

Telephone:
Fax:
VAT Registration No.:

Notes			Specified value	Measured value
Vehicle identification				
No. of cylinders	Type	4/OHC		
Capacity	cc	1753		
Compression ratio	:1	17,0		
Fuel system	Make	Siemens		
Injection system				
Air metering	Type	MAP / Mass		
Fuel/injection pump assembly	Make	Siemens		
Pump type		Common rail		
Injection sequence		1-3-4-2		
Engine coolant temperature (ECT) sensor	Ohm/°C	2900/80		
Tuning and emissions				
Idle speed	rpm	850±25		
Rated no load speed	rpm	4670-4930		
Oil temperature	°C	80		
Idle speed - for smoke test	rpm	825-875		
Governed speed range - for smoke test	rpm	4670-4930		
Maximum time at governed speed	secs	1,0		
Test mode	A/B	B		
Probe type	1/2	1		
Smoke opacity - EU limit	m-1 (%)	3,00 (73)		
Smoke opacity - homologation value	m-1 (%)	2,50 (66)		
Starting and charging				
Battery	V/RC(Ah)	12		
Service checks and adjustments				
Valve clearance - INLET	mm	0,30-0,40 cold		
Valve clearance - EXHAUST	mm	0,45-0,55 cold		
Oil pressure	bar/rpm	1,0/2000		
Radiator cap	bar	1,3-1,5		
Thermostat (primary/secondary) open	°C	88-92		
Lubricants and capacities				
Engine oil options				
Ambient temperature range		All temperatures		
Engine oil grade	SAE	5W/30 Synthetic		
Engine oil classification	OEM	WSS-M2C913-C		
Engine with filter(s)	litres	5,6		
Other lubricants and capacities				
Manual transmission oil grade	SAE	75W Synthetic		

Manufacturer: Ford
Engine code: KKDA
Tuned for:

Model: Focus ('04/'08) 1,8D TDCi
Output: 85 (115) 3700
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	Manual transmission oil classification		WSS-M2C200-D2	
	Manual transmission	litres	1,9	
	Cooling system - total capacity	litres	9,0	
	Brake fluid	Type	Super DOT 4	
	Power steering fluid	Type	WSA-M2C 204-A	
Tightening torques				
81	Cylinder head instructions			
Cylinder head				
		Renew bolts	Yes	
Other engine tightening torques				
	Main bearings	Renew bolts/nuts	No	
	Main bearings	Stage 1	45 Nm	
	Main bearings	Stage 2	70 Nm+60°	
	Big end bearings	Renew bolts/nuts	Yes	
	Big end bearings	Stage 1	27 Nm	
	Big end bearings	Stage 2	60°+60°	
	Sump bolts		10 Nm	
	Sump drain bolt		36 Nm	
48	Flywheel/driveplate		35 Nm+45°	
	Clutch pressure plate		29 Nm	
48	Crankshaft pulley/damper centre bolt		100 Nm+180°	
	Camshaft sprocket/gear		50 Nm	
	Camshaft carrier/cap		20 Nm	
	Camshaft/rocker cover		5 Nm	
48	Inlet manifold to cylinder head		24 Nm	
82	Exhaust manifold to cylinder head		24 Nm	
	Water pump		M6=10 Nm M8=23 Nm	
48	Injector/clamp		5 Nm+90°	
123	Injector pipe unions		25 Nm	
	Fuel/injection pump sprocket/gear		33 Nm/42 Nm	
	Fuel/injection pump flange		45 Nm	
	Fuel/injection pump mounting		20 Nm	
	Glow plugs		15 Nm	
124	Crankshaft position (CKP) sensor/engine speed (RPM) sensor		6 Nm	
	Camshaft position (CMP) sensor		6 Nm	
	Engine coolant temperature (ECT) sensor		20 Nm	
	Knock sensor (KS)		20 Nm	
	Engine oil pressure switch		20 Nm	
Chassis tightening torques				
48	Front hub		45 Nm+90°	
	Rear hub - wheel bearing housing bolts		55 Nm	
	Steering wheel		48 Nm	
	Steering rack/box mounting		90 Nm	
82	Steering track rod end		48 Nm	
	Brake caliper to carrier	Front	28 Nm	
	Brake caliper carrier to hub	Front	115 Nm	
	Brake caliper to carrier	Rear	35 Nm	
	Brake caliper carrier to hub	Rear	70 Nm	
	ABS sensor	Front	9 Nm	
	ABS sensor	Rear	5 Nm	

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145	Road wheels			
Brake disc and drum dimensions				
	Minimum disc thickness - ventilated	Front	23 mm	
	Minimum disc thickness	Rear	9 mm	
	Disc thickness variation	Front	0,025 mm	
	Disc thickness variation	Rear	0,025 mm	
	Disc runout	Front	0,05 mm	
	Minimum pad thickness	Front	1,5 mm	
	Minimum pad thickness	Rear	1,5 mm	
	Maximum drum diameter	Rear	230,2 mm	
	Minimum shoe thickness	Rear	1 mm	
Air conditioning				
	No. of AC service connectors		2	
	Air conditioning restrictor type		Fixed orifice tube	
	Air conditioning refrigerant	Type	R134a	
	Air conditioning refrigerant quantity	grams	600±15	
	Air conditioning oil	Type	WSH-M1C231-B	
	Air conditioning oil quantity	cm³	200	
	Air conditioning oil viscosity	ISO	46	

Autodata Note 81

Fig. 82608

A:

- 1) 20 Nm
- 2) 54 Nm
- 3) 90°
- 4) 90°

B:

- 1) 20 Nm
- 2) 54 Nm
- 3) 90°
- 4) 70°

Autodata Note 48

Use new bolts.

Autodata Note 82

Use new nuts.

Autodata Note 123

Replace high-pressure pipes when unions are slackened.
Pipe unions to fuel rail = 38 Nm

Autodata Note 124

Replace sensor if removed from engine.

Autodata Note 145

Steel wheels

Gold nuts = 90 Nm

Silver nuts = 130 Nm

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5 spoke steel wheels = 130 Nm

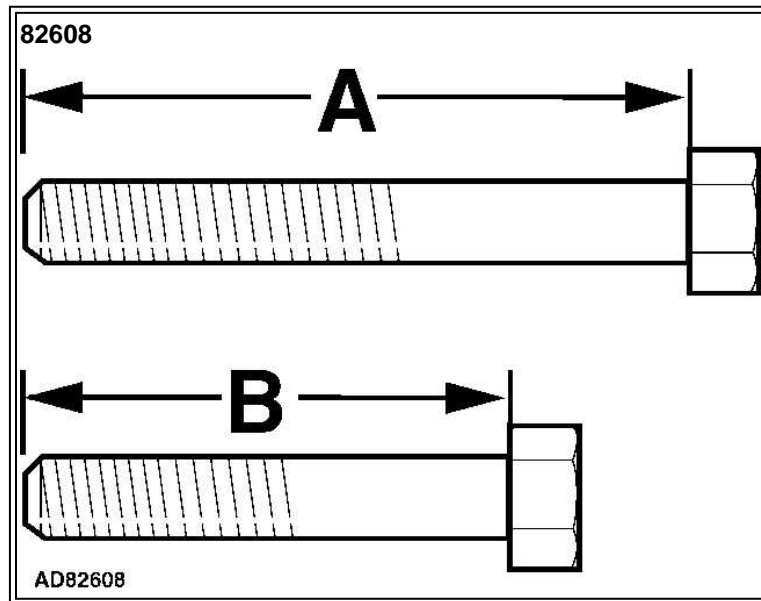
Do NOT lubricate studs, nuts or mating surfaces.

Alloy wheels

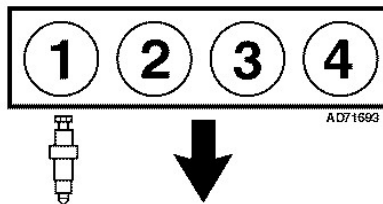
Nuts without conical washers = 130 Nm

Nuts with conical washers = 110 Nm

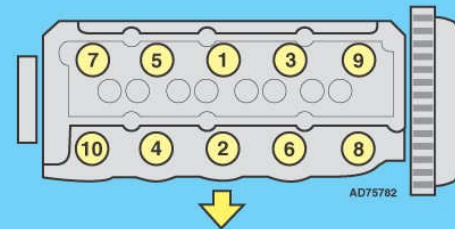
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Cylinder layout



Tightening sequence



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