Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-1**

Date : March 18, 1996

SUBJECT : Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	Tundra II LT (Canada and United States)	3266	All
1997	Tundra II LT (Europe)	3267	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.

O 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.

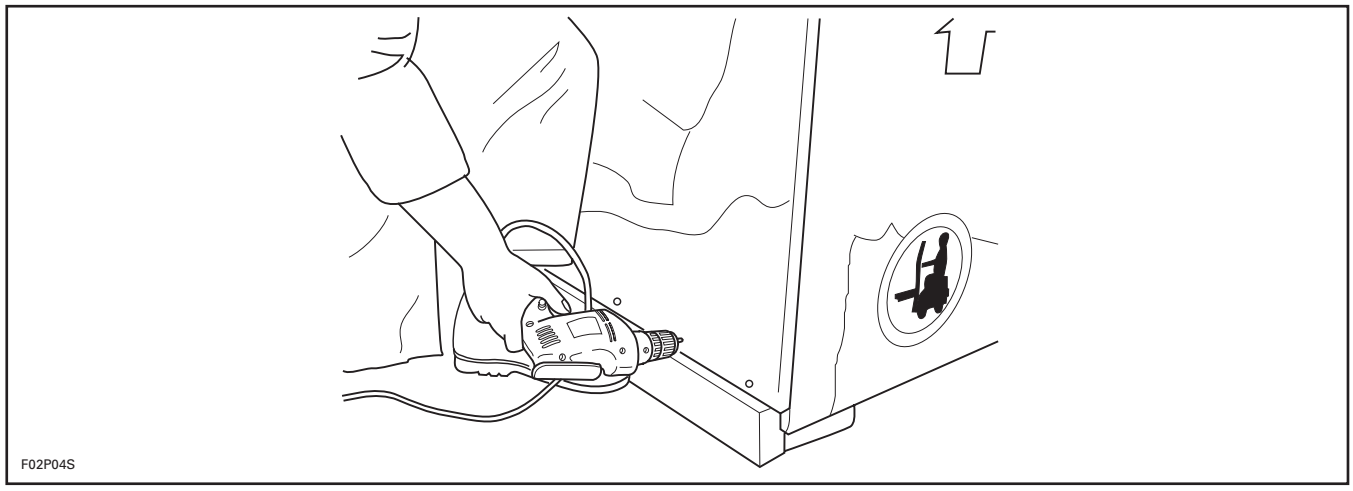
Litho'd in Canada (MBL-9702 GM)

CONTENTS

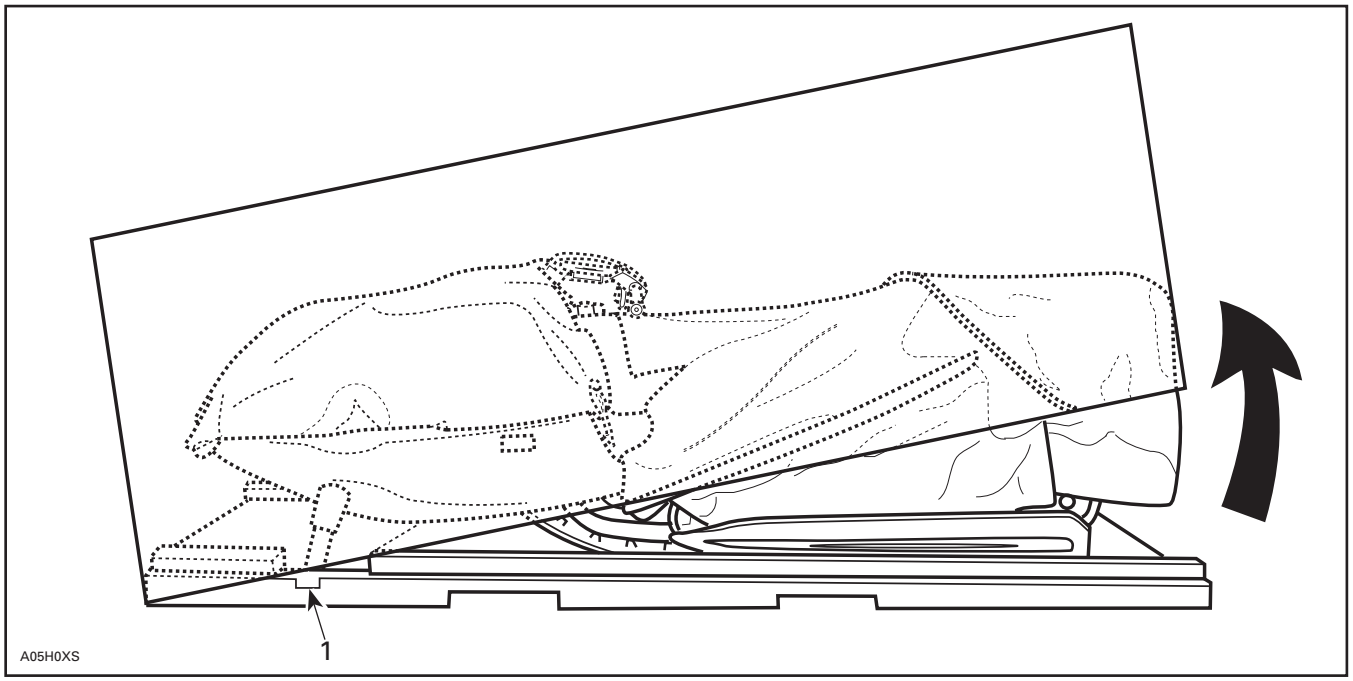
◆ WARNING : Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

▼ CAUTION : Allowing the crate to drop may cause serious damage to the vehicle.

Using a screwdriver remove all screws retaining crate cover to base.



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) from the vehicle and its base.

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

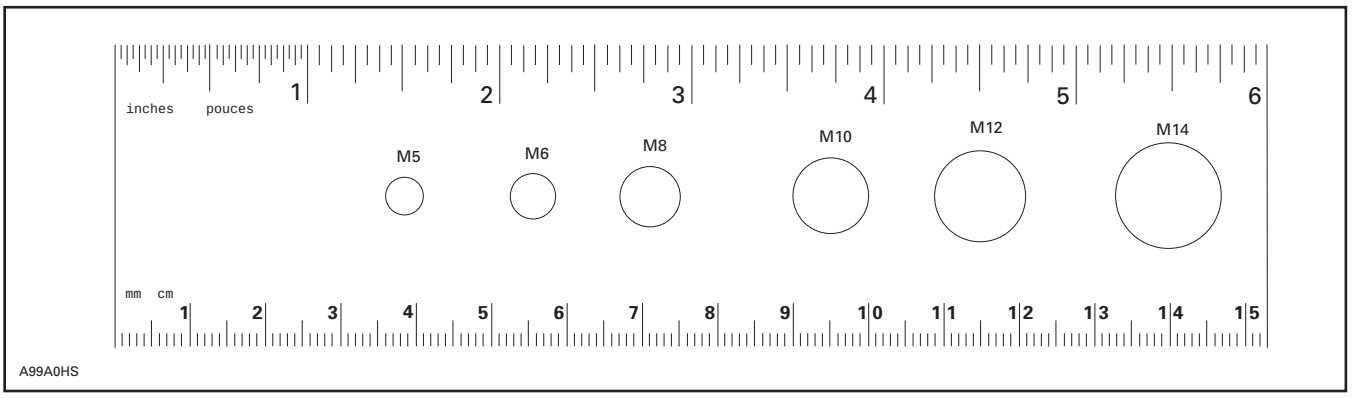
Detach ski legs from crate. Keep ski leg bolts to bolt skis to ski legs. Discard nuts.

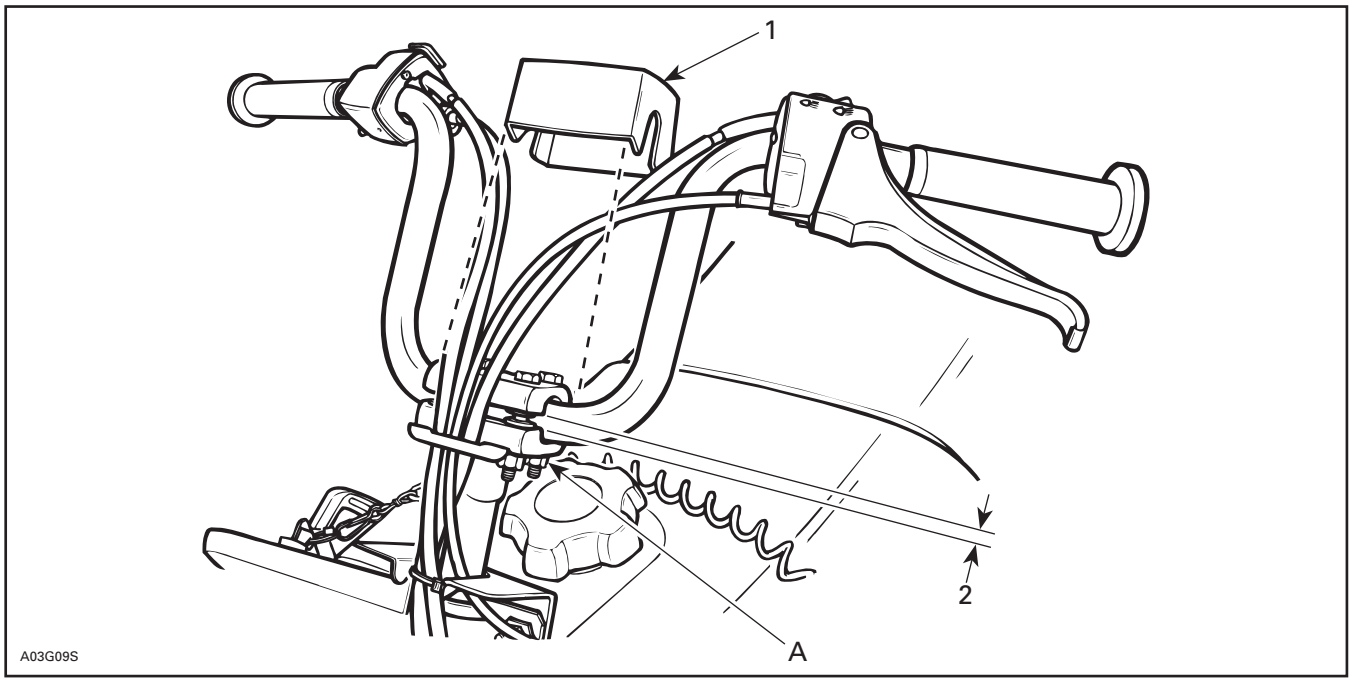
Remove vehicle from base.

Remove predelivery kit from engine compartment.

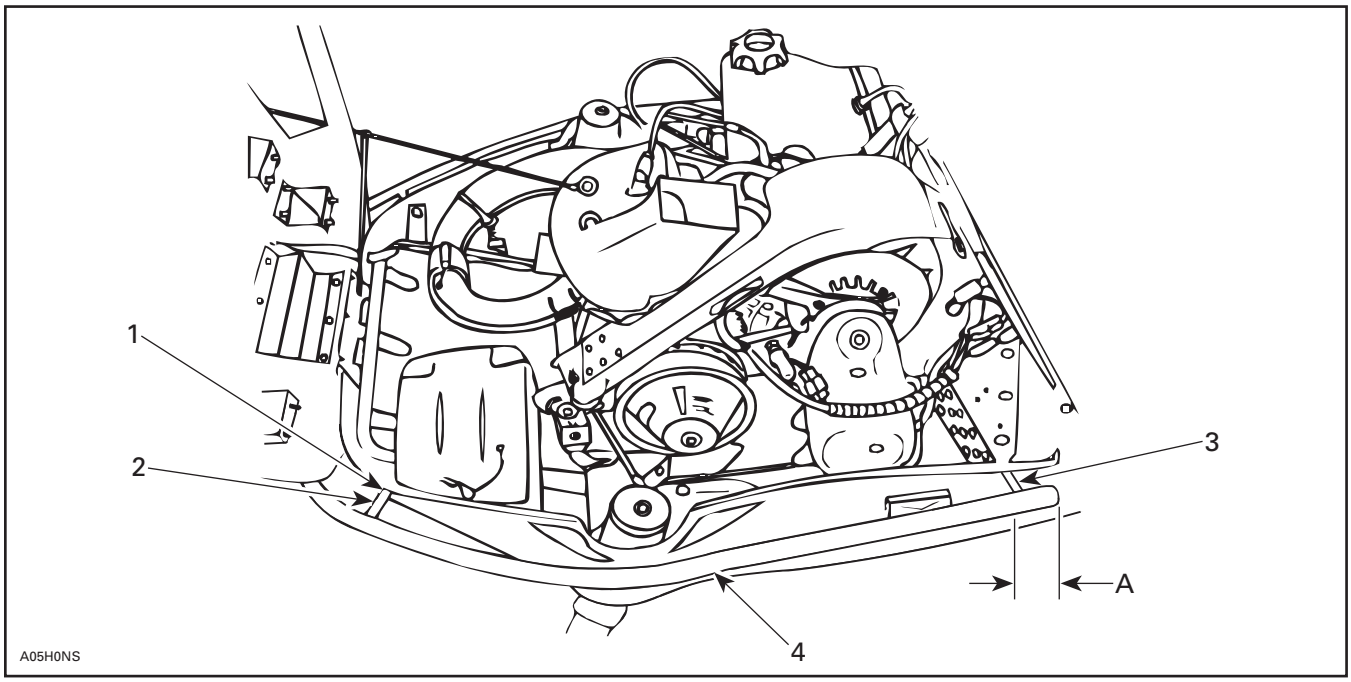
PREDELIVERY KIT P / N	MODELS
582 0609 00	All Tundra II LT

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

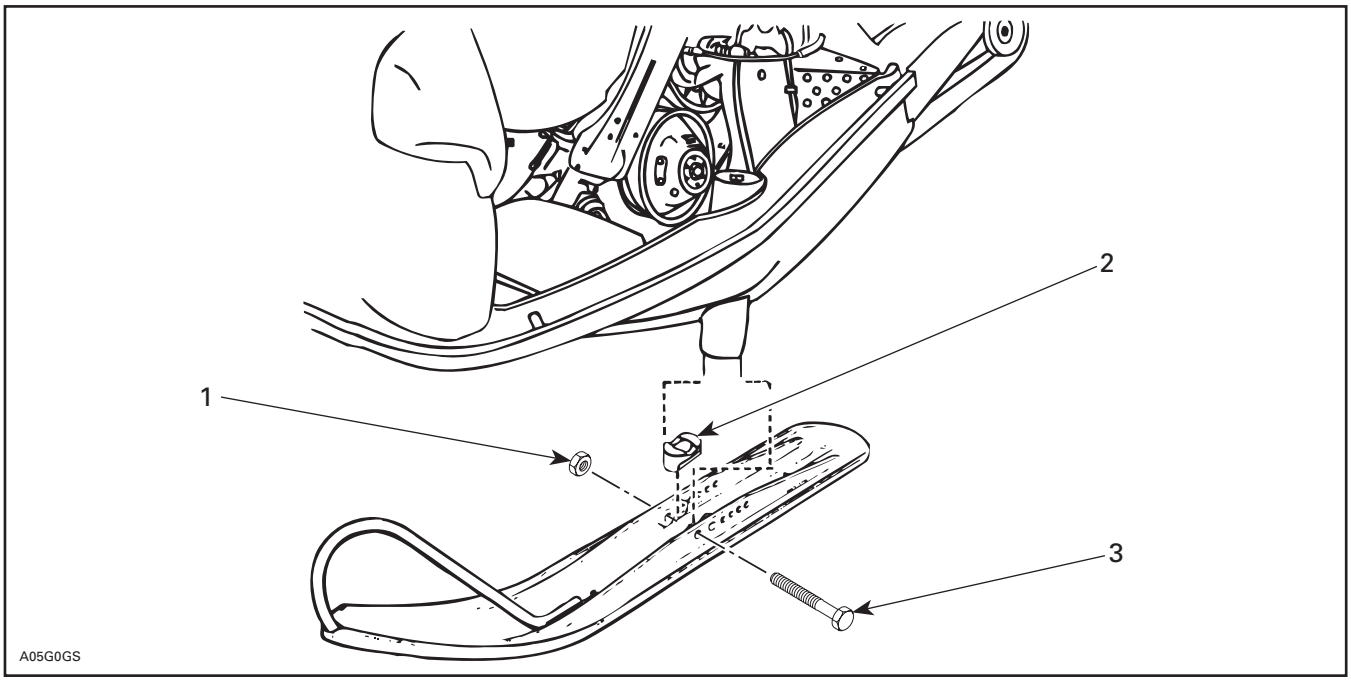




1. Steering cover (P / N 572 0669 00) (on handlebar)
2. Equal gap all around
A. 26 N•m (19 lbf•ft)

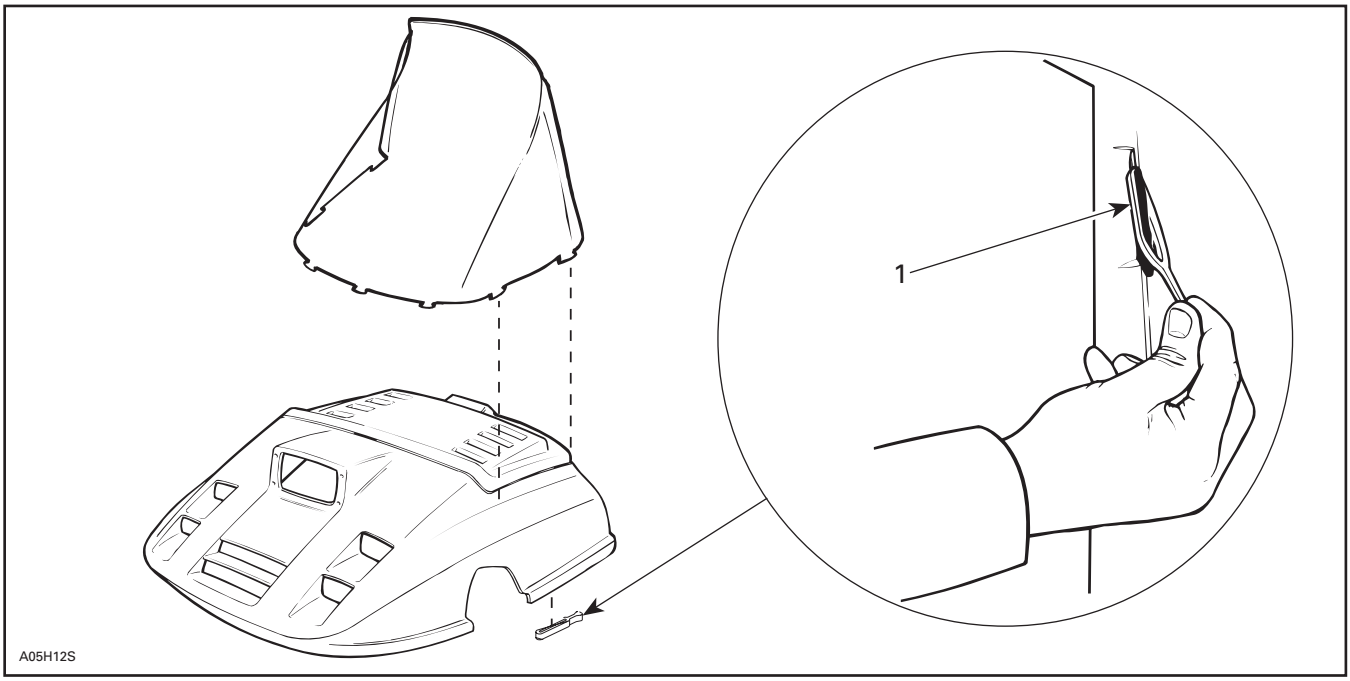


*1. Nut M8 x 1.25 (4) (P / N 228 5810 45) (Section no. 2). Torque to 15 N•m (133 lbf•**in**)*
2. Bushing (long) (2) (P / N 517 2506 00) (Section no. 3)
3. Bushing (short) (2) (P / N 517 2507 00) (Section no. 3)
4. Groove on top
A. 55 mm (2-1/8 in)



1. Nut (2) M10 x 1.5 (P / N 228 5010 45) (Section no. 1). Torque to 29 N•m (21 lbf•ft)
2. Stopper (2) (P / N 570 0270 00) (Section no. 4). Thicker side toward front
3. Bolt (2) M10 x 1.5 x 90 (P / N 222 0090 65) (on crate)

PARTS INSTALLATION
WINDSHIELD



1. Latch (9) (P / N 570 0238 00) (Section no. 3)

PARTS INSTALLATION
DRIVE BELT

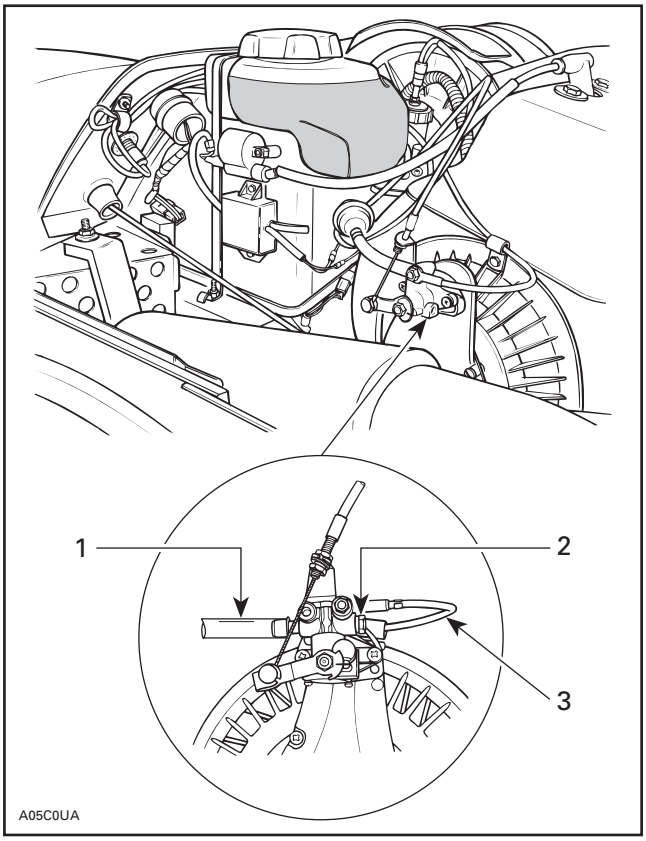
At factory a protective coating for the shipping is applied on pulleys and disc brake. This protective coating must be removed at predelivery.

Clean pulleys and brake disc with a suitable cleaner such as Loctite Safety Solvent (P / N 413 7082 00) before installing drive belt.

Make sure the entire surface of the drive belt travel is clean; open the driven pulley as required for cleaning.

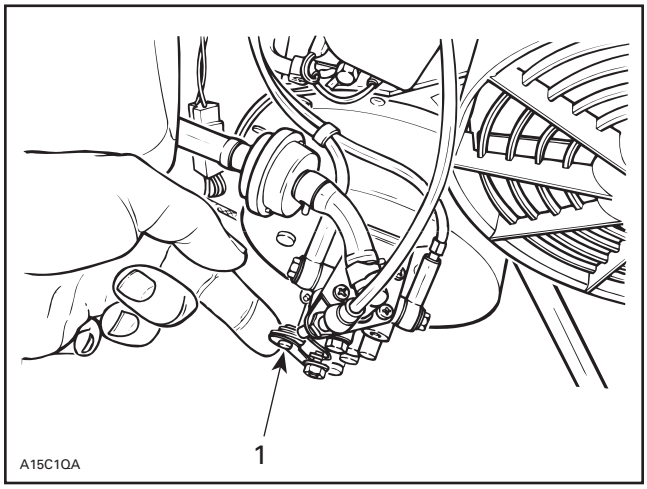
CAUTION : Do not install a new drive belt without properly cleaning the pulleys.

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



1. Main oil line
2. Bleeder screw
3. Small line

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

				TUNDRA II LT
	Engine Type			277
	Maximum HP RPM ①		± 100 RPM	6900
	Carburetor Type			VM 34-443
	Main Jet			190
	Needle Jet			159 O-8
	Pilot Jet			40
	Needle Identification – Clip Position			6DH4-2
	Slide Cut-away			2.5
	Float Adjustment		± 1 mm (± .04 in)	24 (.94)
	Air Screw Adjustment		± 1/16 turn	1
	Idle Speed		± 200 RPM	1200
	Gas Grade / Octane Number ②		(R + M) / 2	Regular Unleaded / 87
	Gas / Oil Ratio			Oil Injection
	Ignition Timing BTDC ③		mm (in)	2.52 (.099)
	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	mm (in)	32 (1-1/4)
		Force ④	kg (lbf)	6.8 (15)
	Driven Pulley Preload		± 1 kg (± 2 lbf)	3.6 (8)
	Drive Chain Tension			Automatic (Spring Loaded)
	Track Adjustment	Deflection ⑤	mm (in)	35 to 45 (1-3/8 to 1-3/4)

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.

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.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-2**

Date: June 28, 1996

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1996	Canada and United states: Touring E/E LT/LE/SLE, Skandic 380/500 Formula S/SL	1115, 1116, 1113, 1112, 1110, 1111, 1120, 1121, 1117, 1118, 1108, 1106, and 1107	ALL
1996	Sweden: Touring LE/SLE, Skandic 380/500 and Formula S/SL	1186, 1114, 1122, 1119 and 1109	ALL

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◆ WARNING

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

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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.

TABLE OF CONTENTS

◆ WARNING

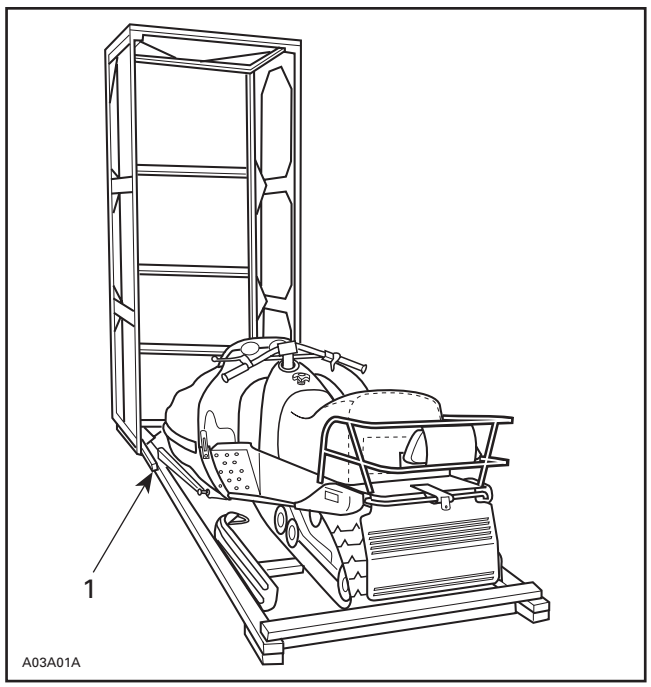
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

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

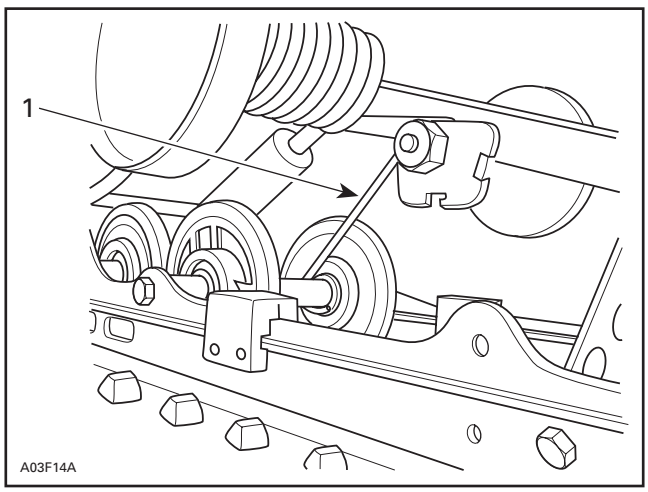
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

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.

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

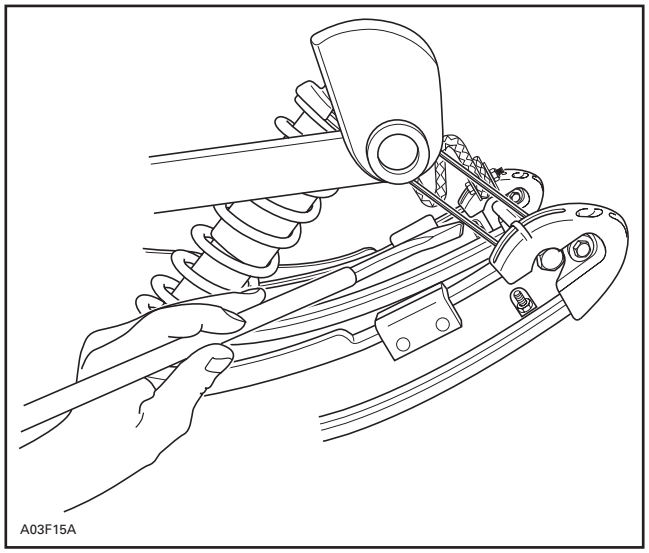


1. Remove hook

Using a long flat chisel such as Snap-On PPC820LA cut shipping strap that collapses front portion of rear suspension.

◆ WARNING

Failure to use this method of strap removal could result in personal injury.

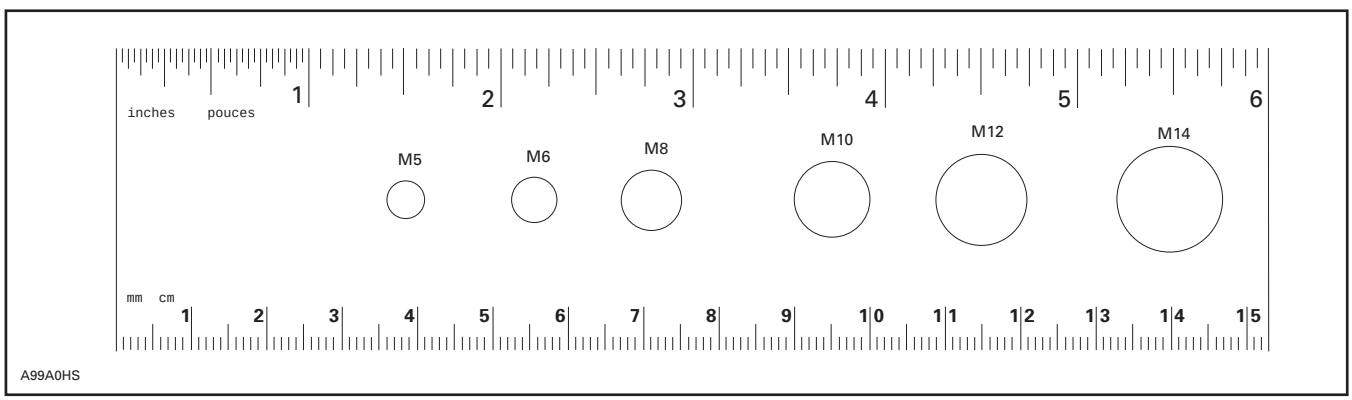


◆ WARNING

Shipping strap must be cut and hook removed to have snowmobile suspension operational.

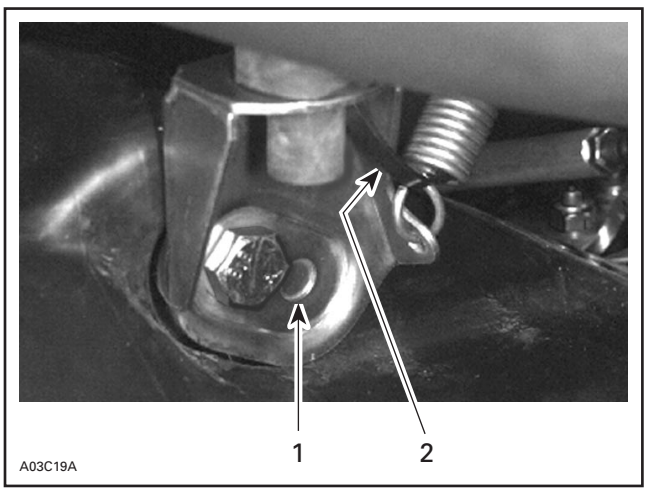
PREDELIVERY KIT P/N	MODELS
580 6532 00	TOURING E
580 6529 00	TOURING ELT/LE/SLE
580 6533 00	SKANDIC 380/500
580 6388 00	FORMULA S/SL

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



Except Skandic 380/500

Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

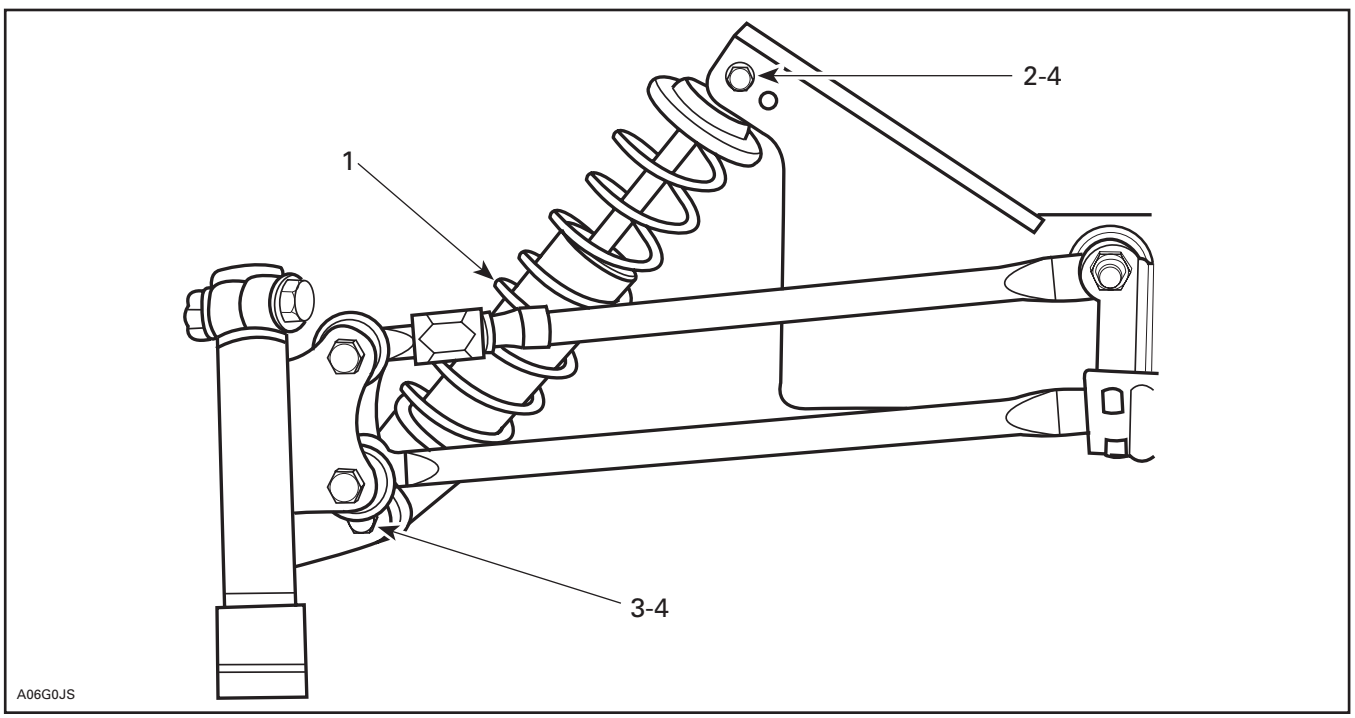
Lift front of vehicle and block safely.

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

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

NOTE: Position screw heads toward front.

Properly position exhaust suppport 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 0060 65) (on suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65)(on suspension)
4. Flanged elastic nut (4) (P/N 228 5010 45) (section no.1 or 5) torque to 48 N•m (35 lbf•ft)

Touring Models Only

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

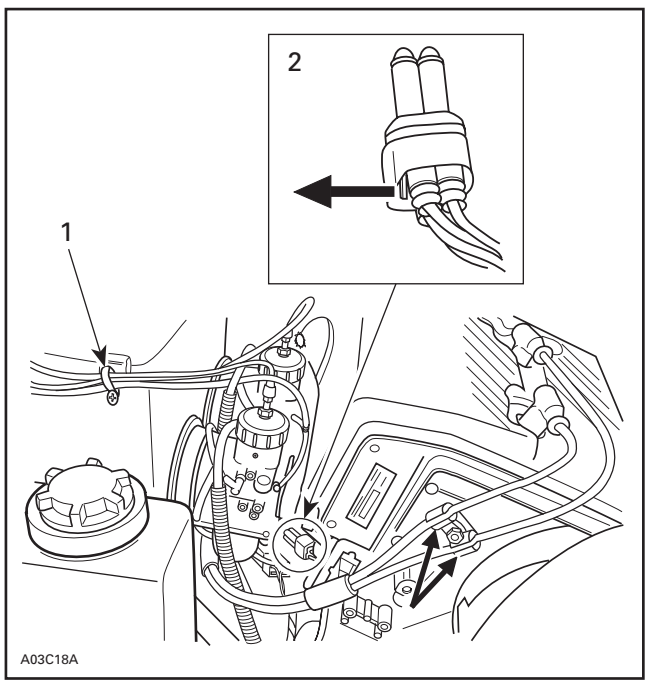
Remove belt guard.

Unfasten spark plug cables from fan housing. Unplug spark plug caps.

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

Unplug CDI box harness connector.

Slacken collar on carburetor adaptors. Remove air silencer. CDI box will come along with.



1. Plastic clip
2. CDI box harness connector

Remove battery.

Battery Installation

Install vent tube on battery.

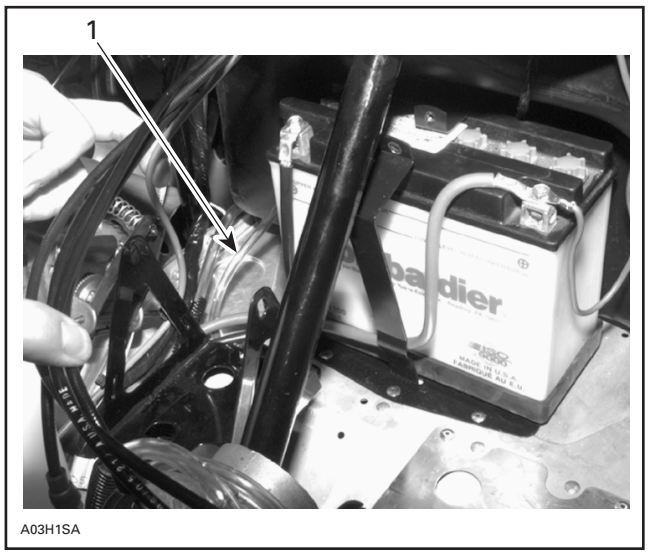
Connect RED positive cable and RED wire to positive battery terminal.

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 7017 00) 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.


A03H1WA

BATTERY PROTECTIVE BOOT INSTALLED

Ensure that vent tube is not kinked or blocked.

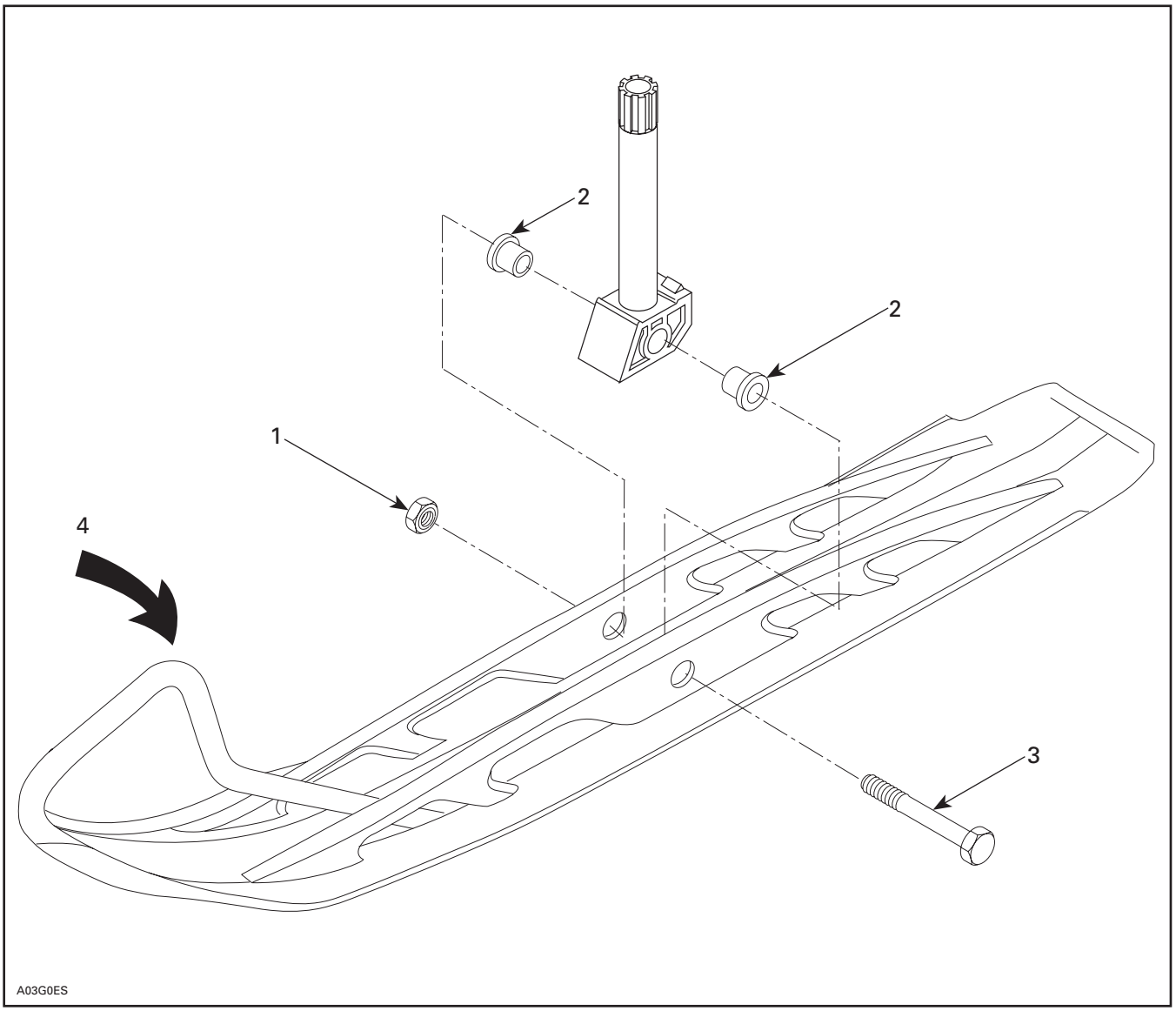
Reinstall air silencer and ignition module.

Reinstall throttle cable and primer hose plastic clip to air silencer. Fasten spark plug cables.

Install skis on vehicle.

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

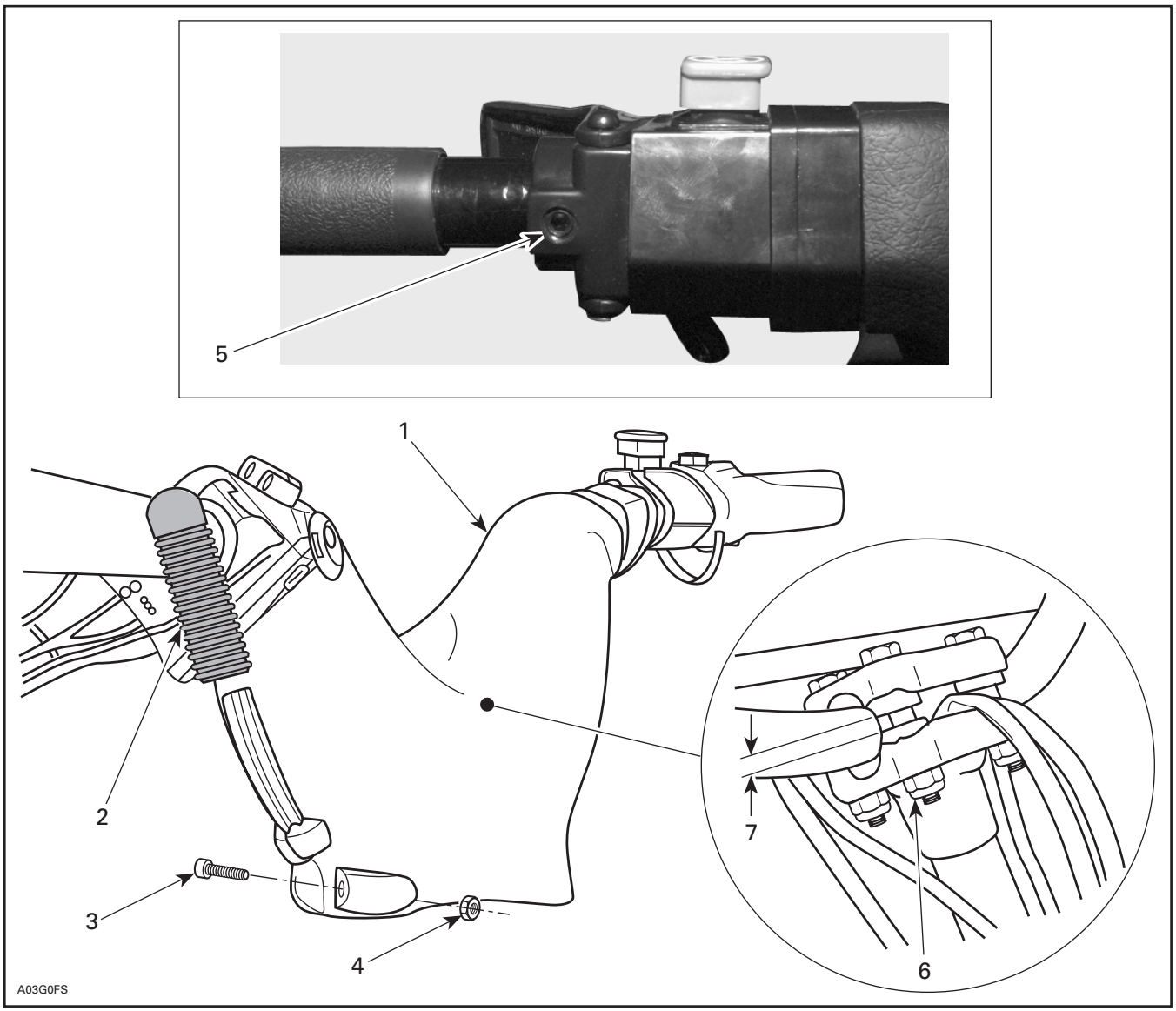
Replace vehicle on ground.



TYPICAL—RIGHT SIDE SHOWN

1. *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*

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 to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



1. *Steering pad (P/N 572 0238 00) (engine compartment)*
2. *Keyway (2) (P/N 572 0239 00) (section no. 4) use liquid soap to ease installation*
3. *Screw M5 x 20 (2) (P/N 222 8520 65) (section no. 4)*
4. *Nut M5 (2) (P/N 228 7510 45) (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*

Formula S/SL Only

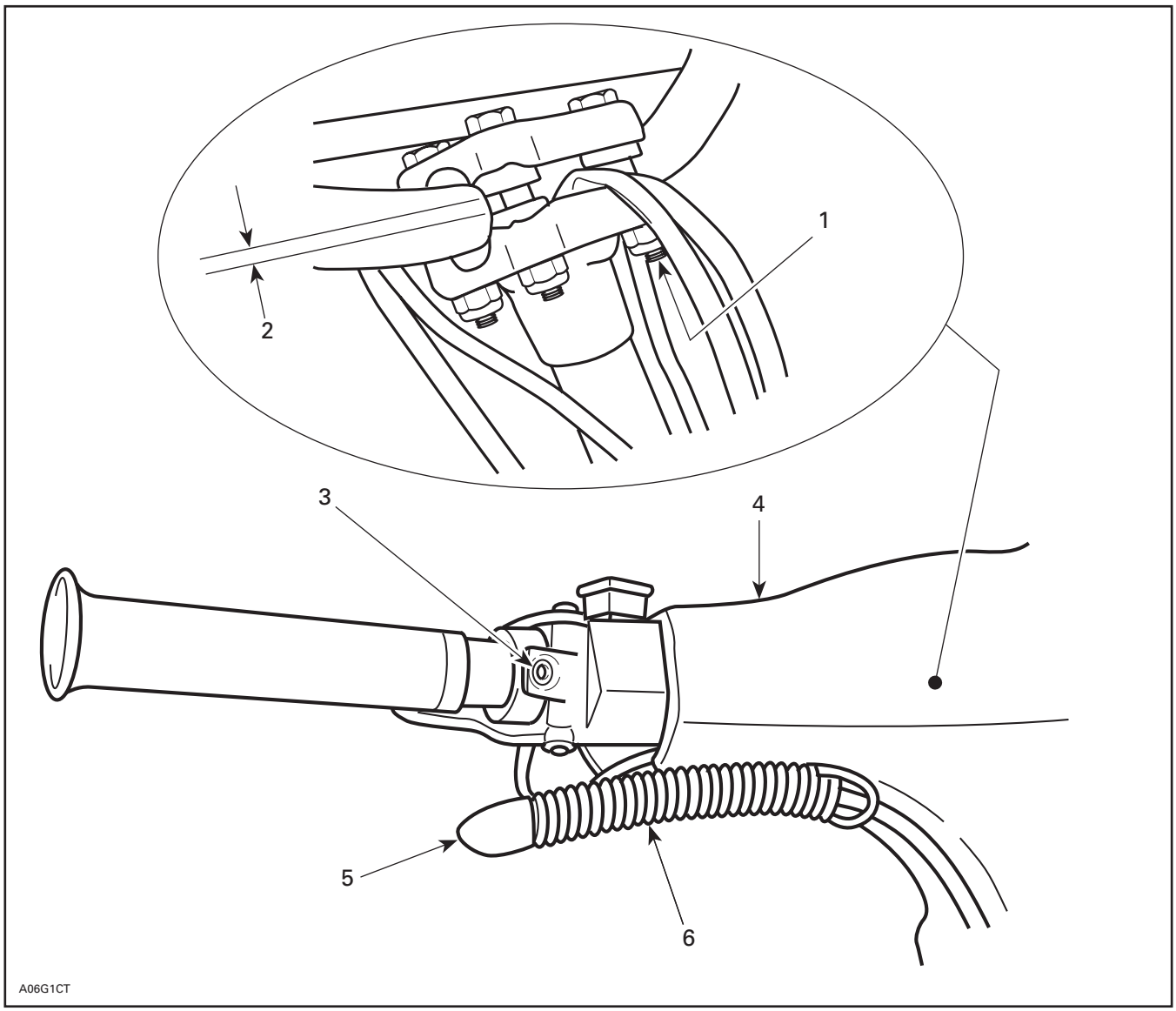
Adjust handlebar temporary and tighten nuts loosely for now.

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

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

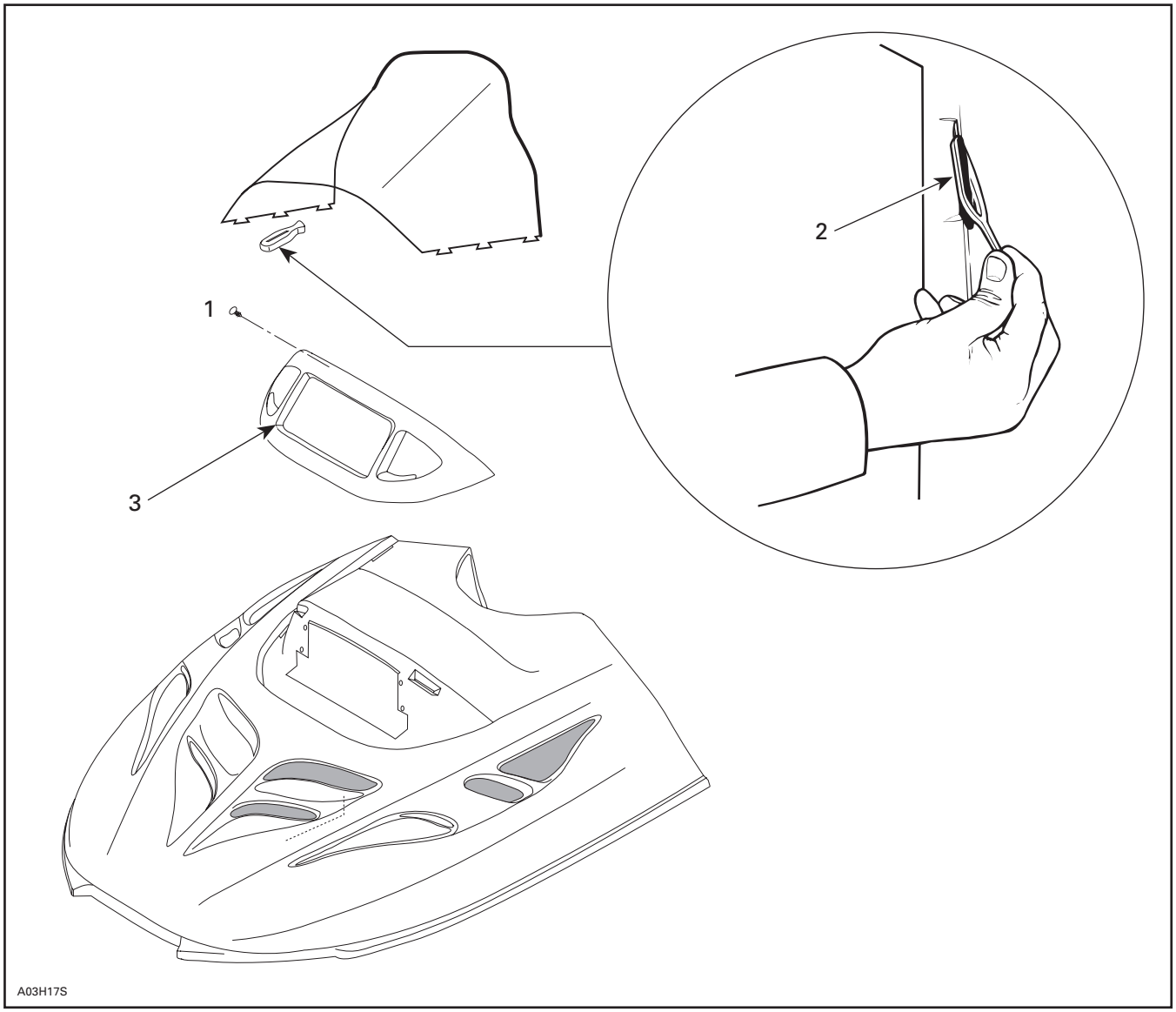
Remove steering pad and torque nuts to 26 N•m (19 lbf•ft).

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



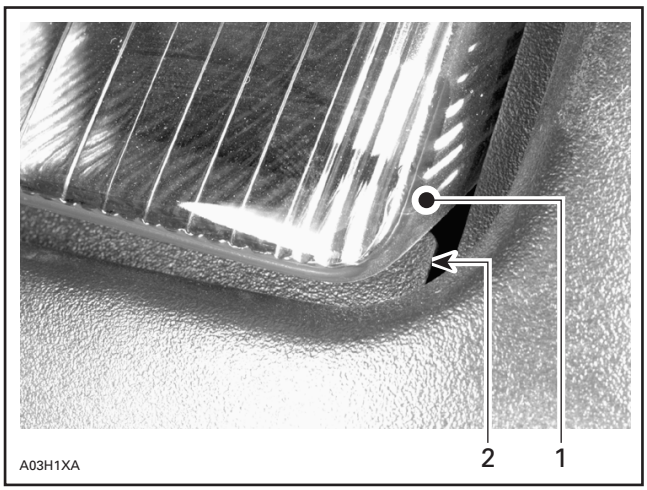
1. *Torque to 26 N•m (19 lbf•ft)*
2. *Equal gap each side*
3. *Loosen allen screw*
4. *Steering pad (P/N 572 0840 00 and 572 0841 00) (engine compartment)*
5. *Use liquid soap to ease installation*
6. *Keyway (2) (P/N 572 0724 00) (section no. 3)*

Install windshield on dashboard.



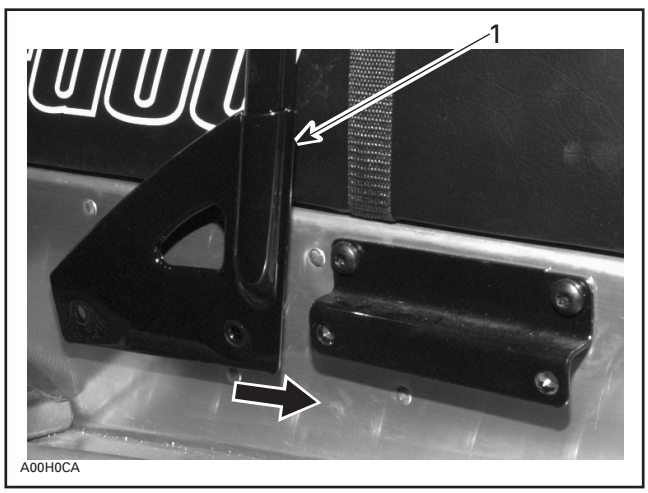
1. *Dart (1) (P/N 414 6443 00) (section no. 2 or 5)*
2. *Latch (6) (P/N 570 0238 00) (section no. 4 or 6)*
3. *Temporary remove headlamp molding for windshield installation*

When reinstalling headlamp molding make sure lip is behind headlamp.



1. Headlamp
2. Lip of headlamp molding behind headlamp

Except Touring E and Formula S/SL



1. Slide backrest on mounting bracket and install with screws

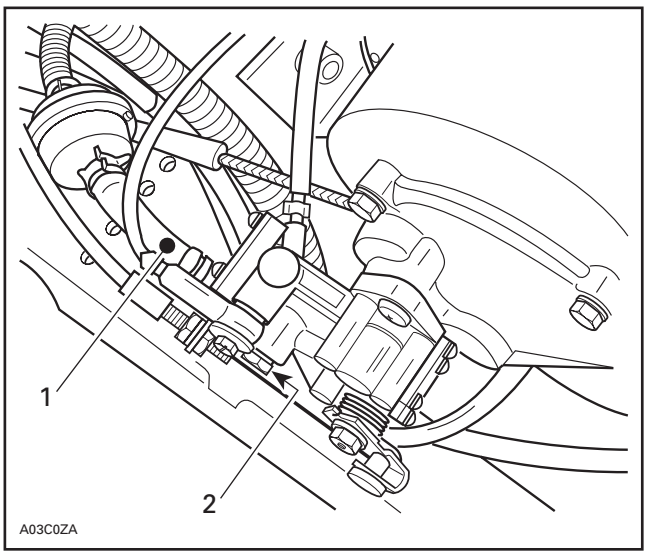
PARTS INSTALLATION
DRIVE BELT

Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) 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 0133 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

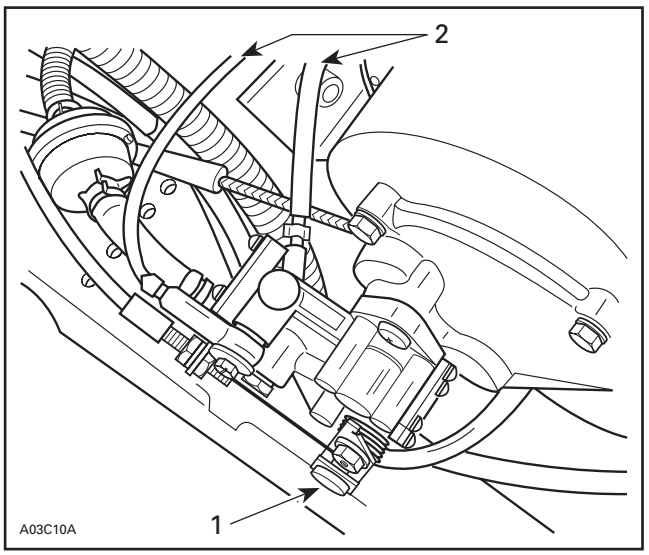
Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



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*

LIQUIDS
BRAKE FLUID LEVEL

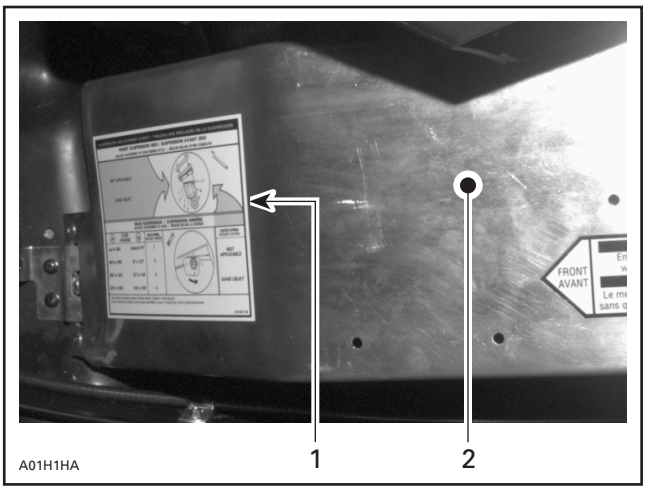
Check brake fluid in reservoir for proper level. Add fluid (DOT 4) as required.

▼ CAUTION

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

ADJUSTMENT
SUSPENSION

Rear suspension is calibrated at factory. At predelivery, 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.

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).

MODELS			TOURING E/E LT FORMULA S SKANDIC 380	TOURING LE
Engine Type			377	443
Maximum HP RPM ①		±100 RPM	6900	7000
Rotary Valve		P/N Opening(BTDC)/ Closing (ATDC)	N.A.	N.A.
Carburetor Type			2 x Mikuni VM 30 mm	2 x Mikuni VM 34
Main Jet			140	180
Needle Jet			P-0 (159)	P-1 (159)
Pilot Jet			40	40
Needle Identification– clip position			6DP9	6DH2
Slide Cut-away			2.5	2.5
Float Adjustment		± 1 mm (± .040 in)	23.9 (.94)	23.9 (.94)
Air Screw Adjustment		± 1/32 turn	1-1/4	2-1/4
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)	1.68 (.066)	1.68 (.066)
Trigger Coil Air-Gap		mm (in)	0.45 - 0.55 (.018 - .022)	0.45 - 0.55 (.018 - .022)
Gear Ratio		teeth	21/44	21/44
Engagement Speed		±100 RPM	Formula S: 3100 Touring E: 3100 Touring E LT: 2900 Skandic 380: 2900	3500
Drive Pulley Calibration Screw Position			N.A.	4
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)
	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)
Drive Belt Adjustment	Deflection	±5 mm (±.197 in)	32 (1-1/4)	32 (1-1/4)
	Force	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)	40 to 55 (1-9/16 to 2-5/32)	40 to 55 1-9/16 to 2-5/32)

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

MODELS			TOURING SLE FORMULA SL SKANDIC 500	
Engine Type			503	
Maximum HP RPM ①		± 100 RPM	7100	
Rotary Valve		P/N Opening(BTDC)/ Closing (ATDC)	N.A.	
Carburetor Type			PTO VM 34-481	MAG VM 34-482
Main Jet			PTO 180	MAG 170
Needle Jet			P-0 (159)	
Pilot Jet			40	
Needle Identification– clip position			6DH2	
Slide Cut-away			2.5	
Float Adjustment		± 1 mm (± .040 in)	23.9 (.94)	
Air Screw Adjustment		± 1/32 turn	1-5/8	
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)	1.66 (.065)	
Trigger Coil Air-Gap		mm (in)	0.45 - 0.55 (.018 -.022)	
Gear Ratio		teeth	Touring SLE and Skandic 500: 21/44 Formula SL: 22/44	
Engagement Speed		±100 RPM	Touring SLE and Skandic 500: 3000 Formula SL: 3600	
Drive Pulley Calibration Screw Position			Formula SL: 3 Touring SLE and Skandic 500: 4	
Pulley Distance	Z	(+ 0, – 1) mm (+ 0, – 1/32 in)	16.5 (21/32)	
Offset	X	± 0.4 m (± 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	kg (lbf)	11.34 (25)	
Driven Pulley Preload		kg (lbf)	4.8 (10.582)	
Drive Chain Tension			④	
Track Adjustment	Deflection ⑤	mm (in)	40 to 55 (1-9/16 to 2-5/32)	

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

PTO: Power Take OFF side

MAG: Magneto side

N.A.: Not applicable

Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-2**

REVISION 1

Date: July 4, 1996

SUBJECT: Predelivery Procedures

Please update the predelivery bulletin 97-2 with the following page. Replace existing page of your bulletin.

Year models has been changed from 1996 to 1997.

ANNEX FROM 97-2 REVISION 1

Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-2**

➡ Date: July 4, 1996

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
➡ 1997	Canada and United states: Touring E/E LT/LE/SLE, Skandic 380/500 Formula S/SL	1115, 1116, 1113, 1112, 1110, 1111, 1120, 1121, 1117, 1118, 1108, 1106, and 1107	ALL
➡ 1997	Sweden: Touring LE/SLE, Skandic 380/500 and Formula S/SL	1186, 1114, 1122, 1119 and 1109	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 removed it. This label will remind the customer to ask the dealer to perform suspension adjustments according to riding style and vehicle load.

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Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-3**

Date: July 29, 1996

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United States: Summit* 500/583/670 and Formula* 500/500 De Luxe/583/Z	1157/1158/1159/1160/ 1162/1163/1138/1139/ 1191/1192/1141/1142/ 1145/1146	ALL
1997	Sweden: Summit 583 and Formula 500	1161/1140	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, 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 removed it. This label will remind the customer to ask dealer to perform suspension adjustments according to riding style and vehicle load.

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◆ WARNING

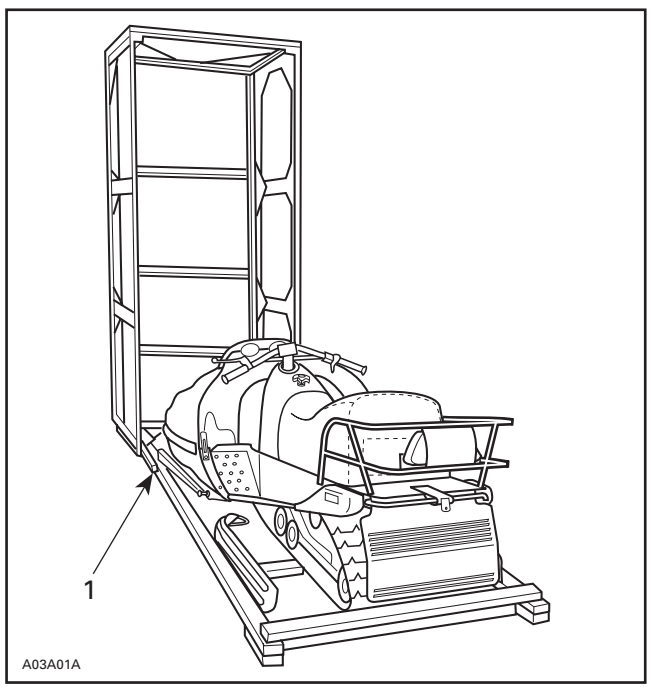
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

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.



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

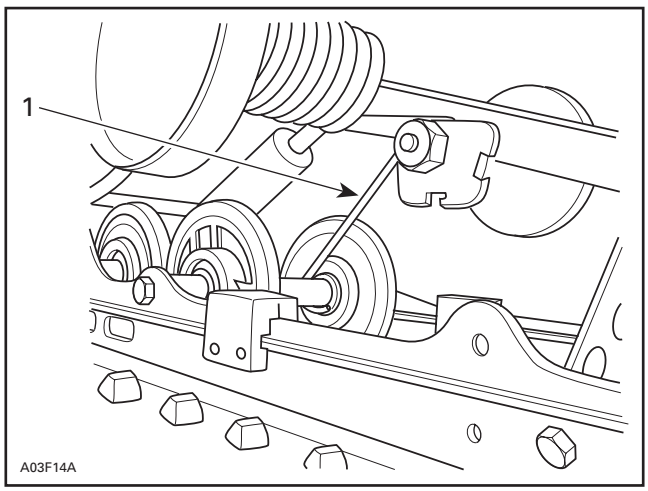
Make sure vehicle is properly supported before removing ski legs and rear suspension from crate brackets.

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.

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

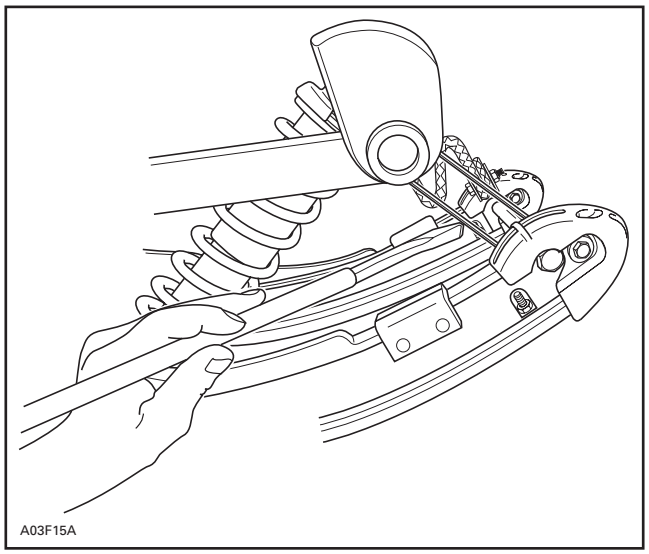


1. Remove hook

Using a long flat chisel such as Snap-On® PPC820LA cut shipping strap that collapses front portion of rear suspension.

◆ WARNING

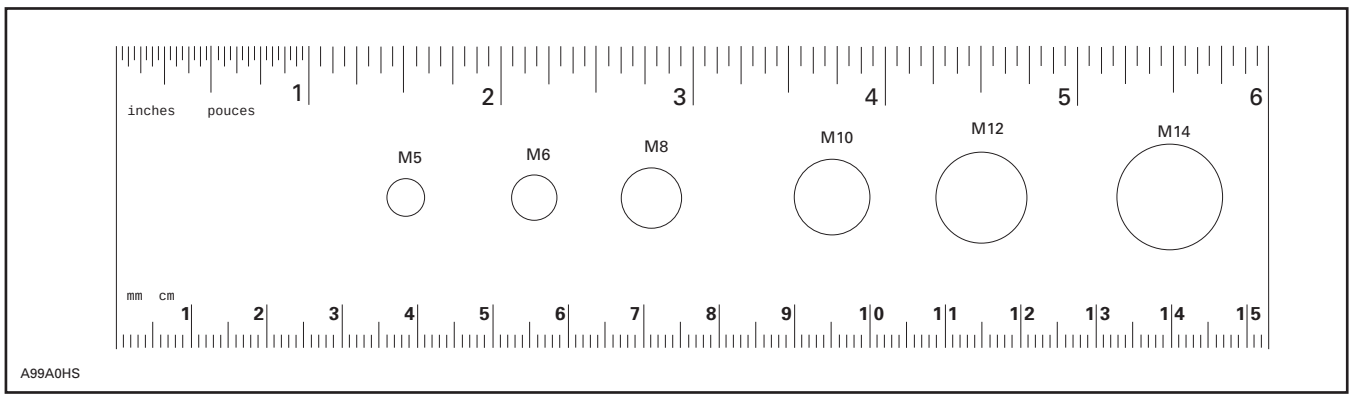
Failure to use this method of strap removal could result in personal injury.



◆ WARNING

Shipping strap must be cut and hook removed to have snowmobile suspension operational.

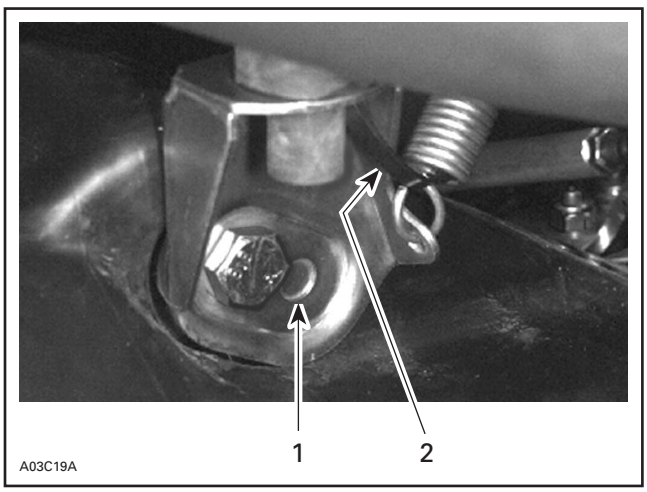
PREDELIVERY KIT P/N	MODELS
580 6540 00	SUMMIT 500/583/670 FORMULA Z FORMULA 500 DE LUXE
580 6543 00	FORMULA 500/583



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

Formula 500/500 De Luxe/583, Summit 583

Cut locking tie retaining exhaust spring to exhaust support.



1. *Lug in recess*
2. *Locking tie*

All Models

Lift front of vehicle and block safely.

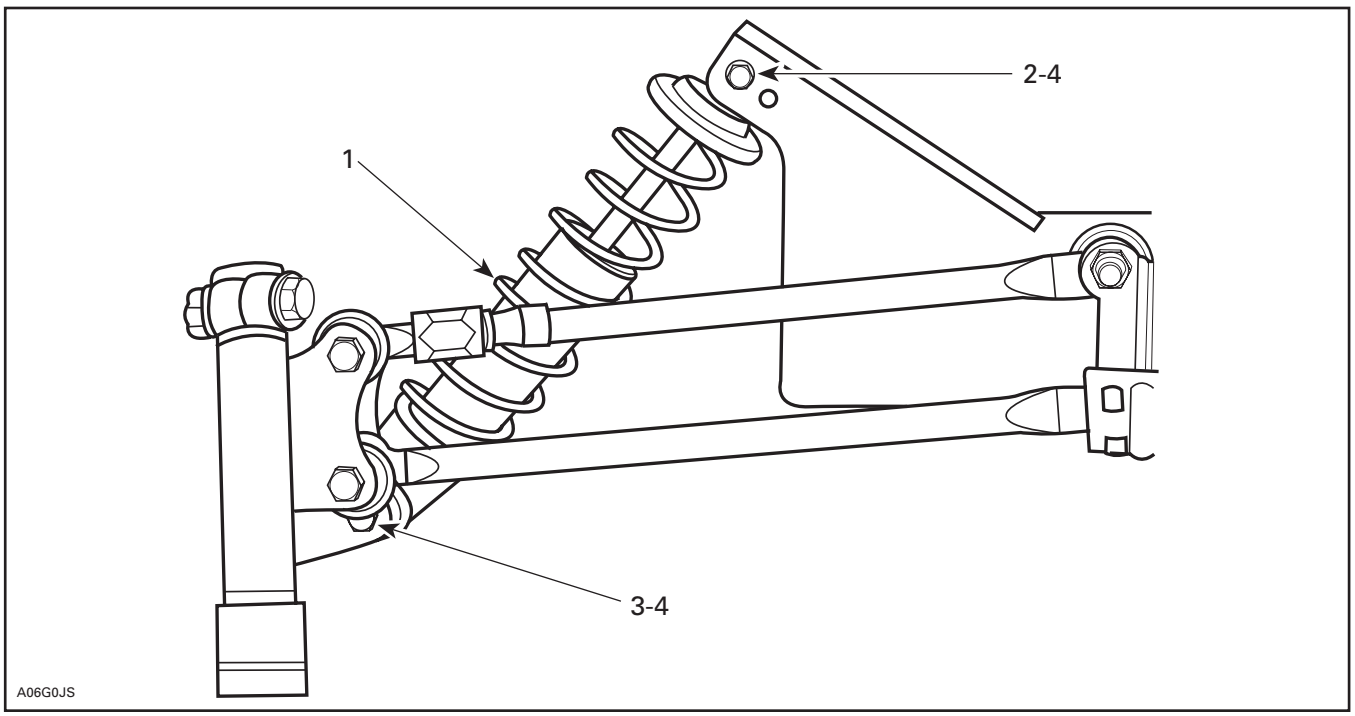
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

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

NOTE: Except for Summit 500 and 583 bottom screw heads, 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 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 0060 65) (On suspension)*
3. *Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (On suspension)*
4. *Elastic flanged nut M10 x 1.5 (2) (P/N 228 5010 45) (Section no. 4 or 5). Torque to 48 N•m (35 lbf•ft)*

Formula 500 De Luxe Only

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.

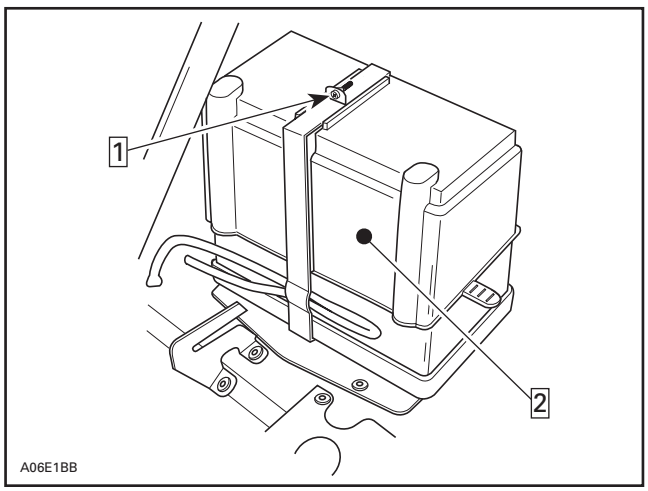
Battery Removal

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.

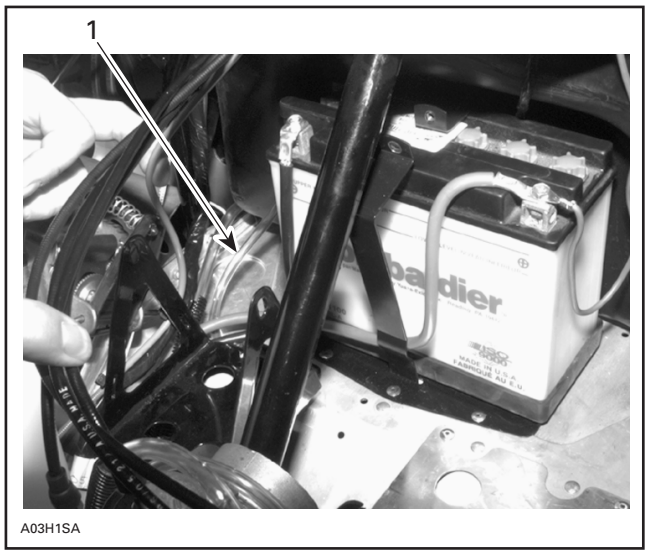
Connect RED positive cable and RED wire to positive battery terminal.

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.

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

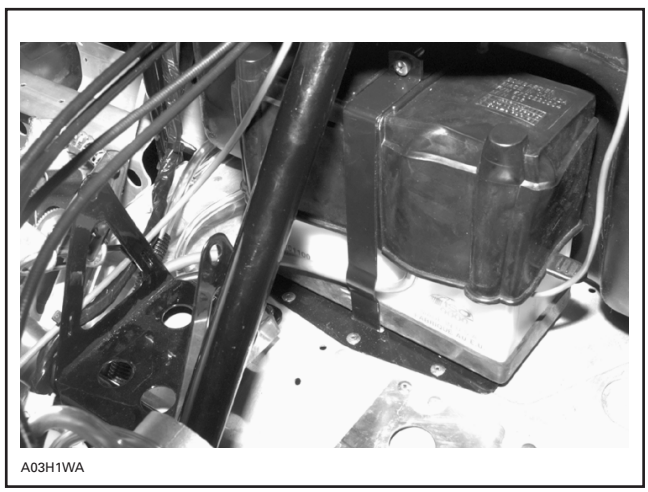


BATTERY CONNECTION
1. Vent tube on fitting

Apply silicone dielectric grease (P/N 413 7017 00) 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.

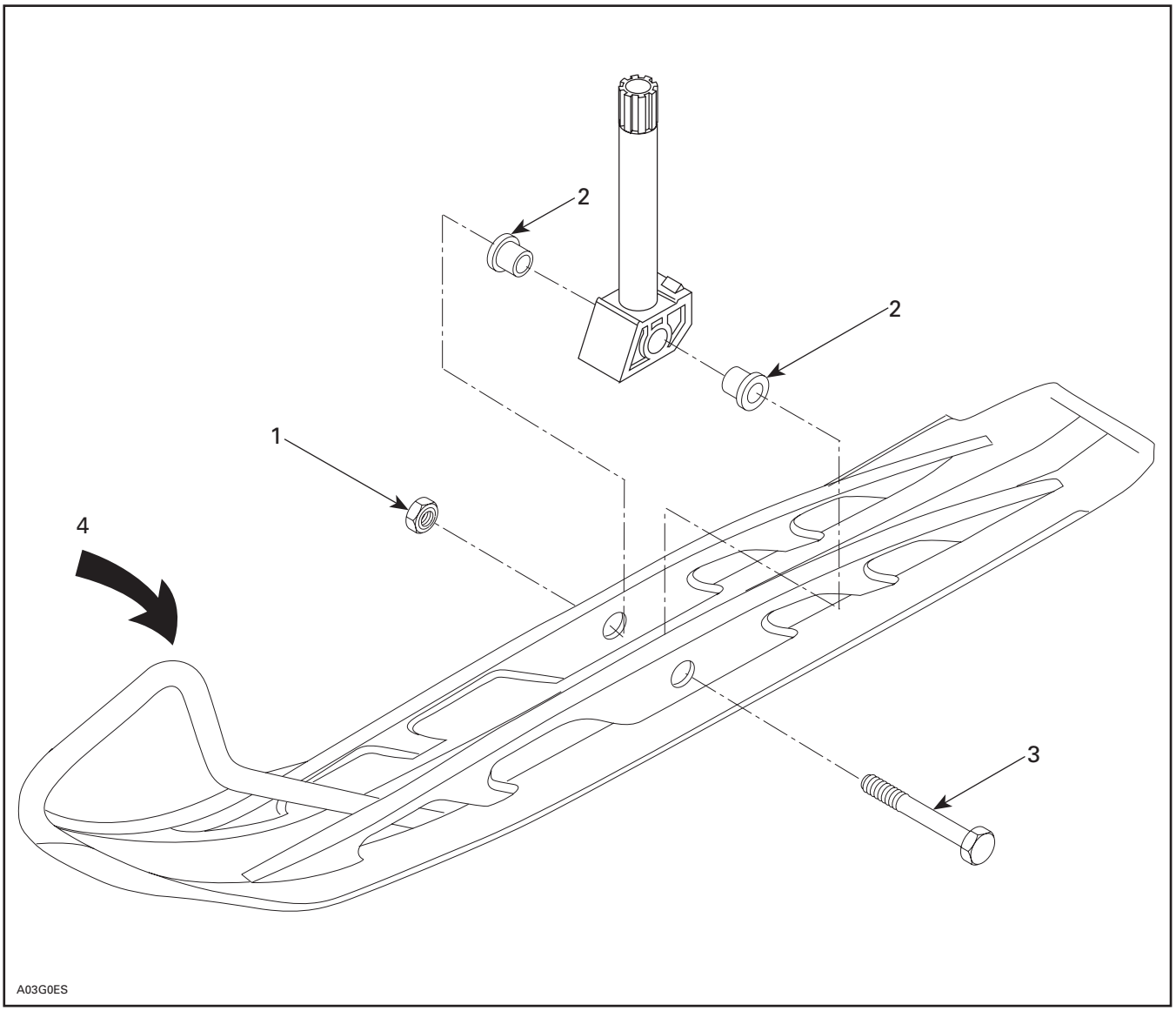
Reinstall air silencer.

Formula 500 and 583 Only

Install skis on vehicle.

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

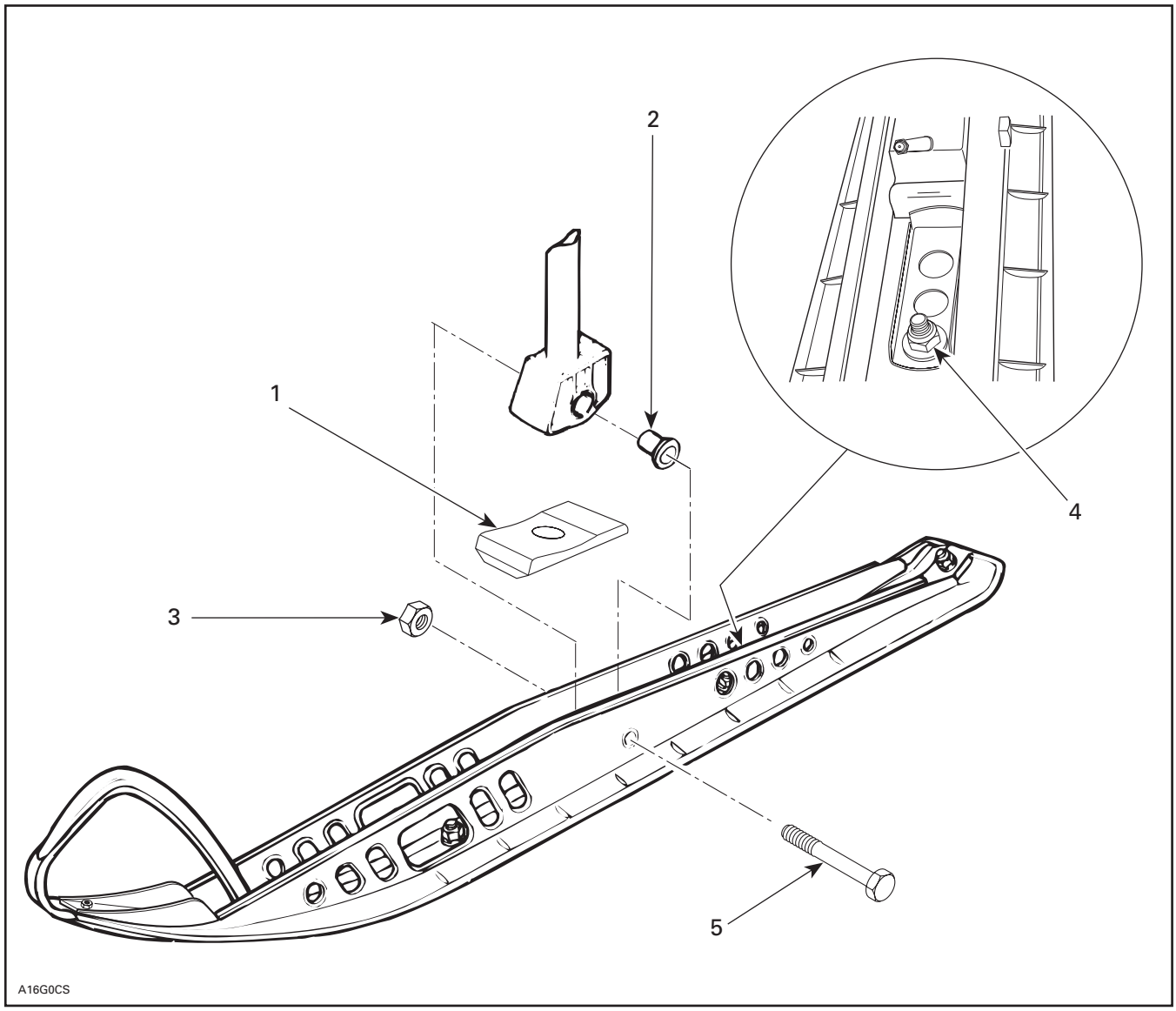
Replace vehicle on ground.



LEFT SIDE SHOWN

1. *Elastic flanged nut M12 x 1.75 (2) (P/N 228 5210 45) (Section no. 1). 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*

Formula 500 De Luxe, Formula Z, Summit 500/583/670



LEFT SIDE SHOWN

1. *Stop bounding (2) (P/N 570 0468 00) (Section no. 8)*
2. *Slider cushion (4) (Ski leg)*
3. *Elastic flanged nut M12 (2) (Ski leg). Torque to 40 N•m (30 lbf•ft)*
4. *Loosen then adjust against stop bounding. Torque to 14 N•m (124 lbf•**in**)*
5. *Bolt M12 (2) (Ski leg)*

After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•**in**). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.

All Models

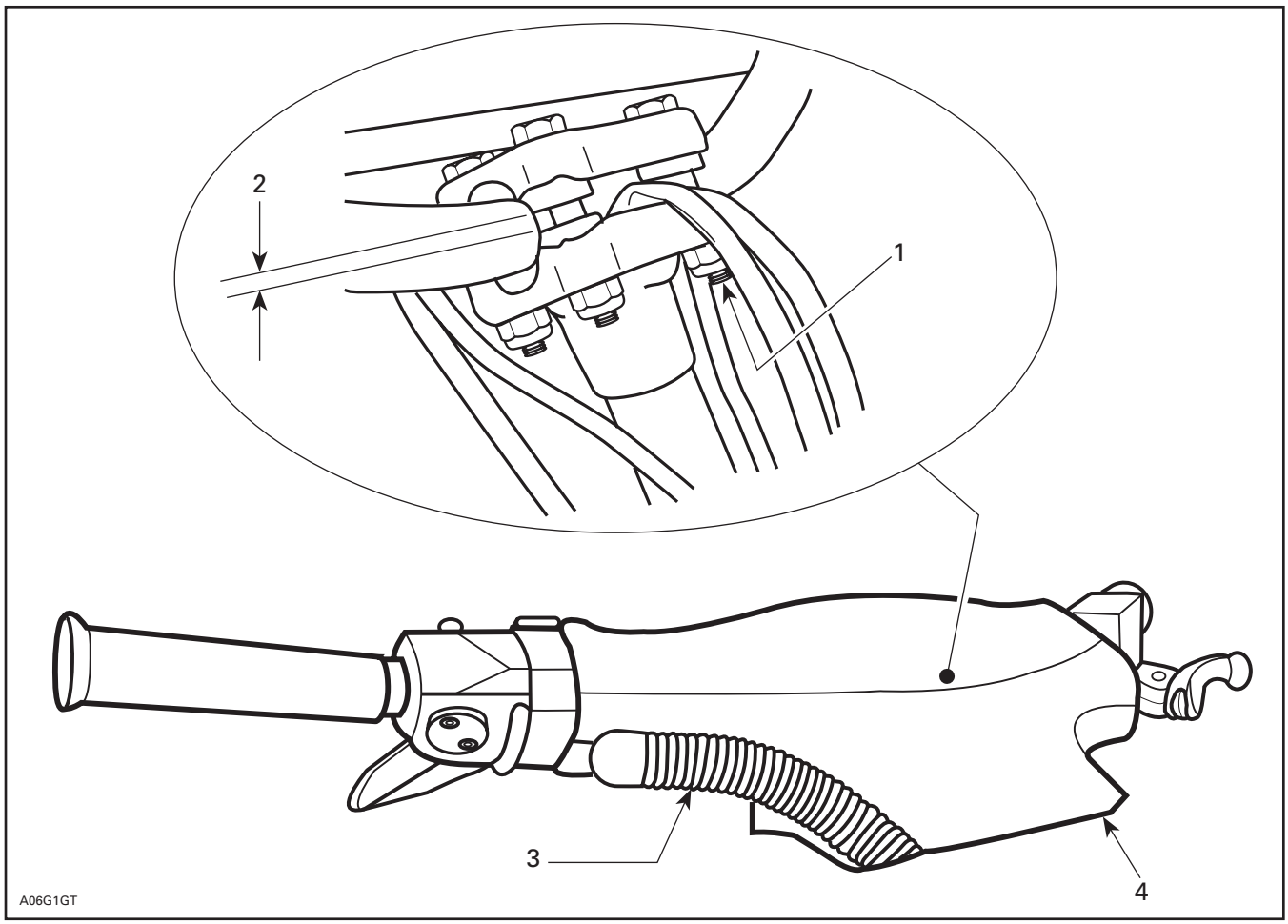
Adjust handlebar temporary and tighten nuts loosely for now.

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

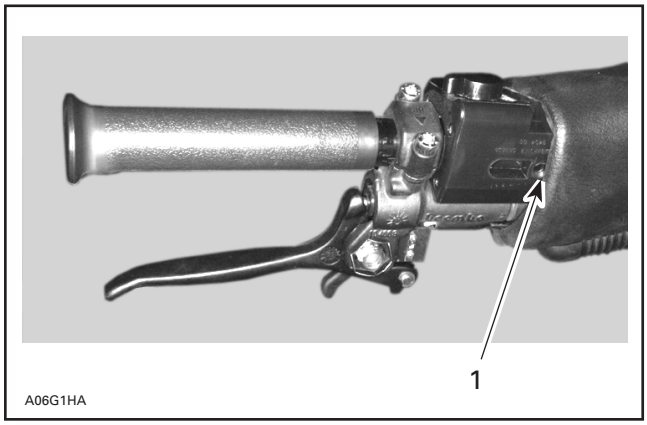
Install steering pad temporary, and adjust for proper fit with console.

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

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

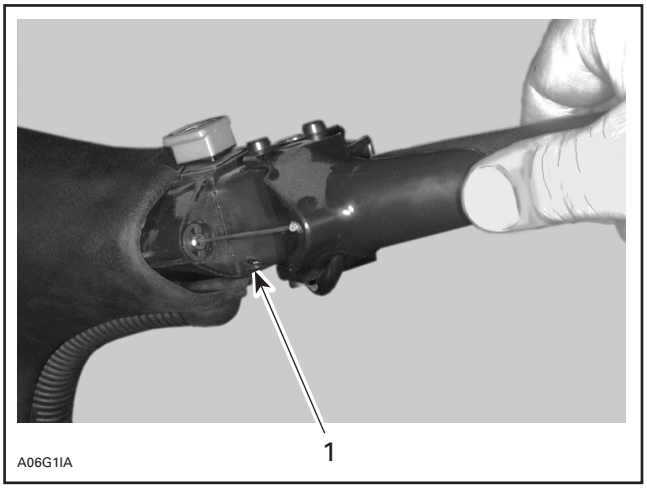


1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (Both clamps)
3. Keyway (2) (P/N 572 0724 00) (Section no. 3 or 5)
4. Steering pad (engine compartment)



BRAKE HANDLE HOUSING

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



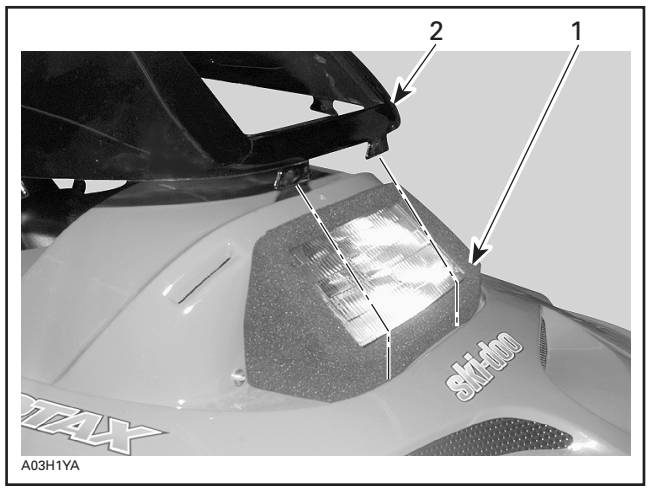
THROTTLE HANDLE HOUSING

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

All Models

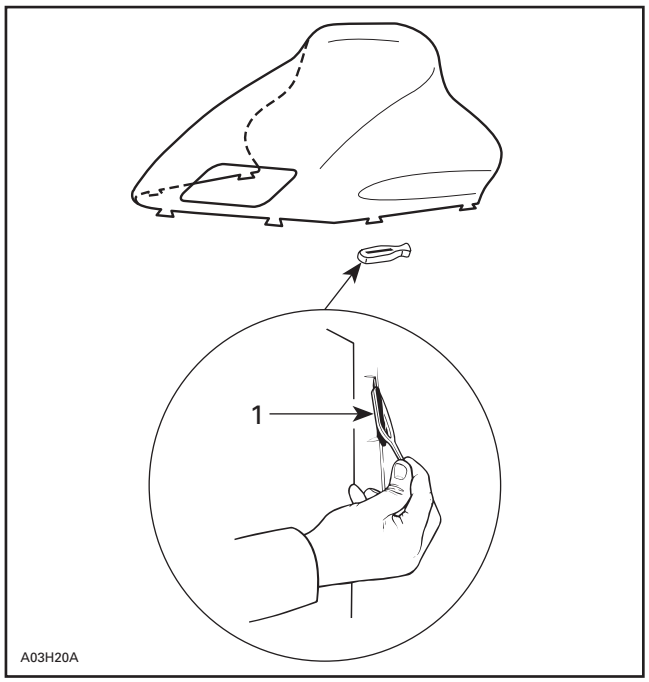
Install windshield on dashboard.

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



1. Protective foam
2. Install windshield on dashboard

WINDSHIELD INSTALLED ON DASHBOARD



1. Latch (6) (P/N 570 0238 00) (section no. 4 or 6)

Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

LIQUIDS
OIL INJECTION PUMP BLEEDING

SUPPLEMENTAL OIL

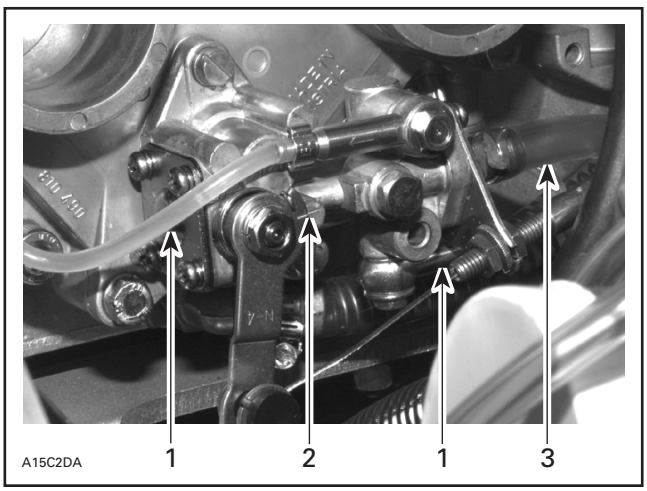
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER ROTAX Injection Oil (P/N 413 8030 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

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 aligned when throttle lever is activated just enough to take all cable play.

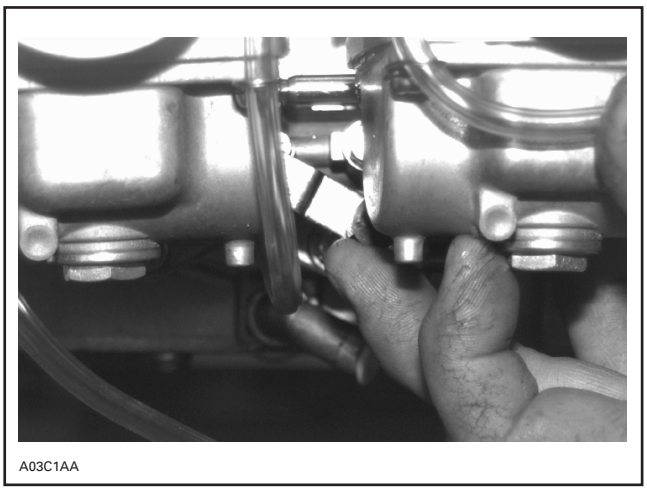


1. *Small oil line*
2. *Marks aligned*
3. *Main oil line*

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 rein-stalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.

ADJUSTMENT
DRIVE PULLEY

Summit 500 and 583

Adjust TRA drive pulley screw according to decal on belt guard.

LIQUIDS
BRAKE FLUID LEVEL

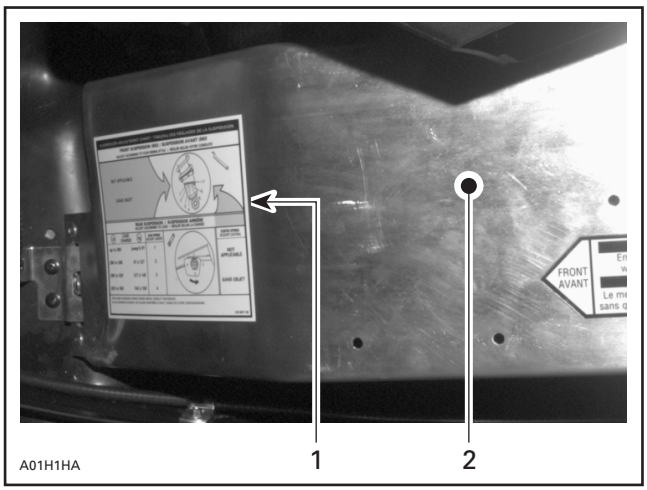
Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ CAUTION

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

ADJUSTMENT
SUSPENSION

Rear suspension is calibrated at factory. At predelivery, 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.

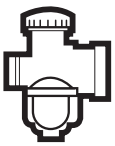
ADJUSTMENT
DRIVEN PULLEY

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

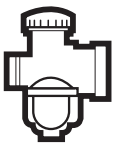
The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service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

A dot (•) on right indicates changes from 1996 model.

	MODELS		FORMULA 500/500 DE LUXE	FORMULA 583
	Engine Type		494	583
	Maximum HP RPM ①	±100 RPM	7750 •	7900 •
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 9245 09 135°/64°	420 9245 02 140/71
	Carburetor Type		PTO VM 38 - 345 • MAG VM 38 - 346 •	PTO VM 38 - 349 • MAG VM 38 - 350 •
	Main Jet		PTO 310/MAG 290 •	PTO 280/MAG 270 •
	Needle Jet		P-3 (480) •	Q-6 (480) •
	Pilot Jet		50 •	50 •
	Needle Identification – clip Position		6FEY1 •	6BGY15 •
	Slide Cut-away		2.5	2.5
	Float Adjustment	±1 mm (in)	18.1 (.71)	18.1 (.71)
	Air Screw Adjustment	± 1/16 turn	1-1/2 •	2-1/4 •
	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	23/44 •	25/44 •
	Engagement Speed	± 100 RPM	4200 •	4100 •
	Drive Pulley Calibration Screw Position		3	3
	Pulley Distance	Z (+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)	
	Offset	X ± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	
		Y	Dimension Y must exceed X from 1mm (1/32in) 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 mm (in)	40 to 55 (1-9/16 to 2-5/32) with a 7.3 kg (16 lb) downward pull	30 to 40 (1-3/16 to 1-9/16) with a 7.3 kg (16 lb) downward pull •

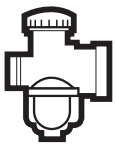
NOTE: See end of specifications for foot notes.

A dot (•) on right indicates changes from 1996 model.

	MODEL		SUMMIT 500	
	Engine Type		494	
	Maximum HP RPM ①	±100 RPM	7750	•
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 9245 09 135°/64°	
	Carburetor Type		PTO VM 38 - 363	MAG VM 38 - 364
	Main Jet		PTO 400	MAG 380 •
	Needle Jet		Q - 0 (480)	•
	Pilot Jet		75	
	Needle Identification– clip Position		6FEY1	•
	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	22/44	
	Engagement Speed	±100 RPM	4800	
	Drive Pulley Calibration Screw Position		5	•
	Pulley Distance	Z (+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)	
	Offset	X ± 0.4 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 ±.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)	45 to 50 (1-3/4 - 2) with a 7.3 kg (16 lb) downward pull	

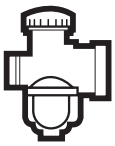
NOTE: See end of specifications for foot notes.

A dot (•) on right indicates changes from 1996 model.

	MODEL		SUMMIT 583	
	Engine Type		583	
	Maximum HP RPM ①	±100 RPM	7800	•
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 9245 09 135°/64°	
	Carburetor Type		PTO VM 38 - 365	MAG VM 38 - 366 •
	Main Jet		PTO 340	MAG 330 •
	Needle Jet		Q-6 (480)	•
	Pilot Jet		75	
	Needle Identification– clip Position		6BGY15	•
	Slide Cut-away		2.5	
	Float Adjustment	±1 mm (in)	18.1 (.71)	•
	Air Screw Adjustment	± 1/16 turn	2-1/4	•
	Idle Speed RPM	±200 RPM	1900	•
	Gas Grade/Pump Octane Number	(R + M)/2	Regular Unleaded/87	
	Gas/Oil Ratio		Oil Injection	
	Ignition Timing BTDC ②	mm (in)	1.75 (.069)	
	Trigger Coil Air-Gap	mm (in)	0.55 - 1.45 .022 - .057)	
	Gear Ratio	teeth	22/44	
	Engagement Speed	±100 RPM	4500	
	Drive Pulley Calibration Screw Position		5	•
	Pulley Distance	Z (+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)	
	Offset	X ± 0.4 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 ±.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)	45 to 50 (1-3/4 - 2) with a 7.3 kg (16 lb) downward pull	

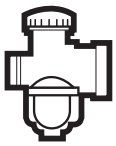
NOTE: See end of specifications for foot notes.

A dot (•) on right indicates changes from 1996 model.

	MODEL			SUMMIT 670	
	Engine Type			670	
	Maximum HP RPM ①		±100 RPM	7700	•
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	420 9245 00 145°/71°	•
	Carburetor Type			PTO VM 40 - 90	MAG VM 40 - 91 •
	Main Jet			PTO 380	MAG 370
	Needle Jet			AA-2 (224)	•
	Pilot Jet			75	
	Needle Identification– clip Position			7DPI1	•
	Slide Cut-away			2.5	
	Float Adjustment		±1 mm (in)	18.1 (.71)	•
	Air Screw Adjustment		± 1/16 turn	2-1/4	
	Idle Speed RPM		±200 RPM	1900	•
	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	23/44	
	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	± 0.4 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	±.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)	45 to 50 (1-3/4 - 2) with a 7.3 kg (16 lb) downward pull	

NOTE: See end of specifications for foot notes.

A dot (•) on right indicates changes from 1996 model.

	MODEL			FORMULA Z		
	Engine Type			583		
	Maximum HP RPM ①		±100 RPM	7900		•
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	420 9245 02 140°/71°		
	Carburetor Type			PTO VM 40 - 88	MAG VM 40 - 89	•
	Main Jet			PTO 280	MAG 260	•
	Needle Jet			AA-2 (224)		•
	Pilot Jet			60		•
	Needle Identification– clip Position			7ECY1		•
	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)	1.75 (.069)		
	Trigger Coil Air-Gap		mm (in)	0.55 - 1.45 .022 - .057)		
	Gear Ratio		teeth	25/44		
	Engagement Speed		±100 RPM	4100		•
	Drive Pulley Calibration Screw Position			3		•
	Pulley Distance	Z	(+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)		
	Offset	X	± 0.4 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	±.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 40 (1-3/16 - 1-9/16) with a 7.3 kg (16 lb) downward pull		•

①Engine speed at which maximum power is achieved.

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

③Force applied midway between pulleys to obtain specified deflection.

④High Altitude Compensator.

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 ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-4**

Date: August 2, 1996

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	Skandic* WT (Canada and United States)	1134/1135	ALL
1997	Skandic* SWT (Canada and United States)	1136/1137	ALL
1997	Skandic* WT LC (Canada and United States)	1132/1133	ALL

This bulletin must be used in conjunction with the check list enclosed in the *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 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 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 inquires 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*.

TABLE OF CONTENTS

All Models

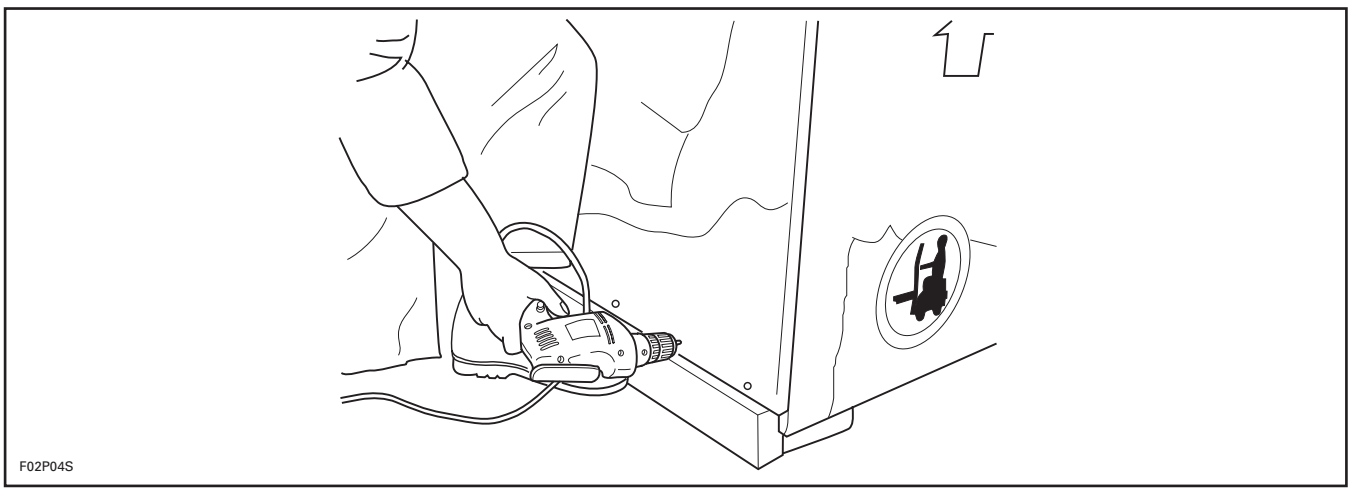
◆ WARNING

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

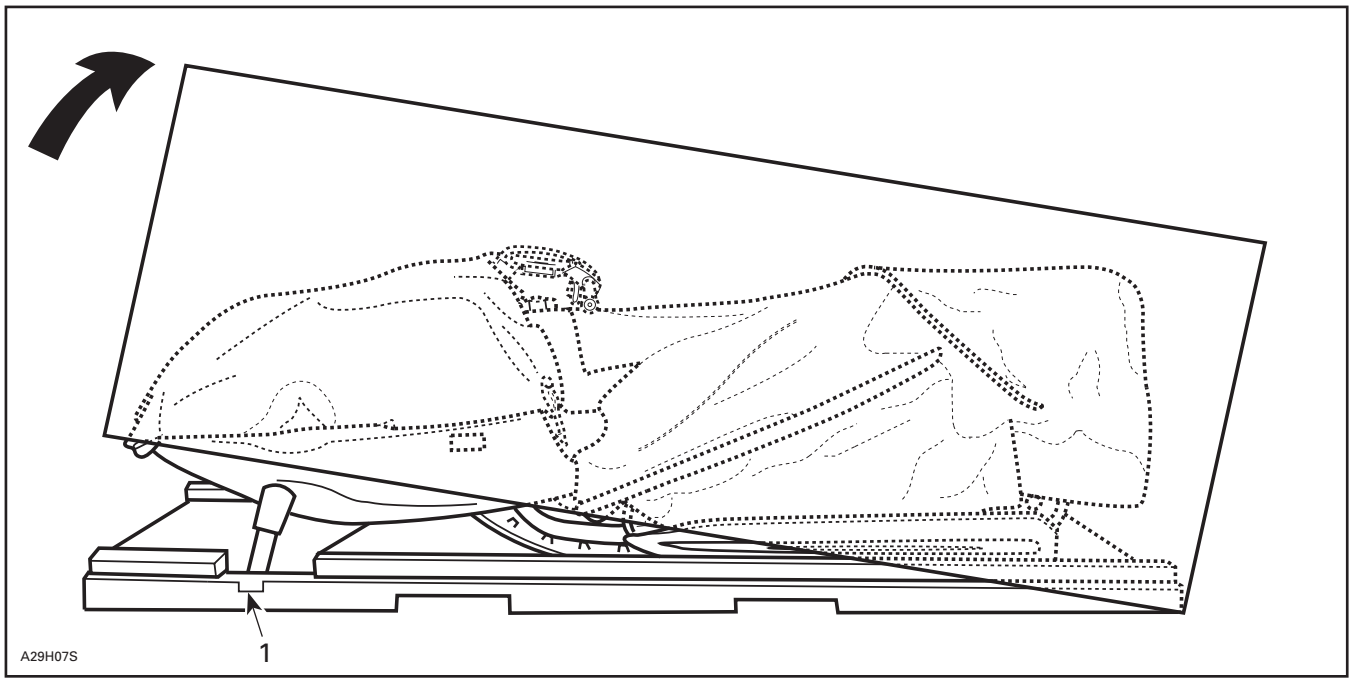
▼ CAUTION

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

Using a screwdriver, remove all screws retaining crate to base.



Tip cover towards rear of vehicle. There is a notch in crate base at front.



1. Notch

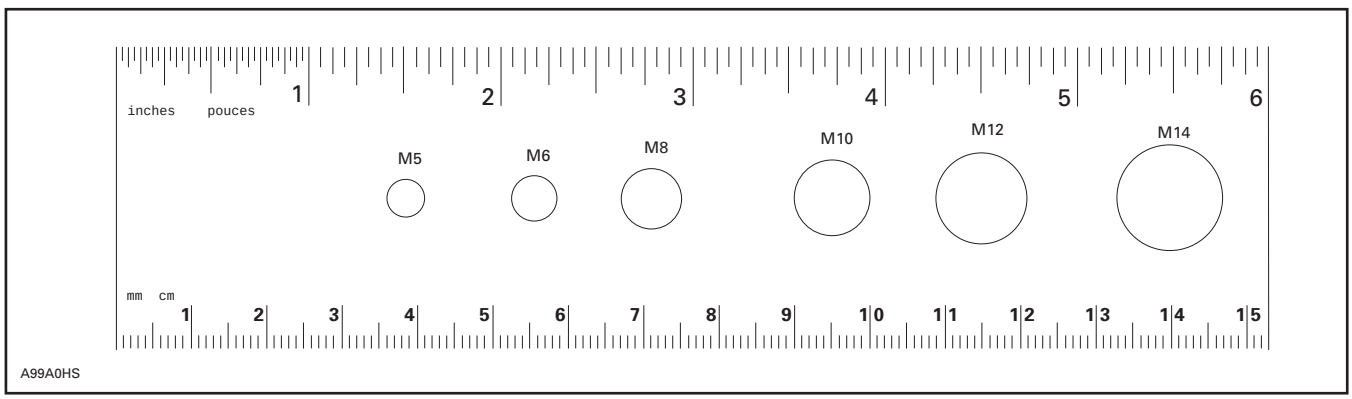
Detach parts to be installed (e.g. skis, windshield), from the vehicle and its base.

▼ 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.

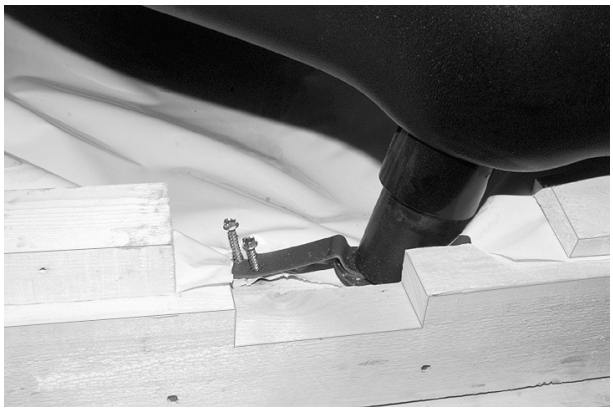
NOTE: This rule can be helpful to identify fastener length/size.



CAUTION

Make sure vehicle is properly supported.

Detach ski legs from crate. Discard nuts and bolts.



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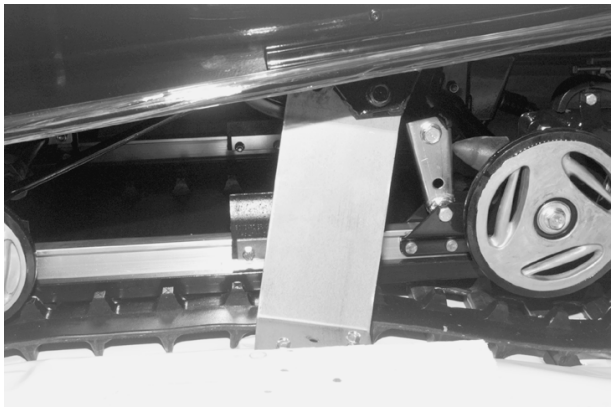
Remove the rear retaining brackets from both sides of vehicle and retain bolts holding brackets to body.



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Remove vehicle from base.

PARTS INSTALLATION
BATTERY

All models

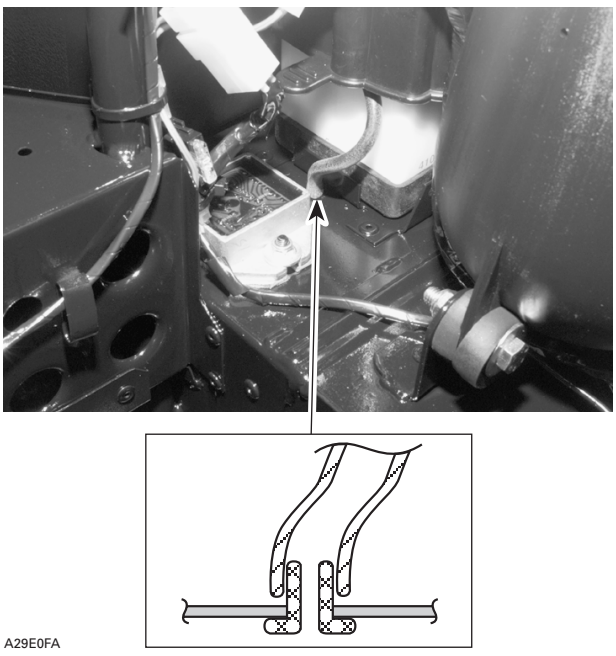
During preparation, the battery can be activated as described in 1997 *Ski-Doo Shop Manual.*

CAUTION

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

On WT and SWT models, a special vented rivet is fixed to the chassis in order to plug the vent tube from the battery.

On WT LC, vent tube is connected to a special plastic reservoir.



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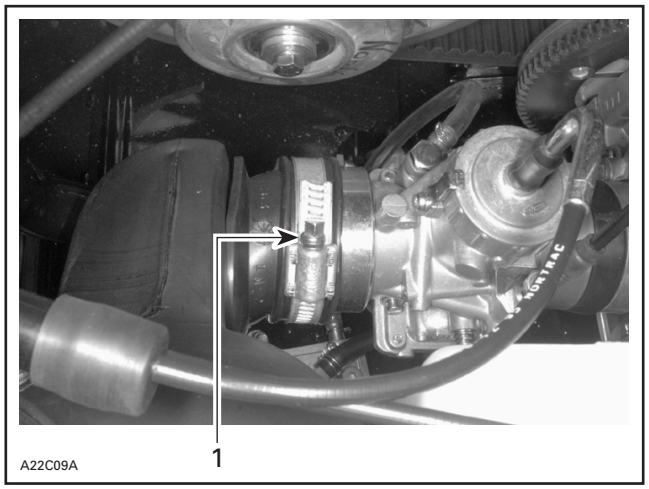
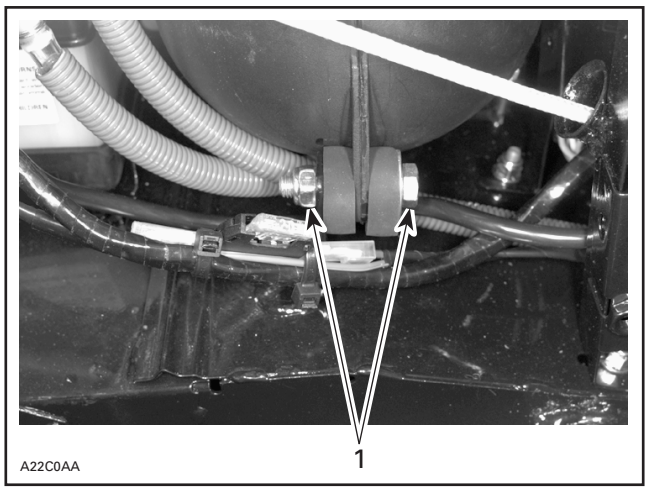
Skandic WT

Battery removal

Remove air intake silencer.

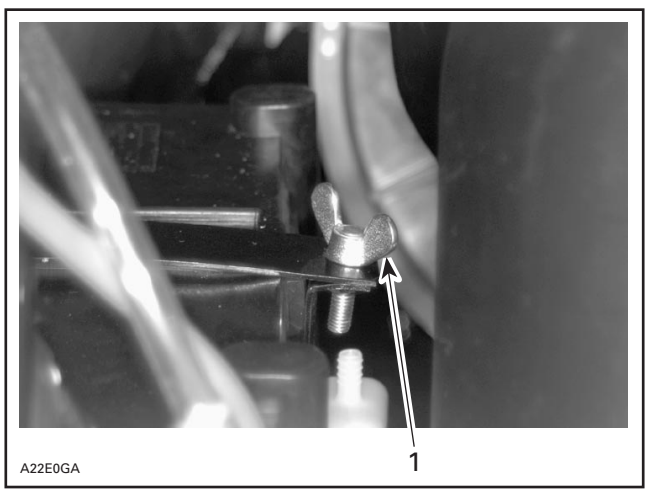


1. Loosen clamp



1. Remove bolt and lock nut

Unfasten battery brackets and remove battery.



1. Wing Screw

Battery installation

Secure battery brackets.

Connect battery cables.

◆ WARNING

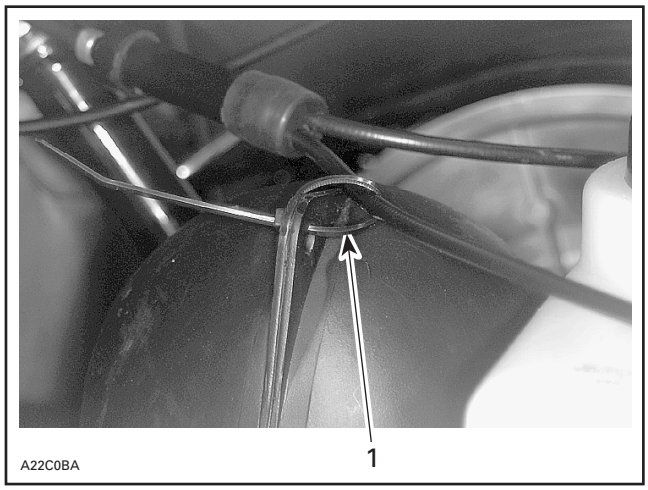
Always connect the battery cables exactly in the specified order. Connect RED positive cable first, then BLACK negative ground cable.

Apply silicone dielectric grease (P/N 413 7017 00) on battery posts and connectors.

Ensure that battery vent tube is properly installed from battery to the plug provided on the frame.

Reinstall air intake silencer.

Secure oil injection pump cable to air intake silencer using a locking tie. Install locking tie loosely as per following illustration.



1. Locking tie

Skandic SWT

Battery removal

Remove battery bracket and remove battery from vehicle.

Battery installation

Install battery in vehicle.

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 413 7017 00) on battery posts and connectors.

Install battery cover.

Secure battery with bracket and tighten wing screw.

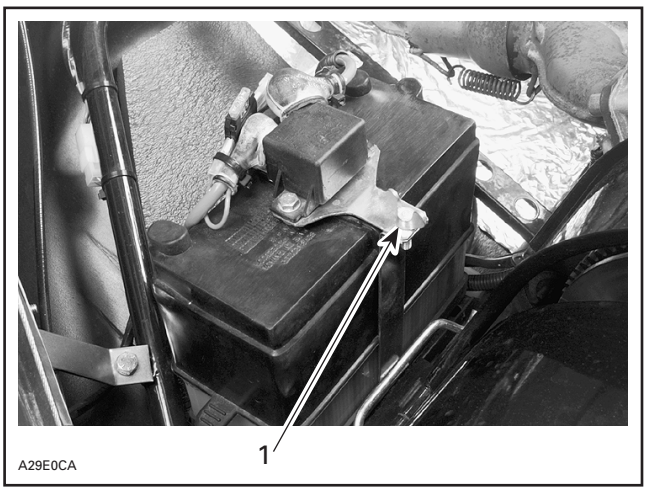
Ensure vent tube is properly installed from battery to the plug provided on the frame.

Skandic WT LC

Battery Removal

Unscrew wing screw and remove bracket with solenoid.

Remove battery cover and remove battery from vehicle.



1. Wing screw

Battery installation

Install battery in vehicle.

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 413 7017 00) on battery posts and connectors.

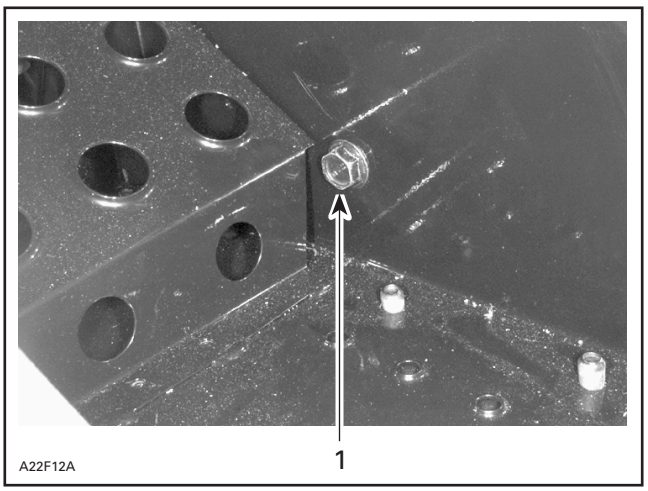
Install battery cover.

Install battery bracket with solenoid and secure with wing screw.

Ensure vent tube is properly installed from battery to the special reservoir provided.

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).

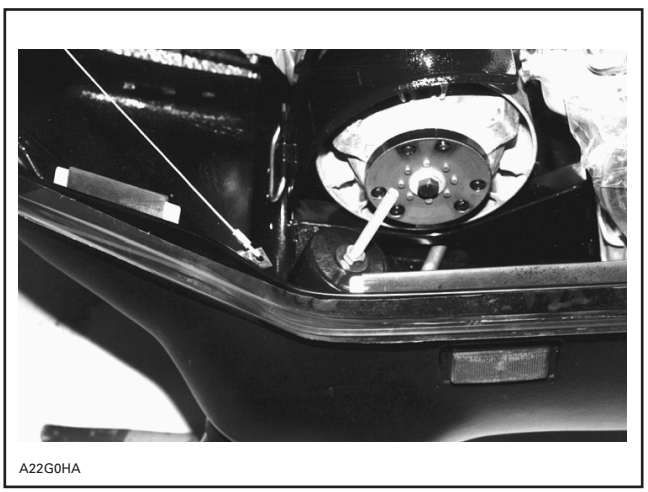


1. Torque screw on each side to 58 N•m (43 lbf•ft)

Secure rear arm using previously removed screws.

Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).

Remove long bolts that compresses front suspension on both sides.

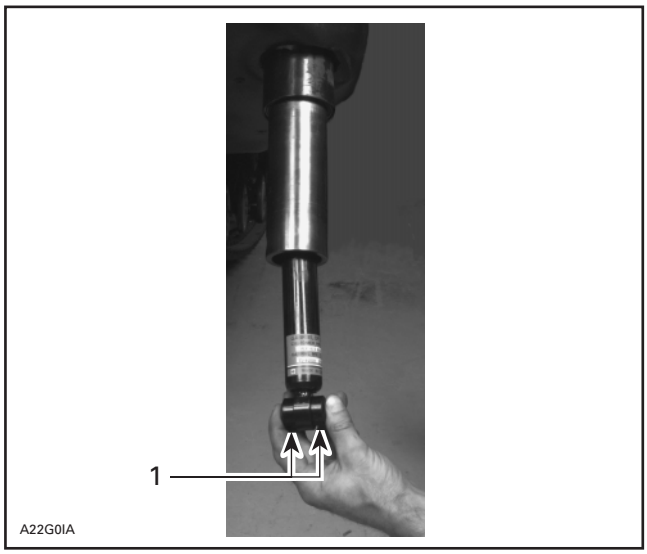


Install 2 plastic bushings into shock absorber eyelet.

Stretch shock to its maximum.

Slide shock absorber onto bottom of ski leg until shock rod goes through cap hole.

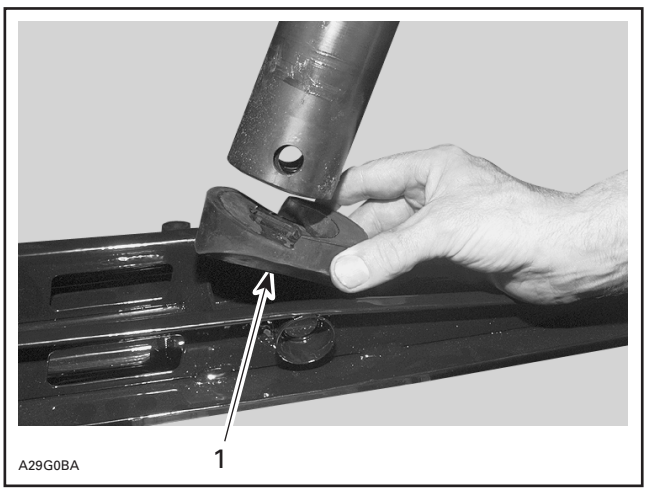
Loosely install washer and nut on shock rods, keeping at least 1/4 in (5mm) of free play.



1. Plastic Bushings

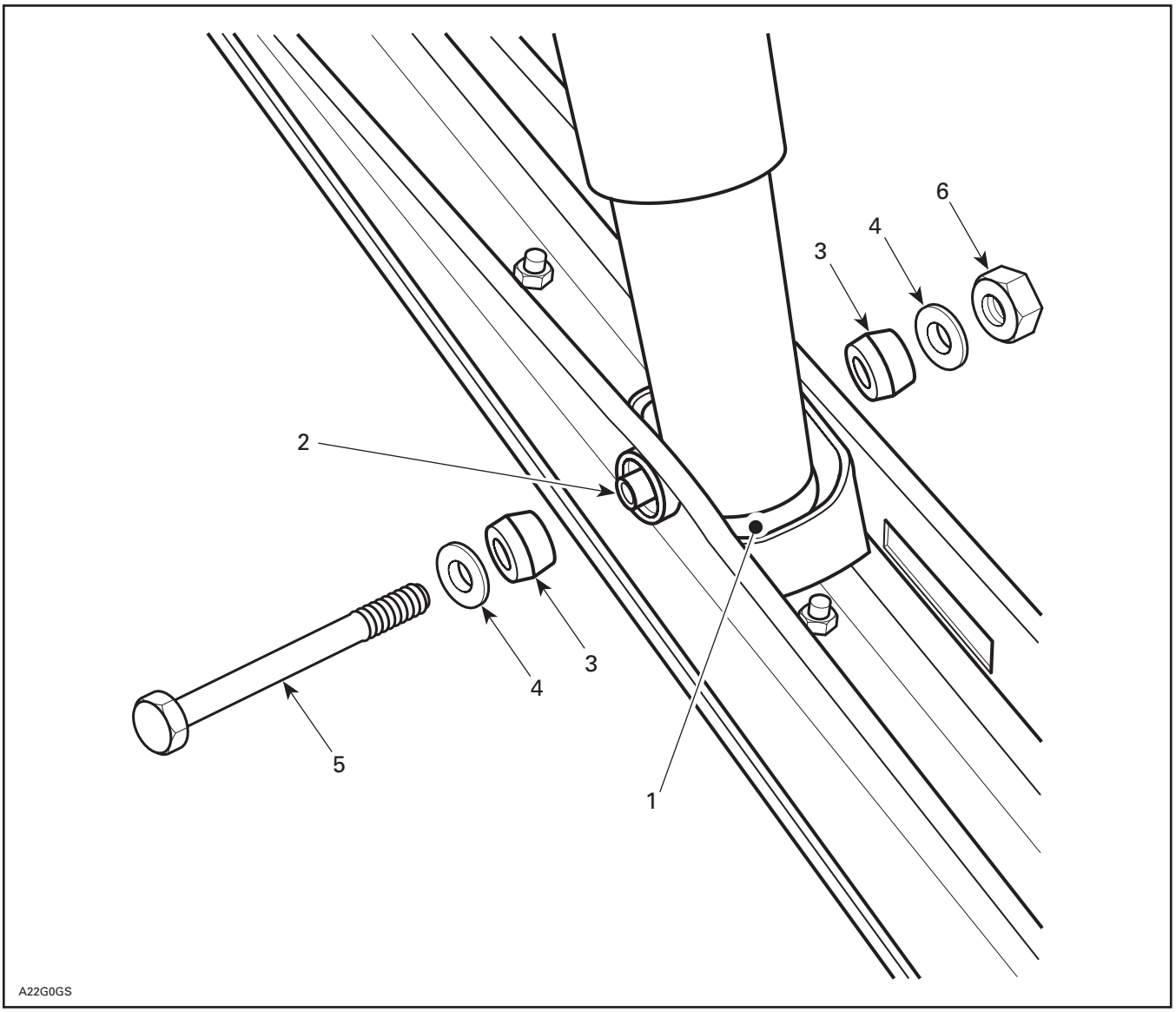
PARTS INSTALLATION
SKIS

Install stop bounding on skis with its highest portion toward front.



1. Stop bounding

Instal skis on vehicle using bolts, nuts, washers and rubber bushings supplied in the predelivery kit.



1. *Stop bounding*
2. *Sleeve*
3. *Rubber bushing (2)*
4. *Flat washer (2)*
5. *Bolt M10 x 120*
6. *M10 lock nut, tighten to 48 N•m (35 lbf•ft)*

Tighten shock rod top nuts to 30 N•m (22 lbf•ft).

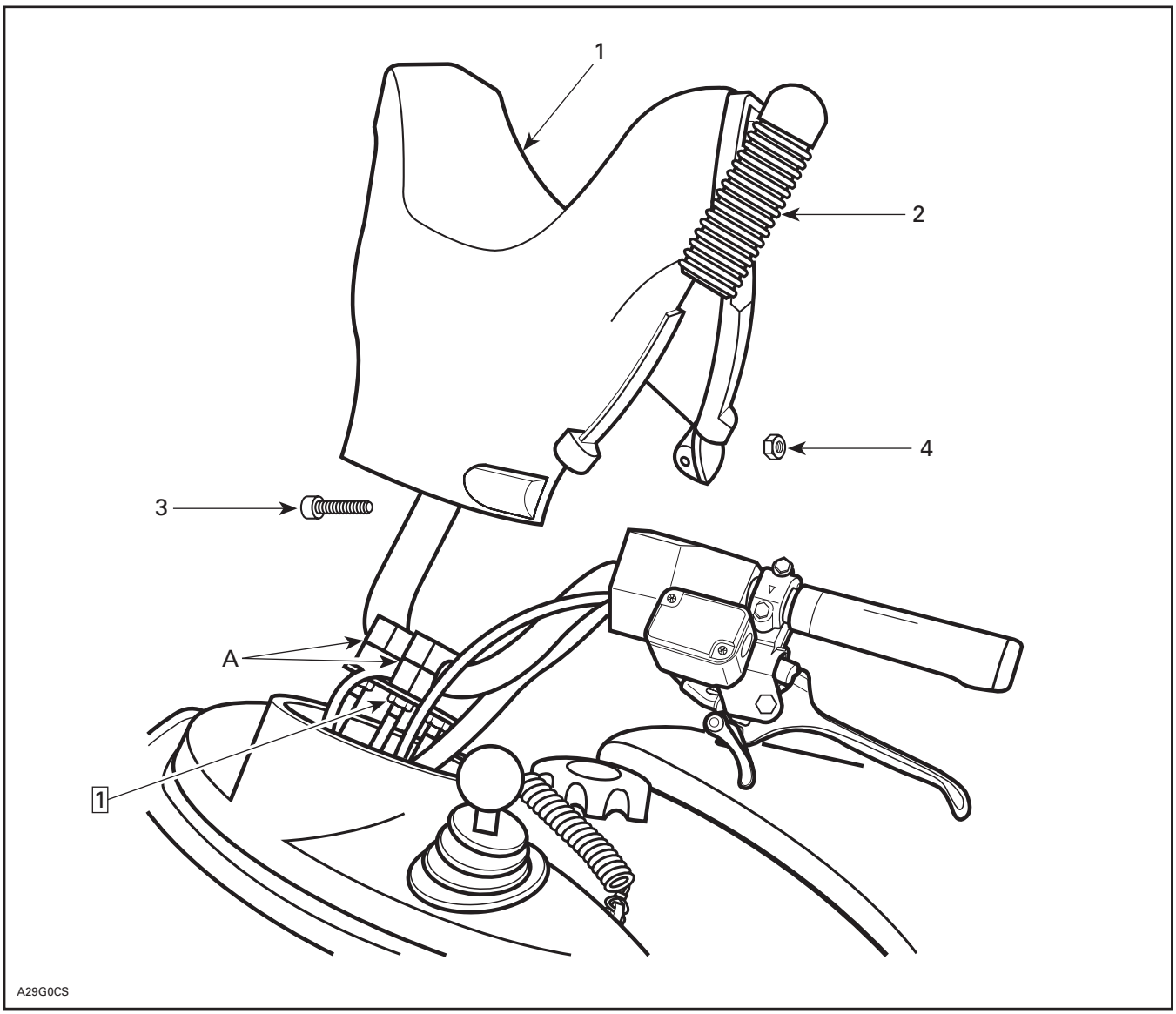
Adjust handle bar and set both clamps to have equal gap on each side. Torque nuts to 26 N•m (19 lbf•ft).

Loosen throttle and brake handle housings.

Install steering pad.

NOTE: On Skandic SWT, make sure to secure steering column cover with steering pad before tightening bolts.

Adjust both throttle and brake handle housings to match steering pad.



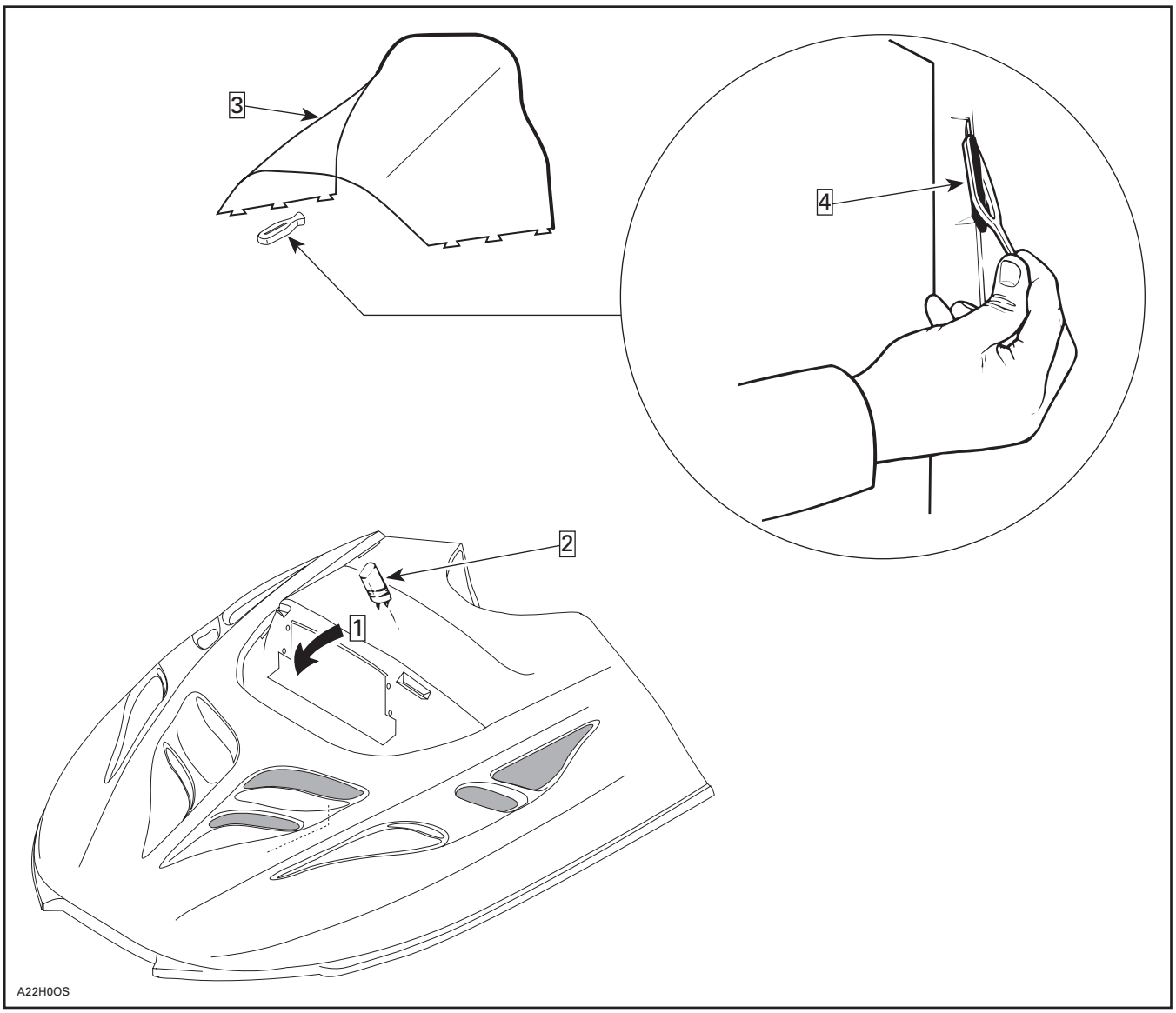
TYPICAL

Step 1: Torque to 26 N•m (19 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*

A. Equal gap on each side (Both clamps)

Remove headlamp molding.
Install rubber support in predrilled holes on the hood.



Step 1: Pry out headlamp molding
Step 2: Install support. Apply soap on tips to ease installation
Step 3: Install windshield
Step 4: Install latches (10)

Install windshield and secure with latches inside hood.

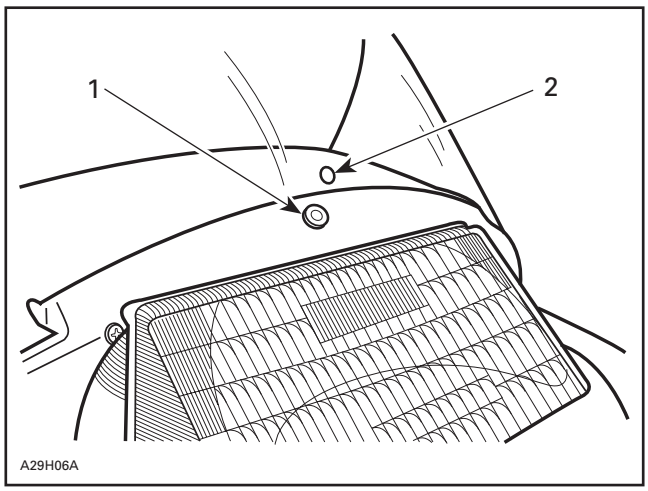
Install rubber expansion nut in hole above head light.

Line up hole in windshield with rubber expansion nut and install screw with cup.

Tighten slightly so that rubber expands inside hood.

Install rubber cap on screw and reinstall headlamp molding.

Make sure to properly position lower edge of plastic molding under head lamp.



1. Rubber Expansion Nut
2. hole in windshield

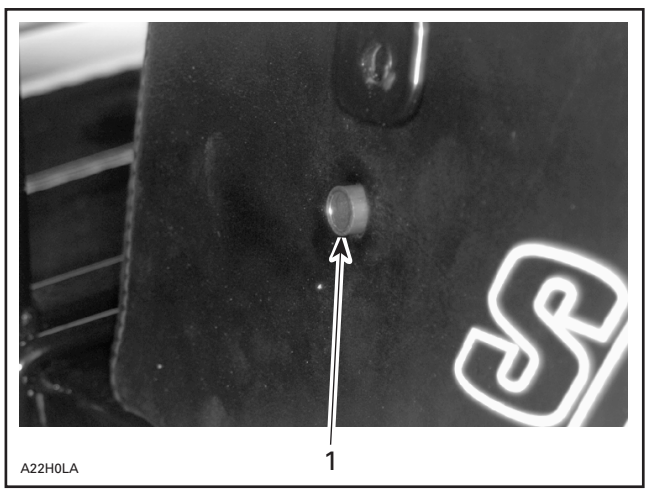
PARTS INSTALLATION
BACKREST AND SEAT STRAP

WT and WT LC

Remove screws retaining backrest to seat.

Remove backrest.

Install spacers (included in shrink kit) in rear seat holes of backrest.

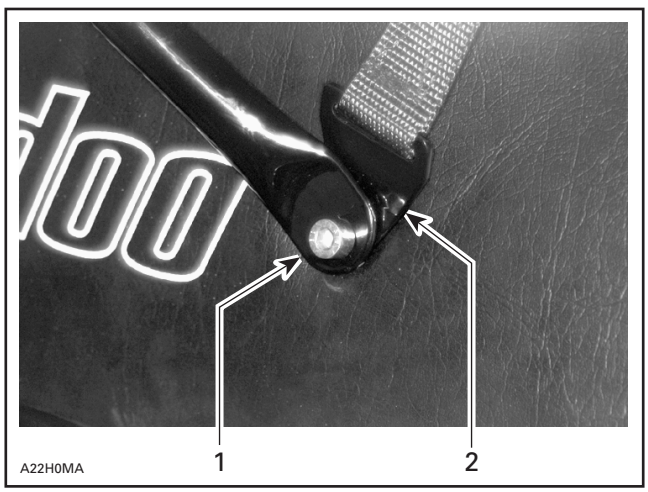


1. Spacer

Reinstall backrest in its proper position.

Secure rear arm backrest using 2 M8 x 30 screws previously retaining backrest to seat.

Install seat strap with front arm of backrest and secure with M8 X 20 screws included in the shrink pack.



1. Front arm of backrest
2. Seat strap

Clean pulleys and disk brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

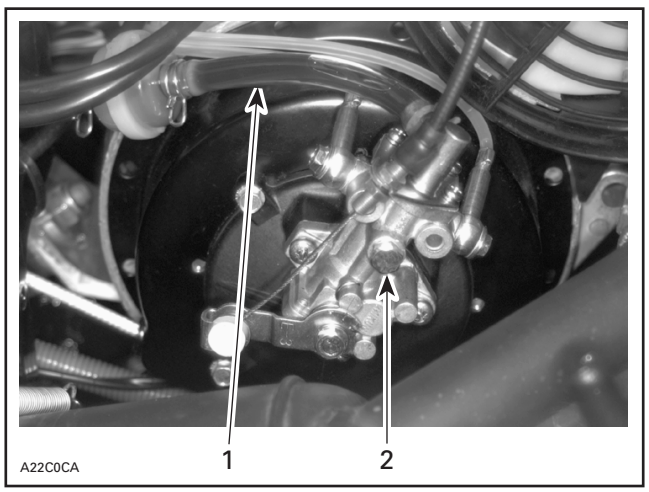
LIQUIDS
OIL INJECTION PUMP BLEEDING

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 8029 00) should be added to fuel for the first full filling of fuel tank.

Skandic WT and SWT

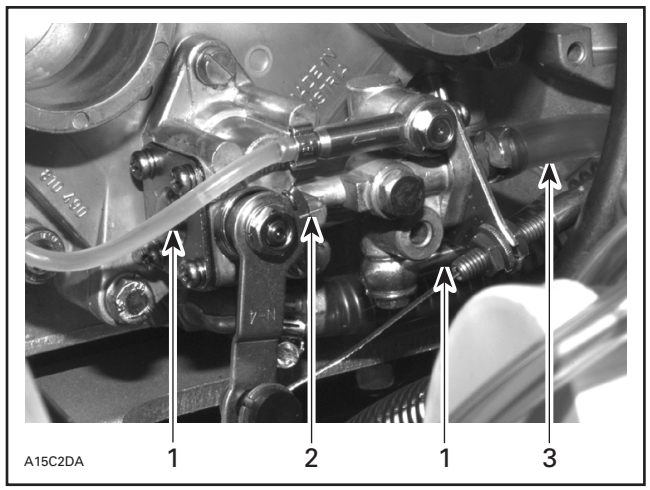
Bleed main oil line (between tank and pump) by loosening the bleeder screw until all air has escaped from the line. Add injection oil as required.



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
3. Main oil line

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 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.

Reinstall air silencer.

LIQUIDS
BRAKE FLUID LEVEL

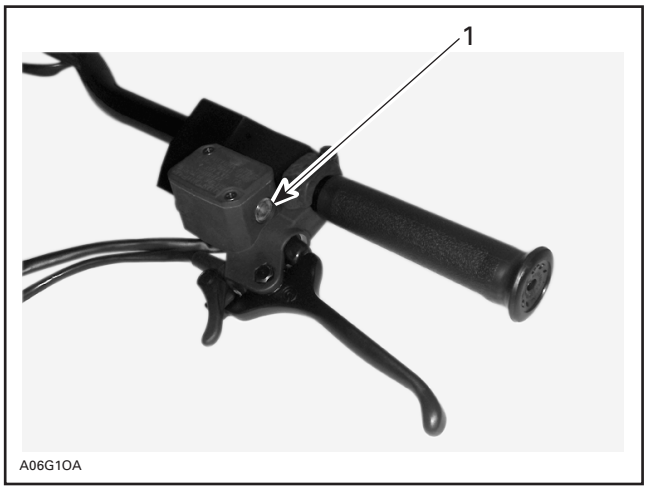
All Models

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 partial 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 ethyl-glycol antifreeze containing corrosion inhibitors specially recommended for aluminum engines. Always use 60% antifreeze and 40% water.

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.

ADJUSTMENT
TRACK

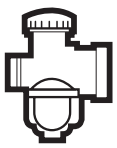
Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

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 inquires should be directed to your distributor service representative.

The dot (•) indicates changes from 1996 models.

MODELS			SKANDIC WT	SKANDIC SWT
Engine Type			ROTAX 503	ROTAX 503
Maximum HP RPM ①		±100 RPM	6500	6500
Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	N.A.	N.A.
Carburetor Type			VM 32	VM 32
Main Jet			230	230
Needle Jet			159 O-0	159 O-0
Pilot Jet			25	25
Needle Identification– clip Position			6DH8-4	6DH8-4
Slide Cut-away			3.0	3.0
Float Adjustment		mm (in)	23.9 (.94)	23.9 (.94)
Air Screw Adjustment		±1/32 turn	1.5	1.5
Idle Speed		RPM	1500-1800	1500-1800
Gas Grade/Pump Octane Number		(R + M)/2	Regular Unleaded/87	Regular Unleaded/87
Gas/Oil Ratio			Oil Injection	Oil Injection
Ignition Timing BTDC ②		mm (in)	1.66 (.065)	1.66 (.065)
Trigger Coil Air-Gap		mm (in)	0.45 - 0.55 (.018 - .022)	0.45 - 0.55 (.018 - .022)
Gear Ratio			1st gear 1:3.27 2nd gear 1:2.07	1st gear 1:4.41 2nd gear 1:3.19
Engagement Speed		±100 RPM	3300	3300
Drive Pulley Calibration Screw Position			3	4
Pulley Distance	Z	(+0, –1) mm (+0, –1/32) in	32.75 (1-9/32)	32.75 (1-9/32)
Offset	X	± 0.4 mm (± 1/64 in)	36.25 (1-27/64)	36.25 (1-27/64)
	Y		Dimension Y must exceed X from1 mm (1/32 in) to 2 mm (5/64)	Dimension Y must exceed X from1 mm (1/32 in) to 2 mm (5/64)
Drive Belt Adjustment	Deflection	mm (in)	32 (1-1/4)	32 (1-1/4)
	Force ③	kg (lbf)	6.8 (15)	6.8 (15)
Driven Pulley Preload		kg (lbf)	7.0 ± 0.7	6.0 ±0.7
Drive Chain Tension			Not Applicable	Not Applicable
Track Adjustment	Deflection	mm (in)	40 to 45 (1.5 to 1.7)	40 to 45 (1.5 to 1.7)
	Force	Kg (lbf)	7.3 (16.1)	7.3 (16.1)

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

	MODELS			SKANDIC WT LC
	Engine Type			494
	Maximum HP RPM ①		RPM	6800-6900
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	420 9245 09 148° 52°
	Carburetor Type			PTO VM 34 MAG VM 34
	Main Jet			PTO 260 MAG 260
	Needle Jet			PTO 159 P-0 MAG 159 P-0
	Pilot Jet			PTO 30 MAG 30
	Needle Identification– clip Position			PTO 6DH4-3 MAG 6DH4-3
	Slide Cut-away			PTO 2.0 MAG 2.0
	Float Adjustment		± 1 mm (±.040 in)	23.9 (15/16)
	Air Screw Adjustment		± 1/16 turn	PTO 1.0 MAG 3/4
	Idle Speed RPM		RPM	1800 - 2000
	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			Low 1:3.38 High 1:1.86
	Engagement Speed		RPM	3400
	Drive Pulley Calibration Screw Position			2
	Pulley Distance	Z	(+ 0, –1) mm (+0, –1/32) in	32.75 (1-9/32)
	Offset	X	± 0.4 mm (±1/64 in)	32.75 1 27/64
		Y		Dimension Y must exceed X from1 mm (1/32in) to 2.0 mm (5/64 in)
	Drive Belt Adjustment	Deflection	mm (in)	32 (1-1/4)
		Force ③	kg (lbf)	6.8 (15)
	Driven Pulley Preload		kg (lbf)	7.0 ±0.7 (15.5 ±1.5)
	Drive Chain Tension			Not applicable
	Track Adjustment	Deflection	mm (in)	45 to 50 (1 3/4 - 2) with a 7.3 kg (16 lb) downward pull

① Engine speed at which maximum power is achived.
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 ☐

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SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-5**

Date: August 2, 1996

SUBJECT: Uncrating Procedure

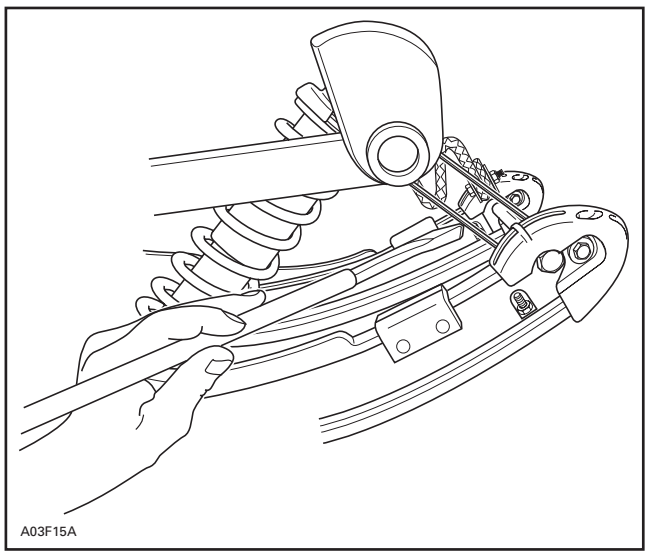
YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	ALL except Skandic* WT/SWT and Tundra* II LT	ALL	ALL

SHIPPING STRAP REMOVAL

Cut shipping strap using one of these 2 following methods:

Method 1

Using a long flat chisel such as Snap-On® PPC820LA cut shipping strap that collapses front portion of rear suspension, as shown on the next photo.



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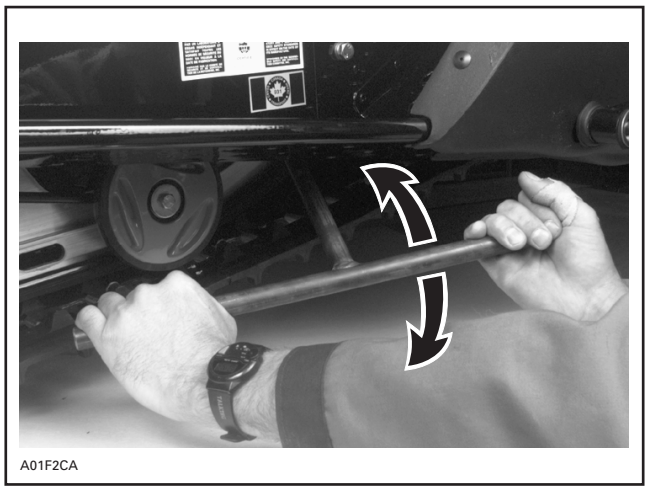
Method 2

Using a special tool cut shipping strap as shown on the next photo.



A01F2CA

1. Insert tool tip onto strap and twist

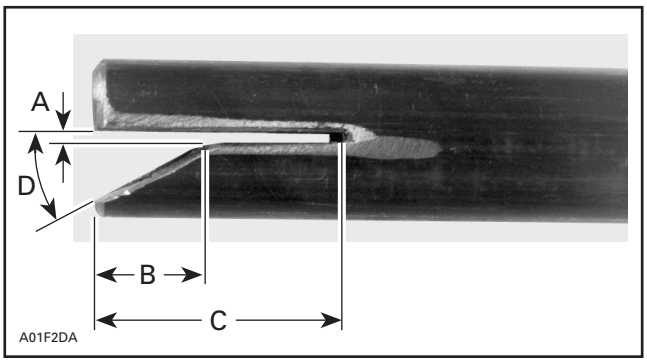
How to build the special tool

Using 20 mm (3/4 in) steel tubing, cut the first piece to 460 mm (18 in) and the second one to 410 mm (16 in).

NOTE: High forces will be apply on this special tool, use strong tubing with a minimum wall thickness of 2 mm (5/64 in).

On one end of the 460 mm (18 in) piece, cut a 1.2 mm (3/64 in) slot by 28.5 mm (1-1/8 in).

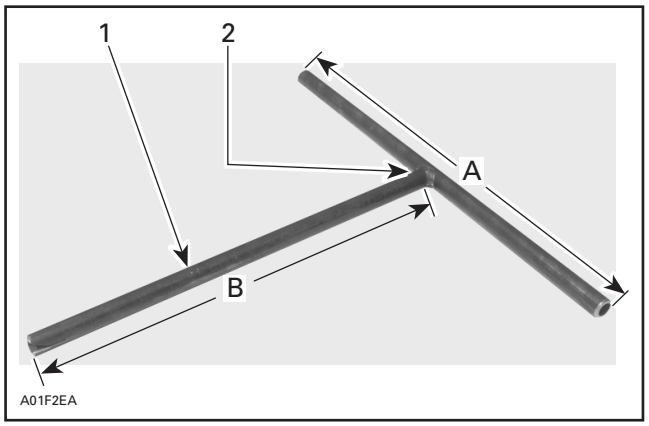
Make a chamfer of 30° X 10 mm (25/64 in), as shown on the next photo.



A. 1.2 mm (3/64 in)
B. 10 mm (25/64 in)
C. 28.5 mm (1-1/8 in)
D. 30°

Remove all sharp edges.

Assemble the two pieces and weld them together, as shown on the following photo.

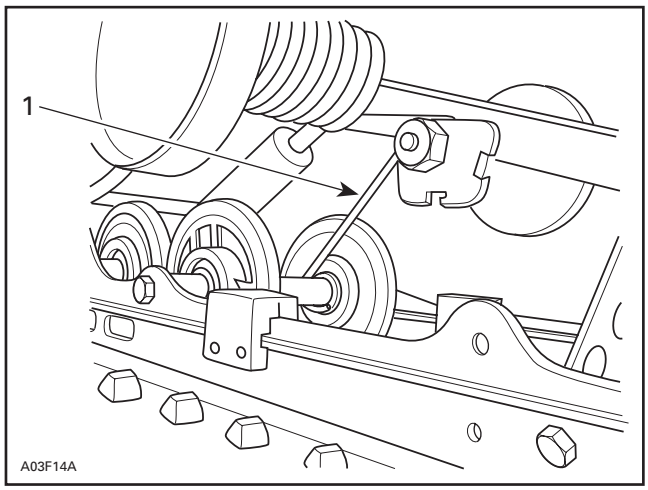


1. 20 mm (3/4 in) steel tubing
2. Welded joint
A. 410 mm (16 in)
B. 460 mm (18 in)

◆ WARNING

Failure to use one of these two methods of strap removal could result in personal injury.

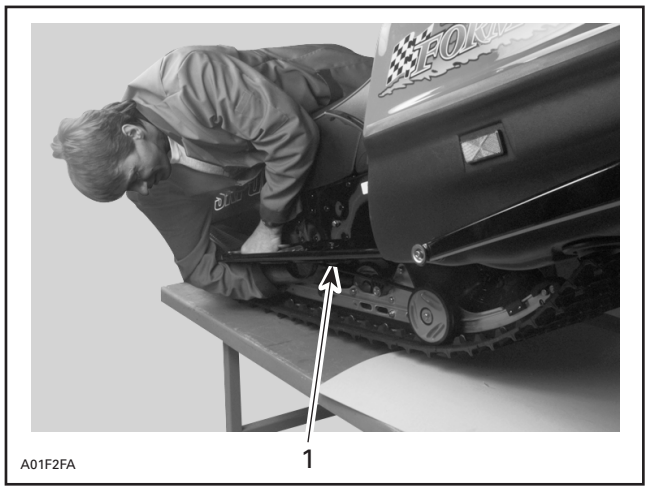
HOOK REMOVAL



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

Shipping strap must be cut and hook removed to have snowmobile suspension operational.

Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

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SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-6**

Date: August 14, 1996

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United States: MX Z* 440, MX Z 440 F, MX Z 583 and MX Z 670	1168, 1169, 1171, 1172, 1174, 1175, 1193, 1194	ALL
1997	Sweden: MX Z 440, MX Z 440 F, MX Z 583 and MX Z 670	1170, 1173, 1176, 1195	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, 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.

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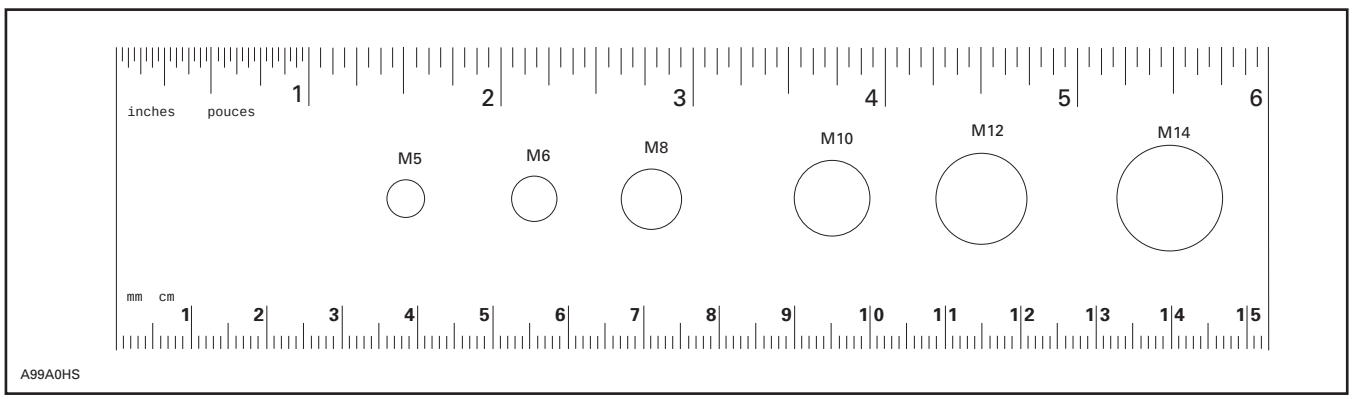


NOTE: This ruler can be helpful to identify fastener length or size.

PREDELIVERY KIT P/N	MODELS
580 6543 00	MX Z 440/440 F/583/670

WARNING

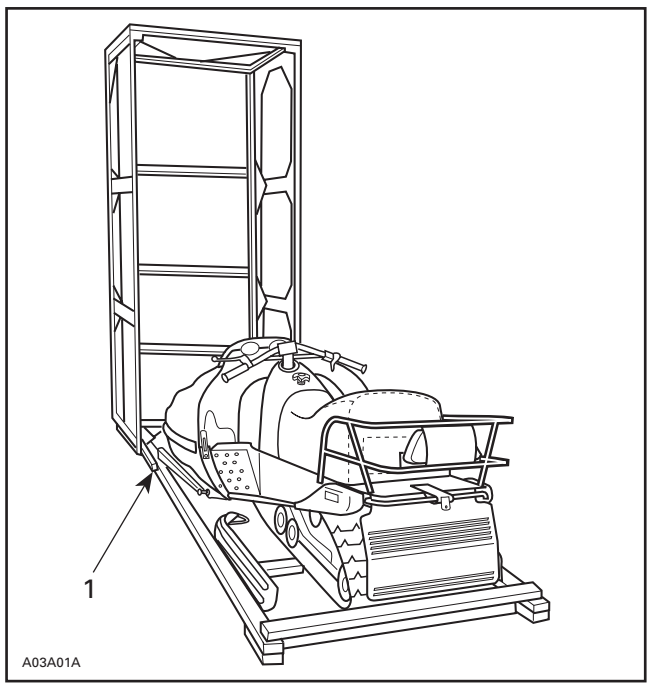
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

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.



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.

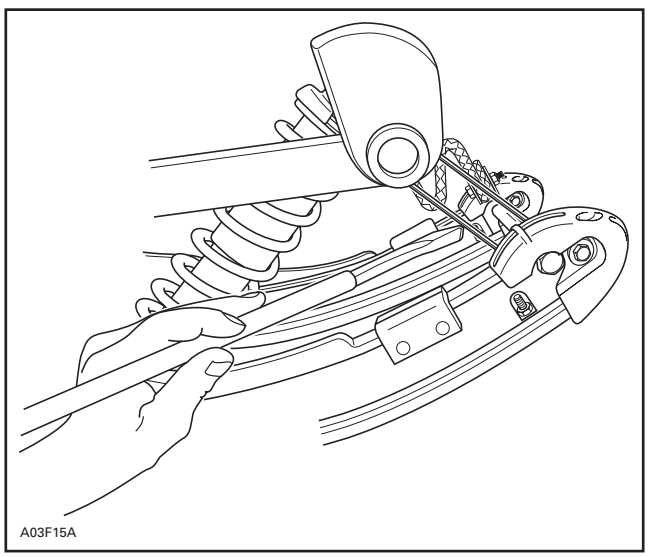
Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

SHIPPING STRAP REMOVAL

Cut shipping strap using one of these 2 following methods:

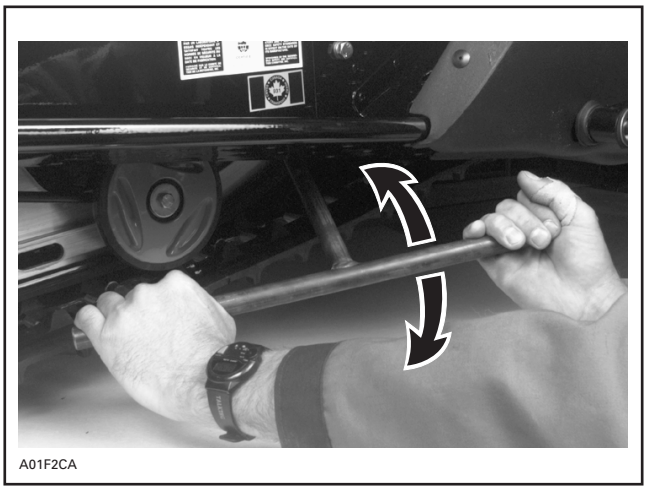
Method 1

Using a long flat chisel such as Snap-On® PPC820LA cut shipping strap that collapses front portion of rear suspension, as shown on the next photo.



Method 2

Using a special tool cut shipping strap as shown on the next photo.



1. Insert tool tip onto strap and twist

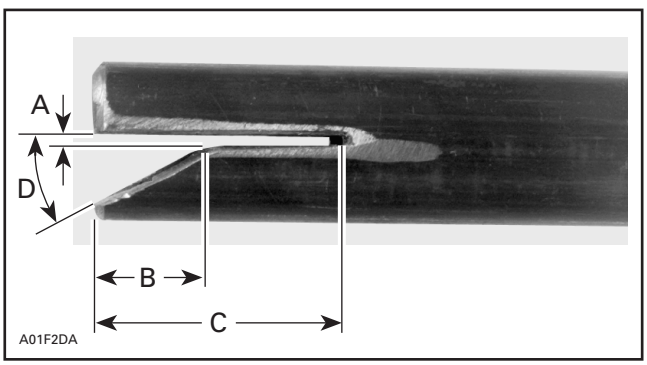
How to Build the Special Tool

Using 20 mm (3/4 in) steel tubing, cut the first piece to 460 mm (18 in) and the second one to 410 mm (16 in).

NOTE: High forces will be applied on this special tool, use strong tubing with a minimum 2 mm (5/64 in) wall thickness.

On one end of the 460 mm (18 in) piece, cut a 1.2 mm (3/64 in) slot by 28.5 mm (1-1/8 in).

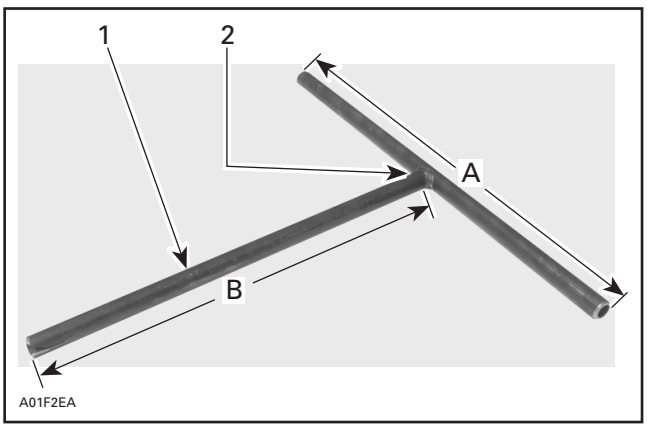
Make a chamfer of 30° X 10 mm (25/64 in), as shown on the next photo.



A. 1.2 mm (3/64 in)
B. 10 mm (25/64 in)
C. 28.5 mm (1-1/8 in)
D. 30°

Remove all sharp edges.

Assemble the two pieces and weld them together, as shown on the following photo.

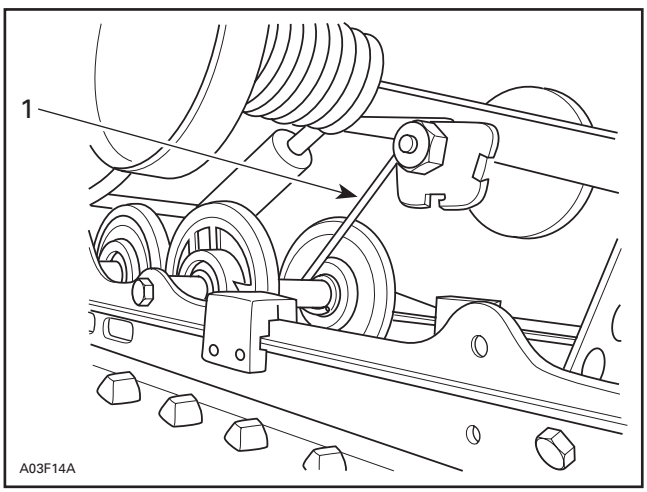


1. 20 mm (3/4 in) steel tubing
2. Welded joint
A. 410 mm (16 in)
B. 460 mm (18 in)

◆ WARNING

Failure to use one of these two methods of strap removal could result in personal injury.

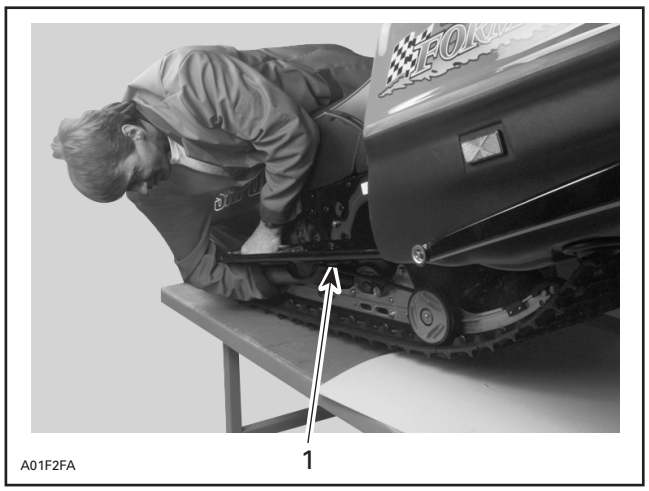
HOOK REMOVAL



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.

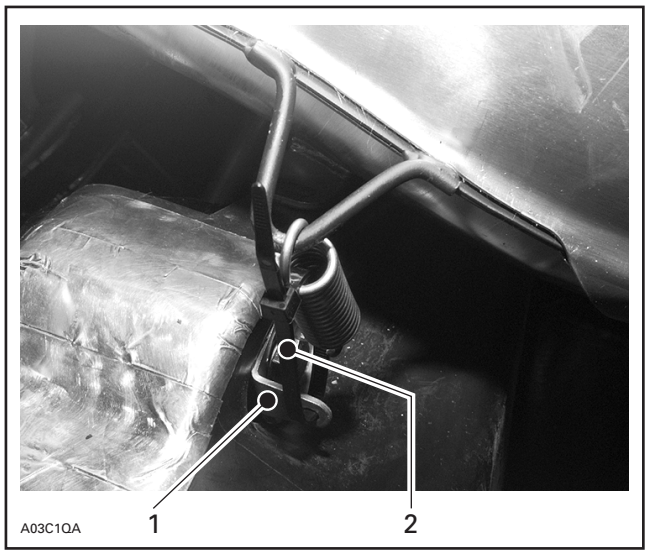


1. Remove hook on the rear portion of the suspension

◆ WARNING

Shipping strap must be cut and hook removed to have snowmobile suspension operational.

Cut locking tie retaining exhaust spring to exhaust support.



1. Lug in recess
2. Locking tie

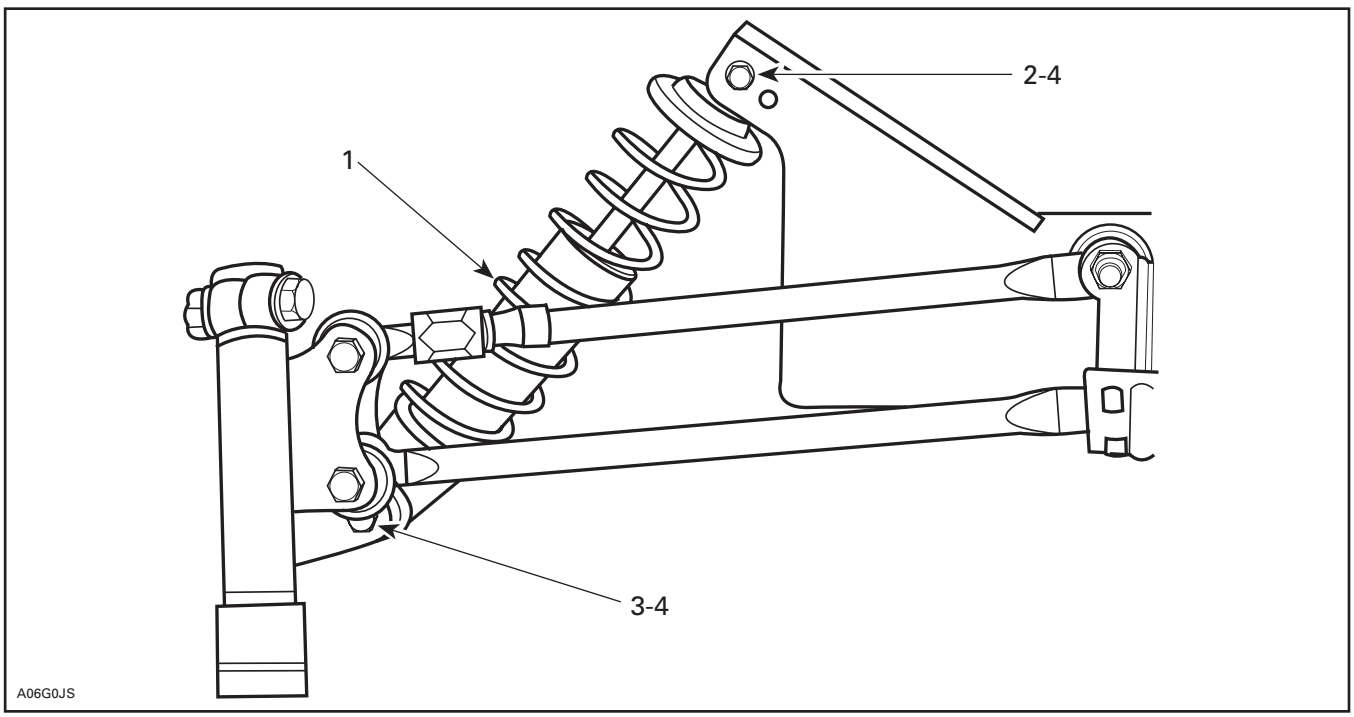
Lift front of vehicle and block safely.

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

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

NOTE: Except for MX Z 440 F bottom screw heads, position 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

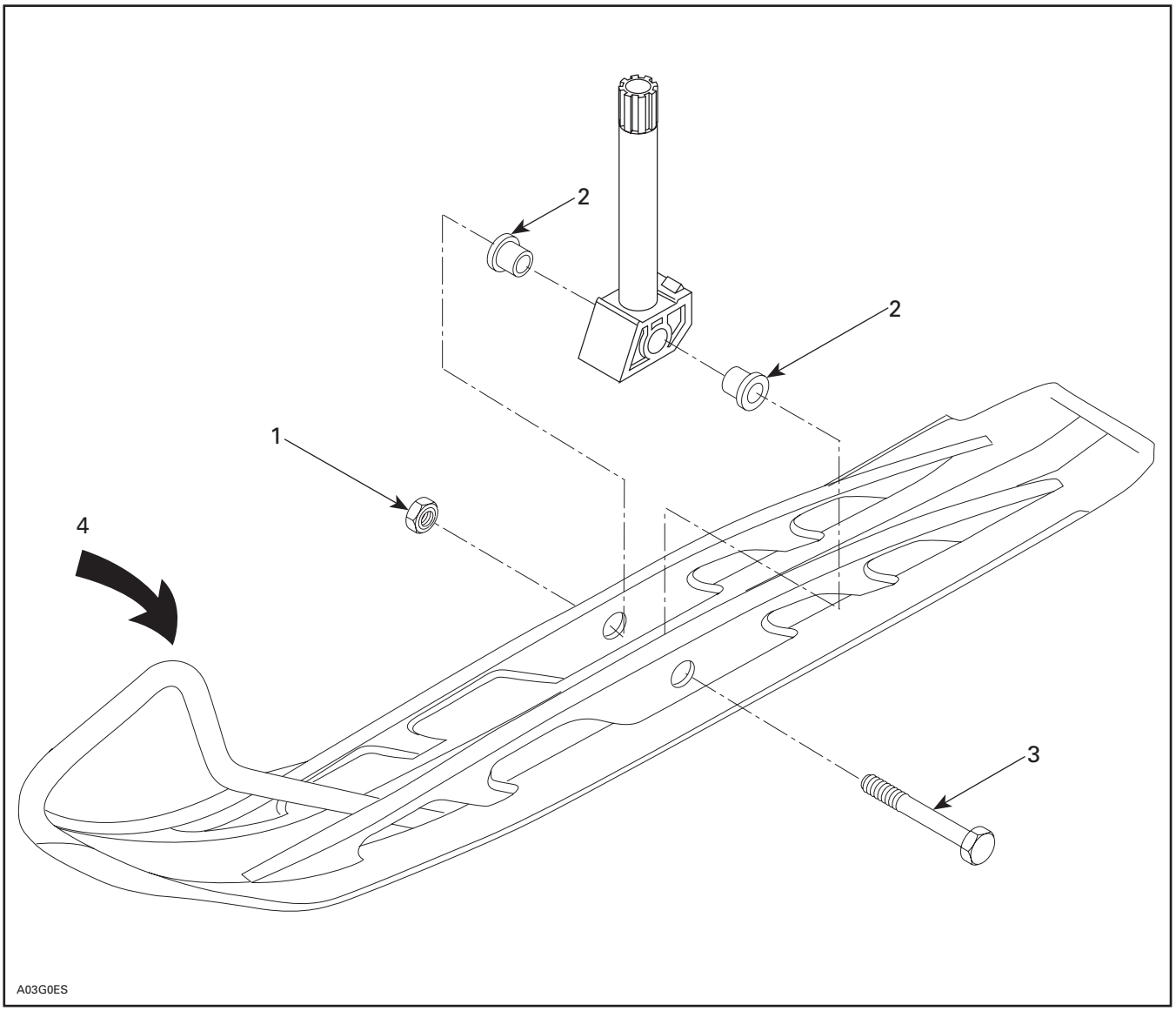
1. Shock absorber (2) (Engine compartment) adjusting ring, if equipped, at bottom
2. Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (On suspension)
3. Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (On suspension)
4. Elastic flanged nut M10 x 1.5 (2) (P/N 228 5010 45) (Section no. 5). Torque to 48 N•m (35 lbf•ft)

All Models

Install skis on vehicle.

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

Replace vehicle on ground.



LEFT SIDE SHOWN

1. *Elastic flanged nut M12 x 1.75 (2) (P/N 228 5210 45) (Section no. 1). 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*

All Models

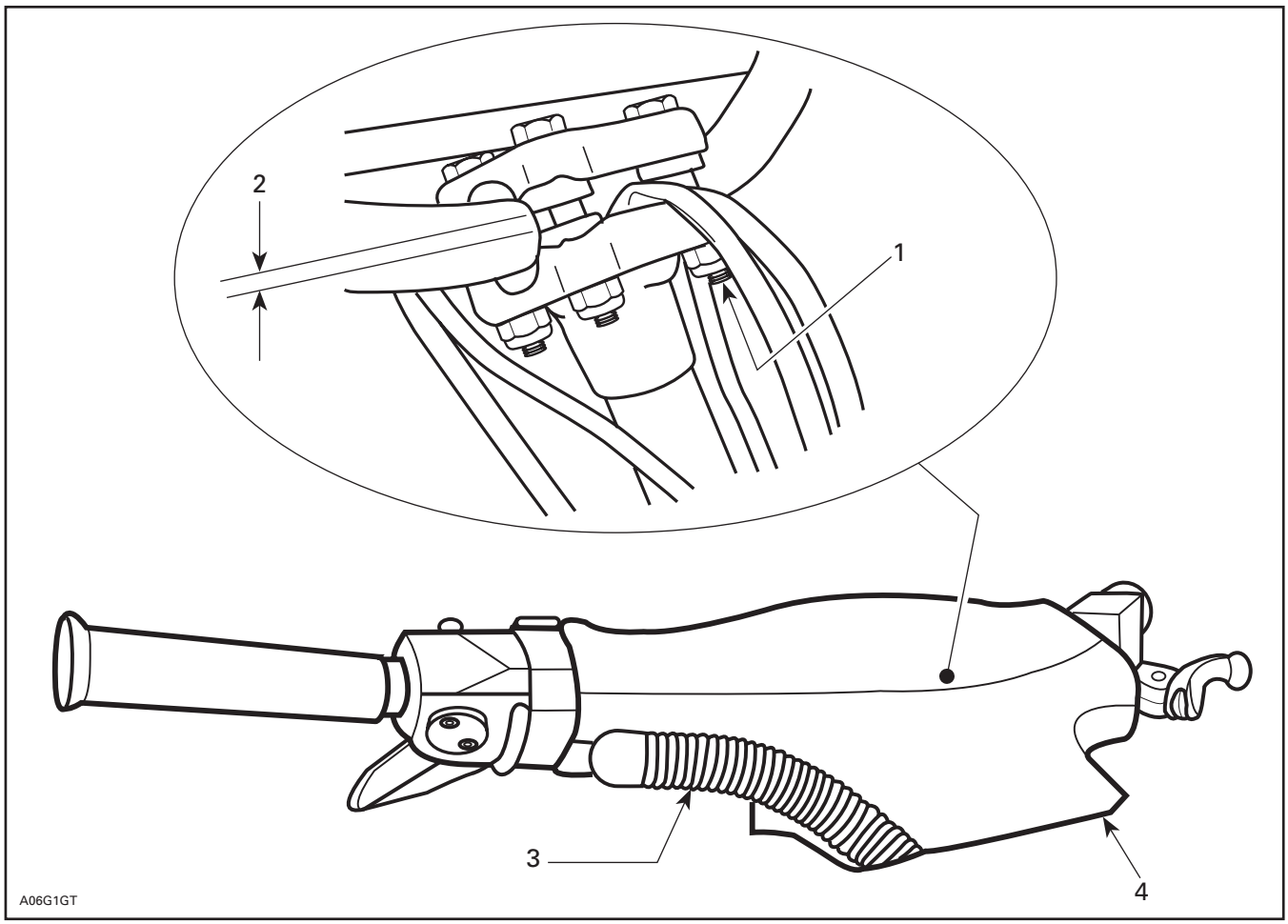
Adjust handlebar temporarily and tighten nuts loosely for now.

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

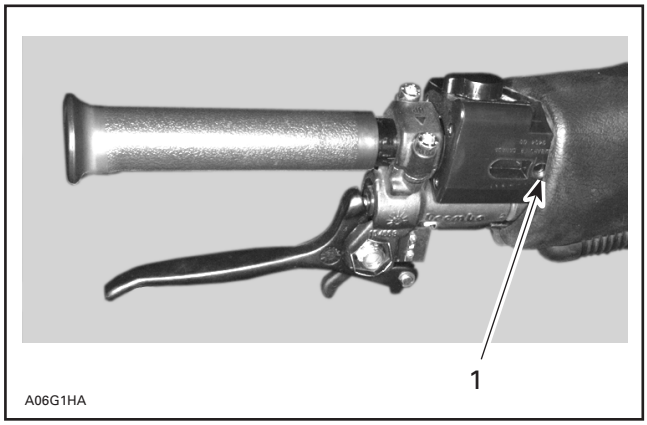
Install steering pad temporarily, and adjust for proper fit with console.

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

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



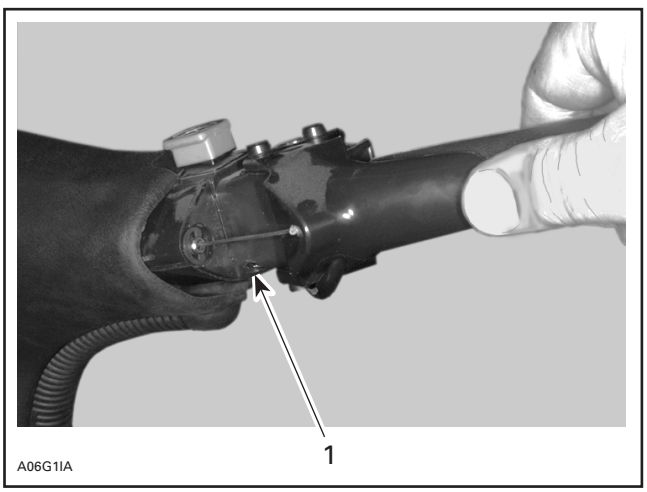
1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (Both clamps)
3. Keyway (2) (P/N 572 0724 00) (Section no. 3)
4. Steering pad (Engine compartment)



BRAKE HANDLE HOUSING

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

Except MX Z 440 F



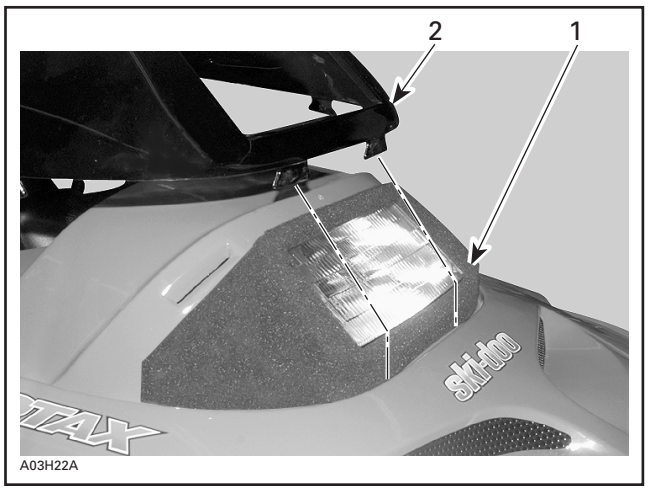
THROTTLE HANDLE HOUSING

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

All Models

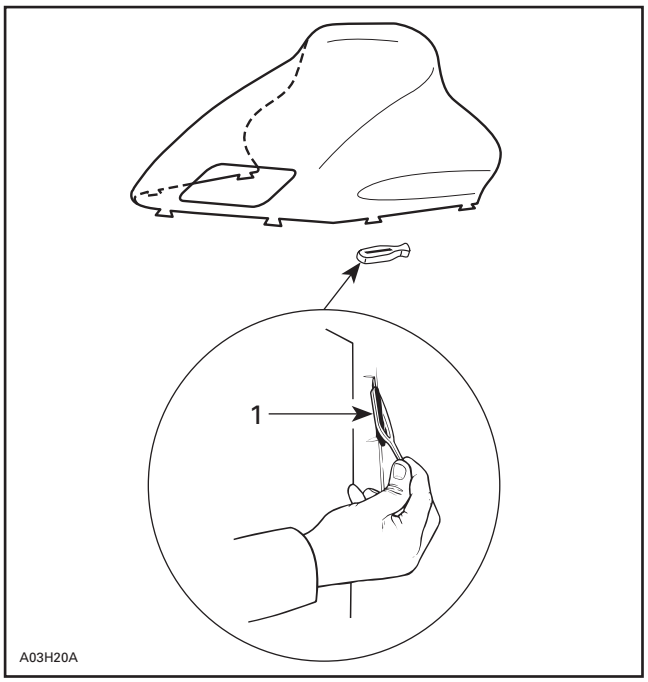
Install windshield on dashboard.

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



1. Protective foam
2. Install windshield on dashboard

WINDSHIELD INSTALLED ON DASHBOARD



1. Latch (6) (P/N 570 0238 00) (section no. 4 or 6)

PARTS INSTALLATION
DRIVE BELT

Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

LIQUIDS
OIL INJECTION PUMP BLEEDING

All Models Except MX Z 440 F

SUPPLEMENTAL OIL

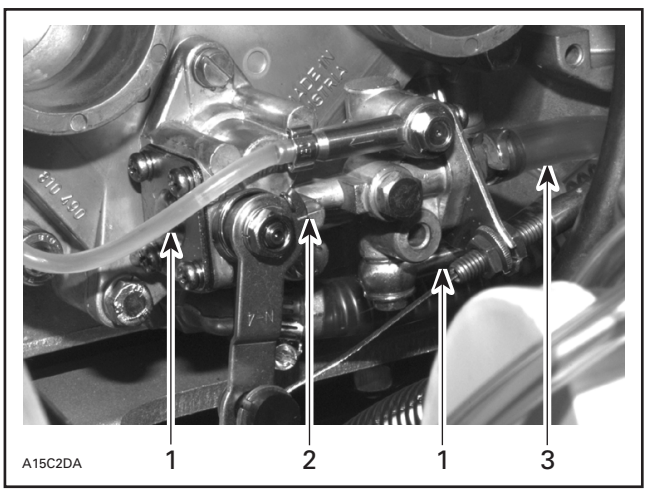
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER ROTAX Injection Oil (P/N 413 8030 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

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 aligned when throttle lever is activated just enough to take all cable play.

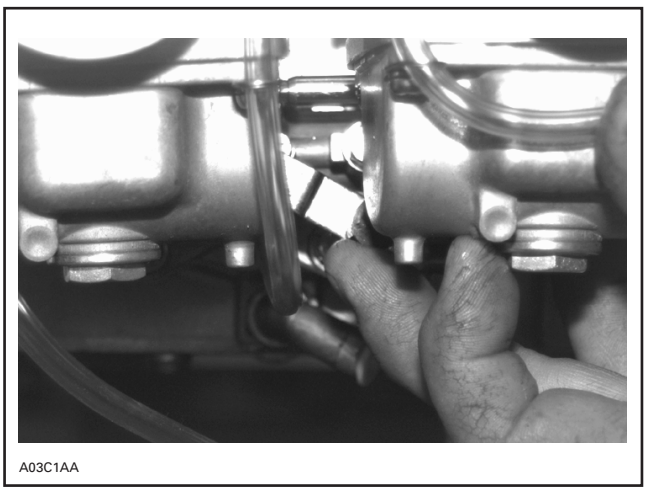


1. *Small oil line*
2. *Marks aligned*
3. *Main oil line*

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.



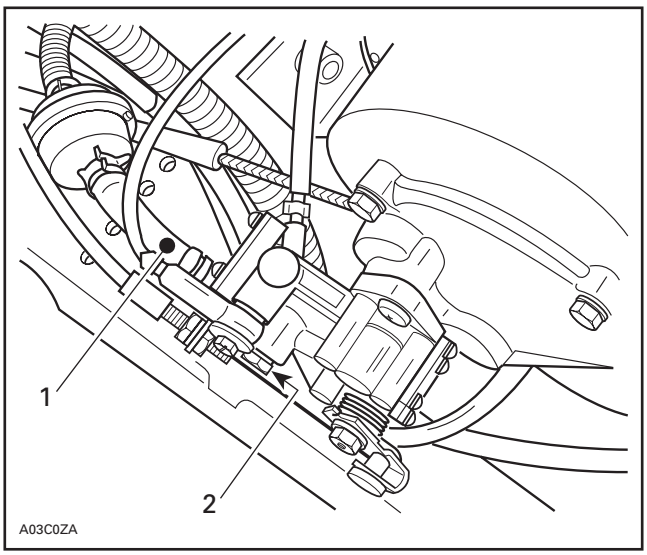
TYPICAL — ENGINE AT IDLE

Reinstall air silencer.

MX Z 440 F Only

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER Injection Oil (P/N 496 0133 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

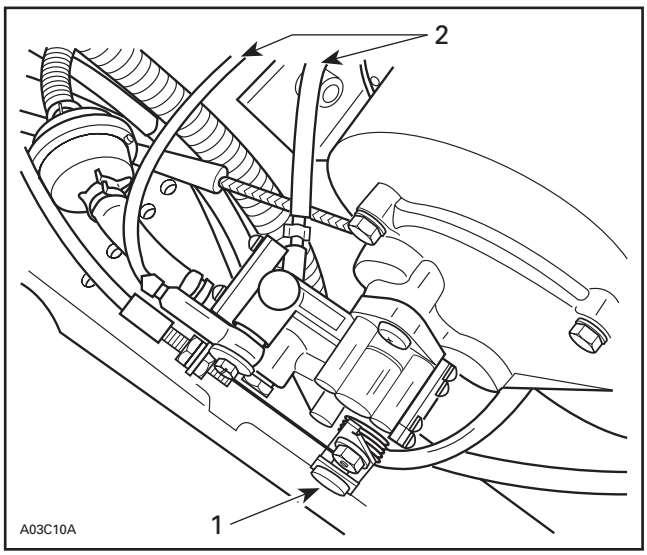
Blead main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



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*

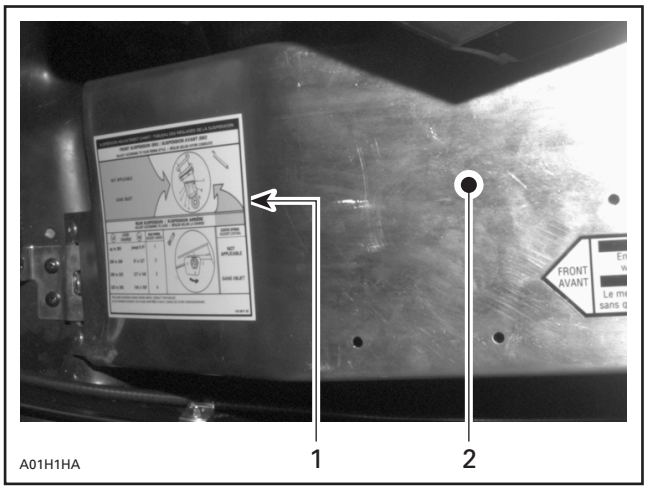
Check brake fluid in reservoir for proper level. Add fluid (DOT) as required

▼ CAUTION

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

ADJUSTMENT
SUSPENSION

Rear suspension is calibrated at factory. At predelivery, 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.

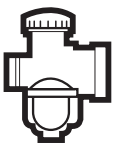
ADJUSTMENT
DRIVEN PULLEY

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

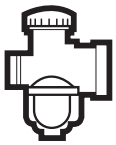
The content of the TECHNICAL DATA pages should be used as necessary to fine-tune and perform additional adjustments required on the snowmobile. Vehicles used at high altitudes, above 600 m (2000 ft) should be fitted with a high altitude kit. Further inquires should be directed to your distributor service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

A dot (•) on right indicates changes from 1996 model.

	MODELS		MX Z 440	MX Z 583
	Engine Type		454	583
	Maximum HP RPM ①	±100 RPM	8000	7900
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	420 9245 02 146°/65°	420 9245 02 140°/71°
	Carburetor Type		PTO VM 34 - 492 • MAG VM 34 - 493 •	PTO VM 40 - 92 • MAG VM 40 - 93 •
	Main Jet		PTO 240/MAG 210 •	PTO 280/MAG 260 •
	Needle Jet		P-8 (159)	AA-2 (224)
	Pilot Jet		40	60 •
	Needle Identification — Clip Position		6FJ43 •	7ECY1 •
	Slide Cutaway		2.5	2.5
	Float Adjustment	±1 mm (in)	23.9 (.941)	18.1 (.71)
	Air Screw Adjustment	± 1/16 turn	1/2	2 •
	Idle Speed RPM	±200 RPM	1700 •	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)	1.48 (.058)	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	25/44
	Engagement Speed	± 100 RPM	4400	4400 •
	Drive Pulley Calibration Screw Position		3	3 •
	Pulley Distance	Z (+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)	
	Offset	X ± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	
		Y	Dimension Y must exceed X from 1mm (1/32in) 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 mm (in)	40 to 55 (1-9/16 to 2-5/32) with a 7.3 kg (16 lb) downward pull •	30 to 40 (1-3/16 to 1-9/16) with a 7.3 kg (16 lb) downward pull •

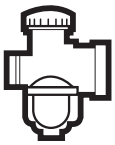
NOTE: See end of specifications for foot notes.

A dot (•) on right indicates changes from 1996 model.

	MODEL			MX Z 670	
	Engine Type			670	
	Maximum HP RPM ①		±100 RPM	7700	
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	420 9245 00 145°/71°	
	Carburetor Type			PTO VM 40 - 94	MAG VM 40 - 95 •
	Main Jet			PTO 300	MAG 270
	Needle Jet			AA-2 (224)	
	Pilot Jet			60	
	Needle Identification — Clip Position			7EDY1	•
	Slide Cutaway			2.5	
	Float Adjustment		±1 mm (in)	18.1 (.71)	
	Air Screw Adjustment		± 1/16 turn	2-1/4	
	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)	1.75 (.069)	•
	Trigger Coil Air Gap		mm (in)	0.55 - 1.45 (.022 - .057)	
	Gear Ratio		teeth	26/44	
	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	± 0.4 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	±.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 40 (1-3/16 - 1-9/16) with a 7.3 kg (16 lb) downward pull	•

NOTE: See end of specifications for foot notes.

A dot (•) on right indicates changes from 1996 model.

	MODEL			MX Z 440 F
	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 - 479 / MAG VM 34 - 480
	Main Jet			PTO 205 / MAG 195
	Needle Jet			P-O (159)
	Pilot Jet			35
	Needle Identification — Clip Position			6DH2
	Slide Cutaway			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)	1.68 (.066)
	Trigger Coil Air Gap		mm (in)	0.45 - 0.55 (.018 - .022)
	Gear Ratio		teeth	22/44
	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	± 0.4 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	±.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)	40 to 55 (1-9/16 - 2-5/32) 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

CRT: Center

N.A.: Not Applicable

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- ☐ Parts ☐

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SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-6**

UPDATE

Date: December 6, 1996

SUBJECT: Technical Data

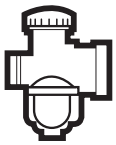
YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1997	MX Z 670	Canada: 1193 United States: 1194 Sweden: 1195	All

The technical data sheet for the above mentioned models has been updated.

Refer to the Ski-Doo *Predelivery Bulletin* no. 97-6.

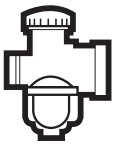
Replace with the attached.

A dot (•) on right indicates changes from 1996 model.

	MODEL			MX Z 670	
	Engine Type			670	
	Maximum HP RPM ①		± 100 RPM	7700	
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	420 9245 00 145°/71°	
	Carburetor Type			PTO VM 40 - 94	MAG VM 40 - 95 •
	Main Jet			PTO 300	MAG 270
	Needle Jet			AA-2 (224)	
	Pilot Jet			60	
	Needle Identification — Clip Position			7EDY1	•
	Slide Cutaway			2.5	
	Float Adjustment		± 1 mm (in)	18.1 (.71)	
	Air Screw Adjustment		± 1/16 turn	2-1/4	
	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	26/44	
	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	± 0.4 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	± .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 40 (1-3/16 - 1-9/16) with a 7.3 kg (16 lb) downward pull	•

NOTE: See end of specifications for foot notes.

A dot (•) on right indicates changes from 1996 model.

	MODEL			MX Z 440 F
	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 - 479 / MAG VM 34 - 480
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	Needle Jet			P-O (159)
	Pilot Jet			35
	Needle Identification — Clip Position			6DH2
	Slide Cutaway			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)	1.68 (.066)
	Trigger Coil Air Gap		mm (in)	0.45 - 0.55 (.018 - .022)
	Gear Ratio		teeth	22/44
	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)
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	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
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SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-7**

Date: September 12, 1996

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United States: Formula*III, Mach*1 and Mach* Z	1148, 1149, 1177, 1178, 1180, 1181	ALL
1997	Sweden: Formula III, Mach 1 and Mach Z	1150, 1179, 1182	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.

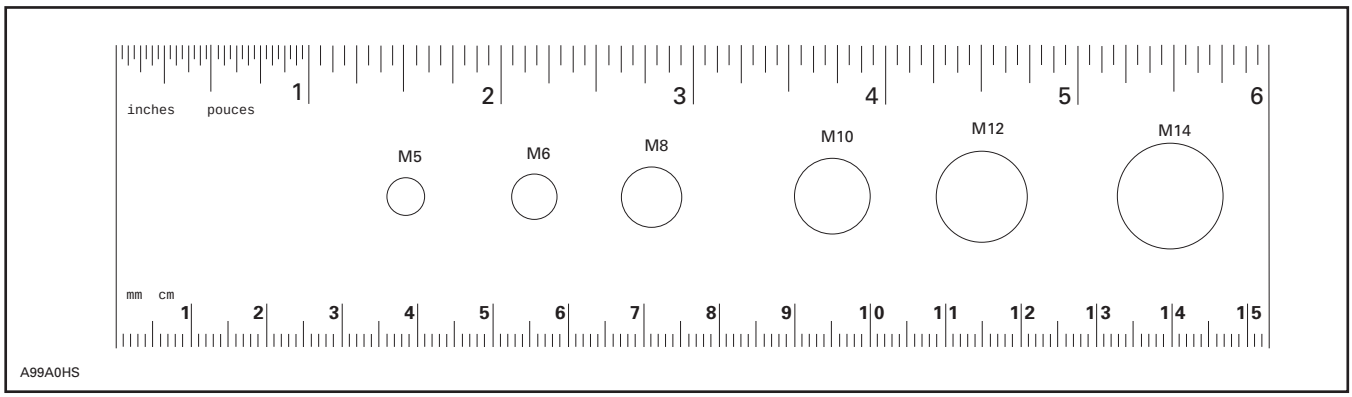
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

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 the dealer to perform suspension adjustments according to riding style and vehicle load.

TABLE OF CONTENTS

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



PREDELIVERY KIT P/N	MODELS
580 6581 00	Mach 1 and Mach Z
580 6580 00	Formula III

◆ 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.

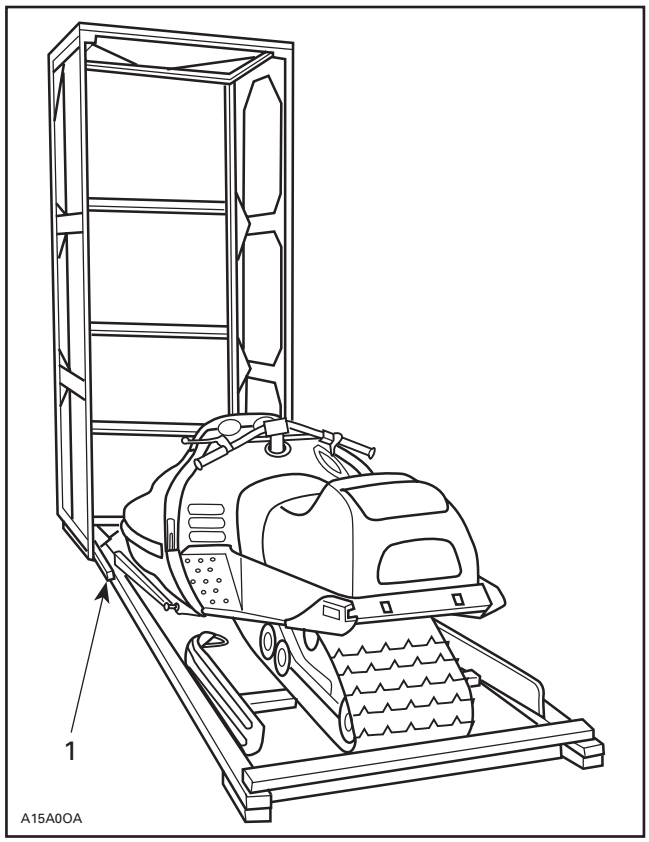
▼ CAUTION

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 retaining windshield.

From underneath tunnel, loosen 4 nuts retaining seat then slowly pull out metal strip retaining windshield. Tighten nuts.

▼ CAUTION

Failure to lift seat might result in leatherette damage.

▼ 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.

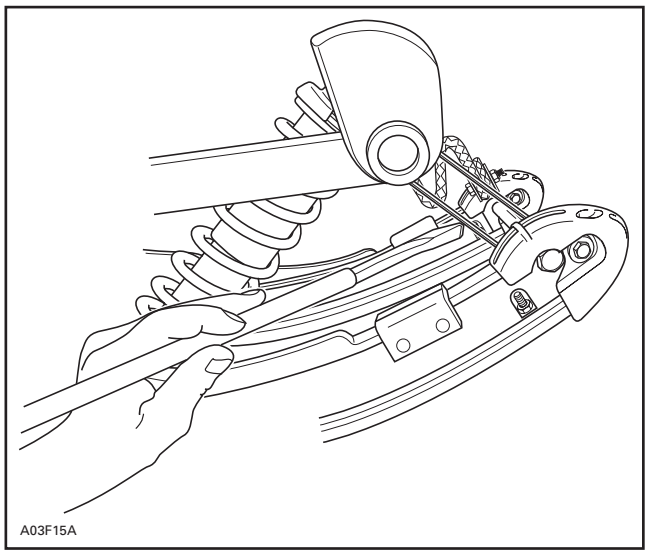
Remove steering pad, shock absorbers, snow guard, drive belt and predelivery kit from engine compartment.

SHIPPING STRAP REMOVAL

Cut shipping strap using one of these 2 following methods:

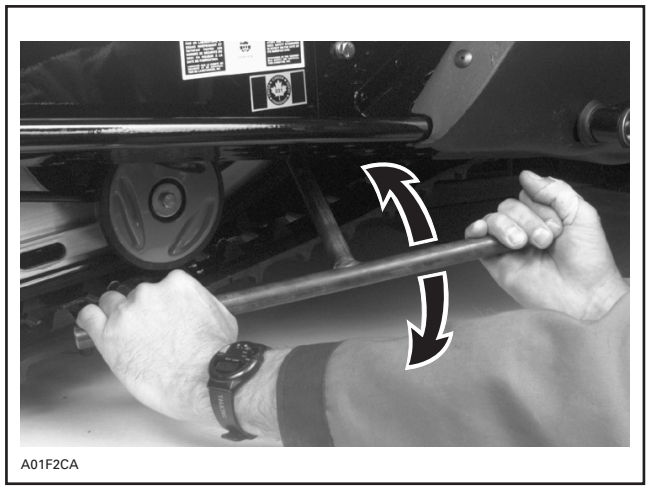
Method 1

Using a long flat chisel such as Snap-On® PPC820LA cut shipping strap that collapses front portion of rear suspension, as shown on the next photo.



Method 2

Using a special tool cut shipping strap as shown on the next photo.



INSERT TOOL TIP ONTO STRAP AND TWIST

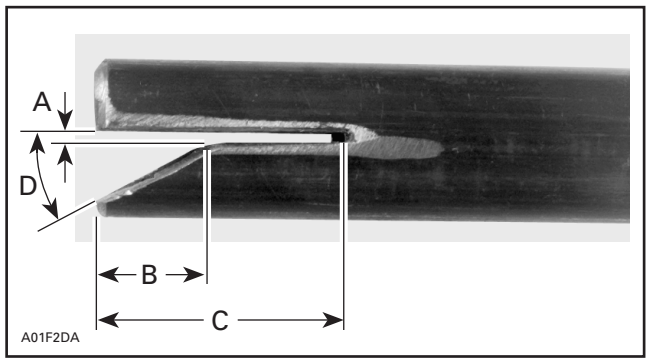
How to Build the Special Tool

Using 20 mm (3/4 in) steel tubing, cut the first piece to 460 mm (18 in) and the second one to 410 mm (16 in).

NOTE: High forces will be applied on this special tool, use strong tubing with a minimum 2 mm (5/64 in) wall thickness.

On one end of the 460 mm (18 in) piece, cut a 1.2 mm (3/64 in) slot by 28.5 mm (1-1/8 in).

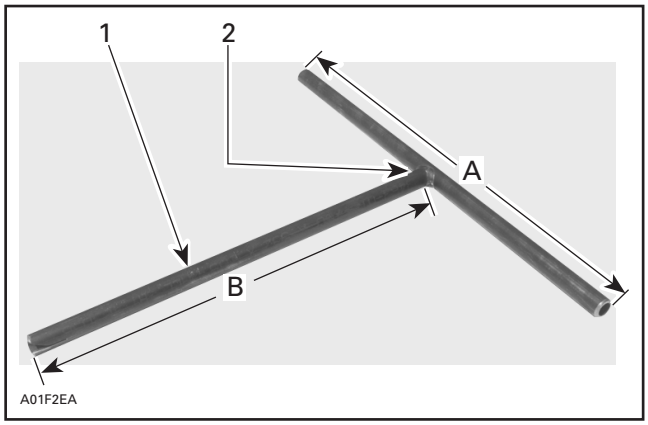
Make a chamfer of 30° x 10 mm (25/64 in), as shown on the next photo.



A. 1.2 mm (3/64 in)
B. 10 mm (25/64 in)
C. 28.5 mm (1-1/8 in)
D. 30°

Remove all sharp edges.

Assemble the two pieces and weld them together, as shown on the following photo.

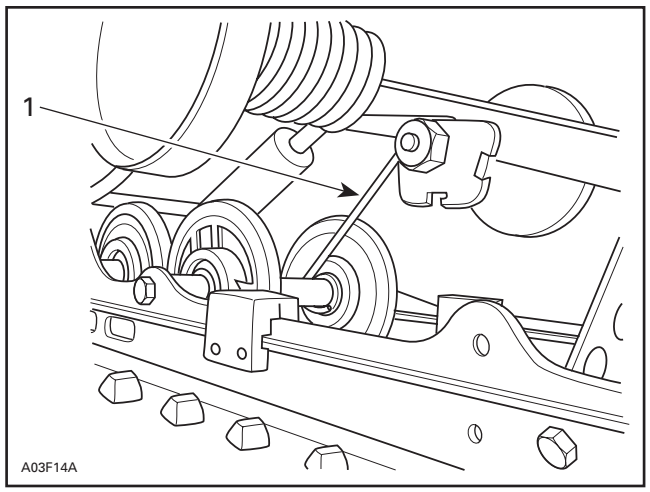


1. 20 mm (3/4 in) steel tubing
2. Welded joint
A. 410 mm (16 in)
B. 460 mm (18 in)

◆ WARNING

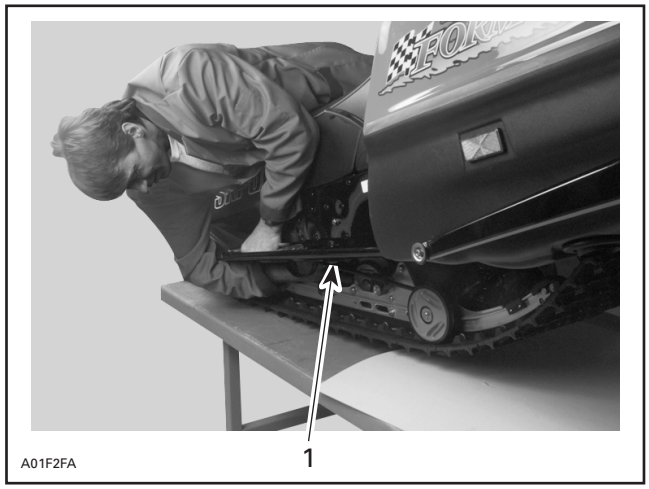
Failure to use one of these two methods of strap removal could result in personal injury.

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

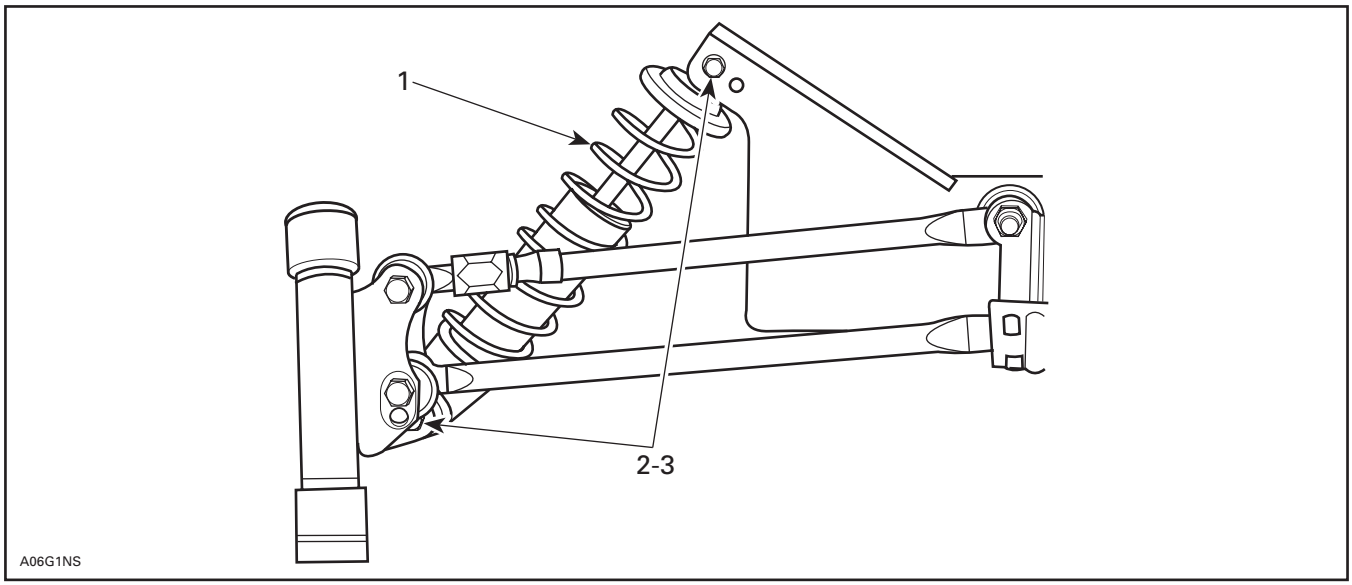
Shipping strap must be cut and hook removed to have snowmobile suspension operational.

Lift front of vehicle and block safely.

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

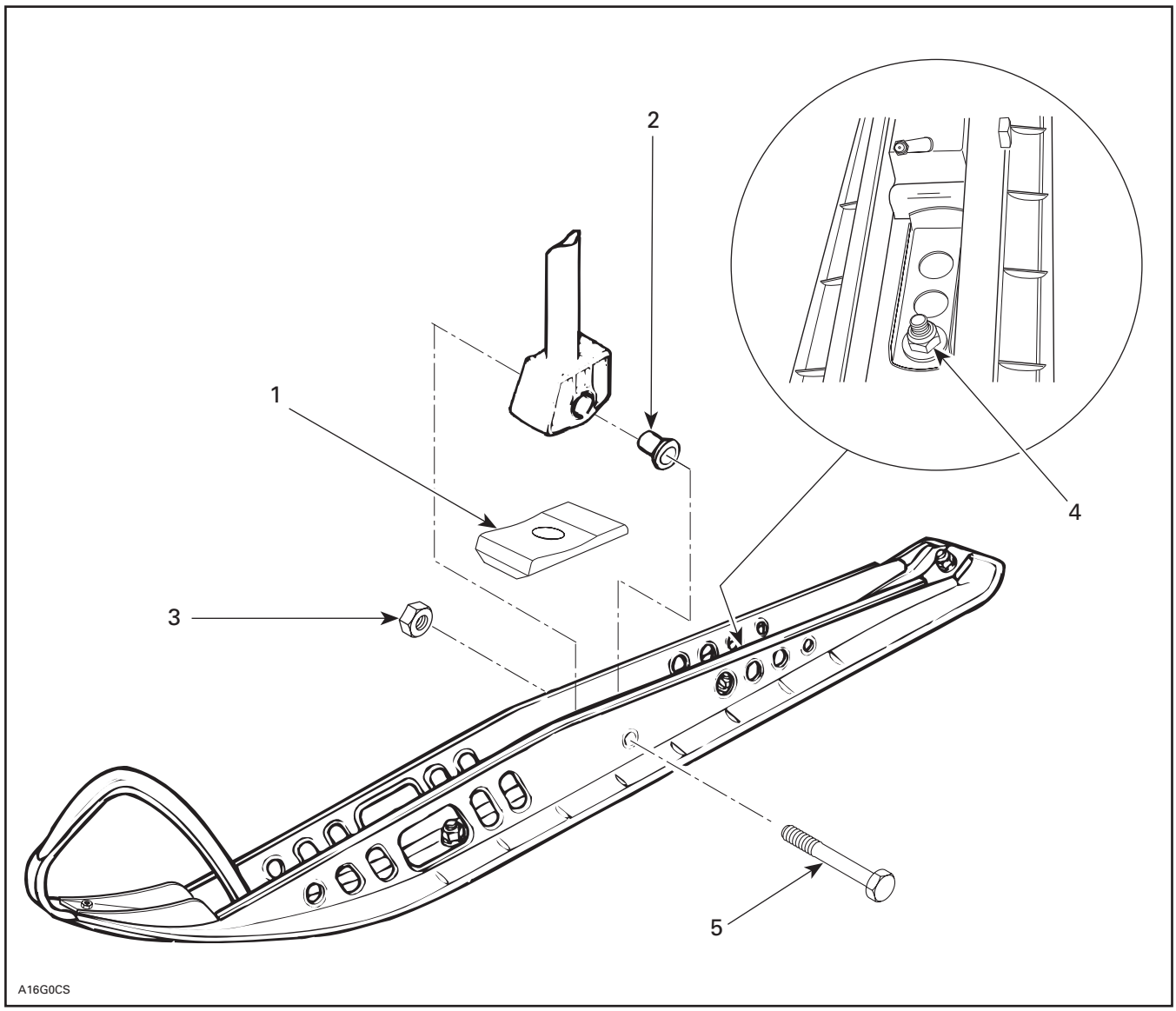
Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bolt heads toward front.



TYPICAL — RIGHT SIDE SHOWN

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

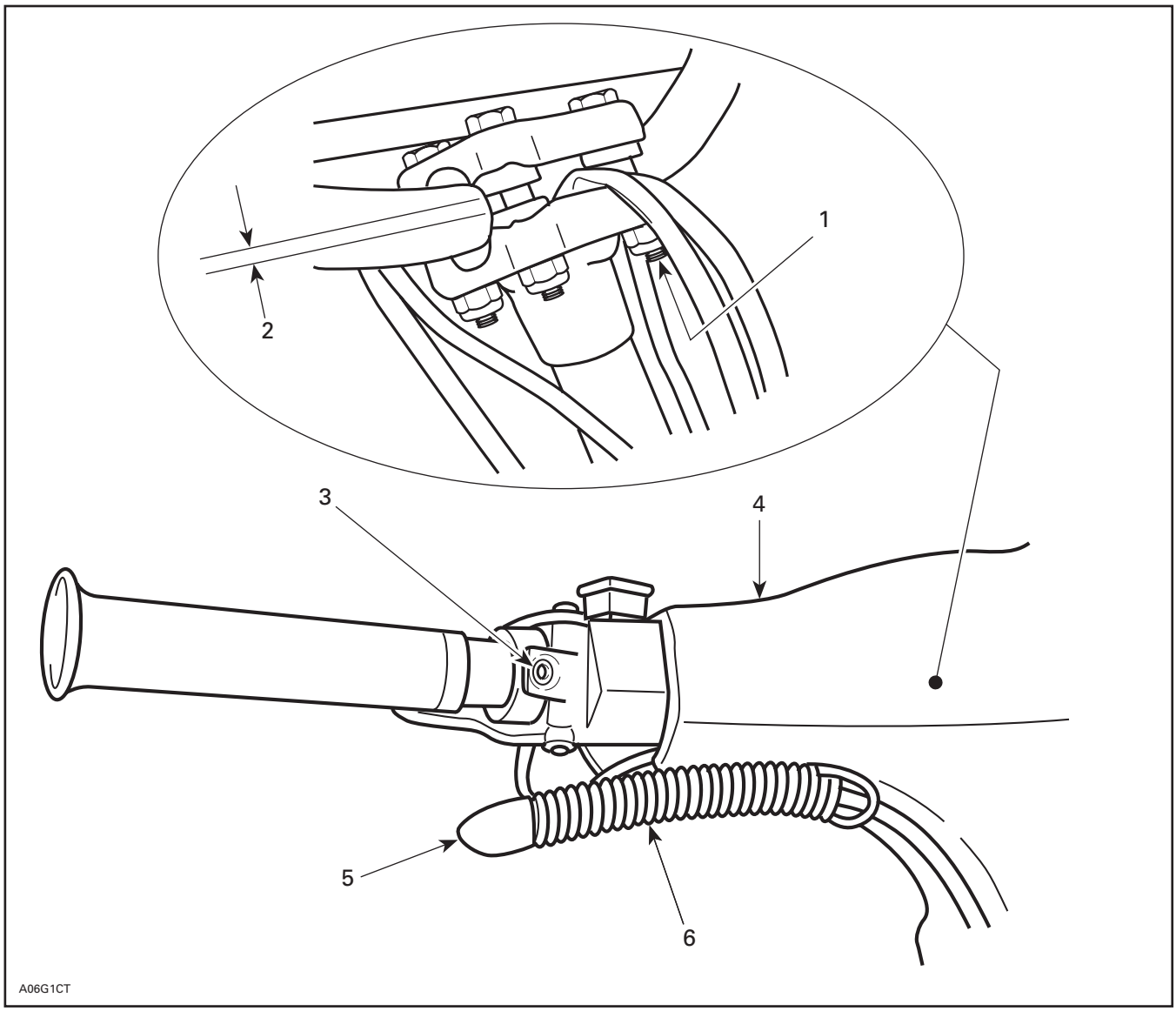


LEFT SIDE SHOWN

1. *Ski stopper (2) (section no. 8) "AVANT" toward front*
2. *Slider cushion (4)*
3. *Elastic flanged nut M12 (2) (section no. 8). Torque to 40 N•m (30 lbf•ft)*
4. *Loosen then adjust against ski stopper 14 N•m (124 lbf•**in**)*
5. *Bolt M12 (2) (ski leg)*

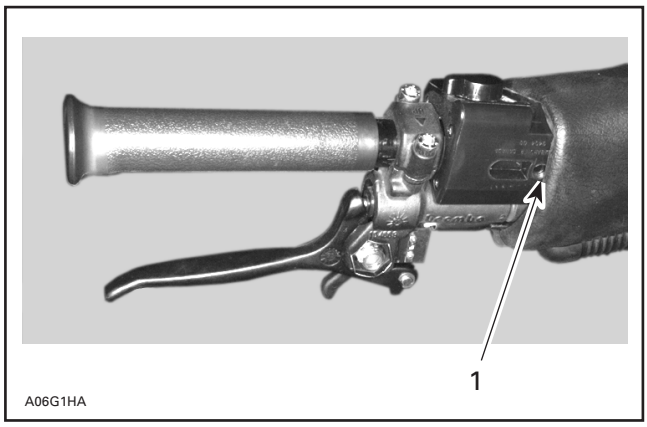
After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•in). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.

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. Loosen Allen screw
4. Steering pad (engine compartment)
5. Use liquid soap to ease installation
6. Keyway (2) (P/N 572 0724 00) (section no. 5)

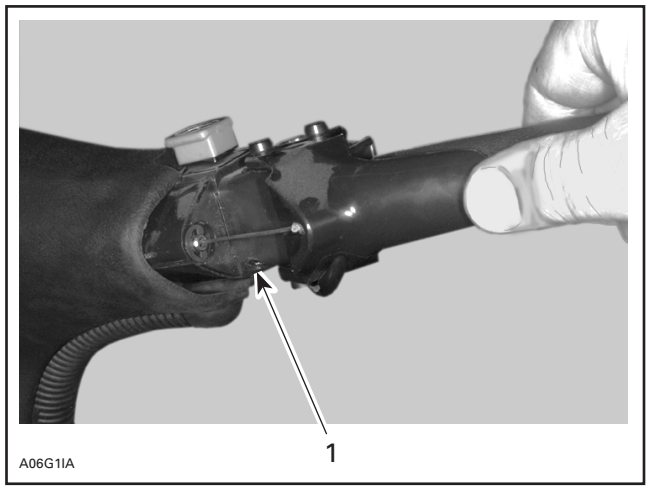
Adjust then tighten throttle and brake handle housings.



BRAKE HANDLE HOUSING

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

Mach Z Only

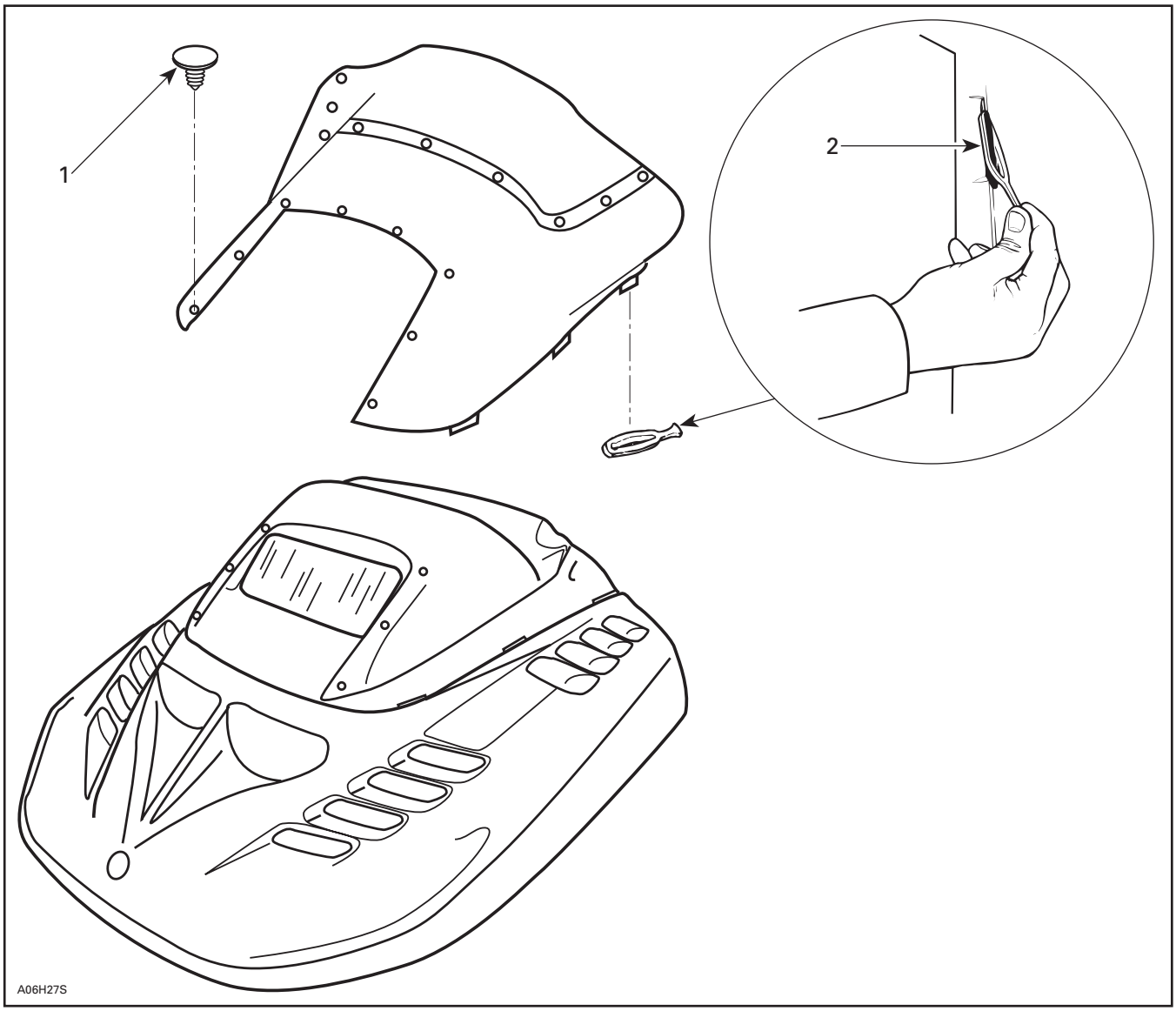


THROTTLE HANDLE HOUSING

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

Install windshield on hood.

NOTE: To ease installation, install windshield with darts first.



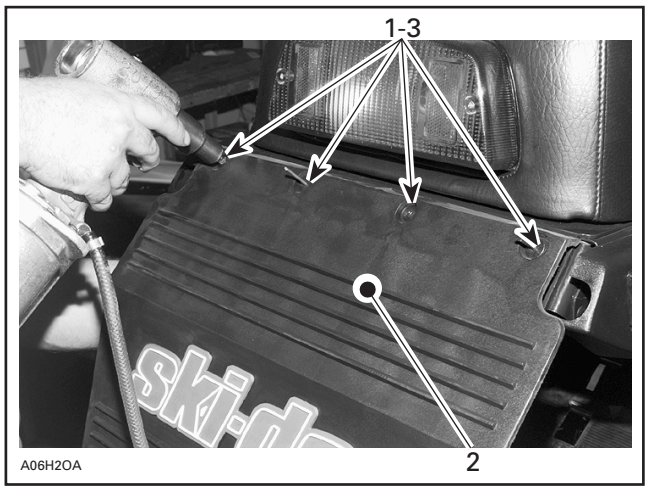
1. Dart (section no. 6)
2. Latch (section no. 6)

PARTS INSTALLATION
SNOW GUARD

Position snow guard protector pad onto chassis.

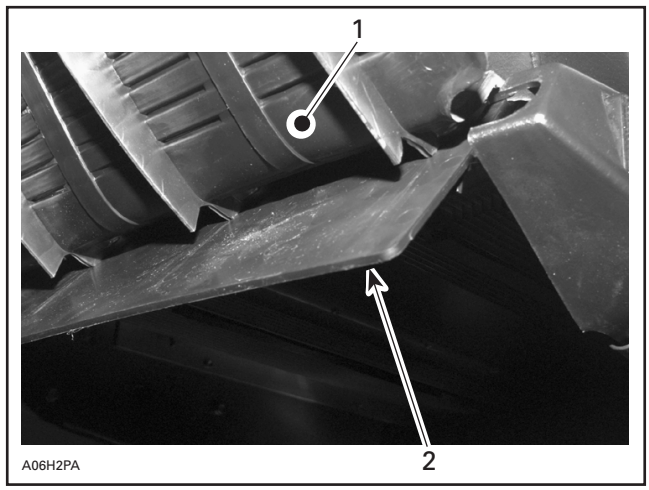
Install snow guard over protector pad and secure the two parts with rivets.

NOTE: Place washers inside tunnel.



TYPICAL

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



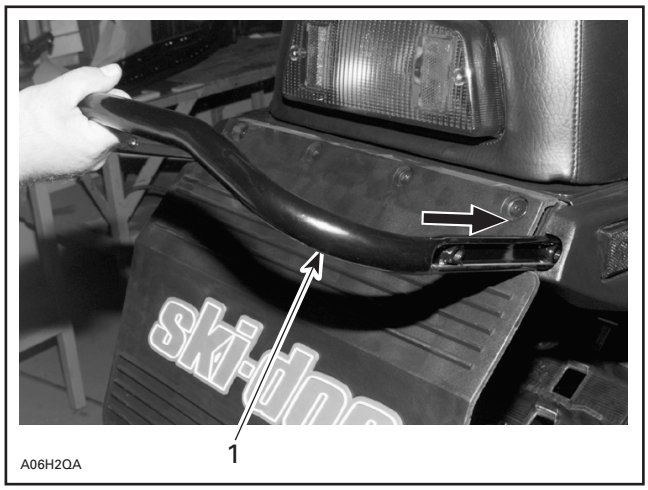
VIEW FROM UNDER SNOW GUARD

1. *Snow guard*
2. *Snow guard protector pad*

PARTS INSTALLATION
REAR BUMPER

NOTE: Bolts located in section no. 3 of shrink pack are not used.

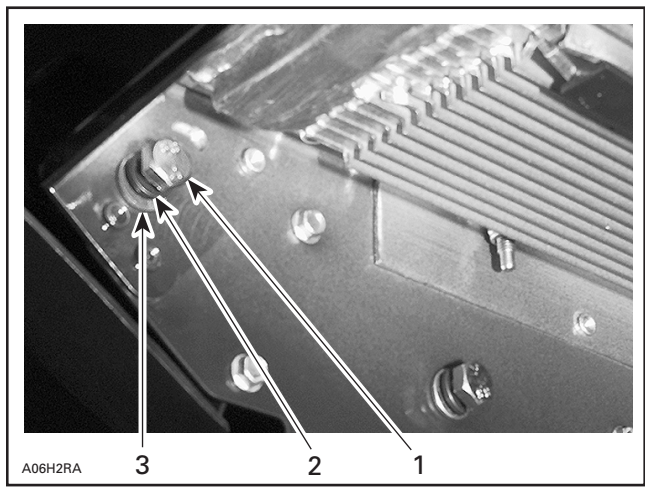
Install rear bumper to chassis.



SLIDE BUMPER INSIDE REAR MOLDINGS

1. *Rear bumper*

Secure bumper from inside of tunnel.



TYPICAL — VIEW FROM INSIDE OF TUNNEL

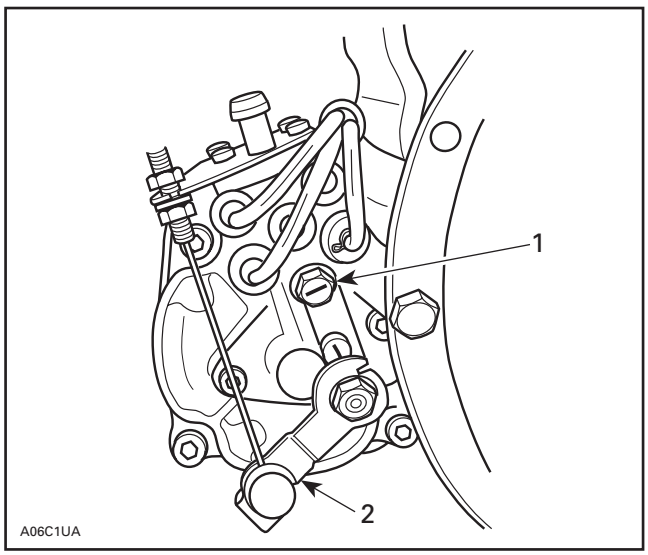
1. *Bolt M8 (4) (section no. 1). Torque to 24 N•m (18 lbf•ft)*
2. *Lock washer (4) (section no. 1)*
3. *Washer (4) (section no. 1)*

Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

LIQUIDS
OIL INJECTION PUMP BLEEDING

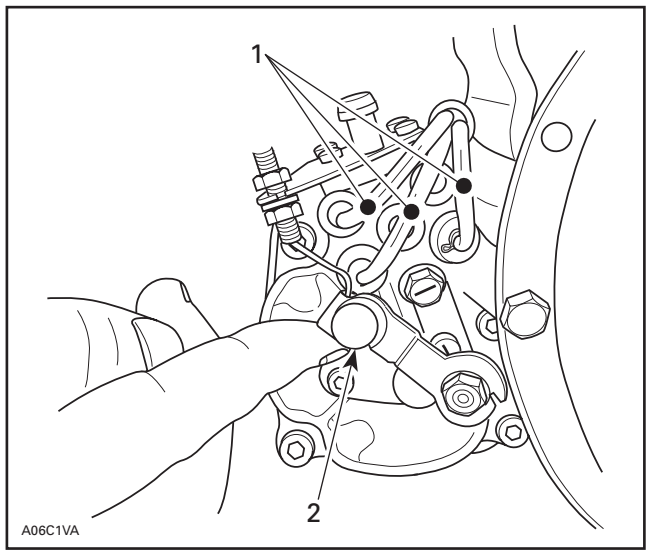
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER Injection Oil (P/N 496 0133 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

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



1. Bleeder screw
2. Oil pump lever

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



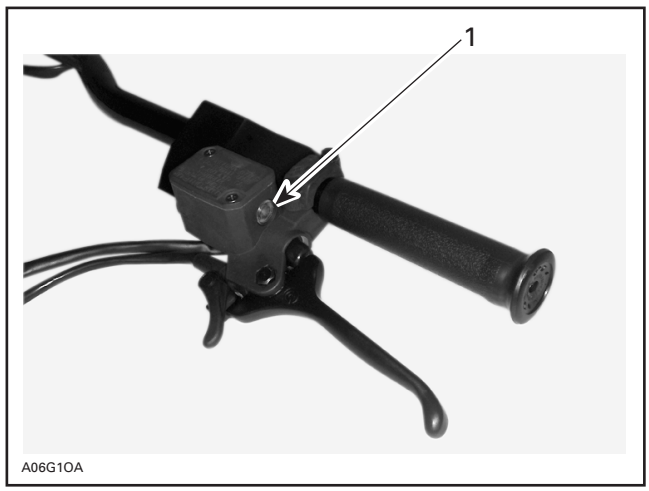
1. Small oil lines
2. Engine at idle (fully open position)

LIQUIDS
BRAKE FLUID LEVEL

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

▼ CAUTION

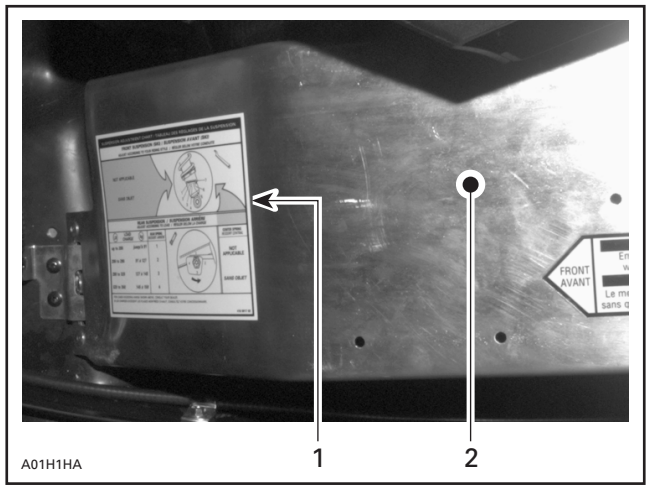
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



1. Minimum

ADJUSTMENTS
SUSPENSION

Rear suspension is calibrated at factory. At predelivery, 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.

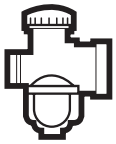
ADJUSTMENTS
DRIVEN PULLEY

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 inquires should be directed to your distributor service representative.

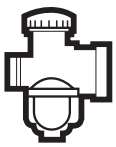
A dot (•) on right indicates changes from 1996 model.

	MODEL		FORMULA III			
	Engine Type		599			
	Maximum HP RPM ①	± 100 RPM	8500			•
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.			
	Carburetor Type		PTO VM 36-176	CRT VM 36-177	MAG VM 36-178	•
	Main Jet		PTO 330	CRT VM 330	MAG 330	•
	Needle Jet		P-0 (286)			•
	Pilot Jet		PTO 50	CRT 50	MAG 50	•
	Needle Identification — Clip Position		6DEY4			•
	Slide Cutaway		2.5			
	Float Adjustment	± 1 mm (in)	18.1 (.71)			
	Air Screw Adjustment	± 1/16 turn	PTO 1-1/2	CRT 1-1/2	MAG 1-1/2	•
	Idle Speed	± 200 RPM	1900			•
	Gas Grade/Octane Number	(R + M)/2	Super Unleaded/91			
	Gas/Oil Ratio		Oil Injection			
	Ignition Timing BTDC ②	mm (in)	2.18 (.086)			
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 (.022 - .057)			
	Gear Ratio	Teeth	25/44			
	Engagement Speed	± 100 RPM	4500			
	Drive Pulley Calibration Screw Position		4			
	Pulley Distance — Z	(+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)			
	Offset — 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)	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)	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 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
CTR: Center
MAG: Magneto Side

A dot (•) on right indicates changes from 1996 model.

	MODEL			MACH 1			
	Engine Type			699			•
	Maximum HP RPM ①		± 100 RPM	8500			•
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	N.A.			•
	Carburetor Type			PTO VM 38-356	CRT VM 38-357	MAG VM 38-358	•
	Main Jet			PTO 350	CRT VM 350	MAG 350	•
	Needle Jet			P-7 (480)			•
	Pilot Jet			PTO 50	CRT 50	MAG 50	•
	Needle Identification — Clip Position			6DEY2			•
	Slide Cutaway			2.5			
	Float Adjustment		± 1 mm (in)	18.1 (.71)			
	Air Screw Adjustment		± 1/16 turn	PTO 2-1/4	CRT 2-1/4	MAG 2-1/4	•
	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)	2.18 (.086)			•
	Trigger Coil Air Gap		mm (in)	0.55 - 1.45 (.022 - .057)			
	Gear Ratio		Teeth	26/44			
	Engagement Speed		± 100 RPM	4500			
	Drive Pulley Calibration Screw Position			4			
	Pulley Distance	Z	(+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)			
	Offset	X	± 0.4 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	± 5 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	mm (in)	40 to 50(1-3/4 to 2) 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
CTR: Center
MAG: Magneto Side

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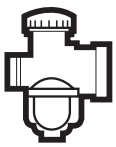
	MODEL		MACH Z			
	Engine Type		809			•
	Maximum HP RPM ①	± 100 RPM	8500			•
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.			
	Carburetor Type		PTO TM 38 C159	CRT TM 38 C159	MAG TM 38 C159	•
	Main Jet		PTO 380	CRT VM 380	MAG 380	•
	Needle Jet		O-4 (327)			•
	Pilot Jet		PTO 50	CRT 50	MAG 50	•
	Needle Identification — Clip Position		8AGY1-41			•
	Slide Cutaway		2.5			•
	Float Adjustment	± 1 mm (in)	18.1 (.71)			•
	Air Screw Adjustment	± 1/16 turn	PTO 4	CRT 4	MAG 4	•
	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)	2.11 (.083)			
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 (.022 - .057)			
	Gear Ratio	Teeth	26/44			•
	Engagement Speed	± 100 RPM	4100			
	Drive Pulley Calibration Screw Position		3			•
	Pulley Distance	Z (+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)			
	Offset	X ± 0.4 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 ± 5 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 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 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
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MAG: Magneto Side

Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-7**

UPDATE

Date: October 7, 1996

SUBJECT: Technical Data

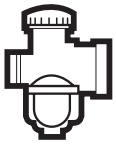
YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United States: Mach*1	1177 and 1178	ALL
1997	Sweden: Mach 1	1179	ALL

The technical data sheet for the above mentioned models has been updated.

Refer to the Ski-Doo *Predelivery Bulletin* no. 97-7.

Replace with the attached.

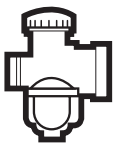
A dot (•) on right indicates changes from 1996 model.

	MODEL		FORMULA III			
	Engine Type		599			
	Maximum HP RPM ①	± 100 RPM	8500			•
	Rotary Valve	P/N Opening (BTDC)/ Closing (ATDC)	N.A.			
	Carburetor Type		PTO VM 36-176	CRT VM 36-177	MAG VM 36-178	•
	Main Jet		PTO 330	CRT VM 330	MAG 330	•
	Needle Jet		P-0 (286)			•
	Pilot Jet		PTO 50	CRT 50	MAG 50	•
	Needle Identification — Clip Position		6DEY4			•
	Slide Cutaway		2.5			
	Float Adjustment	± 1 mm (in)	18.1 (.71)			
	Air Screw Adjustment	± 1/16 turn	PTO 1-1/2	CRT 1-1/2	MAG 1-1/2	•
	Idle Speed	± 200 RPM	1900			•
	Gas Grade/Octane Number	(R + M)/2	Super Unleaded/91			
	Gas/Oil Ratio		Oil Injection			
	Ignition Timing BTDC ②	mm (in)	2.18 (.086)			
	Trigger Coil Air Gap	mm (in)	0.55 - 1.45 (.022 - .057)			
	Gear Ratio	Teeth	25/44			
	Engagement Speed	± 100 RPM	4500			
	Drive Pulley Calibration Screw Position		4			
	Pulley Distance — Z	(+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)			
	Offset — 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)	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)	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 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
CTR: Center
MAG: Magneto Side

A dot (•) on right indicates changes from 1996 model.

	MODEL			MACH 1			
	Engine Type			699			•
	Maximum HP RPM ①		± 100 RPM	8500			•
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	N.A.			•
	Carburetor Type			PTO VM 38-356	CRT VM 38-357	MAG VM 38-358	•
	Main Jet			PTO 350	CRT VM 350	MAG 350	•
	Needle Jet			P-7 (480)			•
	Pilot Jet			PTO 50	CRT 50	MAG 50	•
	Needle Identification — Clip Position			6DEY2			•
	Slide Cutaway			2.5			
	Float Adjustment		± 1 mm (in)	18.1 (.71)			
	Air Screw Adjustment		± 1/16 turn	PTO 2-1/4	CRT 2-1/4	MAG 2-1/4	•
	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)	2.18 (.086)			•
	Trigger Coil Air Gap		mm (in)	0.55 - 1.45 (.022 - .057)			
	Gear Ratio		Teeth	26/44			
	Engagement Speed		± 100 RPM	4500			
	Drive Pulley Calibration Screw Position			4			
	Pulley Distance	Z	(+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)			
	Offset	X	± 0.4 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	± 5 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	mm (in)	40 to 50(1-3/4 to 2) 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
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SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-8**

Date: October 25, 1996

SUBJECT: Predelivery Procedure

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United States: Formula* III LT and Mach* Z LT	1151, 1152, 1183 and 1184	ALL
1997	Sweden: Formula III LT and Mach Z LT	1153 and 1185	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.

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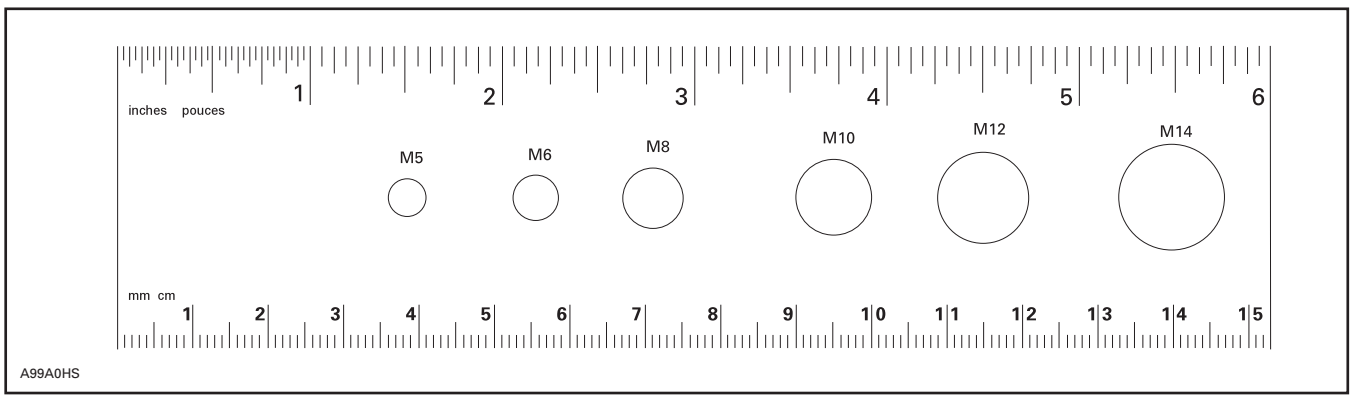
NOTE: This ruler can be helpful to identify fastener length or size.



PREDELIVERY KIT P/N	MODELS
580 6472 00	FORMULA III LT MACH Z LT

WARNING

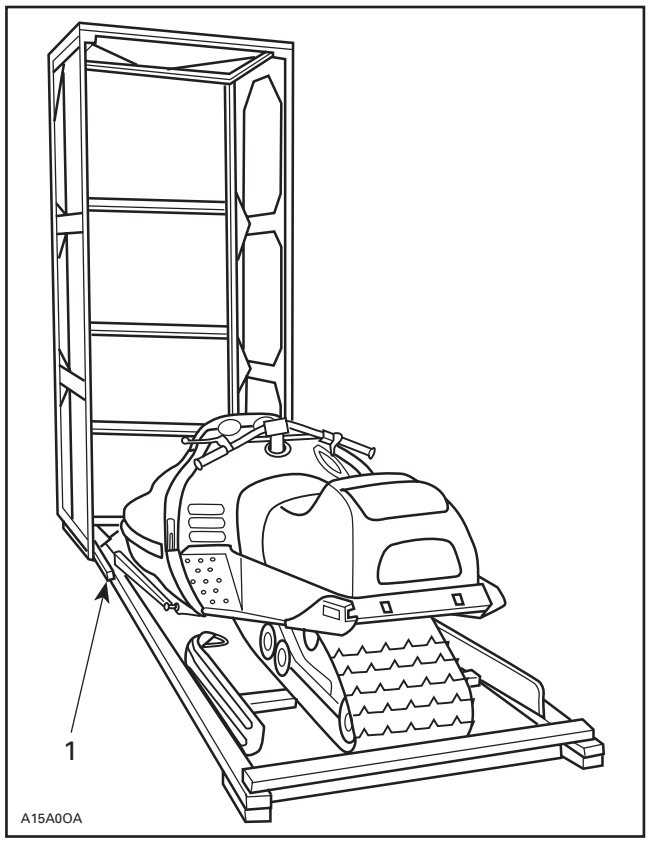
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

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 retaining windshield. Slowly pull out metal strip.

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

CAUTION

Failure to lift seat might result in leatherette damage.

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, slider cushions to bolt skis to ski legs. Discard crating spacers and nuts.

Remove vehicle from base.

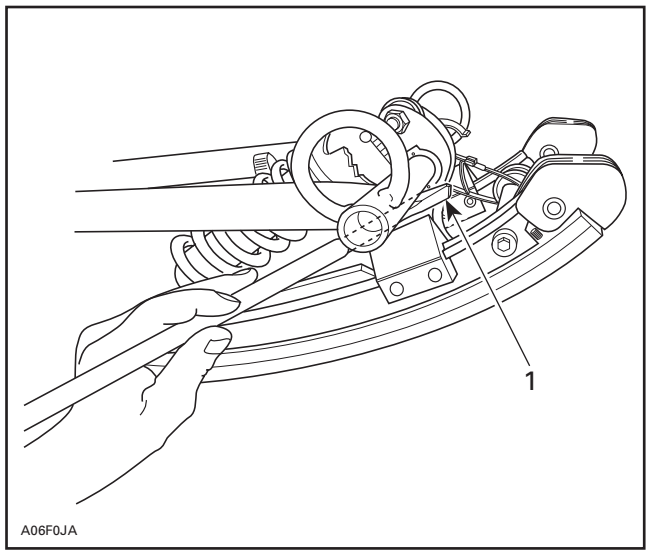
Remove steering pad, drive belt, predelivery kit and detach shock absorbers from engine compartment.

SHIPPING STRAP REMOVAL

Cut shipping strap using one of these 2 following methods:

Method 1

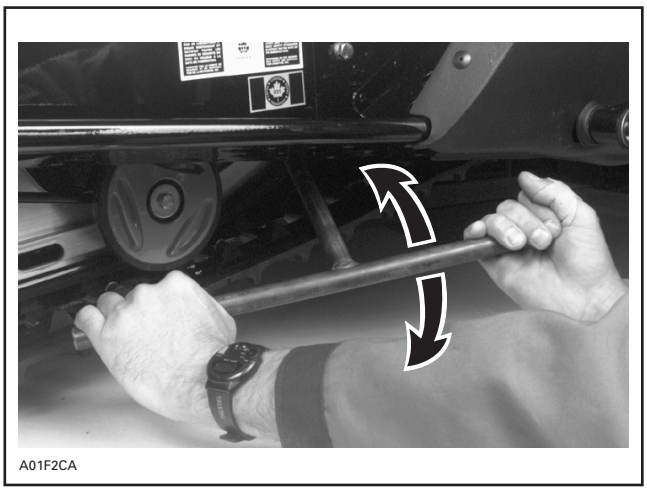
Using a long flat chisel such as Snap-On® PPC820LA cut and remove shipping strap that collapses front portion of rear suspension.



1. Cut shipping strap

Method 2

Using a special tool cut shipping strap as shown on the next photo.



1. Insert tool tip onto strap and twist

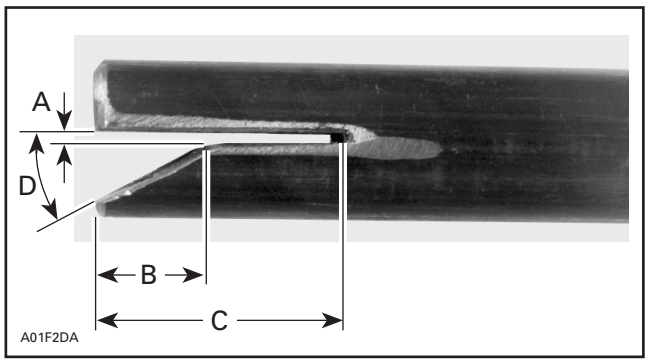
How to Build the Special Tool

Using 20 mm (3/4 in) steel tubing, cut the first piece to 460 mm (18 in) and the second one to 410 mm (16 in).

NOTE: High forces will be applied on this special tool, use strong tubing with a minimum 2 mm (5/64 in) wall thickness.

On one end of the 460 mm (18 in) piece, cut a 1.2 mm (3/64 in) slot by 28.5 mm (1-1/8 in).

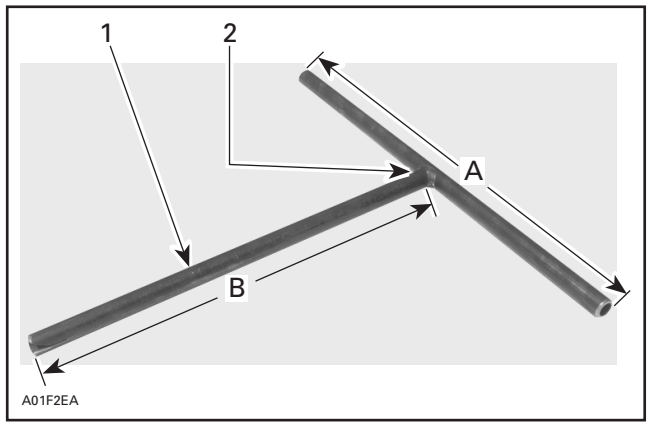
Make a chamfer of 30° X 10 mm (25/64 in), as shown on the next photo.



A. 1.2 mm (3/64 in)
B. 10 mm (25/64 in)
C. 28.5 mm (1-1/8 in)
D. 30°

Remove all sharp edges.

Assemble the two pieces and weld them together, as shown on the following photo.

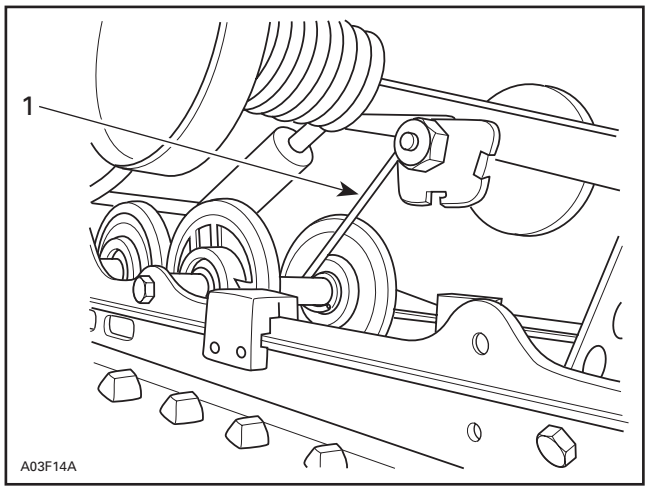


1. 20 mm (3/4 in) steel tubing
2. Welded joint
A. 410 mm (16 in)
B. 460 mm (18 in)

◆ WARNING

Failure to use one of these two methods of strap removal could result in personal injury.

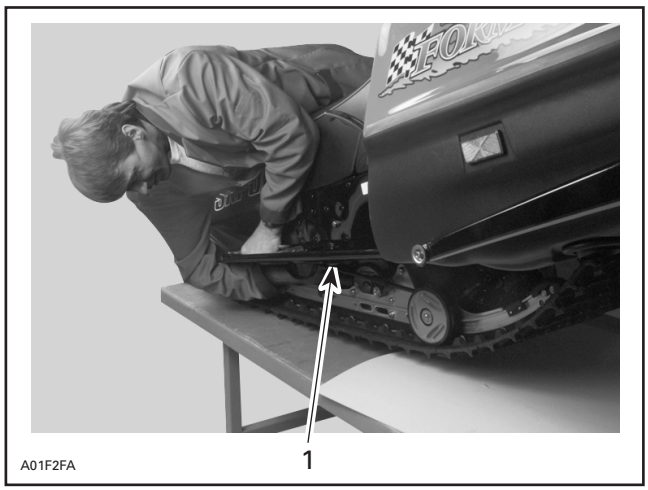
HOOK REMOVAL



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

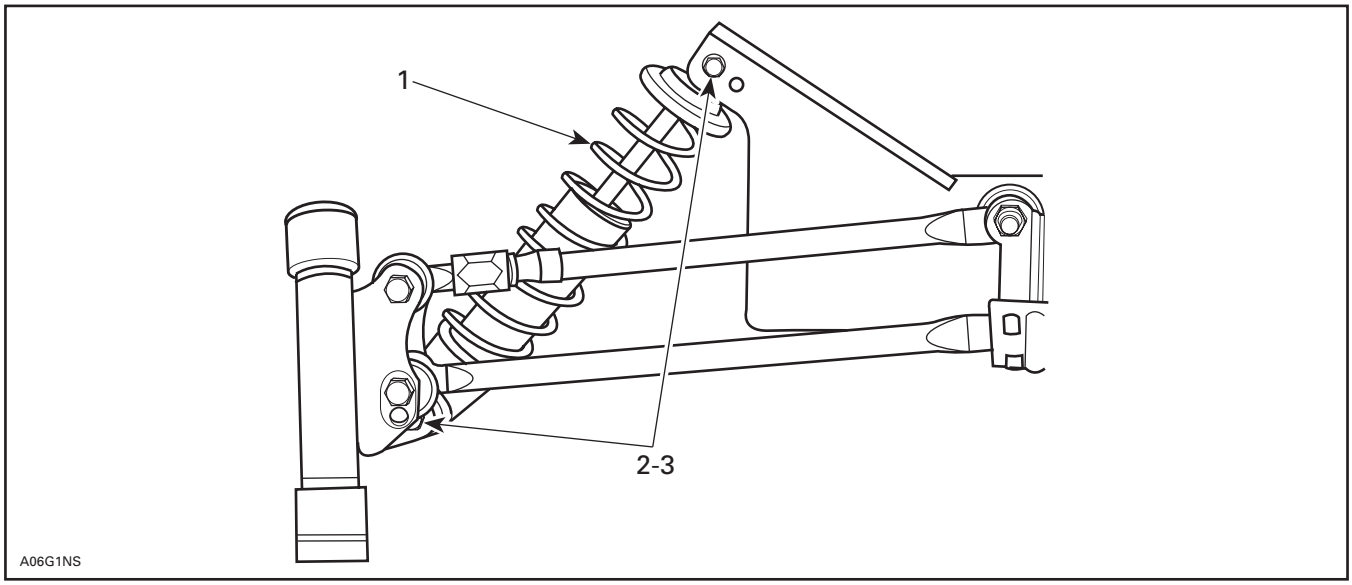
◆ WARNING

Shipping strap must be cut and hook removed to have snowmobile suspension operational.

Lift front of vehicle and block safely. Remove and discard shipping brackets from suspension. Discard spring clips, keep bolts.

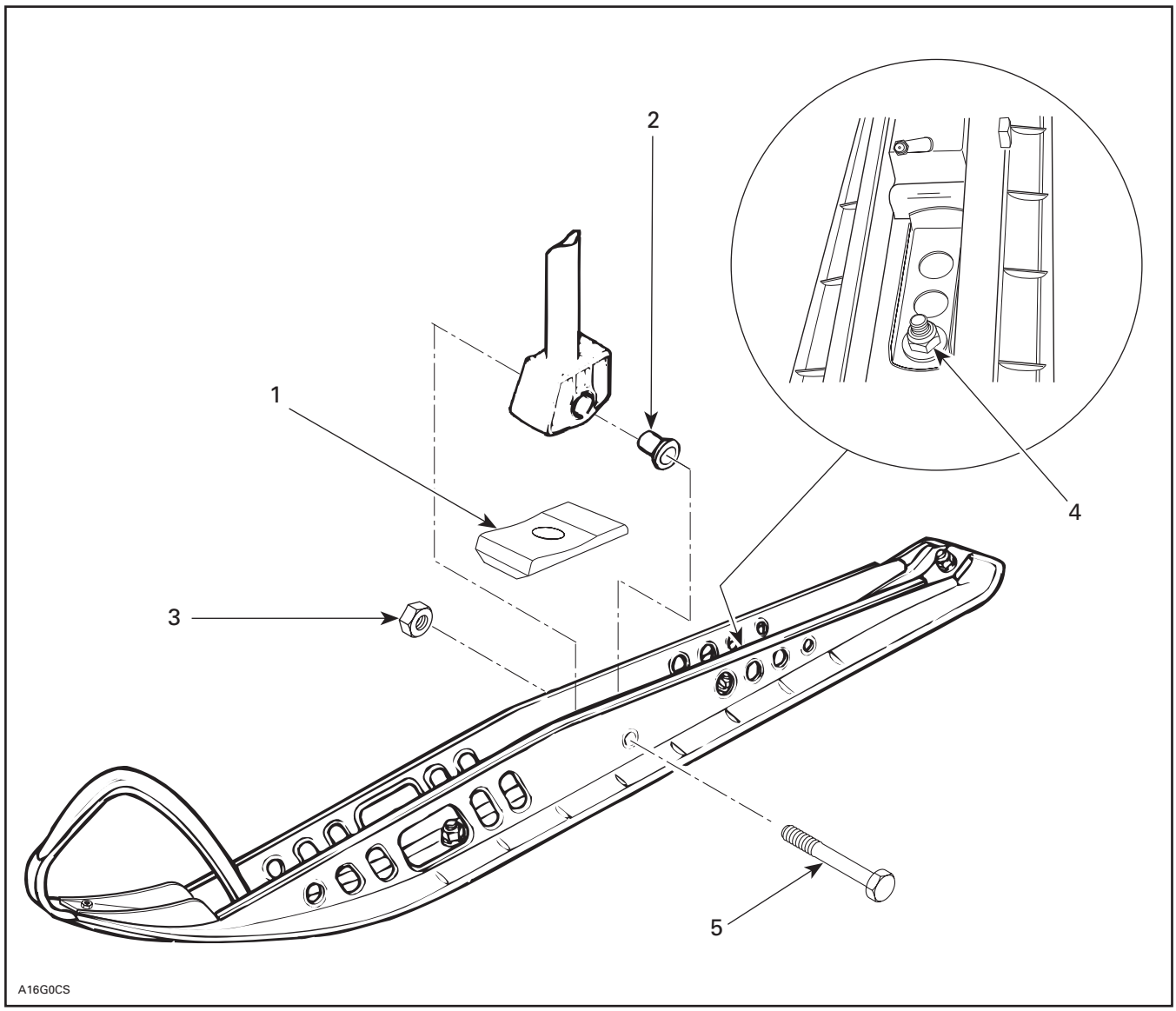
Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position bolt heads toward front.



TYPICAL — RIGHT SIDE SHOWN

1. *Shock absorber (2) (engine compartment)*
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)*

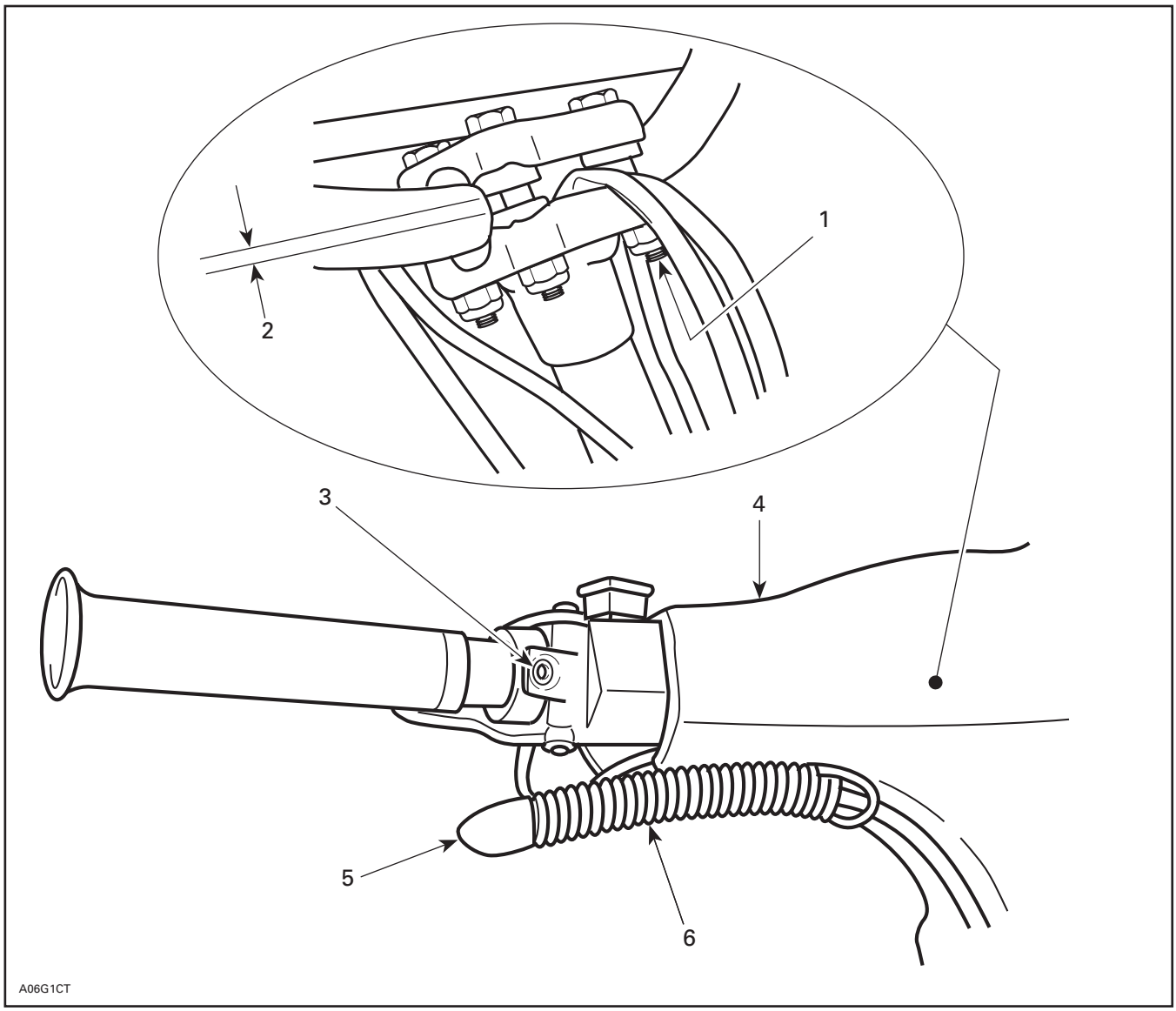


LEFT SIDE SHOWN

1. *Ski stopper (2) (Section no. 8), "AVANT" toward front*
2. *Slider cushion (4)*
3. *Nut M12 (2) (Section no. 8). Torque to 40 N•m (30 lbf•ft)*
4. *Loosen then adjust against ski stopper 14 N•m (124 lbf•**in**)*
5. *Bolt M12 (2)*

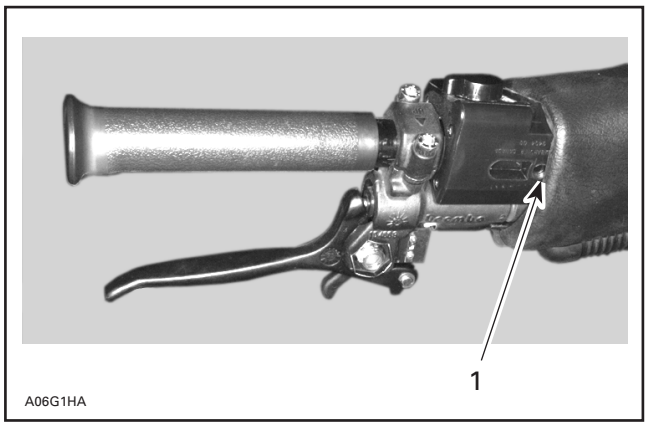
After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•**in**). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.

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 to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



1. *Step 1 Torque nuts 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) (section 5)*

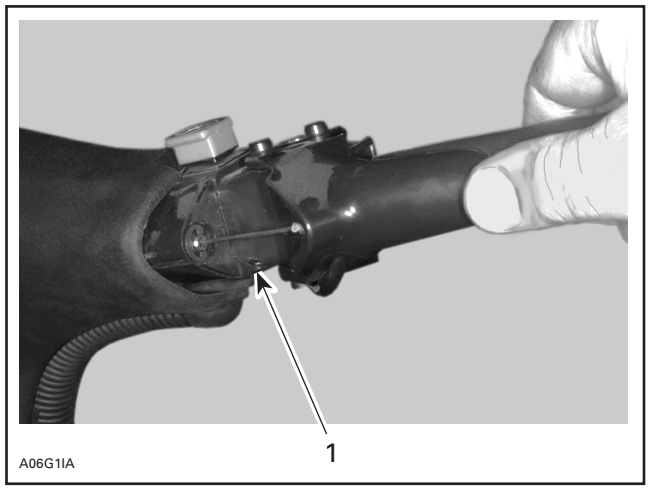
Adjust then tighten throttle and brake handle housings.



BRAKE HANDLE HOUSING

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

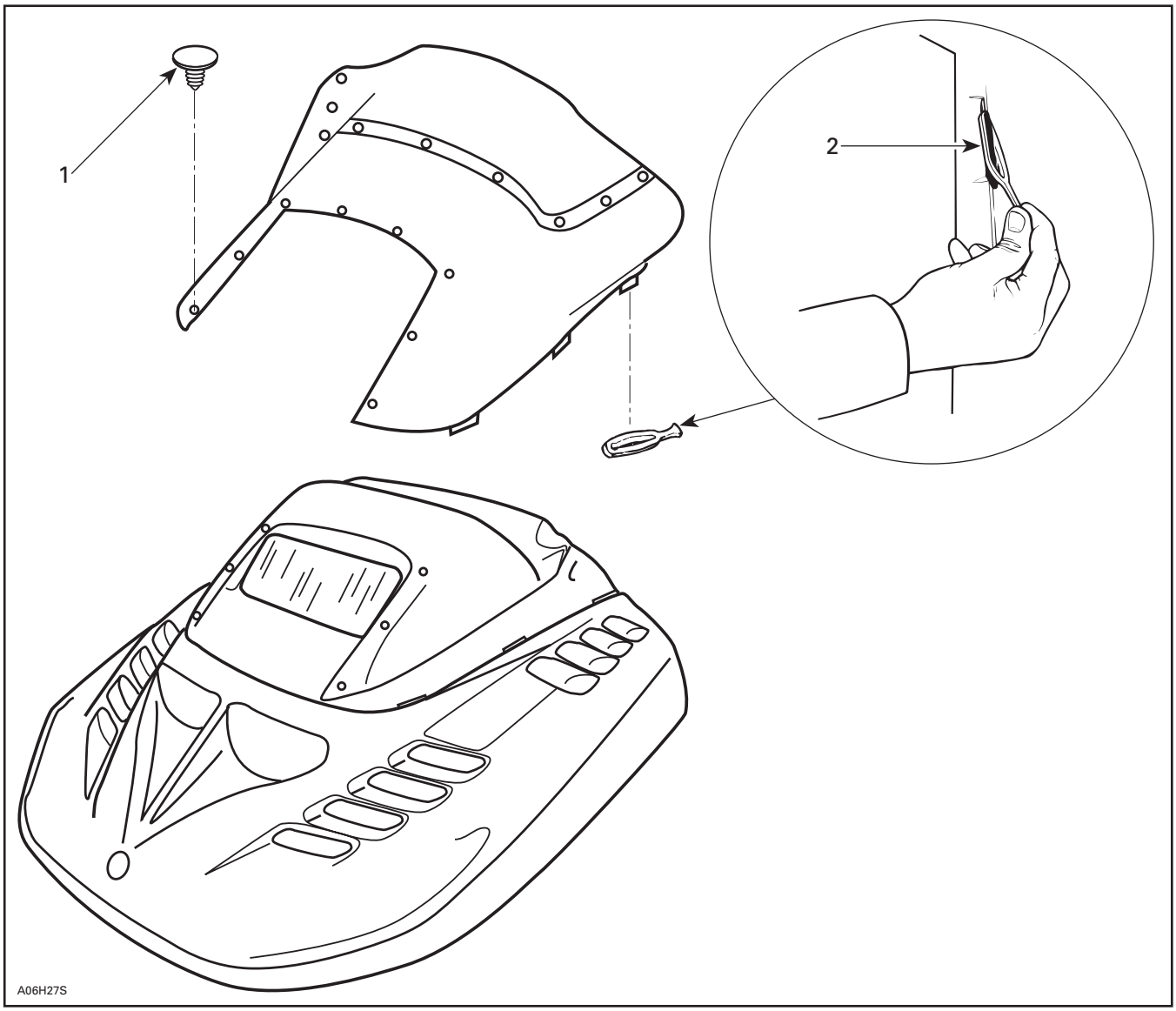
Mach Z LT Only



THROTTLE HANDLE HOUSING

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

Install windshield on hood.



1. Dart (section 6)
2. Latch (section 6)

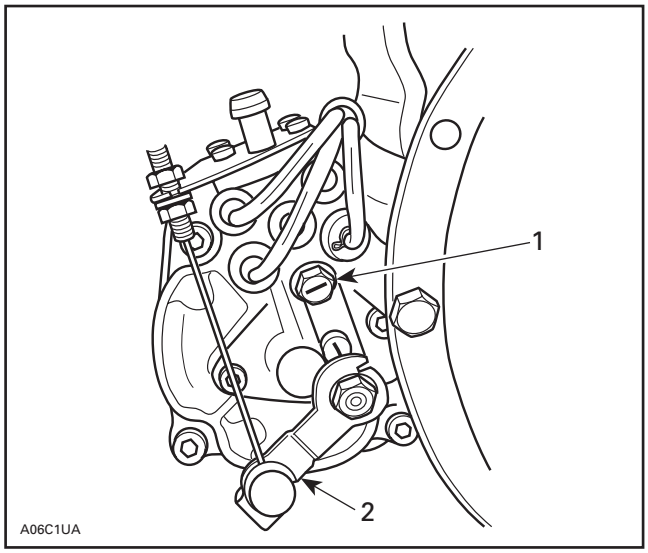
PARTS INSTALLATION
DRIVE BELT

Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

LIQUIDS
OIL INJECTION PUMP BLEEDING

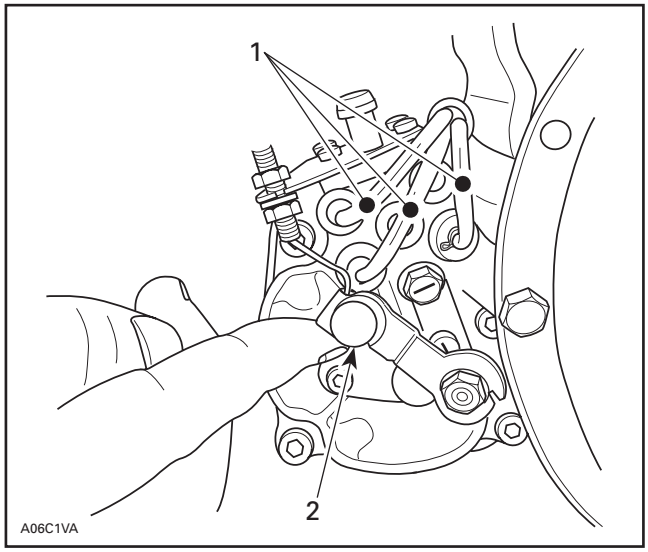
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER Injection Oil (P/N 496 0133 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

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



1. Bleeder screw
2. Oil pump lever

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



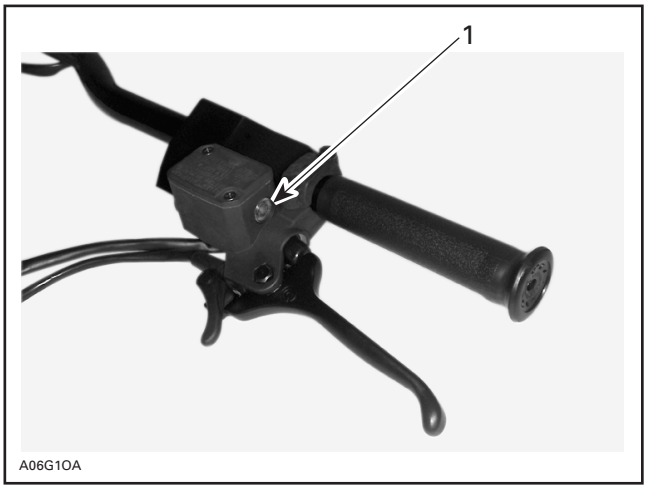
1. Small oil lines
2. Engine at idle (fully open position)

LIQUIDS
BRAKE FLUID LEVEL

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

▼ CAUTION

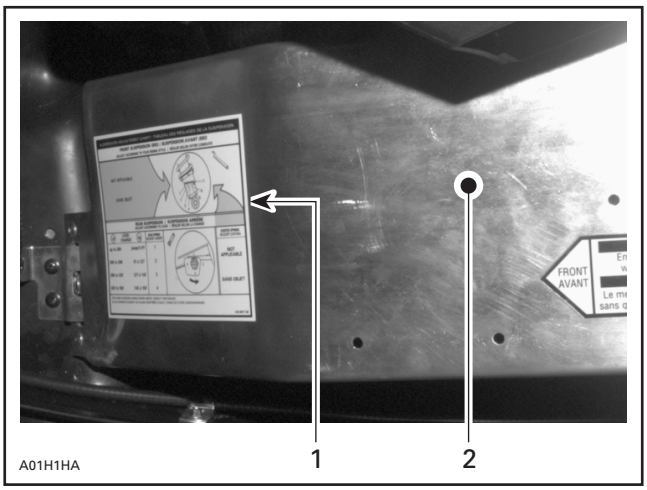
Use only (DOT 4) brake fluid from a sealed container. Do not store or use a partial bottle of brake fluid.



1. Minimum

ADJUSTMENTS
SUSPENSION

Rear suspension is calibrated at factory. At predelivery, 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.

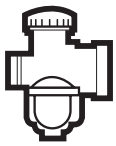
ADJUSTMENTS
DRIVEN PULLEY

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 inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1996 model.

	MODEL			FORMULA III LT			
	Engine Type			599			
	Maximum HP RPM ①		± 100 RPM	8500			•
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	N.A.			
	Carburetor Type			PTO VM 36-176	CTR VM 36-177	MAG VM 36-178	•
	Main Jet			PTO 330	CTR VM 330	MAG 330	•
	Needle Jet			P-0 (286)			
	Pilot Jet			PTO 50	CTR 50	MAG 50	•
	Needle Identification — Clip Position			6DEY4			•
	Slide Cutaway			2.5			
	Float Adjustment		± 1 mm (in)	18.1 (.71)			
	Air Screw Adjustment		± 1/16 turn	PTO 1.5	CTR 1.5	MAG 1.5	
	Idle Speed RPM		± 200 RPM	1900			•
	Gas Grade/Octane Number		(R + M)/2	Regular Unleaded/87 or Super Unleaded/91 (recommended)			
	Gas/Oil Ratio			Oil Injection			
	Ignition Timing BTDC ②		mm (in)	2.18 (.086)			•
	Trigger Coil Air Gap		mm (in)	0.55 - 1.45 (.022 - .057)			
	Gear Ratio		Teeth	23/44			•
	Engagement Speed		± 100 RPM	4500			
	Drive Pulley Calibration Screw Position			4			
	Pulley Distance	Z	(+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)			
	Offset	X	± 0.4 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 (25.00)			•
	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)	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 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.
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CTR: Center
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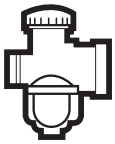
A dot (•) on right indicates changes from 1996 model.

	MODEL			MACH Z LT			
	Engine Type			809			•
	Maximum HP RPM ①		±100 RPM	8500			•
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	N.A.			
	Carburetor Type			PTO TM 38-C159	CTR TM 38-C159	MAG TM 38-C159	•
	Main Jet			PTO 380	CTR 380	MAG 380	•
	Needle Jet			O-4 (327)			•
	Pilot Jet			PTO 50	CTR 50	MAG 50	•
	Needle Identification — Clip Position			8AGY1-41			•
	Slide Cutaway			2.0			
	Float Adjustment		±1 mm (in)	20.0 (.787)			
	Air Screw Adjustment		±1/16 Turn	PTO 4	CTR 4	MAG 4	•
	Idle Speed RPM		±200 RPM	1800			•
	Gas Grade/Octane Number		(R + M)/2	Regular Unleaded/87 or Super Unleaded/91 (recommended)			
	Gas/Oil Ratio			Oil Injection			
	Ignition Timing BTDC ②		mm (in)	2.11 (.083)			
	Trigger Coil Air Gap		mm (in)	0.55 - 1.45 (.022 - .057)			
	Gear Ratio		Teeth	25/44			
	Engagement Speed		±100 RPM	4100			
	Drive Pulley Calibration Screw Position			3			•
	Pulley Distance	Z	(+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)			
	Offset	X	± 0.4 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	± 5 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	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 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
CTR: Center
MAG: Magneto side

Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

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SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-9**

Date: October 11, 1996

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United States: Grand Touring 500/583	1123, 1124, 1126 and 1127	ALL
1997	Sweden: Grand Touring 500/583	1125 and 1128	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.

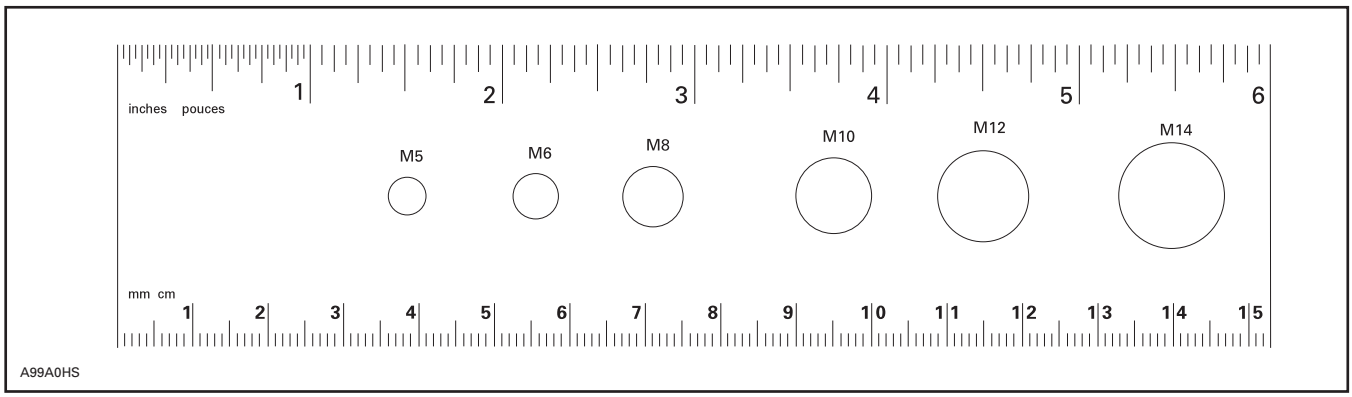
The illustrations in this document show the typical construction of the different assemblies and may not reproduce the full detail or exact shape of the parts. However, they represent parts that have the same or similar function.

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.

TABLE OF CONTENTS

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



PREDELIVERY KIT P/N	MODELS
580 6541 00	GT 500/583

WARNING

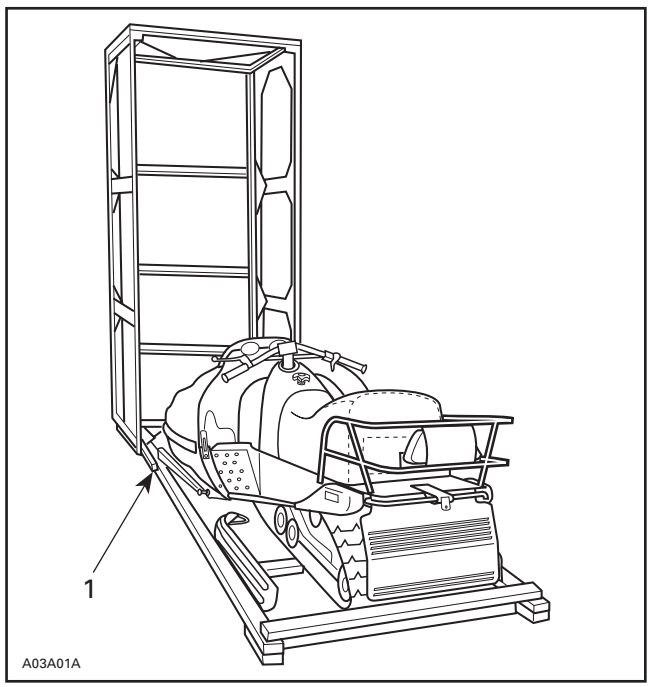
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

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.



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.

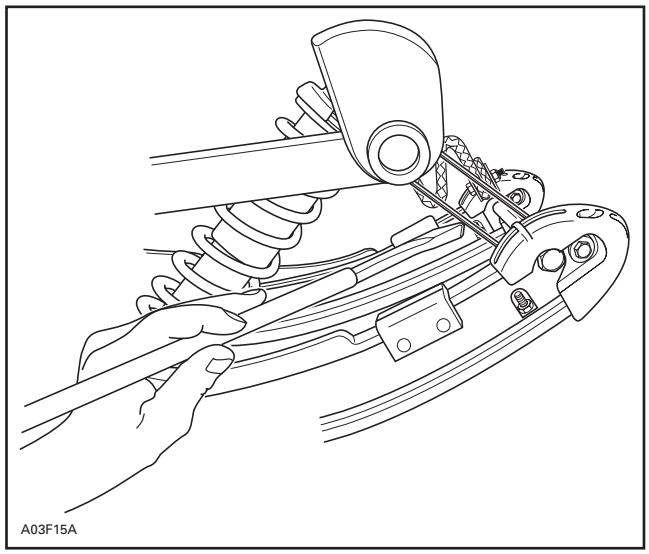
Remove parts to be installed and predelivery kit from engine compartment. Detach shock absorbers from engine compartment.

SHIPPING STRAP REMOVAL

Cut shipping strap using one of these 2 following methods:

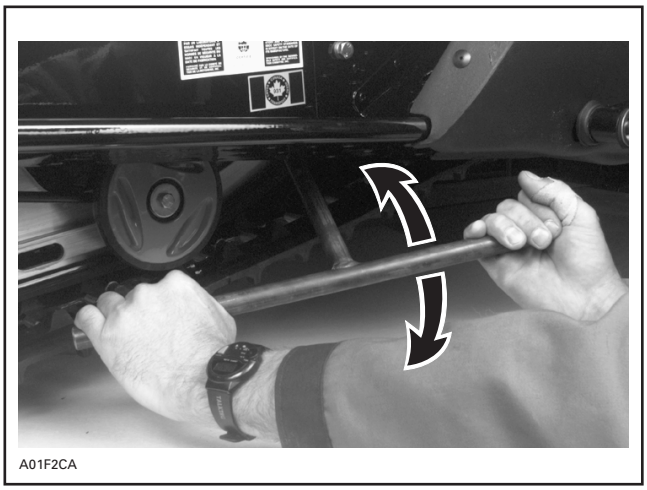
Method 1

Using a long flat chisel such as Snap-On® PPC820LA cut shipping strap that collapses front portion of rear suspension, as shown on the next photo.



Method 2

Using a special tool cut shipping strap as shown on the next photo.



INSERT TOOL TIP ONTO STRAP AND TWIST

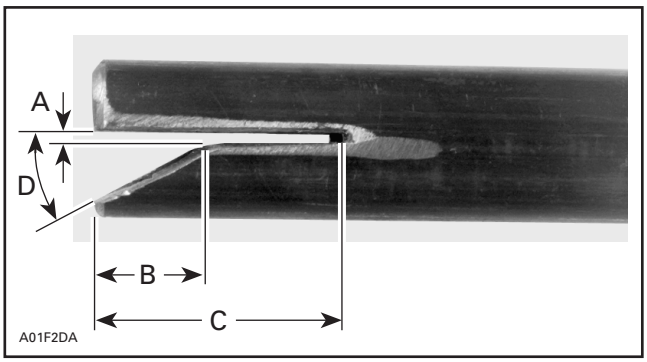
How to Build the Special Tool

Using 20 mm (3/4 in) steel tubing, cut the first piece to 460 mm (18 in) and the second one to 410 mm (16 in).

NOTE: High forces will be applied on this special tool, use strong tubing with a minimum 2 mm (5/64 in) wall thickness.

On one end of the 460 mm (18 in) piece, cut a 1.2 mm (3/64 in) slot by 28.5 mm (1-1/8 in).

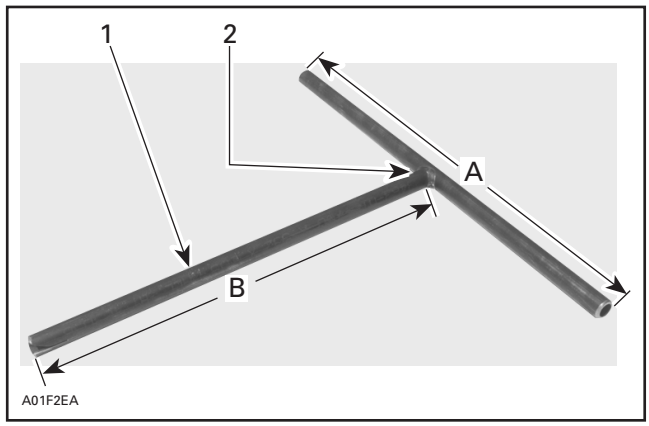
Make a chamfer of 30° x 10 mm (25/64 in), as shown on the next photo.



A. 1.2 mm (3/64 in)
B. 10 mm (25/64 in)
C. 28.5 mm (1-1/8 in)
D. 30°

Remove all sharp edges.

Assemble the two pieces and weld them together, as shown on the following photo.

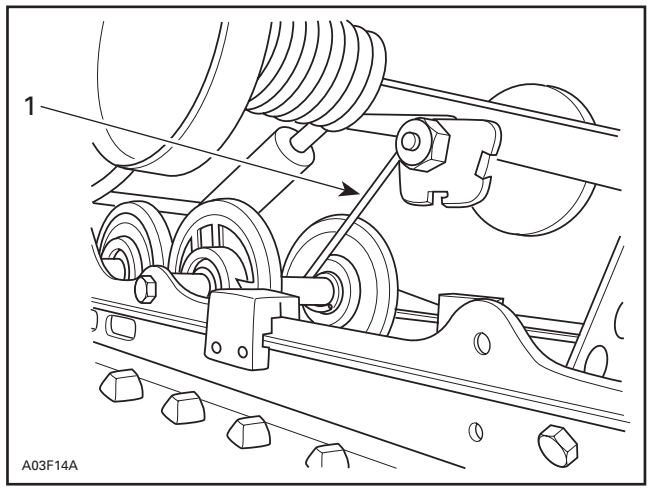


1. 20 mm (3/4 in) steel tubing
2. Welded joint
A. 410 mm (16 in)
B. 460 mm (18 in)

◆ WARNING

Failure to use one of these two methods of strap removal could result in personal injury.

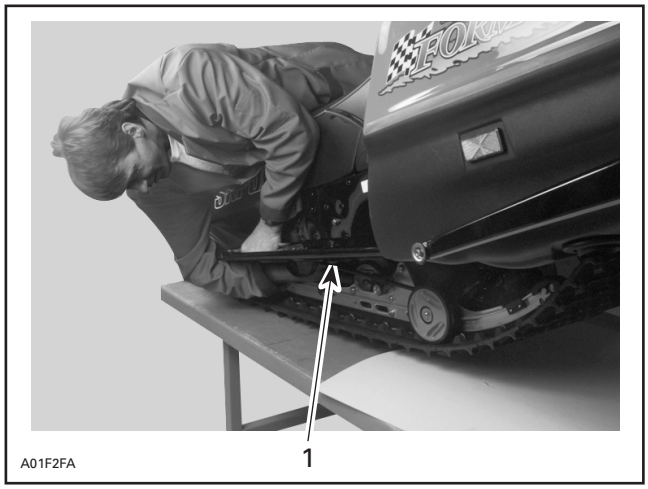
HOOK REMOVAL



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.

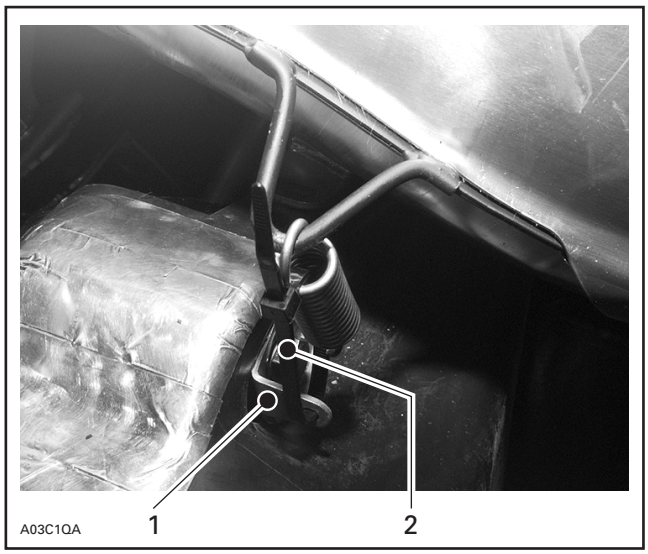


1. Remove hook on the rear portion of the suspension

◆ WARNING

Shipping strap must be cut and hook removed to have snowmobile suspension operational.

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.

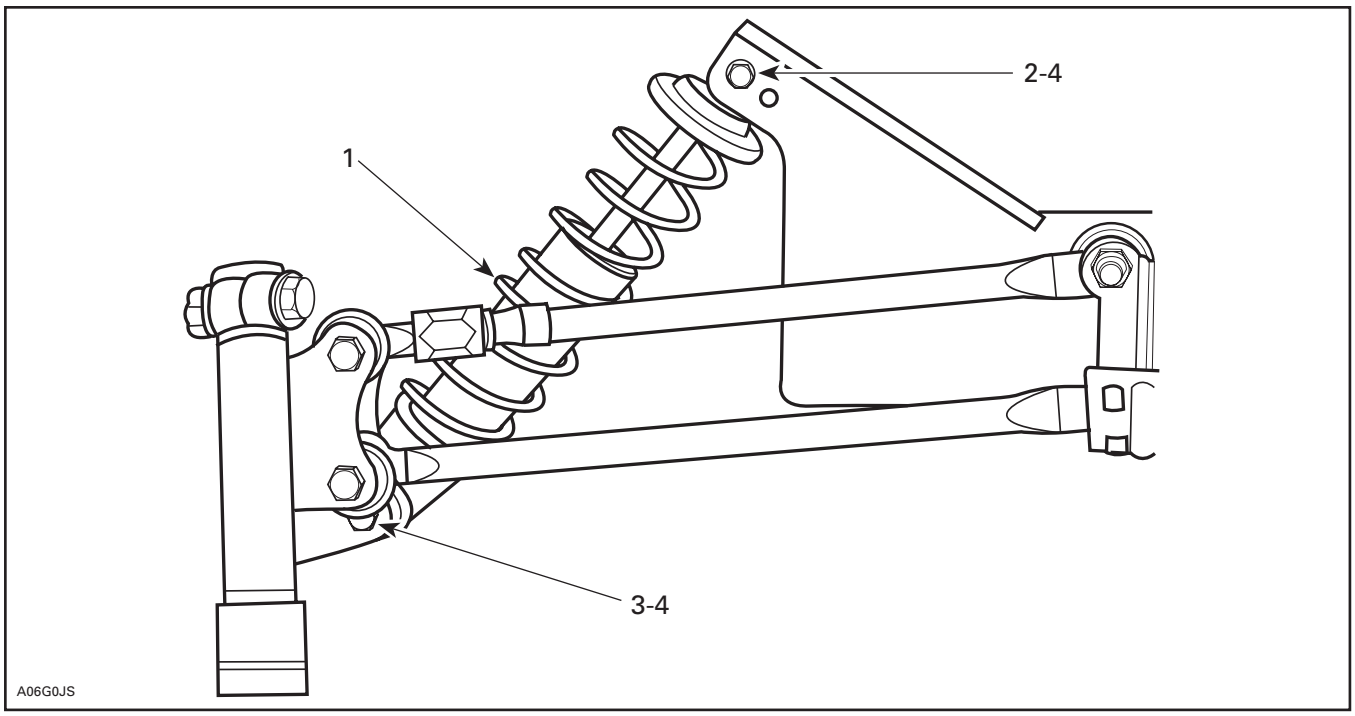
Remove and discard shipping brackets from suspension. Discard spring clips, keep screws.

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 0060 65) (on suspension)*
3. *Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (on suspension)*
4. *Nut M10 x 1.5 (2) (P/N 228 5010 45) (section no. 3). Torque to 48 N•m (35 lbf•ft)*

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.

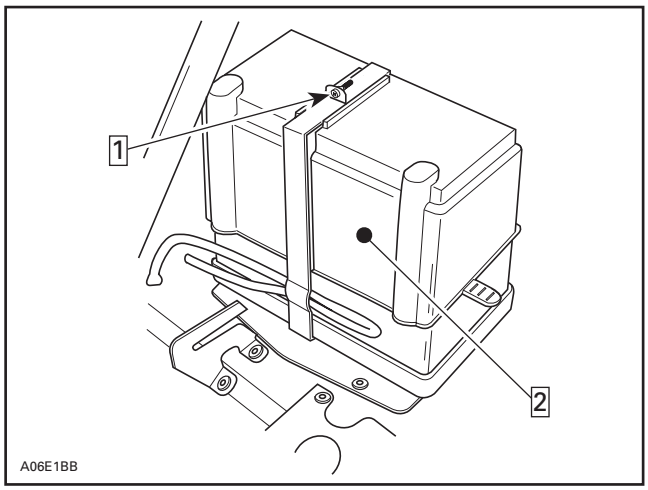
Battery Removal

Remove belt guard.

Remove air intake silencer.

Unfasten battery retaining strips.

Open strips and lift battery protective boot.



Step 1 : Unfasten and open
Step 2 : Lift 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.

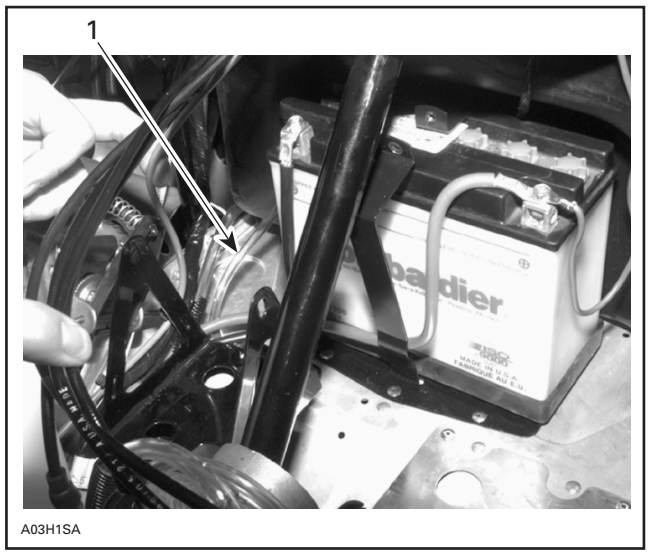
Connect RED positive cable and RED wire to positive battery terminal.

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.

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 7017 00) on battery posts and connectors.

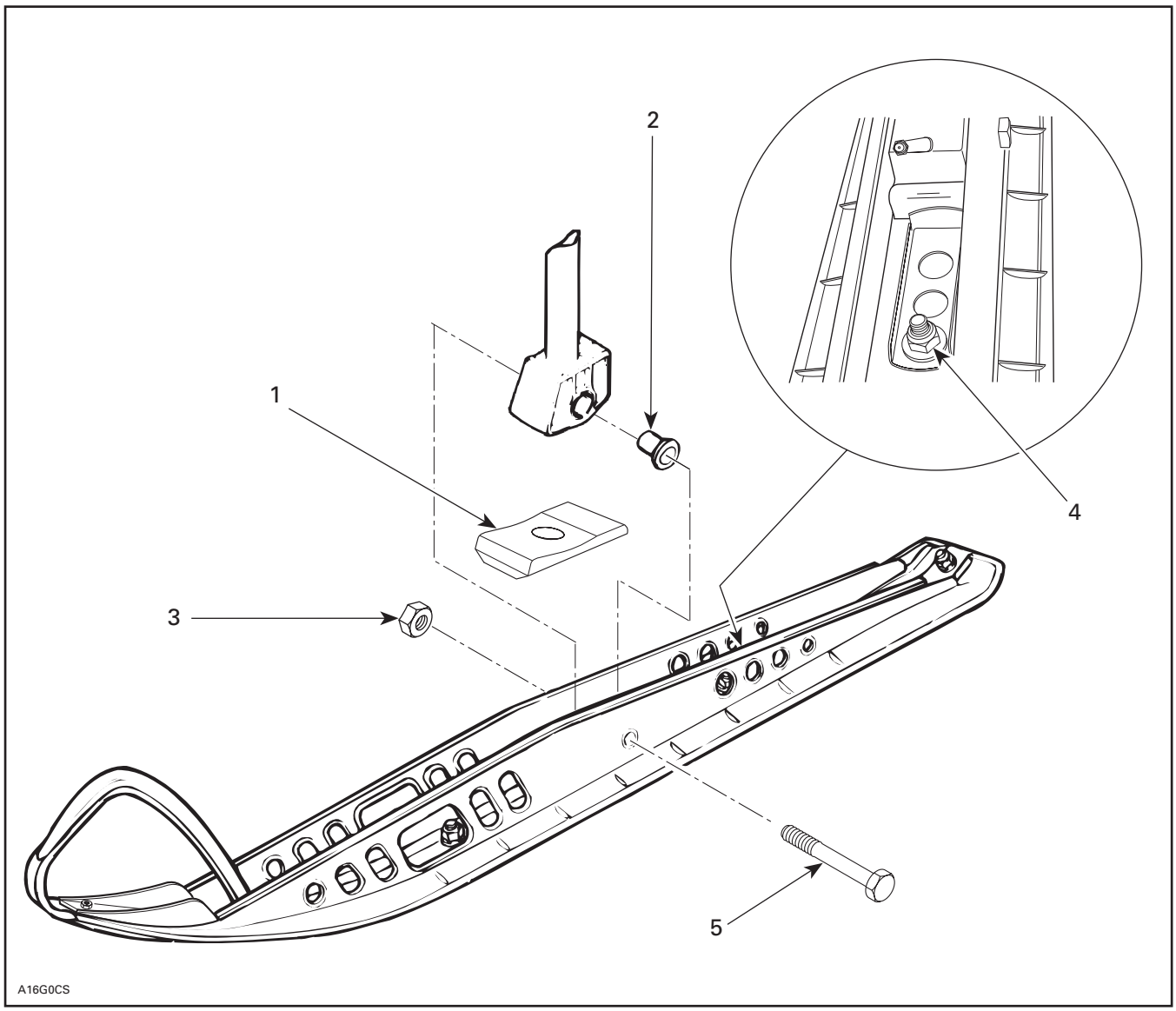
Ensure vent tube is properly installed on battery elbow, then install protective boot over battery.

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.

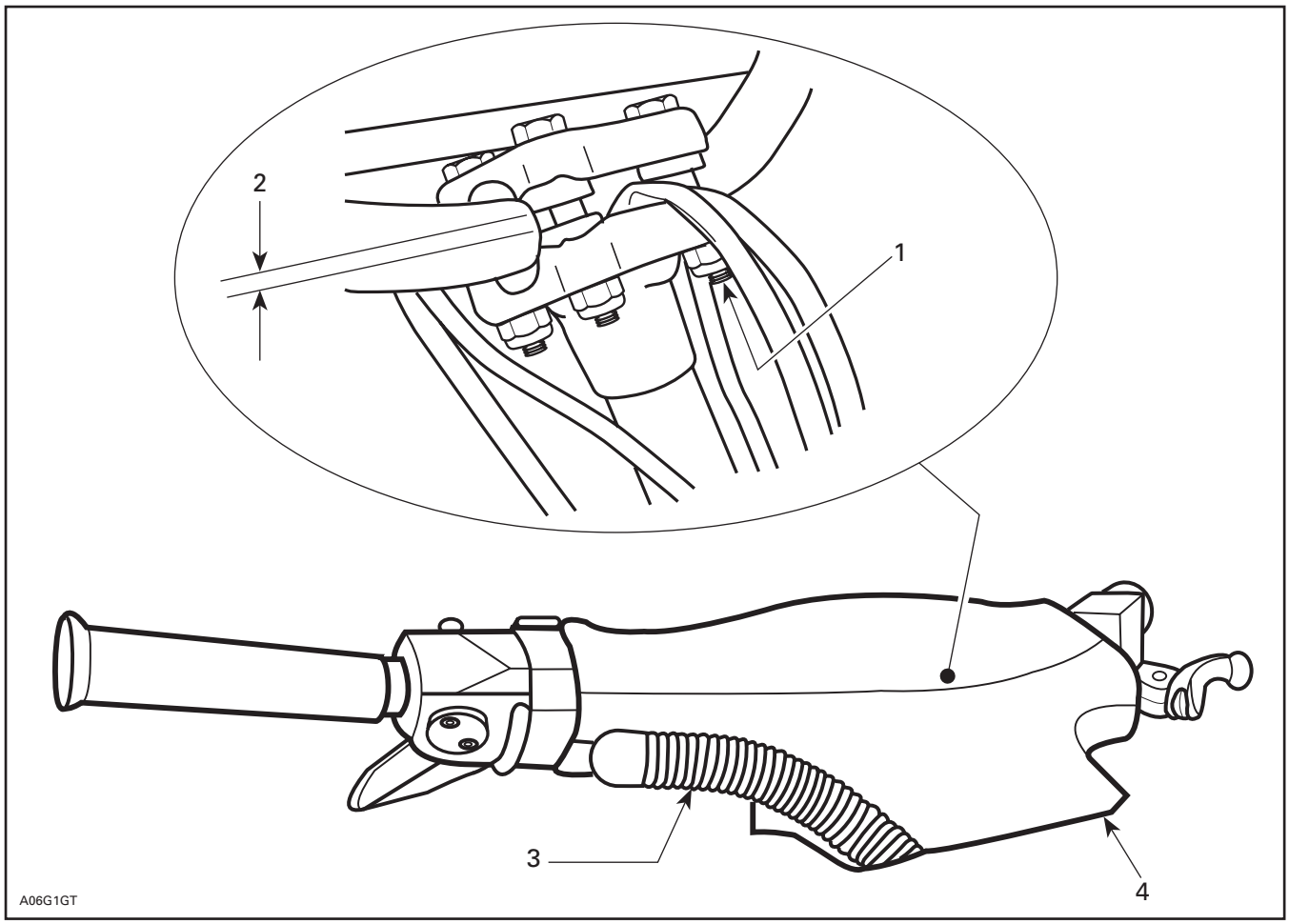


LEFT SIDE SHOWN

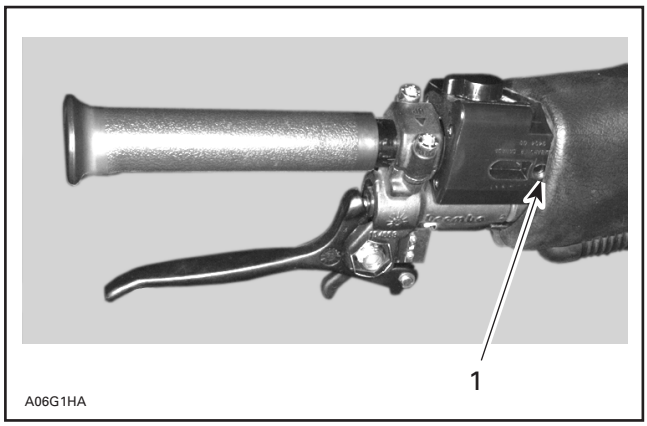
1. *Stop bounding (2) (P/N 570 0468 00) (section no. 4)*
2. *Slider cushion (4) (ski leg)*
3. *Nut M12 (2) (ski leg). Torque to 40 N•m (30 lbf•ft)*
4. *Loosen then adjust against stop bounding. Torque to 14 N•m (124 lbf•**in**)*
5. *Bolt M12 (2) (ski leg)*

After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•**in**). More pre-load on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.

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.

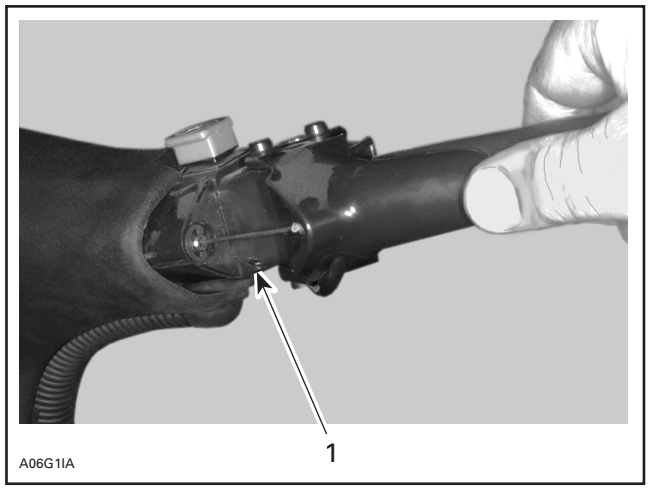


1. Torque to 26 N•m (19 lbf•ft)
2. Equal gap each side (both clamps)
3. Keyway (2) (section no. 3)
4. Steering pad (engine compartment)



BRAKE HANDLE HOUSING

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

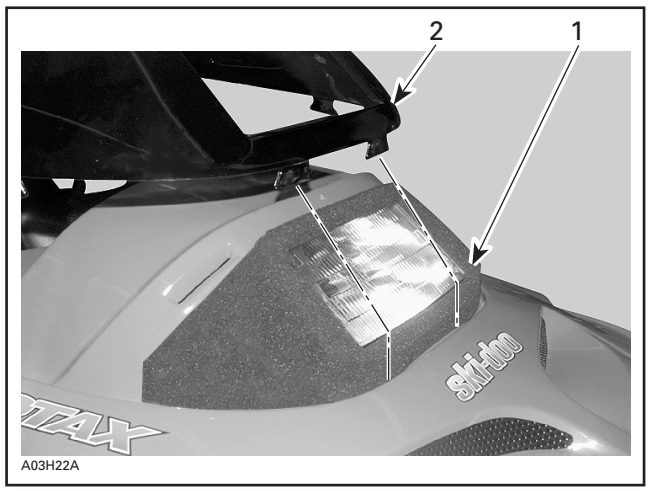


THROTTLE HANDLE HOUSING

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

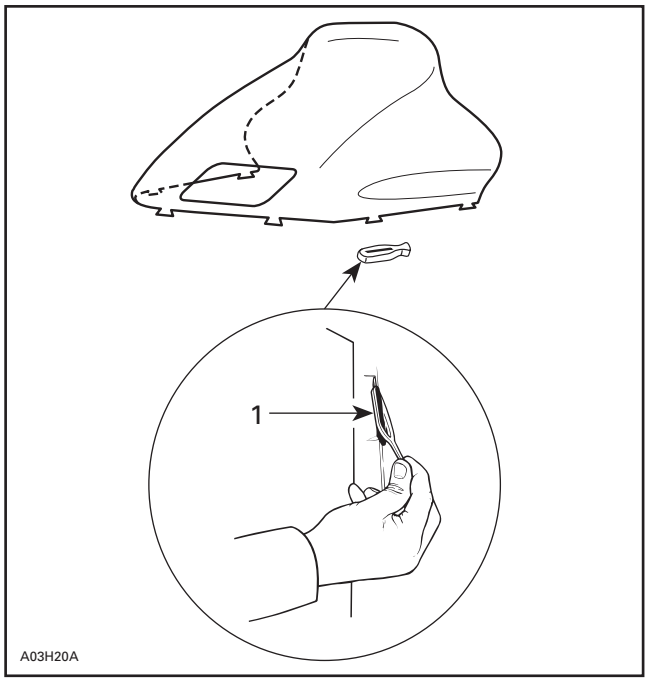
Install windshield on dashboard.

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



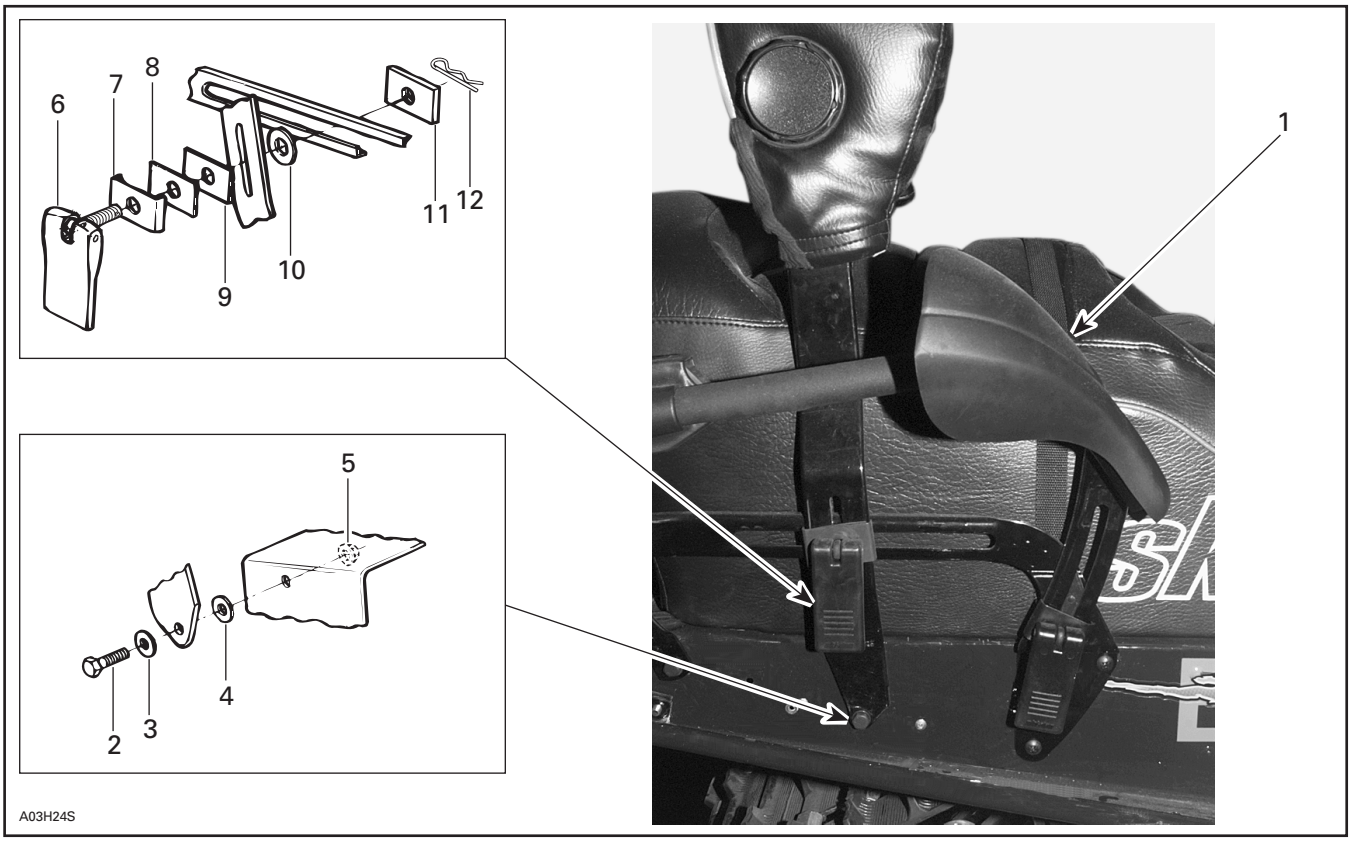
1. *Protective foam*
2. *Install windshield on dashboard*

WINDSHIELD INSTALLED ON DASHBOARD



1. *Latch (6) (P/N 570 0238 00) (section no. 4 or 6)*

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



1. Handle protector (2) (seat storage compartment). Secure with rivets
2. Screw (2) (P/N 732 6011 75) (section no. 6)
3. Washer (2) (P/N 732 9000 30) (section no. 6)
4. Plastic washer (2) (P/N 414 8196 00) (section no. 6)
*5. Elastic nut (2) (P/N 228 5810 45) (section no. 6). Torque to 8 N•m (73 lbf•**in**)*
6. Lever assembly (2) (P/N 580 6110 00) (section no. 2)
7. Guide (2) (P/N 517 2573 00) (section no. 2)
8. Rubber shim (2) (P/N 570 0274 00) (section no. 6)
9. Spacer (2) (P/N 517 2513 00) (section no. 2)
10. Flanged washer (2) (P/N 414 8195 00) (section no. 6)
11. Threaded plate (2) (P/N 517 2500 00) (section no. 6)
12. Hair pin (2) (P/N 414 1083 00) (section no. 6)

PARTS INSTALLATION
BACKREST

Turn adjustment knob left or right to adjust backrest cushion position.


A03H25A

PARTS INSTALLATION
DRIVE BELT

Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

SUPPLEMENTAL OIL

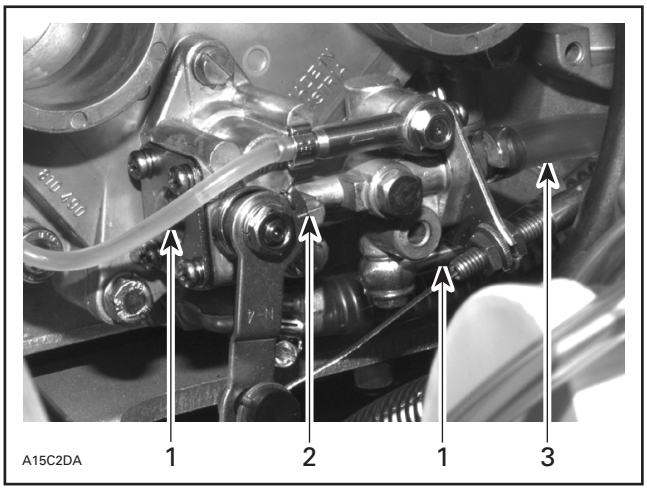
To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER ROTAX Injection Oil (P/N 413 8030 00) should be added to fuel for the first full filling of fuel tank. Always remove and clean spark plugs after engine break-in.

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 aligned when throttle lever is activated just enough to take all cable play.

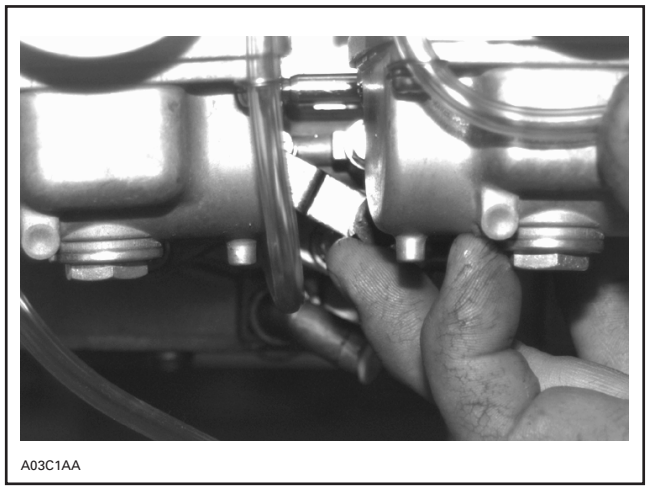


1. *Small oil line*
2. *Marks aligned*
3. *Main oil line*

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 rein-stalled, make a J hook out of mechanical wire to lift the lever.



TYPICAL — ENGINE AT IDLE

Reinstall air silencer.

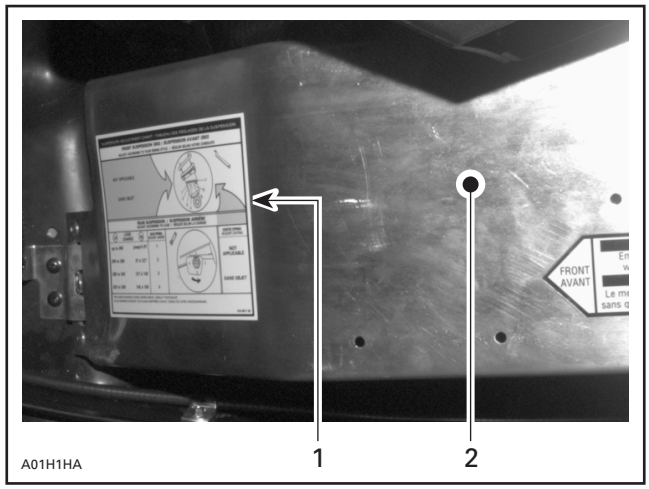
Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ 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 predelivery, 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 inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1996 model.

MODELS			GRAND TOURING 500	GRAND TOURING 583
Engine Type			494	583 •
Maximum HP RPM ①		± 100 RPM	7800 •	7900 •
Rotary valve		P/N	420 9245 09	420 9245 02 •
		Opening (BTDC)/ Closing (ATDC)	135°/64°	140°/71° •
Carburetor Type			PTO VM 38 - 347 • MAG VM 38 - 348 •	PTO VM 38 - 349 • MAG VM 38 - 350 •
Main Jet			PTO 330 • MAG 310 •	PTO 280 • MAG 270 •
Needle Jet			P-4 480 •	Q-6 480 •
Pilot Jet			50 •	50 •
Needle Identification — Clip Position			6FEY1 •	6BGY15 •
Slide Cutaway			2.5	2.5
Float Adjustment		±1 mm (in)	18.1 (.71)	18.1 (.71)
Air Screw Adjustment		± 1/16 Turn	1-1/8	2-1/4 •
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	23/44	23/44 •
Engagement Speed		± 100 RPM	3500 •	3800 •
Drive Pulley Calibration Screw Position			3	3
Pulley Distance	Z	(+ 0, – 1) mm (+ 0, – 1/32) in	16.5 (21/32)	
Offset	X	± 0.4 mm (± 1/64 in)	35.0 (1-3/8)	
	Y		Dimension Y must exceed X from 1 mm (1/32in) 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)	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)	40 to 55 (1-5/8 to 1-3/16) with a M7.3 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

CRT: Center

N.A.: Not applicable

Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-10**

Date: November 5, 1996

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United States: MX Zx* 440 LC	1214 and 1215	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.

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.

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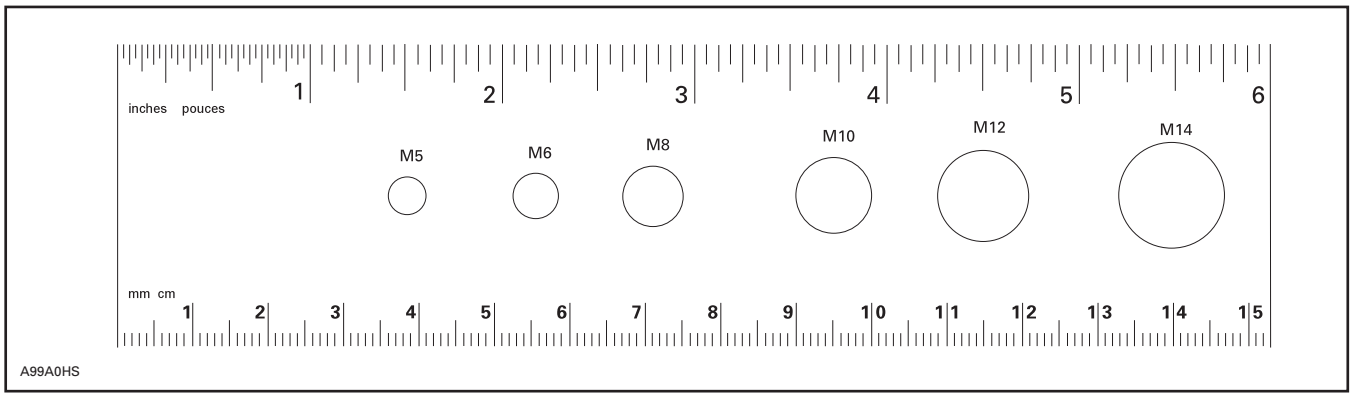


NOTE: This ruler can be helpful to identify fastener length or size.

PREDELIVERY KIT P/N	MODELS
580 6564 00	MX Zx 440 LC

◆ WARNING

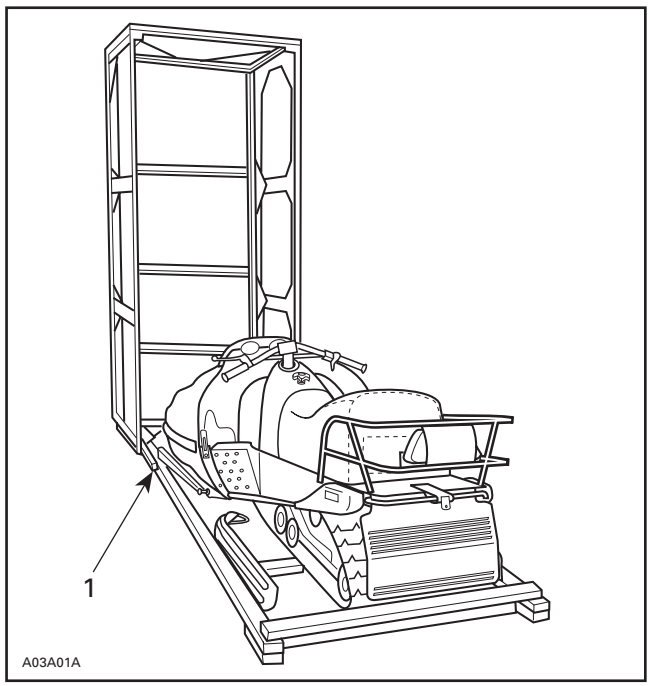
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

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 of vehicle. There is a notch at the front of crate. Lift cover slowly to avoid damaging the snow guard or taillight.



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. Discard ski leg bolts. Discard crating spacers and nuts.

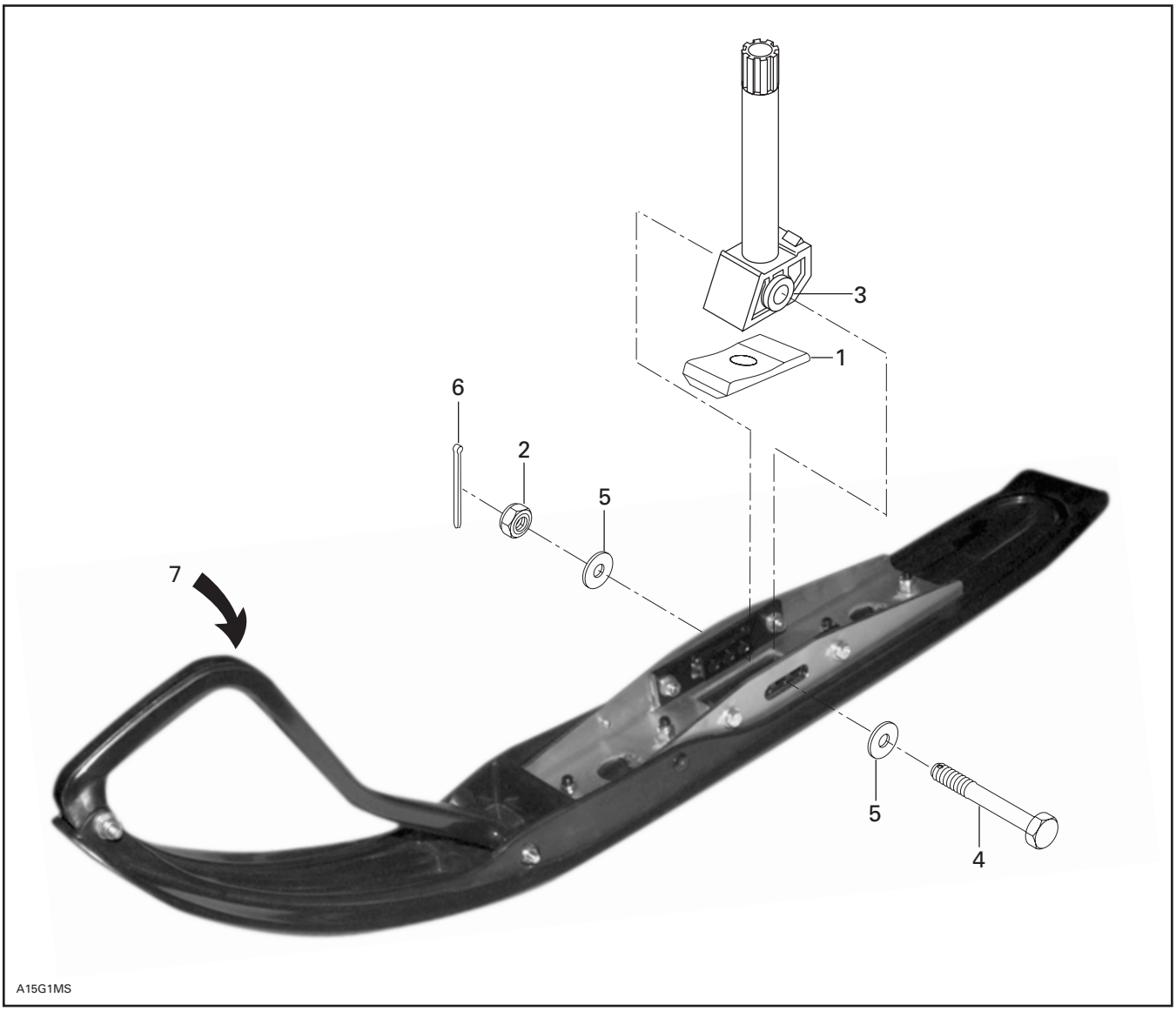
Remove vehicle from base.

Remove drive belt and predelivery kit from engine compartment.

Install skis on vehicle.

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

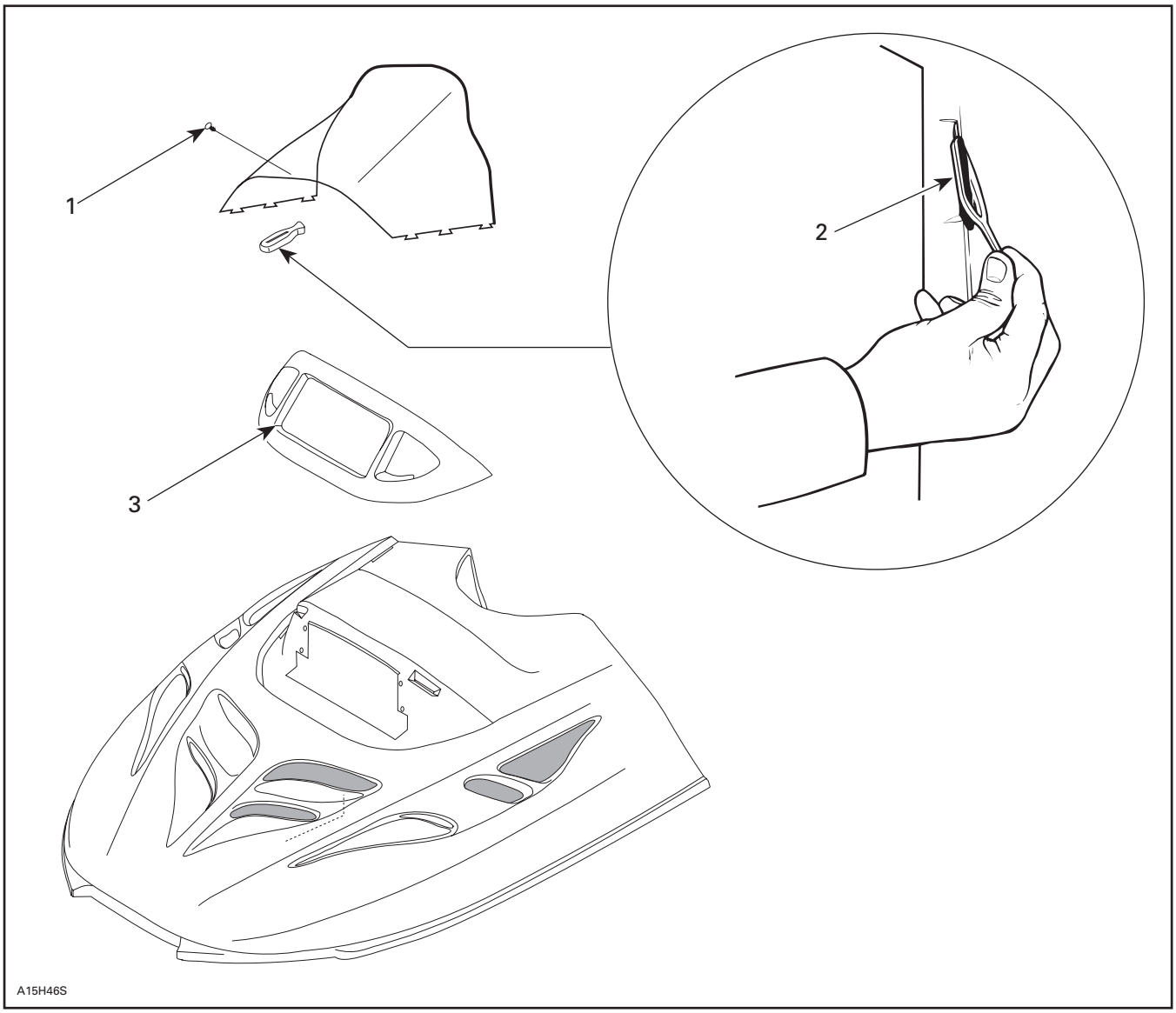
Replace vehicle on ground.



LEFT SIDE SHOWN

1. *Ski stopper (2) (section no. 8) "AVANT" toward front*
2. *Self-locking nut M12 x 1.75 (2) (Section no. 8). Torque to 24 N•m (18 lbf•ft)*
3. *Slider cushion (4) (Ski leg)*
4. *Bolt M12 (2) (section no. 8). Install bolt into mid-hole*
5. *Washer (4) (section no. 8)*
6. *Cotter pin (2) (secion no. 8)*
7. *Twist ski to ease bolt installation*

Install windshield on dashboard.



1. *Dart (1) (P/N 414 6443 00) (section no. 6)*
2. *Latch (6) (P/N 570 0238 00) (section no. 6)*
3. *Temporary remove headlamp molding for windshield installation*

PARTS INSTALLATION
DRIVE BELT

Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

LIQUIDS
ROTARY VALVE OIL RESERVOIR LEVEL

Check oil level in the rotary valve reservoir. Add oil as required. Refer to the following photo.

ROTARY VALVE OIL RESERVOIR

▼ CAUTION

Use only Bombardier-Rotax injection oil (P/N 413 8029 00) (12 x 1L).

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
TRACK

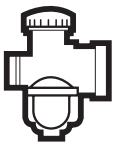
Refer to *Shop Manual* to adjust track tension and alignment. See TECHNICAL DATA section at the end of this bulletin.

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 inquires should be directed to your distributor service representative.

	MODEL			MX Zx 440 LC
	Engine Type			454
	Maximum HP RPM ①		± 100 RPM	8450
	Rotary Valve		P/N Opening (BTDC)/ Closing (ATDC)	420 924 502 146 65
	Carburetor Type			PTO VM 34 - 498 MAG VM 34 - 499
	Main Jet			PTO 260 MAG 250
	Needle Jet			P-8 (159)
	Pilot Jet			45
	Needle Identification — Clip Position			6FJ43
	Slide Cutaway			2.5
	Float Adjustment		± 1 mm (in)	23.9 (.94)
	Air Screw Adjustment		± 1/16 turn	1
	Idle Speed RPM		± 200 RPM	1700
	Gas Grade/Pump Octane Number		(R + M)/2	Regular Unleaded/87
	Gas/Oil Ratio			Premix 40:1 with Bombardier synthetic injection oil
	Ignition Timing BTDC ②		mm (in)	1.48 (.058)
	Trigger Coil Air Gap		mm (in)	0.55 - 1.45 (.022 - .057)
	Gear Ratio		teeth	23/43
	Engagement Speed		± 100 RPM	4900
	Drive Pulley Calibration Screw Position			3
	Pulley Distance	Z	(+0, –1) mm (+0, –1/32) in	16.5 (21/32)
	Offset	X	± 0.4 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	± .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.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-10**

UPDATE

Date: December 12, 1996

SUBJECT: Predelivery

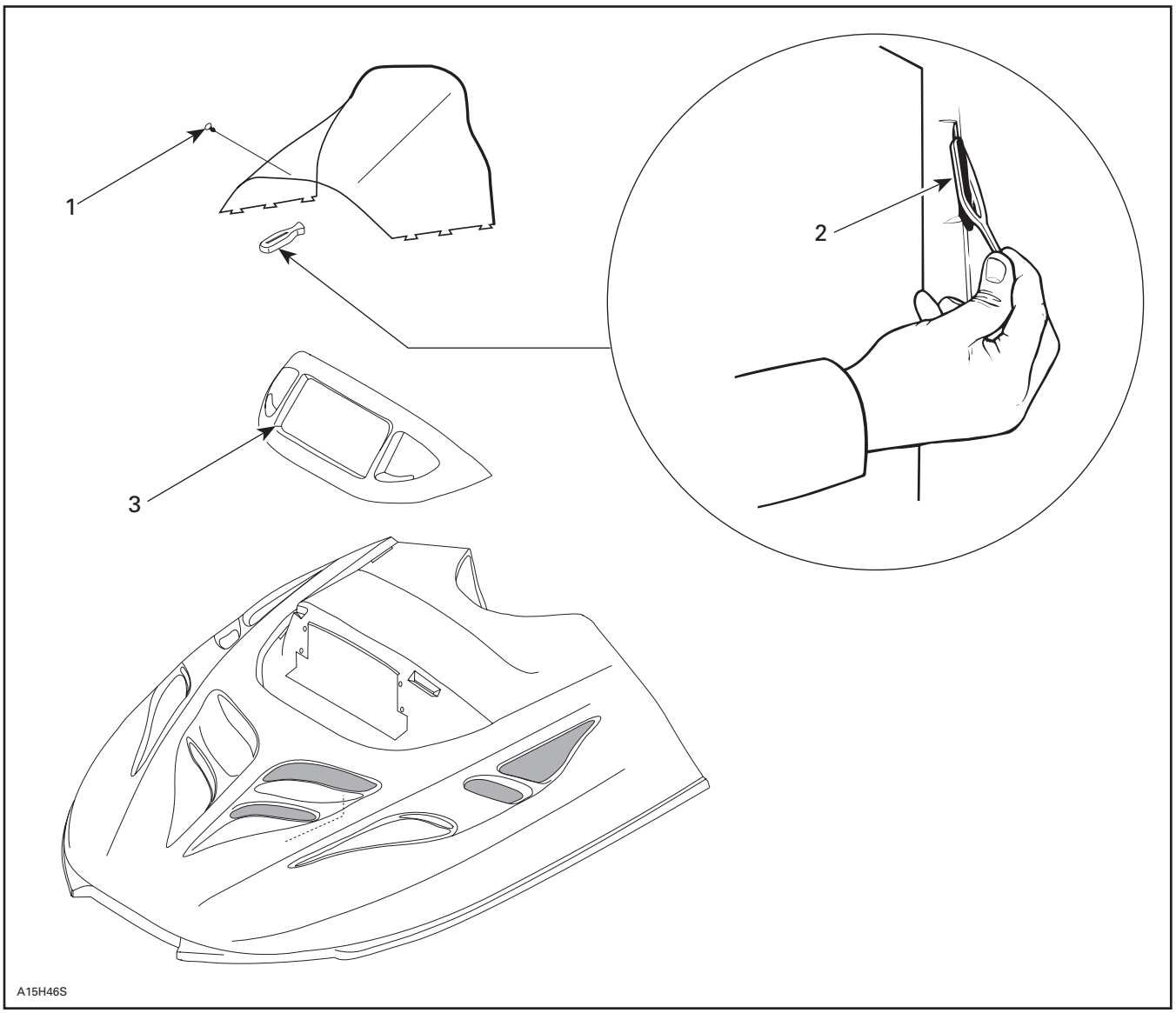
YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United States: MX Zx 440 LC	1214 and 1215	ALL
1997	Sweden: MX Zx 440 LC	1216	ALL

The page 6 for the above mentioned models have been updated. Bombardier-Rotax synthetic injection oil (12 x 1L) part number is 413 7105 00.

Refer to the Ski-Doo *Predelivery Bulletin* no. 97-10.

Replace with the attached.

Install windshield on dashboard.



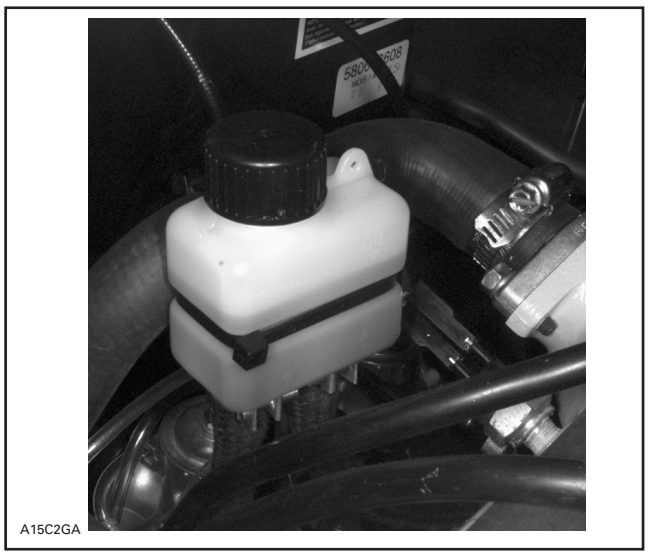
1. Dart (1) (P/N 414 6443 00) (section no. 6)
2. Latch (6) (P/N 570 0238 00) (section no. 6)

PARTS INSTALLATION
DRIVE BELT

Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

LIQUIDS
ROTARY VALVE OIL RESERVOIR LEVEL

Check oil level in the rotary valve reservoir. Add oil as required. Refer to the following photo.



ROTARY VALVE OIL RESERVOIR

▼ CAUTION

Use only Bombardier-Rotax synthetic injection oil (P/N 413 7105 00) (12 x 1L).

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.

Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-11**

Date: December 6, 1996

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	Canada and United States: Grand Touring SE	1129 and 1130	ALL
1997	Sweden: Grand Touring SE	1131	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.

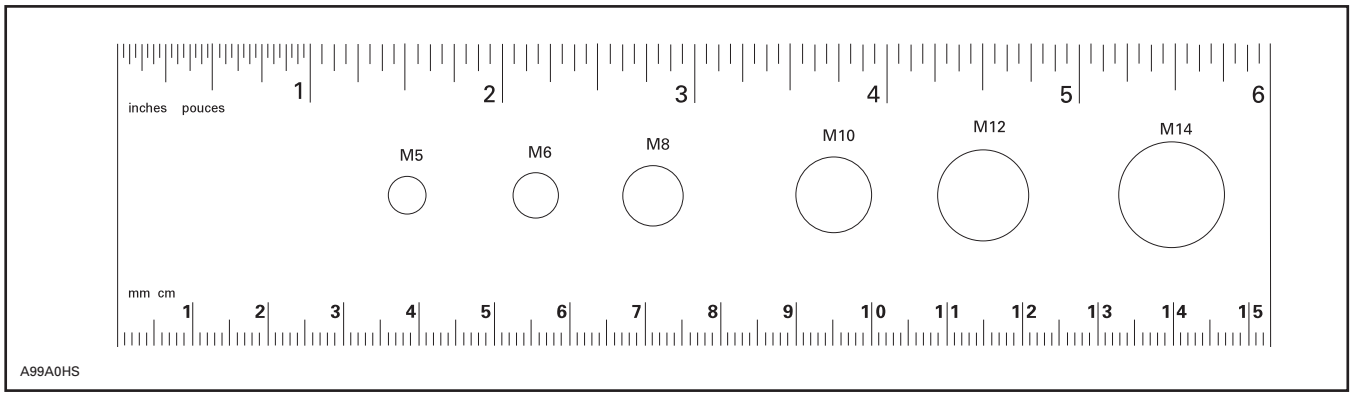
NOTE: The information and components/system descriptions contained in this document are correct at the time of publication. Bombardier Inc. however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. 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 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.

TABLE OF CONTENTS

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



PREDELIVERY KIT P/N	MODEL
580 6542 00	GRAND TOURING SE

WARNING

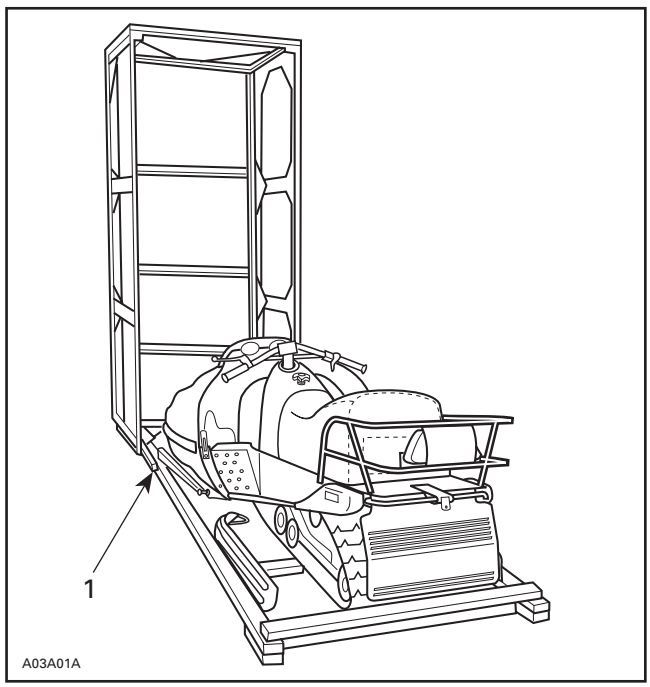
Torque wrench tightening specifications must be strictly adhered to. Locking devices (e.g. lock tabs, elastic stop nuts) must be installed or replaced by new ones, where specified. If the efficiency of a locking device is impaired, it must be renewed.

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.



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.

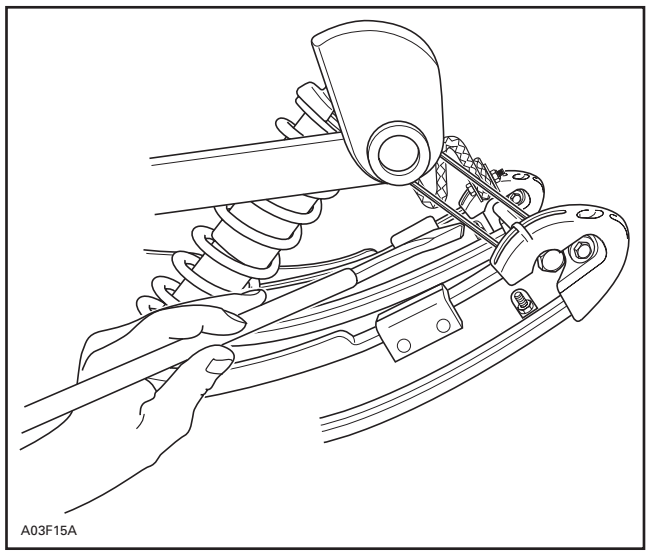
Remove parts to be installed and predelivery kit from engine compartment. Detach shock absorbers from engine compartment.

SHIPPING STRAP REMOVAL

Cut shipping strap using one of these 2 following methods:

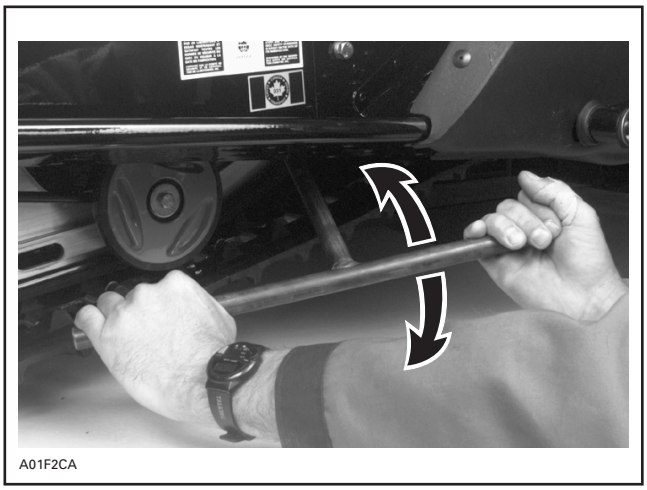
Method 1

Using a long flat chisel such as Snap-On® PPC820LA cut shipping strap that collapses front portion of rear suspension, as shown on the next illustration.



Method 2

Using a special tool cut shipping strap as shown on the next photo.



INSERT TOOL TIP ONTO STRAP AND TWIST

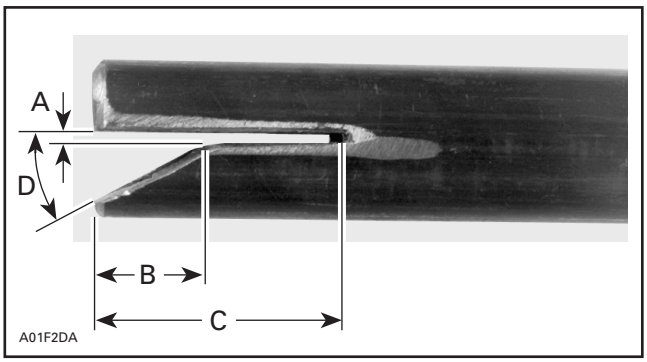
How to Build the Special Tool

Using 20 mm (3/4 in) steel tubing, cut the first piece to 460 mm (18 in) and the second one to 410 mm (16 in).

NOTE: High forces will be applied on this special tool, use strong tubing with a minimum 2 mm (5/64 in) wall thickness.

On one end of the 460 mm (18 in) piece, cut a 1.2 mm (3/64 in) slot by 28.5 mm (1-1/8 in).

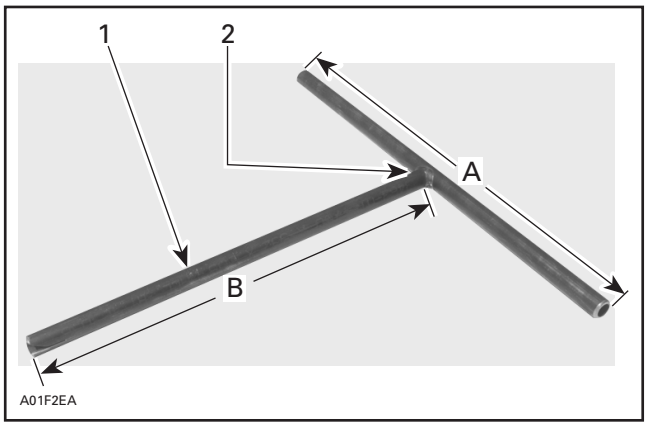
Make a chamfer of 30° x 10 mm (25/64 in), as shown on the next photo.



A. 1.2 mm (3/64 in)
B. 10 mm (25/64 in)
C. 28.5 mm (1-1/8 in)
D. 30°

Remove all sharp edges.

Assemble the two pieces and weld them together, as shown on the following photo.

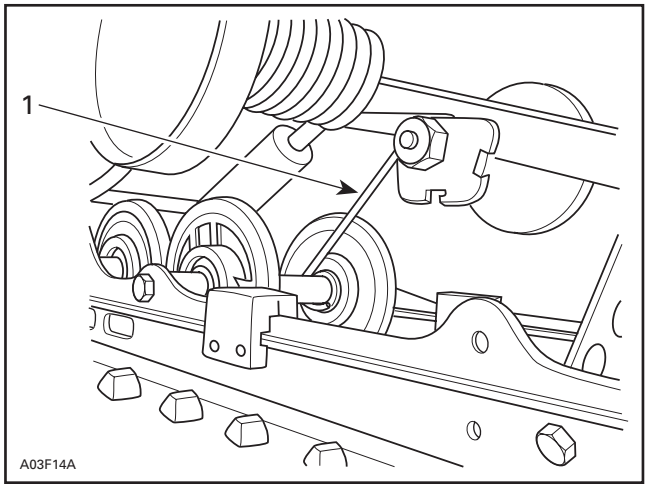


1. 20 mm (3/4 in) steel tubing
2. Welded joint
A. 410 mm (16 in)
B. 460 mm (18 in)

◆ WARNING

Failure to use one of these two methods of strap removal could result in personal injury.

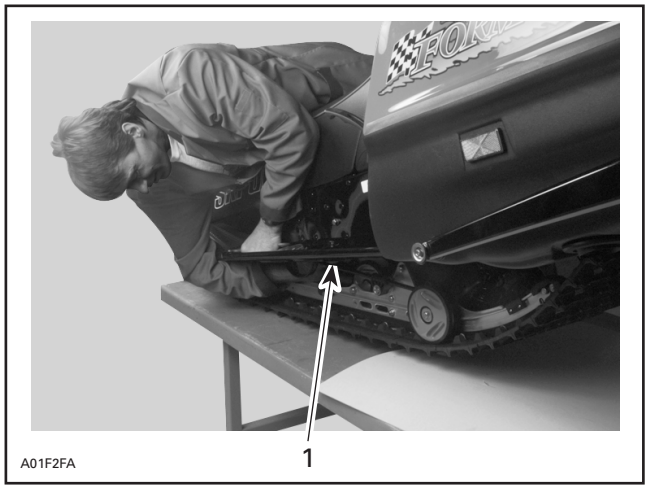
HOOK REMOVAL



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

Shipping strap must be cut and hook removed to have snowmobile suspension operational.

DIGITAL ENCODED SECURITY SYSTEM (DESS)

The DESS is a deterrent against theft. **Factory programmed**, the tether cord provided with snowmobile is the only one that allows engine to turn more than 2500 RPM. If a wrong tether cord is installed the engine will start but will not reach engagement speed required to move vehicle.

The snowmobile MPEM can be programmed to allow the use of up to 8 tether cords. When 8 tether cords have been programmed all cords must be deleted from MPEM memory before others can be added.

Each tether cord has a small magnet as well as a small micro chip molded into the rubber cap. The magnet will close a primary circuit in the electrical system. This completes the circuit and allows the MPEM to read the electronic number in the tether cord when engine is started.

NOTE: We do not program the tether cord! we record the tether cord electronic number into the MPEM memory.

The MPEM also handles data input such as; customer name, delivery date and it record the hours of operation.

After engine is started 2 beeps confirm that the MPEM has recognized the tether cord. The vehicle can be driven normally.

A beep every 3 seconds and DESS pilot lamp blinking as same rate mean that a bad connection has been detected. Vehicle can not be driven.

Refer to *SKI-DOO MPEM Programmer Guide* (P/N 480 1436 00) for proper procedure.

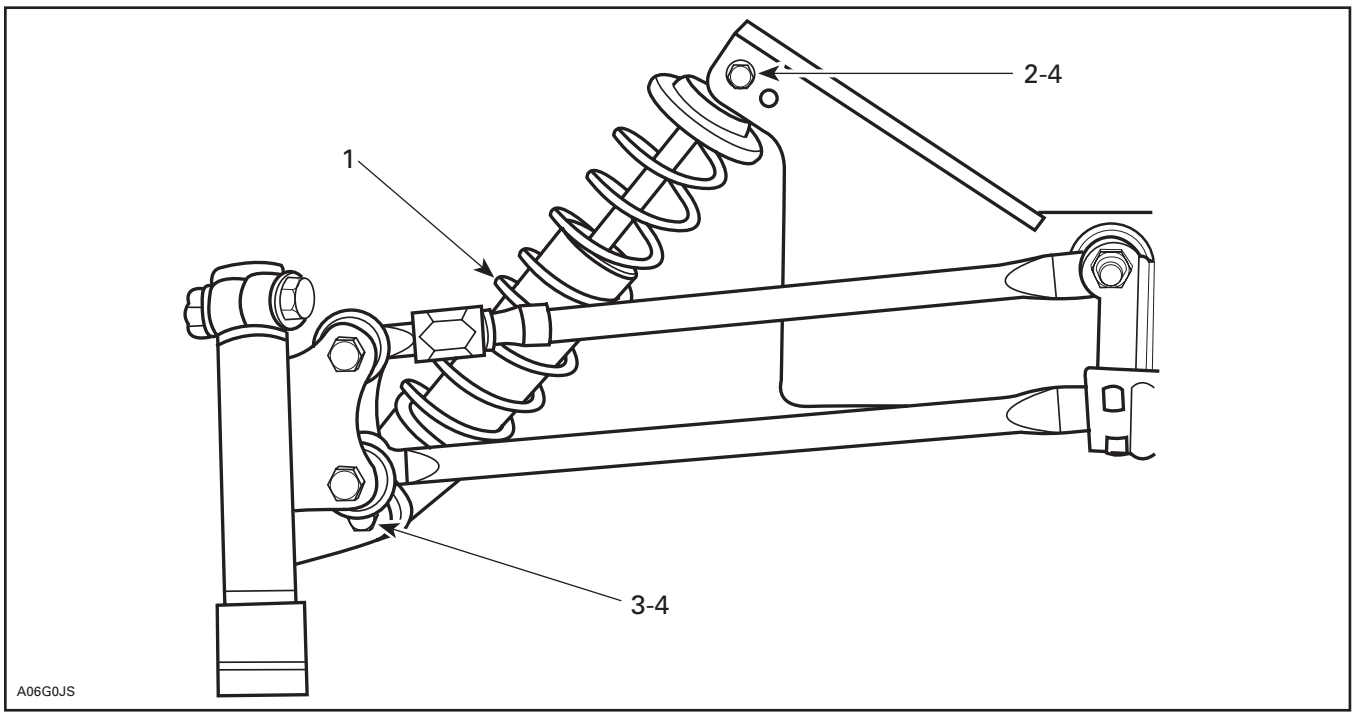
All Models

Lift front of vehicle and block safely.

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

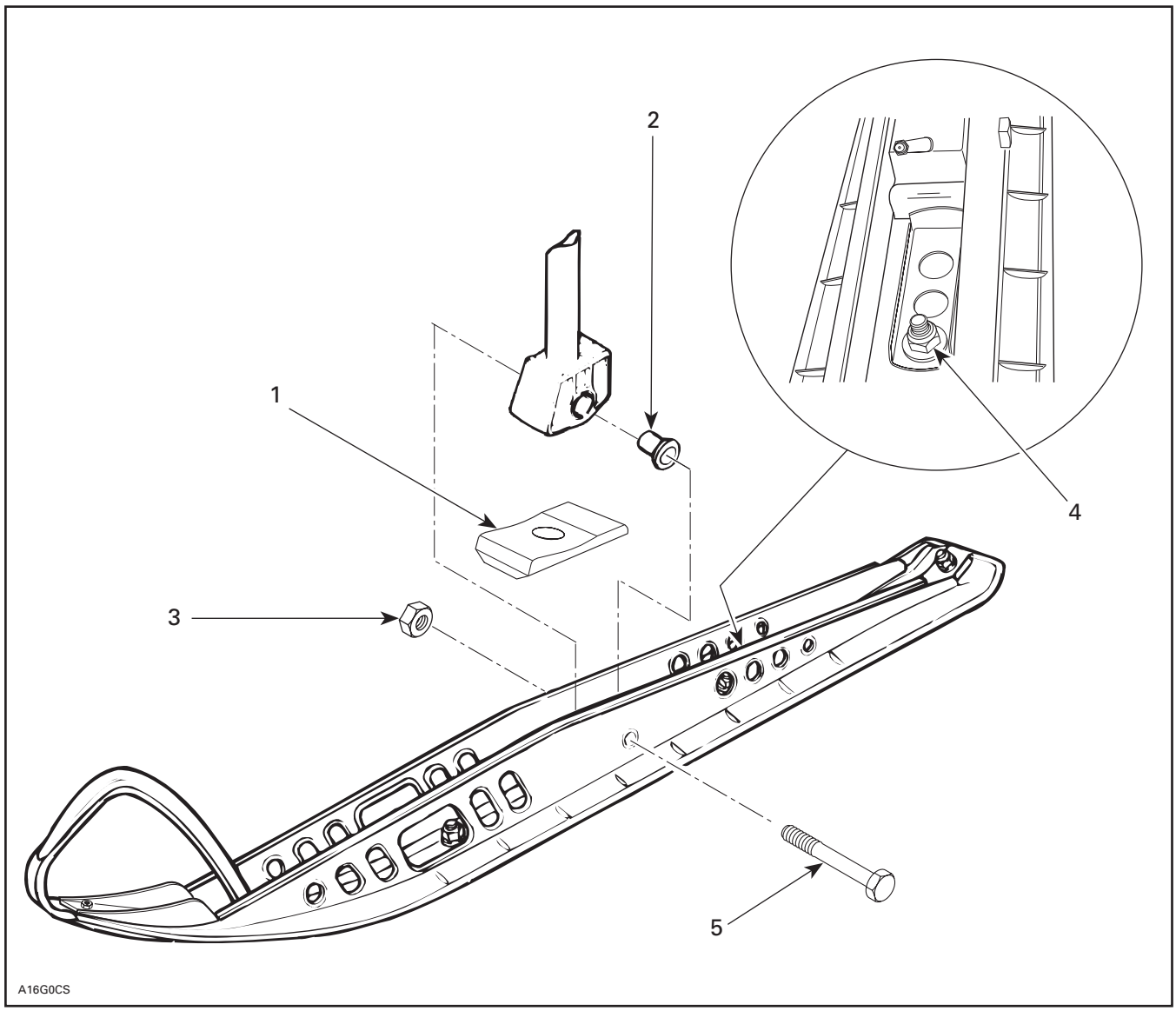
Secure shock absorbers to suspension with their adjusting ring at bottom.

NOTE: Position screw heads toward front.



TYPICAL — RH SIDE SHOWN

1. *Shock absorber (2) (engine compartment)*
2. *Screw M10 x 1.5 x 60 (2) (P/N 222 0060 65) (on suspension)*
3. *Screw M10 x 1.5 x 55 (2) (P/N 222 0055 65) (on suspension)*
4. *Nut M10 x 1.5 (2) (P/N 228 5010 45) (section no. 3). Torque to 48 N•m (35 lbf•ft)*



LEFT SIDE SHOWN

1. *Stop bounding (2) (P/N 570 0468 00) (section no. 4)*
2. *Slider cushion (4) (ski leg)*
3. *Nut M12 (2) (ski leg). Torque to 40 N•m (30 lbf•ft)*
4. *Loosen then adjust against stop bounding. Torque to 14 N•m (124 lbf•**in**)*
5. *Bolt M12 (2) (ski leg)*

After ski installation, adjust stopper against stop bounding then tighten nut to 14 N•m (124 lbf•**in**). More preload on stop bounding will result in a more aggressive steering. Adjust according to driver preferences.

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.

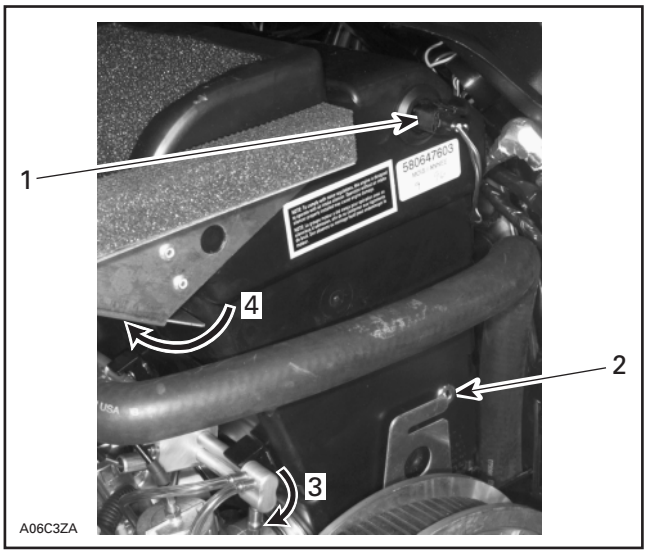
Air Intake Silencers Removal

Unplug air temperature sensor connector from air intake silencer.

Remove screw from left side air intake silencer.

From under air intake heat shield deflector (above carburetors) remove screw retaining left side air intake silencer to right side air intake silencer.

Twist DPM manifold and detach from air intake silencer.

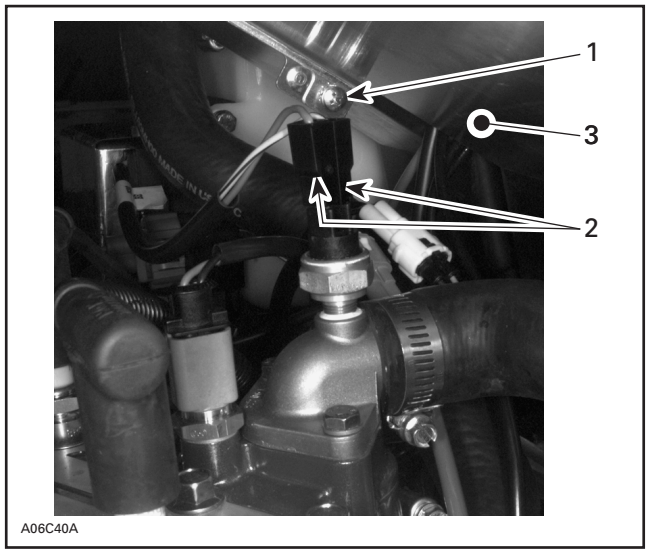


1. *Unplug air temperature sensor*
2. *Remove left side screw*
3. *Twist DPM manifold and detach*
4. *Screw to be removed under heat shield deflector of air intake silencer*

Remove left side air intake silencer.

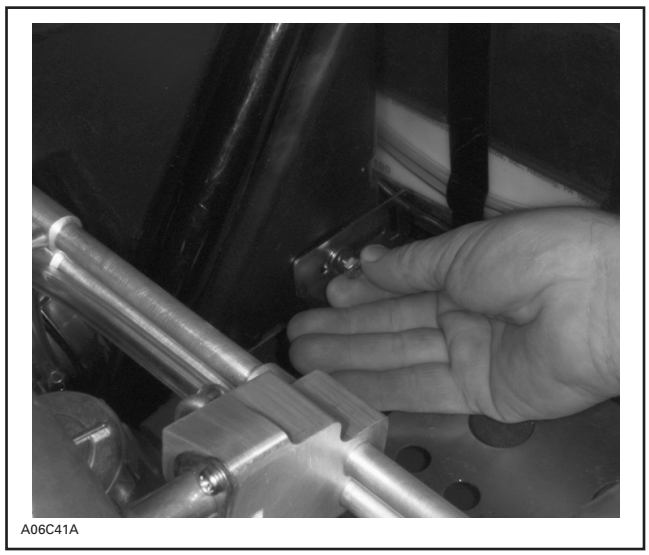
CAUTION

When removing left side air intake silencer, ensure not to damage engine temperature sensor (gauge) connectors, as shown on the next photo.



1. *Remove screw under heat shield deflector*
2. *Engine temperature sensor (gauge) connectors*
3. *Heat shield deflector of air intake silencer*

Remove screw retaining right side air intake silencer, as shown on the next photo.

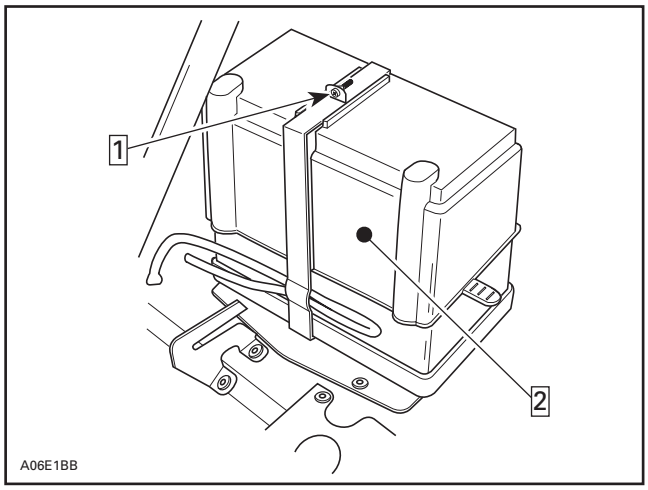


REMOVE SCREW

Remove right side air intake silencer.

Unfasten battery retaining strips.

Open strips and lift battery protective boot.

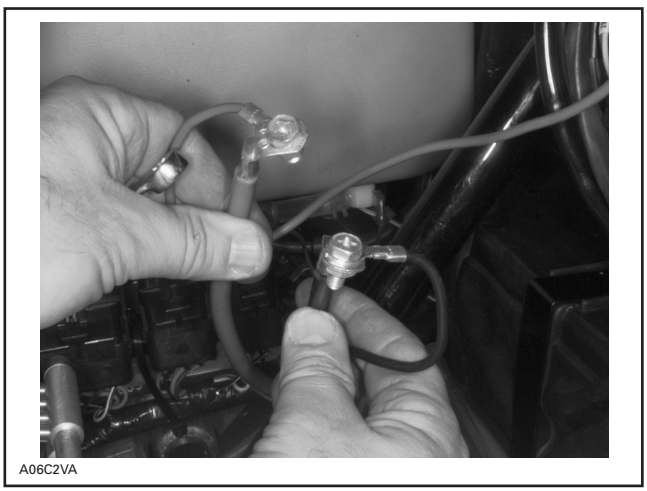


Step 1 : Unfasten and open
Step 2 : Lift protective boot

Withdraw battery from vehicle.

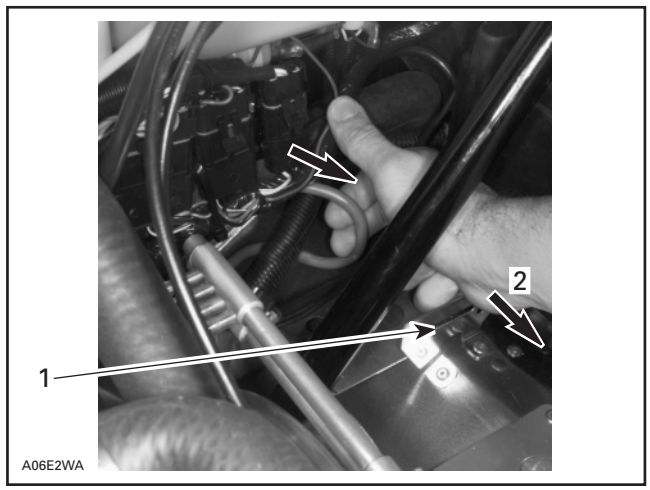
Red Positive Battery Cable Routing

NOTE: Before cable routing, remove screws and nuts from both RED and BLACK cables. KEEP SCREWS AND NUTS FOR BATTERY CONNECTION.



REMOVE SCREWS AND NUTS, KEEP THEM FOR BATTERY CONNECTION

Pull out RED positive battery cable and route cable behind air intake silencer support, as shown on the following photo.



PULL OUT RED POSITIVE BATTERY CABLE

1. *Air intake silencer support*
2. *Route RED positive battery cable behind air intake silencer support*

Battery Installation

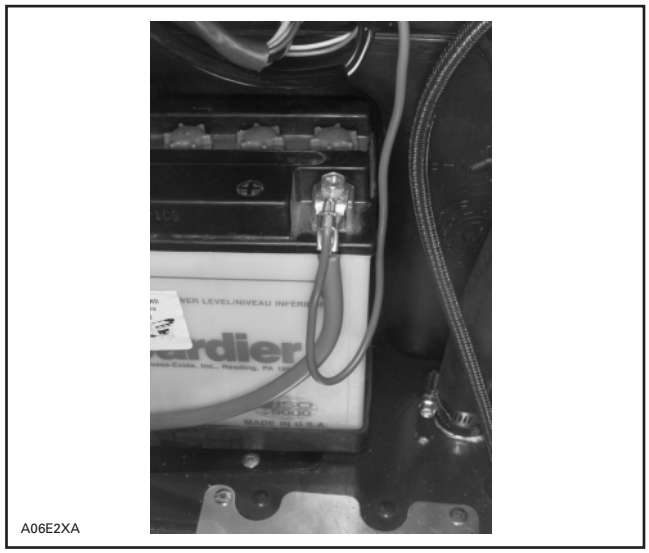
Position battery onto battery support on vehicle.

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

Install vent tube on battery.

NOTE: Ensure that vent tube is not kinked or blocked. Cut vent tube if necessary.

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



RED POSITIVE (+) BATTERY CABLES POSITIONING

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


A06E2YA

BLACK NEGATIVE (-) BATTERY CABLES POSITIONING

◆ 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 413 7017 00) on battery posts and connectors.

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

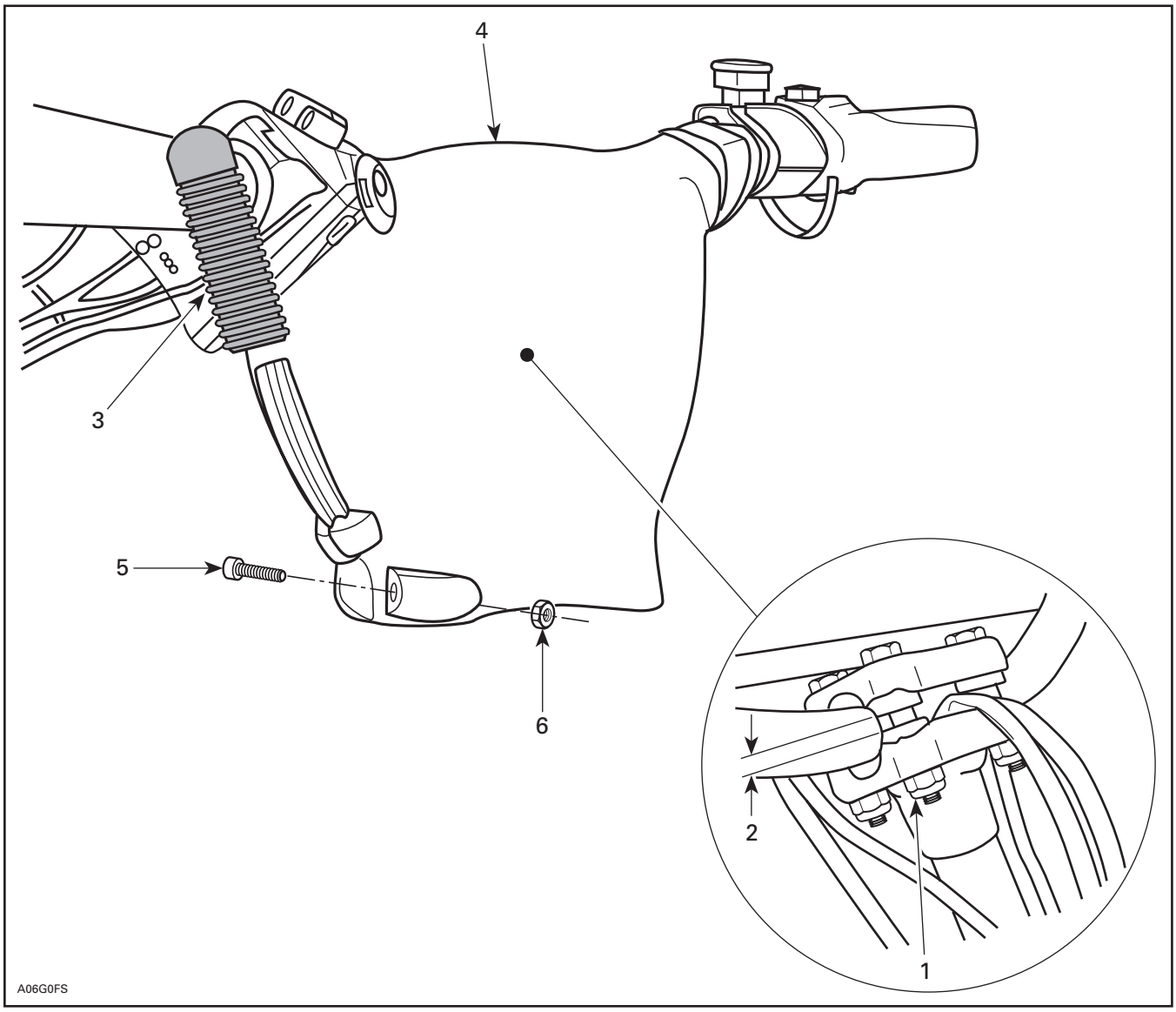
Close and fasten retaining strips and ensure that RED positive battery cable is routed into front retaining strip recess.

Reinstall air intake silencers.

Reinstall triangular air filter, as shown on the next photo.

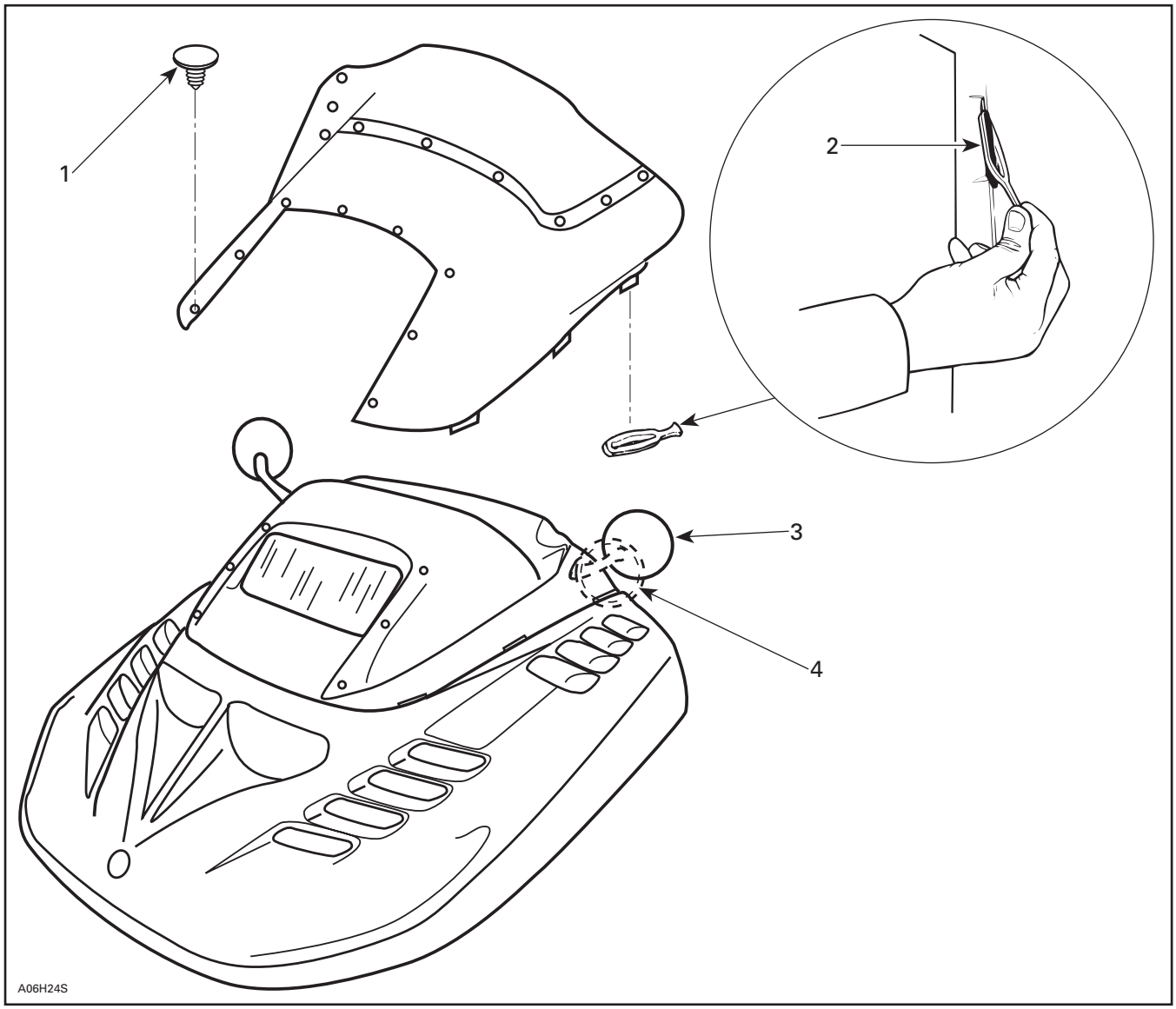
A06C42A

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 to 26 N•m (19 lbf•ft).
Reinstall steering pad, adjust and tighten throttle and brake handle housings.



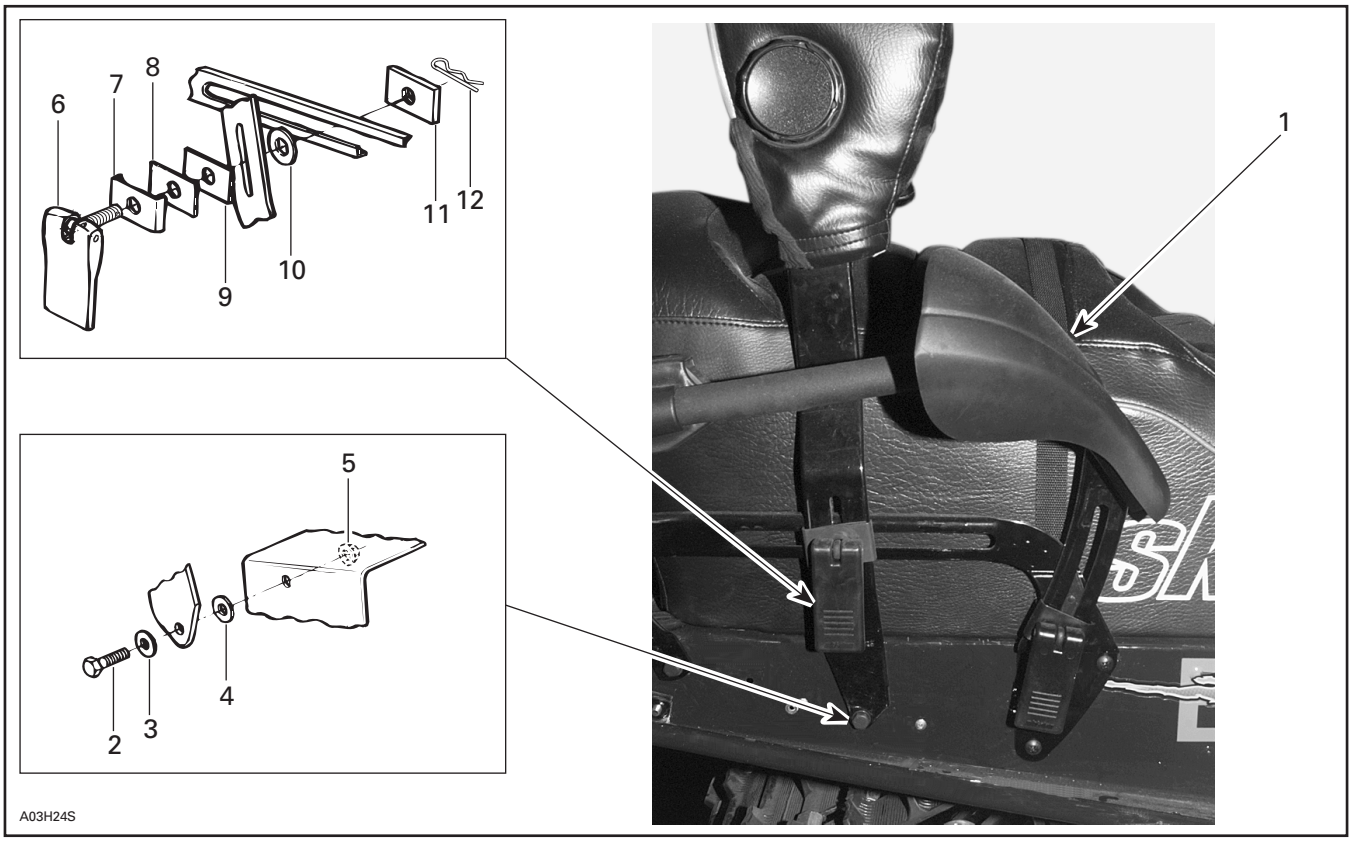
1. *Torque to 26 N•m (19 lbf•ft)*
2. *Equal gap each side (both clamps)*
3. *Keyway (2) (section no. 3)*
4. *Steering pad (engine compartment)*
5. *Screw (2) (P/N 222 8520 65) (section no. 1)*
6. *Nut (2) (P/N 228 7510 45) (section no. 1) tighten loosely, do not deform rubber*

Install windshield on dashboard.



1. *Dart (8) (section no. 5)*
2. *Latch (6) (section no. 5)*
3. *Normal use position: rotate mirror assy's half turn by hand*
4. *PDI position*

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



1. Handle protector (2) (seat storage compartment). Secure with rivets
2. Screw (2) (P/N 732 6011 75) (section no. 6)
3. Washer (2) (P/N 732 9000 30) (section no. 6)
4. Plastic washer (2) (P/N 414 8196 00) (section no. 6)
*5. Elastic nut (2) (P/N 228 5810 45) (section no. 6). Torque to 8 N•m (73 lbf•**in**)*
6. Lever assembly (2) (P/N 580 6110 00) (section no. 2)
7. Guide (2) (P/N 517 2573 00) (section no. 2)
8. Rubber shim (2) (P/N 570 0274 00) (section no. 6)
9. Spacer (2) (P/N 517 2513 00) (section no. 2)
10. Flanged washer (2) (P/N 414 8195 00) (section no. 6)
11. Threaded plate (2) (P/N 517 2500 00) (section no. 6)
12. Hair pin (2) (P/N 414 1083 00) (section no. 6)

PARTS INSTALLATION
BACKREST

Turn adjustment knob left or right to adjust backrest cushion position.

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PARTS INSTALLATION
DRIVE BELT

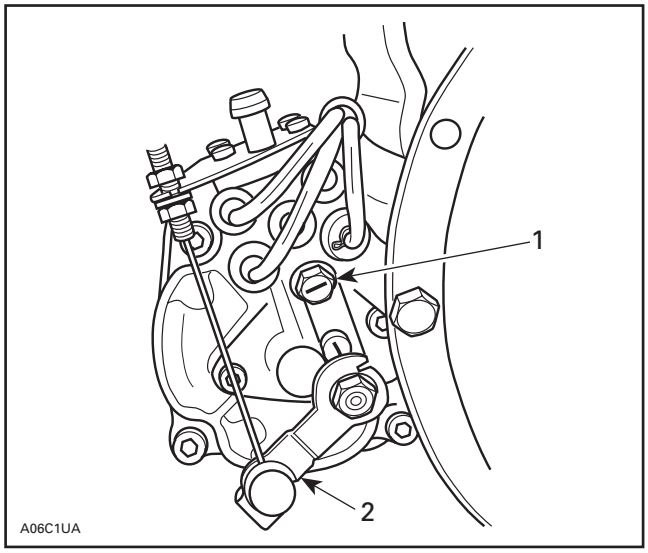
Clean pulleys and disc brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) before installing drive belt.

SUPPLEMENTAL OIL

To assure additional protection during the initial engine break-in, 500 mL (18 imp. oz) of BOMBARDIER ROTAX Mineral Injection Oil (P/N 413 8030 00) 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

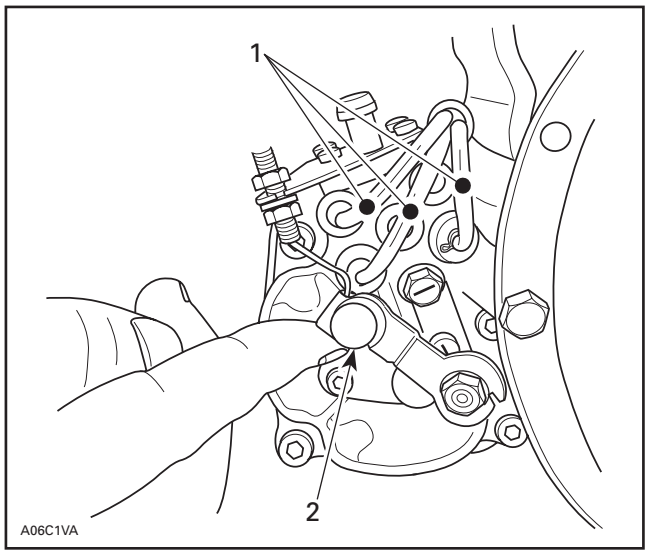
Bleed main oil line (between tank and pump) by loosening the bleeder screw until air has escaped from the line. Add injection oil as required.



1. Bleeder screw
2. Oil pump lever

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.



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

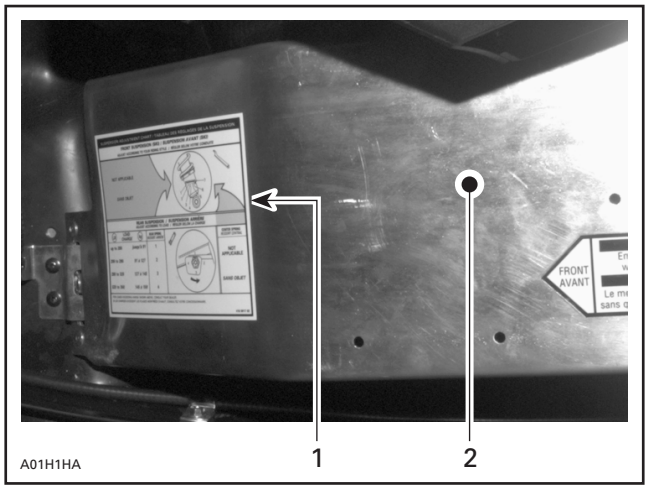
Check brake fluid in reservoir for proper level. Add fluid (DOT) as required.

▼ 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 predelivery, 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 inquires should be directed to your distributor service representative.

A dot (•) on right indicates changes from 1996 model.

MODELS			GRAND TOURING SE	
Engine Type			699	•
Maximum HP RPM ①		±100 RPM	8500	•
Rotary valve		P/N	N.A.	•
		Opening (BTDC)/ Closing (ATDC)	N.A.	•
Carburetor Type			PTO VM 38 - 372 CTR VM 38 - 373 MAG VM 38 - 372	• • •
Main Jet			PTO 350 CTR 350 MAG 350	• • •
Needle Jet			P-7 (480)	•
Pilot Jet			50	•
Needle Identification — Clip Position			6DEY2	•
Slide Cutaway			2.5	
Float Adjustment		±1 mm (in)	18.1 (.71)	
Air Screw Adjustment		±1/16 Turn	2-1/4	
Idle Speed RPM		±200 RPM	1800	•
Gas Grade/ Octane Number		(R + M)/2	Super Unleaded/91	•
Gas/Oil Ratio			Mineral Oil Injection	
Ignition Timing BTDC ②		mm (in)	2.18 (.086)	•
Trigger Coil Air Gap		mm (in)	0.55 - 1.45 (.022 - .057)	
Gear Ratio		Teeth	25/44	
Engagement Speed		±100 RPM	3600	•
Drive Pulley Calibration Screw Position			3	
Pulley Distance	Z	(+0, –1) mm (+0, –1/32) in	16.5 (21/32)	
Offset	X	±0.4 mm (±1/64 in)	35.0 (1-3/8)	
	Y		Dimension Y must exceed X from 1 mm (1/32in) 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)	35 to 40 (1-3/8 to 1-9/16) with a M7.3 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

CTR: Center

N.A.: Not applicable

Please route to :

Init.

- ☐ Service ☐
- ☐ Sales ☐
- ☐ Parts ☐

ski-doo® Bombardier

SNOWMOBILES

D

PREDELIVERY Bulletin

No. **97-12**

Date: February 6, 1997

SUBJECT: Predelivery Procedures

YEAR	MODEL NAME	MODEL NUMBER	SERIAL NUMBER
1997	SKANDIC* SWT	1301	ALL

This bulletin must be used in conjunction with the check list enclosed in the *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 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 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 inquires 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*.

TABLE OF CONTENTS

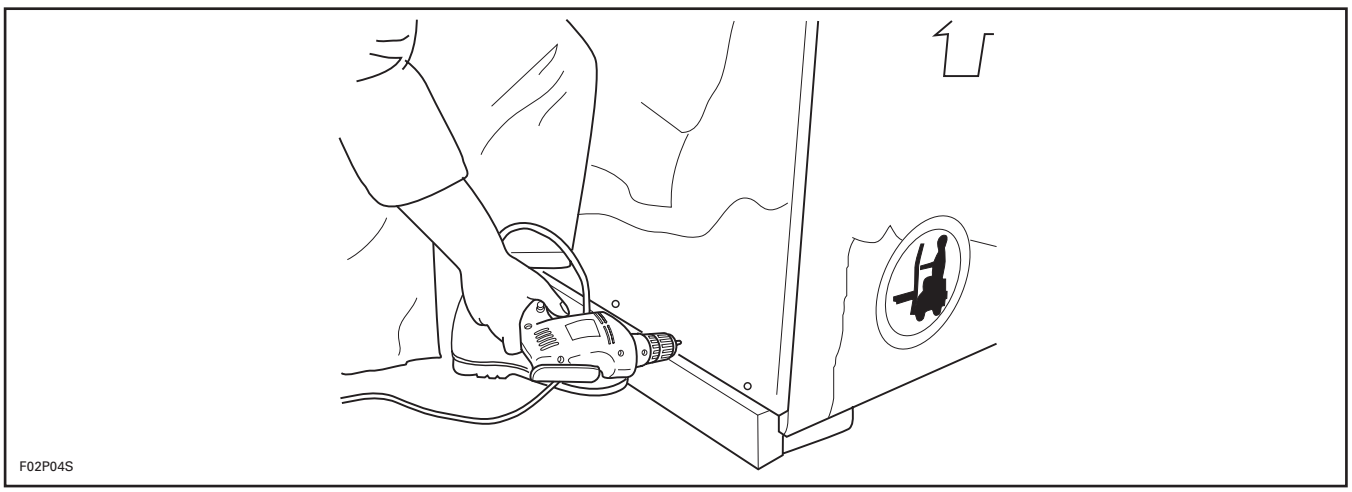
◆ WARNING

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

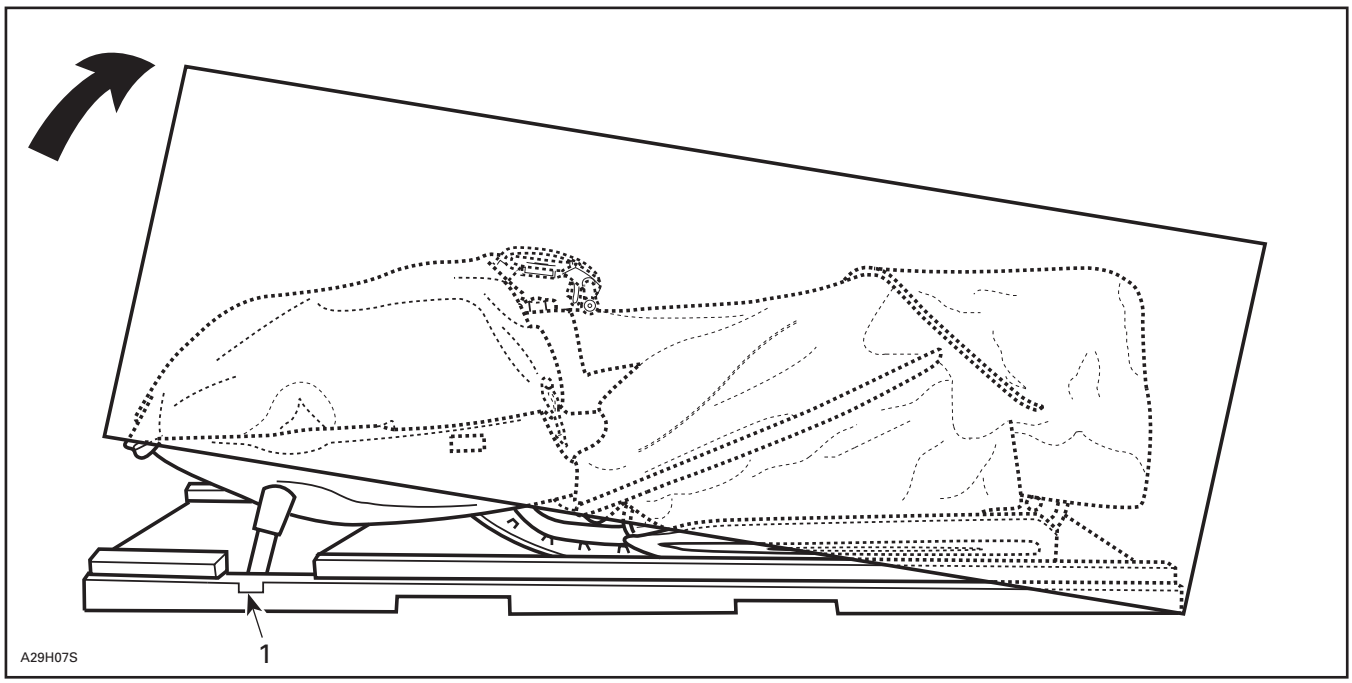
▼ CAUTION

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

Using a screwdriver, remove all screws retaining crate to base.



Tip cover towards rear of vehicle. There is a notch in crate base at front.



1. Notch

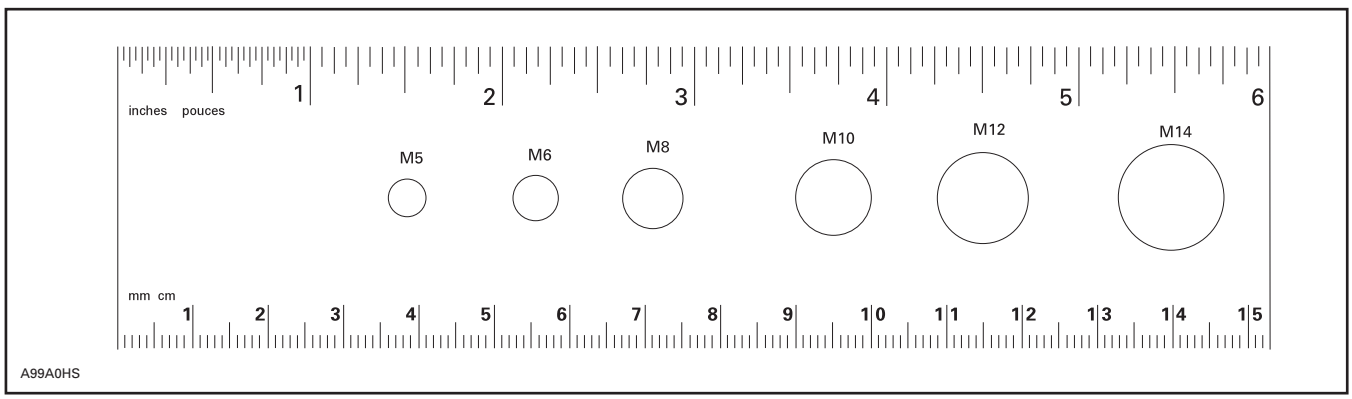
Detach parts to be installed (e.g. skis, windshield), from the vehicle and its base.

▼ 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.

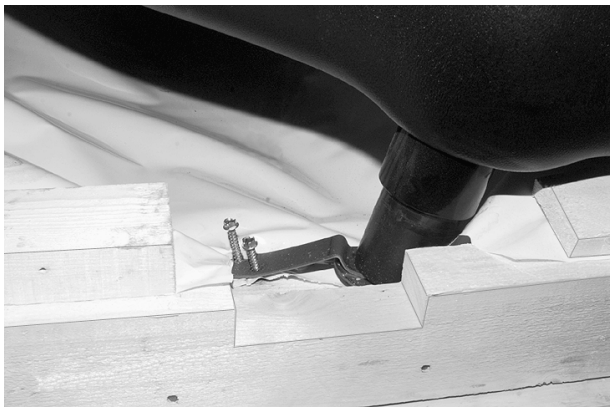
NOTE: This rule can be helpful to identify fastener length/size.



CAUTION

Make sure vehicle is properly supported.

Detach ski legs from crate. Discard nuts and bolts.



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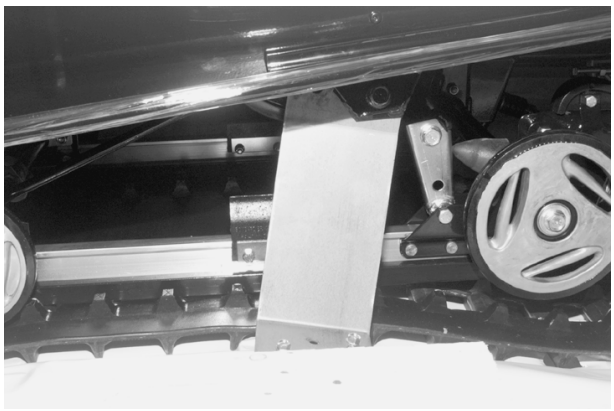
Remove the rear retaining brackets from both sides of vehicle and retain bolts holding brackets to body.



A29F05A

Remove vehicle from base.

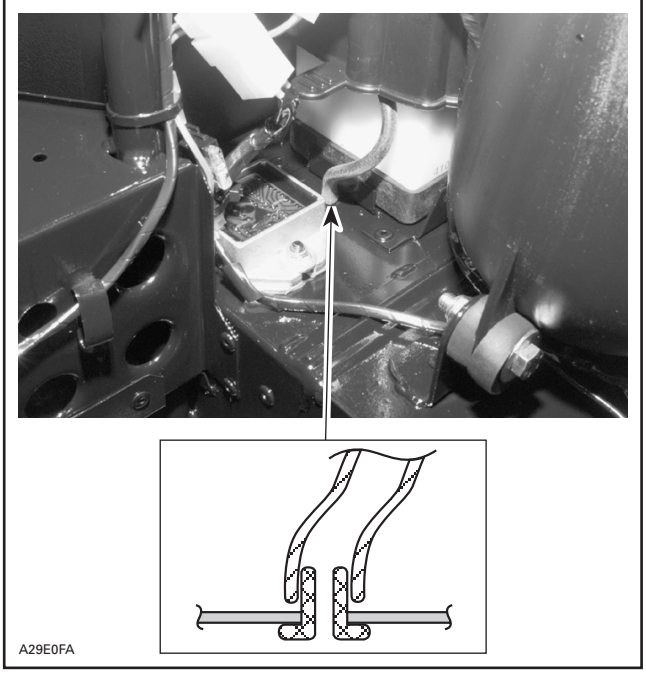
PARTS INSTALLATION
BATTERY

During preparation, the battery can be activated as described in 1997 *Ski-Doo Shop Manual.*

CAUTION

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

NOTE: A special vented rivet is fixed to the chassis in order to plug the vent tube from the battery.



A29E0FA

Battery Removal

Remove battery bracket and remove battery from vehicle.


A29E0DA

Battery Installation

Install battery in vehicle.

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 413 7017 00) on battery posts and connectors.

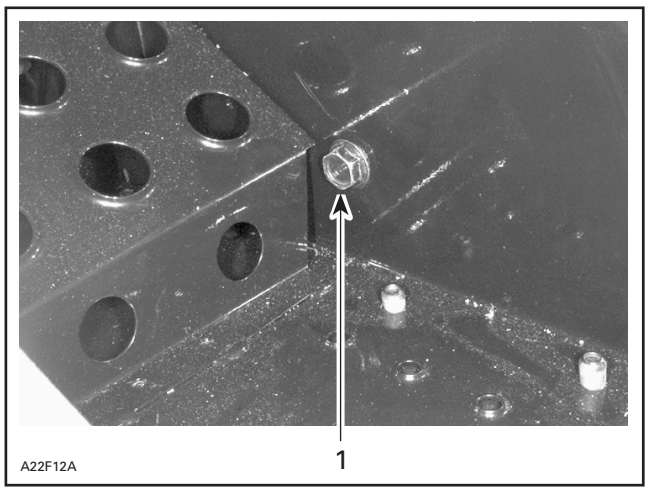
Install battery cover.

Secure battery with bracket and tighten wing screw.

Ensure vent tube is properly installed from battery to the plug provided on the frame.

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).

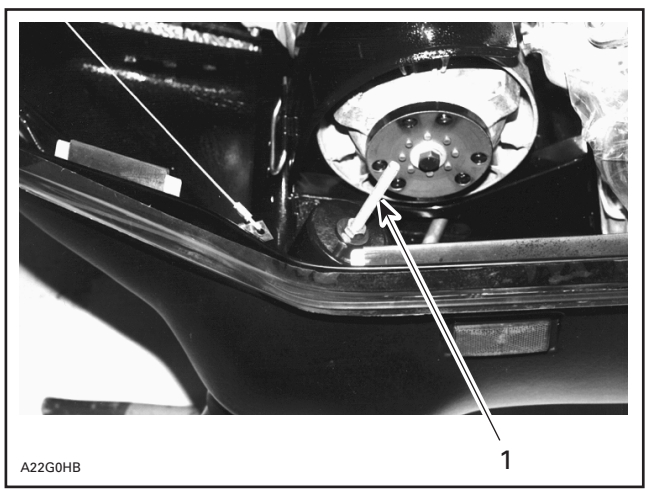


1. Torque screw on each side to 58 N•m (43 lbf•ft)

Secure rear arm using previously removed screws.

Apply Loctite 242 on threads and torque screws to 58 N•m (43 lbf•ft).

Remove long bolts that compresses front suspension on both sides.



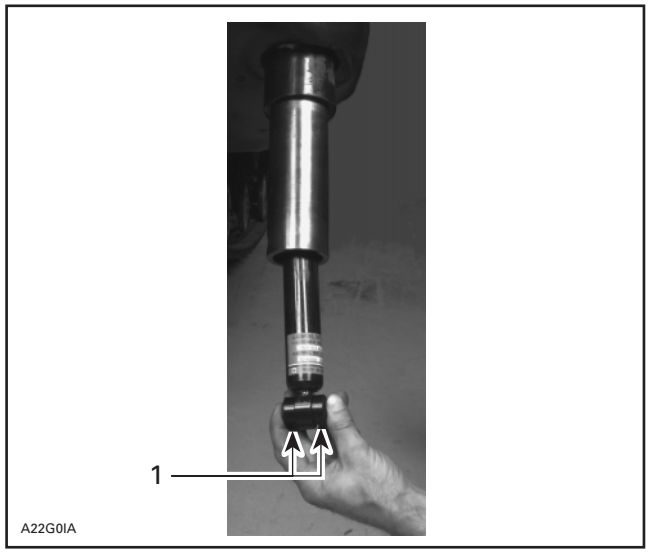
1. Remove and discard long bolt

Install 2 plastic bushings into shock absorber eyelet.

Stretch shock to its maximum.

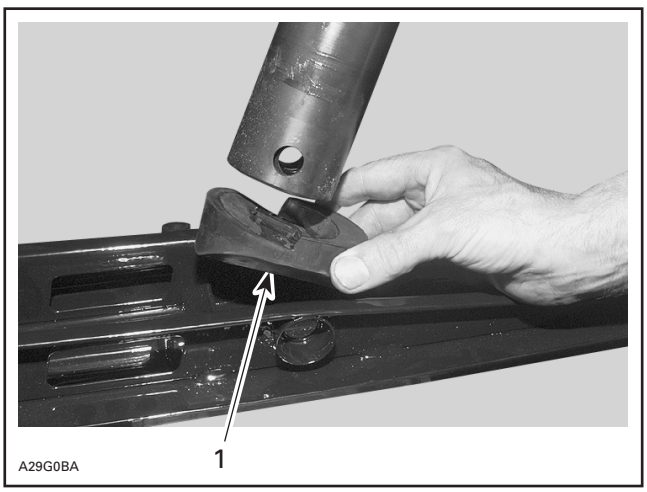
Slide shock absorber onto bottom of ski leg until shock rod goes through cap hole.

Loosely install washer and nut on shock rods, keeping at least 1/4 in (5 mm) of free play.



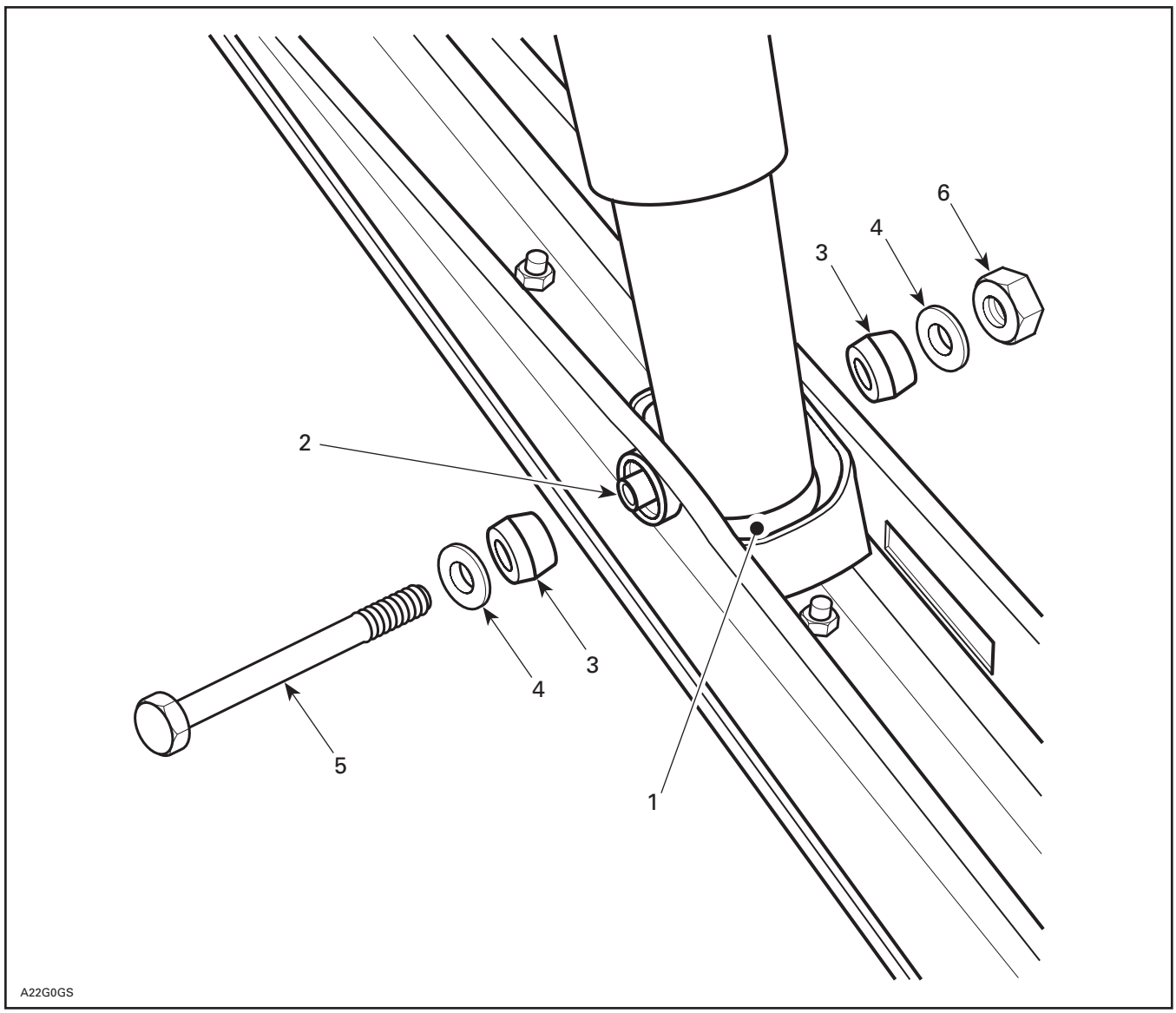
1. Plastic bushings

Install stop bounding on skis with its highest portion toward front.



1. Stop bounding

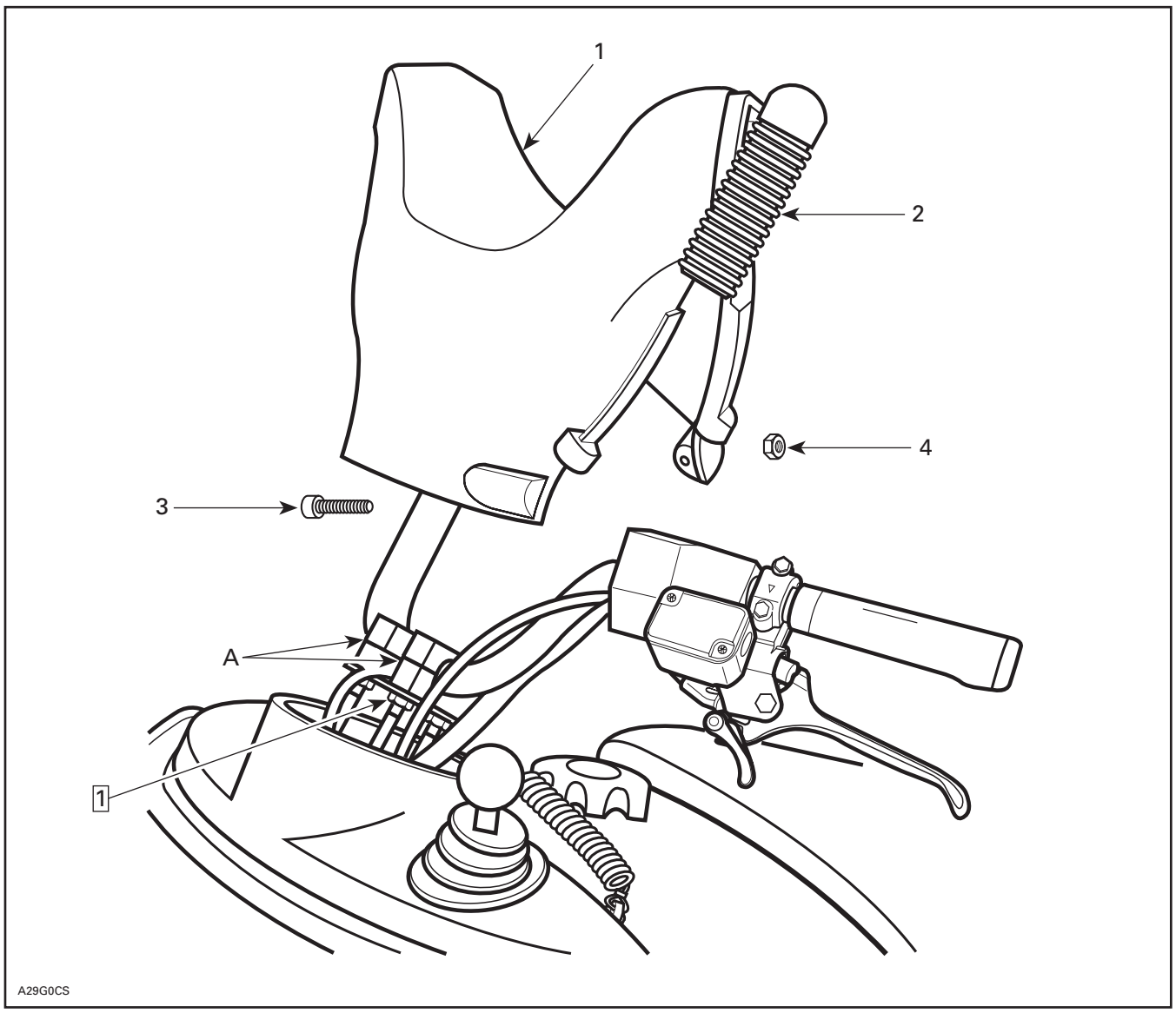
Instal skis on vehicle using bolts, nuts, washers and rubber bushings supplied in the predelivery kit.



1. *Stop bounding*
2. *Sleeve*
3. *Rubber bushing (2)*
4. *Flat washer (2)*
5. *Bolt M10 x 120*
6. *M10 lock nut, tighten to 48 N•m (35 lbf•ft)*

Tighten shock rod top nuts to 30 N•m (22 lbf•ft).

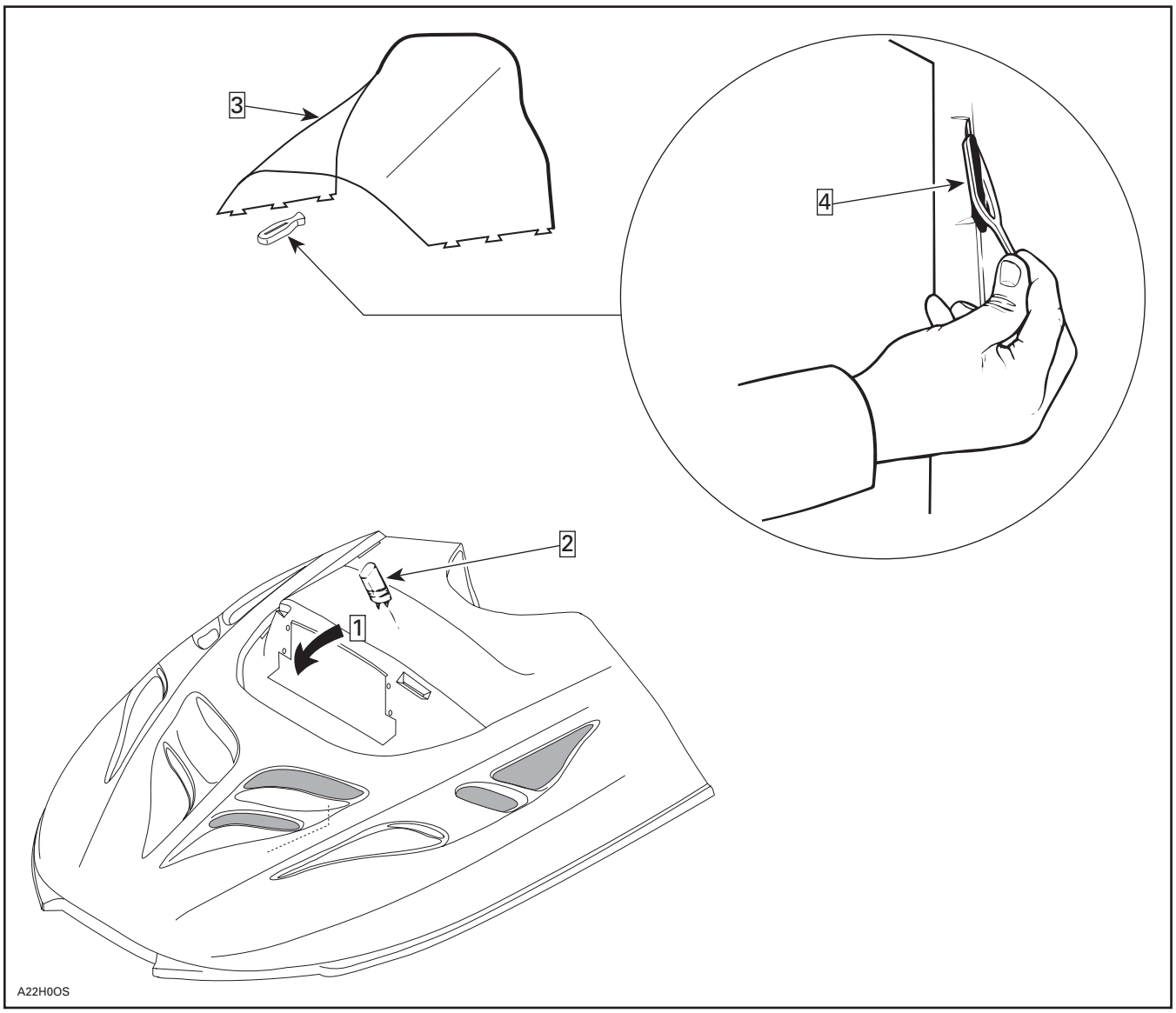
Adjust handle bar and set both clamps to have equal gap on each side. Torque nuts to 26 N•m (19 lbf•ft).
Loosen throttle and brake handle housings.
Install steering pad.
Secure steering column cover with steering pad before tightening bolts.
Adjust both throttle and brake handle housings to match steering pad.



TYPICAL
Step 1 : Torque to 26 N•m (19 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*

A. Equal gap on each side (both clamps)

Remove headlamp molding.
Install rubber support in predrilled holes on the hood.



Step 1 : Pry out headlamp molding
Step 2 : Install support. Apply soap on tips to ease installation
Step 3 : Install windshield
Step 4 : Install latches (10)

PARTS INSTALLATION
WINDSHIELD

Install windshield and secure with latches inside hood.

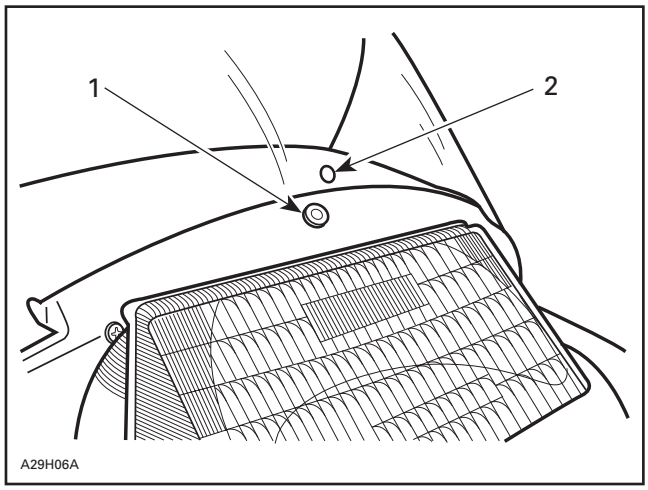
Install rubber expansion nut in hole above head light.

Line up hole in windshield with rubber expansion nut and install screw with cup.

Tighten slightly so that rubber expands inside hood.

Install rubber cap on screw and reinstall headlamp molding.

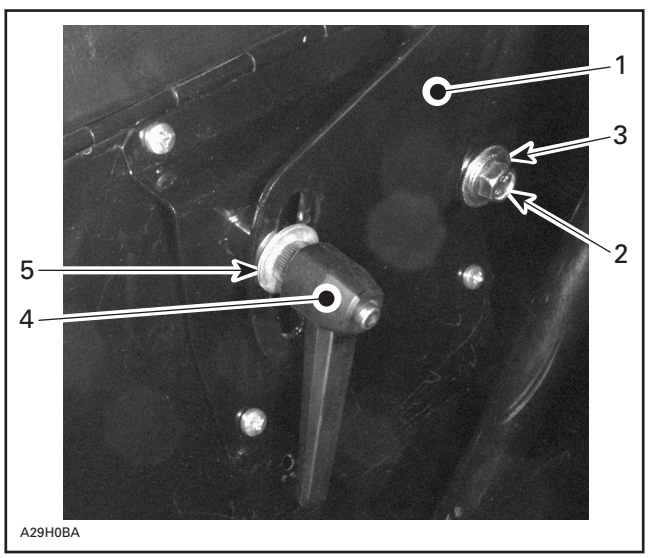
Make sure to properly position lower edge of plastic molding under head lamp.



1. Rubber expansion nut
2. Hole in windshield

PARTS INSTALLATION
BACKREST

Install backrest on vehicle and secure with screws, adjustment screws and washers. Refer to the following photo for proper positioning.



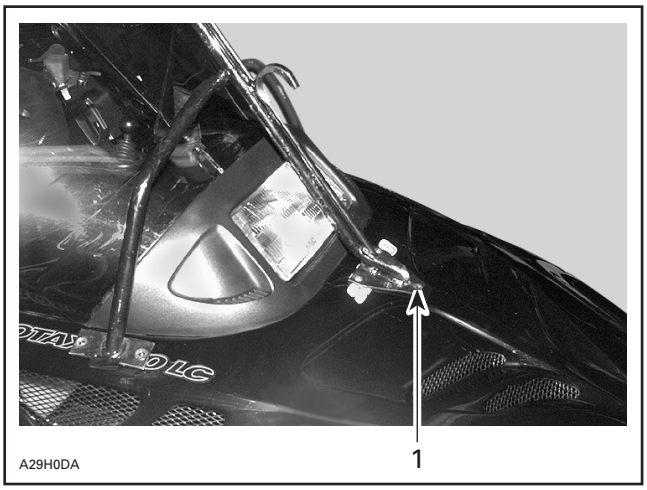
TYPICAL — LEFT SIDE SHOWN

1. Backrest frame
2. Screw M8
3. Washer
4. Adjustment screw
5. Washer

Adjust backrest and tighten. Refer to the last photo.

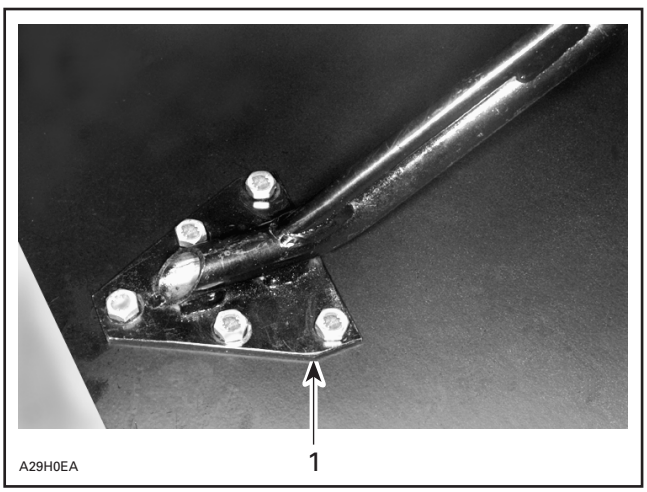
TYPICAL — BACKREST PROPERLY INSTALLED

Position wire cutter on the hood.



1. Install M8 bolt in predrilled hole

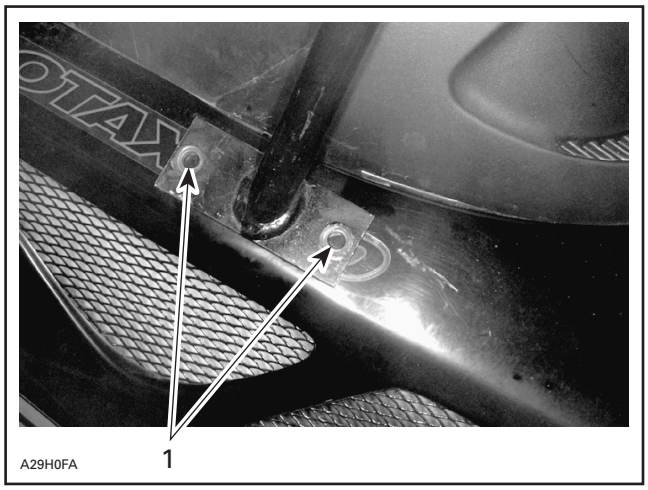
Line up the center hole of the center support plate with hole already drilled in hood and install bolt M8 x 20.



1. Center plate

Position side support plates to have equal distance from windshield on each side of hood.

Using holes in support plates as a template, drill 8 mm (5/16 in) holes through hood and install bolts M8 x 20.



1. Drill 8 mm (5/16 in) holes

Open hood.

From inside hood, install washers and lock nuts to secure side support plates.

Install backing support and secure with washers and lock nuts.

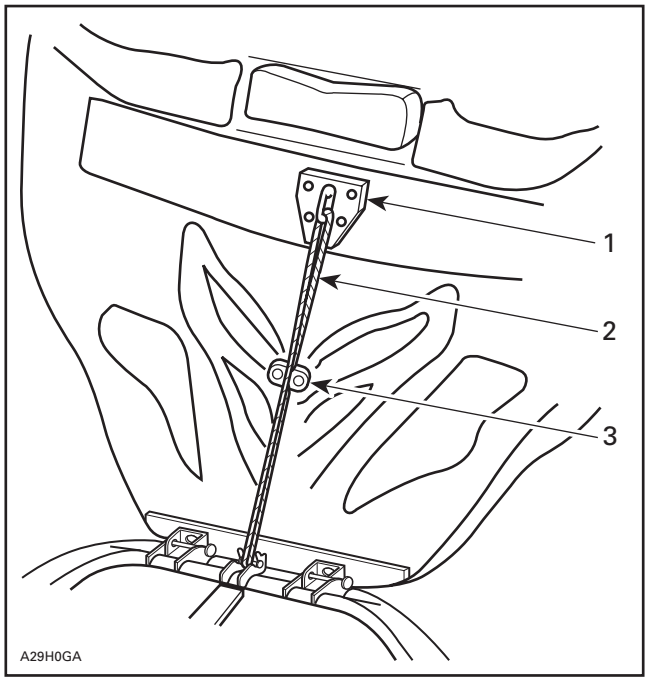
Torque to 20 N•m (15 lbf•ft).

Install cable and cable lock.

Adjust cable tight with hood in fully open position and secure with cable lock.

Torque bolts on cable lock to 11 N•m (84 lbf•**in**).

PARTS INSTALLATION
WIRE CUTTER



1. Backing support
2. Cable
3. Cable lock

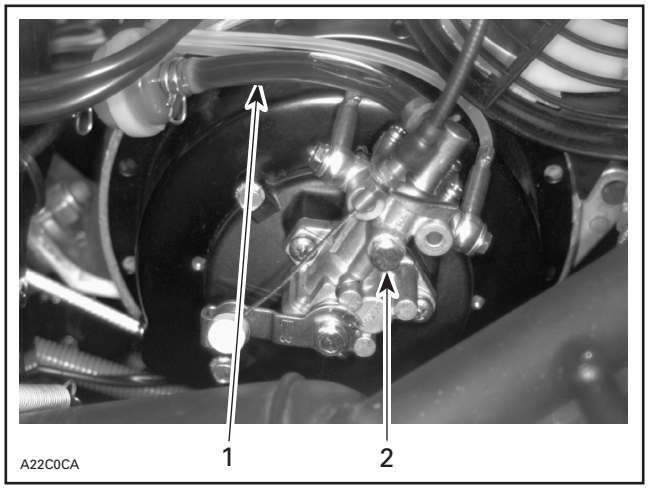
PARTS INSTALLATION
DRIVE BELT

Clean pulleys and disk brake with a suitable cleaner such as Loctite Cleaning Solvent (P/N 413 7082 00) 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 8029 00) 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.



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.

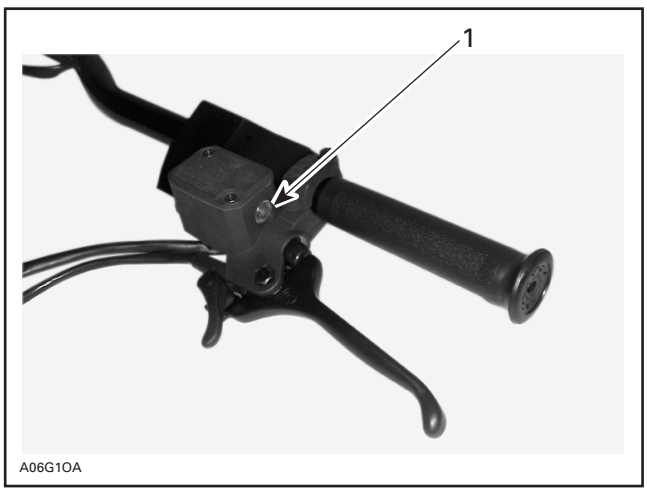
LIQUIDS
BRAKE FLUID LEVEL

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 partial bottle of brake fluid.



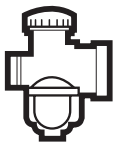
1. *Fluid level window*

ADJUSTMENT
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 (P/N 861 7581 00). Further inquires should be directed to your distributor service representative.

	MODEL			SKANDIC SWT
	Engine Type			ROTAX 503
	Maximum HP RPM ①		±100 RPM	6500
	Rotary Valve		P/N	N.A.
	Carburetor Type			VM 32
	Main Jet			230
	Needle Jet			159 O-0
	Pilot Jet			25
	Needle Identification — Clip Position			6DH8-4
	Slide Cutaway			3.0
	Float Adjustment		mm (in)	23.9 (.94)
	Air Screw Adjustment		±1/32 turn	1.5
	Idle Speed		RPM	1650
	Gas Grade/Pump Octane Number		(R + M)/2	Regular Unleaded/87
	Gas/Oil Ratio			Oil Injection
	Ignition Timing BTDC ②		mm (in)	1.66 (.065)
	Trigger Coil Air Gap		mm (in)	0.45 - 0.55 (.018 - .022)
	Gear Ratio			1st Gear 1:4.41 2nd Gear 1:3.19
	Engagement Speed		±100 RPM	2900
	Drive Pulley Calibration Screw Position			4
	Pulley Distance	Z	(+0, –1) mm (+0, –1/32) in	32.75 (1-9/32)
	Offset	X	± 0.4 mm (± 1/64 in)	36.25 (1-27/64)
		Y		Dimension Y must exceed X from1 mm (1/32 in) to 2 mm (5/64)
	Drive Belt Adjustment	Deflection	mm (in)	32 (1-1/4)
		Force ③	kg (lbf)	11.34 (25)
	Driven Pulley Preload		kg (lbf)	13.23
	Drive Chain Tension			N.A.
	Track Adjustment	Deflection	mm (in)	40 to 45 (1.5 to 1.7)
		Force	Kg (lbf)	7.3 (16.1)
	Carrying Capacity (Passenger + Luggage)			1 Passenger + 125 kg or 2 Passengers + 50 kg
	Towing Capacity (on ice or snow)			200 kg

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.