

ENGINE OIL - 200Tdi ENGINES

The minimum performance level oil required for satisfactory engine performance and protection is defined by specifications RES.22.OL.PD-2 and CCMC PD-2.

The engine oil and filter must be changed every 10,000 km (6000 miles) and it is important that only oils listed below, or clearly marked as meeting the required specification, should be used.

Oils to RES.22.OL.PD-2/CCMC PD-2.

- Agip Superdiesel or Sint Turbo Diesel
- BP Vanellus C3 or Visco Diesel
- Caltex RPM Delo 400*
- Castrol Syntron X, TXT, Dynamax or GTX
- Century Superb
- Duckhams QXR or Hypergrade
- Esso Superlube EX 2, Superlube +, Ultra Oil or Super Oil
- Gulf Super Diesel or Engine Oil T
- Mobil Delvac Super, Mobil 1 Rally Formula or Mobil 1 Formula 15W/50
- Kuwait Q8 Auto-4 or Q8 Auto-7
- Shell Rimula X or Rotella MTX
- Texaco Dieseltex

SHPD oils to RES.22.OL.D5/CCMC D-5

- Agip Sigma Turbo
- BP Vanellus C3 Extra
- Castrol Turbomax
- Century Centurion
- Caltex RPM Delo 450
- Duckhams Fleetmaster SHPD or Fleetmaster Extra
- Elf Multiperformance 4D
- Esso Super Diesel Oil TD or Special Diesel Oil
- Fina Kappa LDO
- Gulf Superfleet Special
- Mobil Delvac 1400 Super
- Texaco Ursa Super TD
- Shell Myrina
- Total Rubia TIR or Total Diesel
- Silkolene Turbolene D

In markets where oils to the above specifications are not available use products to MIL-L-2104D or API CD.

Under severe operating conditions, eg. off road in mud, airborne sand, dust, operating at high speeds in high ambient temperatures above 40°C or continual stop/start operation, the oil and filter change period should not exceed 5000 km (3000 miles). Continuous off road operation in mud, dust and wading conditions requires a monthly oil and filter change. Failure to adhere to the recommended service and operating instructions may result in premature engine wear or damage.

Oil Viscosity - Ambient Temperatures Applications Chart

SPECIFICATION	SAE VISCOSITY	AMBIENT TEMPERATURE °C										
		-30°	-20°	-10°	0°	10°	20°	30°	40°	50°		
Oils must meet RES.22.OL.PD-2 or RES.22.OL.D-5 or CCMC PD-2 or CCMC D-5	5W/30) 5W/40) 5W/50	████████████████████										
	10W/30 10W/40) 10W/50)		████████████████████									
	15W/40) 15W/50)			████████████████████								
	20W/40) 20W/50)				████████████████████							
	25W/40) 25W/50)					████████████████████						
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ENGINE OIL - V8 PETROL ENGINES

Recommended lubricants for ambient temperatures above -10°C

- Land Rover Engine oil 15W/40
 - BP Visco 2000 Plus 10W/40 or Visco 2000 15W/40
 - Castrol GTX or TXT or Syntron X
 - Duckhams Hypergrade 15W/50 or QXR
 - Esso Superlube Ex2 or Superlube +
 - Mobil 1 Rally Formula or Super
 - Fina Supergrade or Fina First
 - Shell Super Motor Oil or Gemini
 - Texaco Havoline X1 or Multigrade
- or other products meeting the specifications shown in the following chart

Oil Viscosity - Ambient Temperatures Applications Chart

SPECIFICATION	SAE VISCOSITY	AMBIENT TEMPERATURE °C									
		-30°	-20°	-10°	0°	10°	20°	30°	40°	50°	
Oils must meet RES.22.OL.G-4 or CCMC G-4	5W/30 5W/40) 5W/50)	[Bar from -30 to 30]									
	10W/30 10W/40) 10W/50)	[Bar from -20 to 30]									
	15W/40) 15W/50)	[Bar from -10 to 30]									
	20W/40) 20W/50)	[Bar from 0 to 30]									
	25W/40) 25W/50)	[Bar from 10 to 30]									

**Recommended lubricants and fluids, service instructions for temperate climates
- ambient temperature range -10°C to 35°C**

COMPONENTS	BP	CASTROL	DUCKHAMS	ESSO	MOBIL	PETROFINA	SHELL	TEXACO	LAND ROVER
LT77 - five speed gearbox	Autran G	TQF	Q-Matic	ATF Type G	ATF 210	Purfimatic 33G	Donax TF	Texmatic Universal	ATF Type G
Automatic Gearbox	Autran DX2D	TQ Devron IID	Fleetmatic CD D - Matic	ATF Dexron IID	ATF 220D	Dexron IID	ATF Dexron IID	Texamatic Fluid 9226	UK only - Land Rover Parts ATF Dexron II
Transfer box, Final drive units, Swivel pin housing	Gear Oil SAE 90EP	Hypoy 90EP	Hypoid 90	Gear Oil GX 85W/90	Mobilube HD 90	Pontonic MP SAE 80W/90	Spirax 90EP	Multigear Lubricant SAE 85W/90	EP90
Propellor shafts - front and rear, Lubrication nipples (hubs, ball joints etc.)	Energrease L2	LM Grease	LB 10	Multi Purpose Grease H	Grease MP	Marson HTL 2	Retinax A	Marfak All Purpose Grease	
Power steering fluid reservoir	Autran G	TQF	Q-Matic	ATF Type G	ATF 210	Purfimatic 33G	Donax TF	Texmatic Type G	ATF Type G
Brake and clutch reservoirs	Brake fluids having a minimum boiling point of 260°C (500°F) and complying with FMVSS 116 DOT 4								
Cooling system anti-freeze	Universal anti-freeze, see later page for instructions								

Recommended lubricants and fluids, service instructions all markets

COMPONENTS	BP	CASTROL	DUCKHAMS	ESSO	MOBIL	PETROFINA	SHELL	TEXACO	
Seat slides and door lock striker (NLGI-2 multi purpose lithium based grease)	Energrease L2	LM Grease	LB 10	Multi Purpose Grease H	Grease MP	Marson HTL 2	Retinax A	Marfak All Purpose Grease	
Windscreen washers	All seasons screen washer fluid								
Bonnet catch	Graphite lock grease type 'B'								
Door locks (anti-burst), Inertia reels	DO NOT LUBRICATE. These components are 'life' lubricated at the manufacturing stage								
Battery lugs and earthing surfaces where paint has been removed	Petroleum jelly. DO NOT use silicone grease								
Air conditioning system refrigerant	METHYLCHLORIDE REFRIGERANTS MUST NOT BE USED. Use only refrigerant 12. This includes 'Freon 12' and 'Arcton 12'								
Air conditioning system compressor oil	Use Shell Clavus 68, BP Energol LPT 68, Sunisco 4GS, Texaco Capella E Wax Free 68 or Castrol Icematic 99								

Recommended lubricants and fluids, service instructions for ambient conditions outside temperate climate limits or for markets where products listed are not available

COMPONENTS	CLASSIFICATION		AMBIENT TEMPERATURE °C								
	PERFORMANCE/VISCOSITY		-30°	-20°	-10°	0°	10°	20°	30°	40°	50°
Front and rear axle differential, swivel pin housings, LT230 transfer box	API GL4	90 EP				█	█	█	█	█	█
	or MIL-L-2105	or 80W EP	█	█	█	█					
Power steering reservoir, LT77 gearbox	ATF type G		█	█	█	█	█	█	█	█	█
Brake and clutch reservoirs	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		█	█	█	█	█	█	█	█	█

Service instructions for ambient conditions outside temperate climate limits or for markets where the products listed are not available

Anti-freeze

Ethylene Glycol based anti-freeze (containing no methanol) with non-phosphate corrosion inhibitors suitable for use in 200Tdi engines, Mpi and V8 petrol engines to ensure protection of the cooling system against frost and corrosion.

200Tdi engine, Mpi and V8 petrol engines

One part anti-freeze, one part water, i.e. 50% anti-freeze in coolant. Complete protection below -36°C.

CAPACITIES

The following capacity figures are approximate and are provided as a guide only. All oil levels must be set using the dipstick or level plugs as applicable. Refer to Section 10 for the correct procedure for checking the oil levels.

Engine sump oil

- 200Tdi models	6,00 litres (10.56 pints)
- V8 petrol models 3.5	5,10 litres (9.00 pints)
- V8 petrol models 3.9	6,1 litres (10,70 pints)
- Mpi	4,90 litres (8.75 pints)

Extra when refilling after fitting new filter

- 200Tdi models	0,85 litres (1.50 pints)
- V8 petrol models	0,56 litres (1.00 pints)
- Mpi	0,4 litres (0.70 pints)

Main gearbox oil (LT77) 2,67 litres (4.70 pints)

Automatic gearbox ZF 9,1 litres (16.00 pints)

Transfer gearbox oil

- Up to suffix 'E'	2.80 litres (4.90 pints)
- From suffix 'D'	2,30 litres (4.00 pints)

Front differential 1,70 litres (3.00 pints)

Rear differential 1,70 litres (3.00 pints)

Power steering box and reservoir LHD 2,90 litres (5.00 pints)

Power steering box and reservoir RHD 3,40 litres (6.00 pints)

Swivel pin housing oil (each) 0,35 litres (0.60 pints)

Fuel tank

- Usable fuel from April 1993	89,0 litres (19.50 gallons)
- Usable fuel pre 1993	81,8 litres (18.00 gallons)

Cooling system,

- 200Tdi models	11,50 litres (20.20 pints)
- V8 petrol models	11,30 litres (20.00 pints)
- Mpi	10,00 litres (17,60 pints)

Washer bottle 7,0 litres (12.00 pints)