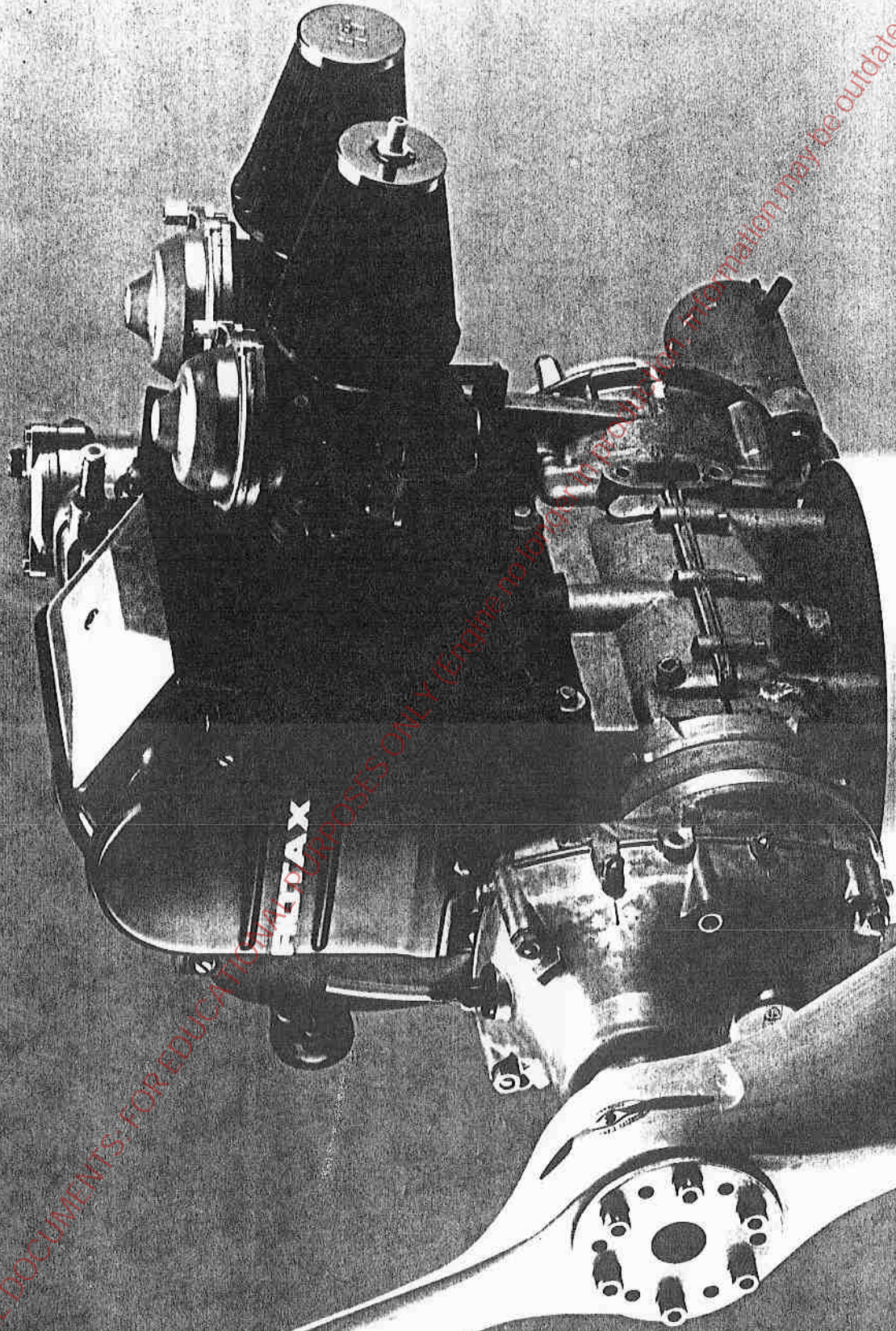


ROTAX 508 4-STROKE ENGINE



HISTORICAL DOCUMENTS FOR EDUCATIONAL PURPOSES ONLY (ENGINE NO. 10155) (THIS INFORMATION MAY BE OUTDATED)

TECHNICAL DATA OF ENGINE AND AUXILIARY EQUIPMENT

Engine:	2 cylinders in line, fan-cooled, 4 stroke with toothbelt driven single overhead camshaft (SOHC)																
Reduction gear:	flanged to engine, spur gear, standard gear ratio $i = 3$, integrated torsional shock absorber.																
Bore:	71 mm (2,80 in)																
Stroke:	64 mm (2,521 in)																
Displacement:	507 c.c. (31 cu.in)																
Performance:	32 kW / 43 hp at 7800 r.p.m.																
Torque:	41 Nm (30 ft.lb.) at 7000 r.p.m.																
Permissible max. speed:	8000 r.p.m.																
Cylinder:	2 light-alloy cylinders with cast iron sleeve																
Piston:	cast, light-alloy, with 3 piston rings																
Cyl. wall to piston clearance:	0,04 mm (0,0016 in)																
Cylinder head:	mono-block-design, camshaft on roller bearings, roller rocker arms																
Compression ratio:	10,5 : 1																
Inlet valve:	36 mm (1,42 in)																
Outlet valve:	30 mm (1,18 in)																
Valve clearance, cold:	0,05 mm (0,002 in) on both valves																
Camshaft:	Case hardened, opening angle 243 degrees																
Valve timing with 1 mm valve clearance:	<table> <tr> <td>inlet valve</td> <td>opens</td> <td>12</td> <td>BTDC</td> </tr> <tr> <td>exhaust valve</td> <td>opens</td> <td>50</td> <td>BBDC</td> </tr> <tr> <td>inlet valve</td> <td>closes</td> <td>51</td> <td>ABDC</td> </tr> <tr> <td>exhaust valve</td> <td>closes</td> <td>13</td> <td>ATDC</td> </tr> </table>	inlet valve	opens	12	BTDC	exhaust valve	opens	50	BBDC	inlet valve	closes	51	ABDC	exhaust valve	closes	13	ATDC
inlet valve	opens	12	BTDC														
exhaust valve	opens	50	BBDC														
inlet valve	closes	51	ABDC														
exhaust valve	closes	13	ATDC														
Crankshaft support:	4 ball-bearings																
Cooling:	axial fan cooled																
Lubrication:	dry sump, forced flow																
Oil pump:	trochoid pump driven by camshaft																

Oil tank capacity:	2,5 litres (0,66 gal.us)
Oil grade:	SAE 20 W 40
Oil pressure:	1 - 1,5 bar (14,5 - 21,8 psi) at 6000 r.p.m. and 140 deg. C (284 deg. F) oil temperature
Lighting output:	12 V 110W + 30W AC
Regulator-rectifier optional	a) rectifier 866 080 for circuits with or without battery as long as a minimum load of 12 W is provided b) rectifier 264 870 for circuits with or without battery but no necessity of any load.
Ignition timing:	timing at start: 14 deg. BTDC at full load: 30 deg. BTDC
Breaker gap:	0,3 - 0,4 mm (0,012 - 0,016 in)
Pole shoe gap:	9 mm +/- 2 mm (.35 in +/- .08 in.) 24 mm (.95 in.) at start timing.
Spark plug:	12 mm, D7 EA
Electrode gap:	0,6 mm (0,024 in)
Carburetor:	2 x BING type 64, 32 mm (1,26 in.) constant depression
Air intake filter:	2 x K&N micronic filter
Fuel pump:	Pneumatic type DF 52
Fuel:	PREMIUM (knock-rating not below RON 95)
Starter:	Rewind starter, optional: Electric starter
Reduction gear:	i = 3 , optional i = 2,58 other gear ratios on request
Gear lubrication:	gear oil SAE 140, API GL 5 or GL 6
Sense of rotation on reduction gear:	clockwise, looking towards propeller flange
Weight of engine with reduction gear and exhaust manifold but without carbs, air filters, muffler, oil container, without oil:.....	38,0 kg (83,8 lbs)
Weight of auxiliary equipment: carbs, airfilters, fuel pump, muffler, oil container, and oil:	approx. 10,5 kg (23,2 lbs)
Weight of electric starter assy.:	3,5 kg (7,7 lbs)

Recd March 24 88 ROTAX ENGINE TYPE 508 UL MOD. 88

design: 37.508.0601

Description: Four-stroke engine, two-cylinders in line, 180 degr. single overhead camshaft, with tooth belt drive and integrated reduction gear

Bore: 71,0 mm (2,795 in.)

Stroke: 64,0 mm (2,519 in.)

Displacement: 507 c.c. (30,939 cu.in.)

Power output: 32 KW (43 hp) at 7800 rpm, performance sheet Lb. 337

max. torque: 41 Nm (30 ft.lb.) at 7000 rpm, performance sheet Lb. 337

Cylinder: 2 light alloy cylinders with cast-iron sleeves

Piston: Aluminium cast piston with 3 piston rings

Piston/cylinder clearance: 0,04 mm (0,00157 in.)

Cylinder head: monoblock design, camshaft on ball bearings, rocker arms with rollers

Compression ratio: 10,5 : 1

Intake valve: 36 mm (1,417 in.)

Exhaust valve: 30 mm (1,181 in.)

Valve gap: 0,05 mm (0,00197 in.) both valves, with cold engine

Cam shaft: steel, case hardened, 243 degrees

Valve timing: (with 1 mm clearance)
 Intake: opens 12 degr. BTDC
 closes 51 degr. ABDC
 Exhaust: opens 50 degr. BBDC
 closes 13 degr. ATDC

Crankshaft: four-bearing crankshaft

Cooling: Fan cooled

Lubrication: dry sump lubrication

Oil pump: Trochoid pump, camshaft driven

Oil quantity: 2,5 l (0,660 US gal.)

Oil quality: 20 W 40

Oil pressure: 1 - 1,5 bar (14,5 - 21,75 p.s.i.) at 6000 r.p.m. and oil temperature 140 degr. C

Delivery rate:	1 litre/min. (0,264 US gal./min.) at 6000 r.p.m.
Ignition system:	flywheel magneto generator SCP 2
Generator output:	AC-12V 110W + 30W
Rectifier-regulator optional:	a) 866 080 requires minimum load 12 W (1 Amp) to regulate b) 264 870 - no minimum load required
Ignition timing:	idling: 14 degr. BTDC full load: 30 degr. BTDC
Contact breaker point gap:	0,3 - 0,4 mm (0,0118 - 0,0157 in.)
Break-away gap:	9 mm (0,3543 in.), 24 mm (0,945 in.) starting
Spark plug:	12 mm (0,4724 in.), D7EA
Electrode gap:	0,6 mm (0,0236 in.)
Carburetor:	2 x BING-CD-carburetor, 32 mm (1,26 in.) dia, type 64
Airfilter:	2 x dry airfilters K & N
Fuel Pump:	pneumatic fuel pump, DF 52
Fuel:	Premium gasoline, octane number not below RON 95
Fuel consumption:	see performance sheet Lb. 337
Starter:	Rewind starter, (pinion type electric starter optional)
Reduction gear:	i=3,0 optional 2,58 other ratios on inquiry
Lubrication of gear-box:	gear oil SAE 140, API-GL5 or GL6
Direction of prop. shaft rotation:	clockwise, viewed towards propeller flange
Weight:	38 kg (83,77 lb.) with exhaust manifold, yet without carburetor, fuel pump, airfilters, exhaust system, oil, oil tank
Additional weight:	10,5 kg (23,148 lb.) (carburetors, fuel pump, airfilters, exhaust system, oil tank with oil)
Weight electric starter assy.:	3,5 Kg (7,716 lb.).

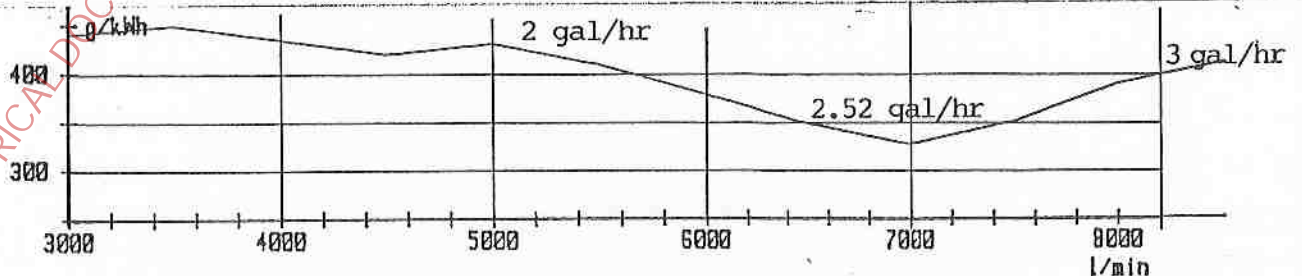
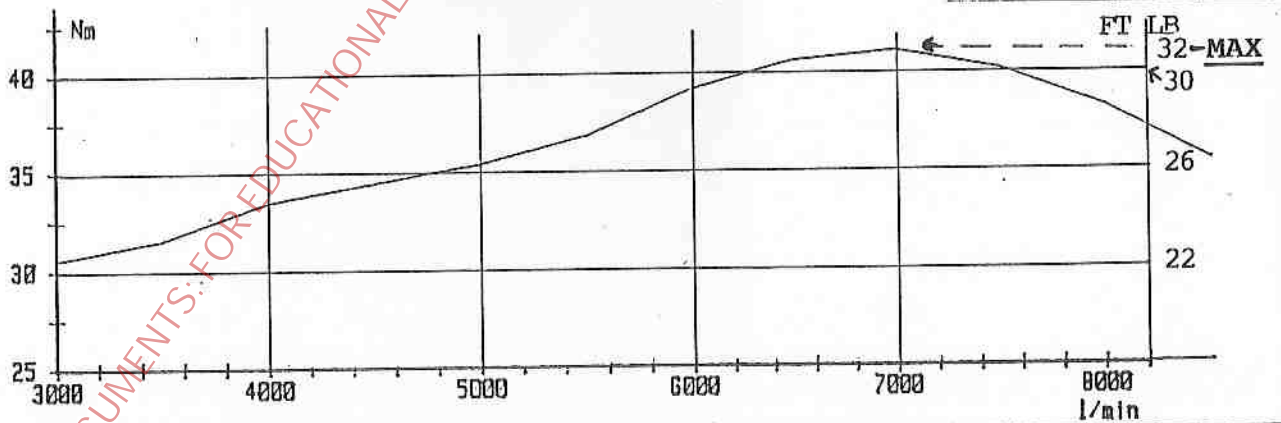
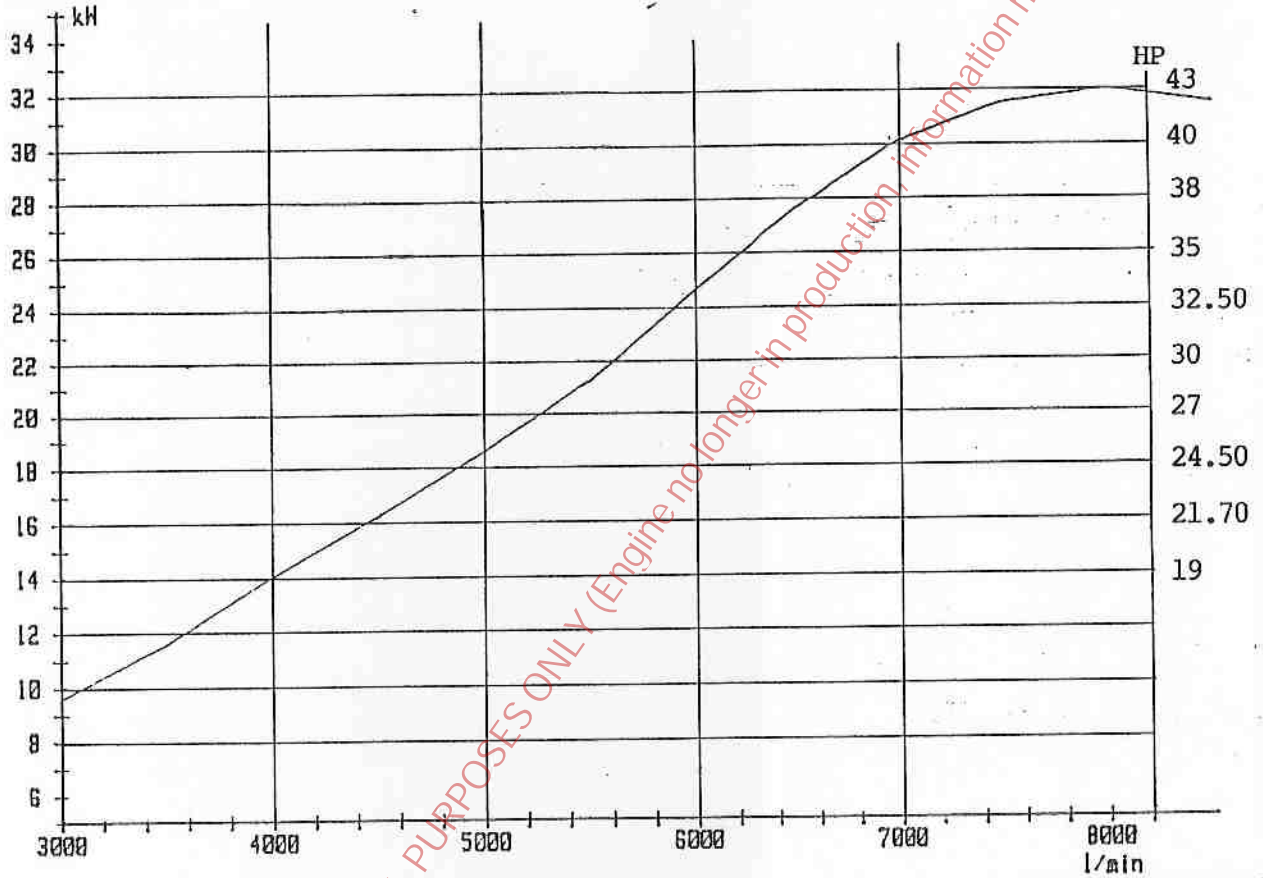


ROTAX ENGINE TYPE 508 UL, Mod. 88

Lb. 337
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Output, Torque and Fuel Consumption DIN 70020

Bore:	71,0 mm	Ignition System:	BOSCH SCP 2
Stroke:	64,0 mm	Ignition Timing:	30° BTDC
Displacement:	506,8 cc.	Spark Plug:	12mm D7 EA
Compression Ratio:	10,5	Carburetor:	2xBING 32 mm, type 64
Cam Shaft:	243°	Air Filter:	2 x 825 550
Fuel:	Premium	Exhaust System:	:973 402 u. 978 220

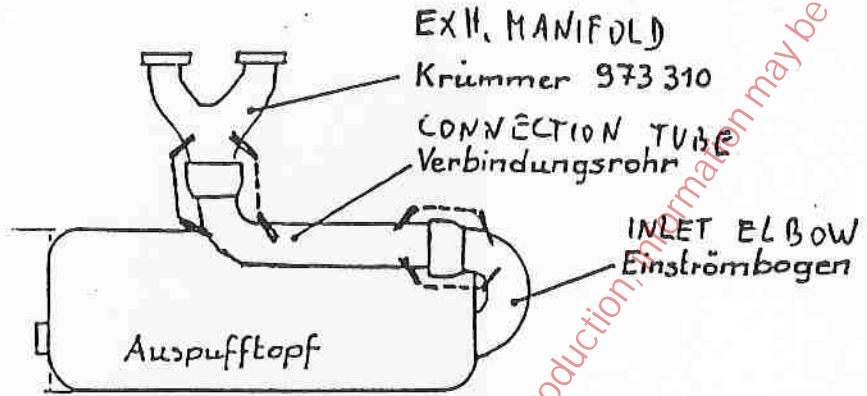


Vert.: GL P2 KB VE VK EP

HISTORICAL DOCUMENTS: FOR EDUCATIONAL PURPOSES ONLY (Engine no longer in production, information may be outdated)

Auspuffanlage 508 UL 360 Grad

JUN 20 1969



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