

MAIN BEARING - FRONT.
MIN. MAX.
SIDE CLEARANCE EACH SIDE ON DIAMETER .75 1.75 .03 .062

CONN. ROD BEARING.
MIN. MAX.
END FLOAT ON DIA. .10 .226 .000 .049

MAIN BEARINGS - INTER & REAR.
MIN. MAX.
SIDE CLEARANCE EACH SIDE ON DIAMETER .75 2.75 .013 .062

CAMSHAFT BEARINGS - INTER.
MIN. MAX.
ON DIAMETER .025 .101

THRUST RACE NUT.
MIN. MAX.
ON DIA. .637 .713

OIL THROWER - FRONT.
MIN. MAX.
CLEARANCE .36 1.0

CAMSHAFT BEARING - FRONT.
MIN. MAX.
END FLOAT ON DIA. .050 .250 .032 .095

IDLER GEAR.
MIN. MAX.
MAX .175 .13
MIN .075 .04

BACKLASH END FLOAT ROLLERS END CLEARANCE DIAM. L CLEARANCE .15 .40 .005 .04

PISTON RINGS SIDE CLEARANCE.
MIN. MAX.
3RD. RING - SCRAPER .088 .138 .127 .178
2ND. RING .203 .253
1ST. RING - UPPER .228 .457

PISTON.
MIN. MAX.
SKIRT ON DIA. .435 .535
3RD. LAND ON DIA. .505 .605
2ND. LAND ON DIA. .585 .685
1ST. LAND ON DIA. .675 .775

TAPPETS.
MIN. MAX.
ON FLATS ON DIA. .069 .136 .014 .045

OIL PUMP.
MIN. MAX.
ROTOR ON DIA. .013 .053
ROTOR END FLOAT .172 .222
PISTON IN ROTOR .003 .027

RELIEF VALVE ON DIA. .01 .04
BEARING BLOCK SIDE CLEARANCE .125 .30
BEARING BLOCK END FLOAT .013 .037
PIN IN BEARING BLOCK ON DIA.

CONN. ROD SMALL END.
MIN. MAX.
SIDE CLEARANCE .75

VALVES IN GUIDES.
MIN. MAX.
ON DIA. .044 .070
VALVE CLEARANCE COLD .10

VALVE ROCKERS.
MIN. MAX.
ON DIA. .019 .057
END FLOAT .075 .38

ALL DIMENSIONS IN MILLIMETRES.

SCRAP SECTION THROUGH IDLER GEAR.

CIRRUS MINOR.

CLEARANCE CHART. (NEW ENGINE)

S.E. 102Z

CIRRUS MINOR CLEARANCES

NOTE.—Heavy Figures show Dimensions in Millimetres.

PART.	Clearance When New.		Maximum Clearance Allowed for a Further 300 Hours Running.	Maximum Clearance Allowed for a Further 600 Hours Running.
	Minimum.	Maximum.		
MAIN BEARINGS.				
On diameter ... ..	.013 m.m. .0005"	.062 m.m. .0025"		.076 m.m. .003"
Side clearance (Front bearing only) each side ...	.75	1.75		
Side clearance (Remainder of bearings) each side	.75 .030	.070 .108		
CONNECTING ROD BIG END BEARINGS.				
On diameter ... ..	.000	.049		.076
End float ... ..	.10 .004	.226 .009		.30 .012
CAMSHAFT BEARING FRONT ONLY.				
On diameter ... ..	.032	.095		.127
End float ... ..	.00125 .050 .002	.0038 .250 .010		.005 .33 .015
CAMSHAFT BEARINGS INTERMEDIATE.				
On diameter ... ..	.025	.101		.152
	.001	.004		.006
CYLINDERS.				
On diameter				
Ovality				
Taper				
PISTON (on diameter in Cylinder).				
Skirt ... ..	.435	.535	.635 m.m. .025"	
3rd Land ... ..	.505	.605	.736	
2nd Land ... ..	.020	.024	.029	
1st Land (nearest crown) ... ..	.585	.685	.813	
(Readings to be taken at 1/2 stroke position.)	.023	.027	.032	
	.675	.775	.890	
	.0265	.0305	.035	

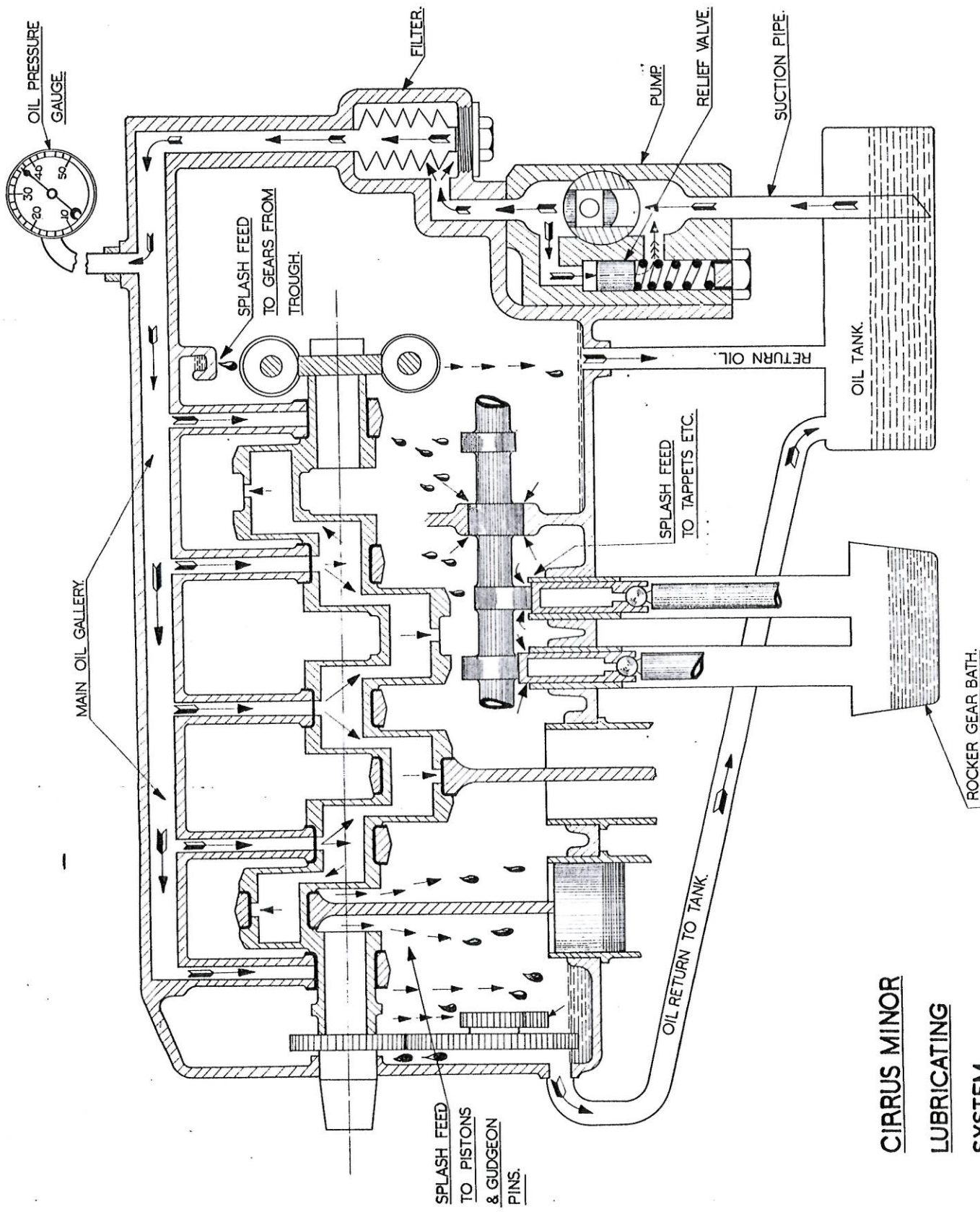
PART.	Clearance When New.		Maximum Clearance Allowed for a Further 300 Hours Running.	Maximum Clearance Allowed for a Further 600 Hours Running.
	Minimum.	Maximum.		
PISTON RINGS (Side Clearance).				
1st Ring (nearest crown) ... ..	.203 m.m. .008"	.253 m.m. .013"	.330 m.m. .013"	
2nd Ring ... ..	.127 .005	.178 .007	.253 .010	
3rd Ring (Scraper) ... ..	.088 .0035	.138 .0055	.203 .0085	
Gap on all rings (at 1/4 stroke position) ... ..	.228 .009	.457 .018	.508 .020	
GUDGEON PIN.				
On diameter in piston and connecting rod ... ..	.000 .000	.026 .001	.039 .0015	
End float between circlips... ..	1.55 .061	1.85 .073	2.03 .080	
CONNECTING ROD.				
Side clearance in piston ... ..	.75 .030	2.75 .108		2.75 m.m. .108"
MAGNETO DRIVE SHAFT.				
Oil thrower clearance from housing ... ..	.125 .005	.213 .0085		.213 .0085
Backlash on gears ... ..	.125 .005	.25 .010		.508 .020
Simms coupling end float ... ..	.500 .020	1.00 .040		1.00 .040
(NOTE.— <i>Flexibile coupling must not be in compression.</i>)				
IDLER GEAR.				
Backlash ... ..	.075 .003	.175 .007		.381 .015
End float ... ..	.04 .0016	.13 .005		.254 .010
NEEDLE ROLLERS.				
End clearance ... ..	.15 .006	.40 .016		.508 .020
Diametrical clearance ... ..	.005 .0002	.04 .0016		.054 .002

PART.	Clearance When New.		Maximum Clearance Allowed for a Further Hours Running.	Maximum Clearance Allowed for a Further Hours Running.
	Minimum.	Maximum.		
			300	600
TAPPETS.				
On flats in guides ...	.069 m.m. .0027"	.138 m.m. .0055"	.203 m.m. .008"	.203 m.m. .008"
On diameter in guides ...	.014 .0005	.045 .0018	.076 .003	.076 .003
OIL PUMP.				
Rotor on diameter ...	.013 .0005	.053	.076	.076
" End float ...	.172 .007	.222	.305	.305
Piston in Rotor on diameter ...	.003 .0002	.027	.038	.038
Bearing block side clearance ...	.01 .0004	.04	.054	.054
" " end float ...	.125 .005	.30	.381	.381
Pin in bearing block on diameter ...	.013 .0005	.037	.054	.054
Relief Valve Piston on diameter ...	.003 .0002	.027	.381	.381
VALVES. In Guides.				
On diameter ...	.077 .003	.102 .004	.203 m.m. .008"	.203 m.m. .008"
VALVE CLEARANCE.				
Cold ...	.10 .004	.10 .004	.10 .004	.10 .004
VALVE ROCKER BUSHES.				
In bore on pin ...	.019 .0008	.057 .0025	.127 .005	.127 .005
End Float ...	.075 .003	.38 .015	.540 .020	.540 .020
THRUST RACE NUT.				
On diameter in front cover ...	.637 .025	.713 .028	.713 .028	.713 .028

PART.	Clearance When New.		Maximum Clearance Allowed for a Further 300 Hours Running.	Maximum Clearance Allowed for a Further 600 Hours Running.
	Minimum.	Maximum.		
<u>OIL THROWER FRONT.</u>				
Clearance from Timing Cover ... ..	.36 m.m. .014"	1.0 m.m. .040"		1.0 m.m. .040"
<u>TACHOMETER DRIVE SPINDLES.</u>				
On diameter in bush ... ..	.012 .0005	.045 .0016		.054 .002

N.B.—The clearances are shown in three groups. Firstly, the new clearances, secondly, the maximum clearance permissible where a part will be refitted at top overhaul for a further period of 300 hours running, and in the last column, the maximum clearances allowed for parts which are to be reassembled at complete overhaul for a further period of 600 hours running.

It will be seen that these parts are such items as will only be disturbed at complete overhaul periods.



**CIRRUS MINOR
LUBRICATING
SYSTEM.**