



# Modern Automotive Technology Chapter 64

## Transaxle and Front Drive Axle Diagnosis and Repair

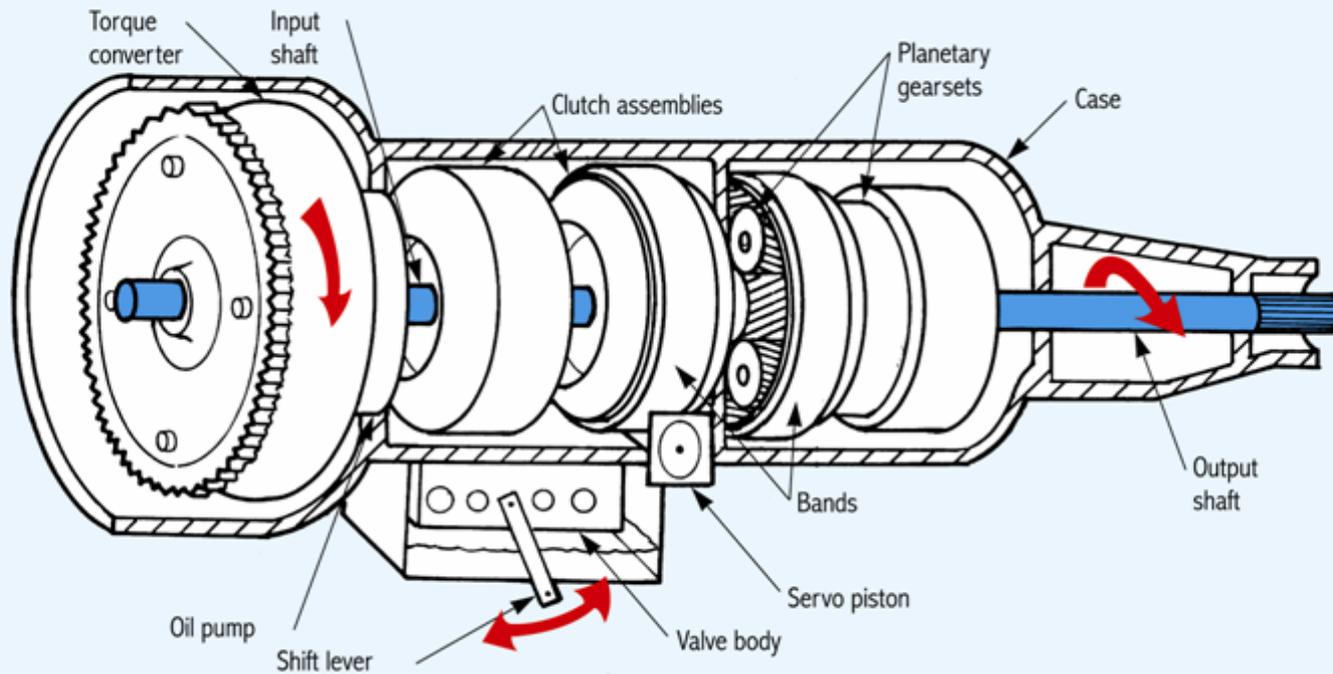


# Learning Objectives

- Diagnose common transaxle and drive axle problems.
- Adjust transaxle shift linkage.
- Complete maintenance operations on a transaxle.
- Remove and install a transaxle assembly.
- Remove and install a front drive axle.
- Replace CV-joints on front drive axles.



# Automatic Transmission

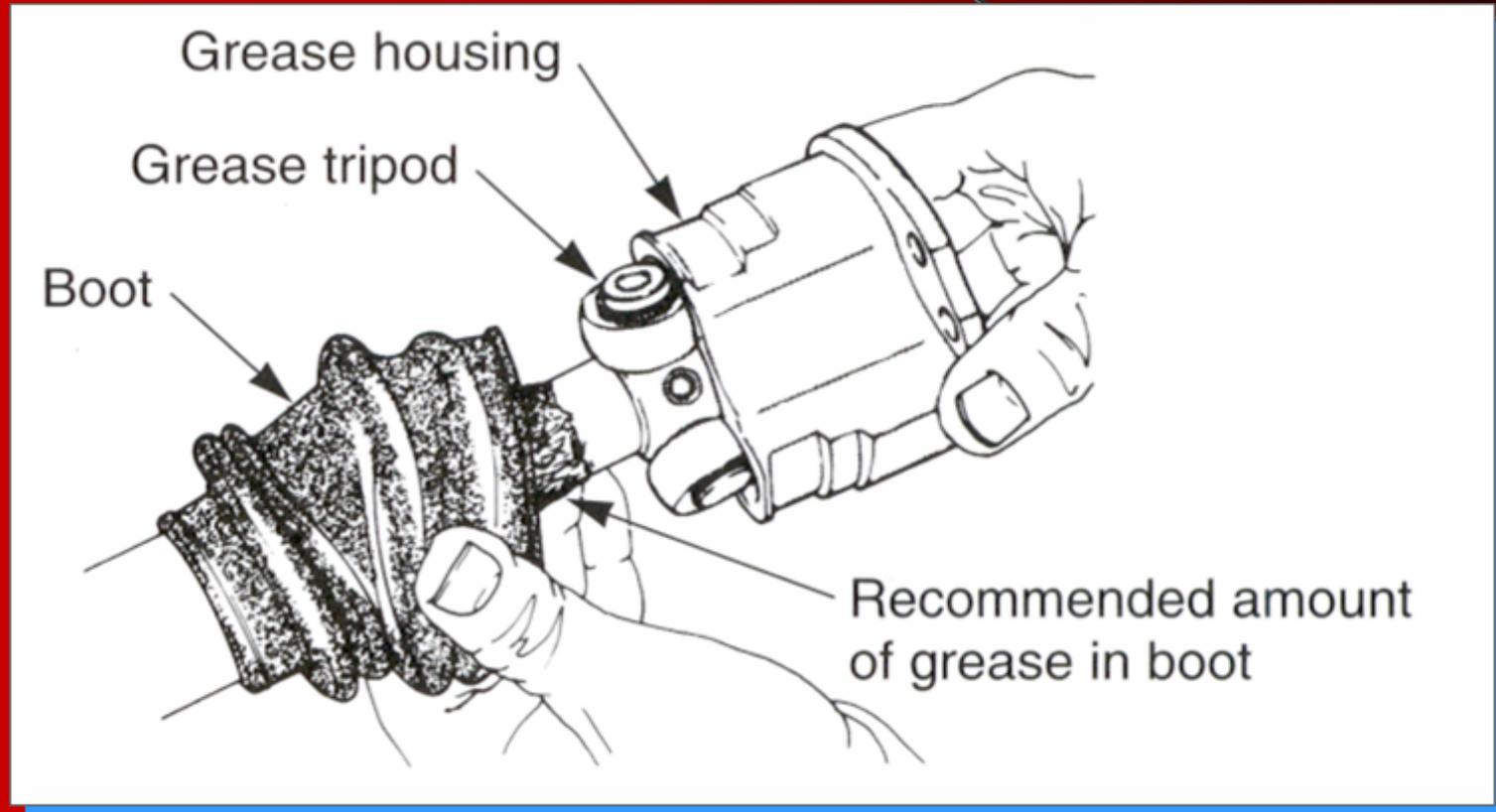


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1. A worn Front Drive Axle will usually produce abnormal noises, vibration, or excessive play in the universals.
2. Some vehicles require a special wheel Puller to free the outer stub shaft from the hub.



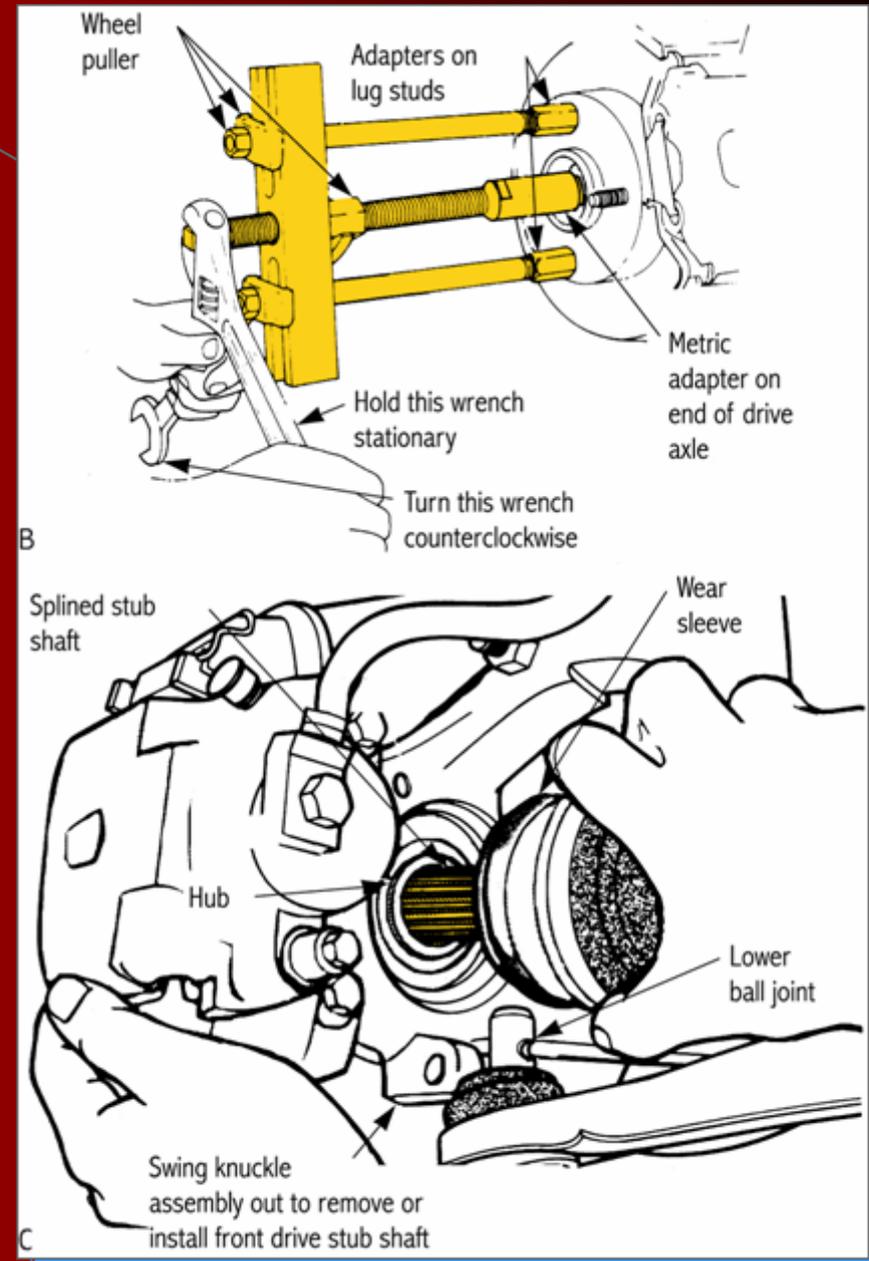
# CV-Joint Assembly Problems



# Drive Axle Removal

On some cars, a puller must be used to free the outer stub shaft from the hub

Lower ball joint removal may be required to free the outer stub shaft

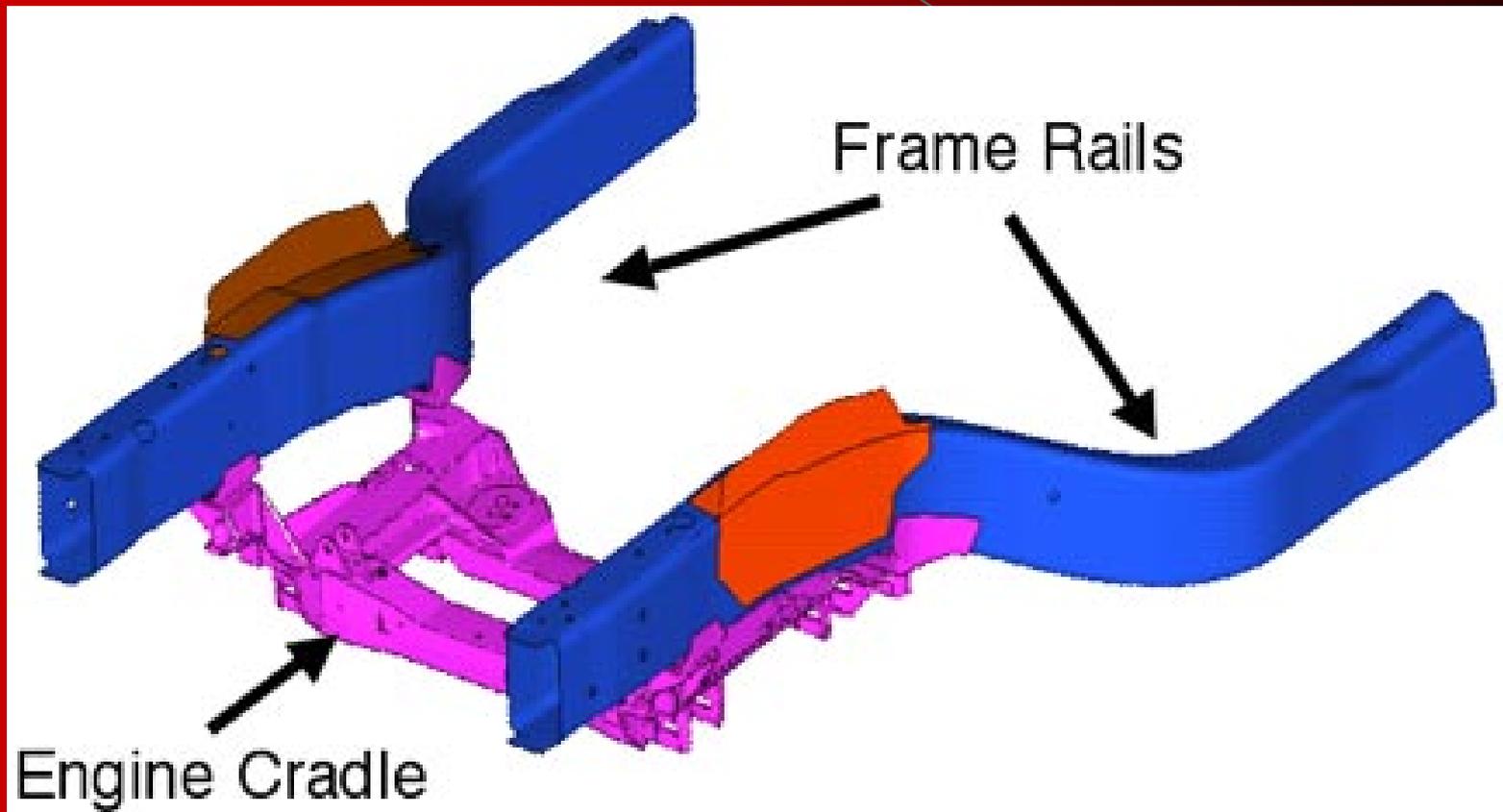


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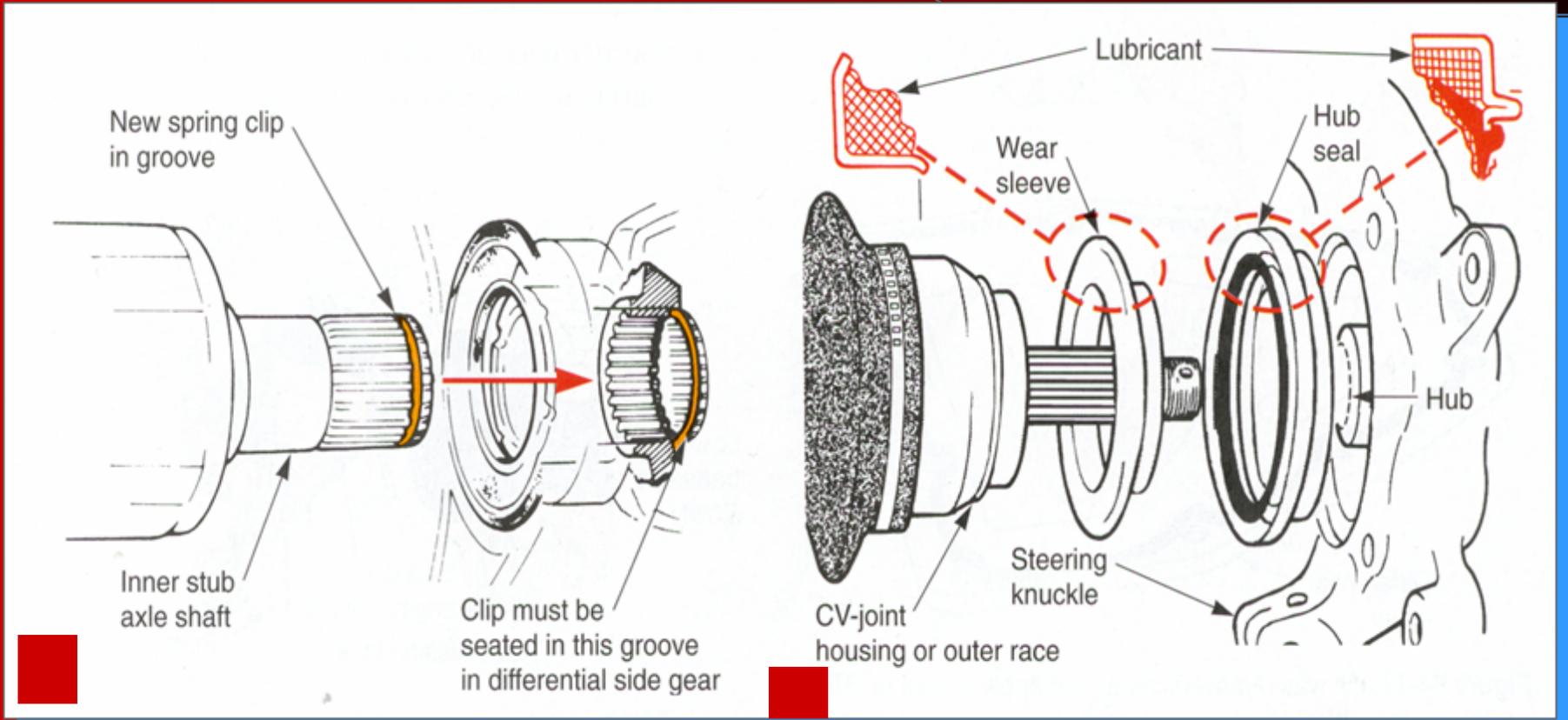
3. The engine-supporting sub-frame is called the engine Cradle.
4. When installing a front drive axle, remember to lubricate the bushing between axle and seal, also known as the Wear Sleeve.



# Engine Cradle



# Installing a Front Drive Axle



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5. A CV-Joint Kit usually includes new joint components, grease, boot, and boot straps/clamps.
6. Abnormal bearing and gear noises, shifting problems, and fluid leaks often indicate Manual Transaxle Problems.



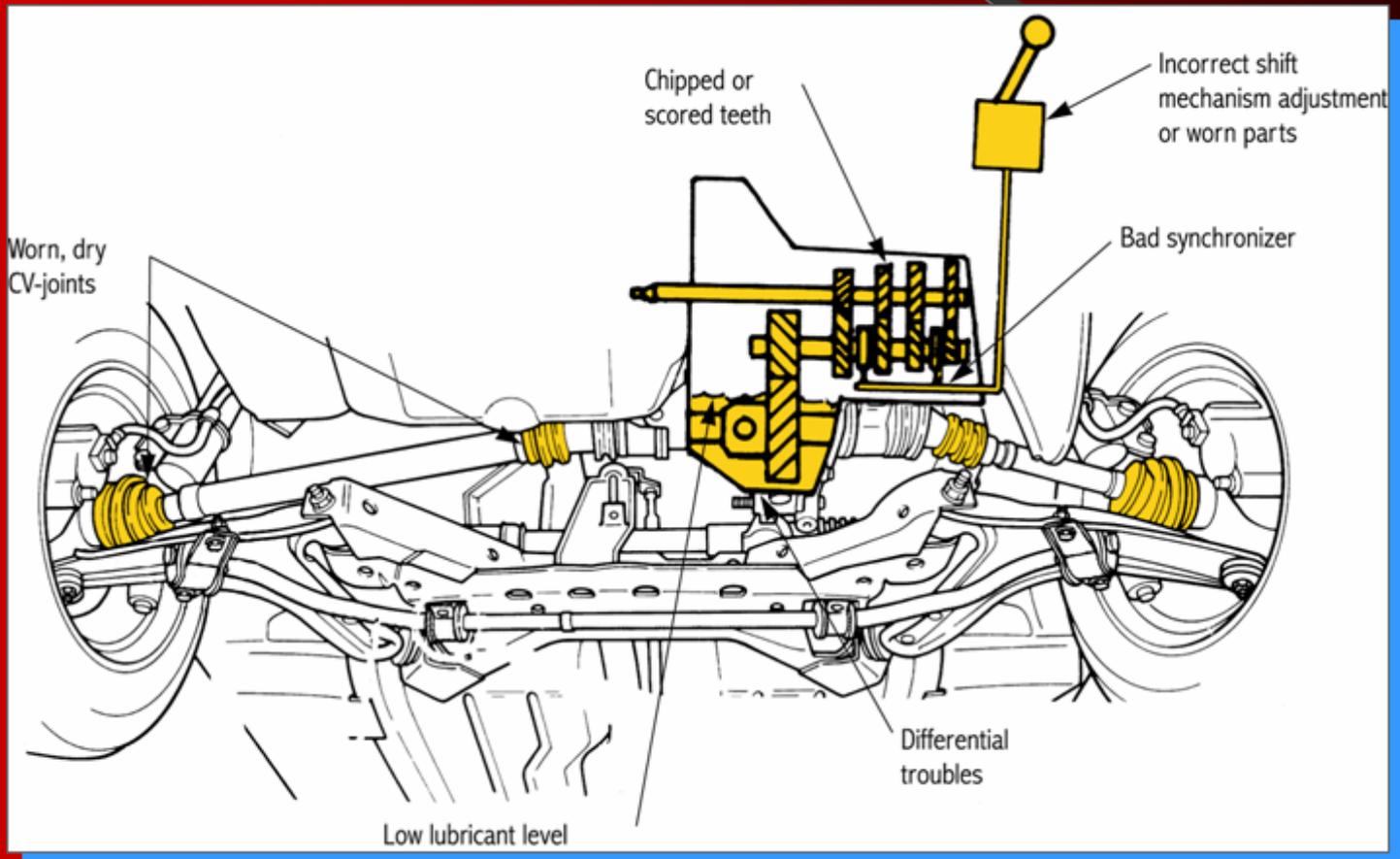
# CV-Joint Kit



Includes a spider, boot, rollers, needle bearings, snap rings, and boot straps/clamps



# Transaxle and Drive Axle Problems

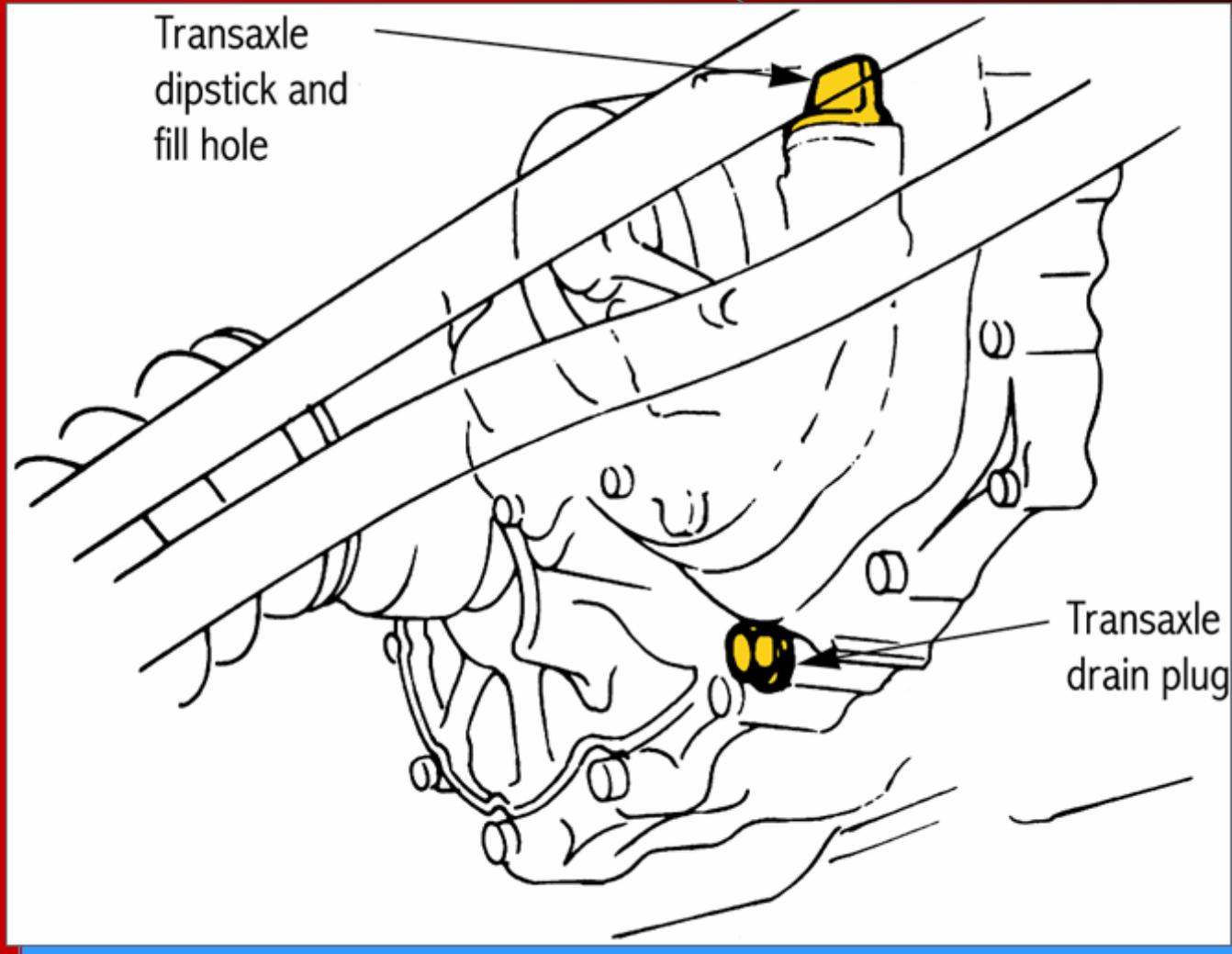


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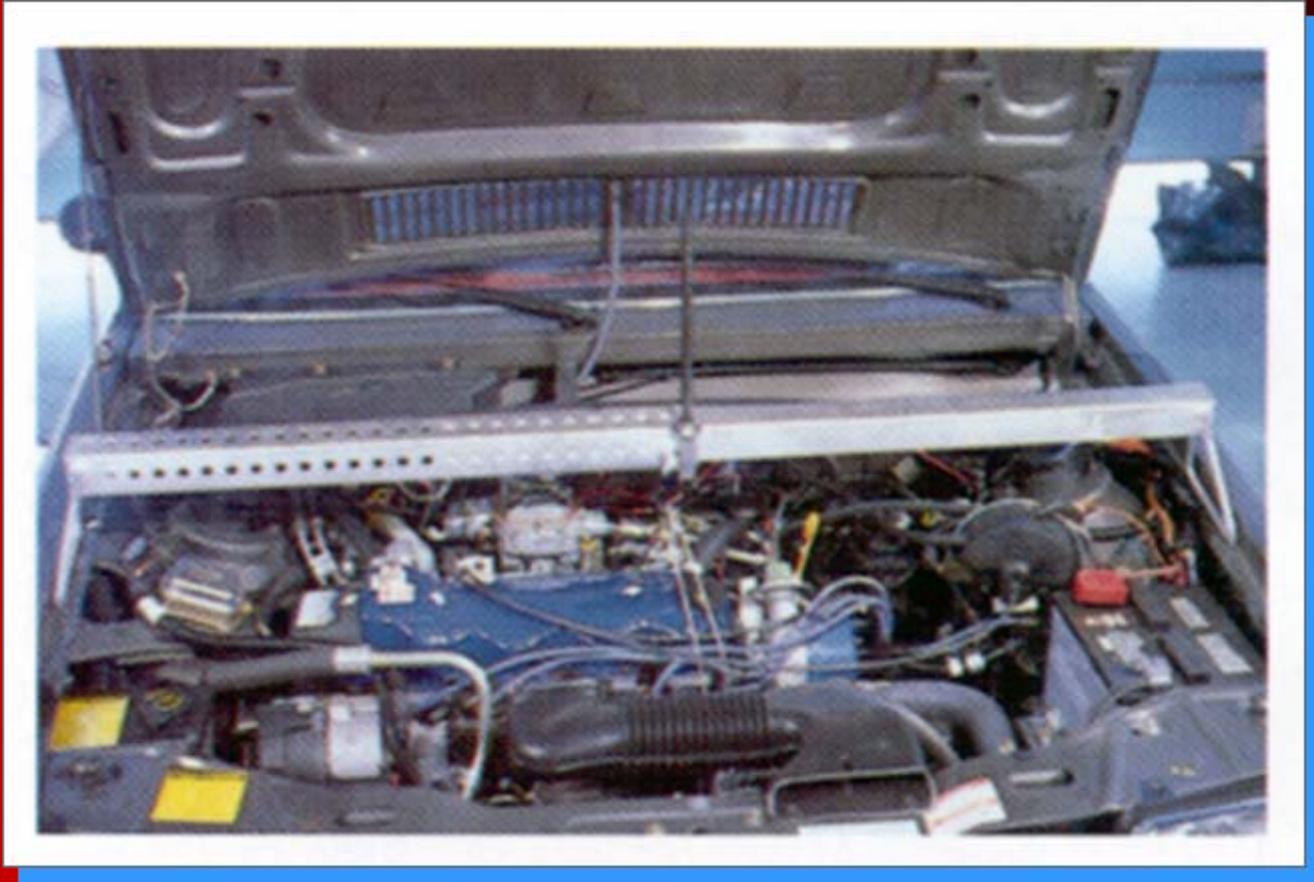
7. A manual transaxle may just have a(n) Fill Hole for checking lubricant level.
8. Before removing all of the bolts securing the transaxle to the engine, mount the Engine Holding Fixture on the vehicle; it will keep the engine from dropping as you remove the transaxle.



# Checking Transaxle Lubricant



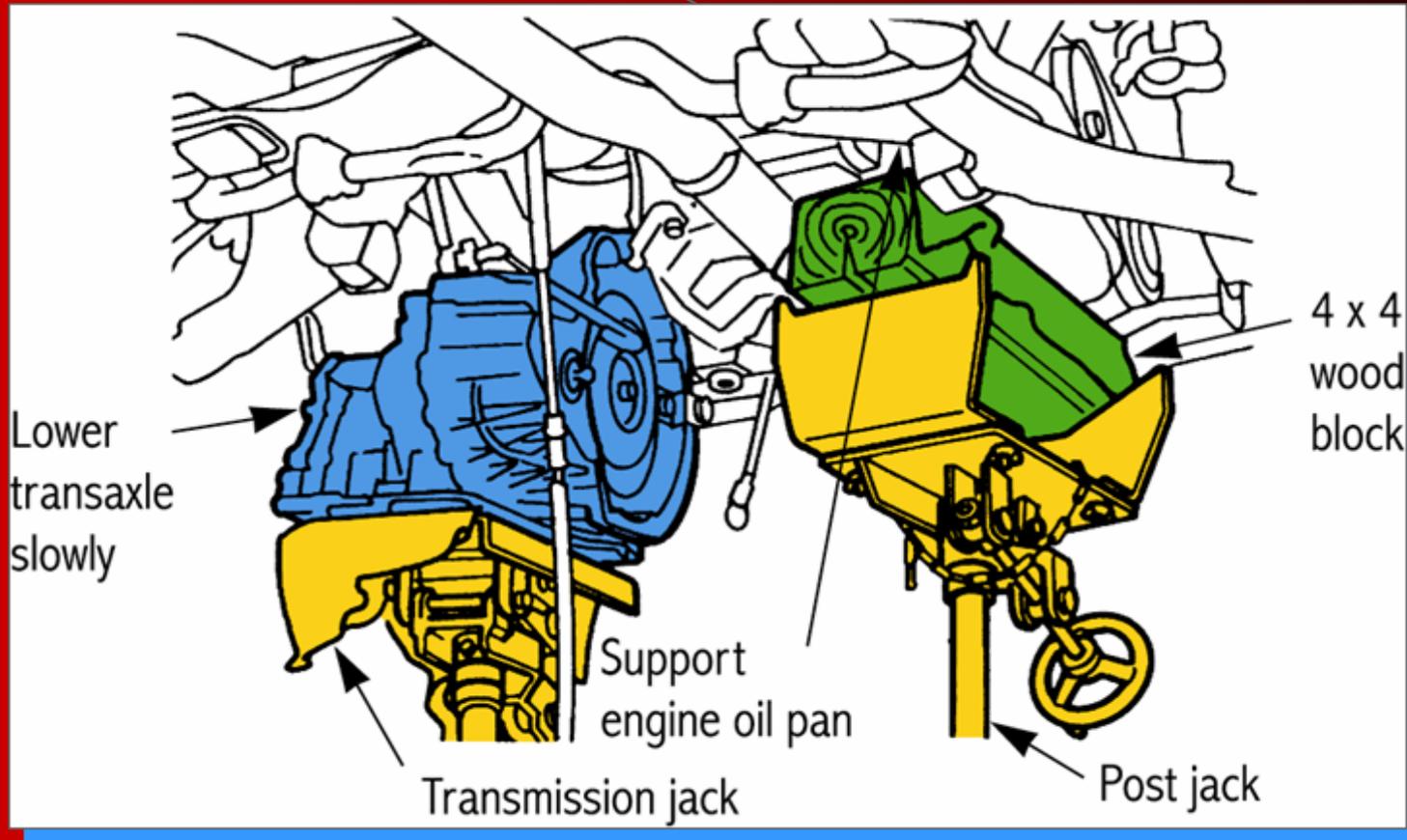
# Removing the Transaxle



Engine holding fixture may be required to support the weight of the engine



# Removing the Transaxle



Using a transmission jack to remove the transaxle and a post jack to support the engine

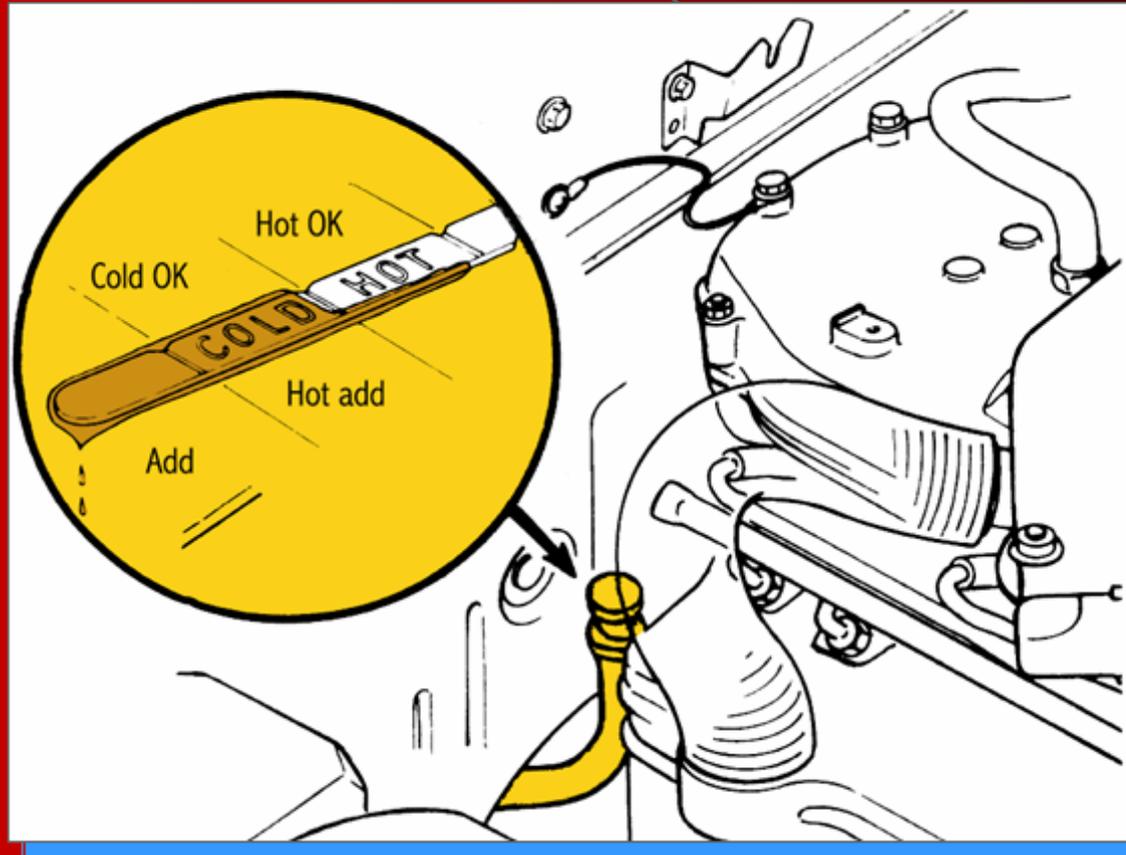


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9. 9. An automatic transaxle will normally have a Dipstick for checking lubricant level.
10. Automatic Transaxle Problems show up as slipping in gear, abnormal noises, and fluid leaks.



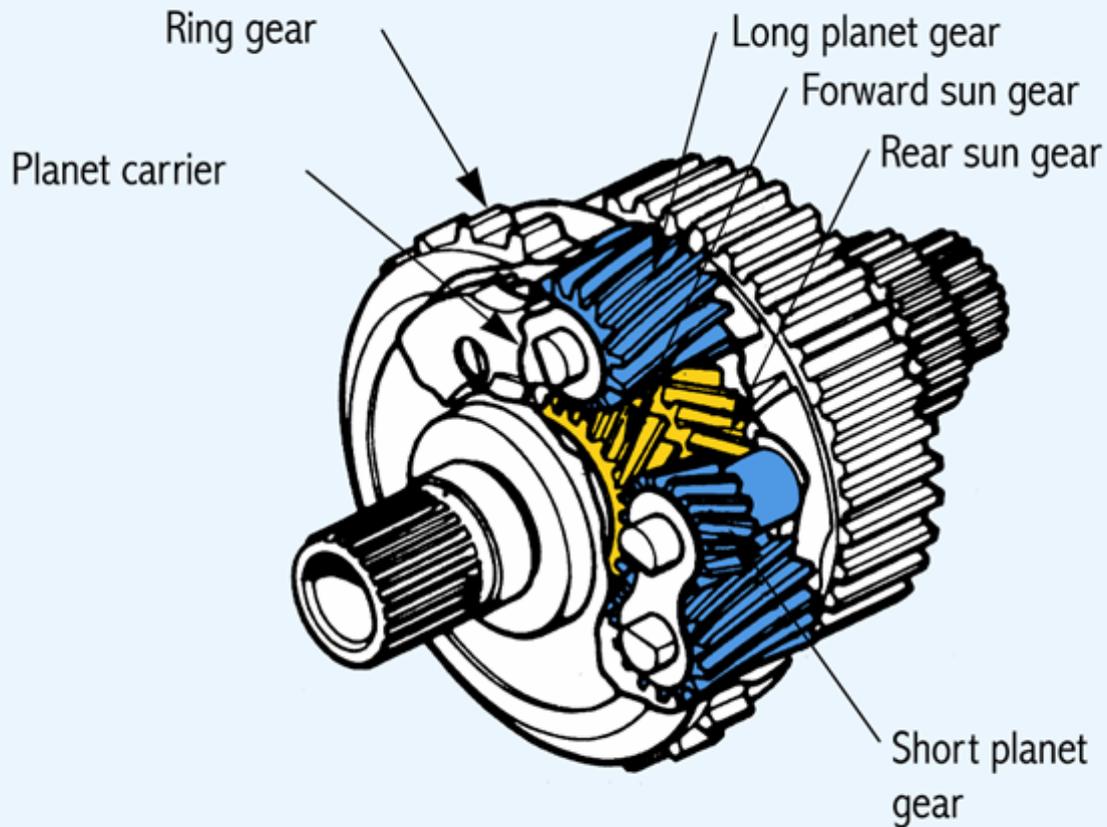
# Checking Transmission Fluid



Fluid level should be between the add and full marks



# Compound Gearset



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