

DIGITALLY ENCODED SECURITY SYSTEM (D.E.S.S.)

SERVICE TOOLS

Description	Part Number	Page
POWER INTERFACE	515 177 223	260

GENERAL

SYSTEM DESCRIPTION

The following components are specially designed for this system: ECM, D.E.S.S. key (inside tether cord cap) and engine cut-off switch.

This system allows the engine to reach pulley engagement speed only if a D.E.S.S. key is installed on engine cut-off switch and the key is recognized as valid by the ECM.

The D.E.S.S. key contains a magnet and a RFID chip.

- The magnet closes the hall effect switch inside the engine cut-off switch.
- The RFID chip contains a unique digital code. It is the equivalent of the tooth-pattern cut on a conventional ignition key.

Up to 8 D.E.S.S. keys may be programmed in the ECM memory using the B.U.D.S. The keys can also be erased individually.

NOTE: If desired, a D.E.S.S. key can be used on another vehicle equipped with the D.E.S.S. system. It only needs to be programmed for that vehicle.

D.E.S.S. Beeper Codes

When starting the engine with a D.E.S.S. key on the engine cut-off switch, the key is identified by the ECM and D.E.S.S. signals will be issued according to the key recognition. See table.

D.E.S.S. SIGNAL		DESCRIPTION	COMMENT
BEEPER	DISPLAYED MESSAGE		
2 shorts beeps	SKI-DOO	Welcome message, good key	Working D.E.S.S. key.
3 short beeps after starting	CHECK KEY	Unable to read key	<ul style="list-style-type: none"> – Reinstall key – RPM limited to 2500 – Check D.E.S.S. status in B.U.D.S. – No voltage at RFID connector pin D
Shorts beeps repeating rapidly	BAD KEY	Invalid key or key not programmed	<ul style="list-style-type: none"> – Use the proper key for this vehicle or have the key programmed. – Vehicle can not be driven.

PROCEDURES

D.E.S.S. KEY

D.E.S.S. Key Programming

Use the latest B.U.D.S. software available from BOSSWeb.

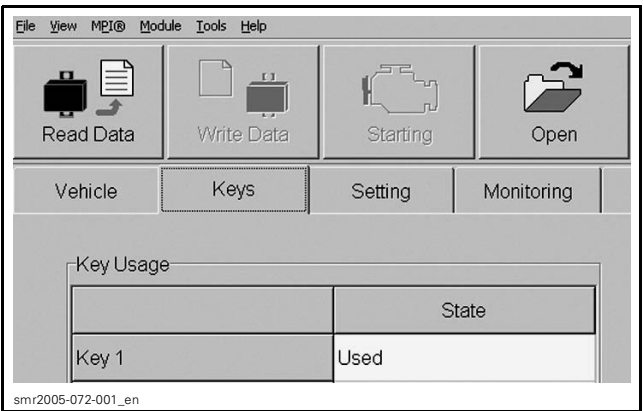
1. Carry out the proper connections to use B.U.D.S. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

IMPORTANT: Ensure all connections have been made **before starting B.U.D.S.** to allow proper operation.

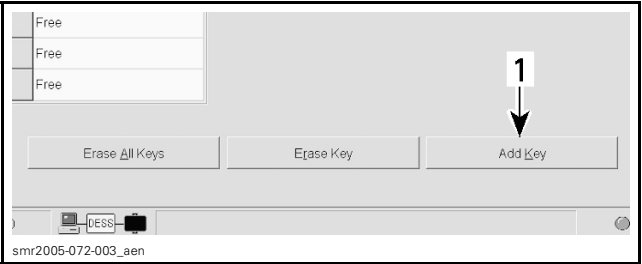
2. Start B.U.D.S. and logon.
3. In B.U.D.S., click on the **Read Data** button to read the ECM.



4. Install the new key to be programmed on the engine cut-off switch.
5. In B.U.D.S., click on the **Keys** tab.



6. Click on the **Add Key** button at the bottom of the screen.

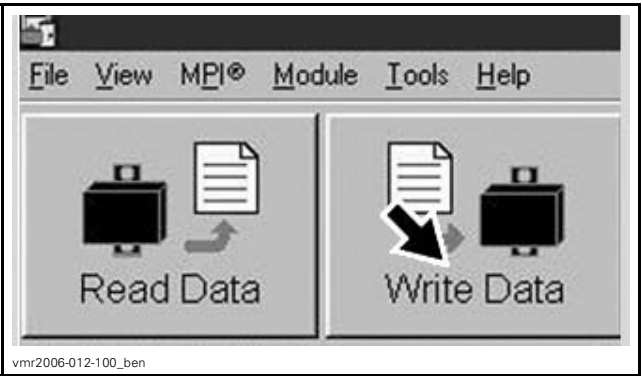


1. Click on this button

The D.E.S.S. key is now saved in the computer.

NOTE: To program other key(s), install a new key on the engine cut-off switch and click on the **Add Key** button again.

7. Save the new key(s) in the ECM by clicking the **Write Data** button.



D.E.S.S. / ENGINE CUT-OFF OPERATION

Normal Operation

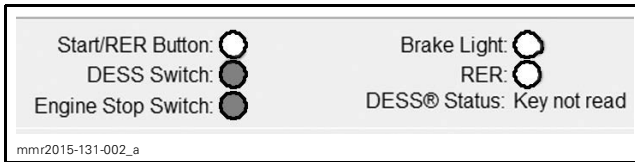


MONITORING PAGE, ECM TAB

Refer to *WIRING DIAGRAM*.

RFID CONNECTOR PIN	SPECIFICATIONS with POWER INTERFACE (P/N 515 177 223) installed
A	ECM ground
B	12 - 15 Vdc
C	5 Vdc
D	12 Vdc

Key Not Read

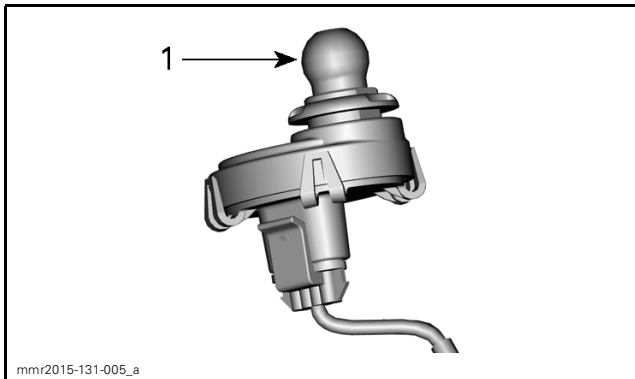


MONITORING PAGE, ECM TAB

Possible causes:

- Damaged RFID chip
- No voltage at RFID-D connector
- No voltage at RFID-C connector

Condition can be duplicated with a magnet on the D.E.S.S. post.



1. D.E.S.S. post

Key Not Present



MONITORING PAGE, ECM TAB

Possible causes:

- No key installed
- No voltage at RFID-B connector
- No ground at RFID-A connector

Condition can be duplicated by unplugging the RFID connector.

Invalid Key



MONITORING PAGE, ECM TAB

Possible causes:

- Key not programmed to ECM

BEEPER

The beeper is integrated in the multifunction gauge and cannot be replaced alone.

If the beeper does not sound when starting the engine, check the beeper operation. Refer to *LIGHTS, GAUGE AND ACCESSORIES* subsection.