

# TECHNICAL BULLETIN



## Check Engine Light On – DTC 12 Flagged – Install Changeover Relay and Link Lead

MODEL ALL 1993 MY

DATE 8/93

**18-36  
AMENDED  
8/94**

Remove and destroy Bulletin 18-36, Date 8/93  
Replace with this Amended Bulletin.  
Revisions are marked with a bar and indicated in Bold Text.

### ISSUE:

On 1993 MY Sedans up to VIN 678670 and 1993 MY XJS 4.0L vehicles up to VIN 188104, engine management diagnostic trouble code (DTC) 12 can be flagged if the ignition is switched off when the engine speed is above 1,500 RPM.

If this occurs, there will be no effect on vehicle performance.

### ACTION:

On all vehicles within the affected range (whether in dealer stock or in for service) with the CHECK ENGINE light on and DTC 12 stored in the ECM memory, locate the fuel injection main relay and check the relay case color. The relay can be located as follows:

93 MY Sedan up to VIN 678670: The fuel injection main relay is located in the right rear corner of the engine compartment against the bulkhead and has a black base connector. If the relay is blue (not violet), perform the procedure as noted below:

93 MY XJS 4.0L up to VIN 188104: The fuel injection main relay is located behind the passenger side footwell "A" post trim panel below the EMS ECM and has a red base connector. If the relay is silver or blue (not violet) perform the following procedure:

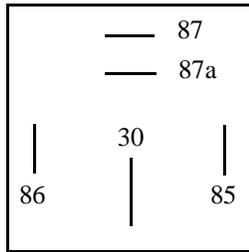
**NOTE:** Later vehicles may incorporate a blue fuel injection main relay and a revised EMS ECM to overcome code flagging. **DO NOT** modify vehicles after the affected VIN range.

### Procedure:

1. Record radio preset stations (including X-mem.). Disconnect the vehicle battery.
2. Locate the fuel injection main relay and remove the relay from its base.
3. Remove the anti-backout clips from the relay base.
4. Extract the following pins from the relay base:
  - Sedan brown/yellow wire from pin 30  
white/brown wire from pin 87
  - XJS brown wire from pin 30  
white/brown wire from pin 87
5. Reconnect the wires to the relay base as follows (refer to figure below for pin positions):
  - Sedan white/brown wire to pin 30  
brown/yellow wire to pin 87
  - XJS white/brown wire to pin 30  
brown wire to pin 87

6. Extract the black wire from pin 85 of the relay base.

### CHANGEOVER RELAY PIN AND WIRE POSITIONS



<u>PIN</u>	<u>WIRE COLOR</u>
30	white/brown
85	black
86	unchanged
87 XJ6	brown/yellow
XJS	brown
87a	black/white

7. Connect the new link lead (LMB 3998AA) to the black harness wire.
8. Connect the black link lead wire with the white tracer to pin 87A of the relay base.
9. Connect the remaining link harness wire to pin 85 of the relay base.
10. Install the anti-backout clips to the relay base.
11. Use black PVC tape to insulate the black wire connection and tape the link lead to the relay harness.
12. Install the relay base to the mounting bracket.
13. Install the changeover relay DAC 7687 (violet case) into the relay base.
14. Connect the battery and reset the radio stations (including X-mem.).

**NOTE:** If DTC 12 is flagged and the relay has been changed (violet relay DAC 7687), check that the link harness has been properly installed.

If the fuel injection main relay and wiring installation are correct or if the vehicle is outside the affected VIN range, check for other causes. Refer to the DTC diagnostic flowchart in the XJ6/XJ12 Service Manual, Section 17.

#### PARTS INFORMATION:

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
LMB 3998AA	Link lead	1
DAC 7687	Changeover relay	1

#### WARRANTY INFORMATION:

<u>SUMMARY CODE:</u>	<u>REPAIR CODE:</u>	<u>R.O. NUMBER:</u>	<u>TIME ALLOWANCE:</u>
BB	S405	86.91.68	Sedan - 0.25 hrs. XJS - 0.40 hrs.