

PARTS & LUBRICANT RECOMMENDATION (Continued)

Body

Component	Fluid, Lubricant, and Genuine Part
Hinges: Door & Hood Swing Gate	Mopar® Engine Oil Mopar® Multi-Purpose Lube NLGI Grade 2 EP, GC-LB
Latches: Door, Hood/Safety Catch, Swing Gate	Mopar® Multi-Purpose Lube NLGI Grade 2 EP, GC-LB
Seat Regulator & Track	Mopar® Multi-Purpose Lube NLGI Grade 2 EP, GC-LB
Lock Cylinders	Mopar® Lock Cylinder Lube

FLUID TYPES

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 to service a Chrysler Corporation vehicle.

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

API QUALITY CLASSIFICATION



9400-9

Fig. 2 API Symbol

This symbol 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 DaimlerChrysler Corporation.

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.

FLUID TYPES

DESCRIPTION

ENGINE OIL

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.

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)
- Association des Constructeurs Européens d'Automobiles (European Automobile Manufacturers Association) (ACEA)

API SERVICE GRADE CERTIFIED

Use an engine oil that is API Certified. MOPAR® provides engine oils, 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. 3).

ACEA Categories

For countries that use the ACEA European Oil Categories for Service Fill Oils, use engine oils that meet the requirements of ACEA A1/B1, A2/B2, or A3/B3.

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.

FLUID TYPES (Continued)

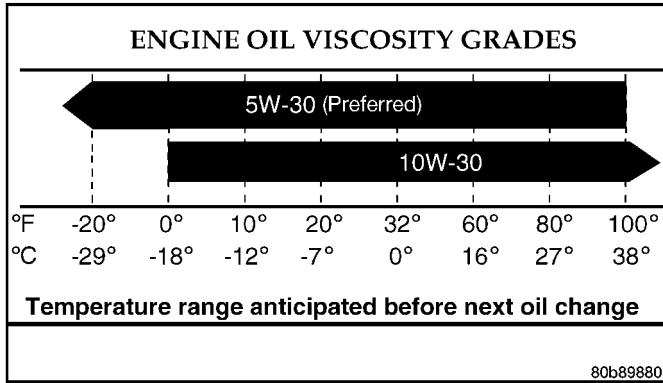


Fig. 3 Temperature/Engine Oil Viscosity

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 label of engine oil plastic bottles and the top of engine oil cans (Fig. 4).

This symbol means that the oil has been certified by the American Petroleum Institute (API). DaimlerChrysler only recommend API Certified engine oils. Use Mopar® engine oil or equivalent.



9400-9

Fig. 4 API Certification Mark

ENGINE OIL - DIESEL ENGINES

Only use synthetic engine oils meeting the API Categories SL/CF and Chrysler Material Standard MS-10725. Those engine oils not meeting the viscosity and API Quality and MS-10725 requirements should not be used.

SAE VISCOSITY GRADE

The preferred engine oil is SAE 0W-40 Mobil® One Synthetic. If you can not locate SAE 0W-40 Mobil® One Synthetic, then SAE 5W-40 Mobil® One Synthetic would be acceptable.

ENGINE OIL - DIESEL ENGINES - EXPORT

Use only Diesel Engine Oil meeting standard MIL-2104C or API Classification CD or higher or CCML D4, D5.

SAE VISCOSITY GRADE

CAUTION: Low viscosity oils must have the proper API quality or the CCMC G5 designation.

To assure of properly formulated engine oils, it is recommended that SAE Grade 10W-40 engine oils that meet Chrysler material standard MS-6395, be used in accordance to ACEA B3, B4 specification. European Grade 10W-40 oils are also acceptable.

Oils of the SAE 5W-40 grade number are preferred when minimum temperatures consistently fall below -15°C.

AXLE

NOTE: DaimlerChrysler recommends using Mopar® lubricants or lubricants of equal quality.

FRONT AXLE

- 186FIA (Model 30) - Mopar® Lubricant 80W-90

REAR AXLE

- 8 1/4 - Mopar® Gear Lubricant 75W-90 (Trailer Towing - Mopar® Synthetic Gear Lubricant 75W-140)

NOTE: Trac-lok® equipped axles require 118 ml (4 ounces) of Limited Slip Additive be added to the lubricant.

MANUAL TRANSMISSION

NOTE: DaimlerChrysler recommends using Mopar® lubricants or lubricants of equal quality.

- NSG370 - Mopar® Manual Transmission Lubricant MS-9224

AUTOMATIC TRANSMISSION FLUID

NOTE: Refer to Service Procedures in this group for fluid level checking procedures.

Mopar® ATF +4, Automatic Transmission Fluid is the recommended fluid for DaimlerChrysler automatic transmissions.

Dexron II fluid IS NOT recommended. Clutch chatter can result from the use of improper fluid.

Mopar® ATF +4, Automatic Transmission Fluid 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.

FLUID TYPES (Continued)

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. 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.

TRANSFER CASE - NV231

Recommended lubricant for the NV231 transfer case is Mopar® ATF +4, Automatic Transmission Fluid.

TRANSFER CASE - NV241 GENII

Recommended lubricant for the NV2421 GENII transfer case is Mopar® ATF+4, Automatic Transmission Fluid.

TRANSFER CASE - NV242

Recommended lubricant for the NV242 transfer case is Mopar® ATF+4, Automatic Transmission Fluid.

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 corrosion 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 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.

CAUTION: Mopar® Antifreeze/Coolant, 5 Year/100,000 Mile Formula (MS-9769) may not be mixed with any other type of antifreeze. Mixing of coolants other than specified (non-HOAT or other HOAT), may result in engine damage that may not be covered under the new vehicle warranty, and decreased corrosion protection.

COOLANT PERFORMANCE

The required ethylene-glycol (antifreeze) and water mixture depends upon climate and vehicle operating conditions. The coolant performance of various mixtures follows:

Pure Water-Water can absorb more heat than a mixture of water and ethylene-glycol. This is for purpose of heat transfer only. Water also freezes at a higher temperature and allows corrosion.

100 percent Ethylene-Glycol-The corrosion inhibiting additives in ethylene-glycol need the presence of water to dissolve. Without water, additives form deposits in system. These act as insulation causing temperature to rise to as high as 149°C (300°F). This temperature is hot enough to melt plastic and soften solder. The increased temperature can result in engine detonation. In addition, 100 percent ethylene-glycol freezes at -22°C (-8°F).

50/50 Ethylene-Glycol and Water-Is the recommended mixture, it provides protection against freezing to -37°C (-34°F). The antifreeze concentration

FLUID TYPES (Continued)

must always be a minimum of 44 percent, year-round in all climates. If percentage is lower, engine parts may be eroded by cavitation. Maximum protection against freezing is provided with a 68 percent antifreeze concentration, which prevents freezing down to -67.7°C (-90°F). A higher percentage will freeze at a warmer temperature. Also, a higher percentage of antifreeze can cause the engine to over-heat because specific heat of antifreeze is lower than that of water.

CAUTION: Richer antifreeze mixtures cannot be measured with normal field equipment and can cause problems associated with 100 percent ethylene-glycol.

CAUTION: Do not use coolant additives that are claimed to improve engine cooling.

POWER STEERING FLUID

Mopar® ATF +4, Automatic Transmission Fluid is required in the power steering system. Substitute fluids can induce power steering system failure.

Mopar® ATF +4, Automatic Transmission Fluid 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.

OPERATION - AUTOMATIC TRANSMISSION FLUID

The automatic transmission fluid is selected based upon several qualities. The fluid must provide a high level of protection for the internal components by providing a lubricating film between adjacent metal components. The fluid must also be thermally stable so that it can maintain a consistent viscosity through a large temperature range. If the viscosity stays constant through the temperature range of operation, transmission operation and shift feel will remain consistent. Transmission fluid must also be a good conductor of heat. The fluid must absorb heat from the internal transmission components and transfer that heat to the transmission case.

FLUID CAPACITIES

SPECIFICATIONS - FLUID CAPACITIES

DESCRIPTION	SPECIFICATION
FUEL TANK – Gasoline & Diesel	19.5 U.S. Gallons (74L)*
ENGINE OIL	
2.4L with Filter	4.7L (5.0 qts.)
3.7L with Filter	4.7L (5.0 qts.)
2.8L Diesel with Filter	6.1L (6.4 qts.)
ENGINE COOLANT	
Cooling System - 2.4L	9.5L (10.0 qts.)
Cooling System - 3.7L	13.2L (14.0 qts.)
Cooling System-2.8L Diesel	12.5 L (11.8 qts.)
POWER STEERING SYSTEM	
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 19, Steering for proper fill and bleed procedures.	
AUTOMATIC TRANSMISSION	
Service Fill - 545RFE	4.73L (10.0 pts)
O-haul Fill - 545RFE	13.33L (28.0 pts)
Service Fill - 42RLE	3.8L (8.0 pts)
O-haul Fill - 42RLE	8.3L (17.6 pts)
Dry fill capacity 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 21 - TRANSMISSION/AUTOMATIC/FLUID - STANDARD PROCEDURE)	
TRANSFER CASE	
NV231	1.4L (2.95 pts.)
NV241 GENII	2.0L (4.2 pts.)
NV242	1.6L (3.4 pts.)
MANUAL TRANSMISSION	
NSG370 (Approximate dry fill or fill to bottom edge of the fill plug hole.)	1.5L (3.17 pts.)
FRONT AXLE	
186 FIA (Model 30)	1.24L (2.6 pts.)
REAR AXLE	
8 1/4	2.08L (4.4 pts.)**
*Nominal refill capacities are shown. A variation may be observed from vehicle to vehicle due to manufacturing tolerance and refill procedure.	
** When equipped with Trac-lok, include 118 ml (4.0 ounces) of Limited Slip Additive.	