

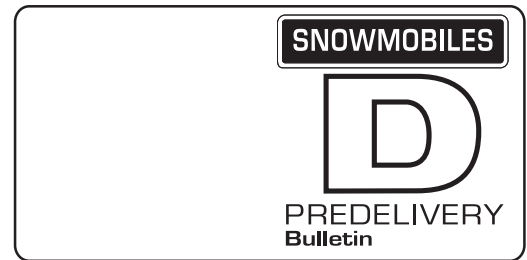
Please route to :

Init.

Service

Sales

Parts



No. **99-1**
REVISION 1

Date: March 23, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Mini Z*	1424	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that *Predelivery Check List* is completed and signed.

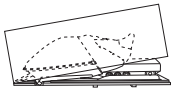
◆ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

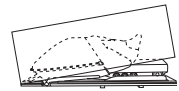
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

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UNCRATING



◆ WARNING

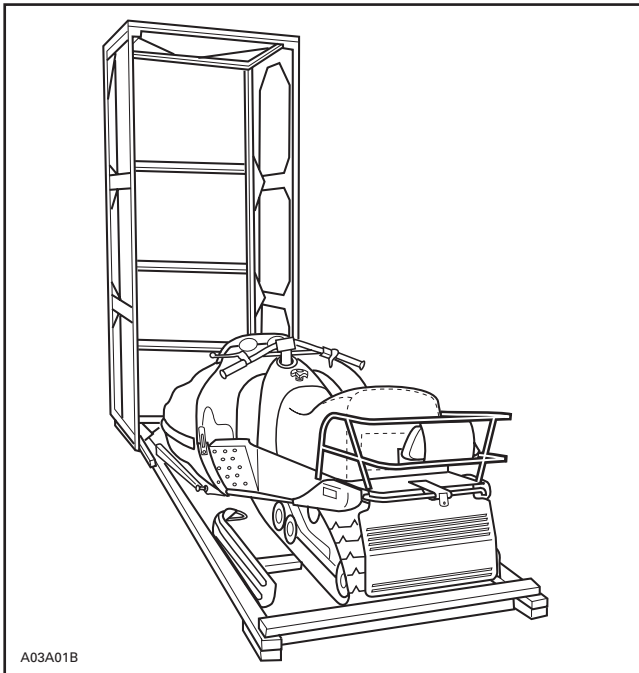
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

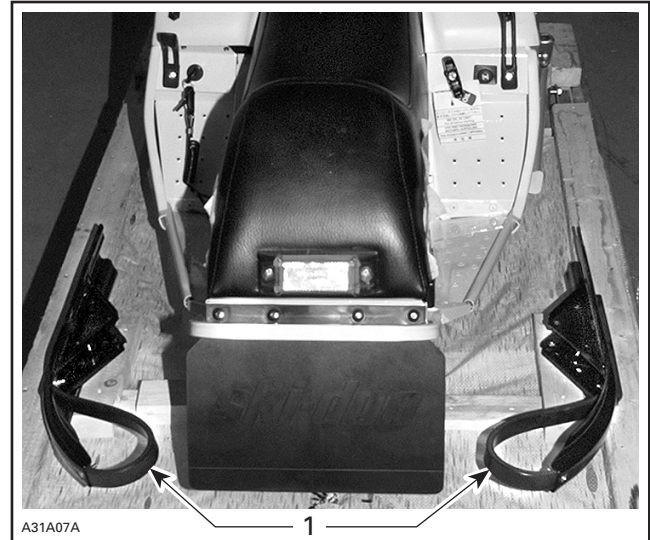
Remove all screws retaining cover to crate base. Tip cover toward front of vehicle. Lift cover slowly to avoid damaging the snow guard or taillight.



A03A01B

TYPICAL

Detach skis from the crate base.



1. Detach skis from crate

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and washers. Discard nuts.



1. Remove bolt, keep it

Remove vehicle from base.

Remove predelivery bag from engine compartment.



PARTS INSTALLATION

SKIS



Lift front of vehicle to install skis.
 Make sure that ski leg spacers are still on ski legs.
 Slide ski on ski leg as shown in the next photo.



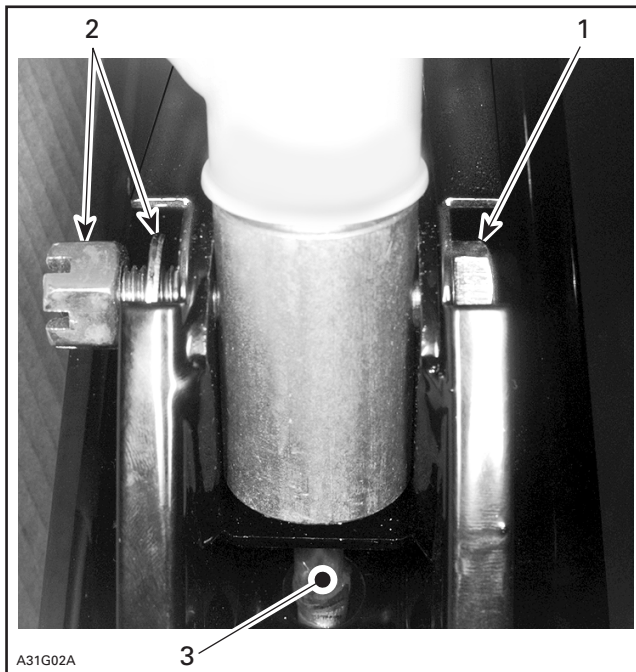
A31G01A

SLIDE SKI

1. Ski leg spacer

Ensure that ski pin is properly centered into ski leg, as shown in the following photo.

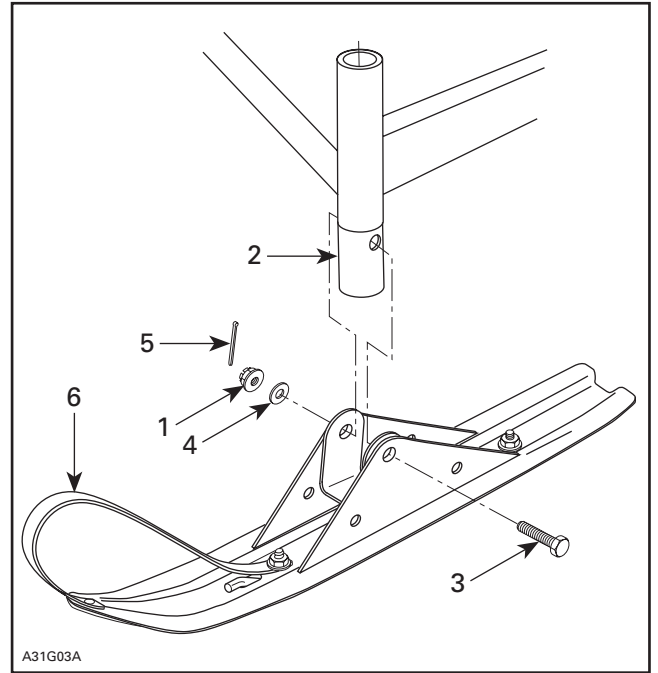
Install ski bolt, washer, nut and cotter pin.



A31G02A

1. Bolt head toward **OUTSIDE** of vehicle
 2. Washer, nut and cotter pin (not shown) toward **inside** of vehicle
 3. Ski pin centered into ski leg

Replace vehicle on ground.



A31G03A

LEFT SIDE SHOWN

1. Nut M10 (2) (predelivery bag). Torque to 3 N•m (27 lbf•in)
2. Spacer (2) (Ski leg)
3. Bolt M10 (2). Bolt head from outside vehicle
4. Washer (4) (ski leg)
5. Cotter pin (2) (predelivery bag)
6. Twist ski to ease bolt installation



PARTS INSTALLATION WINDSHIELD



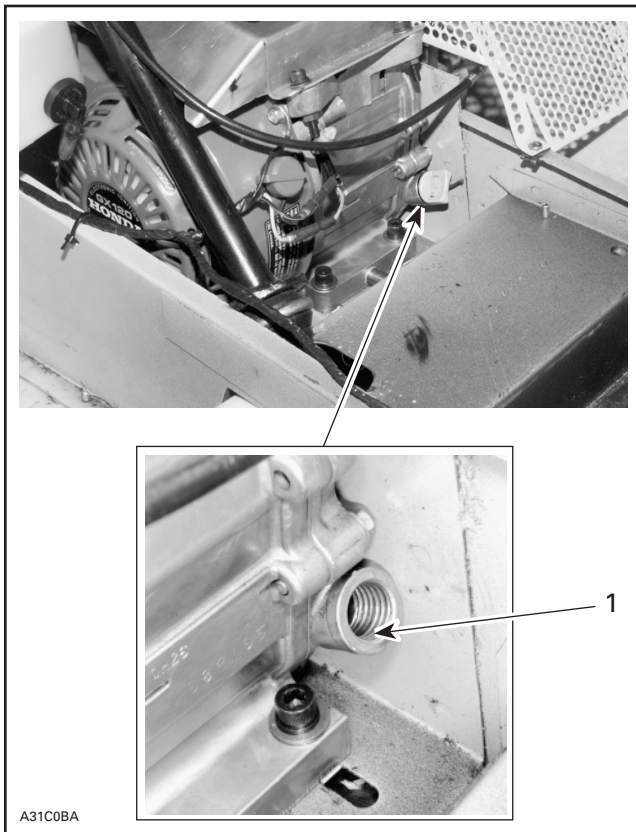
Peel off protective film from windshield.



LIQUIDS ENGINE OIL LEVEL



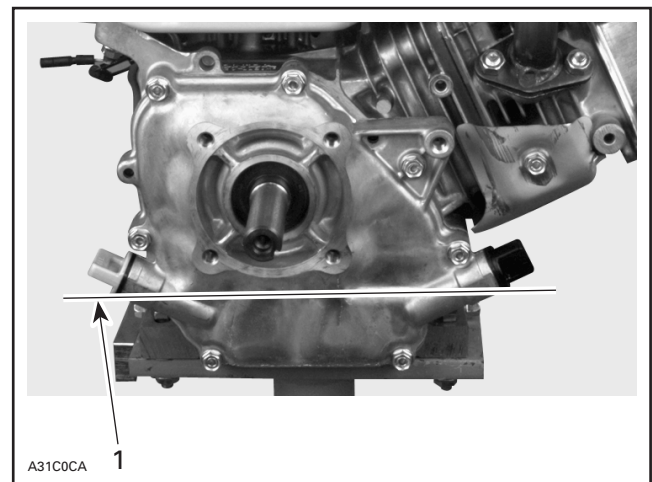
Check engine oil level. Add SAE 5W/30 recommended oil as required. Refer to the following photos.



ADD OIL UNTIL IT REACHES THE TOP OF THE OIL FILLER NECK
1. Top of the oil filler neck

▼ CAUTION

When checking engine oil level in crankcase, ensure vehicle is on level ground.



1. Proper oil level



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. Also, see TECHNICAL DATA section at the end of this bulletin.








TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Further inquires should be directed to your dealer distributor service representative.

TECHNICAL DATA

	MODEL	MINI Z
	Engine Type	4-stroke, overhead valves single cylinder, inclined at 25°, QB26, Model GX120K1 by Honda
	Maximum HP/RPM (Engine speed at which maximum power is achieved)	4.0 HP at 4000 RPM
	Lubricating System/Oil Capacity	Splash Type (Oil Bath)/0.6 liter
	Carburetor Type	Horizontal Type, Butterfly valve
	Main Jet	#60 (Externally vented carb. bowl) #62 (Internally vented carb. bowl)
	Float height	13.7 mm (.539 in)
	Pilot Screw Opening	2 turns out (Externally vented carb. bowl) 2-3/8 turns out (Internally vented carb. bowl)
	Idle Speed RPM	±150 RPM 1400 (RPM)
	Gas Grade/Pump Octane Number	(R + M)/2 Regular Unleaded/87
	Ignition Timing	25° (Fixed)
	Spark Plug Type/Gap	NGK BPR6 ES/ 0.7-0.8 mm .028-.031 (in)
	Drive Sprocket/Driven Sprocket	teeth 10/48
	Drive Sprocket Diameter	mm/in 101.6/4.0
	Clutch Type	Automatic Centrifugal
	Chain Type	Standard Rollers Type 40/78
	Chain Pitch	mm/in 12.7/0.5
	Track Alignment	Equal distance between edges of track guides and slider shoes
	Track Deflection	35 mm 1-3/8 (in) Measure gap between slider shoe and bottom inside of track when exerting a downward pull of 7.3 kg (16 lb) to the track

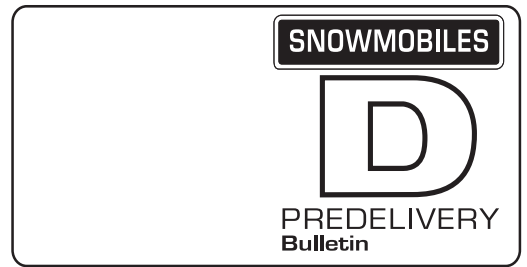
Please route to:

Init.

Service

Sales

Parts



No. **99-3**

Date: May 12, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	Canada: Formula* S/Formula* SL	1351/1348	All
1999	United States: Formula* SL	1349	All
1999	Europe: Formula* S/Formula* SL	1353/1350	All

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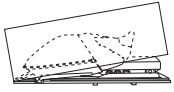
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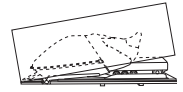
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Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must removed it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

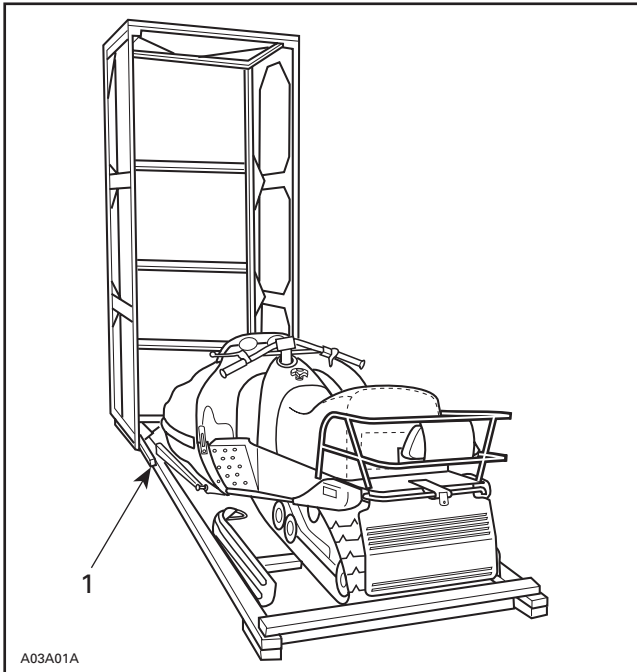
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to vehicle base. Tip cover over front of vehicle. There is a notch in crate base at front.

NOTE: On some models, snow guard may interfere with crate cover, push on snow guard when lifting cover.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if so equipped.

▼ CAUTION

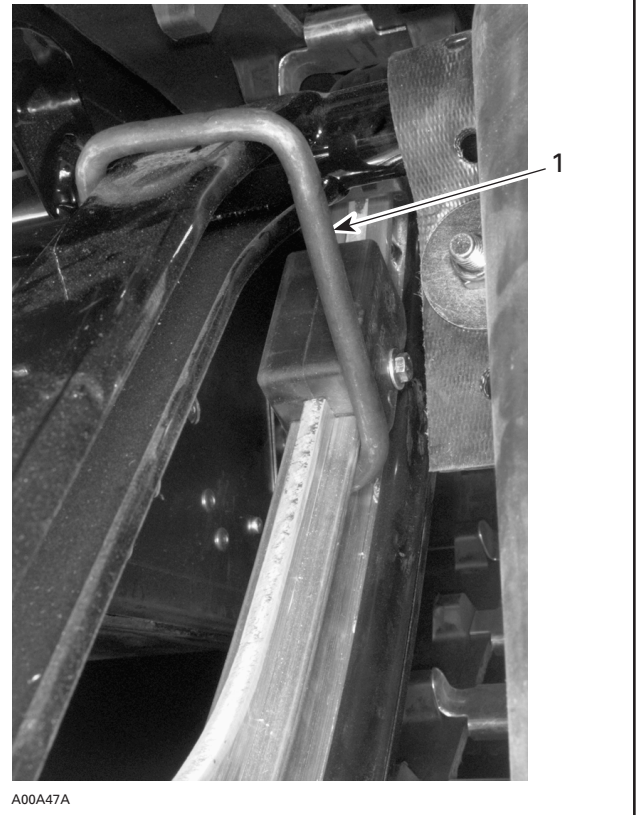
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL



TYPICAL
1. Hook to be removed

Procedure

Apply parking brake.

Cut locking tie holding front retaining hook.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

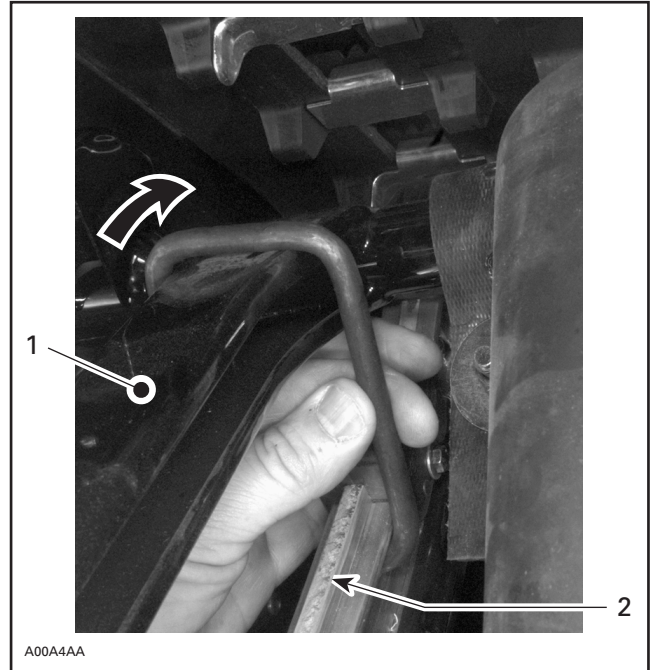


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

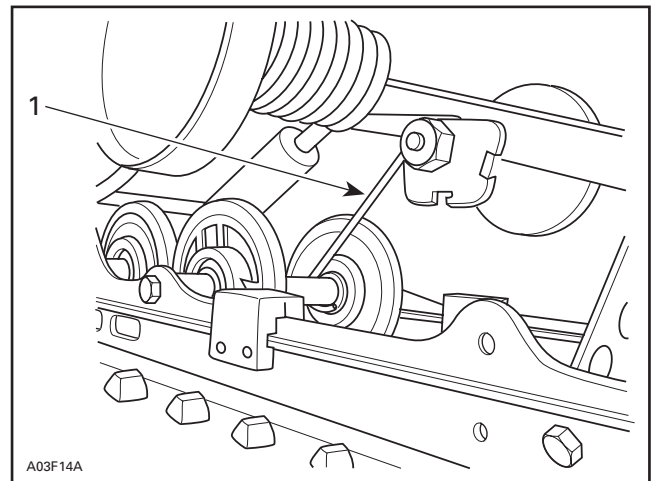
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL

1. Front arm
2. Runner

REAR HOOK REMOVAL



TYPICAL

1. Hook to be removed

Procedure

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



A01F2FA

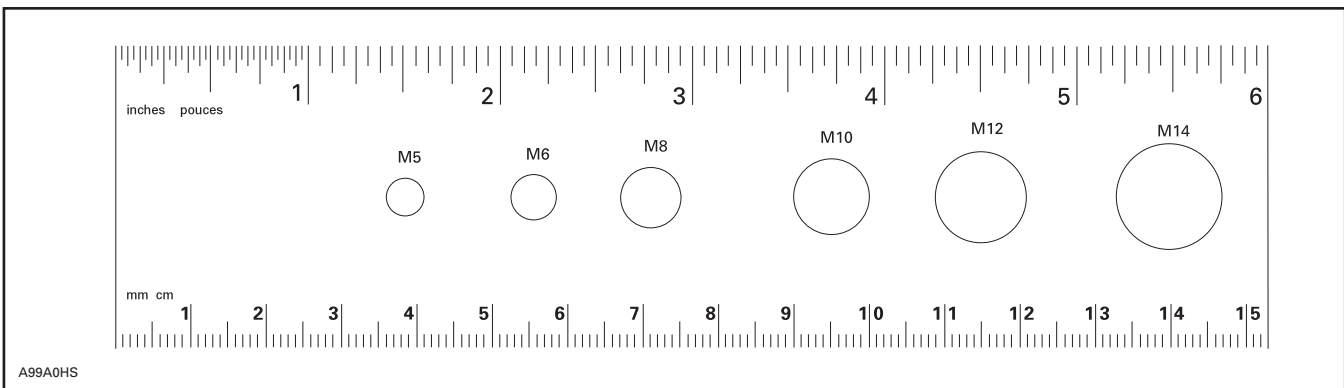
Remove hook on the rear portion of the suspension

◆ WARNING

Both hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
580 638 800	FORMULA S/SL

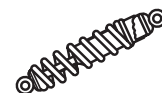
NOTE: This rule can be helpful to identify fastener length or size.



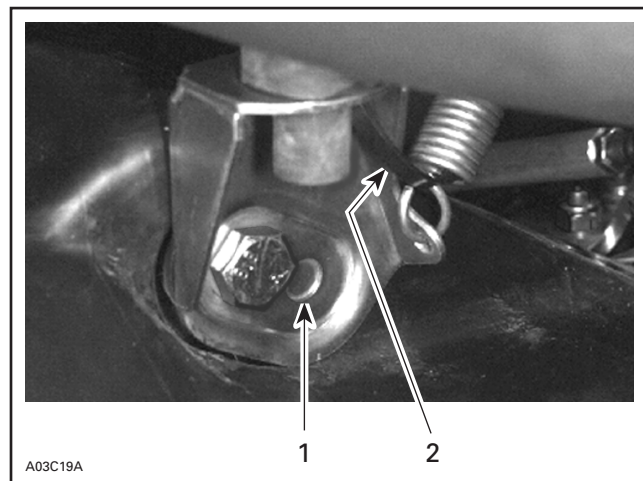
A99A0HS



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

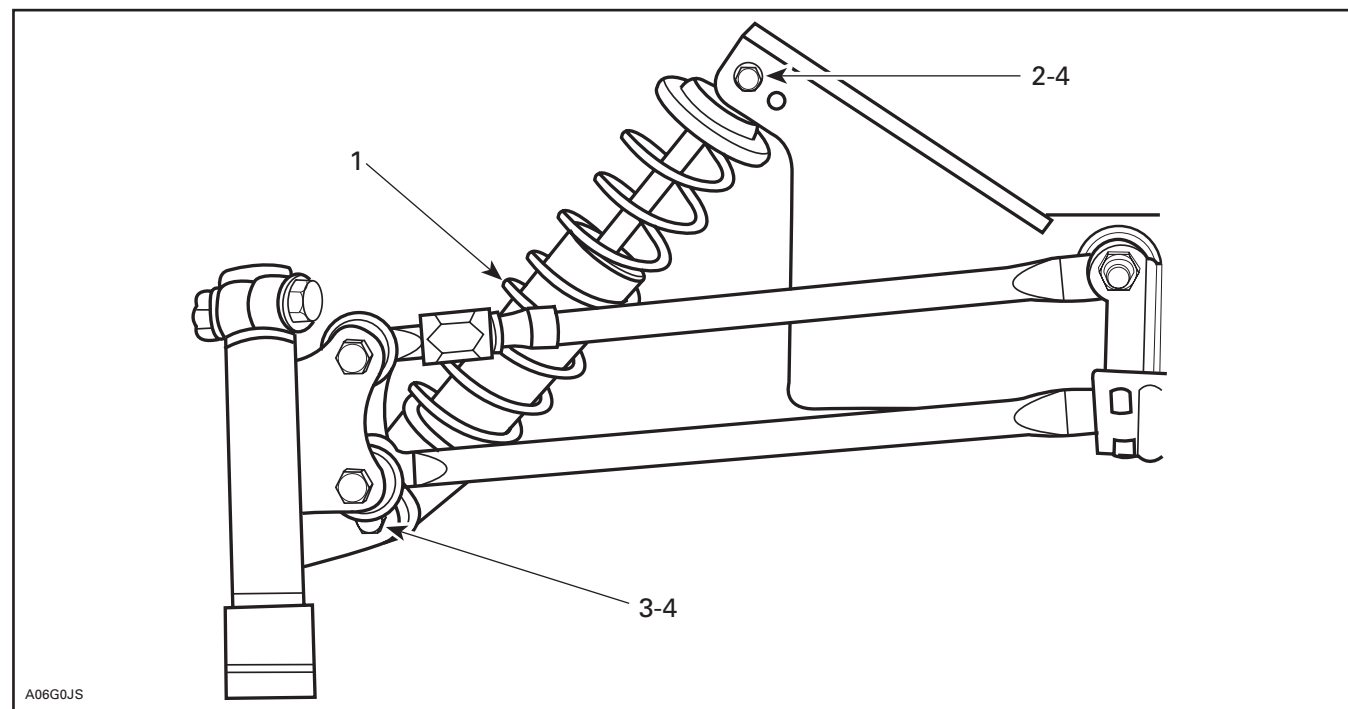
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring, if so equipped, at bottom.

NOTE: Position top screw head toward front and bottom screw head facing back.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.



TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Flanged elastic nut (4) (P/N 228 501 045) (section no.1 or 5) torque to 48 N•m (35 lbf•ft)



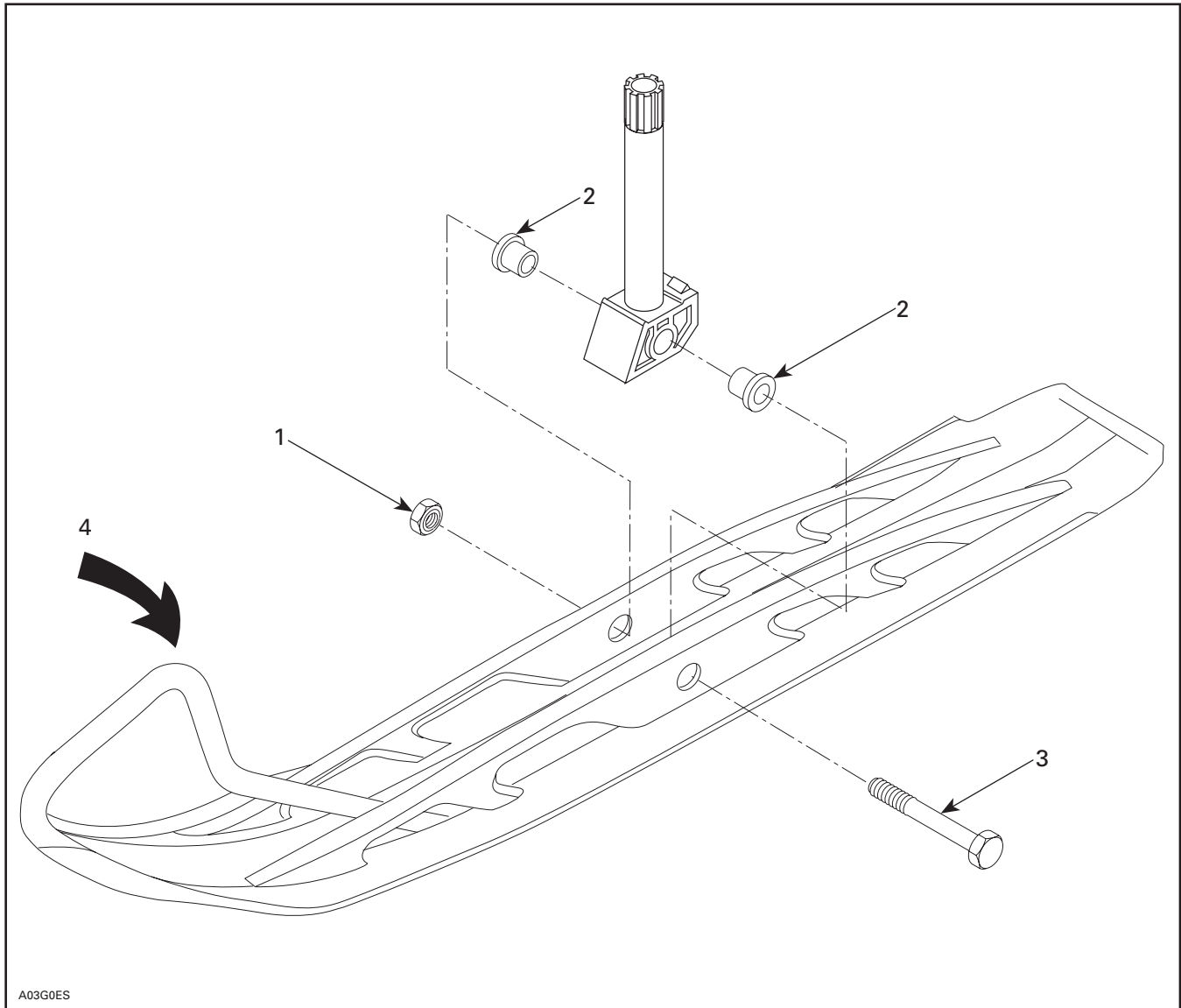
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



TYPICAL — LEFT SIDE SHOWN

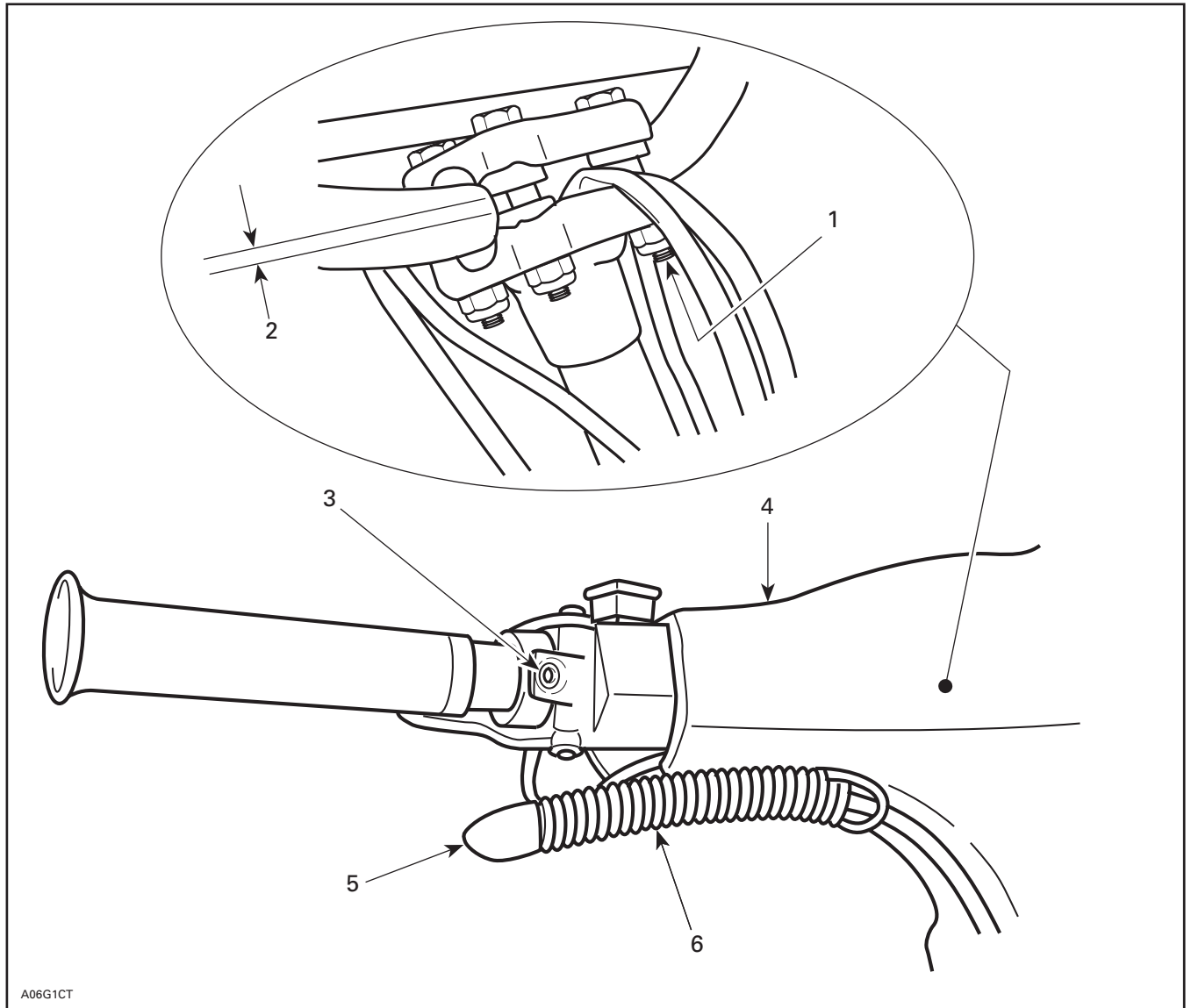
1. Elastic Nut M12 x 1.75 (2) (section no. 1 or 3) torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



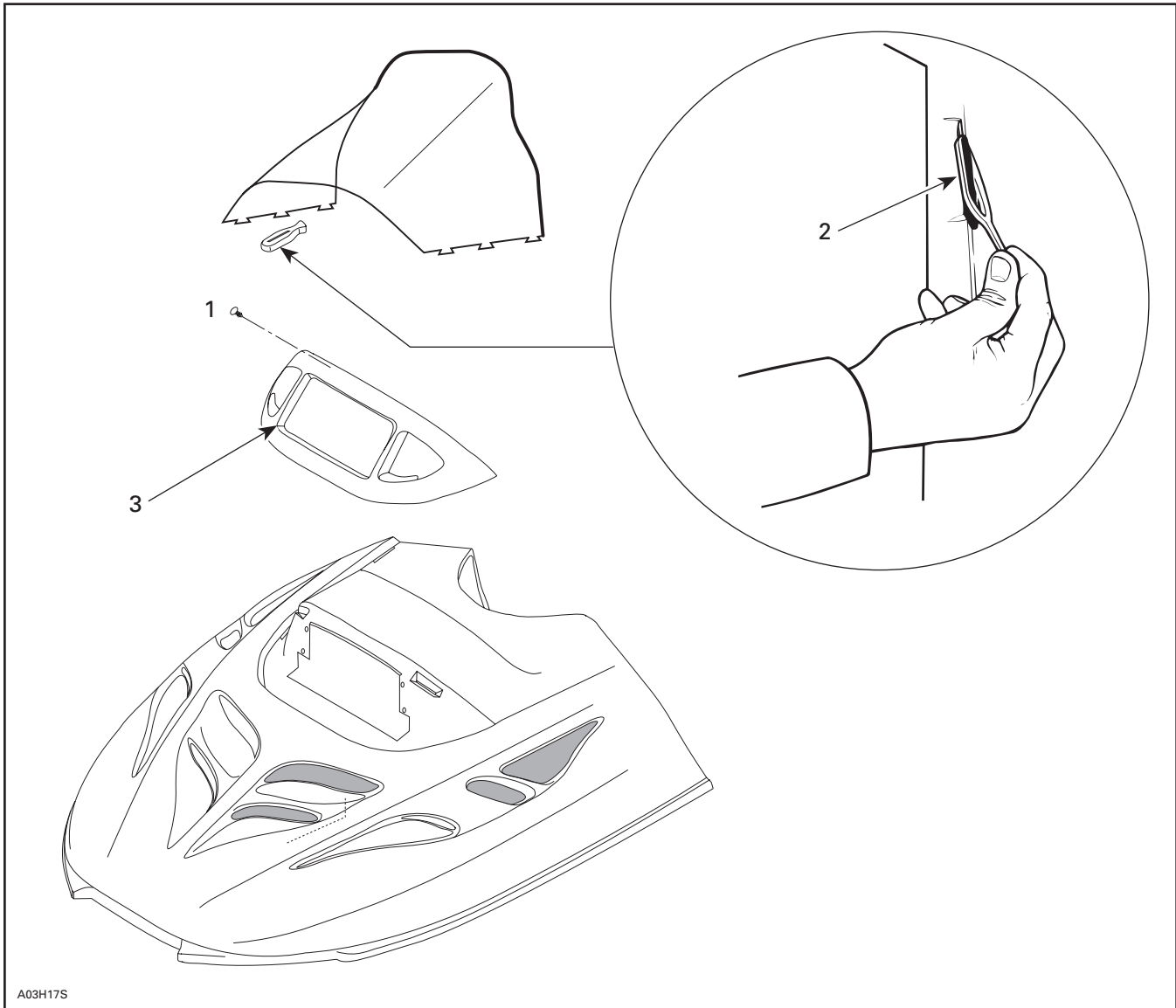
1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side
3. Loosen allen screw
4. Steering pad (P/N 572 084 000 and 572 084 100) (engine compartment)
5. Use liquid soap to ease installation
6. Keyway (2) (P/N 572 072 400) (section no. 3)



PARTS INSTALLATION WINDSHIELD



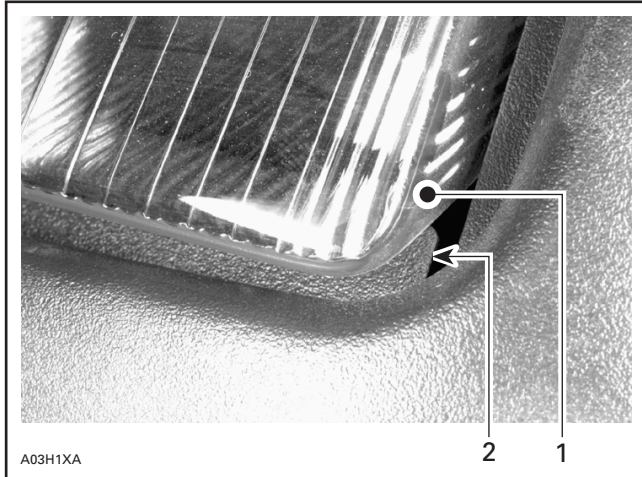
Install windshield on dashboard.



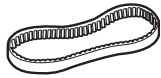
A03H17S

1. Dart (1) (P/N 414 644 300) (section no. 2 or 5)
2. Latch (6) (P/N 570 023 800) (section no. 4 or 6)
3. Temporarily remove headlamp molding for windshield installation

When reinstalling headlamp molding make sure lip is behind headlamp.

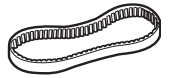


1. Headlamp
2. Lip of headlamp molding behind headlamp



PARTS INSTALLATION

DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.



LIQUIDS

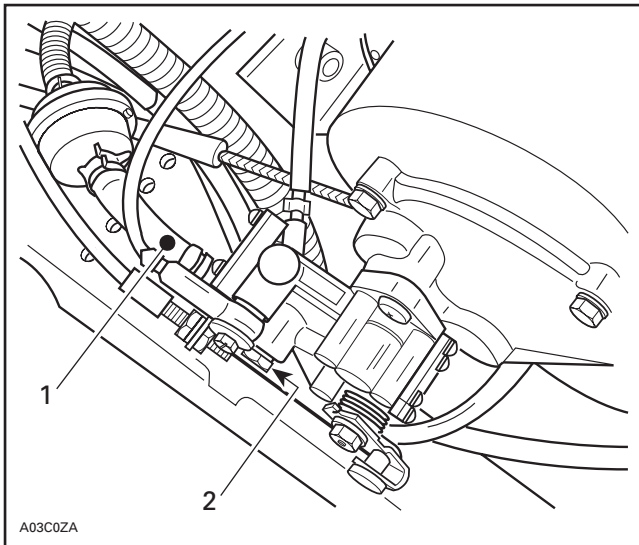
OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 - 12 x 1L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

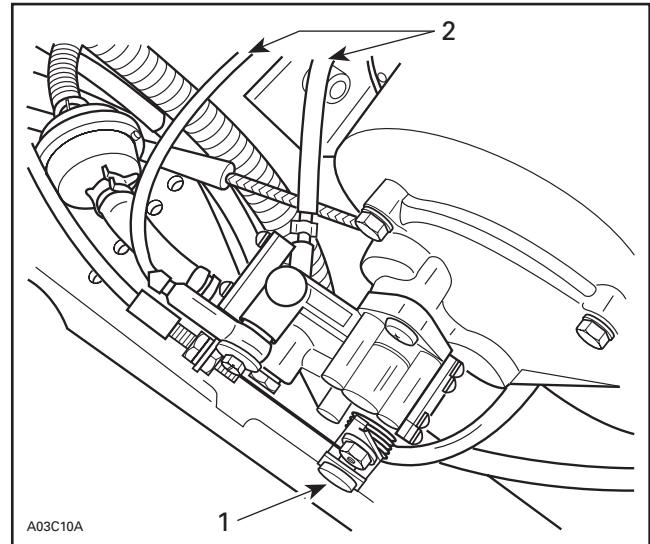
Check also for proper oil lever adjustment. Mark on lever should align 1 to 2 mm (.039 to .079 in) above mark on pump body after removing the cable play by activating throttle lever.



TYPICAL

1. Main oil line
2. Bleeder screw

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



TYPICAL

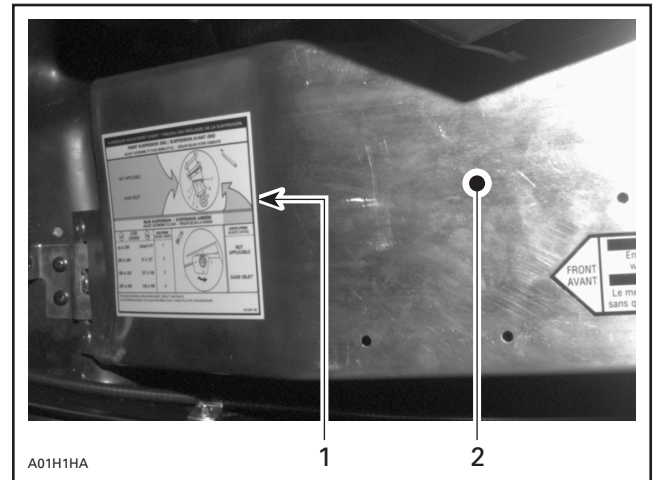
1. Fully open position
2. Small lines



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



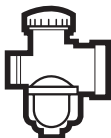




ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in Technical Data are applicable after break-in period (about 10 hours of use).

TECHNICAL DATA

	MODELS	FORMULA S	FORMULA SL		
	Engine Type	377	503		
	Maximum HP RPM ①	±100 RPM	6900		
	Rotary Valve	P/N Opening(BTDC)/ Closing (ATDC)	N.A.	N.A.	
	Carburetor Type	PTO VM 30 - 195 MAG VM 30 - 195	PTO VM 34 - 532 MAG VM 34 - 533		
	Main Jet	PTO 140 MAG 140	PTO 180 MAG 170		
	Needle Jet	P-0 (159)	P-0 (159)		
	Pilot Jet	40	40		
	Needle Identification– clip position	6DP9-3	6DH2-3		
	Slide Cut-away	2.5	2.5		
	Float Adjustment	±1 mm (±.040 in)	23.9 (.94)	23.9 (.94)	
	Air Screw Adjustment	±1/16 turn	1-1/4	1.875	
	Idle Speed RPM	±200 RPM	1650	1650	
	Gas Grade/Octane Number	(R + M)/2	Regular Unleaded/87	Regular Unleaded/87	
Gas/Oil Ratio		Oil Injection	Oil Injection		
	Ignition Timing BTDC ②	mm (in)	1.38 (.054)	1.66 (.0654)	
	Trigger Coil Air-Gap	mm (in)	0.45 - 0.55 (.018 - .022)	0.45 - 0.55 (.018 - .022)	
	Gear Ratio	teeth	18/44	22/44	
	Engagement Speed	±100 RPM	3500	3300	
	Drive Pulley Calibration Screw Position		N.A.	3	
	Pulley Distance	Z	(+0, -1) mm (+0, -1/32 in)	25.5 (1)	16.5 (21/32)
		Offset	X ±0.5 mm (±.020 in)	33.4 (1-5/16)	35.0 (1-3/8)
	Drive Belt Adjustment	Y		Dimension Y must exceed from 0.5 mm (.020 in) to 1.5 mm (.059 in)	Dimension Y must exceed from 1 mm (.039 in) to 2 mm (.079 in)
		Deflection	±5 mm (±.197 in)	32 (1-1/4)	32 (1-1/4)
		Force ③	kg (lbf)	11.34 (25)	11.34 (25)
	Driven Pulley Preload	kg (lbf)	4.8 (10.582)	4.8 (10.582)	
	Drive Chain Tension		④	④	
Track Adjustment	Deflection ⑤	mm (in)	35 to 40 (1-3/8 to 1-9/16)	35 to 40 (1-3/8 to 1-9/16)	

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

④ Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation.

⑤ Deflection with a 7.3 kg (16 lb) downward pull.

BTDC: Before Top Dead Center

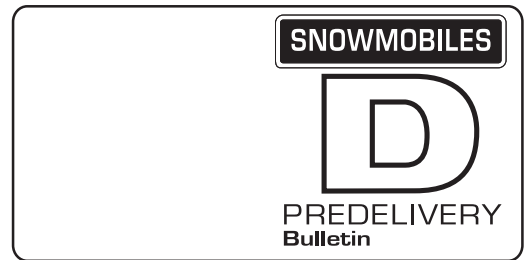
ATDC: After Top Dead Center

N.A.: Not Applicable

Please route to :

Init.

<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-6**

Date: July 2, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Touring SLE	1354/1355	All
1999	Europe: Touring SLE	1356	All

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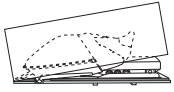
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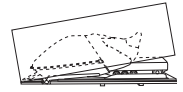
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UNCRATING



◆ WARNING

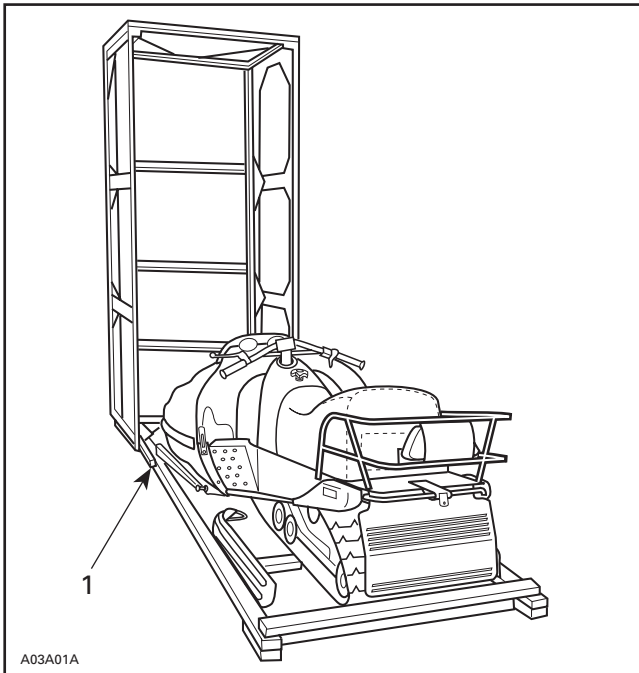
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to crate base. Tip cover over front of vehicle. There is a notch in crate base at front.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

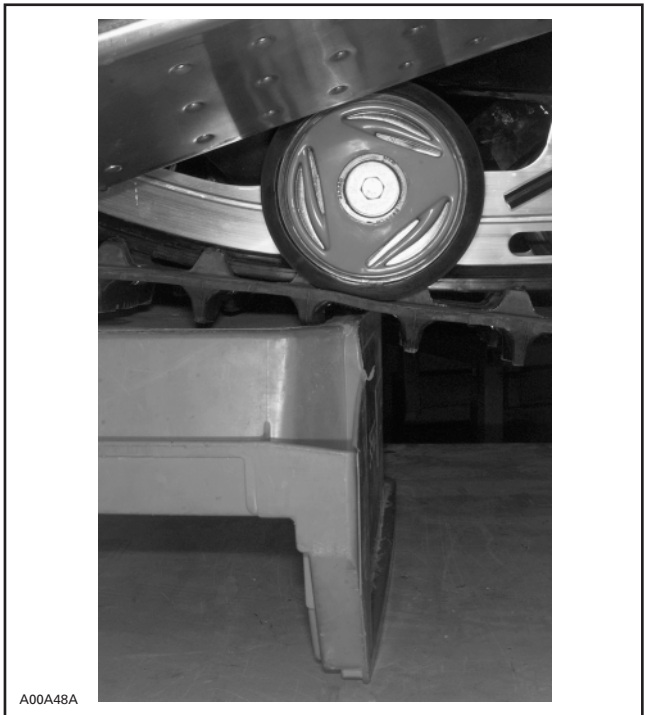
Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

SUSPENSION HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

NOTE: To avoid unhooking during transportation front hook could be held in place with a locking tie; make sure this locking tie is cut before trying to remove hook.

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



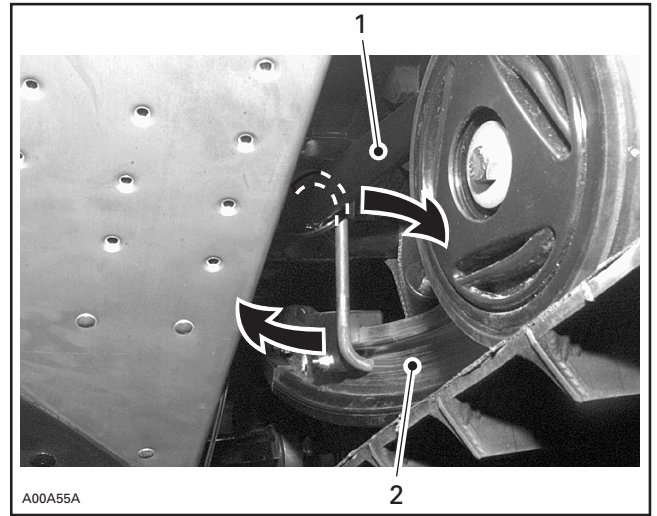
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



A00A55A

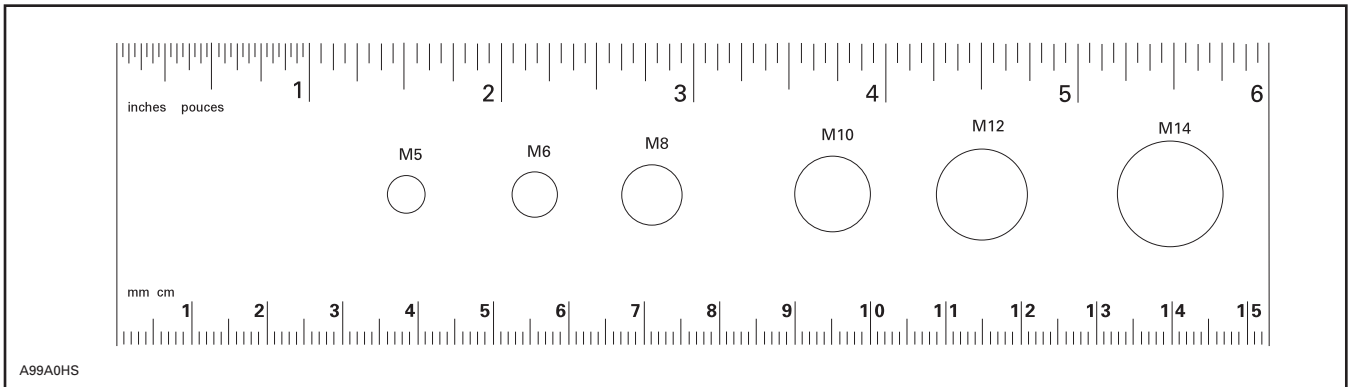
TYPICAL

- 1. Front arm
- 2. Runner

◆ WARNING

Shipping hook must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODEL
580 653 200	Touring SLE



A99A0HS

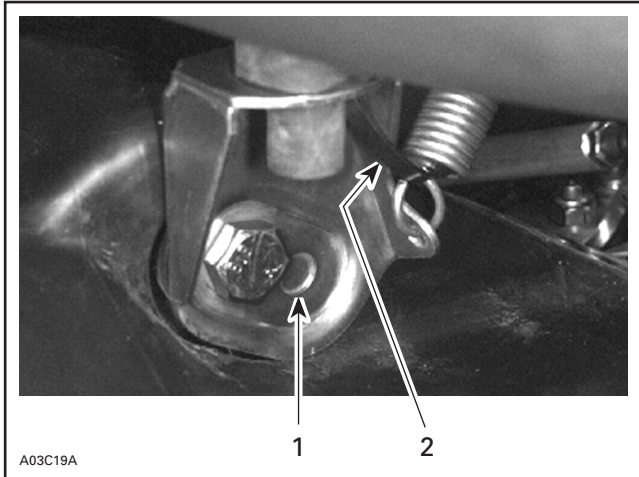
NOTE: This rule can be helpful to identify fastener length or size.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



A03C19A

1. Lug in recess
2. Locking tie

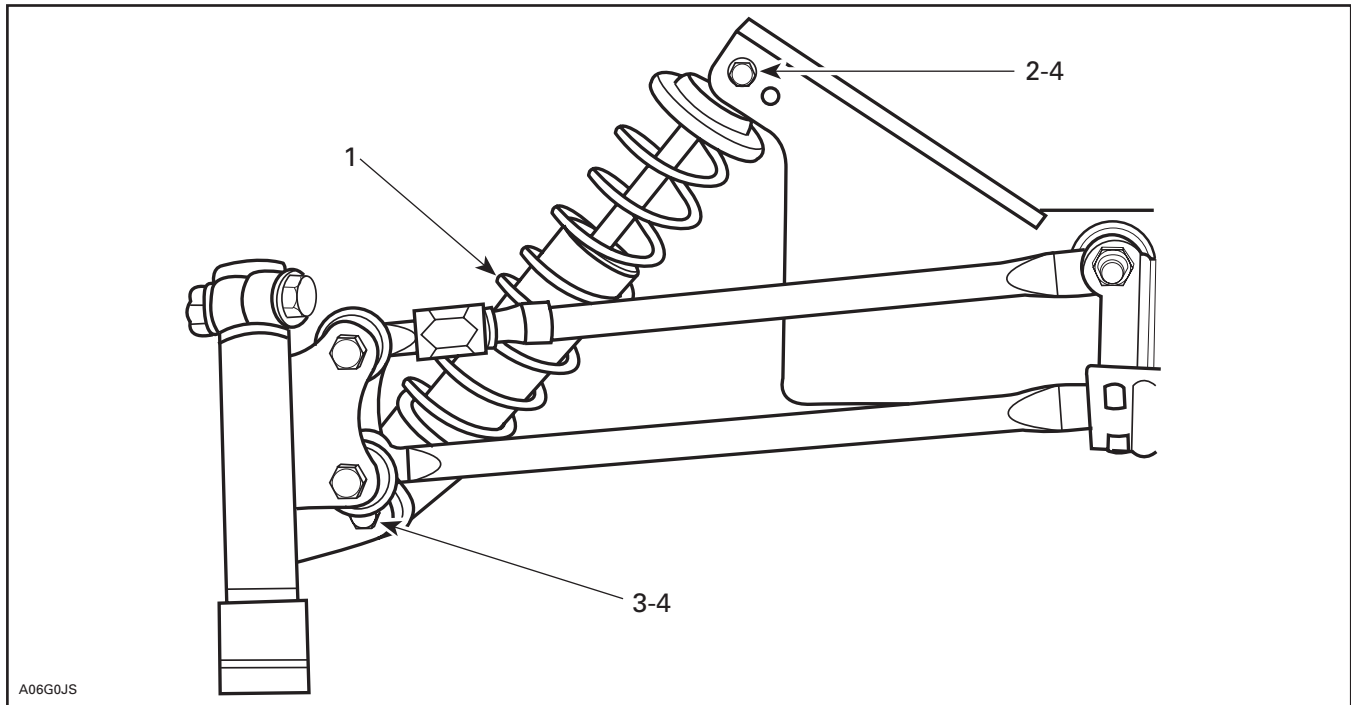
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position screw heads toward front.

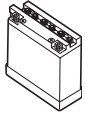
Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.



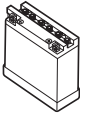
A06G0JS

TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Flanged elastic nut (4) (P/N 228 501 045) (section no.1) torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION BATTERY



During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

Battery Removal

Remove belt guard.

Untie plastic clip retaining throttle cable and choke cable to air silencer.

Loosen collar on carburetor adaptors. Remove air silencer.

Remove battery.

Battery Installation

Install vent tube on battery.

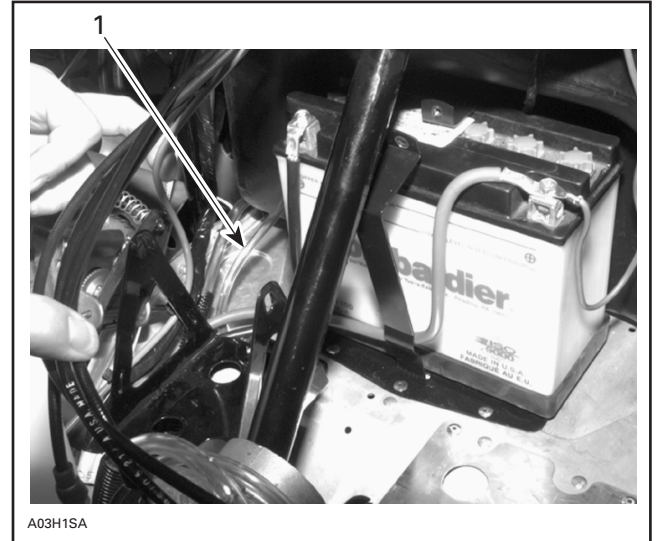
Connect RED positive cable and RED wire to positive battery terminal.

Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Connect vent tube to vehicle fitting on front frame as shown.



BATTERY CONNECTION

1. Vent tube on fitting

Apply silicone dielectric grease (P/N 413 701 700) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.



BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.

Reinstall air silencer.

Reinstall throttle cable and choke cable with plastic clip to air silencer.



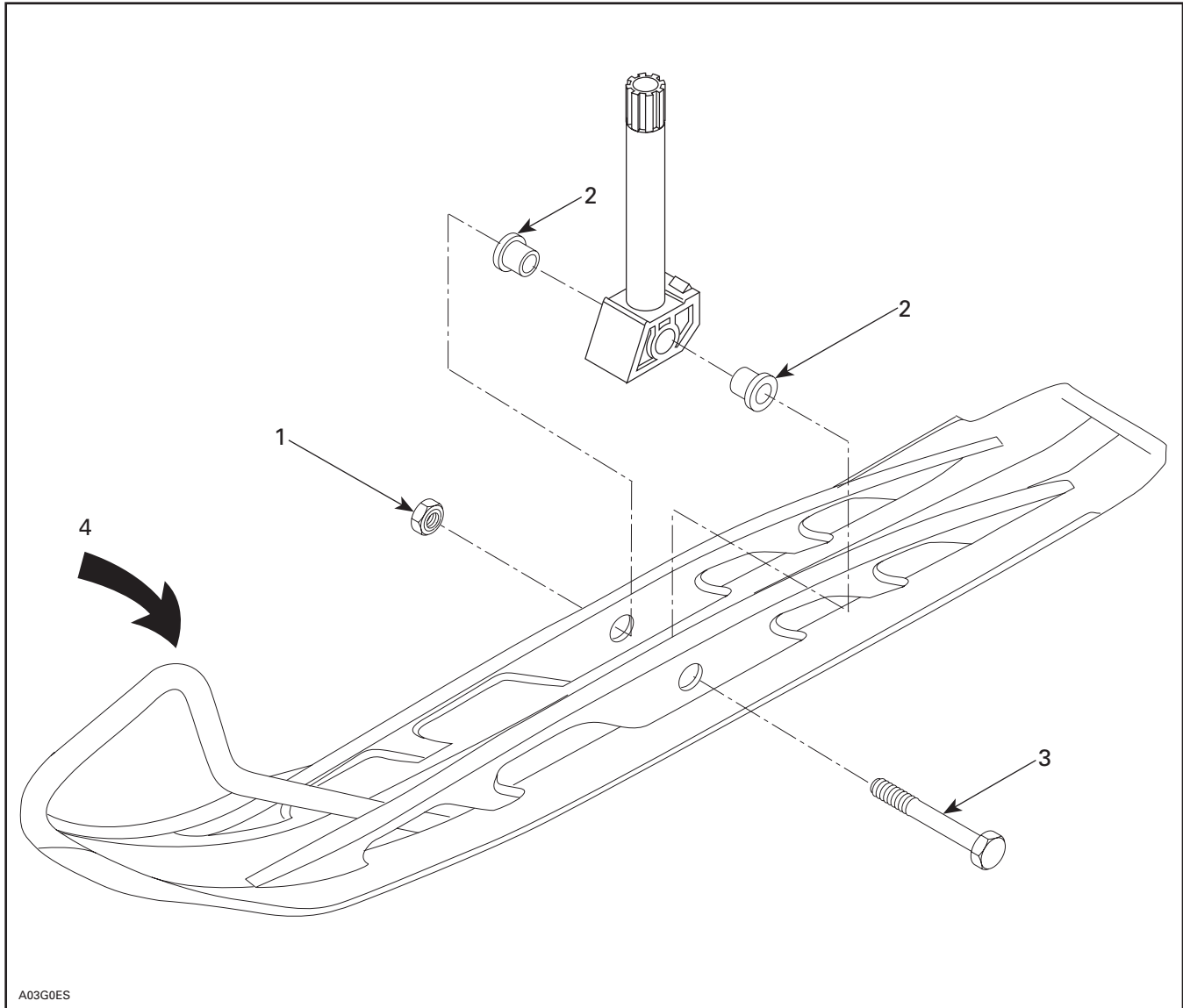
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



TYPICAL — LEFT SIDE SHOWN

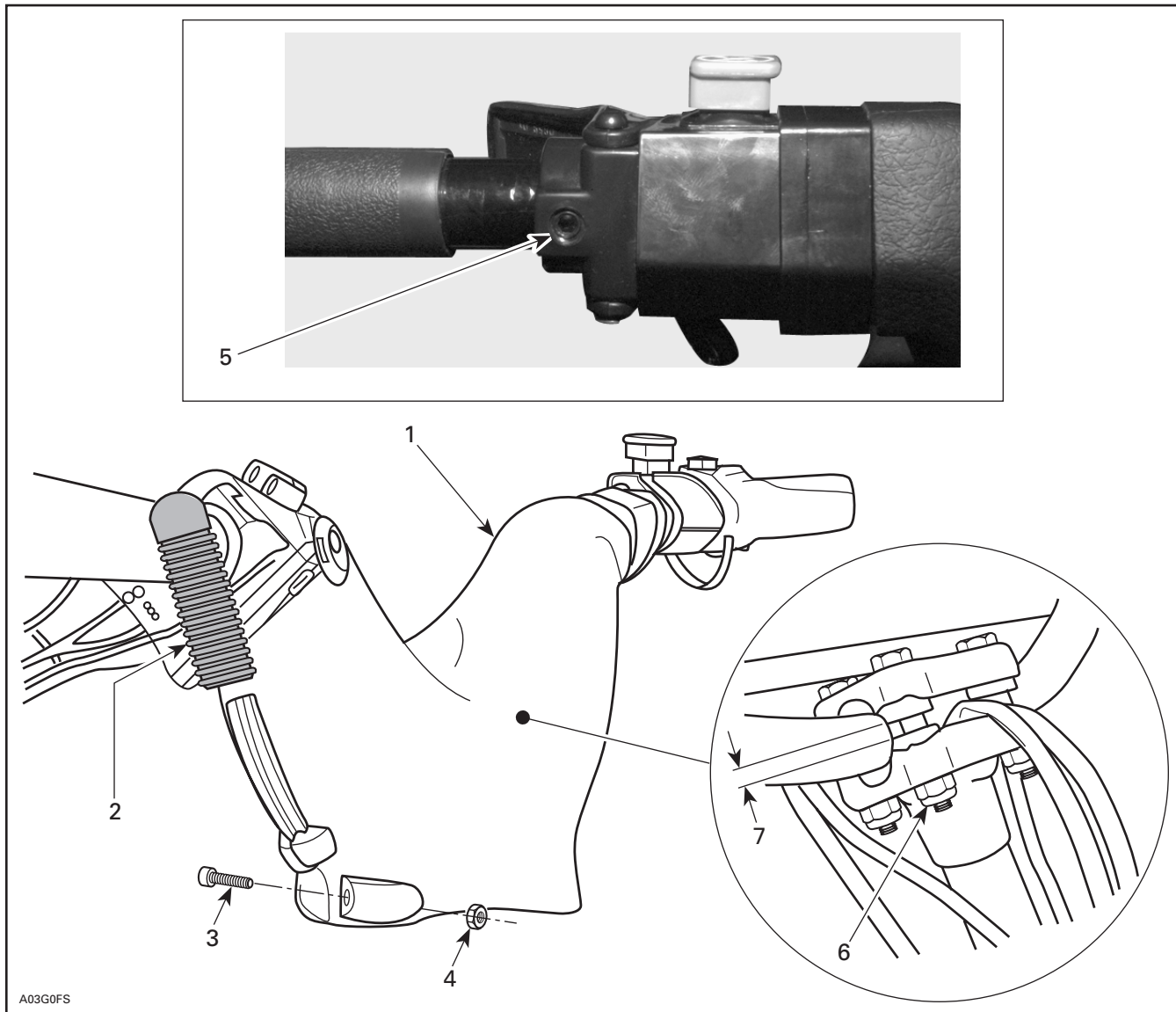
1. Nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 3) torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Align handlebar with steering column axis and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 21 to 28 N•m (16 to 20 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



1. Steering pad (P/N 572 023 800) (engine compartment)
2. Keyway (2) (P/N 572 023 900) (section no. 4) use liquid soap to ease installation
3. Screw M5 x 20 (2) (P/N 222 852 065) (section no. 4)
4. Nut M5 (2) (P/N 228 751 045) (section no. 4) seat tighten only, no deformation of rubber
5. Loosen allen screw
6. Torque nuts from 21 to 28 N•m (16 to 20 lbf•ft)
7. Equal gap each side



PARTS INSTALLATION WINDSHIELD



Remove headlamp molding.
Insert windshield tabs into appropriate slots.

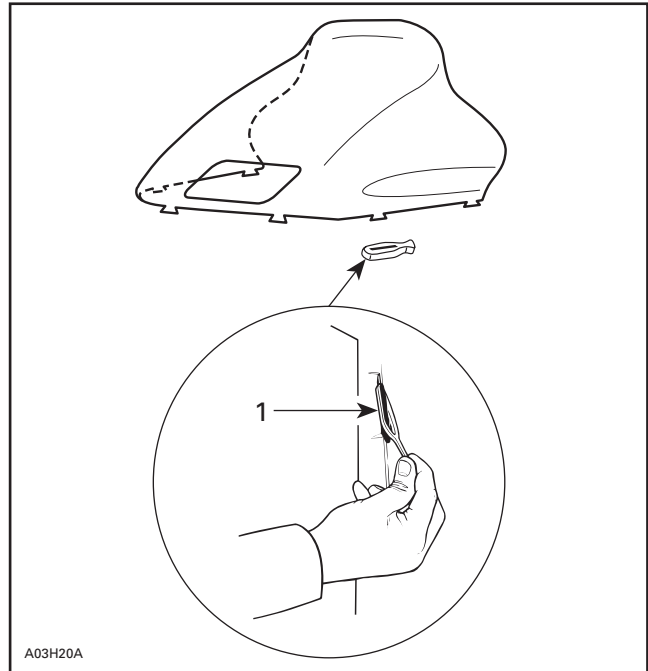


Lodge dart (section no. 5) in hole over headlamp.



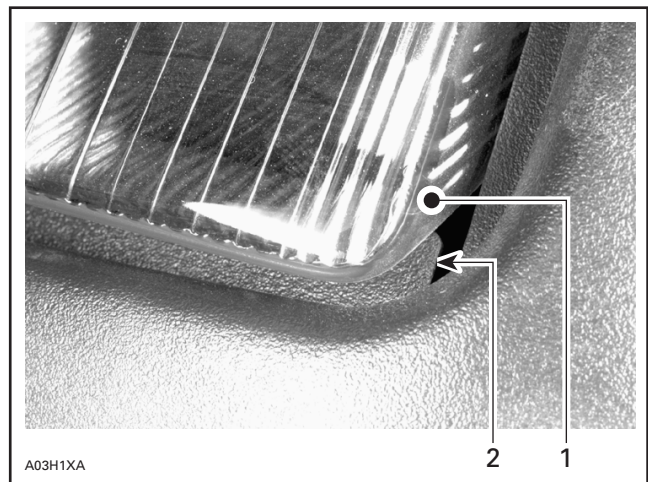
DART (1) (P/N 414 644 300) (SECTION NO. 5)

Reinstall headlamp molding.
NOTE: When reinstalling headlamp molding make sure lip is behind headlamp.



TYPICAL

1. Latch (6) (P/N 570 023 800) (section no. 6)



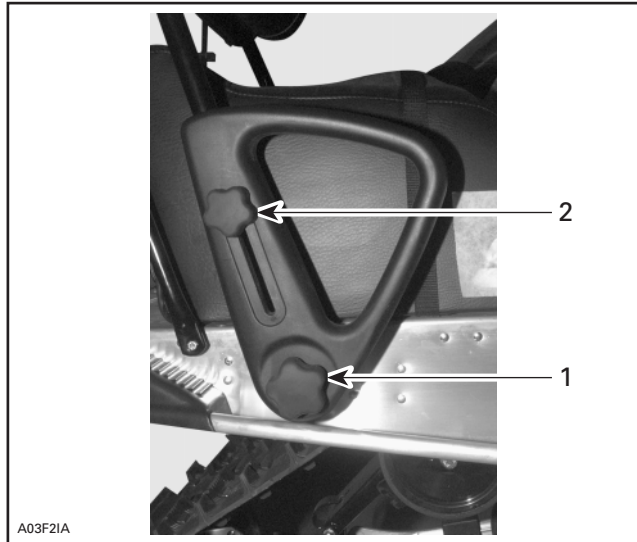
1. Headlamp
2. Lip of headlamp molding behind headlamp



PARTS INSTALLATION BACKREST

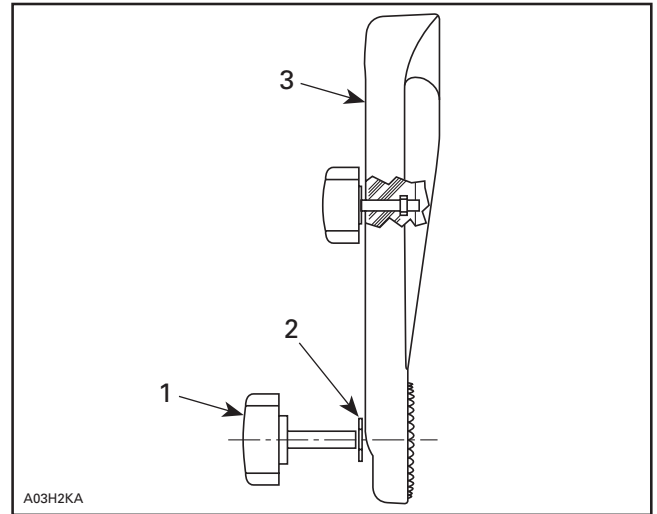


Place backrest in place, adjust it to the preferred angle and height using the plastic knobs (see photos) to fix it in place.



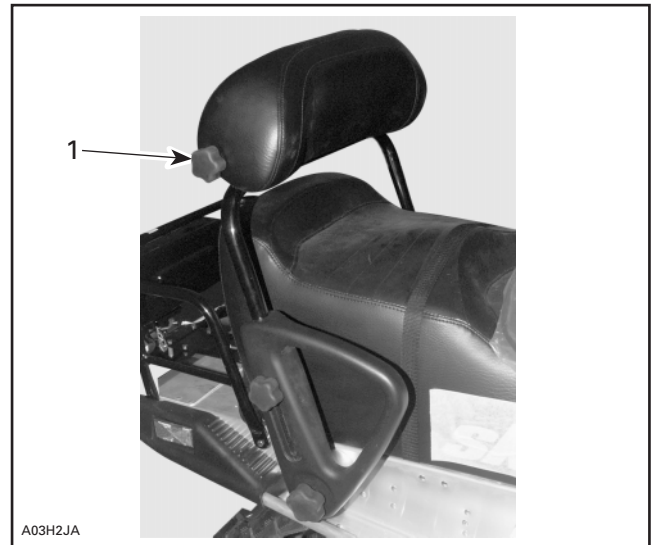
1. Backrest angle knob
2. Backrest height knob

NOTE: Use flat washers (P/N 732 900 050) included in the box to help tighten backrest's lower knob, as shown below.



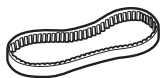
1. Backrest angle knob
2. Flat washer
3. Backrest arm

Adjust the cushion angle using the upper knob.

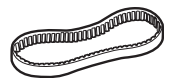


INSTALLED BACKREST

1. Backrest cushion angle knob



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner before installing drive belt.



LIQUIDS

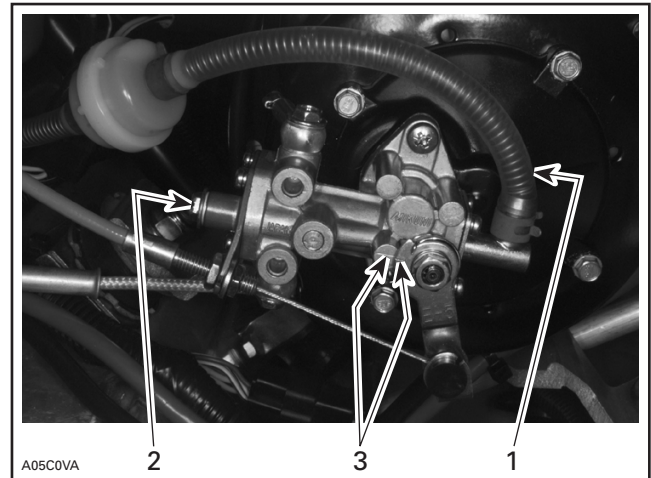
OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER Injection Oil (P/N 496 013 300) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



NEW TYPE OF PUMP (WITH ELECTRONIC REVERSE)

1. Main oil line
2. Bleeder screw
3. Alignment marks

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

Check also for proper oil lever adjustment. Mark on pump lever must align 0 to 2 mm (0,0 to 0,08 in) higher than mark on pump body when throttle lever is activated just enough to take all cable play.



LIQUIDS

BRAKE FLUID LEVEL



Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

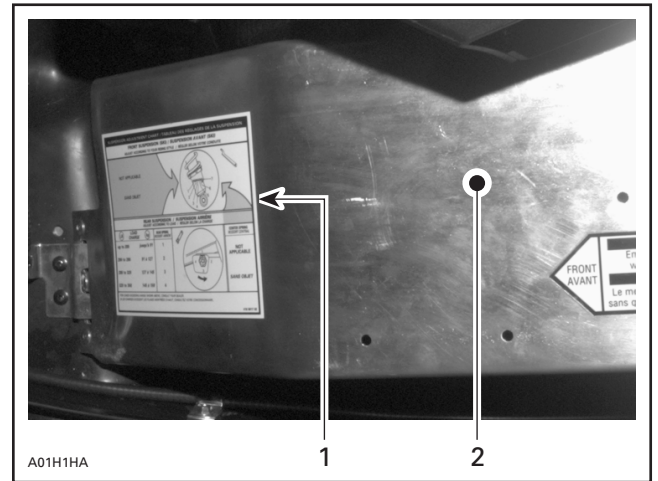
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for spring settings. Specifications in Technical Data are applicable after break-in period (about 10 hours of use).








TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

The dot (•) indicates changes from 1998 model.

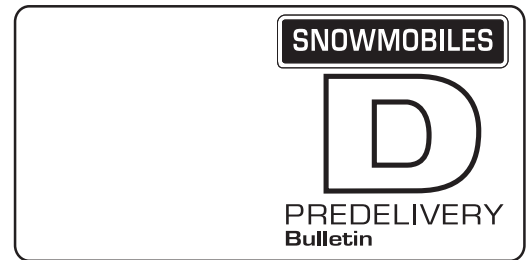
	MODELS	TOURING SLE
	Engine Type	503
	Maximum HP RPM ① ± 100 RPM	7000
	Rotary Valve P/N Opening(BTDC)/ Closing (ATDC)	Not Applicable
	Carburetor Type	PTO VM 34-532 • MAG VM 34-533 •
	Main Jet	PTO 180 MAG 170
	Needle Jet	P-0 (159)
	Pilot Jet	40
	Needle Identification — Clip Position	6DH2-3
	Slide Cut-Away	2.5
	Float Adjustment ± 1 mm (± .040 in)	23.9 (.94)
	Air Screw Adjustment ± 1/16 turn	1.875
	Idle Speed RPM ± 200 RPM	1650
	Gas Grade Octane Number (R + M)/2	Regular Unleaded 87
	Gas/Oil Ratio	Oil Injection
	Ignition Timing BTDC ② mm (in)	2.76 (0.109) •
	Trigger Coil Air-Gap mm (in)	0.40 - 1.10 (0.016 - 0.043) •
	Gear Ratio teeth	21/44
	Engagement Speed ± 100 RPM	2900
	Drive Pulley Calibration Screw Position	3
	Pulley Distance Z ± 0.5 mm (± 0.020 in)	17.0 (0.669) •
	Offset X ± 0.5 mm (± 0.20 in)	35.5 (1.40) •
	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment Deflection mm (in)	32 (1-1/4)
	Force ③ kg (lbf)	11.34 (25)
	Driven Pulley Preload kg (lbf)	0.0 •
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation
Track Adjustment Deflection	35 to 40 mm (1-3/8 to 1-9/16 in) with a 7.3 kg (16 lb) downward pull	

① Engine speed at which maximum power is achieved.
 ② At 3500 RPM (engine cold) with headlamp turned on.
 ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-12**

Date: August 14, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Formula* Deluxe 500 LC Formula* Deluxe 583	1377/1378 1380/1381	All
1999	Europe: Formula* Deluxe 500	1379	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

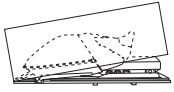
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

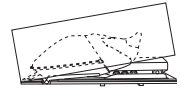
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer must removed it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

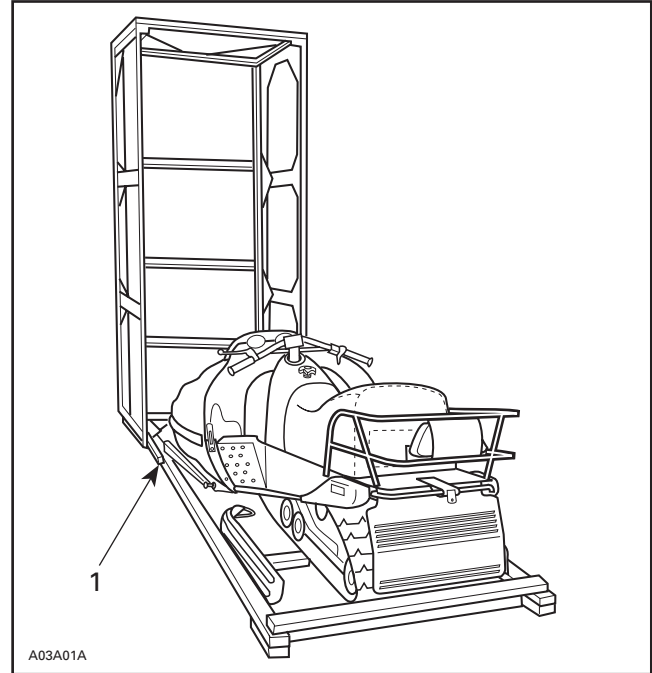
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

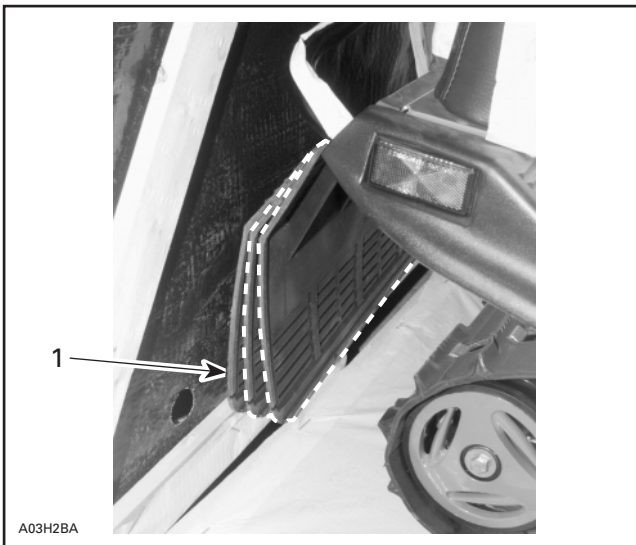
▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

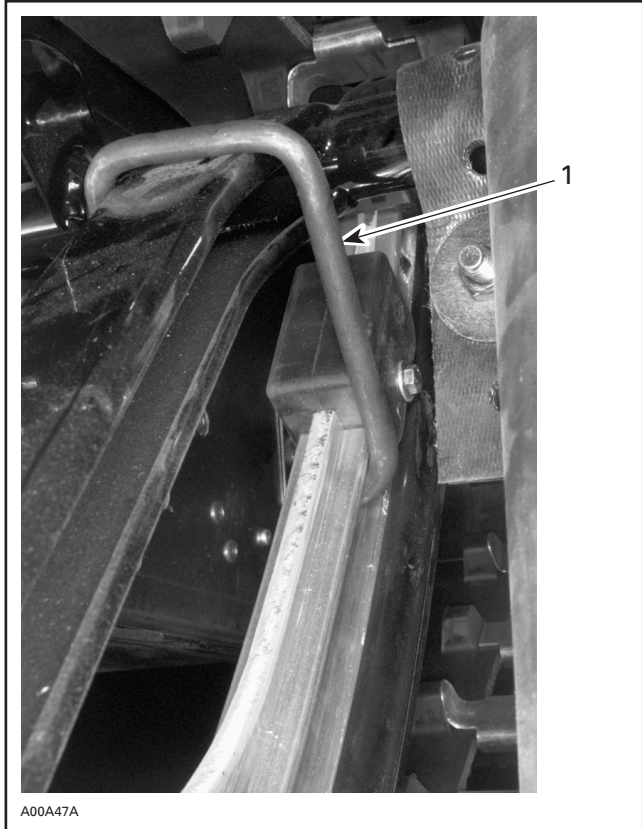


A03H2BA

FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover

FRONT HOOK REMOVAL



TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

Cut tie rap retaining front hook and, from left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

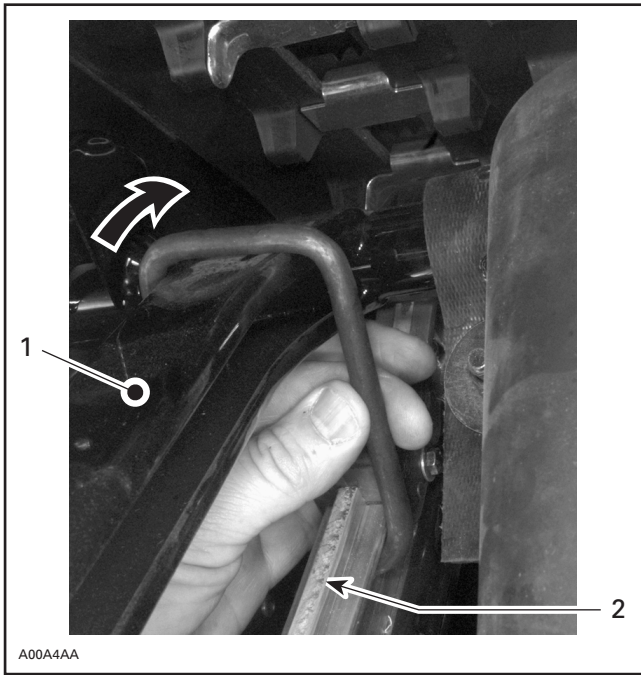


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

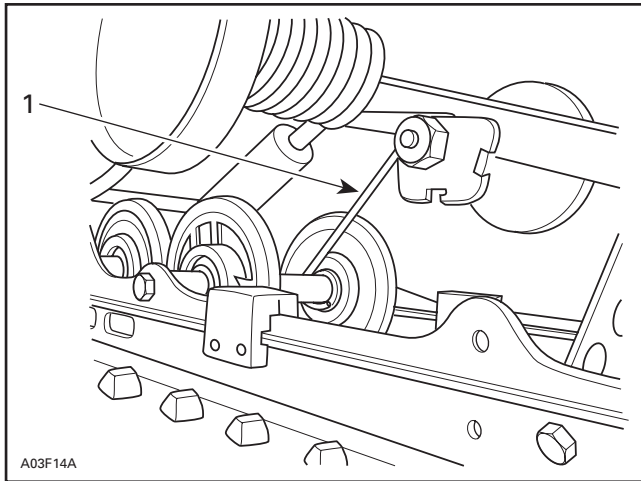
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL



- 1. Hook to be removed

Procedure

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.

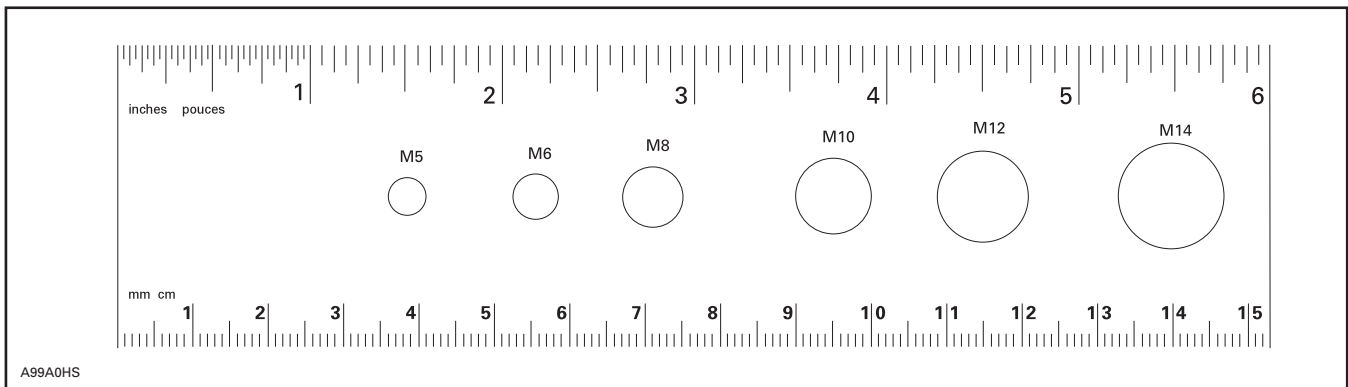


Remove hook on the rear portion of the suspension

◆ WARNING

Both hooks must be removed to have snowmobile suspension operational.

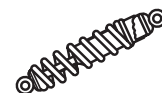
PREDELIVERY KIT P/N	MODELS
549 010 740	Formula Deluxe 500 LC Formula Deluxe 583



NOTE: This ruler can be helpful to identify fastener length or size.

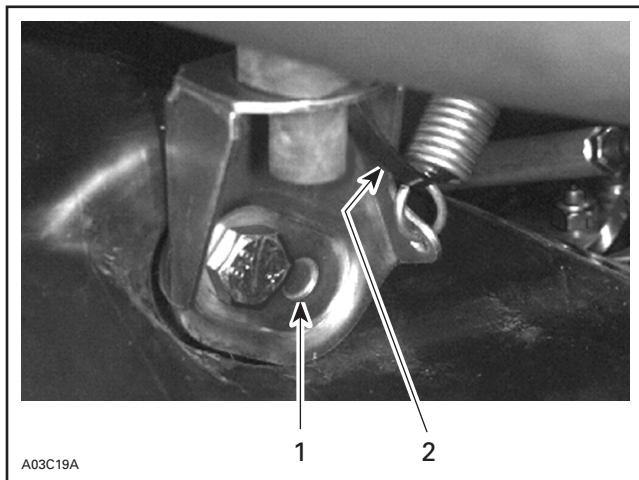


PARTS INSTALLATION FRONT SUSPENSION



All Models

Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

Lift front of vehicle and block safely.

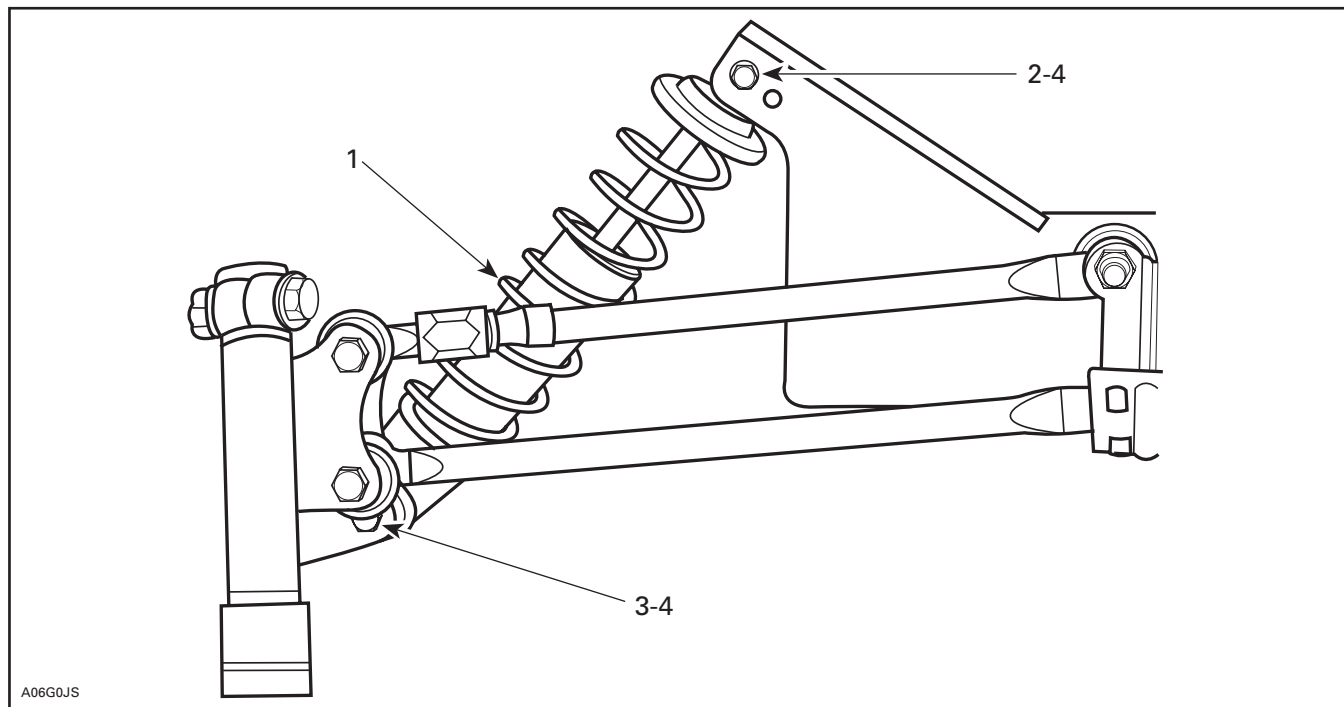
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom and decal facing outside.

NOTE: Position bottom and top screw heads toward front.

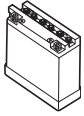
Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

NOTE: On models equipped with a 5 holes exhaust support, hook up exhaust spring on mid-hole.

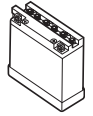


TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic flanged nut M10 x 1.5 (2) (P/N 228 501 045) (section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION BATTERY



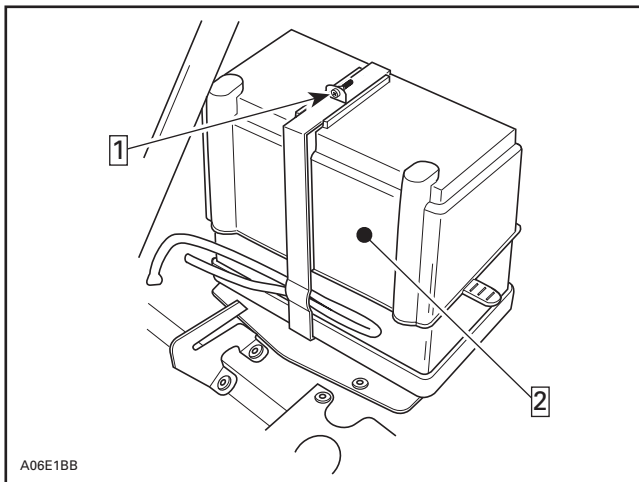
During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage. Do not charge an installed battery.

Battery Removal

- Remove belt guard.
- Remove air intake silencer.
- Unfasten battery retaining strips.
- Open strips and lift battery protective boot.



- Step **1** : Detach and open
Step **2** : Lift battery protective boot

Withdraw battery from vehicle.

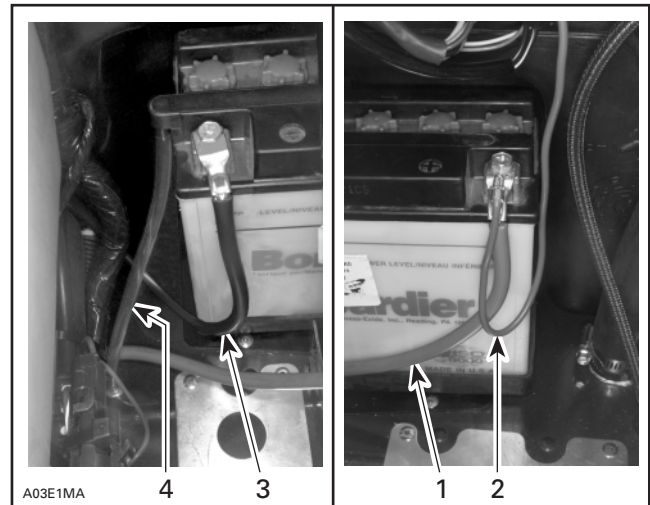
Battery Installation

NOTE: Before reinstalling battery and air silencer check oil pump lever adjustment.

- Install vent tube on battery.
- Connect RED positive cable and RED wire to positive battery terminal.
- Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.



BATTERY CONNECTION

1. RED positive cable
2. RED positive wire
3. BLACK negative cable
4. Ensure that vent tube is properly connected

Ensure that vent tube is properly connected to vehicle fitting on front frame.

Apply silicone dielectric grease (P/N 413 701 700) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.



BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.
Reinstall air silencer.



PARTS INSTALLATION SKIS



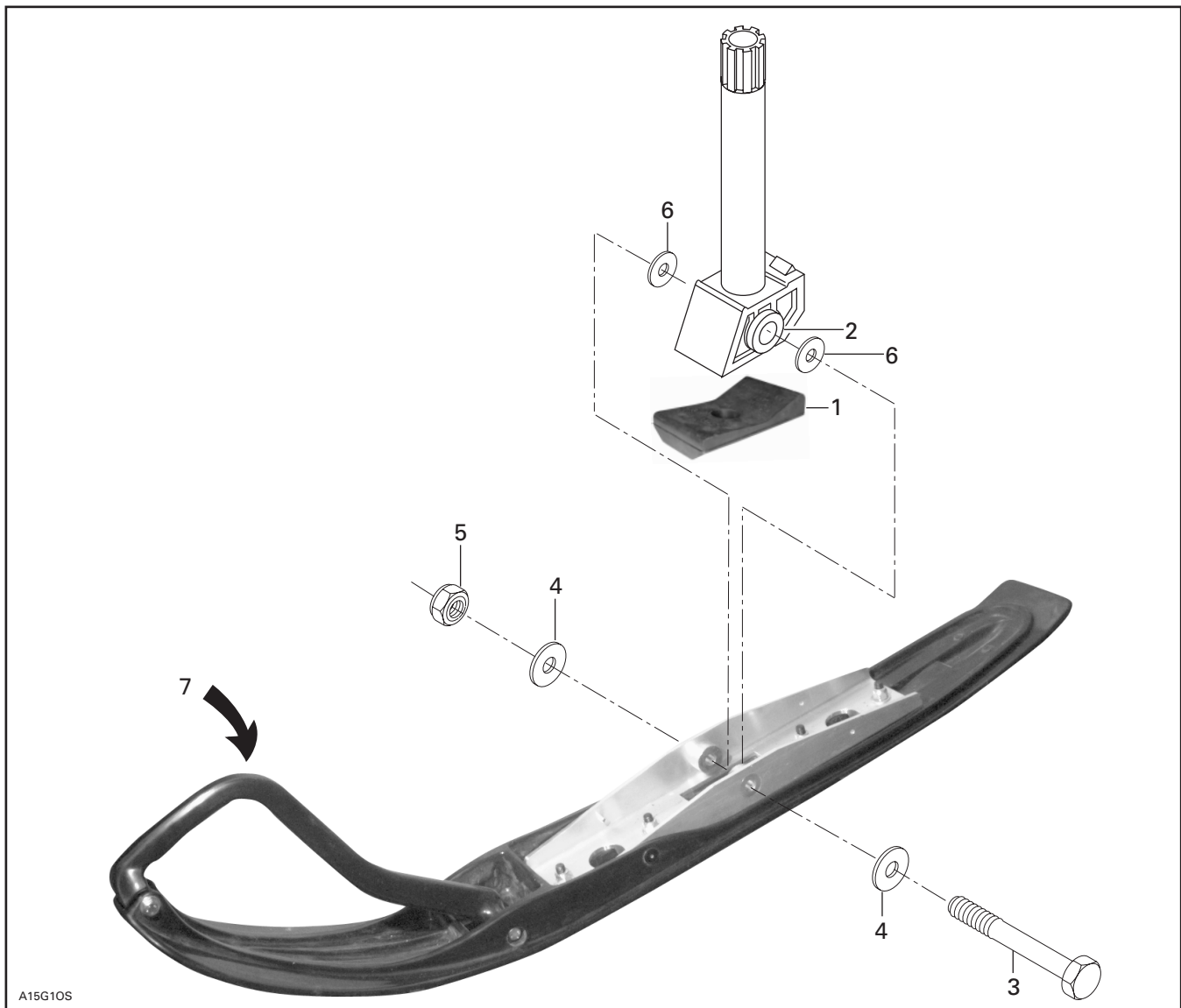
Formula Deluxe 500 LC, Formula Deluxe 583

Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 900 048) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



LEFT SIDE SHOWN

1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (Ski leg)
3. Bolt M12 (2) (Ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



All Models

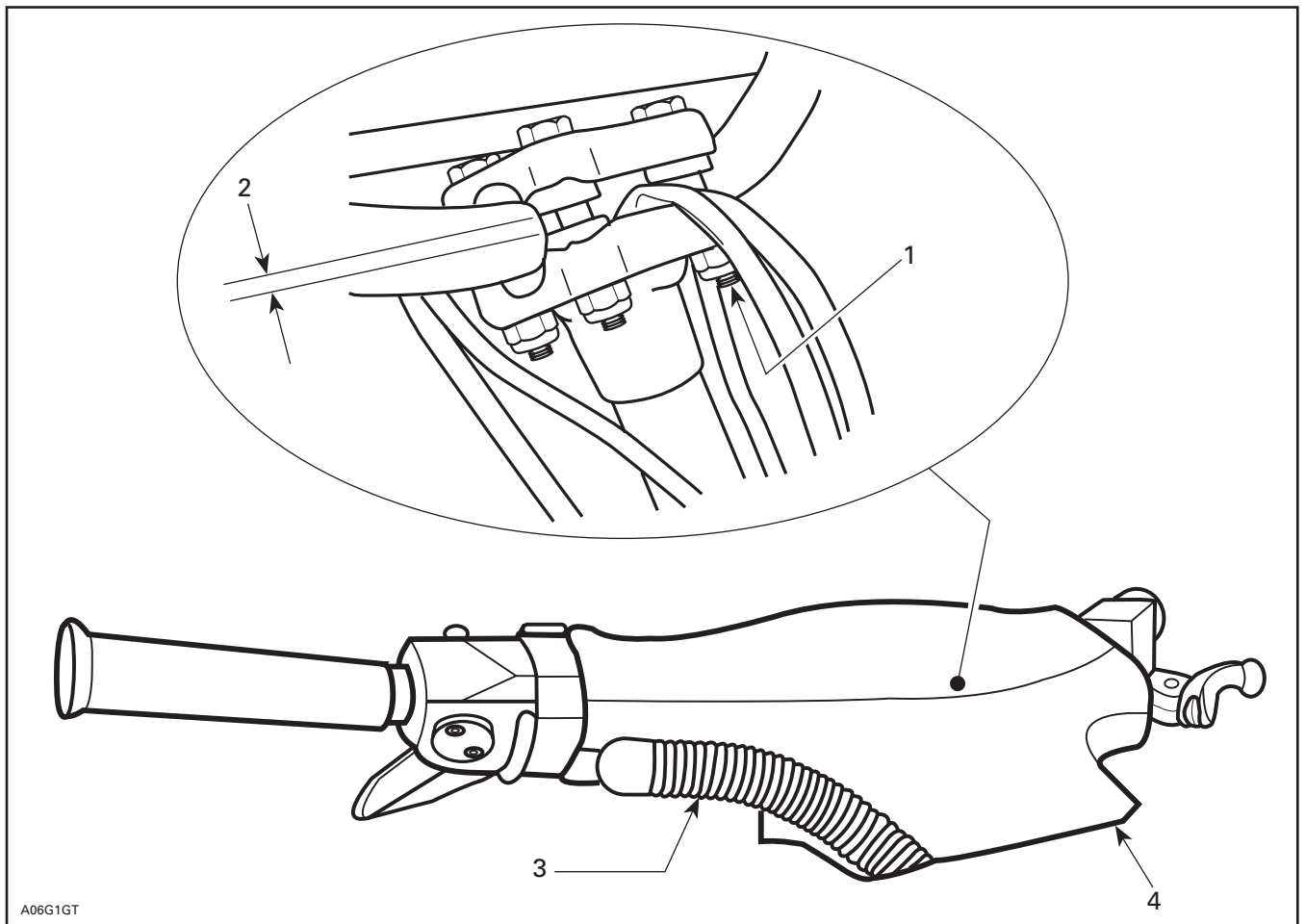
Adjust handlebar temporarily and tighten nuts loosely for now.

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

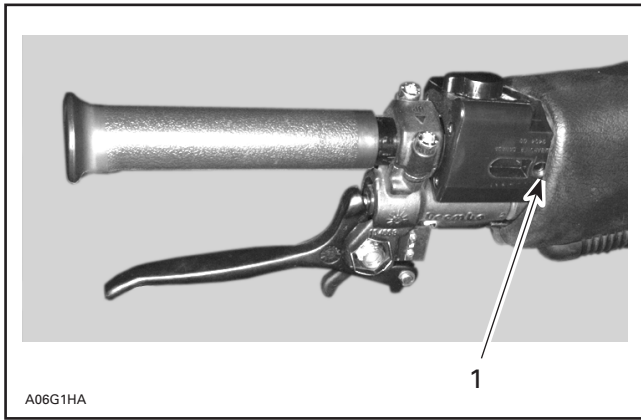
Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings.

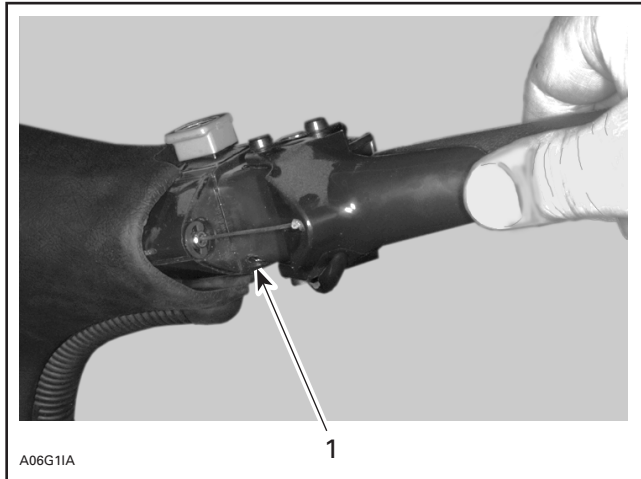


1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (P/N 572 072 400) (section no. 3 or 5)
4. Steering pad (engine compartment)



BRAKE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)



THROTTLE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)



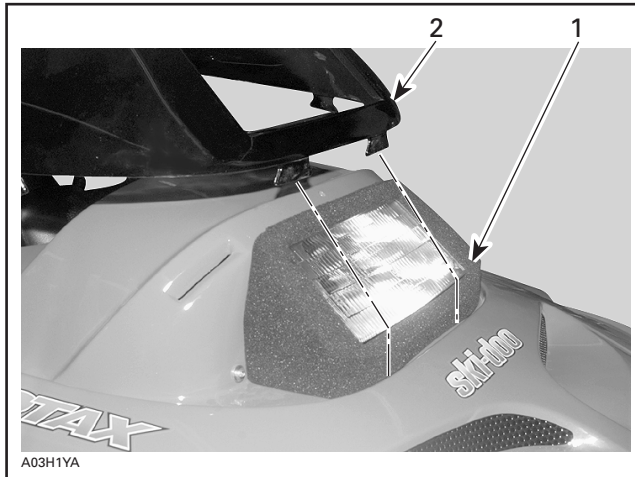
PARTS INSTALLATION WINDSHIELD



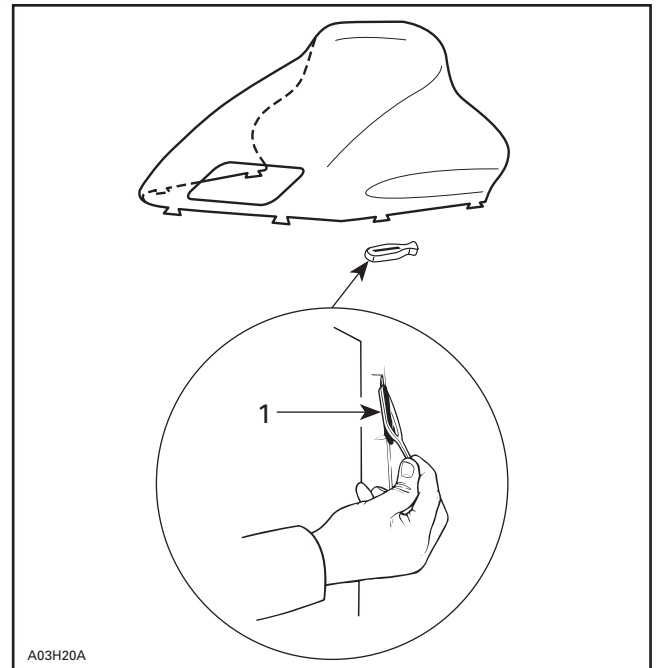
All Models

Install windshield on dashboard.

NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



1. Protective foam
2. Install windshield on dashboard



1. Latch (6) (P/N 570 023 800) (section no. 4 or 6)

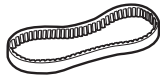


WINDSHIELD INSTALLED ON DASHBOARD

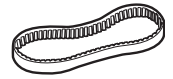
Formula Deluxe 583

Heated Visor Connector Extension

Section no.9 of pre-delivery kit, provides a connector extension for the heated visor.



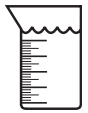
PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING



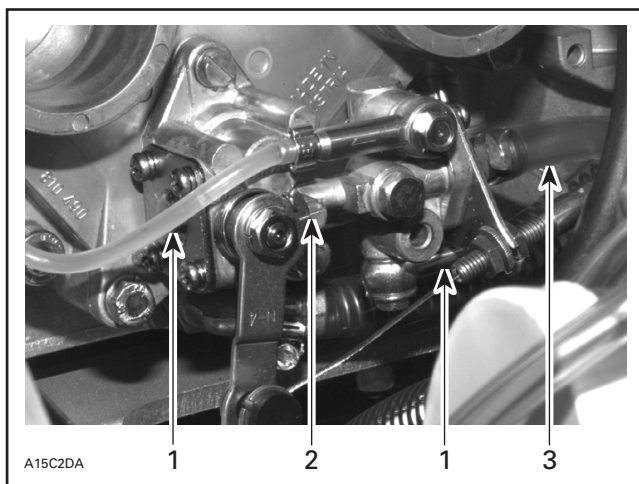
BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Mark on lever should align 1 to 2 mm (.039 to .079 in) above mark on pump body after removing the cable play by activating throttle lever.

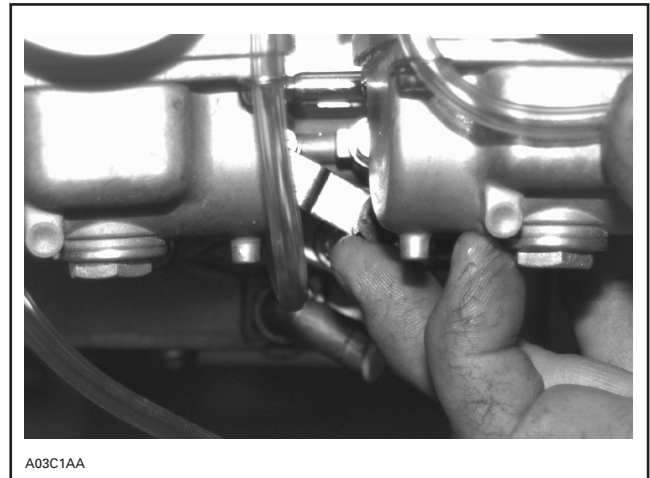


1. Small oil line
2. Lever mark 1 to 2 mm (.039 to .079 in) above pump body mark
3. Main oil line

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.

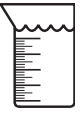


A03C1AA
TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

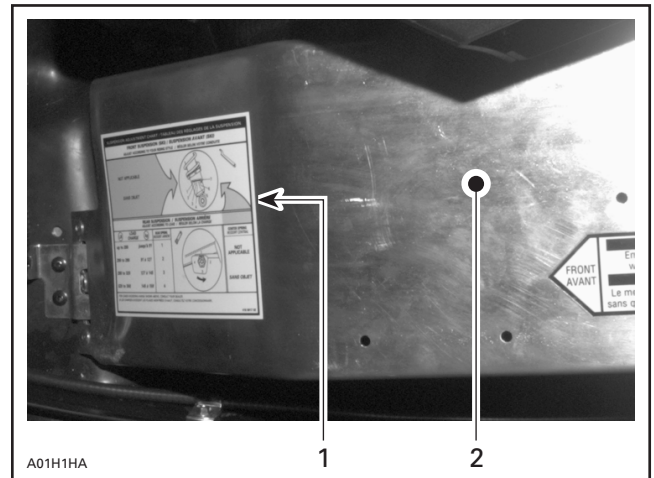
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENT TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

Idler wheel caps are found in the *Predelivery Kit*, make sure they are installed after track setting.



ADJUSTMENT DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).








TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

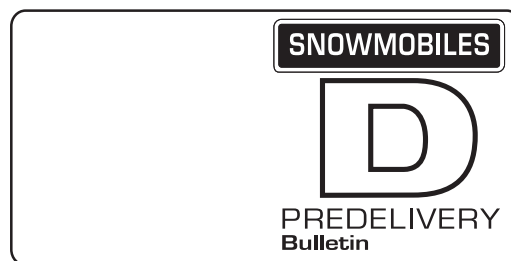
	MODELS	FORMULA Deluxe 500 LC	FORMULA Deluxe 583	
	Engine Type	494	583	
	Maximum HP RPM ①	± 100 RPM 7800	7900	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 924 509 135°/ 64°	420 924 502 140°/ 71°
	Carburetor Type	PTO VM 38 - 408 • MAG VM 38 - 409 •	PTO VM 40 - 416 • MAG VM 40 - 417 •	
	Main Jet	PTO 300/MAG 280 •	PTO 270/MAG 260	
	Needle Jet	Q-3 (480)	P-7 (480)	
	Pilot Jet	50	50	
	Needle Identification — Clip Position	6DGY9 - 2 •	6DEY4 - 2	
	Slide Cut-Away	2.5	2.5	
	Float Adjustment	± 1 mm (± 0.039 in)	18.1 (.71)	18.1 (.71)
	Air Screw Adjustment	± 1/16 turn	2 •	2
	Idle Speed RPM	± 200 RPM	1800	1800
	Gas Grade Octane Number	Regular Unleaded (R + M)/2	87	Regular Unleaded 87
	Gas/Oil Ratio	Oil Injection	Oil Injection	Oil Injection
	Ignition Timing BTDC ②	mm (in)	1.81 (.071)	1.75 (.069)
	Trigger Coil Air-Gap	mm (in)	0.55 - 1.45 (.022 - .057)	0.55 - 1.45 (.022 - .057)
	Gear Ratio	teeth	23/44	23/44 •
	Engagement Speed	± 100 RPM	3800	4100
	Drive Pulley Calibration Screw Position		2 •	3
	Pulley Distance	Z (+ 0, - 1) mm ((+ 0, - 1/32) in)		16.5 (+ 0/- 1) (21/32 (+ 0/- .04)) •
	Offset	X	± 0.4 mm (± 1/64 in)	35.5 (± .05) (1-3/8 (± .002)) •
		Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection	mm (in)	32 (1-1/4)
		Force ③	kg (lbf)	11.34 (25)
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)		7.0 (15.43)
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection	30 to 35 mm (1-3/16 to 1-3/8 in) with a 7.3 kg (16 lb) downward pull •	30 to 35 mm (1-3/16 to 1-3/8 in) with a 7.3 kg (16 lb) downward pull •	

- ① Engine speed at which maximum power is achieved.
- ② 17° at 6000 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-15**

Date: September 15, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Grand Touring 500 Grand Touring 583	1367 and 1368 1370 and 1371	All
1999	Europe: Grand Touring 500 Grand Touring 583	1369 1372	All

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that predelivery check list is completed and signed.

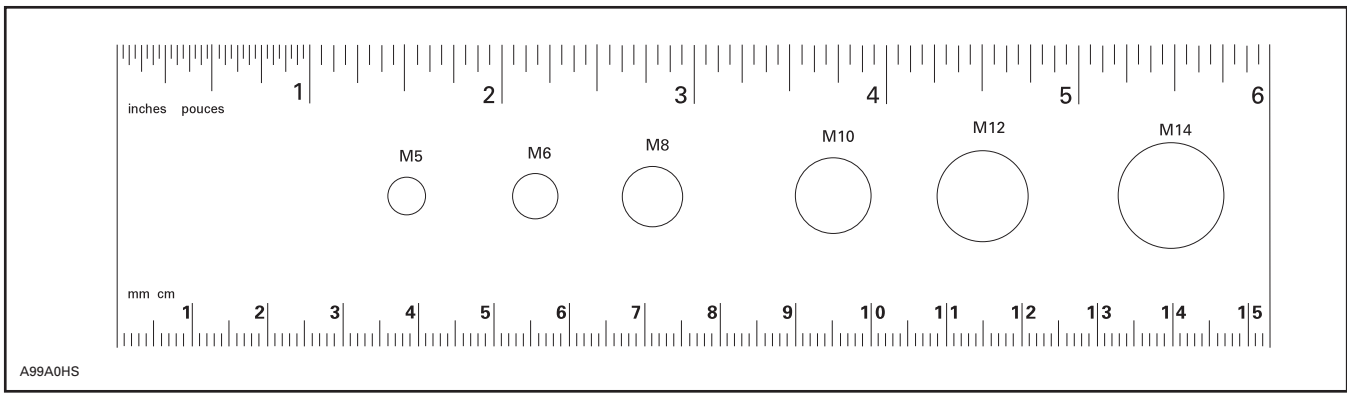
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

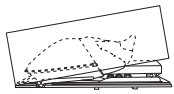
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and video.

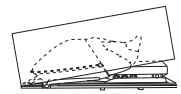
There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
549 010 766	GT 500/583

◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

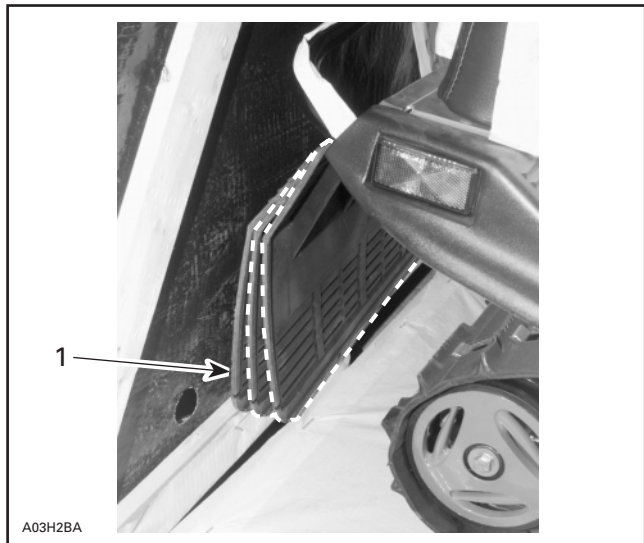
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

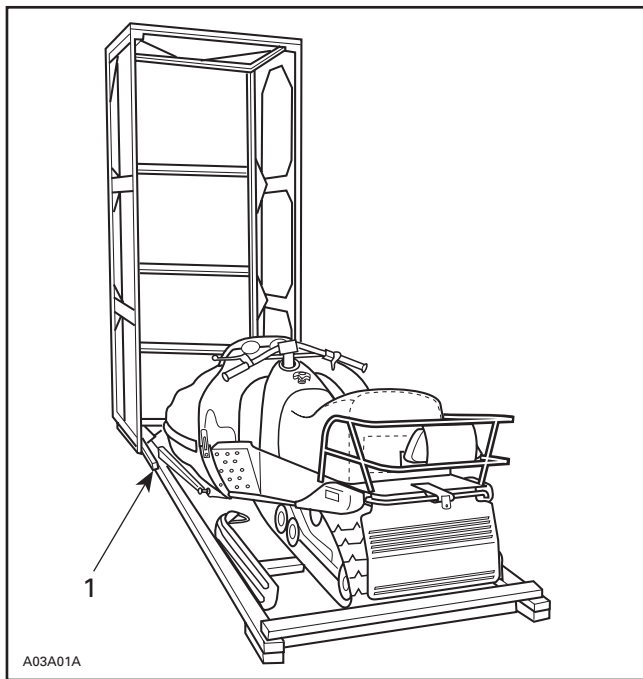
Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip retaining windshield, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove parts to be installed and predelivery kit from engine compartment. Detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

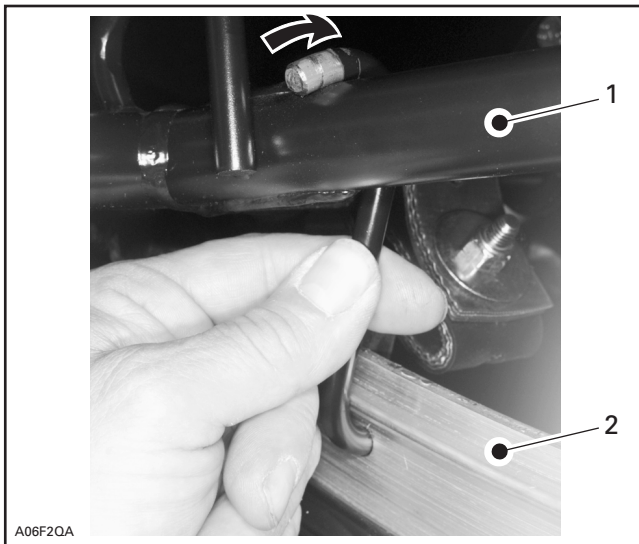


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

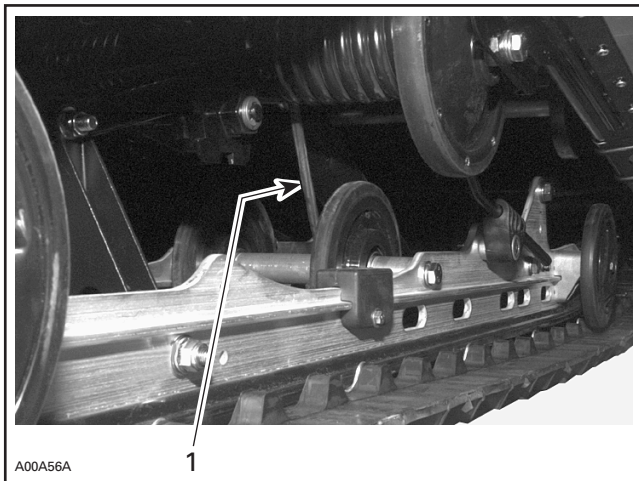
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL

1. Front arm
2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Procedure

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

◆ WARNING

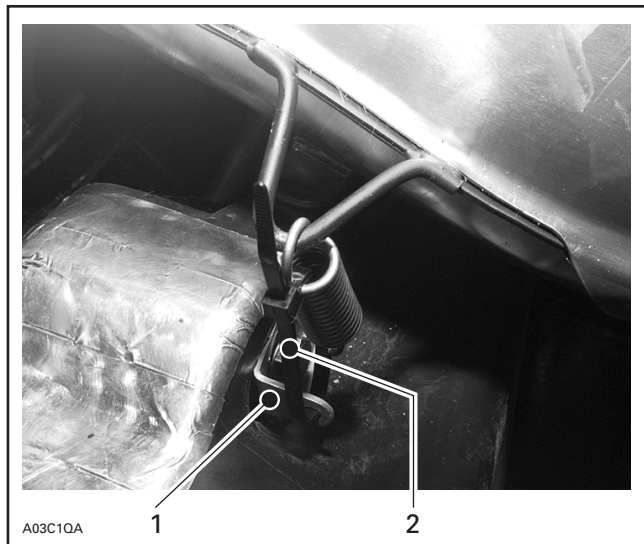
Both hooks must be removed to have snowmobile suspension operational.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



GT 583 SHOWN

1. Lug in recess
2. Locking tie

All Models

Lift front of vehicle and block safely.

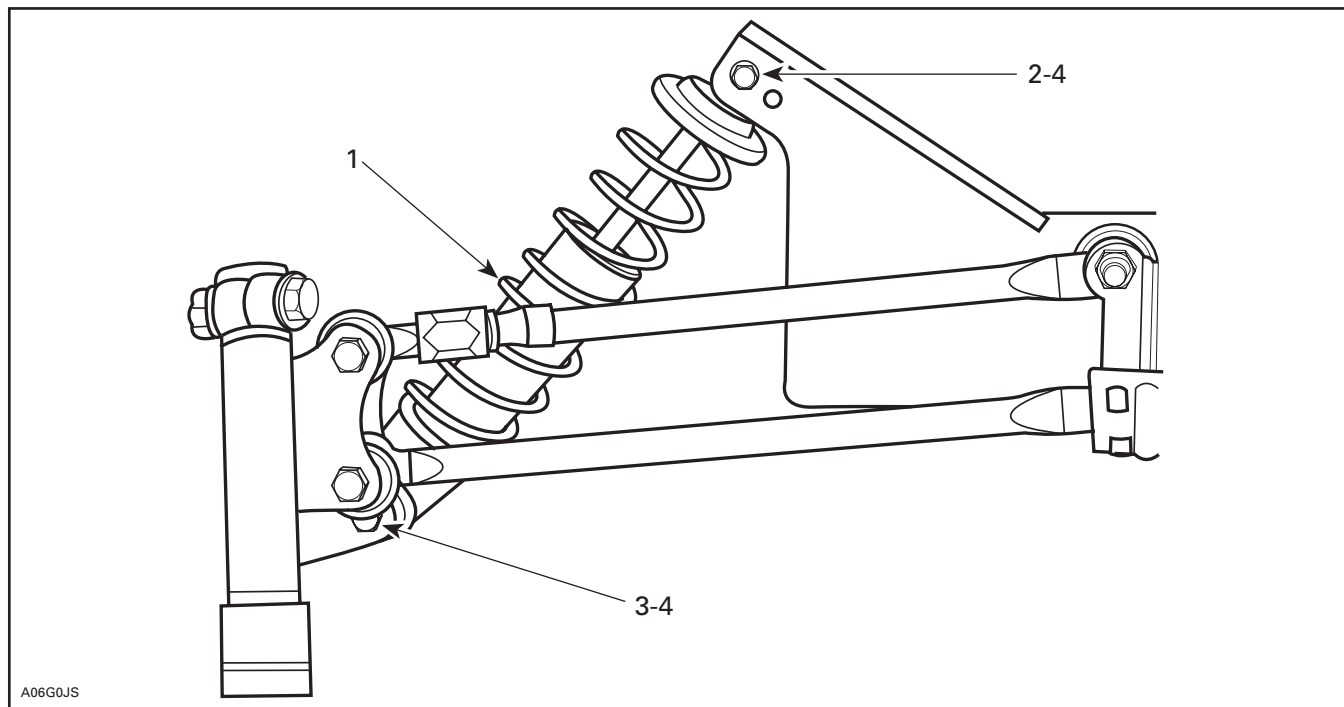
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position screw heads toward front.

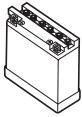
Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

NOTE: On GT 500 model, hook up exhaust spring on mid-hole.



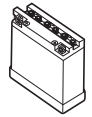
TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment)
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Nut M10 x 1.5 (4) (P/N 228 501 045) (section no. 3). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION

BATTERY



During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage. Do not charge an installed battery.

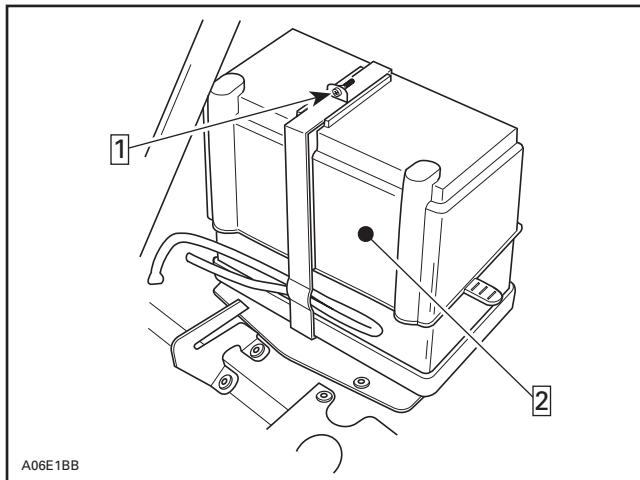
Battery Removal

Remove belt guard.

Remove air intake silencer.

Unfasten battery retaining strips.

Open strips and withdraw battery from vehicle
Lift battery protective boot and charge battery.



Step **1**: Unfasten and open

Step **2**: Lift protective boot

Battery Installation

NOTE: Before reinstalling battery and air silencer check oil pump lever adjustment (See section LIQUIDS — Oil Injection Pump Bleeding).

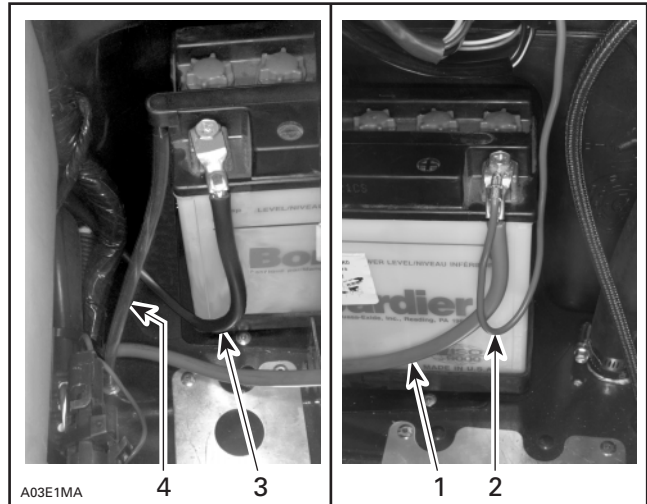
Install vent tube on battery.

Connect RED positive cable and RED wire to positive battery terminal.

Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.



BATTERY CONNECTION

1. RED positive cable
2. RED positive wire
3. BLACK negative cable
4. Vent tube

Apply silicone dielectric grease (P/N 293 550 004) on battery posts and connectors.

Install protective boot over battery and place battery on its stand.

Ensure vent tube is properly connected to vehicle fitting on front frame.

Close and fasten retaining strips as shown on the next photo.

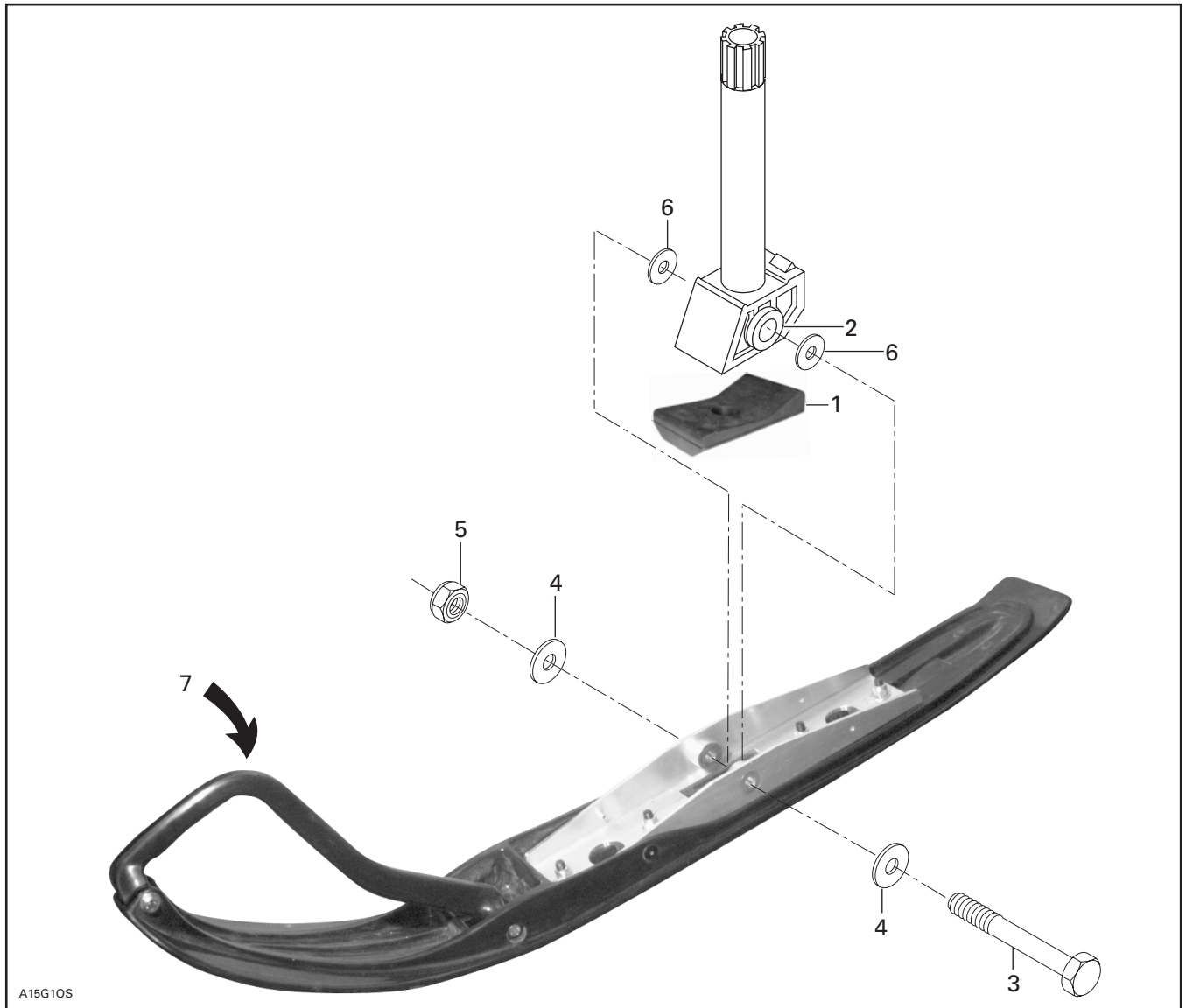
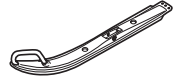


BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.
Reinstall air silencer.



PARTS INSTALLATION SKIS



LEFT SIDE SHOWN

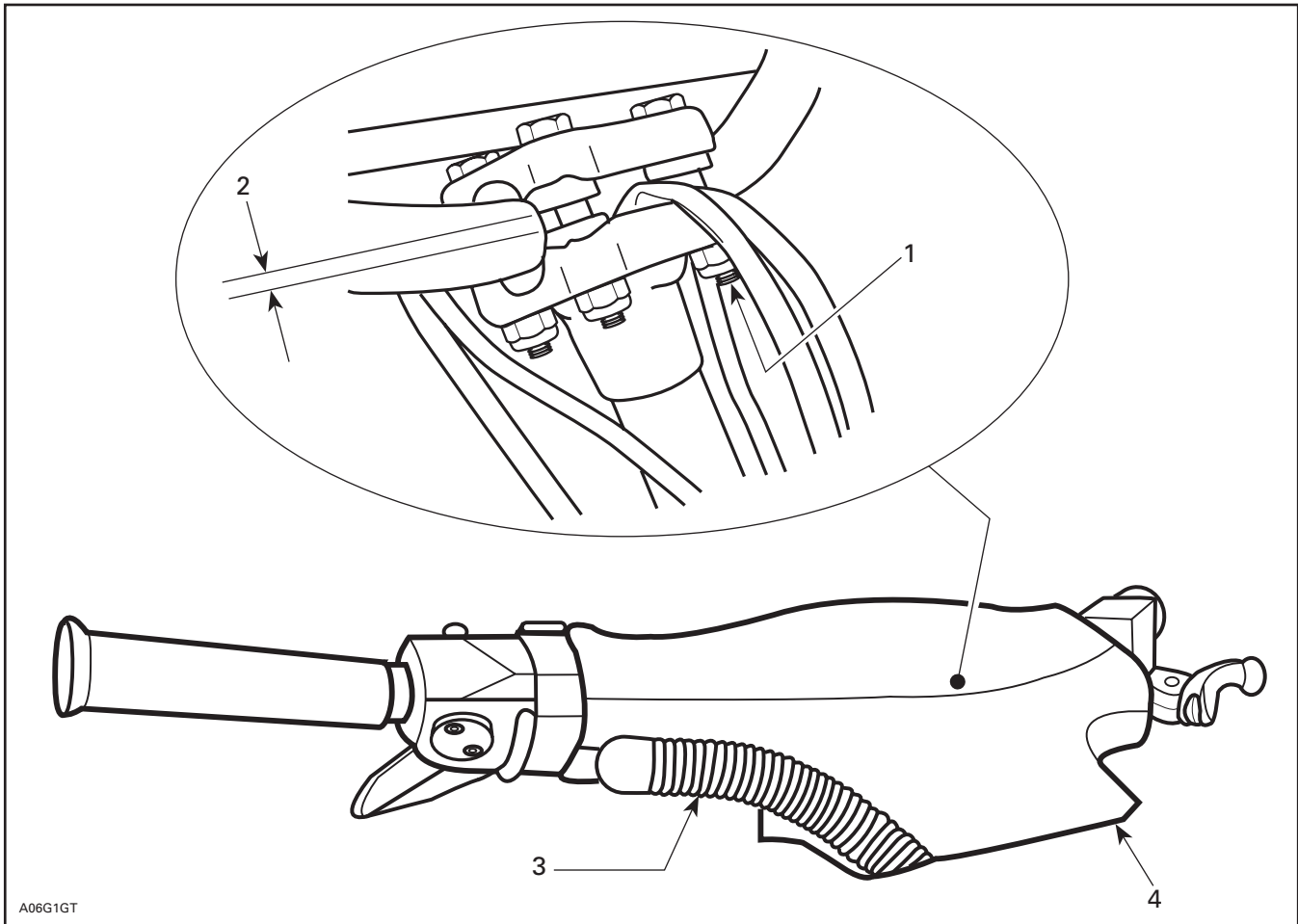
1. Stop bounding (2) (P/N 570 053 300) (section no. 4)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Large flat washer (4) (P/N 732 900 048) (section no. 4)
5. Elastic flanged nut M12 (2) (P/N 228 521 045) (section no. 4). Torque to 40 N•m (30 lbf•ft)
6. Small flat washer (4) (P/N 506 136 400) (section no. 4)
7. Twist ski to ease installation



PARTS INSTALLATION STEERING PAD

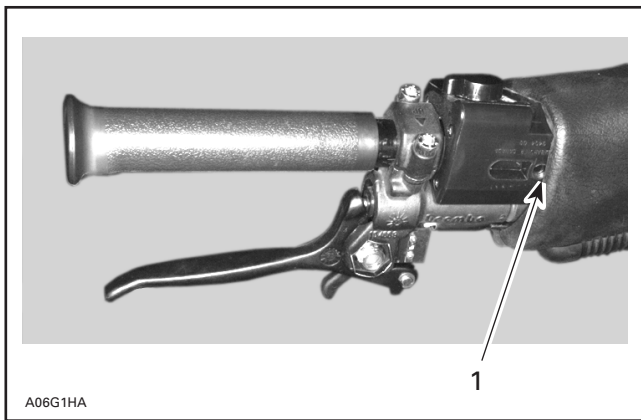


Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts from 21 to 28 N•m (16 to 20 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



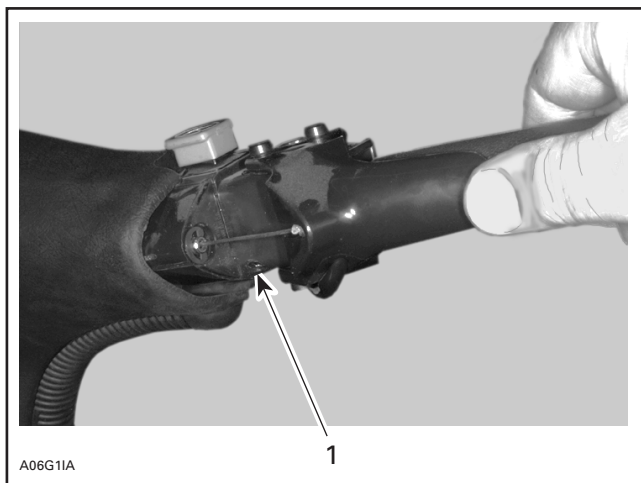
TYPICAL

1. Torque from 21 to 28 N•m (16 to 20 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (section no. 3)
4. Steering pad (engine compartment)



BRAKE HANDLE HOUSING

1. Tighten set screw to **2 N•m (18 lbf•in)**



THROTTLE HANDLE HOUSING

1. Tighten set screw to **2 N•m (18 lbf•in)**

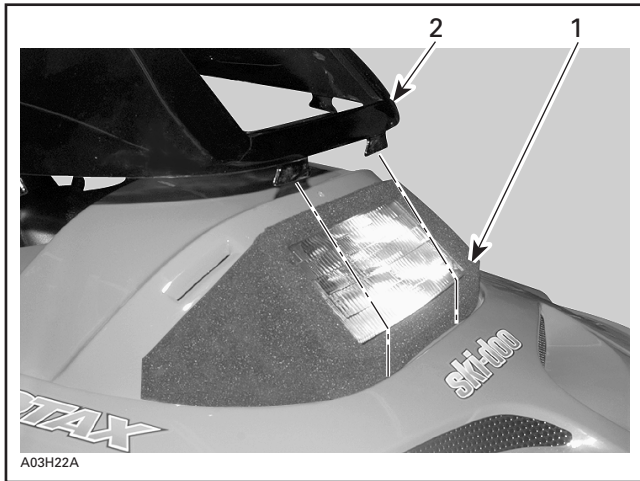


PARTS INSTALLATION WINDSHIELD

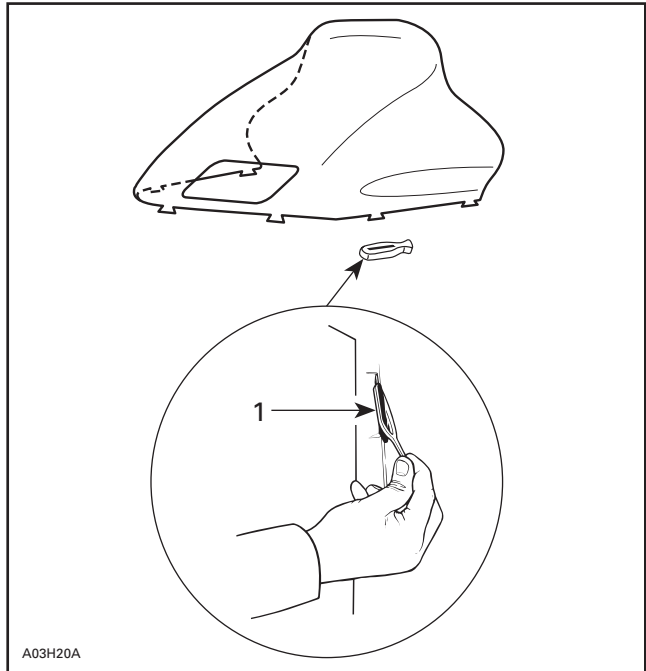


Install windshield on dashboard.

NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.

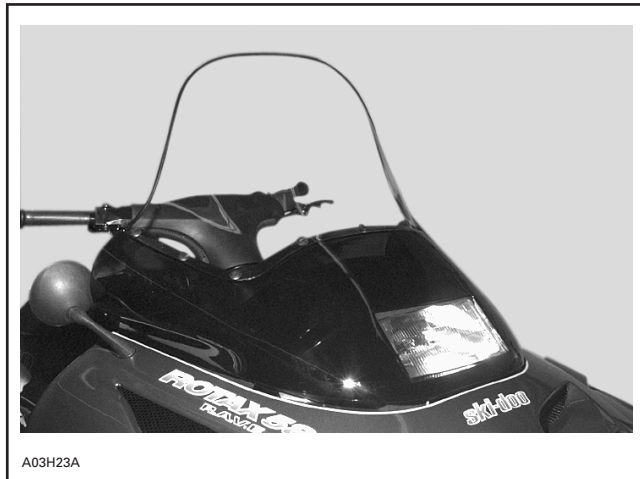


1. Protective foam
2. Install windshield on dashboard



TYPICAL

1. Latch (6) (P/N 570 023 800) (section no. 5)



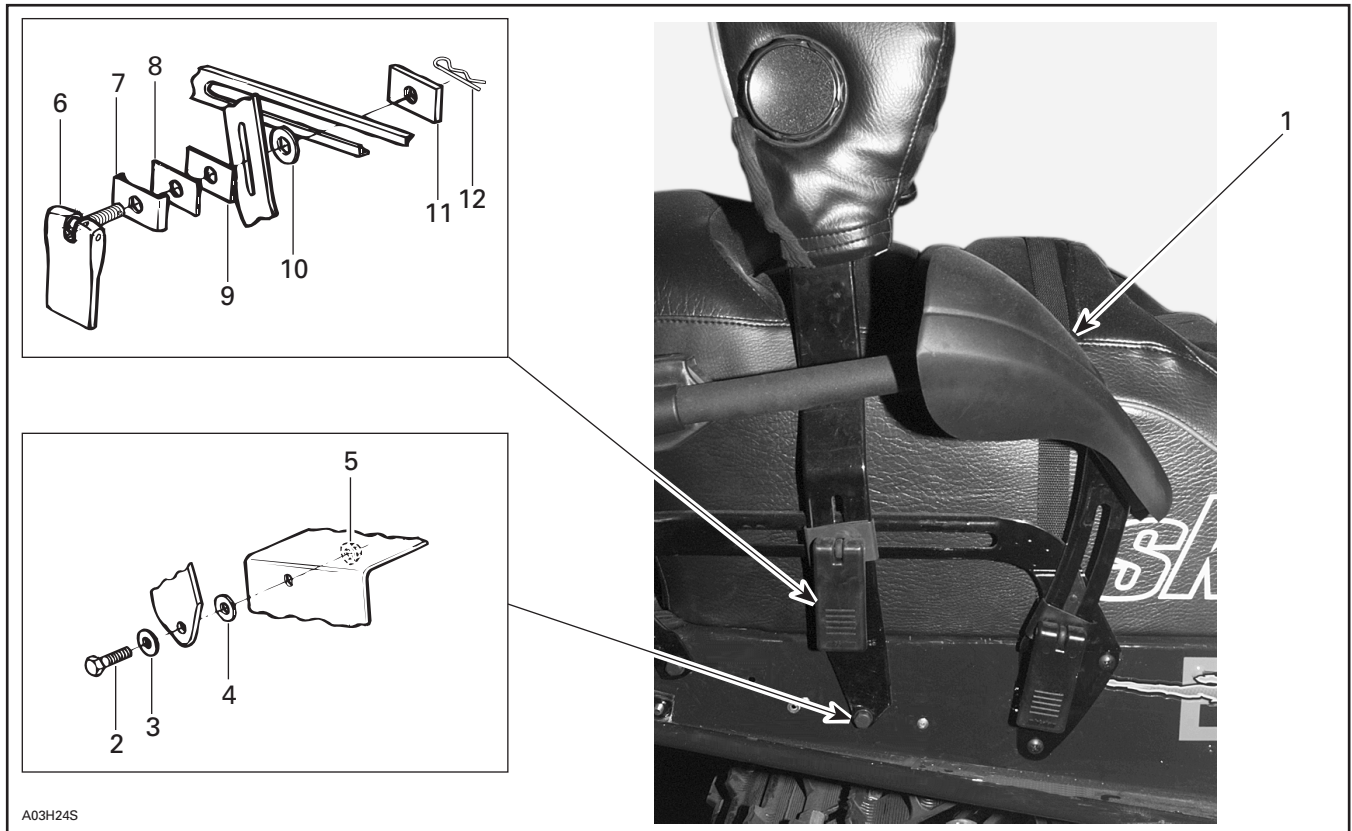
WINDSHIELD INSTALLED ON DASHBOARD



PARTS INSTALLATION BACKREST



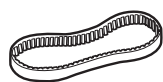
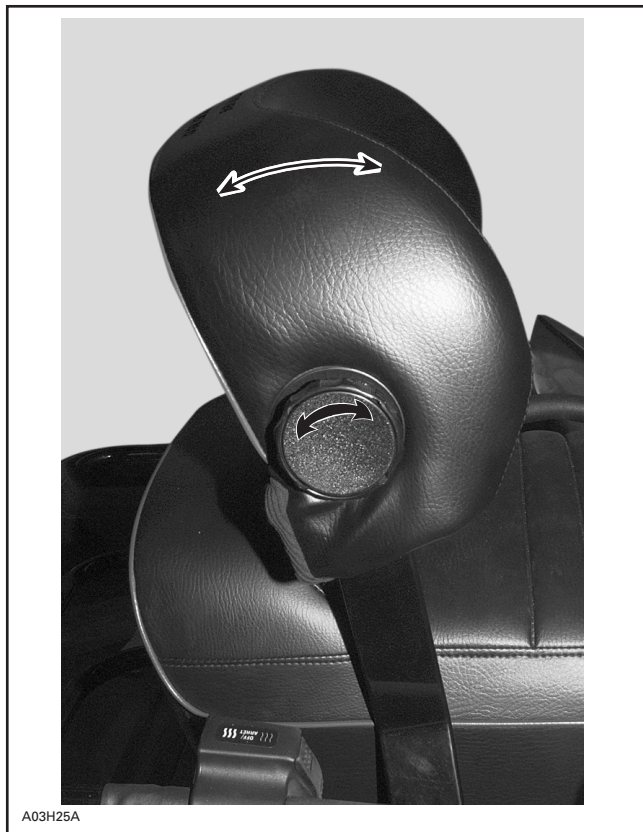
Secure backrest frame on tunnel then install lever assembly onto luggage rack rail.
Install hand protectors with rivets onto luggage rack handle.



A03H24S

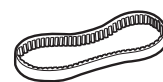
1. Hand protector (2) (seat storage compartment). Secure with BLACK rivets (P/N 390 907 700) (section no. 3)
2. Screw M8 x 25 (2) (P/N 732 601 175) (section no. 6)
3. Washer (2) (P/N 732 900 030) (section no. 6)
4. WHITE plastic washer (2) (P/N 414 819 600) (section no. 6)
5. Elastic nut (2) (P/N 228 581 045) (section no. 6). Torque to 8 N•m (73 lbf•in)
6. Lever assembly (2) (P/N 580 611 000) (section no. 2)
7. Guide (2) (P/N 517 257 300) (section no. 2)
8. Rubber shim (2) (P/N 570 027 400) (section no. 6)
9. Spacer (2) (P/N 517 251 300) (section no. 2)
10. Flanged washer (2) (P/N 414 819 500) (section no. 6)
11. Threaded plate (2) (P/N 517 250 000) (section no. 6)
12. Hair pin (2) (P/N 414 108 300) (section no. 6)

Turn adjustment knob left or right to adjust back-rest cushion position.



PARTS INSTALLATION

DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

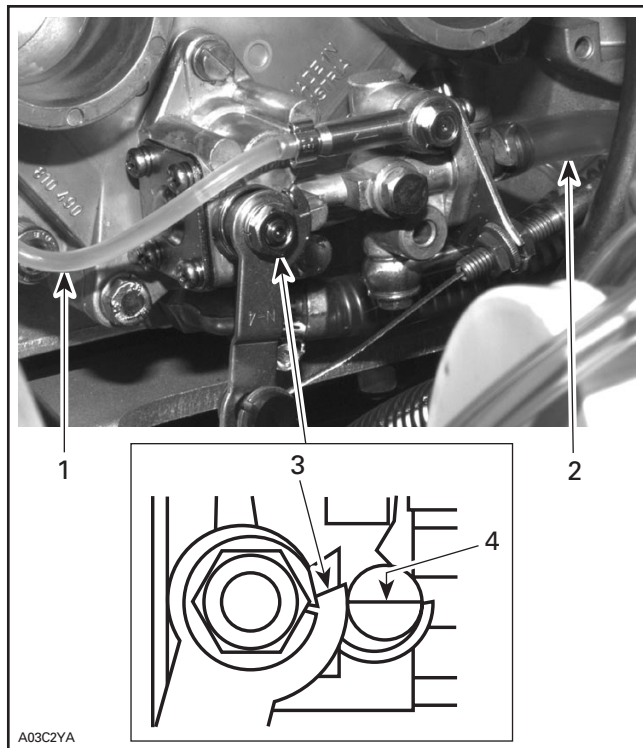
BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required. Check also for proper oil lever adjustment. Mark on pump lever must be from 0 to 2 mm (0 to 1/16 in) higher than mark on pump body when throttle lever is activated just enough to take all cable play.

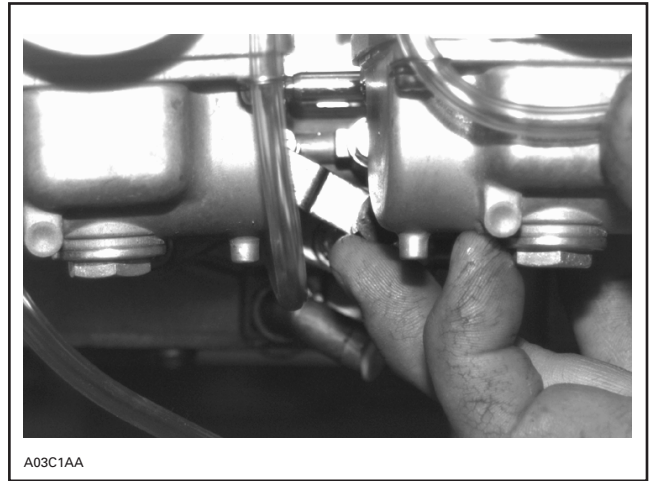
Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



1. Small oil line
2. Main oil line
3. Mark on lever
4. Mark on pump

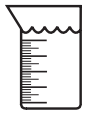


A03C1AA
TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT) as required.

▼ CAUTION

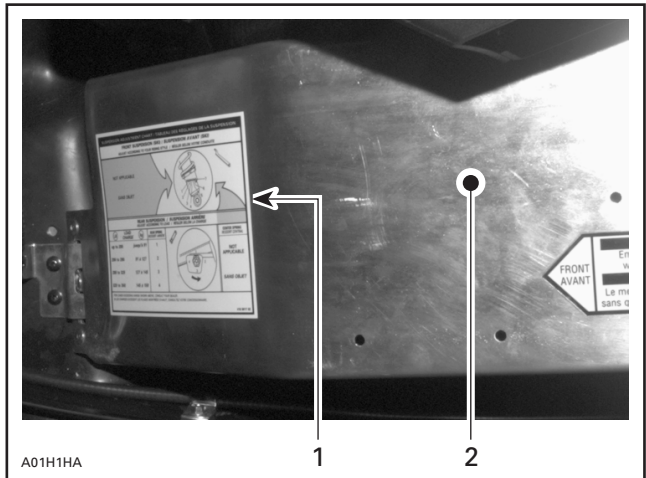
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See *Technical Data* section at the end of this bulletin.

When track adjustment is completed, place wheel caps provided in predelivery kit on rear wheels.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).


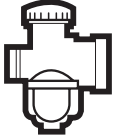




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODELS	GRAND TOURING 500	GRAND TOURING 583	
	Engine Type	494	583	
	Maximum HP RPM ① ± 100 RPM	7800	7900	
	Rotary valve P/N Opening (BTDC)/ Closing (ATDC)	420 924 509 135°/64°	420 924 502 140°/71°	
	Carburetor Type	PTO VM 38 - 410 • MAG VM 38 - 411 •	PTO VM 38 - 416 • MAG VM 38 - 417 •	
	Main Jet	PTO 300 • MAG 280 •	PTO 270 MAG 260	
	Needle Jet	Q-3 480	P-7 480	
	Pilot Jet	50		
	Needle Identification — Clip Position	6DGY9 - 2 •	6DEY4 - 2 •	
	Slide Cut-Away	2.5		
	Float Adjustment ± 1 mm (in)	18.1 (.71)		
	Air Screw Adjustment ± 1/16 Turn	2 •	2	
	Idle Speed RPM ± 200 RPM	1800		
	Gas Grade/ Octane Number (R + M)/2	Regular Unleaded/87		
	Gas/Oil Ratio	Oil Injection		
	Ignition Timing BTDC ② mm (in)	1.81 (.071)	1.75 (.069)	
	Trigger Coil Air Gap mm (in)	0.55 - 1.45 (.022 - .057)		
	Gear Ratio Teeth	23/44		
	Engagement Speed ± 100 RPM	3600	3100	
	Drive Pulley Calibration Screw Position	2 •	3	
	Pulley Distance Z (+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)		
	Offset X ± 0.5 mm (± 1/64 in)	35.0 (1-3/8)		
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
	Drive Belt Adjustment	Deflection mm (in)	32 (1-1/4)	
		Force ③ kg (lbf)	11.34 (25)	
	Driven Pulley Preload ± 0.7 kg (lbf)	7.0 (15.43)		
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment Deflection mm (in)	30 to 35 (1.181 to 1.378) with a 7.3 kg (16 lb) downward pull •			

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

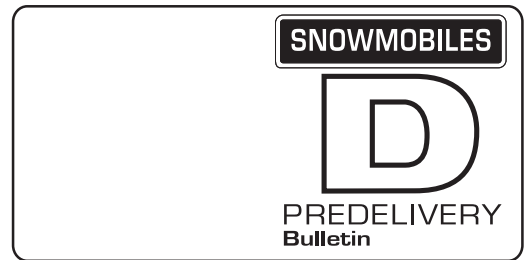
ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-14**

Date: August 21, 1998

SUBJECT: Predelivery Bulletin

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Summit x* 670	1406/1407	All
1999	Europe: Summit x* 670	1408	All

This bulletin must be used in conjunction with the predelivery check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

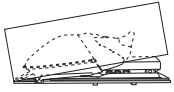
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

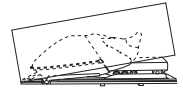
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

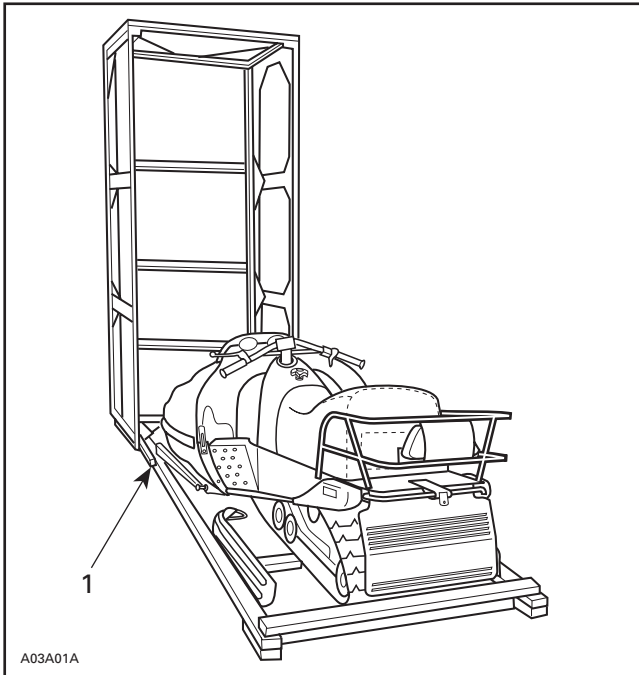
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to crate base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.



TYPICAL
1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

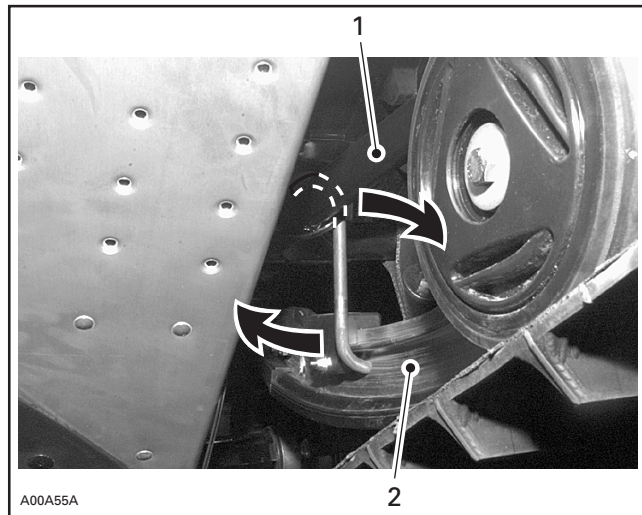
From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

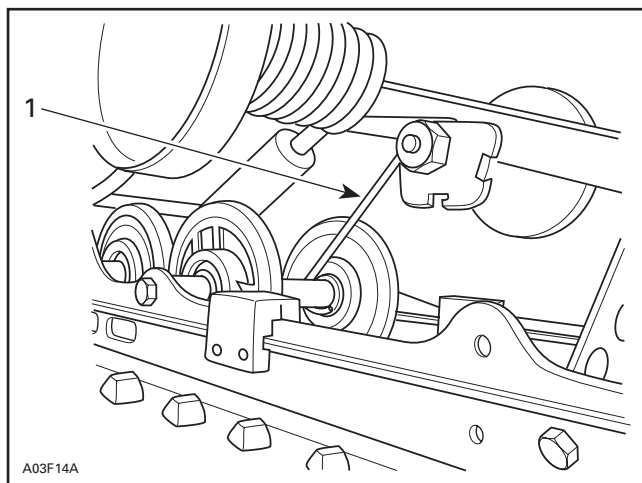


TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL

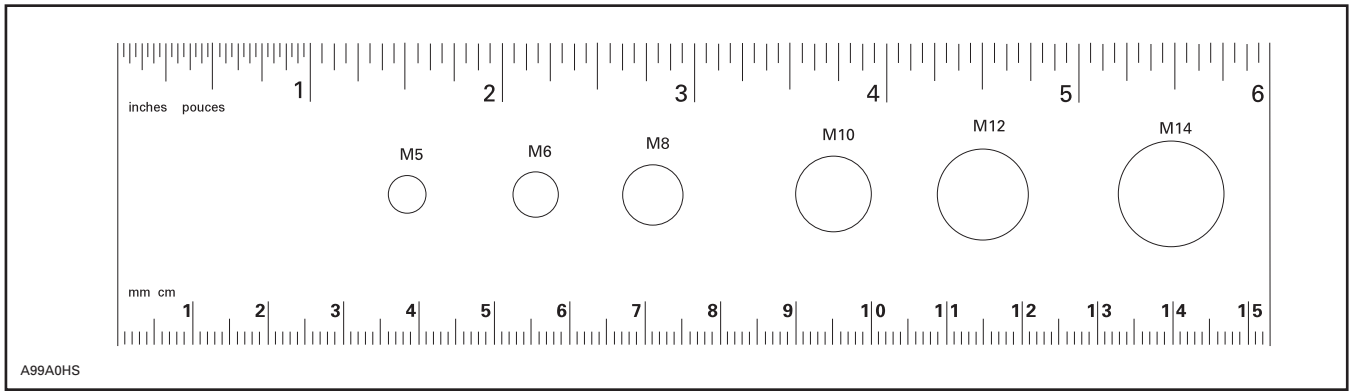
Apply pressure on rear suspension and remove hook from rear portion of suspension, as illustrated.



- 1. Remove hook

◆ WARNING
Shipping hooks must be removed to have snowmobile suspension operational.

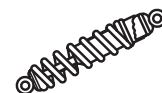
PREDELIVERY KIT P/N	MODELS
580 669 900	Summit x 670



NOTE: This ruler can be helpful to identify fastener length or size.



PARTS INSTALLATION FRONT SUSPENSION



Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

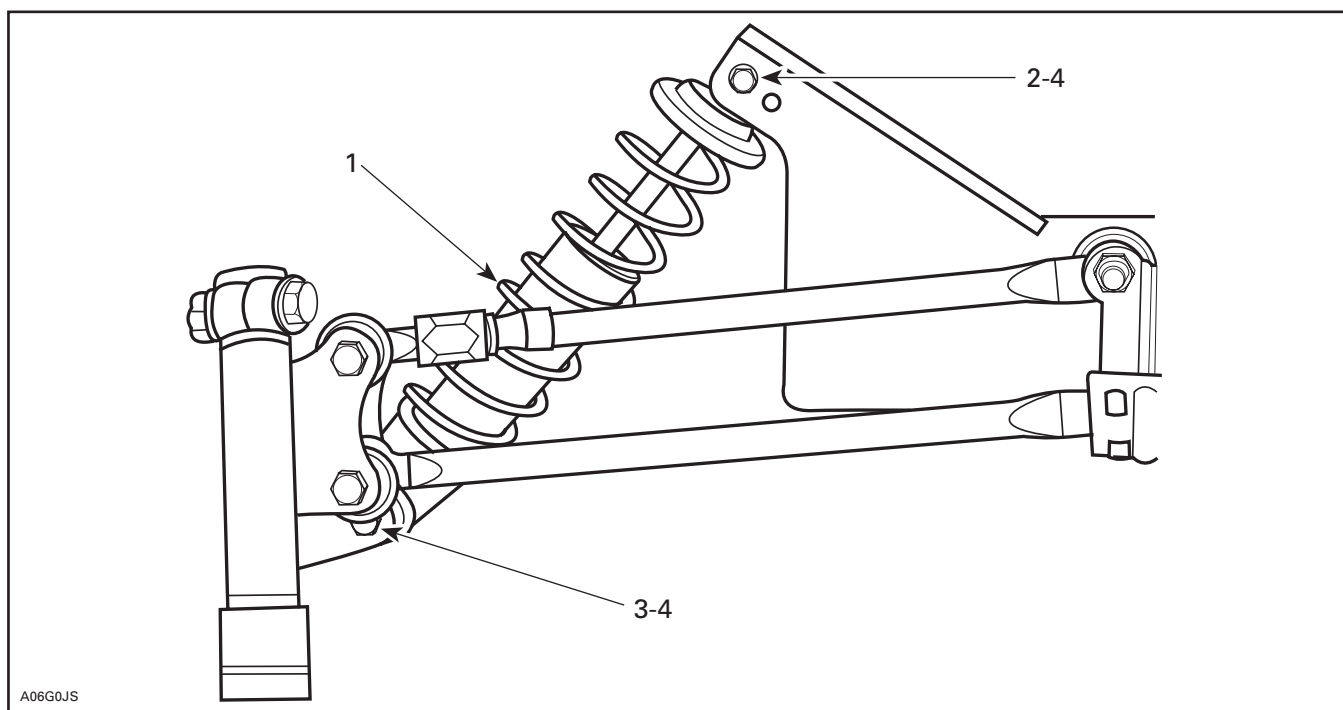
NOTE: Position top screw heads toward front and bottom screw heads toward rear.

Cut locking tie retaining exhaust spring to exhaust support.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess, as shown in the next photo.



Hook up exhaust spring.



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic flanged nut M10 x 1.5 (4) (P/N 228 501 045) (section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS

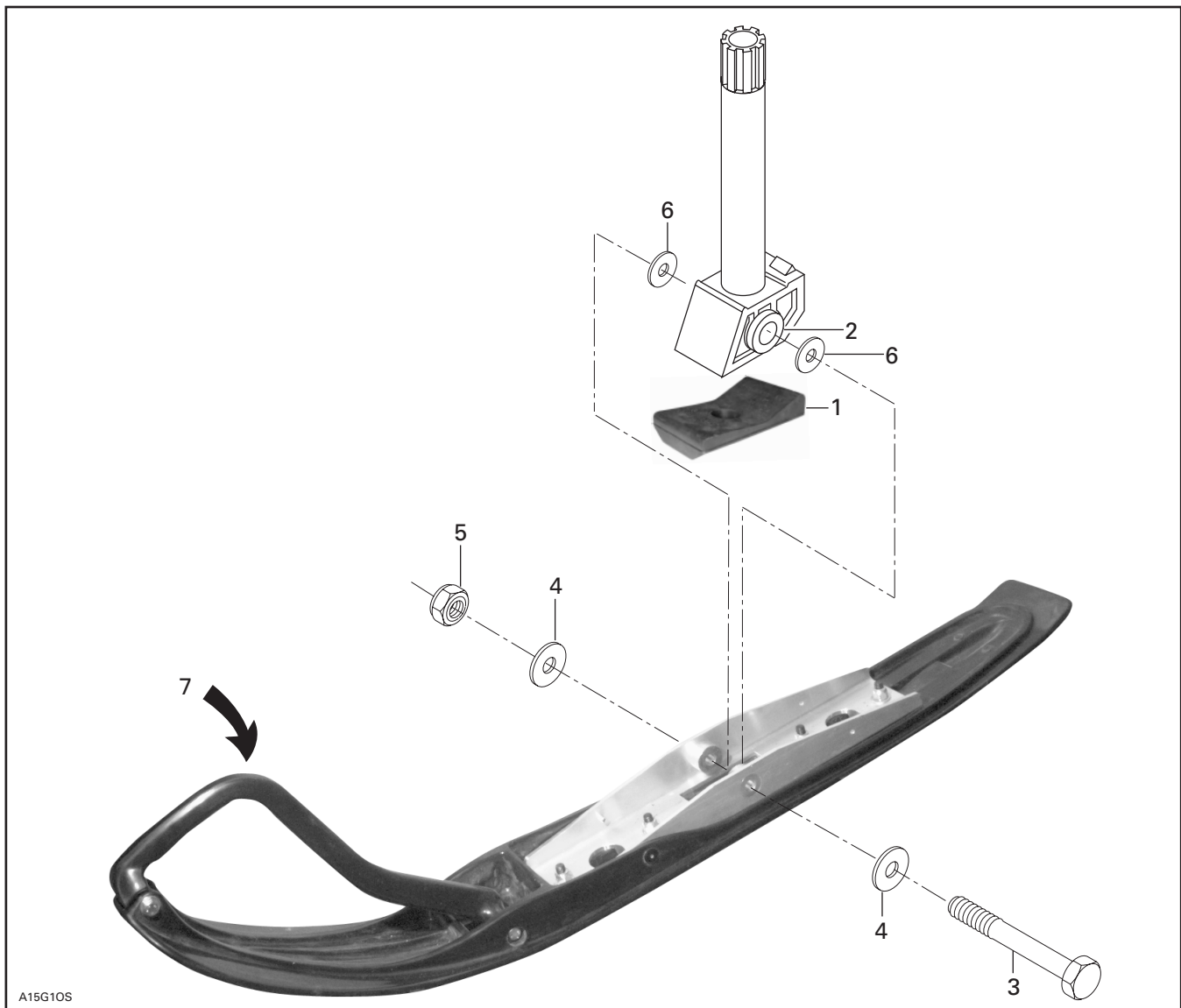


Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 900 048) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.

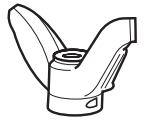


LEFT SIDE SHOWN

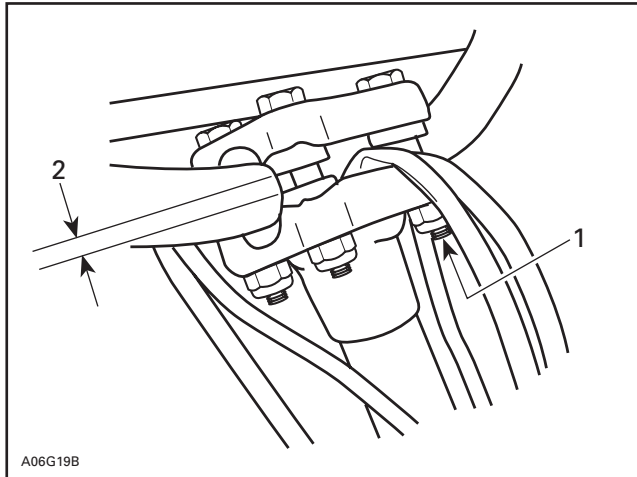
1. Ski stopper (2) (P/N 570 053 300) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Adjust handlebar and torque nuts between 21 and 28 N•m (16 and 20 lbf•ft).



A06G19B

TYPICAL

1. Torque between 21 and 28 N•m (16 and 20 lbf•ft)
2. Equal gap each side (both clamps)

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

STEERING HOLDING STRAP

Start by cutting locking tie retaining right side strap end.

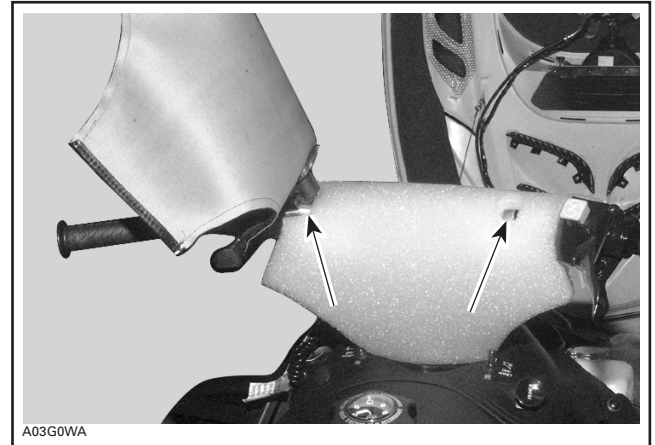
Insert strap through holes provided in steering padding, as shown in the next photo.



A03G0JA

1. Strap inserted through both steering pad cover holes

Properly position steering foam in place, as shown in the next photo.

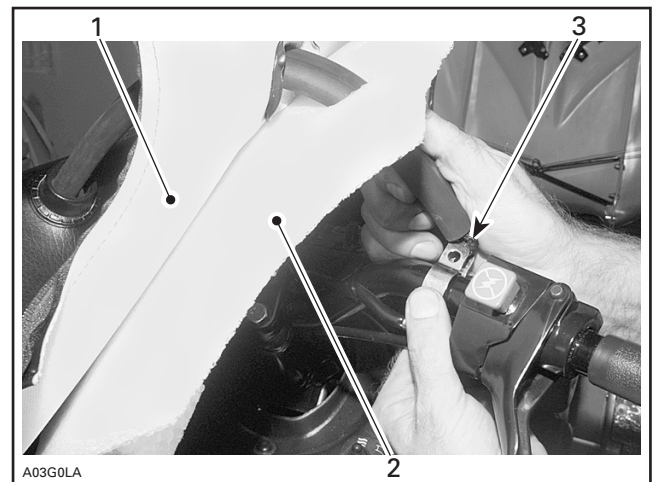


A03G0WA

ON STEERING FOAM, NOTE THAT NOTCH IS AT LEFT AND HOLE IS AT RIGHT

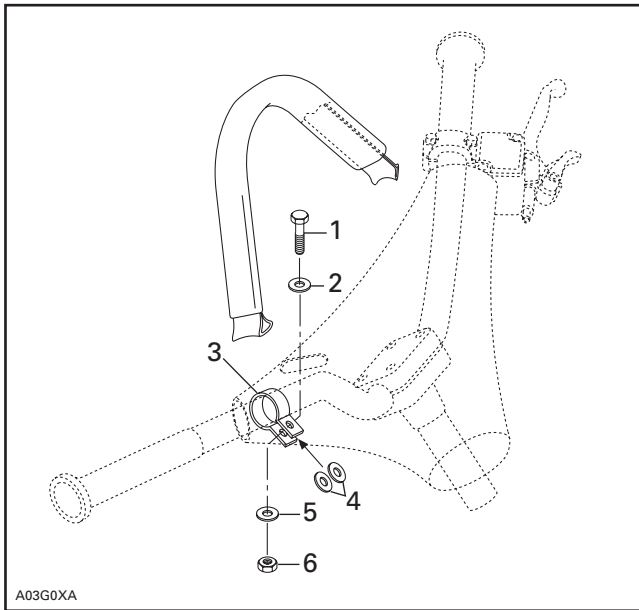
Once steering foam is positioned under steering padding, insert right side strap end through padding hole.

Secure right side strap end with retaining clip and tighten firmly using the bolt nut and washers (section 5) in the sequence shown on drawing below.



A03G0LA

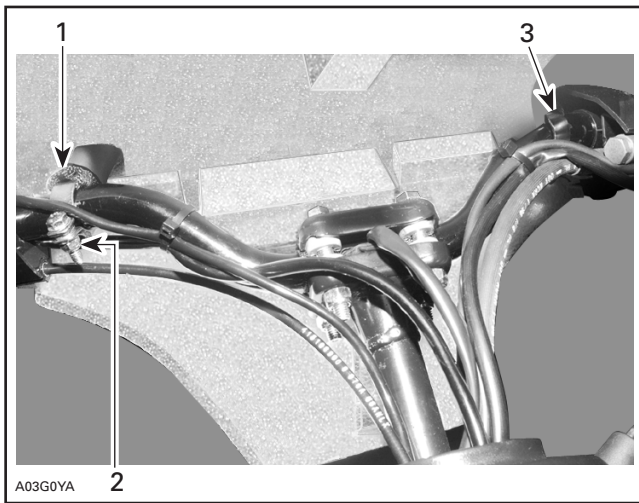
1. Steering padding
2. Steering foam
3. Secure right side strap end using clip, washers, screw and nut, (section no. 5)



A03G0XA

1. Bolt
2. Washer
3. Retaining clip
4. Washers
5. Washer
6. Nut

NOTE: Left side clip tightening bolt and nut should be toward rear and right side toward front, as shown in the next photo.

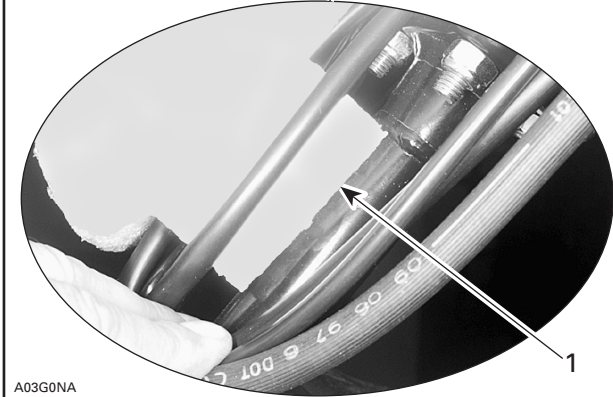
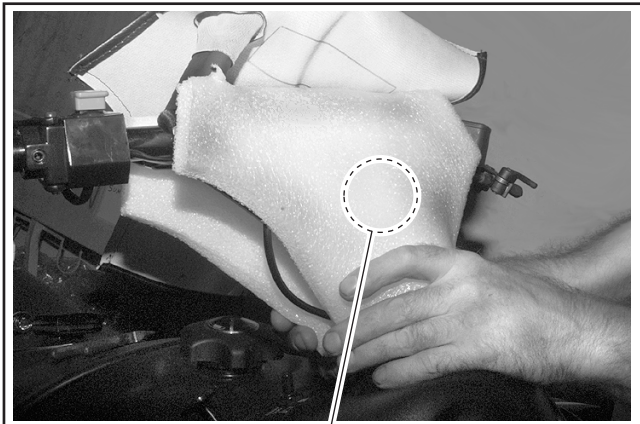


A03G0YA 2

POSITION STYROFOAM BLOCKS PROPERLY ON HANDLEBAR AND MAIN TUBE

1. Strap inserted in clip
2. Right side clip toward front
3. Left side clip toward rear

Install steering foam taking care in positioning foam properly, leaning against steering column, as shown in the next photo.



A03G0NA

PROPERLY POSITION PADDING

1. Foam properly leaning on steering column

Pull down steering padding onto foam and complete installation by zipping both sides.

Align steering pad with handle housings on both side and screw housings in place.



A00A4VA

FINAL INSTALLATION

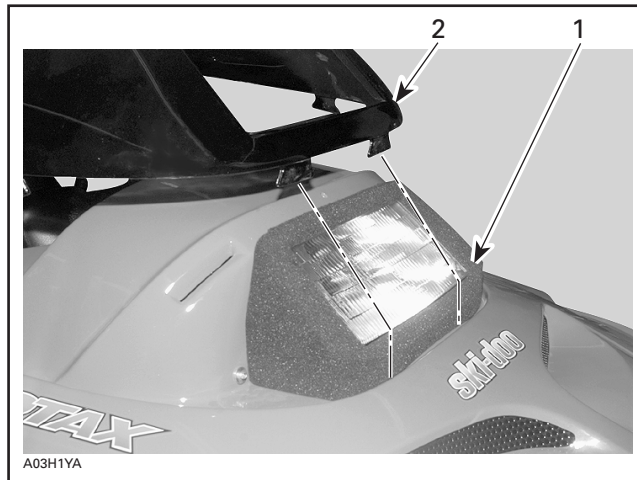


PARTS INSTALLATION WINDSHIELD



Install windshield on dashboard and secure from underneath.

NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.

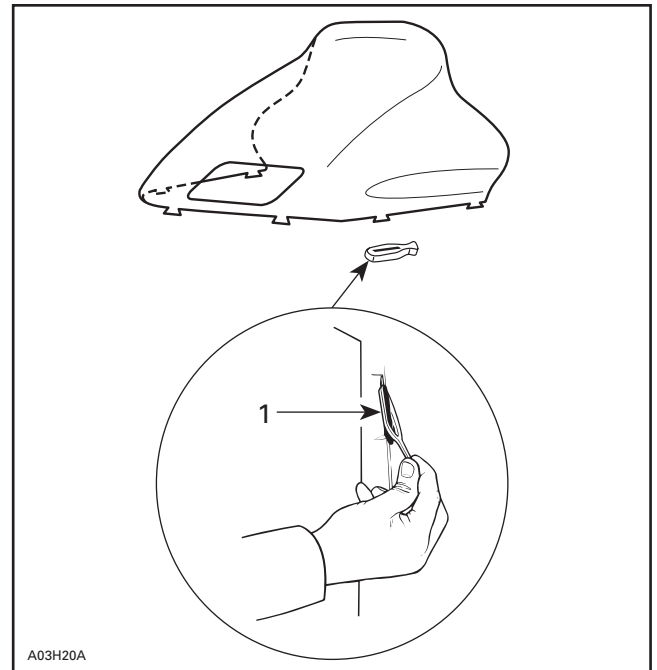


TYPICAL

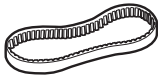
1. Protective foam
2. Install windshield on dashboard



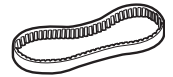
TYPICAL — WINDSHIELD INSTALLED ON DASHBOARD



1. Latch (6) (P/N 570 023 800) (section no. 6)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING



SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz.) of BOMBARDIER- ROTAX injection oil (P/N 413 803 000) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

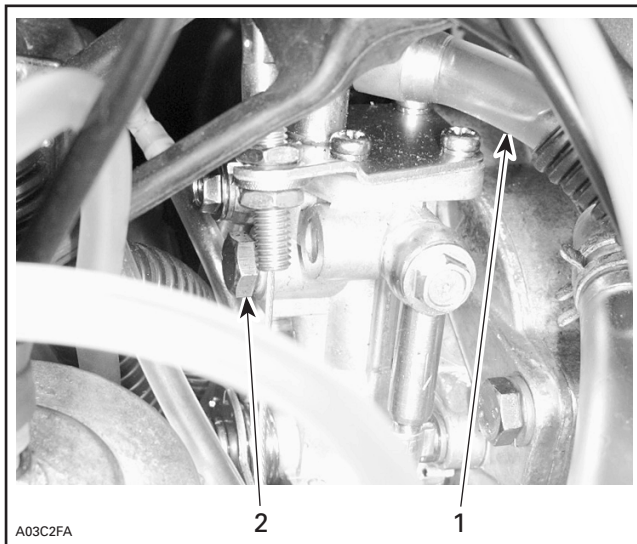
BLEEDING PROCEDURE

NOTE: On Summit x 670, oil pump has been located above carburetors.

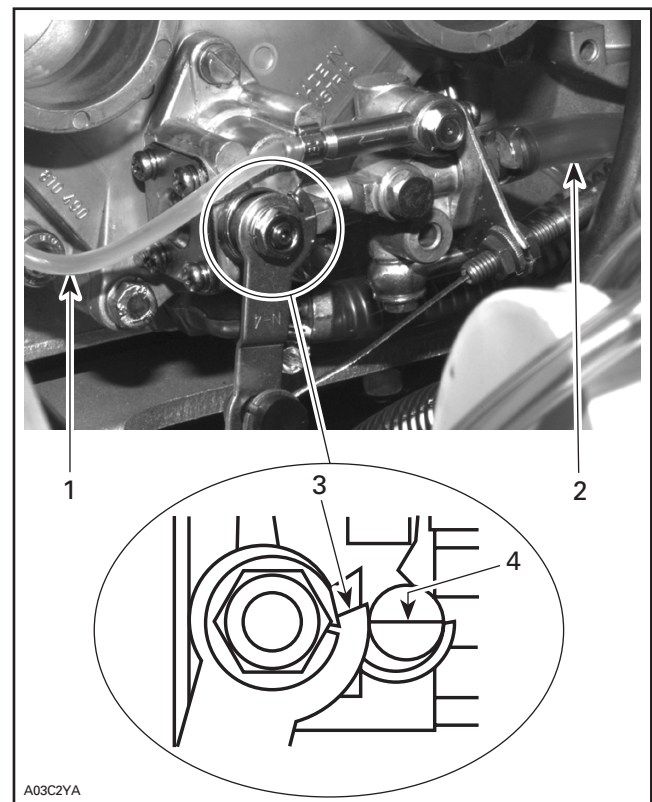
Remove air silencer.

Bleed main oil line by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Mark on lever must be 0 to 2 mm higher than mark on pump's body when throttle lever is activated just enough to take all cable play.



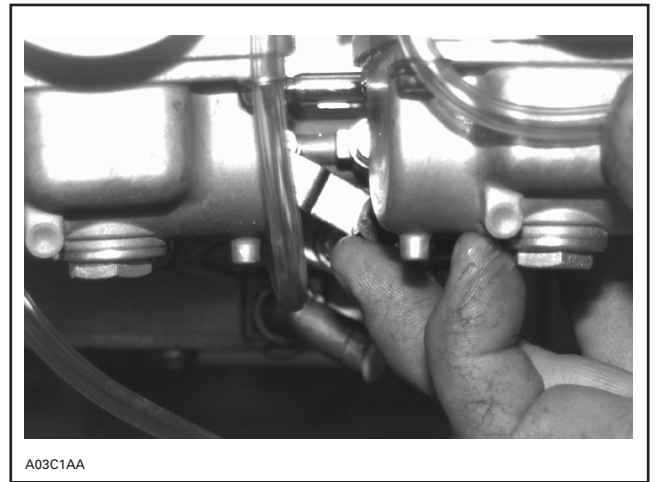
1. Main oil line
2. Bleeder screw



1. Small oil line
2. Main oil line
3. Mark on pump's lever
4. Mark on pump's body

Bleed the small oil line by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



A03C1AA

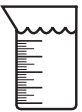
TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS

BRAKE FLUID LEVEL



Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT) as required.

▼ CAUTION

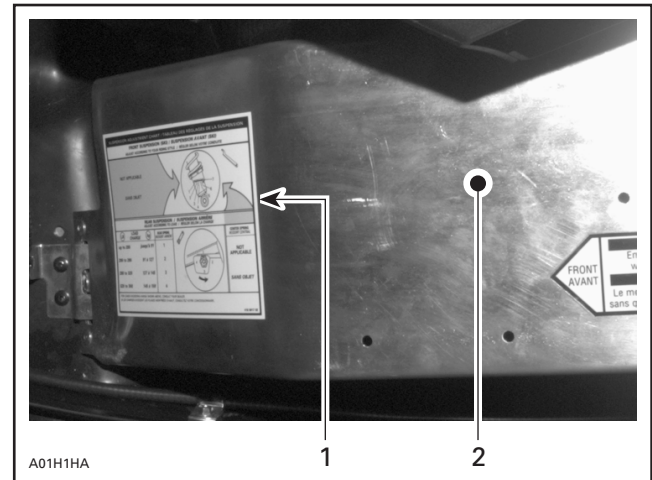
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

When operation is done, install wheel caps provided with the pre-delivery kit on most rear wheels.



ADJUSTMENTS DRIVEN PULLEY




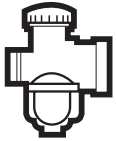


It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

	MODEL	SUMMIT x 670		
	Engine Type	670		
	Maximum HP RPM ①	± 100 RPM	8000 •	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 924 500 145° 71° •	
	Carburetor Type	PTO VM 44 - 38	MAG VM 44 - 39 •	
	Main Jet	PTO 350	MAG 340 •	
	Needle Jet	AA-8 (224) •		
	Pilot Jet	55		
	Needle Identification — Clip Position	7ECY1 — 2 •		
	Slide Cut-Away	2.5		
	Float Adjustment	± 1 mm (± 0.04 in)	22.9 (.90) •	
	Air Screw Adjustment	± 1/16 turn	1.75 •	
	Idle Speed RPM	± 200 RPM	1700	
	Gas Grade/Pump Octane Number	(R + M)/2	Regular unleaded/87 •	
	Gas/Oil Ratio	Oil injection		
	Ignition Timing BTDC ②	mm (in)	3.20 (0.126) •	
	Trigger Coil Air-Gap	mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio	teeth	21/43	
	Engagement Speed	± 100 RPM	4100	
	Drive Pulley Calibration Screw Position	5		
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)
		Offset	X	± 0.5 mm (± 0.02 in)
	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
	Drive Belt Adjustment	Deflection	± 5 mm (± 3/16 in)	32 (1-1/4)
		Force ③	kg (lbf)	11.34 (25)
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection	mm (in)	35 to 40 (1-3/8 to 1-9/16) with a 7.3 kg (16 lb) downward pull	

- ① Engine speed at which maximum power is achieved.
 ② At 3500 RPM (engine cold) with headlamp turned on.
 ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side
 CRT: Center
 N.A.: Not applicable

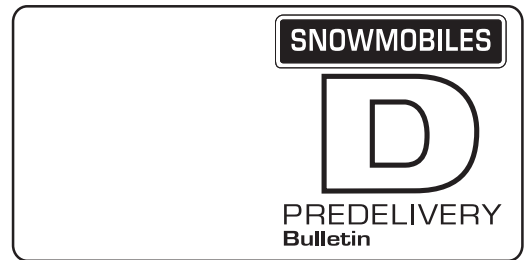
Please route to :

Init.

Service

Sales

Parts



No. **99-7**

Date: July 2, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Touring E	1359 and 1434	All
1999	Europe: Touring E	1360	All

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

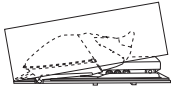
NOTE: The Information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

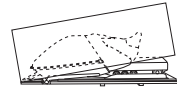
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and video.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

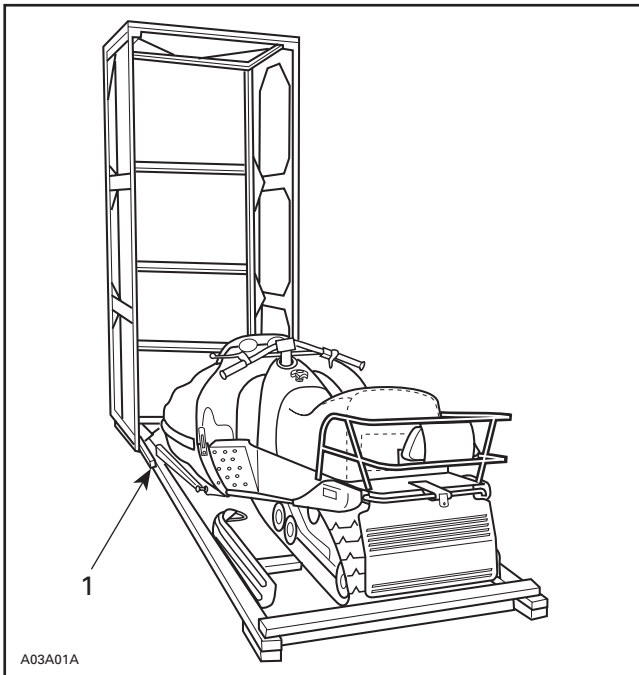
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to vehicle base. Tip cover over front of vehicle. There is a notch in crate base at front.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

SUSPENSION HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

Cut tie rap retaining front hook and, from left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

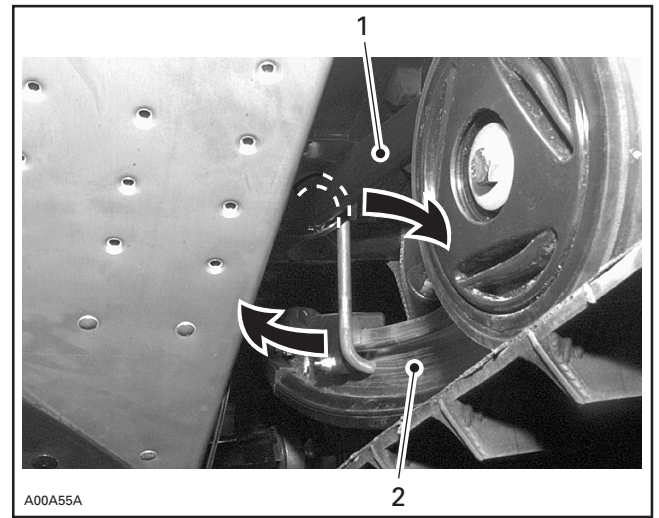


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



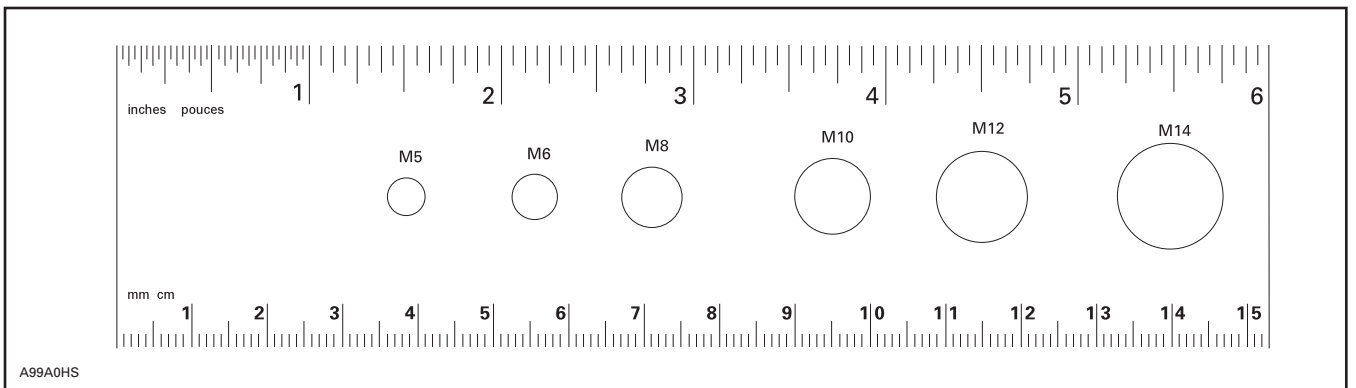
- 1. Front arm
- 2. Runner

◆ WARNING

Hook must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODEL
580 652 900	TOURING E

NOTE: This rule can be helpful to identify fastener length or size.

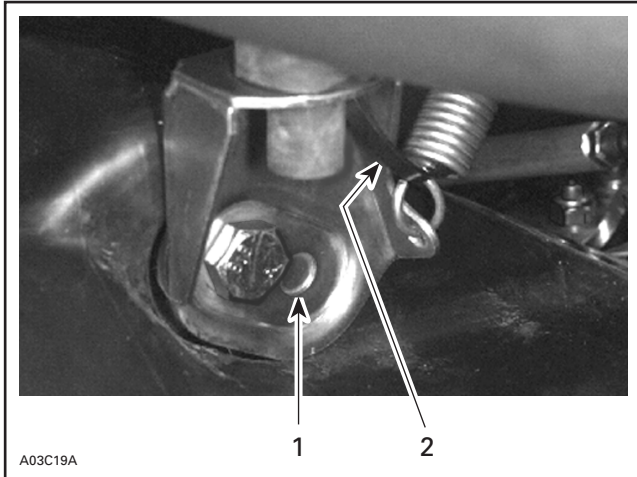




PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



A03C19A

TYPICAL

1. Lug in recess
2. Locking tie

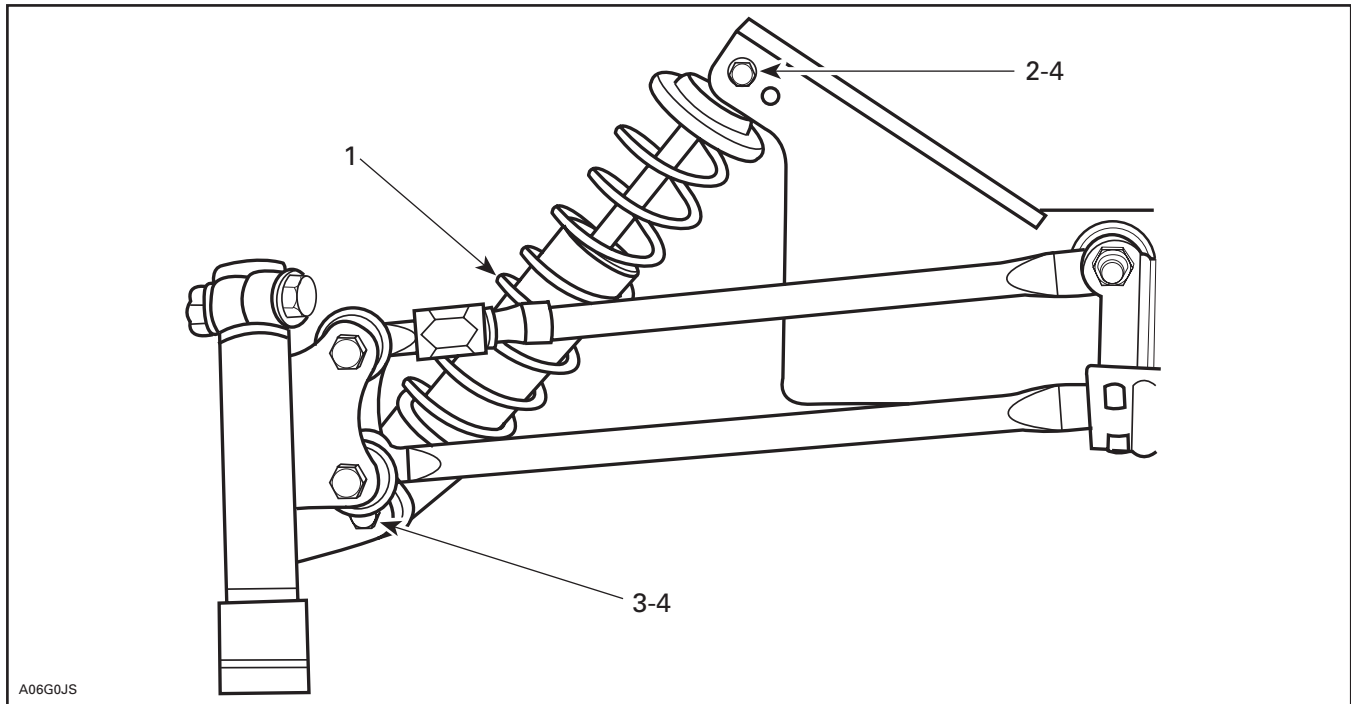
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring, if equipped, at bottom.

NOTE: Position top and bottom screw heads toward front.

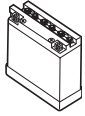
Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.



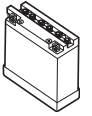
A06G0JS

TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Flanged elastic nut (4) (P/N 228 501 045) (section no. 1 or 5) torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION BATTERY



During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

Battery Removal

Remove belt guard.

Remove throttle cable and choke cable plastic clip from air silencer.

Loosen collar on carburetor adaptors. Remove air silencer.

Remove battery.

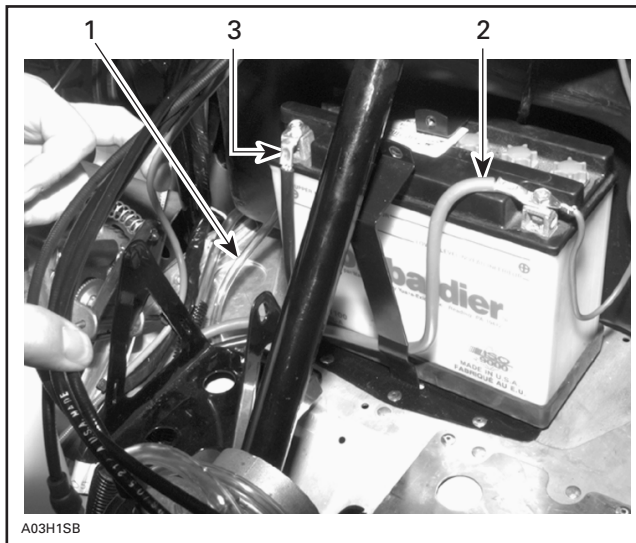
Battery Installation

Install vent tube on battery.

Connect RED positive cable and RED wire to positive battery terminal. Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.



BATTERY CONNECTION

1. Vent tube on battery elbow and vehicle fitting
2. RED positive cable
3. BLACK negative cable

Apply silicone dielectric grease (P/N 413 701 700) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow and vehicle fitting, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.



BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.

Reinstall air silencer.

Reinstall throttle cable and choke cable plastic clip to air silencer.

Reinstall belt guard.



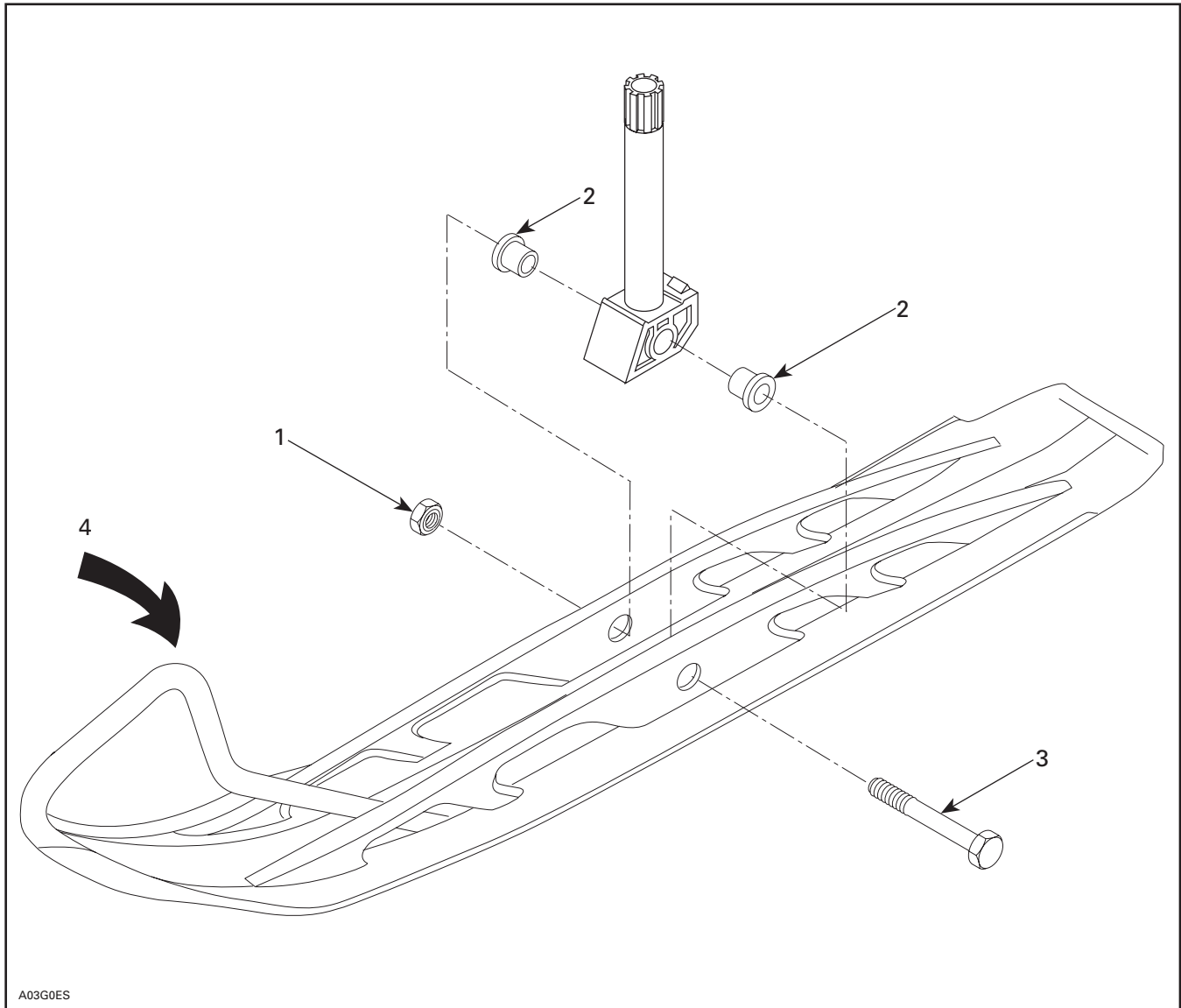
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



TYPICAL — RIGHT SIDE SHOWN

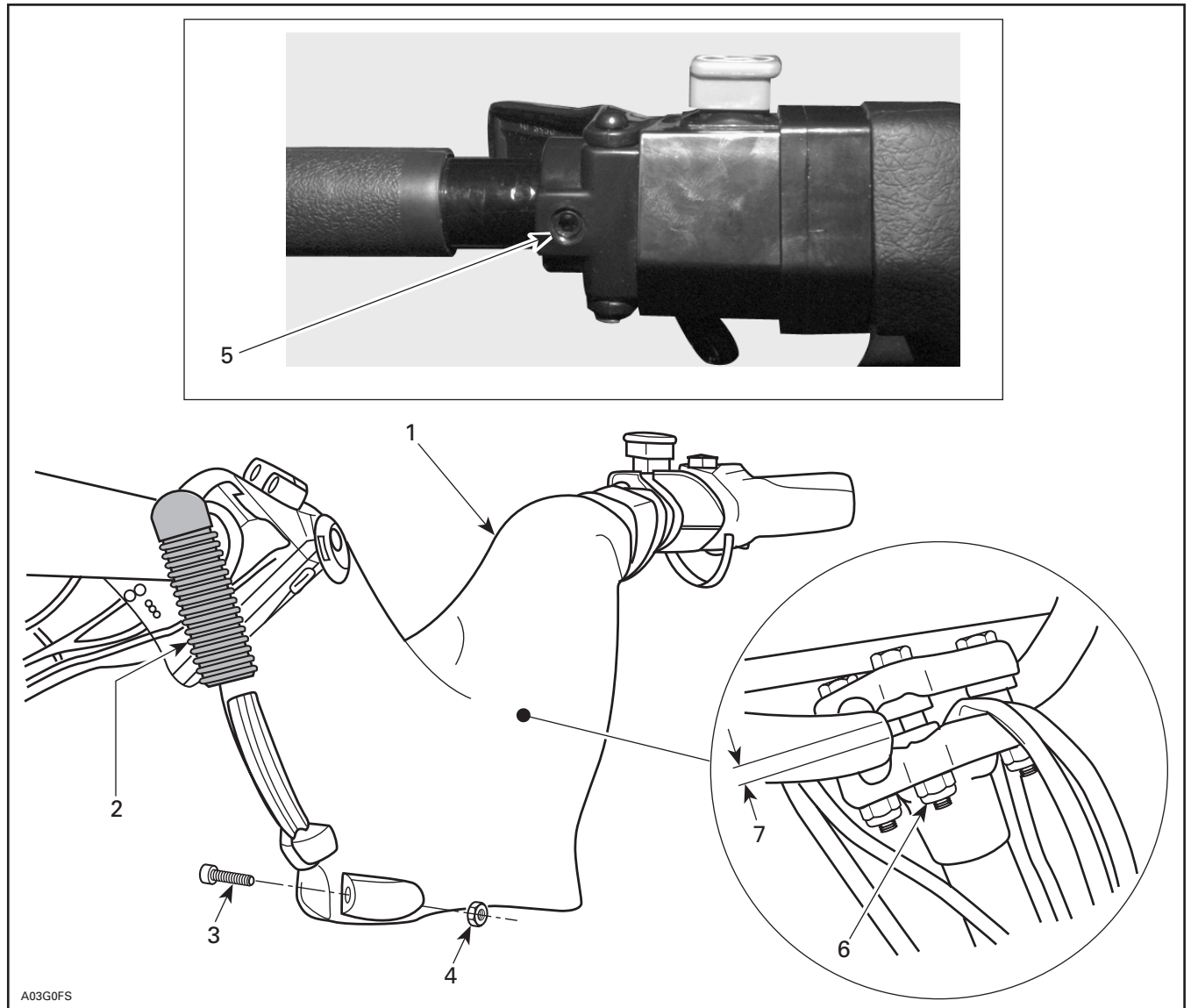
1. Elastic nut M12 x 1.75 (2) (section no. 1 or 3) torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Align handlebar with steering column axis and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and screw nuts up to a 21 to 28 N•m (16 to 20 lbf•ft) torque.
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



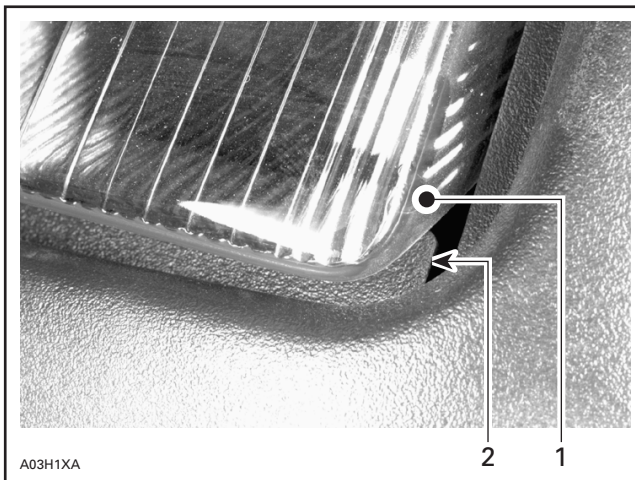
1. Steering pad (P/N 572 023 800) (engine compartment)
2. Keyway (2) (P/N 572 023 900) (section no. 4) use liquid soap to ease installation
3. Screw M5 x 20 (2) (P/N 222 852 065) (section no. 4)
4. Nut M5 (2) (P/N 228 751 045) (section no. 4) seat tighten only, no deformation of rubber
5. Loosen Allen screw
6. Torque nuts to 26 N•m (19 lbf•ft)
7. Equal gap each side



PARTS INSTALLATION WINDSHIELD

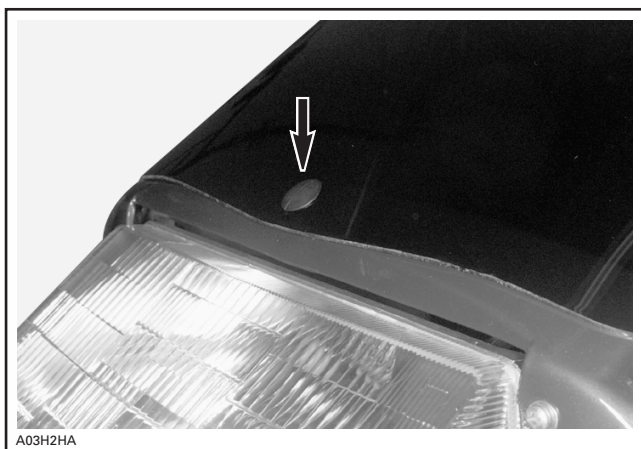


Remove headlamp molding.
Insert windshield tabs into appropriate slots.



1. Headlamp
2. Lip of headlamp molding behind headlamp

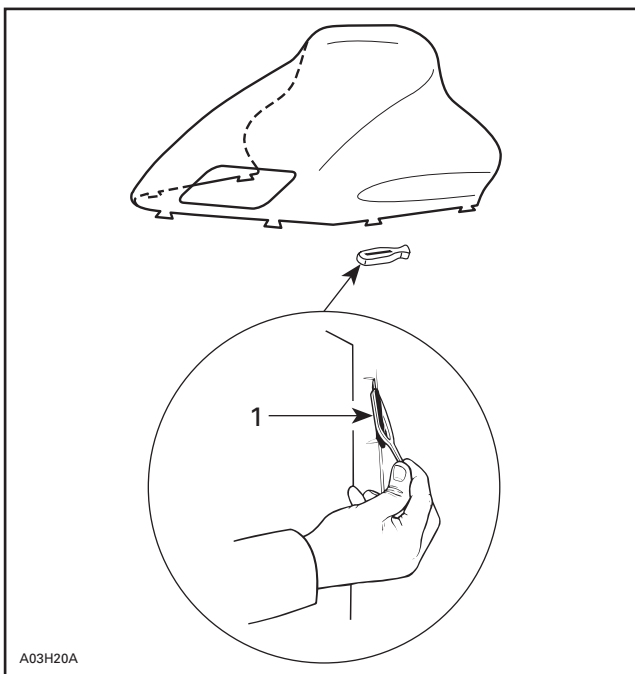
Lodge dart in hole over headlamp.



DART (1) (P/N 414 644 300) (SECTION NO. 5)

Reinstall headlamp molding.

NOTE: Make sure that headlamp is properly positioned on headlamp molding.



1. Latch (6) (P/N 570 023 800) (section no. 6)



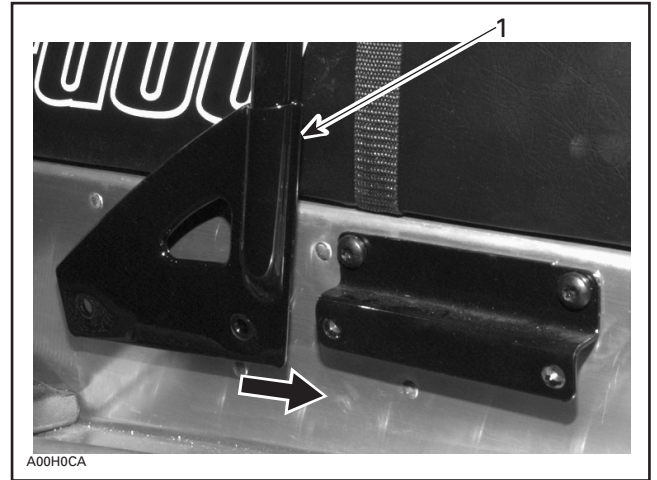
PARTS INSTALLATION BACKREST



Remove backrest from its box and slip off plastic bag.

Place backrest each side of the bench and slide on mounting backrest as shown on next photo.

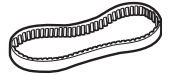
Screw in place using black screws and lock washers (section no. 2).



1. Slide backrest on mounting bracket and install with screws. Torque to 26 N•m (19 lbf•ft)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.



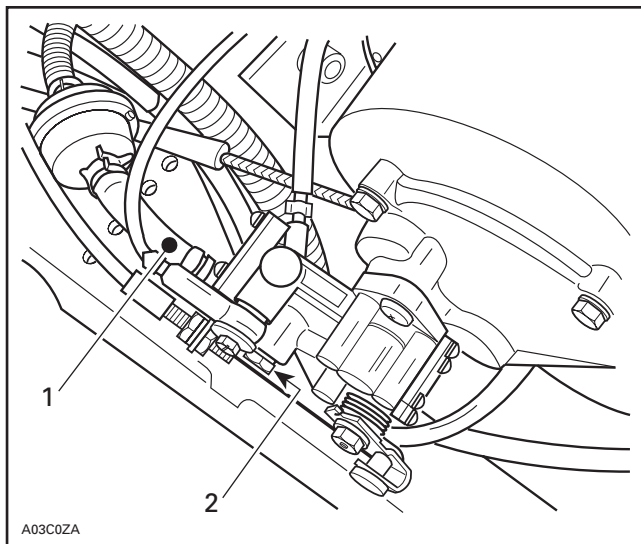
LIQUIDS

OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 — 12 x 1L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

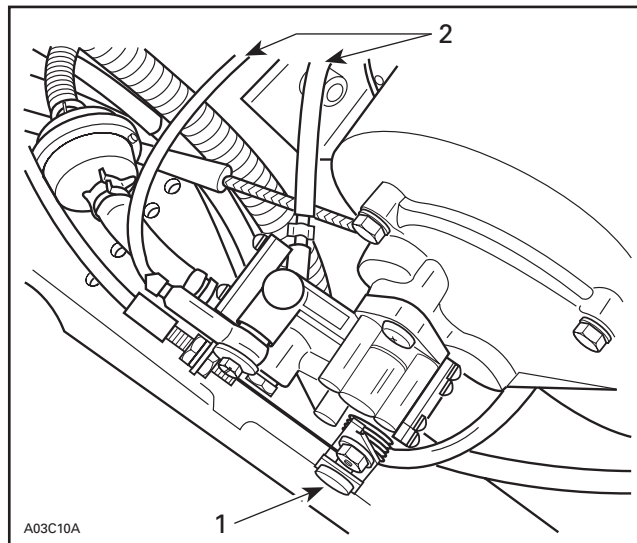
Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



TYPICAL

1. Main oil line
2. Bleeder screw

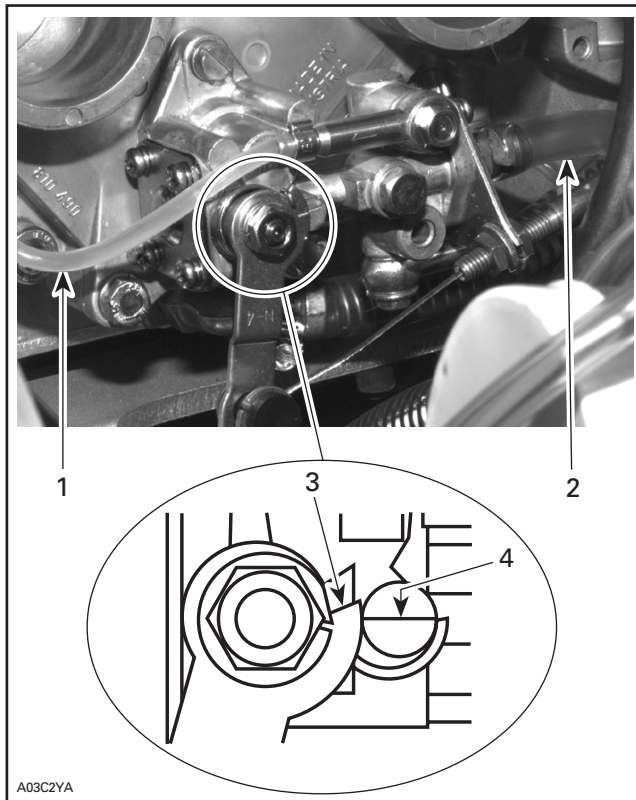
Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



TYPICAL

1. Fully open position
2. Small lines

Check also for proper oil lever adjustment. Mark on lever must be from 0 mm to 2 mm (0 to 1/16 in) above body's mark when throttle lever is activated just enough to take all cable play.



A03C2YA

TYPICAL

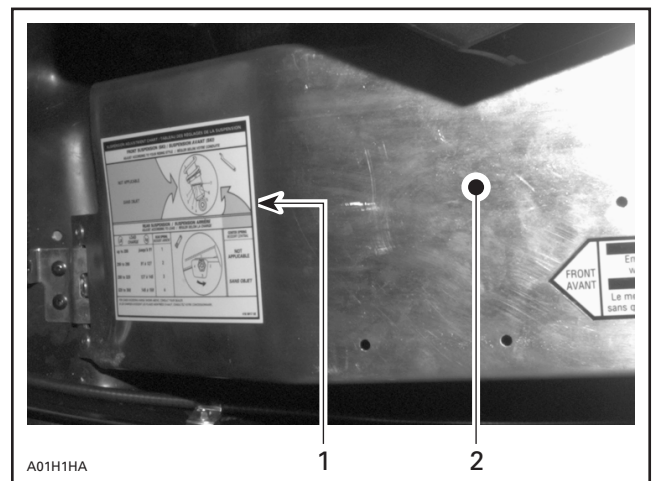
1. Small oil line
2. Main oil line
3. Mark on lever
4. Mark on pump



**ADJUSTMENTS
SUSPENSION**



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



A01H1HA

1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in Technical Data are applicable after break-in period (about 10 hours of use).








TECHNICAL DATA



The content of the TECHNICAL DATA page should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

The dot (•) indicates changes from 1998 model.

	MODELS	TOURING E
	Engine Type	377
	Maximum HP RPM ①	± 100 RPM 6900
	Rotary Valve	P/N Opening(BTDC)/ Closing (ATDC) N.A.
	Carburetor Type	PTO VM 30 - 196 • MAG VM 30 - 196 •
	Main Jet	PTO 140 MAG 140
	Needle Jet	P-0 (159)
	Pilot Jet	40
	Needle Identification — Clip Position	6DP9-3
	Slide Cut-Away	2.5
	Float Adjustment	± 1 mm (± .040 in) 23.9 (.94)
	Air Screw Adjustment	± 1/16 turn 1-1/4
	Idle Speed RPM	± 200 RPM 1650
	Gas Grade/Octane Number	(R + M)/2 Regular Unleaded/87
	Gas/Oil Ratio	Oil Injection
	Ignition Timing BTDC ②	mm (in) 2.79 (0.110) •
	Trigger Coil Air-Gap	mm (in) 0.40 - 1.10 (0.016 - 0.043)
	Gear Ratio	teeth 18/44
	Engagement Speed	± 100 RPM 2500
	Drive Pulley Calibration Screw Position	N.A.
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32 in) 26 (1) •
	Offset	X ± 0.5 mm (± .020 in) 33.4 (1-5/16)
	Y	Dimension Y must exceed X from 0.5 mm (.020 in) to 1.5 mm (.059 in)
	Drive Belt Adjustment	Deflection ± 5 mm (± .197 in) 32 (1-1/4)
	Force ③	kg (lbf) 11.34 (25)
	Driven Pulley Preload	kg (lbf) 0.0 •
	Drive Chain Tension	④
Track Adjustment	Deflection ⑤ mm (in) 35 to 40 (1-3/8 to 1-9/16)	

- ① Engine speed at which maximum power is achieved.
- ② At 3500 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.
- ④ Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation.
- ⑤ Deflection with a 7.3 kg (16 lb) downward pull.

BTDC: Before Top Dead Center
ATDC: After Top Dead Center
N.A.: Not Applicable

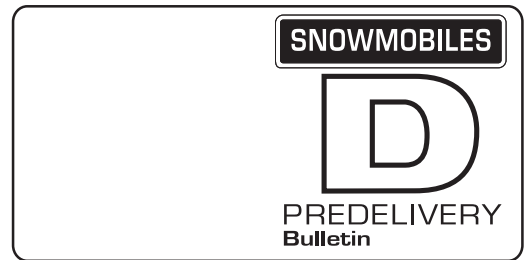
Please route to :

Init.

Service

Sales

Parts



No. **99-9**

Date: July 22, 1998

SUBJECT: Predelivery bulletin

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Skandic 380/500	1364/1365/1361/1362	All
1999	Europe: Skandic 500	1363	All

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
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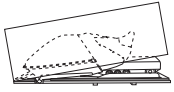
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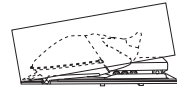
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There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

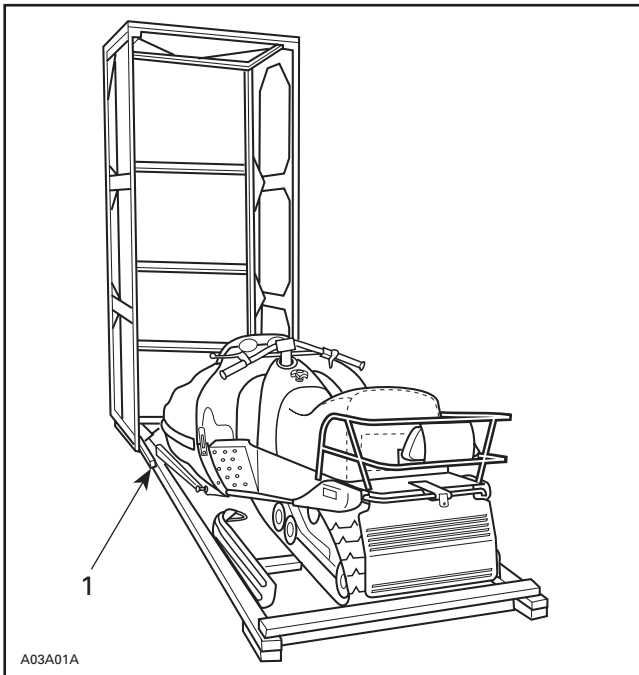
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to vehicle base. Tip cover over front of vehicle. There is a notch in crate base at front.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

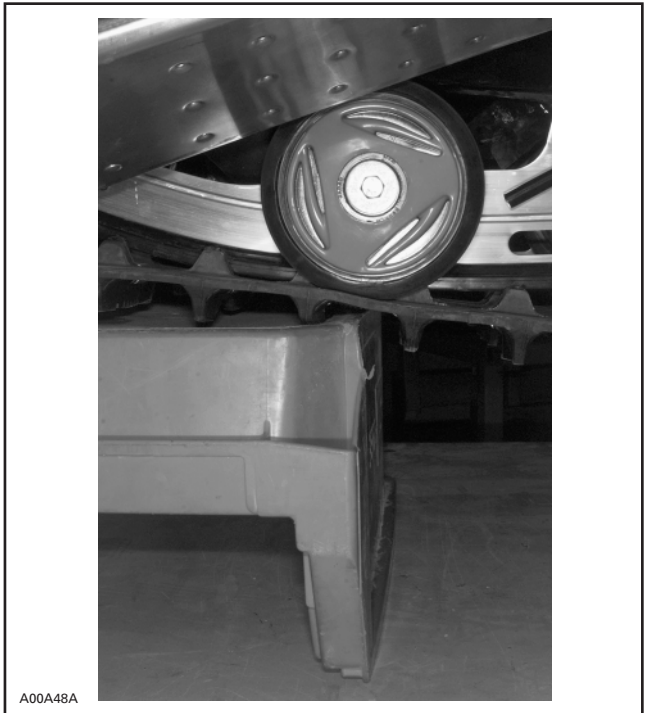
Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

SUSPENSION HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

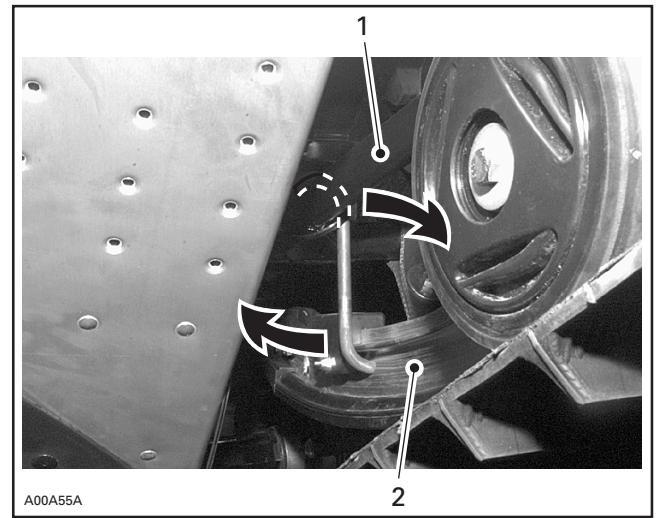
From left side of vehicle, cut locking tie retaining hook and apply pressure onto rear bumper with right hand, as shown on the following photo.



TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



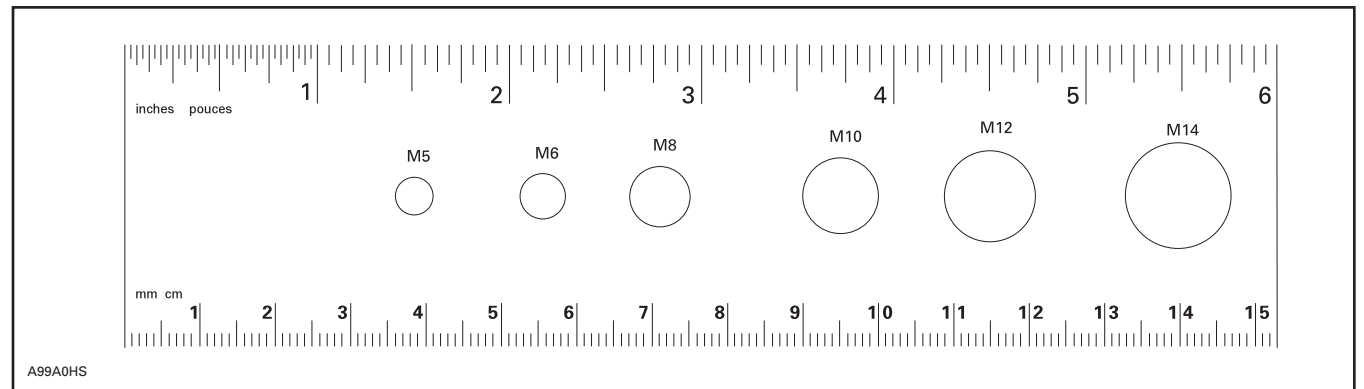
TYPICAL

- 1. Front arm
- 2. Runner

◆ WARNING
Suspension hook must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
580 652 900	SKANDIC 380/500

NOTE: This rule can be helpful to identify fastener length or size.

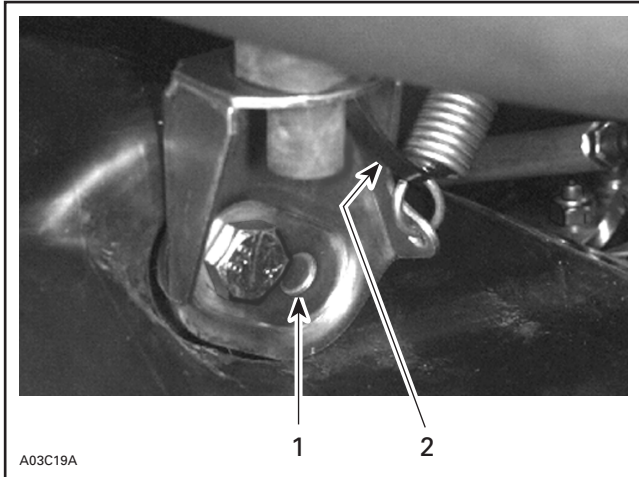




PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



A03C19A

1. Lug in recess
2. Locking tie

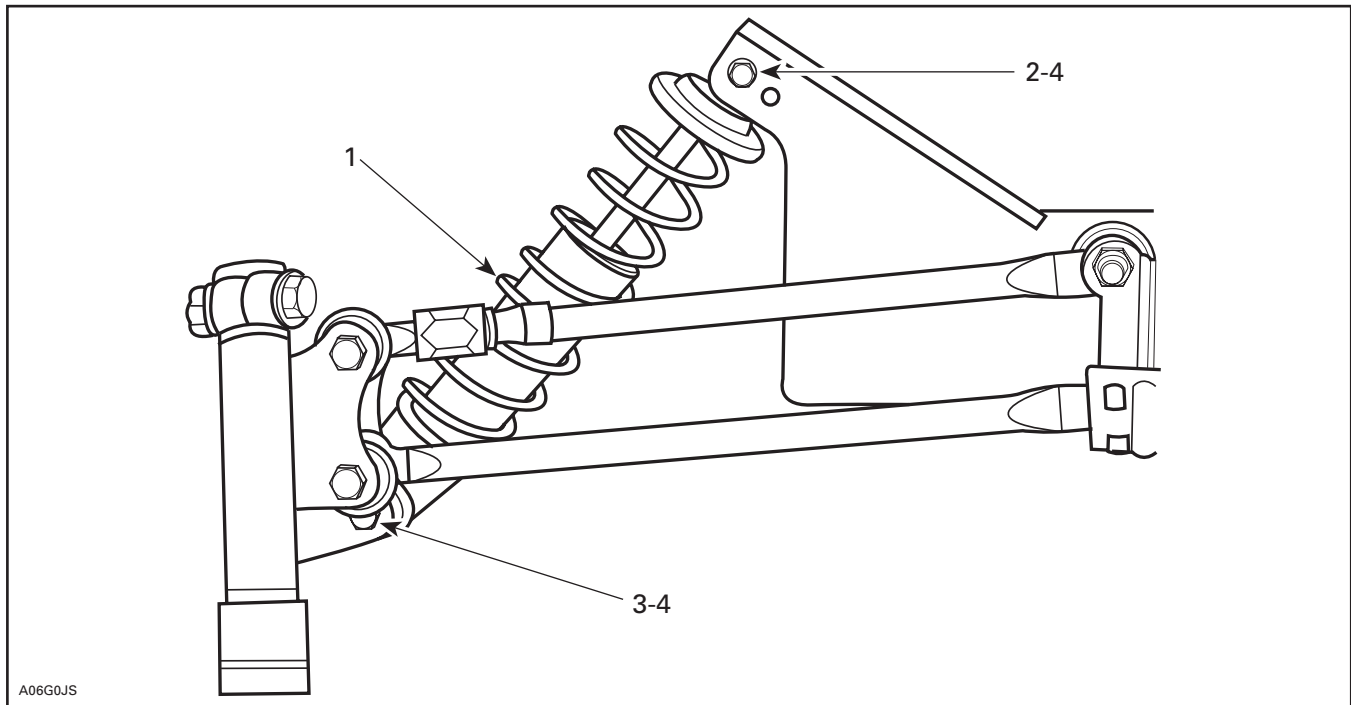
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension as shown on drawing below.

NOTE: Position top screw head toward front and bottom screw head facing back.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.



A06G0JS

TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565)(on suspension)
4. Flanged elastic nut (4) (P/N 228 501 045) (section no.1) torque to 48 N•m (35 lbf•ft)



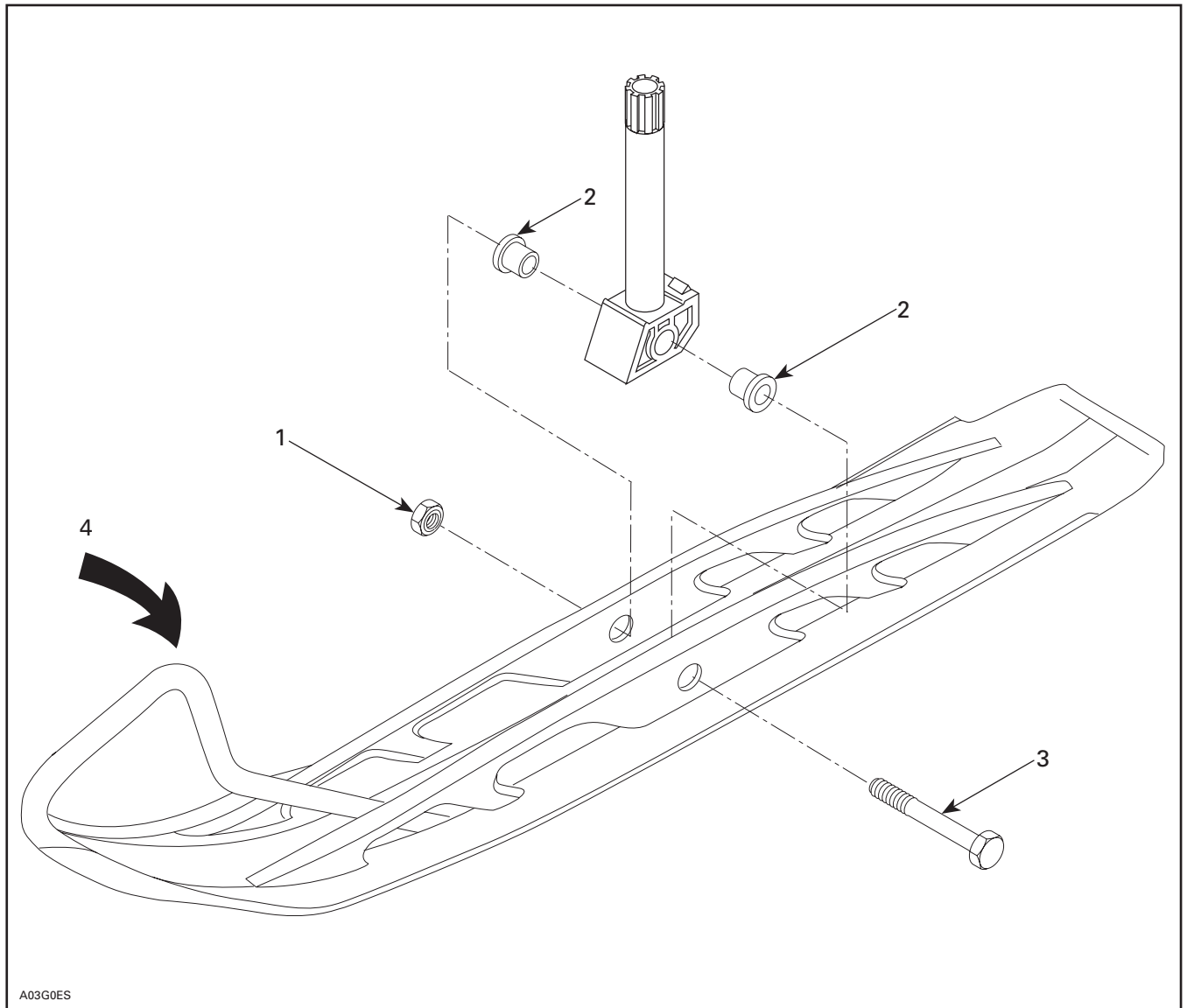
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg. It may be necessary to use a plastic hammer to make the bolt fit in place.

Replace vehicle on ground.



TYPICAL — RIGHT SIDE SHOWN

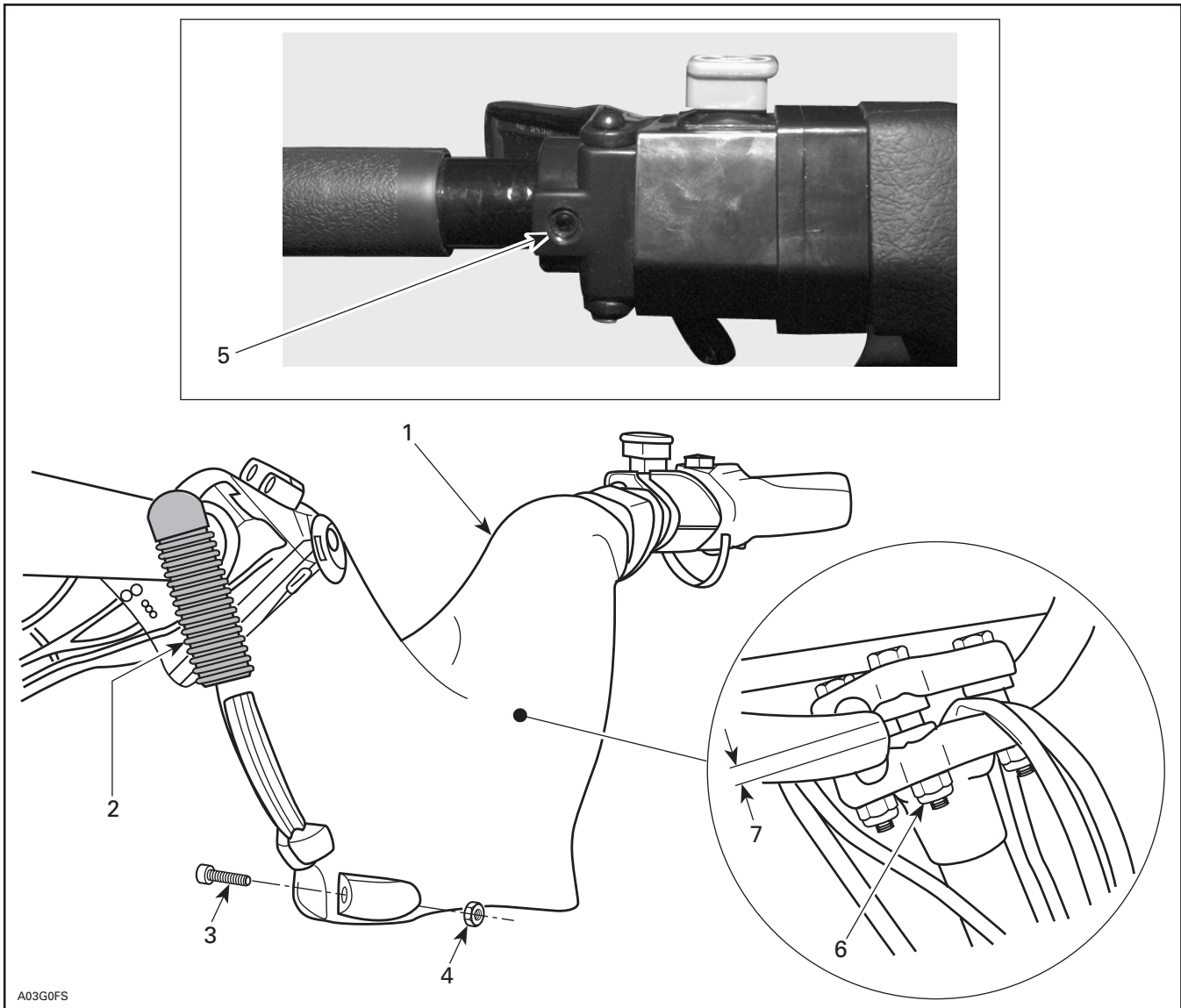
1. Elastic Nut M12 x 1.75 (2) (section no. 3) torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Align handlebar with steering column axis and tighten nuts loosely for now. Loosen, at least 3 turns, Allen screw of throttle and brake handle housings. Install steering pad temporary, and adjust for proper fit with console. Remove steering pad and torque nuts from 21 to 28 N•m (16 to 20 lbf•ft). Reinstall steering pad, adjust and tighten throttle and brake handle housings.



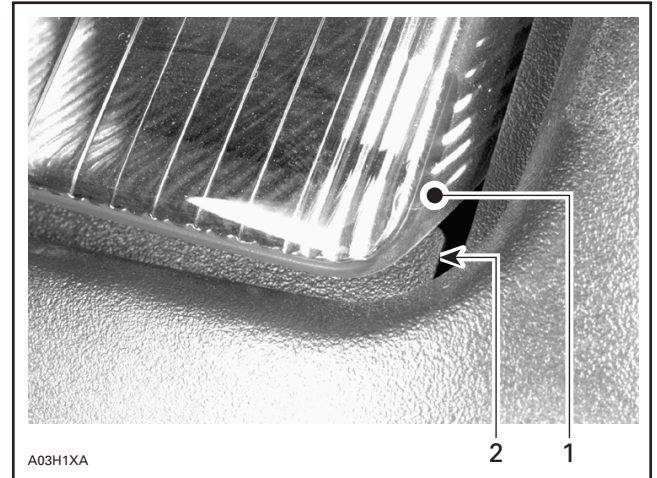
- A03G0FS
1. Steering pad (P/N 572 023 800) (engine compartment)
 2. Keyway (2) (P/N 572 023 900) (section no. 4) use liquid soap to ease installation
 3. Screw M5 x 20 (2) (P/N 222 852 065) (section no. 4)
 4. Nut M5 (2) (P/N 228 751 045) (section no. 4) seat tighten only, no deformation of rubber
 5. Loosen allen screw
 6. Torque nuts from 21 to 28 N•m (16 to 20 lbf•ft)
 7. Equal gap each side



PARTS INSTALLATION WINDSHIELD

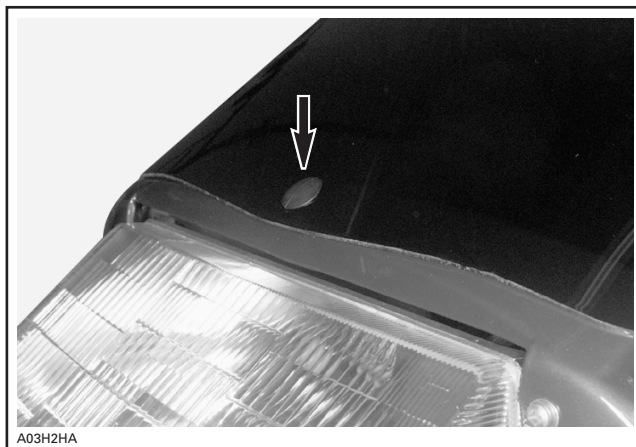


Remove headlamp molding.
Insert windshield tabs into appropriate slots.



1. Headlamp
2. Lip of headlamp molding behind headlamp

Lodge dart in hole over headlamp.

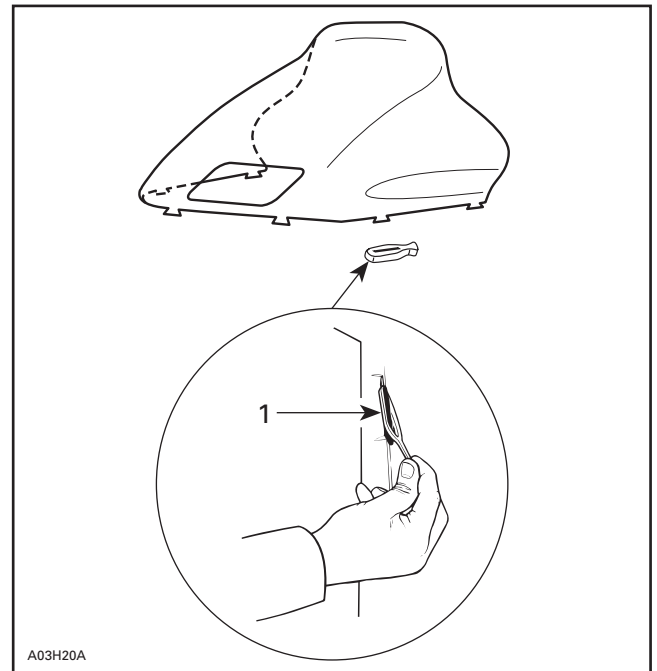


1. Dart (1) (P/N 414 644 300) (section no. 5)

Reinstall headlamp molding.

NOTE: When reinstalling headlamp molding make sure lip is behind headlamp.

Tie windshield and headlamp molding using latches.



TYPICAL

1. Latch (6) (P/N 570 023 800) (section no. 6)

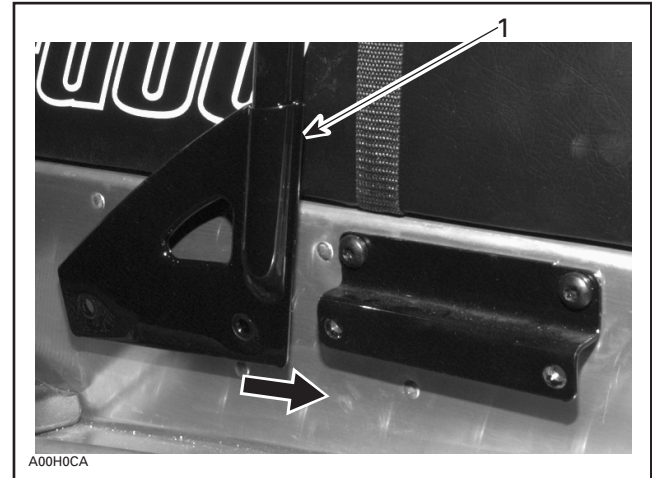


PARTS INSTALLATION BACKREST



Place backrest each side of the bench and slide on mounting backrest as shown on next photo.

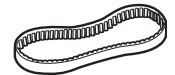
Screw in place using Torx screws (P/N 732 601 250 - M8 x 20) and M8 lock washers (P/N 213 000 001) (section no. 2).



1. Slide backrest on mounting bracket and install with screws. Torque to 26 N•m (19 lbf•ft)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.

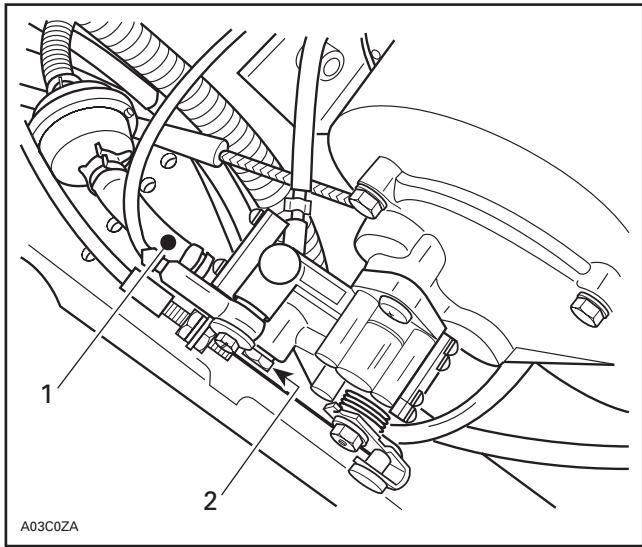


LIQUIDS OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 - 12 x 1L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

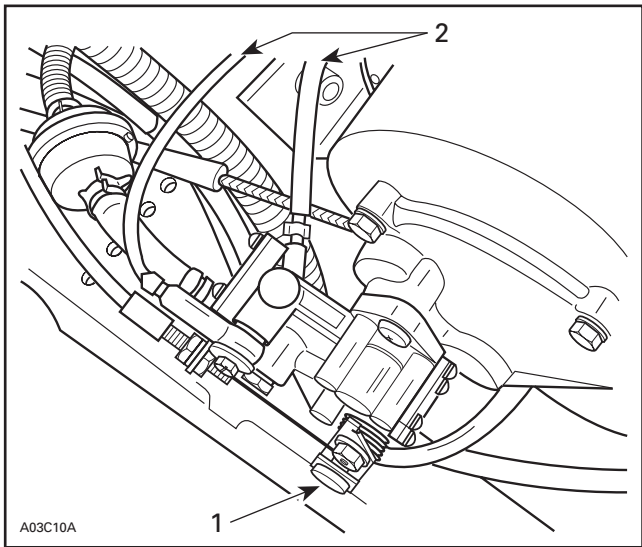
Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



TYPICAL

- 1. Main oil line
- 2. Bleeder screw

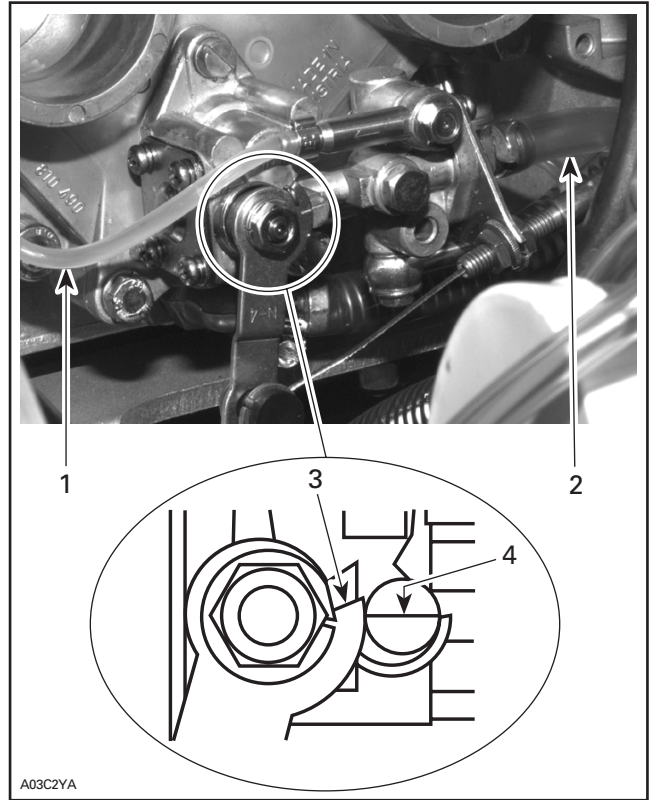
Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



TYPICAL

- 1. Fully open position
- 2. Small lines

Check also for proper oil level adjustment. Mark on pump lever must align 0 to 2 mm (0 to 1/16 in) higher above mark on pump body when throttle lever is activated just enough to take all cable play.



TYPICAL

- 1. Small oil line
- 2. Main oil line
- 3. Mark on lever
- 4. Mark on pump



LIQUIDS BRAKE FLUID LEVEL



Skandic 500 only

Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

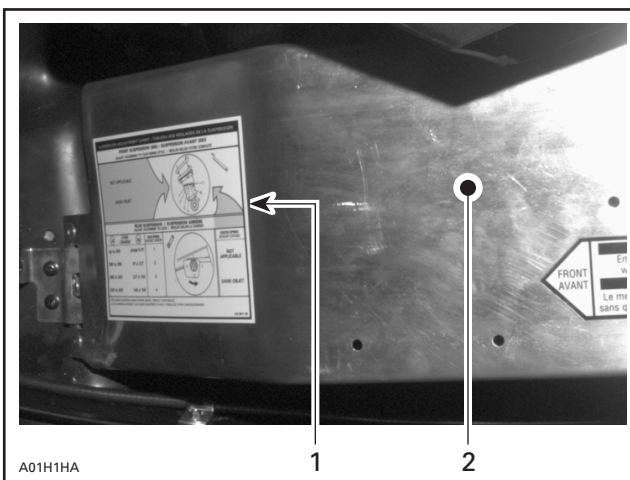
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in Technical Data are applicable after break-in period (about 10 hours of use).


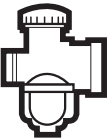




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

The dot (•) indicates changes from 1998 model

	MODELS	SKANDIC 380	
	Engine Type	377	
	Maximum HP RPM ①	± 100 RPM 6900	
	Rotary Valve	P/N Opening(BTDC)/ Closing (ATDC) N.A.	
	Carburetor Type	PTO VM 30-196 MAG VM 30-196 •	
	Main Jet	PTO 140 MAG 140	
	Needle Jet	P-0 (159)	
	Pilot Jet	40	
	Needle Identification — Clip position	6DP9-3	
	Slide Cut-Away	2.5	
	Float Adjustment	± 1 mm (± .040 in) 23.9 (.94)	
	Air Screw Adjustment	± 1/16 turn 1-1/4	
	Idle Speed RPM	± 200 RPM 1650	
	Gas Grade/Octane Number	(R + M)/2 Regular Unleaded/87	
	Gas/Oil Ratio	Oil Injection	
	Ignition Timing BTDC ②	mm (in) 2.76 (.109) •	
	Trigger Coil Air-Gap	mm (in) 0.40 - 1.10 (.016 - .043) •	
	Gear Ratio	teeth 18/44 •	
	Engagement Speed	± 100 RPM 2500	
	Drive Pulley Calibration Screw Position	N.A.	
	Pulley Distance	Z	+ 0, - 1 mm (+ 0, - 1/32 in) 25.5 (1)
		X	± 0.5 mm (± .020 in) 33.4 (1-5/16)
	Offset	Y	Dimension Y must exceed X from 0.5 mm (.020 in) to 1.5 mm (.059 in)
		Drive Belt Adjustment	Deflection
		Force ③	kg (lbf) 11.34 (25)
	Driven Pulley Preload	kg (lbf)	0.0 •
Drive Chain Tension		④	
Track Adjustment	Deflection ⑤	mm (in) 35 to 40 (1-3/8 to 1-9/16)	

① Engine speed at which maximum power is achieved.

② At 3500 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

④ Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation.





⑤ Deflection with a 7.3 kg (16 lb) downward pull.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

N.A.: Not Applicable

The dot (•) indicates changes from 1998 model

	MODELS		SKANDIC 500	
	Engine Type		503	
	Maximum HP RPM ① ± 100 RPM		7000	
	Rotary Valve	P/N Opening(BTDC)/ Closing (ATDC)	N.A.	
	Carburetor Type		PTO VM 34-532 MAG VM 34-533 •	
	Main Jet		PTO 140 MAG 140	
	Needle Jet		P-0 (159)	
	Pilot Jet		40	
	Needle Identification — Clip position		6DH2-3	
	Slide Cut-Away		2.5	
	Float Adjustment ± 1 mm (± .040 in)		23.9 (.94)	
	Air Screw Adjustment ± 1/16 turn		1-7/8	
	Idle Speed RPM ± 200 RPM		1650	
	Gas Grade/Octane Number (R + M)/2		Regular Unleaded/87	
	Gas/Oil Ratio		Oil Injection	
	Ignition Timing BTDC ② mm (in)		2.79 (.110) •	
	Trigger Coil Air-Gap mm (in)		0.45 - 0.55 (.018 - .022)	
	Gear Ratio teeth		18/44 •	
	Engagement Speed ± 100 RPM		2900	
	Drive Pulley Calibration Screw Position		3	
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32 in)	16.5 (21/32)
		X	± 0.5 mm (± .020 in)	35.0 (1-3/8)
	Offset	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
		Drive Belt Adjustment		
	Deflection ± 5 mm (± .197 in)		32 (1-1/4)	
	Force ③ kg (lbf)		11.34 (25)	
	Driven Pulley Preload kg (lbf)		0.0 •	
Drive Chain Tension		④		
Track Adjustment	Deflection ⑤ mm (in)		35 to 40 (1-3/8 to 1-9/16)	

① Engine speed at which maximum power is achieved.

② 3500 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

④ Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation.

⑤ Deflection with a 7.3 kg (16 lb) downward pull.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

N.A.: Not applicable

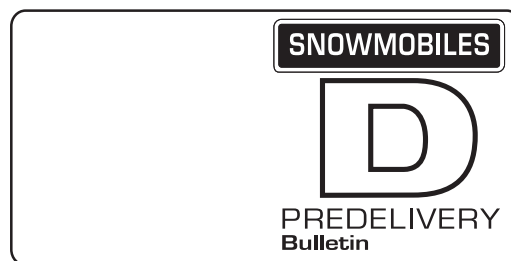
Please route to :

Init.

Service

Sales

Parts



No. **99-21**

Date: November 17, 1998

SUBJECT: Predelivery bulletin

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada: Formula* III 800 Formula* III 700 Formula* III 600	1401 1399 1396	All
1999	United States: Formula* III 800 Formula* III 700 Formula* III 600	1402 1400 1397	All
1999	Europe Formula* III 600	1398	All

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide bag*. Make sure that predelivery check list is completed and signed.

◆ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

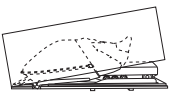
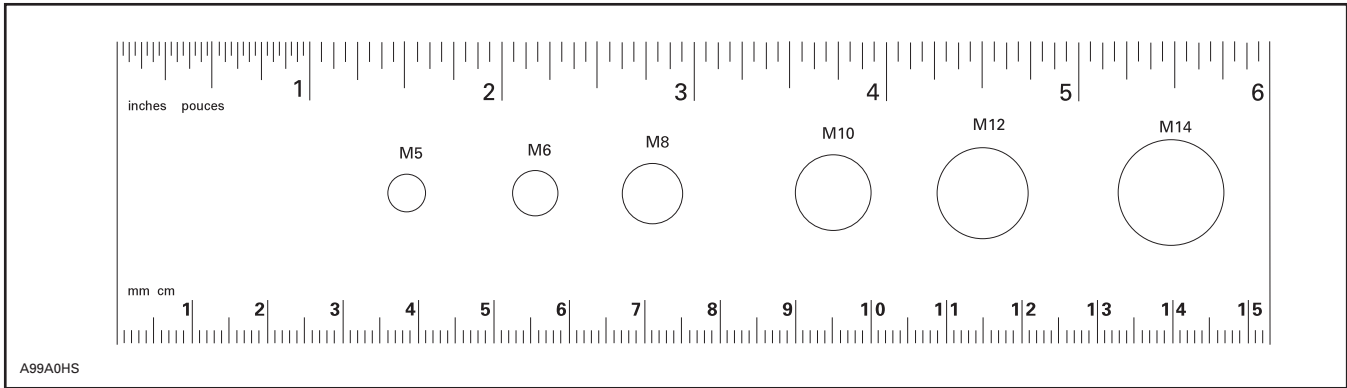
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

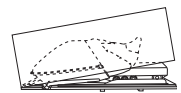
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
549 010 787	FORMULA III 800 FORMULA III 700 FORMULA III 600

◆ WARNING

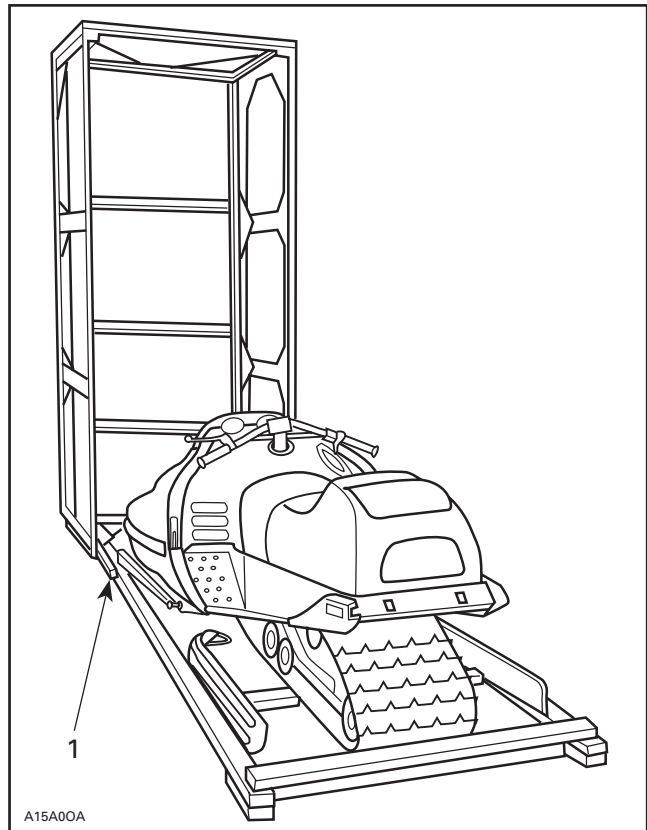
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties and ropes retaining windshield. Keep latches used to maintain ropes on windshield.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, predelivery kit, shock absorbers and other parts to be installed from box.

Remove drive belt from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, cut locking tie retaining hook, then apply pressure onto rear bumper with right hand, as shown on the following photo.



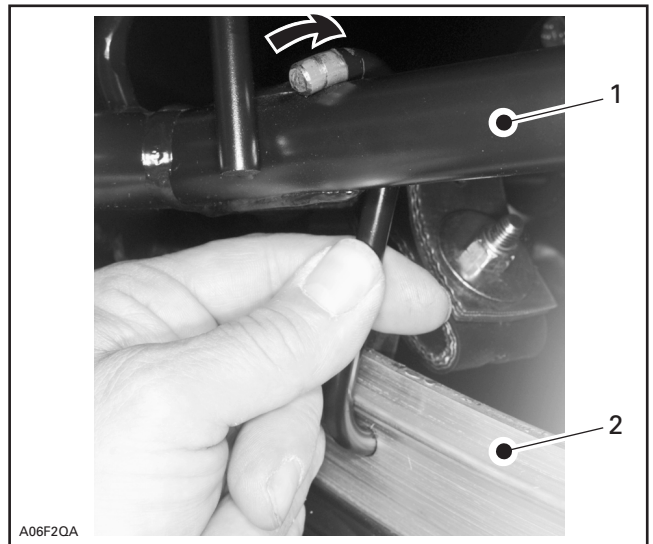
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

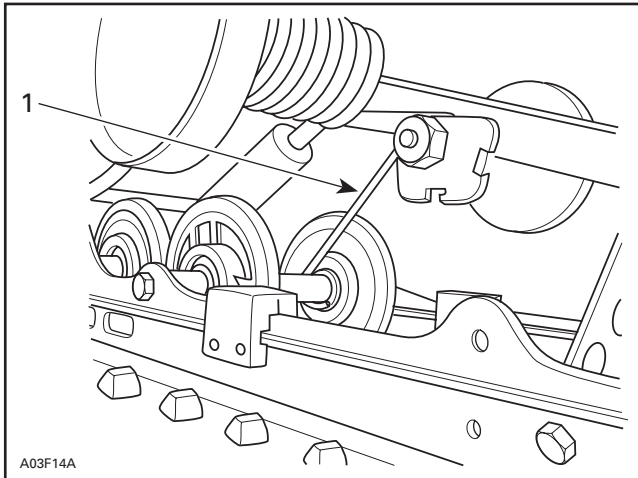


A06F20A

TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 in upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

▼ CAUTION

Both hooks must be removed to have snowmobile suspension operational.

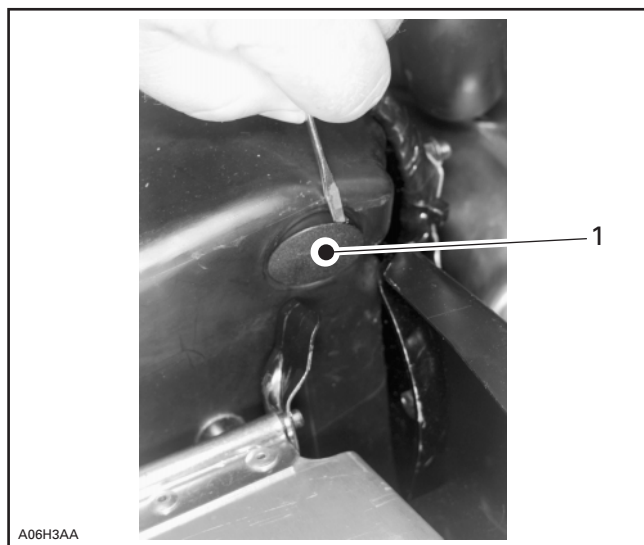


PARTS INSTALLATION FRONT SUSPENSION



Lift front of vehicle and block safely.

From inside engine compartment, remove caps as shown in the next photo.

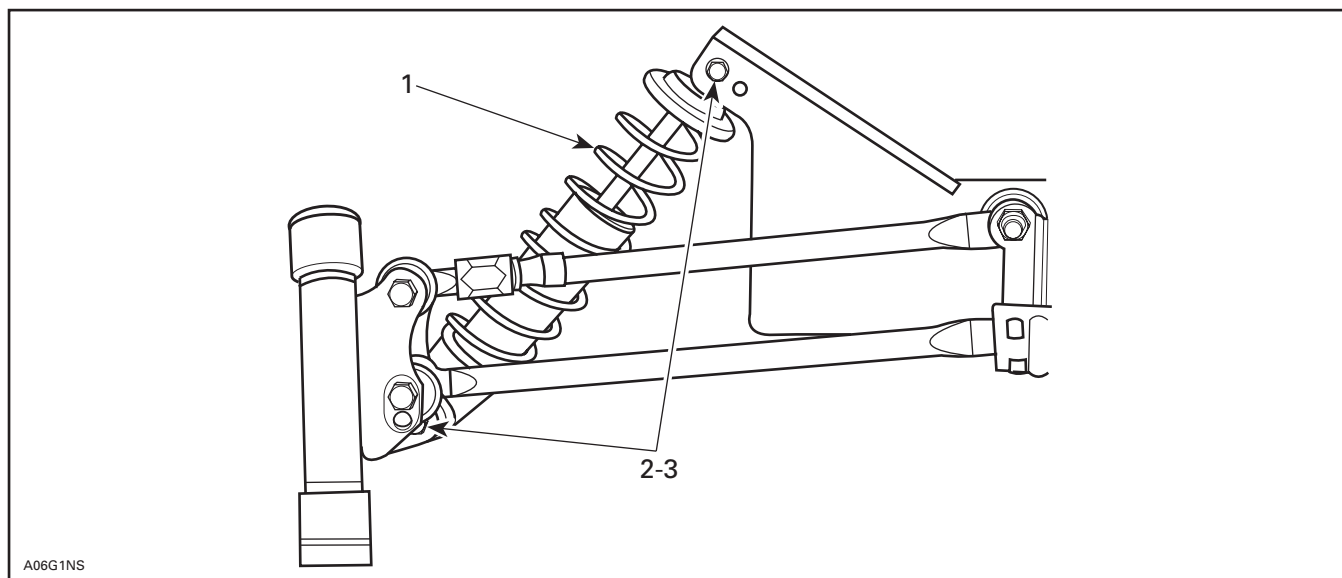


INSIDE ENGINE COMPARTMENT

1. Using flat screwdriver, remove cap

Remove and discard shipping brackets from suspension. Discard spring clips, keep bolts. Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bolt heads toward front.

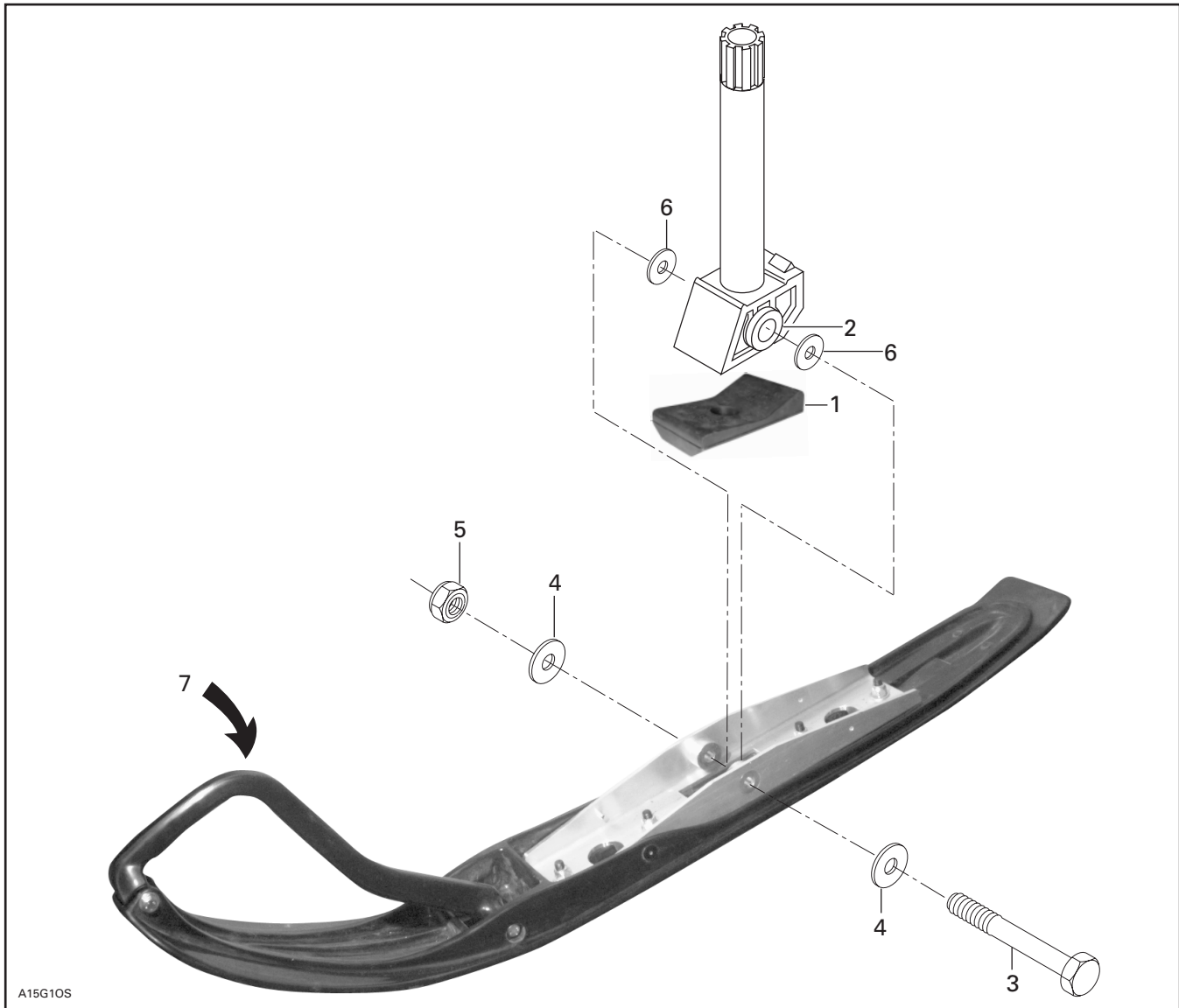


TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (box)
2. M10 x 1.5 x 55 bolt (on suspension)
3. M10 x 1.5 nut (P/N 228 501 045) (section 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS



A15G10S

LEFT SIDE SHOWN

1. Ski stopper (2) (P/N 570 053 300) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 8). Install large washers
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 721 045) (section no. 5). Torque between 30 and 50 N•m (23 and 37 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 8). Insert small washers, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



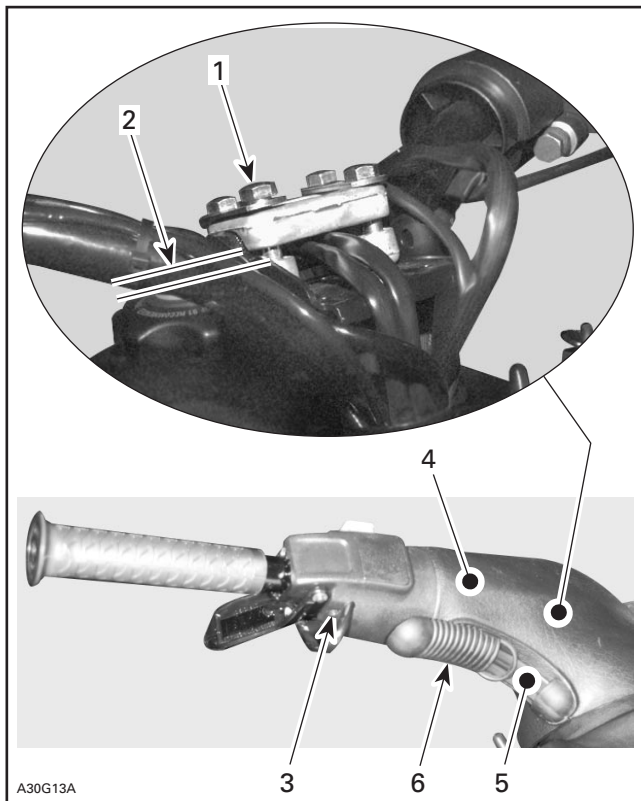
Adjust handlebar temporarily and tighten nuts loosely for now.

Loosen Allen screw of throttle and brake handle housings, at least 3 turns.

Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts between 21 and 28 N•m (between 16 and 20 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housing.



1. Torque nuts between 21 and 28 N•m (between 16 and 20 lbf•ft)
2. Equal gap each side (both clamps)
3. Loosen Allen screw (if needed)
4. Steering pad (box)
5. Soapy water can be used to ease keyway installation
6. Keyway (2) (section 5)



PARTS INSTALLATION WINDSHIELD

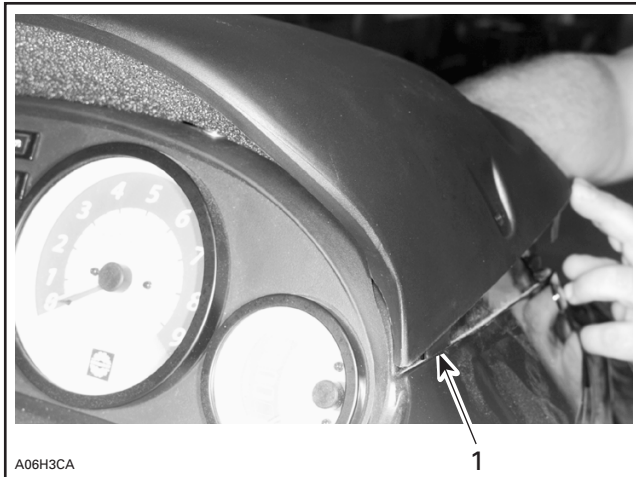


NOTE: Air deflector with foam must be installed before windshield.

AIR DEFLECTOR

Preparation

Position air intake deflector tabs (left and right side) into hood slots, as shown in the next photo.



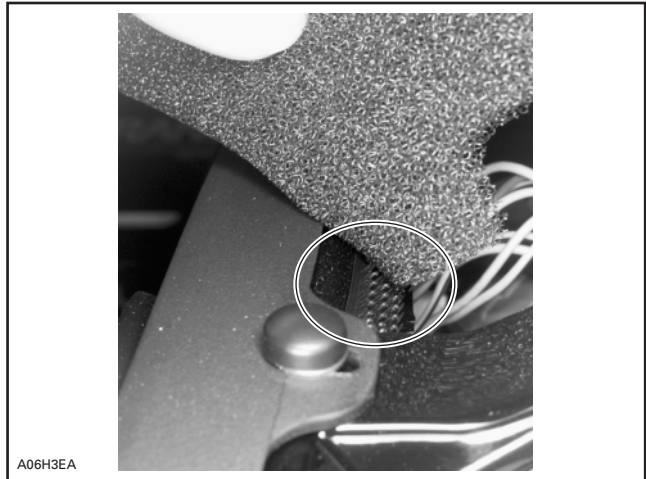
1. Air intake deflector tabs (right side)

Holding air intake deflector, insert one hand through gauges housing, as shown in the next photo. Attach air intake foam to hood Velcro.



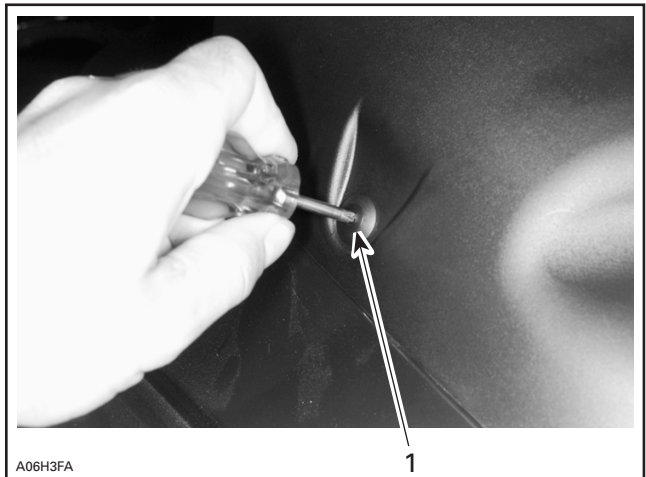
ATTACH FOAM TO VELCRO GOING THROUGH GAUGES HOUSING, FROM UNDERNEATH HOOD

NOTE: Ensure that air intake foam is properly attached to Velcro. See next photo.



AIR INTAKE DEFLECTOR HAS BEEN REMOVED TO SHOW WHERE AND HOW TO ATTACH AIR INTAKE FOAM TO HOOD

Secure air intake deflector using dart, as shown in the next photo.



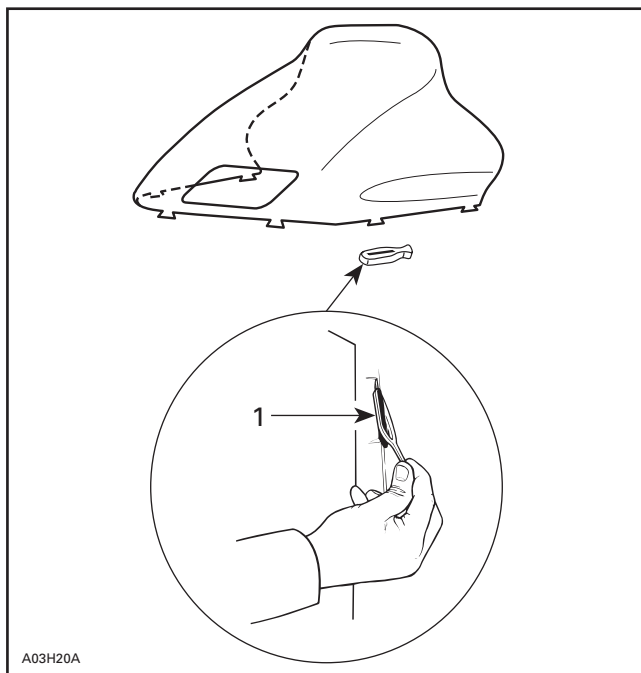
1. Dart (2) (P/N 414 745 900) (section no. 6). Push to snap in place

Install windshield on hood dashboard and secure with latches.



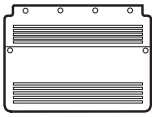
A06H3GA

WINDSHIELD INSTALLED ON DASHBOARD

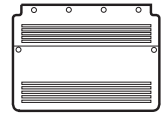


A03H20A

1. Latch (6) (P/N 570 023 800) (section no. 6)



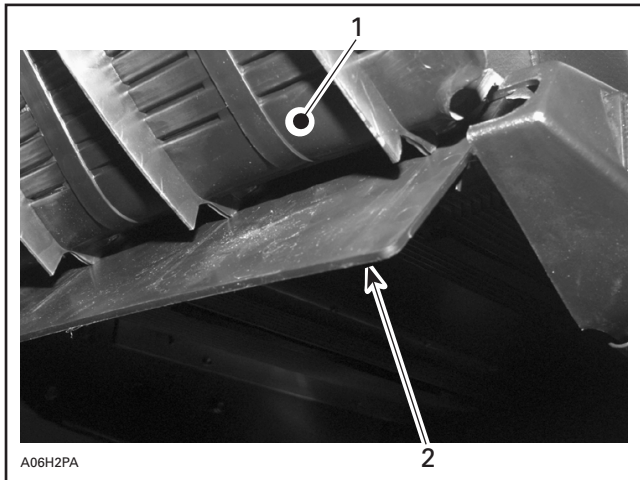
PARTS INSTALLATION SNOW GUARD



Insert and position snow guard onto chassis, between rear moldings.

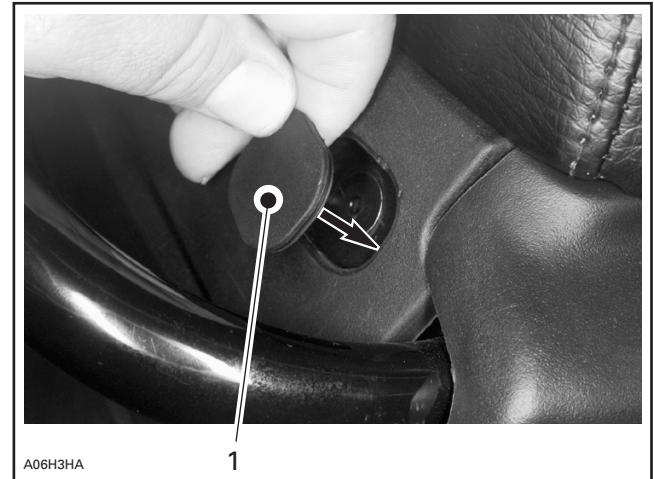
Slide and position snow guard protector pad between snow guard and chassis.

Finalize snow guard installation with caps, as shown in the next photo.



TYPICAL — VIEW FROM UNDER SNOW GUARD

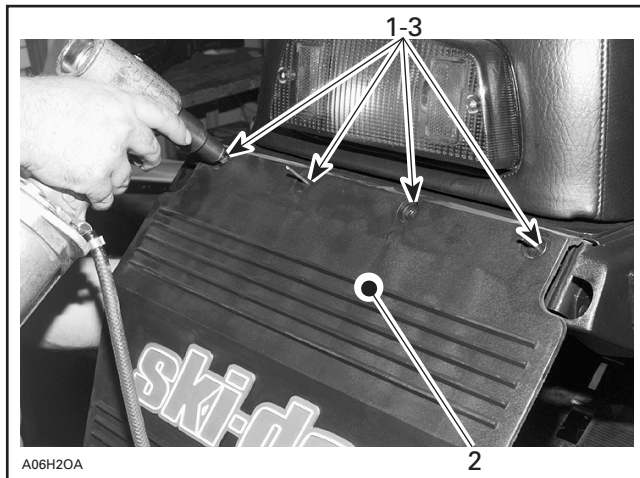
1. Snow guard (box)
2. Snow guard protector pad (box)



1. Cap (4) (P/N 415 073 300) (section no. 9)

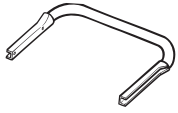
Secure the 2 parts with rivets.

NOTE: Place washers inside tunnel.

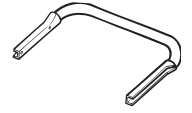


TYPICAL

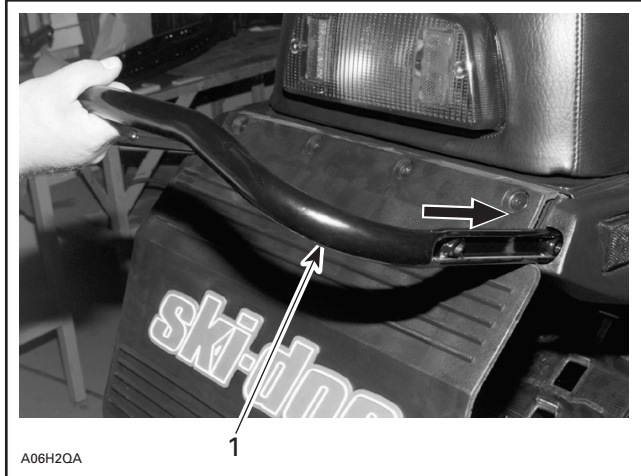
1. Rivet (4) (P/N 390 908 000) (section no. 2)
2. Snow guard
3. Washer (4) (P/N 517 225 900) (section no. 2). Position washer inside tunnel



PARTS INSTALLATION REAR BUMPER



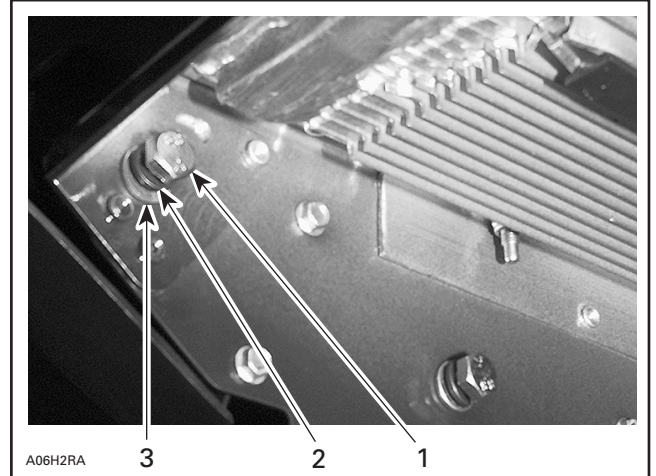
Install rear bumper to chassis.



SLIDE BUMPER INSIDE REAR MOLDINGS

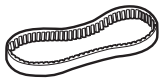
1. Rear bumper

Secure bumper from inside of tunnel.

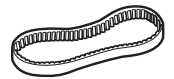


TYPICAL — VIEW FROM INSIDE OF TUNNEL

1. Bolt M8 (4) (section no. 1). Torque between 14 and 17 N•m (10 and 13 lbf•ft)
2. Lock washer (4) (section no. 1)
3. Washer (4) (section no. 1)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 711 809) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

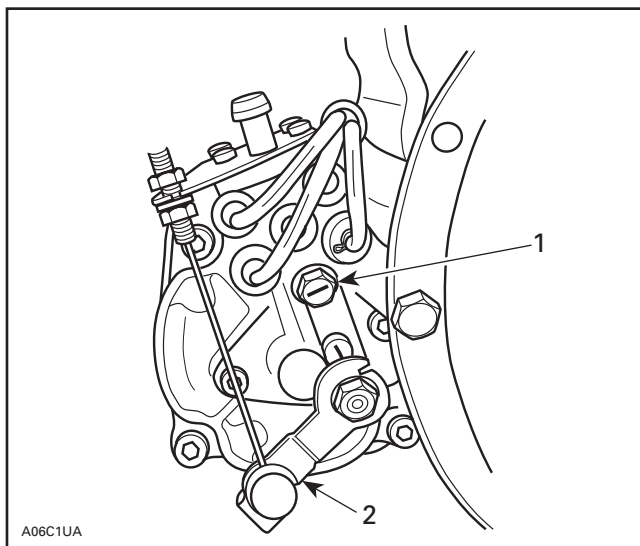
Main Line Bleeding

Remove springs retaining muffler in place and withdraw muffler from engine compartment.



TYPICAL — REMOVE SPRINGS AND WITHDRAW MUFFLER

Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.

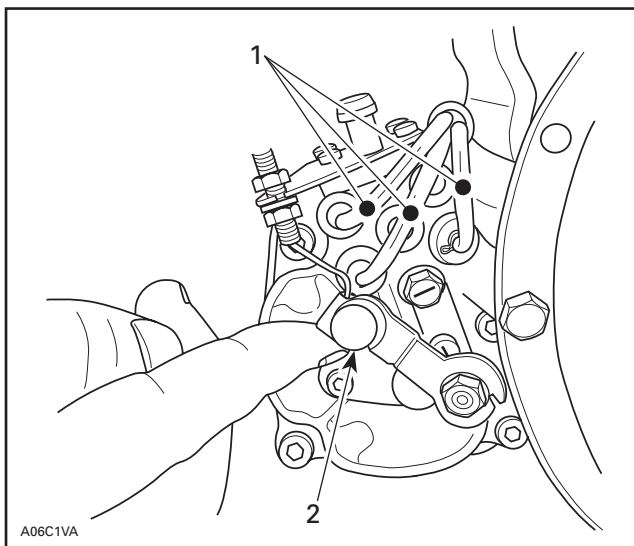


1. Bleeder screw
2. Oil pump lever

Reinstall muffler.

Small Oil Lines Bleeding

When muffler is correctly installed, bleed the small oil lines between pump and engine crank-case by running engine at idle while holding the pump lever in fully open position. The best way to hold pump lever is to make a hook out of a mechanical wire and hang the lever up.



TYPICAL

1. Small oil lines
2. Engine at idle (fully open position)



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid (DOT 4) in reservoir on handlebar for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



TYPICAL

1. Minimum level window



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin. When track adjustment is completed, install wheel caps provided in Predelivery kit (section no. 5).



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).







TECHNICAL DATA



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).





The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

	MODEL	FORMULA III 600			
	Engine Type	599			
	Maximum HP RPM ①	± 100 RPM 8400			
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.		
	Carburetor Type	PTO VM 36-190	CTR VM 36-190	MAG VM 36-190	
	Main Jet	PTO 270	CTR 270	MAG 270	
	Needle Jet	P-0 (286)			
	Pilot Jet	PTO 50	CTR 50	MAG 50	
	Needle Identification — Clip Position	6DEY2-2			
	Slide Cutaway	2.5			
	Float Adjustment	± 1 mm (in)	18.1 (.71)		
	Air Screw Adjustment	± 1/16 turn	PTO 2.0	CTR 2.0	MAG 2.0
	Idle Speed RPM	± 200 RPM	1800		
	Gas Grade/Octane Number	(R + M)/2	Super Unleaded/91		
	Gas/Oil Ratio	Oil Injection			
	Ignition Timing BTDC ②	mm (in)	2.77 (.109)		
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 (.022 - .057)		
	Gear Ratio	Teeth	24/43		
	Engagement Speed	± 100 RPM	4200		
	Drive Pulley Calibration Screw Position	3			
	Pulley Distance	Z ③	mm (in)	120.5 (4-3/4)	
		X	± 0.5 mm (± 1/64 in)	35.5 (1-25/64)	
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
		Deflection	mm (in)	35 (1-3/8)	
	Drive Belt Adjustment	Force ④	kg (lbf)	11.5 (25.35)	
		Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)	7.00 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull		

- ① Engine speed at which maximum power is achieved.
- ② At 3500 RPM (engine cold) with headlamp turned on.
- ③ Distance to be adjusted after a 10-hour break-in period.
- ④ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take Off side
 CTR: Center
 MAG: Magneto side

A dot (•) on right indicates a change from 1998 model.

	MODEL		FORMULA III 700		
	Engine Type		699		
	Maximum HP RPM ① ± 100 RPM		8000		
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.		
	Carburetor Type		PTO VM 38-420	CTR VM 38-420	MAG VM 38-420
	Main Jet		PTO 290	CTR 290	MAG 290
	Needle Jet		P-1 (480)		
	Pilot Jet		PTO 50	CTR 50	MAG 50
	Needle Identification — Clip Position		6DEH5-3		
	Slide Cutaway		2.5		
	Float Adjustment ± 1 mm (in)		18.1 (.71)		
	Air Screw Adjustment ± 1/16 turn		PTO 2.5	CTR 2.5	MAG 2.5
	Idle Speed RPM ± 200 RPM		1800		
	Gas Grade/Octane Number (R + M)/2		Super Unleaded/91		
	Gas/Oil Ratio		Oil Injection		
	Ignition Timing BTDC ② mm (in)		2.77 (.109)		
	Trigger Coil Air Gap mm (in)		0.55 - 1.45 (.022 - .057)		
	Gear Ratio Teeth		25/43		
	Engagement Speed ± 100 RPM		3800		
	Drive Pulley Calibration Screw Position		3		
	Pulley Distance	Z ③	mm (in)	120.5 (4-3/4)	
		X	± 0.5 mm (± 1/64 in)	35.5 (1-25/64)	
	Offset	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
		Deflection	mm (in)	35 (1-3/8)	
	Drive Belt Adjustment	Force ④	kg (lbf)	11.5 (25.35)	
		Driven Pulley Preload ± 0.7 kg (± 1.5 lbf)		7.00 (15.43)	
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection	mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull		

① Engine speed at which maximum power is achieved.

② At 3500 RPM (engine cold) with headlamp turned on.

③ Distance to be adjusted after a 10-hour break-in period.

④ Force applied midway between pulleys to obtain specified deflection.





BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take Off side

CTR: Center

MAG: Magneto side

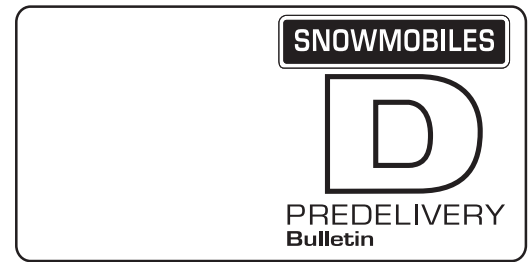
	MODEL	FORMULA III 800			
	Engine Type	809			
	Maximum HP RPM ①	± 100 RPM 8000			
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.		
	Carburetor Type	PTO TM 38-C228	CTR TM 38-C228	MAG TM 38-C228	
	Main Jet	PTO 270	CTR 290	MAG 280	
	Needle Jet	O-2 (327)			
	Pilot Jet	PTO 50	CTR 50	MAG 50	
	Needle Identification — Clip Position	8ADY1/41-3			
	Slide Cutaway	2.0			
	Float Adjustment	± 1 mm (in)	21.0 (0.83)		
	Air Screw Adjustment	± 1/16 turn	PTO 4.5	CTR 4.5	MAG 4.5
	Idle Speed RPM	± 200 RPM	1800		
	Gas Grade/Octane Number	(R + M)/2	Super Unleaded/91		
	Gas/Oil Ratio	Oil Injection			
	Ignition Timing BTDC ②	mm (in)	2.59 (.102)		
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 (.022 - .057)		
	Gear Ratio	Teeth	26/43		
	Engagement Speed	± 100 RPM	3800		
	Drive Pulley Calibration Screw Position	3			
	Pulley Distance	Z ③	mm (in)	120.5 (4-3/4)	
		X	± 0.5 mm (± 1/64 in)	35.5 (1-25/64)	
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
		Drive Belt Adjustment	Deflection	mm (in)	35 (1-3/8)
	Force ④		kg (lbf)	11.5 (25.35)	
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)	7.00 (15.43)		
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull		

- ① Engine speed at which maximum power is achieved.
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BTDC: Before Top Dead Center
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Please route to:

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-19**

Date: October 21, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada: Mach*1 Mach* 1 R	1422 1442	All
1999	United States: Mach* 1 Mach* 1 R	1437 1443	All
1999	Europe: Mach* 1 Mach* 1 R	1423 1444	All

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

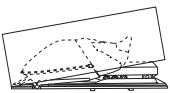
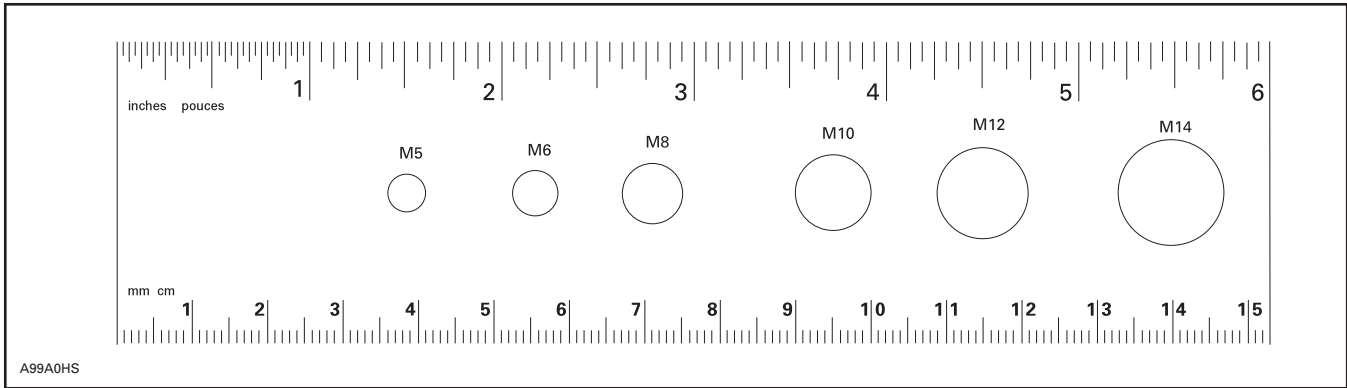
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, it may have some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

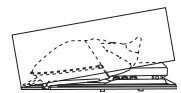
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquires should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and video.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
549 010 787	Mach 1 and Mach 1 R

◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

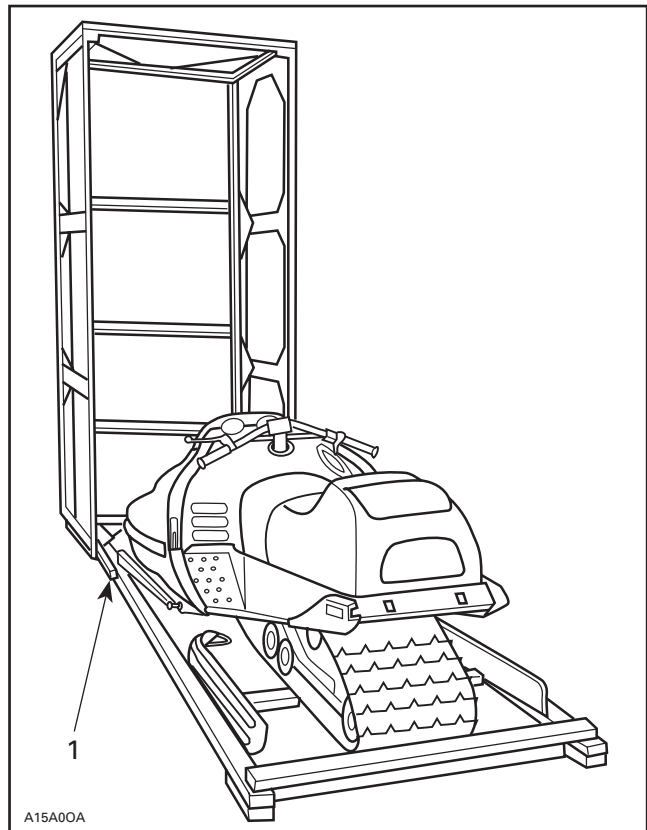
▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to crate base.

Notch in crate base is at front.

Tip cover over front of vehicle.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties and ropes retaining windshield. Keep latches on windshield for further installation.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and elastic stop nuts.

Remove vehicle from base.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

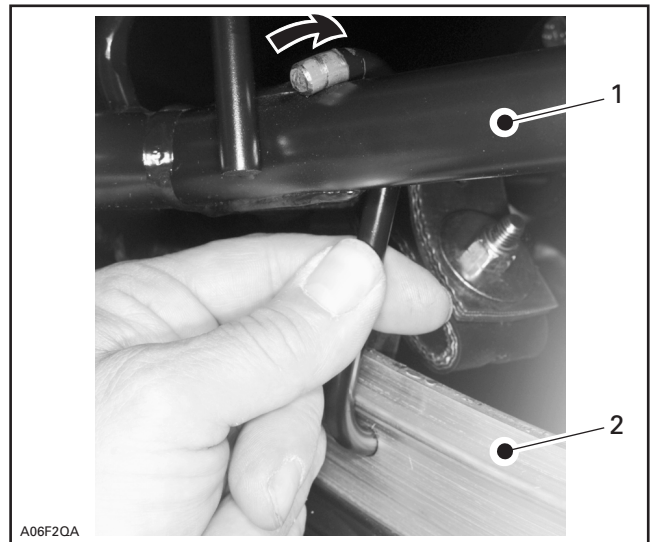


TYPICAL

Using left hand, cut tie wrap and remove hook from suspension, as shown on the following photo.

◆ WARNING

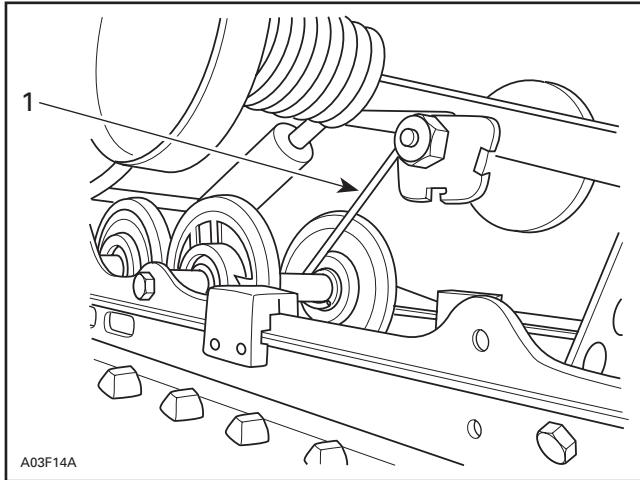
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

◆ WARNING

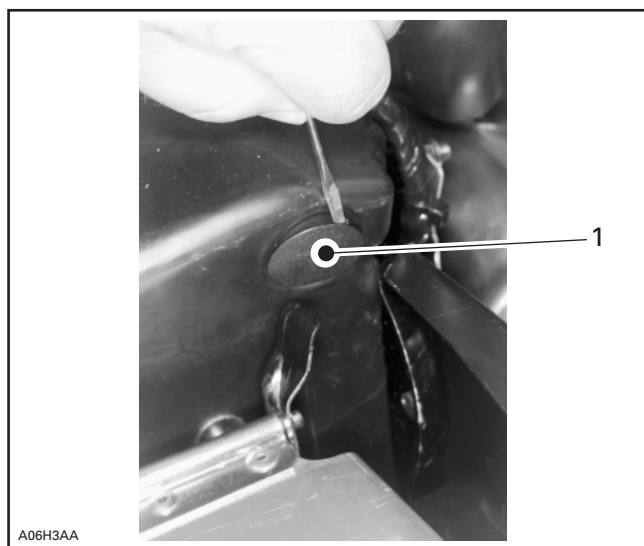
Both hooks must be removed to have snowmobile suspension operational.



PARTS INSTALLATION FRONT SUSPENSION



Lift front of vehicle and block safely.
From inside engine compartment, remove caps
as shown in the next photo.



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INSIDE ENGINE COMPARTMENT

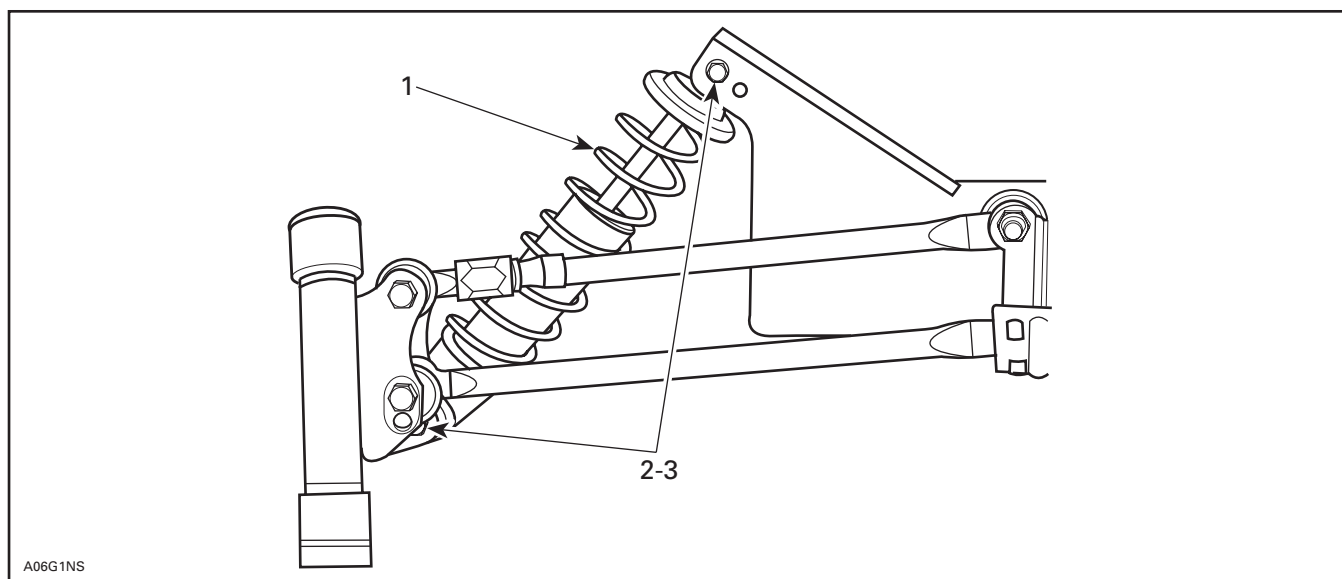
1. Using flat screwdriver, remove cap

Remove and discard shipping brackets from sus-
pension. Discard spring clips, keep bolts.

Secure shock absorbers to suspension with their
adjusting ring at bottom. Place decal edges inside.

NOTE: Position bolt heads toward front.

Reinstall caps.



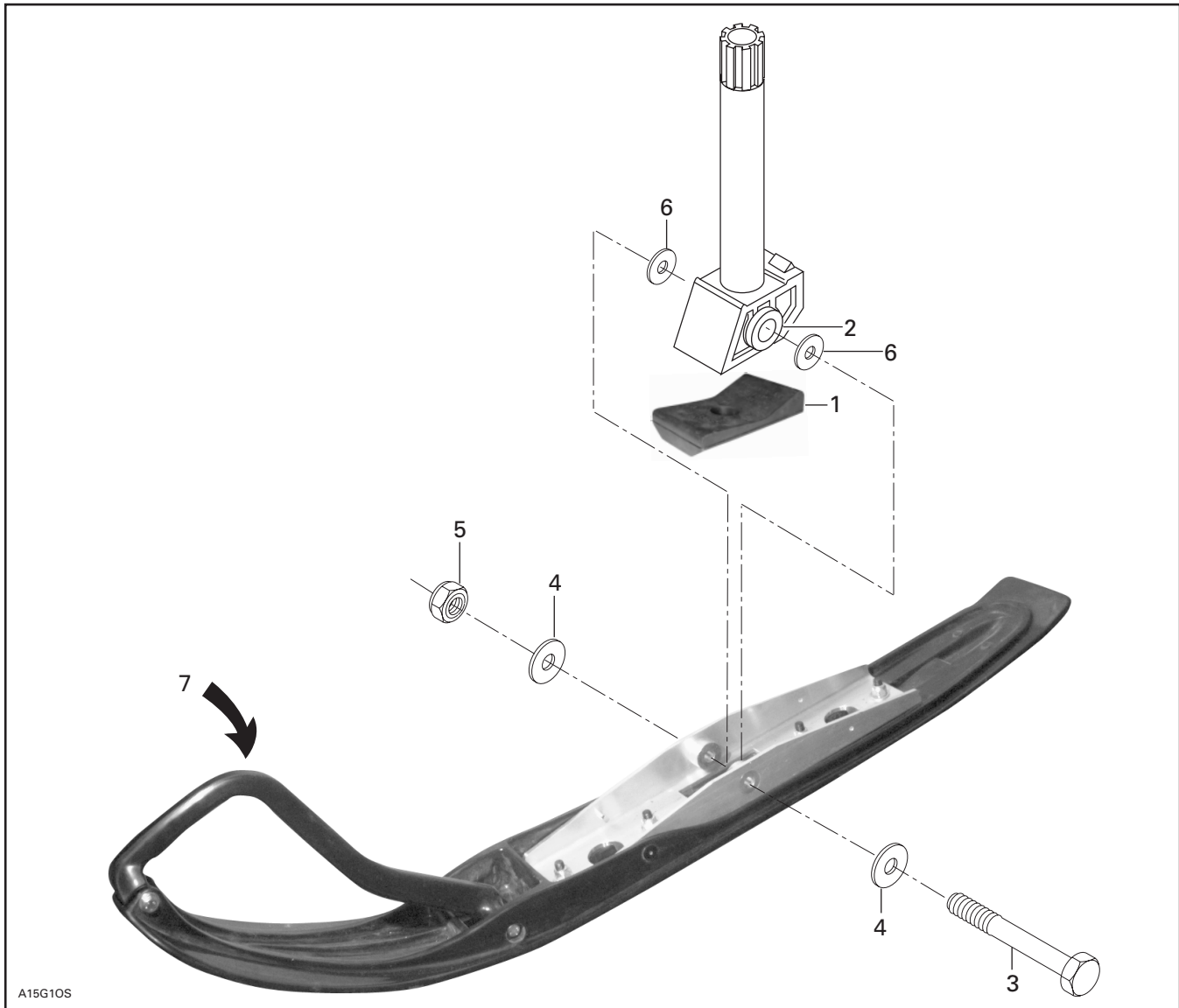
A06G1NS

TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (box)
2. M10 x 1.5 x 55 bolt (on suspension)
3. M10 x 1.5 nut (4) (section no. 4). Torque to 48 N•m (35 lb•ft)



PARTS INSTALLATION SKIS



LEFT SIDE SHOWN

1. Ski stopper (2) (P/N 570 053 300) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 8). Install large washers
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 8). Torque between 30 and 50 N•m (23 and 37 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 8). Insert small washers, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION

STEERING PAD



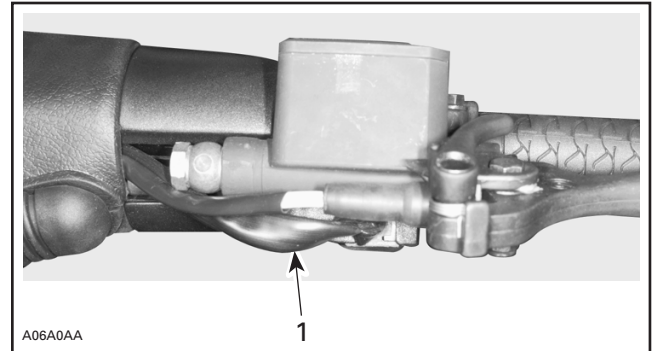
Adjust handlebar temporarily and tighten nuts loosely for now.

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

Install steering pad temporarily, and adjust for proper fit with console.

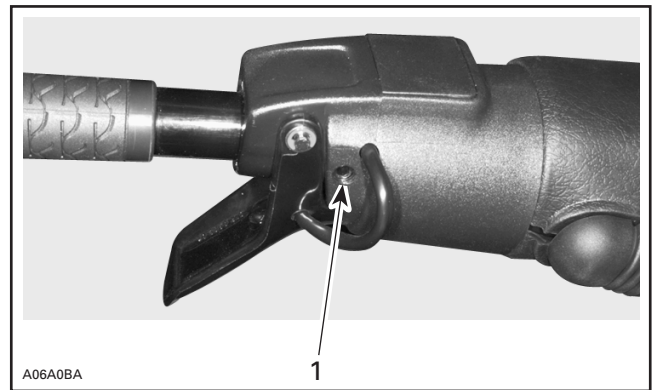
Remove steering pad and torque nuts between 21 and 28 N•m (16 and 20 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings.



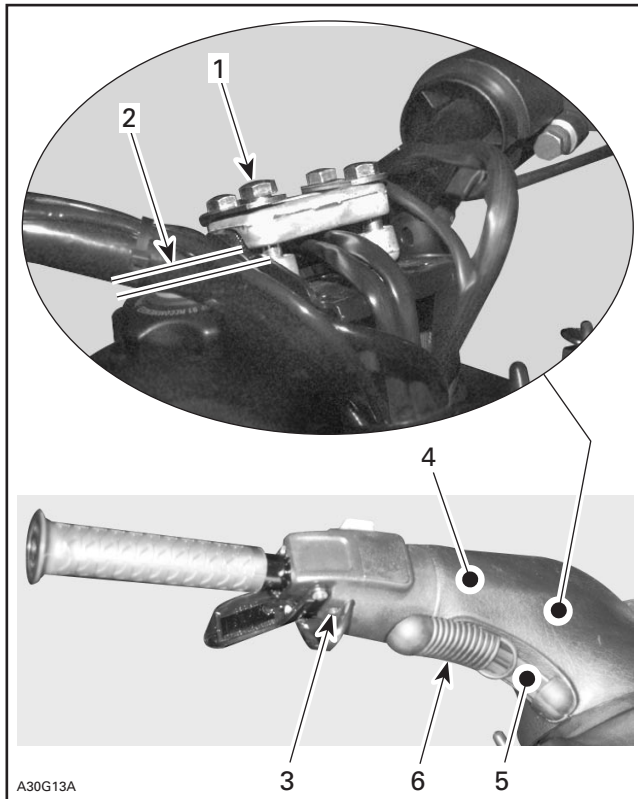
BRAKE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)



THROTTLE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)



1. Torque between 21 and 28 N•m (16 and 20 lbf•ft)
2. Equal gap each side (both clamps)
3. Loosen Allen screw
4. Steering pad (box)
5. Use liquid soap to ease installation
6. Keyway (2) (P/N 572 106 200) (section no. 5)



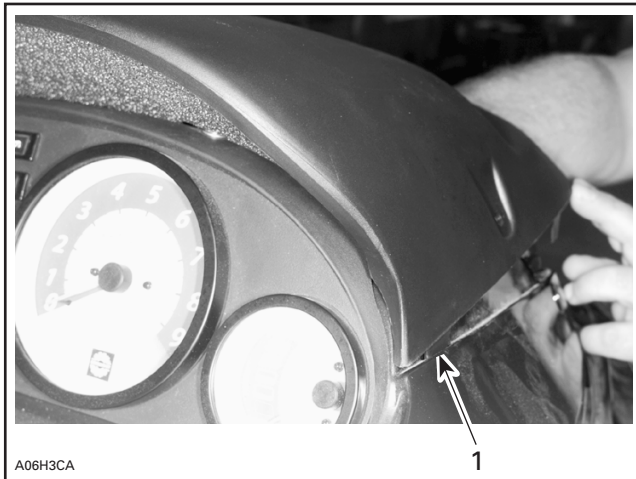
PARTS INSTALLATION WINDSHIELD



NOTE: Air deflector with foam must be installed before windshield.

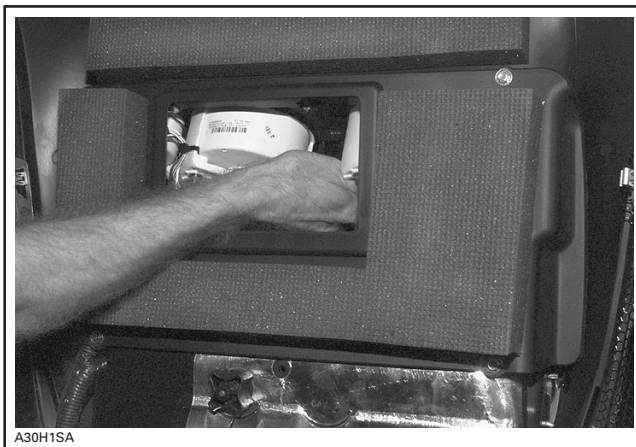
AIR DEFLECTOR

Position air intake deflector tabs (left and right side) into hood slots, as shown in the next photo.



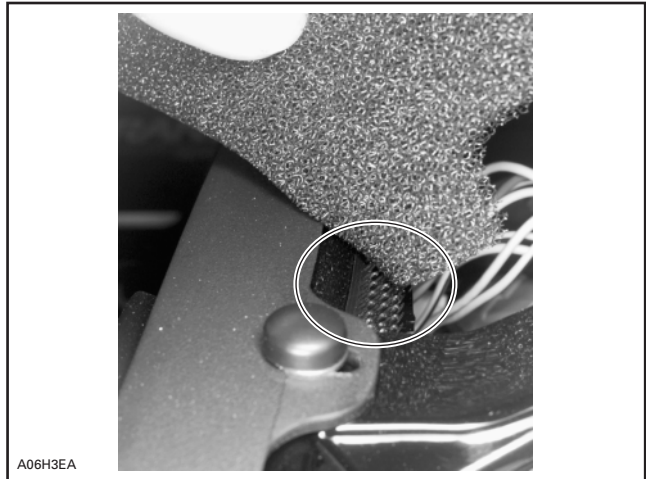
1. Air intake deflector tabs (right side)

Holding air intake deflector, insert hand underneath hood, in gauges housing, and attach air intake foam to hood Velcro.



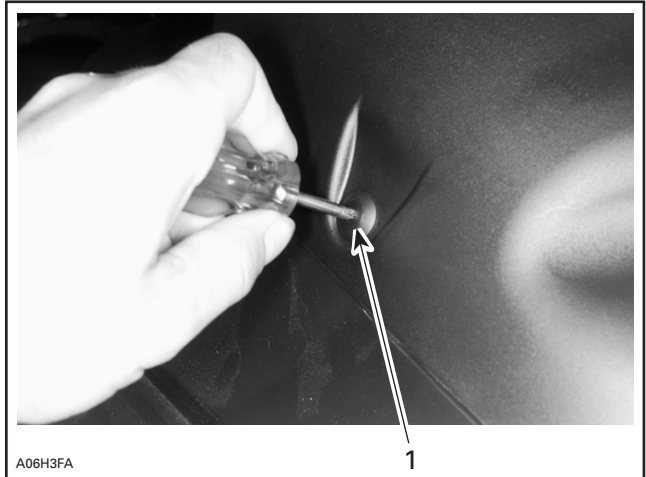
FROM UNDERNEATH HOOD, GOING THROUGH GAUGES HOUSING, ATTACH FOAM TO VELCRO

NOTE: Ensure that air intake foam is properly attached to Velcro. See next photo.



AIR INTAKE DEFLECTOR HAS BEEN REMOVED TO SHOW WHERE AND HOW TO ATTACH AIR INTAKE FOAM TO HOOD

Secure air intake deflector using dart, as shown in the next photo.



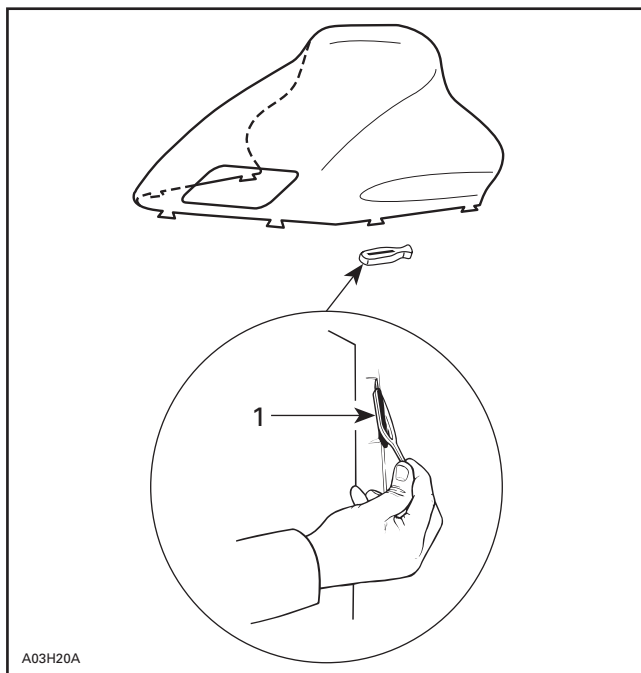
1. Dart (section no. 6)

Install windshield on dashboard and secure with latches.



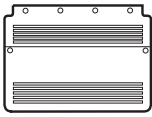
A06H3GA

WINDSHIELD INSTALLED ON DASHBOARD

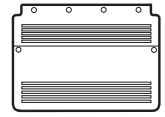


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1. Latch (6) (P/N 570 023 800) (section no. 6)



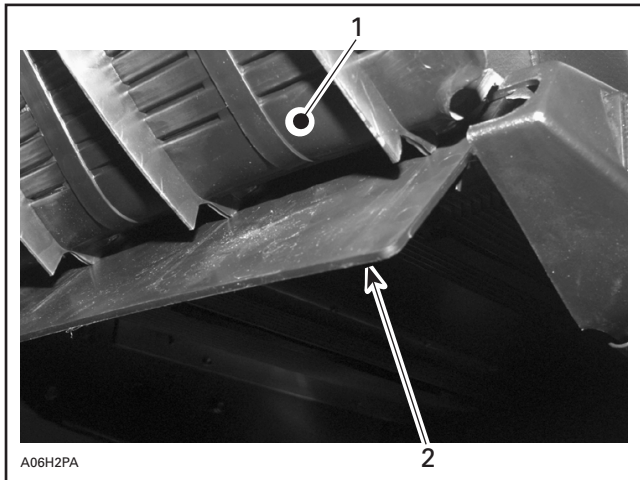
PARTS INSTALLATION SNOW GUARD



Insert and position snow guard onto chassis, between rear moldings.

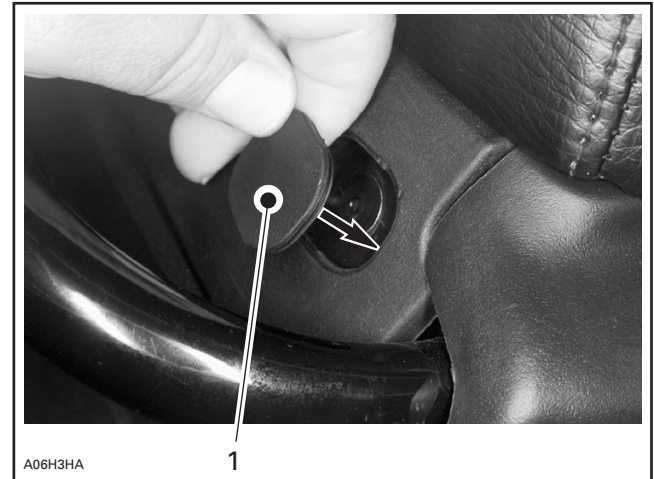
Slide and position snow guard protector pad between snow guard and chassis.

Finalize snow guard installation with caps, as shown in the next photo.



TYPICAL — VIEW FROM UNDER SNOW GUARD

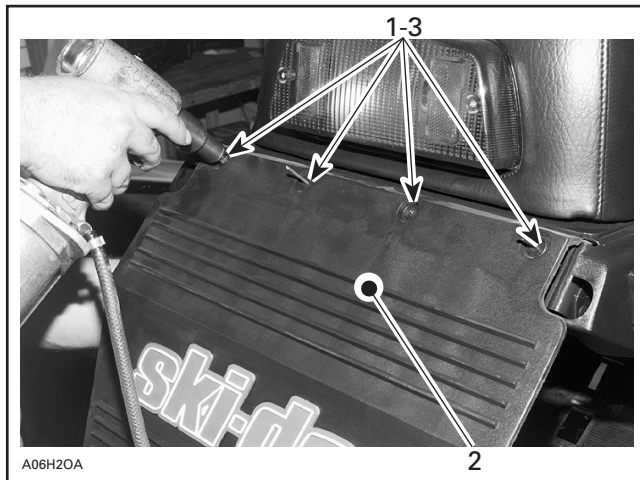
1. Snow guard (box)
2. Snow guard protector pad (box)



1. Caps (4) (section no. 9)

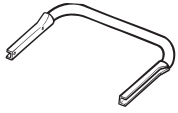
Secure the two parts with rivets.

NOTE: Place washers inside tunnel.

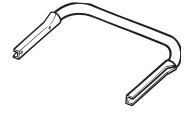


TYPICAL

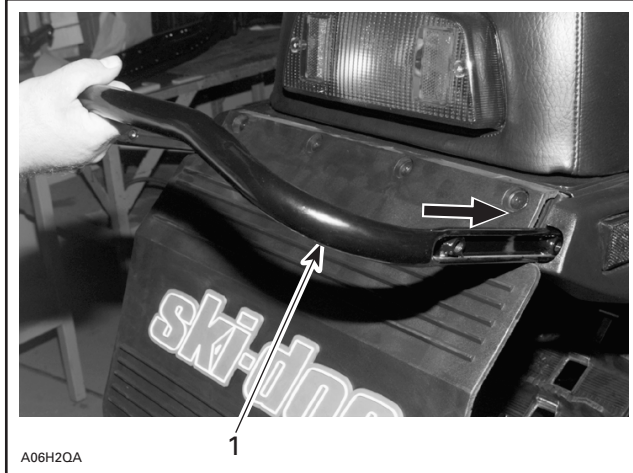
1. Rivet (4) (section no. 2)
2. Snow guard
3. Washer (4) (section no. 2). Position washer inside tunnel



PARTS INSTALLATION REAR BUMPER



Install rear bumper to chassis.

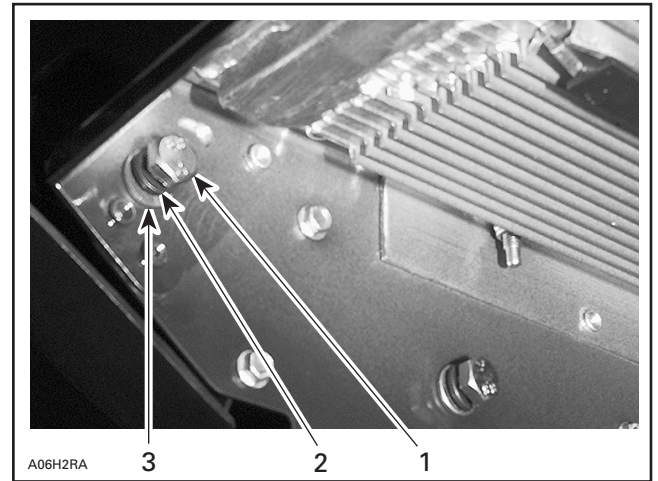


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SLIDE BUMPER INSIDE REAR MOLDINGS

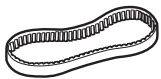
1. Rear bumper

Secure bumper from inside of tunnel.



TYPICAL — VIEW FROM INSIDE OF TUNNEL

1. Bolt M8 (4) (section no. 1). Torque between 14 and 17 N•m (10 and 13 lbf•ft)
2. Lock washer (4) (section no. 1)
3. Washer (4) (section no. 1)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 711 809) before installing drive belt.



LIQUIDS

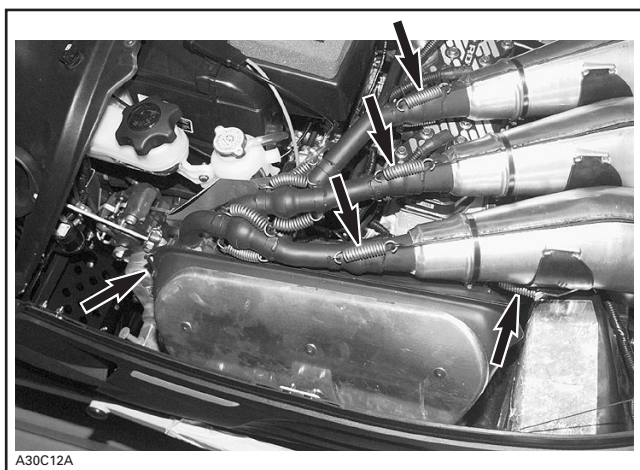
OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX injection oil (P/N 413 802 900 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

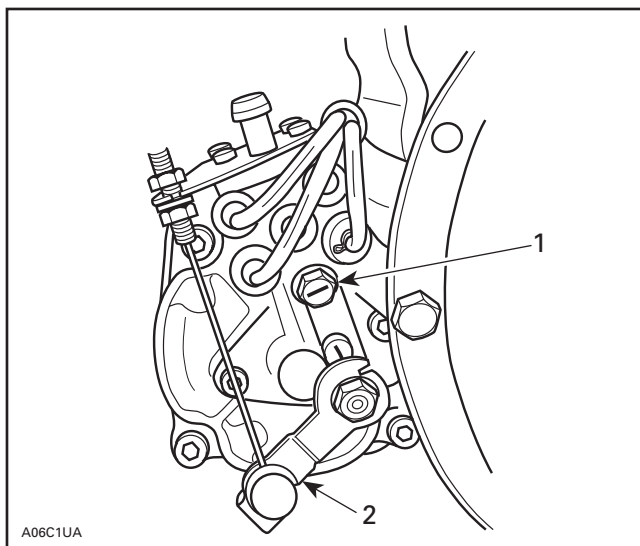
Main Line Bleeding

Remove springs retaining muffler in place and take muffler out of engine compartment.



REMOVE SPRINGS AND WITHDRAW MUFFLER

Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.

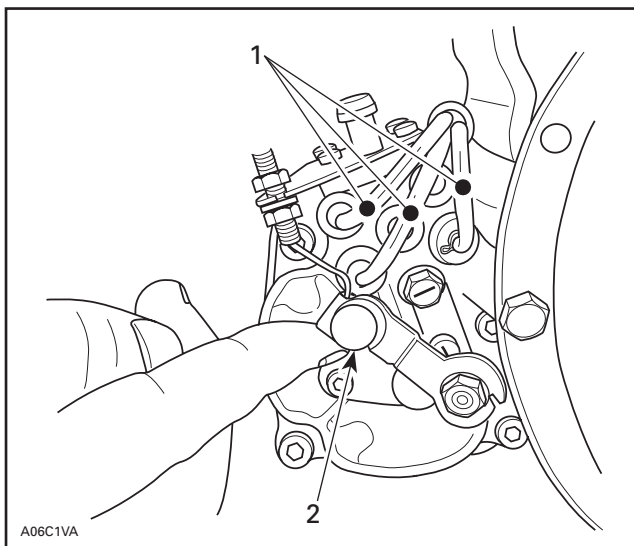


1. Bleeder screw
2. Oil pump lever

Reinstall muffler.

Small Oil Lines Bleeding

When muffler is correctly installed, bleed the small oil lines between pump and engine crank-case by running engine at idle while holding the pump lever in fully open position. The best way to hold pump lever is to make a hook with a steel wire and hang the lever up.



TYPICAL

1. Small oil lines
2. Engine at idle (fully open position)



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid (DOT 4) in reservoir on handlebar for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



A06G10A

TYPICAL

1. Minimum level window



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



A30F08A

1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.

When track adjustment is completed, install wheel caps provided in Predelivery kit.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).


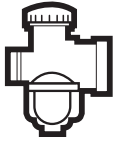




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

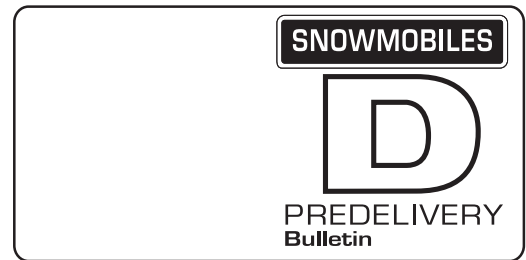
	MODEL		MACH 1		MACH 1 R	
	Engine Type		699			
	Maximum HP RPM ①		± 100 RPM			
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)			
	Carburetor Type		PTO: TM 38-C224	CTR: TM 38-C224	MAG: TM 38-C224 •	
	Main Jet		PTO: 300	CTR: 300	MAG: 300	
	Needle Jet		N-7 (327) •			
	Pilot Jet		PTO: 50	CTR: 50	MAG: 50	
	Needle Identification — Clip Position		8AGY1/41-4 •			
	Slide Cut-away		2.0 •			
	Float Adjustment		± 1 mm (in) •			
	Air Screw Adjustment		± 1/16 turn PTO: 4.0 CTR: 4.0 MAG: 4.0 •			
	Idle Speed		± 200 RPM 1800			
	Gas Grade Octane Number		(R + M)/2 Super Unleaded 91			
	Gas/Oil Ratio		Oil Injection			
		Ignition Timing BTDC ②		mm (in) 2.77 (.109) •		
Trigger Coil Air Gap		mm (in) 0.55 - 1.45 (.022 - .057)				
	Gear Ratio		Teeth 25/43 •			
	Engagement Speed		± 100 RPM 4200			
	Drive Pulley Calibration Screw Position		3 •			
	Pulley Distance	Z ③	± 0.5 mm (± 0.02 in)		123.0 (4.84) •	
		X	± 0.5 mm (± 0.02 in)		35.5 (1.40) •	
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)			
		Drive Belt Adjustment	Deflection	± 5 mm (in)		35 (1-3/8)
	Force ④		kg (lbf)		11.5 (25.35)	
	Driven Pulley Preload		± 0.7 kg (± 1.5 lbf)		7.0 (15.43)	0.0 (0.0) •
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	mm (in)		30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull •		

- ① Engine speed at which maximum power is achieved.
- ② At 3500 RPM (engine cold) with headlamp turned on.
- ③ Distance to be adjusted after a 10-hour break-in period.
- ④ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take Off Side
 CTR: Center
 MAG: Magneto Side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-20**

Date: October 22, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada: Mach* Z Mach* Z R Mach* Z LT Mach* Z LT R	1418 1439 1420 1445	All
1999	United States: Mach* Z Mach* Z R Mach* Z M.H. R Mach* Z LT Mach* Z LT R	1435 1440 1462 1436 1446	All
1999	Europe: Mach* Z Mach* Z R Mach* Z LT R	1419 1441 1447	All

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide bag*. Make sure that predelivery check list is completed and signed.

◆ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

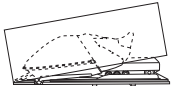
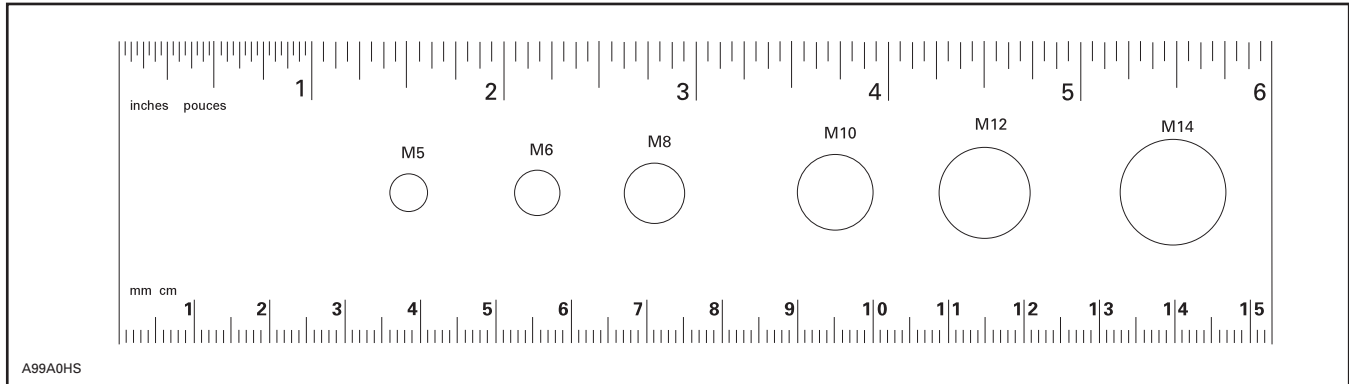
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, it may have some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

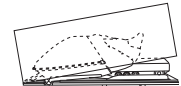
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquires should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and Video.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
549 010 787	MACH Z MACH Z R MACH Z LT MACH Z LT R
549 010 772	MACH Z LT R (european model)

◆ WARNING

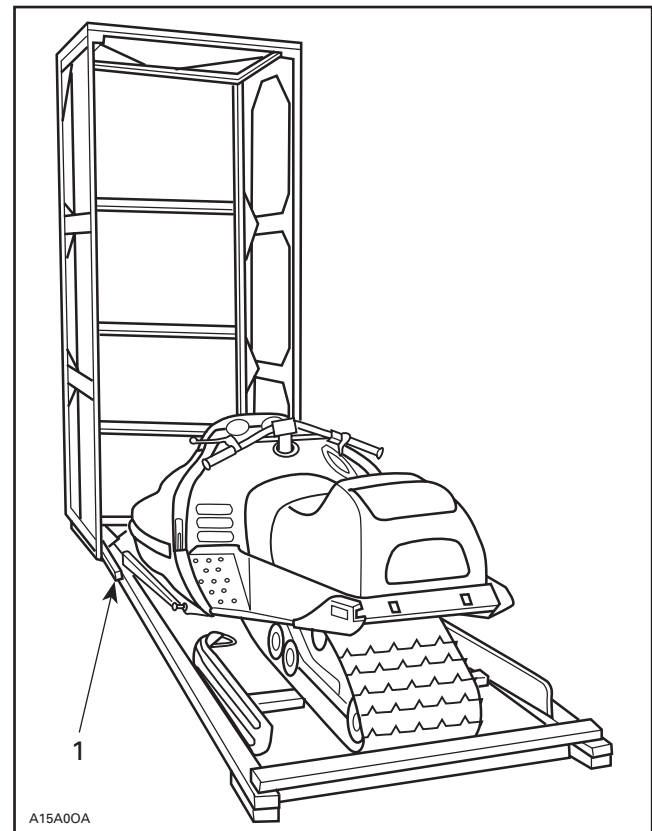
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties and ropes retaining windshield. Keep latches for further installation.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Take out parts to be installed and predelivery kit from box.

Take out drive belt from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, cut locking tie, then apply pressure onto rear bumper with right hand, as shown on the following photo.



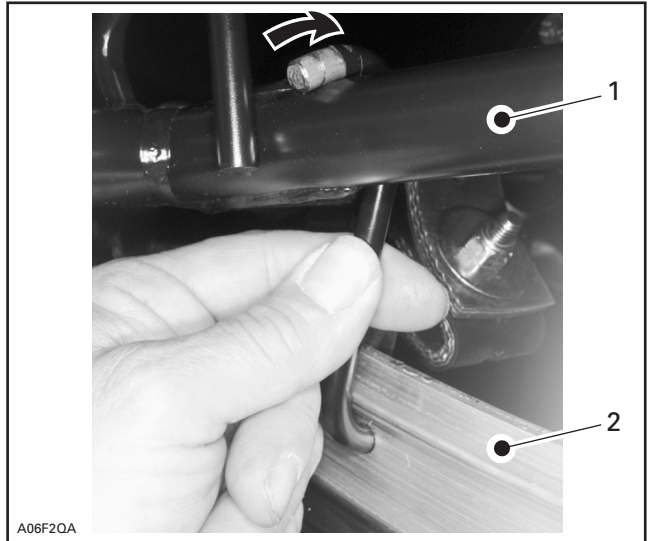
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

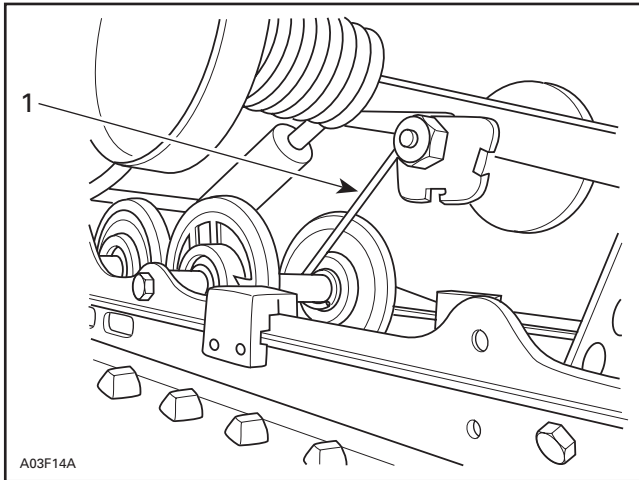


A06F20A

TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

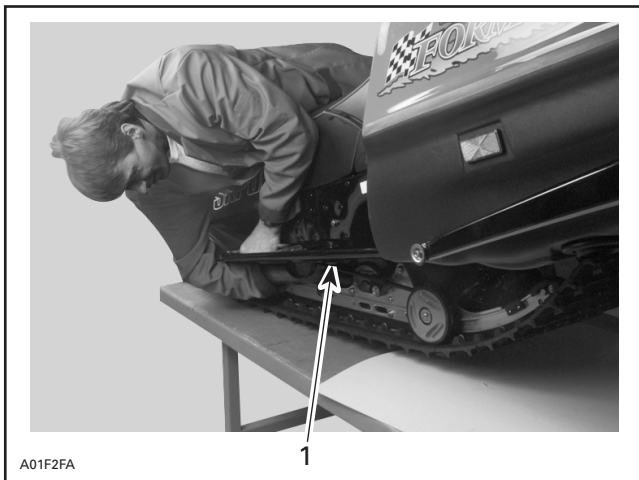
REAR HOOK REMOVAL



1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

◆ WARNING

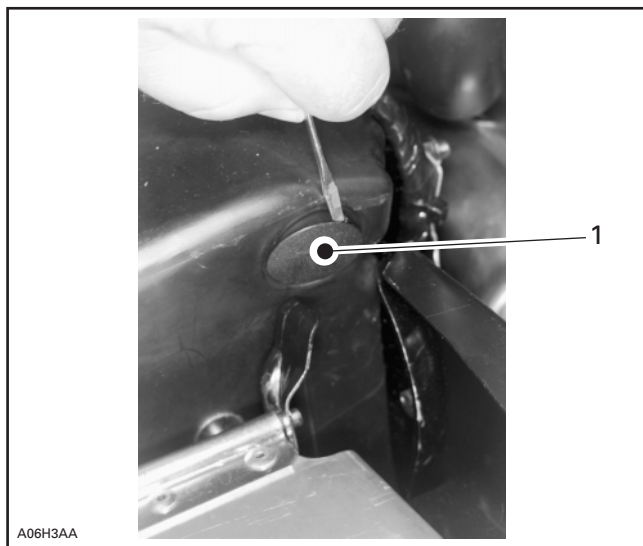
Both hooks must be removed to have snowmobile suspension operational.



PARTS INSTALLATION FRONT SUSPENSION



Lift front of vehicle and block safely.
From inside engine compartment, remove caps
as shown in the next photo.



A06H3AA

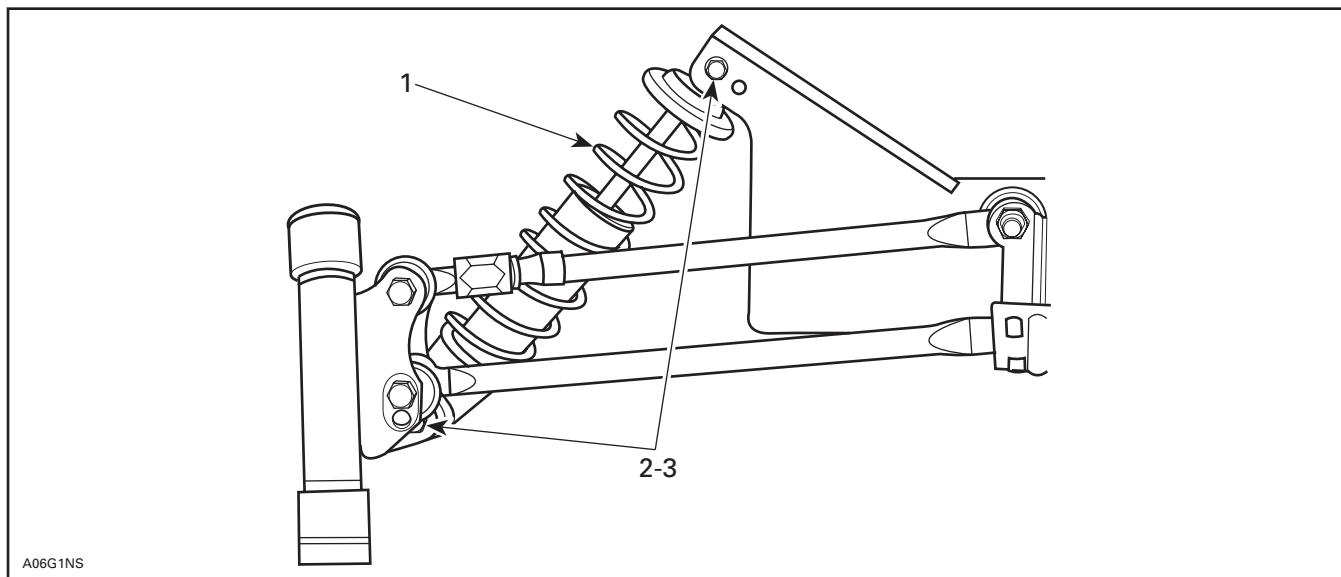
INSIDE ENGINE COMPARTMENT

1. Using flat screwdriver, remove cap

Remove and discard shipping brackets from sus-
pension. Discard spring clips, keep bolts.

Secure shock absorbers to suspension with their
adjusting ring at bottom.

NOTE: Position bolt heads toward front.



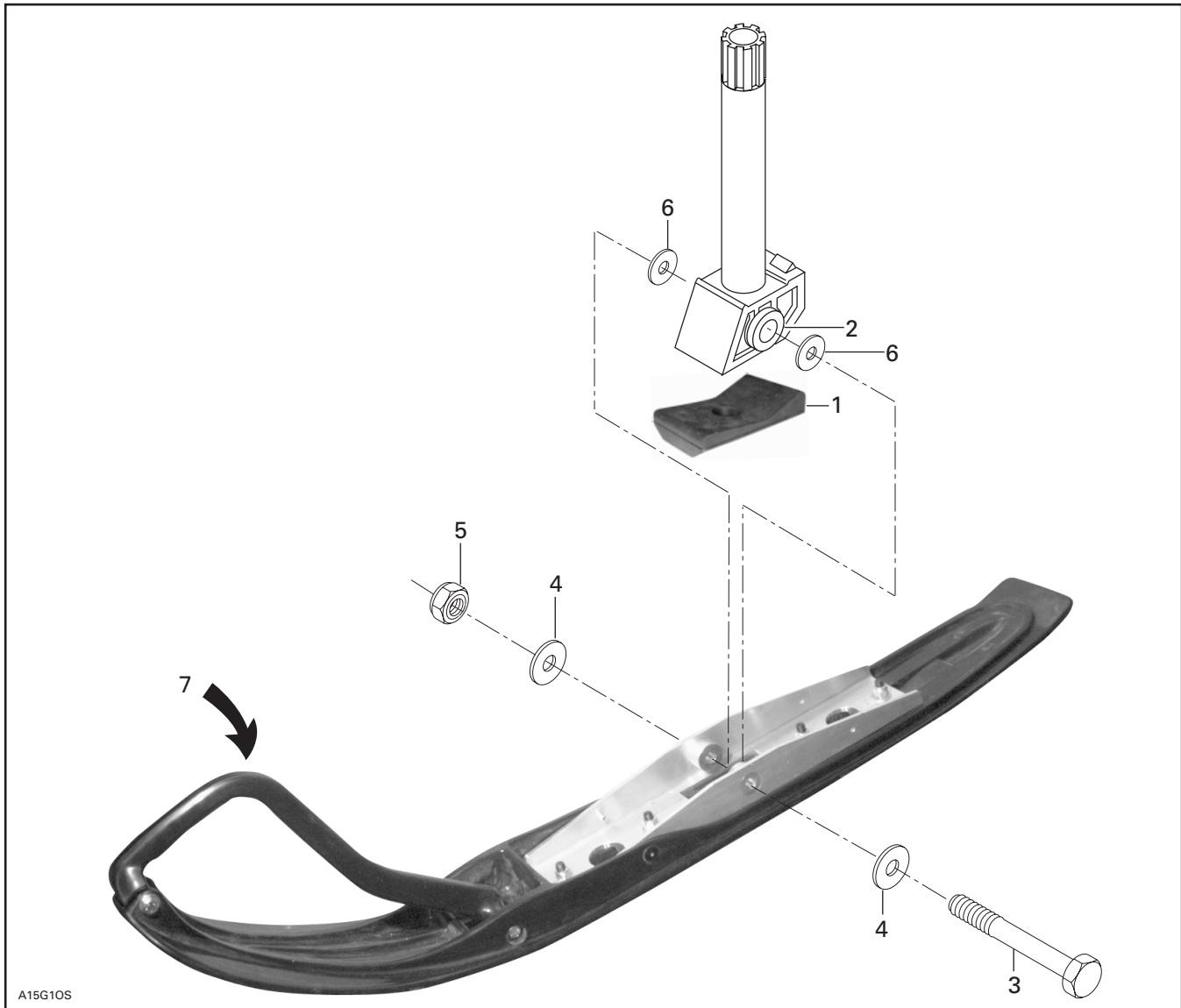
A06G1NS

TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (box)
2. M10 x 1.5 x 55 bolt (on suspension)
3. M10 x 1.5 nut (section 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS



A15G10S

LEFT SIDE SHOWN

1. Ski stopper (2) (P/N 570 053 300) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation

Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 900 048) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



PARTS INSTALLATION STEERING PAD



Adjust handlebar temporarily and tighten nuts loosely for now.

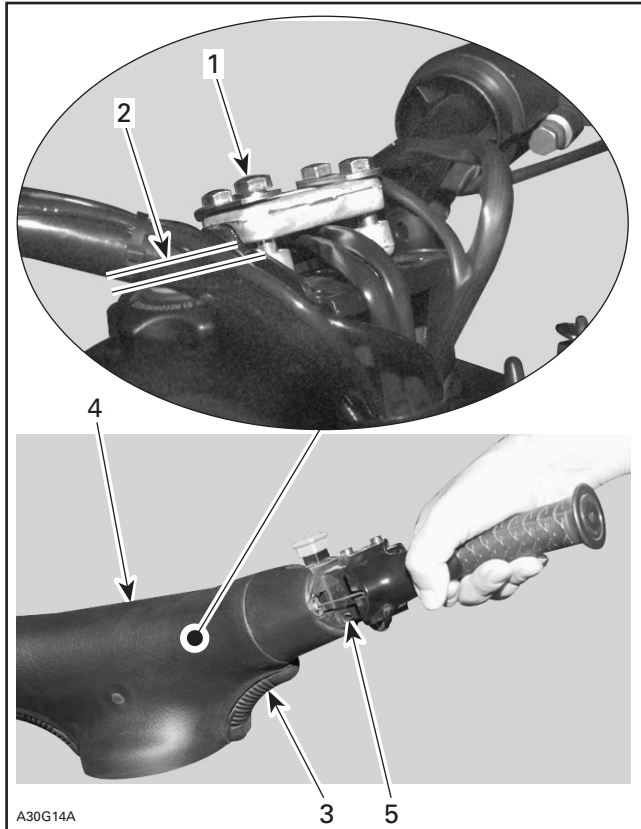
Loosen Allen screw of throttle and brake handle housings, at least 3 turns.

Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts between 21 and 28 N•m (16 and 20 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings.

NOTE: While reinstalling handlebar and pad, make sure oil reservoir is level.



1. Torque nuts between 21 and 28 N•m (16 and 20 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (section 5)
4. Steering pad (box)
5. Loosen Allen screw (if needed)



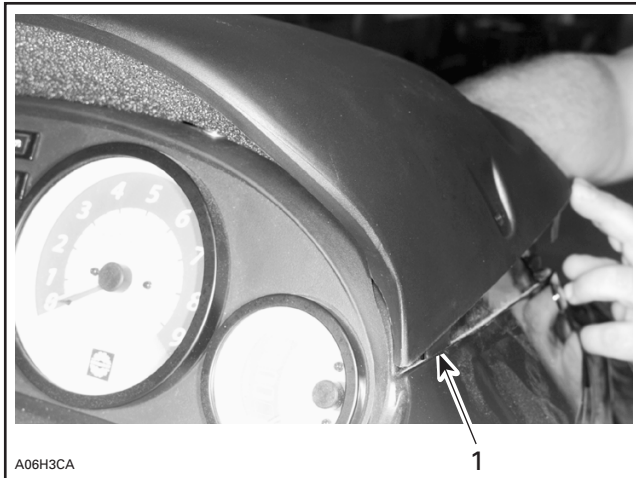
PARTS INSTALLATION WINDSHIELD



NOTE: Air deflector with foam must be installed before windshield.

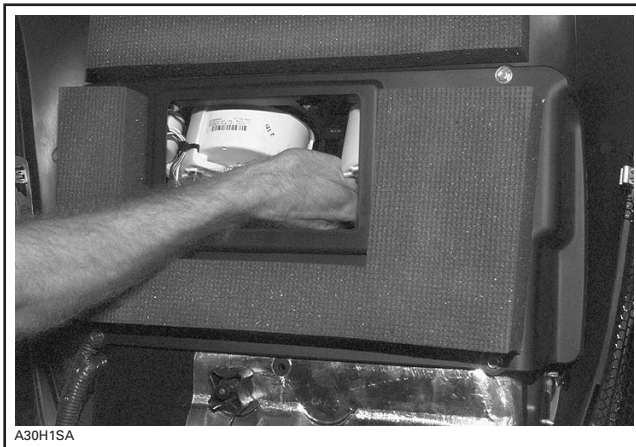
AIR DEFLECTOR

Position air intake deflector tabs (left and right side) into hood slots, as shown in the next photo.



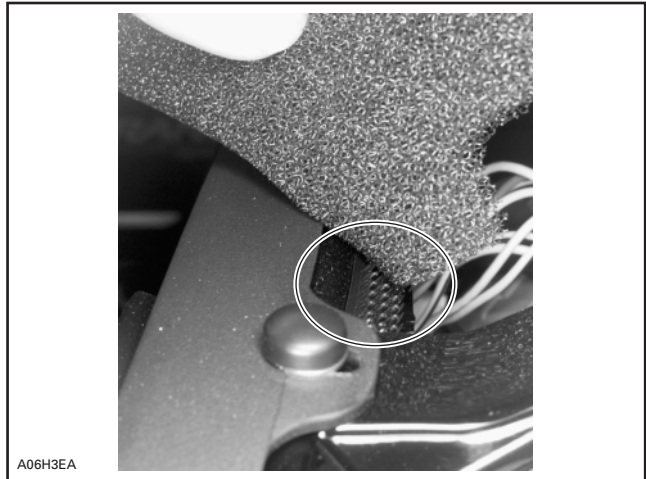
1. Air intake deflector tabs (right side)

Holding air intake deflector, insert hand underneath hood, in gauges housing and attach air intake foam to hood Velcro.



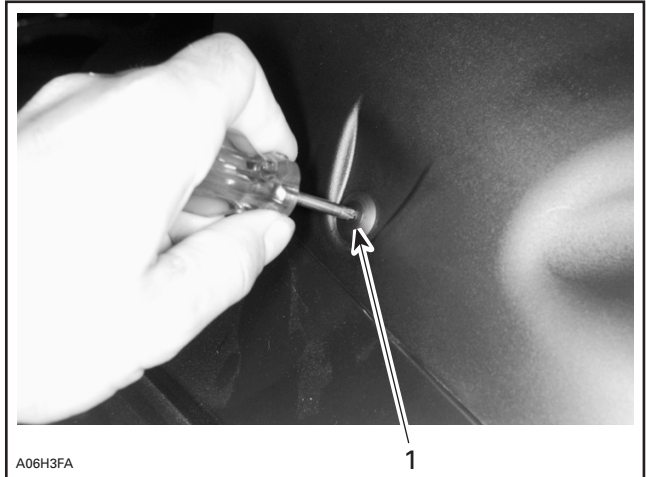
FROM UNDERNEATH HOOD, GOING THROUGH GAUGES HOUSING, ATTACH FOAM TO VELCRO

NOTE: Ensure that air intake foam is properly attached to Velcro. See next photo.



AIR INTAKE DEFLECTOR HAS BEEN REMOVED TO SHOW WHERE AND HOW TO ATTACH AIR INTAKE FOAM TO HOOD

Secure air intake deflector using dart, as shown in the next photo.



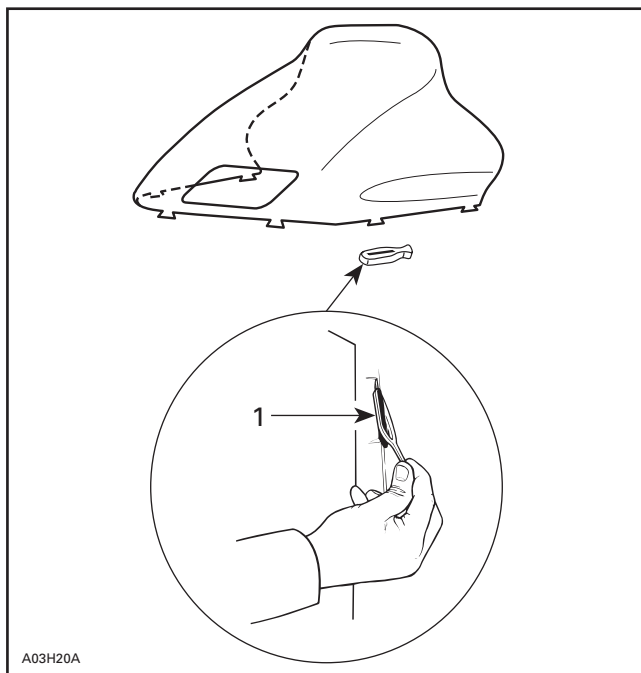
1. Dart (2) (section no. 6)

Install windshield on hood dashboard and secure with latches.



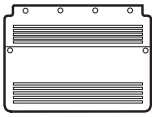
A06H3GA

WINDSHIELD INSTALLED ON DASHBOARD

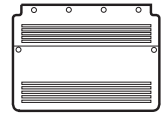


A03H20A

1. Latch (6) (P/N 570 023 800) (section no. 6)



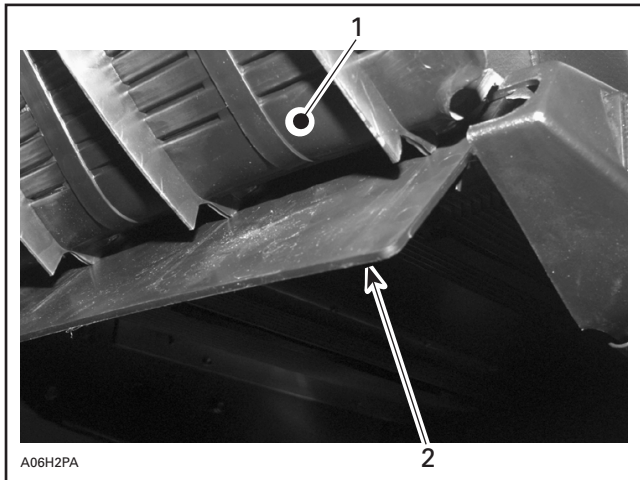
PARTS INSTALLATION SNOW GUARD



Insert and position snow guard onto chassis, between rear moldings.

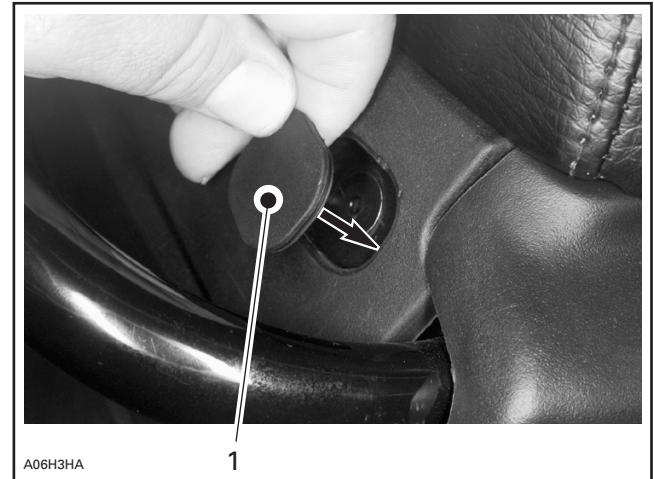
Slide and position snow guard protector pad between snow guard and chassis.

Finalize snow guard installation with caps, as shown in the next photo.



TYPICAL — VIEW FROM UNDER SNOW GUARD

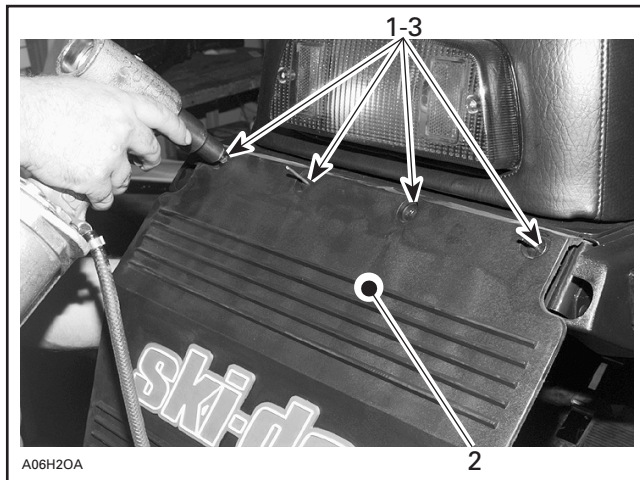
1. Snow guard (box)
2. Snow guard protector pad (box)



1. Cap (4) (section no. 9)

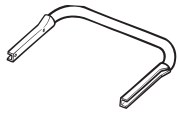
Secure the two parts with rivets.

NOTE: Place washers inside tunnel.

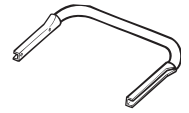


TYPICAL

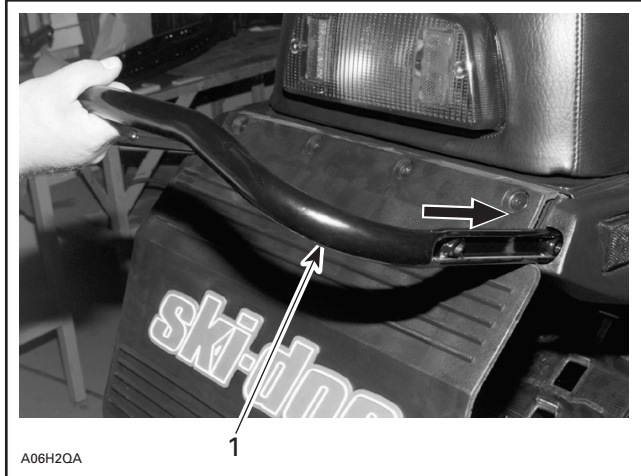
1. Rivet (4) (section no. 2)
2. Snow guard
3. Washer (4) (section no. 2). Position washer inside tunnel



PARTS INSTALLATION REAR BUMPER



Install rear bumper to chassis.

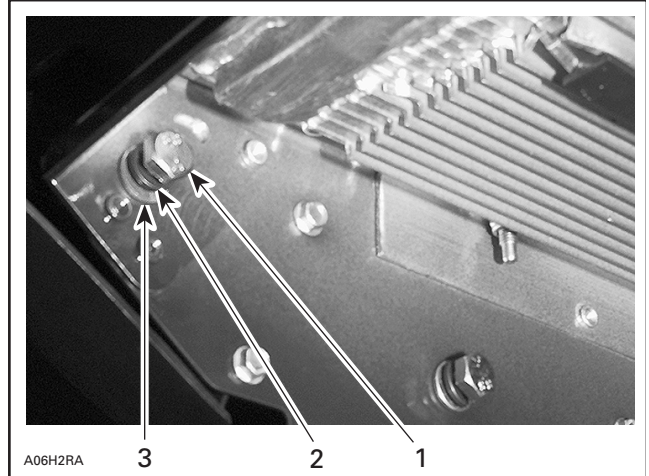


A06H2QA

SLIDE BUMPER INSIDE REAR MOLDINGS

1. Rear bumper

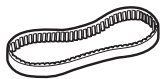
Secure bumper from inside of tunnel.



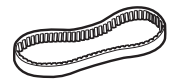
A06H2RA

TYPICAL — VIEW FROM INSIDE OF TUNNEL

1. Bolt M8 (4) (section no. 1). Torque to 14 and 17 N•m (10 and 13 lbf•ft)
2. Lock washer (4) (section no. 1)
3. Washer (4) (section no. 1)

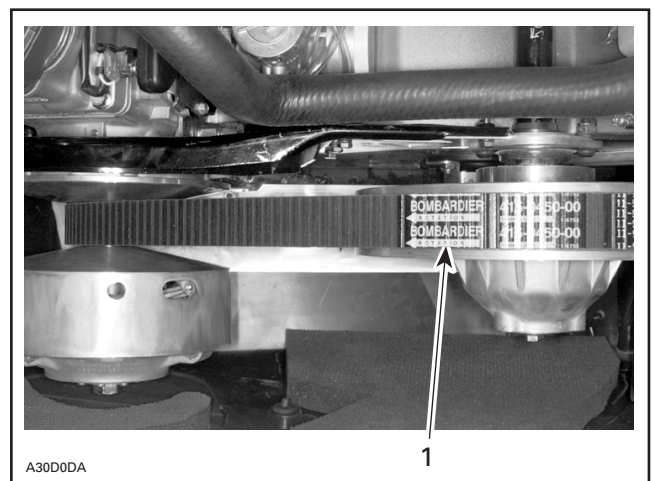


PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 711 809) before installing drive belt.

NOTE: Take care to install belt so that arrows show front of snowmobile.



A30D0DA

1. Install belt with arrows toward front



LIQUIDS

OIL INJECTION PUMP BLEEDING



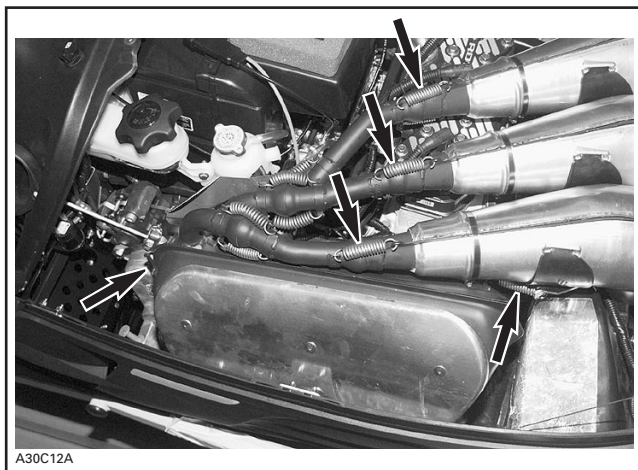
BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Main Line Bleeding

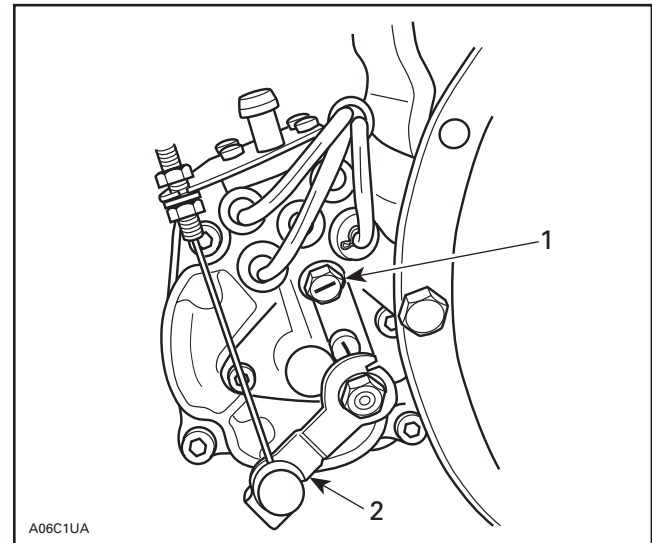
Remove springs retaining muffler in place and take muffler out of engine compartment.



A30C12A

REMOVE SPRINGS AND WITHDRAW MUFFLER

Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.



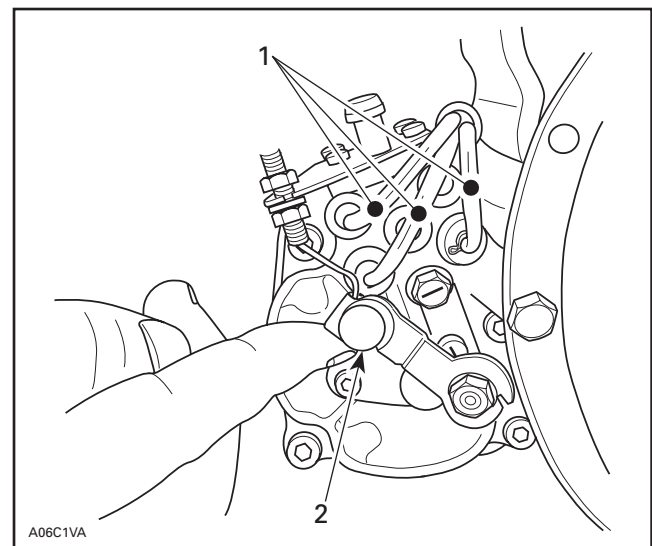
A06C1UA

1. Bleeder screw
2. Oil pump lever

Reinstall muffler

Small Oil Lines Bleeding

When muffler is correctly installed, bleed the small oil lines between pump and engine crankcase by running engine at idle while holding the pump lever in fully open position. The best way to hold pump lever is to make a hook with a steel wire and hang the lever up.



A06C1VA

- TYPICAL**
1. Small oil lines
 2. Engine at idle (fully open position)



PARTS INSTALLATION BACKREST



Mach Z LT R (Europe model only)

Insert backrest poles on rear of seat. Secure with black screws (section no. 3) as shown on photo.



ALIGN HOLES AND SECURE WITH BLACK SCREWS



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid (DOT 4) in reservoir on handlebar for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



TYPICAL

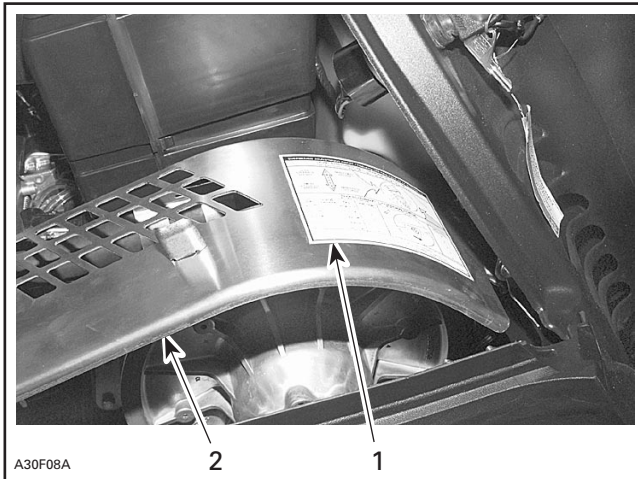
1. Minimum level window



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.

When track adjustment is completed, install wheel caps provided in Predelivery kit (section no. 5).



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).







TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODEL	MACH Z LT	MACH Z LT R		
	Engine Type	809			
	Maximum HP RPM ① ± 100 RPM	8300			
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	N.A.			
	Carburetor Type	PTO: TM 38-C236	CTR: TM 38-C236	MAG: TM 38-C236 •	
	Main Jet	PTO: 310	CTR: 310	MAG: 310 •	
	Needle Jet	O-2 (327)		•	
	Pilot Jet	PTO: 50	CTR: 50	MAG: 50	
	Needle Identification — Clip Position	8ADY1/41 - 3		•	
	Slide Cut-away	2.0			
	Float Adjustment ± 1 mm (in)	21.0 (.83)		•	
	Air Screw Adjustment ± 1/16 Turn	PTO: 4.5	CTR: 4.5	MAG: 4.5 •	
	Idle Speed RPM ± 200 RPM	1800			
	Gas Grade/Octane Number (R + M)/2	Super Unleaded/91			
	Gas/Oil Ratio	Oil Injection			
	Ignition Timing BTDC ② mm (in)	2.59 (0.102)		•	
	Trigger Coil Air Gap mm (in)	0.55 - 1.45 (.022 - .057)			
	Gear Ratio Teeth	25/43			
	Engagement Speed ± 100 RPM	4200		•	
	Drive Pulley Calibration Screw Position	3		•	
	Pulley Distance	Z ③ ± 0.5 mm ± 0.02 in	123.0 (4.84)		•
		X ± 0.5 mm (± 1/64 in)	35.5 (1-13/32)		
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
		Deflection ± 5 mm (in)	35 (1.38)		•
	Drive Belt Adjustment	Force ④ kg (lbf)	11.5 (25.35)		•
		Driven Pulley Preload ± 0.7 kg (± 1.5 lbf)	7.0 (15.43)	0.0 (0.0)	•
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull		•	

① Engine speed at which maximum power is achieved.

② At 3500 RPM (engine cold) with headlamp turned on.

③ Distance to be adjusted after a 10-hour break-in period.

④ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center


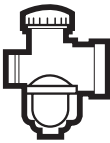


ATDC: After Top Dead Center

PTO: Power Take Off side

CTR: Center

MAG: Magneto side

A dot (•) on right indicates changes from 1998 model.

	MODEL	MACH Z	MACH Z R MACH Z M.H. R		
	Engine Type	809			
	Maximum HP RPM ①	± 100 RPM 8300			
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.		
	Carburetor Type	PTO: TM 38 C236	CTR: TM 38 C236	MAG: TM 38 C236 •	
	Main Jet	PTO: 310	CTR: 310	MAG: 310 •	
	Needle Jet	O-2 (327) •			
	Pilot Jet	PTO: 50	CRT: 50	MAG: 50	
	Needle Identification — Clip Position	8ADY1/41 - 3 •			
	Slide Cut-away	2.0			
	Float Adjustment	± 1 mm (in)	21.0 (.83) •		
	Air Screw Adjustment	± 1/16 turn	PTO: 4.5	CRT: 4.5	MAG: 4.5 •
	Idle Speed	± 200 RPM	1800		
	Gas Grade/Octane Number	(R + M)/2	Super Unleaded/91		
	Gas/Oil Ratio	Oil Injection			
	Ignition Timing BTDC ②	mm (in)	2.59 (0.102) •		
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 (.022 - .057)		
	Gear Ratio	Teeth	26/43 •		
	Engagement Speed	± 100 RPM	4200 •		
	Drive Pulley Calibration Screw Position	3 •			
	Pulley Distance	Z ③	± 0.5 mm ± 0.02 in	123.0 (4.84) •	
		X	± 0.5 mm (± 1/64 in)	35.5 (1-13/32)	
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
		Drive Belt Adjustment	Deflection	± 5 mm (in)	35 (1.38) •
		Force ④	kg (lbf)	11.5 (25.35) •	
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)	7.0 (15.43)	0.0 (0.0)	•
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull •		

① Engine speed at which maximum power is achieved.

② At 3500 RPM (engine cold) with headlamp turned on.

③ Distance to be adjusted after a 10-hour break-in period.

④ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

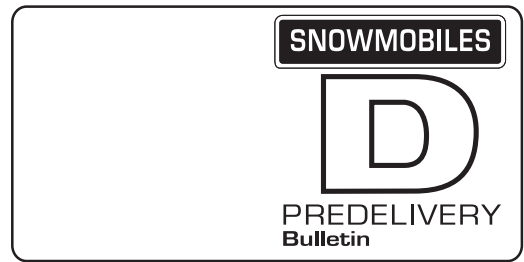
PTO: Power Take Off side

CTR: Center

MAG: Magneto side

Please route to :

<input type="checkbox"/> Service	<input type="checkbox"/> Init.
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-25**

Date: December 11, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada: Grand Touring SE Grand Touring 700	1375 1373	All
1999	Europe: Grand Touring SE Grand Touring 700	1376 1374	All

This bulletin must be used in conjunction with the *Predelivery Check List* enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

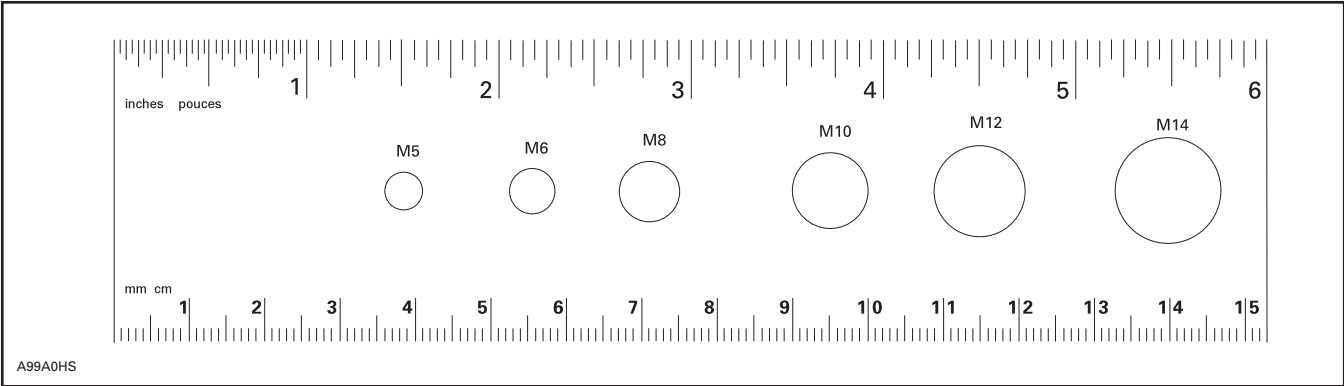
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

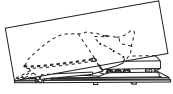
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *Video*.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

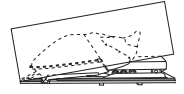
NOTE: This ruler can be helpful to identify fastener length or size.



A99A0HS



UNCRATING



PREDELIVERY KIT P/N	MODEL
549 010 754	GRAND TOURING SE GRAND TOURING 700

◆ WARNING

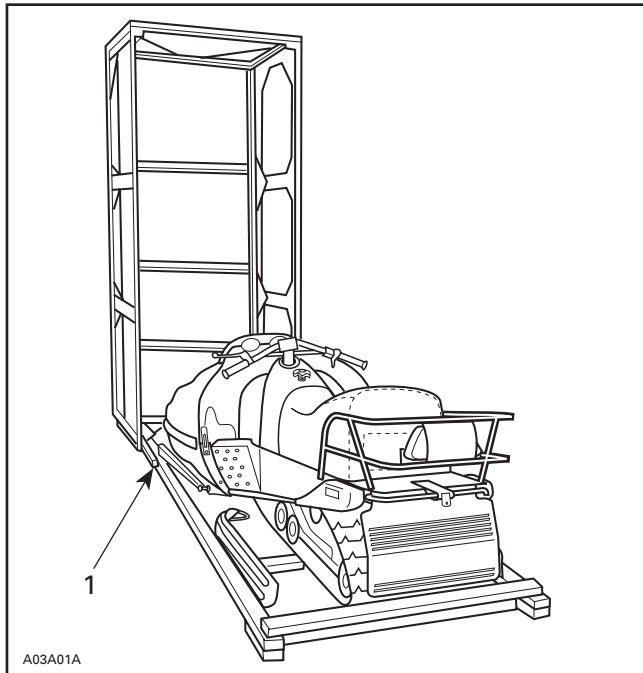
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.



A03A01A

1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties and ropes retaining windshield. Keep latches on windshield for further installation.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove parts to be installed and predelivery kit from box.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



A00A48A

EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



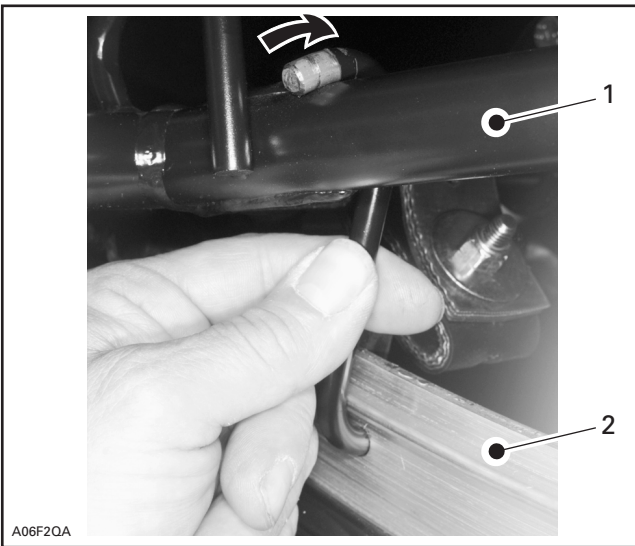
A00A49A

TYPICAL

Using left hand, cut tie wrap and remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

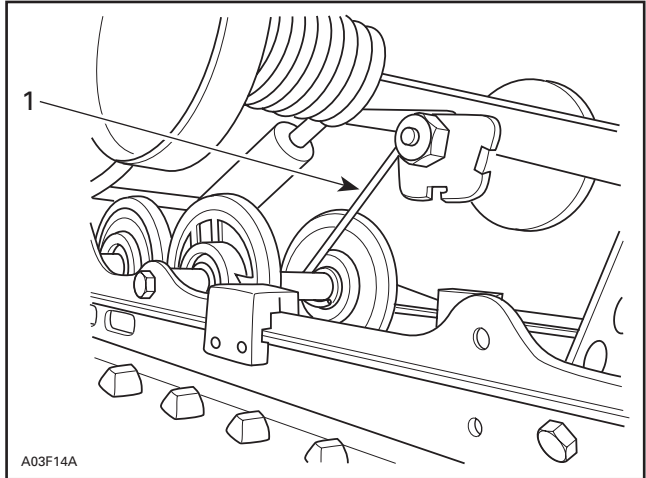


A06F20A

TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL

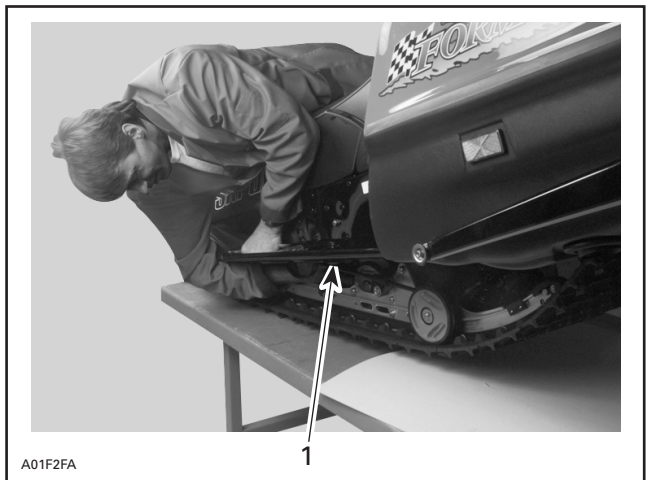


A03F14A

- 1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



A01F2FA

- 1. Remove hook on the rear portion of the suspension

▼ CAUTION

Both hooks must be removed to have snowmobile suspension operational.



PARTS INSTALLATION FRONT SUSPENSION



All Models

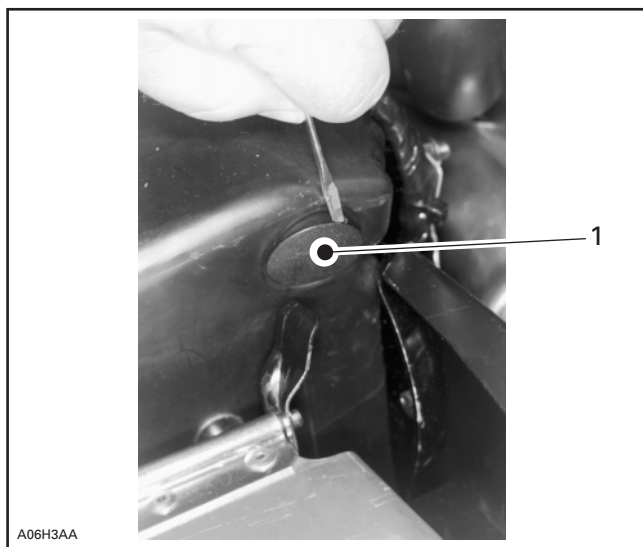
Lift front of vehicle and block safely.

From inside engine compartment, remove caps as shown in the next photo.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom. Place decal edges inside.

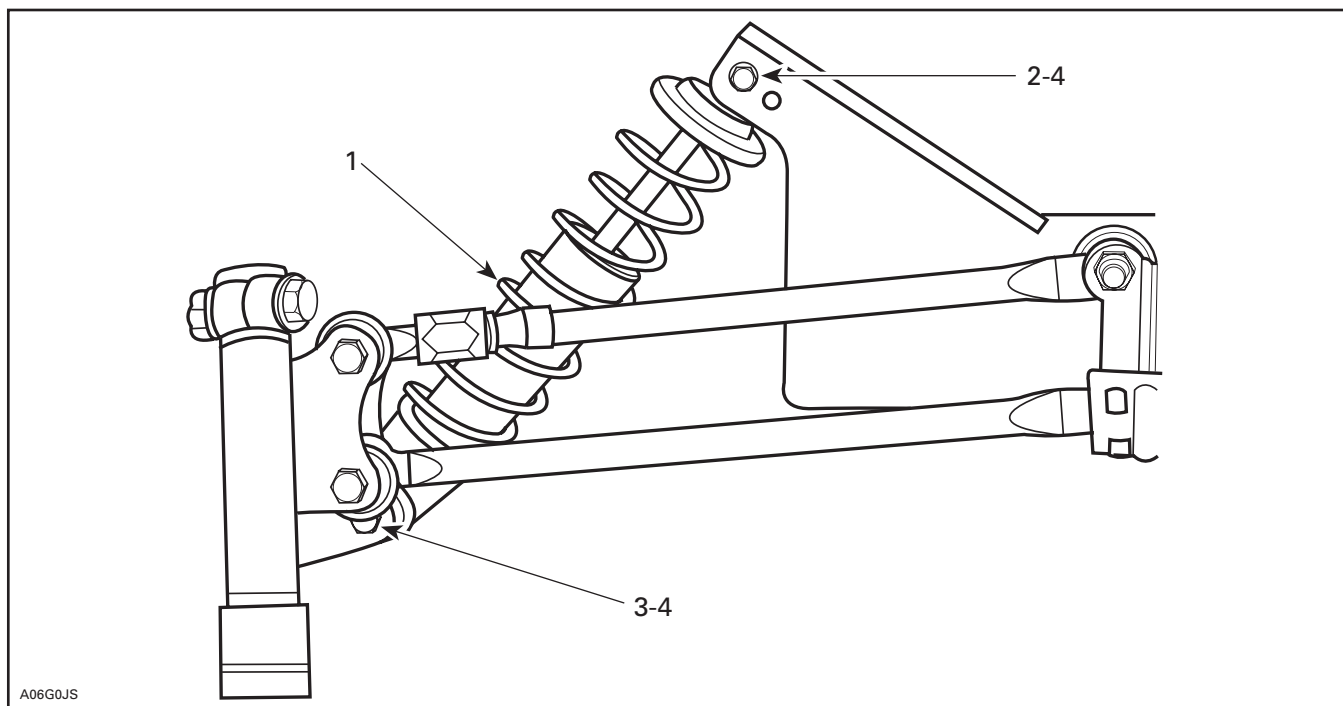
NOTE: Position screw heads toward front.



A06H3AA

INSIDE ENGINE COMPARTMENT

1. Using flat screwdriver, remove cap



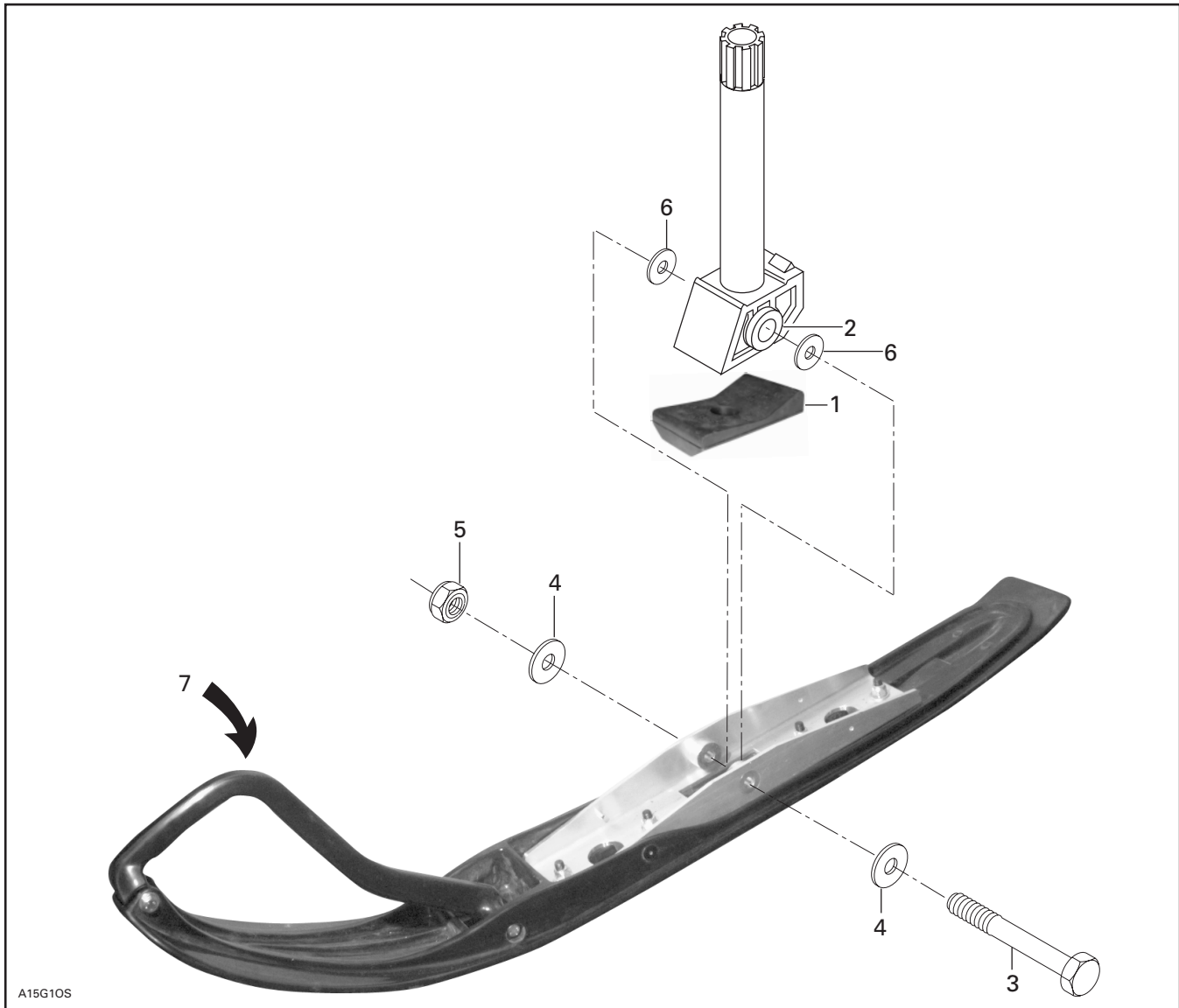
A06G0JS

TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (box)
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Nut M10 x 1.5 (4) (P/N 228 501 045) (section no. 4). Torque to 48 N•m (35 lbf•ft)



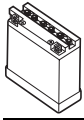
PARTS INSTALLATION SKIS



A15G10S

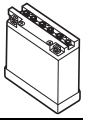
LEFT SIDE SHOWN

1. Ski stopper (2) (P/N 570 053 300) (section no. 4) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 4). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 4). Torque between 30 and 50 N•m (23 and 37 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 4). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION

BATTERY



During vehicle preparation, the battery can be activated as described in *Shop Manual*.

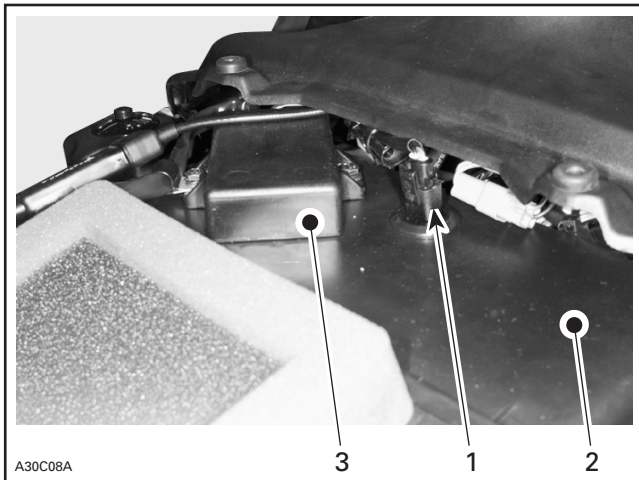
▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage. Do not charge an installed battery.

BATTERY REMOVAL

Air Intake Silencer Removal

Unplug air temperature sensor connector from air intake silencer and remove DPM module, as shown in the next photo.

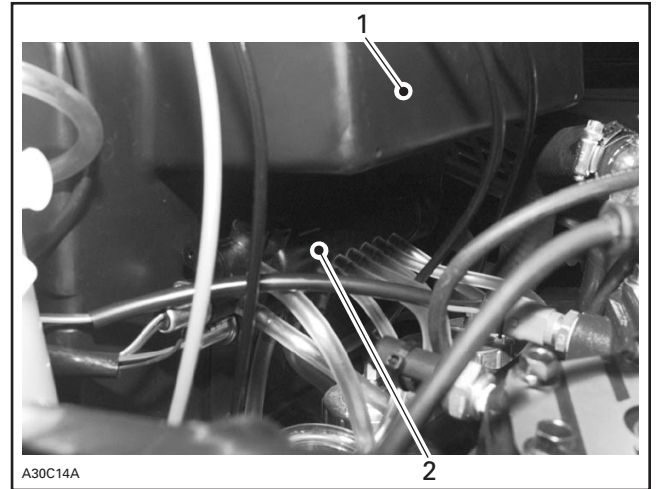


A30C08A

TYPICAL

1. Air temperature sensor
2. Air intake silencer
3. DPM module

Twist DPM manifold and detach from air intake silencer.



A30C14A

1. Air intake silencer
2. Detach DPM manifold

Remove air intake silencer.

Unfasten battery retaining strips.

Open strips and withdraw battery from vehicle.

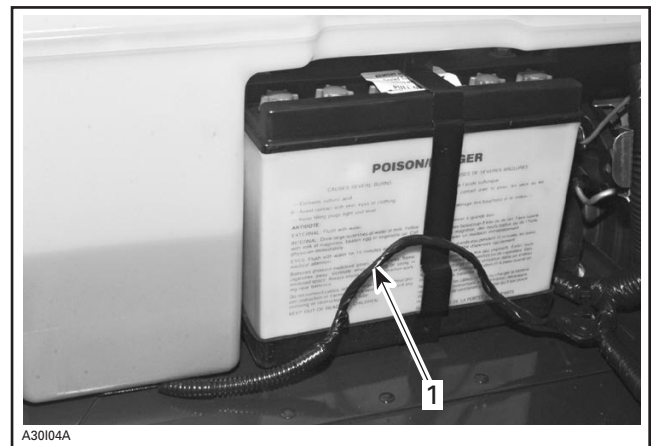
BATTERY INSTALLATION

Position battery onto battery support on vehicle.

NOTE: To ease battery insertion, use soap with water.

▼ CAUTION

Take care to route the cable of oil level sensor high enough behind rear bracket of battery to avoid cable to be pinched.



A30I04A

VIEW FROM DRIVER'S SIDE (FUEL TANK IS REMOVED)

1. Oil level sensor cable

Ensure that vent tube is properly connected to vehicle fitting on front frame.



VENT TUBE PROPERLY CONNECTED

Install vent tube on battery.

NOTE: Ensure that vent tube is not kinked or blocked. To ensure a good routing, cut vent tube if necessary.

Red Positive Cable and Wire

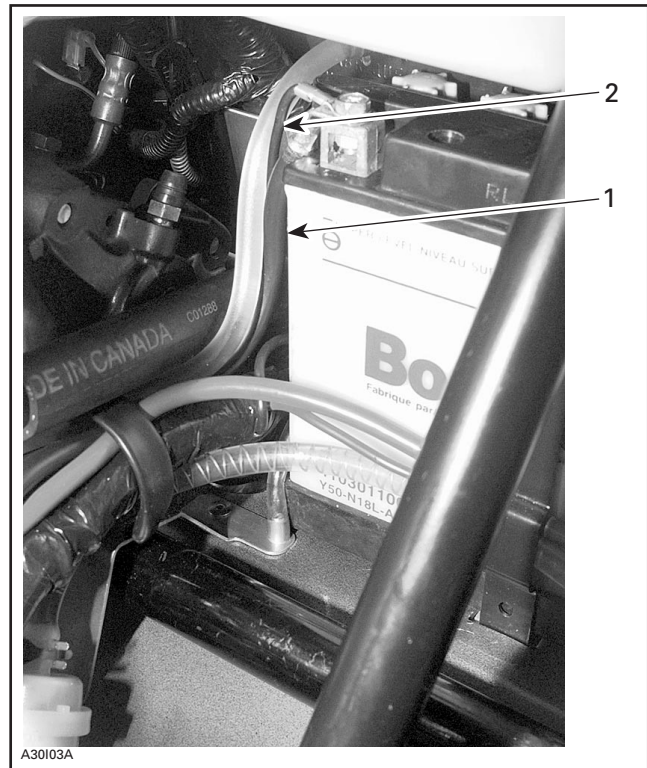
Connect RED positive cable and RED wire to positive battery terminal. Refer to the following photo for proper cable positioning.



RED POSITIVE (+) BATTERY CABLE AND WIRE POSITIONING

Black Negative Cable and Wire

Connect BLACK negative cable and BLACK wire LAST. Refer to the following photo for proper cable positioning.



1. Black negative (-) battery cable
2. Black negative (-) battery wire

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Apply silicone dielectric grease (P/N 293 550 004) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow.

Close and fasten retaining strips and ensure that RED positive battery cable is routed into front retaining strip recess.

Reinstall air intake silencer, DPM manifold, DPM module and air temperature sensor.

NOTE: It can be useful to coat carburetors intakes with oil to facilitate air silencer installation.



PARTS INSTALLATION STEERING PAD

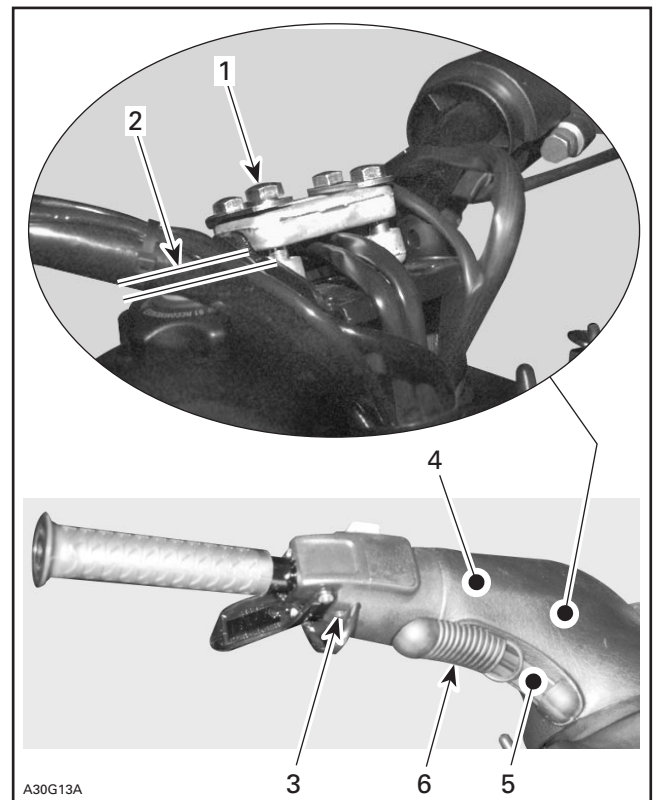


Adjust handlebar temporarily and tighten nuts loosely for now.

Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts between 21 and 28 N•m (16 and 20 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings (if needed).



1. Torque between 21 and 28 N•m (16 and 20 lbf•ft)
2. Equal gap each side (both clamps)
3. Loosen Allen screw
4. Steering pad (box)
5. Use liquid soap to ease installation
6. Keyway (2) (P/N 572 106 200) (section no. 3)



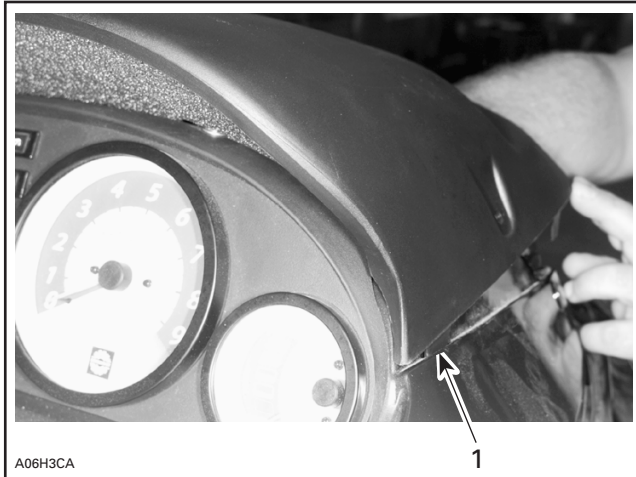
PARTS INSTALLATION WINDSHIELD



NOTE: Air deflector with foam must be installed before windshield.

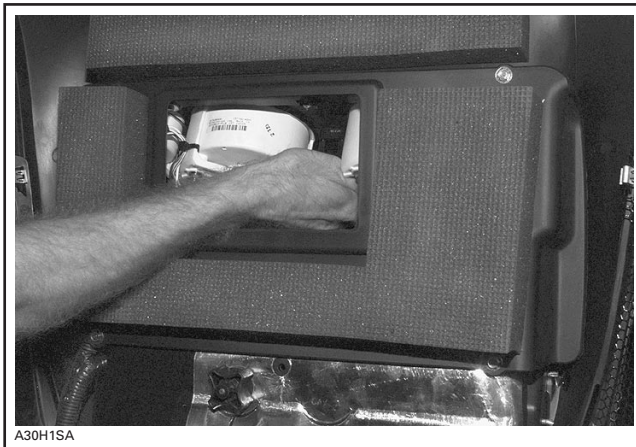
AIR DEFLECTOR

Position air intake deflector tabs (left and right side) into hood slots, as shown in the next photo.



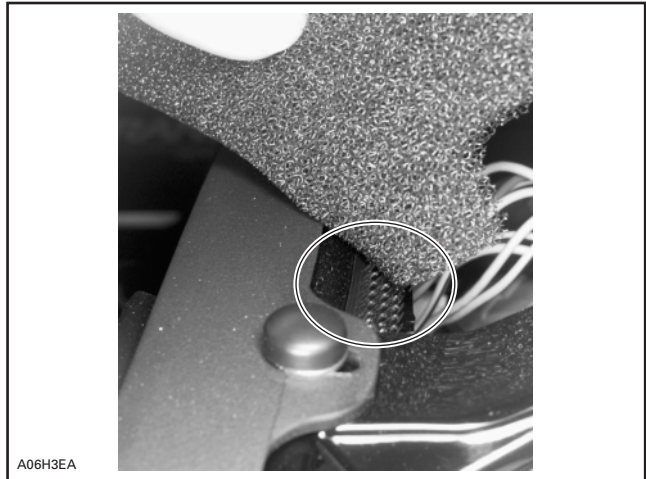
1. Air intake deflector tabs (right side)

Holding air intake deflector, insert one hand underneath hood, in gauges housing and attach air intake foam to hood Velcro.



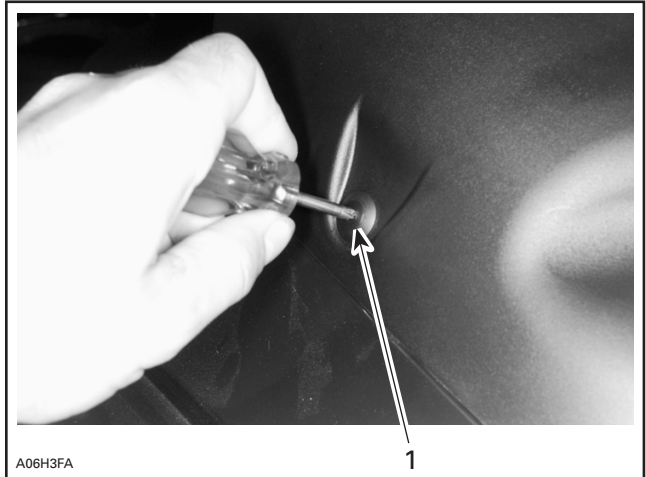
FROM UNDERNEATH HOOD, GOING THROUGH GAUGES HOUSING, ATTACH FOAM TO VELCRO

NOTE: Ensure that air intake foam is properly attached to Velcro. See next photo.



AIR INTAKE DEFLECTOR HAS BEEN REMOVED TO SHOW WHERE AND HOW TO ATTACH AIR INTAKE FOAM TO HOOD

Secure air intake deflector using a dart, as shown in the next photo.



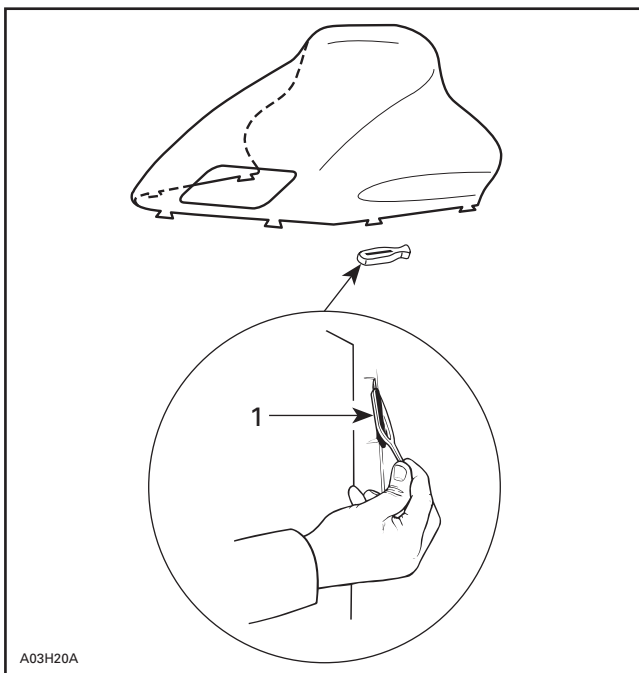
1. Dart (section no. 5)

Install windshield on dashboard and secure with latches.



A30H02A

WINDSHIELD INSTALLED ON DASHBOARD



A03H20A

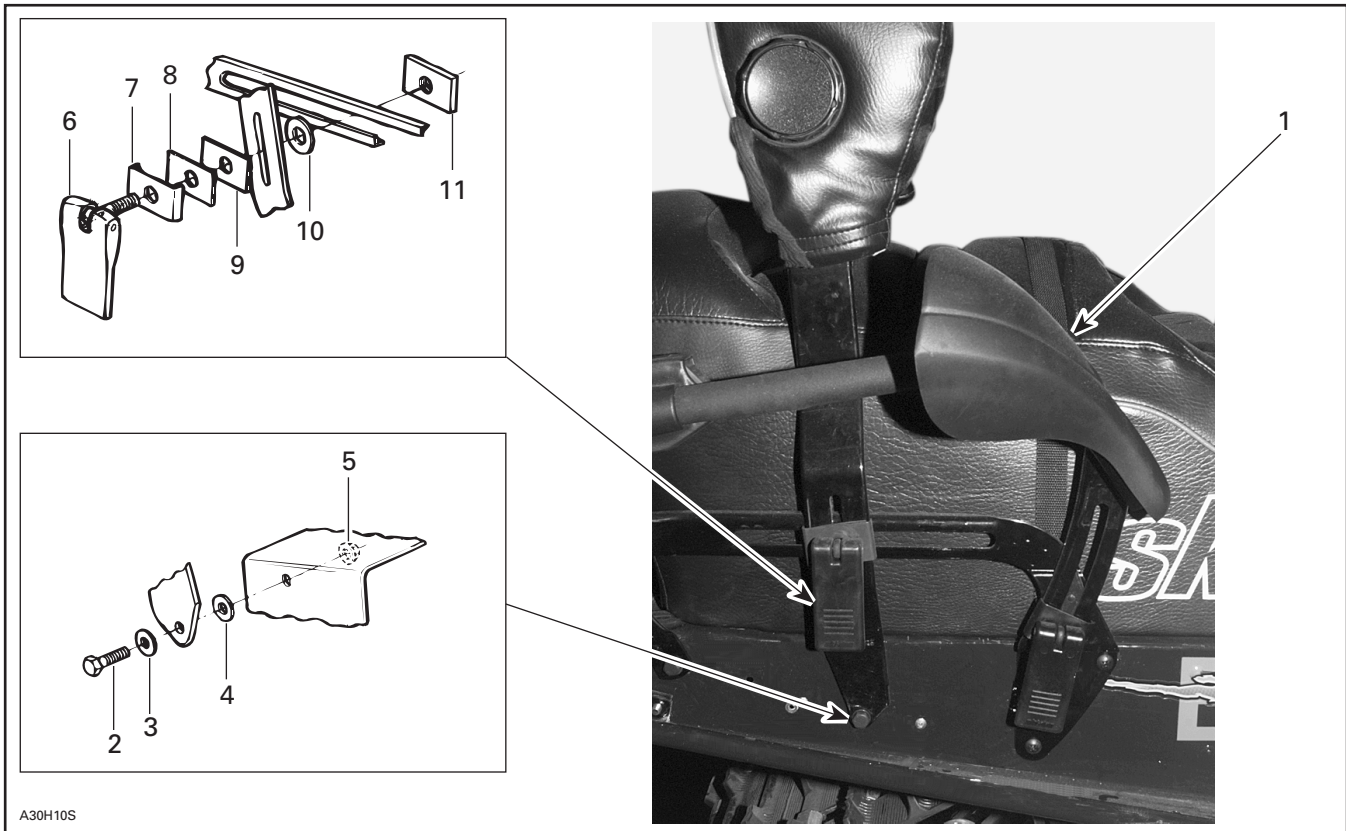
1. Latch (6) (P/N 570 023 800) (section no. 5)



PARTS INSTALLATION BACKREST



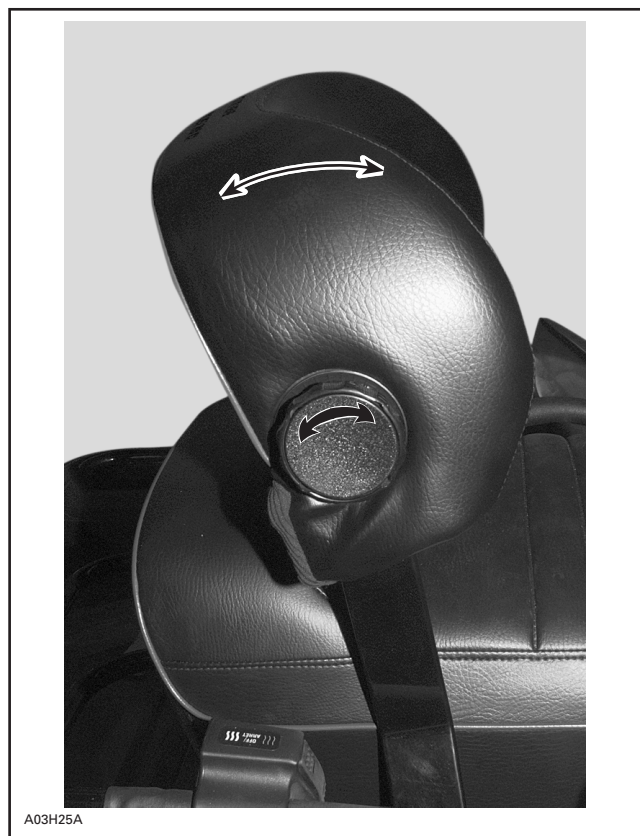
Secure backrest frame on tunnel then install lever assembly onto luggage rack rail.
Install hand protectors with rivets onto luggage rack handle.



A30H10S

1. Handle protector (2). Secure with rivets (section no. 1)
2. Screw (2) (P/N 207 182 584) (section no. 6)
3. Washer (2) (P/N 732 900 030) (section no. 6)
4. Plastic washer (2) (P/N 414 819 600) (section no. 6)
5. Elastic nut (2) (P/N 228 581 045) (section no. 6). Torque to 8 N•m (73 lbf•in)
6. Lever assembly (2) (P/N 580 611 000) (section no. 2)
7. Guide (2) (P/N 517 257 300) (section no. 2)
8. Rubber shim (2) (P/N 570 027 400) (section no. 6)
9. Spacer (2) (P/N 517 251 300) (section no. 2)
10. Flanged washer (2) (P/N 414 819 500) (section no. 6)
11. Threaded plate (2) (P/N 517 250 000) (section no. 6)

Turn adjustment knob left or right to adjust back-rest cushion position.

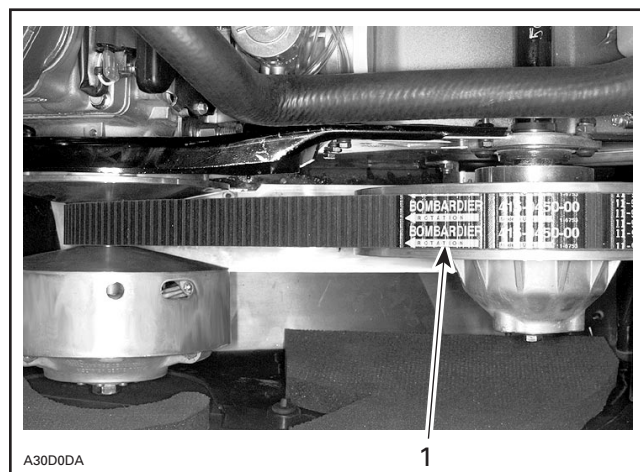


PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 711 809) before installing drive belt.

NOTE: Take care to install belt so that arrows show front of snowmobile.



1. Arrows pointing toward front



LIQUIDS

OIL INJECTION PUMP BLEEDING



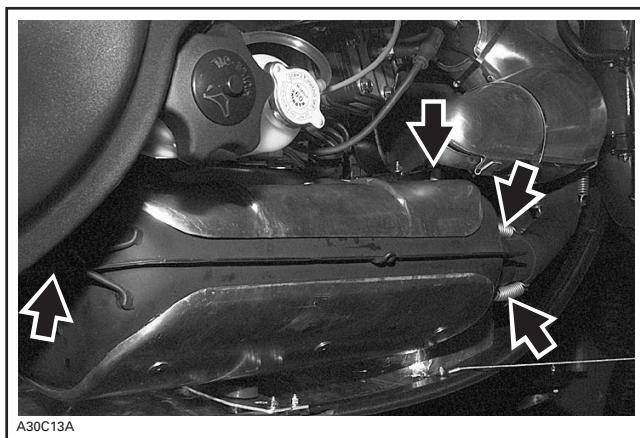
BREAK-IN PERIOD

Supplemental Oil

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

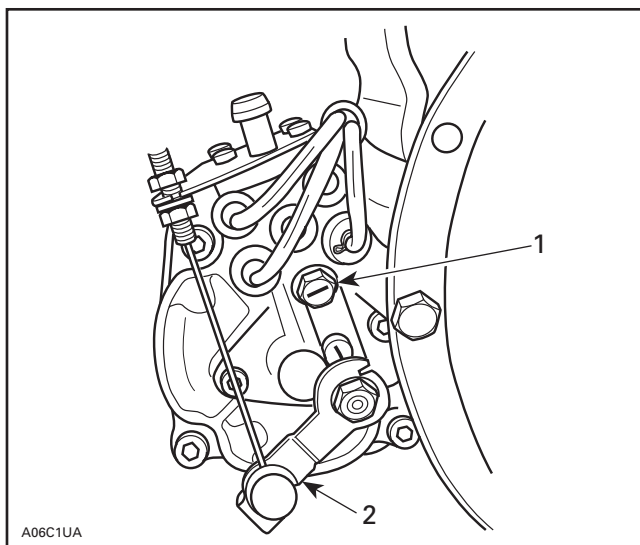
Bleeding Procedure

NOTE: To ease access to oil pump, remove muffler.



REMOVE THESE SPRINGS AND WITHDRAW MUFFLER

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

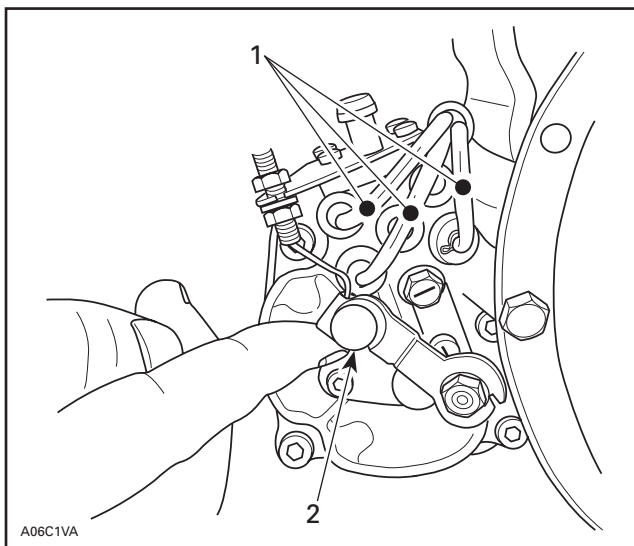


1. Bleeder screw
2. Oil pump lever

Reinstall muffler.

When muffler is correctly installed, bleed the small oil lines between pump and engine crankcase by running engine at idle while holding the pump lever in fully open position.

NOTE: To ease pump lever holding, make a J hook out of mechanical wire to lift the lever.



TYPICAL

1. Small oil line
2. Engine at idle (fully open position)



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



1. Minimum level window



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

When track adjustment is completed, install wheel caps provided in Predelivery kit (section no 3).



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).


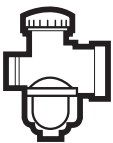




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODELS		GRAND TOURING SE	GRAND TOURING 700
	Engine Type		809 •	699
	Maximum HP RPM ① ± 100 RPM		8000 •	8000 •
	Rotary valve	P/N Opening (BTDC)/ Closing (ATDC)	Not Applicable	Not Applicable
	Carburetor Type		PTO TM 38 - C232 • CTR TM 38 - C232 • MAG TM 38 - C232 •	PTO VM 38 - 422 CTR VM 38 - 422 MAG VM 38 - 422
	Main Jet		PTO 270 • CTR 290 • MAG 280 •	PTO 290 • CTR 290 • MAG 290 •
	Needle Jet		O-2 (327) •	P-1 (480)
	Pilot Jet		50	50
	Needle Identification — Clip Position		8ADY1/41 - 3 •	6DEH5 - 3
	Slide Cut-Away		2.0 •	2.5
	Float Adjustment ± 1 mm (± 0.04 in)		21.0 (0.83) •	18.1 (.71)
	Air Screw Adjustment ± 1/16 turn		4.5 •	2.5 •
	Idle Speed RPM ± 200 RPM		1800	1800
	Gas Grade Octane Number (R + M)/2		Super Unleaded 91	Super Unleaded 91
	Gas/Oil Ratio		Bombardier Injection Oil	Bombardier Injection Oil
	Ignition Timing BTDC ② mm (in)		2.59 • (.102)	2.77 • (.109)
	Trigger Coil Air Gap mm (in)		0.55 - 1.45 (.022 - .057)	0.55 - 1.45 (.022 - .057)
	Gear Ratio Teeth		24/43 •	24/43 •
	Engagement Speed ± 100 RPM		3300 •	3300 •
	Drive Pulley Calibration Screw Position		3 •	4 •
	Pulley Distance	Z ③ (+ 0, - 1) mm (+ 0, - 1/32) in	121.0 • (4-3/4)	121.0 • (4-3/4)
		X ± 0.4 mm (± 1/64 in)	35.5 • (1-13/32)	35.5 • (1-13/32)
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
		Drive Belt Adjustment	Deflection mm (in)	38 • (1-1/2)
		Force ④ kg (lbf)	11.50 (25.4) •	11.50 (25.4) •
	Driven Pulley Preload ± 0.7 kg (lbf)		0.0 •	0.0 •
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation
Track Adjustment	Deflection	30 to 35 mm (1-3/16 to 1-3/8 in) with a 7.3 kg (16 lb) downward pull •	30 to 35 mm (1-3/16 to 1-3/8 in) with a 7.3 kg (16 lb) downward pull •	

① Engine speed at which maximum power is achieved

② At 3500 RPM (engine cold) with headlamp turned on

③ Distance to be adjusted after a 10-hours break-in period

④ Force applied midway between pulleys to obtain specified deflection

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take OFF side

CTR: Center

MAG: Magneto side

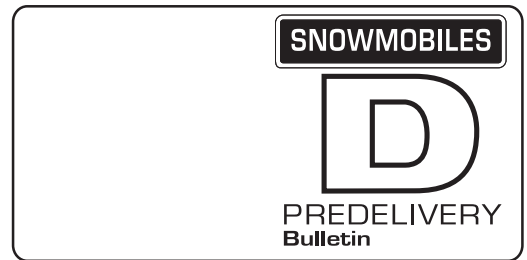
Please route to :

Init.

Service

Sales

Parts



No. **99-10**

Date: July 22, 1998

SUBJECT: Predelivery

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Touring LE	1357 and 1358	All

This bulletin must be used in conjunction with the check list enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

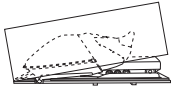
NOTE: The Information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

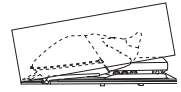
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

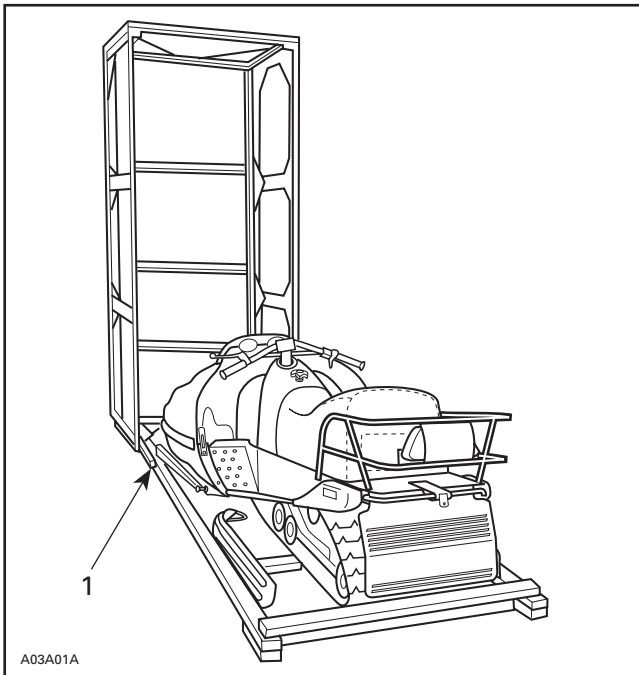
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Unscrew all screws retaining cover to vehicle base. Tip cover over front of vehicle. There is a notch in crate base at front.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

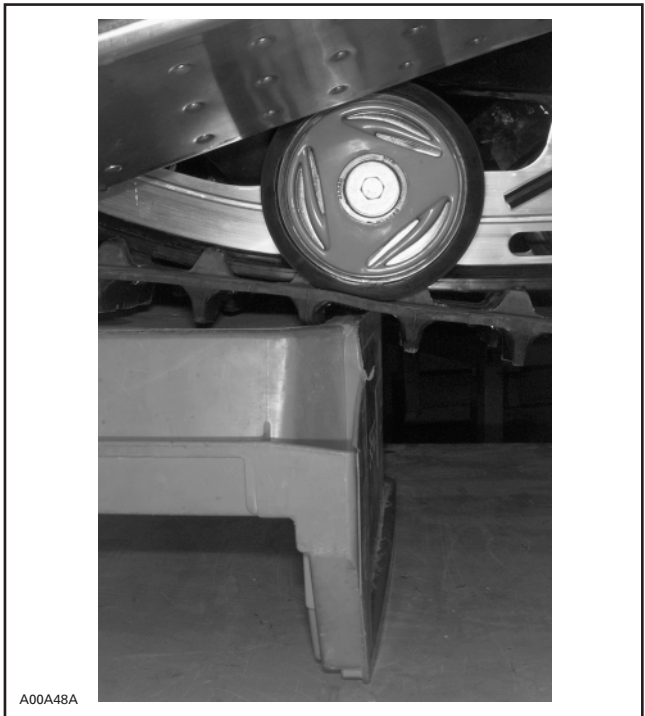
Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



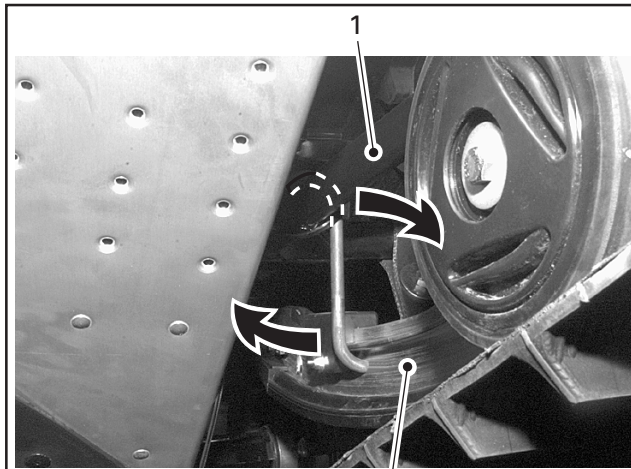
A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

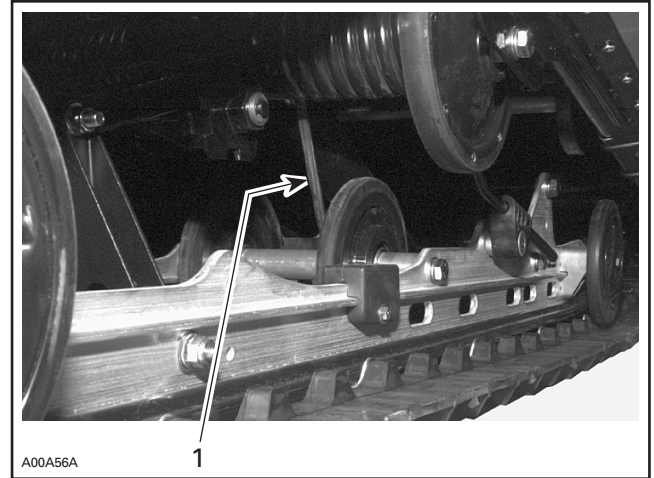


A00A55A

TYPICAL

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL



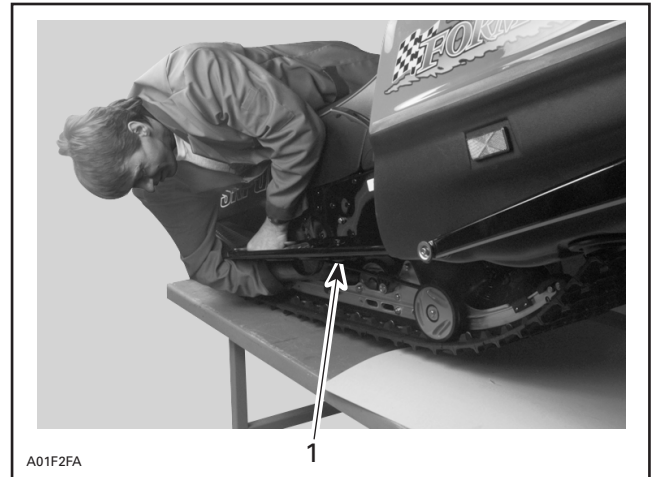
A00A56A

- 1. Hook to be removed

Procedure

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



A01F2FA

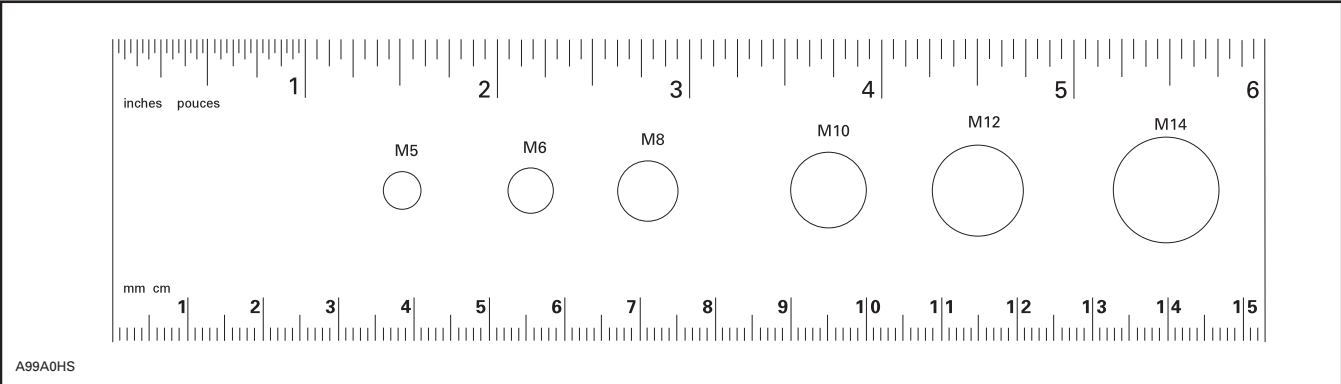
- 1. Remove hook on the rear portion of the suspension

◆ WARNING

Both hooks must be removed to have snowmobile suspension operational.

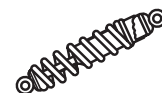
PREDELIVERY KIT P/N	MODELS
580 652 900	TOURING LE

NOTE: This rule can be helpful to identify fastener length or size.



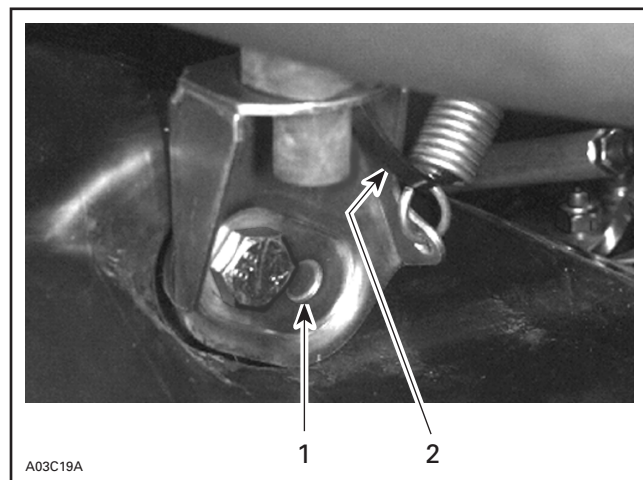


PARTS INSTALLATION FRONT SUSPENSION



Except Skandic 380/500

Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

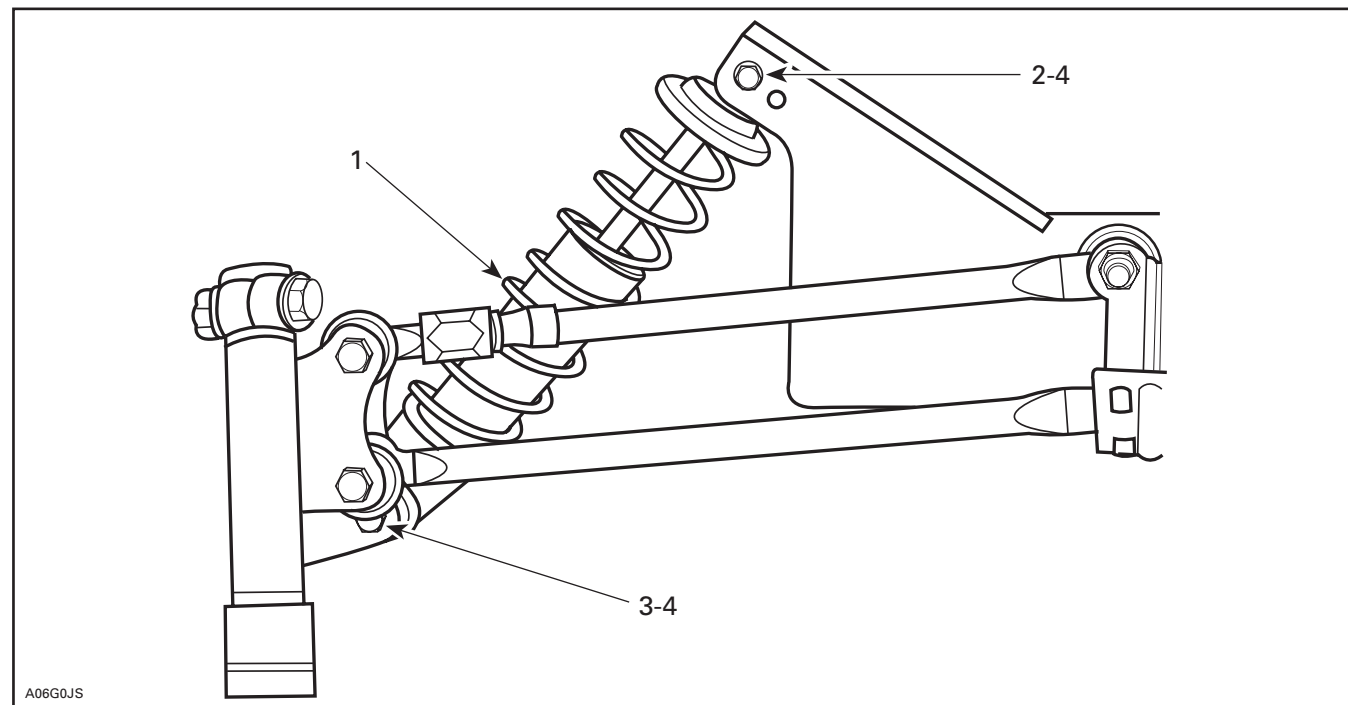
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with rod up and piston down, as shown on drawing below.

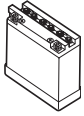
NOTE: On Touring LE, position top and bottom screw heads toward front.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

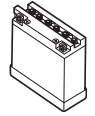


TYPICAL — RIGHT SIDE SHOWN

1. Shock absorber (2) (engine compartment). Adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Flanged elastic nut (4) (P/N 228 501 045) (section no. 1). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION BATTERY



During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

Battery Removal

Remove belt guard.

Remove throttle cable and primer hose plastic clip from air silencer.

Loosen collar on carburetor adaptors. Remove air silencer.

Remove battery.

Battery Installation

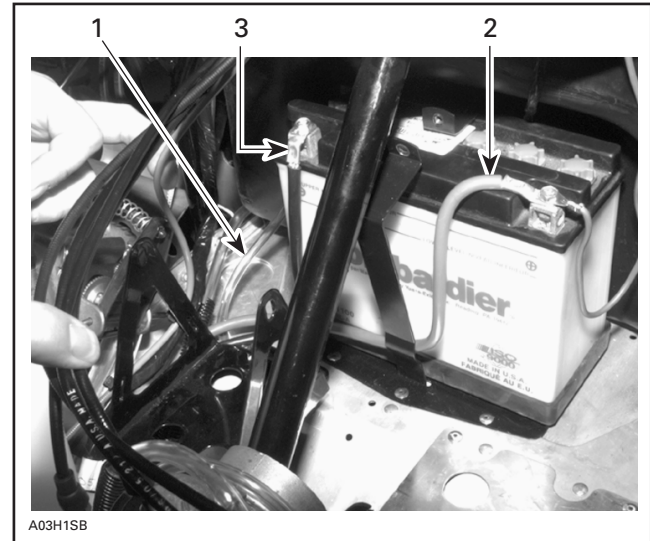
Install vent tube on battery.

Connect RED positive cable and RED wire to positive battery terminal.

Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.



BATTERY CONNECTION

1. Vent tube on battery elbow and vehicle fitting
2. RED positive cable
3. BLACK negative cable

Apply silicone dielectric grease (P/N 413 701 700) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow and vehicle fitting, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.



BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.

Reinstall air silencer.

Reinstall throttle cable and primer hose plastic clip to air silencer.

Reinstall belt guard.



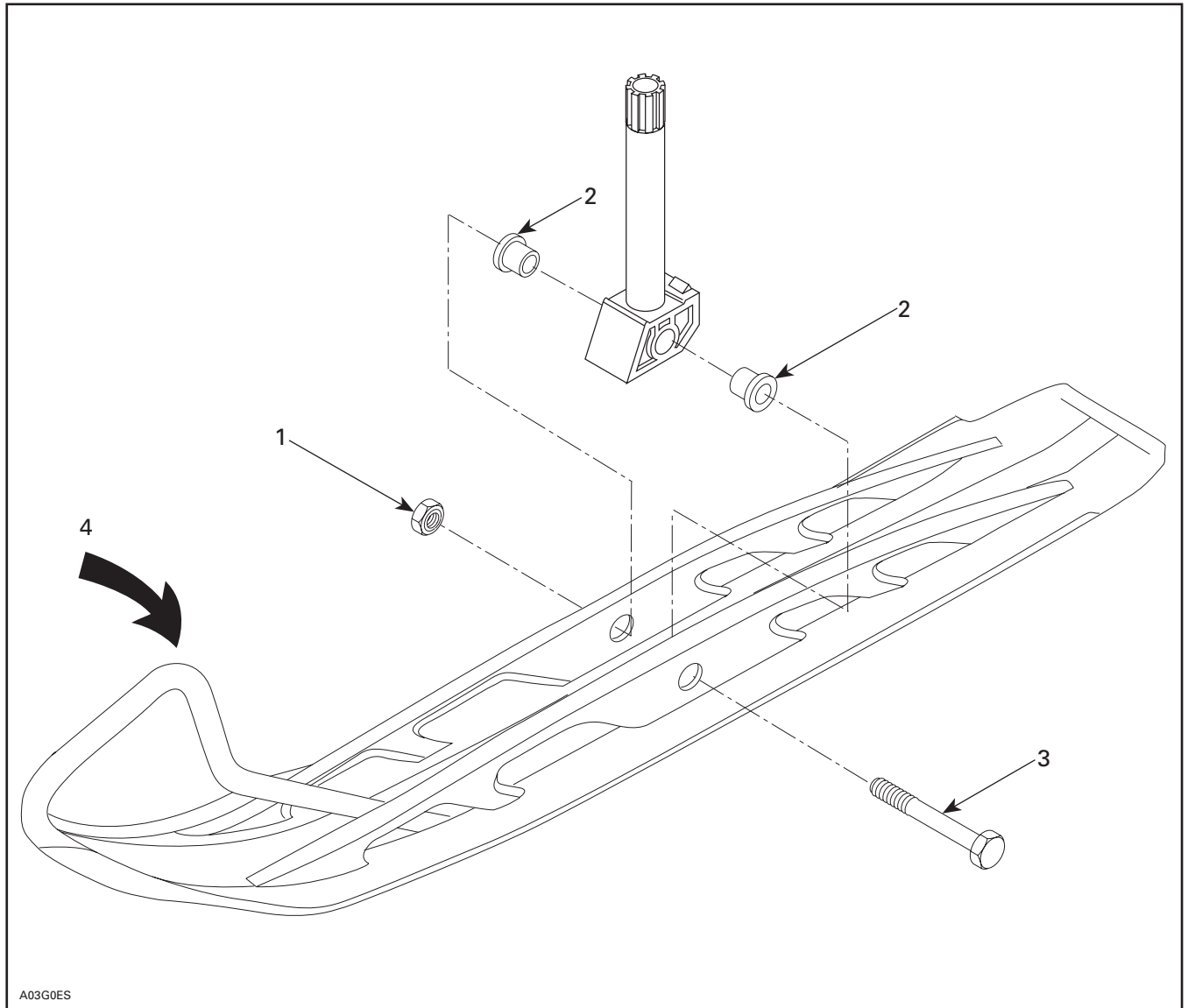
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



TYPICAL — RIGHT SIDE SHOWN

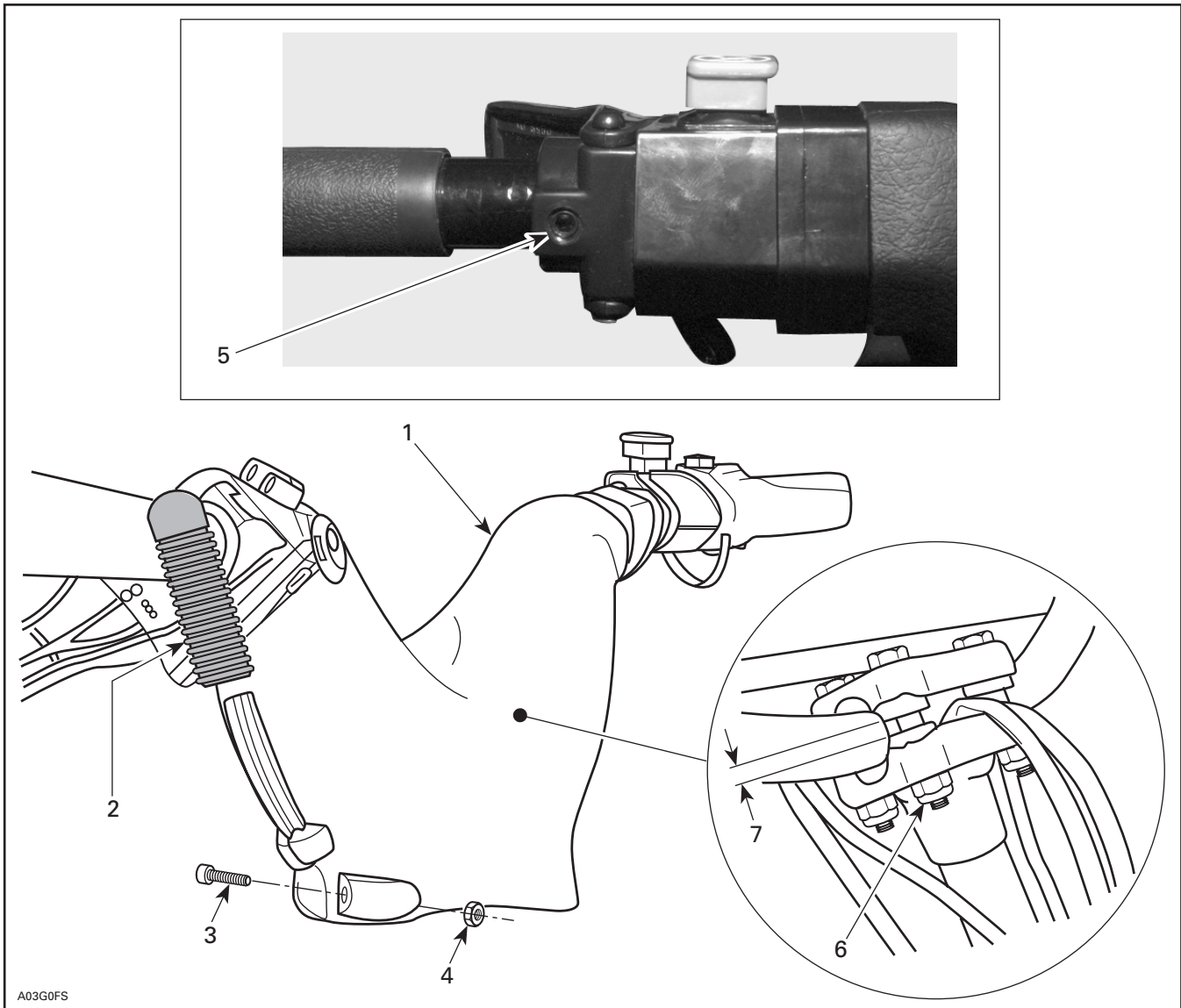
1. Elastic nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 3). Torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



Align handlebar with steering column axis and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporary, and adjust for proper fit with console.
Remove steering pad and torque nuts from 21 to 28 N•m (16 to 20 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



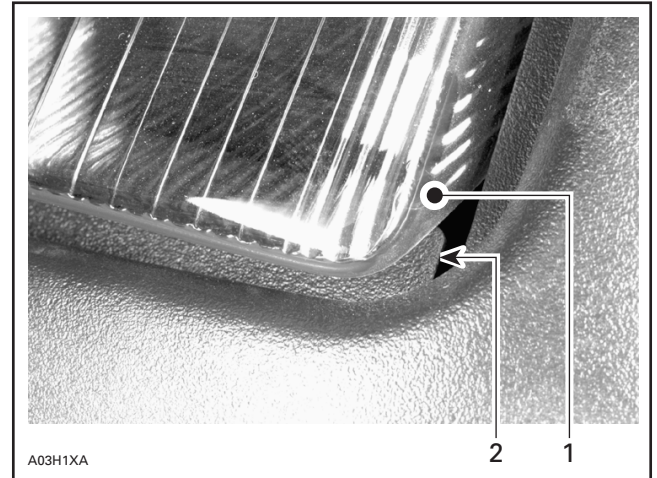
- A03G0FS
1. Steering pad (P/N 572 023 800) (engine compartment)
 2. Keyway (2) (P/N 572 023 900) (section no. 4). Use liquid soap to ease installation
 3. Screw M5 x 20 (2) (P/N 222 852 065) (section no. 4)
 4. Nut M5 (2) (P/N 228 751 045) (section no. 4). Seat tighten only, no deformation of rubber
 5. Loosen Allen screw
 6. Torque nuts from 21 to 28 N•m (16 to 20 lbf•ft)
 7. Equal gap each side



PARTS INSTALLATION WINDSHIELD

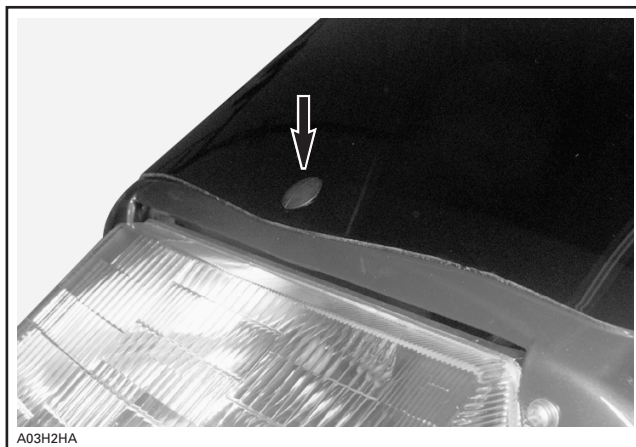


Remove headlamp molding.
Insert windshield tabs into appropriate slots.



1. Headlamp
2. Lip of headlamp molding behind headlamp

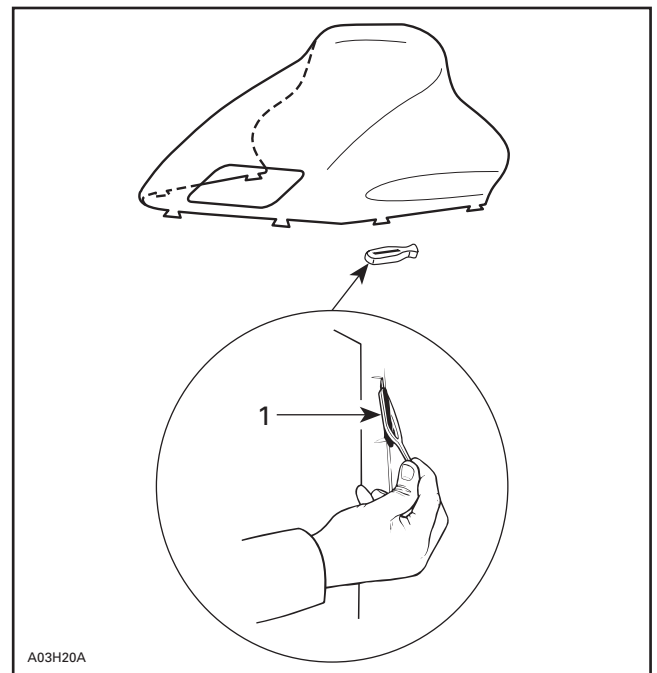
Lodge dart in hole over headlamp.



Dart (1) (P/N 414 644 300) (section no. 5)

Reinstall headlamp molding.

NOTE: When reinstalling headlamp molding, make sure lip is behind headlamp.



1. Latch (6) (P/N 570 023 800) (section no. 6)

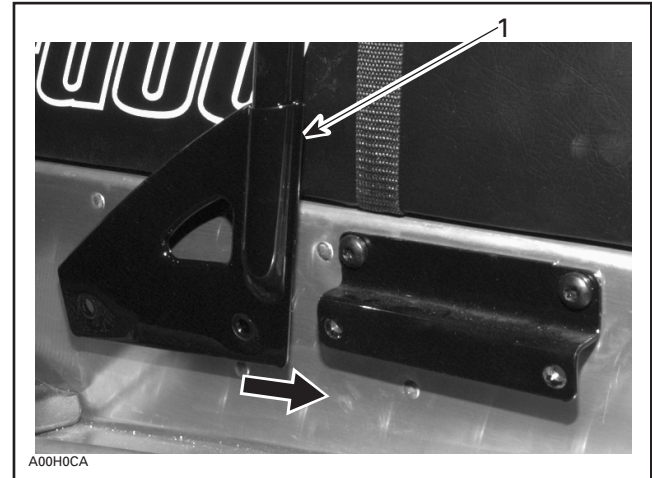


PARTS INSTALLATION BACKREST

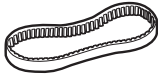


Place backrest each side of the bench and slide on mounting backrest as shown on next photo.

Screw in place using Torx screws M8 x 20 (P/N 732 601 250) and M8 lock washers (P/N 213 000 001) (section no. 2).



1. Slide backrest on mounting bracket and install with screws. Torque to 26 N•m (19 lbf•ft)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.



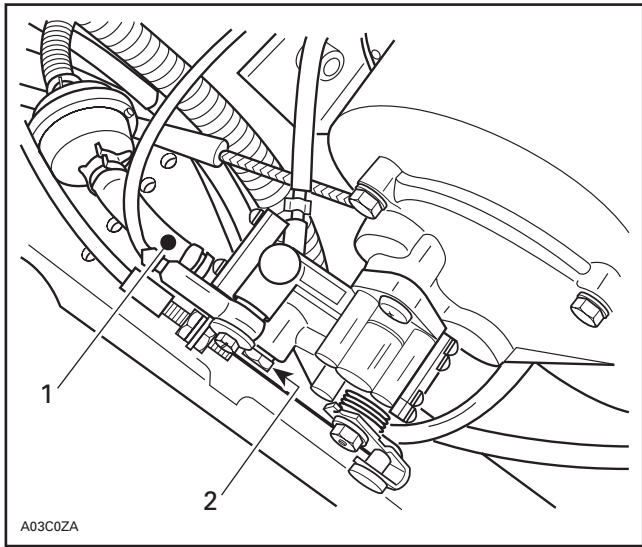
LIQUIDS OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 — 12 x 1L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

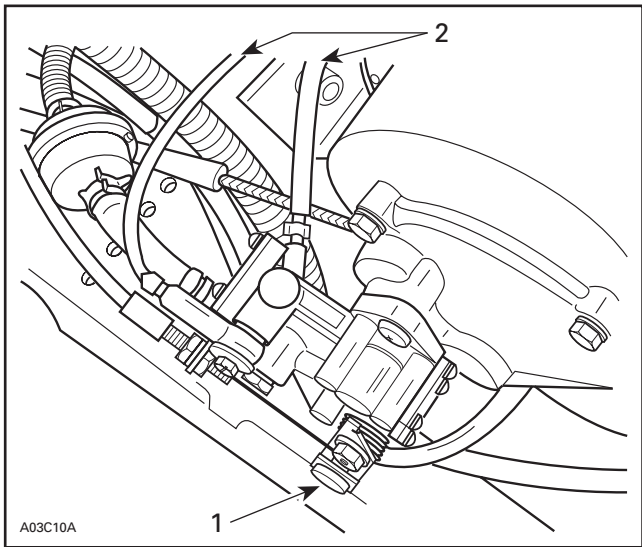


A03C0ZA

TYPICAL

- 1. Main oil line
- 2. Bleeder screw

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

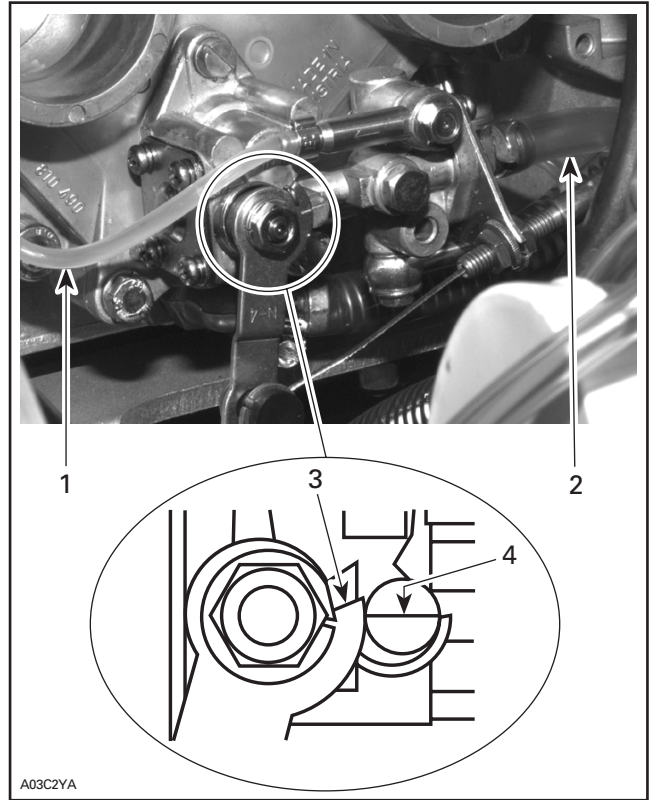


A03C10A

TYPICAL

- 1. Fully open position
- 2. Small lines

Check also for proper oil level adjustment. Mark on throttle lever must be from 0 to 2 mm (0 to 1/16 in) above body's mark when throttle lever is activated just enough to take all cable play.



A03C2YA

TYPICAL

- 1. Small oil line
- 2. Main oil line
- 3. Mark on lever
- 4. Mark on pump



LIQUIDS
BRAKE FLUID LEVEL



Touring LE and Skandic 500 only

Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

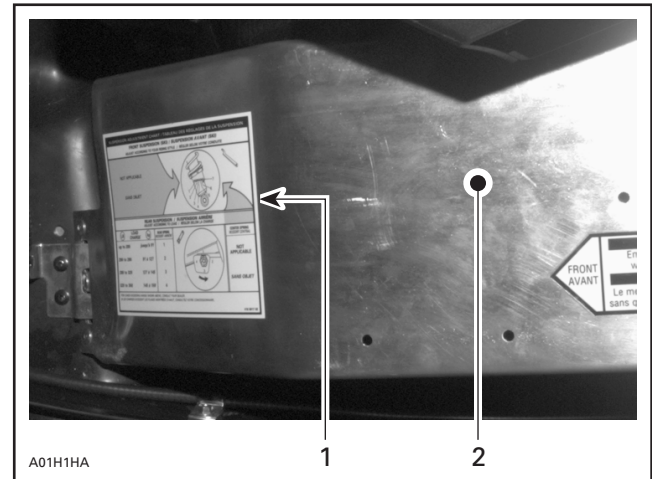
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See Technical Data section at the end of this bulletin.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in Technical Data are applicable after break-in period (about 10 hours of use).


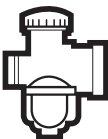




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

The dot (•) indicates changes from 1998 mode

	MODELS	TOURING LE	
	Engine Type	443	
	Maximum HP RPM ①	± 100 RPM 7000	
	Rotary Valve	P/N Opening(BTDC)/ Closing (ATDC) N.A.	
	Carburetor Type	PTO VM 34 - 530 • MAG VM 34 - 531 •	
	Main Jet	PTO 205, MAG 195 •	
	Needle Jet	P-0 (159)	
	Pilot Jet	35	
	Needle Identification — Clip Position	6DH2-3	
	Slide Cut-Away	2.5	
	Float Adjustment	± 1 mm (± .040 in) 23.9 (.94)	
	Air Screw Adjustment	± 1/16 turn 1-1/2	
	Idle Speed RPM	± 200 RPM 1650	
	Gas Grade/Octane Number	(R + M)/2 Regular Unleaded/87	
	Gas/Oil Ratio	Oil Injection	
	Ignition Timing BTDC ②	mm (in) 2.76 (0.109) •	
	Trigger Coil Air-Gap	mm (in) 0.40 - 1.10 (.016 - 0.043) •	
	Gear Ratio	teeth 21/44	
	Engagement Speed	± 100 RPM 2900	
	Drive Pulley Calibration Screw Position	2 •	
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32 in) 17 (21/32) •
		X	± 0.5 mm (± .020 in) 35.5 (1-3/8) •
	Offset	Y	Dimension Y must exceed X from 1 mm (.039 in) to 2 mm (.079 in)
		Deflection	± 5 mm (± .197 in) 32 (1-1/4)
	Drive Belt Adjustment	Force ③	kg (lbf) 11.34 (25)
	Driven Pulley Preload	kg (lbf) 0.0 •	
Drive Chain Tension	④		
Track Adjustment	Deflection ⑤	mm (in) 30 to 35 (1-3/16 to 1-3/8) •	

① Engine speed at which maximum power is achieved.

② At 3500 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

④ Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation.

⑤ Deflection with a 7.3 kg (16 lb) downward pull.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

N.A.: Not Applicable

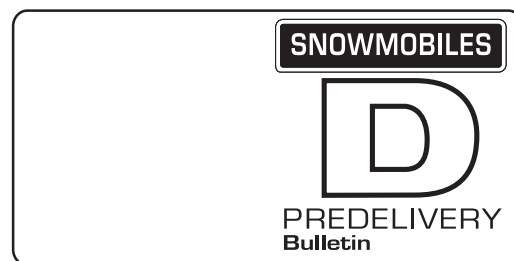
Please route to :

Init.

Service

Sales

Parts



No. **99-22**

Date: November 13, 1998

SUBJECT: Predelivery Bulletin

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada: MX Z 600	1336	All
1999	United States: MX Z 600	1337	All
1999	Europe: MX Z 600	1338	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

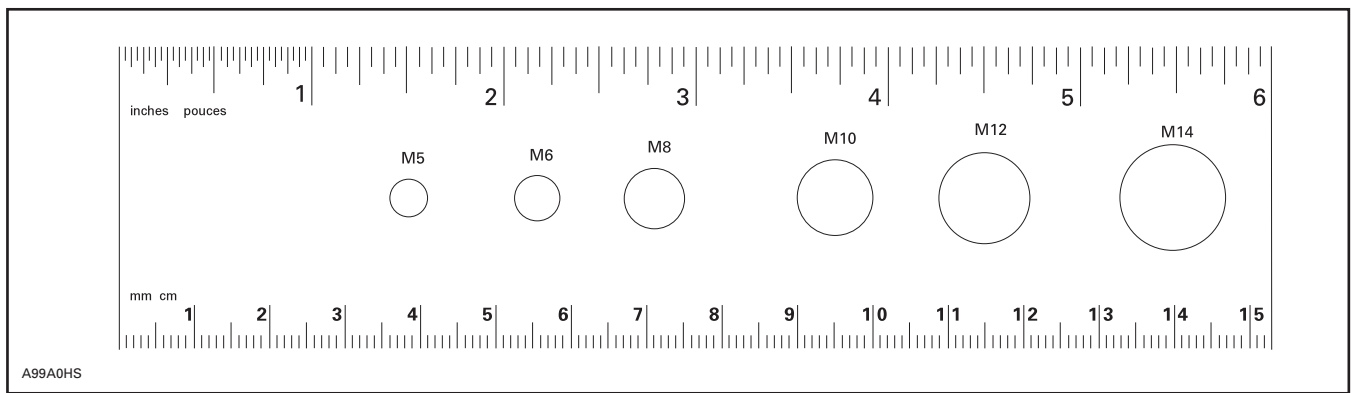
◆ WARNING
To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

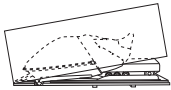
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and *Video*.

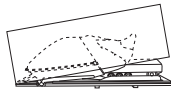
There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
549 010 775	MX Z 600

NOTE: If cover is tilted toward front of vehicle, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.

◆ WARNING

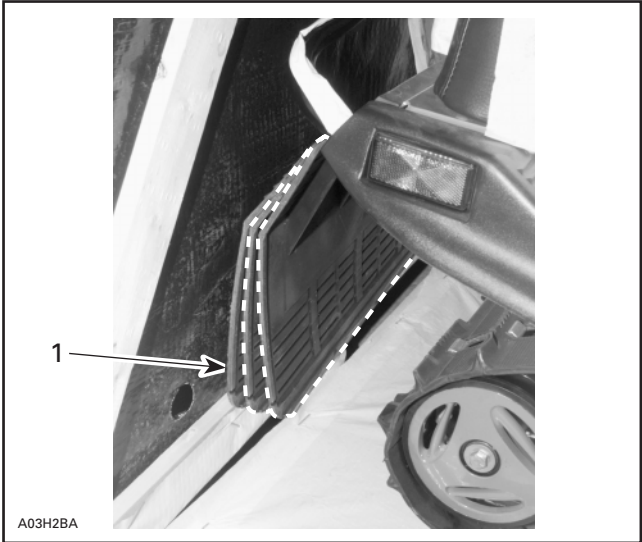
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

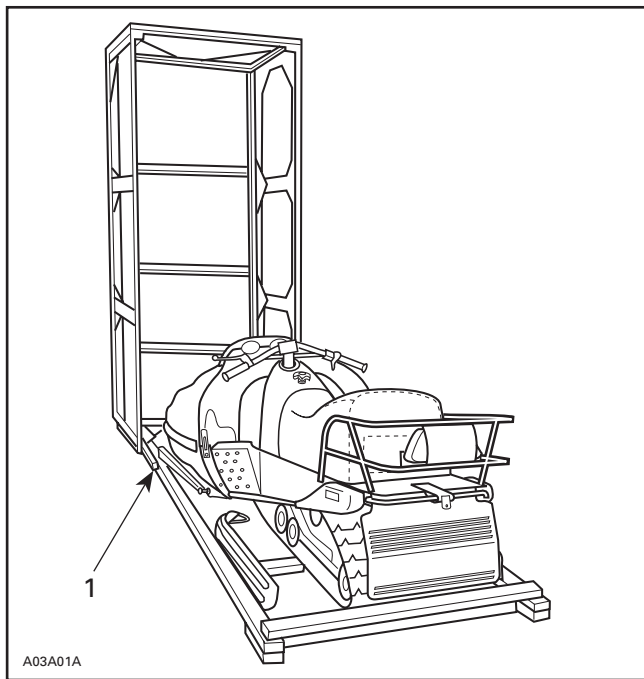
Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front or rear of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging any part of the snowmobile.



IF CRATE COVER IS TILTED TOWARD FRONT OF VEHICLE, FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Remove ropes and cut locking ties retaining windshield.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions in order to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, predelivery kit and shock absorbers from box and drive belt from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, cut locking tie retaining hook, then apply pressure onto rear bumper with right hand, as shown on the following photo.

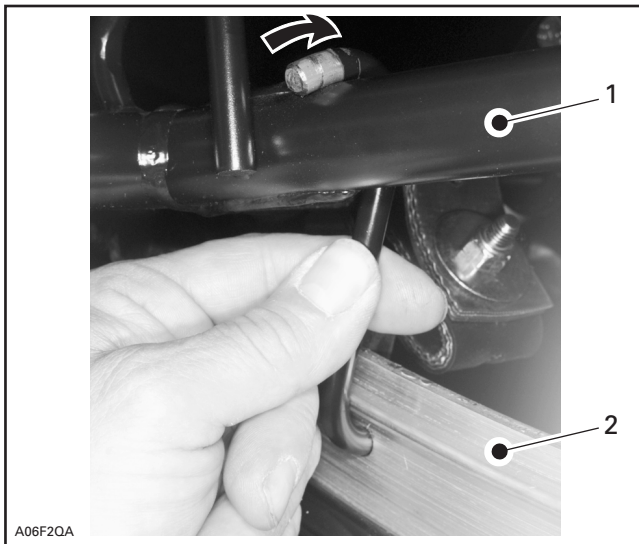


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

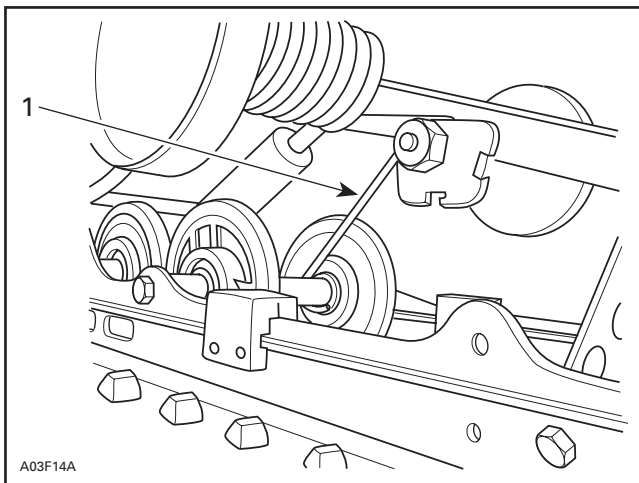


A06F20A

TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL



A03F14A

TYPICAL

- 1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



A01F2FA

TYPICAL

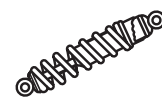
- 1. Remove hook on the rear portion of the suspension

Remove hook on the rear portion of the suspension.

<p>◆ WARNING</p>
<p>Both hooks must be removed to have snowmobile suspension operational.</p>



PARTS INSTALLATION FRONT SUSPENSION

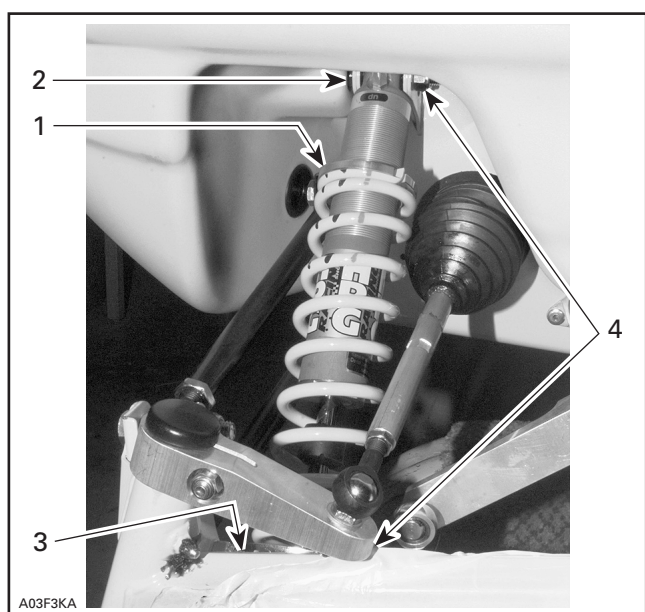


Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at top.

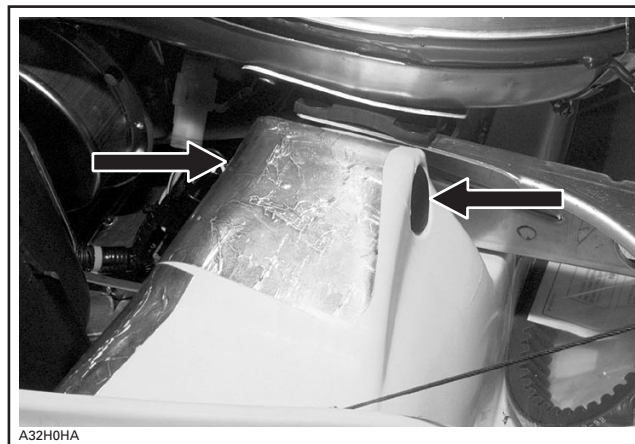
NOTE: Position screw heads toward front of vehicle and secure with nuts provided in Predelivery Kit (section no. 3). Make sure decal edges are toward inside vehicle.



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (predelivery box) adjusting ring at top
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic nut M10 x 1.5 (2) (P/N 228 501 045) (section no. 3).
Torque to 48 N•m (35 lbf•ft)

Install caps provided in predelivery kit on bottom pan, each side of upper bolt.



SNAP PROVIDED CAP (SECTION NO. 6) EACH SIDE OF MOLDING

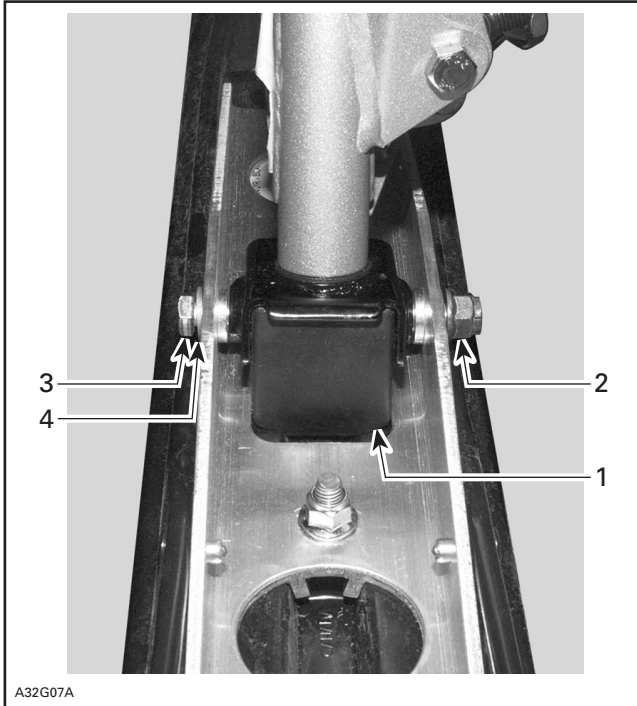


PARTS INSTALLATION

SKIS



Install skis on vehicle.



RIGHT SIDE SHOWN

1. Ski stopper (2) (section no. 8) with higher side toward front
2. Flanged Nut M12 x 1.75 (2). Torque to 32 N•m (27 lbf•ft)
3. Bolt M12 (2) (ski leg)
4. Washer (2) installed on bolt head side

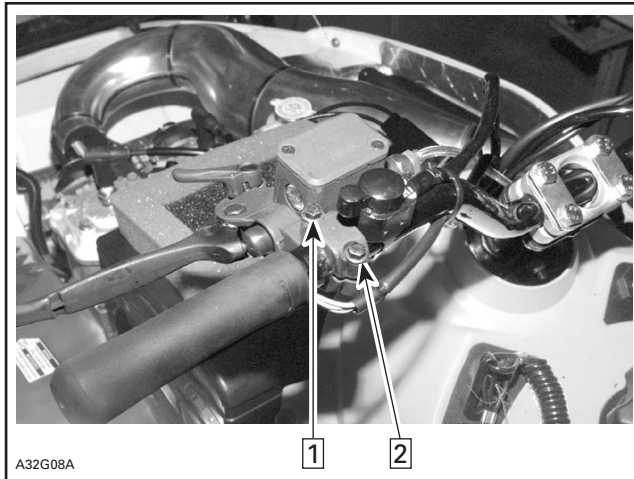


PARTS INSTALLATION STEERING PAD



Adjust handlebar and tighten nuts between 21 and 28 N•m (16 and 20 lbf•ft).

Turn brake housing to level brake oil reservoir. Secure front screw first, then rear screw. See photo.

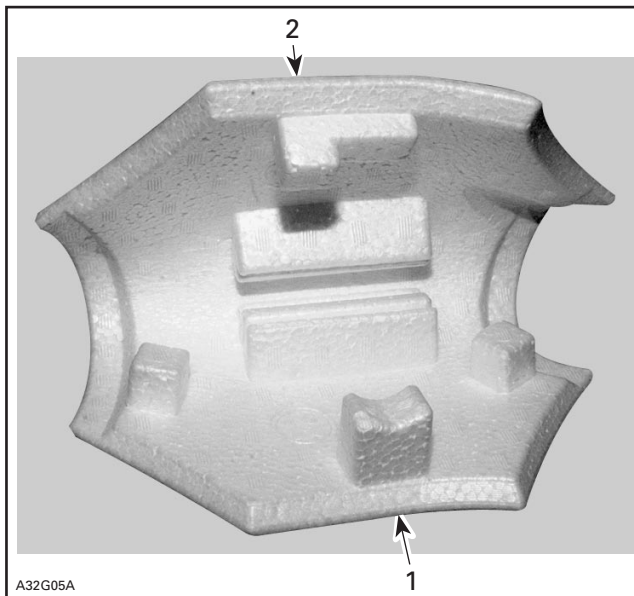


Step **1** : Screw this bolt first to a torque between 7 and 10 N•m (5.25 and 7.5 lbf•ft)

Step **2** : Secure housing with this bolt (same torque)

Install steering foam and adjust for proper fit with console. Fit steering padding and set in place with velcros.

NOTE: Take care to install foam in the proper side.



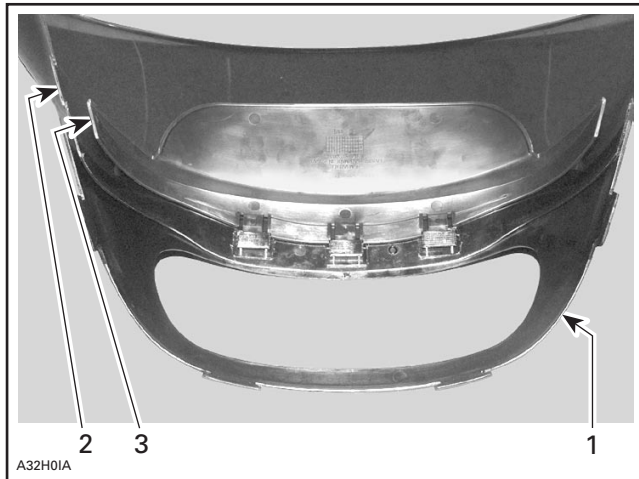
1. Driver's side
2. Engine side



PARTS INSTALLATION WINDSHIELD



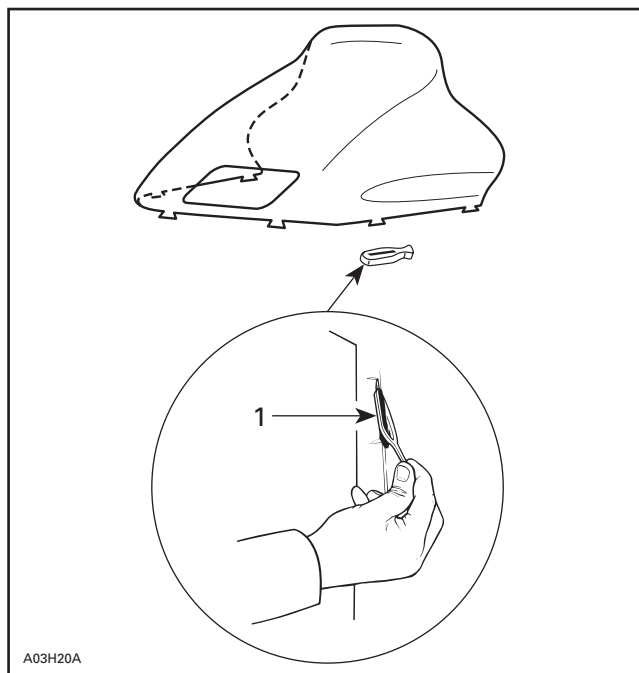
Remove headlamp protector from hood.
Unclip inner protector from headlamp protector.
Insert tabs of headlamp protector in windshield square holes.
Clip inner protector in place.
Secure windshield assembly on hood using latches.



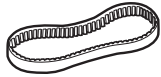
1. Headlamp Protector
2. Windshield
3. Inner Protector



WINDSHIELD INSTALLED

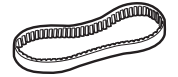


1. Latch (8) (P/N 570 023 800) (4 already on headlamp protector, 2 on windshield and 2 on section no. 5)

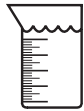


PARTS INSTALLATION

DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 711 809) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



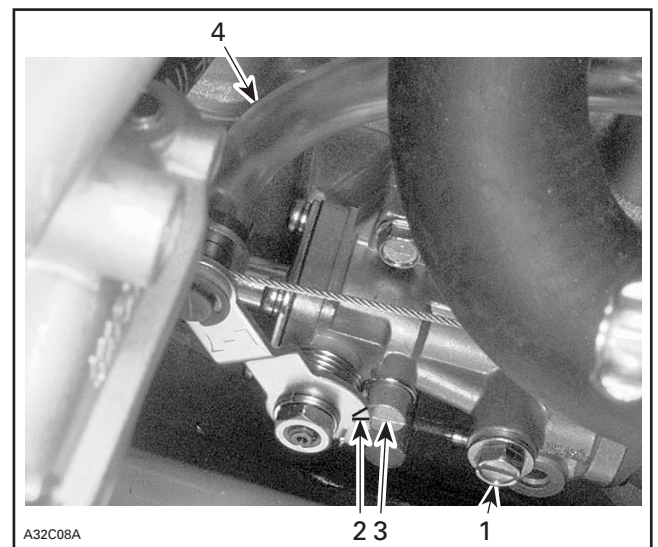
BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Mark on pump body must be set between both marks on lever when throttle lever is activated just enough to take all cable play.



TYPICAL (THE FUEL PUMP IS REMOVED)

1. Bleeder screw
2. Marks on pump lever
3. Mark on pump body
4. Main oil line

Reinstall all parts.

Bleed the small oil line by running engine at idle while holding the pump lever in fully open position.

NOTE: Make a J hook out of mechanical wire to reach the lever from magneto side and pull it in open position.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT) as required.

▼ CAUTION

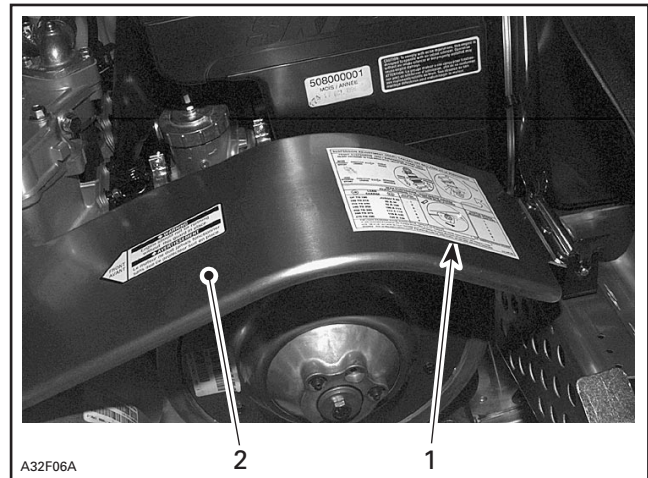
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



TYPICAL

1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

When completed, install wheel caps provided in pre-delivery kit.



ADJUSTMENTS DRIVEN PULLEY




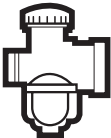


It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

	MODELS	MX Z 600	
	Engine Type	593	
	Maximum HP RPM ① ± 100 RPM	8000	
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	N.A.	
	Carburetor Type	PTO VM 40 - 107 MAG VM 40 - 107	
	Main Jet	PTO 280/MAG 280	
	Needle Jet	Z-9 (224)	
	Pilot Jet	37.5	
	Needle Identification — Clip Position	7DFY1-3	
	Slide Cut-Away	2.5	
	Float Adjustment ± 1 mm (in)	22.9 (0.902)	
	Air Screw Adjustment ± 1/16 turn	0.5	
	Idle Speed RPM ± 200 RPM	1600	
	Gas Grade/Octane Number (R + M)/2	Regular Unleaded/87	
	Gas/Oil Ratio	Oil injection	
	Ignition Timing BTDC ② mm (in)	3.0 (0.125)	
	Trigger Coil Air Gap mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio teeth	24/43	
	Engagement Speed ± 100 RPM	3800	
	Drive Pulley Calibration Screw Position	3	
	Pulley Distance Z	(+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)
		Offset X	± 0.5 mm (± 1/64 in)
	Y		Dimension Y must exceed X from 1 mm (1/32in) to 2 mm (5/64 in)
		Drive Belt Adjustment	Deflection mm (in)
	Force ③ kg (lbf)		11.34 (25)
	Driven Pulley Preload ± 0.7 kg (± 1.5 lbf)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull	

① Engine speed at which maximum power is achieved.

② At 3500 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

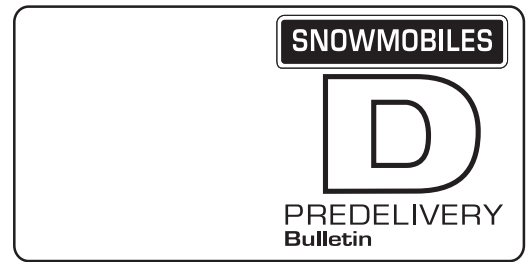
PTO: Power Take OFF side

MAG: Magneto side

N.A.: Not Applicable

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-24**

Date: November 23, 1998

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Summit* 600	1345/1346	All
1999	Europe: Summit* 600	1461	All

This bulletin must be used in conjunction with the predelivery check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

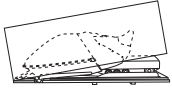
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

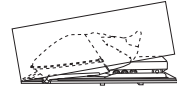
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

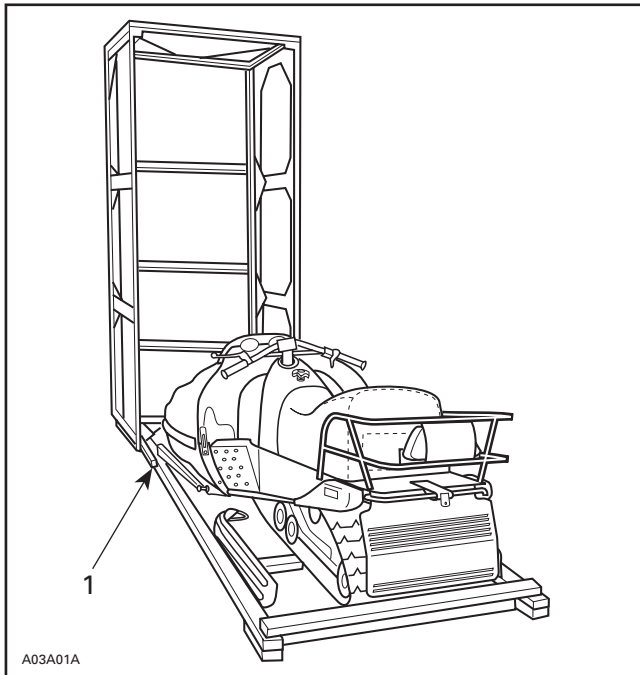
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to crate base. Tip cover toward front or rear of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging any part of the snowmobile.



TYPICAL
1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Remove ropes and cut locking ties retaining windshield.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers box and drive belt from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, cut locking tie, then apply pressure onto rear bumper with right hand, as shown on the following photo.

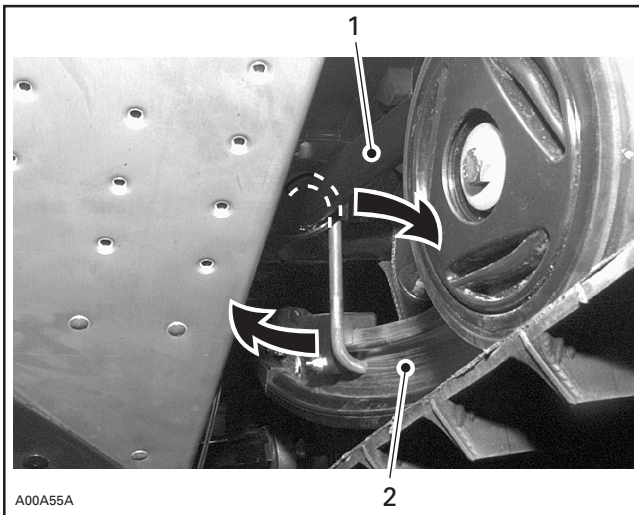


A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



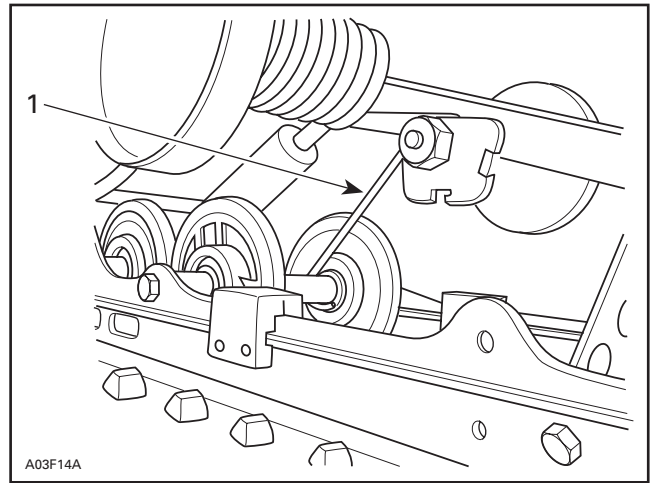
A00A55A

TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL

Apply pressure on rear suspension and remove hook from rear portion of suspension, as illustrated.



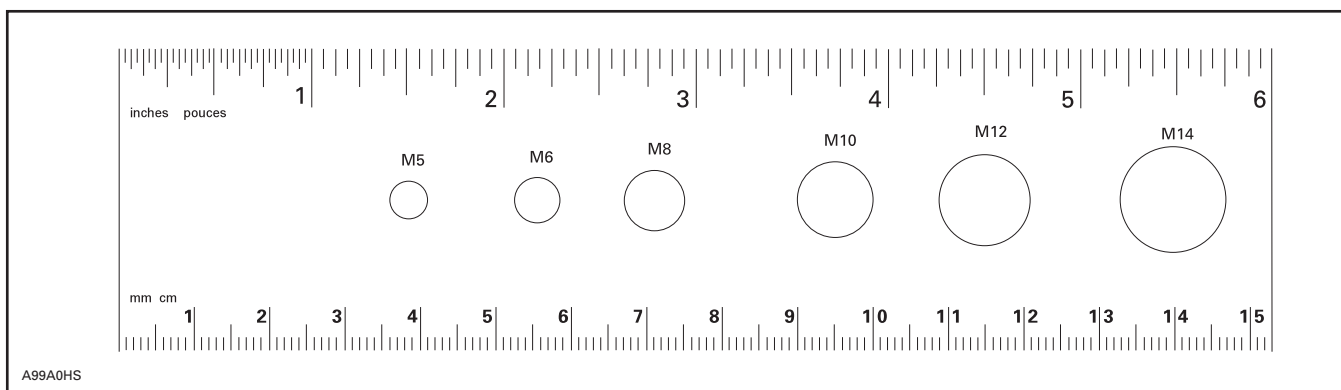
A03F14A

TYPICAL

1. Remove hook

◆ WARNING
Shipping hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
549 010 794	Summit 600



NOTE: This ruler can be helpful to identify fastener length or size.



PARTS INSTALLATION FRONT SUSPENSION

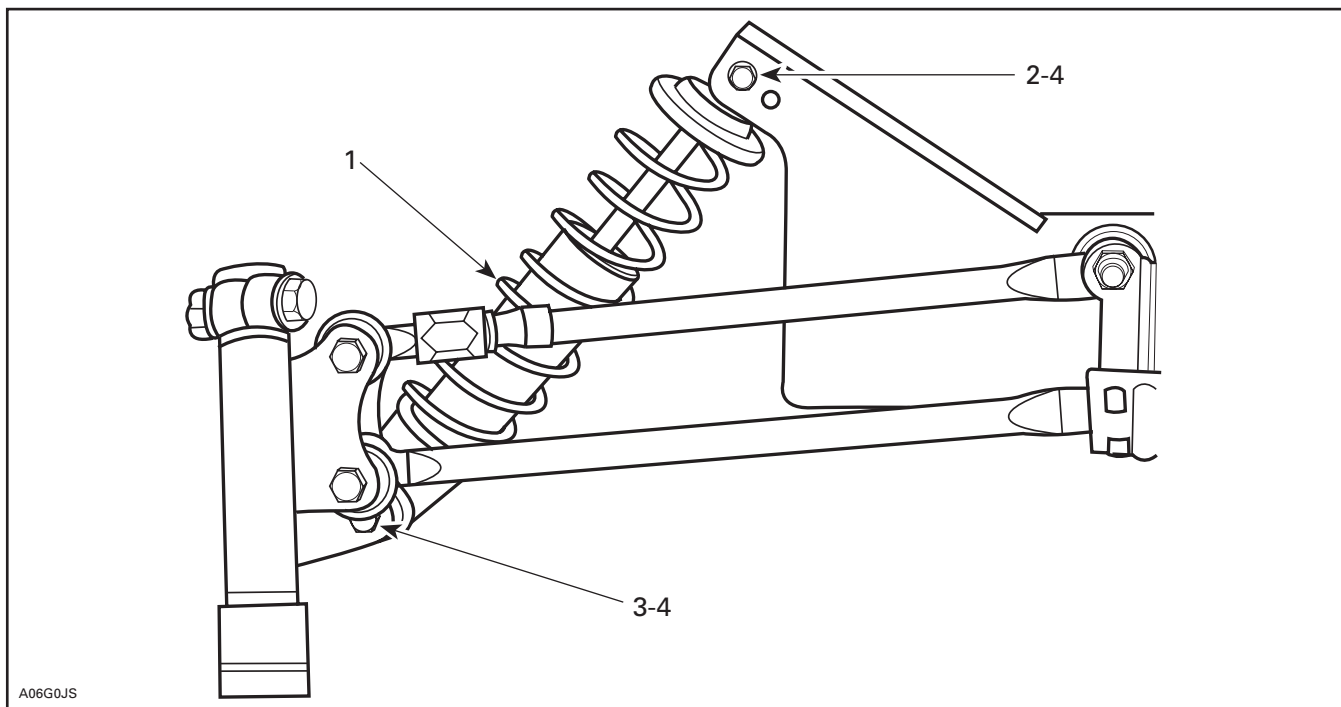


Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

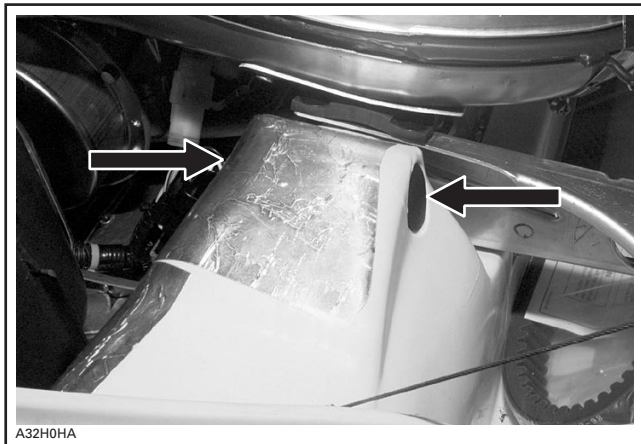
NOTE: Position top and bottom screw heads toward front of vehicle and secure with nuts provided in predelivery kit (section no. 3). Make sure decal edges are toward inside vehicle.



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic flanged nut M10 x 1.5 (4) (P/N 228 501 045) (section no. 3). Torque to 48 N•m (35 lbf•ft)

Install caps provided in predelivery kit on bottom pan, each side of upper bolts.



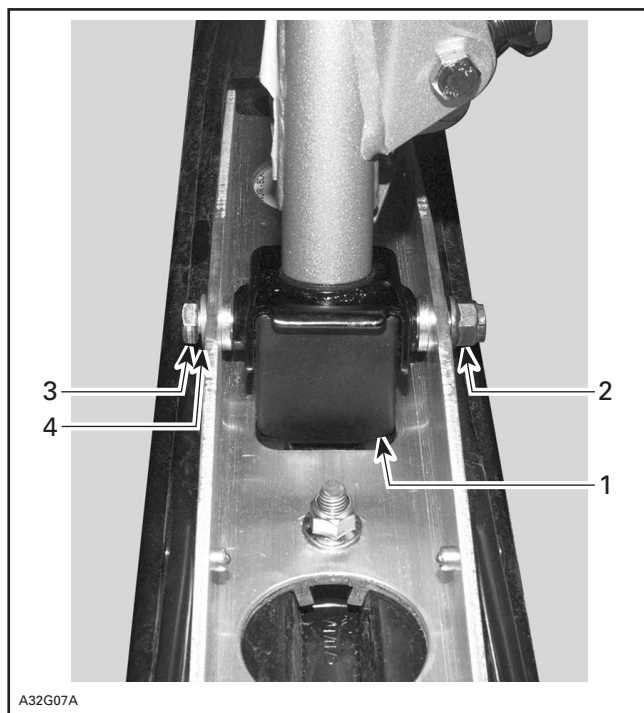
SNAP PROVIDED CAPS (SECTION NO. 6) EACH SIDE OF MOLDING



PARTS INSTALLATION SKIS



Install skis on vehicle.



LEFT SIDE SHOWN

1. Ski stopper (2) (P/N 506 151 233) (section no. 8) with higher side toward front
2. Flanged nut M12 x 1.75 (2). Torque to 32 N•m (24 lbf•ft)
3. Bolt M12 (2) (ski leg)
4. Washer (2) (section no. 8). Installed on bolt head side



PARTS INSTALLATION STEERING PAD



Adjust handlebar and torque nuts between 21 and 28 N•m (16 and 20 lbf•ft).



TYPICAL

1. Torque between 21 and 28 N•m (16 and 20 lbf•ft)
2. Equal gap each side (both clamps)

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

STEERING HOLDING STRAP

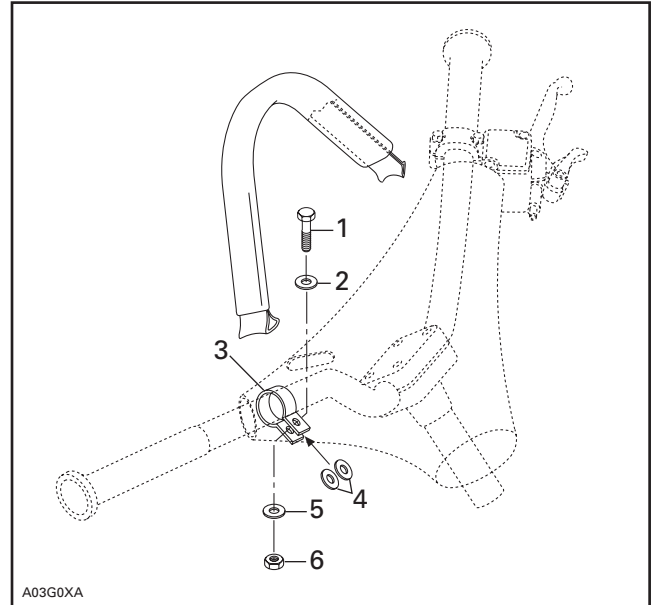
Cut locking tie retaining right side strap end.
Insert strap through holes provided in steering padding, as shown in the next photo.



TYPICAL

1. Strap inserted through both steering pad cover holes

Secure right side strap end with retaining clip and tighten firmly using bolt, nut and washers (section 5) in the sequence shown on drawing below.



1. Bolt
2. Washer
3. Retaining clip
4. Washers
5. Washer
6. Nut

Properly position foam and padding in place, as shown in the next photo.



MAKE SURE FOAM AND PADDING WRAP STEERING PROPERLY

Fasten padding with velcro strips to complete installation.



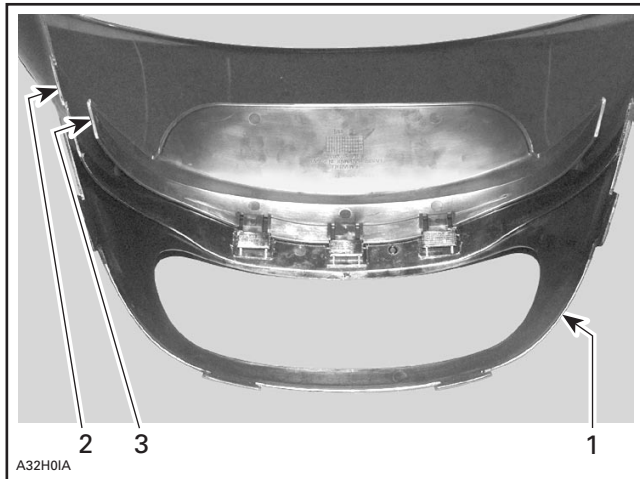
TYPICAL — FINAL INSTALLATION



PARTS INSTALLATION WINDSHIELD



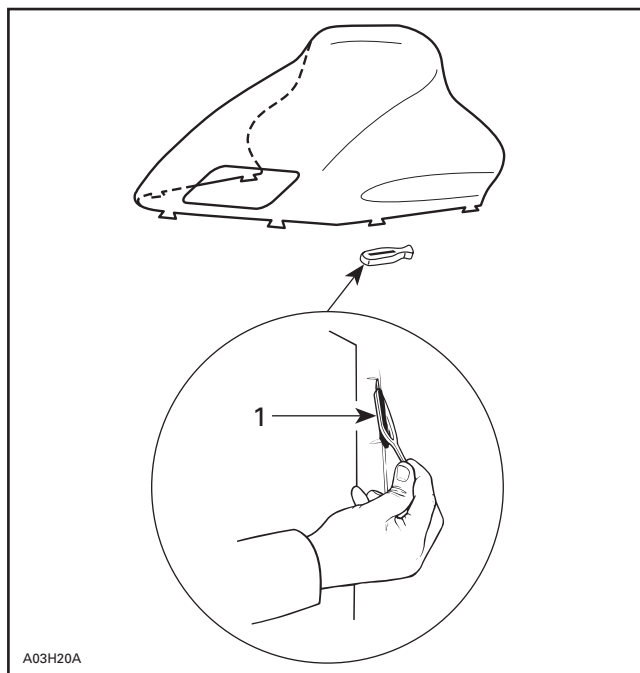
Remove headlamp protector from hood.
Unclip inner protector from headlamp protector.
Insert tabs of headlamp protector in windshield square holes.
Clip inner protector in place.
Secure windshield assembly on hood using latches.



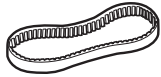
1. Headlamp protector
2. Windshield
3. Inner protector



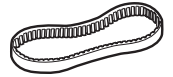
TYPICAL — WINDSHIELD INSTALLED



1. Latch (8) (P/N 570 023 800) (4 already on headlamp protector, 2 on windshield and 2 on section no. 5)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 711 809) before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING



SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz.) of BOMBARDIER-ROTAX injection oil (P/N 413 803 000) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

NOTE: On Summit 600, oil pump has been located under carburetors.

Remove air silencer and move a carburetor aside.

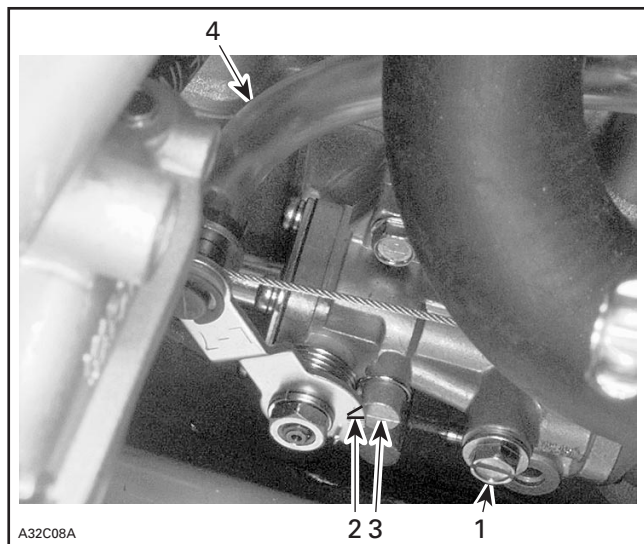
Bleed main oil line by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Mark on pump body must be set between both marks on lever when throttle lever is activated just enough to take all cable play.

Reinstall all parts.

Bleed the small oil lines by running engine at idle while holding the pump lever in fully open position.

NOTE: Make a J hook out of mechanical wire to reach the lever from magneto side and pull it in full open position.



1. Bleeder screw
2. Marks on lever
3. Mark on pump body
4. Main oil line



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT) as required.

▼ CAUTION

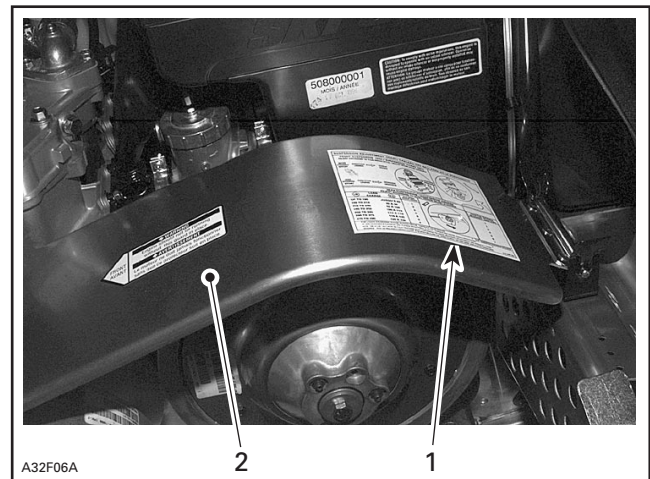
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

When operation is done, install wheel caps provided with the pre-delivery kit (section no. 9) on rearmost wheels.



ADJUSTMENTS DRIVEN PULLEY




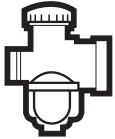


It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

	MODEL	SUMMIT 600		
	Engine Type	593		
	Maximum HP RPM ①	± 100 RPM 8000		
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.	
	Carburetor Type	PTO VM 40 - 113	MAG VM 40 - 113	
	Main Jet	PTO 280	MAG 280	
	Needle Jet	Z-9 (224)		
	Pilot Jet	37.5		
	Needle Identification — Clip Position	7DFY1 — 3		
	Slide Cut-Away	2.5		
	Float Adjustment	± 1 mm (± 0.04 in)	22.9 (.90)	
	Air Screw Adjustment	± 1/16 turn	1.0	
	Idle Speed RPM	± 200 RPM	1600	
	Gas Grade/Pump Octane Number	(R + M)/2	Regular unleaded/87	
	Gas/Oil Ratio		Oil injection	
	Ignition Timing BTDC ②	mm (in)	3.0 (0.118)	
	Trigger Coil Air-Gap	mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio	teeth	21/43	
	Engagement Speed	± 100 RPM	4200	
	Drive Pulley Calibration Screw Position		5	
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)
		X	± 0.5 mm (± 0.02 in)	35.5 (1.398)
	Offset	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
		Deflection	± 5 mm (± 3/16 in)	32 (1-1/4)
	Drive Belt Adjustment	Force ③	kg (lbf)	11.34 (25)
		Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)	7.0 (15.43)
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection	mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull	

- ① Engine speed at which maximum power is achieved.
 ② At 3500 RPM (engine cold) with headlamp turned on.
 ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side
 CRT: Center
 N.A.: Not applicable

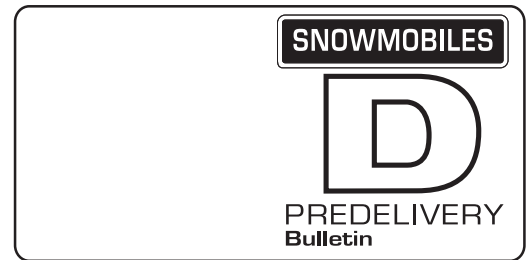
Please route to :

Init.

Service

Sales

Parts



No. **99-5**

Date: June 17, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	Canada/United States: MX Z 440	1409/1410	ALL
1999	Europe: MX Z 440	1411	ALL

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

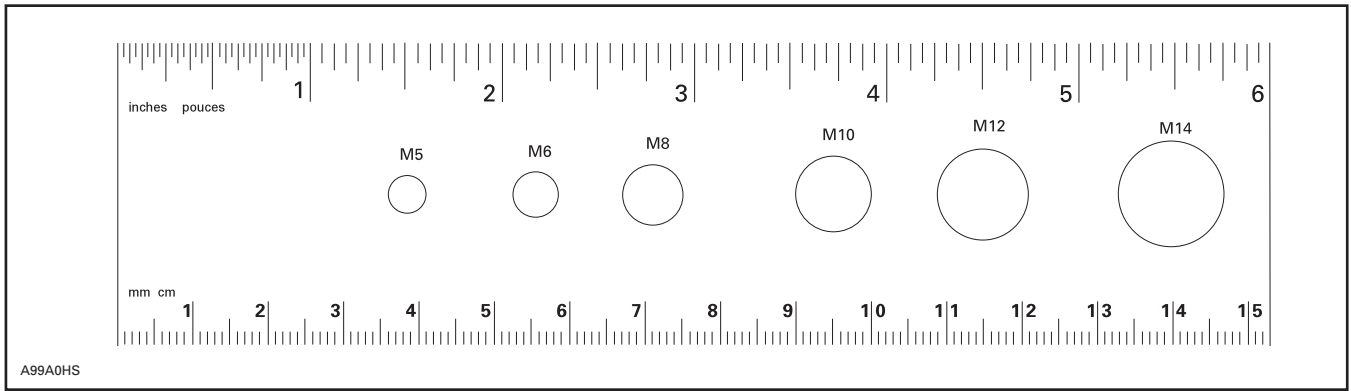
◆	WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>	

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

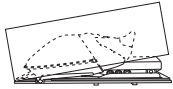
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and *Video*.

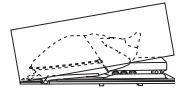
There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODEL
580 668 300	MX Z 440

◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

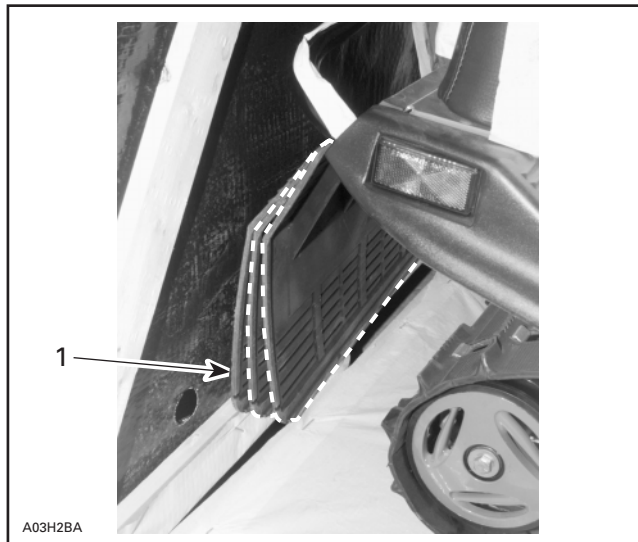
Carefully lay the crate on its bottom.

▼ CAUTION

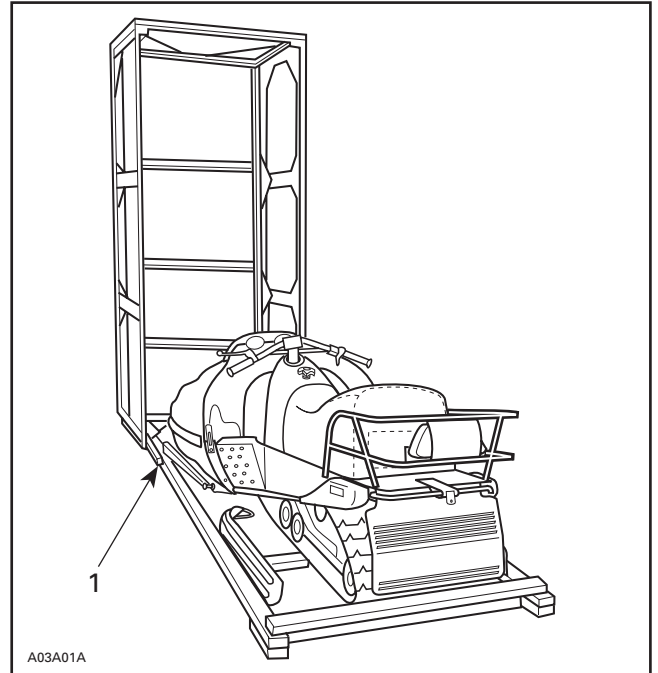
Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



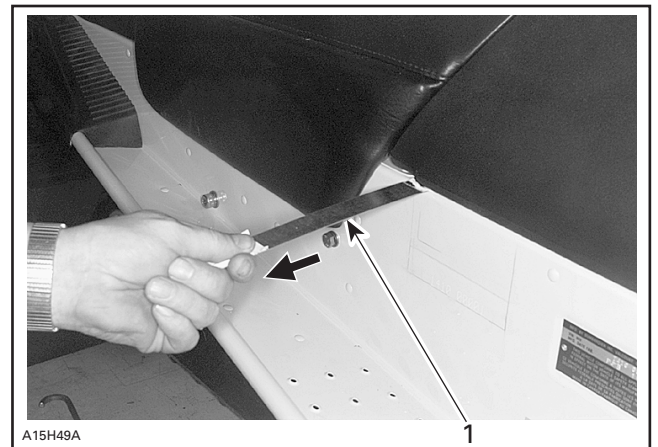
FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD
1. Snow guard interfering with crate cover



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip and discard.



1. Pull out and discard.

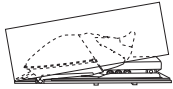
▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

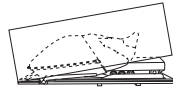
Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

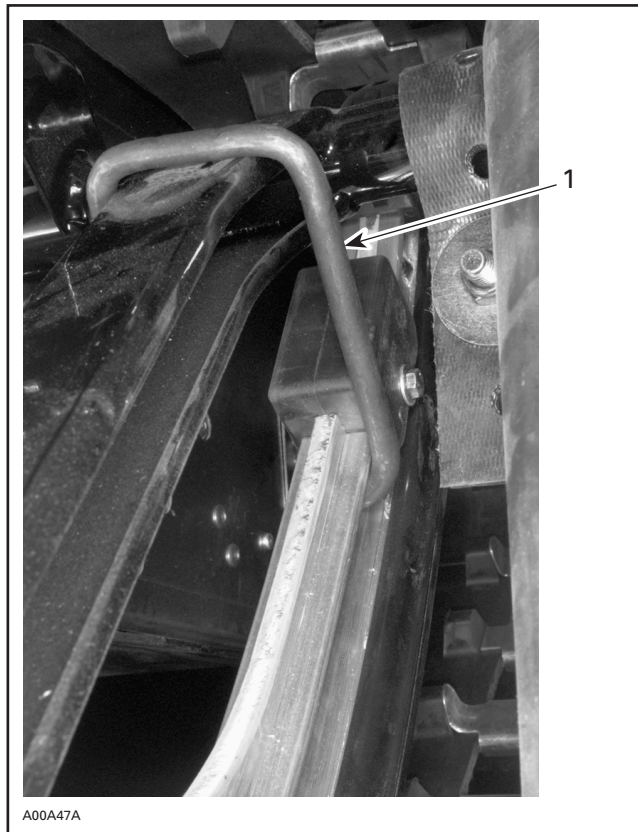
Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.



UNCRATING



FRONT HOOK REMOVAL



TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Cut locking tie holding hook.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

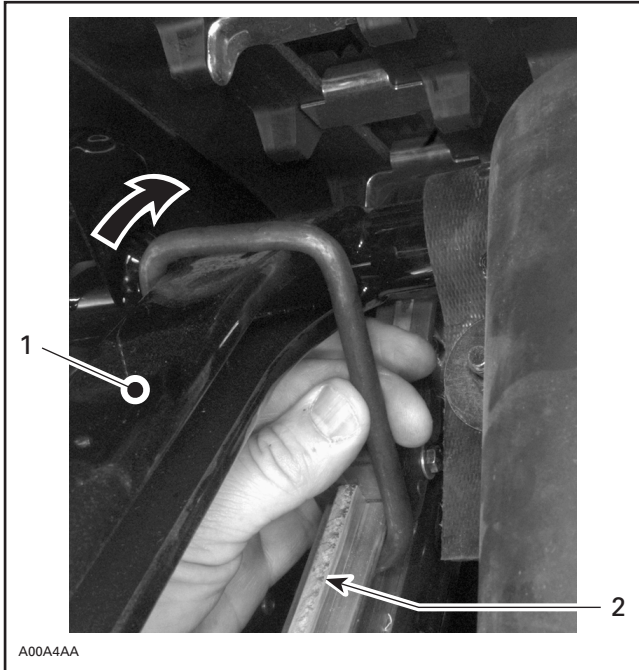


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

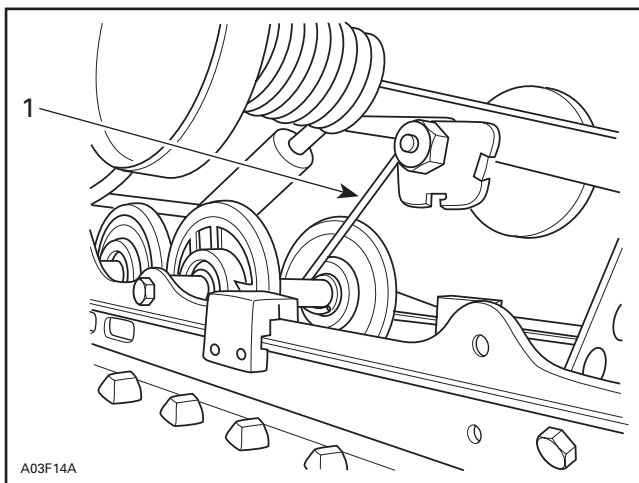
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

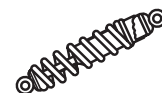
Remove hook on the rear portion of the suspension.

◆ WARNING

Both hooks must be removed to have snowmobile suspension operational.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.

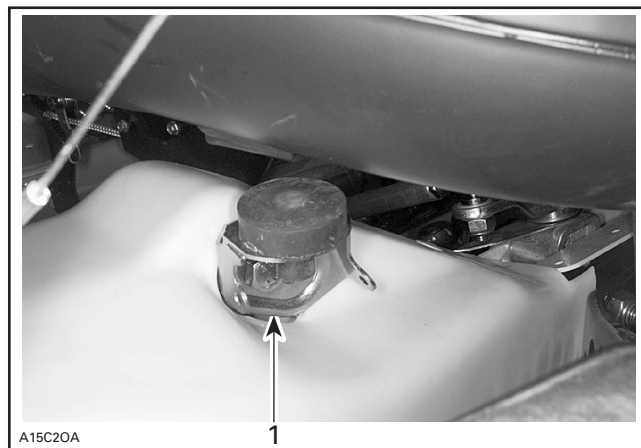
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

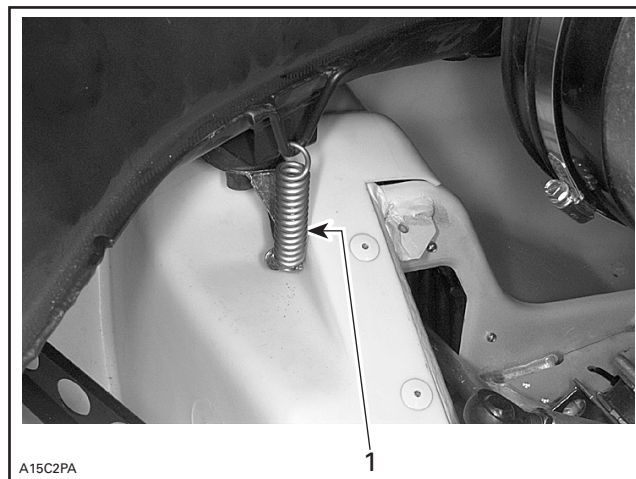
NOTE: Position top screw head toward front and bottom screw head toward rear of vehicle.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess, as shown in the following photo.

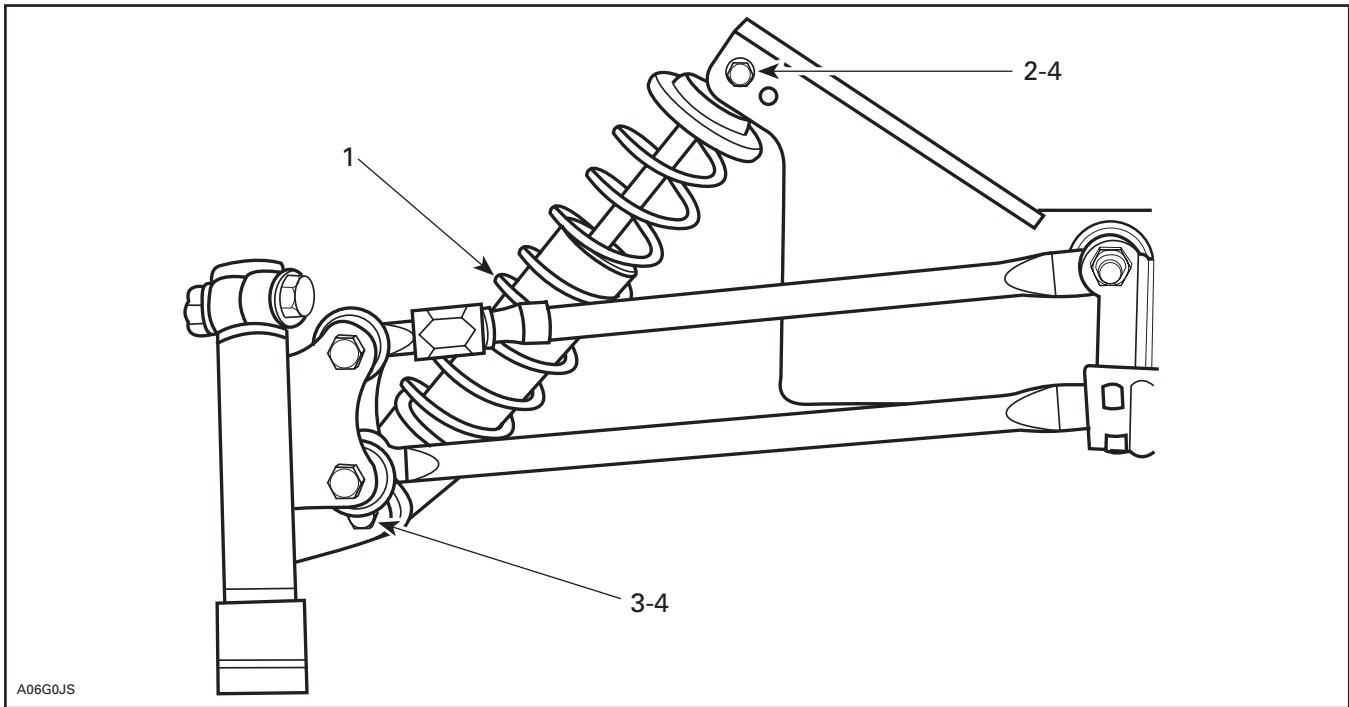


1. Exhaust support

Hook up exhaust spring.



1. Exhaust spring



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (Engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (On suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (On suspension)
4. Elastic nut M10 x 1.5 (2) (P/N 228 501 045) (Section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS

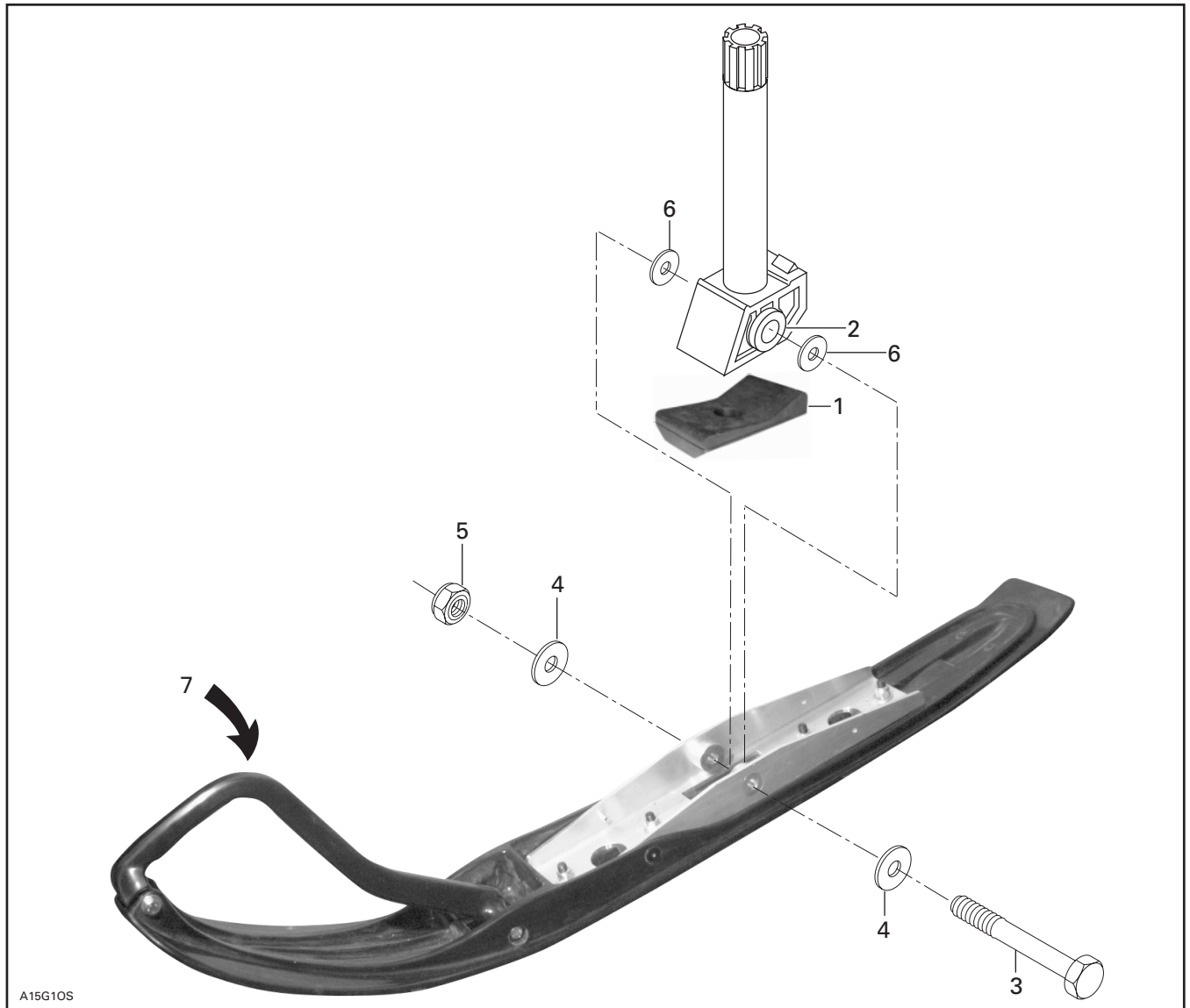


Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 900 048) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



LEFT SIDE SHOWN

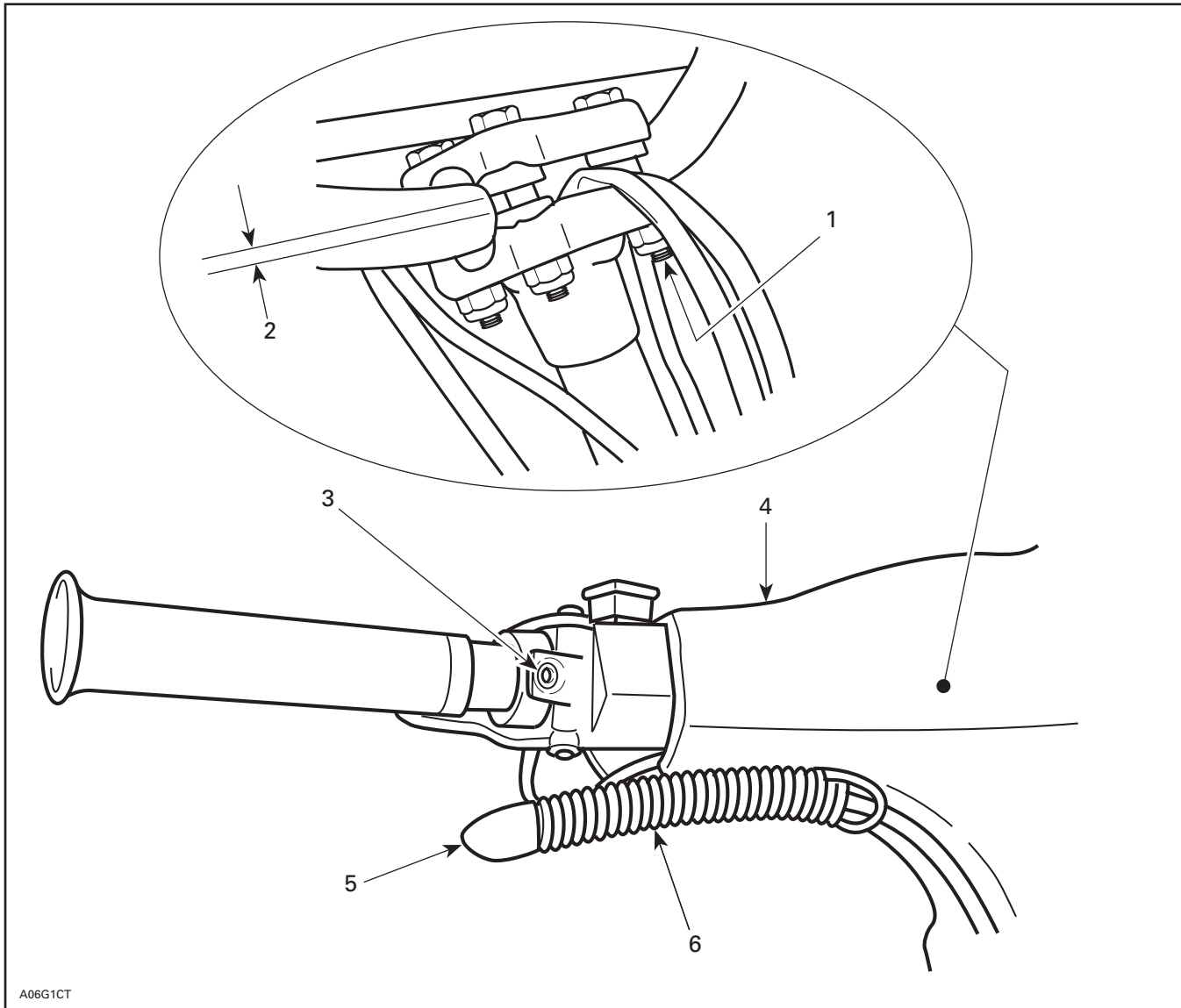
1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (Ski leg)
3. Bolt M12 (2) (Ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (Section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD

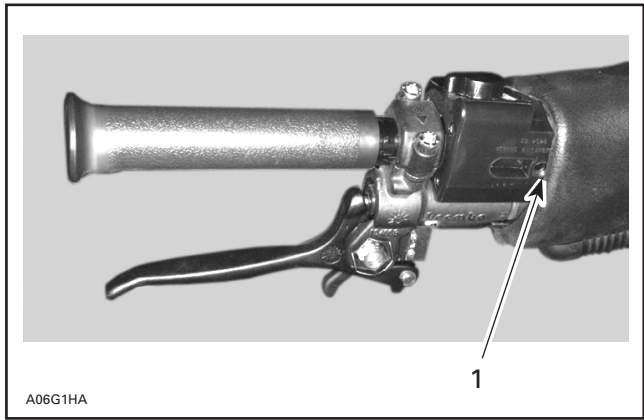


Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



A06G1CT

1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (Both clamps)
3. Loosen Allen screw
4. Steering pad (Engine compartment)
5. Use liquid soap to ease installation
6. Keyway (2) (P/N 572 072 400) (Section no. 5)



BRAKE HANDLE HOUSING

1. Tighten set screw to **2 N•m (18 lbf•in)**

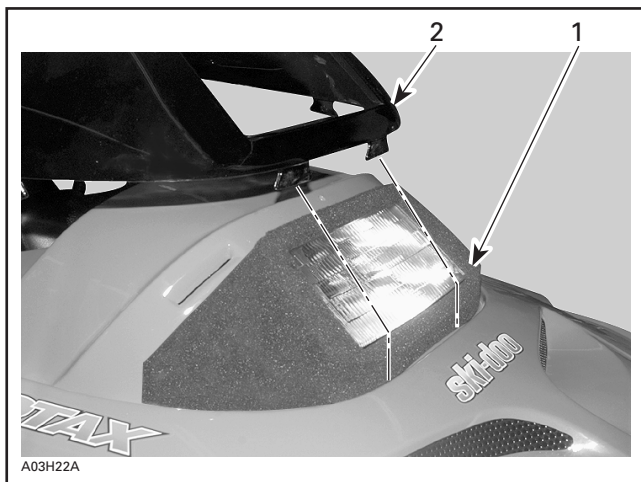


PARTS INSTALLATION WINDSHIELD



Install windshield on dashboard.

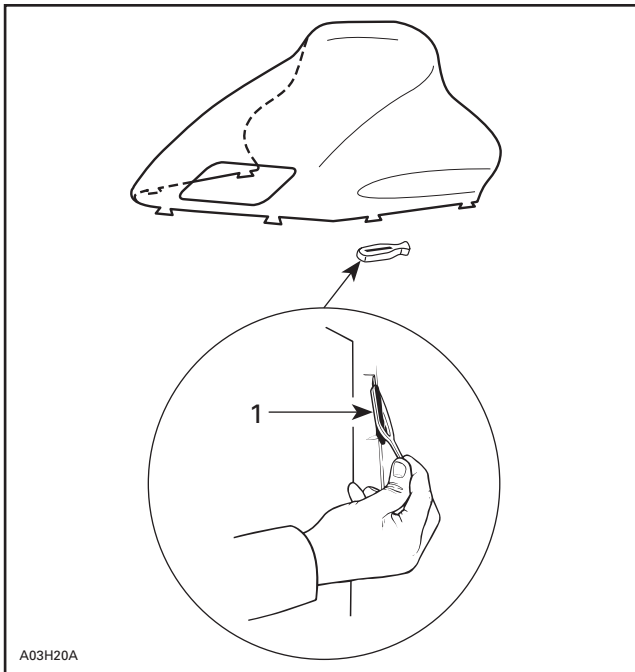
NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



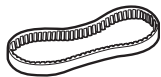
1. Protective foam
2. Install windshield on dashboard



WINDSHIELD INSTALLED ON DASHBOARD



1. Latch (6) (P/N 570 023 800) (section no. 6)



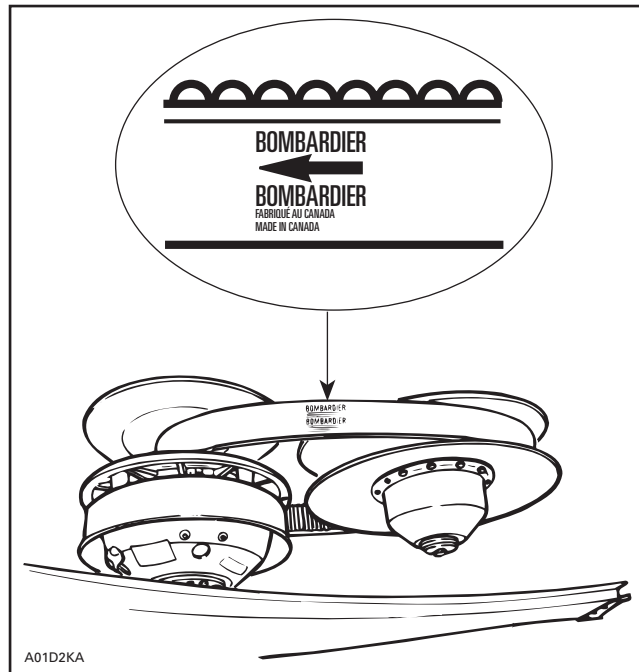
PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.

To ensure maximum drive belt life span, the new drive belt must be installed so that the Bombardier name can be read when facing pulleys.

The arrow is indicating the direction of rotation.



A01D2KA
CORRECT INSTALLATION

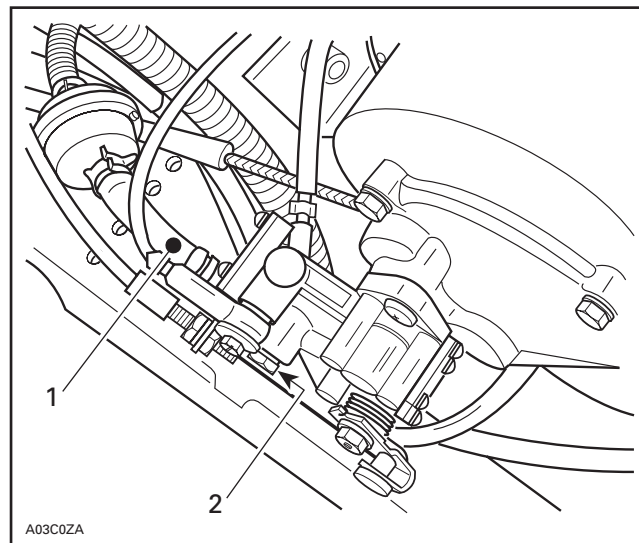


LIQUIDS OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER Injection Oil (P/N 413 802 900 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

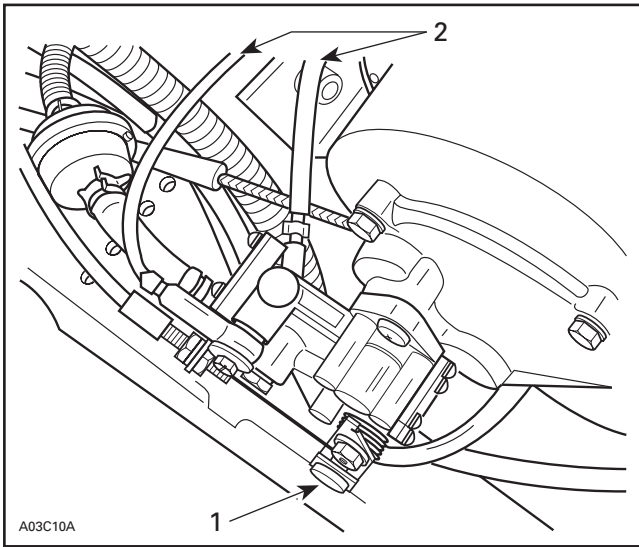


A03C0ZA
TYPICAL

1. Main oil line
2. Bleeder screw

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

Check also for proper oil lever adjustment. Mark on lever should align 1 to 2 mm (.039 to .079 in) above mark on pump body after taking all cable play.




A03C10A

- TYPICAL**
1. Fully open position
2. Small lines

 **LIQUIDS** 
BRAKE FLUID LEVEL

Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

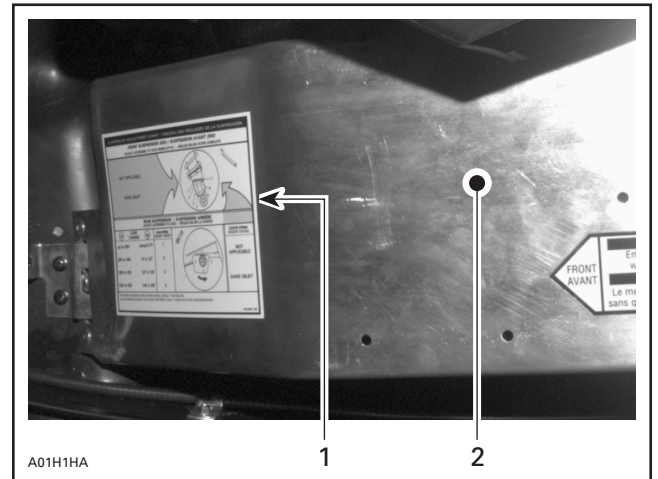
 CAUTION
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard

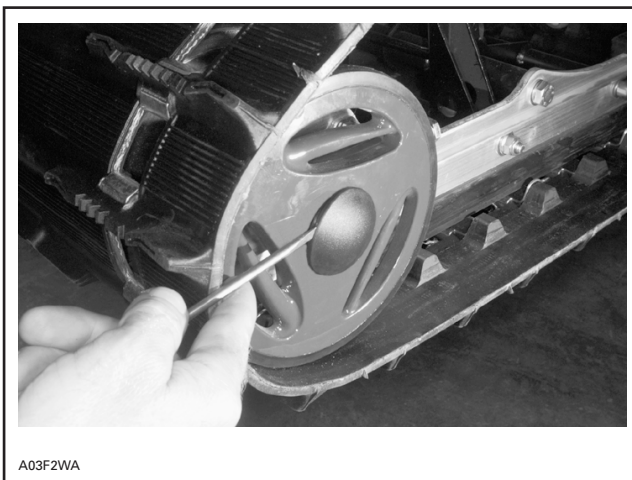


ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

On models equipped with idler wheel cap, remove cap to loosen retaining screws. Refer to the following photo.



Insert a small screwdriver into recess then remove idler wheel cap



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).


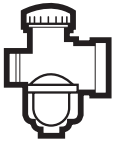




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODEL		MX Z 440	
	Engine Type		443	
	Maximum HP RPM ① ±100 RPM		7000	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A. N.A.	
	Carburetor Type		PTO VM 34 - 530 MAG VM 34 - 531 •	
	Main Jet		PTO 205 MAG 195	
	Needle Jet		P-O (159)	
	Pilot Jet		35	
	Needle Identification — Clip Position		6DH2	
	Slide Cut-away		2.5	
	Float Adjustment ±1 mm (in)		23.9 (.94)	
	Air Screw Adjustment ±1/16 turn		1-1/2	
	Idle Speed RPM ±200 RPM		1650	
	Gas Grade/Pump Octane Number (R + M)/2		Regular Unleaded/87	
	Gas/Oil Ratio		Oil Injection	
	Ignition Timing BTDC ② mm (in)		1.38 (.054)	
	Trigger Coil Air Gap mm (in)		0.45 - 0.55 (.018 - .022)	
	Gear Ratio Teeth		21/44 •	
	Engagement Speed ±100 RPM		3700	
	Drive Pulley Calibration Screw Position		3	
	Pulley Distance	Z	(+0, -1) mm (+0, -1/32) in	16.5 (21/32)
		X	±0.4 mm (±1/64 in)	35.5 (1.398) •
	Offset	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
		Drive Belt Adjustment	Deflection ±.5 mm (in)	32 (1-1/4)
		Force ③ kg (lbf)	11.34 (25)	
	Driven Pulley Preload ±0.7 kg (lbf)		6.1 (13.45)	
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection mm (in)	30 to 35 (1-3/16 - 1-3/8) with a 7.3 kg (16 lb) downward pull •		

① Engine speed at which maximum power is achieved.

② 15.4° at 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

CTR: Center

N.A.: Not Applicable

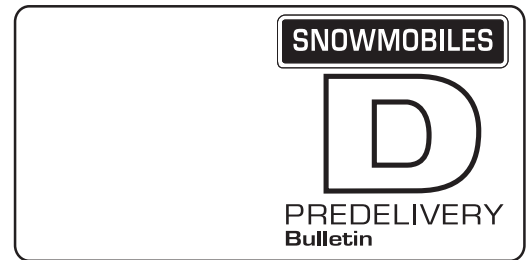
Please route to :

Init.

Service

Sales

Parts



No. **99-13**

Date: August 20, 1998

SUBJECT: Predelivery bulletin

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Formula* Deluxe 670	1382/1383	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

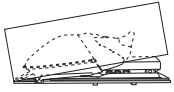
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

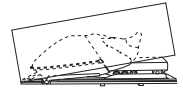
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

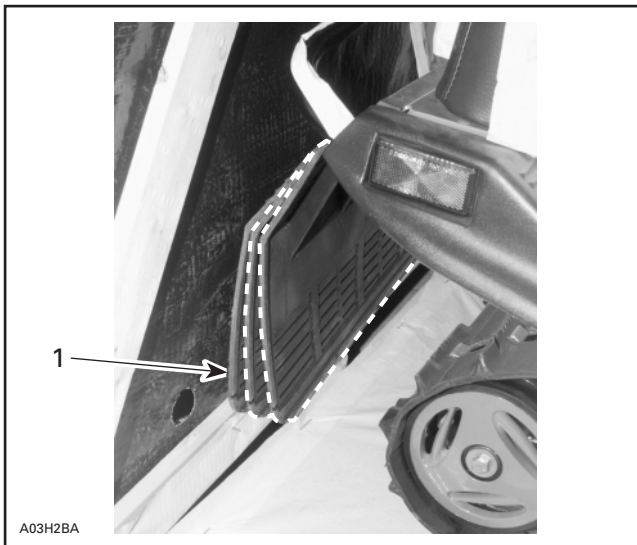
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

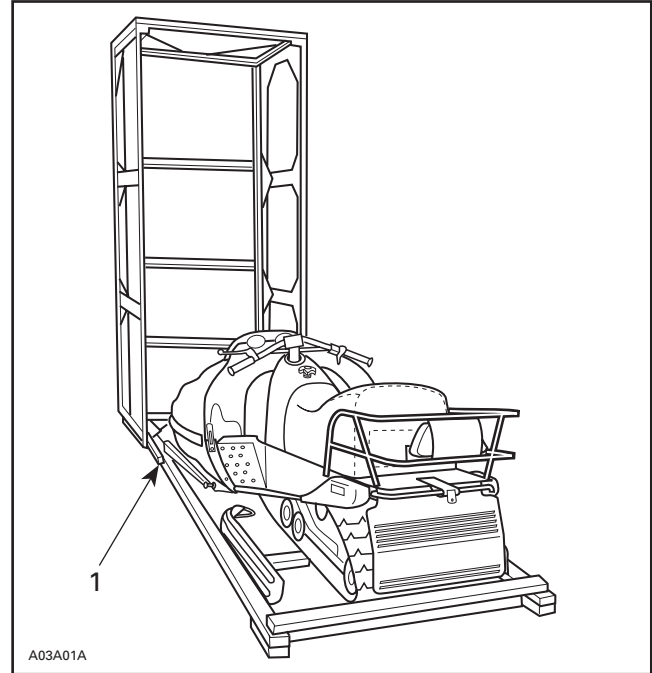
Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover.



TYPICAL

1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

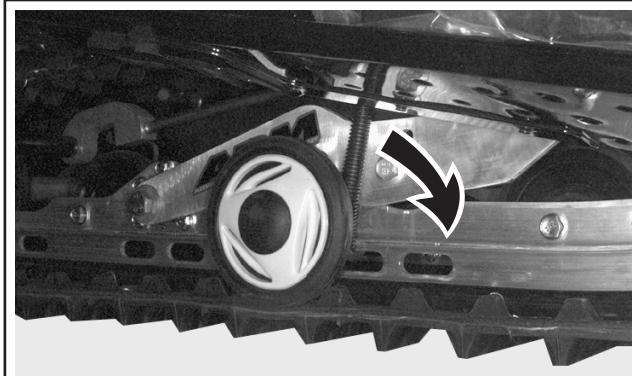
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

REAR HOOKS REMOVAL



A03F3RA

MAKE HOOKS FALL DOWN TO FREE SUSPENSION

Procedure

Both hooks to be removed are located on each side of rear suspension.

To remove hooks, stand on running boards.

Using a fast and strong movement, sit down on snowmobile seat. This will allow suspension to compress and hooks to detach. See the next photo.

▼ CAUTION

To avoid damaging seat storage compartment and cover, always sit on seating surface.



1



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2

STAND ON RUNNING BOARDS THEN SIT DOWN ON SEAT

1. Hook to be removed (both sides)
2. Hook removed

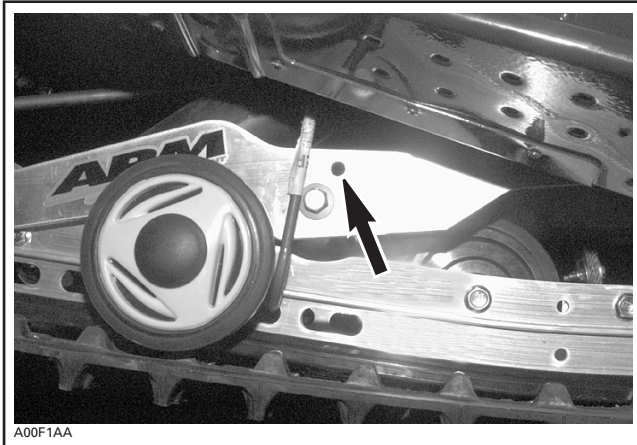
NOTE: Hook may detach from top only. In that case remove hook from runner by hand or with tongs.

▼ CAUTION

Both hooks must be removed to have snowmobile suspension operational.

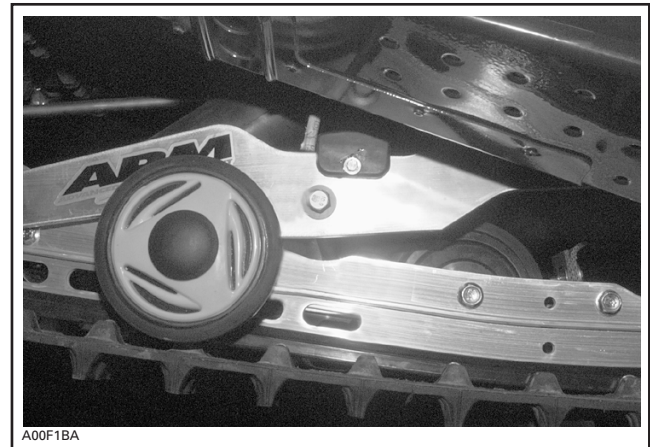
Rubber Stopper Installation

Install rubber stoppers in hole beside center wheels, using M5 x 40 hexagonal screws (P/N 222 054 065), flat washers (P/N 391 301 700) and M5 hexagonal flanged nut (P/N 228 551 045).



A00F1AA

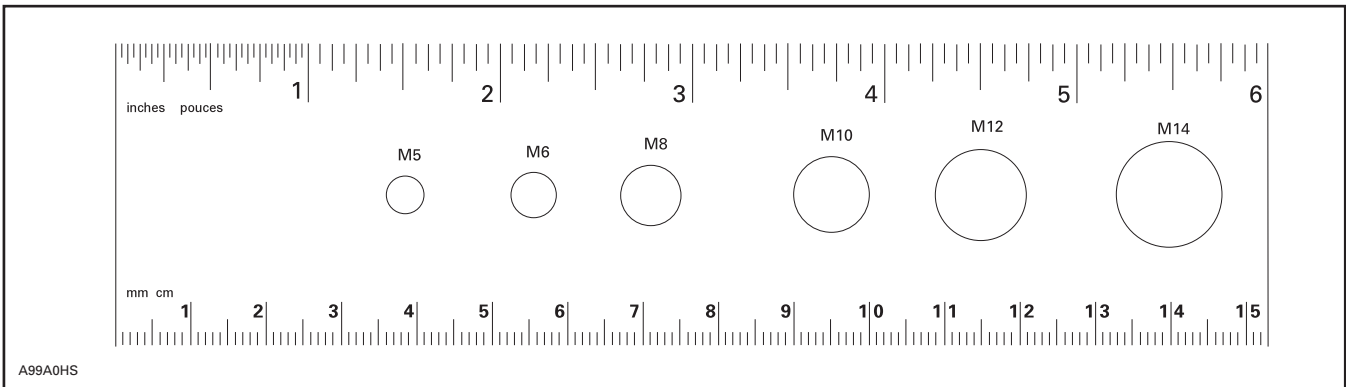
INSTALL RUBBER STOPPER (P/N 570 067 600) HERE AFTER HOOK REMOVAL



A00F1BA

INSTALLATION COMPLETED

PREDELIVERY KIT P/N	MODEL
549 010 792	FORMULA Deluxe 670

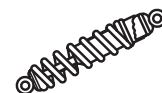


A99A0HS

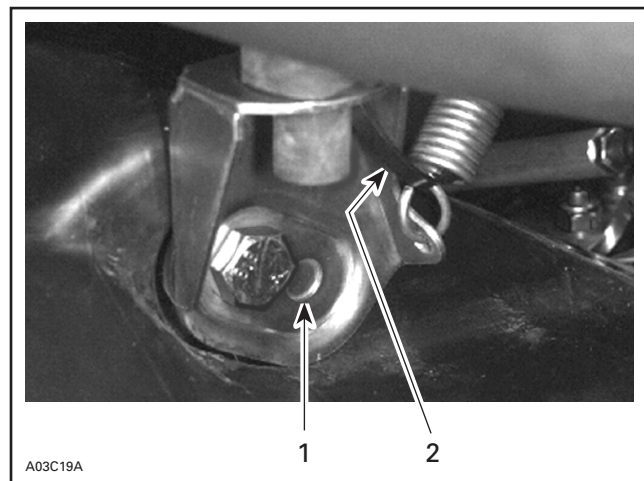
NOTE: This ruler can be helpful to identify fastener length or size.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

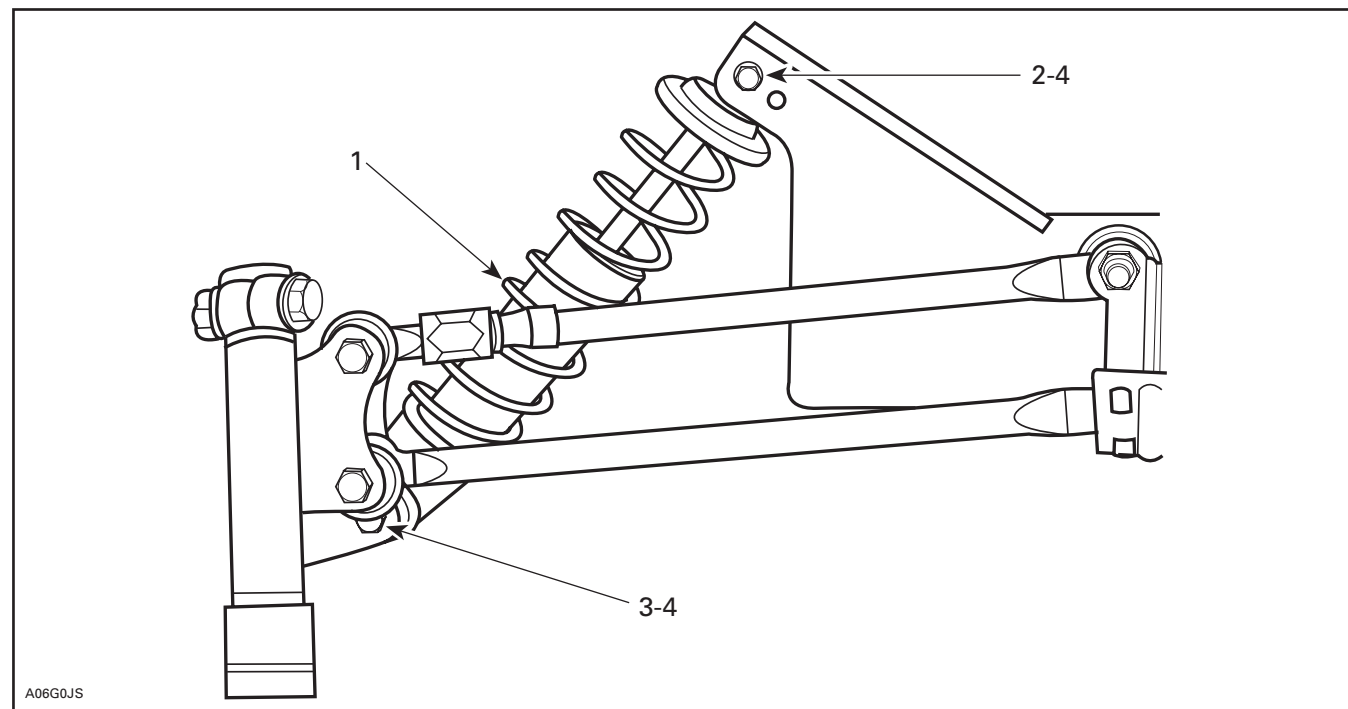
Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

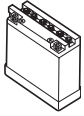
NOTE: Position bottom and top screw heads toward front.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

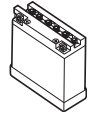


TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment). Adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic flanged nut M10 x 1.5 (2) (P/N 228 501 045) (section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION BATTERY



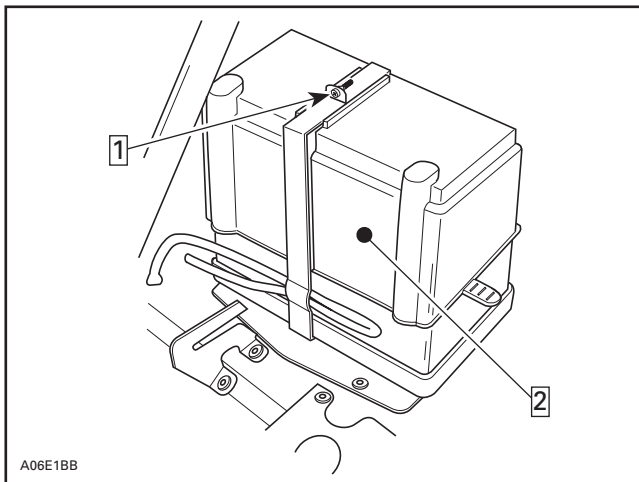
During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage. Do not charge an installed battery.

Battery Removal

- Remove belt guard.
- Remove air intake silencer.
- Unfasten battery retaining strips.
- Open strips and lift battery protective boot.



- Step 1 : Detach and open
Step 2 : Lift battery protective boot

Withdraw battery from vehicle.

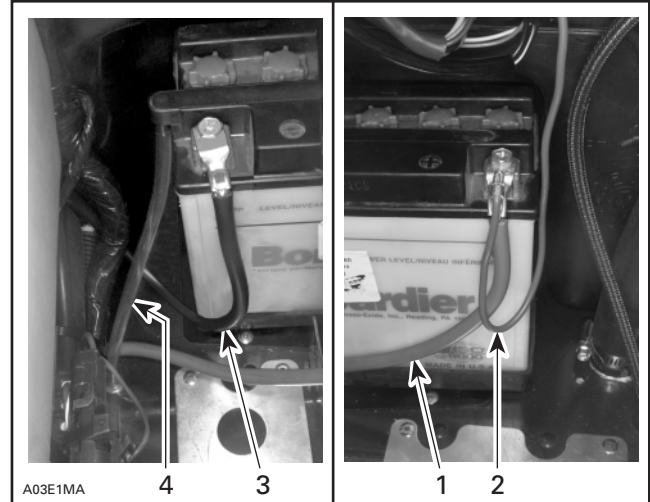
Battery Installation

NOTE: Before reinstalling battery and air silencer check oil pump lever adjustment.

- Install vent tube on battery.
- Connect RED positive cable and RED wire to positive battery terminal.
- Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.



BATTERY CONNECTION

1. RED positive cable
2. RED positive wire
3. BLACK negative cable
4. Ensure that vent tube is properly connected

Ensure that vent tube is properly connected to vehicle fitting on frame.

Apply silicone dielectric grease (P/N 413 701 700) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.



BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.
Reinstall air silencer.



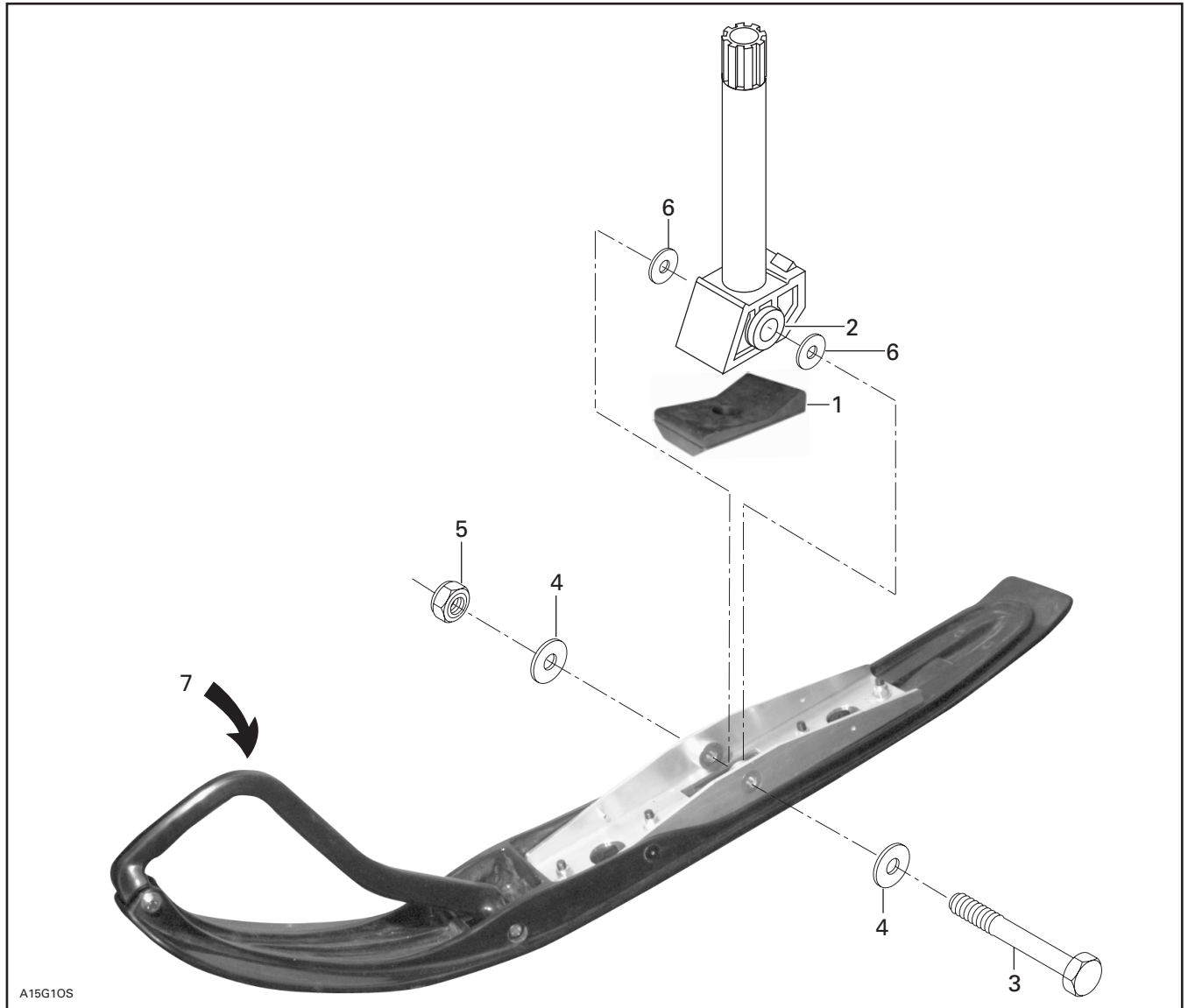
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



A15G10S

LEFT SIDE SHOWN

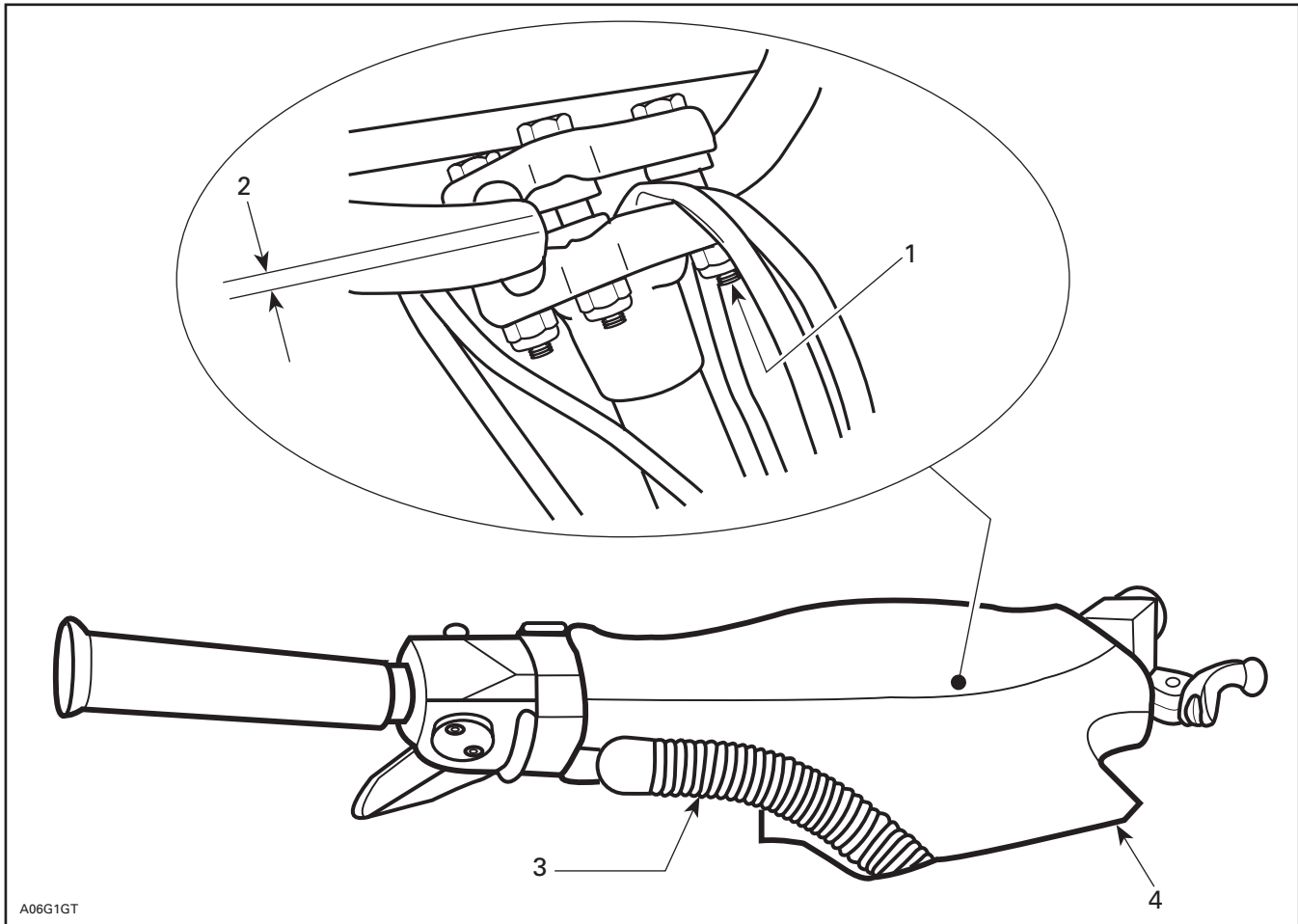
1. Stop bounding (2) (P/N 570 053 300) (section no. 8)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Large flat washer (4) (P/N 732 900 048) (section no. 8)
5. Elastic flanged nut M12 (2) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Small flat washer (4) (P/N 506 136 400) (section no. 8)
7. Twist ski to ease installation



PARTS INSTALLATION STEERING PAD



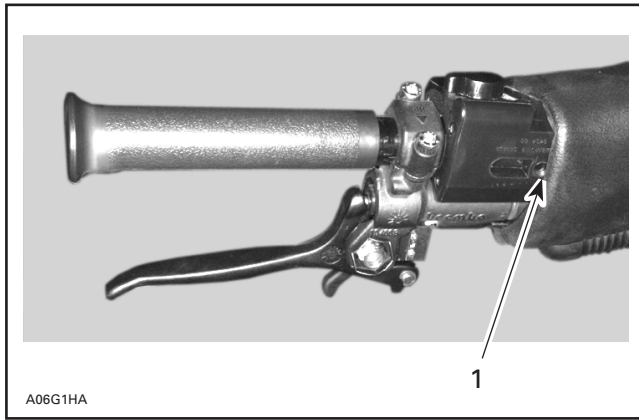
Adjust handlebar temporary and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporary, and adjust for proper fit with console.
Remove steering pad and torque nuts from 21 to 28 N•m (16 to 20 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



A06G1GT

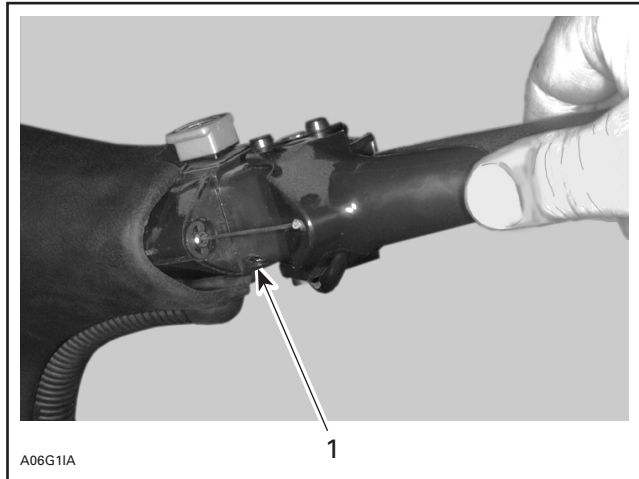
TYPICAL

1. Torque from 21 to 28 N•m (16 to 20 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (P/N 572 072 400) (section no. 5)
4. Steering pad (engine compartment)



BRAKE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)

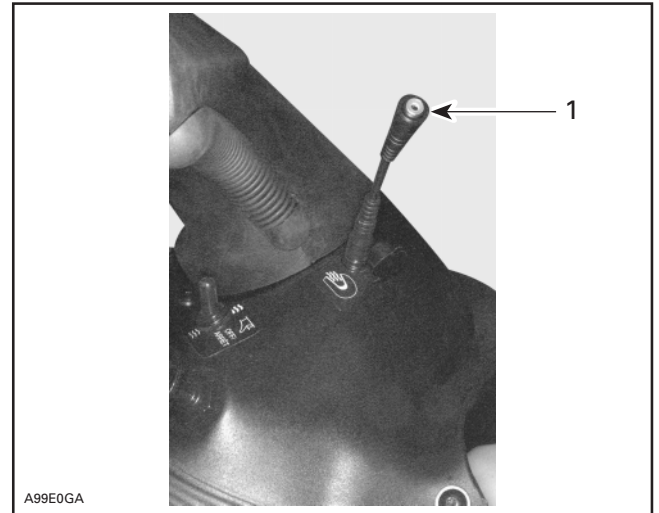


THROTTLE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)

Heating Visor Extension

Meanwhile installing steering pad, open heating visor plug and install extension provided in pre-delivery kit.



INSTALLED, THE CUSTOMER ISN'T LIKELY TO LOOSE THAT PART

1. Heating visor extension (P/N 515 175 161) (Section no. 9)

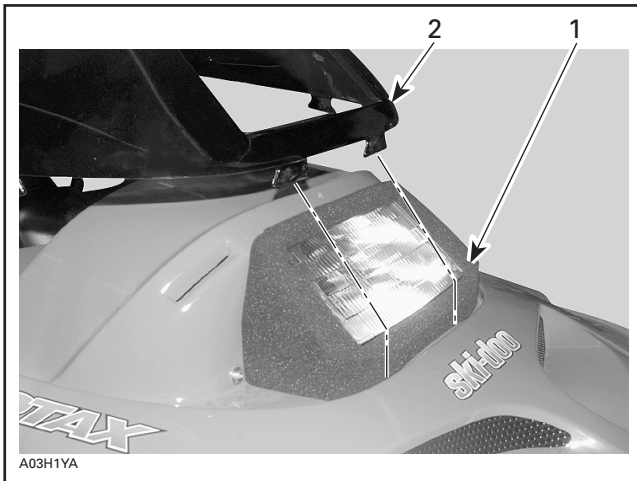


PARTS INSTALLATION WINDSHIELD



Install windshield on dashboard.

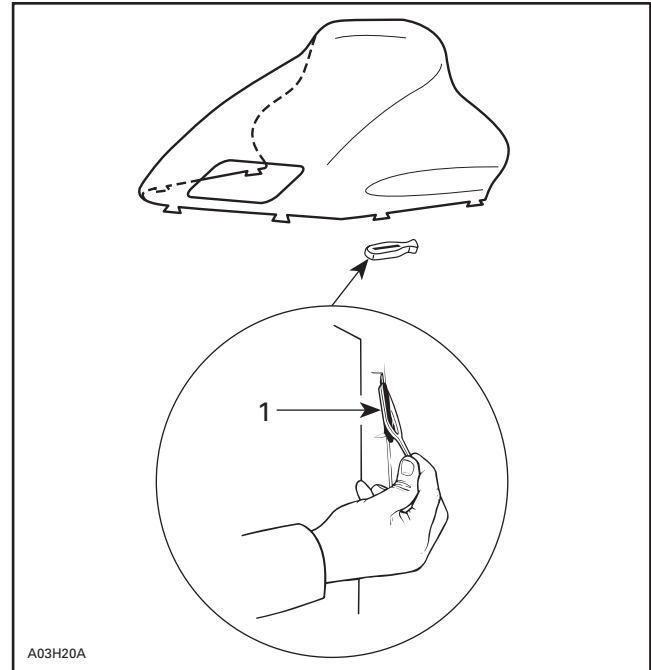
NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



1. Protective foam
2. Install windshield on dashboard



WINDSHIELD INSTALLED ON DASHBOARD

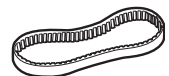


TYPICAL

1. Latch (6) (P/N 570 023 800) (section no. 6)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



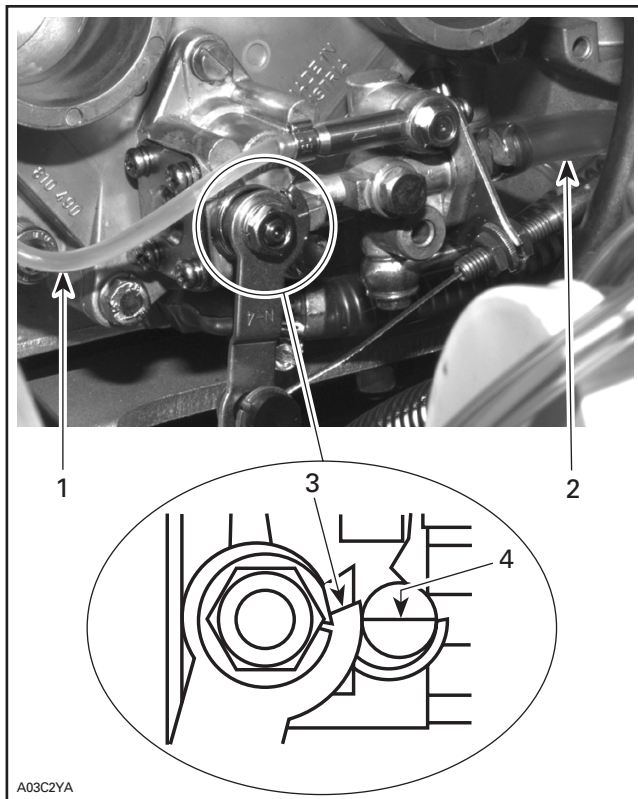
BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Mark on pump's lever must be 0 to 2 mm higher than mark on pump's body when throttle lever is activated just enough to take all cable play.

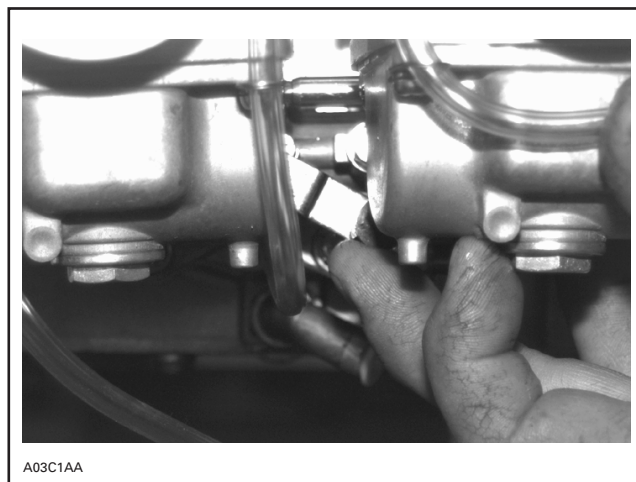


1. Small oil line
2. Main oil line
3. Mark on lever
4. Mark on pump

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: Make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT) as required.

▼ CAUTION

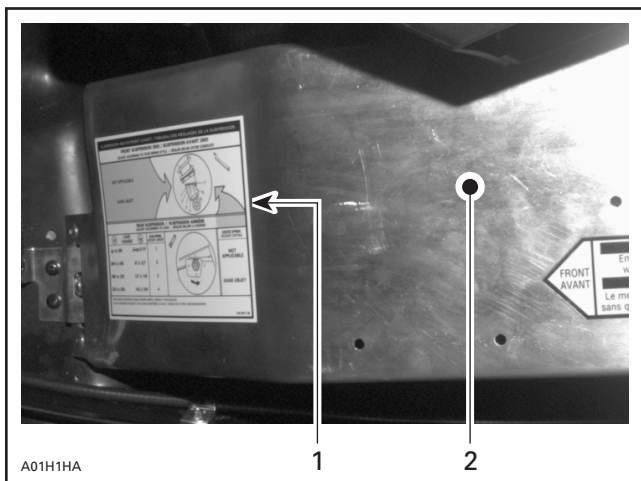
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

When track adjustment is completed, place wheel caps provided in predelivery kit on rear wheels.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).


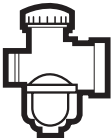




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODEL	FORMULA DELUXE 670	
	Engine Type	670	
	Maximum HP RPM ①	± 100 RPM 7700	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC) 420 924 500 144°/ 72°	
	Carburetor Type	PTO VM 40 - 109 MAG VM 40 - 110	
	Main Jet	PTO 310/MAG 290	
	Needle Jet	AA-3 (224)	
	Pilot Jet	60	
	Needle Identification — clip Position	7EDY1 - 3	
	Slide Cutaway	2.5	
	Float Adjustment	± 1 mm (± 0.039 in) 18.1 (.71)	
	Air Screw Adjustment	± 1/16 turn 2-1/4	
	Idle Speed RPM	± 200 RPM 1700	
	Gas Grade	Regular Unleaded	
	Octane Number	(R + M)/2 87	
Gas/Oil Ratio	Oil Injection		
	Ignition Timing BTDC ②	mm (in) 1.93 (.076)	
	Trigger Coil Air-Gap	mm (in) 0.55 - 1.45 (.022 - .057)	
	Gear Ratio	teeth 25/44	
	Engagement Speed	± 100 RPM 3800	
	Drive Pulley Calibration Screw Position	3	
	Pulley Distance	Z (+ 0, - 1) mm ((+ 0, - 0.04) in) 16.5 (0.065)	
	Offset	X	± 0.05 mm (± 0.002 in) 35.5 (1.398)
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	Drive Belt Adjustment	Deflection	mm (in) 32 (1-1/4)
		Force ③	kg (lbf) 11.34 (25)
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf) 7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection 30 to 35 mm (1-3/16 to 1-3/8 in) with a 7.3 kg (16 lb) downward pull		

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

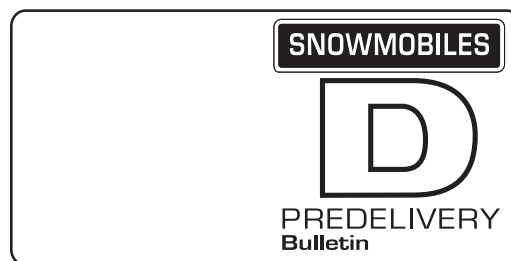
ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-16**

Date: September 17, 1998

SUBJECT: Predelivery Bulletin

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Summit* 500	1403/1404	All
1999	Europe: Summit 500	1405	All
1999	Canada and United States: MX Z* 670 HO MX Z* 670 HO T.H.	1415/1416/1452/1453 1466	All
1999	Europe: MX Z* 670 HO	1417	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

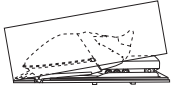
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

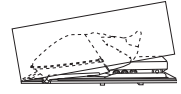
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer should remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

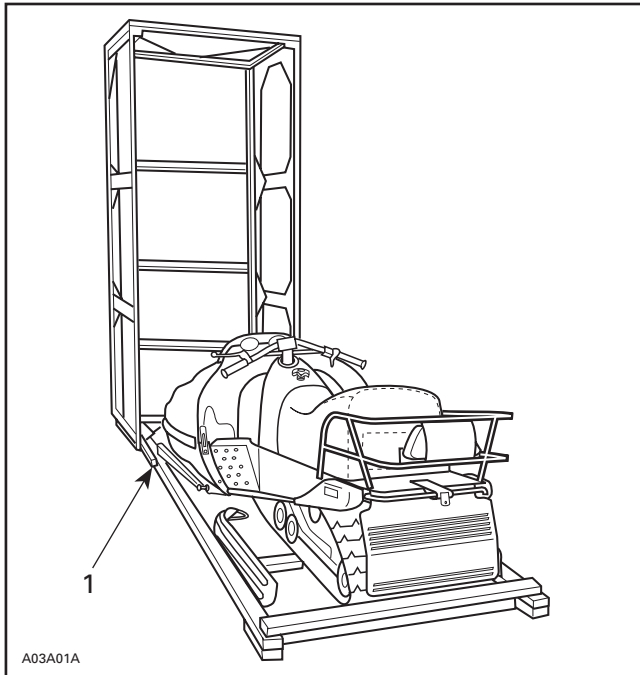
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to crate base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.



TYPICAL

1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and crate base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

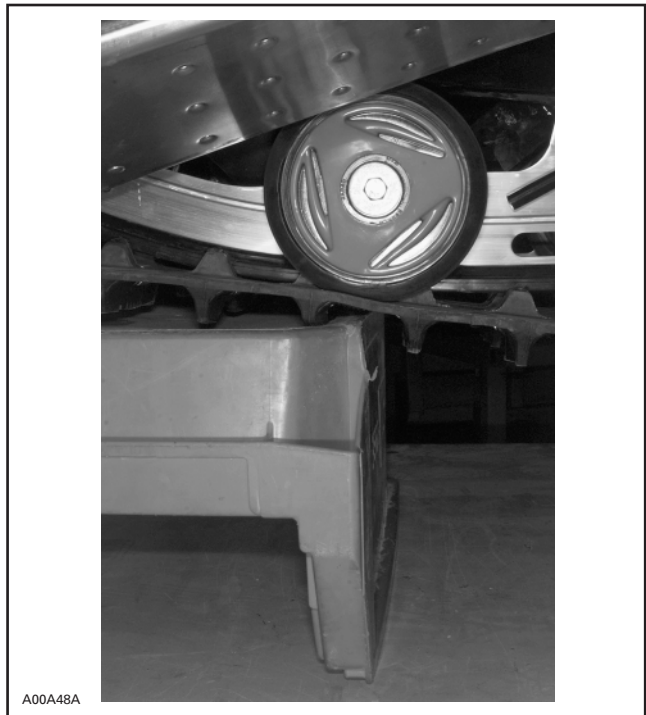
Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

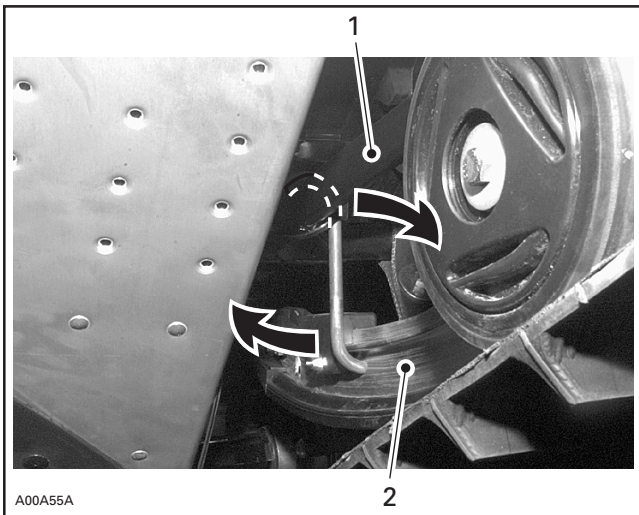


A00A49A

TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



A00A55A

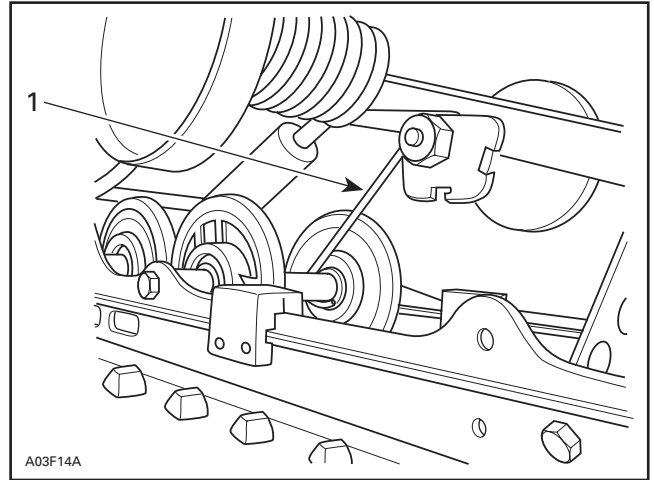
TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL

Lift front of vehicle to position bumper 35 to 40 inches upward.

Apply pressure on rear suspension and remove hook from rear portion of suspension, as illustrated.

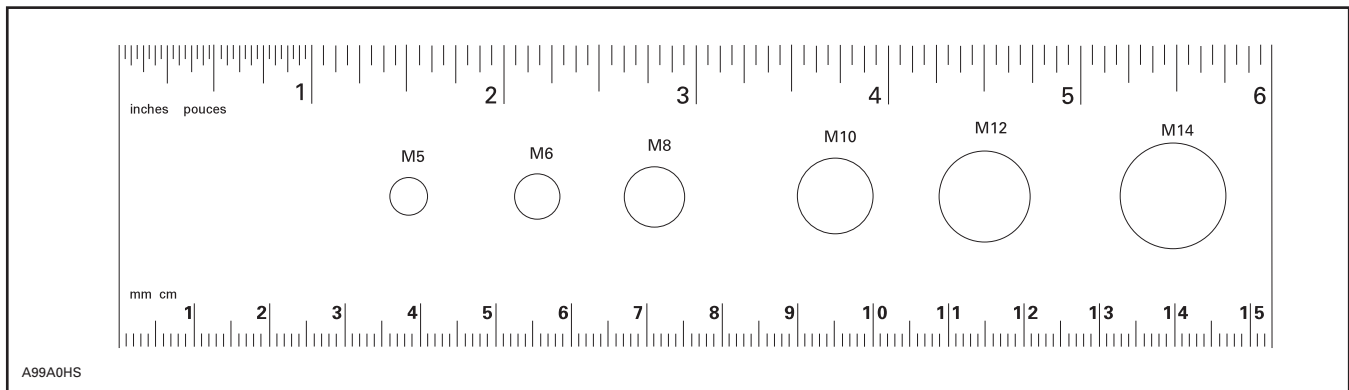


A03F14A

1. Remove hook

◆ WARNING
Both hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
580 668 300	SUMMIT 500 MX Z 670 HO MX Z 670 HO T.H.



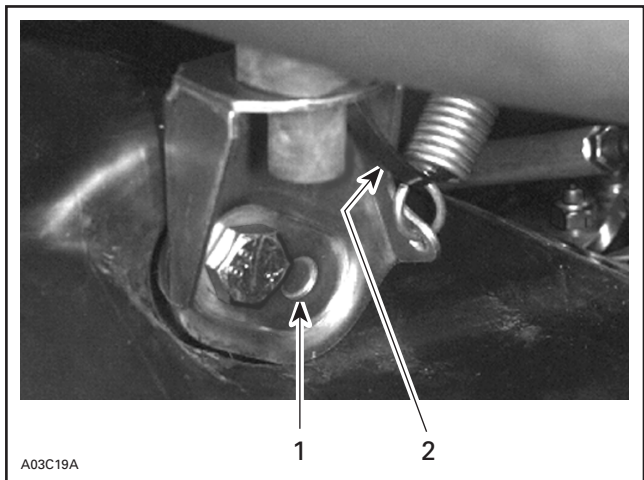
NOTE: This ruler can be helpful to identify fastener length or size.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

Lift front of vehicle and block safely.
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

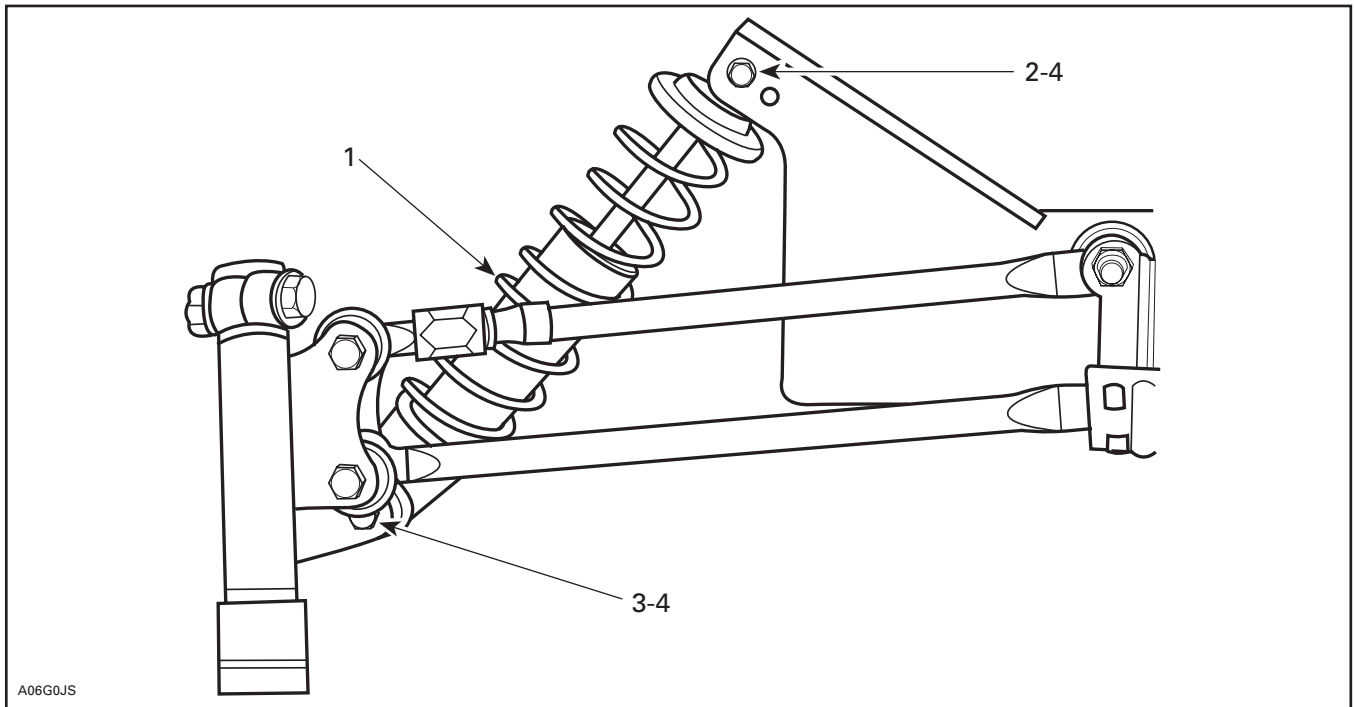
Summit 500 Model

Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bottom screw heads toward rear and top screw heads toward front. Make sure that decal edges are toward inside.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

NOTE: On models equipped with a 5 holes exhaust support, hook up exhaust spring in middle hole.



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic nut M10 x 1.5 (2) (P/N 228 501 045) (section no. 4). Torque to 48 N•m (35 lbf•ft)

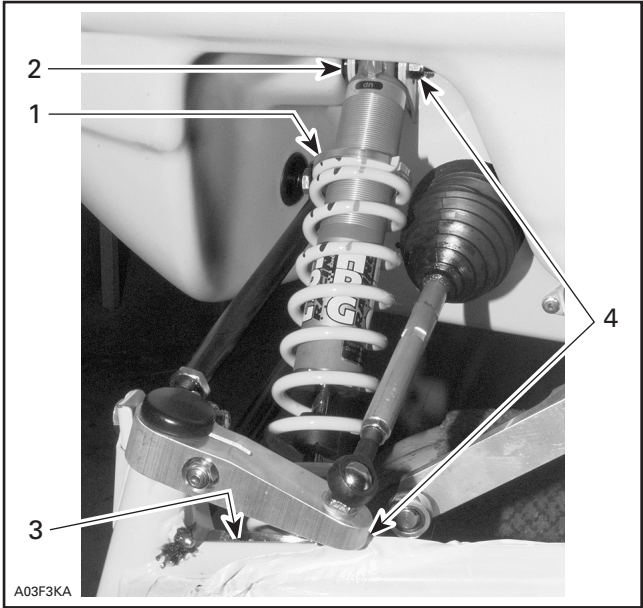
MX Z 670 HO/MX Z 670 HO T.H. Models

Secure shock absorbers to suspension with their adjusting ring on top.

NOTE: Position top and bottom screw heads toward front. Make sure that decal edges are toward inside.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

NOTE: On models equipped with a 5 holes exhaust support, hook up exhaust spring in middle hole.



LH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring at top
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic nut M10 x 1.5 (2) (P/N 228 501 045) (section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS

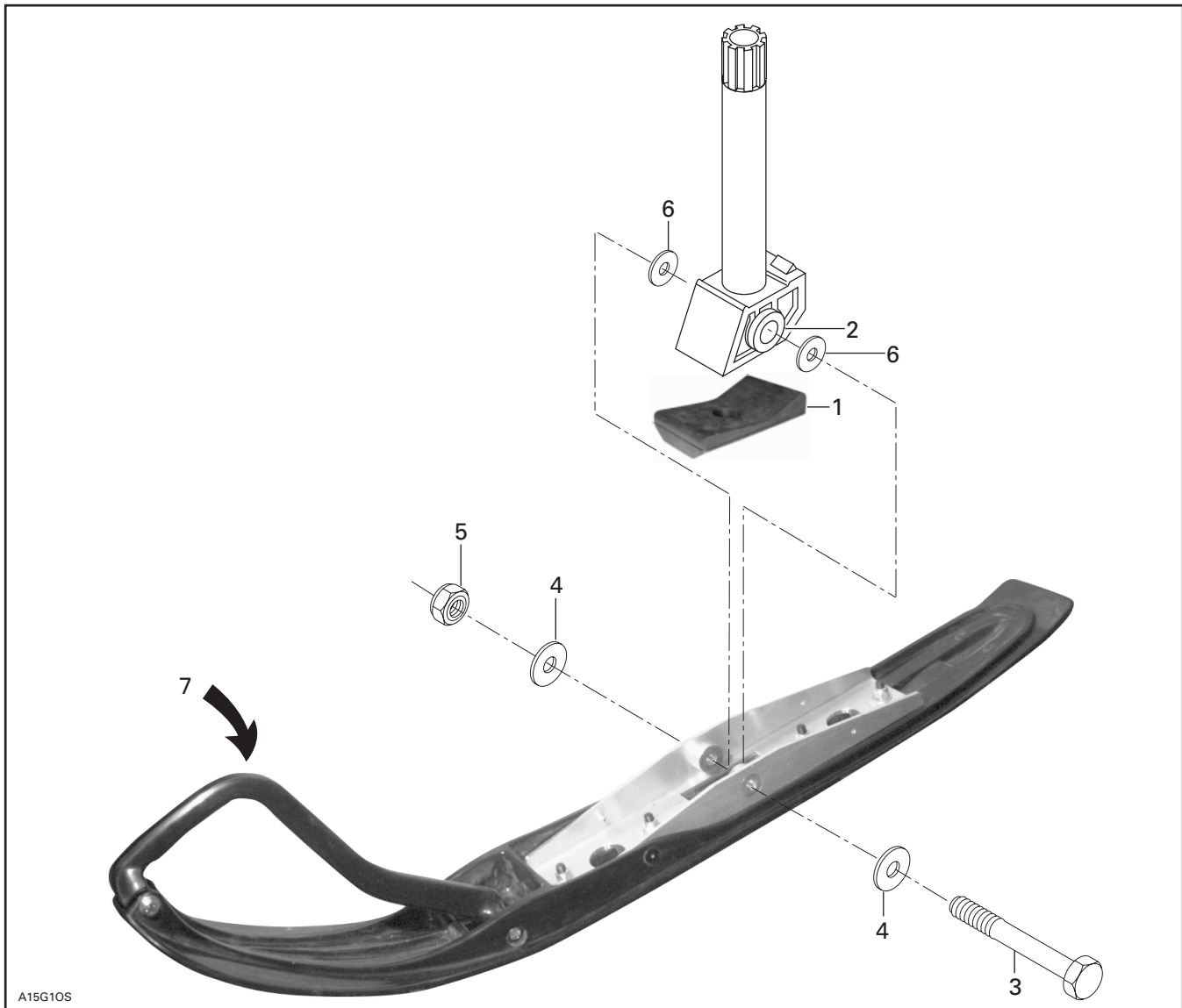


Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 900 048) to fill gap between ski leg slider cushions and ski. If both washers are required, install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



LEFT SIDE SHOWN

1. Ski stopper (2) (P/N 570 053 300) (section no. 8) AVANT toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 8). Install large washers
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation

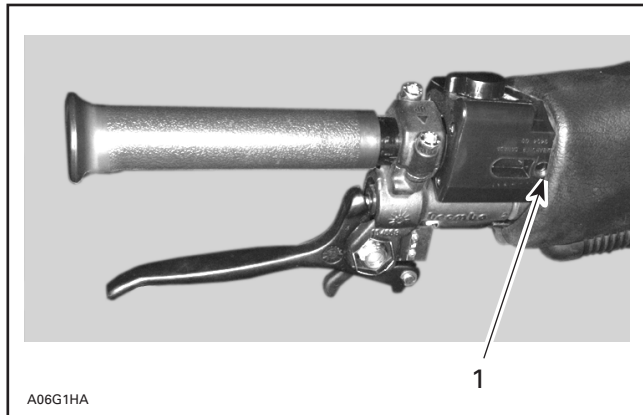


PARTS INSTALLATION STEERING PAD

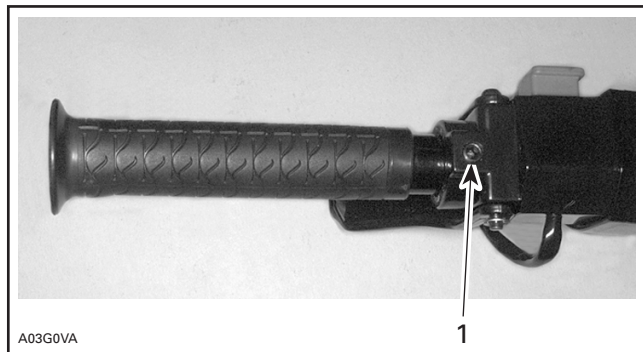


Adjust handlebar temporarily and tighten nuts loosely for now.

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.



1. Tighten set screw to $2 \text{ N}\cdot\text{m}$ ($18 \text{ lbf}\cdot\text{in}$)



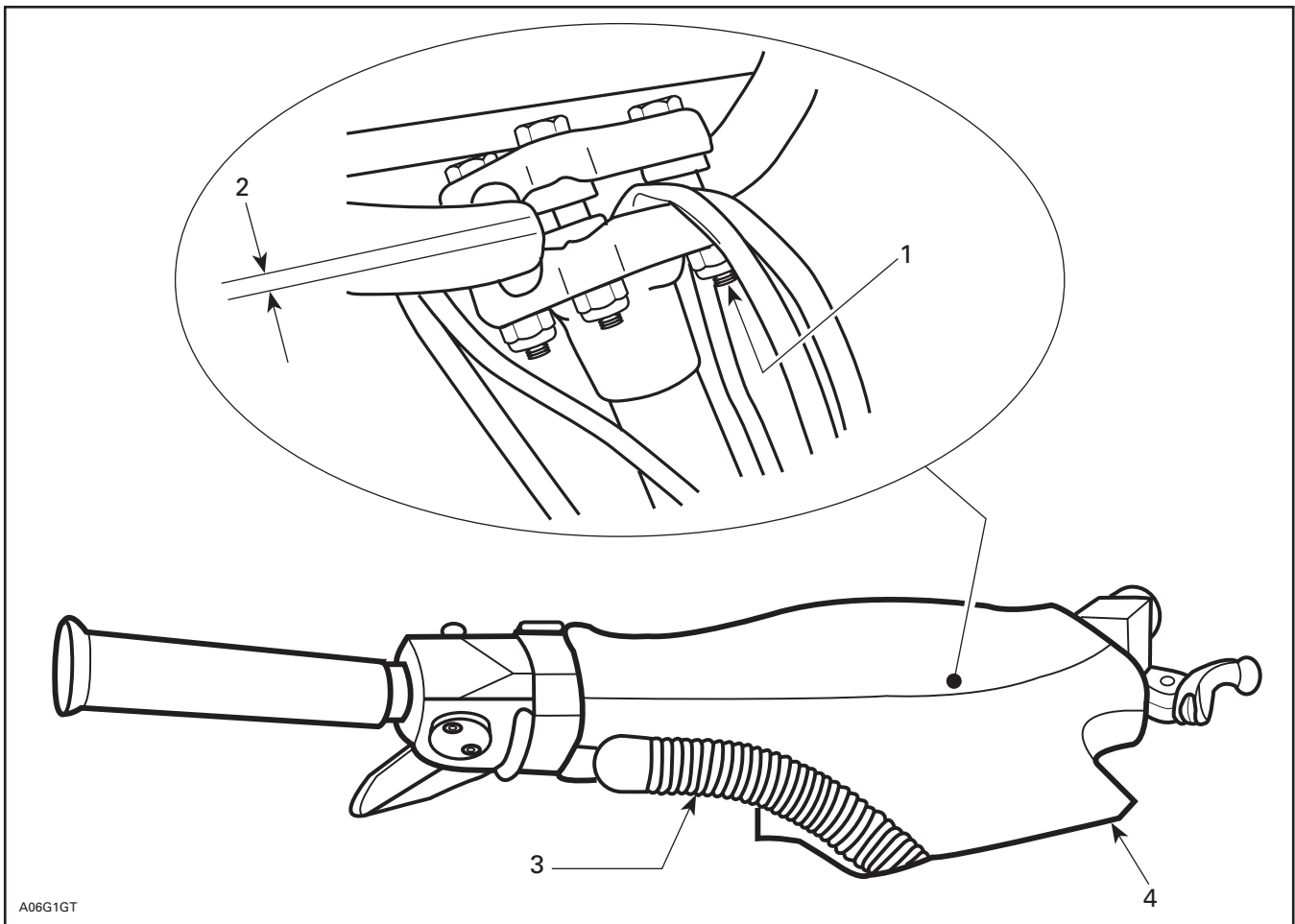
THROTTLE HANDLE HOUSING

1. Tighten set screw to $2 \text{ N}\cdot\text{m}$ ($18 \text{ lbf}\cdot\text{in}$)

Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts between 21 and $28 \text{ N}\cdot\text{m}$ (16 to $20 \text{ lbf}\cdot\text{ft}$).

Reinstall steering pad, adjust and tighten throttle and brake handle housings.



TYPICAL

1. Torque between 21 and 28 N•m (16 to 20 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (P/N 572 072 400) (section no. 5)
4. Steering pad (engine compartment)

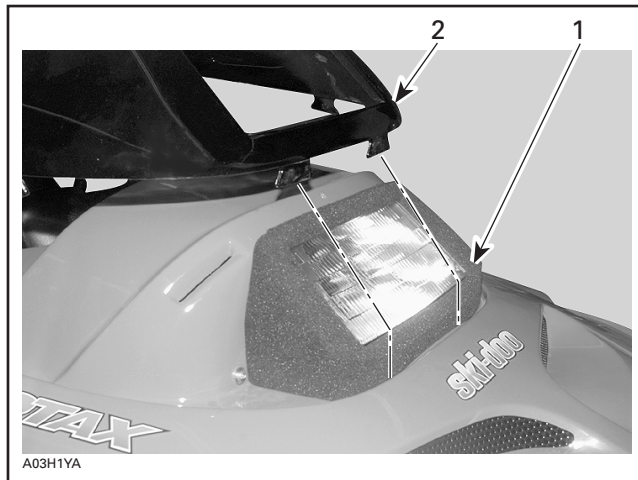


PARTS INSTALLATION WINDSHIELD



Install windshield on dashboard.

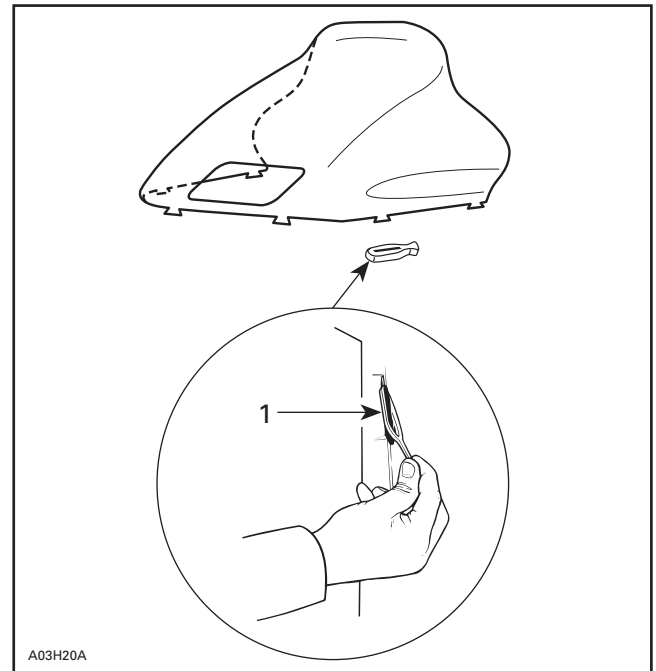
NOTE: Make sure that protective foam is properly positioned around headlamp before installing windshield.



1. Protective foam
2. Install windshield on dashboard

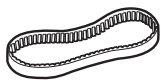


WINDSHIELD INSTALLED ON DASHBOARD

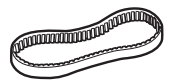


TYPICAL

1. Latch (6) (P/N 570 023 800) (section no. 6)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX injection oil (P/N 413 802 000 — 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Summit 500 Model

Remove pulley guard.

Remove H.A.C. device from air silencer.

Detach rubber strip and extract air silencer from its position.

Remove one carburetor and turn the screw to bleed main oil line. Bleed main line on the other carburetor too.

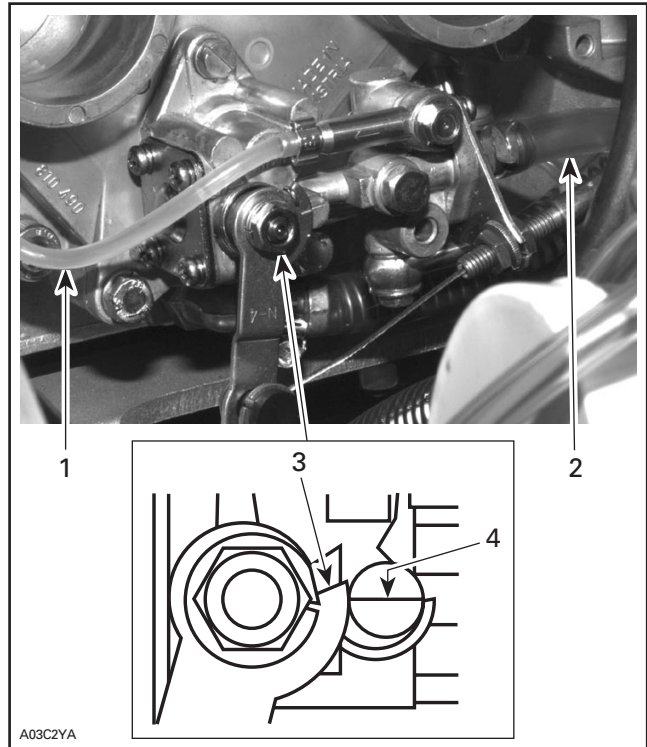
Check also for proper oil lever adjustment. Mark on pump lever must be 0 to 2 mm (0 to 1/16 in) higher than mark on pump body when throttle lever is activated just enough to take all cable play.

Reinstall carburetor.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: Make a J hook out of mechanical wire to lift the lever.

Reinstall air silencer, H.A.C. and pulley guard.



1. Small oil line
2. Main oil line
3. Mark on lever
4. Mark on pump

MX Z 670 HO/MX Z 670 HO T.H. Models

Remove air silencer.

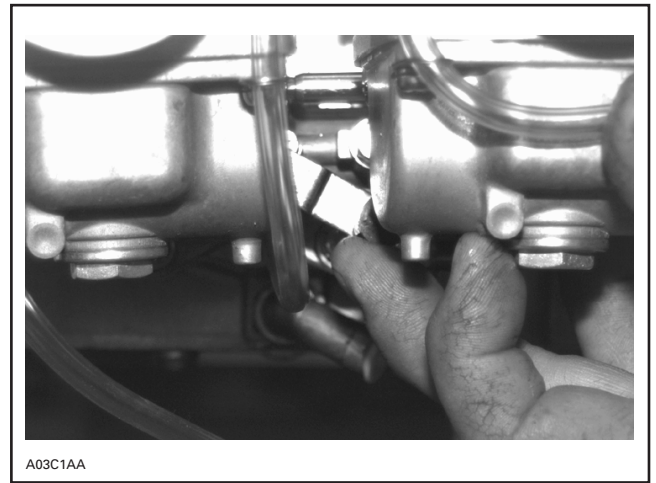
Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Mark on pump lever must be 0 to 2 mm (0 to 1/16 in) higher than mark on pump body when throttle lever is activated just enough to take all cable play.

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



A03C1AA

TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



ADJUSTMENTS DRIVE PULLEY



Summit 500 Model

Adjust TRA drive pulley screw according to decal on belt guard.

NOTE: Lifting the belt guard requires a little care to avoid rear latch from rubbing against inner console padding.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

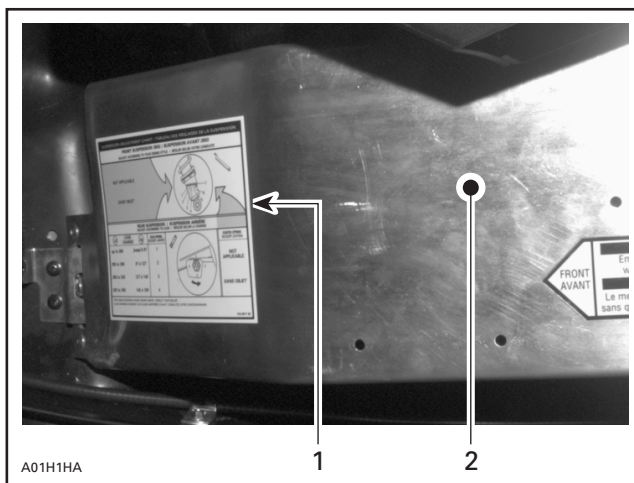
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard



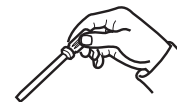
ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin. When adjustment is completed put wheel caps provided with the Predelivery Kit.



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).


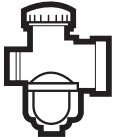




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODEL		SUMMIT 500		
	Engine Type		494		
	Maximum HP RPM ①		± 100 RPM	7800 •	
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	420 924 509 135°/64°	
	Carburetor Type		PTO VM 38 - 414	MAG VM 38 - 415 •	
	Main Jet		PTO 350	MAG 330	
	Needle Jet		Q - 6 (480)		
	Pilot Jet		75		
	Needle Identification — Clip Position		6DHY48 - 4 •		
	Slide Cut-Away		2.5		
	Float Adjustment		± 1 mm (in)	18.1 (.71)	
	Air Screw Adjustment		± 1/16 turn	2	
	Idle Speed RPM		± 200 RPM	1800	
	Gas Grade/Pump Octane Number		(R + M)/2	Regular Unleaded/87	
	Gas/Oil Ratio		Oil Injection		
	Ignition Timing BTDC ②		mm (in)	1.81 (.071)	
	Trigger Coil Air Gap		mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio		teeth	21/43 •	
	Engagement Speed		± 100 RPM	4200 •	
	Drive Pulley Calibration Screw Position		4 •		
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)	
		X	± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
		Drive Belt Adjustment		Deflection	± .5 mm (in)
			Force ③	kg (lbf)	32 (1-1/4)
	Driven Pulley Preload		± 0.7 kg (lbf)	11.34 (25)	
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection	mm (in)	35 to 40 (1.378 -1.575) with a 7.3 kg (16 lb) downward pull		

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.





BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

A dot (•) on right indicates changes from 1998 model.

	MODEL		MX Z 670 HO/MX Z 670 HO T.H.	
	Engine Type		670	
	Maximum HP RPM ①		± 100 RPM	8000 •
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	420 924 500 145°/71° •
	Carburetor Type		PTO VM 44 - 36	MAG VM 44 - 37 •
	Main Jet		PTO 340	MAG 310 •
	Needle Jet		AA-4 (224)	A-4 (224) •
	Pilot Jet		55 •	
	Needle Identification — Clip Position		7ECY1-3 •	
	Slide Cut-Away		2.5 •	
	Float Adjustment		± 1.0 mm (± 0.039 in)	22.9 (0.902) •
	Air Screw Adjustment		± 1/16 turn	1.75 •
	Idle Speed RPM		± 200 RPM	1700 •
	Gas Grade/Pump Octane Number		(R + M)/2	Regular Unleaded/87 •
	Gas/Oil Ratio		Oil Injection •	
	Ignition Timing BTDC ②		mm (in)	3.200 (0.1260) •
	Trigger Coil Air Gap		mm (in)	0.55 - 1.45 (.022 - .057) •
	Gear Ratio		teeth	25/43 •
	Engagement Speed		± 100 RPM	4200 •
	Drive Pulley Calibration Screw Position		2 •	
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32) •
		X	± 0.4 mm (± 1/64 in)	35.5 (1-25/64) •
	Offset	Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
		Drive Belt Adjustment	Deflection	± .5 mm (in)
	Force ③		kg (lbf)	11.34 (25)
	Driven Pulley Preload		± 0.7 kg (lbf)	7.0 (15.43) •
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection	mm (in)	30 to 35 (1-3/16 to 1.378) with a 7.3 kg (16 lb) downward pull •	

① Engine speed at which maximum power is achieved.

② At 3500 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

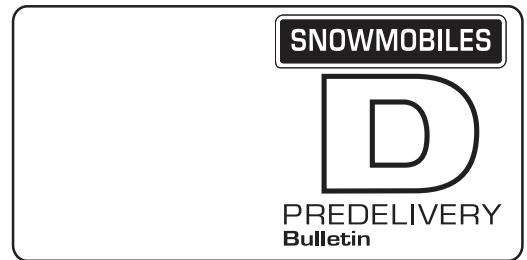
Please route to :

Init.

Service

Sales

Parts



No. **99-4**
REVISION 1 ←

Date: July 14, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada: MX Z 500	1412	All
1999	United States: MX Z 500	1413	All
1999	Sweden: MX Z 500	1414	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

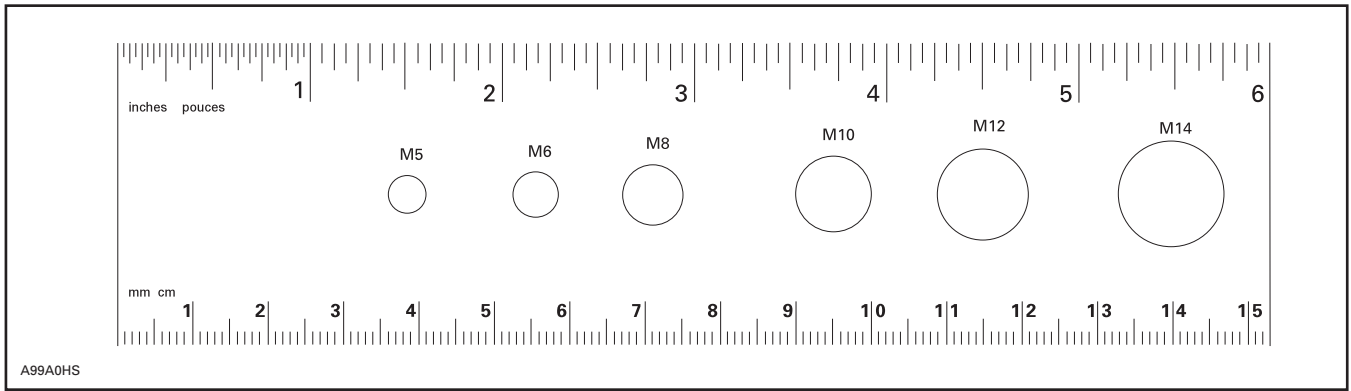
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, it may have some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

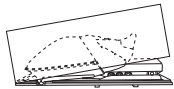
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquires should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and *Video*.

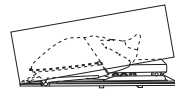
There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODEL
580 668 300	MX Z 500

◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

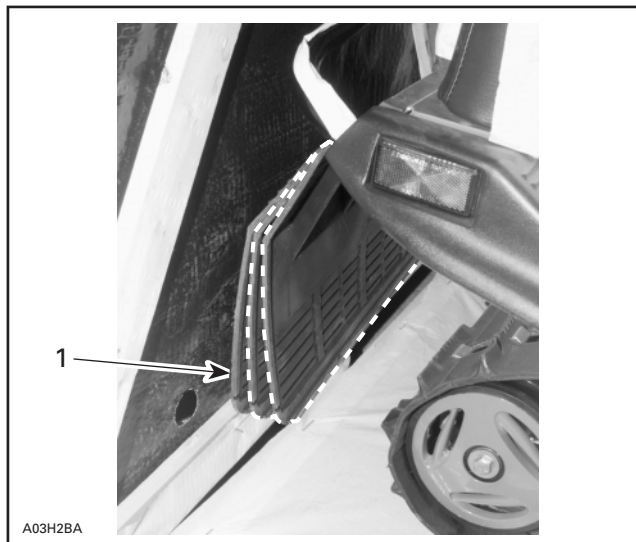
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

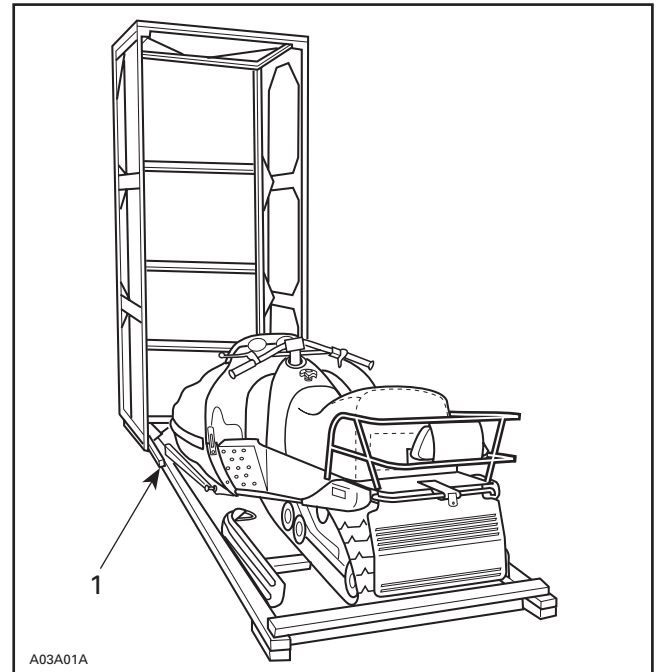
Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

▼ CAUTION

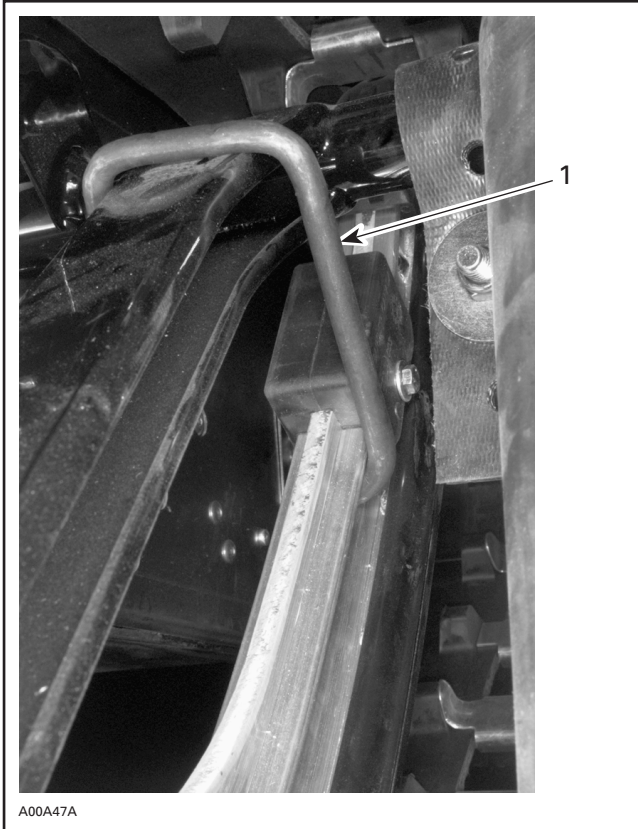
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

FRONT HOOK REMOVAL



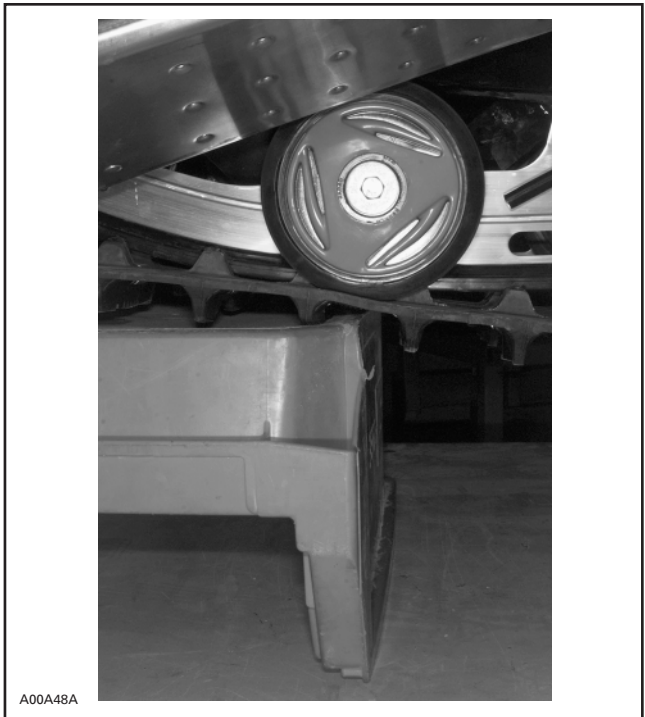
TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, cut locking tie retaining hook to front arm.

Apply pressure onto rear bumper with right hand, as shown on the following photo.

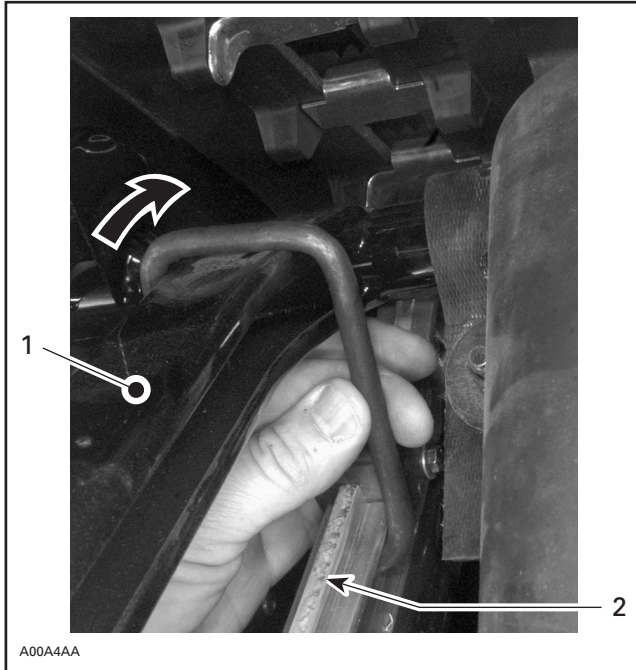


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

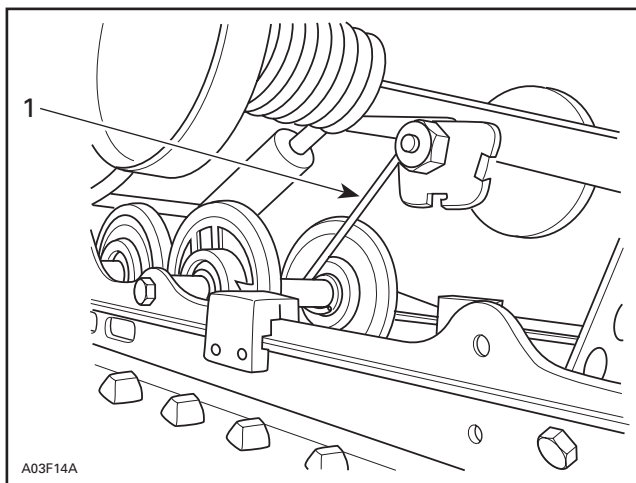
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL — REMOVE HOOK

1. Front arm
2. Runner

REAR HOOK REMOVAL



1. Hook to be removed

Lift front of vehicle to position bumper 35 to 40 inches upward.

Cut locking tie retaining hook to suspension arm.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



1. Remove hook on the rear portion of the suspension

Remove hook on the rear portion of the suspension.

◆ WARNING

Both hooks must be removed to have snowmobile suspension operational.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.

Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

➔ Secure shock absorbers to suspension with their adjusting ring at top.

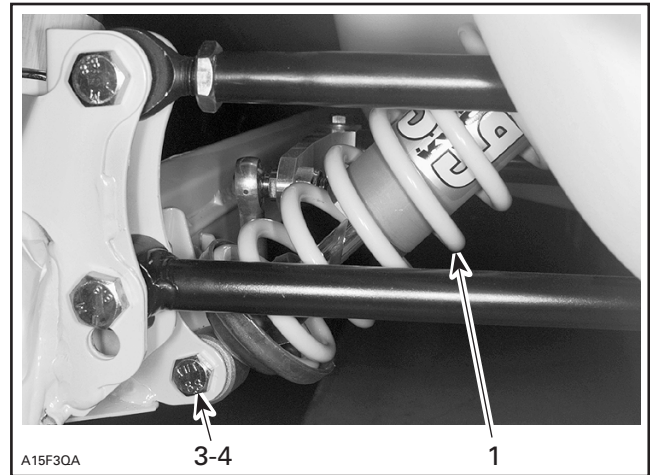
Properly position exhaust support on chassis making sure that its lug rests in chassis recess, as shown in the following photo.



POSITION EXHAUST SUPPORT AS SHOWN

Hook up exhaust spring.

NOTE: For vehicle equipped with multi-hole exhaust bracket, hook up exhaust spring on mid hole.



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment)
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension). Not illustrated
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic nut M10 x 1.5 (2) (P/N 228 501 045) (section no. 4). Torque to 48 N•m (35 lbf•ft)



PARTS INSTALLATION SKIS



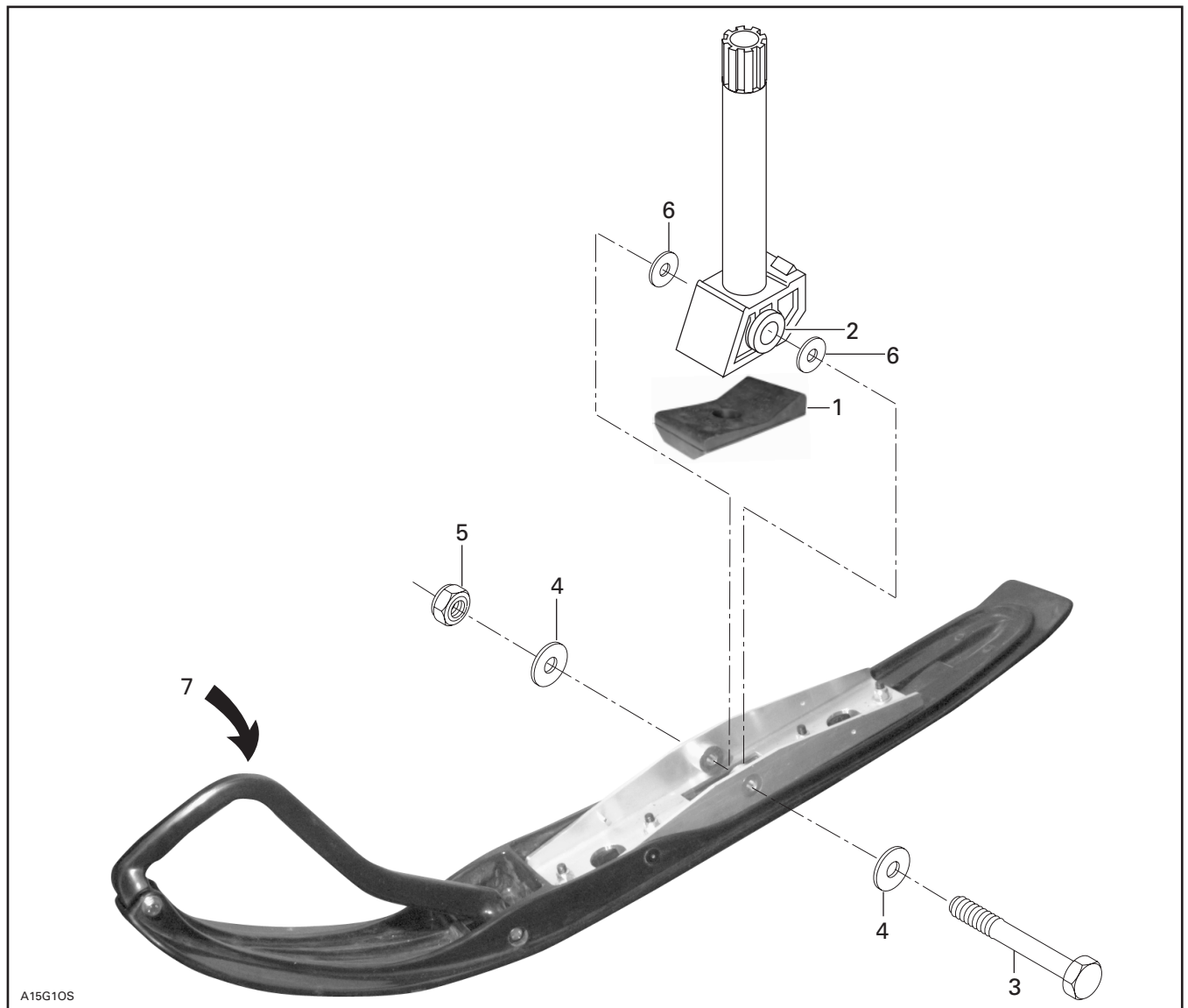
MX Z 500

Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 900 048) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



LEFT SIDE SHOWN

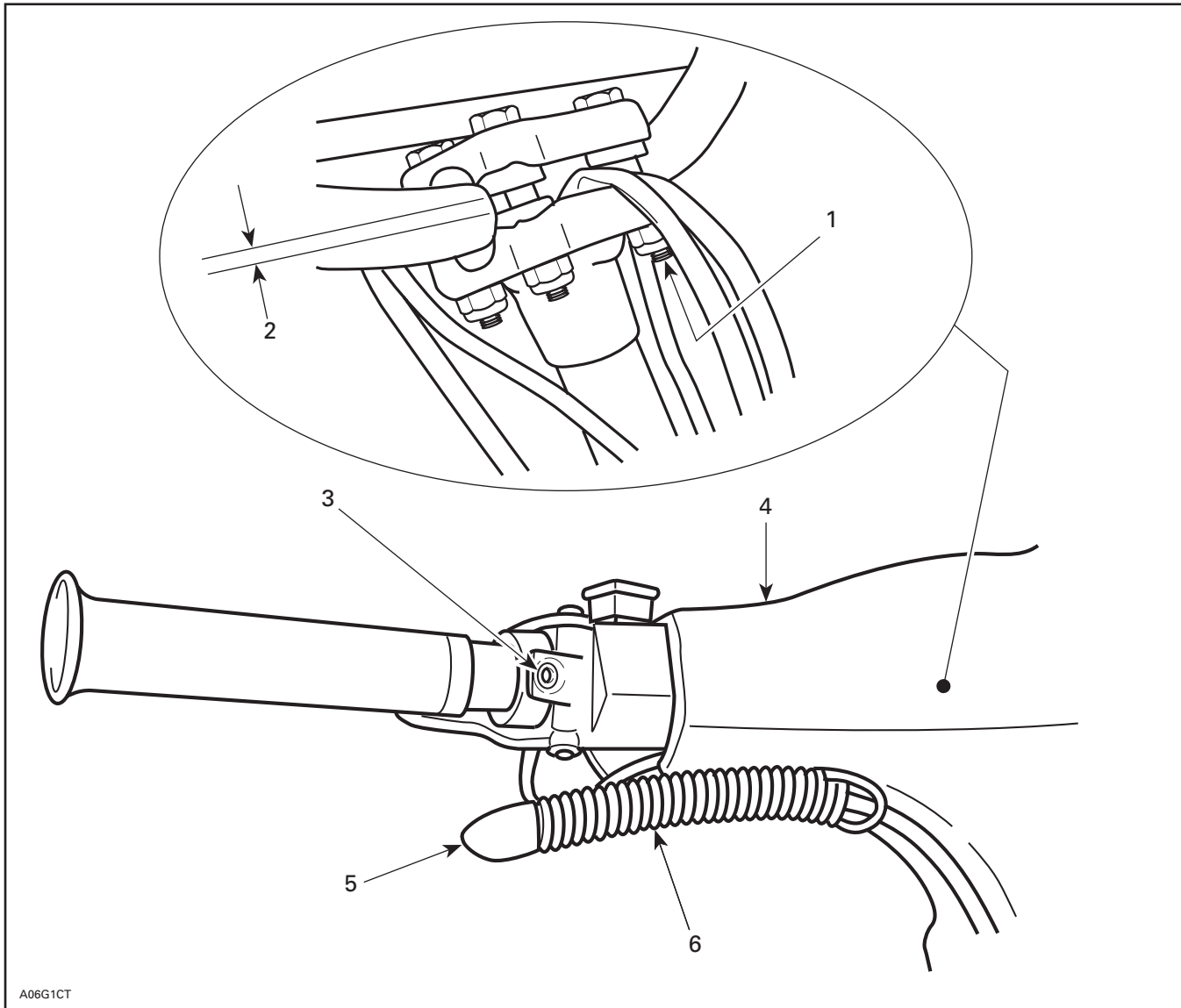
1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD

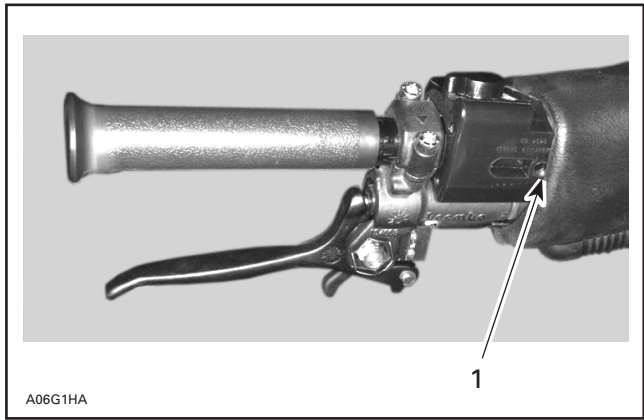


Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



A06G1CT

1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Loosen Allen screw
4. Steering pad (engine compartment)
5. Use liquid soap to ease installation
6. Keyway (2) (P/N 572 072 400) (section no. 5)



BRAKE HANDLE HOUSING

1. Tighten set screw to **2 N•m (18 lbf•in)**

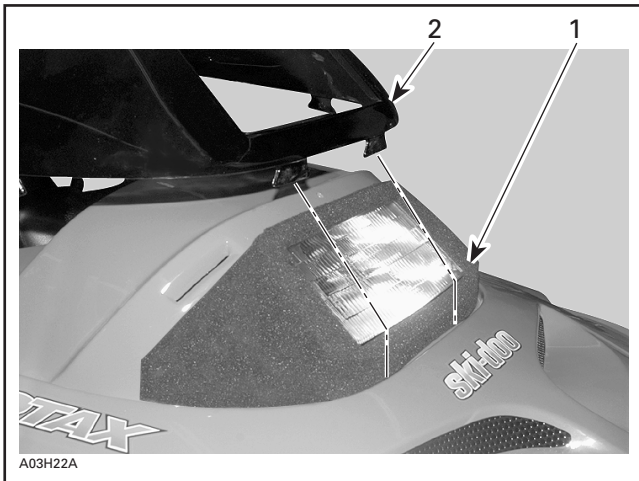


PARTS INSTALLATION WINDSHIELD

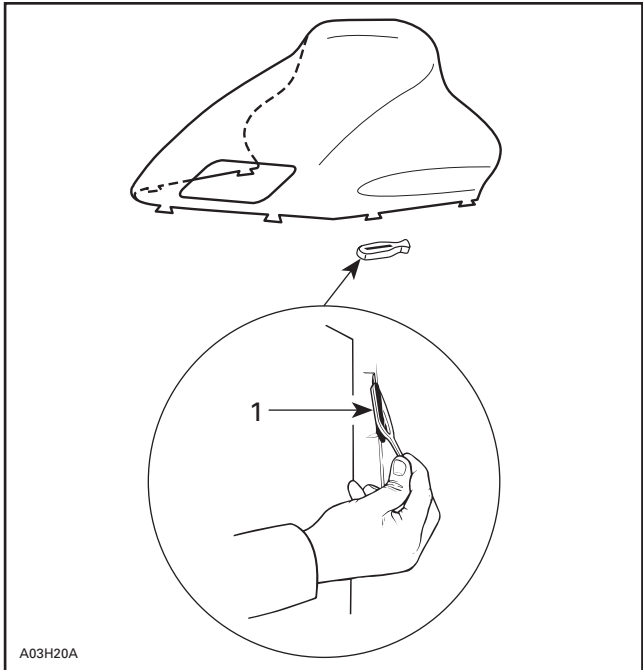


Install windshield on dashboard.

NOTE: Make sure that protective foam is properly positioned around headlight before installing windshield.



1. Protective foam
2. Install windshield on dashboard



1. Latch (6) (P/N 570 023 800) (section no. 6)



WINDSHIELD INSTALLED ON DASHBOARD



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER ROTAX Injection Oil (P/N 413 802 900 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

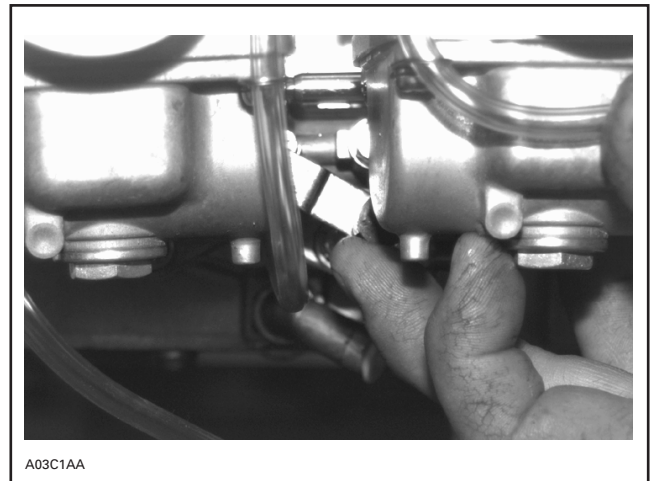
Check also for proper oil lever adjustment. Marks must align when throttle lever is activated just enough to take all cable play.

NOTE: A tolerance between 0 mm (0 in) and 2 mm (0.0787 in) is permitted above mark on pump body.

Reinstall all parts except air silencer.

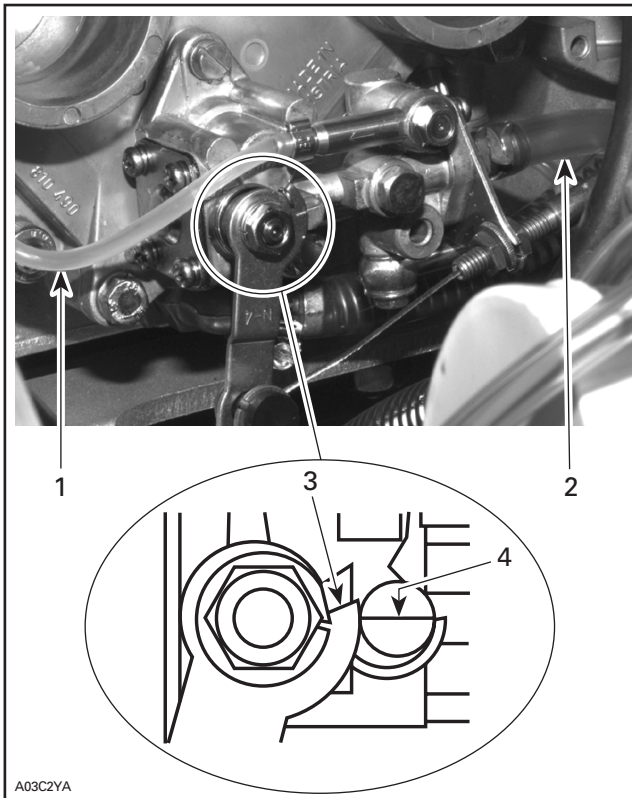
Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



1. Small oil line
2. Main oil line
3. Mark on lever
4. Mark on pump



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required

▼ CAUTION

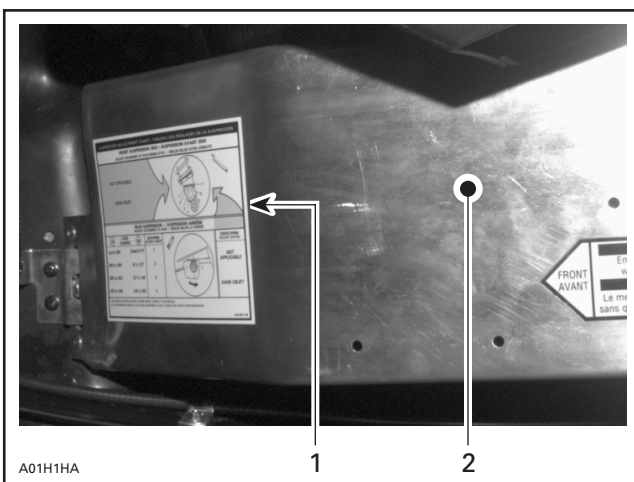
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard

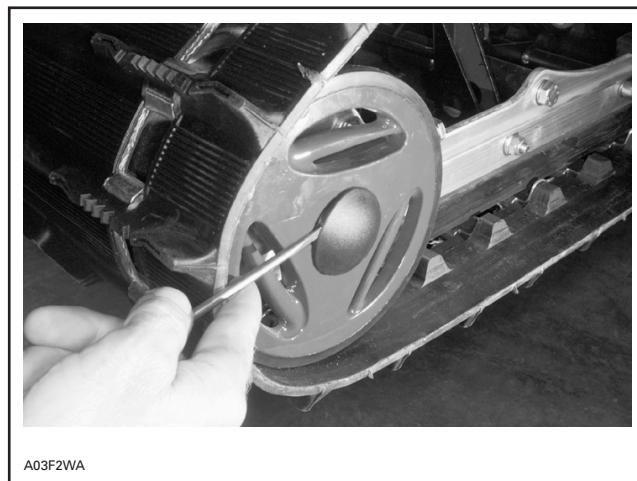


ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

On models equipped with idler wheel cap, remove cap to loosen retaining screws. Refer to the following photo.



INSERT A SMALL SCREWDRIVER INTO RECESS THEN REMOVE IDLER WHEEL CAP



ADJUSTMENTS DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).


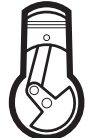





TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODEL	MX Z 500			
	Engine Type	494			
	Maximum HP RPM ①	± 100 RPM	7800		
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 924 502 146°/65°	•	
	Carburetor Type	PTO VM 38 - 412	MAG VM 38 - 413	•	
	Main Jet	PTO 300	MAG 280	•	
	Needle Jet	Q-4 (480)			
	Pilot Jet	50			
	Needle Identification — Clip Position	6DGY9			•
	Slide Cut-away	2.5			
	Float Adjustment	± 1 mm (in)	18.1 (.71)		
	Air Screw Adjustment	± 1/16 turn	2.5		•
	Idle Speed RPM	± 200 RPM	1800		
	Gas Grade/Pump Octane Number	(R + M)/2	Regular Unleaded/87		
	Gas/Oil Ratio	Oil Injection			
	Ignition Timing BTDC ②	mm (in)	1.81 (.071)		
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 (.022 - .057)		
	Gear Ratio	teeth	23/43		
	Engagement Speed	± 100 RPM	4100		
	Drive Pulley Calibration Screw Position	2			•
	Pulley Distance	Z (+ 0, - 1) mm ((+ 0, - 1/32) in)	16.5 (21/32)		
	Offset	X ± 0.4 mm (± 1/64 in)	35.5 (1.398)		•
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)		
	Drive Belt Adjustment	Deflection ± .5 mm (in)	32 (1-1/4)		
		Force ③ kg (lbf)	11.34 (25)		
	Driven Pulley Preload	± 0.7 kg (lbf)	7.0 (15.43)		
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection mm (in)	30 to 35 (1-3/16 - 1-3/8) with a 7.3 kg (16 lb) downward pull		•	

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

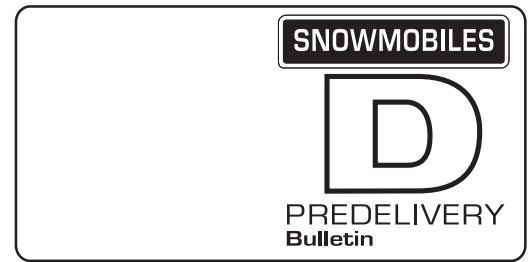
ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-23**

Date: November 13, 1998

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada: MX Zx* 440 LC	1342	All
1999	United States: MX Zx* 440 LC	1343	All
1999	Europe: MX Zx* 440 LC	1344	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

◆ WARNING

To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

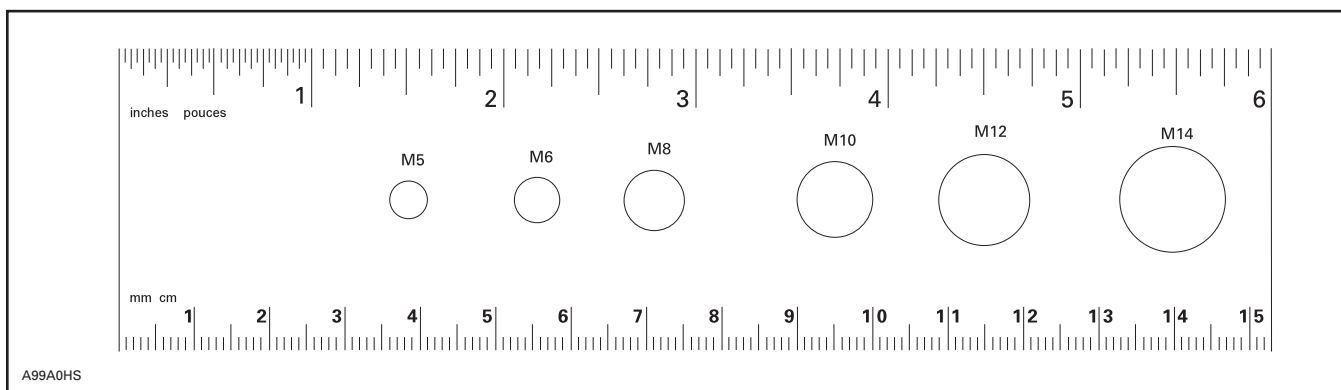
▼ CAUTION

When fuelling snowmobile, always premix fuel with BOMBARDIER-ROTAX synthetic injection oil using a ratio of 40:1.

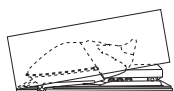
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The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

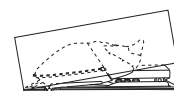
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NOTE: This ruler can be helpful to identify fastener length or size.



UNCRATING



PREDELIVERY KIT P/N	MODELS
549 010 789	MX Zx 440 LC

◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

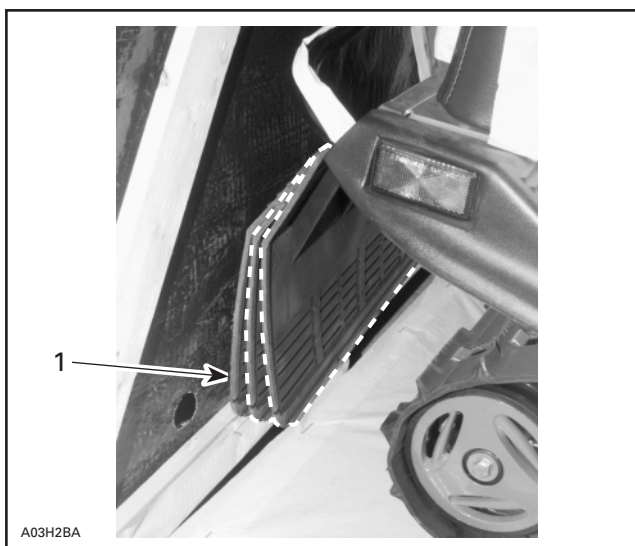
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

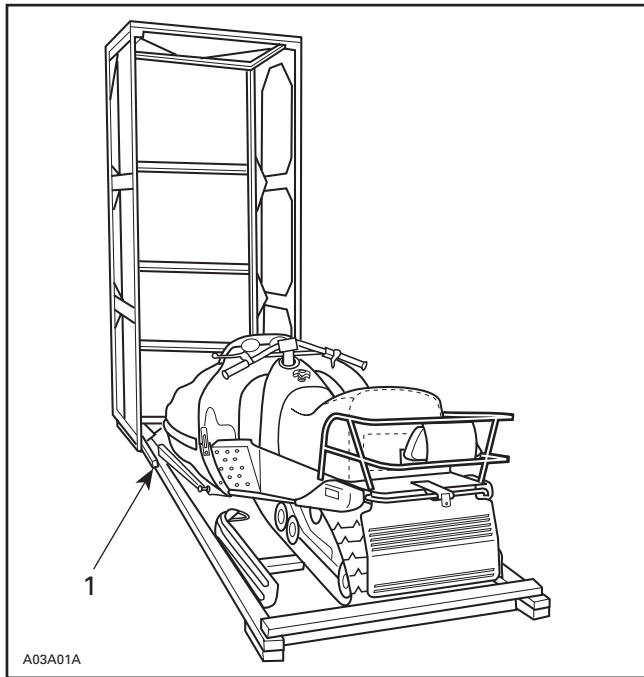
Remove all screws retaining cover to vehicle base. Tip cover toward front or rear of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging any part of the snowmobile.

NOTE: If cover is tilted toward front of vehicle, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



IF CRATE COVER IS TILTED TOWARD FRONT OF VEHICLE, FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts for reinstallation. Discard crating spacers and nuts.

Remove vehicle from base.

Remove drive belt from engine compartment and accessories, such as predelivery kit, steering pad and shocks from the box.

FRONT HOOKS REMOVAL

NOTE: That model is equipped with two front hooks and no rear one.

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



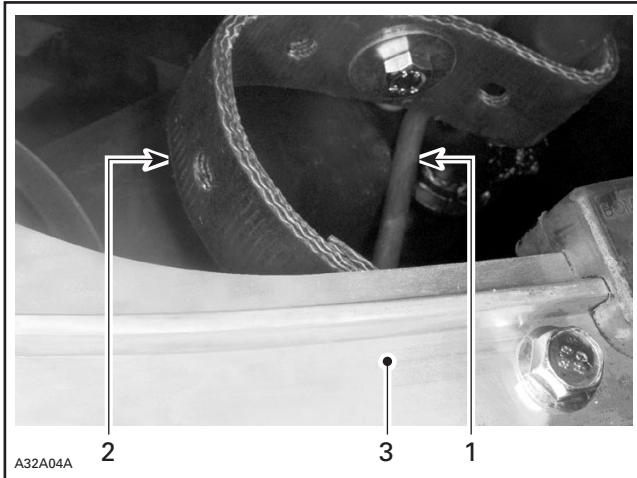
TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

Before removing hook always verify that vehicle is properly supported and that parking brake is applied.

From right side of vehicle, remove the second hook using the same procedure.



TYPICAL — RIGHT SIDE

1. Hook to be removed
2. Stopper Strap
3. Runner



PARTS INSTALLATION FRONT SUSPENSION



Lift front of vehicle and block safely.

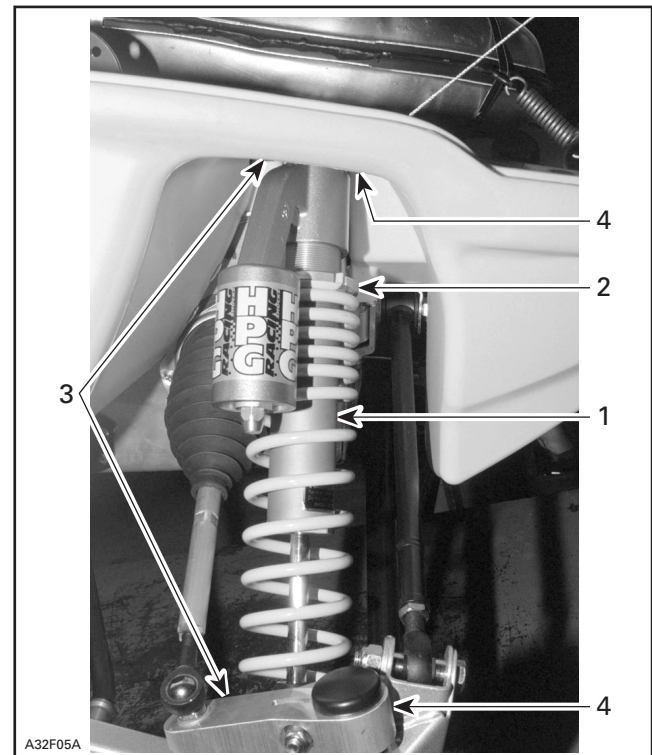
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at top. Take care to do not mix left and right shocks. A label stuck on the shock indicates the side it should be installed.

Position screw heads toward front of vehicle and secure with nuts provided in predelivery kit (section no 3). Torque to 48 N•m (35 lbf•ft).

◆ WARNING

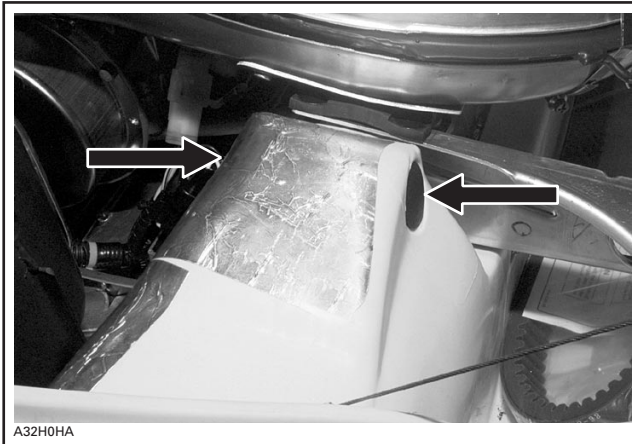
Always turn the adjusting ring of both shocks the same number of turns. Otherwise, the behavior of front suspension will be impaired.



RH SIDE SHOWN

1. Shock absorber (2) (box)
2. Adjusting ring
3. Nut M10 x 1.5 (4) not shown on photo (section no. 3).
Torque to 48 N•m (35 lbf•ft)
4. Screw M10 x 1.5 x 55 (4) (P/N 222 005 565) (on suspension)

Install caps provided in Predelivery Kit on bottom pan, each side of upper bolt.

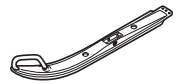


A32H0HA
SNAP PROVIDED CAP (SECTION NO. 6) EACH SIDE OF MOLDING

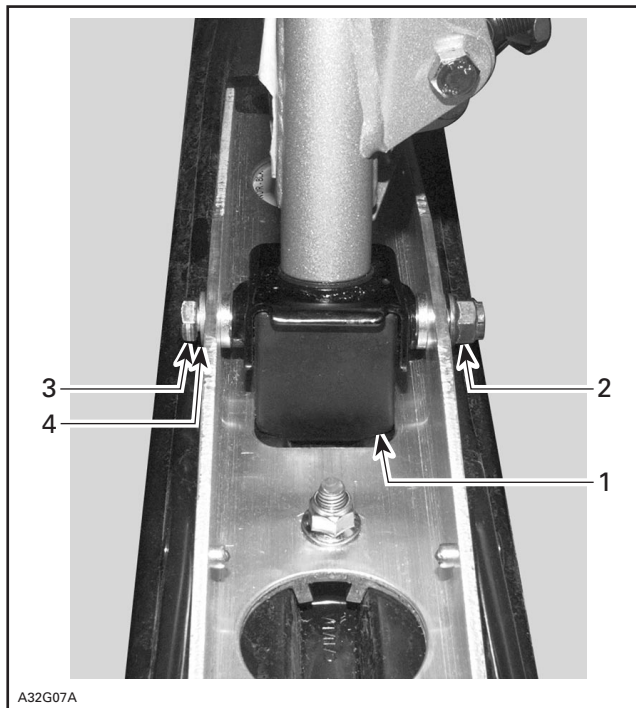


PARTS INSTALLATION

SKIS



Install skis on vehicle.



A32G07A
RIGHT SIDE SHOWN

1. Ski stopper (2) (section no. 8) with higher side toward front
2. Flanged nut M12 x 1.75 (2). Torque to 32 N•m (24 lbf•ft)
3. Bolt M12 (2)
4. Washer (2) installed on bolt head side



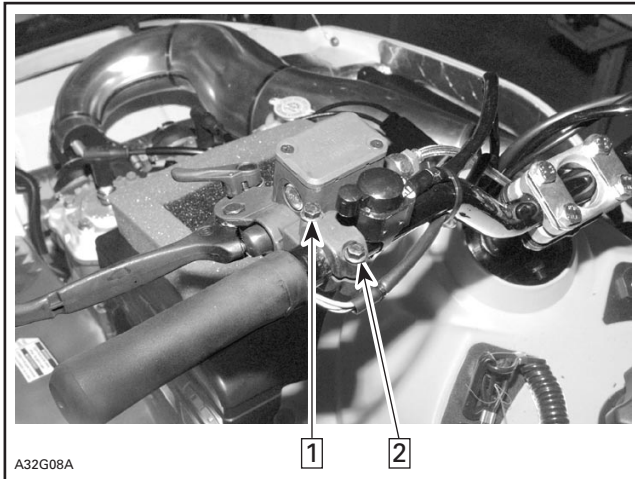
PARTS INSTALLATION

STEERING PAD



Adjust handlebar and tighten nuts between 21 and 28 N•m (16 and 20 lbf•ft).

Turn brake housing to level brake oil reservoir. Secure front screw first, then rear screw. See photo.



Step **1** : Screw this bolt first to a torque between 7 and 10 N•m (5.25 and 7.5 lbf•ft)

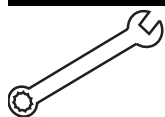
Step **2** : Secure housing with this bolt (same torque)

Install steering foam and adjust for proper fit with console. Fit steering padding and set in place with velcros.

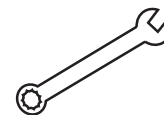
NOTE: Take care to install foam properly.



INSTALLATION COMPLETED



PARTS INSTALLATION OPTIONAL ACCESSORIES



SPEEDOMETER INSTALLATION

NOTE: The speedometer may be installed or not at the convenience of the driver.

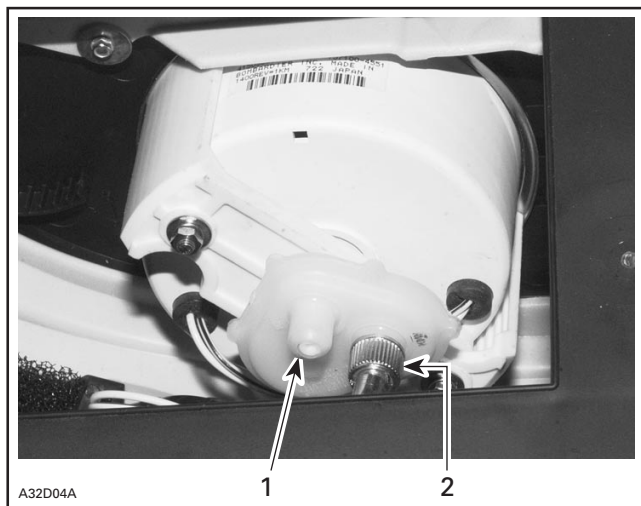
Using the template provided on last page, punch the center point of the speedometer location on gauge support.

Drill speedometer location with a 11 cm (4-3/8 in) hole saw.

Insert speedometer gauge in place on dashboard with gauge packing in place around speedometer gauge.

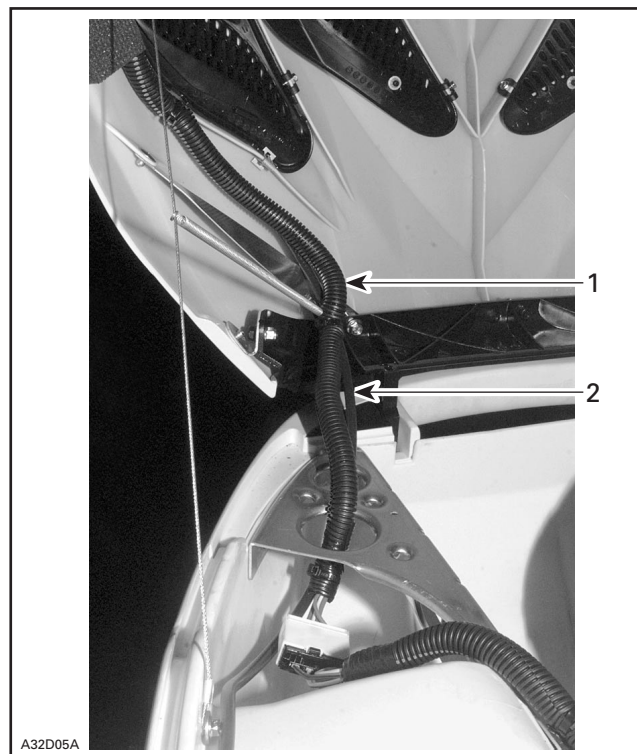
Underneath dash, install ring and gauge holder. Secure with provided fastening devices.

Screw speedometer cable on KMH or MPH stud on drive angle according to your preferences.



1. Screw cable here for MPH
2. Screw cable here for KMH

Route the speedometer cable under electrical wire, through frame support (see photo) and alongside bottom pan.

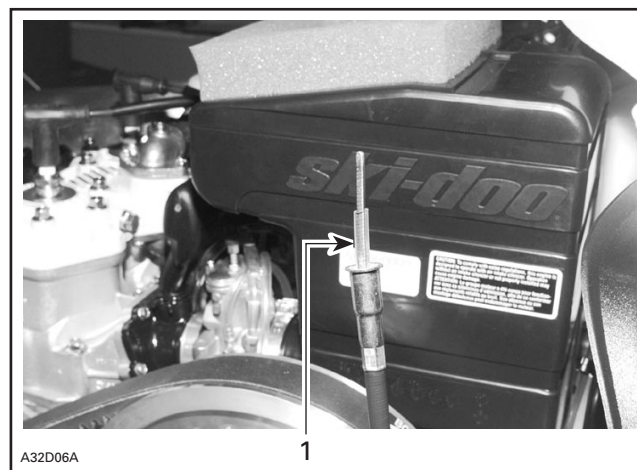


SPEEDOMETER WIRE ROUTING

1. Electrical strand
2. Speedometer wire under electrical strand

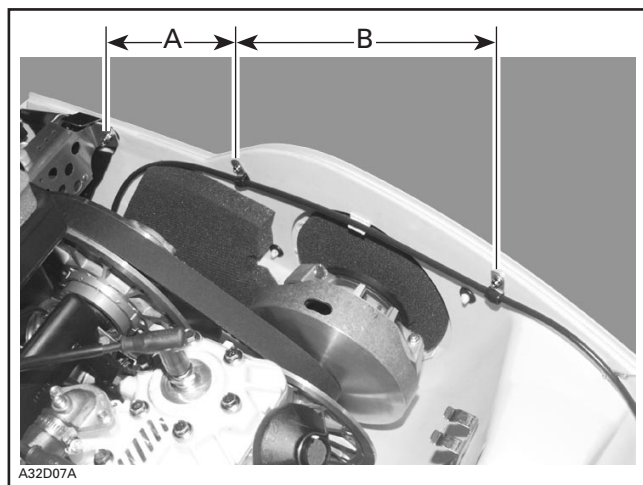
Remove pulley guard.

Insert clear plastic bushing onto wire and insert wire in place on drive axle (under driven pulley).



1. Plastic bushing around speedometer wire

Ensure wire will not touch transmission pulleys securing it with clips screwed as per illustration below.



MEASURE FROM TOE HOLDER FIXATION SCREW

- A. 210 mm (8-1/4 in)
- B. 350 mm (13-3/4 in)

With locking ties (not included), attach speedometer cable to electrical strand.

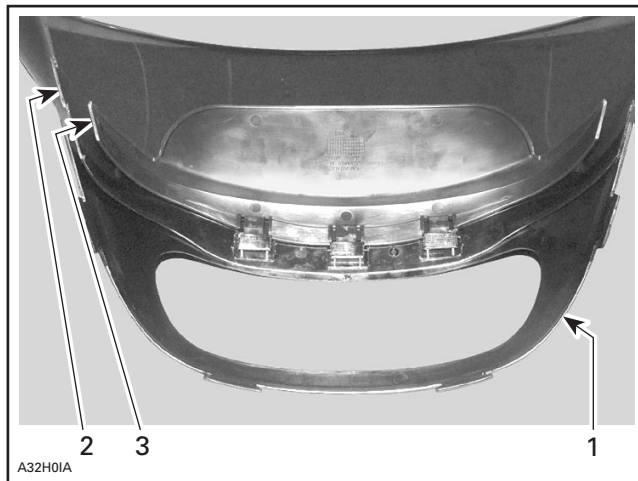
Reinstall pulley guard.



PARTS INSTALLATION WINDSHIELD

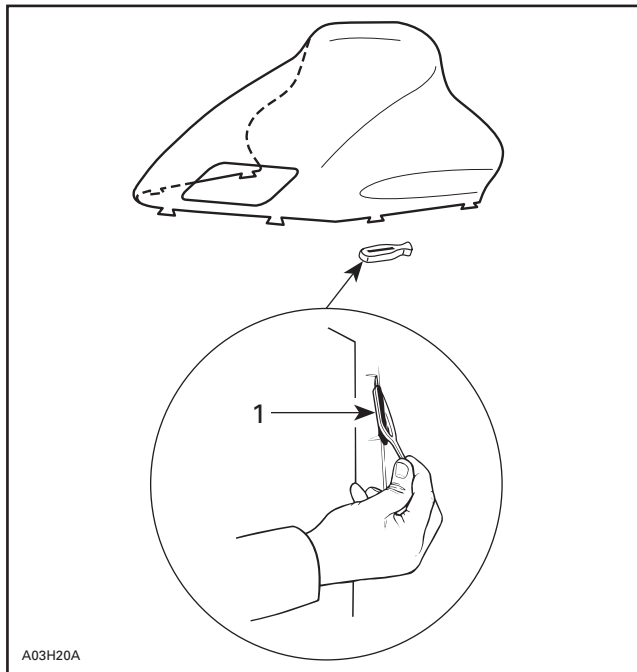


Remove headlamp protector from hood.
Unclip inner protector from headlamp protector.
Insert tabs of headlamp protector in windshield square holes.
Clip inner protector in place.
Secure windshield assembly on hood using latches.



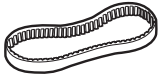
A32H01A

1. Headlamp protector
2. Windshield
3. Inner protector



A03H20A

1. Latch (8) (P/N 570 023 800) (4 already on headlamp protector, 2 on windshield and 2 on section no. 5)



PARTS INSTALLATION

DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 711 809) before installing drive belt.



LIQUIDS

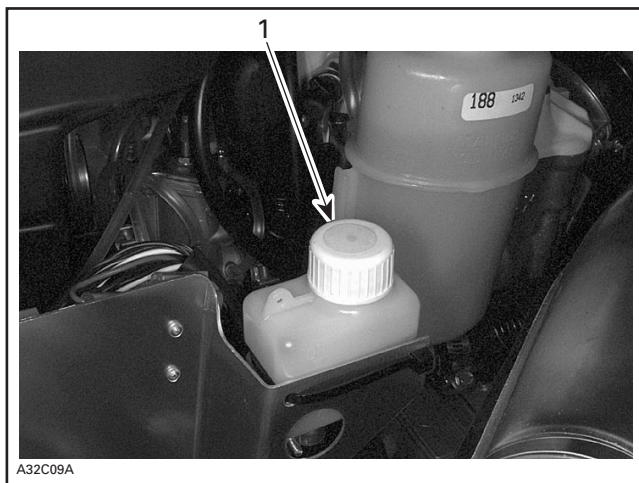
OIL RESERVOIR LEVEL



Remove sticker on oil reservoir cap to free vent hole. This sticker was installed to avoid oil spilling during transportation. Check also oil level in the reservoir. Add oil as required. Refer to the following photo.

▼ CAUTION

Use only BOMBARDIER-ROTAX synthetic injection oil (P/N 413 710 500) (12 x 1 L).



TYPICAL — OIL RESERVOIR

1. Sticker installed for transportation



LIQUIDS

BRAKE FLUID LEVEL



Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT) as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS

TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.



ADJUSTMENTS

DRIVEN PULLEY







It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



TECHNICAL DATA

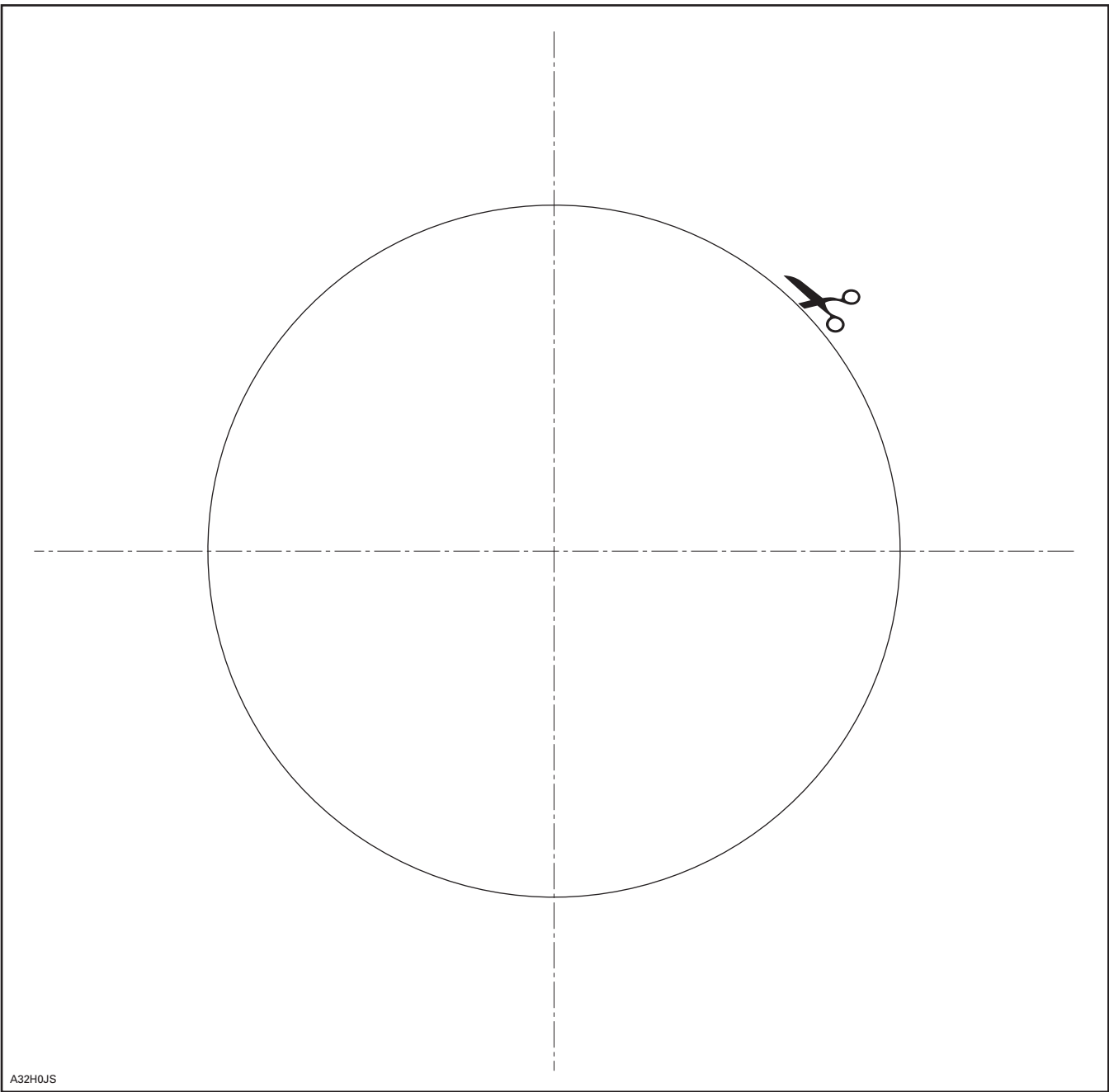


The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

	MODEL	MX Zx 440 LC	
	Engine Type	453	
	Maximum HP RPM ① ± 100 RPM	8500	
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)	N.A.	
	Carburetor Type	2 x TMX 34-1	
	Main Jet	PTO 290 MAG 290	
	Needle Jet	Q-6	
	Pilot Jet	25	
	Needle Identification — Clip Position	6F1Y5/58- 3	
	Slide Cut-Away	4.0	
	Float Adjustment ± 1 mm (in)	8.5 (0.335)	
	Air Screw Adjustment ± 1/16 turn	1.0	
	Idle Speed RPM ± 200 RPM	1600	
	Gas Grade/Pump Octane Number (R + M)/2	Regular Unleaded/87	
	Gas/Oil Ratio	Premix 40:1 with BOMBARDIER-ROTAX synthetic injection oil	
	Ignition Timing BTDC ② mm (in)	3.14 (0.1236)	
	Trigger Coil Air Gap mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio teeth	21/43	
	Engagement Speed ± 100 RPM	5300	
	Drive Pulley Calibration Screw Position	4	
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)
		Offset	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
	X ± 0.5 mm (± 1/64 in)	35.5 (1-25/64)	
	Drive Belt Adjustment	Deflection ± .5 mm (in)	32 (1-1/4)
		Force ③ kg (lbf)	11.34 (25)
	Driven Pulley Preload ± 0.7 kg (lbf)	7.0 (15.43)	
Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull	

- ① Engine speed at which maximum power is achieved.
 ② At 3500 RPM (engine cold) with headlamp turned on.
 ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side



A32H0JS

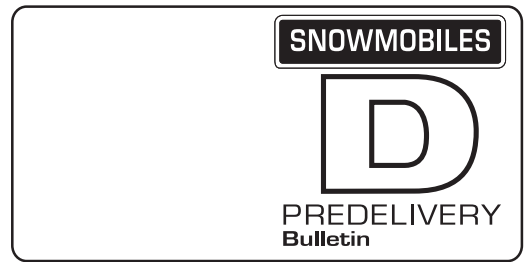
Please route to :

Init.

Service

Sales

Parts



No. **99-8**
REVISION 1 ←

Date: September 15, 1998

SUBJECT: Predelivery Bulletin

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Formula* Deluxe 380 Formula* Deluxe 500	1384/1385 1386/1387	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

◆ WARNING

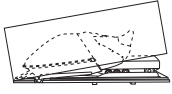
To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

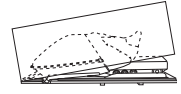
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

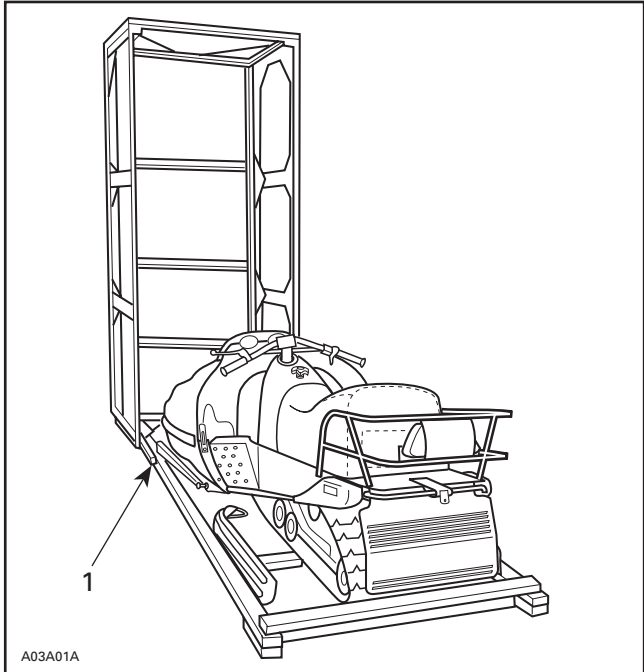
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

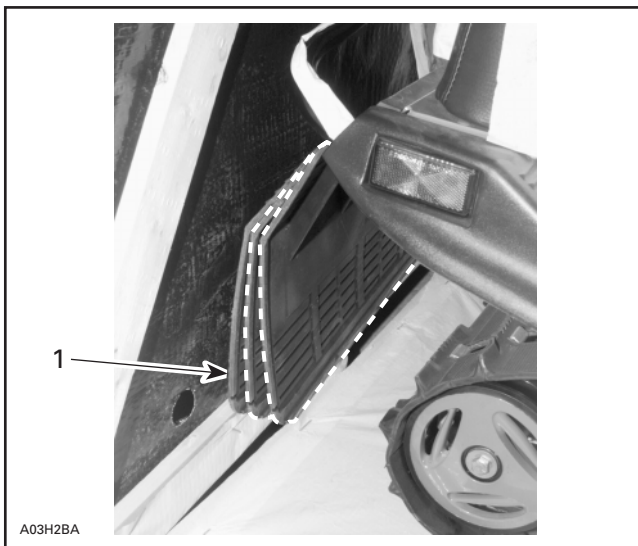
▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.



A03H2BA

FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover

FRONT HOOK REMOVAL

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

Cut locking tie retaining front hook.

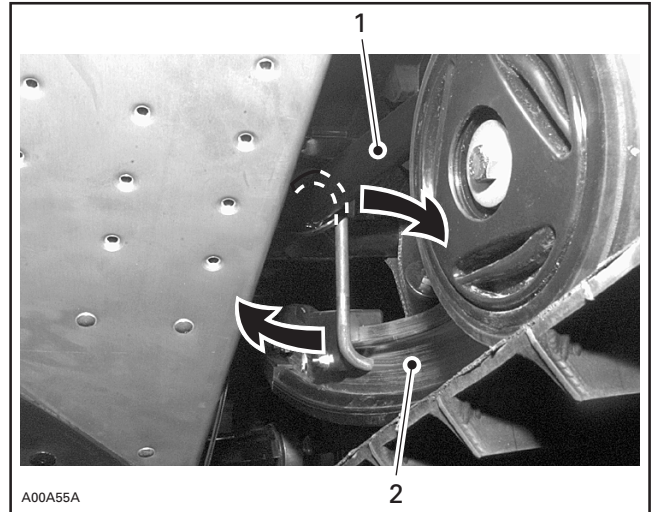
From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.



TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

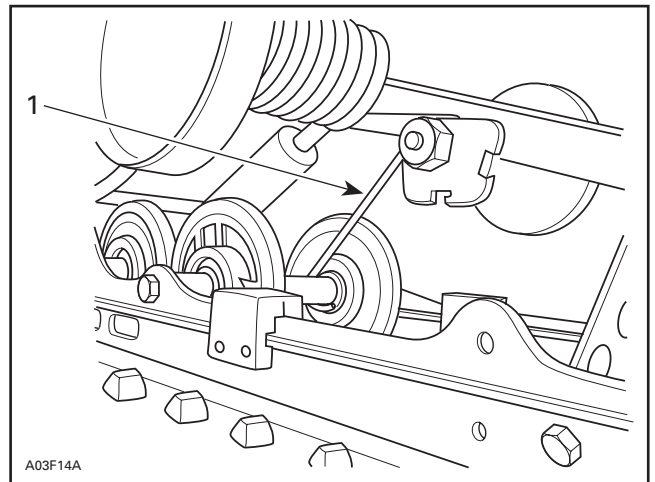
◆ WARNING
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL



- 1. Hook to be removed

Procedure

Lift front of vehicle to position bumper 35 to 40 inches upward.

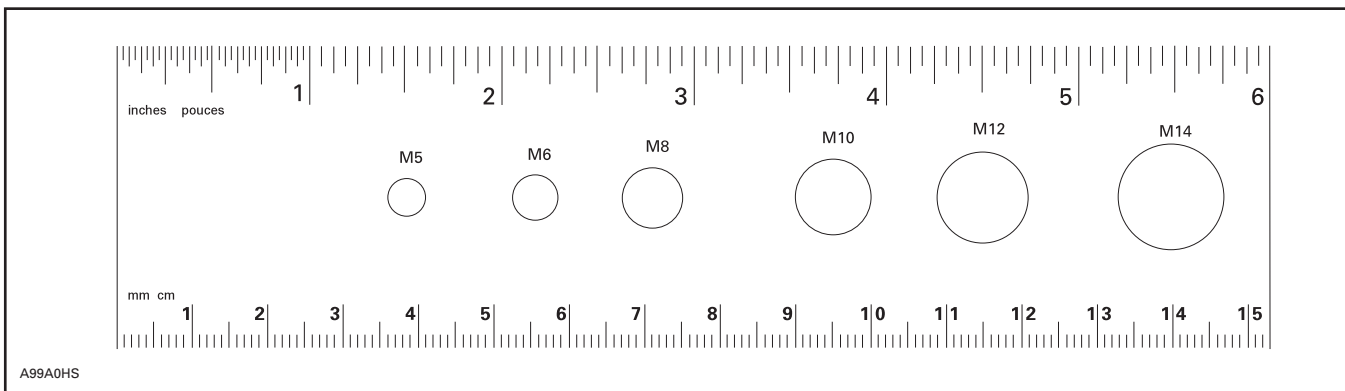
Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.



Remove hook on the rear portion of the suspension.

◆ WARNING
Both hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
549 010 736	FORMULA Deluxe 380 FORMULA Deluxe 500



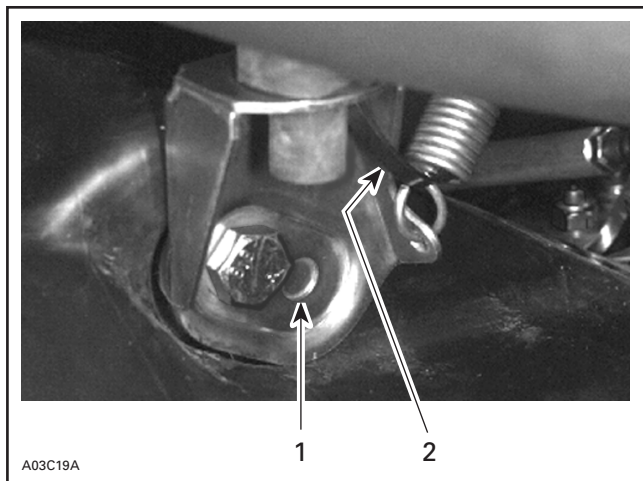
NOTE: This ruler can be helpful to identify fastener length or size.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



A03C19A

TYPICAL

1. Lug in recess
2. Locking tie

Lift front of vehicle and block safely.

Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom.

Formula Deluxe 500

Position bottom and top screw heads toward front.

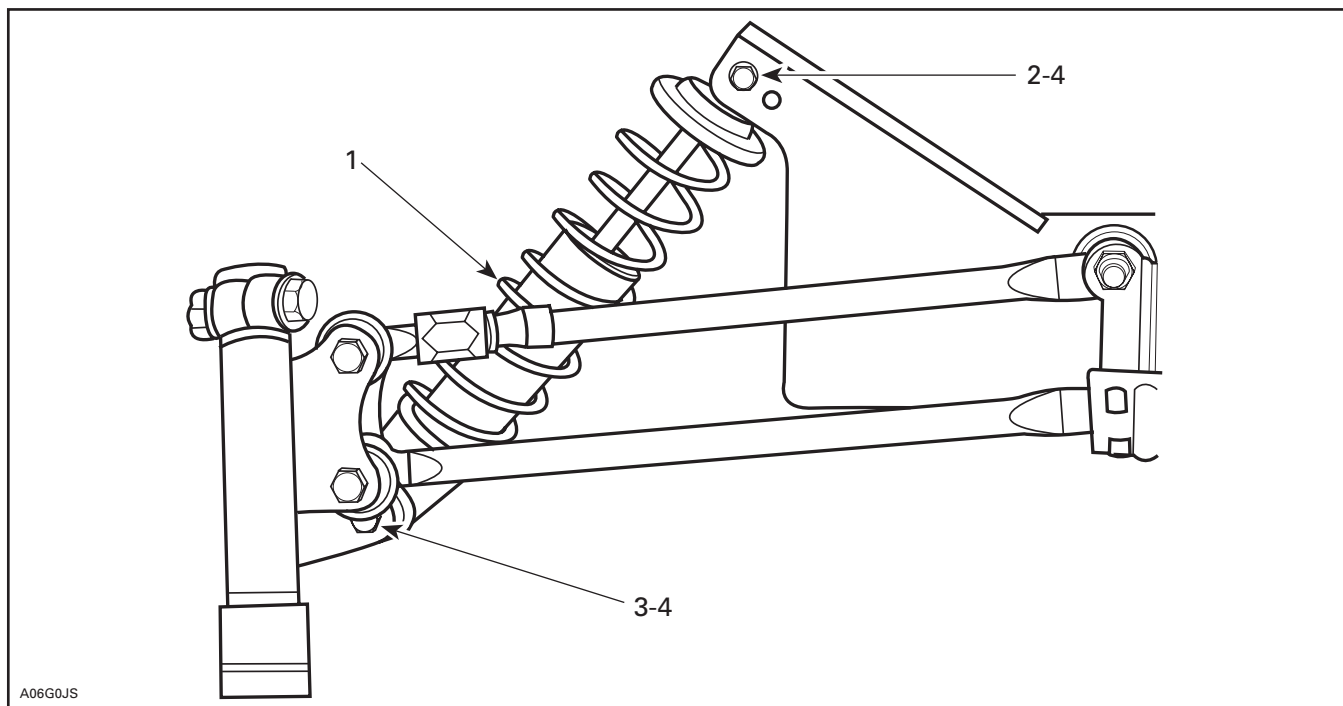
The spring of these shocks may be coded with a BLUE/RED/GOLD dots serie instead of BLUE/RED/BLACK. Even if the right code is the second one, springs with both codes have the same specifications.

Formula Deluxe 380

Position top screw head toward front and bottom screw head toward rear.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

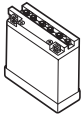
NOTE: On models equipped with a 5 holes exhaust support, hook up exhaust spring on mid-hole.



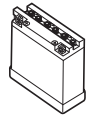
A06G0JS

TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic flanged nut M10 x 1.5 (4) (P/N 228 501 045) (section no. 4). Torque to 48 N•m (35 lb•ft)



PARTS INSTALLATION BATTERY



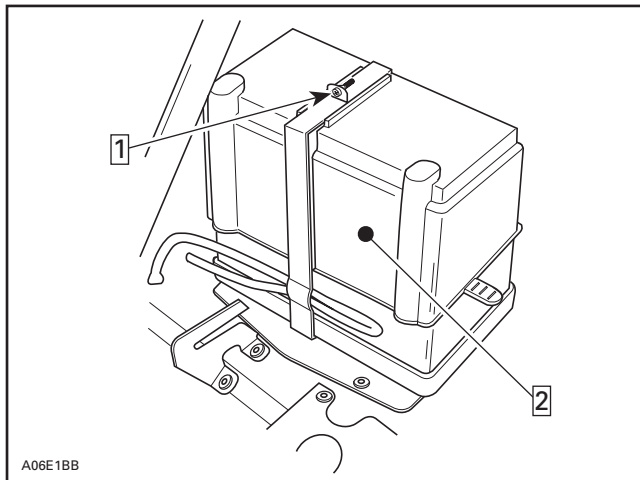
During vehicle preparation, the battery can be activated as described in *Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage. Do not charge an installed battery.

Battery Removal

- Remove belt guard.
- Remove air intake silencer.
- Unfasten battery retaining strips.
- Open strips and lift battery protective boot.



- Step **1**: Detach and open
Step **2**: Lift battery protective boot

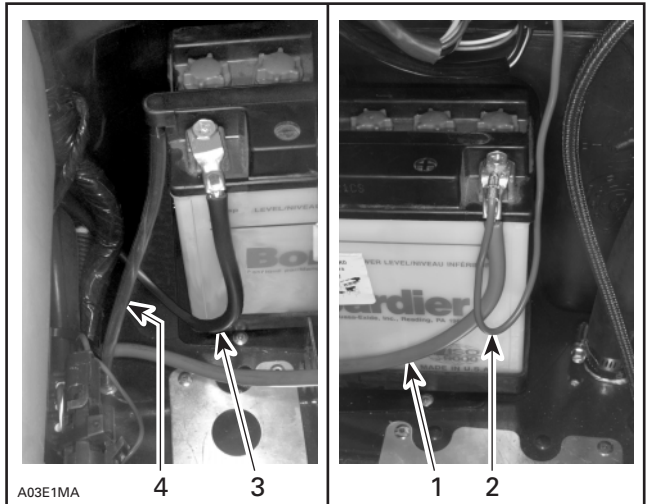
Withdraw battery from vehicle.

Battery Installation

- Install vent tube on battery.
- Connect RED positive cable and RED wire to positive battery terminal.
- Connect BLACK negative cable LAST.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.



BATTERY CONNECTION

1. RED positive cable
2. RED positive wire
3. BLACK negative cable
4. Ensure that vent tube is properly connected

Ensure that vent tube is properly connected to vehicle fitting on front frame.

Apply silicone dielectric grease (P/N 413 701 700) on battery posts and connectors.

Ensure vent tube is properly installed on battery elbow, then install protective boot over battery.

Close and fasten retaining strips as shown on the next photo.

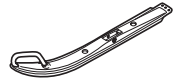


BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.
Reinstall air silencer.



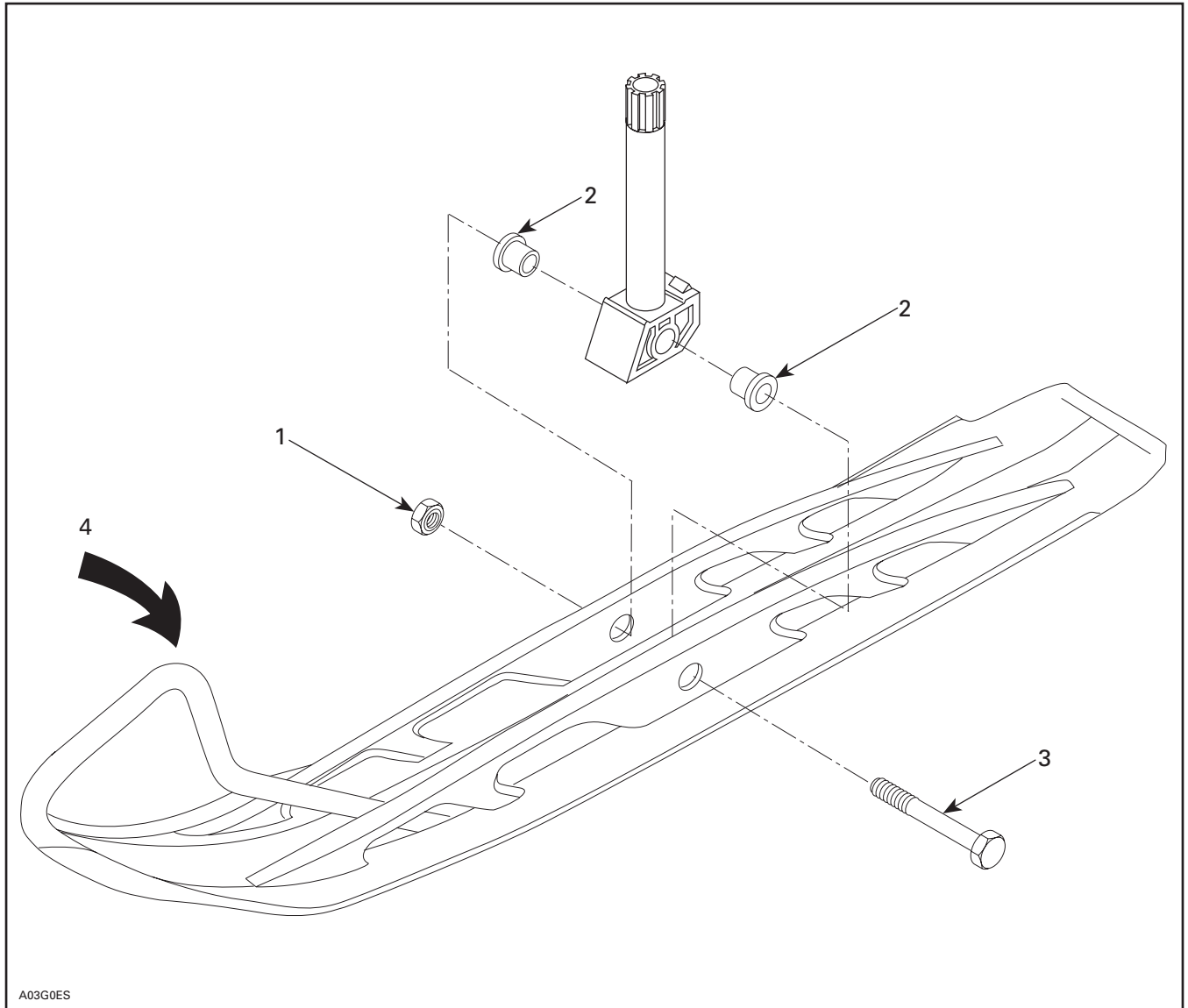
PARTS INSTALLATION SKIS



Install skis on vehicle.

NOTE: Make sure that slider cushions are still in ski leg.

Replace vehicle on ground.



TYPICAL — LEFT SIDE SHOWN

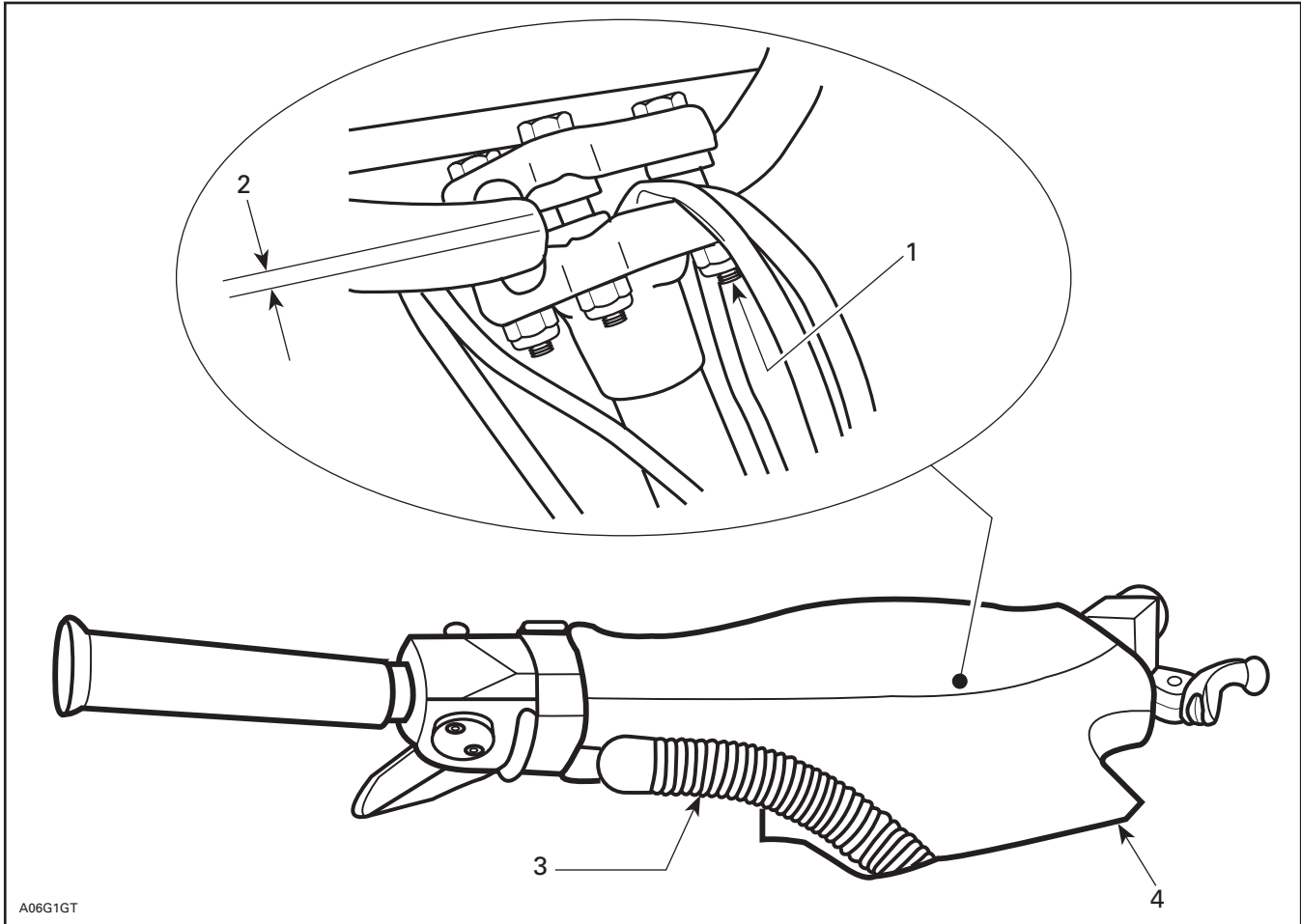
1. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 8). Torque to 40 N•m (30 lbf•ft)
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Twist ski to ease bolt installation



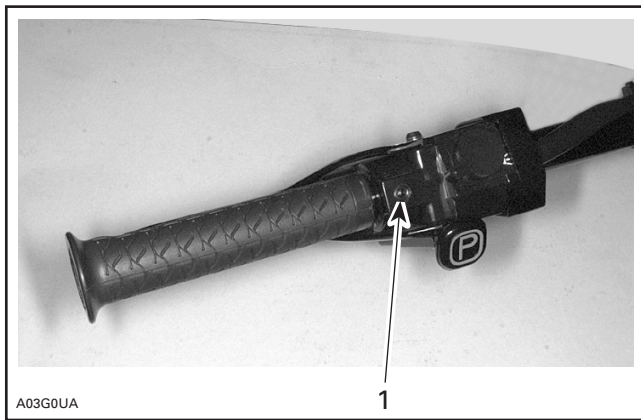
PARTS INSTALLATION STEERING PAD



Adjust handlebar temporarily and tighten nuts loosely for now.
Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.
Install steering pad temporarily, and adjust for proper fit with console.
Remove steering pad and torque nuts to 21 to 28 N•m (16 to 20 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



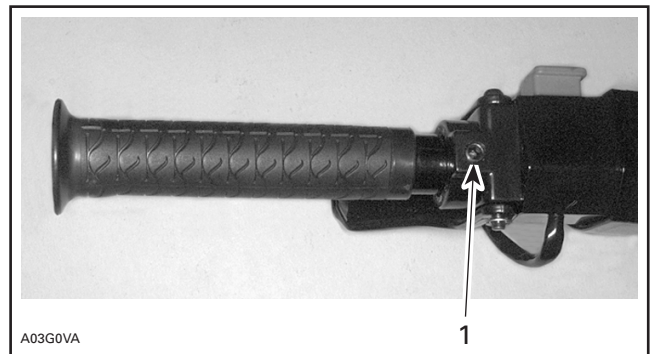
- A06G1GT
1. Torque to 21 to 28 N•m (16 to 20 lbf•ft)
 2. Equal gap each side (both clamps)
 3. Keyway (2) (P/N 572 072 400) (section no. 5)
 4. Steering pad (engine compartment)



A03G0UA

BRAKE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)



A03G0VA

THROTTLE HANDLE HOUSING

1. Tighten set screw to 2 N•m (18 lbf•in)



PARTS INSTALLATION
WINDSHIELD

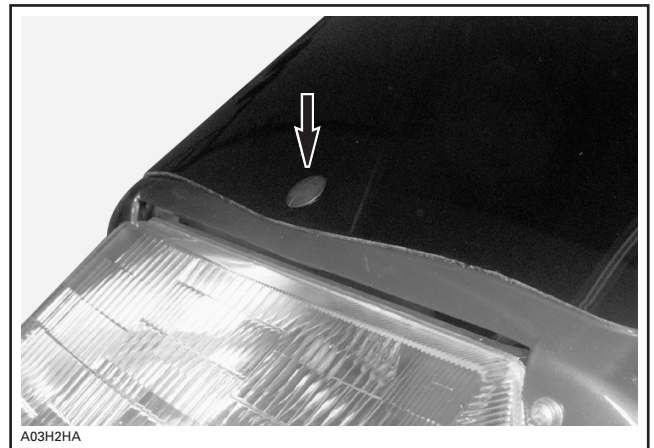


Remove headlamp molding.
Insert windshield tabs into appropriate slots.



A03H2GA

Insert dart (no. 6) in hole over headlamp.

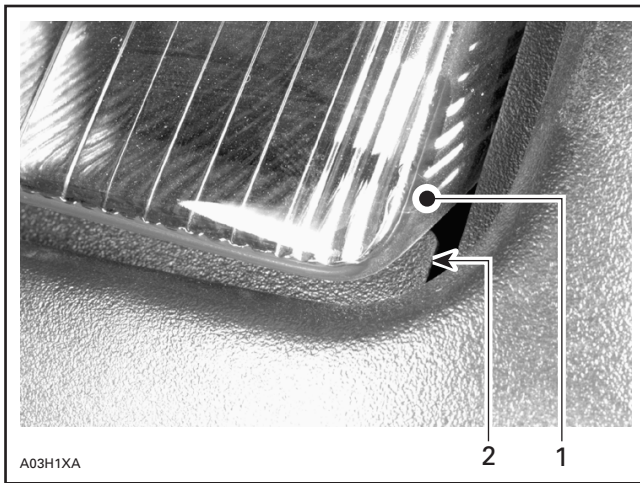


A03H2HA

Reinstall headlamp molding.

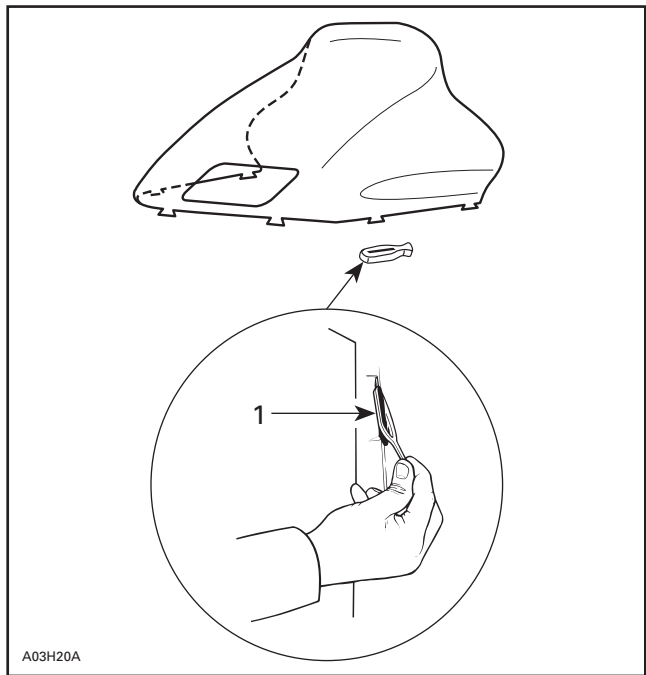
NOTE: Make sure that headlamp is properly positioned on headlamp molding.

Install windshield and secure from underneath.



1. Headlamp
2. Lip of headlamp molding behind headlamp

Lift cap on right side of handlebar and install heated visor extension cord, supplied in kit. (section no. 9).

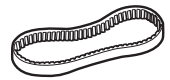


TYPICAL

1. Latch (6) (P/N 570 023 800) (section no. 6)



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.



LIQUIDS

OIL INJECTION PUMP BLEEDING



BREAK-IN PERIOD SUPPLEMENTAL OIL

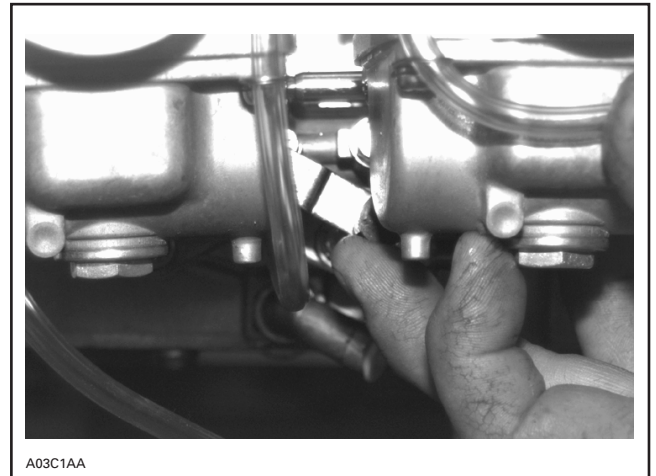
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX injection oil (P/N 413 802 900 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

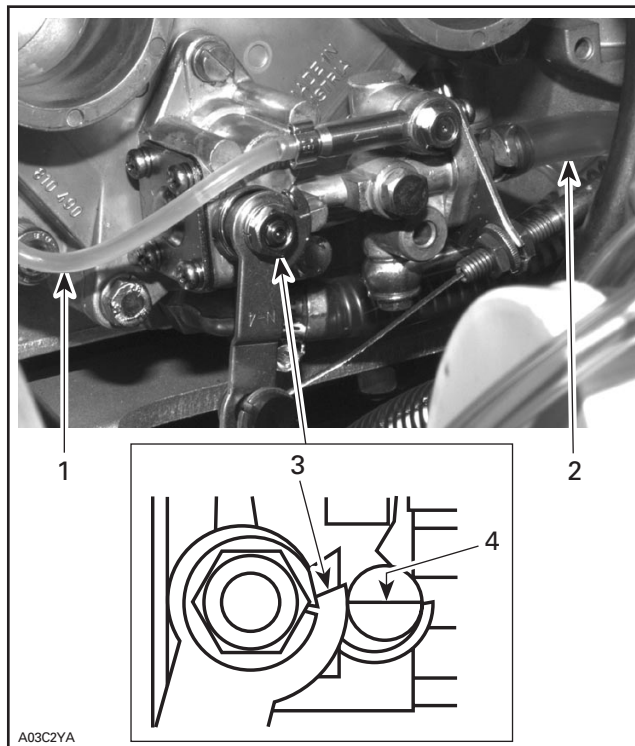
Check also for proper oil lever adjustment. Mark on pump lever must align 1 to 2 mm (0.039 to 0.079 in) higher than mark on pump body when throttle lever is activated just enough to take all cable play.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



A03C1AA

TYPICAL — ENGINE AT IDLE



A03C2YA

TYPICAL

1. Small oil line
2. Main oil line
3. Mark on lever (1 to 2 mm (0.039 to 0.079 in) higher than mark on pump body)
4. Mark on pump



LIQUIDS BRAKE FLUID LEVEL



Formula Deluxe 500 Only

Check brake fluid in reservoir on handlebar for proper level. Add fluid (DOT) as required.

▼ CAUTION

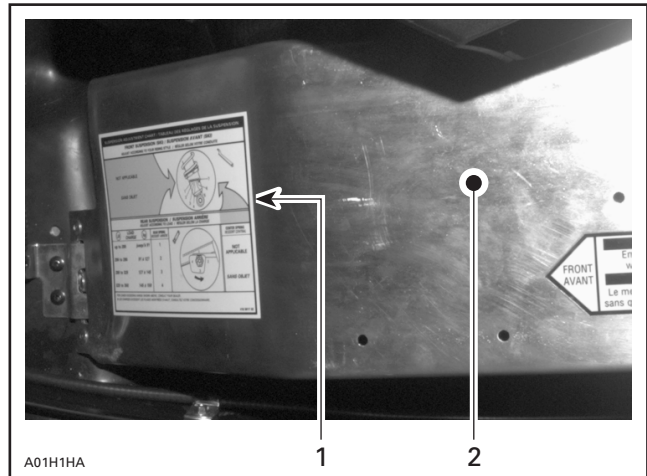
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard

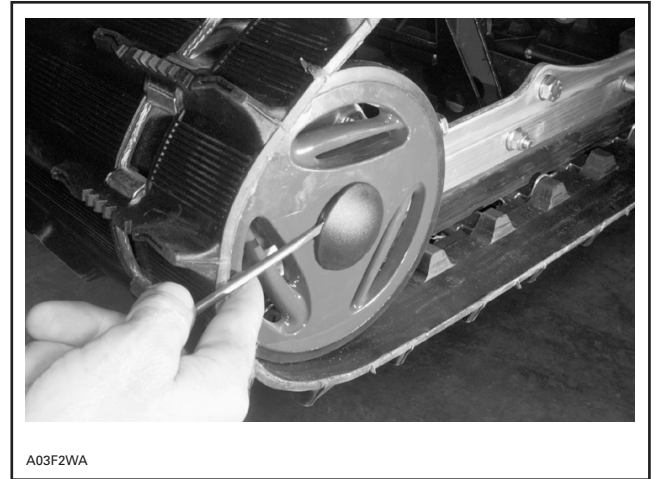


ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

On models equipped with an idler wheel cap, remove cap to loosen retaining screws. Refer to the following photo.



A03F2WA

INSERT A SMALL SCREWDRIVER INTO RECESS THEN REMOVE IDLER WHEEL CAP



ADJUSTMENTS DRIVEN PULLEY








It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).



TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

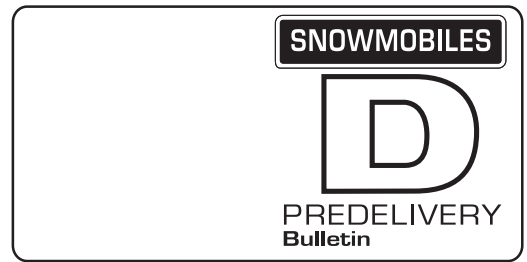
	MODELS	FORMULA DELUXE 380	FORMULA DELUXE 500		
	Engine Type	377	503		
	Maximum HP RPM ①	± 100 RPM	6900	7000	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.	N.A.	
	Carburetor Type	PTO VM 30 - 196 MAG VM 30 - 196	PTO VM 34 - 532 MAG VM 34 - 533		
	Main Jet	PTO 140/MAG 140	PTO 180/MAG 170		
	Needle Jet	P-0 (159)	P-0 (159)		
	Pilot Jet	40	40		
	Needle Identification — Clip Position	6DP9 - 3	6DH2 - 3		
	Slide Cut-away	2.5	2.5		
	Float Adjustment	± 1 mm (± 0.039 in)	23.9 (.941)	23.9 (.941)	
	Air Screw Adjustment	± 1/16 turn	1-1/4	1-7/8	
	Idle Speed RPM	± 200 RPM	1650	1650	
	Gas Grade Octane Number	(R + M)/2	Regular Unleaded 87	Regular Unleaded 87	
	Gas/Oil Ratio		Oil Injection	Oil Injection	
	Ignition Timing BTDC ②	mm (in)	2.79 (.110)	2.760 (.1087)	
	Trigger Coil Air-Gap	mm (in)	0.40 - 1.10 (.0157 - .0433)	0.40 - 1.10 (.0157 - .0433)	
	Gear Ratio	teeth	18/44	21/44	
	Engagement Speed	± 100 RPM	3500	3300	
	Drive Pulley Calibration Screw Position		N.A.	3	
	Pulley Distance	Z	± 0.5 mm (± 0.020 in)	26.00 (1.024)	17 (0.669)
		X	± 0.5 mm (± 0.020 in)	33.40 (1.315)	35.5 (1.398)
	Offset	Y		Dimension Y must exceed X from 0.5 mm (0.020 in) to (1.5 mm 0.059 in)	
		Deflection	mm (in)	32 (1-1/4)	
	Drive Belt Adjustment	Force ③	kg (lbf)	11.34 (25)	
		Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)	0.0 (0.00)	
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection		35 to 40 mm (1-3/8 to 1-9/16 in) with a 7.3 kg (16 lb) downward pull	35 to 40 mm (1-3/8 to 1-9/16 in) with a 7.3 kg (16 lb) downward pull	

- ① Engine speed at which maximum power is achieved.
 ② At 3500 RPM (engine cold) with headlamp turned on.
 ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side
 N.A.: Not applicable

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-18**
REVISION 1 ←

Date: February 26, 1999

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	Skandic* SWT (Canada and United States)	1431/1432	All

This bulletin must be used in conjunction with the *Predelivery Check List* enclosed in the *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

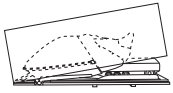
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

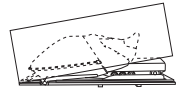
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The contents of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.



UNCRATING



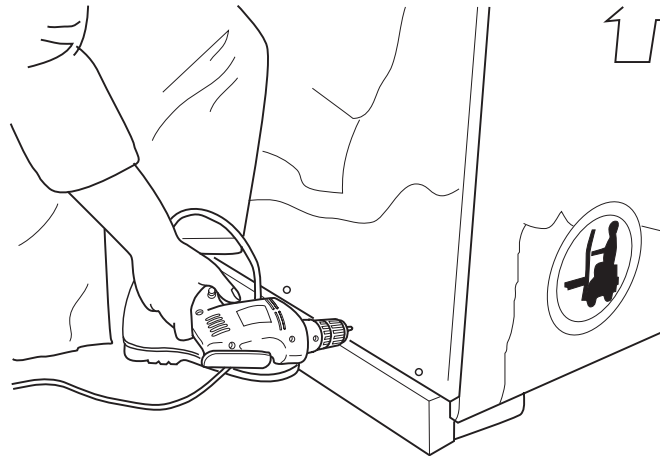
◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, nylon stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

▼ CAUTION

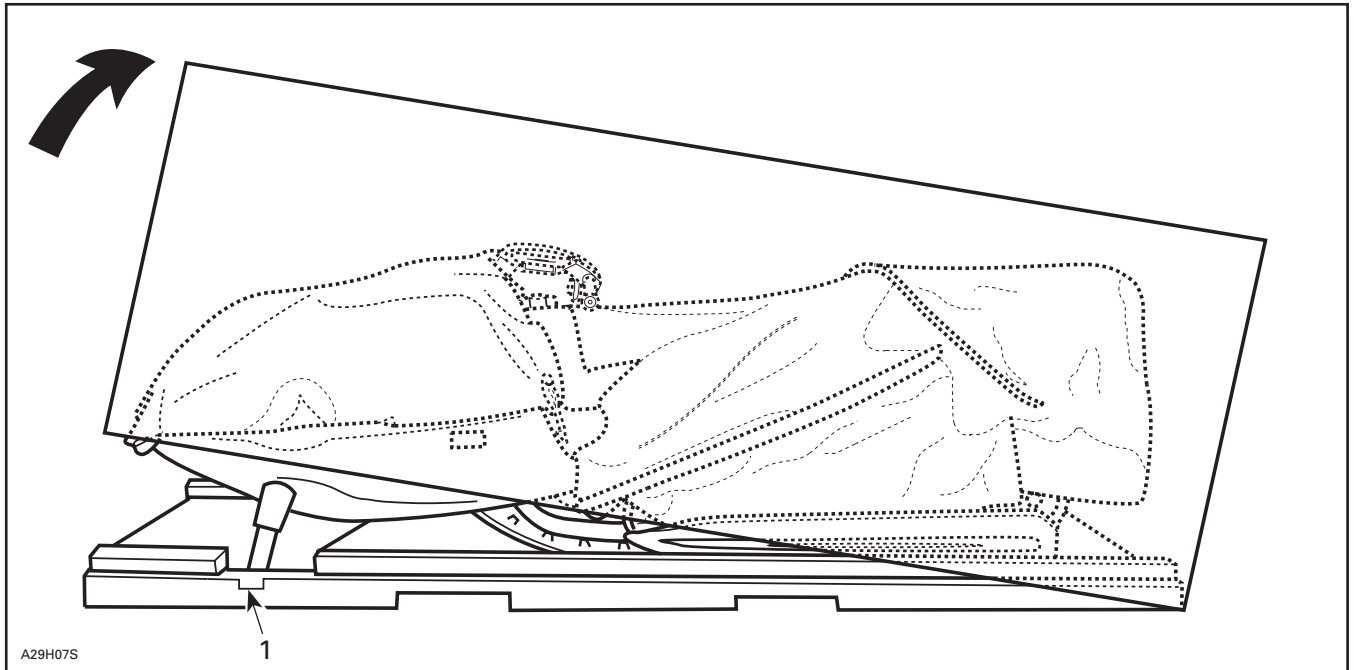
Allowing the crate to drop may cause serious damage to the vehicle.

Using a drill or a screwdriver, remove all screws retaining crate to base.



F02P04S

Tip cover towards rear of vehicle. There is a notch in crate base at front.



1. Notch

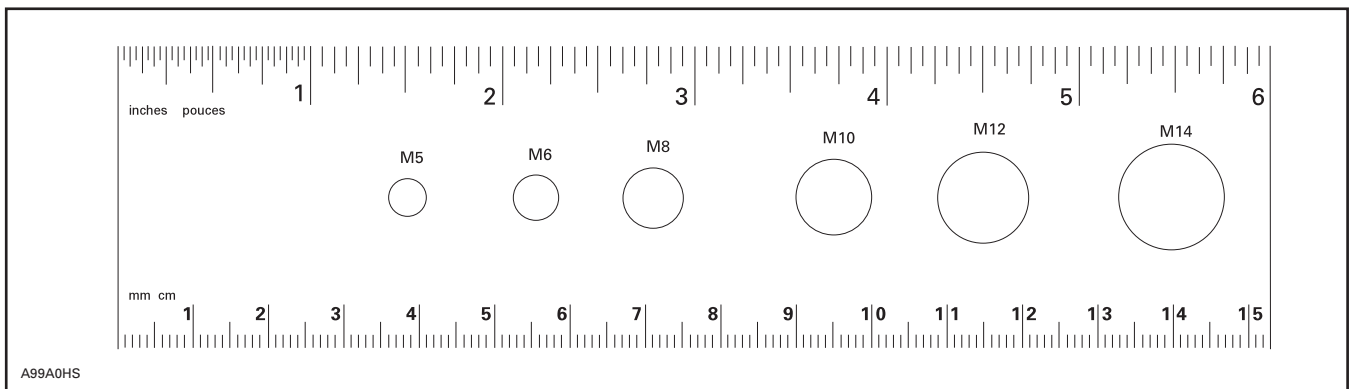
Detach parts to be installed (e.g. skis, windshield), from the vehicle and its base.

▼ **CAUTION**

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Remove predelivery kit and parts to be installed from under seat compartment.

NOTE: This rule can be helpful to identify fastener length/size.



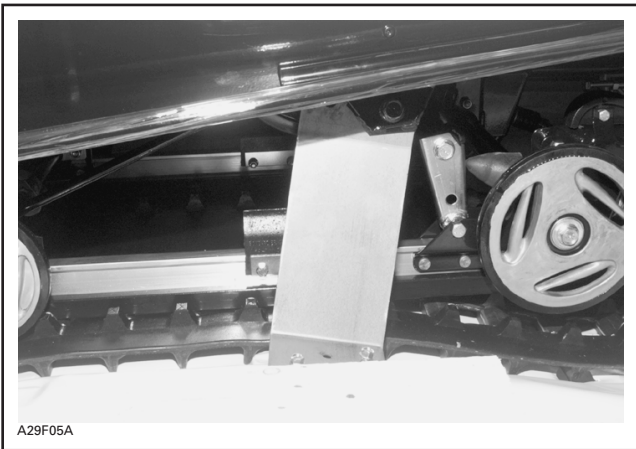
▼ CAUTION

Make sure vehicle is properly supported.

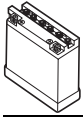
Detach ski legs from crate. Discard screws.



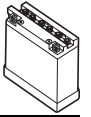
Remove the rear retaining brackets from both sides of vehicle and retain bolts holding brackets to body, discard screws.



Remove vehicle from base.



PARTS INSTALLATION BATTERY

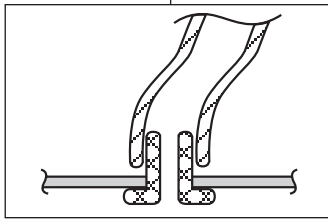
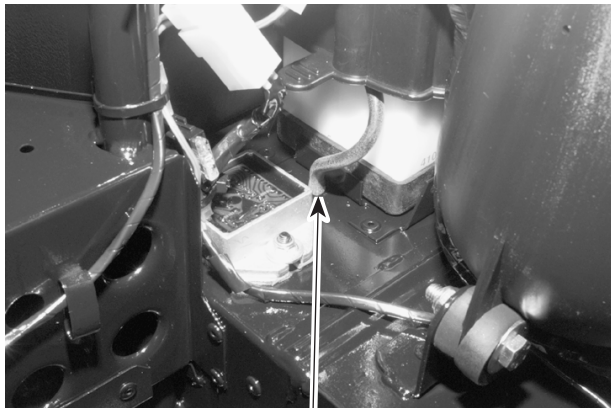


During preparation, the battery can be activated as described in *1999 Ski-Doo Shop Manual*.

▼ CAUTION

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

A special vented rivet is fixed to the chassis in order to plug the vent tube from the battery.



A29E0FA

TYPICAL

Battery removal

Undo steel strips nut and screw holding battery and remove battery.



A29E0DA

TYPICAL

Battery installation

Install battery in vehicle and secure steel strips. Connect battery cables.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Apply silicone dielectric grease (P/N 293 550 004) on battery posts and connectors.

Ensure vent tube is properly installed from battery to the plug provided on the frame and that it is not kinked.



PARTS INSTALLATION

REAR SUSPENSION



Secure front arm upper axle of rear suspension under footwell using 2 M10 x 30 screws in plastic bag under the seat.

Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).

Secure rear arm using previously removed screws.

Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).

NOTE: Also in shrink pack are 4 horse shoe type washers that are used to adjust rear suspension for trail riding according to load (refer to the *1999 Shop Manual* for proper procedure); they are to be put in the toolbox for further use.



PARTS INSTALLATION

FRONT SUSPENSION



Remove long bolts that compress front suspension on both sides.

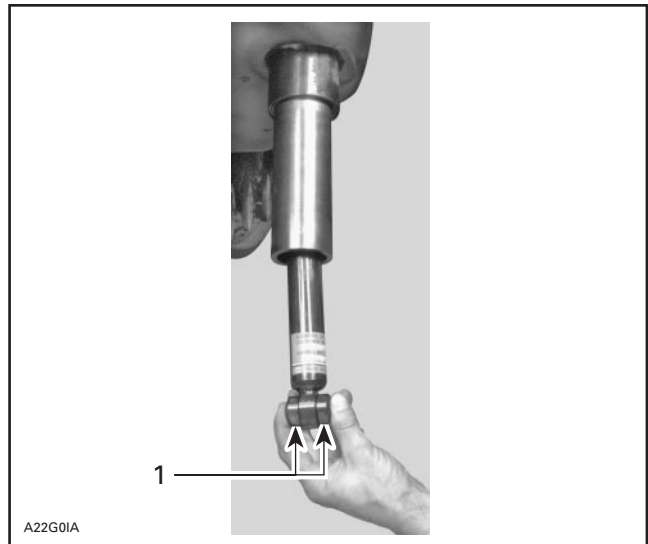


Install 2 plastic bushings into shock absorber eye-lets.

Stretch shock to its maximum.

Slide shock absorber into bottom of ski leg until shock rod goes through cap hole.

Loosely install conical spring washer, concave surface inside, and nut on shock rods, keeping at least 5 mm (1/4 in) of free play.



1. Plastic Bushings

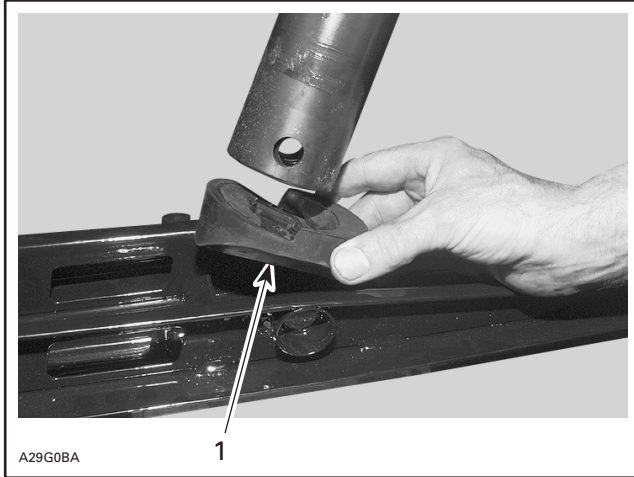


PARTS INSTALLATION

SKIS



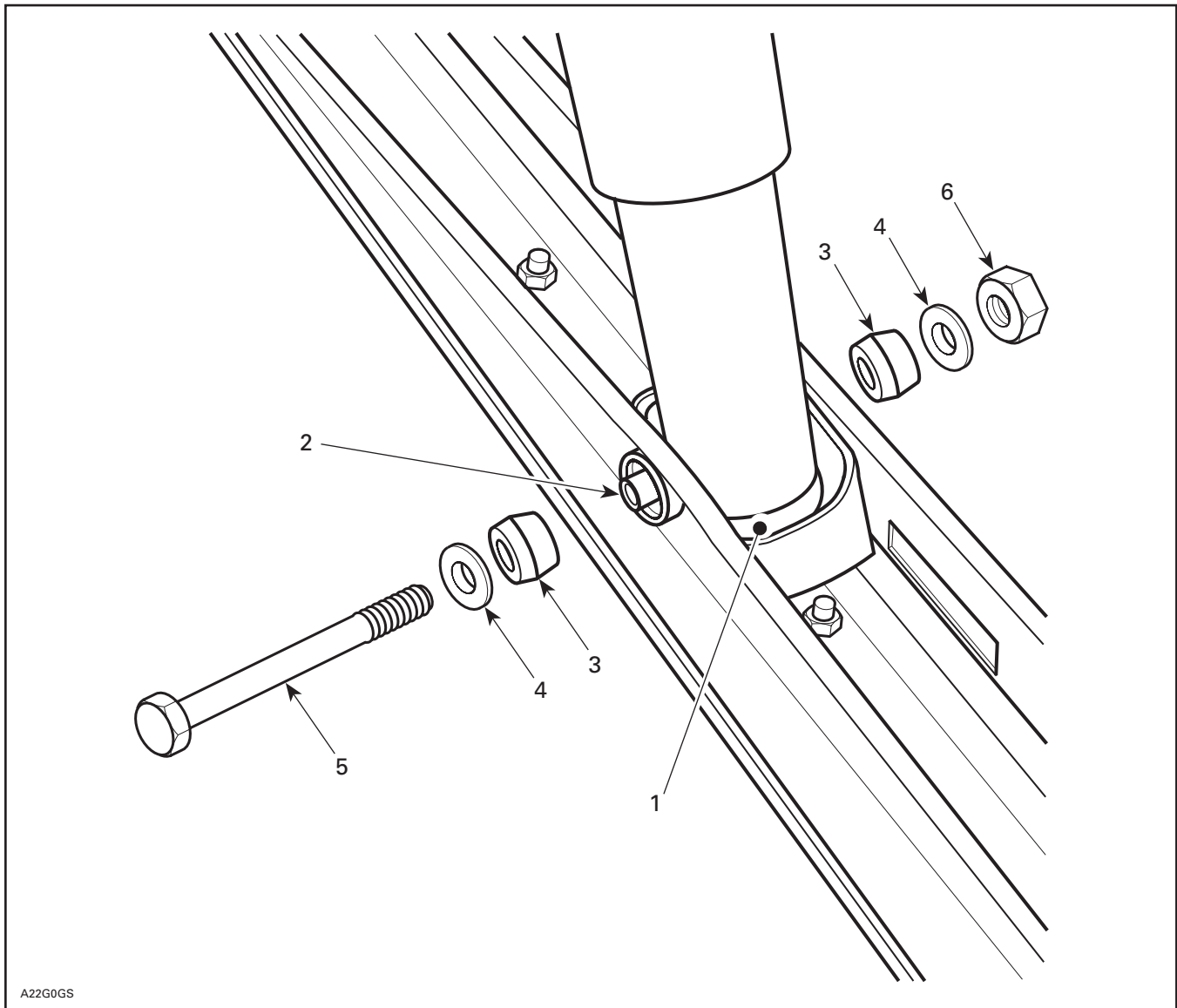
Install stop bounding on skis with its highest portion toward front.



VIEW FROM LEFT SIDE

1. *Stop bounding*

Install skis on vehicle using bolts, nuts, conical spring washers (concave surface inside), and rubber bushings supplied in the predelivery kit.



A22G0GS

1. Stop bounding
2. Sleeve
3. Rubber bushing (2)
4. Conical spring washer (2)
5. Bolt M10 x 125
6. M10 lock nut, tighten to 48 N•m (35 lbf•ft)

Tighten shock rod top nuts to 30 N•m (22 lbf•ft).



PARTS INSTALLATION STEERING PAD



Handlebar hardware comes in a bag, it needs to be assembled.

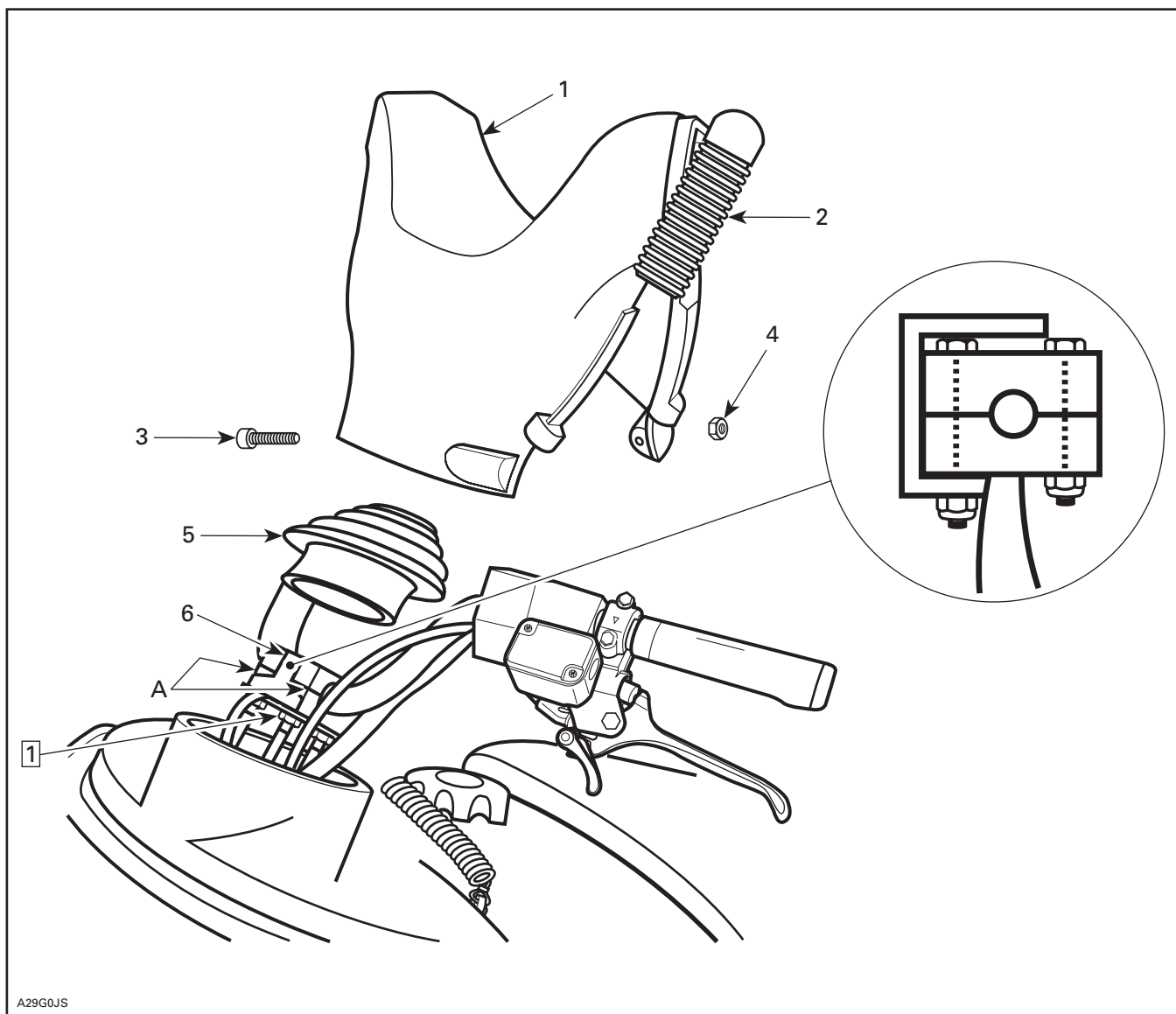
Adjust handle bar and set both clamps to have equal gap on each side. Torque nuts from 21 to 28 N•m (15.5 to 20.7 lbf•ft).

Loosen throttle and brake handle housings.

Install steering pad.

NOTE: Make sure to secure steering column cover with steering pad before tightening bolts.

Adjust both throttle and brake handle housings to match steering pad.



TYPICAL

Step 1: Torque from 21 to 28 N•m (15.5 to 20.7 lbf•ft)

1. Steering pad

2. Keyway. Use liquid soap to ease installation

3. Screw M5 x 0.80 x 20 (2)

4. Nut M5 x 0.80 x 20 (2). Seat tighten only, no deformation of rubber

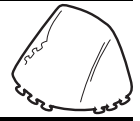
5. Steering column cover

6. Clamp bracket

A. Equal gap on each side (Both clamps)

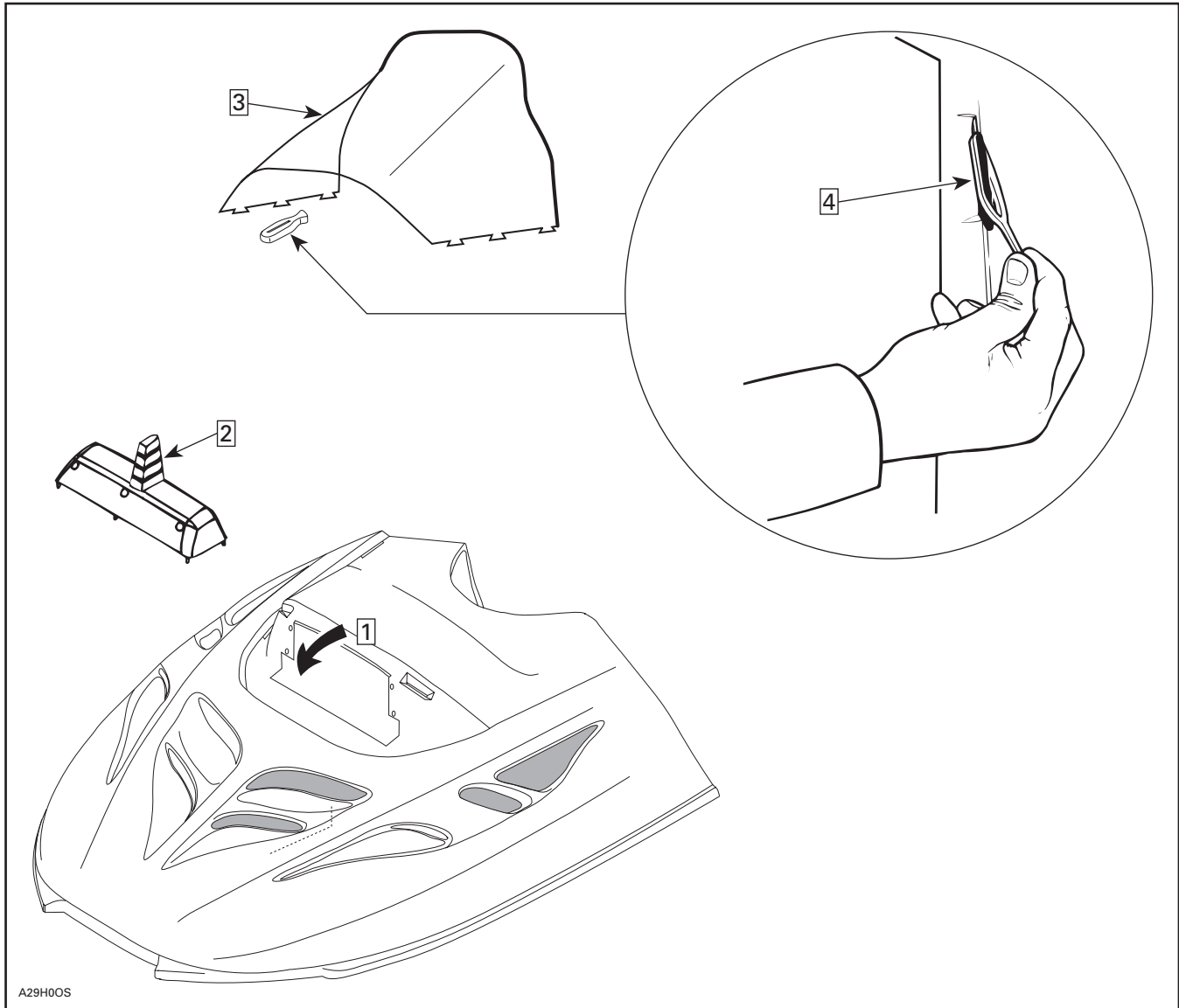


PARTS INSTALLATION WINDSHIELD



Remove headlamp molding.

Install air intake cover with filter and rubber support assembly in predrilled holes on the hood. Retain with 4 supplied push nuts, using 2 end pins on each side.



Step **1**: Pry out headlamp molding

Step **2**: Install air intake cover with filter and rubber support

Step **3**: Install windshield

Step **4**: Install latches (10)

Install rubber expansion nut in hole above head light.

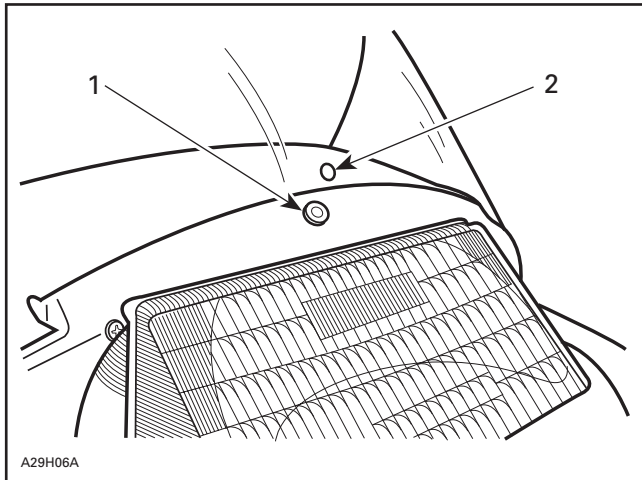
Install windshield and secure with latches inside hood.

Line up hole in windshield with rubber expansion nut and install screw with cup.

Tighten slightly so that rubber expands inside hood.

Reinstall headlamp molding.

Make sure to properly position lower edge of plastic molding under head lamp.



- 1. Rubber expansion nut
- 2. Hole in windshield

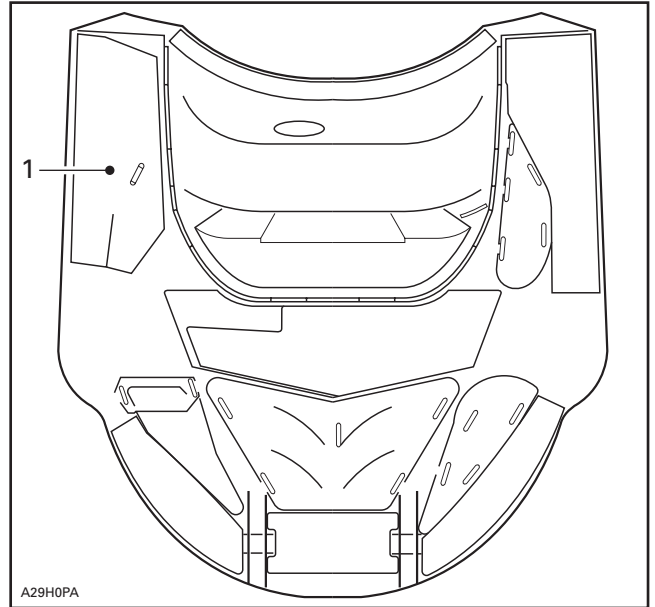
Secure inside hood plastic with supplied green clips (if not already secured).

ALUMINUM FOIL HEATSHIELD

Found in seat compartment, an aluminum foil heatshield has to be installed on hood inner surface.

Remove backing from heatshield, align inside hood above braking mechanism (disc), and stick in place, as per following illustration.

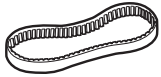
NOTE: This heatshield has to be installed over the duct in order to protect both the duct and the hood from heat. Do not remove duct since this heatshield goes over it.



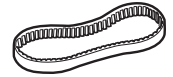
- 1. Heatshield

SNOW GUARD INSTALLATION

Install snow guard with extra plastic support.



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disk brake with a suitable cleaner before installing drive belt.

Install drive belt in its proper rotation direction, arrow pointing at front.



LIQUIDS OIL INJECTION PUMP BLEEDING



To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz.) of BOMBARDIER-ROTAX injection oil (P/N 413 802 900) should be added to fuel for the first full filling of fuel tank.

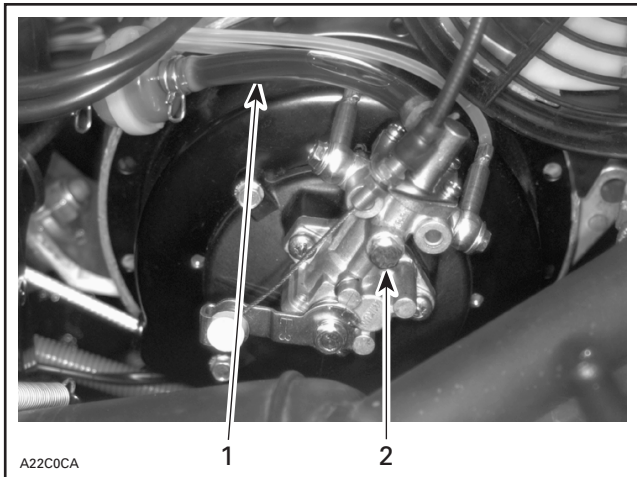
Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.

Bleed the small oil lines between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

AIR SILENCER

Install air silencer aligning with 2 bottom holes and properly inserting carburetors into rubber grommets.

NOTE: Make sure grommets are properly positioned; the use of a mirror could be ideal to see positioning all around underneath. Also assure that control cables are properly routed and that they are not binding.



1. No air in main line
2. Bleeder screw



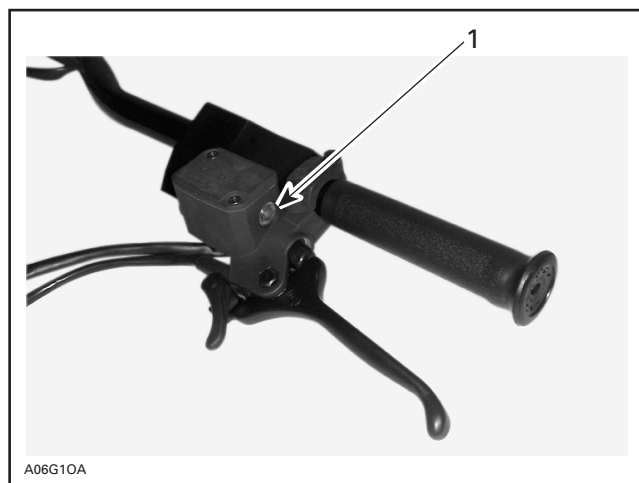
LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level.
Add recommended brake fluid as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



1. Fluid level window



ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.







TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicle used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODELS		SKANDIC SWT		
	Engine Type		ROTAX 503		
	Maximum HP RPM ① ± 100 RPM		6800	•	
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	Not Applicable		
	Carburetor Type		2 x VM 34-534	•	
	Main Jet		185	•	
	Needle Jet		P-1 159	•	
	Pilot Jet		40	•	
	Needle Identification – Clip Position		6DH2-3	•	
	Slide Cut-Away		2.5	•	
	Float Adjustment mm (in)		36.5 (1.431)	•	
	Air Screw Adjustment ± 1/32 turn		1.25	•	
	Idle Speed RPM		1900 ± 200	•	
	Gas Grade Pump Octane Number (R + M)/2		Regular Unleaded 87		
Gas/Oil Ratio		Oil Injection			
	Ignition Timing BTDC ② mm (in)		1.66 (.065)		
	Trigger Coil Air-Gap mm (in)		0.45 - 0.55 (.018 - .022)		
	Gear Ratio		1 st gear 1:3.80 2 nd gear 1:2.29 R gear 1:4.63	•	
	Engagement Speed ± 100 RPM		3000	•	
	Drive Pulley Calibration Screw Position		2	•	
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	32.3 (1-17/64)	•
		X	± 0.4 mm (± 1/64 in)	35.0 (1- 3/8)	•
	Offset	Y		Dimension Y must exceed X from .75 mm (.03 in) to 2.25 mm (.09 in)	
		Deflection	mm (in)	32 (1-1/4)	
	Drive Belt Adjustment	Force ③	kg (lbf)	11.3 (25)	•
		Driven Pulley Preload	kg (lbf)	7.0 + 1/- 0 (15.4 ± 1.5)	•
	Drive Chain Tension		Not Applicable		
Track Adjustment	Deflection	mm (in)	40 to 50 (1.5 to 1.9)		
	Force	Kg (lbf)	7.3 (16.1)		

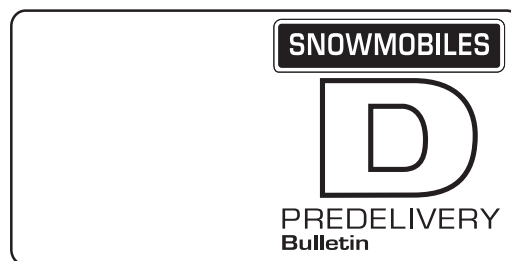
① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-17**

Date: October 1, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	Skandic* WT/WT LC (Canada)	1429/1427	All
1999	Skandic* WT/WT LC (United States)	1430/1428	All

This bulletin must be used in conjunction with the *Predelivery Check List* enclosed in the *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

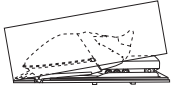
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NOTE: The information and components/system descriptions in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

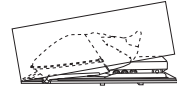
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

The contents of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.



UNCRATING



All Models

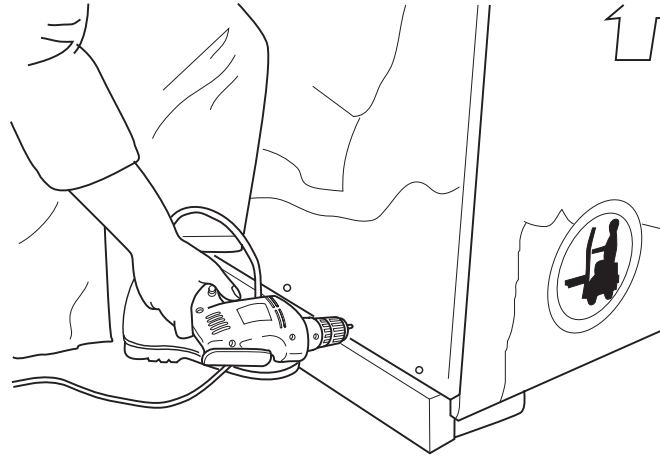
◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, nylon stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

▼ CAUTION

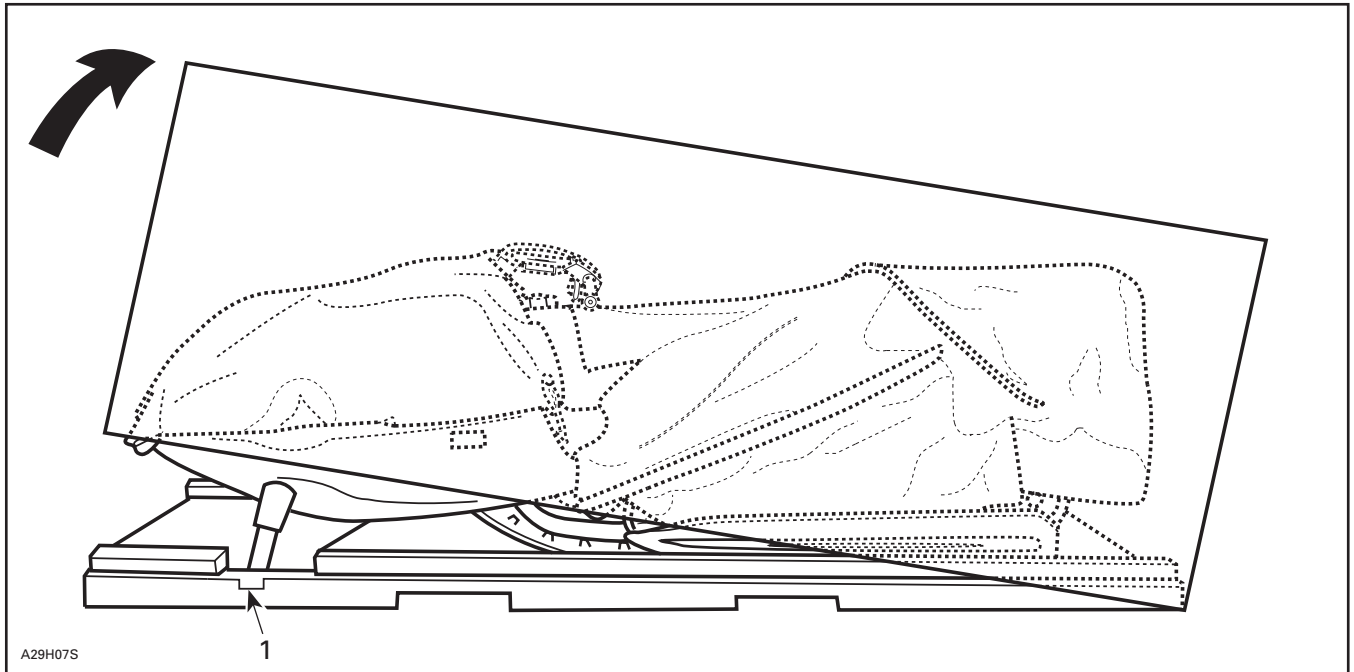
Allowing the crate to drop may cause serious damages to the vehicle.

Using a screwdriver or a drill, remove all screws retaining crate to base.



F02P04S

Tip cover towards rear of vehicle. There is a notch in crate base at front.



1. Notch

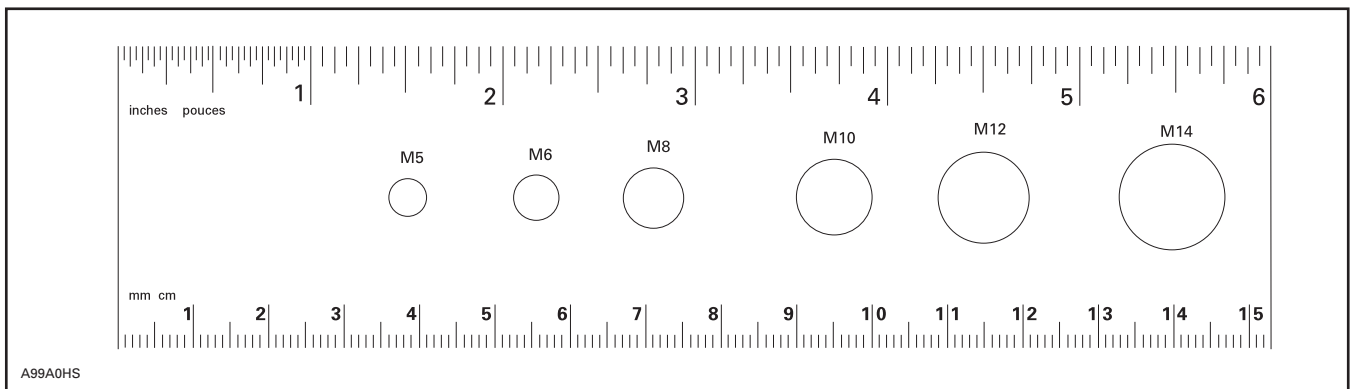
Detach parts to be installed (e.g. skis, windshield), from the vehicle and its base.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Remove predelivery kit and parts to be installed from under seat compartment.

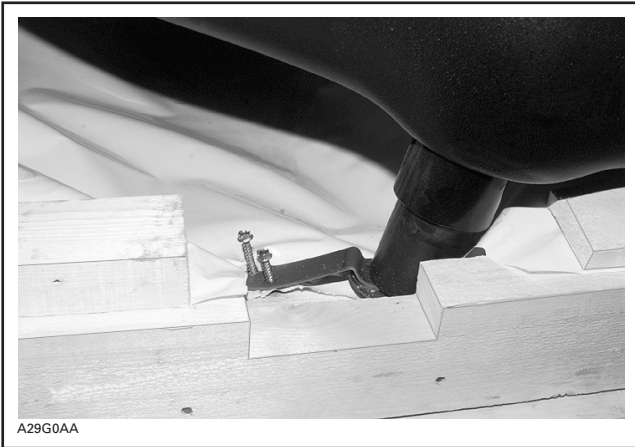
NOTE: This rule can be helpful to identify fastener length/size.



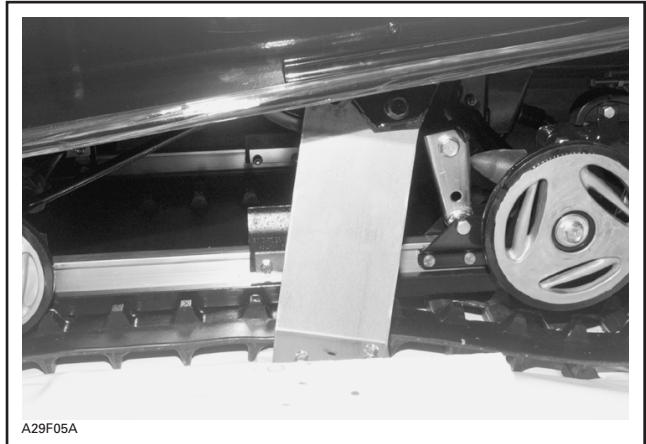
▼ **CAUTION**

Make sure vehicle is properly supported.

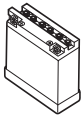
Detach ski legs from crate. Discard screws.



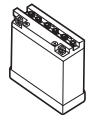
Remove the rear retaining brackets from both sides of vehicle and retain bolts holding brackets to body, discard screws.



Remove vehicle from base.



PARTS INSTALLATION
BATTERY



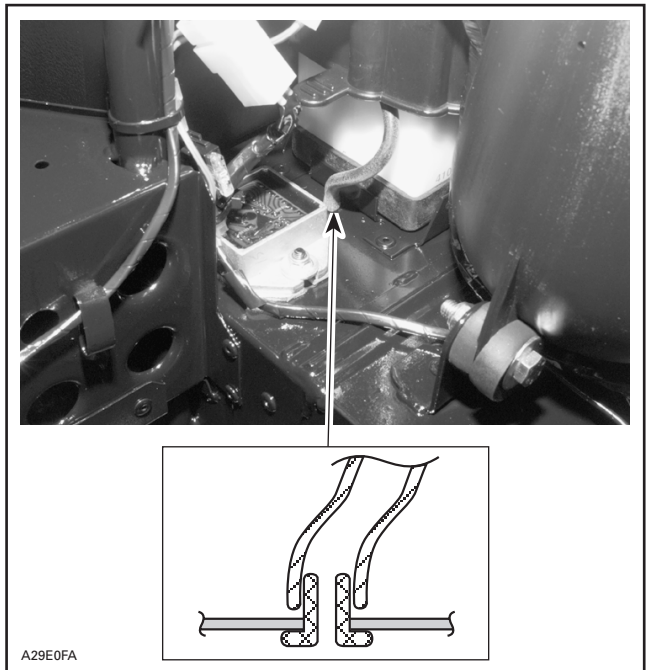
All Models

During preparation, the battery can be activated as described in 1999 *Ski-Doo Shop Manual*.

▼ **CAUTION**

Prior to charging the battery, always remove it from the vehicle to prevent electrolyte spillage.

A special vented rivet is fixed to the chassis in order to plug the vent tube from the battery.



Battery Removal

Undo steel strips nut and screw holding battery and remove battery.



TYPICAL

Battery Installation

Deposit battery on its rack.
Secure battery steel strips.
Connect battery cables.

◆ WARNING

Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Apply silicone dielectric grease (P/N 293 550 004) on battery posts and connectors.

Ensure that battery vent tube is properly installed from battery to the plug provided on the frame and that it is not kinked.

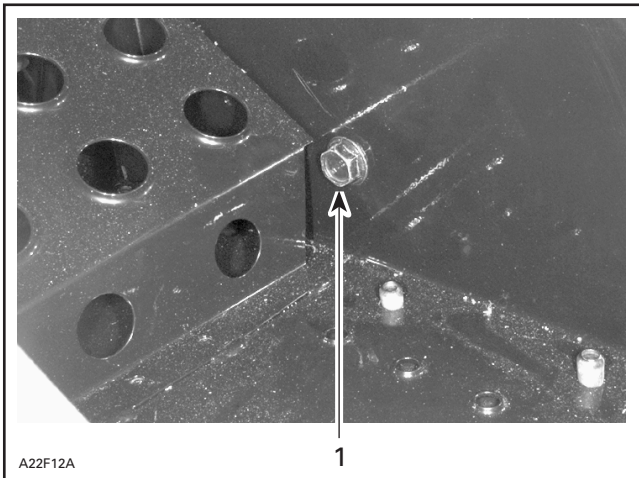


PARTS INSTALLATION REAR SUSPENSION



Secure front arm upper axle of rear suspension using 2 M10 x 30 screws in plastic bag under the seat.

Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).



1. Torque screw on each side to 58 N•m (43 lbf•ft)

Secure rear arm using previously removed screws.

NOTE: For single driving condition use upper hole and for two person driving condition or load in rack, use lower hole.

Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).

NOTE: Also in shrink pack are 4 horse shoe type washers that are used to adjust rear suspension for trail riding according to load (refer to the *1999 Shop Manual* for proper procedure); they are to be put in the toolbox for further use.



PARTS INSTALLATION FRONT SUSPENSION



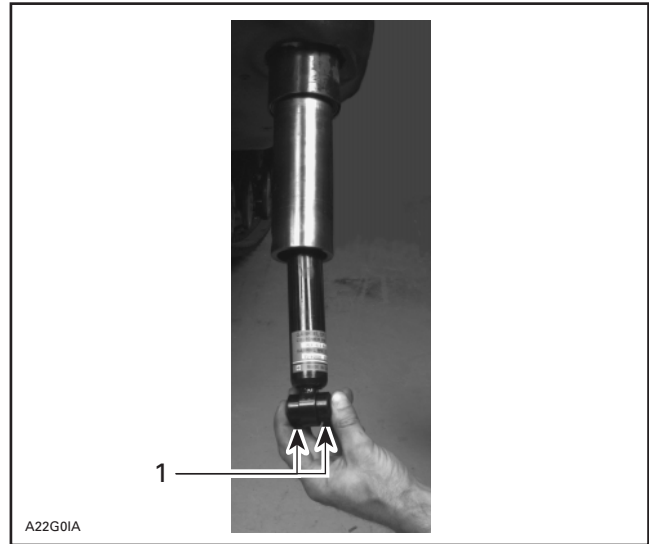
Remove long bolts that compress front suspension on both sides.

Loosely install conical spring washer, concave surface inside, and nut on shock rods, keeping at least 1/4 in (5mm) of free play.



Install 2 plastic bushings into shock absorber eyelets. Stretch shock to its maximum.

Slide shock absorber into bottom of ski leg until shock rod goes through cap hole.



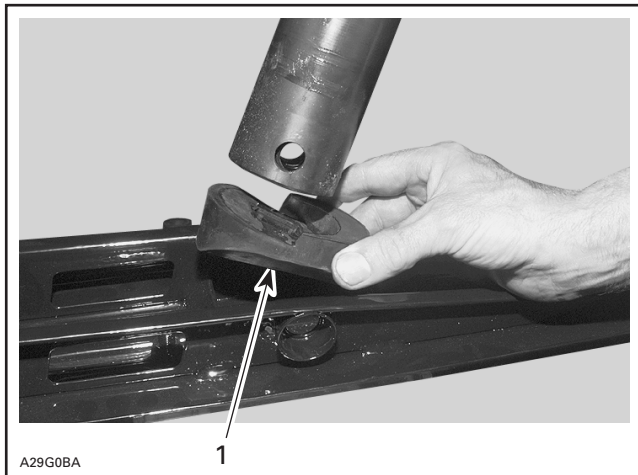
1. Plastic bushings



PARTS INSTALLATION SKIS



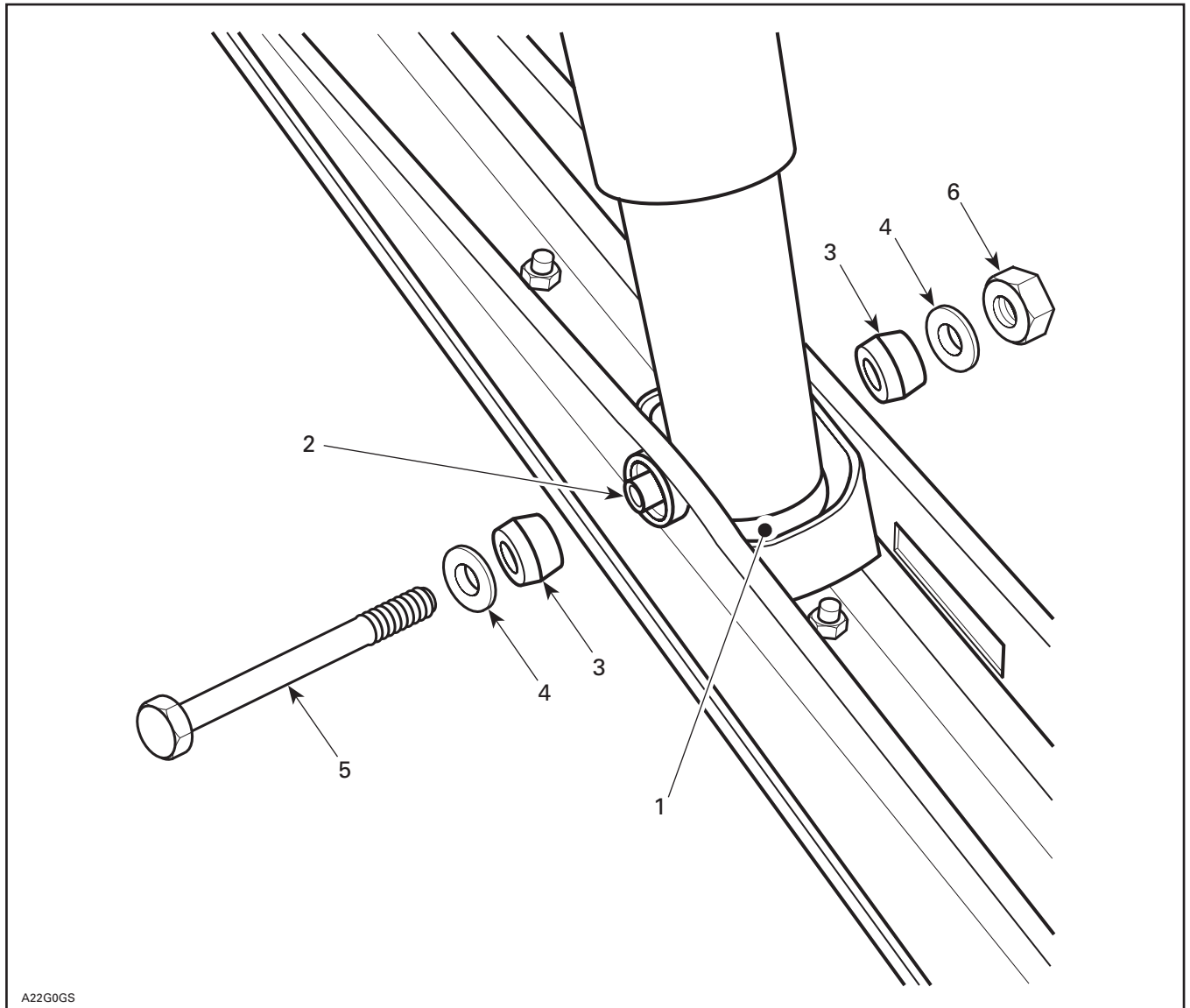
Install stop bounding on skis with its highest portion toward front.



LEFT SIDE SHOWN

1. Stop bounding

Install skis on vehicle using bolts, nuts, conical spring washers (concave surface inside) and rubber bushings supplied in the predelivery kit.



- 1. Stop bounding
- 2. Sleeve
- 3. Rubber bushing (2)
- 4. Conical spring washer (2)
- 5. Bolt M10 x 125
- 6. M10 lock nut, tighten to 48 N•m (35 lbf•ft)

Tighten shock rod top nuts to 30 N•m (22 lbf•ft).



PARTS INSTALLATION STEERING PAD

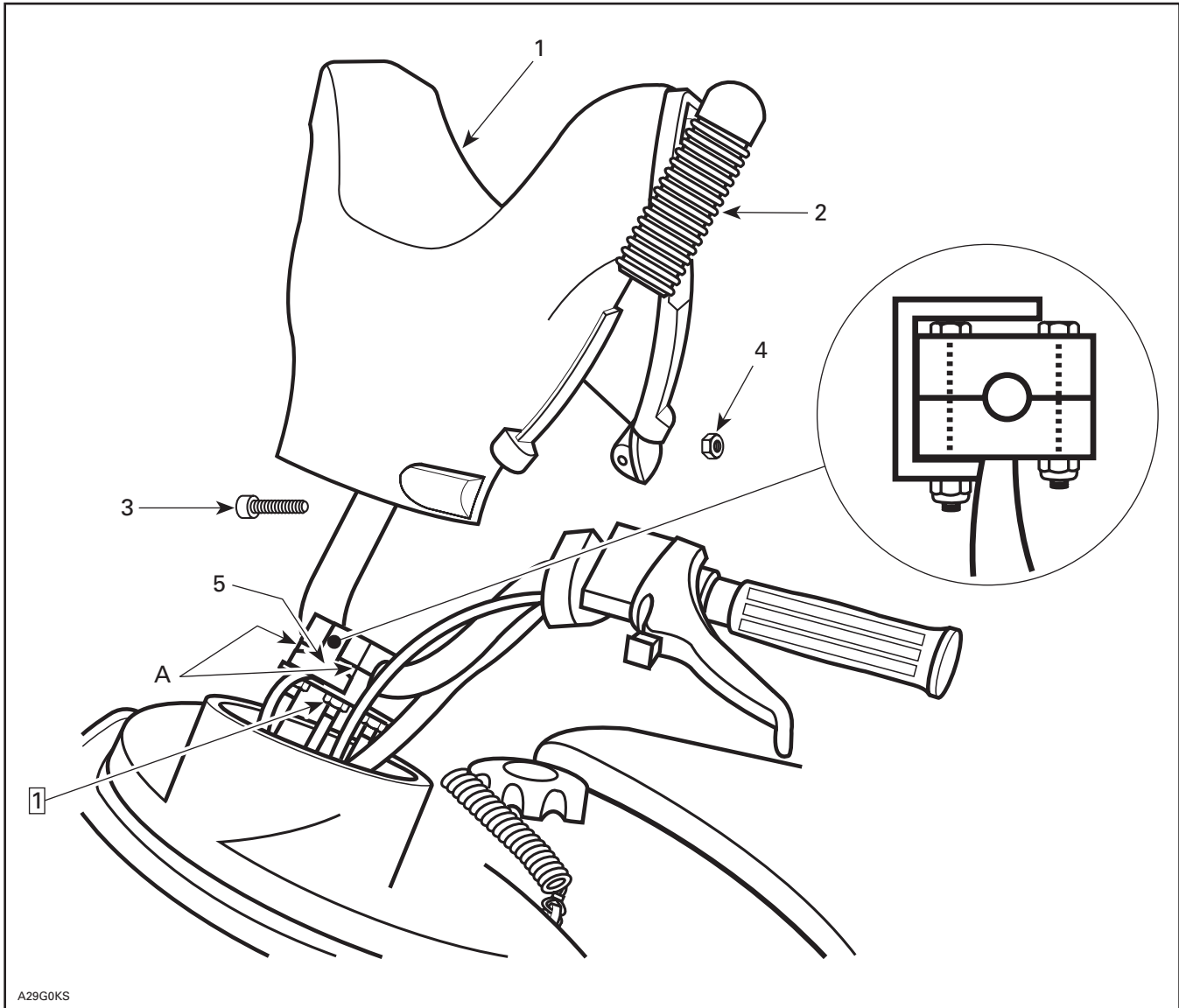


Adjust handle bar and set both clamps to have equal gap on each side. Torque nuts from 21 to 28 N•m (15.5 to 20.7 lbf•ft).

Loosen throttle and brake handle housings.

Install steering pad.

Adjust both throttle and brake handle housings to match steering pad.



TYPICAL

Step **1**: Torque from 21 to 28 N•m (15.5 to 20.7 lbf•ft)

1. Steering pad
2. Keyway. Use liquid soap to ease installation
3. Screw M5 x 0.80 x 20 (2)
4. Nut M5 x 0.80 x 20 (2). Seat tighten only, no deformation of rubber
5. Clamp bracket
- A. Equal gap on each side (Both clamps)

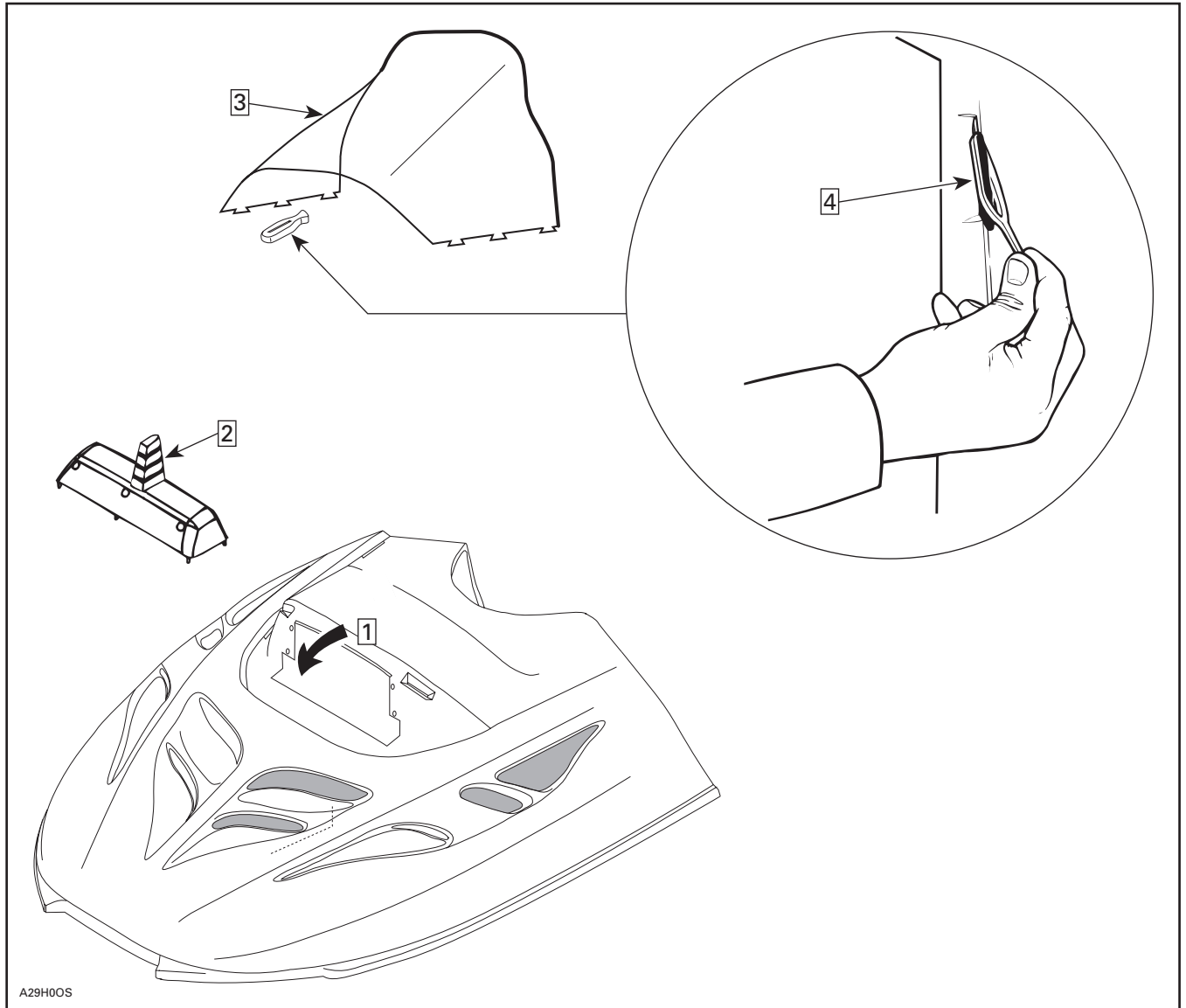


PARTS INSTALLATION WINDSHIELD



Remove headlamp molding.

Install air intake cover with filter and rubber support assembly in predrilled holes on the hood. Retain with 4 supplied push nuts, using 2 end pins on each side.



Step **1**: Pry out headlamp molding

Step **2**: Install air intake cover with filter and rubber support

Step **3**: Install windshield

Step **4**: Install latches (10)

Install rubber expansion nut in hole above head light.

Install windshield and secure with latches inside hood.

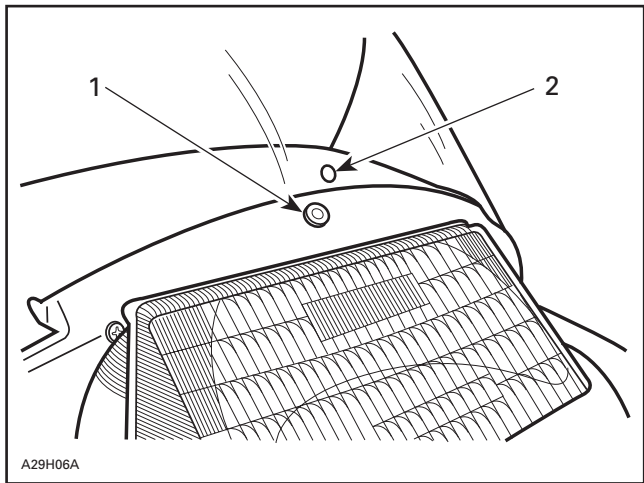
Line up hole in windshield with rubber expansion nut and install screw with cup.

Tighten slightly so that rubber expands inside hood.

Reinstall headlamp molding.

Make sure to properly position lower edge of plastic molding under head lamp.

Secure inside hood plastic with supplied green clips (if not already secured).



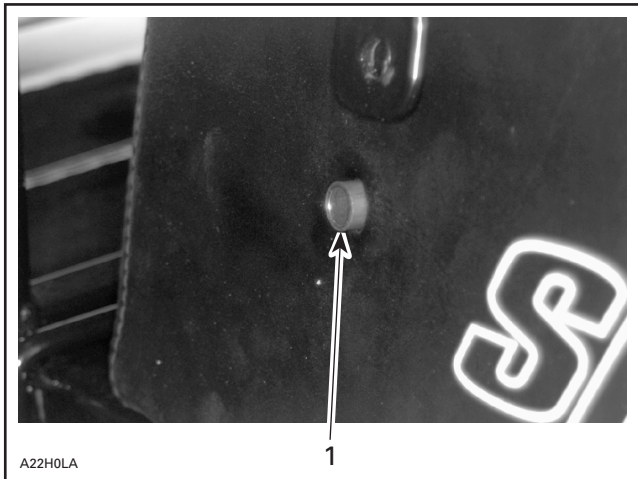
1. Rubber expansion nut
2. hole in windshield



PARTS INSTALLATION BACKREST



Install spacers (included in shrink kit) in rear seat holes for backrest.

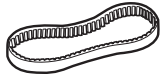


1. Spacer

Install backrest in its proper position.

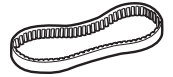
Secure rear arm of backrest using 2 M8 x 30 screws found in shrink pack.

Align front arm of backrest and secure with M8 X 20 screws included in the shrink pack.



PARTS INSTALLATION

DRIVE BELT



Clean pulleys and disk brake with a suitable cleaner before installing drive belt.

Install drive belt in its proper rotation direction, arrow pointing at front.



LIQUIDS

OIL INJECTION PUMP BLEEDING

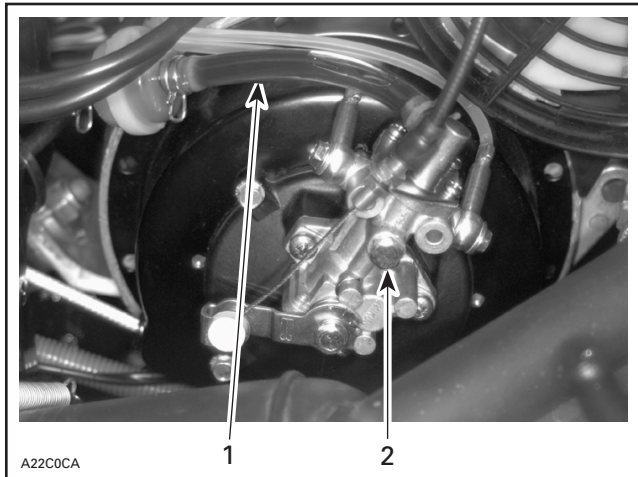


All Models

To assure additional protection during the initial engine break-in, 500 ml (18 imp. oz.) of BOMBARDIER-ROTAX injection oil (P/N 413 802 900) should be added to fuel for the first full filling of fuel tank.

Skandic WT

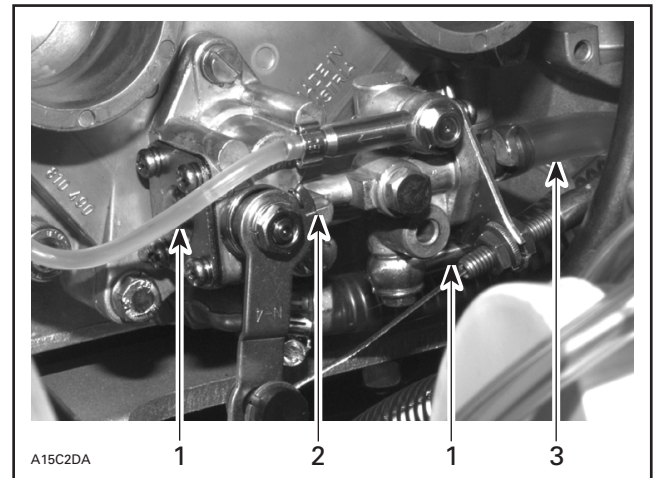
Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.



1. No air in main line
2. Bleeder screw

Bleed the small oil lines between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

Skandic WT LC



1. Small oil line
2. Marks aligned (lever must align 0 to +1 mm (0 to +.039 in))
3. Main oil line

Move carburetors aside.

Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment; lever must align 0 to +1 mm (0 to +.039 in) when throttle lever is activated just enough to take all cable free-play.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

AIR SILENCER

Install air silencer aligning with 2 bottom holes and properly inserting carburetors into rubber grommets.

NOTE: Make sure grommets are properly positioned; the use of a mirror could be ideal to see positioning all around underneath. Also assure that control cables are properly routed and that they are not binding.

SNOW GUARD

Install snow guard using rivets supplied in its packaging.



LIQUIDS BRAKE FLUID LEVEL



All Models

Check brake fluid in reservoir for proper level.
Add recommended brake fluid as required.

▼ CAUTION

Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partially filled bottle of brake fluid.



1. Fluid level window



LIQUIDS ENGINE COOLANT LEVEL



Skandic WT LC Only

With vehicle on a flat surface and engine cold, remove pressure cap and check coolant level. Add coolant as needed.

▼ CAUTION

To prevent rust formation or freezing conditions, always use ethylene-glycol antifreeze containing corrosion inhibitors specially recommended for aluminum engines. Always use 50% antifreeze and 50% water for this particular type of snowmobile.

Reinstall pressure cap.

Run engine until thermostat opens then stop engine.

Check hoses for leaks.

When engine has completely cooled down, recheck coolant level and top up if necessary.



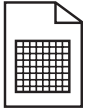
ADJUSTMENTS TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.







TECHNICAL DATA







The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicle used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODEL		SKANDIC WT		
	Engine Type		ROTAX 503		
	Maximum HP RPM ① ± 100 RPM		6800		
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	Not Applicable		
	Carburetor Type		2 x VM 34-515	•	
	Main Jet		210		
	Needle Jet		P-4 (159)		
	Pilot Jet		40		
	Needle Identification — Clip Position		6DH2-3		
	Slide Cut-away		2.5		
	Float Adjustment mm (in)		36.5 (1.44)		
	Air Screw Adjustment ± 1/16 turn		1.0	•	
	Idle Speed RPM		1900 ± 200	•	
	Gas Grade/Pump Octane Number (R + M)/2		Regular Unleaded/87		
	Gas/Oil Ratio		Oil Injection		
	Ignition Timing BTDC ② mm (in)		1.66 (.065)		
	Trigger Coil Air Gap mm (in)		0.45 - 0.55 (.018 - .022)		
	Gear Ratio		1 st gear 1:3.38 2 nd gear 1:2.06 R gear 1:3.88	•	
	Engagement Speed ± 100 RPM		3000	•	
	Drive Pulley Calibration Screw Position		2	•	
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	32.3 (1-17/64)	•
		X	± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	•
	Offset	Y		Dimension Y must exceed X from 0.75 mm (.03 in) to 2.25 mm (.09 in)	
		Drive Belt Adjustment			
	Deflection mm (in)		32 (1-1/4)		
	Force ③ kg (lbf)		11.34 (25)		
	Driven Pulley Preload kg (lbf)		7.0 +1/-0 (15.4 ± 1.5)	•	
Drive Chain Tension		Not Applicable			
Track Adjustment	Deflection mm (in)		40 to 50 (1.5 to 1.9)		
	Force Kg (lbf)		7.3 (16.1)		

NOTE: See end of specifications for foot notes.

	MODEL		SKANDIC WT LC		
	Engine Type		494		
	Maximum HP RPM ①	RPM ±100	7000		
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 924 509 148° 52°		
	Carburetor Type		PTO VM 34-520 MAG VM 34-519		
	Main Jet		PTO 250 MAG 240		
	Needle Jet		P-2 (159)		
	Pilot Jet		40		
	Needle Identification — Clip Position		6DH4-2		
	Slide Cut-away		2.5		
	Float Adjustment		± 1 mm (± .040 in)	36.5 (1.437)	
	Air Screw Adjustment		± 1/16 turn	1.0	
	Idle Speed RPM		RPM	1900 ± 200	
	Gas Grade/Octane Number		(R + M)/2	Regular Unleaded/87	
	Gas/Oil Ratio			Oil Injection	
	Ignition Timing BTDC ②		mm (in)	1.81 (.071)	
	Trigger Coil Air Gap		mm (in)	0.55-1.45 (.022 - .057)	
	Gear Ratio		1 st gear 1:3.38 2 nd gear 1:1.86 R gear 1:3.88		
	Engagement Speed		RPM	3000	
	Drive Pulley Calibration Screw Position		4		
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	32.3 (1-17/64)	
		X	± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	
	Offset	Y	Dimension Y must exceed X from .75 mm (.03 in) to 2.25 mm (.09 in)		
		Drive Belt Adjustment		Deflection mm (in)	32 (1-1/4)
			Force ③ kg (lbf)	11.34 (25)	
	Driven Pulley Preload		kg (lbf)	7.0 +1/-0 (15.4 ± 1.5)	
	Drive Chain Tension		Not Applicable		
Track Adjustment	Deflection		mm (in)		
	40 to 50 (1.5 to 1.9) with a 7.3 kg (16 lb) downward pull				

① Engine speed at which maximum power is achieved.

② At 6000 RPM (engine cold) with headlamp turned on.

③ Force applied midway between pulleys to obtain specified deflection.

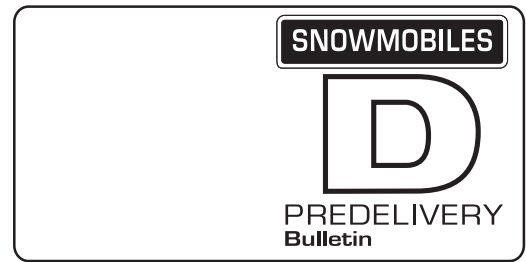
Please route to :

Init.

Service

Sales

Parts



No. **99-11**
REVISION 1 ←

Date: September 10, 1998

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Formula* Z 500 Formula* Z 583 Formula* Z 670	1388/1389 1391/1392 1393/1394	All
1999	Europe: Formula* Z 500 Formula* Z 670	1458 1395	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

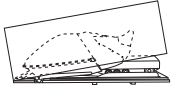
◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

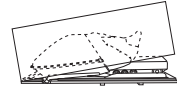
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There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

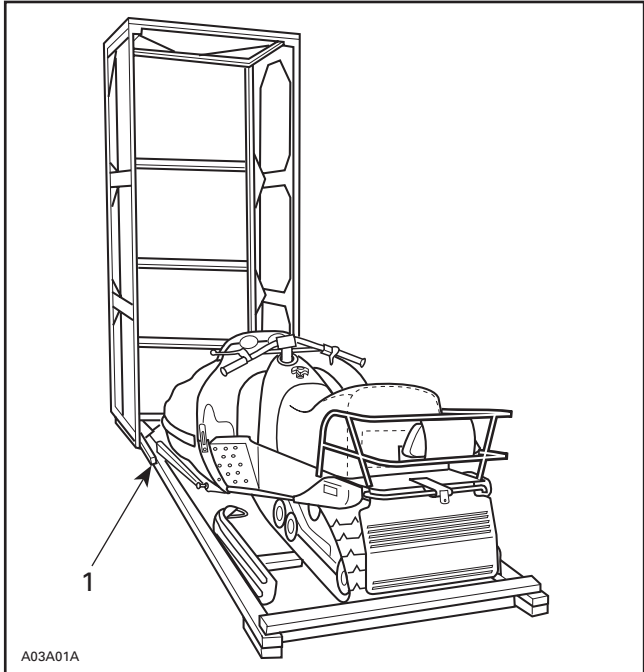
Carefully lay the crate on its bottom.

▼ CAUTION

Allowing the crate to drop may cause serious damage to the vehicle.

Remove all screws retaining cover to vehicle base. Tip cover toward front of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.

NOTE: On some models, snow guard may interfere with crate cover, as shown in the following photo. Push on snow guard when lifting cover.



1. Notch

Detach parts to be installed (e.g. skis, windshield) from the vehicle and its base.

Cut locking ties retaining windshield. Slowly pull out metal strip, if equipped.

When this metal strip is under the seat loosen 2 or 4 nuts retaining the seat before pulling out the metal strip.

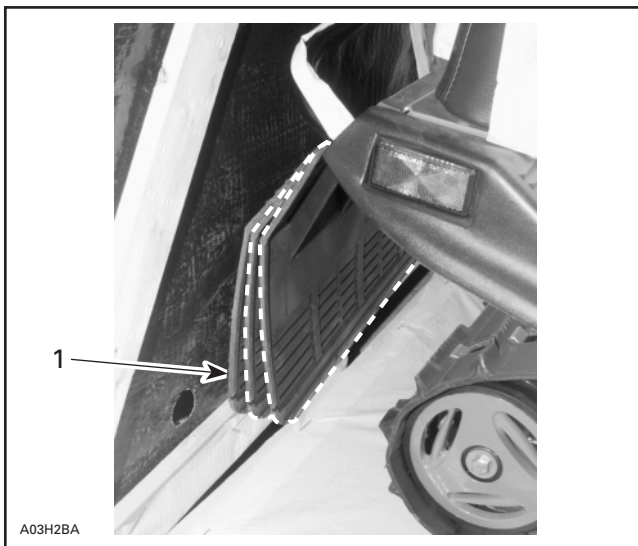
▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

Detach ski legs from crate. Keep ski leg bolts and slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

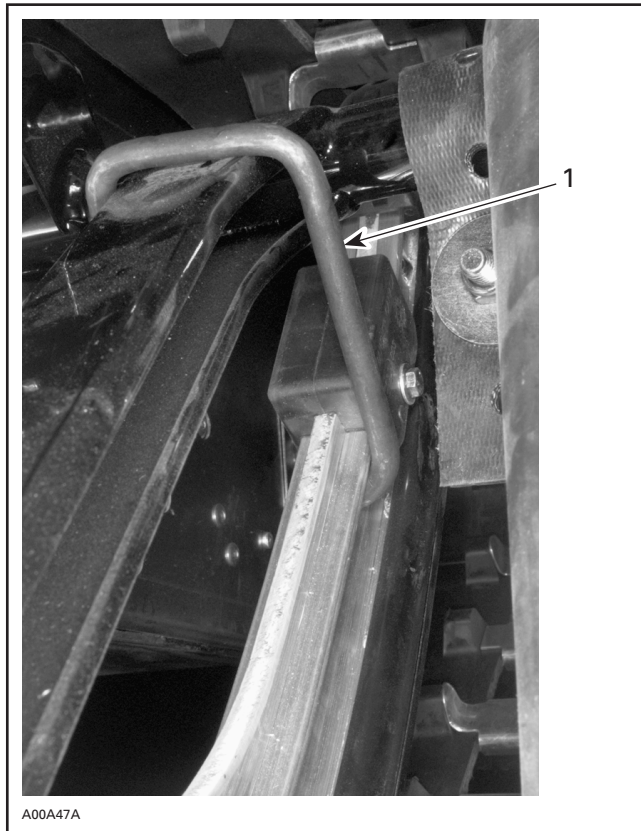
Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.



FROM OUTSIDE CRATE PUSH ON SNOW GUARD TO ALLOW COVER TO LIFT WITHOUT DAMAGING SNOW GUARD

1. Snow guard interfering with crate cover

FRONT HOOK REMOVAL



TYPICAL

1. Hook to be removed

Procedure

Apply parking brake.

Lift rear of vehicle so that a block or a box can be positioned under front wheel, as shown on the next photo.



EDGE OF BOX ALIGNED WITH WHEEL AXIS

Cut locking tie retaining front hook.

From left side of vehicle, apply pressure onto rear bumper with right hand, as shown on the following photo.

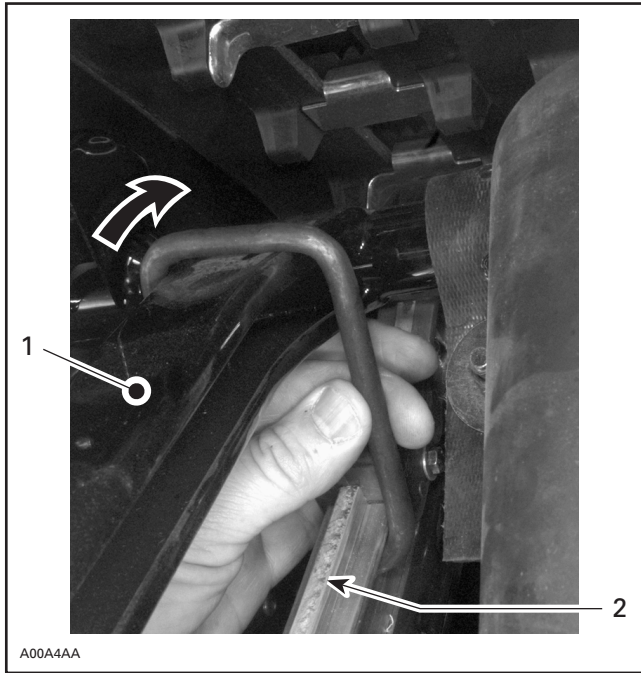


TYPICAL

Using left hand, remove hook from suspension, as shown on the following photo.

◆ WARNING

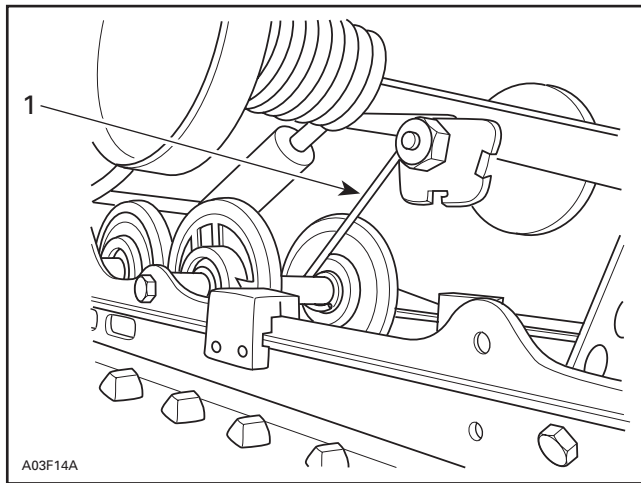
Before removing hook always verify that vehicle is properly supported and that parking brake is applied.



TYPICAL — REMOVE HOOK

- 1. Front arm
- 2. Runner

REAR HOOK REMOVAL



TYPICAL

- 1. Hook to be removed

Procedure

Lift front of vehicle to position bumper 35 to 40 inches upward.

Lean on vehicle seat to apply pressure on rear suspension and remove hook from rear portion of suspension, as shown on the next photo.

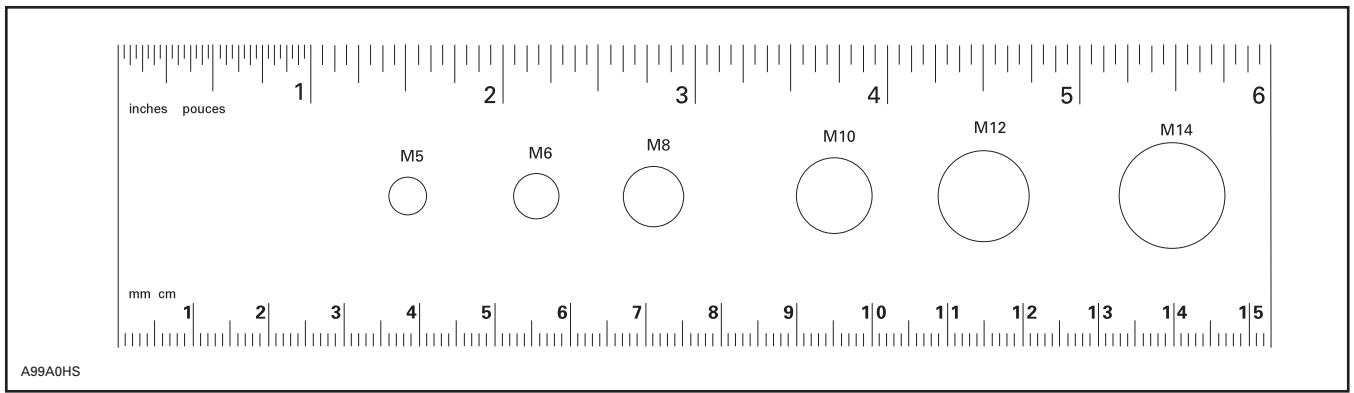


Remove hook on the rear portion of the suspension

◆ WARNING

Both hooks must be removed to have snowmobile suspension operational.

PREDELIVERY KIT P/N	MODELS
549 010 763	Formula Z 500 Formula Z 583
549 010 738	Formula Z 670



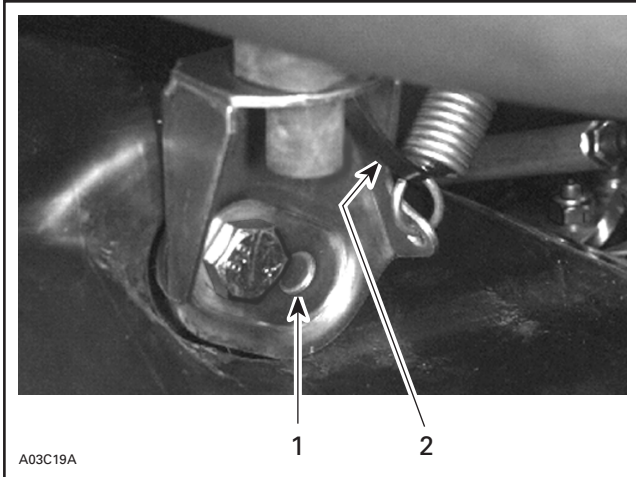
NOTE: This ruler can be helpful to identify fastener length or size.



PARTS INSTALLATION FRONT SUSPENSION



Cut locking tie retaining exhaust spring to exhaust support.



TYPICAL

1. Lug in recess
2. Locking tie

All Models

Lift front of vehicle and block safely.

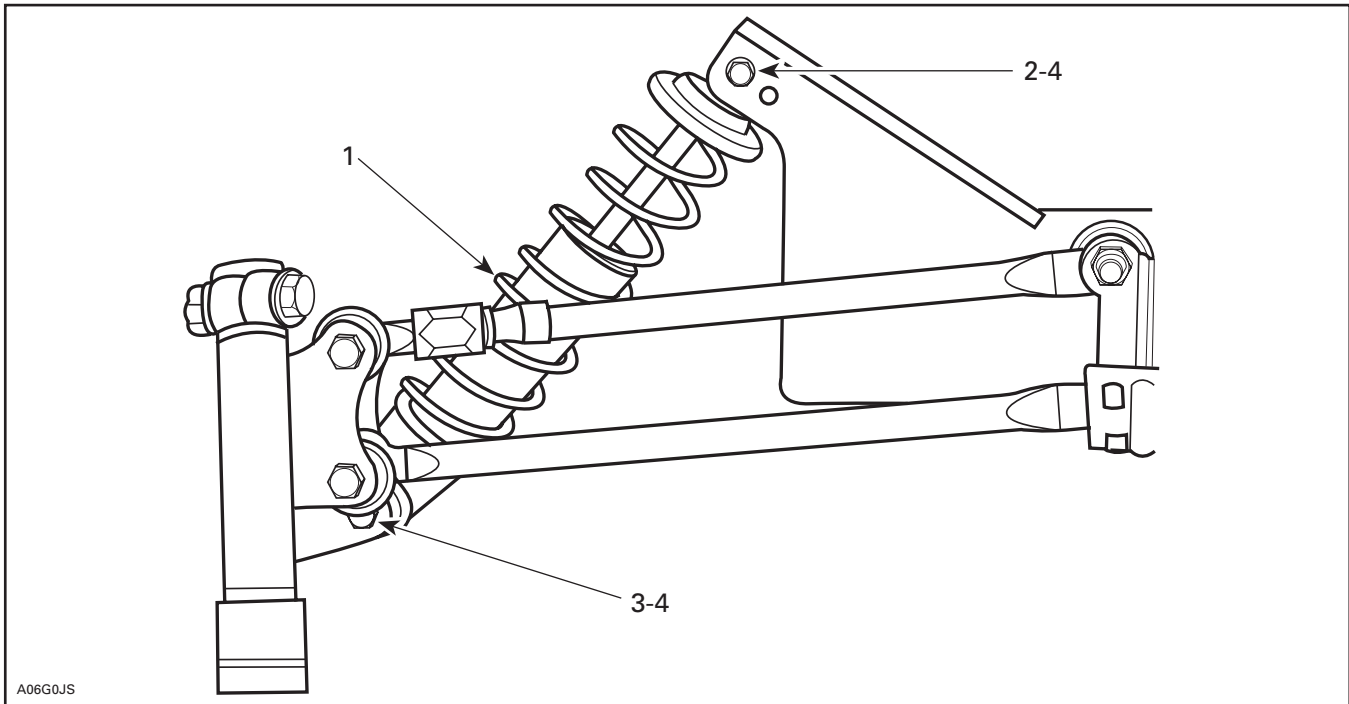
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

Secure shock absorbers to suspension with their adjusting ring at bottom and decal facing outside.

NOTE: Position top screw head toward front and bottom screw head toward rear.

Properly position exhaust support on chassis making sure that its lug rests in chassis recess. Hook up exhaust spring.

NOTE: On models equipped with a 5 holes exhaust support, hook up exhaust spring on mid-hole.



TYPICAL — RH SIDE SHOWN

1. Shock absorber (2) (engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 006 065) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 005 565) (on suspension)
4. Elastic flanged nut M10 x 1.5 (2) (P/N 228 501 045) (section no. 4). Torque to 48 N•m (35 lbf•ft)

REAR SUSPENSION

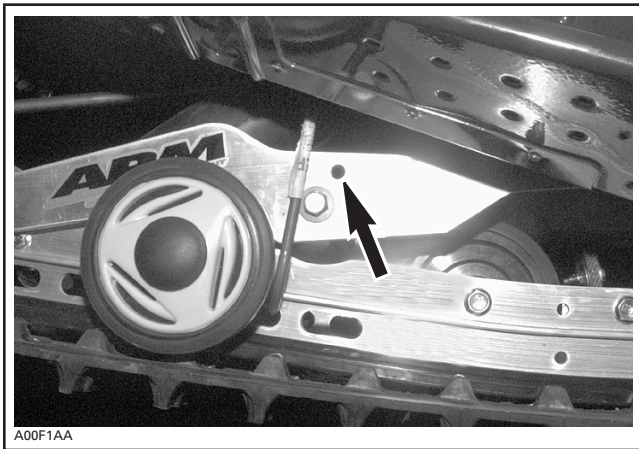
Formula Z 670 Only

Included in *Predelivery Kit* are both sides front runner rubber stoppers with their respective hexagonal screw, flat washers and elastic stop nut.

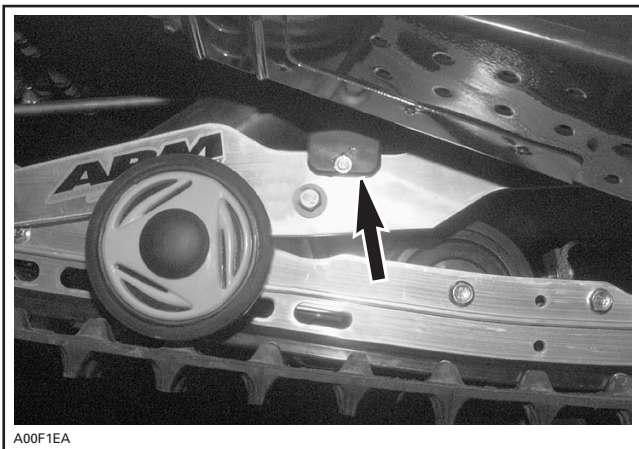
Install both stoppers, screw head outside with a flat washer on each side of stopper and elastic stop nut on the inside.

➡ Rubber Stopper Installation

Install rubber stoppers in hole beside center wheels, using M5 x 40 hexagonal screws (P/N 222 054 065), flat washers (P/N 391 301 700) and M5 hexagonal flanged nut (P/N 228 551 045).



INSTALL RUBBER STOPPER (P/N 570 067 600) HERE AFTER HOOK REMOVAL



INSTALLATION COMPLETED



PARTS INSTALLATION SKIS



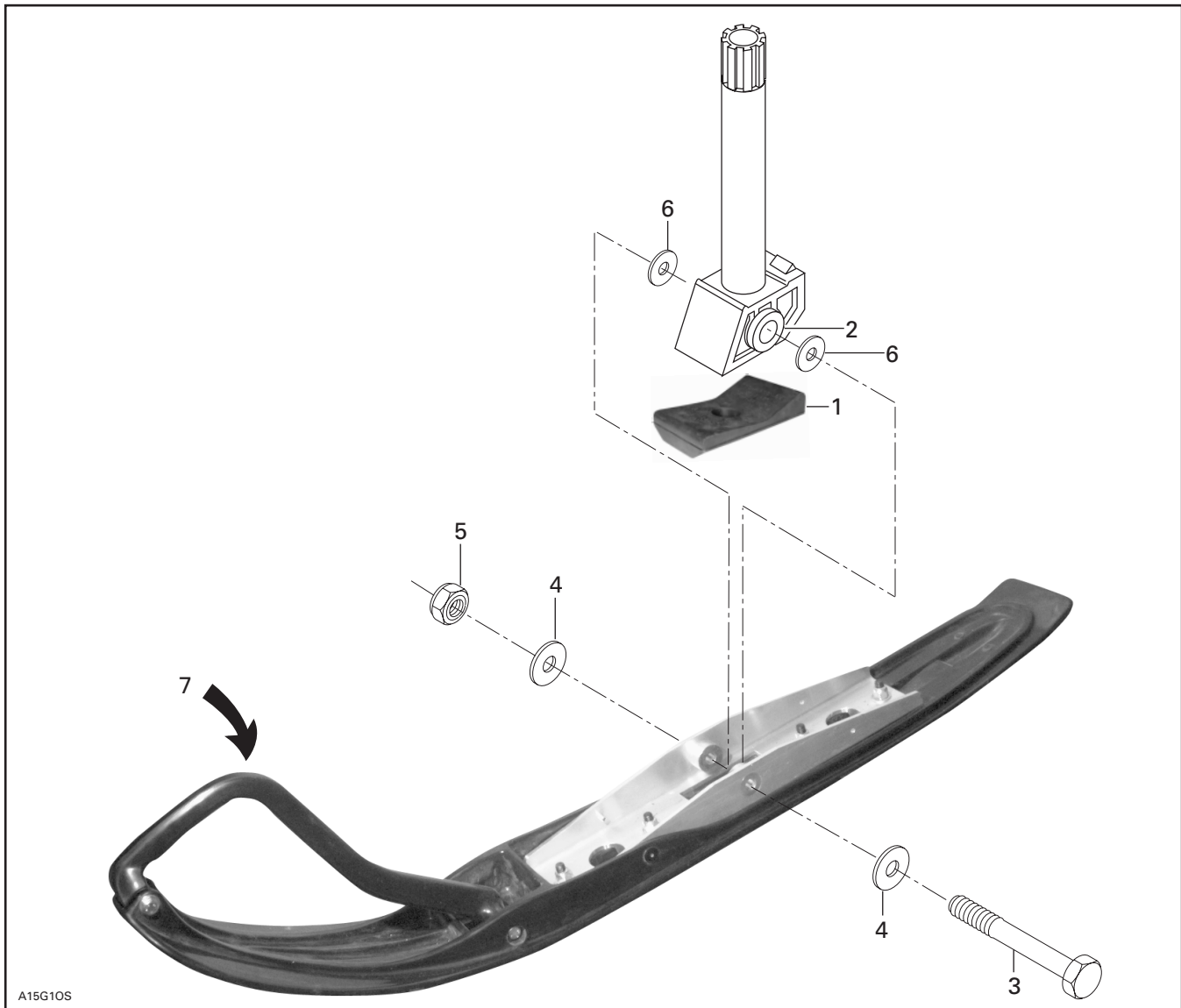
All Models

Ensure ski leg slider cushions are still in ski leg.

Install skis on vehicle.

NOTE: Use small washers (P/N 732 900 048) to fill gap between ski leg slider cushions and ski. If both washers are required install washer on each side of ski leg. If only one washer is required, install washer from inside snowmobile.

Replace vehicle on ground.



LEFT SIDE SHOWN

1. Ski stopper (2) (section no. 8) "AVANT" toward front
2. Slider cushion (4) (ski leg)
3. Bolt M12 (2) (ski leg)
4. Washer (4) (P/N 506 136 400) (section no. 8). Install large washer
5. Elastic flanged nut M12 x 1.75 (2) (P/N 228 521 045) (section no. 8). Torque to 40 N•m (30 lbf•ft)
6. Washer (4) (P/N 732 900 048) (section no. 8). Insert small washer, as needed, to fill gap between ski leg slider cushions and ski
7. Twist ski to ease bolt installation



PARTS INSTALLATION STEERING PAD



All Models

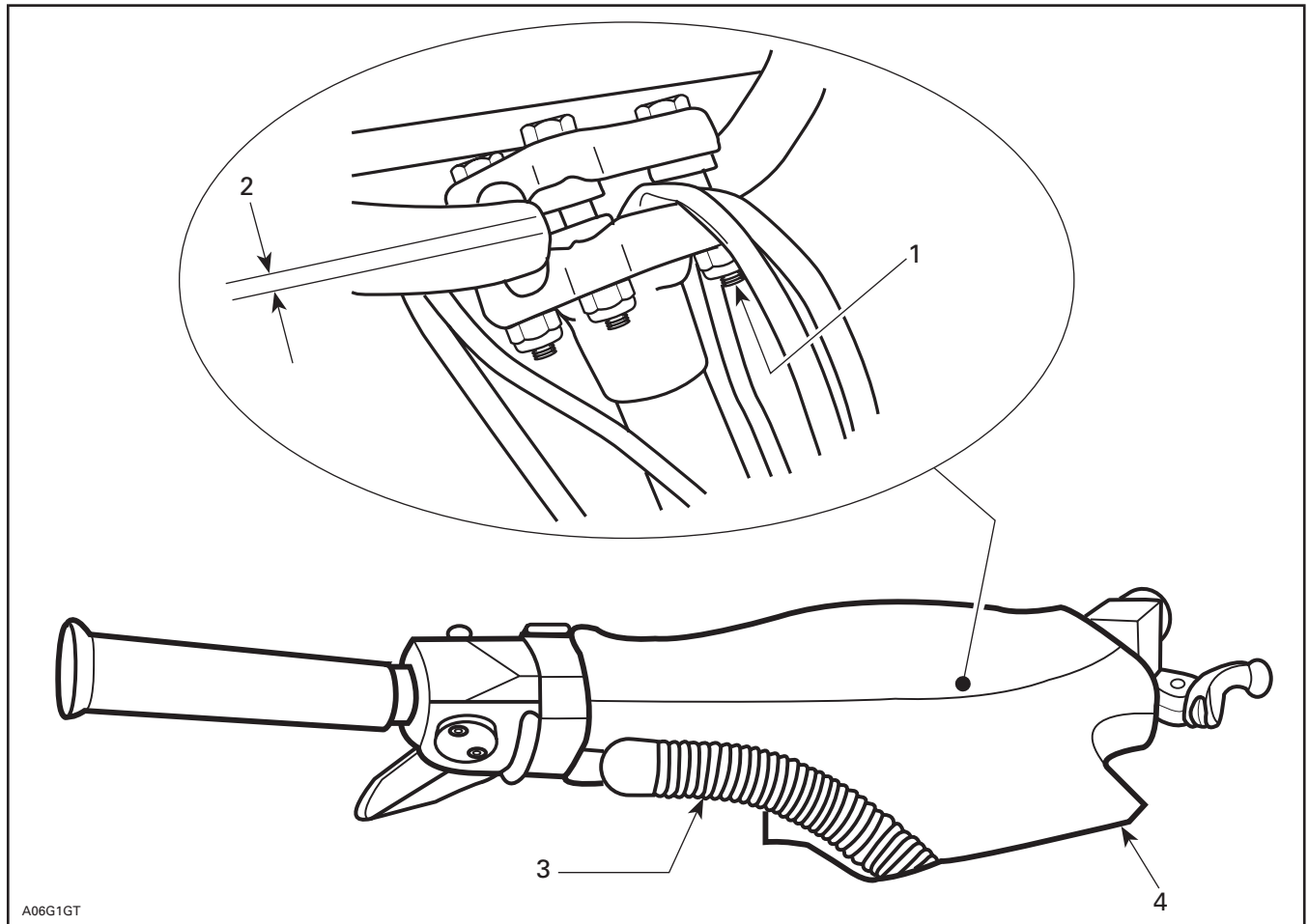
Adjust handlebar temporarily and tighten nuts loosely for now.

Loosen, at least 3 turns, Allen screw of throttle and brake handle housings.

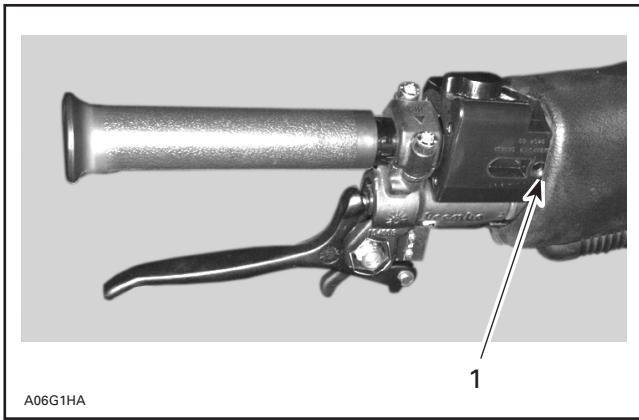
Install steering pad temporarily, and adjust for proper fit with console.

Remove steering pad and torque nuts from 21 to 28 N•m (16 to 20 lbf•ft).

Reinstall steering pad, adjust and tighten throttle and brake handle housings.

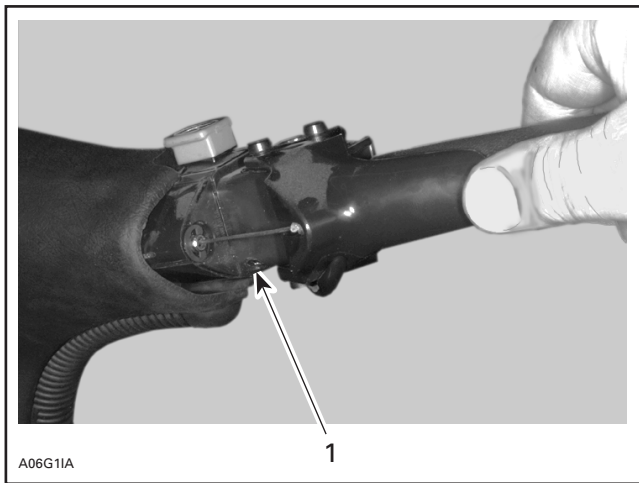


1. Torque from 21 to 28 N•m (16 to 20 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (P/N 572 072 400) (section no. 3 or 5)
4. Steering pad (engine compartment)



BRAKE HANDLE HOUSING

1. Tighten set screw to **2 N•m (18 lbf•in)**



THROTTLE HANDLE HOUSING

1. Tighten set screw to **2 N•m (18 lbf•in)**



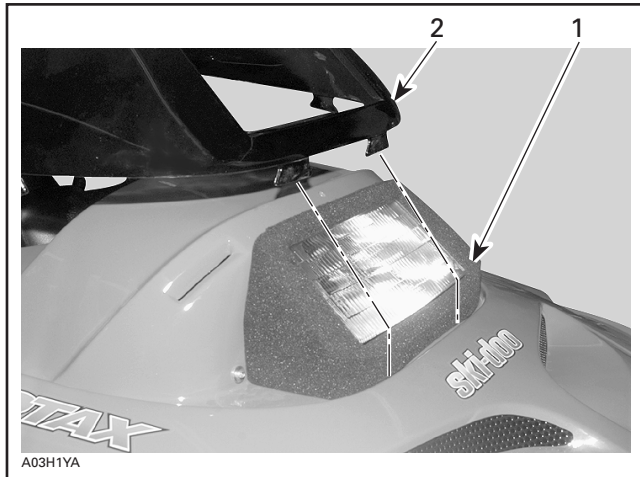
PARTS INSTALLATION WINDSHIELD



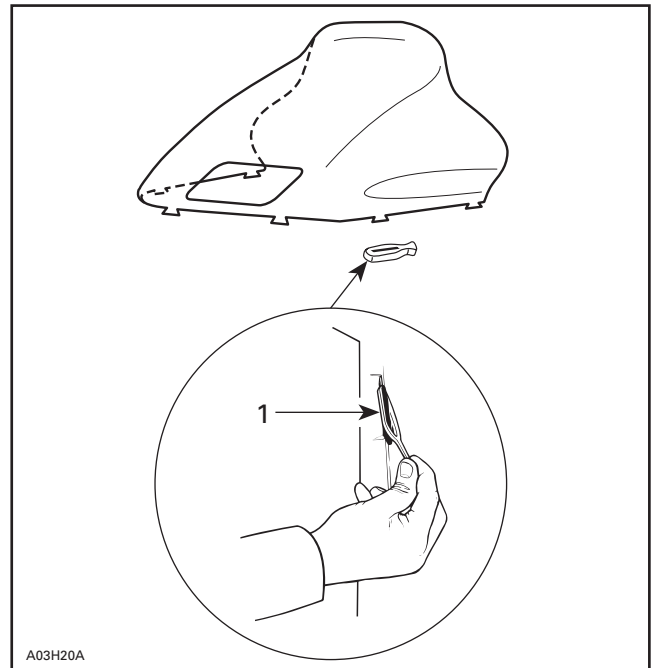
All Models

Install windshield on dashboard.

NOTE: Make sure that protective foam is properly positioned around headlight before installing windshield.



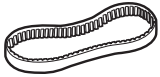
1. Protective foam
2. Install windshield on dashboard



1. Latch (6) (P/N 570 023 800) (section no. 4 or 6)



WINDSHIELD INSTALLED ON DASHBOARD



PARTS INSTALLATION DRIVE BELT



Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 708 200) before installing drive belt.



LIQUIDS OIL INJECTION PUMP BLEEDING



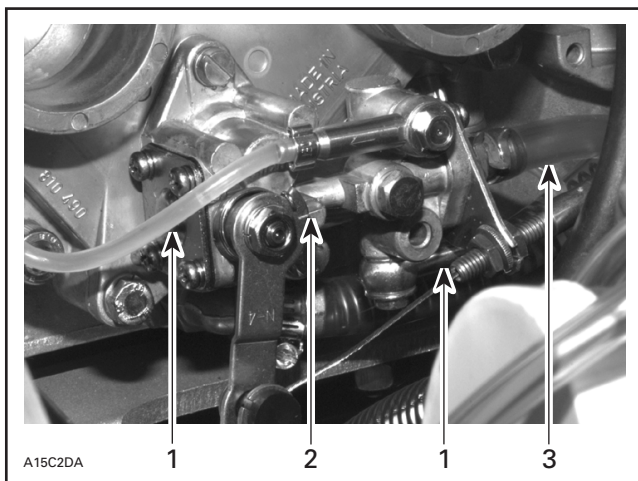
BREAK-IN PERIOD SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz.) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 - 12 x 1 L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

Remove air silencer and move carburetors aside. Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.

Check also for proper oil lever adjustment. Lever mark must align 1 to 2 mm (.039 to .079 in) above mark on pump body when throttle lever is activated just enough to take all cable play.

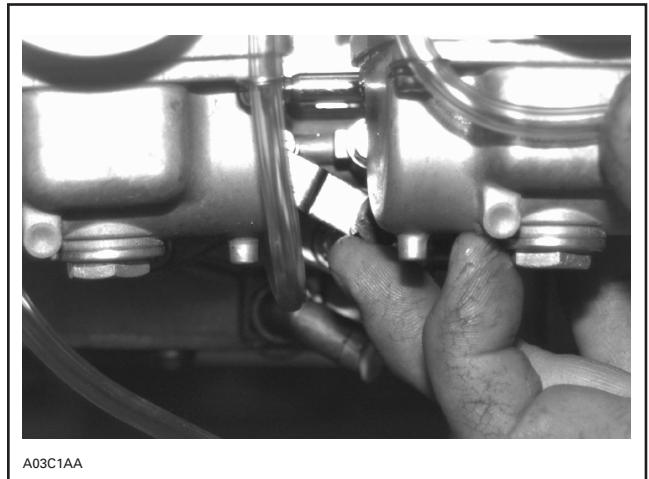


1. Small oil line
2. Lever mark 1 to 2 mm (.039 to .079 in) above pump body mark
3. Main oil line

Reinstall all parts except air silencer.

Bleed the small oil line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.

NOTE: If the air silencer has been reinstalled, make a J hook out of mechanical wire to lift the lever.



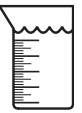
A03C1AA

TYPICAL — ENGINE AT IDLE

Reinstall air silencer.



LIQUIDS BRAKE FLUID LEVEL



Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

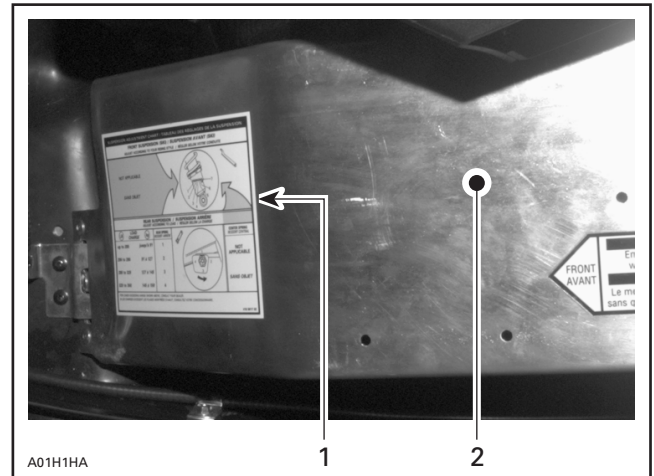
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



ADJUSTMENTS SUSPENSION



Rear suspension is calibrated at factory. At pre-delivery, mechanics should perform suspension adjustments according to customer riding style and vehicle load as described on suspension adjustment chart which is located on pulley guard.



1. Adjustment chart
2. Pulley guard

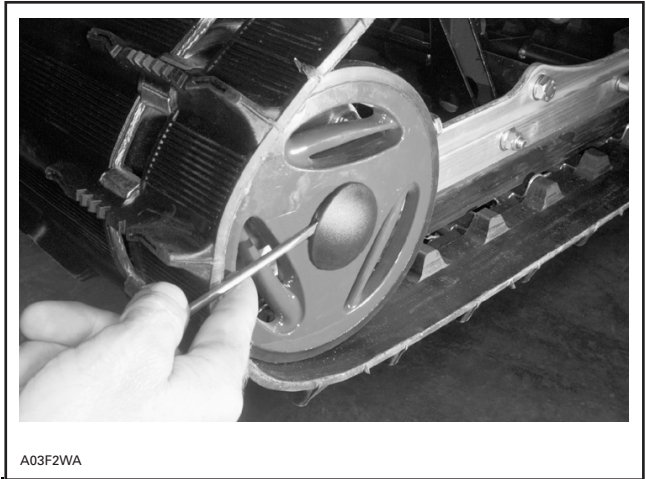


ADJUSTMENT TRACK



Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

Idler wheel caps are found in the *Predelivery Kit*, make sure they are installed after track setting.



ADJUSTMENT DRIVEN PULLEY



It is usual to experience spring settings during break-in period of a new spring. The factory spring preload is slightly higher to compensate for springs settings. Specifications in TECHNICAL DATA are applicable after break-in period (about 10 hours of use).


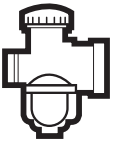




TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1998 model.

	MODELS		FORMULA Z 500	FORMULA Z 583
	Engine Type		494	583
	Maximum HP RPM ① ± 100 RPM		7800	7900
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 924 509 135°/ 64°	420 924 502 140°/ 71°
	Carburetor Type		PTO VM 38 - 408 MAG VM 38 - 409	PTO VM40 - 105 • MAG VM 40 - 106 •
	Main Jet		PTO 300/MAG 280	PTO 280/MAG 260
	Needle Jet		Q-3 (480)	AA-2 (224)
	Pilot Jet		50	60
	Needle Identification — Clip Position		6DGY9 - 2	7ECY1 - 3
	Slide Cut-Away		2.5	2.5
	Float Adjustment ± 1 mm (± 0.039 in)		18.1 (.71)	18.1 (.71)
	Air Screw Adjustment ± 1/16 turn		2	2
	Idle Speed RPM ± 200 RPM		1800	1800
	Gas Grade Octane Number (R + M)/2		Regular Unleaded 87	Regular Unleaded 87
	Gas/Oil Ratio		Oil Injection	Oil Injection
	Ignition Timing BTDC ② mm (in)		1.81 (.071)	1.75 (.069)
	Trigger Coil Air-Gap mm (in)		0.55 - 1.45 (.022 - .057)	0.55 - 1.45 (.022 - .057)
	Gear Ratio teeth		23/43	25/43
	Engagement Speed ± 100 RPM		4100	4100
	Drive Pulley Calibration Screw Position		2	3
	Pulley Distance	Z (+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (+ 0/- 1) (21/32 (+ 0/- .04))	
	Offset	X ± 0.4 mm (± 1/64 in)	35.5 (± .05) (1.398 (± .002)) •	
		Y	Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
	Drive Belt Adjustment	Deflection mm (in)	32 (1-1/4)	
		Force ③ kg (lbf)	11.34 (25)	
	Driven Pulley Preload ± 0.7 kg (± 1.5 lbf)		7.0 (15.43)	
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection	30 to 35 mm (1-3/16 to 1-3/8 in) with a 7.3 kg (16 lb) downward pull	30 to 35 mm (1-3/16 to 1-3/8 in) with a 7.3 kg (16 lb) downward pull •	

① Engine speed at which maximum power is achieved.

② 17° at 6000 RPM (engine cold) with headlight turned on.

③ Force applied midway between pulleys to obtain specified deflection.


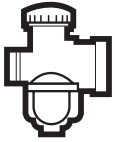


BTDC: Before Top Dead Center

ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

A dot (•) on right indicates changes from 1998 model.

	MODEL		FORMULA Z 670		
	Engine Type		670		
	Maximum HP RPM ① ± 100 RPM		7700		
	Rotary Valve P/N Opening (BTDC)/ Closing (ATDC)		420 924 500 144°/ 72°		
	Carburetor Type		PTO VM 40 - 115	MAG VM 40 - 116 •	
	Main Jet		PTO 310	MAG 290	
	Needle Jet		AA-3 (224)		
	Pilot Jet		60		
	Needle Identification — Clip Position		7EDY1		
	Slide Cut-Away		2.5		
	Float Adjustment ± 1 mm (± 0.039 in)		18.1 (.71)		
	Air Screw Adjustment ± 1/16 turn		2.25		
	Idle Speed RPM ± 200 RPM		1700		
	Gas Grade Pump Octane Number (R + M)/2		Regular Unleaded 87		
	Gas/Oil Ratio		Oil Injection		
	Ignition Timing BTDC ② mm (in)		1.93 (.076)		
	Trigger Coil Air-Gap mm (in)		0.55 - 1.45 (.022 - .057)		
	Gear Ratio teeth		25/43 •		
	Engagement Speed ± 100 RPM		3800		
	Drive Pulley Calibration Screw Position		3		
	Pulley Distance	Z	(+ 0, - 1) mm ((+ 0, - 1/32) in)	16.5 (+ 0/- 1) (21/32 (+ 0/- .04)) •	
		X	± 0.4 mm (± 1/64 in)	35.5 (±.05) (1.398 (±.002)) •	
	Offset	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)	
		Drive Belt Adjustment	Deflection	± .5 mm (± 0.020 in)	32 (1-1/4)
	Force ③		kg (lbf)	11.34 (25)	
	Driven Pulley Preload ± 0.7 kg (± 1.5 lbf)		7.0 (15.43)		
Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation			
Track Adjustment	Deflection	30 to 35 mm (1-3/16 - 1-3/8 in) with a 7.3 kg (16 lb) downward pull •			

① Engine speed at which maximum power is achieved.

② 17° at 6000 RPM (engine cold) with headlight turned on.

③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center

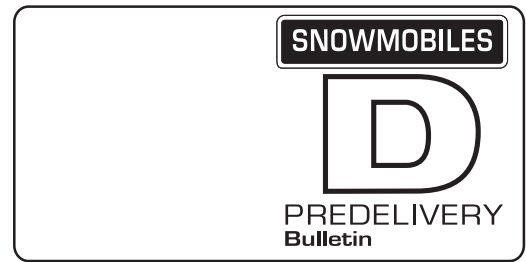
ATDC: After Top Dead Center

PTO: Power Take OFF side

MAG: Magneto side

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-2**
REVISION 2 ←

Date: October 2, 1998

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Tundra* R	3272/3273	All
1999	Tundra*	3274	All

This bulletin must be used in conjunction with the *Predelivery Check List* enclosed in *Operator's Guide* bag. Make sure that *Predelivery Check List* is completed and signed.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>

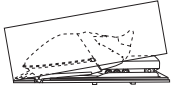
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

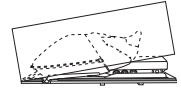
The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your dealer or distributor service representative and/or specific *Shop Manual* sections.

Please complete the *Predelivery Check List* for each snowmobile and return a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook* and *video*.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.



UNCRATING



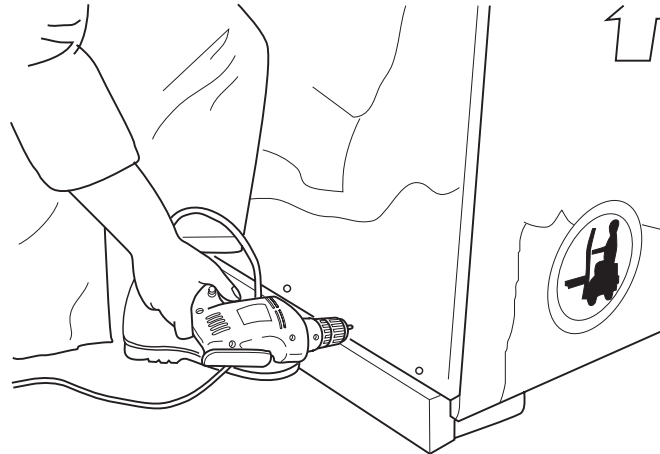
◆ WARNING

Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

▼ CAUTION

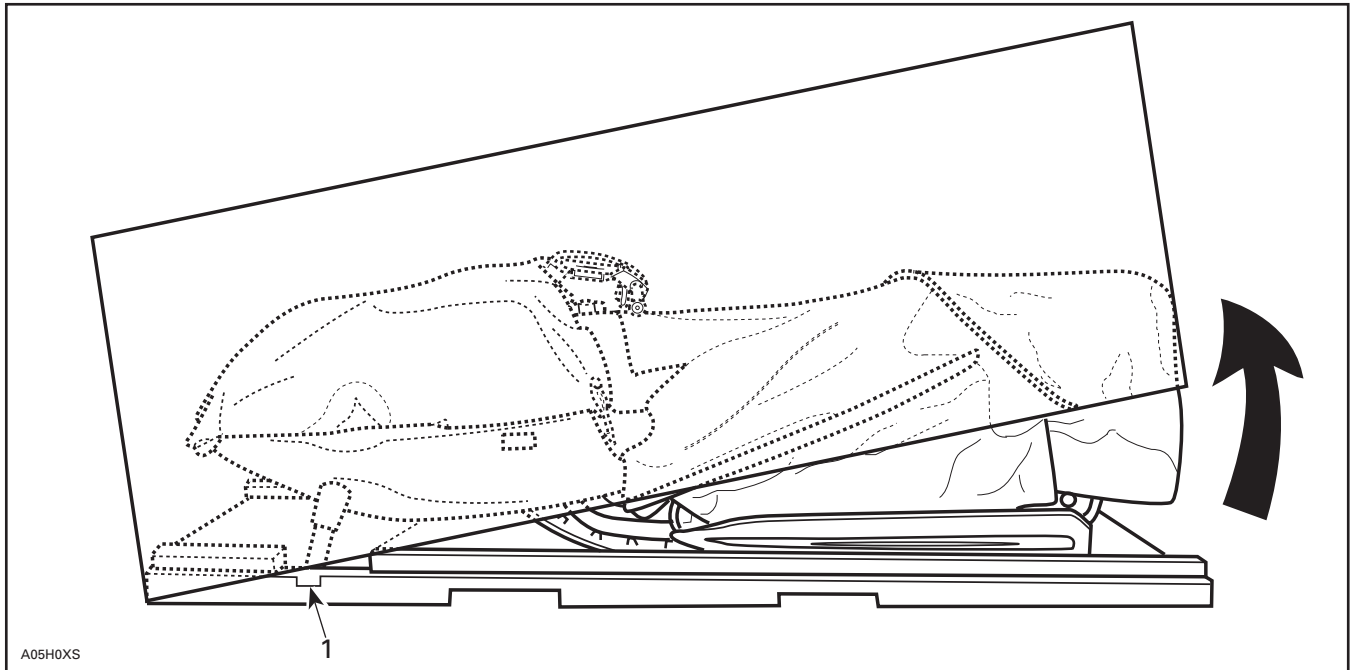
Allowing the crate to drop may cause serious damage to the vehicle.

Using a drill or screwdriver remove all screws retaining crate cover to base.



F02P04S

Tip cover towards front of vehicle. There is a notch in crate base at front.



1. Notch

Detach parts to be installed (e.g. skis, windshield and front bumper) from the vehicle and its base.

NOTE: While removing cover, take care to avoid hitting snow guard and taillight.

▼ CAUTION

Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

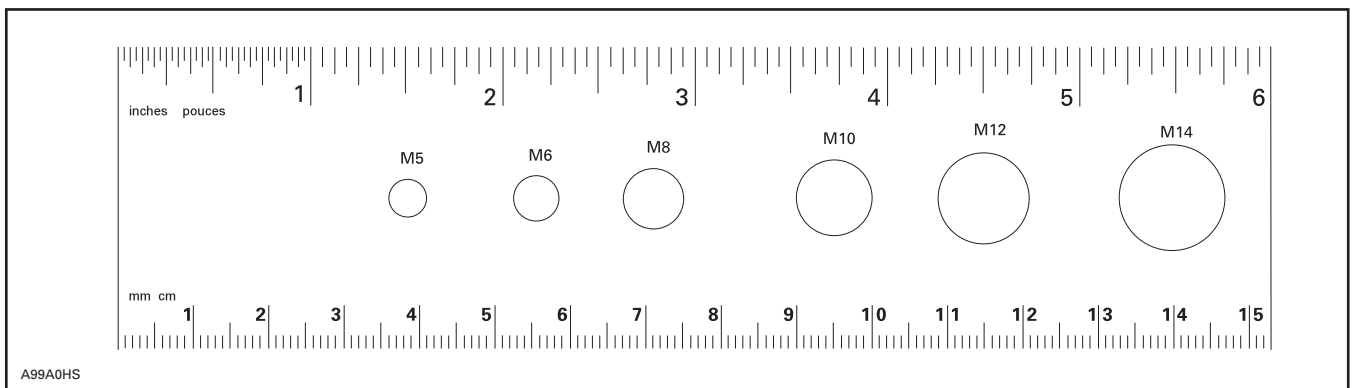
Detach ski legs from crate. Keep ski leg bolts to bolt skis to ski legs. Discard nuts.

Remove vehicle from base.

Remove predelivery kit from tool box in engine compartment.

PREDELIVERY KIT P/N	MODELS
549 010 701	All Tundra* R and Tundra*

NOTE: This ruler can be helpful to identify fastener length/size.

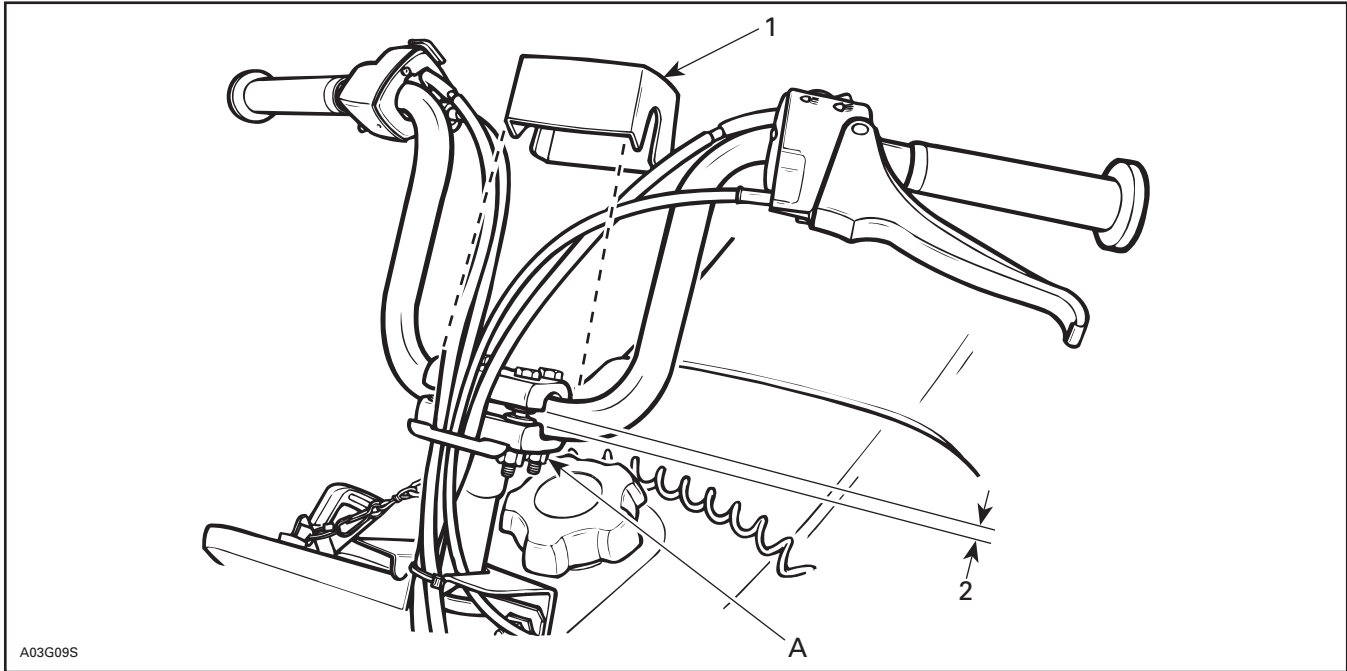




PARTS INSTALLATION STEERING PAD



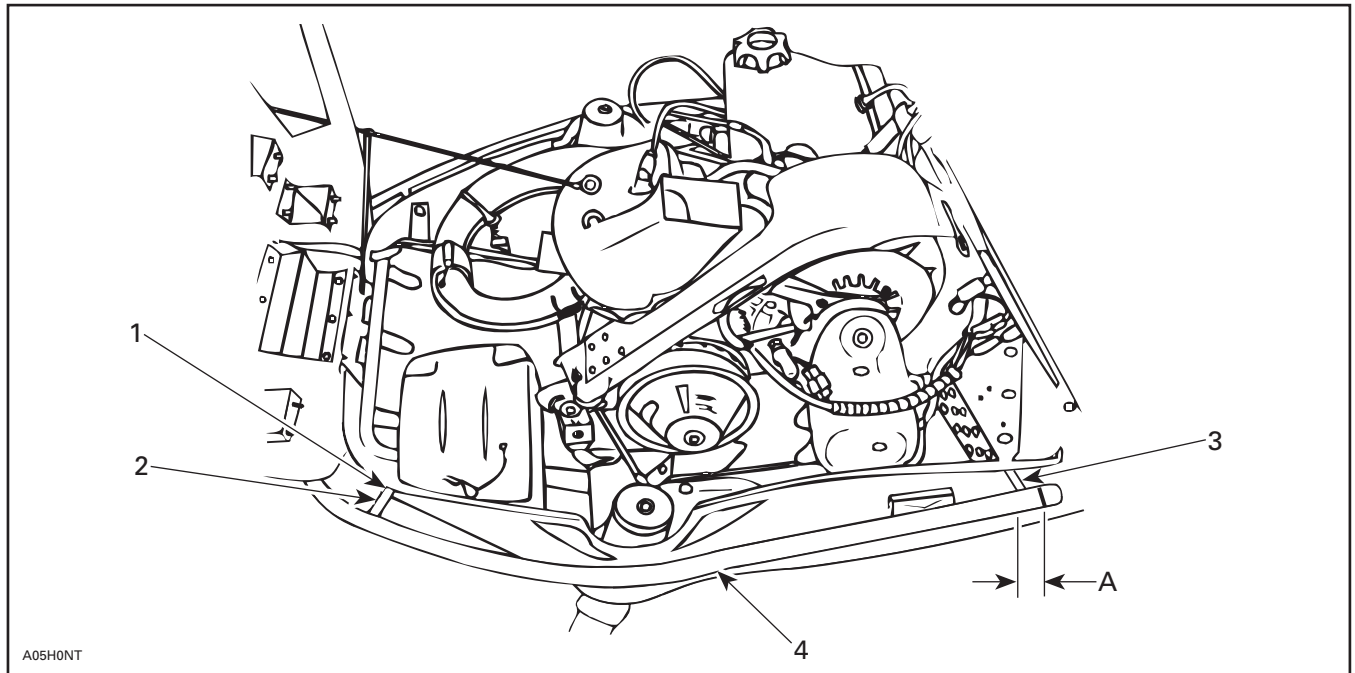
Pull handle bar up and tighten bolts. Torque to 26 N•m (19 lbf•ft).
Install steering cover.



- 1. Steering cover (P/N 572 066 900) (on handlebar)
- 2. Equal gap all around
- A. 26 N•m (19 lbf•ft)



PARTS INSTALLATION FRONT BUMPER



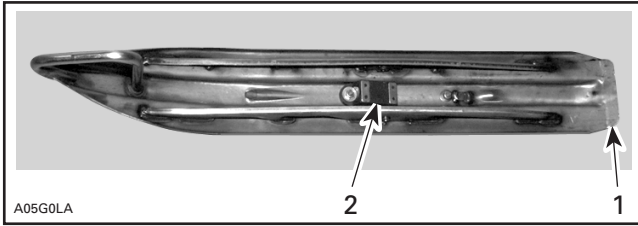
A05H0NT

1. Elastic nut M8 x 1.25 (4) (P/N 228 581 045) (Section no. 2). Torque to 15 N•m (133 lbf•in)
2. Bushing (long) (2) (P/N 517 250 600) (Section no. 3)
3. Bushing (short) (2) (P/N 517 250 700) (Section no. 3)
4. Groove on top
- A. 55 mm (2-1/8 in)



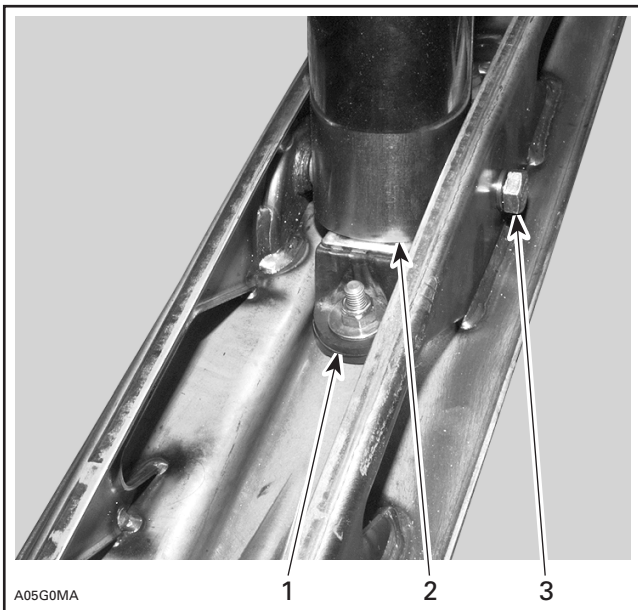
PARTS INSTALLATION

SKIS



NEW TYPE OF SKI

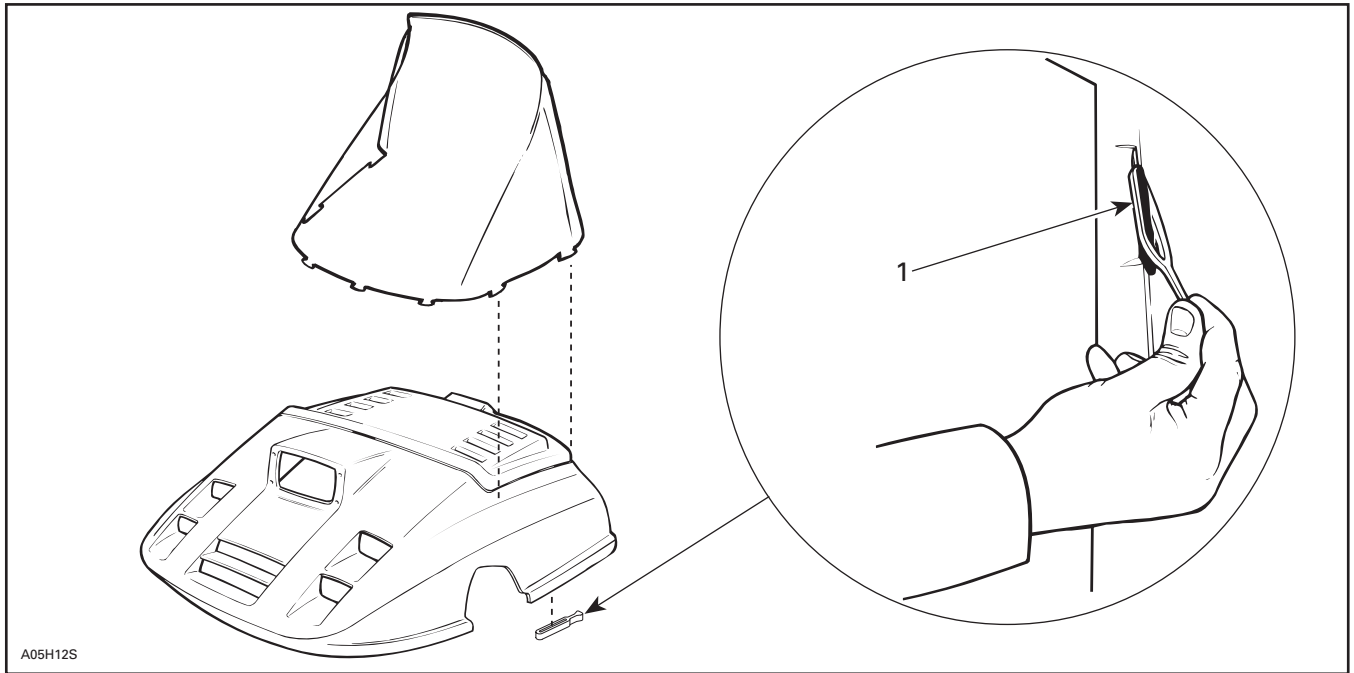
1. Upward Curve at rear
2. Stopper already installed



1. Stopper already installed
2. Align on stopper
3. Secure with bolt and nut (section 1 in Predelivery kit)

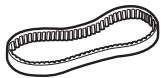


PARTS INSTALLATION WINDSHIELD

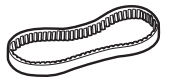


A05H12S

1. Latch (9) (P/N 570 023 800) (Section no. 3)



PARTS INSTALLATION DRIVE BELT



At factory a protective coating for the shipping is applied on pulleys and disc brake. This protective coating must be removed at predelivery.

Clean pulleys and brake disc with a suitable cleaner before installing drive belt.

Make sure the entire surface of the drive belt travel is clean; open the driven pulley as required for cleaning.

▼ CAUTION

Do not install a new drive belt without properly cleaning the pulleys.



LIQUIDS

OIL INJECTION PUMP BLEEDING



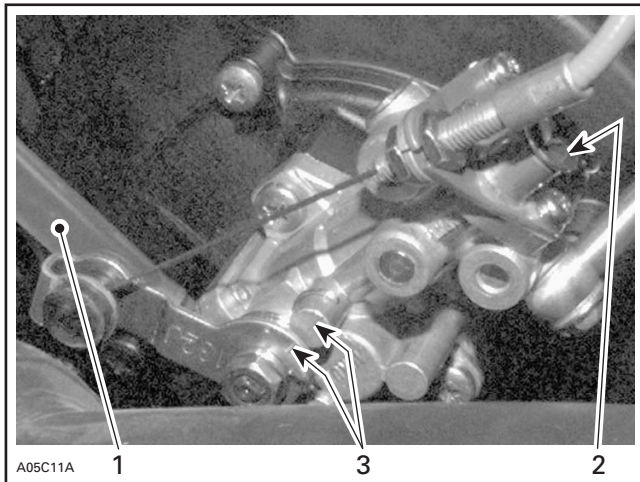
OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER-ROTAX Injection Oil (P/N 413 802 900 — 12 x 1L) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

BLEEDING PROCEDURE

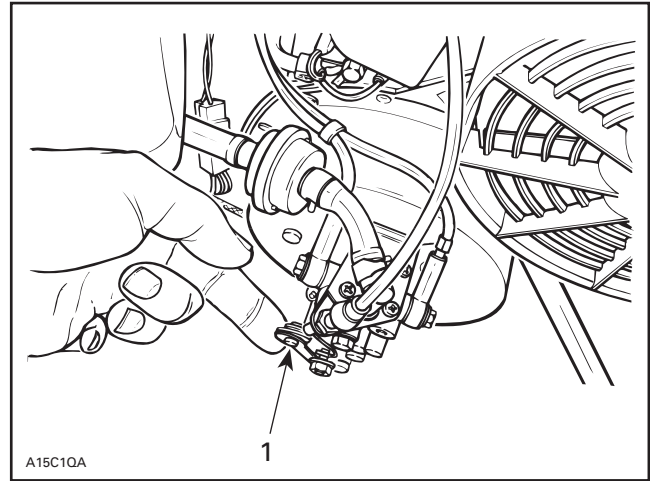
Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line.

➔ Check also for proper oil lever adjustment. Mark on lever should align 1 to 2 mm (.039 to .079 in) above mark on pump body after removing the cable play by activating throttle lever.



1. Main oil line
2. Bleeder screw
3. Alignment marks

Bleed the small line between pump and intake manifold by running engine at idle while holding the pump lever in fully open position.



TYPICAL — ENGINE AT IDLE

1. Fully open position

ABOUT THE ELECTRONIC REVERSE

Tundra R Model

Driving in reverse is obtained by changing the direction of rotation of the engine.

Shifting in reverse is an electronic operation consisting of a control module that will modify the ignition timing of the engine.

When depressing the reverse button, a signal will slow down the engine RPM enough to modify the ignition timing advance in order to reverse the rotation of the crankshaft.

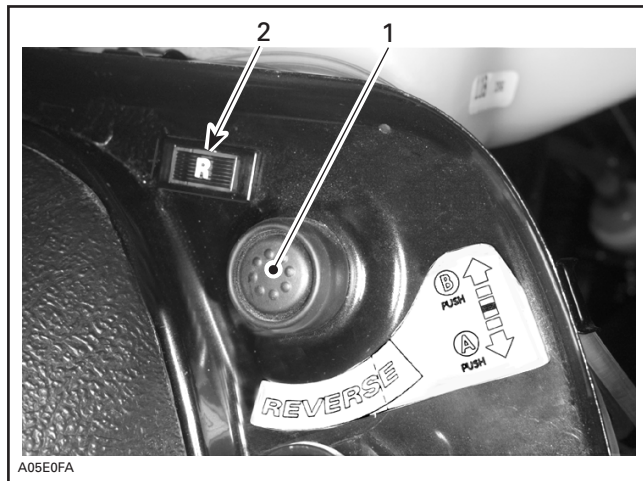
No mechanical action and gear change is involved.

No adjustment is needed.

Shifting Procedure

With the snowmobile completely stopped and engine running at idle, press and release the electronic reverse button. The engine RPM will decrease for a few seconds then the engine will start rotating in the opposite direction and return to its normal idle speed.

NOTE: A reverse indicator lamp will illuminate and a warning buzzer will sound when the snowmobile is engaged in reverse.



TUNDRA R

1. Reverse button
2. Reverse indicator lamp

◆ WARNING

Always remain seated and apply the brake before shifting. Come to a complete stop before pressing the reverse button. Ensure the path behind is clear of obstacles or bystanders. Fast reverse while turning could result in loss of stability.

Apply throttle slowly and evenly. Allow drive pulley to engage then accelerate carefully.

▼ CAUTION

Do not rev the engine when driving in reverse. This may cause the clutch system to operate erratically.

It is recommended to warm up the engine to its normal operating temperature before shifting.

Shifting procedure will take place only when the engine is running.





Engine will automatically shift into forward when starting after stopping or stalling.



TECHNICAL DATA



A dot (•) on right indicates changes from 1998 model.

	MODEL		TUNDRA R	TUNDRA	
	Engine Type		277		
	Maximum HP RPM ①		± 100 RPM 6900		
	Carburetor Type		VM 34 -537	• VM 34 - 529	
	Main Jet		190		
	Needle Jet		O-8 (159)		
	Pilot Jet		40		
	Needle Identification — Clip Position		6DH4-2		
	Slide Cut-away		2.5		
	Float Adjustment		± 1 mm (± .04 in)	23.9 (.94)	
	Air Screw Adjustment		± 1/16 turn 1		
	Idle Speed		± 200 RPM 1650	• 1200	
	Gas Grade Octane Number ②		Regular Unleaded (R + M)/2 87		
	Gas/Oil Ratio		Oil injection		
	Ignition Timing BTDC ③		mm (in) 3.04 (.12)	1.62 (0.06) •	
	Engagement Speed		± 100 RPM 3100		
	Pulley Distance	Z	(+ 0, - 1) mm ((+ 0, - 1/32) in)	37.0 (1-29/64)	
		Offset	X	± 0.4 mm (± 1/64 in)	36.0 (1-27/64)
	Y		Dimension Y must exceed X by up to 1.5 mm (1/16 in)		
	Drive Belt Adjustment	Deflection	± 5 mm (± 13/64 in)	32 (1-1/4)	
		Force ④	kg (lbf)	6.8 (15)	
	Driven Pulley Preload		± 0.7 kg (± 1.5 lbf)	0.00	3.60 (7.94)
	Drive Chain Tension		Automatic (Spring Loaded)		
Track Adjustment	Deflection ⑤	mm (in)	35 to 40 (1.378 - 1.575)		

① Engine speed at which maximum power is achieved.

② In most service station pump octane number corresponds to (R + M)/2 octane number.

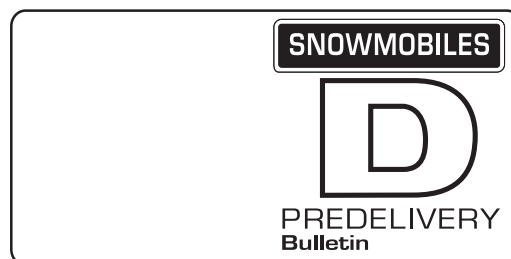
③ At 6000 RPM (engine cold) with headlamp turned on, for Tundra model.
At 3500 RPM (engine cold) with headlamp turned on, for Tundra R model.

④ Force applied midway between pulleys to obtain specified deflection.

⑤ Deflection with a 7.3 kg (16 lb) downward pull.

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-27**

Date: December 24, 1998

SUBJECT: Predelivery

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada: MX Z 700	1339	All
1999	United States: MX Z 700	1340	All
1999	Europe: MX Z 700	1341	All

This bulletin must be used in conjunction with the check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

Refer to Predelivery Bulletin 99-22 for procedures and predelivery adjustments, which are the same as MX Z 600 except for hybrid DPM featuring on MX Z 700. Otherwise, only technical data are different.

◆ WARNING
To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.

NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and *Video*.





There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.



TECHNICAL DATA



The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquiries should be directed to your distributor service representative.

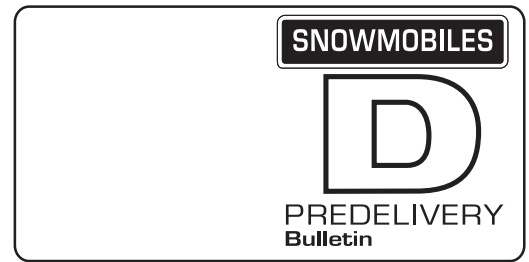
MODEL		MX Z 700		
	Engine Type	693		
	Maximum HP RPM ①	± 100 RPM 8000		
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.	
	Carburetor Type	PTO VM 40 - 117	MAG VM 40 - 117	
	Main Jet	PTO 310	MAG 310	
	Needle Jet	Z-5 (224)		
	Pilot Jet	40		
	Needle Identification — Clip Position	7DHY6 - 4		
	Slide Cut-Away	2.5		
	Float Adjustment	± 1 mm (± 0.04 in)	22.9 (0.902)	
	Air Screw Adjustment	± 1/16 turn	1.0	
	Idle Speed RPM	± 200 RPM	1600	
	Gas Grade/Octane Number	(R + M)/2	Regular unleaded/87	
Gas/Oil Ratio		Oil injection		
	Ignition Timing BTDC ②	mm (in)	3.36 (0.132)	
	Trigger Coil Air-Gap	mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio	teeth	25/43	
	Engagement Speed	± 100 RPM	3800	
	Drive Pulley Calibration Screw Position		3	
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)
		X	± 0.5 mm (± 1/64 in)	35.5 (1-13/32)
	Offset	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
		Drive Belt Adjustment	Deflection	± 5 mm (± 3/16 in) 38 (1-1/2)
		Force ③	kg (lbf)	11.34 (25)
	Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)	7.0 (15.43)	
	Drive Chain Tension	Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation		
Track Adjustment	Deflection	mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull	

- ① Engine speed at which maximum power is achieved.
- ② At 3500 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side
 N.A.: Not Applicable

Please route to :

	Init.
<input type="checkbox"/> Service	<input type="checkbox"/>
<input type="checkbox"/> Sales	<input type="checkbox"/>
<input type="checkbox"/> Parts	<input type="checkbox"/>



No. **99-26**

Date: December 23, 1998

SUBJECT: Predelivery

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Canada and United States: Summit* 700	1467/1468	All

This bulletin must be used in conjunction with the predelivery check list enclosed in the bag with the *Operator's Guide*. Make sure that predelivery check list is completed and signed.

Refer to *Predelivery Bulletin* 99-24 for procedures and predelivery adjustments for this model, which are the same as Summit 600. Only technical data are different.

◆ WARNING
<p>To obtain warranty coverage, predelivery procedures must be performed by an authorized Bombardier snowmobile dealer. Apply all necessary torques as indicated.</p>





NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, there might be some differences between the manufactured product and the descriptions and/or specifications in this document. Bombardier Inc. reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

The content of this bulletin is designed as a guideline only. All mechanics performing predelivery procedures should have attended the current model year service training. Further information or inquiries should be directed to your distributor service representative and/or specific *Shop Manual* sections. Please complete the *Predelivery Check List* for each snowmobile and retain a customer signed copy. Make sure the customer receives the *Operator's Guide*, *Safety Handbook*, *Predelivery Check List* signed copy and video.

There is a tag attached to the ignition key, only the customer must remove it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

TECHNICAL DATA

The content of the TECHNICAL DATA page should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at sea level, below 600 m (2000 ft), should be fitted with a sea level kit. Further inquiries should be directed to your distributor service representative.

MODEL		SUMMIT 700		
	Engine Type	693		
	Maximum HP RPM ①	± 100 RPM 8000		
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.	
	Carburetor Type	PTO VM 40 - 121	MAG VM 40 - 121	
	Main Jet	PTO 310	MAG 310	
	Needle Jet	Z-5 (224)		
	Pilot Jet	40		
	Needle Identification — Clip Position	7DHY6 — 4		
	Slide Cut-Away	2.5		
	Float Adjustment	± 1 mm (± 0.04 in)	22.9 (.90)	
	Air Screw Adjustment	± 1/16 turn	1.0	
	Idle Speed RPM	± 200 RPM	1600	
	Gas Grade/Pump Octane Number	(R + M)/2	Regular unleaded/87	
	Gas/Oil Ratio		Oil injection	
	Ignition Timing BTDC ②	mm (in)	3.36 (0.132)	
	Trigger Coil Air-Gap	mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio	teeth	22/43	
	Engagement Speed	± 100 RPM	4100	
	Drive Pulley Calibration Screw Position		4	
	Pulley Distance	Z	(+ 0, - 1) mm (+ 0, - 1/32) in	16.5 (21/32)
		X	± 0.5 mm (± 0.02 in)	35.5 (1.398)
	Offset	Y		Dimension Y must exceed X from 1 mm (1/32 in) to 2 mm (5/64 in)
		Deflection	± 5 mm (± 3/16 in)	38 (1-1/2)
	Drive Belt Adjustment	Force ③	kg (lbf)	11.34 (25)
		Driven Pulley Preload	± 0.7 kg (± 1.5 lbf)	7.0 (15.43)
	Drive Chain Tension		Fully tighten adjusting screw by hand then back OFF only far enough for hair pin installation	
Track Adjustment	Deflection	mm (in)	30 to 35 (1-3/16 to 1-3/8) with a 7.3 kg (16 lb) downward pull	

- ① Engine speed at which maximum power is achieved.
- ② At 3500 RPM (engine cold) with headlamp turned on.
- ③ Force applied midway between pulleys to obtain specified deflection.

BTDC: Before Top Dead Center
 ATDC: After Top Dead Center
 PTO: Power Take OFF side
 MAG: Magneto side
 CRT: Center
 N.A.: Not applicable