ASRS Database Report Set

Maintenance Reports

Report Set Description	A sampling of reports from aircraft maintenance personnel.
Update Number	30.0
Date of Update	July 31, 2018
Number of Records in Report Set	50
Number of New Records in Report Set	50
Type of Records in Report Set	For each update, new records received at ASRS will displace a like number of the oldest records in the Report Set, with the objective of providing the fifty most recent relevant ASRS Database records. Records within this Report Set have been screened to assure their relevance to the topic.

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, CA 94035-1000

TH: 262-7

MEMORANDUM FOR: Recipients of Aviation Safety Reporting System Data

SUBJECT: Data Derived from ASRS Reports

The attached material is furnished pursuant to a request for data from the NASA Aviation Safety Reporting System (ASRS). Recipients of this material are reminded when evaluating these data of the following points.

ASRS reports are submitted voluntarily. The existence in the ASRS database of reports concerning a specific topic cannot, therefore, be used to infer the prevalence of that problem within the National Airspace System.

Information contained in reports submitted to ASRS may be amplified by further contact with the individual who submitted them, but the information provided by the reporter is not investigated further. Such information represents the perspective of the specific individual who is describing their experience and perception of a safety related event.

After preliminary processing, all ASRS reports are de-identified and the identity of the individual who submitted the report is permanently eliminated. All ASRS report processing systems are designed to protect identifying information submitted by reporters; including names, company affiliations, and specific times of incident occurrence. After a report has been de-identified, any verification of information submitted to ASRS would be limited.

The National Aeronautics and Space Administration and its ASRS current contractor, Booz Allen Hamilton, specifically disclaim any responsibility for any interpretation which may be made by others of any material or data furnished by NASA in response to queries of the ASRS database and related materials.

Linda J Connell

Linda J. Connell, Director
NASA Aviation Safety Reporting System

CAVEAT REGARDING USE OF ASRS DATA

Certain caveats apply to the use of ASRS data. All ASRS reports are voluntarily submitted, and thus cannot be considered a measured random sample of the full population of like events. For example, we receive several thousand altitude deviation reports each year. This number may comprise over half of all the altitude deviations that occur, or it may be just a small fraction of total occurrences.

Moreover, not all pilots, controllers, mechanics, flight attendants, dispatchers or other participants in the aviation system are equally aware of the ASRS or may be equally willing to report. Thus, the data can reflect **reporting biases**. These biases, which are not fully known or measurable, may influence ASRS information. A safety problem such as near midair collisions (NMACs) may appear to be more highly concentrated in area "A" than area "B" simply because the airmen who operate in area "A" are more aware of the ASRS program and more inclined to report should an NMAC occur. Any type of subjective, voluntary reporting will have these limitations related to quantitative statistical analysis.

One thing that can be known from ASRS data is that the number of reports received concerning specific event types represents the **lower measure** of the true number of such events that are occurring. For example, if ASRS receives 881 reports of track deviations in 2010 (this number is purely hypothetical), then it can be known with some certainty that *at least* 881 such events have occurred in 2010. With these statistical limitations in mind, we believe that the **real power** of ASRS data is the **qualitative information** contained in **report narratives**. The pilots, controllers, and others who report tell us about aviation safety incidents and situations in detail – explaining what happened, and more importantly, **why** it happened. Using report narratives effectively requires an extra measure of study, but the knowledge derived is well worth the added effort.

Report Synopses

ACN: 1547034 *(1 of 50)*

Synopsis

A Maintenance Technician reported ongoing concerns with the aircraft parts computer systems.

ACN: 1535000 *(2 of 50)*

Synopsis

B737 Captain reported the localizer, glideslope, and flight director blanked on both sides during approach.

ACN: 1533815 *(3 of 50)*

Synopsis

A Maintenance Technician reported that the MD-11 Cargo "Load Shuttle Beam" needed to be deferred because the required part was not in stock.

ACN: 1533808 *(4 of 50)*

Synopsis

A Maintenance Technician reported that new circuit breaker collars do not allow the high demand circuit breakers on panel in the Airbus fleet to be deactivated.

ACN: 1533432 *(5 of 50)*

Synopsis

A Maintenance Technician reported that used consumable parts are tested and re-certified using bogus procedures.

ACN: 1532715 *(6 of 50)*

Synopsis

A Maintenance Inspector reported the bushings on the aircraft's main gear door actuator migrated, after further review the item was incorrectly signed off.

ACN: 1532707 *(7 of 50)*

Synopsis

B767 Maintenance reported that the hoist equipment failed when raising a main landing gear actuator.

ACN: 1531763 *(8 of 50)*

Synopsis

Lead Technician reported that an incorrect O2 mask was installed on the portable oxygen bottle in a CRJ-900.

ACN: 1531759 *(9 of 50)*

Synopsis

Maintenance person reported an aircraft was found with debris in the engines and the required procedure to address the issue was not accomplished.

ACN: 1531460 *(10 of 50)*

Synopsis

Maintenance Technician reported that an uncontrolled part was installed on an Airbus.

ACN: 1530759 *(11 of 50)*

Synopsis

Two maintenance technicians reported the manuals for the Embraer ERJ engine test were ambiguous and were subject to interpretation.

ACN: 1530758 *(12 of 50)*

Synopsis

Maintenance Technician reported that after doing an engine run, the exhaust from the Bombardier CRJ-200 damaged other aircraft parked behind it.

ACN: 1529567 *(13 of 50)*

Synopsis

A UAV Technician reported that the pitch controller was moved with the rig pin still installed.

ACN: 1527682 *(14 of 50)*

Synopsis

Maintenance Technician reported that proper torque of a filter drain plug was not applied before safety wire application.

ACN: 1527413 *(15 of 50)*

Synopsis

Maintenance person reported that when a lift was used to open the engine cowling it surged up and damaged the lower aft cowling.

ACN: 1526936 *(16 of 50)*

Synopsis

B757 Maintenance Technician reported that they used a forklift to replace the main aft flap.

ACN: 1525958 *(17 of 50)*

Synopsis

A Maintenance Technician reported that when he removed a pitot cover on a B767-300, a rubber piece was left in the end of pitot tube.

ACN: 1525728 *(18 of 50)*

Synopsis

Maintenance Manager reported that a Cessna 404 pilot experienced strong vibrations, an oil pressure decrease, and subsequent engine failure on the left engine while on approach.

ACN: 1525665 *(19 of 50)*

Synopsis

Air carrier receiving inspector reported that parts from different manufacturers were stored in the same bin in violation of FARs.

ACN: 1524750 *(20 of 50)*

Synopsis

A Maintenance Technician reported that the work environment and culture at this work place is not safe and standard practices are not followed.

ACN: 1523945 *(21 of 50)*

Synopsis

A Helicopter Maintenance Technician reported that the balancing spring for the duel controls was not in the proper position.

ACN: 1523478 *(22 of 50)*

Synopsis

B737-800 Maintenance Technician reported that while replacing the rudder, a restraining sling broke loose, subsequently swinging the rudder into their working platform.

ACN: 1522645 *(23 of 50)*

Synopsis

Maintenance personnel on a Bombardier CRJ reported that the throttle lockout and stow switches were installed incorrectly.

ACN: 1522636 *(24 of 50)*

Synopsis

Maintenance Technician reported lifting the nose of the aircraft with the tow cradle unaware that a tail stand had been installed.

ACN: 1522012 *(25 of 50)*

Synopsis

Two Maintenance Technicians reported that replacing a rudder on a 737 became a very difficult task due to inadequate equipment.

ACN: 1521612 *(26 of 50)*

Synopsis

A Maintenance Technician reported that the flight crew inaccurately wrote-up the crew oxygen required servicing after it was signed-off as being within limits.

ACN: 1521071 *(27 of 50)*

Synopsis

A Maintenance Technician with Inspection Authority reported releasing an aircraft for service that had not received a full annual inspection.

ACN: 1521003 *(28 of 50)*

Synopsis

A300 Maintenance Technician reported that after completing a brake deferral the flight crew experienced MLG brake dragging during taxi out.

ACN: 1521002 *(29 of 50)*

Synopsis

Airbus A300 maintenance technician reported the Ram Air Turbine (RAT) was damaged during testing.

ACN: 1519094 *(30 of 50)*

Synopsis

Maintenance person reported a discrepancy between the Aircraft Maintenance Manual and the aircraft panel labeling of the circuits breakers, for the Tablet Interface Module on the A320 fleet.

ACN: 1518645 *(31 of 50)*

Synopsis

FAA Maintenance Inspector reported the collective handle of an MD500 broke off during the pilot's preflight in extreme cold weather.

ACN: 1517894 *(32 of 50)*

Synopsis

Maintenance Technician reported that a CRJ700 made contact with a pole while being tugged into the hangar.

ACN: 1517891 *(33 of 50)*

Synopsis

Air carrier mechanic reported that often mechanics are assigned tasks alone which can have dire consequences if a seriously inured were to occur.

ACN: 1517365 *(34 of 50)*

Synopsis

An Embraer EMB Maintenance Technician reported that a speed brake panel was damaged when they turned on hydraulic power.

ACN: 1517120 *(35 of 50)*

Synopsis

A Maintenance Inspector working on a Cessna Citation reported that the Owner/Operator failed to properly document completion of tasks previously accomplished.

ACN: 1516870 *(36 of 50)*

Synopsis

A Maintenance Crew working on an Airbus A330 reported that the rudder contacted the tail stand when they tested the rudder operation.

ACN: 1516868 *(37 of 50)*

Synopsis

Maintenance Technician reported the external equipment hoist failed and damaged the aircraft.

ACN: 1516230 *(38 of 50)*

Synopsis

A319 was reported that it was released for flight with known wire damage in violation of the GMM.

ACN: 1516229 *(39 of 50)*

Synopsis

B767 emergency medical kit was found discarded in the jet-bridge.

ACN: 1516222 *(40 of 50)*

Synopsis

A Maintenance Technician reported that many company procedures and policies are not being followed.

ACN: 1516213 *(41 of 50)*

Synopsis

A320 maintenance crew reported that when they attempted a cross-bleed start, the right engine caught on fire.

ACN: 1515636 *(42 of 50)*

Synopsis

Maintenance Technician reported mechanic's tools were found in an engine cowling.

ACN: 1515634 *(43 of 50)*

Synopsis

A Maintenance Technician reported that a jet bridge impacted a maintenance vehicle tipping it over.

ACN: 1515632 *(44 of 50)*

Synopsis

B757 Mechanic reported that an aircraft tow crew was unware that external power was not to be activated.

ACN: 1515127 *(45 of 50)*

Synopsis

Maintenance personnel reported that the engine mounts on a Boeing 757 were over-torqued because the part number of the mount bolts were incorrect.

ACN: 1513281 *(46 of 50)*

Synopsis

B737NG Maintenance crew reported that after they accomplished tasks on number one and two engines, the next day, the aircraft had an inflight Engine Driven Hydraulic Pump failure.

ACN: 1513280 *(47 of 50)*

Synopsis

Maintenance Personnel reported that incoming Boeing 737 slides have a different style lanyard and battery pouch than on previous slides. Maintenance was not notified of part number change.

ACN: 1512347 *(48 of 50)*

Synopsis

Maintenance technician reported a Boeing 737 "Overheat Detection Control Unit" was improperly installed and not secured.

ACN: 1511459 *(49 of 50)*

Synopsis

A Maintenance Supervisor reported that an oxygen servicing booster blew a brass cap due to extreme heat.

ACN: 1510756 *(50 of 50)*

Synopsis

A Maintenance employee reported that damage and an improper repair on an Airbus A320 reverser were not documented.

Report Narratives

ACN: 1547034 *(1 of 50)*

Time / Day

Date : 201805

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Make Model Name : No Aircraft

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1547034

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Maintenance
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Equipment / Tooling
Primary Problem : Company Policy

Narrative: 1

For over a year, I have been trying to have Management address a serious concern regarding the security of the Maintenance Computer System and Ancillary Computer System. One issue was about Engineering not having control over technical documentation reference within the Ancillary Computer System extension.

I expressed the issue of security within Maintenance Computer System / Ancillary Computer System. Some of the concerns are, anyone can access the Maintenance Computer System and use anyone's file number to sign off a unit as serviceable without that person knowing it had been done. Once the unit is serviceable in the Maintenance Computer System, anyone could make a label within the Ancillary Computer System, which would show the file number of the unaware person on a calibration label with updated calibration date. This is without finishing the sign off process in Ancillary Computer System.

Other issues found by other technicians and myself are: The unit wouldn't need to be

made serviceable as stated above to be able to make an updated calibration label. When the unit is made unserviceable if the person preforming the function uses todays date in Maintenance Computer System, it will automatically update the calibration date by whatever the cycle for the unit is. I have brought this issue up in the Calibration team, multiple times over the last year. The issue continues to remain and no actions have been taken to resolve our concerns of security, safety, or compliance for Tooling at Company.

Suggested Resolution: Secure the database. Also engineering control over database concerning technical information.

Synopsis

A Maintenance Technician reported ongoing concerns with the aircraft parts computer systems.

ACN: 1535000 *(2 of 50)*

Time / Day

Date : 201804

Place

Locale Reference.Airport : ORD.Airport
State Reference : IL

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.Tower : ORD
Aircraft Operator : Air Carrier
Make Model Name : B737 Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use.Localizer/Glideslope/ILS : Runway XX
Flight Phase : Initial Approach
Airspace.Class B : ORD

Component

Aircraft Component : Flight Dynamics Navigation and Safety
Aircraft Reference : X
Problem : Failed
Problem : Malfunctioning

Person

Reference : 1
Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Maintenance : Lead Technician
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Type : 2224
ASRS Report Number.Accession Number : 1535000
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation - Procedural : MEL
Detector.Person : Flight Crew

When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Overcame Equipment Problem
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Primary Problem : Aircraft

Narrative: 1

Given a go around by ATC in ORD after [the aircraft in front of us] slowed to 150 early when they were assigned 170 on final. ATC tried to adjust aircraft in front of us, but we were all speed limited to 156 and higher due to arrival wind conditions. ATC initiated a missed approach using improper phraseology then [said it] correctly the second time, during which we went to Control Wheel Steering (CWS) mode when, coincidentally, the LOC GS and FD blanked on both sides of the aircraft on autopilot A. We successfully completed the go around and returned to autopilot A as the navigation equipment came back and identified after reset.

The approach that followed had the exact same blanking of all NAV data at 500 until the ground, this time hand flying and under visual conditions. We queried ATC and were the only ones who reported an issue. We wrote up the LOC GS sensing in the Electronic Logbook (ELB) and switched aircraft. I followed up [later] and it appeared my write up was released under MEL for the autopilot A, which never failed or was written up by us. I called Maintenance Control to query him on the decision and he agreed it did not sound like an autopilot issue based on my write up and our conversation. I also briefed the crew on the issue on our arrival to ORD. The maintenance controller said he would follow up with an inflight uplink to make the crew aware.

My concern rested with the, in my opinion, incorrect diagnosis and remedy to the approach navaid sensing issue, and the repeated issue occurring in the future if it happened to another crew during another similar situation on approach low to the terrain. Especially with the new, descent checklist and arrival flows, increased weather and the go around simultaneously happening the same time, this issue needed more attention than I feel it received.

Synopsis

B737 Captain reported the localizer, glideslope, and flight director blanked on both sides during approach.

ACN: 1533815 *(3 of 50)*

Time / Day

Date : 201804
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : MD-11
Operating Under FAR Part : Part 121
Mission : Cargo / Freight
Flight Phase : Parked
Maintenance Status.Maintenance Deferred : Y

Component

Aircraft Component : Cargo Restraint/Tie Down
Aircraft Reference : X
Problem : Failed

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1533815
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : MEL
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : MEL
Primary Problem : MEL

Narrative: 1

After troubleshooting Load shuttle beam, I found that we did not have the required part in stock, at that time. I removed the shuttle beam and attached to the rear wall. Then I came in and looked up MEL procedures for the load shuttle beam. I pulled up MEL 25-XX-XX -A, 25-XX-XX -B, and 25-XX-XX -C [and] after studying all these MELs, I found that 25-XX-XX -A fit the issue the best. The reason for this is that in 25-XX-XX -A there was no affectivity issues and it also made it possible to use the "erecting the partial load latches" for the 7L and 7R position usable. 25-XX-XX -C did not allow for that and called for Voiding of the 5L, 5R, 6L, 6R 7L, and 7R. For this reason, I used the 25-XX-XX -A and voided 6L and 6R, which with the floor locks that were installed on the floor makes it so only 6L and 6R, are effected.

Suggestions: Having the correct verbiage on the MEL 25-XX-XX -A, add the correct affectivity to it, since there is no such restrictions on this MEL.

Synopsis

A Maintenance Technician reported that the MD-11 Cargo "Load Shuttle Beam" needed to be deferred because the required part was not in stock.

ACN: 1533808 *(4 of 50)*

Time / Day

Date : 201804
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Airbus Industrie Undifferentiated or Other Model
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked

Component

Aircraft Component : Electrical Wiring & Connectors
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1533808
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Other

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Engineering Order (EO) has us installing blue circuit breakers (CB) collars to harmonize the fleet. The CB collars called for in the EO do not allow the high demand CBs on panel 123VU of the Airbus fleet to be deactivated. With the collar installed, the CB can be pushed in and there is no visual indication that it is in due to the way the collar fits. The alternate CB collar listed in the Procedures Manual also allows the CB to be pushed in. This was placed on documentation per Procedures Manual instruction and cleared with a collar that doesn't lock out the CB.

The EO did not take all different size CBs into consideration. Suggestions: Put a hold on performing the EO on any more aircraft until a proper CB collar can be found.

Synopsis

A Maintenance Technician reported that new circuit breaker collars do not allow the high demand circuit breakers on panel in the Airbus fleet to be deactivated.

ACN: 1533432 *(5 of 50)*

Time / Day

Date : 201802
Local Time Of Day : 0601-1200

Place

Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Boeing Company Undifferentiated or Other Model
Operating Under FAR Part : Part 121

Component

Aircraft Component : Hydraulic System Lines, Connectors, Fittings
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1533432
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Incorrect / Not Installed / Unavailable Part
Contributing Factors / Situations : Procedure
Primary Problem : Incorrect / Not Installed / Unavailable Part

Narrative: 1

Used consumable part recertified with status "tested" on [FAA form] 8130-3 based on "bogus" procedures - FAA should be [notified]. Part Number: 272A1552-3 Tube assemblies - hydraulic, wing trailing edge, left inboard, ordered [for the aircraft] for use on [a] work order. The part is classified as consumable-unrepairable. This hydraulic tube is for high pressure for the Spoiler System A. There is no specific repair for this type of part.

The tube assemblies were produced 20 years ago and traceable to [a foreign carrier] via [a] Testing Laboratory for test and re-certification/FAA 8130-3/return to service according to block 14a dated earlier this year, further handled via spare parts vendors. Our company has purchased the part from the spare parts vendor. The part has significant wear marks. The part is tested by [the] Testing Laboratory. Boeing Standard BAC5001 test procedure is not followed according to the documentation.
- There is no specific Component Maintenance Manual (CMM) for this part. Doing any type of repair is not an option for our company or even Boeing.
- The test report received refers to a CMM 20-00-00. There is no such document. The closest thing is the Standard Overhaul Practices Manual (SOPM) 20-00-00 and the SOPM does not have any type of procedure whatsoever as how testing should be carried out on hydraulic tubes.
- The test procedure used for this particular part was a bench test to 900 psi for 5 minutes. The drawing requirement for pressure testing is approximately 12,000 psi.
- The test procedure was not done according to the SOPM.
- After a closer look at [the] part, currently in quarantine, there were signs of wear and damage. The nut is chaffed and there are marks on the inside surface at both ends.

Receiving Inspection stopped the part due to the fact that consumable parts should not have a FAA 8130-3 with status "tested" in block 11, but "new". After a closer look it appears that the part has significant wear marks and that the procedure for the described testing is not according to Boeing recommendations. The re-certification process should be addressed to the involved companies and FAA. We recommend that the part should be scrapped on site and to be sure that this part is not sold again based on wrong premises.

Synopsis

A Maintenance Technician reported that used consumable parts are tested and re-certified using bogus procedures.

ACN: 1532715 *(6 of 50)*

Time / Day

Date : 201804
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Daylight

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Airbus 318/319/320/321 Undifferentiated
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked
Maintenance Status.Records Complete : Y
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Work Cards
Maintenance Status.Maintenance Items Involved : Inspection

Component

Aircraft Component : Main Gear Door
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Inspector
ASRS Report Number.Accession Number : 1532715
Human Factors : Communication Breakdown
Human Factors : Workload
Human Factors : Troubleshooting
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Other
Communication Breakdown.Party2 : Maintenance

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance

Detector.Person : Other Person
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Human Factors
Primary Problem : Procedure

Narrative: 1

I accomplished job card and Inspected MLG (Main Landing Gear) Keel Beam Door Hinge & Actuator Fitting - Non Destructive Test (NDT), on Aircraft X. On the left actuator fitting, I found the bushing migrated about an 1/8 [of an] inch on the forward lug. On the right actuator fitting, I found that the bushing on the aft lug was missing. I commented to the mechanic assigned to the job that the bushing was gone and he told me that it was in the parts bag with the rest of the hardware. I verified that the bushing was in the parts bag.

I completed the Detailed Visual Inspections (VDI) and the NDT inspections required by the job card. I created two non-routine work cards in Fleet cycle (26-XXXX-X-XXXX/001, SN: 003 and 26-XXXX-X-XXXX/002, SN: 004) with Discrepancy descriptions stating that the bushings had migrated.

During my next routine shift, I found that the non-routines were signed off and tallied. The completion statement was "Cleaned lug, found bushing installation OK for continued service." I feel that this was not an adequate corrective action for the discrepancy that I noted and basically nothing was done to correct the discrepancy or notify engineering as required by the job card.

I brought this to Quality Control (QC) Supervisor's attention, and he reopened both non-routines to have them worked. At the beginning of first shift, another QC Supervisor interviewed me and [a] QC Inspector, since [this] QC Inspector had bought back the non-routines. QC Inspector Mark stated that the machinist called him out to look at the bushings because he couldn't find anything wrong. QC Inspector stated that he did not see anything wrong. The bushings were installed and looked correct. QC Supervisor acknowledged that there needed to be more investigation and at that time, it was left to management to resolve.

I believe that undocumented maintenance was accomplished by someone reinstalling the bushings before the machine shop came out to look at the job. Normally when bushing migration is found on this inspection, the machinist will remove the bushing and measure the bore of the fitting. This information is then passed on to Engineering for them to use in creating a repair authorization.

My immediate concern is that both the left and right MLG actuators on Aircraft X are not properly installed because the bushings were found to be migrated and then reinstalled improperly. They are to be an interference fit per the documentation. Also, Engineering is to provide the repair authorization as stated in the job card, not arbitrarily reinstalled and not documented. I believe that the upper attach points for the MLG Door actuator for both left and right gear doors be disassembled, the bushings in question be removed and inspected including measuring the bores of the fittings. The findings should then be given to Engineering for review and a proper repair provided. Anything less cannot be considered

as being in compliance with AD 2015-02-14.
Going forward, policies, or protocols should be in place to address issues concerning undocumented maintenance. I would like to see a policy that if an inspector is unsure of the findings and non-routines written by another inspector, that a work stop be placed on the non-routines in question and the matter investigated with the originator of the non-routine. I am giving this information as I see the potential of an aircraft being released into service in an un-airworthy condition.

Synopsis

A Maintenance Inspector reported the bushings on the aircraft's main gear door actuator migrated, after further review the item was incorrectly signed off.

ACN: 1532707 *(7 of 50)*

Time / Day

Date : 201804

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B767-400 and 400 ER

Component

Aircraft Component : Gear Extend/Retract Mechanism
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1532707
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Procedural : Maintenance
Anomaly.Ground Event / Encounter : Other / Unknown
Detector.Person : Maintenance
When Detected.Other
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Equipment / Tooling
Primary Problem : Equipment / Tooling

Narrative: 1

Main Gear actuator was raised with hoist equipment up to wing level. Tooling that held actuator to hoist failed. The bolt that held hoist swivel link between hoist and actuator clamp came off. Actuator fell 12 feet to ground and almost struck several personnel. Luckily no one was injured. Upon further investigation, the bolt that held the hoist swivel link came loose and fell out. The bolt has only 4 threads to hold the weight of the actuator and there is no locking device to prevent bolt from coming out.

Synopsis

B767 Maintenance reported that the hoist equipment failed when raising a main landing gear actuator.

ACN: 1531763 *(8 of 50)*

Time / Day

Date : 201804
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Regional Jet 900 (CRJ900)
Operating Under FAR Part : Part 121
Flight Plan : None
Flight Phase : Parked
Maintenance Status.Maintenance Deferred : Y
Maintenance Status.Records Complete : Y
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Inspection

Component

Aircraft Component : Oxygen System/Portable
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person.Aircraft : X
Location In Aircraft : General Seating Area
Reporter Organization : Air Carrier
Function.Maintenance : Lead Technician
ASRS Report Number.Accession Number : 1531763
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

The flight crew wrote up that the wrong Oxygen (O2) mask was installed at the aft portable O2 bottle. Outstation maintenance deferred the mask. The aircraft then flew to here, where it is currently [in] a hangar Routine Overnight check. I realized there was an open MEL for the mask and went to investigate myself. I walked to the back of the aircraft and saw that the 4 LPM (Liters Per Minute) bag was tagged INOP and a solid tube was sticking out of the bag, indicating that a demo O2 mask was installed. I took a photo of what I found and verified that the bottle's Serial Number, location installed, and date.

A demo mask was installed in place of a 4 LPM oxygen mask. Mask installation requires an operational check, and the 4 LPM mask is supposed to remain connected to the bottle. This was missed by multiple flight crews. A new 4 LPM mask has been ordered and I delegated replacement to one of our technicians.

Synopsis

Lead Technician reported that an incorrect O2 mask was installed on the portable oxygen bottle in a CRJ-900.

ACN: 1531759 *(9 of 50)*

Time / Day

Date : 201804
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737 Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Parked

Component

Aircraft Component : Turbine Engine
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Hangar / Base
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1531759

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Manuals
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Aircraft called in with sand in engines. I determined with crew chief and supervisor it was due to jet blast. This requires a borescope as well as an inspection 05-XX-XX. Neither were

accomplished. This is [the] second incident that happened this week. One was an Electrical Wiring Interconnect System (EWIS) that was signed off for a belly wash and now this. Safety is being violated.

Synopsis

Maintenance person reported an aircraft was found with debris in the engines and the required procedure to address the issue was not accomplished.

ACN: 1531460 *(10 of 50)*

Time / Day

Date : 201804

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : A319
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked

Component

Aircraft Component : Fuel Tank Cap
Aircraft Reference : X

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1531460
Human Factors : Other / Unknown

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
When Detected : Pre-flight
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Incorrect / Not Installed / Unavailable Part
Primary Problem : Incorrect / Not Installed / Unavailable Part

Narrative: 1

Aircraft X needed a fuel cap installed due to it missing from aircraft. Maintenance received a radio call reported by the fueler that a fuel cap was missing and thus applied the proper Crew Deviation List (CDL) application and thus deferred the item legally. Sometime later another radio call came in indicating that the Captain would like the log cleared as there is now a fuel cap installed. The tech was surprised at this news as he did not install this mystery cap since he applied the CDL earlier to address the problem. After investigating

the issue he found out that the fueler installed an uncontrolled fuel cap on the aircraft. [Found] out that fuel caps are being purged from [company] spare stock with certain part numbers effected. The issue at hand here with a viable question is, how and why does a subcontractor have access to fuel caps that are uncontrolled floating around in their hands? These are all [different aircraft model] parts that are controlled by the Aircraft Maintenance Department. The [maintenance technician] removed the installed fuel cap and maintained the Deferred Status of the Fuel Cap.

Synopsis

Maintenance Technician reported that an uncontrolled part was installed on an Airbus.

ACN: 1530759 *(11 of 50)*

Time / Day

Date : 201803
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Make Model Name : EMB ERJ 170/175 ER/LR

Person : 1

Reference : 1
Location Of Person : Company
Location In Aircraft : Flight Deck
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1530759
Human Factors : Troubleshooting
Human Factors : Training / Qualification

Person : 2

Reference : 2
Location Of Person : Company
Location In Aircraft : Flight Deck
Function.Maintenance : Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1530760
Human Factors : Troubleshooting
Human Factors : Training / Qualification

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Manuals
Contributing Factors / Situations : Procedure
Primary Problem : Manuals

Narrative: 1

I was asked to sit left seat and do the steady state break-in runs and the transient break-in runs for the No. 1 Engine. Prior to doing the runs, my partner and I reviewed the procedures in the GE Line Maintenance Manual (LMM) 72-00-00. We were confident about doing the runs being it was our first time and not familiar with the procedures. After several hours of reviewing the GE manual for the runs, we felt confident to do the runs. As we were doing the runs we came across some issues with N2 settings and Interstage Turbine Temperature [ITT] readings that could not be accomplished and required skipping the procedures that the manual did not clearly address these issues. We decided to error on the side of caution and skip these steps but added the soak times to the next available step. There were other steps requiring reduction in power when an increase in power was required. We also came across a setting to go to called approach idle. We were unsure of this setting because in the initial set up it tells you to select it to the off position in the takeoff data set in the MCDU. After completing the runs we returned to the hangar and discussed these irregularities with other mechanics as to what they would have done. We all had different interpretations of the GE Manual. As we felt we did the runs correctly and to the best of what we had to go by, we cannot be certain that we did them properly to the GE Manual specs. I have been in touch with Powerplant Engineering. They have answered most questions confirming we did do proper runs on soak times and skipping procedures. They are researching into the flight idle issues and need to be in contact with GE. We felt compelled to fill this [report] out to bring to the attention of more clarification to these runs and possibly a job card to ease the time to research all the data needed prior to doing the runs.

Unable to reach certain settings required by GE LMM. [Suggest] Job card with all reference charts and graphs with clarifying instruction to understand the task at hand. OJT

Narrative: 2

[Report narrative contained no additional information.]

Synopsis

Two maintenance technicians reported the manuals for the Embraer ERJ engine test were ambiguous and were subject to interpretation.

ACN: 1530758 *(12 of 50)*

Time / Day

Date : 201803
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Regional Jet 200 ER/LR (CRJ200)
Operating Under FAR Part : Part 121
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Inspection

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Lead Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1530758
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Other / Unknown
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Aircraft was pushed out of the hangar for operational check of the right engine anti-ice relief valve. The wind that night was 20 knots out of the east. The aircraft was turned east

to face the wind. It was then pointed out that there were two planes parked west of our hangar. Thinking the runs only require idle runs, I had the aircraft move forward until there was at least 140 to 150 feet apart and looked like the exhaust was pointed away from the other aircraft. The aircraft was parked with the tug still hooked up and chocked. After engine startup, started doing the operational check of the right engine anti-ice valve. The operations check had you turn the valve switch on and off four times at idle power. Then I was told that the next step required that the engine be at 85% N2 turning on the valve switch on and off several times as power was returned to idle. With the aircraft still hooked up to the tug and chocked and thinking that the distance would still be good, I moved the throttles up to 85% N2 and back to idle, completing the operations check. I deployed the thrust reversers a few times then the engine was shut down. Got out of the aircraft, removed the chocks. The aircraft was pulled back in the hangar, post checks done and the paperwork signed. I went on my days off and when I got back the [following week], I was informed that the exhaust from the aircraft that night had damaged the other aircraft parked on the ramp.

Cause: running an aircraft pointing exhaust facing another aircraft. Doing an engine run that requires more than idle power on the ramp in front of the hangar. Leaving the plane still hooked to the tug and chocked so it could not be moved. Be more aware of what runs are required for operational check when needed, and aware of what may be behind the aircraft.

Synopsis

Maintenance Technician reported that after doing an engine run, the exhaust from the Bombardier CRJ-200 damaged other aircraft parked behind it.

ACN: 1529567 *(13 of 50)*

Time / Day

Date : 201803
Local Time Of Day : 0601-1200

Place

Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Government
Make Model Name : UAV - Unpiloted Aerial Vehicle
Mission : Training
Maintenance Status.Maintenance Deferred : N
Maintenance Status.Maintenance Items Involved : Testing
Maintenance Status.Maintenance Items Involved : Installation

Component

Aircraft Component : Propeller Pitch Change Mechanism
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Military
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
Experience.Maintenance.Technician : 25
ASRS Report Number.Accession Number : 1529567
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Maintenance

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

While preforming propeller blade angle rigging, a movement of the power lever was commanded by maintenance technician 1 at the aircraft via radio to maintenance technician 2 in the Ground Control Station. Not realizing a rig pin was installed in the Propeller Pitch Controller, PPC, by maintenance technical 3, the power servo sheered the compass mount out of rig with the PPC housing. Though the PPC unit was not damaged the rigging compass mounted to the PPC was damaged requiring the replacement of the entire PPC. It was my perception as technician 1 that communication with technician 3 was not good and by the time I made the request to move the power lever it was too late to remove the rig pin and prevent the damage, with great force the rig pin was removed.

Synopsis

A UAV Technician reported that the pitch controller was moved with the rig pin still installed.

ACN: 1527682 *(14 of 50)*

Time / Day

Date : 201803
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Work Cards

Component

Aircraft Component : Oil Filter
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1527682
Human Factors : Time Pressure
Human Factors : Fatigue
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

I performed the removal and installation of the main oil filter of the Number 1 ENG along with replacing both IDG filters and starter oil replenishment. Other maintenance required was the manual deployment of blocker doors for inspection. Installation of main oil filter was performed accordingly to specifications and safety wired with a 5 minute engine run at idle for leak check function. No leaks detected at time of engine run. Evidently proper torque of filter drain plug was not applied before safety wire application (again improperly done) due to complacency and distraction of other maintenance tasks performed on engine at the same time.

I was trying to get maintenance done in a timely manner and was doing more than one application at a time, which led to my mistake. The blocker door inspection is a large task which requires 2 individuals to accomplish, and I interrupted my other tasks to accomplish it. I also have a tear on the top of my foot which extends into all joints and bottom plate. I don't want to use this as an excuse, but the constant pain has been causing me distraction.

In the future I will be completing one task at a time to ensure that I accomplish my work properly and without distraction or interruption. I have never been involved in the interruption of a flight where passenger's safety was at stake. I do not take this incident lightly and do not want to repeat this event.

Synopsis

Maintenance Technician reported that proper torque of a filter drain plug was not applied before safety wire application.

ACN: 1527413 *(15 of 50)*

Time / Day

Date : 201803
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Phase : Parked

Component

Aircraft Component : Cowling
Aircraft Reference : X

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1527413

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Object
Detector.Person : Maintenance
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Equipment / Tooling
Primary Problem : Equipment / Tooling

Narrative: 1

Maintenance accomplished on number 1 engine. Positioned engine stand to open cowling. While extending lift upward, stand stalled then surged up. Extended too far striking lower aft cowling [and] cracking a hole.

Found afterwards that with air compressor on [and] with lift operations in motion, engine [will] stall then surges.

[Add an] interlock to the stand [where] you can only operate [the] air or lift controls.

Synopsis

Maintenance person reported that when a lift was used to open the engine cowling it surged up and damaged the lower aft cowling.

ACN: 1526936 *(16 of 50)*

Time / Day

Date : 201803

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : MD-11
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Phase : Parked
Maintenance Status.Maintenance Items Involved : Repair

Component

Aircraft Component : Trailing Edge Flap
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Hangar / Base
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1526936
Human Factors : Situational Awareness
Human Factors : Time Pressure

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Equipment / Tooling
Contributing Factors / Situations : Procedure
Primary Problem : Equipment / Tooling

Narrative: 1

[Maintenance Worker] was seriously injured while using a forklift to remove a flap from a 757. These injuries resulted from being forced by the Company to use equipment unsafe to change flaps on aircraft. AMTs were forced to use a forklift to replace the main aft flap on Aircraft X risking injury to AMTs and damage to aircraft. The Company has also

failed/refused to provide any information on what equipment forklifts may be used for or instruction/precautions when using the forklift to secure flight controls and other large objects. The Company's negligence could result in catastrophic failure.

[A similar incident resulted in] the flight crashed during takeoff when the Number 1 engine separated from the wing. The engine separated as a result of a new procedure whereby AMTs used a forklift to support the engine while it was being detached from the wing. While most other carriers used a hoist, [this company] used a forklift. Under the procedure used, if the forklift was in the wrong position, the engine would rock like a see-saw and jam against the pylon attachment points. The procedure used caused an indentation that damaged the clevis pin assembly and created an indentation in the housing of the self-aligning bearing, which in turn weakened the structure sufficiently to cause a small stress fracture. The fracture went unnoticed for several flights, getting worse each flight. During takeoff, enough force was generated to finally cause the pylon to fail. At the point of rotation, the engine detached and was flipped over the top of the wing

Synopsis

B757 Maintenance Technician reported that they used a forklift to replace the main aft flap.

ACN: 1525958 *(17 of 50)*

Time / Day

Date : 201803
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B767-300 and 300 ER
Operating Under FAR Part : Part 121
Flight Plan : IFR
Nav In Use : FMS Or FMC
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Work Cards
Maintenance Status.Maintenance Items Involved : Testing

Component

Aircraft Component : Pitot-Static System
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1525958
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Equipment / Tooling
Contributing Factors / Situations : Procedure
Primary Problem : Equipment / Tooling

Narrative: 1

I was performing the Ram Air Turbine (RAT) deployment test. To perform this test you have to use the pitot test equipment. During installation of the pitot tubes covers/seals, I tried to align all four covers on the pitot tubes the same amount to provide an adequate seal. I was unaware that the pitot tool cover could bottom out and actually cut into the rubber insert in the bottom of the tool. After finishing the job and removing the covers from the pitot tubes I visually inspected the pitot tubes as required by the paperwork and did not notice the small piece of black rubber that had become stuck in the end of the tube, flush with the end. During the removal process of the covers, I was also trying to be diligent and cautious but also careful with my time management because we had an check coming in about 30 minutes.

Suggestion: The lead was an upgraded lead and not the normal lead for this shift. We had three guys on the job with the same experience level as myself on this job. It could help prevent future incidents like this one from happening by adding a section to the associated paperwork stating to be careful installing covers because the tool could bottom out putting FOD in the end of the Pitot tube.

Synopsis

A Maintenance Technician reported that when he removed a pitot cover on a B767-300, a rubber piece was left in the end of pitot tube.

ACN: 1525728 *(18 of 50)*

Time / Day

Date : 201712
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZZ.Airport
State Reference : FO

Environment

Light : Night

Aircraft

Reference : X
ATC / Advisory.TRACON : ZZZZ
Aircraft Operator : Air Taxi
Make Model Name : Cessna 404 Titan
Crew Size.Number Of Crew : 1
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Maintenance Status.Maintenance Deferred : N
Maintenance Status.Records Complete : Y
Maintenance Status.Released For Service : Y
Maintenance Status.Maintenance Type : Unscheduled Maintenance

Component

Aircraft Component : Engine
Aircraft Reference : X
Problem : Failed

Person

Reference : 1
Location Of Person : Repair Facility
Reporter Organization : Air Taxi
Function.Maintenance : Other / Unknown
Qualification.Maintenance : Inspection Authority
ASRS Report Number.Accession Number : 1525728
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Critical
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Maintenance Action
Result.Flight Crew : Inflight Shutdown
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

During approach to ZZZZ, pilot reports first strong vibration then an oil pressure decrease on engine left. Emergency checklist performed, propeller put in idle position and engine shutoff. ATC is aware of the issue and the pilot asked for priority landing. One engine landing is performed and the aircraft is parked.

The engine GTSIO-520-M have TSN/TSO 952FH and was rebuilt in 20XX. Since rebuilt, no cylinder change or removal occurs. Per EASA (European Aviation Safety Agency) and French regulation our company reported to BEA (French NTSB) and engine manufacturer. We replaced the engine in order to return the aircraft to service and decided to inspect the broken engine. We also contacted two engine shops which indicate that the most probable cause is "counterweight detuning." Mechanics disassembled the engine in order to find root cause. The inspection report stated one counterweight is broken which could break [a] lot of internal part.

If the root cause is the counterweight, the inspection also showned that a lot of connecting rod nuts (locknut "spiralock") which should be torqued to 550-575 in/lbs was easily removed. The lock system was inoperative on most of them. They could be fit and unfit by hand. This remark should be taken in account because we incriminate the counterweight for many years, but it's possible that the poor quality of these locknuts with age is the root cause (Locking system failure could cause loosening, vibrations, then connecting bolt broke, which broke the counterweight).

Synopsis

Maintenance Manager reported that a Cessna 404 pilot experienced strong vibrations, an oil pressure decrease, and subsequent engine failure on the left engine while on approach.

ACN: 1525665 *(19 of 50)*

Time / Day

Date : 201803
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Inspection

Person

Reference : 1
Location Of Person : Repair Facility
Reporter Organization : Air Carrier
Function.Maintenance : Inspector
ASRS Report Number.Accession Number : 1525665

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Incorrect / Not Installed / Unavailable Part
Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Shear tie Part Number 141A1172U9, Inventory Number XXXXXXX was fabricated by [a contracted parts supplier] with a Boeing SMAL (Spares Material Authorization License) on a purchase order. This is the same number that is designated for a Boeing produced part.

Both SMAL and Boeing parts are stocked in the stock room under the same number.

Bracket Part Number 212A1214-9, Inventory Number YYYYYYY was fabricated by [a contracted parts supplier] with a Boeing SMAL on a purchaser order. This is the same number that is designated for a Boeing produced part. Both SMAL and Boeing parts are being stocked together in the same location.

There are no procedures or safeguards in place to prevent the unauthorized use or sale of SMAL produced parts.

Synopsis

Air carrier receiving inspector reported that parts from different manufacturers were stored in the same bin in violation of FARs.

ACN: 1524750 *(20 of 50)*

Time / Day

Date : 201802
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Corporate
Make Model Name : Any Unknown or Unlisted Aircraft Manufacturer
Operating Under FAR Part : Part 91
Flight Phase : Parked
Maintenance Status.Maintenance Deferred : N
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Work Cards
Maintenance Status.Maintenance Items Involved : Inspection

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Corporate
Function.Maintenance : Technician
Qualification.Maintenance : Repairman
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
Experience.Maintenance.Technician : 17
ASRS Report Number.Accession Number : 1524750
Human Factors : Communication Breakdown
Human Factors : Training / Qualification
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Other
Communication Breakdown.Party2 : Maintenance
Analyst Callback : Completed

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Equipment / Tooling
Contributing Factors / Situations : Procedure
Primary Problem : Company Policy

Narrative: 1

I just started working here [recently.] My findings so far, no R&I log allowed or available no matter scope or depth of maintenance. I was given a strut gauge 3 months out of calibration to service a Nose Landing Gear (NLG) I refused. No torque wrench documentation in corridor. Tool sign out sheet only has name date out/in.no traceability to without, item # etc. No fall protection program. I stood my ground and forced the issue and they bought some anchor points and reels after I spent weeks doing heavy maintenance on the tail section with no (none) harness, lanyard or reel. I was 20 feet up!!

I have worked on the these types of planes but rarely have to sign my work off. I have no idea who is signing my work off at times. I do a huge amount of work and nothing to officially sign off?? That is weird! No safety program at all. I saw and heard a lead ask tech sometimes if they can sign off the techs work using the techs own [company] log in.
Ok's to install never documented and sometimes given without proper inspection before install or close.

I have been given tasks with no Maintenance Manual (MM). It is not standard for mechanics here to look up their MM. Supervisor is too busy to print everything out many times I only get a page or two.

Culture is not safe and needs major attention to standard practice. General Manager (GM) literally told me feds come once a year, well it is very obvious.
Over utilizing part 91 maintenance is abused at this facility in my opinion. It should be part 145 maintenance safety and documentation of maintenance on the floor is an issue here.
I am reporting because [this company] does not operate like the other 20+ facilities I have worked at. They fall below standards in my opinion GM is driving this way of doing and approaching maintenance.

We never have morning debrief, info is spread word of mouth only. GM told me he thinks the meetings are a waste of time. [This company] is operating using other people's log instruments to manufacturer website portals. Not sure if this is a violation. Communication between leadership and techs is low priority. Constant threats of firing to motivate techs. by supervisors/leads and yes we reported it to GM. Still happening all the time.

I was physically assaulted by a lead tech. GM just rationalized the lead techs behavior with no reprimand. This was over my refusal to use a 3 month out of calendar strut gauge on a NLG. I was super pissed at this injustice!!

Techs that are new to aviation are not trained on any aircraft we service that I am aware of. No school offered. For me this all adds up to an accident waiting to happen.
[This company] is trying but not hard enough. If I plan to work there long term it needs to be run by the book. Safety, quality and obedience of the standard practices.

Callback: 1

Callback added no additional information.

Synopsis

A Maintenance Technician reported that the work environment and culture at this work place is not safe and standard practices are not followed.

ACN: 1523945 *(21 of 50)*

Time / Day

Date : 201801
Local Time Of Day : 0601-1200

Place

Altitude.AGL.Single Value : 0

Environment

Light : Night

Aircraft

Reference : X
Make Model Name : Eurocopter AS 350/355/EC130 - Astar/Twinstar/Ecureuil
Crew Size.Number Of Crew : 1
Mission : Ambulance
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Installation

Component

Aircraft Component : Collective Control
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
Experience.Maintenance.Technician : 16
ASRS Report Number.Accession Number : 1523945
Human Factors : Situational Awareness
Human Factors : Fatigue
Human Factors : Training / Qualification

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Anomaly.Ground Event / Encounter : Loss Of Aircraft Control
Detector.Person : Maintenance
When Detected : Pre-flight
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Manuals

Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

One problem was the pilot did not put on the collective lock, the aircraft lifted again and had a hard landing seconds later.

I had removed the dual controls and installed them again, and then removed them again.

This was not familiar to me, I had been to a school for EC130's, but this was the first time working on an EC130 by myself. I found I only used part of the electronic manual and not all of it, because of my unfamiliarity with it. I missed the part of balancing the controls by putting the one end of the balancing spring in another position. I thought I had finished the maintenance properly. I found out later I did not via the tech rep. The spring tension/position may have been a factor in the aircraft becoming airborne and then landing again hard.

I see where I could have done a better job, but I had difficulty with both the tech manual site and electronic tech manuals due to my inexperience. I also had asked my company bosses for more training before the helicopter arrived. I was also working at night and was tired. Just from being up at night. I usually work days.

Synopsis

A Helicopter Maintenance Technician reported that the balancing spring for the duel controls was not in the proper position.

ACN: 1523478 *(22 of 50)*

Time / Day

Date : 201802
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Weather Elements / Visibility : Rain

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737-800
Operating Under FAR Part : Part 121
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Installation

Component

Aircraft Component : Rudder
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Hangar / Base
Reporter Organization : Contracted Service
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1523478
Human Factors : Training / Qualification
Human Factors : Workload
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Object
Detector.Person : Maintenance
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Equipment / Tooling
Contributing Factors / Situations : Human Factors

Contributing Factors / Situations : Procedure
Primary Problem : Equipment / Tooling

Narrative: 1

During installation of rudder, the sling broke loose at the shackle on the left hand side, swinging the rudder to the right into the man lift myself and a fellow mechanic were in. Luckily, before the incident the other two mechanics on the other side had managed to stick a bolt in the lower most hinge. From that point, we were instructed by the supervisor to try and secure the rudder to avoid any further damage or potential injury to personnel. Our hangar is not equipped to perform rudder changes on 737-800 as we found out while trying to jack the nose per the Engineering Authorization (EA), which tells to use Aircraft Maintenance Manual 07-11-21 to use the crane indoors. However, before the aircraft could get into the position it is needed, the jack would come unseated. At one point, the aircraft almost rolled off the jack.

Many of my fellow mechanics as well as myself expressed concern that this job should not have been scheduled for our base as we were told that [another base] was capable and was supposed to be the base for 737-800 rudder changes. Under the failed attempts, our lead pulled the aircraft out to the wash rack and the install was continued. Shortly after the incident and during the securing portion it started to heavily down pour. The following day when we returned to work, we were informed that there had been no damage to the rudder or aft structure to the vertical.

Synopsis

B737-800 Maintenance Technician reported that while replacing the rudder, a restraining sling broke loose, subsequently swinging the rudder into their working platform.

ACN: 1522645 *(23 of 50)*

Time / Day

Date : 201711
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Regional Jet 200 ER/LR (CRJ200)
Operating Under FAR Part : Part 121
Mission : Passenger
Maintenance Status.Maintenance Items Involved : Repair
Maintenance Status.Maintenance Items Involved : Inspection

Component

Aircraft Component : Throttle/Power Lever
Aircraft Reference : X
Problem : Improperly Operated

Person : 1

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Inspector
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1522645
Human Factors : Workload
Human Factors : Situational Awareness

Person : 2

Reference : 2
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1522646
Human Factors : Situational Awareness
Human Factors : Training / Qualification

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy

Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Manuals
Primary Problem : Human Factors

Narrative: 1

Was brought to my attention that the throttle lockout and stow switches were installed incorrectly on aircraft. The key washers were installed backwards and on the wrong side of the mounting bracket and the switches were incorrectly clocked.

Our mechanic was the mechanic on the job had never done the job before, I don't know if any leads were helping him that I saw. I got with him at the start and showed him were to start and to measure the inside stop nut for reference of where to start for rigging the stow switch. I visually checked once installed and checked the measurements and were correct per AMM 78-37-01. I did make him re-safety because it was incorrect. Operations test was good. The throttle lock out switch was removed to get access at the stow switch and not to move the inside stop nut for ease of rigging, measurements good and operations checks good.

Need to have a trainer on the floor helping and instructing of jobs. I as an inspector I'm not supposed to train or help do the job.

Narrative: 2

I remember installing the stow switch following the maintenance manual procedure. The inspector even made me safety the lock nut again. We measured everything to the tolerance specified by maintenance manual. The lock washer should only go in one way I do remember that. It's been awhile so I really don't recall every detail about the event.

I think I installed this correctly and I have no explanations for how this happened.

Synopsis

Maintenance personnel on a Bombardier CRJ reported that the throttle lockout and stow switches were installed incorrectly.

ACN: 1522636 *(24 of 50)*

Time / Day

Date : 201802

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737 Undifferentiated or Other Model
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1522636
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Ground Personnel

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Other / Unknown
Detector.Person : Ground Personnel
When Detected : Aircraft In Service At Gate
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

I was waiting between gates for the arrival of the aircraft. Once it pulled into spot and engines shut down I proceeded to pull into position to engage the nose landing gear with the aircraft tug. After opening the cradle gates I pulled into the nose landing gear enough to close the cradle arms, but not pull the nose fully into the nose landing gear into the cradle. This is to prevent an accidental partial lifting of the aircraft due to the jet bridge attached to the aircraft and the ramp belt loaders and ramp personnel working around the

aircraft. After in position I did a look around the area of the aircraft and I did not notice the tail stand installed on the aircraft tail. After the passengers and flight crew left the aircraft I pulled the jet bridge away from the aircraft and went inside and waited until the ramp personnel cleared the area. At this point in time after everyone left and the belt loaders and baggage carts were clear I proceeded to fully engage the aircraft and lift the nose in preparation to move the airplane. I noticed that there were some people congregating around the tail section. At this time the ramp manager approached me and notified me that the tail stand was in place and that I needed to notify my supervisor that there was an incident. I proceeded to inspect the tail stand. I did not see any damage nor did the tail stand make contact with the airframe. After a while I got permission to proceed to tow the aircraft.

Synopsis

Maintenance Technician reported lifting the nose of the aircraft with the tow cradle unaware that a tail stand had been installed.

ACN: 1522012 *(25 of 50)*

Time / Day

Date : 201802
Local Time Of Day : 0001-0600

Place

Altitude.AGL.Single Value : 0

Environment

Weather Elements / Visibility : Rain
Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737-800
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Repair

Component

Aircraft Component : Rudder
Aircraft Reference : X
Problem : Improperly Operated

Person : 1

Reference : 1
Location Of Person : Hangar / Base
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1522012
Human Factors : Situational Awareness
Human Factors : Workload

Person : 2

Reference : 2
Location Of Person : Hangar / Base
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1522327
Human Factors : Situational Awareness
Human Factors : Workload

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance

Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Equipment / Tooling
Contributing Factors / Situations : Procedure
Primary Problem : Equipment / Tooling

Narrative: 1

Installing rudder Aircraft X. First off I'd like to mention we have difficulties R&R 737-700 rudders at this location let alone an 800, Inadequate facilities/tooling for Routine Overnight Maintenance (RON) mechanics to perform this maintenance on an overnight task, unless/maybe we were able to use [some of our other maintenance bays]. Tasked to remove and replace Aircraft X's rudder last night in bay X, overhead crane in this hangar not at sufficient height to perform this task without trying to jump through some hoops (modifying the sling by routing/shortening the web straps through the sling upper casting body and trying to jack the nose of the aircraft to lower tail section for sling usage) this is whats done to perform 700 rudder change, now input an 800 aircraft which is approximately 24' longer, try jacking the nose of aircraft which is outside on ramp on a decline position. Which was attempted numerous times and different configurations (unable to properly seat jacks safely-almost rolled aircraft off jack at one attempt). So supervision instructed us to install rudder using company crane with an added extension arm installed on this crane outside on washrack, this was already attempted by earlier shift with huge headaches and misgivings. We attempted rudder installation outside with crane usage and sling checked out from toolcrib. After lengthy amount of time and manpower (6 mechanics 1 crane operator) we were able to get #1 hinge bolt installed with some degree of difficulty along with numerous scratches, dings, and paint chips. Upon mechanic repositioning to start other bolt installations, the left hand side of sling swivel shackle gave way (popped out) of fitting that's bolted to rudder. Rudder slightly settled down or lodged itself in place due to #1 bolt being installed, it also wedged itself on top or against main Power Control Unit (PCU) actuator. Heavy rain and weather with lightning approached rapidly. Supervisor had us secure rudder in place with rope. No other sling in stock or replacement parts/hardware available at that time. Left in that configuration, due to shift turnover, and heavy weather. Don't know the exact or extent of any damage caused from this operation. Would like to be informed what was damaged or replaced.

Narrative: 2

[Report narrative contained no additional information.]

Synopsis

Two Maintenance Technicians reported that replacing a rudder on a 737 became a very difficult task due to inadequate equipment.

ACN: 1521612 *(26 of 50)*

Time / Day

Date : 201802

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737-800
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Flight Phase : Parked
Maintenance Status.Records Complete : Y
Maintenance Status.Released For Service : Y
Maintenance Status.Maintenance Type : Unscheduled Maintenance

Component

Aircraft Component : Oxygen System/Crew
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1521612
Human Factors : Time Pressure
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Maintenance
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Maintenance
Detector.Person : Flight Crew
When Detected : Pre-flight
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Logbook Entry
Contributing Factors / Situations : Procedure
Primary Problem : Company Policy

Narrative: 1

Flight crew calls that crew oxygen (O2) is at 750 PSI. I signed it off as it was well within limits of 3-man crew. 17 minutes later, crew repeats write-up indicating crew O2 at 500 PSI. At this point, we are left to believe the aircraft system has developed a leak or crew intentionally and deliberately depleted the system to fulfill his demands. This is a serious matter, as we followed MEL/Aircraft Maintenance Manual FAA established procedures to sign off the discrepancy. It is so apparent that Flight Operations has total disregard to these FAA approved dispatch guidelines and will demand a repair/correction as they see fit. If we are going to go the route of appeasing the flight crews, then why have these dispatch guidelines available? We might as well remove the MEL manual from all the fleets, as they [Flight operations] will do as they please, and refuse an aircraft that is totally legal to fly...only by saying it's a safety matter or any other excuse they see fit. Upon arrival to the aircraft about 30 minutes later to prepare to service the oxygen, it was noted that the bottle pressure had not dropped anymore and was instead at 625 PSI, down from the original 750 PSI originally reported. However, even this drop in pressure warranted a thorough leak check of the lines and system.

Suggestions: Remove the MEL from our manuals or reprimand pilots who refuse to follow established FAA dispatch guidelines. There must be some accountability held against Flight Operations as there are against Operations and every other workgroup in the company. Also, a bulletin needs to be issued and signed as read, as we have [paper trail] to the entire Flight Operation group of this. We are not here to delay our customers but to get them to their destinations within the safe parameters that have already been established by the FAA/NTSB.

Synopsis

A Maintenance Technician reported that the flight crew inaccurately wrote-up the crew oxygen required servicing after it was signed-off as being within limits.

ACN: 1521071 *(27 of 50)*

Time / Day

Date : 201711
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Personal
Make Model Name : M-20 Series Undifferentiated or Other Model
Operating Under FAR Part : Part 91
Mission : Personal
Flight Phase : Parked
Maintenance Status.Maintenance Deferred : Y

Component

Aircraft Component : Engine
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Maintenance : Inspector
Function.Maintenance : Lead Technician
Qualification.Maintenance : Inspection Authority
Experience.Maintenance.Inspector : 25
Experience.Maintenance.Lead Technician : 25
ASRS Report Number.Accession Number : 1521071
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Maintenance
Communication Breakdown.Party2 : Other

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
When Detected : Aircraft In Service At Gate
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

Service was rendered to a Mooney aircraft which led to an annual inspection. This aircraft had been sitting for several years following rumored issues. This work was completed in [the previous year]. The Fuselage was inspected according to Mooney's recommended inspection list. AD's provided by self and the owner were reviewed, verified and/or completed in accordance with service and maintenance guidelines. The aircraft was determined to have had a running engine prop strike and a new two blade prop replaced the previous 3 blade. It was determined according to Lycoming to remove the engine for a tear down and inspection. The owner located a used engine that had been sitting for multiple and unknown years. He took the engine to [an A&P], for inspection. Parts were disassembled and reassembled and it was test ran for 45 minutes. A log book entry was made by him. Here is a miscommunication issue. It was assumed that [the A&P] was an IA, and that his log book endorsement constituted a completed inspection for return to service. The inspection sign off alluded to that endorsement. It has come to my attention that his credentials only have him as an A&P. This was an error as I signed off the aircraft for an annual inspection. This information was not known at that or any issues. This report is made at the earliest possible time of the knowledge of events as I learned them and became aware of the issues and being presented as timely as possible.

Obviously in the future more careful reading and verifying past work by others will be implemented in my aircraft history research for annual inspections paying closer attention to details that may have been overlooked for this event.

Synopsis

A Maintenance Technician with Inspection Authority reported releasing an aircraft for service that had not received a full annual inspection.

ACN: 1521003 *(28 of 50)*

Time / Day

Date : 201802
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : A300
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : None
Mission : Cargo / Freight
Flight Phase : Parked

Component

Aircraft Component : Normal Brake System
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1521003
Human Factors : Situational Awareness
Human Factors : Time Pressure

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Flight Crew
When Detected : Taxi
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

I was told by my supervisor to help my partner do a brake deferral because the crew had found both brake wear indicators missing in his preflight. There was a joint effort between my partner, my supervisor, and myself to complete the deferral and the Maintenance Procedures. My partner was pulled off mid-way through to service hydraulics, being directed by the supervisor. The crew was on the aircraft, so they were involved in the [procedure] as well. Once the [procedure] was complied with the plane was dispatched where it taxied a short distance and then stopped. The crew reported the brake felt like it was dragging and also had a higher temp than the others. We were directed by the manager and supervisor to reverse the [procedure], hooking up the hydraulic lines in an effort to get the wheel to free up and allow the ground side to push the plane back into its parking spot. After parking the plane we documented our work performed and left.

Synopsis

A300 Maintenance Technician reported that after completing a brake deferral the flight crew experienced MLG brake dragging during taxi out.

ACN: 1521002 *(29 of 50)*

Time / Day

Date : 201802

Place

Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : A300
Mission : Cargo / Freight

Component

Aircraft Component : Hydraulic Auxiliary System Ram Air Turbine (RAT)
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1521002

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Other / Unknown
Detector.Person : Maintenance
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Equipment / Tooling
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Per task card step 4 first note "engine driven pumps may be used as an alternate power source in lieu of hydraulic ground power cart". The starting and running of #2 engine on Aircraft X was my only involvement with this task card. I was not present on the ground outside the aircraft when damage to the RAM AIR TURBINE occurred. I was in the cockpit.

Synopsis

Airbus A300 maintenance technician reported the Ram Air Turbine (RAT) was damaged during testing.

ACN: 1519094 *(30 of 50)*

Time / Day

Date : 201802

Place

Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : A320
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Inspection

Component

Aircraft Component : Circuit Breaker / Fuse / Thermocouple
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1519094
Human Factors : Situational Awareness
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Manuals
Primary Problem : Ambiguous

Narrative: 1

When pulling up the Aircraft Maintenance Manual (AMM), you find the circuit breakers listed for the task of removing and installing a Tablet Interface Module (TIM) assembly,

respectively. The three listed circuit breakers are all on panel 121VU. The Captain's TIM is listed as K19, the First Officer's (FO) TIM is listed as R40, and the Aircraft Interface Device (AID) is listed as K20. When on the actual aircraft, these are not correct. The circuit breaker located on panel 121VU location K19 is labeled as "F/O EFB". When pulling this circuit breaker, it does control the F/O TIM. The circuit breaker located on panel 121VU location R40 is labeled as "CAPT EFB". When pulling this circuit breaker, it does control the Captain's TIM. There is a blanking cap on panel 121VU, at location K20, where the "AID" circuit breaker is supposed to be. I did go on to another Airbus, to check if this anomaly was only on one aircraft, and unfortunately, it is not.

Suggested Resolution: Do a read and report of all Airbus aircraft in the fleet, which have the TIM units installed. If the same is present in all aircraft, make changes to the associated AMMs, and other Manuals to show the correct locations, rather than doing a whole wiring change throughout the system.

Synopsis

Maintenance person reported a discrepancy between the Aircraft Maintenance Manual and the aircraft panel labeling of the circuits breakers, for the Tablet Interface Module on the A320 fleet.

ACN: 1518645 *(31 of 50)*

Time / Day

Date : 201802

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Work Environment Factor : Temperature - Extreme

Aircraft

Reference : X
Aircraft Operator : Air Taxi
Make Model Name : MD Helicopter 500/C/D/E/L
Crew Size.Number Of Crew : 1
Flight Phase : Parked
Maintenance Status.Maintenance Deferred : N
Maintenance Status.Released For Service : Y
Maintenance Status.Maintenance Items Involved : Testing

Component

Aircraft Component : Collective Control
Aircraft Reference : X
Problem : Failed

Person

Reference : 1
Reporter Organization : Government
Function.Maintenance : Inspector
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1518645
Analyst Callback : Completed

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Detector.Person : Maintenance
When Detected : Pre-flight
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Weather
Primary Problem : Aircraft

Narrative: 1

The aircraft was left outside to cold soak to ensure the collective would operate during operations in cold temperatures. The pilot could not operate the collective and the collective handle section broke off in the pilot's hand. The aircraft manufacturer was contacted by the certificate owner Director of Maintenance. The certificate holder ordered a replacement part made from aluminum, however it is not available and received the same part which had broken.

Callback: 1

The reporter stated that after cold soaking the aircraft the collective control for the rotor became very stiff to operate. The pilot testing the system put extra pressure on the handle trying to get it to move when the handle broke off in his hand. The reporter also stated that the handle is made of magnesium and has a history of cracking in extreme cold temperatures. The reporter stated that an aluminum handle is also used for this application, but there was none available at the time of this incident so it was replaced with the same type of handle. The reporter stated that in their database there are two incidents of collective control handles cracking in this environment. Fortunately, none of these handles have broken in flight.

Synopsis

FAA Maintenance Inspector reported the collective handle of an MD500 broke off during the pilot's preflight in extreme cold weather.

ACN: 1517894 *(32 of 50)*

Time / Day

Date : 201802
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Regional Jet 700 ER/LR (CRJ700)
Operating Under FAR Part : Part 121
Flight Phase : Taxi

Person

Reference : 1
Location Of Person : Hangar / Base
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1517894
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Maintenance

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Object
Detector.Person : Maintenance
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

When I entered the hangar for the first time, I noticed the 700 was entering the hangar without any ground guides. I rushed over to the wall side to clear the wing for parking. I had no time to get my whistle. I originally pointed the aircraft move towards the wall trying to get near the wall where we usually end up placing it. I was looking at the wing

when I noticed the right horizontal tip was near the pole. I held up my open hand to stop the aircraft. It didn't stop and hit the pole.

The 700 was being moved without guides. When I and Person X showed up there was no guide for the tail. I found out later the driver was looking at Person X. I could have yelled to stop. Always have all guides when moving the aircraft in the hangar.

Synopsis

Maintenance Technician reported that a CRJ700 made contact with a pole while being tugged into the hangar.

ACN: 1517891 *(33 of 50)*

Time / Day

Date : 201802

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Make Model Name : No Aircraft

Person

Reference : 1
Location Of Person : Repair Facility
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1517891

Events

Anomaly.Deviation - Procedural : Other / Unknown
Detector.Person : Maintenance

Assessments

Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Staffing
Primary Problem : Environment - Non Weather Related

Narrative: 1

Working alone places mechanics in unsafe situations due to the nature of their chaotic, highly mechanical work environment. For an example the Hangar shop is isolated so if something happened to the person working alone, they might not be found for a while. Also on X concourse at the operation, we currently have 1 lead and 2 techs on day shift. We cover the terminal and the Y concourse, too dangerous to go alone due to high traffic and activity all around as well as noisy environment, making it necessary to have a buddy system to alert 911. In that said when we leave to go to Y concourse or terminal the lead at the X concourse is by himself. The traffic around the area makes it far too dangerous to be out on a call by oneself, besides most calls require two guys. The shop has a welding shop which has 1 welder assigned. Currently there are 2 guys in there with the welder, however they are also assigned to the paint shop. More time than not the welder is by himself. Recently our welder was seriously injured. Thank God there were 3 guys in the shop with him, they saved his life. In the past I spent many years working at the hangar shop. On some days you don't see anyone come in to your shop. An aircraft tech fell out of the pit of an aircraft and suffered a head injury. A Technician found him. Another incident in the basement of the X concourse there was a Technician who was hit by a passing bag cart and left for dead. He is still out of work. Last year one of our Technicians was at the hangar outside in a snow storm, slipped and fell, cracked his head open. Fortunately he

had another tech with him to call 911 so he could be transported to the hospital in a timely manner. A bleeding or non-breathing employee requires immediate medical attention.

Never assign employees to work alone in hazardous environments. This includes isolated shops, The X concourse, the Y concourse, the Terminal, the Hangar Shop and also the welding/paint shops.

Synopsis

Air carrier mechanic reported that often mechanics are assigned tasks alone which can have dire consequences if a seriously inured were to occur.

ACN: 1517365 *(34 of 50)*

Time / Day

Date : 201802
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : EMB ERJ 145 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : None
Mission : Passenger
Nav In Use : FMS Or FMC
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance

Component

Aircraft Component : Speedbrake/Spoiler
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1517365
Human Factors : Training / Qualification
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

We are three technicians working on a plane. One mechanic is working on the right hand (R/H) Trust Reverser of the aircraft. I and other mechanic were working on wings changing of the proximity connector from Aluminum to Stainless steel of both wings spoilers. The other mechanic that was working on the Trust Reverser R/H side came to me that he needs help to [do] the operational check of the Trust Reverser. I was working on the left hand (L/H) side and the other mechanic was working on the R/H side. I asked him is everything clear to [do] the operational check for the Trust Reverser on R/H side and told me yes. My L/H was cleared because I was working on the L/H side of the wing.

I went to the cockpit to operate the Trust Reverser for the operational check. I turned on the hydraulic system, shouted stop, and turned off the hydraulic system. Then we discovered that the other mechanic working on the R/H side put the tire chock between the speed brake and flap. When the hydraulic system was turned on, the speed brake closed with tire chock and it has a composite damage on speed brake. Suggestions: log and tag safety procedure.

Synopsis

An Embraer EMB Maintenance Technician reported that a speed brake panel was damaged when they turned on hydraulic power.

ACN: 1517120 *(35 of 50)*

Time / Day

Date : 201802

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Personal
Make Model Name : Citation Excel (C560XL)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Personal
Nav In Use : FMS Or FMC
Flight Phase : Parked
Route In Use : None
Maintenance Status.Records Complete : Y
Maintenance Status.Required / Correct Doc On Board : Y
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Inspection

Component

Aircraft Component : GPWS
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Contracted Service
Function.Maintenance : Inspector
Qualification.Maintenance : Inspection Authority
ASRS Report Number.Accession Number : 1517120
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
Were Passengers Involved In Event : N
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Procedure
Primary Problem : Company Policy

Narrative: 1

During a routine inspection of the Aircraft, CE560XL, and while prepping to accomplish the [Engineering Order] task, [which] upgrades the Honeywell EGPWS computer, we encountered multiple issues of concern.

The first issue is this task was not applicable to this tail number because of prior accomplishment of two Service Bulletins, and to arrive at this conclusion required extensive time and research by repair station avionics and management personnel. The second issue was the Operator required the repair station to sign-off tasks that were Previously Complied With. To achieve the desired result, and to arrive at this conclusion required extensive time and research by repair station avionics and management personnel.

This is a good example of the Operator failing to properly document completion of tasks previously accomplished, and for placing the responsibility for researching those tasks on the end-user (the maintenance technician). What I was able to deduct from this research is that, during the migration from one maintenance tracking software to another, visibility to those completed tasks were deliberately omitted from populating as historical records. Regardless of the reason, tasks such as this that were previously complied with triggered the repair station organization to consume needless amounts of time, which in turn prevents us from remaining competitive to other vendors.

Synopsis

A Maintenance Inspector working on a Cessna Citation reported that the Owner/Operator failed to properly document completion of tasks previously accomplished.

ACN: 1516870 *(36 of 50)*

Time / Day

Date : 201801
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : A330
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Taxi
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Inspection

Component

Aircraft Component : Rudder Control System
Aircraft Reference : X
Problem : Improperly Operated

Person : 1

Reference : 1
Location Of Person : Hangar / Base
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1516870
Human Factors : Training / Qualification
Human Factors : Situational Awareness

Person : 2

Reference : 2
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1516872
Human Factors : Situational Awareness
Human Factors : Troubleshooting

Person : 3

Reference : 3
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1516874
Human Factors : Training / Qualification
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Maintenance

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Anomaly.Ground Event / Encounter : Object
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Equipment / Tooling
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

In heavy maintenance hangar, I was helping perform Aircraft Maintenance Manual (AMM) task [check for rudder movement]. I gave clear for hydraulics from the hangar floor with company supplied radio to Mr. A in cockpit. I heard Mr. B give the okay to move the rudder on the radio to the cockpit. Then I heard Mr. B say stop, stop, stop on the radio prior to the rudder hitting the tail stand.

Event occurred due to the fact that the 2-way company supplied radio's failed during performing this task and not having the information before performing this task that the A330 rudder cannot go full travel in this tail stand at this height. Bay tail docks are all configured differently.

Have the information that the rudder swinging to full travel hits this tail stand even if the rudder has been cleared at this height. Having warnings posted on all levels of tail stand informing tail stand needs to be lowered below rudder to swing fully. Radio's need to be upgraded. Refresher training. Need bay operation differences if moving from one bay to another bay for an extended time frame.

Aircraft in tail dock. Company did not inform me rudder could not move full travel in current taildock position.

Narrative: 2

While doing [maintenance] task check of rudder movement of aircraft. I had two mechanics clearing me for hydraulic application and clearance to move the rudder. All tail

dock sliders were pushed back to their fullest. Once I was cleared, I applied all three hydraulic systems and was also cleared to begin rudder movement. I felt the aircraft move and I re-centered the rudder. I then began turning off all three hydraulic systems. My lead mechanic immediately assessed the situation and verified all mechanics safety.

Numerous events lead to this mishap. First, the aircraft was not placed centered in the tail dock. Second, the tail dock was not configured properly for full travel movement, nor was anyone informed that the tail dock needed to be moved. Third, the handheld radios from the tool room became intermittent. The tail dock mechanic did make a repeated call to stop, but the transmission never reached the flight deck.

First, it is imperative to have the aircraft completely centered in the tail dock. We were informed after the incident that the tail dock needed to be lowered for full rudder travel movement. All three shifts need to be informed and trained on where to put it. Third, supply adequate radio communicating devices for the mechanics to use. The current radios that are used are old and outdated and appear to be intermitted.

Company did not inform me rudder could not move full travel in current tail dock position.

Narrative: 3

We were assigned an operational check of the rudder on aircraft in heavy maintenance. Three non-routines on the rudder actuators required this. We were doing A330 task [check for rudder movement] which requires all 3 hydraulic systems and rudder movement stop to stop.

We pulled all tail dock sliders back as far as possible to clear. We used 3 company radios to communicate between cockpit, tail and ground. I was on the tail and cleared it for movement, ground mechanic cleared for hydraulics. Cockpit mechanic started moving the rudder slowly to the right, it got within a foot of the stand and I keyed the radio and said "stop, stop, stop". Ground mechanic heard me over the radio, but cockpit mechanic and fellow worker stated nothing came over the radio in the cockpit. Rudder continued right and struck the stand.

The radios failed to transmit correctly. The next shift on duty informed us rudder could not be moved stop to stop with tail dock at the current height and needed to be lowered.

Radios need to be upgraded so communication is not stopped if one mic is keyed, live communication between all mechanics should be used during this task.

Paper work should reference the position the stand should be in to perform this task. Stand should be marked that rudder cannot be moved stop to stop in less it is in correct position. Company did not inform me rudder could not move full travel in current tail dock position.

Synopsis

A Maintenance Crew working on an Airbus A330 reported that the rudder contacted the tail stand when they tested the rudder operation.

ACN: 1516868 *(37 of 50)*

Time / Day

Date : 201802

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737-900
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Repair

Person

Reference : 1
Location Of Person : Hangar / Base
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1516868

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Equipment / Tooling
Primary Problem : Equipment / Tooling

Narrative: 1

During the day I was tasked to replace a part on the aircraft. As I was replacing the part using Aircraft Maintenance Manual (AMM) 27-03-01 I hooked up a hoist that was called out for tooling in the AMM. As the part was being replaced the hoist snapped causing damage to the aircraft. I notified my lead and supervisor. We took photos of the broken tooling. Our tooling supervisor took the tooling and was sending it to the manufacture to see why the tooling failure occurred. Maintenance Control was notified and aircraft was placed out of service to repair damage.

I believe this was a manufacture defect, but I think this tooling should be inspected at all stations to be safe.

Synopsis

Maintenance Technician reported the external equipment hoist failed and damaged the aircraft.

ACN: 1516230 *(38 of 50)*

Time / Day

Date : 201802

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : A319
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Parked
Maintenance Status.Maintenance Deferred : Y
Maintenance Status.Released For Service : Y
Maintenance Status.Required / Correct Doc On Board : N
Maintenance Status.Maintenance Type : Unscheduled Maintenance
Maintenance Status.Maintenance Items Involved : Inspection

Component

Aircraft Component : Electrical Wiring & Connectors
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1516230
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Maintenance

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : MEL
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Manuals
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

[The aircraft] was found to have wire damage as updated on log pages. Log page was updated with my findings and I was told by TOMC through my lead that the aircraft would be taken out of service for repair. Per GMM "It is restricted by [the company] for an aircraft to be flown with known wire damage unless it can be isolated in such a way that no further damage will occur as a result of operating in that condition." [Guidance Manuals] are specific that the chaffed wire was not reparable and had to be replaced. After updating the log page with the troubleshooting performed and parts needed, [management] approved deferral extensions on both the MEL and AHM and the aircraft was released for flight and continues to fly currently with known wire damage in violation of the GMM.

Synopsis

A319 was reported that it was released for flight with known wire damage in violation of the GMM.

ACN: 1516229 *(39 of 50)*

Time / Day

Date : 201802

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B767-300 and 300 ER
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Flight Phase : Parked

Component

Aircraft Component : Emergency Equipment
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1516229
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : FAR
Detector.Person : Ground Personnel
When Detected : Aircraft In Service At Gate
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Incorrect / Not Installed / Unavailable Part
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

[This flight] had a medical emergency at departure time. Resolved the crew requested paramedics for a sick passenger and reported that the EEMK (Enhanced Emergency Medical Kit) was used. The crew made an ELB (Electronic Logbook) entry documented the used EEMK. Maintenance ordered a new EEMK from terminal stores.

While technician was waiting on the delivery of the new kit, Zone Controller reported that the EEMK was taken off of [an aircraft at a neighboring gate, Aircraft Y] by someone that represents the Inflight personnel and placed on [this aircraft, Aircraft X]. A review of Aircraft X's logbook showed that the crew did write up the EEMK as missing. Maintenance personnel went to Aircraft Y and Aircraft X to verify the condition of the EEMKs.

Upon arrival at Aircraft Y maintenance personnel found that the EEMK was missing as reported by the crew's ELB log item. The EEMK was replaced with a new unit from stores, the paperwork was completed and a new release was sent. The used EEMK that was originally installed on Aircraft X was found discarded on the jet bridge. It was recovered by maintenance personnel and marked as unserviceable.

Synopsis

B767 emergency medical kit was found discarded in the jet-bridge.

ACN: 1516222 *(40 of 50)*

Time / Day

Date : 201801
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : EMB ERJ 145 ER/LR
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Inspection

Component

Aircraft Component : Fuel Line, Fittings, & Connectors
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Inspector
Function.Maintenance : Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1516222
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Human Factors : Workload
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Maintenance

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Before my shift began (but during the previous shift), 2 mechanics began to replace the L/H fuel tank vent valve. Sometime between the previous QC shift and the start of my shift, the mechanics finished the task, but were unable to have the task "bought back" by QC due to the inspectors having left at the end of their shift. There was no note made in the written turnover of this task being started or in-work.

I was approached by one of the two mechanics about my "buying back" the installation of the valve, and was not told that there were actually TWO mechanics involved in the installation. The [form] was stamped by the mechanic who approached me. I asked about the previous shift having seen any of the installation, and they had either not seen any of it, or had failed to sign for the portion they had seen.

I inspected the installation of the valve, checked tightness of fittings, bolts, wiring, and general condition of the immediate area, as well as the paperwork approving the part. I reviewed the AMM reference and found that the mechanic had signed for the ENTIRE task (including follow on tasks not yet performed), and had the mechanic change his entry to reflect only the steps actually accomplished up to that point, which I then bought back.

When I arrived at work the following night, I discovered that another [form] had been generated to replace the conduit through which the wiring of the vent valve is routed to outside the wing because it had been damaged by pulling the wires through the conduit with safety wire (which is specifically NOT allowed in the procedure in the AMM.) As I inquired about why I had not been informed the previous night of this damage, I was told that the mechanic had not seen and had not signed for the work (but HAD damaged the conduit) did not report the damage until after he had punched out for the night, and was walking to the parking lot with the other mechanic. Neither mechanic came back to report the damage. The signing mechanic did report the problem to the acting maintenance supervisor at the beginning of his shift the next day, and it was documented on a [form], and was corrected.

In discussing the situation with the mechanic and maintenance supervisor on duty, I was "advised" that I should not file a report, and the supervisor was going to follow up with the mechanic who caused the damage, get his statement, and seemed to say that we should handle the problem outside the reporting program. I only agreed to delay my report until statements from all involved could be obtained, and it was determined that a report was necessary. I do not feel now that this was the correct path to take.

I received a call from my supervisor that after reviewing my statement, and conferring with the QC Manager and Director, that he/they had determined that I needed additional training in the "C-check environment", and that I would be required to go [for remedial training]. I was not given the option to have a Union member present during this phone conference, as required by our Agreement with the company.

I feel that the mechanics should have alerted the inspectors on the previous shift of the work they were performing, and obtained buy back of any work that was completed during their shift. I feel that a turnover should have been provided on the progress of the job

from the last shift. I should have been contacted at the start of my shift about the work being done, and I should have given approval to continue the work, if I felt this was appropriate, or should have been given the chance to observe the work in progress, as appropriate. I should not have "bought back" the work performed. I do not believe that this "buy-back" procedure is adequately explained in the GMM. Obviously, the damage to the conduit should have been immediately reported at the time of occurrence. Obviously, the AMM reference should have been strictly adhered to (no use of safety wire). I do not feel I should be "punished", or be required "remedial training" not given to others as a result of reporting this incident.

The company has completely failed to provide proper training in regards to C-check. The company has refused to recognize the risks they have taken, and are also requiring their employees to undertake, by attempting this new task here without the proper support and training. Many of our newer employees are not in the least bit capable of performing the more complicated tasks without assistance, and working in this new and confusing environment that C-check entails. Management is continuously complaining about "how long tasks are taking", but fail to see that the preparation was sorely lacking, and they are not providing assistance where needed. Many company procedures and policies are not being followed. Senior management is not providing necessary support to do this work as it should be done.

The above statements are not directly responsible for the event in question, but has provided what I consider a "poisonous environment" in which to work. I feel that any reasonably independent review of the current activities would uncover what I have seen and more.

Synopsis

A Maintenance Technician reported that many company procedures and policies are not being followed.

ACN: 1516213 *(41 of 50)*

Time / Day

Date : 201802
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Dusk

Aircraft

Reference : X
ATC / Advisory.Ground : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : A320
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : None
Mission : Passenger
Flight Phase : Taxi
Maintenance Status.Maintenance Type : Unscheduled Maintenance
Maintenance Status.Maintenance Items Involved : Testing

Component

Aircraft Component : Turbine Engine
Aircraft Reference : X
Problem : Improperly Operated

Person : 1

Reference : 1
Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1516213
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Human Factors : Troubleshooting

Person : 2

Reference : 2
Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier

Function.Maintenance : Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1516212
Human Factors : Training / Qualification
Human Factors : Troubleshooting
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected : Taxi
Result.General : Maintenance Action
Result.Flight Crew : Overcame Equipment Problem
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Aircraft
Primary Problem : Aircraft

Narrative: 1

I was running the radios from the right seat for the night. The first move of the day was changed due to another plane going out of service for a fuel leak. We were moved to the Aircraft that had the fuel leak. While performing our checklist on the Aircraft, when the fuel pumps were turned on, we were alerted to fuel coming out of the right wing. We shut the pumps off and alerted the ramp and operations. After a two and a half hour troubleshooting by the technical Crew chief, we taxied the Airplane to the hangar on the left engine only while having to monitor the fuel as operations followed us for safety. It was a stressful situation.

Our next plane to taxi was with an inoperative APU. We did our checklist, and an air start of the left engine at the gate. We got clearance to spot one and asked ground for clearance to do a cross bleed start. Were cleared to taxiway, Ground then gave us permission to start our cross bleed. The left seat mechanic started the cross bleed start in manual mode. During the start, I heard another aircraft tell the tower "the plane in front of us has a right engine fire" The tower then called us and said our right engine was on fire. I told Left seat mechanic the right engine was on fire and he shut the engine down. A few seconds later, the aircraft that was behind us said the fire was out. Then the same plane behind us came back on and said the fire was back burning. We feared for our safety and the safety of the aircraft at that time and decided to start the A320 Emergency Procedures Briefing Guide. We followed the procedure, discharged number 1, and number 2 bottles. I then asked the tower if the fire was out. They said they couldn't verify the fire was out. I then saw personnel on the ground and I yelled out the window if the fire was out and they said yes.

Not sure why the event occurred. We were relying on the pilot's warning and ground control's warning about the right engine fire because we were on an active taxiway. If not for an aircraft being right behind us the fire would have likely been much worse. If we had a ground crew we would have known immediately, we had an engine fire. I don't have a

suggestion as to how to avoid a recurrence of this event because I am not sure why it happened.

Narrative: 2

I was assigned to taxi an aircraft from gate. We were told leave it and go to another Aircraft which was out of service with [a] fuel leak. We went on through our checklist when we put the fuel boost pump the fuel came out of the right wing. The Aircraft has write up in the logbook. After about 2hours and 30 minutes trouble shooting with help of technical Crew chief, we taxied the Aircraft to the hangar.

Our next Aircraft's APU was inoperative. We went through checklist and started [the] left engine with [a] ground air-cart. Engine start was successful. After, the Aircraft was pushed back from the gate, we asked for cross bleed to start number 2 engine. We were told to taxi and start cross bleed engine start. When we started, the engine manually the engine did not light up and does not spool up. I shut down the engine. The right taxi person told me fire on the right engine and turn off the fuel pumps. There was no fire warning and message. The tower said the fire was extinguished. After about 30 seconds tower said there is [an] engine fire again, the radio guy told me and we went through emergency procedure briefing guide. There was no ground personnel who could tell us whether the fire was extinguished. This time there was caution message saying EGT limit. We fired the fire bottle to extinguish the fire.

I was not sure why the incident occurred; we rely on ground crew and pilot to warn us. We do not have any ground crew to warn us to avert this kind of situation. We asked for [a] cross bleed [start] at a closer taxiway but were denied; therefore, there was no help to avoid the occurrence. I do not have any suggestion to avoid this kind of situation. Engine start needs to be attended by ground crew.

Synopsis

A320 maintenance crew reported that when they attempted a cross-bleed start, the right engine caught on fire.

ACN: 1515636 *(42 of 50)*

Time / Day

Date : 201801
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Regional Jet 200 ER/LR (CRJ200)
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Flight Phase : Parked
Maintenance Status.Released For Service : Y
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Work Cards

Person

Reference : 1
Location Of Person : Hangar / Base
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1515636
Human Factors : Training / Qualification
Human Factors : Situational Awareness

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Tools left in the Left engine cowling. All of the correct tasks were being used [from the] CRJ200 Aircraft Maintenance Manual (AMM) tasks: Lubrication of the Thrust Reverser Ball-screw Actuators, Lubrication of the Thrust Reverser Tracks and Slider Blocks, Lubrication of the Power Drive Unit Lock-Piston Assembly, Detailed Inspection of the Air Turbine Starter (ATS) Oil Level. The incident could have only occurred inside of the hangar.

I am being informed that on the night I was working with a sign behind Technician and the sign behind may have left a socket and wrench inside of the engine cowling. I was completely unaware of any tooling left in the engine cowling until three days later. I do not know when exactly this had occurred, but it would have had to be when we were closing everything up on the Left engine. I, myself, had just got off sign-behind, so I feel as if I lack the experience to really work with somebody else/sign behind them.

Synopsis

Maintenance Technician reported mechanic's tools were found in an engine cowling.

ACN: 1515634 *(43 of 50)*

Time / Day

Date : 201710

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Flight Conditions : VMC

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737-800
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Parked

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1515634
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Other
Communication Breakdown.Party2 : Ground Personnel

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Ground Event / Encounter : Other / Unknown
Detector.Person : Maintenance
Detector.Person : Ground Personnel
When Detected : Aircraft In Service At Gate
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

Another mechanic and I completed a deferral on [the] aircraft, proceeded down the stairs to an electric cart positioned next to jet bridge stairs. We both entered the cart and attempted to leave area but the cart indicated a fault, and would not move. While trying to resolve fault, the jet bridge started to move toward us. Because the doors zip closed on cart, escape was impossible. We then both tried yelling and waving to both ramp personal (one was marshaller), the jet bridge continued to impact the vehicle which was now tipping over 60 degrees (one side window facing the ground the other the sky). As the vehicle was pushed over, the angle iron from the baggage chute was tearing through the door. This angle iron and the rest of the baggage chute prevented the cart from falling over completely on its side. The angle iron was also pressing against [my] passengers' leg through [the] door. Before the aircraft was pushed, another person noticed the situation and notified the others to reposition the jet bridge, which up-righted the vehicle. This could have resulted in MAJOR INJURY to a FATALITY. Both occupants were not physically injured but were traumatized and shaken. The vehicle did finally move after incident. This is a refilling of a report not properly addressed and no resolution was given.

Suggested Resolution: Need to ensure area is clear prior to moving [the] jet bridge. I believe marshaller view was partially obscured by both [the] jet bridge stairs and air unit. This is not an excuse it just means more vigilance is necessary.

Synopsis

A Maintenance Technician reported that a jet bridge impacted a maintenance vehicle tipping it over.

ACN: 1515632 *(44 of 50)*

Time / Day

Date : 201801

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B757-200
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked

Component

Aircraft Component : External Power
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Technician
Qualification.Maintenance : Powerplant
Qualification.Maintenance : Airframe
ASRS Report Number.Accession Number : 1515632
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Maintenance
Communication Breakdown.Party2 : Maintenance

Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected : Aircraft In Service At Gate
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Aircraft was properly tagged, and exterior power door was taped shut and tagged as well. Aircraft move team was not aware of not to activate power sources in their training when systems are tagged. Potential electrocution to those working on systems.

Synopsis

B757 Mechanic reported that an aircraft tow crew was unware that external power was not to be activated.

ACN: 1515127 *(45 of 50)*

Time / Day

Date : 201801

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B757-200
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Cargo / Freight
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Installation

Component

Aircraft Component : Powerplant Mounting
Aircraft Reference : X
Problem : Improperly Operated

Person : 1

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1515127
Human Factors : Situational Awareness

Person : 2

Reference : 2
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 151129
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Manuals
Primary Problem : Human Factors

Narrative: 1

During performance of Engineering Order (E.O) of a B757 on left Engine, there was a discovery of torque variance between Forward Engine Mount Bolts ending in -1, -2 [as] opposed to the -3. Members of the facility's engine change crew recognized torque difference between the Aircraft Maintenance Manual (AMM), called out in [the] E.O, and our normal engine change paperwork job card by nearly 100 feet lbs. of torque. Then searched local inventory found all bolts in stock were -3. Proceeded to verify all stock in company were -3 to include, a scenario of ordering a -1/ -2 changes to a -3 in the system.

The inspector went to verify bolts installed in engine by taking a picture of 1 out of the 4 bolts. He saw a line of numerals that appeared to be Part Numbers ending in the numeral 3 then a substantial space. He verified with another mechanic if he concurred it being a -3 bolt. We proceeded with full confidence, that -3 bolts were installed. Due to [the] generation of [a different] E.O, next base maintenance removed and replaced Left Forward Engine Mount bolts and barrel nuts, discovering that the bolts installed were indeed-2 bolts and incorrectly identified by inspector as a -3; subsequently realizing the bolts were over torqued.

Narrative: 2

[Report narrative contained no additional information.]

Synopsis

Maintenance personnel reported that the engine mounts on a Boeing 757 were over-torqued because the part number of the mount bolts were incorrect.

ACN: 1513281 *(46 of 50)*

Time / Day

Date : 201801
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Night

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737 Next Generation Undifferentiated
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Phase : Parked
Maintenance Status.Maintenance Deferred : N
Maintenance Status.Records Complete : Y
Maintenance Status.Released For Service : Y
Maintenance Status.Required / Correct Doc On Board : Y
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Work Cards

Component

Aircraft Component : Hydraulic System Pump
Aircraft Reference : X
Problem : Improperly Operated
Problem : Malfunctioning

Person : 1

Reference : 1
Location Of Person : Company
Reporter Organization : Contracted Service
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1513281
Human Factors : Situational Awareness

Person : 2

Reference : 2
Location Of Person : Company
Reporter Organization : Contracted Service
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1513285
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected.Other
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Task cards were performed on the number 1 and number 2 engines. I performed the task card on the number 2 engine and leak checked the number 1 engine. A different Aircraft Maintenance Technician performed the task on the number 1 engine and I verified the leak check as instructed per the task card. No leaks were observed during the dry motor of the engines or during cowl close up. The following morning it was reported that there was an engine-driven hydraulic pump failure on the number 1 engine enroute. [I suggest having] the task card specify to have a different Aircraft Maintenance Technician check security of quick disconnect fittings as well as leak check.

Narrative: 2

Upon learning of the event, I would suggest having the task card specify to have a different Aircraft Maintenance Technician check security of quick disconnect fitting as well as the leak check of the filter bowl housing as instructed in the task card.

Synopsis

B737NG Maintenance crew reported that after they accomplished tasks on number one and two engines, the next day, the aircraft had an inflight Engine Driven Hydraulic Pump failure.

ACN: 1513280 *(47 of 50)*

Time / Day

Date : 201801
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Daylight

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737 Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Testing
Maintenance Status.Maintenance Items Involved : Inspection

Component

Aircraft Component : Escape Slide
Aircraft Reference : X
Problem : Improperly Operated

Person : 1

Reference : 1
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1513280
Human Factors : Troubleshooting

Person : 2

Reference : 2
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1513282
Human Factors : Troubleshooting

Person : 3

Reference : 3
Location Of Person : Company

Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1513283
Human Factors : Training / Qualification

Person : 4

Reference : 4
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Inspector
ASRS Report Number.Accession Number : 1513535
Human Factors : Troubleshooting

Person : 5

Reference : 5
Location Of Person : Company
Reporter Organization : Air Carrier
Function.Maintenance : Technician
ASRS Report Number.Accession Number : 1513536
Human Factors : Troubleshooting

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Incorrect / Not Installed / Unavailable Part
Primary Problem : Incorrect / Not Installed / Unavailable Part

Narrative: 1

As slides [were] coming in for testing (functional) in our shop we noticed that the battery part number is different than we were using and the battery lanyard is different as well. This slides are manufactured in January 2015, so it's their first time to come thru. Being observant we noticed this difference and our fellow worker contacted [part manufacturer]. We've notified the company that the wrong battery per [part manufacturer] has been installed for some time. Nothing we could've known about since [the company] and our leaders such as engineering never provided the proper information regarding a parts change. Have [company] purchase the correct battery, and have our engineering department update us with any future changes.

Narrative: 2

[Report narrative contained no additional information.]

Narrative: 3

[Report narrative contained no additional information.]

Narrative: 4

[Report narrative contained no additional information.]

Narrative: 5

[Report narrative contained no additional information.]

Synopsis

Maintenance Personnel reported that incoming Boeing 737 slides have a different style lanyard and battery pouch than on previous slides. Maintenance was not notified of part number change.

ACN: 1512347 *(48 of 50)*

Time / Day

Date : 201801

Place

Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : B737-800
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked
Maintenance Status.Maintenance Type : Unscheduled Maintenance
Maintenance Status.Maintenance Items Involved : Installation

Component

Aircraft Component : Fire Protection System
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1512347
Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Maintenance
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

Found security latch, hook, aircraft side, not secured to rack. The Compartment Overheat Detection Control Unit bench plug was taped over with what appeared to be "anti-static" shipping tape. Unit may have been secured in the rack with just the friction of the tape.

Synopsis

Maintenance technician reported a Boeing 737 "Overheat Detection Control Unit" was improperly installed and not secured.

ACN: 1511459 *(49 of 50)*

Time / Day

Date : 201801
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 0

Environment

Light : Daylight

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : No Aircraft
Maintenance Status.Maintenance Type : Scheduled Maintenance
Maintenance Status.Maintenance Items Involved : Work Cards

Person

Reference : 1
Location Of Person : Hangar / Base
Reporter Organization : Air Carrier
Function.Maintenance : Lead Technician
Qualification.Maintenance : Airframe
Qualification.Maintenance : Powerplant
ASRS Report Number.Accession Number : 1511459
Human Factors : Situational Awareness

Events

Anomaly.Ground Event / Encounter : Other / Unknown
Detector.Person : Maintenance
When Detected : Routine Inspection
Result.General : Maintenance Action

Assessments

Contributing Factors / Situations : Equipment / Tooling
Primary Problem : Equipment / Tooling

Narrative: 1

Local mechanics were performing servicing of a crew oxygen bottle using an oxygen servicing booster. The bottle to be serviced was connected, shop air was supplied to the oxygen booster (after the incident the shop air supply source was found set to 150 psi), the oxygen source bottle was opened (the mechanic noted that the source bottle was at 2000 psi), the crew bottle was opened, and the oxygen booster was turned on to begin servicing. The mechanic reported the booster applied 3 pumps into the crew bottle to service it to the desired pressure. The crew bottle was turned off, the oxygen booster was turned off, then the source bottle was closed. Immediately after the source bottle was

closed the mechanics in the vicinity reported a flash and loud explosion. After the explosion a large scorch mark was noted on the wall directly behind the oxygen booster and an adapter kit that was on the shelf behind it. A brass cap on the back of the booster appeared to be the discharge location of the blast. Upon close inspection the cap and the line behind it had signs of exposure to extreme heat. As that cap was facing the wall the explosive force was directed back and up away from the mechanics performing the servicing. No personnel were harmed by shrapnel or the direct force of the blast. The only injuries reported were minor hearing loss directly after the explosion.

As I am not familiar with the internal working of the oxygen booster that was being used I cannot speculate to the cause of a mechanical failure. Based on the witness statements of the 3 mechanics present standard procedures were followed and no unsafe activities were reported. The report of a flash, signs of a high temperature discharge, and presence of oxygen suggests possible ignition fueled by the oxygen. No obvious sources of ignition were found anywhere near the oxygen storage area of the shop. The external safety valves mounted on the oxygen booster had no obvious visual defects. As I was the Lead on duty the mechanics present reported the incident to me directly after it occurred. We have taken the oxygen booster out of service. I took statements from all personnel present and submitted an incident report to Maintenance Control.

Synopsis

A Maintenance Supervisor reported that an oxygen servicing booster blew a brass cap due to extreme heat.

ACN: 1510756 *(50 of 50)*

Time / Day

Date : 201801

Place

Altitude.AGL.Single Value : 0

Aircraft

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : A320
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Parked
Maintenance Status.Maintenance Type : Unscheduled Maintenance
Maintenance Status.Maintenance Items Involved : Repair

Component

Aircraft Component : Reverser Translating Sleeve
Aircraft Reference : X
Problem : Improperly Operated

Person

Reference : 1
Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Maintenance : Other / Unknown
ASRS Report Number.Accession Number : 1510756
Human Factors : Training / Qualification

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : FAR
Detector.Person : Maintenance
Result.General : Maintenance Action
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

It was brought to my attention that a previous shift was made aware of damage on a reverser sleeve two days earlier. Not only [did they not] document discrepancy, but filled in deep gouge and painted over it [and] didn't document their work. Both the lower

intercostal at forward edge was gouged way beyond repairable limits but the main slider adjacent to it was also damaged. I saw the damage on yesterday and that the note was removed left by dayshift and today at [the] start of my shift the damage was filled with a compound of sort and painted over. Suggested resolution [is to] hold people accountable. When someone tries to communicate and we are constantly told to mind, our own business there is a problem.

Synopsis

A Maintenance employee reported that damage and an improper repair on an Airbus A320 reverser were not documented.