

ILMAILULAITOS

CIVIL AVIATION ADMINISTRATION

PL 50

FIN - 01531 VANTAA, FINLAND

Puhelin/Telephone 09 - 82 771

International + 358 9 82 771

Telefax 09 - 82 772499

LENTOTURVALLISUUSHALLINTO

FLIGHT SAFETY AUTHORITY

LENTOKELPOISUUSMÄÄRÄYS

AIRWORTHINESS DIRECTIVE

**M 2561/98****Muutos 1****4.8.1998**

Lentokelpoisuusmääräyksen noudattaminen on ilma-aluksen jatkuvan lentokelpoisuuden edellytyksenä. Määräyksen mukaisen toimenpiteen saa tehdä ja kuitata, ellei määräyksessä toisin mainita, se jolla ilmailumääräyksen AIR M2-1, AIR M4-1, AIR M5-3, AIR M5-10 tai AIR M6-3 mukaisesti on oikeus tehdä kyseisen ilma-aluksen tai -välineen määräaikaishuoltoja. Tehty toimenpide on merkittävä ilma-aluksen teknilliseen päiväkirjaan tai purjelentokoneen matkapäiväkirjaan. Lentokelpoisuusmääräys on annettu ilmailulain (281/95) 17§:n perusteella.

Partenavia. Siipien ja vakaimen tarkastus

Koskee: Lentokoneita Partenavia P68, sarjanumeroita 001 - 400.

Viite: Prescrizione di aeronavigabilita RAI 98-226

Voimaantulo: 1.9.1998

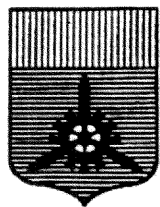
Voimassaoloaika: Tämä määräys on voimassa toistaiseksi.

Toimenpiteet: Tarkasta lentokoneen siipien ja korkeusvakaimen rakenne oheisen Prescrizione di aeronavigabilita 98-226:n ohjeiden mukaisesti, kun koneen kokonaislentoaika saavuttaa 8500 tuntia tai 15.10.1998 mennessä, kumpi tulee myöhemmin. Toista tarkastus sen jälkeen 500 lentotunnin välein. Jos koneen kokonaislentoaika tämän määräyksen voimaan astuessa on jo yli 8500 tuntia, niin tee ensimmäinen tarkastus 50 lentotunnin kuluessa tai 15.10.1998 mennessä, kumpi tulee ensin.

Huom: Jos siipirakenne runkokiinnityksineen tai korkeusvakain joudutaan vaihtamaan, niin uuden rakenteen tarkastus on aloitettava, kun sen lentoaika saavuttaa 8500 tuntia uudesta.

Tämä määräys korvaa määräyksen M 2561/98.

Liite



REGISTRO AERONAUTICO ITALIANO

PRESCRIZIONE DI AERONAVIGABILITÀ

Prescrizione
98-226
del 02/07/98
Pag. 6 di 10

La presente PA annulla e sostituisce la PA 98-070 del 5 marzo 1998

----- FINE -----

English Translation:

In case of any difficulty reference shall be made to the original Italian text.

Airworthiness Directive No. 98-226, dated 02 July, 1998

EFFECTIVE DATE: 30 July 1998

COMPLIANCE:

- Airplanes with less than 8500 flight hours: Prior to the accumulation of 8500 flight hours or within 2 months after the effective date of this AD, whichever occurs later, unless already accomplished.
At intervals not to exceed 500 flight hours thereafter.

- Airplanes with 8500 or more flight hours: Within 50 flight hours, or 2 months after the effective date of this AD, whichever occurs first, unless already accomplished.
At intervals not to exceed 500 flight hours thereafter.

APPLICABILITY:

Partenavia P68 series airplanes, serial numbers 001 through 400.

SUBJECT:

Wing and stabilator structures - Limit of fatigue life.

DESCRIPTION:

(A) Within the terms set forth under "COMPLIANCE" of this AD, inspect the structure of the wing and its wing to fuselage attachments and the structure of the stabilator in accordance with the following instructions.

NOTE 1: IF REPLACEMENT OF WING STRUCTURE WITH ITS WING TO FUSELAGE ATTACHMENTS AND/OR REPLACEMENT OF STABILATOR STRUCTURE IS ACCOMPLISHED, RESUME THE REPETITIVE INSPECTIONS AFTER THE ACCUMULATION OF 8500 FLIGHT HOURS SINCE NEW ON THE REPLACED ASSEMBLY.

NOTE 2: At this RAI AD remain valid the attached figures identified with RAI AD n. 98-070.

(B) WING:

Inspect the front and rear spars.

Non Destructive Testing (NDT) procedures are required for wing zones 1, 2, and 3 (see figure 1).

Zone 1 - Spar between wing to fuselage attachments.

Zone 2 - Spar in front of nacelle firewall and adjacent areas.

Zone 3 - Spar between wing root and engine mount.

The following inspections must be carried out on both left and right hand wings.



REGISTRO AERONAUTICO ITALIANO

PRESCRIZIONE DI AERONAVIGABILITÀ

Prescrizione
98-226
del 02/07/98

Pag. 7 di 10

ACCOMPLISHMENT INSTRUCTIONS

1. Switch off all electrical loads and disconnect the negative post of the battery.
2. Remove the cabin ceiling panels in the wing area.
3. Remove soundproof material if present.
4. Remove the wing-fuselage fillets and the central upper fairing.
5. Remove the wing leading edge between fuselage and nacelle and between nacelle and wing tip.
6. Open the inspection doors near the wing root.

Note: The following tasks do not refer to a complete removal of the wing but refer to a limited lift of the wing just to allow the accomplishment of the required inspections.

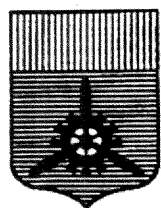
7. Drain the fuel tanks
8. Remove the central seats, rear bench, carpets, fresh air outlets, ADF antenna on wing top (if installed), engine cowlings.
9. Slacken aileron control cables at the turnbuckles located under the cabin floor.

In the area of the wing-fuselage fillets disconnect the following:

- a) Cabin warm/fresh air ventilation flexible hoses.
- b) Sleeves on fuel selector control lines in the area of the grease fittings.
- c) Fuselage girder part number 68-2.2039-1.
- d) Hoses of vacuum system.
- e) Hoses of deice system (if installed).

ATTENTION: To prevent damage and/or contamination of hydraulic, pneumatic and fuel hoses protect the fittings and the terminals as necessary. To ease the reinstallation it is advisable to mark hoses and connections, as appropriate.

10. Be sure that no other connections between the wing and the fuselage are still present.
11. Locate under the wing, adjacent to ribs no. 17, 2 trestles having a height adjustable cradle (See Airplane Maintenance Manual).
12. Position 2 hoists connected to the engines lifting points.
13. Remove, one at a time: No. 3+3 bolts (sample bolts on left and right side)



REGISTRO AERONAUTICO ITALIANO

PRESCRIZIONE DI AERONAVIGABILITÀ

Prescrizione
98-226
del 02/07/98
Pag. 8 di 10

that fasten the upper and lower caps joining plates of the left and right main spars (see figure 2).

a) Carry out a magnetic particles inspection of the removed bolts.

b) Using a rigid boroscope (appropriate diameter with sight at 90 degrees and view angle of 60 degrees) inspect the holes for corrosion and/or cracks .

c) Repeat, removing one bolt at a time, the tasks required in 13.a) and 13.b), above, on:

- No. 3+3 bolts (sample bolts) that fasten the upper and lower caps joining plates of left and right rear spars.
- No. 4+4 bolts (sample bolts) that fasten the joining plates to the left and right spar web (front and rear spars - see figure 2).

d) Repeat the tasks required in 13.a) and 13.b) above on the bolts that fasten the machined angles Part Number 1.4155-1.

Note: If, as a result of any of the above inspections, severe corrosions and/or cracks are found remove one at a time all remaining bolts and inspect them as required in 13.a) and 13.b). Repair in accordance with para.(D) of this AD.

14. Reinstall and torque each removed bolt in accordance with the instructions of the Maintenance Manual.

15. Remove the nuts and washers from the four wing-fuselage attachment bolts (see figure 3).

16. Lift the wing by means of the cradles and the hoists just as necessary to pull out the attach bolts. Then continue to lift until a suitable access to the spar lower cap is attained.

Caution: Pay attention during the removal of the bolts so to avoid damaging wing or fuselage attachments.

17. Replace or inspect by magnetic particles method the attach bolts.

a) Inspect the wing to fuselage steel attach plates using fluorescent penetrant Type I, Method C, solvent removable.

b) Using a rigid boroscope internally inspect the holes of the wing to fuselage attachment.

18. Inspect for presence and dimension of typical crack on the structural element of wing in accordance with the accomplishment instructions of S.B. 65 rev. 3, (see fig. 4).

If the length of crack is equal or greater than 10 mm in the vertical part of the cap (forward and/or backward) carry out the repair of damage in accordance with para (D) of this AD.. If no cracks are found or the lenght of crack is less than 10 mm carry out the modification described in the S.B. 65 rev. 3.

NOTE 1: If a vertical crack with a length greater than 10 mm is found, the repair sketch called for by Partenavia S.B. 65 rev. 3 is no more applicable. In this case if the caps have been repaired according to S.B. 65 rev. 3, remove or



REGISTRO AERONAUTICO ITALIANO

PRESCRIZIONE DI AERONAVIGABILITÀ

Prescrizione
98-226
del 02/07/98

Pag. 9 di 10

re-evaluate the existing repair.

NOTE 2: The modification must be carried out only after accomplishment of the inspection required by item 19.

19. On aircraft already repaired according to the Partenavia S.B. 65 rev. 3, inspect using the X-ray- method, double exposure technique, the caps of forward spar at the wing to fuselage attachment, and for an extension of 20 cm both sides (left and right sides along the span).

For the inspection use an exposure with the following features:

DFF= 100 cm; tube LORAD LPX 160 or equivalent;
lead screened film Agfa D4 class 1 ASTM or equivalent;
V= 120 KV; I= 5 A; T= 2,5 min;
quality level 2-2T; film density range 2,5 and 3 HeD.

20. Visually inspect with the aid of a strong light source and 10X magnifying glass the rear spar in the Zone 1.

21. Inspect for cracks using eddy current method, the lower surface of the main spar caps in the Zone 1. For the inspection use a probe with a range frequency between 100 and 500 KHZ type VM 100 PSS3 or equivalent.

Calibrate the equipment to detect a standard reference crack on aluminum material (NOTCH-TYPE) with width of 0,25 mm and depth of 0,5 mm.
Set parameter signals/noise to 3: 1.

Carry out the inspection by scanning the lower surface of the spar cap moving the probe longitudinally with the aid of a ruler, made of non metallic material, to provide an adequate guide of scan for the probe. Pay attention to balance as necessary to take into account the edge effect.

The inspection must be carried out by II level CND expert, qualified in accordance with the MIL-STD-410E or equivalent. In alternative to the eddy current method a dye-check inspection with a solvent removable fluorescent penetrant Type I Method C can be used. Remove in any case before inspection, dirt and paint from the affected area.

22. Carry out a detailed visual inspection of the spar caps and spar webs in the zone of crossover the fuselage (zone 1).

23 If as a result of the above inspections any damage is detected, repair in accordance with para. (D) of this AD.

24. Put back the wing on the fuselage, insert bolts with washer under head. Move saddles and hoists as necessary.

25. Tighten nuts of the bolts according to the values contained in the Maintenance Manual.

26. For assembling the other parts perform operations in the opposed order to that of dismantling (refer to the applicable sections of the Maintenance Manual).

27. Check the travel of the ailerons and tension of the control cables. Check the travel of the flaps (ref. to Maintenance Manual).



REGISTRO AERONAUTICO ITALIANO

PRESCRIZIONE DI AERONAVIGABILITÀ

Prescrizione
98-226
del 02/07/98

Pag. 10 di 10

28. Remove the engine cowlings.

29. Open the two inspection access door located on the back of the nacelles (ref. Service Bulletin n. 93).

30. Insert a flexible boroscope with diameter 8 mm and lenght at least 2 m (view direction 0 degrees and 90 degrees, field of view 40 through 60 degrees and 250W source of light) between the firewall and the front spar and carry out a detailed inspection of the spar web and spar cap in the zones behind the firewall for cracks and/or corrosion.

31. Using the same boroscope, inspect from the internal of the wing box the front and rear spars for corrosion and cracks. Inspect the wing ribs and the rivets for general conditions.

32. Carry out a visual inspection for cracks and corrosions of all other parts of the wing skin and spars using a strong light source and a 10X magnifying glass.

33. If, as a result of the above inspections, any damage is detected, repair in accordance with para. (D) of this AD.

(C) STABILATOR

1. Remove the stabilator as per Aircraft Maintenance Manual. Carry out a boroscope detailed inspection for craks and corrosion of all internal parts (spars, ribs, and fitting elements thereof).

2. If, as a result of the above inspections, any damage is detected, repair in accordance with para. (D) of this AD.

3. Reassemble parts affected by the inspection by reversing the dismantling procedure (refer to the applicable sections of Maintenance Manual).

(D). If the manufacturer does not provide specific data, repair in accordance with the methods, techniques and practices contained in the FAA Advisory Circular No. 43.13 or equivalent document. The data contained in this Advisory Circular may be used as approved data if the user has determined that it is appropriate to the P.68 airplane, directly applicable to the repair being made and not contrary to other manufacturer's data.

(E) Fill out a report with the total flight hours of the a/c, average duration of flights, type of a/c operations, environmental conditions, type of damages discovered during inspections and send it to the RAI, whether or not damages have been found.

This AD cancels and substitutes AD 98-070 dated 5 March 1998

-----END-----

IL CERTIFICATO DI NAVIGABILITÀ dell'aeromobile sulle cui strutture od impianti deve essere applicata la **PRESCRIZIONE DI AERONAVIGABILITÀ** in oggetto, scade di validità qualora essa non venga attuata nei termini prefissati.

La effettuazione della **PRESCRIZIONE DI AERONAVIGABILITÀ** deve essere annotata - a cura dell'Esercente - sui libretti dell'aeromobile, del motore o dell'elica.



**REGISTRO
AERONAUTICO
ITALIANO**

**PRESCRIZIONE DI
AERONAVIGABILITA'**

**Prescrizione
98-070
del 05/03/98**

ALLEGATO 1

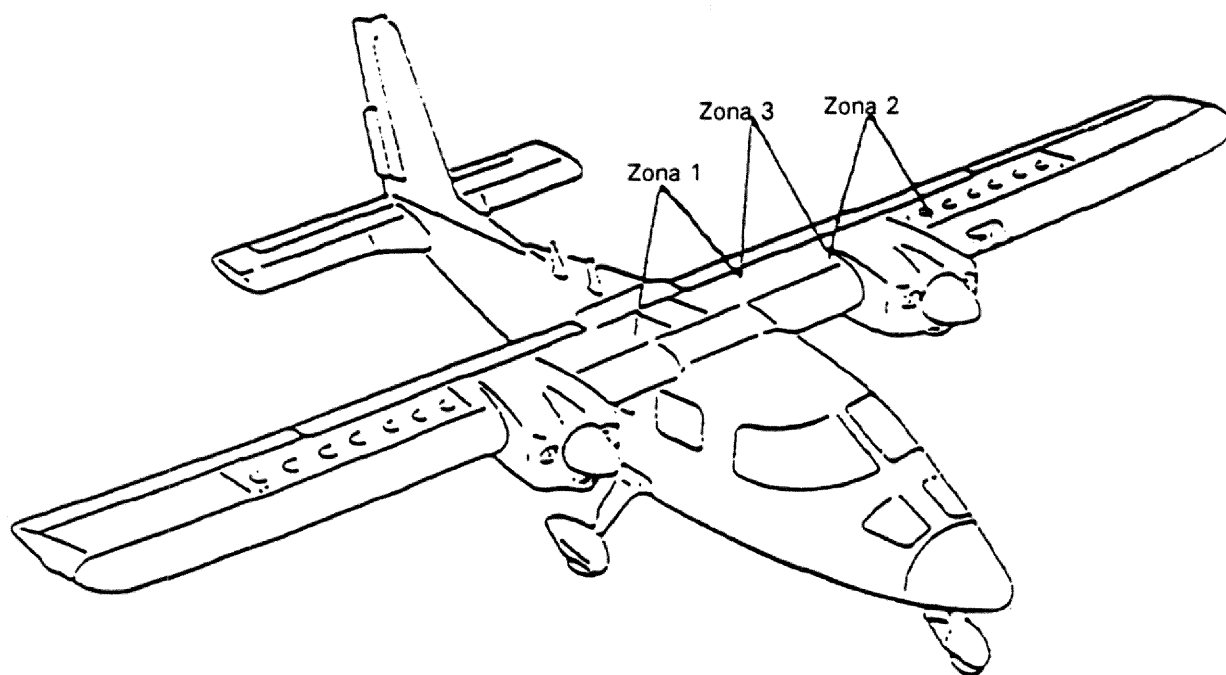


Fig.1



REGISTRO AERONAUTICO ITALIANO

PRESCRIZIONE DI AERONAVIGABILITA'

Prescrizione

98-070

del 05/03/98

ALLEGATO 2

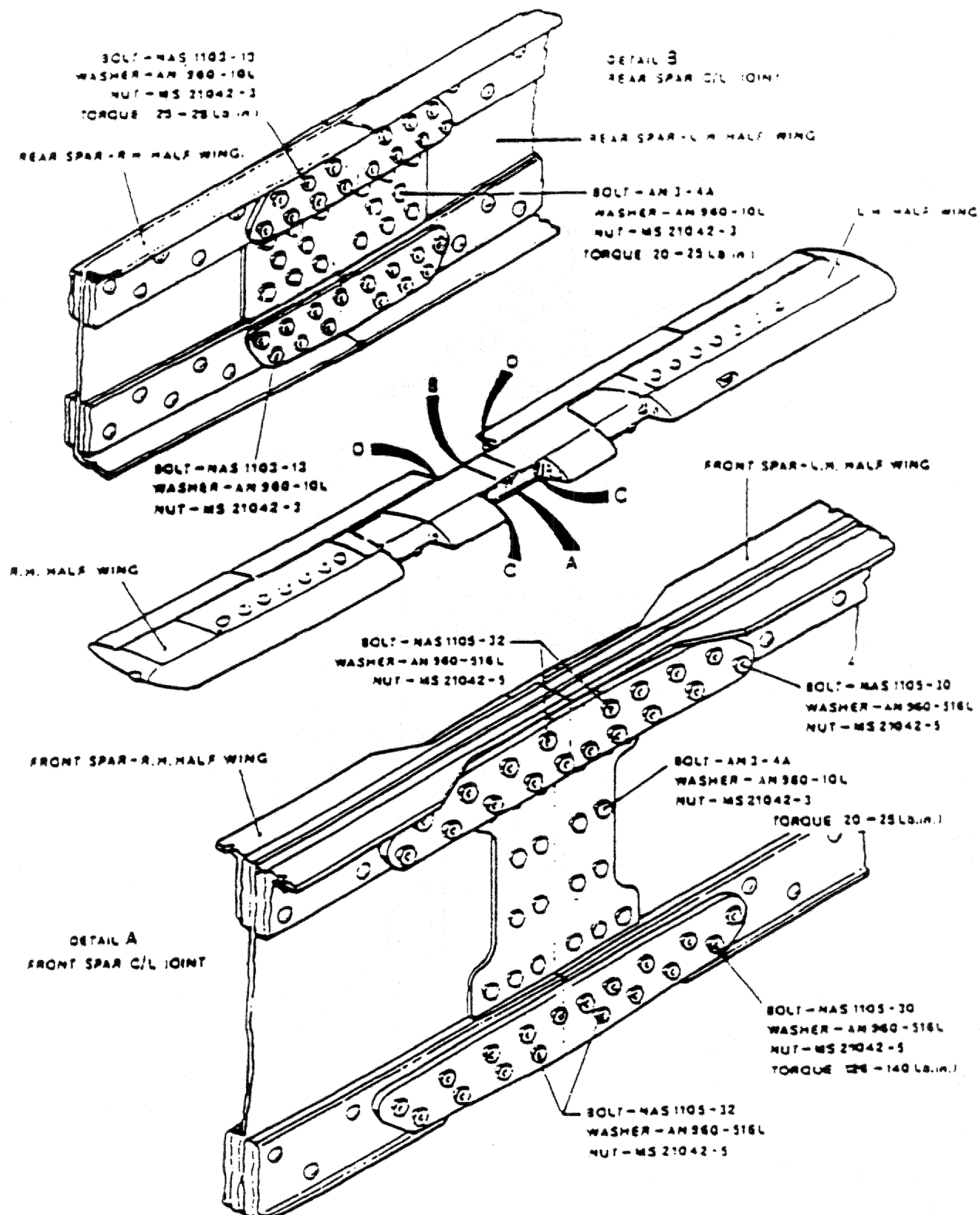
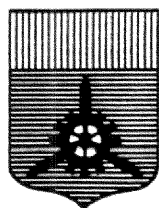


Fig.2



REGISTRO AERONAUTICO ITALIANO

PRESCRIZIONE DI AERONAVIGABILITA'

Prescrizione

98-070

del 05/03/98

ALLEGATO 3

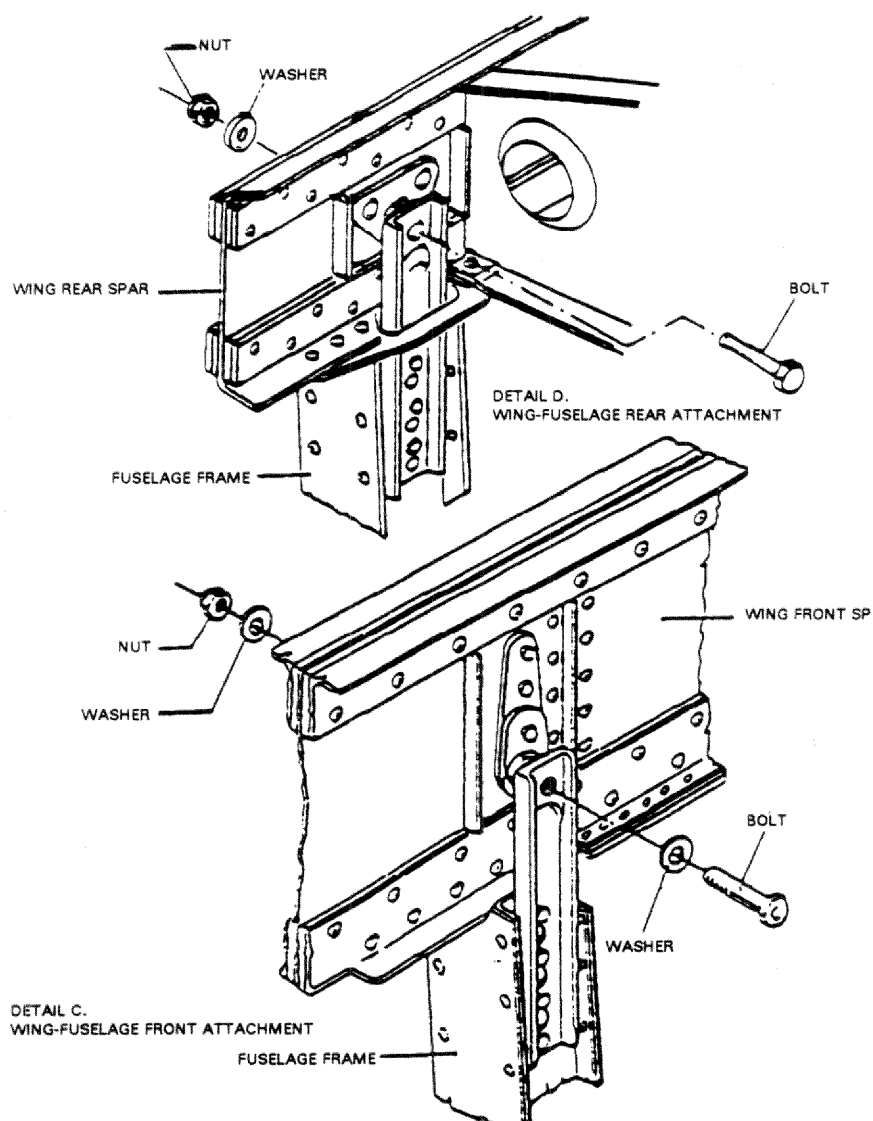
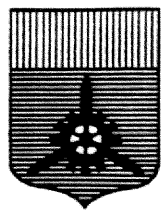


Fig.3



REGISTRO AERONAUTICO ITALIANO

PRESCRIZIONE DI AERONAVIGABILITA'

Prescrizione
98-070
del 05/03/98

ALLEGATO 4

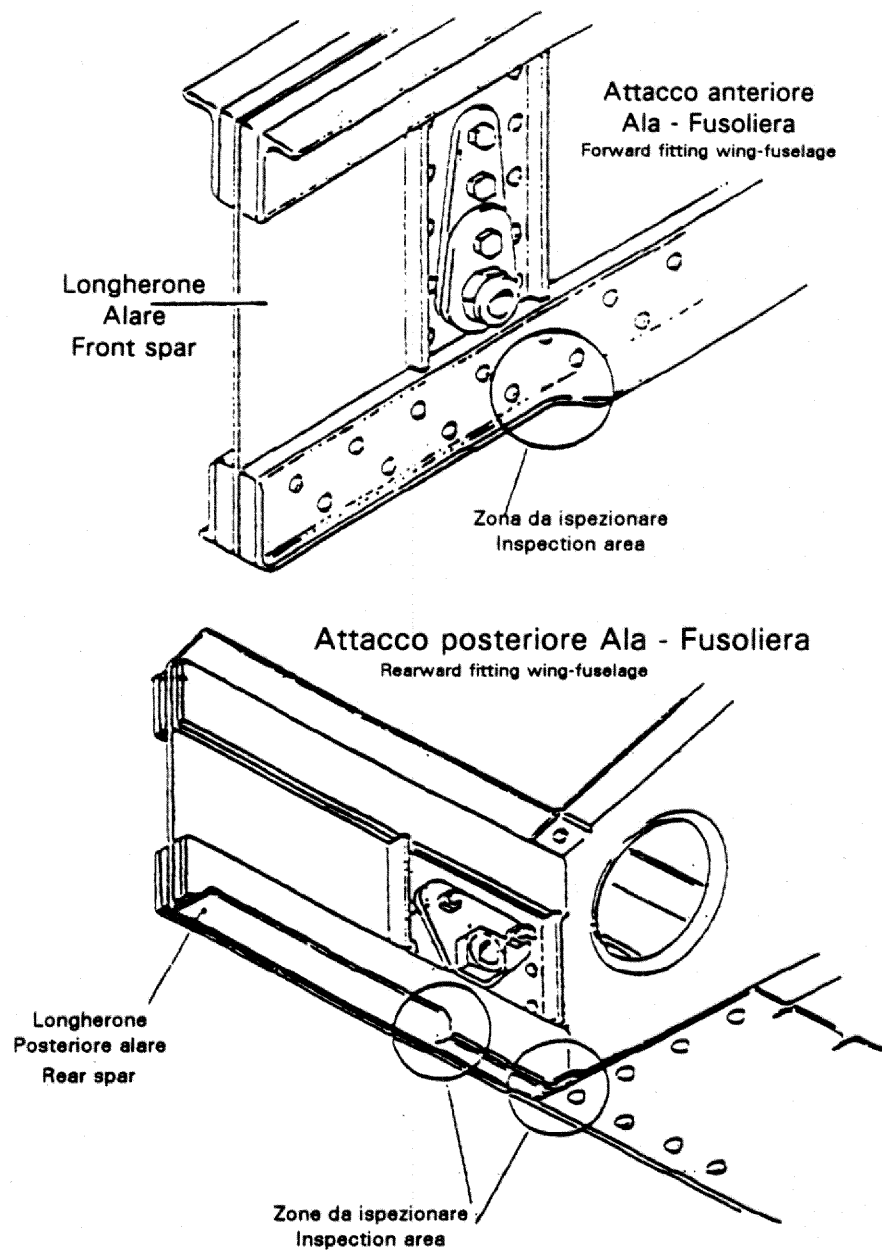


Fig.4