



SAFETY
CAMPAIGN

ROADSTER
WARRANTY
Bulletin



⚠ WARNING: All involved customers must be notified, all involved units must be corrected as per instructions herein.

Campaign no.: 2008-0010
2009-0009
2010-0007

September 7, 2010 Subject: **Dynamic Power Steering (DPS) Unit Replacement**

No. **2010-7**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
2008	Spyder GS	All	All except vehicles included in the <i>SERIAL NUMBER LIST OF EXCLUDED VEHICLES</i>
2009	Spyder GS		
2010	Spyder RS		
	Spyder RT		

This bulletin no 2010-7 titled "Dynamic Power Steering (DPS) Unit Replacement" supersedes bulletin no 2009-2 titled "Dynamic Power Steering" (DPS) Software Update".

This DPS unit replacement is the second phase of the fix in safety campaign initiated in July 2009 under campaign no 2008-006 and 2009-0002.

For administrative purposes, new campaign numbers are issued to be used as instructed herein from the date of this bulletin on.

PROBLEM

A situation may occur where you may need to exert a force greater than expected to initiate the turning of the steering handlebar of your vehicle in order to correct its trajectory. At this increased level of force the handlebar may be turned more than you had intended. If this occurs you may steer your vehicle out of lane which increases the possibility of a crash with other traffic or of a drive off the road.

SOLUTION: 2ND PHASE

Replace the DPS unit with an improved version of DPS assembly.

INTRODUCTION

READ THIS BULLETIN COMPLETELY AND CAREFULLY BEFORE BEGINNING THE REPAIR.

The replacement procedure described in this bulletin is different from shop manual procedure.

The Parts Return procedure and the Steering Angle Sensor (SAS) Reset procedures have been modified. Read and understand the procedures before performing them.

The DPS unit will be delivered from factory, specifically programmed and calibrated for either GS/RS or RT model. Make sure to install proper DPS on proper vehicle.

PARTS REQUIRED

To perform this bulletin, one of the following kits will be required. Make sure to use proper kit for proper vehicle:

- Repair kit for GS and RS Series (P/N 709 400 963)
- Repair kit for RT Series (P/N 709 400 962)

Check if the kit contains all necessary parts:

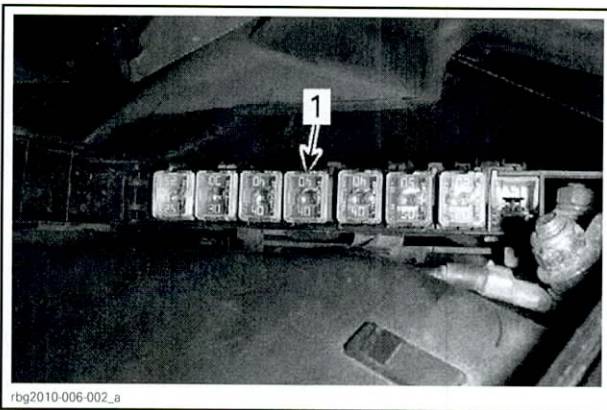
DESCRIPTION	P/N	QTY	
		KIT 709 400 963	KIT 709 400 962
DPS unit (for GS or RS models)	(P/N 709 400 964) (see part number label on DPS unit)	1	-
DPS unit (for RT models)	(P/N 709 400 961) (see part number label on DPS unit)	-	1
M8 elastic flange nut	(P/N 233 281 416)	1	1
M8 x 20 hexagonal flange screw	(P/N 207 582 044)	4	4
Cotter pin	(P/N 250 400 034)	2	2
M12 nut	(P/N 250 100 099)	2	2
M5 elastic flange nut	(P/N 233 251 414)	3	3
Anchorage dart	(P/N 219 800 059)	2	2

NOTE: At the launch of the campaign, dealers will not be able to place an order for replacement DPS units on BOSSWeb. BRP will autoship an initial allocation of replacement DPS units to each dealership. Dealers in the United States and Canada should refer to *ADMINISTRATIVE BULLETIN 2010-3* for details on parts logistics for this campaign. Dealers outside of the United States and Canada should contact their regional after sales office for specific instructions.

PROCEDURE

DPS Unit Removal

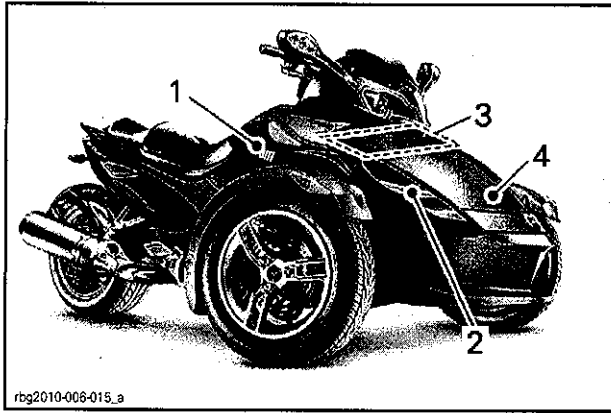
1. Open seat and remove the 40 A DPS motor fuse.



TYPICAL - SPYDER RS SM5 SHOWN
1. DPS motor fuse

NOTICE The DPS motor fuse must be removed to avoid any accidental DPS movement during its installation. Movement of the DPS may cause injury.

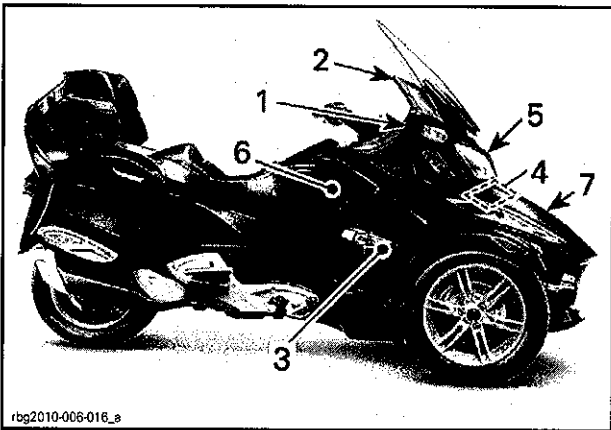
2. Remove plastic parts indicated in the following illustrations as well as the front storage compartment. Refer to the *BODY* subsection in proper shop manual.



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GS AND RS MODELS

1. Upper side panels
2. Front panels
3. Service cover (inside front storage compartment)
4. Front storage compartment

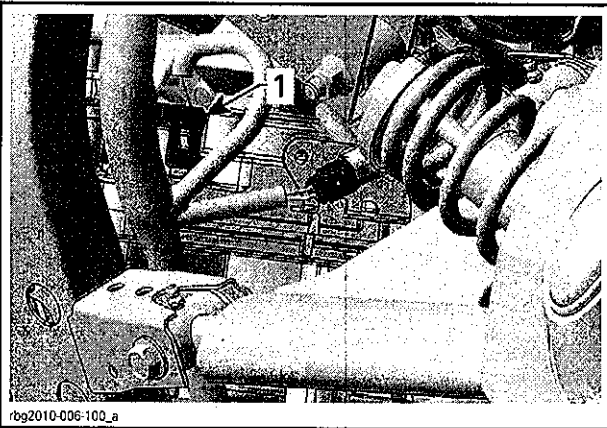


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RT MODELS

1. Mirrors
2. Wind deflectors
3. Middle side panels
4. Service covers (inside front storage compartment)
5. Front fascia
6. Top side panels
7. Front storage compartment

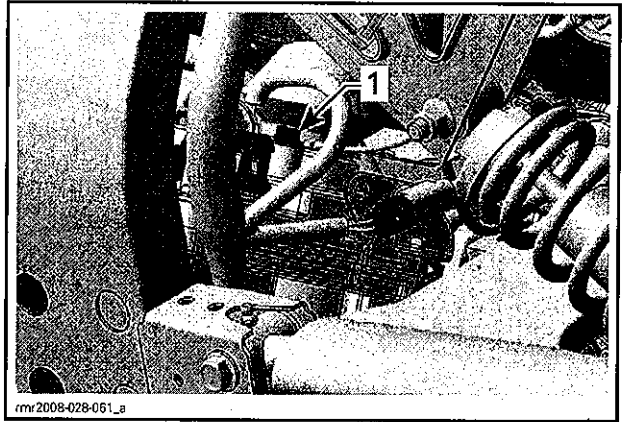
3. Disconnect the DPS unit power connector.



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1. DPS unit power connector

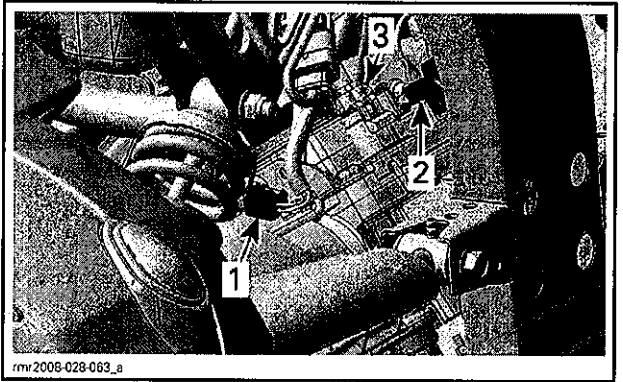
4. Remove the DPS unit ground wire. Keep screw and star washer for reinstallation.



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1. Ground wire on DPS unit

5. Disconnect the DPS unit control and motor connectors.

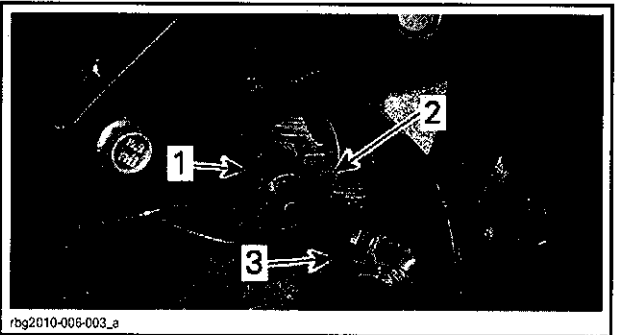


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1. RH speed sensor connector
2. DPS unit control connector
3. DPS unit motor connector

6. Detach the LH and RH speed sensor connectors from mounting brackets.

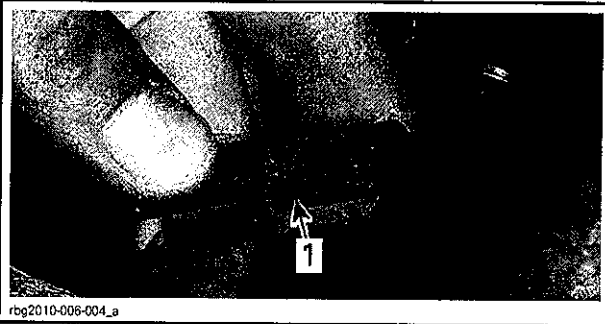
6.1 Insert a small screwdriver, or another small tool, between speed sensor connector and anchorage dart.



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1. Speed sensor connector
2. Anchorage dart
3. Small screwdriver

6.2 Press down the inner tab to unlock the connector.



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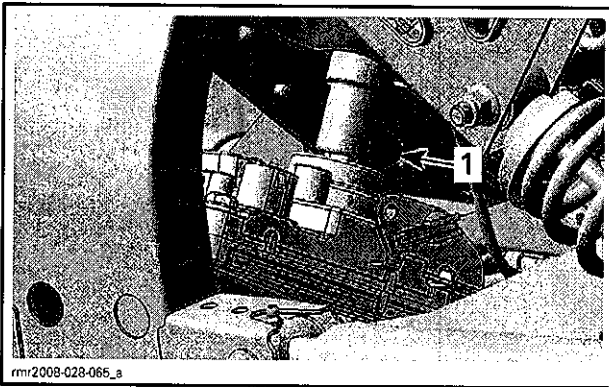
CONNECTOR REMOVED FOR CLARITY PURPOSE

1. Inner locking tab

6.3 Slide connector out of the anchorage dart.

7. On some models, lift the rubber bellows at the end of the steering column to reach the bolt.

8. Remove the bolt securing the lower end of steering column to the DPS unit shaft. Keep bolt and discard nut.

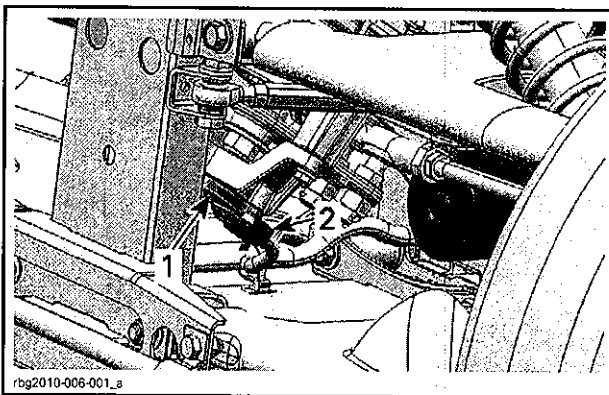


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TYPICAL

1. Steering column bolt

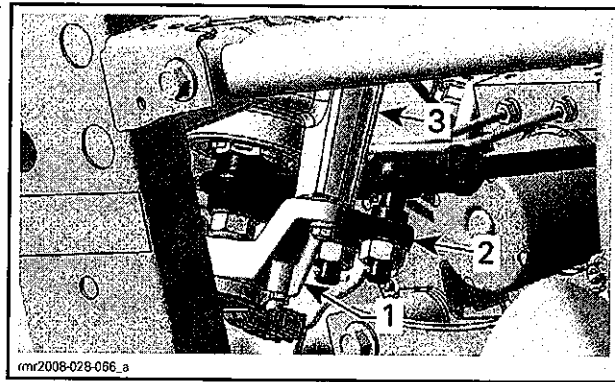
9. Unplug the steering angle sensor (SAS) connector.



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1. SAS sensor
2. SAS sensor connector

10. Remove tie-rod ends from pitman arm. Discard cotter pins and nuts. Keep washers for reinstallation.

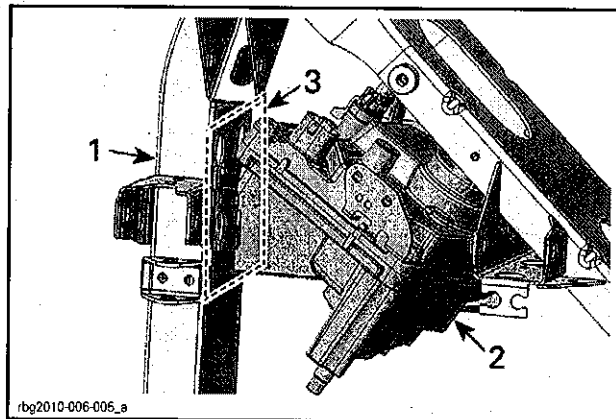


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1. Steering angle sensor support
2. Pitman arm
3. DPS unit

11. Remove the air deflector from the RH lower suspension arm.

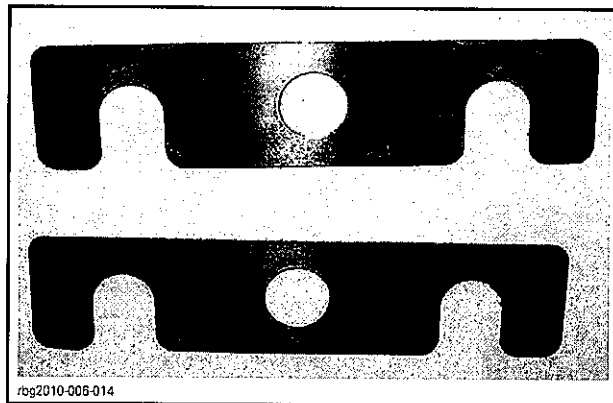
NOTE: Some models may have shims of 0.25 mm (.01 in) installed between DPS unit and frame. Check location and quantity of shims at each screw prior to removing DPS unit. These shims must be reinstalled at the same place.



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MANY PARTS REMOVED FOR CLARITY

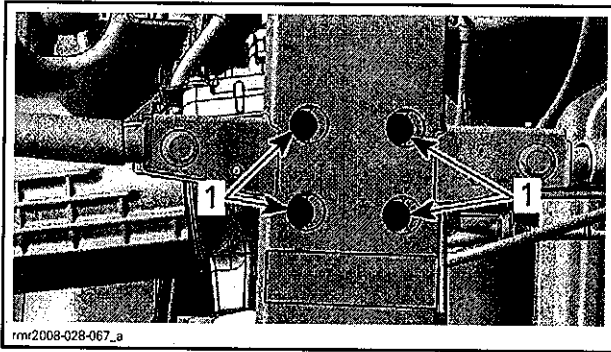
1. DPS unit
2. Front member of frame
3. Shims location



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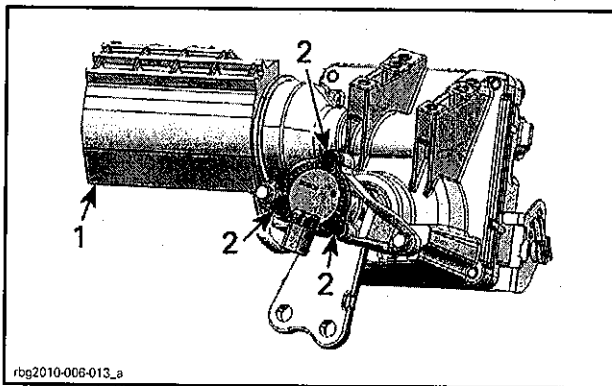
DPS SHIMS

12. While supporting the DPS unit, remove and discard screws securing it to frame. Use a magnetic socket or be careful not to drop screws in frame.



1. DPS screws

13. Remove the DPS unit from the vehicle.
14. Unscrew the three retaining bolts securing the SAS sensor to its support. Keep bolts for re-installation and discard nuts.



1. DPS unit
2. SAS sensor screws

DPS Unit Installation

Keep all documents provided in the DPS box.

NOTE: Confirm DPS part number before beginning the installation of the DPS.

1. Install the SAS sensor on its support using previously removed M5 x 35 socket bolts and new M5 elastic flanged nut.

PART	TORQUE
SAS sensor bolts	4.5 N•m ± 0.5 N•m (40 lbf•in ± 4 lbf•in)

2. Install DPS unit on frame.
 - 2.1 Apply XPS SYNTHETIC GREASE (P/N 293 550 010) on DPS unit splines.
 - 2.2 Position DPS unit in frame.
 - 2.3 Index and insert steering column splines on DPS shaft splines.

- 2.4 Install all previously removed shims at proper position.
- 2.5 Secure DPS units using new M8 x 20 hexagonal flange screws.

PART	TORQUE
DPS unit screws	28 N•m ± 2 N•m (21 lbf•ft ± 1 lbf•ft)

3. Secure lower end of steering column using previously removed bolt and new M8 elastic flange nut.

PART	TORQUE
Steering column bolt	31.5 N•m ± 3.5 N•m (23 lbf•ft ± 3 lbf•ft)

4. Reinstall tie-rod ends to pitman arm using new M12 nuts, original washers and new cotter pins.

PART	TORQUE
Tie-rod end nuts	62.5 N•m ± 7.5 N•m (46 lbf•ft ± 6 lbf•ft)

5. Connect the SAS sensor connector.
6. Reconnect the DPS ground wire using previously removed screw and star washer.

PART	TORQUE
DPS ground wire screw	10 N•m ± 2 N•m (89 lbf•in ± 18 lbf•in)

7. Reconnect the DPS unit connectors (power, control and motor).
8. Install the LH and RH speed sensor connectors on their mounting brackets using new anchorage darts.
9. On the RH lower suspension arm, reinstall the air deflector.
10. Install front storage compartment, refer to *BODY* subsection in shop manual. Do not install service panel (s) and keep the front storage compartment cover unlatched.
11. Reinstall the previously removed 40 A DPS motor fuse.

SAS (Steering Angle Sensor) Reset

To perform the SAS reset, vehicle must be on ground and front wheels must be pointed straight ahead.

NOTE: Make sure front storage compartment cover is unlatched before beginning the procedure. This will allow reaching the communication port without touching handlebar.

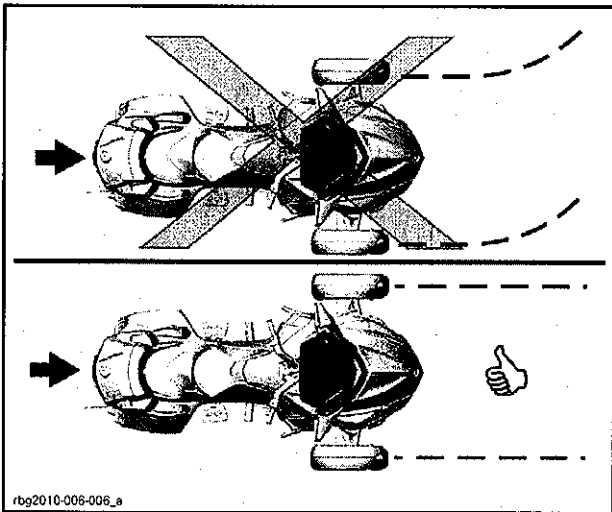
1. Place vehicle on ground, not on "work table".
2. Inflate tires to the specified air pressure. Refer to the following table.

COLD TIRE PRESSURE RECOMMENDATION	
FRONT	REAR
103 kPa (15 PSI)	193 kPa (28 PSI)

3. Start and stop engine 5 times. This will stabilize the level of magnetization in the system and will prevent a possible drift in torque sensor reading.

NOTE: Make sure battery is fully charged or use a power pack.

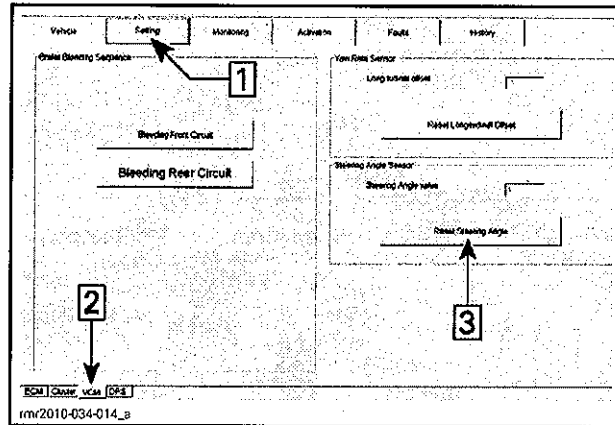
4. After the fifth starting, stop engine and place the ignition key to OFF position.
5. By turning the handlebar, adjust front wheels as straight as possible.
6. Select a reference point (an object, a line, etc.) in front of the vehicle. By pushing the rear of the vehicle, move the vehicle forward (approximately 3 m to 6 m (10 ft to 20 ft)) to confirm that wheels are straight. The vehicle should roll straight without veering off to the right or left.



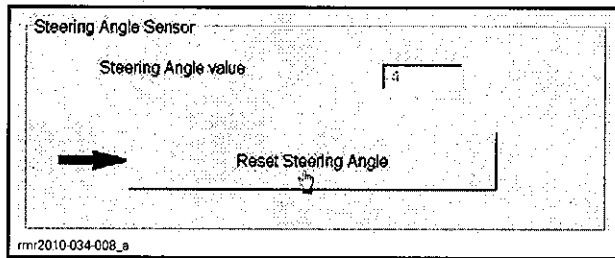
7. Repeat steps 1 and 2 until wheels are straight ahead and vehicle rolls straight.
8. Without moving vehicle or handlebar or sitting on vehicle, connect vehicle to the MPI-2 INTERFACE CARD (P/N 529 036 018), refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection if necessary.

NOTE: Use version B.U.D.S. version 2.3.29 until a new version is available for Can-Am Roadster. DO NOT use versions that are specific to other BRP products.

9. Open B.U.D.S. and turn ignition key to ON position.
10. In B.U.D.S., click on the Read Data button.
11. Choose the Setting page tab, then select VCM tab.
12. Press Reset Steering Angle button.



STEERING ANGLE SENSOR RESET
 Step 1: Choose Setting page tab
 Step 2: Select VCM tab
 Step 3: Press on Reset Steering Angle button



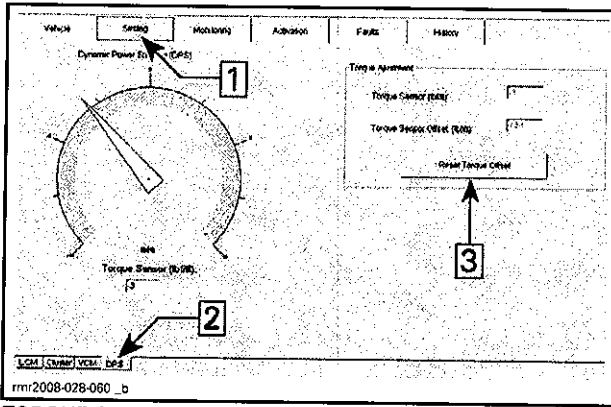
RESET STEERING ANGLE BUTTON

13. Choose "OK" on next screen to complete SAS reset procedure.

Torque Sensor Reset

NOTE: Make sure handlebar position has not been disturbed from previous step (SAS reset), is free (no hands touching, no B.U.D.S. connection harness touching, etc.) and that it remains untouched throughout the torque sensor reset procedure.

1. Choose the DPS tab.
2. Press Reset Torque Offset button.



TORQUE SENSOR OFFSET RESET
 Step 1: Choose Setting page tab
 Step 2: Select DPS tab
 Step 3: Press on Reset Torque Offset button

3. Choose 'OK' on next screen to complete torque sensor reset procedure.
4. Clear all fault codes in B.U.D.S.
5. Exit B.U.D.S. and disconnect B.U.D.S. tools.
6. Reinstall all remaining parts.
7. Perform short test ride to confirm all works normally.

NOTE: Within the test ride, make sure to turn handle bar fully in both directions. Confirm that DPS provides adequate assistance in both directions and no abnormal resistance or behavior is felt.

WARRANTY

Submit a warranty claim using the following information:

GS Series

CAMPAIGN NUMBER	2008-0010 2009-0009
Claim Type	Campaign claim
Action	Repair
Flat Rate Time	1.7 hour

RS Series

CAMPAIGN NUMBER	2010-0007
Claim Type	Campaign claim
Action	Repair
Flat Rate Time	1.7 hours

RT Series

CAMPAIGN NUMBER	2010-0007
Claim Type	Campaign claim
Action	Repair
Flat Rate Time	2 hours

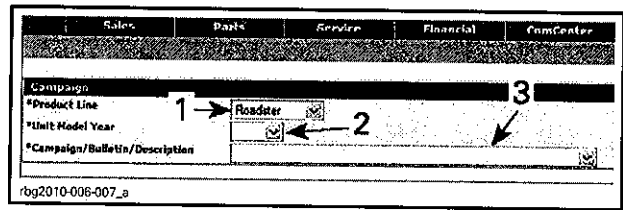
Click in the REPAIR BOX while completing your claim on BOSSWeb.

REPAIR	✓
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Campaign Claiming Procedure

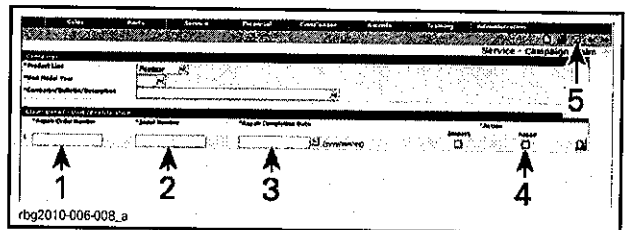
In BOSSWeb, under SERVICE tab select Campaign Claim.

1. In CAMPAIGN, select
 - Product Line
 - Unit Model Year
 - Campaign/Bulletin/Description.



1. Product Line
2. Unit Model Year
3. Campaign/Bulletin/Description

2. In Claim Detail - Unit Identification:
 - Type in the Repair Order Number
 - Type the vehicle serial number
 - Select the Repair Completion Date
 - Check the Repair box
 - Hit the verify button.



1. Repair order number
2. Vehicle serial number
3. Repair date
4. Repair box
5. Verify button

NOTE: A status error will occur: ERROR 1038 SERIAL NO. PROD. CODE MISSING).

3. In the box for Old Serial No., type in DPS.
4. In the box for New Serial No., enter the new DPS serial number.

NOTE: The serial number of the new DPS is indicated on the white identification tag for warranty claim.

is out of normal warranty, please contact the Service Department to request a Special Authorization. This special 2 year coverage is not covered under BEST in order to avoid the \$50 deductible to the customer.

IDENTIFICATION TAG FOR WARRANTY CLAIM

961A22810100 ← 1

DPS serial #: _____
(mandatory for warranty claim)

Work order #: _____

VIN #: _____

IMPORTANT: This document must be attached to the work order for warranty claim.
(BRP part # 21980201)

21980201_b

WHITE IDENTIFICATION TAG FOR WARRANTY CLAIM

3

1 2

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1. Old serial no., type in DPS
 2. New serial no., enter the new DPS serial number included on white identification tag for warranty claim
 3. Send arrow
5. Then submit your claim by clicking on the SUBMIT arrow.

PARTS RETURN PROCEDURE

Dealers in the United States and Canada should refer to *ADMINISTRATIVE BULLETIN 2010-3* for details on the parts return procedure for this campaign. Dealers outside of the United States and Canada should contact their regional after sales office for specific instructions.

PARTS IN INVENTORY

If you have previous version of DPS unit in stock it must be returned, please claim under PARTS CLAIM – FROM INVENTORY.

SPECIAL 2 YEAR WARRANTY ON DPS

The DPS installed on the customer unit for campaign 2008-0010, 2009-0009 and 2010-0007 will come with a 2 year warranty from the date of installation (campaign repair date). If the DPS fails within 2 years after the campaign has been performed and the unit is still under normal warranty, submit a claim under normal warranty. If the unit

SERIAL NUMBER LISTING OF EXCLUDED VEHICLES

Model: A1AH

000170
From 000172 to 000185
From 000188 to 000190
From 000192 to 000193

Model: A1AK

From 000260 to 000271
000273
From 000275 to 000280
000282
From 000285 to 000288
From 000290 to 000293
000314
000325
From 000335 to 000368

Model: A1AM

From 000043 to 000044
From 000046 to 000047
From 000199 to 000202
From 000204 to 000205
From 000207 to 000212
From 000232 to 000243
From 000245 to 000253
From 000255 to 000258
From 000260 to 000289
From 000292 to 000297
From 000300 to 000302
From 000326 to 000327
From 000330 to 000345
From 000348 to 000349
000355

Model: A1AP

000340
000344
From 000347 to 000357

Model: A1AR

From 000001 to 000034

Model: A1AS

From 000001 to 000089

Model: A1AT

From 000001 to 000014
From 000016 to 000059

Model: A1AU

From 000008 to 000042
From 000044 to 000048
From 000050 to 000056
000059
000062
From 000064 to 000065

Model: A1AU (cont'd)

000068
From 000076 to 000078
From 000084 to 000121
From 000141 to 000188

Model: A2AB

000144
000148
000152
000158
000160
From 000162 to 000193
From 000230 to 000235
From 000237 to 000239
From 000241 to 000267
From 000269 to 000274
From 000276 to 000277
From 000302 to 000303
From 000305 to 000310
From 000326 to 000337
From 000434 to 000445

Model: A2AD

000004
From 000028 to 000038
From 000051 to 000062

Model: A2AF

000004
From 000029 to 000037
From 000039 to 000047
000049
000051
From 000053 to 000058
From 000060 to 000061
From 000065 to 000075
From 000088 to 000110

Model: A2AK

000119
000123
000128
000139
000178
From 000182 to 000186
From 000188 to 000200
From 000248 to 000251
000254

Model: A3AC

From 001240 to 001241
From 001246 to 001248
From 001345 to 001356

Model: A4AB

001204
001247
From 001259 to 001260
001310
001315
From 001470 to 001554
From 001556 to 001601

Model: A9AC

From 001288 to 001289
From 001291 to 001292
From 001309 to 001344

Model: A9AF

002078
002082
002172
From 002174 to 002175
From 002177 to 002195

Model: B1AB

From 000541 to 000588

Model: B5AB

001059
From 001602 to 001613

Model: B6AB

From 000055 to 000056
From 000099 to 000101
From 000103 to 000110
From 000112 to 000113
From 000116 to 000117
From 000119 to 000121
From 000123 to 000124
000127
000137