ROADSTER
SERVICE
Bulletin

**January 23, 2014**   Subject: **ECM Software Update - optional**   No. **2012-14**

YEAR	MODEL	MODEL NUMBER
2011	Spyder RT SM5 and SE5	All
2012		

This is an optional software update for vehicles which already had *WARRANTY BULLETIN 2012-8 OR 2012-10* done. It is not covered under warranty and could be performed during normal vehicle maintenance.

This software update includes improved diagnostics functions.

If the following icon appears when connecting the vehicle to B.U.D.S., it means that an update is available.

rmr2010-020-003_a
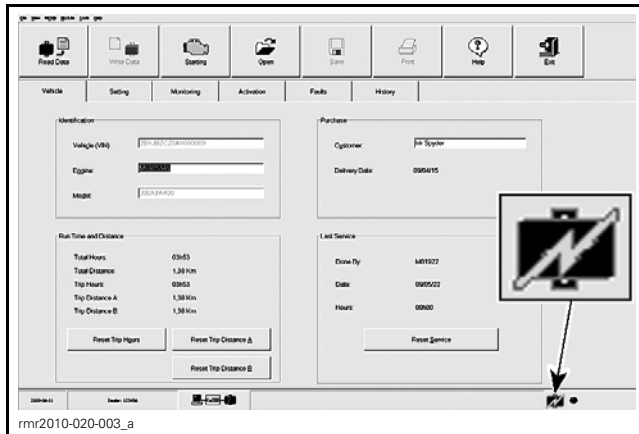
PARTS REQUIRED

The following B.U.D.S. version is required and available on *KNOWLEDGE CENTER* :

> B.U.D.S. - R3.5.1 (or newer) for
> Roadster - Single File

1. Click on "Advanced Search".

2. Select "Diagnostic Software".

3. In the **keyword(s)** field, type in the B.U.D.S. single file number.

4. "SEARCH".

5. Identify and download proper file.

Please note that you can also type in the **keyword(s)** field the B.U.D.S. single file number directly without going in the "Advanced Search".

PROCEDURE

ECM Software Update

The following items must be carried out:

– Preparation
– ECM software update
– Update validation
– ECM initialization
– Clearing faults

Notes For The Module Updates

MODULE	APPROXIMATE TIME FOR THE REFLASH
ECM software update	4-6 minutes

For more detailed explanations on the content of these updates, please refer to the *BRP KNOWLEDGE CENTER*. In the **keyword(s)** field, enter either the article number OR the title between quotes:

ARTICLE NUMBER	TITLE
52965	"Roadster December 2013 ECM update"

Preparation

Computer and Vehicle Preparation

NOTICE
Continuous power to the computer and to the vehicle is mandatory during this operation or damage to a module could occur. Be sure to disable the computer screen saver. If using a portable computer, be sure to provide a continuous supply of electrical power by connecting it to a wall outlet. To ensure there is enough power to the vehicle electronic modules to complete the software updates, use a portable power pack. NEVER use a battery charger instead of portable power pack. The battery charger may cause electrical noise causing problems during the update. These software updates of the vehicle modules will take some time to complete and MUST NOT be interrupted. Although computer screen may blank or may seem to freeze for a while, do NOT interrupt B.U.D.S. to allow updates to be completed. Do not touch the PC. Although the cluster will blank, do NOT interrupt B.U.D.S. to allow updates to be completed. Do not touch the vehicle.

1. Place the vehicle on a level surface.
2. Install 4 wheel chocks (2 on each front wheel) to prevent any movements of the vehicle during the procedure.

rbg2010-004-001_a

*WHEEL CHOCK INSTALLATION, EACH FRONT WHEEL*

3. Set transmission to NEUTRAL.

NOTE: On SE5 models, the engine may need to be started to set transmission to"N". When done, stop engine.

4. RELEASE the parking brake.
5. Ensure trailer mode is deactivated (if applicable). Refer to *OPERATOR'S GUIDE*.
6. Ensure the vehicle battery is fully charged.
7. Connect a portable power pack (fully charged) to the vehicle battery.

NOTE: Depending on vehicle model and year of production, the portable power pack can be connected to the battery at one of the following three locations.

rbg2010-003-032

CONNECTION AT BATTERY POSTS UNDER SEAT

rmo2013-003-032_a
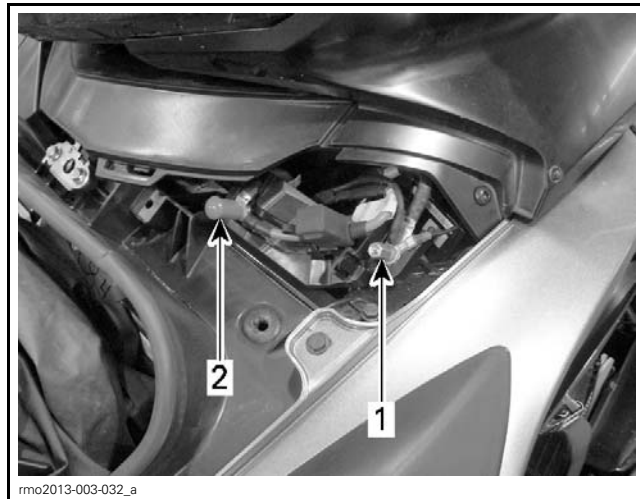
CONNECTION AT JUMP START POSTS IN LH SERVICE CENTER, UNDER FRONT STORAGE COMPARTMENT COVER
1. NEGATIVE (-) post
2. POSITIVE (+) post

B.U.D.S. Connections

1. Connect MPI before starting B.U.D.S. to ensure proper operation. Refer to the applicable *SHOP MANUAL* for details:
   – Section 03: *ELECTRONIC MANAGEMENT SYSTEMS*
   – Subsection 03: *COMMUNICATION TOOLS AND B.U.D.S.*

MANDATORY TOOLS
A personal computer (laptop or desktop)
MPI-2 INTERFACE CARD (P/N 529 036 018)
MPI-2 DIAGNOSTIC CABLE (P/N 710 000 851)
OPTIONAL TOOL
Extension cable available at electronic retail outlets. Do not exceed 7.5 m (25 ft)

2. Start B.U.D.S. and logon.
3. Turn ignition key ON.

TYPICAL - IGNITION KEY ON

NOTE: If the following message does not automatically go away, click the **Retry** button.
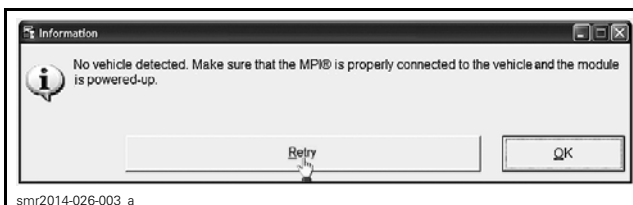
RETRY BUTTON

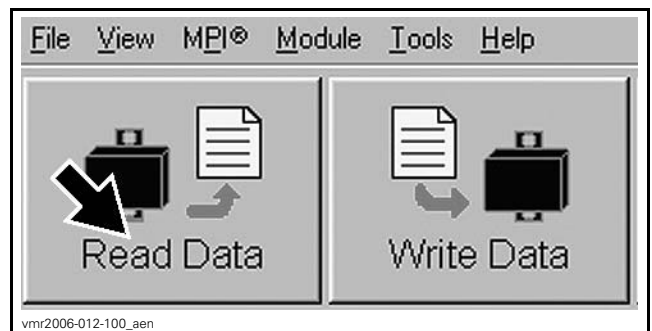Compare number of modules shown in B.U.D.S. with following table.
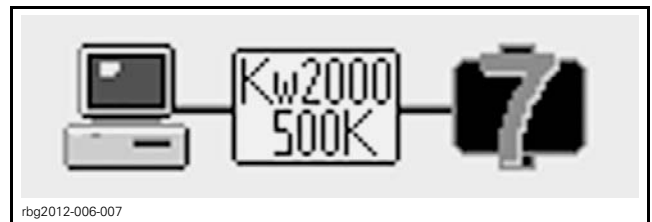
EXAMPLE

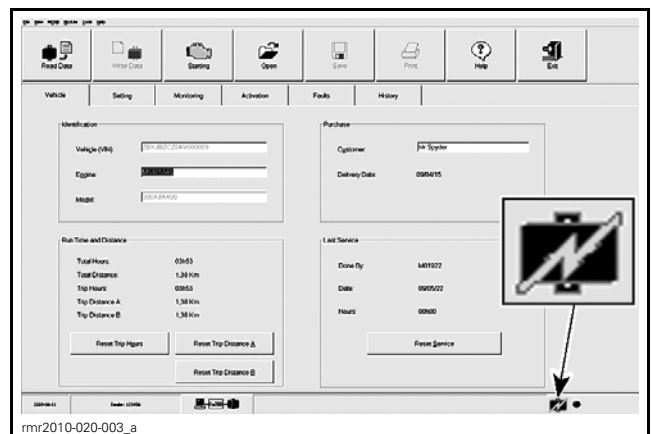| MODEL	NUMBER OF MODULES CONNECTED
RT SM5	6
RT SE5	7

NOTE: If a CAN Configuration Kit (CCK) is installed, the number of modules listed in B.U.D.S. will be increased by one.

ECM Software Update
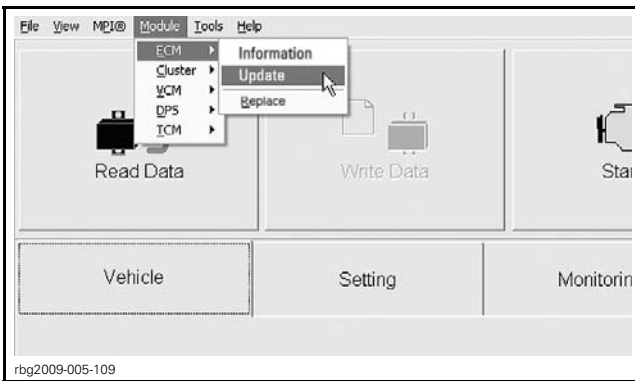
1. Click on **Read Data**.

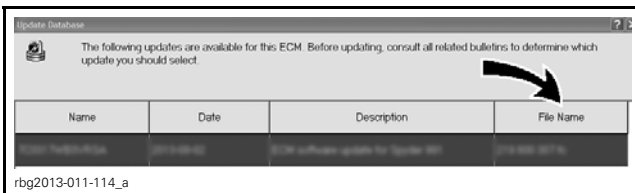NOTE: If the following icon appears, an update is available.

UPDATE AVAILABLE ICON

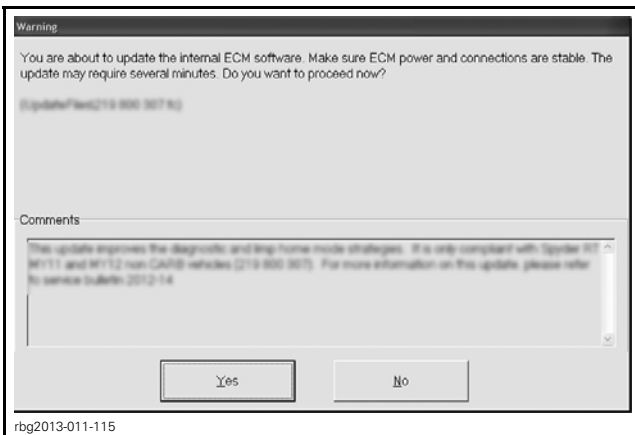2. In the MODULE drop down menu, select ECM, UPDATE.

TYPICAL - MODULE SUBMENU, ECM, UPDATE

3. Select the "File Name" **219 800 317.fc**, then click "OK".

FILE TO BE SELECTED

4. When the following message appears, click "Yes" to start the update.

ECM UPDATE CONFIRMATION - CLICK "YES"

5. If the following message appears, then there is "Active" or "Occurred" fault(s).

5.1 Clicking "OK" will prompt you to the FAULT screen.

5.2 Before proceeding with the update, fault codes relating to a current customer complain should be repaired; all other fault codes should be cleared.
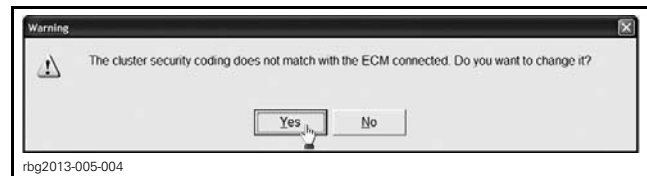
ECM Software Update continued

NOTICE While the ECM is being updated, an hour glass will appear on the computer. The computer screen and cluster might also go blank. DO NOT TOUCH ANYTHING (PC and vehicle) until the following message appears. Then, click the "OK" button.

SUCCESSFUL ECM UPDATE CONFIRMATION - CLICK "OK"

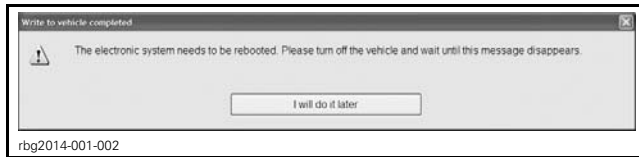6. When the following message appears, click "Yes".

CLUSTER SECURITY MATCHING REQUEST - CLICK "YES"

7. When the following message appears:

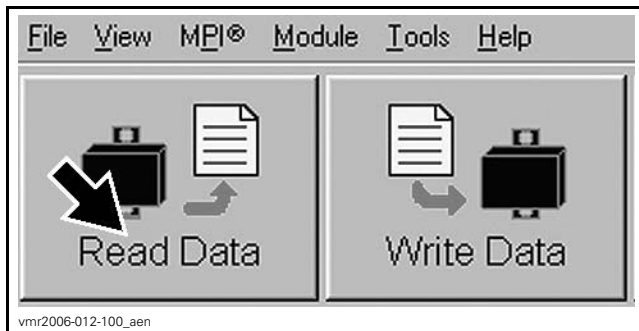7.1 Turn ignition key to OFF.

7.2 Wait until the message vanishes.

rbg2014-001-002

▶ *NEW IMAGE* ◀

8. When the following message appears, turn ignition key to ON and wait until the message vanishes.

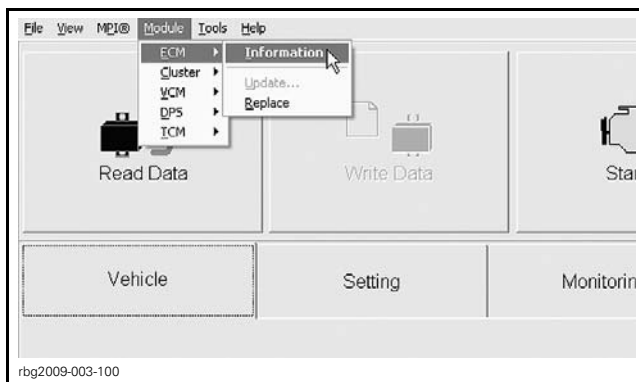rbg2013-005-005_a

9. The ECM software update is completed.

Update Validation

1. Click on Read Data button.

vmr2006-012-100_aen
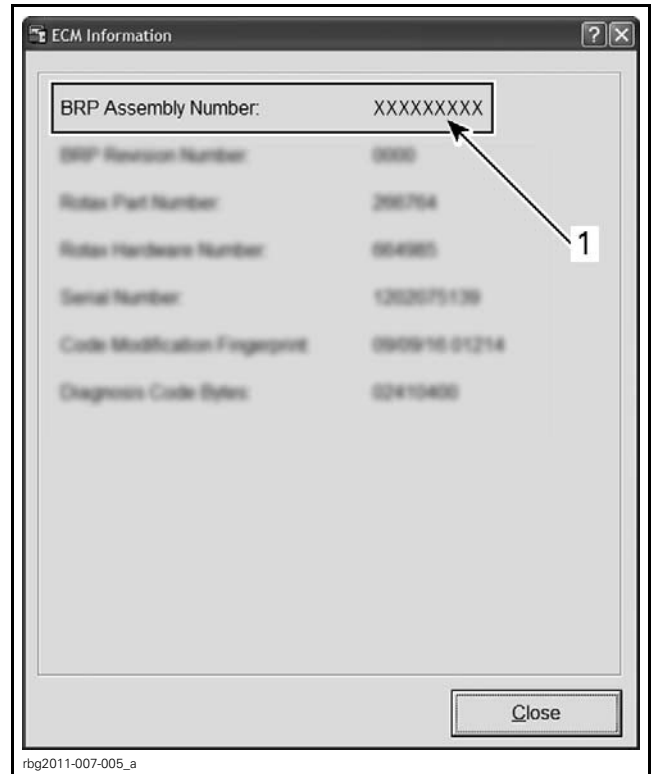
READ DATA BUTTON

2. Check if the update has been successful.

rbg2009-003-100

MODULE, ECM, INFORMATION

3. Look at the "BRP Assembly Number", compare with list in table.

rbg2011-007-005_a

TYPICAL
1. BRP Assembly number

ECM INFORMATION		
BRP assembly number	MY 2011 - 2012	420666565 420666567 420666496 420666498

4. If any number in the table is found in B.U.D.S., then the update was successful.
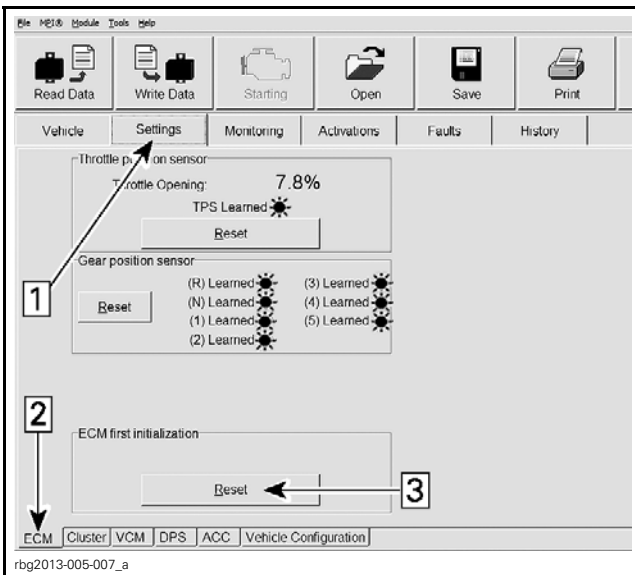
5. If a wrong number is found, repeat the update procedure.

ECM Initialization

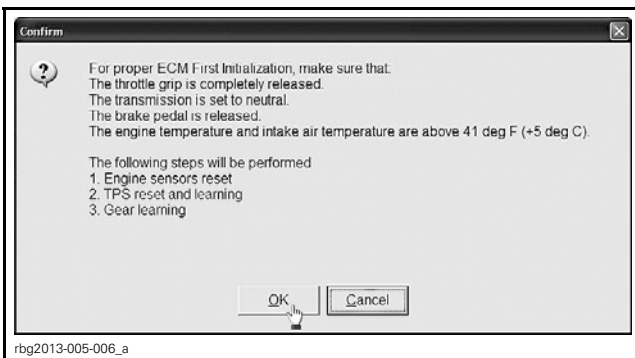IMPORTANT: Do not activate anything on the vehicle while performing a module reset.

ECM First Initialization

1. In B.U.D.S., click the items in the illustrated order.

rbg2013-005-007_a

Step 1: Setting tab
Step 2: ECM tab
Step 3: Reset (ECM First Initialization)

2. When the following message appears:
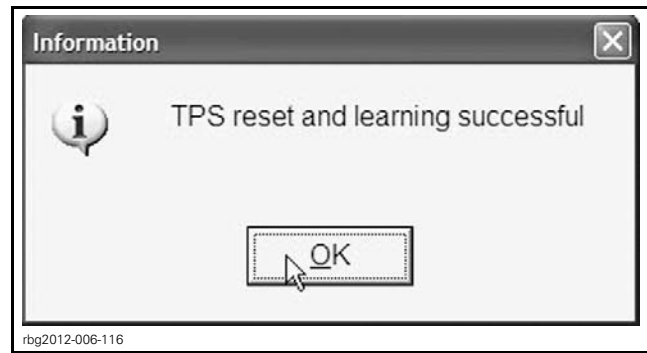   2.1   Follow on screen instructions.
   2.2   Click "OK".

rbg2013-005-006_a

CLICK OK

3. When the following message appears:
   3.1   Follow on screen instructions.
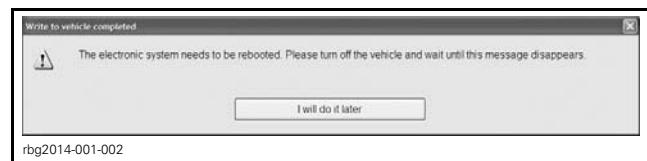   3.2   Click the "OK" button.

rbg2012-006-115

4. When the following message appears, click the "OK" button.

rbg2012-006-116

CLICK "OK"

5. When the following message appears:
   5.1   Turn ignition key to OFF.
   5.2   Wait until the message vanishes.

rbg2014-001-002

▶ *NEW IMAGE* ◀

6. When the following message appears:
   6.1   Turn ignition key to ON.
   6.2   Wait until the message vanishes.
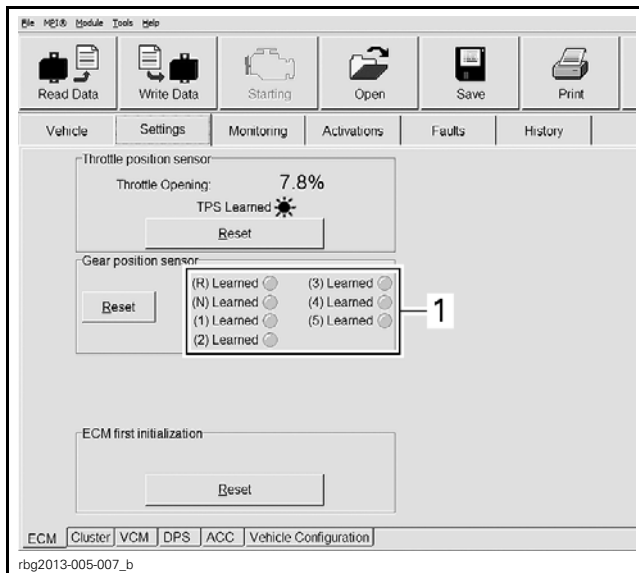

rbg2013-005-005_a

7. When the following message appears, click "OK".

rbg2012-006-208

CLICK "OK"

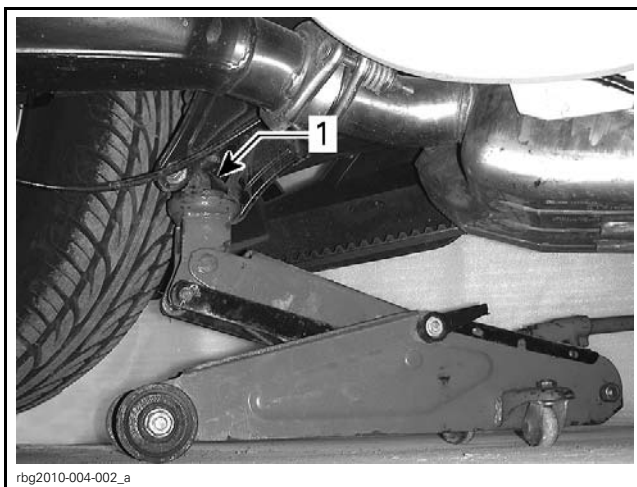8. Ensure all the gear LEDs are OFF in B.U.D.S.

GEAR POSITION SENSOR LEDS
1. All the gear LEDs OFF

GBPS Learning

1. Position a floor jack under the lower portion of the rear shock absorber and lift the rear of vehicle until the rear wheel is off the ground.

NOTICE The floor jack must be positioned so that it cups the lower portion of the rear shock absorber.

1. Lower portion of shock absorber

⚠ WARNING

Before starting engine, ensure the rear tire is well off the ground and cannot come into contact with any obstacle (ground, jack stand, etc.). Keep hands, tools, feet and clothing clear of rotating parts (rear wheel assembly, drive belt). Ensure no one is standing in close proximity to the vehicle.

2. Start engine.

3. Run transmission through all gears (N, R, 1-2-3-4-5 and back to N) waiting until its LED turns green (in B.U.D.S.) before changing gear.

NOTE: On SM5 models, the clutch must be fully released for each gear.

NOTICE Apply brake to stop wheel before shifting from reverse to forward.

NOTE: Engine speed above 3000 RPM is required to shift forward gears.

⚠ CAUTION Do not exceed 3800 RPM.

NOTE: During the GBPS learning procedure, the cluster may show an orange screen and numerous indicator lights may come on (CHECK ENG, VSS, ABS, LIMP HOME, etc).
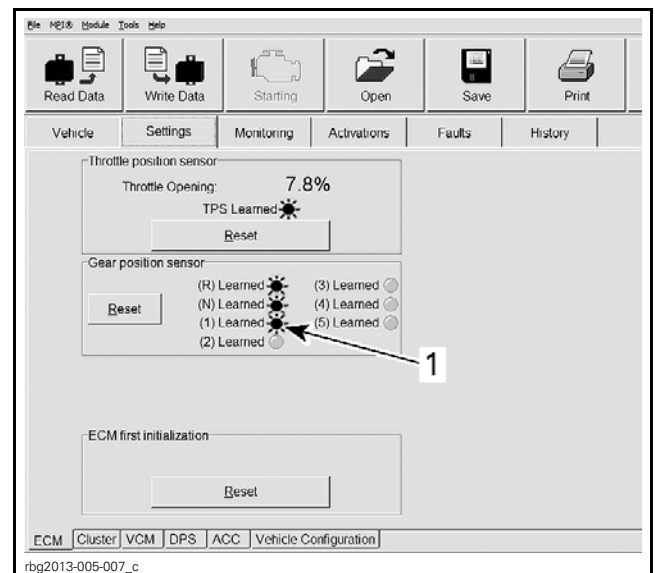
GEAR POSITION SENSOR LEARNING LEDS
1. Wait until the gear LED turns green (learned) before shifting

4. All gear position sensor LEDs must be green in B.U.D.S. to confirm the GBPS learning is completed.

rbg2013-005-007_d
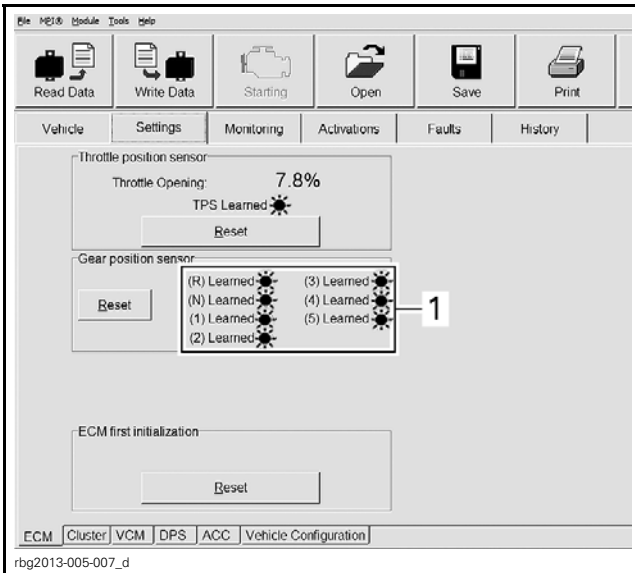
ALL GEARS LEARNED
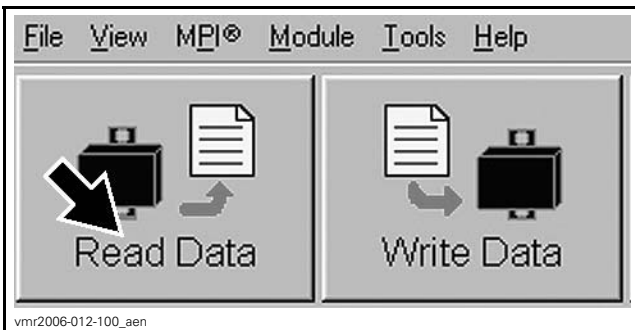*1. All gear position sensor LEDs ON*

5. Turn ignition key OFF.

6. Wait for the following message to appear.

rbg2013-005-005_a

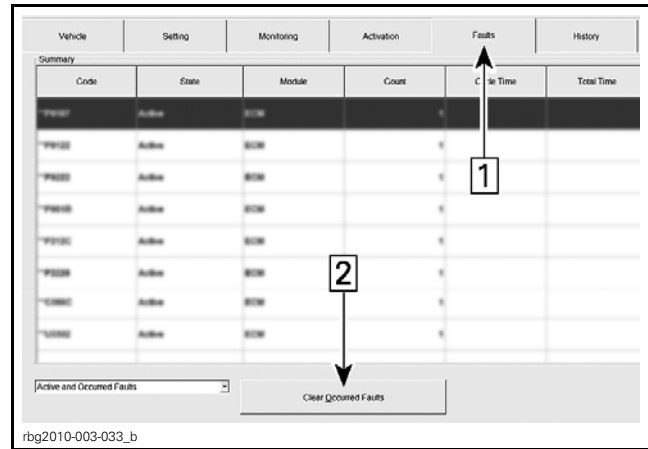7. Turn the ignition key ON and wait until the message vanishes.

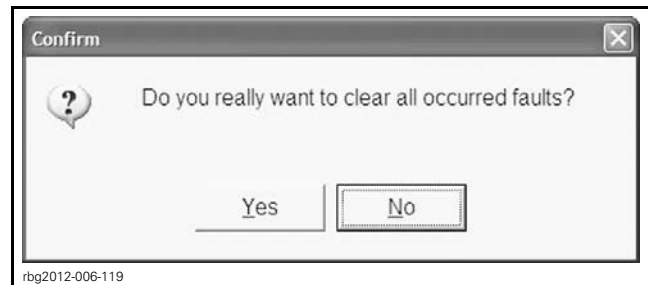# Clearing Faults

1. In B.U.D.S., click on Read Data.

vmr2006-012-100_aen

READ DATA BUTTON

2. Click the items in the illustrated order.

rbg2010-003-033_b

CLEARING FAULTS
Step 1: Faults
Step 2: Click "Clear Occurred Faults" button

3. When the following message appears, click the "Yes" button.

rbg2012-006-119

CONFIRM CLEAR FAULTS REQUEST - YES

NOTE: To clear all faults, it may be necessary turn the ignition key OFF, wait a few seconds, turn the ignition key back ON and activate the **Clear Occurred Faults** button once more.

4. Turn ignition key OFF.

5. When the following message appears, turn ignition key to ON, then click the "OK" button.

rbg2013-005-005_a

6. Click on the **Clear Occurred Faults** button again and ensure all faults are cleared.

7. Turn ignition key OFF.

NOTICE To avoid potential vehicle damage, it is very important to turn ignition key off BEFORE exiting B.U.D.S. or unplugging the MPI-2 diagnostic cable from the vehicle.

8. Unplug MPI-2 diagnostic cable from vehicle.

9. Remove floor jack from under vehicle.