



INSTALLATION INSTRUCTIONS

Av-DEC[®] Conductive Antenna Gasket Installation

NOTE: Read this specification completely before antenna installation.

1. SCOPE

This specification describes the method for antenna and aircraft surface preparation and antenna installation using the Av-DEC[®] HI-TAK[®] Conductive Polyurethane Gasket, HT3326-5 Self-Leveling Green[®] sealant, and HI-TAK Polyurethane StretchSeal[™] tape. This method is to be used only for antenna gasket installations between an antenna and aluminum aircraft skin or ground plane. Installation by qualified personnel only.

2. APPLICABLE DOCUMENTS

Engineering orders, aircraft maintenance manual, avionics installation manual, and/or user maintenance manual as applicable.

3. REQUIREMENTS

3.1 INSPECTION - Inspect the antenna, surrounding area, skin, structure, gasket, fasteners and wiring of the antenna system installation to ensure they are airworthy and serviceable. Repair and reinstall or replace per current maintenance manual requirements. (Reference **Section 6**).

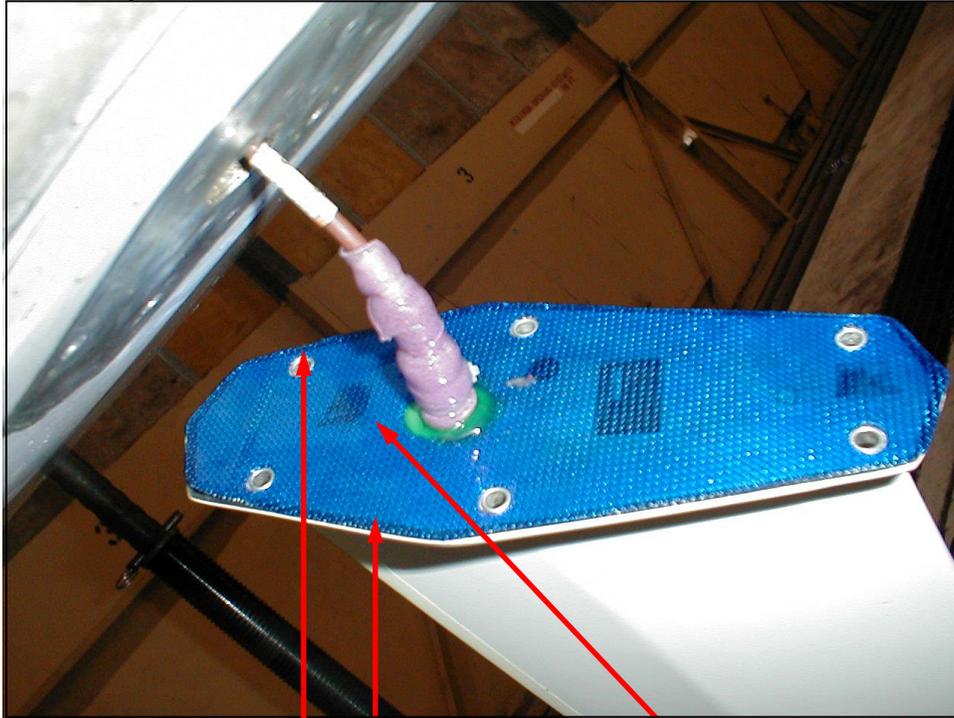
3.2 MATERIALS - Cleaning Solvent - Isopropyl alcohol or other approved cleaning solvent.

3.3 SURFACE PREPARATION - Inspect faying surface areas that will contact the Av-DEC[®] gasket materials for corrosion and take corrective action based upon current maintenance manual requirements. Remove any previously applied adhesives, sealants or fillet sealing materials. Remove any primer or paint to expose clean bare metal. Apply appropriate chemical conversion coating to the faying surfaces per current maintenance manual requirements and allow to dry completely before proceeding. For added protection, it is recommended to apply primer and paint 3/16" under the footprint of the antenna. Allow any primer and paint to fully cure before proceeding. Surfaces that will come in contact with the Av-DEC[®] gasket material shall be wiped with a clean, solvent dampened cloth, followed immediately by wiping with a clean dry cloth to remove any remaining paint, dust, oil, grease, fingerprints, and other contamination prior to the Av-DEC[®] gasket material installation.

3.4 GASKET INSTALLATION - Av-DEC[®] HI-TAK[®] Conductive Polyurethane Gaskets are supplied with protective release film on both sides of the gasket. Remove gasket from the protective packaging, taking care not to fold or bend it. Leave release film in place until ready to install gasket. Verify that fastener holes and connector cutouts in the gasket will align with the antenna when positioned for installation. Trim the perimeter of the gasket flush with the antenna if needed. Remove release film from the side of the gasket marked "antenna side" and position gasket over the antenna. Beginning at one side or corner of the antenna, place gasket into position, carefully aligning gasket fastener holes with antenna fastener holes. Release film should remain on exposed "aircraft side" of gasket until immediately prior to antenna installation.

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Figure 1 Typical HI-TAK® Antenna Gasket Installation with HT3326-5 Self-Leveling Green® Sealant and StretchSeal™ Tape



StretchSeal™ Tape on connector
HI-TAK® Antenna Gasket in place on antenna
HT3326-5 Self-Leveling Green® Sealant applied to connector base

3.5 SEALING ANTENNA CONNECTOR BASE - A major source of antenna corrosion occurs from moisture leakage into the base of the antenna connector. Although the antenna can be mounted with only the sealed antenna gasket installed, Av-DEC® highly recommends the application of HT3326-5 Self-Leveling Green® sealant to the connector mounting area. HT3326-5 sealant will prevent moisture ingress through the connector base.

Do not open HT3326-5 package until ready for use. Follow instructions for priming and mixing on the HT3326-5 cartridge. Dispose of cartridge if it has been removed from package for more than 24 hours.

Apply a layer of Av-DEC® HT3326-5 Self-Leveling Green® sealant (following enclosed application instructions) to the antenna-mounting surface of the antenna connector, as shown in Figure 1. Allow the sealant to cure before mounting the antenna on the aircraft.

3.6 SEALING AIRCRAFT HARNESS/ANTENNA CONNECTOR - An additional source of corrosion occurs from moisture leakage into the aircraft harness or antenna connector. Although the antenna can be mounted with only the sealed antenna gasket installed, Av-DEC® highly recommends the application of StretchSeal™ (PNs: EN110589 or AD89513) tape over the connector. StretchSeal™ tape will prevent moisture ingress into the connector.

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To apply the StretchSeal™ tape, remove the tape from the package and unroll a small length of tape. Wrap the StretchSeal™ Tape around the mated connector with a 50% overlap while stretching the tape 25% to 50% to ensure a tight wrap. A tight wrap is necessary to ensure a proper seal. Coverage shall be from the base of the antenna to at least ½” beyond the connector and onto the insulation jacket of the coaxial cable.

Note: Aircraft cutout hole must be at least ¼” greater in diameter than the connector outer diameter when using StretchSeal™ tape.

Apply cable ties immediately above and below the mated connector and the free end of tape.

- 3.7 ANTENNA INSTALLATION** - Remove release film from the “aircraft side” of the HI-TAK® Conductive Polyurethane Gasket. Pre-position at least two fasteners through the antenna and gasket. Align fasteners at correct locations on the aircraft surface. Tighten each fastener one to two turns to hold the antenna in place on the aircraft. Install remaining fasteners through the antenna and gasket. Tighten fasteners in accordance with approved maintenance manual procedures. Wait at least 15 minutes and retighten the fasteners. Additional re-tightening sequences may be required to achieve the desired bonding requirements.
- 3.8 FILLET SEAL** - Fillet sealing is not required, or needed, with Av-DEC® HI-TAK® Conductive Polyurethane Gaskets. However, a fillet seal may be used along with the gasket if required by maintenance or installation documentation. If a fillet seal is required, Av-DEC recommends the use of TG3212 Thixoflex® Black.
- 4. MAINTENANCE** - Installation of the Av-DEC® HI-TAK® Conductive Polyurethane Gasket, HT3326-5 Self-Leveling Green® sealant and StretchSeal™ tape requires no additional maintenance tasks than those already specified in the approved maintenance manual procedures. Av-DEC® recommends replacing the Av-DEC® HI-TAK® Conductive Polyurethane Gasket, HT3326-5 Self-Leveling Green® sealant and StretchSeal™ tape each time the antenna is removed from the aircraft.
- 5. GASKET REMOVAL** - After removing antenna fasteners, use a phenolic or wooden tool as a wedge between the antenna and aircraft surface to separate antenna from the aircraft. After the antenna is removed, cut the cable ties from the connector wrap (if present) and remove StretchSeal™ tape. Disconnect aircraft coax cable(s) and carefully lift and peel antenna gasket from aircraft. Remove Self-Leveling Green® sealant from the antenna. Use isopropyl alcohol or other approved cleaning solvent to remove any remaining residue.
- 6. GASKET REPLACEMENT** - The antenna gasket shall be inspected when an antenna is removed during scheduled or unscheduled maintenance, or per the aircraft maintenance manual instructions. The antenna gaskets should be removed & replaced with a new gasket any time an antenna is removed. If a replacement gasket is not available, carefully remove the antenna, taking care not to damage the gasket. Replace the gasket if any exposed wire strands extend more than 1/16” from the perimeter of the gasket, or if any polyurethane sealant is missing and the mesh is exposed. Complete inspection per **Section 3.1** before re-installing gasket. Typically, electrical bonding resistance performance is still within acceptable limits but the environmental seal maybe compromised if the gasket is reinstalled.

Antenna Gasket
Installation Video



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