



**RECOMMENDED LUBRICANTS AND FLUIDS -  
USA VEHICLES**

| COMPONENT   | SPECIFICATION  | VISCOSITY            | AMBIENT TEMPERATURE °C |     |     |   |    |    |    |    |    |  |  |  |  |
|---|--|----------------------|------------------------|-----|-----|---|----|----|----|----|----|--|--|--|--|
|   |  |                      | -30                    | -20 | -10 | 0 | 10 | 20 | 30 | 40 | 50 |  |  |  |  |
| Engine  | Use oils to API service level SGSH or RES.22.OL.G4 or CCMC G4                                  | 5W/20 )              | █                      |     |     |   |    |    |    |    |    |  |  |  |  |
|   |  | 5W/30 )<br>5W/40 )   | █                      |     |     |   |    |    |    |    |    |  |  |  |  |
|   |  | 10W/30               |                        |     | █   |   |    |    |    |    |    |  |  |  |  |
|   |  | 10W/40 )<br>10W/50 ) |                        |     | █   |   |    |    |    |    |    |  |  |  |  |
|   |  | 15W/40 )<br>15W/50 ) |                        |     |     | █ |    |    |    |    |    |  |  |  |  |
|   |  | 20W/40 )<br>20W/50 ) |                        |     |     | █ |    |    |    |    |    |  |  |  |  |
| Automatic gearbox                                   | ATF Dexron IID   |                      | █                      |     |     |   |    |    |    |    |    |  |  |  |  |
| Final drive units<br>Swivel pin housings            | API or GL5<br>MIL - L - 2105 or<br>MIL - L - 2105B, C<br>or D                                  | 90 EP                |                        |     | █   |   |    |    |    |    |    |  |  |  |  |
|   |  | 80W EP               | █                      |     |     |   |    |    |    |    |    |  |  |  |  |
| Power steering                                      | ATF Dexron IID   |                      | █                      |     |     |   |    |    |    |    |    |  |  |  |  |
| LT 230T<br>transfer gearbox                         | API GL4 or GL5<br>MIL - L - 2105 or<br>MIL - L - 2105B   |                      | █                      |     |     |   |    |    |    |    |    |  |  |  |  |
| Brake reservoir                                     | Brake fluid must have a minimum boiling point of 260°C (500°F) and comply with FMVSS/116/DOT 4 |                      | █                      |     |     |   |    |    |    |    |    |  |  |  |  |
| Lubrication nipples<br>(hubs, ball joints,<br>etc.) | NLGI-2 multipurpose lithium based grease   |                      | █                      |     |     |   |    |    |    |    |    |  |  |  |  |

See table on page 3 for remaining vehicle components

### RECOMMENDED LUBRICANTS AND FLUIDS

All climates and conditions

| COMPONENT                                | SPECIFICATION  | VISCOSITY        | AMBIENT TEMPERATURE °C |     |     |   |    |    |    |
|--|--|------------------|------------------------|-----|-----|---|----|----|----|
|  |  |                  | -30                    | -20 | -10 | 0 | 10 | 20 | 30 |
| Petrol models<br>Engine sump             | Oils must meet:  | 5W/30            | [Bar from -30 to 35]   |     |     |   |    |    |    |
|  | RES.22.OL.G-4<br>or  | 5W/40<br>5W/50   | [Bar from -30 to 50]   |     |     |   |    |    |    |
|  | CCMC G-4 or  | 10W/30           | [Bar from -20 to 35]   |     |     |   |    |    |    |
|  | API SG or SH   | 10W/40<br>10W/50 | [Bar from -20 to 50]   |     |     |   |    |    |    |
|  |  | 15W/40<br>15W/50 | [Bar from -10 to 50]   |     |     |   |    |    |    |
|  |  | 20W/40<br>20W/50 | [Bar from 0 to 50]     |     |     |   |    |    |    |
|  |  | 25W/40<br>25W/50 | [Bar from 10 to 50]    |     |     |   |    |    |    |
| Diesel<br>Engine sump                    | RES.22.OL.PD-2<br>or CCMC PD-2<br>or API CD                      | 15W/40           | [Bar from -10 to 50]   |     |     |   |    |    |    |
| Main Gearbox<br>Automatic                | ATF Dexron IID   |                  | [Bar from -30 to 50]   |     |     |   |    |    |    |
| Main Gearbox<br>manual                   | ATF Dexron IID   |                  | [Bar from -30 to 50]   |     |     |   |    |    |    |
| Final drive units<br>Swivel pin housings | API or GL5<br>MIL - L - 2105 or<br>MIL - L - 2105B<br>C or D     | 90 EP            | [Bar from -10 to 50]   |     |     |   |    |    |    |
|  |  | 80 EP            | [Bar from -20 to 35]   |     |     |   |    |    |    |
| Power steering                           | ATF Dexron IID   |                  | [Bar from -30 to 50]   |     |     |   |    |    |    |
| Transfer box<br>LT230T                   | API GL4 or GL5<br>MIL - L - 2105 or<br>MIL - L - 2105B<br>C or D | 90 EP            | [Bar from -10 to 50]   |     |     |   |    |    |    |
|  |  | 80 EP            | [Bar from -20 to 35]   |     |     |   |    |    |    |



|  |  |
|--|--|
| Propeller shaft Front and Rear<br>Lubrication nipples (hubs, ball joints etc.)<br>Seat slides<br>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 coolant V8i, Tdi, Mpi   | 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. Use one part anti-freeze to one part water for protection down to -36°C (-33°F).<br><b>IMPORTANT: Coolant solution must not fall below proportions one part anti-freeze to three parts water, i.e. minimum 25% anti-freeze in coolant otherwise damage to engine is liable to occur. Or a maximum of 60%.</b> |
| Battery lugs, Earthing surfaces where paint has been removed   | Petroleum jelly.<br><b>NOTE: Do not use Silicone Grease</b>  |
| Air Conditioning System Refrigerant  | Use only refrigerant R134a   |
| Compressor Oil   | Nippon Denso ND-oil8    Unipart ND-oil8  |
| ABS Sensor bush-rear   | Silicone grease: Staborags NBU - Wabco 830 502,0634<br>Wacker chemie 704 - Wabco 830 502,0164<br>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 are provided as a guide only.

| Capacities (approx.)*                         | Litres | Imp.Unit  | US unit  |
|---|--------|-----------|----------|
| Engine sump oil                               |        |           |          |
| - 300Tdi models .....                         | 5,8    | 10.20 pt  | 12.30 pt |
| - V8i petrol models 3.9 .....                 | 6,1    | 10.70 pt  | 12.90 pt |
| - Mpi petrol models .....                     | 4,90   | 8.70 pt   | 10.40 pt |
| Extra when refilling after fitting new filter |        |           |          |
| - 300Tdi models .....                         | 0,85   | 1.50 pt   | 1.80 pt  |
| - V8i petrol models .....                     | 0,56   | 1.00 pt   | 1.20 pt  |
| - Mpi .....                                   | 0,4    | 0.70 pt   | 0.85 pt  |
| Manual gearbox .....                          | 2,67   | 4.70 pt   | 5.70 pt  |
| Automatic gearbox .....                       | 9,1    | 16.00 pt  | 19.20 pt |
| Transfer gearbox oil .....                    | 2,30   | 4.00 pt   | 4.90 pt  |
| Front differential .....                      | 1,70   | 3.00 pt   | 3.60 pt  |
| Rear differential .....                       | 1,70   | 3.00 pt   | 3.60 pt  |
| Power steering box and reservoir LHD .....    | 2,90   | 5.00 pt   | 6.00 pt  |
| Power steering box and reservoir RHD .....    | 3,40   | 6.00 pt   | 7.20 pt  |
| Swivel pin housing oil (each) .....           | 0,35   | 0.60 pt   | 0.75 pt  |
| Fuel tank usable fuel .....                   | 89,0   | 19.5 gall | 23 gall  |
| Cooling system                                |        |           |          |
| - 300Tdi models .....                         | 11,50  | 20.20 pt  | 24.30 pt |
| - V8i petrol models .....                     | 11,30  | 20.00 pt  | 23.90 pt |
| - Mpi .....                                   | 10,00  | 17.60 pt  | 21.00 pt |
| Washer bottle .....                           | 7,0    | 12.30 pt  | 14.80 pt |



**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.**




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**ANTI-FREEZE**


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| ENGINE TYPE  | MIXTURE STRENGTH                       | PERCENTAGE CONCENTRATION | PROTECTION LOWER TEMPERATURE LIMIT |
|--|--|--------------------------|------------------------------------|
| V8i Engine<br>Diesel Engine  | One part anti-freeze<br>One part water | 50%                      |                                    |
| <b>Complete protection</b><br>Vehicle may be driven away immediately from cold   |  |                          | - 33°F<br>- 36°C                   |
| <b>Safe limit protection</b><br>Coolant in mushy state. Engine may be started and driven away after warm-up period     |  |                          | - 41°C<br>- 42°F                   |
| <b>Lower protection</b><br>Prevents frost damage to cylinder head, block and radiator. Thaw out before starting engine |  |                          | - 47°C<br>- 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.

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**FUEL REQUIREMENTS**


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**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.