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Chrysler 8.5" & 9.25" Rear Axle Pinion Flange Removal

Using the MPS Flange Tool

REMOVAL AND REPLACEMENT OF DRIVE PINION FLANGE AND OIL SEAL IN VEHICLE

On rear axle assemblies using the collapsible spacer to obtain pinion bearing preload, the following procedure for the removal and replacement of the drive pinion flange and pinion oil seal must be followed to assure that the proper bearing preload is maintained in the axle assembly. If this procedure is not followed it could result in a premature failure of the axle.

(1) Raise vehicle on hoist and make scribe marks on propeller shaft, shaft universal joint, drive pinion flange and end of pinion stem.

(2) Disconnect propeller shaft at pinion flange and secure in an upright position to prevent damage to front universal joint.

(3) Remove the rear wheels and brake drums to prevent any drag or a possible false preload reading could occur.

(4) Using inch-pound torque wrench C-685-A measure pinion bearing preload by rotating pinion with handle of wrench floating, read the torque while wrench is moving through several complete revolutions and record. This operation is very important because preload must be carefully reset when reassembling.

(5) With Tool C-3281 hold companion flange and remove drive pinion nut and Belleville washer.

(6) Install companion flange remover Tool DD-999 and remove flange. Lower rear of vehicle to prevent lubrication leakage.

(7) Using a screwdriver and hammer, remove the pinion oil seal from the carrier and clean the oil seal seat.

(8) Check splines on pinion shaft stem to be sure they are free of burrs or are not worn badly. If burrs are evident remove them using crocus cloth by working in a rotational motion. Wipe the pinion stem clean.

(9) Inspect companion flange for cracks, worn splines, pitted, rough or corroded oil seal contacting surface. Repair or replace companion flange as necessary.

(10) The outside diameter of the seal assembly is precoated with a special sealer so no sealing compound is required for installing. Install seal using Tool C-3980 or C-4109 until the seal flange contacts the housing flange face.

(11) Position companion flange on pinion stem being careful to match scribe marks made previously before removal.

(12) Install companion flange with installing Tool DD-999 and holding Tool C-3281.

(13) Remove tool and install Belleville washer (convex side of washer out) and pinion nut.

(14) Hold universal joint flange with holding Tool C-3281 and tighten pinion nut to 210 foot-pounds. Rotate pinion several complete revolutions to assure that bearing rollers are properly seated. Using an inch-pound torque wrench C-685-A measure pinion bearing preload. Continue tightening pinion nut and checking preload until preload is at the original established setting you found in Step 4. Under no circumstances should the preload be more than 10 inch-pounds over the established setting found at time of checking in Step 4 of procedure.

Bearing preload should be uniform during a complete revolution. A preload reading that varies during rotation indicates a binding condition which has to be corrected. The assembly is unacceptable if final pinion nut torque is below 210 foot-pound or pinion bearing preload is not within the correct specifications.

CAUTION: UNDER NO CIRCUMSTANCES SHOULD THE PINION NUT BE BACKED OFF TO LESSEN PINION BEARING PRELOAD. IF THE DESIRED PRELOAD IS EXCEEDED A NEW COLLAPSIBLE SPACER MUST BE INSTALLED AND NUT RETIGHTENED UNTIL PROPER PRELOAD IS OBTAINED. IN ADDITION, THE UNIVERSAL JOINT FLANGE MUST NEVER BE HAMMERED ON OR POWER TOOLS USED.

(15) Install propeller shaft (match scribe marks on propeller shaft universal joint and pinion flange). Tighten clamp screws to 170-200 inch-pounds.

(16) Install the rear brake drums and wheels and tighten nuts 105 foot-pounds.

(17) Raise the vehicle to a level position so axle assembly is at correct running position and check lubricant level. Add the correct type of lubricant required to bring the lubricant to proper level.

*Instructions provided by the Chrysler Corporation

Using the MPS Pinion Flange Tool

Using the U-joint clamp bolts, fasten the pinion flange tool to the pinion flange.

Insert breaker bars and or ratchets as shown in the photo. The vehicle is on the ground, so we used the floor to hold the 3/4" ratchet in place and used a 1 1/4" socket with a breaker bar. This works well because it will take two hands and arms, to break the nut loose. In this case, we had to attach a 4' pipe to the end of the 1/2" breaker for more leverage. The pinion nut is torqued to 210 ft/lbs and is a locking type or will have thread locker which require more torque to remove. Imagine holding a 1 lb. object 210 feet away from your body, that's the leverage needed to break the nut loose.

If you do not have a tool to hold the pinion flange, The Mopar Performance shop has the available for sale. Visit our website www.thempshop.com

Disclaimer:

***MPS provides this information as a guide and does not claim all information is exactly correct. MPS is not responsible for damage or injury to oneself or property.