



F-35 Program Information
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Class 3 Fastener Installation Touch Up Requirements

Supplier Bulletin

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EXPORT CONTROLLED INFORMATION

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22 CFR 125.4(b)(2) Applicable

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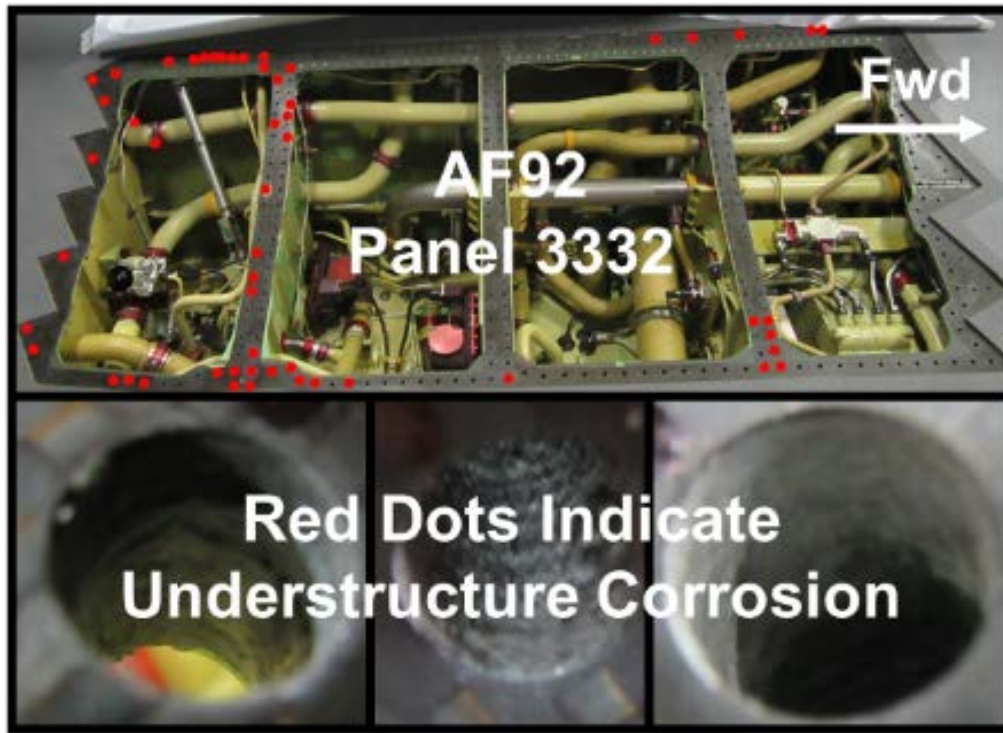
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Dear Valued Supplier,

NGAS has been notified by our Lockheed Martin customer that aircraft have been identified with corrosion in class 3 fastener holes as a result of the holes not having primer applied.



Investigation by NGAS has revealed that the removable panel drawings may have a requirement to mask the holes and only apply chemical conversion coating to the hole at the detail level. At the installation level of the panel LMA-PB019 states to check the hole for primer and apply it if missing. We realize that it may be more convenient to apply the primer at the detail panel level. If you wish to apply the primer at the detail panel level, please provide an RCI to allow priming at the detail panel level.



The requirement to prime class 3 fastener installation holes can be traced as follows:

2ZZP00001

Finish Specification for F-35 Weapon System

LMA-PB019

3.4.3.1 Installation Procedures for Removable Panels, Doors Access Covers, and Other Planned Removable/Replaceable Parts
 Inspect the hole for the presence of primer or other organic finish. If holes have been previously finished or a grommet installed, no additional protection is required. Install the fastener. **If the holes and countersinks have not been previously primed or painted, they shall be primed (or fuel tank coated) in accordance with the touch up requirements specified for in the detail finish code and the applicable program finish specification (refer to LMA-D0022).**

LMA-D0022

3 REQUIREMENTS
 The processing requirements that are specific to each LM Aero program are listed in Table 1. Whenever processing in accordance with the applicable program's requirements is specified by reference to LMA-D0022, the requirements specified in Table 1 shall be followed.

2ZZP00001

3.7.2.2 Interior Surfaces

- Permanently Installed Fasteners in Integral Fuel Tanks - Install metal fasteners with sealant per LMA-PB019, Class 1.
- Permanently Installed Fasteners in Non-Fuel Areas - Install metal fasteners with wet AMS 3281 or LMA-MU006 sealant per 2ZZP00017. AMS 3277 sealant shall be used for areas that will be exposed to 250°F to 360°F.
- Removable Fasteners (Interior Connections) - Except in cases where engineering drawings may specify installation with wet sealant per 2ZZP00009 or 2ZZP00017, all removable fasteners shall be installed after the fastener holes have been primed with LMA-MR003, Class 2 primer and dried hard, or by application of MIL-PRF-16173 compound when approved by F-35 Materials & Process Engineering.

LMA-D0022, Table 1

PROCESS	F-16, F-2, & T-50	F-22 Marietta	F-22 Fort Worth	F-35 JSF
Fatigue/ Fracture Control	16PP159 (F-16) 76PP2003 (F-2) 85PP0017 & 85MP1001 (T-50)	5PTPTT02	5PTPTT02	2ZZP00006
Finishes (Airframe)	16PR070 (FPS-3001)	5PTPJ01	5PTPJ01	2ZZP00001

LMA-MR003

1.3.1 MATERIAL CLASSES
 Class 1 - Strontium chromate based corrosion inhibitors
 Class 2 - Non-chromated based corrosion inhibitors
 Class 3 - Barium chromate based corrosion inhibitors

1.3.2 MATERIAL TYPES
 Type I - Low density primer
 Type II - Standard pigments
 Type III - Low infrared reflective pigments
 Type IV - Low density primer, low infrared reflective pigments

1.3.3 GRADE
 Grade A - 4 hour pot life, 12 month shelf life
 Grade B - 2 hour pot life, 6 month shelf life
 Grade C - 4 hour pot life, 10 day shelf life (premixed frozen touch-up)

Note: When Grade is not specified, Grade A will be assumed. Touch-up Kits for brush application and spray application will be made from the bulk Grade A material and will have a 6 month shelf life. The pot life of brush application is 1 hour.

Below are simplified requirements for certain applications that need to be adhered to.

- For parts in non-fueled areas the class 3 holes need to be coated with a brush coat of LMA-MR003 primer.
- For aluminum structure where there is no chance of solution entrapment, the hole ID needs to be conversion coated in accordance with MIL-DTL-5541, Class 1A prior to primer application. If you are unsure if there is a chance of solution entrapment please submit an RCI for clarification.
- In structure where solution entrapment is possible (stack-ups of greater than one member), MIL-DTL-5541 is not to be used. Solvent cleaning and wiping the solvent dry before it evaporates will provide a surface to which the primer will adhere.



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- Holes that will have nutplates attached to the structure need to be conversion coated prior to installing the nutplates to avoid the possibility of solution entrapment.
- For parts located in fueled areas the same procedures apply except AMS-C-27725 fuel tank coating shall be used in lieu of LMA-MR003 primer. The same cautions regarding conversion coating apply.
- The use of corrosion preventive compounds (CPC's) or LMA-MU008 low adhesion sealant are only to be used if specified on the engineering drawing and are not to be used in fueled areas.

In summary, there should not be any bare metal unless otherwise specified by the engineering. A portion of material that contains only conversion coating is considered bare and should have primer applied unless otherwise specified.

Please check your engineering for the locations of the class 3 fastener installations and ensure that the holes are in compliance with the touch up requirements. If you have shipped any product to NGAS that is known to be non-compliant, please disclose the non-conforming condition to NGAS as outlined in the NGAS Supplier Quality Assurance Requirements (SQAR) section 2.2C.

If you have assemblies provided to you by NGAS as part of a build kit with a removable panel please contact Troy Conwell (troy.conwell@ngc.com) with assembly number, Mfg CAGE code and qty that you have for further disposition of those units. This request is up to two weeks after issuance of the bulletin to account for affected assemblies that may be in transit.