MAIN LANDING GEAR - CLEANING/PAINTING

1. General

A. This procedure provides cleaning and painting instructions for main landing gear components. These components are constructed of aluminum alloy, steel alloy and magnesium alloy. The following anti-corrosion treatment processes are applied at time of manufacture:

(1) Aluminum Alloy Parts:

(a) Chemically degreased.

(b) Chemically film-conversion-coated.

(c) Epoxy primed.

(d) Top coated with Polyurethane paint.

(2) Steel Alloy Parts:

(a) Chemically degreased.

(b) Epoxy primed.

(c) Top coated with Polyurethane paint or white polyester powder coat.

(3) Magnesium Alloy Parts:

(a) Chemically degreased.

(b) Chemically film-conversion-coated.

(c) Epoxy primed.

(d) Top coated with Polyurethane paint.

B. For an illustration of main landing gear construction materials, refer to Figure 701.

2. Tools, Equipment and Materials

A. Refer to Landing Gear - General for a list of required tools, equipment and materials.

NOTE: Follow the directions of the manufacturer or supplier for storing, mixing, and applying spray wash primers, brush chem-film primers, epoxy primers, and topcoats.

3. Refinishing High Stressed Steel Shot Peened Surfaces

WARNING: The main gear legs and the main gear center tube outer surfaces are shot peened during final manufacture and prior to the application of protective coatings. The shot peened surface is thin and must not be disturbed or damaged. Do not use chemical strippers of any kind to remove paint from shot peened surfaces. Chemical strippers have acids that may cause hydrogen embrittlement. Also, do not sand or sand blast these surfaces.

A. Refinishing minor nicks and scratches of high stressed shot peened surfaces.

(1) Using a soft, hand steel wire brush or Scotch Brite pad (no power tools), gently remove loose paint, scale, and rust. Use good judgement to prevent damaging the shot peened surface. For large areas, the preferred method is media stripping. This includes glass bead, plastic bead, or wheat starch.

(2) If the primer is damaged in an area larger than the size of a dime, the area should be hand solvent cleaned with an approved solvent and reprimed with epoxy primer.

(3) Spot paint the damaged areas with Polyurethane paint.

B. Complete refinishing of high stressed steel shot peened surfaces.

(1) To return these components to their factory finish, remove all paint by media stripping using glass bead, plastic bead, or wheat starch.

(2) Remove all media and loose particles with compressed air, clean with an approved solvent and prime with epoxy primer.

(3) Apply Polyurethane topcoat.

4. Refinishing Steel, Aluminum and Magnesium Components

A. Refinishing of minor nicks and scratches.

(1) Feather sand edges of finish around the effected area with 320 grit sandpaper, followed by 400 grit. Avoid sanding through the primer if possible.

(2) For steel parts, if primer is damaged in an area larger than the size of a dime, the area should be hand solvent cleaned with an approved solvent then reprimed with epoxy primer.

(3) For aluminum and magnesium parts. If primer is damaged in an area larger than the size of a dime, the area should be hand solvent cleaned with an approved solvent then apply a spray wash primer or brush chem-film primer.

(a) After spray wash primer or brush chem-film primer has dried for at least 30 minutes, apply epoxy primer.

(4) Spot paint damaged areas with Polyurethane paint.

B. Complete refinishing.

(1) Degrease and remove sealants and heavy soil with approved solvents.

(2) Strip original finish or part following recommendations of stripper manufacturer.

CAUTION: Do not allow stripper to come in contact with the main landing gear legs, center tube or axle spindles. Wear protective clothing and avoid contact with skin. Use of chemicals requires good ventilation and good fire safety practices.

(3) Use steel wire brush, Scotch Brite or fine aluminum oxide paper to remove any remaining loose paint, scale and rust.

(4) Hand solvent clean with an approved solvent.

(5) Apply epoxy primer to steel parts. Apply spray wash primer or brush chem-film primer to aluminum or magnesium parts.

(6) Apply epoxy primer to aluminum or magnesium parts.

(7) Apply Polyurethane topcoat.