

ROADSTER SERVICE

Bulletin



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

o. **2012-14**

YEAR	MODEL	MODEL NUMBER	
2011			
2012	Spyder RT SIVIS and SES	All	

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.



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 **key-word(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 KNOWL-EDGE 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.



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.



CONNECTION AT BATTERY POSTS UNDER SEAT



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.



- 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.



rbg2012-006-007

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.

Warning	
You are about to update the internal ECM software. Make sure ECM power and connections are stable. The update may require several minutes. Do you want to proceed now?	
(Update/Nets215.800.307.5c)	
Comments	
This update improves the diagnostic and long home mode shafeques. It is only compliant with Tpyder RT in M111 and M112 non-CAVIB retrictes (219 800 907). For more information on this update, please refer	
to service bulletin 2012-14	
<u>No</u>	
rbg2013-011-115	



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

towever, this vehicle is mpair troubleshooting eveal before applying mportant update butt	has active or occurred to It is highly recomment the update. When reaction on the main window	ware must be updated. aults. Applying the upda jed to understand and/o dy, the update process o	te now would cle or resolve the iss an be restarted	ear those faults and ues that the faults ma by clicking on the
Op-5afe/Files(219-808	307 A.J			
Comments				
Comments	s the diagnostic and its Eveniscles (219-800-90 to the knowledge cent	p home mode situleger 1). For more defailed ex e. search by keyword. F	s. It is only complemented by the second sec	plant with Spyder e content of this I 2013 ECM update
Comments	t Ter diagnostic and lit 8 vehicles (219 800 10 15 The knowledge card	g home mode shakeger 7). For more defaeled ex x. search by keyword. F	s. It is only cong parathers on R loadshir August	plant with Spyder e content of this r 2013 ECH update
comments	s The diagnostic and lie 8 vehicles (219 800 80 To The knowledge card	g home mode strateger 1). For more defailed ex ex. search by keyword: 8	s. Ris only comp planations on R loadshir August	plant with Spyder e content of the r 2013 ECH-update

- 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.

Informatio	n	X
Ð	Update has been successfully transfered into the ECM.	
	QK K	
rbg2009-005-1	102	

SUCCESSFUL ECM UPDATE CONFIRMATION - CLICK "OK"

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

Varning	
⚠	The cluster security coding does not match with the ECM connected. Do you want to change it?
	Yes ha
og2013-	005-004

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.

N	The electronic system needs to b	e rebooted. Please turn off the vehicle and wait until this message disapp
		I will do it later

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

Informatio	an 🛛
$\mathbf{\Phi}$	No vehicle detected. Make sure that the MPI® is properly connected to the vehicle and that the module is powered-up.
	<u> </u>
rbg201	3-005-005_a

9. The ECM software update is completed.

Update Validation

1. Click on Read Data button.



READ DATA BUTTON

2. Check if the update has been successful.



MODULE, ECM, INFORMATION

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

BRP Assembly Number:	XXXXXXXXX
SRP Revision Number	
Rotax Part Number	200704
Rotax Hardware Number	
Serial Number	1202075139
Code Modification Fregerprint	090910-01214
Diagnosis Code Bytes	02410400

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.

Bie MOI® Module)	ools Help						
Read Data	Write Data	K) Starting	Open	Save	Print		
Vehicle	Settings	Monitoring	Activations	Faults	History		
Thrott	e profile on sensor Trottle Opening: TP:	7.8 S Learned 🔆	1%	'			
		<u>R</u> eset					
Gear J	Gear position sensor (R) Learned (N) Learned (A) Learned (A) Learned (C) Learn						
ECM first initialization							
ECM Cluster	VCM DPS A	CC Vehicle C	onfiguration				
rbg2013-005-007	7_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".





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



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



CLICK "OK"

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

2	The electronic system need	s to be rebooted. Please turn off the vehicle and wait until this message disappears.
		I will do it later

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

Information

No vehicle detected. Make sure that the MPR0 is properly connected to the vehicle and that the module is powered-up.

DK In

rbg2013-005-005_a

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



CLICK "OK"

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

Ble MEI® Module Iools Help						
Read Data	Write Data	K Starting	Open	Save	Print	
Vehicle	Settings	Monitoring	Activations	Faults	History	
Thrott	le position sensor Throttle Opening: TP	7.8 S Learned 🔆 Reset	%			
Gear position sensor (R) Learned (3) Learned (1) Learned (1) Learned (1) Learned (5) Learned (2) Learned (2) Learned (2) Learned (3) Lear						
ECM first initialization						
ECM Cluster VCM DPS ACC Vehicle Configuration rbg2013-005-007_b						

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

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.

A 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).

Read Data Write Data Starting Open Save Print					
Vehicle Settings Monitoring Activations Faults History					
Throttle position sensor Throttle Opening: 7.8%					
TPS Learned					
Gear position sensor					
(R) Learned (3) Learned (4) Learned (4) Learned (2) Learned (2) Learned (2) Learned (3) Learned (4) Le					
ECM first initialization					
Reset					
ECM Cluster VCM DPS ACC Vehicle Configuration					
rbg2013-005-007_c					

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.

Bie M218 Hodule Iools Help							
Read Data	Write Data	K Starting	Open	Save	Print		
Vehicle	Settings	Monitoring	Activations	Faults	History		
Throt	Throttle position sensor Throttle Opening: 7.8% TPS Learned 🖌						
		<u>R</u> eset					
	Gear position server (R) Learned (3) Learned Reset (N) Learned (4) Learned (1) Learned (5) Learned 1 (2) Learned (5) Learned 1						
ECM first initialization							
ECM Cluster	ECM Cluster VCM DPS ACC Vehicle Configuration						
rbg2013-005-00	7_d						

ALL GEARS LEARNED

- 1. All gear position sensor LEDs ON
- 5. Turn ignition key OFF.
- 6. Wait for the following message to appear.

Informatio	n 🕅
\oplus	No vehicle detected. Make sure that the MPRP is properly connected to the vehicle and that the module is powered-up.
rbg2013	3-005-005_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.



READ DATA BUTTON

2. Click the items in the illustrated order.

Summary	1				
Code	State	Module	Count	C sle Time	Total Time
	-				
799-32	A:8++	ECH.			
PR022	Adles	808		1	
79010	Arthur	ROM .		_	
-#212G	Addres	808			
****	Arthur	BCH .	2		
COMIC	Active	808	Т		
100000	Addres	ECH.			
		-	¥		
Active and Occurred I	Faults 🔄	Ciear Or	courred Faults		

CLEARING FAULTS

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

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

Confirm	×
2	Do you really want to clear all occurred faults?
	Yes <u>No</u>
rbg2012-006-11	9

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.



- 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 BE-FORE 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.