Transport Canada Transports Canada

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(4/2013)

Issue 4/2013

Feedback

Canadian Aviation Service Difficulty Reports

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TC-1005289

Canada

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50th Anniversary of the Pratt & Whitney Canada PT6 Turbine Engine

The cover picture for this Feedback issue was chosen to celebrate the 50th anniversary of the Pratt & Whitney Canada PT6 engine. The PT6 is an iconic engine that set the benchmark for reliability.

An astounding 52 300 PT6 engines have been produced of which more than 27 000 are still operating. At last count, there were 90 different models operating in 140 different platforms. The engines have accumulated over 390 million flying hours through an abundance of 7180 operators and there are no signs that this is slowing down. One of the amazing things about this engine is the enduring quality of its simple and reliable design. Even after 50 years since entry into service, new models are still being developed. There is no doubt that many more significant anniversaries of this engine will be celebrated in the future.

Feedback is published quarterly by the Continuing Airworthiness Division of Transport Canada, informing the aviation community of reported day-to-day problems that affect aircraft airworthiness in Canada.

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The articles contained in *Feedback* are derived from *Service Difficulty Reports* (SDRs) submitted by Aircraft Maintenance Engineers (AMEs), owners, operators and other sources in accordance with *Canadian Aviation Regulation* (CAR) 521.

SDRs are normally published verbatim. Transport Canada assumes no responsibility for the accuracy or content of any of these reports. Only spelling errors are corrected and content may be reduced as well as personal references deleted.

All defects or occurrences should be reported to Transport Canada through the Service Difficulty Reporting Program. For additional information about this program or concerning an article in *Feedback* magazine, contact your nearest Transport Canada Centre.

For all technical inquires related to articles of this magazine, please address your correspondence to *CAWWebFeedback@tc.gc.ca*

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Heads Up

Boeing, 737-8Q8 SDR # 20130123003

Cold Weather Operations

While the aeroplane was climbing through 35 000 feet, the crew found the pressurization to be fluctuating and the outflow valve to be unresponsive. During a descent to see if the issue would be resolved, the outflow valve went to full open and the aeroplane rapidly depressurized. The crew initiated a rapid decent and oxygen was deployed for the crew and passengers. The aeroplane returned to its origin and landed without any further issues where there were no reported injuries to crew or passengers.

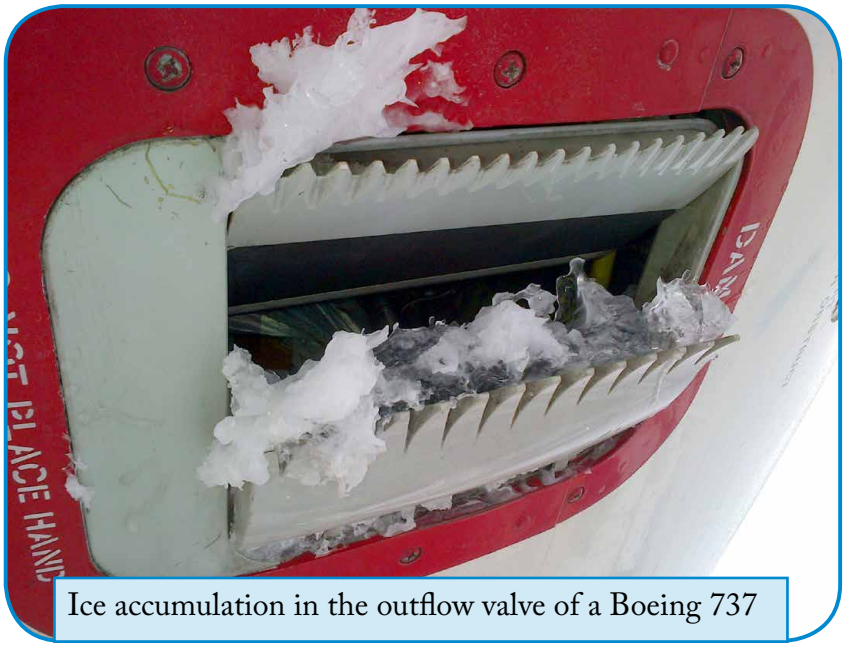
After arrival, maintenance inspected the aeroplane and immediately found a substantial amount of ice around and in the outflow valve. This ice would have restricted the movement and control of the valve. Including the outflow valve, additional ice was found around the drains and tail skid. Further inspection revealed that a potable water 4-way coupling had released in the aft section of the aeroplane causing water to be sprayed directly onto the outflow valve from the inside of the aeroplane, as seen in the attached figure.

The water coupling was re-secured for correct installation and all ice accumulations and obstructions were removed, making the aeroplane serviceable.

Transport Canada Comments:

As stated by the operator, the reason for the 4-way coupling failure was due to a frozen water line where upon review of this event, it was discovered that Boeing had published fleet team article 737NG-FTD-38-07001.

To summarize this article, Boeing has determined that operator diligence towards ground handling in cold weather operations in reference to Aircraft Maintenance Manual (AMM) 12-33-01/02 is essential to prevent such events. Also stated is that Boeing Service Bulletin 737-38-1057 is available for the addition of shroud/drains and heaters for the 4-way coupling along with the replacement of various solid tubing with either flexible non-heated or heated hoses.



Ice accumulation in the outflow valve of a Boeing 737

Airbus A310-304 SDR # 20120827017

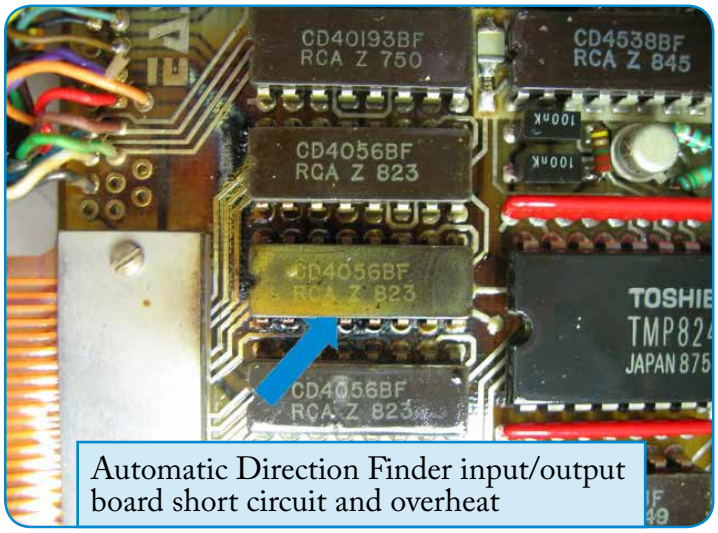
Overheated Automatic Direction Finder Control Panel

SDR submitted:

During cruise, the flight crew reported smoke coming out of the Automatic Direction Finder (ADF) #2 control panel. The ADF #2 circuit-breaker was pulled but smoke continued to come out of panel. The panel was removed and disconnected and the smoke discontinued.

The ADF panel was sent to an approved repair shop for investigation.

A new serviceable ADF panel was installed, making the aeroplane serviceable.



Automatic Direction Finder input/output board short circuit and overheat

Transport Canada Comments:

An in-depth investigation was performed by an approved overhaul facility where the following conclusion was stated:

"The root cause has not been established, but it may be a short circuit between the ground and +28V DC transfer light signals localized:

- *at green indicator lights DS3 or DS4 (potentially caused by water intrusion)*

  or

- *on the I/O board between the ground and +28V DC transfer light tracks near the connector P1 (potentially caused by a foreign object, debris or pollution)."*

It is important to note that for both scenarios of this conclusion, potential foreign object damage (FOD) was stated.

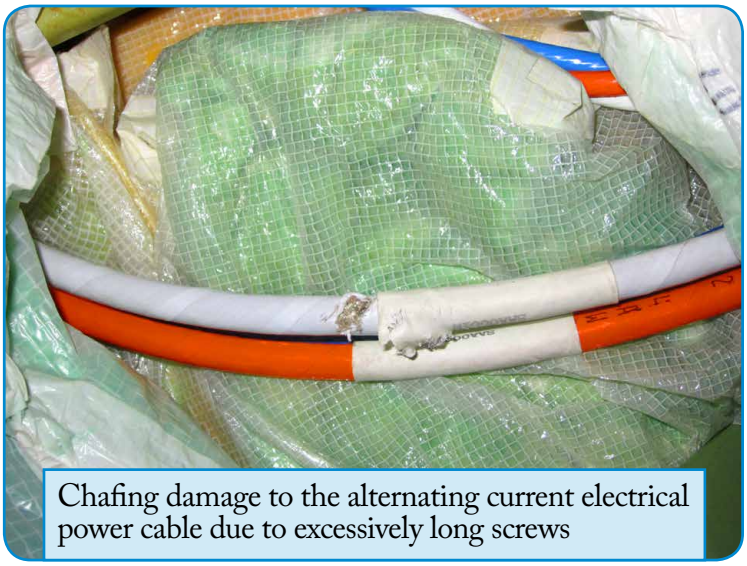
As maintainers of unpressurized piston powered aeroplanes to large turbine commercial jets, the cleanliness of our aeroplanes in being free of potential damaging debris or FOD is critical for its safe continued operation.

Alternating Current (AC) Power Feeder Cable

SDR submitted:

Shortly before entering operational service, a foreign interior completion center had installed the finished interior in the baggage bay. At this time, an upper intercostal was added to support the ceiling headline paneling. It was later found that the screws & bolts used to install the intercostal were excessively long and were chafing into the generator #1 power feeder cable. The feeder cable is installed above the headliner paneling and in an inaccessible area that the installer could not see while installing these improper screws.

Soon thereafter, it was discovered that the screws had damaged the insulation layers of the feeder cable and possibly the conductor of the feeder wires. The document holder will soon be issuing an engineering order to carry out a repair.



Chafing damage to the alternating current electrical power cable due to excessively long screws

Transport Canada Comments:

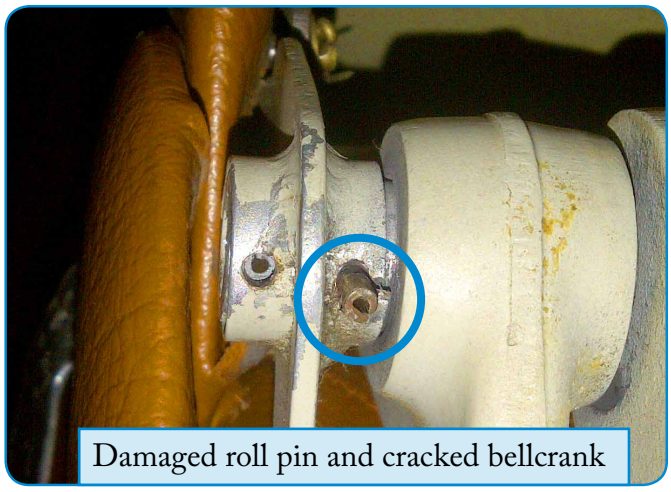
The above defect was entirely preventable and had the potential to have caused significant problems during flight.

Personnel should be fully aware of the areas that they work in, particularly when drilling into hidden compartments. It is essential that the proper hardware/screws be installed.

Cracked Pilot Seat Bellcrank

SDR submitted:

The bellcranks were found cracked where they connect to the "crank-weld assembly" on both the left and right hand side. The pins that secure the bellcrank on the left hand side had partially sheared placing the load on 2 of the 4 holes and appeared to cause the cracks to spread open. Damage to the right hand bellcrank was less severe and the pins were intact. Complete failure of the bellcranks or securing pins would cause the seat backrest to fully recline without warning.



Damaged roll pin and cracked bellcrank

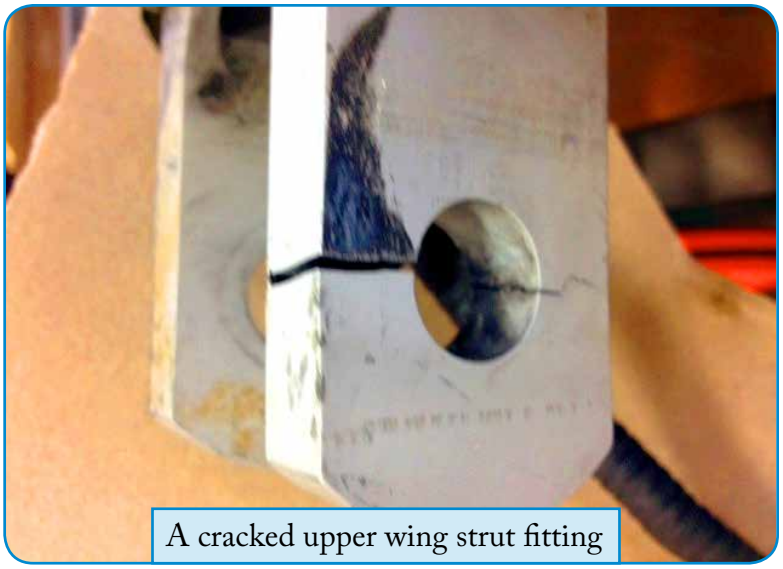
Transport Canada Comments:

Seats are sometimes overlooked or not inspected as thoroughly as other items on an aeroplane. We must remember that they are an airworthiness item just as important as any other installed component. Should a seat back or locking device fail during a critical phase of flight such as during rotation, disastrous consequences could result.

Upper Wing Strut Fitting – Crack

SDR submitted:

While completing a scheduled inspection in the wing area, a significant crack was found at the aft portion of the upper wing strut fitting. Further inspection revealed that the crack located on the fitting ear left only 6.35 mm (¼ inch) of material remaining.


A cracked upper wing strut fitting

The eddy current inspection interval for the upper wing strut is set at 10 000 hours. In this case, the next inspection was still some 4333 hours away.

Transport Canada Comments:

Cessna examined the failed right hand aft upper wing strut fitting part number (P/N) 2621008-202 and determined the mode of failure as high cycle fatigue.

Fortunately, Cessna 208 wings are externally braced by struts that are redundant (double shafts and double fittings). This extra margin of ruggedness built into the type design ensured a margin of safety.

Cessna are planning corrective action and will conduct additional cyclic testing on the wing struts to verify that the current inspection in Chapter 4 of the Model 208 Maintenance Manual (MM) is adequate. It is also Cessna's position that any aeroplane operated on floats should be following the "Severe Inspection Time Limits" and not the "Typical Inspection Time Limits". The Cessna MM will be revised accordingly.

Main Wheel Rim Crack

SDR submitted:

A 1.8 cm (0.700 inch) long crack was found on the out-board wheel half during a routine shop overhaul procedure. The method used to detect the crack was a high frequency eddy current (HFEC) inspection. The crack originated on the mating surface between the spoke and bolt hole.


A half cracked wheel rim

Transport Canada Comments:

The crack was detected using the HFEC method, Transport Canada Civil Aviation emphasizes the importance of close visual inspections during all daily and service check walkaround's for all gear related equipment.

Wing Slat Anti-Ice Hose Delamination

SDR submitted:

During cruise flight, the crew noticed that the left wing inboard leading edge slat was not shedding ice with the anti-ice selected. Upon maintenance investigation, the anti-ice flex hose for the left inboard slat was removed and found to be delaminated in several areas of the inner lining.

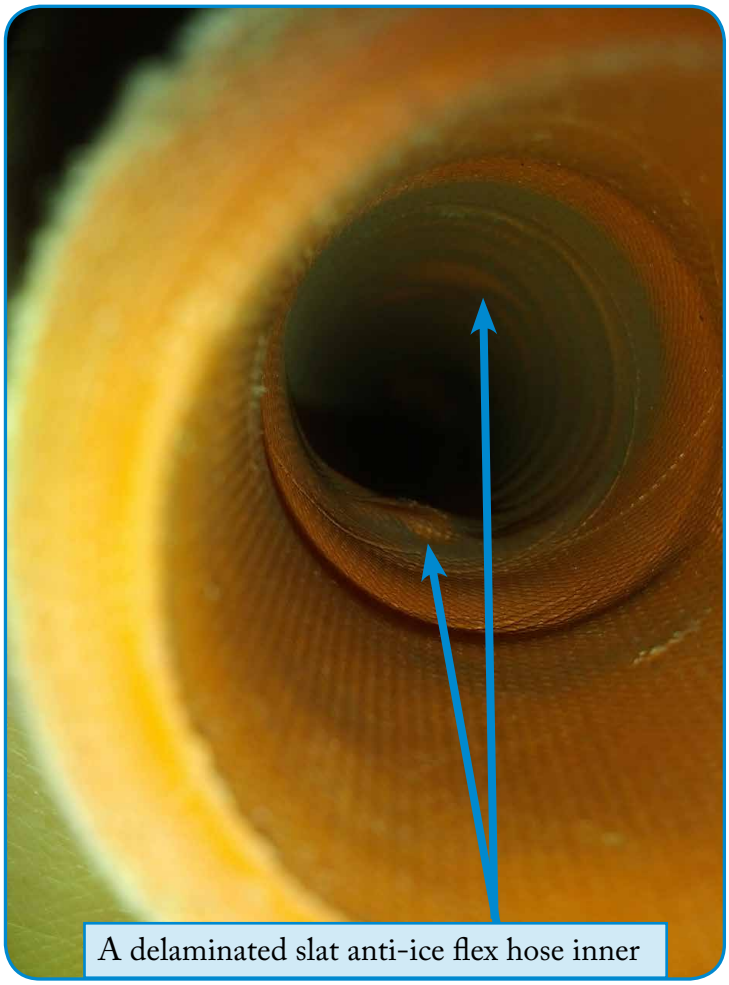
The hose was replaced and the aeroplane was made serviceable.

Transport Canada Comments:

As explained by the operator, the remaining 3 other slat flex hoses were inspected where 2 more hoses with mild delamination of the inner lining were found.

All four slat anti-icing hoses were sent to Dassault (Falcon) Continuing Airworthiness Engineering. Through their investigative efforts, it was concluded that from the possible torsion imposed on the hose during installation, heat-buildup and delamination can occur. Due to this possibility, all affected Aircraft Maintenance Manual installation procedures were revised.

Also, it was decided to de-escalate or drop the hard-time airworthiness limitation from 700 hours to 400 hours for this anti-ice hose. 🛠



A delaminated slat anti-ice flex hose inner

Dornier 328-300 SDR # 20120828006

Elevator De-Icing Boot Failure

SDR submitted:

The left-hand elevator horn failed in flight ("amber fail" on push-button annunciator panel).

Upon removal of the faulty left hand elevator horn assembly, maintenance noticed that the de-icing boot itself was deformed due to excessive heat. An elongated hole was also noticed on the de-icing boot and it is suspected that this is where an electrical short occurred, causing the overheat condition.

The fiberglass fairing was burned through and required replacement including the installation of a new de-icing boot.

Elevator horn de-icing boot overheated and deformed

Transport Canada Comments:

The thorough maintenance investigation captured exactly what the amber fail light indicated.

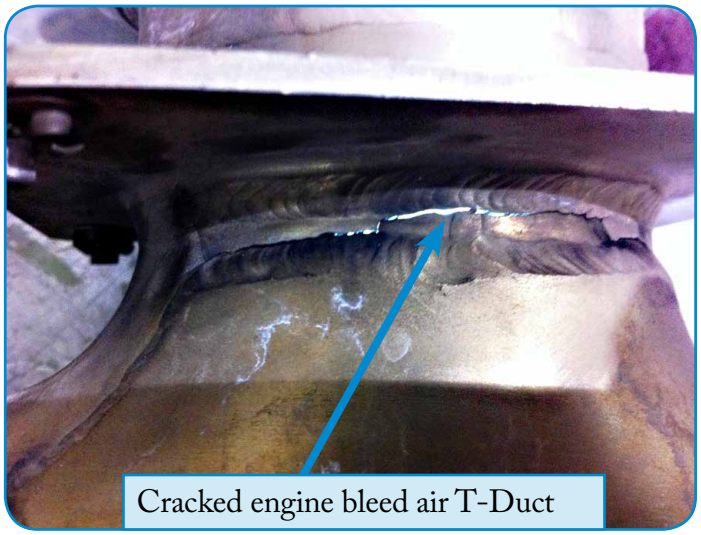
Embraer ERJ 170-200 SU SDR # 20121009002

Bleed Air T-Duct Failure

SDR submitted:

During a scheduled maintenance inspection task, the engine bleed air T-Duct below the pre-cooler on the right-hand pylon was found cracked.

The T-Duct was replaced, making the aeroplane serviceable.



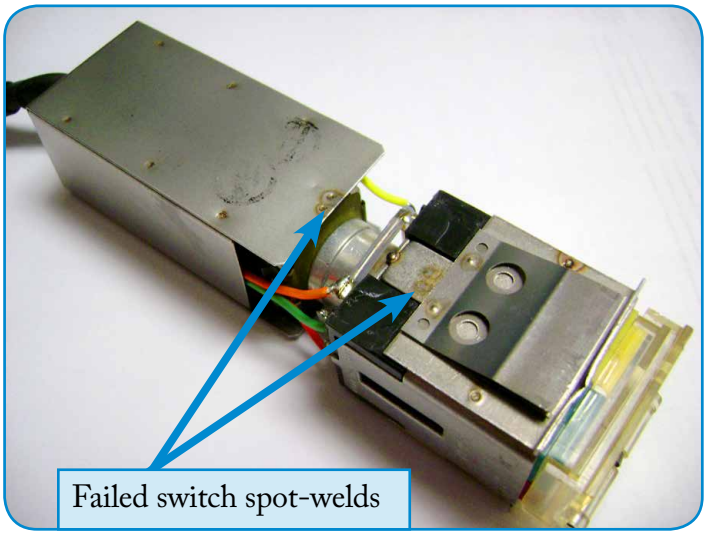
Cracked engine bleed air T-Duct

Transport Canada Comments:

This would be the second Service Difficulty Report (SDR) reported by the operator in the past year for this type of T-Duct failure.

The responsible type certificate holder for this aeroplane has been notified and Transport Canada Civil Aviation is advising all Embraer 170 owners, operators and maintainers to pay close attention to this area and duct.

Failed Annunciator Switch



SDR submitted:

During taxi for takeoff, the crew noticed a left-hand (L/H) engine fire warning indication. Both engines were shut down and the passengers were deplaned.

As reported by maintenance, the fault was with the L/H fire bottle switch pushbutton which also acts as an annunciator light.

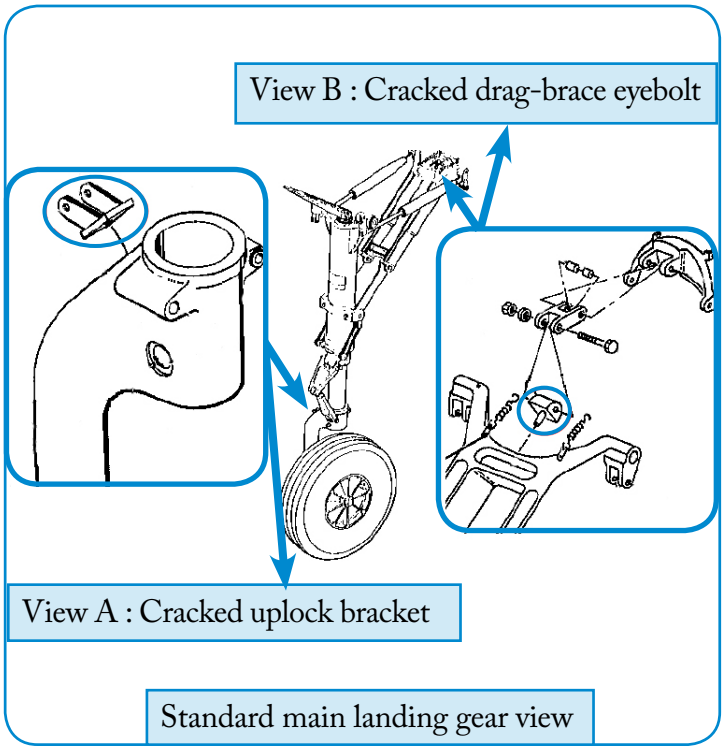
The switch is mounted inside a metal case where the spot-welds holding the switch within the case had failed allowing the switch to move around within the case due to normal vibrations. This caused the switch wires to ground-out on the case which lead to the false fire indication and the flight crews' requirement to shut down both engines and evacuate the passengers.

The switch was replaced, making the aeroplane serviceable.

Transport Canada Comments:

An indication fault as seen here can be as serious as a true engine fire fault. 🛠

Main Landing Gear Component Cracks



SDR submitted:

During a 5 year main landing gear (MLG) inspection, cracks were discovered in the uplock bracket (View A) and the drag-brace eyebolt (View B) by the non destructive testing (NDT) technician.

The discrepant parts were replaced and the MLG assembly was made serviceable for re-installation onto the aeroplane.

Transport Canada Comments:

The requirement to NDT the faulted items for this landing gear at the 5 year visit are not required by the manufactures inspection maintenance program and it was through the proactive initiative of the maintainer that these cracks were found.

As commented by the maintainer, it's believed that even with a total failure of the drag-brace eyebolt and uplock bracket, due to the redundancy of the design, the gear would have functioned safely, yet operational discrepancies may be noted.

Transport Canada Civil Aviation is advising all owners, operators and maintainers of this possible MLG condition. 🛠

Heat Damage to the Windshield Anti-ice Nozzle

SDR submitted:

The flight crew reported a window overheat master caution when at 40 000 feet in cruise with the outside air temperature at -55 degrees C.

Maintenance troubleshooting discovered the windshield ram air modulating valve had internally failed (input shaft had separated from the internal bellows). The valve was replaced and the system function tested serviceable.

As a result of the failing windshield ram air modulating valve, both the left and right windshield anti-ice nozzle ducts received extensive heat damage.

The left and right ducts were removed for repair and the windshields were inspected for possible heat damage.

Heat damage of the windshield anti-ice nozzle ducts

Transport Canada Comments:

Any form of windshield anti-ice nozzle heat damage is an indication of a failed pre-cooling or overheat detection system.

Main Wheel Rim Failure

SDR submitted:

The aircrew reported a tire failure on roll out after landing. The tire was serviced the day before the flight where no-defects were reported. The #3 main wheel out-board rim was found to be severely damaged where it appears that a crack began at the rim bead and propagated around almost half of the rim circumference.

The aeroplane was inspected for possible foreign-object-damage (FOD), the wheel assembly was replaced and the aeroplane was returned to service.

A severely damaged wheel rim

Transport Canada Comments:

Through discussion with the operator, it has been confirmed that for all tire assembly replacements, the rim halves require an eddy current inspection in the bead seat radius. Reference Learjet aircraft maintenance manual (AMM) 32-42-00.

Main Landing Gear Door Attachment Fitting

SDR submitted:

On departure during taxi-out, the line-maintenance crew notified the flight-crew that the left-hand main landing gear (MLG) door was flapping in the wind. Just prior to this, a Sikorsky S-92 had been operating in close vicinity to the aeroplane, violently rocking the aeroplane. It is suspected that the downwash from the helicopter caused the gear door fitting to crack as there was no dirt to indicate a pre-existing crack.

The fitting was replaced and the aeroplane was returned to service.

Broken attachment fitting on the main landing gear door

Transport Canada Comments:

As seen in the illustrated parts catalog 52-80-11, the rod attachment to the MLG door is done through a bolt, washer, floating bushing and castellated nut with cotter-pin. The floating bushing ensures that there is no clamping or pinching effect on the attachment fitting of the MLG door when the nut is torqued.

The correct installation for this attachment is critical to ensure the fittings integrity.

It is also an essential point to note that after any form of adverse handling of an aeroplane, be that in the air or on the ground, that a specific maintenance inspection be done to prevent scenarios as such defined in this article.

Garrett, TPE331-11U SDR # 20120924006

Engine Failure Due To Overhauled Idler Gear

SDR submitted:

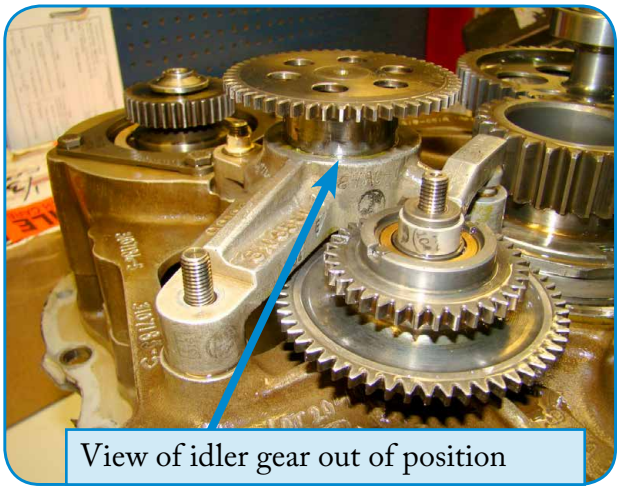
A maintenance report indicated that the right hand engine flamed out approximately 40 miles from the runway. Landing was carried out without incident. Troubleshooting revealed a failure of the engine internal drive of the fuel pump

Transport Canada Comments:

This engine failure was caused by a loss of drive to the fuel pump and fuel control unit which ultimately shut the engine down. The reason for the loss of drive was the idler gear bushing had backed out of the housing assembly. This caused the gear to migrate out of position and loose contact with the other gears in the system. This unit had been overhauled and the bushing replaced (likely more than once) in its service history. It is not known how many times this procedure had been accomplished on this particular unit (it is not a serialized part and as such is not tracked).

As engine fleets age (airframes as well) maintainers and overhaulers must take extra care to look for unusual conditions and wear that the designer may not have been able to predict when the product was first envisioned. Aging aircraft issues are and will continue to be a great challenge to everyone involved in the aviation industry.

Idler gear housing with multiple safety pinning holes drilled



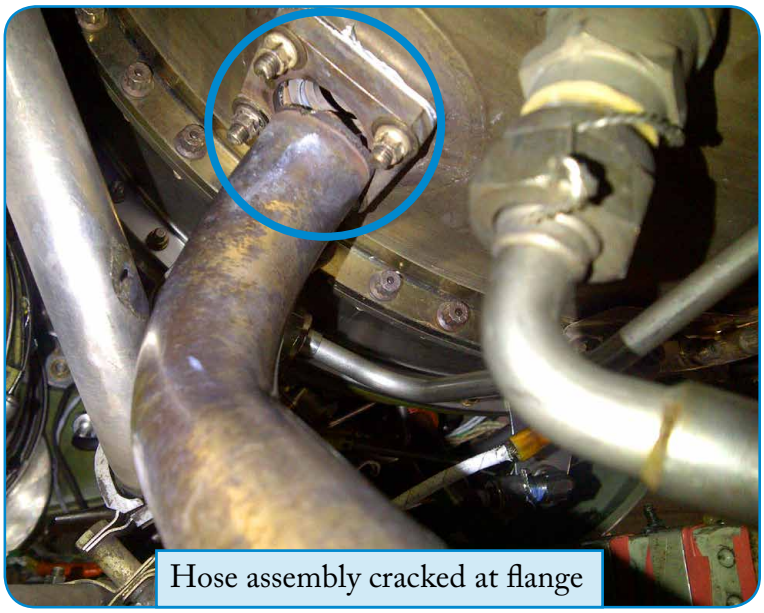
View of idler gear out of position

Cracked Bleed Air Line

SDR submitted:

When ground testing an engine for an unscheduled propeller dynamic balance, the right-hand (R/H) engine flexible p3 bleed air hose cracked at the flange and separated from the engine case. This caused abnormal exhaust gas temperature values, loss of power, pressurization system failure (only from R/H engine supply) and engine inlet anti-ice failure.

The flexible hose assembly became loose and chaffed on the R/H engine fire extinguisher spray pipe causing its failure. Hot air coming from the broken flange burned the electrical wires causing failure of the R/H engine computer, the fluctuation in the temperature indicator and caused the engine cowling seals in zone 1 to melt.


Hose assembly cracked at flange

Transport Canada Comments:

There is a post Service Bulletin line assembly available (part number 13711543L401) that addresses this problem. (Service Bulletin 21-JM 7797)

Pratt & Whitney Canada, PT6A-34 SDR #20120618007

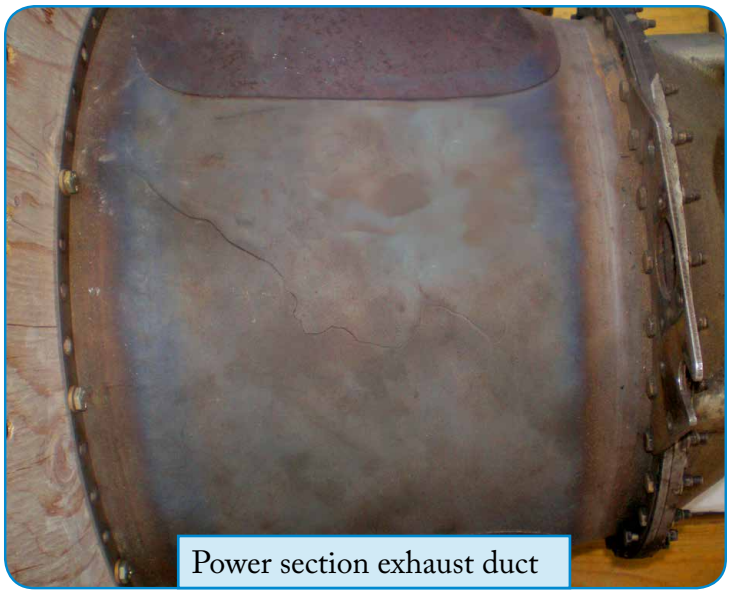
Cracked Power Section Duct

SDR submitted:

During a routine inspection, a crack was noticed on the exhaust duct between the "b" flange and "c" flange of the power section.

Transport Canada Comments:

The fact that this was found during a routine inspection would indicate that the crack initiated and propagated very quickly. It serves as a reminder to pay close attention when conducting any inspections however 'routine' or cursory they may be. Good job spotting this one considering the crack was located on the top of the engine on a DHC-6 aeroplane. This is not the easiest location to access!


Power section exhaust duct

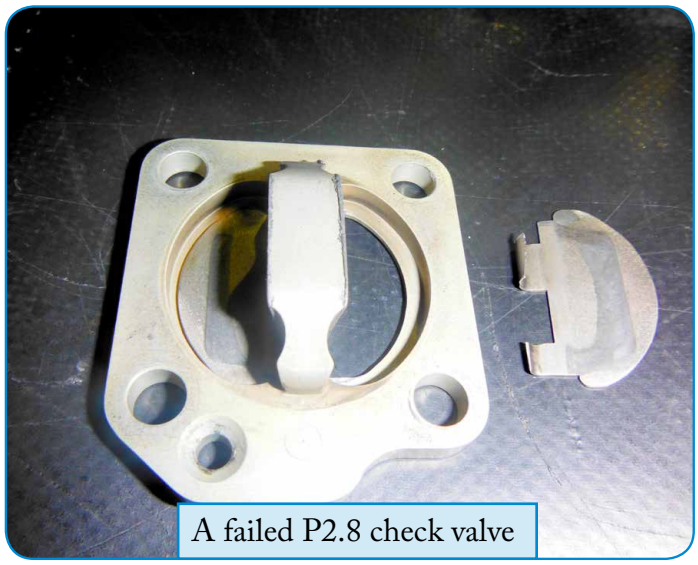
Pratt & Whitney Canada, PT6C-67C SDR # 20120803005

Failed P2.8 Check Valve

SDR submitted:

During a 50 hour inspection on an Augusta AW139, a piece of the P2.8 check valve was found in the engine compartment of the #2 engine.

The flapper valve is Post-Pratt & Whitney Service Bulletin 41042. This was introduced as a result of a similar problem with the Pre-Service Bulletin valves.



A failed P2.8 check valve

Transport Canada Comments:

Service Bulletin 41042 introduced a more robust check valve with improved hinges and contact area for the butterfly. It is obvious that there is still a potential for valve malfunction (due to the hostile environment in which the valve is located). Transport Canada Civil Aviation recommends maintainers inspect this area as per maintenance instructions and any time access permits.

Pratt & Whitney Canada, PW120A SDR # 20130110001

Odor In Cabin Caused By Glycol Ingestion

SDR submitted:

On descent, the flight crew noticed a strong burning plastic smell in the cockpit. An emergency was declared and they donned their oxygen mask. Some electrical systems and engine bleeds were turned off. After a few minutes the smell dissipated. The aeroplane landed without further incident. A maintenance team was dispatched to the outstation and determined that the contamination source originated from the #1 bleed system. The aeroplane was ferried to a maintenance base with the #1 bleed system selected off. Further troubleshooting revealed traces of glycol contamination at the inter compressor case (ICC) plenum, also an unidentified particle was found at the ICC drain. The drain was cleaned, engine ran, environmental system tested and test flight successfully conducted before returning the aeroplane into service.

De-icing procedure on a Dash-8 aeroplane

Picture by Photographer Chris Schock

Transport Canada Comments:

With the return of the icing season, crews are cautioned to follow the recommended procedures when de/anti-icing their aeroplane. Ground crews are also reminded to use caution while carrying out their duties and avoid spraying de/anti-icing fluids into the intake area of aeroplane's engines. Aircraft manufacturers publish procedures for de-icing and anti-icing their aeroplanes.

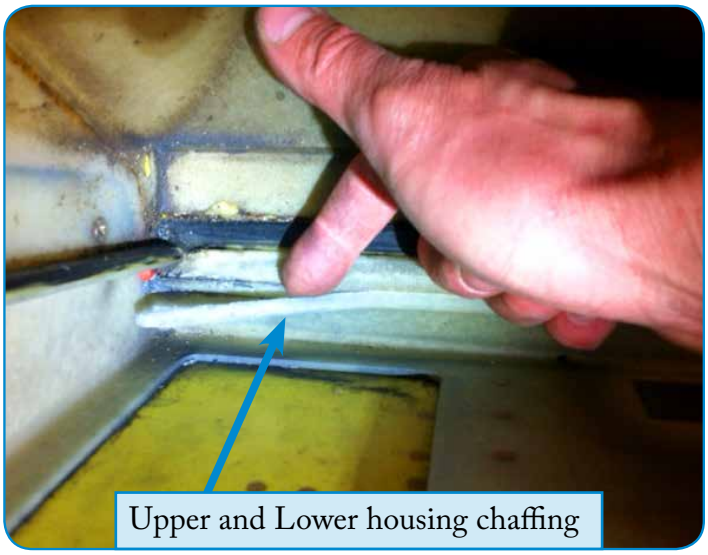
Rotorcraft

Aerospatiale, AS350 B2 SDR # 20121207004

Aerofilter Installation Chafe

SDR submitted:

While conducting a "T" inspection on an AS350 B2 with an FDC aerofilter assembly installed, a crack was found in the fiberglass. The fiberglass was worn on the aft flange where upper housing part number (P/N) 1350A3-1 contacts lower housing P/N 1350A4-3. The lower housing caused chafe damage to the upper housing. If not detected, the aft flange could have completely worn through and gone into the engine.


Upper and Lower housing chaffing

Transport Canada Comments:

A heads up to maintainers that have this STC installed to pay attention to this area during installation and inspection.

Aerospatiale, AS350 B3 SDR # 20130510004

Collective Potentiometer Intermittent

SDR submitted:

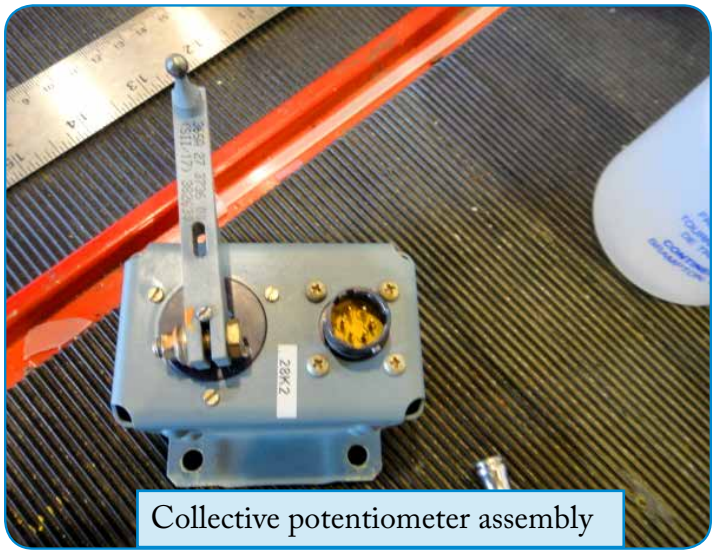
On a flight just before a fuel stop, the yellow governor light illuminated on the master caution panel.

The pilot landed without incident.

After discussion with the pilot about the fault code and the power being cycled on the aircraft, as there was no sign of the yellow governor light or fault, he returned to base.

Upon returning to base, the collective was looked on the VEMD (Vehicle Engine Multifunction Display) and it showed a consistent signal throughout the range of travel. It flew approx 3.5 hours with no further incident from the initial fault.

The part was replaced once a new one was obtained.


Collective potentiometer assembly

Transport Canada Comments:

Eurocopter issued Alert Service Bulletin 76.00.18, which introduces a modification to eliminate the potential for a rotor RPM drop in-flight. The modification involves reconditioning the electrical harness that connects the engine computers digital engine control unit (DECU) to the engine anticipator potentiometer, in order to eliminate any over-length and loops from this electrical harness.

Bell 412 CF SDR # 20130128024

Instrument Panel Bundle Chaffing

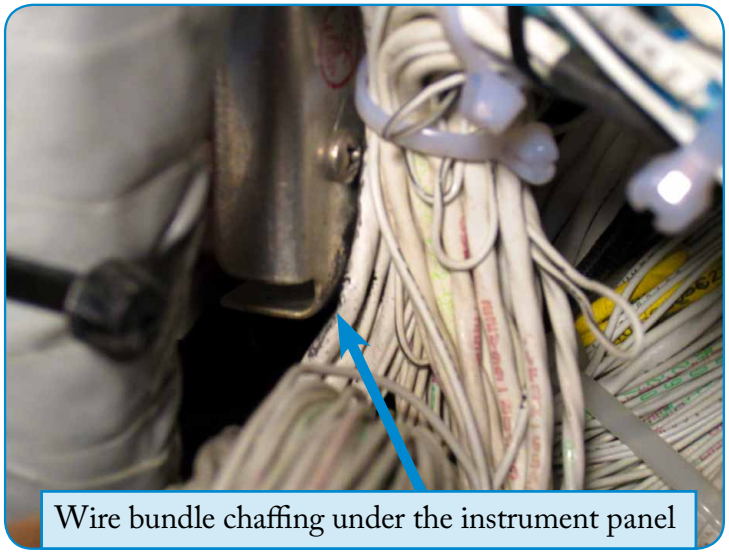
SDR submitted:

A pilot reported lateral cyclic impulses was felt in all flight regimes when the autopilot was on. Extensive trouble shooting was carried out over a 3 week period. The final rectification of the problem was the replacement of wire C943D22 which was found chaffing on the aircraft structure under the instrument panel on the left-hand side. The wire that was replaced was found in wire bundle K-TJ3-4B which was part of the EFIs modification.

A test flight was carried out serviceable and the aircraft was returned to service.

Transport Canada Comments:

Very difficult defect to locate. The operator added that the rest of the fleet had been inspected with no similar defects discovered. 🛠



Wire bundle chaffing under the instrument panel

Bell 430 SDR # 20130430014

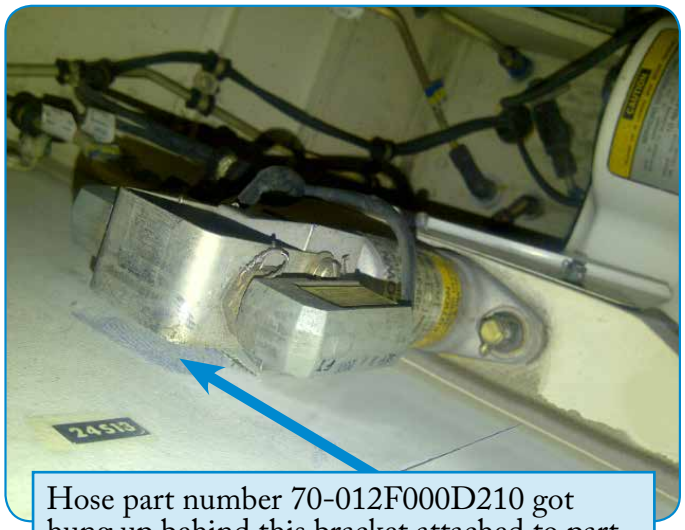
Landing Gear Extension Failure

SDR submitted:

An aircraft was on approach when the pilot attempted to extend the retractable landing gear and did not obtain a green advisory light for the left-hand (L/H) main landing gear.

After 5 attempts with the primary landing gear handle, the pilot decided to pull the emergency gear handle with no result.

A second passenger onboard riding in the copilot seat who happened to be a pilot was able to contact maintenance personnel by phone. While in a hover, the passenger was able to exit the aircraft from the copilot's seat and locate an aircraft jack. With the nose gear and right-hand (R/H) main gear fully extended and locked, the pilot was able to rest both wheels on the tarmac with power on while the passenger was able to get the aircraft jack positioned under the L/H aft jacking point with the pilot keeping the aircraft light on gear.



Hose part number 70-012F000D210 got hung up behind this bracket attached to part number 222-336-001-105 downlock actuator.

Once the aircraft jack was positioned, the pilot was able to rest the aircraft on two extended gears and the jack then successfully shut the aircraft down.

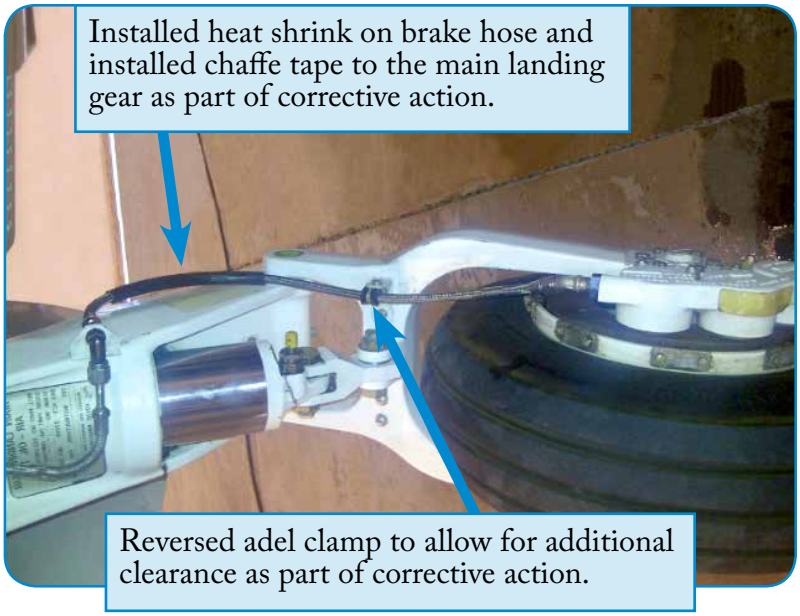
An Aircraft Maintenance Engineer (AME) arrived and determined that the L/H wheel brake hose part number (P/N) 70-012F000D210 was hung up on the down lock actuator P/N 222-336-001-105 not allowing the L/H gear to extend. The AME was able to free the brake hose and extend the L/H gear.

The operator took the following corrective actions to prevent a reoccurrence:

The L/H and R/H brake hoses were replaced and the hoses repositioned to prevent interference, heat shrink was installed on the hose with chafe tape on the landing gear strut to prevent chafe and adel clamp along with the hose repositioned to prevent future fouling. The gear was swung on jacks several times. The aircraft was returned to service.

Transport Canada Comments:

This incident illustrates the importance and vigilance of routing and proper security of hoses and clamps in vital aircraft systems. Failure to do so may have catastrophic consequences. 🛠



Eurocopter France, EC130 B4 SDR # 20110222012

#1 Bearing and Driveshaft Damaged

SDR submitted:

The helicopter was parked outside with all the necessary covers and heaters installed. There had been blowing snow for the past day prior to this incident. For the first flight of the day, the helicopter was ground run and positioned closer to where the passengers were to be picked up. This flight took 30 seconds. After this short flight the pilot reported that there may have been an unusual vibration therefore helicopter was inspected. The Aircraft Maintenance Engineer (AME) discovered that the #1 bearing and driveshaft were damaged. The rear shaft had contacted the Fenestron and a rub mark was evident on the shaft. The #1 bearing attachment bracket was loose and holes had been worn oblong. The helicopter was brought inside a hangar and the horizontal stab was removed and it was discovered that the bulkhead under the #1 bearing was cracked approximately 15.24 cm (6 inches) long. There was evidence that water had entered the hollow drive shaft and caused this vibration and subsequent damage. Approximately 15 ml of water was collected after the snow had melted from the rear end of the shaft.

Transport Canada Comments:

The investigation determined that blowing snow did enter the driveshaft and caused an imbalance of the driveshaft which in turn caused this damage.

Pilots and AMEs should be extra vigilant in inspecting this area during the preflight and take necessary precautions to prevent any moisture from entering the driveshaft (plugs, covers etc) 🛠

Hangar Noise

Boeing, 737-2S2C SDR # 20121113005

Flap Transmission Universal Joint Bolt Failure

It was during a standard ground operation of a Boeing 737-200 aeroplane when a flap retraction discrepancy was discovered with the right wing outboard flap panel. This was detected as the outboard flap panel would not fully retract past the #1 position. Further maintenance investigations revealed that a #7 flap transmission universal joint bolt was missing its' adjoining locking-nut, as seen in figures 1 and 2. The bolt thread to pin shank had sheared allowing it to migrate out from its yoke. The defective bolt was replaced, a dual inspection and functional checked was performed and the aeroplane was returned to service.

Through the evaluation of the operator, it was suspected that the cause of the universal joint bolt failure may have been attributed to stress corrosion imparted by a possible over-torque of the locking-nut and/or aggravated due to the aeroplanes previous operational environment. As a subsequent precautionary measure, the operator removed all flap transmission universal joint bolts (quantity 4, part number (P/N) 65-76606-1 and quantity 4, P/N 65-76607-1) for a magnetic particle inspection (MPI) resulting in a second bolt being indentified with a hair line crack, as seen in figure 3.

Further precautionary measures were taken from the operator through a campaign to inspect their remaining B737 aeroplane for any similar potential defects.

As an added measure of safety by the operator, three additional actions were taken to prevent flap transmission universal joint bolt failures as follows;

- "high lite" the effected attaching bolt hardware with yellow paint to ensure any loss of retention is readily detectable.
- include a specific task within the pre-flight inspection for the presence of the locking nut on the bolt of the universal joint assemblies.
- place the flap transmissions assembly on an in house soft time overhaul limit of 9000 hours or 10 years, whichever occurs first.

Through this proactive approach by the maintainer, the company's mandate pertaining to safety was met.

A review of Boeing's available maintenance documents in relation to this event identified the issuance of Service Bulletin 737-27-1265 in March 2005 which recommends the replacement of the universal joint bolts with a newly designed bolt.

The bolt material was changed to address stress corrosion and a self-locking castellated nut with cotter pin was added to address the potential backing-off and loss of the bolt.

Figure 1

Missing retention nut and bolt threaded end

Figure 2

Missing bolt threaded end and extensive corrosion

Figure 3

Universal joint bolt threaded end intact but hairline crack detected

Equipment Airworthiness Directives (ADs)

Transport Canada (TC) endeavours to send copies of new Airworthiness Directives (ADs), which are applicable in Canada to the registered owners of the affected products. Equipment/appliance ADs are often only distributed to our regional offices because the owners of aircraft affected by this type of AD are not generally known.

Aircraft Maintenance Engineers (AMEs) and operators of the affected products are encouraged to obtain further information or a copy of the ADs from their regional TC office, their local Transport Canada Centre (TCC), their Principal Maintenance Inspector (PMI), or from the Civil Aviation AD website at: www.tc.gc.ca/cawis-swimn

Manufacturer	AD Number	Origin	Description
HONEYWELL	CF-2013-25	Canada	Emergency Locator Transmitter – Battery Wiring Installation Discrepancies
STC SA03-38 STC ST00830SE	2013-19-23	United States	Fatigue cracking of various principal structural elements

Special Airworthiness Information Bulletins (SAIB)

A Special Airworthiness Information Bulletin (SAIB) is an information tool that alerts, educates, and makes recommendations to the general aviation community. It is non-regulatory information and guidance that does not meet the criteria for an Airworthiness Directive (AD).

SAIB Number	Make/Company	Subject	Issue Date
Federal Aviation Administration - *www.faa.gov/aircraft/safety/alerts/SAIB/*			
CE-14-03	Univair Aircraft Corporation	Wing Spar Damage	11/15/13
CE-14-02	XtremeAir	Engine Mount; inspection and replacement	11/05/13
CE-14-01	APEX Aircraft	Placards and Markings: Flat Spin Recovery and Aircraft Flight Manual (AFM) Revision of CAP 10B Aeroplanes	11/04/13
CE-13-43R1	Cirrus Design Corporation	Aircraft Fuel Distribution System and Ice/Rain Protection System	09/30/13
HQ-13-46	Stemme GmbH & Co. KG	Standard Airworthiness Certificate Category for Stemme S10-VT Gliders	09/30/13
CE-13-45	General Aviation	Engine Exhaust; Tailpipe V-band Couplings	09/05/13
CE-10-34R2	Beechcraft Corporation Hawker Beechcraft Corporation	Alternative Methods of Compliance (AMOC) to Airworthiness Directive (AD) 89-25-10 and 89-25-08	08/30/13
CE-13-43	Cirrus Design Corporation	Aircraft Fuel Distribution System and Ice/Rain Protection System	08/30/13
CE-13-44	Revo, Incorporated	Aircraft Fuel Filter/Strainer	08/30/13
CE-10-34R1	Beechcraft Corporation Hawker Beechcraft Corporation	Alternative Methods of Compliance (AMOC) to Airworthiness Directive (AD) 89-25-10 and 89-25-08	08/20/13
European Aviation Safety Agency - *http://ad.easa.europa.eu/sib-docs/page-1*			
2013-19		Non-stabilized Approach followed by Runway Overrun at Lyon Saint Exupéry Airport	11/14/13
2012-06R2		Defective Standard Hardware - MS21042, NAS1291 and LN9338 Self-Locking Nuts, and NAS626 Bolts	10/28/13
2013-18		Laundering of Scrapped Jet Engine Parts	10/16/13
2013-17	Cessna Aircraft Company	U206F Aeroplanes - Elevator Trim Tab Actuator Corrosion	10/14/13
2013-16	Pratt & Whitney Canada	PT6A Engines - Reduction Gearbox Failures	10/14/13
2013-15		Maintenance of Night Vision Imaging Systems (NVIS)	10/10/13
NM-07-47	The Boeing Company	737 Aeroplanes equipped with Forward Airstairs	10/08/13
2013-14	SAAB AB	SF340A and 340B Aeroplanes - Aileron Bell Crank Bearing Failure	09/20/13
2010-21R3		Activation of the European Geostationary Navigation Overlay Service "(EGNOS)"	09/06/13
2013-13		Pilot Training - Artificial Pitch Control Feel	09/04/13

Service Difficulty Reports (SDRs)

LEGEND

JASC: Joint Aircraft System Code number defining assembly/system/components

SDR No.: Transport Canada Civil Aviation (TCCA) assigned SDR control number — please quote in any correspondence or inquiries

Region (RGN): TCCA region of SDR submitter:

PAC = Pacific
ONT = Ontario
ATL = Atlantic
VAR = Various
PNR = Prairie and Northern
QUE = Quebec
NCR = Ottawa (Headquarters)

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
AIRCRAFT						
AEROSPATIALE						
AS 350B	2822	FUEL BOOST PUMP	P94B12209	FAILED	20130916012	PAC
AS 350B	8310	LOCK		UNSERVICEABLE	20130826008	QUE
AS 350B2	2435	STARTER SHAFT	150SG11034	BROKEN	20130816002	QUE
AS 350B2	2821	DOME		CRACKED	20130916011	ONT
AS 350B2	2822	BOOST PUMP	P94B12209	LEAKING	20130816003	QUE
AS 350B2	2900	HYDRAULIC PULLEY	350A35109222	UNSERVICEABLE	20130730003	PNR
AS 350B2	6220	HALF MOON BEARINGS	704A33633261	UNSERVICEABLE	20130809008	QUE
AS 350B2	6420	TR HALF SHELL BEARINGS	704A33633261	UNSERVICEABLE	20130813005	PNR
AS 350B2	6730	SERVO		OVERHAULED	20130918007	PNR
AS 350B2	7921	OIL COOLER	704A33220025	LEAKING	20130925003	PAC
AS 350B3	2900	HYDRAULIC HOSE	704A34412251	LEAKING	20130826016	PNR
AS 350B3	2900	HYDRAULIC HOSE	704A34412271	LEAKING	20130821001	PAC
AS 350BA	7931	OIL PRESSURE TRANSMITTER	704A376420	INTERMITTENT	20130814002	PNR
ATR 42 300	3246	MAIN WHEEL BOLT	MS212500603	SHEARED	20130911003	QUE
AIR TRACTOR						
AT 602	7313	PACKING	MS9388009	CRACKED	20130724001	PNR
AT 802	2720	SWAGE		BROKEN	20130726012	PAC
AT 802A	3246	TIRE - NOSE	AA1E6	RUPTURED	20130812002	PAC
AT 802A	3246	TUBE	122511	CRACKED	20130729017	PAC
AT 802A	5534	ATTACH BRACKET	10A12000070	CRACKED	20130702009	PAC
AIRBUS						
A310 308	2910	HYDRAULIC MANIFOLD	A2901150800000	LEAKING	20130822012	QUE
A310 308	2910	TUBE	2244404523	CRACKED	20130826003	QUE
A319 114	2420	GENERATOR CONTROL UNIT	740120C	FAILED	20130919003	QUE
A319 114	2910	UPPER HEAD SUPPLY HOSE	3214052010	FAILED	20130704004	QUE
A319 114	2913	ENGINE DRIVEN PUMP	623977	FAILED	20130916009	QUE
A319 114	3230	NOSE LANDING GEAR UPLOCK	C247300016	FAILED	20130920014	QUE
A319 114	3230	RELAY	E0242A28A0	FAILED	20130911013	QUE
A320 211	1200	GEAR UPLOCK		OVER GREASED	20130719002	QUE

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
A320 211	2120	AIR INLET VALVE ACTUATOR		FAILED	20130711003	QUE
A320 211	2897	#2 CENTER TANK FUEL PUMP	56812720205R	ARCING	20130704001	QUE
A320 211	2910	FLEX LINE	AE2464051J0225	FAILED	20130731003	QUE
A320 211	2910	HYDRAULIC LINE		FAILED	20130722005	QUE
A320 211	2997	BLUE HYDRAULIC PUMP WIRE		CHAFFING	20130830017	QUE
A320 211	3160	COCKPIT INDICATION		LOST	20130829002	QUE
A320 211	3230	CABLE PULLEY	D3217016020200	SHEARED	20130802002	QUE
A320 211	3230	RIGHT-HAND MAIN LANDING GEAR UPLOCK	201117014	FAILED	20130923003	QUE
A320 211	3610	CHECK VALVE		CRACKED	20130808006	QUE
A320 211	520	GEAR UPLOCKS		OVER GREASED	20130723005	QUE
A320 214	520	FUEL SYSTEM		FUEL SPILL	20130722006	QUE
A321 211	2810	FUEL SYSTEM		SPILL	20130830006	QUE
A330 343	2910	HYDRAULIC MANIFOLD		LEAKING	20130722002	QUE
A330 343	3620	BLEED MONITOR CONTROLLER		FAILED	20130820007	QUE
BAE - UK						
3212	3246	AFT WHEEL HALF	AHA1753	BROKEN	20130826005	QUE
BAE 146 200A	3230	QUADRANT ASSEMBLY	HC323H006100	CORRODED	20130828008	MAR
BAE 146 200A	3240	LEVER ASSEMBLY WHEEL BRAKE	HCZ72H002200	CORRODED	20130828009	MAR
BEECH						
1900C	2730	BOB WEIGHT STOP		BENT	20130722003	MAR
1900C	2842	FUEL FEED SENSOR	1143890407	INCORRECT PART NUMBER	20130705001	PAC
1900D	2120	TUBE ASSEMBLY	1145550411	NEW	20130913008	PAC
1900D	2752	ACTUATOR	1295210512	CRACKED	20130923008	PNR
1900D	2900	HYDRAULIC LINE	1145803651	CHAFFED THROUGH	20130724009	PNR
1900D	5520	HINGE SUPPORT	1016100121	CRACKED	20130823006	PAC
200	5210	CHANNEL	50430043557822	CORRODED	20130829012	PNR
200	5315	BEAM	504200337	CRACKED	20130827005	PNR
200	7220	ICE VANE INLET		TORN	20130905003	PNR
A100	3222	TORQUE KNEE	508103237	OVERHAULED	20130920002	ONT
A100	3233	YOKE CLEVIS	AN2423A	CRACKED	20130906001	QUE
A100	3260	SWITCH	1003810061	WORN	20130925001	ONT
A100	5512	SKIN UPPER	115620010427	CRACKED	20130911005	QUE
A100	5520	SHAFT	1155240465	CORRODED	20130808001	ONT
B100	3400	GPS	GTN625	BLANKED OUT	20130911007	QUE
B100	5753	FLAP TRACK	501600183	CRACKED	20130904005	QUE
B200	3233	ACTUATOR	11238002217	CRACKED	20130830016	PNR
C90A	2100	COMPRESSOR MOTOR	1003840725	USED	20130826002	PNR
C90A	3230	SWITCH	MS213212	NEW	20130729019	PNR
C90A	3260	SWITCH	MS213212	NEW	20130729018	PNR
BELL TEXTRON - CAN						
206B	1000	NUT	NAS12917	CRACKED	20130925002	PAC
206B	2823	SHUT OFF VALVE	AV24B1265AR	FAILED	20130821006	PAC

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
206B	6210	BLADE TIP/END		UNSERVICEABLE	20130812003	PAC
206B	6300	DRIVESHAFT	206040015	OVER TEMP	20130926001	PNR
206B	6310	INNER SHAFT	206040222003	OVERHAULED	20130731006	PNR
206B	6700	TUBE ASSEMBLY	206001189001	LOOSE	20130812009	PNR
206B	7313	NOZZLE	23077068	HANGING	20130711002	PNR
206B	7532	BLEED VALVE	23053176	FAILURE TO CLOSE	20130711008	PAC
206B 3	6300	DRIVESHAFT	206040015	OVERHEAT	20130806006	PNR
206L 1	6210	MAIN ROTOR BLADE	206015001115	CRACKED	20130830013	PAC
206L 1	6410	TAIL ROTOR BLADE	2062200301	DELAMINATION	20130805019	PAC
206L 1	6410	TAIL ROTOR BLADE	2062200301	DELAMINATION	20130805020	PAC
206L 4	6410	TAIL ROTOR BLADE ASSEMBLY	2062200301	DELAMINATION	20130722009	PAC
206L 4	7922	CIRCUIT BREAKER	35AMPS1CB17	POP OUT	20130724008	QUE
407	6210	TIP CAP		DEPARTED	20130709003	QUE
407	6321	GUIDE BOLT	D01641	SHEARED	20130812008	PNR
407	6410	TAIL ROTOR BLADE	406016100119	VOID	20130730001	QUE
407	8000	STARTER RELAY	SM20ACD300A21	CONTACTS OPEN	20130702010	PNR
BELL TEXTRON - USA						
204B	2300	CYCLIC TRIGGER SWITCH	PM212302	USED	20130912007	PNR
204B	6420	BOLT	NAS660419D	SHEARED	20130820004	PNR
205A 1	6230	SUPPORT	204011404125	NEW	20130813006	ONT
205A 1	6510	FITTING	205031818001	CRACKED	20130705006	PAC
212	2432	BATTERY BUS RELAY	MS24142D2	FAILED	20130815012	PAC
212	2436	DC CONTROL UNIT	51509002R	NO VOLTAGE	20130815013	PAC
212	2916	HYDRAULIC TANK	205076135109	CORRODED	20130815014	PAC
212	3210	CROSSTUBE	212321103	BROKEN	20130724003	PAC
212	6220	ROD END	212010123101	WORN	20130815004	PAC
212	6300	BOOT	212040176103	LEAKING GREASE	20130807002	PAC
212	6320	TX MOUNT UPPER WASHER	20130922001	SCRAP	20130922002	QUE
212	6320	TX MOUNT UPPER WASHER	204030913005	SCRAP	20130922001	QUE
212	7720	T5 HARNESS ASSEMBLY	312048401	OPEN CIRCUIT	20130726017	PAC
214B 1	7300	FUEL CONTROL UNIT	216062021	OVERHAULED	20130715017	PNR
412CF	6410	TAIL ROTOR BLADE	212010750127F	DEBONDED	20130726004	PNR
412EP	6730	CYLINDER CONNECTING	41004706001	NEW	20130711001	QUE
BELLANCA						
7ECA	3246	TAIL GEAR ASSEMBLY	3200	SHEARED	20130923016	PNR
8GCBC	2720	PEDAL - TOE BRAKE FRONT	315371FR	BROKEN	20130722007	PNR
BOEING						
727 225	8000	PRESSURE SWITCH	1G309	FAILED	20130702014	PAC
727 227	2760	ROD ASSEMBLY	414001410	BROKEN	20130710011	PAC
727 243	2910	MODULAR PACK	65178231	FAILED	20130726018	PAC
727 243	5230	MANIFOLD ASSEMBLY	AE4895600	CRACKED	20130803011	PAC
737 2R8C	3244	TIRE - BRIDGESTONE	APS01291B4014	FAILED	20130726007	ONT
737 36Q	2750	FLAP BOOM CABLE	694353126	FRAYED	20130830014	PNR
737 6CT	3230	LIMIT SWITCH	MS250114	DIRTY	20130815001	PNR
737 76N	2520	CABIN SMELL		OVERHEATED	20130830007	PNR
737 76N	3417	AIR DATA MODULE	C17001CA01	FAILED	20130913004	PNR
737 7CT	1200	HYDRAULIC SYSTEM		OVERSERVICED	20130829005	PNR

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
737 7CT	2312	AUDIO CONTROL PANEL	5145177	FAILED	20130903010	PNR
737 7CT	2530	COFFEE MAKER	6475300105	OVERHEATED	20130806004	PNR
737 7CT	2742	STAB TRIM MOTOR	6355C000101	FAILED	20130829003	PNR
737 7CT	2910	LOW PRESSURE LIGHT		ILLUMINATED	20130829006	PNR
737 7CT	3230	MANUAL EXTENSION LIMIT SWITCH	MS250114	FAILED	20130927001	PNR
737 7CT	3411	PITOT TUBE	0851HT1	HEATER FAILED	20130710002	PNR
737 7CT	3420	AIR DATA INERTIA REFERENCE UNIT	HG2050AC07	FAILED	20130913003	PNR
737 7CT	5753	TRAILING EDGE FLAP FITTING	113A135Y1	SHEARED	20130723006	PNR
737 8CT	4930	FUEL MANIFOLD		LEAKING	20130819014	PNR
737 8CT	520	CABIN COMPARTMENT		SMELL	20130717009	PNR
737 8CT	5610	CAPTAIN #1 WINDOW	5893543149	UNSERVICEABLE	20130904004	PNR
757 2B7	5230	SWITCH	5EN3206	UNSERVICEABLE	20130815010	PNR
767 375	2150	ACTUATOR EXHAUST	20224324	FAILED	20130731002	QUE
767 375	2923	ADP FILTER MODULE		LEAKING	20130731001	QUE
767 375	3420	INERTIAL REFERERENCE UNIT	HG1050AD11	FAILED	20130906003	QUE
BOMBARDIER						
BD 100 1A10	2910	HYDRAULIC TUBE ASSEMBLY	1005354124005	FAILED	20130702008	QUE
BD 100 1A10	3244	TIRE	263K432	BULGED	20130816004	PNR
BD 100 1A10	3260	PROXIMITY SENSOR ELECTRONIC UNIT	302270402	FAILED	20130712003	QUE
BD 100 1A10	4900	AUXILIARY POWER UNIT	36150BD	FAILED	20130729014	QUE
BD 700 1A10	1000	CABLE GUARD PIN	MS203922C95	MISSING	20130911002	ONT
BD 700 1A10	2421	VARIABLE FREQUENCY GENERATOR	BA0580106	REPLACED	20130725002	ONT
BD 700 1A10	5210	TENSATOR SPRING	GS3210580001	CRACKED	20130911009	ONT
BD 700 1A11	2420	VARIABLE FREQUENCY GENERATOR	GL51111035	OIL SUMP FRACTUR	20130913002	QUE
CL600 2B19 (RJ100)	2100	AIR CONDITIONING	601R950003	OVERHEATED	20130807007	QUE
CL600 2B19 (RJ100)	2421	AIR DRIVEN GENERATOR DEPLOYMENT CONTROL PANEL	820465	DEPLOYED	20130923009	QUE
CL600 2B19 (RJ100)	2621	BOTTLE FIREX	365000183	DISCHARGED	20130708007	QUE
CL600 2B19 (RJ100)	2721	YAW DAMPER ACTUATOR	6229968001	FAILED	20130708008	QUE
CL600 2B19 (RJ100)	2820	FUEL LINE	601R622993	CHAFED	20130916006	MAR
CL600 2B19 (RJ100)	2910	HYDRAULIC TUBE	AE4096G0060	FAILED	20130723004	QUE
CL600 2B19 (RJ100)	2911	GAUGE	600751253	BLEW APART	20130815003	MAR
CL600 2B19 (RJ100)	3230	GEAR SYSTEM		FAILED	20130910005	QUE
CL600 2B19 (RJ100)	3230	SELECTOR VALVE	601R751461	FAILED	20130828002	MAR

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
CL600 2B19 (RJ100)	3230	SELECTOR VALVE		FAILED	20130923011	QUE
CL600 2B19 (RJ100)	3230	VALVE MAIN LANDING GEAR SELECTOR	750005000	FAILED	20130710003	QUE
CL600 2B19 (RJ100)	3244	NOSE TIRE		FAILED	20130710009	QUE
CL600 2B19 (RJ100)	5312	559 PRESSURE BULKHEAD		CRACKED	20130806002	QUE
CL600 2B19 (RJ100)	5312	621 PRESSURE BULKHEAD		CRACKED	20130806001	QUE
CL600 2B19 (RJ100)	5610	WINDOW	601R3303320	CRACKED	20130731007	MAR
CL600 2B19 (RJ100)	5610	WINDOW SIDE	NP13932187226	CRACKED	20130910006	QUE
CL600 2B19 (RJ100)	5610	WINDSHIELD	NP13932114	CRACKED	20130719003	QUE
CL600 2C10 (RJ700)	2760	SPOILER SYSTEM		FAILED	20130912005	QUE
CL600 2C10 (RJ700)	2910	HYDRAULIC HOSE	AS120G094180	FAILED	20130820006	QUE
CL600 2C10 (RJ700)	2910	HYDRAULIC LINE	AE7178141	FAILED	20130820005	QUE
CL600 2C10 (RJ700)	2910	HYDRAULIC RETRACT HOSE	AE71357812	FAILED	20130710005	QUE
CL600 2C10 (RJ700)	3520	PASSENGER SERVICE UNIT	8030006263	FAILED	20130812007	QUE
CL600 2D15 (705)	2721	AILERON/RUDDER TRIM PANEL	CC670511143	STUCK SWITCH	20130920011	MAR
CL600 2D15 (705)	2910	HYDRAULIC LINE	524043	CRACKED	20130726009	MAR
CL600 2D15 (705)	2910	HYDRAULIC TUBE	524044	CRACKED	20130819012	MAR
CL600 2D15 (705)	3220	PIN DOWEL	521613	DISLODGED	20130926002	PNR
CL600 2D15 (705)	520	RADOME	GC21905045	BIRD STRIKE	20130716005	MAR
CL600 2D15 (705)	5610	WINDOW		CRACKED	20130812005	MAR
CL600 2D24 (RJ900)	2100	AIR CONDITIONING	PACK	FAILED	20130715013	QUE
CL600 2D24 (RJ900)	2120	AIR CONDITIONING	PACK	FAILED	20130710001	QUE
CL600 2D24 (RJ900)	3244	MAIN TIRE		BLOWN	20130715015	QUE
CL600 2D24 (RJ900)	3620	BLEED LEAK DETECTION SYSTEM		FAILED	20130910007	QUE
CL600 2D24 (RJ900)	5210	PASSENGER DOOR		JAMMED	20130717002	QUE
CL600 2E25 (RJ1000)	3230	SELECTOR VALVE	533407	FAILED	20130904006	QUE
CANADAIR						
CL215 6B11(CL215T)	5514	FITTING-FINLET	215T212054	CRACKED	20130920010	PNR
CL600 2B16(601 3A)	3230	FITTING	MS219266D	UNSERVICEABLE	20130916007	ONT
CESSNA						
152	2721	RUDDER RETURN SPRING	31019613	UNSERVICEABLE	20130819015	PAC

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
152	3245	INNER TUBE		SPLIT	20130726005	ONT
152	5541	SPAR	4330106	CRACKED	20130927008	ONT
172N	2300	SWITCH		LOOSE	20130923007	PNR
172N	3213	O-RING	AN6227B32	DAMAGED	20130702012	PAC
172N	5753	SWITCH	S19062	STUCK CLOSED	20130822008	PNR
172P	3243	BRAKE MASTER CYLINDER	98820104	SHEARED	20130828001	QUE
172R	2421	ALTERNATOR	991059111RX	MISSING SCREWS	20130806003	PNR
172R	2421	ALTERNATOR	991059111RX	NO CHARGE	20130711004	PNR
172S	2710	AILERON CABLES		SEVERELY FRAYED	20130927006	ONT
172S	7414	MAGNETOS	4371	WORN	20130809001	ONT
182N	5312	BULKHEAD ASSEMBLY	7126161	CRACKED	20130701017	PNR
182S	2721	RUDDER TRIM INDICATION	7136433	ORIGINAL	20130729016	ONT
208	7931	CARRIER OIL SEAL FUEL CONTROL UNIT DRIVE	3004085	DEGRADED	20130807005	ONT
208B	3242	BLEEDER SCREW	7900300	SERVICEABLE	20130909002	MAR
208B	3242	BOLT-ANCHOR	6901900	FAILURE	20130907001	PNR
208B	5522	TIP SKIN LEFT HAND AFT OUTBOARD	26340008	CRACKED	20130909008	MAR
208B	8000	CONTACTOR	SM400D37	UNSERVICABLE	20130826011	PNR
210R	7921	HOSE	AE7013106H0351	WORN CHAFED	20130724006	ONT
414	3231	BELLCRANK	8411066	SHEARED	20130826006	PNR
525A	3260	CAPACITOR	63183951	OVERHEATED	20130711006	PNR
550	2750	FLAP GEARBOX	556517538X	DAMAGED	20130722004	ONT
550	2750	GEARBOX	556517538X	GEAR DAMAGED	20130719001	ONT
750	7500	VALVE CHECK	99141711	NEW	20130826007	ONT
A185F	7800	EXHAUST COLLECTOR	075023847AWL	CRACKED	20130814003	PAC
A188B	2912	FILTER		WORN	20130904001	MAR
R172K	7300	LINE	LW120980170	BROKEN	20130808002	ONT
TU206G	5520	RIGHT HAND ELEVATOR AFT SPAR	12346384	CRACKED	20130809002	PNR
U206G	2435	STARTER	643259A18R	CRACKED	20130722011	PNR
U206G	3244	TIRE	723710	FLAT	20130722014	PNR
U206G	7314	FUEL PUMP	R646212	LOW PRESSURE	20130722010	PNR
CIRRUS						
SR22	3240	BRAKED CALIPER	3052	USED	20130725003	PNR
CONVAIR - CAN						
340	2433	PHASE ADAPTER	661102B	BURNT	20130710004	PAC
340	3222	NOSE LANDING GEAR STRUT	34052101015	BROKEN	20130718004	PNR
340	3250	NOSE STEERING ACTUATOR	14030	LEAKING	20130815011	PAC
340	3260	GEAR INDICATION		FAILED	20130704006	PAC
340	3418	ANGLE OF ATTACK COMPUTER	C212061	FAILED	20130823012	PAC
340	5610	WINDOW	34031103019	CRACKED	20130702013	PAC
580	2422	STATIC INVERTER	1B8001G	FAILED	20130705008	PAC
580	2720	COUPLING	24026402100	CRACKED	20130807006	PAC
CUB AIRCRAFT						
J3C65	2710	BRACKET AILERON HINGE	1299201	CORRODED	20130831001	PNR

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
DEHAVILLAND - CAN						
DHC 2 MKI	2731	ELEVATOR TRIM ROD	KAC2T47A	BROKEN	20130717007	PAC
DHC 2 MKI	2731	T-LINK	C2TF7	UNSERVICEABLE	20130815002	ONT
DHC 2 MKI	3246	FITTING	58S926R	CORRODED CRACKED	20130815015	PAC
DHC 2 MKI	5610	WINDSHIELD BRACKET	C2FC129	CRACKED	20130821002	PNR
DHC 3	2711	PUSHROD	C3CF3113	CRACKED	20130703002	ONT
DHC 3T	2820	MOTOR	A4949	FAILED	20130808003	ONT
DHC 6 300	2720	RUDDER PEDAL	C6CFM121027	CRACKED	20130726011	MAR
DHC 6 300	2730	HINGE ARM	C6TEM101633	CRACKED OFF	20130710008	MAR
DHC 7 103	2110	AIR CYCLE MACHINE	7506601	FAILED	20130918008	ONT
DHC 8 102	1000	PULLEY	85410466001	SEIZED	20130923010	MAR
DHC 8 102	1000	PULLEY	MS202203	SEIZED	20130911008	MAR
DHC 8 102	1400	BRACKET	85410370001	CRACKED	20130923013	MAR
DHC 8 102	2432	AUXILIARY BATTERY	20413000	OVERHEAT	20130920003	MAR
DHC 8 102	2752	BEARING	5903592	SEAL DETACHED	20130716001	MAR
DHC 8 102	2761	CASING		FRACTURED	20130903004	MAR
DHC 8 102	2761	ROLL SPOILER ACTUATOR	A44700009	FRACTURED	20130927002	MAR
DHC 8 102	2840	FUEL QUANTITY INDICATOR	10013000002	SHORTED	20130812001	MAR
DHC 8 102	2900	VALVE HYDRAULIC BRAKE	G831810A	FRACTURED	20130903008	MAR
DHC 8 102	2910	HYDRAULIC TUBE	82970410115	CHAFFED LEAKING	20130731004	MAR
DHC 8 102	3230	PULLEY	85410466001	SEIZED	20130703007	MAR
DHC 8 102	3230	SOLENOID SEQUENCE VALVE	54C546347	FAILED	20130826009	MAR
DHC 8 102	3240	BRAKE CABLE	83200501001	FRAYED/BROKEN	20130906002	MAR
DHC 8 102	5415	FITTING	85711438101	CORRODED	20130927007	MAR
DHC 8 102	5415	FITTING	85711438101	CORROSION	20130923004	MAR
DHC 8 102	7120	STRUT ASSEMBLY	85410029053	CORROSION	20130923002	MAR
DHC 8 202	2760	SPOILER POWER UNIT POWER CONTROLLER	DH10201153CS	UNSERVICEABLE	20130828003	ONT
DHC 8 202	3451	DISTANCE MEASURING EQUIPMENT ANTENNA	1020332N2	CRACKED	20130828004	ONT
DHC 8 300	8012	START CONTACTOR	AJA4N176	WELDED CLOSED	20130717008	ONT
DHC 8 311	2711	WIRE	27113C22	CHAFFED	20130801008	MAR
DHC 8 311	3220	PIPE - HYDRAULIC SYSTEM #2		DAMAGED - LEAK	20130709010	ONT
DHC 8 311	3232	ARM	85420015103	FRACTURED	20130702002	MAR
DHC 8 311	3320	LAMP HOLDER	BV033000220	END BURNT	20130815008	MAR
DHC 8 314	7120	STRUT ASSEMBLY VERTICAL	87110047001	WORN OUT	20130911004	QUE
DHC 8 315	3240	ROTOR	24459023	BROKEN	20130705002	PNR
DHC 8 400	1410	HOSE	115503005	RUPTURED	20130715012	ONT
DHC 8 400	2400	AUDIO RADIO CONTROL DISPLAY UNIT	CDU3933AF05	INTERNAL SHORT	20130918004	ONT
DHC 8 400	2620	CONTROL AMPLIFIER	47387203	BURNT	20130822011	ONT
DHC 8 400	2913	ENGINE DRIVEN PUMP	6617304	SHAFT SHEARED	20130909003	ONT
DHC 8 400	3213	AXLE	461083	CORROSION NOTED	20130830010	QUE
DHC 8 400	3240	BRAKE UNIT	216052	BINDING	20130829009	ONT
DHC 8 400	3244	TIRE	DR0231T	TREAD SEPARATED	20130708006	ONT

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
DHC 8 400	3297	NOSE LANDING GEAR HARNESS	473903	OPEN WIRING	20130830002	ONT
DHC 8 400	5610	WINDSHIELD	80260007	SHATTERED	20130920007	ONT
DHC 8 402	2530	COFFEE MAKER	400263601	SHORTED	20130906006	MAR
DHC 8 402	2530	OVEN MODEL 1432-I-AC	400123002	NEW	20130910002	QUE
DHC 8 402	2910	ENGINE DRIVEN HYDRAULIC PUMP	6617303	LEAKING	20130726010	ONT
DHC 8 402	3230	ALTERNATE ACTUATOR	466501	BROKEN	20130711005	QUE
DHC 8 402	3230	MECH SEQUENCE VALVE	1FA01139103	UNSERVICEABLE	20130801006	ONT
DHC 8 402	3416	RADAR ALTIMETER #1 HARNESS	83440221405	LOCKARM REVERSED	20130815006	ONT
DHC 8 402	3444	RADAR ALTIMETER #1 HARNESS	83440221405	LOCKARM REVERSED	20130815007	ONT
DHC 8 402	5210	TUBE	85217053103	FRACTURED	20130920008	MAR
DHC 8 402	5210	VALVE SHUTOFF	4100S105	FAILED	20130909005	MAR
DHC 8 402	5230	CARGO DOOR HANDLE	85237600001	SERVICABLE	20130816005	ONT
DHC 8 402	5697	WINDOW SYSTEM WIRING		BURNT	20130905009	MAR
DHC 8 402	5713	WING STRINGERS	857143121615	ELONGATED HOLES	20130826010	ONT
DIAMOND - CAN						
DA 20 A1	7520	RADIATOR LEFT HOSE	63019	SPLIT	20130814001	ONT
DA 20 C1	2750	SPACER	2227500002	MISSING	20130708003	MAR
DA 20 C1	7314	ELECTRIC FUEL PUMP	5367001	LOW PRESSURE	20130919005	MAR
DA 20 C1	7322	THROTTLE BODY	6538981A19	SEIZED	20130826004	MAR
DA 20 C1	7930	OIL PRESSURE GAUGE	2279301000	INACCURATE	20130808005	MAR
DA 20 C1	7930	OIL PRESSURE GAUGE	2279301000	INACCURATE	20130826015	MAR
DA 20 C1	7930	OIL PRESSURE GAUGE	227930100	INACCURATE	20130716002	MAR
DA 20 C1	7930	OIL PRESSURE GAUGE	2279301000	INACCURATE	20130716007	MAR
DA 20 C1	7930	OIL PRESSURE GAUGE	2279301000	INACCURATE	20130826014	MAR
DA 20 C1	8011	STARTER	BC3201	SHAFT BROKEN	20130722012	PNR
DOUGLAS						
DC10 30F	2110	AIR CYCLE MACHINE	20497511	FAILED	20130702005	PAC
DC10 30F	5610	WINDSHIELD	NBA6045501	CRACKED	20130704005	PAC
DC3G202A	2913	HYDRAULIC PUMP	1P582K	FAILED	20130703005	ONT
EMBRAER						
EMB 500	3244	TIRE	215K261	BULGED	20130716003	PNR
EMB 500	3418	VANE BASE ASSEMBLY	C1001641	HEATER FAIL	20130705005	PNR
ERJ 170 200 LR	3230	LANDING GEAR CONTROL LEVER	9037B000104	FAILED	20130918001	PNR
ERJ 170 200 SU	3140	MODULAR AVIONICS UNIT POWER MODULE	70265421901	FAILED	20130805018	QUE
ERJ 190 100 IGW	2150	AIR CYCLE MACHINE	10007004	FAILED	20130729022	QUE
ERJ 190 100 IGW	2300	COMMUNICATION SYSTEM		COMPLETE FAILURE	20130823007	QUE
ERJ 190 100 IGW	2730	ELEVATOR ACTUATOR	4161001001	FAILED	20130911011	QUE
ERJ 190 100 IGW	2750	FLAP SYSTEM		FAILED	20130905011	QUE
ERJ 190 100 IGW	2750	FLAP SYSTEM		FAILED	20130919004	QUE
ERJ 190 100 IGW	2752	FLAP ACTUATOR	C1558161	FAILED	20130820001	QUE
ERJ 190 100 IGW	2760	SPOILER SYSTEM		FAILED	20130819017	QUE
ERJ 190 100 IGW	2910	ENGINE DRIVEN PUMP PYLON		RUPTURED	20130823008	QUE
ERJ 190 100 IGW	3140	INPUT/OUTPUT MODULE	70253651901	FAILED	20130702004	QUE

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ERJ 190 100 IGW	3240	MAIN BRAKE PRESSURE	526335001	FAILED	20130927009	QUE
ERJ 190 100 IGW	3241	BRAKE SYSTEM		FAILED	20130805016	QUE
ERJ 190 100 IGW	3411	AIR DATA INDICATION		UNRELIABLE	20130829001	QUE
ERJ 190 100 IGW	3610	ENGINE BLEED SYSTEM		LOSS	20130916004	QUE
ERJ 190 100 IGW	5430	PYLON FAIRING PANEL	3411501503	MISSING	20130905010	PNR
EUROCOPTER FRANCE						
EC 120 B	2360	ELECTRICAL BONDING BRAID	365A31193700	UNSERVICEABLE	20130823009	MAR
FAIRCHILD						
SA227AC	2910	HYDRAULIC TUBE	2781032081	UNSERVICEABLE	20130703006	PNR
SA227AC	2910	TUBE ASSEMBLY	2781032273	CRACKED	20130729023	ONT
SA227CC	2910	HYDRAULIC LINE	2781032013	CRACKED	20130812006	ONT
SA227DC	7930	GAUGE	271916005	FAILED	20130816006	ONT
GULFSTREAM - ISRAEL						
ASTRA SPX	3620	SENSING ELEMENT	35636210	USED	20130920018	ONT
ASTRA SPX	4980	SHROUD ASSEMBLY	AST1271	BAD INSTALL	20130823010	ONT
GULFSTREAM - USA						
GV	3150	LED BULB	ELED682CGSRD	SHORTED	20130905004	QUE
HUGHES						
369D	6520	TAIL ROTOR GEARBOX	369D25400	CHIP LIGHT	20130925004	PAC
LEARJET						
35A	3241	WIRE		CORRODED	20130917001	QUE
45	2130	MUFFLER ASSEMBLY	12945096001	CRACKED	20130927005	QUE
60	2822	AUXILIARY POWER UNIT FUEL BOOST PUMP	15000022	LEAKING	20130712008	PNR
60	5620	CABIN WINDOW	660040510	CRACK	20130912003	QUE
60	7830	BIRDCAGE	2660016503	CRACK	20130912008	QUE
MORAVAN						
Z242L	3213	GEAR		WORN	20130823004	ONT
PILATUS - SW						
PC 12 45	5710	HY-LOK FASTNER	HLT411AP610	MISSING COLLAR	20130705003	ONT
PC 12 47E	2460	OVERHEAD CONTROL PANEL	9728121155	INOPERABLE	20130709002	ONT
PC 12 47E	2710	AILERON CONTROL ROD	5271212060	WET	20130827004	PAC
PIPER						
PA28 140	7800	CLAMP	65442003	UNSERVICEABLE	20130819018	PAC
PA31	3232	BRACKET	46357001	CRACKED	20130712005	QUE
PA31	3232	PIPER BRACKET	4635700	CRACKED	20130712004	QUE
PA31	7800	TOP TAIL PIPE	4031008	PERFORATED	20130912002	QUE
PA31 350	8120	409170-9001	LFR009941	FAILED	20130709013	PNR
PA31 350	8530	BASE STUDS		SHEARED	20130818001	PAC
PA31P	3110	PANEL SHOCK MOUNT	475109J721922	BROKEN/WORN	20130801007	PNR
PA34 200	3260	SQUAT SWITCH	1SE13	REPLACED	20130920012	ONT
PA34 200T	3211	FORWARD TRUNNION	67040013	USED	20130923015	PNR
PA44 180	7800	MUFFLER ASSEMBLY	PIM0010	MISSING BAFFLES	20130724004	MAR
PA60 600	2421	ALTERNATOR	ALLL8521R	LOW OUTPUT	20130823011	PAC
QUEST						
KODIAK 100	2730	CABLE ASSEMBLY	1006184412D01	CORROSION	20130923005	PAC
ROBINSON						
R44	2916	RESERVOIR	D2111	VALVE STICKING	20130820003	PNR
R44	6720	TAIL ROTOR PITCH CHANGE	C0311	WORN	20130910004	PNR

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
R44	7160	AIR FILTER	C7711	DETERIORATED	20130822013	QUE
R44 II	2397	MASTER RADIO RELAY	A9994	FAILED	20130729020	PNR
R44 II	2432	BATTERY	RG2415	LOW VOLTAGE	20130708002	PNR
R44 II	2432	BATTERY	RG2415	UNSERVICEABLE	20130801001	PNR
R44 II	2435	STARTER	14924HT	FAILED	20130708001	PNR
R44 II	2435	STARTER	14924HTH	LOW CRANKING	20130724002	PNR
R44 II	2435	STARTER	14924HT	WON`T START	20130702011	PNR
R44 II	2841	FUEL QUANTITY	624600716	REPLACED	20130802005	PNR
R44 II	2841	FUEL QUANTITY METER	624600716	NOT ADJUSTABLE	20130802004	PNR
R44 II	2913	HYDRAULIC PUMP	D5001	LEAKING	20130807010	PNR
R44 II	2916	RESERVOIR	D2112	VENTING	20130912001	PNR
R44 II	6240	TACHOMETER	C7924	STICKING	20130719004	PNR
R44 II	6310	SPRAG CLUTCH	C1883	UNSERVICEABLE	20130812004	PNR
R44 II	6730	RESERVOIR	D2112	LEAKING	20130715018	PNR
R44 II	7314	FUEL PUMP	LW15473	LEAKING	20130813001	PNR
R44 II	7322	GOVERNOR	D2782	WORN	20130718002	PNR
R44 II	7414	MAGNETO	106006169	WORN	20130925007	PNR
R44 II	7414	MAGNETO	1060064620	WORN	20130813002	PNR
R44 II	7414	MAGNETO	1060064620	WORN	20130815009	PNR
R44 II	7414	MAGNETO	1060064620	WORN	20130925006	PNR
R44 II	8011	STARTER	BC3151004	WONT START	20130801002	PNR
R44 II	8550	ENGINE	IO540AE1A5	MAKING METAL	20130730002	PNR
ROCKWELL COLLINS						
690A	3211	LEFT HAND MAIN LANDING GEAR TRUSS ANGLE	73005821	CRACKED	20130904010	PNR
SAAB						
SF340A	3240	PARKING BRAKE CABLE	AMP250998	FAILED	20130816007	PAC
SWEARINGEN						
SA226TC	3243	MASTER CYLINDER	V1151000	UNSERVICEABLE	20130925005	PNR
VIKING CANADA						
DHC 6 400	2460	JUNCTION MODULE	M8171417D37	FLAWED	20130816008	PAC
DHC 6 400	2810	FLAPPER VALVE	C6PF11573	OBSCURED	20130724010	PAC
DHC 6 400	2997	PRESSURE SWITCH	PDM6607P96A	BURNT	20130923017	PAC
DHC 6 400	5420	AN960PD6L		FOULING	20130918015	PAC
DHC 6 400	6113	SPINNER BULKHEAD	C30641P	GOUGED	20130819019	PAC
DHC 6 400	7921	OIL COOLER	C6SC11413	FRETTING	20130717010	PAC
ENGINE						
ALLISON						
250-C20B	7200	2 1/2 BEARING		MAKING METAL	20130828012	PAC
250-C47B	7210	PINION GEAR	6893672	BROKEN GEARTOOTH	20130923006	PNR
501-D13D	6121	SYNC MODULE	6508977	NOT WORKING	20130822009	PAC
501-D13D	7160	HEATED AIR INLET DUCT	906425201	HEAT DAMAGE	20130709015	PAC
AVCO LYCOMING						
IO-540-AE1A5	7414	BLOCK	10357426	BUSHING FAILURE	20130829011	PNR
IO-540-AE1A5	7414	BLOCK	10357426	CRACKED	20130713001	PNR
IO-540-AE1A5	7414	BLOCK	10357426	CRACKED	20130724005	PNR
IO-540-AE1A5	7414	BLOCK	10357426	CRACKED	20130829010	PNR
O-360-A3A	7800	EXHAUST STACK	99541006AWL	CRACKED	20130717004	PNR
T5313B	7230	DIFFUSER HOUSING	111030011	IN SERVICE	20130920009	PNR

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CFM INTERNATIONAL						
CFM56-5A1	7200	ELECTRONIC CONTROL UNIT ALTERNATOR		CONTAMINATED	20130927004	QUE
GENERAL ELECTRIC						
CF34-10E5A1	7200	ENGINE		TAILPIPE FIRE	20130827002	QUE
CF6-80A	7532	VALVE ASSEMBLY - CHECK VALVE	77385619	ON CONDITION	20130920013	ONT
HONEYWELL						
TFE731-20BR-1B	7220	FAN ASSEMBLY		WORN OUT	20130919002	ONT
PRATT & WHITNEY-CAN						
PT6A-28	7532	DIAPHRAGME	310334701	TEAR	20130704003	QUE
PT6A-41	7240	ENGINE GAS GENERATOR CASE		CRACKED	20130814004	PNR
PT6A-42	7200	ENGINE	PT6A42	CONTAMINATION	20130709012	PNR
PT6A-42A	7250	COMPRESSOR TURBINE BLADES	312313102	DAMAGED	20130717003	PNR
PT6A-60A	7532	BLEED VALVE	311703201	UNSERVICEABLE	20130924004	MAR
PT6A-67B	8300	HELICAL COIL INSERT/ BOLT	MS124775	BROKEN/STRIPPED	20130724007	QUE
PT6A-67F	8300	ENGINE	PT6A67F	WARNING LIGHT	20130822010	PAC
PT6T-3D	7200	#4 MAIN BEARING	3028006	TABS BROKEN	20130920017	PAC
PW119B	7250	PT2 STATOR	3073624	USED	20130808004	PAC
PW121	7280	GARLOC SEAL	311435001	CRACKED	20130731008	QUE
PW123	7210	REDUCTION GEAR BOX 2ND STAGE SPUR GEARSHAFT	310831601	CRACKED	20130826001	PNR
PW123	8300	ENGINE		CASE CRACK	20130916008	MAR
PW535E	2000	NUT-TUBE COUPLING	MS919806	MISSING THE HOLE	20130916001	QUE
PRATT & WHITNEY-USA						
JT8D-17	7711	TUBE ASSEMBLY PT7	500790	CRACKED	20130905014	PNR
JT8D-17A	7500	BLEED AIR DUCT	657745213	ON CONDITION	20130905007	PNR
R-985-AN-14B	8530	CYLINDER	399343	UNSERVICEABLE	20130820008	PAC
TELEDYNE CONTINENTAL						
IO-470-L	7310	FUEL INJECTOR TUBE	928152	CRACKED	20130807012	PNR
O-200-A	8530	EXHAUST VALVE		UNSERVICEABLE	20130819016	PAC
TSIO-520-B	8530	CYLINDER	AEC631397	UNSERVICEABLE	20130725001	PNR
TURBOMECA						
ARRIEL 1D1	1410	ENGINE OIL HOSE	355A75130074	CRACKED	20130715014	PAC
ARRIUS 1A	7800	EXHAUST NOZZLE	319778720	UNSERVICEABLE	20130905006	PAC
WILLIAMS						
FJ44-3A	7720	TT2PT2 SENSOR	79646	HEATER FAILED	20130709011	PNR
PROPELLER						
AEROPRODUCTS						
A6441FN-606	6120	REGULATOR	R654	SERVICEABLE	20130729021	PNR
DOWTY ROTOL						
R408/6-123-F/17	6114	BALL SET	6660003873	GALLING/SCORED	20130814005	PNR
HAMILTON STANDARD						
14SF-19	6111	BLADE COLLAR	8022531AND2	CRACKED	20130802003	QUE
HARTZELL						
HC-D4N-3A	6114	SEAL	C33174262	DAMAGED	20130806005	PNR

Make/Model	Jasc	Part Name	Part Number	Part Condition	SDR No.	RGN
MCCAULEY						
1A101/DCM6948	6110	PROPELLER	1A101DCM6948	UNSERVICEABLE	20130919006	QUE
SENSENICH						
W69EK-63G	6111	PROPELLER	W69EK763	ERODED	20130712006	ONT
EQUIPMENT						
ACS						
SSTCCLSA12	3430	INSTRUMENT LANDING SYSTEM		ERRATIC	20130711011	PNR
ARTEX						
ME406	2562	G-SWITCH	4526505	FAILED	20130718003	PAC
BEECRAFT						
10180153	3244	TIRE	265F868	OUT OF BALANCE	20130904017	PNR
CESSNA						
11341041	2100	MOTOR ASSEMBLY	11341041	BURNT OUT	20130821005	PAC
CONVAIR - CAN						
750X14	3244	NOSEWHEEL TIRE	750X14	OUT OF BALANCE	20130828014	PNR
GENERAL ELECTRIC						
9.231E+11	2610	FLAME DETECTOR WIRING		INTERMITTED	20130905013	MAR
GOODRICH						
23085001	2435	BEARING	3600918	FAILED	20130809004	PNR
23085001	2435	BEARING	3600918	FAILED	20130924006	PNR
GOODYEAR						
265F868	3244	BALANCE PATCH	15OZ	SEPARATED	20130925008	PNR
GULL AIRBORNE						
150906002	7331	FUEL FLOW TRANSMITTER	150906002	NO INDICATION	20130905012	PNR
HONEYWELL						
4006719921	2215	SERVO MOTOR	4006719921	REPAIRED	20130711009	PNR
83440221405	3444	RADAR ALTIMETER #1 HARNESS	83440221405	LOCKARM REVERSE	20130815005	ONT
LIVE TV						
3042865102	2520	SEAT ELECTRONIC BOX	3042865102	OVERHEATED	20130726014	PNR
MARVEL SCHEBLER						
105217	7322	FLOAT BRACKET	15638	FACTORY NEW	20130828005	PNR
UNAPPROVED PART						
PRATT & WHITNEY-CAN						
PW535E	2000	NUT-TUBE COUPLING	MS919806	MISSING THE HOLE	20130916001	QUE

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