

**Aviation Fabricators Inc.
805 North Fourth Street
Clinton, MO. 64735**

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

For
Interior Cabin Configurations

Document No.: AF-479

Revision "E"

Revision Date: 05/01/15

Applicable to:

Hawker Beechcraft model 400 & 400A

Modified by FAA STC ST01572WI

The information in the Instruction for Continued Airworthiness is FAA accepted material and complies with 14 CFR 25.1529, Instructions for Continued Airworthiness. It supersedes or adds to that provided in the Maintenance Manual for the Hawker Beechcraft 400/400A Aircraft, only where covered in the items contained herein. For limitations and procedures not contained in the Supplement, consult the Component Maintenance Manual, or other approved airplane data.

REVISION PAGE

Document Title: Instructions for Continued Airworthiness

Prepared By: Todd Pogue

Reviewed By: William L. Shields

Updates to the ICA will be made by Aviation Fabricators Inc. Updates will be listed in the log of revisions and the effective pages will be listed below.

Log of Revisions				
REV. NO.	EFFECTED PAGE(S)	DESCRIPTION	DATE	APPROVED BY
Orig. Issue	All	Initial Release	06/05/09	JRL
A	All	*Added LED Lighting, Equip Relocation, and Fwd Feedthrough kit info to Section 1.0 DATA *Updated Section 2.0c to be more descriptive for cushion assembly inspection *Updated Section 2.0d to be more descriptive for divan and seat assembly inspections *Added Sections 2.0e, f, g, & h *Added Tasks AFI-108 thru AFI-113 to inspection table in Section 2.0 and added paragraph E & F below table *Updated all W&B info under Section 5.0 *Updated Section 8.0 with added placards and new locations in Figures A, B, D, E, F, G, H, & J *Added Maintenance Instructions under Section 9.0B for LED Lighting, Equip Relocation, and Emergency Power Supply kits *Updated Section 10.0 by separating Rev page and adding Sectin 10.3, 10.4, 10.5 & 10.6	11/05/09	JRL
B	All	*Added model 400A *Corrected all references to the Master Data List to document # AF-475MDL	06-17-10	JRL
C	All	*Updated Inertia Reel Attachment on 32-0377K-X	08-14-13	JRL
D	Pgs.	*Updated Notes 2.1.a & 2.1.b to refer to Beechcraft Maintenance Manual schedule for inspection intervals, p. 12 *Updated Notes 2.2 to refer to Beechcraft Maintenance Manual schedule for inspection intervals, p. 13	05-01-15	JRL
E	12	*Added Figure 1.0K to reference Floorboard Modification Kit for aircraft S/N's RK-98, RK-110 & After	05-19-17	JRL

1.

TABLE OF CONTENTS

DESCRIPTION	PAGE
REVISION PAGE	2
TABLE OF CONTENTS	3
ABBREVIATIONS AND DEFINITIONS.....	4
1.0 INTRODUCTION.....	5
2.0 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE.....	13
3.0 DIMENSION AND ACCESS:	15
4.0 LIFTING AND SHORING	16
5.0 LEVELING AND WEIGHING	16
6.0 TOWING AND TAXIING	17
7.0 PARKING AND MOORING.....	17
8.0 PLACARDS AND MARKINGS.....	18
9.0 SERVICE INFORMATION	23
10.0 AIRWORTHINESS LIMITATIONS	27
11.0 SERVICE INSTRUCTIONS FOR MONOGRAM TOILET UNIT	32

ABBREVIATIONS AND DEFINITIONS

Abbreviations	Definitions
AML	FAA Approved Model List (AML)
Detailed Inspection (DET)	An intensive examination of a specific item, installation or assembly to detect damage, failure or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses, etc. may be necessary. Surface cleaning and elaborate access procedures may be required.
FAA	Federal Aviation Administration
FAA MIDO	FAA Manufacturing Inspection District Office
General Visual Inspection (GVI)	A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or droplight and may require removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked.
ICA	Instructions for Continued Airworthiness
Special Detailed Inspection (SDI)	An intensive examination of a specific item, installation , or assembly to detect damage, failure or irregularity. The examination is likely to make extensive use of specialized Inspection Techniques and/or equipment. Intricate cleaning and substantial access or disassembly procedure may be required.
STC	Supplemental Type Certificate

1.0 INTRODUCTION

The purpose of this Maintenance Manual Supplement and Instructions for Continued Airworthiness (ICA) is to provide the maintenance technician with the information necessary to ensure the continued airworthiness of the Aviation Fabricators cabin configuration, per installation numbers 400-X, when installed in the aircraft passenger cabin in accordance with Aviation Fabricators design data included on Master Data List AF-475MDL and per Supplement Type Certificate (STC) No. ST01572WI.

Modifications to an aircraft obligates the operator to include the maintenance information provided by this document into the operators aircraft Maintenance Manual and operator's aircraft scheduled maintenance program. This document defines supplementary maintenance operations and frequencies recommended by Aviation Fabricators Inc., to ensure the aircraft's airworthiness.

The information contained herein addresses the requirements specified in 14 CFR 25.1529, Instructions for Continued Airworthiness and supplements the basic Airplane Maintenance Manual only in those areas listed as pertains to the installation of divan assemblies, as installed per the Aviation Fabricator Master Data List AF-475MDL. For limitations and procedures not contained in this supplement, consult the basic Airplane Maintenance Manual.

DATA

All information to support the continued airworthiness of this modification is contained in:

STC ST01572WI.
Master Data List: AF-475MDL.

Installation:

2 Place Divan
Installation Instructions D-10607 for p/n's 32-0377K-X

Aft Dividers
Installation Instructions D-10605 for p/n's 32-0380K-X

Aft Toilet Cabinet
Installation Instructions D-10617 for p/n's 32-0382K-X

OEM Seats
Installation Instructions D-10621 for p/n's 32-0384K-X

LED Lighting

Cabin LED Lighting drawing # 120-3010-E0995-000
LED Lighting Installation drawing # 120-3035-M0795-000
Lighting Wire Routing Installation drawing # 120-3035-M0795-002

Relocated Equipment

Equipment Relocation drawing # 120-3035-M0799-000

Forward Bulkhead Feedthrough

FWD Feedthrough Installation drawing # 120-3040-M0799-000

Parts: p/n 32-0377K-X, 2 Place Divan Installation
p/n 32-0380K-X, Aft Divider Installation
p/n 32-0382K-X, Aft Toilet Cabinet Installation
p/n 32-0384K-X, OEM Seat Installation
See document BOM-3035-795 for LED Lighting

The divan is a self contained complete assembly that mounts to the existing seat track, using standard fittings, in accordance with FAA approved floor plans. The unit has arm cabinets attached to each end which are also attached to the existing seat track. The seat belts are attached to the seat track with typical tie down fittings and the inertia reel shoulder harness is bolted to the divan frame on the outboard side using standard hardware.

The aft dividers are mounted to the seat track and fittings in the overhead structure in the same manner as the OEM dividers.

The aft toilet cabinet is a self contained unit that attaches to the existing seat track. It is not to be occupied during taxi, take-off and landing. The Monogram toilet assembly in the toilet cabinet is wired into the aircraft system.

The OEM seat installation involves installing new model seats on the existing seat track at locations farther aft in the cabin than previously approved FAA floorplans.

The original factory installed cabin interior lighting was removed during interior refurbishment and was replaced by new EMTEQ LED PMA lighting. Lighting consisted of down-wash accent and reading lights. All lighting switches were replaced with new Audio International switches. Cabin ordinance signs were replaced with new EMTEQ signs. Reference Elliott Aviation drawing 120-30345-M-0795-000 "LED Lighting Installation" for location of new lighting.

Emergency Lighting Power Supplies were relocated under RH cabin Seat floor panels (F.S. 180) to supply power to certain cabin lights during aircraft power outage.

Design Change Control

All data and changes to the parts and assemblies will be tracked per Master Data List AF-475MDL Rev IR or later approved revision.

Applicable Aircraft
Beechjet 400, 400A

2 Place Divan
P/N 32-0377K-X
Top not shown for clarity

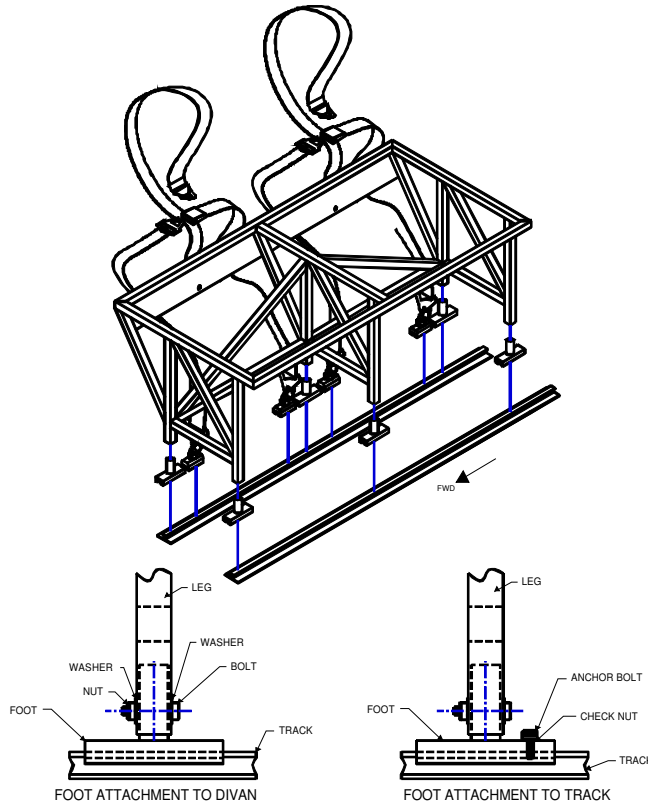


Figure 1.0A

Inertia Reel Attachment

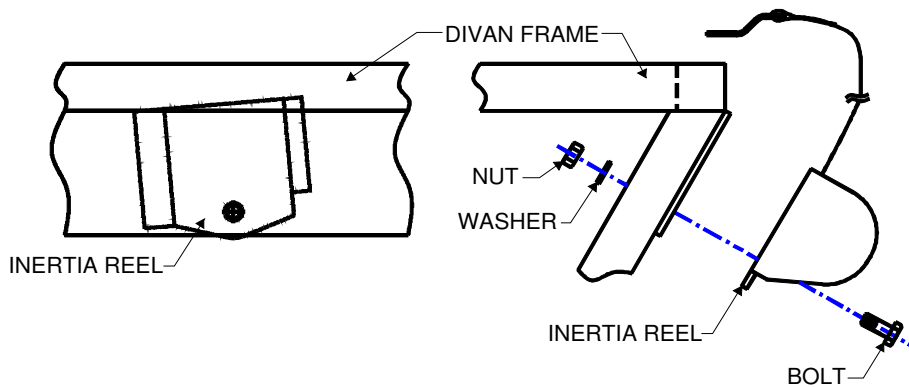


Figure 1.0B

Seat Belt Attachment

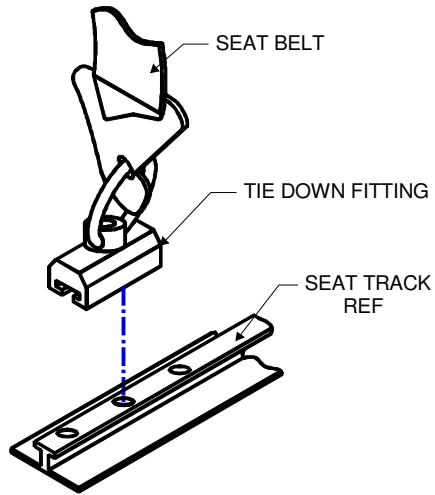


Figure 1.0C

Close-out Panel Assembly

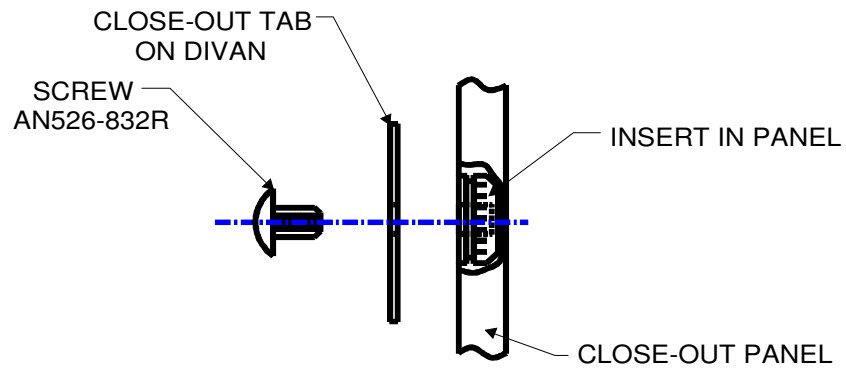


Figure 1.0D

End Arm Cabinets

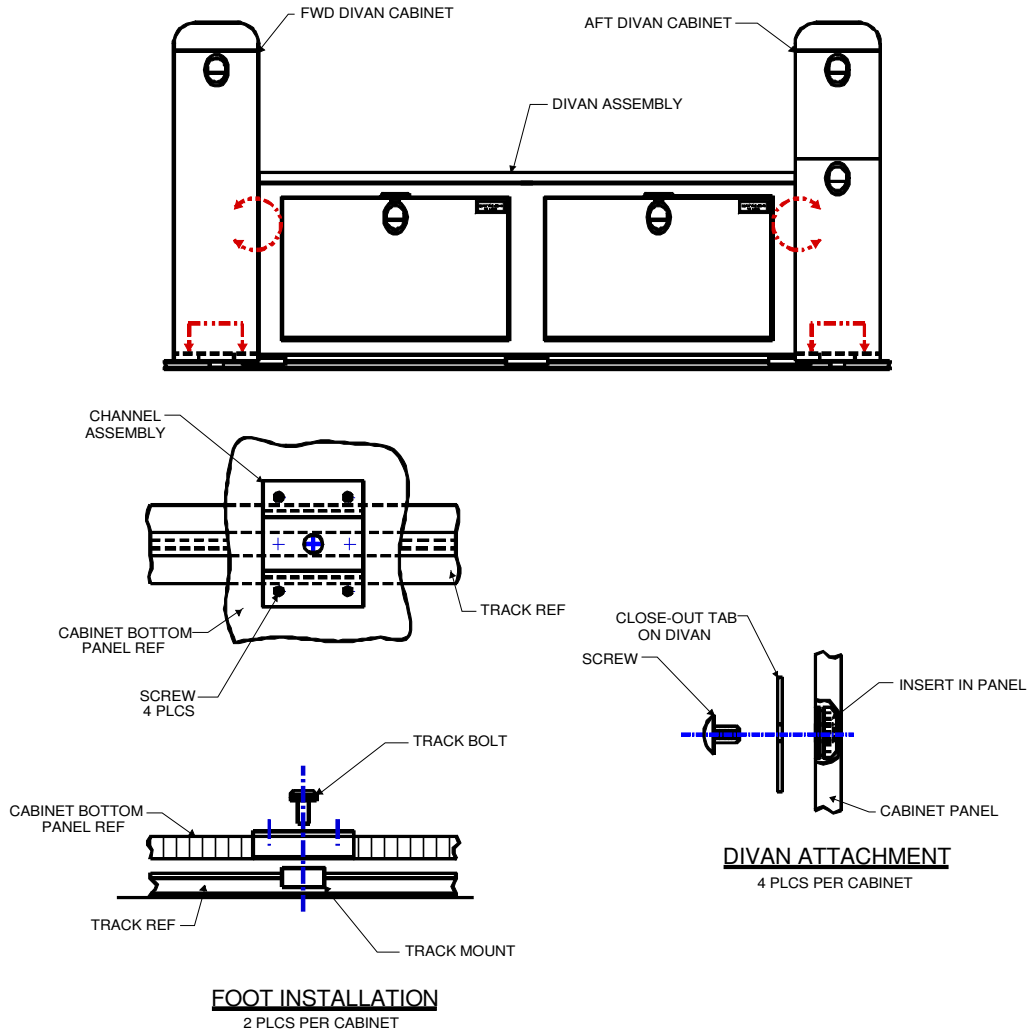


Figure 1.0E

Aft Dividers
P/N 32-0380K-X

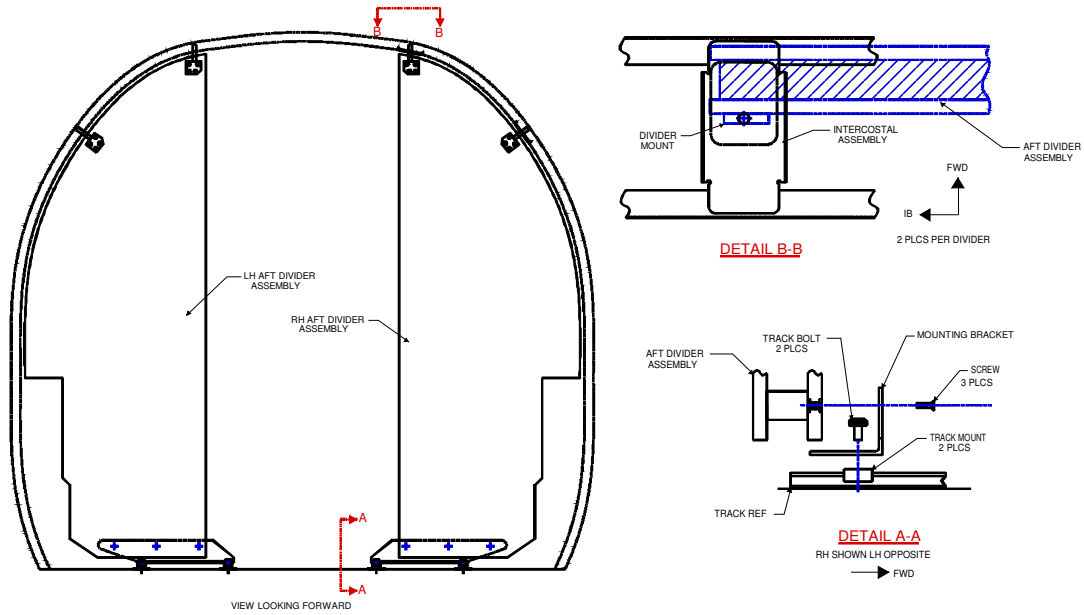


Figure 1.0F

Aft Toilet Cabinet
P/N 32-0382K-X

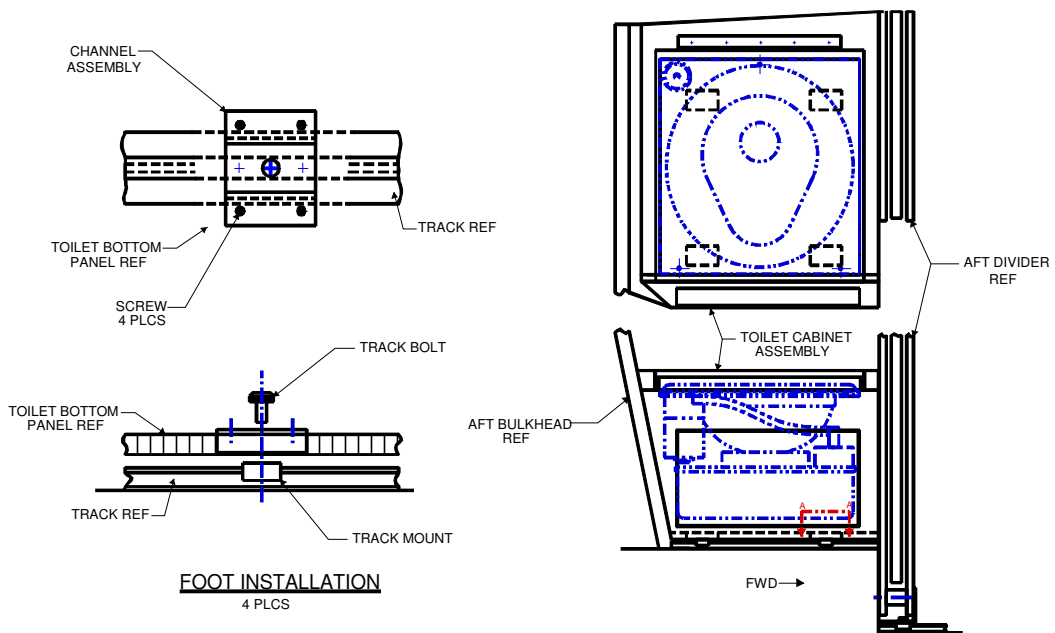


Figure 1.0G

OEM Seats
P/N 32-0384K-X

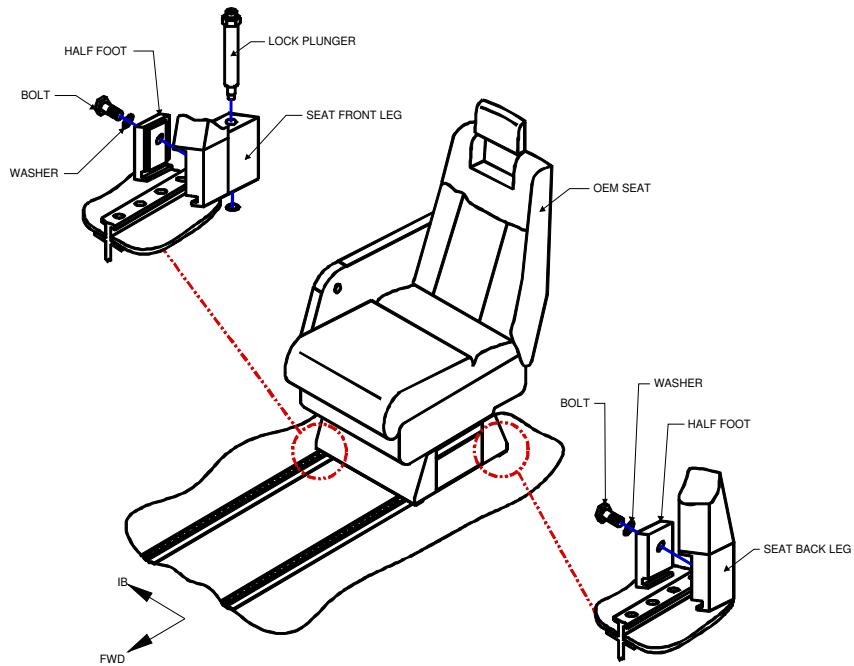
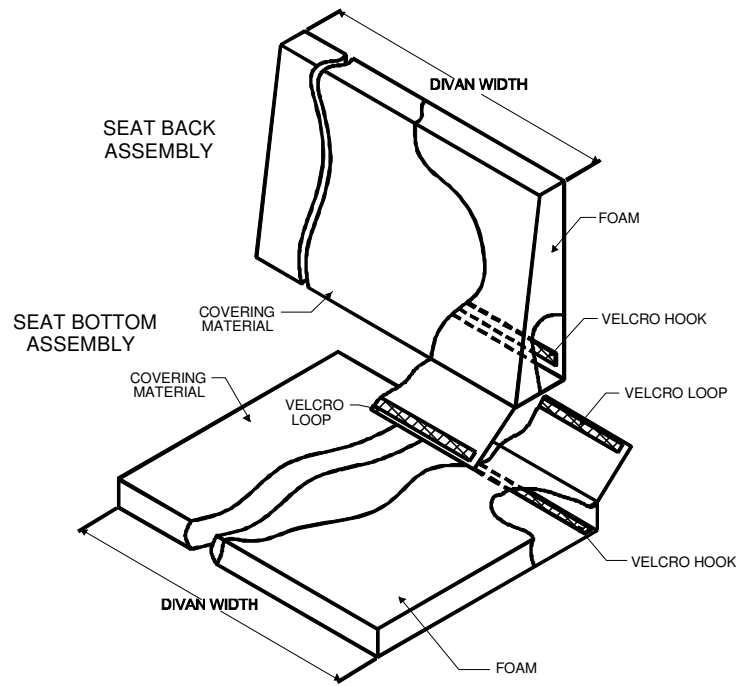


Figure 1.0H



CUSHION ASSEMBLY REFERENCE

Figure 1.0J

Floorboard Modification Kit
S/N's RK-98, RK-110 & After

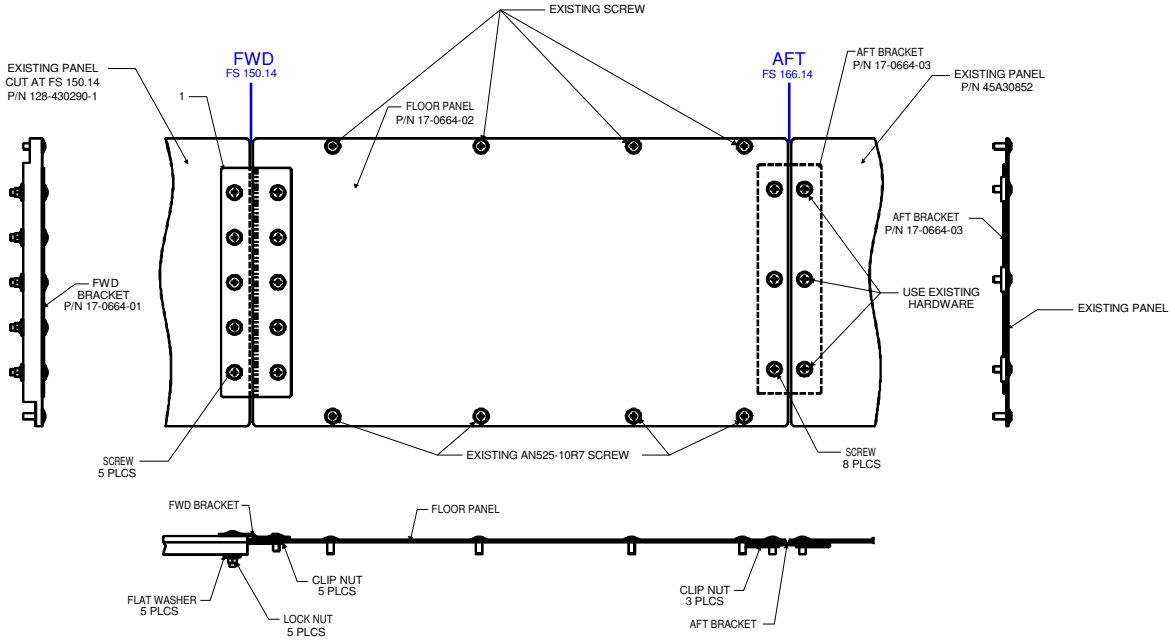


Figure 1.0K

2.0 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE

1. To comply with 14 CFR 25.1529, continue the new divan with restraints, aft dividers, and aft toilet cabinet on the same inspection and maintenance schedule used per the Hawker Beechcraft Maintenance Manual for cabin section inspections.
 - a. The new cabin configuration components require no service other than inspection at normal inspection intervals per the Beechcraft Maintenance Manual schedule.
 - b. The safety belts require no service other than inspection at normal inspection intervals per the Beechcraft Maintenance Manual schedule.
 - c. Perform a detailed visual inspection of each passenger seat bottom and back cushions and covering of all cabin interior components to detect apparent or obvious defects or irregularities.

On the cushion assembly, check for cracks and punctures within a 4" diameter circle. The cushion assembly can have no more than three defects found within the 4" diameter circle. If a cushion develops a "lump", check to see if there are no more than two lumps within a 4" diameter circle. Any damage to the cushions outside of the described limits will require them to be replaced.

Visually inspect the covering assemblies for holes, punctures, and tears. If the damage to the covering is holes smaller than 1/2" in diameter or a cut at a maximum of 2" in length then the covering is satisfactory. The sewing of the cover assemblies is not to exceed 1" tearing. Any damage to the covering assemblies outside of the described limits will require them to be replaced.

- d. Visually inspect the divan and seat assembly tubes and diaphragm for cracks and deformation. Damaged conditions could be detected as a crack at the edge of the tube or along the length of the tubes or as a crack, tear or cut found on the seat bottom or back diaphragm. Visually inspect all hardware for excessive wear before and after installation.

Replace the seat back and bottom diaphragm if two cracks or deformations are found within a 4" diameter circle. If a tear or cut is found with a maximum of 6", replace the diaphragm.

There shall be no broken tubes. There shall be no sharp corners, edges, or protrusions that may injure passengers. Replace the tubes if they are bent in such a way that they are more than 2" off center. Replace the seat tubes if

crack length is found to be .125” or greater. Replace the tube if a dent is found running longer than 3”. Replace the seat tubes if deformation is greater than .25” the overall thickness of the tube diameter.

Cracked or broken fasteners or fittings are to be replaced with new immediately.

For repair or replacement of damaged or broken parts or assemblies contact Aviation Fabricators Inc.

- e. Visually inspect LED lighting for damage or missing parts. Perform operational test of all LED cabin lighting and repair or replace as required. For any unresolved maintenance issues refer to Elliott Aviation drawing 120-3010-E0795-000 “Cabin LED Lighting” for wiring issues or contact EMTEQ Tech Support for mechanical issues.
- f. Emergency Lighting Power Supply must have Inspection/Check of power supplies and switch module, perform functional test, and battery discharge test every 12 months. Reference Chapter 33, 400/400A Maintenance Manual.
- g. Visual inspection of forward pressure bulkhead feedthrough, (reference Elliott Aviation drawing # 120-3010-M0788-000 “FWD Bulkhead Feedthrough Installation”) to be completed during Schedule “C” Inspection (1200 hours recurring) of Hawker Beechcraft Corp. 400/400A Maintenance Manual, Scheduled Inspection Program.
- h. Visual inspection of relocated equipment, (reference Elliott Aviation drawing # 120-3010-M0799-000 “Equipment Relocation”) to be completed during each Scheduled “B” Inspection (400 hours recurring) of Hawker Beechcraft Corp. 400/400A Maintenance Manual, Scheduled Inspection Program.

2. Inspection Time Limit for the cabin configuration installations:

Refer to Beechcraft Maintenance Manual for Inspection Intervals for:
 400 series RK-1 and
 400A series RJ-1 aircraft.

Task Code			Schedule	Date	Mech	Insp
AFI-100	a.	Inspect for damage to upholstery.				

AFI-101	b.	Inspect safety belts for wear, cuts, fraying, damage, and deterioration.				
AFI-102	c.	Inspect safety belt attachment fittings for wear and damage				
AFI-103	d.	Inspect foot fittings for damage, security, and function.				
AFI-104	e.	Inspect seat frame for damage, and corrosion.				
AFI-105	f.	Inspect overall seat for fit and function.				
AFI-106	g.	Check operation of toilet assembly.				
AFI-107	h.	Check aft divider door assembly for smooth, even operation.				
AFI-108	i.	Visually inspect LED Lighting for damage or missing parts.				
AFI-109	j.	Perform operational test of all LED cabin lighting				
AFI-110	k.	Perform Function Test of Emergency Lighting Power Supply				
AFI-111	l.	Perform Battery Discharge Test of Emergency Lighting Power Supply				
AFI-112	m.	Visually inspect forward pressure bulkhead feedthrough for are for cracks.				
AFI-113	n.	Visually inspect relocated equipment for security and visible damage.				

A. The new divan assembly and restraint system are on the same inspection and maintenance schedule used per the Hawker Beechcraft Maintenance Manual for passenger seats.

- B. The new aft toilet cabinet seat is on the same inspection and maintenance schedule used per the Hawker Beechcraft Maintenance Manual for seats.
- C. Monogram flushing toilet maintenance schedule:
 - 1. Service and clean after each flight when toilet is used.
- D. The new aft dividers are on the same inspection and maintenance schedule used per the Hawker Beechcraft Maintenance Manual for interior components.
- E. LED Lighting and Emergency Power Supplies are on the same inspection and maintenance schedule used per Hawker Beechcraft Corp. 400/400A Maintenance Manual for interior lighting.
- F. Relocated Equipment are on the same inspection and maintenance schedule used per Hawker Beechcraft Corp. 400/400A Maintenance Manual for navigation/pilot static equipment.

3.0 DIMENSION AND ACCESS:

The installation of this cabin configuration does not change the dimensions of the aircraft or alter the access to any existing aircraft system.

4.0 LIFTING AND SHORING

No change.

5.0 LEVELING AND WEIGHING

Divan

Maximum Allowable Seat Weight	=	52 lbs
w/ Seat Bottom Upholstery		
Base Weight of Divan w/ Belts	=	25 lbs
Close-out Panel Weight	=	5 lbs

Armrest Cabinets

Forward Arm Cabinet	=	22 lbs
Aft Arm Cabinet	=	25 lbs

Aft Dividers

LH & RH Divider Assembly	=	15 lbs each
--------------------------	---	-------------

Aft Toilet

Maximum Allowable Seat Weight	=	55 lbs (dry)
-------------------------------	---	--------------

Base Weight of Box Assembly	=	15 lbs
Toilet Assembly Weight	=	20 lbs
Additional Fluid for Toilet	=	5 lbs

OEM Seats = 55 lbs each

LED Lighting

Reference following Elliott Aviation drawing/documents for LED Lighting weights and location:

- BOM-3035-795 Rev A – “Bill of Materials for LED Reading and Downwash Lighting
- 120-3010-E0795-000 – “Cabin LED Lighting”
- 120-3035-M0795-000 – “LED Lighting Installation”
- 120-3035-M0795-002 – “Lighting Wire Routing Installation”

Forward Bulkhead Feedthrough
Negligible weight change.

Nose Equipment Installation
Refer to the current Equipment List and revised Weight & Balance data sheets in aircraft POH/AFM section 6.

Emergency Lights Power Supplies Installation		
Forward Power Supply	=	4.17 lbs
Aft Power Supply	=	4.17 lbs
Switch Module	=	.25 lbs

6.0 TOWING AND TAXIING

No change.

7.0 PARKING AND MOORING

No change.

8.0 PLACARDS AND MARKINGS

15 placards are required in conjunction with this modification:

1. The divan installation requires placard part numbers 32-0377-16, 32-0377-17, and 32-0377-20 to be installed in plain view of the seat occupants on the top header of the LH forward galley.

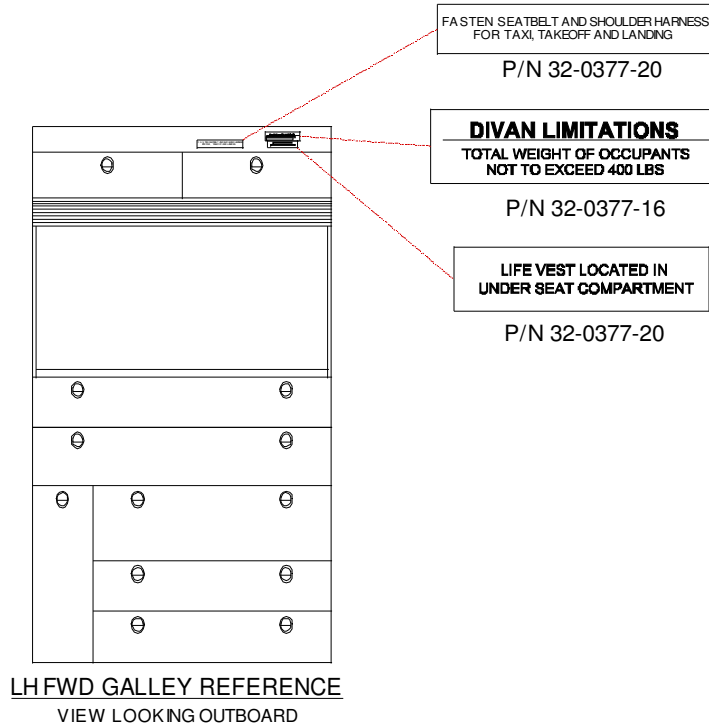


Figure 8.0A

2. For the close out panel on the divan, placard part number 17-0585-09 must be installed on the top inside of the close-out panel door so that it is visible when the door is open.

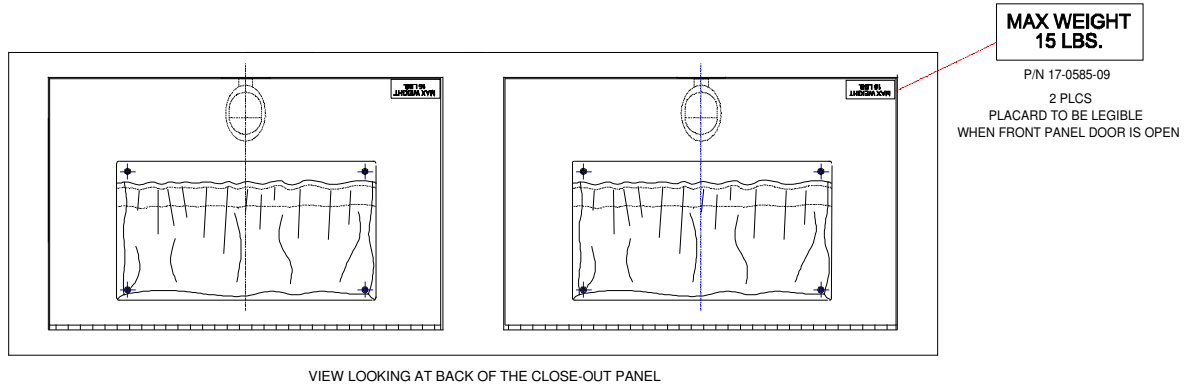


Figure 8.0B

3. A placard stating “to install harness over seat occupant’s fwd shoulder” is sewn on to restraint system part numbers 3088-7-061-2396 and should be legible and easily viewed by the seat occupant.

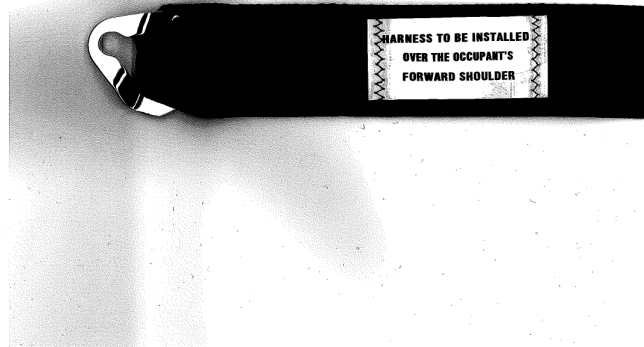


Figure 8.0C

4. The divan end cabinet drawers must be placarded with max weight allowances as follows. The placards are to be installed on the top edge of the drawer body front panels.
 - *Fwd cabinet drawer – “25 lbs max”
 - *Aft cabinet upper drawer – “10 lbs max”
 - *Aft cabinet lower drawer – “15 lbs max”

5. The aft dividers must include placard part number 32-0380-600 attached to just below the pocket door handle on both side of each door (4 pls total).

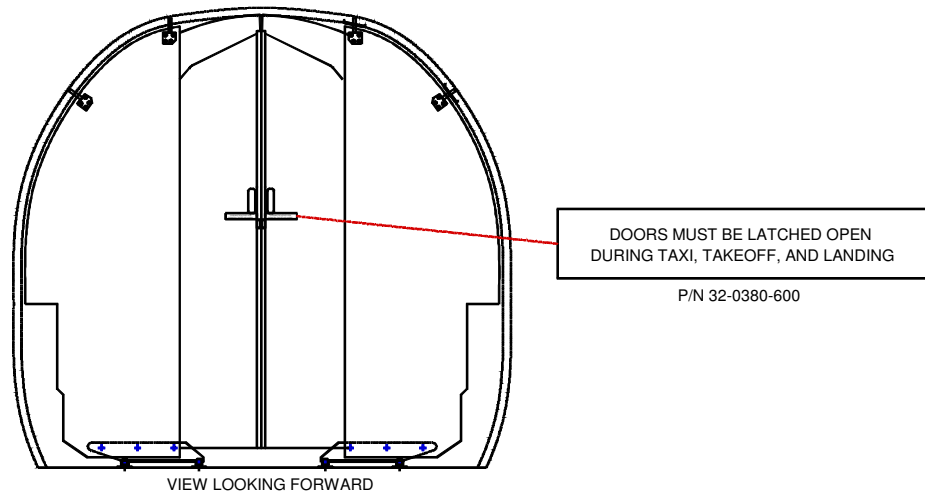


Figure 8.0D

6. For the aft toilet cabinet installation placard part number 32-0382-19 & 32-0382-20 must be installed on the aft panel of the LH aft divider assembly.

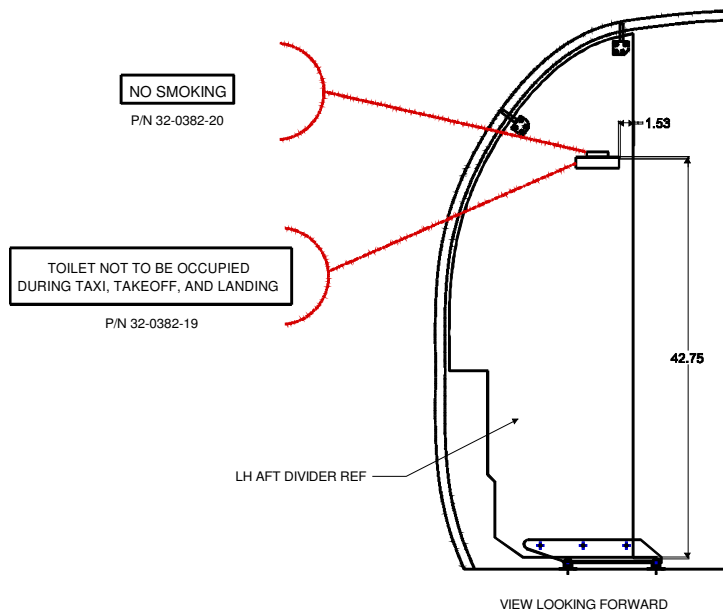


Figure 8.0E

7. In the aft lavatory compartment placard part number 32-0382-21 must be installed on the side wall below the window panel.

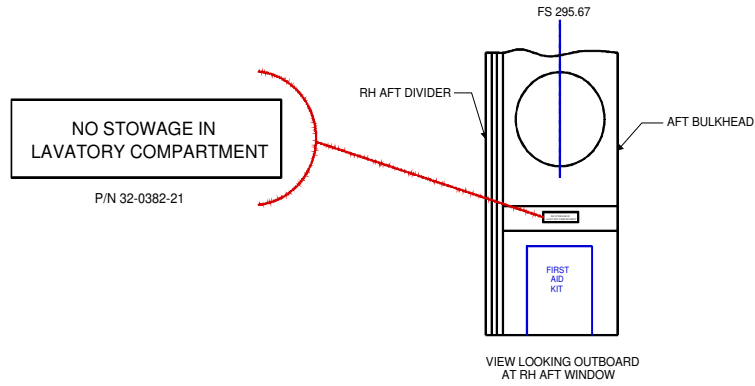


Figure 8.0F

8. Placard part number 400-1A must be installed on the forward side of the RH Aft Divider.

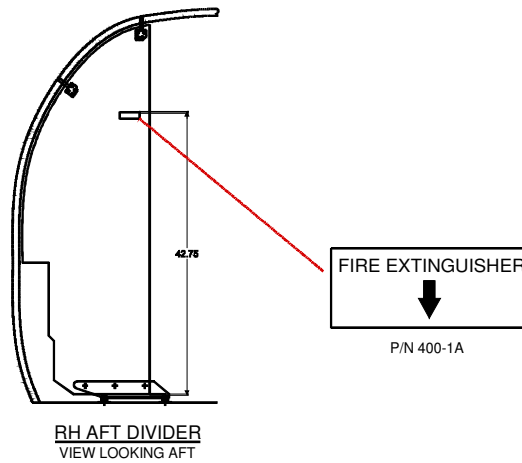


Figure 8.0G

9. Placard part number 400-1B must be installed on the header of the LH Forward Galley.

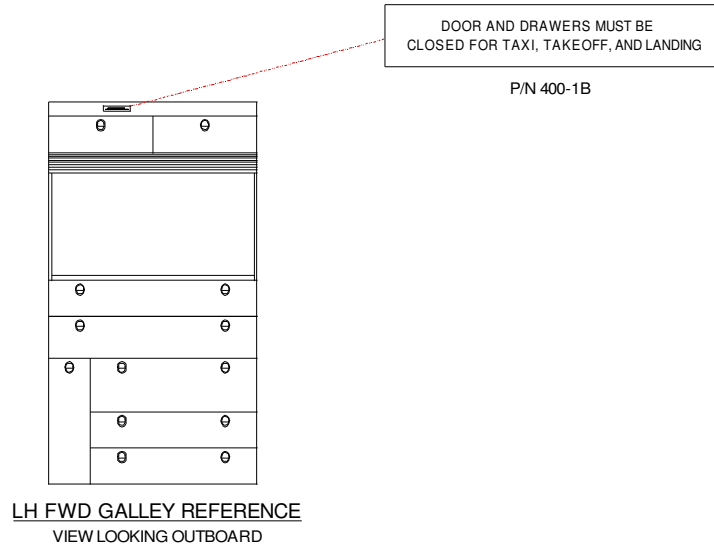


Figure 8.0H

10. Label part number 32-0377-18 must be placed on the inside of the lid of the two forward oxygen box container assemblies that are for the divan seat occupants.

O2 LANYARDS HAVE BEEN CHANGED
AND MUST BE 8-9 INCHES LONG

Figure 8.0J

9.0 SERVICE INFORMATION

Typical Passenger Seating Service Instructions:

A. Upholstery Cleaning:

Service Instructions

1. Remove seat back and seat bottom cushion assemblies from the interior seating components.
2. If possible dry clean fabric cushions.
3. If dry cleaning is not possible clean fabric with Armour All fabric cleaner or equivalent.
4. Clean leather with Armour All leather cleaner or equivalent.
5. Clean the cabinetry finish using Armour All multi-purpose cleaner or equivalent.
6. Clean and inspect restraint system for damage, fraying, cuts or seam deterioration.
7. Inspect all attachment fittings and replace if necessary.
8. Inspect overall interior component for fit and function.

B. Toilet Service Instructions:

See Section 11.0

Typical Maintenance Instructions:

Divan Assembly

The divans are self contained complete assemblies that mount to the existing aircraft cabin seat track using standard fittings in accordance with approved floor plans. Refer to Figure 1.0A.

Divan Installation

Installation of the divan requires aligned the feet on the existing seat track and attaching the divan legs using standard hardware. Refer to Installation Instruction drawing D-10607 for complete installation details and hardware part numbers.

Divan Removal

Removal of the divan requires loosening the attaching hardware and lifting the divan from its location on the seat track. The feet will be slid forward or aft to the end of the seat track or a gap in the track for their removal.

Cushions

Seat back and seat bottom cushion assemblies are removed by simply pulling the cushion inboard away from the Velcro on the sidewall or up away from the Velcro on the pan of the divan assembly, respectively. All covering and upholstery materials must comply with 14 CFR 25.853 as stated on the Finish Materials Listing AF-476. The cushion design and layout were determined & manufactured by the seat installer to match the design of the cabin interior in the aircraft. Refer to Figure 1.0J for Cushion Assembly Reference for basic assemblies.

Inertia Reel

Inertia reel removal is accomplished by loosening attaching hardware and removing from the divan frame bracket. Refer to Installation Instruction drawing D-10607 for complete installation details and hardware part numbers. Refer to Figure 1.0B.

Seat Belt

Seat belt and removal is accomplished by loosening attaching hardware and removing from the existing aircraft seat track. Refer to Installation Instruction drawing D-10607 for complete installation details and hardware part numbers. Refer to Figure 1.0C.

Closeout Panel Assembly

Underseat close-out panel removal is accomplished by removing (8) AN526-832R4 screws from under the divan that are attached to inserts in back of panel and attached through tabs on divan frame. Refer to Figure 1.0D

End Arm Cabinets

The divan arm cabinets are removed from the divan by removing screws from under the divan frame that are attached to the arm cabinet sides. To remove the cabinet from the seat track first remove the cabinet drawers to access the fittings attaching the cabinets to the seat track and then loosen the track bolt from the foot assemblies and track mount. Refer to Installation Instruction drawing 120-3010-M1610-000 for complete installation details and hardware part numbers. Refer to Figure 1.0E

Typical Divider Maintenance Instructions:

The aft dividers are installed using two each upper mounts that are inserted into intercostals riveted to the aircraft structure and then attached to the seat track at the bottom using 3 each screws to attach the aft divider panel to a mounting bracket. The mounting bracket is attached to the existing seat track using a track mount and track bolt. To remove the dividers loosed the screws at the bottom of the aft panel that attach it to the mounting bracket and then remove the mounting pins from the intercostals in the aircraft structure. Refer to Installation Instruction drawing D-10605 for complete installation details and hardware part numbers. Refer to Figure 1.0F

Typical Aft Toilet Cabinet Maintenance Instructions:

The aft toilet cabinet is a self contained assembly that is not approved for occupancy during taxi, take-off and landing. The cabinet is installed through four foot assembly attach to the bottom panel which are attached to the existing seat track using a track mount and track pin. To remove the cabinet from the seat track first remove the Monogram toilet tank and then loosen the track bolt from the foot assemblies and the track mount. Refer to Installation Instruction drawing D-10617 for complete installation details and hardware part numbers. Refer to Figure 1.0G

Typical OEM Seat Maintenance Instructions:

The OEM Seat are typical self contained Hawker Beechcraft seats that are installed by removing the forward and aft shrouds from the seats and securing to the existing seat track using four bolts and washers through the half feet and seat leg. Ensure that the lock pins are clear of the track before setting the seat in place and then lock them into existing holes in the seat track by tightening the jam nuts at the top of the locking pins. To remove the seats loosen the locking pins and make sure they are clear of the seat track then remove the bolts and washer securing the half feet to the seat frame. For further seat maintenance instruction refer to Hawker Beechcraft Maintenance Manual Section 25-22-00. Refer to Figure 1.0H

Typical LED Lighting Maintenance Instructions:

The original factory installed cabin interior lighting was removed during interior refurbishment and was replaced by new EMTEQ LED PMA lighting. Lighting consisted of down-wash accent and reading lights. All lighting switches were replaced with new Audio International switches. Cabin ordinance signs were replaced with new EMTEQ signs. Visually inspect LED lighting for damage or missing parts. Perform operational test of all LED cabin lighting and repair or replace as required. For any unresolved maintenance issues refer to Elliott Aviation drawing 120-3010-E0795-000 "Cabin LED Lighting" for wiring issues or contact EMTEQ Tech Support for mechanical issues. Reference Elliott Aviation drawing 120-30345-M-0795-000 "LED Lighting Installation" for location of new lighting.

Typical Nose Equipment Relocation Maintenance Instructions:

Emergency Lighting Power Supply must have Inspection/Check of power supplies and switch module, perform functional test, and battery discharge test every 12 months. Reference Chapter 33, 400/400A Maintenance Manual.

Typical Emergency Light Power Supply Maintenance Instructions:

Emergency Lighting Power Supplies were relocated under RH cabin Seat floor panels (F.S. 180) to supply power to certain cabin lights during aircraft power outage. Visual inspection of relocated equipment, (reference Elliott Aviation drawing # 120-3010-M0799-000 "Equipment Relocation") to be completed during each Scheduled "B" Inspection (400 hours recurring) of Hawker Beechcraft Corp. 400/400A Maintenance Manual, Scheduled Inspection Program.

C. RECOMMENDED OVERHAUL PERIODS

No additional overhaul time limitations and requirements apply to the Aviation Fabricators' interior cabin configuration.

10.0 AIRWORTHINESS LIMITATIONS

10.1 FAA Approval of Airworthiness Limitations

The information contained herein supplements the basic Maintenance Manuals only in those areas listed, when the aircraft is modified in accordance with Aviation Fabricators Master Data List AF-475MDL Rev IR or later approved revision. For limitations and procedures not contained in this supplement, consult the basic Airplane Maintenance Manuals.

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Sec. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

10.2 Revision Status

AIRWORTHINESS LIMITATIONS - LOG OF REVISIONS			
REV.	EFFECTED PAGE (s)	DESCRIPTION of REVISION	DATE
(IR)	All	Initial Release	05/06/2009

10.3 Airworthiness Limitations

10.3.1 Forward Bulkhead Feedthrough

Structural Analysis Report # 15-1675-3, Wolff Aerospace, Timothy A. Wolff DER (DERT-410167-CE), dated 6/01/09 referencing Elliott Aviation drawing "FWD Feedthrough Installation" # 120-3010-M0788-000

10.3.1.1 Connector Hole

Initial Inspection: 2,627 flight cycles
 Subsequent Inspection: 2,627 flight cycles

10.3.1.2 Fastener Hole

Initial Inspection: 9,793 flight cycles
 Subsequent Inspection: 9,793 flight cycles

10.4 Inspection Method

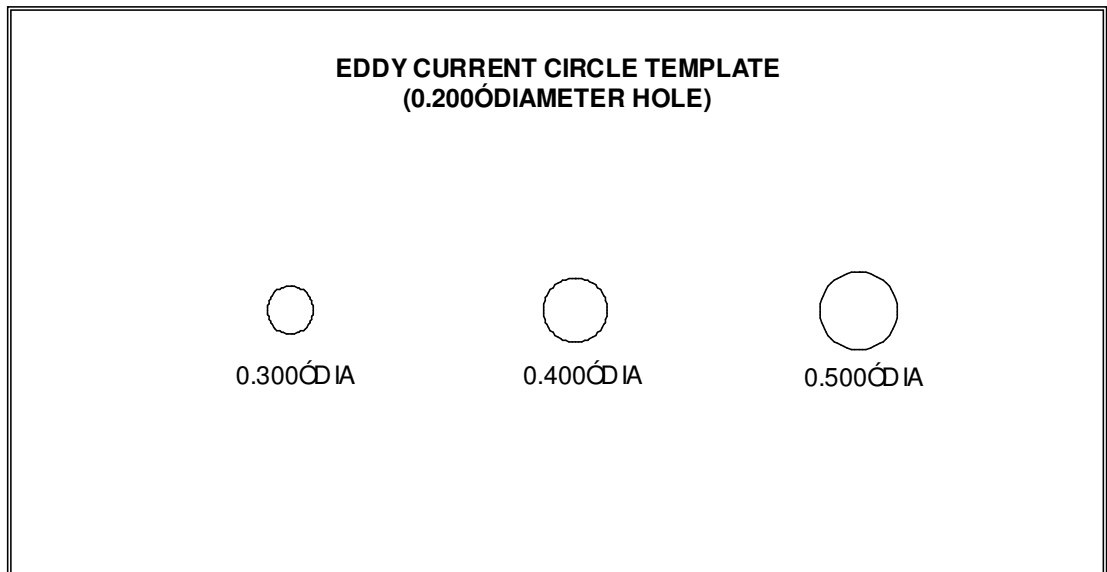
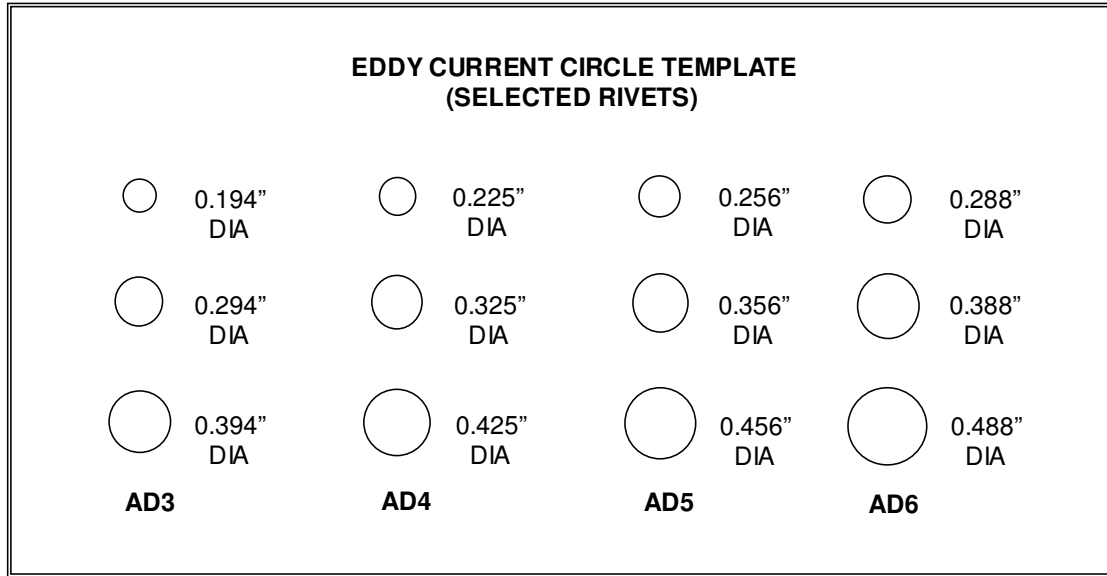
The connector and fastener holes should be inspected using eddy current inspection techniques, according to the intervals outlined in tables below. POD curves from the NTIAC "Nondestructive Evaluation Capabilities Data Book" for lap splice joint specimens that a 0.10" crack has a 90% probability of detection using eddy current techniques. The threshold crack length for each location indicates that a crack, if present should be detectable at the time of the threshold inspection. The section should indicate the following details.

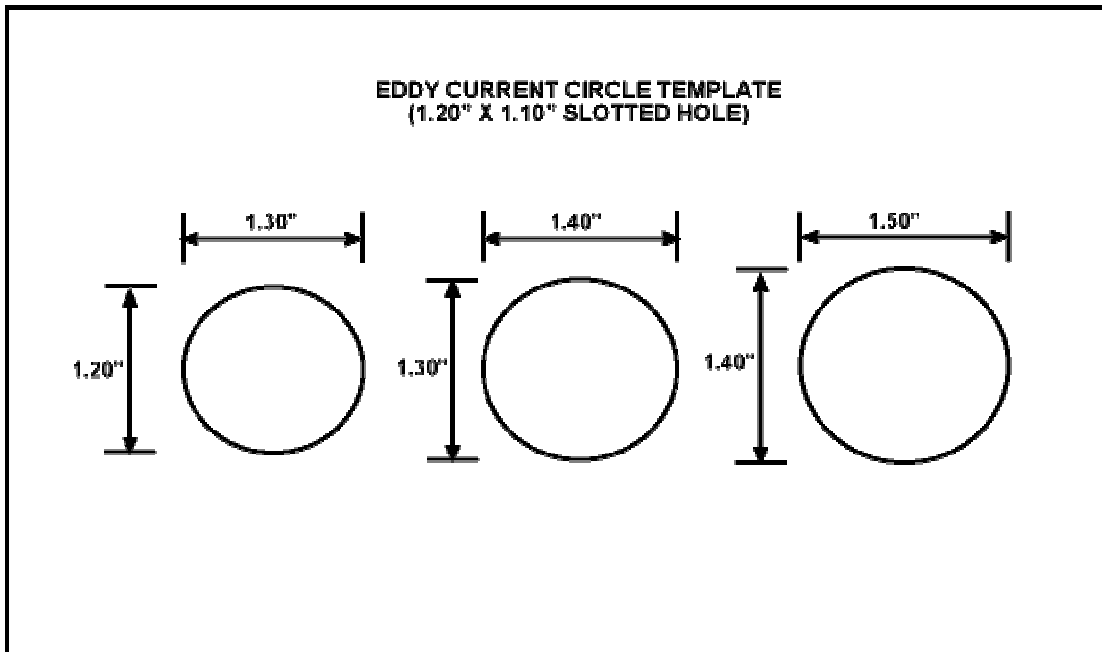
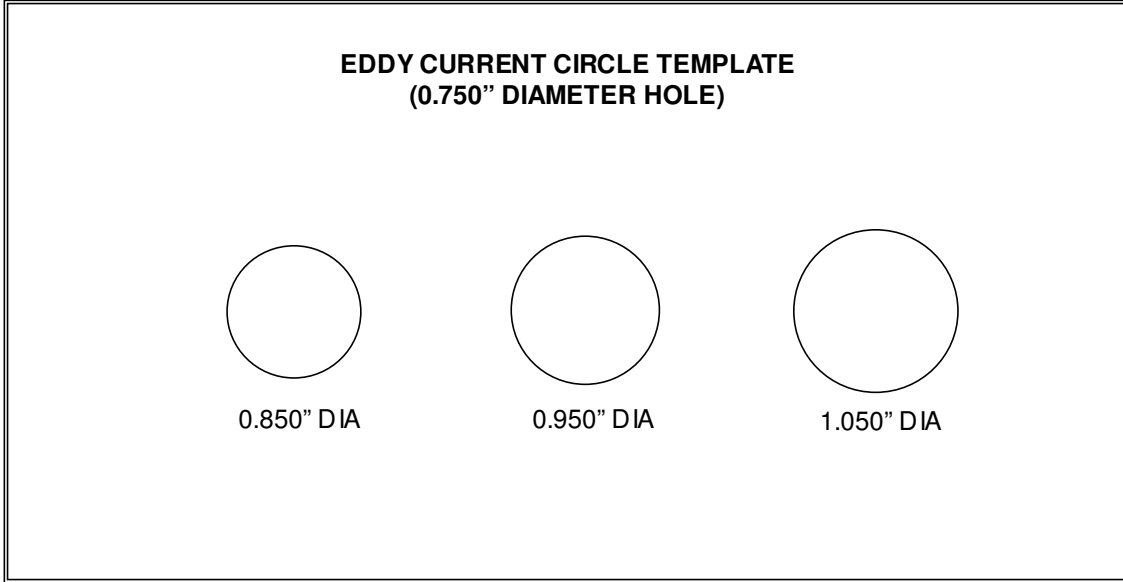
Modification	Affected Aircraft System	Structural Detail	Inspection Notes
1.38 in. Bulkhead Penetration	Aircraft Skin	Connector Hole	Inspect edge of hole in skin.
		Doubler Fastener Holes	Inspect fastener holes in skin. Cracks are most likely around fastener holes closest to the edges of the doubler.

10.5 Required Circle Templates

Modification	AD3 Rivet	AD4 Rivet	AD5 Rivet	AD6 Rivet	0.200"	0.750"	1.2 x 1.1
Upper GPS Antenna	X	X			X	X	

10.6 Eddy Current Templates





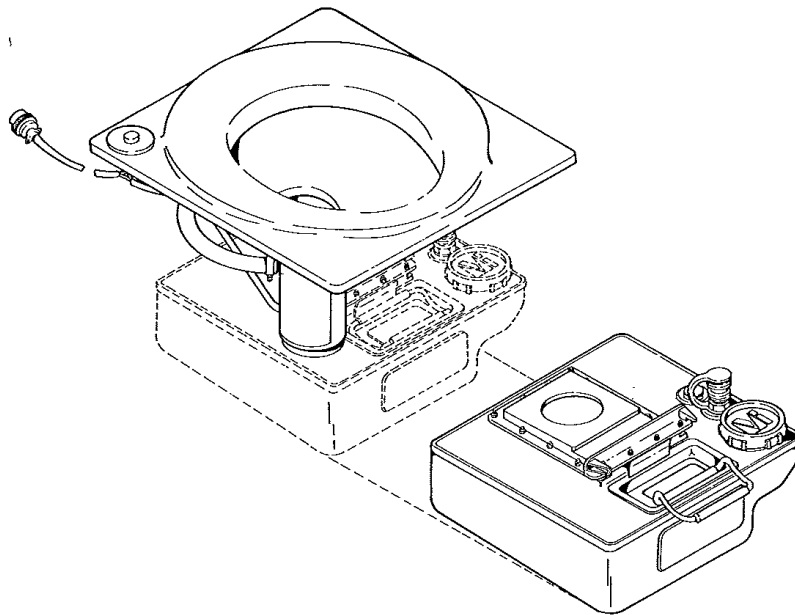
10.7 Distribution

Per the requirement of Appendix H of 14 CFR Part 25 paragraph H25.1 (c), the changes made to the ICA by the applicant will be distributed via mail by means of paper copy.

11.0 SERVICE INSTRUCTIONS FOR MONOGRAM TOILET UNIT

MAINTENANCE MANUAL

MONO-LAV®
AIRCRAFT TOILETS



Monogram Sanitation

800 W. ARTESIA BLVD., COMPTON, CA 90224-9057

MM-170
Nov 20/90

Monogram Sanitation

CONTENTS

<u>SECTION</u>	<u>PAGE</u>
Description and Operation	1
Leading Particulars and Servicing	3
Troubleshooting and Maintenance	7

ILLUSTRATIONS

<u>FIGURE</u>	<u>PAGE</u>
Typical Toilet Assy	1
Wiring Diagram	12

MM-170
CONTENTS
Nov 20/90

Monogram Sanitation

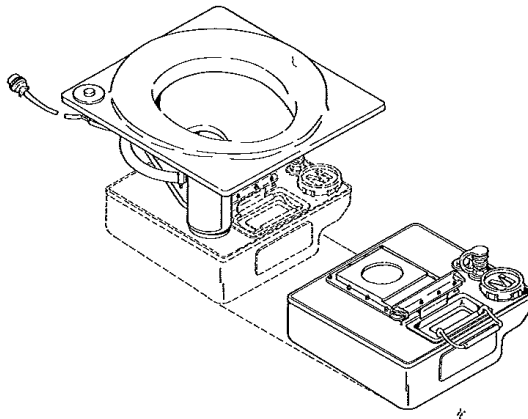
DESCRIPTION AND OPERATION

1. General

This publication is issued to provide instructions for servicing and maintenance of MONO-LAV® Aircraft Toilet Assembly, manufactured by Monogram Sanitation, Compton, California. The unit is a light weight, compact, electrically operated flushing toilet which utilizes ordinary tap water and a germicidal deodorant, Monogram's Chemkare, as a flush fluid.

2. Description

The recirculating flushing toilet is a completely self-contained unit requiring only the external connection of 24-28 volt DC electrical power. The toilet assembly is designed for permanent installation in the aircraft, requiring only the removal of the waste tank when servicing is desired.



MONO-LAV [®] AIRCRAFT TOILET

MM-170
Page 1
Nov 20/90

Monogram Sanitation

The toilet assy consists basically of a seat and shroud assembly which rests on the toilet mounting plate. Attached to the mounting plate are the polished stainless steel bowl assembly, the motor and pump assembly, and the PRESS TO FLUSH switch. Mounted to the bottom flange of the bowl is the slide assembly into which the removable tank assembly is installed.

The removable tank assembly consists of a storage tank on which the knife valve, flush line quick disconnect and carrying handle are located. Extending through the cover of the knife valve is a manually operated actuator to open or close the knife valve, sealing the tank contents prior to removal of the tank. The position of the knife valve may be observed through the opening at the bottom of the bowl.

The tank assembly detaches from the toilet at the front of the unit. Two Pres-Loc fasteners, one on each side of the knife valve, secure the installed tank in the sealed position against the bottom of the bowl. By detaching and draining the flush line at the quick disconnect, depressing the two Pres-Loc fasteners, and by pulling the carrying handle, the tank is easily removed for servicing.

3. Operation

The flush cycle is initiated by pressing the PRESS TO FLUSH button on the seat and shroud assembly. The push button switch applies 24-28 volt DC power to the motor section of the motor and pump assembly. Flushing continues until the push button is released. During the flush cycle, flushing fluid is pumped from the waste tank to the bowl by the self-priming pump section of the motor and pump assembly. The flush fluid enters the bowl through a nozzle in the upper rim and washes the inner surface of the bowl in a swirling pattern. Waste is carried to the waste tank through the knife valve below the bowl. When desired, the removable waste tank may be removed from the toilet for servicing after closing the knife valve.

Monogram Sanitation

LEADING PARTICULARS AND SERVING

1. Leading Particulars

Use Aircraft Toilet Facilities
Electrical Power Requirement 24-28 VDC, 7.5 Amps Max.
Pump Type Self-priming, Vane
Fluid Pump Rating (Nominal) 5 GPM
Flush Cycle Continuous (with flush
switch depressed)

2. Servicing Instructions

WARNING: FOR SANITARY REASONS, ALWAYS WEAR RUBBER GLOVES
(ELBOW LENGTH) WHILE SERVICING OR WHEN HANDLING
PARTS WHICH HAVE BEEN IN CONTACT WITH THE FLUSHING
FLUID.

The toilet should be serviced during routine ground
maintenance of the aircraft following any usage. It is more
efficient and convenient to remove, clean and recharge the
toilet tank on a regular basis than to wait until the tank is
filled to capacity. If the tank becomes filled above the
knife valve, follow the instructions below:

NOTE: To avoid spillage, do not remove tank when the fluid
level is above the knife valve.

- (a) Hold a small paper or plastic cup against the bowl
interior (preferably at the bowl flush ring outlet).
- (b) Depress the "Push to Flush" button to circulate
flushing fluid.
- (c) Pour the flushing fluid into a bucket until the
fluid level is below the knife valve.

Monogram Sanitation

A. Initial Precharge

The removable tank is to be precharged with a mixture of 2 quarts of water and 1 dissolvable package of germicidal deodorant, Monogram's Chemkare.

B. Servicing the Toilet

Instructions for servicing are provided on a decal applied to the front side of the removable tank. Instructions are as follows:

(1) Tank Removal

- (a) Open front access to the toilet, as applicable, to remove the toilet tank.
- (b) Depress the lock ring of the flush hose quick disconnect coupling located on the right side at the front of the tank top.
- (c) Drain any residue of flush fluid in the hose by partially disengaging the plug from the quick disconnect and manipulating the hose to assist drainage.
- (d) Remove the flush hose from the quick disconnect and place hose in the retaining clip located on the underside of the toilet mounting plate.
- (e) Install the plug attached to the quick disconnect to seal the coupling.
- (f) Close the knife valve at the bottom of the toilet bowl by pushing the actuator handle until the valve is fully closed.
- (g) Press the two Pres-Loc fasteners on each side of the knife valve actuator to unlock the tank.
- (h) Remove the tank by pulling the recessed carrying handle on the tank top.

Monogram Sanitation

(2) Tank Cleaning

(a) Remove cap from the pour spout to dispose of tank contents in a sewer or toilet. On earlier models without the pour spout, dispose of tank contents by holding the tank upside-down over a sewer or toilet and pull the knife valve actuator handle, opening the valve and allowing the tank to drain.

(b) Rinse the tank by filling one-half full with water. Close the knife valve and shake vigorously. Drain tank as in previous step (a).

NOTE: Commercial detergents and disinfectants can be included in the rinse water if desired. However, do not include these materials in the tank precharge.

(c) Rinse and drain the tank several times to ensure that the tank is thoroughly clean.

(d) Wipe the exterior surfaces of the tank using a cloth moistened with clear water and disinfectant.

(3) Tank Recharge

(a) Charge the tank with a mixture of 2 quarts of water and 1 dissolvable package of Monogram's Chemkare chemical.

NOTE: To assure toilet recirculation system operation during freezing weather, an ethylene glycol base anti-freeze containing anti-foam agent may be added to the flush fluid.

Monogram Sanitation

(4) Tank Installation

- (a) Re-install the tank by inserting the slides located on each side of the knife valve into the slide plate assembly on the bottom of the toilet bowl and slide tank into place.
- (b) Press the two Pres-Loc fasteners to the first detente to secure the tank.
- (c) Remove the plug in the flush hose quick disconnect and connect the hose coupling to the quick disconnect. Lock the disconnect lock ring.
- (d) Pull the knife valve actuator to fully open the valve.
- (e) Lift the toilet seat and shroud assy from the top of the toilet and wipe with cloth moistened with clear water and disinfectant. Wipe the bowl and surrounding area.
- (f) Check flushing operation of the toilet and check for leaks.
- (g) Close access to the toilet.

Monogram Sanitation

TROUBLE SHOOTING AND MAINTENANCE

1. Troubleshooting

Unless the toilet has been suitable tagged to denote the nature of maintenance requirements, refer to the Troubleshooting Chart as necessary to isolate and identify possible troubles.

TROUBLE	PROBABLE CAUSE	CORRECTIVE ACTION
Toilet will not operate	Electrical power not applied (24-28 VDC)	Check aircraft power, fuse/circuit breaker, electrical connection
	Defective wiring	Check wiring continuity
	Defective flush switch (push button)	Replace flush switch
	Defective motor	Replace motor and pump assy
Toilet operates but flush fluid not pumped into bowl	Inadequate flush fluid charge in tank	Charge toilet tank. Refer to Servicing Instructions
	Defective pump	Replace motor and pump assy
	Bowl nozzle, connecting hoses or strainer in tank clogged	Remove obstruction. Back flush to clean strainer. Refer to Cleaning.
	Flush (suction) hose not connected to tank quick disconnect	Connect hose to quick disconnect coupling

MM-170
 Page 7
 Nov 20/90

Monogram Sanitation

TROUBLE	PROBABLE CAUSE	CORRECTIVE ACTION
Excessive noise during operation	Defective motor or pump	Replace motor and pump assy
	Strainer in tank clogged	Clean strainer (back flush)
Toilet has excessive odor	Excessive usage	Service toilet. Refer to Servicing Instructions
	Improper deodorant/chemical used	Use recommended chemical. Monogram Chemkare

Monogram Sanitation

2. Cleaning

The following methods should be used for cleaning the toilet before disassembly and also for cleaning the disassembled components. Use specified cleaning agents.

A. Back Flushing the Tank

Back flush the toilet tank to clean the strainer inside the tank by connecting a water hose to the quick disconnect coupling on the tank top.

B. Cleaning Procedure

- (1) The toilet should be cleaned manually using a strong solution of hot soapy water and disinfectant. Rinse thoroughly with clean water and dry completely with a cloth and warm dry air.
- (2) Wash all mechanical parts in a strong solution of hot soapy water and disinfectant.

WARNING: WHEN USING TRICHLOROETHYLENE, WEAR SUITABLE PROTECTIVE GLOVES. TRICHLOROETHYLENE ABSORBS MOISTURE READILY AND CAN CAUSE SERIOUS BURNS WHEN IN PROLONGED CONTACT WITH THE SKIN.

- (3) Clean electrical parts manually, using cloth moistened sparingly with trichloroethylene.
- (4) Clean the tank and bowl manually, using a strong solution of disinfectant, hot soapy water and bristle brush. Scrub the flush channel in the upper rim of the bowl to remove buildup of deposits. Rinse thoroughly with clean hot water and dry completely.

ITEM	IDENTIFICATION	SOURCE
Disinfectant	Lysol (or equivalent)	Commercially available
Soap	All purpose liquid soap	Commercially available
Trichloroethylene	Federal Specification O-T-634C	Any approved source

MM-170
Page 9
Nov 20/90

Monogram Sanitation

3. Repair

Only a worn or damaged component should be removed from the toilet tank. Unnecessary disassembly is not recommended. The instructions which follow are provided to disassemble the components of the toilet into their respective detail parts in order to repair or replace an item. Refer to the Illustrated Parts List section for description and identification of detail parts.

- A. Item numbers appearing on the exploded view illustrations have been assigned in a typical order of disassembly. Disassemble only to the extent necessary to repair or replace a part.
- B. Follow the standard shop practice for inspection of detail parts.
- C. Using an ohmmeter, check circuit continuity with the flush button depressed. The motor windings should exhibit a low resistive circuit (3 ohms max).
- D. Any necessary soldering is confined to electrical connections only using SN60WARP2 solder. See the toilet wiring diagram.
- E. Repair of the toilet is confined to replacement of damaged or worn components, except that minor scratches can be repaired in accordance with standard shop practices.
- F. Replace any item found to be damaged or worn. Replace all gaskets, seals, packings and rubber items.
- G. Reassemble the toilet in the reverse order of disassembly with particular attention to the following:

CAUTION: The toilet mounting plate and tank top are honeycomb panel construction. To prevent compression damage, do not over torque hardware when attaching any component to these items.

- (1) Bond new bowl gasket in place using Scotch Grip 1300 rubber adhesive (Minnesota Mining and Manufacturing Co.)

Monogram Sanitation

- (2) Bond new knife valve seals in place using Uralane 5738 A/BX epoxy adhesive (Furane Plastics, Inc.)
- (3) Apply Grade C locking compound (Loctite Corp.) to the threads of two No. 8 pan head screws (MS51957-46). Wipe excess compound from screws and install.
- (4) Install new motor and pump assembly to the toilet mounting plate as follows:

- (a) Remove the two No. 8 slotted head screws and the two No. 10 hex head bolts from the pump cover.
- (b) Discard the cover and the two slotted head screws.

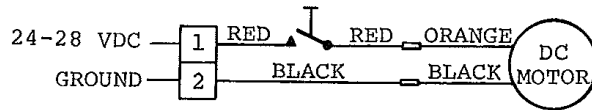
NOTE: Do not disassemble the motor and pump assembly except to remove cover.

- (c) Install the unit to the mounting plate using the two No. 10 hex head bolts (NAS501-3H20A). Lockwire the bolts using MS20995C20 lockwire.
- (d) Apply Grade C locking compound (Loctite Corp.) to the threads of two No. 8 pan head screws (MS51957-46). Wipe excess compound from screws and install.
- (e) Connect the motor leads to the leads of the flush switch harness (Black to Black, Orange to Red). See the wiring diagram.

H. When assembly is completed, perform a functional check of the toilet as follows:

- (1) Connect 24-28 VDC power to the toilet. See the wiring diagram for connection.
- (2) Pour approximately 2 quarts of water into the toilet tank through the bowl.
- (3) Press and hold the flush button. The flushing action should continue until the button is released. The swirl pattern should be consistent and vigorous, washing the complete inner surface of the bowl.

Monogram Sanitation



Wiring Diagram

MM-170
Page 12
Nov 20/90