

# Locking Hubs

## DATSUN, ISUZU, LUV & TOYOTA

**Datsun, Isuzu, Luv & Toyota  
4-WD Pickups & Toyota Land Cruiser**

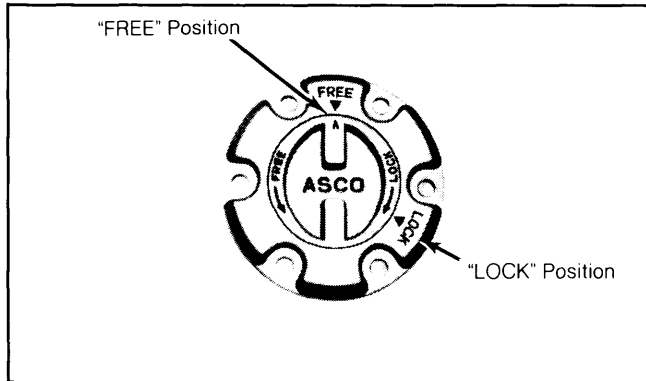
### DESCRIPTION

Locking hubs provide means of engagement of front wheels on vehicles equipped with front driving axles.

When 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, inner clutch ring and axle shaft sleeve act as one piece to connect axle shaft to wheel hub.

**Fig. 1: Front View of ASCO Locking Hub**



### IDENTIFICATION

ASCO internal locking hubs are used on Isuzu, LUV, and Toyota models. ASCO hubs are identified externally by the word "ASCO" stamped on the metal control knob used to engage and disengage hub.

Datsun locking hub is not stamped with any markings, but is of similar configuration as locking hubs used on Isuzu and LUV.

### REMOVAL & INSTALLATION

#### REMOVAL

1) With control knob set to "FREE" ("LOCK" on Datsun) position and transfer shift lever set in "2H" position, remove cover attaching bolts. Remove cover assembly and gasket.

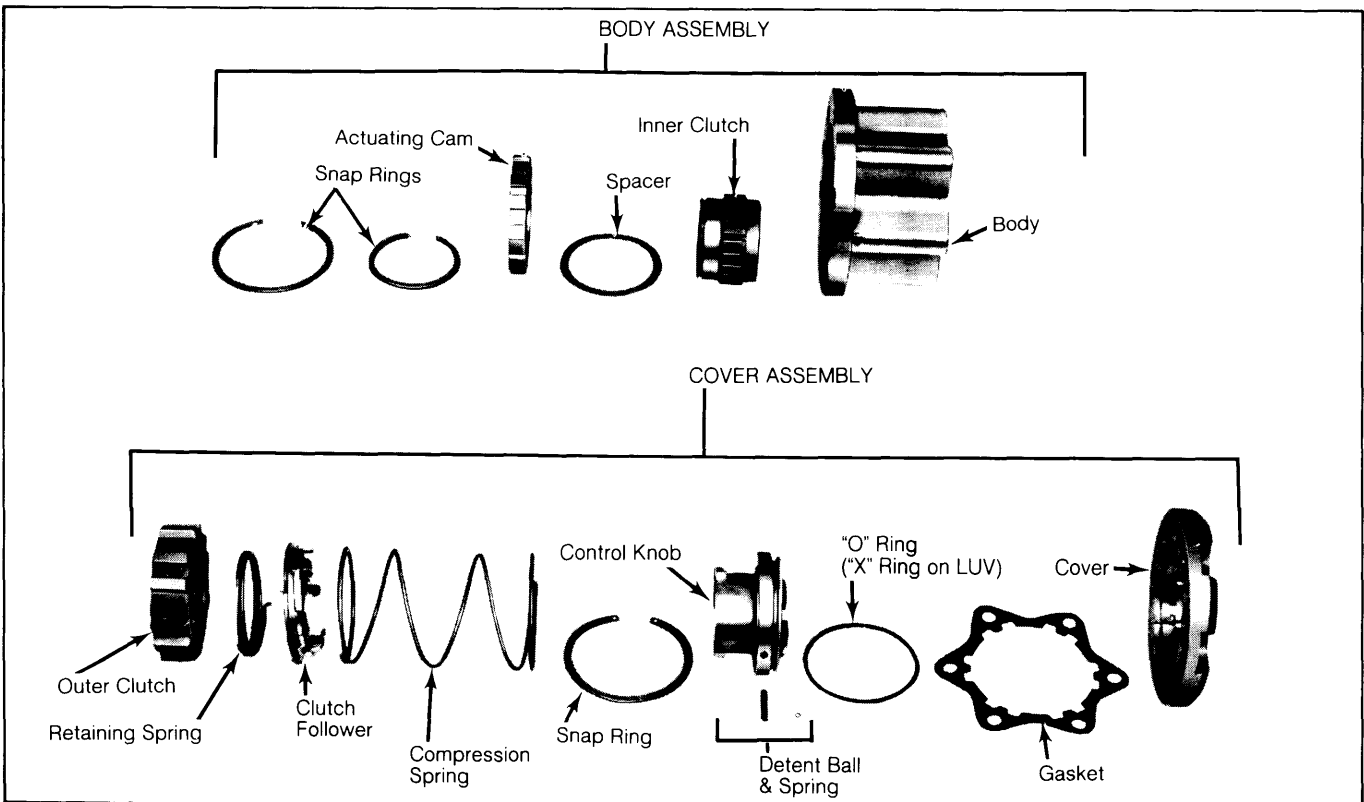
2) Remove snap ring, shims (if equipped) and inner clutch from axle shaft. On Toyota models, remove 6 hub body retaining nuts and cone-shaped lock washers. On all models, remove hub body.

#### INSTALLATION

1) To install, reverse removal procedure and ensure axle shaft is properly seated. On Isuzu and LUV models, place a bolt in end of axle shaft and pull out with hand pressure. Install snap ring. Measure and set clearance between inner clutch and snap ring to 0-.01" (0-.25 mm) with proper shim.

2) Shims are available in thicknesses of .008" (.20 mm), .01" (.25 mm), .02" (.50 mm) and .04" (1 mm) for Isuzu and LUV. On Isuzu, LUV, and Toyota, ensure control knob is set to "FREE" position and control knob operates smoothly after installation.

**Fig. 2: Exploded View of Toyota Locking Hub — Datsun, Isuzu & LUV Similar**



## DATSUN, ISUZU, LUV & TOYOTA (Cont.)

3) On Datsun, install inner clutch and measure axle shaft end play with dial indicator. Adjust end play to .004-.012" (.1-.3 mm) with snap ring of proper thickness. Ensure control knob is set to "LOCK" position and control knob operates smoothly after installation.

**NOTE:** Datsun snap rings are available in 5 thicknesses ranging from .043-.075" (1.1-1.9 mm) in increments of .008" (.2 mm).

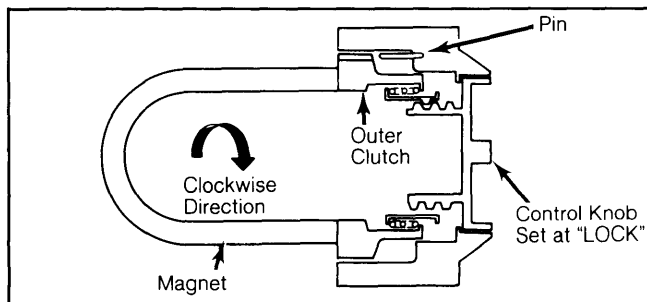
### OVERHAUL

#### DISASSEMBLY

1) On Isuzu, LUV, and Toyota, separate cover and outer clutch assemblies by pushing follower toward knob and turning clutch assembly clockwise. Remove clutch assembly from control knob. Remove control knob snap ring and control knob.

2) DO NOT lose detent ball and spring. Remove "O" ring. Datsun outer clutch is removed in similar manner. However, a pin is used instead of detent ball and spring. Use a magnet to assist in removing outer clutch. See Fig. 3.

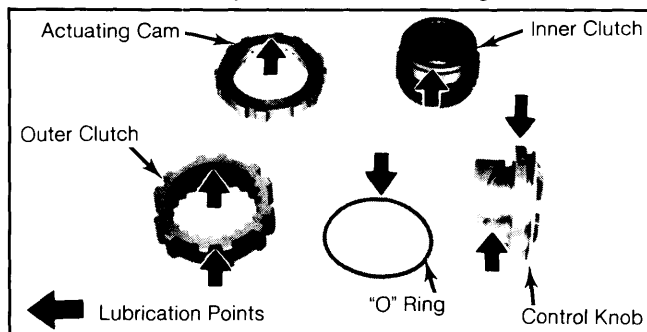
**Fig. 3: Using a Magnet to Remove Datsun Outer Clutch**



3) Remove compression spring from outer clutch assembly. Disengage clutch retaining spring from clutch follower, then remove clutch follower from outer clutch. Remove the retaining spring from clutch by turning counter clockwise.

4) Remove snap ring from rear of body assembly and remove inner clutch assembly. Remove snap ring from rear of inner clutch assembly and remove actuating cam and spacer.

**Fig. 4: View Showing Parts and Lubricating Points**

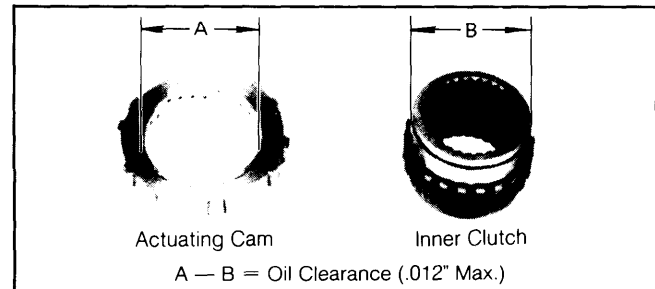


#### CLEANING & INSPECTION

1) Clean and wash all parts in cleaning solvent and blow dry. Inspect all parts for excessive wear or damage and replace as required. Before assembling parts, coat those shown in Fig. 4 with multi-purpose grease as indicated.

2) On Toyota models only, measure inside diameter of actuating cam. Measure outside diameter of inner clutch, and subtract measurement from that of actuating cam. If difference (oil clearance) is not .012" (.3 mm), replace inner clutch assembly. See Fig. 5.

**Fig. 5: Measuring Toyota Inner Clutch Oil Clearance**

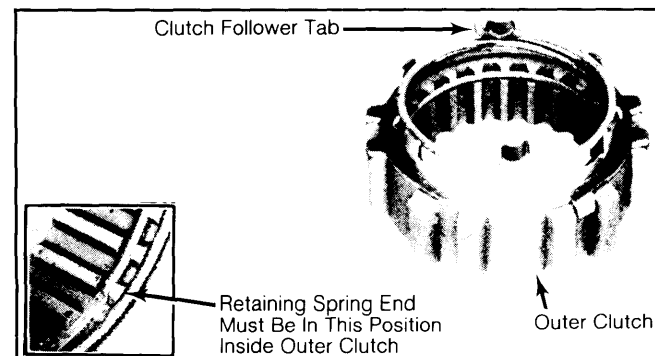


#### REASSEMBLY

1) Install actuating cam and spacer. Fit snap ring to rear of inner clutch. Insert inner clutch assembly to body and install snap ring. Reassemble outer clutch assembly, ensuring retaining spring is seated. Install compression spring. See Fig. 6.

**NOTE:** Ensure inner clutch is installed with tooth end on outer side of hub.

**Fig. 6: Installing Retaining Spring and Clutch Follower to Outer Clutch**



*Inset shows inner spring end.*

2) Install detent ball and spring (pin on Datsun) and ensure control knob is set to "FREE" ("LOCK" on Datsun) position. Insert control knob in cover and install snap ring. Assemble clutch assembly to cover assembly by pressing and rotating counterclockwise.

**NOTE:** On Datsun, after clutch assembly is seated, rotate clutch assembly clockwise to align bolt holes.

#### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Hub Body-to-Hub	
Toyota 4-WD Pickup .....	21-25 (29-34)
Toyota Land Cruiser .....	18-25 (24-34)
Cover Assembly-to-Hub	
Datsun .....	18-25 (24-34)
Isuzu & LUV .....	15 (20)
Toyota Land Cruiser .....	3-5 (4-7)
Toyota 4-WD Pickup .....	6-8 (8-11)