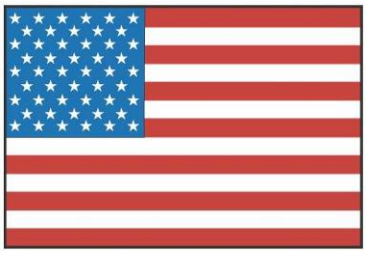
U.S. Department of Transportation
Federal Aviation Administration

AFS-600
Regulatory Support Division

ADVISORY CIRCULAR

43-16A

AVIATION MAINTENANCE ALERTS



ALERT NUMBER 407

JUNE 2012

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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

Beech: 58; Fuel Cell Sealant Deterioration; ATA 2810

"This aircraft has factory installed, extended range fuel cells," says a mechanic. "The cells are sealed wing bays—or 'wet wing' fuel cells located in each wing tip. These wing tip fuel cells were found leaking fuel through the fuel vent tubes (P/N 60-170010) on both sides. The cause of the leak was found to be the deterioration of the sealant around the tube slip-joint fittings. Also present in the fuel cells was an excessive amount of particulate contamination. This *(debris)* is deteriorated fuel tank sealant that failed to remain bonded to the inner tank surfaces. These particles were trapped in multiple locations throughout the entire fuel storage system with no way of draining, accessing, or even *(detecting)* their presence. The upper wing skin must be removed to access the trouble areas in the wing tip fuel cell—given inadequate inspection panel locations. The addition of a second inspection panel to the aft, inboard area of the wing tip fuel cell may be necessary to *(facilitate detection)* of this discrepancy. *(This is)* a potentially dangerous condition as fuel can enter the wing vent system, or *(these particles)* may cause fuel contamination and *(engine failure)."*

(This is a fuel cell? It looks more akin to a trash dump! Thank-you for the documentation—Ed.)

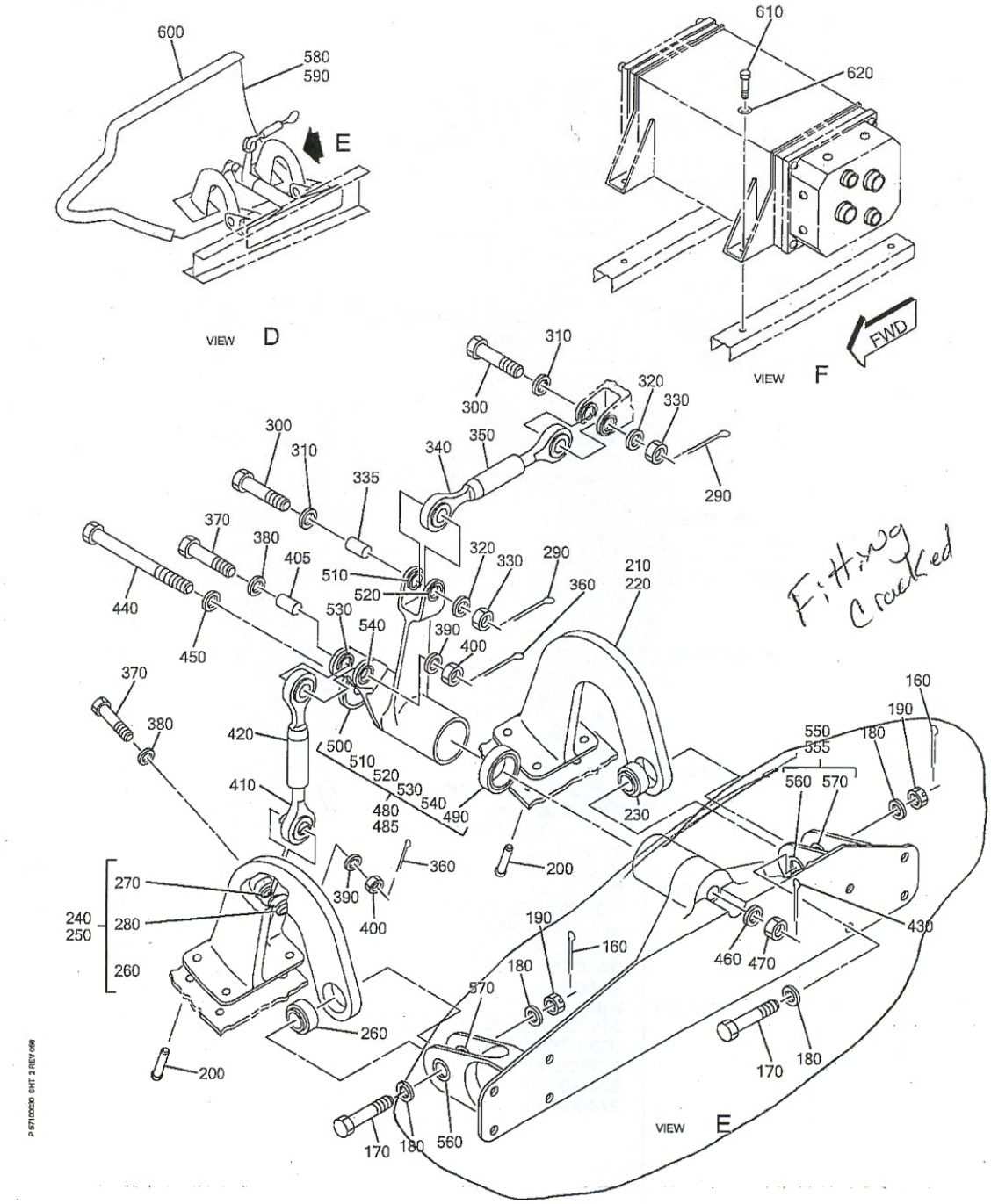
Part Total Time: (unknown)

Beech: 390; Cracked Flap-fairing Hinge Fittings; ATA 5744

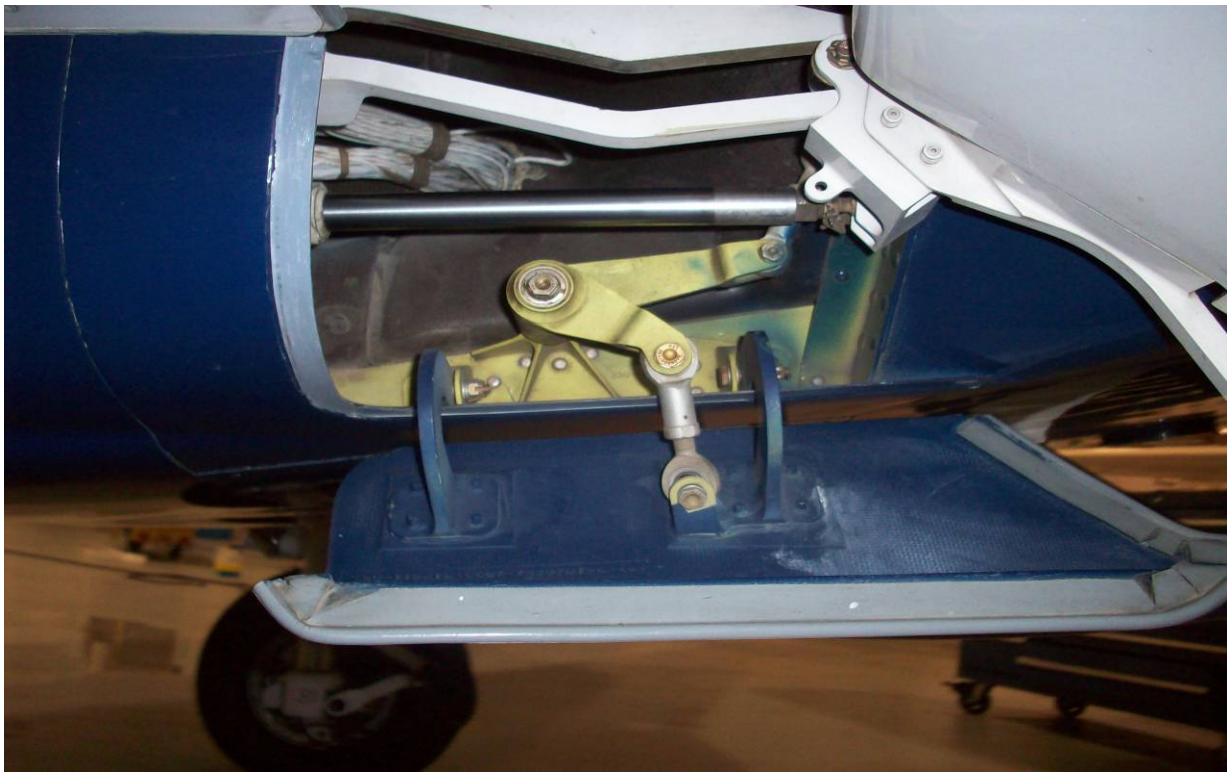
A repair station technician writes, "During inspection of the wing flap actuator attachments, *(I)* found both the L/H and R/H wing inboard flap-fairing hinge fittings cracked *(P/N's 390-110440-0001 and 390-110440-0002)*."

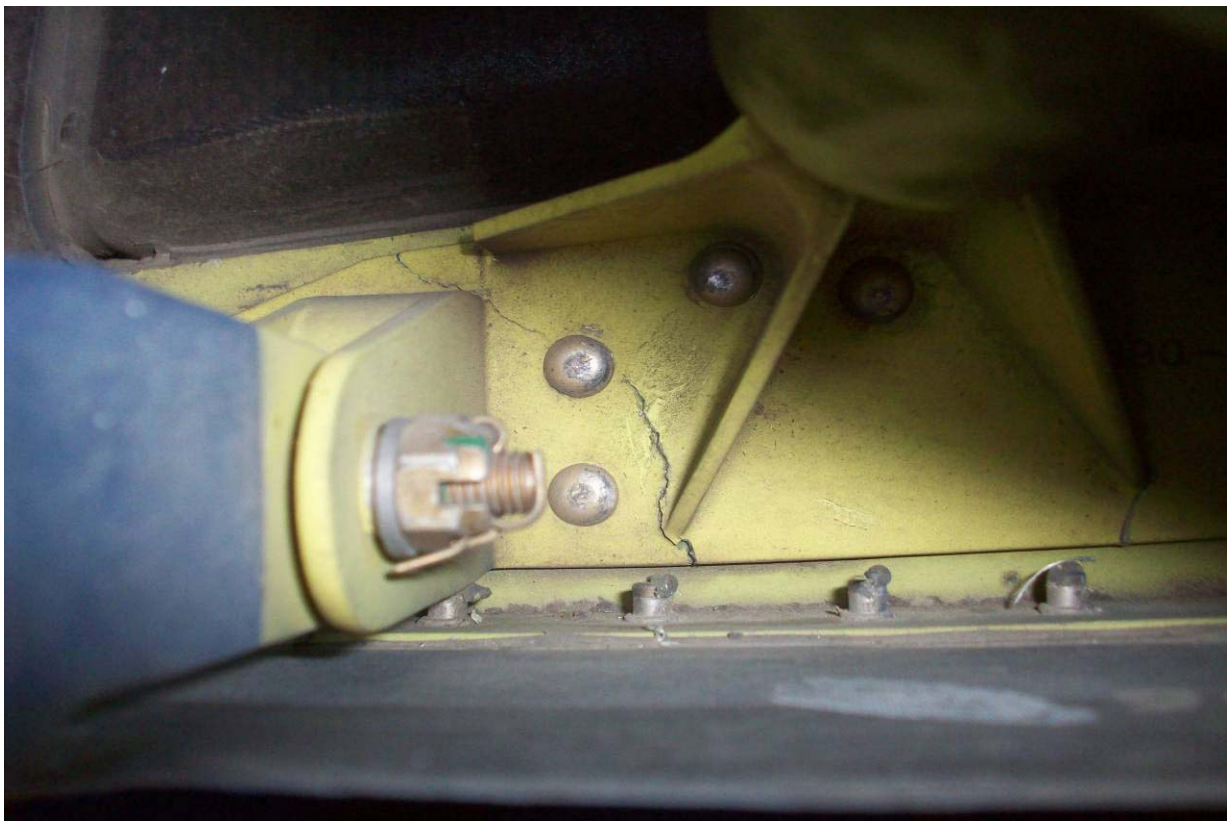
Model 390 Illustrated Parts Catalog

WING INSTL



Printed from Hawker Beechcraft Corporation Interactive Maintenance Library (IML).
P/N: 390-590001-0011 Reissue H - October 1, 2011



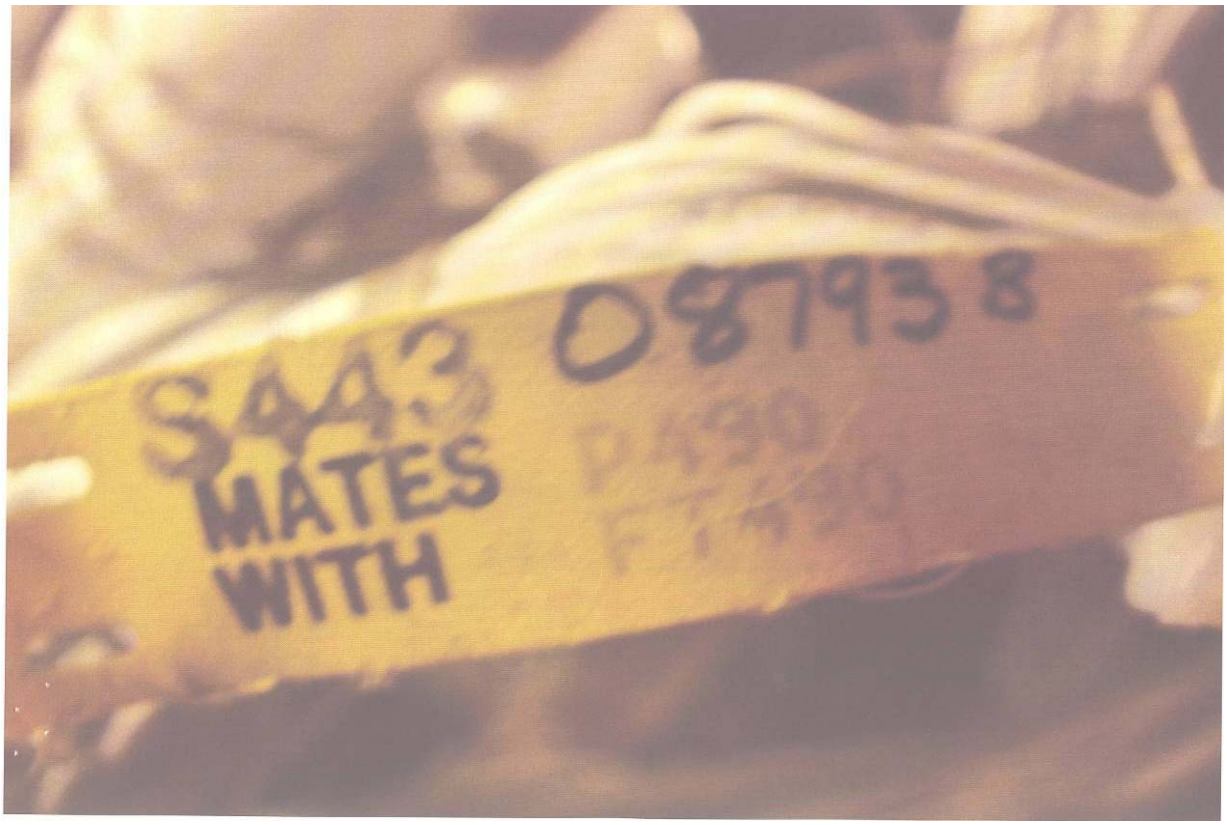


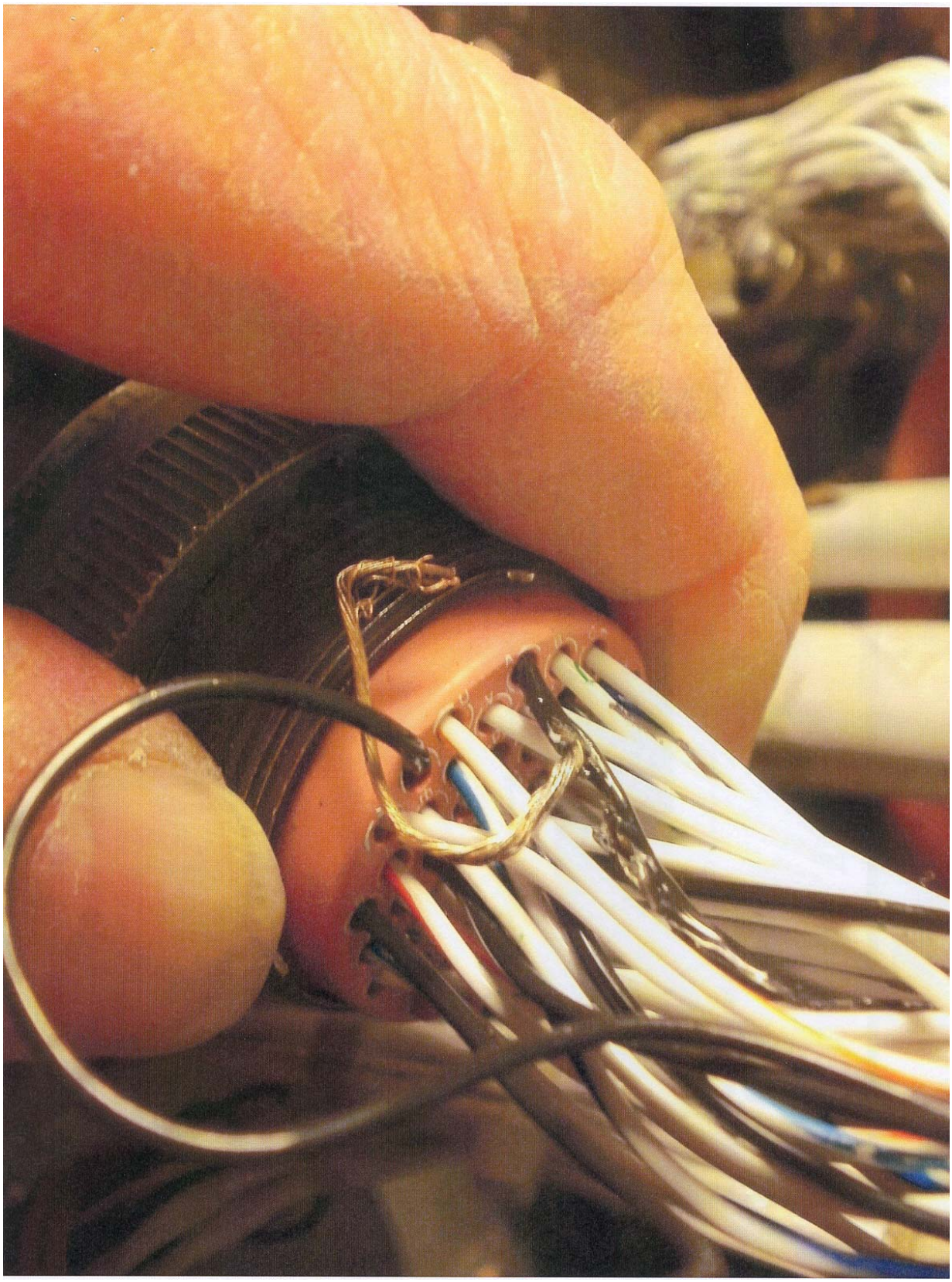
Part Total Time: 980.0 hours

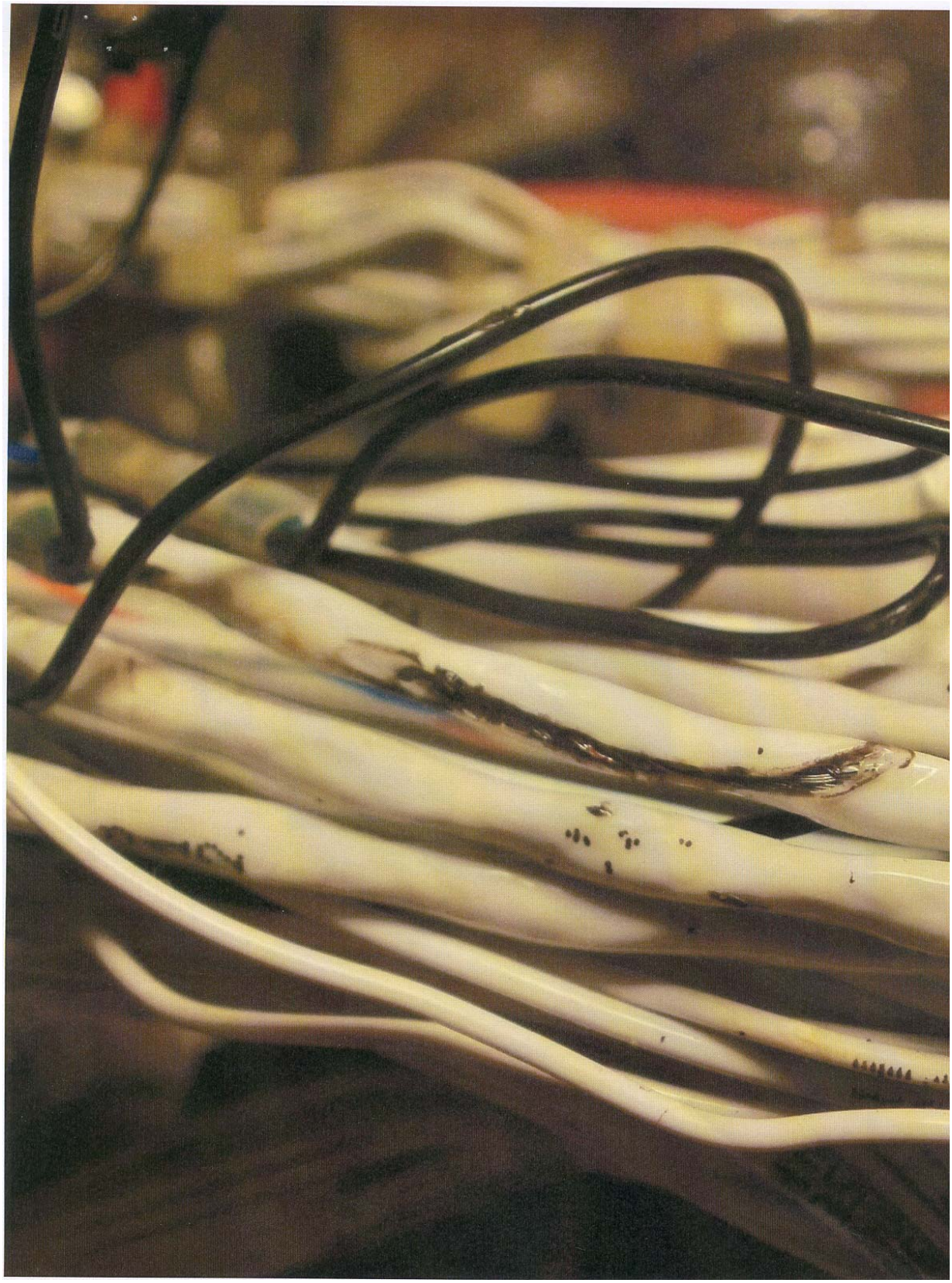
Beech: Burned Engine Indicator Electrical Wires; ATA 7797

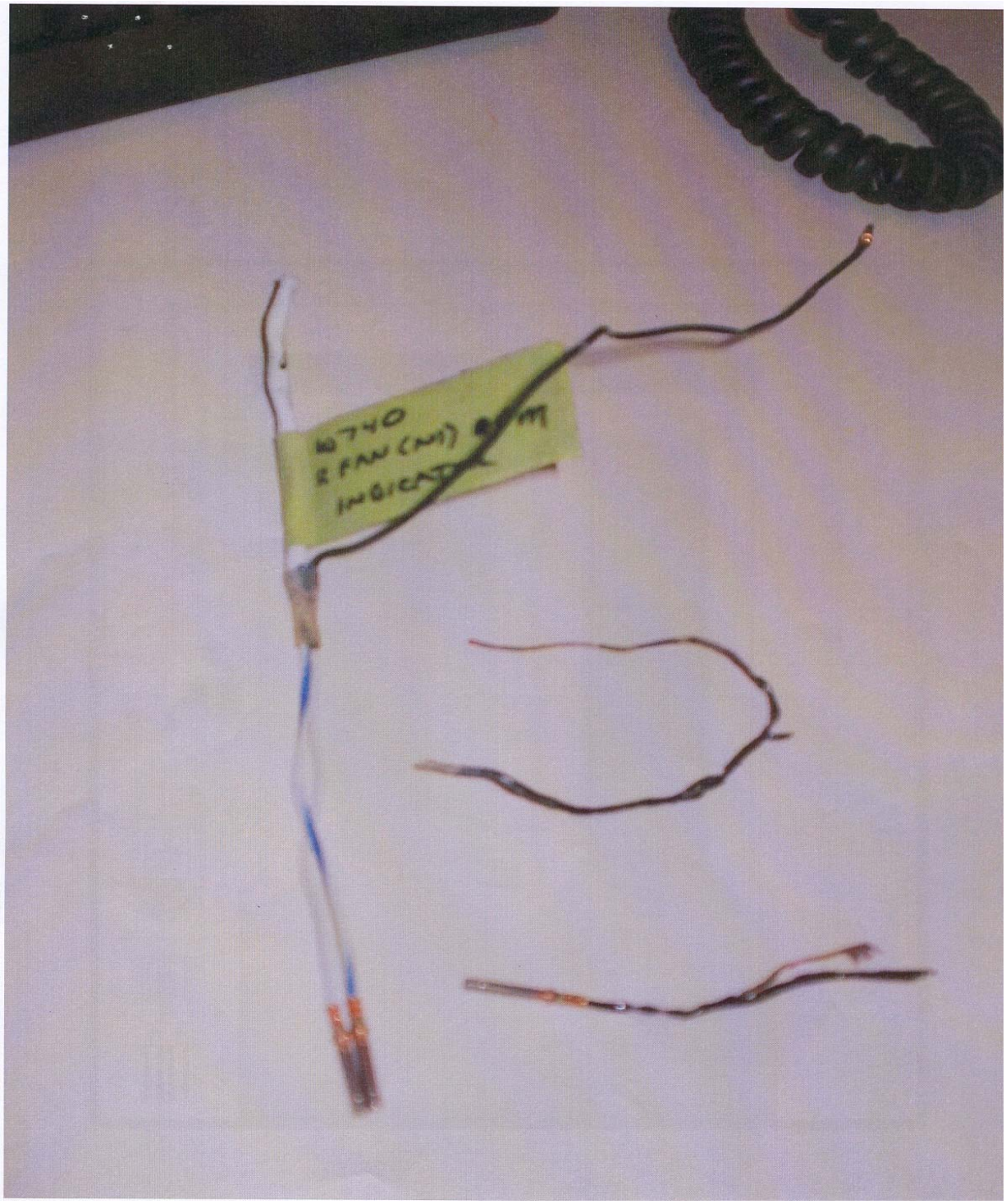
"A 'D' check inspection of the wiring in the aft baggage compartment (R/H, lower area) found some burned wires," says this repair station technician. "These wires had shorted out—burning through their insulation. *(Noted strands include)* W740 R/H Fan N1 RPM Indicator, and W748 R/H Turbine N2 Indicator.

"This *(area/wiring)* needs to be inspected thoroughly as *(failed wiring)* will cause indication problems in the cockpit and possibly a fire. The damaged wires were replaced."








W740
2 FAN (M)

(What caused the shorts? Chaffing? Poor connections? Impact damage? Now I have no idea "Who Done it"—Ed.)

Part Total Time: (unknown)

Bombardier: CL600-2B19; Incorrect MLG Installation; ATA (N/A)

(Reminder to readers: Alerts' submissions often include admonitions, other agency publications, and "operator error" descriptions. If a part has not actually failed, it doesn't wind up in the SDRS database; hence, no ATA code is assigned. There are three such submissions in this month's edition—Ed.)

A technician for a repair station provides the following report of an assembly error and confusing assembly data. "During clearance checks *(I found)* the locking ring of the *(main landing gear)* shock strut assembly incorrectly clocked. *(This caused)* fouling of the aircraft structure and the failure potential for the L/H main gear extension.

"The CMM *(maintenance manual)* fails to note the 'dogged locking ring' requires installation in a specific direction to maintain airframe clearance. *(Reference the following)* steps in CMM 6100, section 32-10-05: '(14) Apply sealing and coating compound listed in paragraph 3 to both faces of dogged locking ring (6239-1); (15) Install the dogged locking ring on the gland nut (6228-1). Install the gland nut on the flange of the cylinder S/A (6217-1) using gland nut wrench CAT (4948-6C). Ensure the dogged locking ring is correctly centered on the gland nut. Torque gland nut to 22.60-45.20 NM. Note: back off to nearest lock position only when necessary. (16) Engage the tab of the locking segment (6233-1) with a slot in the gland nut. Secure the locking segment to the dogged locking ring with 2 bolts (AN4-5), 2 washers (AN960-416L), and two nuts (MS17826-4). Torque nuts to 5.65-7.91 NM. Safety the nuts with cotter pins (MS24665-151).'

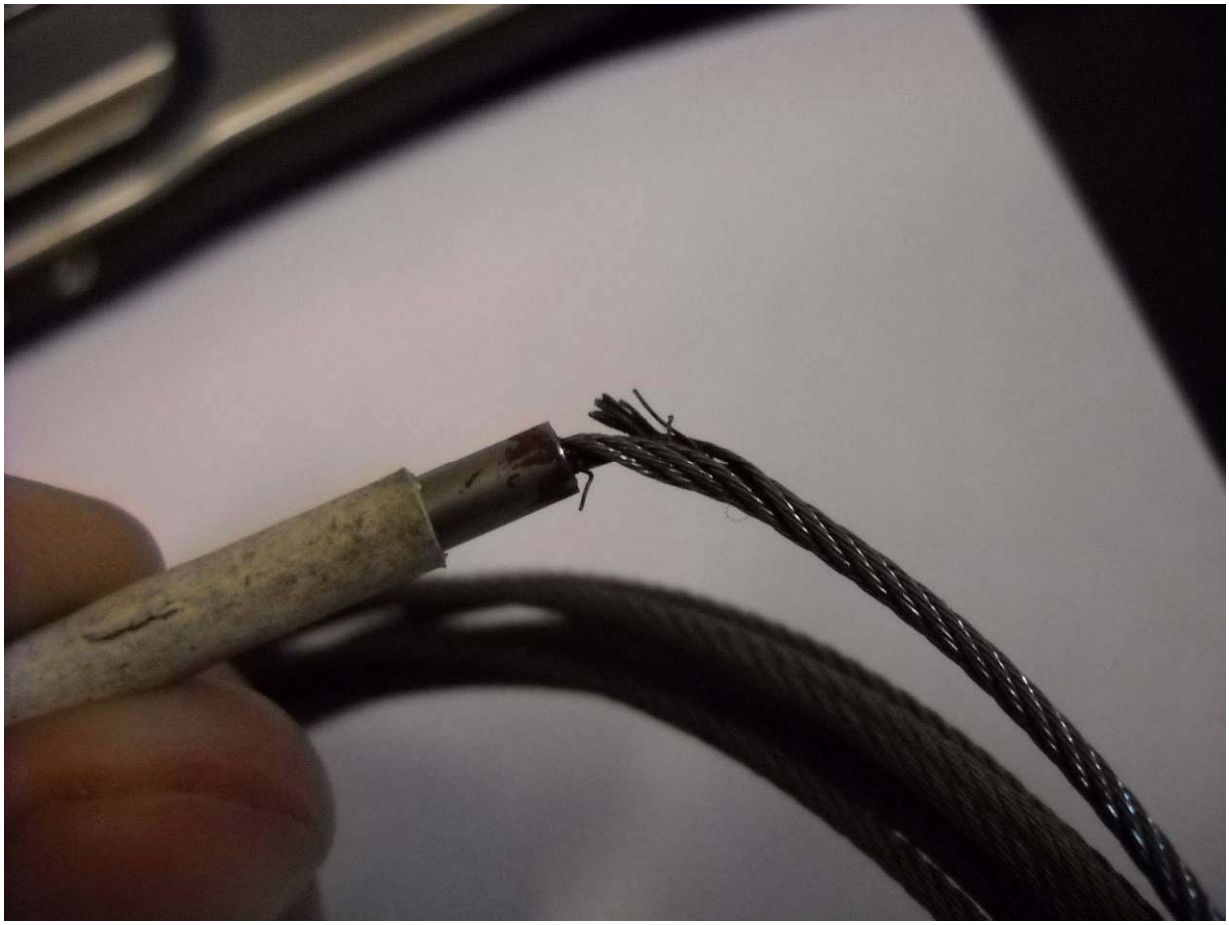
"The data fails to state the dogged locking ring may be installed in either the 0500 or 1100 *(o'clock)* positions—relative on the assembly. However, only the 0500 position provides adequate airframe clearance once the landing gear is placed in the aircraft. Installation of the lock ring 180 degrees (out) or at the 1100 position allows the tab of the lock ring to interfere with the aircraft structure at the aft side of the gear well."

(Shock P/N: 60185001; Assembly P/N: 601850281. I was so intent on observing the locking ring clearances between the two photos I did not initially catch the background "face". Trick shot! Ed.)

Part Total Time: 7,260.0 hours

Cessna: 208B; Frayed Flap Cable; ATA 2750

A mechanic states, "During a routing inspection, *(I)* found a flap cable *(P/N 2660001105)* frayed at the connection to the fairlead—about 30 percent of the *(strands)* were broken. *(It)* runs from the inner bell crank to the outer end of the flap. This cable was original as far as can be traced back—the original P/N tag was still installed. *(And)* judging from the slip mark, the cable had not *(moved from its swaged fitting)."*

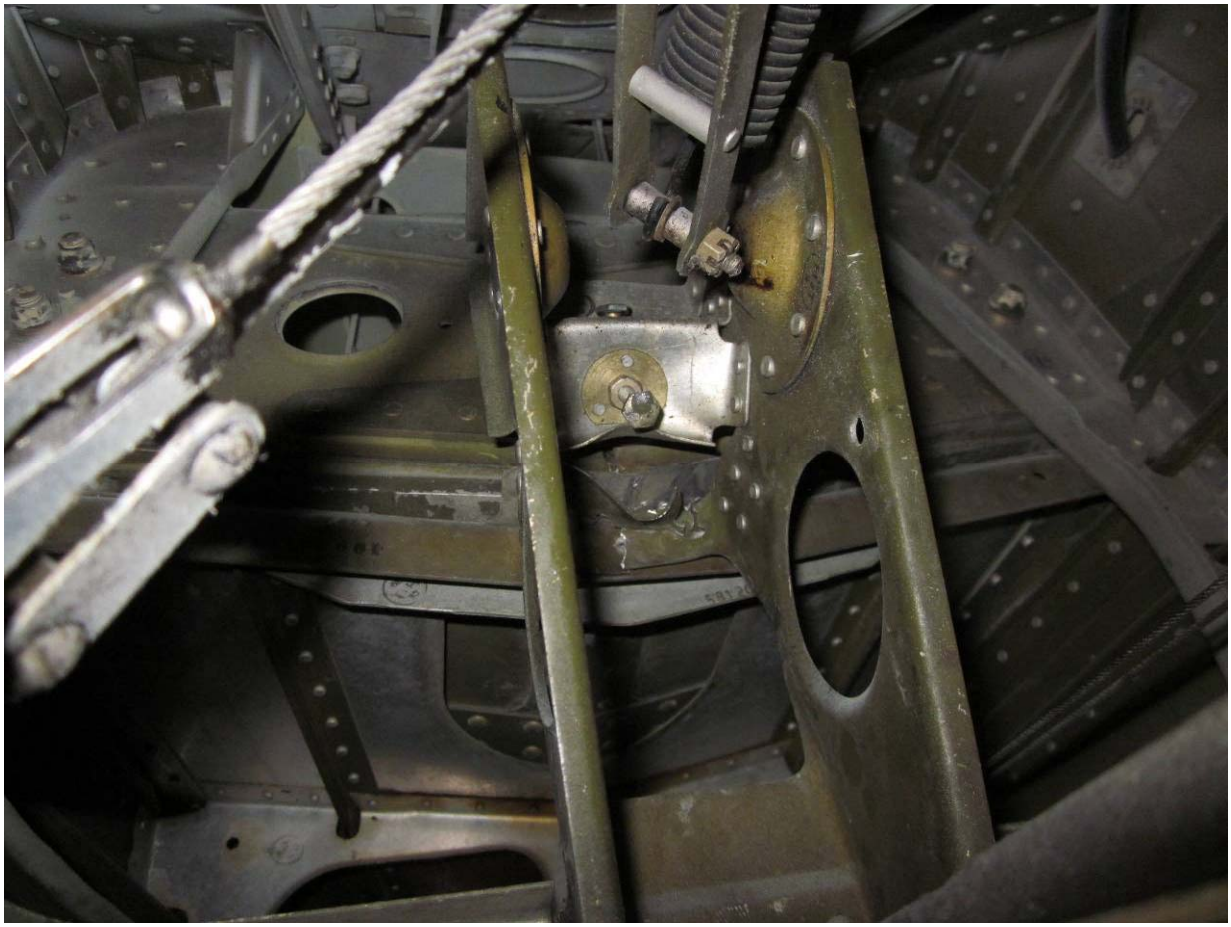


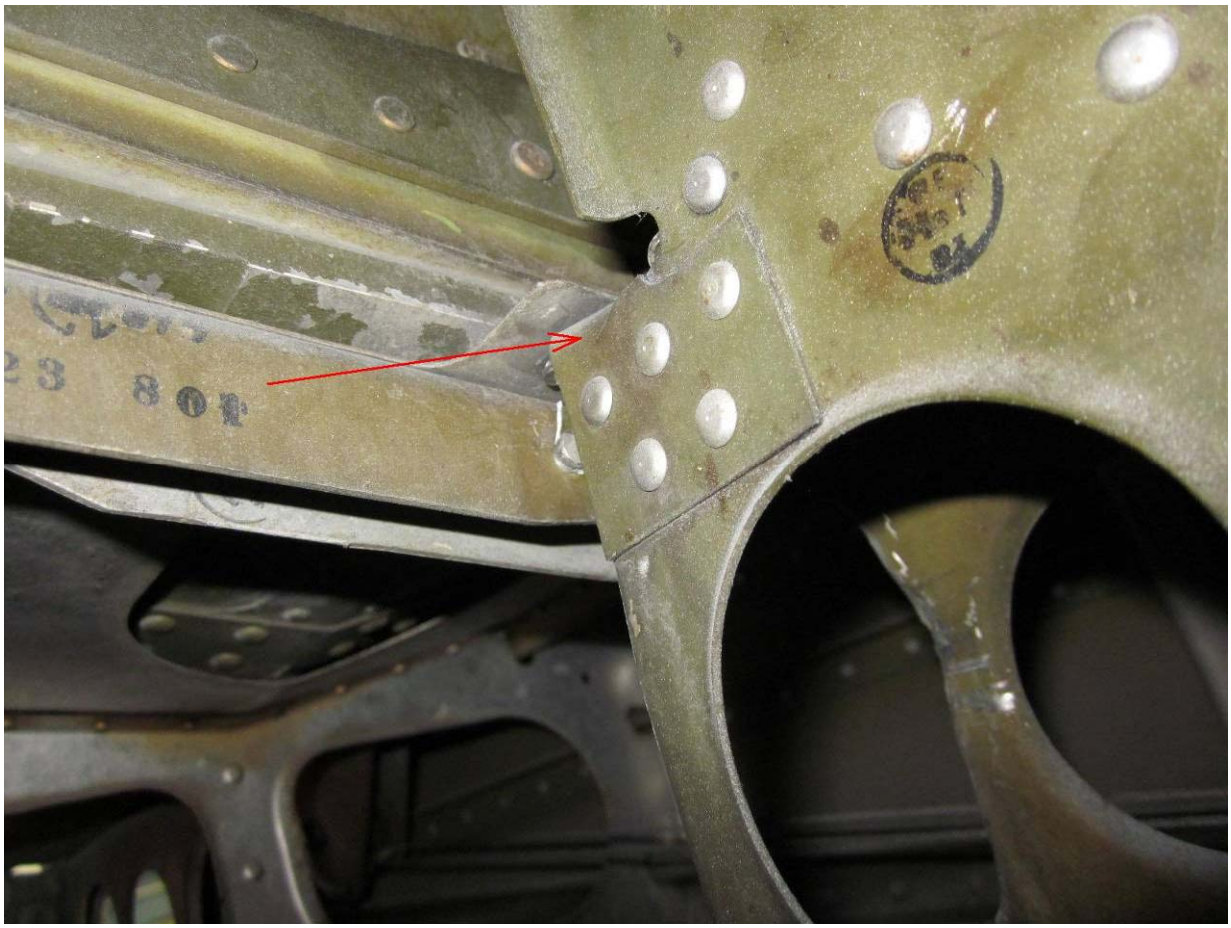
Part Total Time: (unknown)

Cessna: 404; Damaged Elevator Mount Brackets; ATA (N/A)

"While this aircraft was tied down," says a submitter, "the control wheel was secured in the full up position with a seat belt—instead of the approved gust lock device. This *(ad hoc arrangement)* allowed the elevators to have some movement—high winds prior to the intended flight *(allowed the elevator)* to hammer its lower stop until the bracket's upper mounts failed.

"The pilot stated he conducted a flight control check prior to taxi—everything felt fine. It was not until the control surface *(incurred)* an air load that he discovered a problem and aborted the takeoff."





(No P/N's were provided with this report. Red arrows are my insertions—Ed.)

Part Total Time: (unknown)

Cessna: 525C; Failed Brake Rotors *(friction pads)*; ATA 3242

A submission from a corporate operator states, "The brake pads on both the L/H and R/H brake rotors are debonding—with 'chunks' missing." *(Rotor P/N: 90006028; Brake Assembly P/N: 90006022. Red arrows are my insertions—Ed.)*

Part Total Time: 302.0 hours

Piaggio: P-180; Improper Elevator Installation; ATA (N/A)

(The FAA's Small Airplane Directorate in Kansas City provides the following safety admonition. Aerospace Engineer Mike Kiesov narrates the discussion; contact information follows the article.)

"The purpose of this *Alerts* article is to describe an event where the elevators on a Piaggio Aero P180 *Avanti* airplane were installed incorrectly. The R/H elevator was installed upside down on the left side of the airplane, and similarly, the L/H elevator was installed upside down on the right side of the airplane. The airplane was then rigged within acceptable limits per the AMM (aircraft maintenance manual). During flight, this reversed elevator installation greatly influenced elevator trim authority—additionally causing the airplane yoke to be in a noticeably different longitudinal position.

"The airplane manufacturer has subsequently incorporated a note in the airplane manual for this model P180 *Avanti*—a similar note is intended for their model P180 *Avanti II*.

"A very simple way to ensure the correct elevator is installed on the proper side is to verify the location of the static wicks—they must be on the upper surface of the elevator. This fact is reflected in the additional note added to the P180 *Avanti* AMM."

(For further information contact Aerospace Engineer Mike Kiesov; 901 Locust St., Rm. 301, Kansas City, MO. 64106; phone 816-329-4144.)

Part Total Time: (N/A)

Piper: PA44-180; Stuck Throttle Cable; ATA 7603

(This aircraft supports a pair of Lycoming O360A1H6 engines.)

A submission from another corporate operator states, "After practicing an instrument approach and go-around,' the L/H engine throttle lever stuck at 25 inches of manifold pressure and 2500 RPM. Departing from the airport control area, the instructor pilot was able to reduce the L/H throttle down to 16-18 inches of manifold pressure at 2500 RPM. After discussion with flight department personnel, it was decided...to shut down the L/H engine and perform a single engine approach and landing. An emergency was declared, and the aircraft landed uneventfully.

"Since *(there have been)* previous instances of problems with engine control cables in this particular make and model aircraft, the L/H engine throttle cable *(P/N 554546)* was replaced as part of a scheduled progressive inspection." *(Indeed—this throttle cable P/N reflects seven times in the SDRS database. It would have been most helpful had you speculated as to the cause of the cable's binding—Ed.)*

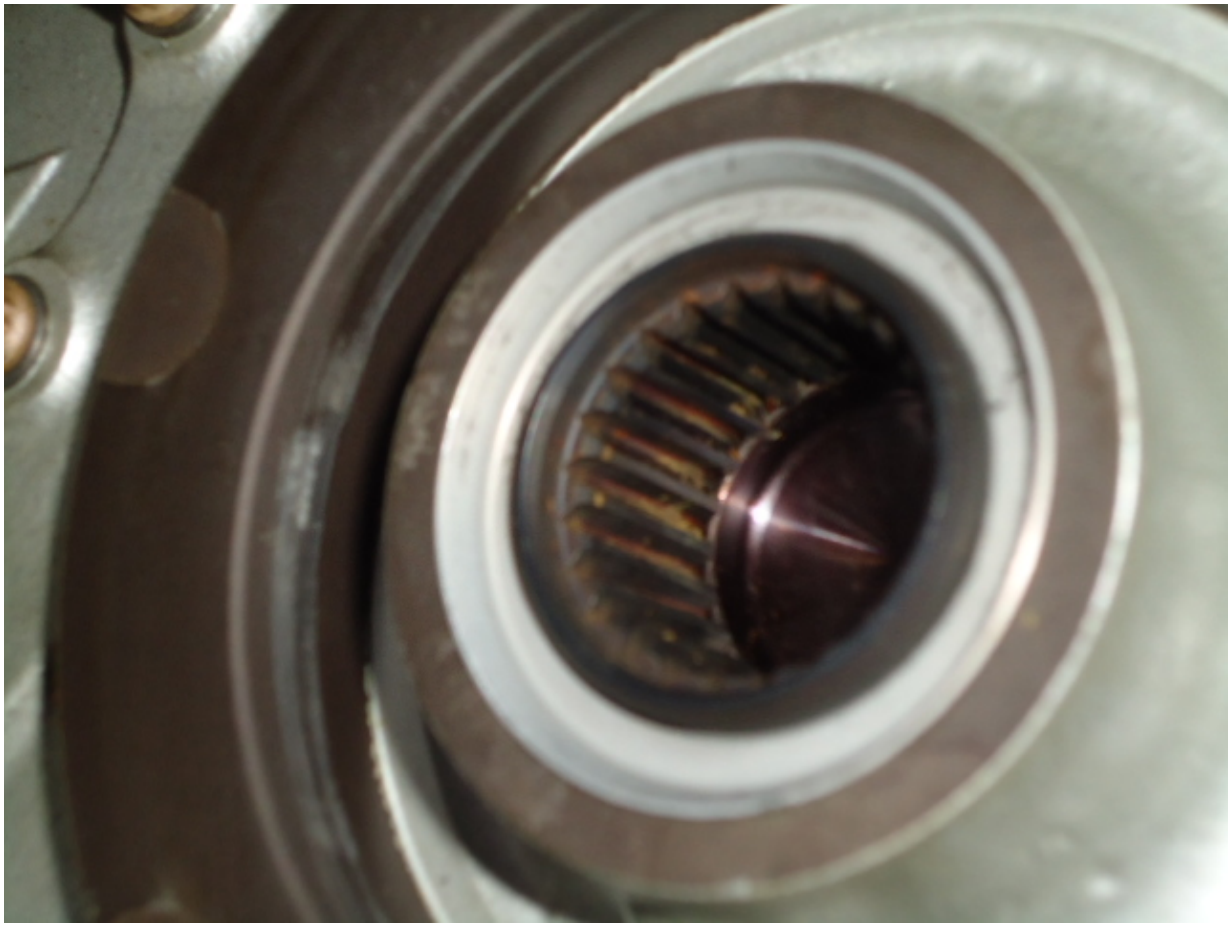
Part Total Time: 705.0 hours

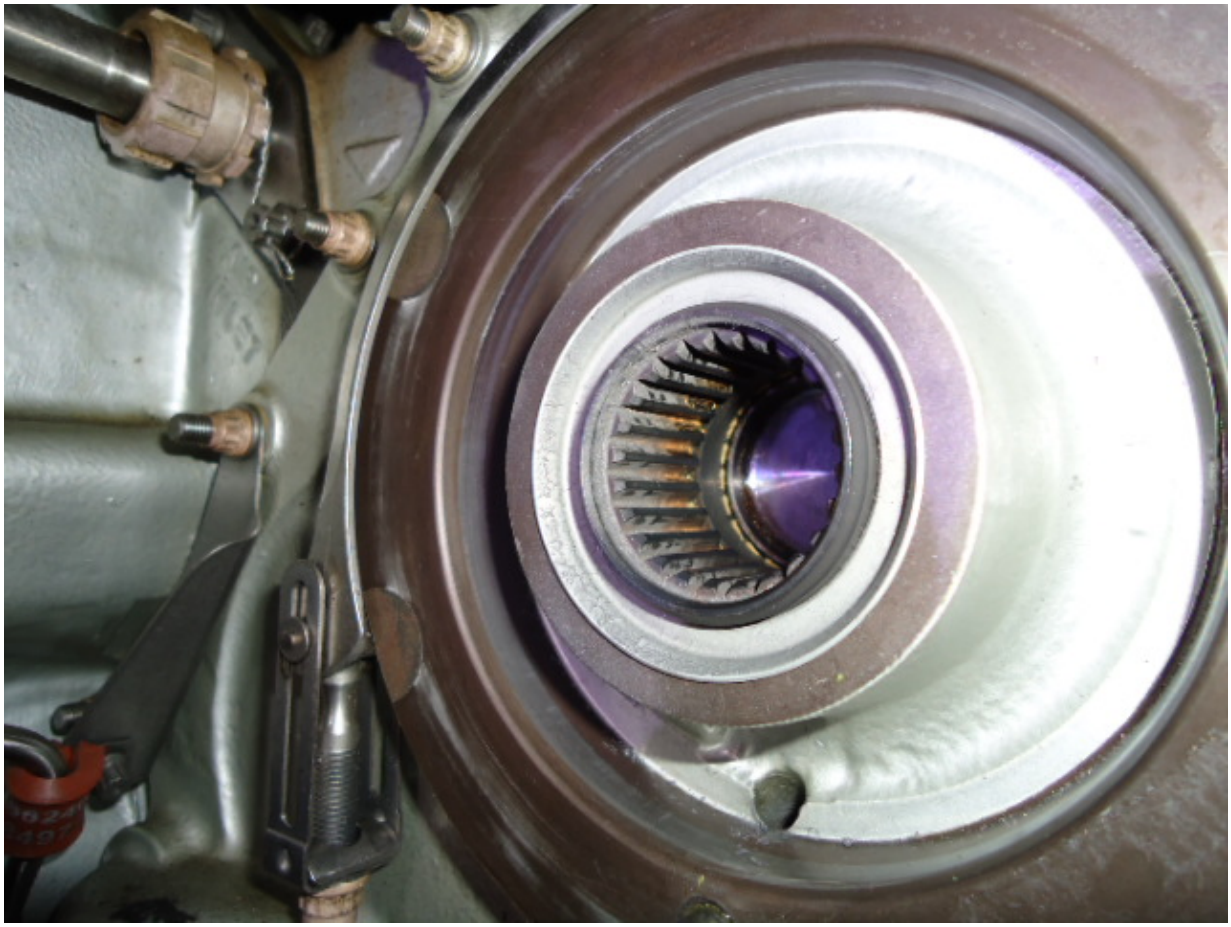
POWERPLANTS

Rolls Royce: BR700710A110; Fuel Pump Shaft Migration; ATA 7314

(This corporate submission references a Gulfstream GV aircraft.)

"While performing a SB (Service Bulletin) to replace the fuel pump spline adapter, we found the engine driven fuel pump drive shaft to be migrating out of the fuel pump and into the accessory gear case. Upon inspection of the gear case, we found a retaining plug in the gear case spline to be pushing into the gear case—allowing the fuel pump drive shaft to migrate out of the fuel pump." *(Gear box P/N: 39500221.)*





Part Total Time: 5,670.0 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 following address.

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 System (SDRS) 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**
2012FA0000214				CARBURETOR	MISREPAIRED
2/29/2012				105219	

CARBURETOR FOUND TO HAVE THE WHITE PLASTIC, ADVANCED POLYMER HOLLOW FLOAT. CARBURETOR IS NOT IN COMPLIANCE WITH SB MSA-13, WHICH STATES PRIOR TO DEC 31, 2008, ALL CARBURETORS NOT ALREADY IN COMPLIANCE MUST BE UPDATED TO THE CURRENT FLOAT. ADDITIONALLY THIS CARBURETOR DOES NOT COMPLY WITH SB-2. SB-2 STATES WITHIN 30 DAYS OF THE DATE OF ISSUANCE OF THIS FLIGHT SAFETY SB, EACH OWNER OF THIS FLOAT CARBURETOR NOT EQUIPPED WITH A SOLID, BLUE EPOXY FLOAT IS REQUESTED AND STONGLY ENCOURAGED TO INSPECT THE CARBURETOR AND TO REINSPECT THE CARBURETOR AT 30 DAY INERVALS THEREAFTER UNTIL THE FLOAT IS REPLACED BY A SOLID BLUE EPOXY FLOAT. DATE O THS BULLETIN IS FEB 1, 2009 MAKING COMPLIANCE MAR 1, 2009. SUBMITTER RECOMMENDS REPLACING ALL HOLLOW FLOATS IAW SB LISTED ABOVE.

2012FA0000250				LIFE VEST	FAILED
4/30/2012				PO723E105PA	

ADHESIVE SEPARATION AT THE ONE ORAL INFLATION TUBE ATTACHING POINT ON LIFE VEST.

2012FA0000251				LIFE VEST	DAMAGED
5/1/2012				PO723E105PW	CABIN

ADHESIVE SEPARATION AT BOTH INFLATION TUBES.

2012FA0000256				DIAPHRAGM	FAILED
3/5/2012				AV2541801	FUEL SERVO

FUEL INJECTION SERVO, WAS RECEIVED FOR FUNCTIONAL TEST AND REPAIR. DURING AN ATTEMPT TO REMOVE THE SERVO REGULATOR ADJUSTMENT NUT TO CHECK THE NULL SETTING OF THE REGULATOR, THE FUEL DIAPHRAGM STEM UNSCREWED FROM THE FUEL DIAPHRAGM ASSY. (SINCE LOCTITE IS APPLIED TO THE NUT DURING ASSY, THE NUT DID NOT UNSCREW.) THIS FUEL DIAPHRAGM, PN AV2541801, IS THE SUBJECT OF AD NOTE 2012-03-06 WHICH SUPERSEDED AD NOTE 2011-15-10. NO PRODUCTION OR LOT NR COULD BE FOUND ON THE DIAPHGRAM.

2012FA0000264				DIAPHRAGM	DAMAGED
3/29/2012				AV2541801	FUEL SYSTEM

FUEL INJECTION SERVO MODEL NR RSA-5AD1, PN 2576536-2, SN 70148903 WAS RECEIVED FOR REPAIR. THE CUSTOMER COMPLAINT STATED "MIXTURE CHANGES TO VERY RICH AT 200 DEGREES OIL TEMP". WHILE PERFORMING A PRELIMINARY FUEL FLOW CHECK EVALUATION, THE TECH ATTEMPTED TO REMOVE THE OUTER REGULATOR ADJUSTMENT NUT TO CHECK FOR WHAT IS TERMED A "NULL SETTING CHECK". INSTEAD OF THE NUT BACKING OFF THE STEM, THE STEM BACKED OUT OF THE DIAPHRAGM ASSY. (THE NUT IS SECURED TO THE DIAPHRAGM STEM BY THE APPLICATION OF LOCKING FLUID DURING FINAL CALIBRATION SETTING) NO LOT NR COULD BE FOUND ON THE ASSY. THIS PN DIAPHRAGM IS THE SUBJECT OF AD NOTE 2012-03-06 BUT IT IS FELT THAT THIS DEFECT MAY NOT BE THE SAME DEFECT ADDRESSED IN THE AD NOTE.

2012FA0000223		LYC	LYC	INTAKE VALVE	MISMANUFACTURED
1/19/2012		O235L2C		LW11901	ENGINE CYLINDER

AFTER EVALUATING CYINDER AND FAILED INTAKE VALVE, IT IS DETERMINED, VALVE FAILED DUE TO "BAD METAL". THE EVIDENCE DOES NOT SUPPORT FOREIGN OBJECT DAMAGE, EXCESSIVE HEAT OR OVERSPEED.

EE4Y2012050700177	AIRBUS	PROFILE	CORRODED
4/18/2012	A319132	D5367423920000	ZONE 100

AFT CARGO BAY PROFILE ASSY CORRODED, FROM FR 58 TO FR 59, S38L. PART REPLACED IAW THE SRM 51-42-11.

2012FA0000206	AIRBUS	FLOORBEAM	CORRODED
2/19/2012	A320214	D5347220922000	FUSELAGE

CORROSION FOUND ON CABIN FLOORBEAM TOP SURFACE AT FRAME 66, 28" RT OF CENTERLINE, CORROSION MEASURED LENGTH 2"X 2" X .028 D, OUT OF LIMITS SRM 53-00-14.

2012FA0000279	AIRBUS	FLOORBEAM	CORRODED
2/19/2012	A320214	D5347220922000	FRAME 66

CORROSION FOUND ON CABIN FLOORBEAM TOP SURFACE AT FRAME 66, 28" RT OF CENTERLINE, CORROSION MEASURED LENGTH 2" X WIDTH 2" X DEPTH .028" OUT OF LIMITS, SRM 53-00-14.

2012FA0000283	AMD	PRESSURE SWITCH	LEAKING
5/5/2012	FALCON2000	7G10521	HYD SYSTEM

ACFT LOST HYD FLUID FROM THE NR 2 SYS, ROOT CAUSE DISCOVERED TO BE A PARKING BRAKE ACCUMULATOR PRESSURE SWITCH (150GC) PN: 7G1052-1 SN:303, WHICH INTERNALLY FAILED AND LEAKED FLUID FROM A PRESSURE RELIEF VENT HOLE. A NEW SWITCH PN: 1203P0224 WAS INSTALLED AND SB SBF2000-0387 FOR PARKING BRAKE ACCUMULATOR SWITCH INSTALLATION IMPROVEMENT WAS COMPLIED WITH.

2012FA0000239	AMD	CIRCUIT BOARD	BURNED
4/16/2012	FALCON50MYST	242501	ZONE 200

ACFT DEPARTED, AT CRUISE ALTITUDE, CREW NOTICED AN ODOR AND A RT PITOT HEAT LIGHT ILLUMINATED ON THE ANNUNCIATOR PANEL. THE CREW SELECTED OFF POSITION ON RT PITOT/STATIC HEAT AND IDENTIFIED AND PULLED THE CIRCUIT BREAKER THAT CONTROLS THAT CIRCUIT. THE ODOR DISSIPATED. THE ACFT DID NOT REQUIRE SPECIAL HANDLING NOR DID IT DEVIATE FROM ITS FLIGHT PLAN ROUTE EXCEPT THE CREW REQUESTED AND ATC CLEARED THE ACFT BACK TO DEPARTURE POINT. ON INSPECTION, FOUND THAT THE CIRCUIT BOARD ON THE RT RELAY/CONTROL BOARD PANEL BEHIND THE F/O SEAT WAS BURNED. AFTER DISASSEMBLE IT WAS DETERMINED THAT A RESISTER ON THE BOARD HAD BURNED THROUGH AND AFFECTED THE BOARDS ABILITY TO CONTROL THE HEAT SYS OF THE PITOT/STATIC SYS.

2012FA0000229	BBAVIA	SPAR	DAMAGED
3/15/2012	7AC	5147	WINGS

THIS REPORT IS BEING SUBMITTED IAW AD 200-25-02 R1. LT AND RT WING TIPS WERE DAMAGED DUE TO LOOSE TIE DOWN ROPES. OTBD MOST RIBS WERE REPLACED AND RT AFT SPAR WAS REPAIRED AT STA 195.

2012FA0000201	BEECH	PWA	STABILIZER	MISMANUFACTURED
4/18/2012	200BEECH	PT6A42		HORIZONTAL

FOUND HORIZONTAL STAB FORWARD SPAR AND RIBS ARE NOT RIVETED CORRECTLY FROM THE FACTORY, FOUND MANY RIVETS THAT GO THROUGHT THE FORWARD SPAR THAT ARE TOO SHORT AND ALSO WHERE THE RIB AND THE FWD SPAR COME TOGETHER, THE RIVET MISSES THE RIB. FOUND SAME PROBLEM ON OTHER ACFT INSPECTED.

2012FA0000219	BEECH	CONT	CONTROL ROD	DAMAGED
2/25/2012	58	IO550*	1023890103	THROTTLE BODY

END OF CONTROL WHICH IS THREADED FOR ROD END FOR THROTTLE CAME OFF CONTROL. APPEARS TO HAVE BEEN SWEDGED INTO CONTROL.

2012FA0000266	BEECH	CONT	IMPULSE COUPLING	DESTROYED
3/27/2012	58	IO550C	M3050	LT MAGNETO

UPON LT ENGINE START-UP THE OIL PRESSURE WAS BELOW LIMITS AT 1000 RPM. WHILE TROUBLESHOOTING LOW OIL PRESSURE, WE FOUND FOREIGN MATERIAL UNDER OIL PRESSURE ADJUST SEAT. INVESTIGATING IT, FOUND THE LT MAGNETO HAD MOVED (ROTATED) POSITION. UPON REMOVAL OF LT MAGNETO THE IMPULSE COUPLING WAS FOUND DESTROYED. THE IMPULSE SHELL WAS GONE (HAD FALLEN INTO THE ENGINE). RETAINING NUT, WASHER AND COTTER KEY WERE STILL INTACT. IT IS HARD TO DETERMINE WHAT THE ACTUAL FAILURE WAS. WE BELIEVE 1 OF THE PAWLS MAY HAVE COME LOOSE. THE PAWL ATTACH RIVET WAS STILL IN PLACE. THE MAGNETO DRIVE RETAINER AND BUSHINGS WERE ALSO DESTROYED WITH MOST OF THE PIECES HAVE FALLEN INTO THE ENGINE. MAGNETO AND ENGINE WILL BE SENT FOR ANALYTICAL INSPECTION.

2012FA0000291	BEECH	LYC	FASTENER	BACKED OUT
5/1/2012	76	O360*		LT AIRBOX

ON RT ENGINE MX FOUND THE CARBURETOR HEAT VALVE SHAFT SCREWS, WASHERS, AND NUTS MISSING. THE CARBURETOR HEAT VALVE SHAFT BEARING WAS DAMAGED. ONE OF THE MISSING SCREWS WAS LODGED IN THROAT OF THE CARBURETOR, BLOCKING THE THROTTLE PLATE FROM RETURNING COMPLETELY TO THE IDLE POSITION. INSPECTED INTAKE SYS AND EACH CYLINDER TO TRY TO FIND ANY OF THE OTHER MISSING HARDWARE, NONE WERE FOUND. NO CYLINDERS HAD ANY VISIBLE INTERNAL DAMAGE. TOP CARBURETOR HEAT VALVE SHAFT BEARING & LT AIRBOX FOUND TO BE WORN. ACFT HAD A 100 HRS INSPECTION 86 HRS PRIOR.

2012FA0000257	BEECH	CONT	SLICK	CONTACT	MISSING
3/9/2012	A36	IO550*		M3081	MAGNETO

ENGINE WAS RUNNING ROUGH AND WHEN THE MAG SWITCH WAS MOVED TO THE RT MAGNETO POSITION, THE ENGINE WOULD STALL. PERFORMED RUN UP TO VERIFY DISCREPANCY. REMOVED MAG FROM ENGINE AND DISASSEMBLED FAR ENOUGH TO FIND THAT THE CONTACT ASSY PN M3081 HAD THE ARM CONTACT ASSY MISSING. (CONTACT POINT). FURTHER INSPECTION FOUND THE MISSING POINT AND REMOVED IT FROM MAGNETO. REASSEMBLED MAG WITH NEW CONTACT ASSY PN M3081 IAW CMM. PERFORMED ENGINE RUNS WITH NO DEFECTS NOTED. SUSPECT IMPROPER CRIMP OF THE CONTACT POINT TO THE ARM AT MFG.

2012FA0000265	BEECH	CONT	SPRING	BROKEN
3/13/2012	A36	IO550B	35524664	RUDDER

DURING FLIGHT, THE PILOT NOTICED THE AILERON CONTROL WAS PULLING TO THE RT. ACFT RETURNED TO BASE WITHOUT INCIDENT. UPON INSP OF AILERON CONTROL SYS THE UPPER AILERON/RUDDER INTERCONNECT SPRING PN 35-5524664 WAS FOUND BROKEN AT THE BELLCRANK ARM, PN 002-524018-25 END. PROBABLE CAUSE FOR THIS FAILURE IS TIME IN SERVICE.

2012FA0000238	BEECH		SMOKE GOGGLES	FAILED
4/26/2012	B300		118077	COCKPIT

WHILE VISUALLY INSPECTING PILOT'S AND CO-PILOT'S SMOKE GOGGLES, BOTH RT AND LT RIVETS THAT ATTACH THE STRAPS TO THE GOGGLES LENSES FAILED, CAUSING THE STRAPS TO FALL OFF ALONG WITH THE GOGGLE LENSES. THIS WAS THE CASE WITH BOTH THE PILOT AND CO-PILOTS SIDES.

2012FA0000249	BEECH	CONT	CIRCUIT BREAKER	FAILED
4/28/2012	F33A	IO520*	35380132103	STROBE LIGHT

PILOT REPORTED STROBE LIGHTS TO BE INOPERATIVE. DURING TROUBLESHOOTING, FOUND THE STROBE LIGHT CIRCUIT BREAKER TO BE AT FAULT. INSTALLED A NEW STROBE LIGHT CIRCUIT BREAKER . OPS CHECKED GOOD.

2012FA0000240	BEECH	CONT	CIRCUIT BREAKER	FAILED
4/26/2012	F33A	IO520BB	35380132103	TAXI LIGHT

PILOT REPORTED TAXI LIGHT TO BE INOPERATIVE. DURING TROUBLESHOOTING, FOUND THE TAXI LIGHT CIRCUIT BREAKER TO BE AT FAULT. INSTALLED NEW CIRCUIT BREAKER. OPS CHECKED OK. NO CAUSES OR RECOMENDATIONS KNOWN AT THIS TIME.

2012FA0000292	BEECH	CONT	SWITCH	FAILED
5/9/2012	F33A	IO520BB	35380132103	STROBE

PILOT REPORTED STROB LIGHTS TO BE ON WITH SWITCH TURNED OFF. DURING TROUBLESHOOTING, FOUND THE SWITCH TO COMING APART AND HAD FAILED. THE SWITCH WAS INSTALLED 5 APR 2009 WITH 2730 TSN WITH AN ESTIMATED 10920 CYCLES. INSTALLED NEW STROB LIGHT SWITCH. OPS CHECK WAS GOOD. NO CAUSE OR RECOMMENDATIONS AT THIS TIME.

2012FA0000205	BEECH	CONT	KEY	SHEARED
2/20/2012	F33A	IO550B	C28150	ALTERNATOR SHAFT

WOODRUFF KEY ON THE ALTERNATOR SHAFT SHEARED LEAVING THE CLUTCH FREE SPOOLING, FREE SPOOLING ON THE ALTERNATOR SHAFT DAMAGING THE ALTERNATOR RING GEAR PN 632018. ALTERNATOR CLUTCH RETAINING NUT AND COTTER PIN REMAINED STILLIN PLACE ON THE SHAFT. THE KEYWAY IN THE ALTERNATOR SHAFT APPEARS TO BE CUT TOO DEEP NOT ALLOWING THE WOODRUFF KEY TO ENGAGE IN THE CLUTCH PROPERLY.

W59R2012043031326	BEECH	CONT	BEECH	HUB	CRACKED
4/27/2012	K35	IO470C	278	2781007	PROPELLER

PROPELLER SUBMITTED FOR OIL LEAK. DURING REPAIR, THE HUB WAS MAGNETIC PARTICLE INSPECTED IAW AD 62-17-01. HUB WAS FOUND CRACKED IN THE WELD AREA, WHICH IS THE SUBJECT OF AN AD.

2012FA0000218	BELL	ALLSN	INDICATOR	FAILED
3/7/2012	206B	250C20R	206040093001	XMSN OIL SYS

DURING ROUTINE INSPECTION, DISCOVERED THAT AFTER MAIN ROTOR TRANSMISSION OIL WAS DRAINED, OIL LEVEL INDICATED FULL. OIL LEVEL SIGHT GLASS REMOVED. INSPECTION OF THE OIL LEVEL INDICATOR REVEALED COATING WITH LEVEL MARKINGS HAD SEPARATED FROM THE METALLIC BACK PLATE. THERE IS A RING OF HOLES ON THE CIRCUMFERENCE OF THE INDICATOR. THE HOLES IN THE LEVEL MARKING COATING AND THE BACK PLATE WERE NO LONGER ALIGNED. THIS CONDITION WOULD NOT ALLOW OIL TO DRAIN FROM THE SIGHT GLASS. THE SIGHT GLASS IS THE ONLY MEANS TO DETERMINE THE OIL LEVEL IN THE MAIN ROTOR TRANSMISSION. IMPROPER SERVICING OF THE TRANSMISSION PRESENTS A POTENTIAL FOR SERIOUS PROBLEMS IF LEFT UNDETECTED.

2012FA0000267	BELL	BELL	SHAFT	CORRODED
4/2/2012	407		407040416103	T/R GB OUTPUT

DURING 60 MONTH INSPECTION FOUND PITTING ON OUTPUT SHAFT ABOUT 4 INCHES INBD FROM END OF SHAFT. SHAFT DETERMINED TO BE UNSERVICEABLE.

FOTR0503201235471	BOEING	SKIN	CORRODED
4/29/2012	717200		ZONE 100

CORROSION ON FUSELAGE SKIN BETWEEN BS 848-858, L28L TO 28R. REPAIRED ON FASI WO 22109, NR 35471.

FY4Y201203070001	BOEING	BEAR STRAP	CORRODED
3/7/2012	727212	BAC1505100617	ZONE 800

DURING PERFORMED 6C-CHECK, CORROSION WAS FOUND ON AFT ENTRY DOOR CUTOUT BEAR STRAP AT STATION BS 1067 TO 1073 BETWEEN S-12L AND S-15L (DIMENSIONS OF CORROSION AREA:8.750 × 2.250 AND 7.000 × 2.250). AFTER BLEND OUT CORROSION, THE PENETRATION DEPTH WAS OVER LIMIT IAW SRM 53-30-1, PAGE 2C.

7AHR2012040600001	BOEING	SEAT TRACK	CORRODED
4/6/2012	7372X6C		ZONE 200

CORROSION ON SEAT TRACK AT STA 663 TO 727 AND LBL 62. REMOVED CORROSION, SEAT TRACK BECAME OUT OF LIMITS. R & R SEAT TRACK IAW SRM.

7AHR2012040600002	BOEING	FLOORBEAM	CORRODED
4/6/2012	7372X6C		ZONE 200

CORROSION ON FLOORBEAM AT STA 727 AND RBL 24 TO 36. REMOVED CORROSION, FLOORBEAM FOUND TO BE OUT OF LIMITS, FABRICATED REPAIR STRAP AND INSTALLED IAW CURRENT SRM.

7AHR2012040600003	BOEING	RUB STRIP	GOUGED
4/6/2012	7372X6C		LT WING

LT INBD ENGINE TO WING FLAP SUPPORT FITTING RUB STRIP IS GOUGED. REMOVED RUB STRIP, FABRICATED REPAIR STRIP AND INSTALLED STRIP IAW SRM.

7AHR201204062249	BOEING	RETAINER SEAL	CORRODED
4/6/2012	7372X6C		ZONE 500

CORROSION ON NR 2 L/E SLAT LOWER RUB SEAL RETAINER OTBD OF SLAT ACTUATOR ATTACH POINT. REMOVED CORRODED SEAL RETAINER, FABRICATED REPAIR PARTS AND INSTALLED SEAL RETAINER IAW SRM.

Z6WR20120301002	BOEING	BOEING	RING	WORN
3/1/2012	737724	737700	315A22225	THRUST REVERSER

THE 315A2222-5 CASCADE RING HAS EXTENSIVE WEAR/DAMAGE CT THE AFT LWR ATTACHING BOLT LOCATION. HOLE SHOULD BE .3750 -.3754. ACTUAL IS ELONGATED TO APPROX .6210 WITH HEAVY WEAR/MISSING MATERIAL CT THE NUT SIDE. THE 315A2402-5 LATCH BEAM HAS A CORRESPONDING ELONGATED HOLE CT THE AFT LOCATING HOLE CT THE CASCADE RING. HOLE IS ELONGATED OUT TO .4950, SHOULD BE .3750-.3754. ADDITIONAL MATERIAL WEAR/DAMAGE ON THE LOCATING FASTENER HEAD SIDE THAT MEASURES APPROX .070 DEEP X .10 WIDE THE OUTSIDE DIA OF HOLE.

Z6WR20120302003	BOEING	BOEING	PANEL	DELAMINATED
3/2/2012	737724	737700	315A210141	THRUST REVERSER

CMM 78-31-37 REV 23 FIG 35 ITEM 40B. THE 315A2101-41 INNER WALL BONDED PANEL HAS AN AREA OF DISBOND (PERF SKIN TO CORE) THAT MEASURES 1.5 X 24.5". AFTER REMOVING THE DISBONDED PORTION OF THE SKIN IT WAS DISCOVERED THAT THE PERF SKIN WAS PERPARED INCORRECTLY PRIOR TO ORIGINAL BONDING. THE DISBOND AREA KEEPS GROWING AND NOW MEASURES 5.5 X 33.5".

3POR201204300003	BOEING	STRUCTURE	MISREPAIRED
4/30/2012	747428		

INCORRECT REPAIR, INCORRECT FASTENERS.

3POR201204290001	BOEING	SKIN	MISREPAIRED
4/29/2012	747428		BS 1795

AFT FUSELAGE SKIN, BS 1795, S48L, MISREPAIRED

3POR201204300002	BOEING	SKIN	MISREPAIRED
4/30/2012	747428		BS 2320

INCORRECT REPAIR OF FUSEALAGE SKIN DAMAGE.

FOTR2107117579	BOEING	FRAME	DENTED
4/20/2012	7572Q8		ZONE 100

AFT LOWER CARGO COMPARTMENT HAS DENTED FRAME AT LT BS 1500, BETWEEN STRINGERS 25L AND 27L. CUT OUT DAMAGED AREAS, FABRICATED REPAIR "J" DOUBLER, AND INSTALLED REPAIR DOUBLER IAW SRM 53-00-07, FIG 201, REPAIR 5.

ABXR2012043000047	BOEING	BRACKET	CRACKED
4/30/2012	767205	344T0522	ZONE 500

DURING C INSPECTION, FOUND LT WING FUEL FILL LINE BRACKET CRACKED ABOVE STRINGER 5 WS 665. R & R BRACKET IAW SRM.

ABXR2012043000048	BOEING	SHEAR TIE	CORRODED

4/30/2012	767205			140T2102536	ZONE 100

DURING C CHECK, FOUND SHEAR TIE AT FS 1087, STR 33 & 34 CORRODED. R & R SHEAR TIE IAW SRM AND DWG.

ABXR2012043000049	BOEING			SKIN	CRACKED
4/30/2012	767205				RT ELEVATOR

DURING C-CHECK FOUND RT INBD ELEVATOR LOWER OTBD L/E CRACKED. REPAIRED IAW SRM AND REA B655-59698-MR.

ABXR2012043000046	BOEING			FITTING	GOUGED
4/30/2012	767205			112T7042	ZONE 600

DURING C-CHECK, FOUND RT WING BACKUP FITTING BETWEEN RIBS 8 7 9 GOUGED WS 394. REPAIRED IAW REA B651-59769-MR.

ABXR2012043000043	BOEING			FITTING	GOUGED
4/30/2012	767205			112T7042	LT WING

DURING C-CHECK, FOUND LT WING BACKUP FITTING BETWEEN RIB 8 & 9 HAS TOOLING MARKS AT WS 394. REPAIRED IAW REA B757-59771-MR.

ABXR2012043000044	BOEING			SHIM	MIGRATED
4/30/2012	767205			112T50861	ZONE 500

DURING C CHECK FOUND LT WING BACKUP FITTING AT RIB 8 HAS SHIM MIGRATING BETWEEN STRINGERS 18 & 19. REPAIRED IAW REA B657-59770-MR.

ABXR2012043000045	BOEING	PWA		FITTING	GOUGED
4/30/2012	767205	JT9D7R4D		112T5086	ZONE 600

DURING C-CHECK FOUND RT WING RIB 8 BACKUP FITTING HAS TOOLING MARKS AT WS 375. REPAIRED IAW WITH REA B657-59769-MR.

ABXA20120201185	BOEING			SHEAR TIE	CORRODED
2/1/2012	767232			140T2102207	FUSELAGE

SHEAR TIE CORRODED. REMOVED AND REPLACED SHEAR TIE PER BOEING DWG 140T2102 & SRM 51-40-02, A/W/G.

AMCR2012042504	BOMBDR	HNYWL	AUXILEC	BEARING	SEIZED
4/25/2012	BD1001A10	AS90711A			RT GENERATOR

GENERATOR REAR BEARING FAILED ON THE RT ENGINE. GENERATOR MOUNTING PAD SHEARED AND GENERATOR SPLIT APART. CREW RECEIVED A GENERATOR FAIL CAS MESSAGE.

2012FA0000244	CESSNA	CONT		SEAL	DETERIORATED
3/8/2012	150F	O200A		AEC539840	ENG CYLINDER

FOUR NEW CYLINDER ASSEMBLIES WERE INSTALLED. AFTER GROUND RUNS AND 1 BREAK IN FLIGHT THE ENGINE WAS INSPECTED. DURING THE INSPECTION THE PUSHROD TUBE SEAL WERE FOUND TO HAVE LARGE CRACKS AND SPLITS. THE SEALS AND GASKETS WERE SUPPLIED WITH THE CYL KITS FROM MFG. THE TT ON THE SEALS IS LESS THAN 2 HRS.

2012FA0000247	CESSNA			SPARK PLUG	FAILED
3/6/2012	150G			REM38S	

TESTED EIGHT REM38S SPARK PLUGS WITH 200 HRS TT AND FOUND THE RESISTORS HAD FAILED, NO RESISTANCE FOUND THROUGH THE SPARK PLUG.

2012FA0000212	CESSNA	LYC		SLEEVE	MISMANUFACTURED
2/23/2012	172N	O320*		AN8196D	FUEL LINE

FUEL LEAK OCCURED AT RIGHT AFT FUEL TANK OUTLET FITTING FUEL LINE FLARED FITTING JOINT. FUEL LINE WAS MANUFACTURED WITH A DEFECTIVE SLEEVE WITH A SHOULDER OF .045" AS OPPOSED TO THE STANDARD DIMMENSION OF .170. FOUND BACK OF FLARE CUT INTO AND NO LONGER ABLE TO CREATE A SEAL ON FLARE FACE BECAUSE THE AN818-6D NUT BOTTOMED OUT ON THE FUEL TANK OUTLET NIPPLE FITTING.

2012FA0000211	CESSNA	LYC	PAWL	LOOSE
2/28/2012	172N	O320D2G		MAGNETO

TRIED TO START ACFT, PROP WOULD TURN BUT IMPULSE COUPLING COULD NOT BE HEARD SNAPPING. REMOVED LEFT MAGNETO AND FOUND THAT THE RIVET HOLDING ONE OF THE PAWLS HAD BROKEN OFF AND THE PAWL WAS BEATING THE EDGE OF THE MAGNETO, DESTROYING THE LIP. THERE WAS ALOT OF AN OIL METAL PASTE ON ENGINE TO MAG SPACER AND WASHER THAT IS BETWEEN THE PAWL AND IMPULSE COUPLING WAS ON THE SPACER BUT THAT THE SPRING WAS MISSING. REMOVED FILTER AND FOUND THAT THERE WAS METAL IN THE FILTER. CAUSE OF THIS WAS THE RIVET THAT HOLDS THE PAWLS.

BQVD2012041600000	CESSNA	CESSNA	SWITCH	OVERHEATED
4/16/2012	172P		S21604	INSTRUMENT PANEL

ON CLIMB-OUT, CREW NOTICED SMOKE EMANATING FROM ABOVE AND BELOW INSTRUMENT PANEL. ATC WAS NOTIFIED, THE MASTER SWITCH WAS TURNED OFF, AND THEY RETURNED TO DEPARTURE. FIRE/ RESCUE PERSONNEL VERIFIED THERE WAS NO ACTIVE FIRE. THE ACFT WAS TURNED OVER TO MX FOR INSP AND REPAIR. MX PERSONNEL DETERMINED THAT THE PROBLEM WAS WITH THE LANDING LIGHT SWITCH. THE LANDING LIGHT SWITCH WAS REPLACED WITH A CURRENT PART NUMBERED SWITCH. AN OPS CHECK WAS PERFORMED WITH NO DIFFICULTIES NOTED.

2012FA0000254	CESSNA	LYC	RUDDER BAR	CRACKED
5/2/2012	172RG	O360F1A6	24670012	ZONE 100

RUDDER BAR WELD ASSY, RT FOOT BRAKE & RUDDER PEDAL. THE PART CRACKED CIRCUMFERENTIALLY AT THE APPROXIMATE MIDPOINT OF THE ASSY ALONG SIDE THE GEAR TEETH THAT ALLOW THIS PART TO ENGAGE THE WELD ASSY FOR THE LT BRAKE & RUDDER PEDALS.

2012FA0000287	CESSNA	LYC	TIRE	DEFLATED
5/7/2012	172S	IO360L2A	505C665	ZONE 700

NOSE TIRE DEFLATED ON LANDING.

2012FA0000288	CESSNA	LYC	STRUT	FAULTED
5/8/2012	172S	IO360L2A	07436311	NLG

DURING PHASE INSPECTION, NOSE GEAR STRUT BOROSCOPED AND CONECTING PINS FOR INNER STRUT TUBE FOUND TO BE LOOSE AND MIGRATING. ORIGINAL BONDED DESIGNED INNER STRUT TUBE WAS INSTALLED.

2012FA0000248	CESSNA	CONT	SPARK PLUG	FAILED
3/5/2012	180J	O470*	RHM40E	RESISTOR

DURING ANNUAL INSPECTION, THE SPARK PLUGS, RHM40E WERE CLEANED AND TESTED AND ONE OF THE NEW PLUGS THAT WAS INSTALLED 12 MONTHS AGO DURING THE LAST ANNUAL AND NOW HAS 14 HRS TT SINCE INSTALLATION, THE PLUG FAILED THE INTERNAL RESISTANCE CHECK: THERE WAS NO CINTINUITY THROUGH THE PLUG AT ALL. THE PLUG WAS RETURNED TO MFG FOR REVIEW OF THE FAILURE OF A VIRTUALLY NEW PLUG.

2012FA0000270	CESSNA	CONT	SLICK	CONTACT	LOOSE
3/30/2012	182D	O470L			MAGNETO

PILOT REPORTED A HIGH MAGNETO DROP. UPON INSPECTION THE LT MAGNETO WOULD NOT TIME CONSISTENTLY. REMOVED AND DISASSEMBLED THE MAGNETO AND FOUND 1 SIDE OF THE CONTACT POINT TO BE VERY LOOSE.

2012FA0000215	CESSNA	BULKHEAD	CRACKED
4/20/2012	182T	0713787110713787	ZONE 100

CRACKS FOUND IN FLANGE OF BOTH THE LEFT AND RIGHT FUSELAGE BULKHEADS AT STATION 17. CRACKS

RADIATING FROM UPPER BOLT HOLE WHERE FUELING STEP ATTACHES. BOLT HOLE IS TOO CLOSE TO BEND RADIUS OF BULKHEAD, CAUSING DISTRESS WHEN BOLT IS TIGHTENED. SECOND INSTANCE FOUND IN "RESTART" AIRCRAFT.

2012FA0000216	CESSNA	BULKHEAD	CRACKED
4/20/2012	182T	0713787110713787	ZONE 100

CRACKS FOUND IN FLANGE OF BOTH THE LT AND RT FUSELAGE BULKHEAD AT STATION 17. CRACKS RADIATING FROM THE UPPER BOLT HOLE WHERE THE FUELING STEP ATTACHES. BOLT HOLE IS TOO CLOSE TO BEND RADIUS OF BULKHEAD, CAUSING DISTRESS WHEN BOLT IS TIGHTENED.

2012FA0000213	CESSNA	TRANSISTOR	MISINSTALLED
4/19/2012	208B	2N6576	DIMMER

DURING LIGHTING SYS INSPECTION, FOUND PANEL LIGHTS FOR CIRCUIT BREAKERS & SWITCHES INOPERATIVE. TROUBLESHOOTING FOUND A DEFECTIVE DRIVE TRANSISTOR IN DIMMER CIRCUIT. DRIVE TRANSISTOR INSPECTED & TESTED. TRANSISTOR FOUND TO HAVE A BASE TO EMITTER OPEN. FOUND ALL TRANSISTORS TO BE IMPROPERLY MOUNTED ON HEATSINK. INSULATORS PREVENTED DRIVE TRANSISTOR FROM MOUNTING ON HEAT SINK PROPERLY CREATING EXCESSIVE HEAT BUILDUP IN TRANSISTOR. REPAIRED AND CIRCUITS WERE TESTED & HEAT CONDUCTION TO HEAT SINK VERIFIED.

2012FA0000281	CESSNA	CONTROL CABLE	FRAYED
5/7/2012	208B	2660001105	TE FLAPS

DURING ROUTING INSPECTION, FOUND FLAP CABLE WHICH RUNS FROM THE INNER BELLCRANCK TO THE OUTER END OF THE FLAP, FRAYED AT THE CONNECTION TO THE FAIRLEAD. CABLE WAS BROKEN FOR ABOUT 30 PERCENT. CABLE WAS ORIGINAL. FROM SLIP MARK THE CABLE HAD NOT SLIPPED.

M36R20120424001	CESSNA	PWA	VENT LINE	CORRODED
4/24/2012	208B	PT6A114A	S5114S51148	ENGINE

IN COMPLIANCE OF A FLEET CAMPAIGN DIRECTIVE DURING AN ENGINE INSPECTION, A MECHANIC CHECKING THE VENT LINE OF THE OVERBOARD ENGINE BREATHER, FOUND THE RUBBER SECTION SWOLLEN INTERNALLY. LEFT UNCHECKED TO THE POINT OF OBSTRUCTION, IT WOULD CAUSE THE ENGINE OF THIS ACFT TO START CONSUMING LARGE AMOUNTS OF ENGINE OIL AND COMPROMISE THE ENGINE BEARING SEALS RESULTING IN EXPENSIVE ENGINE REPAIRS. THE FLEET CAMPAIGN DIRECTIVE MENTIONED ABOVE WAS GENERATED BY THIS ACFT OPERATOR TO ADDRESS THE CONDITION OF THESE AGING HOSE SECTIONS.

2012FA0000217	CESSNA	CONT	CYLINDER	CRACKED
3/6/2012	340A	TSIO520N	AEC631397	INTAKE SEAT

IN CRUISE, AIRCRAFT EXPERIENCED VIBRATION. CHECKED COMPRESSION ON RT ENGINE, FOUND NR 3 CYLINDER HAD 0/80. REMOVED CYLINDER AND FOUND CRACKED FROM SPARK PLUG HOLE TO INTAKE SEAT. INSTALLED NEW CYLINDER AND GROUND RAN. ACFT WAS RETURNED TO SERVICE NO FURTHER ISSUES. NO INDICATION AS TO THE CAUSE OR RECOMMENDATIONS AS TO HOW TO PREVENT REOCCURRANCE.

2012FA0000276	CESSNA	LANDING GEAR	COLLAPSED
3/8/2012	401B		NOSE

ACFT LANDED & NLG COLLAPSED. NLG REPORTED TO HAVE BEEN OPERATED FOR A PERIOD OF TIME WITH A DEFLATED NOSE STRUT. STRUT SERVICED, ALSO REPORTED NLG HAD BEEN SUBJECT TO ROUGH OPERATION, OPERATED IN & OUT OF A GRASS AIRSTRIPS. NLG EXTENDED & RETRACTED USING ELECTRIC & MANUAL SYS. BOTH TIMES GEAR WOULD COME WITHIN .5" OF FULL DOWN TRAVEL. DETERMINED THAT EXTENSIVE DAMAGE HAD OCCURRED TO THE NLG EXTENSION SYS FROM COLLAPSE. APPEARED THAT THERE WAS EXCESSIVE PLAY IN ASSOCIATED RODS, BELL CRANKS, & BUSHINGS IN NLG DOWN SYS. DUE TO EXCESSIVE WEAR. IT APPEARS AS THOUGH DOWN SYS BECAME WORN & OUT OF RIG, PREVENTING FULL DOWN ACTUATION OF NLG ACTUATING ROD. NLG SYS ALSO APPEARED TO BE DRY OF LUBRICATION.

GNMA20120418	CESSNA	SPAR	CRACKED
4/18/2012	414A	50111482	ZONE 100

DURING ROUTINE INSPECTION OF ACFT, 2 CRACKS WERE FOUND ON THE TOP, FORWARD MAIN SPAR WEB AT FS 154.50. AREA OF CRACK IS A TYPICAL AREA FOR CRACKS IAW SRM. REPAIR PROCEDURES OF FRONT SPAR WEB IS OUTLINED IN THE SRM.

GNMA6640C021912	CESSNA	CONT	ENGINE	MAKING METAL
2/19/2012	414A	TSIO520NB	TSIO520NB	LEFT

AIRCRAFT LEFT ENGINE WAS SHOWING LOW OIL PRESSURE 10 MINUTES OUT OF AIRPORT, ALL OTHER ENGINE GAUGES READ NORMAL. PILOT STARTED LEFT ENGINE FOR DEPARTURE BACK, BUT LEFT ENGINE OIL PRESSURE GAUGE DID NOT RESPOND. TROUBLESHOT ENGINE AND FOUND METAL SHAVING IN OIL FILTER, NO FURTHER ACTION HAS BEEN TAKEN TO DETERMINE CAUSE OF ENGINE WEAR. AIRCRAFT HAS BEEN GROUNDED FOR ENGINE REPLACEMENT.

2012FA0000209	CESSNA	CONT	CYLINDER	CRACKED
2/28/2012	414A	TSIO520NB		ENGINE

AT 370, TTSMO WITH NEW CYLINDERS AT O/H, CHANGED NR 1, 3, 5 CYLINDERS FOR CRACKS IN FIN ON INTAKE AT 740 TTSMO. CHANGE 2, 4, CYLINDERS FOR CRACKS IN THE INTAKE FINS.

2012FA0000210	CESSNA	CONT	CYLINDER HEAD	FAILED
11/28/2011	414A	TSIO520NB		ENGINE

ENGINE HAD INFLIGHT SHUTDOWN DUE TO NR 2 CYLINDER HEAD BLOWN OUT AND MELTING NR 4 CYLINDER HEAD INTAKE, CAUSING MANIFOLD PRESSURE TO DROP AND FUEL AIR CHARGE TO IGNITE AND BLOW OUT THRU LOUVERS IN TOP OF COWL.

2012FA0000246	CESSNA	CONT	GASKET	FAILED
3/22/2012	421C	GTSIO520*	635823	OIL CAP

OIL FILLER CAP GASKET ON ENGINE. HAVE REPLACED THE GASKET TWO TIMES DUE TO DISTORTION AND TORN. GASKET MATERIAL LACKS STABILITY FOR THE TWISTING FORCE IT IS SUBJECTED TO. THE MATERIAL SQUEEZES OUT OF PLACE AND WINDS UP IN THE WINGS OF THE CAP. THIS CAUSES AN OIL SEEP. THE FACTORY SENT 3 EA GASKETS AT THE 100 HUR MARK ON THE ENGINE WHEN I MADE COMMENTS TO THEM. THE 2ND ONE CHANGED WITHIN 150 HRS TIS WAS TORN. THE MATING SURFACES ARE SMOOTH. THE GASKET MATERIAL SEEMS TO BE DISPLACED BY THE SQUEEZE OF THE CAP PRESSURE TO FORCE THE GASKET INTO THE WINGS/FINGER HOLDS ON THE CAP. THIS CAUSES A LEAK. THE GASKET MATERIALIS ALSO TEARING IN THIS APPLICATION.

GNMA6640C032712	CESSNA	PWA	ENGINE	OVERTEMP
3/27/2012	425	PT6A112		RIGHT

ACFT DEPARTED AND ON DECENT THE RT ENGINE WAS ABRUPT AND VIBRATED. PILOT NOTICED AN INCREASE ON THE INTER-TURBINE TEMPERATURE AND A DECREASE IN ENGINE TORQUE. ENGINE WAS SHUTDOWN AS A PRECAUTIONARY ACTION AND RETURNED TO DEPARTURE AIRPORT WHICH WAS WITHIN 10 MINUTES OF FLIGHT. ACFT LANDED SAFELY. A BORESCOPE INSP WAS PERFORMED ON ENGINE AND ALL VISUAL INSP WERE GOOD. OIL SCREEN AND CHIP DETECTOR WERE INSPECTED AND NO METAL PARTICLES WERE FOUND. ENGINE OVERTEMP LIMITS PER SECOND ARE BEING EVALUATED TO DETERMINE MX PROCEDURES.

2012FA0000237	CESSNA		PRESSURE SWITCH	SHORTED
4/25/2012	550		6607A745	THRUST REVERSER

NR 1 THRUST REVERSER "ARM" LIGHT ILLUMINATED CONTINUOUSLY, WITH ENGINES SHUTDOWN. THE FAULT LIES IN THE ARM LIGHT PRESSURE SWITCH. INSTALLING A NEW SWITCH FIXED THE PROBLEM.

2012FA0000232	CESSNA		HSI	FAILED
4/23/2012	560XL		5203151003	STANDBY

CREW COMMENTED THAT STANDBY HSI IS INOPERATIVE AND UNRELIABLE. NAV FLAG CAME INTO VIEW ENROUTE. REMOVED AND INSTALLED A REPAIRED HORIZONTAL SITUATION INDICATOR PN 520-3151-003 SN 16485 IAW MM 34-23-01. OPS CHECK GOOD. INDICATOR REPAIRED. WORK COMPLIED WITH.

DXTR20120424001	CESSNA	BRACKET	CRACKED
4/24/2012	560XL	66611542	ZONE 100

RUDDER AUTOPILOT CABLE BRACKET AT AFT CANTED BULKHEAD IS CRACKED ON INBD RIVET LINE. R & R RUDDER AUTOPILOT CABLE BRACKET IAW SRM 51-40-03 AND MM 22-11-01.

DXTR20120424002	CESSNA	LINE	CHAFED
4/24/2012	560XL	651710577	LT BRAKE

LEFT BRAKE LINE FWD OF COPILOTS RT RUDDER PEDAL IS CHAFED DUE TO RUDDER PEDAL CONTACT. R & R LT BRAKE LINE ASSY FWD OF COPILOTS RT RUDDER PEDAL IAW MM 20-10-06.

2012FA0000273	CESSNA	ARM	WORN
3/13/2012	680CE	696400015	FS 303.9

UPON RT CABIN FLOOR PANEL REMOVAL (162ET) IT WAS OBSERVED THAT THERE WAS SOME FRETTING MATERIAL ON THE INSULATION BAGS AND THE SURROUNDING AREA. FURTHER INVESTIGATION REVEALED THAT THE RT (PN 6964000-16) AND LEFT (PN 6964000-15) ARMS THAT CONNECT THE BRAKE METERING VALVE TO THE BRAKE CABLE CLEVISES WERE SEVERELY WORN. THE BOLTS AND CLEVISES AT THE ATTACH POINTS ARE WEARING INTO THE BRAKE METERING VALVE ARMS. IT LOOKS LIKE THE BUSHINGS (SPACER PN NAS43DD4-16FC) WERE NEVER INSTALLED. RECOMMEND DURING A 3AEMERGENCY BATTERY SERVICE OR AN INSPECTION THAT THIS PANEL (162ET) IS REMOVED, THAT THE ARMS BE INSPECTED FOR WEAR AND THAT THE SPACER IS INSTALLED.

2012FA0000274	CESSNA	ARM	WORN
3/13/2012	680CE	696400016	FS303.9

UPON RT CABIN FLOOR PANEL REMOVAL (162ET) IT WAS OBSERVED THAT THERE WAS SOME FRETTING MATERIAL ON THE INSULATION BAGS AND THE SURROUNDING AREA. FURTHER INVESTIGATION REVEALED THAT THE RT (PN 6964000-16) AND LEFT (PN 6964000-15) ARMS THAT CONNECT THE BRAKE METERING VALVE TO THE BRAKE CABLE CLEVISES WERE SEVERELY WORN. THE BOLTS AND CLEVISES AT THE ATTACH POINTS ARE WEARING INTO THE BRAKE METERING VALVE ARMS. IT LOOKS LIKE THE BUSHINGS (SPACER PN NAS43DD4-16FC) WERE NEVER INSTALLED. RECOMMEND DURING A 3AEMERGENCY BATTERY SERVICE OR AN INSPECTION THAT THIS PANEL (162ET) IS REMOVED, THAT THE ARMS BE INSPECTED FOR WEAR AND THAT THE SPACER IS INSTALLED.

2012FA0000235	CESSNA	CONT	CYLINDER HEAD	CRACKED
4/24/2012	A188B	IO550D	AEC631397	ENGINE

CYLINDER HEADS FOUND TO BE CRACKED. ALL OF THE CYLINDERS WERE INSTALLED NEW FEB 15,2012. ACFT HAS BEEN FLOWN 404.3HRS. PILOT HAD LOSE OF POWER AND RETURNED TO AIRPORT. 2 CYLINDERS FOUND CRACKED AND LEAKING DURING COMPRESSION CHECK. REMAING CYLINDERS COMPRESSION CHECKED OK. VISUAL INSP OF CYLINDERS REVIELED THAT 5 OF THE 6 WERE CRACKED. SN OF CRACKED CYLINDERS ARE AS FOLLOWS; 52119-16, 52119-19, 52119-22, 52119-24, 52119-25

2012FA0000220	CESSNA	STARTER	BURNED
2/14/2012	T210N	PM2407	ENGINE

PILOT REPORTED THAT ON LANDING, ACFT LOST ALL ELECTRICAL POWER. PERFORMED INSPECTION AND TROUBLESHOOTING. FOUND BATTERY, STARTER AND STARTER RELAY AT FAULT. ACFT HAD A BURNED WIRE, ELECTRICAL ODOR. FOUND THAT THE STARTER STAYED ENGAGED AND IT ACTED LIKE AN ELECTRICAL GENERATOR OVERCHARGING THE ELECTRICAL SYS CAUSING THE BATTERY TO FAIL. POSSIBLE CAUSE OF THE PROBLEM IS THE STARTER RELAY FAILED TO OPEN ONCE THE ENGINE STARTED.

2012FA0000221	CESSNA	BATTERY	DAMAGED
2/14/2012	T210N	RG2411M	

PILOT REPORTED THAT ON LANDING, ACFT LOST ALL ELECTRICAL POWER. PERFORMED INSP AND TROUBLESHOOTING. FOUND BATTERY, STARTER AND STARTER RELAY AT FAULT. ACFT HAD A BURNED WIRE, ELECTRICAL ODOR. FOUND THAT THE STARTER STAYED ENGAGED AND IT ACTED LIKE AN ELECTRICAL GENERATOR OVERCHARGING THE ELECTRICAL SYSTEM CAUSING THE BATTERY TO FAIL. POSSIBLE CAUSE OF

THE PROBLEM IS THE STARTER RELAY FAILED TO OPEN ONCE THE ENGINE STARTED.

2012FA0000222	CESSNA		CONTACTOR	SHORTED
2/14/2012	T210N		S1577A1	FIREWALL

PILOT REPORTED THAT ON LANDING, ACFT LOST ALL ELECTRICAL POWER. PERFORMED INSP AND TROUBLESHOOTING. FOUND BATTERY, STARTER AND STARTER RELAY AT FAULT. ACFT HAD A BURNED WIRE, ELECTRICAL ODOR. FOUND THAT THE STARTER STAYED ENGAGED AND IT ACTED LIKE AN ELECTRICAL GENERATOR OVERCHARGING THE ELECTRICAL SYSTEM CAUSING THE BATTERY TO FAIL. POSSIBLE CAUSE OF THE PROBLEM IS THE STARTER RELAY FAILED TO OPEN ONCE THE ENGINE STARTED.

2012FA0000275	CESSNA	CONT	CYLINDER HEAD	SEPARATED
3/27/2012	U206D	IO520F	AEC631397	NR 3 CYLINDER

JUST AFTER REACHING CRUISING ATTITUDE OF 2500 FT MSL, THE ENGINE BEGAN PRODUCING A LOUD NOISE, ACCOMPANIED BY LOSS OF POWER AND EXTREME VIBRATION. A SAFE LANDING WAS ACCOMPLISHED, WHERE IT WAS DETERMINED THT THE CYLINDER HEAD ON THE NR3 CYLINDER HAD SEPARATED AT THE TOP END OF THE CYLINDER BARREL. NO OTHER SIGNIFICANT DAMAGE WAS NOTED. CAUSE OF THE SEPARATION IS UNDETERMINED AT THIS TIME.

2012FA0000179	CIRRUS		RELAY	FAULTY
4/4/2012	SR20		V23234A0004X051	TE FLAPS

FLAPS STUCK IN DOWN POSITION. CONDITION TRACED TO A FAULTY RELAY. THIS IS A CHRONIC PROBLEM ENCOUNTERED ON 6 ACFT.

2012FA0000204	CIRRUS	CONT	SPARK PLUG	CRACKED
2/24/2012	SR22	IO550N	RHB32S	ENGINE

REPLACED ALL FINE WIRE SPARK PLUGS RHB32S WITH NEW RHB32E MASSIVE ELECTRODE PLUGS. TWO SPARK PLUGS HAD CRACKED INSULATION WITH SOME INSULATION MISSING.

2012FA0000290	CIRRUS	CONT	CONT	SEAL	LEAKING
5/8/2012	SR22	IO550N			FUEL CONTROL

FUEL LEAKING PAST MIXTURE CONTROL SHAFT SEALS. ACFT AND ENGINE HAS A TURBO NORMALIZING SYS INSTALLED. WHEN ELECTRIC FUEL PUMP OPERATED ON BOOST (LOW), ENGINE DRIVEN FUEL PUMP HAD A LEAKAGE RATE OF FUEL OF ABOUT 1 DRIP EVERY 1.5 TO 2 SECONDS.

2012FA0000268	CIRRUS	CONT	ATTACH BRACKET	CRACKED
4/5/2012	SR22	IO550N	646404	NR2 ALTERNATOR

INVESTIGATING A NR 2 ALTERNATOR NO OUTPUT CONDITION. FOUND THAT THE NR 2 ALTERNATOR ATTACH POINT CRACKED THRU. SUSPECT DEFECT CASTING OF PART. RECOMENDATION WOULD BE TO MAKE THE PART FROM BILLET ALLUMINUM INSTEAD OF CAST ALUNIMUM.

2012FA0000269	CIRRUS	CONT	ATTACH BRACKET	CRACKED
4/5/2012	SR22	IO550N	646404	NR2 ALTERNATOR

ON 100 HR INSPECTION, FOUND CRACK ON LOWER NR 2 ALTERNATOR ATTACH POINT. SUSPECT DEFECT CASTING OF PART. RECOMENDATION WOULD BE TO MAKE THE PART FROM BILLET ALUMINUM.

2012FA0000203	CNDAIR		CONTROLLER	FAILED
2/14/2012	CL6002A12		820465	ADG DEPLOY

AIRCRAFT ON RAMP, APU WAS SHUTDOWN AFTER RUNS AND ADG AUTOMATICALLY DEPLOYED. THIS OPERATION SHOULD NOT HAVE HAPPENED UNLESS ACFT IS IN THE AIR. TROUBLESHOOTING FOUND THE CONTROLLER FAILED. RECOMMENDED REPLACEMENT TO CUSTOMER AND THIS WAS ACCOMPLISHED. UNKNOWN FAILURE INSIDE BOX, UNABLE TO DETERMINE EXACT CAUSE.

2012FA0000278	CNDAIR	GE	BRACKET	CRACKED
3/28/2012	CL6002B16	CF343B	22858220805	THRUST REVERSERS

THRUST REVERSER WOULD NOT INDICATE EXTENDED. FOUND BRACKET THAT HOLDS THE RETRACT AND EXTEND SWITCHES TO BE CRACKED AROUND THE EXTEND SWITCH WHICH ALLOWED THE SWITCH TO MOVE WHEN THE THRUST REVERSER CONTACTED IT DURING EXTENSION. CAUSE APPEARS TO BE CRACKING DUE TO REPEATED CONTACT BETWEEN THRUST REVERSER AND SWITCH ON AN ALUMINUM BRACKET. REPLACED BRACKET.

N6WA2012050302	CNDAIR	BULB	BURNED OUT
5/3/2012	CL6002C10		EMERGENCY LIGHT

EMERGENCY LIGHT SECOND TO LAST ON CEILING IS OUT. REPLACED BULB.

V0XR20120508J0034	CNDAIR	STEP	WORN
5/7/2012	CL6002C10	601R316709	PAX DOOR

PASSENGER DOOR TOP STEP SPONGY IN THE CENTER AREA. R & R PASSENGER DOOR TOP STEP IAW AMM 52-11-04. (REF. W/O 80072, W/C 8020)

V0XR20120508J0035	CNDAIR	CABLE	DAMAGED
5/7/2012	CL6002C10	601R3181273	PAX DOOR

ICE BREAKER CABLE LOCATED IN PASSENGER DOOR DAMAGED BEYOND SERVICEABLE LIMITS. R & R PASSENGER DOOR ICE BREAKER CABLE IAW AMM 52-11-15.

V0XD20120418J0004	CNDAIR	THRESHOLD	CORRODED
4/16/2012	CL6002C10	5H670321723	ZONE 800

RT SERVICE DOOR SILL CORRODED BEYOND SERVICEABLE LIMITS FROM FS 280.00 TO FS 319.70. R & R SERVICE DOOR THRESOLD SILL IAW SRM 51-42-06, 51-23-00.

V0XD2012041800005	CNDAIR	THRESHOLD	CORRODED
4/16/2012	CL6002C10	5H670318215	ZONE 800

PASSENGER DOOR SILL/THRESHOLD CORRODED BEYOND SERVICEABLE LIMITS, FS 310.00, R & R PASSENGER DOOR THRESHOLD SILL IAW SRM 51-42-00, 51-42-06.

V0XR20120508J0028	CNDAIR	FLOORBEAM	CORRODED
5/7/2012	CL6002C10	CC67034175	ZONE 100

FS 280 FLOORBEAM CORRODED BEYOND SERVICEABLE LIMITS. REMOVED CORROSION IAW REO 670-53-11-046. ORIGINAL THICKNESS 0.040 ", MATERIAL REMAINING AFTER CORROSION REMOVAL 0.038 ", MATERIAL THICKNESS REMAINING AFTER REPAIR WITHIN SERVICEABLE LIMITS, TREATED AND PRIMED REPAIR AREA IAW SRM 51-25-06.

V0XR20120508J0029	CNDAIR	FLOORBEAM	CORRODED
5/7/2012	CL6002C10	CC670332929	BS 279

FS 279 FLOORBEAM CORRODED AT RBL 9 TO LBL 9 BEYOND SERVICEABLE LIMITS. INSTALLED NEW FLOORBEAM IAW SRM 51-42-13, 51-42-21.

V0XR20120508J0030	CNDAIR	ANGLE	CORRODED
5/7/2012	CL6002C10	SH670318403	BS 280

FWD VERTICAL POST (CLOSING ANGLE) AT LBL 9, BS 280.00, WL 72.50 CORRODED BEYOND SERICEABLE LIMITS. R & R FWD VERTICAL POST (CLOSING ANGLE), TREATED, PRIMED AND PAINTED WITH TOPCOAT IAW SRM 51-42-06, 51-40-11.

V0XR20120508J0031	CNDAIR	ANGLE	CORRODED
5/7/2012	CL6002C10	SH670318216	ZONE 200

PASSENGER DOOR THRESHOLD BOTTOM ANGLE AFT CAP CORRODED BEYOND SERVICEABLE LIMITS, FS 349, R & R PASSENGER DOOR THRESHOLD LOWER ANGLE AFT CAP IAW SRM 51-42-00, 51-10-06.

V0XR20120508J0032	CNDAIR	ANGLE	CORRODED

5/7/2012	CL6002C10	SH670318216	ZONE 200

PASSENGER DOOR THRESHOLD BOTTOM ANGLE FWD CAP CORRODED BEYOND SERVICEABLE LIMITS, FS 349. R & R PASSENGER DOOR THRESHOLD LOWER ANGLE FWD CAP IAW SRM 51-42-00, 51-10-06.

V0XR20120508J0033	CNDAIR	SEAT TRACK	CORRODED
5/7/2012	CL6002C10	SH670374113	BS 785.15

LEFT SEAT TRACK AT FS 785.15, AFT OF OVERWING EXIT DOOR, CORRODED BEYOND SERVICEABLE LIMITS. CLEANED AND BLENDED SEAT TRACK, BLENDED 0.018" WITHIN THE MAXIMUM 0.35" LIMIT IAW SRM 53-41-49.

V0XR05082012J0028	CNDAIR	FLOORBEAM	CORRODED
5/7/2012	CL6002C10	CC67034175	ZONE 100

FS 280 FLOORBEAM CORRODED. REMOVED CORROSION IAW REO 670-53-11-046. ORIGINAL THICKNESS 0.040 ", MATERIAL REMAINING AFTER CORROSION REMOVAL 0.038 ", MATERIAL THICKNESS REMAINING AFTER REPAIR WITHIN SERVICEABLE LIMITS, TREATED AND PRIMED REPAIR AREA IAW SRM 51-25-06.

V0XR05082012J0030	CNDAIR	ANGLE	CORRODED
5/7/2012	CL6002C10	SH670318403	ZONE 100

FWD VERTICAL POST (CLOSING ANGLE) AT LBL9, BS 280, WL 72.50 CORRODED BEYOND SERICEABLE LIMITS. R & R FWD VERTICAL POST (CLOSING ANGLE), TREATED, PRIMED, & PAINTED WITH TOPCOAT IAW SRM 51-42-06, 51-40-11.

V0XR20120422J0027	CNDAIR	FLOOR SUPPORT	CRACKED
4/19/2012	CL6002C10	SH67033332	ZONE 100

FLOOR SUPPORT ANGLE AT BS 310 TO 333, FOUND CRACKED. FABRICATED AND INSTALLED REPLACEMENT FLOOR SUPPORT IAW SRM 51-25-06 AND DG SH670-33332.

V0XR20120422J0022	CNDAIR	ANGLE	CORRODED
4/19/2012	CL6002C10	SH670318255	PAX DOOR

PASSENGER DOOR LOWER THRESHOLD KICK ANGLE CORRODED BEYOND SERVICEABLE LIMITS. REMOVED AND CLEANED CORROSION FROM KICK ANGLE,.004" MATERIAL REMOVED, PART WITHIN LIMITS, TREATED, PRIMED,AND PAINTED WITH TOPCOAT LAW SRM 53-21-23, 51-21-06,51-25-06, 51-25-16, 51-42-06, AMM 51-21-01, 51-23-00. (REF W/O 80069, W/C 1070)

V0XR20120422J0023	CNDAIR	BULKHEAD WEB	CORRODED
4/19/2012	CL6002C10	CC670341707S	ZONE 100

FS 280 LT BULKHEAD WEB CORRODED BEYOUND SERVICEABLE LIMITS. R & R FS 280 LT BULHEAD WEB LAW SRM 51-42-06, 51-42-13, 51-42-21, 51-23-00, REO670-53-11-052.

V0XR20120422J0024	CNDAIR	FLOORBEAM	CORRODED
4/19/2012	CL6002C10	CC670341757S	ZONE 100

FS 280 FLOORBEAM CORRODED BEYOND SERVICEABLE LIMITS. R & R FS 280 FLOORBEAM, LAW REO 670-53-11-0047 & REO 670-53-11-046 AND SRM 51-42-20, 51-42-06.

V0XR20120422J0025	CNDAIR	SILL	CORRODED
4/19/2012	CL6002C10	SH670321713	ZONE 100

FS 280, SILL CORRODED BEYOND SERVICEABLE LIMITS. R & R SILL AND INSTALLED IAW SRM 51-40-11, 51-42-13, 51-42-06.

V0XR20120422J0026	CNDAIR	ANGLE	CORRODED
4/19/2012	CL6002C10	CC670331993	ZONE 100

FS 260 TO 280, LT RECEPTICLE ANGLE CORRODED BEYOND SERVICEABLE LIMITS. REMOVED AND CLEANED CORROSION, TREATED AND INSTALLED PROTECTIVE FINISH IAW SRM 51-21-11, 51-25-06.

V0XR20120422J0028	CNDAIR	ANGLE	DEFORMED
4/19/2012	CL6002C10	SH670318403	ZONE 200

PASSENGER DOOR KICK ANGLE CLOSING PLATE DAMAGED BEYOND SERVICEABLE LIMITS (DEFORMED/DENTED). R & R PASSENGER DOOR KICK ANGLE CLOSING PLATE IAW SRM 53-21-23, 51-42-06, 51-42-21, 51-40-11 AND AMM 51-21-01-380-801.

V0XR20120422J0029	CNDAIR	ANGLE	DAMAGED
4/19/2012	CL6002C10	SH670318214	ZONE 200

PASSENGER DOOR END CAPS DAMAGED BEYOND SERVICEABLE LIMITS. R & R PASSENGER DOOR KICK ANGLE END CAP, LAW SRM 53-21-23, 51-42-06.

V0XR20120422J0030	CNDAIR	ANGLE	DAMAGED
4/19/2012	CL6002C10	SH670318215	ZONE 200

PASSENGER DOOR FORWARD CAP DAMAGED BEYOND SERVICEABLE LIMITS. R & R PASSENGER DOOR KICK ANGLE FORWARD CAP, LAW SRM 53-21-23, 51-42-06. 51-40-11, AMM 51-21-01-380-801.

V0XR20120422J0031	CNDAIR	ANGLE	DAMAGED
4/19/2012	CL6002C10	SH670318259	ZONE 200

PASSENGER DOOR MID CAP DAMAGED BEYOND SERVICEABLE LIMITS. R & R PASSENGER DOOR KICK ANGLE MID CAP, IAW SRM 51-41-02, 51-42-06. 51-40-11.

V0XR2012042700006	DHAV	SKIN	DENTED
4/27/2012	DHC8106	8714003	RT NACELLE

DENT ON LT SIDE OF OF RT NACELLE AT XN=72.0 AND ZN=1.0. DENT ON COWL ASSY IS LOCATED 6.25" FROM TOP EDGE OF DOOR AND 8.25" FROM FORWARD EDGE. DENT IS MEASURED AT 0.015 DEEP AND 0.700 DIAMETER AND FOUND TO BE IN LIMITS WITH SRM 54-00-16 AND REPAIR DWG 8-71-885. NDT INDICATES NO CRACKS IAW NDTM PART 6.

2012FA0000245	DIAMON	CONT	TUBE	FAILED
3/22/2012	DA20C1	IO240B		NLG TIRE

ACFT LANDED AFTER A TRAINING MISSION. THE NOSE TIRE WENT FLAT ON OR DURING THE LANDING AND SUBSEQUENT ROLLOUT. THE ACFT WAS INSPECTED (NOSE TIRE AND WHEEL ASSY) AND IT WAS VERIFIED BY MX THAT THE NOSE TIRE WAS IN FACT DEFLATED. THE REPAIR EFFORTS BY MX CONSISTED OF A REPLACEMENT NOSE WHEEL/TIRE AND WHEEL ASSY PERFORMED. THE APPROPRIATE PAPERWORK WAS COMPLETED AND THE ACFT WAS RETURNED TO SERVICE. THE FINDING IN THIS MATTER REVEALED A SMALL HOLE IN THE SIDE OF THE TUBE WHICH APPEARS TO BE A MFG DEFECT. HAVE CONTQCTED OUR SUPPIERS TO MAKE THEM AWARE OF THIS PROBLEM SO WE CAN FIND A RESOLUTION.

2012FA0000227	DIAMON	TUBE	MISMANUFACTURED
3/15/2012	DA40	G156006	TIRE

AFTER TOUCHDOWN, ACFT WAS ABLE TO MAINTAIN DIRECTIONAL CONTROL. REMOVED AND REPLACED OR TIRE WHEEL ASSY. DEFECTIVE TIRE WHEEL ASSY DISASSEMBLED AND A SMALL PUNCTURE DISCOVERED IN THE SIDEWALL OF THE TUBE. DETERMINED THAT THIS WAS A MANUFACTURER DEFECT.

ABXR2012042700042	DOUG	SKIN	DAMAGED
4/27/2012	DC932	591142465	ZONE 100

DENT AND GOUGE AT APPROX FUSELAGE STATION 883 RT SIDE AT LONGERON 21 RIGHT. REPAIRED IAW SERVICE DWG SG09530002.

I06B20120416001	EMB	UPLOCK	FAILED
4/16/2012	EMB135ER	23092900401	MLG

ON GEAR UP, RECEIVED MLG LEVER DISAGREE MESSAGE AND RT MLG NOT LOCKED INDICATION. CYCLED MLG AND RECEIVED SAME INDICATIONS. EXTENDED MLG AND RETURNED TO BASE NORMALLY. TROUBLESHOOTING

REVEALED A FAILED RT MLG UPLOCK ASSY. UPLOCK REPLACED AND TESTED IAW MM & ACFT APPROVED FOR RETURN TO SERVICE.

2012FA0000252	GRTLKS	LYC	SPAR	CRACKED
5/2/2012	2T1A2	AEIO360*	1010216321911	HORIZONTAL STAB

INSPECTED ACFT IAW SB-GL12-01R. AFTER REMOVING THE RT HORIZONTAL STABILIZER, A CRACK WAS DISCOVERED ALONG THE INBD RIVET LINE WHICH COVERED APPROX 70 DEGREES OF THE TUBE CIRCUMFERENCE. THE LT HORIZONTAL STABILIZER WAS FOUND TO BE CRACKED THE ENTIRE CIRCUMFERENCE OF THE TUBE, INBD OF THE SECOND LINE OF RIVETS.

2012FA0000262	GULSTM	BOLT	LOOSE
2/28/2012	200	31B518201	FAN DISK

FLIGHT CREW DISCOVERED, DURING PREFLIGHT INSPECTION THAT THE RT ENGINE FAN DISK SPINNER ATTACH BOLT, PN 31B0162-01 HAD COME LOOSE FROM THE TIE ROD. RECORDS SEARCH REVEALED THAT THE FAN DISK HAD NOT BEEN REMOVED SINCE NEW. MX REPLACED BOLT AND LOCK WASHER WITH NEW BUD DID NOT FIND ANY OBVIOUS DEFORMATIONS ON OLD PARTS, PILOTS HAD NOT COMPLAINED ABOUT ANY EXCESSIVE VIBRATION OR OTHER ABNORMALITIES PRIOR TO THIS EVENT.

K5SR2012050123537	GULSTM	WIRE	CHAFED
5/1/2012	GIV		INVERTER

WHILE PERFORMING ACFT SERVICE CHECK, NOTICED LARGE AMOUNT OF HYD FLUID AROUND APU COMPARTMENT. TROUBLESHOT WITH SYS PRESSURIZIED MOVED WIRE BUNDLE NEAR COMBINED HYD MANIFOLD AND WIRING SPARKED. FOUND 60HZ INVERTER WIRE HAD CHAFED THRU THE HYD PRESSURE LINE GOING TO COMBINED HYD MANIFOLD ASSY LINE. REPAIRED HYD LINE ASSY IAW PERMA SWAGE TUBE CONNECTING SYS INSTRUCTION MANUAL SOP6-01-05 BY INSTALLATION PERMA SWEDGE, PN D10036-12. REPAIRED 60 HZ CONVERTER WIRE USING ENVIRONMENTAL SPLICE AND REPOSITIONED WIRE BUNDLES TO PREVENT FURTHER CHAFING. PERFORMED HYD LEAK AND OPS CHECK WITH ENGINE RUNNING. LEAK AND OPS CHECKED SATISFACTORY. OPS CHECK OF 60 HZ CONVERTER CHECKED SATISFACTORY.

2012FA0000258	ISRAEL	HYDRAULIC LINE	CORRODED
3/21/2012	1124	72358961	

LINE CONNECTED TO NR 2 THRUST REVERSER CONTROL VALVE STOW PORT RUPTURED IN FLIGHT AT A 90 DEGREE BEND, SPRAYING 1.5 PINTS IN THE AFT SECTION OF THE ACFT. INSPECTION OF THE LINE REVEALED A PIN HOLE SIZE FAILURE ON THE OUTER BEND RADIUS OF THE TUBE. FURTHER INVESTIGATION REVEALED SURFACE CORROSION ON THE FAILURE PORTION OF THE LINE. THIS LINE IS FABRICATED FROM 6061-T4 TUBING IAW THE DWG 3732589.

2012FA0000231	LANCAR	KELLY	SHAFT	SHEARED
4/20/2012	LC41550FG			RT ALTERNATOR

PILOT REPORTED LOSS OF RIGHT HAND ALTERNATOR ON FINAL APPROACH TO THE AIRPORT. DURING TAXI OPERATIONS TO THE RAMP THE PILOT REPORTED HEARING A "NOISE" FROM THE FRONT OF THE ACFT. UPON REMOVAL OF THE ALTERNATOR FROM THE ENGINE, IT WAS DISCOVERED THAT THE ALTERNATOR SHAFT HAD SHEARED OFF FLUSH WITH THE CASE LOCATED AFT OF THE DRIVE COUPLING.

2012FA0000294	LEAR	GARRTT	EXHAUST DUCT	CRACKED
5/10/2012	35A	TFE73122B	26520375	LT ENGINE

LT ENGINE AFTER BODY, LOWER HALF DUCT, 4" CRACK EMMINATING FROM INNER IGNITION PLUG ACCESS PANEL. DOUBLER PATCH INSTALLED IAW SRM 51-00-00.

2012FA0000207	LEAR	WIRE HARNESS	CHAFED
4/18/2012	45LEAR	4591009187009	NLG STEERING

NLG STEERING CAS MESSAGE INDICATED. INSTALLED NEW NLG STEERING ACTUATOR AND DISCOVERED STEERING ACTUATOR WIRE HARNESS CHAFED. CHAFE CAUSED BY NLG TRUNION PIN BOLT COTTER PIN. INSTALLED NEW HARNESS. CAS WARNING MESSAGE NO LONGER DISPLAYED.

2012FA0000261	LEAR	PWC	BOLT	LOOSE
3/18/2012	60LEAR	PW306A	31B242401	FAN DISK

FLIGHT CREW DISCOVERED DURING PREFLIGHT INSPECTION THAT THE LT ENGINE SPINNER ATTACH BOLT, PN31B2424-01 HAD COME LOOSE FROM THE TIE ROD, PN 31B2431-01. RECORDS SEARCH REVEALED THAT THE FAN DISK WAS REMOVED FOR INSP. TECH SUSPECTS POSSIBLE CAUSE COULD BE IN CROSSED CLEARANCE BETWEEN THE THREADS OF THE BOLT AND THE TIE ROD CAUSED BY MULTIPLE REMOVALS OF FAN DISK, ALTHOUGH INSP OF BOLT, TIE ROD THREADS, WASHER KEY, KEY DRIVE AND MATEING SURFACES SHOW NO DEFORMATION, ORIGINAL BOLT TORQUED TO PROPER SPECIFICATION.

2012FA0000293	LIBRTY		ATTACH FITTING	WORN
5/2/2012	LIBERTYXL2		135A10236	ZONE 600

RIGHT WING ATTACH FITTINGS ARE SHOWING WEAR BY FORE AND AFT MOVEMENT OF WING.

2012FA0000277	MAULE	LYC	SPARK PLUG	MISMANUFACTURED
3/6/2012	M7260C	IO540*	REM38S	ENGINE

INSTALLED NEW MFG FINE WIRE PLUGS IN FEB 2010 AT 1260 HRS TT. NOTICED A PROBLEM WITH THE RESISTORS IN A FEW OF THE PLUGS. NOTICED HARD STARTING WHEN HOT. AT ANNUAL INSPECTION, 7 OF 12 PLUGS HAD FAILED, THE RESISTORS WERE COMPLETELY OPEN AND REGISTERED 1 ON THE OHM METER. THE OTHER 5 WERE HIGH, 1 AT 36,000. THEY WERE ALL REMOVED AND REPLACED.

2012FA0000260	MTSBSI		SWITCH	FAILED
3/15/2012	MU2B60		1EN16	LT MLG DOOR

AFTER TAKE OFF, RETRACTED GEAR AND RED DOOR UNSAFE LIGHT WAS ON. ELECTED TO RETURN TO FIELD, SELECTED GEAR DOWN AND GEAR STAYED UP. TRIED CYCLING GEAR SWITCH, NO HELP. ACCOMPLISHED ALTERNATE GEAR EXTENSION AND LANDED SAFELY. JACKED ACFT, RAISED GEAR AND DUPLICATED UNSAFE LIGHT PROBLEM WITH GEAR UP. NOTICED MLG FWD DOORS WERE WIDE OPEN. TRIED LOWERING GEAR, GEAR STAYED RETRACTED. FOUND 1 SET OF CONTACTS IN THE LT AFT MLG (AFT DOOR) SWITCH OPEN. PUSHING SWITCH PLUNGER WITH FINGER, SWITCH FELT CRUNCHY. REPLACED SWITCH, CYCLED GEAR 5 TIMES WITH NO PROBLEMS. TEST FLEW AND CYCLED GEAR TWICE, ALL OPS NORMAL.

2012FA0000225	PILATS		BRAKE DISC	BROKEN
4/19/2012	PC12		30244	RIGHT

THE OTBD FLOATING DISC ON THE RT BRAKE WAS BROKEN IN 3 PIECES. NO KNOWN CAUSALITY FOR FAILURE.

C41R201204240001	PILATS	PWA	ROTOR	SEPARATED
4/24/2012	PC1247	PT6A67B		BRAKE ASSY

DURING A ROUTINE ANNUAL INSPECTION, WHILE PERFORMING A WHEEL BEARING LUBRICATION INTERVAL, TECH FOUND THE RT MLG BRAKE CALIPER OUTER BRAKE ROTOR HAD SEPARATED IN TO 2 SEPARATE SECTIONS. PILOT AND TECH DID NOT REPORT ANY DEGRADED BRAKING CHARACTERISTICS DURING TAXI, TAKEOFF, OR LANDING. THERE ARE 3 BRAKE ROTORS IN THE CALIPER. TECH COMPLETED VISUAL ON THE MIDDLE AND INBD UNITS. NDN LT MLG SHOWED NO DEFECTS. NEW BRAKE CALIPER WAS ORDERED AND INSTALLED.

2012FA0000202	PIPER		AIR FILTER	FAILED
4/22/2012	PA28140		BA3	ENGINE

AIR FILTER ELEMENT CAME APART AT THE SEAM. SECOND ONE FOUND.

2012FA0000224	PIPER	LYC	TRANSMITTER	ERRATIC
4/20/2012	PA28180	O360A4A	68101	FUEL QTY

DURING ALL OPERATIONS, NOTICED VERY ERRATIC FUEL QUANTITY INDICATIONS FROM BOTH TANKS. DURING ANNUAL INSPECTION, MECHANIC DISCOVERED THAT THE BOTH FUEL QUANTITY SENDERS RESISTANCE WAS VERY ERRATIC AND DID NOT APPEAR TO BE WITHIN TOLERANCE. FUEL QUANTITY SENDERS HAD BEEN REPLACED WITH O/H UNITS APPROX 40 HOURS PREVIOUS. REPLACED WITH NEW PMA UNITS AND OPERATION NORMAL. THE O/H UNITS DID NOT APPEAR TO BE ANYMORE THAN OEM SENDERS THAT HAD BEEN CLEANED UP.

2012FA0000271	PIPER	LYC	TUBE	DEFECTIVE
4/12/2012	PA28181	O360A4M	600X6	NOSE TIRE

ACFT LANDED AND REPORTED A NOSE TIRE THAT FELT DEFLATED ON ROLLOUT. THE LANDING OCCURRED WITHOUT INCIDENT. THE ACFT WAS RETURNING FROM A TRAINING FLIGHT. THE MX DEPT REPLACED THE NOSE WHEEL/TIRE ASSEMBLY. UPON DISASSEMBLY OF THE FLATTENED TIRE AND WHEEL, IT WAS DISCOVERED THAT A SMALL PIN HOLE WAS ON THE SIDE OF THE TUBE NEAR THE TOP AND WAS NOT A RESULT OF THE BUILD UP OF THAT COMPONENT. WE FEEL THAT HTIS IS ANOTHER FMG DEFECT FROM MFG. HAVE EXPERIENCED A HIGH VOLUME OF THESE FAILURES AND ARE WAITING FOR A FINAL RESOLVE FROM MFG. WE ARE AWARE THAT A SPECIAL AIRWORTHINESS INFO BULLETIN HAS BEEN ISSUED AND WE ARE IN POSSESSION AND HAVE READ THAT DOCUMENT.

2012FA0000272	PIPER	LYC	TUBE	DEFECTIVE
4/12/2012	PA28181	O360A4M	G156006	TIRE

HAD RIGHT TIRE FLATTEN WHILE ON LANDING, AFTER A TRAINING MISSION. THE ACFT CAME SAFELY TO A STOP AND MX REPLACED THE TIRE/WHEEL ASSY. UPON DISASSEMBLY OF THE AFFECTED TIRE/ WHEEL ASSY, IT WAS DISCOVERED THAT THE TUBE HAD A MFG DEFECT. A SMALL HOLE NOT CREATED FROM THE TIRE BUILD UP, BUT A FLAW IN THE MFG PROCESS. AFTER THE REQUIRED MX WAS PERFORMED THE ACFT WAS RETURNED TO SERVICE. WE HAVE HAD A HIGHER THAN NORMAL FAILURE RATE OF TUBES THAT HAVE THE SAME MFG DEFECT.

NX4R000032	PIPER		BRACE	BROKEN
4/5/2012	PA28R201		76426803	NLG

WHEN THE PILOT SELECTED "GEAR UP", A NOISE WAS HEARD IN THE NOSE WHEEL AREA. THE NOSE GEAR INDICATION WAS UNSAFE AND WHEN THE LANDING GEAR WAS SELECTED "DOWN", THE GREEN LIGHT DID NOT ILLUMINATE. AFTER LANDING THE NLG LINK PN-76426-803 WAS FOUND CRACKED AND BROKEN AT THE ACTUATOR ATTACH LOCATION. THE END OF THE ACTUATOR WAS MISSING AS WELL.

2012FA0000228	PIPER	CONT	SPARK PLUG	DAMAGED
3/2/2012	PA28R201T	TSIO360F	RHM38E	ENGINE

PILOT REPORTED ENGINE BEGAN RUNNING ROUGH AT 11,000 FT. DESCENDED TO 5,000 FT AND ENGINE OPERATED CORRECTLY. RETURNED TO AIRPORT, LANDED WITHOUT FURTHER INCIDENT. REMOVED TOP COWLING AND ALL 12 SPARK PLUGS, PN RMH38E. ALL SPART PLUGS RUSTED ON OUTSIDE AND INSIDE THE BARRELS WHERE THE IGNITION LEADS INSTALL. SPARK PLUGS SHOWED 70 PERCENT NORMAL WEAR AND WERE NOT FOULED EXCESSIVELY. BLASTED 3 SPARK PLUGS AND TEST FIRED. RESULTS WERE VERY WEAK SPARK. ACFT FLOWN LESS THAN 60 HOURS PER YEAR. 12 NEW RHM38E SPARK PLUGS INSTALLED. PILOT COMPLETED FLIGHT WITHOUT INCIDENT.

2012FA0000242	PIPER		HOUSING	WRONG PART
4/17/2012	PA32R301T		RB90812	FUEL PUMP

FUEL PUMP WAS RECEIVED FOR A FUNCTIONAL TEST DUE TO POOR OPERATION BELOW 1400 RPM WITH THE BOOST PUMP TURNED ON. WHEN TESTED, THE FUEL PRESSURE WAS SET 10 PSI LOW AND TEST FLUID WAS NOTICED LEAKING FROM THE UPPER DECK REF PORT OF THE PUMP RELIEF VALVE COVER. IT WAS ALSO NOTICED DURING THE PRELIMINARY INSP THAT THE FULE PUMP BODY WAS THE INCORRECT PN. THE PUMP BODY INSTALLED PN RD9081-2 BUT IT SHOULD HAVE HAD AN RD 9081 BODY. THE RD9081-2 BODY UTILIZES A THREADED HOLE FOR A SCREW THROUGH THE BODY TO LOCATE THE PUMP LINER WHILE THE RD9081 BODY HAS NO HOLE FOR A SCREW AND THE LINER IS LOCATED BY A PIN INSERTED THROUGH THE FACE OF THE RELIEF VALVE BODY MOUNTING SURFACE. THE PART OF THE SCREW THAT LOCATES THE LINER HAD BEEN GROUND OFF AND THE SCREW WAS ONLY USED TO SEAL THE THREADED HOLE IN THE BODY. THE LINER WAS LOCATED BY A LOCATOR PIN INSTALLED THROUGH THE FACE OF THE RELIEF VALVE BODY, WHICH IS CORRECT FOR THIS PN FUEL PUMP. IT WILL BE NECESSARY TO REPLACE THE BODY AS WE O/H THIS PUMP.

2012FA0000230	PIPER	CONT	LINK ASSY	BROKEN
4/20/2012	PA34200T	TSIO360E	6702502	MLG

ON LANDING, LINK ASSY ON MAIN GEAR TRUSS ASSY BROKE AT STRUT ATTACHMENT AREA, CAUSING ACFT TO VEER OFF RUNWAY.

GW1R20120427181	PIPER		BRACE	CRACKED
4/27/2012	PA421000		75245015	RT MLG

DURING ROUTINE INSPECTION, RT MLG SIDE BRACE WAS FOUND CRACKED. THIS IS A POST SB 0817C PART. PART LIFE-LIMIT IS 3,000 HRS PART TTSN:1876.7 HRS. PART WAS REPLACED WITH NEW UNIT. NOTE: THIS IS THE SECOND OCCASION THAT THIS PART HAS BEEN FOUND CRACKED ON THIS MODEL ACFT. PREVIOUS M & D WAS SUBMITTED.

2012FA0000286	PIPER		TIRE	DEFLATED
5/7/2012	PA44180		SEMITIREASSY	ZONE 700

NOSE TIRE DEFLATED ON LANDING.

2012FA0000282	PIPER	LYC	OIL CAP	LOOSE
5/7/2012	PA44180	O360A1H6		GOVERNOR

AFTER LEVELING OFF AT 5,500 MSL THE CREW BEGAN LEANING MIXTURES AND THE RT ENGINE RPM BEGAN TO DROP AT A STEADY RATE. NO ENGINE ANNUNCIATORS APPEARED AND ALL ENGINE INSTRUMENTS READ NORMAL AFTER 15 SECONDS THE RT PROP WENT FULL FEATHER AND THE ENGINE WAS SHUTDOWN BY THE CREW. THEY RETURNED TO THE AIRPORT AND LANDED WITHOUT INCIDENT, ON ONE ENGINE. MX INSPECTED ACFT AND FOUND THE RT GOVERNOR WAS LEAKING AT THE TOP OF THE GOVERNOR BODY. GOVERNOR WAS REPLACED AND ALL SYS CHECKED GOOD. GOVERNOR WAS SENT TO OVERHAUL FACILITY FOR TEAR DOWN AND REPORT OF INTERNAL CONDITION. UPON TEARDOWN A ROTATION OIL PLUG IN THE BODY HAD CAME LOOSE AND OUT OF BODY CAUSING GOVERNOR TO LOOSE OIL PRESSURE. DURING DISCUSSION WITH OVERHAULER HE STATED THAT HE HAD NEVER SEEN THIS HAPPEN BEFORE.

ECPR201204130001	PIPER	LYC	THROTTLE CABLE	DETACHED
4/10/2012	PA44180	O360E1A6D	554528	ZONE 400

ON CLIMBOUT, 600-700FT AGL, INSTRUCTOR PILOT (IP) REDUCED RT THROTTLE TO IDLE TO SIMULATE ENGINE FAILURE. STUDENT PILOT (SP) SIMULATED FEATHERING RT PROPELLER AND WHEN ATTEMPTING TO SET ZERO THRUST, IP DISCOVERED THAT THERE WAS NO THRUST AVAILABLE. RT ENGINE WAS SECURED, EMERGENCY DECLARED AND UNEVENTFUL LANDING PERFORMED. UPON INSP OF THE RT ENGINE, IT WAS DISCOVERED THAT THE A SWAGED PORTION OF THE RT THROTTLE CABLE, AT THE ENGINE END CONNECTION, HAD FAILED, ALLOWING THE ONLY THE CABLE HSG TO MOVE WHEN THE THROTTLE LEVER IN THE COCKPIT WAS MOVED. FURTHER INSP OF THE FAILED SWAGED AREA LED THIS SUBMITTER TO CONCLUDE THAT DURING THE INITIAL ASSY OF THIS PARTICULAR THROTTLE CABLE, THE CABLE HSG HAD NOT BEEN INSERTED INTO THE CABLE END FAR ENOUGH BEFORE THE END WAS CRIMPED/SWAGED ONTO THE CABLE HSG.

2012FA0000284	RAYTHN		HINGE FITTING	CRACKED
5/7/2012	390		3901104400001000	LT WING TE FLAP

DURING THE INSPECTION OF THE WING FLAP ACTUATOR ATTACHMENTS, FOUND THAT BOTH THE LT WING INBD FLAP FAIRING HINGE FITTING ASSY AND THE RT WING INBD FLAP FAIRING HINGE FITTING ASSY WERE CRACKED.

2012FA0000243	SNIAS	TMECA	SKIN	CHAFED
3/20/2012	AS350B2	ARRIEL1D1		TAIL BOOM

DURING A SCHEDULED 600 HR INSPECTION, MECHANIC PERFORMED A CMD-AS350-09-22 CONCERNING CHAFING OF THE CONDUIT CLAMPS AND CONDUIT ON THE UPPER AND LOWER VERTICAL STABILIZER SPAR AND SKIN. FOUND CHAFE DAMAGE TO THE UPPER VERTICAL STABILIZER SKIN, IN THE AREA OF CONCERN MENTIONED IN THE CMD, FROM WIRING PROTRUDING FROM THE CONDUIT TO THE ANTI-COLLISION LIGHT. THIS DAMAGE AREA IS LABELED AS ADDITIONAL DAMAGE. SUSPECT DAMAGE CAUSED BY IMPROPER MATERIALS USED AS CLAMPS AND CONDUIT. RECOMMEND A CHANGE IN FASTENING AND CONDUIT MATERIAL AND IF POSSIBLE THE ROUTING TECHNIQUE. THE CMD AND TECH SUPPORT WAS FOLLOWED TO EFFECT A REPAIR.

2012FA0000241	SNIAS	TMECA	SHAFT	MISMANUFACTURED
4/18/2012	AS350B3	ARRIEL2B1		TAIL ROTOR

CHROME SURFACE ON TAIL ROTOR OUTPUT SHAFT COMPROMISED. SURFACE AREA OF DAMAGE EXCEEDS MFG SPECIFIED LIMITS. PITTING IN THE METAL SUGGESTS THAT CORROSIVE ELEMENTS WERE PRESENT BEFORE THE

CHROME PROCESS OCCURRED. THIS CORROSION CAUSED THE CHROME FINISH TO NOT ADHERE PROPERLY AND THE WEAR PRODUCED BY THE TAIL ROTOR SPIDER BEARING CAUSED PREMATURE FAILURE OF THE CHROME SURFACE.

2012FA0000226	SNIAS	TMECA	SENSOR	MISINSTALLED
3/9/2012	AS350B3	ARRIEL2B1	50071550020	M/R MAST TACH

INTERMITTENT FLUCTUATIONS ON NR GAUGE DURING OPERATION. FOLLOWED TROUBLESHOOTING STEPS AND FOUND NR TACH SENSOR TO BE IMPROPERLY SHIMMED BY MFG CAUSING CONTACT OF THE SENSOR AND THE PICK UP TEETH ON THE MAIN ROTOR MAST, DAMAGING THE NR TACH SENSOR AND MAIN ROTOR MAST PICK UP TEETH. RECOMMEND CHANGES TO QUALITY CONTROL PROGRAM TO ENSURE SENSOR IS PROPERLY INSTALLED, THIS COULD INCLUDE AN IN PROCESS INSPECTION DURING INSTALLATION.

2012FA0000263	SNIAS	TMECA	SENDING UNIT	LOOSE
3/29/2012	AS350B3	ARRIEL2B1	7583552	FUEL

WHEN PERFORMING A 600 HR INSPECTION, THE MECHANIC NOTED, NO SAFETY WIRE PRESENT ON THE SCREWS SECURING THE SENDING UNIT TO THE TANK. THIS IS THE ACFT FIRST SCHEDULED 600 HR INSP. THIS DEFECT WOULD HAVE HAD TO OCCUR DURING THE ASSEMBLY PROCESS. A MORE COMPREHENSIVE QC PLAN IS NEEDED WHEN ASSEMBLING FLIGHT CRITICAL COMPONENTS.

2012FA0000259	SNIAS	TMECA	SNIAS	FLANGE	DAMAGED
3/23/2012	AS350B3	ARRIEL2B1		350A34102321	T/R DRIVE SHAFT

WHEN PERFORMING A 600 HR INSPECTION OF THE ACFT, THE MECHANIC PERFORMING THE INSP OF THE TAIL ROTOR FLANGES AND FLEXIBLE COUPLINGS NOTICED A SCORE ON THE FLANGE IN THE ATTACHMENT AREA. ACCORDING TO OEM CRITERIA, SCORES ARE CAUSE FOR REJECTION IN THIS AREA. ACFT TIS 600 HRS. THIS WAS THE FIRST DETAILED INSPECTION OF THIS ASSEMBLY. BELIEVE PART TO HAVE BEEN SCORED PREVIOUS TO OR DURING ASSEMBLY BY TOOLING OR MISHANDLING OF THE PART. TIGHTER QA PRCEDURES SUCH AS PRE/POST INSTALLATION INSP OF FLIGHT CRITICAL PARTS.

2012FA0000253	TECNAM	ROTAX	LINE	DETERIORATED
5/2/2012	P2002SIERRA	ROTAX912S	27094	FUEL SYSTEM

DURING CLIMB OUT, SHORTLY AFTER TAKEOFF THE PILOT EXPERIENCED A ROUGH RUNNING ENGINE, ACFT RETURNED TO AIRPORT. DURING INSPECTION OF THE ENGINE THE MECHANIC DISCOVERED DEBRIS IN THE CARBURETOR BOWLS. AFTER FURTHER INSPECTION THE MECHANIC DISCOVERED DETERIORATION OF THE INTERIOR MATERIAL IN THE FUEL HOSES. THE HOSES WERE INSTALLED NEW AT 158.95 HOURS FOR COMPLIANCE OF THE 5 YEAR HOSE REPLACEMENT SCHEDULE.

2012FA0000255	ZINAIR	LYC	OIL COOLER	CRACKED
4/29/2012	CH2000	O235N2C	P010904	ENGINE OIL

PILOT REPORTED ODOR OF BURNED ELECTRICAL WIRING FOLLOWED BY ENGINE OIL ENTERING CABIN AT FOOT PEDAL AREA, LOSS OF ENGINE OIL PRESSURE INDICATED. EMERGENCY LANDING, SAFELY LANDED APPROX 5 MINUTES AFTER FIRST NOTICING THE ENGINE OIL PRESSURE LOSS. FOUND ENGINE WAS FOUND DRY, WITH A LARGE OIL TRAIL STARTING ON THE FIREWALL BEHIND THE ENGINE OIL COOLER, LOCATED ON THE FIREWALL PILOT'S SIDE AND EXTENDING THE ENTIRE LENGTH OF FUSELAGE BELLY. THE 6-QUART OIL SUMP FOUND TO CONTAIN 1.5 - 2.0 QUARTS OF ENGINE OIL, VISUALLY INSPECTED FOR CONTAMINANTS AND NONE FOUND.