

AIRPLANE FLIGHT MANUAL SUPPLEMENT

TO

1974 CESSNA 182P OWNER'S MANUAL

QU182 CONVERSION

This supplement must be attached to the FAA Approved Owner's Manual PN: D1021-13, 03-91 when the airplane is modified by the installation of a TCM 047-U engine and McCauley C2A34C204/80DCB-8 propeller in accordance with STC SA5035NM.

The information contained herein supplements or supersedes the basic placards, markings, and manuals only in those areas listed herein. For limitations, procedures, and performance not contained in this supplement, consult the basic placards, markings, and manuals.

SN: 18262545

FAA Approved: JCR

Acting  
 Manager, Flight Test Branch, ANM-160L  
 Federal Aviation Administration  
 Los Angeles Certification Office  
 Transport Airplane Directorate

Date: 12/17/92

REVISION LOG

Rev. No.	Page No.	Date	Description	FAA APPROVED
Original	1 thru 16	12/17/92	Complete Supplement	Sign: <u>JCR</u> Agrz, Flight Test Branch ANM-160L FAA, Los Angeles ACO Transport Airplane Dir. Date: <u>12/17/92</u>

### LIMITATIONS

This airplane must be operated in accordance with the limitations contained in this Owner's Manual Supplement.

Applicable Serial Numbers: 18282466 through 18283475

The following information supplements or supersedes the information contained in the 1974 Cessna 182P Owner's Manual.

### INSIDE FRONT COVER:

RANGE: Refer to Section VI - Operational Data to determine range performance data.

PROPELLER: Constant Speed Diameter 80.5 - 82 inches

POWER: Continental Engine 0470-U  
230 rated HP at 2400 RPM

### Section I - OPERATING CHECKLIST

#### Pg. 1-5 TAKE-OFF

##### Normal Take-Off

(3) Power - Full Throttle and 2400 RPM

##### Maximum Performance Take-Off

(4) Power - Full Throttle and 2400 RPM

#### ENROUTE CLIMB

##### Normal Climb

(2) Power - 23 inches and 2400 RPM

(4) Mixture - FULL RICH (Mixture may be leaned above 5000 ft)

#### Pg. 1-6 Maximum Performance Climb

(2) Power - FULL THROTTLE and 2400 RPM

(4) Mixture - FULL RICH (May be leaned above 5000 ft)

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**Section I - OPERATING CHECKLISTS cont.**

**Pg. 1-8 CRUISING**

(1) Engine Power - 15 to 23 inches of manifold pressure and 2100 to 2400 RPM.

**BALKED LANDING (GO-AROUND)**

(1) Power - Full Throttle and 2400 RPM

**Section II - DESCRIPTION AND OPERATING DETAILS**

**Pg. 2-12 TAKE-OFF**

4th Paragraph - Normal take-offs are accomplished with wing flaps 0 to 20 degrees, cowl flaps open, full throttle and 2400 RPM. Reduce power to 23 inches of manifold pressure and 2400 RPM as soon as practical to minimize engine wear.

**Pg. 2-13 ENROUTE CLIMB**

1st Paragraph - A Cruising climb at 23 inches of manifold pressure, 2400 RPM (approximately 75% power) and 100 to 120 MPH is recommended to save time and fuel for the overall trip.

**Section III - EMERGENCY PROCEDURES**

No Change

**Section IV - OPERATING LIMITATIONS**

**Pg. 4-2 ENGINE OPERATION LIMITATIONS**

Power and Speed.....230 BHP at 2400 RPM

**ENGINE INSTRUMENT MARKINGS**

**Oil Temperature Gage**

Normal Operating Range.....Green Arc  
Do Not Exceed.....240 Degrees F (Red Line)

**Pg. 4-3 Cylinder Head Temperature Gage**

Normal Operating Range.....200-480 Degrees F (Green Arc)  
Do Not Exceed.....480 Degrees F (Red Line)

**Tachometer**

Normal Operating Range.....2100 - 2400 RPM (Green Arc)  
Do Not Exceed.....2400 RPM (Red Line)

Section V - CARE OF THE AIRPLANE

NO CHANGE

Section VI - OPERATIONAL DATA

Pg. 6-4 CRUISE PERFORMANCE

- 6-5 Fig. 6-4 - Use the following Power/Fuel Performance Charts
- 6-6 contained on pages 8 thru 15 of this supplement to determine
- 6-7 power settings and fuel flow for your chosen cruise altitude
- 6-8 and %bhp.

Determine TAS for your chosen cruise altitude and %bhp by using the Cruise Performance Charts in the Cessna Owner's Manual.

This QU182 Conversion will meet or exceed the Range and Endurance performance depicted in the Cruise Performance Charts in the Cessna Owner's Manual.

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POWER / FUEL FLOW PERFORMANCE FOR 2,000 FEET PRESSURE ALTITUDE

Lean Mixture Per Operator's Handbook.			20 Deg.C Below Standard Temp -9 Deg.C		Standard Temperature 11 Deg.C		20 Deg.C Above Standard Temp 31 Deg.C	
			%BHP	GPH	%BHP	GPH	%BHP	GPH
ALT	RPM	MP	%BHP	GPH	%BHP	GPH	%BHP	GPH
2000	2400	22	77	13.1	74	12.6	71	12.2
		21	72	12.3	69	11.8	67	11.4
		20	67	11.5	65	11.1	63	10.7
		19	62	10.7	60	10.3	58	10.0
	2300	23	78	13.3	75	12.8	72	12.4
		22	73	12.5	70	12.0	68	11.8
		21	68	11.7	66	11.3	64	10.9
		20	64	10.9	62	10.5	60	10.2
	2200	23	73	12.5	70	12.0	68	11.8
		22	69	11.7	66	11.3	64	10.9
		21	64	11.0	62	10.6	60	10.2
		20	60	10.2	58	9.9	56	9.6
	2100	23	68	11.6	66	11.2	64	10.8
		22	64	10.9	62	10.5	60	10.2
		21	60	10.2	58	9.9	56	9.6
		20	56	9.6	54	9.3	52	9.0
19		52	9.0	50	8.7	48	8.5	
18		47	8.4	46	8.1	44	7.9	

POWER / FUEL FLOW PERFORMANCE FOR 4,000 FEET PRESSURE ALTITUDE

Lean Mixture Per Operator's Handbook.			20 Deg.C Below Standard Temp -13 Deg.C		Standard Temperature 7 Deg.C		20 Deg.C Above Standard Temp 27 Deg.C	
			%BHP	GPH	%BHP	GPH	%BHP	GPH
ALT	RPM	MP	%BHP	GPH	%BHP	GPH	%BHP	GPH
4000	2400	22	---	---	76	13	73	12.5
		21	74	12.6	71	12.1	69	11.7
		20	69	11.8	66	11.3	64	11.0
		19	64	10.9	62	10.6	60	10.2
	2300	23	---	---	76	13.1	74	12.6
		22	75	12.8	72	12.3	70	11.9
		21	70	12.0	68	11.5	65	11.2
		20	66	11.2	63	10.8	61	10.4
	2200	23	75	12.8	72	12.3	70	11.9
		22	70	12.0	68	11.6	66	11.2
		21	66	11.3	64	10.9	61	10.5
		20	62	10.5	59	10.2	57	9.8
	2100	19	57	9.8	55	9.5	53	9.2
		23	70	11.9	67	11.5	65	11.1
		22	66	11.2	63	10.8	61	10.4
		21	62	10.5	59	10.1	57	9.9
		20	57	9.8	55	9.5	53	9.3
		18	49	8.6	47	8.3	46	8.1
	17	45	8.0	43	7.8	42	7.6	

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POWER / FUEL FLOW PERFORMANCE FOR 8,000 FEET PRESSURE ALTITUDE

POWER / FUEL FLOW PERFORMANCE FOR 8,000 FEET PRESSURE ALTITUDE

Lean Mixture Per Operator's Handbook.			20 Deg.C Below Standard Temp -17 Deg.C		Standard Temperature 3 Deg.C		20 Deg.C Above Standard Temp 23 Deg.C	
			%BHP	GPH	%BHP	GPH	%BHP	GPH
ALT	RPM	MP	%BHP	GPH	%BHP	GPH	%BHP	GPH
8000	2400	22	---	---	77	13.3	75	12.8
		21	75	12.9	73	12.4	70	12.0
		20	71	12.1	88	11.6	86	11.2
		19	86	11.2	84	10.8	81	10.5
	2300	22	77	13.1	74	12.8	71	12.2
		21	72	12.3	69	11.8	67	11.4
		20	87	11.5	85	11.1	83	10.7
		19	83	10.7	80	10.3	58	10.0
	2200	22	72	12.3	69	11.9	67	11.5
		21	88	11.8	65	11.1	63	10.8
		20	83	10.8	61	10.4	59	10.1
		19	59	10.1	57	9.7	55	9.5
	2100	22	87	11.5	85	11.1	83	10.7
		21	83	10.8	61	10.4	59	10.1
		19	55	9.5	53	9.2	51	8.9
		18	51	8.8	49	8.6	47	8.3
17		47	8.2	45	8.0	43	7.8	

Lean Mixture Per Operator's Handbook.			20 Deg.C Below Standard Temp -21 Deg.C		Standard Temperature -1 Deg.C		20 Deg.C Above Standard Temp 19 Deg.C	
			%BHP	GPH	%BHP	GPH	%BHP	GPH
ALT	RPM	MP	%BHP	GPH	%BHP	GPH	%BHP	GPH
8000	2400	21	77	13.3	74	12.7	72	12.3
		20	72	12.4	70	11.9	67	11.5
		19	88	11.5	85	11.1	83	10.7
		18	83	10.7	80	10.3	58	10.0
	2300	21	74	12.6	71	12.1	69	11.7
		20	89	11.8	86	11.3	84	11.0
		19	84	11.0	82	10.6	80	10.2
		18	80	10.2	58	9.9	58	9.6
	2200	21	89	11.8	87	11.4	85	11.0
		20	85	11.1	83	10.7	60	10.3
		19	81	10.3	58	10.0	58	9.7
		18	58	9.7	54	9.3	52	9.1
	2100	21	85	11.1	83	10.7	80	10.3
		20	81	10.4	59	10.0	57	9.7
		19	57	9.7	54	9.4	53	9.1
		18	52	9.1	50	8.8	49	8.5
17		48	8.5	46	8.2	45	8.0	

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POWER / FUEL FLOW PERFORMANCE FOR 10,000 FEET PRESSURE ALTITUDE

POWER / FUEL FLOW PERFORMANCE FOR 12,000 FEET PRESSURE ALTITUDE

Lean Mixture Per Operator's Handbook.			20 Deg.C Below Standard Temp -25 Deg.C		Standard Temperature -5 Deg.C		20 Deg.C Above Standard Temp 15 Deg.C	
			%BHP	GPH	%BHP	GPH	%BHP	GPH
10000	2400	20	74	12.7	71	12.2	69	11.8
		19	69	11.8	67	11.4	64	11.0
		18	65	11.0	62	10.8	60	10.2
		17	60	10.2	57	9.8	55	9.5
	2300	20	71	12.1	68	11.8	66	11.2
		19	66	11.3	64	10.9	61	10.5
		18	61	10.5	59	10.1	57	9.8
		17	57	9.7	55	9.4	53	9.1
	2200	20	67	11.4	64	11.0	62	10.6
		19	62	10.6	60	10.2	58	9.9
		18	58	9.9	56	9.6	54	9.3
		17	53	9.2	51	8.9	50	8.7
	2100	20	63	10.7	60	10.3	58	9.9
		19	58	10.0	56	9.8	54	9.4
		18	54	9.3	52	9.0	50	8.8
		17	50	8.7	48	8.4	46	8.2
16		46	8.1	44	7.8	42	7.6	

Lean Mixture Per Operator's Handbook.			20 Deg.C Below Standard Temp -29 Deg.C		Standard Temperature -9 Deg.C		20 Deg.C Above Standard Temp 11 Deg.C	
			%BHP	GPH	%BHP	GPH	%BHP	GPH
12000	2400	18	66	11.3	64	10.9	61	10.5
		17	61	10.5	59	10.1	57	9.8
		16	56	9.7	54	9.4	52	9.1
		15	51	9.0	50	8.7	48	8.4
	2300	18	63	10.8	61	10.4	59	10.0
		17	58	10.0	56	9.7	54	9.4
		16	54	9.3	52	9.0	50	8.7
		15	49	8.6	47	8.3	45	8.1
	2200	18	59	10.2	57	9.8	55	9.5
		17	55	9.5	53	9.2	51	8.9
		16	51	8.8	49	8.5	47	8.3
		15	46	8.2	44	7.9	43	7.7
	2100	18	56	9.6	54	9.3	52	9.0
		17	51	8.9	49	8.7	48	8.4
		16	47	8.3	45	8.1	44	7.8

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POWER / FUEL FLOW PERFORMANCE FOR 18,000 FEET PRESSURE ALTITUDE

POWER / FUEL FLOW PERFORMANCE FOR 14,000 FEET PRESSURE ALTITUDE

Lean Mixture Per Operator's Handbook.			20 Deg.C Below Standard Temp -33 Deg.C		Standard Temperature -13 Deg.C		20 Deg.C Above Standard Temp 7 Deg.C		
ALT	RPM	MP	%BHP	GPH	%BHP	GPH	%BHP	GPH	
14000	2400	18	58	9.9	58	9.8	54	9.3	
		15	53	9.2	51	8.9	49	8.6	
		14	48	8.5	48	8.2	45	8.0	
		2300	18	55	9.5	53	9.2	51	8.9
			15	51	8.8	49	8.5	47	8.3
			14	46	8.1	44	7.9	42	7.7
	2200	18	52	9.0	50	8.8	48	8.5	
		15	48	8.4	48	8.1	44	7.9	
	2100	18	49	8.5	47	8.3	45	8.0	

Lean Mixture Per Operator's Handbook.			20 Deg.C Below Standard Temp -37 Deg.C		Standard Temperature -17 Deg.C		20 Deg.C Above Standard Temp 3 Deg.C		
ALT	RPM	MP	%BHP	GPH	%BHP	GPH	%BHP	GPH	
18000	2400	15	55	9.4	53	9.1	51	8.8	
		14	50	8.7	48	8.4	46	8.2	
		2300	15	52	9.1	50	8.8	48	8.5
			14	47	8.4	46	8.1	44	7.9
		2200	15	49	8.8	47	8.3	46	8.1
			2100	15	46	8.2	44	7.9	43

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**Section VII - OPTIONAL SYSTEMS**

No Change

**INSIDE BACK COVER**

**FUEL**

Aviation Grade.....100/100LL Minimum Grade

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