SECTION 6

WEIGHT AND BALANCE

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6.1 - GENERAL

This section contains the procedure for determining the basic empty weight and the balance corresponding to the TBM 700 airplane. Procedures for calculating the weight and the balance for various flight operations are also provided. A list of equipment available for this airplane is included at the end of this section.

It should be noted that the list of specific optional equipment installed on your airplane as delivered from the factory can be found in the records carried in the airplane.

IT IS THE PILOT'S RESPONSIBILITY TO ENSURE THAT THE AIRPLANE IS LOADED PROPERLY AND THE WEIGHT AND BALANCE LIMITS ARE ADHERED TO.

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6.2 - AIRPLANE WEIGHING PROCEDURES

Refer to Maintenance Manual for the procedures to use.

NOTE :
Weighing carried out at the factory takes into account all equipment installed on the airplane. The list of this equipment and the total weight is noted in the Individual Inspection Record.

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6.3 - BAGGAGE LOADING

There are two baggage compartments :

- one located in the rear of the pressurized cabin provides a maximum baggage capacity between 187 lbs (85 kg) and 220 lbs (100 kg),
- the other one located in the rear fuselage section, non pressurized, between the rear pressure bulkhead at frame C17 and the frame C18 provides a maximum baggage capacity between 55 lbs (25 kg) and 77 lbs (35 kg).

Baggage compartment maximum loading, as well as load distribution among the baggage compartments must be determined using the baggage loading graph (Figures 6.3.1 and 6.3.1A).

Stowing straps are provided for securing parcels and baggage on pressurized baggage compartment floor.

A partition net separating the cabin from the baggage compartment is attached to frame C14.

WARNING

IT IS THE PILOT'S RESPONSIBILITY TO CHECK THAT ALL THE PARCELS AND BAGGAGES ARE PROPERLY SECURED IN THE CABIN

TRANSPORT OF DANGEROUS PRODUCT IS NORMALLY PROHIBITED, HOWEVER IF TRANSPORT OF SUCH PRODUCT IS NECESSARY, IT WILL BE PERFORMED IN COMPLIANCE WITH REGULATIONS CONCERNING TRANSPORT OF DANGEROUS PRODUCT AND ANY OTHER APPLICABLE REGULATION

Weight and balance graph should be checked to ensure the airplane is within the allowable limits.

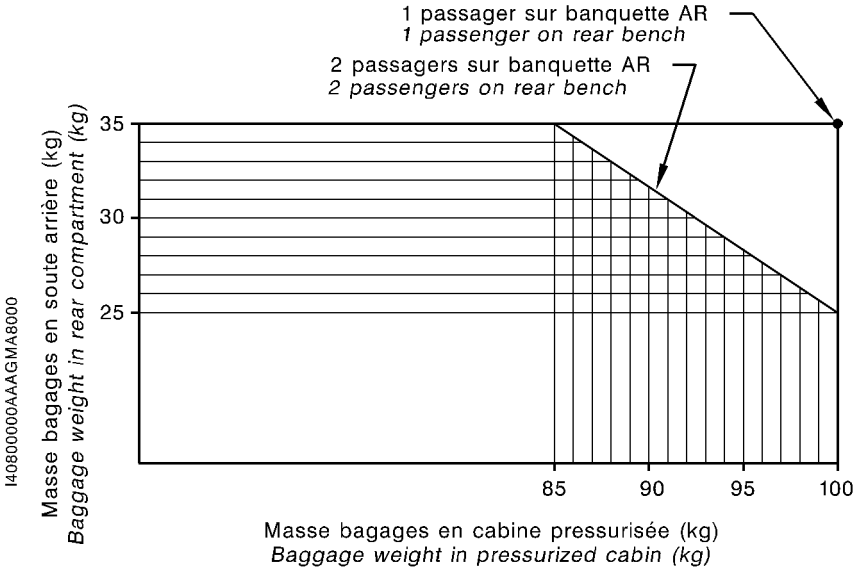

Figure 6.3.1 - BAGGAGE LOADING GRAPH (in kg)

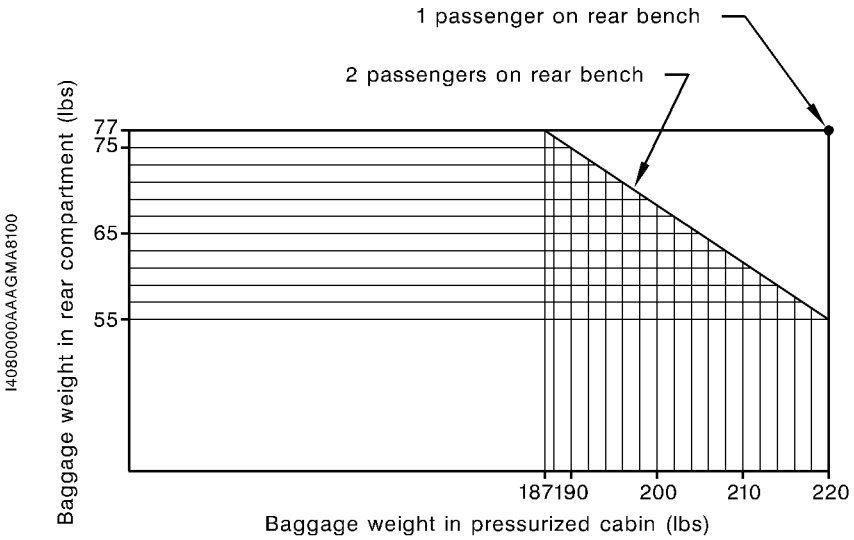

Figure 6.3.1A - BAGGAGE LOADING GRAPH (in lbs)

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6.4 - DETERMINING WEIGHT AND BALANCE

GENERAL

This paragraph is intended to provide the pilot with a simple and rapid means of determining weight and balance of his airplane.

IT IS THE PILOT'S RESPONSIBILITY TO ENSURE THAT THE AIRPLANE IS LOADED PROPERLY AND THE WEIGHT AND BALANCE LIMITS ARE ADHERED TO.

Empty weight to be considered is the weight noted on last weighing form. To this empty weight corresponds a basic balance, expressed in percent of mean aerodynamic chord. Empty weight and the corresponding balance allow to calculate the airplane basic index.

If airplane empty weight has varied since last weighing form, refer to paragraph "DETERMINING EMPTY AIRPLANE CHARACTERISTICS" to determine new empty weight and the corresponding balance (for instance : optional equipment installation).

UTILIZATION OF WEIGHT AND BALANCE GRAPH (Figures 6.4.1, 6.4.1A and 6.4.2, 6.4.2A)

EXAMPLES :

			SAMPLE 1 Fig. 6.4.1	**SAMPLE 2** Fig. 6.4.1A
1 -	***Airplane basic characteristics :***			
	W = Empty weight	:	1860 kg	4100 lbs
	CG = Balance (m.a.c. %)	:	16 %	16 %
2 -	***Foreseen loading :***			
	1 Pilot and 1 front Passenger	:	150 kg	400 lbs
	2 Intermediate Passengers	:	100 kg	300 lbs
	2 Rear Passengers	:	100 kg	200 lbs
	Cargo in pressurized cabin	:	60 kg	100 lbs
	Fuel	:	500 kg	1000 lbs

3 - Utilization of weight and balance graph :

- Record airplane basic characteristics in ①.
- Compute basic index with the formula described in ② and record the result in ③.
- Record foreseen loading in ④ and compute total weight of the loaded airplane.

NOTE :
Intermediate calculation of total weight without fuel allows, taking into account the "Maximum Weight" limit, computing rapidly fuel quantity liable to be loaded.
A conversion scale (lb / us gal) allows quick computation from fuel pounds to us gallons.

- Note computed index ③ on upper index scale and proceed as follows :
  a) Vertically mark a line downwards up to interception of oblique lines of first heading "Front seats".
  b) Then continue the line horizontally following direction given by arrow according to indicated value of loading (400 lbs or 150 kg) in example) **(the weight indicated in the arrow gives pitch value between two oblique lines)**.
  c) Then continue the line vertically downwards up to interception of oblique lines of second heading and work in the same way as before (procedure described in b).
  d) Proceed in the same way for remaining headings.
- Draw then a vertical line ⑤ corresponding to final index (loaded airplane) up to interception of horizontal line representing airplane total weight ⑥.
- Read corresponding balance (30.2 % in kg and litres or 29.2 % in lbs and us gal in examples) by checking that obtained point is inside the weight and balance envelope.
  Check also that the total zero fuel weight does not exceed the max. zero fuel weight of 6001 lbs (2722 kg). If not, reconsider airplane loading.
- Record these data on your navigation log.

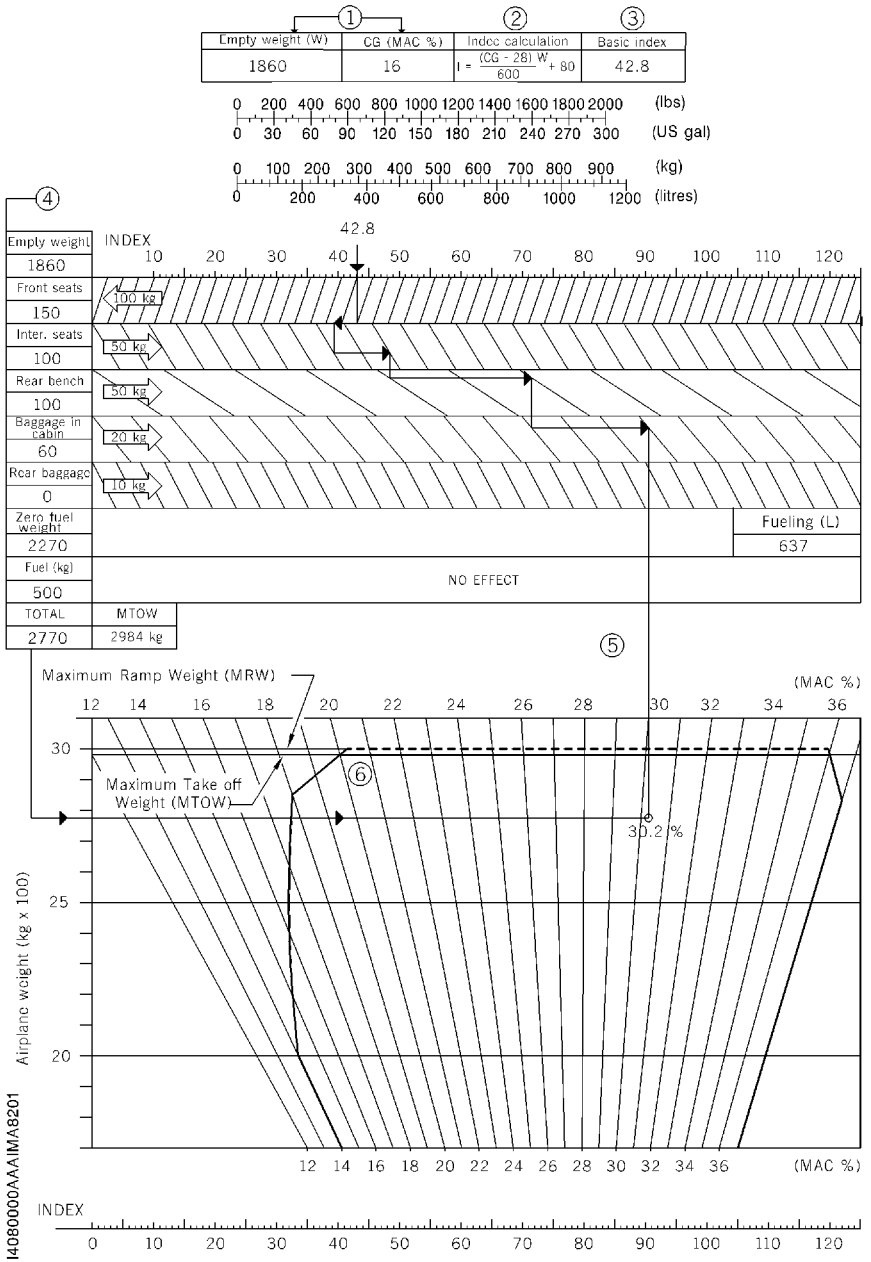

Figure 6.4.1 - LOADING SAMPLE (in Kg and Litres)

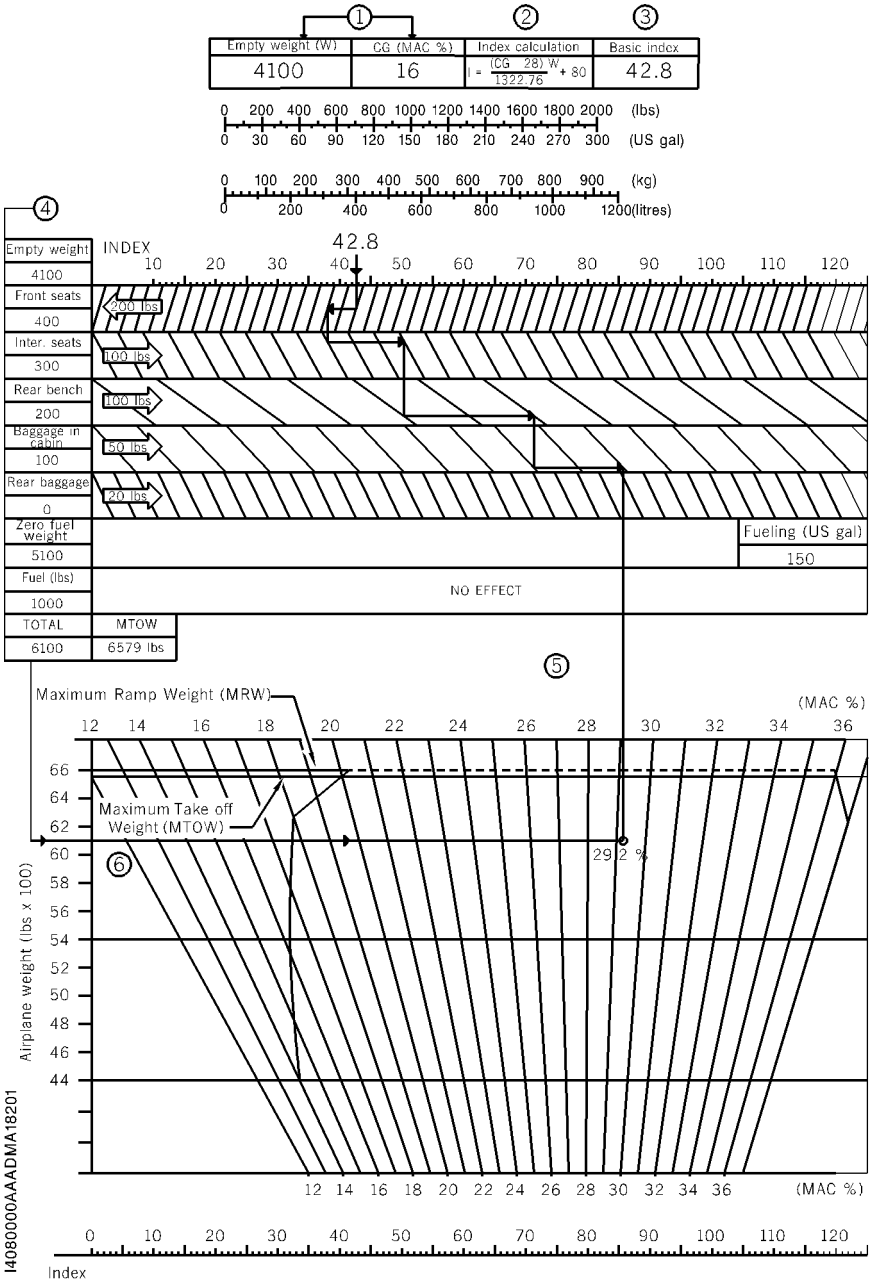

Figure 6.4.1A - LOADING SAMPLE (in lbs and us gal)

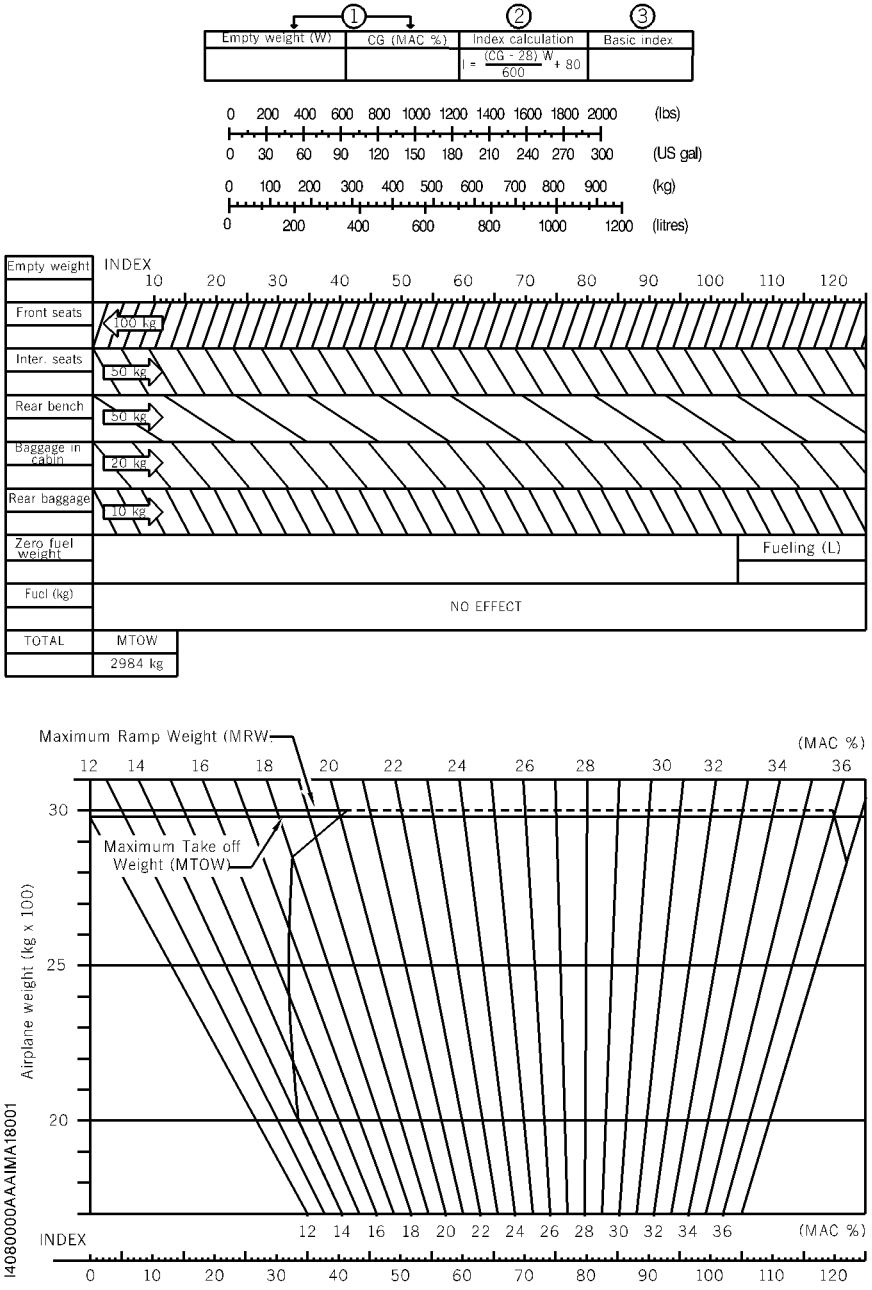

Figure 6.4.2 - WEIGHT AND BALANCE GRAPH (in Kg and Litres)

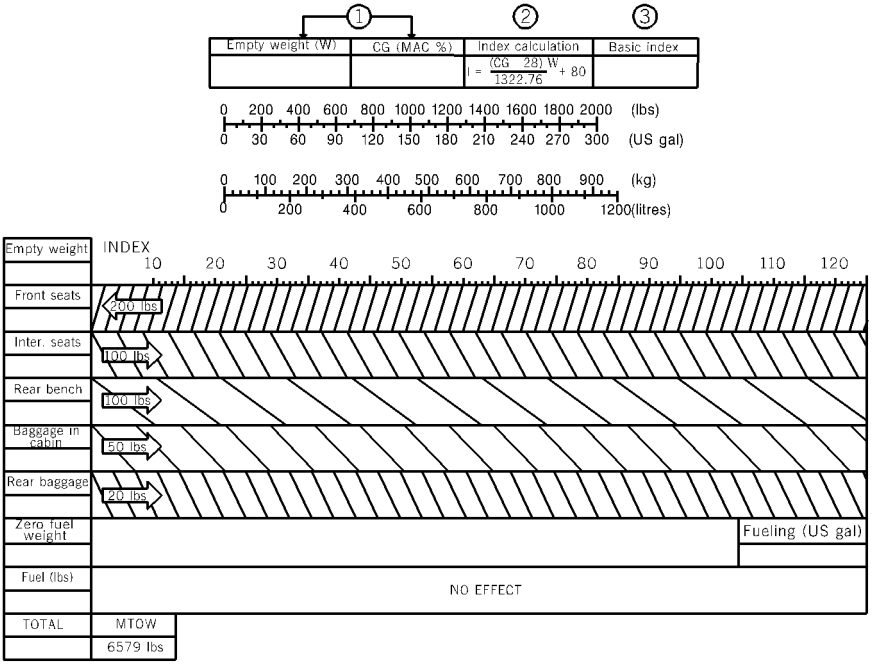

Figure 6.4.2A - WEIGHT AND BALANCE GRAPH (in lbs and us gal)

DETERMINING EMPTY AIRPLANE CHARACTERISTICS

Empty airplane characteristics (weight and balance) may vary with regard to those indicated on weighing form according to installed optional equipment.

List of equipment (paragraph 6.5) contains the standard and optional equipment, as well as their characteristics (weight, arm).

Use the chart below to compute new empty weight and corresponding balance if necessary.

DATE	EQUIPMENT OR MODIFICATION DESCRIPTION	(+) (−)	WEIGHT MODIFICATION			BASIC EMPTY WEIGHT		
			Weight lb	Arm in.	Moment lb.in/1000	Weight W	Arm "d_o"	Moment
	According to delivery							

Figure 6.4.3 - SAMPLE WEIGHT AND BALANCE RECORD

$$\text{CG m.a.c.\%} = \frac{(do - 172.93)}{59.45} \times 100$$

Use the above formula to express arm "d_o" in % of mean aerodynamic chord.

NOTE :
Arm expressed in inches with regard to reference.

Front seats	: 180.5 in. (4.585 m)
Intermediate seats	: 222.1 in. (5.641 m)
Rear bench (2 seats)	: 272.3 in. (6.916 m)
Baggage compartment in pressurized cabin	: 303.0 in. (7.695 m)
Aft baggage compartment	: 329.4 in. (8.366 m)
Fuel	: 189.8 in. (4.820 m)

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6.5 - LIST OF EQUIPMENT

The following list contains standard equipment installed on each airplane and available optional equipment.

A separate list of equipment of items installed at the factory in your specific airplane is provided in your airplane file.

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

In the list of Required, Standard or Optional equipment (not restrictive), a letter "R", "S", "O" or "A" allows classifying the equipment :

"R" : equipment items required for certification

"S" : standard equipment items

"A" : optional equipment items which are in addition to required or standard items

"O" : optional equipment items replacing required or standard items

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		01 - SPECIFIC OPTIONAL EQUIPMENT			
S	01019A	DME KN63 shield case	SOCATA	0.33 (0.150)	231.50 (5.880)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		21 - ENVIRONMENTAL SYSTEM			
		21-20 - Distribution			
S		Cabin fan 11-93364	HONEYWELL LMB	7.72 (3.500)	292.72 (7.435)
		21-30 - Pressurization control			
S		Cabin altitude differential pressure and rate of climb indicator 3300-J51 CODE J.51	UNITED INSTRUMENTS	0.94 (0.425)	157.48 (4.000)
S		Cabin altitude warn switch 214 C40.3.261	CONDEC	0.08 (0.035)	153.94 (3.910)
S		Cabin pressurization dump solenoïd valve 5112-1	AEROSPACE	0.44 (0.200)	181.10 (4.600)
S		Cabin ΔP warn switch 17-600-1 or 17-600-01	UMA	0.14 (0.065)	139.76 (3.550)
S		Check valve 985C-63-3	LE BOZEC	0.20 (0.090)	118.11 (3.000)
S		Outflow valve controller 130618-1	GARRETT	1.65 (0.750)	157.48 (4.000)
S		Outflow valve 103760-1	GARRETT	1.54 (0.700)	317.32 (8.060)
S		Safety valve 103760-2	GARRETT	1.54 (0.700)	317.32 (8.060)
		21-50 - Temperature conditioning system			
S		Pressure regulator and shut-off valve 4350B000-002	NORMALAIR GARRETT	3.09 (1.400)	114.25 (2.902)
S		Overpressure switch 6085C000-001	NORMALAIR GARRETT	0.19 (0.086)	115.51 (2.934)
S		Overtemperature switch 6083C000-001	NORMALAIR GARRETT	0.14 (0.065)	107.95 (2.742)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
S		Heat exchanger/cooling turbine pack 6053C000-003	NORMALAIR GARRETT	18.96 (8.600)	109.84 (2.790)
S		Water separator 6055C000-002	NORMALAIR GARRETT	2.05 (0.930)	97.80 (2.484)
S		Duct overtemperature switch 6084C000-001	NORMALAIR GARRETT	0.14 (0.065)	129.37 (3.286)
		21-55 - Vapor cycle cooling system			
S		Compressor/condenser pack 11-92364	SECAN	55.12 (25.000)	125.39 (3.185)
S		Evaporator 11-91364	SECAN	11.02 (5.000)	309.45 (7.860)
		21-60 - Temperature regulation			
S		Temperature control valve 6094C000-001	NORMALAIR GARRETT	2.50 (1.134)	113.15 (2.874)
S		Controller 6054C000-001	NORMALAIR GARRETT	2.43 (1.100)	133.31 (3.386)
S		Duct temperature sensor 6080C000-001	NORMALAIR GARRETT	0.11 (0.048)	130.87 (3.324)
S		Cabin temperature sensor 6080C000-001	NORMALAIR GARRETT	0.11 (0.048)	303.54 (7.710)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		22 - AUTO FLIGHT *NOTE :* *KFC 325 autopilot is included in EFIS equipment (ATA 34)*			
S		AFC air data computer KDC 222	HONEYWELL	0.970 (0.440)	167.32 (4.250)
S		AFC computer KCP 220	HONEYWELL	3.086 (1.400)	171.26 (4.350)
S		AFC mode selector KMC 321	HONEYWELL	0.882 (0.400)	155.51 (3.950)
S		Altitude and vertical speed preselector KAS 297C	HONEYWELL	1.124 (0.510)	155.51 (3.950)
S		Amplifier separator KA21	SOCATA	1.279 (0.580)	194.88 (4.950)
S		Audio alerter KAA 15	HONEYWELL	0.750 (0.340)	171.26 (4.350)
S		Pitch servo KS 270A	HONEYWELL	2.601 (1.180)	247.44 (6.285)
S		Pitch trim servo KS 272A	HONEYWELL	2.403 (1.090)	157.48 (4.000)
S		Roll servo KS 271A	HONEYWELL	2.403 (1.090)	227.76 (5.785)
S		Yaw servo KS 271A	HONEYWELL	2.403 (1.090)	253.74 (6.445)
S		Yaw rate gyro KRG 331	HONEYWELL	0.750 (0.340)	171.26 (4.350)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		23 - COMMUNICATIONS			
S		Antenna 16-21B-P3 (under fuselage)	CHELTON	1.04 (0.470)	272.28 (6.916) or 280.31 (7.120)
S		Cockpit loud-speaker AB 100 SC	ALPINE ELECTRONICS	0.77 (0.350)	181.10 (4.600)
S		Static dischargers Type 2-16SC-1	CHELTON	Neglig.	/
S		Warning loud-speaker AD 2071/Z8	PHILIPS	0.11 (0.050)	181.10 (4.600)
A	23009A	Additional equipment for electrostatic dischargers	CHELTON	Neglig.	/
S	23011F	Radio stereo-headset Serie X	BOSE	/	/
A	23012B	Audio-Marker PMA 7000-MS (with EFIS equipment)	PS ENGINEERING	1.43 (0.650)	151.57 (3.850)
A	23017C	Transceiver COM1-NAV#1 with EFIS KX 165A	HONEYWELL	3.99 (1.810)	153.54 (3.900)
A	23022C	Transceiver COM1-NAV#2 with EFIS KX 165A	HONEYWELL	3.99 (1.810)	153.54 (3.900)
A	23023A	Audio-Marker GMA340 with EFIS	GARMIN	1.46 (0.660)	153.54 (3.900)
A	23024A	COM/NAV/GPS # 1 system with EFIS :			
		. Transceiver GNS530	GARMIN	8.49 (3.850)	151.57 (3.850
		. VHF antenna (under fuselage) 16-21B-P3	CHELTON	0.86 (0.390)	271.65 (6.900)
		. GPS antenna KA 92	HONEYWELL	0.26 (0.120)	196.85 (5.000)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
A	23025A	COM/NAV/GPS # 2 system with EFIS :			
		. Transceiver GNS530	GARMIN	8.49 (3.850)	151.57 (3.850
		. VHF antenna (upper fuselage) 16-21B-P3	CHELTON	0.86 (0.390)	271.65 (6.900)
		. GPS antenna KA 92	HONEYWELL	0.26 (0.120)	204.72 (5.200)
		. CDI GI 106A	MID CONTINENT	1.46 (0.660)	155.51 (3.950)
A	23026A	VHF Data Link KDR510	HONEYWELL	2.45 (1.113)	191.69 (4.869)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		24 - ELECTRICAL POWER			
		24-30 - DC generation			
R		Ammeter AM99-05	FALGAYRAS	0.31 (0.140)	175.20 (4.450)
R		Electric power center 160GC02Y05	ECE	11.02 (5.000)	127.95 (3.250)
R		Stand-by generator T700A243008000601	SOCATA	12.13 (5.500)	102.36 (2.600)
R		Starter generator 8012F	AUXILEC	24.47 (11.100)	110.24 (2.800)
R		Voltmeter VT99-04	FALGAYRAS	0.22 (0.100)	175.20 (4.450)
O	24001A	Battery 4076-1	SAFT	83.33 (37.800)	112.00 (2.845)
S	24002	Lead-Acid battery RG-380E/44	CONCORDE	85.98 (39.000)	112.20 (2.850)
		24-40 - External power supply			
S		Ground power receptacle MS 3506-1	QPL (AIRCRAFT APPLIANCES AND EQUI. LTD)	0.79 (0.360)	114.17 (2.900)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		25 - EQUIPMENT AND FURNISHINGS			
S		Map holder	SOCATA	0.46 (0.210)	167.72 (4.260)
S		Partition net between the cabin and the baggage compartment			
		(OPT70 25026A) or	SOCATA	2.76 (1.250)	289.53 (7.354)
		(OPT70 25026B)	SOCATA	3.64 (1.650)	289.53 (7.354)
A	25005D	JEPPESEN cabinet	SOCATA	16.09 (7.300)	202.76 (5.150)
A	25006G	Storage box (wood and leather)	SOCATA	17.64 (8.000)	202.76 (5.150)
A	25006H	Refreshment cabinet (wood and leather)	SOCATA	20.28 (9.200)	202.76 (5.150)
A	25009G	BECKER audio cabinet	SOCATA	26.23 (11.900)	225.43 (5.726)
A	25024B	Carpet protecting mat	SOCATA	5.73 (2.600)	246.10 (6.250)
A	25025C	Cabin furnishings "Black chromé"	SOCATA	1.98 (0.900)	314.64 (7.992)
A	25025D	Cabin furnishings "Doré"	SOCATA	1.98 (0.900)	314.64 (7.992)
A	25027A	Cargo transportation capability (pilot alone on board)	SOCATA	25.35 (11.500)	246.69 (6.266)
A	25027B	Cargo transportation capability (1 pilot + 1 passenger)	SOCATA	30.36 (14.000)	246.10 (6.251)
		Leather seats - Belts			
S		. Pilot's seat	SOCATA	27.56 (12.500)	182.68 (4.640)
S		. Front R.H. seat	SOCATA	27.56 (12.500)	182.68 (4.640)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
S		. L.H. Intermediate seat (back to flight direction)	SOCATA	24.25 (11.000)	218.30 (5.545)
		R.H. Intermediate seat (back to flight direction)	SOCATA	24.25 (11.000)	218.30 (5.545)
S		. Divan, L .H. seat	SOCATA	25.35 (11.500)	271.30 (6.891)
S		. Divan, R. H. seat	SOCATA	25.35 (11.500)	271.30 (6.891)
S		Reels	ANJOU AERONAUTIQUE	1.79 (0.810)	192.91 or 287.40 (4.900 or 7.300)
A	25032	Front seats ease covers	SOCATA	2.76 (1.250)	183.78 (4.668)
		25-61 - Emergency locator transmitter			
S	25030A	Emergency beacon C406-1 (with base)	ARTEX	4.46 (2.021)	354.72 (9.010)
		. ELT/NAV interface box 453-6500	ARTEX	2.69 (1.220)	353.15 (8.970)
		. Antenna 21-41	CHELTON	0.31 (0.140)	318.70 (8.095)
O		Emergency beacon KANNAD 406AF (with support)	SERPE-IESM	2.45 (1.110)	347.09 (8.816)
		. ELT/NAV interface box CS144A	SERPE-IESM	1.81 (0.823)	297.64 (7.560)
		. Antenna 21-41	CHELTON	0.31 (0.140)	318.70 (8.095)

S/ R/ A/ O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		26 - FIRE PROTECTION			
S	26001B	Portable fire extinguisher unit 863520-00	L'HOTELLIER	3.64 (1.650)	192.16 (4.881)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		27 - FLIGHT CONTROLS			
		27-10 - Roll control			
R		Roll trim actuator 145700.02	LPMI	1.54 (0.700)	212.60 (5.400)
		27-20 - Yaw control			
R		Rudder trim actuator 145700.02	LPMI	1.54 (0.700)	395.27 (10.040)
R		Trim and flap indicator 4724	PEKLY S.A	1.10 (0.500)	159.45 (4.050)
S		AFC and electric trim control on R.H. control wheel	SOCATA	0.88 (0.400)	157.48 (4.000)
		27-30 - Pitch control			
S		Pitch trim actuator 145400-02	LPMI	1.21 (0.550)	425.20 (10.800)
		27-50 - Wing flaps (control)			
R		Flap control including :	AVIAC	15.52 (7.040)	218.50 (5.550)
		. Flap motor 6157-1	AVIAC	2.87 (1.300)	216.54 (5.500)
		. Flap actuator 1-5295/2-5297	AVIAC	1.92 (0.870)	216.54 (5.500)
		or 1-5297/2-5295		1.83 (0.830)	220.47 (5.600)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		28 - FUEL SYSTEM			
		28-20 - Fuel supply			
R		Electric boost pump 2022-B	WELDON	3.48 (1.580)	129.92 (3.300)
R		Electric boost pump 1B9-5	AIRBORNE	4.41 (2.000)	129.92 (3.300)
R		Engine driven fuel pump 1127-01A	LHC	1.54 (0.700)	110.24 (2.800)
R		Fuel sequencer unit	TFE	1.10 (0.500)	125.98 (3.200)
R		Fuel unit L88A15-651	INTER-TECHNIQUE	4.59 (2.080)	133.07 (3.380)
		28-40 - Fuel indication			
R		Amplifier indicator (in us gal) 748-859-2	INTER-TECHNIQUE	1.48 (0.670)	157.48 (4.000)
R		Fuel pressure indicator PC99-06	FALGAYRAS	0.31 (0.140)	157.48 (4.000)
R		Inboard L.H. probe 768-403	INTER-TECHNIQUE	0.33 (0.150)	183.07 (4.650)
R		Inboard R.H. probe 768-404	INTER-TECHNIQUE	0.33 (0.150)	183.07 (4.650)
R		Intermediate probe 766-976-1	INTER-TECHNIQUE	0.22 (0.100)	190.94 (4.850)
R		Low level probe 722-447	INTER-TECHNIQUE	0.11 (0.050)	183.07 (4.650)
R		Outboard probe 766-977-1	INTER-TECHNIQUE	0.22 (0.100)	190.94 (4.850)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		30 - ICE AND RAIN PROTECTION			
S		Deicer, L.H. horizontal stabilizer T700A3013003000	SOCATA	4.19 (1.900)	398.42 (10.120)
S		Deicer, R.H. horizontal stabilizer T700A3013003001	SOCATA	4.19 (1.900)	398.42 (10.120)
S		Deicer, vertical stabilizer T700A3014003000	SOCATA	3.97 (1.800)	374.02 (9.500)
S		Deicer, inboard L.H. wing T700A3010001002	SOCATA	5.73 (2.600)	173.23 (4.400)
S		Deicer, inboard R.H. wing T700A3010001003	SOCATA	5.73 (2.600)	173.23 (4.400)
S		Deicer, middle L.H. wing T700A3010001004	SOCATA	3.75 (1.700)	173.23 (4.400)
S		Deicer, middle R.H. wing T700A3010001005	SOCATA	3.75 (1.700)	173.23 (4.400)
S		Deicer, outboard L.H. wing T700A3010012000	SOCATA	2.65 (1.200)	173.23 (4.400)
S		Deicer, outboard R.H. wing T700A3010001007	SOCATA	3.31 (1.500)	173.23 (4.400)
S		Dual port distribution valve 1532-10C	LUCAS	2.43 (1.100)	125.98 (3.200)
S		Timer 42E25-2A	LUCAS	0.77 (0.350)	177.17 (4.500)
S		Water separator and filter 44E21-2A	LUCAS	1.10 (0.500)	125.98 (3.200)
		30-40 - Windshield deicing			
S		Windshield heater controller TWH 93-01	AIR SYSTEMS	0.99 (0.450)	149.61 (3.800)

S/ R/ A/ O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT		EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		30-60 - Propeller deicing				
S		Modular brush assy	3E2044-2	BF GOODRICH	0.44 (0.200)	47.05 (1.195)
S		Timer	3E2311-4	BF GOODRICH	0.44 (0.200)	200.79 (5.100)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		31 - INDICATING/RECORDING SYSTEMS			
		31-20 - Independent instruments			
S		Chronometer 420000	ASTROTECH	0.15 (0.070)	157.48 (4.000)
O	31001A	Stop watch Q18-945-22-28-1-LE	THOMMEN	0.42 (0.190)	157.48 (4.000)
O	31002A	Hourmeter (engine running time) 56457-3	DATCON	0.55 (0.250)	156.30 (3.970)
O	31002B	Hourmeter (flying time) 56457-3	DATCON	0.55 (0.250)	156.30 (3.970)
		31-50 - Aural warning			
R		Aural warning system T700A3155011000	SOCATA	0.66 (0.300)	183.07 (4.650)
		31-60 - Visual warning			
R		Advisory panel AP 00-06	AIR SYSTEMS	4.41 (2.000)	157.48 (4.000)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		32 - LANDING GEARS			
		32-10 - Main landing gear			
R		L.H. main landing gear D23767000	MESSIER DOWTY	51.59 (23.400)	200.39 (5.090)
R		R.H. main landing gear D23768000	MESSIER DOWTY	51.59 (23.400)	200.39 (5.090)
		32-20 - Nose landing gear			
R		Nose gear D23766000	MESSIER DOWTY	53.57 (24.300)	93.70 (2.380)
		32-30 - Extension and retraction			
R		Door actuator EC 6230	HRL	1.35 (0.610)	192.91 (4.900)
R		Main locking actuator 08-1480	HRL	13.23 (6.000)	208.07 (5.285)
R		Nose locking actuator 08-1480	HRL	13.23 (6.000)	110.24 (2.800)
R		Hand pump 914-8D27	TELEDYNE	2.33 (1.055)	181.10 (4.600)
		32-35 - Hydraulic generation			
R		Hydraulic power pack assy 1118-02	LHC	10.36 (4.700)	84.65 (2.150)
		32-40 - Wheels and brakes			
R		Brake assembly 030-19100	PARKER	14.99 (6.800)	204.33 (5.190)
R		Main tire 18x5.5-8/190T	MICHELIN	12.20 (5.534)	204.33 (5.190)
R		Main tire 18x5.5-8PR FLE	GOOD YEAR	13.45 (6.101)	204.33 (5.190)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT		EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
R		Master cylinder	010-07801	PARKER	0.88 (0.400)	145.67 (3.700)
R		Master cylinder	010-07802	PARKER	0.88 (0.400)	145.67 (3.700)
R		Nose tire	5.00-5-10PR TL	MICHELIN	5.60 (2.540)	89.57 (2.275)
R		Nose tire	5.00-5-10PR TL	GOOD YEAR	6.17 (2.800)	89.57 (2.275)
R		Nose wheel	40-262A	PARKER	2.98 (1.350)	89.57 (2.275)
R		Main wheel	040-27000	PARKER	11.02 (5.000)	204.33 (5.190)
R		Parking brake valve	T700A3240010 or T700B3240001	SOCATA	0.33 (0.150)	157.48 (4.000)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		33 - LIGHTS			
		33-10 - Instrument panel lighting			
S		L.H. tube 67135 U290 C62S	SELA	Neglig.	/
S		R.H. tube 67135 U290 C63S	SELA	Neglig.	/
S		DC/AC inverter T700A3310021	SOCATA	0.33 (0.150)	153.54 (3.900)
S		Intensity control T700A3310022	SOCATA	0.22 (0.100)	157.48 (4.000)
S		Instruments emergency lighting 2240-3	WEMAC	0.11 (0.050)	181.10 (4.600)
A	33001A	PULSELITE control	PRECISE FLIGHT	1.27 (0.574)	202.60 (5.146)
		33-40 - External lighting			
S		L.H. wing inspection light (icing detection) T700A3340012	SOCATA	0.20 (0.090)	151.57 (3.850)
S		Landing lights 4596	GE	0.79 (0.360)	179.13 (4.550)
S		Taxi light assy T700A3340006	SOCATA	1.10 (0.500)	93.70 (2.380)
S		NAV/Anticollision system :			
S		- Anticollision power supply A413A HDA-CF-14/28	SOCATA	3.00 (1.360)	204.72 (5.200)
S		- R.H. or L.H. navigation light assy T700A3341019	SOCATA	0.51 (0.230)	185.04 (4.700)
A	33002	Halogen landing lights Q5596	WHELEN	0.79 (0.360)	179.13 (4.550)
		Halogen taxi lights Q5587	WHELEN	1.10 (0.500)	93.70 (2.380)

S/R/A/O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		34 - NAVIGATION			
		34-11 - Air data systems			
R		Altimeter # 1 5934 PAD-3 Code A.186	UNITED INSTRUMENTS	0.90 (0.410)	157.48 (4.000)
R		Lift transducer 799-8	SAFE FLIGHT INSTRUMENTS	0.88 (0.400)	173.23 (4.400)
S		Pitot heated probe AN 5812-1	QPL (AIRCRAFT APPLIANCES AND EQUI. LTD)	0.75 (0.340)	200.79 (5.100)
S		Static reference selector TB30 77010000	SOCATA	0.22 (0.100)	157.48 (4.000)
S		Vertical speed indicator 7060 C.118	UNITED INSTRUMENTS	0.82 (0.370)	157.48 (4.000)
R		V_{MO} ΔP switch 32202-1	HYDRA ELECTRIC	0.22 (0.100)	141.73 (3.600)
S	34011A	Airspeed indicator # 1 8140 Code B.666	UNITED INSTRUMENTS	0.75 (0.340)	157.48 (4.000)
O	34012A	Servoed encoding altimeter # 1 KEA 346 (R.H. instrument panel)	KING	3.09 (1.400)	153.15 (3.890)
S	34018A	Vertical speed indicator 7060 C118 (R.H. instrument panel)	UNITED INSTRUMENTS	0.82 (0.370)	157.48 (4.000)
S	34019B	TAS Airspeed indicator 8140 Code B.666 (R.H. instrument panel)	UNITED INSTRUMENTS	0.75 (0.340)	157.48 (4.000)
O	159-34	Installation of two altimeters # 1 and # 2 AM250	AMETEK		
		- Version A		Δ +3.02 (Δ+1.37)	153.54 (3.900)
		- Version B (provision for "RVSM")		Δ +4.10 (Δ+1.86)	153.54 (3.900)

S/R/A/O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
O	160-34A	Autorisation to operate in "RVSM" area (Post SB70-120-34)		/	/
		34-13 - Outside temperature			
S		Outside air temperature indicator 301C	DAVTRON	0.27 (0.120)	157.48 (4.000)
		34-21 - Heading reference system			
S		Directional gyro KG 102A	KING	4.30 (1.950)	192.91 (4.900)
A		Flux valve KMT 112	KING	0.31 (0.140)	181.10 (4.600)
S		HSI Slave KA 51B	KING	3.40 (1.540)	153.54 (3.900)
S	34023B	HSI # 2 KCS 55A (R.H. instrument panel)	HONEYWELL	3.40 (1.540)	153.54 (3.900)
		34-23 - Magnetic compass			
R		Stand-by compass C2350 L4CM23	AIRPATH	0.55 (0.250)	163.39 (4.150)
		34-24 - ADI and standby horizon			
S	34002E	Additional horizon 1100-28LS (7F) (Adjustable pointer) (R.H. instrument panel)	BFG	2.65 (1.200)	153.54 (3.900)
		34-25 - Radio magnetic indication			
S	34020D	RMI # 1 KNI 582 (L.H. instrument panel) EFIS coupled	HONEYWELL	2.98 (1.350)	151.97 (3.860)
		Converter KN 40	HONEYWELL	4.23 (1.920)	257.87 (6.550)

S/R/A/O	ITEM OPT70 or MOD70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
O	34020F	RMI # 1 KNI 582 (L.H. instrument panel) EFIS coupled	HONEYWELL	2.98 (1.350)	151.97 (3.860)
		Converter KN 40	HONEYWELL	4.23 (1.920)	257.87 (6.550)
		34-28 - Electronic flight instrumentation system			
S	34001C	EFIS (EFS 40 + AP KFC 325)	KING	67.81 (30.760)	125.63 (3.191)
		34-31 - Marker			
S		MARKER antenna DM N27-3	DORNE & MARGOLIN	0.75 (0.340)	129.92 (3.300)
		34-41 - Stormscope			
S	34056A	Stormscope, EFIS coupled with MFD KMD 850 :			
		. Antenna NY163	BF GOODRICH	0.84 (0.380)	311.02 (7.900)
		. Processor WX500	BF GOODRICH	2.27 (1.030)	255.91 (6.500)
		34-42 - Weather radar			
S	34040F	Weather radar RDR 2000 EFIS coupled, with MFD KMD 850	HONEYWELL	10.87 (4.930)	161.42 (4.100)
		34-43 - Radioaltimeter			
S	34037F	Radioaltimeter, EFIS coupled :			
		. Transceiver KRA 405B	HONEYWELL	6.28 (2.850)	244.09 (6.200)
		. Indicator KNI 415	HONEYWELL	1.59 (0.720)	153.54 (3.900)
		. Antenna DM 19-2-1	DORNE & MARGOLIN	0.22 (0.100)	181.10 and 204.72 (4.600 and 5.200)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		34-44 - Traffic advisory system			
A	34059A	SKYWATCH Traffic advisory system SKY 899			
		. Antenna NY164	BF GOODRICH	2.29 (1.040)	218.50 (5.550)
		. Processor TRC899	BF GOODRICH	9.77 (4.430)	133.86 (3.400)
A	34059B	SKYWATCH Traffic advisory system SKY 899 TAS/EFIS coupled			
		. Antenna NY164	BF GOODRICH	2.29 (1.040)	218.50 (5.550)
		. Processor TRC899	BF GOODRICH	9.77 (4.430)	133.86 (3.400)
		34-45 - Enhanced Ground Proximity Warning System			
A	34060A	EGPWS :			
		. Antenna KA 92	HONEYWELL	0.26 (0.120)	244.09 (6.200)
		. Computer KGP 560	HONEYWELL	1.37 (0.620)	192.91 (4.900)
		. Control box MD41-1208	MID CONTINENT	0.24 (0.110)	155.51 (3.950)
A	34061A	TAS system + TAWS : (not autonomous)			
		. Processor KMH 880	HONEYWELL	7.94 (3.600)	133.86 (3.400)
		. Control box MD41-1208	MID CONTINENT	0.24 (0.110)	155.51 (3.950)
		. Antenna (upper fuselage) KA 815	HONEYWELL	0.95 (0.430)	219.29 (5.570)
		. Antenna (under fuselage) KA 815	HONEYWELL	0.95 (0.430)	260.63 (6.620)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
A	34061B	TAS system + TAWS :			
		. Processor KMH 880	HONEYWELL	7.94 (3.600)	133.86 (3.400)
		. Control box MD41-1208	MID CONTINENT	0.24 (0.110)	155.51 (3.950)
		. Antenna (upper fuselage) KA 815	HONEYWELL	0.95 (0.430)	219.29 (5.570)
		. Antenna (under fuselage) KA 815	HONEYWELL	0.95 (0.430)	260.63 (6.620)
		34-51 - NAV 1 installation			
S		GS-NAV VHF antenna DM N4-17N	DORNE & MARGOLIN	3.31 (1.500)	401.57 (10.200)
		34-52 - NAV 2 installation			
S		CDI KI 204	HONEYWELL	1.70 (0.770)	151.57 (3.850)
		34-53 - Transponder			
O	34026C	Transponder # 1 KT 76C	HONEYWELL	3.17 (1.440)	150.59 (3.825)
		Antenna KA 60	HONEYWELL	1.87 (0.850)	157.48 (4.000)
O	34057A	Transponder # 1 GTX327	GARMIN	5.60 (2.540)	148.66 (3.776)
		Antenna KA 60	HONEYWELL	1.87 (0.850)	157.48 (4.000)
O	34062A	Transponder # 1 GTX330	GARMIN	7.91 (3.590)	152.87 (3.883)
		Antenna KA 60	HONEYWELL	1.87 (0.850)	157.48 (4.000)
O	34021G	Transponder # 2 KT 76C	HONEYWELL	3.17 (1.440)	150.59 (3.825)
		Antenna KA 60	HONEYWELL	1.87 (0.850)	157.48 (4.000)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
O	34058A	Transponder # 2 GTX327	GARMIN	5.60 (2.540)	148.66 (3.776)
		Antenna KA 60	HONEYWELL	1.87 (0.850)	157.48 (4.000)
		34-54 - Automatic Direction Finder (ADF)			
S	34055A	ADF, EFIS coupled :			
		. Receiver KR87 SC+	HONEYWELL	6.70 (3.040)	151.57 (3.850)
		. Antenna KA 44B	HONEYWELL	6.90 (3.130)	192.91 (4.900)
		34-55 - DME installation			
S	34014A	DME system :			
		. Indicator KDI 574	HONEYWELL	0.77 (0.350)	151.57 (3.850)
		. Receiver KN 63	HONEYWELL	3.59 (1.630)	232.28 (5.900)
		. Antenna KA 60	HONEYWELL	1.87 (0.850)	230.31 (5.850)
		34-57 - Global Positioning System (GPS)			
A	34033D	GPS (B-RNAV), EFIS coupled :			
		. Receiver KLN 90B	HONEYWELL	6.19 (2.810)	155.20 (3.942)
		. Antenna KA 92	HONEYWELL	0.26 (0.120)	240.16 (6.100)
		34-62 - Multifunction Display			
S	34054A	MFD KMD 850 (indicator of RDR 2000 weather radar) (on PL30 or PL24)	HONEYWELL	5.25 (2.380)	153.54 (3.900)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		35 - OXYGEN			
S	35001B	Gaseous oxygen system	EROS/INTER TECHNIQUE	24.69 (11.200)	178.19 (4.526)

S/ R/ A/ O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT		EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		37 - VACUUM				
S		Air ejector valve	19E17-5A	LUCAS	0.66 (0.300)	116.14 (2.950)
S		Gyro suction gage	3-310-5	UMA	0.14 (0.065)	157.48 (4.000)
S		Gyro vacuum air filter	1J7-2	AIRBORNE	0.38 (0.170)	139.76 (3.550)
S		Regulator and relief valve	38E-96-2D	LUCAS	1.32 (0.600)	116.14 (2.950)
S		Vacuum relief valve	691-21A	LUCAS	0.33 (0.150)	139.76 (3.550)
S		Valve	557-18 E	LUCAS	0.35 (0.160)	118.11 (3.000)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		52 - DOORS			
A	52002A	"Pilot" door	SOCATA	44.092 (20.000)	171.26 (4.350)

S/ R/ A/ O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT		EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		61 - PROPELLER				
		61-10 - Propeller assembly				
S		Propeller HC-E4N.3 / E 9083 S (K)		HARTZELL	153.22 (69.500)	43.11 (1.095)
		61-20 - Controls				
R		Overspeed governor	A210632	WOODWARD	2.73 (1.240)	59.06 (1.500)
S		Propeller governor	8210.007	WOODWARD	2.65 (1.200)	59.06 (1.500)

S/ R/ A/ O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		71 - POWER PLANT			
R		Turbogenerator PT6 A-64	P & W CANADA	471.78 (214.000)	79.72 (2.025)
S		Silentblocks 95007-16	BARRY	2.92 (1.325)	79.72 (2.025)
		71-60 - Air inlet			
R		Inertia ice separator actuator 148600-09A	LPMI	1.72 (0.780)	62.99 (1.600)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		77 - ENGINE INDICATING			
R		Compressor turbine tacho-generator (Ng) MIL-G-26611C GEU-7/A	QPL (AIRCRAFT APPLIANCES AND EQUI. LTD)	0.981 (0.445)	108.27 (2.750)
R		Gas generator speed indicator (Ng)5 428-703-91-03	SEXTANT	1.290 (0.585)	151.57 (3.850)
R		Propeller speed indicator 5428-704-91-03	SEXTANT	1.290 (0.585)	151.57 (3.850)
R		Power turbine tacho-generator MIL-G-26611C GEU-7/A	QPL (AIRCRAFT APPLIANCES AND EQUI. LTD)	0.981 (0.445)	55.12 (1.400)
R		Torquemeter 5428-750-91-03	SEXTANT	1.257 (0.570)	151.57 (3.850)
R		Torque transducer 8107.200.00.10 or CZ52E8-G	SEXTANT AUXITROL	0.463 (0.210)	53.54 (1.360)
		77-20 - Engine temperature indicating			
R		ITT indicator 5428-554-91-03	SEXTANT	1.389 (0.630)	151.57 (3.850)
		77-40 - Engine Trend Monitor (ETM)			
S	77003A	ETM (Engine Trend Monitor)	SHADIN	3.593 (1.630)	154.92 (3.935)

S/R/A/O	ITEM OPT70	REQUIRED (R) OR STANDARD (S) OR OPTIONAL (A or O) EQUIPMENT	EQUIPMENT SUPPLIER	WEIGHT per unit lb (kg)	ARM in. (m)
		79 - LUBRICATION			
		79-20 - Distribution			
R		Oil cooler L8538233	LORI	10.472 (4.750)	90.55 (2.300)
		79-30 - Indicating			
R		Oil dual indicator 5427-350-91-03	SEXTANT	1.179 (0.535)	151.57 (3.850)
R		Oil pressure transmitter 8107-400-00-10	SEXTANT	0.441 (0.200)	106.30 (2.700)