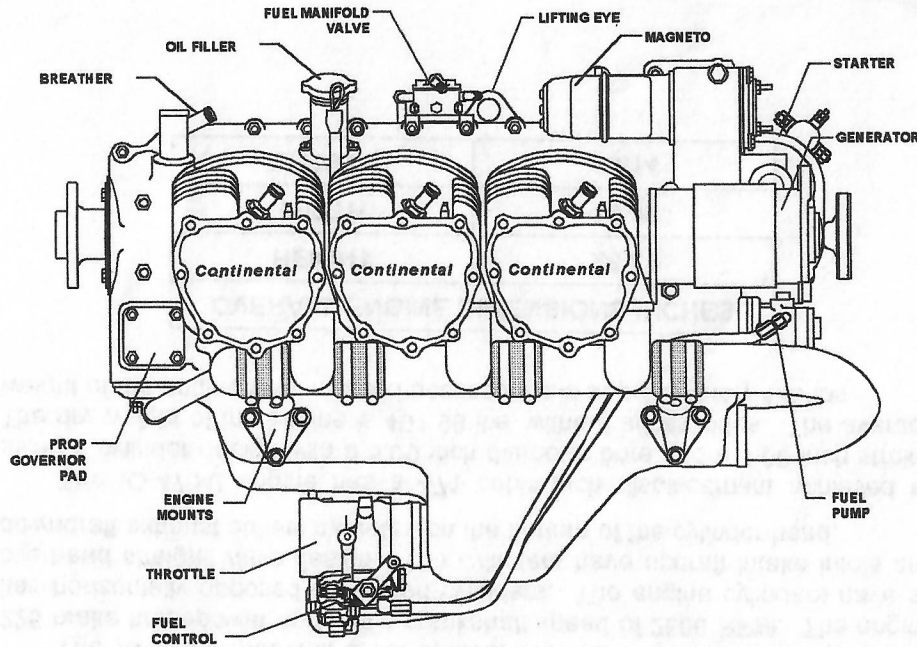


IO-470-N

Type Certificate 3E1



The IO-470-N model is a six cylinder fuel injected engine that produces 260 brake horsepower and has a crankshaft speed of 2625 RPM. The engine has horizontally opposed air cooled cylinders. The engine cylinders have an overhead inclined valve design. The cylinders have updraft intake inlets and downdraft exhaust outlets mounted on the bottom of the cylinder head.

The IO-470-N engine has a 471 cubic inch displacement achieved by using a cylinder design with a 5.00 inch diameter bore and a 4.00 inch stroke. The dry weight of the engine is 414.44 lbs. without accessories. The average weight of the engine with installed accessories is approximately 465 lbs.

OVERALL ENGINE DIMENSIONS INCHES	
HEIGHT	26.81
WIDTH	33.58
LENGTH	38.14

ENGINE SPECIFICATIONSIO-470-N

Cylinders

Arrangement Horizontally Opposed
 Number of Cylinders 6
 Compression Ratio 8.6:1
 Firing Order 1-6-3-2-5-4
 Bore (Inches) 5.00
 Stroke (Inches) 4.00
 Piston Displacement (cu. in.) 471

Brake Horsepower

Rated Maximum Continuous Operation 260 BHP @ 2625 RPM
 Recommended Cruise 195 BHP @ 2450 RPM

OPERATING LIMITS

Crankshaft Speed - RPM

Rated Maximum Continuous Operation 2625
 Recommended Idle 600

Manifold Pressure Limit (In. Hg.) Absolute Full Throttle

Fuel Control System TCM Fuel Injection

Fuel 100/130

Oil

TEMPERATURE	AVIATION GRADE	SAE GRADE	MULTI-VISCOSITY
BELOW 40	65	30	10W-30 / 15W-50 / 20W-50
ABOVE 40	100	50	15W-50 / 20W-50 / 20W-60

Oil Pressure

Idle, Minimum, psi 10
 Normal Operation, psi 30-60

Oil Sump Capacity (U.S. Quarts) 12

Max. Oil Consumption (Lb./BHP/Hr. Max.)012 lbs/bhp/hr

Oil Temperature Limits

Minimum for Take-Off 75° F
 Maximum Allowable 225° F

Cylinder Head Temperature

Recommended Max. at Cruise 380° F
 Limit 460° F

Ignition Timing (Compression Stroke, Breaker Opens)

Right Magneto, Degrees BTC 20°
 Left Magneto, Degrees BTC 20°

Spark Plug

TCM 634675
 Champion RHB32E



CONTINENTAL MOTORS

MODEL	NO. of CYL	TAKEOFF POWER HP@RPM	METRO POWER HP@RPM	BORE & STROKE	DISPL. CUBIC IN.	ENGINE DIMENSIONS (INCHES)			WEIGHT DRY LBS. BASIC ENGINE	FUEL GRADE	COMPR. RATIO	RECOMMEND TBO HRS/YEARS
						HEIGHT	WIDTH	LENGTH				
O-200-A & B	4		100 @ 2750	4.06 X 3.88	200	23.18	31.56	28.53	170.18	80/87	7.0:1	1800/12
IO-240-A & B	4		125 @ 2800	4.44 X 3.88	240	23.50	31.40	29.10/29.80	205.00	100/100LL	8.5:1	2000/12
O300-A, C & D	6		145 @ 2700	4.06 X 3.88	300	27.41	31.50	35.97	248.70	80/87	7.0:1	1800/12
IO-360-C, CB, D, DB, G, GB, H & HB	6		210 @ 2800	4.44 X 3.88	360	22.43	31.46	34.03	327.25	100/100LL	8.5:1	1500/12
IO-360-ES	6		210 @ 2800	4.44 X 3.88	360	26.22	33.05	36.32	305.00	100/100LL	8.5:1	2000/12
IO-360-J, JB,	6	210 @ 2800	195 @ 2600	4.44 X 3.88	360	22.43	31.46	34.03	327.25	100/100LL	8.5:1	1500/12
IO-360-K & KB	6		195 @ 2600	4.44 X 3.88	360	22.43	31.46	34.03	327.25	100/100LL	8.5:1	#1500/12
TSIO-360-A, AB	6	210 @ 2800	210 @ 2800	4.44 X 3.88	360	22.43	31.46	35.34	283.81	100/100LL	7.5:1	1400/12
TSIO-360-C, CB	6		225 @ 2800	4.44 X 3.88	360	22.76	31.46	35.34	301.00	100/100LL	7.5:1	1400/12
TSIO-360-D, DB	6		225 @ 2800	4.44 X 3.88	360	22.76	31.46	35.34	283.81	100/100LL	7.5:1	1400/12
L/TSIO-360-E, EB	6		200 @ 2575	4.44 X 3.88	360	27.5	31.38	56.97	321.35	100/100LL	7.5:1	1400/12
TSIO-360-F -FB	6		200 @ 2575	4.44 X 3.88	360	26.44	31.38	40.53	328.35	100/100LL	7.5:1	1800/12
TSIO-360-H -HB	6		210 @ 2800	4.44 X 3.88	360	22.43	31.38	35.34	295.75	100/100LL	7.5:1	1400/12
TSIO-360-JB	6		225 @ 2800	4.44 X 3.88	360	22.43	31.38	35.34	295.75	100/100LL	7.5:1	1400/12
L/TSIO-360-KB	6		220 @ 2800	4.44 X 3.88	360	27.50	31.38	56.97	328.35	100/100LL	7.5:1	1800/12
TSIO-360-LB	6		210 @ 2700	4.44 X 3.88	360	27.53	31.38	56.97	343.35	100/100LL	7.5:1	1800/12
TSIO-360-MB	6		210 @ 2700	4.44 X 3.88	360	32.82	35.78	42.78	327.50	100/100LL	7.5:1	1800/12
L/TSIO-360-RB	6		220 @ 2600	4.44 X 3.88	360	28.00	33.00	57.5	327.50	100/100LL	7.5:1	1800/12
TSIO-360-SB	6		220 @ 2600	4.44 X 3.88	360	32.82	35.78	42.78	328.35	100/100LL	7.5:1	1800/12
O-470-GCI	6		240 @ 2600	5.00 X 4.00	470	26.81	33.56	37.14	431.60	91/96	8.0:1	1500/12
O-470-J	6		225 @ 2550	5.00 X 4.00	470	27.75	33.32	36.03	354.15	80/87	7.0:1	1500/12
O-470-K, L & M	6		230 @ 2600	5.00 X 4.00	470	28.09	33.56	36.08	380.00	80/87	7.0:1	1500/12
O-470-R & S	6		230 @ 2600	5.00 X 4.00	470	28.42	33.56	36.03	379.66	80/87	7.0:1	1500/12
O-470-U	6		230 @ 2400	5.00 X 4.00	470	28.42	33.56	36.03	388.93	100/100LL	8.6:1	1500/12
IO-470-C	6		250 @ 2600	5.00 X 4.00	470	26.81	33.56	38.14	402.48	91/96	8.0:1	1500/12
IO-470-D & E	6		260 @ 2625	5.00 X 4.00	470	19.75	33.56	43.64	426.06	100/130	8.6:1	1500/12
IO-470-F	6		260 @ 2625	5.00 X 4.00	470	23.79	33.56	36.72	399.06	100/130	8.6:1	1500/12
IO-470-H	6		260 @ 2625	5.00 X 4.00	470	26.81	33.56	38.14	402.48	100/130	8.6:1	1500/12
IO-470-J & K	6		225 @ 2600	5.00 X 4.00	470	26.81	33.39	38.14	401.90/370.56	80/87	7.0:1	1500/12
IO-470-L & M	6		260 @ 2625	5.00 X 4.00	470	19.75	33.56	43.17/47.16	411.28	100/100LL	8.6:1	1500/12
IO-470-N	6		260 @ 2625	5.00 X 4.00	470	26.81	33.58	38.14	414.44	100/130	8.6:1	1500/12
IO-470-S	6		260 @ 2625	5.00 X 4.00	470	19.75	33.56	40.91	409.37	100/130	8.6:1	1500/12
IO-470-U, V & VO	6		260 @ 2625	5.00 X 4.00	470	19.75	33.56	40.91	406.00	100/130	8.6:1	1500/12
IO-520-A & J	6		285 @ 2700	5.25 X 4.00	520	19.75	33.56	40.91	412.43	100/130	8.5:1	1700/12
IO-520-B, BA, BB	6		285 @ 2700	5.25 X 4.00	520	27.32	33.56	37.97	406.65	100/100LL	8.5:1	1700/12
IO-520-C, CB	6		285 @ 2700	5.25 X 4.00	520	18.78	33.56	42.81	398.72	100/100LL	8.5:1	1700/12
IO-520-D & E	6	300 @ 2850	285 @ 2700	5.25 X 4.00	520	23.79	33.56	36.74/47.16	411.43	100/100LL	8.5:1	1700/12
IO-520-F	6	300 @ 2850	285 @ 2700	5.25 X 4.00	520	19.75	33.56	40.91	411.43	100/130	8.5:1	1700/12
IO-520-K	6	300 @ 2850	285 @ 2700	5.25 X 4.00	520	20.41	33.56	40.91	411.43	100/130	8.5:1	1700/12

MODEL	NO. of CYL	TAKEOFF POWER HP@RPM	METRO POWER HP@RPM	BORE & STROKE	DISPL. CUBIC IN.	ENGINE DIMENSIONS (INCHES)			W I
						HEIGHT	WIDTH	LENGTH	
IO-520-L	6	300 @ 2850	285 @ 2700	5.25 X 4.00	520	23.25	33.56	40.91	
IO-520-M, MB	6		285 @ 2700	5.25 X 4.00	520	20.41	33.56	46.80	
L/IO-520-P	6		250 @ 2500	5.25 X 4.00	520	20.81	33.36	40.91	
L/TSIO-520-AE	6		250 @ 2400	5.25 X 4.00	520	21.38	33.29	38.07	
TSIO-520-AF	6	310 @ 2700	285 @ 2600	5.25 X 4.00	520	19.75	33.56	40.91	
TSIO-520-B, BB	6		285 @ 2700	5.25 X 4.00	520	20.41	33.56	39.25	
TSIO-520-BE	6		310 @ 2600	5.25 X 4.00	520	33.50	42.50	42.64	
TSIO-520-C & H	6		285 @ 2700	5.25 X 4.00	520	20.04/23.54	33.56	40.91	4
TSIO-520-CE	6		325 @ 2700	5.25 X 4.00	520	25.00	34.00	41.00	
TSIO-520-D, DB	6		285 @ 2700	5.25 X 4.00	520	29.40	33.56	39.58	
TSIO-520-E, EB	6		300 @ 2700	5.25 X 4.00	520	29.40	33.56	39.25	
TSIO-520-G	6	300 @ 2700	285 @ 2700	5.25 X 4.00	520	19.75	33.56	40.91	
TSIO-520-J, JB, N, NB	6		310 @ 2700	5.25 X 4.00	520	22.32	33.56	54.63	3
TSIO-520-K, KB	6		285 @ 2700	5.25 X 4.00	520	22.32	33.56	54.63	
TSIO-520-L, LB	6		310 @ 2700	5.25 X 4.00	520	20.02	33.56	50.62	
TSIO-520-(M) P & R	6	310 @ 2700	285 @ 2700	5.25 X 4.00	520	(20.04)/23.54	33.56	40.91	
TSIO-520-T	6		310 @ 2700	5.25 X 4.00	520	32.26	33.56	38.20	
TSIO-520-U & UB	6		300 @ 2700	5.25 X 4.00	520	40.56	33.56	52.19	
TSIO-520-VB	6		325 @ 2700	5.25 X 4.00	520	20.41	33.56	39.25	
TSIO-520-WB	6		325 @ 2700	5.25 X 4.00	520	20.02	33.56	50.62	
GTSIO-520-D & HV	6		375 @ 3400	5.25 X 4.00	520	26.63	34.04	63.63	
GTSIO-520-L ▽	6		375 @ 3350	5.25 X 4.00	520	26.41	34.04	60.84	
GTSIO-520-M ▽	6		375 @ 3350	5.25 X 4.00	520	26.41	34.04	62.39	
GTSIO-520-N ▽	6		375 @ 3350	5.25 X 4.00	520	26.41	34.04	60.84	
IO-550-A	6		300 @ 2700	5.25 X 4.25	550	20.41	33.56	46.80	
IO-550-B	6		300 @ 2700	5.25 X 4.25	550	27.32	33.56	37.97	
IO-550-C	6		300 @ 2700	5.25 X 4.25	550	19.78	33.56	43.31	
IO-550-D, E, F & (L)	6		300 @ 2700	5.25 X 4.25	550	23.79	33.56	36.74 (40.91)	
IO-550-G	6		280 @ 2500	5.25 X 4.25	550	20.41	34.04	38.43	
IO-550-N	6		310 @ 2700	5.25 X 4.25	550	20.41	34.04	38.43	
TSIO-550-B&E	6		350 @ 2700	5.25 X 4.25	550	33.50	42.50	42.57	
TSIO-550-C	6		310 @ 2600	5.25 X 4.25	550	33.50	42.50	42.57	
TSIOL-550-A	6		350 @ 2700	5.25 X 4.25	550	33.50	42.50	42.57	
TSIOL-550-B	6		325 @ 2700	5.25 X 4.25	550	30.50	39.30	46.10	
TSIOL-550-C	6		350 @ 2600	5.25 X 4.25	550	30.50	39.30	46.10	

▽ GTSIO RPM LISTINGS REFERENCE CRANKSHAFT RPM