1965-74 CHRYSLER CORP. 8 3/8" RING GEAR

DESCRIPTION

Axle assembly is of integral carrier housing, hypoid gear type in which centerline of drive pinion is mounted below centerline of ring gear. Removable housing cover permits inspection and service of differential. Wheel bearings are straight roller type and roll directly on axle shaft.

AXLE RATIO IDENTIFICATION

Small metal tag attached to one of the cover screws identifies axle ratio by giving number of teeth on drive pinion and ring gear. Ratio is found by dividing larger number by smaller number.

REMOVAL & INSTALLATION

AXLE SHAFTS & BEARINGS

Removal – 1) Raise vehicle, then remove wheel, tire and brake drum. Loosen housing cover attaching bolts to drain lubricant, then remove housing cover. Remove pinion shaft lock screw and differential pinion shaft. Force axle shaft toward center of vehicle, then remove "C" washer lock from groove in axle shaft.

2) Pull axle shaft out of housing, using care not to damage roller bearing. Remove oil seal from housing, using differential end of axle shaft. Dents caused by axle shaft splines should be polished smooth or rubber on outside diameter of seal will be torn and seal leakage will result.

3) Using suitable adapter and slide hammer, remove axle shaft bearing. Inspect both axle shaft and bearing. If either show signs of excessive wear, discard bearing. *NOTE – Always install new axle shaft oil seal.*

Installation – 1) Clean all parts thoroughly. Install axle shaft bearing squarely into housing bore, making sure bearing is bottomed against shoulder in bore. Install oil seal and slide axle shaft into place in housing.

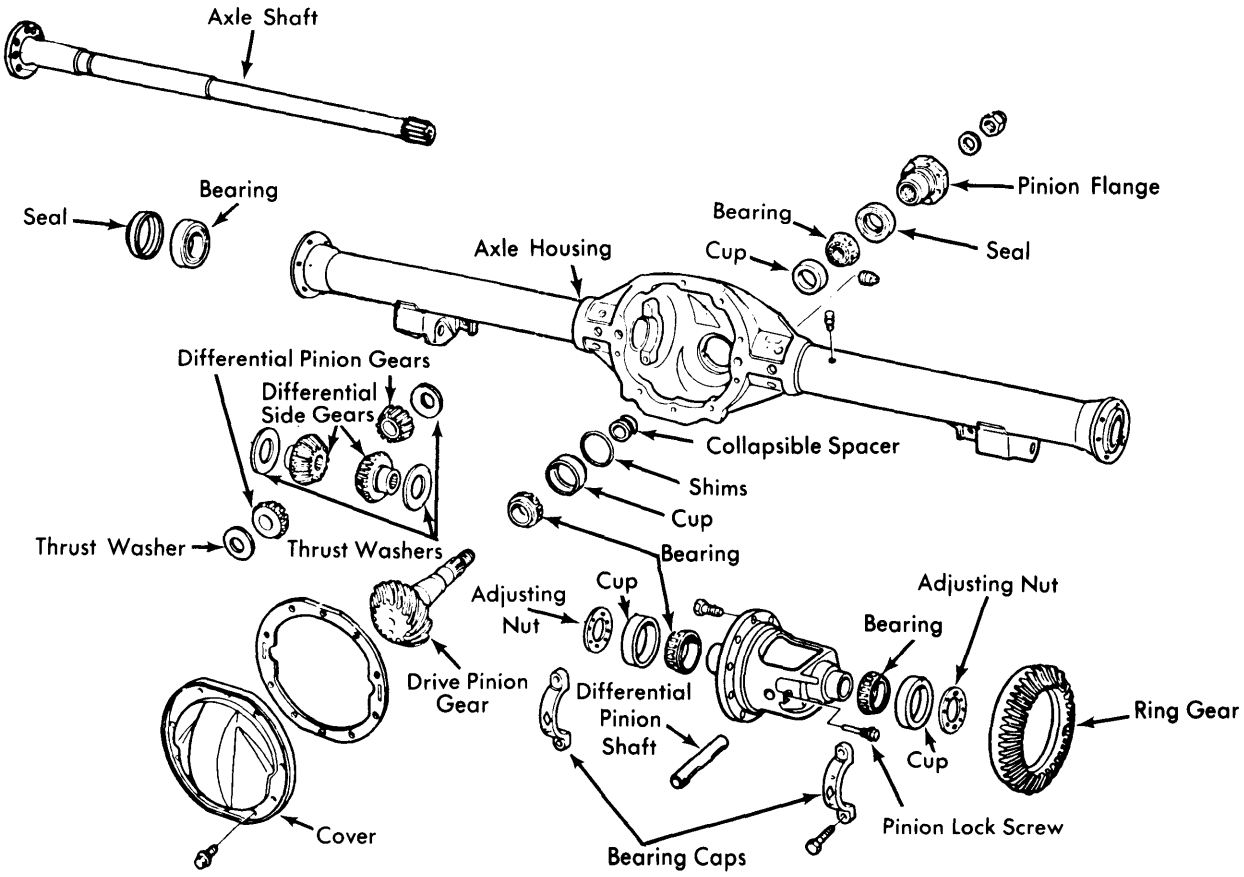
2) Install "C" washer lock into groove in axle shaft, then pull outward on axle shaft so that "C" washer lock seats in counterbore of differential side gear.

3) Install differential pinion shaft through case and pinions, aligning hole in shaft with lock screw hole in case. Install pinion shaft lock screw and tighten securely. Install housing cover and identification tag.

PINION FLANGE & SEAL

Removal – 1) Raise vehicle, then remove wheels, tires and brake drums. Mark propeller shaft universal joint, drive pinion flange and end of pinion stem for reassembly reference. Disconnect propeller shaft and tie out of way.

2) Measure and record pinion bearing preload, then remove drive pinion nut, washer and flange. Pry oil seal from bore in axle housing, using care not to damage machined surface. Clean all parts thoroughly.



CHRYSLER CORP. 8 3/8" RING GEAR AXLE ASSEMBLY

1965-74 CHRYSLER CORP. 8 3/8" RING GEAR (Cont.)

Installation – 1) Install new pinion oil seal squarely into bore in housing until seal flange seats against housing flange face. *NOTE – Outside diameter of seal is precoated with a special sealer, so no sealing compound is required.* Position pinion flange on pinion stem, making sure marks are aligned, then install pinion washer and nut. Tighten pinion nut to 170 ft. lbs. and rotate pinion through several revolutions to be sure bearing rollers are properly seated.

2) Measure pinion bearing preload. Continue tightening pinion nut until preload is same as that noted before diassembly. Under no circumstances should preload be more than 10 INCH lbs. over original setting. *CAUTION – Under no circumstances should pinion nut be backed off to lessen preload. If desired preload is exceeded, a new collapsible spacer MUST be installed, and nut retightened until proper preload is obtained.*

AXLE ASSEMBLY

Removal & Installation – Raise vehicle and block brake pedal in "up" position. Remove wheels, tires and brake drums, then disconnect brake hydraulic lines at wheel cylinders and cap them to prevent fluid loss. Mark propeller shaft and universal joint for reassembly reference, then remove propeller shaft and tie out of way. Remove shock absorbers and rear spring "U" bolts, then remove axle assembly. To install, reverse removal procedure.

OVERHAUL

DISASSEMBLY

1) Remove wheels, tires and brake drums, then drain lubricant and remove axle housing cover. Measure and record: differential side play, ring gear runout, and pinion bearing preload. *NOTE – There should be no side play and ring gear runout should not exceed .005".* Mark differential gear and case at point of maximum runout.

2) Mark side bearing caps and differential housing for reassembly reference, then remove caps and adjusting nuts. Lift differential assembly out of axle housing. Remove ring gear attaching bolts and ring gear from differential. Remove pinion shaft lock screw and differential pinion shaft, then remove differential side gears, pinion gears and thrust washers.

3) Remove drive pinion nut, washer and flange, then drive pinion gear out through housing using soft face hammer or brass drift against stem end. Remove all bearings and bearing cups, then remove shims from axle housing. Measure and record number and thickness of shims removed.

NOTE – Discard all used and damaged bearings, cups and oil seals.

REASSEMBLY & ADJUSTMENT

Case Assembly – 1) Install thrust washers on differential side gears and position gears in differential case. Place thrust washers on differential pinion gears and position gears in case such that they are 180° apart when they are in mesh with side gears.

2) Rotate side gears until holes in pinion gears are in alignment with pinion shaft holes in case. Install differential pinion shaft, making sure hole in shaft is aligned with lock screw hole in case. *CAUTION – Use care not to damage pinion thrust washers.*

3) Make sure that all contact surfaces and chamfer on inside diameter of ring gear are free of all burrs and sharp edges. Position ring gear on differential case pilots, aligning threaded holes of ring gear with those is case flange. Insert NEW left hand thread ring gear attaching bolts through case flange and into ring gear. After all bolts are started, use soft face hammer to properly seat ring gear against flange.

4) Tighten bolts alternately and evenly. Press differential side bearings onto journals of differential case. Lubricate assembly with hypoid gear lubricant.

Drive Pinion Depth – 1) Position both pinion bearing cups squarely in bore of axle housing. Assemble suitable spacer (SP-5408) on main stem (SP-5385), followed by rear pinion bearing. Insert assembly into axle housing from rear side.

2) Hold assembly in position and install front pinion bearing over spacer (SP-5382) and position over main stem of tool. Position suitable compression sleeve (SP-535), centralizing washer (SP-534) and main screw nut (SP-3193) on stem of tool. Hold compression sleeve with suitable tool (C-3281) and tighten nut. Allow tool to rotate while nut is being tightened to prevent damage to bearings and cups.

3) Loosen tool nut, then retighten to obtain pinion bearing preload of 10-30 INCH lbs. Rotate tool after tightening to properly seat pinion bearings. Install suitable gauge block (SP-5383) on main tool and tighten screw.

4) Position cross bore arbor (SP-5380) in housing side bearing seats, and center arbor in bore. Position bearing caps on carrier pedestals and insert .002" spacer between arbor and each cap. Install cap bolts and tighten to 10 ft. lbs.

5) Use feeler gauge to determine proper thickness of shims that will fit snugly between arbor and gauge block. This fit must be snug but not excessively tight.

6) To select correct shim pack, read markings on end of pinion head. When marking is minus, add that amount of thickness to feeler gauge thickness to obtain thickness of correct shim pack. When marking is plus, subtract that amount of thickness. Remove all tools and REAR pinion bearing cup from housing.