Damage Survey Report

MD-83 MSN 53123

Location: Ypsilanti, Michigan
Date of Inspection: April 12-14, 2017
Prepared for: Ameristar Jet Charter

Aircraft Data

Operator:	Ameristar Jet Charter
Registration:	N786TW
Model:	DC-9-83
MSN:	53123
Line:	1987
Year:	1992
Hours:	41,008.6
Cycles:	39,472
P.O.:	

REPORTED ACCIDENT DETAILS

The aircraft overran the departure runway after an aborted takeoff past calculated rotation speed. The aircraft departed the paved surface, struck the airport perimeter fence, and struck an abrupt rise in the terrain at a roadway, collapsing the nose and main gear. The aircraft came to rest over a small ravine with the fuselage belly structure in contact with the ground.

AIRCRAFT CONDITION ON ARRIVAL FOR SURVEY

The aircraft was found to be in the parking position at which it was placed after recovery from the accident location. No pitot or static covers had been installed. The engine inlets were not plugged or covered. The thrust reverser remained partially deployed and exhaust areas were uncovered. APU inlet and exhaust areas were not covered. All windows were uncovered and no internal shades were down. All cargo compartment doors were open. Damage at the forward fuselage caused the internal area of the electronics compartment to be exposed and most computers remained installed.

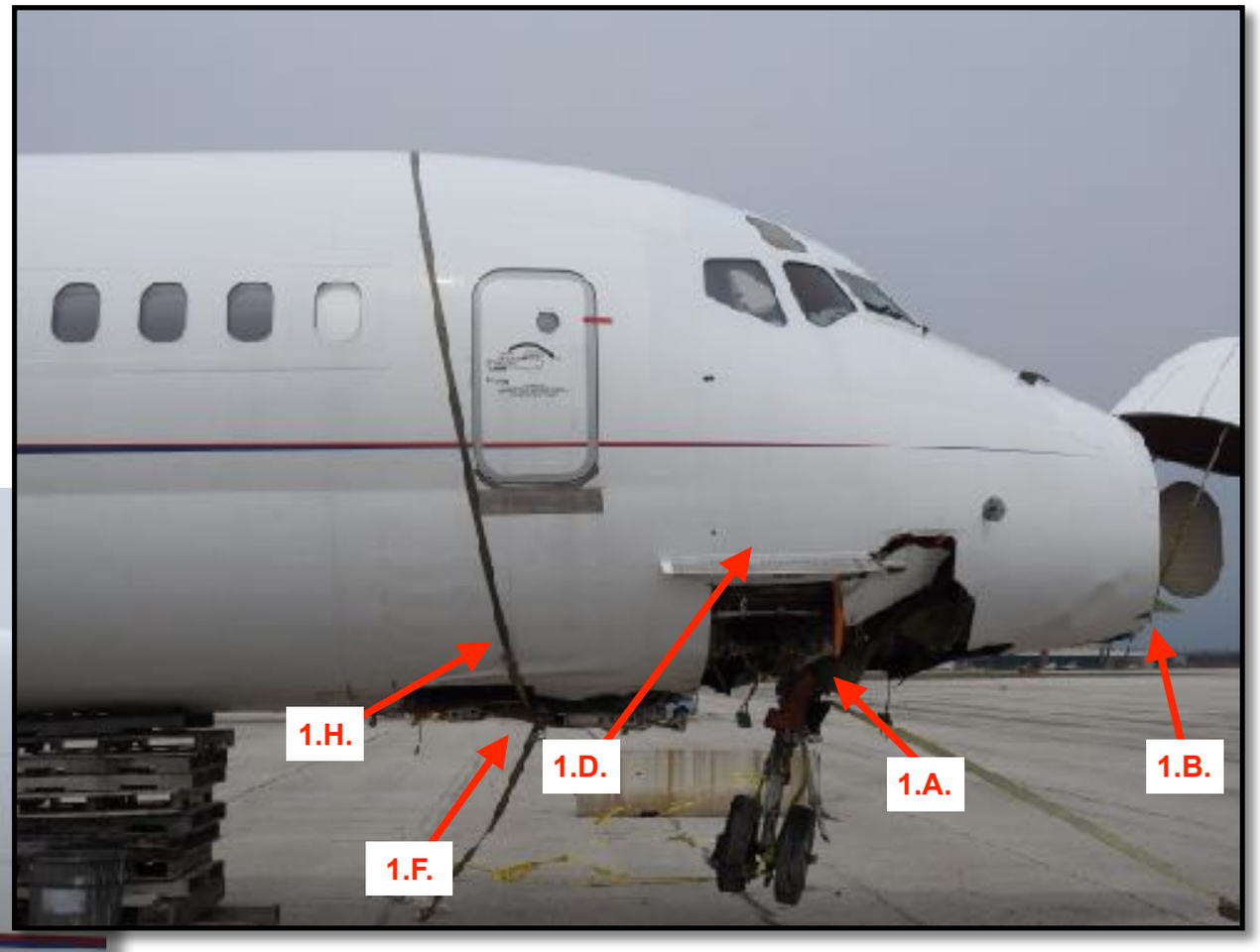
DAMAGE AREA

DAMAGE DESCRIPTIONS AND OBSERVATIONS

The following pages contain the damage noted during the damage survey inspection. They have been grouped according to functional areas impacted and numbered for reference:

1. NOSE FUSELAGE STRUCTURE
2. CONSTANT SECTION STRUCTURE
3. AFT FUSELAGE STRUCTURE
4. LEFT HAND WING
5. RIGHT HAND WING
6. LEFT HAND WHEEL WELL
7. RIGHT HAND WHEEL WELL
8. LANDING GEAR
9. ENGINES AND COWLING
10. BODY FAIRINGS
11. AVIONICS
12. OTHER RELATED OBSERVATIONS
13. ADDITIONAL INSPECTIONS AND TASKS REQUIRED

1. NOSE FUSELAGE STRUCTURE - OVERVIEW



1. NOSE FUSELAGE STRUCTURE

1.A. Lower nose section between Sta. 37 to. Sta. 110 webs and support structure displaced.

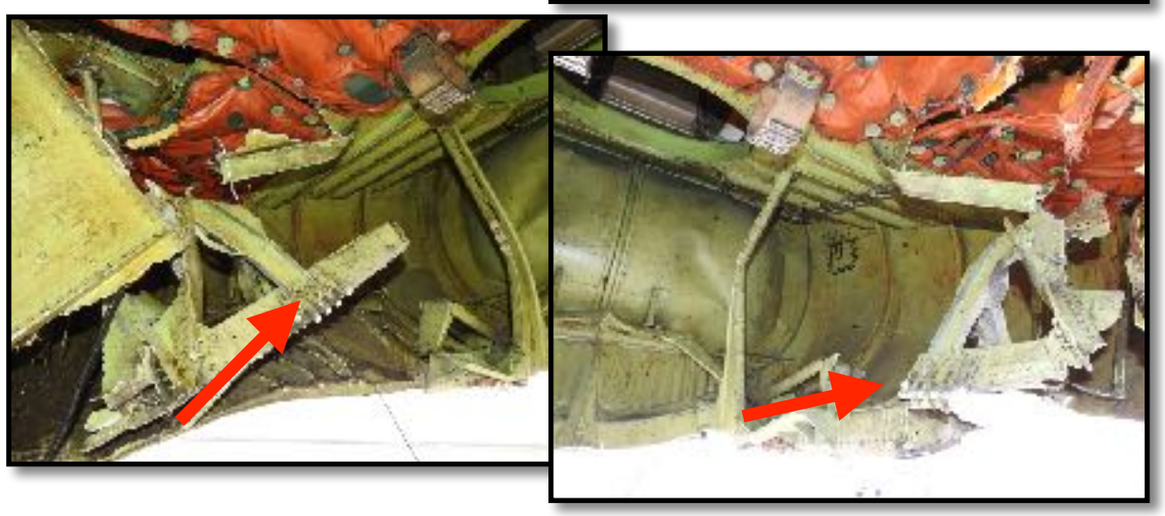
DISPOSITION: Remove and replace lower fuselage section between Sta. 37 and Sta. 229.

1.B. Sta. 37 bulkhead lower section and frame buckled.

DISPOSITION: Remove and replace Sta. 37 bulkhead with replacement fuselage section.

1.C. LH & RH nose wheel well webs, jambs and support structures are displaced.

DISPOSITION: Remove and replace affected structure.



1. NOSE FUSELAGE STRUCTURE

1.D. Nose skin Sta. 37 to Sta. 110 L-18R to L-30 is damaged at the lower end including support structure and strake.

DISPOSITION: Remove and replace lower fuselage section between Sta. 37 and Sta. 229.

1.E. Nose skin Sta. 37 to Sta. 100 L-18L to L-30 is damaged at the lower end including support structure and strake.

DISPOSITION: Remove and replace fuselage section between Sta. 37 and Sta. 229.

1.F. Forward structure between Sta. 110 and Sta. 229 L-18R to L-30 is damaged at the lower end including support frames and longerons.

DISPOSITION: Remove and replace lower fuselage section between Sta. 37 and Sta. 229.

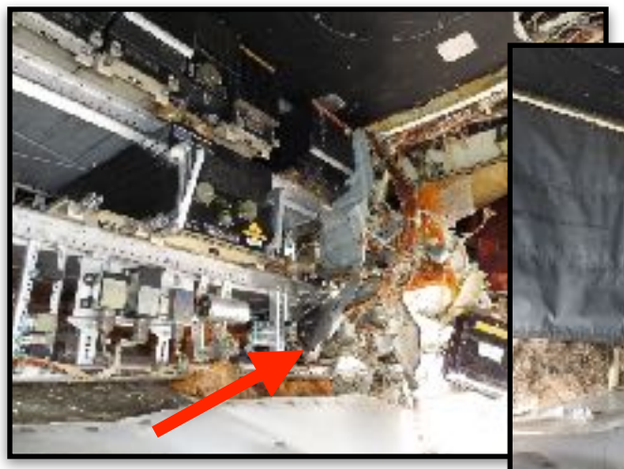
1. NOSE FUSELAGE STRUCTURE

1.G. Forward structure between Sta. 110 and Sta. 229 L-18L to L-30 is damaged at the lower end including support frames and longerons.

DISPOSITION: Remove and replace lower fuselage section between Sta. 37 and Sta. 229.

1.H. Avionics compartment racks damaged, floor panels broken, door missing, antenna structures damaged, door jamb and support structure fractured.

DISPOSITION: Remove and replace fuselage section between Sta. 37 and Sta. 229, including avionics compartment details.



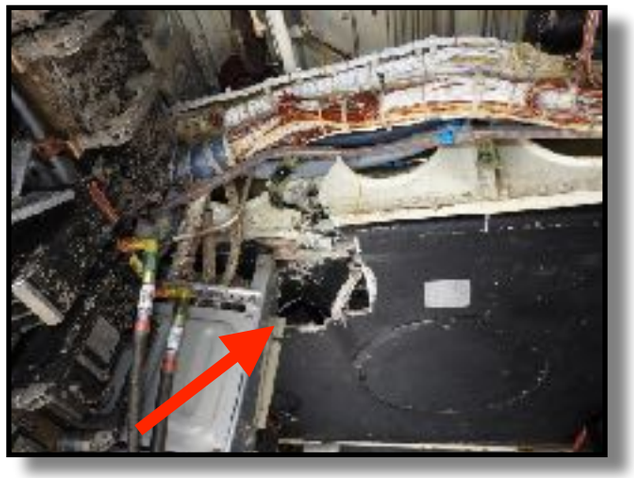
1.I. Sta. 218 bulkhead and lower frame damaged at the lower end between L-26L and L-26R.

DISPOSITION: Remove and replace lower fuselage section between Sta. 37 and Sta. 229.

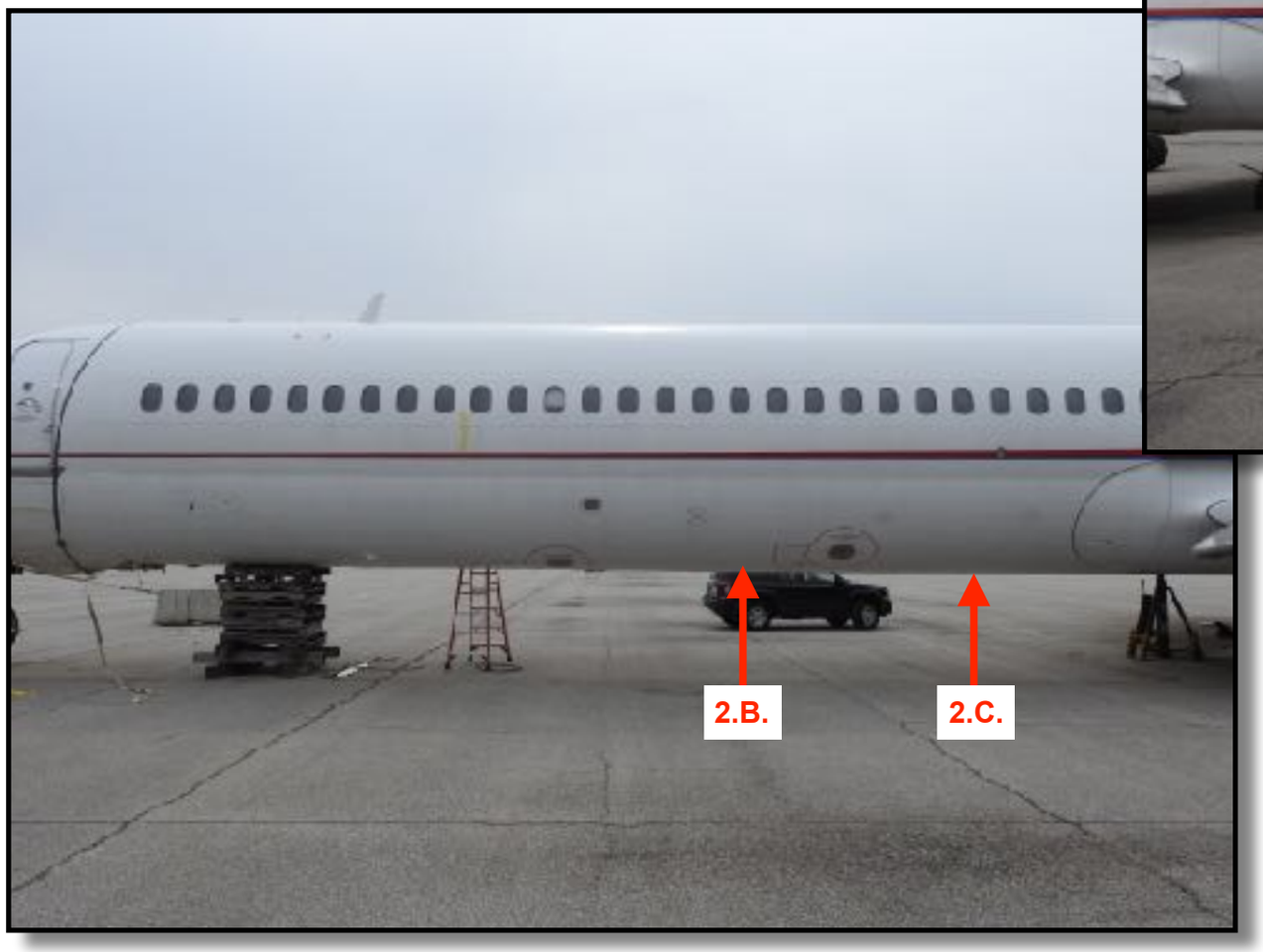
1. NOSE FUSELAGE STRUCTURE

1.J. Forward airstair enclosure punctured on RH side.

DISPOSITION: Remove and replace forward airstair assembly.



2. CONSTANT SECTION STRUCTURE - OVERVIEW

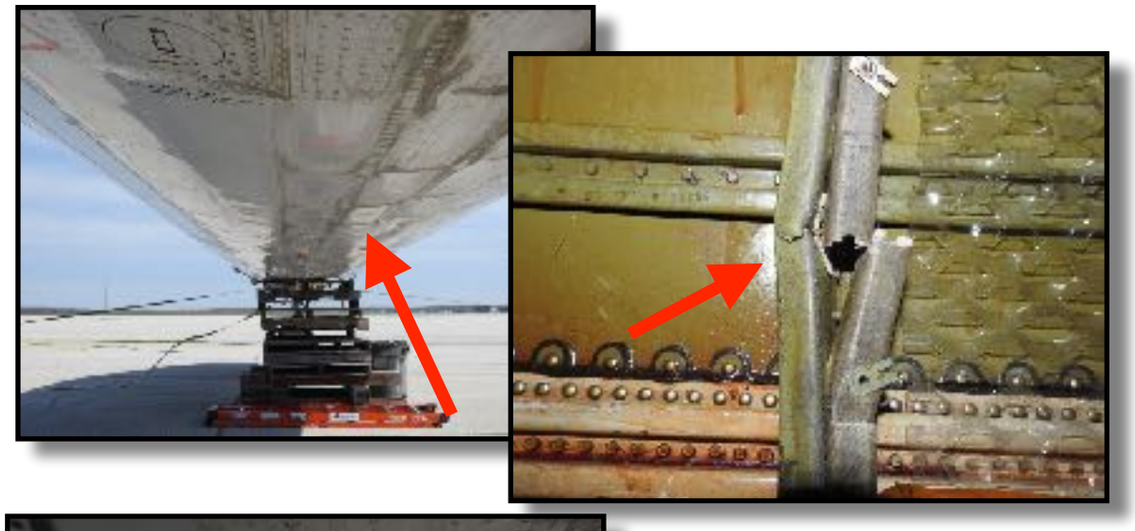


2. CONSTANT SECTION STRUCTURE - OVERVIEW

2. CONSTANT SECTION STRUCTURE

2.A. Lower skin panel Sta. 229 to Sta. 588 L-26L to L-26R buckled and scored, including damage to internal frame structure.

DISPOSITION: Remove and replace lower skin panel and internal structure between Sta. 229 and Sta. 588 L-26L to L-26R.



2.B. Lower skin panel Sta. 588 to Sta. 606 L-26L to L-26R scored, and Sta. 606 to Sta. 817 minor surface damage.

DISPOSITION: Splice repair scored forward section and perform SRM/ Engineering disposition repairs to aft section.

2.C. Constant section skins Sta. 817 to Sta. 1183.5 L-26L to L-26R damaged including support frames and longerons.

DISPOSITION: Remove and replace noted constant section skins.

2. CONSTANT SECTION STRUCTURE

2.D. Sta. 999 to approx. Sta. 1202.5 L-23L to L-26L and L23-R to L-26R is buckled with damage to associated internal structure.

DISPOSITION: Perform localized repairs per engineering instruction.

2.E. Vertical stanchions at Sta. 588 forward cargo aft wall bent.

DISPOSITION: Remove and replace stanchions.

2.F. Forward cargo door outer skin punctured and door will not close.

DISPOSITION: Remove and replace forward cargo door. Check door for proper fit and closing during zero stress repair of fuselage structure.

3. AFT FUSELAGE STRUCTURE - OVERVIEW

3. AFT FUSELAGE STRUCTURE

3.A. LH Sta. 1202.5 to Sta. 1338 damaged between L-24L to L-26L.

DISPOSITION: Repair per engineering disposition.

3.B. RH Sta. 1183.8 to Sta. 1338 damaged between L24R to L-26R including APU inlet air deflector.

DISPOSITION: Repair per engineering disposition.

3.C. Aft pressure bulkhead lower frame, web lower close-out web buckled including jack support area.

DISPOSITION: Repair per SRM or engineering disposition.

3. AFT FUSELAGE STRUCTURE

3.D. Skin panel surrounding lower APU access opening is buckled, L-23L to L-23R.

DISPOSITION: Remove and replace buckled skin panel.

3.E. APU enclosure forward lower jamb has a 1.5" diameter area of buckling.

DISPOSITION: Inspect damaged area per SRM and repair as required.

3.F. Torn skin and scratches on RH APU access door at inboard edge.

DISPOSITION: Remove and replace RH APU access door.

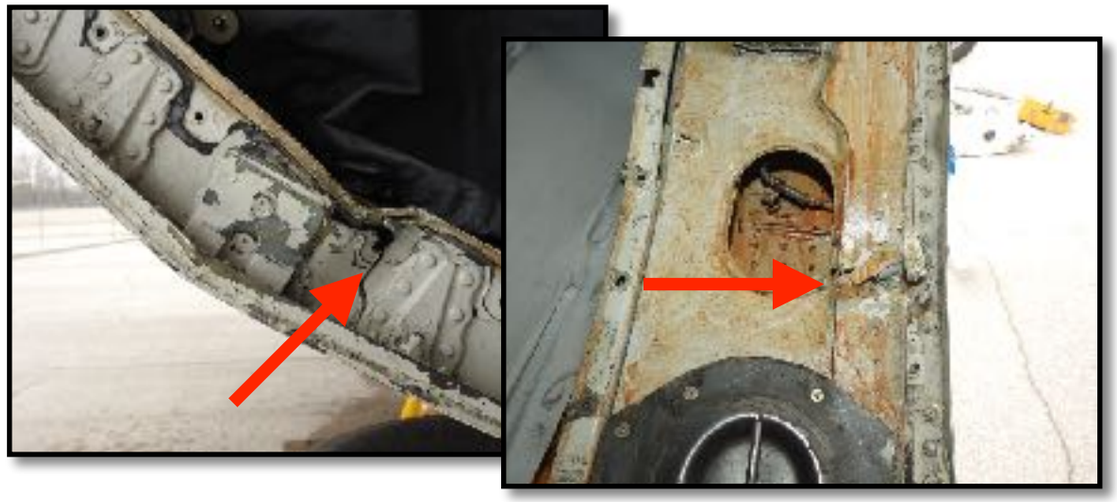
3. AFT FUSELAGE STRUCTURE

3.G. Aft cargo door buckled longitudinally.

DISPOSITION: Remove and replace the aft cargo door.

3.H. Aft cargo door forward and aft jambs fractured.

DISPOSITION: Remove and replace aft cargo door jamb installation.



3.I. Lower skin Sta. 1183.5 to Sta. 1338 L-26L to L-26R crushed by impact with damage to internal structure details..

DISPOSITION: Remove and replace lower skin Sta. 1183.5 to 1338 L-26L to L-26R and internal structure details.

4. LEFT HAND WING - OVERVIEW

4. LEFT HAND WING

4.A. Salt #1 impact damage beyond SRM repair limits.

DISPOSITION: Remove and replace Slat #1.

4.B. Slat #2 impact damage beyond SRM repair limits.

DISPOSITION: Remove and replace Slat #2.

4.C. Slat #4 impact damage beyond SRM repair limits.

DISPOSITION: Remove and replace Slat #4.

4. LEFT HAND WING

4.D. Salt #5 impact damage beyond SRM limits.

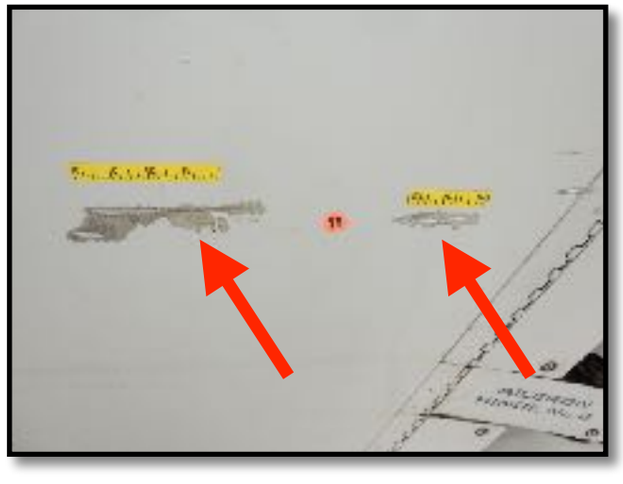
DISPOSITION: Remove and replace Slat #5.

4.E. Outboard aileron inboard static discharges broken.

DISPOSITION: Remove outboard aileron inboard static discharges remaining section and replace.

4.F. Light surface scratches on lower wing surface forward and outboard of the #2 aileron hinge near XRS 424.1.

DISPOSITION: Blend surface scratches per MD-80 SRM.



4. LEFT HAND WING

4.G. Inboard bute door forward of outboard aileron is gouged on lower skin approximately 0.003" deep.

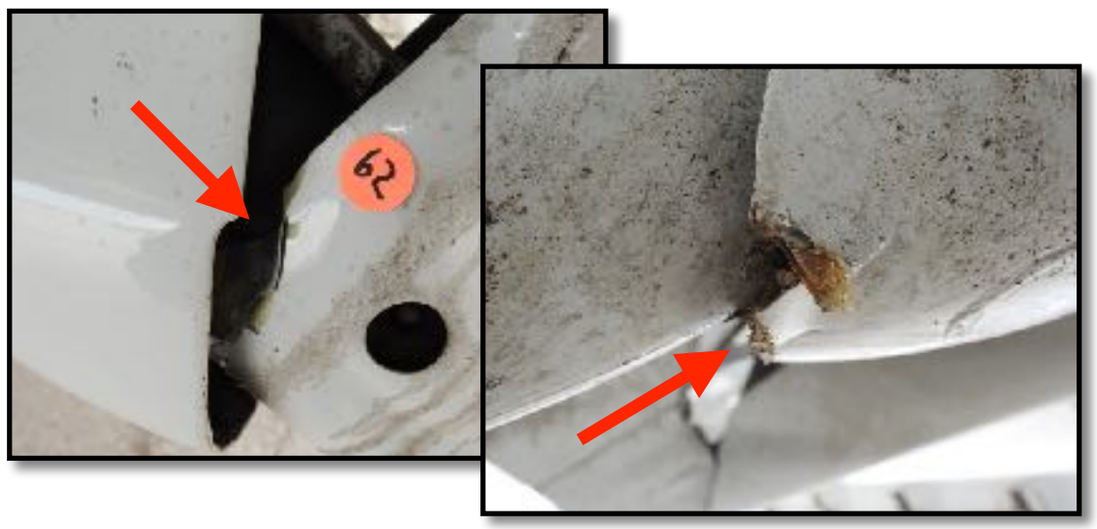
DISPOSITION: Remove and replace inboard butte door forward of outboard aileron.

4.H. Light surface scratches on lower wing surface forward and outboard of the outboard flap center hinge.

DISPOSITION: Blend surface scratches per MD-80 SRM.

4.I. Inboard flap outboard hinge forward and aft lower fairings have crushing damage on edges.

DISPOSITION: Remove and replace inboard flap outboard hinge fairings.



4. LEFT HAND WING

4.J. Inboard flap and vane damaged beyond repair by impact with landing gear.

DISPOSITION: Remove and replace inboard flap and vane assembly.

4.K. #2 bute door inboard aft corner crushed.

DISPOSITION: Remove and replace #2 butte door.

4.L. #1 bute door and supports crushed by landing gear.

DISPOSITION: Remove and replace #1 butte door and supports.

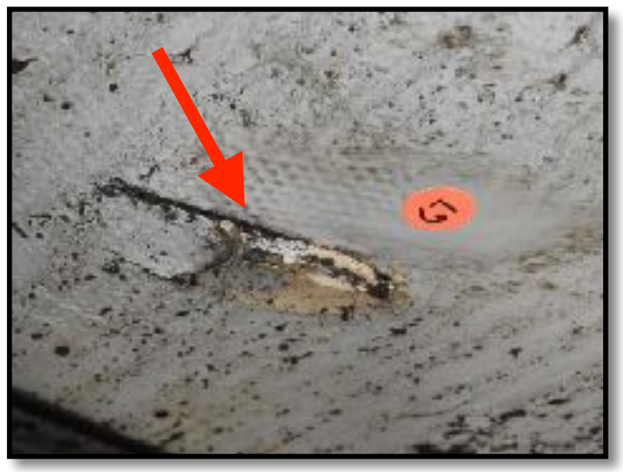
4. LEFT HAND WING

4.M. Upper flap bus cable shear pin severed.

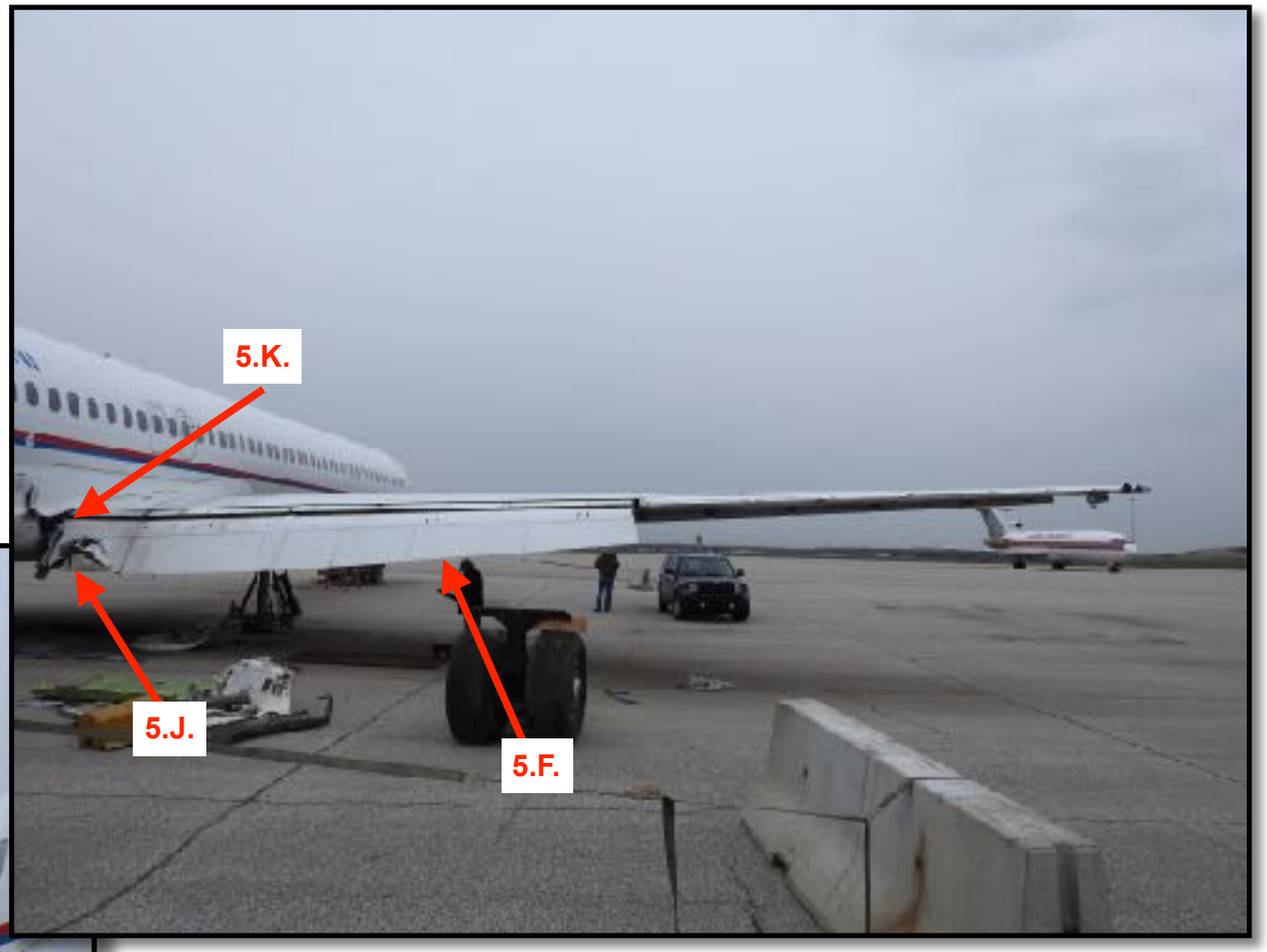
DISPOSITION: Replace shear pin and rig flaps during flap replacement.

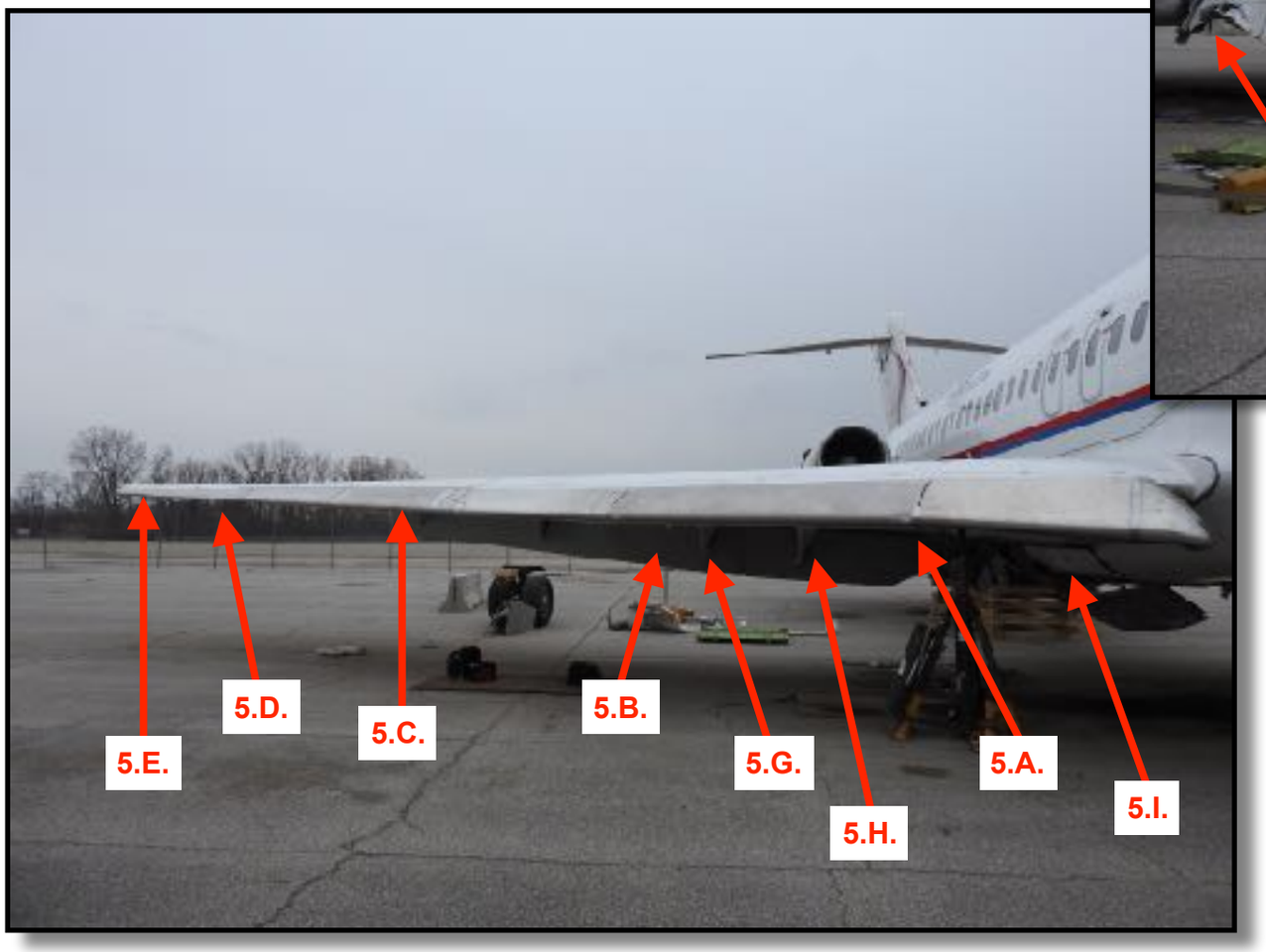
4.N. Fixed trailing edge inboard panel lower surface crushed by impact from #1 butte door.

DISPOSITION: Remove and replace inboard fixed trailing edge panel.



5. RIGHT HAND WING - OVERVIEW





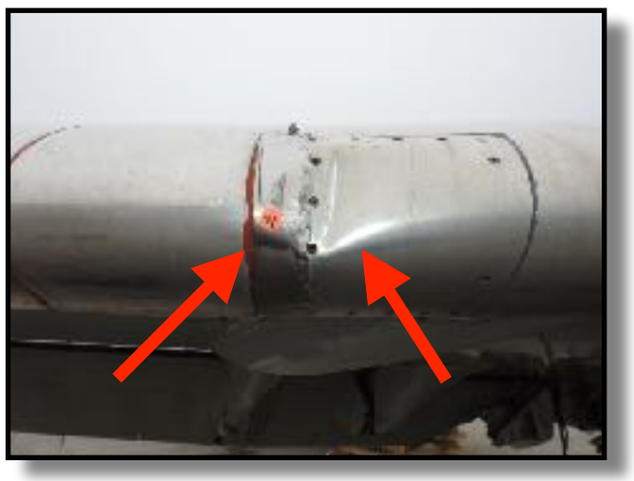
5. RIGHT HAND WING

5.A. Slat #1 inboard impact damage beyond SRM repair limits.

DISPOSITION: Remove and replace Slat #1.

5.B. Slat #1 outboard impact damage beyond SRM repair limits and Slat #2 inboard rubstrip displaced.

DISPOSITION: Remove and replace Slat #1. Repair dislodged Slat #2 rubstrip per SRM.



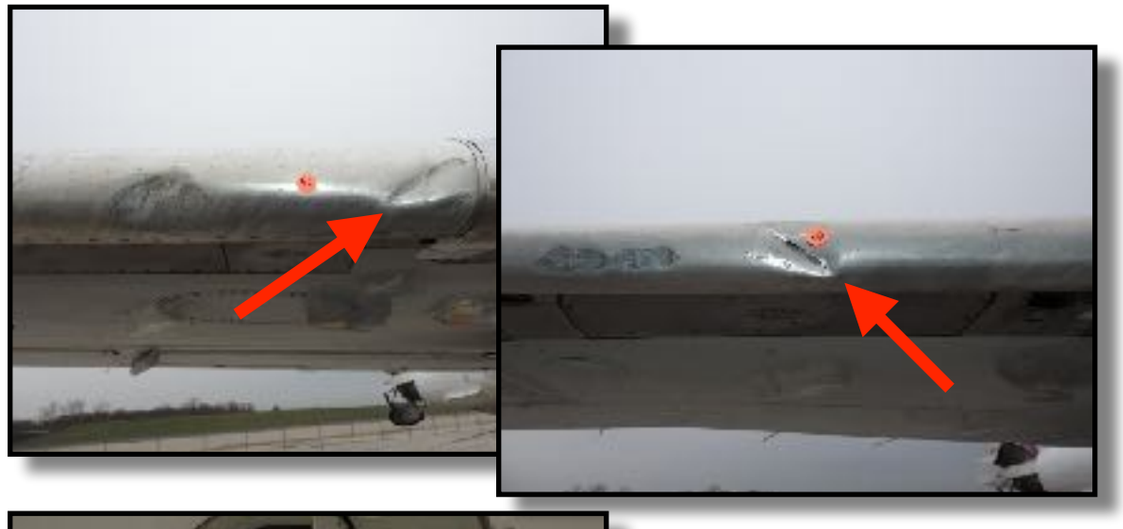
5.C. Slat #3 impact damage beyond SRM repair limits.

DISPOSITION: Replace and replace Slat #3.

5. RIGHT HAND WING

5.D. Slat #5 inboard and outboard impact damage and scratches beyond SRM repair limits.

DISPOSITION: Remove and replace Slat #5.



5.E. Landing light housing and retainer damaged beyond repair.

DISPOSITION: Remove and replace landing light assembly.

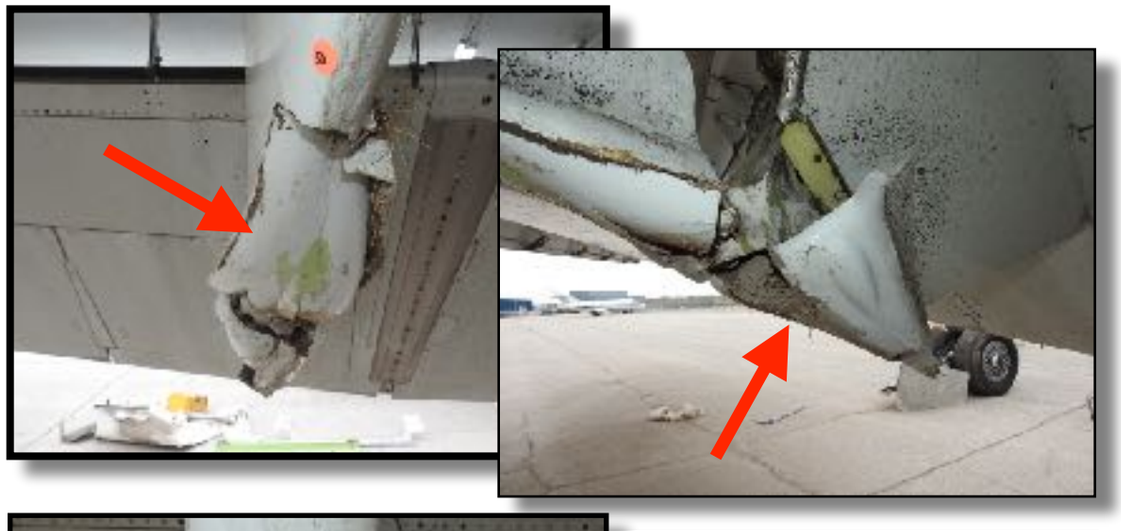
5.F. 1.5" chip in outboard flap trailing edge 10" outboard of #3 panel inboard edge.

DISPOSITION: Repair per SRM.

5. RIGHT HAND WING

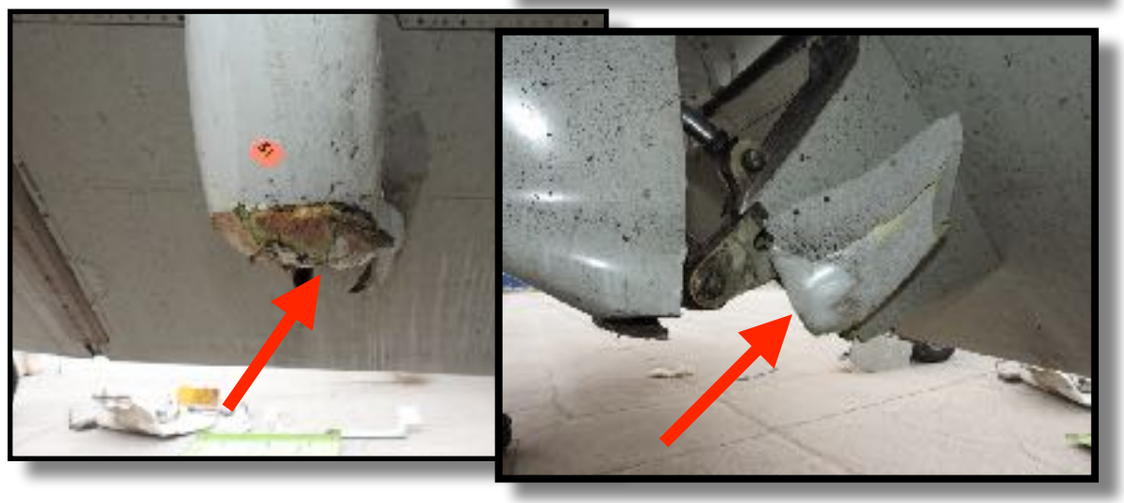
5.G. Outboard flap inboard hinge fairing forward and aft sections crushed.

DISPOSITION: Remove and replace outboard flap inboard hinge fairings.



5.H. Inboard flap outboard hinge fairing forward and aft sections crushed.

DISPOSITION: Remove and replace inboard flap outboard hinge fairings.



5.I. Light surface scratches on lower wing surface near XCW 79.88.

DISPOSITION: Blend surface scratches per MD-80 SRM.

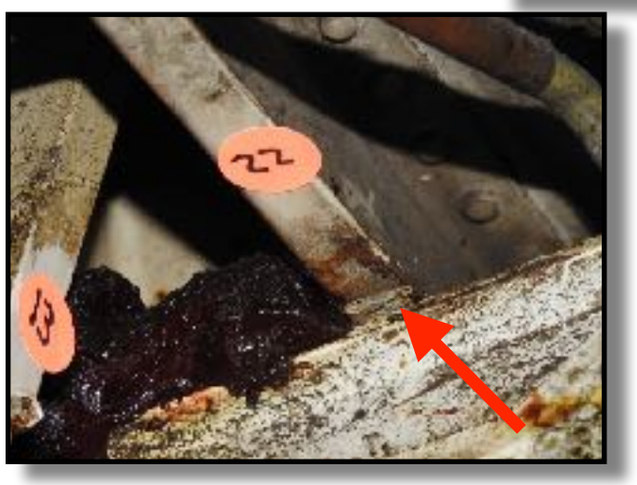
5. RIGHT HAND WING

5.J. Inboard flap and vane supports damaged beyond repair by impact with landing gear..

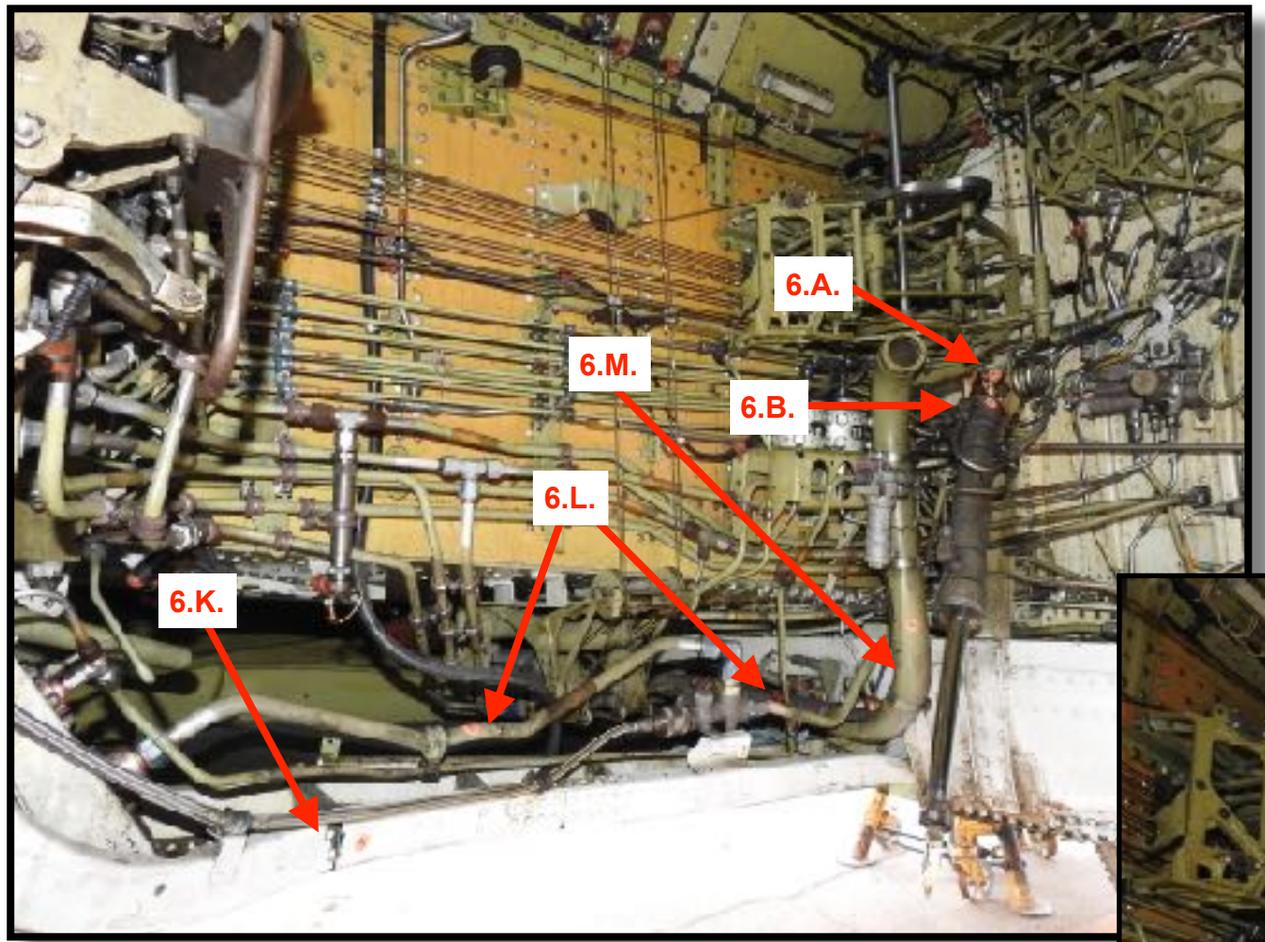
DISPOSITION: Remove and replace inboard flap and vane assembly.

5.K. Inboard fixed trailing edge panel inboard rib lower flange bent above landing fixed brace.

DISPOSITION: Straighten or repair flange per MD-80 SRM requirements.

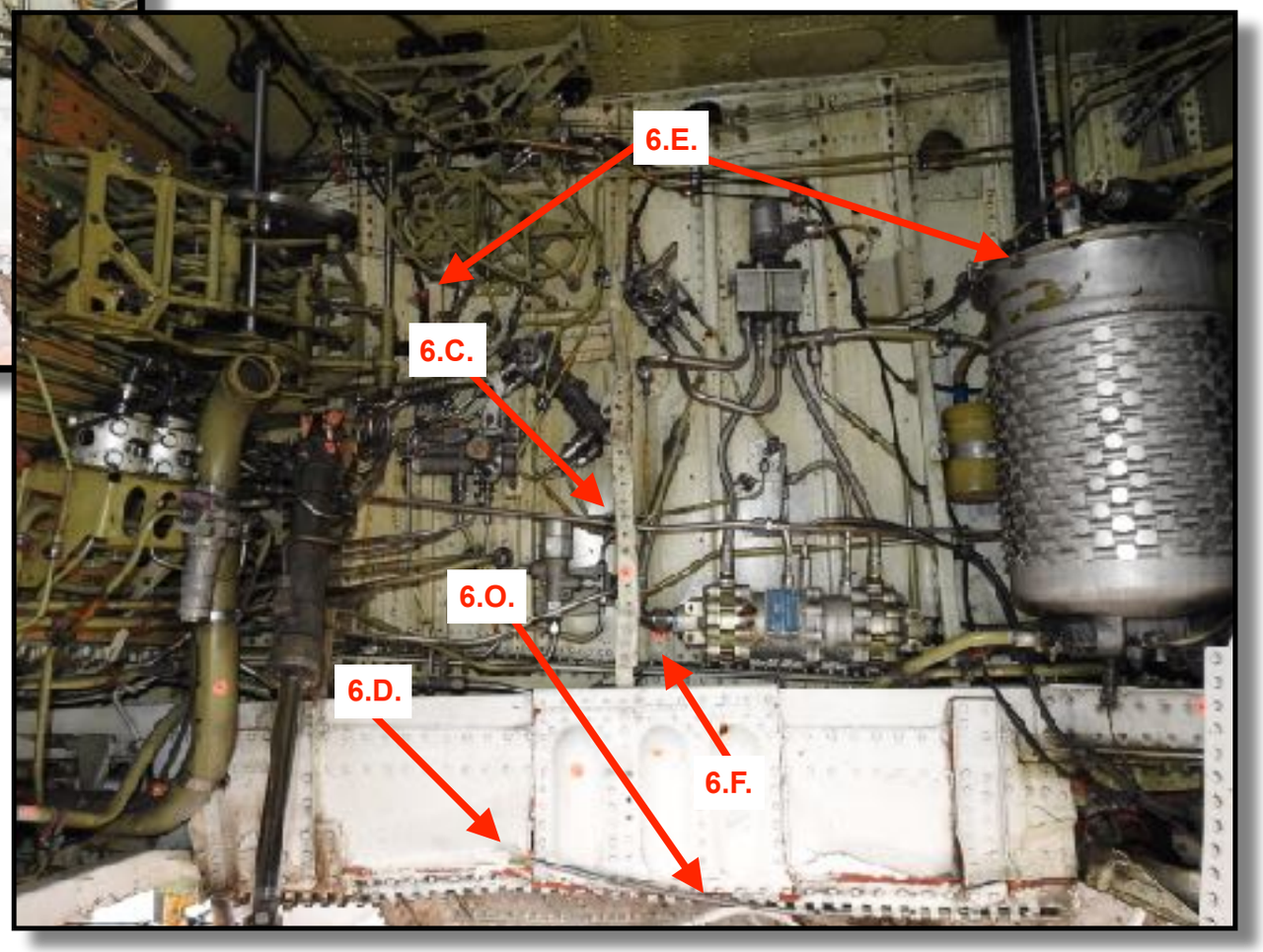


6. LEFT HAND WHEEL WELL - OVERVIEW

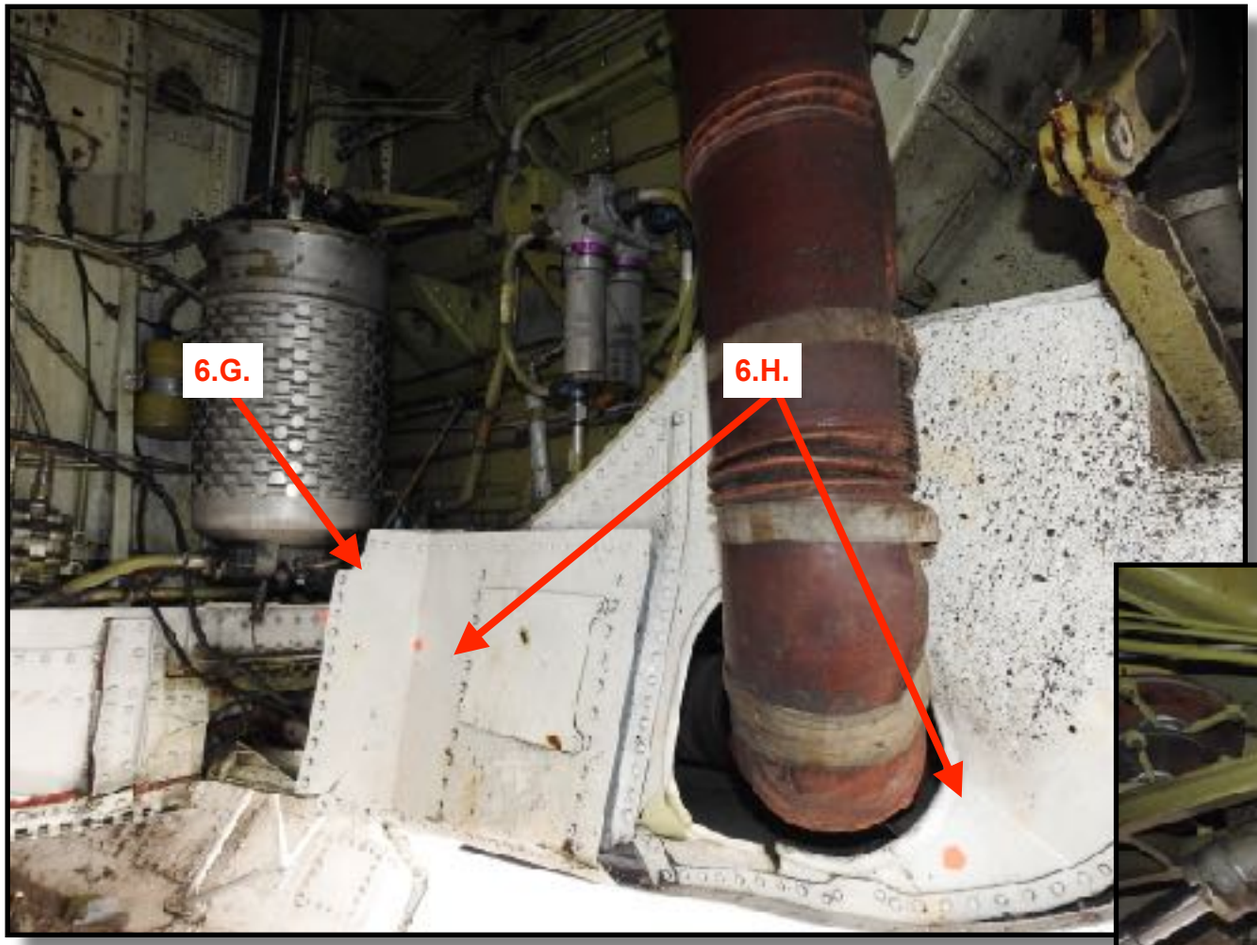


LEFT MAIN WHEEL WELL
LOOKING FORWARD

LEFT MAIN WHEEL WELL
LOOKING INBOARD



6. LEFT HAND WHEEL WELL - OVERVIEW

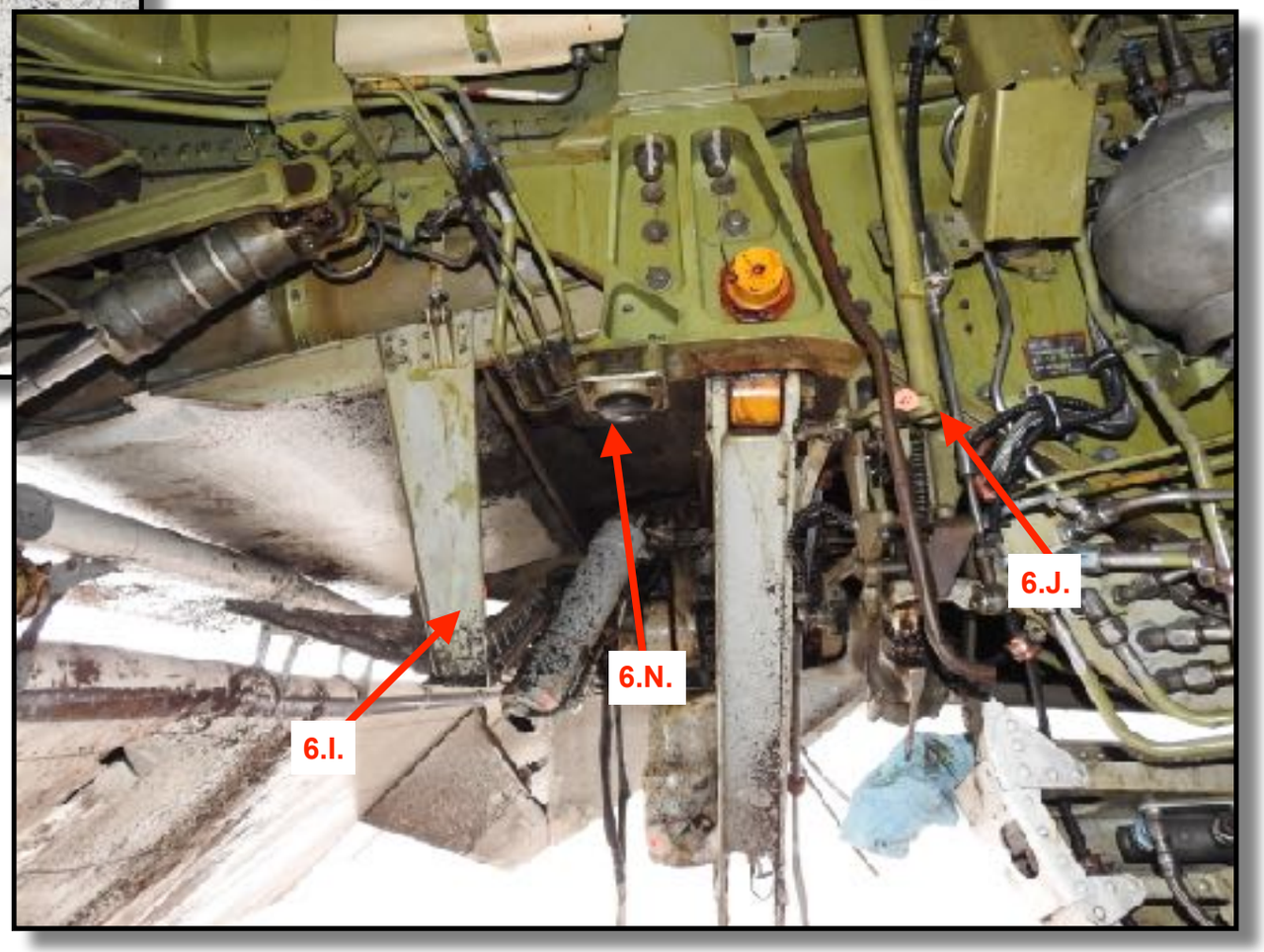


RIGHT MAIN WHEEL WELL

LOOKING AFT

LEFT MAIN WHEEL WELL

LOOKING OUTBOARD



6. LEFT HAND WHEEL WELL

6.A. MLG door actuator support lug has displaced material and is bent.

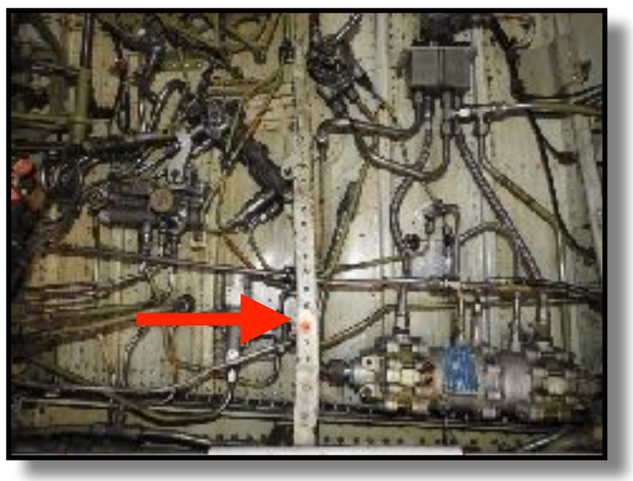
DISPOSITION: Remove and replace associated vertical support.

6.B. MLG door actuator upper surface has displaced material and piston is bent.

DISPOSITION: Remove and replace MLG door actuator.

6.C. Inboard mid vertical support bent and cracked.

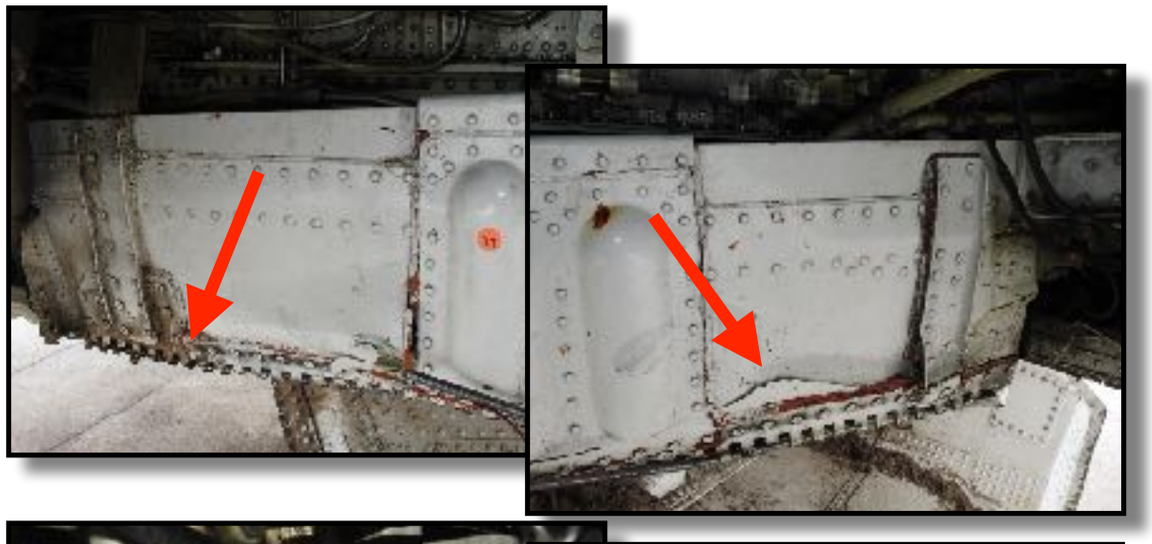
DISPOSITION: Remove and replace vertical support.



6. LEFT HAND WHEEL WELL

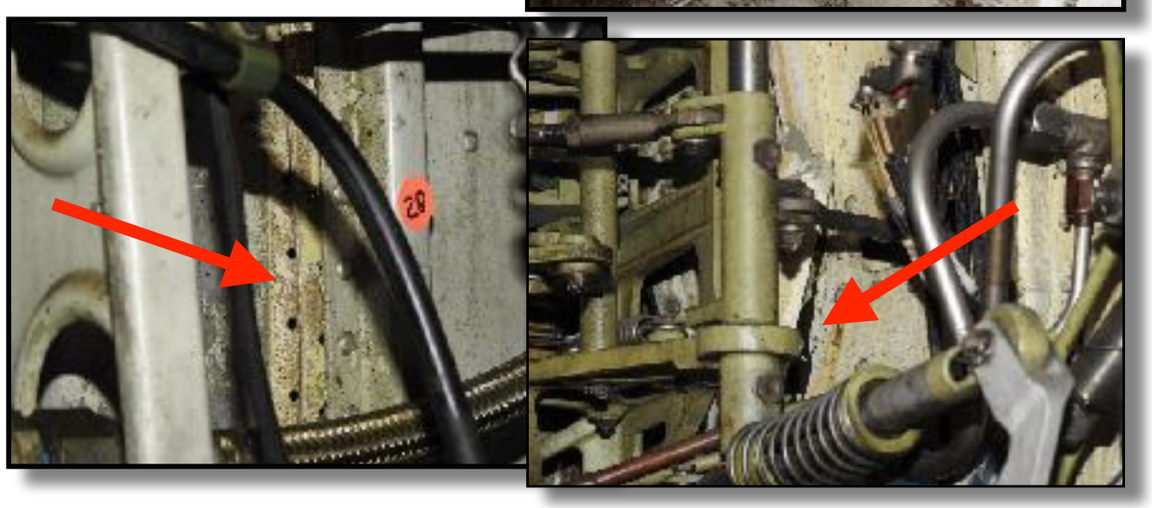
6.D. Keel vertical web panels bent and cracked, hinge lugs fractured.

DISPOSITION: Remove and replace vertical web panels and hinge.



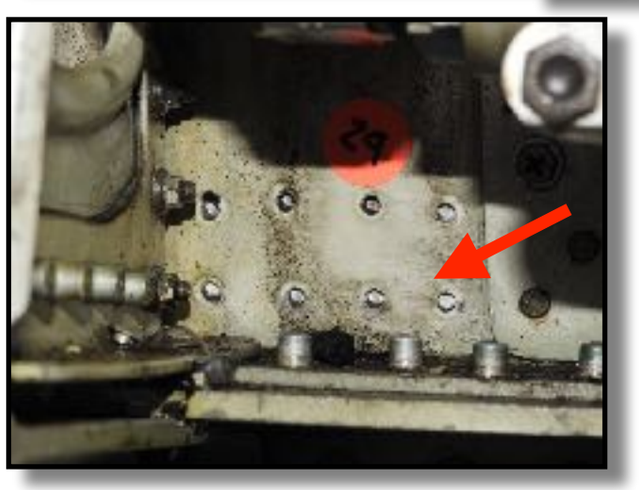
6.E. Wheel well longitudinal web and vertical supports bent in multiple locations.

DISPOSITION: Remove and replace longitudinal web and supports.



6.F. Sheared fasteners on longitudinal web lower edge interface to mounting flange.

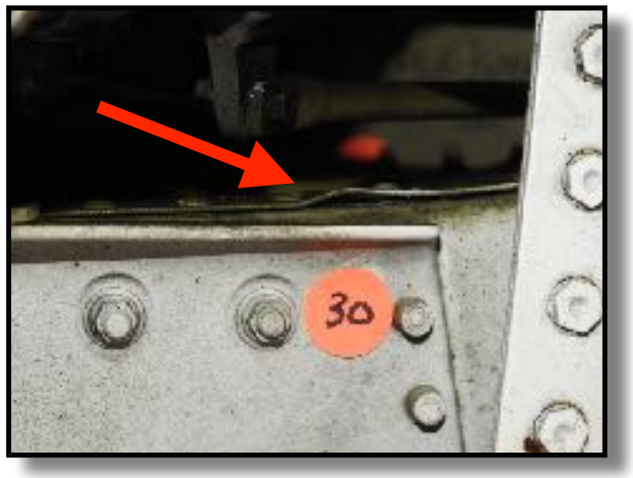
DISPOSITION: Note only. To be replaced during web replacement.



6. LEFT HAND WHEEL WELL

6.G. Horizontal close-out below outboard side of hydraulic reservoir bent.

DISPOSITION: Remove and replace close-out.



6.H. Wheel well aft jamb vertical web buckled and fractured.

DISPOSITION: Remove and replace aft jamb vertical web.

6.I. Inboard butte panel support cracked.

DISPOSITION: Remove and replace inboard butte panel support.

6. LEFT HAND WHEEL WELL

6.J. LH MLG position feedback details bent.

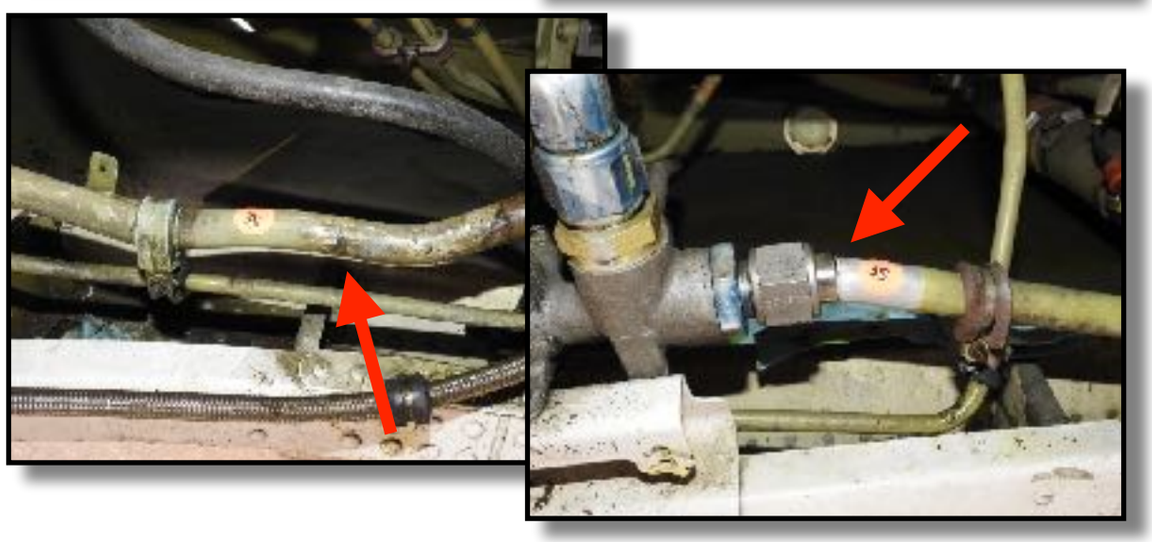
DISPOSITION: Remove and replace LH MLG position feedback details.

6.K. Wheel well forward jamb close-out fractured.

DISPOSITION: Remove and replace wheel well forward jamb close-out.

6.L. LH hydraulic service system multiple details bent and one pipe fractured.

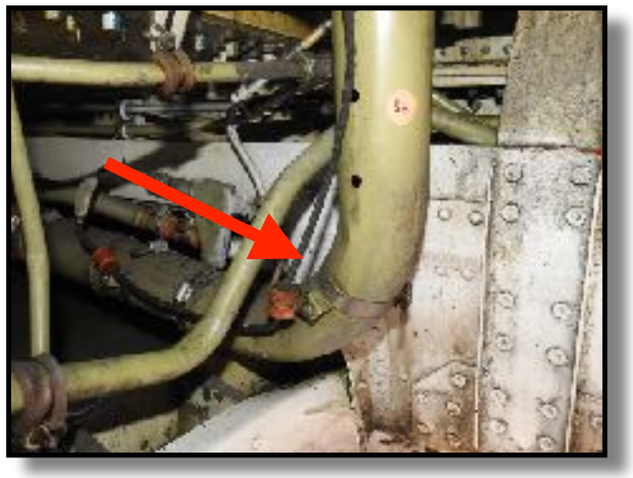
DISPOSITION: Remove and replace LH hydraulic service system details.



6. LEFT HAND WHEEL WELL

6.M. LH brake cooling duct bent.

DISPOSITION: Remove and replace LH brake cooling duct.

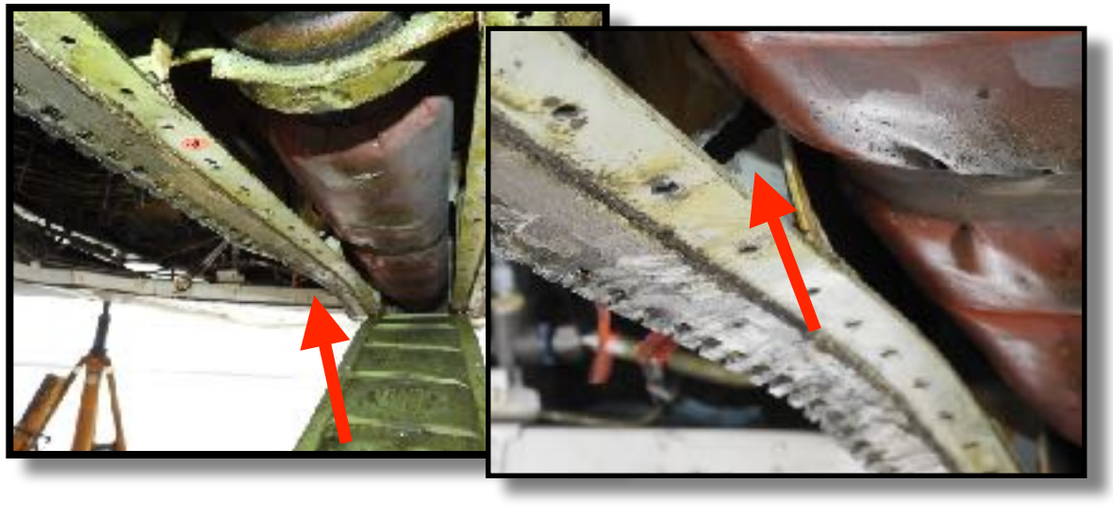


6.N. Trapezodial Panel displaced material on outboard face at LH MLG Side Brace.

DISPOSITION: Repair Trapezodial Panel per engineering disposition.

6.O. Keel box internal structure has multiple failures and damage to the bleed ducting.

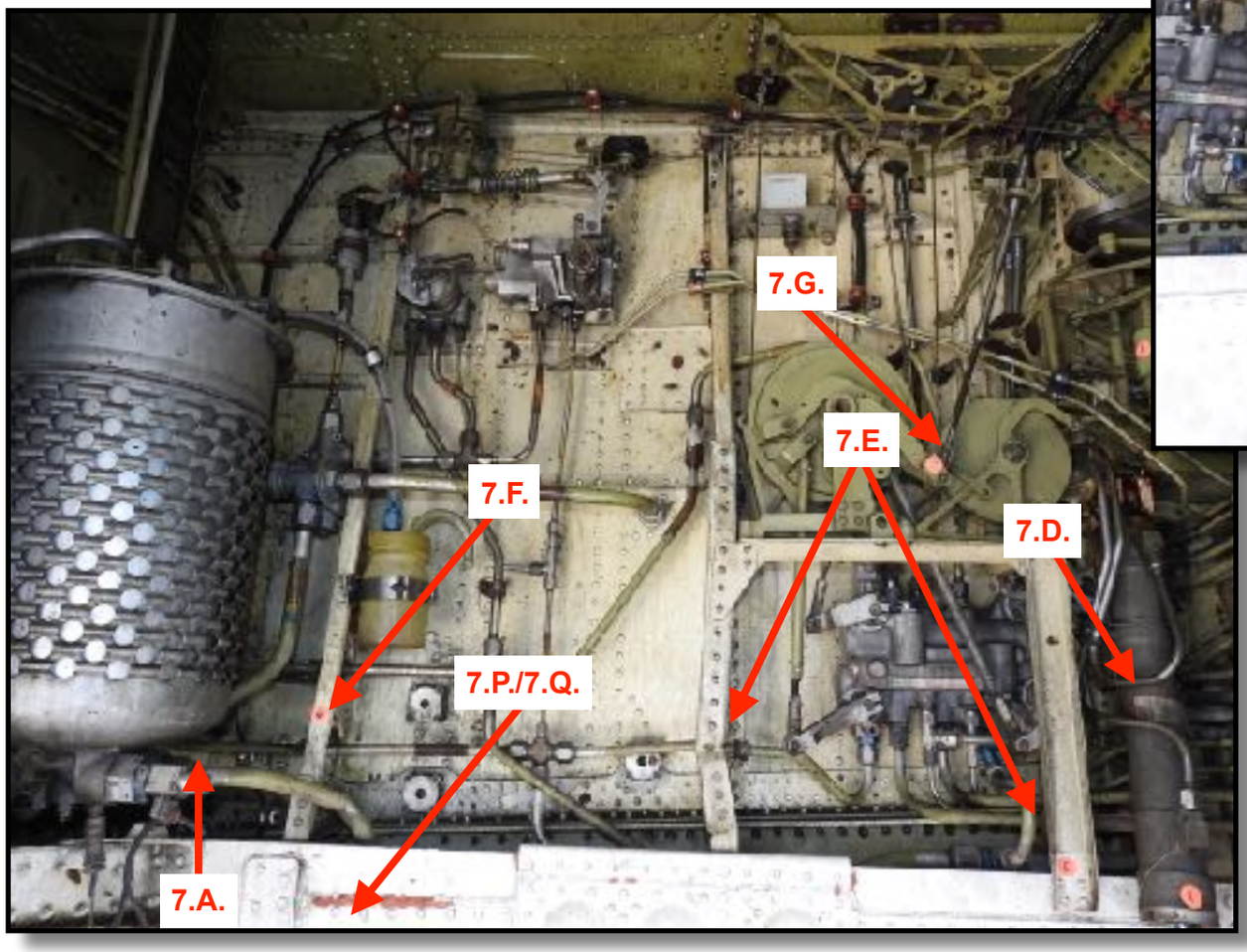
DISPOSITION: Remove and replace all keel box structure, details and ducting.

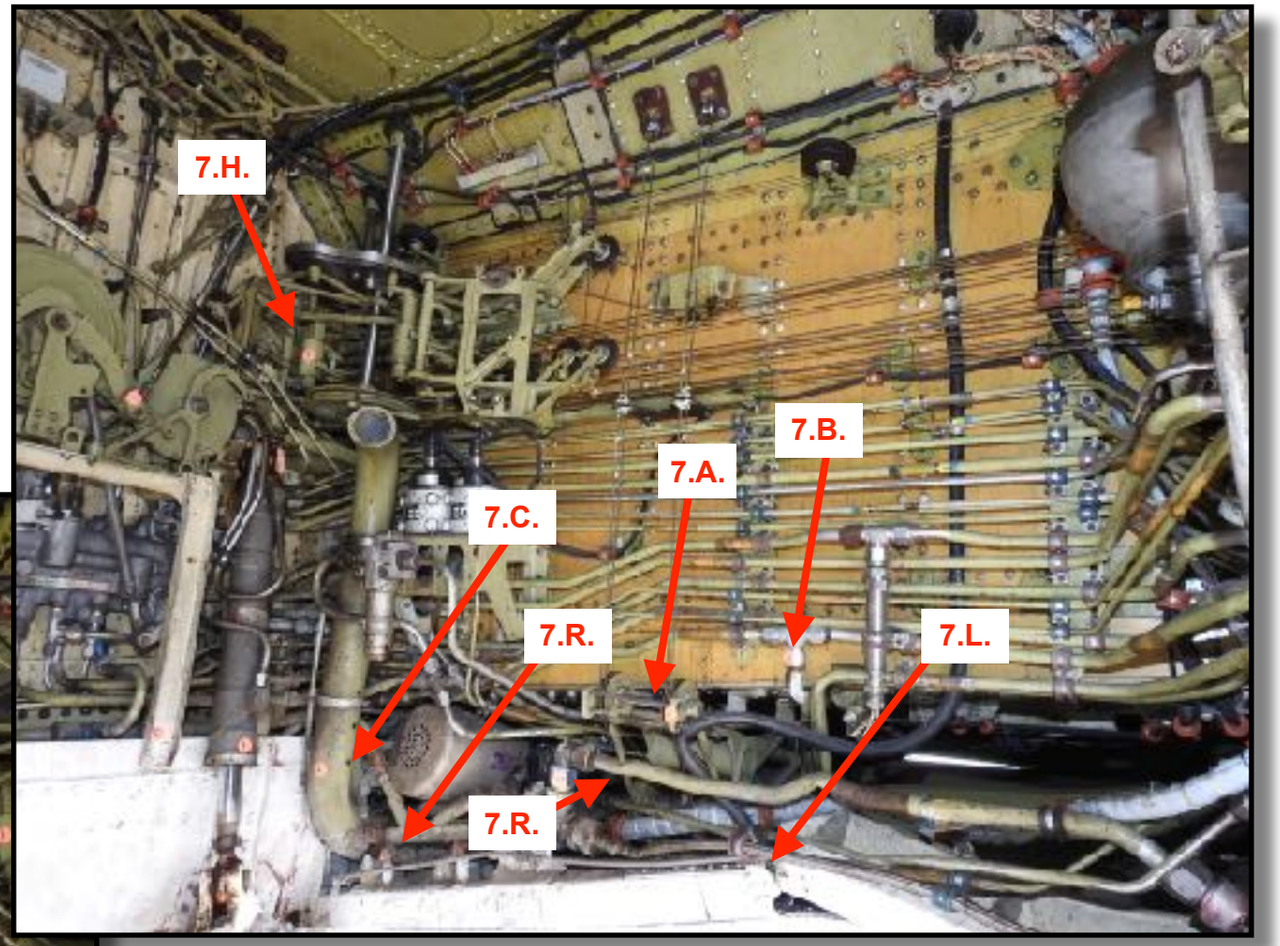


7. RIGHT HAND WHEEL WELL - OVERVIEW

RIGHT MAIN WHEEL WELL

LOOKING INBOARD





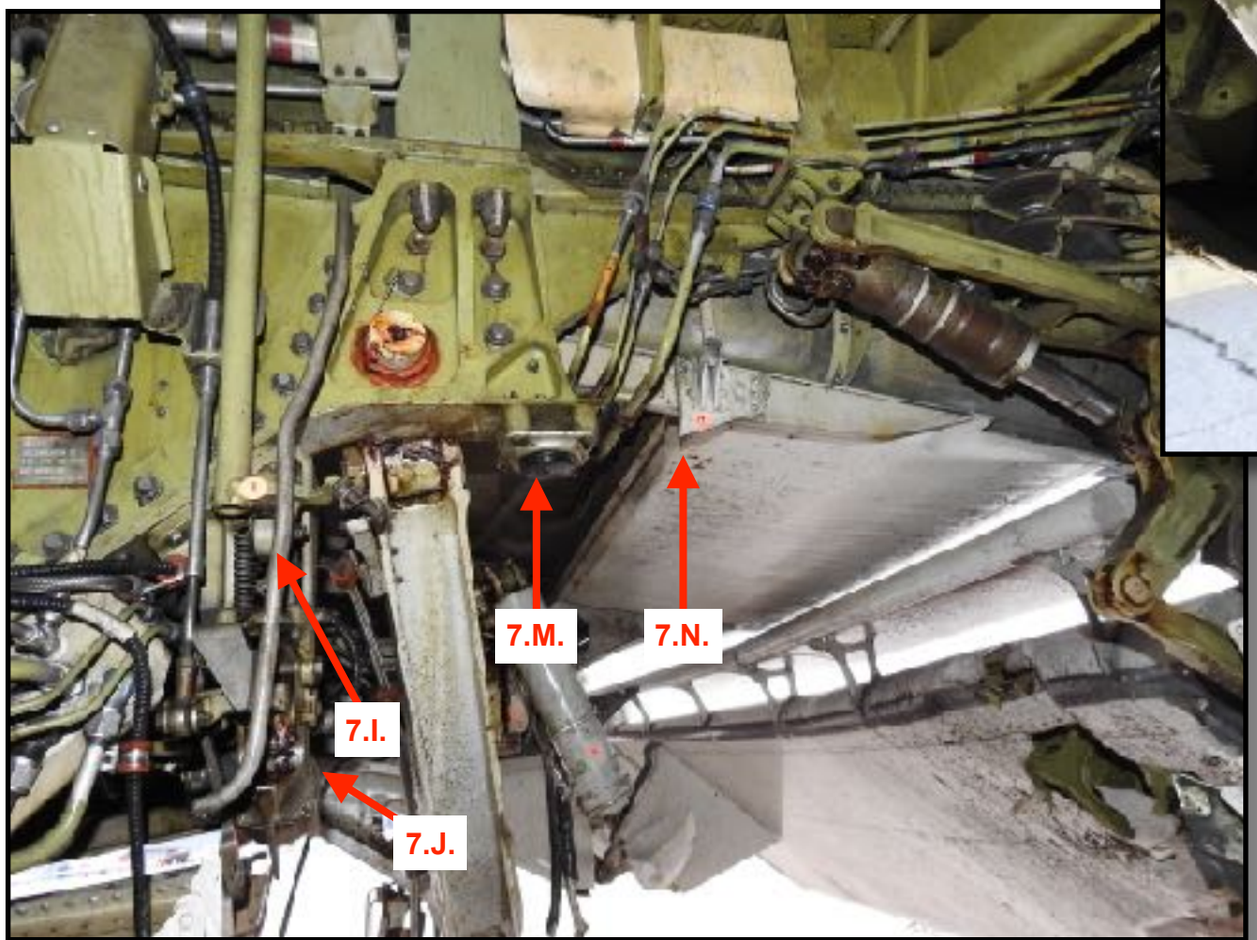
RIGHT MAIN WHEEL WELL

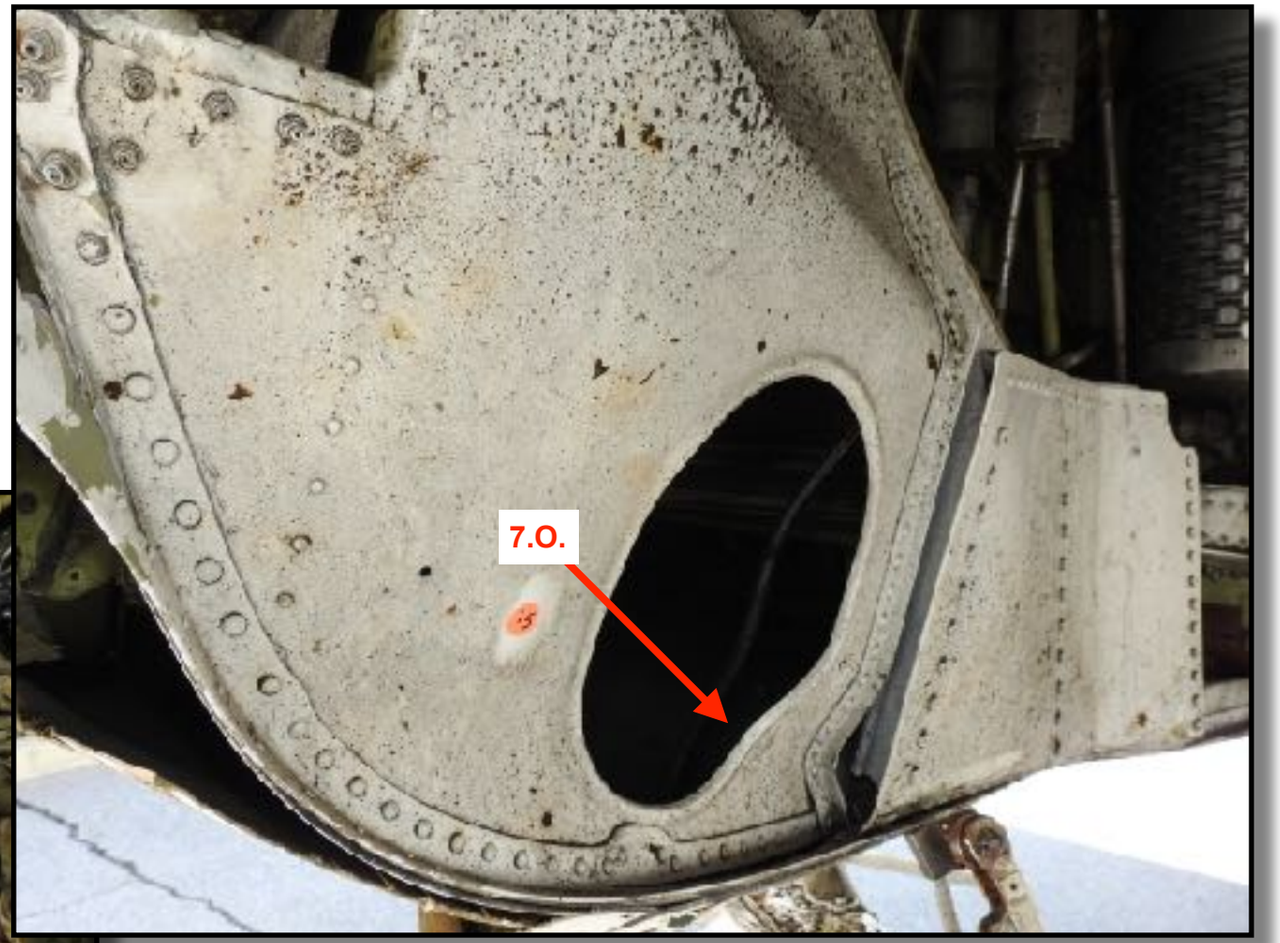
LOOKING FORWARD

7. RIGHT HAND WHEEL WELL - OVERVIEW

RIGHT MAIN WHEEL WELL

LOOKING OUTBOARD





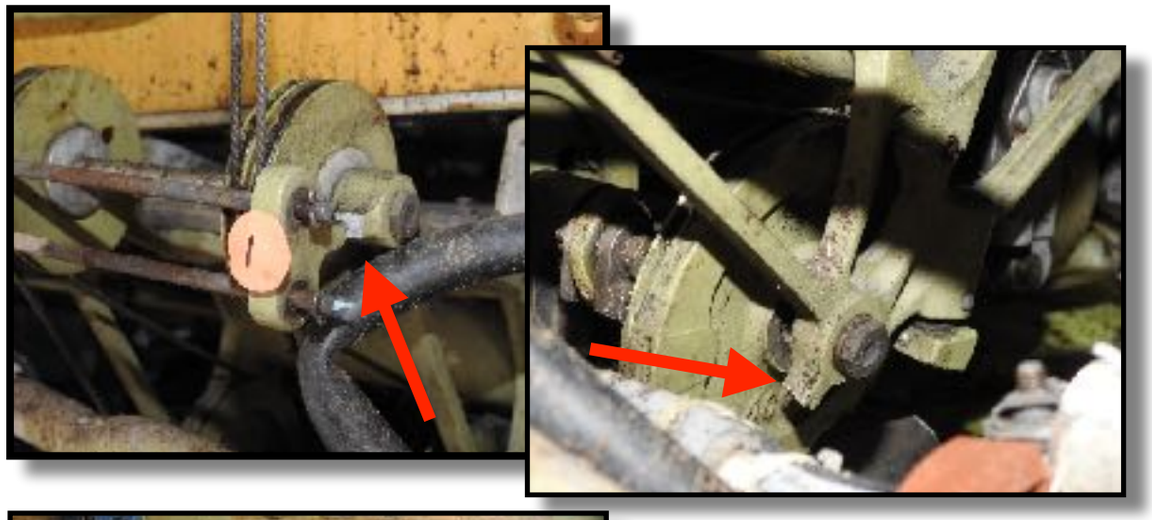
RIGHT MAIN WHEEL WELL

LOOKING AFT

7. RIGHT HAND WHEEL WELL

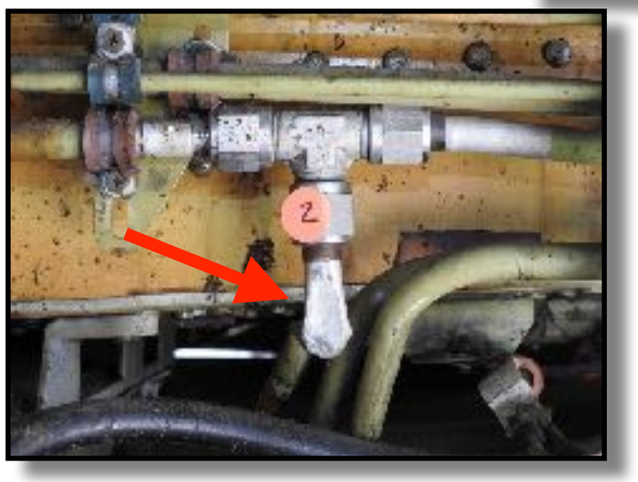
7.A. RH Brake Control support bracket multiple fractures.

DISPOSITION: Remove and replace Brake Control support bracket.



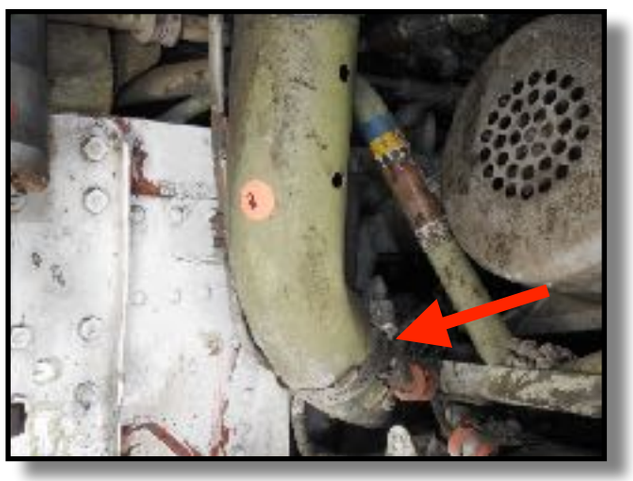
7.B. RH brake line bent.

DISPOSITION: Remove and replace brake line.



7.C. RH brake cooling duct bent and fractured.

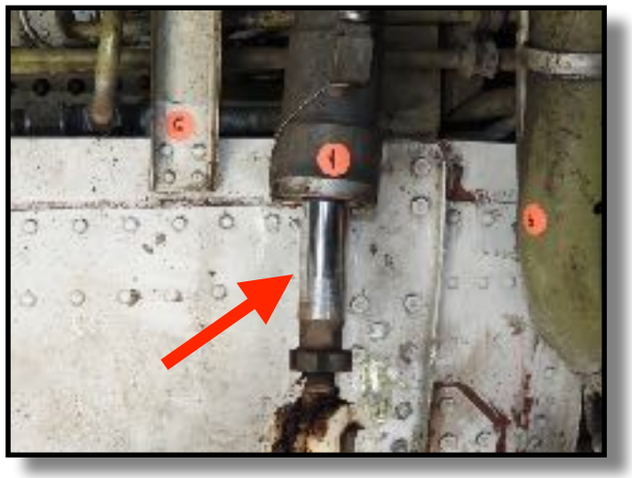
DISPOSITION: Remove and replace RH brake cooling duct.



7. RIGHT HAND WHEEL WELL

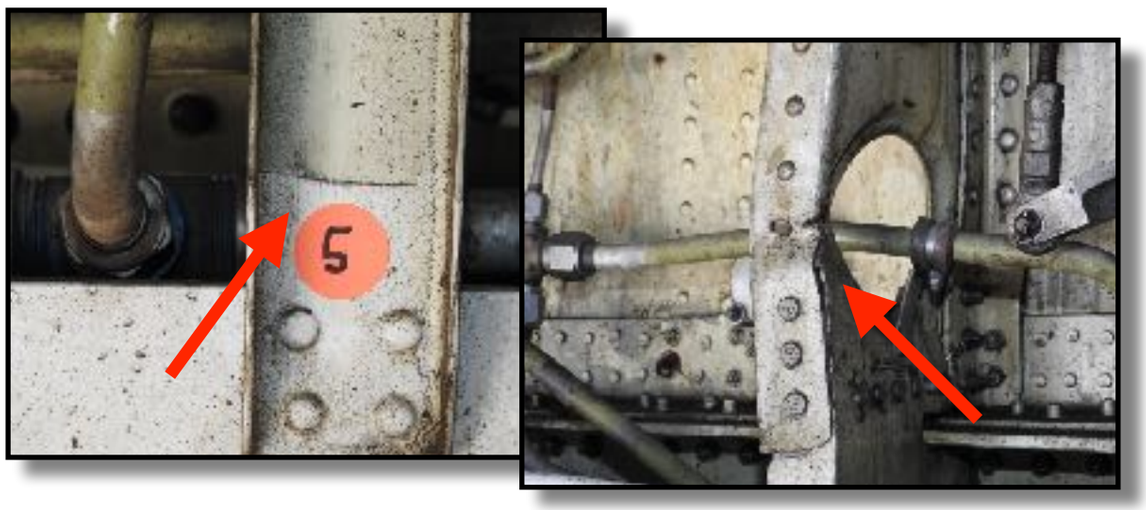
7.D. RH MLG door actuator piston bent.

DISPOSITION: Remove and replace RH MLG door actuator.



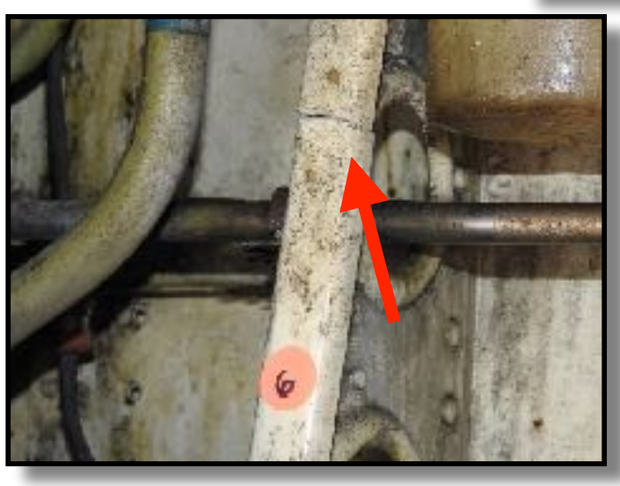
7.E. Vertical supports at MLG actuator controls bent and cracked.

DISPOSITION: Remove and replace supports.



7.F. Aft inboard vertical support forward of reservoir bent and cracked.

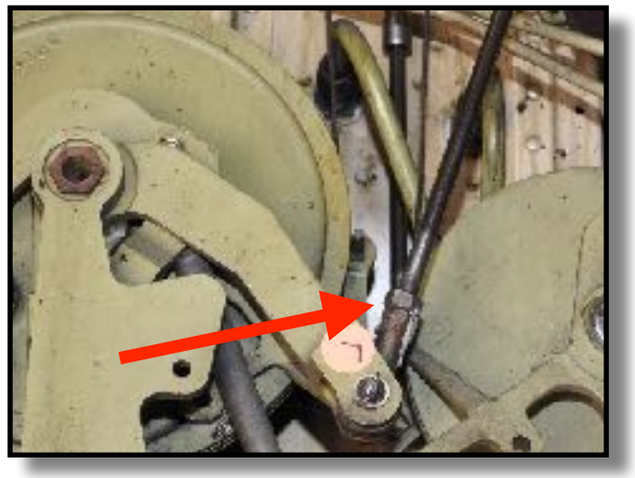
DISPOSITION: Remove and replace aft inboard vertical support.



7. RIGHT HAND WHEEL WELL

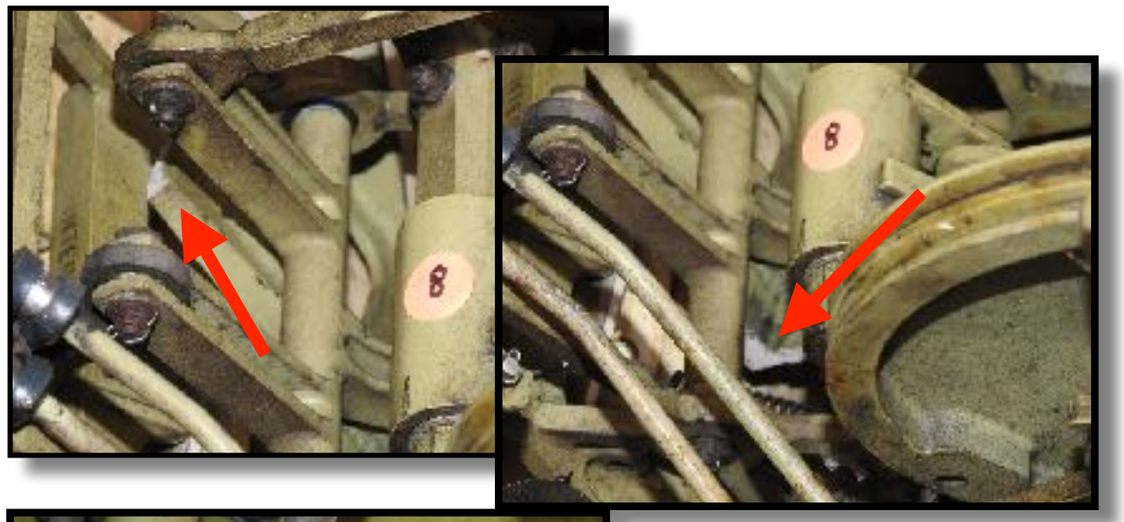
7.G. MLG actuation control teleflex cable ends bent.

DISPOSITION: Remove and replace MLG actuation control teleflex cables.



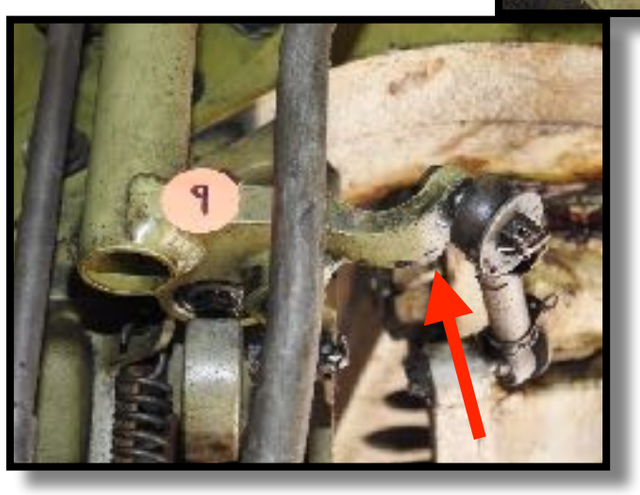
7.H. Spoiler Mixer bracket details bent and fractured.

DISPOSITION: Remove and replace spoiler mixer assembly.



7.I. RH MLG position feedback details bent.

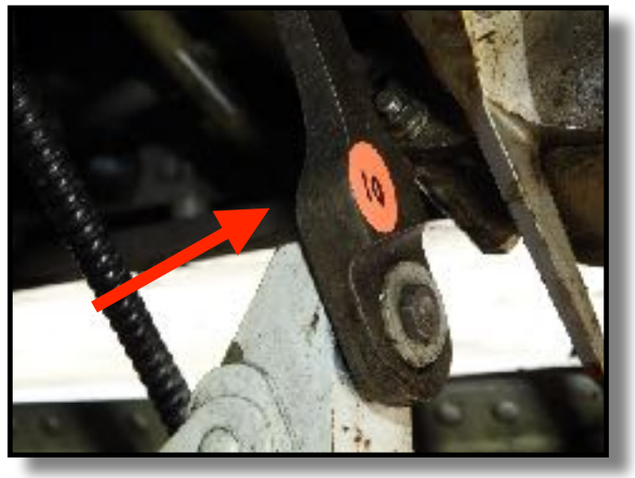
DISPOSITION: Remove and replace RH MLG position details.



7. RIGHT HAND WHEEL WELL

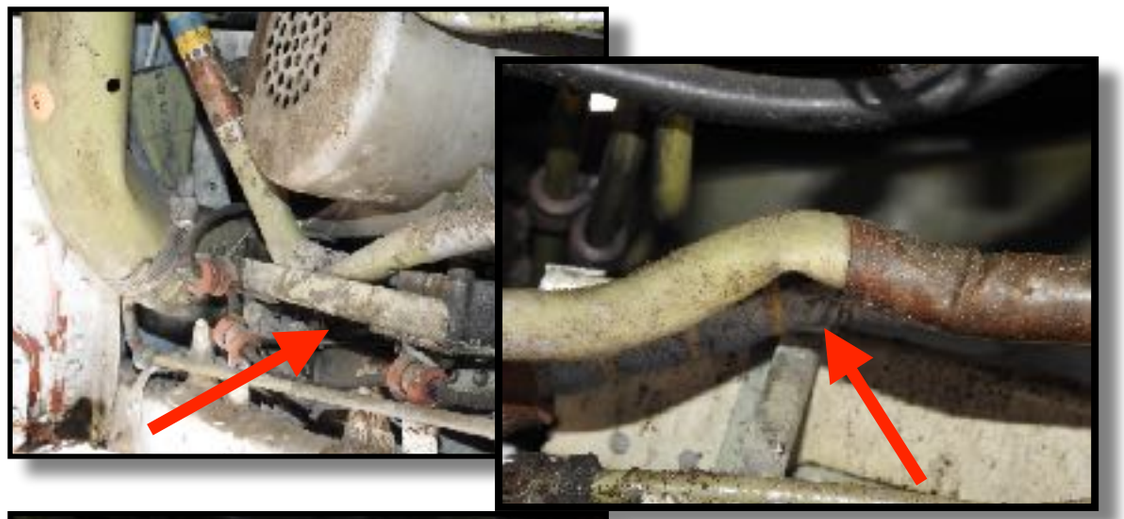
7.J. Forward jamb close-out aft outboard support bent.

DISPOSITION: Remove and replace forward jamb close-out aft outboard support.



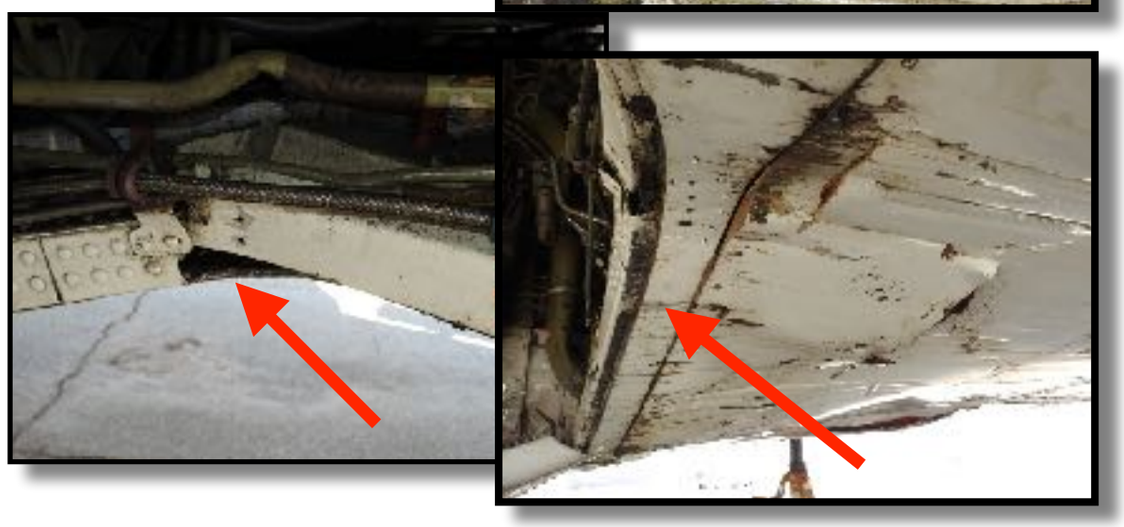
7.K. RH hydraulic service details bent and fractured.

DISPOSITION: Remove and replace damaged hydraulic service details.



7.L. Forward jamb close-out and support bent and fractured.

DISPOSITION: Remove and replace forward jamb close-out and supports.



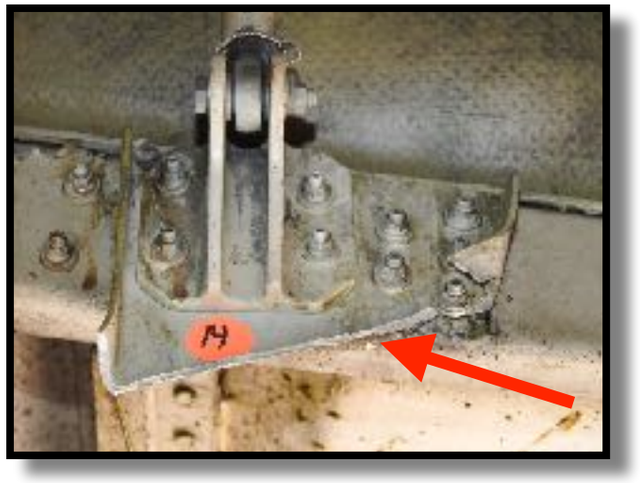
7. RIGHT HAND WHEEL WELL

7.M. Trapezodial Panel displaced material on outboard face at RH MLG Side Brace.

DISPOSITION: Repair Trapezodial Panel per engineering disposition.

7.N. Inboard fixed trailing edge inboard support fractured.

DISPOSITION: Remove and replace inboard fixed trailing edge inboard support.



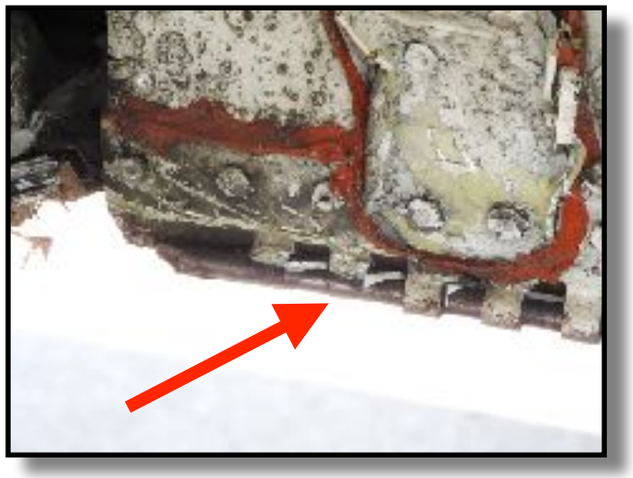
7.O. Aft lower web panels buckled and fractured.

DISPOSITION: Remove and replace aft lower web panels and details.

7. RIGHT HAND WHEEL WELL

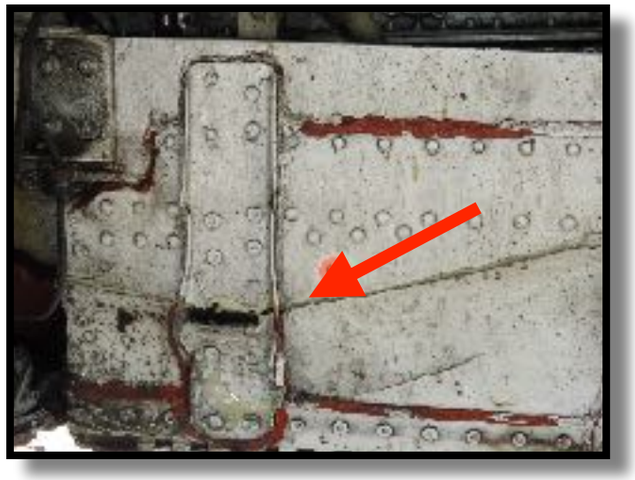
7.P. Landing gear door hinge lugs fractured.

DISPOSITION: Remove and replace RH MLG door keel hinge.



7.Q. Inboard keel web panels and bent and fractured.

DISPOSITION: Remove and replace inboard keel web panels and details.



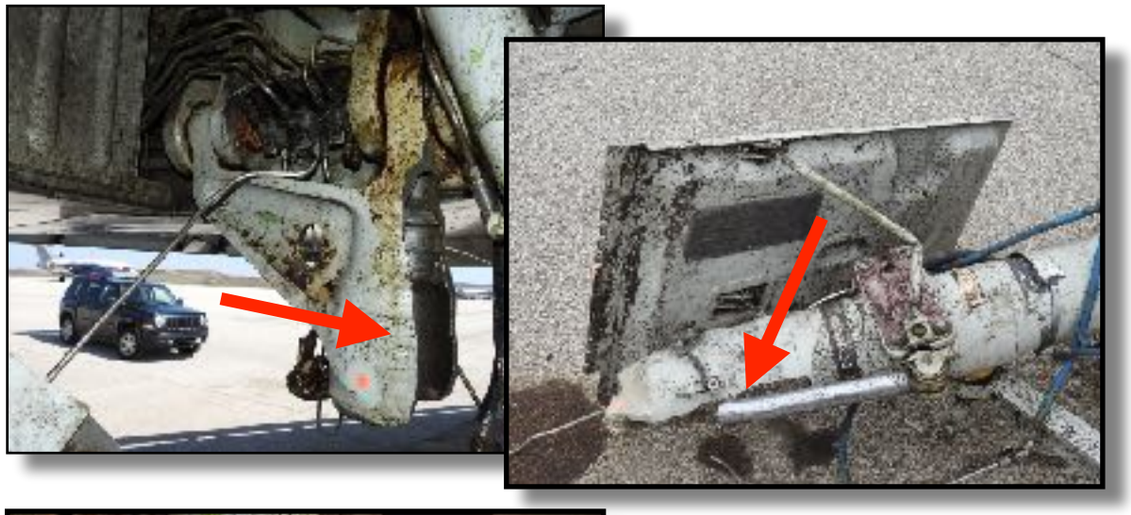
7.R. Auxiliary hydraulic electric pump mounting bracket bent.

DISPOSITION: Remove and replace auxiliary hydraulic electric pump mounting bracket.

8. LANDING GEAR

8.A.. RH MLG upper strut body fractured below the trunnions bracket.

DISPOSITION: Remove and replace the RH MLG Assembly.

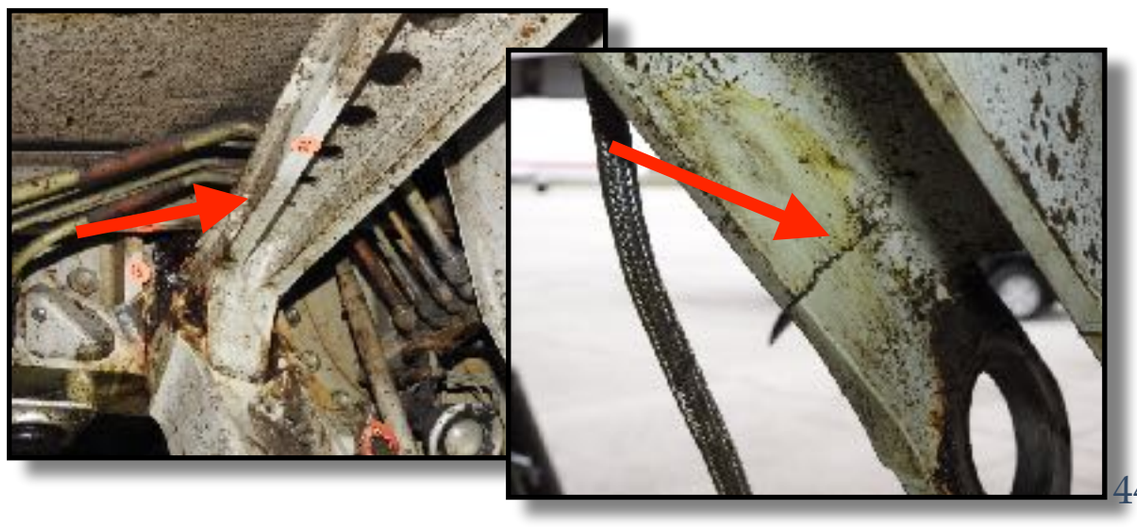


8.B. RH MLG Actuator piston fractured in extend position at the actuator body interface.

DISPOSITION: Remove and replace the RH MLG Actuator Assembly.

8.C. RH MLG fixed brace, side brace and lock link bent and side brace cracked.

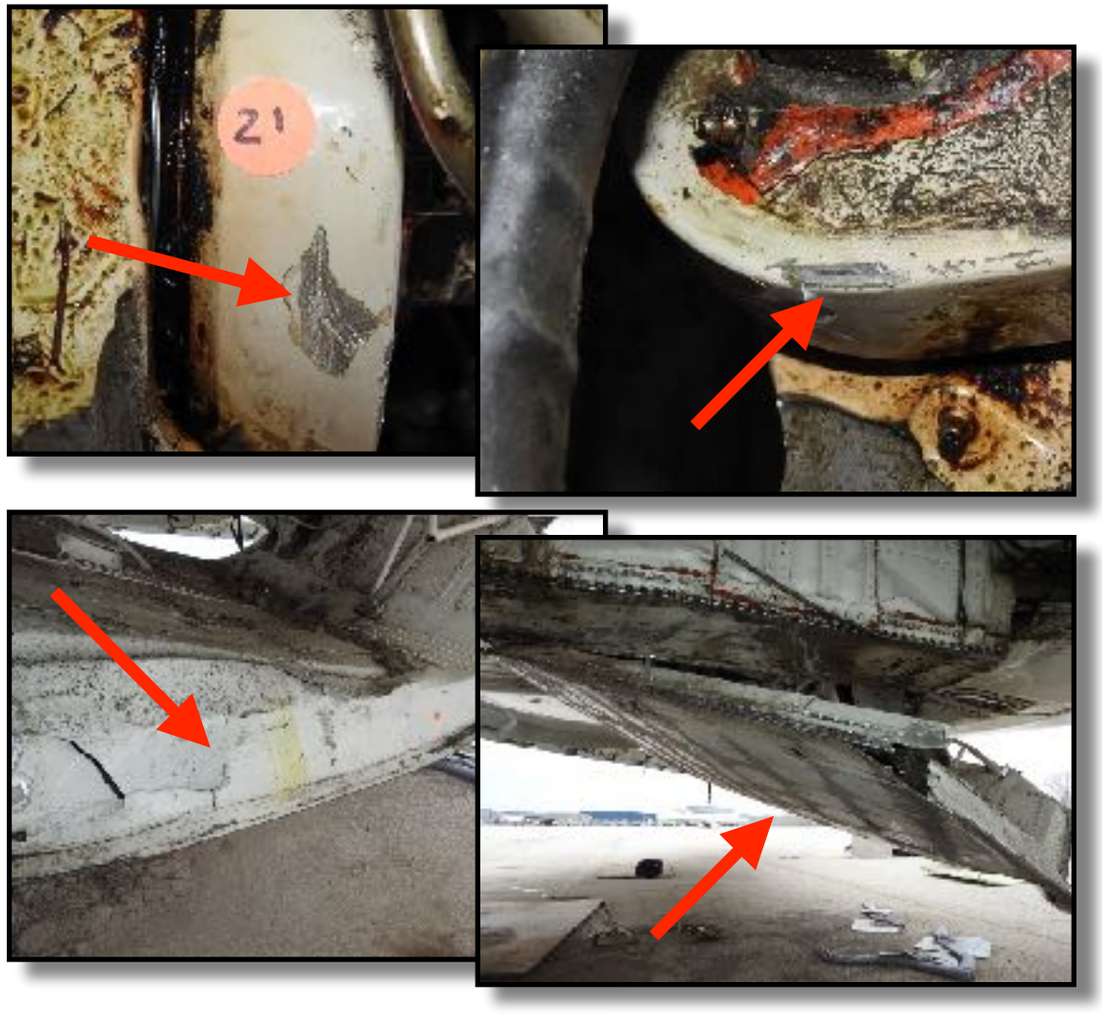
DISPOSITION: Remove and replace RH MLG fixed brace, side brace and lock link.



8. LANDING GEAR

8.D. Impact damage to RH MLG trunnion aft lug.

DISPOSITION: Repair damage to RH MLG trunnion aft lug per engineering disposition.



8.E. RH MLG door fractured and skin has impact damage.

DISPOSITION: Remove and replace the RH MLG door.

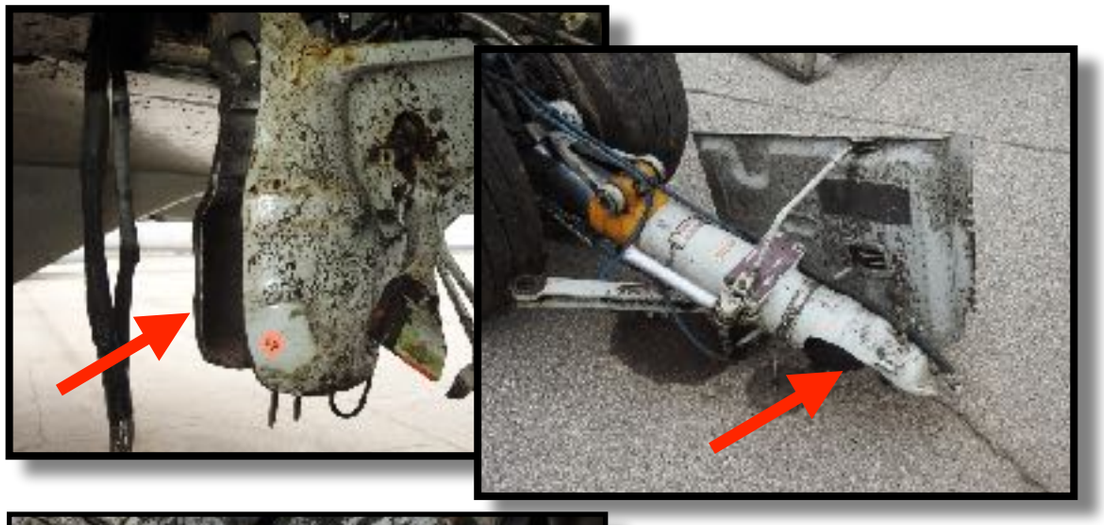
8.F. Impact damage to LH MLG trunnion aft lug.

DISPOSITION: Remove and replace LH MLG trunnion.

8. LANDING GEAR

8.G. LH MLG upper strut body fractured below the trunnions bracket.

DISPOSITION: Remove and replace the RH MLG Assembly.



8.H. LH MLG Actuator piston fractured in extend position at the actuator body interface.

DISPOSITION: Remove and replace the LH MLG Actuator Assembly.

8.I. LH MLG fixed brace, side brace and lock link bent and side brace cracked.

DISPOSITION: Remove and replace LH MLG fixed brace, side brace and lock link.

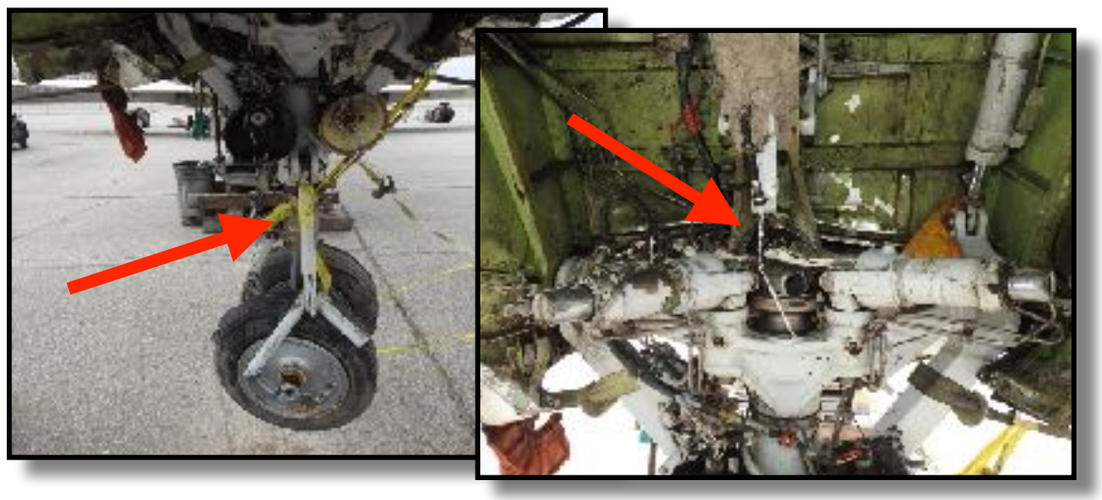
8. LANDING GEAR

8.J. LH MLG door fractured and skin has impact damage.

DISPOSITION: Remove and replace the L MLG door.

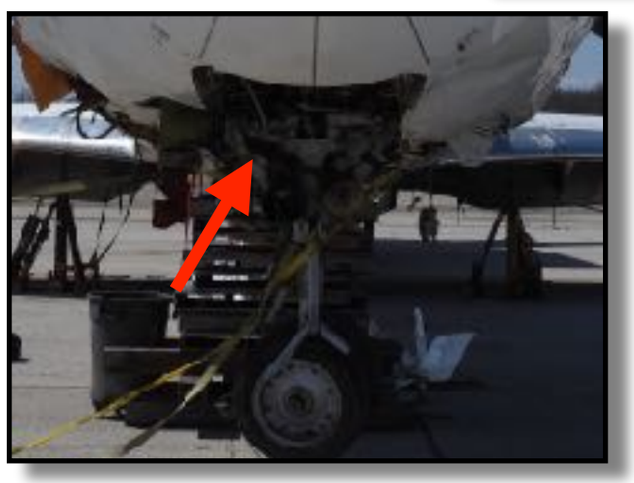
8.K. Nose landing gear assembly has multiple damaged details and is damaged beyond repair.

DISPOSITION: Remove and replace the nose landing gear assembly.

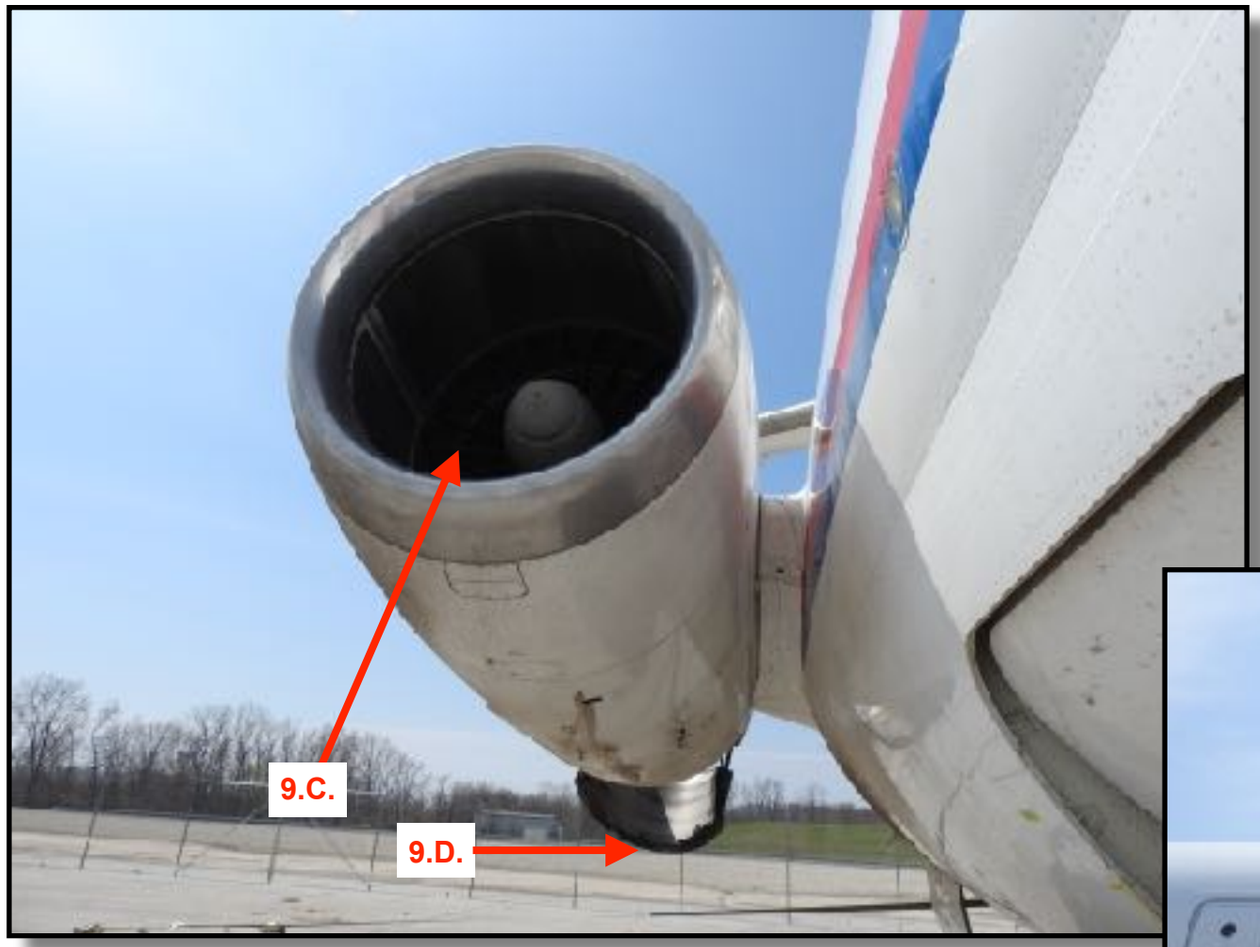


8.L. Nose landing gear doors are missing.

DISPOSITION: Replace nose landing gear doors in conjunction with nose structure replacement.



9. ENGINES AND COWLING - OVERVIEW



9. ENGINES AND COWLING

9.A. Engine #1 fan blades have areas of FOD damage on the leading edges. Undetermined if FOD was injested into the engine core.

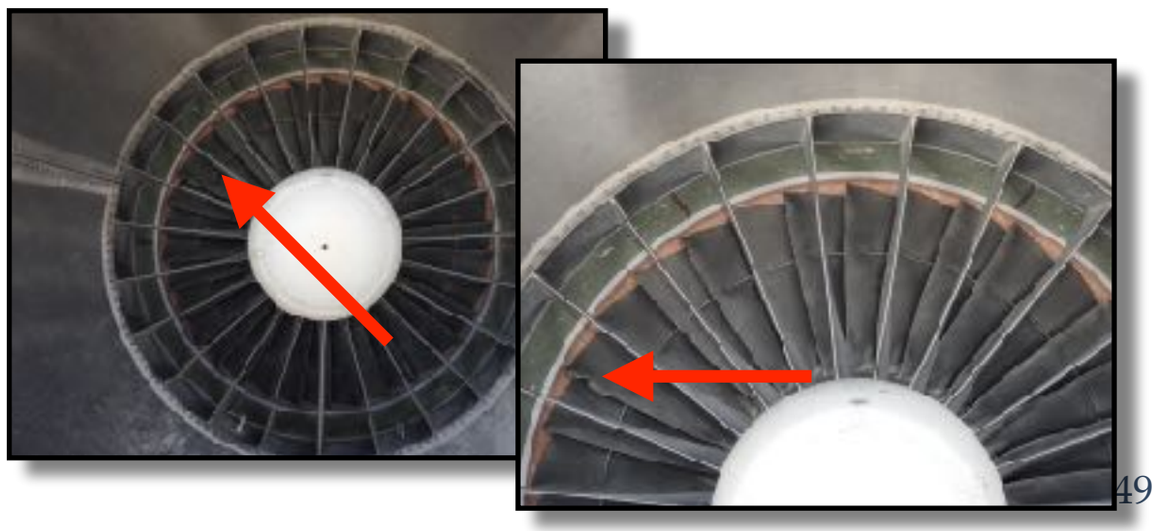
DISPOSITION: Borescope inspect Engine #1 and repair per EMM or route to shop as required.

9.B. Engine #1 lower thrust reverser bucket has damage to the leading edge extending approximately 10.0" at the 5:30 position.

DISPOSITION: Repair thrust reverser bucket leading edge per SRM.

9.C. Engine #2 fan blades have areas of FOD damage on the leading edges. Undetermined if FOD was injested into the engine core.

DISPOSITION: Borescope inspect Engine #2 and repair per EMM or route to shop as required.

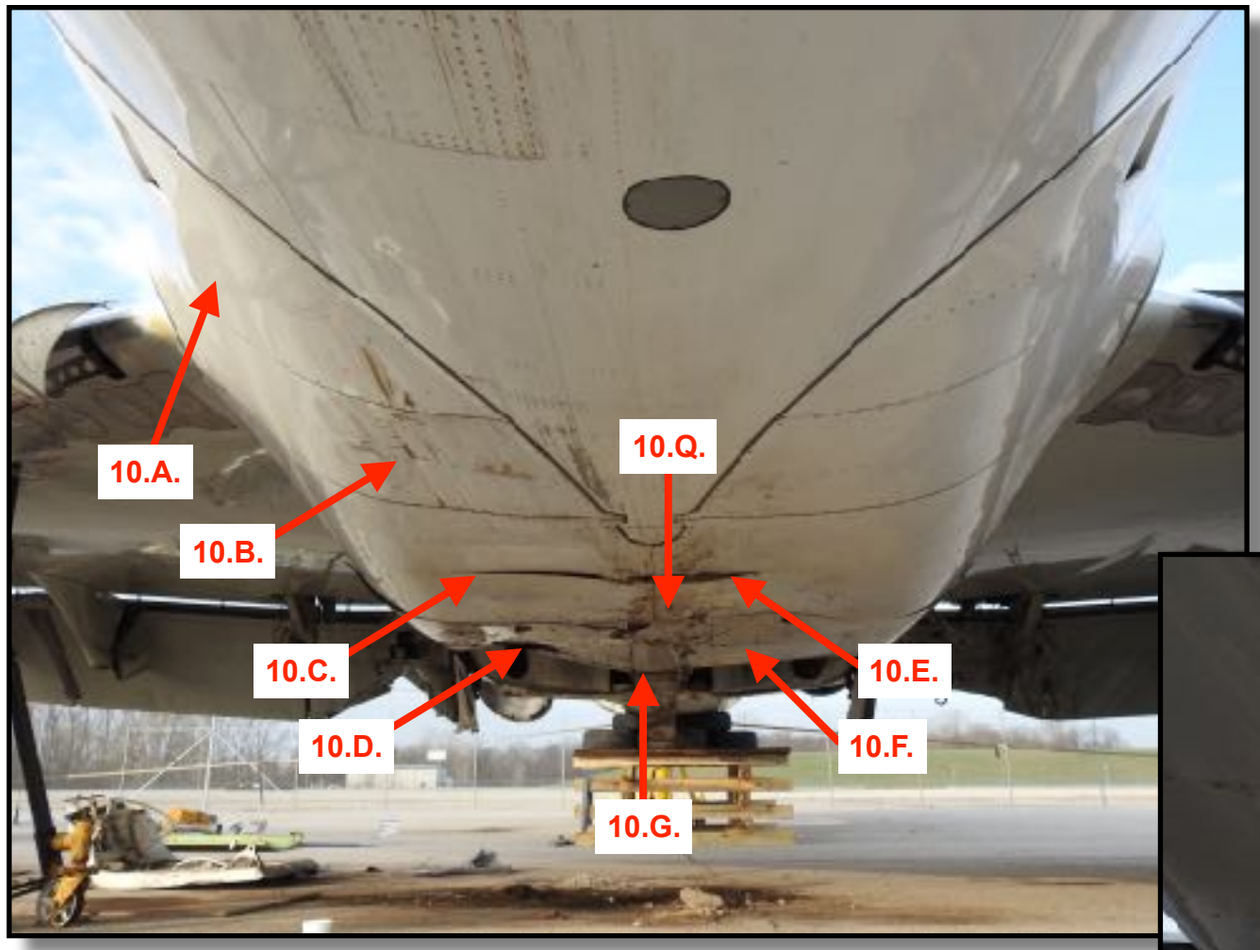


9. ENGINES AND COWLING

9.D. Engine #2 lower thrust reverser bucket has damage to the leading edge extending approximately 13.0" at the 7:00 position.

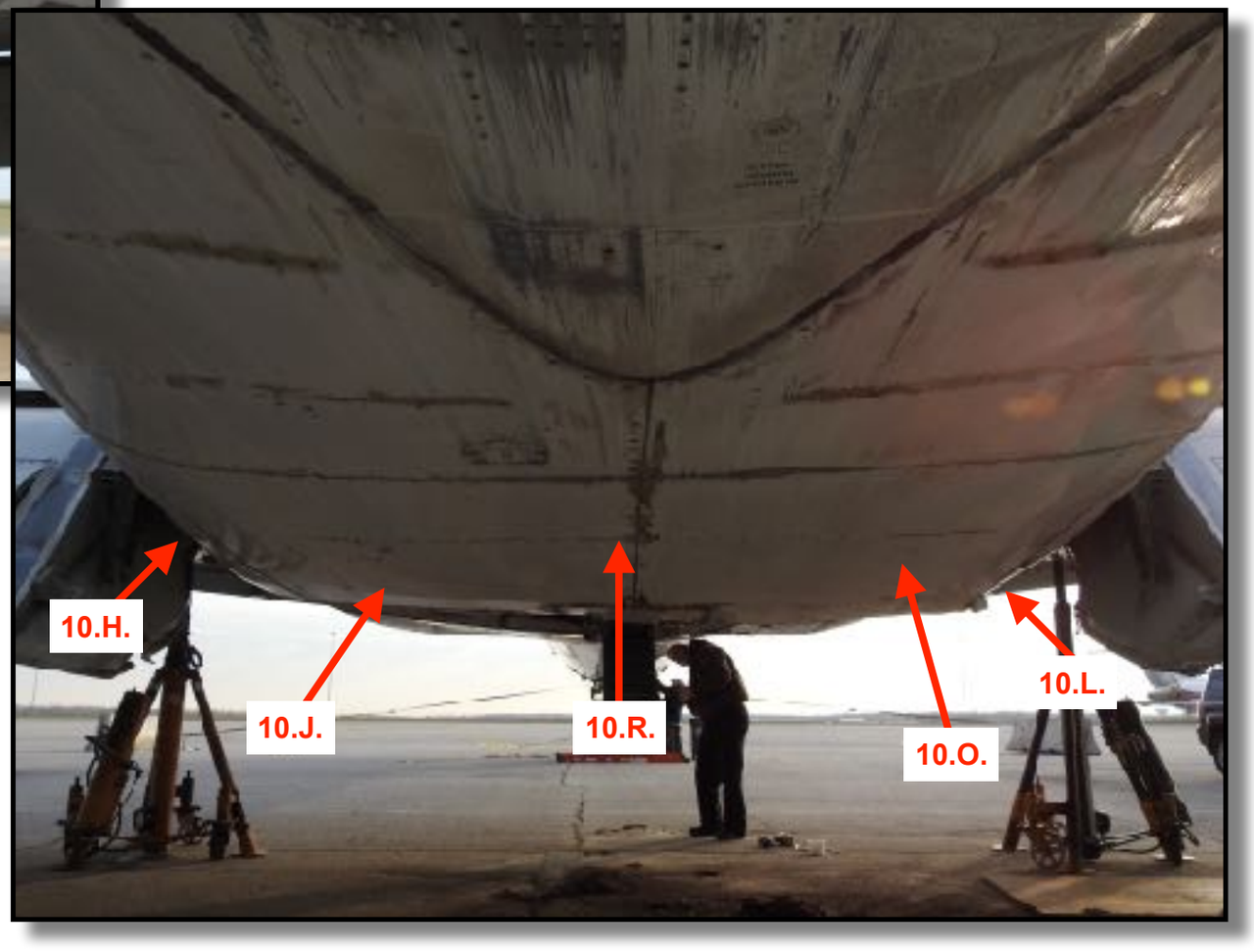
DISPOSITION: Repair thrust reverser bucket leading edge per SRM.

10. BODY FAIRINGS AND SUBSTRUCTURE - OVERVIEW



FORWARD FUSELAGE LOOKING AFT

AFT FUSELAGE LOOKING FORWARD



10. BODY FAIRINGS AND SUBSTRUCTURE - OVERVIEW

RIGHT AFT FAIRINGS

LEFT AFT FAIRINGS

10. BODY FAIRINGS AND SUBSTRUCTURE

10.A. RH #1 fairing gouged and punctured.

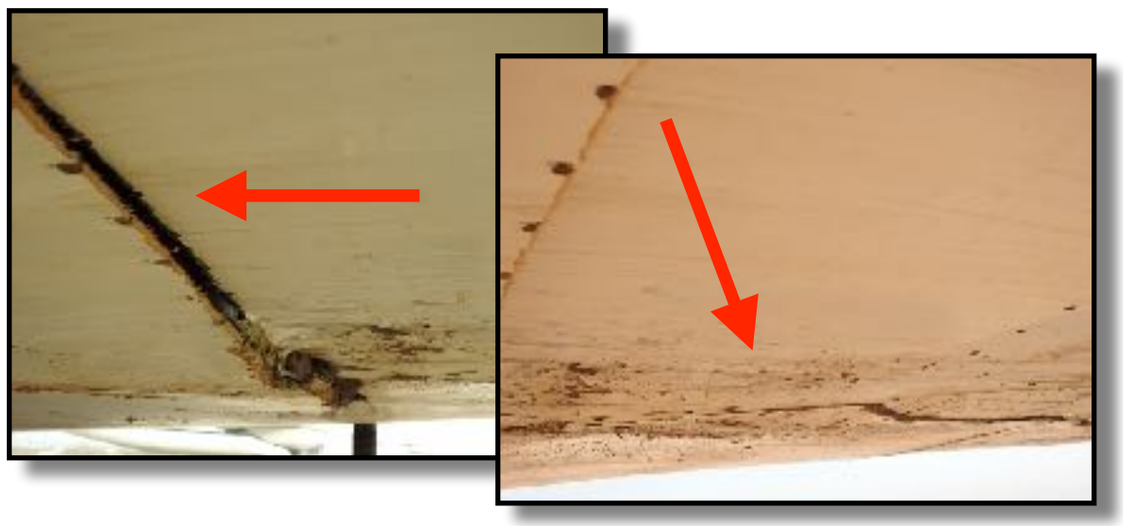
DISPOSITION: Remove and route to shop for repair per SRM.

10.B. RH #2 fairing crushed by impact.

DISPOSITION: Remove and replace RH #2 fairing.

10.C. RH #3 fairing crushed by impact.

DISPOSITION: Remove and replace RH #3 fairing.



10. BODY FAIRINGS AND SUBSTRUCTURE

10.D. RH #4 fairing crushed by impact.

DISPOSITION: Remove and replace #4 fairing.

10.E. LH #3 fairing crushed by impact.

DISPOSITION: Remove and replace RH #3 fairing.

10.F. LH #4 fairing crushed by impact.

DISPOSITION: Remove and replace LH #4 fairing.

10. BODY FAIRINGS AND SUBSTRUCTURE

10.G. Forward center fairing between #4 fairings crushed by impact.

DISPOSITION: Remove and replace center fairing between #4 fairings.

10.H. LH lateral fairing aft of wheel well crushed by impact.

DISPOSITION: Remove and replace LH lateral fairing aft of wheel well.

10.I. LH aft overwing fairing has an area of deflected edge from impact.

DISPOSITION: Remove LH aft overwing fairing and route to shop for repair per SRM.

10. BODY FAIRINGS AND SUBSTRUCTURE

10.J. LH lower fairing aft of wheel well punctured by debris and gouged.

DISPOSITION: Remove LH lower fairing aft of wheel well and route to shop for repair per SRM.

10.K. LH aft body fairing crushed by impact and lower surface punctured by debris.

DISPOSITION: Remove and replace LH aft body fairing.

10.L. RH lateral fairing aft of wheel well crushed by impact.

DISPOSITION: Remove and replace RH lateral fairing aft of wheel well.

10. BODY FAIRINGS AND SUBSTRUCTURE

10.M. RH aft over wing fairing aft outboard corner fractured approximately 3" x 3".

DISPOSITION: Remove RH aft over wing fairing and route to shop for repair per SRM.

10.N. RH upper mid-aft body fairing crushed by impact.

DISPOSITION: Remove and replace RH mid-aft body fairing.

10.O. RH lower fairing aft of wheel well has abrasion marks and scratches.

DISPOSITION: Remove RH lower fairing aft of wheel well and route to shop for repair per SRM.

10. BODY FAIRINGS AND SUBSTRUCTURE

10.P. RH aft body fairing crushed by impact.

DISPOSITION: Remove and replace RH aft body fairing.

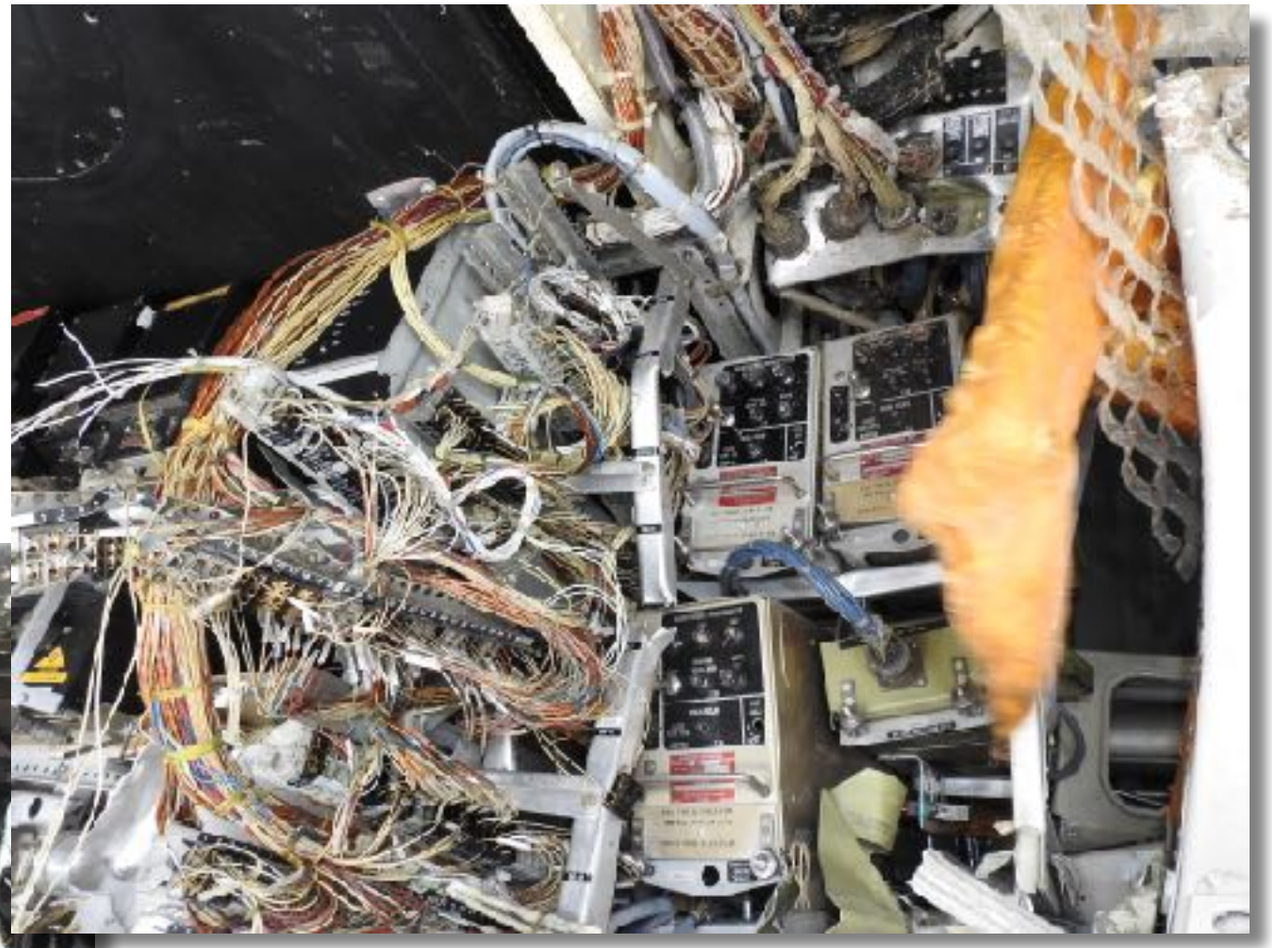
10.Q. All forward body fairing support substructure details show evidence of crushing, fracture or cracking

DISPOSITION: Remove and replace all forward body fairing support substructure details.

10.R. All aft body fairing support substructure details show evidence of crushing, fracture or cracking.

DISPOSITION: Remove and replace all forward body fairing support substructure details.

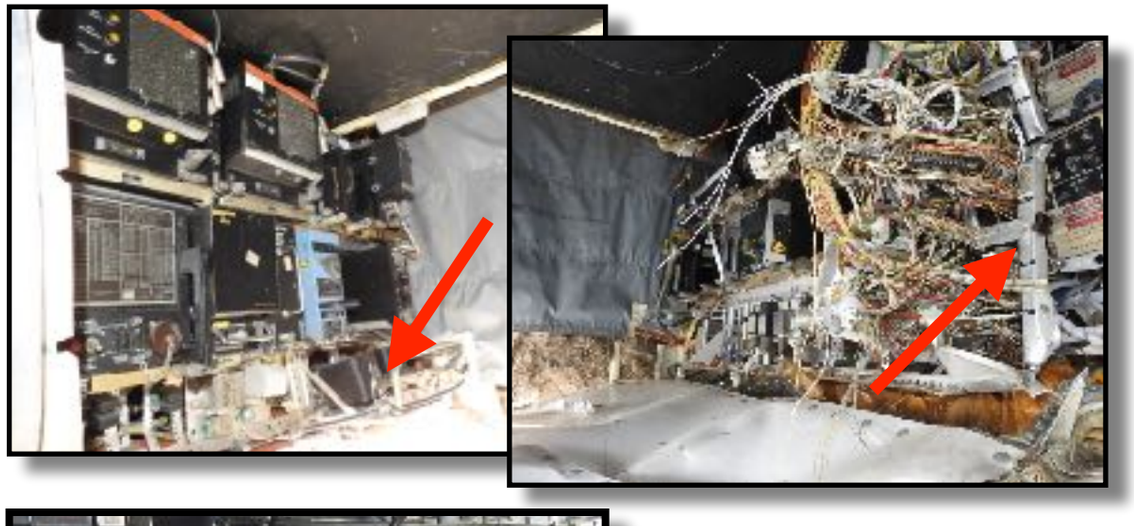
11. AVIONICS - OVERVIEW



11. AVIONICS

11.A. Numerous avionics components in the electronics and electrical compartment were damaged due to mounting rack impacts.

DISPOSITION: Inventory all avionics for repair or replace dispositions.



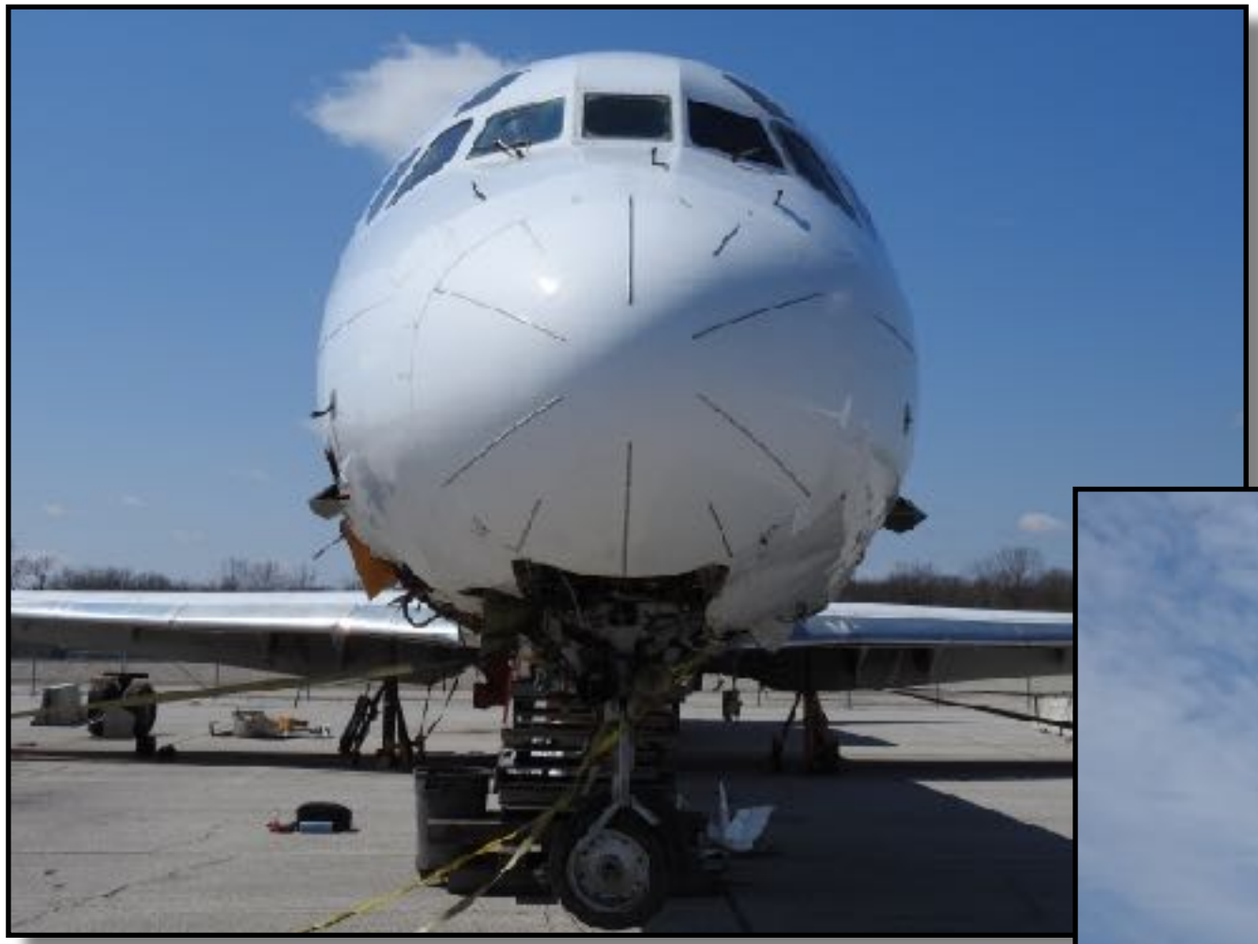
11.B. Flight deck and forward nose avionics components are in good physical condition, but have not been protected post-accident.

DISPOSITION: Examine components for serviceability; replace as required.

11.C. All lower fuselage mounted antennas are damaged due to impact.

DISPOSITION: Remove and replace all lower fuselage mounted antennas.

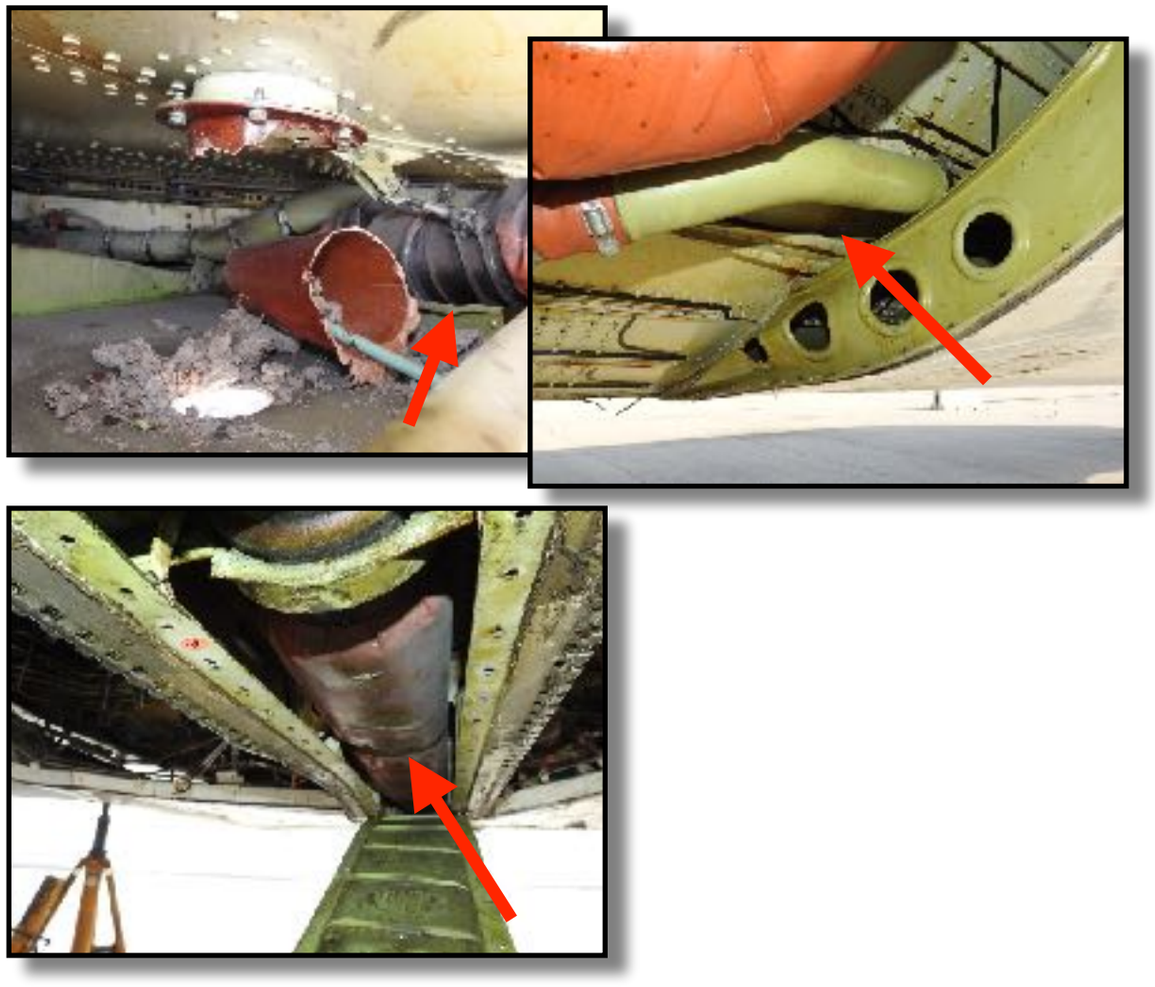
12. OTHER RELATED OBSERVATIONS - OVERVIEW



12. OTHER RELATED FINDINGS AND OBSERVATIONS

12.A. Bleed air and brake cooling ducting under forward fuselage fairings crushed by fairing substructure.

DISPOSITION: Remove and replace bleed air and brake cooling ducting under forward fuselage fairings.



12.B. Bleed ducting in keel box damaged by crushed box structure..

DISPOSITION: Remove and replace bleed ducting in keel box structure.

12.C. Bleed air ducting under aft fuselage fairings crushed by fairing substructure.

DISPOSITION: Remove and replace bleed air ducting under aft fuselage fairings.

12. OTHER RELATED FINDINGS AND OBSERVATIONS

12.D. Numerous control cable runs and runs details adjacent to damaged forward fuselage structure have been compromised.

DISPOSITION: Evaluate cable and cable run requirements during repair and replace as required.

12.E. Bleed ducting in keel box damaged by crushed box structure..

DISPOSITION: Remove and replace bleed ducting in keel box structure.

12.F. Hydraulic piping under RH forward body fairings have been dented and displaced by fairing substructure.

DISPOSITION: Remove and replace hydraulic piping under RH forward body fairings.

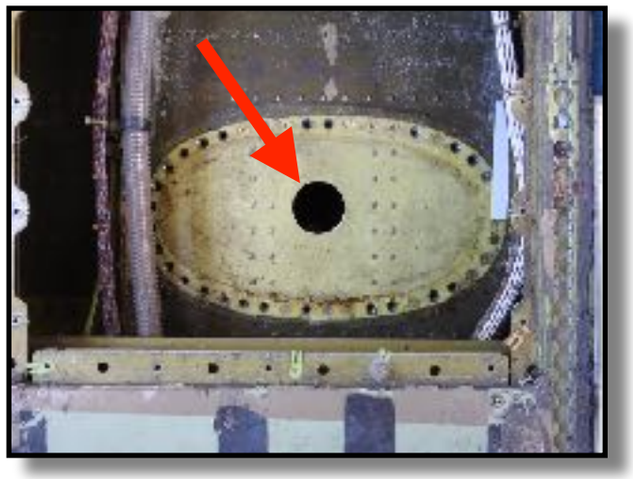
12. OTHER RELATED FINDINGS AND OBSERVATIONS

12.G. Lower fuselage anti-collision light body and lens is missing.

DISPOSITION: Remove anti-collision light base and replace with serviceable anti-collision light assembly.

12.H. Center fuel tank upper access door has a hole cut for emergency suctioning of fuel.

DISPOSITION: Remove and replace center fuel tank upper access door.



12.I. Forward and aft cargo door barriers damaged.

DISPOSITION: Remove and replace forward and aft cargo door barriers.

12. OTHER RELATED FINDINGS AND OBSERVATIONS

12.J. There is no noticeable deflection of the seat track along the length of the aircraft as observed via alignment of the cabin seat armrests.

12.K. L1 door not closing at the upper edge appears to be due to flexing of the forward fuselage caused by the damaged lower structure from Sta. 37 to Sta. 218. This condition is corrected during fuselage alignment procedures accomplished during repair activity. This gap should be sealed to prevent entry of rain and wind.

12.L. Shop inspection of the tailcone assembly will be required due to emergency evacuation jettison and subsequent handling.

12. OTHER RELATED FINDINGS AND OBSERVATIONS

12.M. Both elevators were removed during the course of the accident investigation and will require replacement.

12.N. All escape slides were deployed during aircraft evacuation and will require replacement.

12.O. Nose radome appears to be in good condition with no delamination or punctures, but with scratches in the paint. It is suggested that a shop inspection be performed to confirm and certify the condition and repaint.

13. ADDITIONAL INSPECTIONS AND TASKS REQUIRED

13.A. Preservation of the engines per AMM Chapter 10 and 72 requirements and covering of the engines for long-term storage per AMM Chapter 10 is required to maintain integrity and condition of serviceable components in and on the engines.

13.B. Performance of all possible tasks conforming to AMM Chapter 10 Aircraft Preservation are required to maintain integrity of serviceable components, systems, parts and structures.

13.C. All components installed in the compromised Equipment and Electronics compartment require removal, identification, and disposition as to condition due to the compartment being compromised and exposed to the exterior elements.

GENERAL NOTES

Due to the aircraft condition, it was not possible to engage electrical power and other systems to test system functionality. The documented data relating to avionic and other systems requires full functional checks of the aircraft during the Return to Service (RTS) process after aircraft repair.

Because of the debris in the center tank from a hole being cut for fuel removal, and fuel panels being observed as remaining open after fuel removal during the recovery process, the center and both wing fuel tanks will need to be cleaned before closing and fueling during the RTS process.

Damage repair to the nose section of the aircraft will require detensioning of the rigging of cable controlled systems. Due to this condition, a full check of the rigging of the flight controls and functional testing will be required.

Avionic components removed in Item 11.A. are suggested to be bench checked regardless of removed physical condition so ensure serviceability prior to functional testing. As an alternative, the Operator can provide serviceable replacements.

Photos included in this Survey are presented in a reduced-resolution format to optimize file size for transfer. A document with higher resolution photos can be provided upon request.

SOAR General Manager: Chris Merry
SOAR Senior Project Manager: David Wittrig
SOAR Senior Project Manager: Nabil Wareh

SOAR Project #1438 Prepared by: David Wittrig

Newport Beach
California, USA

April 17, 2017