LUBRICATION CHART AND GENERAL DATA

6

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 4 for the correct procedure for checking the engine sump.

Component	Litres	Imperial unit
Engine sump oil (4-cylinder)	6,00	10.56 pints
Extra when refilling after fitting new filter (4-cylinder)	0,85	1.50 pints
Engine sump oil (V8 cylinder)	5,10	9.00 pints
Extra when refilling after fitting new filter (V8 cylinder)	0,56	1.00 pint
Main gearbox oil (LT77) 4-cylinder	2,67	4.70 pints
Main gearbox oil (LT85) V8 cylinder	3,00	5.28 pints
Transfer box oil, all models	2,30	4.00 pints
Front differential	1,70	3.00 pints
Rear differential (Ninety models)	1,70	3.00 pints
Rear differential: Salisbury 8HA (One Ten models)	2,26	4.00 pints
Steering box - manual	0,43	0.75 pint
Power steering box and reservoir	2,90	5.00 pints
Swivel pin housing oil (each)	0,35	0.60 pint
Fuel tank, rear (One Ten models)	79,50	17.50 gallons
Fuel tank, side (except One Ten Station wagon)	68,20	15.00 gallons
Fuel tank, side (One Ten Station wagon only)	45,50	10.00 gallons
Fuel tank, side (Ninety models)	54,58	12.00 gallons
Cooling system, 4-cylinder petrol models and naturally aspirated diesel models	10,8	19.0 pints
Cooling system, 4-cylinder diesel models and heavy duty petrol models	10,80	19.00 pints
Cooling system, V8 cylinder models	12,80	22.50 pints
Cooling system, Turbo charged diesel models	11,1	20.0 pints

DIESEL ENGINE OIL

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.

Oil 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

DIESEL ENGINE OIL

Oil Viscosity - Ambient Temperatures Applications Chart

SPECIFICATION	SAE VISCOSITY	AMBIENT TEMPERATURE °C -30° -20° -10° 0° 10° 20° 30° 40° 50°
Oil must meet RES.22.OL.PD-2 or CCMC PD-2	5W/30 5W/40) 5W/50)	
	10W/30 10W/40) 10W/50)	
	15W/40) 15W/50)	
	20W/40) 20W/50)	
	25W/40) 25W/50)	

In markets where oil 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 temperature 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.

PETROL ENGINE OIL

Recommended Lubricants for ambient temperature above -10°C

BP Visco 2000 Plus 10W/40 or Visco 2000 15/40
Castrol GTX or TXT or Syntron X
Duckhams Hypergrade 15W/50 or QXR
Esso Superlube Ex2 or Superlube +
Mobil 1 Rally Formula or Super
Fine Supergrade
Shell Super Motor Oil or Gemini
Texaco Havoline Multigrade
or other products meeting the specification 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°
Oil must meet RES.22.OL.G-4 or CCMC G-4	5W/30 5W/40) 5W/50)	
	10W/30 10W/40) 10W/50)	
	15W/40) 15W/50)	
	20W/40) 20W/50)	
	25W/40) 25W/50)	

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
LT77 - five-speed gearbox - 4-cylinder	BP Autran G	Castrol TQF	Duckhams Q-Matic	Esso ATF Type G	Mobil ATF 210	Fina Purfimatic 33G	Shell Donax TF	Texamatic Universal
LT85 - five-speed gearbox - V8 cylinder	BP Visco 2000 15W/40 or BP Visco 2000 PLUS 10W/40	Castrol GTX 15W/50 or Castrol TXT 10W/40	Duckhams Hypergrade 15W/50	Esso Superlube + Lube 15W/40	Mobil Super 15W/40 or 10W/40	Fina Super grade Motor Oil 15W/40 or 10W/40	Shell Super Motor oil 15W/40 or 10W/40	Havoline Motor Oil 15W/40 or 10W/40

Recommended lubricants and fluids (continued)

COMPONENTS	BP	CASTROL	DUCKHAMS	ESSO	MOBIL	PETROFINA	SHELL	TEXACO
Transfer box Final drive units Swivel pin Housings Steering box	BP Gear Oil SAE 90EP	Castrol Hypoy 90EP	Duckhams Hypoid 90	Esso Gear Oil GX 85W/90	Mobil Mobilube HD 90	Fina Pontonic MP SAE 80W/90	Shell Spirax 90EP	Texaco Multigear Lubricant SAE 85W/90
Prop. shaft Front and rear Lubrication nipples (hubs, ball joints, etc.)	BP Energrease L2	Castrol LM Grease	Duckhams LB 10	Esso Multi- purpose Grease H	Mobil- grease MP	Fina Marson HTL 2	Shell Retinax A	Marfak All purpose Grease
Power steering fluid reservoir as applicable	BP Autran G	Castrol TQ F	Duckhams Q-Matic	Esso ATF Type G	Mobil ATF 210	Fina Purfimatic 23 G	Shell ATF DONAX TF	Texam atic 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	SPEC. REF. ALL BRANDS
Windscreen hinges Ventilator hinges Ventilator control Seal slides, Hood retention clips. Door lock striker	BP Energrease L2	Castrol LM Grease	Duckhams LB 10	Esso Multi-purpose Grease H	Mobil Mobil-grease MP	Fina Marson HTL2	Shell Retinax A	Marf ak All purpose Grease	NLGI-2 Multi-purpose Lithium-based Grease
Windscreen washers	All Seasons Screen Washer Fluid								
Bonnet pintle	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 Earthing surfaces Where paint has been removed	Petroleum jelly **NOTE:** Do not use Silicone-Grease.								
AIR CONDITIONING SYSTEM Refrigerant	METHYLCHLORIDE REFRIGERANTS MUST NOT BE USED Use only with refrigerant 12. This includes 'Freon 12' and 'Arcton 12'								
Compressor Oil	Shell Clavus 68		BP Energol LPT 68		Sunisco 4GS		Texaco Capella E Wax Free 68		Castrol Icematic 99

Recommended lubricants and fluids
Service instructions for ambient conditions outside temperate climate limits or for markets where the products listed are not available (continued)

COMPONENTS	SERVICE CLASSIFICATION WORLDWIDE		AMBIENT TEMPERATURE °C
	PERFORMANCE LEVEL	SAE VISCOSITY	-30° -20° -10° 0° 10° 20° 30° 40° 50°
Front and rear Axle differential Swivel pin housings LT230 transfer box Steering box	API GL4 or MIL-L-2105	90 EP 80W EP	
Power steering reservoir LT77 gearbox - 4 cyl.	ATF Type G		
LT85 gearbox - V8 cylinder	Oils must meet Rover Group spec. BLS.22.OL.02 or BLS 22 OL 07 or API service levels	10W/30	
	SE or SF or SE/CC	10W/40 10W/50	
	or SE/CD or SF/CC	15W/40 15W/50)	
	SF/CD or the CCMC G2 or G3 service levels	20W/40 20W/50)	
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 all engines to ensure protection of the cooling system against frost and corrosion.

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

Engine, 4-cylinder petrol models

Bore	90,47 mm (3.562 in)
Stroke	97,0 mm (3.819 in)
Number of cylinders	4
Cylinder capacity	2495 cc (152.2 cu in)
Compression ratio	8.0:1
Firing order	1, 3, 4, 2
Sparking plug type	Champion N9YC
Sparking plug point gap	0,72 to 0,88 mm (0.028 to 0.035 in)
Distributor contact breaker gap	0,35 to 0,40 mm (0.014 to 0.016 in)
Dwell angle	49° to 59°
Ignition timing, dynamic; models with emission control	16° BTDC at 2000 rpm with vacuum pipe disconnected when using 90 octane fuel - 2 star rating in UK
In and emergency where dynamic check equipment is not available, the ignition timing can be set statically at TDC. It should be checked and adjusted dynamically as soon as possible	
Tappet clearance, inlet	0,25 mm (0.010 in)) Engine at
Tappet clearance, exhaust	0,25 mm (0.010 in)) running) temperature
Valve timing (No.1 exhaust valve peak)	104° BTDC
Carburetter	Weber 32/34 DMTL
Oil pressure	2.5 to 4,5 kgf/cm^2 (35 to 65 lbf/in^2) at 50 kph (30 mph) in top gear with engine warm

Engine - V8 models

Bore	88,9 mm (3.500 in)
Stroke	71,12 mm (2.800 in)
Number of cylinders	8
Cylinder capacity	3528 cc (215 cu in)
Compression ratio	8.13:1
Firing order	1, 8, 4, 3, 6, 5, 7, 2
Sparking plug type	Champion N9YC
Sparking plug gap	0,88 to 0,72 mm (0.035 to 0.028 ins)
Distributor	Electronic
Ignition timing, dynamic;	6° BTDC at 750 rpm maximum with vacuum pipe connected using (2 star in UK) 90 minimum octane fuel
Carburetters	Twin S.U. type H.I.F. 44
Oil pressure	2,1 to 2,8 kgf/cm^2 (30 to 40 lbf/in^2) at 80 kph (50 mph) in top gear with engine warm

Engine, 4-cylinder Naturally Aspirated diesel models

Bore	90,47 mm (3.562 in)
Stroke	97,0 mm (3.819 in)
Number of cylinders	4
Compression ratio	21.0:1
Cylinder capacity	2495 cc (152 cu in)
Firing order	1, 3, 4, 2
Injection timing	Crankshaft at EP, set injection pump using special tool 18G 1458
Tappet clearance, inlet	0,25 mm (0.010 in)) Engine hot
Tappet clearance, exhaust	0,25 mm (0.010 in)) or cold
Valve timing (No. 1 exhaust valve peak)	106° to 109°
Oil pressure	2,5 to 4,5 kgf/cm^2 (35 to 65 lbf/in^2) at 50 kph (30 mph) in top gear with engine warm

Engine - Tdi Diesel models

Bore	90,47 mm (3.562 in)
Stroke	97,0 mm (3.819 in)
Number of cylinders	4
Compression ratio	19.5:1
Cylinder capacity	2495 cc (152 cu in)
Firing Order	1, 3, 4, 2
Injection timing	1,54 mm lift at T.D.C.
Tappet Clearance, inlet	0,20 mm (0.008 in) - Engine hot
Tappet Clearance, exhaust	0,20 mm (0.008 in) - or cold
Valve timing (No. 1 exhaust valve peak)	106° to 109°

Main gearbox - 4-cylinder petrol and Naturally Aspirated diesel models

Type - Manual	5-speed helical constant mesh, with synchromesh on all forward gears	
Main gearbox ratios	Fifth (Cruising gear)	0.831:1
	Fourth	1.000:1
	Third	1.507:1
	Second	2.301:1
	First	3.585:1
	Reverse	3.701:1

Main gearbox - V8 and Tdi models

Type - Manual	5-speed helical constant mesh, with synchromesh on all forward gears	
Main gearbox ratios	Fifth (Cruising gear)	0.770:1
	Fourth	1.000:1
	Third	1.397:1
	Second	2.132:1
	First	3.692:1
	Reverse	3.429:1

Main gearbox - V8 models with a gross vehicle weight of 3500kg and over

Type - Manual	LT85 5-speed constant mesh with synchromesh on all forward gears	
Main gearbox ratios	Fifth (Cruising gear)	0.795:1
	Fourth	1.000:1
	Third	1.436:1
	Second	2.181:1
	First	3.650:1
	Reverse	3.824:1

Transfer gearbox

Type	LT230T. Two-speed reduction on main gearbox output. Front and rear drive permanently engaged via a lockable differential.

	High	Low
One Ten models		
4 cylinder petrol and Naturally Aspirated diesel models	1.667:1	3.320:1
V8 and Tdi models	1.411:1	3.320:1
Ninety Models		
4 cylinder petrol, Naturally Aspirated diesel and Tdi models	1.411:1	3.320:1
V8 models	1.222:1	3.320:1

Rear axle	
Type - Ninety models	Spiral bevel
Type - One Ten models	Hypoid; full floating shafts
Ratio - All models	3.538:1
Front axle	
Differential	Spiral bevel
Front wheel drive	Enclosed constant velocity joint
Ratio	3.538:1

Overall ratio (including final drive) - Ninety models		high	low
V8 models	Fifth	3.331:1	9.050:1
	Fourth	4.326:1	11.753:1
	Third	6.043:1	16.419:1
	Second	9.227:1	25.057:1
	First	15.971:1	43.391:1
	Reverse	14.833:1	40.300:1
Tdi models	Firth	3.846:1	9.050:1
	Fourth	4.995:1	11.753:1
	Third	6.978:1	16.419:1
	Second	10.649:1	25.057:1
	First	18.441:1	43.391:1
	Reverse	17.127:1	40.300:1
4 cylinder petrol and Naturally Aspirated diesel	Fifth	4.151:1	9.767:1
	Fourth	4.995:1	11.753:1
	Third	7.527:1	17.711:1
	Second	11.493:1	27.043:1
	First	17.907:1	42.134:1
	Reverse	18.468:1	43.497:1

Overall gear ratios (including final drive) - One Ten models		high	low
V8 and Tdi models	Fifth	3.846:1	9.050:1
	Fourth	4.995:1	11.753:1
	Third	6.978:1	16.419:1
	Second	10.649:1	25.057:1
	First	18.441:1	43.391:1
	Reverse	17.128:1	40.300:1
4 cylinder petrol and Naturally Aspirated diesel models	Fifth	4.903:1	9.767:1
	Fourth	5.901:1	11.753:1
	Third	8.893:1	17.711:1
	Second	13.579:1	27.043:1
	First	21.156:1	42.134:1
	Reverse	21.840:1	43.497:1

Steering (lock to lock)	
Manual	4.3 turns
Power assisted	4.0 turns
Camber angle	Zero
Castor angle	3°
Swivel pin inclination	7°
Front wheel toe-out - permanent 4-wheel drive	1,19-2,38 mm (3/64 - 3/32 in)
Turning circle between kerbs:	
NINETY models:	
750 x 16 tyres	12,3 m (40.34 feet)
205 x 16 tyres	11,7 m (38.38 feet)
ONE TEN models	
750 x 16 tyres	12,8 m (41.98 feet)

Electrical system

Type	Negative earth	
Voltage	12	
Battery - Petrol models	BBMS No. 371	) 9 plate
	BBMS No. 291	) Designation
		) 190/84/90
- Diesel models	BBMS No. 372 14 plate Designation 210/85/90	
Charging circuit - 4-cylinder models	Alternator	
- V8 cylinder models	Alternator	
Ignition system - Petrol models	Coil	

Replacement bulbs and units

Headlamps		
- UK	75/50 W Sealed beam unit	
- Europe (except France)	60/55 W Halogen bulb	) Local legislative
		) requirements
- France and Algeria	60/55 W Halogen bulb, yellow	) may require
		) fitment of
- Rest of world, right-hand steering	75/50 W Sealed beam unit	) quartz-halogen
		) headlamps in
- Rest of world, left-hand steering	60/50 W Sealed beam unit	) countries outside
		) Europe.
Front side lamps	12 V 5 W	) Refer to
		) Distributor or
		) Dealer
Side repeater lamps	12 V 4 W	) for details
Stop/tail lamps	12 V 21/5 W	
Flasher lamps	12 V 21 W	
Number plate lamp	12 V 4 W	
Reverse lamp	12 V 21 W	
Rear fog guard lamp bulb	12 V 21 W	
Interior lamp	12 V 21 W	
Warning lights (except diesel cold start)	12 V 1.2 W	
- diesel cold start	12 V 1.2 W	
Instrument illumination	12 V 3 W	
Hazard switch warning light	12 V 0.6 W	

* The 60/55 W Halogen bulb is fitted to the Land Rover 'County' Station Wagon

Vehicle Dimensions - Ninety models

		Soft Top			Pick-up			Hard Top			Station Wagon		
		2.5P	3.5P	2.5D	2.5P	3.5P	2.5D	2.5P	3.5P	2.5D	2.5P	3.5P	2.5D
DIMENSIONS													
Overall Length	mm (in)	3722 (146.5)			3722 (146.5)			3883 (152.9)			3883 (152.9)		
Overall Width	mm (in)	1790 (70.5)			1790 (70.5)			1790 (70.5)			1790 (70.5)		
2400kg Height +	mm (in)	1965 (77.4)			1963 (77.3)			1972 (77.6)			1963 (77.3)		
2550kg Height +	mm (in)	2000 (78.7)			1993 (78.5)			1997 (78.6)			1989 (78.3)		
Wheelbase	mm (in)	2360 (92.9)			2360 (92.9)			2360 (92.9)			2360 (92.9)		
Track Front/Rear	mm (in)	1486 (58.5)			1486 (58.5)			1486 (58.5)			1486 (58.5)		
Cargo Bed Length	mm (in)	1144 (45.0)			1144 (45.0)			1144 (45.0)			1144 (45.0)		
Interior Width	mm (in)	1620 (63.8)			1620 (63.8)			1620 (63.8)			1620 (63.8)		
Interior Height	mm (in)	1215 (47.8)			-			1215 (47.8)			1215 (47.8)		
Width between Wheel Boxes	mm (in)	925 (36.4)			925 (36.4)			925 (36.4)			925 (36.4)		
Seating Capacity		2 - 7			2 - 7			2 - 7			6 - 7		
PERFORMANCE													
Tyre size fitted		6.00 x 16			205 x 16						7:50 x 16 (except XS)		
Min. Turning Radius (kerb to kerb)	m (ft)	5,75 (18.9)			5,85 (19.2)						6,15 (20.2)		
Max. Gradient	(EEC kerb weight)	45°			45°						45°		
Approach Angle	(EEC kerb weight)	47°			48°						51°		
Departure Angle	(EEC kerb weight)	48°			49°						52°		
Ramp Break Over Angle		149°			150°						146°		
Min. Ground Clearance (unladen)	mm (in)	198 (7.8)			191 (7.5)						229 (9)		
Wading Depth	mm (in)	500 (20)			500 (20)			500 (20)					

TOWING WEIGHTS (Refer to Section 3 Towing off-road)				
Towing Weights	2.5 PETROL	3.5 PETROL	2.5 DIESEL	2.5 DIESEL TURBO
Unbraked Trailers	750kg	750kg	750kg	750kg
Trailers with Over Run Brakes	3500kg	3500kg	3500kg	3500kg
4-wheel Trailers with coupled brakes * FULLY BRAKED	4000kg	4000kg	3500kg	4000kg

+ Height depends upon suspension and tyres specified. **NOTE: All weight figures are subject to local legal restrictions.**

*** Only applies to vehicles modified to accept coupled brakes.**

IMPORTANT: See NOTE in Section 3, "Towing" for towing a trailer with a weight in excess of 3,500 Kg.

Vehicle Dimensions - One Ten models

		Soft Top			Pick-up			Hard Top			Station Wagon			High Capacity Pick-up		
		2.5P	2.5D	3.5P	2.5P	2.5D	3.5P	2.5P	2.5D	3.5P	2.5P	2.5D	3.5P	2.5P	2.5D	3.5P
DIMENSIONS																
Overall Length	mm (in)	4438 (175)			4438 (175)			4599 (181.1)			4599 (181.1)			4631 (182)		
Overall Width	mm (in)	1790 (70.5)			1790 (70.5)			1790 (70.5)			1790 (70.5)			1790 (70.5)		
2950kg Height	mm (in)	2035 (80.1)			2035 (80.1)			2035 (80.1)			2035 (80.1)			2035 (80.1)		
3050kg Height	mm (in)	2079 (81.9)			2064 (81.3)			2073 (81.6)			2059 (81.1)			2076 (81.7)		
Wheelbase	mm (in)	2794 (110)			2794 (110)			2794 (110)			2794 (110)			2794 (110)		
Track Front/Rear	mm (in)	1486 (58.5)			1486 (58.5)			1486 (58.5)			1486 (58.5)			1486 (58.5)		
Cargo Bed Length	mm (in)	1900 (74.8)			1900 (74.8)			1900 (74.8)			-			2010 (79.2)		
Interior Width	mm (in)	1620 (63.8)			1620 (63.8)			1620 (63.8)			1620 (63.8)			1660 (65.3)		
Interior Height	mm (in)	1205 (47.4)			-			1205 (47.4)			1205 (47.4)			-		
Width between Wheelboxes	mm (in)	925 (36.4)			925 (36.4)			925 (36.4)			925 (36.4)			1090 (43)		
Seating Capacity		2 - 3 - 11			2 - 3 - 11			2 - 3 - 11			9 - 10 - 11 - 12			2 - 3		
PERFORMANCE																
Tyre size					7.50 x 16											
Min. Turning Radius	m (ft)							6.4 (21)								
Max. Gradient								45° max								
Approach Angle								50° (at EEC kerb weight)								
Departure Angle								35° (at EEC kerb weight)								
Ramp Break Over Angle								152°								
Min. Ground Clearance	mm (in)							215 (8.5)								
Wading Depth	mm (in)							500 (20)								
TOWING WEIGHTS (Refer to Section 3 Towing off-road)																
Towing Weights					2.5 PETROL			3.5 PETROL			2.5 DIESEL			2.5 DIESEL TURBO		
Unbraked Trailers					750kg			750kg			750kg			750kg		
Trailers with Over Run Brakes					3500kg			3500kg			3500kg			3500kg		
4-wheel Trailers with coupled brakes * FULLY BRAKED					4000kg			4000kg			3500kg			4000kg		

+ Height depends upon suspension and tyres specified. **NOTE: All weight figures are subject to local legal restrictions.**

*** Only applies to vehicles modified to accept coupled brakes.**

IMPORTANT: See NOTE in Section 3, "Towing" for towing a trailer with a weight in excess of 3,500 Kg.

Vehicle Weights - NINETY MODELS

When loading a vehicle to its maximum (Gross Vehicle Weight), consideration must be taken of the unladen vehicle weight and the distribution of the payload to ensure that axle loadings do not exceed the permitted maximum values.
It is the customer's responsibility to limit the vehicle's payload in an appropriate manner such that neither maximum axle loads nor Gross Vehicle Weight are exceeded.

	Soft Top				Pick Up				Hard Top				Station Wagon			
Model - Petrol/Diesel	2.5P	3.5P	2.5D	2.5TD	2.5P	3.5P	2.5D	2.5T D	2.5P	3.5P	2.5D	2.5TD	2.5P	3.5P	2.5D	2.5TD
Gross Vehicle Weight	Standard Suspension: 2400															
EEC Kerb Weight	1606	1602	1643	1643	1624	1620	1661	1661	164 8	1644	1685	1685	1690	1686	1727	1727
Gross Vehicle Weight	High Load Suspension: 2550															
EEC Kerb Weight	1610	1602	1647	1647	1628	1620	1665	1665	1652	1644	1689	1689	1694	1686	1731	1731

MAXIMUM AXLE WEIGHTS

	Ninety Standard	Ninety High Load
Front Axle Kg:	1200	1200
Rear Axle Kg:	1380	1500
GVW Kg:	2400	2550

*EEC Kerb Weight = Unladen Weight + Full Fuel Tank & 75 Kg Driver.

Vehicle Weights - ONE TEN MODELS

When loading a vehicle to its maximum (Gross Vehicle Weight), consideration must be taken of the unladen vehicle weight and the distribution of the payload to ensure that axle loadings do not exceed the permitted maximum values.
It is the customer's responsibility to limit the vehicle's payload in an appropriate manner such that neither maximum axle loads nor Gross Vehicle Weight are exceeded.

	Soft Top				Pick Up				Hard Top				Station Wagon				High Capacity Pick Up			
Petrol/Diesel	2.5P	3.5P	2.5D	2.5TD	2.5P	3.5P	2.5D	2.5TD	2.5P	3.5P	2.5D	2.5TD	2.5P	3.5P	2.5D	2.5TD	2.5P	3.5P	2.5D	2.5TD
Gross Vehicle Weight	Unlevelled Suspension: 3050																			
EEC Kerb Weight	1723	1698	1742	1742	1724	1699	1743	1743	1777	1752	1796	1796	1887	1862	1906	1906	1813	177 8	1859	1859
Gross Vehicle Weight	Levelled Suspension: 2950																			
EEC Kerb Weight	1733	1708	1752	1752	1734	1709	1753	1753	1787	1762	1806	1806	1897	1872	1916	1916	1823	178 8	1869	1869

MAXIMUM AXLE WEIGHTS

	One Ten Levelled	One Ten Unlevelled
Front Axle Kg:	1200	1200
Rear Axle Kg:	1750	1850
GVW Kg:	2950	3050

* EEC Kerb Weight = Unladen Weight + Full Fuel Tank & 75 Kg Driver.

FUEL ECONOMY

Passenger Car Fuel Consumption Order 1983 No. 1486 80/1268 EEC

NINETY MODELS

	Sim Urban Cycle (mpg)	Const Speed 56 mph (mpg)	Const Speed 75 mph (mpg)
Ninety 2.5 Petrol:	16.3	22.8	N/A
Ninety 2.5 Diesel:	26.6	28.2	N/A
Ninety Tdi 205-16 tyres	28.3	32.2	21.2
Diesel: 750-16 tyres	29.7	33.5	22.2
Ninety 3.5 Petrol:	14.1	22.2	14.9
	Sim Urban Cycle 1/100 Km	**Const Speed 90 Kph 1/100 Km**	**Const Speed 120 Kph 1/100 Km**
Ninety 2.5 Petrol:	17.3	12.4	N/A
Ninety 2.5 Diesel:	10.6	10.0	N/A
Ninety Tdi 205-16 tyres	9.9	8.8	13.3
Diesel: 750-16 tyres	9.5	8.4	12.7
Ninety 3.5 Petrol:	20.0	12.7	19.0

ONE TEN MODELS

	Sim Urban Cycle (mpg)	Const Speed 56 mph (mpg)	Const Speed 75 mph (mpg)
One Ten 2.5 Petrol:	14.5	21.0	N/A
One Ten 2.5 Diesel:	21.6	24.7	N/A
One Ten Tdi Diesel:	28.8	29.6	19.0
One Ten 3.5 Petrol:	13.0	21.0	14.8
	Sim Urban Cycle 1/100 km	**Const Speed 90 kph 1/100 km**	**Const Speed 120 kph 1/100 km**
One Ten 2.5 Petrol:	19.4	13.5	N/A
One Ten 2.5 Diesel:	13.1	11.4	N/A
One Ten Tdi Diesel:	9.8	9.5	14.8
One Ten 3.5 Petrol:	21.7	13.4	19.1

The above results were achieved under controlled test conditions in compliance with the Order, and do not express or imply any guarantee of the fuel consumption of any particular vehicle with which this information may be supplied. Vehicles are not individually tested, and there are inevitably differences between individual vehicles of the same model. In addition, the vehicle may incorporate particular modifications. Furthermore, the driver's style and road traffic conditions, as well as the extent to which the vehicle has been driven and the standard of maintenance will all affect its fuel consumption. Information as to the results of officially approved tests on all vehicles tested is available for inspection by customers on the premises where these vehicles are displayed.

One Thirty Crew Cab Model

		V8 (kg)	Turbo D (kg)
Gross Vehicle Weight	Front Axle Rear Axle **Total**	1,580 2,200 **3,500**	1,580 2,200 **3,500**
* Unladen	**Total**	**1,872**	**1,936**
* EEC Kerb Weight	Front Axle Rear Axle **Total**	1,027 985 **2,012**	1,070 1,015 **2,085**
* EEC Payload		1,488	1,415

* Applies to Land Rover 130 Crew Cab with standard rear High Capacity Pick-up body.

NOTE:

* EEC Kerb Weight = Unladen Weight + Full Fuel Tank & 47kg driver.
* EEC Payload = GVW - EEC Kerb Weight. However individual axle weights must not be exceeded.
* Front and Rear Axle weights are non additive.
* For off road use the Front Axle is restricted to a maximum capacity of 1450kg.

Vehicle weights and loads

When loading the vehicle, distribute the weight as evenly as possible between the front and rear axles, ensuring that all cargo is secure. **DO NOT** place a heavy load over or behind the rear axle which would lower the rear of the vehicle and raise the front, as this would affect the steering and general handling.

When loading a vehicle to its maximum (Gross Vehicle Weight) consideration must be taken of the unladen vehicle weight, the distribution of the load and tow hitch loading (where appliable) to ensure that axle loadings do not exceed the specified maximum figures.

NOTE: To accommodate different loading conditions (such as vehicles fitted with optional equipment) the sum of the maximum allowable front and rear axle loads exceed the Gross Vehicle Weight. Therefore, it is the drivers responsibility to limit the vehicle's load in an appropriate manner so that neither maximim axle loads nor the Gross Vehicle Weight is exceeded.

NOTE: All other vehicle details are the same as those given for the Land Rover 110" in this Driver's Handbook.

One Thirty Crew Cab Model

TYRE PRESSURES		NORMAL LOADS AND ROAD SPEEDS	EMERGENCY SOFT 25 mph (40 km/h) MAXIMUM SPEED
FRONT (7,50-16)	bar	3,03	1,1
	lbf/in^2	44	16
	kgf/cm^2	3,09	1,12
REAR (7,50-16)	bar	4,5	2,2
	lbf/in^2	65	32
	kgf/cm^2	4,6	2,25

WARNING: Tyre pressures must be checked with the tyres cold, as the pressure is about 0.21 bar (3 lbf/in^2) 0.2 kg/cm^2 higher at running temperature. If the vehicle has been parked in the sun or high ambient temperatures, DO NOT reduce the tyre pressures, move the vehicle into the shade and wait for the tyres to cool before checking the pressures.

TYRE PRESSURES

Maximum tyre life and performance will only be obtained if the tyres are maintained at the correct pressures.

	Tyres - size and type		Normal All load conditions		Emergency soft			
					Unladen		Laden	
			Front	Rear	Front	Rear	Front	Rear
90 MODELS	205R16 RADIAL-PLY	bar	1,9	2,4	1,1	1,1	1,1	1,6
		lbf/in^2	28	35	16	16	16	23
		kgf/cm^2	2,0	2,5	1,1	1,1	1,1	1,6
	7.50R16 RADIAL-PLY	bar	1,9	2,7.5	1,1	1,1	1,1	1,6
		lbf/in^2	28	40	16	16	16	23
		kgf/cm^2	2,0	2,8	1,1	1,1	1,1	1,6
110 MODELS	750R16 RADIAL-PLY	bar	1,9	3,3	1,1	1,1	1,1	1,8
		lbf/in^2	28	48	16	16	16	26
		kgf/cm^2	2,0	3,4	1,1	1,1	1,1	1,8

General Notes:

- Emergency soft pressures should only be used in extreme conditions where extra floatation is required. Max. speed 40 km/h (25 mph). Return pressure to normal immediately firm ground is regained.
- For extra ride comfort at part load the normal rear tyre pressures may be reduced to following:
  - 90 models - Not more than 1050kg rear axle load.
    1,9 bar (28 lbf/in^2) 2,0 kgf/cm^2
  - 110 models - Not more than 1250 kg rear axle load.
    Cross-ply and radial tyres: 2,2 bar (32 lbf/in^2) 2,25 kgf/cm^2
- Towing: when vehicle is used for towing the reduced rear tyre pressures for extra ride comfort are not applicable.
  Where special tyres or tyres other than those quoted are fitted to the vehicle, consult your Land Rover Distributor or Dealer or the tyre Manufacturer for correct tyre pressures.

DEFENDER TYRE CHARACTERISTICS

TYRE	SIZE	APPLICABLE MODEL	COMMENTS
Michelin XM & S 8 Ply Rating	205 x 16 Radial	Standard fit 90 and V8 models Optional others	Dual purpose, good traction: snow, mud, adverse conditions, low rolling resistance improves M.P.G.
Avon Rangemaster 6 Ply Rating	750 x 16 Radial	Option 110 all models Option 90 2.5 Litre models	Dual purpose, good traction on and off road. Low rolling resistance improves M.P.G.
Michelin XC Type L 8 Ply Rating	750 x 16 Radial	Optional all models	Recommended for all off-road conditions, self cleaning. Resistance to accidental damage.
Michelin XS 6 Ply Rating	750 x 16 Radial	Optional all models	Ideal for sand or similar conditions, maximum flotation heavy loads at reduced pressures, reasonable on-road life.
Michelin X Type 4 x 4 8 Ply Rating	750 x 16 Radial	Optional all models	Dual purpose, good on-road life excellent traction off-road, protector ply in sidewall for off-road.
Michelin XZY 12 Ply rating	750 x 16 Radial	Optional all models	General purpose tyre. Good wear characteristics. Designed to run at low pressures if necessary. Resistance to sidewall intrusion.

FORECOURT DATA

Fuel	4-cylinder petrol engines	90 octane minimum) 2 star ** UK rating) unleaded or
	V8 cylinder petrol engines	91 to 93 octane) leaded
	4-cylinder diesel engines	Diesel fuel (DERV) (Not exceeding 1% sulphur content. See Fuel Recomendations, Section 3)
	Tank capacity	
	- 90 models	Side tank 54,58 litres (12 gallons) Rear tank 79,5 litres (17.5 gallons)
	- 110 models	Side tank (except Station wagon) 68,2 litres (15 gallons) Side tank (Station wagon only) 45,5 litres (10 gallons)
Engine Oil	Viscosity grade	15W/40 for all models. See DATA section for full details.
	Topping-up	Maintain oil level between marks on dipstick as follows: - 4-cylinder models between 'L' and 'H' notches Tdi models between MIN and MAX notches - V8 cylinder models between 'LOW' and 'HIGH' marks Quantity of oil required to raise level from 'L' to 'H' or 'LOW' to 'HIGH' MIN to MAX as applicable: - 4-cylinder models: 1,0 litre (1.75 pints) - V8 cylinder models: 1,4 litre (2.5 pints)
Tyre pressures		See inside rear cover