

# LOCKING HUBS - AUTOMATIC

1988 Jeep Cherokee

1988 Locking Hubs - Command-Trac & Selec-Trac

Jeep

## DESCRIPTION & OPERATION

Command-Trac locking hub is used on Model 30 front axles. This system can be shifted between 2WD and 4WD high range while vehicle is moving. The only time vehicle must be stopped to shift into or out of 4WD is when shifter is in low range. See Fig. 1.

Selec-Trac locking hubs allow full or part time 4WD. Used on Model 30 front axles, system can be shifted into 2WD or 4WD modes only when vehicle is stopped. See Fig. 2.

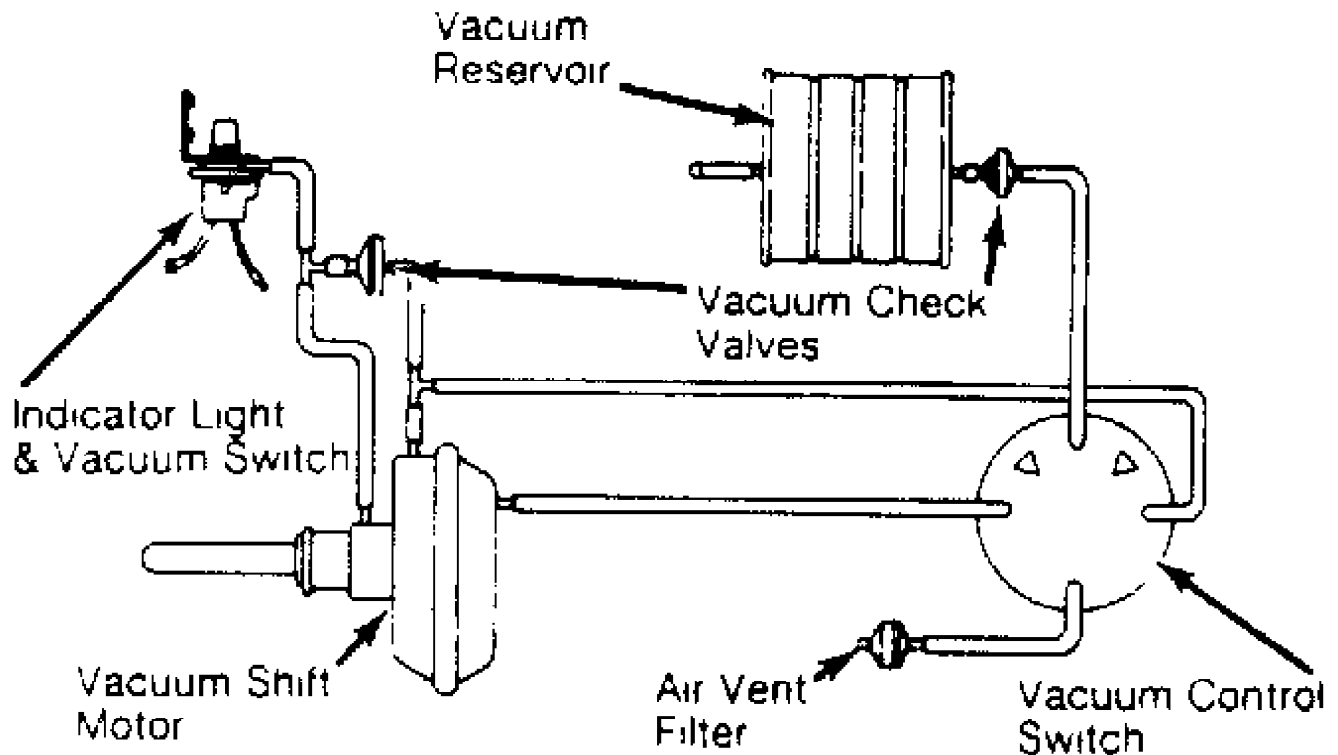


Fig. 1: Command-Trac Vacuum Control System

## TROUBLE SHOOTING

### SELEC-TRAC SYSTEM

#### 2WD To 4WD

Position mode select switch to "4WD" position while driving vehicle 2-3 MPH. Axle should ratchet and clunk into position. Transfer case should shift after axle shifts, accompanied by hissing sound from mode selector switch.

#### 4WD To 2WD

1) Position mode select switch to "2WD" position. Transfer case should shift to 2WD and not allow shifting into 4WD or "LO" range. Axle should shift after transfer case shifts.

2) To determine if front axle has completed a shift out of 4WD into 2WD, position mode select switch back to "4WD" position while operating vehicle at slow speed. If vehicle shifts into 2WD, axle will ratchet. If shift is not completed, transfer case will shift into 4WD and hissing sound will come from mode select switch.

## FRONT AXLE SHIFT MOTOR TEST

1) Disconnect vacuum harness from front axle shift motor. Connect vacuum pump to shift motor front port. Apply 15 in. Hg vacuum to shift motor. Rotate right front wheel to disengage axle.

2) Shift motor should hold vacuum at least 30 seconds. If not, replace motor. If motor does hold vacuum, disconnect vacuum pump from shift motor front port. Connect pump to shift motor rear port and cap transfer case connecting port. Apply 15 in. Hg vacuum to motor.

3) Shift motor should hold vacuum for at least 30 seconds. If not, replace motor. If motor does hold vacuum, remove cap from shift motor transfer case connecting port and check for vacuum. If no vacuum is present, rotate right front wheel to ensure axle has shifted completely. Axle must completely shift to open shift motor connecting port.

4) Recheck vacuum at shift motor transfer case port. If vacuum is present, transfer case requires diagnosis. Command-Trac uses Model 207 transfer case. Selec-Trac uses Model 228 transfer case.

## REMOVAL & INSTALLATION

### LOCKING HUB

#### Removal

1) Remove cover to outer clutch housing. Remove bearing race spring assembly. Remove sealing ring and seal bridge retainer. Remove bearing components.

2) Squeeze tangs of wire retaining ring together with needle-nose pliers. Pull remaining components of automatic hub from wheel.

#### Installation

1) Ensure lock ring is in position. Using Bearing Nut Wrench (J-6893-D), tighten wheel bearing adjusting nut to 50 ft. lbs. (60 N.m) to seat bearings.

2) Back off nut and tighten to 35 ft. lbs. (47 N.m) while rotating hub. Finally, back off nut a maximum of 3/8 turn. Assemble lock ring (with tab in keyway) over axle shaft, against bearing adjustment nut.

3) Adjustment nut pin must pass through one of the washer holes. Tighten outer adjusting nut to 183 ft. lbs. (248 N.m). Align outer clutch housing splines with splines of wheel hub.

4) Loosen cover screws 3 or 4 turns, and push in on cover to allow retaining ring to expand into rotor hub groove. Tighten cover cap screws to 40-50 INCH lbs. (4.5-5.6 N.m).

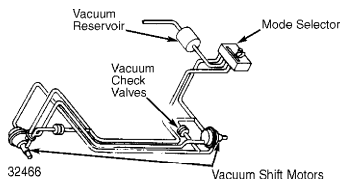


Fig. 2: Selec-Trac Vacuum Control System

## AXLE SHIFT MOTOR & HOUSING

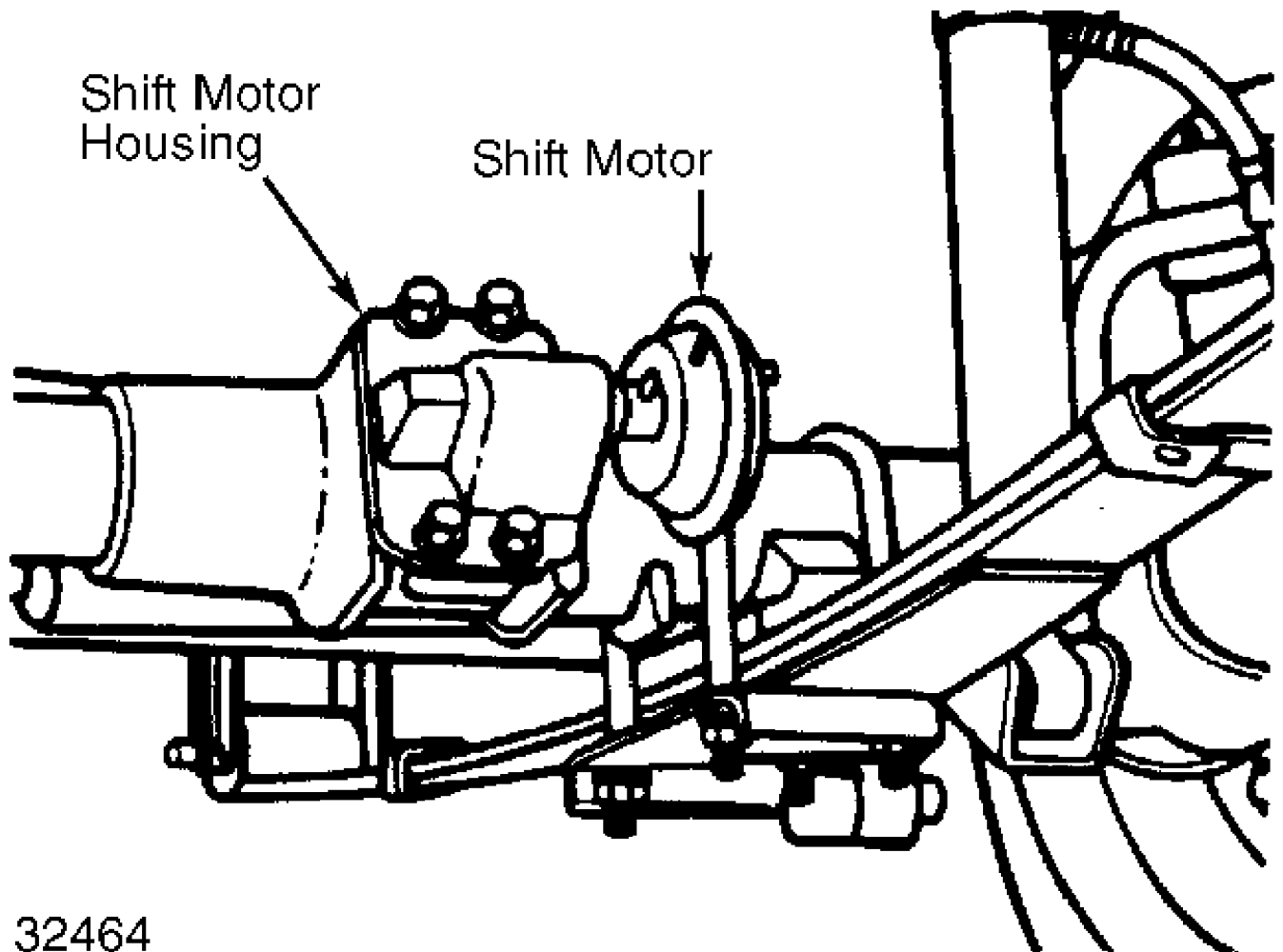
#### Removal

1) Raise and support vehicle. Drain shift housing fluid. Disconnect vacuum harness. Remove housing bolts. Remove motor and housing. Mark shift fork and housing for reassembly. See Fig. 3.

2) Rotate shift motor. Remove shift fork and motor snap rings. Remove shift motor from housing. Remove "O" ring from motor. Always use a new "O" ring for reassembly.

#### Installation

Install new "O" ring on motor shaft. Install motor into housing and slide shift fork onto shaft. Position motor and housing on axle. Add axle lubricant to shift motor housing. Install shift fork in shift collar and install housing bolts. Connect all vacuum harnesses to motor.



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Fig. 3: Shift Motor & Housing