



SKI-DOO 2015-10 New Multi Model E-TEC ECMs_000109350_SER11Y015S01_en

Product:	Ski-Doo
Bulletin type:	Service
Bulletin no:	2015-10 (mbs2015-010_rev1 en ML)
Revision no:	▶ 1
Revision date:	December 5, 2016 ◀
Campaign no.:	
Publication date:	February 2015
Subject:	New Multi Model E-TEC ECMs

▶ TEXT(S) BETWEEN ARROWS IS (ARE) MODIFIED ELEMENT(S) TO THE PREVIOUS PUBLICATION. ◀

Model Year	Models
2008 and up	All Ski-Doo equipped with E-TEC engine

Blank ECM

As of 2015, BRP is offering a blank ECM that can be installed and programmed to multiple Ski-doo models. A blank ECM can be used not only as replacement parts but also as diagnostic tools as they can be programmed and reset as new at will.

Refer to the following chart to determine which ECM fits the applicable model.

The old style ECM with pre-programmed calibration will no longer be available once service inventory is depleted.

Order ECM as per regular channel.

Engine	blank ECM part number
600 HO E-TEC	512060780
800R E-TEC	512060756
▶ 850 E-TEC	512061093 ◀

▶ For programming a New ECM in BUDS2 (2017 and up)

Refer to procedure **PROGRAMMING A NEW ECM in E-TEC DIRECT FUEL INJECTION** in the appropriate shop manual. ◀

For Programming a new ecm in B.U.D.S. (2008 to 2016)

There are 2 possible methods to manually collect the required information. The 1st being the easiest.

- Use B.U.D.S. software and obtain the data from a saved .mpem file on your PC computer.
- Collect the information from the vehicle and obtain the fuel injector coefficient files from Knowledge Center.

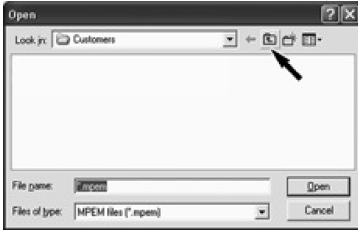
1st Collecting Method: Get the Data from a Saved .mpem File

1. Replace the faulty ECM, refer to the applicable shop manual.
2. Connect vehicle to latest applicable B.U.D.S. version and log on. Refer to COMMUNICATION TOOLS AND B.U.D.S. subsection in the applicable shop manual.

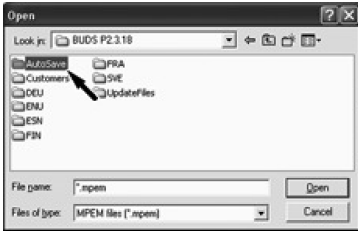
3. Click on the Open button.



4. Click once on the Folder Up button in the Open box.

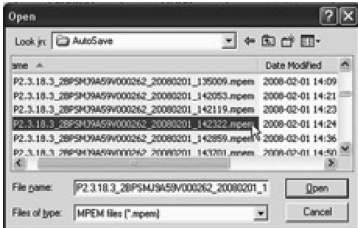


5. Double click on the AutoSave folder.



NOTE: You may have to go to another AutoSave folder from a previous version of B.U.D.S.

6. Choose the latest file saved for this specific vehicle.



IMPORTANT: Ensure to use the file that specifically matches the vehicle you are servicing.

NOTE: The file name structure is as follows:

BUDS version_VIN_date read (yyyymmdd)_hour read (hhmmss).mpem

Example:

P2.3.18.3_2BPSMJ9A59V000262_
20080201_142322.mpem

7. In the Vehicle tab, record the following information;

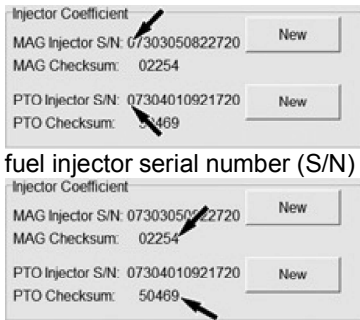
- Engine number (without the leading "M")
- Customer name.

NOTE: It is not necessary to record the vehicle (VIN) and model numbers. They will be transferred later.

8. Select the ECM and Setting tabs and record the following information;

- Ignition/Injection timing: Offset angle
- Oil compensation: Oil pump code
- Fuel injector coefficients: MAG/PTO injectors S/N and Checksums.



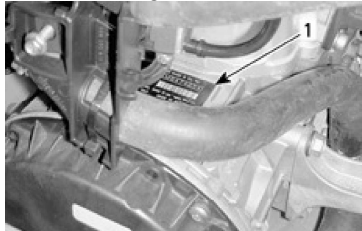


fuel injector checksum (cS)

9. Enter data in ECM as detailed in ENTERING THE COLLECTED INFORMATION INTO THE ECM.

2nd Collecting Method: Collect the Information from the Vehicle

1. Record engine serial number.



RH side of engine compartment

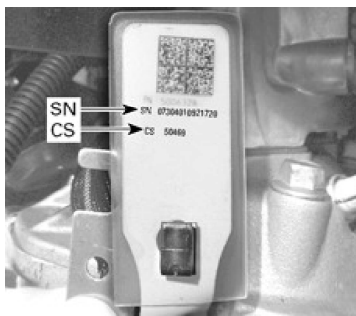
- 1. Engine serial number
- 2. Record oil injection pump code.



Back of oil injection pump

- 1. Oil pump code (0 to 9)
- 3. Record MAG/PTO injector S/N and Checksum numbers.

Record the serial number (SN) and the checksum (CS) on the fuel injector tag.



SN: Serial number
 CS: Checksum number

Use KNOWLEDGE CENTER article 30098 to get the matching calibration file.

Save the calibration file to your PC computer in the folder:

C:\Program Files\BRP\BUDSCommon\
 InjectorCoefficients.

Enter data in ECM as detailed in ENTERING THE COLLECTED INFORMATION INTO THE ECM.

Updating the ECM and Entering the Collected Information

1. Ensure B.U.D.S. is properly connected to the vehicle and logged on.

If the following message appear, click on Retry until it disappear.



2. Click the Read Data button to read the new blank ECM.

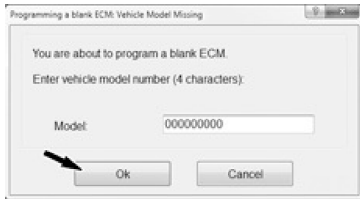


Then, a message will appear saying that the ECM does not respond because the blank ECM needs to be update.

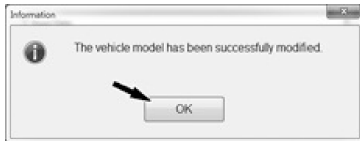
3. Click OK.



4. Enter the model number and click OK.



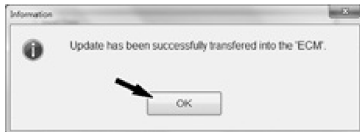
5. Click OK.



6. Click Yes.



7. Click Ok.



8. Click Yes.



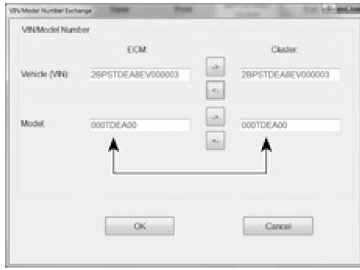
9. Click on the arrow to transfer the VIN number from the Cluster column to the ECM column.



Ensure the Model number in the ECM and cluster are exactly matched.

10. Click:

- Ok if Model numbers match.
- Cancel if Model numbers do not match. Reset the ECM. Refer to **RESETING ECM AS NEW SERVICE PART** at the end of this document. Go back to step 1 and do the procedure again.



11. Click Ok.



NOTE: Always validate with the following charts if the BRP and Calibration file part number correspond by going in the tab ECM then Information.



600 HO E-TEC (ECM P/N 512 060 780)

Year	Platform	FC File Number	Altitude	BRP Part Number After Reflash	Calibration Number After Reflash
2008		415 130 044.fc			
2009	All	415 129 966.fc		415 129 679	512 060 636
2010		415 129 967.fc		415 129 680	512 060 613
2011		415 129 968.fc			
2012	REV-XP / XR (Ski-Doo and Lynx) / Tundra	415 129 969.fc	All	415 129 681	415 129 715
	REV-XU (Ski-Doo and Lynx except Tundra)			415 129 723	415 129 722
2013	REV-XP / XR / XS / XM (Ski-Doo and Lynx) / Tundra	415 129 970.fc	All	512 060 868	512 060 820
	REV-XU (Ski-Doo and Lynx except Tundra)			512 060 871	512 060 788
2014	All	415 129 971.fc		512 061 055	512 061 056
2015	All Ski-Doo models (except	415 130 045.fc		512 060 997	512 060 999

600 HO E-TEC (ECM P/N 512 060 780)

Year	Platform	FC File Number	Altitude	BRP Part Number After Reflash	Calibration Number After Reflash
	Skandic and Expedition LE / SE)				
	Lynx Xtrim Commander			512 061 057	512 061 058
	Ski-Doo Skandic and Expedition LE / SE / All Lynx models (except Xtrim Commander)			512 061 063	512 061 064

800R E-TEC (ECM P/N 512 060 756)

Year	Platform	FC File Number	Altitude	BRP Part Number After Reflash	Calibration Number After Reflash
2010		415 129 973.fc	All	415 129 672	512 060 646
2011		415 129 974.fc	S/L	415 129 673	415 129 615
			H/A	415 129 689	415 129 690
2012	All	415 129 975.fc	S/L	415 129 863	415 129 862
			H/A	415 129 865	415 129 864
2013		415 129 976.fc	S/L	415 129 889	415 129 887
			H/A	415 129 892	415 129 890
2014		415 129 977.fc	S/L	415 129 953	415 129 952
			H/A	415 129 896	415 129 895
2015	All Ski-Doo models (except Skandic and Expedition LE / SE)	415 130 046.fc	S/L	415 130 010	512 061 009
			H/A	415 130 012	512 061 011
	Ski-Doo Skandic and Expedition LE / SE / All Lynx models		S/L	512 061 059	512 061 060
			H/A	512 061 061	512 061 062

12. On the Vehicle page, enter the information you recorded previously:

- Engine number (do not enter the leading "M")
- Customer name.

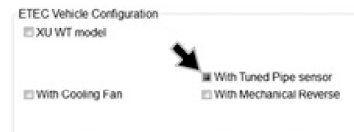
13. In the Keys page, select Erase All Keys.



- 14. Program the desired key(s). Refer to D.E.S.S. SYSTEM subsection.
- 15. Select the Setting tab, then Vehicle Configuration .
- 15.1 Check applicable boxes as per vehicle specifications.



Typical



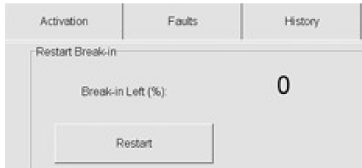
Typical

- 16. Select the Setting tab then ECM.



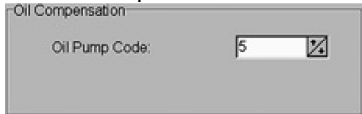
- 17. Reset the Closed Throttle setting as detailed in CLOSED THROTTLE RESET (TPS).
 NOTICE The Closed Throttle Reset must be carried out as described in the specific procedure or engine damage may occur.

- 18. Carry the 3D Rave Valves Position Sensor Setting. Refer to RAVE subsection.
- 19. Set the Ignition/Injection Timing. Refer to IGNITION SYSTEM subsection.
- 20. Restart Break-In. Click Restart button if the actual engine hours are less than 5 hours.



typical

- 21. Oil Compensation. Enter the previously recorded Oil Pump Code.

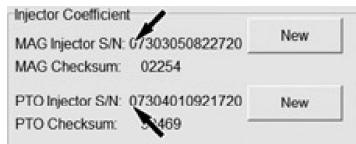


typical

- 22. MAG and PTO fuel injector S/N.
- 22.1 If the data was obtained from a saved .mpem file, refer to table A.
- 22.2 If the fuel injector calibration file was obtained from Knowledge Center, refer to table B.

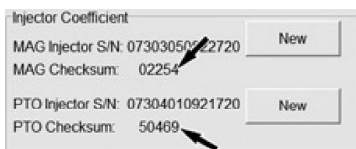
table A (data from a saved .mpem file)

Click on the New button and open the file that matches the previously recorded serial number.



Ensure the PTO and MAG side injector S/N correctly match those on the engine.

Once the file has been read, ensure the checksum number (CS) displayed in B.U.D.S. matches the CS previously recorded.



If the numbers do not match, the wrong file was read. Repeat the procedure to record the correct file.

table b (calibration file from Knowledge Center)

Click on the New button and open the file that you previously saved on your PC computer in the folder:

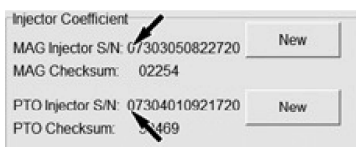
C:\Program Files\BRP\BUDSCommon\InjectorCoefficient

Ensure to correctly match the PTO and MAG side injector serial numbers.

Once the file has been read, ensure the fuel injector tag SN and CS matches those shown in B.U.D.S.

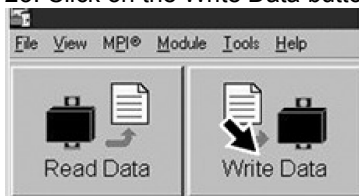


SN: Serial Number
CS: Checksum number



If the numbers do not match, the wrong file was read. Repeat the procedure to record the correct file.

23. Click on the Write Data button to save the data to the ECM.



- 24. Lift rear of vehicle and safely support.
 - 25. Start the engine and increase engine speed above 6000 RPM to be sure no fault codes appear.
 - 26. Let engine idle to ensure idle is adequate.
 - 27. If engine does not run as expected, ensure that the fuel injector calibration files are valid. Check with the tag of the fuel injectors installed on the engine.
 - 28. Reinstall remaining removed parts.
- Resetting ECM as New Service Part
In B.U.D.S., follow these simple steps to reset the ECM.

