DANA/SPICER EXTERNAL LOCKING HUB

DESCRIPTION

Locking hubs provide a means of engagement of front wheels on vehicles with front drive axles. When locking hubs are engaged, full power is transmitted to both front wheels. When hubs are disengaged, front wheels are free to turn but axle shafts and differential will remain idle. Engagement is accomplished through action of gears within hub. With hub in engaged position, the inner clutch gear locks with outer clutch and engages axle shaft with wheel hub.

IDENTIFICATION

Dana/Spicer external locking hubs are identified externally by a Red plastic control knob used to engage and disengage hub. They are identified internally by use of an actuating cam to engage and disengage hub.

REMOVAL & INSTALLATION

REMOVAL

1) Remove hub screws and washers, noting how washers are installed on screws. Loosen gear hub housing and slide away from hub and drum assembly. Remove inner metal gasket and discard. Remove gear hub housing. Remove outer gasket and discard.

2) Wipe clean all exposed components. Apply pressure on clutch gear and remove snap ring. Remove clutch gear and pressure spring from assembly while knob is in "LOCK" position.

3) Turn knob to "FREE" position. Using a drift punch, drive cam lock pin out of assembly. Remove actuating cam from knob. Remove knob from knob retainer.

4) Using a suitable size cap screw, pull out on axle shaft and remove snap ring. Remove bushing and inner clutch assembly. If wear is shown on either the inner or outer clutch gear, replace both as a set.

INSTALLATION

1) Before assembling hub, check splines on axle shaft. Make sure threaded screw holes in wheel hub are clean. Apply Moly XL hi-speed grease to thrust face of bushing and to splines of inner clutch gear.

2) Install inner clutch gear on bushing. Install bushing and inner clutch gear on axle shaft. Make sure splines on inner clutch gear are aligned with splines on axle. Install a new snap ring. Make sure snap ring is fully seated.

3) Apply a suitable "O" ring lubricant to "O" ring area of control knob. Install "O" ring. Place actuating knob into knob retainer with arrow pointing to "FREE" position. Install knob retainer snap ring. It may be necessary to use a small screwdriver to position snap ring in groove.

4) Place actuating cam on knob, making sure ears of cam are aligned with retainer slots. Install cam lock pin through cam groove and holes in actuator knob. Make sure ends of pin are flush with outside diameter of cam.

5) Turn actuator knob to "LOCK" position. Apply a small amount of Moly XL hi-speed lubricant to cam grooves. Install spring and outer clutch gear. Press down on clutch gear to compress spring. With spring compressed, install snap ring.

6) Turn actuator knob to "FREE" position. Install six dished washers to the six retainer screws. Install two screws and washers into knob retainer to align hub components. Apply a small amount of lubricant to outer splines of outer clutch gear. Remove excess lubricant from retainer gasket surface.

7) Install a new outer retainer gasket. Assemble housing by aligning splines of housing with outer clutch gear splines. Install a new inner metal gasket on hub housing. Install hub assembly to axle using retainer screws as pilots to align gasket holes and wheel hub holes.

8) Tighten retainer screws to secure hub in place. Turn actuator knob to "LOCK" position. Install the four remaining screws. Tighten screws evenly to 30-35 ft. lbs. It my be hard to engage and disengage hub until it has been used several times.

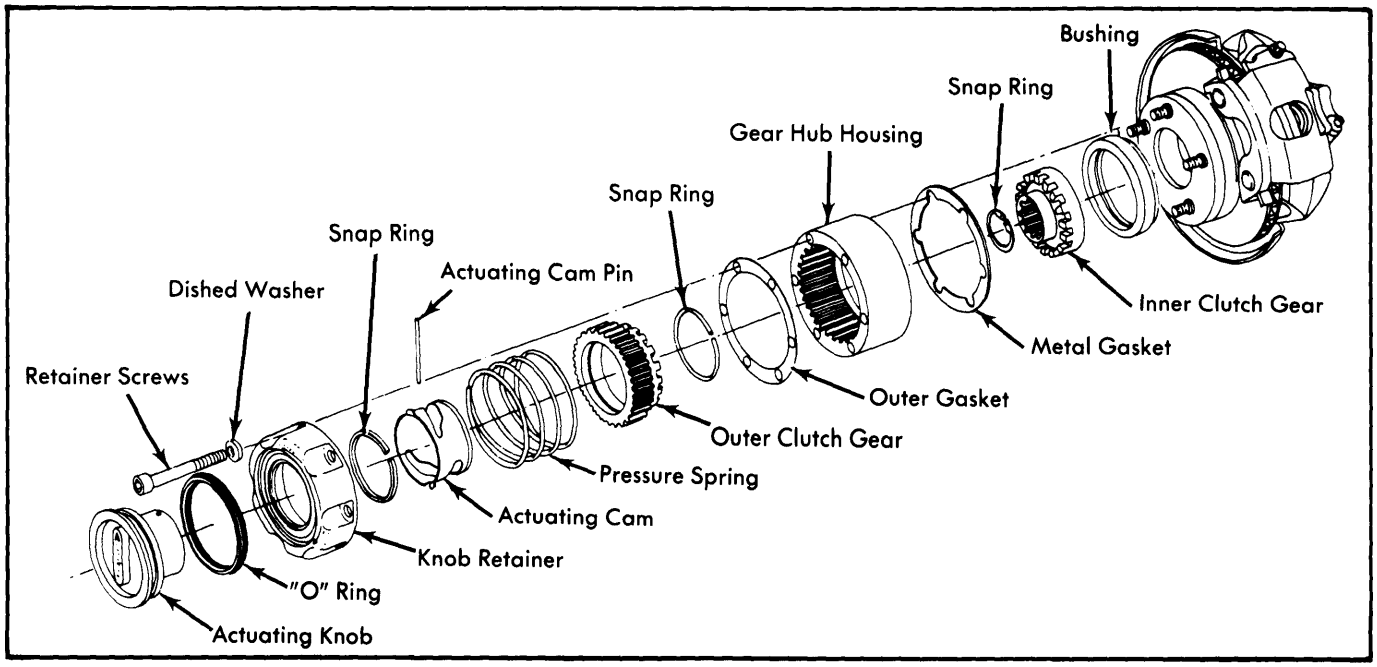

Fig. 1 Exploded View of Dana/Spicer External Locking Hub