DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

A41EU Revision 11 SHORT BROTHERS LIMITED SD3-30 SD3-60 SD3-5HERPA SD3-60 SHERPA SD3-60 SHERPA April 19, 1996

TYPE CERTIFICATE DATA SHEET No. A41EU

This data sheet which is part of Type Certificate No. A41EU prescribes conditions and limitations under which the product for which the Type Certificate was issued, meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder:	SHORT BROTHERS PLC Queens Island, Belfast BT3 Northern Ireland (U.K.)	9DZ				
I. <u>Model SD 3-30 Variant 200 (T</u> (Model C23A, See Note 13 rega	ransport Category Aircraft) rding Certification and Config	, approved June 18 guration Identification	9 , 1976. on.)			
Engines. (See Note 10)	2 Pratt & Whitney, Aircraft Reduction Gear Ratio: or	of Canada Limited, 1 0.0568 : 1	PT6A-45A			
	2 Pratt & Whitney Aircraft o Reduction Gear Ratio: or	f Canada Limited P 0.0568 : 1	T6A-45B			
	2 Pratt & Whitney Aircraft o Reduction Gear Ratio:	f Canada Limited P 0.0568 : 1	T6A-45R			
Fuel.	Specifications, latest issue may be used.					
	American ASTM D1655-70 Type Jet A MIL-T-5624H Grade JP-4 ASTM D1655-70 Type Jet E ASTM D1655-70 Type Jet A MIL-T-5624H Grade JP-5	X 3 X-1	<u>British</u> NONE D. Eng. R.D D. Eng. R.D D. Eng. R.D D. Eng. R.D	0. 2454 0. 2486 0. 2494 0. 2452		
Engine Ratings.	Static, sea level, Internationa No bleed extraction or acces	4. Il Standard Atmosph sory loads, compres	neric condition sor intake scre	ns. een installed.		
	<u>RATINGS</u> PT64-454	<u>SHP</u> <u>TI</u>	JET <u>HRUST</u>	AIR <u>INLET TEMPERATURE</u>		
	Takeoff (dry) (5 min.) Takeoff (wet) (5 min.) Maximum Continuous Reverse	1173 1173 1020 900	136 lb. 136 lb. 127 lb.	to 46°F to 69°F to 79°F to 59°F		

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L	Model SD 3-30 Variant 20) (Transport Category Aircraft	(cont'd)
1.	Though of 3-30 Variant 20	y (manopult Category Anterate	

$\frac{1}{10000000000000000000000000000000000$	in 200 (Transport Category A	(cont u		
			JET	AIR
	RATINGS	SHP	THRUST	INLET TEMPERATURE
	<u>PT6A-45B:</u>			
	Takeoff (dry) (5 min	n.) 1173	140 lb	to 52°F
	Takeoff (wet) (5 min	n.) 1173	140 lb.	to 84°F
	Maximum Continuo	ous 1020	127 lb.	to 84°F
	Reverse	900		to 59°F
	10,0100	200		
	PT64-45R			
	$\frac{110A-45K}{1}$	1107	141 lb	to 729E
	Takeon (dry) (5 mi	1.) 1197	141 ID.	to 73°F
	Alternate Takeoff (3	5 min.) 11/3	140 lb.	to 52°F
	Maximum Continuc	ous 1020	127 lb.	to 92°F
	Reverse	900	-	to 59°F
Engine Limits.	Inter Turbine Temp	erature:		
		<u>PT6A-45A</u>	<u>PT6A-45B</u>	<u>PT6A-45R</u>
	Takeoff (dry or wet)	800°C(1472°F)	800°C(1472°F)	-
	Takeoff	-	-	845°C(1553°F)
	Alternate Takeoff	-	-	800°C(1472°F)
	Maximum Continuous	800°C(1472°F)	800°C(1472°F)	812°C(1494°F)
	Starting Transient (5 sec)	$1000^{\circ}C(1832^{\circ}F)$	$1000^{\circ}C(1832^{\circ}F)$	$1000^{\circ}C(1832^{\circ}F)$
	Transient	850°C(1562°F)	850°C(1562°F)	$900^{\circ}C(1652^{\circ}F)$
	Transient	050 C(1502 1)	050 C(1502 1)	900 C(1052 T)
	Speed Limits Gas	Generator:		
	<u>Speed Linns - Oas</u>	$\frac{1040}{(20,000)}$	10.40/(20.000)	1040/ (20.000)
	Maximum Takeon (5 mm.)	104%(39,000)	104%(39,000)	104%(39,000)
	Maximum Continuous	104%(39,000)	104%(39,000)	104%(39,000)
	Maximum Transient (20 sec.)	104%(39,000)	104%(39,000)	104%(39,000)
	Speed Limits - Prop	eller - RPM: *		
	Maximum Permissible	1685	1695	1695
	Maximum Transient	1870	1870	1870
	Maximum Reverse	1650	1650	1650
	Minimum Flight	1200	1200	1200
	e			
	For other engine limits refer to	NOTE 11 or to e	ngine TCDS Number E	4EA
	* Ground operation at stabiliz	zed speed between	1 170 and 1 400 RPM	is prohibited
	Ground operation at stability	Lea speed between	1,170 und 1,400 Ki M	is promoted.
Propeller and Propeller I imit	2 Hartzell HC-B5M	$P_{-3}\Delta$ reversible or	roneller	
r topener and r topener Enni	<u>Bladas</u> , 5 model l	1 - 3R reversione pr	lopener.	
	Blaues. 5, model 1	M10262AD + 0		
		*		
	Diameter limits:	т		
	Maximum		111 inches	
	Minimum allowable	e for repairs	110.7 inches	
	* No further reduct	ion permitted, with	hout aircraft performanc	e penalty.
	Pitch setting at 30 in	n. radius station.		
	Ground Fine	+ 4		
	Flight Fine	+ 21°		
	Feathered	89°		
	Full Reverse	- 1º		
	(Rayarsa 1	hrust authorized f	or Ground Manauvering	r only)
	For other propeller	imits refer to prop	allar Type Cortificate F	ata Shaat No. D44CI
		minits refer to prop	D 2424 9	ala Sheel NO. P440L
	Spinner:	Hartzell	D-3434-8	
	Propeller Deicer:	B.F. Go	odrich 451601-7	
	Governors:	Woodwa	ard 8210-009 or 8210-2	.09

I. Model SD 3-30 Variant	200 (Transport Category Aircraft) (cont'd	l)				
Airspeed Limits.	V (Maximum Operating Speed)	Speed Kno	ts IAS	Speed M	IPH IAS	
	V _A (Maneuvering Speed) (Linear variation between	13,000 lb	22,900 lb	13,000 1	b 22,900 lb	
	points)	121	157	139	181	
	V MCA * (Minimum Control Speed Takeoff Climb)	77 (4° fl 77 (8° fl 76 (15° f	77 (4° flaps) 77 (8° flaps) 76 (15° flaps)		89 (4° flaps) 89 (8° flaps) 88 (15° flaps)	
	V MCG * (Minimum Control Speed on or near ground)	7	6		88	
	V _{FE} * (Wing Flaps Extended)	(4°)(8°)(15° 148_148_1	°)(35°) 38_125	(4°)(8°)(170_170	(4°)(8°)(15°)(35°) 170, 170, 159, 144	
	V _{LE} * (Landing Gear Extended Speed)	1	61	170 170	185	
	V _{LO} (Landing Gear Operating Speed)	1	48		170	
	* See NOTE 7					
<u>Center of Gravity</u> (C.G.) Range	C.G. Limit	Landing Ge Takeoff and	ear Extended La d Landing	anding Gear Enroute	nding Gear Retracted Enroute	
		Aft of Datum (in.)	% SMC	Aft of Datum (in.)	% SMC	
	Forward Limit at 16,500 lb	29.85	16.0	27.89	13.3	
	Forward Limit at Maximum Landing Weight (See NOTES 6, 8 & 12)	30.72	17.2	28.76	14.5	
	Forward Limit at Maximum Takeoff Weight (See NOTES 6, 8 & 12)	30.80	17.3	28.83	14.6	
	Aft Limit all Weights	43.67	35.0	45.78	37.9	
	Landing Gear Retraction moment change	+4,000 in.	lb.			
<u>Datum.</u>	The C.G. datum is at fuselage station the underside of the fuselage.	200 on the ce	nter line of airc	raft and is n	narked on	
Standard Mean Chord. (SMC)	Length: 72.72 in. The leading edge of SCM is 18.215 in	n. aft of datum	n (Sta. 200).			
<u>Leveling Means.</u>	For determination of the center of gra horizontal attitude. This is checked he placed on pegs inserted in the holes in at Sta. 212 and Sta. 291.12.	vity the aircra orizontally us the two leve	aft should be bro ing a clinomete ling plates on th	bught to date or with a strate the fuselage p	um ight edge port side	
	The lateral level is checked using the passenger compartment.	two floor seat	t rails at the fror	nt spar fram	e in the	

I. Model SD 3-30 Variant 200 (Tr	ransport Category Aircraft)	(cont'd)					
Maximum Weights. *	Maximum Ramp Weight: 22,100 lb.						
	Maximum Takeoff Weight:	22,000 lb.					
	Maximum Landing Weight:	21,700 lb.					
	*See NOTES 6, 8 & 12 for in	ncreased weight limi	itations.				
Minimum Crew.	The minimum flight crew is two pilots.						
Maximum Passengers.	39 As limited by FAR 25 E	mergency Exit Requ	irements.				
	30 As limited by approved seating arrangement.						
<u>Maximum Baggage.</u>	Baggage must be loaded in accordance with the approved Weight and Balance Manual Ref. SD3/WB/200.						
Maximum Cargo Load.	Cargo must be loaded in accordance with the approved Weight and Balance Manual Ref. SD3/WB/200.						
	See Note 19 for operational l	imitations.					
Fuel Capacity.	Volume, weight, and balance	e arm of fuel for each	ı tank.				
<u>r der cupuerr</u>	volune, worght, and bulance	<u>U.S. Gal.</u>	Weight lb.	Arm about (Datum (in	C.G. 1.)		
	Usable			<u>1.01 watu</u>	All		
	Forward tank	288.2	1920	28.33			
	Aft tank	<u>288.2</u>	<u>1920</u>		98.33		
	Total usable in tank	576.4	3840		35.00		
	<u>Unusable</u>						
	Forward tank	2.2	14.7				
	Aft tank	<u>2.0</u>	<u>13.3</u>				
	Total	4.2	28.00				
	Total Capacity	580.6 U.S. Gal.					
	See NOTE 1(b). For increase	ed fuel capacities, re	efer to Note 18.				
Oil Capacity.	Volume, weight, and balance	e arm of engine oil.					
		<u>U.S. Gal</u>	Weight lb.	Arm about Datum (in Forward	C.G. 1.) Aft		
	Usable						
	Left tank	1.5	11.5		14		
	Right tank	<u>1.5</u>	<u>11.5</u>		<u>14</u>		
	Total	3.0	23.0		28		
	<u>Unusable</u>						
	Left tank	.55	4.0		-		
	Right tank	.55	4.0		-		
	System	2.90	21.0		-		
	Total	4.00	29.0				
	Total Capacity	7.0 U.S. Gal.					
	See NOTE 1 (c)						

I. <u>Model SD 3-30 Variant 200</u> Maximum Operating Altitude.	0 (Transport Category Aircrat 20,000 ft.	<u>ft)</u> (cont'd)					
Control Surface Movements.	Elevator Elevator trim tab Rudder Left rudder trim tab Right rudder trim tab Left aileron Right aileron Aileron trim tab	$25 \frac{1}{2^{\circ}} \pm 1^{\circ} \text{ up}$ $9^{\circ} \pm \frac{1}{2^{\circ}} \text{ up}$ $29^{\circ} \pm 1^{\circ} \text{ left}$ $13 \frac{1}{2^{\circ}} \pm \frac{1}{2^{\circ}} \text{ left}$ $22 \frac{1}{2} \pm 1^{\circ} \text{ left}$ $22 \frac{3}{4^{\circ}} \pm \frac{1}{4^{\circ}} \text{ up}$ $23 \frac{3}{4^{\circ}} \pm \frac{1}{4^{\circ}} \text{ up}$ $13^{\circ} \pm \frac{1}{2^{\circ}} \text{ up}$	t	14 $\frac{1}{2^{\circ}} \pm \frac{1}{2^{\circ}}$ down 14 $\frac{1}{2^{\circ}} \pm \frac{1}{2^{\circ}}$ down 29^{\circ} \pm 1^{\circ} right 13 $\frac{1}{4^{\circ}} \pm \frac{3}{4^{\circ}}$ right 22 $\frac{1}{2^{\circ}} \pm 1^{\circ}$ right 13 $\frac{1}{4^{\circ}} \pm \frac{1}{4^{\circ}}$ down 12 $\frac{3}{4^{\circ}} \pm \frac{1}{4^{\circ}}$ down 13^{\circ} \pm \frac{1}{2^{\circ}} down			
	NOTE: Aileron reflex $1 \frac{1}{4^{\circ}} \pm \frac{1}{4^{\circ}}$ The above angles are all measured from the neutral position.						
	Flaps inner and outer: Nominal - 0° En 8° Do 15° Do 35° Do	route, all engines wn - Enroute, one Takeoff and own - Takeoff and own - Landing.	operating. * engine inoperat discontinued ap approach. *	ive. * proach. *			
	For details of flap setting tolerances refer to the approved Maintenance Manual Doc. SD3/MM/200 Chapter 27. * See NOTE 7						
II. Model SD3-60, VARIANT 2	00 (TRANSPORT CATEGOR	RY AIRCRAFT),	approved Octo	<u>ber 29, 1982.</u>			
Engines.	2 Pratt and Whitney of Ca Reduction Gear Ratio 0.05 or 2 Pratt and Whitney of Reduction Gear Ratio 0.05 or 2 Pratt and Whitney of Reduction Gear Ratio 0.05	nada Limited PT6 568: 1; Canada Limited P 568: 1 Canada Limited P 568: 1.	A-65R T6A-65AR T6A-67R				
<u>Fuel.</u>	Specification, latest issued <u>American</u> ASTM D1655-7 Jet A Jet B Jet A- MIL-T-5624L JP4 JP5 MIL-T-83133A JP8	l may be used. Briti O NOM D.Er I D.Er D.Er D.Er	<u>sh</u> NE ng.R.D.2486 ng.R.D.2494 ng.R.D.2454 ng.R.D.2452 ng.R.D.2453				
Engine Ratings.	Static, sea level, Internatic No bleed extraction or acc	onal Standard Atm essory loads, com	ospheric conditi pressor intake sc	ons. reen installed.			
	PT6A-65R	SHP	JET THRUST	AIR INLET TEMPERATURE			
	Take-off (5 min) Alternate take-off (5 min) Maximum Continuous Reverse * See Note 14.	1376 1230 1173 900	209 lb. 195 lb. 189 lb.	to 82°F to 76°F to 84°F * to 59°F			

II. Model SD3-60, VARIANT 20	<u>IU (TRANSPORT CATEGOR</u>	<u>Y AIRCRAFT)</u> (G	cont ^r d)			
	PT6A-65AR	SHP	JET	AIR		
			THRUST	INLET TEMPERATURE		
	Take-off (5 min)	1424	214 lb.	to 82°F		
	Alternate take-off (5 min)	1230	195 lb.	to 84°F		
	Maximum Continuous	1220	194 lb.	to 101°F		
	Reverse	900		to 59°F		
	PT6A-67R	SHP	JET	AIR		
			THRUST	INLET TEMPERATURE		
	Take-off (5 min)	1424	212 lb.	to 99°F		
	Alternate take-off (5 min)	1281	192 lb.	to 91°F		
	Max. Continuous	1220	184 lb.	to 119°F		
	Reverse	900				
	Inter Turbine Temperature.					
		<u>PT6A-65R</u>	PT6A-65AI	<u>R PT6A-67R</u>		
	Take-off (5 min)	845°C(1553°F)	855°C(1571°F	F) 855°C(1571°F)		
	Alternate take-off (5 min)	810°C(1490°F)	820°C(1508°F	F) 825°C(1517°F)		
	Maximum Continuous	810°C(1490°F)*	840°C(1544°F	F) $840^{\circ}C(1544^{\circ}F)$		
	Starting Transient (5 sec)	1000°C(1832°F)	1000°C(1832°	F) 1000°C(1832°F)		
	Transient (20 sec) * See NOTE 14	870°C(1598°F)	870°C(1598°F	F) 870°C(1598°F)		
	Speed Limits - Gas Generat	or				
	Maximum Take-off (5 min)	104% (39,000)			
	Maximum Continuous	104% (39,000)			
	Maximum Transient	104% (39,000)			
	Speed Limits - Propeller Rl	<u>PM</u>				
	Maximum Permissible	1700 (U 1450 (A	Jp to 150 knots l Above 150 knots	IAS) IAS)		
	Maximum Transient	1870				
	Maximum Reverse	1650				
	Minimum Flight	1200				
	For other engine limits refe engines and TCDS No. E26	r to Engine TCDS N 5NE for PT6A-67R 6	lo. E4EA for PT engines.	6A-65R and -65AR		
Engine Ratings. (Continued).	Ground operations using Habitation between 400 and 900 PRPM	artzell HC-B5MP-30 M and 1170 and 140	C propellers at s 0 PRPM is proh	tabilized speeds ibited.		
	Ground operations using Habitation between 500 and 950 PRPM	artzell HC-A6A-3 p M and 1250 and 145	ropellers at stabi 0 PRPM is proh	lized speeds ibited.		
Propeller and Propeller Limits.	Propeller:HC-B5MP-3C No of Blades: 5, Mod	HC-A6. el M10876ASK	A-3 6, Model A10)460E See NOTE 53)		
	Max Diameter: 111.0 in Min Diameter: 110.7 in * No further reduction perm	nches nches * nitted.	108.0 inches 107.875 inche	es *		
	Pitch Setting (42 inch radiu	s)				
	Ground Fine : $-5^{\circ}+30'$		-10°±30'			
	Flight Fine : $+16.5^{\circ}$ +	-12'	+12.5°±12'			
	Feathered : +79°+3	0'	75.5°±30'	-12.5°+12 75.5°+30'		
	Full Reverse : -11±30	-16°±30'				
	Flight Fine: $+16.5^{\circ}\pm$ Feathered: $+79^{\circ}\pm$ Full Reverse: $-11\pm$	-12' 0'	+12.5°±12' 75.5°±30' -16°±30'	n DI (NI 6-n		

II. Model SD3-60, VARIANT 200 (TRANSPORT CATEGORY AIRCRAFT) (cont'd)

For other propeller limits refer to propeller TCDS No. P44GL or P14N for HC-B5MP-3C and HC-A6A-3, respectively.

II. Model SD3-60, VARIA	NT 200 (TRANSPORT CATEGOR)	Y AIR	CRAFT)	(cont'd)			
Propeller and Propeller Limit	ts Spinner : Hartzel Propeller De-Icer: 4E-259	l D-343 5-7	34-8	D-5311			
	Governors : Woodw	ard 82	10-049	8210-190	0		
Airspeed Limits			SPEED K	KNOTS IAS	SPEED M	PH IAS	
	V _{MO} (Maximum Operatin	g	106		226	227	
	V (Manoeuvering Speed)	`	16000 lb	26000 1	b 16000 lb	26000 lb	
	(Linear variation		129	159	148	183	
	between points)						
			26453 lb.	. 27100 l	b. 26453 lb.	27100 lb.	
			160	158	184	182	
	V _{MCA} (Minimum Control Take-off climb)	V _{MCA} (Minimum Control Speed Take-off climb)			95.6 (94.4 (95.6 (5° flaps) 94.4 (15° flaps)	
	V _{MCG} (Minimum Control	Speed	83 (5°	flaps)	95.6 (5° flaps)	
	on or near ground	l)	82 (15° flaps) (5°) (15°) (30°) 150 145 135		94.4 ((15° flaps)	
	V_{FE} (Wing Flaps Extended	1)			(5°) 1727	$(15^{\circ})(30^{\circ})$	
	V _{LE} (Landing Gear Extend	led	162	+5 155	172.7	107.0 155.5 5	
	V _{LO} (Landing Gear Operat Speed)	ting	150		17	3	
<u>Center of Gravity.</u>	C.G. Limit	Take-off and Land		anding	En Route		
(C.G. Kange)		Inch	es about	0/2	Inches about	%	
		Trin	n Datum	SMC	Trim Datum	SMC	
	Forward limit up to 16500 lb	-5.1	5 (fwd)	16.0	-7.33 (fwd)	13.0	
	Forward limit at 20000 lb *Forward limit at max land-	-	-		-7.33 (fwd)	13.0	
	ing weight	-3.62	2 (fwd)	18.10	-	-	
	*Forward limit at max take-	2 5'	7 (frud)	19 17	5 65 (frud)	15 21	
	Aft limit up to 19000 lb	-5.5 +8 3	/ (Iwu) 30 (aft)	34.5	+10.85 (1wd)	38.0	
	Aft limit at 24,000 lb	+9.3	9 (aft)	36.0	+12.30 (aft)	40.0	
	Aft limit at max take-off						
	weight	+9.3	9 (aft)	36.0	+12.30 (aft)	40.0	
	Landing gear retraction		00: 11				
	* See NOTES 15 and 23 for Increase	+600 d Weig	00 in. 16 ght Limitat	ions.			
<u>Trim Datum.</u>	This is a vertical line locate	d at fu	selage Stat	ion 271.			
Standard Mean Chord (SMC) Length : 72.72	inches					
	Leading Edge : Statio	on 254	.215				
<u>Leveling Means.</u>	For determination of the cenhorizontal attitude. This is placed on pegs inserted in that Sta. 255 and Sta. 335. The front spar frames in the	nter of checke he hole he later passen	gravity the ed horizonta es in the tw ral level is ger compar	aircraft shoul ally using a cl o leveling plat checked using rtment.	ld be brought to c inometer with a s tes on the fuselag the two floor se	latum straight edge ge left side at rails at	
Maximum Weights.	*Maximum Ramp Weight : 2610 Maximum Take-off Weight	0 lb : 20	6000 lb				
	Maximum Landing Weight	: 25	5700 lb				

See NOTES 15 and 23 for Increase Weight Limitations.

II. Model SD3-60, VARIANT 20 Minimum Crew.	0 (TRANSPORT CATEGO The minimum flight crew	RY AIRCRAF <i>is two pilots.</i>	$\underline{\mathbf{T}}$ (cont'd)				
Maximum Passengers.	39 As limited by FAR 25 Emergency Exit Requirements.39 As limited by approved seating arrangement.						
Maximum Baggage.	Baggage must be loaded 360/WBM/200.	with the approve	ed Weight and E	Balance Manual Ref.			
Fuel Capacity.	Volume, weight, and bala	ance arm of fuel	for each tank.				
		U.S. Gal	Weight lb.	Arm About Trim Datum (in.) Forward Aft			
	<u>Usable</u> Forward tank Aft tank Total usable in tanks	288.2 <u>288.2</u> 576.4	1920 <u>1920</u> 3840	63.33 63.33			
	<u>Unusable</u> Forward tank Aft tank Total	2.5 <u>2.2</u> 4.7	16.7 15.3 32.0				
	Total Capacity See NOTE 1(b)	581.1 U.S.	Gal.				
Oil Capacity.		U.S. Gal. Weight lb.		Arm About Trim Datum (in.) Forward Aft			
	<u>Usable</u> Left tank Right tank Total	1.5 <u>1.5</u> 3.0	$\frac{11.5}{23.0}$	$\begin{array}{ccc} 21 & - \\ \frac{21}{21} & - \\ \end{array}$			
	<u>Unusable</u> Left tank Right tank System	.55 .55 <u>2.90</u>	4.0 4.0 <u>21.0</u>				
	Total Total Capacity See NOTE 1 (c)	4.00 7.0 U.S.Ga	29.0 1.				
Maximum Operating Altitude.	20,000 ft.						
Control Surface Movements.	Elevator	$22^{\circ} \pm \frac{1}{2^{\circ}}$ up	þ	$12^{\circ} + 0^{\circ}$			
	Elevator trim Rudder Rudder trim tab	7° ± 1 ¹ / ₄ ° up 13° ± 1 ¹ / ₄ ° down 21° \pm ¹ / ₂ ° to left and right 2 ¹ / ₄ ° \pm ¹ / ₄ ° biased to left with rudder and trimmer control neutral					
	Ailerons Ailerons Trim Tab NOTE: * Both ailerons with control The aileron ang	$12^{\circ} \pm \frac{3}{4}^{\circ}$ to left and right from biased position $27 \frac{3}{4}^{\circ} \pm \frac{1}{4}^{\circ}$ up $14 \frac{3}{4}^{\circ} \pm \frac{1}{4}^{\circ}$ down $8 \frac{1}{2}^{\circ} \pm \frac{1}{2}^{\circ}$ up $8 \frac{1}{2}^{\circ} \pm \frac{1}{2}^{\circ}$ downis drooped $3^{\circ} \pm \frac{1}{4}^{\circ}$ I wheel neutral.ngles are all measured from the 3° drooped position.					

All other angles are measured from the neutral position.

II. Model SD3-60, VARIANT 200 (TRANSPORT CATEGORY	AIRCR	AFT) (c	ont'd)		
	Flaps inner and outer	Nominal	l - Enroute	e, all engine operating	g	0
		Down	- Enroute	e, one engine inopera	tive	5°
		Take-off	f and disco	ontinued approach		*5°
		Down	- Take of	f and approach		15°
		Down	- Landing	5		30°
		For deta Mainten	ils of flap ance Man	setting tolerances, re ual. Doc. Ref. 360/M	fer to the ⁄IM.	e
III Model SD3-SHEPPA Variant	200 (Mod. K2009) (Transpor	*5° not u engines See NOT	used for ta aircraft. FE 24 for	ke-off with PT6A-65 aircraft with Aileron	AR and droop de	PT6A-67R eleted.
	200 (1910 u. 182 007) (117alispor	t Calegoi	<u>y Antia</u>	t) approved August	. 50, 1990	<u>.</u>
Engines.	2 Pratt & Whitney, Aircraft Reduction Gear Ratio:	of Canada 0.0568	Limited,	PT6A-65AR		
Fuel.	Specifications, latest issued	may be us	ed.			
	American	NONE	<u>British</u>			
	ASTM D1655-70	NONE	D 2496			
	JET A IFT B	D.Eng.R	D.2480			
	JET B IET A-1	D.Ling.N	D.2494			
	MIL-T-5624L					
	JP4	D.Eng.R	.D.2454			
	JP5	D.Eng.R	.D.2452			
	MIL-T-83133A					
	JP8	D.Eng.R	LD.2453			
	For fuel additives see NOTE	84.				
Engine Rating.	Static, sea level, Internationa extraction or accessory loads	al Standaro s, compres	d Atmospl ssor intake	neric conditions. No screen installed.	bleed	
	PT64-654R		SHD	IFT THRUST	AIR IN	Ι ΕΤ ΤΕΜΡ
	Take-off (5 min)		<u>1424</u>	214 lb.	to 82°F	
	Alternative Takeoff (5 min)		1230	195 lb.	to 84°F	
	Maximum Continuous		1220	194 lb.	to 101°I	F
	Reverse		900	-	to 59°F	
Engine Limits.	Interturbine Temperature		DT6A 6	5 A D		
	Take-off (5 min)		855°C (1	<u>571°F</u>)		
	Alternate take-off (5 min)		820°C (1	1508°F)		
	Maximum Continuous		840°C (1	1544°F)		
	Starting Transient (5 sec)		1000°C (1832°F)		
	Transient (20 sec)		870°C (1	1598°F)		
	Speed Limits - Gas Generato	<u>or</u>				
	Maximum Take-off (5 min)		104% (3	9,000)		
	Maximum Continuous		104% (3	(9,000)		
	waximum Transient		104% (3	9,000)		
	Speed Limits - Propeller RP	М				
	Maximum Permissible	<u></u>	1700 (U	p to 150 knots IAS)		
			1450 (A	bove 150 knots IAS)		
	Maximum Transient (20 sec))	1870			
	Maximum Reverse		1650			
	Minimum Flight		1200			

III. Model SD3-SHERPA Varian	nt 200 (Mod. K2009) (Transport Catego	ory Aircraft) (cont'd)						
Engine Limits	For other engine limits refer to Engin	e TCDS No. E4EA.						
	Ground operations using Hartzell HC-B5MP-3C propellers at stabilized speeds							
	between 400 and 900 PRPM and 117	0 and 1400 PRPM is proh	ibited.					
Propeller and Propeller Limits.	2 Hartzell HC-B5MP-3C reversible propellers.							
	Propeller : HC-B5MP-3C							
	Blades : 5, Mod	el M10876ASK						
	Max Diameter : 111.0 in	nches						
	Min Diameter : 110.7 in	nches*						
	* No further reduction permitted.							
	PITCH SETTING 42 inch	radius						
	Ground Fine : $-5^{\circ} \pm 30$)'						
	Flight Fine : $+12^{\circ} \pm 30'$							
	Feathered: $+79^{\circ} \pm 30'$							
	Full Reverse : $-11^{\circ} \pm 30'$							
	(Reverse thrust authorized for ground	l maneuvering only)						
	For other propener limits refer to propener ICDS No. P44GL.							
	Spinner Assembly : Hartzell D-3434-8							
	Propeller Deicer : Goodrich 4E-2595-7							
	Governors : Woodw	vard 8210-049						
Airspeed Limits.		Speed Knots IAS	Speed MPH IAS					
	V _{MO} (Max Operating Speed)	196	226					
	V _A (Maneuvering Speed) (Linear variation	15700 lb 25600 lb	15700 lb 25600 lb					
	between points)	124 161	143 185.7					
	V _{MCA} (Minimum Control	80 (10° flaps)	93.3 (10° flaps)					
	Speed takeoff climb)	80 (15° flaps)	92.3 (15° flaps)					
	V _{MCG} (Minimum Control							
	Speed on or near ground)	80	92.3					
	V_{FE} (Wing Flaps	(5°) (10°) (15°) (35°)	(5°) (10°) (15°) (35°)					
	Extended)	150 145 140 130	1/3 16/.2 161.5 149.9					
	V _{LE} (Landing Gear	160	184.5					
	Extended Speed)	150	172					
	vLO (Landing Gear	150	1/3					
	Operating Speed)							

Centre of Gravity. (C.G. Range)

C.G. LIMIT	TAKE-OFF & I	TAKE-OFF & LANDING		
	Inches about Trim Datum	% SMC	Inches about Trim Datum	% SMC
Forward limit up to 16 500 lbs (7485 kg)	29.85 Aft	16.00	27.89 Aft	13.30
Forward limit at 22.900 lbs (10115 kg)	30.95 Aft	17.51	29.01 Aft	14.84
Forward limit at max landing weight	33.77 Aft	21.39	29.37 Aft	15.34
Forward limit at max	34.41 Aft	22.27	29.45 Aft	15.45
Aft limit at all weights	43.67 Aft	35.00	45.78 Aft	37.90

III. Model SD3-SHERPA Va	riant 200 (Mod. K2009) (Transp	ort Category Air	craft) (cont'd)			
Datum.	This is located at fuselage a datum plate on the unde	Station 200 on the rside of the aircraf	e centre line of the t.	aircraft and is marked by		
Standard Mean Chord (SMC).	Length : 72.7 Leading Edge : Stat	2 inches ion 218.21				
Leveling Means.	For determination of the c horizontal attitude. This i edge placed on pegs inser left side at Sta. 212 and St seat rails at the front spar	enter of gravity the s checked horizont ted in the holes in ta. 291.12. The lat frame in the passer	e aircraft should be ally using a clino-1 the two leveling pla eral level is checke nger compartment.	brought to datum neter with a straight ates on the fuselage d using the two floor		
Maximum Weights. M	aximum Ramp Weight : Maximum Take-off Weig Maximum Landing Weigl	25,700 lb ht : 25,6 ht : 25,1	00 lb 00 lb			
Minimum Crew.	The minimum flight crew	is two pilots.				
Maximum Passengers.	39 As limited by FAR 2530 As limited by approve	Emergency Exit R d seating arrangen	Requirements nent.			
Maximum Baggage.	Baggage must be loaded i Ref. SD3 SHERPA/WB.	n accordance with	the approved Weig	t and Balance Manual		
Maximum Cargo Load.	Cargo must be loaded in a Ref. SD3 SHERPA/WB.	ccordance with the	e approved Weight	and Balance Manual		
Fuel Capacity.	Volume, weight and balar US Gallon of fuel.	Volume, weight and balance arm of fuel for each tank assuming there are 6.5 lbs per US Gallon of fuel.				
		U.S. Gal	Weight lb.	Arm About Datum (in.) Forward Aft		
	<u>Usable</u>	226	2194	22		
	Forward tank	330 336	2184	122		
	Total usable in tanks	<u>530</u> 672	$\frac{2164}{4368}$	122		
	Systems and Sumps	2.3	15	39		
	Total Usable	674.3	4383			
	Unusable Forward tank	2.2	14.2			
	Aft tank	2.2	14.3			
		4.4	28.6			
	Total Capacity See NOTE 1(b)	678.7 U.S. Ga	llons			
Oil Capacity.		U.S. Gal.	Weight lb.	Arm About Datum (in) Forward Aft		
	<u>Usable</u>					
	Left tank	1.5	11.5	21 -		
	Right tank	$\frac{1.5}{2.0}$	$\frac{11.5}{22.0}$	$\frac{21}{21}$ -		
	TOTAL	3.0	23.0	21		
	<u>Ullusable</u> Left tank	0.55	4.0			
	Right tank	0.55	4.0			
	Kight tank	0.55				
	System	<u>2.90</u>	21.0			
	System TOTAL	<u>2.90</u> 4.00	$\frac{21.0}{29.0}$			

III. Model SD3-SHERPA Variant 200 (Mod. K2009) (Transport Category Aircraft) (cont'd)

Maximum Operating Altitude.	20,000 ft.							
Control Surface Movements.	Elevator	$22^{\circ} \pm \frac{1}{2}^{\circ}$ up		$14 \frac{1}{2^{\circ}} \pm \frac{1}{2^{\circ}} down$				
		- 1°						
	Elevator trim tab	$9^{\circ} \pm 1^{\circ} \text{ up}$	-	$14 \frac{1}{2^{\circ}} \pm 1^{\circ} \text{ down}$				
	Rudder	$29^{\circ} \pm 1^{\circ}$ left	4	$29^{\circ} \pm 1^{\circ}$ right				
	Left rudder trim tab 13 ¹ / ₂	$2^{\circ} \pm 1^{\circ}$ left	$13\frac{1}{2^{\circ}} \pm 1^{\circ}$	right				
	Right rudder trim tab	$22^{\circ} \pm 1 \frac{1}{2^{\circ}}$ left		$22 \frac{1}{2^{\circ}} \pm 1 \frac{1}{2^{\circ}}$ right				
	Left aileron	$22^{3}4^{\circ} \pm \frac{1}{2}^{\circ}$ up	-	$13\frac{1}{4}^{\circ} \pm \frac{1}{2}^{\circ}$ down				
	Right aileron	$23 \frac{3}{4}^{\circ} \pm \frac{1}{2}^{\circ} \text{ up}$	-	$12^{3}4^{\circ} \pm \frac{1}{2}^{\circ}$ down				
	Aileron Trim tab	$13^{\circ} \pm 1^{\circ} \mathrm{up}$	-	$13^{\circ} \pm 1^{\circ}$ down				
	NOTE: Aileron reflex:	$1 \frac{1}{4^{0}} \pm \frac{1}{4^{0}} up$						
	The above angles are all	measured from the n	eutral position.					
	Flaps inner and outer:	Flaps inner and outer:						
	Nominal Designation	_						
	0° flaps Flap	s retracted						
	*5° flaps Sing	le engine en-route						
	10° flaps Take	e-off, preliminary app	broach and					
	disc	ontinued approach						
	15° flaps Take	15° flaps Take-off, approach and landing						
	35° flaps Land	35° flaps Landing						
	For details of flap setting tolerances refer to Maintenance Manual Ref. SD3 SHERPA/MM.							
	* 5° flaps not used for ta	ake-off with PT6A-65	5AR engined ai	rcraft.				
IV Model SD3-60 SHERPA Va	riant 200 (Mod K6001) (Tra	nsport Category Ai	rcraft) annrov	ed April 19, 1996				
IV. Model 5D5-00 SHEKI A Va	Hant 200 (1000 10001) (114	hisport Category An		<u>cu April 19, 1990</u>				
Engines.	2 Pratt & Whitney Aircr	aft of Canada Limited	d, PT6A-65AR					
	Reduction Gear Ratio:	Reduction Gear Ratio: 0.0568 : 1						
Fuel	Specifications latest issue may be used							
<u>r uci.</u>	Specifications, fatest issue may be used.							
	American	Britis	h					
	ASTM D1655-70	NON	NONE					
	Jet A	D.En	D.Eng. R.D. 2486					
	Jet B	D.En	D.Eng. R.D. 2494					
	Jet A-1		-					
	MIL-T-5624L							
	JP4	D.En	D.Eng. R.D. 2454					
	JP5	D.En	g. R.D. 2452					
	MIL-T-83133A							
	JP8	D.En	g. R.D. 2453					
	For fuel additives see NOTE 4.							
Engine Batings	Static sea level Internat	tional Standard Atmo	enheric conditi	ons No bleed extraction				
Englie Ratings.	or accessory loads, com	pressor intake screen	installed.	ons. No bleed extraction				
	<u>PT6A-65AR</u>	<u>SHP</u> <u>JE</u>	<u>T THRUST</u>	AIR INLET TEMP				
	Takeoff (5 min.)	1424 2	14 lb.	to 82°F				
	Alternate takeoff (5 min)) 1230 19	95 lb.	to 84°F				
	Maximum Continuous	1220 19	94 lb.	to 101°F				
	Reverse	900 -		to 59°F				

IV.	Model SD3-60 SHERPA	Variant 200 (N	Mod K6001) (Transport Cate	egory Aircraft)	(cont'd)

Engine Limits.	Interturbine Temperature		,				
		<u>PT6A-65A</u>	<u>R</u>				
	Take-off (5 min)	855°C (157	1ºF)				
	Alternate Takeoff (5 min)	820°C (150	8°F)				
	Maximum Continuous	840°C (154	4°F)				
	Starting Transient (5 sec)	1000°C (18	32°F)				
	Transient (20 sec)	870°C (159	8°F)				
	Speed Limits - Gas Generator						
	Maximum Take-off (5 min)	104% (39,0	00)				
	Maximum Continuous	104% (39,0	00)				
	Maximum Transient	104% (39,0	00)				
	Speed Limits - Propeller RPM						
	Maximum Permissible	1700 (Up to	o 150 knots IAS)				
		1450 (Abov	e 150 knots IAS)				
	Maximum Transient (20 sec)	1870					
	Maximum Reverse	1650					
	Minimum Flight	1200					
	For other engine limits refer to Engine	ne TCDS No. E4EA.					
	Ground operations using Hartzell H0 400 and 900 PRPM and 1170 and 14	C-B5MP-3C propellers at 400 PRPM is prohibited.	stabilized speeds between				
Propeller and Propeller Limits.	2 Hartzell HC-B5MP-3C reversible	propellers					
	Propeller : HC-B5MP-3C						
	Blades : 5, Model M10876ASK						
	Max Diameter 111.0 inches						
	Min Diameter 110.7 inches *						
	* No further reduction permitted.						
	PITCH SETTING	42 inch radius					
	Ground Fine -5° ±	= 30'					
	Flight Fine +12° ±	= 30'					
	Feathered $+79^{\circ} \pm 30'$						
	Full Reverse -11° ±	= 30'					
	(Reverse thrust authorized for ground maneuvring only)						
	For other propeller limits refer to pro	opeller TCDS No. P44GL					
	Spinner :	Hartzell D-3434-8					
	Propeller DeIcer :	Goodrich 4E-2595-7					
	Governors :	Woodward 8210-049					
Airspeed Limits.		Speed Knots IAS	Speed MPH IAS				
	V _{MO} (Maximum Operating Speed)	196	226				
	V _A (Maneuvring Speed)	15700 lb 25600 lb	15700 lb 25600 lb				
	(Linear variation between						
	points)	126 163	145.3 188				
	V _{MCA} (Minimum Control Speed	80 (10° flaps)	93.3 (10° flaps)				
	Takeoff Climb)	80 (15° flaps)	92.3 (15° flaps)				
	V _{MCG} *(Minimum Control Speed	80	92.3				
	on or near ground)						
	V _{FE} * (Wing Flaps Extended)	(5°) (10°) (15°) (35°)	$(5^{\circ})(10^{\circ})(15^{\circ})(35^{\circ})$				
		150 150 140 135	173 173 161.1 155.8				
	V_{LE} * (Landing Gear Extended	160	184.5				
	Speed)						
	V _{LO} (Landing Gear Operating Speed)	150	173				

C.G. LIMIT	TAKE-OFF & LANDING		EN-ROUTE	EN-ROUTE		
	Inches about	%	Inches About	%		
	Trim Datum	SMC	Trim Datum	SMC		
Forward limit up to	29.85 Aft	16.00	27.89 Aft	13.30		
16 500 lbs (7485 kg)						
Forward limit at 22900 lbs	30.95 Aft	17.51	29.01 Aft	14.84		
(10115 kg)						
Forward limit at max	33.77 Aft	21.39	29.37 Aft	15.34		
landing weight						
Forward limit at max	34.41 Aft	22.27	29.45 Aft	15.45		
take off weight						
Aft limit at all weights	43.67 Aft	35.00	45.78 Aft	37.90		
<u>Standard Mean Chord.</u> (SMC) <u>Levelling Means.</u>	 This is located at fuselage Station 200 on the centre line of the aircraft and is marked by a datum plate on the underside of the aircraft. Length: 72.72 in Leading Edge: Station 218.21 For determination of the centre of gravity the aircraft should be brought to datum horizontal attitude. This is checked horizontally using a clinometer with a straight edge placed on pegs inserted in the holes in the two levelling plates on the fuselage left side at Sta. 212 and Sta. 291.12. The lateral level is checked using the two floor seat rails at the front spar frame in the passenger compartment. 					
<u>Maximum Weights.</u> Maximu	m Ramp Weight : Maximum Takeoff Weigh Maximum Landing Weigh	25,700 l t : nt :	b 25,600 lb 25,100 lb			
Minimum Crew.	The minimum flight crew	is two pilots				

IV. Model SD3-60 SHERPA Variant 200 (Mod K6001) (Transport Category Aircraft) (cont'd) Centre of Gravity (C.G. Range).

Maximum Passengers.

Maximum Cargo Load.

Fuel Capacity.

Maximum Baggage. Baggage must be loaded in accordance with the approved Weight and Balance Manual Ref. SD3-60 SHERPA/WB.

39 As limited by FAR 25 Emergency Exit Requirements 30 As limited by approved seating arrangement

Cargo must be loaded in accordance with the approved Weight and Balance Manual Ref. SD3-60 SHERPA/WB.

Volume, weight and balance arm of fuel for each tank assuming there are 6.5 lbs per US Gallon of fuel.

	U.S. Gal.	Weight lb.	Arm about Datum (in) Forward Aft	
Usable				
Forward tank	336	2184	22	
Aft tank	336	2184	122	
Total usable in tank	672	4368		
Systems and Sumps2.3	15	i	39	
Total Usable	674.3	4383		
Unusable				
Forward tank	2.2	14.3		
Aft tank	<u>2.2</u>	14.3		
	4.4	28.6		
Total Capacity	678.7 U.S. Gal	l		
See NOTE 1(b).				

Oil Capacity.	arant 200 (19100 12000)	<u>t, (11alispo</u> [J.S. Gal.	Weight lb.	u <i>j</i>	Arm about Datum (in) Forward	Aft
	<u>Usable</u>	-				Torward	<u></u>
	Left tank	1	1.5	11.5		21	-
	Right tank	<u>1</u>	1.5	11.5		<u>21</u>	-
	Total	3	3.0	23.0		21	
	Unusable						
	Left tank	C).55	4.0			
	Right tank	Ő) 55	4.0			
	System	2	2.90	21.0			
	TOTAL	4	4.00	29.0			
	Total oil capacity 7 See NOTE 1(c)	7.0 U.S. Gal					
Maximum Operating Altitude.	20,000 ft.						
Control Surface Movements.	Elevator	2	22° ± ½ up - 1°		14 ½° ± 1	√2° down	
	Elevator trim tab	9	$P^{o} \pm 1^{o} up$		14 ½° ±	1° down	
	Rudder	2	$29^{\circ} \pm 1^{\circ}$ left		$29^{\circ} \pm 1^{\circ}$	right	
	Left rudder trim ta	$b 13 \frac{1}{2^{\circ}} + 1^{\circ}$	left		$13 \frac{1}{2^{\circ}} +$	1° right	
	Right rudder trim t	tab 2	$22^{\circ} + 1\frac{1}{2}^{\circ}$ left		$22\frac{1}{2^{\circ}}$ +	$1\frac{1}{2}^{\circ}$ right	
	Left aileron	2	$22^{-3}4^{\circ} + \frac{1}{2}^{\circ}$ up		$13\frac{1}{4}^{\circ} + 1$	¹ ⁄2 [°] down	
	Right aileron	- 2	$22^{3}/4^{\circ} = 72^{\circ} up$		$12^{3/0} + 1$	1/2° down	
	Ailoron Trim tob	- 1	$12^{\circ} + 1^{\circ} up$		$12^{-74} \pm 12^{-1}$	down	
	NOTE: Allerer	I aflav, 11/9	13 ± 1 up		15 ± 1	uowii	
	The above angles a	are all measu	\pm ⁵⁴ up ared from the ne	utral position	n.		
	Flaps innder and o	uter:					
	Nominal Designati	ion					
	0° flaps	Flaps retra	cted				
	*5° flaps	Single engi	ine en-route				
	10° flaps	Take-off, p	oreliminiary app	roach and			
		discontinue	ed approach				
	15° flaps	Take-off, a	approach and lar	nding			
	55 Haps	Landing					
	For details of flap	setting tolera	ances refer to the	e Maintenan	ce Manua	1 Ref. SD3-6	0 SHERPA/MM
	* 5° flaps not used	for take-off	with PT6A-65A	AR engined a	ircraft.		
DATA PERTINENT TO ALL MC	DDELS.						
Serial Numbers Eligible.	The United Kingdo noted under "Impo aircraft for which a	om (CAA) C ort Requirem application fo	Certificate of Air ents" below mustor certification i	worthiness f st be submitt is made.	or Export. ed for eac	, endorsed as ch individual	
Import Requirements.	a. To be conside under this typ certifying stat states (in the l certificate nu	ered eligible te certificate tement endor English lang mber A41EU	for operation in must be accomp rsed by the expo uage): This airc J) and is in a co	the United S panied by a c orting foreign craft conform ndition for sa	States, eac ertificate civil airv ns to its U afe operati	h aircraft ma of airworthin vorthiness au .S. type desig	nufactured ness for export of thority which gn (type
	b. The U.S. airw 21.29 and exp	orthiness ce	rtification basis e country of man	for aircraft t ufacture is I	ype certif FAR Secti	icated under ons 21.183(c	FAR Section

<u>Certification Basis.</u>	 <u>SD3-30 Airplanes:</u> FAR 21.29, FAR 25, effective February 1, 1965 including amendments 25-1 through 25-30 and Special Conditions No. 25-70-EU-22 dated June 8, 1976; with amendment No. 1 thereto, dated June 11, 1976; plus FAR 25, amendments 25-31 through 25-34 elected by the applicant, except FAR 25.807 as amended by amendment 25-32. Compliance with the following optional requirements has been established: Ditching provisions 25.801 (overwater operations can be approved when the aircraft has been equipped and installation has been approved according to FAR 25.801). Ice protection provisions 25.1419 (See NOTE 9). 						
	Comp amend 1) 3 p 2) 3 p	liance has be lments as fol 6-1 for airpl ounds. 6-6 for airpl ounds.	een showr llows:- anes with anes with	n with FAR 36 e P&WA Model P&WA Model	ffective Dec PT6A-45A e PT6A-45A e	ember 1, 1969 including engines and takeoff weight of 22,000 engines and takeoff weight of 22,400	
	3) 3 p 4) 3 o	6-8 for airpl ounds 6-9 for airpl f 22,900 pou	anes with anes with ands.	P&WA Model P&WA Model	PT6A-45B e PT6A-45R e	engines and takeoff weight of 22,600	
	Compliance with SFAR 27 has been shown. Equivalent safety in lieu of compliance with FAR 25.773(b)(2)(i) has been established. Type Certificate A41EU issued June 18, 1976. Date of Application for Type Certificate: November 12, 1971.						
Certification Basis (Continued).	SD3-60 Airplanes.						
	FAR 21.29 United Kingdom Certification Basis as defined in CAA TCDS No. BA11, plus FAA additional validation requirements (AVR's) as defined in paper project No. CT184EU dated October 31, 1973. This is equivalent to FAR Part 25, effective February 1, 1965 including amendments 25-1 through 25-34, plus FAR 25.1351 as amended by amendment 25-41. FAA Special Conditions No. 25-70-EU-22 dated June 8, 1976 with amendment No. 1 thereto dated June 11, 1976. FAR Part 36, effective December 1,1969 including amendments 36-1 through 36-12. SFAR 27 effective January 1, 1975.						
	Equiva	alent safety i	in lieu of	compliance with	n FAR 25.77	3(b)(2)(i) has been established.	
	The fo	llowing add	itional FA	AA requirements	have been v	voluntarily complied with:	
	FAR 2 FAR 2	25.785 25.812	to "	Amendment	51 46	Standard	
	FAR 2	25.851	"	"	54	"	
	FAR 2	25.853	"	"	51	"	
	FAR 2	25 1326			43	"	
	FAR 2	25.1320 95.1351		"	45		
	EAD 2	.5.1551 5 1/11		"	41 52	"	
		5 1457			33	"	
	FAR 2 FAR 2	25.1457	"	"	41 41	"	
	- Ditcl	ning Provisio	ons 25.80	1 (Overwater op	erations can	be approved when the	

airplane has been equipped and installation has been approved according to FAR 25.801).

- Ice protection provisions 25.1419.

Type Certificate A41EU amended October 29, 1982.

SD3 SHERPA (Mod K2009) Airplanes:

FAR 21.29 United Kingdom Certification Basis as defined in CAA TCDS No. BA11, plus FAA additional validation requirements (AVR's) as listed below.

FAR Part 25, effective February 1, 1965 as amended by Amendments 25-1 through 25-35, 25-37 through 25-39, 25-43, 25-44, 25-47, 25-49 through 25-53, 25-55, 25-56, 25-58 through 25-63, 25-66 and
25-36 Except for paragraphs .1019 and .1305, 25-40 except for paragraphs .1093 and .1145, 25-41 except for paragraphs .109, .177, .181, .255, .703, 25-42 except for paragraphs .109, .177, .181, .255, .703, 25-45 except for paragraphs .331, .351, .361, .629, .773, .1329, .1416, 25-48 except for paragraphs .305, .783, .1529, 25-57 except for paragraphs .997, .1093, 25-64 except for paragraphs .561, .562, .785, 25-65 except for paragraphs .1457, .1459.

<u>Certification Basis (Continued).</u> Part 36 of the Federal Aviation Regulations as amended by Amendment 36-1 through the latest Amendment 36-17, which was in effect at time of TC and

SFAR 27 as amended by Amendments 27-1 through the latest Amendments 27-6 in effect at the time of TC and

Any exemptions petitioned for by the applicant and granted by the Federal Aviation Administration.

Short Brothers has elected to show compliance with the following optional requirements in the TC basis.

- Ditching provisions Section 25.801 (overwater operations can be approved when the aircraft is equipped and installation is approved in accordance with Section 25.801).

- Ice protection provisions Section 25.1419.

Type Certificate A41EU amended August 30, 1990.

SD3-60 SHERPA (Mod K6001) Airplanes:

FAR 21.29 United Kingdom Certification Basis as defined in CAA TCDS No. BA11, plus FAA additional validation requirements (AVR's) as listed below:

FAR Part 25, effective February 1, 1965 as amended by Amendments 25-1 through 25-35, 25-37 through 25-39, 25-43, 25-44, 25-47, 25-49 through 25-53, 25-55, 25-56, 25-58 through 25-60and 25-62 through 25-63, 25-69 and 25-36 except for paragraphs .1019 and .1305, 25-40 except for paragraphs .1145, 25-41 except for paragraphs .1353, 25-42 except for paragraphs .109, .177, .181, .255, .703, 25-45 except for paragraphs .571, 25-46 except for paragraphs .331, .351, .361, .629, .773, .1329, .1416, 25-48 except for paragraphs .735, 25-54 except for paragraphs .305, .783, .1529, 25-57 except for paragraphs .997 25-61 (See Note 58) 25-64 except for paragraphs .561, .562, .785, 25-65 except for paragraphs .1457, .1459, 25-66 (See Note 58), and

FAR 25.1419, Amendment 25-72, ice protection (airframe) FAR 25.801, Amendment 25-72, Ditching provisions (overwater operations can be approved when the aircraft is equipped and installation is approved in accordance with Section 25.801), and Part 36 of the Federal Aviation Regulations as amended by Amendment 36-1 through the latest Amendment 36-20, which was in effect at time of TC and FAR 34 Subpart B effective 10 September 1990, and

FAA Special Condition No. 25-70-EU-22, (Engine Ignition System & Operation Without Normal Electrical Power), dated June 8, 1976, with Amendment No. 1 (Special Flight & Propulsion Conditions), thereto dated June 11, 1976, and

Equivalent safety in lieu of compliance with FAR 25.773 (b)(2)(i), (Pilot Compartment View, Precipitation Conditions), which has been established.

Any exemptions petitioned for by the applicant and granted by the Federal Aviation Administration.

Type Certificate A41EU amended (date).

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the airplane for certification. In addition the following items of equipment are required:

For SD3-30 airplanes, documents No. SBH 3.3 and SBH 3.6 are the approved, basic airplane Flight Manuals. When a specific Short Brothers CMC Mod. XXXX is incorporated on a Model SD3-30 variant 200 airplane the approved supplement of particular amendment (P/-), associated with the modification, as listed herein, must be incorporated into the appropriate basic document.

CMC	SEE	MODEL OF	AIRPLANE	FLIGHT MANUAL
MOD.	NOTE	ENGINE	BASIC	AND SUPPLEMENT
		INSTALLED	NO.	OR AMENDMENT NO
5192	6	PT6A-45A	SBH 3.3	P/1
		PT6A-45B	SBH 3.3	P/1, P/8, P/9,
				P11, P12
5423	7	PT6A-45A	SBH 3.3	SUPP. 6
		PT6A-45B	SBH 3.3	P/8, P/11, P/12
		PT6A-45R	SBH 3.6	-
5600	8	PT6A-45A	SBH 3.3	P/1, P/5
		PT6A-45B	SBH 3.3	P/1, P/5, P/8,
				P/11, P/12
		PT6A-45R	SBH 3.6	P/1
5539	9	PT6A-45A	SBH 3.3	P/3, P/4, P/7
				P/10, S/14
		PT6A-45B	SBH 3.3	P/3, P/7, P/8,
				P/10, P/11, P/12
				S/12, S/14
5656	10A	PT6A-45B	SBH 3.3	P/1, P/8, P/9,
ONLY				P/11, P/12
5600	8	PT6A-45B	SBH 3.3	P/1, P/5, P/8,
5656	10A			P/11, P/12
5600	8	PT6A-45R	SBH 3.6	P/1
6031	10B			
6031	10B	PT6A-45R	SBH 3.6	-
6036	12			
6504	17	PT6A-45R	SBH 3.6	P/8, P/6

CMC	SEE	MODEL OF	AIRPLANE	FLIGHT MANUAL
MOD.	NOTE	ENGINE	BASIC	AND SUPPLEMENT
		INSTALLED	NO.	OR AMENDMENT NO
6689	18	PT6A-45R	SBH 3.6	P/7
6867				
6700	19	PT6A-45R	SBH 3.6	P/6
5952	21	PT6A-45R	SBH 3.6	S/9
6786				
4731	35	PT6A-45A	SBH 3.3	P/15
		PT6A-45B	SBH 3.3	P/15
		PT6A-45R	SBH 3.6	P/11
4751	39	PT6A-45A	SBH 3.3	P/16, P/17
		PT6A-45B	SBH 3.3	P/16, P/17
		PT6A-45R	SBH 3.6	P/12, P/13
6910	40	PT6A-45R	SBH 3.6	P/9
6946				
5763	41	PT6A-45A	SBH 3.3	SUPP 11
		PT6A-45B	SBH 3.3	SUPP 11
		PT6A-45R	SBH 3.6	SUPP 3

For SD3-60 airplanes Documents No. SB.4.3, SB 4.6 and SB 4.8 are the approved basic Flight Manuals.

When a specific Short Brothers CMC Mod XXXX is incorporated on a model SD3-60 Variant 200 airplane, the approved supplement or particular amendment (P/-), associated with the modification, as listed herein, must be incorporated into the appropriate basic document.

CMC	SEE	MODEL OF	AIRPLANE	FLIGHT MANUAL
MOD.	NOTE	ENGINE	BASIC	AND SUPPLEMENT
		INSTALLED	NO.	OR AMENDMENT NO.
7260	14	PT6A-65R	SB.4.3	P/4
7544	15	PT6A-65R	SB.4.3	P/9, P/4
		PT6A-65AR	SB.4.6	-
7543	16	PT6A-65AR	SB.4.6	
7734	22	PT6A-65AR	SB.4.6	P/7, P/9
		PT6A-67R	SB.4.8	-
7914	20	PT6A-65AR	SB.4.6	P/1
A8096	23	PT6A-67R	SB.4.8	-
A8064	24	PT6A-67R	SB.4.8	
A8077	25	PT6A-67R	SB.4.8	
A8059	26	PT6A-67R	SB.4.8	
7784	27	PT6A-67R	SB.4.8	
A8062	28	PT6A-67R	SB.4.8	
A8310	29	PT6A-67R	SB.4.8	P/1
A8123	30	PT6A-67R	SB.4.8	P/6 SUPP NO. 10
A8283	31	PT6A-67R	SB.4.8	SUPP NO 11
A8268	32	PT6A-67R	SB.4.8	P/3
A8320	33	PT6A-67R	SB.4.8	P/4
A8428	34	PT6A-67R	SB.4.8	P/5
A8286	36	PT6A-67R	SB.4.8	P/10
7264	43	PT6A-65R	SB 4.3	P/6
		PT6A-65AR	SB 4.6	-
		PT6A-67R	SB 4.8	-

A41EU

CMC	SEE	MODEL OF	AIRPLANE	FLIGHT MANUAL
MOD.	NOTE	ENGINE	BASIC	AND SUPPLEMENT
		INSTALLED	NO.	OR AMENDMENT NO
7114	44	PT6A-65R	SB 4.3	P/8
		PT6A-65AR	SB 4.6	-
		PT6A-67R	SB 4.8	-
7985	45	PT6A-65R	SB 4.3	P/11
7767	46	PT6A-65R	SB 4.3	P/15
		PT6A-65AR	SB 4.6	P/4
8243	35	PT6A-65R	SB 4.3	P/18
		PT6A-65AR	SB 4.6	P/11
		PT6A-67R	SB 4.8	P/8
8611	39	PT6A-65R	SB 4.3	P/19, P/20
		PT6A-65AR	SB 4.6	P/12, P/13
		PT6A-67R	SB 4.8	P/14, P/15
7986	47	PT6A-65AR	SB 4.6	P/2
7583	48	PT6A-65AR	SB 4.6	P/3
		PT6A-67R	SB 4.8	-
7479	49	PT6A-65R	SB 4.3	P/17
		PT6A-65AR	SB 4.6	P/10
8574	50	PT6A-67R	SB 4.8	P/9
8575	51	PT6A-65R	SB 4.3	P/21
		PT6A-65AR	SB 4.6	P/14
		PT6A-67R	SB 4.8	P/12

For SD3 SHERPA airplanes Document No. SB. 5.2 is the approved basic Flight Manual.

When a specification Shorts Brothers CMC Mod XXXX is incorporated on a model SD3 Sherpa Variant 200 airplane, the approved supplement or particular amendment (P/-), associated with the modification, as listed herein, must be incorporated into the basic document.

CMC MOD	SEE NOTE	MODEL OF ENGINE INSTALLED	AIRPLANE BASIC NO.	FLIGHT MANUAL AND SUPPLEMENT OR AMENDMENT NO.
K2098	37	PT6A-65AR	SB.5.2	P/1
-	38	PT6A-65AR	SB.5.2	SUPP No 11
K2061	42	PT6A-65AR	SB.5.2	SUPP No 2 or 13
K2161	52	PT6A-65AR	SB.5.2	SUPP No 14

For SD3-60 SHERPA airplanes Document No SB 6.2 is the approved basic Flight Manual.

When a specific Short Brothers CMC Mod XXXXX is incorporated on a Model SD3-60 Sherpa Variant 200 airplane, the approved supplement or particular amendment (P/-), associated with the modification, as listed herein, must be incorporated into the basic document.

CMC MOD	SEE NOTE	MODEL OF ENGINE INSTALLED	AIRPLANE BASIC NO.	FLIGHT MANUAL AND SUPPLEMENT OR AMENDMENT NO.
-	54	PT6A-65AR	SB 6.2	SUPP NO 11
K 6033	55	PT6A-65AR	SB 6.2	SUPP NO 1
K 6043	56	PT6A-65AR	SB 6.2	SUPP NO 12
	57	PT6A-65AR	SB 6.2	BASIC

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Service Information	n. "Service bulletins, structural repair manuals, vendor manuals, aircraft flight manuals, and overhaul and maintenance manuals, which contain a statement that the document is (British Civil Aviation Authority) approved, are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only."
<u>NOTES.</u> NOTE 1.	(a) Current weight and balance report, including list of equipment included in certificated empty weight, and loading instructions when necessary must be in each aircraft at the time of original certification.
	(b) Unusable fuel and system oil and all hydraulic fluid, must be included in the certified empty weight.
	(c) System oil is the amount of oil required to fill the oil system and tanks up to its normal level.
	Dipstick readings calibrated in U.S. quarts indicate the quantity required to fill the tank to normal level, i.e. 1 U.S. quart (0.833 Imperial quarts) below maximum level.
NOTE 2.	All placards required in the limitations section of the FAA-approved Airplane Flight Manual must be installed.
NOTE 3.	(a) The service life limits for airplane structural parts which are fatigue critical are listed in Chapter 5 of the approved Maintenance Manual Document Ref. SD3/MM/200 for Model SD3-30, Chapter 5 of the approved Maintenance Manual Document Ref. 360/MM for Model SD3-60 and Chapter 5 of the approved Maintenance Manual Document Ref SD3 SHERPA/MM for Model SD3 Sherpa and must be replaced as indicated herein.
	(b) The engine life limited parts are listed in the P&WA CL Engine Service Bulletin Nos. 1002, 3002 and 4002 as revised.
	(c) The engine life limited parts for the 65 series engines are listed in P&WC Engine Service Bulletin Nos. 13002 and 13003 as revised.
NOTE 4.	<u>Fuel Additives</u> Only the following additives may be used with the specified fuels.
	U.S.A. MIL-I-27686ECANADA 3-GP-526aU.K. D.Eng.R.D.2451provided that the concentration does not exceed 0.15% by volume.
NOTE 5.	Methanol/Water for SD3-30 airplanes incorporating the -45A and -45B engines, the approved methanol water for use in this particular installation is to the latest approved issue of the following specifications:
	U.S.A.CANADAU.K.Shell methanol/WaterCPW-328D.Eng.R.D.2491mixture 45/55/0D.Eng.R.D.2491
	The methanol/Water mixture shall be in the ratio of 45% methanol 55% water when both fluids are at 15.6°C.
	For Methanol/Water limitations and operating procedures, refer to approved Airplane Flight Manual.
NOTE 6.	SD3-30 airplanes incorporating Short Brothers CMC Mod. 5192* may be operated at the following maximum weights:
	Maximum ramp weight22,500 lbMaximum takeoff weight22,400 lbMaximum landing weight22,100 lb
	* Refer to Equipment in this data sheet for airplane flight manual required.

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Forward (C.G. Limits:	
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The following revised forward C.G. limits must be observed when operating at the above weights:

		<u>T.O. & L</u>	anding		Enroute				
	Lai	nding Gear	Extended	Landing (Gear Retract	ed			
	Aft	of Datum	% SMC	Aft of Da	tum %	SMC			
		(1n)		(11)					
	Forward Limit At	Maximum							
	Landing Weight	30.80	17.3	28.83	14	4.6			
	Take-off Weight	30.87	17.4	28.90	14	4.7			
	All other CG limit	s are uncha	anged.						
NOTE 7.	Airplanes incorpo This setting may b * Refer	rating Shor be used for to <u>Equipm</u>	t Brothers CMC Me takeoff and enroute <u>ent</u> for Airplane Fli	od 5423* h one engine ght Manua	ave an addit e inoperative l required.	ional flap se e flight.	tting of 4°.		
NOTE 8.	SD3-30 airplanes weights:	incorporati	ng Short Brothers C	CMC Mod.	5600* may	be operated	at the follov	ving maximum	
	Maximu	m ramp we	eight 22,700 l	b					
	Maximu	m takeoff	weight 22,600 l	b					
	Maximu	m landing	weight 22,300 l	b					
	* Refer to Equipment in this data sheet for Airplane Flight Manual required.								
	Forward C.G. limit The following rev	ts: ised forwa	d C.G. limits must	be observed	d when oper	ating at the a	ıbove weigł	its:	
		T.O & La	anding		E	nroute			
	La	anding Gea	r Extended		Landing Ge	ar Retracted	<u>.</u>		
	А	ft of Datun	n % SMC		Aft of Datu	m % S	MC		
		(in.)			(in.)				
	Forward Limit at 1	Maximum:							
	Landing Weight	30.85	17.37	28.88	14	4.67			
	Take-off Weight	30.92	17.47	28.95	14	4.77			
	All other C.G. lim	its are uncl	nanged.						
NOTE 9.	SD3-30 airplanes are not approved f	with airfra for flight in	me de-icing provision icing conditions. *	ons remove Refer to <u>Ea</u>	ed in accorda quipment for	nce with Sh r Airplane F	ort Brothers light Manua	CMC Mod. 553 CMC irequired.	9*
NOTE 10.	On SD3-30 Airpla	ines:							
	A. 2 Pratt & Wh PT6A-45A er Bulletin No.	itney aircra ngines in a SD3-71-05	aft of Canada Limito ccordance with Sho and SD3-71-06 ref	ed Model F rt Brothers ers to this s	PT6A-45B er limited Mod subject.	ngines may l lification No	e installed . 5656. Sho	in lieu of the Mo ort Service	del

B. 2 Pratt & Whitney aircraft of Canada Limited Model PT6A-45R engines may be installed in lieu of the Model PT6A-45A or PT6A-45B engines in accordance with Short Brothers PLC Modification No. 6031. Shorts Service Bulletin No. SD3-71-11refers to this subject.

NOTE 11.	A. For approved engine oils for SD3-30, SI 13001.	D3-60 and SD3 Sherpa airplanes se	e P&W Service Bulletin					
	B. Oil Temperature Limits °C	Oil Temperature Limits °C						
	for SD3-30	for SD3-60 and SD3 Sherpa.						
	Minimum -40	Minimum -40						
	Minimum for take-off 20	Minimum for take-off 20						
	Normal operating 60 to 100	Normal operating 20 to 99						
	Maximum (5 min) 104	Maximum (5 min) 110						
	Maximum (5 mm) 104	(Takeoff)						
	C Oil pressure limits (psi)	Oil Pressure Limits for						
	for SD3-30	SD3-60 and SD3 Sherpa						
	Minimum for takeoff 90	Minimum for takeoff 90						
	Minimum for flight 60	Minimum for flight 90						
	Maximum normal	(Normal)						
	operating 135	60 (if torque kept below						
	Maximum transient during	2000 lb ft)						
	cold starts 200	Maximum normal operating 1	35					
		Maximum transient 200						
NOTE 12.	SD3-30 airplanes incorporating Short Brother	rs CMC Mod. 6036* may be opera	ted at the following					
	Maximum ramn weight	23 000 lb						
	Maximum takeoff weight	22,900 lb						
	Maximum landing weight	22,600 lb						
	* Refer to Equipment in this Data Sheet for Airplane Flight Manual Required.							
	Formand C.C. Limitar							
	Forward C.G. Limits:							
	The following revised forward C.G. weights:	limits must be observed when ope	erating at the above					
	T.O. & Landing	<u>Enroute</u>						
	Landing Gear Exter	ded Landing Gear Retracted						
	Aft of Datum	% SMC Aft of Datum	% SMC					
	(in)	(in)						
	Example of Lineits of Manimum							
	Forward Limit at Maximum:	17.44 28.05	1477					
	Landing Weight 30.90	17.44 28.95	14.77					
	All other C G. Limits are unchange	17.51 29.01 d	14.84					
	An other C.G. Limits are unchanged	d.						
NOTE 13.	The Model C23A airplanes are the same as th approved modifications listed in Shorts Broth	e basic model SD3-30 Variant 200 ers Report No. SB/C23A/mods/00	except for the FAA and the deviations from the					
	US Type Design as listed on the Certificate of	f Airworthiness for Export.						
	A model C23A airplane is eligible for a US A	irworthiness Certificate provided:						
	a) A Certificate of Airworthiness for Expor CAA-UK.	t has been issued, and is available	for the airplane, by the					
	b) All deviation listed in the Certificate of A	Airworthiness for export have been	eliminated.					
	c) The maintenance, overhaul and modifica reviewed for changes made by the milita any Modifications, changes of equipmen by the FAA.	tions records of each airplane are a ry services that affect the US Type t and repairs which affect the Type	available, have been Design of the airplane, and Design have been approved					

d) All applicable Airworthiness Directives have been complied with.

	e) A modification nameplate	has been installed adja	cent to the original i	nameplate containing the follo	wing				
	mormation. Modifiers Name								
	Civil Model SD3-30 Variant 200								
	Date of Mo	dification							
	f) A CAA approved, on beha 200 dated has	lf of FAA, Airplane Fl been provided.	ight Manual applica	ble to the Model SD3-30 Vari	iant				
NOTE 14.	On SD3-60 airplanes incorpora Rating is available up to a Tem Limit is increased to 835°C (15)	On SD3-60 airplanes incorporating Short Brothers CMC Mod 7260 the Maximum Continuous Engine Rating is available up to a Temperature of 101°F and the Maximum Continuous Inter Turbine Temperature Limit is increased to 835°C (1535°F). All other Engine Ratings and Limits remain unchanged.							
NOTE 15.	SD3-60 airplanes incorporating maximum weights:	Short Brothers CMC	Mod 7544* may be o	operated at the following					
	Maximum ramp weig	ht 26,553 lb							
	Maximum take-off we	eight $26,453$ lb							
	* Refer to <u>Equipment</u> in this dat	a sheet for SD3-60 Ai	rplane Flight Manua	l required.					
	Forward C.G. Limits:								
	The following revised forward	C.G. limits must be ob	served when operation	ng at the above weights.					
	<u>, T</u>	O. & Landing	Enro	oute					
	Landin Ewd of	<u>g Gear Extended</u>	<u>Landing</u> C	stum % SMC					
	Fwd of (i	n)	rwu 01 Da	atum % SIMC					
	Forward Limit at:	n <i>)</i>	(III)						
	26,000 lb -3	.57 18.17							
	Maximum Landing								
	Weight -3	.28 18.57							
	Maximum								
	Take-off Weight -2	2.24 20.00	-5.53	15.48					
NOTE 16.	On SD3-60 Airplanes:								
	2 Pratt and Whitney aircraft of Canada Limited Model PT6A-65AR engines may be installed in								
	Shorts Service Bullet	in No's SD360-51-03 a	and SD360-71-09 ref	fer to the subject.	.55.				
NOTE 17.	SD3-30 airplanes which ha	we embodied Short Br	others CMC Mod 6	700 (Rear Ramp Door)					
	and CMC Mod 6504* may be operated in the Cargo Role using the main cabin compartment as								
	a Class "E" Cargo Compartment.								
	* Refer to Equipment	in this data sheet for t	he SD3-30 Airplane	Flight Manual Required.					
NOTE 18.	SD3-30 airplanes incorporating may be operated with the follow	Short Brothers CMC	Models 6689 (SD3-3 pacity:	30)* or 6867 (C23A)*					
	Volume, weight and balance an	n of fuel for each tank	assuming there are	6.5 lbs per US Gallon of fuel.					
		U.S. Gal.	Weight	Arm About C.G.					
			lb.	Datum (in.)					
	1111			Forward Aft					
	Usable Forward Tank	336	2184	22					
	Aft Tank	336	2184	122					
	Total usable in tanks	<u>535</u> 672	4368	122					
		- · · -	*						

		U.S. Gal.		Weight lb.	Arm Abou Datum (t C.G. (in.)
					Forward	Aft
Systems and Sumps	2.3		15		39	
Total Usable		674.3		4383		
Unusable						
Forward Tank		2.2		14.3		
Aft Tank		2.2		14.3		
		4.4		28.6		
Total Capacity		678.7 U.S.	Gallons	8		

See NOTE 1(b).

*Refer to Equipment in this data sheet for the SD3-30 Airplane Flight Manual Required.

NOTE 19.

SD3-30 airplanes incorporating Short Brothers CMC Mod 6700* may be operated at the following maximum weights.

Maximum ramp weight	23,000 lbs
Maximum take-off weight	22,900 lbs
Maximum landing weight	22,600 lbs
Maximum Payload	7,000 lbs

Forward CG Limits:

The following revised forward CG limits must be observed when operating at the above weights:

	<u>T.O & Lan</u>	ding	En-Route	
	Landing Gear Ex	tended	Landing Gear Re	tracted
	Fwd of Datum	% SMC	Fwd of Datum	% SMC
	(in)		(in)	
Forward Limit at M	laximum:			
Landing Weight	30.90	17.44	28.95	14.77
Take-off Weight	30.95	17.51	29.01	14.84
All other CG limits	are unchanged.			

* Refer to Equipment in this data sheet for the SD3-30 Airplane Flight Manual Required.

NOTE 20. SD3-60 airplanes with airframe de-icing provisions removed in accordance with Short Brothers CMC Mod 7914* are not approved for Flight in icing conditions.

* Refer to Equipment for Airplane Flight Manual required.

- NOTE 21. SD3-30 airplanes incorporating Short Brothers CMC Mod 5952 (SD3-30)* or 6786(C23A)* may be operated using a Collins APS-65 Autopilot adhering to the limitation and procedures detailed in the Airplane Flight Manual.
 * Refer to Equipment for Airplane Flight Manual required.
- NOTE 22. SD3-60 airplanes incorporating Short Brothers CMC Mod 7734* "Installation of a Low Pressure Tyre, must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual." * Refer to <u>Equipment</u> for Airplane Flight Manual required.

NOTE 23.	SD3-60 airplanes incorporating Short Brothers CMC Mod A8096 may be operated at the following maximum weights:							
	Maximum ramp weight 27,200 lbs							
	Maximum take-off weight 27,100 lbs							
	Maximum landing weight 26,500 lbs *Refer to Equipment in this data sheet for the SD3-60 Airplane Flight Manual required.							
	Refer to <u>Equipment</u> in this data sheet for the <i>DDe</i> of Finiphine Fight Manual required.							
	Forward CG Limits: The following revised forward CG limits must be observed when operating at the above weights:							
	T.O & Landing En-Route							
	Landing Gear Extended Landing Gear Retracted							
	Fwd of Datum % SMC Fwd of Datum % SMC							
	Forward Limit at:							
	Maximum Landing -2.97(Fwd) 19.0 Weight							
	Maximum Take-off -2.24(Fwd) 20.0 -5.35(Fwd) 15.72 Weight							
NOTE 24.	SD3-60 airplanes incorporating Short Brothers CMC Mod A8064 have the following aileron control surfaces movement:							
	Aileron $27 \frac{14^\circ}{2} \pm \frac{12^\circ}{2}$ up $14 \frac{14^\circ}{2} \pm \frac{12^\circ}{2}$ downAileron Trim $8 \frac{12^\circ}{2} \pm 1^\circ$ up $8 \frac{12^\circ}{2} \pm 1^\circ$ down							
NOTE 25.	On SD3-60 Airplanes:							
	2 Pratt and Whitney aircraft of Canada Limited Model PT6A-67R engines may be installed in							
	* Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual required.							
NOTE 26.	On SD3-60 Airplanes:							
	2 Hartzell HC-A6A-3/A10460E propellers may be installed in accordance with Short Brothers							
	* Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual required.							
NOTE 27.	On SD3-60 Airplanes: Cambered Struts may be installed in accordance with Short Brothers PLC CMC Mod No. 7784.							
NOTE 29	On SD2 60 Aimlands							
NOTE 28.	Collins Pro-line 2 Avionics may be installed in accordance with Short Brothers PLC CMC Mod No A8062.							
NOTE 29.	SD3-60 Airplanes incorporating Short Brothers CMC Modification A8310, "Airconditioning:							
	detailed in the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual required.							
NOTE 30.	SD3-60 Airplanes incorporating Short Brothers CMC Modification A8123, "Installation of a Collins APS-65							
	Autophot ^{**} , must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual required.							
NOTE 31.	SD3-60 Airplane incorporating Short Brothers CMC Modification A8123 and A8283 which install a Collins							
	APS65 Autopilot without Yaw Damper installation, must be operated in accordance with the limitations and							
	* Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual required.							

NOTE 32.	SD3-60 Airplanes incorporating Short Brothers CMC Modification A8268, "Electrics: Revised colour markings on oil temperatures/pressure gauge" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual.
	* Refer to Equipment in this data sheet for the Airplane Flight Manual required.
	The temperature limits given in Note 11 still apply.
NOTE 33.	SD3-60 Airplanes incorporating Short Brothers CMC Modification A8320, "Electrics: Revised Torque Gauge Markings" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to Equipment in this data sheet for the Airplane Flight Manual required.
NOTE 34.	SD3-60 Airplanes incorporating Short Brothers CMC Modification A8428, "To alter the Flight Idle/Flight Fuel Gas Generator Speed on the Engine Limitation Label" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual." * Refer to Equipment in this data sheet for the Airplane Flight Manual required.
NOTE 35.	SD3-30 Airplanes or SD3-60 Airplanes incorporating Short Brothers CMC Modification No. 4731or A8243 respectively, "Electrics: Revised Power Source for Pitot Static Heaters", must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual required.
NOTE 36.	SD3-60 Airplanes incorporating Short Brothers CMC Modification A8286, "Electrics: Automatic switch off for emergency lighting" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual required.
NOTE 37.	SD3 Sherpa airplanes that have an IFF Transponder AN/APX 100(V) installed in the nose baggage compartment must not carry cargo exceeding 400 lbs in the nose baggage compartment and must have the appropriate loading limitations placard installed in accordance with the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual required.
NOTE 38.	SD3 Sherpa airplanes that are to be operated with the rear ramp door open in flight must be operated in accordance with the limitations and procedures detailed in Supplement 11 of the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual required.
NOTE 39.	SD3-30 Airplanes or SD3-60 Airplanes incorporating Short Brothers CMC Modification No. 4751 or A8611 respectively "To prevent inadvertent operation of the L.P. fuel levers" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual standard required.
NOTE 40.	SD3-30 Airplanes incorporating either Short Brothers CMC Modification No. 6910 or 6946 (C-23A) "Introduction of low fuel level warning system" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. *Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual standard required.
NOTE 41.	SD3-30 Airplanes incorporating Short Brothers CMC Modification No. 5763 "Installation of Collins 562-8F yaw damper" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual standard required.
NOTE 42.	SD3 Sherpa Airplanes incorporating Short Brothers CMC Modification No. K2061 relating to the introduction of a long range ferry fuel system must be operated in accordance with the limitations and procedures detailed in the appropriate Airplane Flight Manual Supplement.Supplement No. 2 relates to the two tank installation and Supplement No. 13 relates to the one tank installation. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual standard required.
NOTE 43.	SD3-60 Airplanes incorporating Short Brothers CMC Modification No. 7264 "To provide indication of propeller heating in the transfer mode" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual standard required.

NOTE 44.	 SD3-60 Airplanes incorporating Short Brothers CMC Modification No A7114 "Revised illumination of the Fire warning light on the L.P. fuel levers" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to Equipment in this data sheet for the Airplane Flight Manual standard required.
NOTE 45.	SD3-60 Airplanes incorporating Short Brothers CMC Modification No. A7985 "Revised elevator trim indicator markings" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to Equipment in this data sheet for the Airplane Flight Manual standard required.
NOTE 46.	SD3-60 Airplanes incorporating Short Brothers CMC Modification No A7767 "Installation of a low fuel level warning system" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to Equipment in this data sheet for the Airplane Flight Manual standard required.
NOTE 47.	SD3-60 Airplanes incorporating Short Brothers CMC Modification No A7986 "Revised elevator trim indicator markings" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to Equipment in this data sheet for the Airplane Flight Manual standard required.
NOTE 48.	SD3-60 Airplanes incorporating Short Brothers CMC Modification No A7583 "Installation of Safe Flight 796-2 stall warning vane" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to Equipment in this data sheet for the Airplane Flight Manual standard required.
NOTE 49.	SD3-60 Airplanes which have been upgraded by the installation of PT6A-65AR engines under Modification No A7543 (refer to NOTE 16) and which have <u>not</u> incorporated Short Brothers CMC Modification No A7479 "Installation of Graviner Firewire System" or SD3-60 Airplanes with PT6A-65R engines which have incorporated CMC Modification No A7479 must be operated in accordance with the limitations and procedures detailed in the respective Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the respective Airplane Flight Manual standard required.
NOTE 50.	SD3-60 Airplanes incorporating Short Brothers CMC Modification No. A8574 "Engine propeller speed tolerance change" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to Equipment in this data sheet for the Airplane Flight Manual standard required.
NOTE 51.	SD3-60 Airplanes incorporating Short Brothers CMC Modification No A8575 "Introduction of Autofeather disarm feature on final approach" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual standard required.
NOTE 52.	SD3 Sherpa Airplanes incorporating Short Brothers CMC Modification No K2161 "Installation of UNS-1A Flight Management System" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Manual Supplement. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual Supplement required.
NOTE 53.	 SD3-60 Airplanes using HC-A6A-3 propellers are approved for operation with the following blade models installed. A10460E An internal de-icing element only is installed. A10460K An internal de-icing element only is installed. A10460EK An external de-icing element is installed under Hartzell Service Instruction No 187.
	Blade model A10460E must not be intermixed with A10460EK or A10460K models on the same propeller.
	Blade models A10460K and A10460EK may be intermixed on the same propeller as long as their weights (for balance) are compatible.
NOTE 54.	SD3-60 Sherpa Airplanes that are to be operated with the rear ramp door open in flight must be operated in accordance with the limitations and procedures detailed in Supplement 11 of the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual Supplement required.

NOTE 55.	SD3-60 Sherpa Airplanes incorporating Short Brothers CMC Modification No K6033 relating to the introduction of a long range ferry fuel system must be operated in accordance with the limitations and procedures detailed in Supplement No. 1 of the Airplane Flight Manual. * Refer to <u>Equipment</u> in this data sheet for the Airplane Flight Manual Supplement required.
NOTE 56.	SD3-60 Sherpa Airplanes incorporating Short Brothers CMC Modification No K6043 "Installation of UNS- 1A Flight Management System" must be operated in accordance with the limitations and procedures detailed in the Airplane Flight Supplement Manual.
NOTE 57.	SD3-60 Sherpa airplanes that have an IFF Transponder AN/APX 100(V) installed in the nose baggage compartment must not carry cargo exceeding 400 lbs in the nose baggage compartment and must have the appropriate loading limitations placard installed in accordance with the Airplane Flight Manual. * Refer to Equipment in this data sheet for the Airplane Flight Manual required.
NOTE 58.	SD3-60 Sherpa airplanes (Mod K6001) Certification Basis as defined by this TCDS includes Amendment 25.61 and Amendment 25.66. This requirement is applied to all new furnishings introduced by the modifications for conversion of the aircraft but not applied to the existing furnishings being refitted to the SD3-60 Sherpa aircraft (Mod K6005).

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