



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

AFS-600
Regulatory Support Division

ADVISORY CIRCULAR

43-16A

AVIATION MAINTENANCE ALERTS



**ALERT
NUMBER
310**

**MAY
2004**

CONTENTS

AIRPLANES

BEECH	1
CESSNA	1
PIPER.....	2

POWERPLANTS AND PROPELLERS

DUAL O-RING INSTALLED ON ENGINE CYLINDER BASE	3
---	---

ACCESSORIES

SAFE-HEET ENGINE PRE-HEATER.....	4
----------------------------------	---

AIR NOTES

ELECTRONIC VERSION OF FAA FORM 8010-4, MALFUNCTION OR DEFECT REPORT	5
PAPER COPY OF FAA FORM 8010-4, MALFUNCTION OR DEFECT REPORT.....	5
SERVICE DIFFICULTY REPORTING PROGRAM	5
IF YOU WANT TO CONTACT US	6
AVIATION SERVICE DIFFICULTY REPORTS	6

**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 and thereby cooperate 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 which 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 Malfunction or Defect Reports. 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.

AIRPLANES

BEECH

Beech; Model B100; Horizontal Stabilizer Attach Bolt Failure; ATA 5510

While inspecting the horizontal stabilizer attach fittings, the technician discovered the bolt (AN176-13A/M/) head missing at the left aft attach point. Further investigation revealed the bolt was worn and corroded.

The submitter replaced the left and right aft attach bolts since both bolts were worn and corroded.

Part total time unknown.

Beech; Model 1900D; Airliner; Loose Vertical Stabilizer Bolts; ATA 5530

While performing an inspection of the tail section, the technician discovered the upper four attach bolts, (P/N EWB22-514) for the vertical stabilizer forward spar, were smoking and the washers were loose under the right side bolt heads. All four bolts were below the minimum torque spec.

A search of the FAA Service Difficulty Reporting Program data base contains 16 reports on loose vertical stabilizer attach bolts on the Beech 1900D aircraft.

Part total time: 20,267 hours.

CESSNA

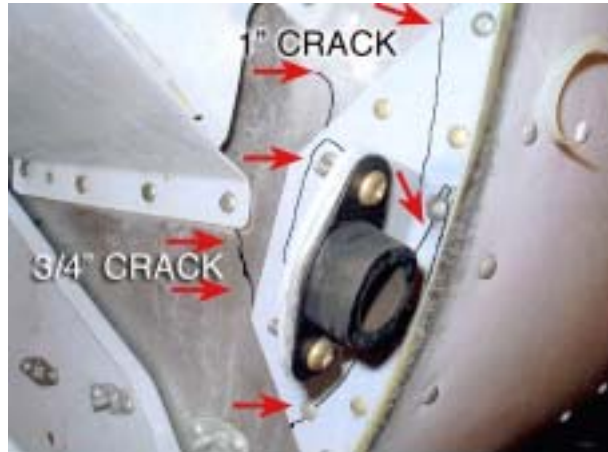
Cessna; Model 172R; Skyhawk; Cracks in Lower Firewall; ATA 5312

During an inspection, the technician found numerous cracks in the lower firewall (P/N 0553031-5) left side zone 124. The cracks radiated from the lower battery mount and cowling mount brackets. (Refer illustration.)

The submitter stated that he was aware of three additional like aircraft where the firewalls developed cracks in the same area.

A search of the FAA Service Difficulty Reporting Program data base contains 20 reports on Cessna 172R with firewall cracks. Most of the reports were generated while complying with Service Bulletin 98-53-02.

Part total time: 500 hours.



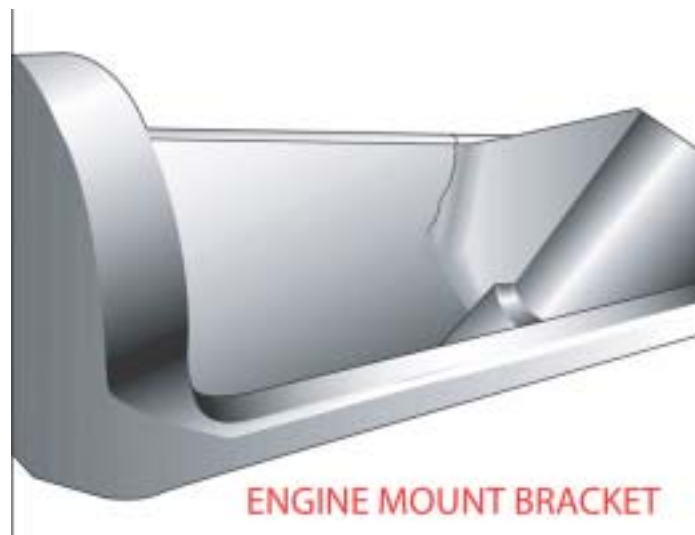
Cessna; Model T-303; Crusader; Cracked Engine Mount; ATA 7120

During an annual inspection, the technician discovered the inboard lower engine mount leg (P/N 643042) was cracked on the left engine.

The aircraft total time was 4,392 hours, and the engine total time was 685 hours since factory rebuilt. The crack was about 1-1/8 inches long and located at the lower edge 3 inches from the engine attach point.

The submitter also stated that it had a small porosity void 3/8 inch from the edge of the mount leg and in line with the crack. (Refer to the illustration.)

Part total time unknown.



PIPER

Piper; Model PA-28R-201; Arrow IV; Nose Landing Gear Actuator Rod-End Failure; ATA 3230

When the pilot tried to retract the nose gear, he heard a “trumping” sound, and the nose gear extended and locked. He extended the main landing gear and made a precautionary landing.

The technician discovered the nose gear actuator rod-end (P/N 452-729) had sheared at the end of the threads on the bearing end.

Part total time: 1,832 hours.

Piper; Model PA-28R-201; Arrow IV; Cracked Rudder Spar; ATA 5541

While inspecting the upper rudder spar (P/N 63543-00) and doublers (P/N 65341-00), the technician found cracks on both sides of the bend radius.

Both cracks were about $\frac{3}{4}$ to 1 inch in length from the top of the rudder to the nut plate. (Refer to the illustration.)

The operator inspected 13 additional PA-28R-201 aircraft in his fleet, and discovered two of the aircraft had spar cracks and four of the aircraft had cracked doublers.

Part total time: 2,639 hours.



POWERPLANTS AND PROPELLERS

DUAL O-RING INSTALLED ON ENGINE CYLINDER BASE

Teledyne-Continental; Model TSIO-520 Engine; Dual O-Ring Installation; ATA 8530

The Small Airplane Directorate received the following report from a repair regarding a problem with a Teledyne-Continental TSIO-520 engine. *(The following report is published as it was received.)*

During an annual inspection, it was discovered that one of the cylinder hold down studs had a missing nut. The nut was found lying in the cylinder baffling area. A torque check of the remaining nuts showed that several had become loose. The cylinder was removed to investigate. Upon removal, the mechanic found that the suspect cylinder had two cylinder base seals installed. The o-rings were deformed and compressed. Due to the two o-rings installed the original torque values had changed allowing one nut to come completely off and several remaining nuts to loosen. If not found it is possible that the cylinder could have eventually come loose from the crankcase causing severe engine damage or failure. The engine had 121 hours since new. (Refer to the illustration).

Maintenance personnel should take precaution when finding cylinder hold down hardware missing or loose. This incident is probably an isolated production error but demonstrates that further investigation into a problem can lead to discovery of additional problems that may not be apparent from a visual inspection.

Part total time: 121 hours.



ACCESSORIES

SAFE-HEET ENGINE PRE-HEATER

McFarlane Aviation, Inc.; Model 700,705,715 and 720 SAFE-HEET Engine Pre-Heater; Engine Pre-heater Oil Pan Damage; ATA 8550

The Airframe and Propulsion & Services, Wichita Aircraft Certification Office, ACE-118W located in Wichita, Kansas, submitted the following article. *(This article is published as it was received.)*

Two reports have been received of a hole in the oil pan on Teledyne/Continental engines equipped with silicone pad engine pre-heaters that use standard 110 volt as a power source. SAFE-HEET brand FAA-PMA engine pre-heaters manufactured by McFarlane Aviation were installed on the O-470 and IO-520 engines with the stamped sheet metal oil pan. In both instances oil was discovered on the aircraft nose gear and hangar floor during the preflight inspection after the engine pre-heater was operated. Further investigation revealed that electrical arcing had burned/eroded a small hole in the oil pan with extensive engine oil loss. Undetected oil leakage could result in in-flight oil loss and subsequent engine failure.

It was reported that one of the pre-heaters had been in service over ten years and one had been in service over two years. Both occurrences were reported from the Northwest United States. The investigation by the manufacturer indicated that the probable cause was lightning induced power spikes or mechanical damage failing the insulation near the power cord. It is believed that further metal erosion from electrical arcing during continued use of the pre-heater after initial damage is possible. It seems likely that this type of damage could occur with other brands of electrical engine pre-heaters that attach to the engine oil pan.

McFarlane Aviation, Inc. has addressed this issue by release of Service Bulletin SB-3, dated February 19, 2004, which outlines inspection requirements and installation of a circuit protective electrical device that will prevent and detect pre-heater and engine damage. The service bulletin is available at: <http://www.mcfarlaneaviation.com/>.

Both occurrences were on Model 720 SAFE-HEET engine pre-heaters, one was in service for approximately 2-1/2 years and the second had been in service for 10 years.

Part total time: Both occurrences were on Model 720 SAFE-HEET engine pre-heaters, one was in service for approximately 2-1/2 years and the second had been in service for 10 years.

AIR NOTES

ELECTRONIC VERSION OF FAA FORM 8010-4, MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the Flight Standards Service Aviation Information Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is: <http://av-info.faa.gov/sdrx>

When the page opens, select "M or D Submission Form" and, when complete, use the "Add Service Difficulty Report" button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

PAPER COPY OF FAA FORM 8010-4, MALFUNCTION OR DEFECT REPORT

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.

SERVICE DIFFICULTY REPORTING PROGRAM

The objective of the Service Difficulty Reporting (SDR) Program is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products fleet wide. The SDR program is an exchange of information and a method of communication between the FAA and the aviation community concerning inservice problems.

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 which may impair its future function, it is considered defective and should be reported under the program.

These reports are known by a variety of names: Service Difficulty Reports (SDR), Malfunction or Defect Reports (M or D) and Maintenance Difficulty Reports (MDR).

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 of this review, 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 (AD's) to address a specific problem.

The primary source of SDR's are certificate holders operating under Parts 121, 125, 135, 145 of the Federal Aviation Regulations, and the general aviation community which voluntarily submit records. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft and maintenance surveillance as well as accident and incident investigations.

The SDR data base contains records dating back to 1974. Reports may be submitted on the Internet through an active data entry form or on hard copy. The electronic data entry form is in the Flight Standards Aviation web site. The URL is: <http://av-info.faa.gov/>.

A public search/query tool is also available on this same web site. This tool has provisions for printing reports or downloading data.

At the current time we are receiving approximately 45,000 records per year.

Point of contact is:

John Jackson
Service Difficulty Reporting System Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125

Telephone: (405) 954-6486

E-mail: <mailto: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: Isaac Williams (405) 954-6488
FAX: (405) 954-4570 or (405) 954-4655

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 between March 24, 2004, and April 24, 2004, 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
<u>CA040113003</u>	AMD	GARRTT		CONTROL ROD	FAILED
12/8/2003	FALCON50MYST	TFE73131C		F50B273517	ELEVATOR
<p>(CAN) DURING C CHECK INSPECTION, ELEVATOR PUSH/PULL CONTROL ROD WAS FOUND WITH A WEAR MARK OF 1.37 LONG, .34 WIDE AND .0125 DEEP. THE WEAR MARK WAS CAUSED BY INTERFERENCE WITH A GEAR TYPE CLAMP ON AN ECS DUCT UNDER THE AFT CABIN VANITY. THE GEAR/SCREW PORTION OF THE CLAMP WAS POSITIONED AGAINST THE TUBE. LOOSENING THE CLAMP AND ROTATING IT SO SCREW/GEAR PORTION WAS AT 12 O'CLOCK POSITION RECTIFIED THE INTERFERENCE PROBLEM. CONTROL ROD WAS REPLACED WITH NEW UNIT.</p>					
<u>CA040311006</u>	AROFAL	ALLSN		SEPARATOR	SHEARED
3/2/2004	OH58C	T63A720		23038229	OIL/AIR
<p>(CAN) ON DISASSEMBLY OF THE GEARBOX ASSEMBLY, THE AIR OIL SEPARATOR GEAR SHAFT WAS FOUND SHEARED AT THE JUNCTION OF GEAR AND SHAFT. THE ENGINE WAS SENT TO THE SHOP FOR METAL CONTAMINATION. THE AIRCRAFT HAD PREVIOUSLY BEEN INVOLVED IN A WIRE STRIKE. THE ENGINE RAN FOR 5 MINUTES AFTER THE STRIKE BUT BOTH CHIP DETECTORS HAD A LOT OF METAL.</p>					
<u>2004FA0000252</u>	AVIAT	LYC		AILERON	MISLOCATED
11/6/2003	A1B	O360*			WINGS
<p>FOUND RIVET IN AILERON LEADING EDGE HAD CAUGHT CORNER OF RIB INSTEAD OF THROUGH CENTER OF RIB. CONDITION IN BOTH LEFT AND RIGHT AILERONS AT WS123. REPAIRED CONDITION IAW MFG LETTER OF INSTRUCTION.</p>					
<u>CA040309001</u>	BEECH	PWA		CONTROL CABLE	SEVERED
3/3/2004	1900C	PT6A65B		1143890503	POWER LEVER
<p>(CAN) AFTER LANDING AND SUBSEQUENT TAXI THE RT ENGINE SPOOLED UP AND DID NOT RESPOND TO POWER LEVER MOVEMENT. THE ENGINE WAS SHUT DOWN AND THE AIRCRAFT COMPLETED TAXI TO THE TERMINAL ON THE LT ENGINE. MAINTENANCE INVESTIGATED AND DISCOVERED THAT THE POWER LEVER CABLE HAD BEEN SEVERED BY THE PULLEY OF THE VAPOR CYCLE AIR CONDITIONING SYSTEM. THE CABLE HAD BEEN ROUTED TOO CLOSE TO THE PULLEY DURING AN ENGINE REMOVAL AND REINSTALLATION 64 HOURS PRIOR TO THE INCIDENT.</p>					
<u>CA040107005</u>	BEECH	PWA		HEATER	CRACKED
12/19/2003	1900C	PT6A65B		10585	OIL/FUEL
<p>(CAN) OIL PRESSURE ANNUNCIATOR ILLUMINATED FOLLOWED BY OIL PRESSURE FLUCTUATIONS. CREW THEN SHUT ENGINE DOWN AND LANDED WITH NO FURTHER PROBLEMS. UPON INSPECTION BY MAINTENANCE IT WAS CLEAR THAT THERE WAS AN EXCESSIVE OIL LEAK AND LOW OIL LEVEL. THIS WAS THE CAUSE OF THE FLUCTUATIONS IN THE OIL PRESSURE. FURTHER INSPECTION REVEALED THAT A CRACK IN THE OIL TO FUEL HEATER CAUSED THE EXCESSIVE OIL LEAK. THE CRACK WAS LOCATED AT A WELD IN THE SEAM AREA. THE ENGINE WAS INSPECTED IAW MFG MM 72-00-00 PAGE 643. OIL TO FUEL HEATER WAS REPLACED AND SEVERAL GROUND RUNS WERE CARRIED OUT. ENGINE WAS FOUND TO BE OPERATING WITHIN DESIRED SERVICEABLE LIMITS AND AIRCRAFT WAS RETURNED TO SERVICE.</p>					
<u>CA040203004</u>	BEECH	PWA		RELAY	FAILED

1/30/2004 1900C PT6A65B MS24171D1 MLG MOTOR

(CAN) LANDING GEAR FAILED TO EXTEND ON APPROACH. EMERGENCY EXTENSION WAS CARRIED OUT AND AIRCRAFT LANDED SAFELY. MAINTENANCE FOUND THAT THE LANDING GEAR MOTOR WAS NO LONGER RUNNING. THE LANDING GEAR RELAY WAS FOUND INTERNALLY DAMAGED WITH THE CONTACTS STUCK IN THE CLOSED POSITION THUS PROVIDING CONTINUOUS POWER TO THE LANDING GEAR MOTOR. THIS CAUSED THE MOTOR TO FAIL. P/N OF RELAY MS24171D1

CA040122004 BEECH PWA BRACKET CRACKED

1/8/2004 1900D PT6A67D 1295140791 PAX DOOR

(CAN) DURING GROUND HANDLING, CREW ATTEMPTED TO OPEN DOOR FROM INSIDE AND THE MAIN HANDLE UPON APPLYING PRESSURE, RELEASED WITHOUT ACTUATING DOOR CAMS. MAINTENANCE FOUND THAT THE MAIN DOOR ACTUATION BRACKET HAD BROKEN INTO TWO PIECES. THE BRACKET WAS REPLACED AND THE AIRCRAFT CONTINUED OPERATIONS.

CA040315011 BEECH PWA VALVE ERODED

3/8/2004 1900D PT6A67D 3012347 TORQUEMETER

(CAN) FLIGHT CREW REPORTED OCCASIONAL PROBLEMS WITH TORQUE INDICATION DURING POWER REDUCTIONS. TORQUE INDICATION WOULD HANG UP AT VARIOUS HIGH SETTINGS DESPITE POWER REDUCTIONS TO IDLE. FROM A PREVIOUS CASE OF THIS ON ANOTHER AIRCRAFT, THE POWER REDUCTION CASE WAS SPLIT WITH AN EXPECTATION THAT THE TORQUEMETER VALVE WAS PREMATURELY WORN, AND IT WAS. A PREVIOUS SUBMISSION UNDER AGL-0120 REFLECTS EXACTLY THE SAME PROBLEM, PRESENTATION AND FIX.

CA040119002 BEECH PWA BLOWER BURNED

1/16/2004 1900D PT6A67D 11438002811 AFT VENT

(CAN) DURING CLIMB, CREW NOTED AN ELECTRICAL ODOR AND TRACE OF SMOKE IN CABIN. AIRCRAFT RETURNED TO AIRPORT WITHOUT FURTHER INCIDENT. MAINT FOUND THE AFT VENT BLOWER HAD OVERHEATED DUE TO ONE OF THE BEARING RESISTING ROTATION. THE NORMAL TEMPERATURE FUSE THAT IS SUPPOSED TO BLOW, DISCONTINUING POWER TO THE UNIT DID NOT APPEAR TO OPEN PRIOR TO BOTH SPEED RESISTORS BECOMING BADLY HEATED AND DISTORTED. THE RESISTORS AND TEMP FUSE ARE CONTAINED INSIDE A METAL CONTAINER MOUNTED ON THE SIDE OF THE BLOWER.

AUS20040006 BEECH PWA WASHER WRONG PART

1/7/2004 200BEECH PT6A41 BB148 LT & RT WING

(AUS) LT AND RT WING LOWER ATTACHMENT BOLT WASHERS INCORRECTLY FITTED. DAMAGE TO BATHTUB FITTING. PERSONNEL/MAINTENANCE ERROR.

CA040311011 BEECH PWA CHANNEL CRACKED

2/27/2004 200BEECH PT6A41 50430043619 DOOR

(CAN) DURING INSPECTION A CRACK WAS DISCOVERED ALONG THE TRAILING EDGE OF THE CABIN DOOR CHANNEL P/N 50430043619. THE CRACK PROPAGATED APPROXIMATELY 6 IN, JUST ABOVE THE DOOR HINGE. THE DOOR WAS REMOVED AND SENT TO AN APPROVED OVERHAUL SHOP, REPAIRED AND REINSTALLED. AIRCRAFT RETURNED TO SERVICE.

AUS20040007 BEECH LYC BENDIX ROTOR FAULTY

1/8/2004 76 LO360A1G6 103827991 MAGNETO

(AUS) RT ENGINE MAGNETO ROTATING MAGNETIC SLIPPED ON SHAFT BY APPROXIMATELY 25 DEGREES.

CA040209001 BEECH PWA BLOWER SEIZED

2/5/2004 A100 PT6A28 903840311 AIR CONDITIONING

(CAN) JUST AFTER LEVELING OUT PILOT NOTICED SMOKE IN THE COCKPIT/CABIN AREA. AIRCRAFT WENT TO 10000 FT, DEPRESSURIZED AND ELECTRICAL POWER WAS REMOVED. POWER WAS RESTORED AND AIRCRAFT RETURNED TO BASE WITHOUT FURTHER INCIDENT. UPON INVESTIGATION IT WAS DETERMINED THAT THE VENTILATION BLOWER BEARING SEIZED AND CAUSED THE SMOKE. VENT BLOWER WAS REPLACED AND SYSTEM TESTED SERVICEABLE.

<u>CA040204012</u>	BEECH	GARRTT	DOWNLOCK SWITCH	FROZEN
1/14/2004	B100	TPE3316252B	1CH25	NLG
(CAN) ON APPROACH THE PILOT SELECTED GEAR DOWN. THERE WAS NO NOSE GEAR INDICATION. AFTER CONFIRMING WITH THE TOWER THAT THE GEAR WAS DOWN, THE AIRCRAFT LANDED WITHOUT INCIDENT. THE DOWNLOCK SWITCH WAS FOUND DEFECTIVE AND SUBSEQUENTLY REPLACED. O AT WAS -25 TO -30 DEGREES CELSIUS.				
<u>CA040317004</u>	BEECH	GARRTT	SPLINE	CRACKED
3/11/2004	B100	TPE3316252B	115610010125	ELEVATOR
(CAN) ON INSPECTION FOUND THREE VISUAL CRACKS IN OB SECTION OF THE ELEVATOR TRAILING EDGE SPLINE, AS DESCRIBED IN OTHER SDR'S /SERVICE DIFFICULTY ADVISORY.				
<u>CA040203006</u>	BEECH	PWA	WINDSHIELD	BROKEN
1/8/2004	B200C	PT6A42	10138402518	COCKPIT
(CAN) IN CRUISE RT WINDSHIELD HEAT ON, WINDOW SHATTERED, DESCENDED TO 12,000 FEET, REDUCED AIR SPEED AND CABIN PRESSURE AND RETURNED TO BASE.				
<u>CA040115006</u>	BEECH	PWA	SOLENOID	STICKING
12/9/2003	C90A	PT6A21	7173	RUDDER BOOST
(CAN) DURING LOWERING OF THE LANDING GEAR, UNSCHEDULED YAW WAS NOTICED BY THE CREW AND UPON LANDING, THE AIRCRAFT WAS DIFFICULT TO TAXI. THE RUDDER SYSTEM RECEIVES THE INPUT FROM THE RUDDER BOOST SOLENOID. AS THEY ARE LOCATED IN AN UNHEATED AREA OF THE AIRCRAFT, THE MOISTURE IN THE COLD AND HUMID INSTRUMENT AIR SUPPLY TENDS TO FREEZE THE SOLENOID AND STICK. WHEN THE SOLENOID STICKS OPEN, THE MOST COMMON SYMPTOM IS HEAVY RUDDER INPUT, WHILE TAXIING. THUS THE PILOT HAD DIFFICULTY ON THE GROUND. THE SOLENOID WAS REPLACED, GROUND RUN CARRIED OUT AND THE AIRCRAFT WAS RELEASED TO SERVICE.				
<u>CA040319002</u>	BEECH	PWA	ANTI-ICE SYSTEM	CRACKED
3/9/2004	C90A	PT6A21	1099100491	RT ENGINE
(CAN) AIR INTAKE ANTI-ICE LIP WAS FOUND CRACKED AT THE WELDED ATTACH JOINTS AT BASE OF EXHAUST INLET/OUTLET TUBES.				
<u>CA040315008</u>	BEECH	PWA	SHUTOFF VALVE	FAILED
3/2/2004	C90A	PT6A21	1013890253	FUEL SYSTEM
(CAN) DURING PRESTART CHECKS FLIGHT CREW COULD NOT EXTINGUISH (LOW FUEL PRESSURE) WARNING LIGHT. FLIGHT CANCELLED. INSPECTION FOUND RT FUEL SHUT OFF VALVE HAD FAILED IN THE CLOSED POSITION. VALVE HAD BEEN RECENTLY OVERHAULED.				
<u>AUS20031336</u>	BEECH	PWA	HOUSING	CRACKED
12/20/2003	D18S	R985AN14B	9540666	BRAKE
(AUS) RT MAIN LANDING GEAR BRAKE HOUSING CRACKED ON MOUNT FLANGE.				
<u>2004FA0000267</u>	BEECH	CONT	RELAY	INTERMITTENT
2/12/2004	F33A	IO520BB	SM50D7	MLG
PILOT REPORTED THAT LANDING GEAR WOULD NOT EXTEND. AFTER GEAR HANDLE CYCLED SIX TIMES GEAR CAME DOWN. UPON TROUBLESHOOTING OF THE LANDING GEAR SYSTEM FOUND LANDING GEAR DYNAMIC RELAY INTERMITTENT. NO RECOMMENDATIONS AT THIS TIME.				
<u>CA040209012</u>	BELL	LYC	SHAFT	WORN
1/27/2004	204B	T5313B	85634	FUEL CONTROL
(CAN) FUEL CONTROL RECEIVED FROM CUSTOMER FOR INSPECTION FOLLOWING PREVIOUS RECORDS ABOUT PUMP FAILURE (WSDR 20040128006). FUEL CONTROL HAS TSO- 3195.3 AND WAS OPERATING ON EXTENSION TIME				

DUE TO A GOOD PERFORMANCES. IT WAS REMOVED FROM A/C FOR INSPECTION IAW SB. T5317A-1-107 (CECO SB.73-39). INSPECTION FOUND WORN EXCESSIVELY, WORN MAIN DRIVE INTERNAL SPLINES, SECONDARY LARGE SPLINE AND PRIMARY PUMP GEAR EXTERNAL SPLINE. THIS IS THIRD CASE OF PUMP-MAIN DRIVE SHAFT FAILURE INVESTIGATED. WE HAVE REPORTED THIS CASE TO MANUFACTURER AND WE ARE WAITING FOR FURTHER GUIDANCE.

<u>CA040203011</u>	BELL	LYC		SHAFT	WORN
1/27/2004	204B	T5313B		91620	FUEL CONTROL

(CAN) UPON SUSPECTING A PROBLEM WITH FUEL CONTROL UNIT. REMOVED FCU FROM THE ENGINE TO INSPECT THE SPLINES IAW MFG SBT5313-107. FOUND THE INTERNAL SPLINES KNIFE EDGED AND VERY CLOSE TO TOTAL FAILURE OF THE FCU. THIS WOULD HAVE LEAD TO THE FAILURE AND SHUTDOWN OF THE ENGINE. THESE PARTS HAD 434 HOURS SINCE THEY WERE REPLACED WITH SERVICEABLE UNITS. SHAFTS P/N 9162076081.

<u>CA040206002</u>	BELL	ALLSN		SIGHT GLASS	CRACKED
1/28/2004	206L	250C20R		206288017	RANGE EXTENDER

(CAN) SIGHT GLASS ON FORWARD SIDE OF RANGE EXTENDER WAS FOUND TO BE THE CAUSE OF A SLOW FUEL LEAK. WHEN THE AIRCRAFT WAS FULL OF FUEL AND KEPT IN THE HANGAR OVER NIGHT A SMALL POOL OF FUEL WAS NOTICED ON THE FLOOR. A CRACK RUNNING ACROSS FROM TWO SCREWS WAS FOUND. A NEW SIGHT GLASS HAS BEEN ORDERED AND WILL BE INSTALLED WHEN RECEIVED. UPON FURTHER INSPECTION OF AIRCRAFT, ANOTHER WITH THE SAME RANGE EXTENDER WAS FOUND TO HAVE THE SAME CRACK IN THE SAME LOCATION.

<u>CA040318001</u>	BELL	PWA		RING	BURNED
3/9/2004	212	PT6T3		3032151	ENGINE VANE

(CAN) DURING ROUTINE HOT END BORESCOPE INSPECTION, HOT END DISTRESS WAS NOTED. POWER SECTION REMOVED FROM AIRCRAFT, HOT END REMOVED. COMBUSTION CHAMBER CRACKED (MANY) ON NR 2 LOUVERED COOLING RING. SMALL DUCT BURNED/WARPED IN TWO AREAS (VANES). VANE RING ASSEMBLY, SEVERE BURNING ON 1 VANE AT TRAILING EDGE APPROXIMATELY .5 SQUARE INCH MISSING. ADJACENT VANE TRAILING EDGE CRACKED. VANE RIM BURNED AND CRACKED (3032151). HOUSING ASSEMBLY, CT SHROUD, ONE SEGMENT 3018503 WARPED INWARD CAUSING CT BLADE CONTACT. BLADE LEADING EDGE AT TIP ROUNDED. DISK/BLADE ASSEMBLY, CONTACT WITH WARPED BLADE SHROUD SEGMENT.

<u>CA040113006</u>	BELL	PWA	BELL	BOLT	SHEARED
1/7/2004	212	PT6T3		AN17415	DAMPER ARM

(CAN) HELISKI OPERATION. PILOT REPORTED BAD VIBRATION IN TURNS AND CONTROLLABILITY CONCERNS, ALSO IN TURNS. RETURNED TO BASE IMMEDIATELY. SHEARED BOLT FOUND WHERE MAIN ROTOR HYDRAULIC DAMPER CONTROL ARM ATTACHES TO STABILIZER BAR CONTROL TUBE ROD END. BOLT WAS CORRODED WITH EVIDENCE OF BEING LOOSE. ALSO BLACK ON NUT AND WASHER. NO OTHER DAMAGE FOUND. ATTACHMENT HARDWARE REPLACED WITH NEW AND AIRCRAFT RETURNED TO SERVICE.

<u>CA040312003</u>	CESSNA	CONT		CYLINDER HEAD	MISALIGNED
3/12/2004	120	C8512F		C8512F	ENGINE

(CAN) ENGINE WAS SENT TO ENGINE SHOP FOR PROP STRIKE INSPECTION. UPON REINSTALLATION OF NR 1 CYLINDER, IT WAS DISCOVERED THAT THE BARREL AND HEAD WERE MISALIGNED BY APPROX. 5 DEGREES (UNIT WAS REPLACED). ENGINE SHOP ADVISES THIS IS A DEFECT OCCURRING DURING ORIGINAL ASSEMBLY AT THE FACTORY AND FURTHER ADVISE THAT THIS IS THE SECOND ONE THEY HAVE FOUND.

<u>2004FA0000259</u>	CESSNA	CONT		CYLINDER	BROKEN
2/7/2004	150F	O200A		SA10200A1	NR 4

AIRCRAFT WAS SUBSTANTIALLY DAMAGED DURING A FORCED LANDING AFTER TOTAL LOSS OF ENGINE POWER. INVESTIGATION SHOWED THE CYLINDER HAD COMPLETELY SEPARATED IN THE MIDDLE WHILE IN FLIGHT, CAUSING THE TOTAL LOSS OF POWER.

<u>CA040310008</u>	CESSNA	CONT	MCAULY	BOLT	SHEARED
2/18/2004	150M	O200A		A251352	PROPELLER

(CAN) UPON APPLICATION OF 27 FT/LBS TO 2 OF THE MOUNTING BOLTS AT THE THREADS FAILED. BOLTS FORWARDED TO COMPANY FOR EVALUATION.

<u>AUS20040015</u>	CESSNA	CONT	MCAULY	SUPPORT	CRACKED
1/14/2004	172H	O300C		05502636	SPINNER

(AUS) PROPELLER SPINNER FORWARD SUPPORT CRACKED AROUND PROPELLER BOLT ATTACHMENT HOLES. SUPPORT HAD BEEN FITTED 30 HOURS AGO DUE TO THE SAME PROBLEM WITH THE PREVIOUS SUPPORT.

<u>2004FA0000264</u>	CESSNA	LYC		TIRE	OUT OF BALANCE
2/13/2004	172M	O320*			NLG

PILOT REPORTED NOSE WHEEL SHIMMY AFTER TOUCH DOWN AND HIGH SPEED TAXI. INSPECTED NOSE GEAR AND NOTED SHIMMY DAMPENER AND STEERING COLLAR BEARING A LITTLE MORE THAN NORMAL AXIAL MOVEMENT, TIRE STILL HAD 65 PERCENT TREAD AND SAW NO OBVIOUS TIRE DEFECTS. REMOVED NOSE STRUT TO INSPECT AND RESHIM STEERING COLLAR AND SERVICE/SHIM SHIMMY DAMPENER. WHEN THE NOSE STRUT LOWER FRONT HALF CLAMP WAS REMOVED, THE NOSE STRUT TUBE SPRUNG FORWARD .120 OUT OF ALIGNMENT WITH THE TOP STRUT MOUNT. FOUND NO DAMAGE TO AIRFRAME OR NO NOSE GEAR HISTORY. POSSIBLE LEAVING FACTORY LIKE THIS. INSPECTED AND RESHIMED NOSE GEAR ASSEMBLY AND LOWER STRUT CLAMP UP TO RELIEVE STRESS. MOUNTED NEW TIRE, DIFFERENT BRAND. NO SHIMMY DETECTED.

<u>CA040310006</u>	CESSNA	LYC		MOUNT	CRACKED
9/18/2003	172M	O320E2D		05510171	ENGINE

(CAN) A WELD WAS DISCOVERED CRACKED IN THE LOWER PART OF THE ENGINE SUPPORT.

<u>2004FA0000263</u>	CESSNA	LYC		IMPULSE COUPLING	CRACKED
2/13/2004	172M	O320E2D			MAGNETO

ONE OF THE MAGNETO IMPULSE COUPLING PAWLS OR PAWL ATTACH RIVETS FAILED DURING TOUCH AND GO OPERATION. THE PAWL BROKE THE MAGNETO MOUNTING CASTING AND DEPARTED THE AIRCRAFT. MAGNETO WAS HANGING FROM THE ACCESSORY HOUSING WITH THE HELP OF THE IGNITION HARNESS. PILOT REPORTED ONLY A SLIGHT BACKFIRE DURING CLIMB OUT WITH A LITTLE LOSS OF POWER. MAGNETO HAD RECEIVED A 500 HOUR INSPECTION 260 HOURS PRIOR TO FAILURE. IF FAILURE HAD OCCURRED DURING A LONG CROSS COUNTRY FLIGHT, TOTAL LOSS OF OIL MAY HAVE OCCURRED. (PILOT WOULD HAVE PROBABLY ADVANCED THROTTLE SLIGHTLY TO MAKE UP FOR ONE MAGNETO FAILING AND DROPPING RPM SLIGHTLY).

<u>CA040315004</u>	CESSNA	LYC		LIGHTER	SHORTED
3/11/2004	172N	O320E2D		05130391	COCKPIT

(CAN) SMOKE/ FUMES DETECTED IN COCKPIT DURING CRUISE FLT. CREW SURVEYED ELECTRICAL SYSTEM CONTROLS AND FOUND CIGAR LIGHTER TO BE HOT. REMOVED LIGHTER FROM DASH AND RETURNED TO BASE WITH NO FURTHER COMPLICATIONS. INSPECTION REVEALED COILS OF LIGHTER SHORTED CAUSING FUMES. MAINTENANCE DISCONNECTED POWER WIRE TO LIGHTER ASSEMBLY IAW AD 78-08-03. NOTE: THIS AD DOES NOT APPLY TO THIS A/C SN BUT CERTAINLY WAS AFFECTED IN THIS INSTANCE, SHIPS AFFECTED BY THIS SN SHOULD BE REVISITED BY THE AD ISSUER.

<u>2004FA0000258</u>	CESSNA			BULKHEAD	CRACKED
1/5/2004	172S				PROP SPINNER

DURING A PRE-FLIGHT INSPECTION THE PILOT NOTED A .7500 INCH CRACK IN THE SPINNER BULKHEAD. THIS CRACK WAS IN THE CORNER NEXT TO THE SPINNER MOUNT NUTPLATE. SEVERAL PREVIOUS M OR D ON THIS SAME PART.

<u>2004FA0000254</u>	CESSNA			DUCT	MISROUTED
11/24/2003	172S				HEATER

DURING A ROUTINE INSPECTION, WE FOUND THAT THE PLASTIC GLOVEBOX WAS MELTED AT THE FORWARD RIGHT SIDE. WE FOUND THAT THE HEATER DUCTING WAS ROUTED UP AGAINST THE GLOVE BOX CAUSING THE BOX TO MELT. REROUTED HEAT DUCTING TO PREVENT FUTURE OCCURRENCE.

<u>2004FA0000261</u>	CESSNA	LYC		MASTER CYLINDER	INOPERATIVE
2/1/2004	172S	IO360A1A		988200104	LT BRAKE
PILOT REPORTED NO RESPONSE FROM LT BRAKE PEDAL, FOUND THAT BOTTOM LT BRAKE MASTER CYLINDER ATTACHMENT CLEVIS PIN MISSING. LOCATED CLEVIS PIN ON UPPERSIDE OF BELLY SKIN AND COTTER PIN. FOUND THAT COTTER PIN WAS BARELY BENT AND APPARENTLY FELL OUT OF CLEVIS PIN HOLE THUS ALLOWING CLEVIS PIN TO FALL OUT OF BRAKE MASTER CYLINDER ATTACHMENT.					
<u>2004FA0000253</u>	CESSNA	LYC		DUCT	MISROUTED
11/24/2003	172S	IO360A1A			HEATER
DURING A ROUTINE INSPECTION, WE FOUND THAT THE PLASTIC GLOVEBOX WAS MELTED AT THE FORWARD RIGHT SIDE. WE FOUND THE HEATER DUCTING WAS ROUTED UP AGAINST THE GLOVEBOX CAUSING THE BOX TO MELT. REROUTED HEAT DUCTING TO PREVENT FUTURE OCCURRENCE.					
<u>CA040205005</u>	CESSNA	LYC	LAMAR	DRIVE ASSY	JAMMED
2/2/2004	172S	IO360L2A		PM2401H	STARTER
(CAN) STARTER DRIVE ONCE ENGAGED DID NOT RETRACT JAMMED OUTWARD.					
<u>CA040204005</u>	CESSNA	CONT		CONTROL CABLE	FRAYED
1/21/2004	180C	O470K		051010516	AILERON
(CAN) AILERON DIRECT CABLE LT AND RT FRAYED EACH IN 3 DIFFERENT PLACES AT PULLEYS, PULLEYS WERE NOT SEIZED, ROTATES FREELY, ALSO FRAYED AILERON CARRY THROUGH CABLE P/N 0510105-113 AT PULLEY AREA.					
<u>CA040116006</u>	CESSNA	CONT		PIN	WORN
1/16/2004	180J	O470S			BRAKE LINKAGE
(CAN) DURING GROUND HANDLING THE RT RUDDER PEDAL BRAKE ASSY SEEMED SLOPPY COMPARED TO THE LT UNIT. INVESTIGATION REVEALED THAT THE PIN THAT CONNECTS THE BRAKE PEDAL TO THE MASTER CYLINDER WAS ALMOST COMPLETELY WORN THROUGH, THIS IS A HOLLOW SHAFT PIN ASSY. WORN PARTS WERE REPLACED AND THE AIRCRAFT WAS RETURNED TO SERVICE.					
<u>AUS20031330</u>	CESSNA	CONT		SKIN	LOOSE
12/29/2003	207	IO520F			ELEVATOR
(AUS) LT ELEVATOR RIVETS FAILED ALLOWING LOWER ELEVATOR SKIN TO BECOME LOOSE AT THE IB TRAILING EDGE. INVESTIGATION FOUND SIMILAR PROBLEMS WITH THE RIVETS ALONG THE LEADING EDGE. THE RIVETS WERE .0937 INCH POP RIVETS. INSPECTION OF THE RT ELEVATOR FOUND THE SAME PROBLEMS. SUSPECT SKIN HAD BEEN REPLACED SOME YEARS AGO.					
<u>CA040210003</u>	CESSNA	PWA		RING	CRACKED
2/8/2004	208B	PT6A114A		265102215	ENGINE MOUNT
(CAN) DURING ROUTINE MAINTENANCE THE ENGINE MOUNT RING (HORSE COLLAR) WAS FOUND CRACKED AT TWO OF THE FOUR CORNERS, INSIDE JOINT. DUE TO THIS BEING A KNOWN PROBLEM, AN ADDITIONAL TASK CARD TO CHECK FOR THIS CONDITION, INITIATED IN 1999, WAS ADDED TO OUR MAINTENANCE SCHEDULE EVERY 100 HOURS. AS A RESULT, WE HAVE DISCOVERED THE CONDITION ON 8 SEPARATE COLLARS. THE COLLAR WAS REPLACED AND THE AIRCRAFT RELEASED.					
<u>AUS20040009</u>	CESSNA	PWA		SUPPORT	FAULTY
1/5/2004	208B	PT6A114A		26011895	ENGINE MOUNT
(AUS) ENGINE SUPPORT HOUSING FOR AIR CONDITIONER DRIVE LEAKING OIL. INVESTIGATION FOUND THE SUPPORT HOUSING ALIGNMENT SPIGOT TO BE TOO LONG TO FIT INTO THE RECESS IN THE ENGINE MOUNT PAD. THE SPIGOT BOTTOMS OUT ON THE SEAL CARRIER CAUSING A 0.33MM (0.013IN) GAP ON THE GASKET FLANGE. THE SPIGOT BOTTOMING ON THE PAD CAUSES EXCESSIVE WEAR ON THE DRIVE SHAFT SPLINES PN 2601267-2 AND THE INTERNAL SPLINES ON THE DRIVE GEAR PNO 3100450-01.					

<u>CA040107007</u>	CESSNA	PWA	RETAINER	COLLAPSED
12/30/2003	208B	PT6A114A	3020159	TURBINE SECTION

(CAN) THE HOT SECTION WAS REPAIRED TO CORRECT DEGRADED PERFORMANCE. THE RETAINING RING HAD POPPED OUT OF THE RING GROOVE AND A CT SHROUD SEGMENT HAD SHIFTED. THIS PROBLEM HAS BEEN DOCUMENTED ON OTHER ENGINES. MFG HAS ISSUED P/N 3110741-02 RETAINING RING ON SB 13121 (60A, 61, 62, 65 SERIES) AND SB 3248 (41/42, 45 SERIES) TO PREVENT THE COLLAPSE OF THE RETAINING RING. THE LATTER SB HAS NOT BEEN ISSUED ON SMALLER ENGINE MODELS SUCH AS THE 114A ENGINE MODEL TO ALLOW THE MORE ROBUST RETAINING RING TO BE USED.

<u>CA040311001</u>	CESSNA	CONT	SWITCH	BROKEN
3/10/2004	310L	IO470VO	JE6	MLG

(CAN) UPON APPROACH THE LANDING GEAR WAS SELECTED DOWN WITH NO GREEN LIGHT DOWN AND LOCKED INDICATION ON THE RT GEAR. THE GEAR WAS CYCLED, THE MANUAL EXTENSION WAS PERFORMED ALL WITH THE SAME RESULT. THE AIRCRAFT LANDED UNEVENTFULLY AND UPON INVESTIGATION THE MICRO SWITCH ACTUATOR TAB WAS FOUND BROKEN AT THE ATTACHING BRACKET. THE ACTUATOR WAS REPLACED AND THE GEAR WAS SWUNG NUMEROUS TIMES SERVICEABLE.

<u>AUS20031309</u>	CESSNA	CONT	BULKHEAD	CRACKED
12/18/2003	310R	IO520M	0823400110	RT WING

(AUS) RT WING TIP TANK REAR ATTACHMENT BULKHEAD CRACKED.

<u>AUS20031301</u>	CESSNA	CONT	CESSNA	ROD	FRACTURED
12/29/2003	310R	IO520M	310R	084012515	MLG

(AUS) RT MAIN LANDING GEAR AFT PUSH/PULL ROD ASSEMBLY FRACTURED.

<u>CA040225011</u>	CESSNA	CONT	CONTROL CABLE	FRAYED
2/24/2004	337A	IO360C	14601008	TE FLAPS

(CAN) FLAP CABLES REMOVED FOR INSPECTION DUE TO SERVICE DIFFICULTY ALERT AL-2003-05. LEFT HAND AND RT OUTBOARD FLAP CABLES FOUND TO BE FRAYED AT THE INBOARD BELLCRANK, APPROXIMATELY 1 INCH FROM THE SWAGED TERMINAL. BOTH CABLES ARE ORIGINAL CESSNA FLAP CABLES AND WERE REPLACED WITH NEW CESSNA FLAP CABLES. ALSO, THE RT HAND, INBOARD FLAP CABLE WAS FRAYED AT THE INBOARD BELLCRANK, APPROXIMATELY 1 INCH FROM THE SWAGED TERMINAL.

<u>CA040225014</u>	CESSNA	CONT	CONTROL CABLE	FRAYED
2/24/2004	337A	IO360C	14601007	TE FLAPS

(CAN) FLAP CABLES REMOVED FOR INSPECTION, REFERENCE SD ALERT AL-2003-05 IB FLAP CABLE, RT SIDE, PART NR 1460100-7 FRAYED APPROX 50 PERCENT AT IB BELLCRANK. 1 INCH FROM SWAGED TERMINAL. ALSO BOTH OB CABLES PN 1460100-8 FRAYED AT IB BELLCRANK, APPROX. 1 INCH FROM SWAGED TERMINAL. ALL CABLES ARE ORIGINAL FLAP CABLES AND HAVE BEEN REPLACED WITH NEW FLAP CABLES SUPPLIED BY MFG.

<u>AUS20031296</u>	CESSNA	CONT	HOSE	DETERIORATED
11/28/2003	337G	IO360G	3034	FUEL SYSTEM

(AUS) REAR ENGINE FUEL PRESSURE HOSE LOCATED BETWEEN FIREWALL AND FUEL MANIFOLD DETERIORATED AND LEAKING ONTO LT EXHAUST STACK.

<u>AUS20031318</u>	CESSNA	CONT	CONTROL CABLE	FRAYED
11/28/2003	337H	IO360G	14601007	TE FLAPS

(AUS) IB FLAP CABLE CONTAINED BROKEN WIRES LOCATED AT TIGHT BEND AROUND THE BELLCRANK. APPROXIMATELY 50 PERCENT OF THE WIRES WERE BROKEN. INSPECTION CARRIED OUT IN RESPONSE TO MFG ALERT.

<u>2004FA0000266</u>	CESSNA	CONT	SAFETY SWITCH	DAMAGED
2/18/2004	337H	IO360GB	12700344	NLG

AFTER TAKE OFF PILOT WAS UNABLE TO RETRACT THE LANDING GEAR, THE GEAR DID SHOW DOWN AND LOCKED. THE PLANE LANDED WITHOUT INCIDENT. FOUND NOSE GEAR SAFETY SWITCH BAD INTERNALLY NOT ALLOWING NOSE GEAR TO RETRACT, (SENSING STILL ON GROUND). IT IS SUSPECTED THAT THIS WAS NORMAL WEAR OF SWITCH. THERE WAS NO EVIDENCE OF EXTERNAL DAMAGE.

<u>CA040203009</u>	CESSNA	CONT	CESSNA	FORK	CRACKED
1/16/2004	340A	TSIO520N		5042013497A	NLG

(CAN) CRACK FOUND IN FORK CASTING ON LT SIDE OF TUBE BORE. DISASSEMBLY REVEALED FORK CRACKED COMPLETELY THROUGH LT SIDE OF BORE.

<u>AUS20031313</u>	CESSNA	GARRTT		SEAL	LEAKING
12/16/2003	441	TPE3318		31070515	COMPRESSOR

(AUS) RT ENGINE COMPRESSOR SEAL SUSPECT FAULTY. LEAKING OIL CAUSED SMOKE IN COCKPIT.

<u>CA040108007</u>	CESSNA	PWA		VALVE	INOPERATIVE
1/7/2004	560XL	PW545A			FUEL CROSSFEED

(CAN) DURING REFUELING, FBO LINE CREW FAILED TO CARRY OUT SINGLE POINT REFUELING PRE-CHECK. DURING FUELLING, ONLY LT TANK WAS FILLED (RT REFUELING VALVE APPARENTLY FAILED IN THE CLOSED POSITION). BY THE TIME THE FLIGHT CREW NOTICED THE DIFFICULTY A SIGNIFICANT FUEL IMBALANCE HAD BEEN CREATED, REQUIRING CROSSFEED FROM LT TO RT TANK.

<u>CA040205007</u>	CESSNA	PWA		FUEL CONTROL	INOPERATIVE
1/22/2004	560XL	PW545A			LT ENGINE

(CAN) WHILE TAXIING, LT ENG POWER LEVER WAS ADVANCED TO FACILITATE TURN. THRUST LEVER WAS ADVANCED, LT ENG SUFFERED A ROLL BACK AND FLAME-OUT. AC WAS TAXIED CLEAR OF RUNWAY, FAULT ANALYSIS RELIGHT ATTEMPTED WITH NO SUCCESS. RELIGHT WAS SUCCESSFUL. AC WAS THEN SHUT DOWN AND SURRENDERED TO MAINT FOR ACTION. EVENT FOLLOWED ACTION AND INSTALLATION OF SB 30253. FUEL LINE, ATTENUATOR ASSY AND FCU WERE REMOVED AND SENT TO MFG FOR ANALYSIS. DURING REMOVAL, A BLACK SUBSTANCE WAS DETECTED. SUBSTANCE WAS SENT OFF FOR CHEMICAL ANALYSIS BY MFG. NR C 10420020 REGARDING SUBSTANCE. FUEL LINE, ATTENUATOR ASSY AND FCU WERE REPLACED, IAW SB 30253. AC WAS GROUND RUN AND TEST FLOWN SATISFACTORILY, RETURNED TO SERVICE.

<u>CA040205008</u>	CESSNA	PWA		ENGINE	FLAMED OUT
1/22/2004	560XL	PW545A			LEFT

(CAN) WHILE TAXIING AND TURNING ONTO THE RUNWAY, THE LT ENGINE POWER LEVER WAS ADVANCED TO FACILITATE THE TURN. AS THE THRUST LEVER WAS ADVANCED, THE LT ENGINE SUFFERED A ROLL BACK AND FLAME-OUT. THE AIRCRAFT WAS TAXIED CLEAR OF THE RUNWAY AND A FAULT ANALYSIS RELIGHT ATTEMPTED WITH NO SUCCESS. THE AIRCRAFT WAS THEN TAXIED TO THE RAMP WHERE A FURTHER RELIGHT WAS ATTEMPTED. THE RELIGHT WAS SUCCESSFUL. THE AIRCRAFT WAS THEN SHUT DOWN AND SURRENDERED TO MAINTENANCE FOR ACTION. THE EVENT FOLLOWED ACTION AND INSTALLATION OF SERVICE BULLETIN 30253.

<u>21200003A</u>	CESSNA			AUTOPILOT SYS	MALFUNCTIONED
2/21/2004	T210L			55X	COCKPIT

AIRCRAFT PORPOISES WHILE IN ALTITUDE HOLD MODE. DISABLE ALTITUDE HOLD MODE. MAINTENANCE CONFIRMS DEFECTIVE UNIT BY MANUFACTURER. MANUFACTURER UNABLE TO SUPPLY REPLACEMENT PART.

<u>CA040122002</u>	CESSNA	CONT		CONTROL CABLE	FRAYED
1/21/2004	T337G	TSIO360CB		14601008	TE FLAPS

(CAN) DURING INSPECTION IT WAS DISCOVERED THAT THESE CABLES (2 EA. 1 LT AND 1 RT) WERE FRAYED WHERE THE CABLE BENDS AROUND THE FLAP CABLE QUADRANT LOCATED IN THE WING TRAILING EDGE.

<u>CA040122003</u>	CESSNA	CONT		CONTROL CABLE	FRAYED
1/21/2004	T337G	TSIO360CB		14601007	TE FLAPS

(CAN) DURING INSPECTION IT WAS DISCOVERED THAT THESE CABLES (2 EA. 1 LEFT AND 1 RIGHT) WERE FRAYED

WHERE THE CABLE BENDS AROUND THE FLAP CABLE QUADRANT LOCATED IN THE WING TRAILING EDGE.

<u>AUS20040002</u>	CESSNA	CONT	MCAULY	CLIP	SEPARATED
1/4/2004	U206F	IO520F			PROPELLER BLADE

(AUS) PROPELLER BLADE ROOT CIRCLIP AND ASSOCIATED SHIMS SEPARATED.

<u>CA040315014</u>	CIRRUS	CONT		BUSHING	BROKEN
3/12/2004	SR20	IO360ES		538684	ENGINE

(CAN) DURING OIL CHANGE, NOTED A .5000 LONG X .1250 INCH WIDE ROUND PIECE OF WHAT APPEARS TO BE BUSHING MATERIAL STUCK ON THE OIL DRAIN PLUG S MAGNET. FOUND THE NR 5 CYLINDER CONNECTING ROD S PISTON PIN BUSHING HAD A MISSING PIECE WHICH MATCHES THE PIECE FOUND ON THE OIL SUMP DRAIN PLUG.

<u>CA040107008</u>	CIRRUS	CONT		OIL COOLER	CRACKED
1/7/2004	SR22	IO550N		654585	ENGINE

(CAN) OIL COOLER FOUND CRACKED ON OB FORWARD LOWER CORNER FLANGE WHERE THE BAFFLE IS ATTACHED. CRACK IS ABOUT 1 INCH LONG. THIS IS THE THIRD COOLER FOUND CRACKED ON THE TYPE OF INSTALLATION. (CIRRUS SR22)

<u>CA040119004</u>	CNDAIR	GE		ENGINE	FAILED
1/12/2004	CL6002B19	CF343A1			NR 2

(CAN) AIRCRAFT HAS RECEIVED A REPORT WHICH WE FEEL IS A REPORTABLE EVENT. WHILE IN CRUISE, THE FLIGHT CREW FELT VIBRATION AND NR 2 ENGINE VIBRATION WAS FLUCTUATING BUT WAS WITHIN LIMITS. AFTER A FEW SECONDS, OIL PRESSURE DROPPED TO ZERO. THE CREW FOLLOWED THE QRH, AN EMERGENCY WAS DECLARED, NR 2 ENGINE WAS SHUT DOWN, AIRCRAFT DIVERTED AND LANDED WITHOUT FURTHER INCIDENT. ENGINE REMOVED AND REPLACED. AIRCRAFT RETURNED TO SERVICE.

<u>CA040108005</u>	DIAMON	ROTAX		SPRING	BROKEN
12/31/2003	DA20A1	ROTAX912		2056000902	CANOPY HOOKS

(CAN) THE LT CANOPY SPRING CLIPS BROKE OFF AT BOTH ENDS OF THE CANOPY SPRING SIMULTANEOUSLY. THE ENERGY RELEASED DURING THE FAILURE WAS SUFFICIENT TO ALLOW ONE OF THE CLIPS TO TRAVEL THE WIDTH OF THE COCKPIT AND STRIKE THE RT SEAT OCCUPANT IN THE REAR OF THE HEAD. THERE HAVE BEEN NUMEROUS FAILURES OF CANOPY SPRINGS NOTED IN THE PAST. IN ALL PREVIOUS CASES ONLY ONE OF THE CLIPS FAILED. IN THE CASE OF A SINGLE-CLIP FAILURE BOTH THE SPRING AND THE BROKEN CLIP HAVE REMAINED ATTACHED TO THE AIRFRAME. THIS IS THE FIRST INSTANCE OF A SIMULTANEOUS FAILURE OF BOTH ENDS. IT IS ALSO THE FIRST INSTANCE IN WHICH AN AIRCRAFT OCCUPANT WAS STRUCK BY A PIECE OF THE FAILED SPRING.

<u>CA040203013</u>	DIAMON	ROTAX		MUFFLER	BROKEN
1/23/2004	DA20A1	ROTAX912S3		973670	ENGINE EXHAUST

(CAN) TAILPIPE NEARLY SNAPPED OFF FROM MUFFLER, INTERNAL BAFFLES LOOSE AND OBSTRUCTING EXHAUST OUTLET PART, CAUSING THE BACK PRESSURE TO RISE AND FAILURE OF TAILPIPE HAS OCCURRED. ENGINE POWER WAS ROBBED AND FORCED THE BUILD-UP OF BACK PRESSURE TO EXIT THE HOLE IT HAS CREATED. CORRECTION ACTION IS TO SEND MUFFLER TO AN AMO WHOM MAY REPAIR MUFFLER AND COMPLETE TAP TESTS TO MUFFLER TO VERIFY THE STATUS OF INTERNAL BAFFLES, AT EVERY INSPECTION.

<u>2004FA0000255</u>	DIAMON	CONT		STALL WARNING	FROZEN
1/5/2004	DA20C1	IO240A			

WE HAVE FOUND THAT THE STALL WARNING SYSTEM ON THIS TYPE OF AIRCRAFT IS PRONE TO FREEZE UP. MOISTURE IS INTRODUCED TO THE SYSTEM THROUGH THE SENSORY HOLE IN THE LEFT WING. MOISTURE TRAVELS TO THE LOW POINT IN THE SYSTEM LOCATED IN THE AIRCRAFT BELLY AD FREEZES UP CAUSING THE STALL WARNING SYSTEM TO NOT FUNCTION.

<u>CA040114002</u>	DIAMON	CONT	DIAMON	SEAL	LOOSE
1/11/2004	DA20C1	IO240B			FLAP ACTUATOR

(CAN) PILOT REPORTED FLAP STUCK IN LANDING POSITION, UPON INSPECTION IT WAS FOUND THAT THE SPLINED RUBBER SEAL PUSHED OUT OF POSITION ON FLAP ACTUATOR ROD ASSY. SPLINED RUBBER SEAL INTERFERED WITH FLAP POSITION MICRO SWITCHES. RE-INSTALLED SPLINED RUBBER SEAL WITH EPOXY AND ALLOWED TO CURE. FLAP SYSTEM FUNCTION TESTED, FLAP POSITION LIGHTS AND FLAPS SERVICEABLE. IT APPEARED THAT THE SPLINES WERE USED TO KEEP THE SEAL IN PLACED BUT AS THERE IS LITTLE LUBRICATION REQUIRED ON THE FLAP ACTUATOR SHAFT, FRICTION OF THE SHAFT ON THE SEAL, PULLS THE SEAL OUT OF POSITION AND DRAGS IT ALONG WITH IT INTO THE SWITCHES.

<u>CA040112006</u>	DIAMON	CONT	DIAMON	SEAL	LOOSE
1/7/2004	DA20C1	IO240B			FLAP ACTUATOR

(CAN) PILOT REPORTED FLAP STUCK IN LANDING POSITION, OVERSPEED FLAPS 100 KTS FOR 5 MIN, FLAP INDICATOR U/S. UPON INSPECTION IT WAS FOUND THAT SPLINED RUBBER SEAL PUSHED OUT OF POSITION ON FLAP ACTUATOR ROD ASSY. SPLINED RUBBER SEAL INTERFERED WITH FLAP POSITION SWITCHES. RE-INSTALLED SPLINED RUBBER SEAL WITH EPOXY AND ALLOWED TO CURE. FLAP SYSTEM FUNCTION TESTED, FLAP POSITION LIGHTS AND FLAPS SERVICEABLE. FLAPS INSPECTED FOR OVER SPEED DAMAGE NONE FOUND. AC RELEASED. IT APPEARED THAT THE SPLINES WERE USED TO KEEP THE SEAL IN PLACED BUT AS THERE IS LITTLE LUBRICATION REQUIRED ON THE FLAP ACTUATOR SHAFT, FRICTION OF THE SHAFT ON THE SEAL, PULLS THE SEAL OUT OF POSITION AND DRAGS IT ALONG INTO THE SWITCHES.

<u>AUS20031298</u>	GULSTM	LYC		CLEVIS	CRACKED
9/26/2003	500S	IO540E1B5		ED12758	MLG

(AUS) MAIN LANDING GEAR CLEVIS CRACKED. FOUND USING MAGNETIC PARTICLE INSPECTION AND VISUAL TECHNIQUES.

<u>CA040209005</u>	HUGHES	ALLSN		NOZZLE	MISSING
2/8/2004	369D	250C20B		369D25100505	M/R GEARBOX

(CAN) UNIT INSTALLED IN A/C AFTER REPLACEMENT OF CRACKED CASE BY CUSTOMER US REPAIR FACILITY. AFTER INITIAL TEST RUNS IT WAS REPORTED TO HAVE VERY LOW OIL PRESSURE, AFTER NUMEROUS HOURS OF TROUBLESHOOTING (PRESSURE PUMP, SWITCH, GAUGE REPLACEMENT AND WIRING CHECKS), THE UNIT WAS REMOVED FROM A/C FOR FURTHER INSPECTION. THE T/R O/P PINION WAS REMOVED TO EXPOSE A LARGE PART OF THE PRESSURE PROBLEM AS THE I/P OIL NOZZLES WERE MISSING. WE HAVE DOCUMENTED THIS ON DIGITALLY WITH PICTURES. WE AWAIT FURTHER INSTRUCTION.

<u>ESPA</u>	LEAR			ODOR	DETECTED
2/25/2004	35A				COCKPIT

SMOKE WAS SUSPECTED IN CABIN. ENTIRE AREA IN SUSPECTED AREA WAS INSPECTED. NO DEFECTS WERE FOUND. PILOT REPORTED LEADING EDGE ANTI-ICE WAS INADVERTENTLY LEFT ON POSSIBLE CAUSING THE SMELL OF SMOKE. AIRCRAFT WAS RUN, SYSTEMS WERE OPERATIONALLY CHECKED AND FOUND TO BE GOOD.

<u>CA040119001</u>	LEAR	GARRTT		SWITCH	FAULTY
1/15/2004	35A	TFE73122B		404EN16	MLG

(CAN) AFTER TAKE-OFF PILOT SELECTED THE GEAR HANDLE TO THE UP POSITION. THE GEAR WOULD NOT RETRACT. AIRCRAFT RETURN TO MAINTENANCE BASE. MAINTENANCE TECH FOUND RT TRUNNION SWITCH AT FAULT. SWITCH REPLACED AND LANDING GEAR SYSTEM SWUNG. AIRCRAFT RETURN TO SERVICE.

<u>CA040121003</u>	LEAR	GARRTT		ACTUATOR	CRACKED
1/19/2004	35LEAR	TFE73122B		66000863	TE FLAP

(CAN) DURING PRE-FLIGHT INSPECTION FLUID LOSS WAS NOTED. FLAP ACTUATOR WAS FOUND TO HAVE A CRACKED BODY.

<u>AUS20031331</u>	LEAR	GARRTT		SHUTOFF VALVE	FAULTY
9/2/2003	45LEAR	TFE7312		P40791	HYD SYSTEM

(AUS) LT ENGINE FIREWALL MOUNTED HYDRAULIC FIREWALL SHUTOFF VALVE FAULTY. VALVE WOULD NOT FULLY CLOSE WHEN THE FIRE SWITCH WAS OPERATED WHICH ALLOWED HYDRAULIC FLUID TO LEAK PAST THE

VALVE.

<u>CA040116004</u>	LEAR	PWA	COMPRESSOR WHEEL	FRACTURED
1/13/2004	60LEAR	PW305A		ENGINE

(CAN) FOLLOWING UNEVENTFUL LANDING AND ROLL-OUT, CREW NOTED VIBRATION AND RISING ITT. ENGINE WAS SECURED. POST FLIGHT EXAMINATION SHOWED THAT ROTOR 1 OF THE HPC HAD .3333 OF ONE AIRFOIL MISSING.

<u>CA040315001</u>	LKHEED	ALLSN	GEARBOX	CONTAMINATED
3/9/2004	382G	501D22A	6850209	NR 2 REDUCTION

(CAN) AT TOP OF CLIMB ENROUTE, NR 2 RGB CHIP LIGHT OBSERVED. THE INDICATION WOULD NOT CLEAR, NR 2 ENGINE WAS SHUT DOWN. MAINTENANCE FOUND BOTH RGB CHIP PLUGS BRIDGED. NR 2 ENGINE WAS REPLACED FOR CONVENIENCE AND THE AIRCRAFT RETURNED TO SERVICE.

<u>AUS20031333</u>	PARTEN	LYC	FITTING	CRACKED
12/15/2003	P68B	IO360A1B6	68120251	NACELLE

(AUS) ENGINE MOUNT FITTINGS PN 68-1.2025-1 AND PN 68-1.2025-2 CRACKED AROUND RIVET HOLES.

<u>CA040113008</u>	PIAGIO	PWA	LAMP	INOPERATIVE
1/8/2004	P180	PT6A66	2527	MAP LIGHT

(CAN) DURING CRUISE, COCKPIT ROOF MOUNTED MAP LIGHT FAILED, C/B ACTIVATED, CREW NOTICED A SLIGHT ODOR. DURING TROUBLESHOOTING THE ROOF PANEL WAS REMOVED AND IT WAS DISCOVERED THAT THE LAMP TERMINAL HAD BEEN IN CONTACT WITH AIRFRAME STRUCTURE CAUSING THE RUBBER PROTECTIVE BOOT ON THE TERMINALS TO WEAR THROUGH AND GROUND ELECTRICAL SUPPLY. IT WAS ESTABLISHED THAT DURING COMPLETION AT A THIRD PARTY COMPLETION CENTER SPACER RINGS UNDER THE LAMP COLLAR HAD BEEN OMITTED. FLEET REVIEW FOUND THAT SISTER AIRCRAFT WAS IN SAME CONDITION, BUT AN OTHER HAD SPACERS INSTALLED. SPACERS OBTAINED AND INSTALLED ON AFFECTED AIRCRAFT.

<u>AUS20040001</u>	PILATS	PWA	ROD	SHEARED
1/3/2004	PC12	PT6A67B	5322112082	MLG DOOR

(AUS) LT NOSE LANDING GEAR DOOR OPERATING ROD BROKEN IN AREA LOCATED ADJACENT TO LOWER WITNESS HOLES.

<u>CA040122001</u>	PILATS	PWA	CYLINDER	DEFECTIVE
1/21/2004	PC1245	PT6A67B	D1657	PROPELLER HUB

(CAN) PROPELLER CYLINDER FOUND DEFECTIVE. MANUFACTURE DEFECT IN THE C AREA MISSING MATERIAL. THIS HAS BEEN SEEN IN SEVERAL OTHER CYLINDERS, MFG WAS CONTACTED ON ALL OF THE DEFECTIVE ASSEMBLIES. MFG INSPECTED AND ANALYZED THEM ALL AND HAS NOT PROVIDED ANY LIMITS FOR DAMAGES IN THE C AREA. ALL CYLINDERS HAVE BEEN WARRANTED FOR REPLACEMENT.

<u>CA040209011</u>	PILATS	PWA	WIRE	BROKEN
2/9/2004	PC1245	PT6A67B	G21A24	MLG INDICATOR

(CAN) LT MLG GREEN INDICATION WAS INTERMITTENTLY LOST. FAULT COULD BE DUPLICATED BY WIGGLING THE WIRES AT THE ACTUATOR PLUG. WIRE G21A24 FOUND BROKEN AT P055 CONNECTOR, REPAIRED, GROUND TESTS SATISFACTORY.

<u>CA040311007</u>	PILATS	PWA	LIGHT	FAILED
3/11/2004	PC1245	PT6A67B	0320713406	EXTERIOR

(CAN) NAVIGATION LIGHT ASSEMBLY (TAIL) APPEARS TO HAVE PROBLEMS WITH THE TOP BULB BURNING OUT. THERE HAS BEEN 8 BULBS P/N 972.87.87.184 REPLACED WITHIN 7 DAYS. THE COMPLETE ASSEMBLY HAS BEEN REPLACED ALONG WITH A ELECTRONIC SWITCH UNIT. THE SAME RESULTS. THE BULBS THEMSELVES ARE EXTREMELY HOT WITHIN A SORT TIME OF OPERATION.(SECONDS) THIS NAV LIGHT ASSEMBLY IS PART OF A KIT P/N 500.50.12.276 DUAL NAV LIGHT SYSTEM. MFG S/B 33-009 WAS USED FOR THE INSTALLATION OF THIS

PRODUCT. IN SHORT, THE LIGHT IS UNRELIABLE. ON GOING TRIALS ARE CONTINUING TO FIND A SOLUTION.

<u>CA040311005</u>	PILATS	PWA	PUMP	INOPERATIVE
3/10/2004	PC1245	PT6A67B	9868411404	FUEL BOOST

(CAN) WHILE IN CRUISE FLIGHT THE PILOT NOTED A 2 LED DIFFERENCE BETWEEN LT AND RT FUEL INDICATORS. A FEW MINUTES LATER THE RT BOOST PUMP LT INDICATOR CAME ON. THE LT REMAIN ON FOR THE DURATION OF THE FLIGHT AND THE FUEL IMBALANCE REMAINED. ON THE GROUND THE FUEL BOOST PUMPS WERE TESTED MANUALLY. THE RT BOOST PUMP INDICATED NORMALLY BUT NO SOUND OF THE PUMP RUNNING WAS NOTED. THE FUEL PUMP WAS REPLACED AND THE SYSTEM TESTED SERVICEABLE. NO FURTHER ACTION WAS REQUIRED.

<u>CA040204009</u>	PILATS	PWA	PIN	MISSING
1/28/2004	PC1245	PT6A67B	5521012219	PAX DOOR HANDLE

(CAN) PAX/CREW DOOR HANDLE LOCKING MECHANISM HARD TO OPERATE EXCEPT UPON ARRIVAL AT MAIN BASE. INSPECTING DOOR, FOUND PIN LOCK AND ITS SPRING FROM SAFETY LOCKING MECH TO BE MISSING. LOCKING MECH STOPS ACCIDENTAL OPERATION OF DOOR HANDLE INSIDE AC. RELEASE LEVER IS INSTALLED ON INSIDE OF DOOR BELOW INNER HANDLE. CABLE CONNECTS IT TO A LOCKING PIN WHICH ENGAGES IN OUTER HANDLE IF PIN LOCK BREAKS OR IS FORCED OUT OF CRANK, COMPRESSION SPRING EJECTS ITSELF AND PIN LOCK AWAY FROM AC AND THE DOOR CAN BE OPENED JUST BY ACTIVATING HANDLE. SUSPECT FORMATION OF ICE BETWEEN THE LOCKING PIN AND THE DOOR STRUCTURE TO RESTRAIN MOVEMENT OF PIN AND CAUSE A FAILURE OF LOCKING MECHANISM.

<u>CA040204010</u>	PILATS	PWA	LUCAS	BEARING	FAILED
1/30/2004	PC1245	PT6A67B		23085024	STARTER GEN

(CAN) GEN NR 1 FAILED IN FLIGHT. UPON ARRIVAL, MAINTENANCE FOUND THE REAR BEARING OF THE STATER GENERATOR FAILED CAUSING THE COOLING FAN TO RUB ON THE CASE. CREATING VIBRATION. STARTER GENERATOR REPLACED.

<u>CA040110001</u>	PILATS	PWA	RELAY	FAILED
1/9/2004	PC1245	PT6A67B	9740926112	HYD SYSTEM

(CAN) AFTER TAKE OFF THE CREW SELECTED GEAR UP. THE HYDRAULIC CAWS LIGHT CAME ON AND THE GEAR WOULD NOT FULLY RETRACT. THE GEAR WAS EXTENDED FULLY WITH THE HAND PUMP AND AN UNEVENTFUL LANDING CARRIED OUT. UPON INSPECTION BY MAINTENANCE, THE HYDRAULIC RELAY K601 WAS FOUND TO BE AT FAULT. THE RELAY WAS REPLACED, GEAR SWINGS CARRIED OUT AND THE AIRCRAFT RETURNED TO SERVICE. THERE ARE SEVERAL OTHER INSTANCES INVOLVING FAILURE OF THESE RELAYS, WITH SIMILAR SNAG CIRCUMSTANCES. A SUGGESTION TO PLACE THESE COMPONENTS ON A HARD TIME INTERVAL IN LIEU OF, ON-CONDITION FOR OTHER OPERATORS WOULD BE BENEFICIAL. WE ARE CURRENTLY RESEARCHING THE TIME BETWEEN FAILURE, AS THESE ARE NOT NORMALLY TIME TRACKED.

<u>CA040206005</u>	PILATS	PWA	WIRE	BURNED
2/2/2004	PC1245	PT6A67B		HEATING SYSTEM

(CAN) ONE POWER WIRE FOR THE FOOT HEATER HEAT CONTROL HAD FALLEN ON TO THE BRAKE LINE THAT RUNS ALONG THE FIREWALL JUST AHEAD OF THE RUDDER PEDALS. AS A RESULT ARCING OCCURRED AND BURNED A HOLE IN THE LINE. THE .2500 INCH ALUMINUM BRAKE LINE WAS REPLACED, SYSTEM BLED AND THE WIRE WAS REPLACED AND SECURED BETTER TO THE BUNDLE.

<u>2004FA0000268</u>	PIPER	LYC	O-RING	WORN
11/26/2003	PA22135	O290*		CHECK VALVE

THE CHECK VALVE BETWEEN THE AUXILIARY FUEL TANK AND THE RT MAIN TANK FAILED, ALLOWING FUEL FROM THE RT MAIN TO DRAIN INTO THE AUX TANK AND OVERFLOW FROM THE FILLER NECK. THE PUMP AND VALVE ASSEMBLY IS INTENDED TO MOVE FUEL FROM THE AUX TANK TO THE RT MAIN TANK AND PREVENT REVERSE FLOW. RECOMMEND A POSITIVE SHUT OF VALVE BETWEEN THE RIGHT MAIN TANK AND THE AUX TANK PUMP TO PREVENT AN IN-FLIGHT DRAINING OF FUEL FROM THE RT MAIN TANK.

<u>AUS20031321</u>	PIPER	LYC	STRUCTURE	CORRODED
--------------------	-------	-----	-----------	----------

12/15/2003	PA28140	O320*		STABILIZER
(AUS) STABILIZER STRUCTURE CORRODED.				
<u>AUS20040005</u>	PIPER	LYC	NEEDLE	STICKING
1/4/2004	PA28161	O320D3G		CARBURETOR
(AUS) FIRE IN ENGINE COWLS. SUSPECT CAUSED BY STICKING CARBURETOR NEEDLE AND SEAT CAUSING FLOODING OF ENGINE. EXCESS FUEL LEAKED INTO COWLS AND IGNITED.				
<u>2004FA0000256</u>	PIPER	LYC	HINGE	WORN
1/16/2004	PA28R200	IO360A1A	62371008	IB RTAILERON
RECEIVED 2 NEW HINGES FROM API WITH EXCESSIVE PLAY BETWEEN PIN AND HINGE HALVES. DATE CODES: 12/23/03 AND 01/16/04. HINGES ARE MADE BY AC MFG.				
<u>AUS20031310</u>	PIPER	LYC	BEARING	DELAMINATED
12/15/2003	PA28R201	IO360C1C6	SL13521	CONNECTING ROD
(AUS) CONNECTING ROD BIG END BEARING DELAMINATED.				
<u>CA040308010</u>	PIPER	LYC	TRIM SYSTEM	LACK OF LUBE
2/21/2004	PA31	TIO540A2B	4420000	ELEVATOR TRIM
(CAN) PILOT REPORTED ELEVATOR TRIM JAMMED FULL FORWARD AND COULD NOT TRIM NOSE UP. ELEVATOR TRIM JACK FOUND NOT LUBRICATED. SHAFT LUBRICATED, SYSTEM FUNCTIONS NORMAL. FORWARD TRIM JACK SPOOL CHECKED OK. SPOOLING AROUND ELECTRIC ACTUATOR CHECKED OK. CABLE TENSION CHECKED OK. AFT TRIM TAB ACTUATOR FREE PLAY CHECKED WITHIN LIMITS IN MM.				
<u>CA040310009</u>	PIPER	LYC	POWERPACK	FAILED
3/10/2004	PA31	TIO540A2C	WTC345	HYD SYSTEM
(CAN) WHEN THE PILOT SELECTED GEAR UP, ONE OF THE GEARS WAS NOT RETRACTING AND THE TRANSITION LIGHT REMAINED ILLUMINATED. AFTER SEVERAL ATTEMPTS THE GEAR RETRACTED AND EVERYTHING WAS NORMAL. THE POWER PACK WAS REPLACED.				
<u>CA040310003</u>	PIPER	LYC	STARTER GEN	FAILED
2/26/2004	PA31350	TIO540J2BD	MHB4016B	LT ENGINE
(CAN) AIRCRAFT WAS AT AIRPORT. AFTER STARTING THE RT ENGINE, THE PILOT WENT TO START THE LT ENGINE, THE ENGINE WOULD NOT TURN OVER, FOUND THAT THE STARTER WAS TURNING OVER BUT THE BENDIX WOULD NOT TURN. CHANGED LT STARTER ENGINE STARTED. NO FAULTS FOUND.				
<u>CA040312002</u>	PIPER	LYC	CONNECTING ROD	CRACKED
3/9/2004	PA31350	TIO540J2BD		ENGINE
(CAN) DURING CRUISE, THE CREW HEARD NOISES COMING FROM THE NR 2 ENGINE, SHORTLY AFTER THERE WAS A LOUD BANG AND VIBRATION. THE CREW NOTICED OIL AND SMOKE COMING FROM THE ENGINE COWL, THE PROP WAS FEATHERED AND ENGINE STOWED. THE OIL HIT THE TURBOCHARGER AND IGNITED CAUSING FIRE TO FLOW ALONG THE LOWER WING AND CAUSED DAMAGE TO THE LOWER SKIN AND GEAR DOOR. THE LOWER FLAP SKIN ALSO SHOWED SIGNS OF HEAT DAMAGE. THE A/C LANDED WITH NO FURTHER PROBLEMS.				
<u>CA040315003</u>	PIPER	LYC	TUBE	FLAT
3/10/2004	PA31350	TIO540J2BD	650X10600X6	NLG
(CAN) A/C DEPARTED WITH 10KT WINDS AND BLOWING SNOW. A/C MADE ROUTINE TAKE OFF AND FLIGHT. AFTER LANDING, DURING TAXI ON RUNWAY, PILOT NOTICED A/C WAS PULLING TO ONE SIDE. PILOT TAXIED OFF RUNWAY AND PARKED. HE THEN VISUALLY INSPECTED LT MAIN TIRE AND SAW IT WAS FLAT. MAINT WAS DISPATCHED. MAINT REPLACED MAIN WHEEL AND INSTALLED NEW TUBE IN NOSE WHEEL. UPON INSP MAIN ASSY HAD A SHEARED VALVE STEM AND NOSE TUBE HAD A PIN HOLE IN IT. CAUSE OF SHEARED VALVE STEM IS BELIEVED TO HAVE BEEN FROZEN BRAKES. CAUSE OF PIN HOLE IN THE NOSE TUBE IS BELIEVED TO HAVE BEEN				

THE CHANGE IN TEMPERATURE BETWEEN AREA OF DEPARTURE AND AREA OF ARRIVAL CAUSING WHEEL PRESSURE TO HAVE GONE DOWN AND TUBE GETTING PINCHED.

<u>CA040206003</u>	PIPER	LYC	JANITROL	BLADE	CRACKED
2/4/2004	PA31350	TIO540J2BD	B4050		FAN

(CAN) ONE OF FOUR BLADES SEPARATED FROM FAN AND MADE A SIGNIFICANT AMOUNT OF NOISE AND VIBRATION IN THE HEATER SUCH THAT THE PILOT SHUT THE HEATER DOWN IN FLIGHT.

<u>CA040209004</u>	PIPER	LYC	PIPER	CONTROL CABLE	BROKEN
2/5/2004	PA31350	TIO540J2BD		2489410	PROP GOVERNOR

(CAN) AT ENGINE WARMING UP PILOT FOUND (WHEN TRYING CHECK OF PROP GOVERNOR WORK) LT PROP CONTROL LEVER WENT LOOSE, PROP DID NOT FOLLOW SETTING ANY MORE. INSPECTION REVEALED LT PROP GOVERNOR CABLE PN:24894-10 BROKEN AND SEPARATED CABLE END FITTING AT GOVERNOR SIDE.

<u>CA040112005</u>	PIPER	LYC		ARM	BROKEN
1/11/2004	PA31350	TIO540J2BD		4204200	MLG

(CAN) AFTER TAKE-OFF, CREW SELECTED LANDING GEAR UP. RT MAIN LANDING GEAR STILL INDICATED DOWN AND LOCKED AFTER RETRACTION. CREWS SELECTED GEAR DOWN AND ALL GEAR INDICATED DOWN AND LOCKED. AIRCRAFT RETURNED TO BASE WITH NO FURTHER FAULTS NOTED BY CREW. VISUAL INSPECTION OF LANDING GEAR SYSTEM CARRIED OUT. FOUND RT MAIN LANDING GEAR RETRACTION ARM P/N 42042-00 BROKEN. THIS PART ORIGINAL CRACK LOCATION NOT POSSIBLE TO BE INSPECTED OR FOUND WITH OUT COMPLETE DISMANTLE OF RETRACTION SYSTEM. RETRACTION ACTUATOR ROD END P/N 762-554 ALSO DAMAGED.

<u>CA040224002</u>	PIPER	PWA		OIL SYSTEM	CONTAMINATED
2/16/2004	PA31T	PT6A28			RT ENGINE

(CAN) PILOT REDUCED ENG POWER FOR LANDING AFTER FIRST FLIGHT OF DAY, RT ENGINE PRESSURE DECREASE WAS OBSERVED. TECH DISCOVERED LARGE QUANTITY OF CARBON IN ENGINE OIL FILTER. ENGINE WAS REMOVED AND SENT TO MFG FOR INVESTIGATION. ENGINE WAS DISSEMBLED AT THE (C FLANGE) FOR AN ITT PROBLEM. AFTER REASSEMBLY, ALL GROUND TESTS WERE PERFORMED AND AC WAS RETURNED TO SERVICE AND ENGINE OIL WAS ADDED. AN INTERNAL INVESTIGATION DETERMINED THAT CARBON DISCOVERED IN FILTER WAS MADE OF LITTLE BLACK STONES. FUNNEL THAT WAS USED TO ADD ENGINE OIL WAS LOCATED, INSPECTED AND CLEANED AND SAME LITTLE BLACK STONES WERE DISCOVERED IN THE FUNNEL. WE WERE NOT ABLE TO DETERMINE THE ORIGIN OF THE LITTLE BLACK STONES.

<u>2004FA0000257</u>	PIPER	LYC		GASKET	FAILED
1/1/2004	PA32R300	TIO540*		LW13388	OIL FILTER

OIL FILTER CONVERTER PLATE GASKET (PN LW13388) PROTRUDED OUT OF THE PLATE CAUSING LOSS OF OIL AND SUBSEQUENT ENGINE SEIZURE. RECOMMENDATION: CURRENT AD ALONG WITH LYC SI CAN LEAD INTO MECHANIC TRAP. IF THE OIL FILTER CONVERTER PLATE KIT (PN LW-13904, THIS PROBLEM WOULD BE RESOLVED. (WP21200402668)

<u>CA040107003</u>	PIPER	LYC	BENDIX	DISTRIBUTOR GEAR	BROKEN
12/16/2003	PA34200	LIO360C1E6		10400405	MAGNETO

(CAN) 20 TEETH BROKEN OFF DISTRIBUTOR GEAR ASSEMBLY AND THE DISTRIBUTOR GEAR ELECTRODE BROKEN OFF. FOLLOWING INSTRUCTIONS OF MFG SB 658 FOR CORRECT PRACTICES FOR MAGNETO INSTALLATION ON ENGINE WILL ELIMINATE THE PROBLEM.

<u>CA040107004</u>	PIPER	LYC	BENDIX	DISTRIBUTOR GEAR	BROKEN
12/22/2003	PA34200	LIO360C1E6		10400405	MAGNETO

(CAN) 8 TEETH BROKEN OFF DISTRIBUTOR GEAR ASSEMBLY. A GEAR HOLDING TOOL WAS USE FOR THE MAGNETO INSTALLATION ON ENGINE NOT RECOMMENDED IAW MFG MSB NR 528 AND MFG SB 658.

<u>2004FA0000265</u>	PIPER	LYC		FLOAT	SATURATED
----------------------	-------	-----	--	-------	-----------

1/29/2004 PA44180 O360E1A6 30768 CARBURETOR

PILOTS REPORTED THAT UPON LANDING THE LEFT ENGINE DIED AND THAT FUEL WAS DRIPPING FROM THE COWLING. MAINTENANCE INSPECTED LEFT ENGINE AND COULD NOT FIND FUEL LEAKAGE. AIRCRAFT WAS GROUND RUN AND OPERATIVE NORMALLY EXCEPT AT IDLE. AT IDLE AIRCRAFT RAN SMOOTHLY FOR ABOUT 15 TO 20 SECONDS AND THEN WOULD BEGIN TO DIE AS IF THE ENGINE WAS EXCESSIVELY RICH. MIXTURE WAS LEANED TO ICO AND ENGINE CONTINUED TO RUN AND THERE WAS FUEL DRIPPING FROM THE AIRBOX. CARBURETOR WAS REMOVED FROM THE AIRCRAFT AND THE TOP OPENED. THE FLOAT INSIDE THE CARBURETOR WAS FOUND TO BE HALF FILLED WITH FUEL. MFG TO MONITOR PRODUCTION OF FLOATS. (WP07200410619)

CA040310005 PIPER LYC CAMSHAFT WORN
1/8/2004 PA44180 O360E1A6 ENGINE

(CAN) CAMSHAFT LOBES AND LIFTERS WEARING PREMATURELY.

CA040120002 ROBSIN LYC ROBSIN HUB GALLED
1/19/2004 R44 O540F1B5 C1861 CONING FLANGE

(CAN) OTHER PART AFFECTED LOWER BEARING C181-3 S/N 1328 UPON REMOVING FAN ASSY FOR ACCESS TO A DEFECTIVE ACTUATOR C051-1, DAMAGE (FRETTING AND GALLING) WAS DISCOVERED ON BOTH MATING FLANGE OF FAN HUB C186-1 (PART OF D174-2 ASSY) AND LOWER BEARING C181-3. NO PREVIOUS SIGN OF MOVEMENT WERE NOTED PRIOR TO DISMANTLING FAN ASSY. FAN WAS NEVER REMOVED AFTER IT LEFT FACTORY. FAN HAD BEEN BALANCED ONCE SINCE NEW. FAN HAS BEEN SPLIT APART FOR INVESTIGATION AND A LARGE AMOUNT OF METAL PARTICLES WERE DISCOVERED BETWEEN BACK PLATE AND FAN AND ALSO SOME EXTENSIVE CORROSION BETWEEN SHIM C178-2 FLANGES, HUB MATING SURFACE AND FAN ITSELF. PART REMOVED AND RETURNED FOR REPAIR AND FURTHER INVESTIGATION.

CA040114008 ROBSIN LYC ROTOR HEAD INOPERATIVE
12/2/2003 R44 O540F1B5 D0621 TAIL ROTOR

(CAN) UPON RECEIPT OF AD 2003-24-51 HELICOPTER WAS INSPECTED FOR THE SUSPECT NAS6605-31 BOLTS. EVEN THOUGH THE R44 S/N WAS NOT LISTED IN THE AD OR ROBINSON HELICOPTER SERVICE BULLETIN 51 THE T/R HUB NAS6605-31 BOLTS WERE FOUND TO HAVE THE VENDOR IDENTIFICATION MARKING 01D0. THE BOLTS WERE REPLACED AND THE A/C RETURNED TO SERVICE.

CA040315006 SNIAS LYC GOVERNOR FAILED
8/27/2003 AS350D LTS101600A2 43012354 OVERSPEED

(CAN) MAIN ROTOR RPM WAS FOUND TO OSCILLATE DURING CRUISE FLIGHT AND SOMETIMES DROOP DOWN -5 RPM NR. REPLACING FUEL CONTROL UNIT, FUEL PUMP AND GOVERNOR DID NOT HELP THE PROBLEM. REPLACING THE OVERSPEED GOVERNOR ELIMINATED ALL SYMPTOMS.

CA040315007 SNIAS LYC LINK BROKEN
9/11/2003 AS350D LTS101600A2 406100807 FLOW FENCE

(CAN) DURING NORMAL CRUISE FLIGHT, THE PILOT NOTICED A SUDDEN SHARP RISE IN T4 (TOT) STILL WITHIN LIMITS. AFTER RETURNING TO BASE, ONE OF THE LINKS CONTROLLING THE FLOW FENCE WAS FOUND TO BE BROKEN.

AUS20040011 STBROS PWA ATTACH FITTING CORRODED
1/10/2004 SD360 PT6A67R SD3230488XA LT WING

(AUS) LT WING STRUT FORWARD LOWER STRUT TO STUB WING ATTACHMENT LUG CORRODED ON AFT FACE. DEPTH OF CORROSION 3.327 MM (0.131 IN) WHICH IS APPROXIMATELY 13 PERCENT OF THE FITTING THICKNESS. FOUND DURING INSPECTION IAW AD/SD3-60/48 AMDT2.

CA040319001 ZLIN LYC CONTROL CABLE FRAYED
3/12/2004 Z242L AEIO360A1B6 Z4244120000 ELEVATOR TRIM

(CAN) DURING A 100 HOUR INSPECTION, IT WAS NOTICED THAT THE AFT TRIM CABLE HAD A BROKEN STRAND FORWARD OF THE RT PULLEY NEAR THE TRIM DRUM. THROUGH EXPERIENCE IT WAS FOUND THAT CONDITION

WOULD LEAD TO A TOTAL FAILURE OF THE CABLE IN THE NEAR FUTURE. THE CABLE WOULD FRAY SO MUCH THAT IT WOULD BIND UP IN THE DRUM ASSEMBLY RENDERING THE ELEVATOR TRIM SYSTEM INOPERABLE. THIS SYSTEM IS CLOSELY INSPECTED EVERY 100 HOUR INSPECTION DUE TO SIMILAR FAILURES OF THIS CABLE.

END OF REPORTS
