

Engine Misfire/MIL Illumination –  
Engine Harness Chafing –  
Repair Procedure

MODEL 2002 MY  
X-TYPE  
VIN C00344-C14372

**Issue:**

Owners of some 2002 MY X-TYPE vehicles within the above VIN range may complain of engine misfire or illumination of the Malfunction Indicator Lamps (MIL). These conditions can be caused by the engine harness chafing on its mounting bracket resulting in a short circuit to ground.

**Action:**

In case of a customer complaint of the above condition on a 2002 MY X-TYPE vehicle within the above VIN range, follow the workshop procedure outlined below.

WORKSHOP PROCEDURE

1. Open drivers door.
2. Pump brake pedal to evacuate the brake booster vacuum.
3. Open hood fit fender protection covers.
4. Close drivers door.
5. Disconnect battery (see Workshop Manual, JTIS CD ROM section: 414-01, General Procedures).
6. Remove throttle body. (See Workshop Manual, JTIS CD ROM, section: 303-04, SRO 19.70.04)
7. Disconnect electrical connectors. (Illustration 1)

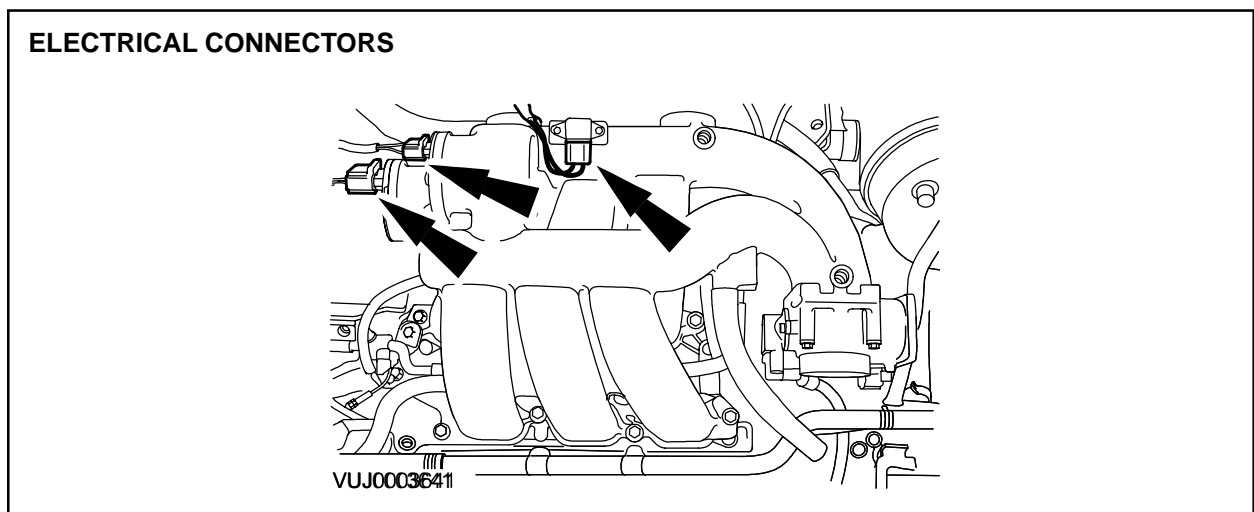


ILLUSTRATION 1

8. Reposition vacuum hoses. (Illustration 2)

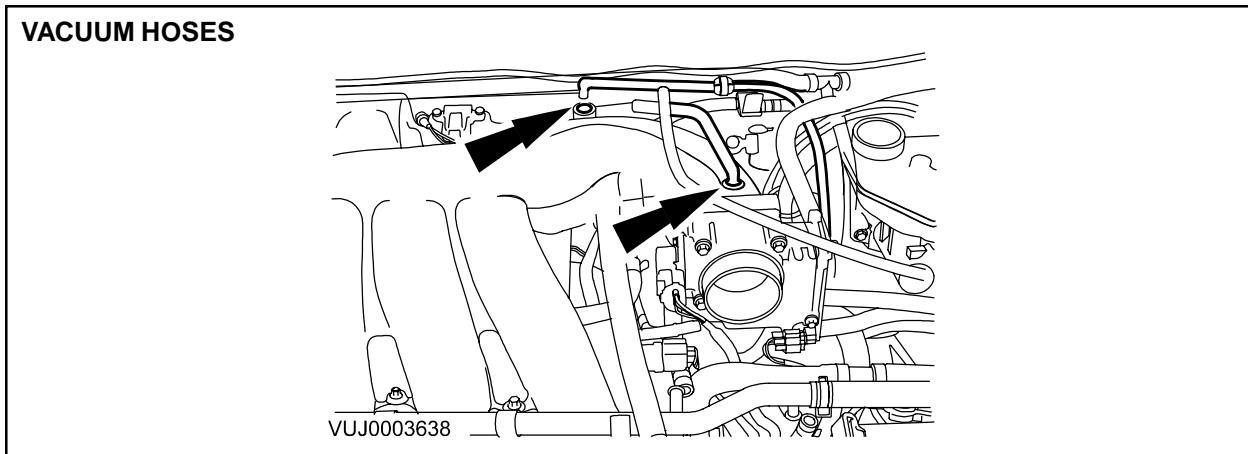


ILLUSTRATION 2

9. Fit suitable blanking plugs in vacuum hoses and intake manifold.

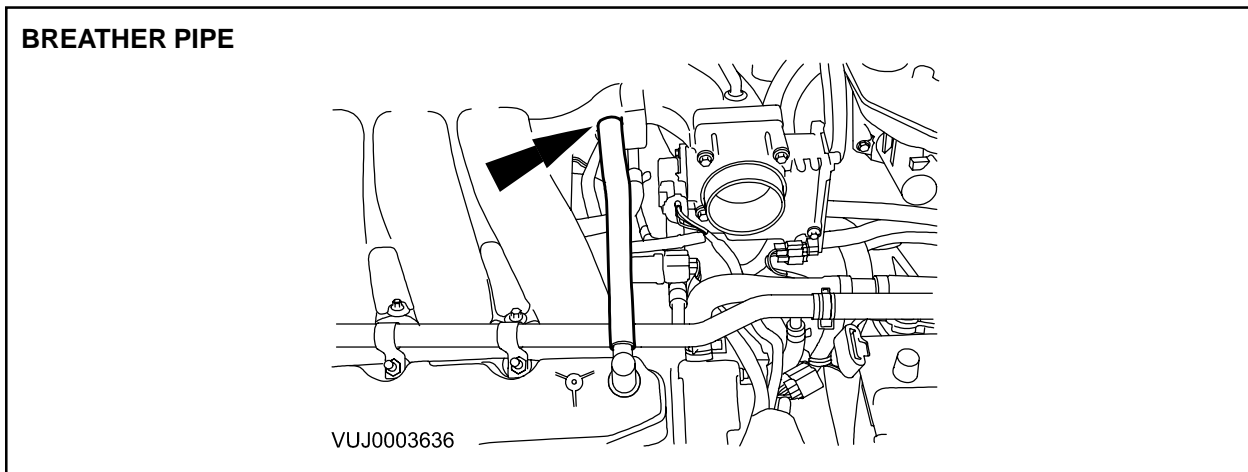


ILLUSTRATION 3

10. Reposition the breather pipe from the intake manifold. (Illustration 3)

11. Fit suitable blanking plugs in intake manifold and breather pipe.

## FUEL PRESSURE REGULATOR HOSE

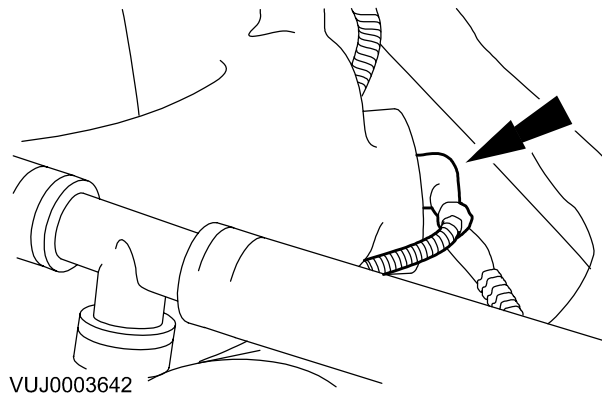


ILLUSTRATION 4

12. Disconnect the vacuum hose that runs from the intake manifold to the fuel rail at the end connected to the intake manifold. (Illustration 4)
13. Fit suitable blanking plugs in vacuum hose and intake manifold.
14. Remove engine harness retaining bracket securing nuts.
15. Reposition engine harness-retaining bracket.

## INTAKE MANIFOLD BOLTS

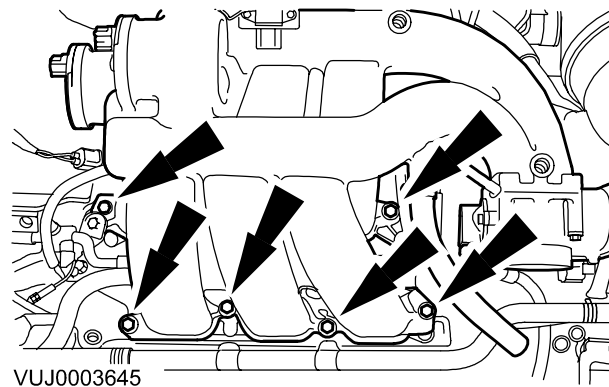


ILLUSTRATION 5

16. Remove intake manifold securing bolts. (Illustration 5)
17. Remove intake manifold.
18. Remove and discard intake manifold to lower manifold seals.
19. Fit suitable blanking plugs in intake manifold and lower manifold.
20. Place intake manifold to a secure area.

## REMOVING HARNESS TAPE

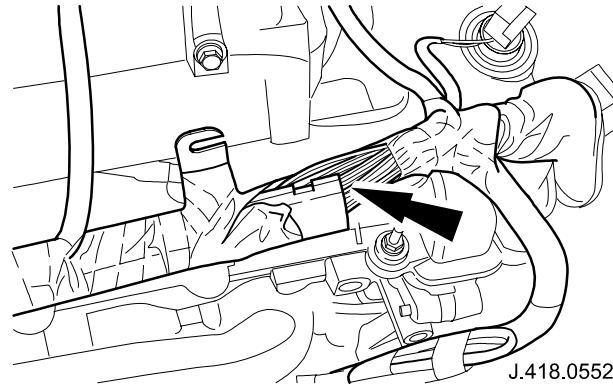


ILLUSTRATION 6

21. Working from right side of the vehicle, remove harness tape to expose wiring at the end of the mounting bracket. (Illustration 6)

**⚠ Caution:** Use great care not to damage the wiring.

22. Remove and discard the cable ties.
23. Inspect wiring harness for damage/chafing from the bracket.

**Note:** If the wiring is damaged, repair the wiring using the Harness Repair Kit (418-S065).

24. Cut damaged wire at point of chafe.
25. Strip back outer casing from end of cut cables approximately 8 mm.
26. Insert one end of cut and stripped cable into butt splice connector from Harness Repair Kit and crimp.

**Note:** Refer to harness repair guide for correct butt splice connector.

27. Slide heat shrink sleeve from Harness Repair Kit over butt splice connector.

**Note:** Refer to harness repair guide for correct heat shrink sleeve.

28. Insert remaining end of cut and stripped cable into opposing end of butt splice connector and crimp.
29. Position heat shrink sleeve over butt splice connector.
30. Shrink sleeve using appropriate heat source.

### APPLYING NEW HARNESS SHIELD

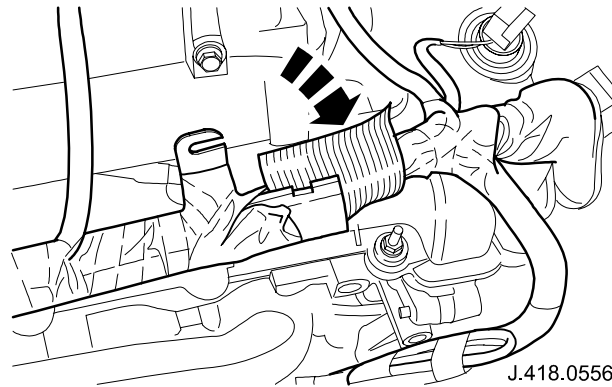


ILLUSTRATION 7

31. Apply the new harness shield centrally around the exposed harness about the edge of the mounting bracket. (Illustration 7)
32. Remove the felt cover from the Velcro strip and secure the harness shield.

### SECURING HARNESS AND SHIELD

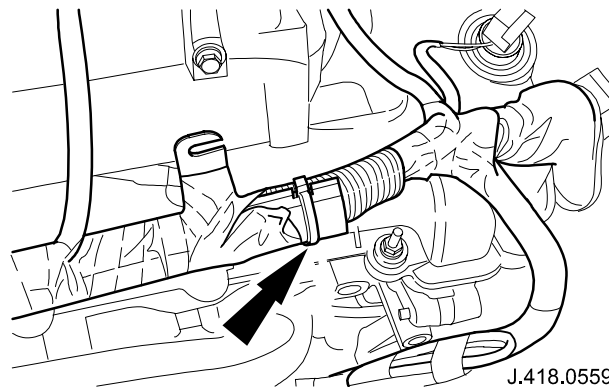


ILLUSTRATION 8

33. Refit cable ties to secure harness and harness shield to mounting bracket. (Illustration 8)
34. Cut protruding end of tie straps and discard.

## REWRAPPING HARNESS

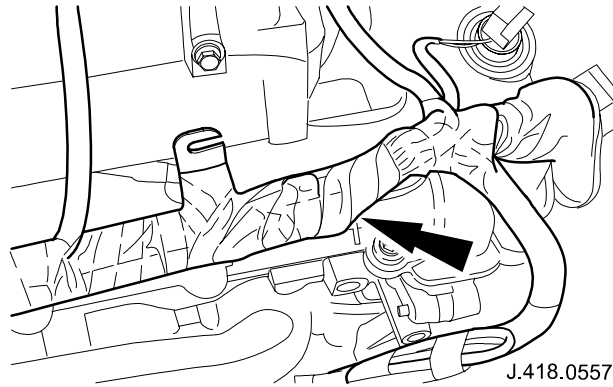


ILLUSTRATION 9

35. Rewrap the harness to the mounting bracket using tape supplied. (Illustration 9)

**Note:** Use care to position the wiring harness centrally in channel of the mounting bracket.

## REMOVING HARNESS TAPE

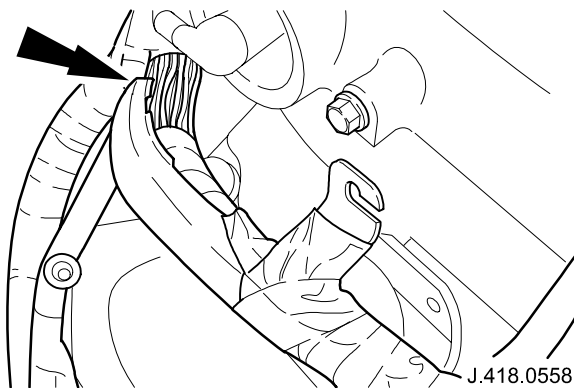


ILLUSTRATION 10

36. Working on the left side of vehicle, remove harness tape to expose wiring at end of mounting bracket. (Illustration 10)

**⚠ Caution:** Use great care not to damage the wiring.

**Note:** Do not disturb the breakout node tape.

37. Remove and discard the cable tie.  
38. Inspect wiring harness for damage/chaffing from the mounting bracket.

**Note:** If the wiring harness is damaged, repair using the Harness Repair Kit (418-S605) and the following method.

39. Cut damaged cable at point of chafe.
40. Strip back outer casing from end of cut cable approximately 8 mm.
41. Insert one end of cut and stripped cable into butt splice connector from Harness Repair Kit and crimp.

**Note:** Refer to harness repair guide for correct butt splice connector.

42. Slide heat shrink sleeve from Harness Repair Kit over butt splice connector.

**Note:** Refer to harness repair guide for correct butt splice connector.

43. Insert remaining end of cut and stripped cable into opposing end of butt splice connector and crimp.
44. Position heat shrink sleeve over butt splice connector.
45. Shrink sleeve using appropriate heat source.

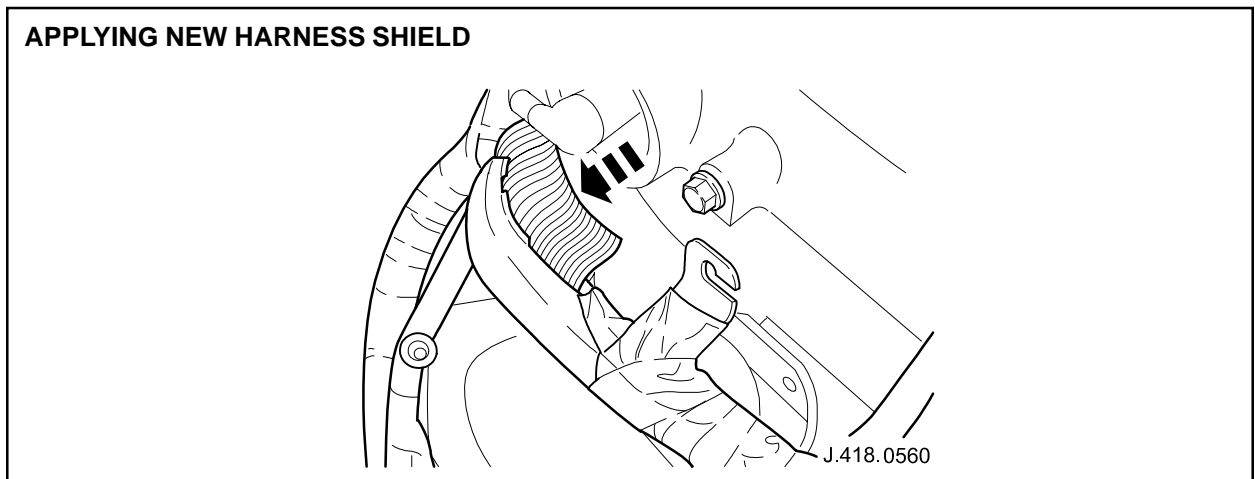


ILLUSTRATION 11

46. Install the new harness shield centrally around the exposed harness about the edge of the mounting bracket. (Illustration 11)
47. Remove the felt cover from the Velcro strip and secure the harness shield.

## SECURING HARNESS AND SHIELD

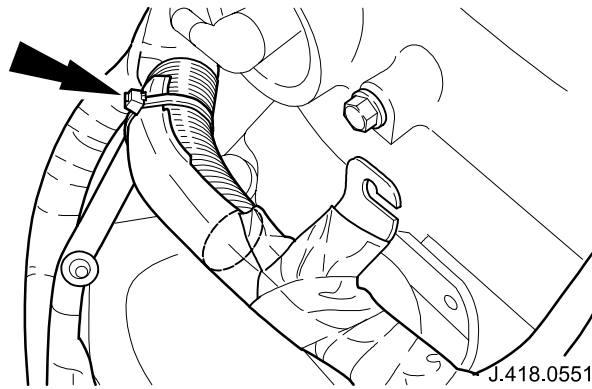


ILLUSTRATION 12

48. Refit cable tie to secure harness and harness shield to mounting bracket. (Illustration 12)
49. Cut protruding end of tie strap and discard.

## REWRAPPING HARNESS

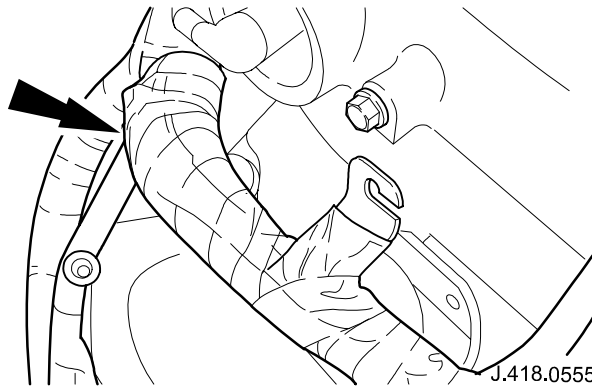


ILLUSTRATION 13

50. Rewrap the harness to the mounting bracket using tape supplied. (Illustration 13)

**Note:** Use care to center the wiring harness in the channel of the mounting bracket.

51. Place intake manifold to front.
52. Remove blanking plugs from intake manifold and lower manifold.
53. Install and align new intake manifold seals.
54. Install and align intake manifold to lower manifold.



## INTAKE MANIFOLD TORQUE SEQUENCE

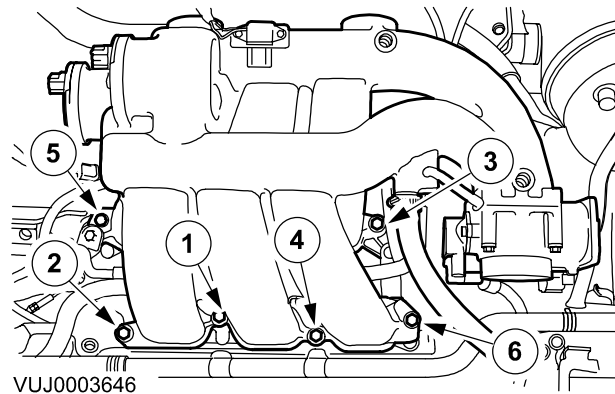


ILLUSTRATION 14

55. Install and tighten intake manifold securing bolts in sequence to 10 Nm. (Illustration 14)
56. Install engine harness bracket to rear of intake manifold.
57. Install and tighten engine harness bracket securing nuts to 10 Nm.
58. Remove blanking plugs from fuel rail vacuum hose and intake manifold.
59. Install and fully seat vacuum hose to intake manifold.
60. Remove blanking plugs from engine breather pipe and intake manifold.
61. Install and fully seat engine breather pipe to intake manifold.
62. Remove blanking plugs from vacuum hose and intake manifold.
63. Install and fully seat vacuum hose to intake manifold.
64. Reposition and install throttle body. (See Workshop Manual, JTIS CD ROM, section: 303-04, SRO 19.70.04)

## ELECTRICAL CONNECTORS

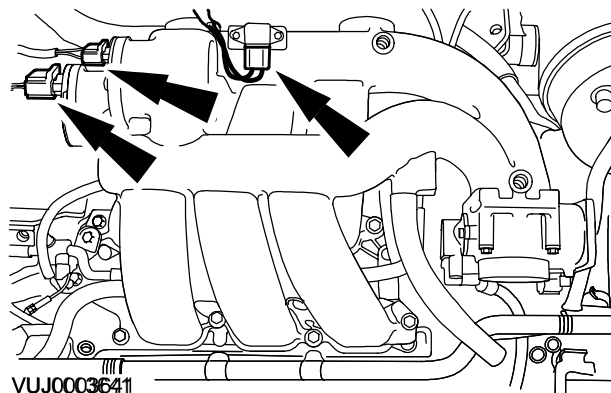


ILLUSTRATION 15

65. Connect electrical connectors. (Illustration 15)

66. Reconnect battery. (See Workshop Manual, JTIS CD ROM, section: 414-01, General Procedures)
67. Remove fender protection covers close hood.

**Parts Information:**

<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QTY</u>
Harness shield	C2S 21006	2
Tape	C2S 21007	1
Intake manifold gasket	C2S 14519	6
Throttle housing seal	XR8 19852	1

**Warranty Information:**

<u>FAULT</u>	<u>R.O.</u>	<u>DESCRIPTION</u>	<u>TIME</u>
<u>CODE</u>	<u>NUMBER</u>		<u>ALLOWANCE</u>
LG BC B4	86.92.87	Engine harness repair	1.4 hrs.