1996-97 DRIVE AXLES "T" Series Front Axle

FRONT AXLE ASSEMBLY

Removal & Installation

- 1. Disconnect negative battery cable. Remove shift cable from vacuum actuator by disengaging lock spring. Push in actuator diaphragm to release cable.
- 2. Unlock steering wheel. Raise and support vehicle. Remove engine drive belt shield and front axle skid plate (if equipped). Remove wheels. Remove lower shock absorber bolt, and compress shock to gain access to output shaft flange bolts.
- 3. Disconnect 4WD indicator light connector from switch. Remove 3 bolts securing cable and switch housing. Pull housing away to gain access to cable locking spring. DO NOT unscrew cable coupling nut unless cable is being replaced. See <u>SHIFT CABLE</u>.
- 4. Disconnect shift cable from shift fork shaft by lifting spring over slot in shift fork. Disconnect axle vent hose. Disconnect steering relay rod from idler arm and pitman arm, and pull steering linkage forward. Support axle assembly using appropriate transmission jack.
- Remove 6 right stub shaft-to-output shaft flange bolts, and 6 left drive axle-to-output shaft flange bolts. Wire left drive axle and right stub shaft aside. Mark front of drive shaft to ensure proper installation. Remove bolts and clamps. Wire drive shaft aside.
- Remove bolts securing right axle tube to frame rail. Remove mounting bolts from axle assembly. Tip axle assembly counterclockwise while lifting to gain clearance from mounting ears and remove axle assembly. To install, reverse removal procedure. Tighten all bolts and nuts to specification. See <u>TORQUE</u> <u>SPECIFICATIONS</u>.

LEFT DRIVE AXLE SHAFT

Removal

1. Raise and support vehicle. Remove engine drive belt shield and front axle skid plate (if equipped). Remove wheel. Remove stabilizer bar from lower control arm. If both ends of stabilizer bar are being removed, DO NOT mix left and right stabilizer bar components.

CAUTION: DO NOT use wedge type remover tool on tie rod end. Damage to tie rod end will result.

Disconnect left outer tie rod end from steering knuckle using Steering Linkage Puller (J-24319-01). Wire tie rod end aside. Insert a long drift through caliper and into disc rotor vanes to prevent rotation. Remove cotter pin, retainer, axle hub nut and washer from drive axle shaft CV joint. See <u>Fig. 3</u>. Loosen 6 drive axle shaft flange bolts retaining tripod joint housing to axle carrier output shaft drive flange.

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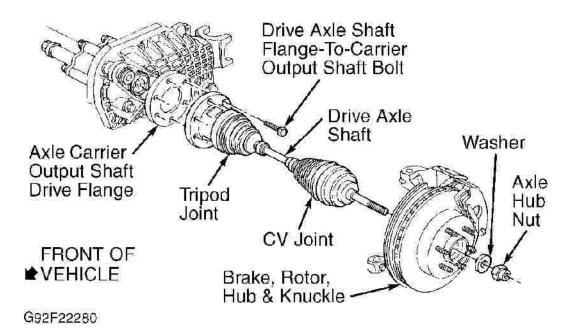


Fig. 3: Left Drive Axle Shaft With Tripod & CV Joints Courtesy of GENERAL MOTORS CORP.

- 3. Remove brakeline bracket from upper control arm. Remove shock absorber from lower control arm mounting bracket. Install floor stand or jack under lower control arm near ball joint to maintain spring tension and lower control arm position.
- 4. Remove upper control arm ball joint-to-steering knuckle nut. Separate upper control arm ball joint stud from knuckle. Using shop towel, cover lower shock mount ears on lower control arm to prevent CV joint boot damage when removing axle shaft. Install Puller (J-28733) to rotor to push CV joint splined shaft through hub splines.
- 5. Remove 6 drive axle shaft flange bolts securing tripod joint housing to axle carrier output shaft drive flange. DO NOT allow drive axle shaft to hang free. Pull slightly outward on top of steering knuckle to enable drive axle shaft removal. DO NOT stretch brake hose. Remove drive axle shaft.

Installation

- 1. Before installing drive axle shaft, inspect inner wheel bearing seal on rear of knuckle. Replace, if required, using Seal Installer (J-28574). Lube seal lip.
- 2. To install drive axle shaft, reverse removal procedure. Tighten all bolts and nuts to specification. See **<u>TORQUE SPECIFICATIONS</u>**.

RIGHT AXLE TUBE & INNER AXLE SHAFT

Removal

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- 1. Disconnect negative battery cable. Remove shift cable from vacuum actuator by disengaging lock spring. Push in actuator diaphragm to release cable.
- 2. Unlock steering wheel. Raise and support vehicle. Remove engine drive belt shield and front axle skid plate (if equipped). Remove wheel. Remove stabilizer bar from both lower control arms. DO NOT mix left and right stabilizer bar components.
- 3. Place a support under right lower control arm, and disconnect right upper ball joint. Remove support so control arm can hang free. Remove stub axle shaft flange bolts from inner axle shaft flange.
- 4. Disconnect 4WD indicator light connector from switch. Remove 3 bolts securing cable and switch housing. Pull housing away to gain access to cable locking spring. DO NOT unscrew cable coupling nut unless cable is being replaced. See **SHIFT CABLE**.
- 5. Disconnect shift cable from shift fork shaft by lifting spring over slot in shift fork. Place drain pan under drive axle. Remove drain plug to drain lubricant. Remove bolts securing axle tube to right frame. Remove bolts securing axle tube assembly to carrier.
- 6. Remove tube assembly by working around drive axle. DO NOT allow sleeve, thrust washers, connector and output shaft to fall out of carrier while removing tube. See **Fig. 5**.

Installation

- Install sleeve, thrust washers, connector and output shaft in carrier. Apply Sealant (GM 1052942 or Loctite 518) on axle tube to differential surface. Ensure thrust washer is installed with notch aligned with tab on washer. See <u>Fig. 6</u>. Use wheel bearing grease to hold thrust washer in place.
- 2. Install tube and shaft assembly to differential and install one bolt at one o'clock position, but DO NOT tighten. Pull assembly down and install cable, switch housing and 4 remaining bolts. Tighten bolts to specification. See **TOROUE SPECIFICATIONS**.
- Install 2 bolts securing tube to frame. Tighten bolts to specification. See <u>TORQUE</u> <u>SPECIFICATIONS</u>. Inspect shift mechanism operation. To complete installation, reverse removal procedure.

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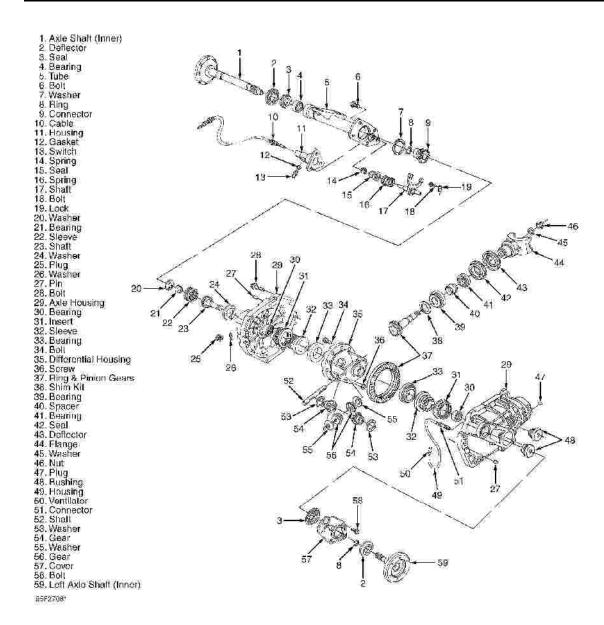


Fig. 5: Exploded View Of 4WD "T" Series Front Axle Assembly Courtesy of GENERAL MOTORS CORP.

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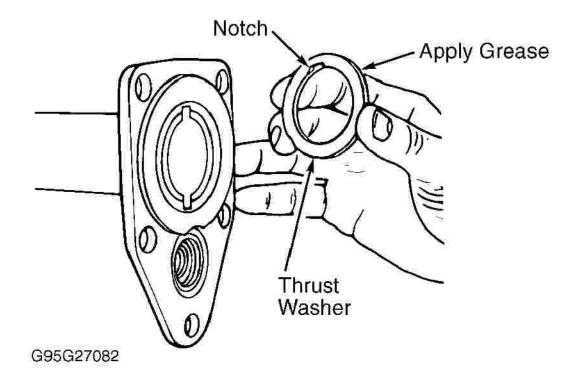


Fig. <u>6</u>: Installing Axle Tube Thrust Washer Courtesy of GENERAL MOTORS CORP.

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