OMB No. 2120-0020 Exp: 07/31/2026	Electronic Tracking Number
	For FAA Use Only
	1

١.,					MAJO	R REPAIR	ANC	A (LTERATIO	N				FOF FAA L	han Challe	
d F	IS Departmen f Tramsportab ederal Aviati idministratio	on lon	(Al			Powerplant,				• •				70724	i constant	
t	nstructions		sition	of thi	s form	les. See Title . This report is				.S.C. §44	701). Fa	Hure to re				
		Nationali N154T	-	Reg	istratio	n Mark				Serial	^{No.} 30	515				
1. /	Aircraft	Make B	oe	ing)					Model		-89L		Series		
		Name (A	s sho	wn or	negisi	tration certificate	9)			Addre	ss (As sh	own on n	gistration	certificate)	
2. Owner Falcon Aviation		n Aviation Holdings LLC						1 Rocket								
		"		City Zip	Hawthorn 90250	<u> </u>	Cou	ntry USA	State CA							
┝								3.	For FAA Use							
-	4. Ty	pe				_		5. (Unit Identific	ation						
	Repair	Alteration		Un	it		Ma	ike		}	1	Model			Serial No	
		×	AIR	FRAN	AE .	Boeing				(As d	escribed	in Item 1	above)	3051	5	
			POV	NERF	TAAL											
			PRC	PEL	LER									<u></u>		
			APP	LIAN	CE	Type Manufacturer							-			
Δ 6	Aconcy's N	lame and A	Irires	\$			- 6	_	nformity Sta Kind of Agend							
Name		E AIRCRAFT SI		_		<u> </u>		H	U. S. Certific	<u> </u>	nic		Man	ulacturer		
Adde	136 MOR	DUEN RACE					_		Foreign Cert	ficated Med	chanic		C. Certifi			
Cay Zeo	95301		mby L	USA		State CA		×	Certificated F			ition	C	CL3F	3427	L
D.	have be	en made in	80000	rdanc	e with	on made to the u the requirement to the best of my	s of I	Part	43 of the U.S	5 above a	and desc Aviation f	ribed on t Regulation	he reverse ns and tha	e or attach at the infon	ments heret mation	0
	ended ran 14 CFR P . B				Signa	ture/Date of Aut	thoriz	ed I	ndividual	1	Sh	uh		15 D	lee2	3
								_	al for Return							
						ns specified be ninistration and i		the	_	Approve		Rejecte		manner	prescribed	by the
BY		A Fit. Stands pector	ards		Manu	facturer		Ma	intenance On	ganization		Depar	tment of Tr	d by Canad ansport	lian	
		A Designee		X	Repa	ir Station		Ins	pection Author	orization	0	ther (Spe	csfy) 	_		
Certi Desig	ficate or gnation No	CL3R4	27L	.]	Signal	ture/Date of Aut	horiz	ed li	ndividual	1	//	1	//			
										A		" / T	7/ .		c.Λ	7 7

			•
		•	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished (If more space is required, attach additional sheets. Identify with aircraft national sheets.	onality and registration mark and dat USA	e work completed.)
	N154TS	December 15, 2023
	Nationality and Registration Mark	Date
1. DESCRIPTION:		
To document the installation of the Starlink Aviation Sonly. Installation engineering data and analysis was posted the guidelines of FAA Policy Statement PS-AIR-25-17-19, 2012 providing Job Aid guidance related to FAA Capproval levels required for major repairs and alteration	performed in accordance 7 and FAA Memorandum Order 8300.16 for determ	with dated Oct
2. APPROVED DATA:		
i) Drawing 06654102-501 Rev A. Dated 10/23/2023, I Aviation by FAA Electrical Robert S Chupka DER-T, 2 Ramachandran DER-T, 575001431 ii) Drawing 06654102-550 Rev C. Dated 12/10/2023, 500D, Starlink Aviation by FAA Structural Venkat Rariii) Drawing 06654102-551 Rev C. Dated 12/10/2023, 727G, Starlink Aviation by FAA Structural Venkat Rariv) Drawing 06654102-570 Rev B. Dated 12/10/2023, Starlink Aviation by FAA Structural Venkat Ramachar	117186691 and FAA Stro Boeing 737-800 Starlink machandran DER-T, 575 Boeing 737-800 Starlink machandran DER-T, 575 Boeing 737-800 Starlink	uctural Venkat Exterior Install, FS 5001431 k Exterior Install, FS 5001431 k Interior Install,
v) SPX-00005053 Rev. 2.0 Dated 12/12/2023, Starlin 737-800 by FAA Structural Venkat Ramachandran Dl vi) Drawing 06654102-202 Rev C. Dated 12/01/2023, FAA Electrical Robert S Chupka DER-T, 117186691 vii) Drawing 06654102-621 Rev B. Dated 12/01/2023	k Aviation Structural Sub ER-T, 575001431 B737, Aeroterminal, Wi	ostantiation, Boeing
Electrical Robert S Chupka DER-T, 117186691 viii) SPX-00004939 Rev. 1.0 Dated 11/13/2023, Starl Analysis by FAA Electrical Robert S Chupka DER-T,	ink Aviation SpaceX B73	•
ix) SPX-00005051 Rev. 1.0 Dated 12/05/2023, Starlir Analysis, Boeing 737-800 by FAA Electrical Robert S x) STR-00000553 Rev. 1.0 Dated 12/08/2023, Starlin	nk Aviation Anti-Collision Chupka DER-T, 117186	6691
Test Report by FAA Electrical Robert S Chupka DER xi) STR-00000554 Rev. 1.0 Dated 12/08/2023, Starlir Report by FAA Electrical Robert S Chupka DER-T, 1	-T, 117186691 nk Aviation B737 (N154T	,
xii) QSA-23084 Rev. Initial Release Dated 12/12/2023 Due to Installation of the SpaceX Satcom Radomes of Analyst Sky W Rudolph DER-T, 367575048	3, Performance Limited Non Boeing 737-800 Aircra	aft by FAA Flight
xiii) SPX-00005289 Rev. 1.0 Dated 1/04/2024, Starlin N154TS by FAA Electrical Robert S Chupka DER-T,		Safety Assessment,

✓ Additional Sheets Are Attached

,			
			·

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

Description of Work Accomplished (If more space is required, attach additional sheets. Identify with aircraft national sheets.	onality and registration mark and dat	e work completed.)
	USA	
	Nationality and Registration Mark	December 15, 2023
0 ADDD01/TD DATA (Nationality and Registration Mark	Date
2. APPROVED DATA (cont.):		
xiv) SPX-00005052 Rev. 2.0 Dated 1/09/2024, Starlin Report, Boeing 737-800 by FAA Structural Venkat Raxv) SPX-00005244 Rev. 1.0 Dated 12/27/2023, Starlin Manual Supplement by FAA Flight Test Pilot James A	machandran DER-T, 57 nk Aviation B737-800 (N	5001431 154TS) Aircraft Flight
3. OTHER DATA: i) SPX-00004932 Rev. 5.0 Dated 1/12/2024, Starlink / Data List ii) SPX-00005050 Rev. 1.0 Dated 10/30/2023, Starlink Boeing 737-800	•	,
iii) STR-00000556 Rev. 1.0 Dated 12/14/2023, Starlin iv) SPX-00005115 Rev. 2.0 Dated 1/09/2024, Starlink Airworthiness (N154TS) v) SPX-00005269 Rev. 2.0 Dated 1/12/2024, Starlink	Aviation B737-800 Inst	ructions for Continued
Summary Report vi) SPX-00005292 Rev. 1.0 Dated 1/08/2024, Starlink Report, N154TS	·	·
viii) STR-00000532 Rev. 1.0 Dated 9/29/2023, Starlin Test Report	k Aviation PVC-Free Ha	rnessing Flammability
ix) SPX-00005294 Rev. 1.0 Dated 1/08/2024, Starlink Boeing 737-800	Aviation Bird Strike Qu	al by Similarity Report,
END		
Additional Sheets	Are Attached	

<i>!</i>				
	•			
			x	
			1	
	•			

DETERMINATION	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS 1. PROJECT NO.(if applicable)									
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION										
2. MAKE Boeing	3. MODEL NO. 737-89L	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF APPLI Space Exploration Te	CANT echnologies, Starlink Aviation						
		PURPOSE OF DATA								
6. IN SUPPORT OF:	6. IN SUPPORT OF: TC/ATC STC PMA Major Repair _X_ Major Alteration Other (Explain)									
PROJECT SPECIFIC INF	Boeing 737-800 Starlink System Provisions Installation PROJECT SPECIFIC INFORMATION:									
PURPOSE OF SUBMITTA	PURPOSE OF SUBMITTAL: To approve structural data for Starlink System provisions Installation									
		LIST OF DATA gs, material specifications, and process specific uirements listed in block 9. A reference to a draw								
7. IDENTIFICATION	8. TITLE OF DATA									
06654102-501 Rev A Date: 23-OCT-2023	BOEING 737-800 TOP LEVEL A	ASSEMBLY,								
06654102-550 Rev C Date: 10-DEC-2023	BOEING 737-800 STARLINK E	KTERIOR INSTALL, FS 500D,								
06654102-551 Rev C Date: 10-DEC-2023	BOEING 737-800 STARLINK EX	KTERIOR INSTALL, FS 727G,								
06654102-570 Rev B Date: 10-DEC-2023										
	Notes:									
This approval is for engineering design data only. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as 'Applicable Requirements'.										
	Structural design aspects only of the above data are approved herein. This approval is valid only for Boeing Model: 737-89L, S/N: 30515.									
	, ,	tions and amendment levels) 25.605(a) Amdt 25-46, 25.609(a)(b) Amdt	25-0, 25.611(a) Amdt	25-123,						
10. FAA DESIGNEE APPF 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the I sheets numbered, have been exa	conditions and limitat mined in accordance	ions of authorization under with established procedures. I						
APPROVE the dat	a above 🔲 RECOMMEN	D APPROVAL of the data above								
FOR MAJOR REPAIR OF EXPLAIN :	R MAJOR ALTERATION OF	NLY – Other data approvals ARE REQ	UIRED ARE NO	T REQUIRED						
	al is required for the alte	eration.								
☐ MANAGING OFFIC	CE WAS CONTACTED (rec	uired when approval was made outside t	ne U.S and/or invlove	d critical or life limited parts)						
11. DER/ODA NUMBER 575001431		12. PRINTED NAME Venkat Ramachandran								
13. TECHNICAL DISCIPL DER-T (Structural Engineer		14. SIGNATURE Venkat Ramachandran	ed ·	16. DATE 12/13/2023						
FAA ADDDO	OVAL (For FAA use when d	Iesignee recommends approval above, or		erved for the FAA)						
17. PRINTED NAME/FAA		18. TECHNICAL DISCIPLINE	milan approval is 165	oreca for the FPA)						
19. SIGNATURE		20. DATE								
Ī										

		•	
		·	
		•	
		·	

		OF TRANSPORTATION ON ADMINISTRATION	1. PRO	JECT NO.(if applicable)						
DETERMINATION	DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS									
	AIRCRAF	T OR AIRCRAFT COMPONENT IDENTIF	ICATION							
2. MAKE Boeing	3. MODEL NO. 737-89L	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF APPLIC Space Exploration Aviation	CANT Technologies, Starlink						
PURPOSE OF DATA										
6. IN SUPPORT OF:	. IN SUPPORT OF: TC/ATC STC PMA Major Repair Major Alteration Other (Explain)									
PROJECT SPECIFIC INF	PROJECT SPECIFIC INFORMATION: Boeing 737-800 Starlink System Provisions Installation									
PURPOSE OF SUBMITTA	AL: To approve structur	al analysis data for Starlink Syste	em provisions Insta	llation						
		LIST OF DATA ngs, material specifications, and process specific ulirements listed in block 9. A reference to a draw								
7. IDENTIFICATION	8. TITLE OF DATA	direfficialità listed il Diock 3. A leterence to a draw	and use modeling leasion	level, may be used.						
SPX-00005053	Starlink Aviation Str	uctural Substantiation, Boeing 737-	800							
Version 2.0 Date: 2023-12-12		, ,								
	Notes:									
	This opposite for		48							
	This approval is for engineering design data only. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as 'Applicable Requirements'.									
	Structural aspects only of the above data are approved herein.									
	This approval is valid only for Boeing Model: 737-89L, S/N: 30515. Additional damage tolerance analysis and approval is required for this alteration and must be									
•	completed within 12 m	onths after this approval.								
	, ,	tions and amendment levels)								
		25-23, 25.305(a)(b) Amdt 25-86, 25 (b)(c) Amdt 25-72, 25.625(a)(b)(c)								
li de la companya de										
10. FAA DESIGNEE APPE	ROVAL - As directed by the	Administrator and in accordance with the	conditions and limitation	ons of authorization under						
14 CFR, Part 183, data lis therefore	ted above, and on attached	i sheets numbered, have been exa	mined in accordance v	vith established procedures. I						
■ APPROVE the dat	a above □RECOMMEN	ID APPROVAL of the data above								
FOR MAJOR REPAIR OF EXPLAIN :	MAJOR ALTERATION O	NLY – Other data approvals 🖲 ARE REQ	UIRED ARE NOT	REQUIRED						
Additional damage tole after this approval.	erance analysis and app	proval is required for this alterat	ion and must be com	pleted within 12 months						
│ │ │ MANAGING OFFIC	E WAS CONTACTED (red	quired when approval was made outside the	he U.S and/or invloved	d critical or life limited parts)						
11. DER/ODA NUMBER 575001431	<u> </u>	12. PRINTED NAME Venkat Ramachandran								
13. TECHNICAL DISCIPL DER-T (Structural Engi		14. SIGNATURE Venkat Ramachandran	Digitall	1,,						
FAA APPRO	VAL (For FAA use when d	esignee recommends approval above, or	when approval is rese							
17. PRINTED NAME/FAA		18. TECHNICAL DISCIPLINE								
19. SIGNATURE		20. DATE								

			•

DETERMINATION	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS 1. PROJECT NO.(if applicable)					
	AIRCRAF	OR AIRCRAFT COMPONENT IDENTIF	FICATION	<u>,</u>		
2. MAKE Boeing	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF APPLICANT SPACE EXPLORATION TECHN	OLOGIES STARLINK		
		PURPOSE OF DATA	<u> </u>			
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair X Major	Alteration Other (Ex	plain)		
PROJECT SPECIFIC INF	In support ORMATION: Installatio	of Major Alteration for AC SN 3051	5 for Starlink Aviation	System		
		Alteration for AC SN 30515 for Sta	arlink Aviation System I	nstallation.		
		LIST OF DATA gs, material specifications, and process specific lirements listed in block 9. A reference to a draw				
7. IDENTIFICATION	8. TITLE OF DATA					
06654102-501 Rev. A Dated 10/23/2023	Boeing 737-800 Top Lev	vel Assembly, Starlink Aviation				
06654102-202 Rev. C Dated 12/1/2023	B737, Aeroterminal, Wi	iring Schematic				
06654102-621 Rev. B Dated 12/1/2023	B737, Aeroterminal, Wi	ire Routing				
	Notes:					
This approval is for engineering design data only. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as 'Applicable Requirements'.						
		rical Aspects Only. This approval i 30515 for Starlink Aviation System		lteration to		
9. APPLICABLE REQUIR	EMENTS (List specific sec	tions and amendment levels)				
14CFR Part 25: 25.899 25.1309(a)(b)(c) [Amdt	[Amdt. 25-123]; 25.981 :. 25-41]; 25.1353(a)(b	.([Amdt. 25-146]; 25.1301(a)(b)(c) b) [Amdt. 25-113]; 25.1357 (a)(c)(d	[Amdt. 25-0]; 25.1307 [A) [Amdt. 25-0]; 25.1431(umdt. 25-72]; a)(c) [Amdt. 25-0]		
10. FAA DESIGNEE APPF 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the d sheets numbered, have been exa	conditions and limitations of mined in accordance with es	authorization under tablished procedures. I		
APPROVE the date	a above RECOMMEN	D APPROVAL of the data above				
EXPLAIN:		NLY — Other data approvals ARE REQ	UIRED ARE NOT REQU	JIRED		
	may be required for thi	uired when approval was made outside the	and/or invloyed critics	al or life limited parts)		
11. DER/ODA NUMBER 117186691	E WAS CONTACTED (180	12. PRINTED NAME Robert S Chupka	le 0.3 and/or invioved chace	ar or me infilted parts)		
13.TECHNICAL DISCIPL DER-T (Electrical Syst		14. SIGNATURE Robert S Chupka	Digitally Sign ed 12/12/2023	16. DATE 12/12/2023		
FAA APPRO	VAL (For FAA use when d	esignee recommends approval above, or		r the FAA)		
17. PRINTED NAME/FAA		18. TECHNICAL DISCIPLINE	mion approval is reserved in			
19. SIGNATURE		20. DATE				

r		

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS 1. PROJECT NO.(if applicable)					
	AIRCRAF	OR AIRCRAFT COMPONENT IDENT	IFICATION	<u> </u>	
2. MAKE Boeing	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft		APPLICANT RATION TECHNOLOGIES STARLINK	
· · · · · ·		PURPOSE OF DATA			
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair Majo	or Alteration	Other (Explain)	
PROJECT SPECIFIC INF	In support ORMATION: Installatio	of Major Alteration for AC SN 305 n.	15 for Starli	nk Aviation System	
PURPOSE OF SUBMITTA	AL: In support of Major	Alteration for AC SN 30515 for St	tarlink Aviat	ion System Installation.	
		LIST OF DATA			
		gs, material specifications, and process specifications and process specifications.			
7. IDENTIFICATION	8. TITLE OF DATA	and the noted in place of Avoid and the	twing not, moldani	g lovision lovel, may be used.	
SPX-00004939	Starlink Aviation Spa	ceX B737-800 Electrical Load Analy			
Rev. 1.0	·	·			
Dated 11/13/23]		•		
SPX-00005051	Starlink Aviation Ant	i-Collision Light Blockage Analysi	s, Boeing 737.	7-800	
Rev. 1.0 Dated 12/05/23					
	Notes:				
	This approval is for	engineering design data only. It i	indicates the	data listed above demonstrates	
	compliance only with	the regulations specified by parag			
'Applicable Requirements'.					
Approval is for Electrical Aspects Only. This approval is in support of major alteration to					
	Boeing 737-800 AC SN	30515 for Starlink Aviation System	ı Installatior	١,	
	•	tions and amendment levels)			
14CFR Part 25: 25.135: 	l(a)(1) [Amdt. 25-72];	25.1401(b) [Amdt. 25-41]			
10. FAA DESIGNEE APPI 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the sheets numbered, have been ex	e conditions and amined in acco	d limitations of authorization under rdance with established procedures. I	
ADDDOVE the dea	a share TIRECOMMEN	ID APPROVAL of the data above			
APPROVE the dat	a above RECOMMEN	ID APPROVAL of the data above			
FOR MAJOR REPAIR OF	R MAJOR ALTERATION OF	NLY – Other data approvals ARE RE	OUIRED TA	RE NOT REQUIRED	
EXPLAIN:	(11110) (11212)	TEL OUIO, data approvato E ////E //E	4011.125 <u> </u>	TE NOT REGULES	
Additional approvals	may be required for thi	s alteration.			
☐ MANAGING OFFIC	CE WAS CONTACTED (red	uired when approval was made outside	the U.S and/or	invloved critical or life limited parts)	
11. DER/ODA NUMBER 117186691		12. PRINTED NAME Robert S Chupka			
40 TECHNICAL DISCIDI	INF	14. SIGNATURE		I 46 DATE	
13. TECHNICAL DISCIPL DER-T (Electrical Sys [*]		Robert S Chupka	ſ	16. DATE Digitally Signe 12/14/2023	
· · · · · · · · · · · · · · · · · · ·		Acces 3 Chapta		12/14/2023	
FAA APPRO	VAL (For FAA use when d	esignee recommends approval above, o	r when approva	il is reserved for the FAA)	
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE			
19. SIGNATURE		20. DATE			
]			

\cdot	
	·

DETERMINATION	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS 1. PROJECT NO.(if applicable)				
	AIRCRAF	T OR AIRCRAFT COMPONENT IDENTI	FICATION	<u> </u>	
2. MAKE Boeing	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF SPACE EXPLO AVIATION	APPLICANT RATION TECHNOLOGIES STARLINK	
	<u> </u>	PURPOSE OF DATA			
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair X Majo	r Alteration	Other (Explain)	
PROJECT SPECIFIC INF	In support ORMATION: Installatio	of Major Alteration for AC SN 3051	.5 for Starlin	nk Aviation System	
		r Alteration for AC SN 30515 for St	arlink Aviati	on System Installation.	
		LIST OF DATA ngs, material specifications, and process specifi uirements listed in block 9. A reference to a dra			
7. IDENTIFICATION	8. TITLE OF DATA				
STR-00000553 Rev. 1.0 Dated 12/08/23	Starlink Aviation B73	7 (N154TS) Functional Ground Test	Report		
STR-00000554 Rev. 1.0 Dated 12/08/23	Starlink Aviation B73	7 (N154TS) EMC Ground Test Report		•	
	Notes:				
This approval is for engineering design data only. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as 'Applicable Requirements'.					
		rical Aspects Only. This approval : 30515 for Starlink Aviation System			
9. APPLICABLE REQUIR	EMENTS (List specific sec	ctions and amendment levels)			
14CFR Part 25: 25.1301	L(d) [Amdt. 25-0]; 25.:	1309(a) [Amdt. 25-41]; 25.1353(a) [Amdt. 25-113]; 25.1431(c) [Amdt. 25-113]	
10. FAA DESIGNEE APPF 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the d sheets numbered, have been exa	conditions and amined in accor	limitations of authorization under dance with established procedures.	
APPROVE the dat	a above RECOMMEN	ND APPROVAL of the data above			
EXPLAIN:		NLY Other data approvals 🖲 ARE REC	QUIRED AF	RE NOT REQUIRED	
Additional approvals m	may be required for the	is alteration.			
☐ MANAGING OFFIC	E WAS CONTACTED (red	quired when approval was made outside t	the U.S and/or i	invloved critical or life limited parts)	
11. DER/ODA NUMBER 117186691		12. PRINTED NAME Robert S Chupka			
13. TECHNICAL DISCIPL DER-T (Electrical Syst		14. SIGNATURE Robert S Chupka	Ę	16. DATE Digitally Signe 12/14/2023 12/14/2023	
FAA APPRO	VAL (For FAA use when d	lesignee recommends approval above, or	when approva	I is reserved for the FAA)	
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE			
19. SIGNATURE		20. DATE			

,				
				1
		•		
				•
	•			
		•		
				1

	U.S. DEPARTMENT FEDERAL AVIATIO		1. PROJECT NO.(if applicable)	
DETERMINATION	OF COMPLIANCE	WITH AIRWORTHINESS STAN	DARDS	
	AIRCRAF	T OR AIRCRAFT COMPONENT IDENTI	FICATION	
2. MAKE Boeing	3. MODEL NO. 737-89L	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF Space Explora	APPLICANT tion Technologies, Starlink Aviation
		PURPOSE OF DATA		
6. IN SUPPORT OF:	TC/ATCSTC		r Alteration	Other (Explain)
PROJECT SPECIFIC INF	Boeing 737-86 ORMATION:	90 Starlink System Provisions Installatio	n	
PURPOSE OF SUBMITTA	presented weight decre	rformance decrements due to additional d ments ensures that the takeoff, landing, o the unmodified aircraft.	rag caused by ex and climb perfo	xternal antenna radomes. Use of ormance in all certified phases of
		LIST OF DATA ngs, material specifications, and process specifi uirements listed in block 9. A reference to a dra		
7. IDENTIFICATION	8. TITLE OF DATA			
QSA-23084 Initial Release 12 December 2023	Performance Limited Weigh	t Decrement Due to Installation of the S_{i}	paceX Satcom Rad	domes on Boeing 737-800 Aircraft
	Notes:			
		neering design data only. It indicates t ified by paragraph and subparagraph list		
	25.111 Amdt 25-72, 25.113	tions and amendment levels) Amdt 25-23, 25.115 Amdt 25-0, 25.117 Amd	dt 25-0, 25.119	Amdt 25-0, 25.121 Amdt 25-0, 25.123
10. FAA DESIGNEE APPF 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the d sheets numbered, have been exa	conditions and amined in accor	limitations of authorization under dance with established procedures. I
	a above RECOMMEN	ID APPROVAL of the data above		
EXPLAIN:	R MAJOR ALTERATION OF	NLY — Other data approvals ARE REC	QUIRED AF	RE NOT REQUIRED
☐ MANAGING OFFIC	E WAS CONTACTED (red	quired when approval was made outside	the U.S and/or i	invloved critical or life limited parts)
11. DER/ODA NUMBER 367575048		12. PRINTED NAME Sky w Rudolph		
13. TECHNICAL DISCIPL DER-T (Flight Analyst)	INE	14. SIGNATURE Sky W Rudolph	<u> </u>	16. DATE d Digitally Signe 12/14/2023 d 12/14/2023
FAA APPRO	VAL (For FAA use when d	esignee recommends approval above, or	when approva	l is reserved for the FAA)
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE		
19. SIGNATURE		20. DATE		

1		

DETERMINATIO	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS 1. PROJECT NO.(if applicable)				
	AIRCRAF	T OR AIRCRAFT COMPONENT IDENTII	FICATION	- 11-11-11	
2. MAKE Boeing	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF SPACE EXPLO AVIATION	APPLICANT RATION TECHNOLOGIES STARLINK	
		PURPOSE OF DATA			
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair Major	r Alteration _	Other (Explain)	
PROJECT SPECIFIC INF	ORMATION: In support	of Major Alteration for AC SN 3051	.5 for Starli	nk Aviation System	
		Alteration for AC SN 30515 for St	arlink Aviati	ion System Installation.	
		LIST OF DATA			
		ngs, material specifications, and process specifications, and process specifications are to a draw			
7. IDENTIFICATION	8. TITLE OF DATA			, 101010110101, 114, 50 450	
SPX-00005289	Starlink Aviation B73	7 System Safety Assessment, N154TS			
Rev. 1.0 Dated 01/04/2024					
	Notes:				
		engineering design data only. It in the regulations specified by paragn nts'.			
		rical Aspects Only. This approval i			
Boeing 737-800 AC SN 30515 for Starlink Aviation System Installation.					
9. APPLICABLE REQUIR	EMENTS (List specific sec	tions and amendment levels)	_		
14CFR Part 25: 25.1309	9(b)(c)(d) [Amdt. 25-43	l]; 25.1431(a)(c) [Amdt. 25-0]			
II					
10. FAA DESIGNEE APPF 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the disheets numbered, have been exa	conditions and amined in accor	limitations of authorization under dance with established procedures.	
APPROVE the dat	a above RECOMMEN	ID APPROVAL of the data above			
n					
FOR MAJOR REPAIR OF EXPLAIN :	R MAJOR ALTERATION OF	NLY – Other data approvals ARE REC	QUIRED AF	RE NOT REQUIRED	
Additional approvals r	may be required for the	is alteration.			
П оты оты оты	NE WAS CONTACTED (
	CE WAS CONTACTED (rec	uired when approval was made outside t	ne U.S and/or	invioved critical or life limited parts)	
11. DER/ODA NUMBER 117186691		Robert S Chupka		•	
13. TECHNICAL DISCIPL DER-T (Electrical Syst		14. SIGNATURE Robert S Chupka		16. DATE Digitally Signe 01/08/2024 01/08/2024	
FAA APPRO	VAL (For FAA use when d	esignee recommends approval above, or	when approva	I is reserved for the FAA)	
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE			
19. SIGNATURE		20. DATE			

•	
•	
	,

DETERMINATIO	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS 1. PROJECT NO.(if applicable)					
	AIRCRAF	T OR AIRCRAFT COMPONENT IDENT	TFICATION			
2. MAKE Boeing	3. MODEL NO. 737-89L	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft		APPLICANT oration Technologies, Starlink		
	<u> </u>	PURPOSE OF DATA				
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair 🗶 Maj	or Alteration	Other (Explain)		
PROJECT SPECIFIC INF	ORMATION: Boeing 737-	800 Starlink System Provisions In	stallation			
PURPOSE OF SUBMITTA	AL: To approve damage t	colerance analysis data for Starli	nk System pro	visions Installation		
		LIST OF DATA		·		
		ngs, material specifications, and process speci uirements listed in block 9. A reference to a dr				
7. IDENTIFICATION	8. TITLE OF DATA		<u> </u>			
SPX-00005052 Version 2.0 Date: 2024-01-09	Starlink Aviation Fat	igue and Damage Tolerance Report,	Boeing 737-8	99		
	Notes:					
		engineering design data only. It the regulations specified by paragets.				
	This approval is vali Additional inspection	cts only of the above data are ap d only for Boeing Model: 737-89L, s are required for the Starlink s ss Document no. SPX-00005115, Rev	S/N: 30515. ystem install:	ations. See Instructions for		
14 CFR 25.571(a)(b) Ar	ndt 25-86	tions and amendment levels)				
10. FAA DESIGNEE APPI 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the disheets numbered, have been ex	e conditions and kamined in acco	d limitations of authorization under rdance with established procedures. I		
APPROVE the dat	ta above RECOMMEN	ND APPROVAL of the data above				
FOR MAJOR REPAIR OF EXPLAIN :	R MAJOR ALTERATION O	NLY – Other data approvals 📵 ARE RE	QUIRED 🗆 A	RE NOT REQUIRED		
Additional static ana	lysis and approval is	required for this alteration.				
☐ MANAGING OFFICE	CE WAS CONTACTED (red	quired when approval was made outside	the U.S and/or	invloved critical or life limited parts)		
11. DER/ODA NUMBER 575001431		12. PRINTED NAME Venkat Ramachandran	·			
13. TECHNICAL DISCIPL DER-T (Structural Eng.		14. SIGNATURE Venkat Ramachandran		16. DATE Digitally Signe 01/12/2024 01/12/2024		
FAA APPRO	OVAL (For FAA use when d	esignee recommends approval above, o	or when approve	al is reserved for the FAA)		
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE				
19. SIGNATURE		20. DATE				

DETERMINATION	FEDERAL AVIATIO	OF TRANSPORTATION N ADMINISTRATION WITH AIRWORTHINESS	STAND	DARDS	1. PROJECT NO.(if applicable)	
	AIRCRAFT	OR AIRCRAFT COMPONENT	IDENTIF	ICATION		
2. MAKE The Boeing Company	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Prop Actuator etc.) Alrcraft	eller,	5. NAME OF Space Explo	APPLICANT ration Technologies	
	<u></u>	PURPOSE OF DATA				
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair	X Major	Alteration	Other (Explain)	
PROJECT SPECIFIC INF	ORMATION: Installation	n of an In-flight Internet	System.			
PURPOSE OF SUBMITTA	AL: AFMS Approval.					
		LIST OF DATA gs, material specifications, and proce irements listed in block 9. A reference			ther data that shows or contributes to a revision level, may be used.	
7. IDENTIFICATION	8. TITLE OF DATA					
SPX-00005244 (Rev IR), 11 January 2024.	,	Supplement for Boeing 737	-89L A1r	craft with S	tarlink System.	
	Notes:					
		he regulations specified b			data listed above demonstrates aragraph listed below as	
	This approval is for s	erial number 30515 AFMS da	ta only.			
					•	
O ADDI ICADI E DECLIIDI	EMENTS // jet specific seed	ions and amendment levels)			· ·	
	• •	. 25-130, 25.1585(a)(b) am	it. 25-10	95, 25.1587(l	o)(3)(1)(11) amdt. 25-108.	
	, , , ,	, ,,,,,		, ,		
10. FAA DESIGNEE APPF 14 CFR, Part 183, data list therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance sheets numbered, have	with the o	conditions and mined in accor	limitations of authorization under dance with established procedures. I	
APPROVE the date	a above RECOMMEN	D APPROVAL of the data above	•			
FOR MAJOR REPAIR OR EXPLAIN :	MAJOR ALTERATION ON	ILY – Other data approvals 🗐	ARE REQ	UIRED AF	RE NOT REQUIRED	
DER-approved airplane Performance data.						
MANAGING OFFICE	E WAS CONTACTED (req	uired when approval was made	outside th	ne U.S and/or i	nvloved critical or life limited parts)	
11. DER/ODA NUMBER 09 8281043		12. PRINTED NAME James Nelson Acree				
13. TECHNICAL DISCIPL DER-T (Flight Test Pil		14. SIGNATURE James Nelson Acree			16. DATE Digitally Signe 01/11/2024 01/11/2024	
FAA APPRO	VAL (For FAA use when de	esignee recommends approval	above, or	when approva	is reserved for the FAA)	
17. PRINTED NAME/FAA		18. TECHNICAL DISCIPLINE	· · · · · · · · · · · · · · · · · · ·			
19. SIGNATURE		20. DATE			,	

•		
	·	
	·	
•		

Airplane Flight Manual Supplement Boeing 737-89L Starlink

Document: SPX-00005244

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

for

Boeing 737-89L Aircraft

with

Starlink System

Serial Number: 30515

Registration Number: <u>N154TS</u>

This supplement must be attached to the FAA Approved Airplane Flight Manual when the airplane is modified by the installation of a Starlink System in accordance with FAA Form 337 dated 15 December 2023.

The information contained herein supplements or supersedes the basic Airplane Flight Manual only in those areas listed. For limitations, procedures and performance not contained in this supplement, consult the basic Airplane Flight Manual.

James N. Acree, DER 098281043, per enclosed 8110-3 for Manager, Flight Test & Human Factors Branch, AIR-710 Federal Aviation Administration 11 January 2024
Approved Date

Approved Date: 11 January 2024 Revision: IR

Page 1 of 6

				:
			•	
	•			

DETERMINATION	FEDERAL AVIATIO	DF TRANSPORTATION N ADMINISTRATION WITH AIRWORTHINESS STANI	DARDS	PROJECT NO.(if applicable)
	AIRCRAF	OR AIRCRAFT COMPONENT IDENTIF	CATION	
2. MAKE The Boeing Company	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF	APPLICANT ration Technologies
		PURPOSE OF DATA		
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair _X_Major	Alteration _	Other (Explain)
PROJECT SPECIFIC INF	ORMATION: Installatio	n of an In-flight Internet System.		
PURPOSE OF SUBMITTA	AL: AFMS Approval.			
		LIST OF DATA gs, material specifications, and process specific utements listed in block 9. A reference to a draw		
7. IDENTIFICATION	8. TITLE OF DATA	memeris issed in block 9. A relevence to a draw	ang iist, incuding	revision rever, may be used.
SPX-00005244 (Rev IR), 11 January 2024.	Airplane Flight Manua	Supplement for Boeing 737-89L Air	craft with S	tarlink System.
	Notes:			
		engineering design data only. It in the regulations specified by paragrats.		
	This approval is for :	serial number 30515 AFMS data only.		
i	` '	tions and amendment levels) . 25-130, 25.1585(a)(b) amdt. 25-16	95, 25.1587(b	o)(3)(i)(ii) amdt. 25-108.
10. FAA DESIGNEE APPF 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the sheets numbered, have been example.	conditions and mined in accon	limitations of authorization under dance with established procedures. I
■ APPROVE the dat	a above RECOMMEN	D APPROVAL of the data above		
EXPLAIN:		NLY – Other data approvals 🗐 ARE REQ	UIRED AR	RE NOT REQUIRED
DER-approved airplane				and a set of the description of the Porth Inc.
☐ MANAGING OFFICE 11. DER/ODA NUMBER	E WAS CONTACTED (rec	ulred when approval was made outside the 12. PRINTED NAME	ne U.S and/or i	nvioved critical or life limited parts)
098281043		James Nelson Acree		
13. TECHNICAL DISCIPL DER-T (Flight Test Pi)		14. SIGNATURE James Nelson Acree		16. DATE Digitally Signe 01/11/2024 01/11/2024
		esignee recommends approval above, or	when approval	is reserved for the FAA)
17, PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE		
19. SIGNATURE		20. DATE		

			t t
			•
			•

Starlink Aviation 8550 Case Rd. McGregor, TX 76657-3 Airplane Flight Manual Supplement Boeing 737-89L Starlink

Document: SPX-00005244

LOG OF REVISIONS

REV.	FAA APPROVAL	SUMMARY DESCRIPTION
IR	James N. Acree, DER 098281043, 11 January 2024	Initial Release
		·
i I		_

Approved Date: 11 January 2024

Revision: IR

			1	'

Starlink Aviation 8550 Case Rd. McGregor, TX 76657-3

Airplane Flight Manual Supplement Boeing 737-89L Starlink

Document: SPX-00005244

TABLE OF CONTENTS

	INTRODUCTION	5
SECTION 1 -	CERTIFICATE LIMITATIONS	6
SECTION 2 -	NON-NORMAL PROCEDURES	(
SECTION 3 -	NORMAL PROCEDURES	(
SECTION 4 -	PERFORMANCE	6

			,	
				ı
•				
	,			

		•		
		·		
	·			
		,		
			1	
		,		

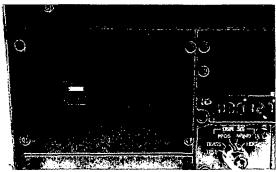
Airplane Flight Manual Supplement Boeing 737-89L Starlink

Document: SPX-00005244

INTRODUCTION

The Starlink Aviation System is installed. The system provides satellite connection for in-flight internet services and interfaces with the cabin wi-fi system. The system is standalone does not interface with any aircraft flight systems.

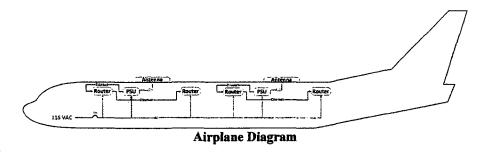
There is an ON/OFF switch on the Flightdeck overhead panel and 3 relevant circuit breakers on the right-side flightdeck circuit breaker panel. The system requires approximately 5 minutes to operate when powered on. There are 2 upper-fuselage antennas and relevant cabin electronics including 4 routers. The system is powered through the IFE/PASS system. Figures below apply:



Flightdeck Switch

	P6-1 (F/O) Electrical System Panel					
	Location	Number Name	Power	Current		
B 11	C9001	STARLINK 1	115 VAC	5 Amps		
B 12	C9002	STARLINK 2	115 VAC	5 Amps		
B 13	C9003	STARLINK CNT	L 28 VDC	2 Amps		

Circuit Breakers



Starlink Aviation 8550 Case Rd. McGregor, TX 76657-3 Airplane Flight Manual Supplement Boeing 737-89L Starlink

Document: SPX-00005244

SECTION 1 – CERTIFICATE LIMITATIONS

- A. Use of the Starlink Aviation System is prohibited for flight crew operations.
- B. Use of the Starlink Aviation System is prohibited as a substitute for flight crew Satellite Voice (SATVOICE) communications.
- C. Use of the Starlink Aviation System is prohibited as a substitute for Air Traffic Service (ATS) communications.
- D. This does not constitute operational approval for the use of Portable Electronic Devices (PEDs).

CAUTION

Due to radiation hazard, personnel should maintain a distance of 2 feet from the antennas when the system is in operation.

SECTION 2 – NON-NORMAL PROCEDURES

ABNORMAL PROCEDURES

Condition: The flight crew determines the need to de-power the entire Starlink system in flight. (suspected EMI, unknown source of smoke, etc.)

STARLINK switchOFF.

NOTE

This action removes electrical power from the complete Starlink System.

NOTE

The Starlink System can also be turned OFF by selecting the IFE/PASS SEAT switch to OFF.

SECTION 3 – NORMAL PROCEDURES

To operate the Starlink System:

o operate the Starlink System:
STARLINK switch.....ON IFE/SEAT power switch.....ON

NOTE

Power to the Starlink System can be removed at any time by setting any (or any combination) of the above switches to OFF.

SECTION 4 - PERFORMANCE

The performance decrements due to installation of the Starlink antennas are provided below:

Flight Segment Weight Penalty Takeoff Climb Negligible Final Climb Negligible Enroute Climb 125 lbs. Approach Climb Negligible

Landing Climb Negligible

On departure, the aircraft's planned enroute climb weight is 167,250 lbs. Example:

Applying the Enroute penalty this becomes 167,375 lbs.

FAA APPROVED

Revision: IR Approved Date: 11 January 2024

Page 6 of 6

	·	
		~

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 2 OF 24

REVISION / CHANGE RECORD

Version	Description	Release Date	
1.0	INITIAL RELEASE	2023-12-14	
2.0	Added Airworthiness Limitations data (section 9) and related inspections. Updated Section 6 Scheduled maintenance. Updated errors in document references and fixed formatting.	See Approval Date	



STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

X-Files Document	Version	Date	
SPX-00005115	2.0	2024-01-09	

Approved Version	2.0	
Approved By	Kalpa Semasinghe	
Approval Date	2024-01-09	
Current Version	2.0	
Prepared By	Kalpa Semasinghe	

Starlink Dish Export Control Statement:

U.S. EXPORT CONTROLLED – ECCN EAR99. Export to an embargoed country, to an end-user of concern, or in support of a prohibited end-use may require a license. (Applicable to Starlink Dish technology.)

Proprietary Notice:

The information contained herein constitutes PROPRIETARY INFORMATION of Space Exploration Technologies Corp. (SpaceX). This information is provided in confidence under existing laws, regulations and/or agreements covering the release of commercial, competition-sensitive and/or proprietary information, and shall be handled accordingly.

PRINTED DOCUMENTS ARE UNCONTROLLED.

VERIFY DOCUMENT REVISION WITH ONLINE SYSTEM PRIOR TO USE.

PAGE 3 OF 24

TABLE OF CONTENTS

1	PURPOSE	4
	1.1 Scope & Purpose	4
	1.2 APPLICABILITY	4
	1.3 DISTRIBUTION	
	1.4 UPDATES AND REVISIONS	
	1.5 DEFINITIONS AND ABBREVIATIONS	
	1.6 GENERAL SAFETY PRECAUTIONS	5
2	SCOPE	6
3	DIAGRAMS AND DRAWINGS	7
4	OPERATION INFORMATION	7
	4.1 ACTIVATION AND DEACTIVATION	
	4.2 SOFTWARE UPDATES	
_	OFDVIOR INFORMATION	_
J	SERVICE INFORMATION	
	5.1 LIST OF SPECIAL TOOLS	
	5.2 LOBRICANTS AND SEALANTS	
	5.3.1 Exterior	
	5.3.2 Interior	
6	SCHEDULED MAINTENANCE	
	6.1 INSPECTION TASKS	
	6.1.1 Visual Type Inspection	10
	6.2 SCHEDULED MAINTENANCE AND INSPECTIONS	
	6.3.1 Aero Terminal Joints Inspection	
	6.3.2 Electrical Bonding Check	
	•	
7	SYSTEM TESTING & TROUBLESHOOTING	
	7.1 System Testing	
	7.2 SYSTEM TROUBLESHOOTING	13
8	REMOVAL AND REPLACEMENT	14
-	8.1 STARLINK AERO TERMINAL	
	8.2 STARLINK POWER SUPPLY UNIT (PSU)	15
	8.3 STARLINK WIFI ROUTER	
	8.4 WI-FI DATA CABLE WIRING	
	8.5 PSU Power Cable Wiring	
	8.6 PSU DATA CABLE WIRING	18
9	AIRWORTHINESS LIMITATIONS	19
40	OMANUFACTURER INFORMATION	20

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 4 OF 24

1 Purpose

1.1 Scope & Purpose

In compliance to §14 CFR Part 25, Appendix H on Instructions for Continued Airworthiness, a maintenance instruction will be provided for the installation of the SpaceX Starlink Aviation System in the Boeing 737-800. There are certain provisions for this model in Type Certificate Data Sheet A16WE. This document is developed for return to service of the 737-800 airplane to standard airworthiness. This document does not provide the instructions for the inspection's programs required to maintain the structural integrity, required by the damage tolerance evaluation.

1.2 Applicability

This document is applicable to aircraft altered by this installation as listed in Section 1.1, and further described in Section 2.

<u>NOTE</u>: The applicability of the current AMM Maintenance instructions, system descriptions, component locations, and testing regarding all systems has not been impacted by the application of this alteration.

1.3 Distribution

The aircraft owner/operator/installer is furnished these Instructions for Continued Airworthiness upon installation of the SpaceX Starlink Aviation System.

1.4 Updates and Revisions

The Design Approval Holder will distribute manual updates upon revision of the ICA. The revised sections will be highlighted for ease of identification. Print this document in color or grey scale. If highlighted text is not legible, contact the Design Approval Holder holder for a printed copy of this document.

Inquiries relating to this ICA, its revisions, or revision services are to be in writing to the Design Approval Holder. Contact details are listed in Section 11. The following information is to be provided with all inquiries:

Subject ICA Document Number: SPX-00005115

Current Revision Status of Document
Aircraft Model, Serial Number and Registration Number
Name
Address
City, State and Zip Code
Contact phone
Email address

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED **AIRWORTHINESS (N154TS)**

PAGE 5 OF 24

1.5 Definitions and Abbreviations

CIC	Corrosion Inhibiting compound	LRU	Line Replaceable Unit
DET	Detailed Visual Inspection	PED	Portable Electronic Device
GVI	General Visual Inspection	POE	Power Over Ethernet
HFEC	High Frequency Eddy Current	PSU	Power Supply Unit
ICA	Instructions for Continued Airworthiness	SDE	Special Detailed Inspection
IPA	Isopropyl Alcohol	STC	Supplemental Type Certificate
LFEC	Low Frequency Eddy Current	LRU	Line Replaceable Unit

1.6 General Safety Precautions



Observe all general safety precautions concerning ground power operations.



Check that all aircraft electrical power is switched OFF prior to performing maintenance.

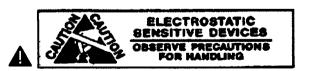
Open the breakers C9001, C9002, and C9003 at the P6-1 panel during inspections, component removals, and wiring troubleshooting procedures other than power checks or normal operational tests.

For wiring maintenance, component removal or repairs other than inspections requiring removal of the aircraft battery refer to Ch 20 of the AMM and SWPM.

Upon completion of inspections and/or maintenance reconnect battery power and ensure the C9001, C9002, and C9003 at the P6-1 panel are closed.



Do not stand on the Aero Terminal Unit. It is not a step.



ESD Sensitive devices are subject to damage by excessive levels of voltage and/or current in order to adequately protect against electrostatic damage, the device and anything that comes in contacts with it must be brought to ground potential by providing a conductive surface and discharge path. The following precautions must be followed:

- Place the LRU and Antennas on a grounded conductive surface while ESD protection caps are
- Use ESD protection caps on the connectors when the LRU or Antennas are being stored or moved.

PAGE 6 OF 24

Store the LRU and Antennas in an ESD shielding bag.

2 SCOPE

The Starlink Aviation System provides satellite connection for in-flight internet services. These services are non-safety critical. The Starlink Aviation System is generally considered for In Flight Entertainment applications. The Starlink Aero Terminals are LRUs that are comprised of the upper-fuselage-mounted Starlink antennas. The antennas communicate with the WiFi Router via Ethernet through the Power Supply Unit and provides necessary information for the antenna to accurately establish communication. A depiction of the equipment locations is shown below in Figure 2-1.

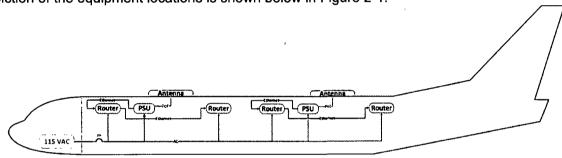


Figure 2-1: System Reference

The Starlink system installation on Boeing 737-800 consists of 2x antennas mounted on top of fuselage crown, along with associated Power-over-Ethernet (PoE) cable routed through existing wire, that runs into the Wi-Fi Routers mounted beneath the ceiling panels.

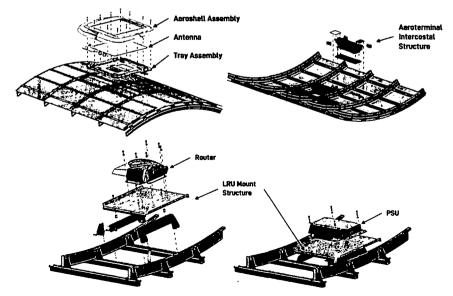


Figure 2-2: Starlink Aviation System

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 7 OF 24

3 DIAGRAMS AND DRAWINGS

The Applicable wiring diagrams, drawings, and other installation data can be found in the MDL pertaining to this installation. (please refer to SPX-00004932 for B737-800 MDL)

4 OPERATION INFORMATION

There are no special operation instructions for the Starlink Aviation System during normal or maintenance operations. Maintenance tasks are detailed in Section 7 of this document. The damaged or inoperable components are replaced and returned to authorized Repair Station.

4.1 Activation and Deactivation

The Starlink Aviation system can be turned on or off using the Starlink ON/OFF switch located in the cockpit.

4.2 Software Updates

The software contained within the Starlink Aviation Aero Terminal is reviewed, tested and updated through a proprietary process by Starlink. If deemed necessary by Starlink, software changes that meet the requirements defined by Starlink will be sent to the aircraft for an over-the-air update per SPX-00003661.

Router and SSID configurations are controlled through the Starlink Enterprise portal and will automatically update once set.

5 SERVICE INFORMATION

5.1 List of Special Tools

No special tools are required. Access procedures referenced from applicable aircraft manuals may require specialized tools or equipment that is outside the scope of this document.

5.2 Lubricants and Sealants

The lubricants and sealants listed in Table 1 constitute the list of SpaceX approved materials for use in servicing components of the Starlink Aviation Aero Terminal and Associated system components. Alternatives may be listed.

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 8 OF 24

Table 1 Lubricants and Sealants

Reference	Description	Material	Supplier
D001	MOLYKOTE 33 Medium Extreme Low Temperature Grease	MOLYKOTE 33	Dupont
D002	KRYTOX 240AC	Perflouropolyether (PFPE) with PTFE	The Chemours Company
S001	SnapSil RTV230 Adhesive	RTV230	Momentive
S002	RESERVED		

5.3 General Maintenance

5.3.1 Exterior

The exterior of the Aero Terminal should be cleaned and washed during regular aircraft cleaning at whatever interval cleaning already takes place. No special washing interval beyond the normally scheduled aircraft cleaning is required. The Aero Terminal may be either wet or dry washed per the following procedures.

5.3.1.1 Wet Wash

Equipment:

- Low pressure spray gun, not to exceed 175 psi Commercially available
- Source of filtered compressed air, not to exceed 175 psi Commercially available
- Sponge Commercially available
- Soft cloth rag Commercially available

Materials:

- Neutral liquid detergent or equivalent AMS 1526 or MIL-PRF-87937
- Isopropyl alcohol (IPA) Commercially available

Procedure:

- 1. Prepare the cleaning solution in a dilution ratio of 10% by volume of neutral detergent to the amount of water.
- 2. Apply cleaning solution with spray gun, wet rag, sponge, or equivalent.
- 3. Allow cleaning solution to soak on the surface for sufficient time to soften soil (about 5 minutes).
- 4. Rinse the area thoroughly with clean water until free of cleaning solution. Always proceed from the upper surface downward.
- 5. Dry the surface with forced air or dry rags.
- 6. After general cleaning and drying, IPA wipe the Starlink Antenna Outer Surface with a clean rag with no debris. Refer to Figure 3 for highlighted Starlink Antenna Outer Surface.

NOTE: NO EQUIPMENT WHICH DEVELOPS MORE THAN 175 PSI NOZZLE PRESSURE SHOULD BE USED. MAINTAIN MINIMUM 2 FEET (24 IN) AWAY FROM AERO TERMINAL WHILE

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 10 OF 24

5.3.2 Interior

Clean the exposed surfaces of the cockpit switch components per the following procedure. No special cleaning interval beyond regular aircraft cleaning is required.

Equipment:

- Sponge Commercially available
- Soft cloth rag Commercially available

Materials:

Neutral liquid detergent or equivalent - AMS 1526 or MIL-PRF-87937

Procedure:

- 1. Prepare the cleaning solution in a dilution ratio of (1 oz.) of neutral detergent to (1 gallon) of water.
- 2. Apply cleaning solution with damp rag, sponge, or equivalent.
- 3. Dry the surface with dry rags.

6 SCHEDULED MAINTENANCE

Below is the scheduled maintenance and inspection tasks for the SpaceX Starlink Aviation System. Initial inspection task should be completed prior to threshold (if applicable) and repeat at a frequency not to exceed the specified interval. The operator may choose to shorten intervals as desired. For each task, ensure to observe all precautions as outlined in Section 1.6.

<u>NOTE</u>: For replacement of any of the compliant wiring or associated components, see Section 8 of this ICA for the appropriate drawing or document associated with the action to be performed. If it is determined there is a functional for safety issue with a harness, replace the identified harness.

6.1 Inspection Tasks

6.1.1 Visual Type Inspection

Visually examine the specific structural area, system, installation, or assembly indicated to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required.

6.2 Scheduled Maintenance and Inspections

The maintenance tasks and inspections are listed in Table 2.

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 9 OF 24

PRESSURE WASHING. DO NOT USE MEK OR ACETONE ON ANY PART OF THE STARLINK SYSTEM. DO NOT USE BRUSHES TO CLEAN THE STARLINK ANTENNA SURFACE. ONLY USE CLEAN RAG WITH NO DEBRIS. AVOID APPLYING DIRECT SPRAY TO INTERNAL CAVITIES.

5.3.1.2 Dry Wash

Equipment:

- Soft cloth rag Commercially available
- Polishing cloth Commercially available

Materials:

- Aircraft dirt and grime remover Commercially available
- Aircraft Polish Commercially available
- Isopropyl alcohol (IPA) Commercially available

Procedure:

- 1. Apply dirt and grime remover with cloth rag or equivalent. Re apply until surface is clean and free of visible dirt and grime.
- 2. [OPTIONAL] Apply aircraft polish to the Aero Terminal with clean polishing cloth.

NOTE: Do not apply polish to the Starlink Antenna Radome Surface as shown in Figure 5-1.

3. After general cleaning, IPA wipe the Starlink Antenna Outer Surface with a clean rag with no debris. Refer to Figure 3 for highlighted Starlink Antenna Outer Surface.

NOTE: DO NOT USE MEK OR ACETONE ON ANY PART OF THE STARLINK SYSTEM. DO NOT USE BRUSHES TO CLEAN THE STARLINK ANTENNA SURFACE. ONLY USE CLEAN RAG WITH NO DEBRIS.

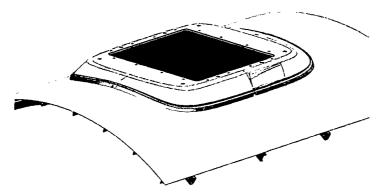


Figure 5-1: Radome Surface

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 12 OF 24

- 5. If signs of corrosion are present, remove the lug pins and bushings
 - Clean and perform visual inspection inside bore of the clevises. See DWG 06654102-550, and 06654102-551.
 - Re-apply lubricant D001 to bores and bushings
 - Re-assemble joint per Figure 6-2. Ensure thread protrusion of joint measures between 1.06mm and 2.41mm. Additional NAS1149C0532R washers up to a maximum of 2 may be used to ensure correct thread protrusion.
 - Torque all bolts to 70 in-lbs +/- 5 in-lbs including running torque.
- 6. Reinstall Aeroshell per Section 8.1 this document
 - o Perform a detailed visual inspection of the cable pass through bulkhead, ensuring nut is uncorroded and secured. DWG 06654102-550, and 06654102-551.
- 7. Perform visual inspection on seal

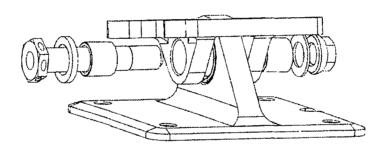


Figure 6-2: Exploded lug and clevis joint. (Rear Right shown, others similar)

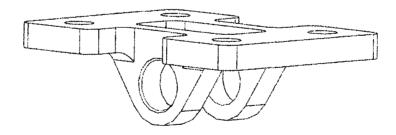


Figure 6-3: Clevis Inspection Surfaces

6.3.2 Electrical Bonding Check

1. Remove aeroshell and place to the side per Section 8.1 of this document.

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 11 OF 24

TASK TYPE	THRESHOLD/ INTERVAL	TASK DESCRIPTION	LOCATION	INSPECTION TASK
DET	T: - I: 20000FC / 15 MO	Internally inspect the Starlink Aviation Aero Terminal installation joints	FWD: STA 500D AFT: STA 727G	Detailed Visual Inspection
DET	T: - I: 15 MO	Check Starlink Aviation System bond path to airframe.	FWD: STA 500D AFT: STA 727G	Detailed Visual Inspection
GVI	T: - I: 15 MO	Externally inspect the Starlink Aviation System installation at the fuselage seal	FWD: STA 500D AFT: STA 727G	Perform general visual inspection See Figure 6-1

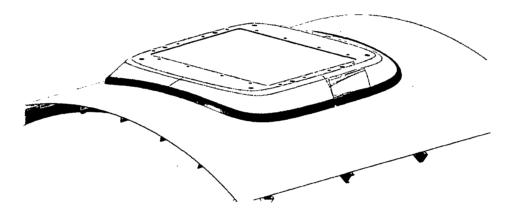


Figure 6-1: Fuselage Seal

6.3 Maintenance Tasks

The maintenance tasks for mechanical and system components are in section 6.3.1 and 6.3.2 respectively.

6.3.1 Aero Terminal Joints Inspection

- 1. Remove aeroshell and place to the side per Section 8.1 this document. NOTE: Take care with antenna harness when disconnecting.
- 2. Perform a detailed visual inspection at all the lug joints
- 3. Look for signs of corrosion
- 4. Look for cracks

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 13 OF 24

NOTE: Be careful with the antenna harness when disconnecting.

- 2. Visually inspect ground contact areas (masked areas without paint) on both aeroshell and tray.
- 3. Check for electrical bonding by placing one probe on 1 of the 2 forward contact area on tray and the other on an uncoated rivet head (removal of CIC over rivet heads may be necessary) connected to the bonding strap nearest to the selected contact area. Maximum resistance allowed is 1 milliohm per SWPM 20-20-00.
- 4. Repeat electrical bonding check for aft contact areas on tray.
- 5. If electrical bonding cannot be established, attempt test again via another rivet head.
- 6. Reapply CIC if required to rivets in accordance with the Install Drawing.
- 7. Reinstall Aeroshell per Section 8.1 of this document.
- 8. Perform visual inspection on seal.

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 14 OF 24

7 SYSTEM TESTING & TROUBLESHOOTING

7.1 System Testing

Verity system function by performing the following test:

• Power cycle the system by toggling the Starlink ON/OFF Switch in the cockpit or breaker. Connect to the Wi-Fi router SSID with any PED. Connect to internet and perform any internet speed test when the aircraft and antenna have a clear view of the sky.

7.2 System Troubleshooting

Should the system not function or connect to internet, troubleshoot with the following steps:

- 1. Ensure connection to the Starlink Wi-Fi network on the aircraft
- 2. Ensure the antenna has a clear view of the sky. If the PED is connected to the Wi-Fi but not able to access to internet, the antenna may be obstructed by buildings around the aircraft.

If connection to Starlink Wi-Fi network is available and clear view of the sky is available:

- 3. Power cycle system by toggling the Starlink ON/OFF switch in the cockpit
- 4. Verify all cables and connectors are plugged in at the Power Supply and Wi-Fi router.
- 5. With system power enabled, look to see if indicator lights on the Wi-Fi routers are visible (indicating).

If these steps do not result in connection to the internet contact SpaceX Starlink support for assistance.

8 REMOVAL AND REPLACEMENT

NOTE: FOR ALL REMOVAL AND REPLACEMENT OPERATIONS, ENSURE ALL AIRCRAFT ELECTRICAL POWER IS OFF.

Follow all general safety precautions when performing maintenance.

8.1 Starlink Aero Terminal

 If the currently installed Aero Terminal is being replaced, rather than just removed and reinstalled for maintenance, create a support ticket with Starlink noting the Serial Number of the new Aero Terminal so it can be activated.

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 16 OF 24

Reconnect harnessing per Starlink System Wiring Diagram, 06654102-202.

8.3 Starlink WIFI Router

- Gain access to the WiFi Router by removing interior cabin panels as required.
- Cut any Zip-Ties restraining the data cable and unplug.
- The power cable may either be fully removed and disconnected on the PSU end or cut and spliced on the WIFI Router end.
- Loosen the 6 fasteners retaining the unit to the mounting tray.
- Lubricate fasteners with D002
- Re-install the Router by torqueing the 6x fasteners to 28 in-lbs. +/- 2 in-lbs per. Replace fasteners as required.
- Reconnect harnessing per Starlink System Wiring Diagram, 06654102-202.

8.4 Wi-Fi Data Cable Wiring

This replacement task is applicable to SpaceX part numbers 02768667-6XX and 02782456-6XX, where XX varies based on the cable length.

- Remove any zip ties or cable clamps securing the cable (See Figure 8-2 and Figure 8-3)
- Unplug the cable at both ends from the Wi-Fi and PSU units
- Remove the cable from the aircraft, mark it "Not For Flight", and send it to SpaceX
- Route a new cable of the same part number according to SpaceX drawing 06654102-621
- Secure the new cable to the LRU units with zip ties

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 15 OF 24

- Remove aeroshell by picking away gap fill sealant at the fastener locations in Figure 8-1.
- Loosen the fasteners.
- Carefully lift and disconnect the connector from the pass-thru.

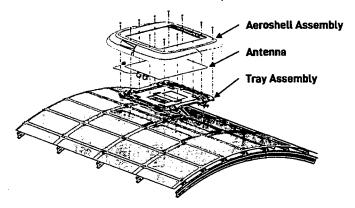


Figure 8-1: Aeroshell removal

- Reconnect the connector to the pass-through
- Reinstall by aligning Aero Terminal so that the harness connection is on the correct side.
- Mate exterior harness to witness line
- Lubricate fasteners with D002
- Torque 12x fasteners (start with inner most ones) to 170 in-lbs +/- 10 in-lbs including running torque per AMM TASK 20-70-11. Replace fasteners as required per install drawing 06654102-550 and 06654102-551 drawings. If prevailing torque on reinstall is below 5 in-lbs. or above 60 in-lbs.
- Apply sealant S001 over fastener heads and make flush with surface
- Perform a system test per Section 7.1. If a new Aero Terminal was installed, it will not connect to the network until activated by Starlink support.

8.2 Starlink Power Supply Unit (PSU)

- Gain access to PSU by removing interior cabin panels as required.
- Cut any Zip-Ties restraining the power and network harnesses. See DWG 06654102-570
- Disconnect ring terminals on PSU terminal strips.
- Disconnect connectors on the PSU.
- Loosen the 4 fasteners retaining the unit to the mounting tray.
- Lubricate fasteners with D002
- Re-install PSU by torqueing the 4x fasteners to 28 in-lbs. +/- 2 in-lbs. Replace fasteners as required per 06654102-570.

PAGE 18 OF 24

8.5 PSU Power Cable Wiring

This replacement task is applicable to SpaceX part number 02645978-601.

- Remove any zip ties or cable clamps securing the cable (see Figure 8-4).
- Disconnect the ring terminals for the wires of the AC PLUG
- Unplug the cable from the PSU unit
- Remove the cable from the aircraft, mark it "Not For Flight", and send it to SpaceX
- Route a new cable of the same part number according to SpaceX drawing 06654102-621
- Secure the new cable to the LRU unit with zip ties

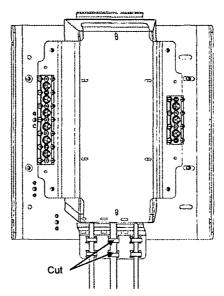


Figure 8-4: PSU Power Cable Zip Ties

8.6 PSU Data Cable Wiring

This replacement task is applicable to SpaceX part number 02687325-6XX

- Remove antenna per Section 8.1 of this document
- Cut safety wire and remove hex nut that holds the 'FUSELAGE INT' connector on the outside of the fuselage
- Remove the 'FUSELAGE INT' connector from the inside of the fuselage
- Remove any zip ties or cable clamps securing the cable (see Figure 8-5)
- Unplug the cable from the PSU unit
- Remove the cable from the aircraft, mark it "Not For Flight", and send it to SpaceX
- Route a new cable of the same part number according to SpaceX drawing 06654102-620
- Secure the new cable to the LRU unit with zip ties

PAGE 17 OF 24

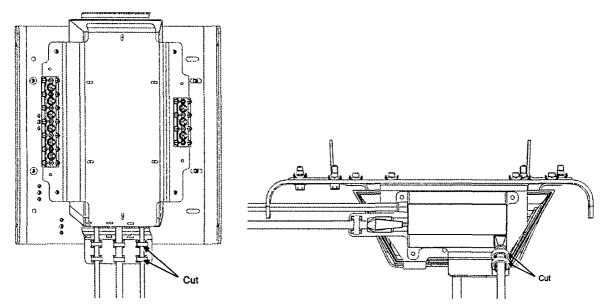


Figure 8-2: 02768667-6XX Zip Ties

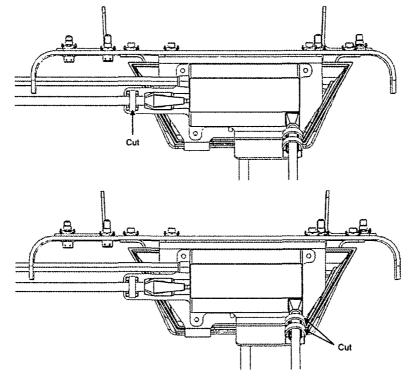


Figure 8-3: 02782456-6XX Zip Ties

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 20 OF 24

9 AIRWORTHINESS LIMITATIONS

This section is in development and provides instructions to ensure the continued airworthiness of structural repairs on certain transport category airplanes. The intent of this AC is to ensure that damage tolerant structure will remain damage tolerant after it has been altered with major modification. The damage tolerance evaluation will be used to define the approved airworthiness limitations and specifies maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations.

9.1 Inspection Requirements

Below are the structural inspection tasks for the SpaceX Starlink Aviation System in order to remain compliant with 14 CFR §§ 25.571. Initial inspection task should be completed prior to threshold (if applicable) and repeat at a frequency not to exceed the specified interval. The operator may choose to shorten intervals as desired. For each task, ensure to observe all precautions as outlined in Section 1.6.

TASK TYPE	NAME	THRESHOLD/ INTERVAL	TASK DESCRIPTION	ZONE	INSPECTION TASK
SDE	FWD Aeroterminal Doublers	T: 14640 I: 4660	External inspection of Fuselage Skin Panel and Doubler Connection in way of Aeroterminal installation at STA 500D between stringer S-2R and S-2L.	231/232	Perform eddy current inspection around fastener heads on outer rivets of
SDE	AFT Aeroterminal Doublers	T: 10150 I: 2290	External inspection of Fuselage Skin Panel and Doubler Connection in way of Aeroterminal installation at STA 727G between stringer S-2R and S-2L.	241/242	each doubler per NDT 51- 00-00 Procedure 4. See Figure 9-1.
SDE	FWD Shear Plates	T: 37500 I: 18750	Internal inspection of fuselage frames in way of Aeroterminal installation at STA 500D between stringer S-2R and S-2L.	231/232	Perform eddy current inspection around fastener heads on frames per NDT 51-00-00 Procedure 4. See Figure 9-2.
SDE	FWD Shear Clips	T: 37500 I: 18750	Internal inspection of fuselage frames in way of Aeroterminal installation at STA 500D between stringer S-2R and S-2L.	231/232	Perform eddy current inspection around fastener heads on frames per NDT 51-00-00 Procedure 4. See Figure 9-3.
SDE	AFT Shear Plates	T: 37500 I: 18750	Internal inspection of fuselage frames in way of Aeroterminal installation at STA 727G between stringer S-2R and S-2L.	241/242	Perform eddy current inspection around fastener heads on outer rivets of each doubler per NDT 51-00-00 Procedure 4. See Figure 9-2.

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 19 OF 24

- Follow instructions of SpaceX drawing 06654102-550 and 06654102-551 for the installation of the 'FUSELAGE' connector.
- Reinstall the Aero Terminal per Section 8.1 of this document

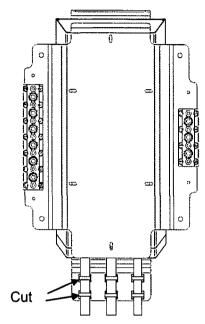


Figure 8-5: PSU Data Cable Zip Ties

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 22 OF 24

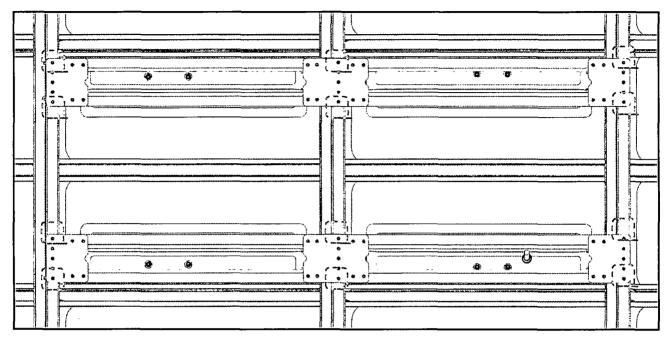


Figure 9-2: Areas of special interest for HFEC inspection - Shear Plates

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 21 OF 24

TASK TYPE	NAME	THRESHOLD/ INTERVAL	TASK DESCRIPTION	ZONE	INSPECTION TASK
SDE	AFT Shear Clips	T: 37500 I: 18750	Internal inspection of fuselage frames in way of Aeroterminal installation at STA 727G between stringer S-2R and S-2L.	241/242	Perform eddy current inspection around fastener heads on frames per NDT 51-00-00 Procedure 4. See Figure 9-3.
SDE	Stringer Clips	T: 37500 I: 18750	Internal inspection of fuselage stringers in way of PSU/ Router installation between stringers S-2L and S-3L and between: STA 460 and STA 480 STA 500B and STA 500C STA 559 and STA 578 STA 727A and STA 727B STA 727D and STA 727E STA 787 and STA 807	231 241	Perform eddy current inspection around fastener heads on stringers per NDT 51-00-00 Procedure 4. See Figure 9-4.

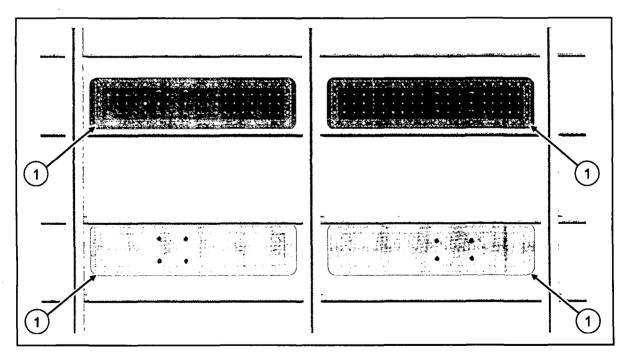


Figure 9-1: Areas of special interest for HFEC inspection - Skin Doublers

STARLINK

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 24 OF 24

9.1.2 Visual Inspection

Perform a visual inspection at indicated areas of interest to detect cracks in aircraft skin/ components.

10 MANUFACTURER INFORMATION

For service difficulties, contact the Design Approval Holder and refer all communications, inquiries, and data requests to:

Space Exploration Technologies 3976 Jack Northrop Road Hawthorne, CA, 90250 https://www.spacex.com/ AWCertification@spacex.com/

STARLINK AVIATION B737-800 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (N154TS)

PAGE 23 OF 24

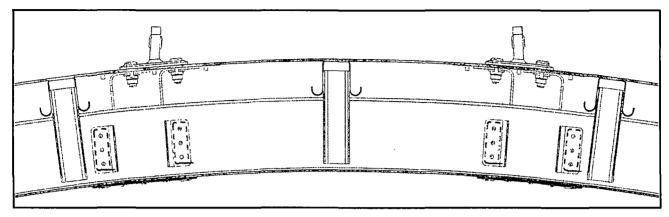


Figure 9-3: Areas of special interest for HFEC inspection - Shear Clips

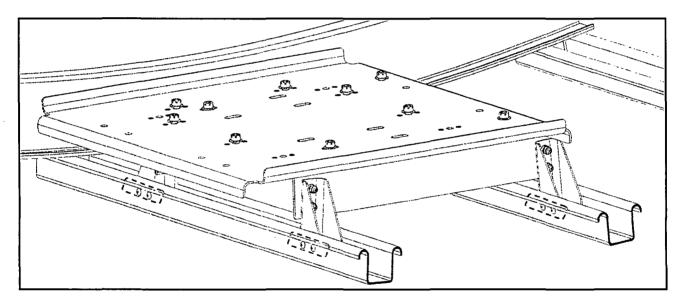


Figure 9-4: Areas of special interest for HFEC inspection - Stringer Clips

9.1.1 Eddy Current Inspection

Perform a detailed visual inspection and high frequency eddy current at indicated areas of interest to detect cracks in the aircraft skin. Ensure special attention is directed at fastener holes. Perform per Part 6 of Boeing NDT Manual.

Table 3: Eddy Current Inspection Reference

REFERENCE	DESCRIPTION
NDT 51-00-26	Aluminum Part Subsurface Inspection - Multilayer
NDT 51-00-00	Procedure 4 – Surface Inspection of Aluminum Parts



STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

X-Files Document	Version	Date	
SPX-00005269	2.0	2024-01-12	

Approved Version	2.0	
Approved By	Zachary Rohland	
Approval Date	2024-01-12	
Current Version	2.0	
Prepared By	Kalpa Semasinghe	

Starlink Dish Export Control Statement:

U.S. EXPORT CONTROLLED – ECCN EAR99. Export to an embargoed country, to an end-user of concern, or in support of a prohibited end-use may require a license. (Applicable to Starlink Dish technology.)

Proprietary Notice:

The information contained herein constitutes PROPRIETARY INFORMATION of Space Exploration Technologies Corp. (SpaceX). This information is provided in confidence under existing laws, regulations and/or agreements covering the release of commercial, competition-sensitive and/or proprietary information, and shall be handled accordingly.

PRINTED DOCUMENTS ARE UNCONTROLLED.

VERIFY DOCUMENT REVISION WITH ONLINE SYSTEM PRIOR TO USE.

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 2 OF 34

REVISION / CHANGE RECORD

Version	Description
1.0	INITIAL RELEASE
2.0	Revision to 8110-3 from DER for the Fatigue and Damage Tolerance Report

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 3 OF 34

TABLE OF CONTENTS

1.0 1.1	INTRODUCTION	
1.1	PURPOSE	
1.3	APPLICABILITY	5
1.4	ACRONYMS AND ABBREVIATIONS	5
2.0 2.1	PROJECT DESCRIPTION	
3.0	SYSTEM DESCRIPTION	
3.1	AERO TERMINAL	
3.2 3.3	STARLINK WI-FI ROUTERSTARLINK POWER SUPPLY UNIT (PSU)	9
3.3 3.4	STARLINK ON/OFF SWITCH	
3.5	STARLINK SYSTEM POWER	
4.0	CERTIFICATION BASIS	12
4.1	SPECIAL CONDITIONS	
4.2	EXEMPTIONS	
4.3	AIRWORTHINESS DIRECTIVES	
4.4	14 CFR PART 26 COMPLIANCE	
	4.4.2 26.47 (Damage Tolerance Analysis)	
5.0	CERTIFICATION CONSIDERATIONS	13
5.1	SYSTEM SAFETY ASSESSMENT	
5.2	Human Factors	
5.3 5.4	DESIGN AND INSTALLATION CONSIDERATION	
5. 4 5.5	STRUCTURAL CONSIDERATIONSEQUIPMENT QUALIFICATION	
5.6	BIRD STRIKE TEST	
5.7	FLAMMABILITY	
5.8 5.9	SOFTWARE	
5.9 5.10	NETWORK SECURITYINSTRUCTION FOR CONTINUED AIRWORTHINESS (ICA)	
5.11	AIRCRAFT FLIGHT MANUAL SUPPLEMENT	
6.0	COMPLIANCE CHECKLIST	15
7.0	GROUND AND FLIGHT TEST	24
8.0	DELIVERABLES	24
9.0	PART LIST	24
10.0	DESIGNEES	25
11.0	APPROVAL 8110-3S	26

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 4 OF 34

TABLES

Figure 1: Starlink System Overview	7
Figure 2: Aero Terminal - Components	8
Figure 3: External Antenna Structural Installation Overview	9
Figure 4: Starlink Aviation Wi-Fi Router	
Figure 5: Starlink Aviation Power Supply	
Figure 6: Starlink ON/OFF Switch	
FIGURES	
Table 1. Compliance Checklist	15
Table 2: Designees Authorized for this Project	

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 5 OF 34

1.0 Introduction

1.1 Purpose

The purpose of this document is to provide a certification summary for the Major Modification project that installs the SpaceX Starlink Aviation System on the Boeing 737-800 series.

1.2 Scope

This certification summary outlines the activities and methods used to show compliance in support of the Major Modification project to install the SpaceX Starlink Aviation System on the Boeing 737-800 aircraft.

1.3 Applicability

This Major Modification is applicable to Boeing 737-800 aircraft, which includes only the B737-89L. The specific tail number is N154TS with MSN 30515.

1.4 Acronyms and Abbreviations

(A) AFMS	Approval Aircraft Flight Manual Supplement
Amdt	Amendment
CCL	Compliance Checklist
CFR	Code of Federal Regulation
COS	Continued Operational Safety
Elect.	Electrical
FAA	Federal Aviation Administration
ICA	Instructions for Continued Airworthiness
Mech.	Mechanical
MDL	Master Data List
Para.	Paragraph
PED	Portable Electronic Devices
PSCP	Project Specific Certification Plan
PSU	Power Supply Unit
(RA)	Recommend Approval
STC	Supplemental Type Certificate
STIR	Supplemental Type Inspection Report
Stru.	Structural
T-PED	Transmitting Portable Electronic Devices
TIA	Type Inspection Authorization
TIR	Type Inspection Report

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 6 OF 34

2.0 PROJECT DESCRIPTION

This Major Modification project installs the SpaceX Starlink Aviation System on Boeing 737-800 series aircraft. The SpaceX Starlink provides a non-essential in-flight internet for passengers using the Starlink Satellite Constellation. The SpaceX Starlink Aviation System provides Wi-Fi over IEEE 802.11 a/b/g/n/ac 2.4 GHz and 5 GHz Wi-Fi connectivity between passenger Transmitting Portable Electronic Devices (T-PEDs).

This project includes the certification of two separate Starlink Aviation Systems, each including one externally mounted Electronically Steered phased array, one internally mounted power supply, and two separate Starlink Wi-Fi Routers with all connecting harnessing as described in Section0 3.0 of this certification summary report.

The installation was performed on a Boeing 737-89L aircraft.

2.1 Project Information

Applicant Name	Space Exploration Technologies, Starlink Aviation	
Type of Project	Major Modification (Form 337)	
Project Description	Install Starlink Aviation Systems on Boeing 737-800 Series Aircraft	
Model-Series Designation	Boeing 737-800 series	
Type Certification Data Sheet (TCDS)	A16WE	
Aircraft Data (Aircraft model number and S/N)	B737-89L MSN: 30515	

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 8 OF 34

3.1 Aero Terminal

The Starlink Aero Terminal is comprised of the upper-fuselage-mounted Aero Shell Assembly, Starlink antenna, and tray assembly.

Unit function:

The Starlink Aero Terminal function is to establish a link to the Starlink satellites in low earth orbit. It contains a modem, up-converters, RF amplifiers, and phased array. It has one Power-over-Ethernet interface, through which it receives power from the power supply and sends data to and from the cabin network (WI-FI router).

Power (per Aero Terminal):

Power IN: 49V DC, max 360 W (7.35 A) Power-over-Ethernet interface

Signals (per Aero Terminal):

• One Gigabit Ethernet (8 data wires) to the power supply (Power-over-Ethernet interface)

Designed Failure Safety Characteristics:

- Input Surge Protection
- Input Overvoltage Protection
- Over-temperature Protection

The overall weight of each Starlink Aero Terminal is 38 lbs max., and its overall dimensions are 39.8" length, 31" width, and 2.5" height.



Figure 2: Aero Terminal - Components

PAGE 7 OF 34

3.0 SYSTEM DESCRIPTION

The SpaceX Starlink Aviation System is installed on the aircraft to provide satellite connection for inflight internet services over the Starlink Low-Earth-Orbit (LEO) satellite constellation. These services are non-safety critical. The Starlink Aviation System is generally considered for In-Flight Entertainment applications.

The Starlink System includes the following components as installed on B737 aircraft:

- Two externally mounted Starlink Aero Terminal. Each comprised of:
 - o One Aero Shell Assembly
 - One Electronically steered phased array antenna and harness
 - One Adaptor tray with 4x spherical lugs
- Two Starlink Power Supply (PSU) internally mounted
- Two Starlink Wi-Fi Routers per Power Supply (a total of four) internally mounted

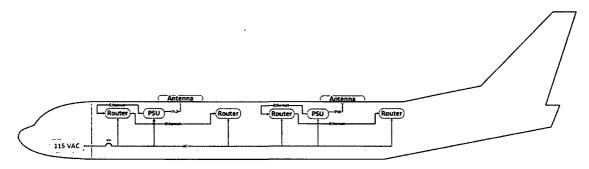


Figure 1: Starlink System Overview

The Starlink System has no interface with aircraft electrical and electronic systems other than electrical interfaces to power buses and aircraft ground.

The Starlink System is powered from the IFE/PASS XEF BUS 1 through two circuit breakers, STARLINK 1 and STARLINK 2, installed on the F/O Electrical System Panel – P6-1. Power to the Starlink System will be automatically removed in the event of electrical emergency.

The Starlink System is primarily controlled by a dedicated STARLINK ON/OFF switch installed in the flight deck. The switch is ON during normal operation. The crew can turn OFF the system using the switch as necessary.

PAGE 9 OF 34

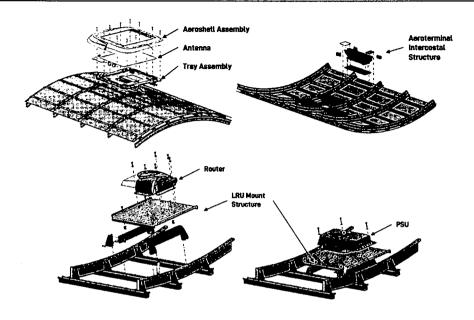


Figure 3: External Antenna Structural Installation Overview

The forward Aero Terminal is installed centered at FS 500D, while the second is centered at FS 727G.

3.2 Starlink Wi-Fi Router

The Starlink Wi-Fi Router's function is to provide a Wi-Fi network in the cabin that wireless devices can connect to, and send data to and from the Starlink Aero Terminal. The Wi-Fi Router operates on both 2.4 GHz and 5 GHz 802.11 a/b/g/n/ac protocols. It has the following two interfaces:

- AC Power IN
- Ethernet

Power:

Power IN: 100-240VAC, single phase, 50/60Hz or 400Hz, 20 W max

Signals:

- One Gigabit Ethernet (8 data wires) to the Starlink Aero Terminal (Power-over-Ethernet interface)
- One Gigabit Ethernet (8 data wires) to a second downstream Wi-Fi Router (Optional)

Designed Failure Safety Characteristics:

- Input Surge Protection
- Input Short Circuit Protection
- Over-temperature Protection

The weight of each Wi-Fi Router is 3.9 lbs and the overall size is 10.9" x 7.5" x 2.9".

PAGE 10 OF 34

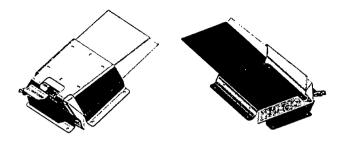


Figure 4: Starlink Aviation Wi-Fi Router

3.3 Starlink Power Supply Unit (PSU)

The Starlink Power Supply's function is to provide power to the Aero Terminal and forward data from the Aero Terminal to the Wi-Fi Router. It has the following three interfaces:

- AC Power IN
- Power-over-Ethernet OUT to the Aero Terminal
- · Ethernet OUT to the Wi-Fi Router

Power:

- Power IN: 100-240VAC, single phase, 50/60Hz or 400Hz, max. 400W
- Power OUT: 49VDC, max 8A (Power-over-Ethernet interface)

Signals:

- One Gigabit Ethernet (8 data wires) to the Starlink Aero Terminal (Power-over-Ethernet interface)
- · One Gigabit Ethernet (8 data wires) to the Wi-Fi Router

Designed Failure Safety Characteristics:

- Input Surge Protection
- Input/output Overcurrent Protection
- Output Undercurrent Protection
- Output Overvoltage Protection
- Over-temperature Protection

The weight of the Power Supply Unit is 4.8 lbm, and its enveloping dimensions are 12.8" x 7" x 2.1".

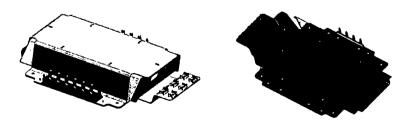


Figure 5: Starlink Aviation Power Supply

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 12 OF 34

4.0 CERTIFICATION BASIS

The applicable CFRs with amendment levels to this certification project are listed in the Compliance Checklist, Section 6.0, of this document.

4.1 Special Conditions

There were no special conditions for this project.

4.2 Exemptions

There were no exemptions for this project.

4.3 Airworthiness Directives

Airworthiness Directives (AD) review was completed for the areas affected by this modification and no AD was identified with potential impact to the Starlink Aviation System installation.

4.4 14 CFR part 26 Compliance

4.4.126.11 (EWIS ICA)

The EWIS ICA assessment has been performed per the guidance provided in FAA AC 25.27A. It has been determined that the modification does not necessitate a revision to the EWIS ICA that were required to be developed by § 26.11(b). (Reference: SPX-00005115, Starlink Aviation B737-800 Instructions for Continued Airworthiness (N154TS).

4.4.226.47 (Damage Tolerance Analysis)

This project will has shown compliance to § 25.571 Amdt. 25-86 in SPX-00005052, Starlink Aviation Fatigue and Damage Tolerance Report, Boeing 737-800.

PAGE 11 OF 34

3.4 Starlink ON/OFF Switch

The STARLINK ON/OFF switch is a primary means to remove power from the Starlink System when necessary. The switch comprises of a switch with an "ON" annunciation. It also contains associated wiring and connectors.

The "ON" annunciation is illuminated when the switch is in the ON position.

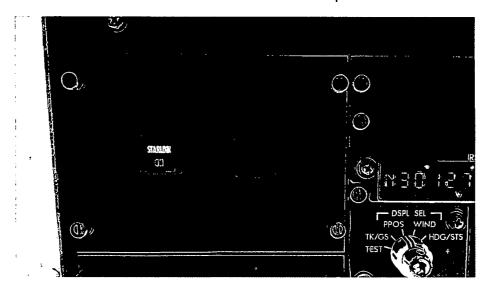


Figure 6: Starlink ON/OFF Switch

3.5 Starlink System Power

The Starlink System is powered from the IFE/PASS XEF BUS 1 through two circuit breakers, STARLINK 1 and STARLINK 2, installed on the F/O Electrical System Panel – P6-1.

The Starlink ON/OFF control relay is powered by 28 VDC through a "STARLINK CNTL" circuit breaker installed on the Rear Circuit Breaker Panel – P6-1.

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 13 OF 34

5.0 CERTIFICATION CONSIDERATIONS

5.1 System Safety Assessment

A System Safety/Functional Hazard assessment has been completed for the installation of the Starlink System on Boeing 737-800 (N154TS) aircraft and documented in Starlink Aviation B737 System Safety Assessment, N154TS, document no. SPX-00005289. The analysis showed that failure of the Starlink system to provide its intended function has no impact on the continued safe flight and landing of the aircraft.

5.2 Human Factors

The Starlink On/Off switch installed on the flight deck overhead panel was evaluated for compliance with 14 CFR 25.771 (a)(c) amdt 25-4, 25.773(a)(2) amdt. 25-72, 25.777(a)(c) amdt. 25-46, 25.1322 amdt. 25-38 (including appropriate color, arrangement, visibility and day and night lighting) per the Flight Test Plan, document No. STP-00000728. The test result has been documented in the Starlink Aviation B737 Flight Test Report, document No. STR-00000556.

5.3 Design and Installation Consideration

The design and installation data for this project is provided in the Mater Date List (MDL), document no. SPX-00004932.

5.4 Structural Considerations

FAA Policy Statement PS-AIR-25-17, Structural Certification Criteria for Antennas, Radomes, and Other External Modifications was followed to identify structural requirements and acceptable means of compliances for external Aero Terminal installation. Refer to Section 6.0 Compliance Checklist for structural requirements and corresponding means of compliances.

5.5 Equipment Qualification

Equipment qualification testing for the Aero Terminal in this modification was conducted under the FAA Project ST03206AC-T, STC for Airbus A321, in accordance with RTCA/DO-160G per FAA approved Qualification Test Plan, document no. STP-0000677. The summary of the test result was documented in the Equipment Qualification Report, document no. STR-00000555.

The Power Supply Unit (PSU) used for this project had been PMA'ed and qualified in a separate STC project, ST04219NY. Equipment qualification testing and its suitability evaluation is documented in Wi-Fi and PSU Suitability Evaluation for A321, document no. SPX-00004898. The Wi-Fi router and harnessing for this Major Modification project have updated part numbers that have been updated to be PVC-free. This change has no impact on environmental capabilities except for flammability, therefore, the suitability evaluation for A321 can be used for all the upgraded PVC-free LRUs.

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 14 OF 34

5.6 Bird Strike Test

Compliance for Bird Strike testing of the Aero terminal assembly is demonstrated in Starlink Aviation Birdstrike Qualification by Similarity Report Boeing 737-800, document no. SPX-00005294, to show compliance with § 25.571(e)(1).

5.7 Flammability

Compliance with the flammability requirements of §§ 25.853 and 25.869(a)(4) was shown by flammability testing and similarity analysis. The flammability test was performed per the FAA approved test plan, document no. STP-00000714. The test result was documented in the flammability test report, document no. STR-00000532. The flammability similarity report was documented in the flammability by similarity report, document no. STR-00000482.

5.8 Software

The software utilized on the Starlink Aero Terminal and WI-FI Router are hosted on non-essential equipment and approved as installed on the respective LRU. The software versions used for this certification were validated through the Functional Ground and Flight Test. The Functional Ground Test Report, document no. STR-00000553, documents the software versions used.

5.9 Network Security

The Starlink System has no interface to other aircraft avionics system installed on the aircraft. It's primarily installed for passenger entertainment application. As such, network and/or cyber security was not considered for this project.

5.10 Instruction for Continued Airworthiness (ICA)

An Instructions for Continued Airworthiness (ICA) was developed for this modification and provided in the Starlink Aviation Instructions for Continued Airworthiness (ICA), document no. SPX-00005115. Damage tolerance inspection intervals are included in this document in the Airworthiness Limitations section.

5.11 Aircraft Flight Manual Supplement

An Aircraft Flight Manual Supplement (AFMS) was developed for this project and provided in the Starlink Aviation Aircraft Flight Manual Supplement, document no. SPX-00005244.

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 15 OF 34

6.0 COMPLIANCE CHECKLIST

The compliance checklist for this project is provided in the Table below:

Table 1. Compliance Checklist

14 CFR Section	Title	Para. & Amdt Level	MOC (D, I, A, T)	Compliance Document(s)	Approval / Remark			
Part 25								
			Subpart B -	Flight				
25.23	Load distribution limits	25-0	А	Weight and Balance Report (WB), SPX-00005050	-			
25.111	Takeoff path	(C)(1)(3)(i) 25-121	Α	Performance Limited Weight Decrement, QSA-23084	Sky Rudolph, 8110-3(A), 12/14/2023			
				Aerodynamic Drag Report, AMS 2023-0053	-			
25.115	Takeoff Flight path	(b)(1) 25-92	Α	Performance Limited Weight Decrement, QSA-23084	Sky Rudolph, 8110-3(A), 12/14/2023			
				Aerodynamic Drag Report, AMS 2023-0053	-			
25.119	Landing climb: All- engines operating	25-121	Α	Performance Limited Weight Decrement, QSA-23084	Sky Rudolph, 8110-3(A), 12/14/2023			
				Aerodynamic Drag Report, AMS 2023-0053	-			
25.121	Climb: One-engine inoperative	25-121	Α	Performance Limited Weight Decrement, QSA-23084	Sky Rudolph, 8110-3(A), 12/14/2023			
				Aerodynamic Drag Report, AMS 2023-0053	-			
25.123	En route flight paths	(b) 25-121	А	Performance Limited Weight Decrement, QSA-23084	Sky Rudolph, 8110-3(A), 12/14/2023			
				Aerodynamic Drag Report, AMS 2023-0053	-			
25.251	Vibration and buffeting	(a)(c)(d) 25-77	Т	Flight Test Plan (FTP), STP- 00000728	-			
				Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023			
		(b)	A	Aerodynamic Vibration and Buffeting Analysis Report, AMS 2023-0055	-			
		25-77						

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 16 OF 34

14 CFR Section	Title	Para. & Amdt Level	MOC (D, I, A, T)	Compliance Document(s)	Approval / Remark			
Subpart C - Structure								
25.301 Loads		Loads (a)(b) 25-23		Structural Substantiation Report (SSR), SPX- 00005053	V. Ramachandran 8110-3(A), 12/13/2023			
	_			Aerodynamic Loads Report, AMS 2023-0052				
25.303	Factor of safety	25-23	Α	Structural Substantiation Report (SSR), SPX- 00005053	V. Ramachandran 8110-3(A), 12/13/2023			
				Aerodynamic Loads Report, AMS 2023-0052	-			
25.305	Strength and deformation	(a)(b) 25-86	Α	Structural Substantiation Report (SSR), SPX- 00005053	V. Ramachandran 8110-3(A), 12/13/2023			
		(e) 25-86	Α	Aerodynamic Loads Report, AMS 2023-0052	-			
25.307	Proof of structure	(a) 25-139	Α	Structural Substantiation Report (SSR), SPX- 00005053	V. Ramachandran 8110-3(A), 12/13/2023			
25.321	General	25-86	Α	Aerodynamic Loads Report, AMS 2023-0052	-			
25.331	Symmetric maneuvering conditions	25-141	Α	Aerodynamic Loads Report, AMS 2023-0052	-			
25.333	Flight envelope	25-86	Α	Aerodynamic Loads Report, AMS 2023-0052	_			
25.335	Design Airspeeds	25-91	Α	Aerodynamic Loads Report, AMS 2023-0052	-			
25.337	Limit maneuvering load factors	25-23	Α	Aerodynamic Loads Report, AMS 2023-0052	-			
25.341 	Gust and turbulence loads	25-141	Α	Aerodynamic Loads Report, AMS 2023-0052	-			
25.351	Yawing conditions	25-91	A	Aerodynamic Loads Report, AMS 2023-0052	-			
25.365	Pressurized compartment loads	(e)(3) 25-87	Α	Aerodynamic Loads Report, AMS 2023-0052	-			
		(a)(b)(d) 25-87	А	Structural Substantiation Report (SSR), SPX- 00005053	V. Ramachandran 8110-3(A), 12/13/2023			
25.561	Emergency Landing Conditions - General	(a)(b)(c) 25-91	А	Structural Substantiation Report (SSR), SPX- 00005053	V. Ramachandran 8110-3(A), 12/13/2023			
25.571	Damage Tolerance and Fatigue of Structure	(a)(b) 25-86	А	Fatigue and Damage Tolerance Report (DTE), SPX-00005052	V. Ramachandran 8110-3(A), 1/12/2023			

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 17 OF 34

14 CFR Section	Title	Para. & Amdt Level	MOC (D, I, A, T)	Compliance Document(s)	Approval / Remark
		(a)(3) 25-96	A	Instructions for Continued Airworthiness (ICA), SPX- 00005115	-
		(e)(1) 25-96	A	Starlink Aviation Bird Strike Qualification by Similarity Report, SPX-00005294	-
25.581	Lightning protection	(a)(b)(c) 25-23	A	Starlink Aviation B737 Qualification by Similarity Report, N154TS, SPX- 00005292	~
		Subpart	D – Design a	nd Construction	
25.601	Design and Construction - General	25-0	D	Top Level Assembly Drawing 06654102-501	V. Ramachandran 8110-3(A), 12/13/2023
				FWD Exterior Install Drawing 06654102-550	V. Ramachandran 8110-3(A), 12/13/2023
				AFT Exterior Install Drawing 06654102-551	V. Ramachandran 8110-3(A), 12/13/2023
				Interior Install Drawing 06654102-570	V. Ramachandran 8110-3(A), 12/13/2023
25.603	Design and Construction - Materials	(a)(b)(c) 25-46	D, A	Top Level Assembly Drawing 06654102-501	V. Ramachandran 8110-3(A), 12/13/2023
				FWD Exterior Install Drawing 06654102-550	V. Ramachandran 8110-3(A), 12/13/2023
				AFT Exterior Install Drawing 06654102-551	V. Ramachandran 8110-3(A), 12/13/2023
				Interior Install Drawing 06654102-570	V. Ramachandran 8110-3(A), 12/13/2023
25.605	Fabrication methods	(a) 25-46	D	Top Level Assembly Drawing 06654102-501	V. Ramachandran 8110-3(A), 12/13/2023
				FWD Exterior Install Drawing 06654102-550	V. Ramachandran 8110-3(A), 12/13/2023
				AFT Exterior Install Drawing 06654102-551	V. Ramachandran 8110-3(A), 12/13/2023
				Interior Install Drawing d06654102-570	V. Ramachandran 8110-3(A), 12/13/2023

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 18 OF 34

14 CFR Section	Title	Para. & Amdt Level	MOC (D, I, A, T)	Compliance Document(s)	Approval / Remark
25.609	Protection of structure	(a)(b) 25-0	D	Top Level Assembly Drawing 06654102-501	V. Ramachandran 8110-3(A), 12/13/2023
				FWD Exterior Install Drawing 06654102-550	V. Ramachandran 8110-3(A), 12/13/2023
				AFT Exterior Install Drawing 06654102-551	V. Ramachandran 8110-3(A), 12/13/2023
		<u> </u>		Interior Install Drawing 06654102-570	V. Ramachandran 8110-3(A), 12/13/2023
25.611	Accessibility provisions	(a) 25-123	D	Top Level Assembly Drawing 06654102-501	V. Ramachandran 8110-3(A), 12/13/2023
				FWD Exterior Install Drawing 06654102-550	V. Ramachandran 8110-3(A), 12/13/2023
				AFT Exterior Install Drawing 06654102-551	V. Ramachandran 8110-3(A), 12/13/2023
_				Interior Install Drawing 06654102-570	V. Ramachandran 8110-3(A), 12/13/2023
25.613	Material strength properties and material design values	(a)(b)(c) 25-112	A	Structural Substantiation Report (SSR), SPX- 00005053	V. Ramachandran 8110-3(A), 12/13/2023
25.625	Fitting Factors	(a)(b)(c) 25-72	A	Structural Substantiation Report (SSR), SPX- 00005053	V. Ramachandran 8110-3(A), 12/13/2023
25.629	Aeroelastic stability requirements	(a)(d)(8) (d)(10)(e) 25-77	A	Starlink Aviation B737 Qualification by Similarity Report, N154TS, SPX- 00005292	-
25.771	Pilot compartment	(a) c) 25-4	T, A	Flight Test Plan (FTP), STP- 00000728	-
				Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023
25.773	Pilot compartment view	(a)(2) 25-72	Т	Flight Test Plan (FTP), STP- 00000728	-
				Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023
25.777	Cockpit controls	(a)(c) 25-46	Т	Flight Test Plan (FTP), STP- 00000728	-
				Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 19 OF 34

14 CFR Section	Title	Para. & Amdt Level	MOC (D, I, A, T)	Compliance Document(s)	Approval / Remark
25.789	Retention of items of mass in passenger and crew compartments [and galleys]	(a) 25-46	Α	Structural Substantiation Report (SSR), SPX-00005053	V. Ramachandran 8110-3(A), 12/13/2023
25.841	Pressurized Cabins	25-87	Α	Structural Substantiation Report (SSR), SPX-00005053	V. Ramachandran 8110-3(A), 12/13/2023
25.853	Compartment Interiors	25-116 (a)	Α	Flammability Test Plan, STP- 00000714	-
				Flammability Test Report, STR-00000532	FAA Witnessed 9/22/2023
				Flammability Similarity Analysis Report, STR- 00000482	-
25.869	Fire protection: systems	(a)(4) 25-113	D, A	Flammability Test Plan, STP- 00000714	-
				Flammability Test Report, STR-00000532	FAA Witnessed 9/22/2023
				Flammability Similarity Analysis Report, STR- 00000482	-
25.899	Electrical bonding and protection against static electricity	25-123	D	Master Data List (MDL), SPX- 00003982 (Installation Drawing - Elect.)	Robert Chupka 8110-3(A), 11/01/2023
		S	ubpart E - Po	werplant	
25.901	Sustained Engine Imbalance (Windmilling)	(c) 25-46	A	Starlink Aviation B737 Qualification by Similarity Report, N154TS, SPX- 00005292	-
25.903	Control of engine rotation Sustained - Engine Imbalance (Windmilling)	(c) 25-100	A	Starlink Aviation B737 Qualification by Similarity Report, N154TS, SPX- 00005292	-
25.981	Fuel Tank Explosion Prevention	25-146	D	Top Level Assembly Drawing, 06654102-501	Robert Chupka 8110-3(A), 12/12/2023
				Wiring Schematic Drawing 06654102-202	Robert Chupka 8110-3(A), 12/12/2023
				Wire Routing Drawing 06654102-621	Robert Chupka 8110-3(A), 12/12/2023

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 20 OF 34

14 CFR Section	Title	Para. & Amdt Level	MOC (D, I, A, T)	Compliance Document(s)	Approval / Remark			
Subpart F – Equipment								
25.1301	Function and installation	(a)(b)(c) 25-0	D	Top Level Assembly Drawing, 06654102-501	Robert Chupka 8110-3(A), 12/12/2023			
				Wiring Schematic Drawing 06654102-202	Robert Chupka 8110-3(A), 12/12/2023			
				Wire Routing Drawing 06654102-621	Robert Chupka 8110-3(A), 12/12/2023			
				Equipment Qualification Compliance Report Aero Terminal, STR-00000555	-			
				Wi-Fi router and PSU suitability report, SPX- 00004898	- ·			
		(d) 25-0	Т	Flight Test Plan (FTP), STP- 00000728	-			
				Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023			
		1		Ground Functional Test Plan, STP-00000722	-			
				Ground Functional Test Report, STR-00000553	Robert Chupka 8110-3(A), 12/14/2023			
				Ground EMC Test Plan, STP- 00000727	-			
				Ground EMC Test Report, STR-00000554	Robert Chupka 8110-3(A), 12/14/2023			
25.1307	Miscellaneous Equipment	25-72	D	Top Level Assembly Drawing, 06654102-501	Robert Chupka 8110-3(A), 12/12/2023			
				Wiring Schematic Drawing 06654102-202	Robert Chupka 8110-3(A), 12/12/2023			
				Wire Routing Drawing 06654102-621	Robert Chupka 8110-3(A), 12/12/2023			

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 21 OF 34

14 CFR Section	Title	Para. & Amdt Level	MOC (D, I, A, T)	Compliance Document(s)	Approval / Remark
25.1309	Equipment, systems, and installations	(a)(b)(c) 25-41	D	Top Level Assembly Drawing, 06654102-501	Robert Chupka 8110-3(A), 12/12/2023
				Wiring Schematic Drawing 06654102-202	Robert Chupka 8110-3(A), 12/12/2023
				Wire Routing Drawing 06654102-621	Robert Chupka 8110-3(A), 12/12/2023
		(a) 25-41	Т	Flight Test Plan (FTP), STP- 00000728	-
				Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023
				Ground Functional Test Plan, STP-00000722	-
				Ground Functional Test Report, STR-00000553	Robert Chupka 8110-3(A), 12/14/2023
				Ground EMC Test Plan, STP- 00000727	-
				Ground EMC Test Report, STR-00000554	Robert Chupka 8110-3(A), 12/14/2023
		(a)(g) 25-41	Α	Equipment Qualification Compliance Report Aero Terminal, STR-00000555	-
				Wi-Fi router and PSU suitability report, SPX- 00004898	-
		(b)(c)(d)	A	System Safety Assessment/Functional Hazard Assessment (FHA/SSA), SPX-00005289	Robert Chupka 8110-3(A), 1/08/2023
25.1322	Instruments: Installation – Flight crew alerting	25-38	D, T	Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023
25.1351	Electrical Systems and Equipment - General	(a) 25-72	A	Electrical Load Analysis (ELA), SPX-00004939	Robert Chupka 8110-3(A), 12/14/2023

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 22 OF 34

14 CFR Section	Title	Para. & Amdt Level	MOC (D, I, A, T)	Compliance Document(s)	Approval / Remark
25.1353	Electrical equipment and installations	(a)(b) 25-113	D	Top Level Assembly Drawing, 06654102-501	Robert Chupka 8110-3(A), 12/12/2023
				Wiring Schematic Drawing 06654102-202	Robert Chupka 8110-3(A), 12/12/2023
				Wire Routing Drawing 06654102-621	Robert Chupka 8110-3(A), 12/12/2023
		(a) 25-113	Т	Ground EMC Test Plan, STP- 00000727	-
				Ground EMC Test Report, STR-00000554	Robert Chupka 8110-3(A), 12/08/2023
				Flight Test Plan (FTP), STP- 00000571	-
				Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023
				Equipment Qualification Compliance Report Aero Terminal, STR-00000555	-
	·			Wi-Fi router and PSU suitability report, SPX- 00004898	-
25.1357	Circuit protective devices	(a)(c)(d) 25-0	D	Top Level Assembly Drawing, 06654102-501	Robert Chupka 8110-3(A), 12/12/2023
				Wiring Schematic Drawing 06654102-202	Robert Chupka 8110-3(A), 12/12/2023
				Wire Routing Drawing 06654102-621	Robert Chupka 8110-3(A), 12/12/2023
25.1401	Anti-collision Light system	(b) 25-41	A	Anti-collision Light Obstruction Analysis, SPX- 00005051	Robert Chupka 8110-3(A), 12/14/2023
25.1419	Ice protection	(a) 25-121	А	Icing Analysis, AMS 2023- 0054	
25.1431	Electronic equipment	(a) 25-0	D	Equipment Qualification Compliance Report Aero Terminal, STR-00000555	-
				Wi-Fi router and PSU suitability report, SPX- 00004898	-

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 23 OF 34

14 CFR Section	Title	Para. & Amdt Level	MOC (D, I, A, T)	Compliance Document(s)	Approval / Remark
		(a)(c) 25-0	D, A	Top Level Assembly Drawing, 06654102-501	Robert Chupka 8110-3(A), 12/12/2023
				Wiring Schematic Drawing 06654102-202	Robert Chupka 8110-3(A), 12/12/2023
				Wire Routing Drawing 06654102-621	Robert Chupka 8110-3(A), 12/12/2023
				System Safety Assessment/Functional Hazard Assessment (FHA/SSA), SPX-00005289	Robert Chupka 8110-3(A), 1/08/2023
		(c) 25-0	Т	Flight Test Plan (FTP), STP- 00000728	-
				Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023
				Ground EMC Test Plan, STP-00000727	-
				Ground EMC Test Report, STR-00000554	Robert Chupka 8110-3(A), 12/08/2023
	Sul	part G - Ope	erating Limit	ations and Information	
25.1501	Operating Limitations and Information - General	(a)(b) 25-42	D	Aircraft Flight Manual Supplement (AFMS), SPX- 00005244	Jim Acree 8110-3(A), 1/11/2024
25.1529	Instructions for Continued Airworthiness	25-54	D	Instructions for Continued Airworthiness (ICA), SPX- 00005115	-
25.1541	Markings and Placards - General	(a)(b) 25-0	D	Flight Test Report (FTR), STR-00000556	FAA Witnessed 12/14/2023
25.1581	Airplane Flight Manual - General	(a)(2)(d) 25-72	D	Aircraft Flight Manual Supplement (AFMS), SPX- 00005244	Jim Acree 8110-3(A), 1/11/2024
25.1585	Operating procedures	(a)(b) 25-105	D	Aircraft Flight Manual Supplement (AFMS), SPX- 00005244	Jim Acree 8110-3(A), 1/11/2024
25.1587	Performance Information	(b) 25-108	A	Aircraft Flight Manual Supplement (AFMS), SPX- 00005244	Jim Acree 8110-3(A), 1/11/2024
	Subj	part H - Instr	uctions for (Continued Airworthiness	
H25.1	Instructions for Continued Airworthiness - General	25-123	D	Instructions for Continued Airworthiness (ICA), SPX- 00005115	-

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 24 OF 34

7.0 GROUND AND FLIGHT TEST

Aircraft Functional Ground Test was performed on Boeing 737-89L, MSN 30515, per Ground Functional Test Plan, document no. STP-00000722 and the test results were documented in the FAA approved Ground Functional Test Report, document no. STR-00000553.

Aircraft EMC Compatibility Ground Test was performed on Boeing 737-89L, MSN 30515, per Ground EMC Test Plan, document no. STP-00000727, and the test results were documented in the FAA approved Ground EMC Test Report, document no. STR-00000554.

Flight test was conducted on Boeing 737-89L, MSN 30515, per Flight Test Plan, document no. STP-00000728, and the test results were documented in the Flight Test Report, document no. STR-00000556.

8.0 DELIVERABLES

The deliverables for this project are listed in the Master Data List (MDL) for this Project, SPX-00004932.

9.0 PART LIST

The parts and equipment used in this project are listed in the Master Data List (MDL) for this Project, SPX-00004932.

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE **25** OF **34**

10.0 DESIGNEES

The following table provides the designees supporting this project:

Table 2: Designees Authorized for this Project

Designee (Name, phone, email)	Designee Number	Delegated Function(s)/ Function Codes
Robert Chupka 404-451-3605, bob.chupka@gmail.com	117186691	Electrical Systems & Equipment - System Safety
Venkat Ramachandran 303-514-1882; <u>ram@omengr.com</u>	575001431	Structural Engineering/ Design and Construction, Static Analysis,
Sky W Rudolph 425-478-1183; <u>Sky@QSAero.com</u>	367575048	Flight Analyst
Bill McDonald 817-312-5468, billpmcdon@yahoo.com	N/A	Inspection, 4,3,8,7,1,2,6,5,22,23,28,21,24, 20,25,26,67,43,30,31,32,33,41,44,47,48,36, 51,55,56,62,63,64,53,52,40,42,45,65,46
Paul Patrick Desrochers (817) 832-5136, paul@testpilotinc.com	230709399	Flight Test Pilot

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 26 OF 34

11.0 APPROVAL 8110-3s

		OF TRANSPORTATION	1. PROJECT N	VO.(if applicable)				
FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS								
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION								
2. MAKE Boeing	3, MODEL NO. 737-891	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Atreraft	5. NAME OF APPLICANT Space Exploration Technolog	ies, Starlink Aviation				
		PURPOSE OF DATA						
6. IN SUPPORT OF: _	_TC/ATCSTC		or Alteration Other (Ex	rplain)				
PROJECT SPECIFIC I	Boeing 737-89 NFORMATION:	80 Starlink System Provisions Installati	on .					
PURPOSE OF SUBMI	ITAL: To approve structural	data for Starlink System provisions Inst	aliation					
		LIST OF DATA ngs, material specifications, and process speci usements listed in block 9. A reference to a dis						
7. IDENTIFICATION	8, TITLE OF DATA	documents added at Block 3. A to ordinate to a date	ining par, motioning revision lavel, i					
06654107-361 Rev A Date: 23-001-2023	BOEING 737-888 TOP LEVEL STARLINK AVIATION	ASSEMBLY,						
06654102-558 Rev C Date: 10-DEC-2023	. BOEING 737-800 STARLINK E STARLINK AVIATION	XIERION INSTALL, ES SODO,						
86654182-551 Rev C Date: 18-DEC-2823	BUEING 737-BOW STARLINK E STARLINK AVIATION	XIERIOR INSTALL, FS 727G,						
06654107-570 Rev B Oate: 10-DEC-2023	BOEING 737-800 STARLINK I STARLINK AVIATION	NTERIOS INSTALL,						
	Notes:							
	This approval is for engl with the regulations spec	neering design data only. It indicates i ified by paragraph and subparagraph lis	the data listed above demonstr ted below as 'Applicable Requi	ates compliance only rements'.				
	Structural design aspects This approval is valid or	only of the abuve data are approved hesely for Boeing Model: 737-89L, 5/K: 3051	rein. 5.					
		ctions and amondment tovols) , 25.685(a) Amt 25-46, 25.689(a)(b) And	it 25-0, 25.611(a) Amdt 25-123	,				
				,				
		Administrator and in accordance with the disheots numbered, have been or						
APPROVE the	data above RECOMME	ND APPROVAL of the data above						
FOR MAJOR REPAIR EXPLAIN :	OR MAJOR ALTERATION O	NLY – Other data approvats 🖲 ARE RE	QUIRED ARE NOT REQ	UIRED				
Electrical systems app	roval is required for the alt	eration.						
		quired when approval was made outside	the U.S and/or invloved critic	al or life limited parts)				
11. DER/ODA NUMBE 575091431	11. DER/ODA NUMBER 575001431 12. PRINTED NAME 975001431 13. PRINTED NAME 14. Renachandran							
13. TECHNICAL DISC DER-T (Structural Engli		14. SIGNATURE Venhat Ramachandran	Danath Sign	16. DATE 12/13/2023				
FAA APF	ROVAL (For FAA uso when	designee recommends approval above,		or the FAA)				
17, PRINTED NAME/F	AA OFFICE	18. TECHNICAL DISCIPLINE						
19. SIGNATURE	19. SIGNATURE 20. DATE							

FAA Form 8110-3 (09/20) Supersedes Previous Edition

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 27 OF 34

U.S. DEPARTMENT OF TRANSPORTATION 1. PROJECT NO.(If applicable) DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS								
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION								
2. MAKE Boeing	3. MODEL NO. 737-89L	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF APP Space Explorati Aviation	LICANT on Technologies, Starlink				
		PURPOSE OF DATA						
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major RepairX_Major	Alteration	Other (Explain)				
PROJECT SPECIFIC INF	ORMATION: Boeing 737-	800 Starlink System Provisions Ins	tallation					
PURPOSE OF SUBMITTA	AL: To approve structur	al analysis data for Starlink Syste	em provisions In	stallation				
		LIST OF DATA gs, material specifications, and process specific fromants listed in block 9. A reference to a draw						
7. IDENTIFICATION	8. TITLE OF DATA							
SPX-00005053 Version 2.0 Date: 2023-12-12	Starlink Aviation Stru	ctural Substantiation, Boeing 737-	869					
	Notes:							
		engineering design data only. It in the regulations specified by paragr ats'.						
	Structural aspects only of the above data are approved herein. This approval is valid only for Boeing Model: 737-89L, S/N: 30515. Additional damage tolerance analysis and approval is required for this alteration and must be completed within 12 months after this approval.							
O ADDI ICADI E DECLUD	5145170 # L.	Van de la constant de						
14 CFR 25.301(a)(b) As	ndt 25-23, 25.303 Amdt	ions and amendment levels) 25-23, 25.305(a)(b) Amdt 25-86, 25 (b)(c) Amdt 25-72, 25.625(a)(b)(c)						
14 CFR, Part 183, data lis therefore	ited above, and on attachoo	Administrator and in accordance with the sheets numbered have been exa	conditions and limi mined in accordan	lations of authorization under ce with established procedures. I				
APPROVE the dat	a above RECOMMEN	D APPROVAL of the data above						
FOR MAJOR REPAIR OF EXPLAIN :	MAJOR ALTERATION OF	LY - Other data approvals ARE REC	UIRED AREN	OT REQUIRED				
Additional damage tole after this approval.	erance analysis and app	roval is required for this alterat	ion and must be	completed within 12 months				
MANAGING OFFIC	CE WAS CONTACTED (req	uired when approval was made outside to	he U.S and/or invio	wed critical or life limited parts)				
11. DER/ODA NUMBER 575001431		12. PRINTED NAME Venkat Ramachandran						
13. TECHNICAL DISCIPL	INE	14. SIGNATURE		16. DATE				
DER-T (Structural Eng:		Venkat Ramachandran	- w	igitafly Sign 12/13/2023 1/13/2023				
FAA APPRO	VAL (For FAA use when d	esignee recommends approval above, or	when approval is r	eserved for the FAA)				
17, PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE						
19. SIGNATURE		20. DATE						

FAA Form 8110-3 (09/20) Supersedes Previous Edition

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 28 OF 34

		OF TRANSPORTATION N ADMINISTRATION		1. PROJECT N	O.(if applicable)			
DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS								
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION								
2. MAKE Boeing	3. MODEL NO. 737-888	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF SPACE EXPLO AVIATION		OLOGIES STARLINK			
		PURPOSE OF DATA						
6. IN SUPPORT OF:	TC/ATCSTC	PMAMajor Repair _X_Major	r Alteration	Other (Ex	plain)			
PROJECT SPECIFIC INF	In support ORMATION: Installatio	of Major Alteration for AC SN 3051 n.	is for Starli	nk Aviation	System			
PURPOSE OF SUBMITTA	AL: In support of Major	Alteration for AC SN 30515 for St	arlink Aviat	ion System I	nstallation.			
		LIST OF DATA gs. material specifications, and process specifi irrements listed in block 9. A reference to a dra						
7. IDENTIFICATION	8. TITLE OF DATA	inicationis used to older 5. A reference to a dra-	CAN HE LIZE OF THE PERSON OF THE	g ravisian rever, i	asy be used.			
86654182-501 Rev. A Dated 18/23/2023	Boeing 737-800 Top Le	vel Assembly, Starlink Aviation	anato i i i					
06654102-202 Rev. C Dated 12/1/2023	B737, Aeroterminal, W.	iring Schematic						
06654102-621 Rev. B Dated 12/1/2023	B737, Aeroterminal, W	ire Routing						
	Notes:							
	This approval is for engineering design data only. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as 'Applicable Requirements'.							
		rical Aspects Only. This approval 80515 for Starlink Aviation System			lteration to			
9. APPLICABLE REQUIR	EMENTS (List specific sec	tions and amendment levels)						
		:([Amdt. 25-146]; 25.1301(a)(b)(c) i) [Amdt. 25-113]; 25.1357 (a)(c)(d)						
		Administrator and in accordance with the disheets numbered, have been ex						
APPROVE the date	ta above ☐ RECOMMEN	ID APPROVAL of the data above						
FOR MAJOR REPAIR OR MAJOR ALTERATION ONLY - Other data approvals ARE REQUIRED ARE NOT REQUIRED EXPLAIN:								
Additional approvals may be required for this alteration.								
☐ MANAGING OFFICE WAS CONTACTED (required when approval was made outside the U.S and/or invloved critical or life limited parts)								
11, DER/ODA NUMBER 117186691								
	13. TECHNICAL DISCIPLINE DER-T (Electrical Systems Engineering) 14. SIGNATURE Robert S Charles 12/12/2023							
FAA APPRO	OVAL (For FAA use when d	esignee recommends approval above, o	r when approva	at is reserved f	or the FAA)			
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE						
19. SIGNATURE	19. SIGNATURE 20. DATE							
		<u></u>		_				

FAA Form 8110-3 (09/20) Supersedes Previous Edition

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 29 OF 34

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS							
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION							
2. MAKE Boeing	3. MODEL NO. 737-800	4. TYPE (Alrcraft, Engine, Propeller, Actuator etc.) Africaft	5. NAME OF APPLICANT SPACE EXPLORATION TECHNOLOGIES STARLINK AVIATION				
		PURPOSE OF DATA	-				
	In support	of Major Alteration for AC SN 305 on.	or AlterationOther (Explain) is for Starlink Aviation System itarlink Aviation System Installation.				
			ifications and any other data that shows or contributes to a awing list, including rovision lovel, may be used.				
7. IDENTIFICATION	8. TITLE OF DATA						
SPX-00004939 Rev. 1.0 Dated 11/13/23	Starlink Aviation Sp.	aceX 8737-800 Electrical Load Analy	ysis				
SPX-00005851 Rev. 1.0 Dated 12/05/23	Starlink Aviation An	ri-Collision Light Blockage Analys	is, Boeing 737-800				
	Notes:						
	This approval is for engineering design data only. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as 'Applicable Requirements'.						
		trical Aspects Omly. This approval 30515 for Starlink Aviation System	is in support of major alteration to m Installation.				
	• •	clions and amendment levels) 25.1401(b) [Amdt. 25-41]					
10, FAA DESIGNEE AP 14 CFR, Part 183, data therefore	PROVAL - As directed by the listed above, and on attached	e Administrator and in accordance with the sheets numbered, have been ex	ne conditions and limitations of authorization under xamined in accordance with established procedures. I				
APPROVE the d	ata above 🔲 RECOMME	ND APPROVAL of the data above					
EXPLAIN:	OR MAJOR ALTERATION C and be required for the	ONLY — Other data approvals 📵 ARE RE nis alteration.	EQUIRED ARE NOT REQUIRED				
	·····		e the U.S and/or invloved critical or life limited parts)				
11, DER/ODA NUMBER 117186691	₹	12. PRINTED NAME Robert S Chupka	Í				
13. TECHNICAL DISCIPLINE 14. SIGNATURE 15. DER-T (Electrical Systems Engineering) 16. DATE 17. Pobert S Chapta 17.14/2023							
FAA APPI	ROVAL (For FAA use when	designee recommends approval above,	or when approval is reserved for the FAA)				
17. PRINTED NAME/F/	AA OFFICE	18. TECHNICAL DISCIPLINE					
19. SIGNATURE		20. DATE	- And the state of				
L		1					

FAA Form 8110-3 (09/20) Supersedes Previous Edition

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 30 OF 34

DETERMINATIO	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS								
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION									
2. MAKE Boeing									
		PURPOSE OF DATA							
6. IN SUPPORT OF:		, ,	-	Other (Explain)					
PROJECT SPECIFIC INF	ORMATION: In support	of Major Alteration for AC SN 3051 on.	15 for Starli	nk Aviation System					
		r Alteration for AC SN 30515 for St	tarlink Aviat	ion System Installation.					
		LIST OF DATA ngs, material specifications, and process specifi							
showing of com 7. IDENTIFICATION	spliance with the applicable requ 8. TITLE OF DATA	usements listed in block 9. A reference to a dra-	nving list, includin	g revision level, may be used.					
STR-00000553	-	7 (N154TS) Functional Ground Test	Report						
Rev. 1.0		(1000)							
Dated 12/08/23									
STR-00000554 Rev. 1.0 Dated 12/08/23	Starlink Aviation B73	7 (N154TS) EMC Ground Test Report							
-	Notes:								
				A. 6. 94 A. 6. 4					
		<pre>engineering design data only. It i the regulations specified by parag ents'.</pre>							
		rical Aspects Only. This approval 30515 for Starlink Aviation System							
		ctions and amendment levels)							
14CFR Part 25: 25.130	1(d) [Amdt. 25-0]; 25-1	1309(a) [Andt. 25-41]; 25.1353(a)	[Amdt. 25-113]; 25.1431(c) [Amdt. 25-113]					
10. FAA DESIGNEE APPI 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the sted above, and on attached	e Administrator and in accordance with the disheets numbered have been ex	e conditions and amined in acco	d limitations of authorization under ordance with established procedures. I					
APPROVE the date	ta above RECOMMEN	ND APPROVAL of the data above							
FOR MAJOR REPAIR OF EXPLAIN :	R MAJOR ALTERATION OF	NLY - Other data approvals ARE REC	QUIRED A	RE NOT RÉQUIRED					
Additional approvals may be required for this alteration.									
☐ MANAGING OFFIC	☐ MANAGING OFFICE WAS CONTACTED (required when approval was made outside the U.S and/or invlowed critical or life limited parts)								
11. DER/ODA NUMBER 117186691									
13. TECHNICAL DISCIPE DER-T (Electrical Sys		14. SIGNATURE Robert S Chapka		116. DATE B Digitally Signe 12/14/2823 12/14/2023					
		designee recommends approval above, o	or when approva	at is reserved for the FAA)					
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE							
19. SIGNATURE		20. DATE							
		i							

FAA Form 8110-3 (09/20) Supersedes Previous Edition

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 31 OF 34

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS									
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION									
2. MAKE Roning									
		PURPOSE OF DATA							
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair Major	Alteration Other (Explain)						
PROJECT SPECIFIC INF	Baeing 737-88 ORMATION:	9 Starlink System Provisions Installation	ı						
PURPOSE OF SUBMITTA	presented weight decree	formance decrements due to additional dr ents ensures that the takeoff, landing, the unmodified aircraft.	ag caused by external antenna radomes. U and climb performance in all certified p	lse of phases of					
		LIST OF DATA gs, material specifications, and process specific livements listed in block 9. A reference to a dray		butes to a					
7. IDENTIFICATION	8. TITLE OF DATA	Memoria indice in block 5. A resolution to it of as	may not uncovery revision rever, may be used.	-					
QSA-13084 Initial Welease 12 December 2023	Performance Limited Wnight	Decrement Due to Installation of the Sp	aceX Sattom Radobes on Boeing 737-800 A	ircraft					
	Notes:								
		menring design data mmly. It indicates the field by paragraph and subparagraph lists		ance only					
	25.111 Andt 25-72, 25.113	ions and amendmenl levels) Andt 25-23, 25.115 Andt 25-0, 25.117 And	: 25-0, 25.119 Andt 25-0, 25.121 Andt 25	i-0, 25.123					
10. FAA DESIGNEE APPE 14 CFR, Part 183, data lis thorefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the sheets numbered, have been exa	conditions and limitations of authorization mined in accordance with established properties.	n under ocedures. I					
APPROVE the dat	a above RECOMMEN	D APPROVAL of the data above							
FOR MAJOR REPAIR OR MAJOR ALTERATION ONLY ~ Other data approvals ARE REQUIRED ARE NOT REQUIRED EXPLAIN:									
Performance decrements presented must be incorporated into AFMS as described. MANAGING OFFICE WAS CONTACTED (required when approval was made outside the U.S and/or invioved critical or life limited parts)									
11. DER/ODA NUMBER 12. PRINTED NAME Sky w Rudolph									
13. TECHNICAL DISCIPL DCR-T (Flight Analyst)	13. TECHNICAL DISCIPLINE 14. SIGNATURE 16. DATE DISTRICT Spin 12/14/2023 12/14/2023								
FAA APPRO	VAL (For FAA use when d	esignee recommends approval above, or	when approval is reserved for the FAA)						
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE							
19. SIGNATURE	19. SIGNATURE 20. DATE								
		i							

FAA Form 8110-3 (09/20) Supersedes Provious Edition

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 32 OF 34

	U.S. DEPARTMENT OF TRANSPORTATION 1. PROJECT NO.(II upplicable)							
DETERMINATION		NADMINISTRATION WITH AIRWORTHINESS STANI	DARDS					
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION								
2. MAKE Boeing	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF SPACE EXPLO AVIATION	APPLICANT RATION TECHNOLOGIES STARLINK				
		PURPOSE OF DATA						
6. IN SUPPORT OF:			-	Other (Explain)				
PROJECT SPECIFIC INF	In support ORMATION: Installation	of Major Alteration for AC SN 30519 n.	5 for Starli	nk Aviation System				
		Alteration for AC SN 30515 for Sta	arlink Avi at:	lon System Installation.				
		LIST OF DATA gs, material specifications, and process specific incoments listed in block 9. A reference to a draw						
7. IDENTIFICATION	8. TITLE OF DATA	ntollicates listed in black 5. A least-erice to 9 than	ung nac nacaduna) revision level, may be used.				
SPX-80895289	Starlink Aviation 8737	System Safety Assessment, N154TS						
Rev. 1.0 Dated 01/04/2024								
	l							
	Notes:							
		engineering design data only. It in the regulations specified by paragr hts'.						
	Approval is for Electrical Aspects Only. This approval is in support of major alteration to Boeing 737-800 AC SM 30515 for Starlink Aviation System Installation.							
}								
A ADDI ICADI E OFOLIIO	TAPTATO A las anasita ana	along and a second of the latest						
	• •	tions and amendment levels)]; 25.1431(a)(c) [Andt. 25-0]						
		1,						
10, FAA DESIGNEE APP 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the sted above, and on attached	Administrator and in accordance with the d sheets numbered, have been exa	conditions and imined in acco	l limitations of authorization under dance with established procedures. I				
■ APPROVE the dat	la above RECOMMEN	ID APPROVAL of the data above						
FOR MAJOR REPAIR OF	R MAJOR ALTERATION OF	&Y – Other data approvats ■ ARE REC	UIRED A	RE NOT REQUIRED				
Additional approvals may be required for this alteration.								
MANAGING OFFICE WAS CONTACTED (required when approval was made outside the U.S and/or invloved critical or life limited parts)								
11. DER/ODA NUMBER 117186691								
13. TECHNICAL DISCIPLINE DER-T (Electrical Systems Engineering) 14. SIGNATURE Robert S Churcha DER-T (Electrical Systems Engineering) 16. DATE DOGUM, Signature 01/08/2024								
		esignee recommends approval above, or	when approva	l is reserved for the FAA)				
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE						
19. SIGNATURE		20. DATE						
}								

FAA Form 8110-3 (09/20) Supersedes Previous Edition

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 33 OF 34

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS							
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION							
2. MAKE Boeing	3. MODEL NO. 737-89L	TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5 NAME OF APPLICANT Space Exploration Technologies, Starlink Aviation				
		PURPOSE OF DATA					
6. IN SUPPORT OF:TC/ATCSTCPMAMajor RepairX_Major AlterationOther (Explain) PROJECT SPECIFIC INFORMATION: Boeing 737-800 Starlink System Provisions Installation PURPOSE OF SUBMITTAL: To approve damage tolerance analysis data for Starlink System provisions Installation							
			cations and any other data that shows or contributes to a				
7. IDENTIFICATION	pliance with the applicable requ 8. TITLE OF DATA	irements listed in block 9. A reference to a drav	ving list, including revision level, may be used.				
SPX-00005052 Version 2.0 Date: 2024-01-09		lgue and Damage Tolerance Report, E	Socing 737-800				
	Notes:						
	This approval is for e	the regulations specified by paragr	ndicates the data listed above demonstrates raph and subparagraph listed below as				
	Damage tolerance aspects only of the above data are approved herein. This approval is valid only for Boeing Model: 737-891, S/M: 30515. Additional inspections are required for the Starlink system installations. See Instructions for Continued Airworthiness Document no. SPX-00005115, Rev. 2.0, dated 2024-01-09 for datails of the required inspections.						
9. APPLICABLE REQUIR 14 CFR 25.571(a)(b) As		lions and amendment levels)					
14 CFR, Part 183, data lis therefore	ted above, and on attached	Administrator and in accordance with the sheets numbered, have been exa D APPROVAL of the data above	conditions and limitations of authorization under mined in accordance with established procedures. I				
	_		NUMBER FLARE NOT RECUIRED				
FOR MAJOR REPAIR OR MAJOR ALTERATION ONLY - Other data approvals ARE REQUIRED ARE NOT REQUIRED EXPLAIN: Additional static analysis and approval is required for this alteration.							
MANAGING OFFICE WAS CONTACTED (required when approval was made outside the U.S and/or invloved critical or life fimited parts)							
11. DER/ODA NUMBER	Journal La had	12. PRINTED NAME	and allers interior amount in the littlest parts)				
575001431							
13. TECHNICAL DISCIPLINE 14. SIGNATURE 16. DATE 17. Depart Signature 19. Depart Sign							
FAA APPRO	VAL (For FAA use when d	esignee recommends approval above, or	when approval is reserved for the FAA)				
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE					
19. SIGNATURE		20. DATE					

FAA Form 8110-3 (09/20) Supersedes Previous Edition

STARLINK

STARLINK AVIATION B737-800 (N154TS) CERTIFICATION SUMMARY REPORT

PAGE 34 OF 34

U.S. DEPARTMENT OF TRANSPORTATION 1. PROJECT NO.(If applicable) FEDERAL AVIATION ADMINISTRATION							
DETERMINATION OF COMPLIANCE WITH AIRWORTHINESS STANDARDS							
- 1111 -		OR AIRCRAFT COMPONENT IDENTIF					
2. MAKE The Boeing Company	3. MODEL NO. 737-868	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF APPLICANT Space Exploration Technologies				
		PURPOSE OF DATA					
6. IN SUPPORT OF:	TC/ATCSTC		Atteration Other (Explain)				
PROJECT SPECIFIC INF	ORMATION: Installation	n of an In-flight Internet System.					
PURPOSE OF SUBMITTA	AL: AFMS Approval.						
		LIST OF DATA gs, material specifications, and process specific irrements listed in block 9. A reference to a draw	ations and any other data that shows or contributes to a				
7. IDENTIFICATION	8. TITLE OF DATA		and the state of t				
SPX-80005244 (Rev IR), 11 January 2024.	Airplane Flight Manual	Supplement for Boeing 737-89L Air	craft with Starlink System.				
	Notes:						
		the regulations specified by paragr	dicates the data listed above demonstrates aph and subparagraph listed below as				
	This approval is for :	serial number 30515 AFMS data only.					
	1						
		ions and amendment fevels) . 25-138, 25.1585(a)(b) amdt. 25-10	95, 25.1587(b)(3)(i)(ii) amdt. 25-108.				
10. FAA DESIGNEE APPE 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the ted above, and on attached	Administrator and in accordance with the sheets numbered, have been exa	conditions and limitations of authorization under mined in accordance with established procedures. I				
APPROVE the dat	a above RECOMMEN	D APPROVAL of the data above					
FOR MAJOR REPAIR OF EXPLAIN :	R MAJOR ALTERATION ON	NLY - Other data approvals 🖸 ARE REC	UIRED ARE NOT REQUIRED				
DER-approved airplame Performance data.							
MANAGING OFFICE WAS CONTACTED (required when approval was made outside the U.S and/or invioved critical or life limited parts)							
11. DER/ODA NUMBER 12. PRINTED NAME 988281943 12. PRINTED NAME James Nelson Acree							
13. TECHNICAL DISCIPLINE 14. SIGNATURE 15. TECHNICAL DISCIPLINE 16. DATE 17. SIGNATURE 17. SIGNATURE 18. SIGNATURE 19. Digitale, Signature							
		esignee recommends approval above, or	when approval is reserved for the FAA)				
17. PRINTED NAME/FAA	OFFICE	18. TECHNICAL DISCIPLINE					
19. SIGNATURE		20. DATE					
		1					

FAA Form 8110-3 (09/20) Supersedes Previous Edition

6	
US Depart	4
of Transpo	
Federal A	bon

MAJOR REPAIR AND ALTERATION

CMB No. 2120-0020 Exp: 07/31/2026	Electronic Tracking Number
	or FAA Use Only

of Transports Federal Aviat Administratio	tion	(Airfran	ne, P	owerplant, Prop	lec	ler, or Appl	lance)		-		PATRA US CINY
INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for Instructions and disposition of this form. This report is required by law (49 U.S.C. §44701). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a))											
Nationality and Registration Mark N154TS						Serial No. 30515					
1. Aircraft	Make B	Make Boeing					Model	737-8	9L	1	Series
Name (As shown on registration certificate) Address (As shown on registration certificate)								certificate)			
2. Owner	Falcor	n Aviatio	n H	oldings LLC			1	1 Rocket Road	1		
	<u> </u>			3			City Hawthome Zip 90250 Count			State CA	
					3.	For FAA Use		===			
											,
4.7					5	Unit Identifica	tion				
Repair	Alteration	Unit		Ma		OTHE RESTRICT	- India	Mo	del		Serial No.
	R	AIRFRAM		Boeing	_		(As described in Item 1 above)			30515	
		POWERP	LANT								
		PROPELL	ER								
		APPLIAN	CE	Type Manufacturer							
					_	onformity Sta					
	Name and A				18	. Kind of Agend	<u></u>	nic		1 1400	ufacturer
	DASTENATOR	entres_			H	Foreign Cert					cate No.
COV ATW	ATER			State CA	×	Certificated F	tepair Static	วก			CL3R427L
Zp 9530		USA USA	===		L			Organizatio			
have	been made in	accordanc	e with	ion made to the unit(the requirements of the best of my kno	Par	rt 43 of the U.S	5 above : . Federal /	and describ Aviation Re	ed on ti gulation	ne reverse is and the	e or attachments hereto at the information
Extended ra per 14 CFR App. B			Sign	ature/Date of Authori	/	Individual		M	ul		15 Dec 23
			<u></u>	7. AD	_	val for Return	to Servk		9		1- Dure -
Pursuant Administr	to the authoritor of the Fe	ority given deral Aviati	perso on Adi		_	ne unit identif		m 5 was	inspect Rejecte		e manner prescribed by the
l I li	AA Fit. Stand nepector	dards	Man	ufacturer	M	faintenance O	ganization		Depar	tment of T	ed by Canadian ransport
BY	AA Designee	, X	Rep	air Station	lı	nspection Auth	crization	Oth	ег (Ѕре	cify)	
Certificate o Designation	Certificate or CL3R427L Signature/Date of Authorized Individual Designation No. CL3R427L Signature/Date of Authorized Individual 15 Doc 3										

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

	USA	
•	N154TS	December 15, 2023
	Nationality and Registration Mark	Date
1. DESCRIPTION:		
To document the installation of the Starlink Aviation only.	n System on the Boeing 73	87-89L, MSN 30515
2. APPROVED DATA:		
i) Drawing 06654102-501 Rev A. Dated 10/23/2023 Aviation by FAA Electrical Robert S Chupka DER-T Ramachandran DER-T, 575001431	•	
ii) Drawing 06654102-550 Rev C. Dated 12/10/202 500D, Starlink Aviation by FAA Structural Venkat F		
iii) Drawing 06654102-551 Rev C. Dated 12/10/202 727G, Starlink Aviation by FAA Structural Venkat F	23, Boeing 737-800 Starlin	k Exterior Install, FS
iv) Drawing 06654102-570 Rev B. Dated 12/10/202	•	

737-800 by FAA Structural Venkat Ramachandran DER-T, 575001431 vi) Drawing 06654102-202 Rev C. Dated 12/01/2023, B737, Aeroterminal, Wiring Schematic by

v) SPX-00005053 Rev. 2.0 Dated 12/12/2023, Starlink Aviation Structural Substantiation, Boeing

Starlink Aviation by FAA Structural Venkat Ramachandran DER-T, 575001431

- vi) Drawing 06654102-202 Rev C. Dated 12/01/2023, B737, Aeroterminal, Wiring Schematic by FAA Electrical Robert S Chupka DER-T, 117186691
- vii) Drawing 06654102-621 Rev B. Dated 12/01/2023, B737, Aeroterminal, Wire Routing by FAA Electrical Robert S Chupka DER-T, 117186691
- viii) SPX-00004939 Rev. 1.0 Dated 11/13/2023, Starlink Aviation SpaceX B737-800 Electrical Load Analysis by FAA Electrical Robert S Chupka DER-T, 117186691
- ix) SPX-00005051 Rev. 1.0 Dated 12/05/2023, Starlink Aviation Anti-Collision Light Blockage Analysis, Boeing 737-800 by FAA Electrical Robert S Chupka DER-T, 117186691
- x) STR-00000553 Rev. 1.0 Dated 12/08/2023, Starlink Aviation B737 (N154TS) Functional Ground Test Report by FAA Electrical Robert S Chupka DER-T, 117186691
- xi) STR-00000554 Rev. 1.0 Dated 12/08/2023, Starlink Aviation B737 (N154TS) EMC Ground Test Report by FAA Electrical Robert S Chupka DER-T, 117186691
- xii) QSA-23084 Rev. Initial Release Dated 12/12/2023, Performance Limited Weight Decrement Due to Installation of the SpaceX Satcom Radomes on Boeing 737-800 Aircraft by FAA Flight Analyst Sky W Rudolph DER-T, 367575048
- 3. OTHER DATA:

8. Description of Work Accomplished

i) SPX-00004932 Rev. 2.0 Dated 12/28/2023, Starlink Aviation SpaceX 737-800 (N154TS) Master Data List

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

		N154TS De	scember 15 2023
		Nationality and Registration Mark	Date
ing 737-800 TR-00000556 Rev. 1.0 Dated	d 12/14/2023, St	arlink Aviation Weight Balance arlink Aviation B737 Flight Tes tarlink Aviation B737-800 (N15	t Report
		END	
			·
		•	

			•
	•		
	J		
		·	

DETERMINATI	FEDERAL AVIAT	T OF TRANSPORTATION TION ADMINISTRATION E WITH AIRWORTHINESS STA		(if applicable)
	AIRCRA	FT OR AIRCRAFT COMPONENT IDE	NTIFICATION	-
2. MAKE loeing	3. MODEL NO. 737-89L	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF APPLICANT Space Exploration Technologies	, Starlink Aviation
		PURPOSE OF DATA		
3. IN SUPPORT OF: _			ajor Alteration Other (Expla	in)
PROJECT SPECIFIC	NFORMATION: Boeing 737-	800 Starlink System Provisions Installa	ation	
PURPOSE OF SUBMI	TTAL: To approve structura:	l data for Starlink System provisions I	nstallation	
List the data for this su	ubmittal including applicable drav	LIST OF DATA wings, material specifications, and process spequirements listed in block 9, A reference to a	ecifications and any other data that show	es or contributes to a
7. IDENTIFICATION	8. TITLE OF DATA	equirements pace in clock 3, A falls offee to a	Graving list, including revision level, may	De decu.
06654102-501 Rev A Date: 23-OCT-2023	BOEING 737-800 TOP LEVE STARLINK AVIATION	L ASSEMBLY,		
96654102-550 Rev C Date: 10-DEC-2023	BOEING 737-800 STARLINK STARLINK AVIATION	EXTERIOR INSTALL, FS 500D,		,
06654102-551 Rev C Date: 10-DEC-2023		EXTERIOR INSTALL, FS 727G,		
06654102-570 Rev B Date: 10-DEC-2023	BOEING 737-800 STARLINK STARLINK AVIATION	INTERIOR INSTALL,		
	Notes:			
		ngineering design data only. It indicate pecified by paragraph and subparagraph		
		cts only of the above data are approved only for Boeing Model: 737-89L, S/N: 3		
		sections and amendment levels) 46, 25.605(a) Andt 25-46, 25.609(a)(b)	Amdt 25-0, 25.611(a) Amdt 25-123,	
10. FAA DESIGNEE A 14 CFR, Part 183, da therefore	APPROVAL - As directed by the listed above, and on attack	the Administrator and in accordance with hed sheets numbered, have been	h the conditions and limitations of au n examined in accordance with esta	ithorization under blished procedures.
● APPROVE the	e data above 🔲 RECOMM	END APPROVAL of the data above		
EXPLAIN:	R OR MAJOR ALTERATION	ONLY – Other data approvals ARE	REQUIRED ARE NOT REQUI	RED
-		(required when approval was made out	side the It Condler involved exiting	or life limited earth)
11. DER/ODA NUMB 575001431		12. PRINTED NAME Venkat Ramachandran	side the O.S and/or invioved chicar	or me imited parts)
13. TECHNICAL DIS DER-T (Structural Eng		14. SIGNATURE Venkat Ramachandran		16. DATE 12/13/2023
FAA AF	PROVAL (For FAA use whe	en designee recommends approval abov		the FAA)
17. PRINTED NAME		18. TECHNICAL DISCIPLINE		······································
1				

,

DETERMINATION	FEDERAL AVIATIO	OF TRANSPORTATION IN ADMINISTRATION WITH AIRWORTHINESS STAN	1. PROJECT NO	o.(if applicable)		
	AIRCRAF"	OR AIRCRAFT COMPONENT IDENTI	FICATION			
2. MAKE Boeing	3. MODEL NO. 737-89L	TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF APPLICANT Space Exploration Techno Aviation	logies, Starlink		
		PURPOSE OF DATA				
6. IN SUPPORT OF:			r Alteration Other (Exp	lain)		
PROJECT SPECIFIC INF	ORMATION: Boeing 737-	800 Starlink System Provisions Ins	stallation			
PURPOSE OF SUBMITTA	AL: To approve structur	al analysis data for Starlink Syst	em provisions Installation	1		
		LIST OF DATA ngs, material specifications, and process specifications is and process specifications. A reference to a dra				
7. IDENTIFICATION	8. TITLE OF DATA			.,		
SPX-00005053 Version 2.0 Date: 2023-12-12	Starlink Aviation Str	uctural Substantiation, Boeing 737	-800			
	Notes:					
	This approval is for engineering design data only. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as 'Applicable Requirements'.					
	This approval is valid Additional damage to	nly of the above data are approved donly for Boeing Model: 737-891, lerance analysis and approval is reconths after this approval.	S/N: 30515.	n and must be		
14 CFR 25.301(a)(b) A	mdt 25-23, 25.303 Amdt	ctions and amendment levels) 25-23, 25.305(a)(b) Amdt 25-86, 2)(b)(c) Amdt 25-72, 25.625(a)(b)(c				
10. FAA DESIGNEE APP 14 CFR, Part 183, data list therefore	PROVAL - As directed by the sted above, and on attached	e Administrator and in accordance with the disheets numbered, have been ex	e conditions and limitations of camined in accordance with es	authorization under tablished procedures. I		
APPROVE the da	ita above ☐ RECOMME	ND APPROVAL of the data above				
FOR MAJOR REPAIR O	R MAJOR ALTERATION (ONLY – Other data approvals ■ ARE RE	EQUIRED ARE NOT REQU	JIRED		
Additional damage tol after this approval.	lerance analysis and a	oproval is required for this alter	ation and must be complete	d within 12 months		
☐ MANAGING OFF	ICE WAS CONTACTED (re	equired when approval was made outside	the U.S and/or invloved critical	al or life limited parts)		
11. DER/ODA NUMBER 575 00 1431		12. PRINTED NAME Venkat Ramachandran				
13. TECHNICAL DISCIP DER-T (Structural En		14. SIGNATURE Venkat Ramachandran	Digitally Sign ed 12/13/2023	16. DATE 12/13/2023		
FAA APPR	OVAL (For FAA use when	designee recommends approval above,	or when approval is reserved f	or the FAA)		
17. PRINTED NAME/FA	A OFFICE	18. TECHNICAL DISCIPLINE				
19. SIGNATURE		20. DATE				

	•			
			•	
		•		
		·		

DETERMINATION	FEDERAL AVIATIO	OF TRANSPORTATION ON ADMINISTRATION WITH AIRWORTHINESS STAN		1. PROJECT NO	.(if applicable)		
	AIRCRAF	T OR AIRCRAFT COMPONENT IDENTI	FICATION				
2. MAKE Boeing	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft	5. NAME OF A SPACE EXPLOR AVIATION		LOGIES STARLINK		
		PURPOSE OF DATA					
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair _X_ Majo	r Alteration	Other (Expl	ain)		
PROJECT SPECIFIC INF	ORMATION: Installation			•			
PURPOSE OF SUBMITTA	AL: In support of Major	Alteration for AC SN 30515 for St	arlink Aviati	on System Ins	stallation.		
		LIST OF DATA ngs, material specifications, and process specifications and process specifications are specifications.					
7. IDENTIFICATION	8. TITLE OF DATA	unemonts lised in block 3. A felerence to a dia	wing list, incidening	104/3/01/10461, 118	ay be used.		
06654102-501 Rev. A Dated 10/23/2023	Boeing 737-800 Top Le	evel Assembly, Starlink Aviation					
06654102-202 Rev. C Dated 12/1/2023	B737, Aeroterminal, W	Aeroterminal, Wiring Schematic					
06654102-621 Rev. B Dated 12/1/2023	B737, Aeroterminal, W	Wire Routing					
	Notes:						
		engineering design data only. It is the regulations specified by paragents'.					
		trical Aspects Only. This approval 30515 for Starlink Aviation System			teration to		
14CFR Part 25: 25.899	[Amdt. 25-123]; 25.98	ections and amendment levels) 31([Amdt. 25-146]; 25.1301(a)(b)(c) (b) [Amdt. 25-113]; 25.1357 (a)(c)(
10. FAA DESIGNEE APP 14 CFR, Part 183, data li therefore	PROVAL - As directed by the sted above, and on attached	e Administrator and in accordance with the sheets numbered, have been ex	ne conditions and xamined in acco	l limitations of a rdance with est	authorization under ablished procedures. I		
APPROVE the date	ata above	ND APPROVAL of the data above					
EXPLAIN:		ONLY – Other data approvals ARE RE	EQUIRED A	RE NOT REQU	JIRED		
	may be required for t						
		equired when approval was made outside	e the U.S and/or	invioved critica	al or life limited parts)		
11. DER/ODA NUMBER 117186691		12. PRINTED NAME Robert S Chupka					
13. TECHNICAL DISCIP DER-T (Electrical Sy		14. SIGNATURE Robert S Chupka		Digitally Sign ed 12/12/2023	16. DATE 12/12/2023		
FAA APPR	ROVAL (For FAA use when	designee recommends approval above,	or when approv	al is reserved f	or the FAA)		
17. PRINTED NAME/FA	A OFFICE	18. TECHNICAL DISCIPLINE					
19. SIGNATURE		20. DATE					

•		
	•	

_

DETERMINATION	FEDERAL AVIATIO	OF TRANSPORTATION IN ADMINISTRATION WITH AIRWORTHINESS STA	NDARDS	1. PROJECT NO.(if applicable)
	AIRCRAF	TOR AIRCRAFT COMPONENT IDEN	ITIFICATION	<u> </u>
2. MAKE Boeing	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Propeller, Actuator etc.) Aircraft		APPLICANT PRATION TECHNOLOGIES STARLINK
		PURPOSE OF DATA		
6. IN SUPPORT OF:T			•	Other (Explain)
PROJECT SPECIFIC INFO	ORMATION: In support	of Major Alteration for AC SN 30	9515 for Starli	nk Aviation System
		Alteration for AC SN 30515 for	Starlink Aviat	cion System Installation.
		LIST OF DATA ngs, material specifications, and process specifications and process specifications are specifications.		
7. IDENTIFICATION	8. TITLE OF DATA	and the latest and please of A the latest and	<u> </u>	green to our may be used:
SPX-00004939 Rev. 1.0 Dated 11/13/23	Starlink Aviation Spa	ceX B737-800 Electrical Load Ana	alysis	
SPX-00005051 Rev. 1.0 Dated 12/05/23	Starlink Aviation Ant	i-Collision Light Blockage Analy	sis, Boeing 73	7-800
_	 Notes:			
•				
	This approval is for compliance only with Applicable Requirement	the regulations specified by pa	t indicates the ragraph and sub	e data listed above demonstrates pparagraph listed below as
		trical Aspects Only. This approv 30515 for Starlink Aviation Sys		
9. APPLICABLE REQUIR	EMENTS (List specific se	ctions and amendment levels)		
14CFR Part 25: 25.135	1(a)(1) [Amdt. 25-72];	25.1401(b) [Amdt. 25-41]		
10. FAA DESIGNEE APP 14 CFR, Part 183, data lis therefore	ROVAL - As directed by the sted above, and on attached	e Administrator and in accordance with ed sheets numbered, have been	n the conditions an examined in acc	nd limitations of authorization under cordance with established procedures.
APPROVE the dat	ta above 🔲 RECOMME	ND APPROVAL of the data above		
EXPLAIN:		ONLY - Other data approvals • ARE	REQUIRED	ARE NOT REQUIRED
	may be required for the		eide the US and/	or invloved critical or life limited parts)
11. DER/ODA NUMBER 117186691	OL WAS SORTAGILD (II	12. PRINTED NAME Robert S Chupka	and the distance	
13. TECHNICAL DISCIP DER-T (Electrical Sys		14. SIGNATURE Robert S Chupka		16. DATE Digitally Signe 12/14/2023 12/14/2023
FAA APPR	OVAL (For FAA use when	designee recommends approval above	e, or when appro	oval is reserved for the FAA)
17. PRINTED NAME/FA		18. TECHNICAL DISCIPLINE		
19. SIGNATURE		20. DATE		

				1
DETERMINATION	FEDERAL AVIATION	OF TRANSPORTATION ON ADMINISTRATION WITH AIRWORTHINESS ST	ANDARDS	1. PROJECT NO.(If applicable)
	AIRCRAF	T OR AIRCRAFT COMPONENT IDE	NTIFICATION	
2. MAKE Boeing	3. MODEL NO. 737-800	4. TYPE (Aircraft, Engine, Propeller Actuator etc.) Aircraft		APPLICANT DRATION TECHNOLOGIES STARLINK
		PURPOSE OF DATA		
6. IN SUPPORT OF:			Major Alteration	Other (Explain)
PROJECT SPECIFIC INF	ORMATION: Installati	of Major Alteration for AC SN . on.	30515 for Starli	ink Aviation System
PURPOSE OF SUBMITTA	AL: In support of Majo	r Alteration for AC SN 30515 fo	r Starlink Aviat	ion System Installation.
		LIST OF DATA		
		ings, material specifications, and process s quirements listed in block 9. A reference to		
7. IDENTIFICATION	8. TITLE OF DATA	description in product of the product of	a arawing not, madain	ig to tall at the same of the
STR-00000553	Starlink Aviation B7	37 (N154TS) Functional Ground To	est Report	
Rev. 1.0 Dated 12/08/23				
	Stanish Audatian By	DI (NAFATE) FMC Conved Took Do-		
STR-00000554 Rev. 1.0	Stariink Aviation B/	37 (N154TS) EMC Ground Test Rep	ort	
Dated 12/08/23				
	Notes:			
	This approval is for	engineering design data only	It indicates the	e data listed above demonstrates
	compliance only with	the regulations specified by p		
	'Applicable Requirem	ents'.		
		trical Aspects Only. This appro		
	Boeing /3/-800 AC 2M	30515 for Starlink Aviation Sy	stem installation	on.
6. 4 P.D. 10.4 P.L. P.CO. 115	STAFFAITO (I : 1 : 1 : 1 : 1			
	• •	ections and amendment levels) .1309(a) [Amdt. 25-41]; 25.1353	(a) [Amdt. 25-11	31: 25 1431(c) [Δmdt 25-113]
1401K GI C 251 251250	-(a) [Allact 25 0]; 25		(a) [railett 25 22	23, 2312+32(4) [
		•		
10 FAA DESIGNEE APE	PROVAL - As directed by the	ne Administrator and in accordance w	th the conditions a	nd limitations of authorization under
				cordance with established procedures. I
	to the control	TAID ADDDOVAL at the date above		
APPROVE the da	ita above RECOMMI	END APPROVAL of the data above		
FOR MA IOD BEDAIR O	D MA IOD ALTERATION.	ONLY Other data approvals	E DECLUBED I	ARE NOT REQUIRED
EXPLAIN:	K WASOK ALI EIXA ION	ONE! - Onici data approvais ELAIV	LIVEGOUVED []	ARE NOT REGUINED
Additional approvals	may be required for t	this alteration.		
			tside the U.S and/	or invloved critical or life limited parts)
11. DER/ODA NUMBER 117186691		12. PRINTED NAME Robert S Chupka		
13. TECHNICAL DISCIP	DINE	14. SIGNATURE		I 16. DATE
DER-T (Electrical Sy		Robert S Chupka		Digitally Signe 12/14/2023
				12/14/2023
		n designee recommends approval abo	ove, or when appro	oval is reserved for the FAA)
17. PRINTED NAME/FA	VA OFFICE	18. TECHNICAL DISCIPLINE		
19. SIGNATURE		20. DATE		
Ì				

	· · · · · · · · · · · · · · · · · · ·		 _
·			
		•	

DETERMINATION	FEDERAL AVIATIO	OF TRANSPORTATION ON ADMINISTRATION WITH AIRWORTHINESS S'	TANDARDS	1. PROJECT NO.(if applicable)
	AIRCRAF	T OR AIRCRAFT COMPONENT ID	ENTIFICATION	<u></u>
2. MAKE Boeing	3. MODEL NO. 737-89L	4. TYPE (Aircraft, Engine, Propelle Actuator etc.) Aircraft		APPLICANT ation Technologies, Starlink Aviation
		PURPOSE OF DATA		
6. IN SUPPORT OF:	TC/ATCSTC	PMA Major Repair X	Major Alteration	Other (Explain)
PROJECT SPECIFIC INF	ORMATION: Boeing 737-8	00 Starlink System Provisions Instal	lation	
PURPOSE OF SUBMITT	presented weight decre	rformance decrements due to additio ments ensures that the takeoff, lan O the unmodified aircraft.	nal drag caused by ding, and climb per	external antenna radomes. Use of formance in all certified phases of
		LIST OF DATA ngs, material specifications, and process purements listed in block 9. A refèrence to		other data that shows or contributes to a
7. IDENTIFICATION	8. TITLE OF DATA			
QSA-23084 Initial Release 12 December 2023		nt Decrement Due to Installation of	the SpaceX Satcom R	adomes on Boeing 737-800 Aircraft
		ineering design data only. It indica cified by paragraph and subparagraph		l above demonstrates compliance only upplicable Requirements'.
	, 25.111 Amdt 25-72, 25.11	ections and amendment levels) 3 Amdt 25-23, 25.115 Amdt 25-0, 25.1	117 Amdt 25-0, 25.11	9 Amdt 25-0, 25.121 Amdt 25-0, 25.123
10. FAA DESIGNEE APF 14 CFR, Part 183, data ii therefore	'ROVAL - As directed by the sted above, and on attached	e Administrator and in accordance wed sheets numbered, have be	rith the conditions a een examined in acc	nd limitations of authorization under cordance with established procedures. I
● APPROVE the da	ata above 🔲 RECOMME	ND APPROVAL of the data above		
EXPLAIN:		ONLY — Other data approvals 🖲 AF	RE REQUIRED 📋	ARE NOT REQUIRED
MANAGING OFF	ICE WAS CONTACTED (F	equired when approval was made or	utside the U.S and/o	or invloved critical or life limited parts)
11. DER/ODA NUMBER 367575048		12. PRINTED NAME Sky w Rudolph		
13. TECHNICAL DISCIP DER-T (Flight Analyst)	LINE	14. SIGNATURE Sky W Rudolph		16. DATE Digitally Signe 12/14/2023 12/14/2023
FAA APPR 17. PRINTED NAME/FA		designee recommends approval ab	ove, or when appro	val is reserved for the FAA)
19. SIGNATURE		20. DATE	· · · · · · · · · · · · · · · · · · ·	

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION STANDARD AIRWORTHINESS CERTIFICATE 1 NATIONALITY AND REGISTRATION MARKS 2 MANUFACTURER AND MODEL 3 AIRCRAFT SERIAL NUMBER 4 CATEGORY **BOEING 737-800** 30515 Transport N154TS 5 AUTHORITY AND BASIS FOR ISSUANCE RITY AND BASIS FOR ISSUANCE This airworthiness certificate is issued pursuant to 49 U.S.C. § 44704 and certifies that, as of the date of issuance, this aircraft has been inspected and found to conform to its type certificate and be in condition for safe operation. This aircraft meets the requirements of the applicable airworthiness standards in Annex 8 to the Convention on International Givil Aviation, except as follows: NONE 6 TERMS AND CONDITIONS Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the FAA, this airworthiness certificate is effective as long as maintenance, preventative maintenance, and afterations are performed per the applicable Federal Aviation Regulations and the aircraft is registered in the United States. FAA REPRESENTATIVE //Signed by//Phillip Beck,05:25 AM, January 14, 2024 14/Jan/2024 553275380 Any alteration, misuse, or reproduction of this certificate for a fraudulent purpose may be punishable by certificate revocation, fine, and / or imprisonment. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT PER THE APPLICABLE FEDERAL AVIATION REGULATIONS. FAA Form 8100-2 (9-2019) Previous Edition May be Used Until Depleted

- (2
Ω
m
Ϋ́
٧.
੍ਰਾ
èρ
ρ
ര
SĐ
٠-
· .
ű
Jan
₽
`
$\boldsymbol{\mu}$
J
~
N
0
N
4

U.S. Department of Transportation Federal Aviation Administration



APPLICATION FOR U.S. AIRWORTHINESS CERTIFICATE

INSTRUCTIONS - Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use attachment. For special flight permits complete sections II, VI, and VII as applicable.

Adminis	stration				CI	EKIIF	ICAI						., . ,			
	1. REG N154		TION MARI	KS		2. AIRCRA BOEING		DER'S NAME (M	lake)	3. AIRC		DEL DESIG	SNATION	4. YR. MFG 2002	FAA CODING	
I. AIRCRAFT DESCRIPTION	5. AIRCRAFT SERIAL NO. 30515			` ′				7. ENGINE MODEL DESIGNATION CFM56-7B24 Do Not Code								
- A DES	8. NUMBER OF ENGINES 9. PF 2 N/A				LLER BU	ILDER'S NAME	(Make)	10. PRO N/A	10. PROPELLER MODEL DESIGNATION 11. AIRCRAFT IS IMPORT (Check if applicable) N/A IMPORT				,			
	APPLIC					applicable ite										\Box
	A 1 B	-				CERTIFICA		e category) ppropriate items		RMAL	UTILITY	ACRO	BATIC X TR.	ANSPORT COM	MUTER BALLOON OTH	IER
	P	7	PRIMAR		NESS CE	KIIFICATE	(Спеск а	рргорпате петіз	9							
		9		SPORT (in	dicate Clas	Class) Airplane Powers			ered-Para	chute	Weight-	Shift-Control	Glider	Lighter than Air	\dashv	
		2	LIMITED				100000000	_				SUSCESSION OF THE PROPERTY OF				
		5	PROVIS	IONAL (In	dicate Cla	ss)	111	Class I AGRICULTU	IDE AND I	DEST CO	NTDOL	2 2	Class II AERIAL SUR	VEY 3	AERIAL ADVERTISING	\dashv
Ω		3	RESTRICTED (Indicate ope			ration(s)	4	FOREST (W				5	PATROLLING		WEATHER CONTROL	\dashv
STE			to be co	onducted)			0	OTHER (Spe				kl		B 8 8 8 8		\neg
GUE.							1	RESEARCH		/ELOPME	NT	2	AMATEUR B	100000	EXHIBITION	
E.							0	AIR RACING		\A#T T	IE OED	5 7	CREW TRAI	(12556)	MARKET SURVEY	\dashv
ē							0	SHOW COM	PLIANCE 8	27490		663636	•		KIT BUILT AIRCRAFT lo not meet § 103.1	\dashv
<u>ic</u>		4			(Indicate	operation(s)		OPERATING	20000	989			ort Kit-built		Ü	
CERTIFICATION REQUESTED			to be co	onducted)			8	LIGHT-SPO	RT 80					sued special light-s	port category	
8								UNMANNE) 9 <i>f</i>				ficate under § 21 DEVELOPMEN			\dashv
=							9	AIRCRAFT	91	200		ET SURVE	6.77633	EXHIBITION		\neg
									90)	CREW	TRAINING	9E	SHOW COM	PLIANCE WITH THE CFR	
			SPECIA	AL FLIGHT	PERMIT	(Indicate	2						AINTENANCE, (OR STORAGE		\dashv
		8		on to be co te Section			3	EVACUATE OPERATIO					ATED TAKE-OF	F WEIGHT		\dashv
				ble on reve		3	4	DELIVERIN					5		ON FLIGHT TESTING	
	C 6		ALII TIDI E	AID\M/ODT	HINESS (PEDTIFICAT	6 (Check	CUSTOMER					ted" as applicable	۵۱		\dashv
	SEC. 199 SEC. 1997	-				icate of airc			oted Oper	ation an			HECK HERE	"		\dashv
	NAME FALCON AVIATION HOLDINGS LLC								RESS OCKET F	RD, HAWT	HORNE, Califor	mia, 90250-6844,	United States			
	B. AIRCE	AFT CEI	RTIFICATION	N BASIS (Ch	eck applicab	le blocks and	complete it	ems as indicated)								
SATION	AIRCRAFT SPECIFICATION OR TYPE CERTIFICATE DATA SHEE A16WE REV-73				SHEET (G	ive No. and Revision No.) AIRWORTHINESS DIRECTIVES (Check if all applicable ADs are compiled value of applicable ADs are compiled value). All SUPPLEMENT available in the biweekly series as of the date of applications.				f the						
NER'S CERTIFICATION		NRCRA	FT LISTING	G (Give pa	ge numbe	r(s))				SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorposition of ST00983SE-D, ST03450NY, ST02929AT			' '			
:R'S							CE RECORDS			EVOCOMENTAL ONLY TO A TOTAL OF THE STATE OF						
III. OWNI		HECK I 4 CFR 9	F RECORE 11.417	OS IN COM	//PLIANCE	******	43,531	RFRAME HOUF	E HOURS EXPERIMENTAL ONLY (Enter hours flown since last certificate issued or renet				since last certificate issued or renewo	9d)		
=	accorda	nce with		f the Unite											I Aviation Administration in rworthy and eligible for the	
	DATE C	F APP	LICATION		NAME AN	ND TITLE (F	Print or typ	pe)			[5	SIGNATURI				コ
		Jan	04, 2024		Perez	, Gary B	ladimir	(Director O	of Aviati	on)		//Signed l	by//Gary Pere	z,12:29 PM, Jar	nuary 04, 2024	
չ	A. THE	AIRCR.	AFT DESC	RIBED AE	OVE HAS	BEEN INS	PECTED						only if 14 CFR 21			コ
N AGENO TION	2	14 C	R part 121	1 CERTIFI	CATE HOI	_DER (Give	No.) 3	CERTIF	ICATED N	MECHANI	C (Give C	Certificate N	o.) [6 X	61DR503D	REPAIR STATION (Certificate N	ło.)
INSPECTION AGENCY VERIFICATION	5	AIRC	RAFT MAN	NUFACTU	RER (Give	name)										
N. SN.	DATE	Jan	08, 2024		TITLE Gary F	Perez (Dii	rector c	of Aviation ,S	pace E	x Falco		SIGNATURI	Ξ			
¥.			licable bloo			or VII meets	require					QUESTED	LOE CURRENT	AIDWODTI IIVIECO	CERTIFICATE	\exists
FATI			r a special				NSPECT		AIVIE		ESIGNEE		OF CURRENT	AIRWORTHINESS	CERTIFICATE	ᅱ
FA SEN1			conducted			CERT	TIFICATE	HOLDER UNDE	R	14 CFF	R part 65	1	4 CFR part 121 o	or 135 14 C	FR part 145	
V. FAA REPRESENTATIVE CERIFICATION	DATE Ja	an 14, 2	024	MIDO/FS WP07	DO OFFIC	4	AND NO.	ECTORS SIGNA Phillip Beck (5532 I by//Phillip B	75380)				FAA INSPE SIGNATUR LEON L K	E	Digitally signed by LEON L KELLEY Date: 2024.01.15 10.00:08-07'00'	

Form Approved OMB No. 2120-0018 Expires: June 30, 2024

Г		A. MA	NUFACTURER									
	5 LING	NAME					ADDF	RESS				
	ES	B. PR	ODUCTION BASIS	Check applicable ite	m)							
	늉	П	PRODUCTION CER	RTIFICATE (Give pro	duction certificate number)							
	N F		TYPE CERTIFICAT									
	UCTIO		OTHER									
	B. PRODUCTION BASIS (Check applicable item) PRODUCTION CERTIFICATE (Give production certificate number) TYPE CERTIFICATE OTHER C. GIVE QUANTITY OF CERTIFICATES REQUIRED FOR OPERATING NEEDS											
	<u>-</u>	C. GI	VE QUANTITY OF C	ERTIFICATES REC	UIRED FOR OPERATING NEEDS							
	_	DATE		NAME AND TITLE	(Print or type)				SIGNATURE			
+		A DE	SCRIPTION OF AIR	CDAET								
			STERED OWNER	OIVAI I			ADDF	ESS				
		T.E.O.	STEREB SWILL				7,001					
		BUILE	DER (Make)				MOD	EL				
		SERIA	AL NUMBER				REGI	STRATI	ION MARK			
									_			
	<u>.</u>		SCRIPTION OF FLI	GHT	CUS	TOMER DEM		RATION	N FLIGHTS (Check if app	licable)		
		FROM	1				ТО					
	듈	1.04					חבות	DTUDE	DATE	Teuesties		
	년 본	VIA					DEPA	RIURE	E DATE	DURATION		
		C. CR	EW REQUIRED TO	OPERATE THE AIR	CRAFT AND ITS EQUIPMENT							
			PILOT	COPILOT	FLIGHT ENGINEER	OTHER (S	Specify)				
	<u> </u>	D. Th	E AIRCRAFT DOES	NOT MEET THE A	PPLICABLE AIRWORTHINESS REQ	UIREMENTS	AS FO)LLOW:	S:			
	¥											
	ER											
	ᇤ											
	ES (
	BOS											
	PUR											
	RMIT											
	IAL FLIGHT PERMIT PURPOSES OTHER THAN PRODUCITON FLIGHT TEST	F TH	F FOLLOWING RES	STRICTIONS ARE C	ONSIDERED NECESSARY FOR SA	FE OPERATI	ATION (Use attachment if necessary)					
	널						(,,			
	ALF											
	VII. SPEC											
					the registered owner (or his agent) of ode 44101 <u>et seg</u> , and applicable Fed							
		DATE		NAME AND TITLE		orar / Wation	rtoguit		SIGNATURE		- Ingili dosoribod.	
		DATE		NAME AND TITLE	(Print or type)				SIGNATURE			
╁												
NO.		×	A. Operating Limita applicable.	ations and Markings	in Compliance with 14 CFR Section 9	1.9, as	П	G. Sta	atement of Conformity, FAA Form	n 8130-9 (Attach when re	equired)	
IATA	۶		арриодые.									
ME	No ON		B. Current Operatir	ng Limitations Attach	ed			H. For	reign Airworthiness Certification	for Import Aircraft (Attach	n when required)	
S	USE							I. Prev	vious Airworthiness Certificate Is	sued in Accordance With	1	
S.S.H	NE.		C. Data, Drawings,	Photographs, etc. (A	Attach when required)		×					
	ESIG							14 CFF	R Section 21.329	CAR	(Original attached)	
YOR.	AA/D	×	D. Current Weight	and Balance informa	tion Available in Aircraft			J. Cur	rent Airworthiness Certificate Is	sued in Accordance With		
AIRV	(FAA/DESIGNEE USE ONLY)	П	E. Major Repair and	d Alteration, FAA Fo	rm 337 (Attach when required)		×	14 05	R Section 21.183(d)(2)		(Cany attached)	
									ht-Sport Aircraft Statement of Co		(Copy attached) 0-15 (Attach copy when	
L		×	F. This Inspection F	recorded in Aircraft	records			require			- 1	

	Conformity Inspection Rec	ord	Project Number, Checklist Stand	TIA/Request Date: dard Airworthiness	DMS 5532753	380-2024-1	2. SHEET of Sheets
•	cant/Manufacturer: Aviation LLC		T Oncomet Otani	4. Beginn Jan 5 2	ing Date:	500 202+1	5. Ending Date: JAN 14, Ze Zd
6. Mode B737-	l: 300 N154TS s/n 30515 TT: 43528: TC:	26665		7. Inspected By: Phillip Beck. 5532	75380	Whis Tode	PR 553275300-20
8. Item No.	9. Nomenclature of Item Inspected	10. Drawing, Doc etc.	ument, Specification,	11. Revision and Date	12. No. of Iter	ms Determined UNSAT.	13. Comments
1	Application and Program letter if applicable	8130-6 FSE program	OO AWC		xx		AWC code 01042024-168
2	Agent letter	If not the aircr			NR		
3	Identification numbers		-		X		
4	Data Plates	AF 89101	11/893661		44		
5	Registration	<u> </u>	· cy p ex ·		xx		8/6/2023
6	Hard time controlled items or OC items requiring an inspection	Items requiring	g an inspection for the Program		xx		
7	Life Limits	Ultimate Life L components o	imited		xx		
8	Airworthiness Directives	The state of the s	es/ accessories		xx		
9	Repair file for structures	File of known and FAA appre	structural repairs		xx		
10	Placards	As per the Flig	ht or pilot		V		
11	Alterations		for avionics and		XX		3 STCS , 1 (ONE) 8110-3 ALTERATION
12	Weight and Balance Equipment list	-		-	xx		
13	Instrument markings				V		
14	Flight Manual and supplements	Starlin	LK SUPP		XX		FAA Approved
15	ELT				xx		
16	Transponder and Altimeter certification	Check ADSB	compliance		xx		
17	Log Books complete	All required rel			CXX Y		Citadel Aviation release
18	Inspections type and release to FAA Approved Inspection Program	Final release binspections pe	y recording the rformed		C10/12		3
19	Aircraft original Certification & Complinace to current TCDS	Export to Chin	a and retruned		х		

	Conformity Inspection Reco	ord 1. Project Number, TIA/Request Date:					2. SHEET of Sheets		
3. Applica Falcon	ant/Manufacturer: n Air			4. Beginr	ning Date:		5. Enging Date: 3. An 14, 2020		
6. Model B 737-8	: 800 N154 T S			7. Inspected By: Phillip Beck DAR	T553275386	the)		
8. Item No.	9. Nomenclature of Item Inspected	10. Drawing, Doc etc.	ument, Specification,	11. Revision and Date	12. No. of Iter	ns Determined UNSAT.	13. Comments		
1	C/W Doc 1 Part 25 Conformity				77		Jan 14		
2	AD 2020-16-51	Eng Ble	e)			188	7 day insp Due		
3	Resistration Numbers		PATH 45			**	Numbers are 11" his		
4	Rowl Overhead BIN	EL4 (Por-	table) missin	u		XY	8		
5	CREW Storace		Able)Missin			44			
6	Fuel Panel in KG		<i></i>	-1	Cockpit.	strujes.	and Fueling Panel		
7			\	au Kg	T .	1 1			
8	Reft Above	A.D. Con	uplied with	th on site	, 87	J			
9	Ref #3 Above	l	Y	StAlledo	1	x sat	istactory -		
10	Ret # 4		_	OFF CONFU	-		J		
u	ReF#5		Ed intep?		77		Confirmed Trainstall		
			<u> </u>				#-4 25 JAN 14		
							i		
		E	ND	amplete	JAN 1	4,2024			

		ECKLIST Doc 1 Aircraft: 13737-800	10			4 JAn	or other special data
AR	SUBJECT	REMARKS OR DISCREPANCY	SAT	Unsatf	Corctd	Excptn	
25.73	3 Tires	speed and ply rating I/A/W Flight Manual					
25.77	1 PILOT COMPARTMENTS	Control access and work station comfort	~				
25.77	2 COCKPIT DOORS	Lock and exit if door is jammed security door	<u></u>				
25.77	3 PILOT COMPARTMENT VIEW	clear view and visibility to instruments	V				
25.77	S WINDSHIELD AND WINDOWS	visibility thru alternate w/s	V				
25.77	7 COCKPIT CONTROLS	location and movement indicators, identifiable	V				
25.78	B DOORS	operation, locking, markings	<u> </u>				
25.78	S SEATS,BERTHS,AND BELTS	ratings,padding, clearence belts and restraints	v		<u> </u>]
25.78	7 STOWAGE COMPARTMENTS	weights,doors, cargo light protection	レ				
25.78	9 GALLEY COMPARTMENTS	restraint devices	レ				
25.79	1 PAX INFO SIGNS	no smoking, seat belts, lav placards, seat placards FA notification	۰				1
25.79	FLOOR SURFACES	non slip	~]
25.80	1 DITCHING	ditching certification TCDS	<u>ا</u>				_
25.80	3 EMERGENCY EVACUATION	evacuation certification for pax number approved LOPA	<u>ب</u>]
25.80	5 EMERGENCY EXIT FLT CREW	Evacuation certification for flight crew	V				
25.80	7 EMERGENCY EXIT DOORS	types and numbers	1				
25.80	SEMERGENCY EXIT ARRANGEMENT	types of doors, markings, cooper tocks and placards	ار ا	1]
25.810	EMERGENCY ESCAPE ASSIST	slides,ropes, wing markings.	1/				
25.81 ⁻	1 EMERGENCY EXIT MARKING	markings on exits Interio Exterior	-				
	Z EMERGENCY LIGHTING	path lights,sign lights,exterior lights	<u>س</u>				j
25.813	3 EMERGENCY EXIT ACCESS	access rules and placards	<u>ب</u>]
25.815	AISLE WIDTH	aisle widths per pax load /5/22 /6/72 /18/77	<u></u>				j
25.817	NUMBER OF SEATS ABREAST	one aisle no more than three per side Center as per LDPA approval				253	
25.819	LOWER LEVEL GALLEYS	rules for lower galleys	NA				
25.83	I VENTILATION	ventilation rules for cabins and cockpits	<u>.</u>]
25.841	PRESSURIZED CABIN DETAILS	pressure requirements and control requirements	<i>u</i> /				ļ
25.851	I FIRE EXTINGUISHERS	types and locations]
25.853	COMPARTMENT INTERIORS	burn certifications	~]
25.854	LAV FIRE PROTECTION	smoke detectors, independent fire extinguisher	~				
25.855	CARGO COMPARTMENTS	construction	<u></u>]
25,857	CARGO COMPARTMENT CLASS	class requirements					Ĭ
25.858	CARGO FIRE DETECTION	fire detection system lights and testing by crew	V]
25.971	FUEL TANK SUMPS	sump requirements	1				
25.973	FUEL TANK FILLER CONNECTION	drains , seals, and grounding	V				

Doc 1 PART 25 CONFORM

	T		1 7		
25.114	1 POWERPLANT CONTROLS	location,arrangement,and movement	1		
25.114	2 AUXILIARY POWER CONTROLS	starting, stopping cockpit controls	V		
25.114	3 ENGINE CONTROLS	type,arrangement, controls	1		
25.115	5 REVERSR THRUST SETTINGS	operation and prevention of operation			
25.116	1 FUEL JETTISON CONTROLS	guarded	NA		
25.116	5 ENGINE IGNITION SYSTEMS	requirements	V		
25.119	FIRE EXTINGUISHER SYSTEMS	requirements	1		
25.120	3 FIRE DETECTOR SYSTEM	requirements			
25.130	3 FLIGHT & NAVIGATION	type and requirements			
25.130	POWERPLANT INSTRUMENTS	type and requirements	~		
25.130	7 MISC.EQUIP	2 sources of electric,to nav , 2 com, circuit breakers	V		
25.132	1 ARRANGEMENT OF INSTRUMENTS	panel layout			
25.132	WARNING LIGHTS	colors for types	V ,		
25.1323	AIRSPEED INDICATING SYSTEM	pitot heats,tubes,			
25.1325	STATIC PRESSURE	types,SDCs,alternate systems	1		
25.1326	PITOT HEAT INDICATORS	warnings	V		
25.1327	MAGNETIC COMPASS	installation requirements	1		
25.1329	AUTOMATIC PILOT SYSTEM	controls,locations,disconnects,warnings	~		
25.1331	INSTRUMENTS USING POWER SPLY	indicators,switching devices,loss of power indicator	V		
25.1333	INSTRUMENT SYSTEMS	requiremments for each station,switching	~		
25.1335	FLIGHT DIRECTOR SYSTEM	mode indicator	V		
25.1337	POWERPLANT INSTRUMENTS	units of measure, indicating, required Instruments	/		
25.1351	ELECTRICAL SYSTEMS	generators,power,indicators, switches	V		
25.1353	BATTERY AND ELEC. SOURCES	batteries,vents,indicators	2		
25.1355	DISTRIBUTION SYSTEM		~		
25.1357	CIRCUT PROTECTIVE SYSTEMS		V		
25.1381	INSTRUMENT LIGHTS	requirements	V		
	LANDING LIGHTS	requirements , switches	L		
25.1385	POSITION LIGHTS	colors ,locations,types	V		
25.1401	ANTI COLLISION LIGHTS	requirements			
25.1403	ICE DETECTION LIGHT	requirements	V		
25.1411	SAFETY EQUIP GENERAL	required equipment	~		
25.1415	DITCHING EQUIPMENT	life raft requirements for number of personnel vests	~		
	ICING PROTECTION	if certificated requirements	-		
25.1421	MEGAPHONES	installation requirements hold downs	V		
	PUBLIC ADDRESS	requirements	V		
25.1439	PBE	requirements locations and quantity	V		
	OXYGEN SYSTEMS	requirements quantity determination by crew	~		
				-l- ·- l	

25.1447	PAX OXYGEN	requirements			
25.1457	VOICE RECORDERS	requirements	V		
25,1459	FLIGHT RECORDERS	requirements			
25,1541	MARKINGS AND PLACARDS	requirements	1		
25.1543	MARKINGS INSTRUMENT	requirements	v		
25.1545	AIRSPEED LIMITATION MARKING	easily read by the crew	V		
25.1547	MAGNETIC DIRECTION INDICATOR	calibration cards	~		
25.1549	POWERPLANT MARKINGS	marking cotors	~		
25.1551	OIL QUANTITY MARKINGS	type of markings	V		
25.1553	FUEL QUANTITY MARKINGS	marking requirements	~		
25.1555	CONTROL MARKINGS	color, type and style of marking			
25.1557	MISC MARKINGS	bag compartment placards, fuel filler, fuel valves, oil filler	V		
25.1561	SAFETY EQUIPMENT	markings for locations of emergency equipment	V		
25,1563	AIRSPEED PLACARD	max speeds for flaps,gear,			
25.1581	FLIGHT MANUAL	requirements + Approved Sugar	W		
art 45	DATA PLATES A/F & ENG				
art 47	REGISTRATION		48		
Part 47	AIRCRAFT EXTERIOR ID		NR		
Additional	info or notes and remarks				
		ON SITE : LAKE CHAIL	es - Citades	Luittion	
		a			
		complete JAN 14, 202	<u>u</u>		
		- N			

EXPERIMENTAL PROGRAM				
1. Registered Owner (as show NAME: Falcon Aviation Holdings, LLC	A. 12	e of Aircraft Regi DDRESS: 101 Crenshaw Bl awthorne, CA 902	vd.	
2 4: CD :::				
2. Aircraft Description Registration Mark: N154TS	Aircraft Buile	lar Pagina		Year of Mfr.: 2002
Registration Wark. 1913415	Ancian Bun	ier. Boeing		1 car of Wiff 2002
Serial Number: 30515	Aircraft M	odel Designation:	737-89L	
3. Describe program purpose	for which the a	ircraft is to be us	ed. 14 CFR	21.193(d)(1)
Certification test of the SpaceX effort on a Boeing 737-800.	Starlink Aviatio	n System installat	ion to suppor	t the 337 major alteration
List estimated flight hours requi	red for program		Hours:	10
List estimated number of flights		gram	No. Flig	
List estimated duration for progr	rams		No. Day	vs: 30
4. Describe the area over which CFR 21.193(d)(3) The flights will take place within airport, limited to US airspace of agreed area needed by the FAA weather condition of the area at this aircraft shall not be operated. All Flight operation for vibration conditions for EMI/RFI flight te	n a geographical only as directed be Flight Test Pilot the time planned tover densely per and Buffeting	radius area of 750 y the local Air Tradius and also bath of the required for the required for the reas or in will be conducted	ONM of KCV affic Control sed on the fli flight testing. in congested in day VMC	VF, Chennault International Authority based on the ght-testing requirements an Except for landing takeoffs airways. weather conditions. Weath
5. Describe the aircraft config of the aircraft)	uration (Attacl	three-view drav	vings or thre	e dimensional photograph
The aircraft is in accordance wit installed alteration, with the foll	T .	,	,	* *
Modification Description		Remark		and the first of the second
Installation of Starlink Aviation	n System	Certification	flight test to	show compliance
6. Date:	7. Name	and Title:	Sign	ature:
11/30/2023	Bill Berge	n, Agent	1/30	War

	UNITED STATES DEPARTMENT OF TRANSPORTATION-F SPECIAL AIRWORTH	EDERAL AVIATION ADMINISTRATION								
CATEGORY/D	ESIGNATION Experimental									
PURPOSE Re	search and Development									
MANU-	NAME N/A									
FACTURER	ADDRESS N/A									
FLIGHT	FROM N/A									
FLIGITI	TO N/A									
N154TS	MODEL 737-800	SERIAL NO. 30515								
BUILDER BOI	EING	DATE OF ISSUANCE 13/Dec/2023								
the conditions ;	prescribed in 14 CFR, Part 21, Section 21.181 or 21.2	date of 31/Dec/2023, this airworthiness certificate is effective under 17.								
SIGNATURE OF FAA		DESIGNATION OR OFFICE NO.								
2023	//Signed by//Bill P Mcdonald,02:59 PM, December 13, 677576439 2023									
fraudulent purpose of th		04 and Title 14 Code of Federal Regulations. Any alteration, misuse or reproduction for a // or imprisonment. THIS PORTION OF THE CERTIFICATE MUST BE DISPLAYED IN								

--Conditions and Limitations—

- 1. This aircraft does not meet the airworthiness standards of Annex 8 to the Convention on International Civil Aviation. Operations in airspace outside of the United States will require the permission of the applicable foreign authority. That permission must be carried aboard the aircraft together with this U.S. airworthiness certificate and, upon request, be made available to an FAA inspector or the applicable foreign authority in the country of operation. Operations may be further restricted by the applicable foreign authority. This may include not allowing use of an airport, requiring specific routing, and restricting flight over specific areas. The operator must comply with any additional limitation prescribed by the applicable foreign authority when operating in its airspace. (1)
- 2. These operating limitations do not provide any relief from any applicable law or regulation. This aircraft must be operated per applicable regulations and the additional limitations prescribed herein. Note that a clearance from air traffic control (ATC) is not authorization for a pilot to deviate from any rule, regulation, operating limitation, or minimum altitude, or to conduct unsafe operation of the aircraft. If ATC issues a clearance that would cause a pilot to deviate from a rule, regulation, or operating limitation, or in the pilot's opinion, would place the aircraft in jeopardy, it is the pilot's responsibility to request an amended clearance. These operating limitations are a part of FAA Form 8130-7 and are to be carried in the aircraft at all times and to be available to the pilot in command of the aircraft. (2)
- 3. This special airworthiness certificate is not in effect during public aircraft operations (PAO). Concurrent public/civil operations are not permitted; the aircraft cannot be operated as a civil aircraft and as a public aircraft at the same time. No weapons or special military mission systems may be added to the aircraft. This airworthiness certificate is not in effect during flights related to providing military services (that is, air combat maneuvering, air-to-air gunnery, target towing, electronic countermeasures simulation, cruise missile simulation, and air refueling). These activities are inherent military, not civil activities. The FAA makes the distinction between the authorized flights for experimental purposes, and PAO. Before operating this aircraft under this special airworthiness certificate following a PAO, the aircraft must be returned to the condition and configuration at the time of inspection for the issuance of this airworthiness certificate. The operator must have written procedures for returning the aircraft to the civil configuration. This action must be documented in the maintenance records. The maintenance records and entries must clearly differentiate between a civil experimental flight per this certificate and any other flights. (3)
- 4. Application to amend this certificate must be made to the local Flight Standards District Office (FSDO) or Manufacturing Inspection District Office (MIDO). (4)
- 5. The pilot in command must hold Airplane category and Multi Engine Land class certificate or privilege. The pilot in command must hold all required ratings or authorizations and endorsements required by part 61. (7)
- 6. The pilot in command must hold-
 - (a) An appropriate type rating (if one has been established), or
 - (b) An experimental aircraft authorization, by make and model, on their pilot certificate; or
 - (c) A temporary letter of authorization (LOA) issued by an FAA Flight Standards Operations Inspector. (8)
- 7. Additional required flightcrew members must hold the appropriate airman certificate, that is, pilot or flight engineer. Pilots must hold Airplane category and Multi Engine Land class certificate. (10)

Registration Mark: N154TS Aircraft Make and Model: BOEING 737-800 Aircraft Serial Number: 30515 Issuance Date: 13/Dec/2023

- 8. When filing a flight plan, the experimental nature of this aircraft must be listed in the remarks section. (11)
- 9. This aircraft must not be used for towing, including, but not limited to glider towing, banner towing, target towing, or towing electronic receivers or emitters. This aircraft must not be used for intentional parachute jumping. (13)
- 10. If aircraft, engine, or propeller operating limitations are exceeded outside of planned test conditions, an appropriate entry will be made in the maintenance records. (14)
- 11. No person may operate this aircraft unless it is maintained per an inspection program meeting the scope and content described in § 91.409(f). The operator must select and identify in the aircraft maintenance records one of the following programs for the inspection of the aircraft:
 - (a) For type-certificated aircraft, a current inspection program recommended by the manufacturer; or
- (b) For former-military aircraft, an inspection program recommended by the manufacturer or North Atlantic Treaty Organization (NATO) military service: or
 - (c) An FAA-approved inspection program.

Inspections must be recorded in the aircraft maintenance records showing the following, or a similarly worded, statement: "I certify that this aircraft has been inspected on [insert date] per [identify applicable inspection program] and found to be in a condition for safe operation."

Note: To extend an inspection interval, the owner/operator must submit a request for that extension with supporting documentation and data to the local FSDO and obtain concurrence from that FSDO. (15)

- 12. Only FAA-certificated repair stations, FAA-certificated mechanics with appropriate ratings, or a manufacturer as authorized by § 43.3 may perform inspections required by these operating limitations. (19)
- 13. The aircraft may not be operated unless the replacement for life-limited articles specified in the applicable technical publications pertaining to the aircraft and its articles are complied with in one of the following manners:
- (a) Type-Certificated Products: Replacement of life-limited parts required by § 91.409(e) applies to experimental aircraft when the required replacement times are specified in the U.S. aircraft specifications or type certificate data sheets.
- (b) Non-Type-Certificated Products: All articles installed in non-type-certificated products operated under an airworthiness certificate issued for an experimental purpose, in which the manufacturer has specified limits, must include in their program an equivalent level of safety for those articles. These limits must be evaluated for their current operating environment and addressed in the approved inspection program. All articles installed in non-type-certificated products in which the manufacturer has specified limits, must include in their program an equivalent level of safety for those articles. The article must be inspected to ensure the equivalent level of safety still renders the product in a serviceable condition for safe operation. (20)
- 14. For aircraft originally incorporating fatigue life recording systems, the owner/operator must maintain and use the system as prescribed by the aircraft manufacturer and comply with the manufacturer's fatigue life limits. (21)
- 15. Enhanced Flight Vision System (EFVS) operations for the purpose of research and development and/or showing compliance with regulations are not authorized if any component associated with the instrument approach procedure being flown, or any component of the approach lighting system associated with the instrument approach, is inoperative. (40)
- 16. Kinds of operations authorized:

Day VFR flight operations are authorized. (47)

- 17. Instrument flight operations are authorized if the instruments specified in § 91.205(d) are installed, operational, compliant with the performance requirements of, and maintained per the applicable regulations. The pilot in command must have a method to comply with the § 91.319(c) prohibition from operating over densely populated areas or in congested airways. All maintenance or inspection of this equipment must be recorded in the aircraft maintenance records and include the following items: date, work performed, and name and certificate number of person returning aircraft to service. (50)
- 18. All flights must be conducted within the geographical area described as follows base of operation is Citadel Completions LLC, Chennault International Airport (KCWF), Lake Charles, LA. All flights will be conducted within a geographical radius of 750nm of KCWF and is limited to U.S. airspace only as directed by the local Air Traffic Control Authority. All flight testing for vibration & Buffeting will be conducted VMC, day only.

Flight(s) under day/night IMC weather conditions are only authorized for operations normally conducted under Standard-Airworthiness for relocation purposes only. (note that there may be areas within the geographical area that are not suitable for operation).

Flights for maintenance, as defined in paragraph 1.1, of the aircraft are permitted outside the defined area. (53)

19. Flight over a densely populated area or in a congested airway is authorized per § 91.319(c) only for the purpose of takeoff and landing.

The area on the surface described by the term "only for the purpose of takeoff and landing" is the traffic pattern.

1,2	
Ω	
Ö	
ъ	
ď	
Ò	
ted	
Ā	
DG	
De	
ŏ	
Ğ	
Υ.	
N	
20	
~	
N	
Õ	
02	
ω̈	
-	

U.S. Department of Transportation Federal Aviation Administration



APPLICATION FOR U.S. AIRWORTHINESS CERTIFICATE

INSTRUCTIONS - Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use attachment. For special flight permits complete sections II, VI, and VII as applicable.

					-		O , ()	_													
FT NO	REGISTRATION MARKS N154TS				1 ' ' 1				3. AIRCRAFT MODEL DESIGNATION 4737-800				4. YR. I 2002	4. YR. MFG 2002		FAA CODING					
I. AIRCRAFT DESCRIPTION	1			` ′ ′			7. ENGINE MODEL DESIGNATION CFM56-7B24							Do Not (Code						
.i. DE	8. NUMI 2	BER C	F EN	GINES		. PROPEL N/A	LER BU	ILDER'S N	NAME (M	ake)	10. PRO N/A	OPELLER I	MODEL	DESIGN	ATION		CRAF	T IS IMPOF	RT (Che	ck if appli	cable)
	APPLIC/			EREBY MADE F																	
	A 1	_		DARD AIRWOR						NOF	RMAL	UTILITY	ACF	ROBATIC	Т	RANSPORT	С	OMMUTER	BAI	LOON	OTHER
	В	20100000	_	AL AIRWORTH	INESS CERT	TIFICATE ((Check a	ppropriate	items)												
		7	_	RIMARY	r (0)	,		la: i		15			1			Loru		lieri i	u A:		
		9	_	GHT-SPORT <i>(in</i> MITED	aicate Ciass,	<i>'</i>		Airpla	ne	Powe	ered-Para	ichute	vveigr	ht-Shift-Co	ontroi	Glider		Lighter	ınan Air		
		5	_	ROVISIONAL (In	dicate Class)		Class I					2	Clas	e II						
		-	Ť	1011010111112 (111	arouto oraco,	<u> </u>	11		ULTURE	AND	PEST CO	NTROL	2	_	IAL SUF	RVEY	3	AERI	AL ADV	ERTISIN	G
CERTIFICATION REQUESTED		3		ESTRICTED (In be conducted)	dicate opera	tion(s)	4	FORES		ife cons	servation)		5	_	ROLLIN		6			ONTROL	
Ğ			\top				1 ×				/ELOPME	ENT	2	AM	ATEUR	BUILT	3	EXHIE	BITION		
ZEC							4	AIR RA	CING				5	CR	EW TRA	INING	6	MARI	KET SUF	RVEY	
NO							0	SHOW	COMPL	IANCE	WITH TH	IE CFR	7	OPI	ERATIN	G (primary	catego	ry) KIT BU	ILT AIRO	CRAFT	
ΨĬ										8.	A	Existing :	aircraft v	without ar	airwort	hiness certi	ficate 8	& do not me	et § 100	3.1	
FIC.		4 :		XPERIMENTAL	(Indicate op	eration(s)		OPER,		88	2000			Sport Kit-							
R			10	be conducted)			8	LIGHT	-SPORT	80	3		Operating Light-Sport previously issued special light-sport category								
8														ertificate u							
=							9	UNMANNED AIRCRAFT		9 <i>P</i> 9E	200	MARKE		ND DEVE	9D		HBITIC	NI.			
							9	AIRCE	KAF I	90	99.2	CREW			9E			MPLIANC	E WITH	THE CER	\rightarrow
			\top				1	FERR	Y FLIGH	800,900	200				B 10.10.000			JIVII LIANO	L VVIIII	THE OH	`
				PECIAL FLIGHT			2		FERRY FLIGHT FOR REPAIRS, ALTERATIONS, MAINTENANCE, OR STORAGE EVACUATE FROM AREA OF IMPENDING DANGER												
		8		peration to be co amplete Section		en	3	OPERATION IN EXCESS OF MAXIMUM CERTIFICATED TAKE-OFF WEIGHT													
				oplicable on reve			4 DELIVERING OR EXPORTING 5 PRODUCTION FLIGHT TESTING							TING							
						DT:510.4T	6					STRATION FLIGHTS ation" and "Standard" or "Limited" as applicable)									
	C 6								Restricte	a Oper	ation" an			mitea" as CHECK I		oie)					
	A. REGISTERED OWNER (As shown on certificate of aircraft registration) NAME									ADD	RESS	, , ,	01120111								
		N AVI	ATIO	N HOLDINGS L	.LC							OCKET RI	D, HAW	/THORNI	E, Califo	ornia, 9025	0-684	4, United S	States		
	D AIDCD	AET CE	DTIEI	CATION BASIS (Ch	ook analisahla	blocks and s	omnloto itr	me ae india	atad)												
-										(a.)	$\overline{}$	AIRWORT	HINESS [DIRECTIVE	S (Check	if all applicat	ole ADs	are complied	with and o	give the nu	mber of the
CATION		V/A	1 31 6	.cii icanon on i	TI E CENTILIC	AIL DAIA	FA SHEET (Give No. and Revision No.)			last AD SUPPLEMENT available in the biweekly series as of the date of application) 2023-24											
WNER'S CERTIFICATION	II II.	IRCRA V/A	AFT L	ISTING (Give pa	age number(s	s))				SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated) N/A											
۶.s (C. AIRC	RAFT	OPE	RATION AND M.	AINTENANC	E RECOR	RDS					-									
Ä	다	HECK	IF RE	CORDS IN COM	APLIANCE V	VITH T	OTAL AI	RFRAME	HOURS				ς E>	XPERIME	NTAL C	NLY (Enter	hours flo	wn since las	t certificati	e issued or	renewed)
ο				-			43,528						3 0								
≝	D CERI	TIFICA	TION	I hereby cert	ify that I am t	the registe	red owne	er (or his a	gent) of t	he airc	raft descr	ibed above	that the	e aircraft	is regist	ered with th	e Fede	eral Aviation	n Admini	istration i	n
	accordan	ce wit	h Title	49 of the Unite																	
	airworthir	ness c	ertific	ate requested.																	
	DATE O	F APP	LICA	TION	NAME AND							SI	GNATU	RE							
		Dec	01, 2	2023	bergen,	william	ı (Ager	nt)				//	Signed	d by//Wi	lliam B	ergen,06	:54 P	M, Nover	nber 3	0, 2023	
>	A. THE	AIRCR	AFT	DESCRIBED AE	OVE HAS B	EEN INSP	ECTED	AND FOU	ND AIRV	VORTH	IY BY: (C	omplete thi	s sectio	n only if 1	4 CFR 2	21.183(d) a	pplies)				
INC		14 C	FR pa	art 121 CERTIFI	CATE HOLD	ER (Give	No.)	CE	ERTIFIC <i>A</i>	ATED N	/IECHANI	C (Give Ce	rtificate	No.)		CERTIFI	CATE	REPAIR S	OITATE	V (Certifi	cate No.)
AGE	[4]	1					3								6						
N A		AIR	RAF	T MANUFACTU	RER (Give n	ame)								10		1					
INSPECTION AGENCY VERIFICATION	5	7.41.00	2100	1 107410171010	NEN (ONC II	ame)															
INS!	DATE	-			TITLE							sı	GNATU	IRE							
≥.																					
	(Check A	11 or	nlicah	le block items A	and R1				T X	THE	CERTIFIC	CATE REQ	UESTF	D							
<u> </u>				raft described in		VII meets	requirem	ents for	4			OR MODI			JRREN1	AIRWOR	THINES	SS CERTIF	ICATE		-
ATAT				pecial flight pern	nit under	FAA IN	SPECT	OR	poptabl			ESIGNEE									
SEN ICA	Section \	/II was	conc	lucted by:		CERTI	IFICATE	HOLDER	UNDER		14 CFF	R part 65		14 CFR	part 121	or 135	14	CFR part	145		
. Y. E.	DATE		_	MIDO/FS	DO OFFICE						DESIGN	EE'S SIGN	ATURE			ECTOR'S	CERTIF	ICATION I	ILE RE	VIEW	7
V. FAA REPRESENTATIVE CERIFICATION	De	c 14, 2	2023	CMS.	AIR-862	4		Bill P Mcdo			0 444 5		0 0000		GNATU		10	: Digitally	signed by He	eather M Calvi	,
_				,			/Signed	oy//Bill P	ivicaona	ıa,11:2	U AIVI, D	ecember 1	o, 2023		eatne	r M Calvi	11	Date: 200	23.12.18 12:4	eather M Calvi 1:10 -06'00'	

Form Approved OMB No. 2120-0018 Expires: June 30, 2024

	A. MA	ANUFACTURER									
_o	NAM	=			ADD	RESS					
Ž L											
Ĕ	B. PF	RODUCTION BASIS	(Check applicable ite	m)							
듈		PRODUCTION CER	RTIFICATE (Give pro	duction certificate number)							
N F	一	TYPE CERTIFICAT	·								
CTIO	OTHER										
ngo											
8.	C. G	IVE QUANTITY OF C	CERTIFICATES REC	UIRED FOR OPERATING NEEDS							
>	DATE		NAME AND TITLE	(Print or type)			SIGNATURE				
	A. DE	SCRIPTION OF AIR	CRAFT								
	REGI	STERED OWNER			ADD	RESS					
	DI III I	DER (Make)			MOD						
	BOIL	JER (Wake)			IWICD	EL.					
	SERL	AL NUMBER			REG	STRAT	TION MARK				
	02.11.										
1_	B. DE	SCRIPTION OF FLI	GHT	CUSTOMER D	I EMONST	RATIO	N FLIGHTS (Check if applicable)				
TESI	FROM	v1			то						
上											
Ę	VIA				DEP	RTURI	E DATE DURATION				
P											
DOC	C. CF	REW REQUIRED TO	OPERATE THE AIR	CRAFT AND ITS EQUIPMENT FLIGHT ENGINEER	(Specify	<i>(</i>)					
8	D. Th			PPLICABLE AIRWORTHINESS REQUIREMEN			/S:				
IAL FLIGHT PERMIT PURPOSES OTHER THAN PRODUCITON FLIGHT TEST											
VII. SPECIAL FLIGH		ie rollowing ne.	STRICTIONS ARE C	ONSIDERED NECESSARY FOR SAFE OPERA	thou h	ose aua	ionnent in necessary				
	F. CE	RTIFICATION - I her	eby certify that I am t	he registered owner (or his agent) of the aircraft ode 44101 <u>et seq</u> . and applicable Federal Aviatio	describe	d above	e; that the aircraft is registered with the Federal Aviation Administration in and that the aircraft has been inspected and is safe for the flight described.				
	DATE		NAME AND TITLE	Print or type)			SIGNATURE				
TATION)	×	A. Operating Limita applicable.	ations and Markings	in Compliance with 14 CFR Section 91.9, as		G. Sta	atement of Conformity, FAA Form 8130-9 (Attach when required)				
CUMEN SE ONLY	×	B. Current Operatir	ng Limitations Attach	ed			reign Airworthiness Certification for Import Aircraft (Attach when required)				
VIII. AIRWORTHINESS DOCUMENTATION (FAA/DESIGNEE USE ONLY)		C. Data, Drawings,	Photographs, etc. (A	Attach when required)			vious Airworthiness Certificate Issued in Accordance With R Section CAR (Original attached)				
WORT FAA/DE	×	D. Current Weight	and Balance informa	tion Available in Aircraft	 X	J. Cui	rrent Airworthiness Certificate Issued in Accordance With				
VIII. AIF				m 337 (Attach when required)			R Section 21.191(a) (Copy attached)				
	\times	F. This Inspection F	Recorded in Aircraft	Records		require	ht-Sport Aircraft Statement of Compliance, FAA form 8130-15 (Attach copy when ed)				

Falcon Aviation Holdings, LLC 12101 Crenshaw Blvd Hawthorne, CA 90250

Appointment of Authorized Representative

The undersigned, Falcon Aviation Holdings LLC, "the Owner" hereby designates, authorizes and appoints Bill Bergen as the authorized representative of the Owner for the purpose of executing any applications for U.S. Certificate of Airworthiness and any other necessary documentation to facilitate such applications pertaining to one (1) 737-800 bearing manufacturers serial number 30515 to which U.S. Registration No N154TS has been assigned (the "Aircraft").

Dated: November 29, 2023

Falcon Aviation Holdings LLC

Name: Erica Jehling

Authorized Representative

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of C	alifornia
Countries	Los Angeles
County of	

LINDA SAITH
Notary Public - California
Los Angeles County
Commission # 2455032
Ay Comm. Expires Jul 25, 2027

Place Notary Seal and/or Stamp Above

Subscribed and swo	rn to (or affirmed) be	fore me on
this 29 day of Date	November	. 20 ²³ . by
Date	Month	Year Year
Erica Jehlin	g	
,,		
(and (2))
i	Name(s) of Signer(s)	ı
proved to me of the	basis of satisfactory	evidence to
be the person(s) with	appeared before n	ne.
M		
Signature	MIN	
S	ignature of Notary i	Public

Completing this Information can deter alteration of the document or fraudulent reattachment of this form to an unintended document. Description of Attached Document Title or Type of Document: Appointment of Authorized Representative Document Date: Number of Pages: Signer(s) Other Than Named Above:

	Conformity Inspection Rec	1. Project Number, TIA/F	Request Date: N/A			2. Sheet 1 of 2 Sheets
	icant/Manufacturer: SpaceX / Starling A adel Completions, 3900 Chennault Pkv			Beginning Date: 12/11/23	nga amandistration in the charge and in the char	5. Ending Date: 12/13/23
6. Mod Boein	el; g 737-89L, S/N 30515, N154TS		7. Inspected By: Bill P. McDonald, 677576	5439 PS RU	(25)	and a make a specimen specimen and a make a mak
	9. Nomenclature of Item Inspected	10. Drawing, Document, Specification	11. Revision and	12. No. of Items De	termined	13. Comments
No.		etc.	Date	SAT.	UNSAT	
1.	Obtain Delegation.	NACIP/DMS	12/11/23	1		Obtained delegation via NACIP and DMS via DMS No. PR-677576439-2023-0100.
2.	Application for Airworthiness Certificate	FAA Form 8130-6	6/20	1		Reviewed signed form dated 12/01/23, provided for Research & Development, experimental certificate via AWC No. 11302023-1868.
3.	Proof of Ownership – Registration	Form 8050-3	10/10	1		Verified registration dated 8/16/23 and is valid.
4.	Agent Letter	Falcon Aviation Holdings, LLC	12/11/23	1		Obtained and reviewed Agent letter dated 11/29/23, delegating Mr. Bill Bergen to act as Agent for applications for airworthiness.
5.	Program Letter	SpaceX / Starlink Aviation	12/11/23	1		Obtained and reviewed form. Provided for Experimental, Research & Development certificate dated 11/30/23.
6.	Logbook Review	FAA Order 8130.2J	7/21/17	1		Reviewed all aircraft/engine logbook.
7.	a) Maintenance	Logbooks	12/13/23	1		Aircraft was ferried to Citadet Completions to conduct a C-Check heavy check and to install the Starlink connectivity system.
8.	b) Inspections	Logbooks	12/13/23	1	:	A review of a 90-maintenance forecast indicated all inspections affecting the airworthiness of the aircraft were completed and up to date. There were a number of non-airworthy inspection pending the close out of the C-Check.
9.	c) Completions	Logbooks	12/11/23	1	enteksintää en vantisiojon eta valteisiojon en kilosomisi vionikis vah	N/A.
10.	Weight and Balance	Citadel Completions	12/11/23	1		Obtained and reviewed current W & B dated 12/07/23 that included the Starlink system.
11.	Flight Tested and Recorded	FAA Order 8130.2J	7/21/17	1		No company flight test was conducted. Testing will be concurrently.
12.	AD Search and Compliance	Bi-Weekly AD 2023-25	12/13/23	1		Reviewed ADs thru the current Bi-weekly 2023-25. All applicable ADs were complied with.
13.	Equipment List	FAA Order 8130.2J	7/21/17	1		The Aircraft Equipment List will be updated upon issuance of STC.
14.	Aircraft Inspections	FAA Order 8130.2J	7/21/17		ntina nyina nyina ini antonina nyina n	Conducted a general airworthiness inspection of the aircraft per FAA Order.

	Conformity Inspection Rec	ord	1. Project Number, TIA	Request	Date: N/A		2. Sheet 2 of 2 Sheets		
	cant/Manufacturer: SpaceX / Starling Avadel Completions, 3900 Chennault Pkw			Hawthor		Beginning Date: 2/11/23		5. Ending Date: 12/13/23	
6. Mode Boeine	el: 1 737-89L, S/N 30515, N154TS								
8. Item No.	9. Nomenclature of Item Inspected	10. Drawin etc.	g, Document, Specification	n 11. Revision and Date		12. No. of Items D SAT.	vetermined UNSAT	13. Comments	
15.	a) TCDS Verification		TCDS No.: A16WE		Rev. 74	1	ritination in speciment and account of contract and account of contract and account of contract and account of	Reviewed the TCDS for this aircraft. Verified S/N eligibility.	
16.	b) Airframe ID Plate		FAA Order 8130.2J		7/21/17			Reviewed data plate was matched the aircraft info in AWC.	
17.	c) Engine ID Plate		CFM International CFM56-7B24/3		12/11/23	2		Verified through the records the following S/Ns #1 8961164 & #2 893661.	
18.	d) Registration Numbers	·	FAA Order 8130.2J		7/21/17	1		Verified registration numbers and verified certificate was valid.	
19.	e) Flight Control Operation		FAA Order 8130.2J		7/21/17	-1		Verified.	
20.	f) Engines/Instruments Operate Properly		FAA Order 8130.2J		7/21/17	1	***************************************	Verified.	
21.	g) Instruments are Marked IAW Approved Flight Manual		FAA Order 8130.2J		7/21/17	1		Verified.	
22.	h) ELT Installed		FAA Order 8130.2J		7/21/17	1		Verified.	
23.	Pitot Static System – Leak Test/Certification		Citadel Completions		12/11/23	1	matalagad dang sintanan pipan-inibad siging distantinan an sintanan si	The 14 CFR 43, 91.413 transponder check was performed on 12/03/23, conducted per Boeing Task Card 34-110-01-03.	
24.	Airworthiness Certificate Issued		FAA Form 8130-7		11/16	1	annicamentale esta annicamente esta esta esta esta esta esta esta es	Special Airworthiness Certificate, Experimental, R & D dated 12/13/23.	
25.	Operating Limitations Issued		FAA Order 8130.2J		7/21/17	1	ana kana maka maka maka maka maka maka m	Special Airworthiness Certificate, Experimental, R & D dated 12/13/23.	
26.	Logbook Entry		FAA Order 8130.2J		7/21/17	1		Completed for this inspection dated 12/13/23.	
27.	Total Aircraft Time:		43,528.60 Hrs Landings 26,665		12/13/23	1	-	Verified via the logbook entries.	
	LAST ITEM							LAST ITEM	
								#	
