



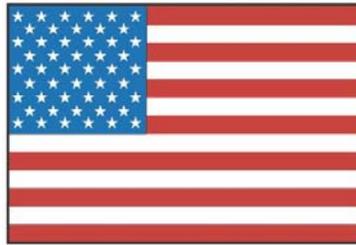
U.S. Department
of Transportation
**Federal Aviation
Administration**

AFS-600
Regulatory Support Division

ADVISORY CIRCULAR

43-16A

AVIATION MAINTENANCE ALERTS



**ALERT
NUMBER
346**



**MAY
2007**

CONTENTS

AIRPLANES

BEECH	1
CESSNA	1
LEARJET	3
PIPER.....	3
SPENCER.....	5
VAN'S	7

POWERPLANTS

CONTINENTAL	8
VOLKSWAGEN	8

AIR NOTES

INTERNET SERVICE DIFFICULTY REPORTING (iSDR) WEB SITE.....	10
IF YOU WANT TO CONTACT US	11
AVIATION SERVICE DIFFICULTY REPORTS	11

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

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience, cooperating in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via a Mechanical Reliability Report (MRR), a Malfunction or Defect Report (M or D), or a Service Difficulty Report (SDR). Your comments and suggestions for improvement are always welcome. 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

Beech: B200; Defective Receiver-Driers; ATA 2170

A repair station technician writes, "This King Air aircraft—and many others—have had air conditioner shut-downs because of defective receiver-driers. We have cut open the effected driers and found that the filter screens have collapsed. This creates a low pressure suction when the screen collapses and drives the system down to the point the low pressure switch activates and shuts down the system. I write this because this pressurized aircraft gets very hot in the summer months. This could pose a safety issue. Many aircraft have had several receiver-driers replaced. It seems *(this part)* has to be replaced several times before a good part is *(finally)* installed." *(Receiver-drier part numbers: manufacturer—1936T100-7; aircraft—101-384079-5.)*

Part Total Time: 5.0 hours.

CESSNA

Cessna: 208B; Sheared Rivets in Induction Chamber; ATA 7160

About this Cessna Caravan a mechanic writes, "While removing the engine for a scheduled overhaul we noticed five rivets sheared off the top half of the induction air plenum band assembly (P/N 2658047-1). A sheared rivet head can easily fit through the engine inlet screen and could be ingested by the engine, causing great damage or total engine failure. We hope this information makes owners of Caravans aware of this problem before it happens to them." *(Top plenum assembly part number: 2658047-1; bottom 2658047-2.)*

P/N 2658047-1 Top Side



Part Total Time: (unknown).

Cessna: CE-560; Burned Florescent Light Power Supply; ATA 3320

“Smoke was reported in the cabin,” writes the submitter. “(We) found the left forward fluorescent light protected power supply showing signs of overheating. (We) removed the protected power supply P/N TR922 and installed P/N AL-5112. (As a precautionary measure we...) changed the inverter connected to this power supply—removing P/N 18-994 and installing P/N AL-5114. System operational checks were normal.”

(The FAA Service Difficulty Reporting System data base records a similar lighting defect on a Cessna 550. In this report the writer states, “The AL5112 power supply does not have enough power to light the forward cabin fluorescent bulbs. It is rated to ‘inches of bulb’—the manufacturer having 2 bulbs equaling 69 inches installed.” This technician describes replacing multiple parts to no avail—that even the aircraft tech-reps were stumped.”
“...we came to the conclusion the manufacturer created a lighting system using this AL5112 part, but they seem to have overlooked the fact each power supply can only power up to 52 inches of bulb.” Unfortunately, this report does not include references for the conclusion or a description of their solution. The Airworthiness Directive data base has one entry referencing the indirect lighting system—AD 88-06-02—through a Cessna 550 service letter; its relevance to the power supply is unknown. No similar AD was found for the 560.)

Part Total Time: 8,449.0 hours.

LEARJET

Learjet: 45; Failed Air Data Computer; ATA 3140

“Thirty minutes into a flight with only the crew (*onboard*), this aircraft experienced multiple failures associated with loss of the number one Air Data Computer (*resulting in*) subsequent loss of cabin pressurization,” says this air taxi operator. “With the cabin (*pressure*) exceeding 10,000 feet but not more than 11,000 feet, emergency pressurization initiated normally, but the cabin oxygen masks did not deploy. Emergency check list procedures for all failures and loss of cabin pressure were initiated and followed—the crew donned oxygen masks as a precaution. An in-flight emergency was declared with air traffic control, and the aircraft (*then*) landed back (*at its base*) with no incident.

“Subsequent trouble shooting from maintenance determined the number one ADC failure (*led*) to the cabin pressurization loss. (*This unit*) was replaced with an inspected (*serviceable*) unit. Ground (*and in-flight*) functional checks and cabin pressurization were performed with satisfactory results. (*Our*) recommendation is for the FAA and the manufacturer to investigate the possibility of ADC failure scenarios initiating loss of pressurization. (*Troubleshooting*) and experience by maintenance supervisors led to this conclusion.” (*The part name and number is AZ-850 Air Data Computer; 7014700-606. The FAA Service Difficulty Reporting System data base reflects two additional entries when the last digit is cropped from the part number.*)

Part Total Time: (unknown).

PIPER

Piper: PA28R-201; Broken Engine Mount; ATA 7120

A repair station technician writes, “During a routine scheduled maintenance inspection the engine mount was (*found*) cracked just above the weld on the R/H side of the mount, just above the aft drag link mount point. Upon further inspection the lower horizontal tube most outboard was also (*found*) bent (*in the area*) toward the front part of the mount by the landing gear attach point. No hard landings had been reported.”

(*The engine mount part number listed is 67119-57. Eight additional entries can be found in the FAA Service Difficulty Reporting System data base.*)



Part Total Time: 4,437.1 hours

Piper: PA44-180; Improperly Repaired Ailerons; ATA 5751

(The following combines seven defect reports on the same make and model aircraft. Each report is from the from the same repair station and written by its chief inspector.)

“During power off, clean configuration stalls, the aircraft would suddenly break left and—if not immediately stopped—could lead to a spin. After re-rigging all flight controls (*and confirming aircraft alignment with laser equipment*), several test flights were performed, both by company pilots and a Piper Factory test pilot. It was determined we had “FAT” ailerons on our fleet of Seminolos. Piper has a history of aileron skin cracking. For (*our operation*) this recurring defect has just been on the R/H ailerons. Once the crack is past a certain point one either has to replace the effected skin OR replace the aileron. During skin replacement, if the pre-formed factory skin is spread apart—even a little—the trailing edge takes on a “fat” condition. This leads to the aileron not having the proper profile and (*as result*) creates “lift” at that portion of the aileron, causing control problems. This may seem like a small problem, but it can have big consequences. Also, when replacing the skins, the mechanic must be aware of and maintain the 1.79 degree washout built into the factory aileron. Unfortunately, this information is not currently in the Piper Maintenance Manuals. At this point we have replaced all of our right ailerons with new Piper units and the aircraft now exhibit normal flight characteristics.” (*Aileron P/N 86562025. More information may be forth coming on this topic from the local district office FAA inspector.*)

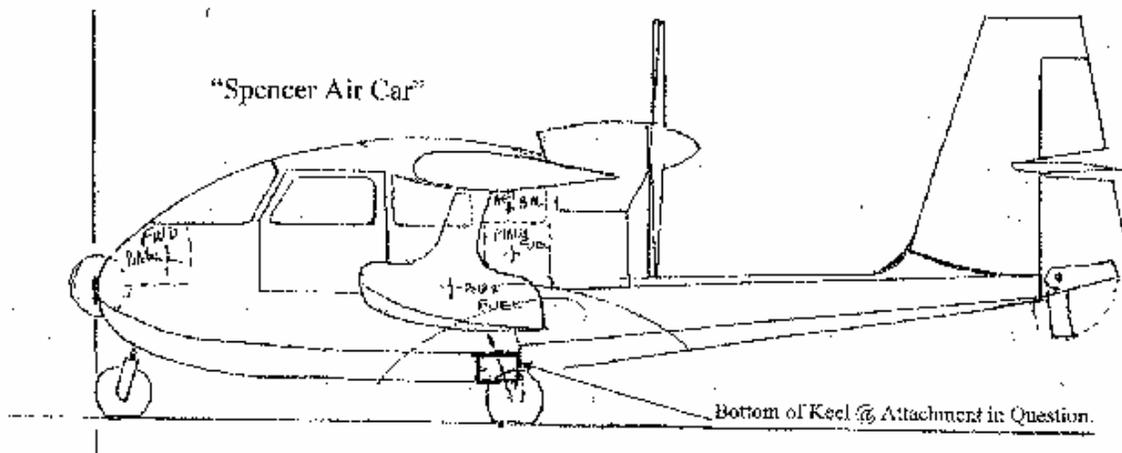
Part Total Time: 3,634.3 hours (*average of seven*).

SPENCER

Spencer Air Car: S12D; Corroded/Dry Rot Keel Beam; ATA 5314

(An inspector from the Des Moines Iowa Flight Standards District Office (FSDO) submitted this discrepancy and its attached photos.)

“During an accident investigation of a Spencer S12D, the airframe rear keel support was found to have excessive corrosion and the wooden structure attached to the keel was dry rotted. Although the corrosion is evident, we believe it was not a cause of the accident. This aircraft—built in 1975—was operated in a salt water environment. It had (*recently*) received a condition inspection, (*...however, we observed*) ...there was no access (*provision*) for inspecting the keel support located aft of the passenger compartment. It is recommended an access panel be made to inspect the keel assembly, and for it to be inspected at least (*during*) every condition inspection.”



(The following two pictures have been slightly compressed in the vertical dimension.)





Part Total Time: 2,437.0 hours.

VAN'S

Van's Aircraft: RV-4; Loose Purge Valve Stop Screw; ATA 7324

(The FAA's Atlanta Aircraft Certification Office is cooperating with the National Transportation Safety Board with respect to this defect and its contribution to an accident. Aerospace Engineer Jerry Robinette provides the following admonition. Contact information for this ongoing safety action is found at the end of the report.)

“In December 2006, a RV-4 experimental airplane had a loss of engine power and made a forced landing. The pilot stated he was in cruise flight when the engine lost power. He attempted an engine restart with negative results. While making the forced landing to what appeared to be an open field, he discovered the field was terraced. He collided with a terrace and nosed over inverted.

“Post accident investigation revealed the Lycoming engine had been modified with an aftermarket fuel injection system. Shortly after initial installation, the injection system developed a fuel leak in the flow divider and was returned to the manufacturer for repair. After repair the unit performed well until placed in temporary storage. When the airplane was removed from storage, the fuel injection system was returned to the manufacturer for recalibration. After reinstallation, the airplane was flown for over a year until the accident occurred. It should be noted the pilot, who installed the fuel injection system, holds an FAA repairman certificate (experimental aircraft builder) to perform condition inspections on the aircraft constructed by the holder and in accordance with the operating limitations of that aircraft.

“Because the engine was not damaged extensively in the accident, several attempts were made to start it but were unsuccessful. Examination of the purge valve/flow divider revealed the purge valve stop screw was not safety wired and the valve body had migrated out approximately 1/8th inch. The purge valve was removed from the system by rerouting the fuel line directly to the flow divider/distribution block. The engine was started, run at idle, advanced to high power and then shut down.

“When the injection system was received from the manufacturer after the fuel leak incident, the purge valve stop screw was safety wired. However, it appears after the unit was returned for calibration, the stop screw was not safety wired and eventually backed out far enough to cause the engine to lose power.

“The lesson to be learned from this matter is the owner/operator and/or the mechanic must insure any equipment or component that has been repaired, overhauled, calibrated, etc. should be inspected closely to ensure the unit is in an airworthy condition and can be returned to service. This applies equally to certificated products/components as it does to experimental/amateur built.”

(For further information contact Aerospace Engineer Jerry Robinette: Atlanta Aircraft Certification Office, One Crown Center, Suite 450, 1895 Phoenix Blvd., Atlanta, GA. 30349. Phone 770-703-6096; fax 770-703-6097; e-mail jerry.robinette@faa.gov).

POWERPLANTS

CONTINENTAL

Continental: IO520R; Eroded Pistons; ATA 8520

“(I) found the number six piston eroded from possible detonation by unknown causes,” writes a repair station technician. “I found the number five cylinder (*piston*) connecting rod cap missing and internal damage to the crankcase. No oil was noted on the dipstick—(*the oil*) presumed to be forced out of the engine due to excessive blow-by from the eroded number six (*piston*). This engine was shut down (*in flight*) and the aircraft landed in a grass field with no damage.”

Part Total Time: (unknown).

VOLKSWAGEN

Volkswagen: 2007cc; Failed Crankshaft; ATA 8510

This engine is attached to an experimental airplane known as a Cygnet SF2A. Its owner, a resident of Arizona writes in attached information, “...I departed Ryan Field on runway 24 left. At about 2 miles N.W. and 3700 feet altitude the aircraft nose jolted and the windscreen began oiling up. I executed a 180 degree turn, contacted the tower, and notified them of a problem. A safe landing was effected on runway 15. Upon exiting the airplane I noted the prop and flange were missing....”

Additional information with this report continues: “The engine speed was approximately 3100 RPM...with an airspeed of 104 MPH. Failure (*of the “Scat” brand crank*) occurred about 10 inches behind the propeller and aft of the front bearing (*three inches into the engine case*). The crankshaft failed diagonally with an approximate 45 degree break. The propeller and crankshaft stub departed cleanly with no resulting damage to the airframe.”



(Let's see: 2 miles out and roughly 2,200 feet AGL...a windscreen full of oil during a 180-degree turn, no power, and radio communication during an emergency landing —this low-time pilot would be grateful to get the plane on the ground—skip the multitask laundry list! So—where is the story on how and where you managed to find the prop for the great pictures? Thanks for leaving this reader chewing his fingers—Ed.)

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) data base 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, Mechanical Reliability Reports (MRRs), 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/>.

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

The SDRS and iSDR web site point of contact is:

Tom Marcotte
Service Difficulty Reporting System, Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125
Telephone: (405) 954-6500
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 submitted for the previous month, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. 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
2007FA0000280				BEARING	INACCURATE
3/12/2007				452552	LANDING GEAR
<p>PN 96522-00, CENTERING SPRING ASSY, HAS A ROD END BEARING ON THE END OF THE SHAFT, WHICH BOLTS TO THE IMMOVABLE PORTION OF THE NOSE GEAR. ORIGINAL ROD END BEARING IS .375 INCH THICK WHERE BOLT GOES THRU. NEW ROD END BEARING THAT COMES WITH PN 96522-00 ASSY, IS .433 INCH THICK AND RELOCATES CLEVIS BOLT PN AN24-20A .0625 INCH DOWNWARD (UNFAVORABLE) AND CONTRADICTS REQUIREMENTS OF MFG MSB 893. (K)</p>					
200345493				OIL FILTER	DEFECTIVE
3/16/2007				4012T16P01	OIL SYSTEM
<p>INTERNAL BORE TO EACH END OF THE OIL FILTER ASSEMBLIES ARE SHARP AND UNSMOOTH. THIS CONDITION WAS NOTED ON 3 ADDITIONAL FILTERS IN OUR STOCK, LOT 583085. THIS CONDITION CAUSES THE PACKINGS ON THE OIL FILTER BODY TO SHEAR UPON INSTALLATION OF THE FILTER ELEMENT AND COULD CAUSE OIL BYPASS TO OCCUR. THIS FILTER ELEMENT IS USED. (K)</p>					
2007FA0000193				ROTOR	BROKEN
2/13/2007				6350	MAGNETO
<p>ROTOR AT ROTOR GEAR AND BROKEN. (K)</p>					
2007FA0000234				BLADE	MISREPAIRED
3/17/2007				F8483	PROPELLER
<p>(REF NR: 38430A) 2 OF 3 PROPELLER BLADES WERE PREVIOUSLY REPAIRED USING AN UNAPPROVED WELD METHOD IN SEVERAL LOCATIONS ON THE BLADE AIRFOIL. THE BLADES HAVE BEEN SCRAPED PENDING DISPOSITION INSTRUCTIONS FROM MFG. THE CUSTOMER HAS BEEN CONTACTED FOR HISTORICAL RECORDS. (K)</p>					
2007FA0000313		GARRTT		BEARING	MISINSTALLED
3/30/2007		TPE33110U		31030351	IDLER GEAR
<p>SUBASSEMBLY BEARINGS TO 2ND IDLER GEAR ASSEMBLED BACKWARDS, CAGE FAILED.</p>					
200701	ACQCOR	PWA		GEARBOX	MISDRILLED
3/28/2007	F22	JT15D4		311300001	ACCESSORY G/B
<p>ENGINE WAS ROUTED TO OUR FACILITY FOR OVERHAUL AND DURING A FLUSHING PROCESS WE DISCOVERED A WALL IN AN ACCESSORY GEARBOX WITH A MISDRILLED OIL PASSAGE. THE OIL PASSAGE DID SUPPLY OIL TO THE REQUIRED AREA BUT IT BROKE THROUGH THE WALL DURING THE MANUFACTURING PROCESS RESTRICTING THE OIL SUPPLY. THE ENGINE HAS BEEN OPERATING WITH THIS CONDITION WITH NO APPARENT EFFECT. THE AGB COMPONENTS WAS INSPECTED AND NO DAMAGE WAS FOUND AS A RESULT OF THIS CONDITION.</p>					
THMN4346177	AMD			ATTACH BRACKET	CRACKED
4/10/2007	FALCON10				LT NLG DOOR
<p>LT NOSE LANDING GEAR DOOR ATTACH POINT IN THE LT NOSE COMPARTMENT HAS 2 EA CRACKS AT FRAME C.</p>					

MADE AIRWORTHY REPAIR IAW SRM 51-20-02-0, 51-40-11, AND 51-40-13.

THMN4346179	AMD		SPLICE PLATE	CRACKED
4/10/2007	FALCON10			FUSELAGE

SPLICE PLATE ON RT SIDE OF CABIN AT FRAME 13 JUST BELOW WINDOW LINE CRACKED. MADE AIRWORTHY REPAIR IAW SRM 51-00-01 FIG. 201 AND 51-40-11.

THMN4346176	AMD		ATTACH BRACKET	CRACKED
4/10/2007	FALCON10			RT NLG DOOR

RT NOSE LANDING GEAR DOOR ATTACH POINT IN THE RT NOSE COMPARTMENT HAS 2 EA CRACKS AT FRAME C. MADE AIRWORTHY REPAIR IAW SRM 51-20-02-0, 51-40-11, AND 51-40-13.

DJS110DJ	AMTR		TIRE	BLOWN
4/16/2007	ECLIPSE500		40440A	LT MLG

LT MAIN WHEEL AND TIRE ASSEMBLY BLEW OUT DURING TAXI.

2007FA0000260	AMTR		PROPELLER	BROKEN
2/19/2007	KITFOX41200		3BLADEWOOD68	PROPELLER

OWNER REPORTED 5 MINUTES AFTER TAKEOFF AT 2500 ASL, ALL 3 PROPELLER BLADES DEPARTED. THERE WAS ONE VIOLENT SHAKE AND THEN SMOOTH GLIDING TO SAFE LANDING OFF AIRPORT. PRELIMINARY EXAM INDICATES ENGINE MOVED ENOUGH TO CAUSE CARBURETOR TO SEPARATE PREVENTING OVERSPEED. SEPARATED BLADES WERE NEVER LOCATED. PROPELLER TO BE REPLACED BY OWNER, THIS IS AN EXPERIMENTAL HOMEBUILT AIRCRAFT.

UE5R1	BEECH	PWC	PWC	BLADE	CRACKED
4/2/2007	100BEECH	PT6A67AG		3023401	COMPRESSOR DISC

COMPRESSOR TURBINE DISC BLADE FAILURE. SINGLE BLADE IN COMPRESSOR TURBINE DISC CRACKED IN FIR TREE AREA OF BLADE. CAUSED MISALIGNMENT OF CT BLADE AND SUBSEQUENT RUB ON SHROUD SEGMENTS. THE CRACK IN FIR TREE WAS NOT VISIBLE WITH ENGINE SPLIT IF PERFORMING A ROUTINE INSPECTION, HOWEVER BLADE MISALIGNMENT AND RUB WERE VISIBLE. THE BLADE CRACK BECAME VISIBLE WHEN CT DISC ASSY WAS REMOVED FROM ENGINE.

2007FA0000237	BEECH	PWA		WINDSHIELD	CRACKED
3/1/2007	300BEECH	PT6A60A		10138402524	COCKPIT

AT AN ALTITUDE OF 17,000 FT OAT -6 DEGREES C, THE RT WINDSHIELD CRACKED FROM THE CENTER OB FROM THE TOP TO THE BOTTOM ABOUT 2 INCHES OB ON THE OUTER PANE. RETURNED TO THE DEPARTING AIRPORT WITHOUT ANY PROBLEMS. WINDSHIELD WAS REPLACED AND NO KNOWN CAUSE FOR THE WINDSHIELD TO CRACK. (K)

2007FA0000279	BEECH			UPLOCK	OUT OF ADJUST
2/28/2007	400A			45A3952211	NLG

FLIGHT CREW REPORTED RED LANDING GEAR HANDLE WARNING LIGHT STAYING ILLUMINATED AFTER GEAR RETRACTION. LANDING GEAR CYCLED SEVERAL TIMES, HANDLE WARNING LIGHT STAYED ILLUMINATED. FOUND NOSE LANDING GEAR UPLOCK NOT FULLY ENGAGING ADJUSTED NOSE LANDING GEAR UPLOCK AS REQUIRED IAW THE MM. LANDING GEAR RETRACT/ EXTENSION CHECKS OK, NO FAULTS NOTED. HAVE NOTED THIS FAULT ON LOW TIME AC SEVERAL TIMES, PARTICULARLY DURING COLD WEATHER OPERATION UPLOCK ADJUSTMENT FAULTS USUALLY SHOW UP DURING MM FUNCTIONAL TESTS DURING THE LOW PRESSURE/LOW FLOW TESTS. (K)

M40675	BEECH	PWA		ACTUATOR	INOPERATIVE
3/20/2007	400A	JT15D5		45AS610023139	PITCH TRIM

DIFFICULTY OCCURRED UPON DESCENT. PILOT RECEIVED A WARNING PITCH TRIM WAS NOT SYNCHRONIZED WITH AUTOPILOT SYSTEM AND TO PREPARE FOR RESISTANCE WHEN AUTOPILOT IS DISCONNECTED. PITCH TRIM ACTUATOR WAS FOUND INOPERATIVE IN THE EMERGENCY MODE/AUTOPILOT MODE. REPLACED PITCH TRIM UNIT

AND RETURNED AIRCRAFT TO SERVICE. THIS AIRCRAFT WAS LAST INSPECTED ON 11-9-06 AT 1408.6 TT.

40675	BEECH	PWA	ACTUATOR	INOPERATIVE
3/20/2007	400A	JT15D5	45AS610023139	PITCH TRIM

DIFFICULTY OCCURED UPON DESCENT. PILOT RECIEVED A WARNING PITCH TRIM WAS NOT SYNCRONIZED WITH AUTOPILOT SYSTEM AND TO PREPARE FOR RESISTANCE WHEN AUTOPILOT IS DISCONNECTED. PITCH TRIM ACTUATOR WAS FOUND INOPERATIVE IN THE EMERGENCY MODE/AUTOPILOT MODE. REPLACED PITCH TRIM UNIT AND RETURNED AIRCRAFT TO SERVICE. THIS AIRCRAFT WAS LAST INSPECTED ON 11-9-06 AT 1408.6 TT.

2007FA0000196	BEECH	GARRTT	COVER	BROKEN
2/20/2007	B100	TPE3316	8961051	LT ENGINE

PILOT REPORTED HIGH OIL CONSUMPTION, INSPECTED LT ENGINE SCAVENGE PUMP AND FOUND THE PUMP COVER BROKEN AND MISSING PIECES. ALSO FOUND THE SCAVENGE PUMP OIL TUBE COVER BROKEN AND CHAFING A HOLE THROUGH THE OIL TUBE. RECOMMEND REMOVING EXHAUST PIPE AT INSPECTIONS TO INSPECT PUMP COVER AND TUBE ASSY FOR DEFECTS. (K)

2007FA0000309	BEECH		PIN	BROKEN
4/2/2007	B200		508103437	ZONE 700

UPON EXTENDING THE LANDING GEAR, THE PILOTS GOT A RED GEAR UNSAFE LIGHT IN THE HANDLE, AND THE LT DOWN AND LOCKED LIGHT WAS NOT LIT UP. THE PILOTS TRIED TO EXTEND THE GEAR MANUALLY, BUT THE HANDLE WOULD NOT EXTEND THE GEAR ANY FURTHER, THE PILOTS RETRACTED THE GEAR AND THE RED LIGHT STAYED ILLUMINATED, THE GEAR WAS EXTENDED AGAIN, STILL THE LT DOWN AND LOCKED LIGHT WAS OFF AND THE RED LIGHT IN THE HANDLE WAS ON. THE PILOTS DECLARED AN EMERGENCY AND LANDED THE AIRCRAFT, WITH NO OTHER EVENTS. THE AIRCRAFT WAS JACKED UP, AND THE LANDING GEAR WAS INSPECTED. THE LT MAIN DOWN LOCKING ASSY PIN WAS FOUND TO BE BROKEN AND HANGING OUT OF THE LOCK HOLES, PREVENTING THE GEAR FROM FULLY EXTENDING AND RETRACTING. THE PIN WAS REPLACED AND A GEAR OPERATIONAL CHECK WAS PERFORMED WITH NO OTHER PROBLEMS.

2007FA0000308	BEECH		PIN	BROKEN
4/2/2007	B200		508103437	LT MLG

UPON EXTENDING THE LANDING GEAR, THE PILOTS GOT A RED GEAR UNSAFE LIGHT IN THE HANDLE, AND THE LT DOWN AND LOCKED LIGHT WAS NOT LIT UP. THE PILOTS TRIED TO EXTEND THE GEAR MANUALLY, BUT THE HANDLE WOULD NOT EXTEND THE GEAR ANY FURTHER, THE PILOTS RETRACTED THE GEAR AND THE RED LIGHT STAYED ILLUMINATED, THE GEAR WAS EXTENDED AGAIN, STILL THE LT DOWN AND LOCKED LIGHT WAS OFF AND THE RED LIGHT IN THE HANDLE WAS ON. THE PILOTS DECLARED AN EMERGENCY AND LANDED THE AIRCRAFT, WITH NO OTHER EVENTS. THE AIRCRAFT WAS JACKED UP, AND THE LANDING GEAR WAS INSPECTED. THE LT MAIN DOWN LOCKING ASSY PIN WAS FOUND TO BE BROKEN AND HANGING OUT OF THE LOCK HOLES, PREVENTING THE GEAR FROM FULLY EXTENDING AND RETRACTING. THE PIN WAS REPLACED AND A GEAR OPERATIONAL CHECK WAS PERFORMED WITH NO OTHER PROBLEMS.

2007FA0000269	BEECH	PWA	NONE	UNKNOWN
3/21/2007	C90	PT6A21		PROPELLER

AIRCRAFT HAS RAISEBECK STC SA3593NM INSTALLED WHICH STATES THE PROPS ARE NOT TO BE OPERATED BELOW THE SET MINIMUM RPM. PRE PHASE INSPECTION RUNS REVEALED THIS CONDITION. IAW MFG SERVICE LETTER 61-254 THIS CAN CAUSE NO REACTION MODE VIBRATORY RESONANCE AND MAY RESULT IN HIGH STRESS IN THE BLADES. IT WAS RECOMMENDED THAT THE PROPELLERS BE REMOVED AND BE SENT TO A PROPELLER SHOP FOR INSPECTION. CUSTOMER DECLINED RECOMMENDATION. NO FURTHER ACTION WAS TAKEN AT THIS INSPECTION. BOTH THE LT AND RT PROPELLERS HAVE A TSO OF 957.9 AND A TT OF 2615.2

FMOR20070002	BEECH	PWA	CONTROL CABLE	FRAYED
4/10/2007	C90A	PT6*	NAS302665170	FS 216

THE ELEVATOR TRIM CABLE BEGAN UNRAVELING JUST FORWARD OF THE CABIN DOOR. FROM THERE THE CABLE BEGAN BINDING IN A PULLEY UNDERNEATH THE PILOT'S SIDE FORWARD FACING PASSENGER CHAIR CAUSING STIFFNESS OF OPERATION BY HAND AND THE MALFUNCTION OF THE ELECTRIC TRIM SYSTEM LEADING TO THE EVENTUAL INOPERATION OF THE ELEVATOR TRIM. THE ISSUE MOST LIKELY AROSE DUE TO AGE. WHILE UNDER

THE SCHEDULED INSPECTION PROGRAM OUTLINED BY MFG THE INSPECTION OF THESE AREAS OCCURS ONCE EVERY (2) YEARS OR 800 HOURS.

2007FA0000270	BEECH	CONT	CONTROL CABLE	WORN
3/26/2007	N35	IO470*	35524314	AILERONS

(REF MODEL 35 SERIES IPC FIG. 27) LT AILERON CABLE FOUND RIDING ON PROP CONTROL CABLE SHEATH, ABOUT 2 INCHES AFT OF FIREWALL. AILERON CABLE WAS WORN ABOUT HALF THROUGH, AND THE PROP CABLE WAS WORN THROUGH THE SHEATH TO THE INNER STEEL CABLE. (VERY DIFFICULT TO ACCESS THIS AREA FOR VISUAL INSPECTION.) NO INDICATION OF RUBBING OR DRAGGING DURING GROUND CONTROL SYSTEM CHECKS, OR IN FLIGHT. IT IS RELATIVELY EASY TO HAVE THE PROP CONTROL CABLE DISPLACED INTO CONTACT WITH THE AILERON CABLE WHEN WORKING IN THIS AREA DURING, FOR EXAMPLE, PANEL MODIFICATIONS OR AVIONICS UPGRADES. RECOMMEND VISUAL AND TACTILE INSPECTION IN THIS AREA TO CONFIRM CLEARANCE. UPON REMOVAL OF CABLE ASSEMBLY FOR REPLACEMENT, FOUND ADDITIONAL DAMAGE DUE TO A RIVET CAPTURED BETWEEN THE PULLEY AND THE CABLE AT THE LOWER PULLEY INSTALLATION. THIS AREA IS BASICALLY UNABLE TO BE INSPECTED WITHOUT REMOVAL OF PULLEYS, AND IS OPEN AT THE TOP CREATING A FOD TRAP. RECOMMEND CLOSING OUT THE UPPER SECTION OF THE PULLEY SUPPORT STRUCTURE WITH FUEL CELL TAPE (OR SOMETHING EQUALLY SIMPLE) THAT WOULD NOT POSE A HAZARD TO THE CABLE.

2007FA0000297	BELL	LYC	BLADE	DAMAGED
3/5/2007	47G5	VO435*	HAC473	TAIL ROTOR

THE STAINLESS STEEL ABRASION STRIP ON THE LEADING EDGE OF THE COMPOSITE TAIL ROTOR BLADE SEPARATED FROM BLADE IN FLIGHT. PILOT NOTED A VIBRATION IN A SPRAY TURN AND ELECTED TO LAND; AND LANDED SAFELY (NO INJURIES).

2007FA0000336	BOLKMS	LYC	RADIO	SHORTED
4/16/2007	BK117A1	LTS101650B1	0464105430	NR 2 COMM

WHILE SHUTTING DOWN AIRCRAFT THE CREW NOTED A WHIFF OF SMOKE AND ELECTRICAL SMELL IN THE COCKPIT. FOUND THE NR (2) COMM RADIO INTERNALLY SHORTED.

QXEANM09402	BOMBDR	PWC	SUNDSTRANDEM	DRAIN VALVE	MISINSTALLED
3/15/2007	DHC8402	PW150A		164161100	APU

BALL ON WRONG SIDE OF SPRING, WHICH ALLOWS IT TO REST IN CLOSED POSITION, NOT ALLOWING PROPER DRAINAGE.

QXEANM09417	BOMBDR	PWC		DRAIN VALVE	PLUGGED
3/14/2007	DHC8402	PW150A		164161100	APU

BALL ON WRONG SIDE OF SPRING ALLOWING IMPROPER DRAINAGE.

2007FA0000357	CESSNA	LYC		LANDING GEAR	BROKEN
4/25/2007	152	O235L2C			NOSE

NOSE LANDING GEAR BROKE AT HARD NOSE LANDING, NO EVIDENCE OF PREVIOUS CRACKS.

2007FA0000221	CESSNA	LYC		CRANKSHAFT	CORRODED
2/22/2007	172R	IO360L2A			ENGINE

DURING NORMAL OVERHAUL, CRANKSHAFT FOUND PITTED IN THE INTERNAL BORE. THIS ENGINE WAS LAST OVERHAULED BY THE FACTORY, JULY 2002.. THE PID COATING DOES NOT SEEM TO PREVENT PITTING OR CORROSION. (K)

2007FA0000301	CESSNA	LYC		NUT	MISMANUFACTURED
4/6/2007	172S	IO360A1A			

WHILE INSTALLING KIT MK172-25-10C TO COMPLY WITH SB 04-25-01 R4 AND AD 2007-05-10, ONE OF THE PARTS IN THE KIT WAS MACHINED IMPROPERLY. THE HEIGHT ADJUSTING NUT HAD THE THRU HOLE FOR THE ULTRALOC WITH MIS FORMED THREADS. THE MINOR DIAMETER OF THE THREAD WAS GREATER THAN THE MAJOR DIAMETER OF THE THREADS ON THE ULTRALOC. THE CROSS HOLE FOR MOUNTING WAS INCORRECTLY

LOCATED WITH INSUFFICIENT EDGE DISTANCE, AND THE PILOT HOLE WAS OFFSET GIVING AN EGG SHAPED HOLE.

2007FA0000310	CESSNA	LYC	NUT	MISMANUFACTURED
4/6/2007	172S	IO360A1A	07900072	KIT

WHILE INSTALLING KIT MK172-25-10C TO COMPLY WITH SB 04-25-01 R4 AND AD 2007-05-10, ONE OF THE PARTS IN THE KIT WAS MACHINED IMPROPERLY. THE HEIGHT ADJUSTING NUT HAD THE THRU HOLE FOR THE ULTRALOC WITH MALFORMED THREADS. THE MINOR DIAMETER OF THE THREAD WAS GREATER THAN THE MAJOR DIAMETER OF THE THREADS ON THE ULTRALOC. THE CROSS HOLE FOR MOUNTING WAS INCORRECTLY LOCATED WITH INSUFFICIENT EDGE DISTANCE, AND THE PILOT HOLE WAS OFFSET GIVING AN EGG SHAPED HOLE.

2007FA0000316	CESSNA		TRANSDUCER	MALFUNCTIONED
4/6/2007	180		0111	AUTO PILOT

ALTITUDE HOLD WAS INOP. WHEN SELECTED THE A/C WOULD PITCH EITHER UP OR DOWN IMMEDIATELY, OR THE A/C WOULD MAINTAIN ALTITUDE FOR A SHORT TIME AND THEN PITCH IN EITHER DIRECTION. COMPUTER AND PRESSURE TRANSDUCER WERE SENT TO STEC OF TESTING. BOTH UNITS WERE RETURNED AS SERVICEABLE. AFTER INSTALLATION THE PROBLEM WAS STILL THERE. REPLACED THE TRANSDUCER WITH A KNOWN GOOD PART AND PROBLEM WAS SOLVED. STEC ACTED ASTONISHED THAT THEIR BENCH CHECK WOULD NOT FIND THE PROBLEM!

2007FA0000319	CESSNA	STEC	TRANSDUCER	MALFUNCTIONED
4/6/2007	180		0111	ZONE 200

ALTITUDE HOLD WAS INOPERATIVE. WHEN SELECTED THE A/C WOULD PITCH EITHER UP OR DOWN IMMEDIATELY, OR THE A/C WOULD MAINTAIN ALTITUDE FOR A SHORT TIME AND THEN PITCH IN EITHER DIRECTION. COMPUTER AND PRESSURE TRANSDUCER WERE SENT TO STEC FOR TESTING. BOTH UNITS WERE RETURNED AS SERVICEABLE. AFTER INSTALLATION THE PROBLEM WAS STILL THERE. REPLACED THE TRANSDUCER WITH A KNOWN GOOD PART AND PROBLEM WAS SOLVED. STEC ACTED ASTONISHED THAT THEIR BENCH CHECK WOULDN'T FIND THE PROBLEM!

2007FA0000317	CESSNA	STEC	TRANSDUCER	MALFUNCTIONED
4/6/2007	180		0111	AUTO PILOT

ALTITUDE HOLD WAS INOPERATIVE. WHEN SELECTED THE A/C WOULD PITCH EITHER UP OR DOWN IMMEDIATELY, OR THE A/C WOULD MAINTAIN ALTITUDE FOR A SHORT TIME AND THEN PITCH IN EITHER DIRECTION. COMPUTER AND PRESSURE TRANSDUCER WERE SENT TO STEC FOR TESTING. BOTH UNITS WERE RETURNED AS SERVICEABLE. AFTER INSTALLATION THE PROBLEM WAS STILL THERE. REPLACED THE TRANSDUCER WITH A KNOWN GOOD PART AND PROBLEM WAS SOLVED. STEC ACTED ASTONISHED THAT THEIR BENCH CHECK WOULDN'T FIND THE PROBLEM!

2007FA0000318	CESSNA	STEC	TRANSDUCER	MALFUNCTIONED
4/6/2007	180		0111	ZONE 200

ALTITUDE HOLD WAS INOP. WHEN SELECTED THE A/C WOULD PITCH EITHER UP OR DOWN IMMEDIATELY, OR THE A/C WOULD MAINTAIN ALTITUDE FOR A SHORT TIME AND THEN PITCH IN EITHER DIRECTION. COMPUTER AND PRESSURE TRANSDUCER WERE SENT TO STEC FOR TESTING. BOTH UNITS WERE RETURNED AS SERVICEABLE. AFTER INSTALLATION THE PROBLEM WAS STILL THERE. REPLACED THE TRANSDUCER WITH A KNOWN GOOD PART AND PROBLEM WAS SOLVED. STEC ACTED ASTONISHED THAT THEIR BENCH CHECK WOULDN'T FIND THE PROBLEM!

2007FA0000325	CESSNA	CONT	EXHAUST PIPE	BROKEN
3/25/2007	182A	O470*		RT EXHAUST

RT EXHAUST BROKE AT ELBOW, PART HAD BEEN REPAIRED 544 HRS AGO. DID NOT SHOW ANY CRACK 50 HRS EARLIER. DO NOT REPAIR EXHAUST PARTS THAT HAVE 1000 HRS ON THEM. (K)

2007FA0000334	CESSNA	CONT	BULKHEAD	CRACKED
4/2/2007	182L	O470*	07126161	FUSELAGE

SMALL CRACK AT RUDDER CABLE CUTOUT IB, APPROX .2500 INCH, NO CAUSE.

2007FA0000342	CESSNA	CONT	CONT	CONNECTING ROD	FAILED
4/21/2007	402B	TSIO520E	TSIO520E	655910	RT ENGINE

DURING CLIMB AFTER THE POWER HAD BEEN REDUCED FROM THE TAKEOFF SETTING, THE RT ENGINE STARTED TO VIBRATE. THE PILOT COULD SEE OIL SPLASHING FROM AROUND THE OIL ACCESS DOOR AND RUNNING BACK ON THE TOP COWLING. THE PILOT SHUTDOWN THE ENGINE AND FEATHERED THE RT PROPELLER. THE PILOT RETURNED TO THE DEPARTURE AIRPORT AND LANDED WITHOUT FURTHER INCIDENT. UPON INITIAL INVESTIGATION, A LARGE HOLE WAS FOUND IN THE CRANKCASE ABOVE THE NR 4 ROD JOURNAL. THE NR 4 CONNECTING ROD WAS SEPARATED FROM THE CRANKSHAFT AND PROTRUDING FROM THE HOLE IN THE CASE. THE NR 4 CONNECTING ROD CAP WAS ALSO SEPARATED FROM THE CONNECTING ROD AND WAS STICKING UP OUT OF THE HOLE.

2007FA0000226	CESSNA	CONT		ENGINE	FAILED
2/20/2007	404	GTSIO520M			

THIS ENGINE FAILED TO THE TERMINOLOGY OF CATASTROPHIC AT THE NR 1 AND NR 2 CYLINDER CONNECTING ROD LOCATIONS DURING A MAINTENANCE TEST FLIGHT WITHIN TEN MINUTES INTO THAT FLIGHT WITH A MECHANIC ON BOARD MONITORING THE ENGINE INSTRUMENTS. THE OIL PRESSURE SUDDENLY DROPPED TO ZERO, THE PROPELLER STARTED TO FEATHER AND DURING SHUTDOWN AND SECURING, THE ENGINE LOCKED UP. PRIOR TO THIS, THE OIL FILTER WAS REMOVED, CUT OPEN AND INSPECTED WITH NO DEFECTS NOTED. AN OIL SOAP SAMPLE WAS TAKEN. THE OIL PUMP AND AIRCRAFT OIL PRESSURE GAUGE WAS CHECKED FOR A POSITIVE OIL PRIME AND INDICATION. AN EXTENDED ENGINE GROUND RUN WAS DONE AT LOW AND HIGH POWER SETTINGS WITH NO OIL PRESSURE DISCREPANCIES NOTED. THESE CHECKS WERE ACCOMPLISHED AFTER A PILOT DISCREPANCY WAS NOTED THAT OIL PRESSURE DROPPED TO ZERO DURING THE PREFLIGHT GROUND RUN CHECKS. THE OIL PUMP ON THIS ENGINE WAS DISASSEMBLED AND INSPECTED. NO DEFECTS OF THE OIL PUMP WERE NOTED. THE ENGINE OIL PAN WAS REMOVED AND THERE WAS A HEAVY AMOUNT OF CRANKSHAFT BEARING MATERIAL ACCUMULATED. THE OIL SOAP TAKEN PRIOR TO THE FAILURE ANALYSIS RESULTS WERE, NO ABNORMAL WEAR DETECTED. THIS ENGINE TT O/H WAS 57 HOURS. NOTE; THERE WAS A SIMILAR FAILURE OF AN OTHER ENGINE OF THIS TYPE JUST 3 MONTHS PRIOR TO THIS ONE, THE TTSOH 123 HRS. WILL UPDATE THIS REPORT WITH A PROBABLE CAUSE AND RECOMMENDATION WHEN MORE INFORMATION AVAILABLE. (K)

2007FA0000295	CESSNA	CONT		BEARING	WORN
3/20/2007	414A	TSIO520*			TURBOCHARGER

FAILURE OF RT TURBOCHARGER SEAL AND CENTER BEARING CAUSED SMOKE OUT OF EXHAUST AND SQUEALING NOISE RESULTING IN THE FLIGHT CREW TO FEATHER PROPELLER AND SHUTDOWN THE ENGINE. CAUSE OF FAILURE DO TO WEAR. (K)

FMOR477K	CESSNA	CONT		UPLOCK HOOK	DISTORTED
4/9/2007	414A	TSIO520*		57412025	MLG

PILOT REPORTED THAT THE LANDING GEAR CAME UNHOOKED FROM THE UP POSITION IN FLIGHT. THE GEAR WAS EXTENDED AND THE AIRCRAFT LANDED. THE AIRCRAFT WAS JACKED AND THE GEAR CYCLED TO THE UP POSITION. WHEN ALL (3) UPLOCK SWITCHES WERE MADE THE RT MAIN GEAR FELL FROM THE WHEEL WELL. A DISTORTED AND CRACKED UPLOCK HOOK WAS FOUND. THE CRACK WAS FROM THE CENTER OF THE HOOK TO THE HOLE FOR THE UPLOCK SWITCH.

FMOR20070001	CESSNA	CONT		UPLOCK HOOK	CRACKED
4/9/2007	414A	TSIO520*		57412025	ZONE 700

PILOT REPORTED THAT THE LANDING GEAR CAME UNHOOKED FROM THE UP POSITION IN FLIGHT. THE GEAR WAS EXTENDED AND THE AIRCRAFT LANDED. THE AIRCRAFT WAS JACKED AND THE GEAR CYCLED TO THE UP POSITION. WHEN ALL (3) UPLOCK SWITCHES WERE MADE THE RT MAIN GEAR FELL FROM THE WHEEL WELL. A DISTORTED AND CRACKED UPLOCK HOOK WAS FOUND. THE CRACK WAS FROM THE CENTER OF THE HOOK TO THE HOLE FOR THE UPLOCK SWITCH.

2007FA0000198	CESSNA	CONT		BOLT	CORRODED
-------------------------------	--------	------	--	------	----------

7/26/2006

421C

GTSIO520*

511150480

PAX DOOR

DURING ACCOMPLISHMENT OF ANNUAL INSPECTION, EXCESSIVE PLAY WAS NOTED AT AFT HINGE POINT OF UPPER MAIN CABIN DOOR. INVESTIGATION REVEALED THAT HINGE BOLT WAS BROKEN, HEAD OF BOLT COULD BE TURNED, BUT END WITH NUT WOULD NOT FOLLOW. TRIED TO REMOVE BOLT BUT WAS UNABLE TO REMOVE EITHER PIECE. ATTEMPTED TO REMOVE FORWARD BOLT AS THE WHOLE DOOR ASSY HAD TO BE REMOVED FOR FURTHER INSPECTION, BUT WERE UNABLE TO REMOVE IT EITHER. HAD TO FINALLY REMOVE HINGES FROM DOOR AND REMOVE HINGE SUPPORTS FROM THE FUSELAGE STRUCTURE. FOUND THAT THE BOLTS AND BUSHINGS IN THE HINGES WERE EXCESSIVELY CORRODED WHICH PREVENTED THEM FROM BEING REMOVED. IN ORDER TO DISASSEMBLE THE FWD HINGE, IT WAS NECESSARY TO HACKSAW OFF THE HEAD AND NUT END OF THE BOLT. FURTHER INSPECTION REVEALED THE FOLLOWING: IPC CALLS OUT FOR AN174-34A BOLTS TO BE INSTALLED. BOLTS THAT WERE ACTUALLY INSTALLED APPEARED TO BE MS20004 INTERNAL WRENCHING HEAD BOLTS. FORWARD HINGE WAS CRACKED. BOLTS THAT WERE INSTALLED WERE SEVERELY CORRODED AND FROZEN TO HINGE BUSHINGS AND BEARINGS(PART OF HINGE ASSY BUT NOT SHOWN IN IPC). FWD HINGE SUPPORT WAS CRACKED INT HE VICINITY OF THE FWD HINGE BOLT HOLE. THE AFT HINGE SUPPORT AFT HINGE BOLT HOLE WAS ELONGATED. SUSPECT THAT THE CAUSE OF THE EXCESSIVE CORROSION IS DUE TO WATER COLLECTING IN THE HINGE SUPPORTS AND NOT BEING ABLE TO DRAIN. THE SUPPORTS ARE ON THE TOP OF THE FUSELAGE AND DUE TO THEIR BEING SEALED TO PREVENT PRESSURIZATION LEAKAGE WATER IS UNABLE TO DRAIN FROM THEM AS THEY FORM SORT OF A TUB. COMPLETE FAILURE OF THE BOLTS DUE TO CORROSION WOULD CAUSE RAPID DECOMPRESSION. INSPECTION OF THE BOLTS IS NOT POSSIBLE UNLESS THE BOLTS AND HINGES ARE REMOVED FRO THE FUSELAGE WHICH IS NOT A ROUTINE OCCURRENCE. IT IS RECOMMENDED THAT AN INITIAL INSPECTION OF THESE BOLTS AND HINGE BUSHINGS AND BEARINGS ON IN-SERVICE BE CONDUCTED AT THE NEXT 100 HOUR/ANNUAL INSPECTION AND REPETITIVE INSPECTION INTERVAL BE ESTABLISHED. PROBLEM HAS BEEN REPORTED TO MFG TECH SUPPORT. (K)

2007FA0000224	CESSNA	PWA	PUROLATOR	FUEL FILTER	SEPARATED
2/15/2007	500CESSNA	JT15D1A		99120154	RT WING

THE RT FUEL FILTER ASSY SEPARATED FROM THE STANDPIPE DUE TO THE SNAP-RING BECOMING DISLODGED AND RESULTED IN A SUBSTANTIAL FUEL LEAK.

2007FA0000302	CESSNA	PWA		ACTUATOR	BINDING
4/3/2007	550	JT15D4		65651412	ELEVATOR TRIM

AFTER A PHASE 1-4 INSPECTION THE ELEVATOR TRIM WAS FOUND TO BE BINDING. INSPECTION OF THIS SYSTEM FOUND THAT THE WILKIE BUTTON IN THE BACK OF THE ACTUATOR TRIM JACK SCREWS HAD COME OUT AND WAS BINDING THE TRIM CHAIN AND SPROCKETS. WHEN THE ACTUATORS ARE LUBED THE WILKIE BUTTONS HAVE A TENDENCY TO POP OUT OF THERE PLACE IF YOU DONT LOOK CLOSELY AFTER LUBING THESE ACTUATORS THE GREASE PUSHES THESE PLUGS OUT AND THEY STICK TO THE INTERCONNECT CHAIN CAUSING A BINDING CONDITION. THIS COULD ALSO HAPPEN IN FLIGHT CAUSING A LIKE CONDITION WITH MORE DIRE PROBLEMS. I THINK MFG SHOULD REMOVE THIS PLUG OR MORE SECURELY FIX THIS PLUG IN PLACE.

2007FA0000303	CESSNA	PWA		ACTUATOR	BINDING
4/3/2007	550	JT15D4		65651412	ZONE 200

AFTER A PHASE 1-4 INSPECTION THE ELEVATOR TRIM WAS FOUND TO BE BINDING. INSPECTION OF THIS SYSTEM FOUND THAT THE WILKIE BUTTON IN THE BACK OF THE ACTUATOR TRIM JACK SCREWS HAD COME OUT AND WAS BINDING THE TRIM CHAIN AND SPROCKETS. WHEN THE ACTUATORS ARE LUBED THE WILKIE BUTTONS HAVE A TENDENCY TO POP OUT OF THERE PLACE IF YOU DONT LOOK CLOSELY AFTER LUBING THESE ACTUATORS THE GREASE PUSHES THESE PLUGS OUT AND THEY STICK TO THE INTERCONNECT CHAIN CAUSING A BINDING CONDITION. THIS COULD ALSO HAPPEN IN FLIGHT CAUSING A LIKE CONDITION WITH MORE DIRE PROBLEMS. I THINK MFG SHOULD REMOVE THIS PLUG OR MORE SECURELY FIX THIS PLUG IN PLACE.

CWQR200702	CESSNA	PWA		FLANGE	CRACKED
4/16/2007	560CESSNA	PW535A		65526022	NACELLE

DURING A PHASE 1-4 INSPECTION A 2.5 INCH CRACK WAS FOUND ON THE ENGINE INLET FLANGE, THIS CRACK PASSES THROUGH (2) FASTENERS THAT ATTACH THE INLET TO THE FLANGE. AND ARE AT THE 3 O'CLOCK POSITION ON BOTH THE LT AND RT ENGINES.

2007FA0000286	CIRRUS			MOUNT	BROKEN
-------------------------------	--------	--	--	-------	--------

3/22/2007	SR20		11925003	ENGINE
ENGINE MOUNT RT FRONT CROSSOVER TUBE BETWEEN LT AND RT ENGINE SUPPORTS FOUND BROKEN AT THE WELD RT SIDE. ENGINE WAS CHANGED ABOUT 250 HRS AGO, NO MENTION OF ENGINE MOUNT DAMAGE. COULD HAVE BEEN A HARD LANDING, BUT NO OTHER SIGNS WERE NOTED. CONTACT WITH MFG SAYS NO OTHER REPORTS HAVE BEEN FILLED. (K)				
2007FA0000340	CIRRUS	CONT	ARM	MISRIGGED
4/19/2007	SR20	IO550N		RUDDER
PILOT WAS TURNING ONTO RUNWAY IN CROSSWIND WITH FULL OPPOSITE AILERON AND RUDDER CONTROLS. CONTROLS LOCKED IN CROSSED POSITION AND WOULD NOT RETURN TO NEUTRAL. PILOT RETURNED TO RAMP. INSPECTION FOUND RUDDER/AILERON INTERCONNECT MISRIGGED RESULTING IN THE BOLT CONNECTING THE BUNGEE TO THE RUDDER/AILERON INTERCONNECT ARM LOCKING OVER THE BOLT GOING THROUGH THE FORWARD CABLE CLAMP. IN THE NEUTRAL POSITION, THE DISTANCE FROM THE C/L OF THE ARM IS SUPPOSED TO BE 4.5 INCHES. ON THIS AIRPLANE IT WAS JUST OVER 3 INCHES. THERE WAS NO EVIDENCE OF ANYONE MOVING THE CLAMP OR THE CLAMP SLIDING. RECORDS SHOW THAT THERE WAS NO FLIGHT CONTROL RIGGING DONE SINCE THE AIRCRAFT LEFT THE FACTORY.				
ODAR3	CIRRUS	CONT	ALTERNATOR	DESTROYED
4/11/2007	SR22	IO550*	BC4101	NR 2
OWNER REPORTED NR 2 ALTERNATOR LIGHT ILLUMINATED. REMOVED TOP COWLING TO INSPECT NR 2 ALTERNATOR. FOUND NR 2 ALTERNATOR BROKEN OFF AT MOUNTING PLATE BY (3) STUDS. ONE STUD STILL ATTACHED WITH NUT, BUT LOOSE. REMOVED P/N BC410-1, S/N 0921403. PICTURES AVAILABLE AT THIS FACILITY.				
2007FA0000339	CIRRUS	CONT	ARM	MISRIGGED
4/19/2007	SR22	IO550N		RUDDER
EACH AC THAT CAME INTO THE SHOP WAS INSPECTED FOR THE SAME CONDITION WITH THE AILERON/RUDDER INTERFERENCE. INSPECTION FOUND RUDDER/AILERON INTERCONNECT MISRIGGED RESULTING IN THE BOLT CONNECTING THE BUNGEE TO THE RUDDER/AILERON INTERCONNECT ARM HITTING THE FORWARD CABLE CLAMP AND DEFLECTING THE RT AILERON CABLE. THE CONTROLS DID NOT LOCK BUT THERE WAS DEFINITE INTERFERENCE. IN THE NEUTRAL POSITION, THE DISTANCE FROM THE C/L OF THE ARM IS SUPPOSED TO BE 4.5 INCHES. ON THIS AIRPLANE IT ABOUT 3.75 INCHES. THERE WAS NO EVIDENCE OF ANYONE MOVING THE CLAMP OR THE CLAMP SLIDING. RECORDS SHOW THAT THERE WAS NO FLIGHT CONTROL RIGGING DONE SINCE THE AIRCRAFT LT THE FACTORY.				
2007FA0000341	CIRRUS	CONT	RELAY	FAILED
4/16/2007	SR22	IO550N		T/E FLAP
DURING A TRAINING FLIGHT, THE FLAPS BECAME STUCK IN THE DOWN POSITION. THE AIRCRAFT RETURNED TO THE AIRPORT WITHOUT INCIDENT AND THE AIRCRAFT WAS SENT TO MAINTENANCE FOR TROUBLESHOOTING. MAINTENANCE DISCOVERED THE FLAPS DOWN RELAY FAILED.				
2007FA0000337	CIRRUS	CONT	CONTROL SYSTEM	OUT OF RIG
4/18/2007	SR22	IO550N		AILERON SYS
DURING INSPECTION, FOUND AILERON RUDDER INTECONNECT OUT OF RIG AND CAUSING INTERFERENCE BETWEEN RUDDER AND AILERON. THIS IS THE FOURTH AIRCRAFT WE'VE FOUND WITH THIS PROBLEM AND ONE ACTUALLY HAD THE RUDDER AND AILERON LOCK IN FULL OPPOSITE DEFLECTIONS JUST PRIOR TO TAKEOFF.				
2007FA0000276	DIAMON	CONT	BOLT	BROKEN
3/6/2007	DA20C1	IO240B		HORIZ STAB
AC, RETURN FROM FLIGHT WITH BOTH BOLTS BROKEN; ATTACHING THE FORWARD HORIZONTAL STABILIZER MOUNT BRACKETS. ATT 1) GIVES FLIGHT INFO. ATT 2 AND 3) SHOW THE IPB BRAKE DOWN OF THE BOLTS AND LOCATION FROM MFG PARTS BOOK. ATT 4) PICTURES OF BOLTS AND AIRCRAFT. ATT 5) THE NTSB PAPERWORK. ATT 6) IS SOME EMAIL TRAFFIC. WE REMOVED THE RUDDER AND HORIZONTAL STABILIZER TO INSPECT ENTIRE AREA. WE REPLACE THE AFT MOUNT PLATE AND FORWARD MOUNT BRACKET ALONG WITH ALL NEW BOLTS,				

WASHERS AND NUTS. WE ALSO INSPECTED OUR OTHER 9 AC AND REPLACED BOTH BOTH ON ALL 9 AC. NO OTHER ISSUES WERE FOUND ON OUR OTHER AC. MFG HAS BEEN BRIEFED AND IS WORKING WITH THE NTSB. (K)

AMCR200700001	GULSTM	RROYCE	PRESSURE SWITCH	FAILED
-------------------------------	--------	--------	-----------------	--------

3/29/2007	GIV	TAY6118	B12520	BOOST PUMP
-----------	-----	---------	--------	------------

DURING DESCENT, THE RT MAIN FUEL PUMP FAILED. MAINTENANCE FOUND THAT THE FUEL PRESSURE SWITCH ON THE RT MAIN FUEL PUMP HAD FAILED. THIS IS THE SECOND FAILURE OF A PUMP PRESSURE SWITCH WE KNOW OF WITHIN THE LAST 4 MONTHS.

2007FA0000264	GULSTM	RROYCE	FAIRING	DEPARTED
-------------------------------	--------	--------	---------	----------

3/6/2007	GULFSTREAMGV	BR700715A130	1159B541014	FUSELAGE
----------	--------------	--------------	-------------	----------

ON MARCH 6, 2007, DURING A FLIGHT, THE SUBJECT AIRCRAFT EXPERIENCED AN APPARENT IN-FLIGHT STRUCTURAL FAILURE OF THE RIGHT WING-TO FUSELAGE FORWARD FAIRING. THE INCIDENT OCCURRED AT FLIGHT LEVEL 400 AT 90 DME ON THE (LNK) VOR 220 RADIAL AT .85 MACH. AFTER ONE HOUR AND 45 MINUTES INTO THE FLIGHT (APPROX 2115Z), THE CREW NOTED AN AUDIBLE (THUMP) FOLLOWED BY A (CHANGE IN WIND NOISE). AS THE AIRCRAFT IS EQUIPPED WITH PROXIMITY CAMERAS, THE FIGHT CREW WAS ABLE TO SEE A (HOLE OF SIGNIFICANT SIZE) IN THE AREA OF THE SINGLE POINT REFUELING ACCESS DOOR USING THE LOWER AFT-FACING FUSELAGE CAMERA. THE FLIGHT CREW NOTIFIED AND REQUESTED EMERGENCY LANDING, WHERE THE AIRCRAFT LANDED WITHOUT FURTHER INCIDENT. THE FSDO WAS NOTIFIED AT APPROXIMATELY 2200Z AND RESPONDED TO THE AIRCRAFT BY 2220Z. UPON ARRIVAL AT THE AC, A LARGE HOLE WAS NOTED IN THE RT WING-TO-FUSELAGE FORWARD FAIRING JUST FORWARD AND INBOARD OF THE SINGLE-POINT REFUELING ACCESS DOOR. THE HOLE WAS LOCATED APPROXIMATE TO FS 391.00-FS 417.00. UPON EXTERNAL EXAMINATION A RAGGED-EDGE, TEAR-DROP SHAPED HOLE APPROX 1.5 FEET ACROSS AND 2.5 TO 3 FT LONG WAS NOTED IN THE FAIRING. A FLAP OF COMPOSITE MATERIAL WAS FOUND INSIDE THE HOLE, THE AFT END STILL ATTACHED TO THE FAIRING. A RAGGED TEAR WAS NOTED LONGITUDINALLY ALONG THE APPROXIMATE CENTER OF THIS FLAP. AS THIS HOLE WAS IN A DIRECT LINE WITH THE RIGHT NOSE GEAR WHEEL, THE TIRE WAS CLOSELY EXAMINED FOR DEEP CUTS AND/OR MISSING MATERIAL. NO DEFECTS WERE NOTED ON THE TIRE OR WHEEL. INTERNAL EXAMINATION OF THE FAIRING REVEALED (2) PN STAMPS AND A HAND-WRITTEN PART IDENTIFICATION. THE APPARENT TOP LEVEL ASSEMBLY PN IS MFG PN 1159B54101-4. THE (FLAP) WAS POSITIONED BACK INTO PLACE WHICH INDICATED NO MISSING INNER MATERIAL OR PUNCTURES. THE FAIRING IS CONSTRUCTED WITH A PAPER HONEYCOMB CORE BETWEEN WHAT APPEARS TO BE A SINGLE LAYER OF WOVEN MATERIAL ON EACH SIDE OF THE HONEYCOMB CORE BETWEEN WHAT APPEARS TO BE A SINGLE LAYER OF WOVEN MATERIAL ON EACH SIDE OF THE HONEYCOMB. UPON CLOSE EXAMINATION OF THE INNER SURFACE OF THE FAIRING, THE WOVEN MATERIAL APPEARS TO HAVE FAILED ALONG BOTH THE WARP AND FILL OF THE INNER SURFACE FABRIC. FURTHER, AN APPARENT LACK OF BONDING BETWEEN THE HONEYCOMB AND WOVEN MATERIAL WAS EVIDENT, WITH LITTLE OR NO PATTERN OF HONEYCOMB IN THE ADHESIVE IN/ ON THE INNER SURFACE MATERIAL(S). NO EVIDENCE OF POST PRODUCTION REPAIRS WAS APPARENT. ATL MIDO WILL PROCESS FOR POSSIBLE NON-CONFORMANCE. (K)

2007FA0000229	ISRAEL	GARRTT	VALVE	CRACKED
-------------------------------	--------	--------	-------	---------

3/8/2007	1124A	TFE731*	653014	RT LWR FUEL CELL
----------	-------	---------	--------	------------------

CRACK IN INTERCONNECT VALVE MOTOR HOUSING. FOUND DURING BAG REMOVAL AND REINSTALLATION. CAUSE OF CRACK, UNKNOWN. (K)

2007FA0000346	LEAR	GARRTT	ADC	MALFUNCTIONED
-------------------------------	------	--------	-----	---------------

1/22/2007	35A	TFE731*	702490031304	
-----------	-----	---------	--------------	--

DURING PRE-FLIGHT, THE CREW NOTED THAT THE PILOTS ALTIMETER AND ALTITUDE ALERTER WERE FLAGGED. ATTEMPTS TO RECYCLE THE SYSTEM WERE NOT SUCCESSFUL. THE CREW GROUNDED THE AIRCRAFT. AN AVIONICS TECH WAS DISPATCHED TO THE AIRCRAFTS LOCATION AND DETERMINED THAT THE ADC HAD FAILED. THE ADC WAS REPLACED. THE SYSTEM WAS TESTED AND INSPECTED AND FOUND TO COMPLY WITH FAR 91.411, PART 43 AND TO REMAIN RVSM COMPLIANT. (K)

2007FA0000274	LEAR		REGULATOR	LEAKING
-------------------------------	------	--	-----------	---------

3/22/2007	60LEAR		270213	HYD SYSTEM
-----------	--------	--	--------	------------

IN-FLIGHT FAILURE OF BOTH ENGINE HYDRAULIC PUMPS, AND LOSS OF MAIN HYDRAULIC SYSTEM FLUID.

AIRCRAFT DIVERTED TO HOME BASE, DECLARED EMERGENCY LANDING, UNEVENTFUL. FOUND PRESSURE HOSE ON R ENGINE HAD FAILED, DUE TO OVER-PRESSURE. FOUND RESERVOIR AIR-PRESSURE REGULATOR (PN 2702-12) HAD FAILED, CAUSING LOSS OF HEAD PRESSURE IN RESERVOIR, AND SUBSEQUENT PRESSURE SPIKES IN ENGINE PUMPS, WHICH BURST FLEX LINE ON R ENGINE HYD PUMP, AND DAMAGED FLEX LINE ON L HYD PUMP AS WELL. REPLACED L AND R ENGINE HYDRAULIC PUMPS, ALL FLEX PRESSURE LINES IN ENGINE HYDRAULIC CIRCUIT, HYDRAULIC FILTERS, RESERVOIR PRESSURE REGULATOR, CHECK VALVE, AND FILTER. BLED AIR FROM HYDRAULIC SYSTEM, PERFORMED FUNCTIONAL TESTS AND GROUND RUN, REPLACED PRESSURE FILTERS AGAIN. PERFORMED AIRCRAFT TEST FLIGHT.

2007FA0000265	LEAR		REGULATOR	LEAKING
3/22/2007	60LEAR		270213	HYD SYS PRESSURE

IN-FLIGHT FAILURE OF BOTH ENGINE HYDRAULIC PUMPS, AND LOSS OF MAIN HYDRAULIC SYSTEM FLUID. AC DIVERTED TO HOME BASE, DECLARED EMERGENCY LANDING, UNEVENTFUL. FOUND PRESSURE HOSE ON R ENGINE HAD FAILED, DUE TO OVER-PRESSURE. FOUND RESERVOIR AIR-PRESSURE REGULATOR (PN 2702-12) HAD FAILED, CAUSING LOSS OF HEAD PRESSURE IN RESERVOIR, AND SUBSEQUENT PRESSURE SPIKES IN ENGINE PUMPS, WHICH BURST FLEX LINE ON R ENGINE HYD PUMP, AND DAMAGED FLEX LINE ON L HYD PUMP AS WELL. REPLACED L AND R ENGINE HYDRAULIC PUMPS, ALL FLEX PRESSURE LINES IN ENGINE HYDRAULIC CIRCUIT, HYDRAULIC FILTERS, RESERVOIR PRESSURE REGULATOR, CHECK VALVE, AND FILTER. BLED AIR FROM HYDRAULIC SYSTEM, PERFORMED FUNCTIONAL TESTS AND GROUND RUN, REPLACED PRESSURE FILTERS AGAIN. PERFORMED AIRCRAFT TEST FLIGHT.

2007FA0000315	LEAR	PWA	MIXING VALVE	OUT OF TOLERANCE
4/2/2007	60LEAR	PW305	1H1068	LT BLEED AIR SYS

DURING TAKEOFF ROLL CREW EXPERIENCED A RUSH OF WARM OILY SMELLING AIR IN THE COCKPIT. CREW ABORTED TAKEOFF AND RETURNED TO BASE. MAINTENANCE CREW RAN AIRCRAFT AND DUPLICATED PROBLEM FINDING THE DUCT OVRHT LIGHT AND LT BLEED LIGHT ON AT FULL POWER. FURTHER TROUBLESHOOTING FOUND THAT THE LT BLEED AIR MIXING VALVE WAS ALLOWING MORE THAN 200PSI OUT PUT OF AIR. LT BLEED AIR MIXING VALVE WAS REPLACED WITH A SERVICEABLE INSPECTED VALVE AND OPS CHECKED GOOD.

2007FA0000287	MOONEY	LYC	RIVET	CORRODED
3/22/2007	M20J	IO360A1A		COWLING

OWNER BROUGHT COWLINGS IN FOR REPAIR BECAUSE THE THROUGH SKIN RIVETS WERE CORRODING AND SHEARING OFF AT THE MFG HEAD AS EXHIBITED BY BLISTERING PAINT AT THE RIVET LOCATIONS. INSPECTION REVEALED MOST OF THE AD TYPE RIVETS WERE SEVERELY CORRODED BECAUSE THE COWLINGS WERE CONSTRUCTED WITH A HYBRID COMPOSITE LAMINATE OF E-GLASS AND CARBON GRAPHITE PLIES. IT IS STANDARD INDUSTRY PRACTICE TO USE CORROSION RESISTANT FASTENERS SUCH AS RIVETS THROUGH CARBON GRAPHITE STRUCTURE AND IT IS UNKNOWN WHY ALUMINUM RIVETS ARE USED IN THIS CASE. AFFECTED AREAS: UPPER COWL/ OIL DOOR CUTOUT DOUBLER RIVETS COOLING AIR INLET AFT EDGE RIVETS. LOWER COWL/ BOTH UPPER CAMLOCK RECEPTACLE GANG STRIPS (SEVERELY CORRODED AND CONCEALED BY A LAYER OF FIBERGLASS) BOTH COWL FLAP DOOR CUTOUT DOUBLER RIVETS HORIZ STIFFENER RIVETS. (K)

2007FA0000311	NAMER	PWA	REGULATOR	STUCK
3/5/2007	AT6D	R1340AN1		FUEL PUMP

THE PRESSURE REGULATOR (IN THE WOBBLE PUMP) STUCK IN THE (BYPASS) POSITION CAUSING LOSS OF FUEL PRESSURE AND POWER LOSS DUE TO LACK OF FUEL.

2007FA041101	PIPER	LYC	AIR BOX	FAILED
4/7/2007	PA18105SPEC	O360*		CARBURETOR

CARBURATOR AIR BOX AIR FILTER RETAINING SHAFT SHEARED ADJACENT TO FISH MOUNTH WELD AT FORWARD EDGE OF HORIZONTAL PLATE (APPROXIMATELY 1/3 SHAFT LENGTH FROM BASE). AIR FILTER DOME, SHAFT AND RETAINING NUT APPEARANTLY DEPARTED AIRPLANE IN FLIGHT. AIR FILTER WAS FOUND LOOSE IN COWL AIR SCOOP AFTER LANDING. NO OPERATIONAL INDICATIONS AND NO DAMAGE TO PROPELLER, COWL, FUSELAGE OR LANDING GEAR. AIRPLANE COMPLETELY REBUILT 2004. NEW K & N AIR FILTER INSTALLED AT ANNUAL INSPECTION NOVEMBER 2006. PHOTOS AVAILABLE.

2007FA0000335	PIPER	LYC	SLICK	SPRING	BROKEN
-------------------------------	-------	-----	-------	--------	--------

4/17/2007 PA28181 O360A4M IMPULSE COUPLING

PILOT STARTED AIRCRAFT NORMALLY AND DID RUN UP WITH A BAD MAGNETO CHECK. PILOT DID NOT FLY AIRCRAFT AND RETURNED TO HANGER. AIRCRAFT WOULD NOT RESTART. IMPULSE COUPLE DID NOT MAKE ANY NOISE, TIMING WAS WAY OFF. FOUND IMPULSE COUPLE SPRING BROKEN A TURN AND A HALF FROM OUTER END.

[2007FA0000218](#) PIPER LYC BAFFLE CRACKED

2/2/2007 PA32301 TIO540AH1A 56G23399 OIL SUMP

DURING ENGINE OIL CHANGE FOUND RIVET HEAD IN OIL SUMP SCREEN. REMOVED ENGINE AND OIL SUMP ASSY. FOUND OIL SUMP BAFFLE ASSY RIVETS SHEARED OFF AND ATTACH HOLES BROKEN OUT AND BAFFLE ASSY CRACKED. RETRIEVED RIVET STEMS AND HEADS. REMOVED AND REPLACED OIL SUMP BAFFLE ASSY WITH NEW PART. REASSEMBLED ENGINE AND REINSTALLED. (K)

[2007FA0000288](#) PIPER CONT FLOOR PANEL DEBONDED

4/2/2007 PA34220T TSIO360RB 37829007 FUSELAGE

FLOOR PANEL BETWEEN FORWARD AND REAR WING SPARS ON WHICH AFT FACING CENTER SEATS ARE MOUNTED IS DELAMINATING. THE FLOOR PANEL CONSISTS OF 2 SHEETS OF ALUMINUM (.040 INCH) WITH A SOUND DEADENING STIFF FOAM BETWEEN THEM. THE SEAT MOUNTING BRACKETS ARE BOLTED THRU BOTH SHEETS, BUT THIS STILL MAY BE A STRUCTURE ISSUE. CALLED MFG FOR GUIDANCE, BUT HAVE NOT HEARD ANYTHING AS YET.

[2007FA0000290](#) PIPER CONT FLOOR PANEL DEBONDED

4/2/2007 PA34220T TSIO360RB 37829007 ZONE 100

FLOOR PANEL BETWEEN FORWARD AND REAR WING SPARS ON WHICH AFT FACING CENTER SEATS ARE MOUNTED IS DELAMINATING. THE FLOOR PANEL CONSISTS OF 2 SHEETS OF ALUMINUM (.040 INCH) WITH A SOUND DEADENING STIFF FOAM BETWEEN THEM. THE SEAT MOUNTING BRACKETS ARE BOLTED THRU BOTH SHEETS, BUT THIS STILL MAY BE A STRUCTURE ISSUE. HAVE CALLED MFG FOR GUIDANCE, BUT HAVE NOT HEARD ANYTHING AS YET.

[2007FA0000289](#) PIPER CONT FLOOR PANEL DEBONDED

4/2/2007 PA34220T TSIO360RB 37829007 ZONE 100

FLOOR PANEL BETWEEN FORWARD AND REAR WING SPARS ON WHICH AFT FACING CENTER SEATS ARE MOUNTED IS DELAMINATING. THE FLOOR PANEL CONSISTS OF 2 SHEETS OF ALUMINUM (.040 INCH) WITH A SOUND DEADENING STIFF FOAM BETWEEN THEM. THE SEAT MOUNTING BRACKETS ARE BOLTED THRU BOTH SHEETS, BUT THIS STILL MAY BE A STRUCTURE ISSUE. CALLED MFG FOR GUIDANCE, BUT HAVE NOT HEARD ANYTHING AS YET.

[2007FA0000292](#) PIPER CONT FLOOR PANEL DEBONDED

4/2/2007 PA34220T TSIO360RB 37829007 ZONE 100

FLOORPANEL BETWEEN FORWARD AND REAR WING SPARS ON WHICH AFT FACING CENTER SEATS ARE MOUNTED IS DELAMINATING. THE FLOOR PANEL CONSISTS OF 2 SHEETS OF ALUMINUM (.040 INCH) WITH A SOUND DEADENING STIFF FOAM BETWEEN THEM. THE SEAT MOUNTING BRACKETS ARE BOLTED THRU BOTH SHEETS, BUT THIS STILL MAY BE A STRUCTURE ISSUE. HAVE CALLED MFG FOR GUIDANCE, BUT HAVE NOT HEARD ANYTHING AS YET.

[2007FA0000291](#) PIPER CONT FLOOR PANEL DEBONDED

4/2/2007 PA34220T TSIO360RB 37829007 ZONE 100

FLOOR PANEL BETWEEN FORWARD AND REAR WING SPARS ON WHICH AFT FACING CENTER SEATS ARE MOUNTED IS DELAMINATING. THE FLOOR PANEL CONSISTS OF 2 SHEETS OF ALUMINUM (.040 INCH) WITH A SOUND DEADENING STIFF FOAM BETWEEN THEM. THE SEAT MOUNTING BRACKETS ARE BOLTED THRU BOTH SHEETS, BUT THIS STILL MAY BE A STRUCTURE ISSUE. HAVE CALLED MFG FOR GUIDANCE, BUT HAVE NOT HEARD ANYTHING AS YET.

[2007FA0000263](#) SNIAS TMECA SOLENOID UNSERVICEABLE

3/21/2007 AS350B3 ARRIEL2B L810BQ54 AUTO THROTTLE

(REF NR: 186AE-2007-I-0032) WHILE PERFORMING A CHECK OF THE TWIST GRIP SOLENOID, ENGAGED THE SOLENOID BY PLACING THE AUTO/MAN SWITCH TO MAN MODE FOR A TOTAL OF 10 MINUTES. AFTER THE 10 MINUTE PERIOD HAD ELAPSED, RETURNED THE AUTO/MAN SWITCH TO AUTO. AFTER 15 MINUTES MOVED AUTO/MAN SWITCH BACK TO MAN, THE PISTON FROM THE SOLENOID FAILED TO MOVE. THE PISTON SHOULD HAVE RETRACED IMMEDIATELY. PROBABLE CAUSE: SOLENOID OVERHEATING AND MALFUNCTIONING. RECOMMENDATION TO PREVENT RECURRENCE: REPLACING CURRENT PN OF SOLENOID WITH ONE THAT CAN EITHER RUN COOLER OR WITHSTAND THE HEAT. (K)

[2007FA0000267](#) SOCATA LYC BEARING FAILED
2/28/2007 TB21 TIO540AB1A 4066109031 TURBOCHARGER
IN FLIGHT, DROP IN MANIFOLD PRESSURE, TROUBLESHOT, FOUND TURBOCHARGER BEARING FAILURE. FOUND METAL IN OIL FILTER. ENGINE REMOVED FOR REPAIR. (K)

[2007FA0000328](#) SOCATA PWA FITTING CRACKED
4/6/2007 TBM700 PT6A64 T700A5340023100 RUDDER
DURING A 6000HR/10 YEAR CORROSION INSPECTION AD2007-06-11 WAS BEING COMPLIED IAW AD AND MANDATORY SB70-104, AMENDMENT 2. AFTER COMPLETING THE PENETRANT INSPECTION NO CRACKS WERE DETECTED IN THE SPECIFIED AREAS HOWEVER THE FITTINGS LISTED IN BLOCK 5 WERE REMOVED FROM SERVICE FOR LIGHT PITTING CORROSION. RECENTLY IN OUR FACILITY, THERE WAS A LEVEL 3 NDT RECURRENT COURSE BEING GIVEN AND THE REMOVED FITTINGS WERE CRACK CHECKED USING A ROTARY TOOL FOR BOLT HOLE EDDY CURRENT SET UP ON .030 CORNER EDM NOTCH AS A REFERENCE STANDARD. AT THIS TIME THERE WERE CORROSION PITTING CRACKS DETECTED IN BOTH FITTINGS. THE INSPECTION CRITERIA STATED IN AD AND SB ARE INSUFFICIENT FOR CRACK DETECTION IN THIS AREA. POSSIBLY THE BOLT HOLE CRACK DETECTION METHOD USING THE ABOVE MENTIONED ROTARY TOOL SHOULD BE IMPLEMENTED IN PLACE OF THE DYE PENETRANT. THIS IS A CRITICAL AREA AND FAILURE OF EITHER FITTING COULD CAUSE TEMPORARY OR PERMANENT LOSS OF RUDDER CONTROL AND AIRCRAFT STABILITY. A TTR FORM HAS BEEN FILED WITH MFG. (K)

END OF REPORTS