



F-5F Mat. 4502

Repair Proposal

Table of Contents / Description of Damages

A: Forward Fuselage bulkhead: Repair	L: 18-10377
B: Forward Fuselage station 47.65-87.5	M: 18-10378
2: Fuselage Section lower 47.5-87.5	N: 18-10380
A: Parts List	O: 18-10381
B: 18-10360	P: 18-10384
C: 14-10780 bulkhead	Q: 18-10385
D: 14-10781 bulkhead	R: Fasteners
E: 18-10368 fs4750	S: Fixtures
F: Intercoastal	T: Nose landing gear door
G: 18-10370	U: Repair/replace nose landing gear door
H: 18-10372	V: Repair/refurbish nose landing gear
I: 18-10374	W: Nose wheel steering actuator
J: 18-10375	X: Nose Landing Gear 14-41600
K: 18-10376 former lower	

Summary

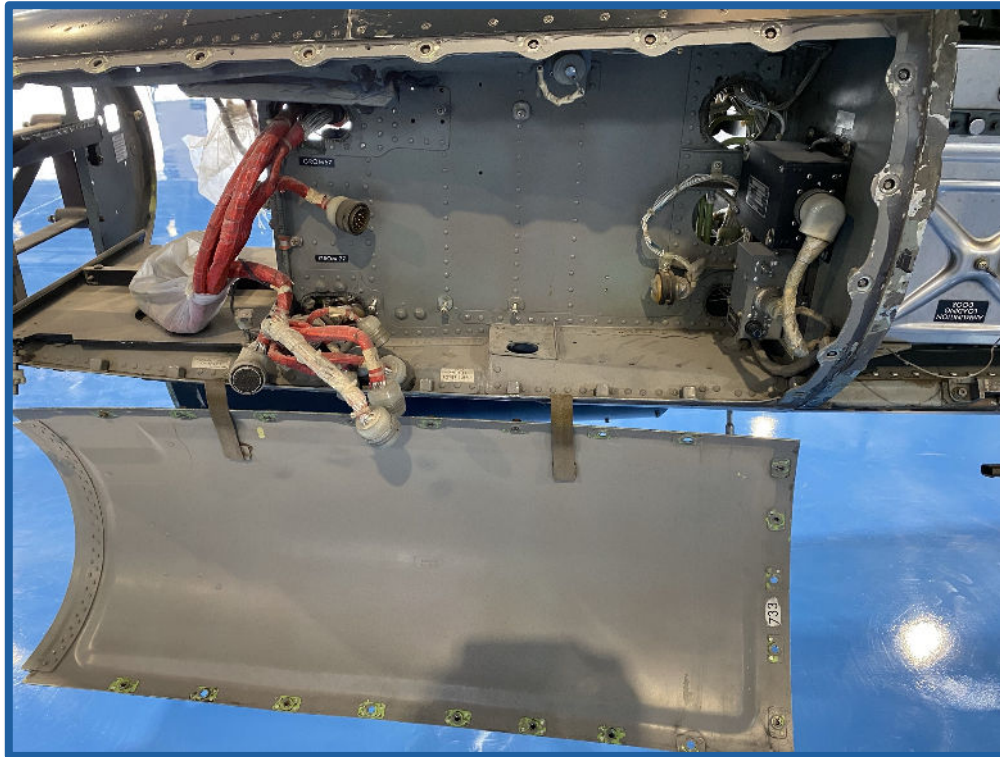


FAM aircraft 4502 suffered damages to nose of aircraft at FS 47.5 to 87.5 due to failure of nose landing gear that collapsed during taxi on runway. The radome was badly damaged as well as the nose landing gear door. The forward fuselage suffered damages to the lower structure consisting of 18-10360 assembly drawings. COC inspected the aircraft at Esquadron 401 on July 28, 2021 and determined the that the aircraft can be successfully repaired. COC inspected the PDM logbooks that document the condition of the aircraft as very good with no findings of corrosion or stress cracking of wing, fuselage and upper and lower longerons. This proposal provides the most cost effective and quickest program to return this aircraft to flight. COC will produce a complete 'Repair Kit' and will provide training, if needed, for the FAM to perform the repairs.

Current Condition of F-5F Mat. 4502



Major damage to lower forward fuselage but damage is limited to FS 47.5 to 87.5. There are no signs of damage past FS 87.5. The aircraft is fully repairable.



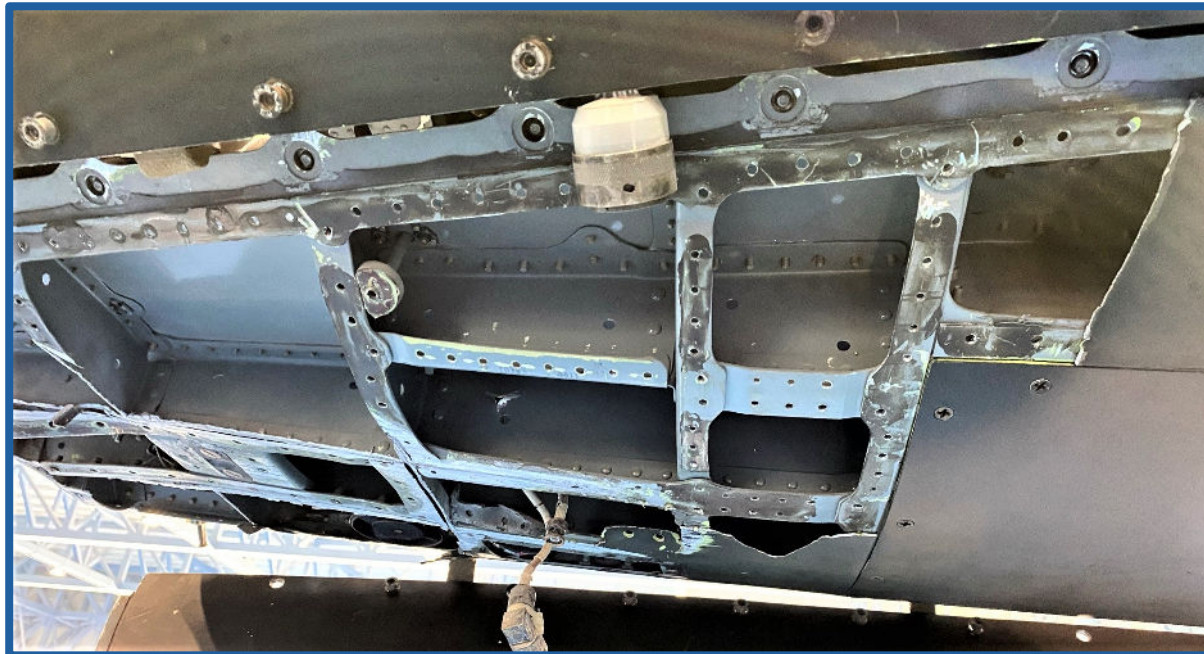
Current Condition of F-5F Mat. 4502



The damage requires that the entire lower section of the fuselage FS47.5 to 87.5 be replaced with new parts.



The upper section of the assembly is undamaged. The bulkhead at 47.5 needs replacement



Replace Nose Wheel Landing Gear Door



Repair, Refurbish Nose Landing Gear and Overhaul Steering Actuator







COC will disassemble nose landing gear, perform a complete inspection and rebuild nose landing gear.



Steering Actuator will be overhauled.







Price Proposal is divided into 4 sections.

-  1. Lower Fuselage Repair.
-  2. Nose Landing Gear Door Replacement.
-  3. Nose Landing Gear and Steering Actuator.
-  4. Inspection of Fuselage Attach Section of Nose Landing Gear.

COC Lower Fuselage Repair Kit

 **Total Price: \$650,000.00 USD**

Includes:

-  - **Manufacture fuselage fixtures to disassemble, reassemble FS 47.5 to 87.5**
-  - **Work Cards (Instructions in steps for disassembly and reassembly)**
-  - **Spare parts to replace all damaged parts.**
-  - **Fasteners, hardware, shims, etc.**

NOTE: Cost for producing one (1) piece each for Northrop F-5F is very costly, therefore, pricing reflects this cost driver.

Nose Landing Gear Door Replacement

 **Total Price: \$220,000.00 USD to Replace**




 **- COC will construct a new door to replace damaged BER (Beyond Economic Repair) door.**

NOTE: Cost for honeycomb bonded assembly in quantity of one (1) each is very costly.

COC Lower Fuselage Repair Kit

 **Total Price: \$80,000.00**


Includes:

-  - **Overhaul of NWS Actuator**
-  - **Complete disassembly, inspection of nose landing gear 14-41600, including strip paint, NDT inspect, anodize, prime and paint.**
-  - **Replace damaged parts; cylinder, piston, seals, bushings, hardware, etc.**

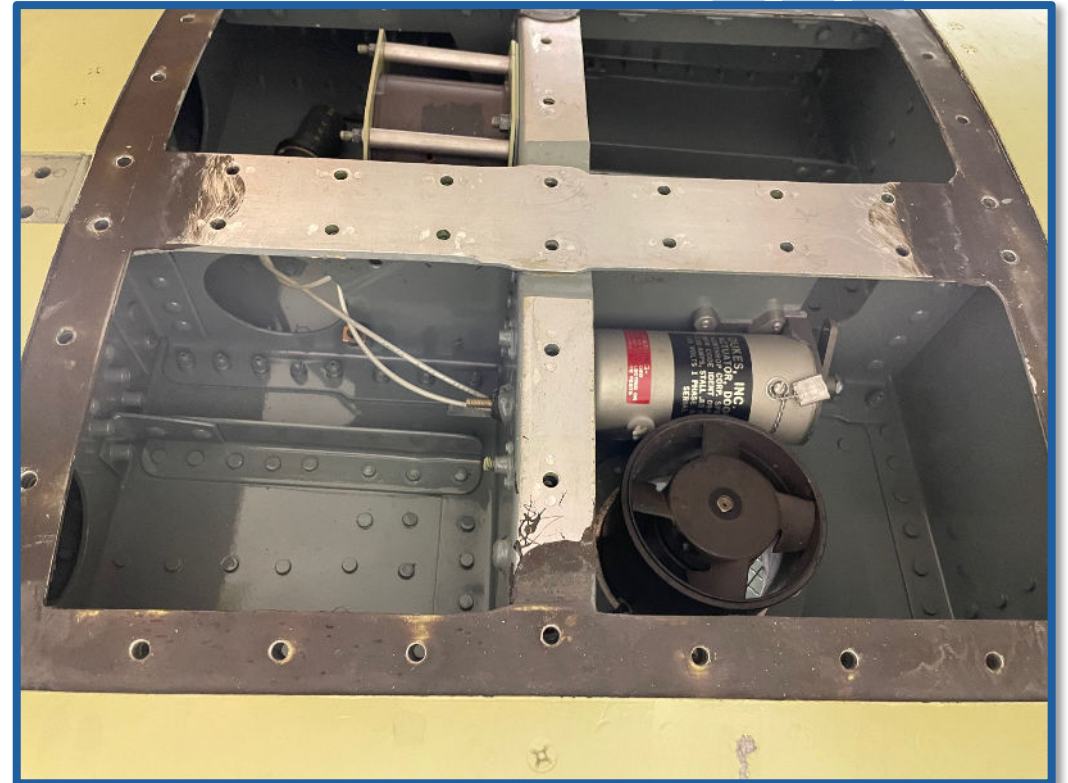
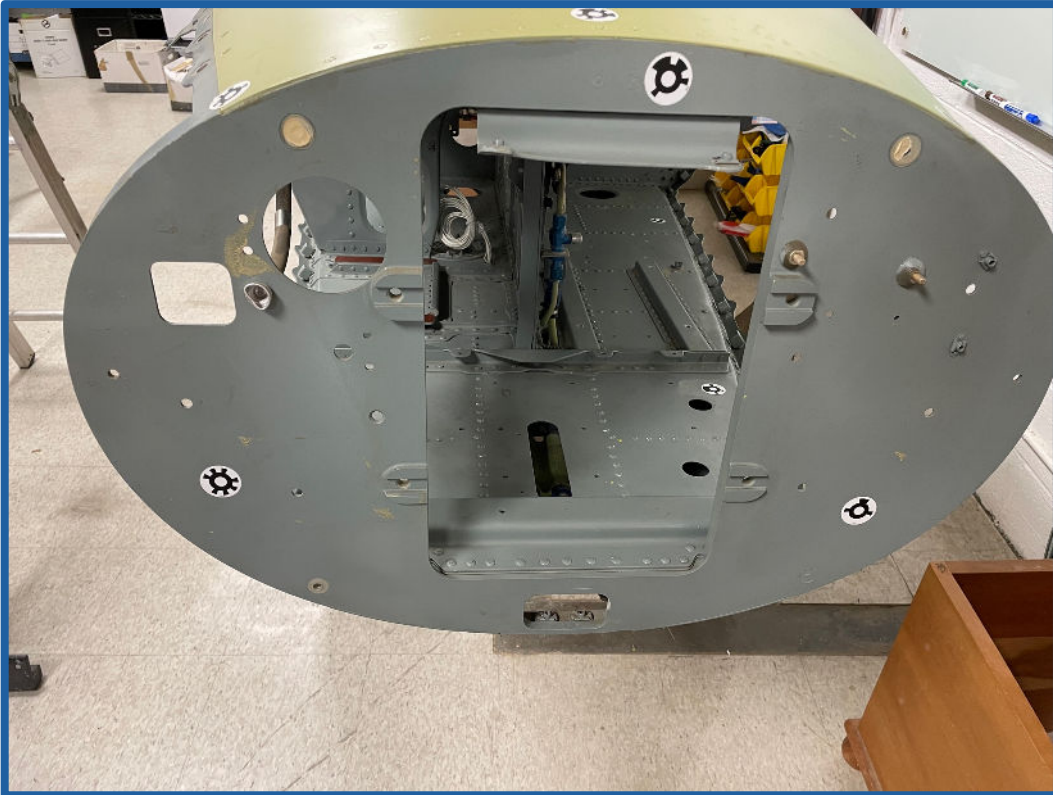
Inspection of Fuselage Attach Section of Nose Landing Gear

 **Total Price: \$40,000.00 USD**

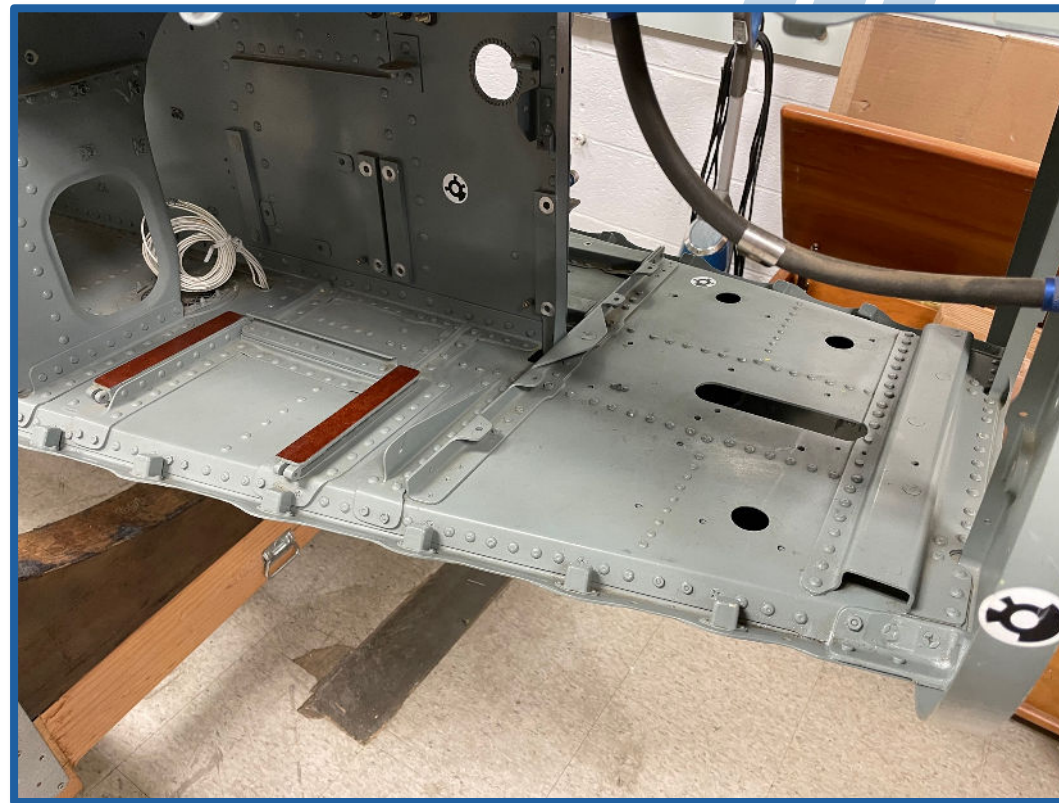
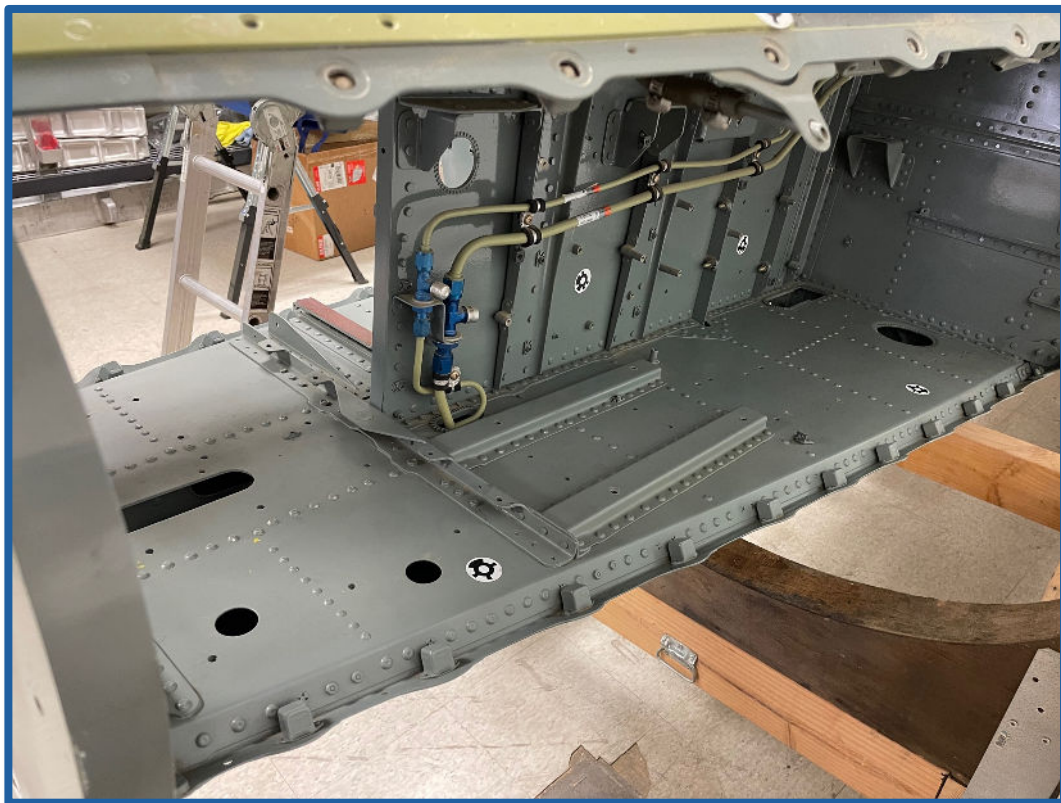
Includes:

-  **- Inspection of Nose Landing Gear attach points to fuselage including NDT inspection of all key components of fuselage that support the nose landing gear assembly.**

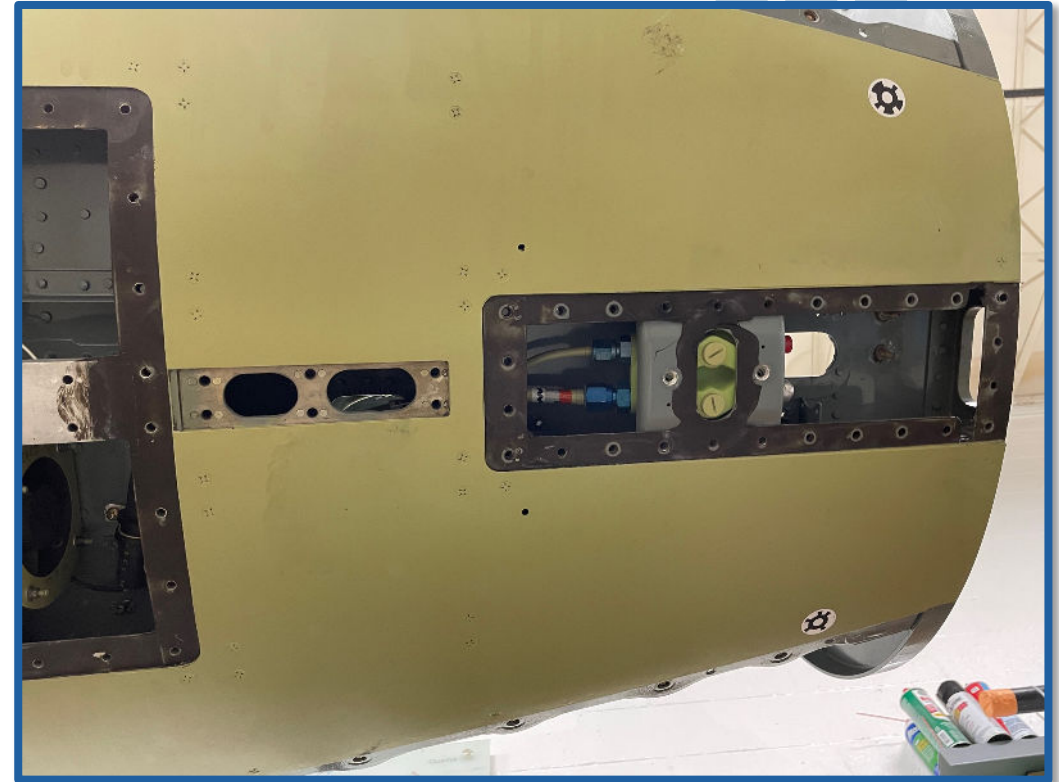
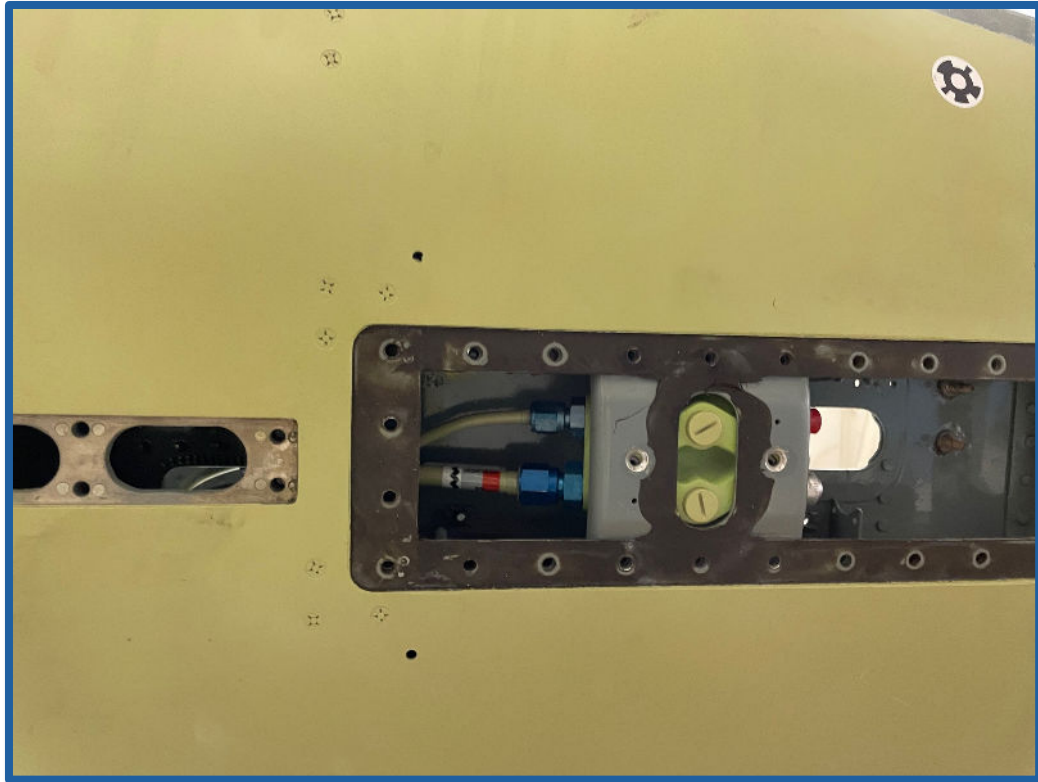
Photos of 'AFTER REPAIRS'



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THANK YOU

 **The COC F-5 Team - www.coc-aerospace.com** 

EXPERIENCE - OVER 5 DECADES YEARS SUPPORTING LEGACY AIRCRAFT
CUSTOMER SERVICE - OVER 50 YEARSSUPPORTING THE SAME CUSTOMERS
TRUST - ABOVE ALL, WE ALWAYS DO THE RIGHT THING