### 2-E. Transfer Assembly

### All Wheel and Four Wheel Drive Vehicles

# 1. Leaks fluid from seals or vent after being driven

- a. Fluid level overfilled. Check and adjust transfer case fluid level.
- b. Check for a restricted breather or breather tube, clear and check the fluid level and top off as needed.
- c. Check seal condition and replace worn, damaged, or defective seals. Check the fluid level and top off as necessary.

## 2. Makes excessive noise while driving

- a. Check the fluid for the correct type of lubricant. Drain and refill using the recommended type and amount of lubricant.
- b. Check the fluid level. Top off the fluid using the recommended type and amount of lubricant.
- c. If the fluid level and type of lubricant meet specifications, check for internal wear or damage. Remove assembly and disassemble to inspect for worn, damaged, or defective components.

#### 3. Jumps out of gear

- a. Stop vehicle and make sure the unit is fully engaged.
- b. Check for worn, loose or an improperly adjusted linkage. Replace and/or adjust linkage as necessary.
- c. Check for internal wear or damage. Remove assembly and disassemble to inspect for worn, damaged, or defective components.

#### 2-F. Driveshaft

# Rear Wheel, All Wheel and Four Wheel Drive Vehicles

# 1. Clunking noise from center of vehicle shifting from forward to reverse

a. Worn universal joint. Remove driveshaft and replace universal joint.

# 2. Excessive vibration from center of vehicle when accelerating

- a. Worn universal joint. Remove driveshaft and replace universal joint.
- b. Driveshaft misaligned. Check for collapsed or damaged engine and transmission mounts, and replace as necessary.
- c. Driveshaft bent or out of balance. Replace damaged components and reinstall.
- d. Driveshaft out of balance. Remove the driveshaft and have it balanced by a competent professional, or replace the driveshaft assembly.

NOTE: Most driveshafts are linked together by universal joints; however, some manufacturers use Constant Velocity (CV) joints or rubber flex couplers.

#### 2-G. Axles

# **All Wheel and Four Wheel Drive Vehicles**

### 1. Front or rear wheel makes a clicking noise

a. Check for debris such as a pebble, nail or glass in the tire or tire tread. Carefully remove the debris. Small rocks and pebbles

- rarely cause a puncture; however, a sharp object should be removed carefully at a facility capable of performing tire repairs.
- b. Check for a loose, damaged or worn Constant Velocity (CV) joint and replace if defective.

## 2. Front or rear wheel vibrates with increased speed

- a. Check for a bent rim and replace, if damaged.
- b. Check the tires for balance or internal damage and replace if
- c. Check for a loose, worn or damaged wheel bearing and replace if defective
- d. Check for a loose, damaged or worn Constant Velocity (CV) joint and replace if defective.

#### **Front Wheel Drive Vehicles**

### 3. Front wheel makes a clicking noise

- a. Check for debris such as a pebble, nail or glass in the tire or tire tread. Carefully remove the debris. Small rocks and pebbles rarely cause a puncture; however, a sharp object should be removed carefully at a facility capable of performing tire repairs.
- b. Check for a loose, damaged or worn Constant Velocity (CV) joint and replace if defective.

## 4. Rear wheel makes a clicking noise

a. Check for debris such as a pebble, nail or glass in the tire or tire tread. Carefully remove the debris. Small rocks and pebbles rarely cause a puncture; however, a sharp object should be removed carefully at a facility capable of performing tire repairs.

#### **Rear Wheel Drive Vehicles**

### 5. Front or rear wheel makes a clicking noise

a. Check for debris such as a pebble, nail or glass in the tire or tire tread. Carefully remove the debris. Small rocks and pebbles rarely cause a puncture; however, a sharp object should be removed carefully at a facility capable of performing tire repairs.

#### 6. Rear wheel shudders or vibrates

- a. Check for a bent rear wheel or axle assembly and replace defective components.
- b. Check for a loose, damaged or worn rear wheel bearing and replace as necessary.

## 2-H. Other Drive Train Conditions

# 1. Burning odor from center of vehicle when accelerating

- a. Check for a seizing brake hydraulic component such as a brake caliper. Check the caliper piston for surface damage such as rust, and measure for out-of-round wear and caliper-to-piston clearance. For additional information on brake related odors, refer to section 3-A, condition number 9.
- b. On vehicles with a manual transmission, check for a slipping clutch. For possible causes and additional information, refer to section 2-C, condition number 1.