

STEERING CONTROL

APPLICATION

This inspection applies to all vehicles.

PROCEDURE AND STANDARDS

- With the steered wheels in the straight ahead position lightly rotate the steering wheel to the left and right and note the amount of free play.
- Check the movement between the steering wheel column and shaft by rocking the steering and applying upward and downward pressure at the wheel's rim and also by pushing and pulling at the rim.
- Check steering wheel for condition. Cracks in the plastic covering do not necessarily mean that a spoke is fractured.
-
- Check the steering column has no excessive end float, when applying an upward and downward pressure to the steering wheel in line with the column.
- Free play at the steering rim in excess of 1/30 of the steering wheel diameter for a rack and pinion mechanism is considered a reason for failure. For other types of mechanism free play in excess of 1/5 of the wheel's diameter is considered a Reason for Failure. The acceptable free play for a range of wheels is shown below.

| WHEEL DIAMETER | RACK AND PINION STEERING | | OTHER TYPES OF STEERING |
|----------------|--------------------------|---|-------------------------|
| | CONVENTIONAL | WITH STEERING WHEEL AHEAD OF THE RACK AND WITH A NUMBER OF JOINTS | |
| 380mm (15") | 13mm (0.5") | 48mm (1.9") | 76mm (3") |
| 455mm (18") | 16mm (0.6") | 57mm (2.3") | 90mm (3.6") |
| 530mm (21") | 18mm (0.7") | 67mm (2.6") | 106mm (4.2") |
| 610mm (24") | 21mm (0.8") | 77mm (3.3") | 122mm (4.8") |

Note:

Unless specified by the manufacturer vehicles fitted with power steering must be checked with the engine running.

"Free Play" must not be confused with movement caused by the compression of steering joints, etc.

Certain types of steering column might show some movement not due to excessive wear, e.g., those fitted with universal joints or flexible couplings.

On vehicles that are equipped with a steering lock (anti-theft device) these should be checked for functionality.

REASON FOR FAILURE

| | Deficiency Category |
|---|---------------------|
| 1. Steering column: | |
| a. with excessive movement of centre of steering wheel in line with the column (end float). | MAJOR |
| b. with excessive side play indicating a badly worn top bearing or insecure top mounting bracket. | MAJOR |
| c. flexible coupling or universal joint deteriorated, with excessive wear or insecure. | MAJOR |
| d. coupling clamp bolt or locking device missing or loose. | MAJOR |
| e. coupling clamp bolt or locking device missing or loose with a serious risk of uncoupling. | DANGEROUS |
| f. with an adjustment device worn to such an extent that it would render the column insecure. | MAJOR |
| g. with an adjustment device worn to such an extent that it would render the column insecure with a serious risk of loss of steering control. | DANGEROUS |
| h. with an unsafe modification. | DANGEROUS |
| i. Steering lock not functioning | MINOR |
| 2. Steering Wheel: | |
| a. loose. | MAJOR |
| b. loose to such an extent that detachment is likely. | DANGEROUS |

- c. hub, spoke or rim fractured or cracked. The cover torn with jagged edges which may injure the driver. MAJOR
 - d. hub, spoke or rim fractured or cracked to such an extent that detachment is likely. DANGEROUS
 - e. hub retaining device not fitted or loose. MAJOR
 - f. hub retaining device not fitted or loose and detachment is likely. DANGEROUS
- 3.
- a. Free play in system which is outside the prescribed limits. MAJOR
 - b. Free play in system which is outside the prescribed limits and would obviously affect safe control of the vehicle. DANGEROUS