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Reality Expansion Pack for X-Plane

**Cessna T210M Centurion II**

**Checklists & References**

**BEFORE STARTING ENGINE**

- 1. Preflight Inspection ..... COMPLETED
- 2. Seats, Belts, Shoulder Harnesses ..... ADJUST and LOCK
- 3. Brakes ..... TEST and SET
- 4. Cowl Flaps ..... OPEN
- 5. Avionics Power Switch, Electrical Equipment ..... OFF

**CAUTION**

The avionics power switch must be OFF during engine start to prevent possible damage to avionics.

- 6. Landing Gear Lever ..... DOWN
- 7. Master Switch ..... ON
- 8. Beacon ..... ON
- 9. Circuit Breakers ..... CHECK IN
- 10. Fuel Selector Valve ..... EMPTY TANK

## STARTING ENGINE

1. Mixture ..... RICH
2. Propeller ..... HIGH RPM
3. Throttle ..... FULL FORWARD
4. Auxiliary Fuel Pump Switch (yellow) ..... ON
5. Fuel Flow ..... WAIT for 60 lbs/hr
6. Auxiliary Fuel Pump Switch (yellow) ..... OFF
7. Throttle ..... CLOSED
8. Propeller Area ..... CLEAR
9. Ignition Switch ..... START
10. Throttle ..... ADVANCE slowly
11. Ignition Switch ..... RELEASE when engine starts

### NOTE

The engine should start in two or three revolutions. If it does not continue running, start again at step 3 above. If the engine does not start, leave auxiliary fuel pump switch off, set mixture to idle cut-off, open throttle, and crank until engine fires or for approximately 15 seconds. If still unsuccessful, start again using the normal starting procedure after allowing the starter motor to cool.

12. Throttle ..... RESET to desired idle speed
13. Oil pressure ..... CHECK

**AFTER STARTING ENGINE**

- 1. Alternator Switch ..... ON
- 2. Ammeter ..... CHECK
- 3. Low-Voltage Light ..... OFF
- 4. Flaps ..... UP
- 5. Avionics Power Switch ..... ON
- 6. Radios and Instruments ..... SET
- 7. Taxi Briefing ..... EXECUTE

**BEFORE TAKEOFF**

1. Parking Brake ..... SET
2. Cabin Doors and Windows ..... CLOSED and LOCKED
3. Cowl Flaps ..... FULL OPEN
4. Flight Controls ..... FREE and CORRECT
5. Flight Instruments ..... CHECK
6. Fuel Selector Valve ..... FULLER TANK
7. Mixture ..... RICH
8. Elevator and Rudder Trim ..... TAKEOFF
9. Throttle ..... 1700 RPM
10. Magnetos ..... CHECK (150RPM/125RPM)
11. Propeller ..... CYCLE from high to low RPM
12. Engine Instruments and Ammeter ..... CHECK
13. Suction Gauge ..... GREEN ARC
14. Throttle ..... 1100 RPM
15. Avionics Power Switch ..... ON
16. Autopilot ..... OFF
17. Wing Flaps ..... 0-10 degrees (10 degrees preferred)
18. Takeoff Briefing ..... EXECUTE
19. Lights ..... ON as required
20. Throttle Friction Lock ..... ADJUST
21. Transponder ..... ON

**NORMAL TAKEOFF**

- 1. Power 36.5 INCHES Hg and 2700RPM (5 minute limitation)
- 2. Mixture ..... ADJUST to 186 lbs/hr
- 3. Elevator Control ..... LIFT NOSE WHEEL at 65 to 70 KIAS
- 4. Climb Speed ..... 80-90 KIAS
- 5. Brakes ..... APPLY momentarily when airborne
- 6. Landing Gear ..... RETRACT in climb out
- 7. Wing Flaps ..... RETRACT after reaching 85 KIAS

**SHORT FIELD TAKEOFF**

- 1. Wing Flaps ..... 10 degrees
- 2. Brakes ..... APPLY
- 3. Power 36.5 INCHES Hg and 2700RPM (5 minute limitation)
- 4. Mixture ..... ADJUST to 186 lbs/hr
- 5. Brakes ..... RELEASE
- 6. Elevator Control ..... LIFT NOSE WHEEL at 65 KIAS
- 7. Climb Speed ..... 78 KIAS
- 8. Landing Gear ..... RETRACT when obstacles are cleared
- 9. Wing Flaps ..... RETRACT after reaching 85 KIAS

**NORMAL CLIMB**

- 1. Airspeed ..... 105-120 KIAS
- 2. Power ..... 30 INCHES Hg and 2500 RPM
- 3. Mixture ..... LEAN to 120 lbs/hr

**NOTE**

On hot days, it may be necessary to utilize the auxiliary fuel pump to maintains 120 lbs/hr fuel flow.

- 4. Cowl Flaps ..... AS REQUIRED (full open on warm days)

**NOTE**

On hot days, turn on auxiliary fuel pump momentarily if switching tanks in climb

**MAXIMUM PERFORMANCE CLIMB**

- 1. Airspeed ..... 100 KIAS
- 2. Power ..... 35 INCHES Hg and 2600 RPM
- 3. Mixture ..... ADJUST to 162 lbs/hr

**NOTE**

See power and fuel flow placard for maximum continuous power manifold pressure and fuel flow above 17,000 feet.

**NOTE**

On hot days at higher altitudes, be alert for fuel vapor indications. If fuel flow fluctuations are observed or if desired fuel flow cannot be maintained, turn the auxiliary fuel pump ON and reset the mixture as required.

- 4. Cowl Flaps ..... FULL OPEN

**NOTE**

On hot days, turn on auxiliary fuel pump momentarily if switching tanks in climb



**CRUISE**

1. Power ..... 15-30 INCHES Hg, 2200-2500 RPM
2. Elevator and Rudder Trim ..... ADJUST
3. Mixture ..... LEAN for cruise fuel flow

**NOTE**

On hot days at higher altitudes, be alert for fuel vapor indications. If fuel flow fluctuations are observed or if desired fuel flow cannot be maintained, turn the auxiliary fuel pump ON and reset the mixture as required.

4. Cowl Flaps ..... CLOSED (open on hot days or high altitude)

**NOTE**

On hot days, turn auxiliary fuel pump ON momentarily if switching tanks within first 30 minutes of cruise.

**DESCENT**

- 1. Power ..... As desired
- 2. Auxiliary Fuel Pump ..... OFF
- 3. Mixture ADJUST for smooth operation (full rich for idle power)
- 4. Cowl Flaps ..... CLOSED
- 5. Approach/Landing Briefing ..... EXECUTE

**BEFORE LANDING**

- 1. Seats, Belts and Shoulder Harnesses ..... SECURE
- 2. Fuel Selector Valve ..... FULLER TANK
- 3. Landing Gear ..... EXTEND (below 165KIAS)
- 4. Landing Gear ..... CHECK
- 5. Auxiliary Fuel Pump ..... OFF
- 6. Mixture ..... RICH
- 7. Propeller ..... HIGH RPM
- 8. Wing Flaps ..... AS DESIRED
- 9. Autopilot ..... OFF
- 10. Elevator Trim ..... ADJUST

**NORMAL LANDING**

- 1. Airspeed ..... 80-90 KIAS
- 2. Wing Flaps ..... AS DESIRED (flaps down preferred)
- 3. Airspeed ..... 70-80 KIAS (flaps down)
- 4. Elevator Trim ..... ADJUST
- 5. Touchdown ..... MAIN WHEELS FIRST
- 6. Landing Roll ..... LOWER NOSE WHEEL GENTLY
- 7. Braking ..... MINIMUM REQUIRED

**SHORT FIELD LANDING**

- 1. Wing Flaps ..... FULL DOWN
- 2. Airspeed ..... 74 KIAS
- 3. Power ..... REDUCE to idle after clearing obstacles
- 4. Elevator Trim ..... ADJUST
- 5. Touchdown ..... MAIN WHEELS FIRST
- 6. Brakes ..... APPLY HEAVILY
- 7. Wing Flaps ..... RETRACT

**BALKED LANDING**

1. Power 36.5 INCHES Hg and 2700RPM (5 minute limitation)
2. Wing Flaps ..... RETRACT to 20 degrees (immediately)
3. Climb Speed ..... 70 KIAS (until obstacles are cleared)
4. Wing Flaps .... RETRACT SLOWLY (after reaching 75 KIAS)
5. Cowl Flaps ..... OPEN

**AFTER LANDING**

1. Wing Flaps ..... RETRACT
2. Cowl Flaps ..... OPEN
3. Transponder ..... OFF
4. Lights ..... AS REQUIRED
5. Pitot Heat ..... OFF

**SECURING THE AIRPLANE**

1. Parking Brake ..... SET
2. Avionics Power Switch, Electrical Equipment ..... OFF
3. Mixture ..... IDLE CUT-OFF
4. Ignition Switch ..... OFF
5. Lights ..... OFF
6. Master Switch ..... OFF

**ENGINE FAILURE DURING TAKEOFF RUN**

- 1. Throttle ..... IDLE
- 2. Brakes ..... APPLY
- 3. Wing Flaps ..... RETRACT
- 4. Mixture ..... IDLE CUT-OFF
- 5. Ignition Switch ..... OFF
- 6. Master Switch ..... OFF

**ENGINE FAILURE DURING IMMEDIATELY AFTER  
TAKEOFF**

- 1. Airspeed ..... 85 KIAS
- 2. Mixture ..... IDLE CUT-OFF
- 3. Fuel Selector Valve ..... OFF
- 4. Ignition Switch ..... OFF
- 5. Wing Flaps ..... AS REQUIRED (30 degrees recommended)
- 6. Master Switch ..... OFF

**ENGINE FAILURE DURING FLIGHT**

- 1. Airspeed ..... 85 KIAS
- 2. Fuel Quantity ..... CHECK
- 3. Fuel Selector Valve ..... FULLER TANK
- 4. Mixture ..... RICH
- 5. Auxiliary Fuel P<sub>u</sub> ON for 3-5 sec with thr 1/2 open, then OFF
- 6. Ignition Switch ..... BOTH (or START if propeller stopped)
- 7. Throttle ..... ADVANCE SLOWLY

**LANDING GEAR FAILS TO RETRACT**

- 1. Master Switch ..... ON
- 2. Landing Gear Lever ..... CHECK FULL UP
- 3. Landing Gear and Gear Pump Circuit Breakers .. CHECK IN
- 4. Gear Up Light ..... CHECK
- 5. Landing Gear Lever ..... RECYCLE
- 6. Gear Motor ..... CHECK OPERATION (ammeter and noise)

**LANDING GEAR FAILS TO EXTEND**

- 1. Landing Gear Lever ..... DOWN
- 2. Emergency Hand Pump ..... EXTEND and PUMP
- 3. Gear Down Light ..... ON
- 4. Pump Handle ..... STOW

**GEAR UP LANDING**

- 1. Landing Gear Lever ..... UP
- 2. Landing Gear and Gear Pump Circuit Breakers ..... IN
- 3. Runway ..... SELECT longest with hardest surface
- 4. Wing Flaps ..... 30 degrees on final
- 5. Airspeed ..... 75KIAS
- 6. Doors ..... UNLATCH prior to touchdown
- 7. Avionics and Master Switch .... OFF when landing is assured
- 8. Touchdown ..... SLIGHTLY TAIL LOW
- 9. Mixture ..... IDLE CUT-OFF
- 10. Ignition Switch ..... OFF
- 11. Fuel Selector Valve ..... OFF
- 12. Airplane ..... EVACUATE



**REFERENCE SPEEDS**

Vne - Never Exceed Sped .....	195 KIAS
Vno - Max Operating Sped .....	165 KIAS
Va - Maneuvering Speed .....	156 KIAS
Vfe - Maximum Flap Extended Speed (10 degrees Flap) .....	150 KIAS
Vfe - Maximum Flap Extended Speed (10-30 degrees Flap) .....	115 KIAS
Vlo - Maximum Landing Gear Operating Speed .....	140 KIAS
Vle - Maximum Landing Gear Extended Speed .....	195 KIAS
Vx - Best Angle of Climb Speed .....	80 KIAS
Vy - Best Rate of Climb Speed .....	97 KIAS
Maximum Glide - 1700 Kg .....	85 KIAS
Maximum Glide - 1450 Kg .....	70 KIAS
Maximum Glide - 1180 Kg .....	75 KIAS

**TAKEOFF PERFORMANCE - 3700 POUNDS**

Flaps 10°, 2700RPM, 36.5 inches Hg, Mixture set to 186 PPH, Cowl Flaps open, Paved, Level, Dry runway.

**NOTES**

1. Lift off at 72 KIAS. 50ft at 78 KIAS.
2. Short field takeoff technique applied.
3. Decrease distances by 10% foreach 10 knots of head wind. For operations to up to 10 knots tailwind, increase distance by 10% for each 2.5 knots.
4. For operation on a dry, grass runway, increase distances by 15% of the ground roll figure.

PRESSURE ALTITUDE	0° C	10° C	20° C	30° C	40° C
	GRND ROLL	GRND ROLL	GRND ROLL	GRND ROLL	GRND ROLL
	50 FT	50 FT	50 FT	50 FT	50 FT
S.L.	950	1035	1125	1230	1340
	1565	1705	1865	2045	2245
1000	1010	1100	1200	1310	1430
	1655	1805	1975	2170	2385
2000	1075	1170	1275	1395	1525
	1750	1915	2095	2300	2535
3000	1145	1245	1360	1485	1625
	1855	2030	2225	2445	2700
4000	1215	1330	1450	1585	1735
	1965	2155	2365	2605	2800
5000	1300	1420	1550	1695	1855
	2085	2290	2515	2775	3070
6000	1385	1515	1655	1810	1980
	2215	2435	2675	2955	3280
7000	1480	1615	1770	1935	2120
	2355	2590	2855	3155	3510
8000	1580	1725	1890	2070	2270
	2505	2760	3045	3370	3755

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 2000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	80	167	105	75	167	99
	28	78	162	102	74	162	96	69	162	91
	26	71	157	93	67	157	88	63	155	83
	24	64	150	84	60	149	80	57	148	75
	22	57	142	75	53	141	72	50	139	68
2400	30	80	163	105	76	164	99	71	163	93
	28	74	158	96	69	159	91	65	157	86
	26	67	153	88	63	152	83	59	151	78
	24	60	146	80	57	145	75	53	143	71
	22	54	139	72	51	137	68	48	135	65
2300	30	76	160	99	71	160	94	67	160	88
	28	70	156	92	66	156	87	62	154	82
	26	64	150	84	61	149	80	57	148	76
	24	58	144	77	55	142	73	51	140	69
	22	52	136	69	49	134	66	46	131	62
2200	30	72	157	95	68	157	89	64	156	84
	28	66	152	87	62	151	82	59	150	78
	26	60	146	79	57	145	75	53	143	71
	24	54	139	72	51	138	69	48	135	65
	22	48	131	66	46	129	62	43	126	59

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 4000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	81	171	106	76	171	100
	28	79	166	103	74	166	97	70	165	91
	26	72	160	95	68	160	90	64	159	84
	24	65	154	86	62	153	81	58	152	77
	22	58	146	77	55	145	73	51	142	69
2400	30	80	167	105	76	167	99	71	167	93
	28	74	162	97	70	162	92	66	161	86
	26	68	156	89	64	156	84	60	154	79
	24	61	150	81	58	149	77	54	147	73
	22	55	142	73	52	141	70	49	138	66
2300	30	77	164	100	72	164	95	68	163	89
	28	71	159	93	67	159	88	63	157	83
	26	65	154	85	61	153	81	58	151	76
	24	59	147	78	55	146	74	52	143	70
	22	52	139	70	49	137	67	46	134	63
2200	30	73	161	95	68	161	90	64	159	84
	28	67	156	88	63	155	83	59	153	78
	26	61	149	80	57	148	76	54	146	73
	24	55	142	73	52	141	70	49	138	66
	22	49	135	67	46	132	63	44	129	60

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 6000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	81	175	107	76	175	100
	28	79	169	104	75	170	98	70	169	92
	26	73	164	96	69	164	91	65	163	85
	24	67	158	88	63	157	83	59	155	78
	22	59	150	79	56	149	75	53	146	71
2400	30	81	170	106	76	171	100	72	170	94
	28	75	166	98	71	166	93	66	164	87
	26	69	160	90	65	159	85	61	158	80
	24	62	153	82	59	152	78	55	150	74
	22	56	146	75	53	144	71	50	142	67
2300	30	77	168	101	73	168	96	69	166	90
	28	72	163	94	68	163	89	64	161	84
	26	66	157	87	62	156	82	58	154	77
	24	60	150	79	56	149	75	53	147	71
	22	53	142	72	50	141	68	47	138	64
2200	30	73	164	96	69	164	90	65	162	85
	28	68	159	89	64	158	84	60	156	79
	26	62	153	82	58	152	77	55	149	73
	24	56	146	75	53	144	71	50	141	67
	22	50	138	68	47	135	64	44	132	61

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 8000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	81	178	107	76	178	100
	28	80	173	105	75	173	99	71	172	93
	26	74	168	97	70	168	91	65	166	86
	24	68	162	89	64	161	84	60	159	79
	22	60	154	80	57	152	76	53	150	72
2400	30	81	174	106	76	174	100	72	173	94
	28	75	169	99	71	169	93	67	167	87
	26	69	164	91	65	162	86	61	161	81
	24	63	157	83	60	156	79	56	153	74
	22	57	150	76	54	148	72	51	145	68
2300	30	78	171	102	73	171	96	69	170	90
	28	72	167	95	68	166	90	64	164	84
	26	67	161	87	63	160	83	59	158	78
	24	60	154	80	57	152	76	54	150	72
	22	54	146	72	51	144	69	48	140	65
2200	30	73	167	96	69	167	91	65	165	86
	28	68	162	89	64	161	85	60	159	80
	26	63	156	82	59	155	78	55	152	74
	24	57	149	75	54	147	72	50	144	68
	22	51	141	69	48	138	65	45	135	62

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 10000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	81	182	107	76	181	100
	28	80	176	105	76	177	99	71	175	93
	26	75	172	98	71	171	92	66	170	87
	24	69	166	90	65	164	85	62	162	80
	22	62	158	81	58	156	77	55	153	73
2400	30	81	177	107	77	178	101	72	176	94
	28	76	173	99	71	172	94	67	171	88
	26	70	167	92	66	166	87	62	164	82
	24	64	160	84	60	159	80	57	157	75
	22	58	153	77	55	151	73	51	148	69
2300	30	78	175	103	74	175	97	69	173	91
	28	73	170	96	69	169	90	65	168	85
	26	67	164	88	64	163	84	60	161	79
	24	61	157	81	58	156	77	54	153	73
	22	55	149	73	52	147	70	49	143	66
2200	30	74	171	97	70	170	92	66	169	86
	28	69	166	90	65	165	85	61	163	81
	26	63	160	84	60	158	79	56	156	75
	24	58	153	77	54	151	73	51	148	69
	22	52	144	70	49	141	66	46	138	63



**CRUISE PERFORMANCE - PRESSURE ALTITUDE 12000  
FEET - 3800 POUNDS**

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	81	185	107	76	184	100
	28	80	180	105	76	180	99	71	178	93
	26	75	175	98	71	174	93	66	173	87
	24	69	169	90	65	168	85	61	166	81
	22	62	161	82	59	159	78	55	156	73
2400	30	81	181	107	77	181	101	72	179	94
	28	76	176	99	71	175	94	67	174	88
	26	70	170	92	66	169	87	62	167	82
	24	64	164	85	61	162	80	57	160	76
	22	59	156	78	55	155	74	52	151	70
2300	30	79	179	103	74	178	97	70	177	91
	28	73	174	96	69	173	91	65	171	85
	26	68	167	89	64	166	84	60	164	79
	24	62	161	82	58	159	77	55	156	73
	22	56	152	74	53	150	71	49	146	67
2200	28	69	169	91	65	168	86	61	166	81
	26	64	163	84	60	163	80	57	159	75
	24	58	156	77	55	154	73	52	151	70
	22	52	147	70	49	144	67	46	140	63
	20	46	137	63	44	133	60	41	129	57

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 14000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	81	189	107	76	187	100
	28	80	184	105	76	183	99	71	182	93
	26	75	179	99	71	178	93	67	176	88
	24	70	172	91	66	171	86	62	169	81
	22	63	164	83	59	163	78	56	160	74
2400	30	82	185	107	77	184	101	72	183	95
	28	76	180	100	72	179	94	67	177	89
	26	71	174	93	67	173	88	63	170	83
	24	65	167	86	61	166	81	58	163	77
	22	60	160	79	56	158	75	53	154	71
2300	30	79	182	104	74	182	98	70	180	92
	28	74	177	97	70	176	92	66	174	86
	26	68	171	90	65	170	85	61	167	80
	24	63	164	83	59	162	78	55	159	74
	22	57	156	75	53	153	72	50	150	68
2200	28	70	173	92	66	172	87	62	169	82
	26	65	167	85	61	165	81	57	162	76
	24	59	160	78	56	157	74	52	154	70
	22	53	151	71	50	148	68	47	143	64
	20	47	140	64	45	136	61	42	131	58

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 16000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	81	192	106	76	191	100
	28	80	187	105	76	186	99	71	185	93
	26	75	182	99	71	181	93	67	179	88
	24	70	176	91	66	174	86	62	172	81
	22	63	167	83	60	166	79	56	162	74
2400	30	81	188	107	77	187	101	72	186	94
	28	76	183	100	72	182	94	67	180	88
	26	71	177	93	67	176	88	63	173	83
	24	66	171	86	62	169	81	58	166	77
	22	60	163	79	57	161	75	53	157	71
2300	30	79	186	103	74	185	97	70	183	92
	28	74	180	97	70	179	92	66	177	86
	26	69	174	90	65	173	85	61	170	80
	24	63	167	83	59	165	79	56	162	74
	22	57	159	76	54	157	72	51	152	68
2200	28	70	176	92	66	175	87	62	172	82
	26	65	170	86	62	169	81	58	165	77
	24	60	163	79	56	161	75	53	157	71
	22	54	154	72	51	151	68	48	146	65
	20	48	143	65	45	139	62	42	134	59

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 18000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	81	196	106	76	194	100
	28	80	191	105	76	190	99	71	188	93
	26	75	185	99	71	184	93	67	182	88
	24	70	179	91	66	177	86	62	174	81
	22	63	171	84	60	168	79	56	165	75
2400	30	81	192	107	77	191	101	72	189	94
	28	76	186	100	72	185	94	67	183	88
	26	71	180	93	67	179	88	63	176	83
	24	66	174	87	62	172	82	58	169	77
	22	61	167	80	57	164	76	54	160	72
2300	30	79	189	103	74	188	97	70	186	91
	28	74	184	97	70	183	91	65	180	86
	26	69	178	91	65	176	86	61	173	81
	24	64	171	84	60	169	79	56	165	75
	22	58	163	77	55	160	73	51	155	69
2200	26	66	174	87	62	172	82	58	169	77
	24	61	166	80	57	164	76	54	160	72
	22	55	157	74	51	154	69	48	149	66
	20	49	146	66	46	142	63	43	136	59

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 20000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	80	198	105	76	197	99
	28	80	194	105	75	193	99	71	190	93
	26	75	188	98	71	187	93	66	184	87
	24	70	182	91	66	180	86	62	177	81
	22	64	173	84	60	171	79	56	167	75
2400	30	81	195	106	76	194	100	72	192	94
	28	76	189	100	72	188	94	67	185	88
	26	71	183	93	67	182	88	63	179	83
	24	66	177	87	62	175	82	58	171	77
	22	61	170	81	57	167	76	54	162	72
2300	28	74	187	97	69	185	91	65	182	86
	26	69	181	91	65	179	86	61	176	81
	24	64	174	84	60	172	80	57	168	75
	22	59	166	78	55	163	74	52	158	70
2200	24	61	170	81	58	167	76	54	163	72
	22	55	160	74	52	156	70	49	151	66
	20	49	149	67	46	144	63	44	138	60

**CRUISE PERFORMANCE - PRESSURE ALTITUDE 22000 FEET - 3800 POUNDS**

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	30	---	---	---	80	202	104	75	199	98
	28	80	197	104	75	196	98	70	193	92
	26	75	191	98	70	190	92	66	186	87
	24	69	184	91	65	182	86	61	178	81
	22	63	175	83	59	173	79	56	168	74
2400	30	80	197	105	75	196	99	71	194	93
	28	76	192	99	71	191	93	67	188	88
	26	71	186	93	67	184	87	62	181	82
	24	66	179	86	62	177	82	58	172	77
	22	61	172	80	57	168	76	54	163	72
2300	26	69	184	91	65	182	86	61	178	81
	24	65	178	85	61	175	80	57	171	76
	22	59	170	79	56	166	75	53	161	71
	20	54	161	73	51	157	69	48	151	65
2200	24	61	173	81	58	170	77	54	165	73
	22	56	163	74	52	159	70	49	154	67
	20	50	151	67	47	147	64	44	140	61

## CRUISE PERFORMANCE - PRESSURE ALTITUDE 24000 FEET - 3800 POUNDS

For best fuel economy at 70% power or less, operate at 6 PPH leaner than shown in this chart or at peak EGT if an EGT indicator is installed.

		ISA - 20° C			ISA + 0° C			ISA + 20° C		
RPM	MP	%BHP	KTAS	PPH	%BHP	KTAS	PPH	%BHP	KTAS	PPH
2500	28	79	200	104	74	198	98	70	196	92
	26	74	194	97	70	192	91	65	188	86
	24	68	186	90	64	183	85	60	179	80
	22	62	177	82	59	174	78	55	169	74
2400	28	75	195	99	71	193	93	66	190	87
	26	70	188	92	66	186	87	62	182	82
	24	65	181	85	61	178	81	57	173	76
	22	60	173	79	57	170	75	53	164	71
2300	26	69	187	91	65	185	86	61	181	81
	24	65	181	85	61	178	81	57	173	76
	22	60	173	79	57	170	75	53	164	71
	20	55	164	74	52	160	70	49	155	66
2200	22	56	165	74	52	161	70	49	155	66
	20	50	154	68	47	148	64	44	141	61

**LANDING PERFORMANCE - 3700 POUNDS**

Flaps 30°, Power Off, Maximum Braking, Paved, Level, Dry runway, Zero Wind.

**NOTES**

1. Speed at 50ft: 74 KIAS.
2. Short field landing technique applied.
3. Decrease distances by 10% foreach 10 knots of head wind. For operations to up to 10 knots tailwind, increase distance by 10% for each 2.5 knots.
4. For operation on a dry, grass runway, increase distances by 40% of the ground roll figure.
5. If landing with flaps up is necessary, increase the approach speed by 14 KIAS and allow for 35% longer distances.



PRESSURE	0° C	10° C	20° C	30° C	40° C
	GRND ROLL	GRND ROLL	GRND ROLL	GRND ROLL	GRND ROLL
ALTITUDE	50 FT	50 FT	50 FT	50 FT	50 FT
S.L.	725	750	780	805	830
	1440	1480	1520	1560	1600
1000	750	780	805	835	860
	1480	1520	1560	1605	1645
2000	708	810	835	865	895
	1525	1565	1605	1650	1695
3000	810	840	870	900	930
	1565	1610	1660	1705	1750
4000	840	870	900	930	965
	1614	1660	1705	1750	1800
5000	870	905	935	965	1000
	1660	1710	1755	1805	1855
6000	905	940	970	1005	1035
	1710	1765	1810	1860	1910
7000	940	975	1010	1045	1075
	1765	1815	1870	1920	1970
8000	975	1010	1050	1085	1120
	1815	1870	1930	1980	2035

