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Administration**

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Regulatory Support Division

ADVISORY CIRCULAR

43-16A

AVIATION MAINTENANCE ALERTS



**ALERT
NUMBER
410**



**SEPTEMBER
2012**

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**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

AVIATION MAINTENANCE ALERTS

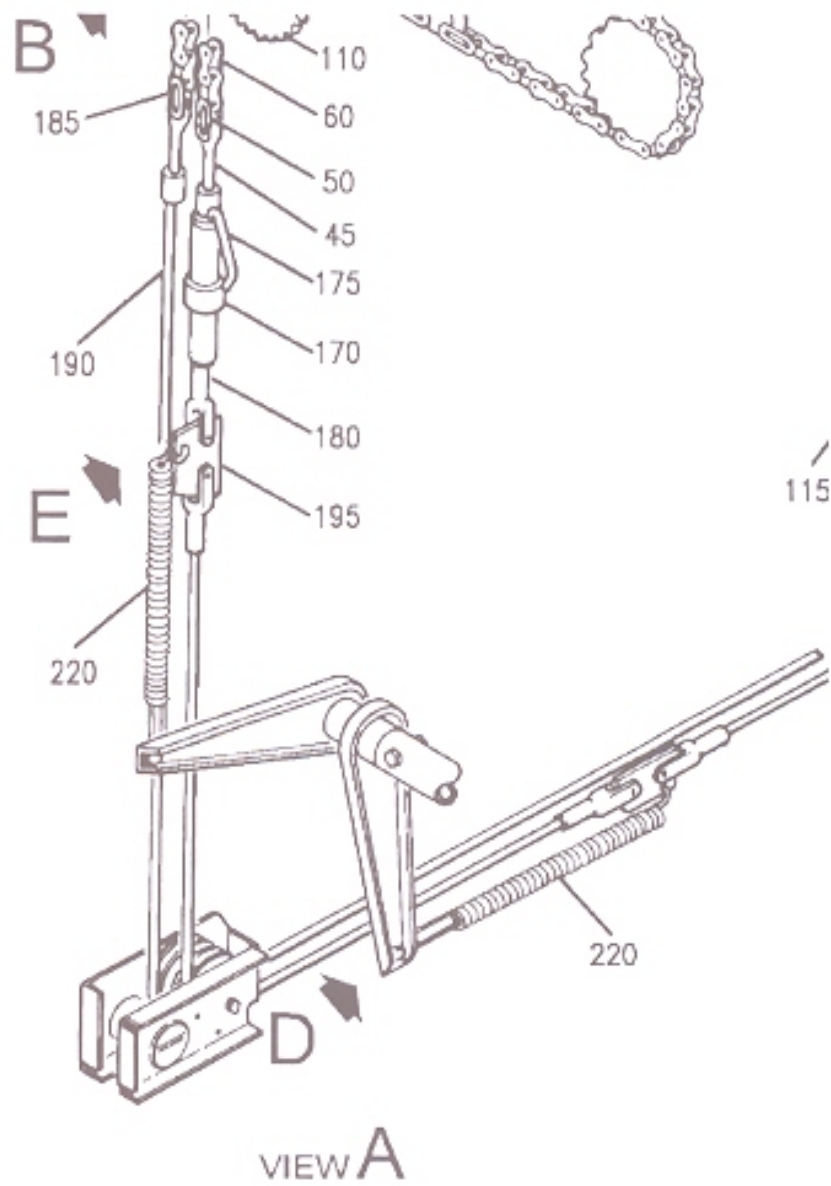
The Aviation Maintenance Alerts provides the aviation community with an economical means to exchange service experiences and to assist the FAA in improving aeronautical product durability, reliability, and safety. We prepare this publication from information operators and maintenance personnel who maintain 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: A36; Broken Aileron/Rudder Spring; ATA 2720

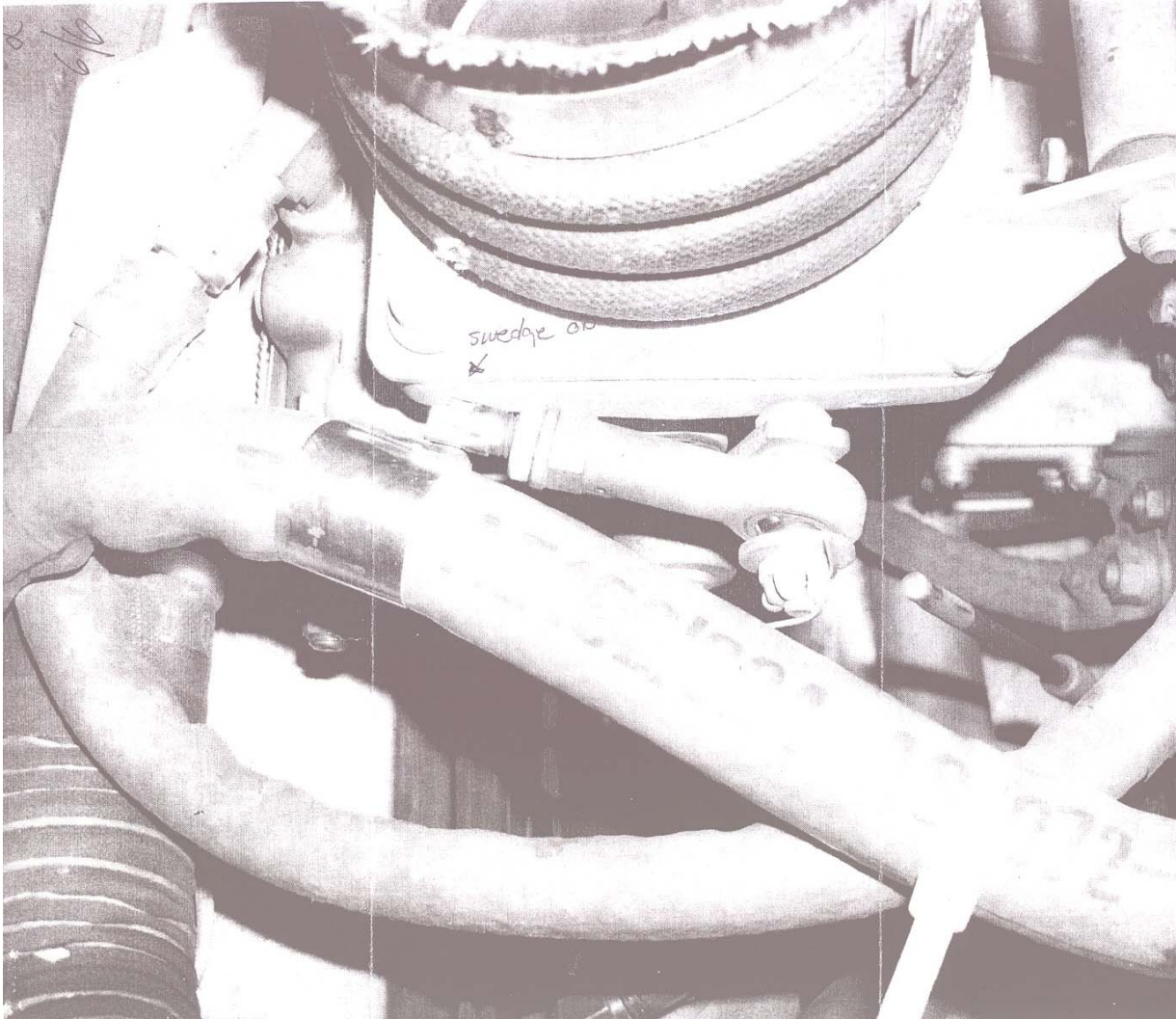
A technician working a corporate aircraft states, "During flight, the pilot noticed the aileron control was pulling to the right. The aircraft returned to base without incident. Upon inspection of the aileron control system, the upper aileron/rudder interconnect spring (P/N 35-5524664) was found broken at the end of the bell crank arm (P/N 002-524018-25). The probable cause for this failure is time in service."



Part Total Time: 10,609.0 hours

Beech: 58; Failed Throttle Control Rod; ATA 7603

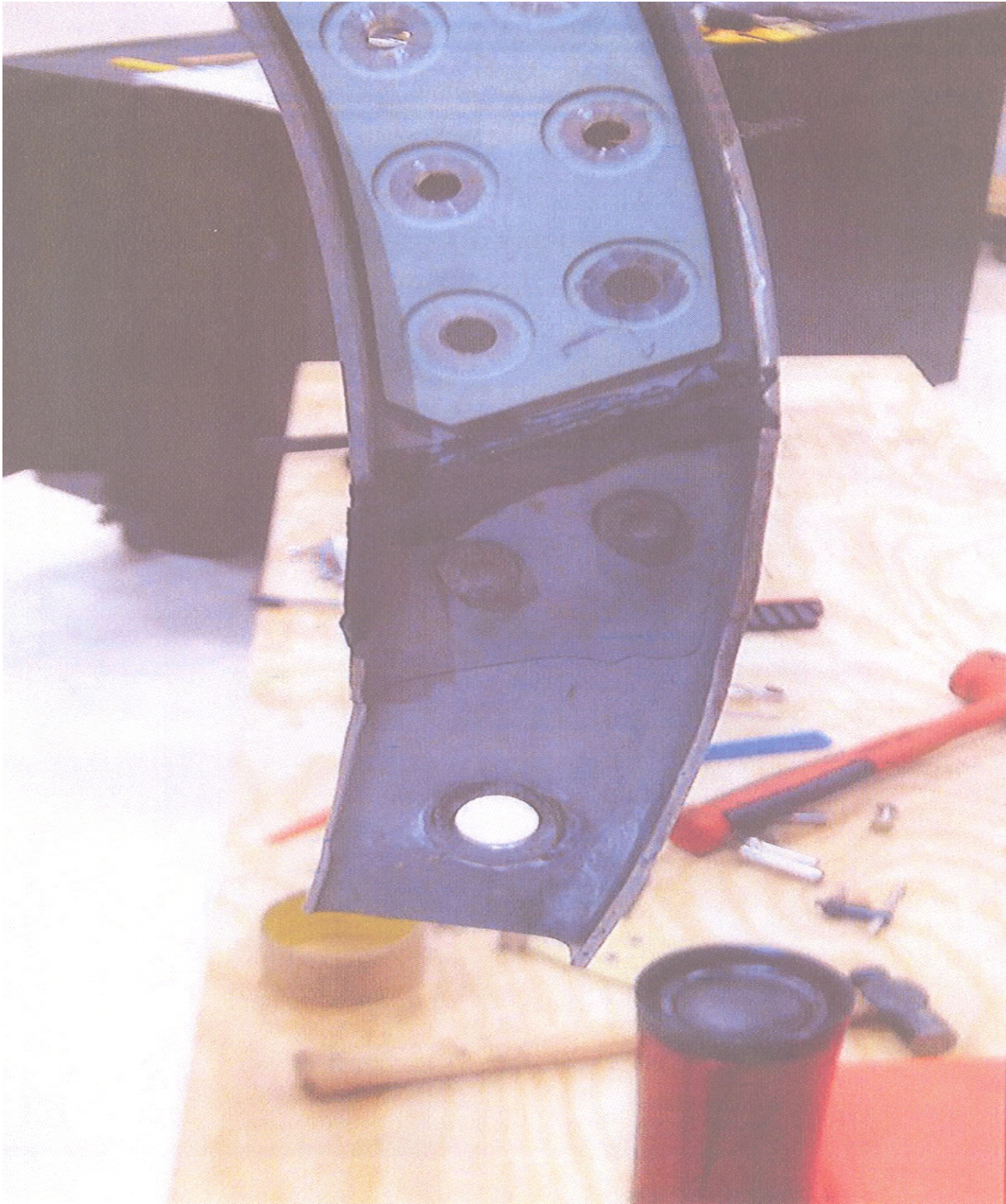
"The throttle control (*rod*) end—threaded for a rod-end—came off the control (*rod*)," says this submitter. "It appears to have been swaged on to the end of the (*now separated*) control (*rod*)." (P/N: 1023890103. Are you saying this rod end was—or was not suppose to have been swaged in the first place? Ed.)



Part Total Time: 1,275.0 hours

Beech: 400A; Cracked Engine Mount; ATA7120

A mechanic says, "During the removal of the L/H engine, the engine mount (*was found*) to have a large crack."





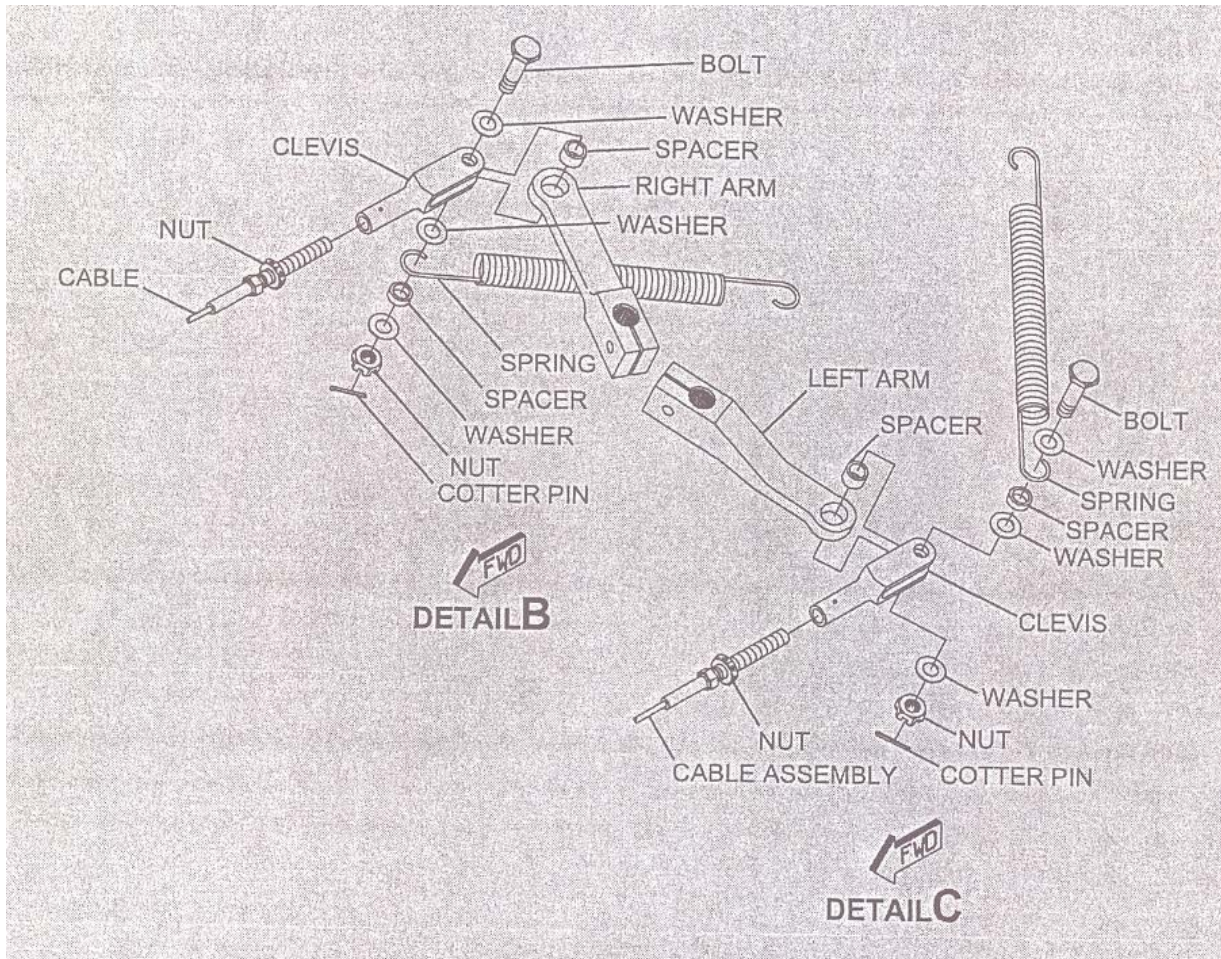


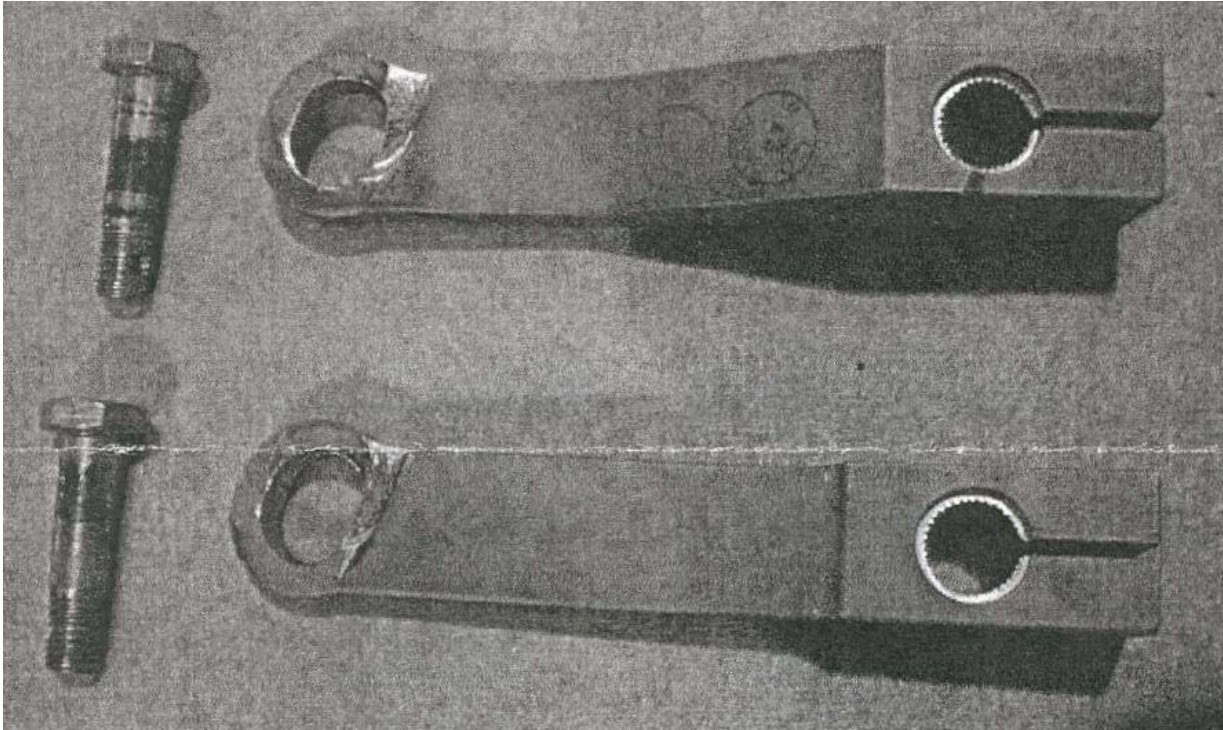
(The first two photos have been artistically "forced" to fit the page. Engine mount P/N: 45A34361005. There are at least eight such records in the SDRS database.)

Part Total Time: (unknown)

Cessna: 680CE; Worn Brake Metering Valve Arms; ATA 5310

"Upon removal of the R/H floor panel," say this repair station mechanic, "it was observed there was some fretting material on the insulation bags and the surrounding area. Further investigation revealed the R/H and L/H arms (P/N's 6964000-16 and -17) 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 P/N NAS43DD4-16FC) were never installed. (I) recommend during a 3A Emergency Battery Service or inspection that this panel (162ET) is removed and the (valve) arms inspected for wear and spacer installation."



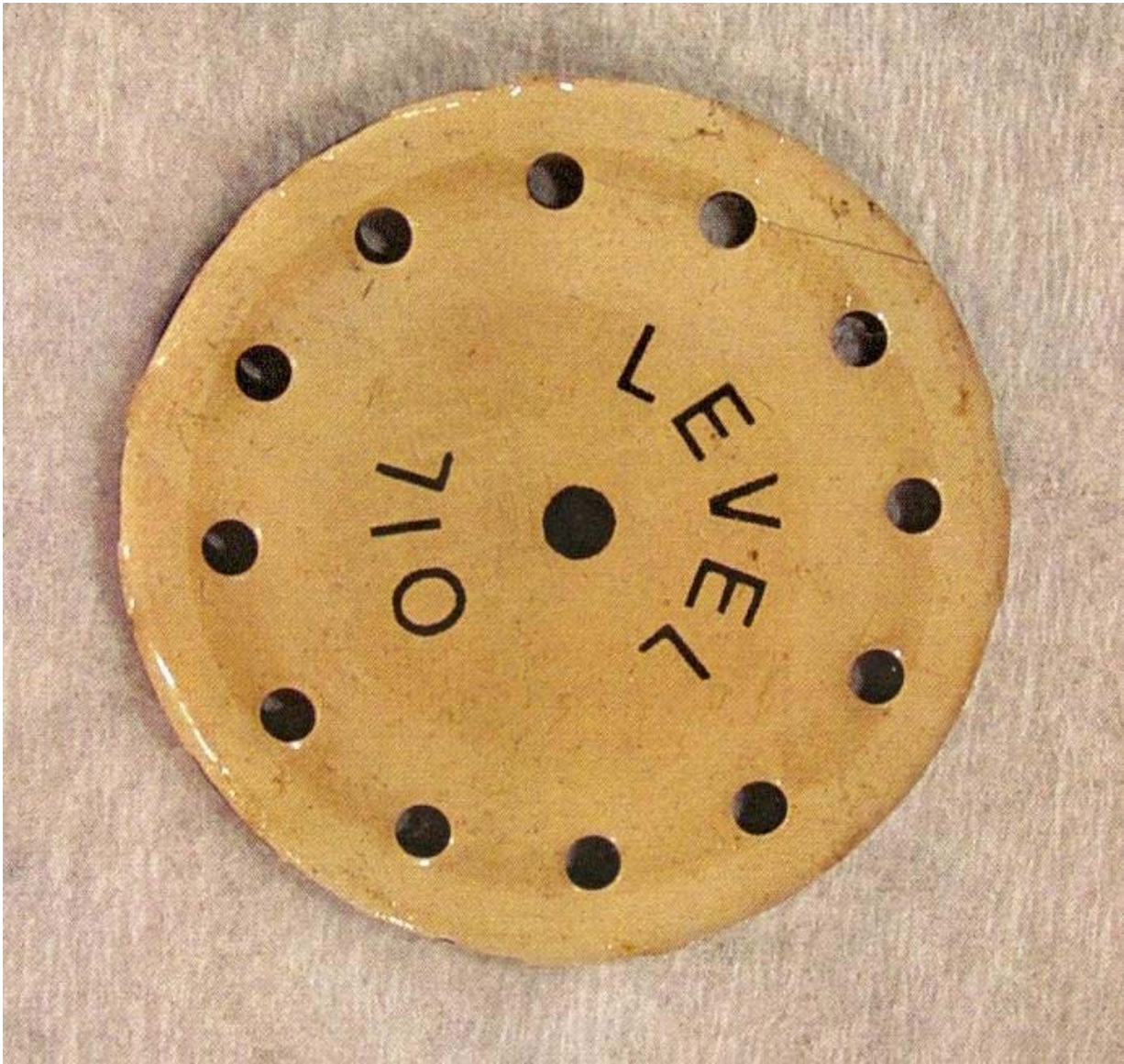


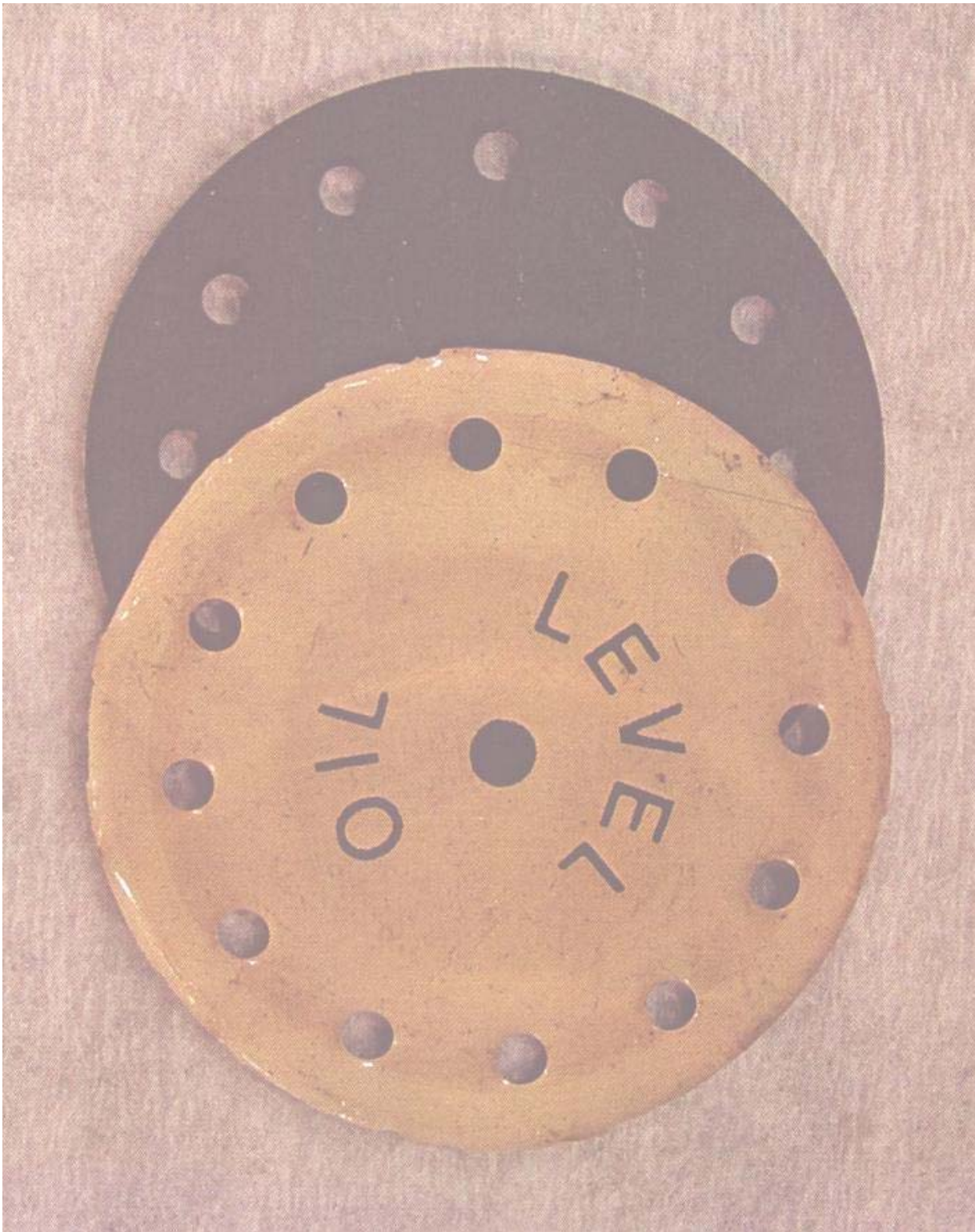
Part Total Time: (unknown)

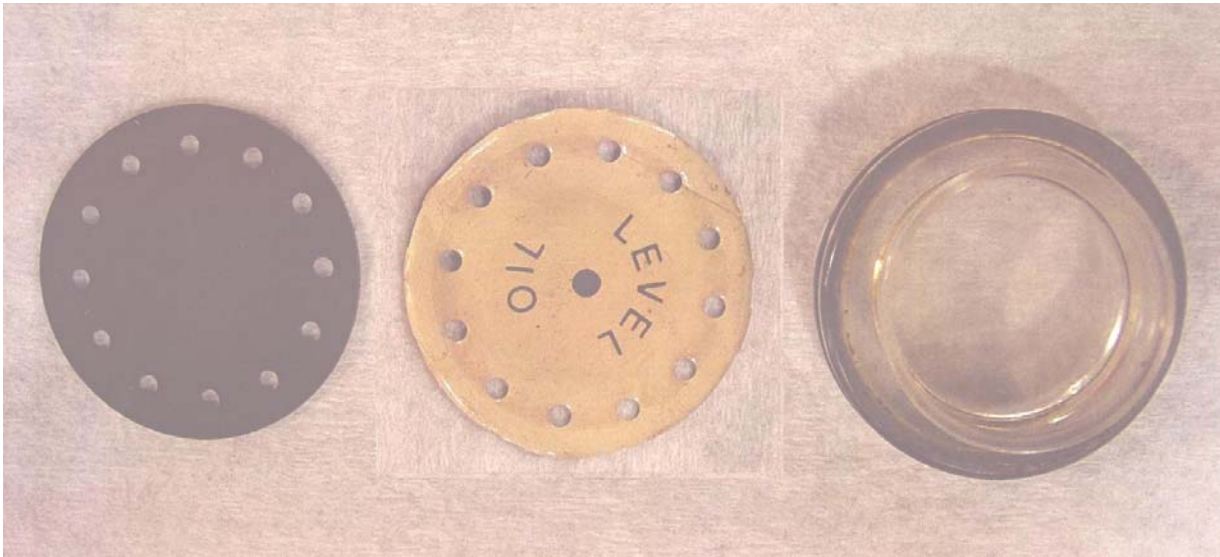
HELICOPTERS

Bell: 206B; Failed Transmission Oil Sight Indicator; ATA 6320

"During a routine inspection," says this repair station submission, "(we) discovered the oil level indicated 'full'—after the main rotor transmission oil was drained. After removal, inspection of the indicator (*P/N 206040093001*) revealed the coating with the 'level markings' had separated from the metallic back plate. There is a ring of holes on the circumference of the indicator. These were not aligned with the holes in the 'level mark' coating on the back plate. This condition would not allow oil to drain from the sight glass—the only means to determine (*correct*) oil level in the main rotor transmission. Improper servicing of the transmission presents a potential for serious problems if left undetected."







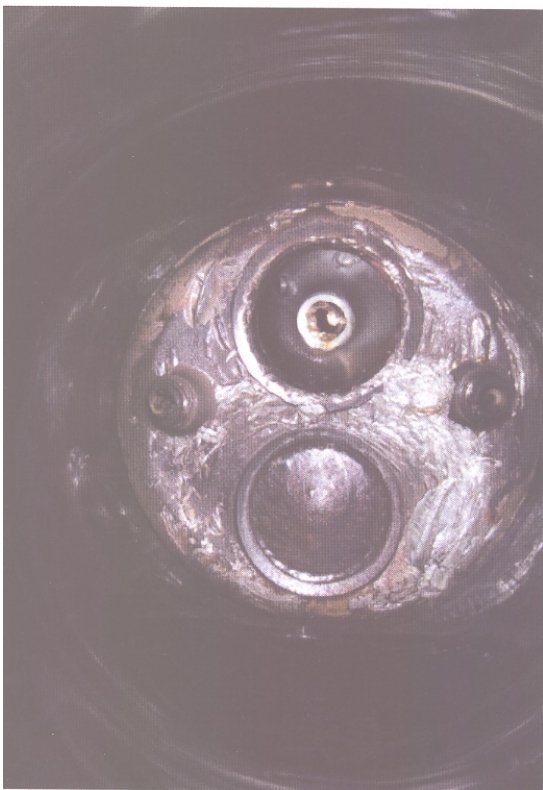
Part Total Time: 4,143.0 hours

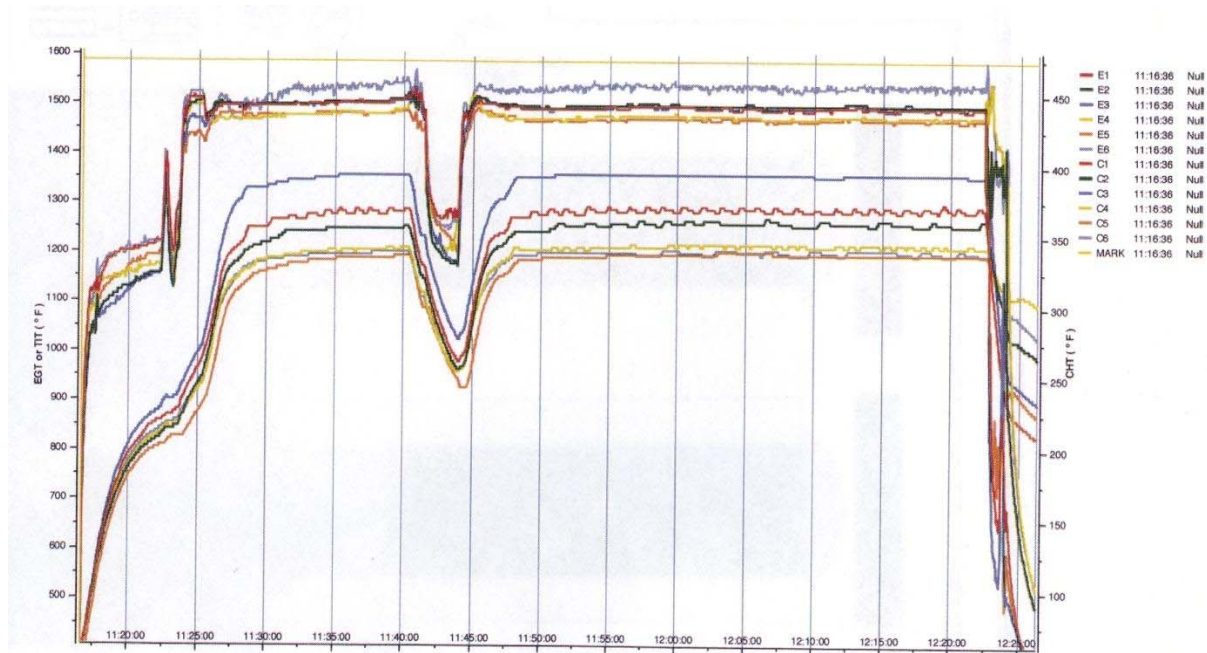
POWERPLANTS

Lycoming: IO540AE1A5; Failed Intake Valve; ATA 8520

(The following description references a Robinson R44 Raven II helicopter.)

"Removal of the number one cylinder for visual inspection revealed a failure of the intake valve," says this technician. "Subsequent analysis from the data recorded by the JPI graphical engine monitor showed massive ingestion of engine oil into the remaining cylinders, causing loss of power—oil fouling the remaining (*otherwise*) unaffected spark plugs. Closer inspection of the effected cylinder showed catastrophic damage to the piston and combustion area from (*piston/valve/head*) multiple contacts. Fractured valve parts became wedged in the induction tube and in the common manifold area. When the intake rocker assembly was removed it was discovered the top portion of the valve stem above the 'keepers' was the area of separation/failure. A 30X power microscope was used for inspection. It is (*our*) opinion the failure of the intake valve may have been caused from a stress riser created during manufacturing at either the machining, heat treating process, or perhaps at the molecular level during creation of the raw material. It should be noted the aircraft was in compliance with Lycoming Service Bulletin SB388C exactly 85.8 hours earlier. No defect or abnormalities were noted at the time of the inspection."





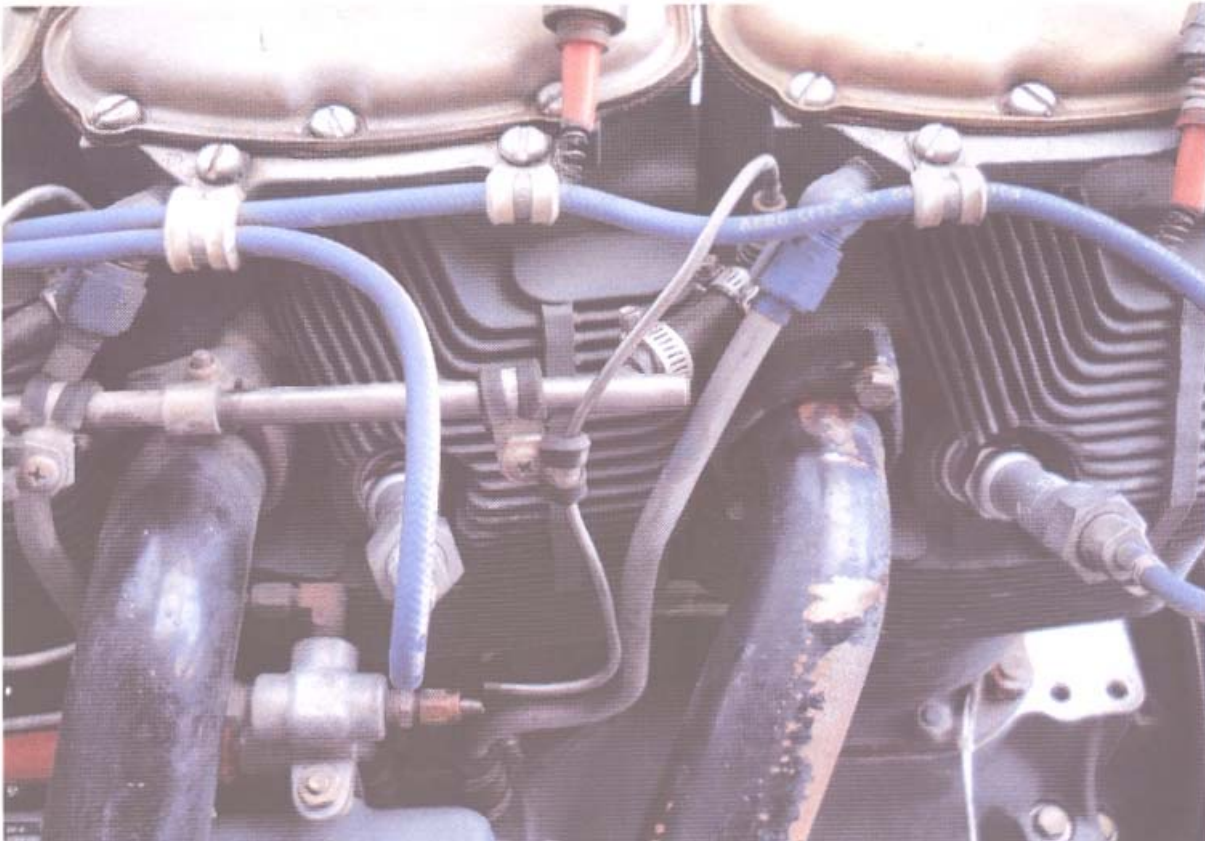
(Intake valve P/N: LW13622. There are eleven of these part numbers reflected in the SDRS database.)

Part Total Time: 381.0 hours

Lycoming: TIO540 SER; Broken Fuel Line; ATA 7310

(This report references a Piper PA310350 aircraft.)

This general aviation report reads, "On departure the pilot reported all engine indications were normal prior to rotation. Climbing out of 4,000 feet the right engine lost power. The pilot proceeded with the 'engine out' procedures—determining the right engine was only producing 30 inches of manifold pressure with 8 PSI fuel flow. The pilot returned to *(base)* and landed without incident." "Maintenance inspected the right engine and found the number one cylinder injection line broken. AD2011-26-04 was last complied with in May (2012). The aircraft was last inspected 67.7 hours previous to the total time (20,555.3 hours). No defects were found during the inspection."





(Fuel Line P/N: LW120980100. Nine of these part numbers can be found in the SDRS database.)

Part Total Time: 20,555.3 hours

Williams: FJ44; Failed Fuel Delivery Unit; ATA 7310

(This report originates on a Cessna 525B airplane.)

A technician states, "At reduction of engine power during descent from 45,000 down through 43,00 feet, the R/H engine began to decrease N1 (*engine fan/compressor*) RPM until shutdown. All corresponding engine related indications and advisory warning lights came on. The pilots ran the in-flight emergency check list and secured the engine. The pilot followed the procedures for in-flight engine restart (*three times*) but the engine would not start.

"We contacted the engine manufacturer and concluded the engine flame-out was caused by the fuel delivery unit (P/N 116190014A)."

Part Total Time: 2,962.0 hours

ACCESSORIES

Champion Spark Plug: REM38S; Mis-manufactured; ATA 7421

(A Maule aircraft sporting a Lycoming IO540 engine is described in this report.)

"We installed new, fine-wire plugs (P/N REM38S) at 1,260 hours," says this submitter. "A problem with the plug's resistors was noticed—engine starting (*was difficult*) when hot. At Annual inspection, seven of the twelve plugs (*were discovered*) to have failed: the resistors were completely open—registering '1' on the OHM meter. The other five plugs were high—one at 36,000 OHMS. All of the plugs were removed and replaced."

Part Total Time: 205.0 hours

Slick Magneto: 6310; Failed Contact Point; ATA 7414

(This defect occurred on a Beech A36 aircraft.)

A repair station mechanic describes this failure. "This engine was running rough—when the magneto switch was moved to the R/H magneto position the engine would stall. (I) performed a run-up to verify the discrepancy. The magneto was removed from the engine and disassembled far enough to find the contact assembly's (P/N M3081) arm was missing the contact point. Further inspection found the missing point—it was removed from the magneto. (I) reassembled the magneto with a new contact assembly IAW the Component Maintenance Manual. Engine run-up was then performed with no defects noted. I suspect an improper crimp of the contact point to the arm (*at the time of manufacture as the cause of this failure*)."



(The SDRS database records P/N M3081 22 times.)

Part Total Time: 10.0 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

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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
2012FA0000506				POINTS	MISMANUFACTURED
7/22/2012				M3081	MAGNETO
<p>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,</p>					
2012FA0000507		CFMINT	CFMINT	TURBINE	DESTROYED
7/23/2012		CFM567B262		1759M36P02	ENGINE
<p>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.</p>					
2012F00140		LYC		SPARK PLUG	MISMANUFACTURED
7/20/2012		LTIO540J2BD		RHB32E	ENGINE
<p>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.</p>					
2012FA0000500	BEECH			ROD END	SEPARATED
7/3/2012	95			3582518512	NOSE GEAR
<p>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.</p>					
2012FA0000497	BEECH	CONT	SLICK	IMPULSE COUPLING	CRACKED
7/10/2012	A36	IO550B		10400309	LT MAGNETO
<p>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.</p>					
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
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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
7/12/2012	172S	IO360L2A	LW19001	DAMAGED
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 REPLACED.

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 LAVATORY 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 EMANATE 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 UNTIL 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 PLUNGER 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
<p>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.</p>				
2012FA0000589	PIPER	LYC	BRUSHES	FAILED
8/5/2011	PA32R300	IO540K1A5		HYD POWER PACK
<p>ON DEPLOYING LANDING GEAR, COULD NOT GET A NOSE GEAR INDICATION. RAN THROUGH EMERGENCY 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.</p>				
2012FA0000480	PIPER	LYC	LANDING GEAR	FAILED
6/4/2012	PA46R350T	TIO540AE2A	89137041	NOSE
<p>SB 1103D WAS 212 HOURS OVERDUE WHEN THE NOSE GEAR COLLAPSED AFTER LANDING CAUSING SUBSTANTIAL DAMAGE TO THE AIRCRAFT.</p>				
UVVR2012071800023	RAYTHN		MOUNT	FRACTURED
7/17/2012	HAWKER800XP			ZONE 500
<p>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.</p>				
2012FA0000489	SOCATA		BRIDAL CABLE	DISENGAGED
7/19/2012	TBM700		T700A2210024000	AUTOPILOT
<p>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.</p>				
2012FA0000513	SWRNGN	GARRTT	FUEL CONTROL	FAILED
6/10/2012	S2RG6	TPE3316252M	89777012	ENGINE
<p>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</p>				

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").
