

TECHNICAL BULLETIN



FUJI HEAVY INDUSTRIES LTD.

~~JCAB APPROVED~~

HEAD OFFICE ; SUBARU BLDG.
SHINJUKU, TOKYO, JAPAN

NO. 200-023

DATE September 26, 1996

(SUPERSEDES NO.)

REV.

DATE

(SUPERSEDES NO.)

REASON

1. SUBJECT : Flap Hinge Fitting and Main Landing Gear Fitting, Corrosion Inspection/Repair of
2. AIRCRAFT AFFECTED : All FA-200 series aircraft.
3. PRIORITY : Desirable
4. REASON : There have been several instances reported whereby corrosion has occurred in the subject flap hinge fitting and main landing gear fitting. In these malfunction reports, operators also requested us to investigate structural integrity of these fittings. Therefore, this bulletin provides general information for corrosion, and establishes inspection/repair procedures of the affected areas to ensure flight safety.
5. DESCRIPTION : This bulletin requires inspection of possible corrosion in the affected areas, and also specifies repair limits (wall thickness limits after corrosion removal) and repair procedures if corrosion is found.
6. ACCOMPLISHMENT : Inspect for corrosion each 50 hours of flight operation or after 2 calendar months; whichever occurs first. If corrosion is found, accomplish repair immediately.
7. JCAB APPROVAL : Not required.
8. PARTS REQUIRED : Not required.
9. SPECIAL TOOL : None required.
10. WEIGHT AND BALANCE : Not affected.
11. REFERENCE : Not applicable.
12. DETAILED INSTRUCTIONS :

General Information:

Corrosion in airframe structure will cause a reduction in static strength due to a thickness loss of structural material. A further significant effect is to reduce fatigue strength.



AIRCRAFT DIVISION

1-11 YOUNAN 1 CHOME, UTSUNOMIYA TOCHIGI JAPAN 〒320
TEL 0286 (59) 4833 TELEX 3522 176

TECHNICAL BULLETIN 200-023

PAGE 1 OF 6

It is well known that corrosion will chemically attack structural material surface locally, cause a stress concentration which results in premature destruction even if minor load is applied.

Corrosion will not grow rapidly but progress gradually with the passage of time. It is therefore possible to positively detect corrosion by daily inspection/maintenance.

During daily inspection, operators should try to find out corrosion and, if found, make an early repair. It is also important to remove such defects as deteriorated paint, raised paint, paint flaking, scratch, etc. which will cause corrosion damage. This will ensure the safety of flight, and eliminate or reduce the need for extensive repair or replacement of components.

PART I - Corrosion Inspection

1. Position airplane in a safe place.
2. Remove main landing gear as required in accordance with Service Manual, paragraph 9-3-1.
3. Remove flap as required in accordance with Service Manual, paragraph 8-3-1.
4. Clean flap hinge fitting and main landing gear fitting with naphtha or equivalent solvent.
5. Visually inspect these fittings for corrosion or such defects as deteriorated paint, raised paint, paint flaking, scratch, etc. which will cause corrosion.
6. If evidence of corrosion is found, remove paint completely and inspect for corrosion.
7. If corrosion is not found, prime and finish paint.
It is recommended that chemical film treatment (alodine) be applied for corrosion protection prior to painting. Prime and finish paint to match surrounding areas.
8. (If removed) install main landing gear and flap in accordance with Service Manual, paragraphs 9-3-2 and 8-3-2 respectively.
9. If corrosion is found, accomplish PART II of this bulletin.

PART II - Corrosion Repair

1. Position airplane in a safe position.
2. Remove main landing gear as required in accordance with Service Manual, paragraph 9-3-1.
3. Remove flap as required in accordance with Service Manual, paragraph 8-3-1.

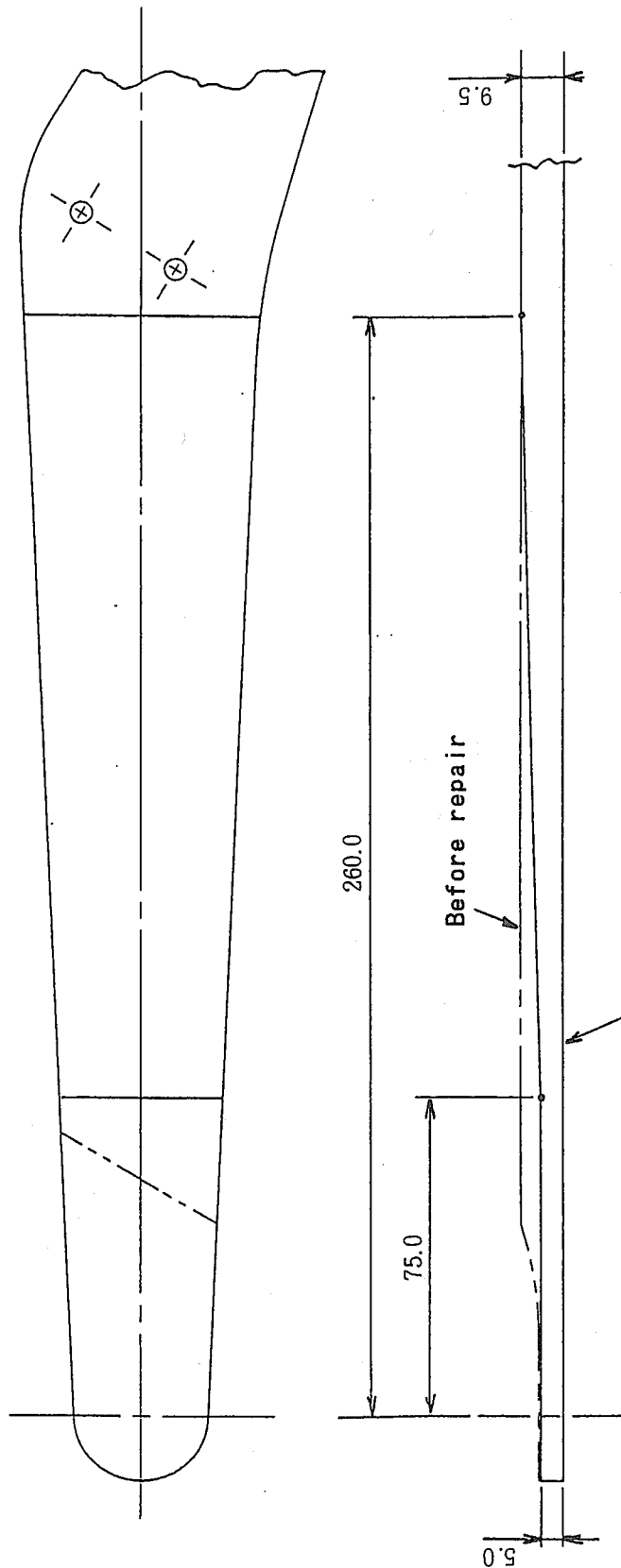
4. Remove corrosion damage completely, using file or equivalent tool.
5. After corrosion removal, polish out surface with 400 to 600 grit abrasive cloth or paper.

NOTES

- Remove only enough material to completely eliminate the corrosion.
 - Blend edges of repaired area into surrounding surface with a smooth contour.
 - The inside corner radius (R) of main landing gear shall be 10 mm or greater.
6. Dimensionally inspect repaired area to ensure Repair Limits (as shown in Figures 1 through 3) are not exceeded. If Repair Limits are exceeded contact FHI (for further engineering evaluation).
 7. Prime and finish paint repaired area.
It is recommended that chemical film treatment (alodine) be applied for corrosion protection prior to painting. Prime and finish paint to match surrounding areas.
 8. (If removed) install main landing gear and flap in accordance with Service Manual, paragraphs 9-3-2 and 8-3-2.

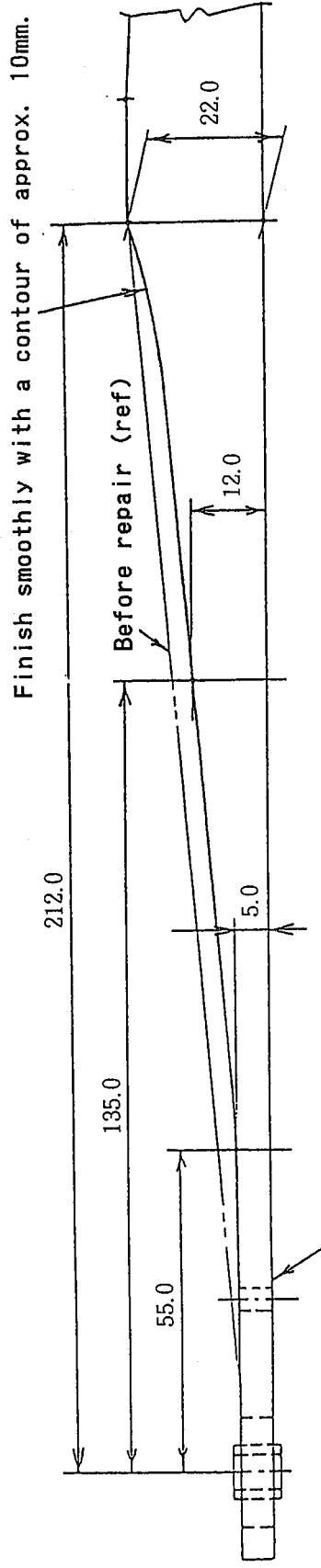
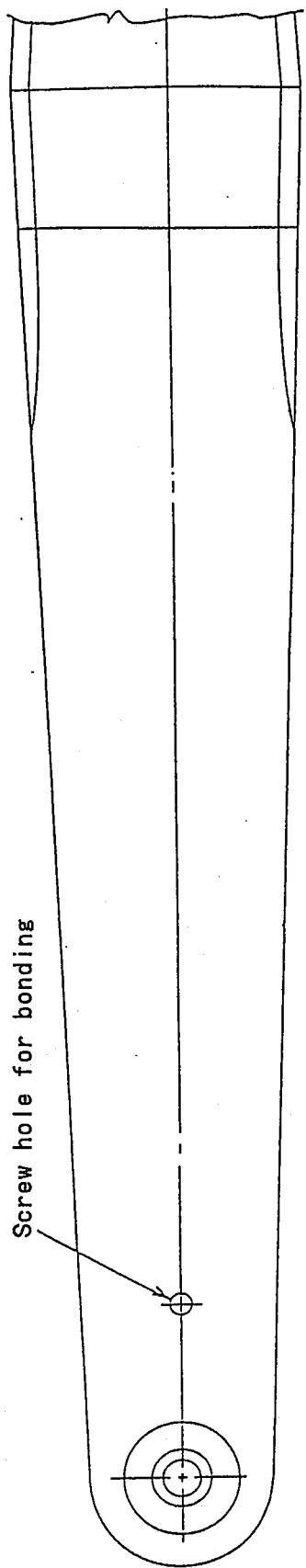
NOTES

- If a lateral gap has occurred between main landing gear strut fitting and main landing gear fitting, do not install main landing gear in this condition. To fill the gap, use shim as described below:
- If corrosion is removed from the surface mating with main landing gear strut fitting, use shim washer(s) between main landing gear and main landing gear fitting at installation. Thickness of shim washer(s) shall be equal to the amount of corrosion removal. Use of shim shall be displayed by appropriate marking in the adjacent area.



SCALE: NONE
 UNIT : mm

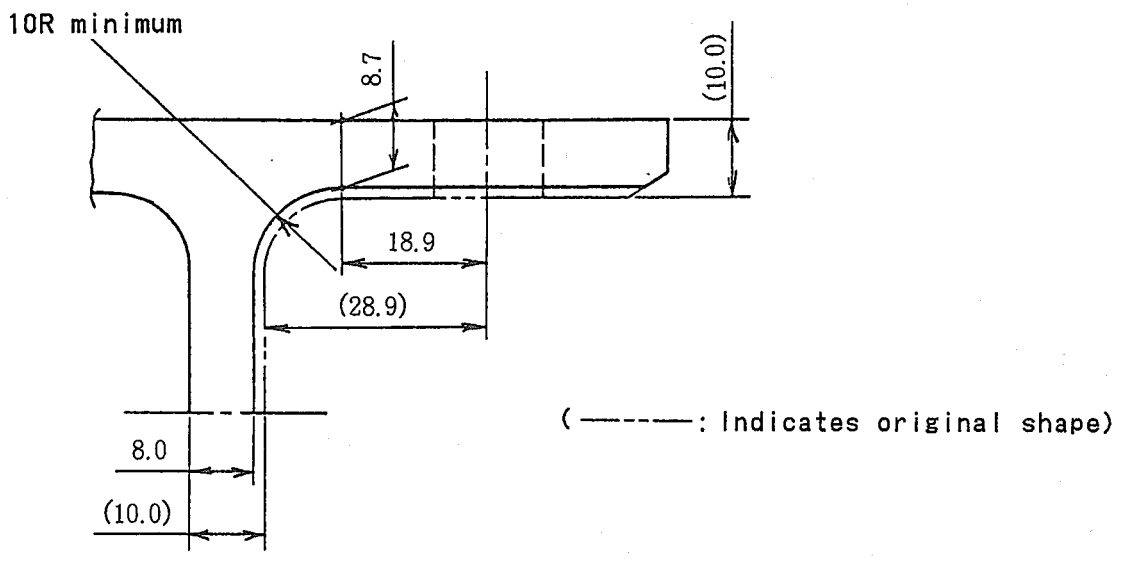
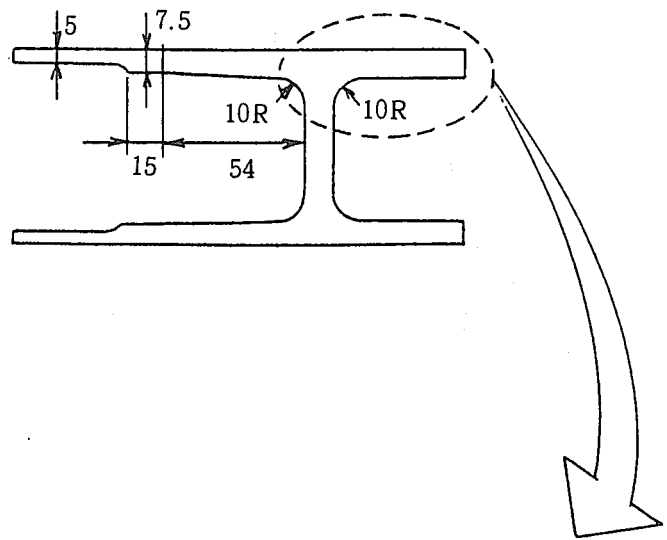
FIGURE 1 REPAIR LIMITS - FA-200 INBOARD FLAP HINGE FITTING



This side surface may be removed, provided minimum thickness is maintained.

SCALE: NONE
UNIT: mm

FIGURE 2 REPAIR LIMITS - FA-200 OUTBOARD FLAP HINGE FITTING



Dimensions show repair limits; The dimensions given in parentheses are the original dimensions.

SCALE: 1/1
UNIT : mm

FIGURE 3 REPAIR LIMITS - MAIN LANDING GEAR FITTING