



MAJOR REPAIR

Number
9002121

Revision
A

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Release Date: 05/28/92

Title: **Support Assembly, GTCP85 APU - Repair Using BMP Parts and Procedures**

Affected Part Number(s):	696658-1/-2/-3 and 966584-1/-2
Application:	GTCP85 Series APU's
Drawing(s):	BMP696658

I CUSTOMER - MAJOR REPAIR INCORPORATION RECORD

AIR CARRIERS: The FAA (Federal Administration Association), requires all repair stations that perform maintenance for Air Carriers operating under FAR, Part 121 to perform such maintenance following that Air Carriers' Operation Specification. This FAA approved, Major Repair is beyond the scope of the current Original Equipment Manufacture's (OEM) Repair Manual. Therefore, all Part 121 Air Carriers who opt to use components repaired using the methods set forth within this repair must incorporate this repair in their applicable Operation Specification(s). Regulation may or may not be compliant or reciprocal with Air Carriers operating under foreign regulations.

REPAIR STATIONS/OTHER: BMP (Britt Metal Processing, Inc.) prefers your Company follow the same guidelines set forth for the Air Carriers.

Instructions: Please review this major repair and incorporate into your technical files. Return a signed copy of this acceptance record to our Document Control Department. If applicable, furnish a copy of your revised Operation Specification(s) that reflect incorporation of this repair.

Customers who sign below have authorized BMP to incorporate this FAA approved major repair procedure as a stand alone written document. Parts that require the repair embodied in this repair will be placed on hold pending proof of your acceptance. Thereafter, BMP will accomplish this major repair procedure without further notification.

Company Name

Date

Company Representative Signature

Printed Name

Title

Reference: CFR 14, FAR Part 121, Sub-Part L, and FAR 145.2

BMP-95



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9002121

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Title: **Support Assembly, GTCP85 APU - Repair Using BMP Parts and Procedures**

REVISION INFORMATION

Revision	Description	Approved By:	Date
A	Revised repair to combine with repair #9002122, format to current BMP standard, and add fuse repair. This repair revision is a complete re-issuance.	J. Smith	08/20/92

DESCRIPTION

GTCP85 APU support assemblies exhibit damage (cracking, deformation, etc.) beyond the current GTCP85 APU repair manual 49-21-73. This repair restores the support assembly by fuse repair and repair using the following BMP fabricated repair parts:

BMP P/N	DESCRIPTION	GARRETT P/N
BMP696658-17	RING	N/A
BMP696658-19	CONE	N/A
BMP696658-36	RING/CYLINDER ASSY	N/A
-BMP696658-15	RING	968602-1
-BMP696658-21	CYLINDER	N/A

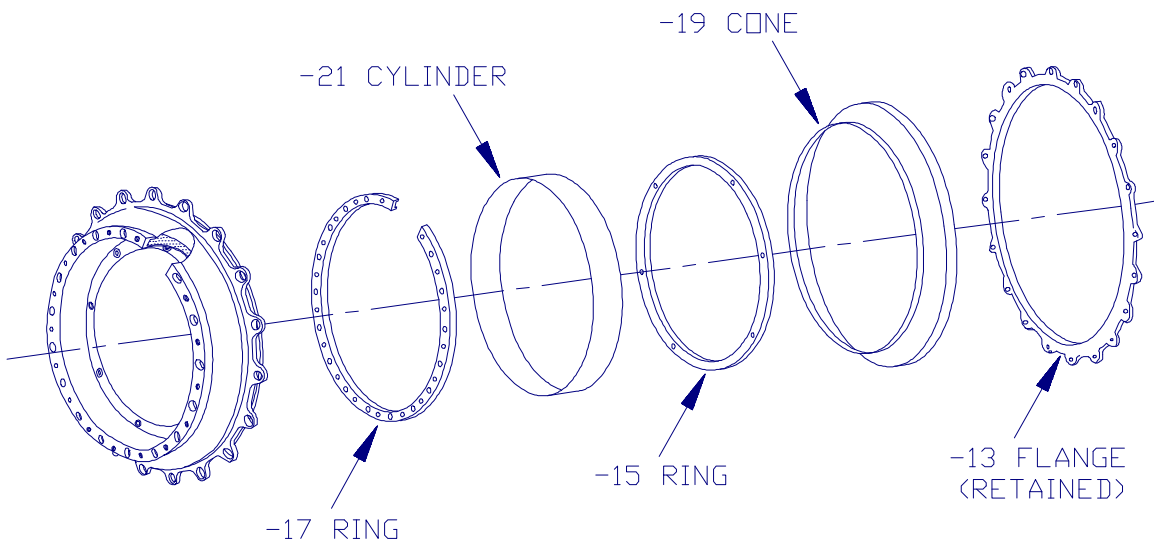


FIGURE 1
GTCP85 APU SUPPORT ASSEMBLY

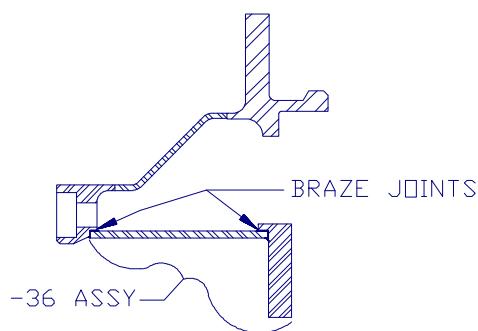
Title: **Support Assembly, GTCP85 APU - Repair Using BMP Parts and Procedures**

I PROCEDURE

NOTE: P/N 966584 will be restored to the 696658 configuration by replacing the -36 assembly (procedure 1) and fuse restoration of the outer diameter of the retained -13 flange (procedure 2). This will remove SB 49-3688 accomplishment.

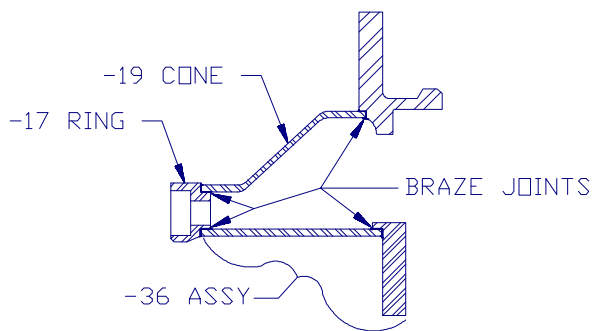
1. Install New -36 Assembly, -17 Ring, -19 Cone

- 1.1 Machine support as required to install -36 assembly (figure 2, below), or -36 assembly, -17 ring, and -19 cone (figure 3, below) as applicable per BMP drawing BMP696658 dimensions.
- 1.2 Assemble support using -36 assembly or -36 assembly, -17 ring, and -19 cone as applicable maintaining 0.002-0.004 braze joint gaps.
- 1.3 Tack weld parts per BMP process 6.1B using CRES347 weld wire (AMS5680) as required.
- 1.4 Degrease per BMP process 2.2A and glass bead clean per BMP process 2.3C.
- 1.5 Inspection verify braze joint gaps or 0.002-0.004.
- 1.6 Apply braze alloy and furnace braze per BMP process 7.1B.
- 1.7 Inspection verify 100% braze flow through
- 1.8 Machine to required finished dimensions per BMP drawing BMP696658.
- 1.9 Penetrant inspect braze joints for cracks per BMP process 1.1A. No cracks allowed.



REPLACE -36 ASSY ONLY

FIGURE 2



REPLACE -36 ASSY, -17 RING, -19 CONE

FIGURE 3

Title: **Support Assembly, GTCP85 APU - Repair Using BMP Parts and Procedures**

I PROCEDURE (continued)

2. Fuse Repair of Support Assembly (Reference Figure 4).

- 2.1 Machine allowable surfaces and/or diameters as required to prepare for fuse repair. Maintain minimum parent material and dimensional limits per BMP drawing BMP696658.
- 2.2 Mask support assembly as required per BMP process 2.4A and aluminum oxide blast surfaces/diameters per BMP process 2.3A to prepare for metal spray application.
- 2.3 Remask per BMP process 2.4B.
- 2.4 Apply METCO12C alloy per BMP process 4.3A to prepared surfaces.
- 2.5 Run support assembly through furnace fuse cycle per BMP process 7.3A.
- 2.6 Finish machine support assembly per BMP drawing BMP686658 dimensions.

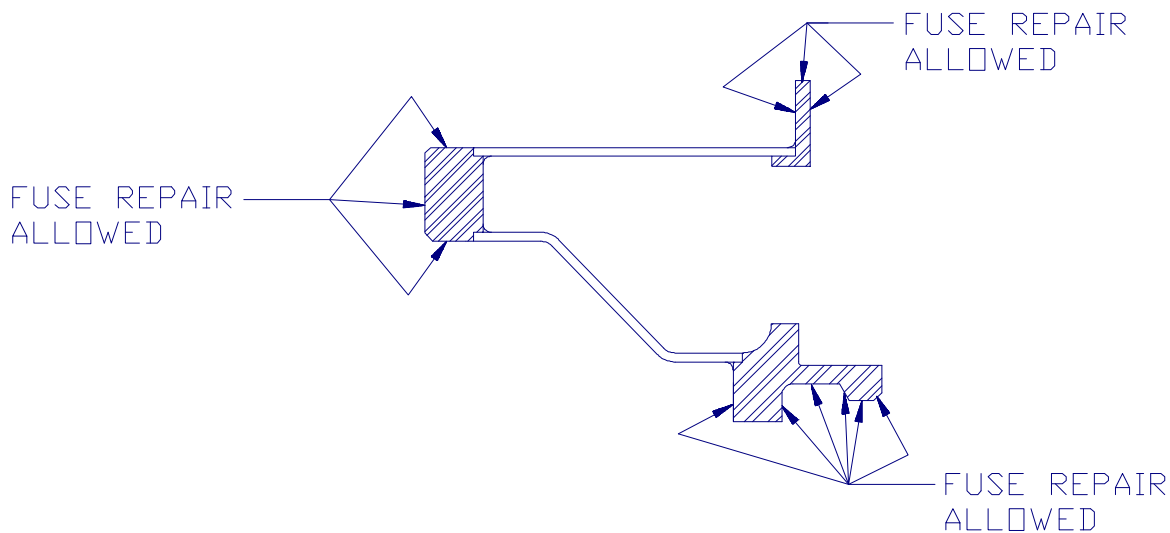


FIGURE 4

I SUBSTANTIATION

ATTENTION: Substantiation Data is considered Proprietary and is not customarily included when major repairs are sent to our Customers. Please contact our Quality Control Department if you require any additional information.

DEPARTMENT OF TRANSPORTATION
 FEDERAL AVIATION ADMINISTRATION
 STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS

DATE
 August 28, 1992

AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION

MAKE GARRETT	MODEL NO. GTCP85	TYPE (Airplane, Rotor, Helicopter, etc.) APU	NAME OF APPLICANT BRITT METAL PROCESSING
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LIST OF DATA

IDENTIFICATION	TITLE
9002121 Rev A	SUPPORT ASSEMBLY, GTCP85 APU - REPAIR USING BMP PARTS AND PROCEDURES
BMP696658 Rev A	SUPPORT ASSEMBLY - GTCP85 SERIES APU

PURPOSE OF DATA Define repair using BMP fabricated detail parts. This is design approval only and not installation approval.

APPLICABLE REQUIREMENTS (List specific sections)
 FAR 33.15

CERTIFICATION - Under authority vested by direction of the Administrator and in accordance with conditions and limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on attached sheets numbered _____ have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations.

I (We) Therefore Recommend approval of these data
 Approve these data

SIGNATURE(S) OF DESIGNATED ENGINEERING REPRESENTATIVE(S)	DESIGNATION NUMBER(S)	CLASSIFICATION(S)
<i>Fred B. Jones</i>	SO-607	Powerplants Systems & Equipment