SECTION 6
WEIGHT & BALANCE/ EQUIPMENT LIST

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INTRODUCTION

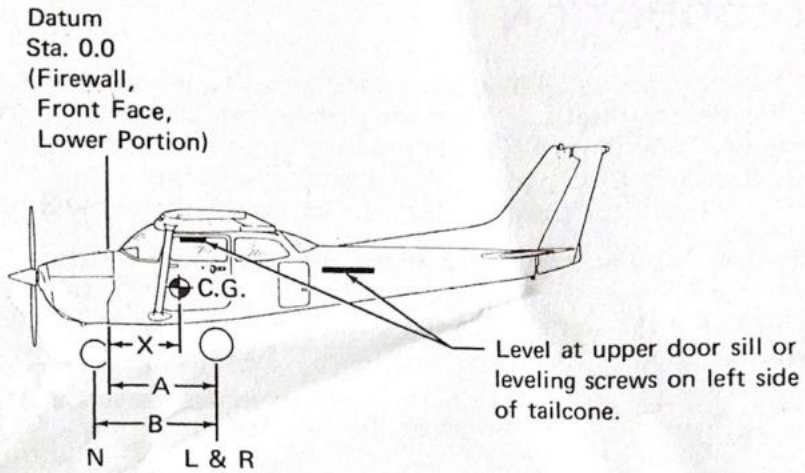
This section describes the procedure for establishing the basic empty weight and moment of the airplane. Sample forms are provided for reference. Procedures for calculating the weight and moment for various operations are also provided. A comprehensive list of all Cessna equipment available for this airplane is included at the back of this section.

It should be noted that specific information regarding the weight, arm, moment and installed equipment for this airplane as delivered from the factory can only be found in the plastic envelope carried in the back of this handbook.

It is the responsibility of the pilot to ensure that the airplane is loaded properly.

AIRPLANE WEIGHING PROCEDURES

1. Preparation:
   a. Inflate tires to recommended operating pressures.
   b. Remove fuel tank sump quick-drain fittings and use sampler cup at quick-drain in fuel selector valve to drain all fuel.
   c. Service engine oil as required to obtain a normal full indication (7 quarts on dipstick).
   d. Move sliding seats to the most forward position.
   e. Raise flaps to the fully retracted position.
   f. Place all control surfaces in neutral position.
2. Leveling:
   a. Place scales under each wheel (minimum scale capacity, 500 pounds nose, 1000 pounds each main).
   b. Deflate the nose tire and/or lower or raise the nose strut to properly center the bubble in the level (see figure 6-1).
3. Weighing:
   a. With the airplane level and brakes released, record the weight shown on each scale. Deduct the tare, if any, from each reading.
4. Measuring:
   a. Obtain measurement A by measuring horizontally (along the airplane center line) from a line stretched between the main wheel centers to a plumb bob dropped from the firewall.
   b. Obtain measurement B by measuring horizontally and parallel to the airplane center line, from center of nose wheel axle, left side, to a plumb bob dropped from the line between the main wheel centers. Repeat on right side and average the measurements.
5. Using weights from item 3 and measurements from item 4, the airplane weight and C.G. can be determined.
6. Basic Empty Weight may be determined by completing figure 6-1.



Scale Position	Scale Reading	Tare	Symbol	Net Weight
Left Wheel			L	
Right Wheel			R	
Nose Wheel			N	
Sum of Net Weights (As Weighed)			W	

$$X = ARM = (A) - \frac{(N) \times (B)}{W} ; X = (\quad\quad) - \frac{(\quad\quad) \times (\quad\quad)}{(\quad\quad)} = (\quad\quad) \text{ IN.}$$

Item	Weight (Lbs.)	X C.G. Arm (In.) =	Moment/1000 (Lbs.-In.)
Airplane Weight (From Item 5, page 6-3)			
Add Unusable Fuel: Std. Tanks (3 Gal at 6 Lbs/Gal)		46.0	
L.R. Tanks (4 Gal at 6 Lbs/Gal)		46.0	
Integral Tanks (6 Gal at 6 Lbs/Gal)		46.0	
Equipment Changes			
Airplane Basic Empty Weight			

Figure 6-1. Sample Airplane Weighing

SAMPLE WEIGHT AND BALANCE RECORD

(Continuous History of Changes in Structure or Equipment Affecting Weight and Balance)

AIRPLANE MODEL	SERIAL NUMBER	PAGE NUMBER

DATE	ITEM NO.		DESCRIPTION OF ARTICLE OR MODIFICATION	WEIGHT CHANGE						RUNNING BASIC EMPTY WEIGHT	
				ADDED (+)			REMOVED (-)				
	In	Out		Wt. (lb.)	Arm (In.)	Moment /1000	Wt. (lb.)	Arm (In.)	Moment /1000	Wt. (lb.)	Moment /1000
			As delivered								

Figure 6-2. Sample Weight and Balance Record

WEIGHT AND BALANCE

The following information will enable you to operate your Cessna within the prescribed weight and center of gravity limitations. To figure weight and balance, use the Sample Problem, Loading Graph, and Center of Gravity Moment Envelope as follows:

Take the basic empty weight and moment from appropriate weight and balance records carried in your airplane, and enter them in the column titled YOUR AIRPLANE on the Sample Loading Problem.

NOTE

In addition to the basic empty weight and moment noted on these records, the C.G. arm (fuselage station) is also shown, but need not be used on the Sample Loading Problem. The moment which is shown must be divided by 1000 and this value used as the moment/1000 on the loading problem.

Use the Loading Graph to determine the moment/1000 for each additional item to be carried; then list these on the loading problem.

NOTE

Loading Graph information for the pilot, passengers and baggage is based on seats positioned for average occupants and baggage loaded in the center of the baggage areas as shown on the Loading Arrangements diagram. For loadings which may differ from these, the Sample Loading Problem lists fuselage stations for these items to indicate their forward and aft C.G. range limitations (seat travel and baggage area limitation). Additional moment calculations, based on the actual weight and C.G. arm (fuselage station) of the item being loaded, must be made if the position of the load is different from that shown on the Loading Graph.

Total the weights and moments/1000 and plot these values on the Center of Gravity Moment Envelope to determine whether the point falls within the envelope, and if the loading is acceptable.

BAGGAGE TIE-DOWN

A nylon baggage net having tie-down straps is provided as standard equipment to secure baggage on the cabin floor aft of the rear seat (baggage area 1) and in the aft baggage area (baggage area 2). Six eyebolts

serve as attaching points for the net. Two eyebolts for the forward tie-down straps are mounted on the cabin floor near each sidewall just forward of the baggage door approximately at station 90; two eyebolts are installed on the cabin floor slightly inboard of each sidewall approximately at station 107; and two eyebolts are located below the aft window near each sidewall approximately at station 107.

When the cabin floor (baggage area 1) only is utilized for baggage, the two forward floor-mounted eyebolts and the two aft floor-mounted eyebolts (or the two eyebolts below the aft window) may be used, depending on the height of the baggage. When baggage is carried in the aft baggage area (baggage area 2), the aft floor-mounted eyebolts and the eyebolts below the aft window should be used. When baggage is loaded in both areas, all six eyebolts should be utilized.

A placard on the baggage door defines the weight limitations in the baggage areas.

LOADING ARRANGEMENTS

*Pilot or passenger center of gravity on adjustable seats positioned for average occupant. Numbers in parentheses indicate forward and aft limits of occupant center of gravity range.

**Arm measured to the center of the areas shown.

NOTES:

1. The usable fuel C.G. arm for standard, long range and integral tanks is located at station 48.0.
2. The rear cabin wall (approximate station 108) or aft baggage wall (approximate station 142) can be used as convenient interior reference points for determining the location of baggage area fuselage stations.

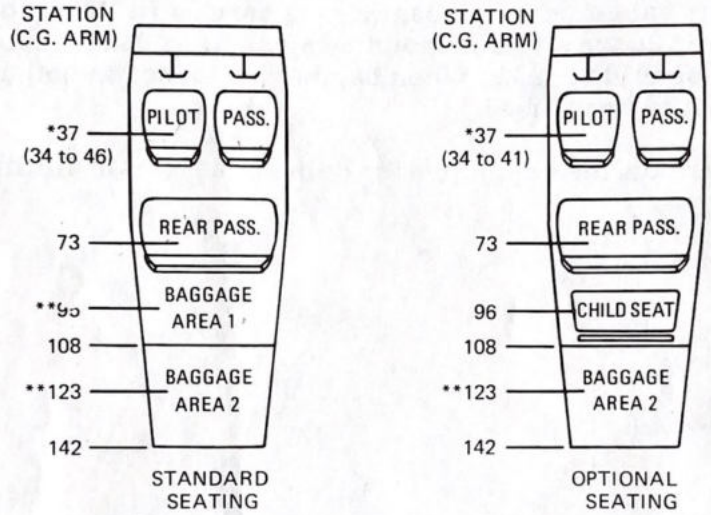
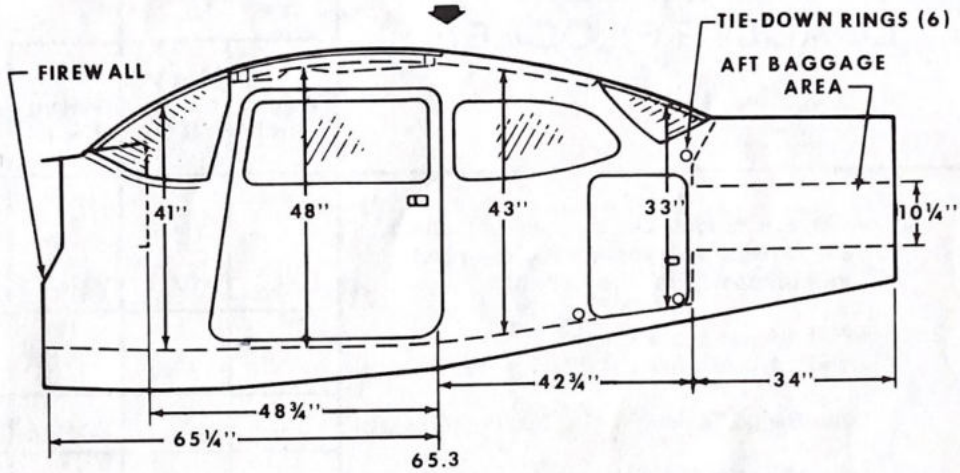


Figure 6-3. Loading Arrangements

CABIN HEIGHT MEASUREMENTS



DOOR OPENING DIMENSIONS

	WIDTH (TOP)	WIDTH (BOTTOM)	HEIGHT (FRONT)	HEIGHT (REAR)
CABIN DOOR	32"	37"	40½"	39"
BAGGAGE DOOR	15¼"	15¼"	22"	21"

WIDTH
● LWR WINDOW LINE
* CABIN FLOOR

CABIN WIDTH MEASUREMENTS

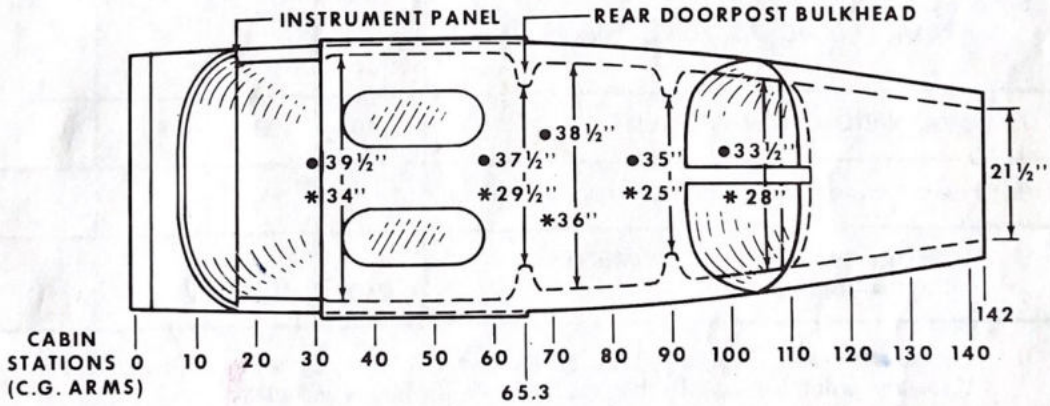


Figure 6-4. Internal Cabin Dimensions

SAMPLE LOADING PROBLEM	SAMPLE AIRPLANE		YOUR AIRPLANE	
	Weight (lbs.)	Moment (lb.-ins. /1000)	Weight (lbs.)	Moment (lb.-ins. /1000)
1. Basic Empty Weight (Use the data pertaining to your airplane as it is presently equipped. Includes unusable fuel and full oil)	1467	57.3	1520	58.3
2. Usable Fuel (At 6 Lbs./Gal.) Standard Tanks (40 Gal. Maximum)	240	11.5	240	11.5
Long Range Tanks (50 Gal. Maximum) . . .				
Integral Tanks (62 Gal. Maximum)				
Integral Reduced Fuel (42 Gal.)				
3. Pilot and Front Passenger (Station 34 to 46) . .	340	12.6	410	15.5
4. Rear Passengers	340	24.8		
5. * Baggage Area 1 or Passenger on Child's Seat (Station 82 to 108, 120 Lbs. Max.)	20	1.9	50	5.4
6. * Baggage Area 2 (Station 108 to 142, 50 Lbs. Max.)				
7. RAMP WEIGHT AND MOMENT	2407	108.1	2220.6	90.3
8. Fuel allowance for engine start, taxi, and runup	-7	-.3	-7	-.3
9. TAKEOFF WEIGHT AND MOMENT (Subtract Step 8 from Step 7)	2400	107.8	2213.6	90

10. Locate this point (2400 at 107.8) on the Center of Gravity Moment Envelope, and since this point falls within the envelope, the loading is acceptable.

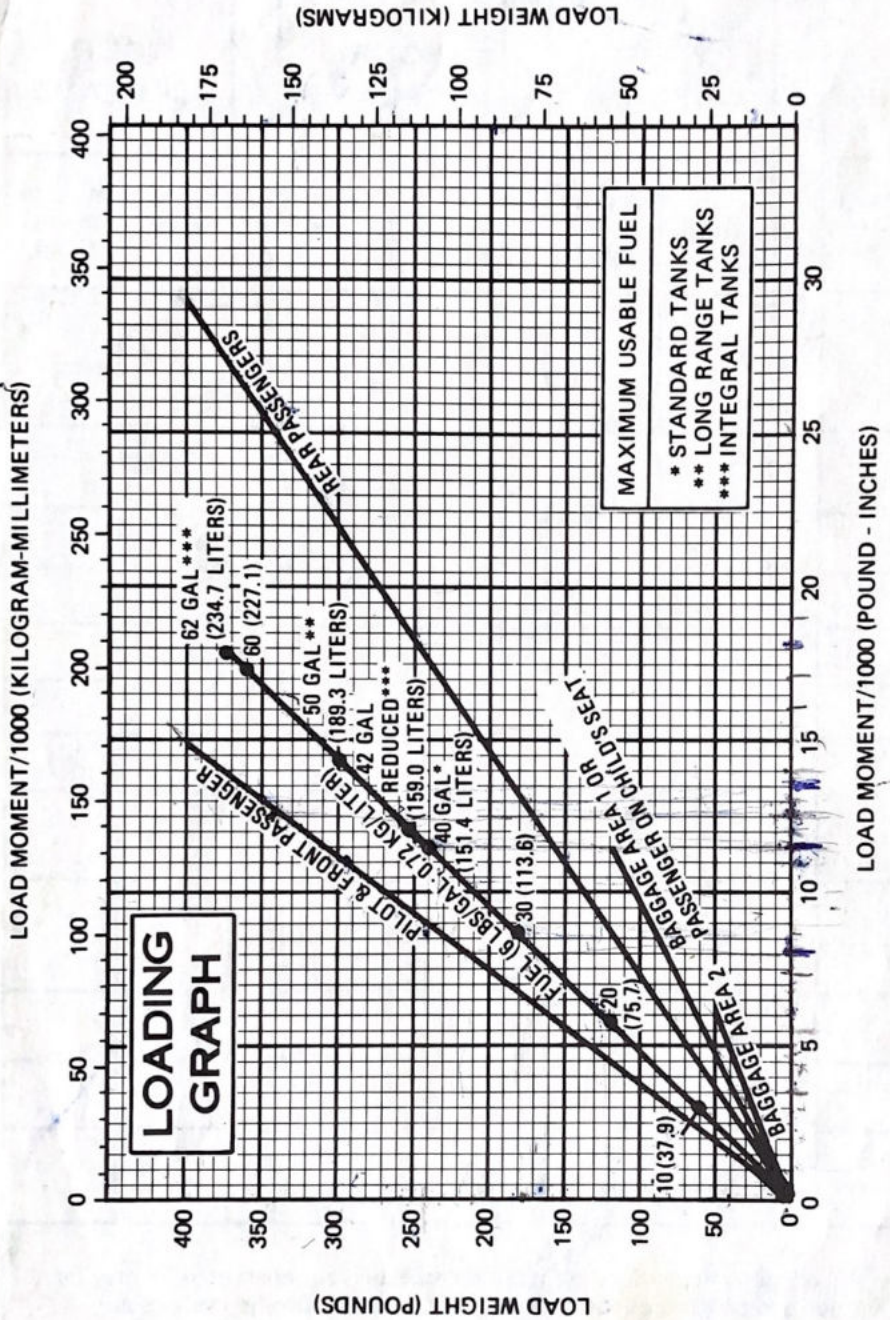
* The maximum allowable combined weight capacity for baggage areas 1 and 2 is 120 pounds.

Figure 6-5. Sample Loading Problem (Sheet 1 of 2)

YOUR AIRPLANE		YOUR AIRPLANE		YOUR AIRPLANE		YOUR AIRPLANE	
Weight (lbs.)	Moment (lb.-ins. /1000)	Weight (lbs.)	Moment (lb.-ins. /1000)	Weight (lbs.)	Moment (lb.-ins. /1000)	Weight (lbs.)	Moment (lb.-ins. /1000)
1513							
240	11.5						
·365	13						
250	18						
40	3.5						
2408							

When several loading configurations are representative of your operations, it may be useful to fill out one or more of the above columns so that specific loadings are available at a glance.

Figure 6-5. Sample Loading Problem (Sheet 2 of 2)



NOTE: Line representing adjustable seats shows the pilot or passenger center of gravity on adjustable seats positioned for an average occupant. Refer to the Loading Arrangements diagram for forward and aft limits of occupant C.G. range.

Figure 6-6. Loading Graph

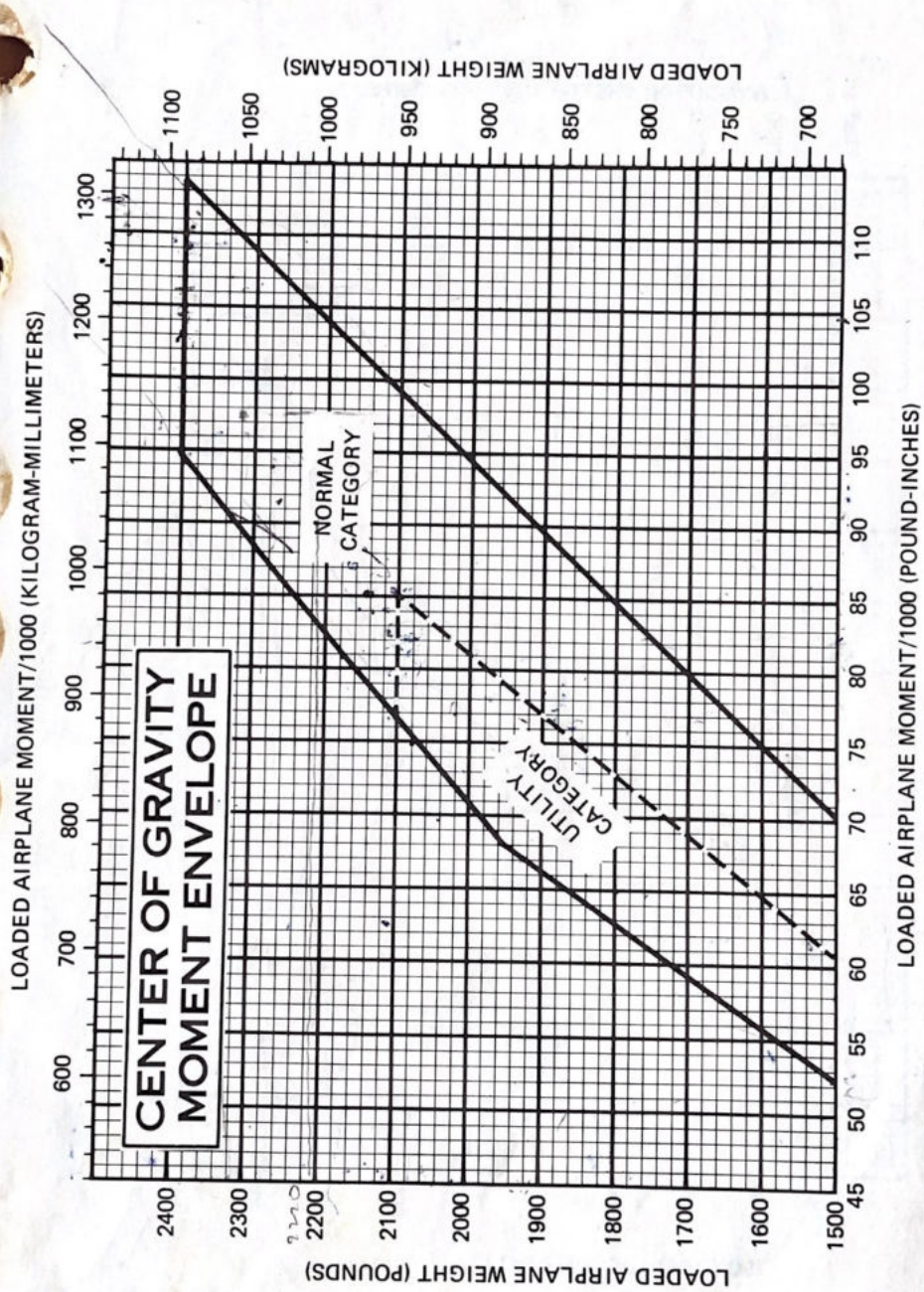


Figure 6-7. Center of Gravity Moment Envelope

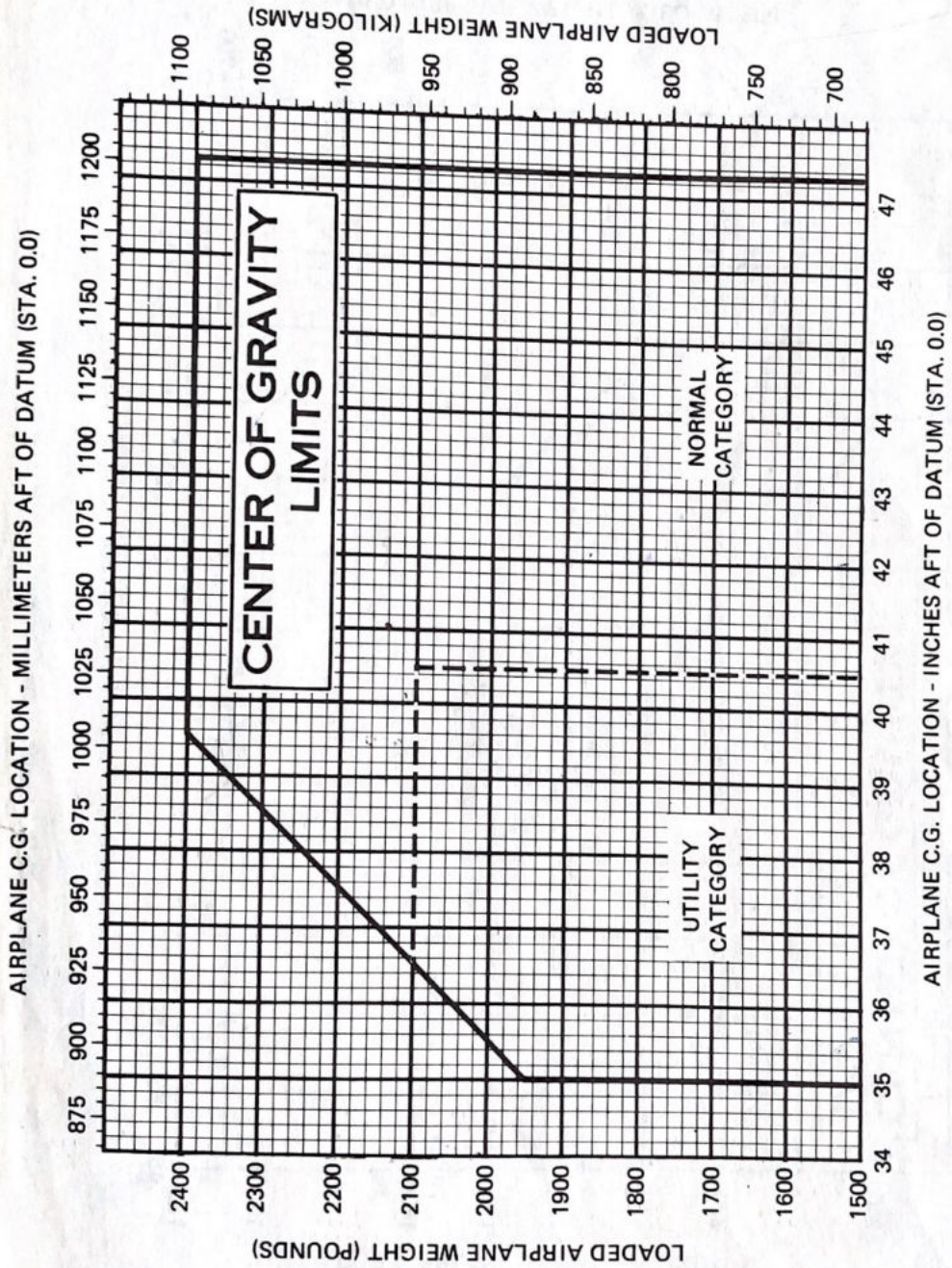


Figure 6-8. Center of Gravity Limits

EQUIPMENT LIST

The following equipment list is a comprehensive list of all Cessna equipment available for this airplane. A separate equipment list of items installed in your specific airplane is provided in your aircraft file. The following list and the specific list for your airplane have a similar order of listing.

This equipment list provides the following information:

An **item number** gives the identification number for the item. Each number is prefixed with a letter which identifies the **descriptive** grouping (example: A. Powerplant & Accessories) under which it is listed. Suffix letters identify the equipment as a required item, a standard item or an optional item. Suffix letters are as follows:

- -R = required items of equipment for FAA certification
- -S = standard equipment items
- -O = optional equipment items replacing required or standard items
- -A = optional equipment items which are in addition to required or standard items

A **reference drawing** column provides the drawing number for the item.

NOTE

If additional equipment is to be installed, it must be done in accordance with the reference drawing, accessory kit instructions, or a separate FAA approval.

Columns showing **weight (in pounds)** and **arm (in inches)** provide the weight and center of gravity location for the equipment.

NOTE

Unless otherwise indicated, true values (not net change values) for the weight and arm are shown. Positive arms are distances aft of the airplane datum; negative arms are distances forward of the datum.

NOTE

Asterisks (*) after the item weight and arm indicate complete assembly installations. Some major components of the assembly are listed on the lines immediately following. The summation of these major components does not necessarily equal the complete assembly installation.

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
	A. POWERPLANT & ACCESSORIES			
A01-R	ENGINE, LYCOMING O-320-D2J (LYC DWG 63507)	0550319-3	281.5*	-19.6*
	-CARBURETOR, MARVEL SCHEBLER MA4SPA	LW13659	3.5	-14.6
	-MAGNETOS AND HARNESS, TWO SLICK 4251	LW16894, 895	10.5	-9.5
	-OIL FILTER AND ADAPTER, C294505-0106	6439036	2.5	-4.6
	-SPARK PLUGS, 8 CHMP RHM-38E OR AC SR-86	1182-D4	1.9	-20.1
	-STARTER, 24 VOLT PRESTOLITE MCL6501	LW14208	18.0	-26.0
A05-R	FILTER, CARBURETOR AIR	C294510-0301	0.5	-26.0
A09-R	ALTERNATOR, 28 VOLT 60 AMP	C611503-0102	10.7	-29.0
A17-R	OIL COOLER INSTALLATION	0550319-3	3.3*	-10.2*
	-OIL COOLER, STEWART WARNER	8406-R	2.3	-11.7
A33-R	PROPELLER ASSEMBLY, FIXED PITCH LANDPLANE	C161001-0310	34.6*	-38.3*
	-PROPELLER, 75 INCH MCCAULEY	1C160/DTM7557	30.1	-38.7
	-PROP SPACER ADAPTER, 3.5 INCH MCCAULEY	C4516, C4592	3.6	-35.5
A33-O	PROPELLER ASSEMBLY, FIXED PITCH FLOATPLANE	C161001-0307	37.5*	-38.3*
	-PROPELLER, 75 INCH MCCAULEY	1A175/ETM8042	31.8	-38.7
	-PROP SPACER ADAPTER, 3.5 INCH MCCAULEY	C4516, C4592	3.6	-35.5
A41-R	SPINNER INSTALLATION, PROPELLER	0550320-7	2.0*	-41.4*
	-SPINNER DOME ASSEMBLY	0550236-8	1.2	-43.1
	-FWD SPINNER BULKHEAD	0550321-4	0.3	-40.8
	-AFT SPINNER BULKHEAD	0550321-10	0.4	-37.3
A43-R	EXHAUST SYSTEM INSTALLATION	1754001-20	16.3*	-20.0*
	-MUFFLER AND TAILPIPE WELD ASSEMBLY	1754001-22	4.6	-22.7
	-SHROUD ASSEMBLY, MUFFLER HEATER	0554001-92	0.8	-22.7
A59-R	CARBURETOR HEAT SYSTEM	0550319-3	1.0	-14.0
A61-S	VACUUM SYSTEM, ENGINE DRIVEN PRIMARY	0501054-1	3.1*	-2.7*
	-VACUUM PUMP, AIRBORNE 211CC	C431003-0101	1.9	-6.3
	-VACUUM PUMP, ALTERNATE SIGMATEK 1U128-3	C431003-0302	2.1	-6.3
	-FILTER INSTALLATION	1201075-2	0.3	5.4
	-VACUUM GAUGE	C668509-0101	0.1	16.2
	-RELIEF VALVE	C482001-0401	0.4	4.5
	-LOW VACUUM WARNING LIGHT	S-2571	0.1	17.5

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
A61-A	VACUUM SYSTEM, ELECTRICALLY DRIVEN STANDBY	0501131-1	8.2*	5.5*
	-VACUUM PUMP, AIRBORNE 211CC	C431003-0101	1.9	6.1
	-VACUUM PUMP, ALTERNATE SIGMATEK 1U128-3	C431003-0302	2.1	6.1
	-ELECTRIC MOTOR AND GEAR BOX ASSEMBLY	C165008-0101	3.8	6.1
	-MANIFOLD AND CHECK VALVE ASSEMBLY	A/M1H5-23	0.5	-2.0
A70-S	PRIMER SYSTEM, ENGINE ONE CYLINDER	0550319	0.3	-8.5
A70-O	PRIMER SYSTEM, ENGINE THREE CYLINDER (NET CHANGE)	0501056-1	0.2	-16.5
A73-O	OIL QUICK DRAIN VALVE (NET CHANGE)	S1951-5	0.0	-15.9
	B. LANDING GEAR & ACCESSORIES			
B01-R	WHEEL, BRAKE AND TIRE, 6.00X6 MAIN	0541200-5, -6		
	MCCAULEY (SET OF 2)	C163019B0201	39.8*	57.8*
	CLEVELAND, ALTERNATE (SET OF 2)	1241156-40	37.3*	57.8*
	-WHEEL ASSEMBLY, MCCAULEY (EACH)	C163006-0101	7.7	58.2
	-WHEEL ASSEMBLY, CLEVELAND (EACH)	C163001-0104	6.2	58.2
	-BRAKE ASSEMBLY, MCCAULEY (EACH)	C163033-0102	1.6	54.5
	-BRAKE ASSEMBLY, CLEVELAND (EACH)	C163030-0113	2.0	54.5
	-TIRE, 4-PLY BLACKWALL (EACH)	C262003-0101	8.0	58.2
	-TIRE, 4-PLY BLACKWALL, ALTERNATE (EACH)	C262003-0103	8.3	58.2
	-TUBE (EACH)	C262023-0102	2.1	58.2
B04-R	WHEEL AND TIRE ASSEMBLY, 5.00X5 NOSE	C163018-0104	10.4*	-6.8*
	-WHEEL ASSEMBLY, MCCAULEY	C163005-0201	3.8	-6.8
	-TIRE, 6-PLY BLACKWALL	C262003-0202	5.2	-6.8
	-TUBE	C262023-0101	1.4	-6.8
B10-A	WHEEL FAIRING INSTALLATION	0541225-1	16.9*	47.5*
	-NOSE WHEEL FAIRING	0543088-2	3.5	-3.5
	-MAIN WHEEL FAIRING (SET OF 2)	0541229	10.7	61.1
	-BRAKE FAIRINGS (SET OF 2)	0541224	1.1	55.6
	-MOUNTING PLATE (SET OF 2)	0541220	0.8	59.5
	C. ELECTRICAL SYSTEMS			
C01-R	BATTERY, 24 VOLT 12.75 A.H. MANIFOLD TYPE	C614002-0101	23.2	-5.0
C01-O	BATTERY, 24 VOLT 15.50 A.H. MANIFOLD TYPE	C614002-0102	25.2	-5.0

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
C04-R	ALTERNATOR CONTROL UNIT, 28 VOLT WITH HIGH VOLTAGE PROTECTION AND LOW VOLTAGE SENSING	C611005-0101	0.4	3.5
C07-A	GROUND SERVICE PLUG RECEPTACLE	0501104-1	3.0	-0.2
C16-O	HEATED PITOT SYSTEM (NET CHANGE)	0422355-8	0.6	24.4
C22-A	POST LIGHT INSTALLATION, INSTRUMENT (REQUIRES ITEM E34-0-1 DELUXE GLARESHIELD)	0513094-23	0.5	16.5
C25-A	MAP LIGHT IN CONTROL WHEEL (REQUIRES ITEM E89-0 CONTROL WHEEL WITH MIC. SWITCH)	0570453-1	0.2	21.5
C28-S	MAP AND INSTRUMENT FLOOD LIGHT ON DOORPOST	0700149	0.3	32.0
C31-A	COURTESY LIGHTS UNDER WING (SET OF 2)	0521101-1	0.5	61.0
C40-A	NAVIGATION LIGHT DETECTORS (SET OF 2)	0701013-1,-2	0.0	40.8
C43-A	FLASHING BEACON LIGHT ON VERTICAL FIN TIP	0506003-5	1.4*	204.7*
	-BEACON LIGHT ON FIN TIP, OMNIFLASH	C621001-0102	0.4	242.5
	-POWER SUPPLY IN VERTICAL FIN	C594502-0102	0.6	205.1
	-RESISTOR, MEMCOR 7174	OR95-6	0.2	208.3
	-WIRING AND MISCELLANEOUS HARDWARE		0.2	124.3
C46-A	STROBE LIGHT INSTALLATION ON WING TIPS	0501027-4	3.4*	43.3*
	-POWER SUPPLY (SET OF 2)	C622008-0102	2.3	47.0
	-STROBE LIGHT (SET OF 2)	C622006-0107	0.2	40.8
	-WIRING AND MISCELLANEOUS HARDWARE		0.9	33.8
C49-S	LANDING AND TAXI LIGHT INSTL. IN WING	0523029	2.2*	25.3*
	-LANDING LAMP, G.E. 250 WATT	4596	0.5	29.0
	-TAXI LAMP, G.E. 250 WATT	4587	0.5	29.0
	-BRACKETS, WIRING AND HARDWARE		1.2	22.2
	D. INSTRUMENTS			
D01-R	INDICATOR, AIRSPEED	C661064-0102	0.6	16.2
D01-O	INDICATOR, TRUE AIRSPEED	0513279-5	0.7	16.3
D04-A	ALTERNATE STATIC AIR SOURCE	0501017-1	0.2	15.5

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
D07-R	ALTIMETER, SENSITIVE WITH 50 FT MARKINGS, INCHES OF MERCURY SETTING, 20,000 FT CALIB	C661071-0101	0.9	14.0
D07-0-1	ALTIMETER, SENSITIVE WITH 50 FT MARKINGS, MILLIBARS SETTING, 20,000 FT CALIBRATION	C661071-0102	0.9	14.0
D07-0-2	ALTIMETER, SENSITIVE WITH 20 FT MARKINGS, MILLIBARS SETTING, 20,000 FT CALIBRATION	C661025-0102	0.9	14.0
D10-A	DUAL ALTIMETER INSTALLATION (2ND UNIT)	2001015	0.9	14.0
D16-A-1	ENCODING ALTIMETER INSTALLATION, INCHES OF MERCURY SETTING (REQUIRES RELOCATION OF, AND IS IN ADDITION TO, ITEM D07 ALTIMETER)	0501049-1	2.9*	12.8*
	-ENCODING ALTIMETER, INCHES OF MERCURY	42540-3128	2.6	13.0
	-ALTIMETER TO TRANSPONDER CABLE ASSEMBLY	3980206-2	0.2	8.0
D16-A-2	ENCODING ALTIMETER INSTALLATION, MILLIBARS SETTING (REQUIRES RELOCATION OF, AND IS IN ADDITION TO, ITEM D07 ALTIMETER)	0501049-2	2.9*	12.8*
	-ENCODING ALTIMETER, MILLIBARS SETTING	42540-3228	2.6	13.0
	-ALTIMETER TO TRANSPONDER CABLE ASSEMBLY	3980206-2	0.2	8.0
D16-A-3	BLIND ALTITUDE ENCODER, REMOTE MOUNTED	0511085-1	1.5*	15.0*
	-ENCODER	C744001-0101	1.3	14.6
	-ENCODER TO TRANSPONDER CABLE ASSEMBLY	3980206	0.2	8.0
D19-R	AMMETER	S-1320-5	0.3	16.5
D22-A	GAGE, CARBURETOR AIR TEMPERATURE	0513339-4	1.0	14.0
D25-S	CLOCK, ANALOG 3 HAND ELECTRIC	C664508-0102	0.3	16.3
D25-0	CLOCK, DIGITAL ELECTRONIC (NET CHANGE)	0770776-4	0.2*	16.1*
	-QUARTZ ELECTRONIC DIGITAL CHRONOMETER	C664511-0102	0.6	16.3
D28-R	COMPASS INSTALLATION, MAGNETIC	0513262-1	0.5	14.0
D38-R	FUEL QUANTITY INDICATORS, LEFT AND RIGHT (USED WITH ITEM G92-S STANDARD TANKS)	C669537-0106	0.4	16.5
D38-0-1	FUEL QUANTITY INDICATORS, LEFT AND RIGHT (USED WITH ITEM G92-0-1 LONG RANGE TANKS)	C669637-0101	0.4	16.5

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
D38-O-2	FUEL QUANTITY INDICATORS, LEFT AND RIGHT (USED WITH ITEM G92-O-2 INTEGRAL TANKS)	C669562-0101	0.4	16.5
D41-R	OIL PRESSURE AND TEMPERATURE INDICATORS	C669535-0102	0.4	16.5
D49-A	E.G.T. INDICATOR, ECONOMY MIXTURE	0501043-2	0.6	7.8
D64-S	GYRO INSTALLATION, NON NAV-O-MATIC	0501054-1	5.7*	12.4*
	-DIRECTIONAL GYRO INDICATOR	C661075-0104	2.5	13.5
	-ATTITUDE GYRO INDICATOR	C661076-0101	1.9	14.5
	-HOSES AND MISCELLANEOUS HARDWARE	1201075	1.4	7.7
D64-O	GYRO INSTALLATION FOR 300 NAV-O-MATIC	0501054-2	6.0*	12.5*
	-DIRECTIONAL GYRO INDICATOR, SPERRY	40760-0104	2.7	13.5
	-ATTITUDE GYRO INDICATOR	C661076-0101	1.9	14.5
	-HOSES AND MISCELLANEOUS HARDWARE	1201075	1.4	7.7
D67-A	FLIGHT HOUR RECORDER, HOBBS TYPE ELECTRIC	0501052-3	0.5*	9.1*
	-HOUR METER, OIL PRESSURE ACTIVATED	C664503-0101	0.3	16.2
D82-S	O.A.T. OUTSIDE AIR TEMPERATURE GAGE	C668507-0101	0.1	28.6
D85-R	TACHOMETER INSTALLATION, RECORDING	0506007	1.0*	12.1*
	-TACHOMETER INDICATOR	C668020-0121	0.7	16.0
D88-S-1	TURN COORDINATOR INDICATOR, 28 VOLT	C661003-0507	1.8	15.8
D88-S-2	TURN COORDINATOR INDICATOR, 10 TO 30 VOLT	C661003-0506	1.0	15.8
D88-O	TURN COORDINATOR INDICATOR, AUTOPILOT	42320-0028	1.2	15.8
D91-S	V.S.I. VERTICAL SPEED INDICATOR	C661080-0101	0.8	15.7
	E. CABIN ACCOMMODATIONS			
E05-R	SEAT, PILOT FIXED HEIGHT	0514203-1	16.3	44.0
E05-O	SEAT, PILOT VERTICAL ADJUSTING	0514204-1	23.0	41.5
E07-S	SEAT, CO-PILOT FIXED HEIGHT	0514203-1	16.3	44.0
E07-O	SEAT, CO-PILOT VERTICAL ADJUSTING	0514204-2	23.0	41.5

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
E09-S	SEAT, REAR ONE PIECE BACK CUSHION	0514201-1	23.0	79.5
E09-O	SEAT, REAR TWO PIECE BACK CUSHION	0514184-1	26.5	79.5
E11-A	SEAT INSTALLATION, CHILDS FOLDAWAY -LAP BELT ASSEMBLY -SEAT ASSEMBLY	0501009-6 S-1746-5 0714050-4	8.4* 0.8 6.7	101.1* 100.8 100.8
E15-R	SEAT BELT AND SHOULDER HARNESS, PILOT	S-2275-11	1.6	37.0
E19-O	INERTIA REEL INSTALLATION, PILOT AND CO-PILOT SHOULDER HARNESS, (NET CHANGE)	0501046-1	2.0	82.0
E23-S	SEAT BELT AND SHOULDER HARNESS, CO-PILOT (REQUIRED WHEN ITEM E07 CO-PILOT SEAT IS INSTALLED)	S-2275-11	1.6	37.0
E27-S	SEAT BELT AND SHOULDER HARNESS, REAR SEAT (SET OF 2)	S-2275-8, -34	3.2	70.0
E34-O-1	DELUXE GLARESHIELD (NET CHANGE)	0515034	1.0	21.0
E34-O-2	LEATHER SIDE PANEL COVERING (NET CHANGE)	CES-1151	1.0	63.0
E35-A-1	LEATHER SEAT COVERING, FULL (NET CHANGE)	CES-1151	2.0	62.0
E35-A-2	LEATHER SEAT COVERING, PARTIAL (NET CHG)	CES-1151	1.5	62.0
E36-A	REMOVABLE FLOORMATS (SET OF 2)	0501120-1	3.8	20.5
E37-O	WINDOW, HINGED RIGHT DOOR (NET CHANGE)	0501107-3	2.3	47.0
E38-S	WINDOW, HINGED LEFT DOOR	0517025-7	3.0	47.0
E39-A	WINDOWS, CABIN TOP SKYLIGHT (SET OF 2)	0511800-10	0.9	47.9
E43-A	REAR SEAT AIR VENTS (SET OF 2)	0700322-14	1.7	60.0
E49-A	BEVERAGE CUP HOLDERS (SET OF 2)	0501022-1	0.1	15.5
E50-A	HEADRESTS, FRONT SEAT (SET OF 2)	1215073-11	1.5	47.0
E51-A	HEADRESTS, REAR SEAT (SET OF 2)	1215073-11	1.5	86.0

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
E55-S	SUN VISORS (SET OF 2)	0514166-1	0.9	32.8
E57-A	TINTED CABIN WINDOW GLASS (NET CHANGE)	0500267-4	0.0	60.0
E59-A	APPROACH PLATE HOLDER INSTALLATION	0415044-2	0.1	20.5
E65-S	BAGGAGE RETAINING NET (STOWED)	2015009-8	0.5	95.0
E71-A	CARGO TIE DOWN RINGS (STOWED)	0511165	1.0	95.0
E75-A	STRETCHER INSTALLATION (STOWED) (USE CG ARM AS INSTALLED WITH OCCUPANT)	0700164-4	9.8	95.0
E85-S	DUAL CONTROLS INSTALLATION, RIGHT SEAT -CONTROL WHEEL WITH PADDING, CO-PILOT -RUDDER AND BRAKE PEDAL INSTL, CO-PILOT	0513335-6 0415030-1	5.5* 2.0 1.1	12.4* 26.0 6.8
E87-A	RUDDER TRIM SYSTEM INSTALLATION	0513290-1	1.9	9.4
E88-A	AIR CONDITIONING SYSTEM, CABIN -COMPRESSOR AND CLUTCH ASSEMBLY -EVAPROATOR INSTALLATION, OVERHEAD CABIN -CONDENSOR, UNDER FUSELAGE A.R.A. -HOSES AND MISCELLANEOUS ITEMS	0501066-4 C413001-0115 0501116 0519600	69.5* 18.0 23.8 5.3 22.7	32.6* -29.5 57.9 98.0 40.0
E89-O	CONTROL WHEEL WITH MAP LIGHT AND MIC. SWITCH INSTALLATION (INCLUDES PANEL MOUNTED AUXILIARY MIC. JACK)	0570453-2	0.2	22.0
E93-S	CABIN HEATER SYSTEM	0550333-1	2.5	-4.0
	F. PLACARDS, WARNINGS & MANUALS			
F01-R	PLACARD, OPERATIONAL LIMITATIONS VFR DAY	0505087	0.0	18.0
F01-O-1	PLACARD, OPERATIONAL LIMITATIONS VFR DAY AND NIGHT	0505087	0.0	18.0
F01-O-2	PLACARD, OPERATIONAL LIMITATIONS IFR DAY AND NIGHT	0505087	0.0	18.0
F01-O-3	PLACARD, OPERATIONAL LIMITATIONS VFR DAY FLOATPLANE	0505087	0.0	18.0

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
F01-O-4	PLACARD, OPERATIONAL LIMITATIONS VFR DAY AND NIGHT FLOATPLANE	0505087	0.0	18.0
F01-O-5	PLACARD, OPERATIONAL LIMITATIONS IFR DAY AND NIGHT FLOATPLANE	0505087	0.0	18.0
	NOTE--EACH OF THE ABOVE PLACARDS REQUIRES CERTAIN EQUIPMENT BE INSTALLED ON AIRCRAFT			
F04-R	STALL WARNING INDICATOR, PNEUMATIC	0523112	0.2	28.5
F09-S	LOW VOLTAGE WARNING SYSTEM, ALTERNATOR		0.5*	0.0*
	-ALTERNATOR CONTROL UNIT	C611005-0101	0.4	-0.7
	-WARNING LIGHT	S-2519-2	0.0	16.6
F10-S	LOW VACUUM WARNING SYSTEM, VACUUM PUMP	0501054	0.1*	12.0*
	-WARNING LIGHT	S-2519-2	0.0	16.6
	-LOW VACUUM LIGHT SWITCH	S-2571-1	0.1	8.0
F13-S	PILOT'S OPERATING CHECKLIST (STOWED IN INSTRUMENT PANEL MAP CASE)	D6143	0.3	14.3
F16-R	PILOT'S OPERATING HANDBOOK AND FAA APPROVED AIRPLANE FLIGHT MANUAL (STOWED IN PILOT'S SEAT BACK CASE)	D1272-13PH	1.2	50.0
	G. AUXILIARY EQUIPMENT			
G04-A	TOW HOOK INSTALLATION, GLIDER AND BANNER	0500228-1	0.7*	199.9*
	-TOW HOOK, SCHWEIZER ID-112-15	0500228-2	0.4	229.0
	-RELEASE CORD, NYLON 300 POUND TEST	0500228-3	0.2	123.0
G07-A	HOISTING RINGS, CABIN TOP, (SET OF 4)	0541115-1	1.1	49.1
G11-S	FUEL SAMPLING CUP (STOWED IN MAP CASE)	0756035-5	0.1	14.3
G13-A	CORROSION PROOFING, INTERNAL ZINC CHROMATE	0501108-1	12.9	77.0
G16-A	STATIC DISCHARGE WICKS (SET OF 10)	0501048-1	0.4	143.2
G19-A	ABRASION BOOTS, STABILIZER	0500041-3	2.7	206.0
G22-S	TOW BAR, NOSE GEAR (STOWED)	0501019-1	1.7	124.0

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
G25-S	PAINT, OVERALL EXTERIOR COVER	0504045	12.4*	92.2*
	-WHITE BASE, OVERALL		12.0	90.5
	-STRIPE, COLOR SCHEME		0.4	144.1
G31-O	CABLES, CORROSION RESISTANT (NET CHANGE)	0501108-1	0.0	70.0
G55-A	FIRE EXTINGUISHER INSTALLATION	0501011-2	5.3*	43.8*
	-FIRE EXTINGUISHER, GENERAL CORPORATION	C421001-0201	4.8	44.0
	-MOUNTING CLAMP	C421001-0202	0.5	42.2
G58-A	REFUELING STEPS AND HANDLE INSTALLATION	0513415-2	1.7	16.3
G67-A	RUDDER PEDAL EXTENSIONS (SET OF 2)(STOWED)	0501082-1	2.8	95.0
	(INSTALLED)		2.8	8.0
G88-A	WINTERIZATION KIT INSTALLATION, ENGINE	0501128-2	0.8*	-22.7*
	-BREATHER TUBE INSULATION	0552011	0.4	-13.8
	-COWL INLET COVERS (INSTALLED)	0552229-3,-4	0.3	-32.0
	-COWL INLET COVERS (STOWED)	0552229-3,-4	0.3	95.0
	-OIL COOLER COVER PLATE	2401018-1	0.1	-10.2
G92-R	STANDARD TANKS, 40 GALLON USABLE FUEL SYS.	0526007	20.0	48.0
G92-O-1	LONG RANGE TANKS, 50 GALLON (NET CHANGE)	0501055-2	8.0	48.0
G92-O-2	INTEGRAL TANKS, 62 GALLON (NET DECREASE)	0501094-2	-7.2	48.0
	H. AVIONICS & AUTOPILOTS			
H01-A	ADF INSTALLATION, SPERRY R-546E WITH BFO	3910159-2	6.9*	23.2*
	-RECEIVER, SPERRY R-546E	41240-0001	3.4	13.1
	-MOUNTING TRAY, SPERRY	40900-0000	0.3	13.1
	-INDICATOR, SPERRY IN-346E	40980-1001	0.9	14.1
	-SENSE ANTENNA INSTALLATION	0570400-632	0.2	101.8
	-LOOP ANTENNA INSTALLATION	3960104-1	1.4	58.2
	-WIRING AND HARDWARE	3950122-31	1.1	20.8
H04-A	DME INSTALLATION, SPERRY RT-377A	3910241-2	3.2*	13.5*
	-TRANSCEIVER/INDICATOR, SPERRY RT-377A	51670-0001	2.0	11.9
	-MOUNTING TRAY, SPERRY	50713-0003	0.3	10.3
	-ANTENNA, SPERRY 42940-0000	C589507-0201	0.2	32.0
	-CABLE INSTALLATION	3950122-47	0.7	12.7

ITEM NO	EQUIPMENT LIST DESCRIPTION	REF DRAWING	WT LBS	ARM INS
H07-A-1	GLIDESLOPE INSTALLATION, SPERRY R-443B (INCLUDES VOR/ILS INDICATOR EXCHANGED FOR VOR/LOC INDICATOR, USED WITH ITEM H22-A NAV/COM, NET CHANGE)	3910157-2	4.7*	80.4*
	-GLIDESLOPE RECEIVER, SPERRY R-443B	42100-0000	2.1	117.2
	-RECEIVER MOUNT, SPERRY	36450-0000	0.1	117.2
	-ANTENNA COUPLER, S-2473-1 (NET CHANGE)	3960111-27	0.0	7.0
	-VOR/ILS INDICATOR ADDED, IN-381A	50570-2000	1.5	14.7
	-VOR/LOC INDICATOR DELETED, IN-380A	50570-1000	-1.4	14.7
	-WIRING AND MISCELLANEOUS HARDWARE		2.5	53.1
H08-A-1	AUTO RADIAL CENTERING INDICATOR (ARC/LOC INDICATOR EXCHANGED FOR VOR/LOC INDICATOR, USED WITH ITEM H22-A VHF NAV/COM, NET CHANGE)	3910196-3	0.0*	14.7*
	-ARC/LOC INDICATOR ADDED, IN-380AC	50570-1200	1.4	14.7
	-VOR/LOC INDICATOR DELETED, IN-380A	50570-1000	-1.4	14.7
H08-A-2	AUTO RADIAL CENTERING INDICATOR (ARC/ILS INDICATOR EXCHANGED FOR VOR/ILS INDICATOR, USED WITH ITEM H07-A ILS GLIDESLOPE, NET CHANGE)	3910196-4	0.0*	14.7*
	-ARC/ILS INDICATOR ADDED IN-381AC	50570-2200	1.5	14.7
	-VOR/ILS INDICATOR DELETED IN-381A	50570-2000	-1.5	14.7
H11-A	HF COM TRANSCEIVER, SUNAIR ASB-125HF (MUST BE INSTALLED AS A 2ND UNIT WITH A 1ST UNIT CONTAINING AN AUDIO POWER AMPLIFIER SUCH AS ITEM H22-A VHF NAV/COM)	3910158-1	20.8*	86.7*
	-TRANSCEIVER, PANEL MOUNTED SUNAIR	99681	5.3	13.1
	-AUDIO CONTROL PANEL INSTALLATION	3970131-1	1.1	15.8
	-POWER SUPPLY AND SHOCK RACK, SUNAIR	99391	8.5	114.3
	-ANTENNA LOAD BOX, SUNAIR CU-1000A	99816	4.9	108.0
	-ANTENNA INSTL. 351 IN LONG	3960117-3	0.3	163.1
	-WIRING AND MISCELLANEOUS HARDWARE	3950122-12	1.8	94.3
H13-A	MARKER BEACON INSTALLATION, SPERRY R-402B	3910164-1	2.2*	60.3*
	-RECEIVER, SPERRY R-402B	51170-0000	0.6	8.2
	-ANTENNA, "L" ROD	3960125-1	0.7	140.0
	-WIRING AND HARDWARE	3950122	0.9	33.0