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Vehicle: X-Type 2002 MY-ON
VIN: C00001-ON

Driveshaft Vibration

Problem
A new procedure has been developed for use after the WDS Vehicle Vibration Analyzer (VVA) has confirmed a vehicle vibration.

Action
After a driveshaft vibration has been confirmed using WDS VVA, follow the workshop procedure outlined below.

Workshop Proceedure

Warning : Driveshaft bolts are one-time use only. Use new bolts for the final repair. Existing bolts may be reused throughout the diagnostic procedures.

1. Raise vehicle on twin-post lift.
2. Check for alignment of the green line on the rear differential flange with white paint spot on the rear of the driveshaft. If not aligned continue from step 3; if aligned continue from step 16.
3. Remove the rear driveshaft joint to rear differential flange bolts and links where accessible.
4. Rotate the driveshaft and remove the remaining rear driveshaft joint to rear differential flange securing bolts and links.
5. Displace driveshaft from the rear differential flange.
6. Remove and discard the gasket from the rear differential flange (where installed).
7. Clean the mating faces.
8. Install a new gasket to the rear differential flange, if previously installed.
9. Rotate the driveshaft 180°from the original position.*
10. Position the driveshaft to the rear differential flange.
11. Install, but do not final-tighten the accessible bolts and links that secure the rear driveshaft joint to the rear differential flange.

12. Rotate driveshaft and install, but do not final-tighten, the remaining bolts and links that secure the rear driveshaft joint to the rear differential flange.
13. With the driveshaft joint fully seated in the rear differential flange, final tighten the accessible securing bolts to 44 Nm (32 lb. ft.).
14. Rotate driveshaft and final tighten the bolts securing the driveshaft to the rear differential flange to 44 Nm (32 lb. ft.).
15. Lower vehicle.

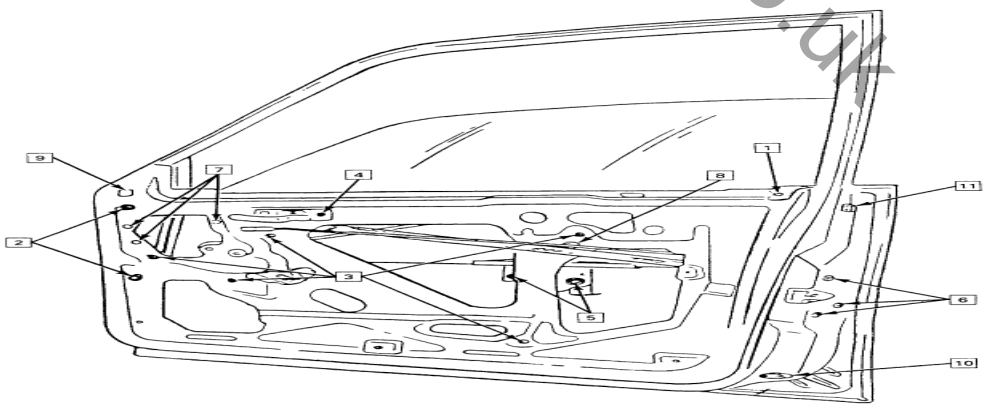
If the VVA still confirms a driveshaft vibration, or the paint marks were already aligned:

16. Loosen the 6 bolts at the rear differential flange/driveshaft mating surface. Reseat the driveshaft and re-torque to 44 Nm (32 lb. ft.).
17. If the VVA still confirms a driveshaft vibration, install a new driveshaft (see Workshop Manual, section: 205-01, SR047.15.01).
    Note :Ensure colored marks are aligned at the rear differential

If the VVA still confirms a driveshaft vibration, check the flange inside diameter and run-out as described below.

CHECKING DIFFERENTIAL FLANGE INSIDE DIAMETER AND RUN-OUT

1. Raise vehicle on twin-post ramp
2. Remove driveshaft (see Workshop Manual, section: 205-01, SRO 47.15.01).
3. Clean mating faces.



4. Using a suitable measuring device, measure and record the rear differential driveshaft locating flange inside diameter (Illustration 1).
5. Mount a suitable magnetic base dial indicator and mount on the rear differential.

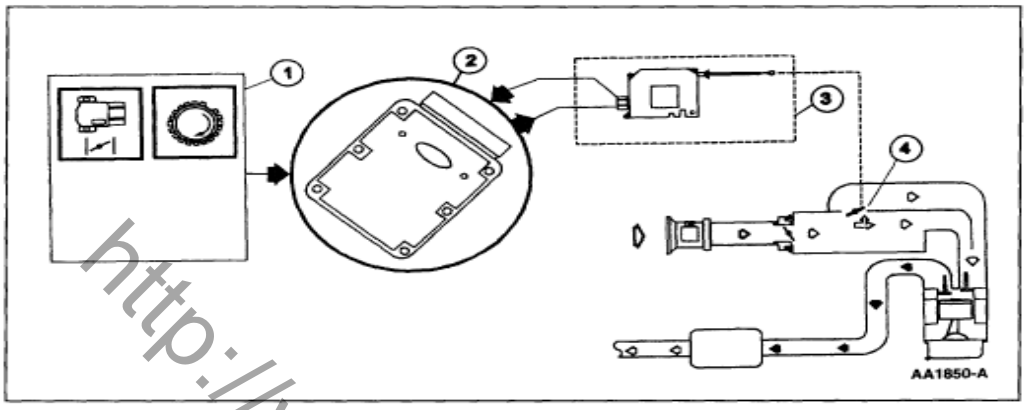


Figure 107: Intake Manifold Runner Control (IMRC) - Electric Actuated (Refer to the On Board Diagnostics Monitor System Overview for Icon Definitions.

6. Measure and record the rear differential driveshaft locating flange inside diameter run-out (Illustration 2).
7. If the inside diameter is greater than 94.076 mm or less than 94.030 mm and/or the run-out is greater than 0.12 mm, install a new drive pinion flange and seal (see Workshop Manual, section: 205-02, SRO 51.25.13).

   Note :Ensure colored marks are aligned at the rear differential. If the inside diameter is between 94.076 mm and 94.030 mm and/or the run-out is less than 0.12 mm, continue with the procedure below.

If the VVA still confirms a driveshaft vibration check the transfer case flange inside diameter and run-out as described below:

CHECKING TRANSFER CASE FLANGE INSIDE DIAMETER AND RUN-OUT

1. Raise vehicle on twin-post ramp.
2. Remove driveshaft (see Global Technical Reference GTR Workshop Manual, section: 205-01).
3. Clean the face of transfer case output flange.

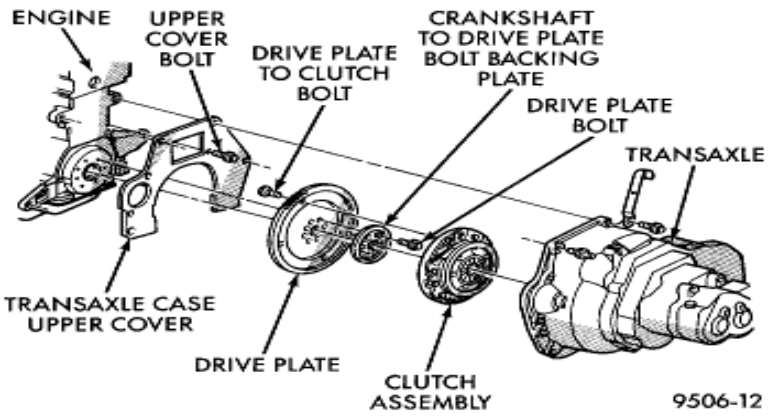
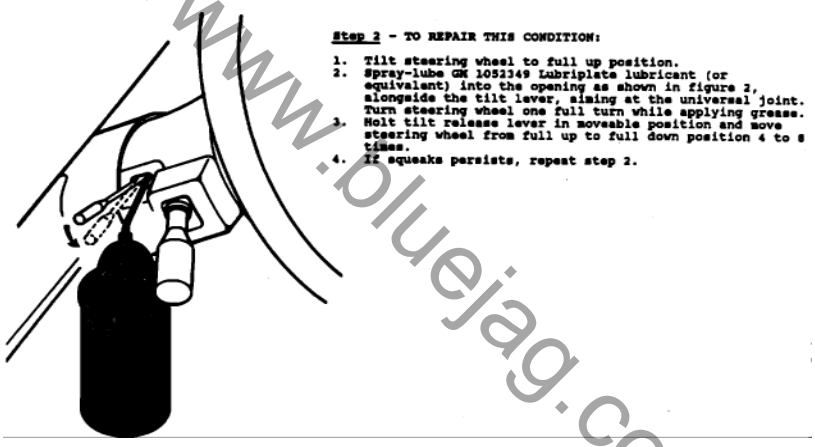


Fig. 6 Clutch Components

4. Use a suitable measuring device, to measure the inside diameter of the transfer case output flange (Illustration 3).
5. Assemble a suitable magnetic base Dial Test Indicator (DTI) and mount to transfer case.



6. Measure the run-out of the inside diameter of the transfer case output flange (Illustration 4).

If the inside diameter is greater than 94.076 mm or less than 94.030 mm and/or the run-out is greater than 0.12 mm, continue from step 7. If readings are in specification continue from step 8.

7. Install a new drive pinion seal and flange (see Global Technical Reference GTR Workshop Manual, section: 308-07, SRO 46.10.04).

If the VVA still confirms a driveshaft vibration:

8. Install a new driveshaft (see Global Technical Reference GTR Workshop Manual, section 205-01