



U.S. Department
of Transportation

**Federal Aviation
Administration**

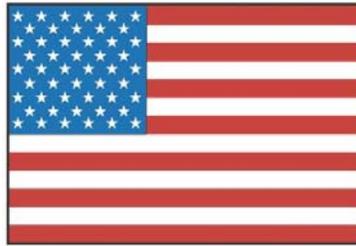
AFS-600

Regulatory Support Division

ADVISORY CIRCULAR

43-16A

AVIATION MAINTENANCE ALERTS



**ALERT
NUMBER
375**



**OCTOBER
2009**

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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

American Champion: 7GCAA; Binding Aileron; ATA 5751

A mechanic holding an Inspection Authorization (IA) states, "(I) removed the right aileron due to reports of binding between the aileron and wing during aerobatic maneuvers. On the ground, the inboard aileron-to-aileron bay rib clearance was approximately 1/16 inch. Per the American Champion technical support the clearance should be 1/4 inch. The inboard aileron bay rib appeared to have bowed due to fabric shrinkage..., causing the interference. The aileron rib fabric was opened and the rib was relocated outboard 3/16 inch. The fabric was repaired utilizing new tapes and the Superflite process. The repair was painted with PPG paint—codes DCC 15797 (blue) and DCC 91063 (white) with flex agent added. Per American Campion technical support, aileron balancing was not required. The aileron was reinstalled, with the clearance and operation satisfactory. The aircraft is a 1999 model with 478.7 hours total time." *(No part numbers accompanied this report.)*

Part Total Time: 478.7 hours

Beechcraft: B200; Main Cabin Door Separation; ATA 5210

An A&P mechanic writes, "The pilot reported the door came open in flight. Upon landing it was *(discovered)* the main cabin door had departed the aircraft. The door was *(subsequently)* recovered. During inspection and disassembly of the door, several issues were *(observed)*: 1) the upper forward latch hook was found without rigging holes installed and was incorrectly rigged, 2) the door's bell crank (P/N 50-430031-29) was found bent and twisted, and 3) the main cabin Door Latch Braze Assembly was catching on the hook, *(preventing)* a smooth transition to a locked position. *(These items)* as listed had been accomplished prior to the *(current)* operator receiving the aircraft. All required inspections on the door had been accomplished and signed off in the aircraft log books. *(Our mechanic continues next with details for each of the listed items.)*

"1) Upper Forward Latch Hook (Missing) Rig Holes: The upper forward latch hook bracket (P/N 50-430062-21) was not drilled for proper rigging. The bracket was replaced 661 hours prior to this incident (figure 1). Proper rigging of the latch mechanism could not be accomplished in accordance with the maintenance manual without

the rig pin holes installed. This bracket is suppose to have a rig pin hole drilled in it from the factory. When rigging the upper latch hooks per the maintenance manual, this hole is used to insure the upper hook assembly has latched in an over-center position. If the hooks are not in an over-center position, they will tend to pull the main cabin door latch toward an open position (reference Beech manual 52-10-00-201).



FIG 1: Undrilled hook assy removed from door

"2) Bell Crank (P/N 50-430031-29) Bent and Twisted: The bell crank is the actuation transition point from the handle to the Upper Hook assembly. It is suspected that this bell crank failed (*because*) of the upper hook not being rigged properly due to the lack of rig pin holes. This area of the door is not accessible for inspection unless upholstery panels and latch cover panels are removed. When inspecting this bell crank, the transition attach points from the handle linkage to the upper hook linkage should be at 90 degrees (reference figures 3 and 4). The improper installation of the bracket assembly (P/N 50-430062-21) led to the twisting of the bell crank assembly (P/N 50-430031-29; figure 2).

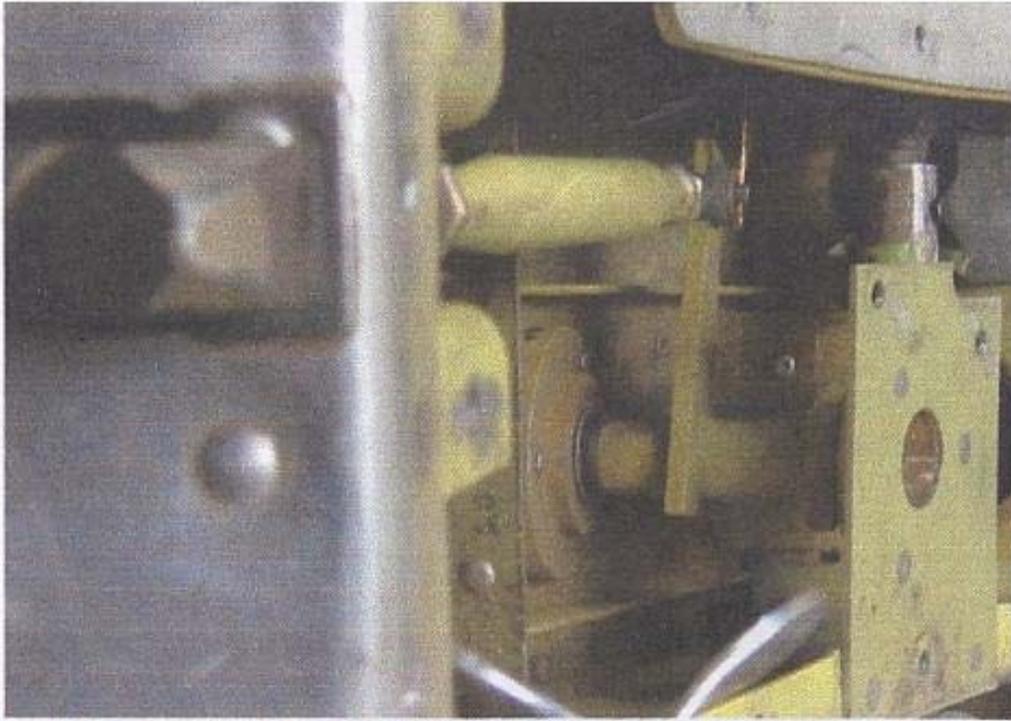


Fig 2: This view shows the Bellcrank assy P/N 50-430031-29. Notice twist of shaft.

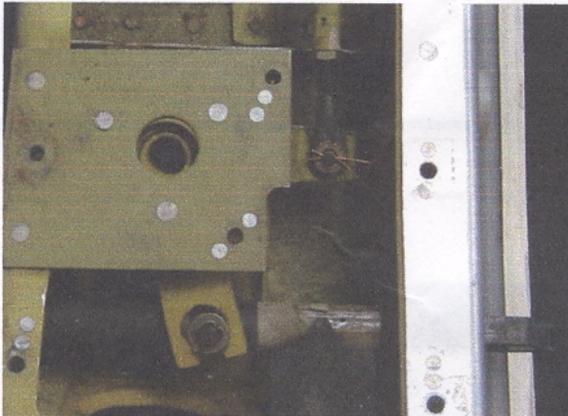


Fig 3: Forward: DAMAGED BELLCRANK
Top view of bellcrank notice less than 90 degree's between actuating rod and clevis for Hook Assy.

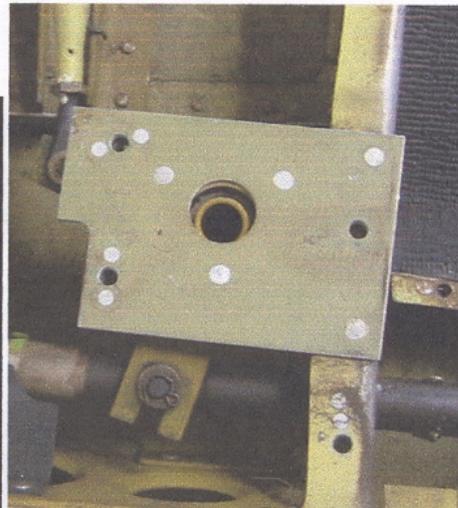


Fig 4: AFT: GOOD BELLCRANK
Main cabin door bellcrank 50-430031-29. Notice 90 degree's between actuating rod and upper hook rod clevis.

"3) Door Latch Braze Assembly Catching on Hook: The braze assembly (P/N 50-430043-197) had actuated the switch but had not seated in the pin, creating a false locked indication. This braze assembly was replaced 1,024.2 hours prior to this incident. The cabin door switch was installed at that time. The switch would indicate locked just prior to the braze assembly seating with the pin. With the braze assembly not smoothly entering the pin, the door gave a false indication of locked and latched.

"Conclusion: Since the forward upper hook was not rigged properly at replacement, it would have not been possible to determine over-center of the upper hook assemblies due to lack of rigging holes. The (*improperly*) rigged hooks caused the twisting damage found on the forward bell crank. The door handle braze assembly was catching on the lock pin, not allowing a smooth transition to a seated and locked condition. The door annunciator switch was showing locked just prior to the door dropping into the lock pin and did not give the crew a warning light. When the aircraft was being pressurized during climb out, the handle was pulled out of its latch due to the (*improperly*) rigged mechanism being on the wrong side of the over-center position, causing the door to open. This resulted in the door departing the aircraft. When everything is properly rigged (with the hook assembly in an over-center position), the handle tendency is to be pulled into its locked position." (*Door latch P/N: 101-430100-1. Okay—my fingers are shorter from all the key pounding, but this discrepancy narration was worth every stroke. Thank-you for the excellent submission—Ed.*)

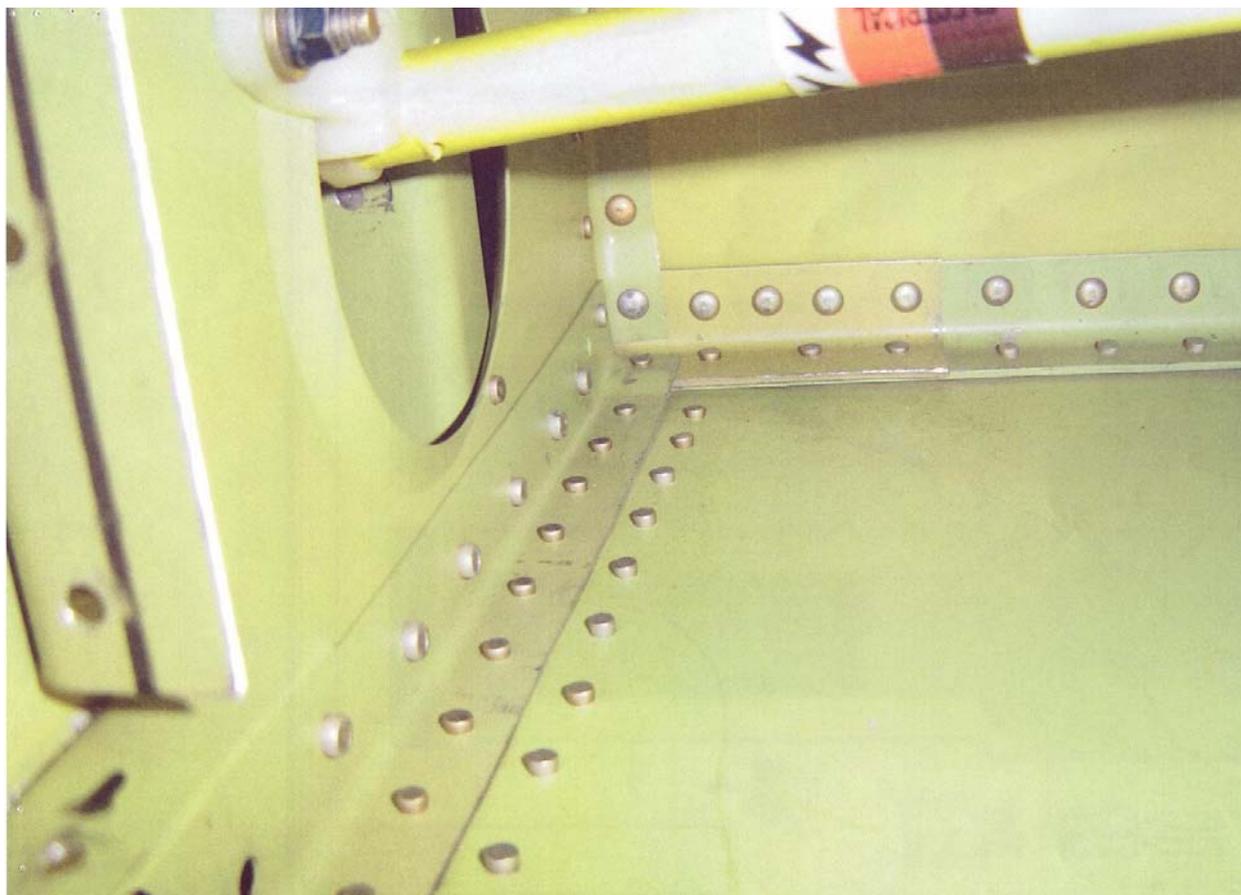
Part Total Time: 661.0 hours

Beechcraft: B300; Loose Wing Skin Rivets; ATA 5730

(The following combines three reports on two similar model aircraft from the same aircraft technician. Identically worded, two reports reference both wings of one airplane, the third report a right wing only on the second plane. Sample pictures were included from all three submissions.)

"The aircraft was brought in for inspection of a double row of rivets at wing station 209.016. Rivets were found smoking, and paint was popped on the rivet heads. A borescope was used to inspect the rivet buck tails (*shop heads*). All of the rivets in the double row of the skin lap at WS 209.016 were under-driven. These rivets were installed new at the factory. The aircraft has a total time of 1,659.1 hours (*201.8 hours for the second report*). (*I*) recommend inspecting these rivets for popped paint and smoking condition (*loose rivet indicators, like streaming grease marks*) and installing new rivets per AC 43.13-1B."





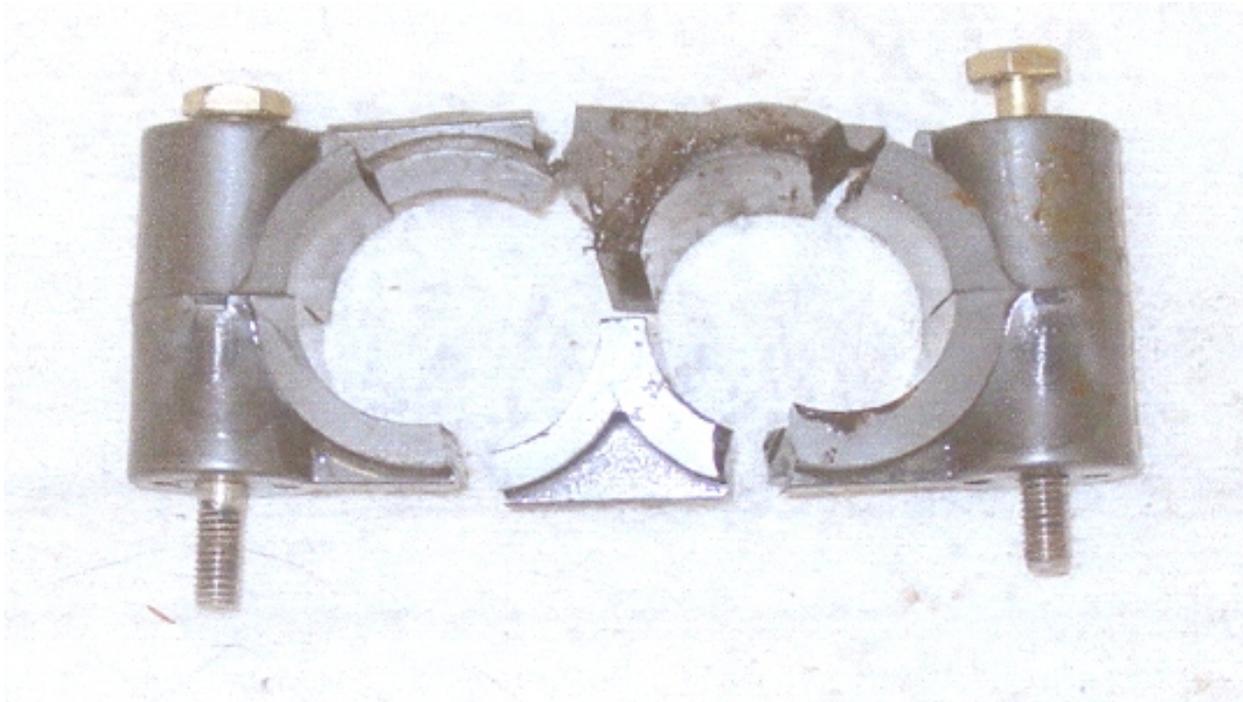


(Left wing and right wing P/N's: 101-110072-27 and -28. Nice photography! Also, neat trick for head protection in the first picture—Ed.)

Part Total Times: 1,659.1 and 201.8 hours, respectively.

Cessna: T210M; Broken Rudder Pedal Bearings; ATA 2720

"While performing a run-up of the aircraft during an annual inspection, it was noticed that the pilot's right rudder pedal had an unusual feel while braking," states the submitter. "During the inspection of the rudder pedals it was found that each of the pilot's side, inboard rudder pedal bearing halves (P/N S1675-1) had broken into several parts. These bearing halves are constructed of plastic, and the likely reason for breaking would be due to the aging and embrittlement of the plastic. I would recommend these bearings be constructed of a material other than plastic, or have a part replacement interval before breakage occurs."



(Four similar reports reside in the SDRS database.)

Part Total Time: 2,721.9 hours

Dassault: F20E-5; Broken Pneumatic Line Flares; ATA 2133

This technician states, "During a routine servicing and cleaning of (*this aircraft's*) outflow valves, three pneumatic lines were found to have severely damaged AN flares due too over-tightening. Two of these lines (P/N MY20721-207 and MY20721-218) attach to the L/H outflow valve. The third line (P/N MY20721-219) attaches to the R/H outflow valve. The AN flare on line -207 had wall thickness reduction and a small piece missing from the flare. The AN flare on line -218 was completely destroyed, with the pieces of the flare contained in the B-nut. The flare on line -219 had wall thickness reduction and was cracked almost completely around at approximately the flare mid-point.

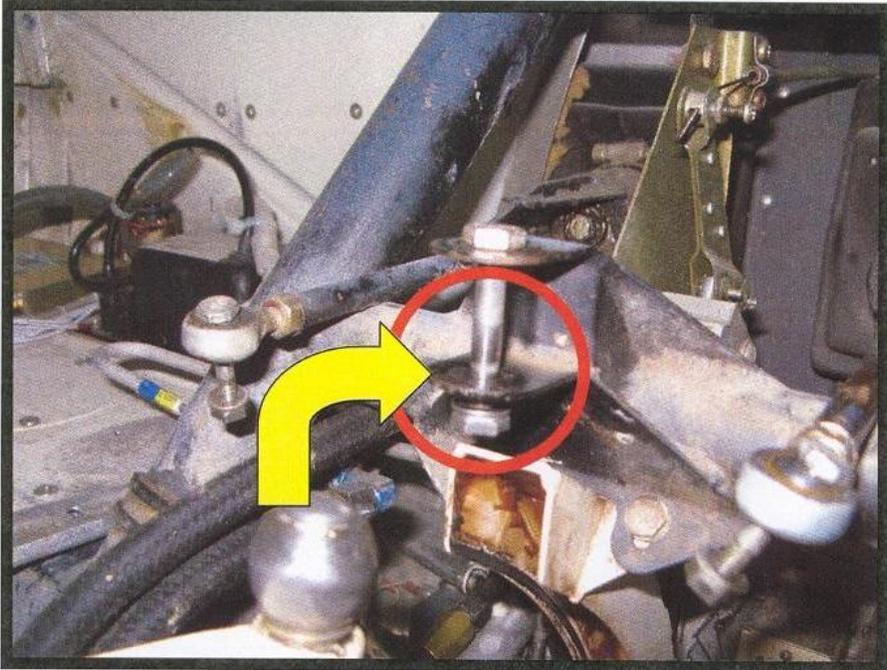
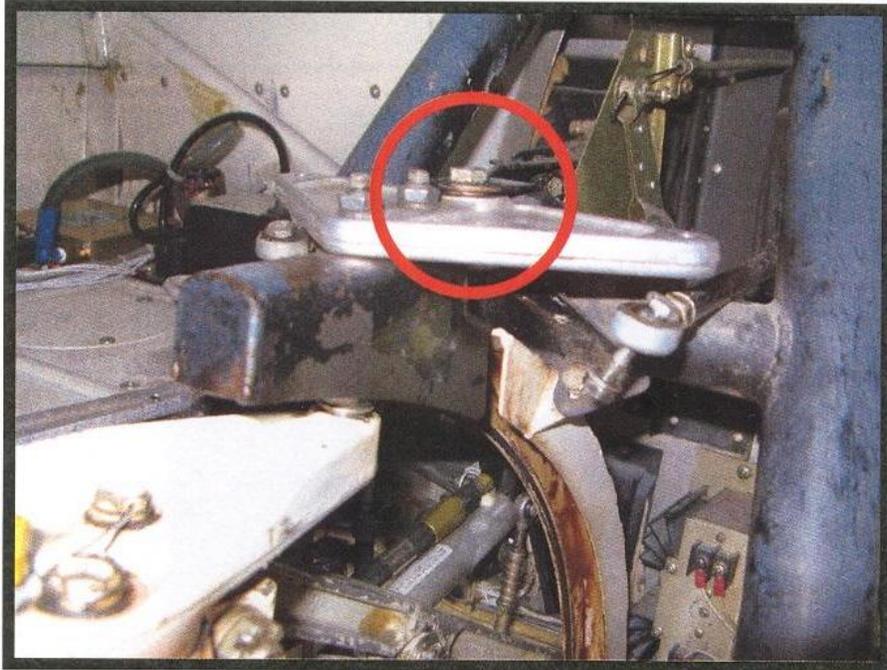
"(I) recommend careful examination of all AN and MS connections at the next outflow valve inspection and cleaning—and proper tightening of lines IAW AC 43.13-1B."

Part Total Time: (unknown)

Piper: PA34-200T; Worn Nose Gear Steering Mount; ATA 3222

An inspector for a repair station provides the following discrepancy. "The nose landing gear mount assembly (P/N 95551-23) attachment point for the steering arm assembly (P/N 95395-00) has excessive wear at the lower mount hole. The Piper service manual does not specify a fix or allowable limits for this (*nose landing gear mount assembly, P/N 95551-23*). This discrepancy was found during an inspection in accordance with Piper Service Bulletin 1123A & B—and an annual inspection in accordance with the service manual inspection guide. Service Bulletin 1123B gives the service limits to the steering arm's center pivot bushings and center pivot sleeve. However, the more critical component—the nose gear mount assembly—is not addressed for the service limit of the steering arm mounting tabs (see attached photos). Piper should incorporate service limit data that covers the nose gear mount assembly and (*its*) repair data."

**NOSE LANDING GEAR MOUNT ASSEMBLY
LOWER MOUNT HOLE ELONGATED AT
STEERING ARM ASSY**



**LOWER MOUNTING FLANGE HOLE ELONGATED
AND AN4-14A BOLT HAS EXCESSIVE PLAY**

(These worn steering mounts report at least three times in the SDRS database. The words accompanying above two J-PEG photographs are "cut & paste" arrangements, eliminating specific aircraft identifiers in accordance with the Alerts standard practice. Tell-tales including alignment errors are blunders of this editor, not the submitter.)

Part Total Time: 4,792.4 hours

HELICOPTERS

Eurocopter: AS350B2; Broken Retaining Ring Spacer; ATA 6320

A helicopter submitter states, "The retaining ring 'spacer' (P/N 350A37-1289-01) apparently broke as it spun around and caught the main rotor shaft chip detector, breaking the end off, *(which then)* turned on the 'chip light' in the cockpit. The aircraft turned around and landed at base. We found the chip detector broken, so we took the transmission apart and subsequently found the source of the problem." *(Main rotor and shaft assembly P/N: 350A37-1076-12.)*

Part Total Time: 12,112.2 hours

Eurocopter: EC130B4; Cracked Blade Elastomer; ATA 6220

"During a routine 100 hour inspection," writes an air taxi technician, "a crack in the blue blade elastomer was found on the trailing edge, lower inboard surface radiating from the inspection bore. This crack had reached the maintenance manual limitation of 10mm in total length. This is a very common failure for a part with a newly published 20,000 hour life limit. The original life limit was 3,000 hours which none of these parts have ever lasted." "The elastomer formulation of the original part number (replaced by the current part number) almost never failed. Eurocopter has been notified of both of these details for years with no action taken." *(Main rotor head assembly P/N: 355A31-0002-01. Frequency Adapter: P/N 350A31-1827-03. This adapter P/N finds at least five entries in the SDRS database.)*

Part Total Time: 1,199.5 hours

Eurocopter: EC130B4; Cracked Engine Fairing; ATA 7110

The same air taxi operator as above submitted another EC130 report. "During a routine 100 hour inspection, a crack in the hinge of the engine fairing was found radiating from the second hole from one end of the hinge. The corner separated from the hinge due to cracks emanating from the first hole. This is a common failure for this part. The surface under the hinge is uneven and gives *(poor)* support to the hinge when bolted down. *(I)* suggest using a stronger material such as stainless steel for the hinge, or improving the surface contour and strength of the fairing hinge mounting surface." *(Hinge half P/N: 350A58-0045-23. This number reflects nine entries in the SDRS database.)*

Part Total Time: 1,199.5 hours

ACCESSORIES

Slick Magneto: 4370; Broken Point Contact Arm; ATA 7414

An aviation mechanic states, "The arm for this magneto's contact points broke inboard of the points after only 133.1 hours time since installation."



(The parent magneto was installed on a Lycoming O-320E2D leading a Cessna 172M around the sky. Point set P/N: M3081. The SDRS database stores 14 reports for this item.)

Part Total Time: 133.1 hours

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>. 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

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:
<http://av-info.faa.gov/>. Select the General Aviation Airworthiness Alerts heading.

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.

Federal Aviation Administration

Service Difficulty Report Data

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.

| Control Number | Aircraft Make | Engine Make | Component Make | Part Name | Part Condition |
|---|----------------|--------------|-----------------|-----------------|------------------|
| Difficulty Date | Aircraft Model | Engine Model | Component Model | Part Number | Part Location |
| 2009FA0000793 | | | | TUBE | FAILED |
| 9/18/2009 | | | | 6006 | ZONE 700 |
| WE HAVE HAD MULTI FAILURES TIRE TUBES WITH A DATE CODE OF 2007. MOSTLY 6.00-6 AND 5.00-5. VENDORS STATE THE PROBLEM IS IN THE MFG PROCESS. THE TUBE FAILS/SEPARATES AT THE SEAM. | | | | | |
| 2009FA0000675 | | | | BOLT | BENT |
| 8/10/2009 | | | | ANS23A | LANDING GEAR |
| THESE ARE BOLTS USED IN THE HYDRAULIC LANDING GEAR COMPONENTS OF BEECH KING AIR AIRCRAFT. THESE BOLTS ARE COMING BACK TO US BENT. THEY ARE NOT HIGH SHEAR BOLTS BEING USED. WHEN ASKED, BEECH TOLD US "WE HAVE FOUND THAT THIS CONDITION IS A RESULT OF IMPROPER RIGGING OF THE LANDING GEAR AND/OR HARD LANDINGS. AND A STRONGER BOLT WOULD ONLY SEND THE STRESS TO ANOTHER AREA AND NOT ULTIMATELY ALLEVIATE THE PROBLEM. NO FURTHER ANSWER WAS GIVE TO ALLEVIATE THE PROBLEM. WE ARE CONCERNED DUE TO THIS PROBLEM CONTINUOUSLY SHOWING UP. LANDING GEAR BOLT ANS-23A, USED IN ASSEMBLY OF MAIN LANDING GEAR DRAG BRACE. MOST FIELDS WILL BE VOID DUE TO THE NEED FOR THEM TO BE FILLED IN TO SUBMIT FORM. | | | | | |
| AG2R862701 | | CONT | | CYLINDER | SEPARATED |
| 2/18/2009 | | IO520* | | SA52000A20P | |
| CYLINDER HEAD SEPERATION AND CANNOT BE SAFELY REPAIRED. | | | | | |
| AG2R91788.1 | | CONT | | CYLINDER HEAD | CRACKED |
| 8/21/2009 | | IO520A | | | ENGINE |
| EXHAUST SEAT CRACK TOO SEVERE FOR REPAIR. ACFT MFG, MODEL, SN, TOTAL TIME AND CYLCES ARE UNKNOWN. | | | | | |
| 2009FA0000719 | | CONT | | BOSS | MISMANUFACTURED |
| 8/14/2009 | | IO550B | | | PUSH ROD HOUSING |
| WHILE PERFORMING INCOMING INSP OF A NEW MFG CYLINDER. THE CYLINDER PUSH ROD HSG BOSS WAS FOUND TO HAVE NOT BEEN MACHINED FOR THE PUSH ROD HAS SEAL DURING THE MFG OF THE CYLINDER. (K) | | | | | |
| AG2R84729.2 | | CONT | | CYLINDER | CRACKED |
| 1/20/2009 | | O470J | | | ENGINE |
| EXHAUST PORT CRACKED, TOP SPARK PLUG BOSS CRACKED, EXHAUST SEAT BOSS CRACKED TOO SEVERE FOR REPAIR. AIRCRAFT MANUFACTURER, MODEL, SERIAL NUMBER, TOTAL TIME AND CYCLES ARE UNKNOWN. | | | | | |
| 2009FA0000772 | | LYC | | TAPPET | NICKED |
| 9/4/2009 | | O235* | | 71105R | ENGINE |
| TAPPET BODIES RECEIVED FROM MFG WERE FOUND TO BE FULL OF NICKS AND POROSITY. (K) | | | | | |
| AC2A2009081482852 | AGUSTA | PWC | | PRESSURE SWITCH | MALFUNCTIONED |
| 8/14/2009 | AB139 | PT6C67C | | 7079785 | |

TURNING DOWNWIND AFTER TAKEOFF, NR 2 SERVO LIGHT ILLUMINATED. FOLLOWED ESTABLISHED EMERGENCY PROCEDURE. PRESSURE SWITCH MALFUNCTIONED.

| | | | | | |
|-------------------------------|--------|---------|-------|--------|---------------|
| 2009FA0000792 | ARCTIC | LYC | SCOTT | ARM | CRACKED |
| 8/12/2009 | S1B2 | O320D1A | | 321400 | TAIL STEERING |

THE STEERING ARM ON LT SIDE OF THE TAILWHEEL ASSY WAS FOUND CRACKED ACROSS THE RADIUS OF BEND NEAR THE HUB OF THE STEERING ASSY. THIS WAS FOUND ON A PREFLIGHT INSP. OF NOTE IS THE FACT THE ARM WAS BENT DOWN TO "LEVEL" WHEREAS THE STANDARD ANGLE IS UP BY 5-10 DEGREES. POSSIBLY SOMEONE STEPPED ON THIS WHILE TRYING TO WASH OR GET TO THE TOP SECTION OF THE RUDDER. NOTE: THIS IS THE FACTORY R & D AIRCRAFT. (K)

| | | | | | |
|-------------------------------|--------|--|--|-------|---------|
| 2009FA0000764 | BBAVIA | | | SPAR | CRACKED |
| 9/4/2009 | 7BCM | | | 5147L | LT WING |

DURING THE ANNUAL INSP, A CRACK WAS DISCOVERED IN THE REAR SPAR OF THE LT WING. THE CRACK WAS IN THE CTR OF THE SPAR RUNNING LENGTH WISE LT AND RT OF WHERE THE WING STRUT ATTACHES. (K)

| | | | | | |
|-----------------------------|-------|--|--|--------------|------------------|
| E81RJT22643 | BEECH | | | LANDING GEAR | FALSE INDICATION |
| 9/16/2009 | 400A | | | | RIGHT |

ON APPROACH, FLT CREW NOTED RT MLG WOULD NOT INDICATE DOWN AND LOCKED CONDITION FOLLOWING MLG EXTENSION. FLT CREW PERFORMED MLG EMERGENCY EXTENSION PROCEDURES AND ABLE TO OBTAIN RT MLG FULL EXTENSION AND LOCKING INDICATION. RESTORED SYSTEM TO NORMAL PER MM 32-30-00. VISUAL CHECKS AND REPEATED FUNCTIONAL CHECKS OF MLG EXTENSION SYSTEM PER MM 32-00-00. IAW MM 32-30-00 TROUBLESHOOTING CHECKS NORMAL, NO FAULTS NOTED. CHECKED MLG AND DOORS RIGGING, POSITION/WARNING SWITCHES RIGGING, FOUND OK, RIGGING WITHIN SERVICE LIMITS. LUBRICATED MLG AND SERVICED EMERGENCY DOOR CLOSE RESERVOIR AND HYDRAULIC SYSTEM RESERVOIR PER MM 12-10-00. MLG RETRACT/EXTENSION SYSTEM CHECKS PER MM 32-30-00 NORMAL, NO FAULTS NOTED. UNABLE TO DETERMINE FAULT INDICATION, POSSIBLE CAUSE STIFF RT MLG OPERATION FROM LACK OF LUBRICATION OR STICKING DOWNLOCK SWITCH AGGRAVATED BY COLD TEMPERATURES DURING 2.5 HR. FLIGHT AT FL300-FL400 ALTITUDES.

| | | | | | |
|-------------------------------|-------|--------|--|--------------|-------------|
| 2009FA0000755 | BEECH | PWA | | RELIEF VALVE | LOOSE |
| 8/31/2009 | A200 | PT6A41 | | 02FC213 | FUEL SYSTEM |

DURING SCHEDULED PHASE INSP, FOUND RELIEF VALVE BACKED OUT OF FUEL FILTER PN 50-389110. THIS FIREWALL-MOUNTED FILTER HAS A BALL-AND-SPRING TYPE RELIEF VALVE THREADED INTO THE FILTER HSG (PN 02W760-140). THE MECHANIC FOUND THE VALVE SEAT AND BALL COMPLETELY BACKED OUT INTO THE HSG AND DISPLACED ALLOWING FUEL TO CONSTANTLY BYPASS THE FILTER. VALVE SEAT (PN 02FC213) IS NORMALLY SECURED INTO THE FILTER HSG BY 'STAKING' THE THREADS. THIS IS THE THIRD FILTER ASSY IN 8 MONTHS WE HAVE FOUND IN THIS CONDITION (UNSTAKED AND DISPLACED) IN OUR FLEET OF 60+. IT IS ALSO INTERESTING TO NOTE THE VALVE BACKED OUT UPWARDS AGAINST GRAVITY AND SPRING PRESSURE. THE RELIEF VALVE WAS RE-INSTALLED AND STAKED.

| | | | | | |
|-------------------------------|-------|--|--|----------------|------------|
| E81RTW5004304 | BEECH | | | HOSE CONNECTOR | WRONG PART |
| 9/21/2009 | B300 | | | 330997F100230 | ZONE 400 |

DURING SCHEDULED 5-YEAR REPLACEMENT NOTED LT ENGINE FUEL FILTER TO FUEL HEATER HOSE ASSY. APPEARED TO HAVE EXCESSIVE LENGTH, POOR ROUTING THAT CAUSED HOSE ASSY. TO RIDE AND CHAFE ON ADJACENT ENGINE COMPARTMENT COMPONENTS. INSTALLED HOSE ASSY. WAS FOUND TO BE A P/N 3330997F10-0230 HOSE ASSY. THE IPC CALLS OUT A P/N 330997F10-210 HOSE ASSY. FOR THIS APPLICATION. NO RECORD OF REPLACEMENT SINCE MANUFACTURE. SUSPECT INCORRECT HOSE ASSY. INSTALLED AT AIRCRAFT BUILD. RECOMMEND MANUFACTURER INVESTIGATE IF THIS WAS A 1-TIME OCCURENCE, OR IF INCORRECT P/N HOSE ASSY'S. WERE BEING INSTALLED ON OTHER ACFT.

| | | | | | |
|----------------------------------|-------|---------|--|------------|------------|
| ALGA145920990242 | BELL | ALLSN | | FIRESHIELD | MISALIGNED |
| 9/2/2009 | 206L4 | 250C30P | | 23032326 | ZONE 400 |

UNABLE TO FIT FIRESHIELD TO GEARBOX, 6 PADS OFF CENTER TO GEARBOX.

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|----------------------------|------|--|--|------------|---------------|
| 2009F00084 | BELL | | | SWASHPLATE | MISOVERHAULED |
|----------------------------|------|--|--|------------|---------------|

9/14/2009 407 406010401117 MAIN ROTOR

DURING THE INSP OF THE SWASHPLATE FRICTION, FOUND THE UPPER ROTATING RING HAD AN EXCESSIVE UP/DOWN MOVEMENT. MOVEMENT WAS ABOUT .1250 INCH PLAY. REMOVED SWASHPLATE ASSY FROM SERVICE. IT HAD 221.6 HOURS SINCE OVERHAUL. AFTER THE SWASHPLATE WAS RETURNED TO THE ORIGINAL OVERHAUL SHOP, IT WAS NOTED THAT ONE OF THE DUPLEX BEARINGS WERE INSTALLED BACKWARDS. THE DUPLEX BEARINGS HAVE A "V" MARK ETCHED ON THE OUTER RACE OF THE BEARINGS TO ENSURE PROPER INSTALLATION. FOR SOME REASON, IT WASN'T.

[ALGA9110944443](#) BELL ALLSN FIRESHIELD MISALIGNED

9/11/2009 407 250C47B 23062326 ENGINE

ALL MOUNT PADS ON FIRESHIELD HAD RAISED SHEETMETAL FROM IMPROPER FIT.

[AC2A2009081282853](#) BELL PWC BOLT BROKEN

8/12/2009 427 PW207D NAS660430 VERTICAL STAB

DURING PRE-FLIGHT INSP, PIC FOUND THE VERTICAL STABILIZER TO HAVE UP AND DOWN PLAY.

[2009FA0000759](#) BNORM LYC BEAM CRACKED

7/7/2009 BN2A26 O540* NB45A22985 RUDDER PEDAL

WHILE PERFORMING FLUORESCENT DYE PENETRANT INSP IAW AD 2002-25-03 OF CAPTAINS RUDDER PEDAL BEAMS FOUND CRACKED ON (LT) INNER SIDE FWD BEAM. (K)

[2009FA0000660](#) BOEING DOUBLER MISMANUFACTURED

7/31/2009 737* WING ROOT

THE FUEL SYSTEMS DOUBLER IN CENTER SECTION OF THE WING, WHERE THE AUXILIARY FUEL LINE IS ATTACHED TO 3" DIAMETER CUTOUT IN THE WING CENTER TANK IS NOT A FULL CIRCULAR DOUBLER INSTEAD IT IS IN THE SHAPE OF THE BAND-AID (L X B) WITH NO FASTENERS ON EITHER SIDE ON THE SHORT B SIDE AND FASTENERS ONLY ON THE LONGITUDINAL SIDE L OF THE DOUBLER (DOUBLER IS ATTACHED TO A TOTAL OF 2 STRINGERS IN THE CENTER WING SECTION)(CANNOT ATTACH A HAND DRAWN SKETCH HERE..). PATS / DECRANE IS VERY HESITANT IN ATTACHING THE DOUBLER TO THE ADJACENT STRINGERS BECAUSE OF COST CUTTING MEASURES.

[EE4Y090195](#) BOEING BEAR STRAP CRACKED

7/29/2009 737200 654589015 ZONE 200

FORWARD ENTRY DOOR UPPER HINGE CUTOUT BEAR STRAP CRACKED.

[EE4Y090206](#) BOEING SKIN CRACKED

7/30/2009 737200 654576644 ZONE 200

UPPER FUSELAGE AT B/S 375, BETWEEN STR. 12L AND 13L, EXTERNAL SKIN WITH CRACK.

[EE4Y090205](#) BOEING DOUBLER CORRODED

7/30/2009 737200 65516267 ZONE 100

LOWER FUSELAGE, POTABLE WATER SERVICE PANEL CUT OUT INTERNAL DOUBLER WITH CORROSION.

[EE4Y090207](#) BOEING SKIN CRACKED

7/30/2009 737200 654577339 ZONE 200

UPPER FUSELAGE AT BS 843 STR 11 LT EXTERNAL SKIN WITH CRACK.

[DU4R2009396](#) BOEING SKIN CORRODED

9/11/2009 737524 BS 303-304

DURING SCHEDULED INSPECTION, NDT INSPECTION OF L1 DOOR LOWER HINGE CUTOUT FASTENER HOLES CORROSION NOTED BS 303.9, W/L 234

[DU4R2009397](#) BOEING BEAR STRAP CORRODED

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| 9/12/2009 | 737524 | | | BS 847 S24R |
| DURING SCHEDULED INSPECTION, FOUND AFT CARGO DOOR CUTOUT, INTERNAL BEARSTRAP CORRODED AT 2.5" ABOVE S24R TO 2" BELOW S-24R FWD OF BS 847 FRAME. | | | | |
| DU4R090905001 | BOEING | | SKIN | CRACKED |
| 9/5/2009 | 737524 | | 65C35774 | FUSELAGE |
| DURING SCHEDULED INSPECTION, FOUND EXTERIOR SKIN AT LOWER FWD CORNER OF AFT CARGO COMPT DOOR FRAME HAS CRACK INDICATION AND SIGNS OF GALLING FROM SCUFF PLATE | | | | |
| DU4R2009395 | BOEING | | FRAME | CRACKED |
| 8/27/2009 | 737524 | | | BS 616 |
| DURING SCHEDULED INSP, FOUND CABIN, FUSELAGE FRAME AT BS 616, INBD CHORD CRACKED AT LWR (2) FASTENERS, WL 201.6 LT. | | | | |
| DU4R2009394 | BOEING | | SKIN | DENTED |
| 8/23/2009 | 737524 | | | BS 927-947 |
| DURING SCHEDULED INSP, FOUND DENT ON FUSELAGE BELLY SKIN BETWEEN FRAMES AT BS 927-947, S25-27R. REVISION SEE ITEM (G) | | | | |
| DU4R2009393 | BOEING | GE | SKIN | GOUGED |
| 8/21/2009 | 737524 | CFM56* | | BS 867 |
| DURING SCHEDULED INSP, FOUND DEEP GOUGE ON FUSELAGE SKIN AT BS 867, STR 1. | | | | |
| TIPR20090022 | BOEING | BOEING | LATCH | OUT OF ADJUST |
| 9/12/2009 | 767222 | | 312540011 | ESCAPE SLIDE |
| LEFT OFF-WING ESCAPE SLIDE FAILED OPERATIONAL CHECK(FAILED TO DEPLOY. ACCOMPLISHED RESTORATION OF LT OFF WING ESCAPE SYSTEM TO ITS INITIAL CONDITION AFTER DEPLOYMENT IAW MM 25-65-00 REAJUSTED LT OFF WING SLIDE DOOR LATCHES IAW MM 25-65-00, LATCH CHECK GOOD, REARMED LT WING OFF WING ESCAPE SYSTEM IAW MM25-65-00. | | | | |
| TIPR20090020 | BOEING | PWA | SKIN | DAMAGED |
| 8/27/2009 | 767222 | JT9D3A | 146T350201 | ZONE 200 |
| FUSELAGE SKIN REPAIR DOUBLER/STRAP AT FS 1222 AND S22-24R, REMOVED AND REPLACED REPAIR DOUBLER IAW REO-G12895 REV C, DATED 08/13/09. | | | | |
| 2009F00086 | BOEING | | STRUCTURE | CRACKED |
| 9/25/2009 | 767231 | | 141T293815 | NLG WW |
| NOSE WHEEL WELL RIGHT AFT VERTICLE CHORD CRACKED MID SPAN STA 287 RBL 25 WL 159. | | | | |
| 2009FA0000724 | BOEING | GE | ENGINE | AUTO SHUTDOWN |
| 8/16/2009 | 767241 | CF680C2B2 | | RIGHT |
| DURING CRUISE LEVEL AT FL 360, 65 NM MILES SOUTH OF INTERSECTION, THE RT ENG OIL FILTER EICAS ANNUNCIATION DISPLAYED. ACCORDING TO CHECK LIST, REDUCED THRUST TO IDLE, THE ANNUNCIATION REMAIN DISPLAYED. FOLLOWING CHECK LIST, THE RT ENGINE WAS SHUTDOWN AFTER COOL DOWN PERIOD. ADVISED ATC, DUE TO ENGINE SHUTDOWN. WILL LAND AT ORIGINAL DESTINATION WITH NO OTHER INCONVENIENCE. | | | | |
| TAMF20090031S | BOEING | GE | FITTING | CRACKED |
| 7/24/2009 | 767241 | CF680C2B2 | | THRUST REVERSER |
| DURING (SC3) CHECKS INSP WAS FOUND NACELLES/PYLON THRUST REVERSER FITTING AT 5 O'CLOCK WITH CRACK REPAIRED ACCOMPLISHED IAW EWO 767-54-031, | | | | |
| 2009FA0000727 | BOLKMS | | SKIN | MISREPAIRED |

8/19/2009 BK117B2 11730002V01 TAILBOOM
TAILBOOM WAS FOUND TO HAVE 32 RIVETS IN THE AFT PART OF TOP SKIN THAT WERE TOO SHORT. RECEIVED REPAIRED.

[2009FA0000787](#) BOLKMS WASHER MISSING
8/25/2009 BK117C1 SWASHPLATE

ON 08/21/2009 INSTALLED A MAIN TRANSMISSION/SWASH PLATE ASSY NEWLY REPAIRED BY THE MANUFACTURE. GROUND RUNS, TRACK, BALANCE, & FLIGHT TESTS COMPLETED, NOTHING OUT OF THE ORDINARY NOTICED. PILOT REPORTED THAT ACFT HAD STARTED DISPLAYING VIBRATIONS DURING FLT. ACFT LANDED WITHOUT INCIDENT. PILOT GROUNDED ACFT AND AN INSPECTION PERFORMED. PLAY FOUND IN THE M/R SWASHPLATE ALLOWING THE SWASHPLATE TO SLIDE Laterally APPROX. 1/2 INCH. MANUFACTURER PERFORMED A TEAR DOWN INSPECTION. UPON REMOVAL OF SWASHPLATE, DETERMINED INCIDENT WAS CAUSED BY THE LT GIMBAL BEARING ASSY MISSING A WASHER, AS WELL AS A COTTER PIN ON THE NUT, WHICH CAME LOOSE & BACKED OUT OF MOUNTING BOLT. INNER BORE OF BEARING IS LARGER THAN NUT DIAMETER, WITHOUT WASHER, BEARING WAS ABLE TO SLIP PAST THE LOOSE NUT. IMPROPER ASSEMBLY ALLOWED THE BEARING AND CUP TO BECOME DISLODGED PERMITTING THE SWASHPLATE TO MOVE Laterally AROUND THE MAST.

[2009FA0000677](#) CESSNA LYC VALVE BURNED
7/20/2009 152 O235L2C CYLINDER

DURING TAKE OFF AND CLIMB OUT AT ABOUT 200 FEET OFF RUNWAY PILOT EXPERIENCED ENG STALL, PILOT MADE EMERGENCY LANDING WITH ENG RESTARTING AND STALLING SEVERAL TIMES, ENG WAS INSPECTED WITH BORESCOPE AND COMPRESSION GAUGE. NR 1 CYL HAD NO COMPRESSION AND HAD SCARRING ON CYL WALLS, CYL WAS REMOVED AND INTAKE VALVE WAS FOUND TO HAVE A HOLE BURNED THROUGH IT, PISTON AND PISTON RINGS WERE REMOVED AND A OVERHAULED CYL AND NEW PISTON AND PISTON RINGS WERE INSTALLED.

[2009FA0000745](#) CESSNA CONT MAGNETO FAILED
8/17/2009 172 O300A 6364 ENGINE

LT MAGNETO SEVERE MISS AND INTERMITTENT, INOPERATIVE IN FLIGHT. SB'S 02-08A AND 03-08A C/W THROUGH INSP. LT MAGNETO, SLICK MODEL 6364, SN 06121363 WITH 356 TOTAL HOURS. FUNCTIONAL CHECK ON GROUND CHECK GOOD BEFORE AND AFTER FLIGHT. INSP REVEALED CAPACITOR, CAP AND ROTOR DEFECTIVE. CAPACITOR PN K3984 FAILED AT REAR LEAD, DISTRIBUTOR BLOCK AND ROTOR ASSY PN K3823. ROTOR END BURNED, CAP/BLOCK ASSY HAS DEEP GOUGES AND UNEVEN SPARK PATTERN AROUND CONTACTS CREATING PITTING AND FANNING OF THE ELECTRICAL CURRENT.

[2009FA0000749](#) CESSNA YOKE BROKEN
8/25/2009 172F 051178216 ELEVATOR

THE ELEVATOR YOKE FAILED AT THE LOWER PORTION SLIGHTLY ABOVE (2 INCHES)THE PUSH PULL TUBE ATTACHMENT,DURING FLIGHT CONTROL CHECK. IT WAS FOUND THAT SERVICE BULLETIN SB SEB01-3 HAD NOT BEEN ACCOMPLISHED. THE YOKE WAS CORRODED INTERNALLY AND FAILED. THERE IS SOME INDICATION THAT A CRACK MAY HAVE BEEN PRESENT PRIOR TO THE FAILURE.

[2009FA0000680](#) CESSNA CONTROL CABLE FRAYED
8/12/2009 172S 0510105360 FLT CONTROLS

DURING A ROUTINE INSP, THIS CABLE LOCATED IN CTR CEILING, AT STA 65.33, WAS FOUND BADLY WORN WHERE IT CONTACTS ONE OF THE 3 PULLEYS. THE PULLEY FREELY ROTATES HOWEVER THERE IS NOT ENOUGH "TRACTION" FROM THE CABLE TO ROTATE THE PULLEY DURING NORMAL OPERATION. THIS CAUSES THE CABLE TO SLIDE ACROSS THE PULLEY WHICH CREATES A WEAR POINT. THE CABLE APPEARS SHINY, BUT IF VIEWED WITH A STRONG MAGNIFIER MANY INDIVIDUAL STRANDS CAN BE SEEN BROKEN.

[2009FA0000681](#) CESSNA CONTROL CABLE FRAYED
8/12/2009 172S 0510105362 FLT CONTROLS

DURING A ROUTINE INSP, THIS CABLE LOCATED IN RT WING, AT STA 100.50, WAS FOUND BADLY WORN WHERE IT CONTACTS A FAIRLEAD. THE CABLE APPEARS SHINY, BUT IF VIEWED WITH A STRONG MAGNIFIER MANY

INDIVIDUAL STRANDS CAN BE SEEN BROKEN.

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| 2009FA0000789 | CESSNA | LYC | SLICK | GEAR | DAMAGED |
| 9/9/2009 | 172S | IO360L2A | | M3827 | MAGNETO |

ACFT HAD INTERMITTENT MAGNETO OPERATION ON LT MAGNETO POSITION DURING GROUND RUN-UP PROCEDURE. ACFT MX WAS ABLE TO DUPLICATE PROBLEM. REMOVED LT MAGNETO FOR INTERNAL INSPECTION. ROTOR (NR 16) WAS UNSEATED FROM ROTOR SHAFT CAUSING LIP ON ROTOR GEAR TO GROUND-UP BY DISTRIBUTOR BLOCK GEAR. THE LIP MATERIAL WAS FOUND THROUGHOUT THE INSIDE OF MAGNETO HOUSING. ACFT MX REMOVED RT MAGNETO FOR VISUAL INSP AND FOUND THE SAME DAMAGE AS THE LT MAGNETO. BOTH MAGNETOS HAD FACTORY TORQUE SEAL APPLIED TO TOP COVER SCREW. (K)

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| 2009FA0000790 | CESSNA | LYC | SLICK | GEAR | DAMAGED |
| 9/9/2009 | 172S | IO360L2A | | M3827 | MAGNETO |

ACFT HAD INTERMITTENT MAGNETO OPERATION ON LT MAGNETO POSITION DURING GROUND RUN-UP PROCEDURE. ACFT MX WAS ABLE TO DUPLICATE PROBLEM. REMOVED LT MAGNETO FOR INTERNAL INSPECTION. ROTOR (NR 16) WAS UNSEATED FROM ROTOR SHAFT CAUSING LIP ON ROTOR GEAR TO GROUND-UP BY DISTRIBUTOR BLOCK GEAR. THE LIP MATERIAL WAS FOUND THROUGHOUT THE INSIDE OF MAGNETO HOUSING. ACFT MX REMOVED RT MAGNETO FOR VISUAL INSP AND FOUND THE SAME DAMAGE AS THE LT MAGNETO. BOTH MAGNETOS HAD FACTORY TORQUE SEAL APPLIED TO TOP COVER SCREW. (K)

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| 2009FA0000782 | CESSNA | CONT | | CONTROL CABLE | FRAYED |
| 9/10/2009 | 337G | IO360G | | 14601007AND8 | RT WING TE FLAP |

FOUND BOTH OF THE RT WING FLAP EXTEND CABLES WITH BROKEN INTERNAL WIRES. CABLES HAD TO BE REMOVED AND TWISTED AGAINST THEIR NORMAL WIND TO FIND THE TROUBLE. BOTH WERE DAMAGED AT THE POINT WHERE THEY GO AROUND THE BELLCRANKS IN THE WING, ABOUT 2 INCHES FROM THE CABLE TENSION ADJUSTING NUT.

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| 2009FA0000685 | CESSNA | CONT | ECI | CYLINDER HEAD | CRACKED |
| 8/12/2009 | 414A | TSIO520NB | | AEC65385E | NR 1 CYLINDER |

DURING ROUTINE ENGINE OIL CHANGE, FUEL STAINS WERE NOTED ON INTAKE MANIFOLD BELOW EACH CYLINDER INTAKE PORT AND BETWEEN CYLINDER HEAD FINS IN THIS AREA. PERFORMED DIFFERENTIAL COMPRESSION TEST WITH LOW COMPRESSION NOTED ON NR 1 AND 5 CYLINDERS. SOAP BUBBLE LEAK CHECK REVEALED CRACKS ON BOTH CYLINDER HEADS BETWEEN FINS ABOVE INTAKE PORTS. REMOVED ALL CYLINDERS FOR FURTHER INSPECTION. EACH CYLINDER FOUND TO HAVE CRACKS EMANATING FROM THE TOP SPARK PLUG BOSS TO THE INTAKE VALVE AREA.

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| 2009FA0000686 | CESSNA | CONT | ECI | CYLINDER HEAD | CRACKED |
| 8/12/2009 | 414A | TSIO520NB | | AEC65385E | NR 2 CYLINDER |

DURING ROUTINE ENGINE OIL CHANGE, FUEL STAINS WERE NOTED ON INTAKE MANIFOLD BELOW EACH CYLINDER INTAKE PORT AND BETWEEN THE CYLINDER HEAD FINS IN THIS AREA. PERFORMED DIFFERENTIAL COMPRESSION TEST WITH LOW COMPRESSION NOTED ON NR 1 AND 5 CYLINDERS. SOAP BUBBLE LEAK CHECK REVEALED CRACKS ON BOTH CYLINDER HEADS BETWEEN FINS ABOVE INTAKE PORTS. REMOVED ALL CYLINDERS FOR FURTHER INSPECTION. EACH CYLINDER WAS FOUND TO HAVE CRACKS EMANATING FROM THE TOP SPARK PLUG BOSS TO THE INTAKE VALVE AREA.

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| 2009FA0000687 | CESSNA | CONT | ECI | CYLINDER HEAD | CRACKED |
| 8/12/2009 | 414A | TSIO520NB | | AEC65385E | NR 3 CYLINDER |

DURING ROUTINE ENGINE OIL CHANGE, FUEL STAINS WERE NOTED ON INTAKE MANIFOLD BELOW EACH CYLINDER INTAKE PORT AND BETWEEN THE CYLINDER HEAD FINS IN THIS AREA. PERFORMED DIFFERENTIAL COMPRESSION TEST WITH LOW COMPRESSION NOTED ON NR 1 AND 5 CYLINDERS. SOAP BUBBLE LEAK CHECK REVEALED CRACKS ON BOTH CYLINDER HEADS BETWEEN FINS ABOVE INTAKE PORTS. REMOVED ALL CYLINDERS FOR FURTHER INSPECTION. EACH CYLINDER WAS FOUND TO HAVE CRACKS EMANATING FROM THE TOP SPARK PLUG BOSS TO THE INTAKE VALVE AREA.

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| 2009FA0000688 | CESSNA | CONT | ECI | CYLINDER HEAD | CRACKED |
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8/12/2009 414A TSIO520NB AEC65385E NR 4 CYLINDER

DURING ROUTINE ENGINE OIL CHANGE, FUEL STAINS WERE NOTED ON INTAKE MANIFOLD BELOW EACH CYLINDER INTAKE PORT AND BETWEEN THE CYLINDER HEAD FINS IN THIS AREA. PERFORMED DIFFERENTIAL COMPRESSION TEST WITH LOW COMPRESSION NOTED ON NR 1 AND 5 CYLINDERS. SOAP BUBBLE LEAK CHECK REVEALED CRACKS ON BOTH CYLINDER HEADS BETWEEN FINS ABOVE INTAKE PORTS. REMOVED ALL CYLINDERS FOR FURTHER INSPECTION. EACH CYLINDER WAS FOUND TO HAVE CRACKS EMANATING FROM THE TOP SPARK PLUG BOSS TO THE INTAKE VALVE AREA.

[2009FA0000689](#) CESSNA CONT ECI CYLINDER HEAD CRACKED

8/12/2009 414A TSIO520NB AEC65385E NR 5 CYLINDER

DURING ROUTINE ENGINE OIL CHANGE, FUEL STAINS WERE NOTED ON INTAKE MANIFOLD BELOW EACH CYLINDER INTAKE PORT AND BETWEEN THE CYLINDER HEAD FINS IN THIS AREA. PERFORMED DIFFERENTIAL COMPRESSION TEST WITH LOW COMPRESSION NOTED ON NR 1 AND 5 CYLINDERS. SOAP BUBBLE LEAK CHECK REVEALED CRACKS ON BOTH CYLINDER HEADS BETWEEN FINS ABOVE INTAKE PORTS. REMOVED ALL CYLINDERS FOR FURTHER INSPECTION. EACH CYLINDER WAS FOUND TO HAVE CRACKS EMANATING FROM THE TOP SPARK PLUG BOSS TO THE INTAKE VALVE AREA.

[2009FA0000690](#) CESSNA CONT ECI CYLINDER HEAD CRACKED

8/12/2009 414A TSIO520NB AEC65385E #6 CYLINDER

DURING ROUTINE ENGINE OIL CHANGE, FUEL STAINS WERE NOTED ON INTAKE MANIFOLD BELOW EACH CYLINDER INTAKE PORT AND BETWEEN THE CYLINDER HEAD FINS IN THIS AREA. PERFORMED DIFFERENTIAL COMPRESSION TEST WITH LOW COMPRESSION NOTED ON #1 AND 5 CYLINDERS. SOAP BUBBLE LEAK CHECK REVEALED CRACKS ON BOTH CYLINDER HEADS BETWEEN FINS ABOVE INTAKE PORTS. REMOVED ALL CYLINDERS FOR FURTHER INSPECTION. EACH CYLINDER WAS FOUND TO HAVE CRACKS EMANATING FROM THE TOP SPARK PLUG BOSS TO THE INTAKE VALVE AREA.

[2009FA0000769](#) CESSNA CONT DIODE INTERMITTENT

7/14/2009 421C GTSIO520F 1N1201 TERMINAL BOARD

PILOT COMPLAINED ABOUT RT ENG GOING TO HIGH FUEL PUMP PRESSURE INTERMITTENTLY WITH PUMP SET ON LOW, AFTER MANY HOURS OF TROUBLESHOOTING (IT ALWAYS WORKED IN THE SHOP PROPERLY), THE PROBLEM WAS DETERMINED TO BE AN INTERMITTENT DIODE IN THE FUEL BOOST PUMP CIRCUIT. REPLACED THE DIODE AND THE BOOST PUMP WORKED PROPERLY. (DIODE PN 1N1201) DIODE INSTALLED ON TER. NR 8 ON TERM BOARD TB9- DIODE REF NR CR12. TERM BOARD LOCATED INSIDE CB/SWITCH PANEL ON LT SIDE. (K)

[CA090617002](#) CESSNA WILINT TRIM TAB DISPLACED

6/4/2009 525 FJ44 C2TE43ATAB ELEVATOR

(CAN) PILOT REPORTED "JERKINESS: OF ELEVATOR CONTROL - GROUNDED ACFT ELEVATOR TRIM/TAB OPERATION INSPECTED - LT TAB INGFS FOUND MIGRATED INBD. CONTRACTING TAILCONE. HINGE PIN RETAINING LOCKWING FOUND MISSING. LOCKWING HOLES (2) FOUND "PULLED THRU" TAB SKIN. TAB ASSY REMOVED-TAB, INGS, PIN INSPECTED, FOUND SERVICEABLE. TAB REINSTALLED, NOW LOCKWING HOLES DRILLED IN TAB, PIN, HINGES LUBRICATED, NEW SAFETY WIRE INSTALLED, OTBD END OF HINGE PIN (EXPOSED) BENT AS SECONDARY RETENTION, SYS FUNCTION CKS COMPETED - INDEPENDENT CKS COMPLETED. TRIM TAB HINGE RETENTION CHECKED ON OPERATORS OTHER ACFT - LOCKWIRE HOLES (NEW) INSTALLED AS REQUIRED. MX ADVISED OF ISSUE. POSSIBLE LONG TERM SOLUTION - SECURE `LOOSE` LOCKING WITH RTV - REPLACE EACH YEAR - REMOVE/INSPECT SKIN HIDDEN BY LOCKING EACH 100 HRS - REPLACEMENT HINGE PINS SHOULD BE CUT LONG ENOUGH TO ALLOW EXPOSED OUTBD. BEND TO BE SLIGHTLY BENT THUS DISALLOWING INBD. MIGRATION OF PN SHOULD LOCKWIRE OR LOCKWIRE HOLES (2) FAIL.

[2009FA0000783](#) CESSNA ACTUATOR FAILED

9/11/2009 550 99121202 NLG

NOSE LANDING GEAR ACTUATOR FAILED AND GEAR COLLAPSED DURING LANDING CAUSING DAMAGE TO LOWER BELLY SKINS.

[PIYRS260900285](#) CESSNA CESSNA SUPPORT BRACKET MISALIGNED

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| 8/25/2009 | 560CESSNA | | 65601971AND2 | ZONE 300 |
| AFT ELEVATOR BELLCRANK SUPPORT BRACKETS ARE MISALIGNED CAUSING SIDE LOADING TO LWR ELEVATOR CONTROL CABLE. NO VISUAL SIGNS OF DAMAGE CREATING THIS ISSUE. | | | | |
| 2009FA0000771 | CESSNA | PWA | VALVE | INOPERATIVE |
| 7/16/2009 | 560CESSNA | PW535A | 99124094 | CABIN PRESSURE |
| PRESSURIZATION INOPERATIVE AT ALTITUDE, THE ACFT GOT RED "ALT" ANNUNCIATOR, EMER PRESSURIZATION DID NOT KICK ON. DIFFERENTIAL PRESSURE GAUGE STUCK AT 12,000 FT. REPLACED PRIMARY OUT FLOW VALVE. OPS CHECK STILL BAD ON CHECK FLIGHT. NOTED CABIN ALTITUDE UNCONTROLLABLE IN MANUAL MODE. TROUBLESHOOT DOWN TO AND REPLACED MANUAL TOGGLE VALVE. ACCOMPLISHED OPS CHECK AND ALL OPS NORMAL. | | | | |
| 2009FA0000777 | CESSNA | | TOTALIZER | MALFUNCTIONED |
| 9/8/2009 | 750 | | | FUEL SYSTEM |
| FUEL DISCREPENCY ENROUTE. FUEL TOTALIZER SHOWED 9700 LBS AT THE CHACKS BEFORE TAXI, DURING TAXI FUEL DROPPED TO 9400 LBS, AFTER TAKE-OFF FUEL SHOWS 10400 LBS AND STAYED THERE UNTIL LAND OFF 25 MIN. LATER. | | | | |
| 2009FA0000791 | CESSNA | CONT | LINE | CORRODED |
| 6/17/2009 | T210M | TSIO520R | 1200406131 | FUEL SYSTEM |
| INSP FOUND MINOR FUEL LEAK AT THE FWD FUEL LINE WHERE IT COMES IN CONTACT WITH FRESH AIR VENT DUCTING LOACTED IN WING L/E. AIR DUCTING CAUSES CORROSION PITS TO FORM. LINE WAS REPLACED. INSPECTED (5) OTHER SIMULAR ACFT AND FOUND SAME RESULTS IN ALL EXCEPT (1). SO FAR WE HAVE HAD TO CHANGE (7) LINES. THE SAME LINE IS USED ON LT AND RT WING IN SAME LOCATION. (K) | | | | |
| 2009FA0000761 | CESSNA | CONT | IGNITION SWITCH | FAILED |
| 9/4/2009 | TU206G | IO550F | C2925010109 | COCKPIT |
| IGNITION SWITCH FAILED TO SHUT-OFF MAGENTO DURING A PRE-FLIGHT MAGNETO CHECK AND FAILED AT 1201.1 HOURS SINCE NEW . THE REQUIRED DIODE ON THE STARTER SOLENOID WAS INSTALLED PER THE AD/SERVICE BULLETIN SO THIS SWITCH SHOULD NOT HAVE FAILED AT 1201.1 HOURS. | | | | |
| 2009FA0000784 | CIRRUS | CONT | LATCH | WORN |
| 9/13/2009 | SR20 | IO360ES | H50002 | ZONE 200 |
| THE OIL ACCESS DOOR IS SECURED WITH TWO HARTWELL H-5000-2 LATCHES. ON PRE-FLIGHT INSPECTION THE FORWARD LATCH HINGE PIN WAS SEVERELY WORN, WITH LESS THAN 1/32 INCH OF METAL REMAINING. HAD THIS PIN FAILED, THE LATCH WOULD HAVE OPENED AS WOULD HAVE THE ACCESS DOOR. THE OIL DOOR IS UNDER POSITIVE PRESSURE IN FLIGHT SO THE FAILURE OF THE LATCH AND ACCESS DOOR WOULD HAVE DEPRIVED THE ENGINE OF COOLING AND COULD POSSIBLY HAVE CAUSED THE OIL DOOR TO SEPARATE FROM THE AIRCRAFT. DURING FLIGHT, THE OIL ACCESS DOOR IS FORCED AGAINST THE LATCH BY AIR PRESSURE AND IS SUBJECT TO SIGNIFICANT VIBRATION LEADING TO WEAR. THIS ASSEMBLY SHOULD BE PART OF A PREFLIGHT INSPECTION. | | | | |
| 2009FA0000715 | COLUMB | | STARTER | CONTAMINATED |
| 6/15/2009 | LC41550FG400 | | 655566 | ENGINE |
| STARTER FOUND COMPLETELY FULL OF ENGINE OIL DURING 100 HR INSPECTION. STARTER STILL PARTIALLY FUNCTIONED. (K) | | | | |
| 2009FA0000714 | COLUMB | | STARTER | CONTAMINATED |
| 6/15/2009 | LC41550FG400 | | 655566 | ENGINE |
| STARTER FOUND COMPLETELY FULL OF ENG OIL DURING 100 HR INSP, STARTER STILL PARTIALLY FUNCTIONED. (K) | | | | |
| 2009FA0000725 | DHAV | | CIRCUIT BREAKER | FAILED |
| 8/18/2009 | DHC6300 | | 727185 | |

A 5 AMP CB (FOR LOW FUEL PRESS WARNING) WAS PULLED DURING ROUTINE MX. AT COMPLETION OF MX THE CB WOULD NOT PUSH IN, RESET. CB REPLACED.

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| 2009FA0000717 | DIAMON | CONT | ROTOR | BROKEN |
| 7/27/2009 | DA20C1 | IO240B | M3073 | MAGNETO |

ACFT GROUNDED DUE TO ROUGH RUNNING ENG, THE RT MAGNETO HAD 200 RPM DROP. RT MAGNETO TIMING WAS FOUND TO BE 10-12 DEGREES RETARDED. DISASSEMBLY OF MAGNETO REVEALED THAT ROTOR WAS FRACTURED IN 2 PIECES BETWEEN THE MAGNET AND LWR BRG. THE UNEVENNESS OF THE FRACTURE ALLOWED THE 2 PARTS OF THE ROTOR SHAFT TO STAY ALIGNED WITH SOME PLAY. THIS MAGNETO WAS TORN DOWN AND INSPECTED DUE TO PROP STRIKE 245 HOURS AGO AND THE MAGNETO PARTS WERE FOUND TO BE AIRWORTHY. (K)

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|----------------------------|-------|--|-----------------|----------|
| EE4Y090283 | DOUG | | SUPPORT FITTING | CORRODED |
| 9/21/2009 | DC983 | | 3957317501 | ZONE 100 |

COO FOUND IN THE LWR FUSELAGE, AFT CARGO COMPARTMENT AT Y STA 1151 BETWEEN LONG 29R AND 30 SUPPORT FITTING WITH CORROSION.

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|----------------------------|-------|--|----------|----------|
| EE4Y090269 | DOUG | | FITTING | CRACKED |
| 9/14/2009 | DC983 | | 39542212 | ZONE 200 |

PAX CABIN, STA 1346 PASSENGER AFT ENTRANCE STAIRWELL DOOR, FITTING CRACKED.

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|----------------------------|-------|--|----------|----------|
| EE4Y090271 | DOUG | | STRINGER | CORRODED |
| 9/16/2009 | DC983 | | | ZONE 500 |

LT WING FUEL TANK INTERNAL STRUCTURE FROM XRS 69.000 TO XRS 137.750, STGR 18L, 19L, 20L, 21L AND 22L, CORRODED.

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|----------------------------|-------|--|----------|----------|
| EE4Y090250 | DOUG | | STRINGER | CORRODED |
| 9/16/2009 | DC983 | | | ZONE 500 |

LT WING FUEL TANK INTERNAL STRUCTURE FROM XRS 69.000 TO XRS 137.750, STGR 18L, 19L, 20L, 21L AND 22L, CORRODED.

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|----------------------------|-------|--|------|----------|
| EE4Y090273 | DOUG | | SKIN | CORRODED |
| 9/21/2009 | DC983 | | UNK | ZONE 100 |

SKIN CORRODED IN LOWER FUSELAGE, MID CARGO COMPARTMENT FROM YSTA 617 TO Y STA 627 BETWEEN LONG 28R ANF LONG 29R.

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|----------------------------|-------|--|----------|----------|
| EE4Y090281 | DOUG | | SUPPORT | CORRODED |
| 9/21/2009 | DC983 | | 59512729 | ZONE 100 |

FOUND THE LOWER FUSELAGE FAIRING AREA FROM Y STA 1012 TO Y STA 1065.44 AT X=0.00 (CENTER LINE) A SUPPORT TEE P/N 5951272-9 WITH CORROSION.

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|----------------------------|-------|--|------------|----------|
| EE4Y090279 | DOUG | | SKIN | CORRODED |
| 9/21/2009 | DC983 | | 5930503105 | ZONE 500 |

FOUND THE LT WING LOWER SKIN INNER SURFACE CORRODED, AT XRS 69.500 NEAR TO REAR SPAR.

| | | | | |
|----------------------------|-------|--|-----------|----------|
| EE4Y090274 | DOUG | | SKIN | CORRODED |
| 9/21/2009 | DC983 | | 993751239 | ZONE 500 |

COO REPORTED, IN LT WING, THE LEADING EDGE UPPER SKIN, WITH CORROSION FROM XFS 228.5 TO XFS 250.5

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| EE4Y09275 | DOUG | | SHEAR TIE | CORRODED |
| 9/21/2009 | DC983 | | 993607317 | ZONE 100 |

COO REPORTED THE SHEAR TIE CORRODED IN AFT CARGO COMPARTMENT AT Y STA 1211 BETWEEN LONG 29

AND 30R.

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|----------------------------|-------|--|------|----------|
| EE4Y090282 | DOUG | | SKIN | CORRODED |
| 9/21/2009 | DC983 | | | ZONE 100 |

FOUND THE FUSELAGE SKIN CORRODED AT STA Y207, BETWEEN LONG 20R AND LONG 21R.

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|---------------------------|-------|--|----------|----------|
| EE4Y09276 | DOUG | | ANGLE | CORRODED |
| 9/21/2009 | DC983 | | 59380599 | ZONE 400 |

NR 1 ENGINE EXHAUST NOZZLE UPPER SECTION, ANGLE CRACKED.

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| EE4Y090278 | DOUG | | SUPPORT | CRACKED |
| 9/21/2009 | MD83 | | 3936409505 | ZONE 100 |

LOWER FUSELAGE, WING CENTER SECTION AREA SUPPORT TEE CRACKED AT YSTA 884,X 0

| | | | | |
|----------------------------|------|--|------------|----------|
| EE4Y090280 | DOUG | | SUPPORT | CRACKED |
| 9/21/2009 | MD83 | | 3936409507 | ZONE 100 |

LOWER FUSELAGE WING CENTER SECTION AREA SUPPORT TEE CRACKED AT Y STA 875.

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| 2009FA0000786 | EMB | | FLOOR SUPPORT | CORRODED |
| 9/14/2009 | ERJ170200LR | | 17003263001 | FUSELAGE |

DURING BASIC CHECK MAINTENANCE VISIT CORROSION WAS FOUND ON RT FLOOR TRACK BETWEEN FR 14 TO 18. TEMPORARY REPAIR WAS ACCOMPLISHED PER IC2009-170/07126 AND EO E175-53MR-010. WITH PERMANENT REPAIR TO BE ACCOMPLISHED AT NEXT BASIC CHECK MAINTENANCE VISIT.

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| 2009FA0000785 | EMB | GE | FLOOR SUPPORT | CORRODED |
| 9/14/2009 | ERJ170200LR | CF348E5 | 17003264001 | FUSELAGE |

DURING BASIC-1 CHECK MX VISIT, CORROSION WAS FOUND ON LT FLOOR TRACK BETWEEN FR 16-19. PN 170-03264-001. PERMANENT REPAIR WAS ACCOMPLISHED IAW IC2009-170/07126 AND COMPASS EO E175-53MR-010.

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| 2009FA0000767 | EMB | GE | FLOORBEAM | CORRODED |
| 8/24/2009 | ERJ190100IGW | CF3410E5 | 17086100001 | FUSELAGE |

CORROSION FOUND ON FLOORBEAM, 11 INCHES FROM LT-BUTT-LINE, BETWEEN FRAMES 85 AND 87. (K)

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|----------------------------|--------------|----------|-------------|--------|
| 2009F00069 | EMB | GE | SHEAR PIN | BROKEN |
| 9/16/2009 | ERJ190100IGW | CF3410E5 | 19015183403 | ENGINE |

DURING VISUAL INSPECTION OF ENGINE, TWO SHEAR PINS WERE OBSERVED TO BE BROKEN.

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|-------------------------------|--------------|----------|-------------|----------|
| 2009FA0000768 | EMB | GE | FLOORBEAM | CORRODED |
| 8/24/2009 | ERJ190100IGW | CF3410E5 | 17065669003 | FUSELAGE |

CORROSION FOUND ON FLOORBEAM, 11 INCHES FROM LEFT-BUTT-LINE, BETWEEN FRAMES 85 AND 87. (K)

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|-------------------------------|--------|--|---------|--------|
| 2009FA0000760 | GULSTM | | TIRE | FAILED |
| 7/18/2009 | G1159A | | 348F832 | MLG |

ON TAKEOFF AT 1622Z, ACFT BLEW NR 4 RT OTBD TIRE. UPON RETURN LANDING BACK AT DEPARTURE, THE FOLLOWING DAMAGE WAS FOUND: RT INBD FLAP, RT LWR COWL, RT ENG T/R, AND RT GEAR DOOR OTBD. THIS TIRE SN FALLS WITHIN GY SB 2008-32-001. (K)

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|-------------------------------|--------|------------|---------|----------------|
| AI5R2009RS002 | GULSTM | BFGOODRICH | BOTTLE | EMPTY |
| 8/31/2009 | G1159A | | 4A38184 | RAFT INFLATION |

THE LIFE RAFT ARRIVED AT OUR FACILITY FOR ANNUAL INSPECTION. UPON INSPECTING AND WEIGHING THE CO2 CYLINDER, IT WAS DISCOVERED THAT THE CYLINDER WAS EMPTY.

| | | | | |
|-------------------------------|--------|------------|----------|----------------|
| AI5R2009RS001 | GULSTM | BFGOODRICH | CYLINDER | EMPTY |
| 8/31/2009 | G1159A | | 4A38185 | RAFT INFLATION |

THE LIFE RAFT ARRIVED AT OUR FACILITY FOR ANNUAL INSPECTION. UPON INSPECTING THE HYDROSTATIC TEST DATE ON THE CO2 CYLINDER, IT WAS DETERMINED THAT THE CYLINDER WAS DUE FOR HYDROSTATIC TESTING, AND WE THEN PULLED THE CYLINDER CABLE TO RELEASE THE CO2 FROM INSIDE THE CYLINDER. UPON DOING THIS, WE DISCOVERED THAT IT THE CYLINDER WAS EMPTY.

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|-------------------------------|--------|--|--------------|--------------|
| 2009FA0000751 | GULSTM | | SILENCER | DETERIORATED |
| 8/31/2009 | GIV | | 1159AC201131 | CABIN AIR |

THE CREW REPORTED THAT THE AIRCRAFT WAS DIFFICULT TO COOL AFTER BEING HEAT SOAKED. TECHNICIANS UPON TROUBLESHOOTING FOUND VERY LOW AIRFLOW FROM THE LEFT AND RIGHT FLOOR DISTRIBUTION DUCTS. USING A BOROSCOPE AND HAND MIRRORS IT WAS DETERMINED THAT THE AIR HOLES IN THE DISTRIBUTION DUCTS WERE CLOGGED WITH A FOAM MATERIAL. THE DUCTS WERE REMOVED AND LARGE AMOUNTS OF FOAM MATERIAL HAD TO BE REMOVED. THE SOURCE WAS DETERMINED TO BE THE CABIN AIR SILENCER GAC P/N 1159AC20113-1. INTERNAL BAFFLING FOAM HAD DETERIORATED AND THE FOAM TRAVELED ALONG THE AIR DISTRIBUTION DUCTS IN THE CABIN CLOGGING THE OUTPUT HOLES. THIS IS A KNOWN ISSUE WITH THIS SILENCER. CLEANING THE DUCTS AND REPLACING THE CABIN SILENCER RETURNED THE SYSTEM TO NORMAL.

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|---------------------------------|--------|--|-------------|------------|
| W9FA20090818001 | GULSTM | | SEAL | SPLIT |
| 8/18/2009 | GIV | | 1159SCB2022 | CARGO DOOR |

BAGGAGE DOOR SEAL HAD SMALL SPLIT ALONG GLUE LINE WHERE THE TWO ENDS MEET. FOUND WHEN OPENING BAGGAGE DOOR AND THE SEAL DIDN'T DEFLATE WHEN BAGGAGE DOOR HANDLE WAS ROTATED TO UNLOCKED POSITION. THIS IS THE SECOND TIME REPLACING A BAGGAGE DOOR SEAL THAT HAS SPLIT AT THE GLUE SEAM.

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|-------------------------------|--------|------------|-------------|-----------|
| 2009FA0000753 | GULSTM | WINSLOW | FIRING HEAD | DAMAGED |
| 8/31/2009 | GV | 1218FAAVUL | A53077 | LIFE RAFT |

DURING ROUTINE INSPECTION OF TWO (2) LIFE RAFTS LAST RETURNED TO SERVICE BY RIVER SERVICES INC. FAA 145 REPAIR STATION NR AI5R727M IN NOVEMBER OF 2008, IT WAS DISCOVERED THAT THE BAYONET PROTECTIVE COVERS REMAINED IN PLACE IN-BETWEEN THE FIRING HEAD AND CYLINDER HEAD ON BOTH LIFE RAFTS INFLATION SYSTEMS.

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|-------------------------------|--------|------------|-------------|-----------|
| 2009FA0000754 | GULSTM | WINSLOW | FIRING HEAD | DAMAGED |
| 8/31/2009 | GV | 1218FAAVUL | A53077 | LIFE RAFT |

DURING ROUTINE INSPECTION OF TWO (2) LIFE RAFTS LAST RETURNED TO SERVICE BY RIVER SERVICES INC. FAA 145 REPAIR STATION NR AI5R727M IN NOVEMBER OF 2008, IT WAS DISCOVERED THAT THE BAYONET PROTECTIVE COVERS REMAINED IN PLACE IN-BETWEEN THE FIRING HEAD AND CYLINDER HEAD ON BOTH LIFE RAFTS INFLATION SYSTEMS.

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| 2009FA0000723 | LANCAR | CONT | GUARD | BROKEN |
| 8/4/2009 | LC41550FG | TSIO550C | LB21710011A | COMPRESSOR |

THE AIR CONDITIONER BELT GUARD FAILED IN FLIGHT. INSP REVEALED 2 SMALL CRACKS AT THE LT SIDE WELDED NUT. THIS FAILURE CAUSED A 2 INCH X 2 INCH STEEL PIECE OF THE BELT GUARD TO SEPARATE, STRIKE THE AIR CONDITIONER CLUTCH ASSY AND SHEAR THE CLUTCH ASSY, BOTH OF WHICH SUBSEQUENTLY DEPARTED THE ACFT.

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|-------------------------------|------|---------|------------|------------|
| 2009FA0000766 | LEAR | GARRTT | LINE | CORRODED |
| 8/19/2009 | 35A | TFE731* | 2607003368 | HYD SYSTEM |

LINE HAD CORROSION ON 90 DEGREE BENDS ADJACENT TO FERRULES FOR B-NUTS. THE PORTION OF THE LINE AT BOTH ENDS HAD CORROSION THA WAS PRESENT WHERE THE PROTECTIVE COATING WAS REMOVED, APPARENTLY DURING MFG OF THE PART. THE CORROSION HAD EATEN THROUGH ONE END OF THIS LOCATION SUFFICIENT TO REDUCE WALL THICKNESS ALLOWING LINE TO BURST.

[2009FA0000780](#) LET CONTROL CABLE FRAYED
9/9/2009 L23SUPERBLAN A740255NA740254N RUDDER

RUDDER CABLES FOUND FRAYED, LEFT AND RIGHT SIDE. CHRONIC PROBLEM. SHOULD LAST 1000 HOURS ACCORDING TO MFG., L/R CABLES FAILED AT 665.9

[2009FA0000781](#) LET RIVET SHEARED
9/9/2009 L23SUPERBLAN FUSELAGE

RIVET AT SPAR INTER-CONNECT, AFT BULKHEAD AT REAR PORTION OF BATTERY BOX, UPPER LT SIDE, STA 65 (APPROX), RIVET HEAD SHEARED.

[2009FA0000757](#) LKHEED SKIN CRACKED
9/3/2009 P3A 9006031 ZONE 500

DISCREPANCY IDENTIFIED BY SLIGHT FUEL WEEP ON PREFLIGHT, LEFT WING STATION 90.5. FURTHER EVALUATION WITH ULTRASONIC NDT DISCLOSED A CRACK ON THE LOWER WING PANEL NO.3. THE CRACK EMANATED FROM ATTACH HOLE, THROUGH RISER AND APPROXIMATELY 1/2" INTO PLANK.

[2009FA0000748](#) PIAGIO CONTROLLER MALFUNCTIONED
8/28/2009 P180 21178049 CABIN PRESSURE

AT ALTITUDE THE CABIN PRESSURE WARNING LIGHT ILLUMINATED AND THE RATE OF CLIMB FOR THE CABIN ALTITUDE WAS 4000' ASCENDING. PILOT'S MADE AN EMERGENCY DECEND TO 12,000 FT. BACK AT THE STATION THE FAULT LIGHT ON THE SELECTOR PANEL REMAINS ILLUMINATED INDICATING A VOLTAGE SUPPLY PROBLEM TO THE CONTROLLER.

[5APR577Y12](#) PILATS PWA PARKERHANFIN BRAKE DISC BROKEN
9/15/2009 PC1245 PT6A67B 159074 MLG

PILOT REPORTS LT BRAKE MAY HAVE A CRACKED BRAKE DISC. REMOVED LT MAIN WHEEL ASSY AND DETERMINED THAT THE INBD BRAKE DISC WAS BROKEN INTO 3 PIECES. REMOVED AND REPLACED LT BRAKE ASSY IAW MM INSTRUCTIONS AND REINSTALLED THE LT MAIN WHEEL ASSY.

[5APR577Y11](#) PILATS PWA BRAKE DISC BROKEN
9/5/2009 PC1247 PT6A67B 244755 BRAKE ASSY

DURING A LINE CHECK IT WAS DISCOVERED THAT THE RT MAIN BRAKE ASSY OTBD DISC WAS BROKEN INTO 2 PIECES. THE BRAKE ASSY WAS REMOVED AND REPLACED.

[2009FA0000762](#) PIPER BULKHEAD CRACKED
8/17/2009 PA24 2047900 STA 258

FOUND AFT VERTICAL FIN SPAR TO BULKHEAD BRACKET CRACKED AT STA 258.75. THIS PROBLEM HAS BEEN ADDRESSED BY AD 74-16-08 AND MFG SL 679 ON OTHER SERIES ACFT BUT NOT ON THIS ONE. (K)

[2009FA0000763](#) PIPER BULKHEAD CRACKED
8/17/2009 PA24260 2047915 BS 258

FOUND AFT VERTICAL FIN SPAR TO BULKHEAD BRACKET CRACKED. STA 258.75. THIS PROBLEM HAS BEEN ADDRESSED BY AD 74-16-08 AND MFG SL 679 ON OTHER SERIES ACFT BUT NOT ON THIS ONE. (K)

[2009FA0000758](#) PIPER LYC HOSE CRACKED
8/6/2009 PA31310 TIO540* 8D0294156F003 FUEL SYSTEM

WHILE IN FLIGHT, PILOT OBSERVED FLAMES EMITTING FROM LOUVER OF LT INBD UPPER COWLING. PILOT SHUTOFF FUEL TO LT ENG AND SHUTDOWN SAME, WHICH EXTINGUISHED THE FIRE. PILOT LANDED AT THE NEXT AVAILABLE AIRPORT. UPON INSP BY MX THE FUEL SUPPLY LINE (PN 156F0038D294) WAS FOUND CRACKED AT 45 DEGREE FITTING BETWEEN B-NUT AND COLLAR. THE HOSE WAS INSTALLED 7/20/09 AND HAD APPROX 7.3 HOURS TT AT TIME OF FAILURE. INITIAL INSP REVEALED THE HOSE WAS NOT INSTALLED UNDER STRESS. SUSPECT MFG

DEFECT TO THE BE CAUSE OF FAILURE. PART ASSY DATE 2/2/09. (K)

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| 2009FA0000770 | PIPER | LYC | STUD | CRACKED |
| 6/24/2009 | PA31350 | LTIO540N2BD | 38135015 | CRANKCASE |

PILOT SAW LOSS IN OIL PSI AND MANIFOLD PSI, FEATHERED ENGINE AND LANDED, AFTER INSP, FOUND NR 3 CYLINDER ON RT ENGINE COMING OFF DUE TO STUDS BROKEN, NOT SURE WHICH STUD BROKE FIRST, BUT ONE STUD PROBABLY BROKE WHICH CAUSED EXTRA STRESS ON THE OTHER STUDS CAUSING THEM TO BREAK. REMOVED/ REPLACED ALL STUDS AND THROUGH BOLTS IN CRANKCASE, BECAUSE THIS EVENT IS THE SECOND TIME ON THIS ENG WHERE THE STUDS ON A CYLINDER BROKE. ALL CRANKCASE STUDS SHOULD BE A 100 PERCENT REPLACEMENT ITEM AT OVERHAUL AND LISTED IN SB 240U OR GREATER, THERE IS NO SURE WAY TO CHECK EACH STUD FOR CRACKS IN THE THREADS, WHEN MOUNTED IN THE CASE. THE STUDS ARE NOT THAT EXPENSIVE AND SHOULD BE REPLACED AT O/H. (K)

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| 2009FA0000774 | PIPER | | TRUNNION | CRACKED |
| 8/24/2009 | PA31T | | 4531603 | MLG |

PERFORMING PIPER EVENT NR 2, NOSE LANDING GEAR TRUNNION FOUND UNSERVICEABLE. EIGHT INCH CRACK NOTED IN CASTING. CRACK STARTING IN UPPER STEERING BEARING BOSS AT THE FIVE O'CLOCK POSITION LOOKING DOWN AT CASTING. CRACK EXTENDS STRAIGHT DOWN THE REAR RIGHT SIDE OF TRUNNION CASTING. NO REPORT OF HARD LANDING OR OTHER OPERATIONAL PROBLEMS

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|-------------------------------|--------|--|--------|----------|
| E81RJW3018133 | RAYTHN | | HOSE | CHAFED |
| 9/17/2009 | 390 | | A91941 | ZONE 400 |

DURING SCHEDULED INSP, FOUND LT ENG COMPARTMENT FUEL HOSE ASSY CHAFED PAST SERVICE LIMITS FROM CONTACT WITH ADJACENT COWLING STRUCTURE. REPLACED HOSE ASSY WITH NEW HOSE ASSY AND SECURED AS REQUIRED. 390 SERIES POWERPLANT INSTALLATIONS HAVE TIGHT CLEARANCES BETWEEN HOSES, WIRING, TUBING, ETC. AND ADJACENT STRUCTURES, TECH SHOULD PAY CLOSE ATTENTION TO THE MM 71-00-00-201 INSP REQUIREMENTS WHENEVER LINES, TUBING, ETC. ARE DISTURBED. CLEARANCE INSP REQUIRED EACH 200 HR AIRFRAME INSP OR ENG INSTALLATION, SHOULD BE CLOSELY ADHERED TO.

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|----------------------------------|-------------|--|-----------|--------------|
| E81R759X_JT22625 | RAYTHN | | JACKSHAFT | LEAKING |
| 9/4/2009 | HAWKER800XP | | AIR453965 | NLG STEERING |

INVESTIGATED REPORT OF HYD FLUID ON TOP OF NLG TIRES. FOUND NLG STEERING JACK DRIPPING HYD FLUID FROM BOTH ENDS SEALS. NLG STEERING JACK REPLACED 3 DAYS PREVIOUSLY FOR SAME CONDITION, ACFT HAD NOT FLOWN YET SINCE REPLACEMENT WITH "0" TSOH NLG STEERING JACK. HAVE REPLACED LOW TIME SINCE OVERHAUL NLG STEERING JACKS 3 TIMES IN LAST 4 MONTHS FOR SAME CONDITION. ALL REPLACED AND INSTALLED UNITS OVERHAULED OR REPAIRED DURING 2009. RECOMMEND O/H FACILITY INVESTIGATE RECORDS TO SEE IF INSP, REPAIR, OR Q/A PROCESSES NEED TO BE MODIFIED. RECOMMEND NLG STEERING JACK MFG INVESTIGATE WHETHER COMPONENT MM SERVICE LIMIT DIMENSIONS FOR WEAR NEED TO BE CHANGED TO CLOSER TOLERANCES.

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|-------------------------------|-------------|---------|----------|-----------------|
| 2009FA0000765 | RAYTHN | GARRTT | BEARING | DAMAGED |
| 4/5/2009 | HAWKER900XP | TFE731* | 30750161 | NR 5 COMPRESSOR |

THE SUBJECT ENGINE WAS REMOVED FOLLOWING A COMMANDED INFLIGHT SHUTDOWN ON APRIL 5TH, 2009. SHUTDOWN DETAILS: AT APPROX 39K, CREW NOTED NR 1 ENGINE THUMP AND VIBRATION, WITH OIL PRESSURE INDICATION IN RED (LOW). CREW PERFORMED ENGINE SHUTDOWN. ENG WAS RETURNED TO REPAIR AND O/H AND DISASSEMBLED AS REQUIRED TO ACCESS THE NR 5 BRG. A MATERIAL ANALYSIS (443741) WAS PERFORMED AND WITH FINDINGS INCONCLUSIVE. (K)

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| 2009FA0000756 | ROBSIN | | HINGE BRACKET | BROKEN |
| 9/2/2009 | R44 | | | MAIN DOOR |

DURING CRUISE FLIGHT AT 90 KNOTS, A LOUD POP WAS HEARD ON THE LT SIDE OF ACFT. DETERMINED THE CO-PILOTS DOOR OPENED PARTIALLY, DAYLIGHT COULD BE SEEN THROUGH LOWER FRONT OF DOOR INSTEAD THE REAR WHERE NORMALLY WOULD OPEN. SLOWED ACFT WHILE INSTRUCTOR HELD ON TO THE DOOR HANDLE. PERFORMED AN OFF AIRPORT LANDING. ABLE TO DETERMINE THE LOWER HINGE SNAPPED IN HALF AT HOLE

WHERE ATTACHING PIN PASSES THROUGH. REMOVED DOOR, AND RETURNED TO THE AIRPORT.

[EGRR2009090883077](#) SKRSKY

BUSHING

MISSING

9/8/2009

S76C

7610308012104

MAIN ROTOR

CUSTOMER REPORTED MUD AROUND STATIONARY SCISSORS ASSEMBLY. AFTER FURTHER INSPECTION REMOVED SCISSORS AND FOUND BUSHINGS IN LOWER LINK (P/N 76104-08042-101) MISSING. INSTALLED NEW STATIONARY SCISSORS ASSEMBLY P/N 76104-08040-042 S/N B168-00072.
