


Approved by:  J. Themmes, Repair Station Supervisor	 Astronautics Corporation of America				
Approved by:  E. Furness, Quality Assurance Vice President	TITLE: Astronautics Corp. of America Repair Station Capabilities List				
Prepared by:  J. Williams, Repair Station Accountable Manager	<table border="1"><tr><td data-bbox="841 1696 1096 1759">QAP 2003/2</td><td data-bbox="1096 1696 1490 1759">REV. D</td></tr><tr><td data-bbox="841 1759 1096 1801">CODE IDENT NO 10138</td><td data-bbox="1096 1759 1490 1801">Page 1 of 7</td></tr></table>	QAP 2003/2	REV. D	CODE IDENT NO 10138	Page 1 of 7
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 Astronautics Corporation of America											QAP 2003/2					
REV SYM	DESCRIPTION OF CHANGE										DATE	APPROVED				
A	Initial Release.										3/25/2003	PFM				
B	Updated to reflect FAA comments regarding when revisions will be submitted.										1/16/2004	JT, DY, JGW				
C	Updated to change the preliminary XQAR449-P-L Repair Station Number to XQAR449L. Added the 197800-1 & -3 DU, the 198200-1 & -3 EU, the 198000-() EFI and its 198040-() Control Panel, and the 260500-() EFI.										6/25/2004	JT, EF, JGW				
D	Updated to separate Appendix A from the text (removed the date on the cover sheet for the Appendix). The FAA will be sent a copy of the Appendix within ten days of the date on the Appendix whenever items are added or removed. The appendix will be controlled by date. A copy of the QAP cover sheet and text are controlled by revision letter, and a copy of that will be submitted to the FAA within ten days of the date that the new revision letter version of the text is released.										11/30/2004	JT, EF, JGW				
SH	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	
REV																
SH	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
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1.0 PURPOSE

This document contains the **capability list** for Astronautics' Certified Repair Station, XQAR449L. This is to fulfill the requirement of the Code of Federal Regulations (CFR), Title 14, Part §145, paragraph 145.215, "Capability list".

2.0 APPLICATION

This list applies to Astronautics' Repair Station XQAR449L. It is a list of articles (accessories and instruments) that may be maintained or altered that can be this repair station. This list is required by Part §145, paragraph 145.215.

3.0 DEFINITIONS

AD	Airworthiness Directive
Articles	For Astronautics, this means airframe parts (e.g. PMA parts), appliances, or component parts (ref. Part 145.3 (b))
A/W	Airworthiness
CFR	Code of Federal Regulations
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
NTSB	National Transportation Safety Board
PMA	Parts Manufacturer Approval
PS	Process Specification
QAM	Quality Assurance Manual
QDP	Quality Departmental Procedure
STC	Supplemental Type Certificate (an aircraft level FAA approval supplementing a Type Certificate)
TC	Type Certificate (an FAA approval at the aircraft level of a certain type of aircraft, e.g. single engine land)
TSO	Technical Standard Order (a set of instructions, the successful completion of which will lead to an FAA approval of the DESIGN, also called a TSO.)
TSOA	Technical Standard Order Authorization (an FAA MANUFACTURING approval for the approved -- "TSO'd" -- design at the "box level" for an aircraft part or appliance that performs a specific function as defined in a TSO, e.g. a Horizontal Situation Indicator)

4.0 ASSOCIATED MATERIALS

CFR 14, Part 145	Code of Federal Regulations, Title 14 Aeronautics and Space, Parts 21, 25, 43, 45, 65, 121, 135, 145. NOTE - <u>current</u> Federal Regulations always take precedent.
LST-001	Astronautics Training Manual
PS3008, Repair Station Manual	Production Engineering document PS3008, Repair Station Manual.

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Astronautics' Repair Station Forms Manual

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Astronautics' Repair Station Roster

5.0 PROCEDURE

- 5.1 As required by Part §145, paragraph 145.215, a certificated repair station may perform maintenance, preventive maintenance, or alterations on an article if the article is listed on a current capability list acceptable to the FAA or on the repair station's operations specifications. The capability list in this document (appendix A) is that list for Repair Station XQAR449L.
- 5.2 The capability list must identify each article by make and model or other nomenclature designated by the article's manufacturer and be available in a format acceptable to the FAA.
- 5.3 Frequency of Capability List Updates -- A procedure is required by §145.215(c) for revising the capability list, including methods and frequency of such evaluations, and procedures. Regarding Frequency:
- (a) Astronautics' equipment - The Capability List is to be updated on an "as needed" basis. In the case of new TSOA approvals or PMA's the FAA's approval will stand as a sufficient review for adding the part number to the capability list. An addition to the list of an item that is NOT manufactured by Astronautics is covered as noted in 5.3 (b) below. In either case, an FAA approved item is required to be added to the Capabilities List before that item can be approved for return to service.
 - (b) Non-Astronautics equipment - Again, this is "as needed". Once a change is proposed to add non-Astronautics built equipment (instruments, accessories, etc.) to the capability list, Quality Assurance Engineering, or Repair Station personnel as designated by management, will perform an evaluation audit. The purpose of this audit will be to ensure the applicable FAA approved data is available, and appropriate test equipment is available, as well as anything else that may be required. This audit must show the required items are in place before adding that equipment to the capabilities list.
 - (c) Other Evaluations - At any time that a significant change is made, as determined by the Accountable Manager, the Repair Station Supervisor, or Astronautics' management (e.g. a major change to the housing of the repair station), then the repair station must perform a self evaluation relevant to that change to determine that the repair station still has all of the housing, facilities, equipment, material, technical data, processes, and trained personnel in place to perform the work on the article as required by part 145. Again, this is on an "as needed" basis.
- 5.4 Methods of Evaluations - There are several methods of performing self evaluations.
- (a) The evaluation for adding items to the Capabilities List may take the form of an initial Technical Standard Order Authorization (TSOA) request documented in a letter submitted to the FAA Aircraft Certification Office. As a manufacturer, Astronautics considers an FAA TSOA approval request package, a.k.a. a TSO request letter,

evidence of such an evaluation. NOTE: For new TSOA approval requests, the addition to the Capability List must be backed by an approval from the FAA.

- (b) The evaluation for adding items to the Capabilities List may take the form of a minor change review, which will be documented in a letter submitted to the FAA Aircraft Certification Office. A “minor change” request letter sent to the FAA is evidence of an evaluation audit as well. NOTE: “Minor changes” are “preapproved” and may be added to the capability list as long as a “minor change” letter is submitted to the FAA within the time frame noted in FAR 21.611(a).
- (c) The evaluation for adding items to the Capabilities List may take the form of a major change review, which will be documented in a letter submitted to the FAA Aircraft Certification Office. A “major change” letter sent to the FAA is evidence of an evaluation audit as well. NOTE: For “major change” TSOA approval requests, the addition to the Capability List must be backed by an approval from the FAA.
- (d) Non-Astronautics instruments and accessories will be evaluated on a “as needed” basis as outlined in 5.5 below.

5.5 Evaluation Procedure -- Once a change is proposed to add instruments, accessories, etc. to the capability list, Quality Assurance Engineering, or Repair Station personnel as designated by management, will perform an evaluation audit.

- (a) The assigned auditor will ensure the applicable FAA approved design data is available and appropriate test equipment is available, as well as anything else that may be required. The repair station must perform this self evaluation to determine that the repair station has all of the housing, facilities, equipment, material, technical data, processes, and trained personnel in place to perform the work on the article as required by part 145.
- (b) The self-evaluation must be performed in accordance with the procedures under § 145.209(d)(2). This audit must show that all the required items are in place before adding that equipment to the capabilities list. An article may be listed on the capability list only if the article is within the scope of the ratings of the repair station’s certificate, and only after the successful completion of this self-evaluation.
- (c) As required by part 145, the Repair Station had to perform a self evaluation initially to determine that the Repair Station had all of the housing, facilities, equipment, material, technical data, processes, and trained personnel in place to perform the work on the articles listed on the original capability list. As a result, the self-evaluation covering the added articles can be limited to the additional needs generated by those added articles, not on the entire Repair Station.
- (d) If the evaluation results show that actions should be taken, QAE must report the results to the QAE Manager, or the appropriate management in the Repair Station, for review and action. Before an addition to the capabilities list is made, all steps must be taken in order to meet the requirements for such additions. Articles manufactured by Astronautics under TSOA approvals and PMA approvals will be added to the list in each case only after the FAA approval is obtained, as required, and before the Repair Station performs maintenance or alteration on the affected articles. The capability list will also be updated

on an “as needed” basis to reflect articles made by *other manufacturers* for which Astronautics has FAA approved data and for which Astronautics has the ratings and equipment necessary for performing the work.

- (e) Any item requiring an FAA approval for return to service form must be added to the Capabilities List before any Repair Station Repairman will be allowed to complete such a form for the Repair Station.
- (f) The repair station must retain on file documentation of the last evaluation performed, and of all other evaluations for a minimum of two (2) years.
- (g) **Under NO circumstances is an article to be returned to service by Astronautics’ Repair Station if that article is not on the capability list**

5.6 Procedure for Revising the Capabilities List -- Upon the successful completion of the self-evaluation– i.e. the audit has been performed and all action items are closed -- the capability list may be updated. Within ten (10) business days of the addition of an article to its capability list, the Repair Station Accountable Manager or Repair Station Supervisor must provide its certificate holding district office, i.e. the Flight Standards District Office (FSDO) in Milwaukee Wisconsin with a copy of the revised list as directed in Part §145.209(d).

APPENDIX A

CAPABILITY LIST
for
FAA Certified Repair Station XQAR449L

ASTRONAUTICS' CAPABILITIES LIST

INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
ALTITUDE SENSOR	17511(-)	ALTITUDE SENSOR	C9c,C52a	11/12/1981	STC SH543GL	
GYRO, HEADING INDICATOR	17512(-)	HEADING INDICATOR GYRO	C5c,II	11/12/1981	STC's SH543GL & SH716GL	
GYRO, VERTICAL (ATTITUDE)	17569(-)	GYRO, VERTICAL (ATTITUDE) Initial unit was 17569-001	C4c	11/12/1981	STC's SH543GL & SH716GL	
GYRO, YAW RATE	17595- (-)	GYRO, RATE (17595-1 is mechanical - same as 303891) Note: 17595-3 is mechanical NOTAR gyro	C9c	11/25/1981, 06/29/1992, 07/15/1994	Autopilot STC's SH543GL, & SH716GL, SH1655GL. Notar TC 08/15/1991, 07/15/1994	Q303891
Gyro, Yaw Rate (Solid State, NOTAR)	17595(-)	NOTAR RATE GYRO (Solid State Gyro) 17595-5, 17595-7, etc.	C9c	8/27/1993, 07/18/1994	Notar TC, STC SH1655GL	
INDICATOR, Bearing-Distance-Heading	101200(-)	ID663/U, 3" DIAMETER BDHI; also ID663A/U, (ACA's OLDEST TSOA)	C6c	4/22/1963		-
INDICATOR, Bearing-Distance-Heading	101240(-)	ID663A/U, 3" DIAMETER, RED LIGHTED	C6c	4/22/1963		-
INDICATOR, ATTITUDE DIRECTOR	102379(-)	ARU-2B/A, 5", RED LIGHTED	C4c	2/3/1971		ATP102379
INDICATOR, ATTITUDE	102550(-)	UH-1, 5", RED LIGHTED (a.k.a. 112090(-2))	C4c	1/24/1974		ATP102550
INDICATOR, TEMPERATURE	102576(-)	EHU-15/A, 2" DIAMETER, WHITE LIGHTED	C43	10/6/1965		-
INDICATOR, ATTITUDE REMOTE	102630(-)	ARU-13/A, 3", RED LIGHTED -initially 102630 plain	C4c	1/29/1971		ATP102630-1
INDICATOR, HORIZ. SITUATION	104500(-)	AQU-4/A, 5" RED & WHITE LIGHTED - initially 104500 plain	C6c	9/15/1967		ATP104500
INDICATOR, ATTITUDE REMOTE	109090(-)	ARU-20/A, 3", WHITE LIGHTED	C4c	1/29/1971		-
FLIGHT DIRECTOR SYSTEM	111300(-)	FLIGHT DIRECTOR SYSTEM (FDS). Note: 111300-1 includes FD Computer 111301, ADI Model 111303, and HSI Model 111302. 111300-2 includes FD Computer 111301-2, ADI 112475, and HSI 111302.	C4c, C6c, C52a	1/12/1971		
Flight Director Computer/Controller	111301(-)	Flight Dir. System (FDS) COMPUTER	C52a	1/12/1971		
INDICATOR, HORIZONTAL SITUATION	111302(-)	111302-3, -4, -5 HSI (Note:111302 -3 is same as 116940, 111302-5 same as 113515). Also, 111302-4 is the model number for part numbers 125810-3, -5	C6c, C52a	1/12/1971		
INDICATOR, ATTITUDE	111303(-) Note: this is the model number	INDICATOR, ATTITUDE 111303-4 (the model number for part numbers 113540; 113540-MOD A, and 113540-MOD-B)	C4c, C52a	1/12/1971		
INDICATOR, ATTITUDE REMOTE	112090(-)	REMOTE AI, 5", RED LIGHTED 112090 (plain) & 112090-2, etc. Model number 112090-2 is part number 102550	C4c	4/5/1971		-
INDICATOR, HORIZ. SITUATION	113515(-)	AQU-6/M, 5" WHITE LIGHTED	C6c, C52a	6/7/1973		-
INDICATOR, ATTITUDE DIRECTOR (Model number 111303-4)	113540(-)	5", WHITE LIGHTED ADI. This was initially 113540 plain, then 113540-3	C4c, C52a	11/17/1977		-

ASTRONAUTICS' CAPABILITIES LIST

INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
INDICATOR, ATTITUDE	115370-()	ARU-2B/M, 5", WHITE LIGHTED	C4c, C52a	6/7/1973		-
INDICATOR, ATTITUDE REMOTE	116900-()	UH-1/M, 5" RED LIGHTED model 117800-3	C3b, C4c			-
INDICATOR, HORIZ. SITUATION	116930-()	5", WHITE LIGHTED	C6c, C52a	11/17/1977		-
INDICATOR, ATTITUDE REMOTE	117800-()	UH-1/M, 5", RED LIGHTED	C3b, C4c	8/27/1975		-
INDICATOR, COURSE SELECT	118600-()	CSI with bearing ptr, to/from, OBS select knob; 118600-1,-5, -7, etc	C52a	02/08/1985 minor change letter		
INDICATOR, ATTITUDE REMOTE	119890-()	REMOTE, 3", UNLIGHTED	C4c	4/13/1982		-
INDICATOR, HORIZ. SITUATION	120100-()	5", WHITE LIGHTED	C6c, C52a	3/27/1973		ATP120100
INDICATOR, ATTITUDE REMOTE	122760-()	116900 MOD, 5", WHITE LIGHTED (Model 117800- (2))	C3b, C4c	9/26/1975		-
INDICATOR, ATTITUDE REMOTE	125780-()	5", RED OR WHITE LIGHTED (Model 117800-(7))	C3b, C4c	3/17/1977		-
INDICATOR, HORIZ. SITUATION (a.k.a. "MODEL" number 111302-4)	125810-()	AQU-6/M, 5" WHITE LIGHTED, initially 125810-3 (a.k.a. "MODEL" number 111302-4) Also tied to 125810-3/M, 125810-5, 125810-5M, 125810-11, etc. AND 133640-()	C6c, C52a, C66a	03/28/1980 (for 125810- 3, a.k.a. 111302-4)		ATP02552
INDICATOR, REMOTE ATTITUDE	126020-()	TSOA request for TSO-C4c submitted 07/14/1981. Reported to be approved at aircraft level.	Pending	8/12/1981		
INDICATOR, ATTITUDE REMOTE	126070-()	5", WHITE LIGHTED (Model 117800-(5))	C3b, C4c	3/17/1977		-
INDICATOR, ATTITUDE REMOTE	127900-()	UH-1/M, 5", RED LIGHTED	C3b, C4c			-
INDICATOR, ATTITUDE DIRECTOR	128680-()	4" WHITE LIGHTED "MITSUBISHI" 128680-3	C4c	4/24/1996		QTR08248 Env
PANELS	128840-()	FDC MODE SELECT, initially 128840, then 128840- 3, etc.	C52a	4/27/1984		-
Computer	128870-()	FLIGHT DIRECTOR, 3Q Initially 128870, then 128870-3, 128870-5, etc.	C52a	10/23/1980, 04/19/1982, 04/24/1984		-
INDICATOR, ATTITUDE DIRECTOR	129160-()	5", WHITE LIGHTED (a modified version of this created the 134080)	C4c, C52a	3/28/1980		ATP02971
SENSORS	129170-()	COLLECTIVE STICK POSITION SENSOR	C52a	8/20/1980		QTR02773
PANELS	129180-()	NAV MODE SELECT	C52a	4/1/1980		-
INDICATOR, HORIZ. SITUATION	129222-()	4", WHITE LIGHTED	C6c, C40a, C52a	8/9/1979		ATP02502
INDICATOR, HORIZ. SITUATION	129400-()	AQU-6/M, 5" TUNGSTEN WHITE LIGHTED, 129400-2, 129400-3	C6c, C52a	03/26/1980, 7/16/1984, 07/17/1984		ATP02792
Flight Director Computer	129855-()	KLM 3Q FLIGHT DIRECTOR for S-76 helicopter program (192855-1, -3, -5) System included the 129400 HSI, 129160 ADI, with Mode Select. The 192855-() system is STC'd, not TSO'd, but the major components comprising the system are TSO'd.	Component are TSO'd to C52a	4/22/1981	STC'D SH399GL	-

ASTRONAUTICS' CAPABILITIES LIST

INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
INDICATOR, ATTITUDE DIRECTOR	130530-()	5", WHITE LIGHTED ADI	C3b, C4c, C52a	07/08/1983, 12/21/1983	British Civil Aviation Auth. CAA AR-138	QTR03942, ATP02706
Computer	131030-()	FLIGHT DIRECTOR, 2Q	C52a	7/2/1980		-
COMPUTER, REMOTE AUTOPILOT	131140-()	AUTOPILOT COMPUTER, 131140-1, -3, -5, -7, -9, -11, etc.	C9c	11/27/1981, 02/09/1983, 04/06/1987	STC's SH543GL & SH716GL	QTR03505, QTR05330
TRANSDUCERS	131270-()	Altitude Transducer (ROSEMONT #1241U)	C52a	6/26/1980		-
AUTOPILOT SYSTEM	131500-()	AUTOPILOT SYSTEM (various "dashes" as noted below).	C9c	Various	STC's (various)	
AUTOPILOT SYSTEM	131500-1	HUGHES AUTOPILOT (UNCOUPLED/Dual) The system is STC'd, not TSO'd, but the individual components have either TSO or PMA.	C9c	11/23/1981 05/29/1992	STC'D SH543GL	QTR03127
AUTOPILOT SYSTEM	131500-5	HUGHES AUTOPILOT (UNCOUPLED/Single) The system is STC'd, not TSO'd, but the individual components have either TSO or PMA.	C9c	11/23/1981	STC'D SH543GL	QTR03127
AUTOPILOT SYSTEM	131500-9	Hughes/MDHC AUTOPILOT (COUPLED) The system is STC'd, not TSO'd, but the individual components have either TSO or PMA.	C9c	11/15/1983	STC'D SH716GL	QTR03307
AUTOPILOT SYSTEM	131500-11	MDHC AUTOPILOT (COUPLED/Dual/Light Wt) The system is STC'd, not TSO'd, but the individual components have either TSO or PMA.	C9c	11/5/1987	STC'D SH716GL	
AUTOPILOT SYSTEM	131500-13	Hughes Autopilot (Uncoupled/Single/Light Weight) The system is STC'd, not TSO'd, but the individual components have either TSO or PMA.	C9c	11/5/1987	STC'D SH716GL	
AUTOPILOT SYSTEM	131500-15	MDHC AUTOPILOT (COUPLED/Lt Wt) -- STC'd system with TSO'd components	C9c	11/5/1987	STC'D SH716GL	
AUTOPILOT SYSTEM	131500-21	MDHC AUTOPILOT (COUPLED); AUTOPILOT FOR MD500 HELICOPTER. The TSOA letter states the -21 as the first in a series that is granted TSOA	C9c	07/11/1991, 08/23/1991, 10/15/1991, 05/29/1992	STC'D SH1655GL 10/31/1991	QTR07164 and EMI06874
Computer	131810-()	SEARS 2Q FLIGHT DIRECTOR		8/23/1980	STC'D SH435GL	-
ACTUATOR, ROLL SERVO	131880-()	ACTUATOR 131880-1, -3, -5, -9, etc. e.g. ROLL (-1), PITCH (-3), YAW (-5 and -9). Covered by STC approval for the -1, -3, and -5	C9c	11/23/1981	STC's SH543GL & SH716GL	
INSTALLATION KIT	132448-()	INSTALLATION KIT Note: the 132448-21 was TSOA approved. Previous versions were PMA'd, including 132448-1, -5, -9, -11, -13, -15	C9c or PMA	10/31/1991 for TSO, 07/08/1987 for initial PMA	132448-21 STC'D SH1655GL; 132448-1 & -5 STC'D SH543GL; 132448-9, - 11, -13, & -15 STC'D under SH716GL,	
CONTROL PANEL COUPLER	132510-()	MODE SELECT (Control Panel) FOR COUPLED AUTOPILOT	C9c	11/24/1981	STC's SH543GL & SH716GL	

ASTRONAUTICS' CAPABILITIES LIST

INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
SENSORS	133160-()	ALTITUDE HOLD	C9c, C52a	12/1/1981		-
INDICATOR, HORIZ. SITUATION (associated with "MODEL" number 111302-4)	133640-()	125810-5/M, 5" WHITE LIGHTED (This includes the 133640-11) -- minor change letters cover the -3, -5, -7, -9, -11, -13, etc.	C6c	2/2/1983		ATP03213
INDICATOR, ATTITUDE DIRECTOR	134080-()	INDICATOR, ATTITUDE DIR. (129160 MOD)	C4c, C52a	4/24/1984		
INDICATOR, ATTITUDE DIRECTOR	134080-()	INDICATOR, ATTITUDE DIRECTOR e.g. 134080-7	C4c, C52a	0705/1995		
CONTROL PANEL COUPLER	134280-()	MODE SELECT FOR COUPLED AUTOPILOT	C9c	10/25/1983	STC'D SH716GL	QTR03342
ACTUATOR, SERVO	135050-()	ACTUATOR, ROLL (135050-1, & 135050-11 a.k.a. 1A), YAW (135050-5), PITCH (135050-7, 135050-9)	C9c	7/18/1994	STCs SH716GL, SH1655GL	
INDICATOR, HORIZ. SITUATION	138740-1	4" WHITE LIGHTED Horizontal Situation Indicator (HSI).	C6c	5/21/1987		ATP05741
INDICATOR, HORIZ. SITUATION	138740-7	4" WHITE LIGHTED Horizontal Situation Indicator (HSI).	C6d (updated from C6c for 138740-1)	Minor Change 2/12/1990		ATP05741
INDICATOR, HORIZ. SITUATION	138740-19 & 138740-23	4" WHITE LIGHTED Horizontal Situation Indicator. Note: Only the 138740-1, -7, and -31 have TSOA. Others are covered by the Eurocopter TCs, including AS-365 N2 and N3 "Dauphin" and SA-365 Dauphin Transport Helicopters, noted in Type Certificate Data Sheet (TCDS) H10EU, and Eurocopter SA 330/SA 331 and AS 332 Super Puma, as noted in TCDS H4EU. Also refer to the Eurocopter Illustrated Parts Catalogs.	TC Data Sheet No. H10EU for Eurocopter SA-365N2, etc. initially for "Dauphin", approved 10/11/1978.	10/19/1988	Eurocopter Illustrated Parts Catalog 34.27.03 shows both the 138740-19 and the 138740-23 as approved for installation in an SA 365N.	
INDICATOR, HORIZ. SITUATION	138740-31	4" WHITE LIGHTED Horizontal Situation Indicator (HSI).	C6d	MC letter 17498LDS:lds 5/17/2004 (FAA stamp 3/22/05); and 17599NE:jgw 7/02/2004		ATP05741
AIRSPEED/ALTITUDE HOLD SENSOR	147450-()	AIRSPEED/ALT HOLD SENSOR, 147450-1, -3, etc.	C9c	06/29/1992, 07/15/1994, 08/15/1991	STC'D SH1655GL	
ACTUATOR, YAW SERIES	147580-()	ACTUATOR, YAW SERIES (small movements) 147580-1 was made to work with the 147650-1 "parallel" actuator (large movements)	C9c	07/11/1991 06/29/1992 07/15/1994	STC'D SH1655GL	
ACCELEROMETER, LINEAR (LATERAL)	147610-()	ACCELEROMETER (the 147610-001 was also known as a 147610-1)	C9c	7/15/1994	STC'D SH1655GL	EMI07188
Computer, Remote Autopilot	147630-()	Remote Autopilot Computer initially 147630-1, then 147630-3, etc.	C9c	11/27/1991, 06/29/1992, 07/18/1994, 04/25/1996	STC'D SH1655GL	QTR07409 retest

ASTRONAUTICS' CAPABILITIES LIST

INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
CONTROL PANEL COUPLER	147640-()	MODE SELECT FOR COUPLED AUTOPILOT initially 147640-1, then 147640-1 Mod A	C9c	10/07/1991 06/29/1992 07/16/1997	STC'D SH1655GL	
ACTUATOR, YAW PARALLEL	147650-()	ACTUATOR, YAW PARALLEL (large movements) 147650-1 actuator was made to work with the 147580-1 (small movements)	C9c	10/07/1991 06/29/1992 11/15/1993 04/25/1996	STC'D SH1655GL	QTR07828 retest
AUTOPILOT SYSTEM	148600-()	MDHC AUTOPILOT for AGUSTA, initially 148600-1, then 148600-3 (also see 131500-21 above) The components of the Autopilot system are TSO'd.	C9c	Components are TSO'd; 07/11/1991, 08/23/1991, 10/15/1991, 05/29/1992	Approved at the aircraft level by Agusta Helicopters	
PANEL	155450-()	BASIC CONTROL PANEL (AUTOPILOT), initially 155450-1	C9c	03/11/1992 06/29/1992		QTR07490
YAW DAMPER ACTUATOR	165490-()	NOTAR ACTUATOR - TSO for MD900 Helicopter. Initially 165490-3, then -5, -11, -13, -15, -17, etc. (Electronic Stop started with -5)	C9c	8/16/1991, 04/20/1992, 10/12/1994	TC	ATP07268
YAW DAMPER COMPUTER	168240-()	NOTAR Yaw Damper COMPUTER /Control Box, initially 168240-1	C9c	9/6/1991	TC	ATP07225
YAW STABILITY AUGMENTATION SYSTEM	168670-()	MDHC NOTAR YAW DAMPER SYSTEM, a.k.a. NOTAR YAW Stability Augmentation System (SAS), initially 168670-1. Note, only the individual components of this system were TSO'd under TSO-C9c. For approved maintenance data, refer to the TSO related items.	C9c	9/6/1991	TYPE CERT. (OEM)	QTR07284
YAW DAMPER ACTUATOR	186830-()	NOTAR Heavy Duty ACTUATOR - MD900 Helicopter, initially 186830-1.	C9c	2/13/1997	Unknown	
VERTICAL STABILIZER (Vertical Fin) CONTROL UNIT	186900-()	MD900 VERTICAL STABILIZER CONTROL UNIT, initially 186900-1	C9c	6/14/1995	TC	
FLAP CONTROL UNIT (FCU)	186950-3	FLAP CONTROL UNIT (FCU) for Gulfstream aircraft (models GV and G550). Unit built for Hamilton-Sundstrand (HS). The initially approved FCU, 186950-3, is HS p/n 5910712, and Gulfstream P/N 1159SCC505-5. NOTE: This capability list does NOT presently include the 186950-5 (HS p/n 5913545). Note: Autorig Modules, p/n 187579-() , i.e. -3, and -4, are attached to the FCU in service, but are NOT often returned with the FCU for repair.	NONE by ACA	Hamilton-Sundstrand PMA, Supplement 186 dated Sept 29, 1997	Hamilton-Sundstrand has the PMA (not ACA), based on licensing agreement with Golfstream under their TC/amended TC.	Hamilton Sundstrand drawing 5910712

ASTRONAUTICS' CAPABILITIES LIST

INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
FLAP CONTROL UNIT (FCU)	186950-7	FLAP CONTROL UNIT (FCU) for Gulfstream aircraft (GV and G550). Unit built for Hamilton-Sundstrand (HS). The follow-on unit, the 186950-7 is Hamilton Sundstrand p/n 5914041 and Gulfstream P/N 1159SCC651-5. NOTE: This capability list does NOT include the 186950-5 (HS p/n 5913545, Gulfstream p/n 1159SCC651-3). Note: Autorig Modules, p/n 187579-() , i.e. -3, and -4, are attached to the FCU in service, but are NOT often returned with the FCU for repair.	NONE by ACA	Hamilton-Sundstrand PMA, Supplement 377 dated July 24, 2006.	Hamilton-Sundstrand has the PMA (not ACA), based on licensing agreement with Golfstream under their TC/amended TC.	Hamilton Sundstrand drawing 5914041.
FLAP CONTROL UNIT (FCU) PMA supplement 404 that shows FAA approval traceability for the 186950-11 to the Hamilton Sundstrand 5915070 part number.	186950-11	FLAP CONTROL UNIT (FCU) for Gulfstream aircraft (GV and G550). Original -3 unit was built for Hamilton-Sundstrand (HS). The follow-on unit, the 186950-7 (see above) was then upgraded to a 186950-11, which is Hamilton Sundstrand p/n 5915070 and Gulfstream P/N 1159SCC651-7. Note: Autorig Modules, p/n 187579-() , i.e. -3, and -4, are attached to the FCU in service, but are NOT often returned with the FCU for repair.	NONE by ACA	Hamilton-Sundstrand PMA, Supplement 404 dated Dec 14, 2007.	Hamilton-Sundstrand has the PMA (not ACA), based on licensing agreement with Golfstream under their TC/amended TC. GV=G500 GV-SP=G550	Hamilton Sundstrand drawing 5915070.
Autorig Data Module (for use with Flap Control Units)	187579-3 & 187579-4	Autorig Data Module (ADM) for FCUs for Gulfstream V aircraft. Unit is built for Hamilton-Sundstrand. Autorig Modules, p/n 187579-3, and -4, are attached to the 186950-() Flap Control Unit as part of the system. 187579-3 is HS p/n 5910731 (Gulfstream 1159SCC509-3), and 187579-4 is HS p/n 5910732 (Gulfstream 1159SCC509-4).	NONE by ACA	Hamilton-Sundstrand PMA, Supplement 186 dated Sept 29, 1997	Hamilton-Sundstrand has the PMA (not ACA), based on licensing agreement with Golfstream under their TC/amended TC.	Hamilton Sundstrand drawings 5910731 for ACA's 187579-3 and 5910732 for ACA's 187579-4.
DISPLAY, Electronic Flight Instrument (United Airlines)	188600-()	Electronic Flight Instrument--ADI, HSI, Color Weather Radar, Traffic Collision Avoidance System, Maps (GPS)	C113, C4c, C6d, C63c, C119a	06/17/1996 02/07/1997	STC'd by United Air Lines on DC-10 airliners	QTR08209A (Environment), QTR08280A (EMI)

ASTRONAUTICS' CAPABILITIES LIST

INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
DISPLAY, Electronic Flight Instrument (EFI) -- Bristow Helicopters S-61	191640-()	Electronic Flight Instrument Multifunction LCD Display -- HSI, ILS Glideslope, ILS Localizer, VOR, and Color Weather Radar The 191640-1 was approved 20 August 1999. (Also see Minor Change was letter 15710BB:bb, 8/23/02) The 191640-3 has new AMLCD "glass" and was approved by Major Change via FAA letter dated 6/9/00 (Also see Minor Change was letter 15690BB:bb, 8/23/02)	C113, C6d, C34e, C36e, C40c, C63c	08/20/1999 06/09/2000	STC'd by Bristow on a S-61 helicopter	QTR08629A (Environment), QTR08638A (EMI), PSAC 192230-01.01\DOC\PSA C.DOC, Software Configuration Index 192230-01.13\SCI.DAT, Software Accomplishment Summary 192230-119\DOC\SAS.
Pilot Control Panel - used with Electronic Flight Instrument (EFIS) -- Boeing VC-25 (Air Force One)	192120-()	Pilot Control Panel. EFI 192150-() uses this control panel, PCP 192120-(); initially 192120-1	C113, C4c, C6d, C34e, C36e, C40c, C52b, C63c, C92c (Grd Prox), and C119b	06/17/1999 11/17/1999	STC'd by Boeing in VC-25 (747) airliner -- "Air Force One"	
Navigator Control Panel -- used with Electronic Flight Instrument (EFIS) -- Boeing VC-25 (Air Force One)	192130-()	EFI 192150-() uses the Navigator Control Panel 192130-1, etc.	C113, C4c, C6d, C34e, C36e, C40c, C52b, C63c, C92c (Grd Prox), and C119b	06/17/1999 11/17/1999	STC'd by Boeing in VC-25 (747) airliner -- "Air Force One"	

ASTRONAUTICS' CAPABILITIES LIST

INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
DISPLAY, Electronic Flight Instrument (EFIS) -- Boeing VC-25 (Air Force One)	192150-()	Electronic Flight Instrument--typically used with Navigator and Pilot Control Panels. EFI was initially 192150-1, then -3, -7, etc. It uses control panels: 192130-() NCP, and 192120-() PCP. Multifunction Display -- ADI, HSI, ILS Glideslope, ILS Localizer, VOR, Flight Director, Color Weather Radar, and Traffic Collision Avoidance System II. 192150-3 (same as -1 but with Ground Proximity Warning System/TAWS, TSO-C92c). The 192150-7 uses a new AMLCD (minor change letter 12/22/1999.) The -3 and -7 both have Ground Prox. The 192150-9 is the same as -1 but with new LCD -- in other words it does NOT have Ground Proximity Warning System/Terrain Avoidance Warning System (TSO-C92c). See Minor Change letter 12412JGW.jw 12/20/2000. The 192150-11 is also operationally the same as the 192150-1 (Minor Change letter 15234JGW:jw, 4/30/02)	C113, C4c, C6d, C34e, C36e, C40c, C52b, C63c, C92c (Grd Prox), and C119b	06/17/1999 (192150-1) 11/17/1999 (192150-3) 12/22/1999 (192150-7) 12/20/2000 (192150-9) 4/30/2002 (192150-11)	STC'd by Boeing in VC-25 (747) airliner -- "Air Force One"	QTR08595A (Environment), QTR08597A (EMI), QTR08623A (Supplemental), PSAC 192297-01.20\DOC\PS AC.DOC, Software Configuration Index 192297-01.43\SCI.DAT, Software Accomplishment Summary 192297-02.09\DOC\SA S.DOC
DISPLAY, Flat Panel for Electronic Flight Instrument System (EFIS). The entire system includes a Flat Panel Display (FPD), a Multifunction Display Unit (MDU), and a Control Panel.	193220-()	EFIS for L3 (formerly Raytheon) Flat Panel Display (FPD), a Multifunction Display (MFD), and a Control Panel (CP). Part numbers in the initial system were 193220-1 FDP, 193230-1 MDU, and 193240-1 CP	C113; C4c, C6d, C34e, C35d, C36e, C40c, C41d, C52b, C63c, C66c, C87, C92c, C119b, and C129a	2/3/2003		
DISPLAY, Multifunction, for Electronic Flight Instrument System (EFIS). The entire system includes a Flat Panel Display (FPD), a Multifunction Display Unit (MDU), and a Control Panel.	193230-()	EFIS for L3 (formerly Raytheon) Flat Panel Display (FPD), a Multifunction Display (MFD), and a Control Panel (CP). Part numbers in the initial system were 193220-1 FDP, 193230-1 MDU, and 193240-1 CP	C113; C4c, C6d, C34e, C35d, C36e, C40c, C41d, C52b, C63c, C66c, C87, C92c, C119b, and C129a	2/3/2003		
CONTROL PANEL, for Electronic Flight Instrument System (EFIS). The entire system includes a Flat Panel Display (FPD), a Multifunction Display Unit (MDU), and a Control Panel.	193240-()	EFIS for L3 (formerly Raytheon) Flat Panel Display (FPD), a Multifunction Display (MFD), and a Control Panel (CP). Part numbers in the initial system were 193220-1 FDP, 193230-1 MDU, and 193240-1 CP	C113; C4c, C6d, C34e, C35d, C36e, C40c, C41d, C52b, C63c, C66c, C87, C92c, C119b, and C129a	2/3/2003		

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INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
DISPLAY, Electronic Flight Instrument (EFI) -- for Agusta A-109 Helicopters	193850-()	<p>Electronic Flight Instrument for Agusta A-109 helicopters. Also see Minor Change request letters, 15593NE:jw dated 07/26/2002, and 15594NE:jw also dated 07/26/2002.</p> <p>The 193850-3 was covered by Minor Change letter 16714BB dated 8-11-03.</p> <p>The 193850-101 was covered by Minor Change letter 17427JGW dated 4-30-04.</p> <p>Also see 193850-3 Minor Change letter 17576NE:jw dated 06-17-04. Other minor changes (dash numbers) also apply.</p>	C113; also C3d, C4c, C6d, C34e, C35d, C36e, C40c, C41d, C52b, C63c, C66c, C87, C119b, and C129a	6/4/2001 TSOA; -3 and -101 by Minor Change letter		
DISPLAY, Engine Display Unit (EDU) -- for Agusta A-119 Helicopters	193860-()	<p>Engine Display Unit (EDU) -- for Agusta A-119 Helicopters. NOTE: Aircraft flight testing led to Agusta's request to make additional software changes and to meet higher EMI test levels. The TSOA authorization was approved 02/05/02 for 193860-() hardware and 193893-() software. Also see Minor Change Request letters, 15490BB:bb dated 06/21/2002, and 15836JGW:jw for the -7 dated 09/12/0202. As of 11-30-2004, the following were TSOA approved: 193860-1, -3, -7, -9, -11, -13, and -109 EDU. Other minor changes (dash numbers) also apply.</p>	C113; also C43c and C47	2/5/2002		
DISPLAY, Electronic Flight Instrument (EFIS), Display for UPS, a.k.a. Cockpit Display of Traffic Information (CDTI) "Free Flight" unit	194440-()	<p>Initial unit was a 194440-1 Electronic Flight Instrument built for UPS (formerly "Il Morrow"), which was the first TSOA approved Cockpit Display of Traffic Information (CDTI) "Free Flight" unit. FAA Administrator Jane Garvey flew on the UPS aircraft to see the units work during a "free flight" demonstration. The 194440-3 and the 194440-5 were by "Minor Change" -- see Minor Change letters 12915JGW:jw and 15677NE:ne respectively.</p>	C113; also C63c, C92c, C105, and C119b	9/13/2000 initial, 3/21/2001 (Minor Change), 9/12/2002 (Minor Change)		

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INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
DISPLAY, Electronic Flight Instrument (EFIS)	195000-()	Also see 195000-7 AND 195000-11 MC letter 17579NE:jgw dated 06/24/2004. For Kallita 747s 195000-9 AND 195000-11 EFI (STC via CMC), which used 195010-11 CPs, see MC request letter for 195000-11 ("created from" -7) EFI, letter 17361LDS:lds dated 04/13/2004 for the "-11" EFI. The 195000-15 (created from the -11 by ECO 126592 dated 07/13/04) was for LM Aero (Saudi L-100). The 195000-17 (created from the -11 by ECO 127569 dated 03/17/05) was for SRF Boeing. The 195000-19 (created from the -11 by ECO 128210 dated 10/25/05) was for Dragonair (Hong Kong, China). Also see 195000-7 AND 195000-11 MC letter 17579NE:jgw dated 06/24/2004. For Kallita 747s 195000-9 AND 195000-11 EFI (STC via CMC), which used 195010-11 CPs, see MC request letter for 195000-11 ("created from" -7) EFI, letter 17361LDS:lds dated 04/13/2004 for the "-11" EFI. The 195000-21 was created from the -11. The 195000-23 "Omni" was created from the 195000-19. Minor Changes are in place for the 195000-21, -23, and -25.	C113; also C4c, C6d, C34e, C36e, C40c, C52b, C63c, C92c, C119b, and C129a	4/25/2001 original, 07/16/2002, 07/18/2002, 06/24/2004, 01/08/04, 04/13/04	Lufthansa Technik STCs: Dubai Air Wing (two aircraft): LBA STC TA0467 Amiri Flight Abu Dhabi (one aircraft): LBA STC TA0534	
CONTROL PANEL, used with Electronic Flight Instrument (EFIS)	195010-()	The initial 195010-1 Display Control Panel was used with the 195000-1 Electronic Flight Instrument for Honeywell/South African Airways 747s. For those also see Minor Change request letters 15521BB:bb dated 07/16/2002, and 15573BB:bb dated 07/18/2002 (both cover changes in the EFI and the DCP). Also see Minor Change request letter 16142JGW:jgw dated 01/30/2003 for the 195010-3 "Qantas" DCP. See Minor Change request letter 17062JGW:jgw dated 01/08/2004 for the "195010-7" DCP (used with the 195000-7 EFI). Minor Change request letter for the "Kallita" 195010-11 CP, and 195000-11 created from -7 EFI, see letter 17361LDS:lds dated 04/13/2004. The 195010-13 was created from the -11 via ECO 129692 dated 02/23/07. The DCP used with the 195000-1 EFI, part of the "Lufthansa - Abu Dhabi" version of the EFIS, was the 195010-51 was created by ECO 123070 dated 07/30/02. See Minor Change letter 15677NE:ne dated 10/19/2002. The 195010-15 was for the LM Aero (Saudi L-100). The 195010-19 was created for Dragonair.	C113; also C4c, C6d, C34e, C36e, C40c, C52b, C63c, C92c, C119b, and C129a	4/25/2001, 10/19/2002, 07/16/2002, 07/18/2002, 01/30/2003, 01/08/2004, 06/24/2004, 4/13/04	Lufthansa Technik STCs: Dubai Air Wing (two aircraft): LBA STC TA0467 Amiri Flight Abu Dhabi (one aircraft): LBA STC TA0534	

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INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
CONTROL PANEL, GLARESHIELD, for Electronic Flight Instrument (EFIS) for Lufthansa (Dubai Air Wing) 747	195560-()	Glareshield Control Panel for the 195000-() Electronic Flight Instrument. The 195560-1 Glareshield Control Panel (GCP) and 195570-1 Pedestal Control Panel (PCP) together replaced the 195010-1 DCP used in the Honeywell SAA 195000-1 EFIS. Either the DCP or the Lufthansa (Dubai Air Wing) GCP and PCP combination can be used to control the 195000-1 EFI. Also see Minor Change letter 17577NE:jgw dated 06/24/2004. Also see minor Change letter 15573BB:bb dated 07/18/02 for both the 195560-() and 195570-().	C113; also C4c, C6d, C34e, C36e, C40c, C52b, C63c, C92c, C119b, and C129a	07/05/2001, 06/24/2004, 07/18/2002	Lufthansa Technik STCs: Dubai Air Wing (two aircraft): LBA STC TA0467 Amiri Flight Abu Dhabi (one aircraft): LBA STC TA0534	
CONTROL PANEL, PEDESTAL, for Electronic Flight Instrument (EFIS) for Lufthansa (Dubai Air Wing) 747	195570-()	Pedestal Control Panel for the 195000-() Electronic Flight Instrument. The 195560-1 Glareshield Control Panel (GCP) and 195570-1 Pedestal Control Panel (PCP) together replaced the 195010-1 DCP used in the Honeywell SAA 195000-1 EFIS. Also see 195000-1 Minor Change letter 17577NE:jgw dated 06/24/2004. Also see minor Change letter 15573BB:bb dated 07/18/02 for both the 195560-() and 195570-().	C113; also C4c, C6d, C34e, C36e, C40c, C52b, C63c, C92c, C119b, and C129a	07/05/2001, 06/24/2004, 07/18/2002	Lufthansa Technik STCs: Dubai Air Wing (two aircraft): LBA STC TA0467 Amiri Flight Abu Dhabi (one aircraft): LBA STC TA0534	
Display Unit	197800-1, 197800-3, 197800-5, 197800-7, 197800-31	Display Unit -- initially 197800-1, then -3, etc. Covered by PMA or TC or both. Initial model effectivity: Boeing 777-200, then 777-300ER, etc. Part of the Pilot Information Display system, a.k.a. Boeing PID, or Electronic Flight Bag (EFB). Works with the 198200-() EU.	PMA, Supplements 1, 2, 3, & 5.	Superceded "new" Supplement 1, 05/17/2006; Sup. 2 11/29/2006, Sup 3 01/25/2007, and Sup 5 09/17/07	Boeing TC T00001SE (777), TC A2NM (757), and TC No. A16WE (737): all PMA units built under Production PMA PQ2070CE-D.	
Display Unit	197800-51	Display Unit -- similar to 197800-() as noted above. This is an approved aircraft part as noted in the Boeing 737-700 Recommended Spare Parts List (RSPL) for 737-700 aircraft, registration number D2-TBJ, which includes the 197800-51 DU. The 737-700 TC is as noted in Type Certificate Data Sheet TCDS No. A16WE, Rev. No. 40, for The Boeing Company, 737-700 Series aircraft, and in TC T00001SE for 777s.	PMA, Supplement 7	Sup. 7, 05/23/2008; TSDS dated April 27, 2007	Boeing 737-700 Recommended Spare Parts List (RSPL) for 737-700 aircraft. Type Certificate Data Sheet TCDS No. A16WE, for Boeing 737 aircraft, and in TC T00001SE for 777s.	

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INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
Display Unit	197800-71	Display Unit -- similar to 197800-() DUs as noted above. This part is approved in Type Certificate A16WE for Boeing 737 aircraft.	PMA, Supplement 8	Sup. 8, 01/08/2009	This part is approved in Type Certificate A16WE for Boeing 737 aircraft.	
DISPLAY, Electronic Flight Instrument a.k.a. Royal Saudi / "Jet" EFI	198000-()	The initial 198000-1 Electronic Flight Instrument (EFI) is used with the associated 198040-1 Control Panel on 747s. The 198040-3 was updated for use with the TC'd L-100.	TSO-C113; also C2d, C3d, C4c, C5e, C6d, C8d, C10b, C34e, C36e, C40c, C41d, C52b, C63c, C66c, C87, C92c, C119b, and C129a	TSOA letter 06/17/04	Boeing 747SP, 747-100, and 747-200 aircraft; TC resulting from FAA Project ST3587NY-T	
CONTROL PANEL, for Electronic Flight Instrument a.k.a. Royal Saudi / "Jet" EFI	198040-()	The initial 198040-1 Control Panel is used with the associated 198000-1 Electronic Flight Instrument (EFI) on 747s. The 198040-3 is an updated Panel for use with the TC'd L-100.	TSO-C113; also C2d, C3d, C4c, C5e, C6d, C8d, C10b, C34e, C36e, C40c, C41d, C52b, C63c, C66c, C87, C92c, C119b, and C129a	TSOA letter 06/17/04	Boeing 747SP, 747-100, and 747-200 aircraft; TC resulting from FAA Project ST3587NY-T	
Electronics Unit	198200-1, 198200-3, 198200-5, 198200-7, 198200-9	Electronics Unit -- initially 198200-1, then -3, -5, etc. Part of the Pilot Information Display system a.k.a. Boeing PID or EFB for Electronic Flight Bag. Works with the 197800-() Display Unit -- Covered by PMA. Initial model effectivity: Boeing 777-200, then 777-300ER, etc. NOTE: The different dash numbers have different installation eligibility on different model aircraft. The PMA label must match the dash number for the unit and show eligible aircraft models.	PMA, Supplements 1, 2, 3, & 6.	Superseded "new" Supplement 1, 05/17/2006; Sup. 2 11/29/2006, Sup 3 01/25/2007, and Sup 6 01/27/09.	Boeing TC number T00001SE, amendment dated 10/22/2003 (777) and Boeing TC number A16WE (737). Built under Production PMA PQ2070CE-D	

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INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
Electronic Flight Instrument a.k.a. Pilatus 6x8 EFI	260500-()	Electronic Flight Instrument (EFI) This initially started life as a 198000-21, but was changed to the 260500-() after discussions with the FAA. The 260500-1 was approved in TSOA letter dated 06/07/04. The 260500-3, -5, -7 etc. are by minor change.	TSO-C113; also C2d, C3d, C4c, C5e, C6d, C8d, C10b, C34e, C36e, C40c, C41d, C66c, C87, C95, C101, C129a and C147	TSOA letter 06/07/04	Pilatus PC-7 (USA TC) and PC-9, among others	
Engine Indication Display (EID)	261710-()	Engine Indication Display (EID) with hardware P/N 261710-() and software P/N 261724-(). Part of a SYSTEM TSOA APPROVAL consisting of an Engine Indication Display (EID), 5x4 EFIS, part number 261710-(), and the 261850-() EDCU for Pilatus PC-9 Aircraft	C113, with C43c, C44c, C47a, and C49b	2/27/2008		
Electronic Flight Instrument (EFI)	261400-()	Electronic Flight Instrument (EFI). The 261400-() was approved in TSOA letter dated 10/21/2009. This is part of a TSOA approved system that includes the 261450-1 EDCU (a.k.a UH-1).	C113, C-2d, C3e, C4c, C5f, C6e, C-8e, C- 10b, C34e, C36e, C40c, C41d, C-43c, C46a, C47a, C49b, C66c, C87, and C- 129a.	10/21/2009		
Engine Data Concentrator Unit (EDCU)	261450-()	Engine Data Concentrator Unit (EDCU). The 261450-() was approved in TSOA letter dated 10/21/2009. This is part of a TSOA approved system that includes the 261400-1 EFI (a.k.a UH-1).	C113, C-2d, C3e, C4c, C5f, C6e, C-8e, C- 10b, C34e, C36e, C40c, C41d, C-43c, C46a, C47a, C49b, C66c, C87, and C- 129a.	10/21/2009		
Engine Data Concentrator Unit (EDCU)	261850-()	Engine Data Concentrator Unit (EDCU), hardware P/N 261850-() and software P/N S00925-(). Part of a SYSTEM TSOA APPROVAL consisting of an Engine Indication Display (EID), 5x4 EFIS part number 261710-(), and the 261850-() EDCU for Pilatus PC-9 Aircraft	C113, with C43c, C44c, C47a, and C49b	2/27/2008		

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INSTRUMENT/ACCESSORY	Model/P/N	DESCRIPTION	TSO, PMA or TC	Date	Other Approvals	Comments
Electronic Flight Instrument a.k.a. Pilatus 6x8 EFI	262500-()	Electronic Flight Instrument (EFI). This was a major change to the 260500-5 due to a software change that added functionality. (There was essentially no change to the hardware.) The 262500-1 was approved in TSOA letter dated 09/27/07. Follow-on units, the 260500-3, -5, -7 etc. are to be covered in minor change letters.	TSO-C113; also C2d, C3d, C4c, C5e, C6d, C8d, C9c, C10b, C34e, C36e, C40c, C41d, C43c, C44c, C47a, C49b, C52b, C66c, C87, C95, C101, C129a, and C147.	TSOA letter 09/27/07	Pilatus PC-7 (USA TC) and PC-9, among others	
Display Unit	261690-101	Display Unit -- part of the Pilot Information Display system, a.k.a. PID, or Electronic Flight Bag (EFB). Works with the 261700-1 Electronics Unit -- Covered by PMA. <u>Initial</u> model effectivity: Boeing 777-200, 777-200LR, etc. The PMA label must match the dash number for the unit and show eligible aircraft models.	PMA, Supplement 9.	PMA Supplement 9, 05/20/09.	Boeing TC number T00001SE (777). Built as a PMA under Production PMA PQ2070CE-D	Initially designed for the 787.
Display Unit	261690-201	<p>Display Unit (DU) -- part of the Pilot Information Display system, a.k.a. PID, or Electronic Flight Bag (EFB). The DU works with the 261700-1 Electronic Unit.</p> <p>FAA traceability for approval of PN 261690-201 was obtained in the form of an FAA 8100-9, signed on 12/18/2009, by Chris L. Brown, FAA AR-635846, approving Boeing Drawing 246W0900, revision E, dated 12/16/09, "Interchangeable Parts Electronic Flight Bag (EFB)", which indicates the 261690-201 DU is interchangeable with the 261690-101 DU, as the only difference is the bezel color.</p> <p>Boeing Service Letter 737-SL-46-006-A, dated 11/12/2009, allows the installation of Electronic Flight Bag (EFB) Generation 2 hardware with Block Point 4.0 (BP 4) software -- both the Electronics Unit (EU) and Display Unit (DU) -- to be installed on Boeing 737 aircraft.</p>	<p>TC approval for this DU is in Boeing Drawing 246W0900, revision E, dated 12/16/09.</p> <p>Also Boeing Service Letter 737-SL-46-006-A allows the installation of BP 4 EFB articles -- both the EU and DU -- on B737 aircraft.</p>	<p>Boeing Drawing 246W0900 revision E, dated 12/16/09.</p> <p>Boeing Service Letter 737-SL-46-006-A, dated 11/12/2009;</p> <p>Also CMM document 46-11-03, revision 5, dated July 15, 2010.</p>	<p>The Component Maintenance Manual (CMM) for the Gen 2 BP 4.0 DU covers maintenance activities for the 261690-1, 261690-101, and 261690-201 Display Units. The CMM is document 46-11-03, "Display Unit Component Maintenance Manual with Illustrated Parts List Part Number 261690-1, -101, -201", revision 5, dated July 15, 2010.</p>	<p>The Illustrated Parts Listing found in the CMM for these 261690-1, -101, & -201", units shows that the same hardware is used for each. The only difference between the three DU PNs, covered by CMM document 46-11-03, is the bezel colors.</p>

