

DANA/SPICER POWER-LOK

Chrysler Corp.
Ford Motor Co.
General Motors
International Harvester
Jeep

TESTING ON VEHICLE

With engine off and transmission in Neutral, raise one wheel off ground and block both front and rear of opposite wheel. Install suitable tool across two wheel studs and attach torque wrench to center of tool. Observe torque required to continuously turn wheel smoothly through several revolutions. *NOTE* — Disregard breakaway torque. Repeat test for opposite side. If differential is operating properly, torque should be 40-200 ft. lbs.

DESCRIPTION

Power-Lok differential transmits engine torque to wheels through clutches between case and differential side gears. Driving force causes pinion shafts to move up ramps on case, thereby increasing preload on clutches. When poor traction is encountered by either wheel, wheel with lesser traction will tend to spin freely; however, due to action of clutch pack, three to five times more torque will be transferred to wheel with greater traction.

AXLE RATIO & IDENTIFICATION

See Drive Axles in this Section.

LUBRICATION

NOTE — To insure proper operation of unit and to prevent differential chatter, manufacturers recommend that only the special lubricants listed be used.

Dodge — "Sure-Grip" lubricant No. 2585318.

Ford Motor Co. — Hypoid Gear Lubricant specification ESW-M2C105A and friction modifier additive specification EST-M2C118A.

General Motors Corp. — General Motors Positraction Lubricant.

International Harvester Corp. — Lubricant meeting Mil-L-2105-B specifications.

Jeep Corp. — Limited Slip Differential Lubricant.

REMOVAL & INSTALLATION

See Drive Axles in this Section.

OVERHAUL

DISASSEMBLY

CAUTION — During disassembly note and record relationship of all parts, especially clutch discs and plates, to each other. Mark case halves and differential spiders for reassembly reference.

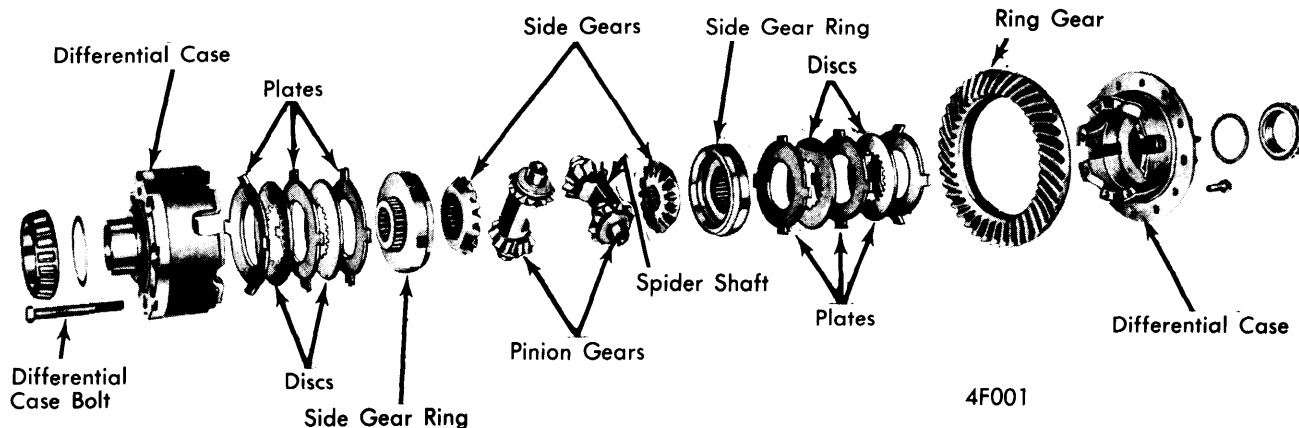
Remove differential case bolts and separate case halves. Remove differential spider shafts, pinion gears, thrust washers, side gears and side gear rings from case halves. Remove clutch plates and discs, noting position of flat and concave discs. *NOTE* — It is unnecessary to remove ring gear or differential side bearings unless they are to be replaced.

INSPECTION

Inspect differential spider shafts for wear, scoring and pitting. If center land of either spider shaft shows signs of wear inspect end of axle shaft to determine if shaft is rubbing against spider. Examine clutch plates and discs for wear, cracks or distortion. Check side gear rings, side gears and differential case halves for wear, cracks and distortion.

REASSEMBLY

NOTE — During assembly, keep all parts clean, and lubricate with limited slip gear lubricant just prior to installation.



4F001

POWER-LOK DIFFERENTIAL ASSEMBLY

Positive Traction Differentials

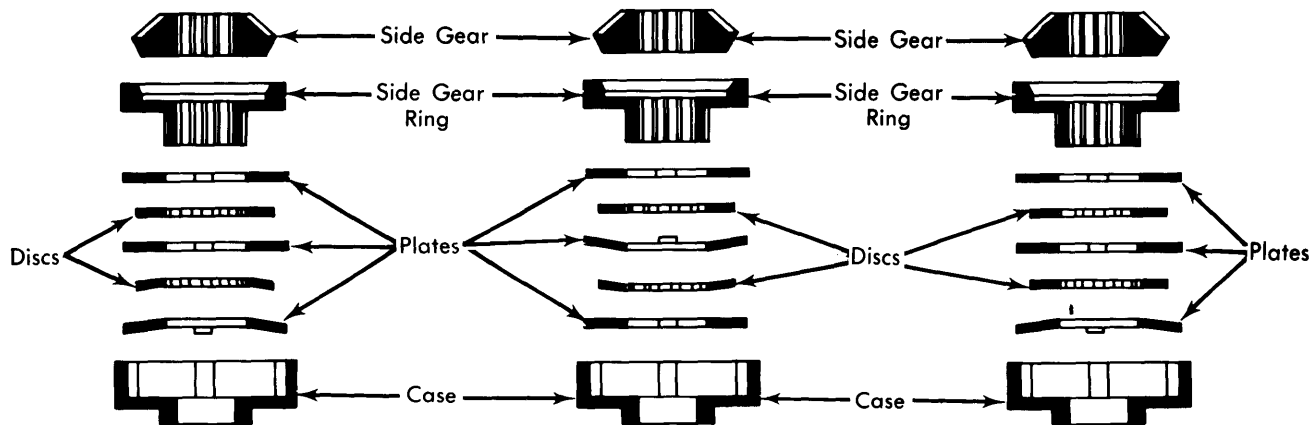
DANA/SPICER POWER-LOK (Cont.)

1) Assemble clutch plates and discs to side gear rings, making sure they are assembled in exact order and direction of removal. Place assembled side gear ring and clutch pack into ring gear half of differential case. Install differential side gear, spider shaft, pinion gears and thrust washers.

2) Install second spider shaft with its pinion gears and thrust washers. Install remaining side gear, side gear ring, clutch plates and clutch discs, making sure they are assembled in exact order and direction of removal.

3) Position remaining case half over assembled parts, being sure to align reference marks made at time of disassembly. Loosely install differential case bolts. Using splined end of axle shaft, align splines of side gears and side gear rings on each side. Tighten differential case bolts alternately and evenly and remove axle shaft.

4) Check alignment of spider shafts. They should be tight in "V" of their ramps or within .005" of tight. If clearance does exist, it should be equal at all four ramps.



4JE01

CLUTCH PACK ARRANGEMENTS