

1. Approving competent Authority/Country/
Autorité Compétente / Pays
DIRECTION GÉNÉRALE DE
L'AVIATION CIVILE
FRANCE

2.

AUTHORISED RELEASE CERTIFICATE
Certificat Libératoire Autorisé
EASA Form 1
Formulaire 1 de l'EASA

3. Form Tracking Number
N° de repère du Formulaire
00000000000010789697
Page 1 of 1

4. Organisation Name and Address:
Nom et Adresse de l'Organisme :

Goodrich Actuation Systems SAS
43, Rue des Prés
27950 Saint-Marcel, France

5. Work Order/Contract/Invoice
Bon de commande/ Contrat Facture

45792223 / T42042

6. Item/ Item	7. Description/Description	8. Part No./N° de pièce	9. Qty/Qté	10. Serial No./N° série	11. Status/Work Etat/Travaux
01	RUDDER SERVOCONTROL	31115-080	1	1158	REPAIRED

12. Remarks/ Remarques

CSM 27-21-20 REV 4 dated 03 Feb 2012, AMDTS : 05 TSN : Unknown Fhrs CSN : Unknown Fcys TSR / TSI : 0 Fhrs CSR /
CSI : 0 Fcys RECOMMENDED SHELF LIFE 60 MONTHS
See, in Appendix of this Airworthiness Certificate, the Teardown Report relative to the Repair Sales Order n° 120973132
, listing, if any, all the Service Bulletins applied on the unit and their corresponding Airworthiness Directives.

The work identified in Block 11 and described herein has been accomplished in accordance with 14 CFR part 43 and in respect to that work, the items are approved for release or return to service under certificate no. O6SY947N
Les travaux identifiés en case 11 et décrits ici ont été exécutés conformément à la partie 43 du 14 CFR et dans le cadre de ces travaux, les articles sont approuvés pour la libération ou la remise en service en vertu du certificat n° O6SY947N

13a. Certifies that the items identified above were manufactured in conformity to:
Certifie que les éléments identifiés ci-dessus ont été fabriqués conformément aux :

☐ approved design data and are in a condition for safe operation
dessins de conception approuvés et sont en état de fonctionner en toute sécurité

☐ non-approved design data specified in Block 12
dessins de conception non approuvés spécifiés dans la case 12

13b. Authorised Signature /
Signature autorisée

13c. Approval / Authorisation Number
Numéro d'approbation/autorisation

13d. Name / Nom

13e. Date (dd mmn yyyy) / Date (jj mmm aaaa)

14a. ☒ Part 145, A.50 Released to Service
Approbation pour remise en service selon Partie 145, A.50

☒ Other regulation specified in Block 12
Autre réglementation précisée en case 12

Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12, was accomplished in accordance with Part 145 and in respect to that work the items are considered ready to release for service.
Certifie que, sauf indication contraire spécifiée en case 12, les travaux identifiés en case 11 et décrits en case 12, ont été réalisés conformément à la Partie 145 et qu'au vu de ces travaux, les pièces sont considérées prêtes à la remise en service

14b. Authorised Signature /
Signature autorisée



14c. Certificate / Approval Ref. No
N° du Certificat/Agrément
FR 145 0051

14d. Name / Nom
BAPTISTE PATEREAU

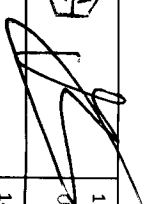
14e. Date (dd mmn yyyy) / Date (jj mmm aaaa)
20 NOV 2023

USER/INSTALLER RESPONSIBILITIES / Responsabilités de l'utilisateur/ installateur

This certificate does not automatically constitute authority to install the item(s).
Ce document ne constitue pas forcément l'autorisation d'installer l'(es) item(s).

Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts items from the airworthiness authority specified in block 1.
Quand l'utilisateur/installateur travaille selon les réglementations d'une autorité de navigabilité différente de l'autorité de navigabilité mentionnée dans la case 1, il est essentiel que l'utilisateur/installateur s'assure que son autorité de navigabilité accepte les items libérés par l'autorité de navigabilité mentionnée dans la case 1.

Statements in block 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.
Les indications portées en cases 13a et 14a ne constituent pas une certification de montage. Dans tous les cas le dossier d'entretien de l'aéronef doit contenir une certification d'installation délivrée conformément aux règlements nationaux par l'utilisateur/installateur avant que l'aéronef puisse voler.

1. Approving Competent Authority / Country		2.		AUTHORISED RELEASE CERTIFICATE			3. Form Tracking Number	
UK CAA								120463
4. Organisation Name and Address		Goodrich Actuation Systems SAS, 43, Rue des Pies 27950 Saint-Marcel (France)					5. Work Order/Contract/Invoice	
							45792223 / TA2042	
6. Item	7. Description	8. Part No.	9. Qty.	10. Serial No.	11. Status/Work			
01	RUDDER SERVOCONTROL	31115-080	1	1158	REPAIRED			
12. Remarks / Remarques								
CMM 27-21-20 REV 4 dated 03 Feb 2012 AMDTS : 05 TSN : Unknown Fhrs CSN : Unknown Fcys TSR / TSI : 0 Fhrs CSR / CSI : 0 Fcys RECOMMENDED SHELF LIFE 60 MONTHS See, in Appendix of this Airworthiness Certificate, the Teardown Report relative to the Repair Sales Order n° 120973132, listing, if any, all the Service Bulletins applied on the unit and their corresponding Airworthiness Directives.								
13a. Certifies that the items identified above were manufactured in conformity to : ☐ approved design data and are in a condition for safe operation ☐ non-approved design data specified in block 12				14a. ☒ Part 145 A.50 Release to Service ☐ Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with Part 145 and in respect to that work the items are considered ready for release to service.				
13b. Authorised Signature		13c. Approval/Authorisation Number		14b. Authorised Signature		14c. Certificate/Approval Ref. No		
				 		OK.145.01540		
13d. Name		13e. Date (dd mm yy)		14d. Name		14e. Date (dd mm yy)		
				BAPTISTE PATEREAU		20 Nov 2023		
USER/INSTALLER RESPONSIBILITIES This certificate does not automatically constitute authority to install the item(s). Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts items from the airworthiness authority specified in block 1. Statements in blocks 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.								

FINAL TEARDOWN REPORT

Goodrich Actuation Systems SAS
13, Avenue de l'Eguillette
BP 7186 Saint Ouen l'Aumône
F-95056 CERGY PONTOISE CEDEX
Repair Station #O6SY947N



Customer A J WALTER AVIATION	Cust PO T42042	Operator PO
Input Part 31115-080	Input Serial 1158	Qty 1.000
Output Part 31115-080	Output Serial 1158	Workscope REPAIR
Cust Part	Cust Serial 1158	Status/Work REPAIRED
Description RUDDER SERVOCONTROL	Removal Code IRAN	Failure Date
Aircraft A330/A340	Engine Type	
Incoming NSN N/A	Outgoing NSN N/A	Tail No A6-EYH
Date Rec'd 18.09.2023	Quote Date 06.10.2023	Accept Date 17.10.2023
Ship Date	DOM 01.10.2008	Last Order Date
Sales Order 120973132	Work Order 45792223	Notification 305382481

Measuring Point:  											
Serial #	CSN	TSN	CSR	TSR							
OUT 1158	3059	22845-00	0.00	0.00							

UNK UNK

Internal Traceability

Traçabilité composants

INCOMING TRACEABILITY :

EYE-END PN : 346739 SN : AF1151
PISTON ROD PN : 346363 SN : H1348
TAIL TUBE PN : 346386 SN : AF1059
PISTON ROD LVDT PN : D90ST0306-200 SN : 1089
MODE SWITCHING LVDT PN : D90ST0308-200 SN : 01315
FILTER PN : 346444 SN : 2151/19
DIFFERENTIAL PRESSURE SENSOR #1 PN : D90ST0307-300 [#1] SN : A101814
DIFFERENTIAL PRESSURE SENSOR #2 PN : D90ST0307-300 [#2] SN : A101813
SERVOVALVE PN : 22286090-104 SN : 1226
ELECTROVALVE PN : D90ST00207-200 SN : UNK
ROLLER BEARING PN : 8169-275 SN : L15776
AUTO-LUBRICATING BEARING PN : 8182-394 SN : UNK
FRONT BEARING PN : 346389-200 SN : 04/2013-99
REAR BEARING PN : 346388 SN : 08-05-61
JACK BODY PN : 346362 SN : RIS1048
RING PN : 346831-100 SN : 0806-29

OUTCOMING TRACEABILITY :

EYE-END PN : 346739 SN : AF1151
PISTON ROD PN : 346363 SN : AF2806
TAIL TUBE PN : 346386 SN : AF1059
PISTON ROD LVDT PN : D90ST0306-200 SN : 1089
MODE SWITCHING LVDT PN : D90ST0308-200 SN : 01315
FILTER PN : 346444 SN : 2151/19
DIFFERENTIAL PRESSURE SENSOR #1 PN : D90ST0307-300 [#1] SN : A101814
DIFFERENTIAL PRESSURE SENSOR #2 PN : D90ST0307-300 [#2] SN : A104367

FINAL TEARDOWN REPORT



UTC Aerospace Systems

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FINAL TEARDOWN REPORT



Work Order	45792223	Description	RUDDER SERVOCONTROL	Date Rec'd	18.09.2023
Input Part	31115-080	Input Serial	1158		
Cust Part		Cust Serial	1158		

external leakage at the scrapper level at the pressure line assembly level
 -> main part concerned : D90ST8007-200

Test 700-010-A01 : null bias for the original part in normal mode out of acceptable range at the servovalve level ($-0.30 < I < 0.30$ mA) -> measured value : 31 mA / main part concerned : D90ST0102-500

Test 750-003-A01 : insulation resistance out of acceptable range at the actuator level ($R1 > 250$ Mohms) -> measured value : 72 Mohms / main part concerned : D90ST0307

piston rod worn at the pressure line assembly level -> main part concerned : 346363

Test 750-003-A01 : insulation resistance out of acceptable range at the actuator level ($R1 > 250$ Mohms) -> measured value : 140 Mohms / main part concerned : D90ST0307-300

CHARGING AND FAILURE CONFIRMATION :
 work requested by the customer performed
 the repair is chargeable to the Customer

WORK PERFORMED :
 test and/or repair of the unit performed according to CMM 27-21-20 REV 4

SERVICE BULLETINS STATUS :
 31115-27-03 , Rev - , Dated 20 April 2009 -> unit already compliant

EASA AIRWORTHINESS DIRECTIVES CLEARED :
 none

FAA AIRWORTHINESS DIRECTIVES CLEARED :
 none

PART LIST :
 All the parts listed on the table below will be installed during the repair of the unit
 For information :
 - Location MAG4 or NDHL is for new parts
 - Location PREN or RHSA or RDHL is for reworked parts"

FINAL TEARDOWN REPORT



Work Order	45792223	Description	RUDDER SERVOCONTROL	Date Rec'd	18.09.2023	
Input Part	31115-080	Input Serial	1158			
Cust Part		Cust Serial	1158			
Components :						
Order	Material	Description	Req Qty	Issued	Reason Code	Stor Loc
45792223	8523-941	O'RING SEAL	2	2	DISASSEMBLY	MAG4
45792223	8531-841	PACKING	1	1	DISASSEMBLY	MAG4
45792223	346461	SPACER	1	1	MISSING	MAG4
45792223	418577	PLATE	1	1	MISSING	MAG4
45792223	341093	STRAP	4	4	DISASSEMBLY	MAG4
45792223	341093	STRAP	3	3	DISASSEMBLY	MAG4
45792223	346172	PACKING, RING	2	2	DISASSEMBLY	MAG4
45792223	345989-156	BACK UP RING	2	2	DISASSEMBLY	MAG4
45792223	346172	PACKING, RING	1	1	DISASSEMBLY	MAG4
45792223	346363	ROD PISTON	1	1	WORN	MAG4
45792223	346373	WASHER	1	1	DISASSEMBLY	MAG4
45792223	346487	SEAL DYNAMIC	1	1	DISASSEMBLY	MAG4
45792223	346989	RING BACK UP	10	10	DISASSEMBLY	MAG4
45792223	346990	BEARING, FEMALE PAD	4	4	DISASSEMBLY	MAG4
45792223	346991	SEAL DYNAMIC	4	4	DISASSEMBLY	MAG4
45792223	345989-156	BACK UP RING	1	1	DISASSEMBLY	MAG4
45792223	345989-171	RING, BACK UP	2	2	DISASSEMBLY	MAG4
45792223	345997-116	RING BACK UP	2	2	DISASSEMBLY	MAG4
45792223	8581-641	PACKING, RING	2	2	DISASSEMBLY	MAG4
45792223	D90ST8007-200	SCRAPER	1	1	DISASSEMBLY	MAG4
45792223	D90ST8009-000	SEAL ROD PISTON	1	1	DISASSEMBLY	MAG4
45792223	346378	PAD	1	1	DISASSEMBLY	MAG4
45792223	345943	O RING	2	2	DISASSEMBLY	MAG4
45792223	8544-741	O'RING SEAL	4	4	DISASSEMBLY	MAG4
45792223	D90ST0102-500	SERVOVALVE	1	1	TEST FAILURE	MAG4
45792223	345943	O RING	2	2	DISASSEMBLY	MAG4
45792223	346487	SEAL DYNAMIC	1	1	DISASSEMBLY	MAG4
45792223	346810	PROTECTOR	1	1	DAMAGED BY CUSTOMER	MAG4
45792223	8541-541	PACKING	3	3	DISASSEMBLY	MAG4

FINAL TEARDOWN REPORT



Work Order	45792223	Description	RUDDER SERVOCONTROL			Date Rec'd	18.09.2023
Input Part	31115-080	Input Serial	1158				
Cust Part		Cust Serial	1158				
45792223	345989-267	RING, BACK UP	1	1	DISASSEMBLY	MAG4	
45792223	608-010-4451Z21	CONNECTOR	1	1	TEST FAILURE	MAG4	
45792223	608-010-4551Z21	CONNECTOR	1	1	TEST FAILURE	MAG4	
45792223	608-013-4610Z01	ADAPTER CABLE CLAMP	2	2	DISASSEMBLY	MAG4	
45792223	663532-250	SLEEVING	2	2	DISASSEMBLY	MAG4	
45792223	8554-641	O RING SEAL	1	1	DISASSEMBLY	MAG4	
45792223	D90ST0306-101	BUSHING	1	1	DISASSEMBLY	MAG4	
45792223	D90ST0306-102	RING	1	1	DISASSEMBLY	MAG4	
45792223	D90ST0307-300	SENSOR	1	1	TEST FAILURE	MAG4	
45792223	5746-132	SCREW	2	2	WORN	MAG4	
45792223	348182	CABLE	1	1	TEST FAILURE	MAG4	
45792223	346391	SEAT, VALVE	1	1	TEST FAILURE	MAG4	
45792223	346392	VALVE	1	1	TEST FAILURE	MAG4	
45792223	345989-203	BACK UP RING	1	1	DISASSEMBLY	MAG4	
45792223	345989-283	RING, BACK UP	1	1	DISASSEMBLY	MAG4	
45792223	8549-641	PACKING, O-RING	1	1	DISASSEMBLY	MAG4	
45792223	8556-641	PACKING, O-RING	1	1	DISASSEMBLY	MAG4	
45792223	8205-703	RING, RETAINING	1	1	DISASSEMBLY	MAG4	
45792223	8556-641	PACKING, O-RING	2	2	DISASSEMBLY	MAG4	
45792223	346957	CUP	1	1	DISASSEMBLY	MAG4	
45792223	8546-741	O RING SEAL	1	1	DISASSEMBLY	MAG4	
45792223	8174-121	ROLLER	1	1	DISASSEMBLY	MAG4	

Author : P. A. DEAN Print name : [Signature] Signature : [Signature] Date : 20 NOV 2023	Authorized Approval : Print name : NOT APPLICABLE Signature : Date :
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Collins Aerospace Saint-Ouen l'Aumône site certify that the part(s)/item(s) identified above and shipped against this pack slip under the purchase order listed has been repaired / modified / tested / inspected (as applicable) in accordance with the approved technical data and that all other purchase order and quality requirements have been met. All records are on file and available for review.

 UTC Aerospace Systems Goodrich Actuation Systems SAS	Restrictions à l'exportation et utilisation finale	
PFC-ITC-010-DON-00	Date d'application : voir répertoire documentaire	Page 1 sur 2

WARNING – EXPORT CONTROL RESTRICTIONS AND END-USE SPECIFICATIONS

As a US-controlled company, GOODRICH ACTUATION SYSTEMS SAS must comply with international sanctions edicted by the OFAC. Any transfer of its products to Cuba, Iran, Libya, North Korea, Sudan and Syria, either in their original form or after being incorporated through an intermediate process into other end-items must be authorized under applicable export control laws.

Also, these commodities:

1. will not be used for purposes associated with chemical, biological or nuclear weapons or missiles capable of delivering such weapons, nor will they be resold if there is any suspicion that they are intended or likely to be used for such a purpose;
2. will not be re-exported or otherwise re-sold or transferred to a destination subject to UN, EU or OSCE embargo where that act would be in breach of the terms of that embargo;
3. will not be used in any nuclear explosive activity or unsafeguarded nuclear fuel cycle.

ATTENTION – RESTRICTIONS A L'EXPORTATION ET UTILISATION FINALE *(Traduction de courtoisie)*

En tant que société détenue par un groupe américain, la société GOODRICH ACTUATION SYSTEMS SAS doit se conformer aux sanctions internationales prévues par l'OFAC. Le transfert de ses produits vers Cuba, l'Iran, la Lybie, la Corée du Nord, le Soudan et la Syrie, que ce soit sous leur forme d'origine ou après leur incorporation par un procédé intermédiaire dans d'autres produits finaux, doit être autorisé en vertu des réglementations sur le contrôle des exportations qui leur sont applicables.

En outre, ces marchandises:

1. ne sauraient être utilisées à des fins liées aux armes chimiques, biologiques ou nucléaires, ou à des missiles pouvant servir de vecteurs à de telles armes et ne sauraient être revendues s'il existe des raisons de croire qu'elles sont destinées ou susceptibles d'être utilisées à de telles fins ;
2. ne sauraient être réexportées ou autrement revendues ou transférées vers une destination faisant l'objet d'un embargo des Nations Unies, l'Union Européenne ou l'Organisation pour la Sécurité et la Coopération en Europe (OSCE) lorsque cette réexportation, revente ou retransfert se ferait en violation des termes de cet embargo ;
3. ne sauraient être utilisées dans des activités en rapport avec les explosifs nucléaires ou des activités non contrôlées liées au cycle du combustible nucléaire.

GOODRICH ACTUATION SYSTEMS - SOCIETE PAR ACTIONS SIMPLIFIEE AU CAPITAL DE 54 000 000 € - RCS / VERSAILLES 443 177 233 / SIEGE SOCIAL : 106, RUE FOURNY - 78 530 BUC - FRANCE
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PFC-QI-000-DON-02

