

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

B. Chassis

Clutch

Pressure plate	F. and S. KS 12 K
Disk	K 12 SSZ
Facing	Rusko

Transmission

Gear ratios	
1 st gear	1 : 4.05
2 nd gear	1 : 2.38
3 rd gear	1 : 1.53
4 th gear	1 : 1
Reverse gear (not synchronised)	1 : 3.92

Front Axle

	curb condition	normally loaded
Front wheel camber	0° to + 1°*)	0° to + 1°*)
Front wheel toe-in — rolled average, wheels not forced inward	0—2 or 0° to 0° 20'	0—2 or 0° to 0° 20'
Front wheel caster	2° 50' to 4°	3° 10' to 4° 10'
King pin inclination in accordance with camber	5° 20' to 5° 40'	5° 20' to 5° 40'
Track angularity differential with inner wheel at 20° lock, curb condition	approx. — 2° 30'	

* Should be the same on both sides as far as possible; admissible difference 30'. Recommended value + 0° 20' to + 0° 40' normally loaded

Rear Axle

Rear axle ratio	1 : 4.10
Rear wheel camber	
curb condition	left right
	approx. + 1° 30' approx. + 1° 45'
normally loaded	left right
	— 2° 30' to — 3° 30' — 3° to — 4°

Steering Gear

Wheel lock	
inner	39°
outer	30°
Minimum turning circle (m)	approx. 10.7
Steering shock absorber	Stabilus T 20 × 135

Wheels and Tires

Rim size		4½ K × 13 unsymmetrical
Tire size		6.40—13
Tire pressure (atmospheres)	front	1.7
	rear	1.8

Springs

front	Coil springs with rubber buffer rings and torsion-bar stabilizer
rear	Coil springs with rubber buffer rings

Shock Absorbers

	Fichtel and Sachs	Stabilus
front	Sov 26 × 130	T 40 × 130
rear	Tov 30 × 140	T 40 × 140

Brakes

Service brake		Internal expanding hydraulic brake, acting on all four wheels
		Brake drum with turbo-cooling
		Brake shoes with automatic adjustment
Brake master cylinder, Ø		1"*)
Brake wheel cylinders, Ø	front	1⅛"
	rear	1⅝" (previously 1")
Hand brake		Mechanical, acting on rear wheels
*) If on request an ATE Power Brake T 50 is installed, the brake master cylinder must be replaced by one 1⅞" in diameter.		

Electrical Equipment

Battery	Voltage (V)	12
	Capacity (Ah)	56

C. Dimensions

Track (mm)	front	1430
	rear	1470
Wheelbase (mm)		2650
Length of vehicle (mm)		4485
Width of vehicle (mm)		1740
Height of vehicle curb condition (mm)		approx. 1560
Ground clearance, carrying two persons (mm)		approx. 205

D. Weights

Dry weight of vehicle (kg) without fuel, spare wheel and tools in curb condition		1110
Unladen weight of vehicle, with full fuel tank, spare wheel and tools (kg)		1200
Load capacity (kg)		450
Permissible total weight (kg)		1650
Permissible axle load (kg)	front	770
	rear	880

E. Capacities

Cooling system with DB heating (liters)	Water	approx.	9.3
Crankcase (liters)	Engine oil	max.	4
		min.	2.5
Oil filter (liters)	Engine oil		0.5
Water pump (cc.)	Hypoid oil SAE 90		10
Transmission (liters)	Transmission fluid		1.4
Rear Axle (liters)	Hypoid oil SAE 90		2.25
Steering (liters)	Hypoid oil SAE 90		0.3
Brake fluid reservoir (liters)	ATE blue brake fluid		0.35
Wheel hub, front (g)	Anti-friction bearing grease		65 each
Carburetor shock absorber (cc.)	Engine oil SAE 10 W		approx. 1.2

F. Speeds, Consumption Figures and Operating Conditions

Maximum speeds in the individual gears (km/h)	
1 st gear	40
2 nd gear	69
3 rd gear	110
4 th gear	approx. 140
Climbing ability (%)	
1 st gear	58
2 nd gear	29
3 rd gear	17
4 th gear	9.5
Engine speed at 100 km/h in 4 th gear (rpm)	3580
Rated fuel consumption (liters/100 km)	8.9
Engine oil consumption (liters/100 km)	0.15
Cooling water working temperature (0° C)	70—95
Fuel	commercial fuels with a minimum anti-knock rating of 86 octane (according to Research-Method)