

**Check Engine MIL - DTC P0121 Flagged –  
Connector Material Mismatch –  
AJ27 Engines – Modify Harness**

**MODEL**  
1999-2001 MY XK Range  
1999-2001 MY V8 XJ Series  
**VIN**  
031303-A22860  
853936-F40117

**Issue:**

On some 1999-2001 XK and XJ vehicles within the above VIN ranges, with AJ-27 engines, Diagnostic Trouble Code (DTC) P0121 (Throttle Position Signal) may be present. A possible cause is a mismatch of electrical connector terminal materials between the Throttle Position Sensor (TPS) and the wiring harness electrical connector (gold terminals on the TPS and tin terminals on the wiring harness).

**Action:**

**For 1999 MY vehicles, also refer to Technical Bulletin 303-S498, Service Action S498.**

On a customer complaint basis only, install new gold terminals into the TPS wiring harness electrical connector as follows:

**HARNESS MODIFICATION PROCEDURE**

1. Record customer preferences as described in Technical Bulletin 414-01. Remove battery cover and disconnect battery.
2. Open hood and fit fender protectors.
3. On XK Series vehicles:
  - Remove induction elbow to throttle housing securing screws.
  - Disconnect induction elbow from throttle housing and reposition for access.

On V8 XJ Series vehicles:

- Remove left and right hand bulkhead covers.
  - Remove engine compartment rear cover.
  - Remove nut securing engine harness main electrical connector to support bracket.
  - Reposition main electrical connector upwards.
4. On all vehicles, disconnect TPS electrical connector (Illustration 1).

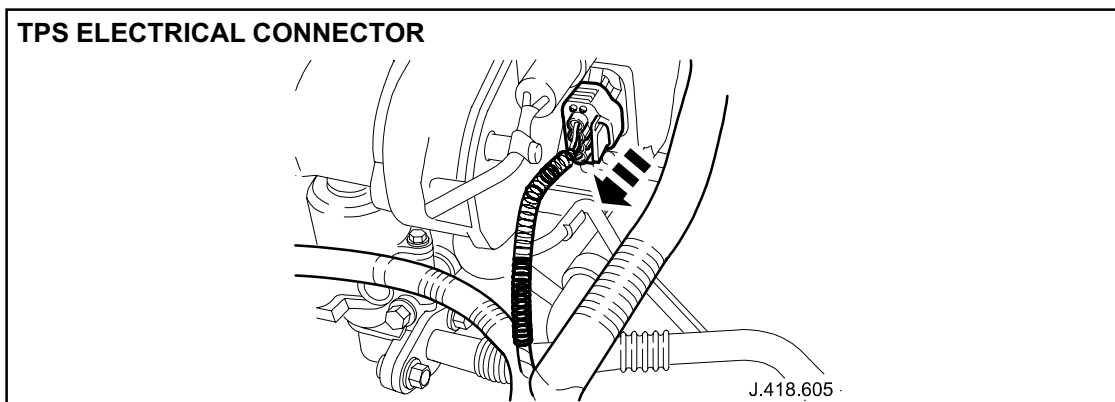


ILLUSTRATION 1

5. Reposition TPS electrical connector upwards for access.
6. Remove tape from convoluted sleeve.
7. Remove and discard convoluted sleeve from wiring harness.
8. Remove electrical tape from wiring harness.
9. Note position of wires in TPS electrical connector.
10. Displace and remove anti-back-out device from TPS electrical connector (Illustration 2).

**REMOVE ANTIBACK-OUT DEVICE**

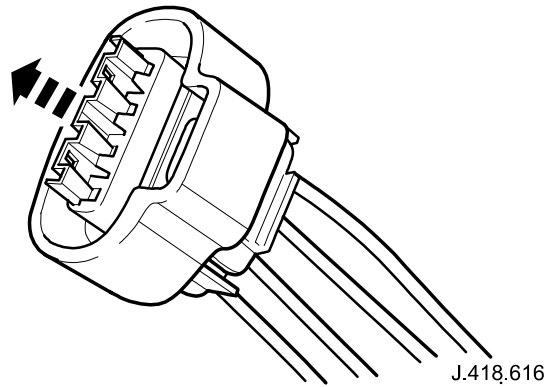


ILLUSTRATION 2

11. Remove the existing tin-plated terminals from the TPS electrical connector.
12. Cut and remove existing tin-plated electrical terminals/wires (Illustration 3).

**Note:** Make sure to stagger the cuts to allow installation of the convoluted sleeve after modification.

**STAGGERED CUTS IN TPS HARNESS**

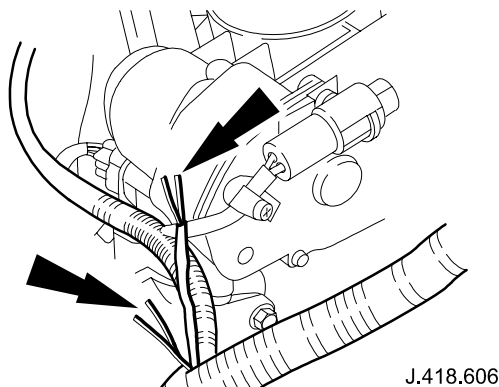


ILLUSTRATION 3

13. Strip back electrical wire insulation.
14. Cut gold terminated cables to required length.

**Note:** TPS wiring harness is to be same length as original after service repair.

15. Strip back electrical wire insulation from terminated cable ends.
16. Secure butt splice connectors from harness repair kit to terminated cable ends.

**Note:** Refer to the harness repair guide to determine the correct butt-splice connectors.

17. Secure butt-splice connectors/terminated cables to existing wires (Illustration 4).

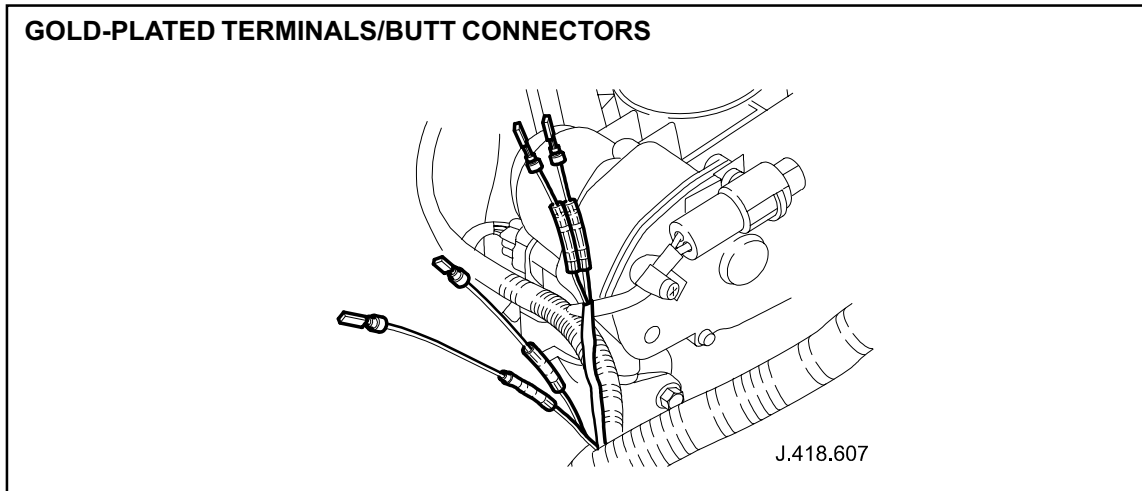


ILLUSTRATION 4

18. In turn, install heat-shrink tubing from harness repair kit over butt-splice connectors, using suitable heat source (Illustration 5).

**Note:** Refer to the harness repair guide to determine the correct heat-shrink tubing.

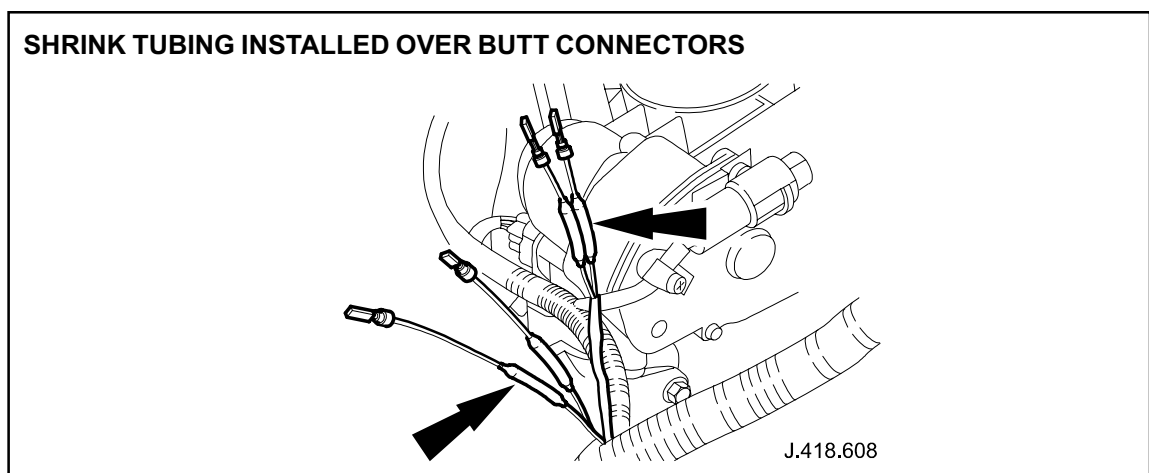


ILLUSTRATION 5

19. Install gold plated electrical terminals (into positions noted at step 9) into TPS electrical connector (Illustration 6).

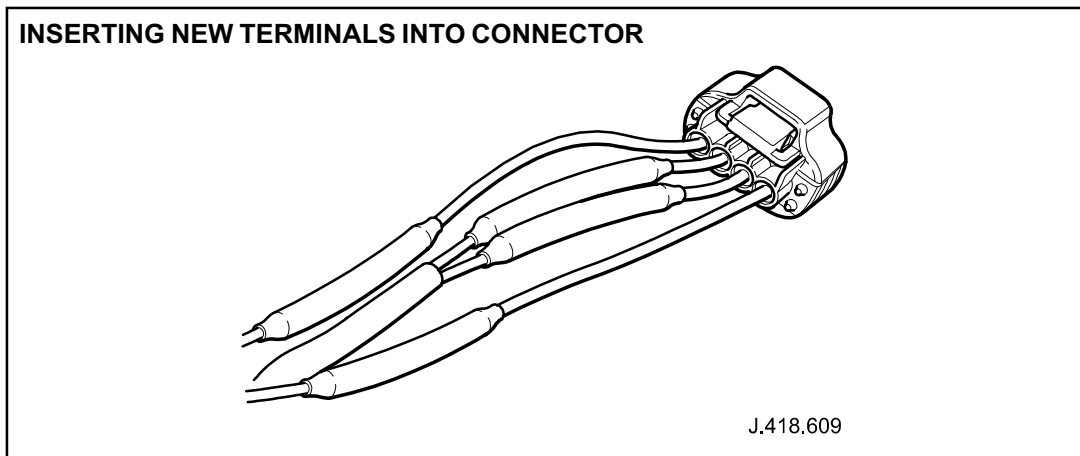


ILLUSTRATION 6

20. Install anti-back-out device to TPS electrical connector (Illustration 7).

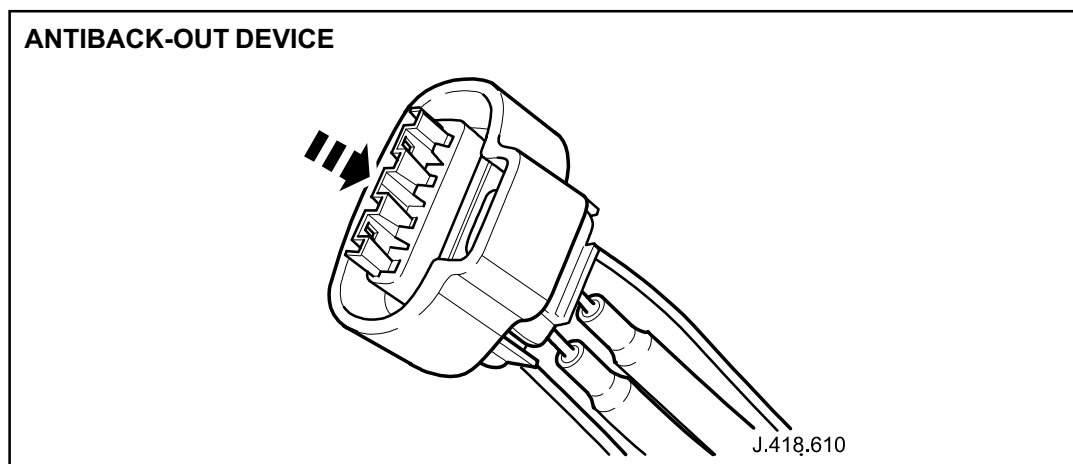


ILLUSTRATION 7

21. Install new convoluted sleeve around TPS wiring harness and secure using suitable electrical tape (Illustration 8).

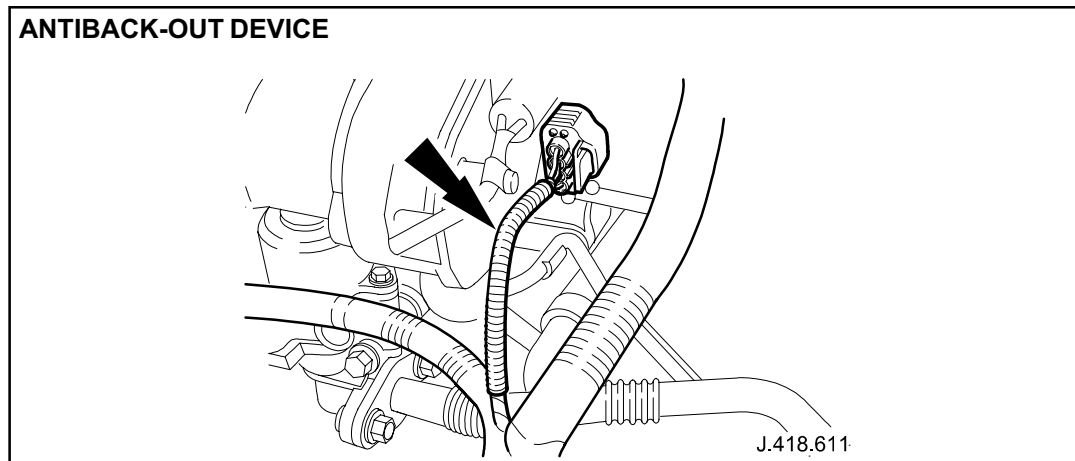


ILLUSTRATION 8

22. Install TPS electrical connector (Illustration 9).

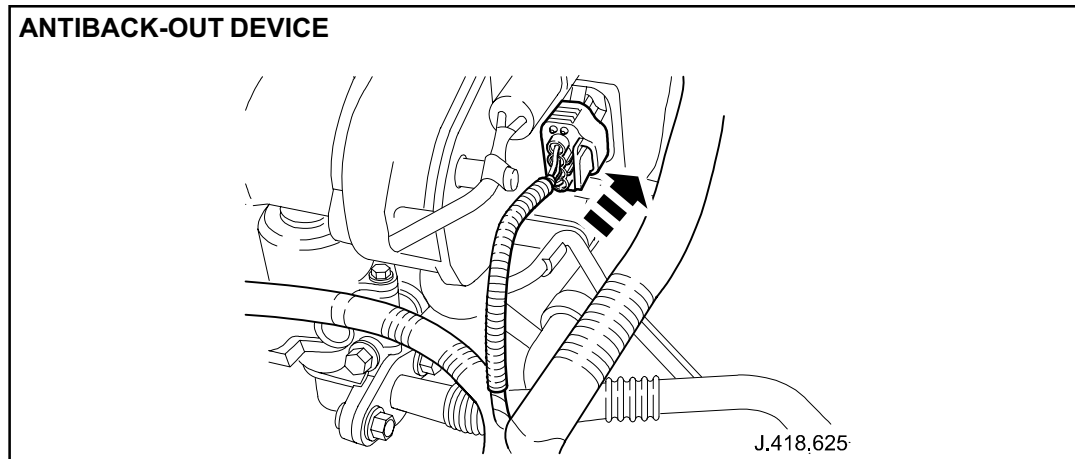


ILLUSTRATION 9

23. On XK Series vehicles:
- Install induction elbow to throttle housing.
  - Install and tighten induction elbow to throttle housing securing screws.
- On V8 XJ Series vehicles:
- Reposition main engine harness electrical connector and align with support bracket.
  - Tighten nut securing the engine harness main electrical connector to the support bracket.
  - Install engine compartment rear cover.
  - Install left and right hand bulkhead covers.
24. On all vehicles.
25. Connect battery and install battery cover.
26. Close luggage compartment.
27. Connect Worldwide Diagnostic System (WDS) to vehicle and clear DTC P0121.
28. Remove fender protector covers and close hood.

**Parts Information:**

<b>DESCRIPTION</b>	<b>PART NUMBER</b>	<b>QTY</b>
Convolute tube	LST 6754AA	1
Gold terminated cable	LNG 3956AA	4

**Warranty Information:**

Warranty claims should be submitted quoting the information found in the table below. This will result in payment of the stated time and, where applicable parts/miscellaneous expense codes as listed.

<b>Description</b>	<b>SRO</b>	<b>Time</b>	<b>Causal Part Number</b>	<b>Causal Part Description</b>
Install gold terminals on throttle position sensor harness-XK Series	86.93.05	1.0 hrs.	LNG 3956AA	Gold-terminated cable
Install gold terminals on throttle position sensor harness-V8 XJ Series	86.93.05	1.1 hrs.	LNG 3956AA	Gold-terminated cable