

Butterfield Industries, Inc.

1-800-524-3404

INSTALLATION INSTRUCTIONS

P/N BI 4003

OIL RESIDUE COLLECTION SYSTEM
KING AIR 300, B300 SERIES

KIT P/N BI 4020-1

10/26/98
REV: N/C

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IMPORTANT NOTICE

THE BUTTERFIELD INDUSTRIES OIL RESIDUE COLLECTION SYSTEM INSTALLATION HAS BEEN APPROVED BY THE FEDERAL AVIATION ADMINISTRATION (FAA) UNDER SUPPLEMENT TYPE CERTIFICATE (STC)

THIS INSTALLATION MUST CONFORM TO THE FAA APPROVED BUTTERFIELD INDUSTRIES INSTALLATION DRAWINGS AND THE INSTRUCTIONS CONTAINED IN THIS DOCUMENT.

CONFORMITY VERIFICATION OF THE INSTALLED SYSTEM TO THE BUTTERFIELD INDUSTRIES INSTALLATION DRAWINGS AND INSTRUCTIONS IS THE RESPONSIBILITY OF THE INSTALLATION FACILITY.

DEVIATIONS TO THE FAA APPROVED BUTTERFIELD INDUSTRIES INSTALLATION DRAWINGS AND INSTRUCTIONS MUST BE APPROVED BY BOTH THE FAA AND BUTTERFIELD INDUSTRIES. THE INSTALLATION FACILITY IS RESPONSIBLE FOR BOTH COORDINATING AND OBTAINING THAT APPROVAL.

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CHECKED		
J. WHITCOMB		10/21/98
ENGINEER		
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BUTTERFIELD INDUSTRIES, INC.
INSTALLATION INSTRUCTIONS
OIL RESIDUE COLLECTION
SYSTEM
KING AIR 300 SERIES AIRCRAFT

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REVISIONS

LTR

DESCRIPTION

APPROVALS

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1.0 INTRODUCTION

THIS DOCUMENT IS INTENDED TO PROVIDE DETAILED INSTRUCTIONS FOR THE INSTALLATION OF THE BUTTERFIELD INDUSTRIES 'OIL RESIDUE COLLECTION SYSTEM', ON THE KING AIR 300 AND B300 FAMILY OF AIRCRAFT.

2.0 REQUIRED DOCUMENTATION

IN ADDITION TO THIS INSTRUCTION MANUAL, THE FOLLOWING DOCUMENTS WILL BE REQUIRED TO INSTALL THE OIL RESIDUE COLLECTION SYSTEM.

2.1 BUTTERFIELD SUPPLIED DOCUMENTS

THE FOLLOWING DRAWINGS OF THE CORRECT REVISION ARE SUPPLIED AS PART OF THIS DOCUMENTATION.

BI-1021 SHEET 1 AND 2 RESIDUE TANK INSTALLATION

BI-4012 DRAWING LIST

2.2 CUSTOMER SUPPLIED DOCUMENTS

THE FOLLOWING DOCUMENTS OF THE LATEST REVISION IN EFFECT AT THE TIME OF THE KIT INSTALLATION SHALL BE SUPPLIED BY THE CUSTOMER OR THE INSTALLATION FACILITY:

101-590010-19 BEEHCRAFT KING AIR 300
MAINTENANCE MANUAL

FAA-AC 43.13-1A ACCEPTED METHODS, TECHNIQUES AND
PRACTICES FOR AIRCRAFT ALTERATION,
INSPECTION AND REPAIR.

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3.0 GENERAL

THE OIL RESIDUE COLLECTION SYSTEM, PART NUMBER BI-4020-1, IS ELIGIBLE FOR INSTALLATION ON BEECHCRAFT KING AIR 300 AND B300 FAMILY OF AIRCRAFT UNDER AUTHORIZATION OF THESE INSTRUCTIONS AND STC # SA00975CH.

SERIAL NUMBER OF AUTHORIZED AIRCRAFT ARE AS FOLLOWS

FA-1 AND AFTER	MODEL 300 AND 300LW
FF-1 AND AFTER	MODEL 300
FL-1 AND AFTER	MODEL B300
FM-1 AND AFTER	MODEL B300C
FN-1 AND AFTER	MODEL B300C

PRE-MODIFIED AIRCRAFT MUST CONFORM TO INSTALLATION DRAWING BI-1021 (SHEET 1 "MANIFOLD REMOVAL", SHEET 2 "TANK INSTL").

3.1 KIT DESCRIPTION

INSTALLATION OF THE BUTTERFIELD INDUSTRIES OIL RESIDUE COLLECTION SYSTEM ALLOWS THE COLLECTING OF DRAIN FLUID INTO A SINGLE SUMP ASSEMBLY. THE SUMP HAS A DRAIN VALVE, WHICH CAN BE USED PERIODICALLY TO DRAIN THE TANK. THE SYSTEM WILL ELIMINATE THE OIL MESS ON THE BOTTOM OF THE NACELLE AND ON THE MAIN LANDING GEAR. IT WILL ALSO CLEAN UP THE MESSY OIL SPOTS ON THE HANGAR FLOOR AND RAMP WHEN THE AIRCRAFT IS PARKED. THIS IS A MESS AS WELL AS AN EPA HAZARD.

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3.2 KIT CONTENTS

THE CONTENTS OF THE BI-4020-1 KIT ARE AS SPECIFIED IN THE LIST OF MATERIALS ON SHEET 1 OF THE DRAWING LISTED IN PARAGRAPH 2.1. ADDITIONALLY, THE KIT CONTAINS A DATA PACKAGE CONTAINING:

- 1) BI 4003 - "INSTALLATION INSTRUCTIONS"
- 2) A COPY OF THE PACKING LIST (PAGE 12)
- 3) DRAWINGS LISTED IN PARAGRAPH 2.1
- 4) ONE COPY OF THE STC

BUTTERFIELD INDUSTRIES SHOULD BE NOTIFIED IMMEDIATELY OF ANY SHORTAGES OR OTHER DISCREPANCIES.

3.3 SPECIALIZED TOOLING REQUIRED

OTHER THAN STANDARD AIRCRAFT TECHNICIAN'S TOOLS, NO SPECIAL TOOLS ARE REQUIRED.

4.0 AIRPLANE PREPARATION

NO SPECIAL AIRPLANE PREPARATION IS REQUIRED PRIOR TO INITIATING INSTALLATION OF THE OIL RESIDUE COLLECTION KIT.

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5.0 REMOVALS

THE OPERATION DEFINED HERE ARE THOSE NECESSARY TO REMOVE AND ALTER COMPONENTS FROM THE LEFT AND RIGHT HAND NACELLE. THE SEQUENCE OF EVENTS IS PRESENTED IN A RECOMMENDED SEQUENCE. HOWEVER, THAT SEQUENCE MAY BE ALTERED TO SUIT THE CUSTOMER OR THE INSTALLATION FACILITY.

REF. DRAWING BI-1021 SHEET 1

- 1) GAIN ACCESS TO THE FORWARD SIDE OF THE FIREWALL BY REMOVING COWLING AS REQUIRED.
- 2) DISCONNECT HOSES FROM EXISTING DRAIN MANIFOLD.
- 3) REMOVE AND DISCARD MANIFOLD (101-910099-11) AND THE ATTACHING HARDWARE AS SHOWN.

6.0 KIT INSTALLATION

THE FOLLOWING PARAGRAPHS DEFINE THE INSTALLATION OF THE OIL RESIDUE COLLECTION SYSTEM. THE ACTIVITIES SPECIFIED HEREIN ARE PRESENTED IN A RECOMMENDED SEQUENCE. HOWEVER, THAT SEQUENCE MAY BE ALTERED TO SUIT THE CUSTOMER OR THE INSTALLATION FACILITY. UNLESS OTHERWISE SPECIFIED, INSTALLATION OF ALL HARDWARE SHALL CONFORM TO FAA-AC 43.13-1A.

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6.1 SUMP ASSEMBLY INSTALLATION

REF. DRAWING BI 1021 SHEET 2

- 1) POSITION SUMP ASSEMBLY (BI-4002-1) ON THE ENGINE FIREWALL AS SHOWN.

NOTE: THE EXISTING HOLE IN THE COWL MAY REQUIRE ENLARGEMENT TO ACCEPT THE NECK OF THE SUMP ASSEMBLY.

- 2) ATTACH THE SUMP ASSEMBLY WITH TWO BOLTS (AN3H3A) AND WASHERS (AN960KD10) AT TWO EXISTING NUTPLATE LOCATIONS.
- 3) SAFETY-WIRE THE TWO BOLTS AS SHOWN.

6.2 HOSE ASSEMBLY INSTALLATION

CONNECT HOSES TO SUMP ASSEMBLY IN SAME POSITIONS.

6.3 FINAL INSTALLATION

- 1) PERFORM A DETAILED INSPECTION OF ALL WORK ACCOMPLISHED.
- 2) INSTALL ALL COWLING REMOVED TO GAIN ACCESS FOR THE MODIFICATION.

NOTE: DRAIN VALVE MAY BE REMOVED DURING COWLING INSTALLATION AND THEN REINSTALLED.

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6.4 INSPECTION

THERE IS NO INSPECTION CRITERIA FOR THE SUMP. CHECK CONTINUED AIRWORTHINESS INSTRUCTIONS ON PAGE 13 FOR SUGGESTIONS AS TO PERIODIC MAINTENANCE.

7.0 RETURN AIRPLANE TO SERVICE

- 1) COMPLETE AN APPROPRIATE ENTRY IN THE AIRPLANE LOGBOOK

EXAMPLE: INSTALLED BUTTERFIELD INDUSTRIES OIL
RESIDUE COLLECTION SYSTEM PART
NUMBER 4020-1 AS PER STC SA00975CH.

- 2) COMPLETE THREE COPIES OF FAA FORM 337. INSERT ORIGINAL IN AIRPLANE FLIGHT MANUAL. MAIL ONE COPY TO LOCAL FAA-FSDO AND RETAIN ONE COPY FOR THE INSTALLER
- 3) NO WEIGHT AND BALANCE CHANGE

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PACKING LIST

KIT P/N BI 4020-1

RESIDUE TANK ASSEMBLY	BI 4002-1	2 EA.
WASHER	AN960KD10	4 EA.
BOLT	AN 3H3A	4 EA.

CONTINUED AIRWORTHINESS INSTRUCTIONS

THERE ARE NO SCHEDULED INSPECTION PERIODS FOR ANY COMPONENT OF THE BUTTERFIELD INDUSTRIES 'OIL RESIDUE COLLECTION SYSTEM'.

USE THE FOLLOWING GUIDELINES FOR SUCCESSFUL CONTINUED AIRWORTHINESS.

ANYTIME THE COWLING IS OPEN FOR INSPECTION, THE OIL RESIDUE TANK SHOULD BE INSPECTED FOR CONDITION AND SECURITY.

ALL HOSE CLAMPS TO TANK SHOULD BE INSPECTED FOR CONDITION AND SECURITY.

THE TANK SHOULD BE DRAINED ON A PERIODIC BASIS.

IF THE TANK IS NOT DRAINED, THE RESIDUE OIL WILL DRAIN FROM THE OVERFLOW TUBE.

4

3

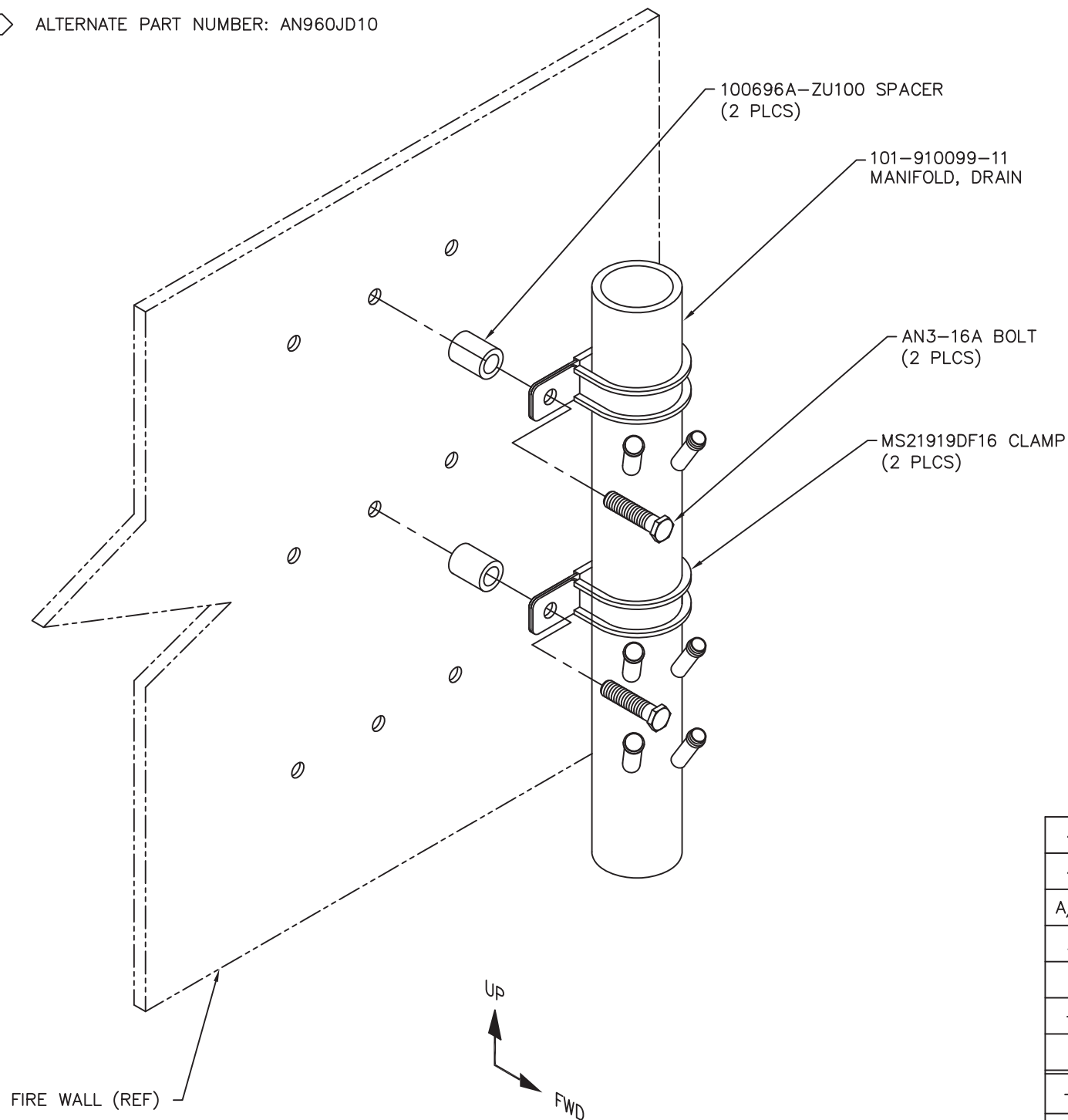
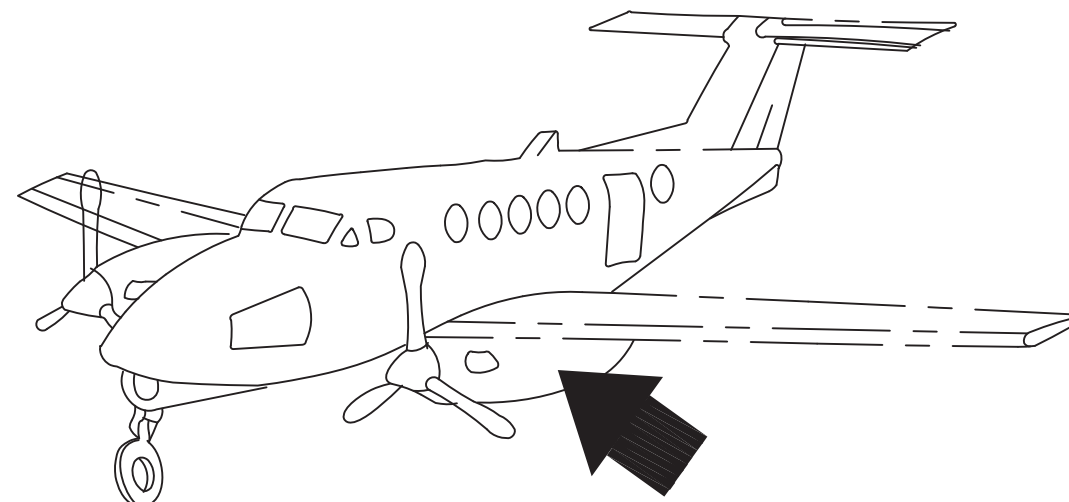
2

1

NOTES:

- 1 SLIGHT ENLARGEMENT OF EXISTING HOLE PERMISSIBLE FOR CLEARANCE OF DRAIN VALVE AND TUBE
- 2 INSTALL BOLTS PER EA-AC43.13
- 3 ALTERNATE PART NUMBER: AN960JD10

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED BI 4020-1 TO PARTS LIST SEE DCN A FOR DETAILS	2/12/18	<i>[Signature]</i>



4		AN960KD10	WASHER	3					
4		AN3H3A	BOLT						
A/R		MS20995-C32	SAFETY WIRE		CUSTOMER SUPPLIED				
2		BI-4002-1	SUMP ASSEMBLY		BUTTERFIELD INDUSTRIES ROCHESTER, MN.				
-	1	-1	SUMP INSTALLATION					B	
-		BI 4020-1	KIT						
-1	-1	ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL/SPECIFICATION	FINISH	PT MK	ZONE	REV LTR
QTY REQ'D									

MANIFOLD REMOVAL
TYPICAL L.H. AND R.H. ENGINES

LIST OF MATERIAL			
QTY REQ'D	ITEM NO.	PART NUMBER	DESCRIPTION
-1	-----	300/B300	APPLICATION
			UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES
			---TOLERANCES---
			.X ± .01
			.XX ± .03
			.XXX ± .010
			ANGULAR ± 2'
			PROPRIETARY NOTICE
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			DRAWN B. W. 09-14-98
			CHECKED J. W. 10-24-98
			ENGR J. W. 10-24-98
			STRESS
			APPVD W.B. 10-24-98
			SCALE 1/1
			RLSE DATE
			SHEET 1 OF 2

BUTTERFIELD INDUSTRIES.
ROCHESTER, MINNESOTA.

**ENGINE DRAIN SUMP
INSTALLATION**

SIZE D DWG NO. BI-1021 REV LTR A

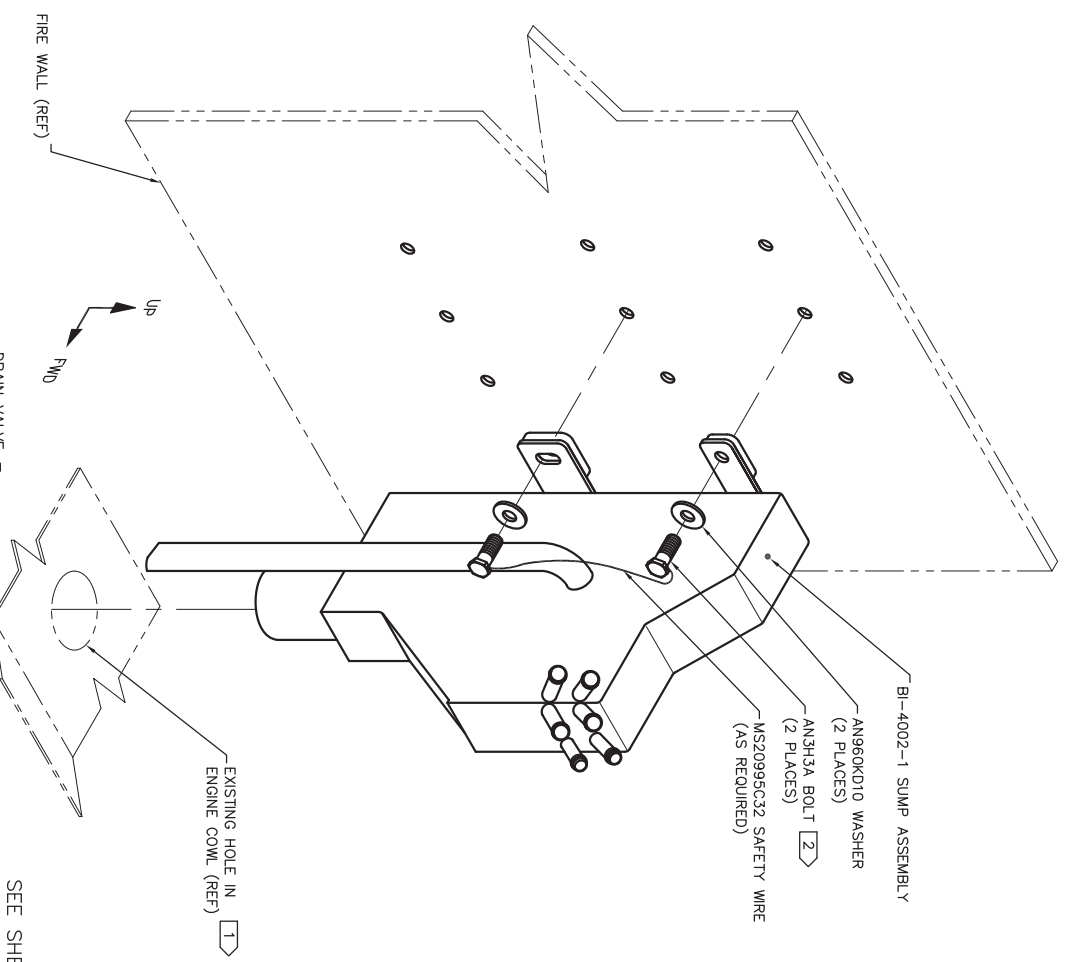
4

3

2

A

REVISIONS		DATE	APPROVED
REV	DESCRIPTION		



-1 DRAIN SUMP KIT INSTALLATION
(INSTALLATION TYP. BOTH ENGINES)

SEE SHEET 1 FOR LIST OF MATERIAL, NOTES AND APPLICATION DATA.

PART DASH	QUANTITY	DESCRIPTION	USED ON
		APPLICATION	

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
TOLERANCES
XX ± .01
XXX ± .010
ANGLER ± .2

INTERFERE. PROHIBIT. NOTICES
ARE INCLUDED IN THE INFORMATION PACKAGED WITH THE PRODUCT. THESE NOTICES ARE FOR INFORMATION ONLY AND DO NOT CONSTITUTE A WARRANTY. THE PROVISION DOES NOT APPLY TO OTHER DATA.

DESIGNED BY	B. W.	DATE	09-14-98
CHECKED BY	J. W.	DATE	10-24-98
DRN BY	J. W.	DATE	10-24-98
APPROVED			

BUTTERFIELD INDUSTRIES
AEROSPACE DIVISION

**ENGINE DRAIN SUMP
INSTALLATION**

SIZE D DWG NO. BI-1021
SCALE 1/1 KEE DATE
REV AIR
SHEET 2 OF 2