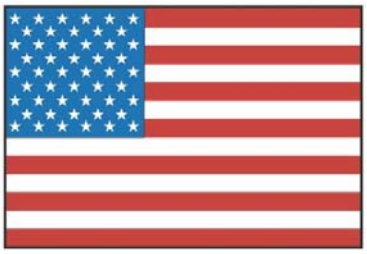
U.S. Department of Transportation
Federal Aviation Administration

AFS-600
Regulatory Support Division

ADVISORY CIRCULAR

43-16A

AVIATION MAINTENANCE ALERTS



ALERT NUMBER 376

NOVEMBER 2009

CONTENTS

AIRPLANES

POWERPLANTS

ACCESSORIES

AIR NOTES

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

Canadair: CL600; Loose Hydraulic Brake Fitting; ATA 3242

A Canadian submitter writes, "After landing the flight crew reported the aircraft required a lot of power to taxi, and that the L/H brakes seemed to be dragging. Once clear of the runway they stopped on the taxiway and the tower confirmed their number one main wheel was flat. *(Maintenance personnel)* dispatched to the aircraft found 1) the number one main wheel *(tire)* had a large flat spot and hole in it—indicative of landing with a locked brake, and 2) the number one brake quick disconnect fitting was loose (it came off with only one half turn). The loose fitting allowed hydraulic pressure to be trapped in the brake, causing it to remain locked on landing. This quick disconnect fitting (P/N H155006-191-001; IPC 32-11-35 figure 1-180) was tightened and locked. Both wheels *(tires)* were replaced and the aircraft returned to service. The *(mechanic)* that completed this work mentioned he had seen this issue more than once, where the quick disconnect fitting was loose...." "It appears this fitting is susceptible to backing off if it is not correctly locked." *(Aircraft total time: 10,804.0 hours.)*

Part Total Time: (unknown)

Cessna: 208B; Malfunctioning Autopilot; ATA 2215

"On the night of March 4th...and during flight into moderate turbulence," writes a repair station technician, "the autopilot started to disconnect on the pilot. This happened twice. On the third attempt to engage the autopilot, the aircraft made a sudden uncommanded 1500 fpm descent. The pilot said he tried to correct the attitude with the CWS *(control wheel steering—suspends autopilot)* function, but the autopilot would not disengage. The autopilot disconnect button would not let go either. He then had to overpower the autopilot clutches manually to regain control—and he attempted to disconnect the system with the circuit breaker. However, the autopilot remained on *(with an indication light)* after he pulled the *(breaker)*. He recycled the breaker and was successful *(in disconnecting the autopilot)*. The pilot also reported the electric trim switch seemed to work backwards. All this happened on descent, so the systems had been functioning normally prior to the incident.

"Maintenance...found water accumulated behind the rear curtain. This is the area in which the pitch servo is located. They found this servo had a solenoid stuck closed, *(preventing)* servo release. *(Further investigation revealed...)* the autopilot flight computer was burnt out. We believe all this was attributed to the presence of water at the pitch servo. There is no circuit breaker between the servo and the flight computer. The water accumulation was caused by plugged bilge drains." *(Solenoid P/N: 023-00115-0003; Servo P/N: 065-0059-001.)*

Part Total Time: (unknown)

Gulfstream: G450 & 550; Broken Hyd. Tank Sight Glass; ATA 2910

(This short report combines two identically worded submissions from the same repair station technician.)

"The sight glass for this *(hydraulic replenishing tank)* is cracked in several locations and leaks hydraulic fluid. This tank is one of several returned for the same defect." *(Hydraulic tank P/N: 1159SCH519-7.)*

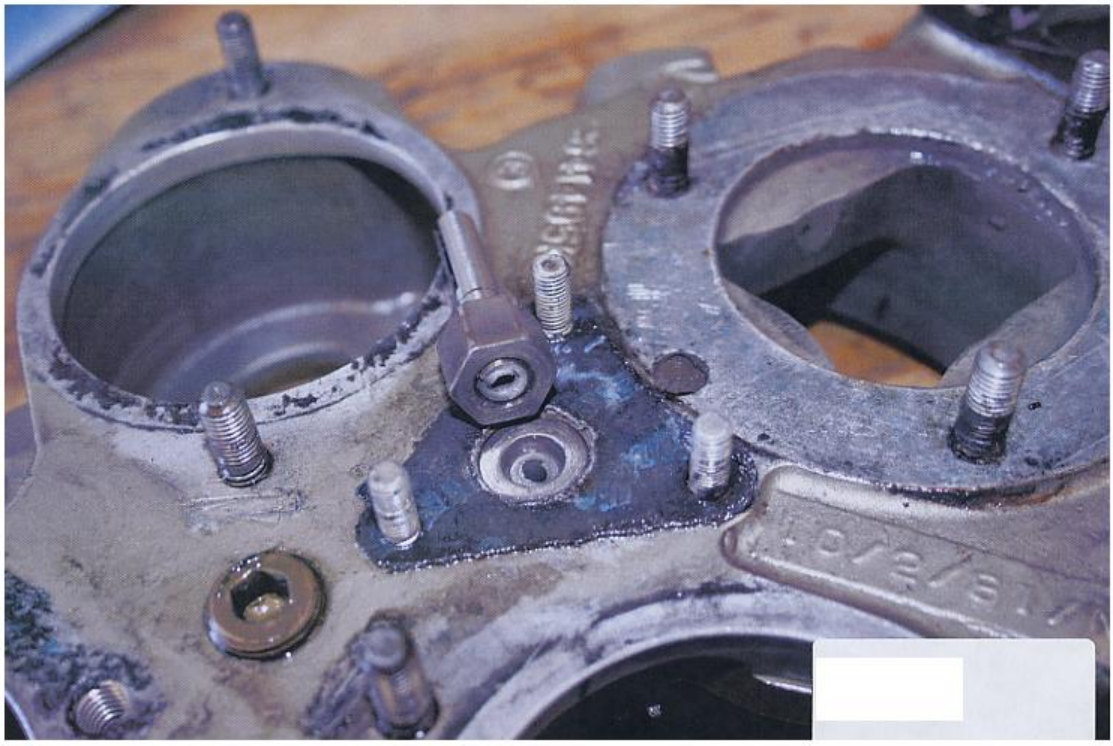
Part Total Times: 224.9 and 38.9 hours

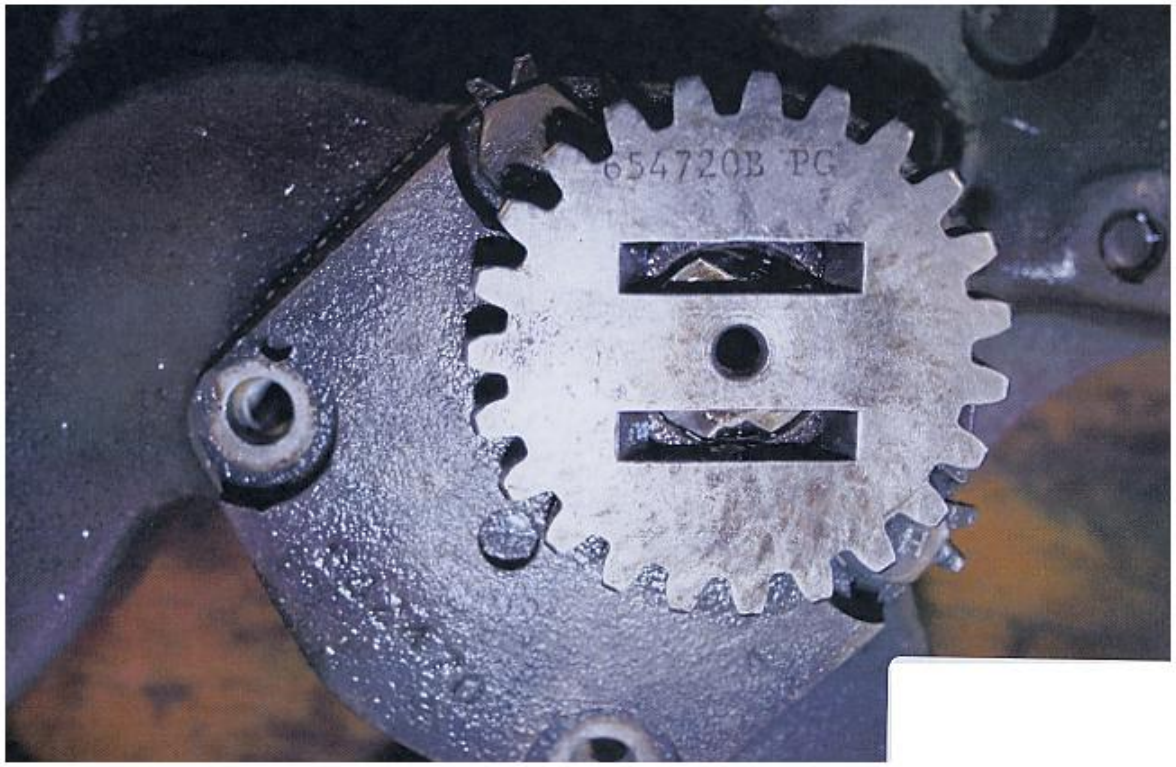
POWERPLANTS

Continental: TSIO360; Failed Oil Pump Drive Shaft; ATA 8550

(The following describes a defect for a Piper PA28R201T.)

An unknown submitter writes, "*(There was...)* an in-flight failure of this engine due to a shaft shearing on the oil pump drive gear *(gear component P/N: 654720BPC). (This occurred)* while the pilot was at cruise altitude of approximately 4,000 feet MSL. He made an unscheduled landing at an airport."





(Aircraft and pump total time: 2,857.0 hours.)

Part Total Time: 960.0 hours (since overhaul)

ECI Cylinder: TISN71*; Cracked Cylinder Heads, ATA 8530

(The following report originates from a Cessna 414A's Continental TSIO520NB engine.)

"During a routine engine oil change," states an unknown submitter, "fuel stains were noted on the intake manifold below each cylinder intake port and between the cylinder head fins in this area. *(I)* performed a differential compression test, with low compression noted on numbers 1 and 5 cylinders. A soap bubble leak check revealed cracks on both cylinder heads between the fins above the intake ports. All cylinders were removed for further inspection. Each cylinder was found to have cracks emanating from the top spark plug boss to the intake valve area. Engine Components, Inc. mandatory Service Bulletin 06-2 covers this defect, but it applies to earlier serial numbered cylinder assemblies. A recommendation would be to revise this bulletin to include later serial numbers, or to issue a new bulletin due to the fact the same defects still occur in later manufactured cylinders." *(*Unfortunately, the submitter did not include a full part number for the cylinder. ECI lists 71.4ACA, -.4BCA, -.4CCA, -.4VA. If the mechanic would e-mail a clarification, we could straighten out our database! Thank--you—Ed.)*

Part Total Time: 699.0 hours

ECI Cylinder: TISN04.1CA; Cracked Valve Covers, ATA 8530

(The following combines two reports on two different aircraft of the same model. Both Cessna 172P aircraft have the Lycoming O320/D2J engine installed.)

An A&P mechanic writes, "I found the rocker box cover cracked during a 100 hour inspection *(ECI P/N AEL61247)*. The cause of these cracks is due to improper clearance between the cover and the rocker arms, allowing the rocker arms to contact the cover. There is a notable clearance difference between an OEM *(original equipment manufacturer)* cover and the ECI cover at the lower portion of the cover. Further inspection of our other aircraft disclosed one other cracked cover. I recommend replacement of all ECI stainless steel covers with OEM *(parts)* or a suitable substitute."

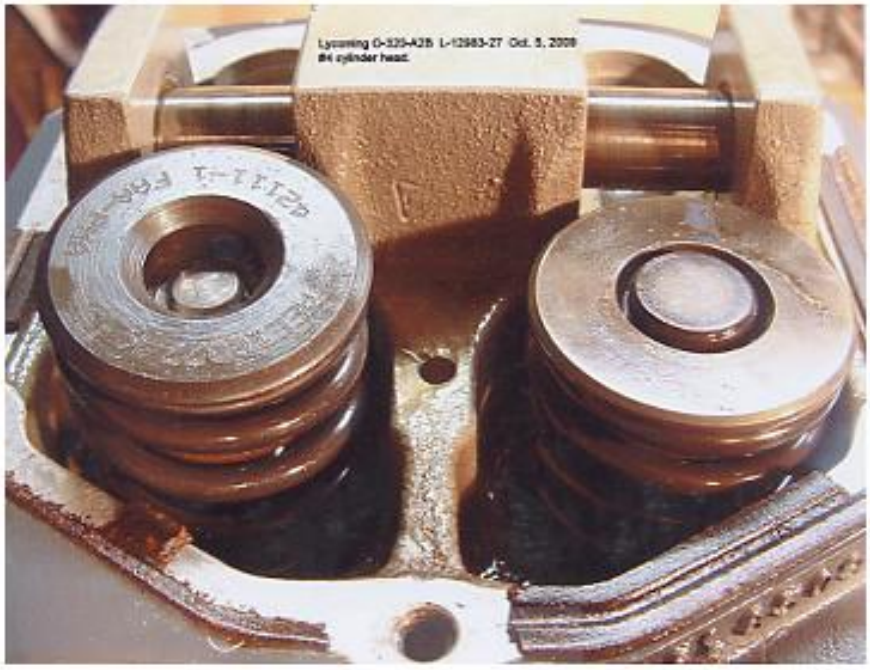
Part Total Time(s): 190.0 and 632.3 hours, respectively.

ECI Cylinder: TIST06.0CA; Failed Intake Valve Keys; ATA 8530

(This reported cylinder hangs from a Lycoming O320-A2B.)

A mechanic holding an IA *(inspection authorization)* states, "This engine was overhauled in March of 2007 and currently has 237.3 hours since overhaul. The material at the lower end of the intake valve keys wore away, allowing the upper valve spring seat to move too high on the valve stem. This caused the rocker arm tip to wear abnormally, resulting in most of the rocker arm tip wearing away or breaking off. The upper valve spring seat continued moving up the valve stem until it began to make contact with the neck of the rocker arm. This caused the spring seat to tilt at an angle, eventually tilting enough to make contact with the rocker cover, wearing a ½ inch cut through the cover. The pilot did not notice any roughness in the engine's operation. He said that it felt like the engine might have been a little underpowered and not reaching full RPM at takeoff. The engine normally doesn't make full takeoff RPM on the first flight of the day if it has not had enough time to warm up and the oil is still cool." "*(The pilot)* assumed this was the case and continued with the takeoff. The engine ran smoothly throughout the flight. Upon landing, he noticed an oil streak running along the side of the aircraft. After opening the cowling, he found the cut that the upper valve spring seat had worn through the rocker cover. Because the aircraft was not at location where tools and supplies were available, we decided to replace the entire cylinder assembly. The cylinder was returned to ECI for warranty consideration."


Piper PA-12 12-535
Lycoming O-320-A2B L-12983-27 Oct. 5, 2009
#4 intake valve


#4 cylinder head.


Lycoming O-320-A2B L-12669-27 Oct. 5, 2000
#4 rocker arm and upper valve spring retainer.

Part Total Time: 237.3 hours

Superior Cylinder: SA52006A20P; Stuck Exhaust Valves; ATA 8530

(A Canadian technician provides this next report concerning a Cessna 210L and its Continental IO520L engine.)

"This aircraft was undergoing a 50 hour inspection which revealed an oil leak on the R/H side of the engine. Further investigation revealed the exhaust push-tube seals were leaking. Removal of the push-tube and rod showed the push rod was bent. The oil leak was caused by the push rod displacing the seals on the push tube. *(Additionally),* the exhaust valve had contacted the face of the piston. All other pistons on the engine were checked—a total of three pistons were found with exhaust valve contact. All six cylinders were removed for further investigation and replacement. These cylinders are Superior Air Parts 'Millenium' cylinders. They were replaced new at engine overhaul in October 2006...." "Note: there is a similar SDR from this same company *(ref. SDR CA090204014; it having 1,273.0 hours)*. It appears there is a defect with these cylinders, *(this problem appearing)* around the 1000 hour TSN *(time since new)*.

Part Total Time: 1,081.0 hours

ACCESSORIES

Kelly Heater: FR81D94-3EL; Cracked Combustion Tube; ATA 2140

(This heater unit is part of a Beech 58.)

A repair station technician says, "While performing a pressure-decay test per AD 2004-21-05, the combustion tube would not maintain pressure, and air leaking was noted. Investigation found a 0.75 inch long crack in the aft end of the combustion tube near the radius. The crack may have been caused by stress induced while forming the end cap, along with the normal heating and cooling of the heater. This heater had 98 hours since the last pressure test. A factory rebuilt unit was installed and the aircraft returned to service." *(Combustion tube P/N: 88D70-15EL.)*

Part Total Time: 453.2

Skytech Starter: 149-24PM; Cracked Mount; ATA 8011

(The host for this unit is a Cessna T206H pulled by a Lycoming TIO-540-AJ1A.)

"The original starter (433.4 hours total) was removed because it had failed," writes a repair station submitter. "A replacement was ordered from Cessna and installed. We also changed the spark plugs and checked the engine timing, which was found good. After installation of the *(new)* starter, we started the aircraft five times—it operationally checked good. That evening the pilot tried to start the aircraft. He heard a growling sound. We opened up the cowling and found the starter mount cracked through the bell housing. I notified Skytech *(and I was assured)* this *(breakage)* was normal when the aircraft has kickback. We sent the starter to Skytech for repair. After its return we *(reinstalled this starter)* and checked the ignition system—no abnormalities were found. We started the aircraft five times, and on the following day had the owner start it three times. After the third start, the pilot departed for a local flight of 1.2 hours, *(including)* a quick break. He then turned the key for 'start' and nothing happened *(except)* for a growling sound—*(this starter was also found cracked at the base and around the bell housing).* Skytech flew *(another),* overhauled starter to *(the owner).*

"Note: the original removed starter has a thicker base mount face which is solid, and the bell housing is also thicker. The new replacement that cracked twice within 1.2 hours has a hollowed out base mount face and thinner material around the bell housing. The thicker base has an 'H' stamped on it and the thinner base has an 'HT' on it. The starter that was brought out to us also had a solid base with an 'H' stamped on it. I was told by Skytech that

the thinner casting is dye-cast to save weight, and the older, thicker style was a sand-casting process and is no longer in production. Before installing the last starter, we checked the P-lead on the right magneto and the switch with no abnormalities found. I also contacted Cessna Product Support and found that they have had five incidents of the mount cracking on the new 206 models, with several starters failing, *(but with)* no abnormalities found on the aircraft."

Part Total Time: 1.2 hours

AIR NOTES

INTERNET SERVICE DIFFICULTY REPORTING (iSDR) WEB SITE

The Federal Aviation Administration (FAA) Internet Service Difficulty Reporting (iSDR) web site is the front-end for the Service Difficulty Reporting System (SDRS) database that is maintained by the Aviation Data Systems Branch, AFS-620, in Oklahoma City, Oklahoma. The iSDR web site supports the Flight Standards Service (AFS), Service Difficulty Program by providing the aviation community with a voluntary and electronic means to conveniently submit in-service reports of failures, malfunctions, or defects on aeronautical products. The objective of the Service Difficulty Program is to achieve prompt correction of conditions adversely affecting continued airworthiness of aeronautical products. To accomplish this, Malfunction or Defect Reports (M or Ds) or Service Difficulty Reports (SDRs) as they are commonly called, are collected, converted into a common SDR format, stored, and made available to the appropriate segments of the FAA, the aviation community, and the general public for review and analysis. SDR data is accessible through the “Query SDR data” feature on the iSDR web site at: http://av-info.faa.gov/sdrx/Query.aspx.

In the past, the last two pages of the Alerts contained a paper copy of FAA Form 8010-4, Malfunction or Defect Report. To meet the requirements of *Section 508, this form will no longer be published in the Alerts; however, the form is available on the Internet at: http://forms.faa.gov/forms/faa8010-4.pdf. You can still download and complete the form as you have in the past.

*Section 508 was enacted to eliminate barriers in information technology, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals.

A report should be filed whenever a system, component, or part of an aircraft, powerplant, propeller, or appliance fails to function in a normal or usual manner. In addition, if a system, component, or part of an aircraft, powerplant, propeller, or appliance has a flaw or imperfection, which impairs or may impair its future function, it is considered defective and should be reported under the Service Difficulty Program.

The collection, collation, analysis of data, and the rapid dissemination of mechanical discrepancies, alerts, and trend information to the appropriate segments of the FAA and the aviation community provides an effective and economical method of ensuring future aviation safety.

The FAA analyzes SDR data for safety implications and reviews the data to identify possible trends that may not be apparent regionally or to individual operators. As a result, the FAA may disseminate safety information to a particular section of the aviation community. The FAA also may adopt new regulations or issue airworthiness directives (ADs) to address a specific problem.

The iSDR web site provides an electronic means for the general aviation community to voluntarily submit reports, and may serve as an alternative means for operators and air agencies to comply with the reporting requirements of 14 Title of the Code of Federal Regulations (CFR) Section 121.703, 125.409, 135.415, and 145.221, if accepted by their certificate-holding district office. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft maintenance surveillance as well as accident and incident investigations.

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

The SDRS and iSDR web site point of contact is:

Pennie Thompson
Service Difficulty Reporting System, Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125
Telephone: (405) 954-5313
SDRS Program Manager e-mail address: 9-AMC-SDR-ProgMgr@faa.gov

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

Editor: Daniel Roller (405) 954-3646
FAX: (405) 954-4570 or (405) 954-4655

E-mail address: Daniel.Roller@faa.gov

Mailing address: FAA, **ATTN: AFS-620 ALERTS**, P.O. Box 25082, Oklahoma City, OK 73125-5029

You can access current and back issues of this publication from the internet at: http://av-info.faa.gov/. Select the General Aviation Airworthiness Alerts heading.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports processed for the previous month, which have been entered into the FAA Service Difficulty Reporting (SDR) System database. This is not an all-inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

To retrieve the complete report, click on the Control Number located in each report. These reports contain raw data that has not been edited. Also, because these reports contain raw data, the pages containing the raw data are not numbered.

If you require further detail please contact AFS-620 at the address above.

Federal Aviation Administration

Service Difficulty Report Data

Sorted by aircraft make and model then engine make and model. This report derives from unverified information submitted by the aviation community without FAA review for accuracy.

Control Number	Aircraft Make	Engine Make	Component Make	Part Name	Part Condition
Difficulty Date	**Aircraft Model**	**Engine Model**	**Component Model**	**Part Number**	**Part Location**
2009FA0000846				CIRCUIT BREAKER	MISMANUFACTURED
10/13/2009				MS252445	

DURING INSPECTION OF CIRCUIT BREAKERS, FOUND THAT WHEN THE STEM OF THE CIRCUIT BREAKER IS PUSHED IN TO SET THE BREAKER ANY ADDITIONAL PRESSURE WILL CAUSE THE BREAKER TO TRIP. IN ADDITION, FOUND THAT IT REQUIRES 10 AMPS OR MORE TO TRIP THE 5AMP BREAKER.

2009FA0000808	GENERATOR	DESTROYED
7/24/2009	11522185	AC SYS

DEFECT AC GENERATOR DISINTEGRATED INTERNALLY. STATOR HSG HAD A HOLE PUNCHED THROUGH ON THE DE SURFACE FROM THE INSIDE OF THE GENERATOR. AFTER DISASSEMBLY, THE ROTOR WAS FOUND TO HAVE A SEVERE DAMAGE ON THE DRIVE END. THE ROTOR DE WAS ALSO MISSING THE ROTOR BAND. THE ROTORBAND WAS WEDGED INTO THE BOTTOM OF THE STATOR HSG. AN EXAMINATION OF THE ROTOR BAND REVEALED THAT THE BAND WELD LACKED ADEQUATE PENETRATION. THE ROOT CAUSE OF THIS FAILURE IS DUE TO POOR WELD PENETRATION OF THE BAND WELD. PREVENTATIVE ACTION: PENDING COMPLETION OF ENGINEERING EVALUATION.

2009FA0000848	COMPASS	MISMANUFACTURED
7/30/2009		

ALL NEW AIRCRAFT ALL NEW REPLACEMENT COMPASSES DELIVERED IN APPROX THE LAST 1.5 YEARS HAVE DEVELOPED BUBBLES IN THE FLUID, REQUIRING REPLACEMENT. COMPASSES WITH BUBBLES USE TO BE A VERY RARE OCCURRENCE. HAVE REPLACED OVER 25 COMPASSES THIS YEAR. ALL LESS THAN 2 YEAR OLD.

2009FA0000910	SWITCH	SHORTED
9/29/2009	35380132103	

THIS SWITCH IS ONE OF THE NEW REPLACEMENT SWITCHES FOR ACFT UNDER AD2008-13-17. THE SWITCH WAS ACTUATED AND THE TOGGLE BROKE OUT OF THE PLASTIC HSG ALLOWING THE TOGGLE TO COME PART WAY OUT OF THE SWITCH. UPON INSPECTION, IT IS BELIEVED THAT THERE WAS NO PIN INSTALLED IN THE TOGGLE PORTION WHERE THE BALL ROTATES AND THIS APPLIED PRESSURE ON THE HSG CAUSING IT TO BREAK. VERIFY THAT SWITCHES HAVE A PIN INSTALLED BY VISUALLY INSPECTING THE TOGGLE BALL INSIDE THE HOLD DOWN. THE PIN IS CLEARLY VISIBLE INSIDE THAT AREA. THIS BREAK WAS DISCOVERED BEFORE THE PART WAS INSTALLED IN AN ACFT. HAD THIS PART BEEN INSTALLED, IT COULD HAVE CAUSED A FIRE HAZARD DUE TO THE SWITCH SHORTING. (K)

2009FA0000884	SLIDE	NO TEST
5/12/2009	7A1323111	

RECEIVED AT REPAIR STATION, STRETCHED UPPER DECK EMERGENCY EVACUATION ESCAPE SLIDE ASSY IN A DEPLOYED CONDITION WITH O/H OF UNIT REQUESTED, THIS UNIT WAS MFG IN FEB 1990 AND WAS LAST O/H IN JAN 2008. DURING INSP/TESTING THE INFLATABLE SIDE WAS FOUND TO HAVE LARGE AREAS OF EXCESSIVE LEAKAGE THRU THE RUBBERIZED, TREATED FABRIC, REFERRED TO AS UNACCEPTABLE POROSITY OF THE ESCAPE SLIDE MATERIAL AND THE UNIT FAILED THE AIR RETENTION TEST AS SPECIFIED IN THE CMM. AFTER FURTHER INVESTIGATION, IT CAME TO OUR ATTENTION THAT AN UNAPPROVED REPAIR PROCESS MAY HAVE BEEN USED TO TRY TO REPAIR THE POROSITY ON THIS UNIT. WE ARE NOT AWARE OF ANY APPROVED REPAIR

PROCEDURE THAT CAN BE USED TO REPAIR THIS TYYPE OF FEFECT OF THIS SCOPE. THE CMM ONLY ALLOWS YOU TO PATCH A SMALL AREA OF PORPSITY TO A MAX SIZE OF 64 SQ IN. THERE ARE PREVIOUSLY MADE GREASE PENCIL MARKS ALONG WITH THE INFLATABLE WEIGHING APPROX 7 LBS MORE THAT IS MARKED ON THE GIRT OF THE SLIDE LEADS US TO BELIEVE THAT THE INSIDE OF THE INFLATABLE TUBE MAY HAVE BEEN COATED WITH SOME TYPE OF ADHESIVE OR SEALANT COATING. THERE IS NO PROCEDURE IN THE CMM FOR THIS TYPE OF REPAIR AND THE CMM SPECIFIES THAT THE INFLATION TUBE SHOULD BE REPLACED IF IT HAS THIS MUCH POROSITY. (K)

AG2R6381303	CONT	CYLINDER	CRACKED
9/24/2009	IO520*		ENGINE

EXHAUST SEAT AND EXHAUST PORT WALL CRACK TOO SEVERE FOR REPAIR.

2009FA0000833	CONT	PUMP	MALFUNCTIONED
10/8/2009	IO520D	642121A14	MECH FUEL

PARTIAL LOSS OF POWER IN CRUISE FLT 2500 MSL ON LEFT TANK. LOSS OF FUEL PRESSURE, SWITCHED TANKS, ENGAGED AUX FUEL PUMP AND REGAINED POWER. MONITORED ENGINE GAUGES, APROX 15 GAL OF 100 LL IN TANK. LANDED ON MECHANICAL PUMP. NO ISSUES ON LANDING. NOTIFIED DIRECTOR OF MAINTENANCE AND DIRECTOR OF OPERATIONS. NOTIFIED FSDO. MAINTENANCE TROUBLE SHOOTING SYMPTOMS FOUND NO ISSUE AFTER INITIAL POWER LOSS. LOST POWER IN FLIGHT, SWITCHED TANKS WITH PROPELLER WINDMILLING. ENGINE RESTARTED AND TURNED OFF AUX PUMP. LANDED AT HOME BASE. ACTUAL CAUSE OF LOSS OF POWER UNK. MAINTENANCE CONTINUING TO TROUBLESHOOT FUEL TANK, FUEL SYSTEM FILTERS (MISC) AND OTHER POSSIBLE CAUSES. SENDING MECHANICAL FUEL PUMP AND FUEL CONTROL SERVO TO REPAIR STATION FOR EVALUATION.

2009FA0000849	LYC	HONEYWELL	HOUSING	LEAKING
10/16/2009	LTS101700D2		4143020R35	COMBUSTION CHMBR

ENGINE WAS RETURNED TO THIS REPAIR STATION FOR SMOKE AT START UP AND TAILPIPE OIL LEAK AT SHUTDOWN. UPON DISASSEMBLY NOTICED INTERNAL OIL FEED TUBE CONNECTED TO THE FEED CHAMBER OF THE HOUSING TO BE LOOSE. THE TUBE SEPERATED TO A POINT THAT THERE WAS A GAP OF 1/16" BETWEEN THE TUBE AND THE FEED CHAMBER OF THE HOUSING. THIS FEED LINE SUPPLIES OIL TO NR 2 AND 3 BEARINGS VIA AN OIL FEED RING THAT HAS THREE OIL JETS AIMED AT THOSE BEARINGS. THE BEARING DID NOT SHOW ANY EVIDENCE OF WEAR OR DAMAGE, JUST MINOR VARINSH OR COCKING, NO ROUGH ROTATION. THE HOUSING, BOTH BEARINGS AND OTHER ASSOCIATED PARTS ARE BEING SENT DESIGN HOLDER FOR FURTHER INVESTIGATION.

2009FA0000847	AGUSTA	AGUSTA	TUBE	CORRODED
10/15/2009	A109E	30436	109060550107	NR 1 ENGINE

DURING A DAILY INSPECTION, NR 1 ENGINE REAR SUPPORT LEG WAS FOUND SHEARED AT MIDPOINT. DAMAGE OCCURRED DUE TO SEVERE INTERNAL CORROSION OF THE STEEL TUBE. THE DAMAGE WAS HIDDEN BEHIND A CLAMP THAT SECURES A WIRE BUNDLE TO THE MOUNT LEG. AT LEAST 2 MORE IDENTICAL AIRCRAFT HAVE BEEN FOUND SINCE TO HAVE SIMILAR DAMAGE. FLEET-WIDE INSPECTION IS IN PROGRESS.

ULXR2009091683124	AGUSTA	BLADE	DEBONDED
9/16/2009	AW139	3G6410A00131	TAIL ROTOR

TAIL ROTOR BLADE LEADING EDGE STRIP DEBONDING.

ULXR2009080483136	AGUSTA	PWC	INDICATOR	MALFUNCTIONED
8/4/2009	AW139	PT6C67C		AHRU

IN FLIGHT CAS MESSAGE INTERMITTANTLY ILLUMINATED: NR 1 AHRS FAIL, NR 1 AP FAIL, AFCS DEGRADED, AVIONICS FAIL. REPLACEMENT OF AHRU CORRECTED THE SQUAWK.

CA090929001	AIRBUS	LINE	CRACKED
9/24/2009	A330243	AE71112112	HYD SYSTEM

(CAN) GREEN HYDRAULIC LEAK ON NR 1 ENGINE PRESSURE LINE FOR EDP. LINE FOUND CRACKED. REPLACEMENT CARRIED OUT. (TC# 20090929001)

2009FA0000805	AMTR	LYC	DOOR	SEPARATED
9/26/2009	RV10	IO540D4A5	C1012R	MAIN PAX

PASSENGER DOOR NOT LATCHED AT AFT PIN PRIOR TO TAKEOFF. SOON AFTER ROTATION DOOR OPENED AND THEN SEPARATED FROM ACFT AT HINGE CONNECTION ON DOOR. DOOR DID NOT CONTACT ACFT AND FELL TO SIDE OF RUNWAY WITH MINOR DAMAGE. PILOT CONTINUED CLIMB AND ENTERED PATTERN FOR UNEVENTFUL LANDING. TAXIED TO HANGAR AND SHUTDOWN ENGINE. NO DAMAGE TO MAIN STRUCTURE OF ACFT. DOOR WILL REQUIRE REPLACEMENT OF HINGE, LIKELY PLEXIGLASS WINDOW, AND GAS STRUT.

2009FA0000816	AMTR	LYC	RETAINER	DISCONNECTED
10/8/2009	VELOCITY	IO360C1C		BALL CLIP

LT NOSE GEAR DOOR WOULD NOT OPEN TO LET THE NOSE GEAR COME DOWN. AFTER LANDING WITH THE NOSE GEAR UP, FOUND THAT THE LINKAGE CAME OFF IN FLIGHT AND JAMMED THE DOOR CLOSED. AFTER REMOVING AN INSP COVER, WAS ABLE TO FREE THE LINKAGE AND DROP THE NOSE GEAR WHILE THE FIREMAN HELD THE NOSE UP. ONLINE FOUND RECOMMENDATION TO MODIFY DOORS SO THEY SPRING OPEN IF LINKAGE FAILED. MINIMUM DAMAGE LIMITED TO NOSE GEAR DOOR AREA.

2009FA0000822	BBAVIA	CONT	SCREEN	CLOGGED
6/17/2009	7AC	A65*		FUEL STRAINER

FUEL STRAINER SCREEN IN NOSE TANK, FOUND PLUGGED UP. CAUSE UNKNOWN. AGE OF PANT ESTM: 63 YRS.

2009FA0000821	BBAVIA	CONT	COIL	FAILED
6/17/2009	7AC	A65*		MAGNETO

MAGNETO FAILURE DUE TO COIL. UPON INSPECTION, FOUND OIL FROM COIL, INSIDE MAGNETO. AGE OF COIL ESTM: 36 YRS. (K)

VIBR RK125 LEFT	BEECH		TUBE	BLEW OUT
10/1/2009	400A		12855001111	BLEED AIR SYS

DURING SCHEDULED AIRFRAME MX, A AND B CHECKS AND INSP OF ACFT BLEED AIR TUBES IN REFERENCE TO AD2001-03-06 FOUND LEFT BLEED AIR TUBE BELLOWS RUPTURED.

2009FA0000829	BEECH		TURNBUCKLE	BROKEN
9/11/2009	B200		30014181	ACM

AIR CONDITIONING BELT TENSION ADJUSTMENT TURNBUCKLE AND BRACKET BROKE. THE TURNBUCKLE BROKE AT THE ROD END AND THE BRCKET BROKE AT THE TAB CONNECTING THE COMPRESSOR BRACKET TO THE ENGINE. (K)

2009FA0000826	BEECH		GREASE	INADEQUATE
9/11/2009	B200			

THE NEW GREASE MIL-PRF-81322 AVIATION GREASE SHC 100 CALLED OUT FOR USE BY MFG IN CHAP 12-20-00 ON THE WHEEL BEARINGS DOES NO SUFFICIENTLY LUBRICATE THE BEARINGS CAUSING THEM TO SEIZE UP. (K)

CA090928006	BEECH	PWA	DUCT	DEFORMED
9/23/2009	B300	PT6A60A	30006741	ACM

(CAN) FLIGHT CREW REPORTED NO HEAT IN AFT CABIN. INSPECTION OF THE DUCTING IN THE AFT CABIN FOUND TWO DUCTS DEFORMED DUE TO HEAT CAUSING A RESTRICTION OF AIRFLOW TO THE CABIN OUTLETS. NEW DUCTS INSTALLED. TEMPERATURE CONTROL WAS OPERATING IN MANUAL MODE DUE TO FAILURE OF AUTO MODE. (TC# 20090928006)

CA090928005	BEECH	PWA	DUCT	DEFORMED
9/23/2009	B300	PT6A60A	30006761	CABIN HEAT

(CAN) FLIGHT CREW REPORTED NO HEAT IN AFT CABIN. INSPECTION OF THE DUCTING IN THE AFT CABIN FOUND TWO DUCTS DEFORMED DUE TO HEAT CAUSING A RESTRICTION OF AIRFLOW TO THE CABIN OUTLETS. NEW DUCTS INSTALLED. TEMPERATURE CONTROL WAS OPERATING IN MANUAL MODE DUE TO FAILURE OF AUTO MODE. (TC# 20090928005)

2009FA0000817	BEECH	LYC	WINDOW	FRACTURED
9/2/2009	B60	TIO541E1A4	604302943	RT REAR

RT SIDE REAR WINDOW FRACTURED (BLEW OUT) IN FLIGHT CAUSING CABIN SUDDEN DECOMPRESSION. (K)

2009FA0000836	BEECH		SUPPORT BRACKET	CRACKED
10/12/2009	C90		5052443229	ELEVATOR PULLEY

WHILE REMOVING FLOORING INSULATION BECAUSE OF AGE AND WEAR, CRACKS WERE FOUND IN THE FLOOR PANEL (P/N 50-440012-655), INVESTIGATION FOUND SEVERAL CRACKS IN THE FLOORS SECOND LAYER AND ELEVATOR PULLEY SUPPORT BRACKET (P/N 50-524432-29) AT FS242, JUST INSIDE THE CABIN ENTRY DOOR. MY CONCERN IS THAT THESE CRACKS WERE UNDER THE FLOORING INSULATION WHICH IS GLUED TO THE PANEL AND NOT VISIBLE UNTIL THE INSULATION WAS REMOVED, THESE CRACKS MAY HAVE GONE UNDETECTED FOR WHO KNOWS HOW LONG OR UNTIL THE BRACKET FAILED COMPLETELY. PICTURES ARE AVALABLE.

2009FA0000929	BEECH	PWA	TORQUE KNEE	WRONG PART
7/27/2009	C90A	PT6*	5081029525	MLG

LWR TORQUE KNEE STOP LUG IS MACHINED TOO SHORT ALLOWING OVER EXTENSION OF THE LWR LANDING GEAR STRUT. THIS ALLOWS THE BRAKE ASSY AND TIRE TO CONTACT AND DAMAGE THE LWR NACELLE SKIN DURING GEAR RETRACTION AND EXTENSION. THE MFG DATED CODE STAMPED ON THE TORQUE KNEE WAS JULY 2, 2008. THE PROBLEM WAS CORREDTED WITH THE INSTALLATION OF A NEW TORQUE KNEE WITH MFG DATE OF AUGUST 26, 2006. (K)

2009FA0000909	BEECH	CONT	PUMP	CONTAMINATED
8/12/2009	F33	IO520BB	64621238A1	ENG FUEL

AT CRUISE, PILOT NOTICED SLOWER THAN NORMAL OPERATING SPEED WHICH COULD NOT BE INCREASED BY ADVANCING THE THROTTLE. FUEL FLOW CONTINUED TO DECREASE WITHOUT THROTTLE MOVEMENT. EMERGENCY LANDING WAS PERFORMED WITHOUT INCIDENT. AFTER LANDING ENGIN CONTINUED TO RUN PROVIDING ENOUGH POWER TO TAXI TO RAMP TIE-DOWN AREA WHERE NORMAL SHUT DOWN PROCEDURE WAS INITIATED. TEAR DOWN INSP OF ENGINE DRIVEN FUEL PUMP REVEALED CONTAMINATION IN VAPOR SEPARATOR HOUSING AND JET, CAUSING A PARTIAL BLOCKAGE WHICH IS CONSISTENT WITH OPERATOR SCENARIO OF REDUCING FUEL FLOW AND POWER LOSS. (K)

CA090914008	BELL	ALLSN	BLEED VALVE	STICKS
9/11/2009	206B	250C20	23053176	ENGINE

(CAN) BLEED VALVE VERY HARD TO MOVE, STICKY OPERATION, NOT MOVING FEELY WHEN ENGINE RUNNING. (TC 20090914008)

2009FA0000827	BELL	ALLSN	BEAM	CRACKED
8/11/2009	206B	250C20B	206031200016	BS 87

A SMALL CRACK WAS DISCOVERED IN THE ROOF BEAM WEB, TOP RIGHT OF VERTICAL TUNNEL, NEAR STA 87.20 AND WL 67.40. IT WAS FOUND DURING AN ANNUAL INSPECTION.

ULXR2009080683133	BELL	ALLSN	HMU	FAILED
8/6/2009	407	250C47B	23078031	

FAILED FADEC AUTO TO MANUAL CHECK.

CA090928004	BELL	ALLSN	SPRING	BROKEN
9/14/2009	407	250C47B	407001109103	M/R CONTROLS

(CAN) DURING INSPECTION FOUND SPRING BROKEN. (TC# 20090928004)

TIPR20090023	BOEING	BEAR STRAP	CORRODED
10/4/2009	737448	6545890	ZONE 100

FS 344 STR 9L TO 11L AND STR 12L TO 15L- FWD ENTRY DOOR BEARSTRAP CORRODED. REPAIRED IAW REO-G12967 REV E DATE 10/3/2009. MAJOR REPAIR.

TIPR20090024	BOEING	FLOORBEAM	CORRODED
10/4/2009	737448	6546809126	ZONE 200

FS 947.50 FLOORBEAM UPPER TEE RBL 70.53 TO LBL 70.53. REPAIRED IAW REO-G12924 REV B DATE 09/23/2009.

2009FA0000902	BOEING	HEAT EXCHANGER	RUPTURED
6/11/2009	7572B7	1942723	RT SECONDARY

THE ACFT HAD A LOSS OF PRESSURIZATION AT FL390. ACFT DIVERTED. ON INSP, THE RT SECONDARY HEAT EXCHANGER WAS FOUND TO BE RUPTURED, CAUSING A LOSS OF PRESURIZATION.

TIPR20090026	BOEING	SKIN	CRACKED
10/6/2009	767222		ZONE 400

DURING MAINTENANCE INSPECTION (C-CHECK) AT TIMCO GSO, A CRACK AND A NON CONFORM REPAIR WERE FOUND ON N2 PYLON INBOARD SIDE SKIN ON PANEL 446BL CUTOUT, NAC STA 223-NAC STA 229. REPAIRED PER B767-200 SRM 54-50-01 FIG 201 REPAIR 7.

TIPR20090025	BOEING	PRESSURE BLKHD	DENTED
10/5/2009	767222		BS 1629 RBL 20

DURING A MX INSP (C-CHECK), A DENT WAS FOUND ON THE AFT PRESSURE BULKHEAD (DOME WEB) AT BS 1269 RBL 20, DENTED. REPAIRED IAW SRM 53-80-08 FIG.201 REPAIR 2.

2009FA0000905	BOEING	CONT	SHOE	INOPERATIVE
8/10/2009	A75N1	W670*		LT MLG BRAKE

ON ROLL-OUT PORTION OF LANDING LT BRAKE STARTED TO DRAG AND RESULTED IN PARKING THE ACFT OFF TO THE LT SIDE OF RUNWAY 33 AT THE AIRPORT. BRAKE WAS RELEASED BY SCREWING ADJUSTMENT SCREW IN AND ACFT WAS TOWED TO HANGAR. NO DAMAGE OR INJURIES OF ANY KIND. AIRPORT WAS NOT CLOSED NOR WAS ANY OTHER TRAFFIC MADE TO DEVIATE IN ANY MANNER WHATSOEVER. THIS TYPE OF BRAKE SYS HAS BEEN KNOWN TO DRAG AND ACTUALLY LOCK-UP. SOME DOW AND SOME NEVER DO. ALSO, THE SYS ON THIS ACFT WAS ADJUSTED ACCORDING TO THE MM. HAVE ORDERED AND WILL REPLACE SYS WITH A COMPLETELY NEW DISC-BRAKE SYS. THIS SHOULD TAKE CARE OF PROBLEM.

2009FA0000875	BOMBDR	HNYWL	BEARING	DAMAGED
2/3/2009	BD1001A10	AS90711A	30356475	NR 4

FEB 3, 2009, WHILE ACFT WAS ENROUTE, FLIGHT CREW INITIATED DESCENT. AT 13,000 FEET, FLIGHT CREW FELT VIBRATIONS ACCOMPANIED BY AN ENGINE SYNCHRONIZER LIGHT. FLIGHT CREW ATTEMPTED TO MOVE THROTTLE, HOWEVER VIBRATION BECAME WORSE UNTIL THE LEFT ENGINE VIBRATION CAS MESSAGE ILLUMINATED AT 3000 FEET. FLIGHT CREW SECURED THE ENGINE, WITH THE AIRCRAFT SUBSEQUENTLY LANDING WITHOUT INCIDENT. POST FLIGHT MX CHECKS INDICATED METAL ON THE CHIP DEBRIS COLLECTORS IN ADDITION TO THE ENGINE BEING DIFFICULT TO IMPOSSIBLE TO ROTATE. MX CREW REMOVED ENGINE 118353 AND INSTALLED A BANK UNIT TO ALLOW AIRCRAFT TO RETURN TO SERVICE. ENGINE 118353 WAS SENT TO MANUFACTURER FOR INVESTIGATION. MANUFACTURER HAS DETERMINED THE CAUSE OF THE IN-FLIGHT SHUTDOWN EVENT WAS FAILURE OF THE NR 4 BEARING. DUE TO THE EXTENSIVE DAMAGE OF THE BEARING, IT IS DIFFICULT-TO-IMPOSSIBLE TO SPECIFICALLY DETAIL HOW THE BEARING FAILED, HOWEVER BASED ON ANALYSIS OF THE BEARING AND ITS` ASSOCIATED COMPONENTS, IT MOST LIKELY FAILED DUE TO A LOSS OR A REDUCTION IN OIL LUBRICATION. INVESTIGATION INTO THE EVENT IS CONTINUING. (K)

2009FA0000934	BOMBDR	FIRE DETECTOR	FAILED
8/10/2009	BD7001A10	47378401	

CHECK OF THE FIDEEX SYSTEM, CHECKED OUT. ALL OF THE CHECKS PASSED WITH THE EXPECTATION OF THE IN-CIRCUIT CHECK OF THE SQUIB-FIRING-CURRENT. NONE OF THE 3 DUAL-CHANNEL SQUIB OUTPUTS TO THE TWO BOTTLES (12 TOTAL) POPPED THE 1-AMP C/B ON THE TEST-SET. IT WAS VERIFIED THAT THE TEST-SET USED STANDARD CBS. CONNECTING AN IN-CIRCUIT LAMP, IT LIT VERY DIM. THE MEASURED VOLTAGE WAS 18VDC. AN IN LINE CURRENT METER DID NOT SHOW ANY CIRCUIT CURRENT, POSSIBLY DUE TO SUCH A LOW CURRENT AND A HI-INPUT RESISTANCE OF THE METER. IAW THE CMM, THE CURRENT IS SUPPOSE TO BE OVER 4 AMPS. A CONTROLLED TEST WAS PERFORMED USING AN EXTERNAL "TEST-SQUIB" IN A HEAVY 1/2" STEEL BOX. THE TEST-SQUIB WAS WIRED WITH TEST-LEADS INTO ONE OF THE AIRCRAFT SQUIB OUTPUT CONNECTOR'S. PULLED AND TURNED THE FIRE-HANDLE, IT DID NOT FIRE. GROUNDING THE TEST-SQUIB GROUND LEAD DIRECTLY TO THE AIRFRAME DID NOT WORK EITHER. A REPLACEMENT FIDEEX CONTROL BOX (SN 0070) WAS INSTALLED AND THE 1 AMP CB CHECK PASSED ON ALL 12 CHANNELS. (K)

2009FA0000890	BOMBDR	EFB	UNSERVICEABLE
6/1/2009	BD7001A11	24560441280000	COCKPIT

THE ACFT WAS RECENTLY EQUIPED WITH A CLASS 2 ELECTRONIC FLIGHT BAG SYS. STC NR ST02480NY, CONFIGURATION 19, INSTALLATION, CLASS II ELECTRONIC FLIGHT BAG, IAW MODIFICATION DATA SUMMARY F376000, REVISION G, DATED MARCH 18, 2009. THE WORK WAS ACCOMPLISHED ON MAY 22, 2009. THE PILOT`S EFB EDU WAS REMOVED BECAUSE THE UNIT STARTED BILLOWING WHITE SMOKE WHILE THE ACFT WAS IN FLIGHT. THE UNIT WAS TOTALLY INOP AND HAS BEEN SENT. THE EFB EDU THAT WAS INSTALLED IN PLACE OF SN 1583 IN OPERATING NORMALLY. IT`S MY UNDERSTANDING THAT THE EFB EDU CONTAINS A LITHIUM BATTERY(S) OF SOME TYPE. THESE PARTICULAR EFB`S HAVE BEEN EXTREMELY UNRELIABLE AND PROBLEMATIC, HOWEVER, THIS IS OUT FIRST SUCH OCCURRENCE WITH THE UNITS. (K)

CA090928007	BOMBDR	PWC	SWITCH	MISINSTALLED
9/27/2009	DHC8400	PW150A	8209076	OVER TEMP

(CAN) AT ENGINE START MAINTENANCE MESSAGE AS FOLLOWS: NR 2 BLEED CAUTION LIGHT ON AFTER START UP DURING OVER TEMPERATURE SWITCH REPLACEMENT IT WAS NOTICE THAT DURING PRODUCTION THIS UNIT WAS CROSS TREADED, CONSEQUENTLY THE DUCT ASSY. AND THE SWITCH WERE REPLACED. AFTER MAINTENANCE WAS COMPLETED ENGINE RUN CARRIED OUT SATISFACTORY. (TC# 20090928007)

2009FA0000839	CASA	SKIN	CORRODED
10/10/2009	C212		LT WING

UPON REMOVAL OF THE LEFT SIDE UNDER-WING (RIVETED ON) AFT EXHAUST FAIRING WHILE PERFORMING SID 20000 CYCLES/8100 LANDINGS INSPECTION, AN AREA OF MODERATE TO SEVERE EXFOLIATION CORROSION WAS DISCOVERED ON THE WING SKIN UNDERNEATH THE EXHAUST FAIRING. THIS CORROSION WAS NOT VISIBLE WITH THE RIVETED FAIRING INSTALLED.

2009FA0000908	CESSNA	LEG ASSY	CORRODED
9/19/2009	150J		MLG

DURING ANNUAL INSP, NOTED RUST STAINS ADJACENT TO THE STEPS LOCATED ON BOTH THE RT AND LT MLG LEGS. REMOVED THE STEPS AND FUND DEEP RUST PITS AND DAMAGE ON BOTH GEAR LEGS. BOTH GEAR LEGS WERE REMOVED AND REPLACED WITH USED SERVICEABLE GEAR LEGS. STEPS WERE NOT REINSTALLED.

2009FA0000825	CESSNA	G SWITCH	INOPERATIVE
9/16/2009	150M		ELT

ELT G SWITCH, INOPERATIVE. (K)

2009FA0000904	CESSNA	LYC	FLOAT	LOOSE
8/27/2009	152	O235L2C	30766	CARBURETOR

UPON CK FOR REPORTED ENGINE POWER LOSS THE CARBURETOR FLOAT WAS FOUND WITH ONE FLOAT UNSOLDERED. COMPARED TO THE OTHER FLOAT, THE REINFORCEMENT TAB WAS FOUND NOT TO HAVE BEEN SOLDERED WHEN MFG. (K)

2009FA0000937	CESSNA	CONT		YOKE	BROKEN
8/22/2009	172F	O300D		051178216	ELEVATOR CONTROL

ACFT EXPERIENCED A TOTAL SEPARATION OF THE WELD ASSY- YOLK (PN 0511782-16) APPROX 3 INCHES ABOVE THE ELEVATOR CONTROL ROD ATTACH POINT AT THE LOWER BEARING (PN AN200KS4). THIS SEPARATION RESULTED IN A TOTAL LOSS OF ELEVATOR CONTROL. THIS POTNETIALLY CATASTROPHIC FAILURE OCCURRED ON THE GROUND BETWEEN FLIGHTS. ACFT WAS PREPARING FOR SECOND FLIGHT WHEN PILOT DECIDED AGAINST THE FLIGHT DUE TO WEATHER. PILOT SHUT DOWN ENGINE AND ATTEMPTED TO INSTALL CONTROL LOCK. AS THE PILOT PULLED THE CONTROL YOLK AFT TO ALIGN THE LOCKPIN HOLE, HE NOTED NO RESISTANCE. VISUALLY CHECKING THE ELEVATOR`S RESPONSE TO CONTROL YOLK MOVEMENT, IT WAS APPARENT THAT THERE WAS A TOTAL SEPARATION. YOLK BROKE WITHOUT ANY OBVIOUS EXTERNAL DEFORMATION. UPON EXAMINATION, IT WAS APPARENT THAT THE WELD ASSY-YOLK HAD CORRODED FROM THE INSIDE. YOLK ASSY IS SEALED ON THE BOTTOM AT THE ATTACH POINT OF THE ELEVATOR CONTROL ROD BUT ITS OPEN AT THE TOP, FILLING AND TRAPPING WATER AT THE BOTTOM. SB SEB01-3 ADDRESSES SITUATION. EVEN THOUGH THE YOLK LOOKED GOOD AND HAD A SOLID RING WHEN STRUCK WITH A STEEL ROD, IT STILL FAILED THE SB TEST.

2009FA0000900	CESSNA	LYC	SLICK	ROTOR	BROKEN
8/12/2009	172M	O360A4M		M3548	RT MAGNETO

THE ROTOR SHAFT WAS FOUND BROKEN IN TWO. THE BREAK LINE INDICATES A CRACK WAS PRESENT FOR SOME TIME PRIOR TO SEPARATION. THE MAG AHD NOT HAD ANY INTERNAL MX. 2 WEEKS PRIOR TO THIS, THIS SAME ROTOR BREAK OCCURED ON A 4370 WITH 708 HOURS TIME IN SERVICE.

2009FA0000925	CESSNA	LYC	ACTUATOR	BROKEN
10/1/2009	172RG	O320*	12810013	MLG

ON RETURN TO AIRPORT THE PILOT COULD NOT GET THE LEFT MAIN GEAR TO FULLY EXTEND INTO THE DOWN AND LOCKED POSITION FOR LANING. AFTER SEVERAL ATTEMPS TO GET THE GEAR DOWN THE DECISION WAS MADE TO LAND THE ACFT WITH THE GEAR UP IN THE GRASS ALONG SIDE THE RUNWAY WITH NO DAMAGE DONE TO THE ACFT. FURTHER INSPECTION OF THE ACFT AFTER THE GEAR UP LANDING REVEALED THAT THE LT MAIN GEAR ACTUATOR HAD BROKEN ALLOWING THE SECTOR GEAR AND PISTON TO BECOME JAMMED THEREFORE NOT ALLOWING THE GEAR TO OPERATE AS INTENDED. SB , SEB01-2, REV 2 RECOMENDS INSPECTION BE DONE EVERY 500 HRS. (K)

CA090929003	CESSNA	CONT	LANDING GEAR	OBSTRUCTED
9/27/2009	210L	IO520L		NOSE

(CAN) UPON APPROACH, PILOT SELECTED MLG DOWN, & DID NOT GET A MLG DOWN INDICATION & HYDRAULIC MOTOR DID NOT SHUT-OFF. PILOT PULLED MLG CIRCUIT BREAKER & USED EMERGENCY EXTENSION PUMP. PILOT SAID HAND PUMP PRESSURED UP IMMEDIATELY. VISUAL ON LT & RT MLG INDICATED THEY WERE DOWN. COULD NOT CONFIRM NLG DOWN. A PHONE CALL WITH MX IN AIR DETERMINED THAT ALL MLG WAS MOST LIKELY DOWN DUE TO PREVIOUS EXPERIENCE WITH FAILED DOWN LOCK MICROSWITCHES. PILOT CONTINUED TO LAND UNEVENTFULLY UNTIL ROLL-OUT WHEN NLG STARTED TO COLLAPSE. PROP STRUCK PAVEMENT & ENGINE STOPPAGE OCCURED. NO OTHER POST FIRES ETC OCCURED. ACFT GOING AT TAXI SPEED WHEN NLG COLLAPSED. UPON REMOVAL OF ACFT FROM RUNWAY, NOTICED RT CABIN STEP RETRACT CABLE HAD BROKE (SUSPECTED UPON LAST RETRACTION) AND HAD FLIPPED AROUND AND LODGED ITSELF INTO NLG ACTUATOR LOCKING MECHANISM. NLG LOCKED INTO PLACE ON RUNWAY & TOWED TO HANGER. ACFT HAD ALL 3 GEAR DOWN UPON LANDING EXCEPT NLG WAS TRULY NOT LOCKED. HYD PRESSURE BLED OFF DURING ROLL-OUT AND SUBSEQUENTLY GEAR COLLAPSED. (TC# 20090929003)

2009FA0000916	CESSNA	CONT	LINKAGE	BENT
10/5/2009	310D	IO470*		NLG

NOSE GEAR FAILED UPON RETRACT. EXACT CAUSE, UNKNOWN. FOUND LINKAGE FROM GEAR ACTUATOR BOX TO NOSE GEAR BENT. THE NOSE GEAR DOOR LINKAGE IS SUSPECT TO CAUSING THE INCIDENT, BUT CANNOT SAY WITH CERTAINTY.

2009FA0000932	CESSNA	CONT	CYLINDER	FAILED
10/12/2009	340A	TSIO520*		ENGINE

PROBLEM ORIGINATED FROM A ROUGH RUNING ENGINE CAUSED BY BROKEN CYLINDER VALVE SPRINGS. CYLINDER WAS REMOVED FOR REPAIR AT THIS TIME SPALLED CAMSHAFT AND LIFTERS WERE OBSERVED NECESSITATING A COMPLETE ENGINE TEARDOWN WHICH EXPOSED THE ADDITIONAL PARTS WITH CORROSION ON THEM.

2009FA0000942	CESSNA	CONT	SPRING	BROKEN
9/9/2009	340A	TSIO520NB		VALVE

RT ENGINE REPORTED TO RUN ROUGH DURING APPROACH. ENGINE HAS A 25 RPM MAGNETO DROP. COMPRESSION CHECK INDICATED A LEAKING EXHAUST VALVE WITH THE ENGINE HAVING ALLOWABLE COMPRESION READINGS. CHT'S DID NOT COME UP EVENLY DURING INITIAL ENGINE START UP, SOME LAGGED WAY BEHIND OTHERS. TURBOCHARGERS WERE REPLACED AT LAST ANNUAL 5 HOURS AGO DUE TO THEM REPORTED AS BEING STIFF. ENGINE FUEL FLOWS APPEAR TO BE LOW AND ENGINE IS RUNNING LEAN, NO RISE AT ICO. RECENTLY SEALED LEFT PROP IS LEAKING RED DYE/OIL. REMOVED THE ROCKER BOX COVERS AND FOUND CYL NR 4 WITH BROKEN OUTER VALVE SPRINGS AND CYL NR 5 WITH BROKEN INNER VALVE SPRINGS. REMOVED THE FILTER AND FOUND IT COMTANINATED WITH STEEL PARTICLES.

2009FA0000941	CESSNA	CONT	MAGNETO	FAILED
9/9/2009	340A	TSIO520NB		LEFT

RIGHT ENGINE REPORTED TO RUN ROUGH DURING APPROACH. ENGINE HAS A 25 RPM MAGNETO DROP. COMPRESSION CHECK INDICATED A LEAKING EXHAUST VALVE WITH THE ENGINE HAVING ALLOWABLE COMPRESSION READINGS. CHT'S DID NOT COME UP EVENLY DURING INITIAL ENGINE START UP, SOME LAGGED WAY BEHIND OTHERS. TURBO CHARGERS WERE REPLACED AT LAST ANNUAL 5 HOURS AGO DUE TO THEM REPORTED AS BEING STIFF. ENGINE FUEL FLOWS APPEAR TO BE LOW AND ENGINE IS RUNNING LEAN, NO RISE AT ICO. RECENTLY SEALED LEFT PROP IS LEAKING RED DYE/OIL. REMOVED VENT PLUGS ON THE MAGNETOS AND FOUND THE INSIDE OF THE RT ENGINES LT MAGNETO TO BE FILLED WITH CRUD WHICH TURNED OUT TO BE FROM A FAILED DISTRIBUTOR GEAR TEETH THAT CHANGED THE INTERNAL TIMING OF THE MAGNETO. NOTE MAGNETOS WERE REPLACED DURING THE ENGINE O/H.

2009FA0000842	CESSNA	CONT	CYLINDER	CRACKED
1/20/2009	421B	GTSIO520*	ECC720	NR 5

ECI REPAIRED CYLINDER FOUND TO BE CRACKED

2009FA0000841	CESSNA	CONT	CYLINDER	CRACKED
12/5/2008	421B	GTSIO520C		ENGINE

12/25/08 6 CRACKED TCM CYLINDERS WERE REPLACED.

2009FA0000843	CESSNA	CONT	CYLINDER	CRACKED
4/17/2009	421B	GTSIO520C	ECC720	NR 6

REPAIRED CYLINDER FOUND TO BE CRACKED

2009FA0000891	CESSNA	CONT	CRANKSHAFT	BROKEN
4/30/2009	421C	GTSIO520*	653020	NR 3 MAIN

RECEIVED ENGINE INTO DISASSY SHOP ON 4/30/09. SMOH: 246.7- POSSIBLY NR 5 CYLINDER NOT TORQUED PROPERLY (MAINTENANCE AFTER O/H). CRANKSHAFT BROKEN AT NR 3 MAIN JOURNAL. M010 CRANK. DAMAGE AT CRANKCASE NR 3 AND NR 4 MAIN BEARING TOWER. FRETTING AT NR 3 TOWER ALSO. METAL IMPREGNATION FOUND IN ALL BEARING/ GEARS/ CAMSHAFT. (K)

2009FA0000798	CESSNA	WILINT	SHAFT	SHEARED
9/23/2009	525	FJ44		HYD PUMP

SHAFT SHEARED ON NR1 (L) HYD PUMP WHILE ACFT WAS IN A CLIMB AFTER TAKE OFF. THIS RESULTED IN THE HYD RESERVOIR TO BE EMPTIED OVERBOARD THRU THE PUMP DRAIN. THE PILOT'S THEN GOT A HYD FLOW LOW ANNUNCIATOR, FIRST ON THE RT SIDE AND THEN A FEW SECONDS LATER ON THE LT. PERFORMED AN EMERGENCY EXTENSION OF THE LANDING GEAR AND RETURNED TO THE DEPARTURE AIRPORT.

VIBR 560 RUDDER	CESSNA		CABLE	FRAYED
9/2/2009	560CESSNA		6565007118193	ZONE 100

DURING A 1200-HOUR/36-MONTH PHASE 5 INSP. REMOVED FWD FLOORDBOARDS FOR INSP OF THE AREA. FOUND RUDDER CABLE GUARD PIN MISSING AT FS 127.70. LT AND RT (UPPER/LOWER) RUDDER CABLES WERE FOUND DAMAGED. THE UPPER RUDDER CABLE WAS RIDING IN THE LOWER RUDDER CABLE'S PULLEY, BOTH CABLES WERE DAMAGED DUE TO THE SAWING EFFECT DURING RUDDER DELECTION.

DXTA2009102001	CESSNA		TRANSCEIVER	MALFUNCTIONED
10/2/2009	560CESSNA			WX RADAR SYS

IN FLIGHT, THE RADAR WHILE IN STBY WOULD FLASH "WAIT" ON THE MFD LOWER LEFT. IN WX MODE ON THE CONTROL HEAD AND SUBPANEL IT WOULD CYCLE BETWEEN A YELLOW "WX" AND WAIT. YOU COULD NOT ADJUST THE PITCH OR RANGE. THE RADAR WOULD NOT PAINT IN WX OR GMAP MODE.

2009FA0000800	CIRRUS	CONT	CRANKCASE	CRACKED
6/25/2009	SR20	IO360ES	64928610	ENGINE

DURING A SCHEDULED INSPECTION AND UPON VISUAL INSPECTION A CRACK IN THE ENGINE CRANKSHAFT CASE WAS DISCOVERED.

2009FA0000797	CIRRUS	CONT	CRANKCASE	CRACKED
3/23/2009	SR20	IO360ES	64928610	ENGINE

DURING A SCHEDULED INSP AND UPON VISUAL INSP A CRACK IN THE ENGINE CRANKSHAFT CASE WAS DISCOVERED.

2009FA0000801	CIRRUS	CONT	CRANKCASE	CRACKED
7/27/2009	SR20	IO360ES	64928610	ENGINE

DURING A SCHEDULED INSP AND UPON VISUAL INSP A CRACK IN THE ENG CRANKSHAFT CASE WAS DISCOVERED.

2009FA0000802	CIRRUS	CONT	CRANKCASE	CRACKED
8/7/2009	SR20	IO360ES	64928610	ENGINE

DURING A SCHEDULED INSP AND UPON VISUAL INSP A CRACK IN THE ENG CRANKSHAFT CASE WAS DISCOVERED.

2009FA0000795	CIRRUS	CONT	CRANKCASE	CRACKED
10/22/2008	SR20	IO360ES	64928610	ENGINE

DURING A SCHEDULED INSPECTION AND UPON VISUAL INSPECTION A CRACK IN THE ENGINE CRANKSHAFT CASE WAS DISCOVERED.

2009FA0000796	CIRRUS	CONT	CRANKCASE	CRACKED
1/27/2009	SR20	IO360ES	64928610	ENGINE

DURING A SCHEDULED INSPECTION AND UPON VISUAL INSPECTION A CRACK IN THE ENGINE CRANKSHAFT CASE WAS DISCOVERED.

2009FA0000803	CIRRUS	CONT	CRANKCASE	CRACKED
9/4/2009	SR20	IO360ES	64928610	ENGINE

DURING A SCHEDULED INSP AND UPON VISUAL INSP A CRACK IN THE ENGINE CRANKSHAFT CASE WAS DISCOVERED.

2009FA0000794	CIRRUS	CONT	CRANKCASE	CRACKED
8/29/2008	SR20	IO360ES	64928610	ENGINE

DURING A SCHEDULED INSP AND UPON VISUAL INSP A CRACK IN THE ENGINE CRANKSHAFT CASE WAS DISCOVERED.

2009FA0000851	CIRRUS	CONT	PAN	DAMAGED
7/15/2009	SR22	IO550*	13549002	NLG

PILOT REPORTED THE PROPELLER APPEARED TO BE MUCH CLOSER TO THE GOUND THAN NORMAL & OIL WAS LEAKING FROM COWL. OWNER REMOVED COWL ENOUGH TO OBSERVE UPPER BUNGEE ASSY CUP ROTATED UP INTO THE OIL PAN. SHAFT WELD FAILED, ALLOWING CUP ASSY TO ROTATE. AT SOME POINT IT APPEARS THE CUP ROTATED UP INTO OIL PAN COLLAPSING OIL PAN INTO THE CANKSHAFT ACCSSY DRIVE GEAR. DRIVE GEAR CUT A SMALL HOLE INTO PAN ALLOWING AN OIL LEAK. WHILE EXAMINING THE NEW PART, IT WAS OBSERVED THE WELD ON THE OLD PART WAS ONLY ON THE INSIDE OF THE CUP TO GUIDE SHAFT. WELD TORE AWAY FROM PAN & APPEARS TO BE A DEFECTIVE WELD. NEW PAN/SHAFT ASSY HAS A SIGNIFICANTLY IMPROVED WELD INSIDE OF THE PAN AS WELL AS A SECOND WELD ON THE TOP SIDE OF THE PAN. IT IS APPARENT THAT THE ACFT FLEW WITH THIS PART BROKEN. IT IS UNCLEAR AS TO HOW MANY FLIGHTS IT HAD WITH THIS PART FAILED HOWEVER, IT APPEARS THAT IT TAXIED IN WITH THE PART FAILED.

2009FA0000804	CIRRUS	CONT	CYLINDER	CRACKED
9/29/2009	SR22	IO550N	655932A3	NR 4

DURING VISUAL INSP CONCURRENT WITH OIL AND FILTER CHANGE, THE NR 4 CYLINDER WAS FOUND CRACKED, UPPER, OUTBOARD FIN, RADIUSING DOWN TO CYLINDER HEAD BASE LT OF SPARK PLUG AND IN BETWEEN LOWER FIN AND HEAD.

2009FA0000820	CIRRUS	CONT	SCREW	BROKEN
7/2/2009	SR22	IO550N	51377001	DOOR HANDLE

PILOTS REPORTED THAT THE DOOR POPPED OPEN ON TAKEOFF, 800 FEET. THE PILOT GRABED THE DOOR BY THE HANDLE TO PULL IT CLOSED AND THE HANDLE CAME OFF IN HIS HAND. PLASTIC SCREWS BROKE OOF A THE HEAD. RECOMMEND REPLACING HARDWARE WITH STEEL. (K)

2009FA0000899	CIRRUS	CONT	RING	FAILED
8/4/2009	SR22	IO550N	16678001	TIE DOWN

JACKED ACFT IAW MM. TAIL TIEDOWN RING FAILED WITH ACFT ON JACKS. TIEDOWN RING MADE OF RUBBER ONLY. SITUATION CAUSES THREAT TO PERSONNEL UNDER AND AROUND ACFT. ACFT WILL FALL-NOSE DOWN WHEN FAILURE OCCURS. (K)

2009F00090	CNDAIR		FITTING	GOUGED
10/2/2009	CL600*		4655021501	ZONE 900

9G BULKHEAD FITTINGS GOUGED AND SCRATCHED

2009FA0000898	COLYAR	ROTAX	CONNECTOR	LOOSE
6/12/2009	FREEDOM	ROTAX912ULS		NLG ACTUATOR

AFTER 2 SUCCESSFUL TAKEOFFS AND LANDINGS, PILOT DID NOT GET NOSE GEAR DOWN INDICATION WHILE ATTEMPTING A LANDING. PILOT PERFORMED A FLY-BY. TOWER PERSONNEL INDICATED NOSE WHEEL EXTENDED, BUT NOT FULLY DEPLOYED. AFTER TOUCH-DOWN, AIRSPEED DIMINISHED. ACFT BEGAN TO MOVE TO THE DOWNWIND SIDE OF RUNWAY. WITHOUT NLG STEERING FEATURE FULLY ENGAGED, NO DIFFERENTIAL BRAKING (HAND BRAKE ONLY), ACFT COULD NOT BE CONTROLLED DIRECTIONALLY. NLG WHEEL STRUCK A TAXI LIGHT & TURNED NOSE STRUT PERPENDICULAR TO ACFT LONGITUDINAL AXIS. NLG SIDE SUPPORTS BENT WITH SIDE LOAD. ACFT CAME TO A STOP WITH NO INJURIES REPORTED. NLG STRUT REMOVED. GEAR ACTUATOR SELECTED AND MLG RETRACTED & DEPLOYED NORMALLY. NLG ACTUATOR & INDICATING LIGHTS OPERATED NORMALLY WHEN LIMIT SWITCHES OPERATED MANUALLY. FAULT HAS BEEN ISOLATED TO A MULIT-PIN ELECTRICAL CONNECTOR THAT POWERS THE NLG ACTUATOR & LIGHTS FOR THE NLG DOWN POSITION. REPLACE CONNECTOR. UPON FURTHER INVESTIGATION, CAUSE OF THE MLG NOT FULLY DEPLOYING WAS DUE TO A DEFECTIVE ACTUATOR, PN 113-419, NOT A DEFECTIVE WIRING CONNECTION. WIRING HARNESS WAS NOT SEALED AT GEAR ACTUATOR CASE ALLOWING WATER FROM THE WHEELWELL TO ENTER THE GEAR ACTUATOR MOTOR. A NEW ACTUATOR WAS INSTALLED AND SEALANT WAS APPLIED TO THE NOSE AND MAIN GEAR HARNESSES AT THE ACTUATOR CASE TO SEAL THE MOTOR. MFG TO SEAL ALL ACTUATOR WIRING HARNESSES FOR NOSE AND MAIN GEAR ACTUATORS. (K)

2009FA0000931	DHAV		GENERATOR	OVERHEATED
10/12/2009	DHC8*		11522185	

GENERATOR OVERHEATED. ENGINEERING HAS IDENTIFIED A SECOND DEFECTIVE WELD IN A MAIN ROTOR BAND (643104-1) THAT PROPAGATED TO A FAILURE CONDITION RESULTING IN A GENERATOR FAILURE IN SERVICE. THE WELD APPEARS TO SHOW STRONG INDICATIONS OF INCOMPLETE FUSION (ORIGINAL UNMELTED JOINT SURFACE) ALONG THE ID SIDE OF THE WELD. THE INCOMPLETE FUSION ZONE BEGINS ON ONE END OF THE WELD AT ALMOST 50 PERCENT OF THE THICKNESS AND TAPERS TO NEARLY -0- PERCENT (FULLY WELDED) ON THE OTHER END.

CA090929002	DHAV	PWA	TORQUE TUBE	SHEARED
9/25/2009	DHC8301	PW123	734386B	TE FLAPS

(CAN) ON APPROACH, FLT CREW NOTICED "FLAP DRIVE" CAUTION LIGHT ILLUMINATE. FLAPS HAD ALREADY BEEN EXTENDED, SO CREW CARRIED OUT A NORMAL LANDING. AFTER LANDING, MX CREW PERFORMED AN INSPECTION OF VISIBLE SECTIONS OF FLAP DRIVE TRAIN & DISCOVERED A SHEARED RT NR 4 TORQUE TUBE. IT APPEARS THAT THE TORQUE TUBE HAD BEEN CHAFING FOR SOME TIME AGAINST ONE OF THE FLAP SHROUD HANGERS, DUE TO EITHER AN UNBALANCED CONDITION, OR A SLIGHT BEND IN THE TORQUE TUBE. (TC# 20090929002)

CA090928014	DIAMON		CONTROL CABLE	WORN
9/21/2009	DA20A1		SF12579	RUDDER

(CAN) FWD 4 RUDDER CABLES ARE ROUTED FROM RUDDER PEDAL ASSYS TO RUDDER BELLCRANK (AFT OF THE MAIN SPAR) THROUGH NYLON GUIDE TUBES THAT PASS UNDER THE SPAR THROUGH A TUNNEL ENCLOSURE. IT WAS NOTED THAT THE CABLES WERE SOMEWHAT WORN AT EACH EXIT END OF THE GUIDE TUBES. AFTER REMOVAL OF THE CABLE (THE CABLES ARE BUILT IN PLACE AND MUST HAVE THE END CUT OFF TO REMOVE), IT WAS NOTED THAT THE WEAR WAS CONSIDERABLY WORSE IN THE GUIDE TUBES THAN INITALLY THOUGHT. 3 OUT OF 4 CABLES HAD BROKEN STRANDS AS WELL AS NUMEROUS SPOTS WHERE CABLE WEAR CAUSED "BLENDING" OF THE CABLE STRANDS. AFT RUDDER CABLES (2) ARE ROUTED FROM THE RUDDER BELCRANK TO THE RUDDER HORN IN A STRAIGHT LINE DOWN THE TAIL CONE. 2 LARGE (APROX 1 1/4" ID) FAIRLEADS AND ONE RUB STRIP (LH CABLE) KEEP THE CABLES FROM SLAPPING THE TAIL CONE STRUCTURE. THESE FAIRLEADS AND RUB STRIP ARE NOT ACCESSABLE UNLESS THE FUEL TANK IS REMOVED. EVEN THEN BECAUSE OF RESTRICTED ACCESS AND BEING UPSIDE DOWN (THE INSPECTOR), IT IS EXTREMELY DIFFICULT TO ASERTAIN THE CONDITION OF THE CABLE PASSING THROUGH/BY THE FAIRLEADS. SOME WEAR WAS NOTED AND UPON REMOVAL AND SIGNIFICANT BLENDING HAD OCCURRED. AIRCRAFT TOTAL TIME WAS 5454 HRS. IT IS UNKNOWN IF THE CABLES HAD BEEN PREVIOUSLY REPLACED. (TC# 20090928014)

2009FA0000873	DIAMON	CONT	NUT	CRACKED
10/22/2009	DA40	IO360*		PROPELLER

WHEN REMOVING PROPELLER FOR RESEAL, FOUND 2 MOUNTING NUTS CRACKED. THE PROP HAS 93.5 HRS SINCE INSTALLATION. THE PROPELLER PREVIOUSLY HAD THE BLADES REPLACED DUE TO PROP STRIKE.

2009FA0000921	DIAMON	CONT	SCREEN	CRACKED
8/14/2009	DA40	IO360*		INTAKE

REPAIR STATION IS HOLDER OF STC SA03674AT FOR THE INSTALATION OF R-134 COOLANT AIR CONDITIONER SYS IN THIS ACFT. IAW THIS STC INSTALLATION, A CONDENSER HOUSING IS MOUNTED ON THE BOTTOM OF THE ACFT FUSELAGE. IT HAS BEEN DISCOVERED THAT THE SCREEN WHICH COVERS THE FRONT OF THE CONDENSER HSG HAS CRACKED WHERE IT ATTACHES TO THE CONDENSER HSG. PROBABLE CAUSE OF THIS CONDITION IS VIBRATION. A MORE STURDY SCREEN ATTAHMENT SYS IS BEING INVESTIGATED TO CORRECT THE PROBLEM. THE CRACKING OF THIS SCREEN DOES NOT AFFECT THE AIRWORTHINESS OF THE ACFT NOR DOES IT AFFECT THE OPERATION OF THE AIR CONDITIONING SYS OR THE ACFT IN GENERAL. (K)

2009FA0000832	DIAMON	LYC	JUMPER	BURNED
6/23/2009	DA40	IO360A1A	DA431446003	CIRCUIT BREAKER

JUMPER WIRE FROM 70 AMP ALTERNATOR BREAKER TO BUSS BAR WAS BURNED AND DISCOLORED CAUSING

INFLIGHT ALTERNATOR FAILURES AS WELL AS AVIONICS INTERFERENCE AND FAILURE. SMOKE IN CABIN WAS ALSO REPORTED. UPON INSPECTION FOUND JUMPER TERMINALS WERE NEVER CRIMPED AT FACTORY CAUSING HIGH RESISTANCE AND BURNING OF THE WIRE. MFG REPS ADVISED OF OTHER FAILURES ON ACFT IN THIS SN RANGE. RECOMMEND IMMEDIATE GROUNDING OF THESE EFFECTED SN ACFT UNITL THESE JUMPERS ARE REPLACED WITH SERVICEABLE PARTS. (K)

2009FA0000819	DIAMON	THIELT	CONTROL VALVE	DEFECTIVE
10/9/2009	DA42	TAE1250299	057212K021401	LT ENGINE PROP

THE LT ENGINE PROPELLER CONTROL VALVE FAILED, CAUSING THE PROPELLER TO FEATHER AND COMMANDED THE FADEC TO SHUTDOWN ENGINE. THIS ISSUE CAN BE RESOLVED BY COMPLYING WITH SB TAE 125-1007P1, REV 2. (K)

EE4Y090298	DOUG	TEE FITTING	CORRODED
9/16/2009	MD83	99574657	ZONE 500

LT WING, STA XTE 342, TRAILING EDGE TEE FLANGE CORRODED.

EE4Y090277	DOUG	SKIN	DELAMINATED
9/21/2009	MD83	59304942	FLAP VANE

RT WING INBOARD VANE FLAP OUTER AND INNER SKIN DELAMINATED.

2009FA0000806	EMB	HOSE	CRACKED
9/30/2009	EMB135BJ	13506691001	FUEL SYSTEM

BOTH VENT VALVE RUBBER COUPLINGS (HOSE) ARE DRY ROTTED/CRACKING AFT END OF FWD FUEL TANKS.

2009FA0000812	EMB	BRACKET	MISMANUFACTURED
10/3/2009	EMB135BJ		ZONE 100

THREE JOBOLTS WERE MISSING, APPARENTLY LEFT OUT DURING MANUFACTURE OF AIRFRAME, FROM A BRACKET ATTACHED TO FRAME 70 BETWEEN STRINGER 11L AND 12L.

2009FA0000815	EMB	CONTROL CABLE	WORN
10/3/2009	EMB135BJ	14571009401	AILERONS

THE LT AND RT WING AILERON CABLES, 2 EA P/N 145-71009-405 AND 2 EA -401 CABLES WERE WORN BEYOND AMM IN-SERVICE LIMITS. NO STRANDS WERE BROKEN. THE WEAR OCCURED WHERE THE CABLES PASS THROUGH THE NYLON FAIR LEADS ALONG THE WING LEADING EDGE WHEN THE AILERONS ARE IN NEUTRAL POSITION.

2009FA0000813	EMB	FASTENER	MISSING
10/3/2009	EMB135BJ		FLOORBEAM

FOUR RIVETS WERE MISSING FROM THE LATERAL FLOOR SUPPORT TO FRAME 71 AT STRINGER 16L.

2009FA0000814	EMB	HOSE	CRACKED
10/3/2009	EMB135BJ	14509942405	APU

APU COMBUSTION DRAIN RUBBER HOSE, P/N 145-09942-405, IS ROTTED AND CRACKED.

2009FA0000918	EMB	ALLSN	RING	CORRODED
9/2/2009	EMB135ER	AE3007A	14575207	ENGINE

(16) OF THE ATTACHMENT RINGS THAT SECURE THE ENGINE INLET TO THE ENGINE, HAVE CORROSION IN ALL ATTACH HOLES. THESE RINGS WERE LOCATED IN A REPAIR STATION. (K)

2009FA0000837	EMB	HINGE	SEIZED
10/12/2009	EMB500	50010035402	PAX DOOR

THE MAIN CABIN DOOR AFT HINGE PIN PARTIALLY SEIZED IN THE HINGE HALF MOUNTED ON THE DOOR. THE

DOOR WAS VERY HARD TO OPEN AND CLOSE AND MADE A LOUD NOISE WHEN OPENING. THE HINGE PIN HAD TO BE CUT TO BE REMOVED FROM THE DOOR. A VISUAL AND EDDY CURRENT INSPECTION REVEALED NO DISCREPANCIES WITH THE HINGE HALF MOUNTED ON THE FUSELAGE. A VISUAL INSPECTION OF THE FORWARD HINGE AND HINGE PIN REVEALED NO DISCREPANCIES. THE AFT HINGE HALF, P/N 500-10035-402, MOUNTED ON THE DOOR WAS REPLACED, ALONG WITH THE FORWARD AND AFT HINGE PINS P/N 500-10022-001. THE NEW PINS, P/N 500-10022-003 ARE SLIGHTLY SMALLER IN DIAMETER TO HELP PREVENT SEIZING IN THE FUTURE.

CA090928013	FRCHLD	GARRTT	WIRE	DAMAGED
9/27/2009	SA227DC	TPE33112UHR	52986	TEMP BULB

(CAN) EXCESSIVE OIL TEMP ON LH ENGINE DUE TO BAD WIRING CONNECTION ON OIL TEMP BULB CONNECTION. THE BAD CONNECTION CAUSED RESISTANCE TO BE INTRODUCED INTO SYSTEM WHICH MADE THE INDICATION READ HIGH. CONNECTION WAS REPAIRED AND AIRAFT GROUND SERVICIBLE - AIRCRAFT RETURNED TO SERVICE (TC# 20090928013)

2009FA0000880	GULSTM	ACM	BINDING
3/1/2009	G1159	2039254	

ACM WAS INSTALLED AS AN OVERHAULED UNIT. OIL SERVICE AND NEW WATER SEPARATOR SOCK INSTALLED. GROUD RAN SYSTEM, DID COMPLETE OPS CHECK NO LEAKAGE. 50.6 HOURS AFTER THE ACM WAS BINDING INSIDE, MAKING A LOUD SCRAPING NOISE. UNIT WAS REMOVED AND REPLACED WITH A WARRANTY UNIT. ACM WAS RETURNED TO MFG FOR EVALUATION.

2009FA0000881	GULSTM	ACM	BINDING
3/4/2009	G1159	20392541	

UNIT WAS INSTALLED AS AN OVERHAULED UNIT. WITH 21.1 HOURS ON THE UNIT. THE TURBINE WAS BINDING AND CAUSING OVERHEAT AND SMOKE IN THE CABIN. UNIT WAS REPLACED WITH AN O/H UNIT AND AN OPS CHECK WAS COMPLIED WITH. OIL LEVEL CHECK, NO DEFECTS NOTED. THIS WAS THE SECOND UNIT FROM THE SAME O/H SITE TO FAIL WITH UNDER 50 HOURS. (K)

2009FA0000852	GULSTM	AVIONICS UNIT	BURNED
9/29/2009	GULFSTREAMGV	70244041913	

BURNED/OVERHEATED BACK PANEL AT AGM CONNECTION - SLOT 6 AND 6 OF THE MODULAR AVIONICS UNIT. (K)

2009FA0000811	GULSTM	ACTUATOR	LEAKING
10/3/2009	GV	1159SCH50255	RUDDER

TESTING PLUG BACKED OUT OF THE RUDDER ACTUATOR CASE, BECAUSE IT WAS NOT SAFTIED, RESULTING IN THE RIGHT HYDRAULIC SYSTEM DRAINING TO ZERO IN FLIGHT.

2009FA0000920	HUGHES	GEARBOX	LEAKING
9/29/2009	269C	269A5600703	TAILROTOR

PILOT NOTE THE TAIL ROTOR GEARBOX WAS LEAKING. GEARBOX WAS CLEANED WITH SOLVENT AND AIR DRIED AND THEN GROUND RAN FOR 2-3 MIN. LEAKAGE AND CRACK WERE NOTED IN AREA DEPICTED IN DIAGRAM BELOW. LOGBOOK RESEARCH NOTED NO EVIDENCE OF DAMAGE HISTORY OR TAIL ROTOR STRIKE. CAUSE OF CRACK UNKNOWN. (K)

2009FA0000834	MOONEY	SELECTOR VALVE	SEIZED
2/28/2009	M20C		FUEL SYSTEM

FUEL SELECTOR SEIZED IN THE LEFT TANK POSITION. WAS ABLE TO CONTINUE TO DESTINATION ON REMAINING FUEL LOAD IN LEFT TANK.

2009FA0000818	PILATS	DISPLAY	BURNED
9/3/2009	PC1245	066031373100	COCKPIT

PILOT REPORTED STRONG ELECTRICAL BURNING SMELL IN COCKPIT AND MADE EMERGENCY LANDING. FOUND PILOT HSI DISPLAY MODEL ED551A, SN U3714 TO HAVE A STRONG ODOR OF BURNED ELECTRONICS. UNIT STILL

POWERED UP AND DISPLAYED CORRECTLY. REMOVED UNIT AND SENT TO MFG FOR ANALYSIS/ REPAIR. (K)

2009FA0000915	PIPER	LYC		MIXING VALVE	INOPERATIVE
9/8/2009	PA22160	O320*		CF242514	CARBURETOR

MIXTURE CONTROL VALVE BRASS END FITTING ON THE END OF THE FLEX SHAFT, LOOSE, WOULD NOT ALLOW THE MIXTURE CONTROL TO SHUT DOWN THE ENGINE. (K)

2009FA0000871	PIPER			HINGE	CRACKED
10/22/2009	PA24260			2070702	RUDDER

TOP RUDDER HINGE CASTING CRACK AT ROLLER BRG LOCATION. (K)

2009FA0000872	PIPER			HINGE	CRACKED
10/22/2009	PA24400			2070706	RUDDER

TOP RUDDER HINGE CASTING CRACK AT ROLLER BEARING LOCATION. (K)

2009FA0000894	PIPER	LYC		CYLINDER HEAD	SEPARATED
7/20/2009	PA28181	O360*		FRST120OCA	ENGINE

ON FINAL, PILOT LOST OIL AND ENGINE WENT TO ROUGH RUNNING. ONCE LANDED, POPPED COWLING AND FOUND HEAD SEPARATED FROM BARREL. (K)

2009FA0000930	PIPER	LYC		IGNITION SWITCH	BURNED
9/9/2009	PA28181	O360*		103572101	COCKPIT

PILOT REPORTED SMOKE IN THE CABIN WHEN THE IGNITION SWITCH WAS PLACED IN THE START POSITION AND ENGINE WOULD NOT START. UPON INSPECTION THE IGNITION SWITCH WAS FOUND TO BE BURNED AND MELTED. THE CONTACTS ALSO SHOWED ARCING AND WAS ALSO BURNED. IT IS UNKNOWN WHAT CAUSED THIS MALFUNCTION. THE REST OF THE STARTER SYS WAS INSPECTED AND NO OTHER DEFECTS WERE NOTED. (K)

2009F00087	PIPER	LYC		PISTON	FAILED
7/31/2009	PA28R180	IO360B1E			ENGINE

PISTON FAILED AT PISTON PIN POINT. STRESS MARKS FOUND ON INITIAL INSPECTION.

2009FA0000807	PIPER	CONT	CONT	SHAFT	SHEARED
8/29/2009	PA28R201T	TSIO360*			ENGINE

INFLIGHT FAILURE OF ENGINE, DUE TO OIL PUMP DRIVE GEAR SHAFT SHEARING. PILOT WAS IN CRUISE . ALTITUDE APPROXIMATELY 4000 FT MSL, UNSCHEDULED LANDING AT AIRPORT.

2009FA0000913	PIPER	LYC	SLICK	CAMSHAFT	SHEARED
9/1/2009	PA28RT201	IO360C1C6			MAGNETO

MAGNETO FAILURE DUE TO ROTATING MAGNETO CAM SHAFT SHEARING OFF JUST BELOW THE CAM, AT THE FORK. THE PROBABLE CAUSE OF THE BREAK IS METAL FATIGUE AT THE FORKED GROOVE WHICH CAUSES CRACKS AND THEN LEADS TO FAILURE. THIS IS THE SECOND MAGNETO THIS SHOP HAS SEEN FAIL THIS WAY AT ABOUT THE SAME TT. (K)

2009FA0000828	PIPER	LYC		AIR FILTER	SPLIT
7/2/2009	PA32R300	IO540K1G5D		BA3	

THE FILTER IS SEPARATING AT MFG SEAM. THIS IS THE 3RD FILTER FOUND IN THIS CONDITION.

2009FA0000901	PIPER			RIB	CRACKED
8/28/2009	PA32R301T				AILERON

DURING AN ANNUAL INSP, THE INSPECTOR FOUND WHAT APPEARED TO BE A CRACK EXTENDING FWD OF THE OTBD AILERON HING ATTACH BRACKET, LT AILERON, IN THE AILERON L/E RIB. THE AILERON WAS REMOVED AND THE AILERON OUTER HINGE BRACKET WAS REMOVED. PAINT WAS CHEMICALLY REMOVED EXPOSING A CRACK

WHICH CONNECTS THE TWO NUT-PLATE ATTACHMENT RIVETS. THE TECH THEN REMOVED THE RT AILERON AND PERFORMED THE SAME PROCEDURE. THE L/E RIB IS NOT CRACKED ON THE RT AILERON, HOWEVER THE SKIN HAS DEFINATELY BEEN WORKING AND APPEARS THAT IT WILL CRACK FROM WORK HARDENING VERY SOON.

2009FA0000799	PIPER	TRUNNION	CRACKED
9/29/2009	PA34200T	9572305	MLG

FOUND NLG TRUNNION TO BE CRACKED AT 2 WELDS, 1 CRACK .2500" THE OTHER .0625". THESE CRACKS ARE IN THE AREA TO BE INSPECTED IAW AD 2005-13-16 AT 1000 HOUR INTERVALS. TIME SINCE LAST INSPECTION WAS 464.2. LARGER CRACK WAS FOUND BY SIMPLE VISUAL INSPECTION DURING SCHEDULED MX. THE SMALLER WAS FOUND BY REMOVING THE PAINT IN THE AREA OPOSITE THE OTHER CRACK AND VISUALY INSPECTING WITH A LIGHT SOURCE AND MAGNIFICATION.

2009FA0000936	PIPER	CONT	AUTOPILOT SYS	INOPERATIVE
8/7/2009	PA34200T	TSIO360*		

UNIT WAS INITIALLY REMOVED FROM ACFT IN MARCH OF 2009 BECAUSE AUTOPILOT WOULD NOT OPERATE PROPERLY. TO VERIFY AUTOPILOT OUTPUTS FROM ATTITUDE GYRO WERE WORKING GYRO REMOVED FROM ACFT AND A BENCH TEST PERFORMED. BENCH TEST REVEALED THAT IT WOULD NOT ERECT AT ALL ON VACUUM PRESSURE. NO FURTHER TESTING ACCOMPLISHED AT THIS TIME & SINCE UNIT WAS STILL UNDER WARRANTY, IT WAS SENT BACK TO BE REPAIRED. GYRO WAS REINSTALLED INTO ACFT IN APRIL 2009 AFTER COMING OUT OF REPAIR/OH. IT ERECTED OK ON THE GROUND BUT FLIGHT CHECK REVEALED AGAIN THE AUTO PILOT WOULD NOT STABILIZE AND HOLD ATTITUDE. AUGUST 2009 UNIT WAS REMOVED AND BENCH TESTED AND IT WAS VERIFIED THE AUTOPILOT ROLL REF OUTPUT WAS REVERSED. IT WAS ALSO NOT ERECTING WELL TO PROPER VACUUM PRESSURE AND WAS VERY QUICK TO SPOOL DOWN AFTER VACUUM WAS REMOVED FROM INSTRUMENT. UNIT WAS RETURNED FOR RE-EVALUATION. THIS INSTRUMENT WAS INITIALLY INSTALLED AS AN EXCHANGE OH BY ANOTHER FACILITY. ACCORDING TO CUSTOMER, THE AUTOPILOT NEVER WORKED PROPERLY AFTER THAT. ANOTHER GYRO WAS SHIPPED AS A REPLACEMENT AND INSTALLED IN ACFT. AUTOPILOT HAS BEEN TEST FLOWN AND FUNCTIONS PROPERLY.

2009FA0000831	PIPER	CONTROL CABLE	FRAYED
7/12/2009	PA44180	62701099	RT AILERON

CABLE IS FRAYED WHERE IT PASSES NEXT TO THE FLAP SELECTOR HANDLE UNDER THE CENTER FLOORBOARD TUNNEL. DIFFICULT TO SEE DEFECT WITHOUT REMOVING FLAP SELECTOR HANDLE. CABLE FRAYED APPROX 50 PERCENT AT THIS LOCATION. IT IS NOTED THAT WHEN THE FLAP IS EXTENDED TO ITS FULLEST TRAVEL, THE SELECTOR HANDLE CONTACTS THE AILERON CABLE. THEN THE CABLE RUBS ON THE HANDLE WHENEVER THE AILERONS ARE MOVED WHILE FLAPS ARE EXTENDED FULLY. THERE APPEARS TO BE ENOUGH CLEARANCE WHEN THE FLAPS ARE NOT FULLY EXTENDED. FLAP SELECTOR HANDLE SEEMS TO HAVE WORN OVER TIME AND NOW HAS MUCH MORE PLAY THAN ON A NEW HANDLE ASSEMBY. THIS MAY BE CAUSING THE DAMAGE ON THE OLDER . NO PULLEYS OR FAIRLEADS ARE NEARBY - RECOMMEND INSTALLING A PULLEY OR FAIRLEAD TO AVOID DAMAGE OF A NEWLY INSTALLED CABLE ON AN OLDER AIRCRAFT. ALL CABLE TENSIONS WERE CORRECT, ON DEFECTIVE CABLE AND OTHER CABLES.

2009FA0000907	PIPER	TUBE	DETERIORATED
9/14/2009	PA46310P	84315004	

THE TUBING COVERING THE FUEL QUANTITY WIRING INSIDE THE WING HAS DETERIORATED. SOME SMALL PIECES WERE FOUND NEAR THE WING STRAINERS. THE CONDITION WAS FIRST DISCOVERED LOOKING THROUGH THE FUEL FILL PORT. ADDITIONALLY THE MFG CALLS OUT FOR INSPECTING THE FUEL BAYS INTERNALLY EVERY 2 YEAR. THE SUBJECT ACFT WING PANELS HAD NOT BEEN REMOVED SINCE THE ACFT WAS LAST PAINTED AND THERE WAS NO ENTRY IN THE LOG BOOKS FOR THE ACFT HAVING BEEN PAINTED SINCE MFG IN 1985. MFG HAS INSPECTION PROGRAM FOR INSIDE OF FUEL BAYS EVERY 2 YEAS AND INSPECTING THE WIRE COVER EVERY 100 HOURS THROUGH THE FUEL PORT HOLE. (K)

2009FA0000824	PIPER	SUPPRESSOR	FAILED
10/9/2009	PA46350P	70415K36	VOLTAGE

WHILE RETURNING FROM A SALES DEMONSTRATION, PILOT REPORTED SMOKE IN THE COCKPIT AND LANDED. UPON FURTHER INVESTIGATION, FOUND THAT VOLTAGE SUPPRESSOR D4 (REF WIRING DIAGRAM 91-34-20 FIG 4

SHEET 5 OF 5) HAD FAILED. SUPPRESSOR D3 (MOUNTED DIRECTLY NEXT TO D4) HAS INDICATIONS OF HEAT DAMAGE, BUT CONTINUED TO FUNCTION NORMALLY. BOTH SUPPRESSORS HAVE A MFG MODEL NR OF 704-15K36 AND LOT NR 0707. MFG SB 1187 DATED 8 FEB 2008 COVERS THE REPLACEMENT OF FAULTY VOLTAGE SUPPRESSORS, BUT THIS ACFT FALLS OUTSIDE OF THE AFFECTED ACFT S/N RANGE. THE SB ALSO GIVES THE DEFECTIVE LOT NR, BUT THE LOT NR OF THE INSTALLED SUPPRESSOR (0707) IS NOT IN THE LIST. SUPPRESSORS D3 AND D4 WERE REPLACED USING MFG KIT 88432-002. (K)

S290901424	PIPER	PWA	CASE	RUPTURED
7/24/2009	PA46500TP	PT6A42		FUEL HEATER

OUTER CASE OF FUEL HEATER RUPTURED ON THE OILL SIDE OF THE CASE.

2009FA0000838	RAYTHN	CLEVELAND	TIE BOLT	MISSING
10/12/2009	G36			MLG WHEEL

DURING AN INCOMING INSPECTION A MISSING WHEEL ASSY TIE BOLT WAS MISSING. (UNKNOWN OPERATOR, UNKNOWN REPAIR STATION...ADP)

2009FA0000877	RKWELL	PWA	VALVE	FAILED
3/17/2009	NA26560	JT12*	711701	NLG WW

ACFT EXPERIENCED AN UNCOMMANDED GEAR UP DURING TROUBLE SHOOTING FOR FREQUENT HYD CYCLING, WHILE IN HANGAR. MX WAS ATTEMPTING TO LOCATE THE SOURCE OF HYDARULIC FLUID BYPASS, WHICH WAS ORIGINALLY THOUGHT TO BE ONE OF THE BRAKE ACTUATING VALVES. BOTH ARE LOCATED IN THE NOSE WHEEL WELL. WHILE INSPECTING BRAKE VALVES THE MECHANICS DISCOVERED THE BYPASSING FLUID WAS ACTUALLY IN THE LANDING GEAR SELECTOR VALVE. HYD PUMP WAS THEN SHUT OFF, AND MX EXITED THE NOSE WHEEL WELL. THEN ELECTRIC POWER WAS SHUT OFF; AT THAT TIME THE NOSE WHEEL COLLAPSED, AND SETTLED ON THE NOSE GEAR DOORS. SHORTLY THEREAFTER THE RIGHT MAIN GEAR BEGAN TO RETRACT INBD WITH THE RIGHT WNG SETTLING TO THE GROUND. AFTER THE ACFT WAS RAISED AND PLACED ON JACKS, WE TESTED THE SYS, AND EXPERIENCED RANDOM FAILURES. AFTER OUR TESTS THE VALVE WAS REMOVED, AND SENT TO AVMATS, WHO HAD ORIGINALLY OVERHAULED THE VALVE IN THEIR HYD SHOP IN SEPT 2004, AND INSTALLED IN ACFT, ACFT TT 10,266; THE FAILURE OCCURRED AT TT 12, 226. THE VALVE WAS TESTED ON A HYD BENCH AT AVMATS AND FOUND TO BE DEFECTIVE, IN THE SAME MODES EXPERIENCED ON THE ACFT. THE VALVE WAS THEN DISASSEMBLED. A FAULTY O-RING, (PN MS28775-009, ITEM 14 IN THE COMPONENT REPAIR MANUAL) WAS DISCOVERED. THE O-RING WAS FOUND TO HAVE FAILED, WITH A SECTION OF SEAL MISSING AND FOUND IN THE VALVE BODY. RESULTS WERE REPORTED TO US BY DIRECTOR OF TECH SUPPORT OF AVMATS, AND DETAILED IN HIS LETTER. NEW VALVE WAS INSTALLED IN ACFT AND PERFORMED BETTER THAN MM TEST SPEC FOR PUMP CYCLING. MANY RETRACTIONS ACCOMPLISHED WITH FLAWLESS RESULTS. END

2009FA0000903	ROBSIN	LYC	WIRE	CHAFED
7/19/2009	R44RAVENII	IO540AE1A5		LT MAGNETO

FOUND WIRE IN LT MAG CHAFED TO GROUND WHICH CAUSED THE ENGINE TACH TO SHOW AT OVERSPEED, THE GOVERNOR TRIED TO SLOW THE ENGINE DOWN WHICH CAUSED THE LOW ROTOR RPM HORN TO SOUND. WITH THE CHANGE IN POWER SETTING THE CLUTCH LIGHT CAME ON SHOWING THAT THE BELT WAS BEING RETENTIONED. (K)

CA090720004	ROBSIN	LYC	STARTER GEN	MALFUNCTIONED
7/18/2009	R44RAVENII	IO540AE1A5	BC3151004	ENGINE

(CAN) THE AIRCRAFT WOULD NOT START, TROUBLESHOOTING REVEALED THE BENDIX STARTER GEAR ENGAGED TO THE RING GEAR AND WOULD NOT RETRACT BACK INTO THE STARTER CASE. (TC 20090720004)

CA090914009	ROBSIN	LYC	STARTER GEN	MALFUNCTIONED
9/11/2009	R44RAVENII	IO540AE1A5	14924HT	ENGINE

(CAN) STARTER INSTALLED, TESTED SERVICEABLE, AFTER 5 CYCLES THE NEXT START ATTEMPT IT WOULD NOT ENGAGE AT ALL. (TC 20090914009)

CA090928011	ROBSIN	LYC	PUMP	NOISY
9/17/2009	R44RAVENII	IO540AE1A5	D8187B	FUEL SYS

(CAN) EXCESSIVE NOISE FROM FUEL PUMP, REPLACED WITH SERVICABLE PUMP (TC# 20090928011)

NDF2009F00001	SCWZER	LYC	LYC	ALTERNATOR	FAILED
8/31/2009	269D	HIO360D1A		ALU8521LS	ENGINE

ALTERNATOR FAILED IN FLIGHT. ALTERNATOR WAS INSTALLED DURING ENGINE O/H BY MFG.

U0GA2009092883296	SKRSKY	GE		ENGINE	FAILED
9/28/2009	S61N	CT581401			NR 1

NR 1 ENGINE FAILED IN FLIGHT.

CA090930002	SKRSKY	GE	SKRSKY	MODULE	CONTAMINATED
9/23/2009	S92A	CT78A		9235115001042	GB CHIP DETECTOR

(CAN) NR 2 INPUT CHIP INDICATION TRIGGERED IN FLIGHT, AIRCRAFT RETURNED TO BASE. FOLLOW UP INSPECTION OF NR 2 INPUT MODULE CHIP DETECTOR WAS CARRIED OUT. TWO RIVETS HEADS WERE FOUND BRIDGING THE DETECTOR GAP. DURING REPLACEMENT OF THE INPUT MODULE TWO ADDITIONAL RIVET HEADS WERE DISCOVERED. (TC# 20090930002)

2009FA0000917	SWRNGN	GARRTT		ENGINE	MISOVERHAULED
9/26/2009	S2RG6	TPE3316252M			

ENGINE WAS DELIVERED TO OUR FACILITY BY ACFT OWNER DUE TO A BIRD INGESTION RESULTING IN DAMAGE TO THE 1ST STAGE COMPRESSOR IMPELLER. UPON INITIAL INSPECTION OF THE ENGINE, SEVERAL DISCREPANCIES WERE NOTED WITH THE CONFIGURATION OF THE ENGINE. FIRST NOTED WAS THE PLENUM CHAMBER INSTALLED ON THE ENGINE WAS A (PN 8697281) WHICH IS APPROVED FOR A TPE331-1/-2 ENGINE NOT A TPE331-6, THE CORRECT PLENUM SHOULD BE (PN 893973-5), THIS CONFIGURATION PROVIDES FOR A MORE ROBUST REAR MOUNTING STRUCTURE FOR HIGHER HORSEPOWER ENGINES. THE NEXT ITEM NOTED WAS THE INSTALLATION OF A TORQUE COMPENSATOR (PN 867916-4) IN PLACE OF PLUG (PN 896273-1), INSTALLATION OF THIS DEVICE ALLOWS FOR ADJUSTMENT OF THE TORQUE SENSOR OUTPUT PRESSURE FOR WHICH THERE IS NO PROVISION IN THE MM FOR THIS ENGINE MODEL. LASTLY NOTED WAS THE FACT THAT ITT HARNESS (PN 897529-4 WAS NOT INSTALLED IN THE ENGINE AND INSTEAD PLUGS WERE INSTALLED IN THE BOSSES WHERE THE HARNESS PROBES AND LEADS WOULD TYPICALLY BE INSTALLED. ABOVE REFERENCED PN WERE OBTAINED FROM CURRENT MFG ILLUSTRATED PARTS CATALOGS. (K)

CA090928009	SWRNGN			BLEED AIR SYS	STUCK
9/16/2009	SA227AC				

(CAN) PILOT REPORTED SMOKE IN COCKPIT AFTER BLEEDS SELECTED "ON" AFTER TAKEOFF. LT BLEED AIR SYSTEM FOUND TO BE STUCK IN FULL HOT. (TC# 20090928009)

2009FA0000850	UNIVAR	FRNKLN	FRNKLN	GEAR	FRACTURED
8/3/2009	1082	6A4165*		17725	CRANKCASE

ON A FLIGHT THE ENGINE STOPPED SUDDENLY WITH NO WARNING. THE AIRCRAFT LANDED. THE ENGINE ACCESSORY CASE HAD MAJOR DAMAGE. THE MAGNETOS WERE BROKEN AWAY FROM THE CASE AND THERE WERE SOME LARGE HOLES IN THE CASE. A TEARDOWN INSPECTION REVEALED THAT THE CRANKCASE GEAR WAS FRACTURED IN SEVERAL PIECES. NOT ALL OF THE PIECES WERE FOUND.