

**Technical Bulletin No:** XT307-01  
**Issue Date:** Aug 0  
**Vehicle:** X-Type 2002- MY-ON  
**VIN:** C00001-ON

## **Difficulty Selecting Transmission Ranges – GEARBOX FAULT Message – Reset J-Gate**

### **Problem**

Some 2002 MY X-TYPE vehicles with automatic transmissions may experience difficulty in selecting a transmission range. Also the message 'GEARBOX FAULT' flashing on the message centre or the power-train malfunction lamp [MIL] illuminating) which may cause the vehicle to run in limp-home mode.

### **Action**

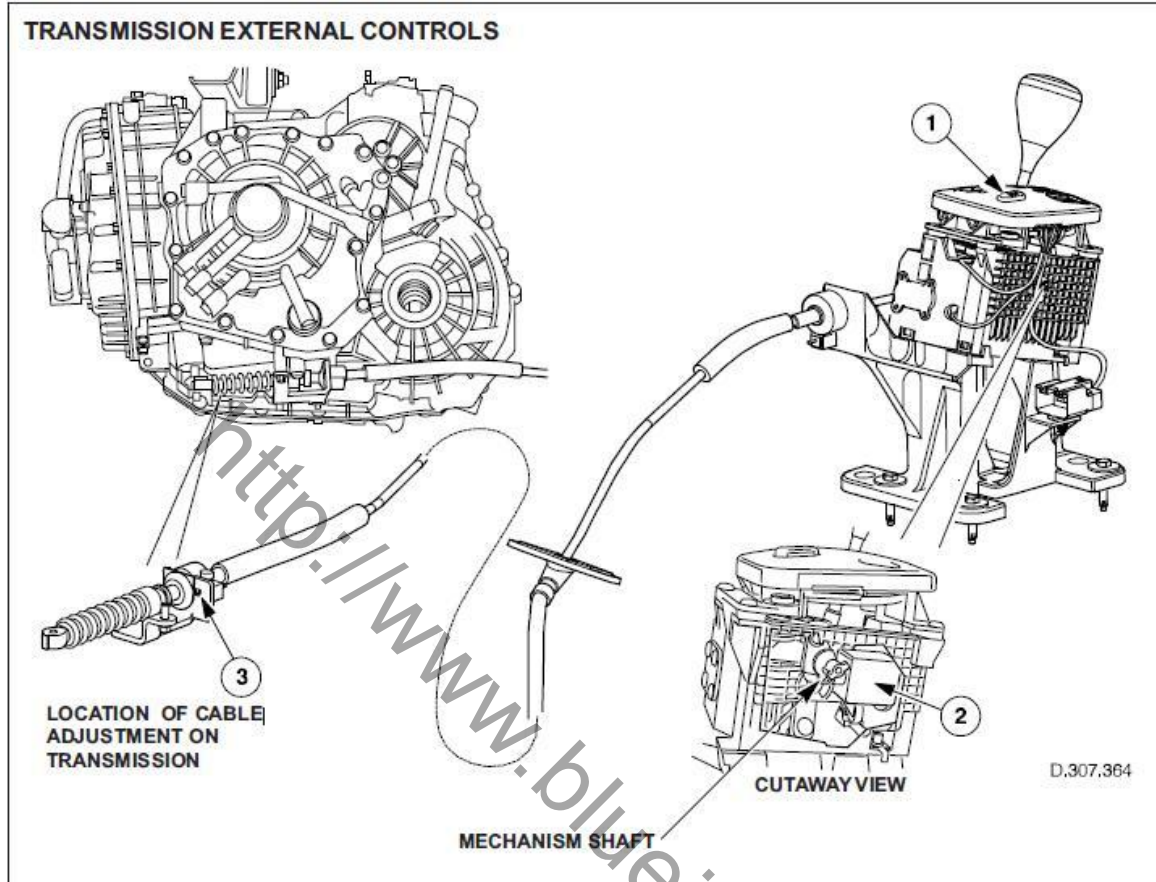
Using WDS, check for any diagnostic trouble codes (DTCs) stored. If any DTC is stored (see table below), the J-gate assembly is functioning incorrectly and needs resetting. In order to do this, follow the Workshop Procedure outlined below.

### **Possible DTCs:**

P1780 and/or P0706 - Can cause the vehicle to run in limp-home mode  
P0731 P0732 P0733 P0734 P0735 P0740 – Can cause difficulty selecting a range or Drive.

Note: Before starting the J-gate setting procedure, ensure the vehicle is cold, or has been left to cool for at least 2 hours.

## Procedure



TRANSMISSION EXTERNAL CONTROLS MECHANISM SHAFT  
CUTAWAY VIEW LOCATION OF CABLE ADJUSTMENT ON TRANSMISSION

**Note:** If the selector lever cannot be moved from the Park position, remove the trim on the left side of the console. Release the lever by turning the end of the mechanism shaft to a vertical position (Illustration 1).

## FUNCTION CHECK

1. Apply handbrake.
2. Apply foot brake.
3. Start vehicle engine.
4. Starting in P, slowly, move the selector lever around the J-gate and stop in each position to check that all ranges can be selected, return back to P and stop in each range position on the way.
5. Move selector lever from P to R.
6. Holding selector lever tight to outside edge of J-gate, slowly move selector lever from R to N two or three times to ensure N illuminates.
7. Applying minimal force, slowly move the selector lever from N to D two or three times to ensure D does engage and illuminate. To verify that D is engaged, check the tachometer for a drop in RPM.

**If illumination is not apparent, proceed to setting procedure A.**

8. Move selector lever to 3.
9. Holding selector lever to inside edge of J-gate, slowly move selector lever from 3 to D two or three times, ensure selector lever passes around the corner of D.

**If after moving the selector lever to D at step 9, illumination is lost in all gear positions and cannot be recovered (even by shifting to N), then proceed to setting procedure A**

**If at step 9 illumination is still apparent or can be recovered, no further action is required.**

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### **SETTING PROCEDURE A**

1. Switch ignition OFF.
2. Move selector lever to N.
3. Raise vehicle on a drive-on lift.
4. Remove transmission selector cover plate and place aside.
5. Loosen, but do not fully remove transmission selector cable adjusting bolt (3, Illustration 1).
6. Inside the vehicle, hold selector lever tight to position N.
7. Using corner of the gray feature line (that follows the J-gate) as a reference mark, use a ruler and move selector lever back 2 mm and hold.
8. Using an assistant under the vehicle, wiggle selector cable at transmission end.
9. Fully tighten transmission selector cable adjusting bolt (3, Illustration 1).
10. Start vehicle engine and repeat fault identification procedure to check if fault has been rectified. Check that ignition key can be removed easily.

### **SETTING PROCEDURE A (WITH J-GATE TOOL)**

1. Switch ignition OFF.
2. Move selector lever to N.
3. Raise vehicle on lift.
4. Remove transmission selector cover plate and place aside.
5. Loosen, but do not fully remove transmission selector cable adjusting bolt (3, Illustration 1).
6. Inside the vehicle, insert the red J-Gate setting tool into the cover plate to lock the lever in the N position.
7. Using an assistant under the vehicle, wiggle selector cable at transmission end.
8. Fully tighten transmission selector cable adjusting bolt (3, Illustration 1). Remove red tool.
9. Start vehicle engine and repeat fault identification procedure to check if fault has been rectified. Check that ignition key can be removed easily.

**If illumination is not apparent at any point, proceed to setting procedure B.**

## SETTING PROCEDURE B

1. Move selector lever to N.
2. Loosen, but do not fully remove transmission selector cable adjusting bolt (3, Illustration 1).
3. Using a steel ruler, adjust selector lever (see adjustment table below) either towards or away from N position and hold.

## ADJUSTMENT TABLE

| Failure Position | Action   |
|------------------|--|
| N or D           | Set selector lever closer to N position in 1 mm increments to a maximum of 1 mm in front of N. |
| 4                | Set selector lever away from N position in 1 mm increments to a maximum of 4 mm behind N.      |

4. Using an assistant, wiggle selector cable at transmission end.
5. Fully tighten transmission selector cable adjusting bolt (3, Illustration 1).
6. Repeat fault identification procedure to check if fault has been rectified.

**If illumination is still not apparent, further setting procedures may be necessary. (See table for adjustment limit).**

7. Reinstall transmission selector cover plate.
8. Fit and fully tighten cover plate fixing bolts (10 Nm).
9. Lower vehicle. Check that ignition key can be removed easily. J-GATE REPLACEMENT If problems with key removal persist, replace the J-gate as follows:
  1. Open door.
  2. Switch ON ignition.
  3. Depress brake pedal.
  4. Reposition selector lever to N position.
  5. Release brake pedal.
  6. Switch OFF ignition.
  7. Open hood and install fender protector covers.
  8. Disconnect vehicle battery.
  9. Remove J-gate surround.
  10. Remove console assembly.
  11. Disconnect J-gate electrical connector.
  12. Undo and remove centre console bracket securing screws. ( Centre console bracket is removed with J-gate).
  13. Release and remove selector cable locking pin.
  14. Release selector cable retaining clip from J-gate.
  15. Remove ashtray securing screws.
  16. Displace and reposition ashtray.
  17. Disconnect cigar lighter connector.
  18. Remove ashtray.
  19. Remove J-gate securing screws.
  20. Displace and remove J-gate.
  21. Remove centre console bracket from J-gate.
  22. Position new J-gate in the vehicle.
  23. Position J-gate selector lever to N position.

24. Install centre console bracket.
25. Install and fully seat new J-gate.
26. Install and tighten J-gate securing screws.
27. Connect ashtray cigar lighter connector.
28. Install and fully seat ashtray.
29. Install and tighten ashtray securing screws.
30. Connect selector cable to J-gate.
31. Secure selector cable locking pin.
32. Install and tighten centre console mounting bracket securing screws.
33. Connect J-gate electrical connector.
34. Install centre console.
35. Install J-gate surround.
36. Connect vehicle battery.
37. Switch ignition ON.
38. Depress brake pedal.
39. Position selector lever to P position.
40. Release brake pedal.
41. Switch ignition OFF.

**Parts Information:**

| DESCRIPTION     | PART NUMBER | QTY |
|-----------------|-------------|-----|
| J-Gate assembly | C2S 20251   | 1   |
|                 |             |     |
|                 |             |     |

42. Remove fender protector covers and close hood. Check that ignition key can be removed easily.