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Figure 3-5. LAIM Assembly with FMA and BUC-HPA Placement on Aircraft (Typical Installation)

- (e) On completion of the LRU interconnection and applying power to the FMA, the FMA will stay in its current position until it is told to move by the KANDU.

6. Inspection of Waveguide

A. FMA Human Exposure to RF EM Fields

WARNING: THE JetWave™ MCS-8562 Terminal IS A SOURCE OF NON-IONIZING RADIATION.

- (1) The Minimum Safe Distance:
- FMA = 66.6 feet (20.3 m).

NOTE: The minimum safe distance for occupational/controlled exposure is determined based on the computational method specified in FCC Office of Engineering and Technology; Bulletin Number 65, Edition 97-01: *Evaluating compliance with FCC Guidelines for human exposure to Radio Frequency Electromagnetic fields.*

- (2) The areas which the risk exists are based upon the location of the antenna. This means personnel operating on the apron, transient personnel, and the general population in the controlled exposure category will not be exposed to levels in excess of the limits. Maintenance personnel working close to the tail must be protected by disabling the transmitter before they approach that area of the aircraft.

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SYSTEM DESCRIPTION, INSTALLATION, AND MAINTENANCE MANUAL

JetWave™ MCS-8562 Terminal

- (3) The JetWave™ MCS-8562 Terminal incorporates three fail-safe features to limit the potential for human exposure to non-ionizing radiation:
- (a) The system will not transmit unless the receiver is receiving a valid signal, therefore if the received signal were to become blocked the transmitter would be disabled.
 - (b) The antenna subsystem includes a hardware end-stop that prevents the antenna from pointing more than 2° below its mounting plane.
 - (c) An input into the JetWave™ MCS-8562 Terminal wired on the aircraft to a switch in the aircraft, to disable the RF transmission. This switch would be used to prevent any radiation from the antenna in the event of aircraft operations in the vicinity of the antenna, for instance when de-icing the aircraft. This would be achieved by a defined procedure on the aircraft.

Any waveguide received that contains more than one dent is unacceptable and must be returned to the vendor. Dents must not exhibit obvious signs of mechanical rework such as file marks or rough edges, where it is obvious that small tools have damaged what should be a precisely machined waveguide.

The very outer edge of the waveguide does not generally contain critical portions of the waveguide structure that affect performance. Therefore the outer edge of the waveguide may include small dents, marks, machine tool marks, etc so long as the damage does not structurally impair the waveguide. The outer surface may contain bending, tool marks or handling damage. A new waveguide that contains large numbers of dents or marks such that it appears not to be a new article shall be rejected and returned to the vendor. If more than 25% of the waveguide surface is marred in any way, the component must be rejected and returned to the vendor for rework.

Any evidence of nicks, surface pits, surface etching or scratches on the waveguide are acceptable as long as the flaw has been caused by the manufacturing process, i.e. brazing, cleaning, honing, a tool and no larger than 0.030 inch etc. The number or shape of the nicks, pits or scratches are not limited unless greater than 25% of the waveguide appears to have sustained overall damage of one or more types. Any waveguide having more than 25% of the surface damaged in this way is not acceptable and must be returned to the vendor.

The surface finish of the waveguide must not exceed 125 micro inch finish. All measurements will be made in an area free of braze material. The surface finish will not pertain to any area where excess braze material has flowed on the back of the waveguide.

7. Cabling and Drawings

Refer to Table 3-8 for the cabling requirements.

Table 3-8. Cabling Requirements

Cable	Conductor Type	Single Point	Multiple Point	Minimum Conductor Coverage by Shield
Power Lines	Twisted pair	NA	NA	NA
Ethernet Data	Quadrax, twisted pair	-	Yes	100%
RF	Coaxial, waveguide	-	Yes	100%

EFFECTIVITY _____

ALL

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