

## **SERVICE BULLETIN**

<b>NUMBER</b>	<b>SB1608</b>
<b>TO</b>	<b>Gogo Commercial Aircraft Services</b>
<b>SUBJECT</b>	<b>Temporary Repair to Waveguide Flex Section</b>
<b>REVISION</b>	<b>C</b>
<b>DATE</b>	<b>4/22/2016</b>

## **APPLICABLE ASTRONICS AEROSAT PRODUCTS**

<b>DESCRIPTION</b>	<b>TX Waveguide Filter Assembly</b>
<b>PART NUMBER</b>	<b>006-15138-02, 006-15138-03, 006-1000-0001, 10211, 19498, 20488, 20663, 300-21800, 300-23887</b>

## **COMPLIANCE**

Compliance with this Service Bulletin is Optional. It is recommended waveguide replacement be completed on condition of degraded system performance during a scheduled maintenance interval not to exceed one calendar year from date of repair.

## **PURPOSE**

The purpose of this action is to provide a way to allow continued operation of the HR6400 SATCOM System in the event an inspection reveals one or more cracks in a waveguide flex section. It has been determined there are no adverse health effects for passengers in the vicinity of a cracked waveguide flex section.

## **APPROVALS**

This repair has been approved by Astronics AeroSat Engineering, 14 CFR 43.5 (a.) (b.) Approval for return to service after maintenance, preventative maintenance, rebuilding, or alteration. This repair is a Minor Repair by FAA definition of Major and Minor repairs as shown in 14 CFR 43 Appendix A and AC 120-77 Paragraph 5.I. This repair does not affect the part number or revision level of a system waveguide assembly. Substantiating technical data for passenger safety is on file at Astronics AeroSat, and per the above referenced AC120-77 paragraph 10.a.2, is considered acceptable data to the Administrator. Therefore no further FAA approval is required.

## **PERSONNEL REQUIREMENTS**

The execution of this action requires one trained technician for 1.5 hours.

## TOOLING REQUIREMENTS

- Scissors

## MATERIAL

- Isopropyl Alcohol wipes
- 1" or 2" adhesive backed Aluminum or Copper Tape

## WEIGHT AND BALANCE

There is no effect on weight and balance.

## ELECTRICAL LOAD

There is no effect on electrical load.

## INSTRUCTIONS

If the crack is within  $\leq 80\%$  of the waveguide circumference in length, it may be temporarily repaired by the following methods. It is acceptable to repair multiple cracks in the same waveguide section together.

- 1) Clean the Waveguide with Isopropyl alcohol wipes, ensuring the area past the ends of the flex section are clean for at least one half inch.
- 2) Use 1" or 2" Aluminum or Copper tape. Two or more pieces will be required, so overlap the edges by at least .25" and CAREFULLY apply the tape lengthwise, as far past the end of the flex section as possible. Wrap the tape around the waveguide like a sleeve. Gently form the tape bends to follow the waveguide path and adhere the overlapping edge to the first length of tape. Use a light touch only to seal the tape edges, but press firmly where the tape covers the solid sections of the waveguide. (see Figures 1 through 5 below)

**CAUTION:** DO NOT pinch or press the tape against the waveguide except at each end where the waveguide is solid. Excess pressure may deform the waveguide flex section requiring immediate replacement.

**CAUTION:** Removing the tape after application can cause severe damage to the flex section if care is not exercised, requiring immediate Waveguide replacement.

**CAUTION:** Avoid manipulation or movement of the TX Waveguide Filter Assembly during the repair as further damage can occur.

- 3) Gogo AMCC and/or the NOC are to monitor Transmit Power levels for the HR6400 system until the Waveguide has been replaced.

Note: Increases of TX power greater than 2.5 dB from normal operations post repair will require inspection of the repaired portion of the TX Waveguide Filter Assembly to ensure further damage is not present.

Figure 1 Damaged area



Figure 2 Area to be Cleaned and tape adhered to

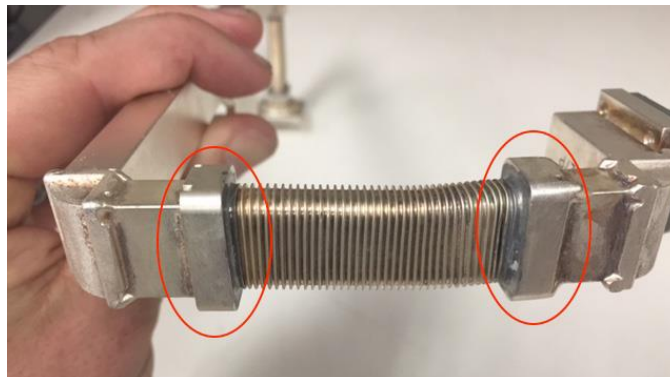


Figure 3 Tape pieces joined together



Figure 4 Application of the tape



Figure 5 securing the tape in place



### ACCEPTANCE/REJECTION CRITERIA

All areas of the flex section are completely covered with the repair tape.

## **RECORD OF COMPLIANCE**

Upon completion, please enter the details in the appropriate maintenance record as required.

## **CONTACT INFORMATION**

For further information regarding this Service Bulletin, please contact Astronics AeroSat Product Support:

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