

Section V

Performance Charts

Performance information has been derived from actual flight tests and has been corrected to standard atmospheric conditions. Actual performance may vary from standard due to variations in atmospheric conditions, engine and propeller condition, mixture leaning technique, and other variables associated with the particular performance item.

Model AA-1 - Cruise Performance Table

Altitude Feet	RPM	Percent Power	True Air- speed MPH	Fuel Con- sump- tion GPH	Endur- ance Hours	Range Miles Zero Wind
2,500	2600	85	136	7.3	2.8	384
	2500	77	130	6.5	3.1	408
	2400	70	123	5.8	3.5	434
	2300	63	116	5.2	3.9	455
	2200	56	108	4.7	4.3	468
	2100	49	96	4.3	4.7	458
4,500	2600	82	135	6.9	2.9	399
	2500	75	129	6.2	3.3	425
	2400	67	122	5.5	3.7	452
	2300	60	114	4.9	4.1	467
	2200	53	104	4.5	4.5	472
	2100	46	90	4.2	4.8	440
6,500	2600	78	135	6.6	3.1	415
	2500	71	128	5.8	3.5	441
	2400	63	120	5.2	3.8	460
	2300	56	110	4.7	4.3	470
	2200	50	98	4.3	4.6	457
8,500	2600	74	133	6.2	3.3	429
	2500	67	126	5.5	3.6	453
	2400	60	117	5.0	4.0	466
	2300	53	106	4.5	4.4	465
10,500	2600	72	132	5.9	3.4	441
	2500	63	122	5.2	3.8	460
	2400	57	112	4.7	4.2	466

NOTES:

- 1) Range and endurance data include allowance for take-off and climb.
- 2) Fuel consumption is for level flight with mixture leaned to best power. Continuous operation at powers above 75% should be with full-rich mixture.
- 3) Speed performance data is with wheel fairings. Subtract 2 mph for cruise without wheel fairings.
- 4) For temperatures other than standard, add or subtract 1% power for each 10°F below or above the standard temperature; respectively.

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|-----------------------------|---------------------------------|
| 1. Compass Card | 17. Fuses & Circuit Breakers |
| 2. Compass | 18. Cigar Lighter |
| 3. Airspeed Indicator | 19. Parking Brake Control |
| 4. Turn-And-Bank Indicator | 20. Cabin Heat Control |
| 5. Gyro Horizon | 21. Engine Primer |
| 6. Directional Gyro | 22. Mixture Control |
| 7. Altimeter | 23. Throttle Control |
| 8. Vertical Speed Indicator | 24. Carb Heat Control |
| 9. Tachometer | 25. Instrument Light Rheostat |
| 10. Omni Head | 26. Individual Circuit Switches |
| 11. Radio | 27. Starter Switch |
| 12. Instrument Cluster | 28. Master Switch |
| 13. Suction Gauge | 29. Ignition Switch |
| 14. Hourmeter | 30. Phone Jack |
| 15. Glove Compartment | 31. Clock |
| 16. Spare Fuses | |

Landing (Normal):

1. Touchdown on main gear.
2. Lower nose wheel slowly as speed decreases.
3. Directional control: Use rudder until it becomes ineffective (approximately 20 MPH).
4. Brakes: As required for stopping and directional control.

Landing (Obstacle Clearance):

1. Airspeed: 78 MPH.
2. Flaps: Fully extended.
3. Land on main wheels first.
4. Lower nose wheel.
5. Directional control: Use rudder until it becomes ineffective (approximately 20 MPH).
6. Flaps: UP.
7. Brakes: As required for stopping and directional control.

Balked Landing:

1. Apply full throttle.
2. Carburetor heat: OFF.
3. Establish climb attitude.
4. Flaps: Retract.

After Landing:

1. Flaps: UP.
2. Carburetor heat: OFF.
3. Auxiliary fuel pump: OFF.

Shut-Down:

1. All electrical equipment: OFF.
2. Mixture: To idle cutoff.
3. Magneto switch: OFF.
4. Master switch: OFF.
5. Install control lock.
6. Brakes: Set and/or wheels chocked.

SECTION 3
OPERATING INSTRUCTIONS

LYCOMING OPERATOR'S MANUAL
O-235 AND O-290 SERIES

OPERATING CONDITIONS (CONT.)

O-235-F, -G, -J

Operation	RPM	HP	Fuel Cons. Gal./Hr.	Max. Oil Cons. Qts./Hr.	*Max. Cyl. Head Temp.
Normal Rated	2800	125	10.7	0.56	500°F (260°C)
Performance Cruise (75% Rated)	2500	94	7.3	0.31	500°F (260°C)
Economy Cruise (65% Rated)	2400	81	5.8	0.27	500°F (260°C)

* - At Bayonet Location – For maximum service life of the engine, maintain cylinder head temperatures between 150°F (65°C) and 400°F (204°C) during continuous operation.

O-235-K, -L, -M

Operation	RPM	HP	Fuel Cons. Gal./Hr.	Max. Oil Cons. Qts./Hr.	Max. Cyl. Head Temp.
Normal Rated	2800	118	9.5	0.39	500°F (260°C)
Performance Cruise (75% Rated)	2500	89	6.7	0.30	500°F (260°C)
Economy Cruise (65% Rated)	2400	77	5.8	0.27	500°F (260°C)

O-235-K2C

Operation	RPM	HP	Fuel Cons. Gal./Hr.	Max. Oil Cons. Qts./Hr.	Max. Cyl. Head Temp.
Take-Off	2800	118	----	----	500°F (260°C)
Normal Rated	2700	115	9.2	0.38	500°F (260°C)
Performance Cruise (75% Rated)	2425	86	6.4	0.29	500°F (260°C)
Economy Cruise (65% Rated)	2300	75	5.6	0.25	500°F (260°C)

O-235-H Series

Operation	RPM	HP	Fuel Cons. Gal./Hr.	Max. Oil Cons. Qts./Hr.	Max. Cyl. Head Temp.
Take-Off	2800	115	----	----	500°F (260°C)
Normal Rated	2600	108	10.7	0.36	500°F (260°C)
Performance Cruise (75% Rated)	2350	81	7.3	0.27	500°F (260°C)
Economy Cruise (65% Rated)	2250	70	5.8	0.23	500°F (260°C)