

Engine - 2.4L Duratorq-TDCi HPCR (103kW/140PS) - Puma -

Lubricants, Fluids and Sealers

Item	Specification
SAE 5W-30 engine oil	WSS-M2C913-B
Sealant — oil pan, camshaft carrier and engine front cover	WSE-M4G323-A4

Cylinder Head Dimensions

Description	mm
Maximum distortion — measured longitudinally and diagonally	0.10
Peak to valley height of mating surface	0.02
Cylinder head gasket thickness	
Piston protrusion of 0.310 - 0.400 mm	1.1 (one tooth)
Piston protrusion of 0.401 - 0.450 mm	1.15 (two teeth)
Piston protrusion of 0.451 - 0.500 mm	1.2 (three teeth)

Oil pressure specifications

Description	bar
Minimum oil pressure at idle speed	1.25
Minimum oil pressure at 2000 rpm	2.0

Description	Nm	lb-ft
Transmission to engine bolts	40	30
Engine mount nuts	80	59
Engine mount bolts	80	59
Engine mount bracket bolts	63	46
Valve cover bolts	10	7
+ Rocker shaft bolts		
Stage 1	10	7
Stage 2	Further 30 degrees	
Timing chain guide bolts	15	11
Timing chain tensioner nut	15	11
Timing chain tensioner bolts	15	11
Oil pump chain tensioner bolts	22	16
Camshaft sprocket bolts	35	24
Fuel injection pump sprocket bolts	33	26
Generator bolts	48	35
Generator mounting bracket bolts	25	18
Exhaust gas recirculation (EGR) valve to EGR valve outlet tube bolts	10	7
EGR valve to EGR cooler bolts	23	17
Exhaust manifold to EGR cooler bolts	23	17
Intake manifold bolts	15	11
Intake manifold to EGR valve outlet tube bolts	10	7
Coolant pump bolts	23	17
Oil level indicator tube bolt	10	7
Oil pump pickup tube bolts	10	7
Oil filter housing assembly bolts	23	17
Oil pump bolts	10	7
Oil pan drain plug	23	17
Oil pressure switch	15	11
Oil pan bolts		
Stage 1	7	5
Stage 2	14	10
Coolant manifold bolts	10	7
EGR cooler to cylinder head bolts	23	17
+ Cylinder head bolts	A	-
Engine front cover bolts	14	10
Engine front cover nuts	10	7
Glow plugs	10	7
Power steering pump bolts	23	17
Power steering pump bracket bolts	23	17
Exhaust manifold bolts	40	30
+ Exhaust manifold nuts	40	30
+ Exhaust manifold studs	20	15
Turbocharger oil return tube bolts	10	7
Turbocharger oil return tube clamp bolt	22	16
Turbocharger oil supply line banjo bolt	35	26