INCREMENTAL CHANGE Release Notification Date: 12/27/2022

SPM 70-00-01 STANDARD PRACTICES

DISCLAIMER

The Incremental Changes published by GE Aviation are considered Instructions for Continued Airworthiness. These Incremental Changes, along with the current Manual revision and published Temporary Revisions, constitute the latest Instructions for Continued Airworthiness.

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HIGHLIGHTS

HIGHLIGHT REFERENCE	DESCRIPTION OF CHANGE
sk70-00-01-800-021	Technical Change: Changed Tool Requirements.

TASK 70-00-01-800-002

1. General.

This section covers processes frequently used in the maintenance and repair of jet engine parts. These practices are generally standard processes or procedures of the Commercial Engine Division of the General Electric Company's Aircraft Engine Business Group. The standard practices described in this section can be categorized into eight basic sub-groups:

2. Tool Requirements.

Subtask 70-00-01-800-021

A. While standard hand tools, gages and materials can be used for many operations on engine parts, certain restrictions must be observed in specific instances. Among these are the following:

(1) Use of low-melting-point forming tools (Kirksite or other lead-containing materials) can cause intergranular attack at elevated temperatures during heat treatment or engine operation. Use of intermediate-melting-point materials, such as aluminum, copper, tin, zinc, cadmium, magnesium, bismuth, antimony and their alloys, such as brass and bronze can

have the same effect. All three residues must be removed prior to subsequent heat treatments or installation of the parts in an engine. Avoiding their use is easier than assuring complete removal of any transferred low-melting-point metal.

NOTE: To preclude transfer of detrimental material to nickel and ferrous parts, soft metals such as copper, brass, bronze, aluminum, lead, zinc, tin, cadmium, bismuth, antimony and their alloys shall not be used for any fixturing, tooling, equipment, or material handling used for the manufacturing or assembly/disassembly of rotating hardware. Contact surfaces made of any of these materials may be used if a protective coating that will prevent transfer to the rotating part is applied and maintained.

(2) Fluorescent-penetrant contaminants can cause severe attack on nickel-base super alloys (Inconel W, Ren. 41, etc.). All residues must be removed prior to subsequent heat treatments or installation of the parts in an engine.

(3) Use of contaminated salts (Virgo, etc.) can also attack super alloys at elevated temperatures. All residues must be removed prior to subsequent heat treatments or installation of the parts in an engine.

(4) Halogens (fluorine, chlorine, bromine, iodine) and their compounds react with titanium and can result in stress-corrosion cracking at elevated temperatures. Materials containing halogens of this nature should not be used on titanium.

(5) Use special tools when called for in maintenance and repair instructions. These tools have been designed, manufactured and supplied to do a specific job better than generally available tools, to protect the part from possible damage, and to protect personnel from injury.

(6) Do not use cadmium-plated tools/fixtures for maintenance or repair of engines or parts. Cadmium will embrittle many metals, including titanium, if they are exposed to temperatures of 500°F (260°C) and above. Cadmium embrittled titanium can fail at room temperature under the influence of high stress and plastic deformation. To inspect tools/fixtures for the presence of cadmium plate, refer to TASK 70-10-80-380-001, Inspection of Tools to Find Cadmium.

(7) Never use pressure-sensitive, gummed or adhesive tapes on engine parts except where absolutely necessary, such as when masking during repair. Tape and tape residues can cause surface attack at room temperature, and can cause severe, penetrating attack at elevated temperatures. When tape has been used in the repair process, be sure that all tape and adhesive residue have been completely cleaned from parts before subjecting them to such temperatures as those encountered in welding, baking, heat treating or normal engine operation.

3. Safety Instructions.

Subtask 70-00-01-800-022

A. The Standard Practices Manual contains processes where risks are involved to personnel and engine hardware. The purpose of this section is to provide the method by which these risks are identified in the text of the process standard practices.

WARNING: THE INFORMATION PROVIDED IN THIS DOCUMENT IS PRESENTED IN GOOD FAITH. IT DOES NOT REMOVE THE OBLIGATION OF THE PERSONNEL TO EXERCISE ALL PRECAUTIONS INCLUDING THOSE DICTATED BY GOOD, NORMAL PRACTICE.

B. In the Standard Practices specified for shop maintenance of an engine, certain operations can involve risks, to both personnel and engine hardware. It is urged that personnel act with care and caution, and with respect for all standards, laws and labor legislation required by the countries where these operations and processes are performed. Danger and damage may be minimized or avoided by adhering to careful preventive measures, strict adherence to the procedure provided in the standard practice instructions, using recommended tools and fixtures, and the wearing of appropriate protective clothing.

C. The Standard Practices Manual complies with the specifications of ATA 100, Chapter 1-1-3, page 2, paragraph 1.G. as follows:

(1) Each process where danger to personnel is involved, the text contains a WARNING to alert that harm may occur to personnel using the process. The following is an example.

WARNING: HYDROFLUORIC ACID SOLUTIONS ARE VERY DANGEROUS AND POISONOUS. PREVENT CONTACT WITH SKIN, EYES, AND CLOTHING. PREVENT INHALATION OF VAPORS. IF AN INCIDENT OCCURS, IMMEDIATELY WASH WITH AN ABUNDANT QUANTITY OF WATER AND OBTAIN IMMEDIATE MEDICAL ASSISTANCE.

WARNING: OPERATOR SHOULD WEAR FACE SHIELD, GLOVES, PROTECTIVE CLOTHING, AND PROTECTIVE SHOES.

(2) Each process where material damage is involved, the text contains a CAUTION to alert personnel. The following is an example.

CAUTION: PERMANENT MARKING SHOULD NOT EXTEND ONTO ANY CURVE, CHAMFER, SHARP EDGE, OR FILLET ADJOINING THE SURFACE WHERE THE MARK IS PLACED.

D. A WARNING or CAUTION is provided in the text of the processes of the Standard Practices Manual immediately before the paragraph where safety is involved.

E. In each process standard practice at the beginning of the Equipment paragraph, the different compulsory protective equipment and safety installations in the shop area where the process is performed are described.

F. A WARNING is provided in the text before the first time in which a solution or corrosive product is called out in the procedure.

G. In each solution sheet:

(1) The Preparation paragraph is preceded by a WARNING when it requires handling of corrosive or toxic products.

(2) Where appropriate, the Regeneration paragraph is preceded by a WARNING to avoid a combustible or explosive mixture when servicing the solution.