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Campaign no. 99001

No. **99-1**

Date: November 26, 1998

SUBJECT: Pick-Up Wire

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	MX Z 600	1336/1337/1338	Attached list shows vehicles not involved
	Summit 600	1345/1346/1461	
	MX Zx 440 LC	1342/1343/1344	All

IMPORTANT: DO NOT START THE ENGINE BEFORE PERFORMING THE INSTRUCTIONS CONTAINED IN THIS BULLETIN.

▼ CAUTION

The instructions contained in this bulletin are very important. Not performing these instructions may lead to serious engine damages.

PROBLEM

Magneto flywheel may rub on pick-up wire causing engine misfiring or cut-off. Engine won't restart if wire is completely cut.

SOLUTION

Visual inspection to see if distance between wire and magneto flywheel is sufficient.

1. If it is sufficient, 2 mm (5/64 in) or more, reinstall all removed parts.
2. If it is not sufficient, less than 2 mm (5/64 in), secure wire away from magneto flywheel with bracket.
3. If damage to wire is limited to outer protective sleeve, secure wire away from magneto flywheel with bracket.
4. If damage to wire extends to inside wires, replace pick-up and make sure distance between wire and magneto flywheel is 2 mm (5/64 in) or more.

PARTS REQUIRED

DESCRIPTION	P/N	Qty
Bracket	512 059 178	1
Self-tapping screw	210 261 680*	1
Pick-up (if required)	410 922 922	1

* This P/N consists of a bag of 10 screws.

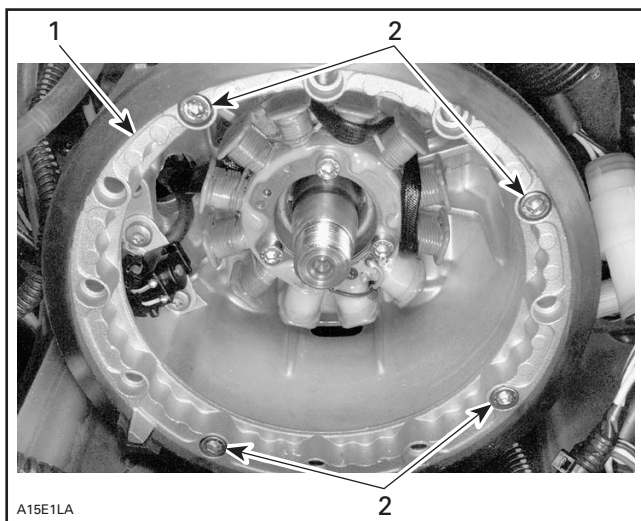
NOTE: Bracket and screw are available now. **Pick-up, (P/N 410 922 922), will be available starting November 27, 1998.**

Parts are to be ordered through regular channel.

PROCEDURE

To proceed with visual inspection, remove tuned pipe and muffler.

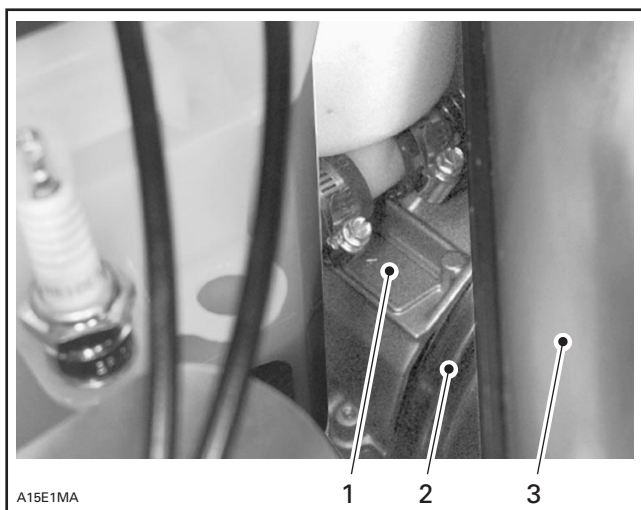
Remove rewind starter and connecting flange.



1. Connecting flange
2. Remove these screws

NOTE: Allen key with ball type end is ideal to remove left lower screw of connecting flange.

1. If visual inspection reveals that distance between wire and magneto flywheel is sufficient, 2 mm (5/64 in) or more, reinstall all removed parts and identify unit as "done" with an X in rectangle on top of magneto housing, using a marker.



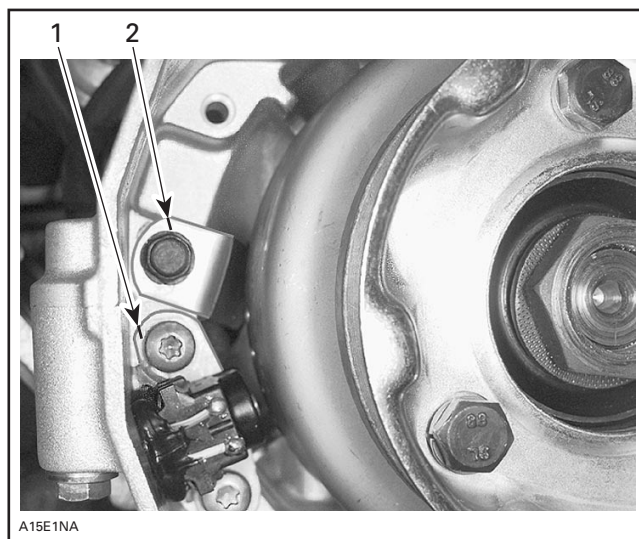
1. Use this space on top of magneto housing
2. Rewind cover
3. Tuned pipe

2. If distance is not sufficient or
3. If pick-up wire visual inspection reveals that **outer protective sleeve** starts to be worn, proceed with bracket installation and identify unit as "done" with an X in rectangle on top of magneto housing, using a marker.

4. In the event that **inside wires** start to be worn, proceed with pick-up replacement and make sure distance between wire and magneto flywheel is 2 mm (5/64 in) or more. Identify unit as "done" with an X in rectangle on top of magneto housing, using a marker.

Bracket Installation

Using already existing hole in casting secure pick-up wire with bracket and self-tapping screw, apply Loctite 242 (blue) (P/N 293 800 015) on screw and torque to 10-12 N•m (7-9 lbf•ft). Note that bracket must be installed with its lower edge in contact with top of pick-up bracket. Refer to following photo.



1. Pick-up bracket
2. Wire bracket in contact with top of pick-up bracket

Reinstall all removed parts.

Identify unit as "done" with an X in rectangle on top of magneto housing, using a marker.

Pick-Up Replacement

Remove starting pulley and counterweight.

Remove magneto flywheel.

Remove air intake and right side carburetor.

Disconnect pick-up wire from its connector.

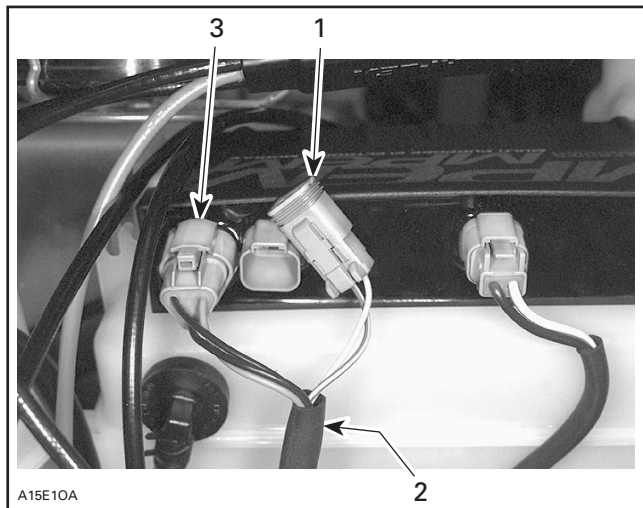
Remove connector cap, unlock pins out of connector.

NOTE: Make sure to properly identify wire colors in order to use same location in connector when installing new pick-up.

▼ CAUTION

Do not use dielectric grease with this type of connector.

Disconnect stator wire from its connector.
Remove pick-up/stator grommet from crankcase.



1. Remove this cap
2. Pull wires out of this loom from inside magneto housing
3. Disconnect this connector also

Unscrew pick-up and stator, remove electrical tape around wires at grommet and pull-out pick-up wires from inside protective loom.

Slide new pick-up wires back in protective loom.
NOTE: Soapy water will help sliding wires into protective loom.

Using electrical tape, cover both pick-up and stator wires at grommet.

▼ CAUTION

Make sure that electrical tape installation will prevent pick-up wire looping that would cause wire wear on magneto flywheel.

Install new pick-up, and make sure distance between wire and magneto flywheel is 2 mm (5/64 in) or more.

Reinstall stator.
Make sure rubber grommet is properly positioned.

Insert pins into connector at proper location and reposition connector cap.

Connect both pick-up and stator connectors.
Reinstall right side carburetor and air intake.
Clean crankshaft extension (taper) and apply Loctite 242 (blue) on taper, then position Woodruff key, magneto flywheel and lock washer on crankshaft.

Clean nut threads and apply Loctite 242 (blue) then tighten nut to 120-130 N•m (88-96 lbf•ft).

Clean counterweight/starting pulley contact surface and screws, using Loctite Chisel (P/N 413 708 500). Apply Loctite 242 (blue) to screws and Loctite 648 (green) (P/N 413 711 400) to counterweight contact surface with magneto flywheel, then torque screws to 20-22 N•m (14.8-16 lbf•ft).

Identify unit as "done" with an X in rectangle on top of magneto housing, using a marker.
Reinstall all previously removed parts.

WARRANTY

Inspection/Bracket Installation Only

Complete a warranty claim form using the following information.

Campaign Number	99001*
Claim Type	07
Expiration Date	December 1, 1999
Flat Rate Time	0.6

* **NOTE:** This campaign number covers inspection with/without bracket installation.

Pick-Up Replacement

To perform the warranty claim on pick-up replacement, use the following information.

Claim Type	01
Job Code	03 20
Flat Rate Time	0.6

NOTE: Dealers are requested to return defective pick-up coils.

For claiming procedure, refer to the *Dealer Warranty Guide*.

NOTE: DO NOT PERFORM WARRANTY WORK ON VEHICLES LISTED BELOW.

1336 MX Z 600 CAN 1999

00227
00448
00664
00675
00677
00682
01375 and up

1337 MX Z 600 US 1999

00005	00042	00073	01231	01488	01532
00006	00043	00077	01267	01489	01533
00012	00045	00079	01341	01495	01534
00015	00047	00081	01343	01504	01535
00016	00054	00082	01402	01515	01537
00017	00055	00085	01424	01517	01538
00020	00059	00086	01425	01524	01539
00026	00063	00088	01436	01525	01541
00028	00064	00090	01437	01526	01546
00032	00065	00091	01442	01527	01547
00038	00070	01125	01465	01529	02157
00041	00071	01227	01471	01531	02343 and up

1338 MX Z 600 EUR 1999

00110	00236
00154	00237
00169	00238
00198	00240
00210	00241
00211	00243
00215	00246
00217	00249
00219	00255
00222	00256
00235	

1345 SUMMIT 600 CAN 1999

00058	00263	00319	00361	00403	00445	00487	00529
00078	00266	00320	00362	00404	00446	00488	00530
00096	00267	00321	00363	00405	00447	00489	00531
00114	00268	00322	00364	00406	00448	00490	00532
00121	00277	00323	00365	00407	00449	00491	00533
00127	00280	00324	00366	00408	00450	00492	00534
00128	00281	00325	00367	00409	00451	00493	00535
00130	00284	00326	00368	00410	00452	00494	00536
00146	00285	00327	00369	00411	00453	00495	00537
00147	00286	00328	00370	00412	00454	00496	00538
00153	00287	00329	00371	00413	00455	00497	00539
00156	00288	00330	00372	00414	00456	00498	00540
00160	00289	00331	00373	00415	00457	00499	00541
00164	00290	00332	00374	00416	00458	00500	00542
00167	00291	00333	00375	00417	00459	00501	00543
00170	00292	00334	00376	00418	00460	00502	00544
00171	00293	00335	00377	00419	00461	00503	00545
00172	00294	00336	00378	00420	00462	00504	00546
00182	00295	00337	00379	00421	00463	00505	00547
00190	00296	00338	00380	00422	00464	00506	00548
00196	00297	00339	00381	00423	00465	00507	00549
00198	00298	00340	00382	00424	00466	00508	00550
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00203	00301	00343	00385	00427	00469	00511	00553
00204	00302	00344	00386	00428	00470	00512	00554
00207	00303	00345	00387	00429	00471	00513	00555
00208	00304	00346	00388	00430	00472	00514	00556
00209	00305	00347	00389	00431	00473	00515	00557
00219	00306	00348	00390	00432	00474	00516	00558
00222	00307	00349	00391	00433	00475	00517	00559
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00241	00309	00351	00393	00435	00477	00519	00561
00242	00310	00352	00394	00436	00478	00520	00562
00243	00311	00353	00395	00437	00479	00521	00563
00244	00312	00354	00396	00438	00480	00522	00564
00246	00313	00355	00397	00439	00481	00523	00565
00249	00314	00356	00398	00440	00482	00524	00566
00252	00315	00357	00399	00441	00483	00525	00567
00255	00316	00358	00400	00442	00484	00526	00568
00257	00317	00359	00401	00443	00485	00527	00569
00259	00318	00360	00402	00444	00486	00528	00570

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00573	00616	00659	00702	00745	00788	00831	00874
00574	00617	00660	00703	00746	00789	00832	00875
00575	00618	00661	00704	00747	00790	00833	00876
00576	00619	00662	00705	00748	00791	00834	00877
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00578	00621	00664	00707	00750	00793	00836	00879
00579	00622	00665	00708	00751	00794	00837	00880
00580	00623	00666	00709	00752	00795	00838	00881
00581	00624	00667	00710	00753	00796	00839	00882
00582	00625	00668	00711	00754	00797	00840	00883
00583	00626	00669	00712	00755	00798	00841	00884
00584	00627	00670	00713	00756	00799	00842	00885
00585	00628	00671	00714	00757	00800	00843	00886
00586	00629	00672	00715	00758	00801	00844	00887
00587	00630	00673	00716	00759	00802	00845	00888
00588	00631	00674	00717	00760	00803	00846	00889
00589	00632	00675	00718	00761	00804	00847	00890
00590	00633	00676	00719	00762	00805	00848	00891
00591	00634	00677	00720	00763	00806	00849	00892
00592	00635	00678	00721	00764	00807	00850	00893
00593	00636	00679	00722	00765	00808	00851	00894
00594	00637	00680	00723	00766	00809	00852	00895
00595	00638	00681	00724	00767	00810	00853	00896
00596	00639	00682	00725	00768	00811	00854	00897
00597	00640	00683	00726	00769	00812	00855	00898
00598	00641	00684	00727	00770	00813	00856	00899
00599	00642	00685	00728	00771	00814	00857	00900
00600	00643	00686	00729	00772	00815	00858	00901
00601	00644	00687	00730	00773	00816	00859	00902
00602	00645	00688	00731	00774	00817	00860	00903
00603	00646	00689	00732	00775	00818	00861	00904
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00605	00648	00691	00734	00777	00820	00863	00906
00606	00649	00692	00735	00778	00821	00864	00907
00607	00650	00693	00736	00779	00822	00865	00908
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00609	00652	00695	00738	00781	00824	00867	00910
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00920	00935	00950	00965	00980	00995	01012	01027
00921	00936	00951	00966	00981	00996	01013	01028
00922	00937	00952	00967	00982	00997	01014	01029
00923	00938	00953	00968	00983	00998	01015	01030
00924	00939	00954	00969	00984	00999	01016	01031
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00926	00941	00956	00971	00986	01002	01018	01033
00927	00942	00957	00972	00987	01003	01019	01034
00928	00943	00958	00973	00988	01004	01020	01035
00929	00944	00959	00974	00989	01005	01021	

1346 SUMMIT 600 US 1999

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00009	00509	00585	00611	00637	00663	00689	00715
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00037	00517	00589	00615	00641	00667	00693	00719
00143	00521	00590	00616	00642	00668	00694	00720
00188	00524	00591	00617	00643	00669	00695	00721
00189	00537	00592	00618	00644	00670	00696	00722
00220	00550	00593	00619	00645	00671	00697	00723
00226	00553	00594	00620	00646	00672	00698	00724
00306	00562	00595	00621	00647	00673	00699	00725
00368	00567	00596	00622	00648	00674	00700	00726
00385	00568	00597	00623	00649	00675	00701	00727
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00745	00788	00831	00874	00917	00962	01006	01049
00746	00789	00832	00875	00918	00963	01007	01050
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00749	00792	00835	00878	00921	00966	01010	01053
00750	00793	00836	00879	00922	00967	01011	01054
00751	00794	00837	00880	00923	00968	01012	01055
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00767	00810	00853	00896	00939	00985	01028	01071
00768	00811	00854	00897	00940	00986	01029	01072
00769	00812	00855	00898	00941	00987	01030	01073
00770	00813	00856	00899	00942	00988	01031	01074
00771	00814	00857	00900	00943	00989	01032	01075
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00773	00816	00859	00902	00945	00991	01034	01077
00774	00817	00860	00903	00946	00992	01035	01078
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01118	01161	01204	01247	01291	01335	01378	01421
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01121	01164	01207	01250	01294	01338	01381	01424
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01124	01167	01210	01253	01297	01341	01384	01427
01125	01168	01211	01254	01298	01342	01385	01428
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01435	01467	01502	01534	01571	01614	01762	01831
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01449	01481	01516	01550	01587	01742	01786	01847
01450	01482	01517	01551	01588	01743	01787	01848
01451	01483	01518	01552	01589	01744	01804	01849
01452	01485	01519	01553	01591	01745	01807	01850
01453	01487	01520	01554	01592	01746	01810	01851
01454	01488	01521	01555	01593	01747	01817	01853
01455	01489	01522	01556	01595	01748	01818	01854
01456	01490	01523	01557	01596	01749	01819	01855
01457	01492	01524	01558	01597	01750	01820	01856
01458	01493	01525	01559	01599	01751	01821	01857
01459	01494	01526	01560	01601	01752	01822	
01460	01495	01527	01561	01602	01753	01823	
01461	01496	01528	01562	01603	01754	01824	
01462	01497	01529	01563	01604	01755	01826	
01463	01498	01530	01564	01605	01756	01827	
01464	01499	01531	01566	01608	01757	01828	

1461 SUMMIT 600 EUR 1999

00002	00020	00038	00056	00074	00092	00110	00128
00003	00021	00039	00057	00075	00093	00111	00129
00004	00022	00040	00058	00076	00094	00112	00130
00005	00023	00041	00059	00077	00095	00113	00131
00006	00024	00042	00060	00078	00096	00114	00132
00007	00025	00043	00061	00079	00097	00115	00133
00008	00026	00044	00062	00080	00098	00116	00134
00009	00027	00045	00063	00081	00099	00117	00135
00010	00028	00046	00064	00082	00100	00118	00136
00011	00029	00047	00065	00083	00101	00119	00137
00012	00030	00048	00066	00084	00102	00120	00138
00013	00031	00049	00067	00085	00103	00121	00139
00014	00032	00050	00068	00086	00104	00122	00140
00015	00033	00051	00069	00087	00105	00123	00141
00016	00034	00052	00070	00088	00106	00124	00142
00017	00035	00053	00071	00089	00107	00125	00143
00018	00036	00054	00072	00090	00108	00126	00144
00019	00037	00055	00073	00091	00109	00127	

Please route to:

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



Campaign no. 99002

No. **99-2**

Date: December 4, 1998

SUBJECT: Mixture too lean

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1998	Skandic WT LC	1284/1285	All
1999		1427/1428	

PROBLEM

Quantity of fuel delivered is inaccurate at a 50% throttle opening thus creating a too lean mixture to meet engine requirements.

SOLUTION

Replace carburetor jet needles by new ones (6DGH10).

Set needles clip position to 2.

Adjust air screws to 3/4 of a turn instead of 1 turn.

PARTS REQUIRED

DESCRIPTION	P/N	Qty
Needle	404 161 876	2

Parts are to be ordered through regular channel.

PROCEDURE

Refer to *1998 Shop Manual* (P/N 484 068 200) or to *1999 Shop Manual* (P/N 484 200 003) for proper replacement procedure.

WARRANTY

Complete a warranty claim form using the following information.

Campaign Number	99002
Claim Type	07
Expiry Date	December 1, 2001
Flat Rate Time	0.4

For claiming procedure refer to the *Dealer Warranty Guide*.

NOTE: Dealers are requested to return replaced parts to support their claim.

Please route to:

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



Reference nos.
99003
99004

No. **99-3**

Date: December 10, 1998

SUBJECT: Rear Suspension Rear Arm Welding

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	MX Z x 440 LC	1342/1343/1344	All

PROBLEM

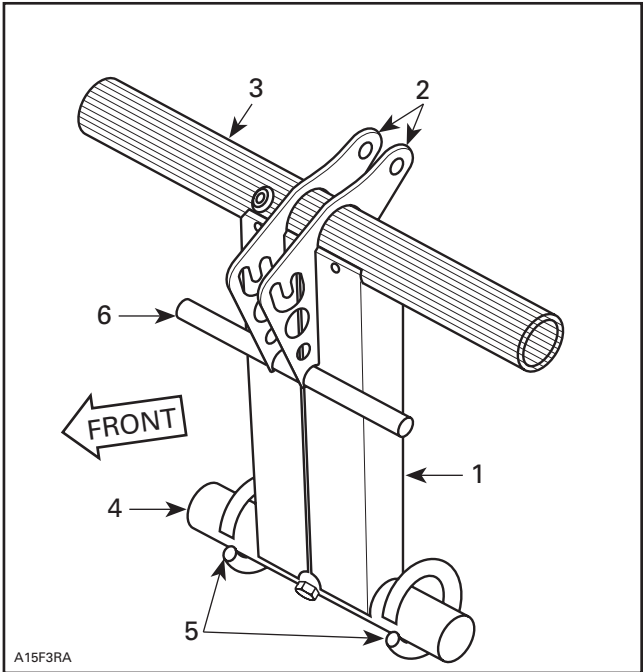
Rear suspension rear arm welding, in some cases, could have been omitted.

SOLUTION

Inspect and change rear arm assembly in cases where welding was omitted.

PARTS REQUIRED

DESCRIPTION	P/N	Qty
Rear Arm	503 189 135	1



- 1. Welded arm
- 2. Shock absorber support
- 3. Upper tube
- 4. Lower tube
- 5. Tube protector
- 6. Axle

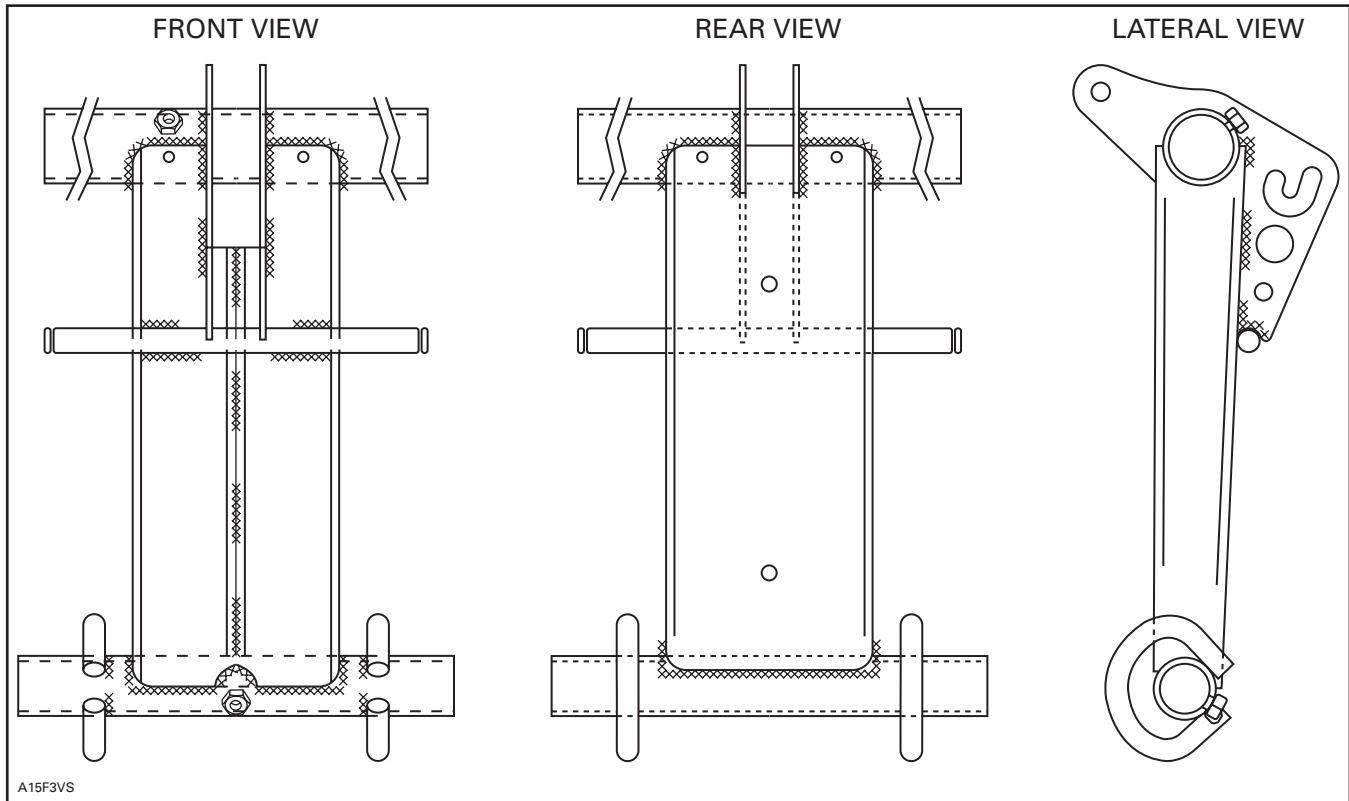
NOTE: If part is needed, it should be ordered through regular channel.

PROCEDURE

Inspection

Lift rear of snowmobile and secure safely to allow good visual inspection with a mirror and adequate lighting.

Perform a complete inspection as per following FRONT VIEW, REAR VIEW and LATERAL VIEW illustrations.



WELDING SEAMS ARE SHOWN WITH XXXX

Pay closer attention to following welded seams:

- arm to lower tube, at front and at rear
- axle to arm
- arm to upper tube, at front

Should a single omission be detected, rear arm must be replaced.

▼ CAUTION

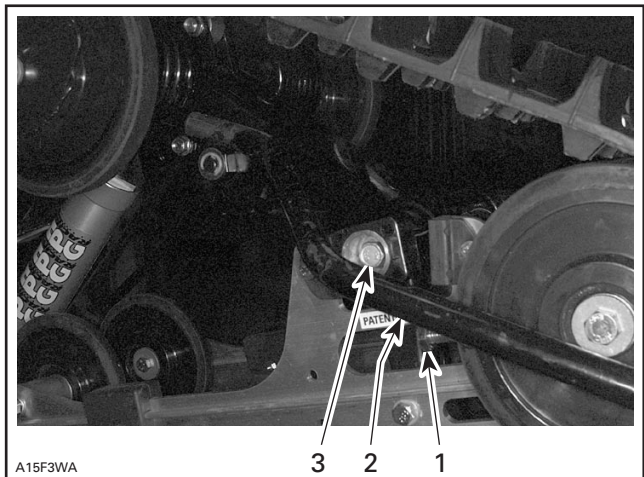
Do not attempt to perform welding since strict specifications must be adhered to.

Replacement

Lift rear of vehicle and secure safely.

Loosen both sides rear track adjuster bolts.

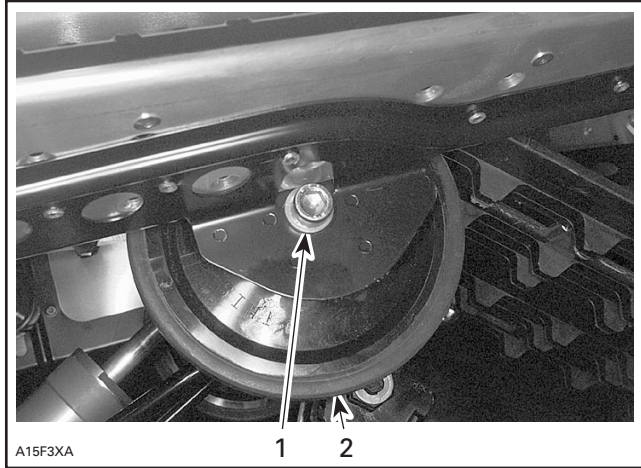
Using tool (P/N 529 005 000), unhook springs on both sides.



1. Adjuster bolt
2. Tool (P/N 529 005 000)
3. Lower tube retaining bolt

Remove both sides Allen bolts retaining suspension to tunnel.

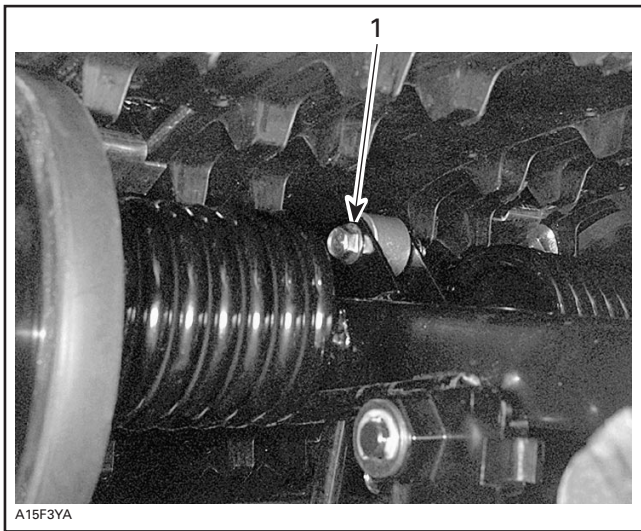
Remove both idler wheels.



1. Allen bolt
2. Idler wheel

Remove springs out of position.

Undo shock absorber upper bolt.



1. Shock absorber upper bolt

Undo center tie-rod rearward retaining screw.

Unscrew rear arm lower tube retaining bolts and remove arm.

Reverse above procedure to install new arm.

Make sure to respect the following specifications.

Lower tube retaining bolts require Loctite 271 (P/N 413 707 400) and are tightened to 125 N•m (92 lbf•ft).

Center tie rod elastic stop nut should be replaced by a new one and tightened to 25 N•m (18 lbf•ft).

Shock absorber elastic stop nut should be replaced by a new one and tightened to 25 N•m (18 lbf•ft).

Idler wheels retaining Allen bolts require Loctite 242 (P/N 413 703 000) and are tightened to 85 N•m (63 lbf•ft).

Verify track tension and alignment, refer to 1999 *Shop Manual, Volume 2*, (P/N 484 200 003), section 07, subsection 06, for proper procedure.

WARRANTY

Use reference number as a campaign number.

Complete a warranty claim form using the following information.

Inspection only

Reference number	99003
Claim Type	07
Expiration Date	December 1, 2001
Flat Rate Time	0.3

Inspection and Replacement

Reference number	99004
Claim Type	07
Expiration Date	December 1, 2001
Flat Rate Time	1.0

Dealers are requested to return defective rear arms.

For claiming procedure, refer to the *Dealer Warranty Guide*.

Please route to:

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



Campaign no. 98033
and no. 99006

No. **99-4**

REVISION 1 ←

Date: February 12, 1999

SUBJECT: Engine Detonation on Tundra R

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Tundra R	3272/3273	All
1998	Tundra R	3268/3269	All

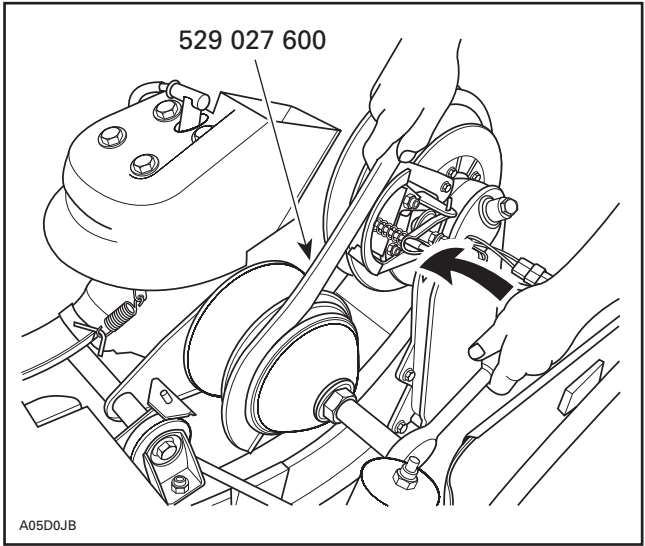
PROBLEM

Under specific conditions, over revolution of engine may occur and lead to detonation.

Use holder (P/N 529 027 600).
Remove retaining screw.

SOLUTION

Add weights in drive pulley to lower shifting RPM.



PARTS REQUIRED

DESCRIPTION	P/N	QUANTITY
Weight	417 114 400	9

➔ **NOTE:** This part number refers to a pack of 10 weights, to be ordered through regular channel.

PROCEDURE

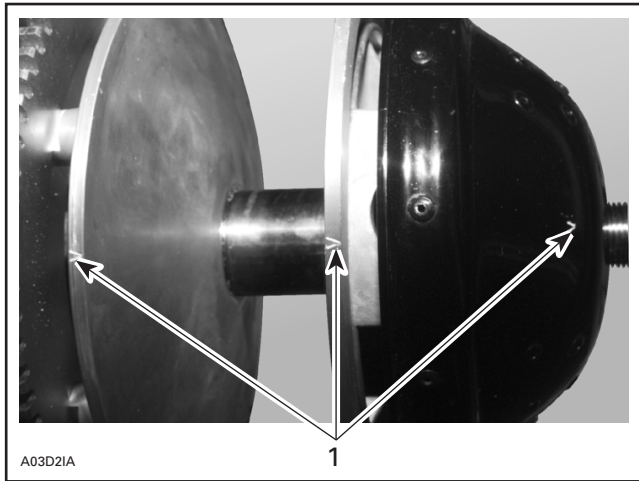
Remove belt guard and drive belt, then remove governor cup only.

To do so, straighten tab washer then untighten nut.

◆ WARNING
Never use an impact wrench to remove or install the drive pulley.

Unscrew nut. Remove tab washer.

Check for alignment marks for proper indexing at reassembly.



1. Alignment marks

Withdraw cup. On each centrifugal block, unscrew both capsules, place 3 weights and secure with one capsule only.

NOTE: Make sure to install blocks at their original position and with their curved end toward governor cup.

Reinstall cup accordingly to alignment marks and tighten nut to 128 N•m (95 lbf•ft).

Torque screw to 90 to 100 N•m (66 to 74 lbf•ft).

Install drive belt and belt guard.

Raise and block the rear of the vehicle and support it with a mechanical stand.

◆ WARNING

Ensure that the track is free of particles which could be thrown out while track is rotating. Keep hands, tools, feet and clothing clear of track. Ensure nobody is standing near the vehicle.

Accelerate vehicle at low speed (maximum 30 km/h (20 MPH)) and apply brake. Repeat 5 times.

Recheck the torque of screw to 90 to 100 N•m (66 to 74 lbf•ft).

Bend tab washer to secure nut.

◆ WARNING

After 10 hours of operation the transmission system of the vehicle must be inspected to ensure the retaining screw is properly torqued.

WARRANTY

Complete a warranty claim form using the following information.

1998 Tundra R

Campaign Number	98033
Claim Type	07
Expiry Date	January 1 st , 2002
Flat Rate Time	0.4 hour

1999 Tundra R

Campaign Number	99006
Claim Type	07
Expiry Date	January 1 st , 2002
Flat Rate Time	0.4 hour

For claiming procedure, refer to *Dealer Warranty Guide*.

NOTE: Dealers are requested to return the 3 capsules removed from drive pulley. The claim will be rejected without these 3 capsules.

Please route to:

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



Campaign no. 99005

No. **99-5**

Date: February 19, 1999

SUBJECT: High Oil Consumption

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Grand Touring SE	1375/1376	All

PROBLEM

On the above mentioned vehicles, DPM air pump may stop functioning due to accumulation of oil in hose.

SOLUTION

- Reset oil pump lever adjustment **on mark \pm 0.5 mm (\pm 0.020 in)**, after removal of cable free play.
- Bleed DPM air pump.
- Change all 3 spark plugs.

PART REQUIRED

DESCRIPTION	P/N	QTY
Spark plugs	414 961 100	3

NOTE: Parts are to be ordered through normal channel.

PROCEDURE

Refer to the *1999 Shop Manual*, volume 3, (P/N 484 200 005), for

- proper pump lever adjustment procedure (page 04-05-3) and
- DPM air pump bleeding procedure (page 02-01-6).

WARRANTY

Complete a warranty claim form using the following information.

Campaign Number	99005
Claim Type	07
Expiration Date	January 1, 2002
Flat Rate Time	0.4

NOTE: Dealers are not required to return replaced parts.

For claiming procedure, refer to the *Dealer Warranty Guide*.

Please route to:

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



Campaign no. 99005

No. **99-5**

REVISION 1 ←

Date: June 8, 1999

**SUBJECT: A) High Oil Consumption
B) High Fuel Consumption**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Grand Touring SE	1375/1376	All

➔ **CAUTION: Completion of this Bulletin is mandatory. Failure to comply with the instructions contained in this Bulletin may create a vehicle malfunction and/or severe engine damage in certain riding condition.**

PROBLEM (A)

On the above mentioned vehicles, high oil consumption may occur.

DPM air pump may stop functioning due to accumulation of oil.

SOLUTION (A)

- Reset oil pump lever adjustment **on mark**, after removal of cable free play.
- Bleed DPM air pump.

PROCEDURE (A)

Refer to the *1999 Shop Manual, Volume 3*, (P/N 484 200 005), for

- proper pump lever adjustment procedure (page 04-05-3) and
- DPM air pump bleeding procedure (page 02-01-6).

PROBLEM (B)

High fuel consumption condition could be reported to servicing dealers.

SOLUTION (B)

- Step one

Change carburetor needles, needle jets, main jets, pilot jets and adjust float level.

- Step two

Change clutch ramps and spring.

- Step three

Replace MPEM.

PARTS REQUIRED (B)

- Three step solution in ONE kit

DESCRIPTION	P/N	QTY
Carburetor and TRA components/MPEM Kit	590 030 600	1

NOTE: Kit is to be ordered through regular channel and consists of:

DESCRIPTION	SPECIFICITY	QTY
Needle	8BCY01-42	3
Needle Jet	O2-(876)	3
Main Jet	340	2
Main Jet	360	1
Pilot Jet	15	3
Ramp	293x	3
Spring	VIOLET/YELLOW	1
MPEM	—	1

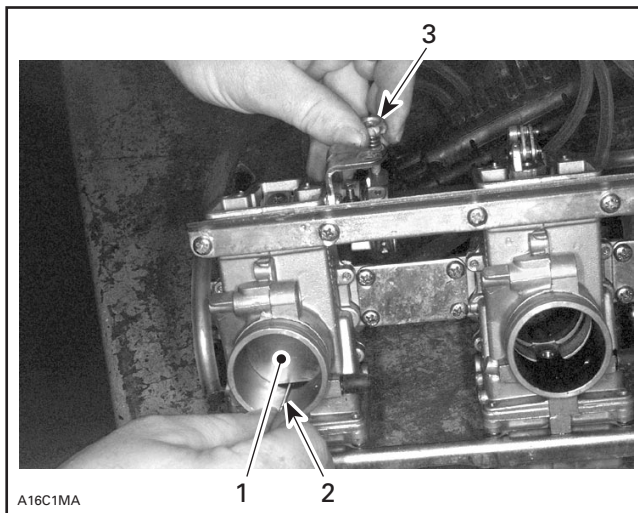
➔ **IMPORTANT:** Parts (kit) will be available starting August 6, 1999. Releases are going to be first in/first out. You may order now.

PROCEDURE (B)

Refer to the 1999 Shop Manual, Volume 3, (P/N 484 200 005),

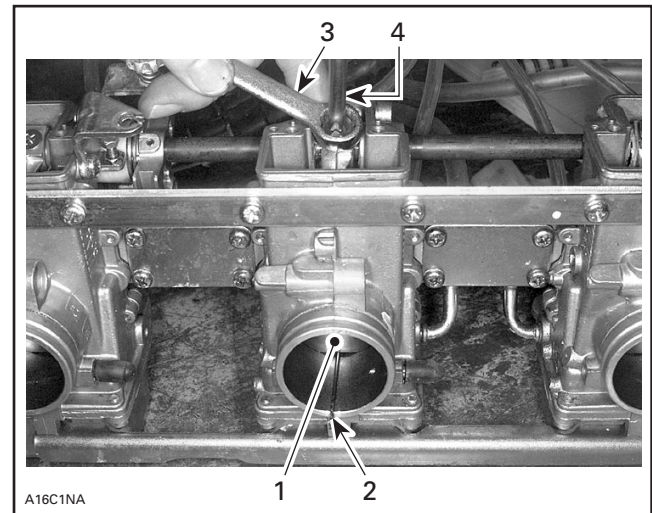
- section 04-08 for proper carburetor components replacement,
- jet needle clips adjusted to position 4,
- cut-away height to 1.3 mm (0.051 in),

Start with carburetor near throttle cable (without eccentric nut).



START WITH PTO SIDE CARBURETOR

1. Throttle slide
2. 1.3 mm (0.051 in) bit inserted for proper gap
3. Manual adjustment before tightening screw



CENTER AND MAG SIDE CARBURETORS

1. Throttle slide
2. 1.3 mm (0.051 in) bit
3. Loosen nut with wrench
4. Tighten or untighten screw with screw driver to obtain proper cut-away height

CAUTION: Make sure all three cut-aways are adjusted according to specification without difference in height. **Failure to do so will cause severe engine damage.**

IMPORTANT: When proper height is attained, tighten screw. Reverify cut-away height and readjust if necessary till specified height is reached on all three carburetors.

- 360 Main Jet placed at center position,
- air screws closed completely,
- section 05-03 for proper clutch components replacement,
- screws adjusted to position 3.
- section 06-02 for timing adjustment following MPEM replacement.
- MPEM replacement procedure consisting of a simple operation of unplugging connectors and removing two screws and then securing new MPEM with two same screws and plugging back connectors.
- Adjust ignition timing according to number on the engine head label.

CAUTION: Failure to adjust ignition timing may cause severe engine damage.

WARRANTY (A and B)

Complete a warranty claim form using the following information.

Campaign Number	99005
Claim Type	07
Expiration Date	May 1, 2002
Flat Rate Time	2.5 hours

NOTE: Dealers are required to return replaced parts. Claims will be debited if parts are not returned.

➔ **NOTE: All involved parts must be replaced before claiming this campaign.**

For claiming procedure, refer to the *Dealer Warranty Guide*.

Please route to:

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



Campaign no. 99007

No. **99-6**

Date: March 26, 1999

SUBJECT: Voltage Regulator

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Grand Touring* SE/700	1373/1374/1375/1376	All

PROBLEM

Complete battery discharge causes voltage to MPEM to be too weak and DESS not to recognize the lanyard; therefore RPM cannot be raised to engagement point.

SOLUTION

Replace voltage regulator.

PART REQUIRED

DESCRIPTION	PART NUMBER	QUANTITY
Voltage regulator	515 175 461	1

NOTE: Part is to be ordered through regular channel.

PROCEDURE

Refer to the *1999 Shop Manual*, Volume 3, (P/N 484 200 005), for proper procedure.

WARRANTY

Complete a warranty claim form using the following information.

Campaign number	99007
Claim Type	07
Expiration Date	January 1, 2002
Flat Rate Time	0.3 hour

NOTE: Dealers are required to return replaced part.

For claiming procedure, refer to the *Dealer Warranty Guide*.

Please route to :

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



Campaign no. 99010 (A)
and 99011 (B)

No. **99-7**

Date: May 28, 1999

**SUBJECT: Brake Hose Rubbing on
Electrical Harness**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	MX Zx 440 LC	1342/1343/1344	All

PROBLEM

Brake hose may rub on electrical harness located next to steering shaft and wear.

SOLUTION

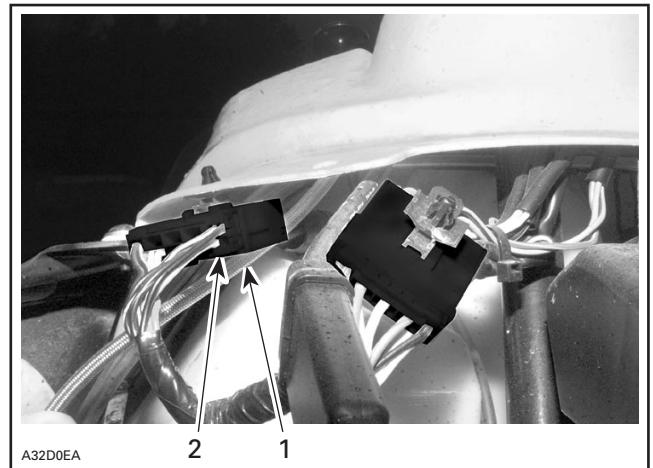
- A. Inspect brake hose and electrical harness and relocate brake hose if no sign of wear is found.
- B. Inspect brake hose and if sign of wear is found, replace brake hose, relocate and secure it. Fix harness if needed.

REQUIRED PARTS (If needed)

DESCRIPTION	PART NUMBER	QTY
Brake Hose	415 064 600	1

PROCEDURE

Open hood and locate brake hose and harness.



1. Brake hose
2. Potentially faulty harness

Check for wear of both parts.

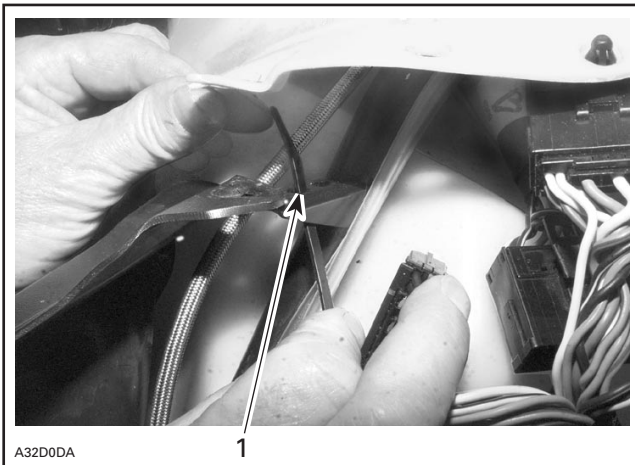
A) No Sign of Wear: Inspection and New Routing

Remove screw securing center console on right side. Keep screw for reinstallation.

Disconnect harness connector and allow hose to cross over the frame bracket.



Secure hose using a locking tie and screw center console in place.



1. Locking tie in center hole of bracket

Connect harness connector and set it in place.

B) Worn Brake Hose: Hose Replacement and Harness Repair

CAUTION: Always release brake and oil brake pressure before servicing brake system.

Install a container under hose to contain brake oil and remove brake hose from caliper.

Remove brake hose from reservoir on handlebar. Take care to avoid oil spillage.

NOTE: Brake oil may damage paint finish. Never allow brake oil to spill onto painted surface.

Install the new brake hose.

Fill oil reservoir with DOT 4 brake fluid.

CAUTION: Use only DOT 4 brake fluid.

Bleed brake system as per *1999 Ski-Doo Shop Manual* (refer to transmission 05-06).

Repair electrical wires if needed.

Route brake hose as described in part A of this procedure.



INSTALLATION COMPLETED

WARRANTY

A) Inspection and Relocation of Brake Hose

Complete a warranty claim form using the following information.

Campaign Number	99010
Campaign Type	07
Flat Rate Time	0.3
Expiration Date	2002 06 01

B) Inspection and Replacement of Brake Hose

Complete a warranty claim form using the following information.

Campaign Number	99011
Campaign Type	07
Flat Rate Time	0.9
Expiration Date	2002 06 01

For claiming procedure, refer to the *Dealer Warranty Guide*.

Do not claim both campaign if a hose replacement is completed since campaign number 99011 pays for both inspection and replacement. Duplicate claims will be debited.

NOTE: Dealers are requested to return worn brake hose in support of their claim.



Date: May 28, 1999
To: All Ski-Doo Dealers
Subject: **SAFETY RECALL**
Brake Hose Rubbing on Electrical Harness
(1999 Ski-Doo MX Zx 440 LC)

BOMBARDIER
RECREATIONAL PRODUCTS

Bombardier Inc.
565, de la Montagne
Valcourt, Québec, Canada J0E 2L0
Telephone 1(450) 532-2211
Fax 1(450) 532-5032
<http://www.recreation.bombardier.com>

Certified Mail

Dear Dealer:

This notice is sent to you in accordance with the requirements of applicable Federal regulations. **Bombardier Recreational Products or Bombardier Motor Corporation of America (Bombardier)**, has determined that a safety defect may exist in **1999 Ski-Doo MX Zx 440 LC** models.

The component that may be defective in the above mentioned **MX Zx 440 LC** is the brake hose. On some **1999 MX Zx 440 LC** models, the brake hose may rub against and wear on the electrical harness located next to the steering shaft.

We will be sending a Safety Recall letter, a copy of which is enclosed herewith to all known owners of the concerned **MX Zx 440 LC** models asking them to contact their dealer in order to inspect and/or replace the brake hose. However, it is strongly recommended that you also personally contact any owner to whom you have sold a **MX Zx 440 LC** involved in this Safety Recall.

Please read and carry out all instructions contained in the enclosed Recall Safety bulletin.

Please do not use, and advise all customers against using the 1999 MX Zx 440 LC until the necessary inspection and/or modification has been performed.

Please note that this safety recall also applies to all in-stock units sold to your dealership but not yet retailed to customers. Dealers must complete the inspection and/or modification on the above mentioned models prior to selling these in-stock units.

We regret any inconvenience this may cause but trust you understand our safety concerns.

Thank you for your immediate attention to this matter.

After-Sales Service Department
Bombardier Recreational Products



Date: May 28, 1999

SAFETY RECALL

Brake Hose Rubbing on Electrical Harness (1999 Ski-Doo MX Zx 440 LC)

BOMBARDIER *RECREATIONAL PRODUCTS*

Bombardier Inc.
565, de la Montagne
Valcourt, Québec, Canada J0E 2L0
Telephone 1(450) 532-2211
Fax 1(450) 532-5032
<http://www.recreation.bombardier.com>

Certified Mail

Dear Owner:

This notice is sent to you in accordance with the requirements of applicable Federal regulations. **Bombardier Recreational Products or Bombardier Motor Corporation of America (Bombardier)**, has determined that a safety defect may exist in some **1999 MX Zx 440 LC** models. Our records indicate you are the owner of a **1999 Ski-Doo MX Zx 440 LC**.

The component of your **MX Zx 440 LC** that may be defective is the brake hose. This part may rub against and wear on the electrical harness located next to the steering shaft.

You should not operate, nor permit your **MX Zx 440 LC** to be operated, before it has been inspected and repaired, if necessary, by your authorized Ski-Doo dealer.

Please contact your authorized **Ski-Doo** dealer at your earliest convenience to have the necessary repair performed. This work will be carried out at no charge to you.

If you have already sold your **MX Zx 440 LC**, please forward this letter to the new owner.

We are sorry to cause you this inconvenience; however, we have taken this action in the interest of your safety and continued satisfaction with our products.

Sincerely,

After-Sales Service Department
Bombardier Recreational Products

Please route to:

Init.

Service

Sales

Parts



Campaign no. 990019

No. 99-8
REVISION 1

Date: January 18, 2000

SUBJECT: Mixture too Rich During Engine Warm-Up

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Grand Touring* SE	1375/1376	All

IMPORTANT NOTICE

Proceed with this bulletin on units that have had the update performed as per **Warranty Bulletin No. 99-5**, dated June 4 1999.

NOTE: Warranty Bulletin No. 99-5 must have been done prior to proceeding with this bulletin.

PROBLEM

Multi-Purpose Electronic Module (MPEM) supplied in kit P/N 590 030 600, as per *Warranty Bulletin No. 99-5*, gives a false information that causes mixture to be too rich during engine warm-up.

NOTE: MPEM in kits (P/N 590 030 600) in stock should be updated as per present bulletin upon installation.

SOLUTION

First and foremost, update MPEM programmer with supplied 3.2 version diskette.

NOTE: Combined Sea-Doo*/Ski-Doo* dealers already have this same 3.2 version diskette.

- A)** Change all 3 spark plugs.
- B)** Bleed air pump.
- C)** Re-calibrate MPEM.

PARTS REQUIRED

DESCRIPTION	P/N	QTY
3.2 version diskette	Auto-shipped	1
Calibration cartridge	Auto-shipped	1
Spark plugs	414 961 100	3

NOTE: Both diskette and cartridge will be auto-shipped to all Ski-Doo* dealers, **free of charge**. Spark plugs, included in campaign, are to be ordered through regular channel.

PROCEDURE

A) Change All 3 Spark Plugs

Ensure spark plug gap is at 0.45 mm (0.018 in).

B) Bleed Air Pump

Unplug hose coming from air pump at DPM manifold.

Run engine at 3000 RPM until all liquid has escaped from that hose (about 2 to 3 minutes).

⚠ WARNING

Ensure fuel is drained into a container. Fuel is flammable and explosive under certain conditions. Always wipe off any fuel or oil spillage from the vehicle.

When liquid is seen through hose but doesn't come out, air pump does not function properly; overhauling of air pump is required. Order overhaul kit (P/N 404 161 878) through regular channel; normal warranty applies.

Reconnect hose.

C) Re-Calibration (MPEM)

Use the 3.2 version updated programmer.
(main menu).

IMPORTANT NOTICE

Re-calibration must be performed in one single operation; **there is no room for mistakes.**

CAUTION: Failure to do so will cause MPEM to become useless.

We strongly recommend the use of the by-pass wire (P/N 529 033 300), (refer to following illustration), **instead of starting engine** in order to reduce the chances of data transfer problems.



CONNECT BOTH BY-PASS WIRE TERMINAL HOUSINGS TO HARNESS AND MODULE AND TURN ON THE SWITCH

Connect by-pass wire or start engine (if by-pass wire is not available).

CAUTION: Engine must run till the end of the procedure. Failure to do so will cause MPEM to become useless.

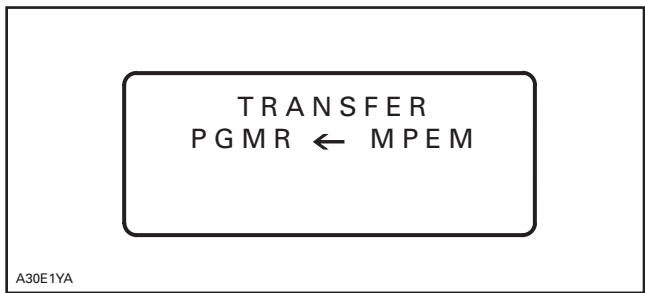
To go backward in the programmer, press "MENU" till desired menu appears.

When data are being transferred, you must rev the engine at 2000-2500 RPM and make sure connection between programmer and vehicle is good.

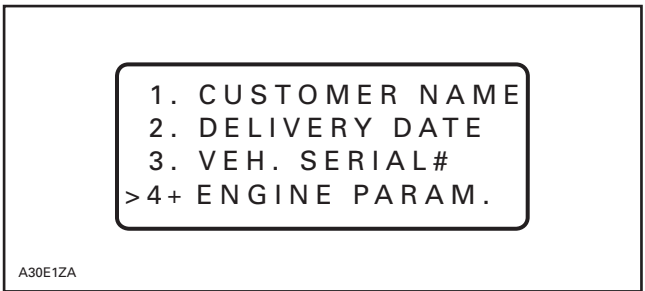
CAUTION: Never reach or exceed 2700 RPM. Failure to do so will cause MPEM to become useless. The consequence is that the RER function will be lost.

Each time a function engages data transfer, the following sign will appear: ← Trs. At this point, be ready to rev the engine so it won't fall below the 2000 RPM mark.

Press 3 for VEHICLE INFO, following screen appears temporarily:



Followed by this screen:

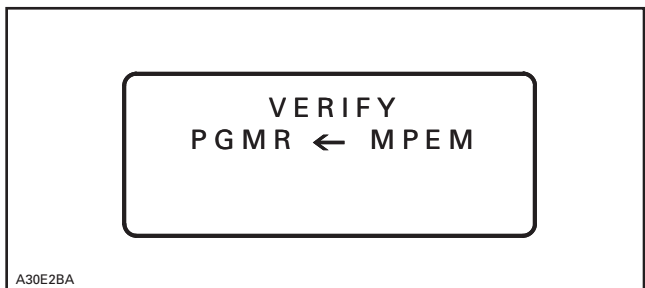


Press 4 for ENGINE PARAMETERS, following screen appears:

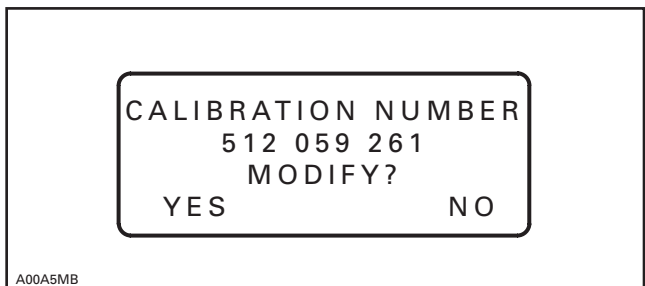


Press 3 for CALIBRATION.

← Trs appears and following screen temporarily:



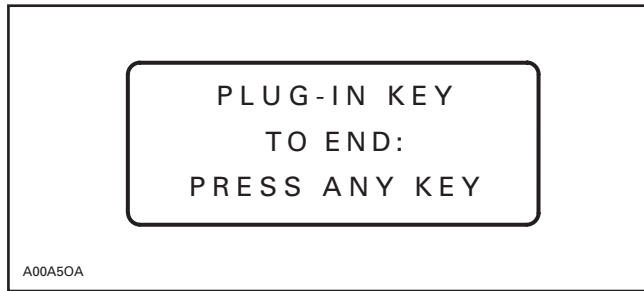
And then following screen showing the actual calibration number in the vehicle.



Select YES to MODIFY? and press ENTER following screen appears:



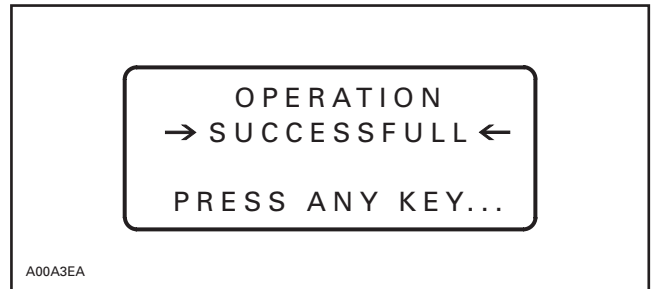
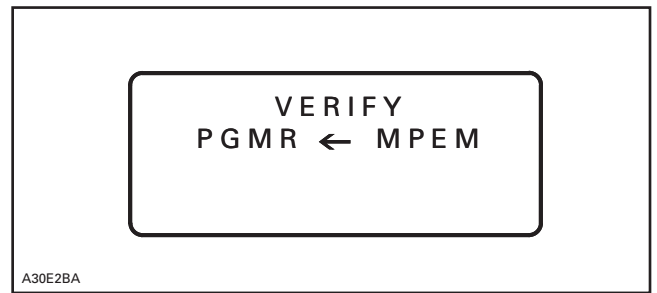
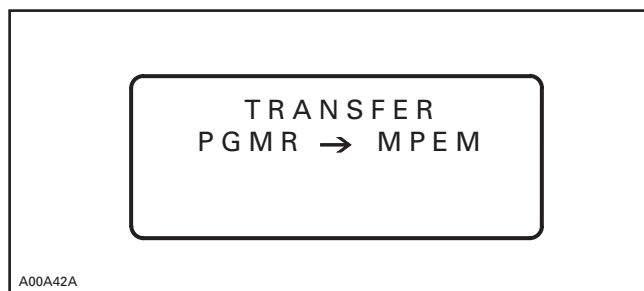
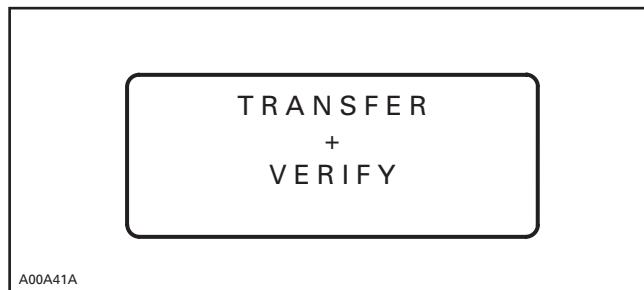
Enter calibration number 512 059 340 and press ENTER, following screen appears:



➡ **NOTE:** If an error occurred during data entry, the MPEM becomes useless.

Simultaneously with the following operation a transfer will occur: ← Trs. At this point, be ready to rev the engine so it won't fall below the 2000 RPM mark.

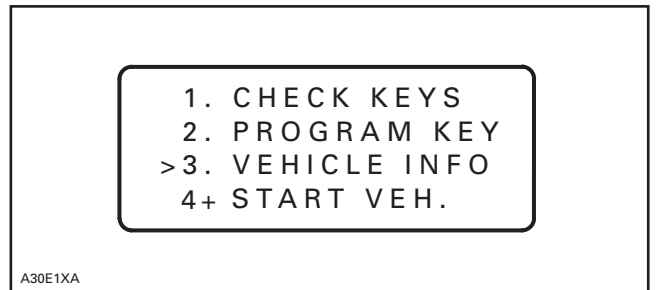
➡ Plug-in the desired calibration cartridge onto the programmer post, the following screens will appear temporarily:



Press any key, ← Trs will show followed by next screen:



Press MENU twice, following screen will show:



After procedure is completed, ensure engine idle speed with engine hot is 1800-2000 RPM.

You can stop the engine.

NOTE: If an error occurred during data entry, the MPEM becomes useless.

After re-calibration, start engine with vehicle lanyard and verify the reverse (RER) function; this test will confirm that MPEM is correct. If reverse (RER) function does not operate, change MPEM by the new updated version (P/N 512 059 343). This updated MPEM already has the correct calibration specification for engine warm-up period.

➡ ADDITIONAL INFORMATION

Kit (P/N 590 030 700) supersedes old kit (P/N 590 030 600). MPEM in new kit is already updated to the correct engine warm-up calibration.

WARRANTY

Complete a warranty claim form using the following information.

Campaign Number	990019
Claim Type	07
Expiration Date	January 12, 2001
Flat Rate Time	0.4 hour

For claiming procedure, refer to the *Dealer Warranty Guide*.

Please route to :

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



QUALITY

SNOWMOBILES



NOTE: Repair only if described symptoms exist or are noticed.

No. **99-9**

Date: June 30, 2000

**SUBJECT: A) Cold Start Carburation
 Recalibration
 B) TRA Clutch Recalibration
 C) MPEM Recalibration**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
1999	Grand Touring* SE	1375/1376	All

IMPORTANT NOTICE: These corrective actions are to be taken **ONLY IF** symptoms arise and/or are reported by user. Furthermore, if these corrective actions are to be taken, ensure *Warranty Bulletin 99-5 Revision 1* has been performed before proceeding.

To find out about vehicle campaign status, verify in BOSS Web.

PROBLEM

In some cases, owners of involved models may report a hard starting or even a non starting condition in cold weather jointly with a bad acceleration response under 6000 RPM.

SOLUTION

Proceed with all following recalibrations (A, B and C).

PARTS REQUIRED

NOTE: Required parts are supplied by ordering kit (P/N 590 122 000) through regular channel.

Kits will be available starting August 7, 2000; releases are going to be first in/first out. You may order now.

PROCEDURE

A) COLD START CARBURATION RECALIBRATION

Required Tools

DESCRIPTION	PART NUMBER	QTY
Compensation Jet Extractor	529 035 723	1
Compensation Jet Installer	529 035 722	1

NOTE: Required tools will be auto-shipped **free of charge** to all authorized Ski-Doo dealers starting August 7, 2000.

Refer to the *1999 Shop Manual, Volume 3*, (P/N 484 200 005) for carburetors/DPM removal procedure.

Ensure fuel valve is closed on snowmobile.

WARNING

Fuel is flammable and explosive under certain conditions. Always wipe off any fuel or oil spillage from the vehicle. Ensure work area is well ventilated. Do not smoke or allow open flames or sparks in the vicinity.

Place carburetors/DPM on a work bench and proceed as per attached instruction sheet (P/N 415 127 995).

B) TRA CLUTCH RECALIBRATION

Refer to the *1999 Shop Manual, Volume 3*, (P/N 484 200 005), and perform TRA clutch ramps replacement as per given procedure, using ramps no. 8 supplied in kit (P/N 590 122 000).

NOTE: Set calibration screws at position 3.

C) MPEM RECALIBRATION

Required Tool

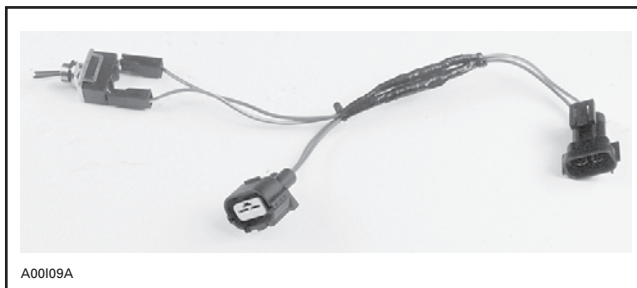
DESCRIPTION	PART NUMBER	QTY
Calibration Cartridge	512 059 358	1

NOTE: Calibration cartridge, also programmed to be used on 2000 models, will be auto-shipped to all authorized Ski-Doo dealers **free of charge** starting August 7, 2000.

Ensure programmer used has been updated with 3.3 version diskette (P/N 529 035 717), (of which auto shipment started February 11, 2000; refer to *Service Bulletin 99-20*).

Connect programmer.

We strongly recommend the use of the by-pass wire (P/N 529 033 300), (refer to following illustration), **instead of starting engine** in order to reduce the chances of data transfer problems.



CONNECT BOTH BY-PASS WIRE TERMINAL HOUSINGS TO HARNESS AND MODULE AND TURN ON THE SWITCH

Connect by-pass wire or start engine (if by-pass wire is not available).

CAUTION: Engine must run until the end of the procedure (unless by-pass wire is used). Failure to do so will cause an error requiring procedure to be restarted.

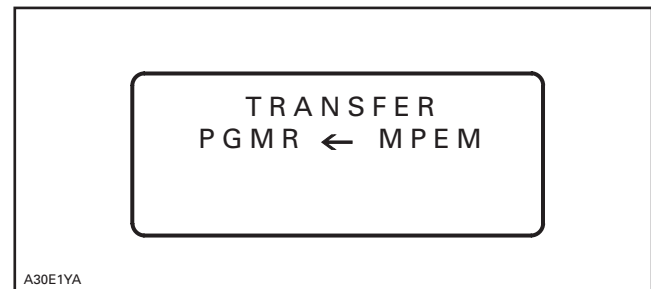
To go backward in the programmer, press "MENU" until desired menu appears.

When data are being transferred, you must rev the engine at 2000 - 2500 RPM and make sure connection between programmer and vehicle is good (unless by-pass wire is used).

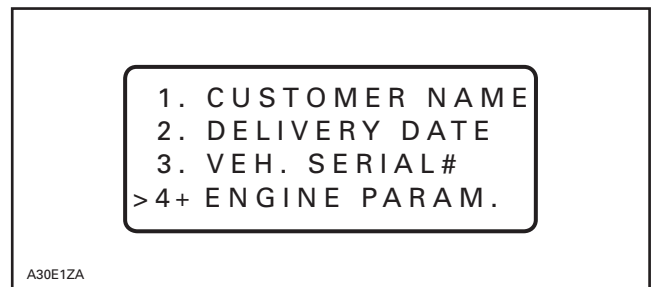
CAUTION: Never reach or exceed 2700 RPM. Failure to do so will cause an error requiring procedure to be restarted.

Each time a function engages data transfer, the following sign will appear: ← **Trs**. At this point, be ready to rev the engine (unless by-pass wire is used) so it will not fall below the 2000 RPM mark.

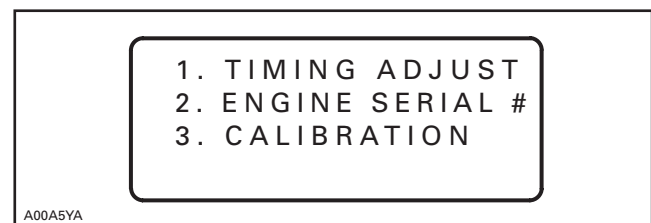
Press 3 for VEHICLE INFO, following screen appears temporarily:



Followed by this screen:

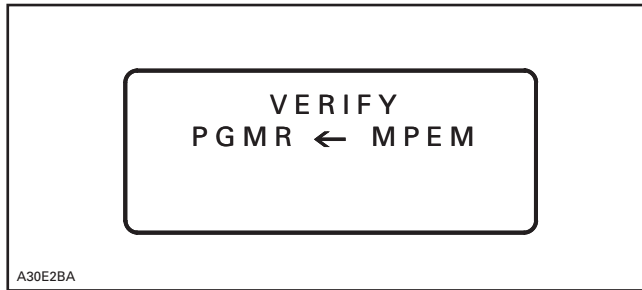


Press 4 for ENGINE PARAMETERS, following screen appears:

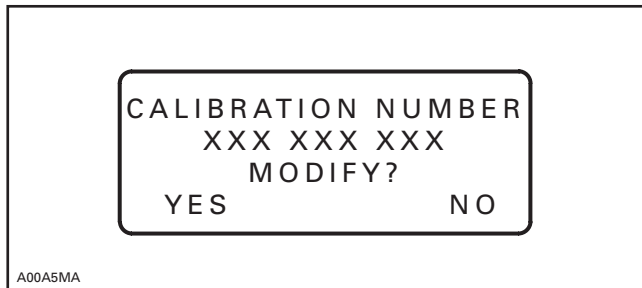


Press 3 for CALIBRATION.

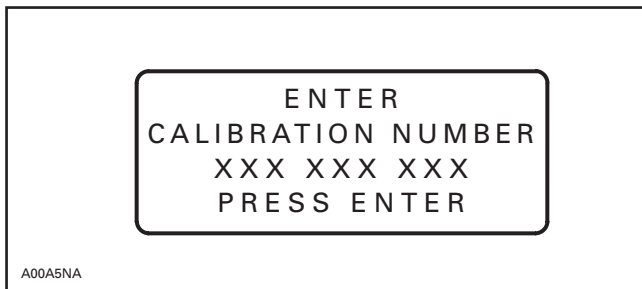
←Trs appears and following screen temporarily:



And then following screen showing the actual calibration number in the vehicle.



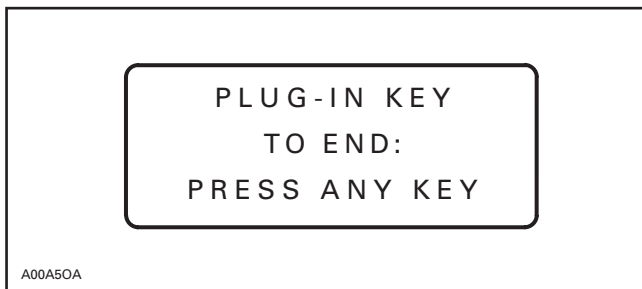
Select YES to MODIFY? and press ENTER; following screen appears:



Enter calibration number 512 059 359.

IMPORTANT: Be sure to enter number 512 059 359.

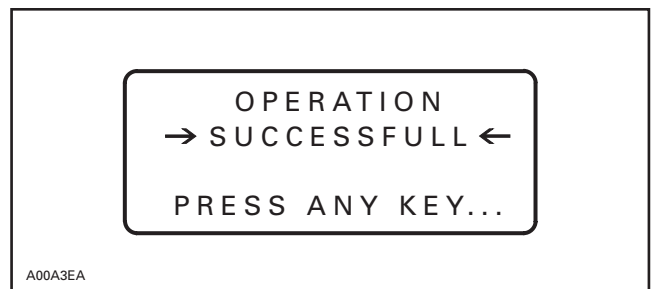
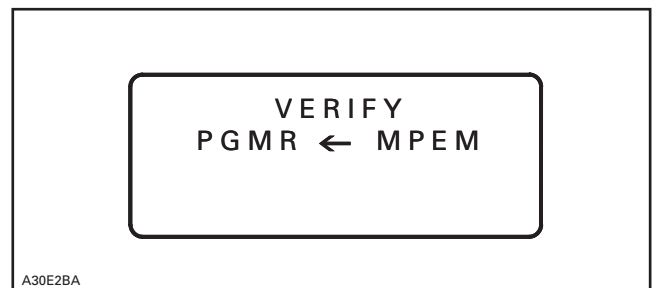
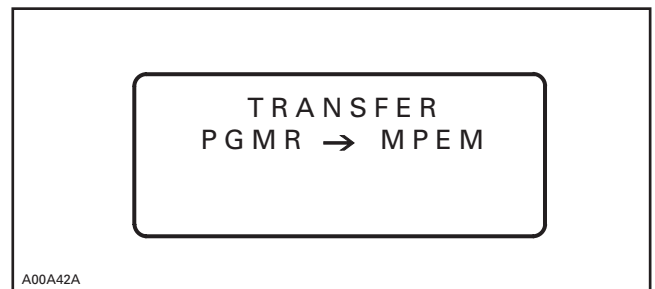
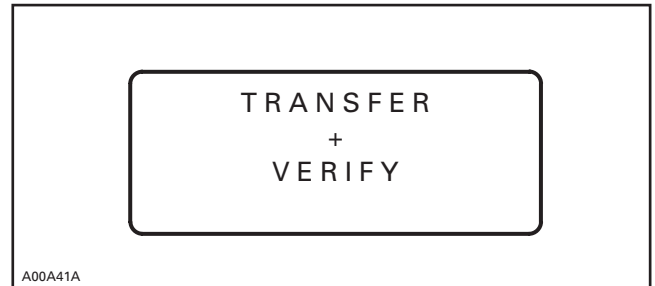
Press ENTER, following screen appears:



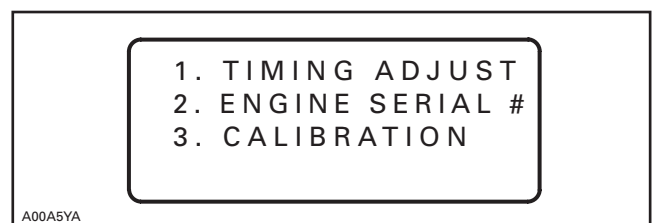
NOTE: If an error occurred during data entry, the procedure will have to be restarted.

Simultaneously to the following operation a transfer will occur: ←Trs. At this point, be ready to rev the engine (unless by-pass wire is used) so it will not fall below the 2000 RPM mark.

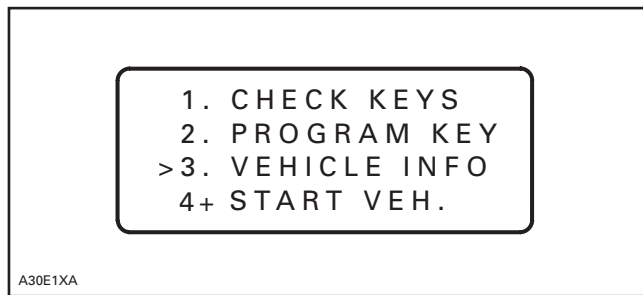
Plug-in calibration cartridge (P/N 512 059 358) onto the programmer post, the following screens will appear temporarily:



Press any key, ←Trs will show followed by next screen:



Press MENU twice, following screen will show:



After procedure is completed, ensure engine idle speed **with engine hot** is 1800 - 2000 RPM.

You can stop the engine.

NOTE: If an error occurred during data entry, the procedure will have to be restarted.

After recalibration, start engine with vehicle lanyard and verify the reverse (RER) function; this test will confirm that MPEM is correct. If reverse (RER) function does not operate, restart procedure.

WARRANTY

When and if all conditions described herein are fulfilled, complete a warranty claim form using the following information.

Reference Number	1999-0020
Claim Type	07
Flat Rate Time	2.6 hours
Expiration Date	December 31, 2001

Use reference number as a campaign number.

For claiming procedure, refer to the *Dealer Warranty Guide*.

Ensure involved *Shop Manual* is updated accordingly.

FINAL NOTE: When all of these 3 recalibrations are completed, ensure you identify the unit as a "COMPLETED ONE" by writing the bulletin number (99-9) on the clutch with a marker together with the mention OK (**99-9 OK**).



**CARBURETORS/TRA CLUTCH
RECALIBRATION KIT
(P/N 590 122 000)**

⚠ WARNING

For safety reasons, this kit must be installed by an authorized Ski-Doo® snowmobile dealer. Should removal of a locking device (e.g. lock tabs, self-locking fasteners, etc.) be required when undergoing disassembly/assembly, always replace with a new one. This instruction sheet should be given to the purchaser. This kit is designed for specific applicable models only. It is not recommended for units other than those for which it was sold.

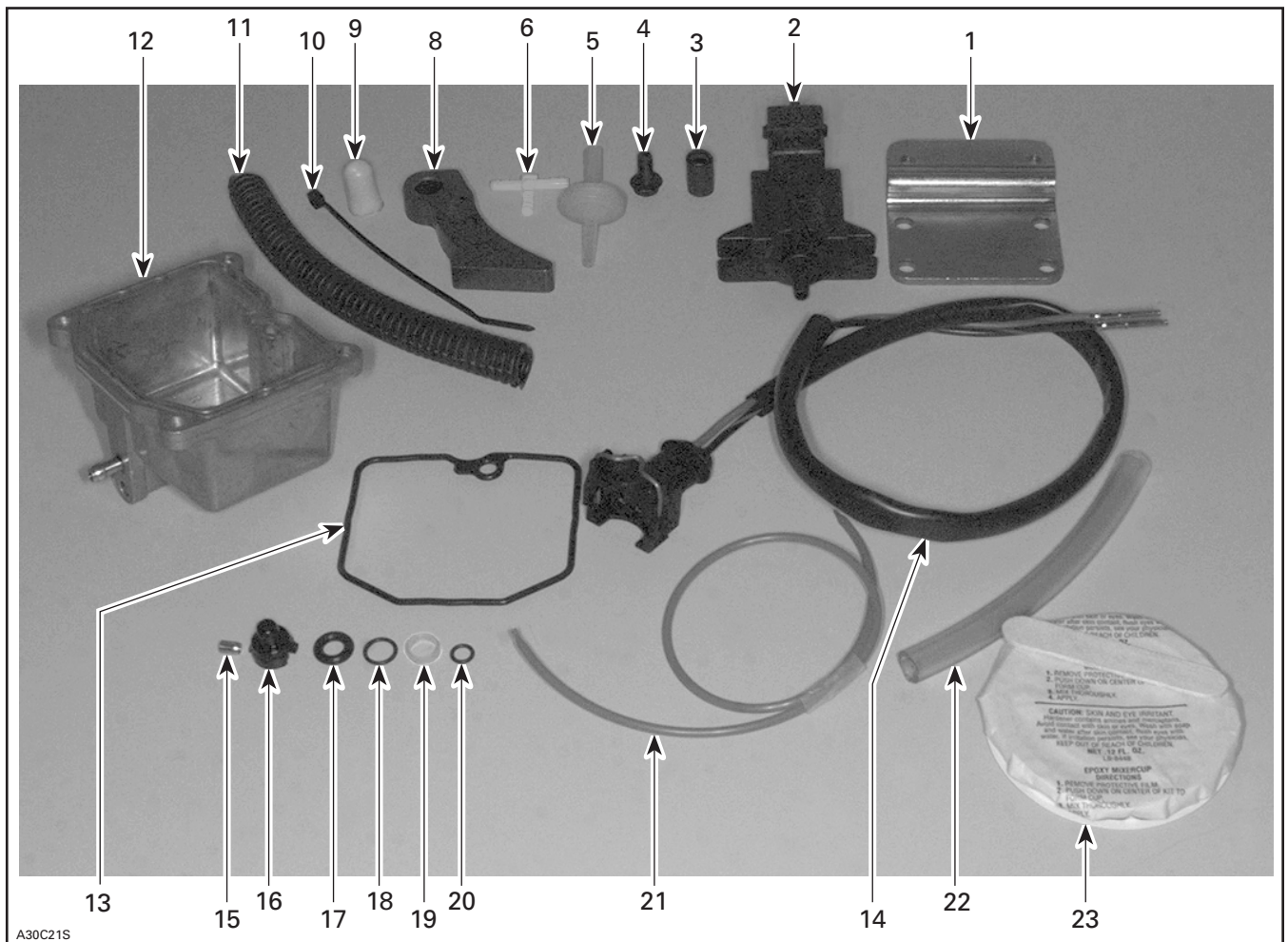
NOTE: Installation time is 2.6 ① hours for 1999 Grand Touring SE models ②.

NOTE: Installation time is 2.0 ① hours for 2000 Grand Touring SE models ②.

① Amount of labor allowed **includes all 3 recalibration items** mentioned in either *Warranty Bulletins* 99-9 or 2000-3: A) Cold Start Carburation Recalibration, B) TRA Clutch Recalibration and C) MPEM Recalibration.

② For which models this instruction sheet is solely intended.

PARTS TO BE INSTALLED



1. Solenoid Plate
2. Solenoid Valve
3. Cap
4. Self-Tapping Screw (2)
5. Check Valve (3)
6. T-Fitting (2)
7. Hose (1 m (39 in)) (not illustrated)
8. Ramp (3)
9. Cap (3)
10. Locking Tie (5)
11. Protector Tubing (125 mm (5 in))
12. Float Body

13. Float Body O-Ring
14. Solenoid Valve Harness
15. Compensation Jet 2.0
16. Vacuum Collector End Cap
17. Vacuum Collector End Cap O-Ring
18. Compensation Solenoid O-Ring (larger)
19. Compensation Solenoid Plastic Spacer
20. Compensation Solenoid O-Ring (smaller)
21. Nylon Wire (1/2 m (20 in)) (1999 models only)
22. Tubing (102 mm (4 in))
23. Quick Epoxy Kit (1999 models only)

INSTRUCTION

WARNING

Torque wrench tightening specifications must strictly be adhered to. Locking devices (ex.: locking tabs, elastic stop nuts, self-locking fasteners, etc.) must be installed or replaced with new ones where specified. If the efficiency of a locking device is impaired, it must be renewed.

NOTE: This instruction sheet must be used **in conjunction with** *Warranty Bulletin* 99-9 or 2000-3.

Carburetors Recalibration

Removal

Ensure fuel valve is closed on snowmobile.

WARNING

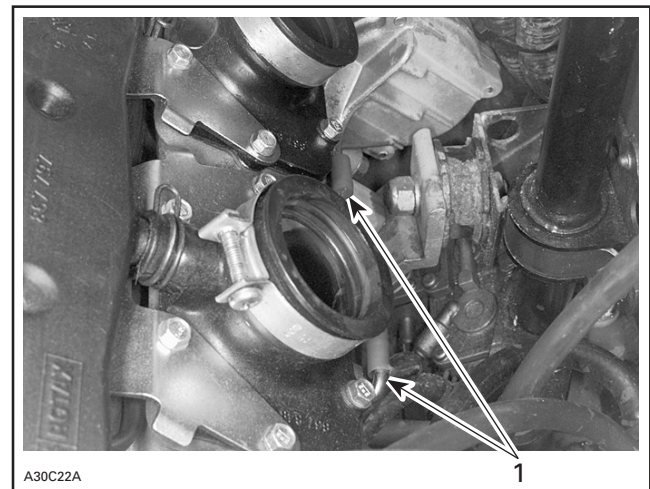
Fuel is flammable and explosive under certain conditions. Always wipe off any fuel or oil spillage from the vehicle. Ensure work area is well ventilated. Do not smoke or allow open flames or sparks in the vicinity.

At this stage, carburetors/DPM have been removed from snowmobile and rest on a working bench.

1999 and 2000 Models

Before proceeding with carburetor modifications, unplug and discard all 3 air pump hoses; air pump will no longer be used.

Plug up 2 air pump impulse fittings on engine using caps no. 9.



1. 2 impulse fittings on engine

1999 Model Year Only (compensation mode)

Remove and discard DPM vacuum collector end cap and its O-ring (if O-ring does not come out, get it out with a small hook).

Remove DPM compensation solenoid retaining plate by removing its retaining screw; these parts will be reused.

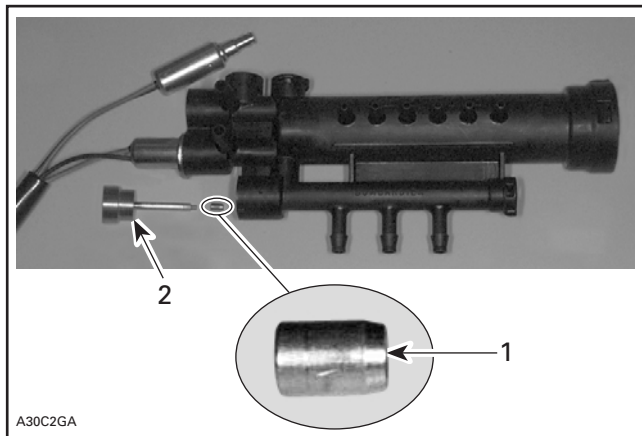
Pull out DPM compensation solenoid by wiggling it out; pull it out gently so to be sure larger O-ring and plastic spacer will come out. Discard larger O-ring, spacer and smaller O-ring.

Using DPM compensation jet extractor tool (P/N 529 035 723), push out compensation jet by inserting tool on DPM vacuum collector end cap side. Discard jet.

WARNING

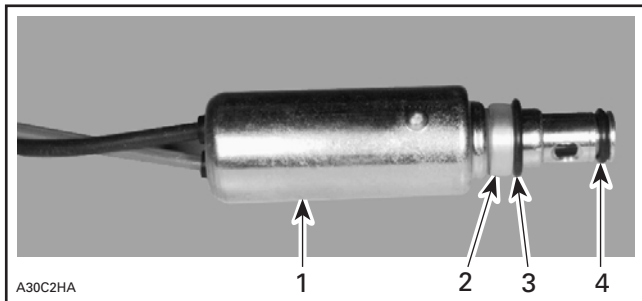
Push tool slowly and gently, a hard blow may propel jet in someone's face. Wear protective glasses during this operation.

Using DPM compensation jet installer tool (P/N 529 035 722), insert compensation jet **no. 15**, tapered end first, on compensation solenoid side; when tool contacts DPM body, compensation jet is properly seated.



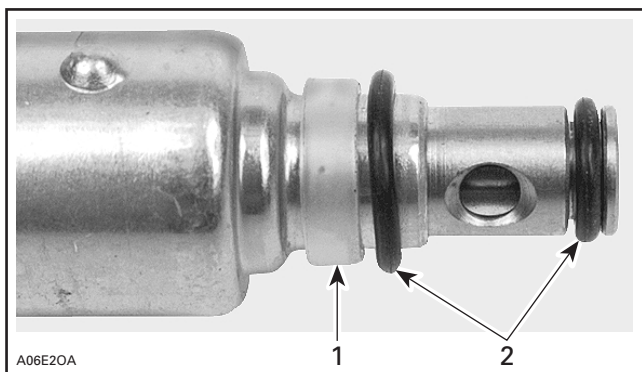
1. Compensation jet no. 15
2. Installer tool

Slide DPM compensation solenoid plastic spacer **no. 19**, then larger DPM compensation solenoid O-ring **no. 18** onto compensation solenoid and finally, slide smaller DPM compensation solenoid O-ring **no. 20** into compensation solenoid groove.



1. Solenoid
2. Plastic spacer no. 19
3. Larger O-ring no. 18
4. Smaller O-ring no. 20

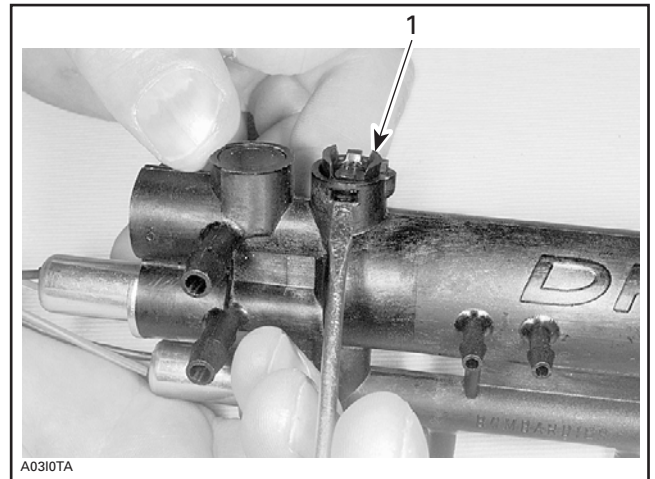
At reassembly, ensure that solenoid seals are in place.



1. Plastic spacer
2. O-rings

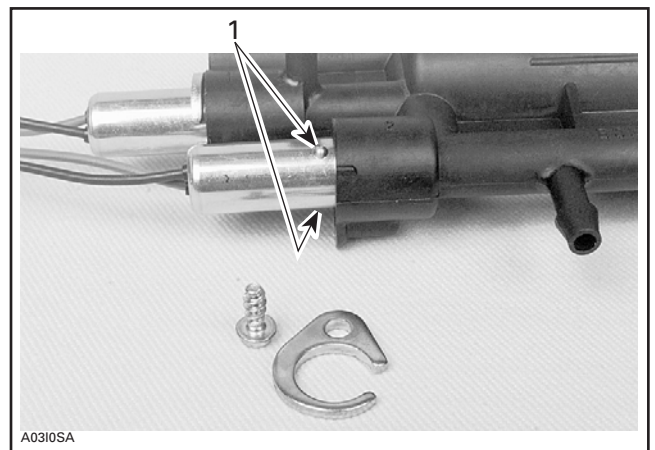
Installation of compensation solenoid must be done as follows:

Remove transfer gallery plug by pushing 2 tabs.



1. Transfer gallery plug

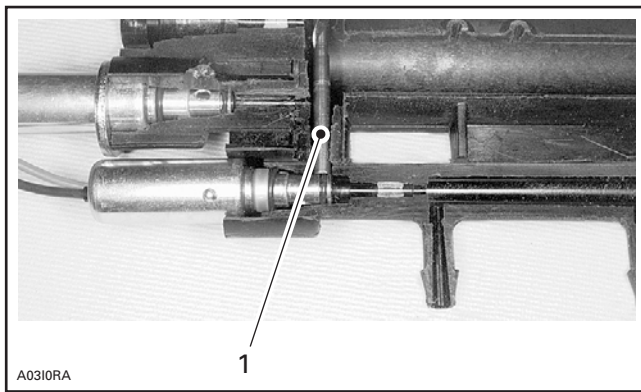
Partially insert compensation solenoid into DPM manifold.



1. Embosses not engaged

Insert a 3.969 mm (5/32 in) drill bit with its round end first into the transfer gallery.

Fully push solenoid into DPM manifold while maintaining a pressure on drill bit. This will guide the solenoid O-ring.

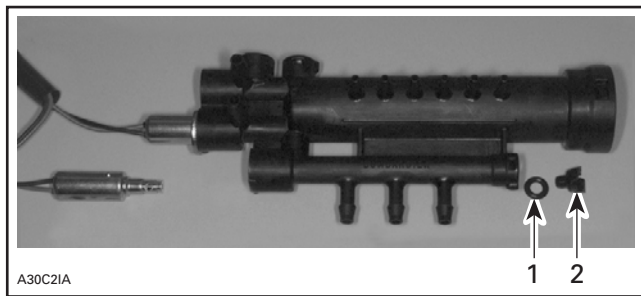


TYPICAL — CUT-AWAY

1. Drill bit round end guiding solenoid O-ring

Secure DPM compensation solenoid in place with its retaining plate and screw previously removed. Snap transfer gallery plug back in place.

Insert DPM vacuum collector end cap O-ring **no. 17** onto DPM vacuum collector end cap **no. 16**. Align cap dot with solenoid body groove and push it in its hole till it snaps in place.

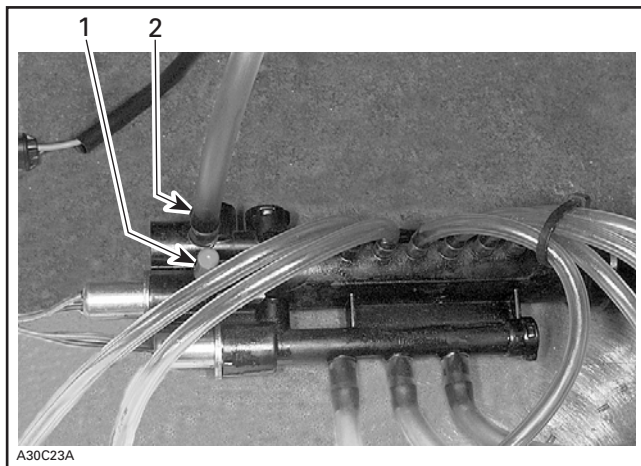


1. End cap O-ring no. 17
2. End cap no. 16

1999 and 2000 Models

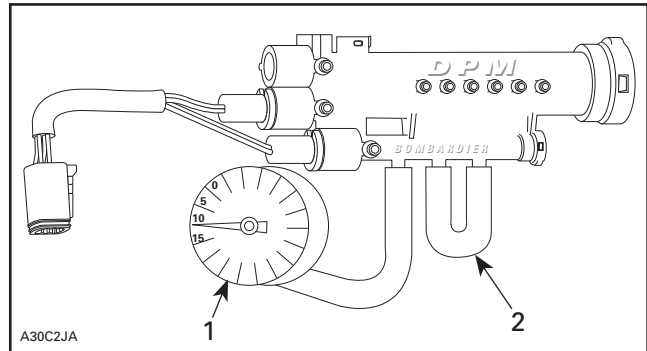
Using third and last cap **no. 9**, plug up air pump inlet fitting on air pressure manifold.

CAUTION: Ensure proper fitting is plugged up otherwise, severe engine damage will occur.



1. Fitting to be plugged up on pressure manifold
2. Vent hose **not to be plugged up nor removed**

Disconnect all 3 carburetor venturi hoses from DPM. Using tubing **no. 22**, connect 2 carburetor venturi nipples together as per following illustration and proceed with air tightness test by connecting tester onto third nipple; must hold 5 PSI vacuum for 10 seconds.



1. Tester
2. Tubing no. 22

Repair leaks (if any).

Reconnect carburetor venturi hoses to DPM.

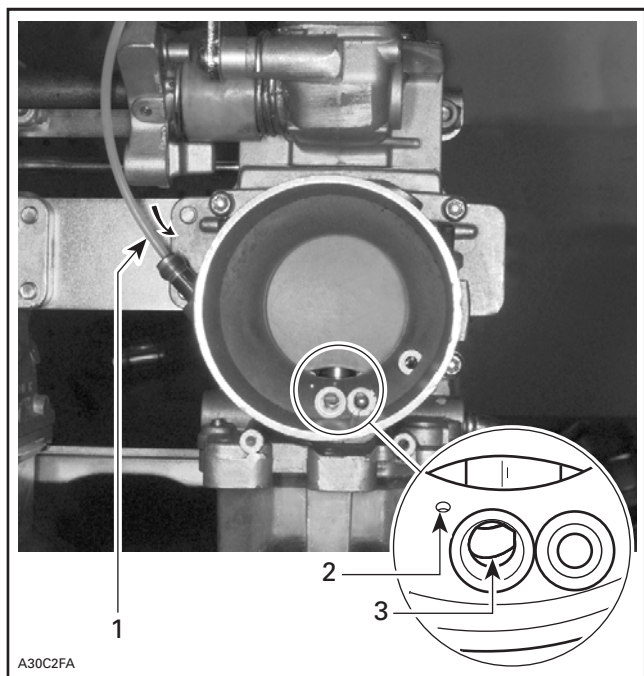
1999 Model Year Only

Cut the 1/2 m (20 in) long nylon wire **no. 21**, into 3 equal lengths; grind one end of each length as to sharpen a pencil, and insert in venturi hose inlet of each carburetor.

Remove and keep screw inside carburetors (no. 3 hole in illustration below).

Push nylon wire till the end until tip of it is visible through hole left by removal of screw.

For better result, use a regular pair of pliers and pinch nylon wire at approximately 6.35 mm (1/4 in) from carburetor venturi hose inlet and push nylon wire, back up and repeat with pliers until tip of wire is visible.



1. Nylon wire no. 21
2. Hole to block
3. Nylon wire seen through screw hole

Clean surfaces around holes to block (no. 2 in above illustration) with carburetor cleaner and get quick epoxy kit no. 23 ready. (Follow manufacturer's instructions).

Using supplied wooden stick, apply a small coat of epoxy on hole of each carburetor, wipe off excess with a clean cloth and set aside to dry for 3 minutes.

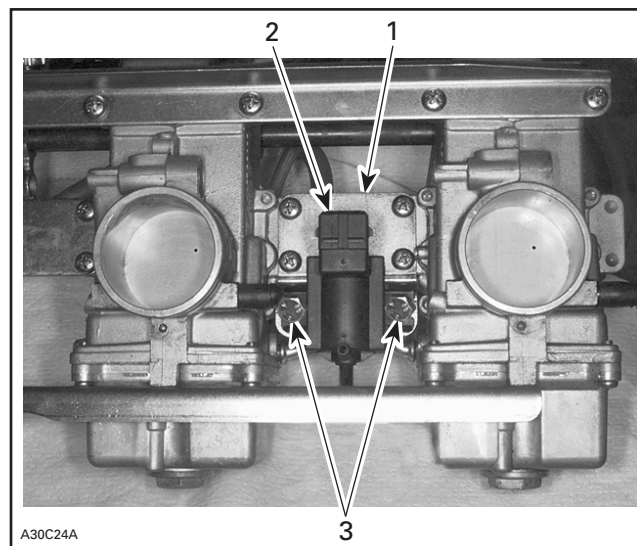
Pull out nylon wires from carburetors.

Reinstall previously removed screw inside carburetors.

1999 and 2000 Models

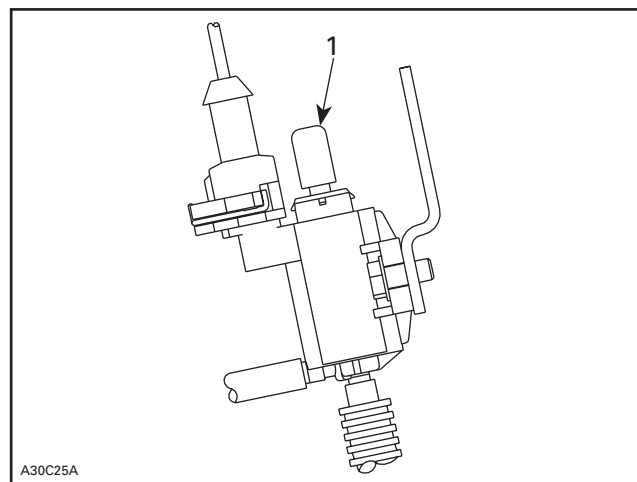
With carburetors laying flat on working bench, engine side up, exchange plate between CENTER and PTO side carburetors with solenoid plate no. 1 using same screws.

Secure solenoid valve no. 2 to solenoid plate using 2 self-tapping screws no. 4. Tighten at 2.7 to 3 N•m (24 to 27 lbf•in). Refer to following photo.



1. Solenoid plate
2. Solenoid valve
3. Self-tapping screws no. 4

Using cap no. 3, plug up top outlet fitting on solenoid valve. Refer to following illustration.



1. This outlet fitting **must be plugged up**

WARNING

Top outlet fitting on solenoid valve **must be plugged up** or fuel may exit and cause damage. Fuel is flammable and explosive under certain conditions. Always wipe off any fuel or oil spillage from the vehicle. Ensure work area is well ventilated. Do not smoke or allow open flames or sparks in the vicinity.

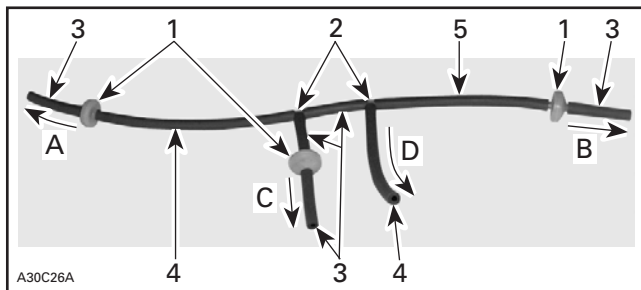
Remove and discard existing float body from CENTER carburetor and install float body no. 12 using same screws and making sure float body O-ring no. 13 is properly placed in new float body groove. **Transfer bottom plug with O-ring from old to new float body.**

⚠ WARNING

Fuel is flammable and explosive under certain conditions. Always wipe off any fuel or oil spillage from the vehicle. Ensure work area is well ventilated. Do not smoke or allow open flames or sparks in the vicinity.

Cut a length of 135 mm (5-5/16 in) from hose no. 7 and connect it from solenoid valve bottom fitting to CENTER carburetor float body fitting; secure hose to float body fitting with a locking tie no. 10, and cover hose with protector tubing no. 11.

Using three no. 5 check valves, two no. 6 T-fittings with the remaining of the meter (39 in) long no. 7 hose, cut hose to appropriate lengths and connect to reach pattern shown in next illustration.

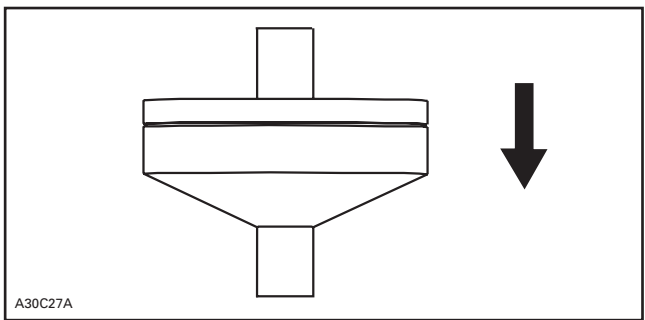


- 1. Check valve (3)
- 2. T-fitting (2)
- 3. 41 mm (1-39/64 in) length hose (5)
- 4. 135 mm (5-5/16 in) length hose (2)
- 5. 110 mm (4-21/64 in) length hose (1)
- A. To MAG side carburetor
- B. To PTO side carburetor
- C. To CTR carburetor
- D. To solenoid valve

Remove factory installed plugs from fuel inlet fitting of each carburetor and connect hoses as per pattern.

CAUTION: Make sure check valves are properly installed so they deliver gas instead of blocking its circulation. Coned side, like an arrow, shows in which direction gas circulates, towards carburetors.

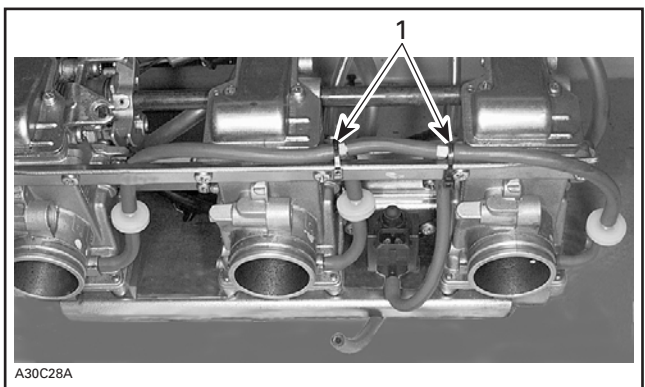
Refer to following illustration.



ARROW SHOWS DIRECTION OF GAS FLOW TOWARDS CARBURETORS

Route as described and secure to plate with 2 locking ties no. 10 as per following photo.

NOTE: Make sure both locking ties are over T-fittings in order not to kink hose.

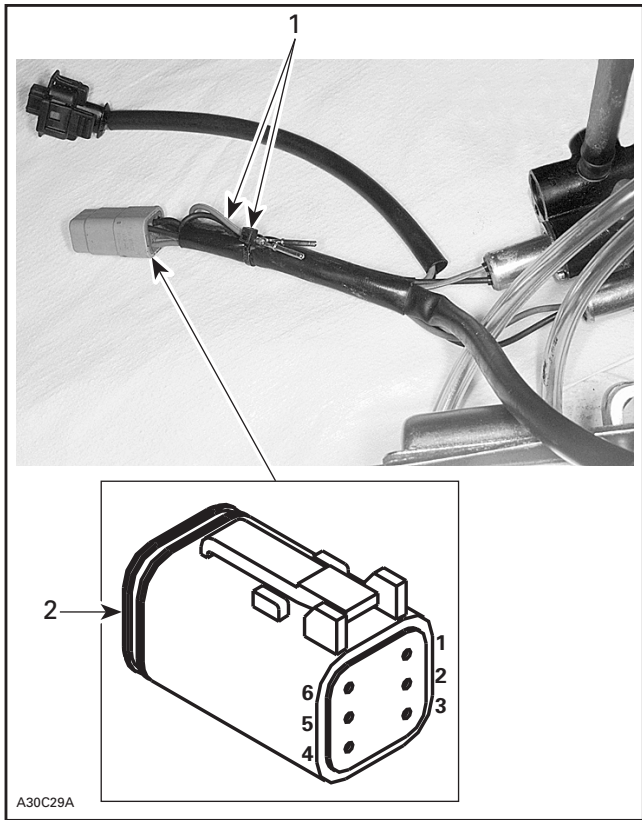


1. Locking ties

Enrichment Mode

From DPM electrical harness male connector housing, remove RED-GREEN wire (position 2 in illustration below) and its BLACK wire (position 5 in illustration below), fold them backward onto their plastic protector and secure them in place with a locking tie no. 10. This will cancel this enrichment solenoid.

Ensure you remove the good wires from connector (the ones from enrichment solenoid), refer to following illustration.



A30C29A

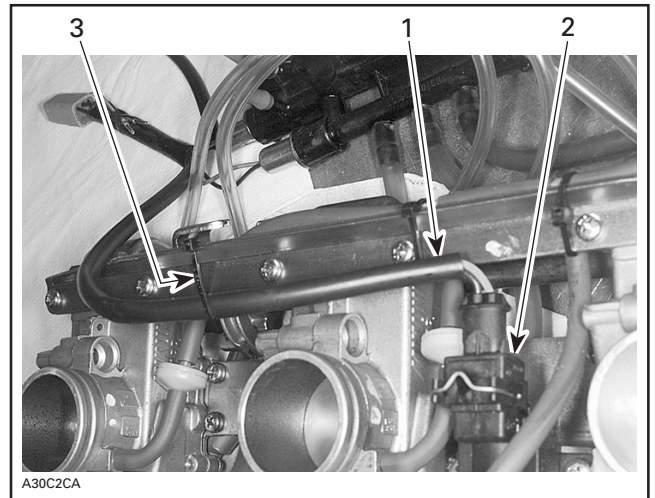
1. RED-GREEN (2) and BLACK (5) wires folded backward and secured with a locking tie
2. Positioning of wires **in male connector housing**
 - 1 — VIOLET
 - 2 — RED-GREEN
 - 3 — RED BLUE
 - 4 — BLACK
 - 5 — BLACK
 - 6 — BLACK

Connect solenoid valve harness no. 14 to solenoid valve.

Route RED-GREEN and BROWN-GREEN wires from **new solenoid valve** harness through DPM solenoid wires plastic protector and insert their terminals in DPM electrical harness male connector housing to replace previously removed RED-GREEN and BLACK wires.

RED-GREEN replaces RED-GREEN at position 2.
BROWN-GREEN replaces BLACK at position 5.

CAUTION: Do not mix their positioning; BROWN-GREEN wire connects on the same side than BLACK wires connect, while RED-GREEN wire connects on the colored wires side.

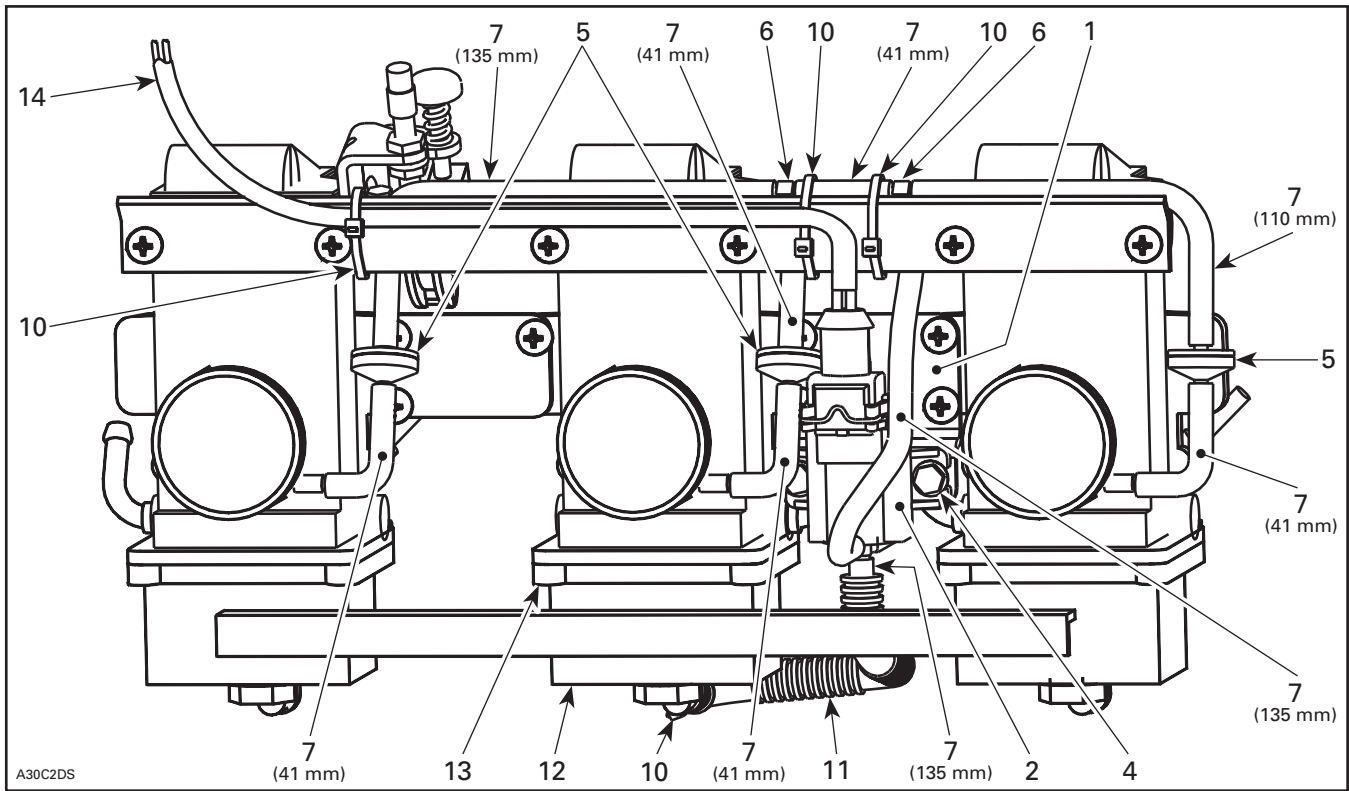


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SOLENOID VALVE HARNESS CONNECTED TO SOLENOID VALVE

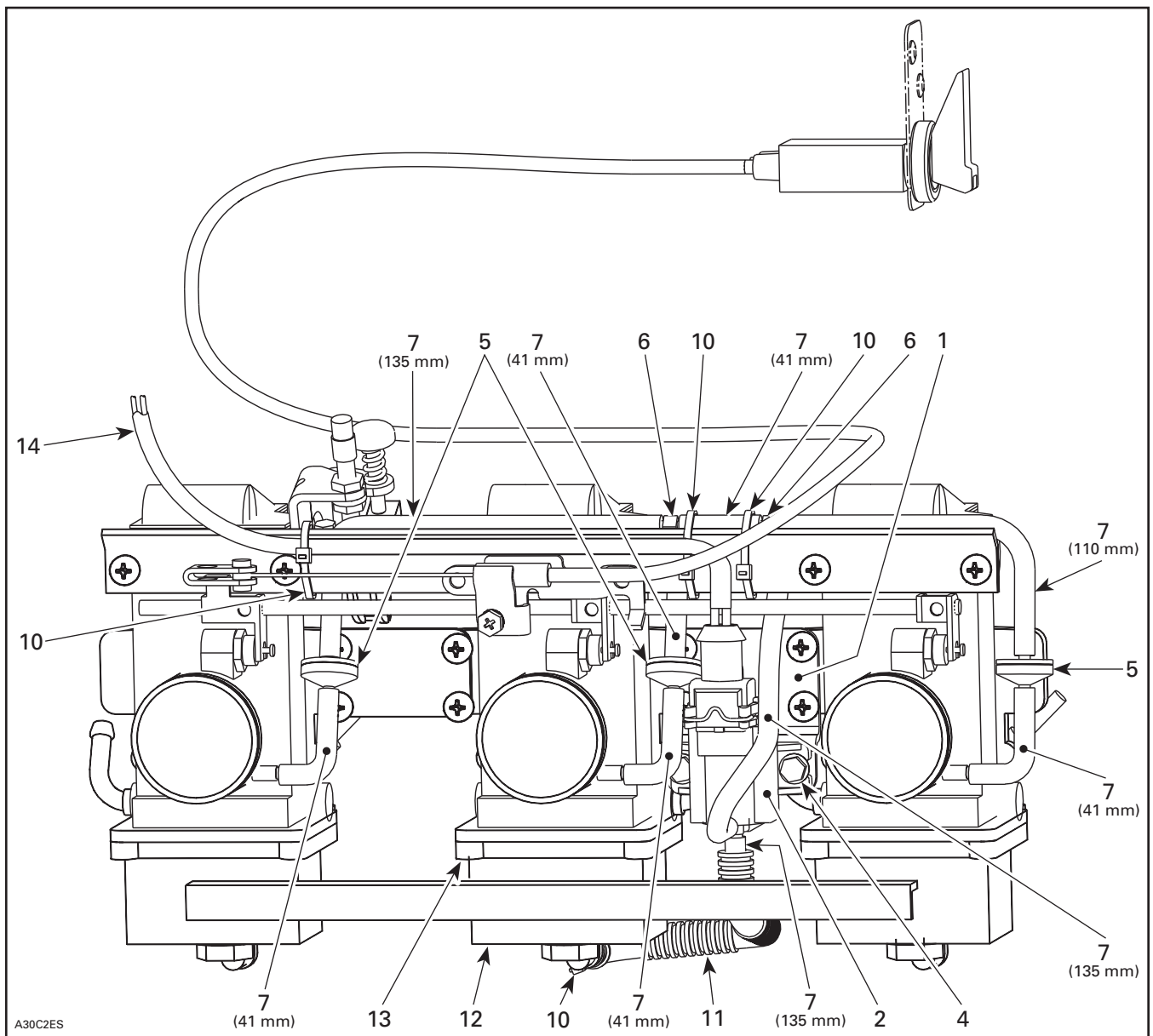
1. Solenoid valve harness
2. Solenoid valve
3. Locking tie

Using locking tie no. 10, secure solenoid valve harness to plate.



A30C2DS

FINAL INSTALLATION (1999 MODEL YEAR)
NUMBERS REFER TO "PARTS TO BE INSTALLED" LISTING OF PAGE 2



FINAL INSTALLATION (2000 MODEL YEAR)
NUMBERS REFER TO "PARTS TO BE INSTALLED" LISTING OF PAGE 2

Reinstallation

Refer to proper model year *Shop Manual* for carburetors/DPM reinstallation procedure.

2000 Models

Ensure choke cable is re hooked to air silencer.

1999 and 2000 Models

Ensure throttle cable travel is properly adjusted.

CAUTION: Prior to starting engine, ensure spark plugs are properly gapped at 0.45 ± 0.05 mm (0.018 ± 0.002 in) **otherwise spark plug will prematurely stop firing.**

TRA Clutch Recalibration

For no. 8 ramps installation, refer to *Warranty Bulletins* 99-9 and/or 2000-3, item B.

NOTE: Set calibration screws at position 3.

590 122 000

1.	404 161 966	Solenoid Plate	Plaque de solénoïde
2.	270 600 005	Solenoid Valve	Soupape solénoïde
3.	404 158 700	Cap	Capuchon
4.	210 251 180	Self-Tapping Screw (2)	Vis autotaraudeuse (2)
5.	512 059 286	Check Valve (3)	Soupape d'arrêt (3)
6.	414 222 400	T-Fitting (2)	Raccord en «T» (2)
7.	270 500 342	Hose (1 m (39 in))	Boyau (1 m (39 po))
8.	417 222 372	Ramp (3)	Rampe (3)
9.	420 960 770	Cap (3)	Capuchon (3)
10.	293 750 001	Locking Tie (5)	Attache (5)
11.	409 901 700	Protector Tubing (125 mm (5 in))	Gaine de protection (125 mm (5 po))
12.	404 161 965	Float Body	Cuve de flotteur
13.	404 137 000	Float Body O-Ring	Joint torique de la cuve de flotteur
14.	515 175 572	Solenoid Valve Harness	Faisceau de fils de la soupape solénoïde
15.	404 161 825	Compensation Jet 2.0	Gicleur d'appauvrissement 2.0
16.	512 058 921	Vacuum Collector End Cap	Bouchon du collecteur de dépression
17.	512 058 925	Vacuum Collector End Cap O-Ring	Joint torique du bouchon de collecteur de dépression
18.	404 161 826	Compensation Solenoid O-Ring (larger)	Joint torique du solénoïde d'appauvrissement (grand)
19.	404 161 827	Compensation Solenoid Plastic Spacer	Entretoise de plastique du solénoïde d'appauvrissement
20.	404 161 971	Compensation Solenoid O-Ring (smaller)	Joint torique du solénoïde d'appauvrissement (petit)
21.	512 059 402	Nylon Wire (1/2 m (20 in))	Fil de nylon (1/2 m (20 po))
22.	415 080 200	Tubing (102 mm (4 in))	Tube (102 mm (4 po))
23.	293 530 073	Quick Epoxy Kit	Nécessaire de colle époxy à prise rapide