



Sedan Range

DATE 2/95  
Amended 4/98

05.1-09

SERVICE

# TECHNICAL BULLETIN

## Uneven Cold Idle – Drivability Enhancements – ECM Upgrade

MODEL 1995 MY  
Sedan (4.0L) Range  
VIN As listed below

Remove and destroy Bulletin 05.1-09, dated 2/95.  
Replace with this Bulletin.  
ECMs are no longer sent to Lucas since EPROMs are  
now available for upgrading ECMs at the dealer.

### ISSUE:

1995 MY Sedan Range vehicles in the VIN ranges listed below may display the following symptoms:

### SYMPTOMS

Uneven idle following cold start.

Inconsistency at cruising speeds of 50 - 60 mph (80-100 km/h).

Hesitation at low speed, low throttle application with a warm engine.

### MODEL

### VIN RANGE

Sedan (4.0L NA) Range 1995 MY VIN 720001 - 724499

XJR (4.0L SC) Sedan 1995 MY VIN 720001 - 740020

These symptoms result from an unfavorable combination of fuel volatility and ignition timing factors. The ECM EPROM has been revised to correct these conditions from VIN 724500 Sedan (4.0L NA) Range and VIN 740021 XJR Sedan.

### ACTION:

If customers complain of the symptoms listed above on vehicles within the quoted VIN range and all other engine parameters are within specification, the ECM will require upgrading.

**To upgrade an ECM to the latest specifications, proceed as follows:**

**Normally aspirated vehicles: Refer to Technical Bulletin (Service Action S675) 05.1-24 dated 4/97.**

**XJR supercharged vehicles: continue with the procedure beginning on the following page.**

**IMPORTANT:** Inspect the vehicle to determine if a revised air pump hose with a vacuum bleed has been fitted. If the existing air pump hose has no vacuum bleed, replace the hose with the correct revised hose for the vehicle.  
Refer to Service Bulletin 05.1-04 for the appropriate part numbers and warranty information.

## PREPARATION

1. Connect the PDU to the vehicle and check for any DTCs stored in the ECM.
2. Record any DTCs found on an OBDII report form (S-93), then clear them from the system. Any DTCs found must be diagnosed separately.
3. Turn the ignition OFF. Wait 20 seconds, then disconnect the vehicle battery.

## REMOVING ECM

1. Remove the right side A-pillar trim.
2. Remove the trim panel mounting bracket.
3. Remove the ECM retaining bolt and disengage the upper spade mounting of the ECM from the slot in the A-pillar.
4. Disconnect both harness multi-plug connectors from the ECM and remove the ECM from the vehicle.

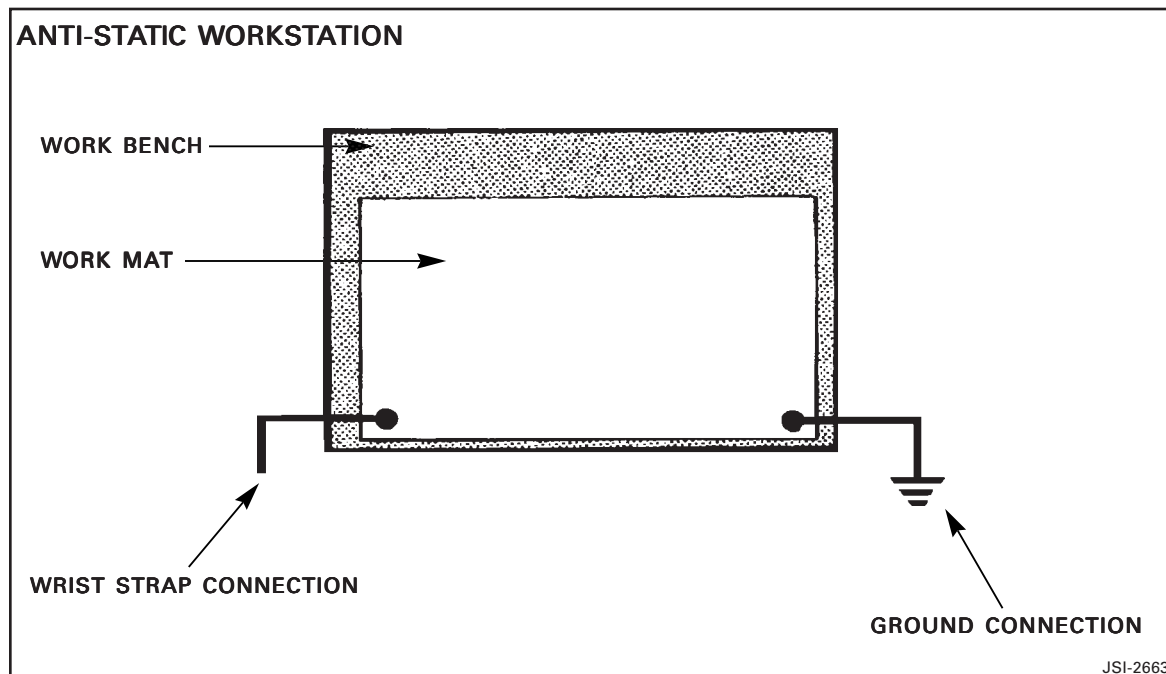


ILLUSTRATION 1

## REPLACING PROM

ECM tools required:

- One Anti-static work mat, Part No. JAG 205/ST010
- One PROM removal tool, Part No. JAG 999/ND
- One TX 20TorxTamper-proof screw bit, JAG 20/TORX

**CAUTION!** The following steps should only be carried out while working at an anti-static workstation (Illustration 1) and wearing a grounding wrist strap.

1. Position the ECM on the anti-static work mat so that when facing the multi-plugs, the red multi-plug is at the upper right and the black multi-plug to the lower left.

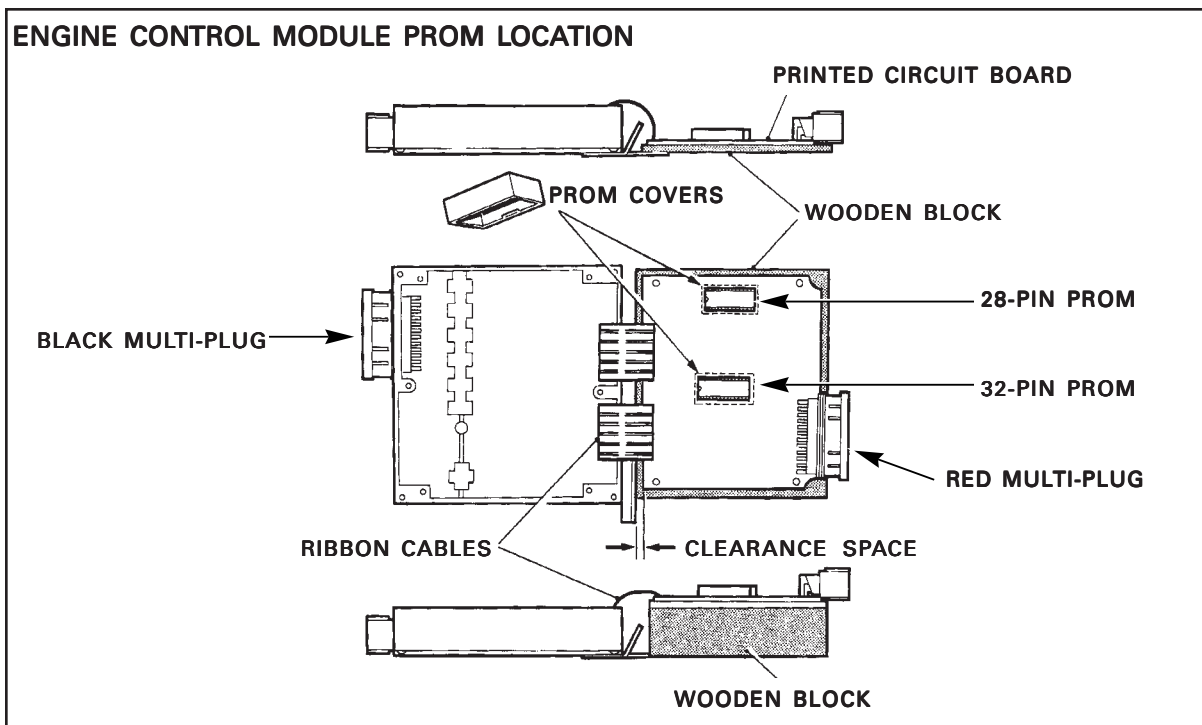


ILLUSTRATION 2

2. Note the position of the top cover with its mounting tab to the ECM housing. Mark both the cover and the casing using a felt tip marker to assist re-assembly. Remove the four tamper resistant retaining screws of the top cover (the cover adjacent to the red multi-plug) using a Torx 20 Anti-Tamper screw bit.
3. Obtain a wooden block approximately 6 x 6 x 1 inches. Remove the seven retaining screws of the printed circuit board (Illustration 2). Lift the printed circuit board and support it on the wooden block so that no strain is applied to the ribbon connectors. Allow a clearance space so that no damage can occur from contact with the mounting brackets.
4. Remove the appropriate PROM covers by lightly gripping the PROM cover with a pair of pliers and using a side to side rocking action.

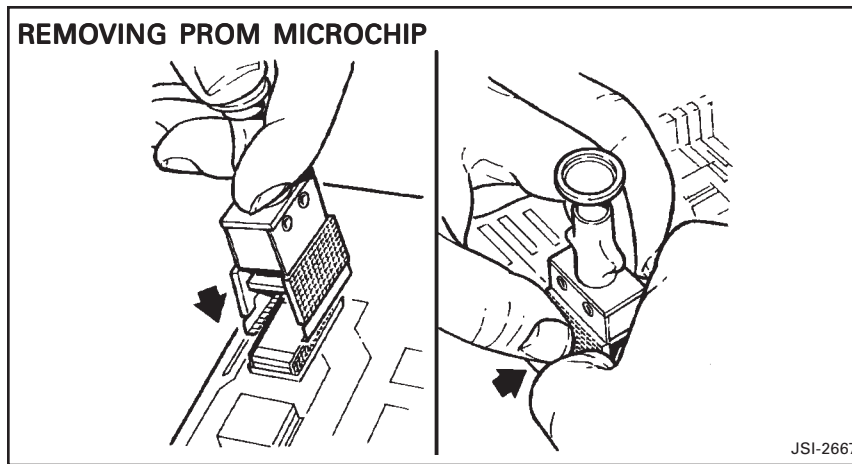


ILLUSTRATION 3

5. Use a suitable chip removal tool to carefully remove both PROM chips from the printed circuit board (Illustration 3). The PROM removal tool supplied may differ from that shown in the illustration.
6. Before installing the new microchip(s), identify the semicircular cutouts in both the chip and the socket on the printed circuit board (Illustration 4). The two cutouts **must be aligned** as the chip is inserted into the socket.

**NOTE:** To aid in installing the PROM, an installation tool can be sourced at a local electronics supply store. Careful manual alignment and installation methods must be used at this point in the procedure.

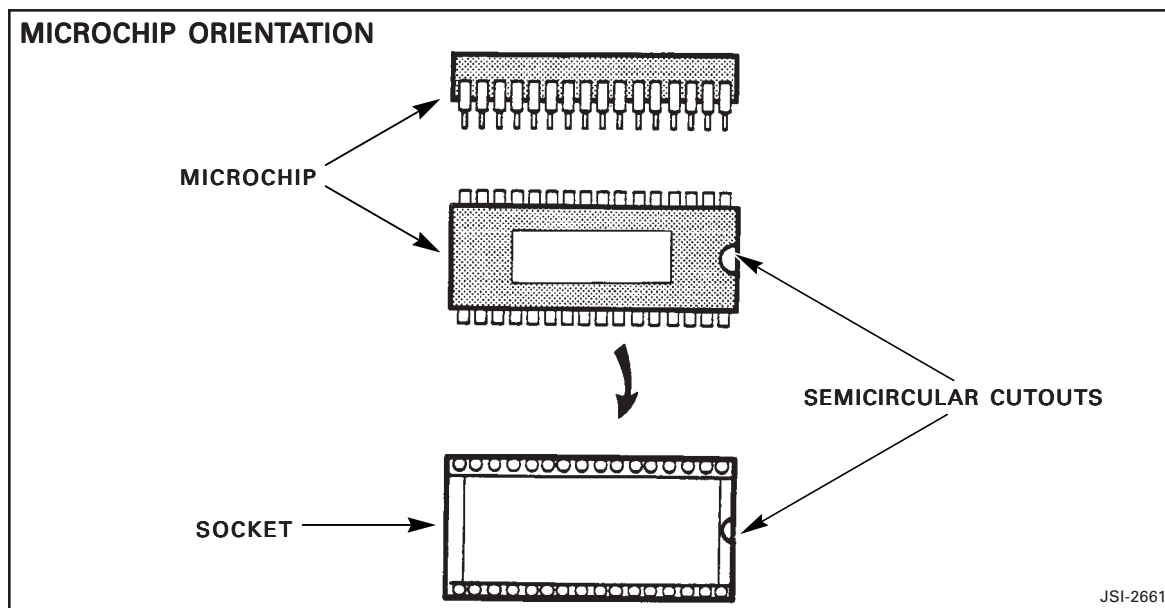


ILLUSTRATION 4

7. Identify and install the replacement 28-pin chip from the kit into the 28-pin socket and the 32-pin chip into the 32-pin socket.

**CAUTION!** The microchip **MUST** lie parallel to the printed circuit board with all the pins engaged into the socket (condition A, Illustration 5). Permanent damage to the chip is likely in conditions B or C. Malfunctions will occur with partial engagement as in condition D.

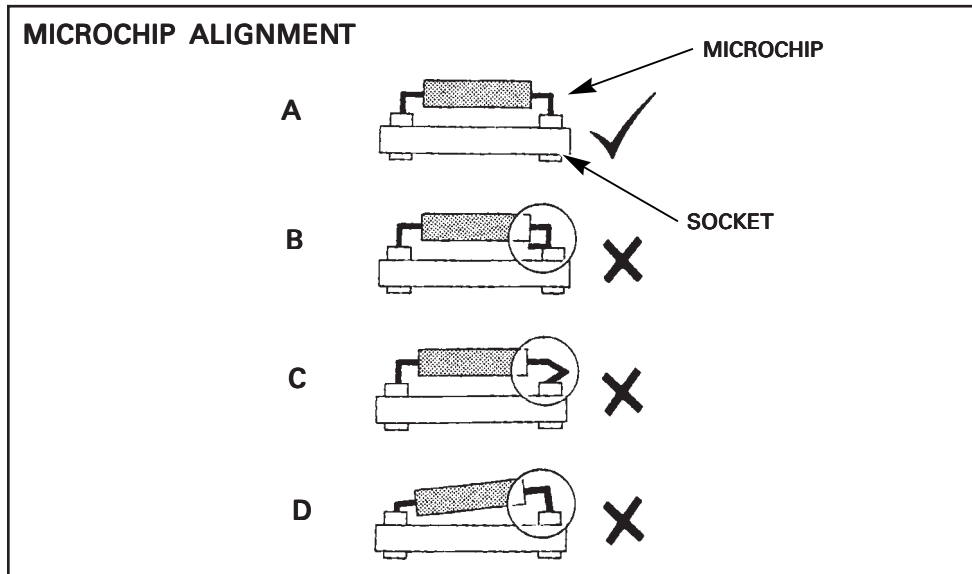


ILLUSTRATION 5

8. Install the original cover(s) over the PROM chip(s).
9. Carefully fold the printed circuit board back into its original location on the housing of the ECM. Make sure the multi-plug is correctly aligned with its location in the housing. Install the seven retaining screws. Torque the screws to 20 - 25 lb. in. (2.25 - 2.82 Nm).
10. Install the ECM cover on the housing aligning the marks made during disassembly. Install the four mounting screws. Torque the screws to 20 - 25 lb. in. (2.25 - 2.82 Nm).

11. Apply the PECUS label from the kit to the cover near the existing labels without covering them (Illustration 6).
12. Install the ECM by reversing the removal procedures.

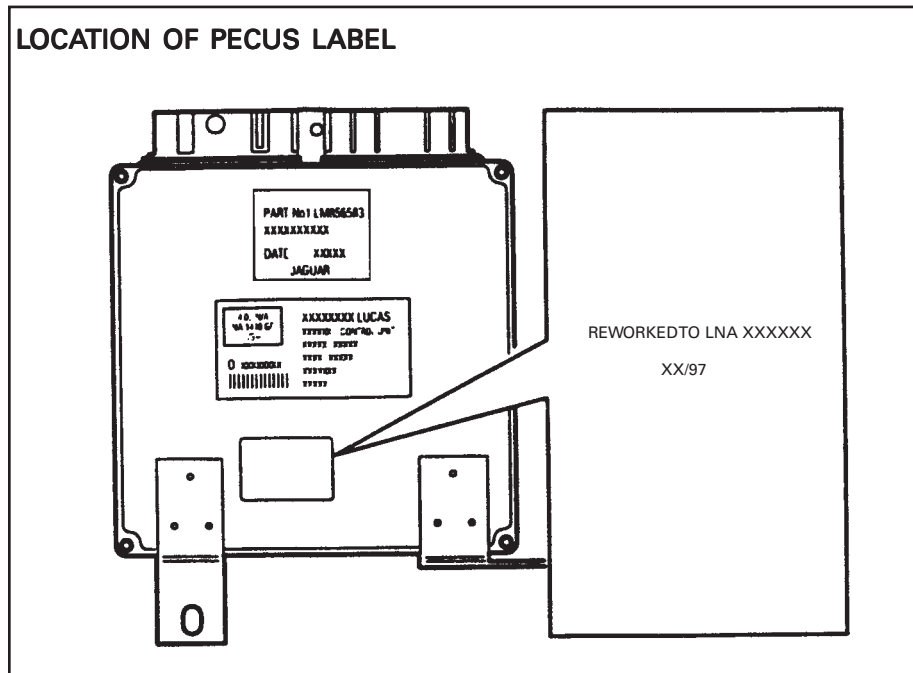


ILLUSTRATION 6

13. Connect the battery and reset the vehicle clock.
14. Start the vehicle and perform an adequate road test to verify proper engine operation. **Only if** a drivability complaint exists, use the PDU to check the orientation of the oxygen sensors and to perform the engine setup.

**PARTS INFORMATION (XJR vehicles):**

For 4.0L NA vehicles, refer to Technical Bulletin 05.1-24, dated 4/97.

<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QTY</u>
PROM chip - XJR 4.0L SC	JLM 20372	1

**WARRANTY INFORMATION (XJR vehicles):**

For 4.0L NA vehicles, refer to Technical Bulletin 05.1-24, dated 4/97.

<u>FAULT CODE</u>	<u>R.O. NUMBER</u>	<u>DESCRIPTION</u>	<u>TIME ALLOWANCE</u>
BX DF **	18.91.18	XJR - Replace EPROM	0.65 hrs.