

TECHNICAL INFORMATION



No: 86/01/99/NAS
Ref: WSM section 86
Issue: 1
Date: 01/29/99

Intermittent Failure of Engine to Start

AFFECTED VEHICLE RANGE:

DISCOVERY (LJ)

1999 GEMS Equipped

SITUATION:

ENGINE CRANKS BUT WILL NOT START OR INTERMITTENTLY WILL NOT CRANK

Intermittently the vehicle may not crank or crank and not start. Some or all of the following symptoms may be present:

- The "Check Engine" light does *not* illuminate when the key is turned to position II (run).
- A delay of 3 to 5 seconds between turning the key to position III (crank) and engine cranking.
- After turning the key off (position I) then on again, the vehicle starts normally.

RESOLUTION:

MODIFICATION OF THE IMMOBILIZATION STRATEGY

The symptoms outlined indicate that the engine is temporarily immobilized due to a miscommunication between the security (10AS) ECU and GEMS ECM. These symptoms have reoccurred on 1999 GEMS-equipped vehicles.

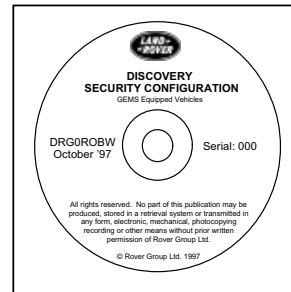
The technician must inspect and verify that two circuits and six electrical terminals are in good condition and working correctly as outlined in the repair instructions. When it is determined by the above electrical inspection that the fault is in the ECU, a security strategy modification can be performed to install the most current security ECU configuration. Use TestBook and the "Discovery Security Configuration" compact disk.



NOTE: The repairs outlined in this TIB are to be performed to resolve customer complaint of the symptoms described.

TOOL INFORMATION:

TestBook disk..... DRG0ROBW
Discovery Security Configuration



WARRANTY CLAIMS:

86.77.89/36..... Time 1.00 hrs.

Verify electrical connections and install current immobilization strategy using TestBook.

FAULT CODE: Y

Normal warranty policy and procedures apply

TIB	CIRCULATE:	Service Mgr	Reception	Workshop	Parts
86/01/99/NAS		X	X	X	X

TECHNICAL INFORMATION



No: 86/01/99/NAS

REPAIR PROCEDURE:

INSPECTION

1. Remove the terminals from the connector housings to inspect the pin and socket terminals and the quality of the wiring crimps for each of the following:

CONNECTOR	CAVITY	COLOR	DESCRIPTION/LOCATION
C225	11	RS	Alarm ECU
C225	15	B	Alarm ECU
C1032	22	RS	GEMS ECM
C1017	26	B	GEMS ECM
C1027	11	RS	Behind the windshield washer reservoir
C1026	3	B	Behind the windshield washer reservoir

2. Cautiously deform each pin and socket to improve connection.
3. Assemble connectors.
4. Use an ohmmeter to verify the continuity between the following:
 - C225 position 11 to C1032 position 22.
 - C225 position 15 to C1017 position 26.
5. Verify that **neither** circuit is short-circuited to vehicle ground.
6. If the tests verify the circuits and connectors are functioning correctly, perform selection of current immobilization strategy using TestBook.

SELECTION OF CURRENT IMMOBILIZATION STRATEGY

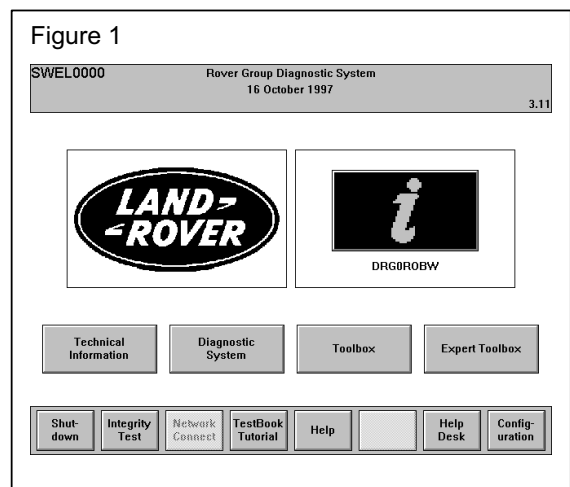


CAUTION: Any repair procedure that replaces the 10AS ECU will cause the GEMS ECM to relearn the security code. Depending on the configuration of the 10AS ECU installed, the GEMS ECM may re-enable the incorrect immobilization strategy.



NOTE: The "Discovery Security Configuration" CD can be used to install the correct level of vehicle security. The new level of security will eliminate the intermittent failure-to-start symptom experienced on some 1999 vehicles. The new level of security continues to activate the horn and the lights and continues to inhibit engine cranking.

1. Activate TestBook and access the Welcome Screen (Figure 1).





2. Insert the "Discovery Security Configuration" disk into TestBook and follow the on-screen prompts to install the current security strategy as follows:
 - Select "DIAGNOSTIC SYSTEM."
 - Select "DISCOVERY" and "SECURITY CONFIGURATION" at the Model Derivative Selection screen (Figure 2).
 - Press "CONTINUE."
 - Enter the 17-digit VIN at the VIN Entry Screen.
 - Press "CONTINUE."
 - Verify "Vehicle Information" screen data is correct.
 - Press "CONTINUE."
 - Select "NEW STRATEGY" at the System Selection screen (Figure 3).
 - Follow the on-screen prompts carefully to complete the security strategy configuration (Figure 4).

Figure 2

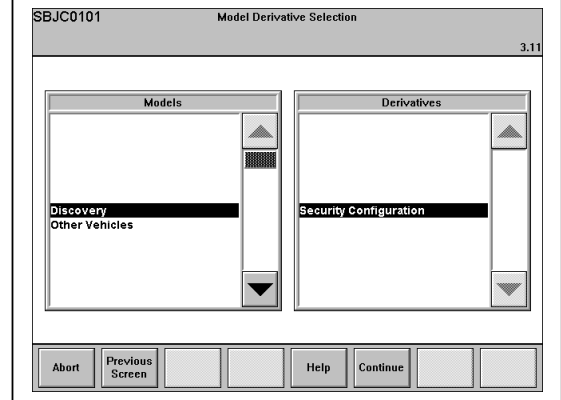


Figure 3

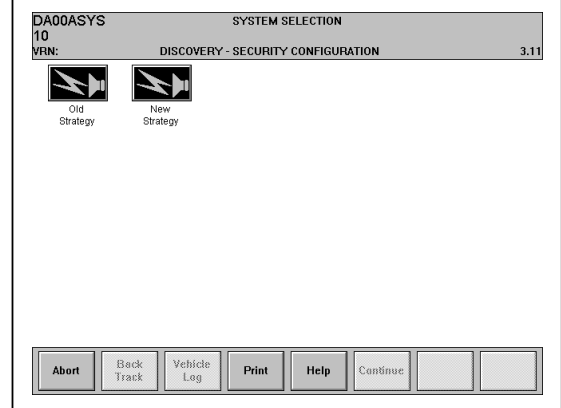


Figure 4

