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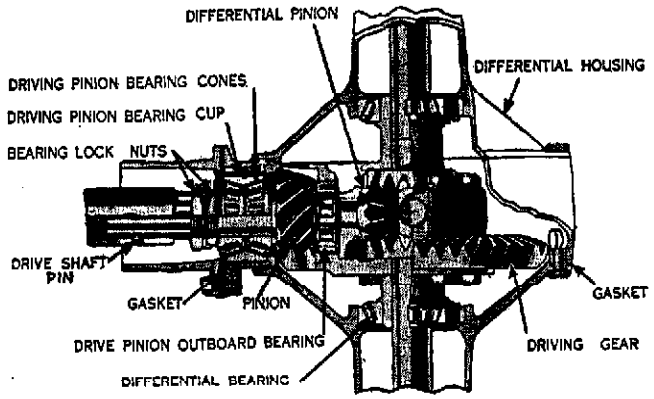
OVERHAUL:—Disassembly. Remove speedometer driven gear assembly. Remove snap ring on forward end of propeller shaft, withdraw speedometer drive gear and thrust washer. Take out flange mounting screws at rear of torque tube, withdraw propeller shaft from tube toward rear. Drive out rivet in coupling, disconnect propeller shaft from pinion. Use AATA-1 driver to remove pinion assembly from housing. BV-92 puller to remove bearings.

Pinion Bearing Assembly:—Assemble bearings on pinion shaft (see Note below), tighten bearing locknuts so that bearing cup turns on cones with heavy drag. Heat housing (use approved heater or immerse housing neck in boiling water or hot oil for 1-2 minutes), install outboard bearing (use BV-94 driver), then with housing still hot install pinion assembly making certain that bearing cup is against shoulder in housing. Check pinion bearing adjustment only after installed in housing.

NOTE—Only bearings marked 'P' on end of cone should be used next to pinion



Pinion Bearing Adjustment:—Use approved gauge ABV-129 to check bearing adjustment. The setting must be 15-20 in. lbs. (V8 Stub pinion), 12-17 in. lbs. (Ford straddle mounted pinion, Lincoln-Zephyr, Mercury). To adjust, tighten pinion bearing nut until correct gauge reading secured (check only after pinion assembly installed in axle housing), then tighten locknut securely and turn lockwasher ears over on nuts to prevent nuts loosening in service.

Differential Bearing Adjustment:—Assemble axle with one 18-4035-A gasket (.008-.010" thick) between right and left hand axle housing and pinion housing. Check bearing adjustment by rotating both axle shafts simultaneously (rotating one shaft will not turn differential assembly). Differential assembly should turn with a heavy drag. If clearance too great, replace gasket between right hand axle housing & pinion housing with B-4035-BR gasket (.004-.005" thick). Then check gear for backlash.

Ring Gear Backlash. Use dial indicator mounted to show pinion gear shaft movement with ring gear stationary. Backlash .006-.010" (Ford '32-36), .012" max. (Ford '37 on), .010" (Mercury & Lin.-Zephyr) maximum. Adjust by increasing or decreasing thickness of gasket between left hand axle housing and pinion housing. Total gasket thickness must not be changed in order not to disturb bearing adjustment (increase or decrease right hand gasket thickness equally).

FORD TWO-SPEED TRUCK TYPE

Optional Equipment On:

ALL TRUCK MODELS (1939-40-41-42)

NOTE:—This axle provides a ratio of 5.83-1 for speed with reduced engine R.P.M. (planetary gears locked out) and a ratio of 8.11-1 for power (with planetary gears operating—these gears provide a supplementary reduction of 1.39-1). Do not confuse this type with the Ford Overdrive Axle used on passenger car models which operates differently.

TYPE:—Spiral bevel, full-floating type with torque tube drive (1939), Hotchkiss Drive with semi-elliptic springs (1940-42). Pinion shaft is straddle mounted on two taper roller bearings (front), plain roller bearing (rear). Pinion shaft is splined and pinned to propeller shaft within torque tube housing. Differential assembly mounted on taper roller bearings with bearing adjusting nut under bearing cap at outer end of each bearing.

Two-Speed (Planetary) Gears. Two speed design consists of a set of four planetary pinions mounted on hardened bronze pins in the differential case and meshing with an internal gear cut on the inner rim of the ring gear. A sliding gear clutch on the left side of the differential assembly (operated by a shift lever extending through the axle housing) controls the planetary system.

Lubrication System. Special lubricating system consists of a drum on the ring gear which picks up lubricant and a scraper tube which is held against the drum by light spring pressure so as to collect this lubricant. Scraper tube is divided by partition so that lubricant directed to front pinion bearings through one channel and to right differential bearing through second channel in housing.

SERVICING:—Gear Adjustment. Paint gears to check mesh. Backlash should be .006-.020". Adjusted by backing off one differential bearing adjusting nut and tightening opposite nut equally (to avoid disturbing differential bearing adjustment). See Pinion Setting and Differential Bearing Adjustment below.

Axle Shafts & Wheel Rearings. Same design as used on regular full-floating Ford Truck Axle. See separate Ford Truck Axle article for adjustment directions.

Two-Speed (Planetary Gear) Adjustment. No adjustment is required. Planetary gears are Spur type.

OVERHAUL:—Pinion Bearing Assembly & Adjustment. Pinion bearing design and assembly similar to type used on other Ford models. Pinion bearing adjustment controlled by pinion bearing nut on forward end of pinion shaft. To adjust, tighten nut until force required to turn pinion shaft is 8-12 in. lbs. measured with approved gauge ABV-129. Lock adjustment by tightening locknut and make certain that lockwasher ears are turned down over nuts to prevent them loosening in service.

Pinion Setting. Pinion position controlled by shims installed between bearing cage flange and carrier.

Differential Bearing Adjustment. After correct gear mesh and backlash secured (see below), tighten right hand differential bearing adjusting nut until bearings are tight, then back off adjusting nut one notch which should allow bearings to roll freely. Install adjusting nut locks and make certain that bearing cap nuts are securely tightened.

Ring Gear Backlash Adjustment. Back off right hand differential bearing adjusting nut and turn