

SPICER (DANA) EXTERNAL LOCKING HUB

DESCRIPTION

Locking hubs provide a means of engagement and disengagement of wheels on 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 and axle shafts and differential remain idle.

Engagement is accomplished through the action of gears within the hub. With hub in engaged position, the inner clutch gear locks with the outer clutch and engages the axle shaft with wheel hub.

IDENTIFICATION

Spicer (Dana) 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.

2) Remove inner metal gasket, and discard. Remove gear hub housing. Remove outer gasket, and discard. Wipe clean all exposed components. Apply pressure on clutch gear, and remove snap ring.

3) Remove clutch gear and pressure spring from assembly, while knob is in "LOCK" position. Turn knob to "FREE" position. Using a drift punch, drive cam lock pin out of assembly.

4) Remove actuating cam from knob. Remove knob from knob retainer. Using a cap screw, pull out on axle shaft. Remove snap ring, 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 X-L 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.

3) Install a new snap ring. Make sure snap ring is fully seated. Apply Parker "O" Ring Lubricant to "O" ring area of control knob. Install "O" ring.

4) 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.

5) 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.

6) Make sure ends of pin are flush with outside diameter of cam. Turn actuator knob to "LOCK" position. Apply a small amount of Moly X-L hi-speed lubricant to cam grooves.

7) Install spring and outer clutch gear. Press down on clutch gear to compress spring. With spring compressed, install snap ring. Turn actuator knob to "FREE" position.

8) Install 2 retaining screws and washers into knob retainer to align hub components. Apply a small amount of lubricant to outer splines of outer clutch gear.

9) Remove excess lubricant from retainer gasket surface. Install a new outer retainer gasket. Assemble housing by aligning splines of housing with outer clutch gear splines.

10) 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.

11) Tighten retainer screws to secure hub in place. Turn actuator knob to "LOCK" position. Install the 4 remaining screws. Tighten screws evenly to 30-35 ft. lbs. (41-48 N.m).

NOTE: It may be difficult to engage and disengage hub, until it has been used several times.

Fig. 1: Exploded View of Spicer (Dana) External Locking Hub

