

## M-4-220 OPTIONAL EQUIPMENT LIST

Date

Initials

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SERIAL NO. \_\_\_\_\_ REG. NO. \_\_\_\_\_ PROD. NO. \_\_\_\_\_

<u>ANTI COLLISION LIGHTS</u>	WEIGHT (LBS)	ARM (IN)
<u>1. BEACONS</u>		
A. Grimes (Top) D-7080A-1-12	1.6	37.9
B. Grimes (Bottom) D-7080A-1-12	1.6	-24.0
C. Aeroflash (Top) X2FS	0.5	37.9
D. Aeroflash (Bottom) X2FS	0.5	-24.0
E. Scientifico (Top) Model 1400	0.4	37.9
F. Scientifico (Bottom) Model 1400	0.4	-24.0
G. Grimes (Dual Red) 30-0550-2-14	4.1	11.8
H. Grimes (Dual White) 30-0550-3-14	4.1	11.8
I. Grimes Dual Position Light/Strobe Light Left (red) and Right (green) 30-0555-19-14	2.6	16.5
NOTE: Flasher Unit Model 902-12 to be installed with C & D		
<u>COMMUNICATION AND NAVIGATION</u>		
<u>2. RADIO</u>		
A. Narco MK XII	6.1	-5.4
B. King KX 150	8.7	-6.2
C. King KX 160	5.25	-5.5
D. Genave Alpha 200	5.7	-6.0
E. Narco Escort 110	4.14	-6.0
F. King KX 170	7.3	-5.5
G. Genave Alpha 360	5.0	-6.0
H. King KX 175	7.3	-5.5
I. Narco Com 10	4.25	-5.5
J. Narco Com 11	3.25	-5.5
NOTE: Broad Band BB-9, Lamda/100 or Melco BB-16 antenna's must be used with Genave Alpha 200 or 360		
<u>3. RADIO POWER SUPPLY</u>		
A. Narco T-12-MP-12A1	4.0	16.5
B. King	3.25	16.5
<u>4. ADF</u>		
A. Narco ADF-31	4.8	-4.3
B. King KR-80	3.1	-4.0
C. Narco PDF-35	4.3	-4.7
D. King KR-85	5.1	-3.2
<u>5. MARKER BEACON</u>		
A. Narco MBT	1.1	-3.0
B. Genave Delta/300	0.7	-3.0
C. King KA-40 W/KR-21 Receiver	0.9	-3.1

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		WEIGHT (LBS)	ARM (IN)
<u>6. OMNI</u>			
A.	Narco VOA-40	1.75	-3.8
B.	Narco VOA-40M	2.8	-3.8
C.	Narco VOA-50	1.75	-3.8
D.	Narco VOA-50M	2.9	-3.8
E.	Narco VOA-8	2.8	-4.0
F.	Narco VOA-9	2.9	-4.0
G.	King KI-201	2.5	-3.3
H.	King KI-201B	2.5	-3.3
I.	King KI-201C	2.5	-3.3
J.	King KI-211	3.2	-3.3
K.	Theta/100 VOR Converter	2.0	-4.0
L.	Theta/200 VOR Converter	2.0	-4.0
M.	Narco NAV/10	1.7	-5.5
N.	Narco NAV/11	2.5	-5.5
O.	Narco NAV/12	2.5	-5.5
P.	Narco DGO 10/NAV 14	7.2	-5.25
<u>7. TRANSPONDER</u>			
A.	Genave Beta/4096	4.4	-6.0
B.	Genave Beta/500	4.4	-6.0
C.	Narco AT-50	3.0	-5.5
D.	King KT-76	3.0	-5.0
E.	King KT-78	3.0	-5.0
<u>8. DISTANCE MEASURING EQUIPMENT</u>			
A.	King KN-60C	6.8	-6.7
B.	Narco UDI-4	8.5	-6.25
C.	Narco DME-70	10.0	-6.25
<u>9. ANTENNA</u>			
A.	Melco Broad Band BB-9	0.4	7.0
B.	Narco Loop ADF 01073-101	2.5	149.5
C.	Melco Marker Beacon 354	0.6	0
D.	Maule Sense Ant. EI-B495	0.2	7.0
E.	Melco Wing VHF-1	0.2	7.0
F.	Melco Tail M809	0.4	160.0
G.	Genave Broad Band Lambda/100	0.3	7.0
H.	Genave Marker Beacon Lambda/75	0.6	95.0
I.	Melco BB-16	0.3	7.0
J.	Melco MB-7	0.9	95.0
K.	Melco MB-5	0.9	95.0

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			WEIGHT (LBS)	ARM (IN)
<u>10. MIKE</u>				
A.	Electro Voice	205-STC	0.7	13.5
B.	Genave	4LSS	0.7	7.0
<u>11. SPEAKER</u>				
A.	Jensen	C7788-4	0.9	30.0
<u>VACUUM SYSTEM</u>				
<u>12. Dry Air Pump</u>				
A.	Airborne Mech.	200CW	3.5	-51.8
B.	Airborne Mech.	206CW	2.3	-51.8
<u>13. REGULATOR</u>				
A.	Airborne Mech.	133A4	0.6	-15.5
<u>14. GYRO FILTER</u>				
A.	R. C. Allen	J4161-01	0.5	-14.2
B.	Airborne	1J7-1	0.5	-14.2
<u>15. VACUUM GAGE</u>				
A.	Manning, Maxwell & Moore	6701-52	0.4	-0.8
B.	Airborne Mechanisms	1G3-4	0.7	-0.8
C.	Airborne Mechanisms	1G3-4	0.7	-0.8
D.	MacLeod	40-470	0.7	-0.8
<u>16. OUTSIDE AIR TEMP.</u>				
A.	Scott	2716	0.1	12.0
<u>17. DIRECTIONAL GYRO</u>				
A.	R. C. Allen R.C.A.	10 TSO C5c	4.7	-2.75
B.	Jack & Heintz	JH5500	4.7	-2.75
C.	Sperry	A5737-1	3.3	-2.75
D.	R.C. Allen R.C.A.	11A TSO C5c	3.25	-2.75
E.	R.C. Allen R.C.A.	11A-10 TSO C5c	3.25	-2.75
F.	Aeritalia	8.043.008.1.01 TSO C5c	1.8	-2.75
<u>18. ARTIFICIAL HORIZON</u>				
A.	R.C. Allen R.C.A.	20 TSO C4c	3.3	-2.25
B.	Jack & Heintz	JH6500	4.4	-2.50
C.	Sperry	A5736-1	4.4	-2.50
D.	R.C. Allen R.C.A.	21 TSO C4c	2.2	-2.25
E.	R.C. Allen R.C.A.	21-23 TSO C4c	2.2	-2.25
F.	Aeritalia	8.048.008.1.01 TSO C4c	2.2	-2.25

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LANDING GEAR		WEIGHT (LBS)	ARM (IN)
<u>19. WHEEL FAIRINGS</u>			
A.	Maule (2) 4034B	3.5	8.25
<u>20. DUAL BRAKES</u>			
A.	Maule 3152X	1.0	-14.25
<u>INSTRUMENTS</u>			
<u>21. RATE OF CLIMB</u>			
A.	Eclipse Pioneer 1636-B-1	1.0	-2.0
B.	Garwin 22-204-01-A	1.0	-2.0
C.	United Inst. 7040M TSO C8B	1.0	-2.0
D.	United Inst. 7030M TSO C8B	1.0	-2.0
E.	MacLeod 340-50 TSO C8B	1.0	-2.0
F.	Aeritalia 8.041.508.1 TSO C8B	1.3	-2.0
<u>22. TURN AND BANK</u>			
A.	Whittaker D-24	2.4	-3.0
B.	R.C. Allen A2475	2.4	-3.0
C.	R.C. Allen A2670	2.4	-3.0
D.	Garwin 23-324-01A	2.4	-3.0
E.	Brittain 1677A TSO C3a	2.3	-3.0
F.	Brittain 600-009-900 TSO C3a	2.4	-3.0
G.	R.C. Allen RCA 80A	2.4	-3.0
H.	Schwein R.C. Allen 21500	2.4	-3.0
I.	Aeritalia 8.042.703.2.02 TSO C3b	1.4	-3.0
<u>23. EXHAUST GAS TEMPERATURE GAUGE</u>			
A.	Alcor Aviation 210-9A	0.2	0.75
B.	KS Mixture Mizer	0.2	0.75
<u>24. CLOCK</u>			
A.	Waltham 22840	0.3	-0.5
B.	Elgin A-11	0.3	-0.5
C.	Wakmann A-11	0.3	-0.5
D.	Shins American 46G & 53G	0.3	-0.5
E.	Longines-Whittnauer A-11-90	0.3	-0.5
F.	Wakmann W33 7510-101	0.3	-0.5
<u>ACCESSORIES</u>			
<u>25. HEATED PITOT</u>			
A.	Kollsman Type 172K-01	1.0	43.0
B.	Aero Inst. PH-502-12 TSO-C16	1.0	43.0

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M-4-220 REQUIRED EQUIPMENT LIST

SERIAL NO. \_\_\_\_\_ REQ. NO. \_\_\_\_\_ PROD. NO. \_\_\_\_\_

SAFETY BELTS (CONT'D)	WEIGHT (LBS)	ARM (IN)
<u>34. CARGO &amp; LUGGAGE STRAPS</u>		
A. Aeroquip Front	31010036072-022	0.75
B. Aeroquip Rear	31010036072-022	0.75
<u>LIGHTS</u>		
<u>35. POSITION LIGHTS (WING)</u>		
A. Grimes Left (red) Type 1285		0.25
B. Grimes Right (green) Type 1285		0.25
C. (See Optional Equipment List Item 1. I)		
<u>36. TAIL LIGHT</u>		
A. Grimes	A2064-12	0.15
<u>37. LANDING LIGHT</u>		
A. Left Wing	9030E	1.0
<u>38. WINDSHIELD</u>		
A. Clear	1168X	
B. Green	1168X	
C. Blue	1168X	
<u>39. EMERGENCY LOCATION TRANSMITTER</u>		
A. Sharc 7 Model No. 7A-81 Type AF TSC-C91		2.3
		18.75