

Engine & Cooling

Fuel

Ignition

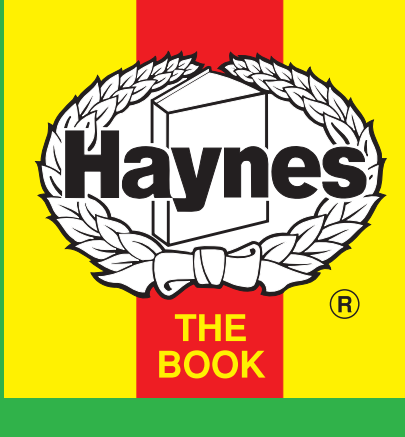
Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical
DATA BOOK

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HELP

Engine and cooling systemShuttle 1.6i 4x41988 to 1990

Type		D16A7 SOHC 16V
Capacity (cm ³) / number of cylinders		1590 / 4
Compression ratio / pressure	bar	9.1 / ≥9.3
Oil pressure	bar	1.7 [5.1]
Oil temperature	°C	80
Valve clearance - inlet	mm	0.17 to 0.22
Valve clearance - exhaust	mm	0.22 to 0.27
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	76 to 80
Radiator cap pressure	bar	0.74 to 1.03

Fuel systemShuttle 1.6i 4x41988 to 1990

Idle speed - manual [auto]	rpm	780±50
Fast idle speed - manual [auto]	rpm	1000 to 2000
CO @ idle speed [3000 rpm] - see page VI	%	≤0.1
HC @ idle speed [3000 rpm] - see page VI	ppm	≤200
CO2 @ idle speed [3000 rpm] - see page VI	%	—
O2 @ idle speed [3000 rpm] - see page VI	%	—
Carburettor / fuel injection		Honda
Type / ref		PGM-Fi
Main jet / needle		—
Injection pressure	bar	2.3 to 2.7
Pump pressure	bar	4.4 to 5.9
Octane rating	RON	97[RA]

Ignition systemShuttle 1.6i 4x41988 to 1990

Type		Electronic
Ignition coil		—
Primary resistance	ohms	0.3 to 0.5
Ballast resistor	ohms	—
Voltage - Tmnl 15(+) to earth	V	—
Distributor		Hitachi
Points gap (air gap)	mm	—
Dwell angle	° (%)	—
Condenser capacity	µF	—
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	18±2 BTDC @ idle
V = Vacuum NV = No Vacuum		V
Total ignition advance	° Crankshaft @ rpm	2 BTDC @ idle (NV)
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Centrifugal check.	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
	° Crankshaft @ rpm	—
Vacuum range check	mbar	—
Maximum vacuum advance	° Crankshaft	—
Spark plugs		NGK/Champion
Type		BCPR6E-11 / RN9YC
Electrode gap	mm	1.00 to 1.10

Electrical systemShuttle 1.6i 4x41988 to 1990

Battery	V / CC / RC	12 / 47Ah
Alternator voltage / full load current / engine rpm		13.9 to 15.1 / _ / 3000
Starter motor current / voltage - cranking	A / V	—
- locked	A / V	—

Running gearShuttle 1.6i 4x41988 to 1990

Brakes -		
Front (min. friction material thickness)	mm	3.0
Rear (min. friction material thickness)	mm	2.0

Tyres		
Saloon	Size	—
Estate / Van	Size	165x13: 175/65x14
Pressure - front / rear - Saloon	bar	—
- Estate / Van	bar	1.9 / 1.9

Front suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	0±3.0 ¹
Camber		+35'±1°
Castor		+2°56'±1°
King pin inclination		+6°58'

Rear suspension / wheel alignment		
Toe-in (+) / Toe-out (–)	mm [°]	+2.0±2.0 ²
Camber		0±1°

Torque wrench settingsShuttle 1.6i 4x41988 to 1990

Cylinder head - stage 1	Nm	30 oiled
- stage 2	Nm	65
Cylinder head - stage 3	Nm	—
- stage 4	Nm	—
Big-end bearings	Nm	32
Main bearings	Nm	58 oiled
Clutch cover	Nm	26
Flywheel [driveplate]	Nm	120
Front hubs	Nm	185
Rear hubs	Nm	185
Wheel nuts / bolts	Nm	110
Spark plugs	Nm	18

CapacitiesShuttle 1.6i 4x41988 to 1990

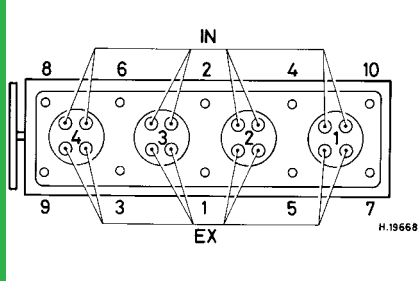
Engine oil & filter	litres	3.5
Gearbox - 4-speed [5-speed]	litres	2.3
Automatic transmission - refill	litres	—
Final drive	litres	Rear: 0.7
Cooling system	litres	5.4
Fuel tank	litres	45

Notes and Illustrations

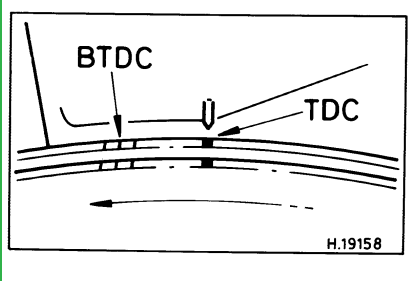
¹1989 ►: 0±2.0

²1989 ►: +2.0±2.0-1.0

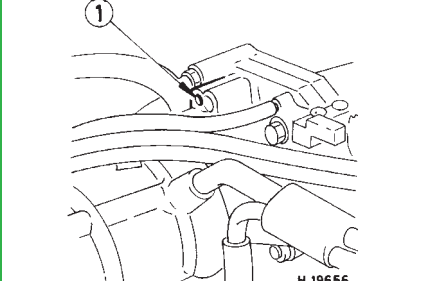
1: Idle speed2: CO / Mixture



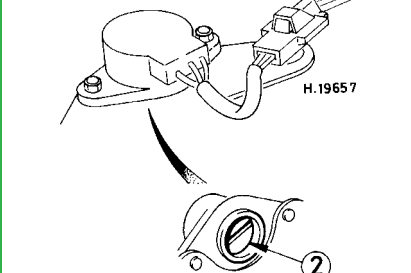
1590 cm³, SOHC 16V



1590 cm³, SOHC 16V



PGM-Fi



PGM-Fi