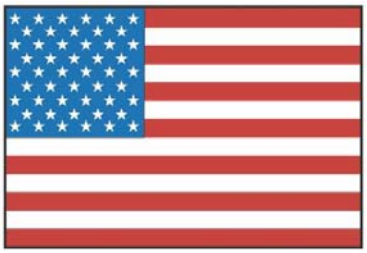
U.S. Department of Transportation
Federal Aviation Administration

AFS-600
Regulatory Support Division

ADVISORY CIRCULAR

43-16A

AVIATION MAINTENANCE ALERTS



ALERT NUMBER 411

OCTOBER 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

Cessna: 150B; Corroded Wing Spars; ATA 5720

A general aviation submission provides the following defect report. "Corrosion was found on the forward and aft wing spars under the fuel tank spacer blocks (P/N 0523524) in the fuel tank mounting bay. This problem was discovered when the fuel tanks were removed for repair. No visual corrosion indications were noted around the spacers when mounted. These spacers were removed on a 'hunch' that underlying corrosion might exist. This condition *(was found)* in both wings."

08/02/2012

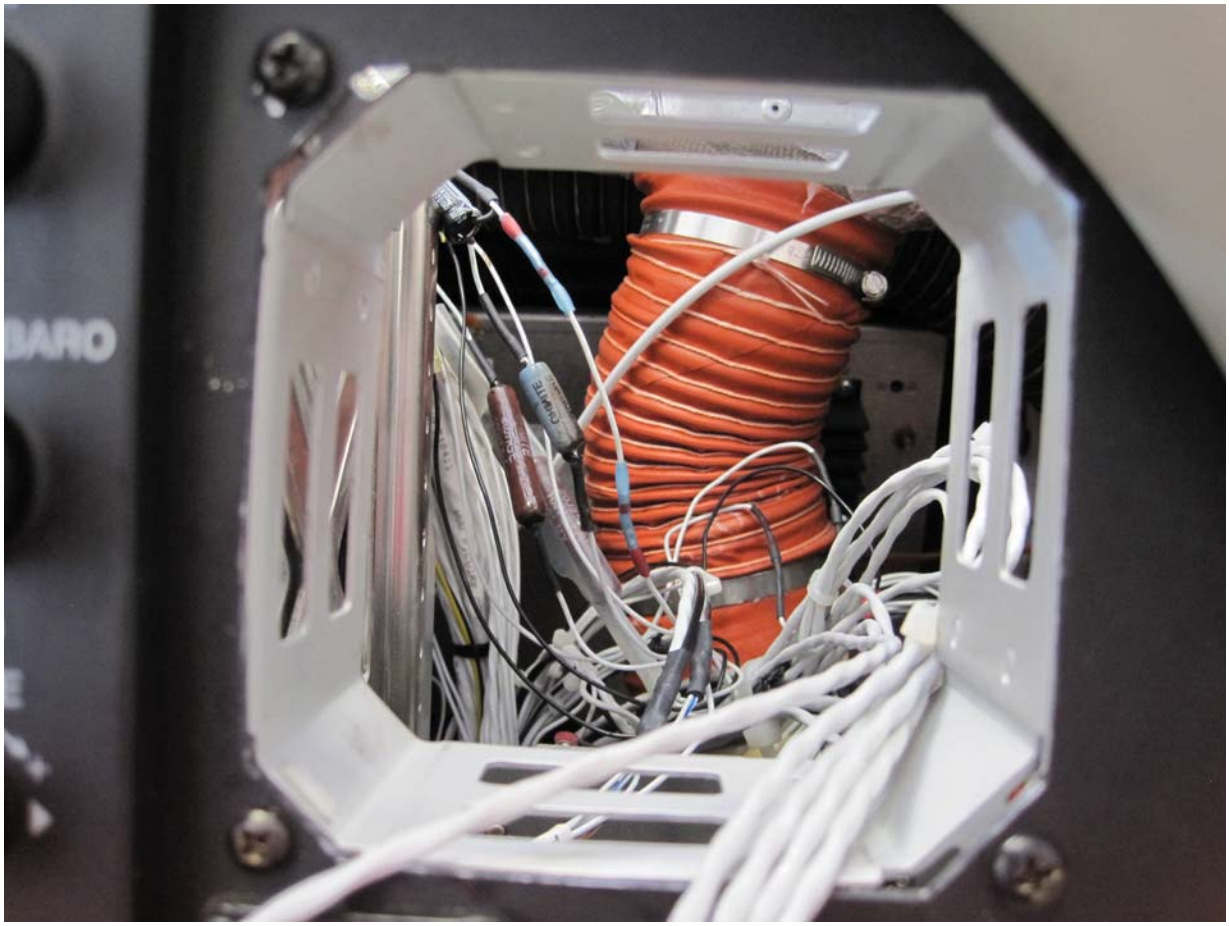
C150B
Corrosion
Front spar
08/02/2012

C150B
Corrosion
Aft Spar
08/02/2012

Part Total Time: 7,400.0 hours

Cessna: 550; Burned Wires Behind Multi-display; ATA 3497

"(I) investigated a problem of smoke in the cockpit," states this repair station technician. "Smoke appeared to be coming out of the anti-fog vents. After further investigation, some wiring behind the copilot's MFD *(multi-function display)* were found to be shorted. In this mechanic's opinion, the wiring to the K10 relay chafed inside the heat shrink, causing a short to ground. This area contains two resistors (1 each 7.5 OHM 10 watt; 1 each 10 OHM 5 watt) and a ground wire *(all in the same shrink package).* The round *(solid-core)* wire was visibly burned. I repaired the damage wiring—replacing both resistors and both relays, then heat-shrinking the resistors individually. I inspected the associated wiring in both circuits and found *(these)* to be okay. During operational checks, the regulator valve was found to be faulty, although it checked 'good' with a multi-meter prior to this *(functional)* test."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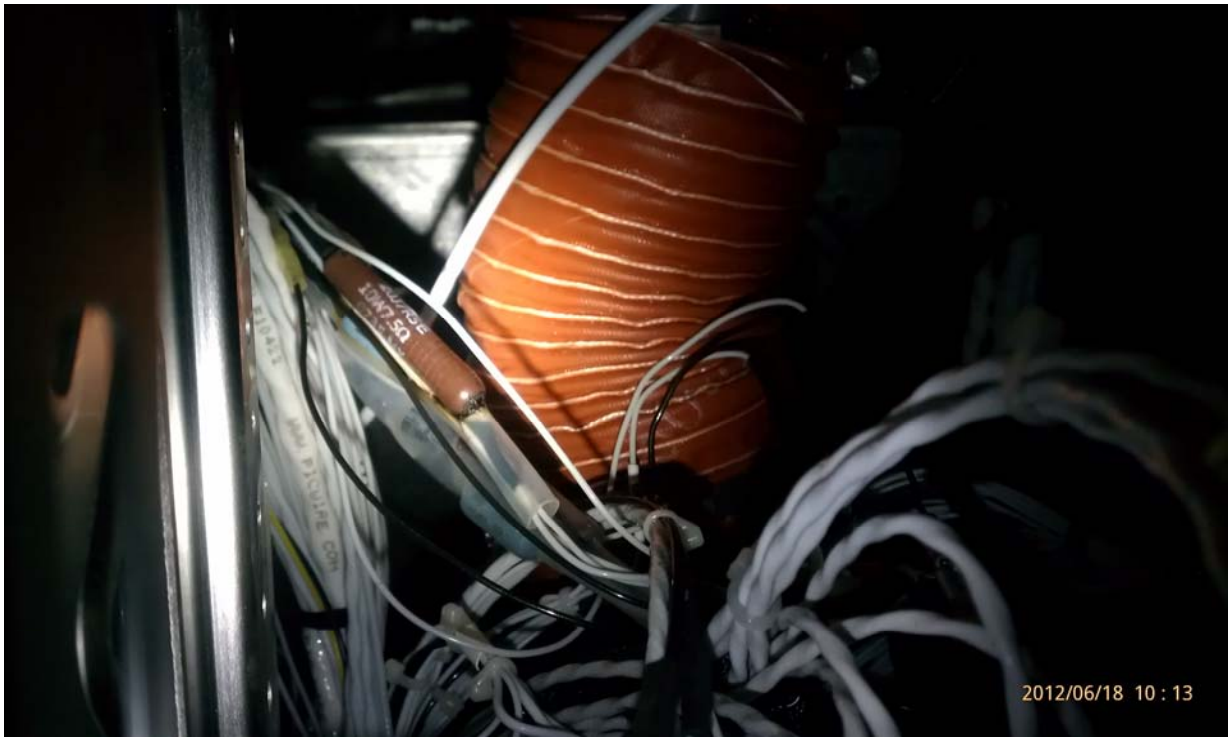
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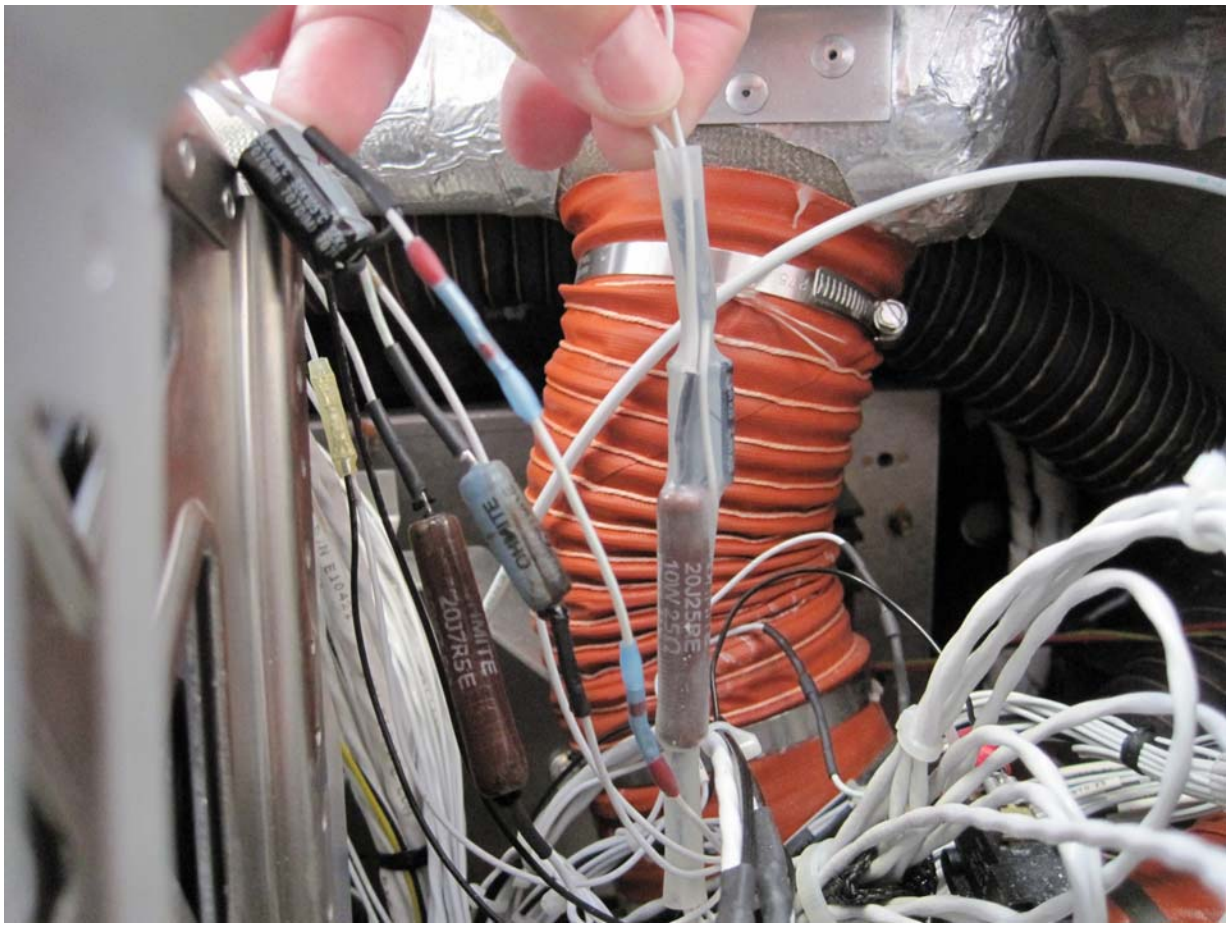


(Thank-you for these clear photos! We can read the P/N's right off the resistors—Ed.)

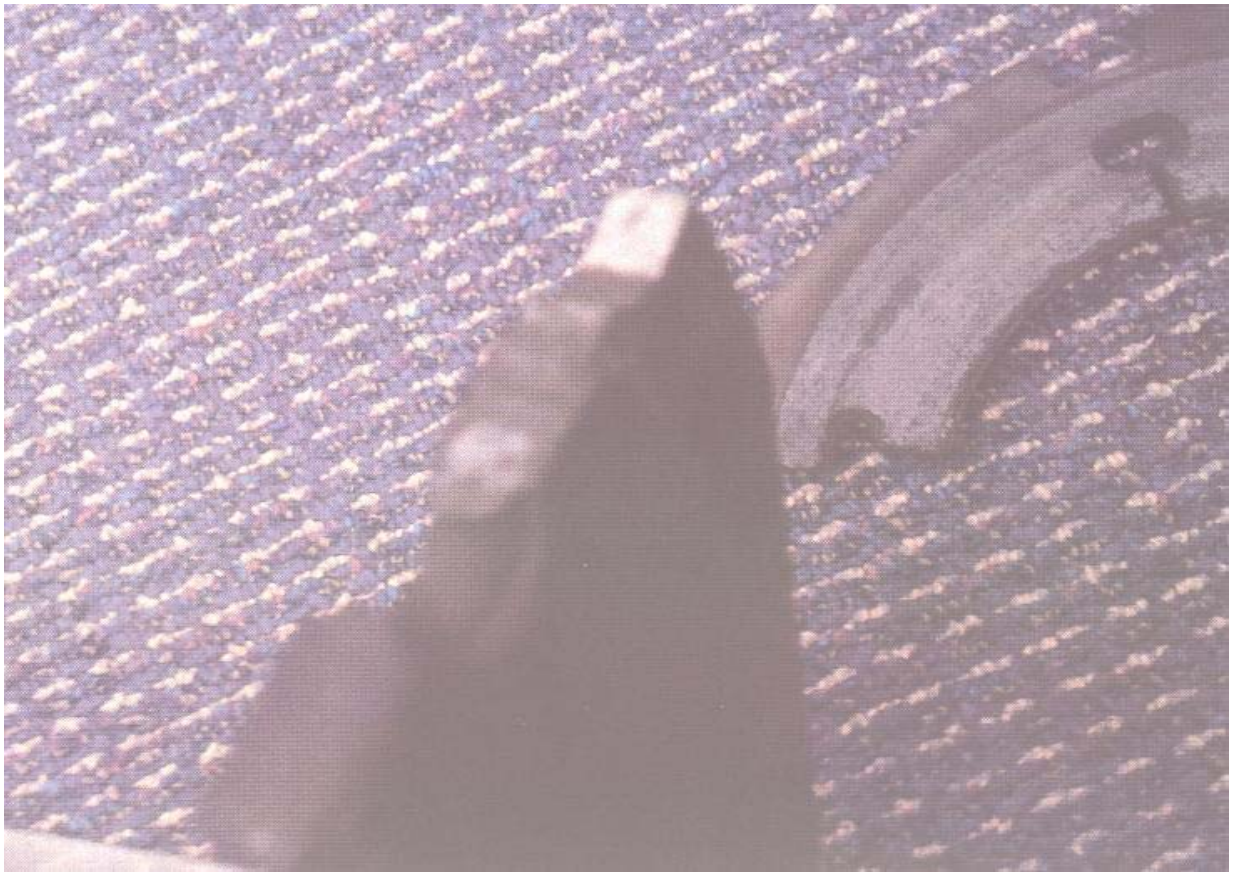
Part Total Time: 400.0 hours

Pilatus: PC1247; Failed Brake Disk; ATA 3242

"This aircraft was undergoing a 100 hour inspection," says this submitter. *"(The mechanics)* removed the L/H and R/H main landing gear wheel assemblies to complete NDT *(non-destructive testing)*—and upon wheel removal one of the wheel's brake disk assemblies fell onto the floor in two separate pieces. Both L/H and R/H brake assemblies *(presented)* separated brake disks. These brake disk assemblies were not the original *(units).* They were installed at an earlier date and *(had been tagged)* as removed from another aircraft. The operator did not notice any abnormal sounds or conditions during aircraft operations. The technician did not notice any abnormal sounds or conditions during operational run up, and the wear guide pins *(indicating)* 'normal system' functioned properly."

Brake Caliper Section Split in two
Sections. One Section removed.

Brake Caliper has split in two pieces. Second section
also removed here.

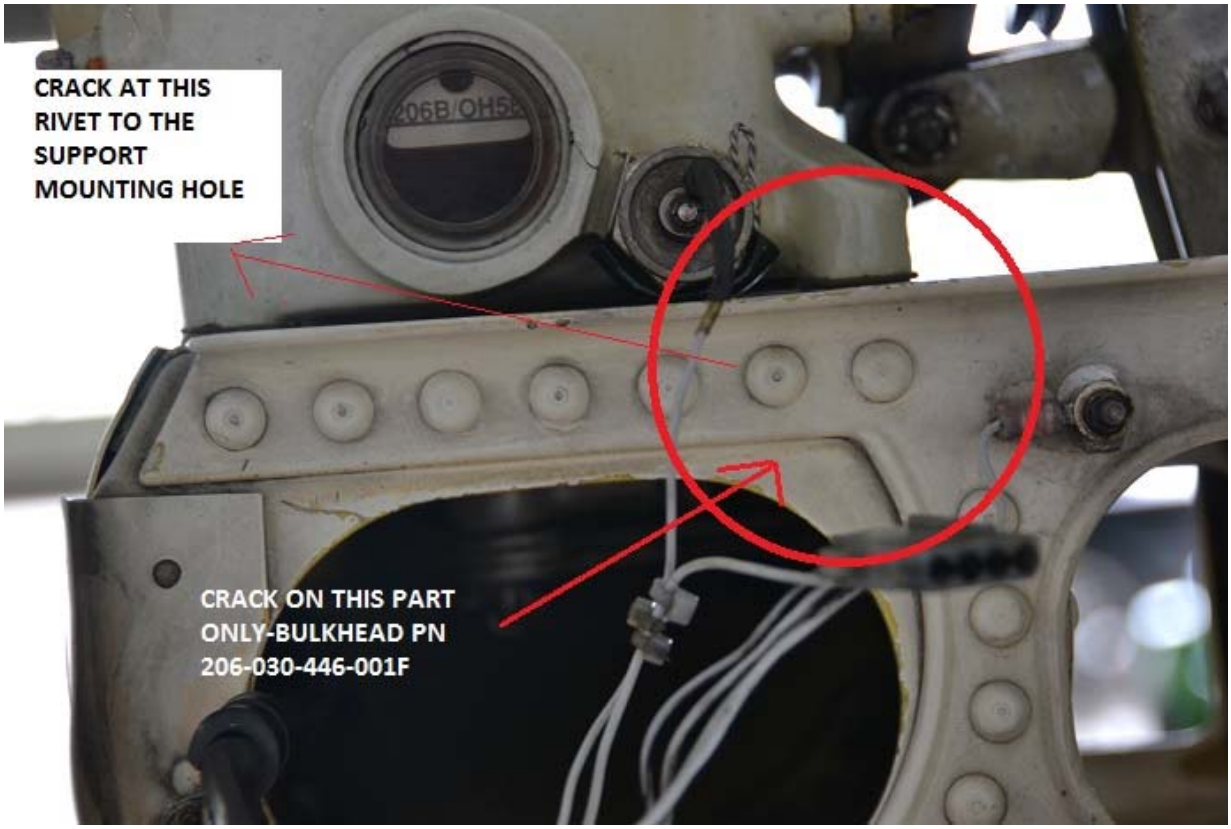


Part Total Time: 1,043.0 hours

HELICOPTERS

Bell: 206B; Cracked Tail Rotor Gearbox Support; ATA 5302

An Air Carrier provides the following defect report. "The tail rotor gearbox support bulkhead cracked at the right-rear mounting hole—*(progressing)* to the second rivet inboard on the gear box support."



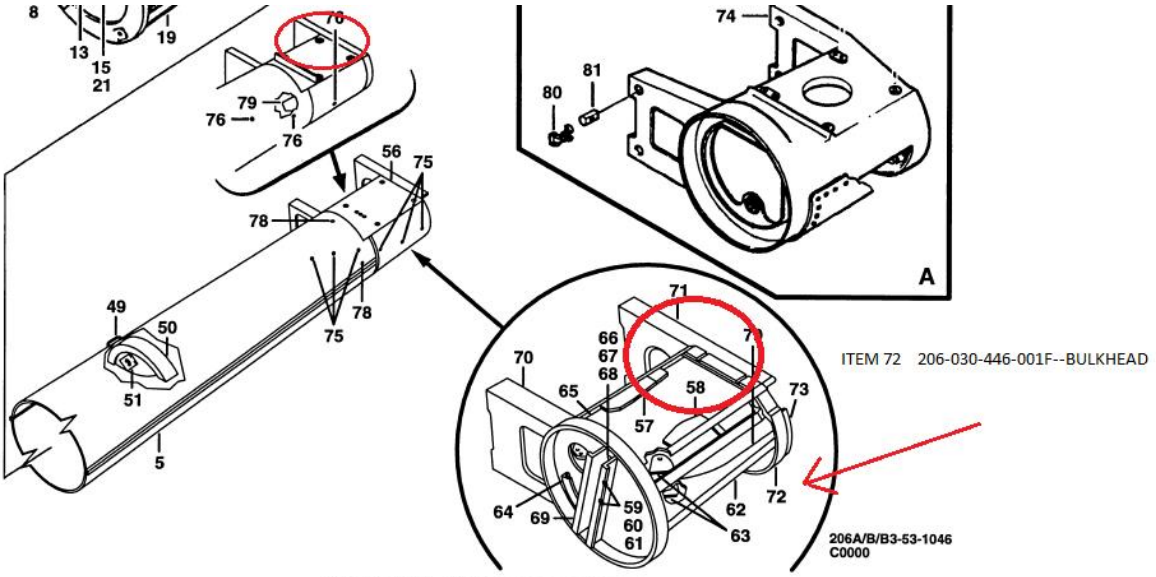
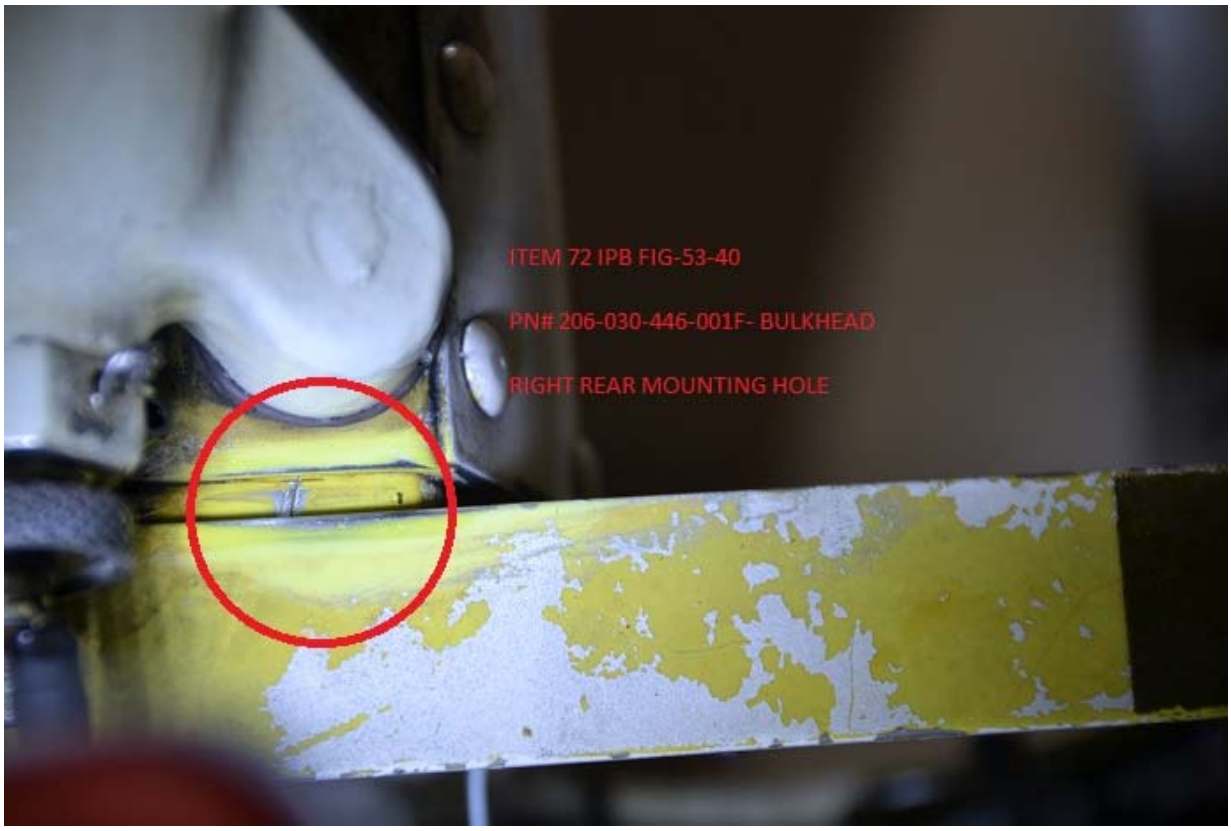


Figure 53-40. Tailboom assembly

BELL 206B3

53-99-00
Page 150

TAIL BOOM PN# 206-031-004-115---TR GEARBOX PN# 206-040-400-013



(Bulkhead P/N: 206030446001F. There are seven such entries for this P/N in the SDRS database. This last photo gets a blue ribbon—and the eyeballs too! Ed.)

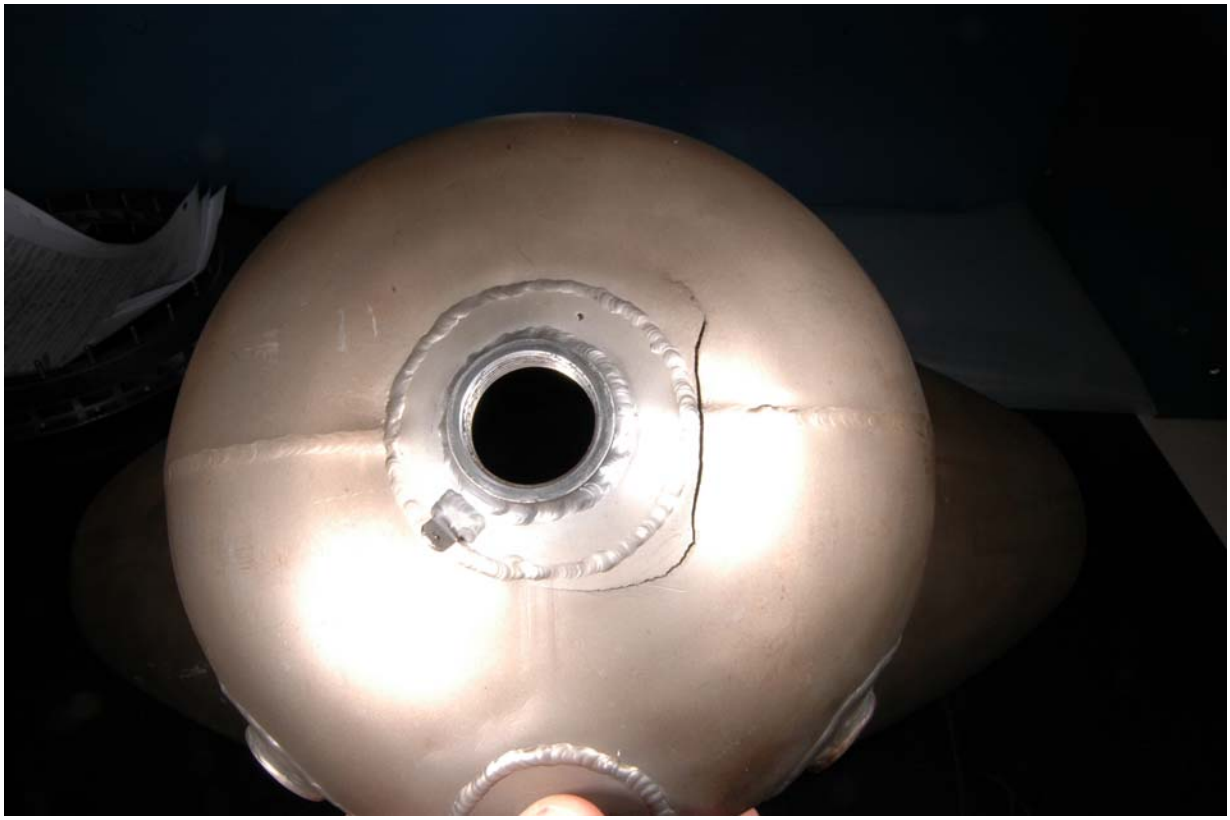
Part Total Time: 13,811.0 hours

POWERPLANTS

Allison: 250C47B; Cracked Combustion Case; ATA 7240

(The following report references a Bell 407 helicopter.)

An Air Carrier submission states, "*(The engine)* was removed due to a crack around the fuel nozzle boss. *(We)* replaced the combustion case *(P/N: 23030911).*



(Eleven of these P/N's are found in the SDRS database.)

Part Total Time: 1,641.0 hours

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de Havilland: Gipsy Major 1; Broken Valve Cover Bolt; ATA 1430

(This in-line, inverted four cylinder engine pre-dates too many of us! Wikipedia has a very nice history on this engine: http://en.wikipedia.org/wiki/De_Havilland_Gipsy_Major In this application it is bolted to a DH82A aircraft.)

This general aviation defect report provides a short description. "The bolt *(P/N 80285)* separated due to heavy corrosion."

Part Total Time: 3,500.0 hours

Rotax: 912S3; Chafed Coolant Hose; ATA 8570

A repair station technician writes, "The lower engine coolant hose and exhaust SCAT hose are in constant contact due to installation design. Chafing caused wire from the SCAT hose to puncture the lower coolant hose. Subsequent loss of all coolant caused engine overheating. While the pilot was determining the cause of a high CHT *(cylinder head temperature)* indication, the CHT gauge went to zero. The engine was making normal power and all other indicators were normal—leaving the pilot *(in doubt)* of the problem (faulty gauge or engine overheating).

"Upon return to the airport and inspection of the engine it was determined the engine became *(sufficiently)* hot to destroy the CHT indicator in the cylinder head. The visual access to the hoses is very limited; the only way to inspect is to remove the SCAT hose. These hoses are in constant contact and need to be re-routed or re-designed. This event occurred on the R/H engine. The L/H engine is routed differently, but these hoses too are in constant contact." *(No P/N's were provided with this report.)*

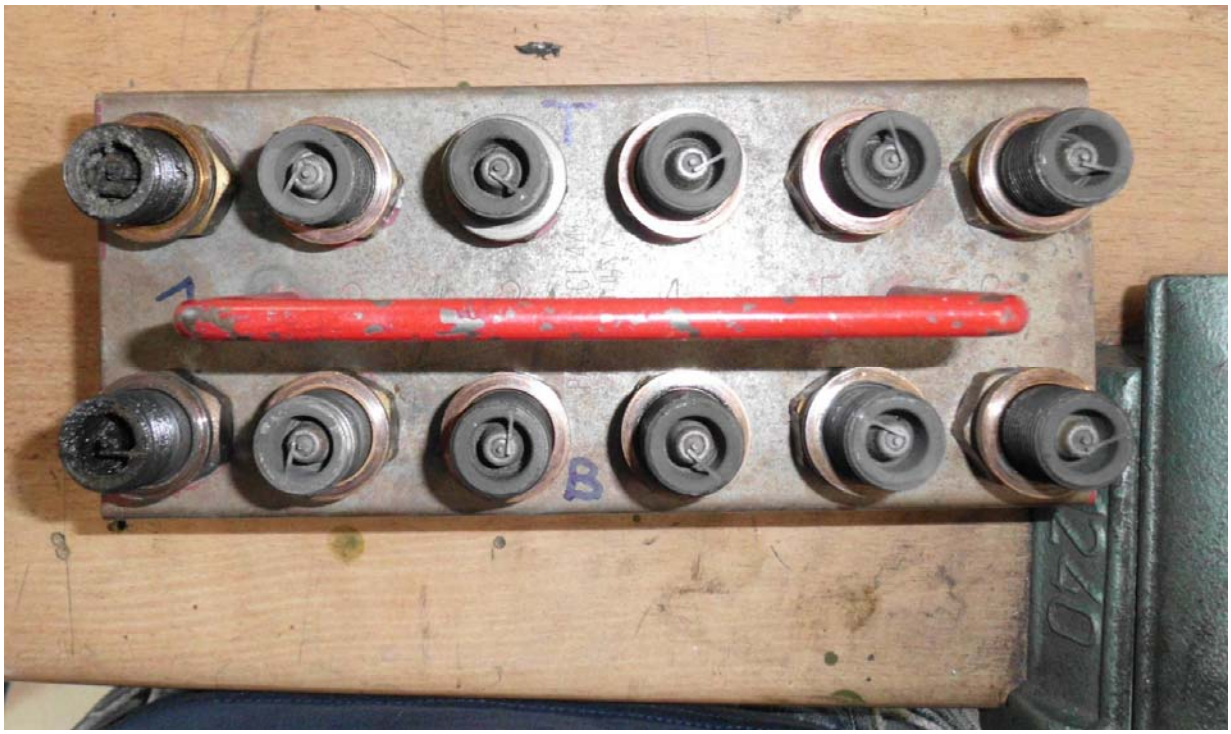
Part Total Time: 161.0 hours

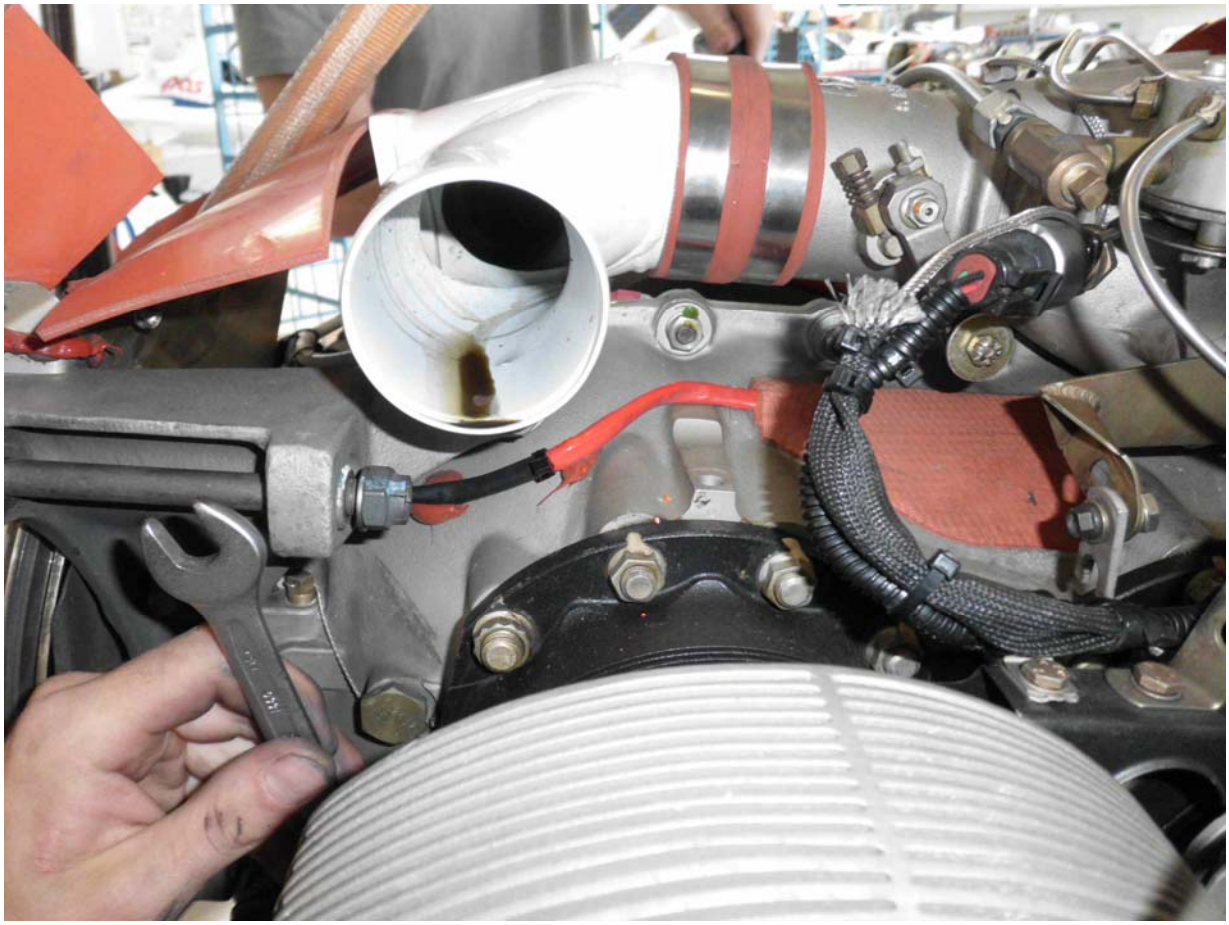
ACCESSORIES

Champion Spark Plug: RHB32S, Cracked Insulators; 7421

(A pilot/mechanic provides this defect report referencing a Cirrus SR22 aircraft with a Continental IO550N engine.)

"The engine *(ran)* rough during climb to 14,000 feet. *(I)* could not set 17.5 GPH *(fuel consumption)* for cruise." "CHT *(cylinder head temperature)* for number one cylinder increased from 340 degrees to 480 degrees and beyond. I had normal EGT (exhaust gas temperature), high and rising TIT (turbo inlet temperature) on turbocharger number two—from 1600 to 1750 degrees. When the oil pressure dropped I diverted *(for landing).* Inspection revealed no differential pressure on cylinder number two, the oil filter was full of metal, the waste gate controller was missing parts, and the spark plugs had cracked insulators and pre-ignition *(indications)* on the cylinders. There was metal contamination throughout the engine. An Annual inspection *(...had been accomplished 30 hours prior to the flight)*."





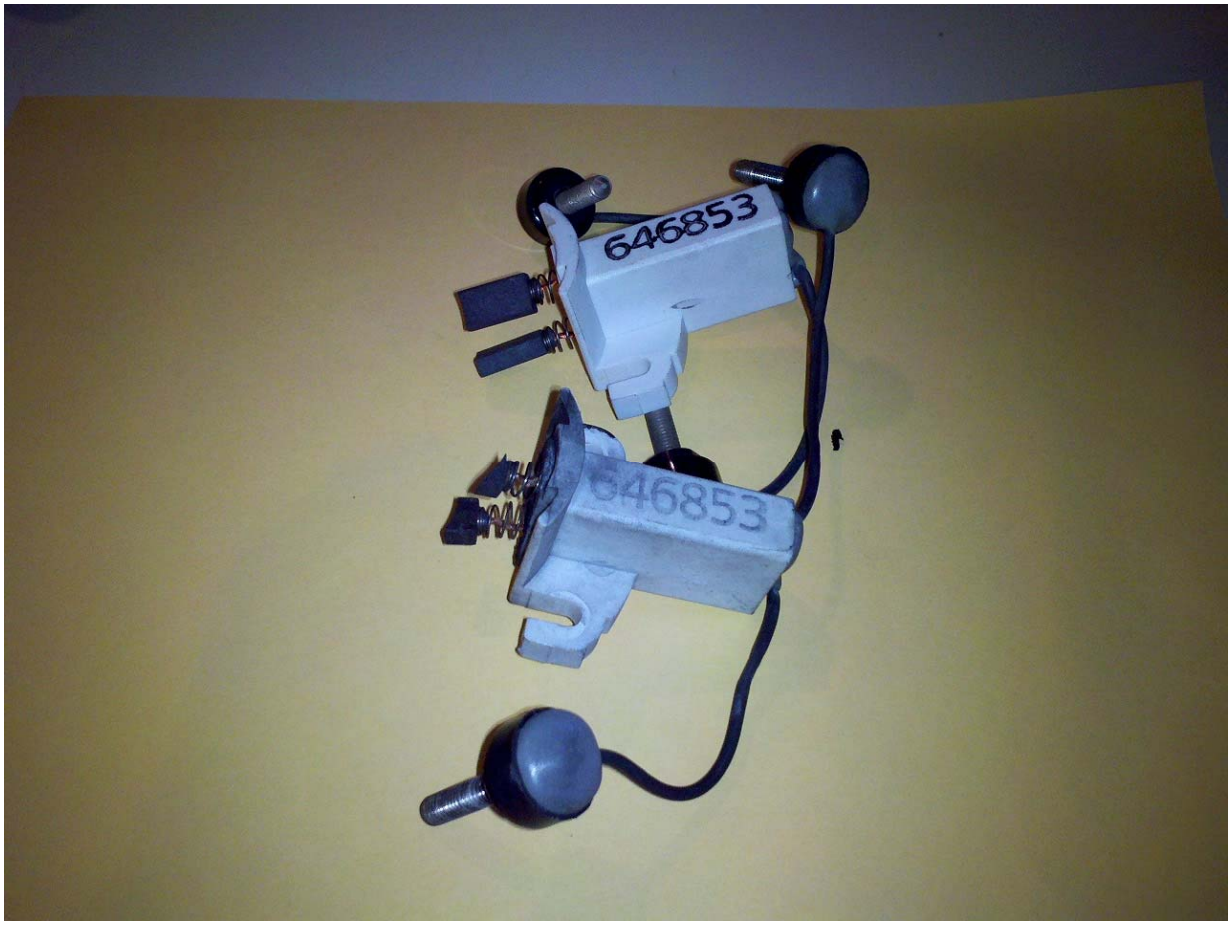
(Note: I had to 'interpolate' some of your shorthand; I apologize if there has been a misconstruction. Thanks for the photos—Ed.)

Part Total Time: 30.0 hours

Continental Alternator: P/N 649304; Worn Brushes; ATA 2434

(This report references a Beechcraft A36 sporting a Continental IO550B engine.)

A repair station technician says, "The aircraft owner had casually discussed his *(recent)* engine overhaul—*(including)* the installation of a standby alternator. *(I)* inquired about the last alternator inspection...none had been *(performed)* since the installation of a new engine 1,626 hours previously. Inspection followed this conversation. One brush *(P/N 646853)* was *(found)* worn well past its limits, the other exhibited imminent failure." "The alternator service support manual (P/N X30531-4) recommends 'The alternator be removed, disassembled, inspected, repaired, and tested...' at 500 hour intervals."



Part Total Time: 1,626.0 hours

Sky-tec Starter: C24SF3; Shorted Commutator, ATA 2434

(This report references Cirrus SR20 aircraft with a Continental IO360ES engine.)

"After start up, the crew noted the R/H IFD (instrument flight display) went blank," says this repair station mechanic. "The maintenance crew suspected a bad battery (low voltage), so they installed a new battery. When the negative wire was installed, a large spark *(was generated)*. The 'Battery NO. 1' relay was found to be stuck. After replacing the relay and the battery, the engine would not start. The starter was replaced, and during run up all conditions were normal. IFD data was downloaded and reviewed, and the starter disassembled. The maintenance crew determined a dead short-to-ground caused by a section of the commutator coming loose had caused Battery NO. 1 to rapidly discharge, causing the relay to stick in the closed position. *(My)* recommendation to flight crews is to monitor the systems page on the IFD (after start up) to determine proper battery discharge/charge rate and bus voltages."

Part Total Time: 850.0 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 / Difficulty Date	Aircraft Make / Aircraft Model	Engine Make / Engine Model	Component Make / Component Model	Part Name / Part Number	Part Condition / Part Location
2012FA0000506				POINTS	MISMANUFACTURED
7/22/2012				M3081	MAGNETO
OVER THE LAST 6 MONTHS, HAD MANY CASES OF ENGINE ROUGHNESS, HIGH RPM MAGNETO DROPS, DEAD MAGNETOS. TROUBLESHOOTING SQUAWKS AND INSPECTION OF THESE MAGNETOS AT 500 HR INSPECTIONS, HAVE NOTICED INCORRECTLY MFG POINTS CAUSING MISFIRING DUE TO LARGE GAPS BETWEEN POINTS AND EVEN HAVING THE POINTS FALLING OUT OF THE ASSEMBLIES THEMSELVES IN SOME CASES LESS THAN 25 HRS TIME IN SERVICE. INSPECTED INVENTORY AND FOUND THAT THE POINTS ARE AS FOLLOWS: ONE SET OF POINTS DATED 09/22/2011 REJECTED, TWO SETS DATED 11/15/2011 REJECTED, TWO SETS OF POINTS DATED 11/17/2011 REJECTED, FIFTEEN SETS OF POINTS DATED 1/02/2012 REJECTED,					
2012FA0000507		CFMINT	CFMINT	TURBINE	DESTROYED
7/23/2012		CFM567B262		1759M36P02	ENGINE
ENGINE FAILED WHILE CLIMBING THRU 1100 FT. MASSIVE FAILURE WITH LOUD BANG. N1 & N2 SEIZED , RETURNED TO DEPARTURE. REPORTED ENGINE HIGH N2 VIBRATION (5 AC UNITS) FOLLOWING TAKEOFF, WITH RESULTING UNCOMMANDED ENGINE IFSD, SUBSEQUENT PILOT INITIATED AC AIR RETURN AND FLIGHT CANCELLATION. UNEVENTFUL SINGLE ENGINE LANDING AT DEPARTURE. INITIAL GENERAL VISUAL INSPECTION REVEALED METAL-IN-TAILPIPE. DURING DISASSEMBLY IT WAS NOTED SEVERE DAMAGE ON HPT AND LPT SECTION; HPT FRONT ROTATING AIR SEAL HAS APPROXIMATELY 40 PERCENT OF AREA BETWEEN RETAINER RABBET FILLET AND INDUCER HOLE MISSED. THIS SEAL WAS INSTALLED NEW DURING THE LAST SHOP VISIT.					
2012F00140		LYC		SPARK PLUG	MISMANUFACTURED
7/20/2012		LTIO540J2BD		RHB32E	ENGINE
INSTALLED NEW CRHB32E MASS ELECTRODE PLUGS 96.7 HOURS AGO. WHEN DIAGNOSING A ROUGH CLIMB POWER FOUND: 6 PLUGS WITH NO CONTINUITY. THE OTHER 6 MEASURED 1.424K OHMS, 1.266K OHMS, 1.394K OHMS, 1.427K OHMS, 1.123K OHMS, 2.166K OHMS. OF THOSE 6 PLUGS, 3 WERE FOUND TO INTERMITTENTLY FIRE AT CORRECT PSI BUT CONTINUOUS UNDER AT 80PSI AND UNDER.					
2012FA0000500	BEECH			ROD END	SEPARATED
7/3/2012	95			3582518512	NOSE GEAR
THE ROD END, PN HMXL6FG, CONNECTED TO GEAR RETRACT ROD, SEPARATED AT THAT CONNECTION CAUSING THE NOSE GEAR TO COLLAPSE DURING THE LANDING ROLL OUT.					
2012FA0000497	BEECH	CONT	SLICK	IMPULSE COUPLING	CRACKED
7/10/2012	A36	IO550B		10400309	LT MAGNETO
DURING A ROUTINE 500 HR MAGNETO AND IMPULSE COUPLING INSPECTION, THE LT MAGNETO IMPULSE COUPLING PAWL WAS FOUND CRACKED FROM THE RIVET HOLE TO OUTER EDGE OF PAWL. A NEW IMPULSE COUPLING WAS INSTALLED AND ACFT RETURNED TO SERVICE. CAUSE OF CRACK MAY BE IMPROPER HEAT TREAT AT MFG.					
2012FA0000510	BEECH	CONT	CONT	BRUSHES	WORN
7/25/2012	A36	IO550B		646853	ALTERNATOR

INSPECTED ALTERNATOR AND FOUND ONE BRUSH WAS WORN PAST LIMITS, THE OTHER EXHIBITED IMMINENT FAILURE.

2012FA0000481	BEECH	PWA		BLADE	LOOSE
6/26/2012	B200	PT6*			PROPELLER

DURING SECOND ENGINE START OF THE DAY, THE RT PROP STARTED VIBRATING. START WAS ABORTED AT APPROX 40 PERCENT N1. ON INSPECTION OF PROPELLER, FOUND 3 BLADES FEATHERED AND IN LOW PITCH. NR 1 BLADE COULD BE REPOSITIONED BY HAND. REMOVED PROPELLER AND SENT FOR REPAIR. FOUND LINK HARDWARE LOOSE ON BLADE, REPAIRED BLADE LINK, REPLACED ALL 4 LINK SCREWS AND NUTS, AND CHECKED BLADE ANGLES. PROP REINSTALLED ON ACFT.

2012FA0000483	BEECH	CONT	ECI	INTAKE VALVE	CRACKED
6/14/2012	B36TC	TSIO520NB		AEC539988W	NR 4 CYLINDER

TROUBLESHOT ROUGH RUNNING ENGINE. FOUND NR 4 CYLINDER HAS NO COMPRESSION. REMOVED CYLINDER AND FOUND DAMAGED INTAKE VALVE. THIS O/H CYLINDER ASSY WAS INSTALLED 10/14/06. TSI 271.0. THIS CYLINDER ASSY, PN EC636122, VALVE, PN AEC539988W. FOR INSTALL INFO: SO 151045.

2012FA0000504	BEECH	CONT	CIRCUIT BREAKER	FAILED
7/22/2012	F33A	IO520BB	35380132103	BEACON

PILOT REPORTED THAT THE BEACON LIGHT WOULD NOT TURN ON. DURING TROUBLESHOOTING, FOUND THAT THE BEACON LIGHT CIRCUIT BREAKER WAS TO BE AT FAULT. THE CIRCUIT BREAKER HAS A TSN OF 2788 AND AN ESTIMATED 11152 CYCLES. INSTALLED A NEW BEACON CIRCUIT BREAKER, OPS CHECKED GOOD.

2012FA0000505	BEECH	CONT	CIRCUIT BREAKER	FAILED
7/22/2012	F33A	IO520BB	3538013273	ALTERNATOR

PILOT REPORTED THAT THE ALTERNATOR WAS INOPERATIVE. DURING TROUBLESHOOTING FOUND THAT THE ALTERNATOR CIRCUIT BREAKER WAS TO BE AT FAULT. THE CIRCUIT BREAKER HAS A TSN OF 3314.1 AND AN 13256.4 CYCLES. INSTALLED NEW ALTERNATOR CIRCUIT BREAKER AND OPS CHECKED GOOD.

2012FA0000509	BEECH	CONT	CIRCUIT BREAKER	FAILED
7/24/2012	F33A	IO520BB	35380132103	STROBE

PILOT REPORTED STROBE INOPERATIVE. ON TROUBLESHOOTING, THE TECH FOUND THE CIRCUIT BREAKER AT FAULT. INSTALLED NEW CIRCUIT BREAKER. OPS CHECKED OK.

T4OR5494 2	BEECH		FUEL CELL	LEAKING
7/20/2012	F90		20025	ZONE 500

LEFT AUX FUEL CELL LEAKING AFTER 12 MONTHS SINCE NEW. FUEL CELL REMOVED, FOUND FUEL CELL MATERIAL NOT ADHERED AT SEAM, INADEQUATE BONDING.

T4OR549415	BEECH		FUEL CELL	LEAKING
7/20/2012	F90		253412	ZONE 600

RIGHT WING INBOARD BOX FUEL CELL LEAKING AFTER 12 MONTHS SINCE NEW. FUEL CELL REMOVED, FOUND FUEL CELL MATERIAL NOT ADHERED TO INTERCONNECT TUBE NIPPLE, INADEQUATE BONDING.

EVCA201206270031	BELL	ALLSN	COLLECTOR	CRACKED
6/19/2012	206L3	250C30	23004545	EXHAUST

ON ROUTINE INSPECTION FOUND CRACKS IN THE REPAIR WELDS ON THE ENGINE EXHAUST COLLECTOR ASSEMBLY.

IU6R20120725	BOEING	PNEUDRAULICS	HOUSING	CRACKED

7/24/2012	737*		511531	ZONE 700

PIN HOLE CRACK IN MOUNTING HOLE CLOSEST TO INA PORT.

2012FA0000493	BOEING		SKIN	MISREPAIRED
7/20/2012	767224		148T32111	BS 1793 S34-35L

DURING REPAIR ASSESSMENT IT WAS DETERMINED THAT SKIN AT BS 1793 BETWEEN STRINGERS 34 AND 35 LT WAS MISREPAIRED. REPAIRED IAW SRM 53-00-01, FIG 201.

2012FA0000498	BOEING		SKIN	MISREPAIRED
7/20/2012	767224		14132301	BS 325

SKIN AT BS 325 AT STRINGER 31 LT, MISREPAIRED. REPAIRED SKIN IAW SRM 53-00-01, FIG 201.

2012FA0000516	BOMBDR	RROYCE	CONTROL CABLE	FRAYED
7/27/2012	BD7001A11	BR700710A220	GC413001337	AUTO PILOT

DURING COMPLIANCE OF SB 7001A11-22-003 (AUTOPILOT SYSTEM CHECK), FOUND RT ELEVATOR LOWER A/P TRIM CABLE FRAYED AT THE UPPER BELLCRANK. SENT CABLE TO TECH REP FOR EVALUATION.

2012FA0000490	BRAERO		AUTOPILOT SYS	MALFUNCTIONED
7/18/2012	BAE125800A		7011702916	

AT 24000 FT, INBOUND TO DESTINATION, AUTOPILOT WARNING HORN SOUNDED CONTINUOUSLY AND ALL AUTOPILOT WARNING LIGHTS WERE ON AND AUTOPILOT ENGAGE LIGHTS WERE ON WITH AUTOPILOT OFF. DETECTED A BURNED WIRE ODOR THAT PROGRESSIVELY INCREASED, DECIDED TO LAND. PULLED AUTO FLIGHT CONTROL CIRCUIT BREAKER AND ALL OF THE AUTOPILOTS WENT OUT.

2012FA0000477	BRAERO		LEVER	CORRODED
5/21/2012	BAE125800B		25CX1123AC	CROSSFEED VALVE

LEVER ASSY WAS OBSERVED TO BE CORRODED WHILE DOING LUBRICATIONS IN THE FORWARD BELLY AREA. AFTER IT WAS TAKEN APART, CORROSION WAS FOUND TO BE SEVERE. NO SPECIFIC INSPECTION FOR THIS OTHER THAN "AREA INSPECTIONS".

2012FA0000478	BRAERO		LEVER	CRACKED
5/21/2012	BAE125800B		25CX1013A	CROSSFEED VALVE

WHILE CHANGING A CORRODED ROD END AT LEVER, LEVER WAS OBSERVED TO BE CRACKED. AFTER LEVER WAS REMOVED, IT BROKE INTO TWO PIECES. NO SPECIFIC INSPECTIONS FOR THIS AREA OTHER THAN "AREA INSPECTIONS".

2012FA0000469	CESSNA	LYC	LYC	VALVE	DAMAGED
7/12/2012	172S	IO360L2A		LW19001	ZONE 400

ON START-UP ENGINE BEGAN TO RUN ROUGH. INSPECTION BY MX FOUND NR 3 CYLINDER EXHAUST VALVE STUCK OPEN AND CONTACTING PISTON. CYLINDER AND PISTON REPLACED ENGINE RAN SMOOTH.

WI5R2012071600001	CESSNA	WILINT	SPINNER	FRACTURED
7/16/2012	525	FJ441A	56661	ENGINE

ON ENGINE, DURING CLIMB AT 94 PERCENT N1, THE PILOTS HEARD A THUMP AND A LOW PITCH NOISE. ON GROUND TROUBLESHOOTING REVEALED A MISSING SECTION OF THE SPINNER AND DAMAGE TO THE FAN, INLET AND FAN STATOR.

WI5R201207170001	CESSNA	WILINT	ROTOR	BROKEN
7/17/2012	525	FJ441A	66032	ENGINE

ENGINE 1537 (FROM 525-0264) WAS RETURNED TO THE REPAIR STATION FOR BROKEN IP BLADES AFTER THE CUSTOMER REPORTED VIBRATIONS, HIGHER ITT & FUEL FLOW, AND A SMALL ABNORMAL NOISE. UPON DISASSEMBLY, VISUAL INSPECTION AND FPI REVEALED THAT 2 BLADES WERE LIBERATED AND 3 BLADES WERE

CRACKED AT THE ROOT. THE IP STATOR IS RUBBED, AND THE FAN ROTOR HAS SOME GROOVING ON THE TIPS OF 3 ADJACENT BLADES FROM CONTACTING THE FAN CASE INSERT RIBS.

2012FA0000470	CESSNA	ALLSN	ACTUATOR	FAILED
7/12/2012	750	AE3007C	991450912	

AUTOPILOT TRIPS OFF LINE AND LOST MACH TRIM. PRIMARY, SECONDARY AND MACH TRIM FAILED, ALL AT THE SAME TIME, PRIOR TO LANDING.

2012FA0000495	CESSNA	CONT	RETAINER	BACKED OUT
6/18/2012	A185F	IO520*		LT WHEEL

DURING TAXI, LT WHEEL OUTER TIRE RETAINER HARDWARE BACKED OUT AND PULLED THREADS FROM INNER WHEEL HUB, OUTER TIRE RETAINER DEPARTED AND ALLOWED TIRE AND TUBE TO DEPART AS WELL. THE ACFT WAS STOPPED AND NO OTHER DAMAGE NOTED.

2012FA0000475	CESSNA	LYC	SERVO	INOPERATIVE
7/3/2012	T206H	TIO540AJ1A	61M23897	FUEL SYSTEM

AFTER INSTALLATION OF FACTORY REBUILT ENGINE, ENGINE PERFORMED NORMALLY FOR 28 HRS. THEN IT BEGAN TO RUN EXCESSIVELY RICH WITH BLACK SMOKE AT LOW RPM AND AT FULL POWER. MIXTURE CONTROL HAS NO EFFECT, AFTER LANDING, BOOST PUMP MUST BE TURNED ON IN ORDER TO KEEP ENGINE RUNNING, FUEL SERVO AND ENGINE DRIVEN FUEL PUMP WERE SENT OUT FOR INSPECTION, AFTER INSTALLING SERVO AND PUMP, ACFT PERFORMED SATISFACTORY ON GROUND RUN. AFTER LESS THAN 1 HOUR OF FLIGHT, THE SAME PROBLEMS RETURNED. REMOVED FUEL SERVO AND WITH MFG APPROVAL INSTALLED FUEL SERVO FROM ANOTHER ENGINE. FOUND FUEL PRESSURE WITHIN LIMITS. RETURNED ACFT TO SERVICE, AFTER 27 HRS OF FLIGHT ACFT PERFORMS SATISFACTORY.

V0XR2012071700002	CNDAIR		PRESSURE BLKHD	CRACKED
7/17/2012	CL6002B19			ZONE 200

CRACK INDICATION FOUND AT REAR PRESSURE BULKHEAD FWD FACE AT RBL 27.5, 16" ABOVE STRINGER 17. REPAIRED AFT PRESSURE BULKHEAD FWD FACE AT RBL 27.5 BY CUTTING OUT DAMAGED AREA AND INSTALLING WEB DOUBLER IAW REO 601R-53-61-1285.

V0XR20120809J0052	CNDAIR	GE	CHANNEL	CORRODED
8/6/2012	CL6002C10	CF348C1	601R3199833S	PAX DOOR

PASSENGER DOOR CORRODED BEYOND SERVICEABLE LIMITS FROM FS 311.75 TO FS 347.25, END CAPS. R & R LOWER SECTION, FORWARD BOTTOM CORNER IAW SRM 51-42-06, 51-42-13, 51-21-11, 51-21-06.

2012FA0000512	DHAV	DHAVXX	BOLT	SEPARATED
7/26/2012	DH82A	GIPSYMAJOR1	80285	EXH VALVE ROCKER

BOLT SEPARATED DUE TO HEAVY CORROSION.

2012FA0000501	DIAMON	CONT	VALVE	STICKING
7/19/2012	DA20C1	IO240B		NR 1 CYLINDER

ACFT ON A TRAINING FLIGHT. A REPORT WAS MADE THAT THE ENGINE WAS RUNNING ROUGH AND IT FELT LIKE IT WAS RUNNING ON 3 CYLINDERS. DECLARED AN EMERGENCY, DIVERTED MADE AN UNEVENTFUL LANDING. AN INSPECTION PERFORMED BY MECHANICS VERIFIED A VALVE WAS STICKING INTERMITTENTLY. CYLINDER WAS REPLACEDT.

2012FA0000482	DIAMON	THIELT	PROPELLER	LEAKING
6/8/2012	DA42	TAE12501		

PROPELLER LEAKING OIL FROM VENT IN DOME.

EE4Y2012072400261	DOUG		SUPPORT FITTING	CRACKED
6/29/2012	DC982		5936709502	ZONE 100

LOWER FUSELAGE RT MLG WW CEILING AREA AT Y BS 977 FLAP ACTUATOR SUPPORT FITTING WITH CRACK. FITTING WAS REPLACED IAW SRM 51-01, PARAGRAPH 2D.

EE4Y2012072400262	DOUG	ANGLE	CRACKED
7/6/2012	DC982	9936073U17	ZONE 100

LOWER FUSELAGE AFT CARGO COMPARTMENT BS 1155 BETWEEN LONGERON 28 AND 29 RT ANGLE CRACKED. ANGLE WAS REPLACED WITH THE SRM 51-01, PARAGRAPH 2.

EE4Y2012072400263	DOUG	DOOR	CORRODED
6/29/2012	DC982	591479237	LAVATORY SERVICE

LOWER FUSELAGE AFT LAVORATORY SERVICE DOOR WITH CORROSION. SERVICE DOOR WAS REPLACED IAW SRM 51-01, PARA 2.

EE4Y2012072400264	DOUG	FITTING	CORRODED
6/29/2012	DC982		NR 3 SLAT TRACK

RIGHT WING NR 3 SLAT CENTER TRACK FITTING LUGS WITH CORROSION. FITTINGS WERE REPLACED WITH THE SRM 51-01, PARA 2D.

EE4Y2012072400265	DOUG	PANEL	CRACKED
6/29/2012	DC982	596200643	ZONE 500

LT WING T/E CAVITY UPPER PANEL EDGE CRACKED AT XCW 109. THE PANEL WAS REPAIRED IAW SRM 57-09, FIG 42.

2012FA0000484	DOUG	LIGHT	INOPERATIVE
7/14/2012	DC983		CABIN

R1 DOOR EMERGENCY LIGHT INOPERATIVE, DOES NOT WORK. R & R R1 DOOR EMERGENCY LIGHT IAW AMM 33-50-00. OPS NORMAL.

2012F00137	EMB	DUCT	FAILED
7/17/2012	EMB120	12024937011	CABIN PRESSURE

PRESURIZATION DUCT HAS A TREND OF RUPTURING LENGTH WISE OPPOSITE THE WELD. FAILURE LOOKS TO EMINATE FROM THE SLIGHT BEND AT THE FORWARD END OF THE DUCT. HAD FIVE FAILURES OF THE SAME TYPE IN A PERIOD 1 YEAR.

2012FA0000515	GULSTM	SHUTOFF VALVE	FAILED
7/13/2012	GVSPG550	1159SCH50117	LT AILERON

WHILE PERFORMING THE AILERON HARDOVER PREVENTION SYSTEM OPERATIONAL CHECK (HOPS), LEFT AILERON HYDRAULIC S/O (PILOT-C4) CIRCUIT BREAKER WOULD POP AND HYDRAULIC PRESSURE WAS NOT REMOVED FROM THE AILERON ACTUATOR. SHUTOFF VALVE WAS FOUND ELECTRICALLY SHORTED. R & R VALVE, PERFORMED LEAK CHECKS AND OPS CHECKS. THIS WAS A DORMANT FAILURE THAT WOULD NOT HAVE ALLOWED THE "HOPS SYSTEM" TO SHUTOFF HYDRAULIC PRESSURE TO THE LEFT AILERON IF IT WOULD HAVE HAD A FAULT IN FLIGHT. CB DIDN`T POP UNITL OPERATIONAL CKS OF THE "HOPS SYSTEM" FORCED THE VALVE TO ACTIVATE.

2012FA0000514	GULSTM	RROYCE	PLUNGER	MELTED
7/13/2012	GVSPG550	BR700710C411	1159F523623	EMERGENCY EXIT

CREW REPORTED THAT THE FORWARD EMERGENCY EXIT WINDOW WAS ICING UP IN FLIGHT. TECH FOUND THAT THE SPRING HOLDING THE PLUNGER FOR THE CABIN WINDOW HEAT HAD MELTED THE BACK PLATE OF THE PLUNGER ASSY AND THAT THE PLUNGER AND CONNECTOR ASSY HAD BOTH BEEN ARCING. REPLACED PULUNGER ASSY AND CONNECTOR ASSY. OPS CHECKED OK.

NI6R20120814003	LKHEED	WING	CRACKED
8/14/2012	P2V5F		ZONE 500

AT LEFT WING STATION 40, A CRACK IN THE WING SKIN, JUST OUTBOARD OF THE FUSELAGE SKIN, APPROXIMATELY 4 INCHES LONG WAS DISCOVERED UNDER AN EXISTING REPAIR USING EDDY CURRENT INSPECTION. THE CRACK RUNS FORE AND AFT BETWEEN STRINGERS 17 AND 18. NO OTHER DAMAGE HAS BEEN DETECTED AT THIS TIME, OPEN.

NI6R20120814004	LKHEED	SKIN	LOOSE
8/14/2012	P2V5F		RT WING

FOUND WING SKIN AT THE ATTACHING FASTENERS AT THE RT LOWER FWD SPAR CAP, RT WS 120, RUNNING FOR APPROX 4.25 INCHES TO HAVE WORKED LOOSE. SKIN CAN BE PUSHED UP AND DOWN APPROX .005. NO ADDITIONAL STRUCTURES WERE FOUND TO BE DISCREPANT BY VISUAL INSPECTION AND NO CRACKING WAS DISCOVERED.

NI6R20120814005	LKHEED	SKIN	LOOSE
8/13/2012	P2V5F		RT WING

FOUND WING SKIN AT THE ATTACHING FASTENERS AT THE RT LOWER FWD SPAR CAP, R WS 120, RUNNING FOR APPROX 5.0 INCHES TO HAVE WORKED LOOSE. SKIN CAN BE PUSHED UP AND DOWN APPROX .005. NO ADDITIONAL STRUCTURES WERE FOUND TO BE DISCREPANT BY VISUAL INSPECTION AND NO CRACKING WAS DISCOVERED.

NI6R20120814006	LKHEED	SKIN	CRACKED
8/13/2012	P2V7		RT WING

FOUND WING SKIN AT THE ATTACHING FASTENERS AT THE RT LOWER FWD SPAR CAP RUNNING FOR APPROX 20 INCHES TO HAVE WORKED LOOSE. SKIN CAN BE PUSHED UP AND DOWN APPROX .020. UPON REMOVAL OF THE LEADING EDGE AND NACELLE PANEL, A FOUR INCH CRACK IN THE WING SKIN, DISCOVERED RUNNING AFT AT APPROX. WS 120. CRACK RUNS FROM FWD EDGE OF SKIN THROUGH TWO FASTENERS. NO ADDITIONAL STRUCTURES WERE FOUND TO BE DAMAGED BY VISUAL INSPECTION AND VERIFIED BY EDDY CURRENT.

2012FA0000479	MOONEY	MOUNT	FAILED
7/12/2012	M20K		INSTRUMENT PANEL

PILOT INSTRUMENT PANEL SHOCK MOUNTS (PROBABLY ORIGINAL) ALL BROKEN AND SEPARATED CAUSING PANEL TO FALL ONTO A TUBULAR STRUCTURE, THE CIRCUIT BREAKER SWITCHES ARE MOUNTED TO THE SHOCK MOUNT PANEL. THE BUSS BAR OF THE CIRCUIT BREAKER SWITCHES SHORTING ON TO TUBULAR STRUCTURE.

2012FA0000485	PARTEN	LYC	CONTROL CABLE	FRAYED
7/16/2012	P68C	IO360A1B6		STABILATOR

WHILE COMPLYING WITH MANDATORY SB 75, R3, "FLIGHT CONTROL CABLES", ONE OF THE 2 FWD STABILATOR CABLES WAS FOUND FRAYED. THE FRAYED CABLE WAS FOUND ONLY BY SLACKENING THE CABLE AND BENDING IT AT A SHARP RADIUS AS CALLED FOR IN SB 75. THIS ACFT HAS BEEN MODIFIED BY STC SA5647SW, "INSTALLATION OF CAMERA PORTS" THIS MODIFICATION RE-ROUTED THE FLIGHT CONTROL CABLES AROUND THE CAMERA PORTS, REQUIRING LONGER CABLES.

2012FA0000471	PIPER	LYC	SLICK	POINTS	LOOSE
7/1/2012	PA25260	O540*		M3081	MAGNETO

FOUND MAGNETO CONTACT POINTS LOOSE WHEN POINTS ARE OPEN.

2012FA0000508	PIPER	LYC	LYC	EXHAUST VALVE	FAILED
5/26/2012	PA28140	O320E2A			NR 1 CYLINDER

NR 1 EXHAUST VALVE FAILED IN CRUISE.

2012FA0000496	PIPER	SPAR	CRACKED
7/6/2012	PA28181	62073003	WING

DURING EDDY CURRENT INSPECTION, SEVERAL CORRODED & CRACK INDICATIONS WERE FOUND FROM WING STA 106.20 TO 57.00.

2012F00139	PIPER	LYC	CAP	FAILED
7/16/2012	PA32300	IO540K1A5	66817000	FUEL SYSTEM

PILOT MADE AN IMMEDIATE RETURN TO AIRPORT AND UNSCHEDULED LANDING AFTER ENCOUNTERING ROUGH RUNNING ENGINE AND PARTIAL LOSS OF RPM AT APPROX 500 FEET AGL, AFTER TAKEOFF, WHILE SETTING CLIMB POWER AND FUEL FLOW. FUEL FLOW INDICATION ERRATIC, FUEL PRESSURE APPEARED NORMAL. ACFT LANDED SAFELY & TAXIED TO BLOCK UNDER ITS OWN POWER. SHORTLY AFTER LANDING ENGINE APPEARED TO BE RUNNING SMOOTHLY AGAIN. ACFT HAD ACCUMULATED 18 HOURS OF FLIGHT TIME OVER PREVIOUS WEEK AND IS REGULARLY FLOWN. INSPECTION OF FUEL STORAGE SYS REVEALED SMALL AMOUNT OF WATER IN SELECTED FUEL TANK (LT TIP TANK), ESTIMATED AT 2-3 TABLESPOONS. INSPECTION OF FUEL CAP ASSEMBLY REVEALED ONE SCREW ATTACHING LOWER METALIC LOCKING PORTION OF CAP ASSEMBLY TO UPPER ASSEMBLY WAS NO LONGER ABLE TO BE SECURED DUE TO STRIPPED THREADS IN UPPER CAP ASSEMBLY. CAP REPLACED WITH A NEW AND ENGINE RAN NORMAL. SEVERAL HIGH SPEED / HIGH POWER GROUND RUNS WERE MADE, WITH ENGINE OPERATING NORMALLY.

2012FA0000589	PIPER	LYC	BRUSHES	FAILED
8/5/2011	PA32R300	IO540K1A5		HYD POWER PACK

ON DEPLOYING LANDING GEAR, COULD NOT GET A NOSE GEAR INDICATION. RAN THROUGH EMERGANCY PROCEDURES SEVERAL TIMES TO NO AVAIL (ALSO NOTED GEAR WOULD NO LONGER RETRACT). PERFORMED LANDING AND ON ROLL OUT, NOSE GEAR COLLAPSED. POST INCIDENT INSPECTION REVEILED ELECTRIC MOTOR ON HYDRAULIC POWER PACK BRUSH FAILURE AND SUSBIQUENT INOP PUMP.

2012FA0000480	PIPER	LYC	LANDING GEAR	FAILED
6/4/2012	PA46R350T	TIO540AE2A	89137041	NOSE

SB 1103D WAS 212 HOURS OVERDUE WHEN THE NOSE GEAR COLLAPSED AFTER LANDING CAUSING SUBSTAINTIAL DAMAGE TO THE AIRCRAFT.

UVVR2012071800023	RAYTHN		MOUNT	FRACTURED
7/17/2012	HAWKER800XP			ZONE 500

WHEN REMOVING THE LT UPPER AIRBRAKE FOR 8 YEAR STRUCTURAL INSPECTION OF THE AIRBRAKE HINGE FITTINGS, THE AIRBRAKE JACK (ACTUATOR) OTBD MOUNTING BOSS WAS FOUND SEPARATED FROM THE AIRBRAKE JACK HOUSING. THE FAILED MOUNTING BOSS IS PART OF THE CAST ALUMINUM HOUSING FOR THE AIRBRAKE JACK ASSEMBLY. NO ANOMALIES WERE REPORTED BY THE FLIGHT CREW.

2012FA0000489	SOCATA		BRIDAL CABLE	DISENGAGED
7/19/2012	TBM700		T700A2210024000	AUTOPILOT

ON CLIMBOUT, PILOT ENGAGED AUTOPILOT AND ACFT BEGAN TO PITCH UP AND CLIMB. AUTOPILOT WAS DISENGAGED AND CONTROL WAS MAINTAINED. PILOT AGAIN ENGAGED AUTOPILOT AND ACFT ROLLED TO THE LEFT. PILOT DISENGAGED AUTOPILOT AND AGAIN GAINED CONTROL, DELCLARED AN EMERGENCY AND LANDED ACFT. UPON INSPECTION, 2 PROBLEMS WERE FOUND. KVG-350 GYRO HAD FAILED AND ROLL BRIDAL CABLE WAS LOOSE FROM THE ROLL SERVO CAPSTAN. CABLE WAS BOUND AND BROKE THE CABLE GUARD. UNABLE TO DETERMINE CAUSE OF CABLE COMING LOOSE. CABLE AND CABLE GUARD WERE REPLACED. NO FURTHER PROBLEMS NOTED.

2012FA0000513	SWRNGN	GARRTT	FUEL CONTROL	FAILED
6/10/2012	S2RG6	TPE3316252M	89777012	ENGINE

PILOT REPORTED THAT THE ENGINE DID NOT RESPOND TO POWER LEVER MOVEMENTS AND WAS UNABLE TO CONTROL ENGINE POWER. ENGINE WAS OVER TEMPING AND OVER TORQUING. HE THEN FLEW TO A NEAR BY AIRPORT AND USED EMERGENCY SHUTDOWN CONTROL TO SHUTDOWN THE ENGINE. LANDING WAS SHORT OF RUNWAY CAUSING MAJOR DAMAGE TO ACFT. PRIOR TO THIS EVENT, A DIFFERENT PILOT HAD A PROBLEM WITH THE ENGINE BEING STUCK AT A LOWER POWER SETTING AND HAD TO SHUTDOWN THE ENGINE TO LAND WITH NO HIGH TORQUE OR HIGH TEMPS. FUEL CONTROL WAS REMOVED AND SENT FOR TESTING. BENCH TESTING INDICATED NO PROBLEMS AND THE FUEL CONTROL WAS REINSTALLED ON THE ENGINE, AND THE SAME PROBLEM OF NOT BEING ABLE TO CONTROL THE ENGINE WAS PRESENT, FUEL CONTROL WAS REMOVED AND RETURNED AND WAS INSPECTED AND REPAIRED, FUEL CONTROL WAS REINSTALLED, RIGGING WAS CHECKED

AND IT OPERATED NORMALLY UNTIL THE ACCIDENT 50.5 HOURS LATER. FUEL CONTROL WAS SENT TO MFG FOR ACCIDENT INVESTIGATION.

2012FA0000476	SWRNGN	ACCUMULATOR	RUPTURED
6/25/2012	SA227AC	223002	HYD SYSTEM

SHORTLY AFTER TAKEOFF, THE PILOT RETRACTED THE LANDING GEAR AND FLAPS NORMALLY BUT THE HYD PRESSURE ANNUNCIATOR LIGHT ILLUMINATED AS WELL AS THE HYD PRESSURE GAUGE READING ZERO. MX FOUND THE MAIN HYD ACCUMULATOR HAD RUPTURED, SPILLING OUT ALL OF THE FLUID.

2012FA0000494	UROCOP	TMECA	TORQUE TUBE	WORN
7/12/2012	EC120B	ARRIUS2F		

ACFT UNDERGOING 1500 HR INSPECTION AT A TOTAL AIRFRAME TIME OF 1501.4 HRS. THE MECHANIC FOUND THE THE WEAR ADHESIVE TAPE ON THE ORIGINAL ASSY HAD DEBONDED AND CAUSED AN ABNORMAL AMOUNT OF WEAR TO THE SHAFT (.008").