

Telephone:
Fax:
VAT Registration No.:

Notes			Specified value	Measured value
Vehicle identification				
No. of cylinders	Type		4/OHC	
Capacity (Fiscal)	cc		2212	
Compression ratio	:1		9,5	
Suitable for unleaded petrol			Yes	
Minimum octane rating	RON		95	
Ignition system	Make		Diamond	
Ignition system	Description		Map-DIS	
Trigger location			Cam / Crankshaft	
Fuel system	Make		Subaru	
Fuel system	Type		MPFI	
Fuel system	Description		MFI-s	
Air metering	Type		Mass	
Combined ignition and fuel ECM			Yes	
Diagnostic socket			Yes	
Ignition system				
Ignition coil	Make		Diamond	
Ignition coil	Type		F-569-01R	
Ignition coil supply voltage	+ with ballast V		12,2	
Primary resistance	Ohm		0,62-0,76	
Secondary resistance	Ohm		17850-24150	
Firing order			1-3-2-4	
Tuning and emissions				
Ignition timing - basic BTDC	°Engine/rpm		15±10/800 Not adjustable	
Ignition advance checks	°Engine/rpm		ECM Controlled	
Idle speed	rpm		800±100 Not adjustable	
Idle speed - alternative	rpm		AC=850±50 Not adjustable	
Oil temperature for CO test	°C		80	
CO level at idle speed - tailpipe	Vol. % CO		0,5 Max Not adjustable	
HC level at idle speed	ppm		100	
CO2 level at idle speed	Vol. % CO2		14,5-16	
O2 level at idle speed	Vol. % O2		0,1-0,5	
Increased idle speed for CO test	rpm		2500-2800	
CO content at increased idle speed	Vol. %		0,2	
Lambda at increased idle	λ		0,98-1,02	
Spark plugs				
Spark plugs	Original equipment		NGK	
Spark plug	Type		BKR6E-11	
Electrode gap	mm		1,0-1,1	
Spark plugs	Make		Beru	
Spark plug	Type		14FR-7DUX	
Electrode gap	mm		1,1	
Spark plugs	Make		Bosch	
Spark plug	Type		FR7DCX	

Manufacturer: Subaru

Model: Legacy (94-99) 2,2

© Autodata Limited 2008

Engine code: EJ22

Output: 94 (128) 5200

3/15/10

Tuned for: R-Cat

Year: 1994-96

V7.412-ENGP440704

/Autodata

	Electrode gap	mm	1,1	
	Spark plugs	Make	Champion	
	Spark plug	Type	RC8YC4	
	Electrode gap	mm	1,0-1,1	
	Spark plugs	Make	NGK	
	Spark plug	Type	BKR6E-11	
	Electrode gap	mm	1,1	
Fuel system				
	System pressure	bar	2,35-2,65	
	Regulated pressure with vacuum	bar	1,77-2,06	
	Engine coolant temperature (ECT) sensor	Ohm/°C	350-390/80	
	Crankshaft position (CKP) sensor/engine speed (RPM) sensor	Ohm	950-1250	
	Injector	Ohm	11-12	
	Injector opening duration (hot)	ms/rpm	2,1-3,5/-	
	Idle air control (IAC) valve/idle speed control (ISC) actuator	Ohm	8-11	
Service checks and adjustments				
	Valve clearance -INLET	mm	Hydraulic	
	Valve clearance -EXHAUST	mm	Hydraulic	
	Compression pressure	bar	8,8-12,8	
	Oil pressure	bar/rpm	2,9/5000	
	Radiator cap	bar	0,78-0,98	
	Thermostat opens	°C	76-80	
	Drive belt tension - alternator/PAS/AC	mm	9-11	
	Drive belt tension - AC	mm	9-10	
Lubricants and capacities				
Engine oil options				
	Ambient temperature range		Cold climate	
	Engine oil grade	SAE	5W/30	
	Engine oil classification	API/ACEA	SJ/A2-96	
	Ambient temperature range		Moderate climate	
	Engine oil grade	SAE	10W/40	
	Engine oil classification	API/ACEA	SJ/A2-96	
	Ambient temperature range		Moderate climate alternative	
	Engine oil grade	SAE	10W/30	
	Engine oil classification	API/ACEA	SJ/A2-96	
	Ambient temperature range		Hot climate	
	Engine oil grade	SAE	20W/50	
	Engine oil classification	API/ACEA	SJ/A2-96	
	Engine with filter(s)	litres	4,0	
Other lubricants and capacities				
	Manual gearbox oil grade	SAE	75W/90	
	Manual gearbox	litres	4,0	
	Automatic transmission fluid	Type	Dexron II	
	Differential oil grade - front	SAE	80W/90	
	Differential front/AT	litres	1,2 (AT)	
	Differential oil grade - rear	SAE	75W/90	
	Differential rear	litres	0,8	
	Cooling system	litres	5,8	
	Brake fluid	Type	DOT 3/4	
	Power steering fluid	Type	Dexron II	
	Power steering fluid	litres	0,7	
Tightening torques				
9	Cylinder head instructions			
Cylinder head				
		Renew bolts	No	

Manufacturer: Subaru

Model: Legacy (94-99) 2,2

© Autodata Limited 2008

Engine code: EJ22

Output: 94 (128) 5200

3/15/10

Tuned for: R-Cat

Year: 1994-96

V7.412-ENGP440704

/Autodata

Other engine tightening torques				
	Main bearings	Renew bolts/nuts	No	
20	Main bearings	Stage 1		
	Big end bearings	Renew bolts/nuts	No	
	Big end bearings	Stage 1	22 Nm	
	Big end bearings	Stage 2	42-46 Nm	
	Oil pump to cylinder block		6-7 Nm	
	Sump bolts		10 Nm	
	Sump drain bolt		44 Nm	
	Flywheel/driveplate		69-75 Nm	
	Clutch pressure plate		14-17 Nm	
	Crankshaft pulley/damper centre bolt		103-113 Nm	
	Camshaft sprocket/gear		73-83 Nm	
	Camshaft/rocker cover		5 Nm	
	Spark plugs		18-24 Nm	
	Lambda sensor (Oxygen)		41-47 Nm	
Chassis tightening torques				
	Front hub		166-206 Nm	
	Rear hub		166-206 Nm	
	Steering track rod end		25-29 Nm+60°	
	Brake caliper to carrier	Front	40 Nm	
	Brake caliper carrier to hub	Front	78 Nm	
	Brake caliper to carrier	Rear	20 Nm	
	Brake caliper carrier to hub	Rear	50 Nm	
	Back plate to hub	Rear	46-58 Nm	
	ABS sensor	Front	32 Nm	
	ABS sensor	Rear	32 Nm	
	Road wheels		78-98 Nm	
Starting and charging				
	Battery	V/RC(Ah)	12/90 (52)	
	Maximum cranking amps	A	140-172	
	Alternator output at engine speed	A/V/rpm	85/14/2500	
Brake disc and drum dimensions				
	Minimum disc thickness - ventilated	Front	22 mm	
	Minimum disc thickness	Rear	8,5 mm	
	Disc runout	Front	0,075 mm	
	Disc runout	Rear	0,10 mm	
28	Minimum pad thickness	Front	7,5 mm	
28	Minimum pad thickness	Rear	6,5 mm	
	Minimum shoe thickness	Rear	1,5 mm	
	Parking brake travel	No. of notches	7-8	
Air conditioning				
	Air conditioning refrigerant	Type	R134a	
36	Air conditioning refrigerant quantity	grams		
37	Air conditioning oil	Type		
35	Air conditioning oil quantity	cmi		

Autodata Note 9

Cylinder head bolts

Tighten in the following stages:

- 1) 29 Nm
- 2) 69 Nm
- 3) Slacken off 180°
- 4) Slacken off a further 180°
- 5) Bolts 1 & 2 = 34 Nm

Manufacturer: Subaru

Model: Legacy (94-99) 2,2

© Autodata Limited 2008

Engine code: EJ22

Output: 94 (128) 5200

3/15/10

Tuned for: R-Cat

Year: 1994-96

V7.412-ENGP440704

/Autodata

- 6) Bolts 3-6 = 15 Nm
- 7) All bolts = 90°
- 8) All bolts = a further 90°.

Autodata Note 20

Main bearings

10 mm = 47±3 Nm
8 mm = 25±2 Nm
6 mm = 6,4 Nm.

Autodata Note 28

Minimum pad/shoe thickness

Measurement includes lining and pad/shoe backing plate.

Autodata Note 36

Refrigerant quantity

1994-95 = 600-700 grams
1996 RHD = 700-800 grams
1996 LHD = 600-700 grams
1997-99 RHD = 790-830 grams
1997-99 LHD = 550-650 grams.

Autodata Note 37

Oil type

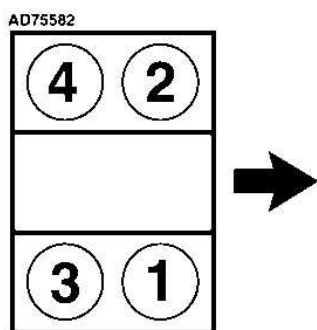
1994-95 = ZXL 100 PG
1996 RHD = Dens Oil 9
1996 LHD = ZXL 200 PG
1997-99 RHD = Dens Oil 9
1997-99 LHD = ZXL 200 PG.

Autodata Note 35

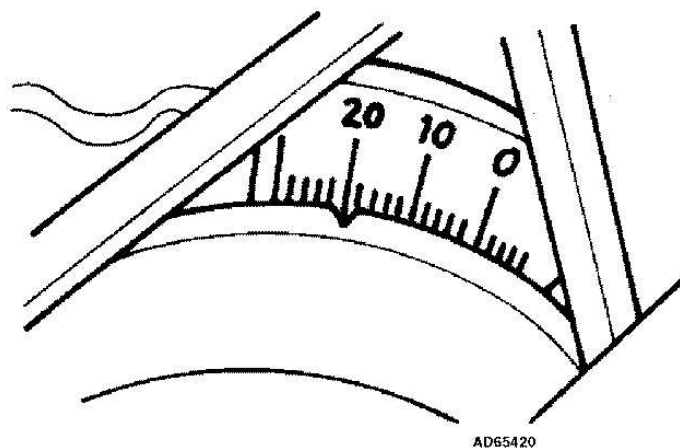
Oil quantity

Refer to underbonnet label.

Cylinder layout



Timing mark



Tightening sequence

