

LUBRICATION & MAINTENANCE

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LUBRICATION & MAINTENANCE







SPECIFICATIONS - FLUID CAPACITIES

DESCRIPTION	SPECIFICATION
Fuel Tank	64 L (17 gal.)
Engine Oil*	4.7 L (5.0 qts.)
Cooling System**	8.9 L (9.4 qts.)
Automatic Transaxle - Estimated Service Fill	4.3 L (4.5 qts.)
Automatic Transaxle - Overhaul Fill Capacity with Torque Converter Empty	8.8 L (9.3 qts.)
Differential	0.74 L (0.78 qts.)
*(includes filter)	
**(includes heater and recovery/reserve bottle)	

INTERNATIONAL SYMBOLS

DESCRIPTION

DaimlerChrysler Corporation uses international symbols to identify engine compartment lubricant and fluid inspection and fill locations (Fig. 1).

	ENGINE OIL		BRAKE FLUID
	AUTOMATIC TRANSMISSION FLUID		POWER STEERING FLUID
	ENGINE COOLANT		WINDSHIELD WASHER FLUID

8097ddb

Fig. 1 INTERNATIONAL SYMBOLS

FLUID TYPES

DESCRIPTION

DESCRIPTION - ENGINE OIL AND LUBRICANTS

WARNING: NEW OR USED ENGINE OIL CAN BE IRRITATING TO THE SKIN. AVOID PROLONGED OR REPEATED SKIN CONTACT WITH ENGINE OIL. CONTAMINANTS IN USED ENGINE OIL, CAUSED BY INTERNAL COMBUSTION, CAN BE HAZARDOUS TO YOUR HEALTH. THOROUGHLY WASH EXPOSED SKIN WITH SOAP AND WATER. DO NOT WASH SKIN WITH GASOLINE, DIESEL FUEL, THINNER, OR SOLVENTS, HEALTH PROBLEMS CAN RESULT. DO NOT POLLUTE, DISPOSE OF USED ENGINE OIL PROPERLY. CONTACT YOUR DEALER OR GOVERNMENT AGENCY FOR LOCATION OF COLLECTION CENTER IN YOUR AREA.

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

Only lubricants bearing designations defined by the following organization should be used.

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

API SERVICE GRADE CERTIFIED

Use an engine oil that is API Certified. MOPAR® provides engine oils, meeting Material Standard MS-6395, that meet or exceed this requirement.

SAE VISCOSITY

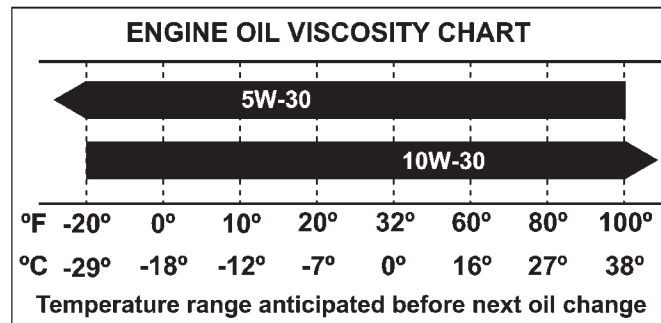
An SAE viscosity grade is used to specify the viscosity of engine oil. Use only engine oils with multiple viscosities such as 5W-30 or 10W-30. These are specified with a dual SAE viscosity grade which indicates the cold-to-hot temperature viscosity range. Select an engine oil that is best suited to your particular temperature range and variation (Fig. 2).

ENERGY CONSERVING OIL

An Energy Conserving type oil is recommended for gasoline engines. The designation of ENERGY CONSERVING is located on the label of an engine oil container.

CONTAINER IDENTIFICATION

Standard engine oil identification notations have been adopted to aid in the proper selection of engine oil. The identifying notations are located on the front



80990199

Fig. 2 TEMPERATURE/ENGINE OIL VISCOSITY

label of engine oil plastic bottles and the top of engine oil cans (Fig. 3).

This symbol means that the oil has been certified by the American Petroleum Institute (API). DaimlerChrysler only recommend API Certified engine oils that meet the requirements of Material Standard MS-6395. Use Mopar or an equivalent oil meeting the specification MS-6395.



9400-9

Fig. 3 API SYMBOL

GEAR LUBRICANTS

SAE ratings also apply to multigrade gear lubricants. In addition, API classification defines the lubricants usage. Such as API GL-5 and SAE 75W-90.

LUBRICANTS AND GREASES

Lubricating grease is rated for quality and usage by the NLGI. All approved products have the NLGI symbol (Fig. 4) 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.

SPECIALIZED LUBRICANTS AND OILS

Some maintenance or repair procedures may require the use of specialized lubricants or oils. Consult the appropriate sections in this manual for the correct application of these lubricants.

FLUID TYPES (Continued)

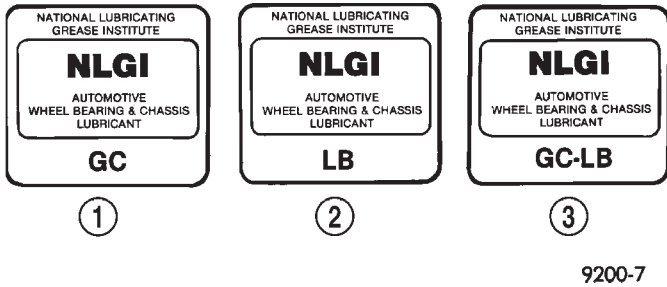


Fig. 4 NLGI SYMBOL

- 1 - WHEEL BEARINGS
- 2 - CHASSIS LUBRICATION
- 3 - CHASSIS AND WHEEL BEARINGS

9200-7

DESCRIPTION - ENGINE COOLANT

WARNING: ANTIFREEZE IS AN ETHYLENE GLYCOL BASE COOLANT AND IS HARMFUL IF SWALLOWED OR INHALED. IF SWALLOWED, DRINK TWO GLASSES OF WATER AND INDUCE VOMITING. IF INHALED, MOVE TO FRESH AIR AREA. SEEK MEDICAL ATTENTION IMMEDIATELY. DO NOT STORE IN OPEN OR UNMARKED CONTAINERS. WASH SKIN AND CLOTHING THOROUGHLY AFTER COMING IN CONTACT WITH ETHYLENE GLYCOL. KEEP OUT OF REACH OF CHILDREN. DISPOSE OF GLYCOL BASE COOLANT PROPERLY, CONTACT YOUR DEALER OR GOVERNMENT AGENCY FOR LOCATION OF COLLECTION CENTER IN YOUR AREA. DO NOT OPEN A COOLING SYSTEM WHEN THE ENGINE IS AT OPERATING TEMPERATURE OR HOT UNDER PRESSURE, PERSONAL INJURY CAN RESULT. AVOID RADIATOR COOLING FAN WHEN ENGINE COMPARTMENT RELATED SERVICE IS PERFORMED, PERSONAL INJURY CAN RESULT.

CAUTION: Use of Propylene Glycol based coolants is not recommended, as they provide less freeze protection and less boiling protection.

The cooling system is designed around the coolant. The coolant must accept heat from engine metal, in the cylinder head area near the exhaust valves and engine block. Then coolant carries the heat to the radiator where the tube/fin radiator can transfer the heat to the air.

The use of aluminum cylinder blocks, cylinder heads, and water pumps requires special corrosion protection. Mopar® Antifreeze/Coolant, 5 Year/100,000 Mile Formula (MS-9769), or the equivalent ethylene glycol base coolant with hybrid organic corrosion inhibitors (called HOAT, for Hybrid Organic Additive Technology) is recommended. This coolant offers the best engine cooling without corrosion when mixed with 50% Ethylene Glycol and 50% distilled

water to obtain a freeze point of -37°C (-35°F). If it loses color or becomes contaminated, drain, flush, and replace with fresh properly mixed coolant solution.

The green coolant **MUST NOT BE MIXED** with the orange or magenta coolants. When replacing coolant the complete system flush must be performed before using the replacement coolant.

CAUTION: Mopar® Antifreeze/Coolant, 5 Year/100,000 Mile Formula (MS-9769) may not be mixed with any other type of antifreeze. Doing so will reduce the corrosion protection and may result in premature water pump seal failure. If non-HOAT coolant is introduced into the cooling system in an emergency, it should be replaced with the specified coolant as soon as possible.

DESCRIPTION - AUTOMATIC TRANSMISSION FLUID

NOTE: Refer to the maintenance schedules for the recommended maintenance (fluid/filter change) intervals for this transaxle.

NOTE: For fluid level checking procedures, (Refer to 21 - TRANSMISSION/TRANSAXLE/AUTOMATIC - 42LE/FLUID - STANDARD PROCEDURE).

NOTE: The 42LE transaxle has separate transmission and differential oil sumps, each requiring different fluids.

TRANSMISSION FLUID

Mopar® ATF+4 (Automatic Transmission Fluid-Type 9602) is required in this transaxle. Substitute fluids can induce torque converter clutch shudder.

Mopar® ATF+4 (Automatic Transmission Fluid-Type 9602) when new is red in color. The ATF is dyed red so it can be identified from other fluids used in the vehicle such as engine oil or antifreeze. The red color is not permanent and is not an indicator of fluid condition. As the vehicle is driven, the ATF will begin to look darker in color and may eventually become brown. **This is normal.** ATF+4 also has a unique odor that may change with age. Consequently, **odor and color cannot be used to indicate the fluid condition or the need for a fluid change.**

FLUID ADDITIVES

DaimlerChrysler strongly recommends against the addition of any fluids to the transmission, other than those automatic transmission fluids listed above.

FLUID TYPES (Continued)

Exceptions to this policy are the use of special dyes to aid in detecting fluid leaks.

Various “special” additives and supplements exist that claim to improve shift feel and/or quality. These additives and others also claim to improve converter clutch operation and inhibit overheating, oxidation, varnish, and sludge. These claims have not been supported to the satisfaction of DaimlerChrysler and these additives **must not be used**. The use of transmission “sealers” should also be avoided, since they may adversely affect the integrity of transmission seals.

DESCRIPTION - FUEL REQUIREMENTS

Your engine is designed to meet all emissions regulations and provide excellent fuel economy and performance when using high quality unleaded gasoline having an octane rating of 87. The uses of midgrade, octane rating of 89, gasoline is recommended for the 3.5L H.O. engine. The use of premium gasoline is not recommended. The use of premium gasoline will provide no benefit over high quality regular gasoline, and in some circumstances may result in poorer performance.

Light spark knock at low engine speeds is not harmful to your engine. However, continued heavy spark knock at high speeds can cause damage and immediate service is required. Engine damage resulting from operation with a heavy spark knock may not be covered by the new vehicle warranty.

Poor quality gasoline can cause problems such as hard starting, stalling and hesitations. If you experience these symptoms, try another brand of gasoline before considering service for the vehicle.

Over 40 auto manufacturers world-wide have issued and endorsed consistent gasoline specifications (the Worldwide Fuel Charter, WWFC) to define fuel properties necessary to deliver enhanced emissions, performance and durability for your vehicle. We recommend the use of gasolines that meet the WWFC specifications if they are available.

REFORMULATED GASOLINE

Many areas of the country require the use of cleaner burning gasoline referred to as “reformulated” gasoline. Reformulated gasoline contain oxygenates, and are specifically blended to reduce vehicle emissions and improve air quality.

We strongly support the use of reformulated gasoline. Properly blended reformulated gasoline will provide excellent performance and durability for the engine and fuel system components.

GASOLINE/OXYGENATE BLENDS

Some fuel suppliers blend unleaded gasoline with oxygenates such as 10% ethanol, MTBE, and ETBE. Oxygenates are required in some areas of the country during the winter months to reduce carbon monoxide emissions. Fuels blended with these oxygenates may be used in your vehicle.

CAUTION: DO NOT use gasoline containing METHANOL. Gasoline containing methanol may damage critical fuel system components.

MMT IN GASOLINE

MMT is a manganese-containing metallic additive that is blended into some gasoline to increase octane. Gasoline blended with MMT provide no performance advantage beyond gasoline of the same octane number without MMT. Gasoline blended with MMT reduce spark plug life and reduce emission system performance in some vehicles. We recommend that gasoline free of MMT be used in your vehicle. The MMT content of gasoline may not be indicated on the gasoline pump; therefore, you should ask your gasoline retailer whether or not his/her gasoline contains MMT.

It is even more important to look for gasoline without MMT in Canada because MMT can be used at levels higher than allowed in the United States. MMT is prohibited in Federal and California reformulated gasoline.

SULFUR IN GASOLINE

If you live in the northeast United States, your vehicle may have been designed to meet California low emission standards with Cleaner-Burning California reformulated gasoline with low sulfur. If such fuels are not available in states adopting California emission standards, your vehicles will operate satisfactorily on fuels meeting federal specifications, but emission control system performance may be adversely affected. Gasoline sold outside of California is permitted to have higher sulfur levels which may affect the performance of the vehicle’s catalytic converter. This may cause the Malfunction Indicator Lamp (MIL), Check Engine or Service Engine Soon light to illuminate. We recommend that you try a different brand of unleaded gasoline having lower sulfur to determine if the problem is fuel related prior to returning your vehicle to an authorized dealer for service.

CAUTION: If the Malfunction Indicator Lamp (MIL), Check Engine or Service Engine Soon light is flashing, immediate service is required; see on-board diagnostics system section.

FLUID TYPES (Continued)

MATERIALS ADDED TO FUEL

All gasoline sold in the United States and Canada are required to contain effective detergent additives. Use of additional detergents or other additives is not needed under normal conditions.

FUEL SYSTEM CAUTIONS

CAUTION: Follow these guidelines to maintain your vehicle's performance:

- The use of leaded gas is prohibited by Federal law. Using leaded gasoline can impair engine performance, damage the emission control system, and could result in loss of warranty coverage.

- An out-of-tune engine, or certain fuel or ignition malfunctions, can cause the catalytic converter to overheat. If you notice a pungent burning odor or some light smoke, your engine may be out of tune or malfunctioning and may require immediate service. Contact your dealer for service assistance.

- When pulling a heavy load or driving a fully loaded vehicle when the humidity is low and the temperature is high, use a premium unleaded fuel to help prevent spark knock. If spark knock persists, lighten the load, or engine piston damage may result.

- The use of fuel additives which are now being sold as octane enhancers is not recommended. Most of these products contain high concentrations of methanol. Fuel system damage or vehicle performance problems resulting from the use of such fuels or additives is not the responsibility of DaimlerChrysler Corporation and may not be covered under the new vehicle warranty.

NOTE: Intentional tampering with emissions control systems can result in civil penalties being assessed against you.

DESCRIPTION - DIFFERENTIAL LUBRICANT

NOTE: Refer to the Owner's Manual for the recommended differential lubricant change intervals for this transaxle.

NOTE: Refer to 42LE TRANSAXLE SERVICE PROCEDURES for fluid level checking procedures.

NOTE: The 42LE transaxle has separate transmission and differential oil sumps, each requiring different fluids.

42LE DIFFERENTIAL LUBRICANT

The differential sump should be filled with Mopar® 75W-90 hypoid gear lubricant. Synthetic gear lubricants should be avoided.

FLUID ADDITIVES

DaimlerChrysler strongly recommends against the addition of any fluids to the transmission, other than those lubricants listed above. Exceptions to this policy are the use of special dyes to aid in detecting fluid leaks.

Various "special" additives and supplements exist that claim to improve shift feel and/or quality. These additives and others also claim to improve converter clutch operation and inhibit overheating, oxidation, varnish, and sludge. These claims have not been supported to the satisfaction of DaimlerChrysler and these additives **must not be used**. The use of transmission "sealers" should also be avoided, since they may adversely affect the integrity of transmission seals.

FLUID FILL/CHECK LOCATIONS

DESCRIPTION

The fluid check/fill point locations are located in each applicable service manual section.

LUBRICATION POINTS

DESCRIPTION

Lubrication point locations are located in each applicable Sections.

MAINTENANCE SCHEDULES

DESCRIPTION

"Maintenance Schedule Information not included in this section, is located in the appropriate Owner's Manual."

HOISTING

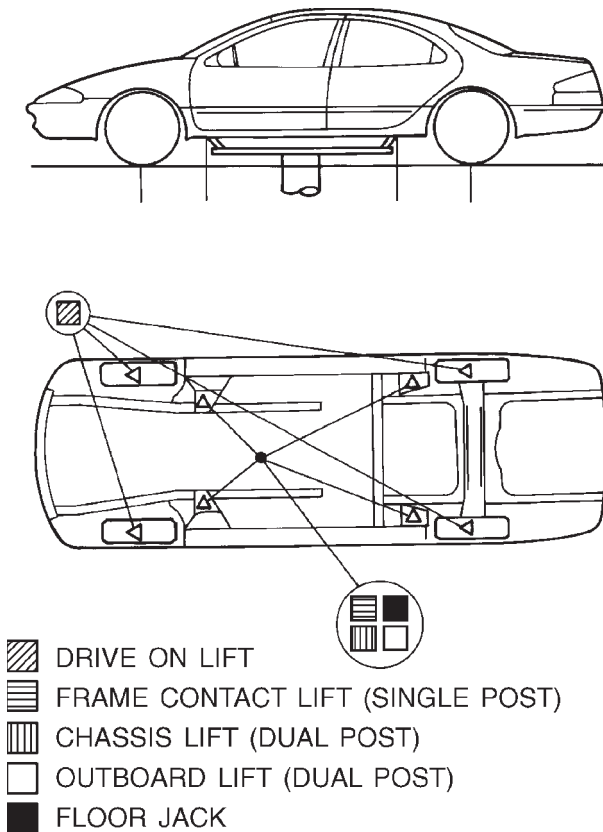
STANDARD PROCEDURE - HOISTING

Refer to Owner's Manual provided with vehicle for proper emergency jacking procedures.

WARNING: THE HOISTING AND JACK LIFTING POINTS PROVIDED ARE FOR A COMPLETE VEHICLE. WHEN THE ENGINE OR REAR SUSPENSION 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.

CAUTION: Do not position hoisting device on suspension components, damage to vehicle can result.

For proper hoisting and jacking points, refer to (Fig. 5).



80b1b34a

Fig. 5 HOISTING AND JACKING POINTS

JUMP STARTING

STANDARD PROCEDURE - JUMP STARTING

WARNING:

REVIEW ALL SAFETY PRECAUTIONS AND WARNINGS.

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.

A BATTERY GENERATES HYDROGEN GAS WHICH IS FLAMMABLE AND EXPLOSIVE. KEEP OPEN FLAME OR SPARKS AWAY FROM THE BATTERY.

DO NOT ALLOW JUMPER CABLE CLAMPS TO TOUCH EACH OTHER WHEN CONNECTED TO A BOOSTER SOURCE. ,

DO NOT ALLOW BATTERY VOLTAGE TO EXCEED 16 VOLTS.

TAKE CARE TO AVOID THE RADIATOR COOLING FAN WHENEVER THE HOOD IS RAISED. THE FAN CAN START AT ANYTIME THE IGNITION SWITCH IS ON. YOU CAN BE HURT BY THE FAN.

BATTERY FLUID IS A CORROSIVE ACID SOLUTION: DO NOT ALLOW BATTERY FLUID TO CONTACT EYES, SKIN, OR CLOTHING. IF ACID SPLASHES IN EYES OR ON SKIN, FLUSH THE CONTAMINATED AREA IMMEDIATELY WITH LARGE QUANTITIES OF WATER.

CAUTION:

Do not attempt to push or tow the vehicle to start it. The vehicle cannot be started this way. Pushing with another vehicle may damage the transaxle or the rear of the vehicle.

If the vehicle has a discharged battery, booster cables may be used to obtain a start from another vehicle. This type of start can be dangerous if done improperly, so follow the procedure carefully.

NOTE:

The battery is stored in a compartment in front of the tire in the right front fender and is accessible through the engine compartment.

TO JUMP START A DISABLED VEHICLE:

If the indicator is dark or shows a green dot, proceed as follows:

(1) Wear eye protection and remove metallic jewelry worn on hands or wrists to avoid injury by accidental arcing of battery current.

JUMP STARTING (Continued)

(2) When using another vehicle as a booster source, park the booster vehicle within cable reach without allow vehicles to touch.

(3) Turn off all accessories, set the parking brake, place the automatic transmission in PARK, and turn the ignition OFF in both vehicles.

(4) Connect one end of the positive jumper cable to the positive jump start attachment of the booster battery. Connect the other end of the cable to the positive jump start attachment of the discharged battery (Fig. 6).

(5) Connect one end of the negative jumper cable to the negative jump start attachment of the booster battery. Connect the other end of the cable to the negative jump start attachment of the discharged battery (Fig. 7). Ensure that the jump cable clamps have good connections.

(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.

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

- (7) When removing the jumper cables:
- Disconnect jumper cable negative clamp from the disabled vehicle.
 - Disconnect the jumper cable negative clamp from the booster battery start attachment.
 - Disconnect jumper cable positive clamp from disabled battery start attachment.
 - Disconnect jumper cable positive clamp from booster battery start attachment.

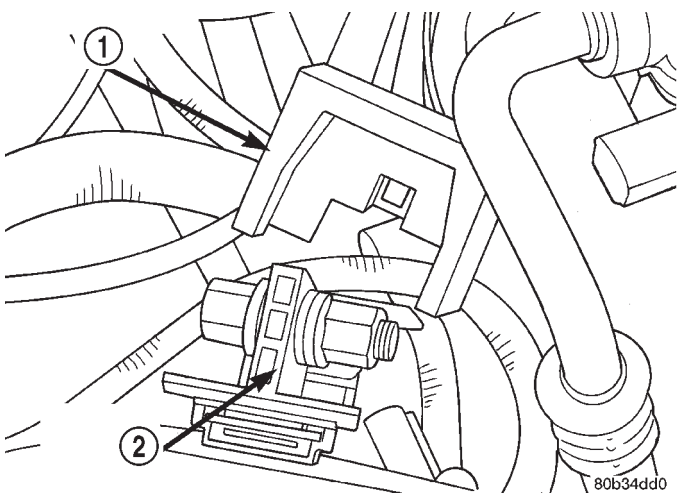


Fig. 6 POSITIVE JUMPER START ATTACHMENT

- 1 - ATTACHMENT CAP
- 2 - JUMPER START ATTACHMENT

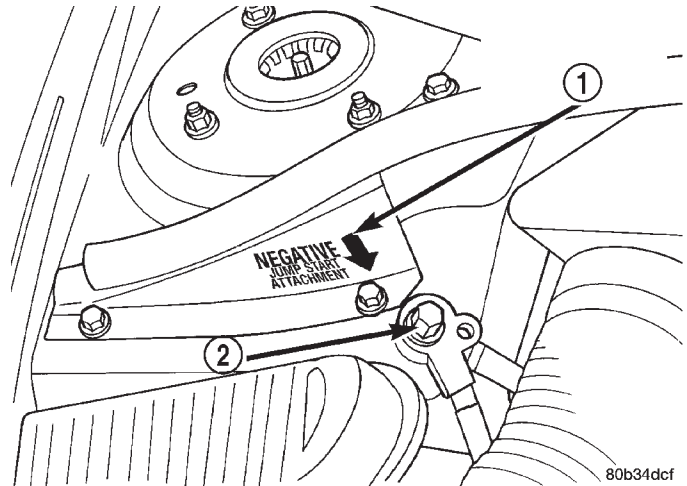


Fig. 7 NEGATIVE JUMPER START ATTACHMENT

- 1 - NEGATIVE JUMP START ATTACHMENT
- 2 - ATTACHMENT

TOWING

STANDARD PROCEDURE - TOWING

WARNING:

- Do NOT tow vehicle with front wheels on the ground. The transaxle can be damaged.
- Secure loose and protruding parts from a disabled vehicle.
- Always use a safety chain system that is independent of the lifting and towing equipment.
- Do not allow any of the towing equipment to contact the fuel tank of the vehicle being towed.
- Do not go under the vehicle while it is lifted by the towing equipment.
- Do not allow passengers to ride in a vehicle being towed.
- Always observe all state and local laws pertaining to warning signals, night illumination, speed, etc.
- Do not attempt a towing operation that could jeopardize the operator, bystanders or other motorists.
- Do not exceed a towing speed of 48 km/h (30 mph).
- Avoid towing distances of more than 24 km (15 miles), whenever possible.
- Never attach tow chains or a tow sling to the bumper, steering linkage, or constant velocity joints.

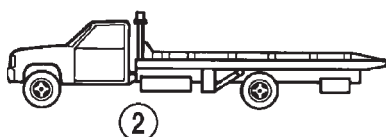
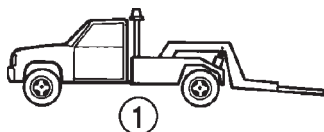
RECOMMENDED TOWING EQUIPMENT

To avoid damage to bumper fascia and air dams use of a wheel lift or flat bed towing device (Fig. 8) is recommended. When using a wheel lift towing device,

TOWING (Continued)

be sure the rear end of disabled vehicle has at least 100 mm (4 inches) ground clearance. If minimum ground clearance cannot be reached, use a towing dolly. If a flat bed device is used, the approach angle should not exceed :

- 13 degrees for Intrepid
- 12 degrees for Concorde and 300M
- Additional ramping may be required.



9100-17

Fig. 8 RECOMMENDED TOWING DEVICES

- 1 - WHEEL LIFT
2 - FLAT BED

GROUND CLEARANCE

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

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 braking discs.

TIE DOWN LOCATIONS FOR FLAT BED TOWING

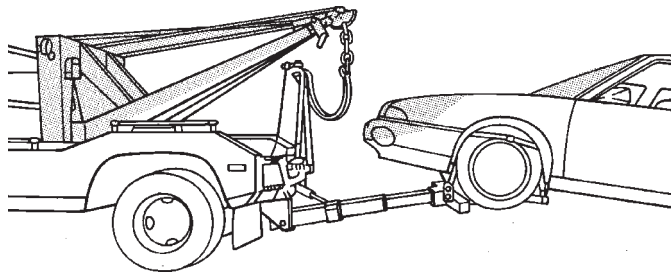
There are two reinforced elongated holes on each side of the vehicle designed to serve as hold down locations. These locations can safely hold the vehicle to the towing device using T or R hooks.

- Bottom of the forward torque box between the front frame rail and the rocker panel.
- Bottom of the rearward torque box forward of the rear wheel.

FRONT TOWING PROCEDURES

CAUTION: Do Not tow vehicle from the front with sling type towing device. Damage to bumper fascia will result.

Always tow vehicle with front wheels off the ground as shown (Fig. 9).



9300-12

Fig. 9 TOWING

Use a flat bed towing device when wheel lift towing device is not available.

REAR TOWING PROCEDURES

CAUTION: Do not tow vehicle with the rear end lifted.

If damage to the vehicle prevents front towing, use a flat bed towing device.

CAUTION: Do not push the vehicle with another vehicle as damage to the bumper fascia and trans-axle can result.

GROUND CLEARANCE

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

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 braking discs.

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