



Specifications

Sealers

Item	Land Rover Part No.
Valve cover gasket	8510303
Sump pan	8510303
Oil strainer pick-up pipe bolts	STC 50553
Cylinder block core plugs	STC 50554
Timing cover seal apertures	8510303
Cylinder block coolant outlet elbow stub pipe	STC 50554
Bedplate to cylinder block	8510303

Lubricant - UK, Europe and ROW - Not NAS/Japan

Item	Specification
* Recommended Lubricant	The use of 5W/30 oil to Specification WSS - M2C913-B is preferred. Where oil to this specification is not available, then 5W/30 oil meeting specifications ACEA A1/A3 or API SJ or SL may be used.

* WSS is a Ford prefix to the oil specification **Lubricant NAS/Japan**

Item	Specification
* Recommended Lubricant	Use 5W/30 oil meeting Specification WSS-M2C205-A (GF3) and 'Certified for Gasoline Engines' by the American Petroleum Institute (API).

* WSS is a Ford prefix to the oil specification **Capacity**

Item	Capacity
Dry fill including filter	8 litres (14 pints) (8.5 US quarts)
Oil and filter change	7.7 litres (13.6 pints) (8.1 US quarts)
Amount of oil required to bring the level from the lower to the upper holes on the dipstick	1.5 litres (2.6 pints) (1.5 US quarts)

General Specification

Item	Specification
Type	4.4 litre 90° 'V', petrol engine, twin overhead camshafts per cylinder head, 4 valves per cylinder
Cylinder arrangement	V8, numbers 1 and 5 cylinders at front of engine when engine is viewed from rear
Cylinder numbering	Number 1 cylinder - right hand bank; Number 5 cylinder - left hand bank
Bore - nominal	88.0 mm (3.465 in)
Stroke	90.3 mm (3.55 in)
Capacity	4396 cm ³ (268.3 in ³)
Firing order	1 - 5 - 4 - 2 - 6 - 3 - 7 - 8
Compression ratio	10.5:1
Direction of rotation	Anti-clockwise - viewed from rear of engine

Maximum power:	
UK/Europe and ROW - Not NAS/Japan	220 kW (295 bhp) @ 5500 rev/min
NAS/Japan	300 bhp (224 kW) @ 5500 rev/min
Maximum torque:	
UK/Europe and ROW - Not NAS/Japan	425 Nm (313 lb-ft) @ 4000 rev/min
NAS/Japan	315 lb-ft (427 Nm) @ 4000 rev/min
Dimensions:	
Length	720 mm (28.3 in)
Width	720 mm (28.3 in)
Height	785 mm (30.9 in)
* Engine oil pressure:	
At idle	1.0 bars (100 kPa) (15.0 lb/in ²)
At 3500 rev/min	3.0 bars (300 kPa) (44.0 lb/in ²)
** Valve clearances:	
Inlet	0.18 to 0.22 mm (0.007 to 0.008 in)
Exhaust	0.23 to 0.27 mm (0.009 to 0.010 in)

* Note: prior to checking the engine oil pressure, a road test of 6 miles (10 kilometres) must be carried out. Do not attempt to attain engine normal operating temperature by allowing the engine to idle ** Note: that there are 50 different thicknesses of graded tappet available ranging from 2.950 to 3.685 mm (0.116 to 0.145 in) rising in increments of 0.015 mm (0.0005 in) **Torque Specifications**

Description	Nm	lb-ft
Exhaust manifold heat shield bolt	25	18
* Exhaust manifold to cylinder head bolts	20	15
Battery clamp nut	10	7
* Cylinder head bolts:		
Stage 1	20	15
Stage 2	35	26
Stage 3 - Tighten bolts 1 to 10	Further 90°	Further 90°
Stage 4 - Tighten bolts 1 to 10	Further 90°	Further 90°
Stage 5 - Tighten the M8 bolts 11 and 12	25	18
EGR pipe to exhaust manifold flange nuts	25	18
CMP sensor Torx screw	7	5
Oil filter adapter	60	44
++ Oil filter	18	13
Oil drain plug	25	18
Oil cooler bolts	10	7
Oil cooler Allen bolt	60	44
Primary timing chain tensioner guide bolts	12	9
Primary timing chain tensioner bolts	12	9
Secondary timing chain tensioner bolts	12	9
Primary timing chain tensioner guide stud	12	9
** VCT oil control unit bolts	22	16
LH VCT oil control unit nut	10	7
* Camshaft bearing cap bolts	10	7

Intake camshaft sprocket retaining bolt	120	88
Exhaust camshaft sprocket retaining bolt	120	88
Engine front mount bolts:		
Stage 1	45	33
Stage 2	Further 60°	Further 60°
Engine to front mount nut	90	66
Engine ground cable bolt	25	18
Starter motor bolts	45	33
+++ Starter motor cable nut	10	7
*+ Steering column lower universal joint bolts	25	18
Brake hose to upper arm bolt	23	17
** Upper arm/wheel knuckle nut	70	52
Stabilizer bar link nuts	175	129
*+ Crankshaft pulley bolt	380	280
PCV valve bolts	6	4
* RH valve cover bolts	12	9
* LH valve cover bolts	12	9
Oil level indicator tube nut	6	4
* Sump pan bolts	20	15
Transmission retaining bolts	45	33
Transmission cooler pipes clamp bolt	25	18
A/C compressor bolts	25	18
Power steering pump bolts	25	18
Differential extension bolts	45	33
HO2S mounting bracket bolts	10	7
Oil pump to cylinder block bolts	10	7
**+ Oil strainer pick-up pipe bolts - M5	6	4
Oil strainer pick-up pipe bolt - M6	10	7
Coolant pump pulley bolts	10	7
Coolant crossover tube bolts	6	4
Accessory drive belt idler pulley bolt	25	18
Accessory drive belt tensioner bolt	40	30
Viscous fan drive belt tensioner pulley bolt	25	18
Viscous fan drive belt tensioner bolt	40	30
Radiator access panel bolts	10	7
Engine oil pressure sensor	12	9
Exhaust manifold EGR pipe to flange nuts and bolts	25	18
EGR valve to EGR pipe bolts	25	18
Upper suspension arm and brake line heat shield nuts and bolts	10	7
Battery positive cable to battery junction box (BJB) bolt	10	7
Flexplate to torque converter bolts:		
Stage 1	15	11
Stage 2	110	81
Hood bolts	25	18
Road wheel nuts	140	103
Engine oil temperature sensor	20	15

Engine front cover bolts	12	9
Generator mounting bracket bolts	45	33
Generator mounting bolts	48	35

* Bolts must be tightened in sequence ** New nuts/bolts must be installed **+ Apply sealant to threads *+ New Patchlok bolt(s) must be installed + Lightly oil bolt threads ++ Apply engine oil to seal +++ Damage to internal connections will result if this torque is exceeded