

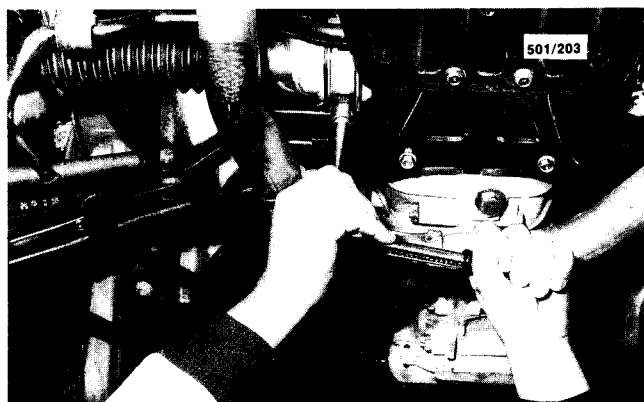
PART 1. STEERING TROUBLE SHOOTING

FAULTS, CAUSES AND REMEDIES

EXCESSIVE PLAY OR LOOSENESS IN STEERING GEAR

- (1) Tie rod end loose or worn: Tighten or renew the tie rod end.
- (2) Steering gear assembly loose on cross-member: Inspect for damage and tighten the steering gear assembly mounting bolts.
- (3) Steering gear worn: Overhaul the steering gear.
- (4) Loose or worn intermediate shaft flexible joints: Tighten or renew the intermediate shaft flexible joints.

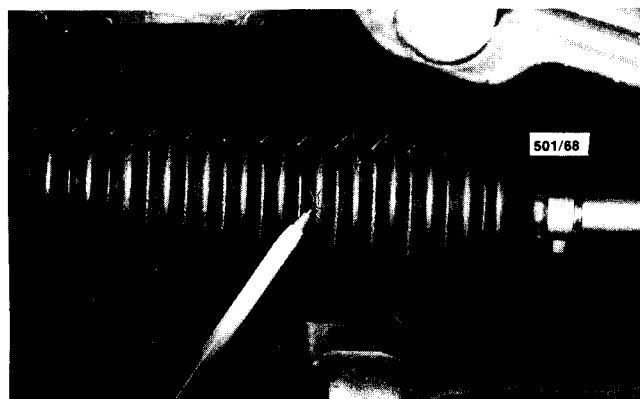
NOTE: Looseness in the steering linkage is best assessed with the weight of the vehicle on the front wheels. Have an assistant turn the steering wheel from left to right while the inspection for wear is being carried out. If looseness is found in the steering gear it will be necessary to overhaul the steering gear assembly.



Checking the steering gear mounting bolts for tightness.

HEAVY STEERING

- (1) Low or uneven tyre pressures: Check tyres and inflate to the recommended pressures.
- (2) Low fluid level in the power steering reservoir: Replenish the fluid in the power steering reservoir. Check for leakage, repair and/or renew faulty components.
- (3) Suspension worn, or out of alignment: Check the suspension for wear, renew worn components and realign the suspension.
- (4) Binding intermediate shaft flexible joints: Renew the intermediate shaft flexible joints.
- (5) Insufficient power steering pump pressure: Check the pump drive belt tension and the reservoir fluid level. If necessary, overhaul or renew the power steering pump assembly.



Check the steering gear rubber boots for deterioration.

- (6) Loss of lubricant from steering gear: Check rubber boots for cracking and deterioration, renew as required and replenish lubricant.
- (7) Loss of lubricant from tie rod ends: Check rubber boots for cracking and deterioration, renew tie rod ends as necessary.

NOTE: Ensure that both front tyres have ample depth of tread and are inflated to the correct pressure. Check the front suspension components for wear before having the steering geometry checked. Refer to the Front Suspension section for component checking procedure.

STEERING PULLS TO ONE SIDE

- (1) Uneven tyre wear or pressures: Check the tyre condition and inflate the tyres to the recommended pressures.
- (2) Incorrect front wheel alignment: Check and align the front wheels.
- (3) Dragging brakes: Check each wheel for dragging brakes. Repair the brakes as described in the Brakes section.
- (4) Damaged suspension components: Check and renew the damaged components as described in the Front Suspension section.
- (5) Faulty pinion valve in the steering gear: Check and renew the pinion valve assembly.

NOTE: Dragging brakes are normally indicated by excessive heat felt at the centre of the road wheel.

FRONT WHEEL WOBBLE OR SHIMMY

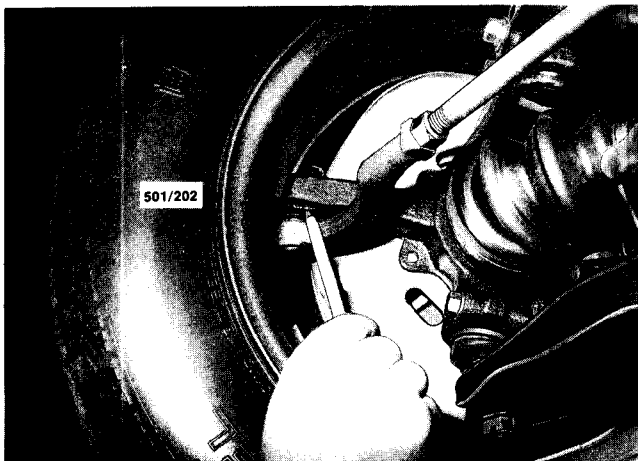
- (1) Irregular tyre wear or incorrect tyre pressures: Check the tyre condition and inflate the tyres to the recommended pressures.
- (2) Tyre or wheel unbalance: Check and balance as necessary.

- (3) Worn front hub bearings: Check the condition and if necessary, renew the front hub bearings.
- (4) Faulty or worn suspension unit: Check and renew the suspension unit, preferably as a pair.

NOTE: Check the steering linkage as previously described. Raise the front of the vehicle and check the adjustment of the hub bearings by working the road wheel in and out at the top and bottom. No perceptible movement in the bearings should be felt. Check the suspension units as outlined in the Front Suspension section.

STEERING ERRATIC OR WANDERING

- (1) Incorrect or uneven wheel alignment: Check and if necessary adjust the front wheel alignment.
- (2) Smooth front tyres: Check and renew the tyres as necessary.
- (3) Steering gear assembly loose on cross-member: Inspect for damage and tighten the steering gear assembly mounting bolts.
- (4) Tie rod end ball joint worn: Renew worn tie rod end.
- (5) Steering gear assembly worn: Overhaul steering gear assembly.



Check the tie rod end rubber boot for deterioration.



Checking the power steering fluid line for tightness.

- (6) Worn or incorrectly adjusted front hub bearings: Check the condition and if necessary, renew the front hub bearings.

NOTE: Check the steering linkage as previously described. Under no circumstances mix radial ply and conventional ply tyres. Install only tyres of the same construction on all four wheels.

FAILURE OF POWER ASSISTANCE

- (1) Loose or broken power steering pump drive belt: Renew or adjust the drive belt.
- (2) Low fluid level in the power steering reservoir: Replenish the fluid in the power steering reservoir. Check for leakage, repair or renew faulty components.
- (3) Insufficient power steering pump pressure: Check the pump drive belt tension and the reservoir fluid level. If necessary, overhaul or renew the power steering pump assembly.
- (4) Faulty power steering gear assembly: Overhaul the power steering gear assembly.

NOTE: In most cases a loose drive belt can be heard squealing when a load is placed on the pump. Such as when the steering wheel is turned or when the engine is accelerated.