

YUGO/ZASTAVA

311, 511

1986 to 1991

Engine & Cooling

Fuel

Ignition

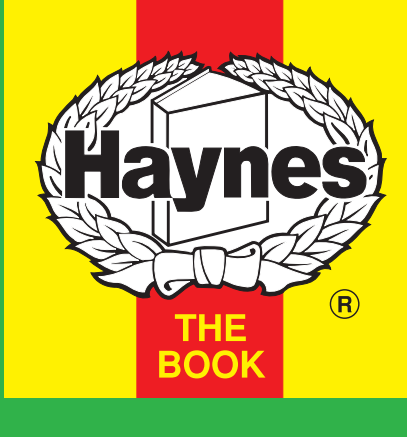
Electrical

Running gear

Torque settings

Capacities

Notes & Illustrations



Automotive Technical
DATA BOOK

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HELP

Engine and cooling system

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1986 to 1991

Type		128A. 064
Capacity (cm ³) / number of cylinders		1116 / 4
Compression ratio / pressure	bar	9.2 / _
Oil pressure	bar	[3.5 to 4.8]
Oil temperature	°C	100
Valve clearance - inlet	mm	0.35 to 0.55
- exhaust	mm	0.45 to 0.55
Firing order		1-3-4-2
No 1 cylinder position		TBE
Thermostat opening temperature	°C	82±2
Radiator cap pressure	bar	0.8

Fuel system

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Idle speed - manual [auto]	rpm	850±50
Fast idle speed - manual [auto]	rpm	_
CO @ idle speed [3000 rpm] - see page VI	%	1.0 to 2.0
HC @ idle speed [3000 rpm] - see page VI	ppm	≤1200
CO2 @ idle speed [3000 rpm] - see page VI	%	_
O2 @ idle speed [3000 rpm] - see page VI	%	_
Carburettor / fuel injection		IPM
Type / ref		32 MGV 12 (Weber type)
Main jet / needle		117
Injection pressure	bar	_
Pump pressure	bar	0.20 to 0.25
Octane rating	RON	97[RA] ¹

Ignition system

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Type		Contact breaker - CIS
Ignition coil		Iskra
Primary resistance	ohms	2.6 to 4.0 (typical)
Ballast resistor	ohms	_
Voltage - Tmnl 15(+) to earth	V	_
Distributor		Rudi Cajavec
Points gap (air gap)	mm	0.37 to 0.43
Dwell angle	° (%)	55±3
Condenser capacity	µF	0.22 to 0.27
Rotation		Clockwise
Ignition timing - basic [static	° Crankshaft @ rpm	10 BTDC @ 850±50 ¹
V = Vacuum NV = No Vacuum		NV
Total ignition advance	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
	° Crankshaft @ rpm	_
Centrifugal check.	° Crankshaft @ rpm	0 @ 1000 to 1400
	° Crankshaft @ rpm	10 to 14 @ 2800
	° Crankshaft @ rpm	22 to 26 @ 4400
Vacuum range check	mbar	160 to 333
Maximum vacuum advance	° Crankshaft	10 to 14
Spark plugs		Marelli/Champion
Type		CW240LP / RN9YC
Electrode gap	mm	0.50 to 0.60

Electrical system

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Battery	V / CC / RC	12 / 45Ah
Alternator voltage / full load current / engine rpm		14.0 / _ / 2500
Starter motor current / voltage - cranking	A / V	198 / 9.1
- locked	A / V	315 / 7±0.3

Running gear

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

Tyres		
Saloon	Size	145x13
Estate / Van	Size	145x13
Pressure - front / rear - Saloon	bar	1.6 / 1.8
- Estate / Van	bar	1.6 / 1.8

Front suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	0±1.0 L
Camber		+1°25'±30' L
Castor		+2°15'±30' L
King pin inclination		_

Rear suspension / wheel alignment

Toe-in (+) / Toe-out (-)	mm [°]	+3.0 to 7.0
Camber		-3°±30'

Torque wrench settings

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1986 to 1991

Cylinder head - stage 1	Nm	93 ²
- stage 2	Nm	_
- stage 3	Nm	_
- stage 4	Nm	_
Big-end bearings	Nm	51
Main bearings	Nm	80
Clutch cover	Nm	16
Flywheel [driveplate]	Nm	83
Front hubs	Nm	137
Rear hubs	Nm	137
Wheel nuts / bolts	Nm	79
Spark plugs	Nm	37

Capacities

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1986 to 1991

Engine oil & filter	litres	4.5
Gearbox - 4-speed [5-speed]	litres	3.2
Automatic transmission - refill	litres	_
Final drive	litres	WT
Cooling system	litres	6.5
Fuel tank	litres	38

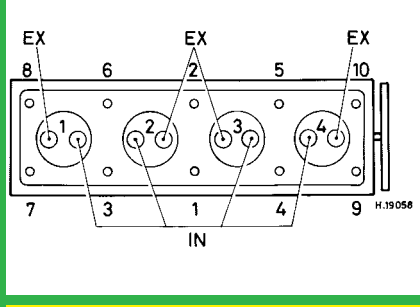
Notes and Illustrations

¹[E 95 RON]: 5° BTDC

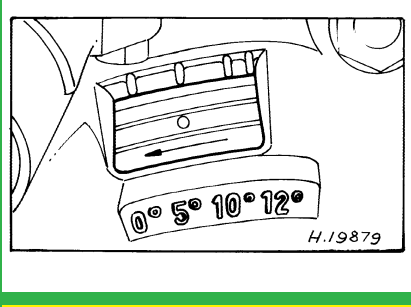
²Engine no. 951668 ►: S1: 20. S2: 40. S3: + 90° S4: + 90°. New bolts after 4 removals

1: Idle speed

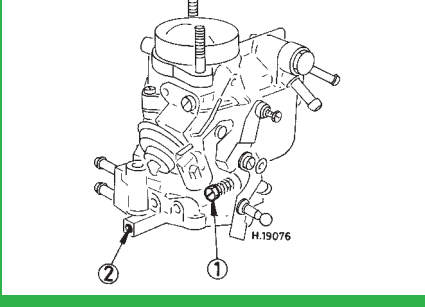
2: CO / Mixture



1116 cm³



1116 cm³



IPM 32 MGV 12