

Technical Specifications

Job-No.

00 — 1

A. Engine

General

Model	M 121 B. I
Operation	Four cycle (Gasoline)
Number of cylinders	4
Bore and stroke (mm)	85×83.6
Total effective piston displacement (cc.)	1897
Compression ratio	7.5:1
Firing order	1—3—4—2
Maximum rpm	6000
Engine performance in metric HP at rpm according to DIN	75 at 4600
in grHP at rpm according to SAE	84 at 4800
Maximum torque in mkg at rpm, DIN rating	13.9 at 2800
in mkg, SAE rating	14.8 at 2800
Crankshaft bearings	3 compound bearings
Connecting rod bearings	Compound bearings
Valve arrangement	Overhead
Camshaft location	Top
Air cleaner	Pico-Silencer filter Mann & Hummel AP 2154/00 Cartridge C 2154
Oil filter	Percolator filter with Micronic-insert in main flow Knecht FO 235/5
Oil cooling	Oil-water heat exchangers
Cooling system	Water circulation through pump, thermostat with by-pass pipe and fan
Lubrication	Force-feed lubrication by means of gear-type pump

Electrical Equipment at Engine

Distributor	Bosch VJU 4 BR 14 m K
Ignition adjustment	Automatic advance with centrifugal and vacuum control, retarding by hand through octane number compensator*)
Ignition coil	Bosch TK A 3
Spark plugs without suppressors	Bosch W 175 T 7 "N" Beru 175/14 Lu ₃ Champion 730
Spark plugs with suppressors	Bosch W 175 RT 7 "N" Beru E 175/14 Lu ₃ Champion X 730
Starter	Bosch EED 0.8/12 R 30
Generator	Bosch LJ/GEG 160/12 — 2500 R 8
Regulator	Bosch 3-element voltage and current regulator RS/UA 160/12/15

*) On later models the octane number compensator is no longer installed.

Fuel System and Mixture Control

Fuel feed pump	DVG diaphragm pump PE 10284 e	
Fuel pre-filter	Fine-screen full flow filter	
Carburetor	1 Solex downdraft compound carburetor 32 PAITA	
	Stage 1	Stage 2
Air horn "K"	23	25
Main jet "G"	0125	0170
Air correction jet "a"	180	200 c (with mixing tube)
Mixing tube "s"	44	—
Mixing tube holder with polyamide ball valve	Res. 5.5	—
Idle fuel jet	g 50	—
Idle air jet "u"	1.0 (previously 1.5)	—
Float chamber vent	1.5	—
Accelerating pump	Nr. 841 (neutral)	—
Pump jet "G"	80	—
Injection tube	high 0.5 graded	—
Starter fuel jet "Gs"	110	—

	Stage 1	Stage 2
Starter air jet bore in starter slide	3.0	—
Float needle valve	2.0	
Weight of float (g) (Nylon float)	7.3	
By-pass bores	1.2 and 1.8 (previously 2x1.15)	—
Fuel tank capacity (liters)	56	
Fuel reserve (liters)	approx. 5.5	
Fuel reserve indication	Red indicator light	

Engine Adjustment Data

Tappet clearance with engine cold (mm)	
Inlet	0.10
Exhaust	0.20
Ignition points with 0.4 mm tappet clearance for test measurements	
Inlet opens	12° BTDC
Inlet closes	44° ABDC
Exhaust opens	51° BBDC
Exhaust closes	15° ATDC
Spark gaps (mm)	
Spark plugs without suppressors	0.7 — 0.8
Spark plugs with suppressors	0.9 — 1.0
Ignition setting at maximum advance	8 ± 1 BTDC
Contact point gap (mm)	0.4 — 0.5
Idle rpm	700 — 750
Fuel level (mm)	19 — 21
Amount injected by accelerator pump (cc/stroke)	1.0 — 1.2