

LEADING PARTICULARS

NAME ... SKYVAN SERIES 3
SKYVAN SERIES 3A
SKYVAN SERIES 3M

TYPE ... TWIN ENGINED, STRUT-BRACED HIGH-WING MONOPLANE
WITH FIXED TRICYCLE UNDERCARRIAGE

DUTY ... PASSENGER, TROOP AND FREIGHT TRANSPORT

CREW ... ONE OR TWO PILOTS AS REQUIRED BY OPERATOR

MAIN DIMENSIONS ... Refer to General Arrangement drawing (Page 8)

MAIN UNDERCARRIAGE

COMPLETE: Non-retracting, levered suspension with cantilevered axle and shock absorber, by Electro Hydraulics Ltd.

Part No.	1831 (port)	}	for basic aircraft
	1832 (stbd)		
	1837 (port)	}	S. O. O.
	1838 (stbd)		
	1885 (port)	}	S. O. O.
	1886 (stbd)		

SHOCK ABSORBER:

Type	...	Oleo-pneumatic
Fluid	...	DTD. 585 (MIL-H-5606A)
Fluid capacity	...	2.45 Imp. pints (2.94 U.S. pints, 1.39 Litres)
Nitrogen pressure	...	285 p. s. i.
Extension	...	Max. 8.2 in., Static (refer to table);

A. U. W. (lb)	Forward C. G.	Aft C. G.
12 500	2.48 in.	2.15 in.
13 500	2.20 in.	1.92 in.
13 700	2.17 in.	1.98 in.

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MAIN UNDERCARRIAGE (contd)

WHEELS AND TYRES:

Wheel ... Dunlop AH.52443

Tyre (standard) Dunlop tubeless DR.10623T (11.00-12)

Tyre (L.P.normal) Dunlop tubed DR.18321 (s.o.o.) (36 x 13.00-12)

Tyre (L.P.heavy duty) Dunlop tubed DR.18322 (s.o.o.)

Tube (L.P.) ... Dunlop DT.18300 (s.o.o.)

Pressures ... Refer to table;

A.U.W. (lb.)	PRESSURE (p.s.i.)				
	Standard tyres		L.P. tyres (Normal and Heavy Duty)		
	Off load	On Load	Off load	On load	Concession
12 500	40 ⁻³ ₊₅	42 ⁻³ ₊₅	34 ⁻³ ₊₅	35 ⁻³ ₊₅	* 28 ⁻⁰ ₊₇
13 500 and 13700	44 ⁻³ ₊₅	46 ⁻³ ₊₅	34 ⁻³ ₊₅	36 ⁻³ ₊₅	* 30 ⁻⁰ ₊₇

* Re-moulding of tyres not advised if this pressure is used.

Brakes ... Dunlop disc AH.52109

NOSE UNDERCARRIAGE

COMPLETE: Non-retracting, cantilever, fork-mounted single-wheel and shock absorber by Electro Hydraulics Ltd.

Part No. 1833 for basic aircraft
1839 or 1843 or 1887 (S.O.O.)

SHOCK ABSORBER:

Type ... Oleo-pneumatic
Fluid ... DTD.585 (MIL-H-5606A)
Fluid capacity... 4.95 Imp. pints (5.94 U.S. pints, 2.80 litres)
Nitrogen pressure 115 p.s.i.
Extension ... Max. 9.5 in., Static (refer to table);

A.U.W. (lb)	Forward C.G.	Mid C.G.	Aft C.G.
12 500	2.55 in.	3.55 in.	5.46 in.
13 500	2.25 in.	3.25 in.	5.00 in.
13 700	2.20 in.	3.17 in.	4.94 in.

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NOSE UNDERCARRIAGE (contd)

Steering angle ... $\pm 50^{\circ}$
Towing angle ... $\pm 50^{\circ}$

WHEEL AND TYRE

Wheel ... Dunlop AH.52444
Tyre (standard) ... Dunlop tubeless DR.12220T(7.50-10)
or DR.12221T
Tyre (L.P.) ... Dunlop tubed DR.8627(8.50-10) (s.o.o.)
Tube (L.P.) ... Dunlop DR.8602 (s.o.o.)
Pressures ... Refer to table;

A.U.W.(lb)	PRESSURE (p.s.i.)			
	Standard tyre		L.P. tyre	
	Off load	On load	Off load	On load
12 500	40 $\begin{smallmatrix} -3 \\ +5 \end{smallmatrix}$	42 $\begin{smallmatrix} -3 \\ +5 \end{smallmatrix}$	32 $\begin{smallmatrix} -3 \\ +5 \end{smallmatrix}$	33 $\begin{smallmatrix} -3 \\ +5 \end{smallmatrix}$
13 500 and 13 700	42 $\begin{smallmatrix} -3 \\ +5 \end{smallmatrix}$	44 $\begin{smallmatrix} -3 \\ +5 \end{smallmatrix}$	34 $\begin{smallmatrix} -3 \\ +5 \end{smallmatrix}$	36 $\begin{smallmatrix} -3 \\ +5 \end{smallmatrix}$

HYDRAULIC SYSTEM

Fluid ... DTD, 585 (MIL-H-5606A)
Total system capacity ... Approx. 2 Imp. gal. (2.4 U.S. gal., 9.1 litres)
Tank capacity ... 1.2 Imp. gal. (1.4 U.S. gal., 5.45 litres)
Main system pressure ... 2 500 p. s. i. (max.)
Wheel brakes operating press. 1 000 -1 150 p. s. i.
Flaps operating pressure 2 500 p. s. i.
Power pack ... Electro Hydraulics Ltd. Part No. 3171
Accumulator inflation press. 1 400 p. s. i. (nitrogen)
Flap jack ... Electro Hydraulics Ltd. Part No. 6138

AIR CONDITIONING

HEATING ... Ram air/engine-tapped air mixture

FUEL SYSTEM

Approved fuel specs. ... Refer to 2-1, POWER PLANT LIMITATIONS
L.P. warning ... 3 to 4 p. s. i.
System capacity ... Refer to relevant table;

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A. 300 GALLON SYSTEM

TANKS	Imp. gal.	U.S. gal.	Litres
Port No.1 and 3 combined	145.0	174.0	659.0
Stbd No.2 and 4 combined	145.0	174.0	659.0
Unusable	5.0	6.0	23.0
TOTAL	295.0	354.0	1341.0

B. 400 GALLON SYSTEM

TANKS	Imp. gal.	U.S. gal.	Litres
Port No.1, 3, 5 & 7 combined	194.5	233.0	883.0
Stbd No. 2, 4, 6 & 8 combined	194.5	233.0	883.0
Unusable	5.0	6.0	23.0
TOTAL	394.0	472.0	1789.0

NOTE: The system capacity is reduced by 6.0 Imp.gal. (7.2 U.S. gal., 27.2 litres) total when the four side wall tanks are of the self-sealing type (s.o.o.)

OIL SYSTEM

Approved oil specs. ... Refer to 2-1, POWER PLANT LIMITATIONS
 Oil tanks Wrap-around type, on engines
 System capacity ... Refer to table:

TANKS	Imp. quarts	U.S. quarts	Litres
Capacity	5.20	6.25	5.85
FULL mark on dipstick	5.20	6.25	5.85
ADD mark on dipstick	4.37	5.25	4.97

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POWER PLANTS

Engine type ... Garrett AiResearch TPE 331-2-201A

PROPELLERS

Type (3-blade) ... Hartzell HC-B3TN-5C or HC-B3TN-5E
 Type (4-blade) ... Hartzell HC-B4TN-5C (s.o.o.)
 Diameter (3-blade) ... 8 ft. 6 in.
 Diameter (4-blade) ... 8 ft. 3 in. (s.o.o.)
 Blades (3-blade) ... Light alloy, type T10282HB
 Blades (4-blade) ... Light alloy, type T10282HB-4P (s.o.o.)
 Rotation ... Clockwise, viewed from rear

ELECTRICAL SYSTEM

Power supply ... 28 volts d.c. from two engine-driven starter-generators (Lear Siegler 23046-007) rated at 6 KW.
 Batteries (main) ... Two Varley 24.19/25S (lead-acid) or Two Sonotone CA20H (nickel-cadmium) (s.o.o.)
 Battery (auxiliary start) (Post Mod 875) ... One Varley 24.11/4 (lead-acid) or One Cadmium Nickel Ltd. 19V03KH (s.o.o.)
 Battery (ground services) (s.o.o.) ... Two Varley 24.11/4 (lead-acid) in parallel or One Sonotone CA-51N
 Inverters ... Two static single-phase: Flite-Tronics PC14 or PC15 or Plessey 509/1/01090
 Frequency ... 400 c.p.s.
 Voltage ... 115V and 26V via auto-transformers
 Voltage regulator ... Lear Siegler 51065-013 (pre Mod 987) or Phoenix Aerospace SB-1010-24-2E (post Mod 987 or post Mod 1031).

AIRFRAME DATA

MAIN DIMENSIONS:

Span	64 ft. 11 in.	19.79 m
Length	40 ft. 1 in.	12.22 m
Height (approx.)	15 ft. 1 in.	4.59 m

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AIRFRAME DATA (contd)

AREAS

Main plane (gross)	...	378 sq. ft.	35.12 sq. m.
Tail plane (gross)	...	81 sq. ft.	7.52 sq. m.
Fins (each) (gross)	...	41 sq. ft.	3.81 sq. m.
Flaps (gross)	...	63.12 sq. ft.	5.86 sq. m.
Allerons (aft of hinge)	...	25.11 sq. ft.	2.33 sq. m.
Elevator (aft of hinge)	...	27.25 sq. ft.	2.53 sq. m.
Rudders (aft of hinge)	...	20.65 sq. ft.	1.92 sq. m.

MISCELLANEOUS

Flap position	...	0° to 50° range
Gated position	...	(Refer to table) :

Selector Marking	Angle
UP	0°
TAKE - OFF (pre Mod 972) or 18° (post Mod 972 and 1070)	18°
No marking (pre Mod 972) or 30° TAKE OFF (post Mod 972) or 30° (post Mod 1070)	30°
LAND (pre Mod 1070) or 50° (post Mod 1070)	50°

Wheel track	...	13 ft. 10 in.	4.22 m
Wheelbase	...	14 ft. 9.87 in.	4.52 m
Fuselage	...	Stn. 10.50 in.	0.27 m
C. G. Datum	...	Stn. 152 in.	3.86 m
Wing chord (S. M. C.)	...	70 in.	1.78 m
Wing incidence	...	2° 30'	
Tail plane incidence	...	Nil	
Wing dihedral	...	2° 1'41	
Tail plane dihedral	...	Nil	

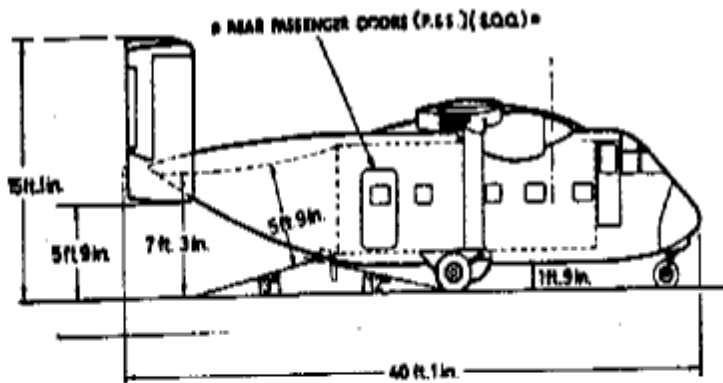
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ICE PROTECTION

Leading edges of main plane, tail plane and fins (s.o.o.) and rudder horns (post Mod 1491)	...	T. K. S. fluid de-icing system
Tank capacity	...	2.4 Imp. gal. (2.88 U.S. gal , 10.88 litre)
Tank capacity (post Mod 1454, or post Mod 1491)	..	4.8 Imp. gal (5.76 U.S. gal , 12.76 litre)
Fluid spec.	...	T. K. S. - R328 (DTD.900/4804)
		Alternative specs:-
		Aeroshell compound 07 (DTD.406B)
		B. P. Aero de-icing 2
		NATO code S745
		BA-PS-605 (Belguim)
		VTL-6850-011 (Germany)
		AM-L-423C (Italy)
Pilot's windscreens (s.o.o.)	...	De-icing fluid spray
Tank capacity	...	1 Imp. gal (1.2 U.S. gal 4.55 litre)
Fluid spec.	...	DTD. 900/4939
Engine air intakes	...	Engine-tapped hot air
Propeller blades (s.o.o.)	...	Electrically heated mats
Pitot heads	...	Electric heaters

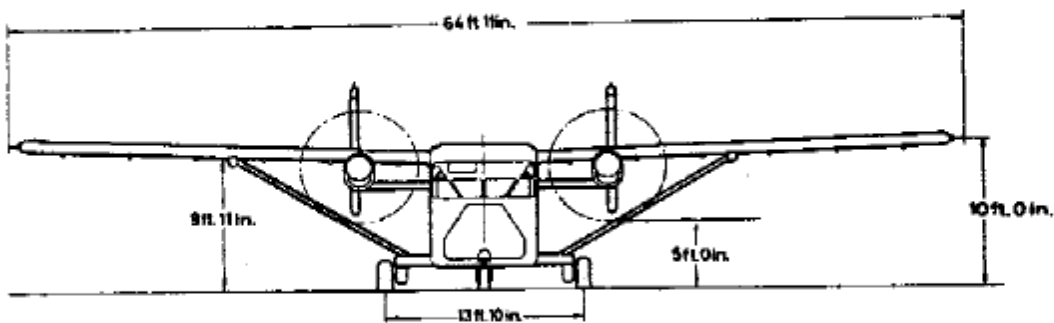
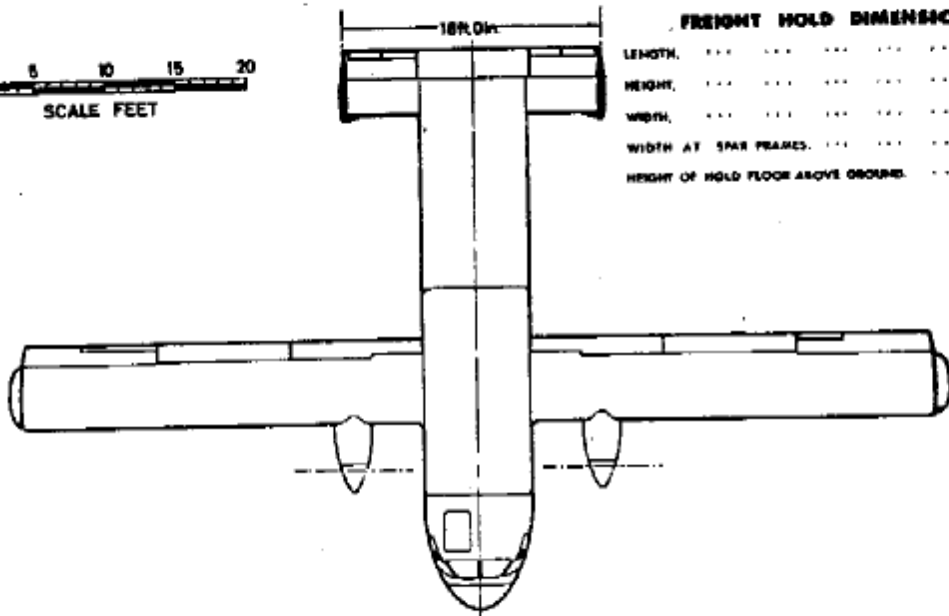
FIRE PROTECTION

Power plant	...	One 2 lb. BCF T type extinguisher for each power plant. Fire detection by Graviner fire wire system.
Airframe	...	One 2½ lb. BCF hand-held extinguisher stowed in flight compartment. Additional hand-held extinguishers optional.



FREIGHT HOLD DIMENSIONS

LENGTH	18 FT. 0 IN.
HEIGHT	6 FT. 6 IN.
WIDTH	6 FT. 6 IN.
WIDTH AT SPAR FRAMES	6 FT. 2 IN.
HEIGHT OF HOLD FLOOR ABOVE GROUND	2 FT. 6 IN.



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