

DESS (CARBURETED AND RFI ENGINES)

NOTE: For DI and 4-TEC models, refer to ENGINE MANAGEMENT section.

GENERAL

The Digitally Encoded Security System (DESS) features an anti-start protection against unauthorized use of the watercraft.

The following components are specially designed for this system: Multi-Purpose Electronic Module (MPEM), safety lanyard cap and safety lanyard switch.

The safety lanyard cap has a magnet and a ROM chip. The chip has a unique digital code.

The DESS circuitry in the watercraft MPEM is activated at the factory. Therefore, a safety lanyard must be programmed to start the engine.

NOTE: Actually, it is the memory of the MPEM which is programmed to recognize the digital code of the safety lanyard cap.

The system is quite flexible. Up to eight safety lanyards may be programmed in the memory of the watercraft MPEM. They can also be erased.

NOTE: If desired, a safety lanyard can be used on other watercraft equipped with the DESS.

The memory of the MPEM is permanent. If the battery is disconnected, no information is lost.

When ordering a new MPEM from the regular parts channel, the DESS circuitry will be activated.

The MPEM features a self-diagnostic mode. Refer to the chart following.

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Self-Diagnostic Mode

It is self-activated when the safety lanyard cap is being installed on the watercraft switch. It gives immediate monitoring. Refer to the following chart.

SIGNAL	CAUSE	REMEDY
2 short beeps (when installing safety lanyard on watercraft post).	<ul style="list-style-type: none">• Safety lanyard is recognized by the MPEM.• Good contact between safety lanyard cap and DESS post.	<ul style="list-style-type: none">• Engine can be started normally.
A 2 seconds beep every 5 minute intervals (RFI models)	<ul style="list-style-type: none">• Fuel tank level is low.	<ul style="list-style-type: none">• Refill.
4 short beeps every 3 seconds interval for 2 hours.	<ul style="list-style-type: none">• Safety lanyard has been left on its post without starting engine or after engine was stopped.	<ul style="list-style-type: none">• To prevent battery discharge, remove the safety lanyard from its post.
Continuous beep	<ul style="list-style-type: none">• Engine overheats	<ul style="list-style-type: none">• Refer to COOLING SYSTEM.
1 long beep (when installing safety lanyard on watercraft post or when pressing start/stop button).	<ul style="list-style-type: none">• Bad connection between safety lanyard cap.• Unprogrammed or defective safety lanyard.• Dried salt water or dirt in safety lanyard cap.• Defective DESS post.• Improper operation of MPEM or defective wiring harness.	<ul style="list-style-type: none">• Remove and replace the safety lanyard on the post until 2 short beeps are heard to indicate the system is ready to allow engine starting.• Use the safety lanyard that has been programmed for the watercraft. If it does not work, check safety lanyard condition with the programmer. Replace safety lanyard if reported defective.• Clean safety lanyard cap to remove dried salt water or dirt .• Refer to IGNITION SYSTEM for testing.• Refer to INSTRUMENTS AND ACCESSORIES or ENGINE MANAGEMENT (RFI).

DESS KEY PROGRAMMING

There is two tools available that can be used to communicate with the MPEM in order to program a DESS key.

The VCK (Vehicle Communication Kit) (P/N 529 035 981) is the primary tool.

B.U.D.S., included in the VCK, is designed to allow, among other things, the programming of safety lanyard(s) and entering customer information.

For more information pertaining to the use of the software B.U.D.S., use its help which contains detailed information on its functions.

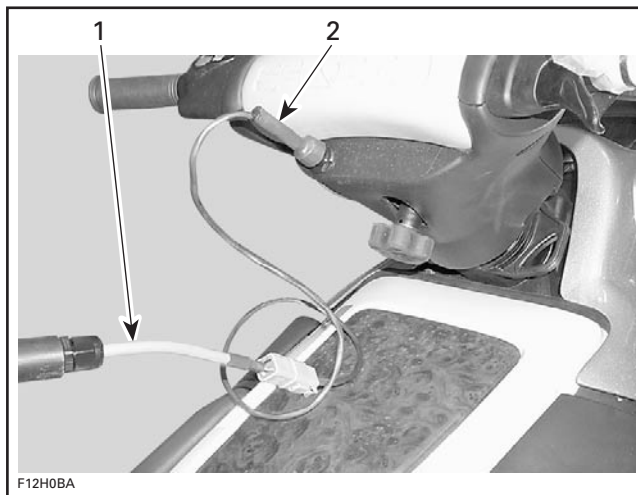
⚠ WARNING

If the computer you are using is connected to the 110 Vac power outlet, there is a potential risk of electrocution when working in contact with water. Be careful not to touch water while working with the VCK.

The MPEM programmer (P/N 529 035 878) is the alternative tool to communicate with the MPEM. For a complete overview of this tool, refer to the MPEM Programmer Guide.

Programming Keys with B.U.D.S.

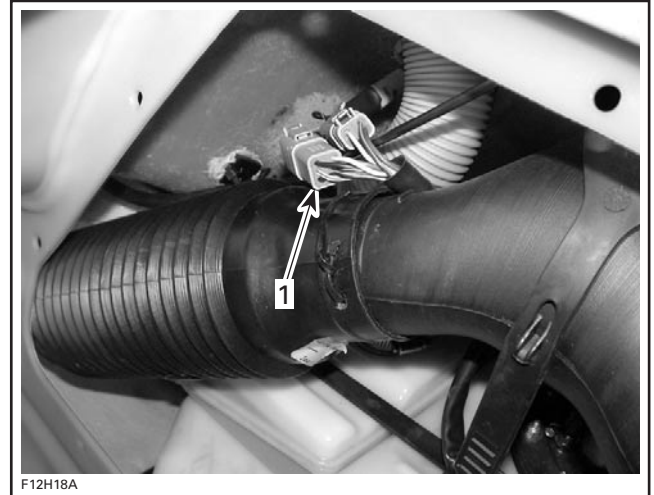
Connect VCK components and open the software B.U.D.S.



1. 6-pin adapter (P/N 529 035 679)
2. DESS adapter (P/N 529 035 684)

RFI Models

It is also possible to disconnect the connector shown in the following picture and install the RFI DESS adapter (P/N 278 001 978).



1. Connector to be disconnected

After all connections are done, connect the safety lanyard to the DESS post to activate the communication.

All Models

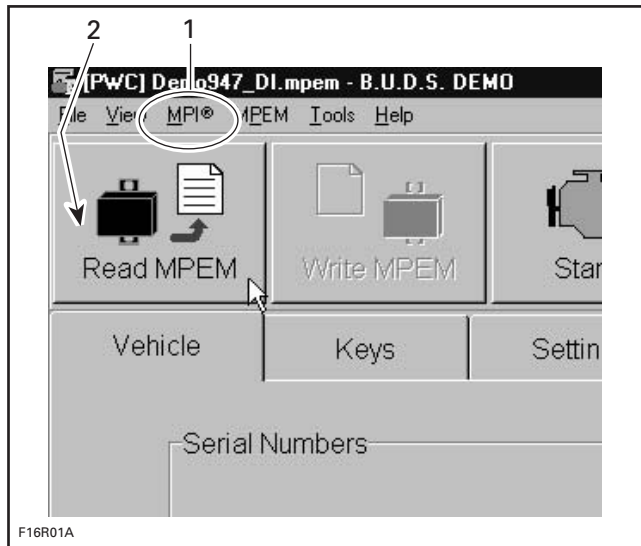
IMPORTANT: When using the software B.U.D.S., ensure that the protocol matching the connection used is properly selected in "MPI" under "Choose protocol" as per the following chart.

TYPE OF CONNECTION	ADAPTER TO USE	PROTOCOL TO CHOOSE
Through DESS post	DESS adapter (P/N 529 035 684)	DESS
Through 6-pin DESS connector (RFI models)	RFI DESS adapter (P/N 278 001 978)	

Read MPEM using leftmost icon in B.U.D.S.

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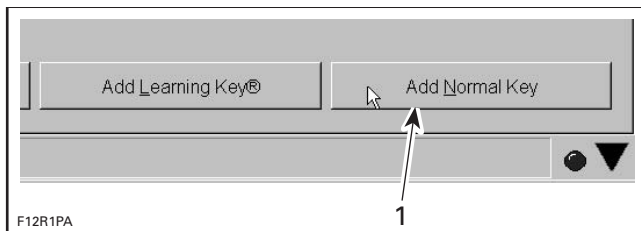
1. Select DESS protocol
2. Click Read MPEM

Click on KEYS tab.

Install key on MPI DESS post.

Click on ADD NORMAL KEY button on bottom of screen.

NOTE: The learning key mode is only for DI or 4-TEC models.



1. Click on this tab

A new key is now saved in the computer.

NOTE: To program other key(s), install a new key on MPI DESS post and click again on ADD NORMAL KEY tab.

Ensure to save new data in MPEM using WRITE MPEM button.

Programming Keys with the MPEM Programmer

Connect the communication cable of the MPEM programmer to the vehicle DESS post.
The following chart lays out the complete procedure to program a new key.

