LUBRICATION AND MAINTENANCE

CONTENTS

LUBRICANTS

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DESCRIPTION AND OPERATION

PARTS AND LUBRICANT RECOMMENDATIONS

DESCRIPTION

When service is required, Chrysler Corporation recommends that only Mopar® brand parts, lubricants and chemicals be used. Mopar provides the best engineered products for servicing Chrysler Corporation vehicles.

CLASSIFICATION OF LUBRICANTS

DESCRIPTION

Only lubricants bearing designations defined by the following organization should be used to service a Chrysler Corporation vehicle.

- Society of Automotive Engineers (SAE)
- American Petroleum Institute (API) (Fig. 1)
- National Lubricating Grease Institute (NLGI) (Fig. 2)

SAE VISCOSITY RATING

An SAE viscosity grade is used to specify the viscosity of engine oil. SAE 30 specifies a single viscosity engine oil. Engine oils also have multiple viscosities. These are specified with a dual SAE viscosity grade which indicates the cold-to-hot temperature viscosity range.

- SAE 30 = single grade engine oil.
- SAE 10W-30 = multiple grade engine oil.

Chrysler Corporation only recommends multiple grade engine oils.

API QUALITY CLASSIFICATION

This symbol (Fig. 1) on the front of an oil container means that the oil has been certified by the American Petroleum Institute (API) to meet all the lubrication requirements specified by Chrysler Corporation.

Refer to Group 9, Engine for gasoline engine oil specification.

9400-9

Fig. 1 API Symbol

GEAR LUBRICANTS

SAE ratings also apply to multiple grade gear lubricants. In addition, API classification defines the lubricants usage. Such as API GL-5 and SAE 80W-90.

DESCRIPTION AND OPERATION (Continued)

LUBRICANTS AND GREASES

Lubricating grease is rated for quality and usage by the NLGI. All approved products have the NLGI symbol (Fig. 2) on the label. At the bottom NLGI symbol is the usage and quality identification letters. Wheel bearing lubricant is identified by the letter "G". Chassis lubricant is identified by the latter "L". The letter following the usage letter indicates the quality of the lubricant. The following symbols indicate the highest quality.

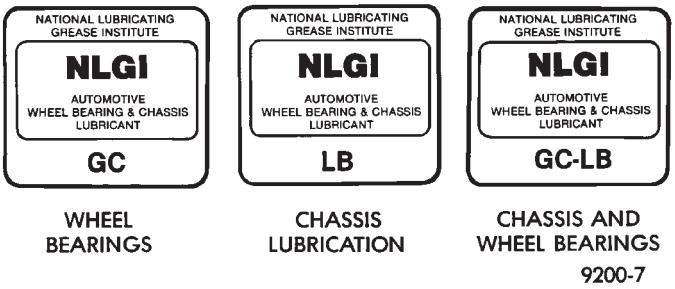

Fig. 2 NLGI Symbol

INTERNATIONAL SYMBOLS

DESCRIPTION

Chrysler Corporation uses international symbols to identify engine compartment lubricant and fluid check and fill locations (Fig. 3).

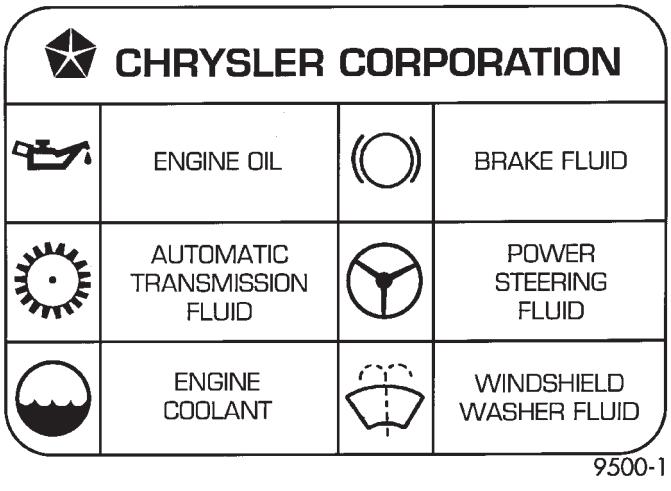

Fig. 3 International Symbols

FLUID FILL/CHECK LOCATIONS

DESCRIPTION

Fluid fill/check locations are located in each applicable group.

LUBRICATION POINT LOCATIONS

DESCRIPTION

Lubrication point locations are located in each applicable group.

SPECIFICATIONS

FLUID CAPACITIES

FUEL TANK

All . . . . . 78 L (20.5 gal.)

ENGINE OIL W/FILTER CHANGE

4.0L . . . . . 5.7 L (6.0 qts.)
4.7L . . . . . 5.7 L (6.0 qts.)

COOLING SYSTEM

CAUTION: Vehicle may be equipped with long life coolant. Extended life coolant is identified by an orange color. Normal coolant is identified by a greenish color. It is recommended that the two types of coolant not be mixed.

4.0L . . . . . 12.3 L (13.0 qts.)*
4.7L . . . . . 12.3 L (13.0 qts.)*

*Includes 2.2 L (2.3 qts.) for coolant recovery bottle.

AUTOMATIC TRANSMISSION

Dry fill capacity. *****

42RE . . . . . 9.1-9.5L (19-20 pts.)
45RFE . . . . . 13.33 L (28.0 pts.)

***** Depending on type and size of internal cooler, length and inside diameter of cooler lines, or use of an auxiliary cooler, these figures may vary. Refer to Group 21, Transmission for proper fluid fill procedure.

TRANSFER CASE

242 NVG . . . . . 1.4 L (3.0 pts.)
247 NVG . . . . . 1.1 L (2.5 pts.)

FRONT AXLE

186 FBI . . . . . 1.18 L (2.5 pts.)
186FBI‡ . . . . . 1.19L (2.51 pts.)

‡If the vehicle is equipped with VARI-LOK, include 0.07L (0.15 pts.) of friction modifier.

SPECIFICATIONS (Continued)

REAR AXLE

198 RBI* . . . . . 1.6 L (3.5 pts.)
198RBI ‡ . . . . . 1.78L (3.76 pts.)
226 RBA* . . . . . 2.24 L (4.75 pts.)
226RBA ‡‡ . . . . . 2.25L (4.75 pts.)

***** If the vehicle is equipped with TRAC-LOK, include 0.11 L (0.25 pts.) of friction modifier.

‡ If the vehicle is equipped with a VARI-LOK, include 0.09L (0.19 pts.) of friction modifier.

‡‡ If the vehicle is equipped with a VARI-LOK, include 0.12L (0.25 pts.) of friction modifier.

NOTE: Vehicles with trailer tow, must use a synthetic lubricant. Refer to Group 3, Differential and Driveline for service procedures.

POWER STEERING

Power steering fluid capacities are dependent on engine/chassis options as well as steering gear/cooler options. Depending on type and size of internal cooler, length and inside diameter of cooler lines, or use of an auxiliary cooler, these capacities may vary. Refer to Section 19 of the service manual for proper fill and bleed procedures.

MAINTENANCE SCHEDULES

INDEX

DESCRIPTION AND OPERATION

MAINTENANCE SCHEDULES

There are two maintenance schedules that show proper service for the Grand Cherokee.

First is Schedule **"A"**. It lists all the scheduled maintenance to be performed under "normal" operating conditions.

Second is Schedule **"B"**. It is a schedule for vehicles that are operated under the following conditions:

- Frequent short trip driving less than 5 miles (8 km)
- Frequent driving in dusty conditions
- Extensive idling
- Trailer towing
- Sustained high speed operation
- Off road driving
- Desert operation
- Frequent starting and stopping
- Cold climate operation
- Commercial service

Use the schedule that best describes the driving conditions.

Where time and mileage are listed, follow the interval that occurs first.

EMISSION CONTROL SYSTEM MAINTENANCE

The scheduled emission maintenance listed in **bold type** on the Maintenance Schedules, must be done at the mileage specified to assure the continued proper functioning of the emission control system. These, and all other maintenance services included in this manual, should be done to provide the best vehicle performance and reliability. More frequent maintenance may be needed for vehicles in severe operating conditions such as dusty areas and very short trip driving.

SPECIFICATIONS

UNSCHEDULED INSPECTION

AT EACH STOP FOR FUEL

- Check engine oil level, add as required.
- Check windshield washer solvent and add if required.

ONCE A MONTH

- Check tire pressure (including spare) and look for unusual wear or damage.
- Inspect battery and clean and tighten terminals as required.
- Check fluid levels of coolant reservoir, power steering and transmission and add as needed.

AT EACH OIL CHANGE

- Inspect exhaust system.
- Inspect brake hoses.
- Rotate the tires at each oil change interval shown on Schedule—A (7,500 miles) or every other interval shown on Schedule—B (6,000 miles).
- Check coolant level, hoses and clamps.
- Lubricate suspension ball joints.
- After completion of off-road (4WD) operation, the underside of the vehicle should be thoroughly inspected. Examine threaded fasteners for looseness.

SCHEDULE—A

7,500 miles (12 000 km) or at 6 months

- Change engine oil.
- Replace engine oil filter.

15,000 Miles (24 000 km) or at 12 months

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.

22,500 Miles (36 000 km) or at 18 months

- Change engine oil.
- Replace engine oil filter.
- Inspect brake linings.

SPECIFICATIONS (Continued)

30,000 Miles (48 000 km) or at 24 months

- Change engine oil.
- Replace engine oil filter.
- **Replace engine air cleaner element.**
- **Replace spark plugs.**
- Inspect and adjust drive belt (4.0L only).
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill transfer case fluid.
- Lubricate upper knuckle ball stud.

37,500 Miles (60 000 km) or at 30 months

- Change engine oil.
- Replace engine oil filter.

45,000 Miles (72 000 km) or at 36 months

- Change engine oil.
- Replace engine oil filter.
- Inspect brake linings.
- Flush and replace engine coolant at 36 months, regardless of mileage.
- Lubricate upper knuckle ball stud.

52,500 Miles (84 000 km) or at 42 months

- Change engine oil.
- Replace engine oil filter.
- Flush and replace engine coolant if not done at 36 months.

60,000 Miles (96 000 km) or at 48 months

- Change engine oil.
- Replace engine oil filter.
- **Replace engine air cleaner element.**
- **Replace spark plugs.**
- **Inspect PCV valve and replace if necessary (4.7L only).***
- Inspect and adjust drive belt (4.0L only).
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill transfer case fluid.
- Lubricate upper knuckle ball stud.

67,500 Miles (108 000 km) or at 54 months

- Change engine oil.
- Replace engine oil filter.
- Inspect brake linings

75,000 Miles (120 000 km) or at 60 months

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.
- Flush and replace engine coolant if it has been 30,000 miles (48 000 km) or 24 months since last change.

82,500 Miles (132 000 km) or at 66 months

- Change engine oil.
- Replace engine oil filter.
- Flush and replace engine coolant if it has been 30,000 miles (48 000 km) or 24 months since last change.

90,000 Miles (144 000 km) or at 72 months

- Change engine oil.
- Replace engine oil filter.
- **Replace engine air cleaner element.**
- **Replace spark plugs.**
- Inspect and adjust drive belt (4.0L only).
- Inspect and replace drive belt if needed (4.7L only).
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill transfer case fluid.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

97,500 Miles (156 000 km) or at 78 months

- Change engine oil.
- Replace engine oil filter.

105,000 Miles (168 000 km) or at 84 months

- Change engine oil.
- Replace engine oil filter.
- Inspect and replace drive belt if not previously replaced (4.7L only).
- Flush and replace engine coolant if it has been 30,000 miles (48 000 km) or 24 months since last change.
- Lubricate upper knuckle ball stud.

112,500 Miles (180 000 km) or at 90 months

- Change engine oil.
- Replace engine oil filter.
- Inspect brake linings.
- Flush and replace engine coolant if it has been 30,000 miles (48 000 km) or 24 months since last change.

120,000 Miles (192 000 km) or at 96 months

- Change engine oil.
- Replace engine oil filter.
- **Replace engine air cleaner element.**
- **Replace spark plugs.**
- **Inspect PCV valve and replace if necessary (4.7L only).***
- Inspect and adjust drive belt (4.0L only).
- Inspect and replace drive belt if not previously replaced (4.7L only).
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill transfer case fluid.

SPECIFICATIONS (Continued)

- Lubricate upper knuckle ball stud.

*This maintenance is recommended, but is not required to maintain warranty on the PCV valve.

IMPORTANT: Inspection and service should also be performed anytime a malfunction is observed or suspected.

SCHEDULE—B

3,000 Miles (5 000 km)

- Change engine oil.
- Replace engine oil filter.
- Lubricate steering linkage.

6,000 Miles (10 000 km)

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.

9,000 Miles (14 000 km)

- Change engine oil.
- Replace engine oil filter.

12,000 Miles (19 000 km)

- Change engine oil.
- Replace engine oil filter.
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

15,000 miles (24 000 km)

- Change engine oil.
- Replace engine oil filter.
- **Inspect engine air cleaner element, replace as necessary.**

18,000 Miles (29 000 km)

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.

21,000 Miles (34 000 km)

- Change engine oil.
- Replace engine oil filter.

24,000 Miles (38 000 km)

- Change engine oil.
- Replace engine oil filter.
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

27,000 Miles (43 000 km)

- Change engine oil.
- Replace engine oil filter.

30,000 Miles (48 000 km)

- Change engine oil.
- Replace engine oil filter.
- **Replace engine air cleaner element.**
- **Replace spark plugs.**
- Inspect and adjust drive belt (4.0L only).
- Drain and refill transfer case fluid.
- Lubricate upper knuckle ball stud.

33,000 Miles (53 000 km)

- Change engine oil.
- Replace engine oil filter.

36,000 Miles (58 000 km)

- Replace engine oil filter.
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

39,000 Miles (62 000 km)

- Change engine oil.
- Replace engine oil filter.

42,000 Miles (67 000 km)

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.

45,000 Miles (72 000 km)

- Change engine oil.
- Replace engine oil filter.
- **Inspect engine air cleaner element, replace as necessary.**

48,000 Miles (77 000 km)

- Change engine oil.
- Replace engine oil filter.
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

51,000 Miles (82 000 km)

- Change engine oil.
- Replace engine oil filter.
- Flush and replace engine coolant.

54,000 Miles (86 000 km)

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.

SPECIFICATIONS (Continued)

57,000 Miles (91 000 km)

- Change engine oil.
- Replace engine oil filter.

60,000 Miles (96 000 km)

- Change engine oil.
- Replace engine oil filter.
- **Replace engine air cleaner element.**
- **Inspect PCV valve and replace if necessary (4.7L only).***
- **Replace spark plugs.**
- Inspect and adjust drive belt (4.0L only).
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill transfer case fluid.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

63,000 Miles (101 000 km)

- Change engine oil.
- Replace engine oil filter.

66,000 Miles (106 000 km)

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.

69,000 Miles (110 000 km)

- Change engine oil.
- Replace engine oil filter.

72,000 Miles (115 000 km)

- Change engine oil.
- Replace engine oil filter.
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

75,000 Miles (120 000 km)

- Change engine oil.
- Replace engine oil filter.
- **Inspect engine air cleaner element, replace as necessary.**

78,000 Miles (125 000 km)

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.

81,000 Miles (130 000 km)

- Change engine oil.
- Replace engine oil filter.
- Flush and replace engine coolant.

84,000 miles (134 000 km)

- Change engine oil.
- Replace engine oil filter.
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

87,000 Miles (139 000 km)

- Change engine oil.
- Replace engine oil filter.

90,000 Miles (144 000 km)

- Change engine oil.
- Replace engine oil filter.
- **Replace engine air cleaner element.**
- **Replace spark plugs.**
- Inspect and adjust drive belt (4.0L only).
- Inspect and replace drive belt if necessary (4.7L only).
- Drain and refill transfer case fluid.
- Lubricate upper knuckle ball stud.

93,000 Miles (149 000 km)

- Change engine oil.
- Replace engine oil filter.

96,000 Miles (154 000 km)

- Change engine oil.
- Replace engine oil filter.
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

99,000 Miles (158 000 km)

- Change engine oil.
- Replace engine oil filter.

102,000 Miles (163 000 km)

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.

105,000 Miles (168 000 km)

- Change engine oil.
- Replace engine oil filter.
- **Inspect engine air cleaner element, replace as necessary.**
- Inspect and replace drive belt if not previously replaced (4.7L only).

SPECIFICATIONS (Continued)

108,000 Miles (173 000 km)

- Change engine oil.
- Replace engine oil filter.
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

111,000 Miles (178 000 km)

- Change engine oil.
- Replace engine oil filter.
- Flush and replace engine coolant.

114,000 Miles (182 000 km)

- Change engine oil.
- Replace engine oil filter.
- Lubricate upper knuckle ball stud.

117,000 Miles (187 000 km)

- Change engine oil.
- Replace engine oil filter.

120,000 Miles (192 000 km)

- Change engine oil.
- Replace engine oil filter.
- **Replace engine air cleaner element.**
- **Replace spark plugs.**
- Inspect and adjust drive belt (4.0L only).
- Inspect and replace drive belt if not previously replaced (4.7L only).
- Drain and refill automatic transmission fluid and change filter.
- Drain and refill transfer case fluid.
- Drain and refill front and rear axles.
- Inspect brake linings.
- Lubricate upper knuckle ball stud.

*This maintenance is recommended, but is not required to maintain warranty on the PCV valve.

IMPORTANT: Inspection and service should also be performed anytime a malfunction is observed or suspected.

JUMP STARTING, HOISTING AND TOWING

INDEX

SERVICE PROCEDURES

JUMP STARTING PROCEDURE

WARNING: REVIEW ALL SAFETY PRECAUTIONS AND WARNINGS IN GROUP 8A, BATTERY/STARTING/CHARGING SYSTEMS DIAGNOSTICS. DO NOT JUMP START A FROZEN BATTERY, PERSONAL INJURY CAN RESULT. DO NOT JUMP START WHEN MAINTENANCE FREE BATTERY INDICATOR DOT IS YELLOW OR BRIGHT COLOR. DO NOT JUMP START A VEHICLE WHEN THE BATTERY FLUID IS BELOW THE TOP OF LEAD PLATES. DO NOT ALLOW JUMPER CABLE CLAMPS TO TOUCH EACH OTHER WHEN CONNECTED TO A BOOSTER SOURCE. DO NOT USE OPEN FLAME NEAR BATTERY. REMOVE METALLIC JEWELRY WORN ON HANDS OR WRISTS TO AVOID INJURY BY ACCIDENTAL ARCING OF BATTERY CURRENT. WHEN USING A HIGH OUTPUT BOOSTING DEVICE, DO NOT ALLOW BATTERY VOLTAGE TO EXCEED 16 VOLTS. REFER TO INSTRUCTIONS PROVIDED WITH DEVICE BEING USED.

CAUTION: When using another vehicle as a booster, do not allow vehicles to touch. Electrical systems can be damaged on either vehicle.

TO JUMP START A DISABLED VEHICLE:

(1) Raise hood on disabled vehicle and visually inspect engine compartment for:

- Battery cable clamp condition, clean if necessary.
- Frozen battery.
- Yellow or bright color test indicator, if equipped.
- Low battery fluid level.
- Generator drive belt condition and tension.
- Fuel fumes or leakage, correct if necessary.

CAUTION: If the cause of starting problem on disabled vehicle is severe, damage to booster vehicle charging system can result.

(2) When using another vehicle as a booster source, park the booster vehicle within cable reach. Turn off all accessories, set the parking brake, place the automatic transmission in PARK or the manual transmission in NEUTRAL and turn the ignition OFF.

(3) On disabled vehicle, place gear selector in park or neutral and set park brake. Turn off all accessories.

(4) Connect jumper cables to booster battery. RED clamp to positive terminal (+). BLACK clamp to negative terminal (-). DO NOT allow clamps at opposite end of cables to touch, electrical arc will result. Review all warnings in this procedure.

(5) On disabled vehicle, connect RED jumper cable clamp to positive (+) terminal. Connect BLACK jumper cable clamp to engine ground as close to the ground cable attaching point as possible (Fig. 1).

(6) Start the engine in the vehicle which has the booster battery, let the engine idle a few minutes, then start the engine in the vehicle with the discharged battery.

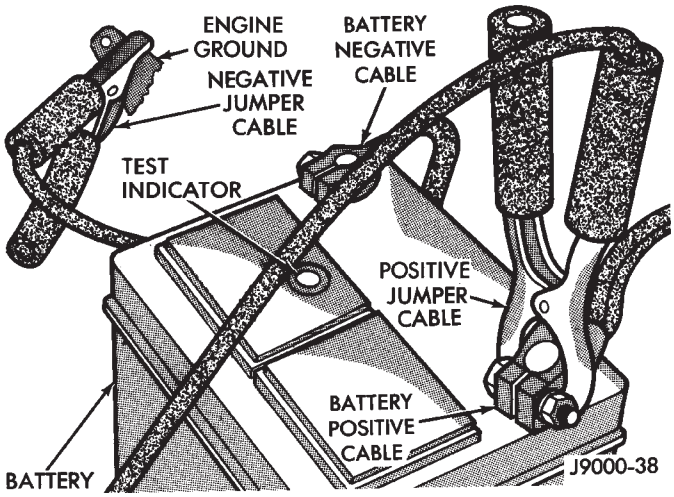

Fig. 1 Jumper Cable Clamp Connections

CAUTION: Do not crank starter motor on disabled vehicle for more than 15 seconds, starter will overheat and could fail.

SERVICE PROCEDURES (Continued)

(7) Allow battery in disabled vehicle to charge to at least 12.4 volts (75% charge) before attempting to start engine. If engine does not start within 15 seconds, stop cranking engine and allow starter to cool (15 min.), before cranking again.

DISCONNECT CABLE CLAMPS AS FOLLOWS:

- Disconnect BLACK cable clamp from engine ground on disabled vehicle.
- When using a Booster vehicle, disconnect BLACK cable clamp from battery negative terminal. Disconnect RED cable clamp from battery positive terminal.
- Disconnect RED cable clamp from battery positive terminal on disabled vehicle.

TOWING RECOMMENDATIONS

A vehicle equipped with SAE approved wheel lift-type towing equipment can be used to tow WJ vehicles. When towing a 4WD vehicle using a wheel-lift towing device, use tow dollies under the opposite end of the vehicle. A vehicle with flatbed device can also be used to transport a disabled vehicle (Fig. 2).

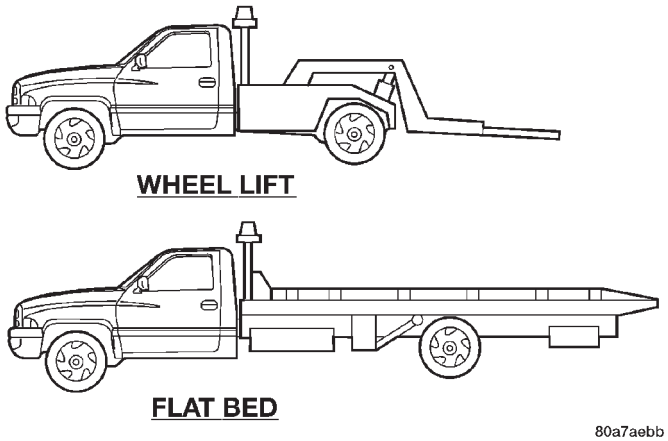

Fig. 2 Tow Vehicles With Approved Equipment

SAFETY PRECAUTIONS

CAUTION: The following safety precautions must be observed when towing a vehicle:

- Secure loose and protruding parts.
- Always use a safety chain system that is independent of the lifting and towing equipment.
- Do not allow towing equipment to contact the disabled vehicle's fuel tank.
- Do not allow anyone under the disabled vehicle while it is lifted by the towing device.
- Do not allow passengers to ride in a vehicle being towed.
- Always observe state and local laws regarding towing regulations.
- Do not tow a vehicle in a manner that could jeopardize the safety of the operator, pedestrians or other motorists.
- Do not attach tow chains, T-hooks, or J-hooks to a bumper, steering linkage, drive shafts or a non-reinforced frame hole.
- Do not tow a heavily loaded vehicle. Use a flat-bed device to transport a loaded vehicle.

GROUND CLEARANCE

CAUTION: If vehicle is towed with wheels removed, install lug nuts to retain brake drums.

A towed vehicle should be raised until lifted wheels are a minimum 100 mm (4 in) from the ground. Be sure there is adequate ground clearance at the opposite end of the vehicle, especially when towing over rough terrain or steep rises in the road. If necessary, remove the wheels from the lifted end of the vehicle and lower the vehicle closer to the ground, to increase the ground clearance at the opposite end of the vehicle. Install lug nuts on wheel attaching studs to retain brake drums.

FLAT-BED TOWING RAMP ANGLE

If a vehicle with flat-bed towing equipment is used, the approach ramp angle should not exceed 15 degrees.

TOWING WHEN KEYS ARE NOT AVAILABLE

When the vehicle is locked and keys are not available, use a flat bed hauler. A wheel-lift device can be used on 4WD vehicles provided **the trailing wheels are off the ground and positioned in tow dollies.**

TWO-WHEEL-DRIVE VEHICLE TOWING

Chrysler Corporation recommends that a vehicle be towed with the rear end lifted, whenever possible.

WARNING: WHEN TOWING A DISABLED VEHICLE AND THE DRIVE WHEELS ARE SECURED IN A WHEEL LIFT OR TOW DOLLIES, ENSURE THE TRANSMISSION IS IN THE PARK POSITION (AUTOMATIC TRANSMISSION) OR A FORWARD DRIVE GEAR (MANUAL TRANSMISSION).

WARNING: ENSURE VEHICLE IS ON A LEVEL SURFACE OR THE WHEELS ARE BLOCKED TO PREVENT VEHICLE FROM ROLLING.

SERVICE PROCEDURES (Continued)

TWO WHEEL DRIVE TOWING-REAR END LIFTED

CAUTION: Do not use steering column lock to secure steering wheel during towing operation.

2WD vehicles can be towed with the front wheels on the surface for extended distances at speeds not exceeding 48 km/h (30 mph).

(1) Attach wheel lift device to rear wheels.
(2) Place the transmission in neutral.
(3) Raise vehicle to towing position.
(4) Attach safety chains. Route chains so not to interfere with tail pipe when vehicle is lifted.
(5) Turn the ignition switch to the OFF position to unlock the steering wheel.

CAUTION: Do not use steering column lock to secure steering wheel during towing operation.

(6) Secure steering wheel in straight ahead position with a clamp device designed for towing.
(7) Place transmission in park.

TWO WHEEL DRIVE TOWING-FRONT END LIFTED

CAUTION: Many vehicles are equipped with air dams, spoilers, and/or ground effect panels. To avoid component damage, a wheel-lift towing vehicle or a flat-bed hauling vehicle is recommended.

(1) Attach wheel lift device to rear wheels.
(2) Place the transmission in neutral.
(3) Raise the rear of the vehicle off the ground and install tow dollies under rear wheels.
(4) Attach wheel lift device to front wheels and raise vehicle to towing position.
(5) Attach the safety chains.

CAUTION: Do not use steering column lock to secure steering wheel during towing operation.

(6) Turn the ignition switch to the OFF position to unlock the steering wheel.
(7) Secure steering wheel in straight ahead position with a clamp device designed for towing.
(8) Place transmission in park.

FOUR-WHEEL-DRIVE VEHICLE TOWING

Chrysler Corporation recommends that a vehicle be transported on a flat-bed device. A Wheel-lift device can be used provided **the trailing wheels are off the ground and positioned in tow dollies.**

WARNING: WHEN TOWING A DISABLED VEHICLE AND THE DRIVE WHEELS ARE SECURED IN A WHEEL LIFT OR TOW DOLLIES, ENSURE THE TRANSMISSION IS IN THE PARK POSITION.

CAUTION: Many vehicles are equipped with air dams, spoilers, and/or ground effect panels. To avoid component damage, a wheel-lift towing vehicle or a flat-bed hauling vehicle is recommended.

FOUR WHEEL DRIVE TOWING—REAR END LIFTED

WARNING: ENSURE VEHICLE IS ON A LEVEL SURFACE OR THE WHEELS ARE BLOCKED TO PREVENT VEHICLE FROM ROLLING.

(1) Attach wheel lift device to front wheels.
(2) Place the transmission in neutral.
(3) Raise the front of the vehicle off the ground and install tow dollies under front wheels.
(4) Attach wheel lift device to rear wheels and raise vehicle to towing position.
(5) Attach safety chains. Route chains so not to interfere with tail pipe when vehicle is lifted.
(6) Turn the ignition switch to the OFF position to unlock the steering wheel.

CAUTION: Do not use steering column lock to secure steering wheel during towing operation.

(7) Secure steering wheel in straight ahead position with a clamp device designed for towing.
(8) Place transmission in park.

FOUR WHEEL DRIVE TOWING—FRONT END LIFTED

WARNING: ENSURE VEHICLE IS ON A LEVEL SURFACE OR THE WHEELS ARE BLOCKED TO PREVENT VEHICLE FROM ROLLING.

(1) Attach wheel lift device to rear wheels.
(2) Place the transmission in neutral.
(3) Raise the rear of the vehicle off the ground and install tow dollies under rear wheels.
(4) Attach wheel lift device to front wheels and raise vehicle to towing position.
(5) Attach the safety chains.

CAUTION: Do not use steering column lock to secure steering wheel during towing operation.

(6) Turn the ignition switch to the OFF position to unlock the steering wheel.
(7) Secure steering wheel in straight ahead position with a clamp device designed for towing.
(8) Place transmission in park.

SERVICE PROCEDURES (Continued)

EMERGENCY TOW HOOKS

WARNING: REMAIN AT A SAFE DISTANCE FROM A VEHICLE THAT IS BEING TOWED VIA ITS TOW HOOKS. THE TOW STRAPS/CHAINS COULD BREAK AND CAUSE SERIOUS INJURY.

Some Jeep vehicles are equipped with front emergency tow hooks (Fig. 3). The tow hooks should be used for **EMERGENCY** purposes only.

CAUTION: DO NOT use emergency tow hooks for tow truck hook-up or highway towing.

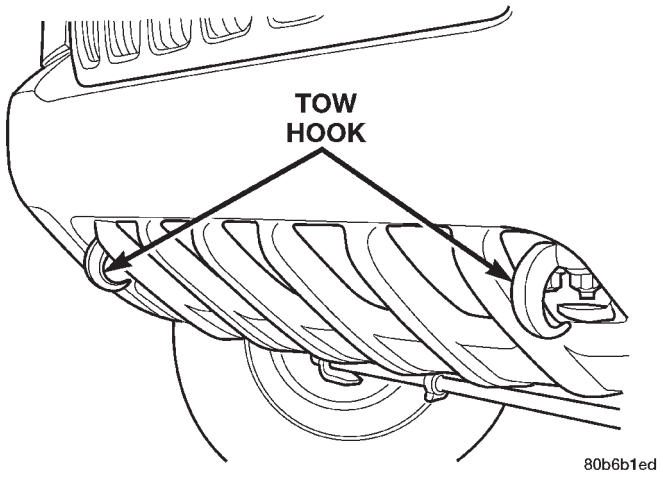

Fig. 3 Emergency Tow Hooks

HOISTING RECOMMENDATIONS

FLOOR JACK

When properly positioned, a floor jack can be used to lift a WJ vehicle (Fig. 4). Support the vehicle in the raised position with jack stands at the front and rear ends of the frame rails.

CAUTION: Do not attempt to lift a vehicle with a floor jack positioned under:

- **An axle tube.**
- **Aluminum differential.**
- **A body side sill.**
- **A steering linkage component.**
- **A drive shaft.**
- **The engine or transmission oil pan.**
- **The fuel tank.**
- **A front suspension arm.**

HOIST

A vehicle can be lifted with:

- A single-post, frame-contact hoist.
- A twin-post, chassis hoist.
- A ramp-type, drive-on hoist.

NOTE: When a frame-contact type hoist is used, verify that the lifting pads are positioned properly (Fig. 4).

WARNING: THE HOISTING AND JACK LIFTING POINTS PROVIDED ARE FOR A COMPLETE VEHICLE. WHEN A CHASSIS OR DRIVETRAIN COMPONENT IS REMOVED FROM A VEHICLE, THE CENTER OF GRAVITY IS ALTERED MAKING SOME HOISTING CONDITIONS UNSTABLE. PROPERLY SUPPORT OR SECURE VEHICLE TO HOISTING DEVICE WHEN THESE CONDITIONS EXIST.

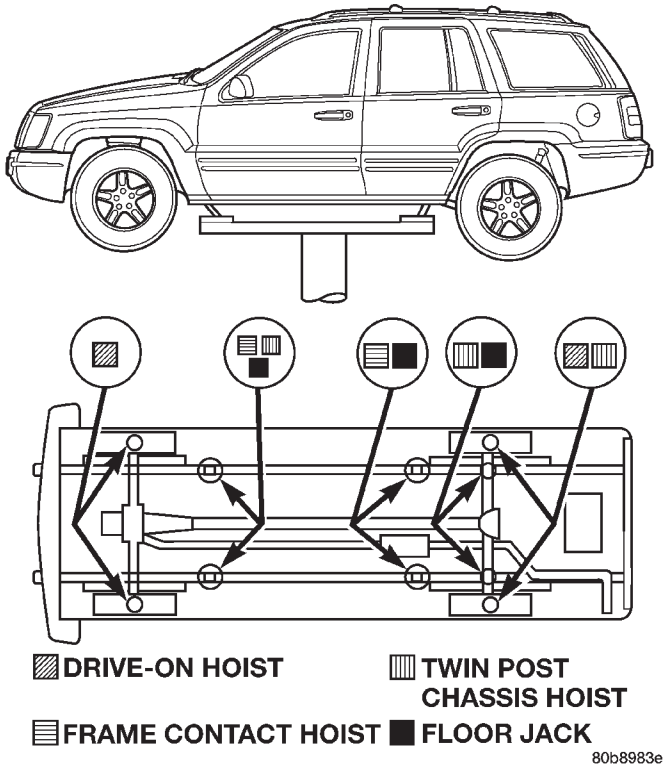

Fig. 4 Correct Vehicle Lifting Locations