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**RECOMMENDED LUBRICANTS AND FLUIDS -
USA VEHICLES**

COMPONENT	SPECIFICATION	VISCOSITY	AMBIENT TEMPERATURE °C						
			-30	-20	-10	0	10	20	30
Engine V8i	Use oils to API service level SG or SH or RES.22.OL.G4 or CCMC-G4	5W/20)	_____						
		5W/30) 5W/40)	_____						
		10W/30	_____						
		10W/40) 10W/50)	_____						
		15W/40) 15W/50)	_____						
		20W/40) 20W/50)	_____						
Automatic gearbox	ATF Dexron IID		_____						
Final drive units Swivel pin housings	API or GL5 MIL - L - 2105 or MIL - L - 2105B, C or D	90 EP	_____						
		80W EP	_____						
Power steering	ATF Dexron IID		_____						
Borg Warner transfer gearbox	ATF Dexron IID		_____						
Brake reservoir	Brake fluid must have a minimum boiling point of 260°C (500°F) and comply with FMVSS/116/DOT 4		_____						
Lubrication nipples (hubs, ball joints, etc.)	NLGI-2 multipurpose lithium based grease		_____						

See table on page 3 for remaining vehicle components



Propeller shaft Front and Rear Lubrication nipples (hubs, ball joints etc.) Seat slides Door lock striker	NLGI - 2 Multi-purpose Lithium based GREASE
Brake and clutch reservoirs	Brake fluids having a minimum boiling point of 260° C (500 ° F) and complying with FMVSS 116 DOT4
Engine cooling system	Use an ethylene glycol based anti-freeze (containing no methanol) with non-phosphate corrosion inhibitors suitable for use in aluminium engines to ensure the protection of the cooling system against frost and corrosion in all seasons.
Battery lugs, Earthing surfaces where paint has been removed	Petroleum jelly. NOTE: Do not use Silicone Grease
Air Conditioning System Refrigerant	Refrigerant R134a CAUTION: DO NOT use any other type of refrigerant.
Compressor Oil	Nippon denso ND-OIL8 UNIPART R134a ND-OIL8
ABS Sensor bush-rear	Silicone grease: Staborags NBU - Wabco 830 502,0634 Wacker chemie 704 - Wabco 830 502,0164 Kluber GL301

LUBRICATION PRACTICE

Use a high quality oil of the correct viscosity range and service classification in the engine during maintenance and when topping up. The use of oil not to the correct specification can lead to high oil and fuel consumption and ultimately to damaged components.

Oil to the correct specification contains additives which disperse the corrosive acids formed by combustion and prevent the formation of sludge which can block the oilways. Additional oil additives should not be used. Always adhere to the recommended servicing intervals.



WARNING: Many liquids and other substances used in motor vehicles are poisonous. They must not be consumed and must be kept away from open wounds. These substances, among others, include anti-freeze windscreen washer additives, lubricants and various adhesives.

CAPACITIES

The following capacity figures are approximate and provided as a guide only. Refer to Section 10 for correct checking procedure for oil levels.

Capacities (approx.)*	Litres	Imp Unit	US unit
Engine sump and filter from dry			
- petrol	6.6	11.60 pints	14.0 pints
- diesel - Tdi	7.0	12.30 pints	14.8 pints
Manual gearbox - R380	2.7	4.70 pints	5.7 pints
Automatic gearbox	9.1	16.00 pints	20 pints
Transfer gearbox from dry	1.7	3.00 pints	3.6 pints
Front axle from dry	1.7	3.00 pints	3.6 pints
Front axle swivel pin housing (each).....	0.35	0.60 pints	0.7 pints
Rear axle from dry	1.7	3.00 pints	3.6 pints
Power steering box and reservoir	2.9	5.00 pints	6.0 pints
Cooling system	11.4	20.00 pints	24 pints
Fuel tank	89	19.5 gallons	23 gallons

 **NOTE: * All levels must be checked by dipstick or level plugs as applicable.**

When draining oil from the ZF automatic gearbox, oil will remain in the torque converter, refill to high level on dipstick only.

ANTI-FREEZE

ENGINE TYPE	MIXTURE STRENGTH	PERCENTAGE CONCENTRATION	PROTECTION LOWER TEMPERATURE LIMIT
V8 Engine Diesel Engine	One part anti-freeze One part water	50%	
Complete protection Vehicle may be driven away immediately from cold			- 33° F - 36° C
Safe limit protection Coolant in mushy state. Engine may be started and driven away after warm-up period			- 41° C - 42° F
Lower protection Prevents frost damage to cylinder head, block and radiator. Thaw out before starting engine			- 47° C - 53° F



CAUTION: Anti-freeze content must never be allowed to fall below 25% otherwise damage to the engine is liable to occur. Also, anti-freeze content should not exceed 60% as this will greatly reduce the cooling effect of the coolant.



FUEL REQUIREMENTS

Catalyst vehicles

Vehicles equipped with catalytic converter are designed to use **ONLY** unleaded fuel. Unleaded fuel must be used for the emission control system to operate properly. Its use will also reduce spark plug fouling, exhaust system corrosion and engine oil deterioration.

Using fuel that contains lead will result in damage to the emission control system and could result in loss of warranty coverage. The effectiveness of the catalysts in the catalytic converters will be seriously impaired if leaded fuel is used. The vehicle is equipped with an electronic fuel injection system, which includes two oxygen sensors. Leaded fuel will damage the sensors, and will deteriorate the emission control system.

Regulations require that pumps delivering unleaded fuel be labelled **UNLEADED**. Only these pumps have nozzles which fit the filler neck of the vehicle fuel tank.

RECOMMENDED FUEL

Petrol engines

- with catalytic converter unleaded only, 95 RON (USA 90 CLC or AKI)
- non catalytic, 9.35:1 compression ratio leaded 97 RON/unleaded 95 RON
- non catalytic, 8.13:1 compression ratio leaded 90 RON/unleaded 95 RON
- Australia minimum 91 RON unleaded

Diesel engines

- 300Tdi Diesel fuel oil, distillate, diesel fuel, automotive gas or Derv to British standard 2869, (1983) class A1 or A2.

Using fuel with an octane rating lower than stated above could seriously impair vehicle performance.



CAUTION: Do not use oxygenated fuels such as blends of methanol/gasoline or ethanol/gasoline (e.g. 'Gasohol'). Take care not to spill fuel during refuelling.