ADVISORY CIRCULAR
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AVIATION MAINTENANCE ALERTS

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SAFETY IS NURTURED BY MAINTENANCE & CARE
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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provides the aviation community with an economical means to exchange service experiences and to assist the FAA in improving aeronautical product durability, reliability, and safety. We prepare this publication from information operators and maintenance personnel who maintain civil aeronautical products pertaining to significant events or items of interest. At the time we prepared this document, we have not fully evaluated the material. As we identify additional facts such as cause and corrective action, we may publish additional data in subsequent issues of the Alerts. This procedure gives Alerts’ readers prompt notice of conditions reported to the FAA Service Difficulty Reporting System (SDRS). We welcome your participation, comments, and suggestions for improvement. Send to: FAA; ATTN: Aviation Data Systems Branch (AFS-620); P.O. Box 25082; Oklahoma City, OK 73125-5029.

(Editor’s notes are provided for editorial clarification and enhancement within an article. They will always be recognized as italicized words bordered by parentheses.)

AIRPLANES

Cessna: 172/180/185; Control Yoke Corrosion; ATA 2701

(The following "Service Difficulty Alert" from our sister agency, Transport Canada, provides helpful information.)
SERVICE DIFFICULTY ALERT

This Service Difficulty Alert brings to your attention a potential hazard identified by the Service Difficulty Reporting Program. It is to provide necessary notification and does not constitute issuance of an airworthiness directive.

FLIGHT CONTROL YOKE – CORROSION CESSNA 172/180/185 SERIES

A recent SDR reported that the control yoke (see diagram) on a parked aircraft broke during high ground-wind conditions. Further investigation of the yoke assembly revealed that a complete fracture had occurred between the yoke pivot area and the elevator attachment point. It was determined that the yoke fracture was due to severe internal corrosion. It is important to note that had the fracture occurred in flight, it would have resulted in a complete loss of elevator (primary pitch) authority. A complete fracture above the pivot point would have resulted in a loss of both the aileron (roll) and elevator (pitch) control authority.

Several years prior to this event, Cessna issued Service Bulletin (SB) SEB01-3 Revision 1, dated 28 May 2001. The SB provides instructions for the removal and drilling of an inspection hole at the yoke base, and the application of corrosion treatment. SEB01-3 also recommends that repeat internal and external yoke inspections, in conjunction with corrosion treatment, be carried out each following year.

In this recent case, the operator had not complied with the manufacturer's SB SEB01-3.

Additionally, while complying with SB SEB01-3 Revision 1, a foreign object found water when the inspection hole was drilled at the yoke base. A quarter of a cup of water and black corrosion residue was drained from the lower area of the yoke tube. Significant rust and corrosion was found inside the full length of the centre tube. In another unrelated case, while complying with SB SEB01-3, the required inspection hole was drilled too large and it was mislocated. This error weakened the structural integrity of the yoke and later resulted in a fracture.

ALERTE AUX DIFFICULTÉS EN SERVICE

Cet alerte aux difficultés en service a pour but d’attirer votre attention sur une condition potentiellement hasardeuse qui a été révélée par le Programme de rapports de difficultés en service. Elle ne constitue pas un arrêté d’airworthiness.

MANCHE – CORROSION CESSNA DES SÉRIES 172/180/185

Un récent RDS a signalé que le manche (voir le schéma) d’un avion stationné s’était rompu dans des conditions de vent violent au sol. Une enquête plus approfondie sur ce manche a permis d’établir qu’il y avait eu fracture complète entre la région du pivot du manche et le point de fixation de la gouverne de profondeur. Il a été établi que la fracture de ce manche était attributable à une importante corrosion interne. Il est important de noter que si cette fracture était survenue en vol, elle aurait provoqué une perte totale d’effet sur la gouverne de profondeur (commande principale de tanager). Une fracture complète au-dessus du pivot aurait provoqué une perte d’effet sur les ailerons (roulis) et sur la gouverne de profondeur (tanager).

Plusieurs années avant cet incident, Cessna a publié la Révision 1 du bulletin de service (BS) SEB01-3, en date du 28 mai 2001. Ce BS renferme des directives concernant le perçage et le remplissage d’un orifice d’inspection à la base du manche ainsi que l’application d’un traitement anticorrosion. De plus, le BS SEB01-3 recommande que l’on procède chaque année à des inspections répétitives intérieures et externes du manche ainsi qu’à un traitement anticorrosion.

Dans ce récent cas, l’exploitant ne s’était pas conformé au BS SEB01-3 du constructeur.

De plus, un exploitant étranger qui se conformait à la Révision 1 du BS SEB01-3 a trouvé de l’eau en perçant l’orifice d’inspection à la base du manche. On a drainé un quart de tasse d’eau et de résidus de corrosion noirs de la partie inférieure du tube du manche. On a trouvé d’importantes traces de rouille et de corrosion à l’intérieur, sur toute la longueur du tube central. Dans un autre cas sans rapport avec le précédent, même si l’orifice d’inspection était conforme au BS SEB01-3, il était trop gros et au mauvais endroit. Cette erreur avait eu pour effet de...
a complete fracture of the yoke.

The FAA previously published a Special Airworthiness Information Bulletin (SAIB) CE-04-03 (in year 2003) on this same subject, strongly advising that operators comply with Cessna SB SEB01-3 and treat the control yoke with corrosion preventative at the earliest opportunity.

Transport Canada Civil Aviation (TCCA) strongly encourages owners, operators and other agencies to comply with the instructions contained within Cessna SB SEB01-3 Revision 1. Please note that the effectivity of the SB covers all the aircraft that have reported this widespread problem. A service history review has determined that this problem is not limited to a specific model year, geographical location or hours of operation that would make one aircraft’s yoke more susceptible to having corrosion than any other model. The only definitive way to determine the internal condition of the yoke tube is to comply with the aforementioned SB.

Defects, malfunctions and failures occurring on aeronautical products should be reported to Transport Canada, Continuing Airworthiness in accordance with CAR 581 mandatory Service Difficulty Reporting requirements.

For further information, please contact a Transport Canada Centre, or Mr. Barry Caldwell at 613-952-4397 or email CAW WEB Feedback@tc.gc.ca or any Transport Canada Centre.

For Director, National Aircraft Certification

Derek Ferguson
Chief, Continuing Airworthiness
Chief, Maintien de la navigabilité aérienne

Note: For the electronic version of this document, please consult the following Web address:

www.tc.gc.ca/CivilAviation/certification/menu.htm

Part Total Time: (N/A)
Cessna: 208B; Corroded Flap Bell Crank Bolts; ATA 2750

(The following combines 20 separate submissions from the same mechanic on nine different registered aircraft over a period of approximately 3 months.)

An operator writes, "During an inspection of the left wing on a Cessna 208B, maintenance personnel found the most outboard flap bell crank (P/N 2622091-1) frozen. The bolt was frozen to the bushing (P/N 82614-4-100N). This prevented the bolt from rotating inside the bushings, elongating the bolt hole through the mounting bracket (P/N 2622101-3). This (provided sufficient...) play that, when the flap handle was selected 'up', (the cable) would wrap around the bell crank, causing the cable tension to increase. This also pushed the cable into the trailing edge rib inboard of the middle flap track (wing station 118.0) causing it to stretch and fray—requiring its replacement. The corrosion was so severe that during the process of removing the bell crank the bolt head broke off."

(The submitted part numbers ranked as follows:

2622083-15 2 each
2622091-1 3 each
2622091-9 4 each
2622267-1 6 each
2622267-8 5 each

I cannot find anything in the CFR's mandating an owner/operator has to wait for an inspection/maintenance requirement to lubricate an aircraft. Is the 208 an exception? Thanks for pointing out the obvious—if applied, a little lubrication can go a long way and prevent a myriad of problems.)

Part Total Time(s): (unknown)

Cessna: CE750; Disconnected Flap Linkage; ATA 2750

An unidentified submitter writes, "On visual approach the copilot complained the aircraft was 'out of rig'—it wanted to roll right with flaps at 35 degrees. On post flight we discovered the right flap was extended full, and (its drive) linkage was not connected."
(Great... I've got a detective's proverbial 'dead body'...but no plot. Does the male rod-end have mangled threads on the OTHER side? Is this mechanical or mechanic failure? Ouch! How are we going to repair that wing skin? YOU sent the scary pictures...so what do you think happened? Guess I have to buy the book—Ed.)

Part (aircraft) Total Time: 6,098.0 hours

HELCIOPTERS

Eurocopter: EC130B4; Cracked Fairing Hinges; ATA 5344

(This report combines two identical submissions but on different N-numbered aircraft. The same air taxi technician submitted both accounts.)

"During a routine inspection the (engine fairing hinge half) was found cracked (from) the screw mounting bores to the metal's edge (P/N 350A58-0045-23). This is a very common failure for this part. (I) suggest the part be manufactured of a more durable material, such as stainless steel."

(At least ten of these defects can be found in the SDRS database—not much of an issue for the aircraft, a potential headache for those on the ground—Ed).

Part Total Time(s): 195.4 and 203.6 hours
Eurocopter: EC130B4; Cracked Stabilizer Fitting; ATA 5302
(The following combines eight reports describing the same defect on six different aircraft of the same model.)

A helicopter submission states, "A crack was found during routine inspection radiating from a screw hole on the mounting flange surface (of the horizontal stabilizer fitting) and onto a reinforcement rib surface. A new fitting (R/H: Top: P/N 350A23-4222-20) has been matched drilled and installed.

"This is a fairly common defect. (I) suggest a stronger material such as stainless steel be utilized to improve part durability. Careful match drilling and shimming by the installer can improve part longevity." (L/H P/N ends with a -21. Of the eight reports, three were R/H parts. The part times range as follows: 205.4; 311.3; 522.3; 1,100.6; 1,372.6; 1,426.8; 2,461.1; and 4,925.9 hours, respectively. The SDRS database finds twenty entries for the -20 P/N, six entries for the -21 P/N.)

Part(s) Total Time: 1,540.8 hours (average)

Eurocopter: EC130B4; Loose Starflex End Bushing; ATA 6220

A helicopter technician writes, "During a routine inspection (on the main rotor head) one of the Starflex arm end bushings was found to turn slightly with applied hand pressure." The rotor head sleeve assemblies had previously been removed. "The Starflex was removed for repair of the bonding defect (Main Rotor Head Assembly P/N: 355A31-0002-01).

"This is a common failure for this part. The manufacturer claims to have a repair for this defect, but (they) offer only an exchange assembly. (I) suggest a new adhesive system (or part design) be tried to reduce this type of defect (effecting) such an expensive part. (Note...) A slippage mark painted across the edge of the bushing and onto the star adhesive bead helps detect this defect...by indicating the bushing has turned."

(See the next entry with slightly different details for six more of these defects—Ed.)

Part Total Time: 535.3 hours

Eurocopter: EC130B4; Loose Starflex End Bushing; ATA 6220
(The previous submitter continues here with six additional—and identical defect reports from different N-numbered aircraft.)

"During a routine inspection, the adhesive bead for a Starflex arm end bushing was found cracked. Further examination utilizing a soap/water detection method revealed relative motion between the bushing and the Starflex arm end. With the rotor hub sleeves removed, the bushings could be moved manually. A serviceable replacement Starflex was installed.

"This is a defect that recently has become more common than in the past. (I) suggest a different adhesive be utilized, or the arm ends and bushings be designed to have a larger adhesive bonding surface. (This might be accomplished by...) adding an inner bushing, and outer Starflex arm end splines.

"There was no evidence of any imminent failure of the part or excessive play developing with the bushing. (I) suggest the application of a slippage mark between the Starflex arm and the bushings to show bushing rotation. (This could be added...) as a precaution to (help) detect dangerous movement."
(Main rotor hub assembly P/N: 355A31-0002-01; Starflex P/N: 350A31-1917-01. Part times for the six submissions: 202.9; 498.0; 499.7; 839.2; 1,299.1; and 1,307.0 hours, respectively. The Starflex P/N reflects nine entries in the SDRS database.)

Part Total Time: 774.3 hours (average)

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**POWERPLANTS**

**Pratt & Whitney: PW150A; Hot Section Deterioration; ATA (N/A)**

(The following "Service Difficulty Alert" from our sister agency, Transport Canada, provides helpful information.)
SERVICE DIFFICULTY
ALERT

This Service Difficulty Alert brings to your attention a potential hazard identified by the Service Difficulty Reporting Program. It is a non-mandatory notification and does not preclude issuance of an alert message.

Engine Hot Section Deterioration and Engine Condition Trend Monitoring (ECTM)

The in-flight failure of a Pratt and Whitney Canada (P&WC) PW150A engine prompted an operator to conduct unscheduled Hot Section Inspections on the rest of their engines. The resulting unscheduled inspections revealed several engines within the operator’s fleet to be damaged beyond limits, particularly in the high-pressure turbine shroud area, resulting in their removal from service.

The authority of the occurrence country, Transport Canada and P&WC has investigated the original occurrence engine. Hot section distress was noted in several areas. A review of the trend data revealed an increasing upward trend in inter-turbine temperature (ITT) and gas generator speed.

This Alert is issued to bring to the attention of all operators and maintainers, utilizing Engine Condition Trend Monitoring (ECTM) systems for the on-condition maintenance of their engine fleet, the importance of diligence following relevant recommendations published by the manufacturer.

Thoroughly investigating and understanding any change in trend readings is paramount to a successful program. Where any doubt exists in the interpretation of said recommendations or identified adverse trends, it is important to communicate with engine design organization for clarification and guidance.

P&WC has issued a service information letter (SIL) 150-031 to address this subject, as well as to clarify the interpretation and recommendations particular to their product.

ALERTE AUX
DIFFICULTÉS EN SERVICE

Cette alerte aux difficultés en service a pour but d’attirer votre attention sur une condition passagère susceptible de mettre en évidence un problème de fonctionnement. Elle est de natures informative et n’obligatoire pas apparaître en alerte de sécurité.

Détérioration de la partie chaude du moteur et surveillance des tendances de l’état du moteur (ECTM)

La défaillance en vol d’un moteur PW150A de Pratt and Whitney Canada (P&WC) a incité un exploitant à procéder à des inspections non planifiées de la partie chaude du reste de ses moteurs, lesquelles inspections ont permis d’établir que plusieurs moteurs du parc aérien de l’exploitant avaient subi des dommages dépassant les limites, en particulier dans la région de l’anneau de cerclage de la turbine haute pression, ce qui s’est traduit par leur retrait du service.

Les autorités du pays où est survenu l’incident, Transports Canada et P&WC ont examiné le moteur ayant à l’origine subi l’incident. On a décrit des dommages importants à la partie chaude en plusieurs endroits. L’étude des données sur les tendances a permis d’établir que la température interturbine (ITT) et le régime du générateur de gaz avaient tendance à augmenter.

On publie la présente alerte pour attirer l’attention de tous les exploitants et de toutes les personnes chargées de la maintenance utilisant les systèmes de surveillance des tendances de l’état des moteurs (ECTM), pour la maintenance selon état des moteurs de leur parc aérien, sur l’importance de suivre avec diligence les recommandations pertinentes publiées par le constructeur.

Il est primordial d’étudier et de comprendre toutes les données sur les tendances nécessaires au succès d’un programme. En cas de doute quant à l’interprétation des recommandations formulées ou des tendances négatives identifiables, il est important de communiquer avec l’organisme de conception du moteur pour obtenir des précisions et des directives d'orientation.

P&WC a publié le bulletin d’information sur l’entretien (SIL) 150-031 pour traiter de ce sujet ainsi que pour apporter des précisions quant à l’interprétation et aux recommandations particulières à ses produits.
Part Total Time: (N/A)

**TCM Cylinder: 655484A5; Missing Seal Counterbores: ATA 8530**

*(This cylinder is part of an IO-550B engine assembly.)*

A repair station mechanic says, "While performing incoming inspection of a new TCM cylinder (P/N 655484A5) the cylinder pushrod housing boss was found not to have been machined for the pushrod housing seal during the manufacture of the cylinder." *(The first picture points to the area of the cylinder missing the counterbore. The second shows the counterbore areas and a typical seal on a correctly machined cylinder.)*
Part Total Time: 0.0 hours
ACCESSORIES

Slick Magneto: 4370; Failed Gear Shaft; ATA 7414

An unidentified submitter states, "(This unit indicated...) an excessive (engine RPM) drop. (I) removed the magneto for an internal inspection and found the shaft had failed at the base of the slot that retains the point cam. (When I) removed the shaft gear from the cam, one side of the shaft stayed attached to the gear."
(The model/part number 4370 has 14 entries in the SDRS database.)

Part Total Time: (unknown)

AIR NOTES

INTERNET SERVICE DIFFICULTY REPORTING (iSDR) WEB SITE

The Federal Aviation Administration (FAA) Internet Service Difficulty Reporting (iSDR) web site is the front-end for the Service Difficulty Reporting System (SDRS) database that is maintained by the Aviation Data Systems Branch, AFS-620, in Oklahoma City, Oklahoma. The iSDR web site supports the Flight Standards Service (AFS), Service Difficulty Program by providing the aviation community with a voluntary and electronic means to conveniently submit in-service reports of failures, malfunctions, or defects on aeronautical products. The objective of the Service Difficulty Program is to achieve prompt correction of conditions adversely affecting continued airworthiness of aeronautical products. To accomplish this, Malfunction or Defect Reports (M or Ds) or Service Difficulty Reports (SDRs) as they are commonly called, are collected, converted into a common SDR format, stored, and made available to the appropriate segments of the FAA, the aviation community, and the general public for review and analysis. SDR data is accessible through the “Query SDR data” feature on the iSDR web site at: http://av-info.faa.gov/sdrx/Query.aspx.
In the past, the last two pages of the Alerts contained a paper copy of FAA Form 8010-4, Malfunction or Defect Report. To meet the requirements of *Section 508, this form will no longer be published in the Alerts; however, the form is available on the Internet at: [http://forms.faa.gov/forms/faa8010-4.pdf](http://forms.faa.gov/forms/faa8010-4.pdf). You can still download and complete the form as you have in the past.

*Section 508 was enacted to eliminate barriers in information technology, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals.

A report should be filed whenever a system, component, or part of an aircraft, powerplant, propeller, or appliance fails to function in a normal or usual manner. In addition, if a system, component, or part of an aircraft, powerplant, propeller, or appliance has a flaw or imperfection, which impairs or may impair its future function, it is considered defective and should be reported under the Service Difficulty Program.

The collection, collation, analysis of data, and the rapid dissemination of mechanical discrepancies, alerts, and trend information to the appropriate segments of the FAA and the aviation community provides an effective and economical method of ensuring future aviation safety.

The FAA analyzes SDR data for safety implications and reviews the data to identify possible trends that may not be apparent regionally or to individual operators. As a result, the FAA may disseminate safety information to a particular section of the aviation community. The FAA also may adopt new regulations or issue airworthiness directives (ADs) to address a specific problem.

The iSDR web site provides an electronic means for the general aviation community to voluntarily submit reports, and may serve as an alternative means for operators and air agencies to comply with the reporting requirements of 14 Title of the Code of Federal Regulations (CFR) Section 121.703, 125.409, 135.415, and 145.221, if accepted by their certificate-holding district office. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft maintenance surveillance as well as accident and incident investigations.

The SDRS database contains records dating back to 1974. At the current time, we are receiving approximately 40,000 records per year. Reports may be submitted to the iSDR web site on active data entry form or submitted hardcopy to the address below.

The SDRS and iSDR web site point of contact is:

Pennie Thompson  
Service Difficulty Reporting System, Program Manager  
Aviation Data Systems Branch, AFS-620  
P.O. Box 25082  
Oklahoma City, OK 73125  
Telephone: (405) 954-5313  
SDRS Program Manager e-mail address: 9-AMC-SDR-ProgMgr@faa.gov

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**IF YOU WANT TO CONTACT US**

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

Editor: Daniel Roller (405) 954-3646  
FAX: (405) 954-4570 or (405) 954-4655  
E-mail address: Daniel.Roller@faa.gov

Mailing address: FAA, **ATTN: AFS-620 ALERTS**, P.O. Box 25082, Oklahoma City, OK 73125-5029
You can access current and back issues of this publication from the internet at:

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports processed for the previous month, which have been entered into the FAA Service Difficulty Reporting (SDR) System database. This is not an all-inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

To retrieve the complete report, click on the Control Number located in each report. These reports contain raw data that has not been edited. Also, because these reports contain raw data, the pages containing the raw data are not numbered.

If you require further detail please contact AFS-620 at the address above.
Sorted by aircraft make and model then engine make and model. This report derives from unverified information submitted by the aviation community without FAA review for accuracy.

<table>
<thead>
<tr>
<th>Control Number</th>
<th>Aircraft Make</th>
<th>Engine Make</th>
<th>Component Make</th>
<th>Part Name</th>
<th>Part Condition</th>
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<td>BLADE</td>
<td>CORRODED</td>
<td>PROPELLER</td>
<td>11/5/2009</td>
<td>(CAN) PROPELLER RECEIVED FOR CORROSION INSPECTION, FOUND SURFACE CORROSION ON BLADE CAMBER FACE, AND THRUST FACE OF BOTH BLADES. EXTRA WORK TO GRIND OUT CORROSION. PROPELLER CONTINUE IN SERVICE.</td>
<td></td>
</tr>
<tr>
<td>CA09110007</td>
<td>BEARING CAP</td>
<td>LOOSE</td>
<td>MAGNETO</td>
<td>11/10/2009</td>
<td>(CAN) CUSTOMER REPORTED MAGNETO QUIT WORKING WHEN MAGNETO DROP CHECK WAS PERFORMED. MAGNETO PERFORMED FINE WHEN WORKING IN LASER ELECTRIC MODE, BUT WHEN MAGNETO DROP CHECK IS PERFORMED THE LASER SYSTEM IS SHUTOFF AND THE MAGNETO WORKS IN THE BACKUP &quot;MAGNETO&quot; MODE. MAGNETO WAS DISASSEMBLED AND THE BRG CAP WAS FOUND LOOSE AND TURNING SLIGHTLY IN THE HSG. THIS CAUSED FRETTING OF BRG CAP AND ALUMINUM DUST WAS FOUND THROUGHOUT THE MAGNETO. THE BRG CAP RETAINING CLAMPS AND SCREWS DO NOT APPEAR TO HAVE BEEN TIGHTENED CORRECTLY, CAUSING THE CAP TO TURN. CONTACT POINTS AND HALL EFFECT SENSOR ARE ATTACHED TO CAP AND ANY AMOUNT OF MOVEMENT WILL CHANGE TIMING OF MAGNETO CAP ASSY, BEARING, SEAL AND CONTACT POINTS WERE REPLACED AND MAGNETO WAS RETURNED TO SERVICE.</td>
<td></td>
</tr>
<tr>
<td>BAAE002</td>
<td>COFFEEMAKER</td>
<td>SHORTED</td>
<td>GALLEY</td>
<td>7/17/2009</td>
<td>GALLEY C BEV MAKER NR5 TEA POT RETURNED TO STOWAGE, BREW HANDLE MOVED DOWN TO POT. A FLASH OF WHITE SPARK WAS SEEN FROM BEV MAKER SWITCHED OFF. VISUAL INSPECTION, FOUND THAT THE SWITCH ACTUATOR PLATE ATTACHED TO THE BREW HANDLE HAD RUBBED A THE SWITCH CABLES EXPOSING THE INNER CORE, SUBSEQUENTLY CAUSING A SHORT TO GROUND.</td>
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<tr>
<td>CA091102010</td>
<td>BOLT</td>
<td>CRACKED</td>
<td>MLG STRUT</td>
<td>10/29/2009</td>
<td>(CAN) DURING THE SCHEDULED REPLACEMENT OF THE MLG SHOCK STRUT, ONE OF THE NEW BOLTS PN AN182-</td>
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32/M APPEARED TO BE CRACKED. THE BOLT WAS SENT FOR NDT AND THE CRACK CONFIRMED. THE SUPPLIER WHERE THE BOLT WAS ACQUIRED HAS BEEN NOTIFIED.

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<td>12/17/2009</td>
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<tr>
<td>BLADE SN K51401 COUNTERWEIGHT MOUNTING HOLE HAS BEEN MODIFIED WITH A THREADED INSERT. INSERT IS NOT A HELI-COIL WHICH IS CALLED OUT IN THE SRM. BLADES SN K49771 SOCKET NR1 HAD GLUE UNDERBEARING RACE. BLADE SN K49771, SN K51401, SN K51447 HAVE DAMAGE IN AREA D-E WHICH IS NOT PERMITTED IAW THE SRM. DISPOSITION OF THESE BLADES IS SCRAP. BLADE SN K49771, SN K51401, HAVE CORROSION IN O-RING GROOVE WHICH IS NOT PERMITTED IAW THE SRM. DISPOSITION OF THESE BLADES IS SCRAP. HUB SN 757101 HAS A REPAIR ON THE BEARING RACE SEATING AREA. NO REPAIRS ALLOWED WITHIN 1.00&quot; OF THE SEATING AREA IAW THE SPN 100 MANUAL. HUB SN 757101 IS SCRAP.</td>
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<td>HUB MOUNTING HOLES HAVE BEEN MODIFIED WITH A THREADED INSERT. 1 INSERT HAS BACKED OUT OF MOUNTING HOLE. INSERT IS NOT A HELI-COIL WHICH IS CALLED OUT IN THE MANUAL. ANTI-SIEZE WAS USED ON ROD PINS AND ACCU. ARMS, BUSHINGS, THE REQUIRED LUBE IS ORELUBE K2 IAW MANUAL. BLADE K51362 AND K48622 HAVE DAMAGE IN AREA D-E WHICH IS NOT PERMITTED IAW THE MANUAL. DISPOSITION OF THESE BLADES IS SCRAP. HUB HAS CORROSION Pitting in Bearing Radius of blade socket. A REPAIRED AREA NEAR THE BEARING RACE SEATING AREA. REPAIRS ARE NOT ALLOWED WITHIN 1.00&quot; OF THE RACE SEATING AREA IAW THE MANUAL. DISPOSITION OF HUB IS SCRAP. BLADE HAS CORROSION IN O-RING GROOVE WHICH IS NOT PERMITTED IAW THE MANUAL. DISPOSITION OF BLADE IS SCRAP.</td>
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<td>23058137</td>
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</tr>
<tr>
<td>(CAN) CUSTOMER COMPLAINT OF METAL GENERATION. ENG WAS INDUCTION TESTED AND CUSTOMER COMPLAINT WAS CONFIRMED. UPON DISASSEMBLY OF NR 8 BRG AREA, IT WAS NOTICED PN 23058137 GP BG THRUST PLATE WAS DAMAGED. PN 23058137 THRUST PLATE HAS A LOCKING TAB OR KEY THAT PREVENTS THE NR 8 BRG FROM SPINNING. THIS LOCKING TAB WAS FOUND TO BE WEDGED INTO THE GP SUPPORT. FURTHER DISMANTLING AND INSPECTED &quot;LOCKING TAB&quot; OF THE PLATE WAS BROKEN OFF AT THE BRAZE JOINT. THE NR 8 BRG OUTER RACE CUT INTO THE &quot;LOCKING TAB&quot; LIKELY CREATED THE SOURCE OF THE METAL THAT WAS FOUND ON THE TOP PLUG. THE LOCKING TAB'S PURPOSE IS TO PREVENT THE NR 8 BRG OUTER RACE FROM SPINNING. THIS IS ACCOMPLISHED BY &quot;LOCKING&quot; THE NR 8 BRG OUTER RACE TO THE GP SUPPORT. REVIEW OF THE PRINT FOR PN 23058137 SPECIFIES THAT THE BRAZE JOINT BETWEEN THE LOCKING TAB AND PLATE IS A CLASS 1 FURNACE BRAZE JOINT. A CLASS 1 BRAZE JOINT REQUIRES A MINIMUM OF 80 PERCENT BOND. THE OEM HAS BEEN CONTACTED REGARDING THIS PROBLEM.</td>
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<th>2009FA0000970</th>
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<th>CYLINDER HEAD</th>
<th>CRACKED</th>
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<tr>
<td>9/22/2009</td>
<td>TSIO520R</td>
<td>AEC631397</td>
<td>ENGINE</td>
</tr>
<tr>
<td>CYLINDER HEAD CRACKED AT THE INTAKE PORT. THE CRACK EXTENDS FROM THE EDGE OF THE INTAKE PORT TO BETWEEN THE COOLING FINS APPROX 2.5&quot;.</td>
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<td>TSIO520R</td>
<td>ACE631397</td>
<td>ENGINE</td>
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<tr>
<td>CYLINDER HEAD CRACKED AT THE EXHAUST PORT. THE CRACK EXTENDS FROM THE INSIDE ABOVE THE VALVE SEAT THROUGH THE CYLINDER HEAD APPROX 1.7&quot; LONG.</td>
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<thead>
<tr>
<th>CA090917004</th>
<th>GARRTT</th>
<th>SHUTOFF VALVE</th>
<th>FAILED</th>
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<tr>
<td>9/17/2009</td>
<td>TPE33110UA</td>
<td>39423091</td>
<td>FUEL SYS</td>
</tr>
<tr>
<td>(CAN) AFTER THE ENGINE WAS OVERHAULED AND WAS INSTALLED IN THE TEST CELL, WHEN TRYING TO DO A START, ENG WOULD NOT LIGHT OFF. IT WAS NOTED THAT THERE WAS NO FUEL GOING TO THE ENG WHEN STARTING. AFTER TROUBLESHOOTING THE STARTING ISSUES IT WAS FOUND TO BE A FAULTY OVERHAULED FUEL SHUTOFF VALVE. THE FSO WAS CHANGED AND THE ENGINE WAS TESTED WITH NO OTHER PROBLEMS.</td>
<td></td>
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</table>
### CA091110006

**GARRTT** | **HONEYWELL** | **O-RING** | **DAMAGED**
---|---|---|---
11/9/2009 | TPE33112UHR | 39440881 | S9412524 | FLOW DIVIDER

On Monday, November 9, 2009, there was a partial loss of power on the NR1 engine noticed by the flight crew. The takeoff was aborted and the aircraft taxied back to the ramp. Further investigation revealed that there was a significant amount of fuel leaking from the NR1 flow divider PN 394408-8-1, SN P6667. The part was replaced and the defective part was sent back to the O/H facility for assessment.

### 2009FA0000981

**LYC** | **BUSHING** | **FRACRETD**
---|---|---
11/4/2009 | IO360L2A | 74637 | VALVE ROCKER

When burnishing new valve rocker bushing in valve rocker arm, the bushing fragmented. Improper MFG suspected. (K)

### 2009FA0001047

**LYC** | **KEY** | **PULLED**
---|---|---
10/19/2009 | O320* | AEL1007760009 | VALVE TRAIN

Valve keys (PN 60009) are pulled thru seat AEL 10077. Rocker arm tip is destroyed, hole worn thru valve cover from upper spring seat. Keys were stuck on valve stem. Valve stem is damaged and will not pass thru valve guide.

### CA090918007

**PWA** | **SPLINE** | **SHEARED**
---|---|---
9/11/2009 | PT642A | 3997015 | FUEL PUMP DRIVE

(CAN) The engine shutdown uncommanded on takeoff roll. Takeoff was aborted. Investigation revealed a sheared fuel pump drive spline.

### CA090930001

**PWA** | **BOLT** | **FRACRETD**
---|---|---
9/7/2009 | PT6A67D | MS949034 | ADAPTER

(CAN) Gas generator SN PCE 114020 and PWR section SN PS 114217 was removed subsequent to in-flight-shutdown due to oil pressure loss in flight. The date of incident was Sept 7, 2009. After landing, the chip detector and main oil filter were removed and a large quantity of metal debris was observed in the main oil filter and on the chip detector. During investigation, dismantle of the PWR section and first-stage reduction carrier assy, 3 of 6 machine hex bolts (IPC PN, CH. 72-10-00, FIGURE 4, ITEM 200, PN MS9490-34) were found without the bolt head attached. Note that carrier hex bolts secure first-stage carrier and first-stage reduction splined adapter. There are a quantity of six hex bolts installed with keywashers and are torqued 75 to 85 in lb. Eng O/H records indicate that quantity six bolts were replaced with new ones during engine O/H.

### CA091119004

**PWA** | **CARRIER ASSY** | **FRACRETD**
---|---|---
10/8/2009 | PT6A67D | MS949034 | ENGINE

(CAN) Eng was removed subsequent to inadvertent in-flight-shut-down. Date of the incident was October 08, 2009. Customer informed that during cruise flight LT Eng inadvertently shutdown. After landing, chip detector and main oil filter were checked and a large quantity of metal debris was observed in the main oil filter and on chip detector. 2nd STG PWR turbine blades were checked from exhaust port and found shredded from the root. During investigation dismantle of PWR section and first-stage reduction carrier assy, 2 of 6 machine hex bolts (IPC PN 3072154, CH. 72-10-00, FIGURE 4, ITEM 200, PN MS9490-34) were found without the bolt head attached. Carrier hex bolts secure first-stage carrier and first-stage reduction splined adapter. There are a quantity of six hex bolts installed with keywashers and are torqued 65 to 85 in lb. Eng O/H records indicate that quantity six bolts were replaced with new ones during engine O/H. This is the 8th case that has come to our attention since April 2004. On similar issue an Advisory (AV-2008-05 DATED 2008-07-10) was issued, advising all PT6 O/H agencies to lubricate bolts on assy. The suggested remedy did not help in arresting this 1ST STAGE REDUCTION CARRIER BOLT FAILURE.

### CA090918009

**PWA** | **FCU** | **FAILED**
---|---|---

(CAN) THE ENGINE FLAMED OUT ON DESCENT AND RELIGHT ATTEMPTS WERE UNSUCCESSFUL. INVESTIGATE IDENTIFIED AN UNSERVICEABLE FUEL CONTROL UNIT.

CA090918010
PW530A
PWA
PUMP
UNSERVICEABLE

9/16/2009
PW530A
ENGINE

(CAN) THE ENG ROLLED BACK UNCOMMANDED IN CLimb AND SUBSEQUENTLY FLAMED OUT. INVESTIGATION REVEALED AN UNSERVICEABLE FUEL PUMP.

CA091120003
PW306C
PUMP
LOW PRESSURE

11/18/2009
Pump UNSERVICEABLE

(CAN) LOW FUEL PRESSURE INDICATION ON TAKEOFF. TAKE-OFF ABORTED. MFG WILL INVESTIGATE AND PROVIDE ROOT CAUSE.

CA090918008
PW545B
PWC
MOTOR
UNSERVICEABLE

9/13/2009
31J285704
BLEED VALVE

(CAN) IN FLIGHT THE ENG EEC REVERTED TO MANUAL MODE AND THE ENGINE DID NOT RESPOND TO THROTTLE INPUT. ENGINE WAS SHUTDOWN. INVESTIGATION REVEALED A FAULTY BLEED VALVE TORQUE MOTOR ASSY.

2009FA0001027
BR700710C411
ROYCE
TUBE
REVERSED

12/8/2009
PNFW34112
COMPRESSOR

DURING THE DISASSEMBLY FOR ACCESS TO ACCOMPLISH A SB, AN INCORRECT INSTALLATION OF ONE OF THE LPC INTERNAL GEARBOX AIR DISTRIBUTION TUBES WAS DISCOVERED. THE SPECIFIC AIR TUBE IS PN FW34112 AND WAS INSTALLED IN THE UPPER LT LOCATION. THE AIR TUBE WAS INSTALLED BACKWARDS (180 DEG. OUT). INSPECTED BOTH MATING SURFACES; CASE SIDE AND MANIFOLD SIDE AND FOUND NO DAMAGE. ATTACHED IS A FILE WITH FURTHER INFORMATION REGARDING OUR FINDINGS.

CA091005004
ATR42300
AEROSP
PWA
SQUAT SWITCH
UNSERVICEABLE

10/4/2009
PW120
D228780001
MLG

(CAN) CREW REPORTED THAT THE GEAR WOULD NOT RETRACT AFTER TAKEOFF. DECISION MADE TO DIVERT FOR MX WITH THE GEAR DOWN. MX JACKETED THE ACFT AND ATTEMPTED TO RETRACT THE GEAR, FOUND THE LT MLG WEIGHT ON WHEEL SWITCHES WERE UNSERVICEABLE, BOTH REPLACED AND ACFT RETURNED TO SERVICE. PN D22878000-1 AND D22883000-1.

CA090929005
ATR42300
AEROSP
PWA
WINDOW
CRACKED

9/26/2009
PW120
NP1588032
COCKPIT

(CAN) IN CRUISE AT FL220 350NM FROM CYSR A LOUD "SNAP" SOUND WAS HEARD BY F/O AND CAPT F/O OBSERVED WHAT LOOKED LIKE A CRACK AND FELT LIKE A CRACK ON AFT WINDOW. ACFT DIVERTED BASED ON FUEL AND MX. MX REPLACED THE WINDOW AND THE ACFT WAS RETURNED TO SERVICE.

CA091023001
ATR42300
AEROSP
PWA
CONTROL CABLE
BROKEN

8/29/2009
PW120
04820208
AILERON

(CAN) DURING THE COMPLETION OF ENGINEERING SERVICE ALERT 120105-01A INSPECTION OF AILERON POSITION SENSORS, THE CABLE BETWEEN THE SENSOR AND THE AILERON WAS FOUND BROKEN. SENSOR REPLACED AND SYSTEM FUNCTION CHECKED SERVICEABLE. THIS SERVICE ALERT APPLIES TO ALL ATR 42 AIRCRAFT, WHICH HAVE STC ST01310NY FDR ENHANCED PARAMETERS. (TC# 20091023001)

CA091109004
ATR42300
AEROSP
PWA
CONTROL CABLE
BROKEN

11/3/2009
PW120
04820208
AILERON

(CAN) DURING THE COMPLETION OF ENGINEERING SERVICE ALERT 120105-01A INSPECTION OF AILERON POSITION SENSORS, THE CABLE BETWEEN THE SENSOR AND THE AILERON WAS FOUND BROKEN. SENSOR REPLACED AND SYSTEM FUNCTION CHECKED SERVICEABLE. THIS SERVICE ALERT APPLIES TO ALL ATR 42 AIRCRAFT, WHICH HAVE STC ST01310NY FDR ENHANCED PARAMETERS. (TC# 20091023001)

CA090924004
ATR42300
AEROSP
PWA
CONTROL CABLE
BROKEN

8/29/2009
PW120
04820208
AILERON

(CAN) DURING THE COMPLETION OF ENGINEERING SERVICE ALERT 120105-01A INSPECTION OF AILERON POSITION SENSORS, THE CABLE BETWEEN THE SENSOR AND THE AILERON WAS FOUND BROKEN. SENSOR REPLACED AND SYSTEM FUNCTION CHECKED SERVICEABLE. THIS SERVICE ALERT APPLIES TO ALL ATR 42 AIRCRAFT, WHICH HAVE STC ST01310NY FDR ENHANCED PARAMETERS. (TC# 20091023001)
9/17/2009 A319114 CFM565A3 NR 1 ENGINE
(CAN) AT FL310, (NO ECAM) NR 1 ENG ROLLED BACK TO ABOUT 45 DEGREES. AUTO THRUST WAS DISCONNECTED AND ENG WAS BROUGHT BACK TO ABOUT 50 PERCENT (MAX WE COULD GET). AROUND FL 200 ENG FINALLY FLAMED OUT AND ECAM CARRIED OUT ENG SHUTDOWN. FOLLOWING PARTS WERE REPLACED: ALTERNATOR ROTOR AND STATOR, ECU, AND EIU. GROUND RUN CARRIED OUT AND NO FAULTS.

CA091116006 AIRBUS CFMINT UPLOCK DAMAGED
(CAN) FLIGHT CREW: ON DEPARTURE LANDING GEAR WOULD NOT LOCK UP, GEAR HANDLE CYCLED NIL FIX. GEAR DOWN INDICATION NORMAL RTG. LANDING GEAR UPLOCK ASSY REPLACED.

CA090924003 AIRBUS RROYCE BLADE COMPRESSOR DAMAGED
9/15/2009 A330342 RB211TRENT76 COMPRESSOR
(CAN) COMPRESSOR STALL OF RT ENG DURING CRUISE. HIGH VIBS OF N3 UP TO 9.0 UNITS. OPERATED AT REDUCED PWR DURING DIVERSION FOUND HPC DAMAGED. STAGE NR 1 BLADES SEVERELY DAMAGED. MANY NICKS, TEARS AND DENTS AND MISSING MATERIAL ON ALL BLADES. ONE BLADE BROKEN OFF AT ROOT. STATOR BLADES HAVE IMPACT DAMAGE AT MANY PLACES. ALL BLADES DAMAGED BEYOND LIMITS.

CA091102000 AIRTRC PWA NLG 10/22/2009 AT802A PT6A67 13A06633001
(CAN) SPECIAL INSPECTION CARRIED OUT DUE TO DEFECT REPORTED BY OTHER OPERATOR. NOSE SPRING CRACKED ABOVE ATTACHMENT BOLT HOLES. GEAR SPRING TO BE REPLACED.

2009FA0000983 AMD MODULE MALFUNCTIONED
10/19/2009 FALCON2000 70253651901 WARNING SYSTEM
PART RECEIVED FROM MFG AFTER "FUNCTIONAL TEST". THE PART WAS SHIPPED UNPROTECTED IN A SHIPPING CONTAINER. INSTALLED IN ACFT, SEVERAL CLEARABLE FAULTS APPEARED AND THE FOLLOWING FAULT CODE CAS MESSAGE "ANLGVZLAB ERR" 2130CP5001 WAS NOT CLEARABLE. AFTER TROUBLESHOOTING IAW MM 45-60-21 THE SOLUTION WAS TO REPLACE GENERAL I/O MODULE 2 (GI02)(R10FX). A REPLACEMENT "REPAIRED" I/O MODULE WAS INSTALLED AND CHECKED OUT GOOD.

CA091110000 AMD CFE HONEYWELL HYDROMECH UNIT FAILED
10/2/2009 FALCON2000 CFE73811B 5085T40G04 LT ENGINE
(CAN) TWICE DURING CLIMB THE LT ENG PWR ROLLED BACK. CREW REPOSITIONED THE THROTTLE AND POWER WAS RESTORED. REMAINDER OF THE FLIGHT WAS NORMAL. UPON ARRIVAL AT HOME BASE THE CREW REPORTED THE EVENT. MX CONDUCTED TROUBLESHOOTING INCLUDING INTERROGATION OF THE ON BOARD COMPUTERS AND DETERMINED THAT THE LT ENGINE HMU WAS AT FAULT. A REPAIRED SERVICEABLE UNIT WAS INSTALLED AND ALL POST INSTALLATION CHECKS WERE NORMAL.

CA091103000 AMD PWC ACTUATOR FAULTED
10/30/2009 FALCON2000 PW308C D97D006071 SHUTOFF VALVE
(CAN) FUNCTIONAL CHECK OF THE HYD SHUT-OFF VALVES DETECTED A FAILURE OF THE NR 2 ENG FUEL SHUT-OFF VALVE STANDBY ACTUATOR. (THE 2 VALVES ARE WIRED IN SERIES.) THE INTERNAL SWITCH AND STANDBY MOTOR WINDCINGS CIRCUIT SHOWS OPEN. ACTUATOR WAS REPLACED AND FAULT CLEARED. THE STANDBY CIRCUIT OF THIS MOTOR IS ONLY TESTED DURING AN 'A' PHASE INSPECTION EVERY 400 HRS. OR 8 MONTHS. THIS FAILURE WOULD NOT BE EVIDENT TO THE FLIGHT CREW DURING NORMAL OPERATIONS.

2009FA0001073 AMD PWC PIN MISINSTALLED
10/21/2009 FALCON2000 PW308C PCB414JE CONNECTOR
REPORT TELLS THAT A FAULTY WIRING CIRCUIT CAUSED THE ACFT TO LOSE SLATS EXTENSION DURING A PRE-FLIGHT INSPECTION OF THE SLAT "STALL 2 TEST". IT APPEARS THAT THE NR 14 FEMALE CONNECTOR PIN ON THE CONNECTOR FOR PCB 414JE WAS NOT FULLY ENGAGED OR "SNAPPED" INTO THE CONNECTOR AND Pushed BACK WHEN THE 414JE RELAY PCB CONNECTION WAS MADE. MECHANIC SURMISSE THAT THIS PIN WAS NOT
FULLY SEATED EVEN THOUGH IT WAS INSTALLED BY EXPERIENCED TECH USING CORRECT DWGS AND APPROPRIATE MX INSTRUCTIONS. THEREFORE REPAIR STATION WILL DEVELOP AN ADDITIONAL INSPECT STEP, AS NECESSARY, ON ALL SUCH CONNECTORS TO ENSURE PROPER SEATING. TRAINING FOR THIS INSPECT STEP WILL BE IMPLEMENTED, AS NECESSARY FOR THOSE TECHS WHO PERFORM THIS TYPE OF WORK TO ENSURE THEIR COMPLETE UNDERSTANDING OF CORRECT MX AND INSPECT PRACTICES ASSOCIATED WITH CONNECTOR PINS.

**2009FA0000994**  
**AMD**  
**CONTROL HANDLE**  
**STUCK**  
11/25/2009  
**FALCON900EX**  
1233740  
**MLG**

DURING APPROACH, THE GEAR HANDLE STUCK IN THE RETRACTED POSITION. THE CREW PERFORMED THE EMERGENCY GEAR EXTENSION CHECKLIST PROCEDURE SUCCESSFULLY EXTENDING THE GEAR AND LANDED WITHOUT INCIDENT. MAINTENANCE PERSONNEL REMOVED THE GEAR HANDLE AND INSTALLED AN INSPECTED UNIT AS REQUIRED, OPS CHECK GOOD. NO FAULTS WERE FOUND DURING TROUBLESHOOTING.

**2009FA0000974**  
**AMTR**  
**ROTAX**  
**PUMP**  
**FAILED**  
10/20/2009  
**AIRCAM**  
**ROTAX912ULS**  
892545  
**FUEL SYS**

BOTH ENG PRIMER LINES AND FUEL PUMPS FAILED (PRIMER LINES DISINTEGRATED, FUEL PUMPS STARTED LEAKING) ALMOST SIMULTANEOUSLY AFTER 15 HRS EXPOSURE TO FUEL CONTAINING UP TO 10 PERCENT ETHANOL. ENG DEALER STATED ON SEVERAL OCCASIONS THAT UP TO 15 PERCENT ETHANOL WAS OK. THIS COULD BE A MAJOR SAFETY ISSUE FOR THESE ENGINE USERS. MANY ACFT USING THESE ENGINES, ALSO EXPERIMENTAL ACFT. THE USE OF AUTOMOTIVE GAS CONTAINING ETHANOL SHOULD BE CLARIFIED. (K)

**2009FA0000986**  
**AMTR**  
**CONT**  
**SHAFT**  
**FRACTURED**  
11/20/2009  
**RV6A**  
**IO360***  
**MAGNETO**

ROTOR SHAFT FRACTURED AT THE BOTTOM OF THE RUBBING BROOK SLOT. (K)

**2009FA0000968**  
**AMTR**  
**LYC**  
**LEG ASSY**  
**CRACKED**  
9/12/2009  
**VELOCITYRG**  
**IO360A2B**  
**NOSE GEAR**

WELDMENT AT TOP OF NOSE GEAR LEG FAILED AND GEAR COLLAPSED UPON LANDING. GEAR LEG APPEARED NORMAL DURING PREFLIGHT AND IN LAST SAFETY INSPECTION. NO OUTWARD INDICATION OF DEFECT. SUBSEQUENT INSPECTION OF BROKEN WELD (BY OWNER/BUILDER) APPEARED TO SHOW SLIGHT CRACK AT ONE CORNER, WHICH, IF REAL, PROBABLY WAS SOURCE OF FAIL. (K)

**CA091029005**  
**BAG**  
**GARRTT**  
**PUMP**  
**FAILED**  
10/29/2009  
**JETSTM3112**  
**TPE33110UGR**  
**ENGINE**

(CAN) SUSPECT THAT THE HIGH PRESSURE FUEL PUMP DRIVE FAILED IN THE ENG GEARBOX CAUSING THE ENG TO SHUTDOWN IN FLIGHT. WHEN WE SPIN THE PROP NOISES ARE COMING FROM THE ENG GEARBOX.

**CA091119005**  
**BAG**  
**GARRTT**  
**WIRE**  
**DAMAGED**  
11/18/2009  
**JETSTM3112**  
**TPE33110UGR**  
**DOWNLOCK**

(CAN) ON APPROACH, WHEN LANDING GEAR WAS LOWERED, THERE WAS NO "DOWN AND LOCKED" INDICATION ON THE NLG. THE PILOT’S ABORTED LANDING AND RETURNED TO BASE. ON APPROACH TO BASE A LOW FLY BY WAS ACCOMPLISHED TO VERIFY THE NLG WAS ACTUALLY DOWN AND LOCKED, WHICH IT WAS. A NORMAL LANDING FOLLOWED AND NO FURTHER PROBLEMS WERE ENCOUNTERED. UPON INSPECT BY MX. THERE WAS A BROKEN WIRE FOUND ON THE DOWNLOCK SWITCH IN THE NOSE LANDING GEAR BAY. THE WIRE WAS FIXED AND THE SYS WAS FUNCTIONALLY TESTED SERVICEABLE.

**CA090925002**  
**BAG**  
**GARRTT**  
**FCU**  
**LEAKING**  
9/22/2009  
**JETSTM3212**  
**TPE33112UA**  
89778025  
**ENGINE**

(CAN) REPORT OF HIGH THAN NORMAL TORQUE AT FLIGHT IDLE AND ON FLARE. UNABLE TO DUPLICATE ON GROUND. SUSPECT INTERNAL P3 LEAK IN FCU. FCU REPLACED AND TEST FLIGHT COMPLETED WITH SATISFACTORY RESULTS.

**2009FA0000988**  
**BBAVIA**  
**LYC**  
**RETAILER**  
**FAILED**  
11/24/2009  
**8KCAB**  
**AEIO360***  
**PROP BLADE**
DURING ANNUAL INSP FOUND COULD ROTATE ONE BLADE AN EXCESSIVE DISTANCE, SENT OUT FOR REPAIR AND IT WAS FOUND THAT THE INSIDE STAINLESS STEEL RETAINER HAD FAILED AND ALLOWED THE BALL BEARINGS TO FALL OUT OF THEIR SEAT, HUB WAS DAMAGED BEYOND REPAIR AND IT WAS CLOSE TO INFLIGHT FAILURE WHICH COULD HAVE CAUSED SEPARATION OF THE BLADE FROM THE HUB.

2009FA0001024  BBAVIA  LYC  BAFFLE  MUSHROOMED
3/3/2009  8KCB  AEIO360H1B  MUFFLER

ACFT WAS EXPERIENCING LARGE EGT DIFFERENCES BETWEEN THE RT AND LT CYL BANKS AT TAKEOFF AND CRUISE FLIGHT (BOTH FULL RICH AND LEAN OPERATIONS). ENG TREND MONITORING SHOWED THE DIFFERENCE GROWING SLOWLY OVER SEVERAL MONTHS TO MORE THAN 350°F AT TAKEOFF FROM AN ORIGINAL EGT SPREAD OF 40°F. OBSERVERS FAMILIAR WITH THE ACFT ON THE GROUND REPORTED 'EXHAUST LEAKAGE' TYPE SOUNDS. THIS PROGRESSION CONTINUED AND PARTIAL PWR LOSS AT TAKEOFF STARTED TO BE OBSERVED.

REPLACEMENT OF THE MUFFLER WITH A NEWLY OVERHAULED PART RETURNED THE ENG TO NORMAL OPERATIONS AND NORMAL EGTS (30°F EGT SPREAD AT TAKEOFF). INTERNAL INSP OF THE OFFENDING MUFFLER REVEALED THE LT SIDE INTERNAL BAFFLE AND FLAME CAN WAS BADLY MUSHROOMED RESULTING IN AN ALMOST COMPLETELY BLOCKED EXHAUST FOR CYL NR 2 AND NR 4. NO EROSION OR THINNING OF THE EXHAUST COMPONENTS WAS OBSERVED.

CA091113002  BEECH  GARRTT  VALVE  MALFUNCTIONED
9/29/2009  100BEECH  TPE3316252B  39423091  ENGINE FUEL

(CAN) DURING START UP, THE ENG DID NOT START. THE PILOT NOTICED THAT THERE WAS NO FUEL FLOW RISE UP AND NO ITT. HAVE REPLACED THE FUEL VALVE AND THE ENGINE STARTED NORMALLY.

CA070726002  BEECH  PWA  BEECH  SLEEVE  IMPROPER PART
6/20/2007  100BEECH  PT6A28  508200233  NLG

(CAN) BOGUS PART DISCOVERED ON CORROSION INSPOF NOSE GEAR ASSY. REPLACED BOGUS PART WITH CORRECT PART. WORK CARRIED OUT ON 20/06-07. BOGUS PART IS RETAINED BY THE QULITY ASSURANCE DEPT.

CA091023005  BEECH  TUBE  WORN
10/23/2009  1900C  1149200023  FUEL SYSTEM

(CAN) DURING HEAVY MAINTENANCE CHECK OF A HARD TO SEE AREA OF THE WHEEL WELL, THE MAIN FUEL FEED LINE FROM THE TANKS TO THE ENGINE WAS FOUND TO BE CHAFING ON THE AIRFRAME. THE RIGID TUBE WAS NOT YET WORN THROUGH BUT WAS WORN APPROXIMATELY 50% OF THE WAY THROUGH. THE LINE WAS REPLACED AN A FLEET CAMPAIGN WILL BE CARRIED OUT ON THE REST OF THE 1900’S IN THE FLEET. (TC 20091023005)

CA091103010  BEECH  PWA  ELECTROMECH  MOTOR  UNSERVICEABLE
11/3/2009  1900C  PT6A65B  571302  POWERPACK

(CAN) ELECTRIC POWERPACK MOTOR SUFFERED AN INTERNAL SHORT CAUSING THE MOTOR TO FAIL, CAUSE SEEMED TO BE FAULTY INTERNAL GROUND CONNECTION.

CA091020005  BEECH  PWA  SPAR  CORRODED
10/16/2009  1900C  PT6A65B  1181300025  AILERON

(CAN) DURING INCORPORATION OF SB 27-3928 OF WEIGHT BALANCE CLIP INSPOF REPLACEMENT, THE TECH DISCOVERED SEVERE EXFOILATION CORROSION OF THE AILERON REAR SPAR IN A AREA OF THE AILERON TRIM TAB. REAR SPAR WAS REPLACED WITH NEW.

CA091016002  BEECH  PWA  FITTING  CRACKED
10/14/2009  1900D  PT6A67D  310047001  OIL SYSTEM

(CAN) DEPARTED AIRPORT 10/14/09 ON FLIGHT 7435 AND BEGAN TO HAVE LT ENG OIL PRESSURE FLUXUATIONS AFTER REACHING CRUISE ALTITUDE. CAPTAIN SHUTDOWN ENG IN FLIGHT AFTER OIL PRESSURE DROPPED BELOW MINIMUMS. ACFT DIVERTED. AFTER TALKING WITH MFG, OUR PRELIMINARY REPORT POINTS TO A FATIGUE CRACK ON THE EXTERNAL OIL PRESSURE FITTING. THE FITTING WILL BE SENT TO MFG FOR TESTING TO DETERMINE THE CAUSE OF THE CRACK AND THE ENGINE IS BEING SHIPPED TO REPAIR STATION TO
INVESTIGATE POSSIBLE PWR SECTION DEFECTS.

CA091008006
BEECH PWA RELAY MALFUNCTIONED
10/4/2009 1900D PT6A67D MS24166D1 PROP DE ICE SYS

(CAN) LT ENG PROP DE-ICE CAUGHT FIRE BEFORE THE START SEQUENCE TOOK PLACE. WITH PROP DE-ICE SWITCH IN THE OFF POSITION. BEFORE START UP GROUND INFORMED THE CREW OF A FIRE ON THE LT PROP. CREW NOTICED IT WAS THE DE-ICE SYS AND IMMEDIATELY CHECKED TO SEE IF THE SYS WAS OFF. IT WAS. CREW THEN TURNED OFF THE MASTER SWITCH AND FIRE AND SPARKS STOPPED. ALTHOUGH A SMALL FIRE CONTINUED TO BURN. THE F/O THEN WENT OUT WITH A FIRE EXTINGUISHER AND PUT OUT THE FIRE. MX DISCOVERED THAT THE AUTO RELAY PN MS24166D1 HAD FAILED IN THE CONTACTED POSITION. THIS ENABLED CURRENT TO FLOW TO DE-ICE BOOTS WITHOUT ENG RUNNING OR SWITCH ACTIVATED. RELAY PROBABLY FAILED IN THE PRIOR LEG, WENT UNOTICED UNTIL NEXT START UP. MAINTENANCE HAD TO REPLACE THE PROP AND RELAY PRIOR TO RE-ENTERING SERVICE. CLOSED, DB (TC 20091008006)

CA091112002
BEECH PWA ACTUATOR CRACKED
11/11/2009 1900D PT6A67D 1123800222 NLG

(CAN) ON PILOTS WALK AROUND AT NON MX STA. PILOT FOUND HYD FLUID COMING FROM THE NOSE GEAR AREA. ON INSPECTION FOUND FLUID LEAKING FROM ACTUATOR END CAP.

CA091104003
BEECH PWA BRACKET CRACKED
10/25/2009 1900D PT6A67D 1015240133 RUDDER

(CAN) 6TH 200 HR DETAILED INSPECTION - RUDDER AFT TORQUE TUBE ATTACH BRACKET, LT - CRACK 1" LONG, SLIGHT BEND AT APEX OF BRACKET. REF IPC 27-20-00-11 ITEM 292. BRACKET REPLACED - NOTE: THIS IS A GOOD EXAMPLE OF DILIGENT VISUAL INSPECTION AS ACCESS TO THIS AREA IS LIMITED AND LIGHTING CONDITIONS IS NIL.

CA091006005
BEECH PWA BRACKET CRACKED
10/6/2009 200BEECH 10191002221 BYPASS INLET

(CAN) ON INSPECTION ACFT, FOUND CRACKED ATTACH BRACKETS, ANGLES AND HINGE HALFS ON THE COWL INLET AIR BYPASS DOORS. THE SECOND AND THIRD AFT HAD DAMAGE FOUND DUE TO INCREASED INSPECTION BASED ON THE DAMAGE BEING FOUND ON THE FIRST. ALL PARTS WERE OR WILL BE REPLACED WITH NEW FROM THE MFG AND THE ACFT RETURNED TO SERVICE.

CA091031001
BEECH PWA LANDING GEAR COLLAPSED
10/29/2009 200BEECH PT642A

(CAN) ACFT TOUCHEO DOWN, ON ROLL OUT THE LT MAIN GEAR COLLAPSED. ACFT WAS RAISED AND GEAR LOCKED DOWN AND ACFT RETURNED TO THE HANGER. NO FAULTS FOUND AT THIS TIME, BUT MX CONTINUES TO INVESTIGATE.

CA091102008
BEECH PWA WIRE HARNESS FAILED
10/29/2009 200BEECH PT642A 10038006127 FUEL INDICATION

(CAN) FUEL QTY INDICATION REPORTED AS UNDER-READING. TROUBLESHOOTING DETERMINED A FAILED WIRING HARNESS ASSY IN THE WET WING TANK. THIS IS THE THIRD FAILURE OF THIS HARNESS ON 2 COMPANY ACFT, IN EITHER LT OR RT WINGS. INSTALLING A NEW HARNESS HAS RECTIFIED THE PROBLEM IN EACH CASE.

CA091027008
BEECH PWA WIRE MISINSTALLED
10/27/2009 200BEECH PT6A41

(CAN) AIRCRAFT RETURNED 15 MINUTES AFTER DEPARTURE DUE TO CABIN SMOKE. LANDED WITHOUT INCIDENT. AIRCRAFT SIDEWALLS AND CEILING COVERING WERE REDONE 8 DAYS PRIOR TO THE INCIDENT. THE PASSENGER READING LIGHT AND SWITCH WERE REMOVED FROM THE SIDEWALL/WINDOW PANEL (P/N 101-530058-63) TO PERMIT INSTALLATION OF NEW LEATHER COVERING OVER THE PANEL ASSY. UPON RE-INSTALLATION OF THE READING LIGHT, POSITIVE AND GROUND WIRES TO THE READING LIGHT WERE FOUND INVERTED. THIS PERMITTED THE +28 VDC TO BE CONNECTED TO THE READING LIGHT SOCKET BODY (GROUND) WHICH IS MOUNTED THROUGH THE PANEL ASSY AND TOUCHING THE METAL HONEYCOMB CORE OF THE PANEL ASSY, WHICH IS ITSELF SECURED TO THE FUSELAGE BY 2 RETAINING SCREWS COMPLETING THE GROUND
CIRCUIT. THE PASSENGER AT THIS LOCATION ATTEMPTED TO TURN ON HIS READING LIGHT WHICH STARTED THE PANEL SLOW BURNING AND SMOKE EVENT. ALL OF THE PANEL ASSY WIRING WERE CHECKED TO CONFIRM CORRECT WIRING CONNECTION TO THE READING LIGHTS. (TC 20091027008)

<table>
<thead>
<tr>
<th>CA091105003</th>
<th>BEECH</th>
<th>PWA</th>
<th>INTERCOSTAL</th>
<th>MISMANUFACTURED</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/2/2009</td>
<td>200BEECH</td>
<td>PT6A41</td>
<td>1005303595</td>
<td>BS 278</td>
</tr>
</tbody>
</table>

(CAN) OEM INTERCOSTAL 100-530359-5 (SUPERSEDED PART 100-530359-11) NEW/ REPLACEMENT PART. OVERALL LENGTH WAS TOO SHORT BY 0.75" WHEN COMPARED TO ORIGINAL FROM ACFT.

<table>
<thead>
<tr>
<th>2009FA0000973</th>
<th>BEECH</th>
<th>TORQUE TUBE</th>
<th>LOOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/16/2009</td>
<td>300BEECH</td>
<td></td>
<td>1016100195</td>
</tr>
</tbody>
</table>

RIVETS ON THE ELEVATOR TORQUE TUBE ASSY BRACKET ARE LOOSE AND WORKING. (K)

<table>
<thead>
<tr>
<th>CA091118006</th>
<th>BEECH</th>
<th>PWA</th>
<th>SKIN</th>
<th>LOOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/17/2009</td>
<td>300BEECH</td>
<td>PT6A60A</td>
<td></td>
<td>FUSELAGE</td>
</tr>
</tbody>
</table>

(CAN) THE FUSELAGE RIVETS ARE LOOSE AND LEAKING PRESSURIZATION. THESE RIVETS WERE SEALED IN AUGUST 2009 IAW MFG RECOMMENDED REPAIR. THE REPAIR WAS COMPLETED AT 1790.7 TTSN, IN 160.5 HOURS THE PROBLEM IS COMING BACK. MFG STATES THAT THIS IS NOT A STRUCTURAL PROBLEM, BUT THE REPAIR THEY RECOMMENDED DID NOT FIX THE PROBLEM. DUE TO THE CIRCUMSTANCES IT IS SUSPECTED TO HAVE STRUCTURAL PROBLEMS WITH THE RIVETS MOVING IN THE FUSELAGE.

<table>
<thead>
<tr>
<th>CA09113008</th>
<th>BEECH</th>
<th>PWA</th>
<th>FITTING</th>
<th>CRACKED</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/10/2009</td>
<td>3NM</td>
<td>R985AN14B</td>
<td></td>
<td>WING TO BODY</td>
</tr>
</tbody>
</table>

(CAN) CRACK INDICATION WAS FOUND DURING MPI INSP AT RT WING STA (RWS) 90 (LWR WING ATTACH FITTING CLUSTER). CRACK WAS WELD REPAIRED AND RE INSPECTED BY MPI AND NO FAULTS WERE FOUND.

<table>
<thead>
<tr>
<th>2009FA0000985</th>
<th>BEECH</th>
<th>PLACARD</th>
<th>IMPROPER PART</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/2/2009</td>
<td>58</td>
<td>6241041</td>
<td>TRIM WHEEL</td>
</tr>
</tbody>
</table>

COULD NOT GET ELEVATOR TRIM TO RIG RIGHT. INVESTIGATED AND CONSULTED WITH TECH SUPPORT AT MFG AND DETERMINED INCORRECT PN PLACARD WAS INSTALLED ON TRIM WHEEL. THE INSTALLED PLACARD PN 624104-1, TECH SUPPORT CONFIRMED THIS PN WAS FOR DIFFERENT ACFT. TAKEOFF POSITION MARKING ALSO CONFIRMED THIS. CORRECT PN 58-524029. THIS PROBLEM WOULD CAUSE INCORRECT TAKEOFF TRIM POSITION AND POSSIBLY IMPROPER RIGGING. CA SHOULD BE SB PUT OUT TO CHECK PROPER PLACARD INSTALLATION. (K)

<table>
<thead>
<tr>
<th>2009FA0001045</th>
<th>BEECH</th>
<th>THROTTLE</th>
<th>JAMMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/7/2009</td>
<td>58</td>
<td></td>
<td>COCKPIT</td>
</tr>
</tbody>
</table>

CHECK LEFT THROTTLE OPERATION, PILOT REPORTED LT THROTTLE JAMMED. INSPECT LT THROTTLE CABLEING AT ENG AND AT INSTRUMENT PANEL, NO DEFECTS NOTED. THROTTLE OPERATED SMOOTHLY THROUGH FULL RANGE OF TRAVEL. INSPECTION OF LT THROTTLE, REVEALED THAT THE SMALL CONDUIT HSG THE "GO-AROUND: SWITCH WIRING, ON THE LT THROTTLE LEVER HAD COME UNATTACHED AND COULD JAM BETWEEN THE OVERLAY AND THE THROTTLE LEVER. REATTACHED AND SECURED WIRING CONDUIT AS REQUIRED, NO FURTHER DEFECTS NOTED.

<table>
<thead>
<tr>
<th>2009FA0001051</th>
<th>BEECH</th>
<th>CONT</th>
<th>SLICK</th>
<th>COIL</th>
<th>BURNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/18/2009</td>
<td>58</td>
<td>IO520*</td>
<td></td>
<td>M3975</td>
<td>MAGNETO</td>
</tr>
</tbody>
</table>

COIL FAILED AFTER ONLY 103.8 HRS. NEW MAG ASSY. A SECTION OF THE COIL WAS LITERALLY BURNED AWAY. WARRANTY WAS DENIED BECAUSE MAG WAS "OUT OF WARRANTY PERIOD". (K)

<table>
<thead>
<tr>
<th>2009FA0001062</th>
<th>BEECH</th>
<th>CONT</th>
<th>MOTOR</th>
<th>BURNED OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/1/2009</td>
<td>58</td>
<td>IO550*</td>
<td></td>
<td>583800901</td>
</tr>
</tbody>
</table>

AFTER TAKEOFF, GEAR WAS RESTRICTED. GEAR IN TRANSIT LIGHT STAYED ON, AND GEAR DID NOT FULLY GO TO UP AND LOCKED POSITION. GEAR HAD TO BE CRANKED DOWN MANUALLY TO GET 3 IN THE GREEN. ACFT.
RETURNED TO AIRPORT AND LANDED SAFELY (NO INCIDENT DECLARED). MOTOR HAD BURNED OUT, CAUSING
THE ABOVE SITUATION. LOGBOOK RESEARCH DID NOT REVEAL GEAR MOTOR (OR BRUSHES, EVER BEING
CHANGED). DATE STAMPED ON MOTOR CASE WAS MAR 1986. (ACFT MFG 1987) MOTOR APPEARED TO BE
"ORIGINAL" EXAM OF BRUSHES SHOWED GOO BRUSH LENGTH.

<table>
<thead>
<tr>
<th>2009FA0001022</th>
<th>BEECH</th>
<th>CONT</th>
<th>LINE</th>
<th>BROKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/4/2009</td>
<td>58</td>
<td>IO550C</td>
<td>9696001115</td>
<td>PROPELLER</td>
</tr>
</tbody>
</table>

LT ENG GOVERNOR UN-FEATHERING ACCUMULATOR OIL LINE BROKE AT THE FLARE OF THE FITTING AT THE
GOVERNOR. PROPELLER FEATHERED UN-CONTROLLED. TAKEOFF WAS ABORTED. TUBE IS ALUMINUM, THE 'B'
NUT IS ALUMINUM, AND IT WAS NOTED THE SLEEVE WAS MAGNETIC/FERROUS.

<table>
<thead>
<tr>
<th>2009FA0001079</th>
<th>BEECH</th>
<th>LYC</th>
<th>BEECH</th>
<th>O-RING</th>
<th>CRACKED</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/21/2009</td>
<td>60</td>
<td>TIO541*</td>
<td>MS29513131</td>
<td>TRANSMITTER</td>
<td></td>
</tr>
</tbody>
</table>

ACFT EXPERIENCED AN IN-FLIGHT FIRE IN THE LT ENG NACELLE DUE TO A LEAKING LT FUEL FLOW
TRANSMITTER. THE TRANSMITTER HAD A BRITTLE/CRACKED O-RING SEAL. THE TRANSMITTER WAS LAST O/H IN
1998. THE RT ENG FUEL FLOW TRANSMITTER HAD BEEN OVERHAULED AT THE SAME TIME AND WAS FOUND TO
BE LEAKING ALSO.

<table>
<thead>
<tr>
<th>CA091006003</th>
<th>BEECH</th>
<th>LYC</th>
<th>ACCUMULATOR</th>
<th>DISCHARGED</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/8/2009</td>
<td>76</td>
<td>LO360A1G6</td>
<td>8907021</td>
<td>FEATHERING SYS</td>
</tr>
</tbody>
</table>

(CAN) DURING ROUTINE MULTI-ENGINE FLIGHT TRAINING PREOCEEDURES, ONE ENGINE WAS SHUTDOWN AND
FEATHERED TO SIMULTE AN ENGINE FAILURE. NORMAL PROCEDURE FOR GETTING ENGINE TO ROTATE FOR A
RESTART IS TO MOVE PROP CONTROL LEVER FROM FEATHERED POSITION TO FULL FINE POSITION.
ACUMULATOR WHICH STORES THE PRESSURE REQUIRED TO UNFEATHER PROP HAD DEVELOPED A LEAK OVER
TIME AND LOST ITS NITROGEN CHARGE. THIS ENGINE MODEL IS VERY DIFFICULT TO START WITH JUST STARTER
FROM THE FEATHERED POSITION IN THE AIR. ACCUMULATOR PRESSURE IS CHECKED AT EVERY 100 HR INSPECT
INTERVAL HOWEVER WE WILL AMEND OUR MX SCHEDULE TO INCREASE THE INTERVAL TO EVERY 50 HOURS TO
CO-INCIDE WITH ROUTINE MX CHECKS.

<table>
<thead>
<tr>
<th>2009FA0001011</th>
<th>BEECH</th>
<th>CIRCUIT BREAKER</th>
<th>FAILED</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/23/2009</td>
<td>A36</td>
<td>W31X102010</td>
<td></td>
</tr>
</tbody>
</table>

UPON INSTALLATION OF NEW REPLACEMENT CIRCUIT BREAKERS TO COMPLY WITH AD 2008-13-7, IT WAS FOUND
THAT TIGHTENING OF SWITCH RETAINER NUT ON THE INSTRUMENT PANEL CAUSED SWITCH SEPARATION AND
FAILURE. AS THESE SWITCHES HAVE TO SUPPORT THE BUSS AND WIRE BUNDLE, IF A FAILURE (SWITCH
SEPARATION) OCCURS IN FLIGHT DUE TO VIBRATION, THE ENSUING RESULT WOULD BE WORSE THAN THE
INTENT OF THE ORIGINAL AD TO AVOID SMOKE IN THE COCKPIT. QUALITY OF NEW REPLACEMENT PART NOT AS
GOOD AS ORIGINAL.

<table>
<thead>
<tr>
<th>2009FA0001029</th>
<th>BEECH</th>
<th>CONT</th>
<th>CYLINDER</th>
<th>FAILED</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/25/2009</td>
<td>A36</td>
<td>IO550B</td>
<td>SA52006A23P</td>
<td>ENGINE</td>
</tr>
</tbody>
</table>

DURING LANDING PHASE OF AN INSTRUCTION FLIGHT, THE PILOT HEARD A LOUD "BANG" AND IMMEDIATE ENG
VIBRATION. UPON LANDING THE ACFT SAFELY THE INSTRUCTOR AND STUDENT NOTICED THA THE RPM COULD
NOT GBE BROUGHT BACK BELOW 1500 RPM. ONCE PARKED THEY OBSERVED A LARGE OIL STREAK ON LT SIDE
OF AIRCRAFT AND UPON FURTHER INSPECTIN BY AN ON-SITE MECHANIC IT WAS FOUND THAT THE NR 4 CYL (SN
6205) HAD SEPARATED AT THE HEAD/BARREL JUNCTION. IT EVENTUALLY CAUSING FAILURE. THE ACFT WAS
ONLY 10 HRS OUT OF A 100 HR INSPECTION TIME WHICH ALL CYLINDERS COMPRESSHION HAD BEEN CHECKED WITH
THE ACCEPTABLE RANGE, AND NO LEAKS WERE FOUND WITH A SOAP SOLUTION. ANOTHER COMPRESSION TEST
WAS PERFORMED ON THE REMAINING CYLINDERS AGAIN WITH SOAP SOLUTION AND DURING THAT CHECK IT
WAS FOUND THAT THE NR 6 CYL (SN 6029) WAS LEAKING OUT OF THE TOP OF THE CYLINDER HEAD BETWEEN FIN AGAIN ON THE EXHAUST SIDE. SINCE ALL CYLINDERS WERE NEW AT INSTALL AND HAD THE SAME AMOUNT
OF ACCUMULATED TIME, IT WAS DECIDED THAT THE PREVENTATIVE SOLUTION WOULD BE TO CHANGE ALL 6
CYLINDERS TO PREVENT RECURRENCE OF CYLINDER FAILURE. ALL 6 CYLINDERS HAVE NOW BEEN CHANGED
WITH O/H CYLINDERS.

<table>
<thead>
<tr>
<th>2009FA0001030</th>
<th>BEECH</th>
<th>CONT</th>
<th>CYLINDER</th>
<th>LEAKING</th>
</tr>
</thead>
</table>

2009FA0001030 BEECH CONT CYLINDER LEAKING
| Date       | Aircraft | Engine | Condition
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11/25/2009</td>
<td>A36</td>
<td>IO550B</td>
<td>ENGINE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DURING A ROUTINE 100 HR INSPECTION A CYLINDER COMPRESSION TEST WAS PERFORMED ON THE ENGINE USING SOAP FOR VISUAL INSPECTION AND DURING THAT CHECK IT WAS FOUND THAT THE NR 3 CYLINDER (SN 4847) WAS LEAKING OUT OF THE TOP OF THE CYLINDER HEAD BETWEEN FINS ON THE EXHAUST SIDE. UPON FURTHER INSPECTION A SMALL CRACK CAN BE SEEN BETWEEN THE FINS ON THAT SIDE. THE CYLINDER IS NOW BEING CHANGED WITH AN O/H CYLINDER. ALL OTHER CYLINDERS WILL BE COMPRESSION AND VISUALLY CHECKED AT 50 HR INTERVALS UNTIL TBO. (K)</td>
</tr>
<tr>
<td>12/3/2009</td>
<td>A36</td>
<td>TIO540J2B</td>
<td>EXHAUST SYS</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>DURING ACCIDENT INVESTIGATION, FOUND TOP LT ENGINE COWLING WITH EVIDENCE OF FIRE AND BURNED HOLES, LT EXHAUST MANIFOLD PIPE WAS LAYING LOOSE, AND LT CLAMP TO TURBO COMPRESSOR BROKEN AND LAYING IN BOTTOM OF ENGINE COWL. AIRCRAFT WAS DESTROYED IN FIRE WITH ONE FATALITY, AND ENGINE HAD SEPARATED (25 FT. FROM WRECKAGE) AND WAS FULLY IN TACT STILL IN COWLING.</td>
</tr>
<tr>
<td>10/7/2009</td>
<td>A60</td>
<td>TIO541E1C4</td>
<td>PROPELLER</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(CAN) PROPELLER WAS RECEIVED FOR O/H DUE TO A FOREIGN OBJECT STRIKE. WHEN THE PAINT WAS REMOVED FROM THE HUB CORROSION IN THE BLADE SEAL GROOVES WAS NOTED. AFTER CONSULTING THE MFG O/H MANUAL IT WAS FOUND THAT THE HUB IS NOT REPAIRABLE AND MUST BE REMOVED FROM SERVICE.</td>
</tr>
<tr>
<td>11/18/2009</td>
<td>B200</td>
<td>PT642A</td>
<td>Rudder</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T/E OF RUDDER ABOVE TRIM TAB FOUND TO BE FULL OF WATER DURING INSPECTION. SUGGEST SERVICE INFORMATION BE INTRODUCED TO CHECK RUDDER FOR PROPER DRAIN HOLES AND ANY OBSTRUCTIONS. (K)</td>
</tr>
<tr>
<td>10/16/2009</td>
<td>B200</td>
<td>PT642A</td>
<td>Rudder</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(CAN) DURING PHASE THREE INSPECTION, THE LEFT HAND RUDDER CONTROL CABLE WAS FOUND TO HAVE APPROXIMATELY 15 FRAYED STRANDS WITHIN A TWO INCH LENGTH AT THE PULLEY AT STATION 305.260 JUST AFT OF THE PASSENGER DOOR, WHERE THE LOWER FUSELAGE CURVES UP TOWARDS THE TAIL. (TC 20091028004)</td>
</tr>
<tr>
<td>10/11/2009</td>
<td>B200</td>
<td>PT642A</td>
<td>Rudder</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(CAN) GENERATOR FAILED IN FLIGHT. SENT TO AMO FOR ASSESSMENT. AMO INSPECTED AND TESTED THE GENERATOR. BEFORE DISASSY, A FUNCTIONAL TEST WAS ATTEMPTED. THE GENERATOR HAD LOW RESIDUAL VOLTAGE AT IDLE, BUT SUFFICIENT TO ENERGIZE AND DEVELOP 30 VOLTS. IMMEDIATELY UPON ENERGIZING, IT PRODUCED A STRONG ODOR OF BURNING INSULATION, AND WAS SHUT DOWN WITHIN 5 SECONDS. NO LOAD WAS APPLIED. REMOVED FROM TEST STAND AND DISASSEMBLED. DEFECT WAS TRACED TO A SHORT INSIDE THE ARMATURE. A BURNT SPOT IS VISIBLE AT THE COMM END OF THE LAMINATION STACK BEFORE THE RETAINING BAND. RESISTANCE BETWEEN ARMATURE WINDINGS AND SHAFT IS .14 OHMS - A DEAD SHORT. THE ARMATURE HAD BEEN REWOUND SOME TIME PRIOR TO 1998, AND HAS BEEN THROUGH FIVE ST-GEN OVERHAULS SINCE THEN. DRIVE SHAFT SPLINE INSPECTED FOR EDD, NONE FOUND. (TC 20091027005)</td>
</tr>
<tr>
<td>11/7/2009</td>
<td>B200</td>
<td>PT642A</td>
<td>Fuselage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(CAN) GENERATOR FAILED IN FLIGHT. SENT TO AMO FOR ASSESSMENT. AMO INSPECTED AND TESTED THE GENERATOR. BEFORE DISASSY, A FUNCTIONAL TEST WAS ATTEMPTED. THE GENERATOR HAD LOW RESIDUAL VOLTAGE AT IDLE, BUT SUFFICIENT TO ENERGIZE AND DEVELOP 30 VOLTS. IMMEDIATELY UPON ENERGIZING, IT PRODUCED A STRONG ODOR OF BURNING INSULATION, AND WAS SHUT DOWN WITHIN 5 SECONDS. NO LOAD WAS APPLIED. REMOVED FROM TEST STAND AND DISASSEMBLED. DEFECT WAS TRACED TO A SHORT INSIDE THE ARMATURE. A BURNT SPOT IS VISIBLE AT THE COMM END OF THE LAMINATION STACK BEFORE THE RETAINING BAND. RESISTANCE BETWEEN ARMATURE WINDINGS AND SHAFT IS .14 OHMS - A DEAD SHORT. THE ARMATURE HAD BEEN REWOUND SOME TIME PRIOR TO 1998, AND HAS BEEN THROUGH FIVE ST-GEN OVERHAULS SINCE THEN. DRIVE SHAFT SPLINE INSPECTED FOR EDD, NONE FOUND. (TC 20091027005)</td>
</tr>
</tbody>
</table>
(CAN) WHEN PERFORMING SB 24-3939, IT WAS DISCOVERED THAT ONE OF THE WIRING HARNESS WAS CONTACTING THE FWD FRAME OF THE CO-PILOT CIRCUIT BREAKER PANEL RECESS. CHAFING HAS NOT PENETRATED THE WIRING INSULATION. CONTACT AREA WAS LIMITED TO THE FRAME 'TAB' PROTRUDING AFT INTO THE RECESS AREA AND WAS TRIMMED TO PROVIDE ADEQUATE CLEARANCE AND THEN COVERED WITH ALIGATOR GROMMET MATERIAL TO PREVENT FURTHER DAMAGE.

CA091027001  BEECH  PWA  AXLE  DAMAGED
9/30/2008  B300  PT6A60A  101810045601  MLG

(CAN) OVERHAULED LANDING GEAR WAS BEING INSTALLED, UPON REMOVAL OF THE BOLT WHICH SECURES THE BRAKE ANTI-ICE ASSY TO THE GEAR, THE HOLE IN THE GEAR WAS FOUND TO BE ELONGATED BEYOND LIMITS AND WAS ASSEMBLED USING WHAT APPEARED TO BE STRUCTURAL ADHESIVE OR METAL SET TO FILL THE HOLE. NEW GEAR WAS ORDERED AND INSTALLED AND GEAR WAS RETURNED TO SELLER. (TC 20091027001)

2009FA0001037  BEECH  COMPUTER  MALFUNCTIONED
2/5/2009  C12C  013040701010  AUTOPILOT

A NEW AUTOPILOT SYS WAS INSTALLED ON 2/5/09 AT ACTT 15821.5. PERFORMANCE OF AUTOPILOT WHICH IS CERTIFIED FOR CATEGORY 1 APPROACHES IS VERY POOR AND ERRATIC. AUTOPILOT WILL FLY THE ACFT AS MUCH AS 2 DOTS OFF LATERALLY FROM THE RUNWAY CENTER LINE. AUTOPILOT ALSO HAS PROBLEMS MAINTAINING THE PROPER GLIDE PATH. OFTEN IT WILL ALLOW THE ACFT TO DROP BELOW THE GLIDE PATH. THE MFG HAS CONFIRMED OUR PROBLEMS (AND OTHER OPERATORS OF THE SAME EQUIPMENT) AND HAVE BEEN RELUCTANT OR SLOW IN RESPONDING TO THE PROBLEM. MFG ATTRIBUTES THE PROBLEM TO A CHANGE IN HARDWARE INSIDE THE COMPUTER AND SAYS THEY NEED TO REWRITE SOFTWARE THAT PROCESSES THE DATA. THIS SAME SYS WAS INSTALLED IN OUR ACFT ON 5/27/08 AND IN JUNE OF 2008 WE STARTED COMPLAINING TO MFG (AND THE INSTALLER) ABOUT THE POOR PERFORMANCE DURING ILS APPROACHES. HAVE ASKED MFG IF THEY WERE GOING TO ISSUE A SAFETY NOTICE TO THEIR CUSTOMERS WHO BOUGHT THE SYS AND THEIR RESPONSE WAS "WE ARE CONSIDERING DOING THAT". THIS IS A SAFETY ISSUE THAT NEEDS TO BE ADDRESSED.

MDG2009  BEECH  PWA  ENGINE  SHUTDOWN
11/16/2009  C90  PT6A27

PILOTS REPORTED ENG SHUTDOWN DURING FLIGHT. MX REPORTED UPON INSP THAT THERE WAS A GRINDING SOUND INTERNAL TO THE ENG WHEN THEY TRIED TO ROTATE THE ENG BY THE STARTER. ENG WILL BE REMOVED AND SENT TO THE O/H SERVICE CTR FOR EVALUATION FOR REASON OF FAILURE.

CA090918006  BEECH  PWA  PLUNGER  WORN
9/16/2008  D18S  R985AN14B  1139  RELIEF VALVE

(CAN) THE ACFT MADE AN UNSCHEDULED LANDING WHEN THE OIL PRESSURE PLUNGER BECAME JAMMED IN THE BODY OF THE OIL PRESSURE RELIEF VALVE CAUSING A LOSS OF OIL PRESSURE. MX REPLACED THE PLUNGER AND THE ENGINE WAS RETURNED TO SERVICE.

CA091020001  BEECH  PWA  SPLICE  MISSING
10/20/2009  E90  PT6A28  9912005965  SKIN

(CAN) DURING INSP OF FUSELAGE BELLY SKINS JUST AFT OF FWD WING SPAR, AN UNUSUAL SKIN BUTT SPLICE WAS FOUND. SPLICE HAS ONLY A SINGLE ROW OF RIVETS IN A PRESSURIZED VESSEL, WHERE THERE IS NORMALLY A DOUBLE ROW. FURTHER INVESTIGATION OF THE INSTALLATION DWG FOR THE SUPER SPAR KIT NR 90-4077, SHOWS THE SKIN IS TO BE CUT AND A SECTION REMOVED IN THIS AREA TO ACCOMMODATE THE NEW SPAR. A NEW SKIN SECTION PN 90-120035-27 IS THEN INSTALLED AND BUTT TO THE ORIGINAL SKIN. THE DRAWINGS SHOW INTERNAL STRAPS PICKING UP A SINGLE ROW OF RIVETS AND 2 WIDER EXTERNAL SPLICE PLATES PN 99-120059-65 INSTALLED OVER THIS SKIN SPLICE PICKING UP A SECOND ROW OF RIVETS. THESE EXTERNAL SPLICE PLATES WERE NEVER INSTALLED BY THE AGENCY THAT PERFORMED THE SPAR REPLACEMENT WHICH ExplAINS WHY THERE IS ONLY A SINGLE ROW OF RIVETS. VISUAL INSP AND RECORDS SHOW NO REPAIRS OR ALTERATIONS IN THIS AREA SINCE SPAR REPLACEMENT BY MFG ON MARCH 5, 1984. THE AIRCRAFT HAS FLOWN 18858 HOURS AND APPROX 19000 CYCLES IN THIS CONDITION. THE PN OF THE AFFECTED BELLY SKINS ARE 50-120156-81 AND -82. A REPRESENTATIVE WAS INFORMED OF THIS ERROR.

CA090918005  BEECH  LYC  CYLINDER  CRACKED
9/10/2009  E95  IO360B1B  SL36006WA1  ENGINE
(CAN) DURING THE CRUISE PORTION OF FLIGHT, THE RT ENG BEGAN RUNNING VERY ROUGH. CREW REDUCED POWER SETTING ON RT ENGINE AND CONTINUED ON TO DESTINATION. UPON ARRIVAL, AN INSPECTION REVEALED A CRACKED CYL AND LEAKING OIL ON INSIDE OF THE COWLING. MX REPLACED THE CYL WHICH WAS CRACKED IN ITS ENTIRETY AT THE CYL HEAD TO BARREL ATTACHMENT. NO DEFINITIVE CAUSE WAS DETERMINED EXCEPT FOR THE POSSIBILITY OF A MFG DEFECT. FAILURES OF THIS NATURE ARE RARE ON THESE ACFT OR ENG WITHIN THIS COMPANIES FLEET.

2009FA0001050  BEECH  CONT  CYLINDER  DESTROYED
10/18/2009  J35  IO470C  NR 2
(2) FLT HRS INTO CRUISE FLT, ENGINE LOST POWER ON NR 2 CYL AS INDICATED ON UBG-16. SHORTLY AFTER, NR 2 CYL JUG BLEW THROUGH THE ENG COWL, SPRAYING OIL OVER WINDSCREEN. ACFT WAS LANDED ON A 2 LANE STATE HWY. CYL REMAINED HANGING ON THE OUTSIDE OF THE ACFT HELD ON BY UBG-16 WIRING AND PLUG WIRES. INVESTIGATION SUSPECTED IMPROPER TORQUED CYL BOLTS DURING OVERHAUL.

CA091120004  BELL  HNYWL  IGNITER  FAILED
11/20/2009  205A1  T5313B-HNYWL  FHE2112  ENGINE
(CAN) FOUND IGNITER PLUG , 2 OF 4 INSTALLED FAILED CAUSED BY IGNITER INTERIOR CATHODE BECOMING LOOSE.

CA091120005  BELL  HNYWL  IGNITER  FAILED
11/20/2009  205A1  T5313B-HNYWL  FHE2112  ENGINE
(CAN) FOUND IGNITER PLUG 1 OF 4 INSTALLED, FAILED CAUSED BY IGNITER INTERIOR CATHODE BECOMING LOOSE.

CA091109002  BELL  LYC  BELL  BOOT  SEPARATED
11/6/2009  205A1  T5317BLYC  2050401767  INPUT SHAFT

CA091006004  BELL  LYC  SHAFT  WORN
9/19/2009  205A1  T5317BLYC  117078001  FUEL PUMP

CA091110001  BELL  ALLSN  COMBUSTION LINER  BENT
10/5/2009  206B  250C20B  23056108  ENGINE
(CAN) - AFTER AN INSPECTION OF THE ENG FOR EXCESSIVE TOT DURING STARTUP, AT WHICH TIME COMBUSTION CASE, COMBUSTION LINER, FUEL NOZZLE, & IGNITER WERE REMOVED AND REINSTALLED. ENGINE WOULD NOT START. THERE WAS NO SPARK AT IGNITER. AFTER TROUBLESHOOTING, IGNITER WAS REMOVED AND IT WAS NOTED THAT END OF IGNITER HAD DAMAGE ON IT, FROM BEING IN CONTACT WITH BORE IN COMBUSTION LINER. IGNITER HAD NOT BEEN MISALIGNED WITH BORE IN THE COMBUSTION LINER AND HAD CAUSED COMBUSTION LINER TO ALSO BE DAMAGED, AS THE IGNITER PUSHED ON BORE FACE DURING PREVIOUS INSTALLATION. DAMAGED COMBUSTION LINER AND INGITER WERE REPLACED WITH NEW/O/H PARTS AND ENGINE STARTED.
WITH NO PROBLEMS. NOTE: THIS WORK WAS CARRIED OUT AWAY FROM BASE, IN ANOTHER HANGAR, AT ANOTHER SITE, WHICH MAY HAVE CAUSED SOME OF THE ISSUES, AS THE ENGINEER WAS OUT OF HIS NORMAL PLACE OF WORK. SELF INFlicted PRESSURE TO GET THE WORK DONE QUICKLY AND RETURN HOME MAY HAVE BEEN A CONTRIBUTING FACTOR TO THE MISTAKES MADE.

**CA090928010**

**BELL**  ALLSN  FCU  MALFUNCTIONED

9/16/2009  206B  250C20B  23070606  ENGINE

(CAN) FCU WAS CAUSE OF DELAYED LIGHT OFF. ANYWHERE FROM 1-5 SECONDS AND WORSE WHEN COLD.

**CA091016003**

**BELL**  ALLSN  ALLSN  GUIDE  BROKEN

10/15/2009  206B  250C20B  6856983  ANTI ICE VALVE

(CAN) ANTI-ICE GUIDE ASSY FOUND BROKE UNDERNEATH "B" NUT. FOUND DURING COMPRESSOR CHANGE.

**CA091028010**

**BELL**  ALLSN  CASE  CRACKED

10/5/2009  206B  250C20B  6870992H  COMBUSTION SECT


**CA091103006**

**BELL**  ALLSN  ALLSN  BEARING  FAILED

6/9/2009  206L  250C20R  23034787  GEARBOX

(CAN) ENG WAS REMOVED AFTER METAL CONTAMINATION AND SENT TO A REPAIR FACILITY. THE 2.5 BEARING WAS FOUND TO HAVE SPALLED ROLLERS AND RACE AND WAS MISSING A ROLLER. THIS BEARING WAS A PMA PART PN 23034787AL SN TA NR 0511363 AND WAS INSTALLED NEW 385 HOURS AGO. OTHER BEARINGS AND PARTS RECEIVED DAMAGE AS A RESULT OF THE METAL CONTAMINATION.

**CA091013003**

**BELL**  ALLSN  ALLSN  BLADE  DELAMINATED

10/10/2009  206L  250C20R  206016201131  TAIL ROTOR

(CAN) DURING DAILY INSPECTION PILOT NOTICED THE OTBD T/E SKIN WAS DELAMINATED 6 INCHES FROM THE TIP ON TAIL ROTOR BLADE PN 206-016-201-131, SN CS-12194 BLADE HAS 120.8 HOURS REMAINING BEFORE RETIREMENT. BOTH BLADES WERE REPLACED WITH NEW BLADES AND THE ASSY WAS BALANCED WITHOUT INCIDENT.

**CA091008004**

**BELL**  ALLSN  BEARING  WORN

10/8/2009  206L  250C20R  23031497  GEARBOX

(CAN) ENGINE CHIP LIGHT FOUND PROBLEM WITH THE BALL BEARING ON THE POWER TAKEOFF OUTPUT SHAFT.

**CA091109007**

**BELL**  ALLSN  INDICATOR  MISREPAIRED

11/6/2009  206L  250C20R2  12444420SN8  TOT

(CAN) RECEIVED THIS INDICATOR FROM O/H AND IT WAS FOUND TO BE INDICATING 300 DEGREES CELSIUS TO HIGH UPON INSTALLATION AND TEST. WE ARE ASSUMING THIS PROBLEM WAS DUE TO POOR QC OR DAMAGE DUE TO SHIPPING BUT THE BOX THE T.O.T. INDICATOR CAME IN LOOKED UNDAMAGED.

**2009F00122**

**BELL**  LONGERON  CRACKED

11/13/2009  206L1  206031314037  ZONE 200

FOUND DURING INSPECTION, AFT FUSELAGE UPPER LT LONGERON UNDER AFT UPPER LT TAILBOOM FITTING CRACKED APPROX 1.5" ORIGINATING FROM 2 FWD MOST RIVETS. APPROX FS 228.4, WL 73.7

**CA091021006**

**BELL**  ALLSN  CASE  CRACKED

10/21/2009  206L1  250C30P  S182250202  ELT

(CAN) INAVERTANT ACTIVATION OF THE ELT DURING THE MIDDLE OF THE NIGHT. ELT WAS FOUND TO HAVE A CRACKED CASE AND FOUND OIL AND OTHER CONTAMINANTS ON AND INSIDE ELT CASE. ELT WAS PROGRAMMED
Wrong with an error in the 24 bit address. ELT performance test failed reset switch function does not work. (TC 20091021006)

<table>
<thead>
<tr>
<th>Code</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Component</th>
<th>Condition</th>
<th>Date</th>
<th>Service Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA091109001</td>
<td>BELL</td>
<td>ALLSN</td>
<td>NUT</td>
<td>CRACKED</td>
<td>10/29/09</td>
<td>206L4 250C30P</td>
<td>NAS1022A8 TAIL ROTOR HEAD (CAN) During removal of T/R pitch change cross head nut, the nut was found to be cracked in 2 of the relief slots. The nut was completely separated after removal. Nut was discarded and replaced with new.</td>
</tr>
<tr>
<td>2009FA0001038</td>
<td>BELL</td>
<td>ALLSN</td>
<td>BELL</td>
<td>SUPPORT FITTING CRACKED</td>
<td>12/9/09</td>
<td>206L4 250C30P</td>
<td>206033426001 TAILBOOM ASSY During inspection of ACFT, identified a crack in the tail rotor gear box support fitting PN 206-033-426-001 at approx the 7 o'clock position. Ship is fitted with a high altitude tail rotor kit.</td>
</tr>
<tr>
<td>CA091109006</td>
<td>BELL</td>
<td>PWA</td>
<td>BELL</td>
<td>BARREL CRACKED</td>
<td>11/4/09</td>
<td>212 250C30P</td>
<td>204011143005 DRAG BRACE (CAN) 2 cracks in barrel grip area, course thread end, running longitudinally, one 1/4 inch, one 1/2 inch long.</td>
</tr>
<tr>
<td>2009FA0000961</td>
<td>BELL</td>
<td>ALLSN</td>
<td>FUEL CONTROL</td>
<td>UNSERVICEABLE</td>
<td>11/18/09</td>
<td>230 250C30</td>
<td>230070613 NR1 ENGINE Component has a history of causing ENG to momentarily decelerate as throttle is advanced past the idle stop to flight. Deceleration can be overcome by continuing to advance throttle through the deceleration. Once through deceleration a maximum of only 90 percent of main rotor rpm could be achieved. All engine indicating instruments are with in limits at full open throttle as well as at idle above and below idle stop.</td>
</tr>
<tr>
<td>CA091002002</td>
<td>BELL</td>
<td>ALLSN</td>
<td>TURBINE</td>
<td>DAMAGED</td>
<td>6/10/09</td>
<td>407 250C47B</td>
<td>ENGINE (CAN) Turbine rub noise reported on shutdown. Recommended removing the turbine and sending out for INS. Turbine was repaired for N1 rub.</td>
</tr>
<tr>
<td>CA091002003</td>
<td>BELL</td>
<td>ALLSN</td>
<td>IGNITER BOX</td>
<td>FAILED</td>
<td>6/19/09</td>
<td>407 250C47B</td>
<td>ENGINE (CAN) ACFT would not start. Pilot noted ignitor not firing. Troubleshoot to faulty ignition excitor box. Replaced with serviceable unit.</td>
</tr>
<tr>
<td>CA091113004</td>
<td>BELL</td>
<td>ALLSN</td>
<td>SEAL</td>
<td>LEAKING</td>
<td>10/25/09</td>
<td>407 250C47B</td>
<td>FREEWHEEL ASSY (CAN) During a night flight, pilot noticed decrease in transmission oil pressure. On landing (still had some pressure indication) found oil all over the ENG compartment and that the aft freewheel adapter seal PN: 209-340-265-103 had come out of the aft adapter HSG. Seal and adapter showed evidence of sealant remaining from the original installation. This ACFT was delivered after the affectivity of ASB 407-07-79.</td>
</tr>
<tr>
<td>2009FA0000978</td>
<td>BELL</td>
<td>ALLSN</td>
<td>DUPLEX BEARING</td>
<td>SPALLED</td>
<td>10/20/09</td>
<td>430 250C47B</td>
<td>SWASHPLATE DUPLEX BEARING found to be heavily spalled. 17/125 balls damaged (approx 14 percent) one inner race damaged 4 places; outer race damaged 2 places.</td>
</tr>
<tr>
<td>CA091019001</td>
<td>BLANCA</td>
<td>CONT</td>
<td>WIRE</td>
<td>BROKEN</td>
<td>10/16/09</td>
<td>1419 IO470L</td>
<td>TAIL BRACE (CAN) Tail brace wire found broken as a result of a crack originating in corrosion pitting.</td>
</tr>
</tbody>
</table>
CA091007001 BOEING RROYCE LOCK PIN MISSING
10/5/2009 717200 BR700715A130 TURBINE BLADE
(CAN) DURING DISASSEMBLY OF THE ENG AFTER SPLITTING THE HP2 TURBINE DISC FROM THE HPT1 TURBINE DISC IT WAS FOUND THAT LOCKING PLUGS WERE MISSING. THE LOCKING PLUG IS PREVENTING THE LOCKING RING HOLDING THE HP1 TURBINE BLADES TO BE RELEASE. THE LOCKING RING WAS STILL IN POSITION BUT LOCKING PLUG WERE RELEASED BY DAMAGING SURROUNDING AREA OF HP 1 AND HP 2 TURBINE DISC WEBS, BLADES AND NGV. OEM ADVISE.

CA091106006 BOEING PWA BEARING SEIZED
11/5/2009 727225 JT8D15 KP4A AILERON
(CAN) TO MAINTAIN STRAIGHT FLIGHT IN CLIMB (HAND FLYING), REQUIRED AILERON TRIM 3 1/2 UNITS, CONTROL COLUMN AT 18 DEG. MX FOUND CABLE ROD END BROKEN AT SPOILER MIXER MECHANISM. BRG IN ROD END SEIZED. ROD END REPLACED.

CA091117005 BOEING PWA BOLT SHEARED
11/6/2009 727227 JT8D9A BACB30US10P37 BULKHEAD
(CAN) DURING ROUTINE WALK AROUND INSPECTION, FOUND A BOLT MISSING AT RT ATTACH FITTING TO REAR PRESSURE BULKHEAD. FURTHER INSPECTION FOUND BOLT HAD SHEARED AT MID POINT AND WAS RECOVERED SITTING IN LWR STURCTURE. NUT END OF BOLT HALF STILL IN POSITION. BOTH BOLT HALVES SHOWED RUST AND CORROSION AT SHEAR POINT. LOCATION STA 1183, STR 3A RT BOLT HOLE INSPECTED AND CLEANED UP, BOLT REPLACED IAW STRUCTURAL INTERIM ADVISORY DOCUMENT 727 190, AND SB 727-53-0178. VISUAL INSPECTION OF OTHER BOLTS FOUND NO FURTHER FAULTS. ACFT TAT 65759.2 TAC 45087 LINE NR 1106.

CA091009003 BOEING PWA WARNING SWITCH FAULTY
10/8/2009 727247 JT8D15 32EN144 STAB
(CAN) IN POSITION ON RWY FOR DEPARTURE. THRUST LEVERS ADVANCED TO TAKEOFF THRUST FOLLOWED BY THE TAKEOFF WARNING HORN. THRUST RETARTED TO IDLE. FLAPS RESELECTED UP THEN BACK TO FLAPS 15, STAB TRIM MOVED TO ZERO THEN BACK TO TAKEOFF POSITION, SPD BRAKES DEPLOYED AND STOWED. RE-ATTEMPTED TO SET THRUST TO TAKEOFF AND HORN SOUNDED AGAIN. RETURNED TO GATE FOR MAINT FOLLOW UP. SYS INSPECTION CARRIED OUT, FOUND UPPER STABILIZER TAKEOFF WARNING SWITCH (S532) AT FAULT.

CA091022004 BOEING PWA WINDSHIELD CRACKED
10/20/2009 727260 JT8D15 5893543129 COCKPIT
(CAN) DURING CRUISE AT FL320, THE CAPTAINS L1 WINDOW OUTER PANE CRACKED. THE AIRCRAFT LANDED WITHOUT FURTHER INCIDENT AND THE WINDOW WAS REPLACED BY MAINTENANCE PERSONNEL. WHEN COMPLETE THE AIRCRAFT WAS RETURNED TO SERVICE. (TC 20091022004)

2009FA0001012 BOEING SPAR CORRODED
12/1/2009 72731 BAC15141687 ZONE 600
LT WING REAR SPAR UPPER SPAR CHORD CORRODED OUT OF LIMITS AT WING STA70 - STA 189 AND CRACKED AT WING STA 177. REPLACE SPAR CHORD SECTION IAW SR NR 1-1446626958 WITH ATTACHED 8100-9.

CA091013002 BOEING FLOOR PANEL CORRODED
10/2/2009 737* FLOOR PANEL CORRODED
(CAN) WHEN COMPLYING WITH SB 737-53-1285 MAJOR CORROSION WAS NOTED IN THE SAME AREA THAT HAD ALREADY BEEN INSPECTED BY 3 C-CHECK TASK CARDS. AREA IN QUESTION IS REAR WET FLOOR AREA. STATES ON THE CLIENTS TASK CARD THAT REMOVAL OF SEALANTS, CORROSION INHIBITORS AND FLOOR LEVELING COMPOUND NOT REQUIRED FOR INSPECTION IAW SB 737-53-1285, ORIGINAL GEL TAPE WAS REMOVED FROM UNDER FLOOR STRUCTURE TO BE REPLACED, AT WHICH POINT CORROSION WAS NOTED PARTICULARLY IN THE AREAS OF THE FLOOR PANEL CLIPNUTS. BECAUSE THE CLIPNUTS ARE STEEL IT MAY BE ASSUMED THAT GALVANIC ACTION CREATED THE CORROSION BETWEEN THE TWO DISSIMILAR METALS. (STEEL CLIPNUTS/ALUMINUM STRUCTURE)

CA090929006 BOEING FIRE LOOP CHAFED
9/28/2009  737*  325027302  FAN CASE
(CAN) FIRE LOOP FOUND RUBBING ON SCREW HEAD. THIS HARNESS WAS FOUND TO HAVE CHAFED ALMOST HALF THE WAY THRU. HAD THIS WIRE HARNESS CONTINUED TO CHAFE THIS LOOP COULD HAVE SHORTED CAUSING A FALSE INDICATION IN THE COCKPIT THUS GIVING FIRE WARNINGS WHEN ACTUALLY NO FIRE WAS PRESENT CAUSING THE PILOTS TO BLOW THE FIRE BOTTLE AND SHUTTING DOWN THE ENGINE.

CA090929007  BOEING  GE  WHEEL  CRACKED
9/28/2009  737*  CFM567B24  3400028160  FAN BLADE
(CAN) DURING INSP 72-020-01-01 IT WAS FOUND THE 2 BLADE PLATFORMS HAD BEEN CRACKED AND BROKEN OFF AT THE BUSHING SURROUND.

CA091029002  BOEING  GE  CONTROL CABLE  TWISTED
10/26/2009  737*  CFM567B24  BACC2A6B04398EG  AILERONS
(CAN) WHILE ACCOMPLISHING TASK CARD TC 27-226-00-03 CONTROL CABLES - LT WING AFT SPAR DURING A PHASE 4 SCHEDULED MX CHECK, THE LT AILERON CABLES ABSA-L1 AND ABSB-L1 WERE FOUND TWISTED BETWEEN WING STA 278 AND 326, AFT OF THE NR 1 ENG. WEAR ON THE CABLES WAS FOUND TO BE BEYOND LIMITS AND THE CABLES (P/N'S BACC2A6B0469FG AND BACC2A6B04398EG) WERE BOTH REPLACED. AS THIS IS A RELATIVELY NEW ACFT, IT WAS DETERMINED THAT THIS DEFECT WAS A QUALITY ESCAPE BY MFG IN PRODUCTION. SUBMITTED THIS FINDING TO THE MFG. MFG HAS SINCE RESPONDED, CONFIRMING THAT THIS INFORMATION HAS BEEN PASSED ALONG TO THE APPROPRIATE MFG AND QC PERSONNEL FOR INVESTIGATION.

TSAA0932014  BOEING  PROXIMITY SENSOR  FAILED
12/8/2009  737210C  189915  MLG
AFTER TAKEOFF, THE CREW ATTEMPTED TO MOVE THE LANDING GEAR HANDLE TO THE UP POSITION. HANDLE FAILED TO MOVE ALL THE WAY TO THE UP POSITION. CREW FOLLOWED PROCEDURES IN THE QUICK REFERENCE HANDBOOK AND RETURNED TO DEPARTURE WITHOUT FURTHER INCIDENT. MX REMOVED AND REPLACED THE K3 RELAY IN THE LANDING GEAR ACCESSORY UNIT AND ALSO REMOVED AND REPLACED THE S106 LANDING GEAR AIR SAFETY SENSOR IAW AMM 32-09-200. THE LANDING GEAR OPS CHECKED SATISFACTORY IAW AMM 32-32-0 AND 32-33-0 AND ACFT RETURNED TO SERVICE.

CA091002004  BOEING  PWA  ACCUMULATOR  OUT OF TOLERANCE
6/20/2009  737275  JT8D17  2660472M2  HYD SYSTEM
(CAN) PART WAS INSTALLED WHEN NOT IN COMPLIANCE WITH AD 2003-11-03 THIS AD EFFECTIVE O3-JULY-03 STATES THAT PN 2660 472M2 MAY NOT BE INSTALLED ON ANY ACFT.

CA091022001  BOEING  PWA  SCREW  WRONG PART
10/20/2009  737275C  JT8D17  BACB30NN4K11  WING PANELS
(CAN) FUEL PANELS HAD BEEN OPEN FOR MAINTENANCE, WHEN IT CAME TIME FOR RE-TORQUE OF THE SCREWS, THE SCREWS BOTTOMED OUT, AS THEY WERE THE WRONG LENGTH. MAINTENANCE CONTRACTOR HAS BEEN ADVISED. PROPER SCREWS HAVE BEEN INSTALLED (TC 20091022001)

2009F00138  BOEING  LAMP  INOPERATIVE
12/18/2009  737800*  776635604  STARTER
RT FWD EMERGENCY OVER WING EXIT DOOR EXTERNAL LIGHT INOP. RELAMPED RT FWD EMER O/W EXIT DOOR LIGHT OPS CKS GOOD IAW AMM 35-51-04-960-801.

2009FA0001080  BOEING  HOUSING  BROKEN
12/23/2009  757  PS600  776635604  STARTER
ALLOWING THE HOUSING TO SEPARATE AND POTENTIAL FOR CONTAINMENT FAILURE.

2009F00110  BOEING  SKIN  DEBONDED
11/16/2009  767266  NR 8 SLAT
WHILE PERFORMING ULTRASONIC INSPECTION IN ACCORDANCE WITH AD 93-14-19, SKIN TO CORE DISBAND IS DETECTED IN THE UPPER AND LOWER SURFACES OF SLAT POSITION 8 T/E WEDGE AT AFT INBD CORNER AREA.

2009F00111  BOEING  FLOORBEAM  CORRODED
11/18/2009  767266  BS 955
CORROSION FOUND BELOW CABIN CENTER SECTION FLOOR STRUCTURE ON REAR SPAR UPPER CHORD AT STATION 955.1 BETWEEN LT BL 54.81 AND 74.81 DURING INSPECTION IN ACCORDANCE WITH TASK CARD NR 53-510-00. (NOTE THAT THERE IS A PREVIOUS REPAIR AT THIS AREA AND THE CORROSION IS FOUND BELOW IT).

2009F00112  BOEING  STRUCTURE  CORRODED
11/16/2009  767266  BS 1562-1582
CORROSION DAMAGE FOUND ON THE AFT EQUIPMENT BILGE AREA AT WASTE DISPOSAL SYSTEM AREA AND ADJACENT STRUCTURE BETWEEN STATIONS 1562 AND 1582 DURING INSPECTION IN ACCORDANCE WITH TASK CARD NR 06-031-01. (LEVEL 2 CORROSION).

2009F00113  BOEING  SKIN  DEBONDED
11/16/2009  767266  NR 8 SLAT
WHILE PERFORMING ULTRASONIC INSPECTION IN ACCORDANCE WITH AD 93-14-19, SKIN TO CORE DISBAND IS DETECTED IN THE UPPER AND LOWER SURFACES OF SLAT POSITION 8 T/E WEDGE AT AFT INBD CORNER AREA.

2009F00125  BOEING  WIRE  BROKEN
12/3/2009  76733A  WHEEL TRANSDUCER
ATB: EICAS MESSAGE "ANTI SKID" ON STATUS PAGE "NORM ANTISKID AND ALT ANTI-SKID ON. FOUND BROKEN WIRE TO NR 8 WHEEL TRANSDUCER. REPLACED WIRE WDM 32-42-11 SECURITY CHECK OK IAW 32-42-00-405 NO FAULTS NOTED.

2009FA0001078  BOEING  GE  COMPRESSOR  MISMANUFACTURED
12/22/2009  777*  GE9090B  ENGINE
RECEIVED NOTIFICATION REGARDING A CONFIGURATION ISSUE WITH HP COMPRESSOR. SN WM022163 - FITTED TO ENGINE NO. 900149 HAS ONE SET OF 3D STG 1 SHROUDS FITTED (350-385-202-0) INSTEAD OF A 2D SET. (350-385-002-0).

2009FA0001077  BOEING  GE  COMPRESSOR  MISMANUFACTURED
12/22/2009  777*  GE9090B  ENGINE
NOTIFICATION REGARDING A CONFIGURATION ISSUE WITH HP COMPRESSOR. SN UMO22124- FITTED TO ENGINE NO. 900223 HAS A 3D CONFIG RUDDER (350-007-530-0) FITTED INSTEAD OF A 2D RUDDER (350-007-523-0).

CA091007002  BOEING  GE  UNKNOWN  ODOR
10/2/2009  777233LR  GE90110B1  CABIN
(CAN) BY DOOR L2 LT AFT J CLASS SEB TOWER HAD STRONG ELECTRICAL ODOR. IFE SWITCH TURNED OFF, SMELL DISSIPATED.

CA091022003  BOEING  GE  ALIDSG  SOFTWARE  MALFUNCTIONED
10/7/2009  777333ER  GE90115B  3676GRS10400  ASCPC
(CAN) IN CRUISE AT FL380 ENROUTE TO YVR, AIRCRAFT HAD TEMPORARY LOSS OF BOTH PACKS. BOTH PACKS RETURNED WITHIN APPROX 10 SECONDS. P/N FOR ASCPC AND S/W GIVEN ABOVE. OUTFLOW VALVE PART
NUMBER IS 2119160-2. PER IPC 21-31-03-01, THIS IS AN UNAPPROVED COMBINATION, WHICH HAS SINCE BEEN CORRECTED. (TC 20091022003)

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<thead>
<tr>
<th>CA091104002</th>
<th>BOMBDR</th>
<th>PARKERHANFIN</th>
<th>SEAL</th>
<th>DAMAGED</th>
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<tbody>
<tr>
<td>10/26/2009</td>
<td>BD1001A10</td>
<td>AE99116J</td>
<td>PUMP</td>
<td></td>
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</tbody>
</table>

(CAN) ON GEAR EXTENSION AN AMBER PTU FAIL CAS MESSAGE POSTED FOLLOWED BY THE LT HYD ENG PUMP FAIL CYAN CAS MESSAGE FOLLOWED BY HYD LOW CAS AND A 0 QUANTITY READING. PILOT SAID THE GEAR DID NOT EXTEND AND HE HAD TO PERFORM EMER EXTENSION. THE FLAPS WENT TO 10 DEGREES JUST FINE. HYD SYNOPTIC PAGE SHOWED DCMP WITH GREEN LINES TO OPERATED COMPONENTS BUT ZERO ON QUANTITY, HALF THE SPOILERS WERE INOP UPON LANDING AS WELL. FOUND LT EDP QUICK DISCONNECTS SEALS BLOWN. REPLACED LT ENG DRIVEN HYD PUMP AND ASSOCIATED QUICK DISCONNECTS RETAINERS AND PACKING.

<table>
<thead>
<tr>
<th>CA091113007</th>
<th>BOMBDR</th>
<th>HNYWL</th>
<th>CONTROL UNIT</th>
<th>FAILED</th>
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<tr>
<td>11/2/2009</td>
<td>BD1001A10</td>
<td>AS90711A</td>
<td>14210451</td>
<td>BRAKE</td>
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</tbody>
</table>

(CAN) PREVIOUSLY REPORTED NOSE WHEEL SHIMMY HAS NOW RETURNED WITH CREW REPORTING SEVERE VIBRATION ON LANDING THROUGH 60 KNOTS. FOLLOWING AN UPDATE FROM THE CREW THEY NOW BELIEVE THE VIBRATION IS BEING FELT IN THE CTR CABIN AREA AND IS BEING INDUCED BY THE BRAKES. THE ACFT ALSO PULLS TO THE LT UNDER BRAKING. THE ACFT WAS TAKEN UP TO 70/80KNTS ON THE RUNWAY AND AT 60 KNTS BRAKES WERE APPLIED AS IF A LANDING WAS BEING CARRIED OUT ACFT PULLED SEVERELY TO THE LT AND CONTINUED TO PULL LT UNTIL CORRECTED BY THE STEERING TILLER, STRAIGHT LINE ROLL REGAINED AND BRAKES RE APPLIED (ACFT NOW TRAVELING AROUND 30/40 KNTS AGAIN DRAMATIC PULL TO THE LT, RECOVERED ONLY BY USE OF STEERING TILLER AND REMOVAL OF BRAKES. ON STAND - BRAKE PSI BRAKES OFF PUMPS ON (ALL FIGURES WILL READ 1 TO 4) 58,58,23,26 SLOW TAXI - BRAKE PSI BRAKES OFF PUMPS ON 125,123,82,87 HEAVY HIGH SPEED BRAKING 2036 PSI,2032 PSI, 880 PSI 872 PSI SECOND APPLICATION HIGH SPEED BUT SPEED REDUCING 700 PSI, 700 PSI, 200 PSI, 200 PSI THIRD APPLICATION 465, 465, 268, 265 AFTER ALL APPLICATIONS ACFT NEEDED TO BE RECOVERED BY STEERING ACFT WAS DEEMED SERVICEABLE IAW AMM AFTER BRAKE CONTROL UNIT REPLACEMENT.

<table>
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<tr>
<th>CA091119002</th>
<th>BOMBDR</th>
<th>HNYWL</th>
<th>PUMP</th>
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<tr>
<td>11/2/2009</td>
<td>BD1001A10</td>
<td>AS90711A</td>
<td>5116003</td>
<td>HYD SYSTEM</td>
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</table>

(CAN) SHORTLY AFTER TAKEOFF (5 MIN) CLIMBING THROUGH FL080 AN (AMBER) R HYD TEMP HIGH CAS POSTED. CREW ELECTED HYD SYNOPTIC PAGE AND THE RT HYD TEMP DISPLAYED WAS 115C AND RAPIDLY CLIMBING. CREW BEGAN TO PERFORM QRH PROCEDURES AND WITHIN ONE MINUTE RT HYD TEMP HAD CLIMBED TO 158C. QRH INSTRUCTS TO SHUTDOWN ENGI IF HYD TEMP REACHES OR IS ABOVE 155C. CREW SHUTDOWN RT ENG, IAW THE QRH, AND HYD TEMP STABILIZED. CREW DECLARED AN EMERGENCY AND ASKED TO BE DIVERTED. CREW LANDED ACFT WITHOUT INCIDENT. ON POST FLIGHT CREW COULD SMELL AN ODOR OF OVERHEATED OIL AT THE REAR OF THE ACFT. NO SMOKE OR FIRE WAS DETECTED. FOUND DEBRIS IN LT EDP CASE DRAIN FILTER. REMOVED AND REPLACED LT ENG DRIVEN HYD PUMP. REPLACED PRESSURE RETURN AND CASE DRAIN FILTERS AND FLUSHED HYD SYS. REPLACED HEAT EXCHANGER BYPASS VALVE AS A PRECAUTION DUE TO THE AMOUNT OF MATERIAL FOUND IN THE CASE DRAIN FILTER. OPS CHECK AND LEAK CHECK GOOD. ACFT RTS’D.

<table>
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<tr>
<th>CA091002001</th>
<th>BOMBDR</th>
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<th>LEAKING</th>
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<tr>
<td>9/25/2009</td>
<td>BD1001A10</td>
<td>AS90711A</td>
<td>1005354233009</td>
<td>HYDRAULIC SYS</td>
</tr>
</tbody>
</table>

(CAN) CUSTOMER REPORTED A HYD LEAK INSIDE RT PYLON. CREW FOUND OUT DURING DECENT ABOUT LEAKAGE. SYS NR 2 WAS EMPTY AFTER LANDING. THEY REFILLED THE RESERVOIR AND CRANKED THE ENG. BY DOING THIS THEY FOUND THE LEAK INSIDE THE PYLON. FOUND HYD PRESSURE LINE LEAKING (STAINLESS STEEL TUBE INSIDE PYLON AREA - ITEM 40 IN IPC).

<table>
<thead>
<tr>
<th>CA090923002</th>
<th>BOMBDR</th>
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<tbody>
<tr>
<td>9/17/2009</td>
<td>BD1001A10</td>
<td>AS90711A</td>
<td>30360613</td>
<td>NR 1 ENGINE</td>
</tr>
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</table>

(CAN) AFTER LANDING, FLIGHT CREW NOTICED A LARGER AMOUNT OF OIL LEAKING FROM NR 1 ENG. THEY VERIFIED THE OIL CAP AND CONFIRMED THAT IT WAS TIGHT. AFTER THE AME INSP, IT WAS DISCOVERED THAT THE OIL CAP WAS CRACKED. CAP WAS REPLACED AND ACFT RETURNED TO SERVICE.

<table>
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<tr>
<th>CA091013001</th>
<th>BOMBDR</th>
<th>PWC</th>
<th>PUMP</th>
<th>FAILED</th>
</tr>
</thead>
</table>
(CAN) DURING FLIGHT, HYD PUMP EDP NR 2 FAILED. AFTER NORMAL LANDING PILOT WROTE: NR 2 ENG HYD PUMP U/S NR 2 RUD HYD CAUTION LIGHT ON ON GROUND NWS U/S WITHOUT ANY CAUTION. PERFORMED FLUSHING OF THE NR 2 HYD SYS IAW TASK 29-10-00-617-803 TR 29-108. IN ADDITION TO FAILED EDP NR 2 PUMP PN 66173-03, SN K0538, REPLACED POWER TRANSFER UNIT PN 51149-04 SN K0251 AND NLG SOLENOID SEQUENCE VALVE PN 48302-5, SN FAH0754.

CA091020003

10/19/2009  
DHC8400  PW150A  
406300501  NLG

(CAN) WHEN GEAR SELECTED UP AFTER TAKEOFF, 3 RED UNSAFE LIGHTS CAME ON AND THE GEAR FAILED TO RETRACT. PILOT RAN THE QRH AND HAD 3 GREEN FOR AN UNEVENTFUL LANDING. MX DISCOVERED THE NOSE WHEEL CENTERING FUNCTION INOP WHEN THE NOSE GEAR TRANSITIONED TO WEIGHT OFF WHEELS. A NEW SCU WAS INSTALLED AND THE CENTERING FUNCTION RESTORED. ACFT RETURNED TO SERVICE.

CA091103001

10/13/2009  
DHC8400  PW150A  
483003  LT MLG DOOR

(CAN) AFTER GEAR RETRACTION L GEAR DOOR AND L GEAR UNSAFE ALONG WITH GEAR DISAGREEMENT LIGHT CYCLED ON AND OFF FOR ABOUT 20 SECONDS. THEN ALL INDICATIONS WERE NORMAL. LANDING UNEVENTFUL. MX REPLACED MLG SELECTOR VALVE.

CA091104001

11/3/2009  
DHC8402  PW120A  
BS 240

(CAN) WHILE CARRYING OUT THE KEELBEAM INSP, A SOOTY SUBSTANCE WAS OBSERVED IN THE AREA OF THE BEND OF THE LWR FRAME AT FUSELAGE STA 240.5 STR 32P AND 32S. AVIONICS RACKS WERE REMOVED FROM ABOVE THE LOCATION TO AFFORD A BETTER EXAMINATION. AS SEEN IN THE ATTACHED IMAGES, SEVERAL CRACKS WERE DISCOVERED IN THE RADIUS AND THE RIVET LINE OF THE FRAME, AS WELL AS IN A ANGLED SUPPORT MEMBER THAT WAS INSTALLED FWD OF THE FRAME TO SUPPORT THE LOADS GENERATED BY THE COM 1 BLADE ANTENNA THAT IS INSTALLED AT THIS LOCATION. FURTHER INVESTIGATION IS BEING COMPLETED VIA NDT IN ORDER TO DETERMINE IF THERE EXIST ANY CRACKS IN THE BELLY SKIN. INFO TO FOLLOW.

2009FA0000995  
CASA  SPAR  CRACKED

11/26/2009  
C212200  21211009912  RT WING


CA091113003

11/5/2009  
140  C8512F  CYLINDER VALVE

(CAN) BROKEN VALVE GUIDE DETECTED AS THE ANNUAL 1 100 HR INSPECTION. CYLINDER ASSY REMOVED, LOW COMPRESSION ON DIFFERENTIAL TEST 20/80 SENT TO AMO FOR REPAIR NOTE: CYLINDER ASSY WAS PURCHASED NEW OCT. 2004 - 245.0 HR.

CA091007004

10/7/2009  
150H  O200A  DOFF10300F  352030  ALTERNATOR DRIVE

(CAN) RETAINER WHICH HOUSES THE 2 RUBBER BUSHINGS (632050) HAS WORN TO THE POINT WHERE DRIVE GEAR HAS ROTATED ALMOST 60 DEGREES WITHIN RETAINER. THIS CONSEQUENTLY CONTAMINATED ENG WITH FERROUS MATERIAL. ENG IS BEING REPAIRED FOR METAL CONTAMINATION.

CA091019006

10/12/2009  
150M  O200A  SA102001A  ENGINE

(CAN) - STRONG SLOPE ALONG TAKEOFF (2000 RPM) - ASKED FOR PRIORITY LANDING - BURST VALVE EXHAUST CYL NR 2 WAS FOUND - REPLACED THE CYL NR 2 SAL0200-1A S/N 01344 WITH GASKET KIT AND NEW SPARK PLUG (2X) REM40E, RUN-UP CLOUT MAX RPM 2450 LEAK CHECK CLOUT AND OK, ACFT BACK IN SERVICE.

CA091019004

10/1/2009  
150M  O200A  SA102001A  ENGINE
<table>
<thead>
<tr>
<th>Date</th>
<th>Aircraft</th>
<th>Engine Type</th>
<th>Issue Description</th>
<th>Repair Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/15/2009</td>
<td>CESSNA</td>
<td>O235L2C</td>
<td>(CAN) THE MASTER CONTACTOR BECAME &quot;OPEN&quot; AND LT ACFT WITH NO ELECTRICAL PWR.</td>
<td>MX REPLACED CONTACTOR AND RETURNED THE ACFT TO SERVICE.</td>
</tr>
<tr>
<td>10/22/2009</td>
<td>CESSNA</td>
<td>O235L2C</td>
<td>(CAN) FOUND ON INSPECTION THAT THE FRONT SPAR ON THE RIGHT WING WAS CRACKED ON</td>
<td>RT WING</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BOTH SIDES OF THE FIRST FLANGED LIGHTENING HOLE AT STATION 44.12, JUST OUTBOARD OF</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>THE FUEL TANK ON THE RIGHT HAND WING. CRACK ON BOTH SIDES OF THE LIGHTENING HOLE</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IS 1/4&quot; IN LENGTH. NO OTHER DAMAGE FOUND.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(TC# 20091026001)</td>
<td></td>
</tr>
<tr>
<td>10/26/2009</td>
<td>CESSNA</td>
<td>O235L2C</td>
<td>(CAN) FWD OF THE NUMBER 2 CYLINDER THE CASE HAS A SIGNIFICANT CRACK CAUSING OIL</td>
<td>ENGINE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TO LEAK FROM THE CASE. THE ENGINE DOES HAVE A CONVERSION KIT INSTALLED WITH</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HIGH COMPRESSION CYLINDERS. STC SE792NW 125 HP. (TC 20091028005)</td>
<td></td>
</tr>
<tr>
<td>9/12/2009</td>
<td>CESSNA</td>
<td>O235L2C</td>
<td>(CAN) AFTER ACCIDENT, ARRIVED AT HANGER ON SEPT 14TH, TO RETRIEVE ACFT AND</td>
<td>NLG</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>VISUALLY INSPECT DAMAGE. ACFT NOSE GEAR WAS FOUND GROUND DOWN, WHEEL WAS NOT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ATTACHED TO ACFT AND FOUND INTERNALS BROKEN AND TIRE/TUBE PUNCTURED, AXLE BOLT</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WAS BENT AND GROUND DOWN, ENG MOUNT WAS BENT AT LOWER RT, PROPELLOR TIPS WERE</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MISSING, APPROX 1.5 INCHES. WINGS WERE REMOVED FOR TRANSPORTATION AND ACFT WAS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BROUGHT BACK TO AIRPORT.</td>
<td></td>
</tr>
<tr>
<td>8/11/2009</td>
<td>CESSNA</td>
<td>O235N2C</td>
<td>(CAN) UPON INSPECTION, MECHANIC DISCOVERED OIL LEAKING FROM BACK OF ENG. NEW BASE</td>
<td>77852</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ASSY INSTALLED ACFT GROUND RUN AND LEAK CHECK OK.</td>
<td></td>
</tr>
<tr>
<td>8/14/2009</td>
<td>CESSNA</td>
<td>O235N2C</td>
<td>(CAN) ENGINE RUNNING ROUGH. RT MAG FOUND TO BE THE CAUSE. BOTH MAGS REPLACED WITH</td>
<td>RT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>REPAIRED UNITS. ACFT GROUND RUN AND TESTED OK.</td>
<td></td>
</tr>
<tr>
<td>7/31/2009</td>
<td>CESSNA</td>
<td>O320D2J</td>
<td>(CAN) DURING A ROUTINE INSPECTION, A BUCKLE ON THE LEFT HAND LOWER FIREWALL WAS</td>
<td>ENGINE BAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NOTICED. AIRCRAFT WAS TAKEN REPAIR STATION FOR REPAIRS. FABRICATED NEW LOWER</td>
<td></td>
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<tr>
<td></td>
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<td>FIREWALL AS PER ORIGINAL USING 301QH AMS-5517 .025 B/N 318 AND CORNER DOUBLERS AT</td>
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</tr>
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<td></td>
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<td>COWL MOUNTS. INSTALLED NEW LOWER FIREWALL DOUBLER. (TC 20091021014)</td>
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<tr>
<td>9/2/2009</td>
<td>CESSNA</td>
<td>O320E2D</td>
<td>(CAN) CRACKS IN NOSE GEAR FORK: AD 71-22-02 DEALS WITH THIS SUBJECT: DWG ATTACHED.</td>
<td>NOSE GEAR</td>
</tr>
<tr>
<td>10/16/2009</td>
<td>CESSNA</td>
<td>O320D2J</td>
<td>(CAN) CREW REPORTED ALTERNATOR NOT CHARGING AFTER ENGINE START-UP. ENGINE SHUT</td>
<td>DC SYSTEM</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>DOWN. TROUBLESHOOTING INDICATED VOLTAGE REGULATOR AT FAULT. NEW REGULATOR INSTALLED</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>AND GROUND RUNS CONFIRMED CHARGING SYSTEM FUNCTIONING CORRECTLY. (TC 20091021010)</td>
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<tr>
<td>10/15/2009</td>
<td>CESSNA</td>
<td>O235L2C</td>
<td>(CAN) CREW REPORTED ALTERNATOR NOT CHARGING AFTER ENGINE START-UP. ENGINE SHUT</td>
<td>DC SYSTEM</td>
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<td>DOWN. TROUBLESHOOTING INDICATED VOLTAGE REGULATOR AT FAULT. NEW REGULATOR INSTALLED</td>
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<td>AND GROUND RUNS CONFIRMED CHARGING SYSTEM FUNCTIONING CORRECTLY. (TC 20091021010)</td>
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<tr>
<td>10/16/2009</td>
<td>CESSNA</td>
<td>O320D2J</td>
<td>(CAN) CREW REPORTED ALTERNATOR NOT CHARGING AFTER ENGINE START-UP. ENGINE SHUT</td>
<td>DC SYSTEM</td>
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<td>DOWN. TROUBLESHOOTING INDICATED VOLTAGE REGULATOR AT FAULT. NEW REGULATOR INSTALLED</td>
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<td></td>
<td></td>
<td>AND GROUND RUNS CONFIRMED CHARGING SYSTEM FUNCTIONING CORRECTLY. (TC 20091021010)</td>
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</table>
10/28/2009  172N  O320D2J  14924LS  ENGINE
(CAN) STARTER WILL NOT TURN ENG OVER.

CA091110002  CESSNA  LYC  MAGNETO  FAULTY
10/30/2009  172N  O320D2J  4371  ENGINE
(CAN) DURING RUN-UP, ENG WOULD NOT RUN ON LT MAGNETO. MAGNETO REMOVED FROM ACFT. O/H MAGNETO INSTALLED ON ACFT AND GROUND RUNS CHECKED SERVICEABLE. FAULTY MAGNETO SENT FOR REPAIRS. CAUSE OF DEFECT UNKNOWN.

2009FA0000977  CESSNA  LYC  CONDENSER  FAILED
10/19/2009  172N  O320H2AD  10302807  MAGNETO
CONDENSERS, LT AND RT FAILED INTERNALLY SO AS TO CAUSE PREMATURE WEAR AND BURNING OF POINTS. (K)

CA091027006  CESSNA  LYC  CYLINDER HEAD  SEPARATED
10/25/2009  172N  O320H2AD  ECI15317  NR 4 CYLINDER
(CAN) THE LOWER SPARK PLUG (WITH HELI COIL AND GASKET STILL ATTACHED) SEPERATED FROM CYLINDER HEAD NR 4. CYLINDER HEAD NR 4 HAS MISSING THREADS AND PIECES OF HELI COIL STILL EMBEDDED IN REMAINING THREADS. IT APPEARS THAT THE HELI COIL INSERT BROKE APART AND TOOK OUT THE ALUMINUM THREADS ON CYLINDER HEAD. NO CRACKS COULD BE FOUND AROUND THE CYLINDER'S SPARK PLUG HOLE OR ON THE CYLINDER ITSELF. THE CYLINDER AND ALL ITS PARTS APPEAR TO BE IN GOOD SHAPE. TOTAL HOURS ON THE ENGINE AND CYLINDER WERE 1778.4. TBO IS 2000 HOURS. THIS ENGINE IS OPERATED ON CONDITION. LAST 2 COMPRESSION CHECKS OF THIS CYLINDER SHOW 74/80 WITH NO DEFECTS. (TC 20091027006)

CA091021003  CESSNA  LYC  CONNECTING ROD  MISMANUFACTURED
9/22/2009  172N  O320H2AD  78030  ENGINE
(CAN) THE BOLT HOLE DID NOT HAVE SUFFICIENT CHAMFER TO FULLY ACCEPT THE BOLT. THERE IS A SERVICE BULLETIN ADDRESSING THIS ISSUE FOR THE OLDER PART NUMBER CONNECTING RODS. THIS NEWER PART NUMBER ROD IS SUPPOSED TO HAVE THIS LARGER CHAMFER INCORPORATED. INSUFFICIENT CHAMFER DOES NOT ALLOW THE BOLT TO SEAT FULLY AGAINST THE CONNECTING ROD. ADEQUATE TORQUE CANNOT BE ASSURED, AND THE RISK OF CONNECTING ROD BOLT FAILURE IS PRESENT. WE HAVE DISCOVERED THIS 2 TIMES PRIOR WITH NEW PART NUMBER CONNECTING RODS. (TC# 20091021003)

CA091005012  CESSNA  LYC  VENT LINE  OUT OF POSITION
10/2/2009  172N  O360A4M  78030  FUEL SYSTEM
(CAN) IT WAS PERIODICALLY NOTICED BY PILOTS THAT FUEL WAS VENTING OUT OF THE VENT LINE. SEVERAL ATTEMPTS WERE MADE TO PREVENT THESE OCCURENCES. THESE INCLUDED CHANGING THE CAPS AS WELL AS ADJUSTING ANGLE OF THE VENT LINE, AND REPLACING THE CHECK VALVE. AS AN END RESULT, MFG WAS PHONED FOR ADVICE ON HOW TO RECTIFY THIS PROBLEM. WE WERE TOLD TO FOLLOW OUT THE ACTIONS OF SEB88-1 IN HOPE THAT THIS WOULD WORK. IT INVOLVED INSTALLING A SEAL AT THE UPPER STRUT CUFF. THIS IS TO PREVENT DISTURBANCE OF THE AIRFLOW SURROUNDING THE VENT LINE. ALTHOUGH THIS SB DID NOT INCLUDE OUR PARTICULAR MODEL OF ACFT IT COMPLETELY SOLVED THE PROBLEM. IN ADDITION TO THE SEAL, A NEW VENT LINE WAS INSTALLED.

2009FA0000980  CESSNA  LYC  SLICK  GEAR  LOOSE
11/2/2009  172P  O320D2J  M3827  MAGNETO
CUSTOMER COMPLAINED OF DEAD LT MAGNETO ON GROUND RUN UP. REMOVED AND OPENED MAGNETO HSG TO FIND A LOT OF DUST. UPON INVESTIGATION, DISCOVERED THAT ROTOR GEAR HAD MOVED UP ON ITS SHAFT AND RUBBED DISTRIBUTOR GEAR HSG. CALLED SERVICE SUPPORT, THEY TOLD US THAT THEY WERE AWARE OF THIS PROBLEM WITH A RANGE OF SN MAGNETO'S. DUST THAT HAD WORN OFF THE GEAR GOT BETWEEN THE POINTS AND MADE THE MAGNETO INOPERATIVE. WHILE MAGNETO WAS OPEN ALSO C/W SB 02-08A CAM INSP; FOUND OK AND SB03-08A CARBON BRUSH INSP; THAT WAS BAD AND REPLACED BRUSH. ALSO, REPLACED THE POINTS WITH A NEW KIT, AND A NEW ROTOR GEAR. C/W A 500 HR INSP ON THE MAGNETO AND THEN
REINSTALLED IT ON THE ENG IN THE SAME POSITION. GROUND RUN UP FOUND NORMAL. (K)

<table>
<thead>
<tr>
<th>TC</th>
<th>AIRCRAFT</th>
<th>PART</th>
<th>CONDITION</th>
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</thead>
<tbody>
<tr>
<td>CA091021005</td>
<td>CESSNA</td>
<td>LYC</td>
<td>TORQUE TUBE</td>
</tr>
<tr>
<td>9/29/2009</td>
<td>172P</td>
<td>O320D2J</td>
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</tr>
</tbody>
</table>

(CAN) DURING A SCHEDULED ENGINE CHANGE IT WAS DISCOVERED THAT PAN ASSEMBLY P/N 0513109-4 WAS BUCKLED. AIRCRAFT WAS TAKEN TO CONVAIR AVIATION LTD FOR REPAIRS. ONCE THE FIREWALL WAS REMOVED FURTHER DAMAGE TO THE INTERNAL STRUCTURES WAS DISCOVERED AS FOLLOWS: FOUND RUDDER TORQUE TUBE MOUNTS CRACKED WHERE BOLTS ATTACH TORQUE TUBES TO AIRFRAME. FOUND R/H SIDE SKIN CRACKED WHERE FUELING STEPS ATTACHES. REPAIRS WERE MADE AS FOLLOWS: CRACKS IN THE FRAME REPAIRED AT RUDDER PEDAL TORQUE TUBES. REPAIR DESIGN CERTIFICATED C-RA09-270/D ISSUE NO.1 SEPTEMBER 18, 2009, DOCUMENT CONTROL LIST, DCL868 AND DRAWING NO. 86801 REV.0. FRAME AND SKIN REPAIRS LT AND RT CARRIED OUT AT FS 20. REPAIR DESIGN CERTIFICATE C-RA09-271-D ISSUE NR 1 SEPTEMBER 22, 2009, DRAWING CONTROL LIST DCL869 REV. 0 AND DRAWING 86901 REV. 0. FABRICATED NEW LOWER FIREWALL P/N 0553006-209 AND PAN ASSEMBLY P/N 0513109-4 AS PER ORIGINAL USING 301QH AMS-5517 .025 B/N 318 AND CORNER DOUBLERS AT COWL MOUNTS AND INSTALLED. AIRCRAFT RETUNED TO SERVICE AFTER THE COMPLETION OF REPAIRS AND ENGINE CHANGE. (TC 20091021005)

<table>
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<tr>
<th>TC</th>
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<th>PART</th>
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<td>CESSNA</td>
<td>LYC</td>
<td>SWITCH</td>
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<tr>
<td>11/3/2009</td>
<td>172P</td>
<td>IO360L2A</td>
<td>W31X100010</td>
</tr>
</tbody>
</table>

(CAN) WHILE IN THE CROSSWIND LEG FOR THE CIRCUIT FOR 36, THE STUDENT NOTICED SMOKE COMING FROM LANDING LITE SWITCH, WHICH WAS FOLLOWED BY A BURNING SMELL. THE PIC (PILOT) ELECTED TO MAKE A FULL STOP AND AN UNEVENTFUL LANDING WAS EXECUTED. UPON INSP AND REMOVAL OF LANDING LIGHT SWITCH, IT WAS FOUND THE SWITCH FAILED, NO OTHER DAMAGE NOTED.

<table>
<thead>
<tr>
<th>TC</th>
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<th>PART</th>
<th>CONDITION</th>
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<td>CESSNA</td>
<td>LYC</td>
<td>ACTUATOR</td>
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<tr>
<td>10/7/2009</td>
<td>172RG</td>
<td>O360F1A6</td>
<td>12810016</td>
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(CAN) LEAKED WHEN PRESSURIZED, MIDWAY ALONG CASTING SEAM (MLG).

<table>
<thead>
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<th>PART</th>
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<td>CESSNA</td>
<td>LYC</td>
<td>SHOCK MOUNT</td>
</tr>
<tr>
<td>11/13/2009</td>
<td>172RG</td>
<td>O360F1A6</td>
<td>125025510</td>
</tr>
</tbody>
</table>

(CAN) EXHAUST TAILPIPE SHOCK MOUNT BORKEN BETWEEN FIREWALL AND TAILPIPE.

<table>
<thead>
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<tr>
<td>11/13/2009</td>
<td>172S</td>
<td>0510105365</td>
<td>AILERONS</td>
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</table>

DURING A ROUTINE INSPECTION THE AILERON CABLE P/N-0510105-365 WAS FOUND CHAFING AND WORN IN THE CENTER CEILING AREA WHERE IS PASSES THROUGH THE 3 PULLEY CLUSTER. THE STRANDS APPEAR SHINY TO THE NAKED EYE, BUT WITH A SUITABLE MAGNIFYING GLASS CAN BE SEEN TO HAVE MANY BROKEN STRANDS.

<table>
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DURING A ROUTINE INSP, THE AILERON CABLE PN-0510105-364 WAS FOUND SHINY WHERE IT PASSES THROUGH THE CEILING PULLEY CLUSTER. WHEN VIEWED THROUGH A STRONG MAGNIFYING GLASS, MANY BROKEN STRANDS CAN BE SEEN.

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CYLINDER NR 4 ROCKER SHAFT BUSINGS IMPROPER INTERFERANCE FIT WITH ROCKER SHAFT. DEFECT FOUND DURING DISASSEMBLY PHASE OF OVERHAUL WHILE ATTEMPTING TO REMOVE ROCKER SHAFT FROM CYLINDER. PROBABLE CAUSE IS IMPROPER MFG. (K)

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(CAN) LT HAND BRAKE LINE WAS FOUND CHAFED WHERE IT PASSES OUT OF THE GEAR LEG FAIRING AND INTO THE FUSELAGE. BRAKE LINE REPLACED AND BRAKES BLED. SB 09-32-02 ADDRESSES SIMILAR DAMAGE ON 182
SERIES AIRCRAFT BUT IT DOES NOT INCLUDE INSP OF THE UPPER END OF THE FAIRING NOR DOES IT COVER THE 172 SERIES OF AIRCRAFT.

<table>
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CA091103009

ON START UP AND TAXI OUT OF THE ACFT, THE EXHAUST AND INTAKE VALVES STUCK. THIS CAUSED BOTH PUSH RODS TO BEND. AND THE LIFTER PLUNGER WAS LOCKED UP UPON FURTHER INSP. THE ENG WAS USING W100 OIL AND HAD ONLY 634.8 HOURS SINCE NEW.

2009FA0001016

ON START UP AND TAXI OUT OF THE ACFT, THE EXHAUST AND INTAKE VALVES STUCK. THIS CAUSED BOTH PUSH RODS TO BEND. AND THE LIFTER PLUNGER WAS LOCKED UP UPON FURTHER INSP. THE ENG WAS USING W100 OIL AND HAD ONLY 634.8 HOURS SINCE NEW.

CA091103009

COPILOT’S RUDDER PADDLE COVER IS CHAFING INTO THE FUEL LINE. THIS CHAFING IS CAUSED BY INSUFFICIENT CLEARANCE OF THE RUDDER PADDLE COVER AND THE FUEL LINE. THE SAME CONDITION HAS BEEN FOUND ON TWO OTHER AIRCRAFT. CORRECTED THE PROBLEM BY TRIMMING THE RUDDER PADDLE COVER FOR POSITIVE CLEARANCE BETWEEN THE FUEL LINE AND COVER ON ALL THREE AIRCRAFT. THE FUEL LINE ON 1821675 REQUIRED REPLACEMENT DUE TO DAMAGE BEYOND LIMITS.

2009FA0000992

COPILOT’S RUDDER PADDLE COVER IS CHAFING INTO THE FUEL LINE. THIS CHAFING IS CAUSED BY INSUFFICIENT CLEARANCE OF THE RUDDER PADDLE COVER AND THE FUEL LINE. THE SAME CONDITION HAS BEEN FOUND ON 2 OTHER ACFT, SN 1821675 AND SN 1821622. WE CORRECTED THE PROBLEM BY TRIMMING THE RUDDER PADDLE COVER PN 0719085-4 FOR POSITIVE CLEARANCE BETWEEN THE FUEL LINE AND COVER ON ALL 3 ACFT. THE FUEL LINE ON 1821675 REQUIRED REPLACEMENT DUE TO CHAFE DAMAGE BEYOND LIMITS.

2009FA0000991

COPILOT’S RUDDER PADDLE COVER IS CHAFING INTO THE FUEL LINE. THIS CHAFING IS CAUSED BY INSUFFICIENT CLEARANCE OF THE RUDDER PADDLE COVER AND THE FUEL LINE. THE SAME CONDITION HAS BEEN FOUND ON 2 OTHER ACFT, SN 1821675 AND SN 1821622. WE CORRECTED THE PROBLEM BY TRIMMING THE RUDDER PADDLE COVER PN 0719085-4 FOR POSITIVE CLEARANCE BETWEEN THE FUEL LINE AND COVER ON ALL 3 ACFT. THE FUEL LINE ON 1821675 REQUIRED REPLACEMENT DUE TO CHAFE DAMAGE BEYOND LIMITS.

CA09110010

(CAN) TRANSPONDER WORKING ON OUT BOUND leg BUT FAILS ON RETURN leg TRACKED DOWN TO FAULTY ANTENNA AWAITING PART.

2009FA0001018


CA091002005

(CAN) LT BRAKE MASTER CYL PISTON ROD BROKE IN THREAD AREA.
9/30/2009  208B  PT6A114A  16211800  RT MLG
(CAN) RT WHEEL ASSY MAKING NOISE DURING TAKE-OFF ROLL AND LANDING. NEW BRAKE DISC HAD BEEN INSTALLED, NEW THICKNESS PERCEIVED TO BE THE CAUSE OF RUBBING ON THE BRAKE PADS. FURTHER INVESTIGATION SHOWED THE WHEEL WAS SPUN THE BRAKE DISC WOBBLED. WHEN DISASSEMBLED IT WAS FOUND THAT ON PREVIOUS ASSY THE SPACER DID NOT LINE UP PROPERLY AND MADE CONTACT WITH THE EDGE OF THE BRC CUP STEP FLANGE ON THE OUTER WHEEL HALF. THIS CAUSED THE CASTING TO CRACK AND DISLODGE THE BRC CUP. THIS IN TURN CAUSED THE WHEEL ASSY TO WOBBLE SLIGHTLY AND WITH NEW DISC ASSY INSTALLED TO RUB ON BRAKE PAD. THE SDR IS IN RESPECT TO THE CRACKED WHEEL HALF 2.5 INCHES AROUND THE RADIUS OF THE BEARING CUP, COULD HAVE CAUSE A CATASTROPHIC WHEEL FAILURE.

CA091022005  CESSNA  PWA  SPAR  CORRODED
10/13/2009  208B  PT6A114A  26310217  VERTICAL STAB
(CAN) DURING A VERTICAL STAB SPAR INSPECTION PER CESSNA CARAVAN 208B SUPPLEMENTAL INSPECTION NUMBER 55-30-01, PART OF A 20,000 HOUR INSPECTION, FRETTING DAMAGE WAS FOUND AT VERTICAL STABILIZER REAR SPAR WEB AT W.L. 134.00. THERE WAS NO CORROSION DETECTED WHERE THE FRETTING WAS FOUND. SEE ATTACHED PICTURES. A REPAIR WAS OBTAINED FROM CESSNA AIRCRAFT COMPANY, STRUCTURES REPORT NR S-208B-0470/02RD. BLEND DEPTH WAS 0.015 INCH AT LT SIDE OF WEB SPAR AND 0.006 INCH AT RT SIDE OF WEB SPAR. REPAIR REPORT S-208B-0470/02RD STATED TO BLEND THE FRETTING, EDDY CURRENT FOR CRACKS & REPEAT AS PER 208 MM 20-31-00. THE REPAIR WAS COMPLETED AND EDDY CURRENT TESTED NO CRACKS. (TC 20091022005)

2009FA0001026  CESSNA  IDLER ASSY  BROKEN
12/7/2009  340A  08411066  MLG DOOR
PILOT DISCOVERED ON PREFLIGHT, RT MAIN INNER GEAR DOOR HANGING OPEN. UPON FURTHER INVESTIGATION, MECHANIC DISCOVERED RT GEAR IDLER BELLCRANK TO INNER GEAR DOOR BROKEN. INSTALLED A NEW BELLCRANK, CHECKED UP AND DOWN TENSIONS. FOUND INNER GEAR DOOR DOWN LOCK TENSION ABOVE MFG SPECIFICATIONS. FAILURE OF PART POSSIBLY FROM EXCESSIVE TENSION.

CA091116007  CESSNA  CONT  SKIN  CRACKED
11/13/2009  414  TSIO520J  WING
(CAN) DURING AN INSP, THE UPPER WING SKIN WAS FOUND CRACKED. THE CRACK WAS LOCATED AT THE AFT ATTACHMENT POINT OF THE MAIN FUEL TIP TANK. THE CRACK WAS 3/4 OF AN INCH IN LENGTH JUST FWD OF THE AFT WING SPAR. 2 RIVETS THAT GO THROUGH THE OTBD AILERON ATTACH BRACKET AND AFT WING SPAR WERE ALSO FOUND SHEARED OFF. THIS PROBLEM WAS FOUND ON BOTH LT AND RT WINGS.

T9ZR725Y4370/41  CESSNA  CONT  BLADE  DAMAGED
12/9/2009  421C  GTSIO520C  PROPELLER
PROP WAS OBSERVED TO BE LEAKING GREASE FROM 2 BLADE SHANK AREAS. SPINNER WAS REMOVED FOR INSPECT AND ALL 3 BLADES APPEAR TO BE LEAKING GREASE. 1 BLADE WAS OBSERVED TO HAVE EXCESSIVE BLADE SHANK MOVEMENT BEYOND ALLOWABLE LIMITS. WHEN BLADES WERE CHECKED FOR BLADE TWIST 1 BLADE EXHIBITED AN EXCESS AMOUNT OF ROTATIONAL MOVEMENT. PROPS WERE REMOVED FOR INSPECTION AND REPAIR AFTER AN INITIAL INSP BY A MFG SERVICE CTR. RT PROP HAD A TOTAL OF 472.5 HOURS SINCE OVERHAUL.

T9ZR725Y4370/40  CESSNA  CONT  BLADE  LEAKING
12/9/2009  421C  GTSIO520C  PROPELLER
PROP WAS OBSERVED TO BE LEAKING GREASE FROM TWO BLADE SHANK AREAS. SPINNER WAS REMOVED FOR INSPECT AND ALL 3 BLADES APPEAR TO BE LEAKING GREASE. ONE BLADE WAS OBSERVED TO HAVE EXCESSIVE BLADE SHANK MOVEMENT BEYOND ALLOWABLE LIMITS. WHEN BLADES WERE CHECKED FOR BLADE TWIST ONE BLADE EXHIBITED AN EXCESS AMOUNT OF ROTATIONAL MOVEMENT. PROPS WERE REMOVED FOR INSPECTION AND REPAIR AFTER AN INITIAL INSP BY A MFG SERVICE CENTER. LT PROP HAD A TOTAL OF 472.5 HOURS SINCE OVERHAUL.

CA091021007  CESSNA  PWA  PLATE  CORRODED
10/19/2009  425  PT6A135A  595105223  LT NACELLE
(CAN) RT NACELLE MADE NOISE DURING TAKE-OFF ROLL AND LANDING. NEW BRAKE DISC HAD BEEN INSTALLED, NEW THICKNESS PERCEIVED TO BE THE CAUSE OF RUBBING ON THE BRAKE PADS. FURTHER INVESTIGATION SHOWED THE WHEEL WAS SPUN THE BRAKE DISC WOBBLED. WHEN DISASSEMBLED IT WAS FOUND THAT ON PREVIOUS ASSY THE SPACER DID NOT LINE UP PROPERLY AND MADE CONTACT WITH THE EDGE OF THE BRC CUP STEP FLANGE ON THE OUTER WHEEL HALF. THIS CAUSED THE CASTING TO CRACK AND DISLODGE THE BRC CUP. THIS IN TURN CAUSED THE WHEEL ASSY TO WOBBLE SLIGHTLY AND WITH NEW DISC ASSY INSTALLED TO RUB ON BRAKE PAD. THE SDR IS IN RESPECT TO THE CRACKED WHEEL HALF 2.5 INCHES AROUND THE RADIUS OF THE BEARING CUP, COULD HAVE CAUSE A CATASTROPHIC WHEEL FAILURE.
During disassembly of the LT nacelle to facilitate a SID Phase 32 inspection, it was discovered that the plate connecting the LT outboard truss assembly to the top of the LT wing skin was corroded. After removing the corrosion, there were pits left in the surface that exceed 10% of material thickness. Plate will have to be replaced. (TC 20091021007)

CA091021008  CESSNA  PWA  BRACKET  CRACKED
10/19/2009  425  PT6A135A  58341309  HORIZONTAL STAB

While performing an eddy current inspection to comply with a Phase 31 SID inspection, a crack was detected in the outboard bracket that attaches the RT elevator to the H stab. The crack was not detectable visually inspection alone. (TC 20091021008)

CA091021009  CESSNA  PWA  SKIN  CHAFED
10/19/2009  425  PT6A135A  512205393  RT WING TE FLAP

RT flap trailing edge, near inboard side has caused chafing damage to the wing skin where flap retracts. Local repair required. (TC 20091021009)

2009FA0001046  CESSNA  ACTUATOR  LOOSE
11/26/2009  510  991226392  AILERON TRIM

During MX on 510-0032 while carrying out SB510-27-01 a loud rattle was noticed from inside the LT aileron prior to refit. The noise sounded like multiple loose items towards the inbd end of the aileron. On removal of the aileron trim actuator access panel (532EB), it was discovered that the noise was being caused by (2) AN3-3A bolts and matching washers (PN NAS 1149F0363P) inside the compartment where matching washers (PN NAS1149F0363P) inside the compartment where the actuator trim actuator is located. Further investigation revealed the (2) bolts had fallen out of the aileron trim actuator mounting points and had dropped inside the aileron. The (2) remaining bolts which secure the actuator in position were very loose and also in process of falling out. (K)

CNQR2009120600001  CESSNA  POSITION SWITCH  OUT OF ADJUST
12/6/2009  510  65430087  MLG

When the acft departed and the landing gear was retracted after takeoff, the landing gear transition light remained illuminated. Flight crew cycled the landing gear several times with successful extensions and retractions on each event. With each event the light did stay illuminated and did not extinguish, so the crew elected to return to departure for investigation. The nose gear uplock position switch was found just out of adjustment, the switch was adjusted as necessary and the acft departed without incident.

2009FA0000959  CESSNA  MARATHON  SENSOR  OUT OF LIMITS
11/4/2009  525  31169001  29570003  BATTERY TEMP

Problem was troublehotted to a faulty battery temp sensor. The spare sensor inside the battery was connected and took the faulty sensor off line. Battery was reinstalled and the aircraft was ops checked good at that time and was released.

CA091015005  CESSNA  WILINT  PRESSURE SWITCH  INTERMITTENT
9/30/2009  525B  FJ44  99123734  HYD

Switch intermittent operation would stay on when should be off. Switch replaced new.

2009FA0001082  CESSNA  RESERVOIR  OUT OF TOLERANCE
12/24/2009  550  99121033  ZONE 700

Received an inspected pneumatic reservoir (emergency brake/ gear blowdown bottle) with 8130-3 NR AE-67615 dated 10/29/2009. Upon installation and ops checks, the inspector determined that the bottle MFG date of June 1980 meant that the bottle life limit of 24 years (as stated in CH 5 of the MM) had been exceeded by 5 years. Removed and replaced bottle S/N 017 with another unit which
WAS REMOVED SERVICEABLE FROM ANOTHER CUSTOMERS ACFT.

<table>
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</table>

(CAN) THE DEFOG OUTLET IS HELD OPEN BY 3 SPACERS BONDED BETWEEN FWD AND AFT SKIN OF THE OUTLET DUCT. THE LT SPACER DEBONDED FROM FWD SKIN AND THE DUCT FRETTED ON INSIDE LWR PORTION OF WINDSHIELD - NOT SURE WHETHER ONE HAD AN EFFECT ON THE OTHER. THE NEW DUCT CAME FROM MFG WITH SHORTER SPACERS MAKING THE OUTLET NARROWER AND ALLOWING MORE CLEARANCE BETWEEN THE DUCT AND THE WINDSHIELD.

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(CAN) THE LINK IS FOR THE SEAT TILT ADJUSTMENT AND WHERE THE ROUND TUBE IS SQUEEZED TO FORM A FLATTENED END, IT IS CRACKED.

<table>
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<tr>
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DURING INSP, FOUND SEVERAL HOLES DRILLED IN THE FD WING CARRY-THRU SPAR. HOLES APPEAR TO HAVE BEEN DRILLED DURING AN INTERIOR INSTALLATION. MFG HAS DEEMED THE SPAR UNREPAIRABLE AND MUST BE REPLACED.

<table>
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PRESSURIZATION FAILED DURING THE DESCENT. SYS WAS IN NORMAL, DIFFERENTIAL PRESSURE DROPPED TO NEAR ZERO, AND THE CONTROLLER RATE INDICATED ZERO THROUGHOUT. ATTEMPTED TO CONTROL PRESSURIZATION MANUALLY WITH NO RESULT.

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FOUND WIRE BUNDLE THAT ORIGINATES IN THE BOTTOM OF THE AFT J-BOX AND RUNS HORIZONTALLY THROUGH THE BULKHEAD VERTICLE SUPPORT STRUCTURE FEED-THROUGH HOLE TOWARD THE ORANGE FRESH AIR DUCT TO BE CHAFING ON THE FRESH AIR DUCT. FOUND MINOR DAMAGE TO THE SHIELDING BUT NOT TO THE CONDUCTORS. PERFORMED CONTINUITY CHECKS, REPAIRED AND INSTALLED PROTECTIVE SLEEVING IAW THE WIRING DIAGRAM MANUAL CHAPTER 20. NOTIFIED ACFT COMPANY PRODUCT SUPPORT OF CONDITION FOUND.

<table>
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LT ENGINE VIBRATION IN FLIGHT. REMOVED LT ENGINE LOWER COWLING AND INSPECTED. REMOVED STARTER/GENERATOR (PN 9912125-3; SN 96107) FOUND BEARINGS WERE WORN. INSTALLED O/H CUSTOMER SUPPLIED PART: STARTER/GENERATOR (PN 9912125; SN 1746) IAW MM, CH 80-11-01. OPS CHECK OF STARTER/GENERATOR WAS SATISFACTORY. SINCE TIME ON THE PART, AND THE DUTY HISTORY IS UNKNOWN IT IS HARD TO STATE A PROBABLE CAUSE. FREQENT REMINDERS TO AIR CREWS TO UTILIZE APU/GPU FOR GROUND STARTING ENGINES WHENEVER POSSIBLE. MAKE SURE THERE VOLTAGE IS AT 28.5 VDC TO MINIMIZE THE OPERATIONAL STRESS TO THE STARTER/GENERATOR UNDER LOAD WHEN STARTING ENGINES.

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ON CLIMB OUT PASSING 16000' CABIN DOOR LIGHT ILLUMINATED. PRESSURIZATION FUNCTIONED NORMALLY. DEFERRED IAW MEL 31-50-06-1, CAT B, DUE DATE 11/22/09.

<table>
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UPPER LT LIGHT IN CABIN DOOR INDICATOR ILLUMINATED IN FLIGHT. GREEN DOOR PIN INDICATOR SHOWED
| Registration Number | Aircraft Manufacturer | Part Number | Condition | Date        | Details                                                                                                                                                                                                                                                                                                                                 |
FLAP POSITION ARM BELLCRANK ASSY. PN 1262060-1 HITS BRACKET ASSY. P/N 1262045-8, WHERE THE BRACKET ATTACHES TO SUPPORT PN 1260448-4. THE SUPPORT FLEXES WHEN HIT, AND AREA HAS METAL SHAVINGS FROM THE EXCESSIVE CONTACT. THERE IS NOT ENOUGH RIVET EDGE DISTANCE TO FILE BRACKET FOR CLEARANCE. IT APPEARS THE ONLY REPAIR WOULD BE TO REPOSITION THE SUPPORT. SHAVINGS COULD CONTACT WIRING AND SWITCHES CREATING AN UNSAFE ELECTRICAL PATH.

**2009FA0001075**
- CESSNA: 12620601
- LYC: T206H
- BELLCRANK OBSTRUCTED

**2009FA0000966**
- CESSNA: TR182
- LYC: O540L3C5
- CYLINDER HEAD DAMAGED

AN INFLIGHT CYL HEAD SEPARATION OF PN 65098, SN 85550-05 CYLINDER RESULTED IN A LOSS OF ENGINE OIL AND AN EMERGENCY LANDING. (K)

**CA091026002**
- CESSNA: U206D
- CONT: IO520F
- HUB CRACKED

(CAN) DURING PROPELLER OVERHAUL PROCESS, EDDY CURRENT INSPECTION CARRIES OUT ON HUB UNIT THREADED BLADE SOCKET AREA’S AS PER MANUFACTURER INSTRUCTIONS, WHERE THE INDICATIONS WERE FOUND. HUB REPLACED. (TC 20091026002)

**CA091030001**
- CESSNA: U206F
- CONT: IO550F
- BOLT LOOSE

(CAN) ALTERNATOR WAS RETURNED DUE TO FAILURE TO CHARGE BATTERY AND HAD BEEN O/H. UPON INSPECTION BOLTS WERE FOUND LOOSE. THE STATOR HAD BECOME LOOSE BETWEEN THE HSG AND HAD BEEN SPUN BY THE ROTOR, BREAKING THE STATOR WIRES. A PLACARD ON ALTERNATORS STATING THAT THE THROUGH BOLTS SHOULD BE RETORQUED AT 10 HOURS OF OPERATION AND EVERY 100 HRS AFTERWARD. THIS PLACARD GAVE A TORQUE VALUE OF 30-35 IN. LBS. WHICH IS THE TORQUE FOR THE 10-24 BOLTS USED IN OLDER HSGS. THIS ALTERNATOR HAD THE NEWER STYLE 1/4"-20 BOLTS, WHICH HAVE A PLACARD THAT GIVES A TORQUE VALUE OF 75-85 IN. LBS. IF CUSTOMER HAD RETORQUED AT THE LWR VALUE INDICATED IT WOULD HAVE CAUSED THE FAILURE OF THE ALTERNATOR. AN EXCHANGE ALTERNATOR WAS SENT TO THE CUSTOMER.

**2009FA0001034**
- CESSNA: U206G
- CONT: IO520*
- PLUNGER FAILED

PLUNGER WAS SERVICED IAW O/H MANUAL 73-40-01 LAPPED AND INSTALLED. SUBSEQUENT TO O/H FUEL PUMP FAILED IN-FLIGHT, PUMP SENT BACK FOR WARRANTY. PLUNGER FOUND WORN, REPLACED, PUMP FUNCTION OK. O/H MANUAL VAGUE ON HOW LONG OR WEAR CAN BE BEFORE IT SHOULD BE REPLACED.

**CA091030002**
- CESSNA: U206G
- CONT: IO520*
- ELECTRODE LOOSE


**CA091005009**
- CESSNA: U206G
- CONT: IO550F
- CYLINDER HEAD CRACKED

(CAN) DURING ACCOMPLISHMENT OF AD 2009-19-07, MSB 09-1, NR 5 CYL HEAD FOUND CRACKED.
CA090930003  CNDAIR  GE  TUBE  CRACKED
9/4/2009  CL600*  CF348C5  CC67058076200  FUEL SYSTEM
(CAN) RT WING FLUX VALVE DRAIN TUBE FOUND CRACKED FROM POSSIBLE WATER FREEZING AND ALLOWED FUEL TO ESCAPE THE RT WING. LINE REPLACED.

CA091013006  CNDAIR  GE  RADOME  DELAMINATED
10/11/2009  CL600*  CF348C5  GC21905045  FUSELAGE
(CAN) ON APPROACH, THE ACFT HAD A BIRD STRIKE TO THE RADOME WHICH CAUSED DELAMINATION DAMAGE TO THE LWR RADOME STRUCTURE. THE RADOME WAS REPLACED AND THE ACFT RELEASED TO SERVICE.

CA091102012  CNDAIR  GE  FILTER  CRUSHED
10/27/2009  CL600*  CF348C5  WE38817671  APU OIL SYSTEM
(CAN) FOUND APU LUBE OIL FILTER CRUSHED WHILE CARRING OUT TASK RJ9-49-360-706 (REPLACEMENT OF OIL FILTER). FILTER REPLACED.

CA091009002  CNDAIR  LYC  ENGINE  FAILED
10/6/2009  CL600*  ALF502L2C  ALF5022C  RIGHT
(CAN) RT ENG IN-FLIGHT SHUTDOWN DURING CRUISE. CREW INDICATED THAT THE RT ENG OIL PRESSURE TAPE STARTED TO FLUCTUATE THEN DROP TO ZERO, IN THE RED. AFTERWARD THE (RED) LOW OIL PRESSURE LIGHT ILLUMINATED. SHORT TIME LATER THE ENG SHUTDOWN AND AN EMERGENCY WAS DECLARED. ACFT LANDED UNEVENTFULLY. ENG WILL BE REMOVED AND SENT FOR REPAIR. BOTH LP AND HP ROTORS WERE FOUND SEIZED. CHIP DETECTOR AND FILTER METAL DEBRIS WILL BE SENT TO A LAB FOR ANALYSIS. ENG SHUTDOWN WAS UNCOMMANDED.

2009F00134  CNDAIR  GE  PUSH-PULL ROD  BROKEN
12/9/2009  CL6002B16  CF34*  601R386493  PAX DOOR
ACFT CABIN WOULD NOT PRESSURIZE. PERFORM GROUND CHECK AND FOUND CABIN DOOR PRESSURE VALVE IN THE OPEN POSITION. INSPECTION FOUND THE PUSH-PULL ROD WAS BROKEN AND NOT ALLowing THE DOOR PRESSURE VENT FLAP, PN: 601R38634-7, TO CLOSE.

CA091118001  CNDAIR  RELAY  OVERHEATED
11/14/2009  CL6002B19  APU CONTROL
(CAN) ELECTRICAL ODOR BEHIND THE CAPTAINS COAT CLOSET. MX INSPECTED AND FOUND THE APU CONTROL RELAY HAD OVER HEATED AND DAMAGED A CONNECTING WIRE. MX REMOVED AND REPLACED RELAY K1XB.

CA091118002  CNDAIR  SELECTOR VALVE  MALFUNCTIONED
11/12/2009  CL6002B19  750005000  MLG
(CAN) ON APPROACH, THE CREW EXPERIENCED A GEAR AGREE MESSAGE ON EICAS AFTER SELECTING THE GEAR DOWN. IT WAS REPORTED THAT 6 UNSUCCESSFUL ATTEMPTS WERE MADE TO EXTEND THE GEAR VIA THE NORMAL SYS. EACH TIME THE NOSE GEAR WOULD EXTEND NORMALLY BUT BOTH MAIN GEAR WOULD NOT DISPLAY DOWN AND LOCKED. THE MAIN GEAR WERE SUCCESSFULLY EXTENDED USING THE ALT EXTN METHOD. A LATER REVIEW OF THE FDR INDICATED BOTH MAIN GEAR DID NOT RELEASE FROM THEIR UPLOCKS. MX WAS ABLE TO DUPLICATE THE PROBLEM IN THE HANGAR. REPLACEMENT OF THE MLG SELECTOR VALVE RETURNED THE GEAR TO NORMAL OPERATION.

CA091118003  CNDAIR  WINDOW  FAILED
11/14/2009  CL6002B19  NP1393226  COCKPIT
(CAN) RT WINDOW SHATTERED IN LEVEL FLIGHT. MX REMOVED AND REPLACED THE RT SIDE WINDOW ASSY REF AMM 56-12-01.

CA091118004  CNDAIR  WINDOW  FAILED
11/14/2009  CL6002B19  NP1393222  COCKPIT
(CAN) AT FL 300 CREW NOTICED RT REAR WINDOW HAD AN ELECTRICAL ARC AND THEN PROCEEDED TO MIDDLE
PLY SHATTERED. CREW FOLLOWED QRH. ACFT LANDED, PRESSURIZATION WAS NORMAL.

**CA090924002**  
**CNDAIR**  
**COMPUTER MALFUNCTIONED**  
9/4/2009  
CL6002B19  
73664320  
FUEL INDICATION

(CAN) AFTER TAKEOFF WITH 2600 LBS IAW SIDE, FUEL IMBALANCE MSG ON ED1. QTY 3000 LBS IN LT AND 2000 IN RT TANK. RT WING LOWERING AND CTR TANK WAS INCREASING. ACFT RETURNED TO DEPARTURE AIRPORT AND LANDED WITHOUT FURTHER INCIDENT. MX REMOVED AND REPLACED FUEL SYS COMPUTER IAW AMM 28-41-16 AND OPS CHECKED. NO FURTHER DEFECTS NOTED.

**CA091107003**  
**CNDAIR**  
**PCU MALFUNCTIONED**  
11/5/2009  
CL6002B19  
270007  
FLIGHT SPOILER

(CAN) DURING CRUISE FLIGHT, ACFT ROLLED LT UNCOMMANDED AND A FEW SECONDS LATER, FLIGHT SPOILER DEPLOY (C) MSGPOSED. FLT CREW REFERED TO QRH. FLIGHT SPOILER HANDLE WAS FULLY STOWED. CAUTION MESSAGE APPEARED AND DISSAPPEARED SEVERAL TIMES. ALSO, FLT CREW REPORTED INTERMITTENT CAS MIS-COMPARE MESSAGE. FLT SPOILER FAULT (S) MSG STAYED ON THE ENTIRE TIME UNTIL ACFT TAXIED TO THE GATE AND THE FLT SPOILER FAULT (S) MSG EXTINGUISHED. MX REMOVED AND REPLACED SECU 2 IAW AMM 27-61-05 AND OPS CHECKED IAW AMM 27-61-00. OPS CHECKED GOOD. ACFT RETURNED TO SERVICE.

**CA091007003**  
**CNDAIR**  
**GE PDU FAILED**  
10/5/2009  
CL6002B19  
CF343A1  
865D1007  
TE FLAPS

(CAN) ON APPROACH, CREW RECEIVED A FLAP FAIL CAUTION MESSAGE WHEN THEY ATTEMPTED TO EXTEND FLAPS. THE FLAPS FAILED AT ZERO DEGREES. CREW CARRIED OUT AN UNEVENTFUL FLAP ZERO LANDING. FAILURE CODES FROM THE FECU INDICATED A FLAP PDU AT FAULT. FLAP DRIVES WERE CLEANED AND RE-GREASED AND THE FLAP PDU (P/N 865D10077, S/N 110) WAS REPLACED. SKEW DETECTION UNIT WAS RESET AND FLAP OPS CHECKS CARRIED OUT. THE ACFT WAS RELEASED TO SERVICE.

**CA090924001**  
**CNDAIR**  
**GE WHEEL DAMAGED**  
9/17/2009  
CL6002B19  
CF343A1  
50105711  
MLG

(CAN) ON T/O ROLL. ACFT VEERS TO THE RT. DIFFICULT TO CONTROL. ABORTED T/O. RETURN TO GATE. MX FOUND 1 NR 4 MLG WHEEL HEAT SHIELD SEGMENT SEPARATED FROM WHEEL WITH MISSING SCREW AND INTERFERING WITH WHEEL SPINNING. NR 4 WHEEL WAS REPLACED.

**CA091019007**  
**CNDAIR**  
**GE ACTUATOR FAILED**  
10/16/2009  
CL6002B19  
CF343A1  
852D10023  
TE FLAP

(CAN) FLAPS FAILED AT ZERO DEGREES (WHEN SELECTED TO 8 DEGREES) ON APPROACH. AN UNEVENTFUL FLAP ZERO LANDING WAS CARRIED OUT. ALL FLAP ACTUATORS WERE REPLACED AND THE SYS FUNCTION CHECKED. PN OF THE REMOVED ACTUATORS ARE: LT1, 852D100-23, LT 2, 852D100-25, LT NR 3, 853D100-23, LT4, 854D100-23, RT1, 852D100-25, RT2, 852D100-23, RT3, 853D100-24, RT4, 854D100-24.

**CA091113009**  
**CNDAIR**  
**GE ACTUATOR FAILED**  
11/9/2009  
CL6002B19  
CF343A1  
854D10023  
TE FLAPS

(CAN) EICAS FLAP FAIL CAUTION MESSAGE APPEARED ON APPROACH INTO WHEN FLAPS SELECTED FROM 0 TO 8 DEGREES. AIRSPEED WAS 200 KNOTS AND OAT WAS 3 DEGREES C MDC FAULT CODES WERE RETRIEVED AND INDICATED JAM, RIGHT BPSU, AND WIRING. JAZZ TECH OPS DEPARTMENT INITIATE AN ACTION PLAN AT THAT POINT TO ACCOMPLISH AN TORQUE CHECK OF THE SYS IAW AMM 27-53-00-750-802 AND WIRING CHECKS OF FECU TO RT BPSU WITH NO FAULTS FOUND. ALL EIGHT FLAP ACTUATORS WERE REPLACED AND THE ENTIRE FLEX DRIVE SYS WAS CLEANED AND LUBED IAW JAZZ TIB 27-06 AND TASK RJ2-12-20-27-LUB-806-FDC. THE FLAP SYS WAS RIGGED AND THE ACFT WAS SUCCESSFULLY TEST FLOWN, THEN RETURNED TO SERVICE.

REMOVE 1 RT PN 852D100-25 SNS110 NR 2 RT PN 852D100-25 SN4146, NR3 RT PN 853D100-24 S/N2168 NR 4RH PN 854D100-24 S/N2283 NR 1 LH P/N 852D100-25 SN 4724 NR 2 LT PN 852D100-25 SN4784 NR 3 LT PN 853D100-23 SN 3218 NR 4 LT
PN 854D100-23 SN2914 INSTALL NR 1 RT PN 852D100-23 SN 4088 NR 2 RT PN 852D100-23 SN 4050 NR 3 RT PN 853D100-24 SN3754 NR 4 RT PN 854D100-24 SN3436 NR 1 LT PN 852D100-25 SN6762 NR 2 LT PN 852D100-25 SN4069 NR 3 LT, PN 853D100-23 SN3227, NR 4 LT PN 854D100-23 SN2307.

CA091019002  CNDAIR  GE  FITTING  CRACKED
10/15/2009  CL6002B19  CF343B1  601R3807413  CARGO DOOR
(CAN) DURING AN INTERNAL WINTER PREVENTIVE MX CHECK, AN ENGINEER OBSERVED BY COINCIDENCE A CRACK ON THE MAIN CABIN DOOR AFT COUNTERBALANCE ANCHOR FITTING. THE CRACK LENGTH WAS EXCEEDING REPAIR EO 601R-52-11-272, THE FITTING WAS REPLACED AND THE ACFT RETURNED INTO SERVICE.

CA091029001  CNDAIR  GE  ENGINE  OVERTEMP
10/7/2009  CL6002B19  CF343B1  RIGHT
(CAN) DISCREPANCY: "RT ENG LOW OIL PRESSURE INDICATED, RT ENG ITT TEMP EXCEEDED, ON APPROACH INTO. CREW FOLLOWED EMERGENCY PROCEDURES AND SHUT THE RT ENG DOWN". ENGINE WAS REPLACED.

CA091103004  CNDAIR  GE  DOWTY  ACTUATOR  UNSERVICEABLE
11/3/2009  CL6002B19  CF343B1  16300106  NLG STEERING

CA090918003  CNDAIR  GE  VALVE  MISSING
9/17/2009  CL6002B19  CF343B1  218423  APU FUEL PUMP
(CAN) ON AUGUST 23, 2009 CREW REPORTED A "X FLOW/APU PUMP" MESSAGE IN FLIGHT. CREW DEFERRED APU PUMP IAW MEL 28-24-01-2. ON AUGUST 24TH MX REPLACED APU PRESSURE SWITCH PN 601R62291-7 BUT NO FIX. APU PUMP REMAINED ON MEL. FURTHER TROUBLESHOOTING ON AUGUST 27TH LED TO THE REPLACEMENT OF THE APU FUEL SWING CHECK VALVE PN 2950001-101 (IPC 28-24-00 –FIG 1 ITEM 61A). LEAK AND FUNCTION CHECKS WERE COMPLETED WITH NO FAULTS FOUND. DEFERRAL WAS CLEARED AND ACFT RETURNED TO SERVICE. DURING THE REPLACEMENT OF THE CHECK VALVE IT WAS DISCOVERED THAT AN UNIDENTIFIED PART WAS LODGED IN THE CHECK VALVE FLAPPER VALVE HOLDING IT OPEN AND CAUSING THE DEFECT. AN SMS REPORT WAS FILED. ON SEPTEMBER 3RD WITH THE ASSISTANCE OF THE MFG FSR THIS PART WAS IDENTIFIED AS PROBABLY A GUIDE VALVE PN 218423 (CMM 28-20-79 ITEM 70) FROM THE APU FUEL PUMP CANISTER PN 228078 (ITEM 1). APU PUMP WAS IMMEDIATELY DEFERRED IAW MEL 28-24-01-2 AND IN SERVICE ENGINEERING ISSUED A TASK TO HAVE APU FUEL PUMP CANISTER REPLACED. TASK WAS COMPLETED SEPT 17TH. INSPECTION OF PUMP CANISTER CONFIRMED THAT THE GUIDE VALVE WAS IN FACT MISSING.

CA091107001  CNDAIR  GE  WINDSHIELD  CRACKED
11/2/2009  CL6002B19  CF343B1  NP13932113  COCKPIT
(CAN) DIVERSION DUE TO LT WINDSHIELD CRACKED IN FL150 FLIGHT LH 391 SCHEDULED, DIVERTED BECAUSE OF A CM 1 FRONT WINDSHIELD CRACKED IN FL 150. NO EXTERNAL IMPACT. CM 1 WINDSHIELD REMOVED IAW AMM TASK 56-11-01-000-801 REV.41 CM 1 WINDSHIELD INSTALLED IAW AMM TASK 56-11-01-400-801 REV41 UNTIL SUBTASK 56-11-01-430-003 CABIN PRESSURE LEAK TEST PERFORMED IAW TASK 56-11-01-790-001. FOUND NO LEAKS AROUND WINDOW EDGES. WINDSHIELD WIPER INSTALLED IAW AMM TASK 30-42-04-400-801. ACFT RETURNED TO SERVICE.

CA091107002  CNDAIR  GE  CONTROLLER  MALFUNCTIONED
10/29/2009  CL6002D24  GG69095026  CABIN PRESSURE
(CAN) PROGRESSIVE LOSS OF CABIN PRESSURE RESULTING IN AN EMERGENCY DESCENT AND DIVERSION. O2 MASKED DEPLOYED. ACFT TO FERRY FOR MX. MX "FOUND THE LT ACSC CONTROLLER FAULTED. REPLACED NR1 ACSC 21-61-04 OPS CHECKED GOOD".

CA0910280012 CNDAIR  GE  ROD  INOPERATIVE
10/8/2009  CL6002D24  ELEVATOR PCU
(CAN) DURING PREFLIGHT CHECK RT ELEVATOR DOES NOT OPERATE NORMALLY USING HYD SYS NR2. INSPECTOR REVEALED THAT THE RT ELEVATOR SYS NR 2 PCU ROD END BROKE.

<table>
<thead>
<tr>
<th>CA091111001</th>
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<th>WINDSHIELD</th>
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<tr>
<td>10/30/2009</td>
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<td>NP13932114</td>
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(CAN) WHEN PASSING THROUGH FL100 WITH IAS 290 KTS RT FRONT WINDOW SUDDENLY CRACKED IN THE OUTER LAYER. WINDOW HEAT WAS Turned OFF and FL150 REQUESTED FOR CRUISE. QRH WAS CONSULTED and MAINTAINED A DIFF PRESSURE OF 6.1 PSI AND HAD A CRUISING SPEED OF 250 KTS RESULTING IN AN UNEVENTFUL CONTINUED FLIGHT. DURING DESCENT SPEED WAS REDUCED TO 200 KTS WHEN PASSING THROUGH 8000 FEET. NORMAL LANDING AND TAXI PERFORMED. PASSENGERS WAS NOT INFORMED, AND CABIN CREW WAS INFORMED AFTER PARKING. MAINT REPLACED WINDSHIELD.

<table>
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<tr>
<th>CA091002007</th>
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<td>CL6002D24</td>
<td>CF348C5</td>
<td>5120011</td>
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(CAN) FL390, EICAS IB SPOILERON, IB FLT SPLRS, AP TRIM IS LWD CAUTION MSGS. FLIGHT SYNOPTIC PAGE SHOWS RT WING INBD MFS FULLY DEPLOYED, AIRPLANE TURNED VIOLENTLY ROLL LT, IAS REDUCED BY DRAG, AP DISC, THRUST INCREASED TO CLIMB TO MAINTAIN SPEED, ALL QRH CHECKLIST ACCOMPLISHED, DURING DESCENT RT MFS INBD STARTED TO LWR AS SHOWN BY ARROW VECTOR (SYNOPTIC PAGE), MESSAGE REMAINED ON EICAS. RT INBD MFS SPOILER PCU REPLACED IAW AMM 27-62-01, ACFT RETURNED TO SERVICE.

<table>
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<th>CA090924008</th>
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<td>9/21/2009</td>
<td>CL604</td>
<td>CF343B</td>
<td>6052T01G08</td>
<td>ENGINE FAN</td>
</tr>
</tbody>
</table>

(CAN) UPON CLEANING OF FAN ASSY. DURING MX EVENT, IT WAS NOTICED THAT A 3 INCH CRACK AFT OF THE FAN STATOR RING WAS PRESENT. FURTHER INVESTIGATION REVEALED A CRACK PROPAGATING ALONG 2 BOLT HOLES THAT ATTACH THE FAN CASE TO THE THRUST REVERSER DEFLECTOR RING. THE AFT FAN CASE INCLUDES THE FWD ENG MOUNT ATTACH POINTS.

<table>
<thead>
<tr>
<th>CA091020004</th>
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<td>CL604</td>
<td>CF343B</td>
<td>6052T01G08</td>
<td>ENGINE FAN</td>
</tr>
</tbody>
</table>

(CAN) CRACKS TO THE AFT FAN CASE PN 6052T01G08 WERE DISCOVERED PRIOR TO SCHEDULED ACFT ENG WATER WASH. 2 CRACKS ALONG THE HORIZONTAL AXIS OF THE FAN CASE CONTINUING DOWNWARD ALONG THE FLANGE, ENG HASE BEEN REMOVED FOR FAN CASE REPAIR.

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(CAN) ON DESCENT LT ENG PWR LEVER COULD NOT BE RETRACTED. AN IN FLIGHT SHUTDOWN WAS CARRIED OUT. ACFT LANDED AT DESTINATION WITHOUT FURTHER INCIDENT. SUBSEQUENT INVESTIGATION FOUND THE LT ENG UPPER CORE COWL STAY OUT OF PLACE AND INTERFERING WITH THE FCU. THE SPRING CLIP PIP PIN HOLES WERE FOUND TO BE WORN AND A LIGHT TAPPING ON THE COWL WAS ENOUGH TO CAUSE THE PIP PIN TO FALL OUT. THE LOCKING MECHANISM AT THE END OF THE STAY IS EASILY SECURED IMPROPERLY AND IT IS UNDETERMINED WHETHER THE PIP PIN WAS INSTALLED IN AN UPWARDS OR DOWNWARDS DIRECTION.

<table>
<thead>
<tr>
<th>CA091120002</th>
<th>CNDAIR</th>
<th>GE</th>
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<td>CL604</td>
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<td>ENGINE BAY</td>
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</table>

(CAN) DURING FLIGHT THE CREW COULD NOT RETARD THE LT THROTTLE. ENG WAS SHUTDOWN AND AN UNEVENTFUL LANDING MADE. IT WAS SUBSEQUENTLY FOUND THE UPPER COWL SUPPORT ROD HAD COME OUT OF ITS STORAGE CLIP AND FALLEN ONTO THE THROTTLE LINKAGE.

<table>
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<tr>
<th>CA091027002</th>
<th>CURTIS</th>
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<td>10/26/2009</td>
<td>C46DAIRLIFT</td>
<td>R280051M3</td>
<td>OIL COOLER</td>
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RECTIFICATION. INSTALLATION OF A REPLACEMENT VALVE PROVED TO RECTIFY THE PROBLEM AND AIRCRAFT DEPARTED ON INTENDED FLIGHT. THE FAULTY OIL COOLER VALVE WAS 0 TSO AND WILL BE SENT BACK TO VENDOR FOR WARRANTY. (TC 20091027002)

<table>
<thead>
<tr>
<th>CA091118005</th>
<th>CVAC</th>
<th>ALLSN</th>
<th>COMPRESSOR</th>
<th>DAMAGED</th>
</tr>
</thead>
</table>

(CAN) ON START UP, ENG NR 2 IN HIGH SPEED WITH ALL THE PARAMETERS STABILIZED, WHEN CLEARED TO START NR 1 ENG, A LOUD BANG WAS HEARD FOLLOWED BY ENG FIRE WARNING AND BELLS IN ZONE NR 2. FLAMES COMING OUT OF ENG COWL, FIRE ON GROUND DRILL EXECUTED, FIRE WENT OUT. AFTER OPENING ENG NR 2 COWL, SEVERAL PIECES OF METAL FOUND ADRIFT AND COMPRESSOR DAMAGES NOTICED FROM MID-SECTION TOWARD TURBINE SECTION. QEC REPLACEMENT CARRIED OUT, THE ACFT RETURNED TO SERVICE, THE US ENG SENT TO MAIN BASE FOR INVESTIGATION.

<table>
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<th>CA090928002</th>
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<td>501D13D</td>
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(CAN) ON SEPT 21, 2009 DURING CRUISE ALTITUDE OF 22,000 FT AT APPROX 13:45 ZULU. PILOT IN COMMAND (PIC) NOTICED RAPID DECREASE IN OIL PRESSURE FOLLOWED BY A DECREASE IN RPM AND HIGH PRESSURE ON NR 2 (RT) ENG. WITH THIS INDICATION THEY PROCEEDED TO PRECAUTIONARY ENG SHUTDOWN CHECKLIST. THIS LED TO A RAPID DECREASE IN CABIN PRESSURE THAT REQUIRED AN EMERGENCY DESCENT. PIC DECLARED AN EMERGENCY WHILE ON DESCENT TO 10,000 FT, ONCE STABILIZED THEY ASKED ATC FOR NEAREST AIRPORT WITH MINIMUM RUNWAY LENGTH OF 4500FT. ATC SUGGESTED HEARST MUNICIPAL AIRPORT AND CREW CONFIRMED WITH THE GPS DATA. ACFT LANDED SAFELY WITH NO OTHER INCIDENT REPORTED. NO MX DISPATCHED, AN ACA MECHANIC TO INSPECT ACFT, MX FINDING WAS AN ENG INTERNAL GEAR BOX FAILURE WITH VERY LITTLE FOD FOUND ON INSPECTION. IT WAS DECIDED TO PROCEED WITH A COMPLETE ENG (QEC) REPLACEMENT. U.S. ENGINE (QEC) WAS RETURNED TO AVITION MX BASE FOR INVESTIGATION AND REPAIR ARRANGEMENTS WITH AN APPROVED SHOP. A COMPLETE SHOP REPORT WILL BE FILED.

<table>
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<tr>
<th>CA090930004</th>
<th>DHAV</th>
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<td>DHC2MK3</td>
<td>PT6A27</td>
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<td>BRAKE ASSY</td>
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(CAN) NATURE - ACFT WAS IN TAKEOFF WHEN BRAKE ASSY SEIZED CAUSING PERSONNEL TO BE DISPATCHED TO RETRIEVE ACFT. UPON REMOVAL AND INSPECTION OF BRAKE, IT WAS NOTED THAT THE BRAKE LINING DISINTTEGRATED ALLOWING THE BRAKE DISKS TO FLOAT EXCESSIVELY RESULTING IN A BINDING ACTION SEIZING THE BRAKE.

<table>
<thead>
<tr>
<th>CA091009004</th>
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<td>10/8/2009</td>
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<td>R985AN14B</td>
<td>C2P1107</td>
<td>FUEL SYS</td>
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(CAN) DURING FUEL TANK REPLACEMENT, INSTALLING HOSE FROM TANK TO FUEL SELECTOR ELBOW. ELBOW CRACKED AND BROKE OFF AT HOSE END ON FITTING, FITTING REPLACED WITH NEW.

<table>
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<tr>
<th>CA091015004</th>
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<td>R985AN14B</td>
<td>C3CF2913</td>
<td>SUMP OUTLET</td>
</tr>
</tbody>
</table>

(CAN) DURING A SERVICING OF ACFT, FUEL LEAK NOTICED AT REAR OF FUEL GALLERY. INVESTIGATION REVEALED LEAKING UNDER OUTLET HOSE. TANK DRAINED, REMOVED, AND REPLACED.

<table>
<thead>
<tr>
<th>CA091021002</th>
<th>DHAV</th>
<th>PWA</th>
<th>DHAV</th>
<th>SCREW</th>
<th>BINDING</th>
</tr>
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<tbody>
<tr>
<td>7/28/2009</td>
<td>DHC3</td>
<td>PT6A34</td>
<td>C3CF2913</td>
<td>ACTUATOR</td>
<td></td>
</tr>
</tbody>
</table>

(CAN) THE PILOT REPORTED THAT THE ELEVATOR TRIM WOULD SEEM TO TIGHTEN UP WITH AIR LOAD ON IT. AFTER INSPECTING THE TRIM SYSTEM, IT WAS DETERMINED THAT THE TRIM SCREW JACK AT THE ELEVATOR WAS HARD TO TURN UNDER LOAD. THE PART WAS DISASSEMBLED, CLEANED AND GREASED. IT APPEARED TO NOT HAVE BEEN APART FOR A LONG TIME. THIS PART NEEDS TO BE CLEANED AND REGREASED EVERY 400 HOURS ACCORDING TO THE LUBRICATION DIAGRAM FOR THIS A/C. (TC# 20091021000)

<table>
<thead>
<tr>
<th>CA091030007</th>
<th>DHAV</th>
<th>CONTROL CABLE</th>
<th>BROKEN</th>
</tr>
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<tbody>
<tr>
<td>10/26/2009</td>
<td>DHC6300</td>
<td>C6CF11491</td>
<td>ELEVATOR</td>
</tr>
</tbody>
</table>

(CAN) CUSTOMER REPORTED A BROKEN STRAND ON A NEW CABLE PURCHASED. MFG HAS INSPECTED THE
REMAINING INVENTORY FROM THIS LOT WITH NO FURTHER DEFECTS FOUND.

<table>
<thead>
<tr>
<th>CA091102006</th>
<th>DHAV</th>
<th>PWA</th>
<th>FAN</th>
<th>BROKEN</th>
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<tbody>
<tr>
<td>10/30/2009</td>
<td>DHC6300</td>
<td>PT6A27</td>
<td>230481490</td>
<td>STARTER-GEN</td>
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</table>

(CAN) DURING INSTALLATION OF FAN AT ST-GEN O/H, THE CTR PART OF THE FAN HUB, AREA BENEATH THE NUT AND WASHER, BROKE OUT FROM THE REST OF THE FAN. THE BREAK HAPPENED BEFORE THE NUT REACHED REQUIRED TORQUE OF 110 INCH-LBS. THIS IS A CAST METAL ONE-PIECE FAN. THIS IS THE 4TH OCCURRENCE IN 5 YEARS AT THIS AMO. THE OEM IS BEING CONTACTED TO SEE IF THEY WILL REDESIGN THE FAN TO STRENGTHEN THE AREA THAT BREAKS. THE OTHER 3 SDRS CAN BE FOUND BY SEARCHING ON PN 230481490. ALL 4 BROKEN FANS ARE BEING HELD IN QUARANTINE.

<table>
<thead>
<tr>
<th>CA091023004</th>
<th>DHAV</th>
<th>PWA</th>
<th>ATTACH ANGLE</th>
<th>CORRODED</th>
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<tbody>
<tr>
<td>10/22/2009</td>
<td>DHC8102</td>
<td>85210025101102</td>
<td>PAX DOOR</td>
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</tr>
</tbody>
</table>

(CAN) DURING BLOCK CHECK ON A/C THE PASSENGER DOOR WAS REMOVED AND ROUTED TO YYC OVERHAUL SHOP FOR REPAIR IN JULY OF THIS YEAR. THIS DOOR WAS BEING DISSASSEMBLED FOR REPAIR WHEN THE SHEETMETAL TECH DISCOVERED THE MAJOR INTERNAL CORROSION.

<table>
<thead>
<tr>
<th>CA091014004</th>
<th>DHAV</th>
<th>PWA</th>
<th>WINDSCREEN</th>
<th>CRACKED</th>
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<tbody>
<tr>
<td>10/9/2009</td>
<td>DHC8102</td>
<td>PW120A</td>
<td>NP15790114</td>
<td>COCKPIT</td>
</tr>
</tbody>
</table>

(CAN) WHILE CLIMBING THROUGH APPROX 16 000 FT, THE CREW HEARD A LOUD POPPING SOUND. THEY THEN NOTICED THAT THE CO-PILOT WINDSCREEN OUTER PANE HAD SHATTERED. CREW REDUCED AIRSPEED AND DESCENDED TO 10 000 FT AND DEPRESSURIZED. THEY PROCEEDED TO LAND WITHOUT FURTHER INCIDENT. MX REPLACED THE WINDSCREEN AND THE ACFT WAS RETURNED TO SERVICE.

<table>
<thead>
<tr>
<th>CA091013007</th>
<th>DHAV</th>
<th>PWA</th>
<th>PRINTER</th>
<th>ODOR</th>
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<tbody>
<tr>
<td>10/11/2009</td>
<td>DHC8102</td>
<td>PW120A</td>
<td>49712631</td>
<td>ACARS</td>
</tr>
</tbody>
</table>

(CAN) ON APPROACH, CREW NOTED A FAINT "ELECTRICAL" ODOR. ALL SYS WERE WORKING NORMALLY. AFTER ARRIVING AT THE GATE CREW NOTICED THE ACARS PRINTER FELT HOTTER THAN NORMAL. CREW PULLED COVER OFF AND FOUND THERMAL PRINTER PAPER WAS BLACK. C/B FOR PRINTER PULLED AND COLLARED, UNIT COOLED DOWN TO ROOM TEMP. ACFT RELEASE UNDER MEL 23-15-2 AND RETURN TO SERVICE. ACFT OVERNIGHT, THAT NIGHT AND ACARS PRINTER WAS REPLACED AND TEST SERVICEABLE.

<table>
<thead>
<tr>
<th>CA091014001</th>
<th>DHAV</th>
<th>PWA</th>
<th>PULLEY</th>
<th>SPLIT</th>
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<tbody>
<tr>
<td>10/13/2009</td>
<td>DHC8102</td>
<td>PW120A</td>
<td>82742339001</td>
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</table>


<table>
<thead>
<tr>
<th>CA091014002</th>
<th>DHAV</th>
<th>PWA</th>
<th>SOCKET</th>
<th>BROKEN</th>
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<tr>
<td>10/14/2009</td>
<td>DHC8102</td>
<td>PW120A</td>
<td>CL12068161</td>
<td>MLG</td>
</tr>
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</table>

(CAN) DURING "C" CHECK, FUNCTIONAL CHECK ON TASK CARD 3230/15 (OPS CHECK OF LANDING GEAR DOOR SEQUENCE CONTROL CIRCUIT) DOES NOT WORK. AFTER INVESTIGATION, RELAY (3261-K9) SOCKET FOUND BROKEN AND PINS OLDER SOCKET UNGLUED. WIRE WERE FOUND HANGING LOOSE WITH A HI RISK OF CONTACT WITH STRUCTURE. POSSIBILITY OF "WOW" CIRCUIT FAILURE AND THE MOST IMPORTANT, IMPOSSIBILITY OF GEARS EXTENTION IN ALTERNATED RELEASE IN CASE OF EMERGENCY EXTENSION. DURING THE SAME CHECK, RELAY SOCKET 7611-K3 (SAME RELAY SOCKET) WAS ALSO FOUND CRACK. THAT MEANT TWO SOCKETS FOUND CRACKED ON THE SAME ACFT.

<table>
<thead>
<tr>
<th>CA090929008</th>
<th>DHAV</th>
<th>PWA</th>
<th>LINE</th>
<th>CHAFED</th>
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<tbody>
<tr>
<td>9/26/2009</td>
<td>DHC8102</td>
<td>PW120A</td>
<td>82970410119</td>
<td>HYDRAULIC SYS</td>
</tr>
</tbody>
</table>
RETURNING HOME AT CRUISE ALTITUDE, THE PILOT NOTICED INDICATED FLUID LEVEL DROPPING, THEN WARNING INDICATION. EMERGENCY DECLARED AND LANDED WITHOUT FURTHER INCIDENT. UPON INVESTIGATION, IT WAS DISCOVERED THAT THE HYD NR 1 SYS PRESSURE LINE FROM PRESSURE MANIFOLD TO ENGINE FIREWALL WAS CHAFED THROUGH AS A RESULT OF AN HOSE CLAMP FROM ANOTHER LINE RUBBING AGAINST IT.

CA090924005 DHAV PWA TSCU FAILED
9/23/2009 DHC8102 PW120A 3005000046 NR 1

(After takeoff NR 1 ENG manual caution light came on. This was followed by a power roll back and loss of NR 1 TQ indication. Crew feathered ENG and then shut it down. NR 1 TSCU (torque signal conditioning unit) was replaced and ENG runs carried out successfully. On this ENG model TQ signal is generated by TQ probe and fed to TSCU, TSCU in turn uses data for autofeather sys and also sends the signal to ENG ECU as well as the TQ indicator. TQ value is one of several primary data inputs to the ECU. The ECU will revert to manual if any one of the primary inputs are missing. On this engine model the electronic fuel schedule is set 20 percent TQ higher than manual fuel schedule, therefore when ECU goes to manual it is normal to have a 20 percent TQ reduction or roll back. In this case TQ signal output from TSCU failed which caused both loss of TQ indication and ECU reverting to manual with consequent pwr roll back.

CA091111002 DHAV PWA TORQUE TUBE DAMAGED
11/1/2009 DHC8102 PW120A 734382D TE FLAPS

During troubleshooting of a refuel snag, one end of the LT NR 7 FLAP PRIMARY TORQUE TUBE was found with extensive damage. Elongated holes where observed at the junction of the tube and splined shaft. Loose fasteners have likely caused the damage. The torque tube Assy was replaced and the acft returned into service.

CA091005005 DHAV PWA BRACKET DAMAGED
10/5/2009 DHC8106 PW121 85321951101 FUSELAGE

While performing a scheduled visual insp of acft wiring, the tech found several wires for the AHRS SYS (1 and 2) showing evidence of shorting with bracket edge, and minor damage to the bracket as well. Location - LT side of fuselage at STA X309:00 between STR 9 and 10. Edge grommet was not found installed on the bracket on discovery of the problem. Wiring repaired, bracket replaced with edge grommet material installed.

CA091007005 DHAV PWA CONNECTOR LOOSE
10/1/2009 DHC8106 PW121 EXCITER

Connector plug found loose during insp. Found connector plug repaired using a rubber sealant. Exciter was installed during importation of the acft in 2008.

CA091021012 DHAV PWA WIRE HARNESS CHAFED
10/15/2009 DHC8106 PW121 AUX FUEL PUMP

During troubleshooting concerning a faulty LT AUX PUMP indication, it was found that a wiring bundle was chaffed. During maintenance function checks of the system the wire bundle began to arc and burn. This caused an ignition of the vapors from LPS contact cleaner used to clean the Canon plug on the pressure switch. The resulting flame extinguished itself with no outside intervention. The chaffed wiring was contaminated with de-ice fluid which coating all equipment in the area around the rear spar and de-ice fluid also pooled in the lower portions of the panels. Aerosol cleaners were used to clean the area prior to the functional test. All power removed, the area vented and the wiring bundle repaired with no further complications. (TC 20091021012)

CA091022002 DHAV PWA SHUTOFF VALVE MISREPAIRED
10/15/2009 DHC8106 PW121 FUEL

Fuel shut off valve found leaking, when panel opened up shut off valve had a previous non standard repair with silicon. No long entries as to who or when the repair was accomplished.
MAINTENANCE CONTRACTOR THAT MAY HAVE BEEN INVOLVED HAS BEEN ADVISED (TC 20091022002)

<table>
<thead>
<tr>
<th>TA NUMBER</th>
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<th>AIRCRAFT TYPE</th>
<th>PART NUMBER</th>
<th>PART DESCRIPTION</th>
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<tbody>
<tr>
<td>CA091100004</td>
<td>DHAV</td>
<td>DHC8202</td>
<td>PW123D</td>
<td>SUPPORT CRACKED</td>
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<tr>
<td>11/9/2009</td>
<td>PRECOOLER</td>
<td></td>
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</table>

(CAN) HIGH FUEL FLOW AND HIGH ITT WERE REPORTED ON THE LT ENG AT ENG START. INVESTIGATION FOUND PRECOOLER PN 10558000 BEING CRACKED. UPON REMOVAL OF THE PRECOOLER, FURTHER INVESTIGATION SHOWED SUPPORT ASSY PN 82110733-005 BROKEN AT AN ATTACHMENT LUG AND CRACKED AT ANOTHER LOCATION. INVESTIGATION ALSO FOUND BUSHINGS WORN OUT AND PRE-COOLER TO SUPPORT AFT ATTACHMENT HOLE ELONGATED.

<table>
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<tr>
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<tr>
<td>CA091016001</td>
<td>DHAV</td>
<td>DHC8301</td>
<td>PW123</td>
<td>PCU MALFUNCTIONED</td>
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<tr>
<td>6/16/2009</td>
<td>NR 1 ENGINE</td>
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(CAN) "ENGINE NR 1 PROP AND ITT DROPPED ON FINAL APPROACH TORQUE LOGGED ON 40% PROP (RPM) 910, ITT - 350 DEG TO 400 DEG. REMOVED AND REPLACED PCU AND PERFORMED FUNCTIONAL AND OPERATIONAL TEST, FOUND SATISFACTORY IN ACCORDANCE WITH CMM 71-00-02 AND AMM 71-00-00. (TC# 20091016001)

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<th>PART NUMBER</th>
<th>PART DESCRIPTION</th>
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<td>DHC8311</td>
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<td>TERMINAL BLOCK FIRE</td>
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<tr>
<td>10/21/2009</td>
<td>WINDSHIELD HEAT</td>
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</table>

(CAN) CREW REPORTED THAT AT 14,000 FT, A ONE FOOT (1’) FLAME SHOT (ARCED) FROM THE TERMINAL BLOCK OF THE LT WINDSCREEN. FIRE EXTINGUISHER WAS REMOVED FROM THE HOLDER BUT BY THAT TIME THE FIRE HAD GONE OUT. SMOKE FILLED THE FLIGHT DECK AND OXYGEN MASKS WERE UTILIZED AND THEN OUTER LAYER OF THE WINDOW STARTED TO CRACK. EMERGENCY WAS DECLARED. CREW LANDED THE A/C SAFELY. THE FIRE MIGRATED THROUGH TO THE INNER PLY AND GLASS WAS FALLING INTO THE FLIGHT DECK. REF: DEFECT-877024, FOR RECTIFICATION. WINDSCREEN AND WINDSHIELD HEAT CONTROLLER TAKEN BY TSB FOR ANALYSIS. (TC 20091021016)

<table>
<thead>
<tr>
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<tr>
<td>CA091102011</td>
<td>DHAV</td>
<td>DHC8311</td>
<td>PW123</td>
<td>BULKHEAD SHORTED</td>
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<tr>
<td>10/29/2009</td>
<td>SPINNER</td>
<td></td>
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</table>

(CAN) CREW NOTED ON APPROACH THE THE NR 2 PROP DEICE A PHASE IS INOP. (JL2 - NR 1 "B” PHASE PROP HEAT LIGHT NOT ILLUMINATING WITH PROP HEAT). TR117. NR 2 PROP BULKEAD RING ASSY AND BRUSH BLOCK FOUND SHORTED. REPLACED.

<table>
<thead>
<tr>
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<th>AIRCRAFT TYPE</th>
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<td>10/1/2009</td>
<td>SPOILER ACTUATOR</td>
<td></td>
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</table>

(CAN) DURING SPOILER ACTUATOR REPLACEMENT, ON THE LT WING REAR SPAR SHROUD AT STA YW404.00, THE BRACKET WAS FOUND CRACKED AT THE LWR END OF THE ANGLE. APROXIMATE LENGTH OF CRACK IS 1.5 INCHES.

<table>
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<td>CA091021013</td>
<td>DIAMON</td>
<td>DA20A1</td>
<td>ROTAX912F3</td>
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</tr>
<tr>
<td>9/23/2009</td>
<td>THROTTLE</td>
<td></td>
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</table>

(CAN) TWO CONTROL CABLES ARE BOLTED TO A SINGLE THROTTLE CONTROL LEVER IN THE CABIN PEDESTAL. THESE INNER CABLES ARE THEN ROUTED THROUGH THEIR OWN RESPECTIVE OUTER SHEATHS AND CONNECTED TO EACH CARBURRTER THROTTLE LEVER. RIGHT INNER CABLE BROKE AND SEPARATED FROM THE THROTTLE LEVER SO THE PILOT HAD NO MORE CONTROL OF THE RIGHT CARBURRETOR BUT STILL HAD CONTROL OF THE LEFT ONE. SHE SHUT THE ENGINE DOWN ON APPROACH AND LANDED SAFELY. UPON INSPECTION, A NEW INNER RT CABLE WAS INSTALLED PER MM, RIGGED, DUAL INSPECTED AND AIRCRAFT RELEASED BACK INTO SERVICE AFTER ENGINE GROUND RUN. (TC 20091021013)

<table>
<thead>
<tr>
<th>TA NUMBER</th>
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<th>PART DESCRIPTION</th>
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<td>CA091007006</td>
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<td>ROTAX912S3</td>
<td>SLEEVE SLIPPED</td>
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<tr>
<td>10/5/2009</td>
<td>Rudder Cable</td>
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</table>

(CAN) INSTRUCTOR AND STUDENT WERE PRACTICING SIDE-SLIPS AND THE LT RUDDER CABLE BROKE FREE OF AFT RUDDER BELLCRANK. INSPE REVEALED CABLE PULLED OUT OF NICO PRESS SWAG. INVESTIGATION IS ON GOING AT THIS TIME. MORE INFORMATION TO FOLLOW.

2009FA0001020 | DIAMON | LATCH FAILED |
FWD DOOR LATCH ASSY BUSHINGS WORKED LOOSE. FAILURE OF LOCKING FLUID WHICH HOLDS THE BUSHINGS IN PLACE. USE OF A DIFFERENT METHOD TO SECURE BUSHINGS IN HINGE ASSY FOR PERHAPS A SIMPLER ASSY WITH FEWER MOVING PARTS.

UPON 100 HR INSPECTION, AFT DOOR, FWD HINGE WAS FOUND TO BE CRACKED RESULTING IN REMOVAL OF DOOR FROM SERVICE AND SENDING OUT FOR REPAIR. THIS IS EITHER THE RESULTS OF THE DOOR PROP STRUT BEING TOO STRONG OR THE DOOR BEING LEFT OPEN AND CATCHING A GUST OF WIND. CONSTRUCTION OF HINGE USING A STRONGER MATERIAL OR WEAKER DOOR PROP STRUT WOULD PROBABLY HELP.

(CAN) DURING ROUTINE MX PITTING ON THE L/E OF MLG LEGS WAS NOTED. FURTHER INVESTIGATION REVEALED EXTENSIVE CORROSION ON MAJORITY OF THE SURFACE. ALSO NOTED PAINT COATING APPEARED TO BE SEPARATING FROM GEAR LEG. PAINT WAS CHEMICALLY REMOVED AND EXCESSIVE CORROSION NOTED THROUGHOUT. MX SHOP WAS ADVISED TO REPLACE GEAR LEGS AND RETURN CORRODED LEGS FOR INVESTIGATION.

(CAN) DURING PENETRANT INSPECTION, IAW MANDATORY SB MSB40-046/3, A SMALL CRACK WAS FOUND IN RADIUS OF PIVOT AS SHOWN IN THE MSB. MSB POINTS TO FRONT SECTION OF RADIUS IN DIAGRAM, CRACK WAS FOUND ON REAR SIDE OF RADIUS. STRUT WAS REPLACED.

(CAN) ACFT WAS UNDERGOING MX (200 HR INSPECTION AND ENGINE REPAIR). ACFT HAD BEEN IN HANGAR FOR APPROX 6 MONTHS. AT COMPLETION OF MX, WHILE TRYING TO TROUBLESHOOT A FUEL QUANTITY INDICATION PROBLEM, A FUEL SAMPLE WAS TAKEN TO CHECK FOR WATER. REMOVED A LARGE QUANTITY OF CONTAMINATION. SENT A SAMPLE TO A LAB FOR ANALYSIS. WHILE WAITING FOR RESULTS, COMPLETELY DRAINED FUEL TANKS, ADDED A FUEL ADDITIVE THAT KILLS BACTERIAL GROWTH AND REFILLED THE TANKS. THEN TOOK MORE SAMPLES UNTIL WE HAD A "CLEAN AND BRIGHT" SAMPLE. SUBSEQUENTLY, ON SEVERAL OCCASIONS, CONTINUED TO GET FUEL SAMPLES WITH CONTAMINATION. REMOVED TANKS AND SEPARATED THEM SO THAT THEY COULD BE STEAM CLEANED. THE DA-42 USES 3 TANKS IN EACH WING JOINED TOGETHER USING FLANGES AND RUBBER COUPLINGS. ACFT WING SITTING STATICALLY HAS DHIREDRAL AND SITS ABOUT 5 DEGREES NOSE UP. ONLY INBD TANK HAS A DRAIN PORT WHICH IS LOCATED ON THE INBD END, IN THE CTR OF TANK LWR ONE SURFACE OF THE TANK IS ROUGHLY PARALLEL TO BOTTOM SURFACE OF THE WING. WITH A 5 DEGREES NOSE UP ATTITUDE THERE IS A PORTION OF THE TANK THAT CANNOT BE DRAINED USING DRAIN VALVE. IF YOU HAVE BACTERIAL CONTAMINATION, REMOVING THE TANKS SEEM TO BE THE ONLY WAY TO FIX THIS. LAB REPORT INDICATED THAT THERE WAS MOULD, YEAST, AND BACTERIAL CONTAMINATION. FUEL ADDITIVE WOULD ONLY KILL BACTERIAL GROWTH AND ONLY IF IT WASN'T SUSPENDED IN THE MOULD/YEAST COMBINATION.

(LT ENG LOST POWER AND STOPPED DURING FLIGHT. ACFT WAS LANDED. ENG FIELD REP REMOVED A CAMSHAFT POSITION SENSOR AND CONFIRMED THAT THE CAMSHAFT DOES NOT MOVE WHEN THE CRANKSHAFT IS ROTATED. ENG REMOVED FROM AIRFRAME AND SHIPPED TO MFG IN GERMANY FOR INVESTIGATION.

(CAN) LT ENG LOST POWER AND STOPPED DURING FLIGHT. ACFT WAS LANDED. ENG FIELD REP REMOVED A CAMSHAFT POSITION SENSOR AND CONFIRMED THAT THE CAMSHAFT DOES NOT MOVE WHEN THE CRANKSHAFT IS ROTATED. ENG REMOVED FROM AIRFRAME AND SHIPPED TO MFG IN GERMANY FOR INVESTIGATION.

LWR FUSELAGE AFT SKIN CORRODED AT STA 1163, BTWN LONG 29L AND LONG 30L.
<table>
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<tr>
<th>Date</th>
<th>Code</th>
<th>Part Number</th>
<th>Issue</th>
<th>Remarks</th>
<th>Code</th>
<th>Part Number</th>
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<tr>
<td>12/1/2009</td>
<td>DC983</td>
<td>5936413501</td>
<td>DOOR BUMPER</td>
<td>LWR FUSELAGE RT MAIN W/W INBD DOOR HUB BUMPER CRACKED.</td>
<td>EE4Y090396</td>
<td>DOUG SUPPORT</td>
<td>CRACKED</td>
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</tbody>
</table>
**10/26/2009**

**ERJ170200LR**  
**CF348E5**  
**NR 4 SLAT**

(CAN) ON COMPLETION OF A REGULAR SLAT TRACK LUBE, A SLIGHT ‘CLICKING’ SOUND WAS NOTED DURING THE FINAL STEP OF A SLAT OPS CHECK. UPON INSPECTION IT WAS NOTED THAT THE SOUND WAS BEING CAUSED BY:
1. RT WING OTBD SEAL ON NR 4 SLAT IS WORN AND CRACKED.
2. RT WING NR 4 SLAT INBD NR 8 SLAT TRACK MOBILE COVER ACTUATING FORKS WERE NOTED BENT. THIS CAUSES THE COVER TO RIDE UNEVENLY DURING SLAT EXTENSION AND RETRACTIONS. MFG HAS BEEN NOTIFIED OF THE ISSUE.

**CA091021001**  
**EMB**  
**GE**  
**PULLEY**  
**DAMAGED**

**10/19/2009**

**ERJ170200SU**  
**CF348E5A1**  
**1159SCL20243**  
**AILERON**

(CAN) DURING B02N01 CHECK IT WAS DISCOVERED THAT THE LT AND RT AILERON PULLEYS BETWEEN RIB 2 AND RIB 4 IS OUT OF ALIGNMENT WITH THE CABLE RUN. AILERON PULLEY SUPPORT BRACKETS P/N 170-32541-001 AND 170-32541-002 MIS-ALIGNED WITH CABLE RUN CAUSING PREMATURE WEAR OF AILERON CABLES. (TC# 20091021004)

**CA091021004**  
**EMB**  
**GE**  
**WIRE HARNESS**  
**BURNED**

**10/17/2009**

**ERJ170200SU**  
**CF348E5A1**  
**170166603001**  
**FADEC**

(CAN) DURING B02N01 CHECK INSPECTION OF RT ENGINE PYLON, MECHANICS DISCOVERED RH PYLON FADEC WIRING HARNESS BURNED IN THE AREA AFT OF THE ENGINE BLEED PRE-COOLER ASSY. FURTHER INVESTIGATION REVEALED PART OF GASKET P/N 170-166603-001, ITEM 30 IPC 36-11-08 FIG.01 MISSING BETWEEN ENGINE BLEED PRE-COOLER AND COOLER OUTLET DUCT P/N 170-14512-403. RH ENGINE PRE-COOLER DUCT GASKET FAILED CAUSING HOT BLEED AIR STREAM TO OVERHEAT AND BURN FADEC HARNESS. (TC# 20091021004)

**CA091116004**  
**EMB**  
**GE**  
**FLAP SYSTEM**  
**FAILED**

**11/8/2009**

**ERJ170200SU**  
**CF348E5A1**  
**TE FLAPS**

(CAN) FLIGHT CREW: AFTER NORMAL LANDING FLAPS SELECTED 0 ECIS FLAP FAIL AND INDICATOR AMBER. SLATS 0 AND GREEN.

**CA091116005**  
**EMB**  
**GE**  
**ACTUATOR**  
**FAILED**

**11/14/2009**

**ERJ190100IGW**  
**CF3410E5A1**  
**TE FLAPS**

(CAN) FLT CREW REPORTED FLAP SLAT FAILURE INBOUND. FLAPS 2, SLATS 0 NO EMERGENCY DECLARED. MX RT SLAT ACTUATOR REPLACED.

**CA091116002**  
**EMB**  
**GE**  
**STEERING UNIT**  
**FAILED**

**11/14/2009**

**ERJ190100IGW**  
**CF3410E5A1**  
**NLG**

(CAN) 1000 FEET AGL FLIGHT CREW SELECTED GEAR DOWN AND RECEIVED A GEAR STEER FAIL MESH. LANDING NORMAL HOWEVER REQUIRED TOW OFF OF RUNWAY. MX CLEARED MAU NVM CONSIDERED OK FOR FURTHER FLIGHT.

**CA091116003**  
**EMB**  
**GE**  
**ACTUATOR**  
**FAILED**

**11/8/2009**

**ERJ190100IGW**  
**CF3410E5A1**  
**SLATS**

(CAN) FLIGHT CREW ON APPROACH, YYC SLATS FAILED AND ACFT LANDED WITH SALT 0 AND FLAP 2. MX NR 3 AND NR 5 RT SLAT ACTUATORS REPLACED, SYS SERVICABLE.

**CA091116010**  
**EMB**  
**GE**  
**SUPPORT BRACKET**  
**DEBONDED**

**11/3/2009**

**ERJ190100IGW**  
**CF3410E5A1**  
**MLGWW**

(CAN) LT AND RT MLG BAY FIRE DETECTION LOOP SUPPORT BONDED BRACKETS HAVE BECOME DISBONDED. (REPORTED INTERNALLY FROM A LINE MECHANIC) PN NOT PROVIDED, UNABLE TO LOCATE IN IPC. SIMILAR CONDITIONS EXIST ON THE FOLLOWING ACFT. C-FLWH LH WHEEL WELL C-FHOS LT & RT WHEEL WELL.
(CAN) ACFT WAS RECENTLY IN FOR A B-01/N-01 MX VISIT. FRAGMENTS OF REFUEL DIFFUSER ASSY WERE FOUND IN THE RT WING FUEL TANK AS SHOWN IN THE ATTACHMENTS. FURTHERMORE, THIS ISN'T AN ISOLATED INCIDENT AS THE SAME FRAGMENTS WERE RECENTLY FOUND IN THE RT WING FUEL TANK OF MSN 190-00092 DURING ITS RECENT MX VISIT, BUT THEIR ORIGINS COULD NOT BE ASCERTAINED AT THAT TIME. NO QUALITY OR DESIGN ISSUE WERE IDENTIFIED IN THE ANALYZED PARTS AND THE INVESTIGATION WAS CLOSED DUE NO REPORTED NEW EVENTS. BE AWARE THAT INADEQUATE FUEL TRUCK PRESSURE (TOO HIGH) WILL DAMAGE THE DIFFUSERS. MFG RECOMMENDS TO FOLLOW AMM PROCEDURES 12-11-01 AND MAKE SURE REFUELING PRESSURE DOES NOT EXCEEDS 50 PSIG. IT WOULD BE EXPECTED TO HAVE FUEL IMBALANCES DURING REFUELING PROCESS. MFG RECOMMENDS TO FOLLOW AMM PROCEDURES 12-11-01 AND MAKE SURE REFUELING PRESSURE DOES NOT EXCEEDS 50 PSIG.

(CAN) ON APPROACH LANDING GEAR LEVER SELECTED DOWN. EICAS MESSAGE " BRK CTRL FAULT" FOLLOWED BY LT MLG SHOWED RED AND NOT DOWN AND LOCKED. GEAR RECYCLED SAME RESULT HOWEVER AFTER A FEW SECONDS EICAS MESSAGE WENT OUT AND GOT 3 GREEN GEAR DOWN LIGHTS. LANDING GEAR SYS INSPECTED, LUBE, BLEED AIR FROM UPLock ACTUATOR. LANDING GEAR EXTENSION AND RETRACTION SYS TEST, EMERGENCY EXTENSION SYS TEST CARRIED OUT AS IAW SNL 190-32-0025.

(CAN) DURING ACCOMPLISHMENT OF SCHEDULED JC 3-327N, IT WAS FOUND THAT BOTH LT & RT AFT FLAPS FWD/LWR OPERATING RODS WERE BENT. BOTH ROD ASSY WERE REPLACED. THIS IS A KNOWN PROBLEM WITH THE FLEET (WORLD WIDE). IT IS SUSPECTED THE ICE AND OTHER FOREIGN MATTER ACCUMULATE ON THE L/E OF THE AFT FLAP OR FLAP OVERSPEED CAUSES BENDING OF THE FWD (LWR) ROD ASSY. MFG HAS BEEN ADVISED OF SIMILAR EVENTS OVER THE LAST 2 YEARS.

(CAN) LT AND RT MAIN GEARBAY FIRE DETECTION LOOP SUPPORT STRUCTURE ADRIFT FROM AIRFRAME THREE OUT OF FOUR BONDED STRUCTURE BRACKETS HAVE DISBONDED FROM THE STRUCTURE. THE REMAINING THREE MECHANICALLY FASTENED BRACKETS AFIX THE ENTIRE FIRE DETECTION LOOP SUPPORT TO THE AIRFRAME. THIS CONDITION ALLOWS CONSIDERABLE MOVEMENT OF THE FIRE DETECTION LOOP/SUPPORT ASSY. POSSIBILITY OF DAMAGE DUE TO FATIGUE. STRUCTURE DEPT TECHS APPLIED ADHESIVE TO REBOND SUPPORT ASSY TO AIRFRAME. (TC 20091028002)

(CAN) LH AND RH MAIN GEARBAY FIRE DETECTION LOOP SUPPORT STRUCTURE ADRIFT FROM AIRFRAME ALL FOUR BONDED SUPPORT STRUCTURE BRACKETS HAVE DISBONDED FROM THE AIRFRAME. THE REMAINING 3 MECHANICALLY FASTENED BRACKETS AFIX THE ENTIRE FIRE DETECTION LOOP SUPPORT ASSY TO THE AIRFRAME. THIS CONDITION ALLOWS CONSIDERABLE MOVEMENT OF THE FIRE DETECTION LOOP/SUPPORT ASSY. POSSIBILITY FOR DAMAGE DUE TO FATIGUE. STRUCTURE DEPT TECHS APPLIED ADHESIVE TO REBOND SUPPORT ASSY TO AIRFRAME. (TC 20091028003)

(CAN) LH AND RH MAIN GEARBAY FIRE DETECTION LOOP SUPPORT STRUCTURE ADRIFT FROM AIRFRAME ALL FOUR BONDED SUPPORT STRUCTURE BRACKETS HAVE DISBONDED FROM THE AIRFRAME. THE REMAINING 3 MECHANICALLY FASTENED BRACKETS AFIX THE ENTIRE FIRE DETECTION LOOP SUPPORT ASSY TO THE AIRFRAME. THIS CONDITION ALLOWS CONSIDERABLE MOVEMENT OF THE FIRE DETECTION LOOP/SUPPORT ASSY. POSSIBILITY FOR DAMAGE DUE TO FATIGUE. STRUCTURE DEPT TECHS APPLIED ADHESIVE TO REBOND SUPPORT ASSY TO AIRFRAME. (TC 20091028003)
(CAN) DURING REMOVAL OF THE RT MLG, PITTING CORROSION WAS FOUND ON RETRACT ACTUATOR ATTACHMENT POINT, AFT LUG AFT FACE. ATTACHMENT PIN WAS FOUND CORRODED ALSO.

<table>
<thead>
<tr>
<th>CA091022006</th>
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<th>SKIN</th>
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<tr>
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<td>G120A</td>
<td>AEIO540D4D5</td>
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(CAN) PREPARING FOR A LOCAL TRAINING FLIGHT, THE STUDENT AND INSTRUCTOR RECEIVED TAXI CLEARANCE FOR A RUN-UP FROM GROUND CONTROL. DURING THESE 'BEFORE TAKE-OFF' CHECKS THE STUDENT BELIEVED THAT HE DETECTED A BURNING ODOR. THE INSTRUCTOR COULD NOT DETECT THE ODOR BUT NOTED THAT HE WAS SOMEWHAT CONGESTED AND MIGHT NOT BE ABLE TO DETECT ANYTHING IF A PROBLEM EXISTED. THE DECISION WAS MADE TO CONTACT GROUND CONTROL AND ADVISE THAT THEY SENSED A BURNING ODOR AND TO SHUTDOWN. GROUND CONTROL HAD ARFF RESPOND. THE FIRE-FIGHTERS FOUND NO EVIDENCE OF SMOKE OR ODOR AND RELEASED THE ACFT TO AMO MX TO TOW BACK TO APRON. MX TOWED THE ACFT INTO HANGAR TO FULLY INVESTIGATE SOURCE OF ODOR. THE ENG COMPARTMENT WAS INSPECTED FOR EVIDENCE OF CONTACT THAT MIGHT RESULT IN MELTED INSULATION, ETC. THE ENVIROMENTAL DUCTING AND ELECTRICAL SYS WERE ALSO INSPECTED FOR CONDITIONS THAT MAY HAVE CAUSED A BURNING ODOR. NO POSSIBLE SOURCES WERE OBSERVED. THE ACFT WAS GIVEN A THOROUGH OPS CHECK RUN-UP WITH NO ODOR NOTED. THE ATTENDING AME RELEASED THE ACFT BACK TO SERVICE. GIVEN THAT WE ARE JUST NOW BEGINNING TO SELECT THE HEATERS AS WE COMMENCE OPERATIONS IN COLDER WEATHER, THE STUDENT MAY BE NOTING 'NORMAL' ODORS THAT TEND TO OCCUR FROM TIME TO TIME WITH THE USE OF HEATER MUFF TYPE SYS.

<table>
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<th>LYC</th>
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<tr>
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<td>G120A</td>
<td>AEIO540D4D5</td>
<td>ENGINE</td>
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</table>

(CAN) THE STUDENT AND INSTRUCTOR DEPARTED FOR A LOCAL TRAINING FLIGHT AND NOTICED A SMALL AMOUNT OF ENGINE VIBRATION DURING THE T/O. THE VIBRATION WAS NOTED AGAIN LATER WHEN THEY RETURNED TO THE AIRPORT FOR CIRCUIT PRACTICE. A PRACTICE MISSED APPROACH WAS CONDUCTED AT WHICH TIME THE VIBRATION WAS NOTED DURING THE T/O SEQUENCE AND A VERY BRIEF 'ENGINE-MISS' WAS ALSO NOTED. THE AIRCREW CONTINUED WITH THE CIRCUIT WITH THE ENGINE RUNNING NORMALLY BUT ON THE SUBSEQUENT PRACTICE MISSED APPROACH THE SAME BRIEF 'MISS' OCCURED. THE INSTRUCTOR THEN ELECTED TO ADVISE ATC WITH 'PAN' CALL AND CARRIED OUT A CLOSE CIRCUIT PROCEDURE TO FULL STOP LANDING. THE ACFT WAS MET WITH ARFF CREWS. NO DANGER WAS OBSERVED BY THE FIRE FIGHTERS AND THE INSTRUCTOR ELECTED TO TAXI IN TO APRON. ENGINE SEEMED TO BE RUNNING SMOOTHLY DURING THE TAXI. MX CARRIED OUT OPERATION RUN-UP CHECKS IN AN ATTEMPT TO ISOLATE A SUSPECTED ENGINE IGNITION FAULT TO LT OR RT SIDE. MAGNETO RPM DROP WAS WITHIN SPECIFICATION BUT ENG ROUGHNESS WAS ALSO NOTED BY THE AME WHEN THE ENGINE WAS RAN AT FULL POWER. THE ACFT WAS BROUGHT INTO HANGAR FOR AN INSP OF THE ENG IGNITION COMPONENTS. THE SPARK PLUGS WERE OBSERVED TO BE FOULED AND WERE REPLACED WITH NEW. THE POST INSP ENGINE RUN-UP SHOWED NORMAL OPERATION WITH NO VIBRATION AT FULL PWR. THE ACFT WAS RELEASED AND RETURNED TO SERVICE.

<table>
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<tr>
<th>CA091123004</th>
<th>GROB</th>
<th>LYC</th>
<th>INJECTOR</th>
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<td>G120A</td>
<td>AEIO540D4D5</td>
<td>25766081</td>
<td>FUEL SYSTEM</td>
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(CAN) INSTRUCTOR AND STUDENT WERE ABOUT 15-20MIN INTO A LOCAL TRAINING FLIGHT WHEN SLIGHT ENG VIBRATIONS WERE NOTED DURING PWR CHANGES MADE AROUND 2300 RPM. INSTRUCTOR FOLLOWED ROUGH RUNNING CHECKLIST STEPS IN APPROVED CHECKLIST AND DETERMINED THAT ENG RAN ROUGH ON EITHER MAGNETO. INSTRUCTOR DECLARED AN EMERGENCY AND RETURNED TO AIRPORT AT 5500` ASL IN PREPARATION FOR A POSSIBLE FORCED LANDING. ACFT WAS LANDED WITHOUT INCIDENT. SUBSEQUENT ENG RUN-UP TESTS
CONFIRMED THE ROUGH RUNNING ENGINE. AFTER A THOROUGH IGNITION SYS INSPECTION IT WAS OBSERVED THAT
INJECTOR UNIT WAS WEEPING FUEL IN THE INLET THROAT AREA. EXCESSIVE PLAY ALSO EXISTED AT THE FUEL
MIXTURE ARM OF THE UNIT AND IT WAS DECIDED TO REPLACE THE UNIT. ENG WAS SUCCESSFULLY RAN-UP
POST ADJUSTMENTS AND FOUND TO OPERATE SMOOTHLY. ACFT WAS RELEASED SUBJECT TO HAVING A
SATISFACTORY TEST FLIGHT. ACFT CONTINUED TO OPERATE SMOOTHLY ON THE SUBSEQUENT TEST FLIGHT
AND WAS RELEASED FOR NORMAL FLIGHT TRAINING OPERATIONS.

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<th>CA091027009</th>
<th>GRUMAN</th>
<th>WRIGHT</th>
<th>BOLT</th>
<th>LOOSE</th>
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<tr>
<td>10/23/2009</td>
<td>FIRECAT</td>
<td>982C9HE2</td>
<td>RC2748</td>
<td>ENGINE MOUNT</td>
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(CAN) DURING ANNUAL INSPECTION, THE MAIN ENGINE MOUNT THROUGH BOLTS WERE FOUND TO BE LOSSENED
OFF ACCORDING TO THE WITNESS MARKINGS. ONE BOLT INDICATED LESS THAN 30 FT LBS OF TORQUE, THE
REQUIRED TORQUE VALUE IS 80 FT LBS. ALL 8 BOLTS WERE FOUND LOOSENED. THE BOLTS WERE LOCKWIRED.
THE QEC TSO IS 418.3 HRS. IT APPEARS THAT PERHAPS AN EXCESSIVE AMOUNT OF PAINT ON THE LORD MOUNTS
UNDER THE BOLT HEADS GAVE WAY, CAUSING THE BOLTS TO LOOSEN. ALL OF THE AFFECTED BOLTS
HAVE BEEN REPLACED AND RETORQUED. A FLEET CAMPAIGN HAS BEEN RAISED TOO INSPECT THE REMAINING
QEC’S. CONAIR WILL REPORT THE FINDINGS UPON COMPLETION OF THE CAMPAIGN. (TC 20091027009)

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<th>CA091117003</th>
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<th>LYC</th>
<th>BOLT</th>
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<tr>
<td>10/23/2009</td>
<td>112TCA</td>
<td>TO360C1A6</td>
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<td>NLG ACTUATOR</td>
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(CAN) SELECTED GEAR UP AFTER TAKEOFF AND NOSE GEAR DIDN’T RETRACT: SELECTED GEAR DOWN AND
LANDED WITH 3 GREEN INDICATING UPON INSPECTION OF NOSE GEAR FOUND THE BOLT THAT ATTACHES NOSE GEAR
ACTUATOR TO NOSE GEAR DRAG BRACE SHEARED: INSTALLED NEW BOLT, CARRIED OUT SEVERAL
RETRACTION: ACFT RELEASED TO SERVICE.

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<th>CA091020006</th>
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<th>LYC</th>
<th>LINE</th>
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<tr>
<td>9/2/2009</td>
<td>680FLP</td>
<td>IO720B1B</td>
<td>HYDRAULIC SYS</td>
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(CAN) PILOT DECLARED EMERGENCY UPON DISCOVERING HYD SYS FAILURE AND LANDED. AFTER LANDING, THE
PILOT HAD NO CONTROL OF NOSE WHEEL STEERING OR BRAKES AND ACFT VEERED OFF THE RUNWAY TO RT,
ONTO GRASS AND A DITCH. THE RT MLG BROKE OFF CAUSING CONSIDERABLE DAMAGE TO THE ACFT BUT NO
INJURIES. UPON INSPECTION OF THE HYD SYS BY MX, AN ALUMINUM TUBING WHICH IS PART OF THE HYD SYS PLUMBING
IN THE RT WING WAS FOUND RUPTURED AT THE BEND RADIUS CAUSING LOSS OF HYD PRESSURE AND
ALLOWING SYS FLUID TO LEAK OVERBOARD.

<table>
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<tr>
<th>CA091023003</th>
<th>GULSTM</th>
<th>TRANSMITTER</th>
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<td>10/20/2009</td>
<td>681</td>
<td>EA1502C1</td>
<td>TRIM SYSTEM</td>
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(CAN) DEPARTED (IFR) & SHORTLY AFTER TAKEOFF, PILOT REPORTED AN "ELEVATOR PROBLEM" & DECLARED AN
EMERGENCY. ADVISED CENTRE RETURNING TO AIRPORT. ARFF CALLED OUT TO BE ON STANDBY AS THE ACFT
ARRIVED SAFELY. APPROXIMATELY 1 HR LATER, SAME ACFT WAS TAKING OFF & PILOT REJECTED TAKEOFF,
CITING AN EQUIPMENT PROBLEM & TAXIED BACK TO HANGAR. ORIGINALLY THOUGHT TO BE AN AUTOPILOT
PROBLEM, CREW RETURNED TO AIRPORT, TESTED AUTOPILOT & ATTEMPTED A SECOND TAKEOFF WITH SAME
RESULT. MX FOUND TRIM POSITION TRANSMITTER WINDING & WIPER TO HAVE FAILED CAUSING ERRONEOUS
INDICATION IN COCKPIT. TAKEOFF ATTEMPTED WITH WHAT WAS THOUGHT TO BE A CORRECT TRIM SETTING
WHEN IN FACT TRIM SETTING DID NOT MATCH ACTUAL TRIM POSITION. TRANSMITTER APPEARED TO BE
ORIGINAL EQUIPMENT. MX REPLACED TRANSMITTER & TESTED THE TRIM SYSTEM. (TC 20091023003)

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<td>12/17/2009</td>
<td>G100</td>
<td>TFE73140</td>
<td>230650181</td>
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</table>

STARTER GENERATOR FAILED, NO INDICATION OF VOLTAGE PRESENT. PN 23065-018-1, SN 98004. REMOVED AND
REPLACED STARTER GENERATOR, SYS OPS CHECK GOOD IAW AMM 24-30-02. ACFT HAD A PREVIOUS FAILURE OF
THE HYD SUCTION LINE WHICH HAD RUPTURED. DETAIL REPORT ON THAT PART SENT ON SEPARATE REPORT.

<table>
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<th>LEAKING</th>
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<td>G100</td>
<td>TFE73140</td>
<td>4018301</td>
<td>HYD SYSTEM</td>
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DISCOVERED A LARGE AMOUNT OF HYDRAULIC FLUID HAD LEAKED FROM THE RT ENG. FURTHER INVESTIGATION
SHOWED A LEAK COMING FROM THE RT HYD PUMP CASE DRAIN INDICATING THAT THE HYD PUMP HAD
INTERNALLY FAILED. REMOVED AND REPLACED HYD PUMP, PN 4018301, SN AL212AB IAW AMM 29-10-04, SERVICED HYD IAW AMM 12-10-29, BLEED PERFORMED IAW AMM 29-10-04, OPS CHECKS GOOD IAW AMM 29-10-00.

CRACKS IN NLG TRUNNION BELOW ACTUATOR ATTACH POINT. PART WAS REPLACED ON ACFT AND SENT TO MFG FOR EVALUATION.

2009FA0001017
GULSTM
TRUNNION
CRACKED
10/29/2009
GIV
1218FAUL6301101
NLG WW
LIFE RAFT MISINSTALLED
UIT WAS RECEIVED FROM CUSTOMER WITH A REQUEST TO O/H. ON INITIAL INSPECTION, IT WAS EVIDENT THAT THE LIFE RAFT ASSY WAS INCORRECTLY REPACKED AT THE PREVIOUS OVERHAUL. THE FOLLOWING WAS FOUND: MOORING LINE AND RIPCORD WERE ROUTED UNDERNEATH THE LACING FOR THE VALISE, BEFORE BEING POSITIONED UNDER THE PAINTER COVER. THE CMM CLEARLY SHOWS THAT THE MOORING LINE AND RIPCORD ARE NOT ROUTED UNDER THE VALISE LACING, BUT GO DIRECTLY UNDER THE PAINTER COVER. POTENTIAL EFFECT IF THE UNIT HAD BEEN USED IN SERVICE IS THAT THE LIFE RAFT MAY NOT HAVE INFLATED. (K)

2009FA0000984
GULSTM
O-RING
DISINTEGRATED
10/28/2009
GIVXG450
SIGHT GLASS
SIGHT GLASS O-RING IN HYD RESERVOIR APPEARS TO BE OF A NON COMPATIBLE MATERIAL WITH HYD FLUID. CAUSING O-RING TO DISINTEGRATE LEAVING PIECES OF O-RING MATERIAL IN RESERVOIR AND CAUSING SIGHT GLASS TO LEAK. THIS COULD CAUSE HYD SYS CONTAMINATION OR LOSS OF HYD POWER. (K)

2009FA0000982
GULSTM
SHAWAERO
O-RING
DISINTEGRATED
10/28/2009
GIVXG450
HYD RESERVOIR
SIGHT GLASS O-RING IN HYD RESERVOIR APPEARS TO BE OF A NON COMPATIBLE MATERIAL WITH SKYDROL. CAUSING O-RING TO DISINTEGRATE LEAVING PIECES OF O-RING MATERIAL IN RESERVOIR AND CAUSING SIGHT GLASS TO LEAK. THIS COULD CAUSE HYD SYS CONTAMINATION OR LOSS OF HYD POWER. (K)


CA091006001
LEAR
NUT
CRACKED
10/2/2009
35A
AN622896D
MLG ACTUATOR
(CAN) CREW NOTICED HYD FLUID ON THE SIDE OF FUSELAGE WILL REMOVING CARGO FROM AFT CARGO POD. INVESTIGATION OF THE ACFT FOUND A CRACKED BACK UP NUT ON THE LT MAIN GEAR ACTUATOR RETRACTION FITTING. BACK UP NUT REPLACED, SYS FLUID REPLACED AND GEAR SWINGS COMPLETED IAW AMM 12, 32.

CA091123005
LEAR
GARRTT
SKIN
CRACKED
11/20/2009
35A
TFE73122B
FUSELAGE
(CAN) DURING TROUBLESHOOTING OF AN UNRELATED DOOR SNAG, A CRACK WAS DISCOVERED ON THE
FUSELAGE SKIN STARTING AT THE LWR FWD CORNER OF MAIN ENTRY DOOR CUTOUT. USING A 10X LOUPE, THE CRACK WAS MEASURED AT 0.270". EDDY CURRENT AND FPI INSPECTION CARRIED OUT WHICH DETERMINED CRACK TO BE 0.342" IN LENGTH. MFG WAS CONTACTED AND DREW A REPAIR SCHEME USING A 0.025" STAINLESS STEEL DOUBLER. REPAIR YET TO BE ACCOMPLISHED.

**2009FA0000990**  LEAR   VALVE   MISALIGNED  
11/24/2009  35LEAR  OXYGEN SYSTEM  

DURING THE ENROUTE CLIMB, PERFORMED THE 10,000 FOOT PORTION OF CLIMB CHECKLIST. WHEN TESTING THE O2 MASKS, DISCOVERED THAT NEITHER CREW O2 MASK HAD OXYGEN FLOW. DUE TO LOSS OF THE SUPPLEMENTAL OXYGEN SYSTEM, ELECTED TO RETURN TO BASE. LANDED WITHOUT INCIDENT. UPON LANDING, THE O2 VALVE IN THE NOSE OF THE ACFT WAS EXAMINED AND FOUND TO BE SLIGHTLY OUT OF THE "ON" DETENT.

**CA091123001**  LEAR   GARRETT   HOSE   LEAKING  
11/20/2009  36A  TFE73121C  230700101  HYD SYSTEM  

(CAN) UPON DESCENT, PILOTS NOTICED THE HYD PRESSURE WAS AT 0. THEY DECLARED AN EMERGENCY, EXTENDED GEAR USING EMERGENCY AIR BOTTLE AND MADE A SUCCESSFUL LANDING. THERE WAS ENOUGH BRAKING PRESSURE USING STANDBY HYD PUMP. EMERGENCY BRAKES WERE NOT USED. DURING INSPECTION, IT WAS FOUND THAT AIRFRAME SIDE OF NOSE GEAR RETRACT HOSE, PN 2307006-101, WAS LOOSE, CAUSING THE LOSS OF HYD FLUID. HOSE WAS REMOVED AND INSPECTED, NO DEFECT WAS FOUND. HOSE WAS RE-INSTALLED AND TIGHTENED, LANDIN GEAR SYSTEM BLEED OF ALL AIR AND OPS CHECKS CARRIED OUT. THE GEAR WAS CYCLED MULTIPLE TIMES, GEAR POSITIONED IN THE UP AND DOWN POSITIONS FOR 2 HOURS EACH AT FULL HYD PRESSURE WITH NO INDICATION OF LEAKS. HYD SYS SERVICED, EMERGENCY AIR SERVICED AND ENG DRIVEN HYD PUMPS BLED AND OPS CHECKS CARRIED OUT SERVICEABLE. ACFT RETURNED TO SERVICE.

**2009FA0000972**  LEAR   MOUNT BRACKET   UNKNOWN  
9/30/2009  60LEAR  2625031018  TE FLAP  

WORK PERFORMED: 6,000 HR TIME CHANGE ON FLAP SECTORS AND SB 60-27-29 R2 INSTALLATION OF LT AND RT IMPROVED FLAP SECTOR MOUNTING BRACKETS. DURING RIGGING CHECKS OF FLAP SYS. FOUND SECTORS TO BE CONTACTING SPAR 8 ON BOTH WINGS. MM 27-50-00, PAGE 202 REQUIRES .030-.040" CLEARANCE BETWEEN SECTORS AND SPAR 8. CONTACTED MFG AND RECEIVED APPROVAL TO BLEND A MAX OF .040" FROM SECTORS TO OBTAIN PROPER CLEARANCES.

**2009FA0000971**  LEAR   FLAP   OBSTRUCTED  
9/30/2009  60LEAR  2625031117  TE FLAPS  

WORK PERFORMED: 6,000 HR TIME CHANGE ON FLAP SECTORS AND SB 60-27-29 R2 INSTALLATION OF LT AND RT IMPROVED FLAP SECTOR MOUNTING BRACKETS. DURING RIGGING CHECKS OF FLAP SYS. FOUND SECTORS TO BE CONTACTING SPAR 8 ON BOTH WINGS. MM 27-50-00, PAGE 202 REQUIRES .030-.040" CLEARANCE BETWEEN SECTORS AND SPAR 8. CONTACTED MFG AND RECEIVED APPROVAL TO BLEND A MAX OF .040" FROM SECTORS TO OBTAIN PROPER CLEARANCES.

**CA091007007**  LKHEED   ALLSN   BEAM   CRACKED  
10/4/2009  382G  501D22A  331386961  MLG WW  

(CAN) CRACK WAS FOUND ON VISUAL INSPECTION OF MLG WHEEL WELL INITIAL REPORT CRACK LOOKED 2 INCHES LONG FURTHER INVESTIGATION SHOWED CRACK MIGRATING TO MLG TRACK. REMOVAL PROGRESS OF BEAM SHOWED CRACK ALMOST THROUGH THE BEAM (.200") OF MATERIAL NOT CRACKED.

**2009FA0001032**  MOONEY   NUT   LOOSE  
9/30/2009  M20M  AN363428  MLG  

DURING ANNUAL INSPECTION THE ACFT WAS JACKED AND LANDING GEAR TESTED. EMERGENCY EXTENSION SYSTEM TESTED. FOUND LOOSE NUT. FINGER TIGHT ONLY AT PULLEY WITHIN BELLY AREA FOR EMERGENCY EXTENSION SYSTEM PULL CABLE. ANA-7A BOLT, AN960-10L WASHER AND AN363-428 NUT. TORQUE AND ALSO FILLED OUT DEFECT REPORT. NO TOOL MARKS. THIS LOOKS TO ME TO BE A FACTORY OVERSIGHT BECAUSE THIS AREA IS VERY HARD TO SEE AND IT LOOKS LIKE IT WAS JUST FLAT OUT MISSED AT ACFT BUILD. NUT TIGHTENED. NO OTHER FAULTS NOTED. NO OPERATION PROBLEM.
CA091006002  MTSBSI  GARRTT  MOTOR  INTERMITTENT
10/2/2009  MU2B60  TPE33110  A5C  MLG ACTUATOR
(CAN) AFTER TAKEOFF ON CLIMB OUT GEAR UNSAFE LIGHT WAS STILL ON. ACFT RETURNED TO AIRPORT AND LANDED UNEVENTFULLY. AFTER LANDING THE GEAR UNSAFE LIGHT WENT OUT. A FERRY FLIGHT WAS COMPLETED BACK TO BASE WITH GEAR DOWN. THE ACTUATOR/MOTOR FOR THE FWD GEAR DOORS WAS REPLACED.

2009FA0001019  PIAGIO  PWA  BLOWER  FAILED
PILOT REPORTED RUBBNG SOUND AND ODOR OF BURNING ELECTRICAL COMPONENTS WITH COCKPIT FAN ON. FOUND FAN CASE PARTIALLY MELTED DUE TO OVERHEATING RESISTOR WHICH DETACHED FROM THE CASE. DAMAGES LIMITED TO THE BLOWER ASSY, NO FURTHER DAMAGES FOUND ON THE ACFT.

CA091118008  PILATS  PWA  DEICE SYSTEM  CRACKED
11/13/2009  PC1245  PT6A67B  5302412140  INTAKE
(CAN) BLACK EXAUST STAIN WAS OBSERVED IN THE INTAKE COWL. REMOVAL OF THE DEICE LIP REVEALED CRACKS ON THE BACK SIDE. DE-ICE LIP REPLACED WITH NEW.

5APR577Y18  PILATS  PWA  DRAG LINK  CRACKED
12/9/2009  PC1245  PT6A67B  5322012140  NLG

5APR577Y19  PILATS  PWA  BRAKE DISC  BROKEN
12/9/2009  PC1245  PT6A67B  244755  MLG
DURING A LINE CHECK DISCOVERED THE OTBD DISC OF THE LT BRAKE BROKEN INTO 2 PIECES. REMOVED AND REPLACED BRAKE ASSY IAW MM.

5APR577Y17  PILATS  PWA  BFGOODRICH  BRAKE DISC  BROKEN
11/22/2009  PC1247  PT6A67B  244755  ZONE 700
DURING A 100 HOUR INSPECTION DISCOVERED THE RIGHT MAIN LANDING GEAR BRAKE ASSEMBLY OUTBOARD DISC WAS BROKEN. REMOVED BRAKE ASSEMBLY AND REPLACED WITH AN OVERHAULED BRAKE ASSEMBLY IN ACCORDANCE WITH MANUFACTURERS MAINTENANCE INSTRUCTIONS.

5APR577Y15  PILATS  PWA  BFGOODRICH  BRAKE DISC  BROKEN
11/11/2009  PC1247  PT6A67B  244755  MLG
WHILE REMOVING THE LEFT MAIN WHEEL ASSEMBLY FOR A FLAT TIRE DURING AN INCIDENT IN BDR, DISCOVERED THE OUTBOARD BRAKE DISC WAS BROKEN. REMOVED BRAKE ASSEMBLY, SENT TO OVERHAUL AND REINSTALLED IN ACCORDANCE WITH MAINTENANCE MANUAL INSTRUCTIONS AFTER OVERHAUL.

5APR577Y16  PILATS  PWA  BFGOODRICH  BRAKE DISC  BROKEN
11/11/2009  PC1247  PT6A67B  244755  MLG
DURING A 100 HOUR INSPECTION DISCOVERED THE RIGHT MAIN LANDING GEAR BRAKE OUTBOARD DISC WAS BROKEN. REPLACED RIGHT BRAKE ASSEMBLY WITH AN OVERHAULED BRAKE ASSEMBLY IN ACCORDANCE WITH MANUFACTURERS MAINTENANCE INSTRUCTIONS.

5APR577Y20  PILATS  PWA  BRAKE DISC  BROKEN
12/19/2009  PC1247  PT6A67B  244755  LT MAIN GEAR
DURING A LINE CHECK THE LT BRAKE OTBD DISC WAS DISCOVERED TO BE BROKEN INTO 2 PIECES. REMOVED AND REPLACED BRAKE ASSY IAW MM.

5APR577Y21  PILATS  PWA  BOOT  SPLIT
DURING FLIGHT, CREW REPORTED AN AIRFRAME DEICE BOOT CAWS ANNUNCIATION. UPON INVESTIGATION FOUND RT HORIZONTAL STABILIZER DEICE BOOT WAS SPLIT ALONG THE UPPER AFT CELL FWD SEEM, 58 INCHES IN LENGTH, STARTING AT THE INBD SIDE OF THE DEICE BOOT. PN 959.89.01.036, MFG PN 27S-7D5221-14, SN MALP810, REMOVED AND REPLACED DEICE BOOT IAW MM.

**5APR577Y22**
- PILATS
- PWA
- BFGOODRICH
- BRAKE DISC
- BROKEN

DURING A 100 HOUR INSP, THE LT BRAKE OTBD DISC WAS DISCOVERED TO BE CRACKED. REMOVED AND REPLACED THE LT BRAKE ASSY IAW MFG INSTRUCTIONS.

**2009FA0000976**
- PIPER
- LYC
- CYLINDER
- WORN


**CA091105002**
- PIPER
- LYC
- CONTROL CABLE
- FRAYED

(CAN) DURING AN INSP WHICH INCLUDED REMOVING THE FLOOR, THE AME NOTICED A SHINY SPOT ON THE RT AILERON CABLE WHERE IT PASSES A PULLY AND MEETS THE FUSELAGE. UPON FURTHER INVESTIGATION IT WAS EVIDENT THAT THE CABLE WAS FRAYED. THERE WERE SEVERAL BROKEN STRANDS OF WIRE. THE CABLE WAS REMOVED, AND NEW CABLES WERE ORDERED FOR INSTALLATION ON BOTH SIDES.

**CA091117001**
- PIPER
- LYC
- CONDUIT
- WORN

(CAN) RT MAIN RETACTION PUSH PULL CONDUIT AT LANDING GEAR END WAS WORN BETWEEN INNER AND OUTER SLEEVES. SEPARATION OF THE SLEEVES DID NOT ALLOW THE GEAR TO EXTEND FULLY DOWN AND CAUSED ACFT TO VEER ONE WAY UPON LANDING.

**CA091109003**
- PIPER
- LYC
- STRUCTURE
- CRACKED

(CAN) AN INSP WAS CARRIED OUT ON THE STABILATOR HORN DUE TO REPORTS OF CRACKING ON OTHER ACFT. NO CRACKS WERE VISIBLE FROM THE OUTSIDE, AND IT WAS NECESSARY TO REMOVE STABILATOR TORQUE TUBE PN20203-02 FROM HORN IN ORDER TO CHECK FOR CRACKS INSIDE HORN. THIS REQUIRES REMOVAL OF 2 STABILATOR HALVES, AND REMOVAL OF TORQUE TUBE AND HORN ASSY FROM ACFT. CRACKS WERE NOT EASILY VISIBLE, BUT UPON CLOSE EXAMINATION WITH MAGNIFYING GLASS, AND LATER, WITH DYE PENETRANT, A CRACK WAS FOUND RUNNING FROM EACH ATTACH THRU BOLT HOLE TO THE BALANCE TUBE HOLE ON THE FWD SIDE OF THE HORN. IT IS A CAST ALUMINUM PART. OTHER SIMILAR CRACKS HAVE BEEN FOUND ON OTHER ACFT AND HAVE BEEN ATTRIBUTED TO STRESS CORROSION CRACKING.

**CA091119006**
- PIPER
- LYC
- HOUSING
- BROKEN
11/19/2009 PA24260 IO540D4A5 MAGNETO
(CAN) ENG WAS RECEIVED FOR PROP STRIKE INSPE. MAG WAS INSPECTED AND 4 OUT OF THE 5 HSG SCREWS WERE MISSING. MAG WAS DISASSEMBLED AND ONE OF 3 ALIGNMENT TABS IN THE DISTRIBUTOR HSG WAS BROKEN OFF. THIS CAUSED HSGS TO SHUFFLE AND LOOSEN SCREWS. SPOT WHERE THE TAB USED TO BE APPEARED TO HAVE BEEN GLASS BEADED AND ALODINED ALONG WITH THE REST OF HSG AT O/H. BROKEN PIECE WAS NOT FOUND IN THE MAG AT ALL. ALSO THE WRONG PN OF MAG DRIVE HAD BEEN INSTALLED AND IN ORDER TO TIME THE MAG THE INSTALLER HAD FILED THE MOUNTING SLOTS LONGER ON THE MAGNETO HSG TO ALLOW FOR MORE MOVEMENT IN ADJUSTING THE MAG TO ENG TIMING. SINCE BOTH HSGS WERE DAMAGED, MAG WAS FOUND TO BE BEYOND ECONOMIC REPAIR AND EXCHANGED.

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(CAN) DURING AN ANNUAL INSPE, VALVE COVERS WERE REMOVED TO INSPECT VALVE GUIDE WEAR, NR 3 AND NR 4 EXH VALVE GUIDES WERE WORN, NR 3 BEING THE WORST, WAS REMOVED FIRST. ON REMOVAL OF NR 3 CYL, NR 3 PISTON WAS DISCOVERED CRACKED AND MISSING A PIECE AT THE RT UPPER PISTON BOSS ON THE SKIRT.
AFTER INSP OF THE PISTON, ALL CYLINDERS WERE REMOVED AND NR 2 PISTON WAS FOUND CRACKED IN THE SAME LOCATION. ALL PISTONS AND CYLINDERS WERE REPLACED WITH NEW UNITS.

PILOT AND COPILOT SEAT BACK SUPPORTS (ITEMS 50 AND 50A, FIG 34, PG 1F14 OF PIPER PN 761-898) WERE FOUND CRACKED AT SEAT CLIP (ITEM 52) DURING 100 HR INSP. IT IS SUSPECTED THAT THE CAUSE OF THE DEFECT IS INDIVIDUALS LEANING AGAINST THE SEAT BACKS TO AID IN ENTRY TO THE COCKPIT, CAUSING THE SEAT CLIPS (ITEM 52) TO CRACK IN HALF AND OVER TIME, THE SUPPORTS (ITEMS 50 AND 50A) TO BEGIN CRACKING. IT IS RECOMMENDED THAT DOUBLERS BE INSTALLED ON THE SUPPORTS, AT THE AFFECTED AREA USING .040” 2024T3 ALUMINUM SHEET, 8 EA MS20470AD4-4 RIVETS, AND 4 EA CR3243-4-4 CHERRY RIVETS TO INSTALL SEAT CLIP OVER NEW DOUBLER. (K)

ALL ACFT RANGE FROM 1500 HRS TT TO 4000 HRS TT. HAVE NOW HAD TO START REPLACING WHEEL ASSY’S ON MANY ACFT DUE TO THE TIRES WEARING A GROOVE INTO THE OUTER RIM OF THE WHEEL HALF.

(CAN) THIS PN OF CYL ALREADY HAS AN AD AGAINST IT (AD 2008-19-05) THIS CYLINDER IS S/N NOT APPLICABLE ACCORDING TO THE AD. THE CYLINDER HEAD POPPED RIGHT OFF OF THE CYLINDER IN NORMAL CRUISE CONDITIONS. THIS INCIDENT LOOKS A LOT LIKE WHAT IS DESCRIBED IN THE AD BUT THE CYLINDER, S/N IS 1933, SN BEYOND APPLICABILITY IN THE AD.

IN THE PROCESS OF PERFORMING AN ANNUAL INSP, A FATIGUE CRACK INDICATION WAS DETECTED ON LT WING IN THE UPPER MAIN SPAR WEB JUST BELOW THE SPAR CAP RUNNING SPANWISE THE ENTIRE LENGTH OF THE EXTRUDED SPAR. REMOVAL OF LT MAIN TANK EASED INSP OF FULL LENGTH OF SPAR. A LOGBOOK REVIEW SHOWED NO PREVIOUS DAMAGE REPORTS OR REPAIRS TO THIS WING.

FIND ELECTRIC TRIM INOPERATIVE. TROUBLESHOOT SYS AND FOUND SHORTED WIRING AT TRIM THUMB SWITCH ON CONTROL WHEEL. REPAIRED WIRING AND OPS CK OK.

TIRE WENT FLAT ON "PUSH BACK". TIRE WAS OK BUT CHANGED. TUBE LEAKIN ON SIDEWALL NEAR STEM. (K)

UPON DESCENT, HAD NO NOSE GEAR DOWN INDICATION. APPARENTLY CYCLED GEAR SEVERAL TIMES AND USED THE EMERGENCY DROP PROCEDURES. ASKED TOWER FOR A VISUAL OF ALL 3 GEARS. LANDED WITH NO GEAR COLLAPSE. UPON INSP OF NOSE GEAR, FOUND DRAG LINK ASSY REAR RT LEG BROKE IN HALF JUST UNDER THE ACTUATOR ATTACHMENT BLOCK. PN 76426-03.

ENGINE DRIVEN FUEL PUMP FAILURE. PUMP FAILED WITH 106.7 HRS ON IT. (K)
ENGINE DRIVEN FUEL PUMP FAILURE. PUMP FAILED WITH 77.7 HRS ON IT.

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ENGINE DRIVEN FUEL PUMP FAILURE. PUMP FAILED WITH 39.7 HRS ON IT. (K)

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(CAN) STARTER, INTERMITTENT CRANKING.

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(CAN) WHILE IN THE CRUISE PORTION OF FLIGHT, DETECTED A SLIGHT VIBRATION, YAWING OF ACFT AND DROP IN MANIFOLD PRESSURE ON RT ENG. AFTER INCREASING PROP RPM TO HELP REMOVE SUSPECTED PROP ICING THEY WERE UNABLE TO MAINTAIN MANIFOLD PRESSURE WHICH RESULTED IN AN IN-FLIGHT SHUTDOWN OF RT ENG WHILE APPROACHING DESTINATION. A SUCCESSFUL SINGLE ENG LANDING WAS COMPLETED AND AIRPLANE WAS TOWED INTO HANGAR. IT APPEARS RT ENG DAMAGED THE FOLLOWING, NR 4 CYL RETAINING STUDS HAD ALL SHEARED NR4 CYL HAD DETACHED FROM THE CRANKCASE, ONE Nr 4 CONNECTING ROD BOLT HAD SHEARED AND THE CONNECTING ROD HAD DETACHED FROM THE CRANKSHAFT ASSOCIATED NR 4 INLET TUBE, VALVE PUSH ROD TUBES AND EXHAUST PIPE HAD ALL DETACHED FROM ENG ONE CAM FOLLOWER HAD DROPPED INTO COWLING INTERNAL STRUCTURE OF CRANKCASE WERE BADLY DAMAGED AND FRACTURED NR3 CYL BASE WAS DISTORTED/FRACTURED CRANKSHAFT NR4 BRG SURFACE HAS IMPACT DAMAGE. CYL HAD DETACHED FROM THE CRANKCASE AND THEN PISTON HAD BEEN PULLED FROM THE CYL ON DOWN STROKE. PISTON DROPPED AND THE SKIRT LEFT WITNESS MARKS IN CRANKCASE WHERE IT HAD JAMMED. THIS SUDDEN STOPPAGE OF PISTON RESULTED IN FAILURE OF A CONNECTING ROD BOLT WHICH ALLOWED THE CAP TO OPEN AND FREE CONNECTING ROD FROM THE CRANKSHAFT. DURING THIS TIME OPPOSITE CYL (NR3) WAS HIT WITHIN THE CRANKCASE, DISTORTING THE BASE OF CYL SO IT COULD NOT BE REMOVED ON STRIP DOWN.

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<td>TIO540J2BD</td>
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(CAN) PILOTS REPORT LANDING GEAR RED UNSAFE LIGHT STAYS ON OCCASIONALLY AFTER GEAR RETRACTION AND RECYCLE. MX INSPI FOUND RT MLG UPLOCK HOOK AFT SUPPORT BRACKET PN 40616-002 CRACKED. CRACK EXTENDED 1" FROM INBD EDGE OF BRACKET TOWARDS OTBD EDGE OF BRACKET, ALONG AND JUST ABOVE THE UPLOCK HOOK PIVOT BOLT HOLE RADIUS. THIS ALLOWS UPLOCK HOOK ENOUGH PLAY AND MOVEMENT TO MISS MLG UPLOCK ROLLER DURING RETRACTION. SUPPORT BRACKET WAS REPLACED AND LG SWING CHECKED OPS NOW NORMAL.

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<td>O540E4B5</td>
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(CAN) THE FLOAT, WHICH IS ATTACHED TO THE WIPER ARM OF THE FUEL SENDER, HAD DETERIORATED TO THE
POINT OF FALLING OFF OF THE ARM.

10/7/2009  CA091008002  PIPER  LYC  CLEVELANDPNU  BOLT  AN536A  MNG WHEEL  SHEARED  (CAN) WHILE TOWING THE ACFT, GROUND CREW NOTICED AN ABNORMAL SOUND COMMING FROM THE LT MAIN WHEEL. UPON INSPECTION BY MX STAFF, THE LT WHEEL WAS FOUND TO HAVE 2 OUT OF 3 WHEEL-HALF BOLTS BROKEN. BOLTS WERE SHEARED AT THE HEAD. WHEEL ASSY WAS REMOVED. GEAR LEG AND AXLE INSPECTED, NO FAULTS FOUND. WHEEL ASSY REPLACED WITH BUILT UP SERVICEABLE ASSY. RT WHEEL REMOVED AND DISASSEMBLED TO INSPECT BOLT CONDITION, NO FURTHER FAULTS FOUND.

1/9/2009  CA090112006  PIPER  LYC  LIO360C1E6  STUD  BROKEN  CRANKCASE  (CAN) ON ROUTINE INSPECTION, NR 4 CYL UPPER CTR HOLD DOWN STUD WAS FOUND SNAPPED OFF. THE CYL WAS REMOVED AND A WASHER WAS FOUND IN BETWEEN CYL AND CRANKCASE. THIS CAUSED CYL TO BE ON SLIGHTLY ANGLED CAUSING STRESS ON THE HOLD DOWN STUDS CAUSING ONE TO BREAK. ENGINE WAS REMOVED FOR INSPECTION AND/or REPAIR. CRANK CASE HAD DAMAGE WHERE THE WASHER CONTACTED THE CASE. CYLINDERS HAD NOT BEEN REMOVED SINCE LAST O/H. ABOUT 1550 AIRTIME HOURS AGO.

9/30/2009  CA091027003  PIPER  CONT  LTSIO360EB  COUPLING  FAILED  ALTERNATOR DRIVE  (CAN) ON FINAL APPROACH FOR LANDING IN IFR CONDITIONS, THE PILOT LOST ALL ELECTRICAL POWER. PILOT INITIATED A “GO AROUND” AND LANDED AT A VFR AIRPORT NEARBY. (TC 20091027003)

11/19/2009  2009FA0000964  PIPER  BOLT  UNDER TORQUED  MLG  DURING SCHEDULED INSPECTION, THE STARBOARD MLG FITTING ATTACH BOLTS WERE FOUND UNDER-TORQUED. UPON REMOVAL OF FITTING FOR HIDDEN DAMAGE INSPECTION THE WING SPAR WEB AND THE MATING FACE OF THE GEAR FITTING SHOWED EVIDENCE OF FRETTING CORROSION AROUND MOUNTING HOLES. CORROSION PITS WERE FOUND TO BE .012 ON SPAR. SPAR CURRENTLY UNDER EVALUATION FOR REPAIR, FITTING IS SCRAP.

11/19/2009  2009FA0000965  PIPER  THROTTLE CABLE  FROZEN  RT ENGINE  DURING CRUISE FLIGHT CREW DISCOVERED RT THROTTLE STUCK. ACFT RETURNED TO BASE LANDED WITH OUT INCIDENT. UPON DISASSEMBLE THE THROTTLE CABLE WAS FOUND TO BE FROZEN AT THE ENG SIDE BETWEEN SHAFT AND THE PROTECTIVE SHEATH. THIS HAS HAPPENED ON OTHER ACFT OPERATED BY THIS FLIGHT SCHOOL AND HAS BEEN REPORTED TO THE MFG.

12/14/2009  2009FA0001040  PIPER  BRAKE CABLE  MISINSTALLED  COCKPIT  CO-PILOTS LT Ruddler pedal became wedged behind the emergency brake cable, and pilot was unable to taxi the ACFT.

10/26/2009  2009FA0001007  PIPER  DOWNLOCK SWITCH  BROKEN  MLG  LT MLG WIRING HARNESS WIRES ON DOWNLOCK SWITCH BROKE AT SWITCH CAUSING AN INDICATION OF UNSAFE GEAR.

10/10/2009  2009FA0001008  PIPER  WIRE HARNESS  BROKEN  DOWNLOCK SWITCH  LT MLG WIRING HARNESS WIRES ON DOWNLOCK SWITCH BROKE AT SWITCH CAUSING AN INDICATION OF UNSAFE GEAR.

10/10/2009  2009FA0001003  PIPER  WIRE HARNESS  BROKEN
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<td>12/1/2009</td>
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<tr>
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<td>Downlock switch</td>
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<td>10/28/2009</td>
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<td>Downlock switch</td>
<td></td>
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<td>12/1/2009</td>
<td>PA44180</td>
<td>Downlock switch</td>
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UNSAFE GEAR.

<table>
<thead>
<tr>
<th>Date</th>
<th>Aircraft</th>
<th>Serial</th>
<th>Issue</th>
<th>Code</th>
<th>Description</th>
<th>Part Number</th>
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<tbody>
<tr>
<td>11/30/2009</td>
<td>PIPER</td>
<td>LO360A1H6</td>
<td>CONTROL CABLE FROZEN</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10/2/2009</td>
<td>PIPER</td>
<td>LO360A1H6</td>
<td>BOLT CORRODED</td>
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<td>TRUNNION</td>
<td></td>
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<td>11/9/2009</td>
<td>PIPER</td>
<td>LO360A1H6</td>
<td>TURNBUCKLE LOOSE</td>
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<td>Rudder Control</td>
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<td>10/28/2009</td>
<td>PIPER</td>
<td>LO360A1H6</td>
<td>ELT MALFUNCTIONED</td>
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<td>ELT1104</td>
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<td>4/8/2009</td>
<td>PIPER</td>
<td>LO360E1A6</td>
<td>CRANKCASE CRACKED</td>
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<td>Engine</td>
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<tr>
<td>12/14/2009</td>
<td>PIPER</td>
<td>O360A1H6</td>
<td>BRAKE CABLE MISINSTALLED</td>
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<td>Cabin</td>
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<td>12/15/2009</td>
<td>PIPER</td>
<td>O360A1H6</td>
<td>JANITROL PRESSURE SWITCH STUCK</td>
<td></td>
<td>Heater</td>
<td></td>
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<td>9/30/2009</td>
<td>PROPJT</td>
<td>PW306A</td>
<td>TRIM TAB CRACKED</td>
<td></td>
<td>Rudder</td>
<td></td>
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</table>
THIS WAS FOUND DURING SCHEDULE MX ON THE ACFT WHILE CARRYING OUT (A) 300 HR CHECK. THE MFG WAS NOTIFIED. THE PART WAS ORDERED AND REPLACED BEFORE THE ACFT WAS RETURNED TO SERVICE.

<table>
<thead>
<tr>
<th>CA091002006</th>
<th>RAYTHN</th>
<th>WILINT</th>
<th>LINE</th>
<th>LEAKING</th>
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<tbody>
<tr>
<td>9/30/2009</td>
<td>390</td>
<td>FJ442A</td>
<td>A91941</td>
<td>LT ENGINE FUEL</td>
</tr>
</tbody>
</table>

(CAN) PILOT NOTED FUEL LEAKING OUT OF LT ENG LWR COWLING DURING WALKAROUND INSPECTION. REMOVED COWLING, CLEANED FUEL RESIDUE FROM LT ENG ASSY, THEN ACFT GROUND RUN FOR LEAK CHECK. DURING LEAK CHECK THE AME OBSERVED A STEADY, HIGH PRESSURE FUEL SPRAY EMANATING FROM THE FUEL LINE THAT ATTACHES FROM THE ENG PYLON TO THE HYDROMECHANICAL UNIT. THE FUEL SPRAY WAS CONTACTING THE BACK OF ONE OF THE ENGINE IGNITERS. THE ENGINE WAS SHUTDOWN WITHOUT INCIDENT. THE FUEL LINE WAS REPLACED. THE UNSERVICEABLE FUEL LINE DID NOT SHOW ANY SIGNS OF WEAR AND HAD NOT CONTACTED ANY OTHER PARTS. NO CAUSE FOR THE FUEL LINE FAILURE COULD BE DETERMINED.

<table>
<thead>
<tr>
<th>2009FA0001028</th>
<th>RAYTHN</th>
<th>DRAG LINK</th>
<th>MISINSTALLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/10/2009</td>
<td>C90GT</td>
<td>9081004012</td>
<td>MLG</td>
</tr>
</tbody>
</table>

DURING A PHASE 1 - 4 INSPECTION. FOUND THE LT & RT MLG DRAG BRACE, DOWN LOCK SPRING UPPER ATTACH POINT HARDWARE POSSIBLY INCORRECTLY INSTALLED. COULD NOT VERIFY CORRECT SPRING ATTACH HARDWARE WITH THE IPC OR COMPONENT MM. CONTACTED TECH SUPPORT AND VERIFIED HARDWARE CORRECT BUT IMPROPERLY INSTALLED.

<table>
<thead>
<tr>
<th>2009FA0001048</th>
<th>RAYTHN</th>
<th>GARRTT</th>
<th>BEARING</th>
<th>FAILED</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/30/2009</td>
<td>HAWKER900XP</td>
<td>TFE731*</td>
<td>3587591</td>
<td>NR 4</td>
</tr>
</tbody>
</table>

S.O.A.P. SAMPLE REVEALED A TRACE OF CARBON STEAL, ALUMINUM AND GRIT (CARBON/GRIT) WITH MAJOR AMOUNTS OF M50 WITH SHINY PLATELETS. THE FILTER WEIGHT WAS 7,806 MGS. THE ENGINE WAS DISASSEMBLED IAW THE CURRENT MM AS REQUIRED TO ACCESS ALL BEARINGS. DISASSEMBLY FINDINGS REVEALED HEAVY SPALLING WITH MATERIAL LOSS ON THE NR 4 ROLLER BRG, WITH DISCOLORATION IN THE FORM OF "BLUEING" AS WELL AS A FRACTURED ROLLER CAGE. A MATERIAL ANALYSIS WAS COMPLETED BY MFG PROJECT ENGINEERING WITH FINDINGS INCONCLUSIVE. (K)

<table>
<thead>
<tr>
<th>CA091013009</th>
<th>ROBSIN</th>
<th>LYC</th>
<th>RESERVOIR</th>
<th>VENTING</th>
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<tbody>
<tr>
<td>9/30/2009</td>
<td>R44</td>
<td>O540F1B5</td>
<td>D2111</td>
<td>HYD SYSTEM</td>
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</tbody>
</table>

(CAN) HYD OIL CONTINUOUSLY VENTING OUT OF THE RESERVOIR THROUGH THE FILLER CAP LOSING APROX HALF OF THE SIGHT GLASS EVERY 50 HOURS OF OPERATION.

<table>
<thead>
<tr>
<th>CA091014003</th>
<th>ROBSIN</th>
<th>LYC</th>
<th>GEAR</th>
<th>WORN</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/8/2009</td>
<td>R44RAVENII</td>
<td>IO540AE1A5</td>
<td>MAGNETO</td>
<td></td>
</tr>
</tbody>
</table>

(CAN) UNABLE TO TIME ENG, OUT OF ADJUSTMENT RANGE, MAIN POINTS EXCESSIVELY WORN DOWN, GEAR TEETH WORN, LACK OF GREASE. DISTRIBUTOR HSG IS THE WRONG PN, HSG IS FOR A -9 MAGNETO, IT HAS A 25 STAMPED INTO IT AND SHOULD BE A 30. MAGNETO WAS OVERHAULED.

<table>
<thead>
<tr>
<th>CA091028011</th>
<th>ROBSIN</th>
<th>LYC</th>
<th>HOUSING</th>
<th>CRACKED</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/16/2009</td>
<td>R44RAVENII</td>
<td>IO540AE1A5</td>
<td>STARTER</td>
<td></td>
</tr>
</tbody>
</table>

(CAN) STARTER HOUSING FOUND CRACKED (TC 20091028011)

<table>
<thead>
<tr>
<th>CA091027010</th>
<th>ROBSIN</th>
<th>LYC</th>
<th>ENGINE</th>
<th>MAKING METAL</th>
</tr>
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<tbody>
<tr>
<td>10/16/2009</td>
<td>R44RAVENII</td>
<td>IO540AE1A5</td>
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<td></td>
</tr>
</tbody>
</table>

(CAN) DURING ACCOMPLISHMENT OF SB 480E, LARGE AMOUNTS ON NON-FERROUS METAL FLAKES AND FILINGS FOUND IN OIL FILTER AND SUMP SUCTION SCREEN. CYLINDER ASSEMBLIES WERE ALL REMOVED, BUT ENGINEERS WERE UNABLE TO DETERMINE CAUSE/SOURCE OF METAL GENERATION. A FLUSH OF THE OIL SYSTEM WAS CARRIED OUT, AND THE SYSTEM REPLENISHED. A SECOND GROUND RUN WAS CARRIED OUT, WITH NO ABNORMAL SOUNDS OR NOISES OBSERVED. THE OIL WAS AGAIN DROPPED AND THE FILTERS INSPECTED, WITH SMALLER AMOUNTS OF METAL FOUND. AGAIN, DRAINED AND FLUSHED THE OIL SYSTEM AND CARRIED OUT A 3RD GROUND RUN. UPON LOADING UP THE AIRCRAFT AND PULLING POWER, A VERY HIGH...

**CA091030005**
ROBSIN LYC LEAD CHAFED
10/30/2009 R44RAVENII IO540AE1A5 MAGNETO TACH
(CAN) ON DISASSEMBLY FOR O/H, FOUND TACH LEAD CHAFING ON THE OPPOSITE SPADE TERMINAL FOR THE TACH POINTS, EVEN THOUGH THE LEADS WERE ROUTED IAW SB663A.

**CA091008001**
ROBSIN LYC PUMP LEAKING
10/1/2009 R44RAVENII IO540AE1A5 LW15473 FUEL SYS
(CAN) FUEL PUMP LEAKING OIL. SERVICABLE FUEL PUMP INSTALLED.

**CA091115001**
ROBSIN LYC STARTER DAMAGED
11/15/2009 R44RAVENII IO540AE1A5 14924HTH ENGINE
(CAN) DURING ENGINE START, STARTER WOULD NOT ENGAGE THE FLYWHEEL. STARTER WAS REPLACED WITH SERVICEABLE UNIT. NEW STARTER FUCTION TESTED, NO DEFECTS FOUND.

**CA091118014**
ROBSIN LYC MAGNETO LEAKING
11/5/2009 R44RAVENII IO540AE1A5 BL6006189 ENGINE
(CAN) MAGNETO LEAKING FROM CASE.

**CA091122001**
ROBSIN LYC PUMP SHORTED
11/21/2009 R44RAVENII IO540AE1A5 D8187B AUX FUEL
(CAN) AUX FUEL LIGHT TURNED ON IN FLIGHT. TROUBLESHOOTING FOUND THAT AUX FUEL PUMP WOULD NOT OPERATE. AUX FUEL PUMP REPLACED WITH SERVICEABLE UNIT AND TESTED. NO DEFECT FOUND.

**2009FA0001069**
ROBSIN LYC INTAKE VALVE BROKEN
12/18/2009 R44RAVENII IO540AE1A5 IO540AE1A5 LW13622 ENG
IN CRUISE FLIGHT EXPERIENCED HIGH MANIFOLD PRESSURE AND ROUGH ENG OPERATION, WHICH LED TO A AUTO-ROTATION LANDING ON A PUBLIC STREET SHORT OF THE AIRPORT. ENG REMOVED FROM ACFT, DASSEMBLED, FOUND NR 4 INTAKE VALVE MISSING. HEAD BROKE OFF THE VALVE KEEPER END WHICH LET THE REMAINDER OF INTAKE VALVE TO DROP INTO THE COMBUSTION CHAMBER WHICH BROKE THE VALVE INTO SEVERAL PIECES WHICH WERE FOUND IN THE INTAKE SUMP AND ADJACENT CYLINDERS. VALVE KEEPERS SHOWED SIGNS OF WEAR. INTAKE VALVE INSPECTION ON THE REMAINING CYLINDERS SHOWED ROLLED METAL ON THE VALVE KEEPER AREA TO THE POINT THAT THE INTAKE VALVE WOULD NOT PASS THROUGH THE INTAKE GUIDE. POSSIBLE CAUSE FOR VALVE KEEPER WEAR WOULD BE AN ENG OVERSPEED CONDITION. SUGGEST INCORPORATING INTAKE VALVE AND VALVE KEEPER INSPECTION TO BE CONDUCTED AT THE SAME TIME SB 388C INSPECTION OF THE EXHAUST VALVE IS CONDUCTED.

**2009FA0000960**
SKRSKY GE FUEL CONTROL CONTAMINATED
11/18/2009 S61N CT581401 7257255 ENGINE
A CT-58 FUEL CONTROL UNIT (FCU) PN 725725-5 SN 29172) , STATOR VANE ACTUATOR (SVA) PN 4004T63G10 SN KTR4579BR) , AND PILOT VALVE (PV) PN 6028T23G01 SN KTR3098BR) WERE DELIVERED BY THE NTSB AND CARRIER FOR INSPECTION. INITIAL DASSEMBLY OF THE FCU, SVA, AND PV SHOWED CONTAMINATION FROM AN UNKNOWN EXTERNAL SOURCE (WHICH MAY STILL BE PRESENT ON IN-SERVICE AIRCRAFT) AND POSSIBLE CONTAMINATION FROM THE CENTRIFICAL FUEL PURIFIER (WHICH WAS NOT DELIVERED WITH THE UNIT FOR EXAMINATION). DISASSEMBLY OF THE UNIT REVEALED THAT THE MAIN FUEL CONTROL FILTER HAD ALSO BEEN REMOVED PRIOR TO DELIVERY TO CHI HOWEVER THERE WAS ONE SMALL METALLIC NON-MAGNETIC SLIVER OF DEBRIS FOUND IN THE MAIN FUEL CONTROL FILTER HOUSING. OUR INITIAL EVALUATION AND DISASSEMBLY OF THESE UNITS REVEALED NO EVIDENCE OF MECHANICAL FAILURE OR IMPROPER ASSEMBLY.
ON 11/18/09 OUR REPAIR STATION PERFORMED AN INSPECTION ON A FUEL CONTROL P/N 7257255, PILOT VALVE P/N 6028T23G01, THAT WERE IN AN FAR135.415 SERVICE DIFFICULTY REPORT CONTROL NUMBER CA090820007, INCIDENT DATE 8/16/09, REPORT DATE 10/23/2009 6:57:53 AM. OUR INITIAL INSPECTION REVEALED THIS FCU WAS CONTAMINATED FROM AN EXTERNAL SOURCE (MOST LIKELY CAME FROM FUEL PURIFIER WHICH WAS NOT PROVIDED FOR INSPECTION). THERE WERE NO MECHANICAL IRREGULARITIES, OR SIGNS OF IMPROPER ASSEMBLY.


MULTIPLE AREAS OF DAMAGE INSIDE TAILBOOM AT STATION 15. CAUSED BY UNSECURED ELECTRICAL HARNESS.

(CAN) THE ENG WAS REMOVED AND INSPECTION WAS BEING CARRIED OUT. DURING THE BOROSCOPE INSPECTION OF THE 1ST STAGE TURBINE BLADES A DEFECT WAS FOUND, LOCATED ON THE SURFACE COATING SWELLING BUT RATHER APPEARS THAT THE BLADE STRUCTURE IS DEFORMED ON THE PLATFORM OR NEAR THE ROOT. ONE PARTICULAR BLADE PLATFORM CRACKED. WE TRIED TO TAKE A PICTURE BUT THE PICTURES DID NOT COME OUT. THE MO2 AND MO3 WILL BE SENT TO VECTOR FOR REPAIRS.

(CAN) A LOUD THUD WAS HEARD AND THE CREW NOTICED THE DASH WINDOW WAS SHATTERED. THEY DECENDED AND ASKED FOR PRIORITY HANDLING, BUT DID NOT DECLARE AN EMERGENCY. THEY NOTICED IT WAS THE OUTER PANEL OF GLASS, THEY LANDED UNEVENTFULLY 20 MIN LATER. MX HAS SINCE REPLACED THE WINDOW. THE FAILURE OF THIS WINDOW IS NOT UNCOMMON AND HAS BEEN OCCURRING FOR SEVERAL YEARS. THE MFG OF THE WINDOW IS AWARE OF THE PROBLEM.

DURING SCHEDULED ROUTINE INSPECTION OF THE LT WING ATTACH FITTINGS, CLIP PN 27-31264-013 WAS FOUND CRACKED/BROKEN VERTICALLY THROUGH AT BOTH CORNERS. CLIP WAS IN 3 PIECES WHEN REMOVED.

DURING SCHEDULED ROUTINE INSPECTION OF THE LT WING ATTACH FITTINGS, CLIP PN 27-31264-013 WAS FOUND CRACKED/BROKEN VERTICALLY THROUGH AT BOTH CORNERS. CLIP WAS IN 3 PIECES WHEN REMOVED.

FLIGHT CREW DECLARED AN EMERGENCY DUE TO HYD FAILURE. RT HYD PRESS LIGHT ILLUMINATED AND HYD PRESSURE GAUGE READ 0 PSI MX FOUND THE RT HYD BYPASS RIGID LINE RUPTURED DUE TO CHAFING.
UPON FURTHER INVESTIGATION THE RT PRESSURE LINE WAS DISCOVERED TO BE CHAFING BUT NOT RUPTURED. BOTH LINES WERE REPLACED TO RETURN THE ACFT TO SERVICE.

### CA091005003
**SWRNGN** | **GARRTT** | **SWITCH** | **INTERMITTENT**
---|---|---|---
10/4/2009 | SA227AC | TPE33111U | 1EN516 | NOSE GEAR

(CAN) PILOT REPORTED THAT HE HAD A RED IN TRANSIT ON THE SELECTION OF GEAR DOWN. FLIGHT CREW DID 5 GEAR SWINGS AND ON THE LAST GEAR SWING THE IN TRANSIT LIGHT WENT OUT. THIS ACCOMPANIED BY THE FACT THAT THE FLIGHT CREW COULD SEE THE GEAR SWING UP AND DOWN IN THE PROP SPINNERS, ACFT LANDED WITHOUT INCIDENT. MX DID MULTIPLE GEAR SWINGS AND COULD NOT DUPLICATE THE SNAG.

### CA091113001
**UNIVAR** | **FRNKLN** | **TUBE** | **CORRODED**
---|---|---|---
10/25/2009 | 1082 | 6A4165B3 | FUSELAGE

(CAN) TUBING RUSTED OUT AFT FITTING.

### CA091027007
**UROCOP** | **TMECA** | **FUEL CONTROL** | **LEAKING**
---|---|---|---
10/27/2009 | EC120B | ARRIU2F | 0319878010 | ENGINE

(CAN) DURING DAILY INSPECTION FUEL WAS NOTICED IN ENGINE BAY AREA. FUEL BOOST PUMP WAS TURNED ON TO SEE WHERE LEAK WAS COMING FROM, FUEL WAS NOTICED DRIPPING FROM THE FRONT OF THE F.C.U. TURBOMECA FIELD REP WAS CALLED AND SAW THE LEAK AND ADVISED TO BE REMOVED AND SENT TO REPAIR FACILITY. (TC# 20091027007)

### 2009FA0001035
**UROCOP** | **QUILL ASSY** | **CORRODED**
---|---|---
6/23/2009 | EC135P1 | TRANSMISSION

COMPLETED INSPECTION OF INPUT QUILL PINION, FOUND PITTING BEYOND LIMITS. REMOVD MAIN TRANSMISSION FROM SERVICE.

### CA091001001
**ZLIN** | **LYC** | **CABLE** | **FRAYED**
---|---|---|---
9/30/2009 | Z242L | AEIO360A1B6 | Z14244130000 | ELEVATOR TRIM

(CAN) THE FWD ELEVATOR TRIM CABLE WAS OBSERVED FRAYED DURING A 500 HOUR INSPECTION.

### CA091001002
**ZLIN** | **LYC** | **CABLE** | **FRAYED**
---|---|---|---
9/28/2009 | Z242L | AEIO360A1B6 | Z14242260100 | RUDDER

(CAN) BOTH RUDDER CABLES WERE OBSERVED FRAYED DURING A 500 HR INSPE. BOTH CABLES WERE FRAYED IN AN AREA AROUND A PULLEY.

### CA090922002
**ZLIN** | **LYC** | **GEAR** | **LOOSE**
---|---|---|---
9/22/2009 | Z242L | AEIO360A1B6 | K3822 | MAGNETO

(CAN) THE DISTRIBUTOR BLOCK GEAR FINGER WAS FOUND LOOSE DURING MX ON THE MAGNETO.

### CA091028006
**ZLIN** | **LYC** | **WHEEL** | **CRACKED**
---|---|---|---
10/28/2009 | Z242L | AEIO360A1B6 | K2231007 | MLG

(CAN) A CRACK WAS IDENTIFIED ON THE OUTER EDGE OF THE WHEEL RIM RUNNING CIRCUMFERENTIALLY APPROX. 5 CM (TC 20091028006)

### CA091112003
**ZLIN** | **LYC** | **SPRING** | **BROKEN**
---|---|---|---

(CAN) THE RT STEERING SPRING BROKE DURING TAXI FOLLOWING A FLIGHT.