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**Federal Aviation  
Administration**

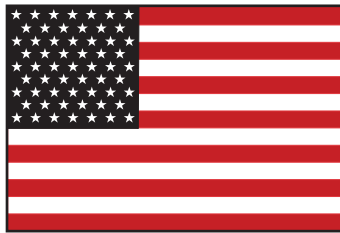
**AFS-600**  
*Regulatory Support Division*

## ADVISORY CIRCULAR 43-16A

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# AVIATION MAINTENANCE ALERTS

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ALERT NO.  
266

SEPTEMBER  
2000

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**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: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

### AIRPLANES

#### **NOTE CONCERNING UNAPPROVED PARTS NOTIFICATIONS**

All of the Unapproved Parts Notifications (UPN) listed in this publication were issued by the FAA, Suspected Unapproved Parts Program Office, AVR-20, and published by the Airworthiness Programs Branch, AFS-610.

Any questions or comments concerning these UPN's should be directed to the originating FAA office listed in each UPN. A complete listing of UPN's is found on the Internet at:

<http://www.faa.gov/avr/sups.htm>

#### **UNAPPROVED PARTS NOTIFICATION NO. 99-174 DATED JULY 17, 2000**

##### **AFFECTED AIRCRAFT**

All Aircraft

##### **PURPOSE**

The purpose of this notification is to advise all aircraft owners, operators, maintenance organizations, and parts suppliers and

distributors regarding aircraft instruments, radios, accessories, and other articles improperly maintained, altered, or returned to service by Quality Air Services.

##### **BACKGROUND**

Information received during a Federal Aviation Administration (FAA) suspected unapproved parts investigation revealed that between June 1998, and June 1999, Quality Air Services (QAS) (Approved Repair Station Certificate No. QUSR002K), 5301 Longley Lane, Reno, NV 89511, improperly maintained, altered, or returned to service various aircraft parts for which QAS was not rated. Evidence also indicated that QAS overhauled various pitot tubes without benefit of the special facility required by the manufacturer's maintenance manual.

QAS's approved repair station certificate was limited to the following ratings prior to September 14, 1999:

- (1) Class 1, 2, and 4 instruments
- (2) All models of Gables audio panels
- (3) Gables public address amplifiers (part no. G-3425A) and Rockwell public address amplifiers (part nos. 622-4096-001 or 622-4487-001)

(4) McDonnell-Douglas auto throttle switches with any series of part number 5758405.

Since September 14, 1999, QAS holds the following ratings:

- (1) Class 1, 2, and 4 instruments
- (2) Limited radio (per current capabilities list)
- (3) Limited accessory (per current capabilities list).

Parts improperly maintained, altered, or returned to service by QAS include, but are not limited to, the following: cabin pressure controller, outflow valve, landing light, centrifugal switch, air pressure transmitter, decoder, strobe light, audio panel, component parts of a multiplexer system, smoke detector, generator control unit, horn, battery pack, safety valve, and pitot tube.

#### **RECOMMENDATION**

Regulations require that type-certificated products conform to their type design. Aircraft owners, operators, maintenance organizations, parts suppliers and distributors should inspect their aircraft, aircraft records, and/or aircraft parts inventories for any part maintained, altered, and/or approved for return to service by QAS for which it was not rated. If any parts improperly maintained, altered, and/or returned to service by QAS are installed on aircraft, appropriate action should be taken.

If any of the parts are found in existing aircraft stock, it is recommended that the parts be quarantined to prevent installation until a determination can be made regarding each part's eligibility for installation.

#### **FURTHER INFORMATION**

Further information may be obtained from the FAA Flight Standards District Office (FSDO) given below. The FAA would appreciate any information concerning the discovery of the above-referenced unapproved parts from any source, the

means used to identify the source, and the action taken to remove the parts from service.

This notice originated from the Reno FSDO, 4900 Energy Way, Reno, NV 89502, telephone (775) 858-7700, fax (775) 858-7737; and was published through the FAA Suspected Unapproved Parts Program Office, AVR-20, telephone (703) 661-0581, fax (703) 661-0113.

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### **UNAPPROVED PARTS NOTIFICATION NO. 98-220 DATED JULY 17, 2000**

#### **AFFECTED PARTS**

Aircraft parts that are new, repaired, overhauled, or were inspected and approved for return to service between January 1, 1996, to the present by Air Electronic Corporation.

#### **PURPOSE**

This notice is to advise all aircraft owners, operators, maintenance entities, manufacturers, and parts suppliers that evidence exists to indicate that Air Electronic Corporation, an FAA-certificated repair station (CRS), has falsified documentation and has performed work for which it is not appropriately rated.

#### **BACKGROUND**

A series of Suspected Unapproved Parts investigations conducted by the FAA has revealed that Air Electronic Corporation (CRS No. EIQR023L) (Air Electronic), located at 1064 N.W. 53<sup>rd</sup> St., Fort Lauderdale, FL 33309, has falsified documentation as well as inspectors' signatures. Evidence exists to indicate that Air Electronic has produced FAA Forms 8130-3, Airworthiness Approval Tags, for new parts without benefit of any supporting documentation. Evidence also exists to indicate that Air Electronic has returned to service parts that have been

improperly repaired, that lack the necessary inspections, or that have been repaired outside Air Electronic's repair station rating.

This notice includes a partial list of parts that were identified as having been improperly approved for return to service.

#### **RECOMMENDATION**

Aircraft owners, operators, maintenance entities, parts suppliers, and manufacturers are encouraged to inspect their aircraft, aircraft records, and/or part inventories for the referenced part numbers associated with FAA Form 8130-3 for new parts or approval for return-to-service record issued by Air Electronic Corporation on or after January 1, 1996, to the present. These parts may include parts returned to service that would not be appropriate for a holder of an avionics repair station rating. If any of these parts are installed or found in existing stock, it is recommended that a determination be made regarding the part's eligibility for installation.

#### **FURTHER INFORMATION**

Further information regarding this notice may be obtained from the FAA Flight Standards District Office (FSDO) listed below. The FAA would appreciate any information concerning the conditions, status, and discovery of these parts from any source, the means used to identify the source, and the actions taken to remove the parts from aircraft and/or stock. Information regarding additional parts not indicated on the attached list may also be reported to the referenced FSDO.

This notice originated from FSDO-17, 1050 Lee Wagener Boulevard, Suite 201, Fort Lauderdale, FL 33315, telephone (954) 356-7520, ext. 119 or 120, fax (954) 356-7531; and was published through the FAA Suspected Unapproved Parts Program Office, AVR-20, telephone (703) 661-0582, fax (703) 661-0113.

The following is a partial list of parts identified as having been improperly returned to service by Air Electronic Corporation.

| <b>Part Name</b>  | <b>Part Number</b> |
|-------------------|--------------------|
| Valve             | 8084018D           |
| Switch            | 21SN41-13          |
| Switch            | 90G138             |
| Switch            | 4271A020101        |
| Panel             | A152               |
| Valve             | 4004TC02           |
| Valve             | 2004022-105        |
| Valve             | 26501012           |
| Valve             | 122546-2-1         |
| Valve             | 122594-3-1         |
| Valve             | 2690326-132        |
| Connector         | K97-63-601         |
| ADI               | 48-60V5M1          |
| Heated Tube       | 8921702G1          |
| Light Assembly    | 60-1254-1          |
| Light Assembly    | 2LA002606-01       |
| Tach Generator    | 287494             |
| Position Actuator | 1523153-119        |
| Radio Altimeter   | AHV5-011A5         |
| Ballast           | 3081-31            |
| C Transformer     | 190QA-01           |
| Control Panel     | G2139A             |
| Smoke Detector    | RCG9-11-03         |
| Indicator         | 522-4825-004       |
| Indicator         | 522-329B-7A        |
| Gyro              | 501-1114-01        |
| Antenna VOR/ILS   | S65-247-10         |

#### **BEECH**

#### **Beech; Model J35; Bonanza; Nose Landing Gear Failure; ATA 3230**

While the pilot taxied the aircraft to the runway for takeoff, the nose landing gear suddenly collapsed. The propeller struck the taxiway, and the engine suffered sudden stoppage.

The technician discovered a broken rod-end at the aft end of the nose gear retraction rod. The rod-end failed where it attaches to the landing gear actuator.

The submitter recommended giving this area close scrutiny during annual inspections.

Part total time not reported.

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**Beech; Model K35; Bonanza; Fuel Starvation; ATA 2823**

During a flight, the aircraft experienced engine failure requiring an off-airport landing. The aircraft sustained substantial damage during the emergency landing.

The pilot switched fuel tanks approximately 12 minutes prior to engine failure and did not notice a "positive detent" when he moved the selector valve handle. When the engine quit, he attempted to switch fuel tanks, and the fuel selector valve handle came off the valve shaft.

During an investigation, the inspector discovered both roll pins missing from the fuel selector valve shaft. The submitter did not explain the circumstances surrounding the missing roll pins. He suggested that the installation of safety wire through the installed roll pins would eliminate the defect.

Part total time-3,600 hours.

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**Beech; Model A-36; Bonanza; Autopilot Electrical Short; ATA 2211**

During a flight, the pilot detected a burning odor in the cockpit. The autopilot disengaged and would not re-engage; however, the pilot landed the aircraft safely.

The technician discovered a shorted transistor and "lifted traces" in the printed circuit for the "servo-engage" section of the autopilot computer. Further inspection revealed an electrical short in the autopilot servo-engage wiring in the aircraft wiring harness caused the transistor failure. A wire chafed and shorted approximately 3 inches from the autopilot computer connector where the pitch-and-roll wires splice together. The splice

chafed against a "step" in the control column cover and was found by physically shaking the instrument panel. Other wire chafing damage was found in the trim circuit wiring harness, which had chafed against the yaw servo bracket causing an additional autopilot computer failure.

The submitter recommended installing wiring harness protection and properly routing the wires to prevent future damage.

Part total time-542 hours.

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**Beech; Model A-45 (T-34A); Mentor; Engine Failure; ATA 2820**

During a flight, the aircraft experienced a complete loss of engine power. The pilot made an off-airport landing.

While investigating, a technician discovered the fuel pressure line, running from the fuel manifold valve to the cockpit fuel pressure indicator, loose at a bulkhead fitting on the rear engine baffle. He attributed the engine failure to the loss of fuel supply through the indicator pressure line. However, the brass fitting (P/N MS20822-4) which attached the fuel line to the manifold valve had a larger orifice than the Teledyne Continental fitting (P/N 631658A1) installed as original equipment. The submitter speculated the smaller orifice in the proper fitting would reduce the amount of fuel leakage and would not have caused the engine to fail.

Part total time-757 hours.

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**Beech; Model B55; Baron; Landing Gear Failure; ATA 3230**

When the pilot selected the landing gear to the "down" position, the landing gear motor circuit breaker opened. While using the emergency extension system, he found it extremely tight and binding. Finally, he was able to lower the gear and make a safe landing.

The technician inspected the landing gear system and found the transmission was binding. He stated the landing gear system appeared to be properly rigged. After further

investigation, he discovered the landing gear motor dynamic brake relay (P/N 6046H39B) was not reversing the electrical current to stop the motor and the transmission. This allowed the motor to drive the sector gear against the internal transmission stop. After removing and disassembling the transmission, he found the sector gear badly damaged at one end.

Part total time-2,900 hours.

### **Beech; Model 56TC; Baron; Flight Control Column Failure; ATA 2701**

During flight, the pilot made an abrupt movement of the control yoke, and the yoke separated from the control column. He made a safe landing and delivered the aircraft to a maintenance shop.

The technician found the control yoke failed at the adapter assembly (P/N 96-524029-15). Airworthiness Directive (AD) 71-24-10 incorporates, by reference, Beech Service Instruction (SI) 0254-156 which deals with this subject. The AD applies to aircraft altered to incorporate control wheels (P/N 60-524080 series) which have provisions for a clock and light. For specific applicability and instructions, operators should consult AD 71-24-10 and SI 0254-156.

The submitter recommended replacing all of the adapters (P/N 96-524029-15) with adapters which incorporate the improved design (P/N 96-524029-31).

Part total time-1,981 hours.

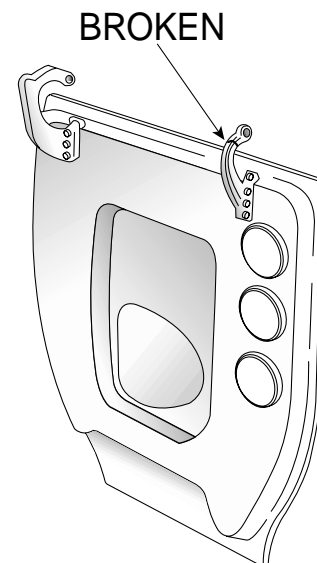
### **Beech; Model 58P; Baron; Landing Gear Door Failure; ATA 5280**

During a landing approach, the pilot heard a loud banging sound when he extended the landing gear. The landing gear indicated down-and-locked, and the pilot made a safe landing.

The technician discovered a broken aft hinge (P/N 35-815016-7) on the right main gear inboard door (P/N 35-815055-169). (Refer to the following illustration.)

The submitter speculated wear and misalignment associated with the pivot fastener hole caused this failure. He suggested inspecting both the front and aft fastener holes for wear and proper alignment by disconnecting the actuating rod and checking for free-play and fastener preload.

Part total time-3,799 hours.



### **Beech; Model 58P; Baron; Landing Gear Malfunction; ATA 3230**

The following article resulted from an aircraft incident investigation conducted by Mr. Stephen Blanset, an Airworthiness Inspector with the Greensboro, North Carolina FAA, Flight Standards District Office (FSDO).

The incident occurred when the pilot made a gear-up landing after failure of the normal landing gear extension system. The pilot was

unable to extend the landing gear with the emergency gear crank handle because it was jammed.

The inspector discovered that the emergency landing gear extension crank handle jammed under the spar carry-through cover. The crank handle had been improperly stowed under the spar carry-through cover during a recent inspection.

The manufacturer's technical data provides instructions for removing the spar cover; however, instructions for reinstalling the cover are not given. The spar cover has an access cutout for the emergency crank handle. Within this access cutout, a recessed portion extends half way down into the cutout. (Refer to the following illustration.) The manufacturer's data does not contain any warnings addressing the possibility of the spar cover jamming the emergency crank handle if the spar cover is installed improperly.

If the spar cover is not installed correctly, the recessed portion of the access cutout will prevent the pilot from engaging the emergency crank handle. This problem exists in most Beech Baron and Bonanza series aircraft. During a discussion of this matter with the aircraft manufacturer, their representative agreed to update the technical data to include the possibility of the emergency gear crank handle being jammed by improper installation of the spar carry-through cover.

Inspector Blanset recommended the following list of suggestions, which may resolve this safety problem.

1. Revise the Beech Service Manuals to include: warning instructions addressing reinstallation of the spar carry-through cover.
2. Issue a Service Bulletin or Airworthiness Directive, which would allow for a modification of the spar carry-through cover by removing the recess part of the cutout.
3. Add a "Caution" to the emergency procedures section of the Pilot's Operating

Handbook (POH), advising of these circumstances.




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#### **Beech; Model C90A; King Air; Electrical System Defect; ATA 2400**

During flight, the aircraft experienced several errant indications from the annunciator panel. The pilot stated these indications were intermittent, and included "autopilot trim fail," "cabin altitude high," and "cabin door" warnings. He made a safe landing.

A technician discovered an electrical system ground wire wrapped around the ground terminal but not soldered. The intermittent errant indications resulted from vibrations causing interruptions in the electrical system. Following the proper technical data during installations should alleviate this type of problem.

Part total time-365 hours.

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#### **Beech; Model 200; King Air; Landing Gear System Failure; ATA 3230**

During a landing approach, the pilot placed the landing gear control in the "down" position; however, the gear did not respond. He used the emergency-extension system successfully and made a safe landing.



A technician discovered the micro-switch (#1, P/N A18M-X296) in the landing gear control electrical circuit failed internally. After he replaced the switch, the landing gear system functioned properly.

The submitter did not offer a cause for the switch failure; however, age and operating environment may be contributing factors.

Part total time not reported.

## CESSNA

### **Cessna; Model 152; Aerobat; Rudder Structural Defect; ATA 5540**

While conducting a scheduled inspection, the technician discovered a crack in the rudder spar.

The technician found the crack adjacent to the upper lightning hole near the upper rudder hinge bracket. This finding prompted him to examine six other like aircraft in the operator's fleet, and he found two additional cracks at the same location. Cessna Service Bulletin SEB 94-3 deals with this subject and offers a replacement spar with an improved structural design. This area deserves close attention during scheduled inspections, especially on high-time aircraft.

Part total time-10,988 hours.

### **Cessna; Model 172N; Skyhawk; Carburetor Defect; ATA 7322**

The pilot reported the aircraft engine ran rough during flight. After making a safe landing, he could not shutdown the engine using the mixture control.

The technician discovered the carburetor bowl separated from the carburetor (Precision P/N MA4-SPA) body. All the bowl attachment screws were secured in place with safety tabs, and the "factory torque seal" was unbroken; however, the screws were loose.

The submitter suspects the attachment screws were improperly torqued during carburetor

overhaul. This defect causes poor engine performance and creates a potential fire hazard. He stated these fasteners deserve close attention during scheduled inspections.

Part total time-764 hours.

### **Cessna; Model 172R; Skyhawk; Defective Shock Mounts; ATA 7110**

During an annual inspection, the technician found three of the eleven engine cowling shock mounts severely damaged.

The technician found the shock mounts (P/N J7444-36) severely deteriorated, and one shock mount torn through approximately half its diameter. He reported finding more than 20 defective cowling mounts on new Model 172 aircraft. The new cowling shock mounts (P/N J7444-36) are much thinner than the old shock mounts (P/N J7444-14) used on older Model 172 aircraft. He stated the older cowling shock mounts (P/N J7444-14) are far more reliable.

The submitter suggested the manufacturer redesign the cowling mounts to correct this problem.

Part total time-243 hours.

### **Cessna; Model 172RG; Cutlass; Fuselage Structural Defect; ATA 5312**

During a scheduled inspection, the technician found cracks in the bulkheads at fuselage station (FS) 108.

The technician discovered the left and right bulkheads (P/N's 2412001-3 and -4) were cracked in the area where the flanges are riveted to the "hatrack" skin. Due to the damage, he replaced both bulkheads.

The submitter recommended paying close attention to this area during scheduled inspections. A thorough inspection requires removal of all of the baggage area trim.

Part total time-6,935 hours.

**Cessna; Model 182; Skylane; Landing Gear Failure; ATA 3210**

During landing, the right main landing gear broke and separated from the aircraft.

The gear-leg spring (P/N 0741009-4) fractured approximately 3 inches outboard of the fuselage. This is the location where the gear leg is dimpled to accommodate the brake line retainer bracket.

The submitter stated the gear-leg spring metal, at this location, is susceptible to corrosion and work hardening; therefore, technicians should inspect this area closely at every opportunity.

Part total time-7,577 hours.

**Cessna; Model 182A; Skylane; Empennage Structural Damage; ATA 5510**

During an annual inspection, the technician found a cracked horizontal stabilizer bracket.

The crack appeared at the attachment bracket (P/N 0712207-1) on the left side next to a mount bolt. Approximately 1 year prior to this finding, records show a technician repaired the horizontal stabilizer by replacing the spar, stringers, and skin.

The submitter believes the stabilizer and mount bracket damage occurred during the repair or when a technician applied physical pressure on the stabilizer while he moved the aircraft.

Part total time not reported.

**Cessna; Model 210B; Centurion; Nose Landing Gear Failure; ATA 3222**

While rolling out after landing, the pilot encountered severe nose gear shimmy. Immediately, the nose gear wheel assembly separated from the aircraft.

The nose gear fork assembly broke where it attached to the strut. Airworthiness Directive

(AD) 71-22-02 deals with this subject but is not applicable to the Cessna 210-series aircraft. AD 71-22-02 references Cessna Service Letter 63-31 and does include the Cessna 210-series aircraft.

The submitter recommended all operators of Cessna 150, 172, 175, 182, 205, and 210-series aircraft inspect their aircraft in accordance with these two documents.

Part total time-3,083 hours.

**Cessna; Model 310; Engine Oil Leak; ATA 7921**

During flight, the pilot experienced a severe engine leak. He terminated the flight immediately by making a safe landing.

After parking the aircraft, the pilot and a technician discovered the oil leak was coming from the oil cooler (Modine P/N 1E1104). The oil cooler was ruptured at the location of a previous "epoxy" repair.

The submitter stated that "epoxy" repairs to oil coolers commonly fail and should be eliminated as a repair procedure. He reported finding a similar defect on an oil cooler (Harrison P/N 626189) used on a Cessna Model 206 aircraft.

Part total time not reported.

**Cessna; Model 550; Citation; Pressurization System Failure; ATA 5210**

During a descent for landing, the flightcrew noticed a loss of cabin pressurization.

The technician discovered the line supplying pressure to the cabin entry door seal full of water. Evidently, the water froze, blocked the door seal pressure supply, and cabin pressure escaped past the deflated seal.

The manufacturer recommends purging the pressurization lines monthly, after exposure to heavy rain, or washing the aircraft.

Part total time not reported.

**Cessna; Model 650; Citation; Nose Landing Gear Failure; ATA 3222**

After takeoff, the pilot selected the landing gear to the “up” position with no response from the nose landing gear. He made a safe landing and reported the problem to maintenance.

The technician discovered the nose gear “oleo” strut would not fully extend causing the electrical circuit through the “squat” switch to remain open; therefore, the nosewheel would not center. He removed and disassembled the nose strut and found the seals (P/N CPS650-2) leaking between the air and hydraulic fluid chambers in the strut.

Part total time not reported.

**FAIRCHILD****Fairchild; Model SA227AC; Hydraulic System Failure; ATA 2911**

After takeoff, the pilot retracted the landing gear and noticed that both “hydraulic flow” warning lights were illuminated. He immediately lowered the landing gear and made a safe landing at the departure airport.

While looking at the aircraft, a technician discovered a very obvious hydraulic leak. The hydraulic system fluid was completely depleted. He found the hydraulic system accumulator (Airright, Inc. P/N 22300-2) ruptured, creating an exit point for the fluid.

The accumulator markings indicated it was manufactured in the second quarter of 1994. The technician speculated the accumulator failure was caused by fatigue and/or possible loss of precharge pressure.

Part total time not reported.

**PIPER****Piper; Model PA 23-250; Aztec; Electrical System Failure; ATA 2400**

During a 100-hour inspection, the technician discovered battery electrical power was not available even though the battery was fully charged.

While investigating the cause of this defect, the technician discovered electrical power would not pass through the battery contactor (Cutler Hammer P/N AN3370-1). When he disassembled the contactor, he discovered a large amount of corrosion debris. The debris prevented the contactor from conducting electrical current.

The submitter recommended giving this area close scrutiny during scheduled inspections.

Part total time-1,795 hours.

**Piper; Model PA 28-140; Cherokee; Improper Stabilator Hardware; ATA 5520**

During an annual inspection, the technician discovered the flight control surfaces had not been balanced after painting.

While removing the stabilator, a technician found it necessary to cut off the mounting bolts to facilitate removal. Prior to removal, the mount bolts appeared normal and undamaged. After removing the mount bolts, he noticed the bolt shanks bent in a “joggled” form, which accounted for the difficulty during removal. He removed the paint from the bolt heads, and discovered the head markings indicated “AN-3” fasteners instead of the NAS-1104-17 specified by the manufacturer’s technical data.

The submitter stated this defect was caused by incorrect hardware installation and exceptionally high airloads on the stabilator. He suspected an out-of-balance condition caused the high stabilator airloads. He stated this defect impacted safety and cautioned maintenance personnel to exercise due diligence during installations.

Part total time not reported.

**Piper; Model PA 28-161; Warrior;  
Rough-Running Engine; ATA 7322**

After a flight, the pilot reported the engine ran rough.

While investigating, the technician discovered the muffler damaged internally and the exterior bulging. He also discovered the carburetor accelerator pump (Precision Airmotive P/N 229-164) discharge tube broken. The broken tube allowed unmetered fuel to enter the intake system and produced an extremely rich mixture.

The submitter suggested maintenance personnel use a mirror to inspect for defects inside the carburetor throat.

Part time since overhaul-1,080 hours.

**Piper; Model PA 28-181; Archer; Defective  
Tachometer; ATA 7714**

The aircraft owner delivered the aircraft to maintenance personnel and reported the engine did not develop full-operational RPM.

The technician checked the tachometer and discovered the tachometer was defective. The tachometer indicated between 120 and 140 RPM low through the full range of operation. He stated the manufacturer installed the tachometer as original equipment. He replaced the tachometer and solved the problem.

Part total time-6,038 hours.

**Piper; Model PA 28R-201; Arrow; Broken  
Engine Mount; ATA 7120**

During a scheduled inspection, the technician discovered a broken engine mount.

The right side engine mount (P/N 67119-57) broke where the drag brace attached. (Refer to the following illustration.) A previous pilot reported the "gear unsafe light" came on only during descent. The microswitch for the gear unsafe light is mounted above the broken engine mount. Apparently, when the pilot reduced engine power, torque caused mount

movement, and prevented the switch from maintaining contact. The broken mount may have been the culmination of previous damage suffered during a hard landing. The FAA data base contains reports of five additional failures of this part number.

This is a good area for special attention during inspections.

Part total time-7,476 hours.

**Piper; Model PA 31B-310; Navajo; Oil Cooler  
Failure; ATA 7921**

As the aircraft rotated during takeoff, the pilot noticed a reduction in manifold pressure and an indication of low oil pressure on the right engine. He returned the aircraft to the departure airport and made a safe landing.

A technician inspected the aircraft and found the right engine oil cooler (P/N 8535311) split approximately 2.5 inches, the oil cooler structure bowed outward, and the coils bulged. After a thorough investigation, he could not determine a cause for this defect.

Part total time since overhaul-120 hours.

**Piper; Model PA 31-350; Chieftain; Defective Firewall Shutoff Valve; ATA 2823**

During a scheduled inspection, the technician found the right engine fuel firewall shutoff valve did not function properly.

With the shutoff valve (P/N 492-114) in the "off" position, the fuel continued to flow. He removed the shutoff valve, and determined it failed internally. Airworthiness Directive (AD) 80-18-10 deals with this subject and incorporates Piper Service Bulletins 507 and 648. However, according to serial number applicability, these documents do not apply to this aircraft. He replaced the questionable shutoff valves with shutoff valves having an improved design.

The submitter suggested the FAA broaden the scope of applicability for AD 80-18-10 to include all the suspect fuel shutoff valves.

Part total time-3,542 hours.

**Piper; Model PA 32-301T; Turbo Saratoga; Hydraulic System Failure; ATA 3233**

During cruise flight, the pilot noticed the loss of hydraulic system pressure and quantity, and the landing gear "free fell" to the "down-and-locked" position without command. After a safe landing, the pilot summoned maintenance personnel.

While troubleshooting the hydraulic system, the technician determined the left main landing gear actuator (P/N SFA232-5) leaked severely from the actuator shaft. He also discovered the hydraulic pump seal was defective. Also, the nose gear actuator leaked internally and allowed air to be drawn into the system. The air introduced into the hydraulic system caused the pump to cycle continuously until it failed.

During the process of repairing these defects, the technician acquired and installed a new hydraulic pump (P/N 636029). While bleeding the air from the system, he discovered the new

pump allowed pressure to bleed back through the pump. He returned the defective pump to the manufacturer.

Hydraulic pump total time-143 hours.

**Piper; Model PA 32R-301; Saratoga; Fuel Starvation Accident; ATA 2820**

During flight, the student pilot inadvertently moved the fuel selector valve to the "off" position. This action resulted in an emergency, off-airport landing and substantial damage to the aircraft. Mr. Michael Brown, an aviation safety inspector with the FAA, Flight Standards District Office in Scottsdale, Arizona, investigated the accident.

During the accident investigation, the inspector discovered he could move the fuel tank selector valve to the "off" position with very little resistance. The stop is attached to the center fuel panel (P/N 69654-22), and the spring steel arm was bent which allowed the selector handle to bypass the stop. He cautioned all operators and maintenance personnel to be aware of these circumstances and take appropriate inspection action.

Inspector Brown submitted a safety recommendation to the FAA which is presently pending.

Part total time-1,800 (plus) hours.

**Piper; Model PA 60-601P; Aerostar; Structural Corrosion; ATA 3211**

During a scheduled inspection, the technician discovered several areas throughout the airframe displayed the early stages of surface corrosion. One area displayed advanced stages of severe intergranular corrosion on the right main landing gear aft side brace support fitting.

The technician removed the trunnion fitting (P/N 200021-02). Prior to installing a new trunnion fitting, he treated the damaged areas and the new part with a corrosion-preventive compound.

This aircraft operates approximately 4 months of each year in a "salt air" environment. With the "proper atmospheric conditions," aircraft operating in such an environment, for even a short period of time, may develop severe corrosion of their structural components. The term "proper atmospheric conditions" alludes to temperature, humidity, and the salt concentration in the air. In some cases, liquid, in the form of ocean spray, may carry concentrated salt into critical areas where it can cause serious compromise of the aircraft structure.

Since it is not always possible to avoid salt air environments, it should be a standard practice to wash these aircraft using fresh water as quickly after exposure as possible.

Part total time-2,065 hours.

## SAAB

### **SAAB; Model 2000; Elevator Trim Defect; ATA 5520**

During a scheduled inspection, the inspector found the right elevator trim actuator bracket dislodged from the spar.

Four of the six fasteners used to secure the bracket to the spar were broken and the spar was cracked in numerous places adjacent to the bracket attachment point.

The submitter suggested close attention to this area during scheduled inspections and elevator trim system maintenance.

Part total time-1,991 hours.

## STINSON

### **Stinson; Model 108-2; Voyager; Engine Failure; ATA 2820**

In July 2000, this aircraft experienced an accident due to engine fuel starvation. FAA inspector Calvin Clark from the Wichita, Kansas, Flight Standards District Office investigated this accident and determined the

fuel hose running from the fuel strainer to the carburetor did not supply sufficient fuel to sustain engine operation.

Inspector Clark identified the .5-inch hose as "MIL-H6000," and stated it was manufactured in the third quarter of 1985 (3Q85). From the available information, he could not identify the hose manufacturer. The hose had a "fire sleeve" installed over the outside for protection.

After removing the hose, the inspector found a small piece of the interior hose liner "curled up" near one end which obstructed the flow of fuel from the strainer to the carburetor. After 15 years of operation, the hose was in a deteriorated state. The aircraft was being operated under the authority of a Supplemental Type Certificate (STC) allowing the use of "auto fuel."

The inspector speculated exposure to "auto fuel" over an extended period of time might have contributed to the hose deterioration. He recommended that all aircraft owners/operators be aware of, and comply with, the aviation hose time-change requirements.

Part total time unknown.

## HELICOPTERS

### BELL

### **Bell; Model 206L-4; Long Ranger; Transmission Gear Failure; ATA 6320**

During flight, the pilot observed the chip light illuminate; therefore, he landed the aircraft immediately.

The technician discovered a large piece of ferrous metal on the chip plug. The metal chip resembled a piece of a gear tooth. He disassembled the transmission and found the input spiral bevel gear as the source of the

broken gear tooth. Also, a crack traveled 360 degrees through the gear ring, and the path took it through a bolt hole.

The submitter did not determine the cause of this failure; however, he sent the parts to the manufacturer for an engineering evaluation and analysis.

Part total time-3,185 hours.

**Bell; Model 222U; Main Rotor Grip Security; ATA 6200**

During a daily inspection, the technician discovered evidence of fretting between the main rotor grips and the pitch horns.

The technician conducted a torque check of the retaining bolts. All four retaining bolts displayed less torque than the required torque value. He disassembled the main rotor grips and discovered the buffer pads loose and distorted. He also found positive evidence of movement between the grips and the pitch horns.

The submitter speculated the cause of this defect may be either improper installation of the buffer pads and/or the paint not being set on the grips prior to assembly and installation of the buffer pads. Also, the pitch horn dimensions were below the manufacturer's required specifications.

Part total time-73 hours.

**Bell; Model 407; Errant Oil Pressure; ATA 6320**

The pilot observed a high transmission oil pressure indication (110 PSI) during flight.

After landing, a technician discovered contamination and corrosion inside an electrical connector caused the errant indication. The defective connector (P/N MS3116FB-4s) is used on the indicating system transducer. He cleaned the connector, conducted an operational test, and found it serviceable.

The submitter recommended that maintenance personnel disconnect the connector periodically for inspection.

Part total time-635 hours.

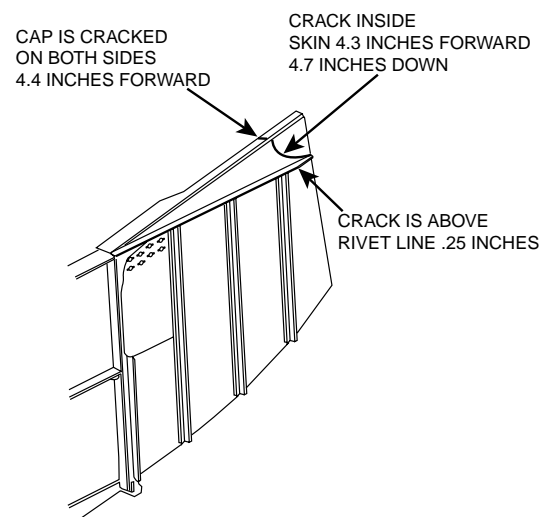
**Bell; Model 412HP; Structural Defect; ATA 5500**

During a crew change following a 4-hour fire-fighting mission, a technician conducted a daily inspection. He discovered a crack in the skin just below the tail-boom attachment fitting on the upper left side of the airframe.

After investigating further, the technician found a broken main beam cap (P/N 212-030-191-001). (Refer to the following illustration.) He removed the helicopter from service and took it to a hangar to disassemble the affected area. He found chips and burrs adjacent to all but two fastener holes on the left tail-boom attachment fitting and the beam cap. An inspection of the right tail-boom fitting and the fittings on another like aircraft revealed similar findings in all cases.

The submitter stated most of the fastener holes were not properly deburred during assembly.

Part total time-3,111 hours.



## AGRICULTURAL AIRCRAFT

### GRUMMAN

#### Grumman; Model G-164A; Ag Cat; Rudder Structural Corrosion; ATA 5540

During a scheduled inspection, the technician discovered severe structural corrosion on the rudder.

The corrosion was located on the main tubular spar (P/N A1203-11). Grumman Service Bulletin (SB) 61, dated June 6, 1977, deals with this subject. Airworthiness Directive (AD) 78-08-09 requires compliance with SB 61. In accordance with these documents, a recurring inspection is required at 300-hour intervals after initial compliance.

The submitter of this report urged all operators of like aircraft to conduct the recurring inspection requirements during each annual inspection regardless of the accumulated operating time.

Part total time-7,555 hours.

## AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

### SEA REY

#### Sea Rey; Landing Gear Failure; ATA 3230

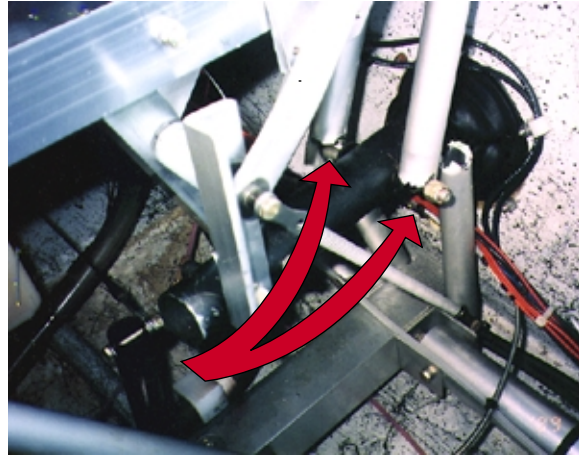
While taxiing the aircraft, the left main landing gear collapsed.

An inspection revealed the two bulkhead upright support tubes (P/N 5310-006) were broken where they attach to the landing gear. (Refer to the following illustration.)

The submitter suspects preload stress imposed during assembly and/or a hard landing caused the tube failures. Proper

installation procedures and landing technique may alleviate recurrence of this defect.

Part total time-165 hours.



### VARIEZE

#### Varieze; Engine Failure; ATA 7322

Immediately after takeoff, the engine lost power. The pilot made a safe off-airport landing with minor aircraft damage.

The submitter determined an excessively rich fuel/air mixture caused the engine failure. The Marvel-Schebler carburetor (Model MA-3SPA) float (P/N 30-766) was cracked and partially filled with fuel. This allowed excessive fuel into the carburetor bowl which produced the excessively rich mixture. He speculated this failure was caused by the position of the carburetor, for this particular application, in relation to other engine compartment components.

Since there was no prior indication of an impending failure, the submitter cautioned all operators of like equipment to inspect the carburetor float at frequent and regular intervals.

Part total time-1,450 hours.



## **POWERPLANTS AND PROPELLERS**

### **UNAPPROVED PARTS NOTIFICATION NO. 99-147 DATED JULY 17, 2000**

#### **AFFECTED PARTS**

Hartzell Aluminum Propeller Blades—Compact Series.

#### **PURPOSE**

This notice is to advise all aircraft owners, operators, maintenance entities, and parts suppliers and distributors that certain Hartzell aluminum propeller blades overhauled by Precision Propeller, Inc. (Air Agency Certificate #AZER344C), Tuscaloosa, Alabama, may not have been overhauled in accordance with the manufacturer's overhaul manual. Evidence also exists that during maintenance or overhaul of Hartzell propellers, Precision Propeller, Inc., did not accomplish all requirements of Airworthiness Directive (AD) 77-12-06 and Hartzell Service Bulletin 118D.

#### **BACKGROUND**

While conducting a Federal Aviation Administration (FAA) suspected unapproved parts investigation, it was determined that Precision Propeller, Inc., was not qualified to perform the cold compression roll process required by AD 77-12-06, Hartzell Service Bulletin 118D, and the Hartzell Aluminum Blade Overhaul Manual—133C. Evidence exists that Precision Propeller, Inc., performed the cold compression rolling process from January 1994, through April 1999.

#### **RECOMMENDATION**

Regulations require that type-certificated products conform to their type design. It is recommended that aircraft, aircraft records, and aircraft parts inventories be inspected and reviewed for propellers that have been repaired, inspected, and/or

overhauled by Precision Propeller, Inc., of Tuscaloosa, Alabama. If any of these parts are installed or found in existing stock, it is recommended that appropriate action should be taken to ensure all requirements of Airworthiness Directive (AD) 77-12-06, Hartzell Service Bulletin 118D, and Hartzell Aluminum Blade Overhaul Manual—133C have been accomplished.

#### **FURTHER INFORMATION**

Further information regarding this notice may be obtained from the FAA Flight Standards District Office (FSDO) indicated below. The FAA would appreciate any information concerning the condition, status, and the discovery of the above-referenced parts from any source, the means to identify the source, and the actions taken to remove the parts from aircraft and/or stock. This notice originated from the Alabama FSDO, 1500 Urban Center Dr., Vestavia Hills, AL 35242, telephone (205) 731-1557, ext. 132, fax (205) 731-0939; and was published through the FAA Suspected Unapproved Parts Program Office, AVR-20, telephone (703) 661-0581, fax (703) 661-0113.

### **ALLISON**

#### **Allison; Model 250-C20B; Stolen Engines; ATA 7200**

On July 15, 2000, two Allison 250-C20B turbine powerplants were stolen from a Petroleum Helicopters, Inc., warehouse located in Lafayette, Louisiana. These two engines were installed in a BO-105 helicopter, which was involved in an accident in March 1997. As a result of the accident, the insurance company now owns these two powerplants.

None of the components, parts, or assemblies should be used and are not considered airworthy. The data, including part number and serial number of each engine component are as follows:

**POWERPLANT #1**

| Nomenclature              | Part Number | Serial Number |
|---------------------------|-------------|---------------|
| Engine                    | 6887190     | CAE-831141    |
| Compressor Assembly       | 6890550     | CAC-41663     |
| Gearbox Assembly          | 6894171     | CAG-32237F    |
| Turbine Rotor Assembly    | 6898735     | CAT-37983     |
| <b>Total Time, 12,726</b> |             |               |

**POWERPLANT #2**

|                           |         |            |
|---------------------------|---------|------------|
| Engine                    | 6887190 | CAE-833349 |
| Compressor Assembly       | 6890550 | CAC-39307  |
| Gearbox Assembly          | 6894171 | CAG-22746  |
| Turbine Rotor Assembly    | 6898735 | CAT-40143  |
| <b>Total Time, 14,420</b> |         |            |

In the interest of aviation safety, we request anyone having any information concerning these powerplants contact the nearest FAA, Flight Standards District Office.

**ACCESSORIES**

**SPECIAL AIRWORTHINESS INFORMATION BULLETIN NO. CE-00-25**

This Special Airworthiness Information Bulletin (SAIB), dated July 27, 2000, was published by AFS-610. All of the SAIB's are posted on the internet at <<http://av-info.faa.gov>>. These publications are issued for informational purposes only and any recommendation for corrective action is not mandatory.

**INTRODUCTION**

The purpose of this Special Airworthiness Information Bulletin (SAIB) is to inform the users of ARTEX ELT equipment in small airplanes of problems that have occurred in the fleet.

**BACKGROUND**

There have been some reports of ARTEX 110-4 ELT battery packs venting and leaking acid into the battery case. This condition appears to be aggravated by the presence of moisture, which, in

combination with the acid, is thought to cause the plastic battery case to break down and release corrosive material or failed case segments into the airplane. In one case, a broken particle from the case became lodged in the rudder control cable of the airplane, chipping the pulley.

The intrusion of moisture into the case seems more prevalent in aircraft that commonly fly at high altitudes, such as pressurized aircraft. The changes of pressure across the battery box seal create an inflow of air on descent if the seal leaks. The airflow may carry moisture that later condenses and accumulates in the case.

The problem has been reported to date on Piper aircraft, but these same conditions may occur on aircraft of other manufacture.

**RECOMMENDATION**

The FAA is recommending, but not requiring, that owners/operators of aircraft using an ARTEX ELT with a P/N 452-0130 battery pack periodically inspect the ELT battery pack case using the procedures outlined by ARTEX Inc., Product Advisory Notice #0002. The FAA recommends the inspection be made at least at each 100-flight hours interval and at each annual inspection. If inspection warrants corrective action, replace the part with Artex P/N 452-0130 manufactured after April 1998, or equivalent part, which contains a Room Temperature Vulcanization (RTV) sealant. For Piper aircraft with the ARTEX part, the Piper Battery Pack P/N 758-696 Rev N3 is equivalent, and Piper Service Bulletin No. 1020 dated July 10, 1998, is applicable.

**FOR FURTHER INFORMATION CONTACT**

FAA, Small Airplane Directorate, Attention: Mr. Sarjapur Nagarajan, ACE- 112, 901 Locust, Room 301, Kansas City, MO 64106, telephone (816) 329-4145, fax (816) 329-4090.

Copies of ARTEX, Inc., Product Advisory Notice #0002 can be obtained from ARTEX Inc., 10714 South Township Road, Canby, OR 97013, telephone 1-800-547-8901.

## **UNAPPROVED PARTS NOTIFICATION NO. 98-310 DATED JULY 17, 2000**

### **AFFECTED PART**

Electric motor used in anticollision and wing position lights.

### **PURPOSE**

The purpose of this Unapproved Parts Notification is to advise all aircraft owners, operators, maintenance entities, manufacturers, suppliers, and aircraft parts distributors of the existence of electric motors, part number A8113-1, used in anticollision and wing position lights, that are being misrepresented as having been produced by a Federal Aviation Administration (FAA) Production Approval Holder (PAH).

### **BACKGROUND**

Grimes Aerospace (Grimes), 240 Twain Avenue, Urbana, Ohio 43078, PAH for the electric motor (part number A8113-1), reported to the FAA that they were notified of motors bearing the Grimes part number and having characteristics different from the motors produced by Grimes. Grimes indicated that the documentation accompanying the suspect motors was not traceable to any records in the Grimes manufacturing or shipping history.

According to Grimes, the distinguishing characteristics of the motors include the following:

1. The size of the bearings in the suspect motors is different from the size of bearings in a Grimes motor.

2. Grimes uses an ink stamp for the identification of the part; the suspect motors have identification affixed by metal plates.

3. Grimes motors are not serialized; invoice documents indicate that the suspect motors have serial numbers 235 through 384.

4. Both shaft ends on the Grimes motor are sealed; the shaft end(s) on the suspect motors is/are open. The shaft bearing is visible on the suspect motor.

5. The wires protruding from the Grimes motor housing are sealed with a rubber grommet; the suspect motor's housing is sealed with silicon.

At this time, the FAA is not aware of any reported motor failures. This notification, however, is being issued because Grimes has stated the suspect motors cannot be traced to their production process; nor does any evidence exist that the suspect motors were manufactured under any FAA production approval process.

### **RECOMMENDATION**

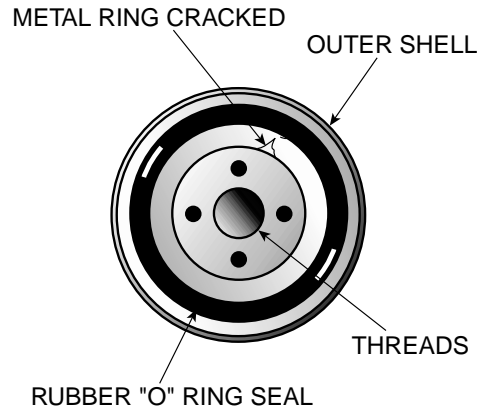
Regulations require that type-certificated products conform to their type design. Aircraft owners, operators, maintenance organizations, manufacturers' suppliers, and aircraft parts distributors should verify the FAA-approval status of the anticollision and wing position light motors. Motors that cannot be traced to an FAA-approved source should be considered suspect and reported to the local FAA Manufacturing Inspection District/Satellite Office (MIDO/MISO). If any of the referenced motors are installed on aircraft, appropriate action should be taken. If found in existing aircraft parts stock, it is recommended that the motors be

quarantined to prevent installation until a determination can be made regarding each motor's eligibility for installation.

**FURTHER INFORMATION**

Further information regarding this investigation may be obtained from the FAA MIDO referenced below. The FAA would appreciate any information regarding the discovery of the above-referenced part from any source, the means used to identify the source, and the action taken to remove the part from service or stock.

This notice originated from the FAA MIDO, One Crown Center, 1895 Phoenix Blvd., Suite 475, Atlanta, GA 30349, telephone (770) 703-6100, fax (770) 703-6108; and was published through the FAA Suspected Unapproved Parts Program Office, AVR-20, telephone (703) 661-0580, fax (703) 661-0113.



**CHAMPION OIL FILTER**

During a routine oil change, the technician examined the new oil filter (P/N CH48110, Lot number F06J02-1) prior to installation.

The technician discovered the metal ring inside of the "O-ring" seal surface cracked and cut. (Refer to the following illustration.) The FAA, Service Difficulty Reporting data base contains six additional defect reports concerning the same part number oil filter.

The submitter recommended that all maintenance technicians conduct a thorough visual inspection of all new oil filters prior to installation.

Part total time-0 hours.

**AIR NOTES**

**SUBSCRIPTIONS**

The Government Printing Office (GPO) distributes this publication. If you have any questions regarding a subscription to this publication, please direct your questions to GPO.

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In the past, we furnished the GPO subscription form in this publication. The older issues which contain the subscription form, may not have current pricing

information. Since GPO controls price increases, contact GPO for current subscription information.

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

One of the recent improvements to the AFS-600 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/isdr/>

When the page opens, select "SDR Submissions Forms" 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.

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### **SERVICE DIFFICULTY PROGRAM DATA AVAILABLE ON THE INTERNET**

The FAA, Service Difficulty Reporting (SDR) Program is managed by the Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The information supplied to the FAA in the form of Malfunction

or Defect Reports, Service Difficulty Reports, or by other means, is entered into the SDR data base. This information has been available to the public through individual written request. This method has provided the aviation public with an invaluable source of data for research or finding specific problems and trends.

The Service Difficulty Reporting Program relies on the support of the aviation public to maintain the high quality of data. AFS-620 has included the SDR data on an Internet web site, which is now available to the public. Using the web site will expedite the availability of information. The Internet web site address is:  
<http://av-info.faa.gov>

On this web site, select "Aircraft" along the top of the page, next select "Service Difficulty Reporting," and then select "Query SDR Data."

This web site is now active; however, it is still under development and improvements are being made. We ask for your patience, ideas, and suggestions. If you find the web site useful, let us know. Also, spread the word about the availability of information on the web site. To offer comments or suggestions, you may contact the web master or call Tom Marcotte at (405) 954-4391.

Please remember that the information contained in the SDR data base is only as good as the input we receive from the aviation public. Also, the data used in production of this publication is derived from the SDR data base. In that regard, we solicit and encourage your participation and input of information.

This publication, as well as many other publications, was previously included on the "FedWorld" internet site. The FedWorld site was terminated on April 15, 2000. The data previously listed there is presently being transferred to the "av-info" web site.

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**ADDRESS CHANGES**

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to:

U.S. Government Printing Office  
**ATTN: SSOM, ALERT-2G**  
710 N. Capital Street N. W.  
Washington, DC 20402

You may also send your address change to GPO via FAX at: (202) 512-2168. If you FAX your address change, please address it to the attention of: **SSOM, ALERT-2G**.

Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

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**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:** Phil Lomax (405) 954-6487  
**FAX:** (405) 954-4570 or (405) 954-4748

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Oklahoma City, OK 73125-5029

**E-Mail address:**

<Phil\_W\_Lomax@mmacmail.jcabi.gov>

You can access current and back issues of this publication from the internet at:  
<http://afs600.faa.gov>

This web site also has view, search, E-Mail, and M or D submit functions.

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## AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between July 25, 2000, and August 21, 2000, 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. The full SDR reports can be found on the internet at: <<http://www.fedworld.gov/pub/faa-asi/faa-asi.htm>>. This internet address takes you to the FAA ASI Library and the SDR reports are listed by weekly entries. This data base is maintained by 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

These reports contain raw data that has not been edited. 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.

| ACFT MAKE<br>ACFT MODEL<br>REMARKS  | ENGMAKE<br>ENG MODEL | COMP MAKE<br>COMP MODEL | PART NAME<br>PART NUMBER  | PART CONDITION<br>PART LOCATION | DIFF-DATE<br>FAA REPORT NO. | T TIME<br>TSO |
|---|----------------------|-------------------------|---------------------------|---------------------------------|-----------------------------|---------------|
| AEROSP<br>AS355F2<br>RIGHT HAND MAIN GEARBOX COWLING CAME OFF OF AIRCRAFT DURING FLIGHT. NO DAMAGE TO AIRCRAFT OTHER THAN MGB COWL ITSELF. NO PERSONAL OR PROPERTY DAMAGE OCCURRED. (X)   |                      |                         | COWLING<br>355A5805420414 | DEPARTED<br>MAIN GEARBOX        | 04/24/2000<br>2000080400173 | 3381          |
| AMD<br>FALCON2000<br>RIGHT ENGINE NR 2 SYSTEM HYDRAULIC PRESSURE LINE BECAME UN-SWAGED AT OUTBOARD END CAUSING COMPLETE DRAINAGE OF NR 1 HYDRAULIC SYSTEM. THIS OCCURRED IN-FLIGHT. FURTHER INVESTIGATION REVEALED IMPROPER SWAGING. TUBE WAS INSTALLED APPROXIMATELY 1 WEEK PRIOR TO INCIDENT. (X) |                      |                         | LINE<br>F2MA751505214     | LOOSE<br>RT PYLON               | 03/30/2000<br>2000080900119 |               |
| AMTR<br>JOE1D11<br>(AUS) PORT WING SPAR FAILED IN COMPRESSION AT DIHEDRAL "CRANK". REAR UPPER SPAR BOOM FAILED IN BOX SPAR AT TWO POINTS: VERTICAL PLY FACE OF BOX SPAR FAILED AT OUTER FAILURE, AND UPPER PLY FACE FAILED AT NEXT INBOARD RIB.   |                      |                         | SPAR                      | FAILED<br>WING                  | 07/06/2000<br>2000081800092 |               |
| AYRES<br>S2RG10<br>(AUS) RIGHT LOWER SPAR CAP CRACKED. FOUND DURING EDDY CURRENT INSPECTION IAW AD/ACSNOW/24 (1). DEFECT CONFIRMED BY MPI.  | GARRTT<br>TPE33110   | AYRES                   | SPAR<br>20207T902         | CRACKED<br>WING SPAR STRUCT     | 04/20/2000<br>2000081900007 |               |
| AYRES<br>S2RRESTD<br>SPARK PLUG FAILED INTERNALLY. COMBUSTION GASSES BURNT OFF THE SPARK PLUG LEAD AND VENTED EXTERNALLY, RESULTING IN LOST COMPRESSION AND POWER OUTPUT. (INT)   | PWA<br>R1340AN1      | PWA<br>AN1              | SPARK PLUG<br>ER400       | BROKEN<br>ENGINE                | 07/11/2000<br>2000080800126 |               |
| AYRES<br>S2RT34NORMAL<br>(CAN) DAMAGE TO INNER SURFACE OF LOW STOP COLLAR DUE TO IMPROPERLY SECURED LOCK WIRE.  | PWA<br>PT6A34AG      | HARTZL                  | COLLAR<br>B30012          | DAMAGED<br>INNER SURFACE        | 03/23/2000<br>2000080100156 | 159           |
| BBAVIA<br>11AC<br>(CAN) DURING INSPECTION OF WING FOLLOWING WIND DAMAGE, CRACK FOUND IN UPPER EDGE OF LEFT REAR SPAR, OUTBOARD OF STRUT ATTACH PLY PLATES. SPAR REPLACED.   | CONT<br>A658         | ARONCA<br>11AC          | SPAR<br>5147L             | CRACKED<br>REAR/OTBDEND         | 07/17/2000<br>2000081800106 | 1558          |
| BBAVIA<br>7GCBC<br>LEFT SIDE, LANDING GEAR DEPARTED AIRCRAFT. (X)   |                      |                         | BOLT<br>MS2000532         | BROKEN<br>LANDING GEAR          | 07/06/2000<br>2000080100032 |               |

|   |             |              |              |                 |               |       |
|---|-------------|--------------|--------------|-----------------|---------------|-------|
| BBAVIA  | LYC         |              | AXLE         | CRACKED         | 04/11/2000    |       |
| 7GCBC   | O320A2D     |              | 31600        | UPPERFWD        | 2000081800040 |       |
| (CAN) CRACK FOUND IN BEND JUST BELOW FORWARD UPPER BOLT HOLE  |             |              |              |                 |               |       |
| BELL  | ALLSN       | BELL         | CASE         | CRACKED         | 06/30/2000    |       |
| 206B  | 250C20      | 206040002013 | 206040151015 | TRANSMISSION    | 2000080400167 | 51500 |
| (CAN) OIL WAS NOTED LEAKING FROM TRANSMISSION DURING GROUND RUN. REMOVAL OF THE PAINT REVEALED A CRACK ON THE UPPER CASE STARTING FROM THE SPLIT LINE BETWEEN TWO MOUNTING STUDS AT THE 4:30 POSITION, VIEWED FROM THE TOP. AIRCRAFT WAS GROUNDED, TRANSMISSION REMOVED.  |             |              |              |                 |               |       |
| BELL  | ALLSN       | ALLSN        | COMBUSTION   | CRACKED         | 07/05/2000    | 13900 |
| 206B  | 250C20      | 6898734      | 23031260     | PATCH AREA      | 2000080400169 |       |
| (CAN) A HIGHER THAN NORMAL T.O.T. WAS EXPERIENCED UNDER NORMAL OPERATING TO-QUE SETTINGS. AIRCRAFT ENGINE WAS INSPECTED UPON LANDING TO DETECT A POSSIBLE MALFUNCTION. A CRACK WAS DISCOVERED IN THE COMBUSTION CASE ASSEMBLY IN THE REINFORCED PATCH AREA OF THE LEFT TUBE INSIDE CURVE AREA. A PREVIOUS AND RECURRING PROBLEM; HENCE, THE REINFORCING PATCH.  |             |              |              |                 |               |       |
| BELL  | ALLSN       | ALLSN        | CASE         | CRACKED         | 07/18/2000    |       |
| 206B  | 250C20      |              | 68709926     | COMBUSTION CASE | 2000080900019 |       |
| (CAN) DURING A 100 HOUR INSPECTION AND TURBINE CHANGE THE AME NOTICED A CRACK IN THE ARMPIT AREA OF THE OUTER COMBUSTION CASE. INSPECTION C/W PER ALLISON 250-C20 SERIES O&M 10W2, 72-40-00 PARA 2B.  |             |              |              |                 |               |       |
| BELL  |             | BELL         | RING         | CRACKED         | 07/01/2000    |       |
| 206L3   |             |              | 206010451005 | MAIN ROTOR MAST | 2000080800061 |       |
| (AUS) MAIN ROTOR SWASHPLATE INNER RING CRACKED ON RIGHT INPUT ARM LOCATED APPROXIMATELY 5 MM (0.2 INCH) BEHIND THE SPHERICAL BEARING. (X)   |             |              |              |                 |               |       |
| BELL  |             |              | YOKE         | WORN            | 02/01/2000    | 627   |
| 206L4   |             |              | 206011819109 | T/R HUB         | 2000080400171 |       |
| YOKE WORN BEYOND ALLOWABLE LIMITS AT CONTACT AREA WITH STATIC STOP BUMPER. BUMPER MATERIAL IS VERY HARD. (X)  |             |              |              |                 |               |       |
| BELL  | PWA         |              | FUELLINE     | DELAMINATED     | 01/16/2000    |       |
| 212   | PT6T3       |              | 2120606003E  | FUEL CELL       | 2000072800229 |       |
| (CAN) WHEN REPLACING FLEXIBLE LINES INSIDE THE FUEL CELL, IT WAS NOTED THAT THE BOTTOM OF THE FUEL CELL WAS SPONGY. IT WAS THEN DISCOVERED THAT LAYERS OF RUBBER WERE BREAKING DOWN AND SEPARATING.   |             |              |              |                 |               |       |
| BELL  | PWA         | BELL         | FASTENER     | CORRODED        | 04/06/2000    | 88740 |
| 212   | PT6T3       | STC212       | 2050310778   | LT DOOR POST    | 2000080300213 |       |
| (CAN) EXCESSIVE DISSIMILAR METAL CORROSION CAUSED BY SHEET METAL CLECS BEING LEFT IN SINCE MANUFACTURE. THEY WERE LOCATED IN THE LEFT-HAND DOOR POST ON BULKHEAD STATION 63.27. NOTE: THIS AREA IS NOT ACCESSIBLE UNLESS THE SKIN IS REMOVED. IT WAS FOUND DURING A 300.  |             |              |              |                 |               |       |
| BOLKMS  | LYC         | LYC          | GOVERNOR     | FAILED          | 07/08/2000    |       |
| BK117B2   | LTS101750B1 | 430121204    | 430121204    | TURBINE         | 2000080800062 |       |
| (AUS) RIGHT ENGINE POWER TURBINE GOVERNOR INTERNAL FAILURE. GOVERNOR DRIVE SPLINE SHEARED WITH CORRESPONDING ENGINE OVERSPEED. (X)  |             |              |              |                 |               |       |
| BOLKMS  |             | BOLKMS       | BUSHING      | CRACKED         | 04/03/2000    |       |
| BO105S  |             | 1053172901   | 1053172904   | TAIL ROTOR      | 2000072700167 |       |
| (CAN) PILOT COMPLAINED THAT EXCESSIVE LEFT PEDAL WAS REQUIRED. TAIL ROTOR ASSEMBLY WAS MEASURED WITH SPRING SCALE AND FORCES WERE FOUND EXCESSIVE. TAIL ROTOR DISASSEMBLED TO CLEAN INNER SLEEVE BUSHINGS AND TEFLON BUSHINGS. THE OUTBOARD SLEEVE BUSHING WAS FOUND CRACKED.   |             |              |              |                 |               |       |
| BOLKMS  | ALLSN       |              | PITCHLINK    | UNSERVICEABLE   | 04/11/2000    |       |
| BO105S  | 250C20B     |              | 1053178201   | T/R GEAR BOX    | 2000072700161 |       |
| (CAN) DURING A TAIL ROTOR (T/R) GEARBOX CHANGE, THE T/R PITCH CHANGE BELL CRANK WAS FOUND DAMAGED. THE DAMAGE WAS CAUSED FROM THE SAFETY WIRE CHAFING NEAR THE PIVOT BEARING. SAFETY WIRE IS FASTENED TO PIVOT BEARING STUD FROM THE T/R GEARBOX.   |             |              |              |                 |               |       |
| CESSNA  | CONT        |              | NUT          | CRACKED         | 05/26/2000    | 22460 |
| 150A  | O200A       |              | NAS697A3     | RUD STOP BOLT   | 2000081800022 |       |
| (CAN) AIRCRAFT WAS INSPECTED AS A RESULT OF SDR AL-2000-04. ANCHOR NUT FOR RUDDER STOP BOLT FOUND CESSNA CONT   |             |              |              |                 |               |       |
| CESSNA  | FRAME       | CRACKED      | 06/01/2000   | 63250           |               |       |
| 150J  | O200A       | 040011887    | 04142221     | AFT O/B LUG     | 2000081000019 |       |
| (CAN) DURING 100 HOUR INSPECTION, IT WAS DISCOVERED THAT THERE WERE 2 SMALL CRACKS ON THE FRAME REAR LUG THAT HOUSES THE ADJUSTING CAM FOR THE SEAT BACK. ONE CRACK WAS FOUND AT THE LUG WELD WHILE THE OTHER WAS FROM THE HOLE FOR THE SHAFT ASSY (0411105-1). IT WAS ALSO DISCOVERED THAT THE SHAFT ASSY ITSELF WAS CRACKED/SPLIT AT THE ENDS INCLUDING UNDER THE CAM. SEAT FRAME IS TO BE REPAIRED AND THE |             |              |              |                 |               |       |
| CESSNA  | LYC         |              | BOLT         | CRACKED         | 11/23/1999    | 47430 |
| 152   | O235L2C     |              | AN24         | CREW SEATS      | 2000081100019 |       |
| (CAN) SEAT BACK PIVOT BOLTS ARE REMOVED FOR INSPECTION AND CRACKS ARE FOUND AT THE FILLET BETWEEN THE BOLT HEAD AND SHANK. THESE BOLTS ARE FOUND ON THE VERTICALLY ADJUSTABLE SEATS FITTED TO 150 AND   |             |              |              |                 |               |       |
| CESSNA  | LYC         | LYC          | CARBURETOR   | FAILED          | 07/20/2000    |       |
| 172N  | O320H2AD    | O320H2AD     | 105217       | MIXTURE CNTRL   | 2000072800159 | 85000 |
| (CAN) THE RECENTLY OVERHAULED ENGINE WOULD START (ON PRIMING FUEL) AND THEN QUIT (AS IF THE MIXTURE CONTROL WAS IN IDLE CUT OFF), CARBURETOR REMOVED AND ANOTHER CARB PUT ON ENGINE - RAN NORMAL CARB MIXTURE, CONTROL SEEMS TO BE STUCK ON IDLE CUT-OFF INTERNALLY, ALTHOUGH EXTERNAL CONTROL ARM MOVES FROM LEAN TO RICH - SENT TO OVERHAUL FACILITY FOR REPAIR.  |             |              |              |                 |               |       |
| CESSNA  | LYC         | LYC          | CYLINDER     | FAILED          | 02/28/2000    |       |
| 172P  | O320D2J     |              |              | LT FWD NR 2 CYL | 2000081000004 | 16000 |



(CAN) AIRCRAFT IN-FLIGHT, OVER LETHBRIDGE CLIMB-OUT. BIG BANG, NR 2 CYLINDER EXITED LEFT COWL, OIL ALL OVER. PILOT LANDED AIRCRAFT AT LETHBRIDGE. ENGINE MADE ENOUGH POWER TO GET AIRCRAFT TO AIRPORT. CYLINDER NOT FOUND. SMALL PART OF PISTON, RINGS, HYDRAULIC LIFTER, FOUND IN COWL, NO PISTON PIN FOUND.

|        |          |      |               |               |       |
|--------|----------|------|---------------|---------------|-------|
| CESSNA | LYC      | BOLT | MISSING       | 05/08/2000    | 36000 |
| 172RG  | O360F1A6 | AN5  | NLG AXLE BOLT | 2000072700055 |       |

(CAN) AFTER LANDING, THE PILOT EXPERIENCED DIFFICULTY STEERING THE AIRCRAFT. THE AIRCRAFT WAS STOPPED ON THE RUNWAY AND IT WAS NOTICED THAT THE NOSE WHEEL WAS SITTING CROOKED ON THE NOSE GEAR FORK. FURTHER INSPECTION REVEALED THAT THE NOSE WHEEL AXLE BOLT AND ONE AXLE FERRULE WERE MISSING FROM THE NOSE GEAR. THE SUBMITTER SUSPECTS THAT THE NUT MAY HAVE COME OFF THE BOLT OR THE BOLT MAY HAVE

|        |  |           |        |               |    |
|--------|--|-----------|--------|---------------|----|
| CESSNA |  | BULKHEAD  | BROKEN | 05/31/2000    | 41 |
| 172S   |  | 055032110 |        | 2000080100023 |    |

DURING POST-FLIGHT INSPECTION, FOUND AFT EDGE OF PROPELLER SPINNER NEAR BLADE BENT OUTWARD. FOUND AFT SPINNER BULKHEAD BROKEN AROUND THE FLOATING NUT PLATE. REPLACED BULKHEAD WITH NEW. WITH SUCH LOW TIME SINCE NEW ON THIS AIRCRAFT, IT IS POSSIBLE THIS BULKHEAD WAS IMPROPERLY FABRICATED. THE NEW PART WAS INSPECTED AND POSSIBLY THIS ONE WILL ALSO FAIL DUE TO THE WAY IT WAS FABRICATED AT THE RADIUS. SUBMITTER SUGGESTED THE MFG INSPECT THE BULKHEADS IN THE AREA OF THE RADIUS AND CORRECT THIS

|        |       |              |        |           |               |      |
|--------|-------|--------------|--------|-----------|---------------|------|
| CESSNA | CONT  | MARVELSCHEBX | FLOAT  | SEPARATED | 07/14/2000    | 1000 |
| 182K   | O470R |              | 666916 |           | 2000080100026 |      |

FUEL SEEP AT CARBURETOR. FOUND BOTH BELLOWS SEPARATED FROM FLOAT ARM. CONDITION EXISTED FOR SOME TIME AS SOLDER JOINTS WERE WORN SMOOTH. (X)

|        |  |       |          |               |  |
|--------|--|-------|----------|---------------|--|
| CESSNA |  | GAUGE | FAILED   | 06/16/2000    |  |
| 182Q   |  |       | INTERIOR | 2000080100018 |  |

PILOT REPORTED RT FUEL GAUGE STUCK ON APPROX ONE-THIRD FULL, NO MATTER WHAT ACTUAL LEVEL WAS. REMOVED GAUGE AND FOUND PIECE OF FOAM INSULATION THAT IS GLUED TO UNDERSIDE OF GLARE SHIELD HAD BECOME LODGED AROUND NEEDLE, PREVENTING IT FROM MOVING. THIS INSULATION WAS FALLING APART AND COVERING COOLING HOLES IN AVIONICS, ETC.

|        |        |        |          |           |               |       |
|--------|--------|--------|----------|-----------|---------------|-------|
| CESSNA | CONT   | CESSNA | THROTTLE | DEFECTIVE | 05/30/2000    | 24600 |
| 207    | IO550F | STC207 | S122225A | THROTTLE  | 2000081000012 |       |

(CAN) AT SCHEDULED MAINTENANCE FUNCTION, THE THROTTLE CONTROL WAS FOUND TO BE DEFECTIVE. THE OUTER CASING (SHROUD) HAD SEPARATED AT A SWAGED FITTING NEAR THE ENGINE END.

|        |          |       |                  |               |  |
|--------|----------|-------|------------------|---------------|--|
| CESSNA | PWA      | VALVE | FAILED           | 01/11/2000    |  |
| 208    | PT6A114A | 25001 | ENGINE BLEED AIR | 2000080100049 |  |

(AUS) BLEED AIR SOLENOID VALVE OPEN CIRCUITED. MOVING PARTS CORRODED. SUSPECT MOISTURE INGRESS.

|        |  |           |           |               |      |
|--------|--|-----------|-----------|---------------|------|
| CESSNA |  | BELLCRANK | BROKEN    | 04/12/2000    | 2392 |
| 208B   |  | 262228112 | INPUT ARM | 2000080100159 |      |

(CAN) DURING APPROACH, THE FLAPS FULLY RETRACTED. MAINTENANCE PERSONNEL FOUND THAT THE RIGHT FLAP BELLCRANK HAD BROKEN AT THE ARM CONNECTED TO THE INPUT DRIVE SHAFT FROM THE FLAP TRANSMISSION. THE BREAK OCCURRED AT THE WELD WHERE THE DOUBLER ENDS. THE BELLCRANK HAD BEEN INSPECTED FOR CRACKS 351 LANDINGS PREVIOUSLY.

|        |  |            |                 |               |      |
|--------|--|------------|-----------------|---------------|------|
| CESSNA |  | SHAFT      | BROKEN          | 06/06/2000    | 2634 |
| 210C   |  | 1243405200 | NOSE GEAR STRUT | 2000080100021 |      |

DURING LANDING, NOSE GEAR BEGAN TO SHAKE AND FORK ASSY BROKE CAUSING A PROP STRIKE AND DAMAGE TO NOSE GEAR DOORS. INVESTIGATION FOUND NOSE GEAR STEERING SHAFT BROKEN, SHAFT FOUND TO BE PREVIOUSLY WELDED BY UNKNOWN PARTIES. (X)

|        |           |           |         |              |               |  |
|--------|-----------|-----------|---------|--------------|---------------|--|
| CESSNA | CONT      | CESSNA    | BUSHING | CONTAMINATED | 04/05/2000    |  |
| 402C   | TSIO520VB | 991015403 | 1454    | LANDING GEAR | 2000072700252 |  |

(AUS) EMERGENCY LANDING GEAR BLOW DOWN BOTTLE HANDLE WOULD NOT OPERATE. INVESTIGATION FOUND THE TEFLON BUSHING LOCATED BETWEEN THE FIRING PLUNGER AND THE OUTLET LINE BLOCK WAS SWOLLEN AND JAMMED PREVENTING THE BOTTLE FROM FIRING. OIL CONTAMINATION WAS FOUND IN THE BOTTLE HEAD.

|        |  |           |         |               |      |
|--------|--|-----------|---------|---------------|------|
| CESSNA |  | TRUNNION  | CRACKED | 02/07/2000    | 3234 |
| CESSNA |  | TRUNNION  | CRACKED | 02/07/2000    | 2629 |
| 750    |  | 671305210 | NLG     | 2000080100036 |      |

NOSE GEAR TRUNNION MOUNT PLATES CRACKED OR MISSING FASTENERS. SUBMITTER STATED THIS IS THE THIRD OCCURRENCE OF THIS TYPE IN A FLEET OF APPROXIMATELY 25 AIRCRAFT. (X)

|        |  |          |                  |               |      |
|--------|--|----------|------------------|---------------|------|
| CESSNA |  | STRUT    | CRACKED          | 09/03/1999    | 3257 |
| A185F  |  | 07410018 | RT UPPER AXLE AT | 2000072700181 |      |

RIGHT MAIN LANDING GEAR LEG FOUND CRACKED IN UPPER AXLE ATTACH BOLT HOLE TO LEADING EDGE. AIRCRAFT OPERATED ON C4000 WHEEL SKIS. 1,032 HRS SINCE LAST INSPECTION (MAGNAFLUX) OF GEAR LEG. (X)

|        |  |           |             |               |  |
|--------|--|-----------|-------------|---------------|--|
| CESSNA |  | MUFFLER   | SEPARATED   | 07/14/2000    |  |
| A185F  |  | 075016189 | OUTLET PIPE | 2000080100019 |  |

MUFFLER OUTLET PIPE FELL OFF AFTER TAKEOFF. AIRCRAFT RETURNED. MUFFLER AND SHROUD WERE REPLACED. AIRCRAFT RELEASED TO SERVICE. (X)

|        |  |      |             |               |       |
|--------|--|------|-------------|---------------|-------|
| CESSNA |  | WIRE | CHAFED      | 05/18/2000    | 47260 |
| S550   |  |      | CENTER CNTR | 2000080100055 |       |

(CAN) DURING CLIMB, THE FLAP CONTROL CIRCUIT BREAKER TRIPPED AS THE FLAPS WERE BEING RETRACTED. THE BREAKER WAS RESET AND IT TRIPPED AGAIN. THE FLIGHT WAS CONTINUED WITH THE FLAPS PARTIALLY EXTENDED. MAINTENANCE PERSONNEL FOUND THE FLAP CONTROL CIRCUIT WIRING WAS CHAFED AND SHORTING WHERE THE WIRES ARE ROUTED THROUGH THE RIGHT HAND WING FAIRING (APPROX WS100.00, ZONE 612 AND 622).

|        |          |          |                |               |  |
|--------|----------|----------|----------------|---------------|--|
| CESSNA | CONT     | CYLINDER | CRACKED        | 07/07/2000    |  |
| T207A  | TSIO520M | 646657A2 | EX. VALVE NR 5 | 2000080100015 |  |

(CAN) WHEN PERFORMING A CYLINDER DIFFERENTIAL COMPRESSION CHECK, FOUND CYLINDER NR 5 HAD A 60/80 COMPRESSION, AND AIR WAS LEAKING OUTSIDE CYLINDER. AFTER FURTHER INSPECTION, FOUND CRACK COULD BE SEEN JUST INBOARD OF THE EXHAUST PIPE FLANGE. CYLINDER WAS REMOVED FROM SERVICE. NEW OVERHAULED

CYLINDER WAS INSTALLED.

|        |        |          |                |               |
|--------|--------|----------|----------------|---------------|
| CESSNA | CONT   | HANDLE   | DAMAGED        | 05/05/2000    |
| U206F  | IO520F | 12170534 | SPLINE OF DOOR | 2000081000022 |

(CAN) PILOT CLOSED DOOR WITH HANDLE SELECTED TO THE CLOSED POSITION, HOWEVER, HANDLE WAS PARTIAL STRIP ON INSIDE GEARING, AND DOOR WAS NOT FULLY LOCKED. MAINTENANCE REPLACED DOOR HANDLE WITH SERVICEABLE HANDLE AND RETURNED THE AIRCRAFT TO SERVICE.

|              |       |        |             |            |               |     |
|--------------|-------|--------|-------------|------------|---------------|-----|
| CNDAIR       | PWA   | CNDAIR | TORQUETUBE  | LOOSE      | 07/07/2000    | 588 |
| CL2156B11415 | PW123 |        | 215T9027622 | OTBD SHAFT | 2000081800095 |     |

(CAN) WHEN OPPOSING FORCE BETWEEN LT AND RT ELEVATOR CONTROL COLUMN, MINOR LOOSENESS CAN BE FELT ON LT COLUMN PRODUCED BY OUTBOARD FASTENERS LOOSENESS ON OUTBOARD LAYSHAFT. SEE K/M/

PSP492,27-31-00, P602 FIG CC OUTBOARD SIDE. NOTE: (ACTION) REPAIRED C/O I.A.W. BOMBARDIER R.E.O. 215-27-30-03.

|         |  |           |              |               |
|---------|--|-----------|--------------|---------------|
| DHAV    |  | LONGERON  | CRACKED      | 06/06/2000    |
| DHC6300 |  | C6W151248 | LONGERON/STR | 2000081800088 |

(AUS) A CRACK APPROXIMATELY 44.5 MM (1.75 INCHES) WAS FOUND IN THE RT OUTBOARD ENGINE NACELLE LONGERON, APPROXIMATELY 24 CM (9.5 INCHES) AFT OF THE ENGINE MOUNT FITTING. THE CRACK ORIGINATED FROM BENEATH STRAP P/N C6WM1712-27 WHICH WAS FITTED IAW DHC MOD 6/1655.

|         |        |            |           |               |
|---------|--------|------------|-----------|---------------|
| DHAV    | PWA    | STRUT      | CORRODED  | 07/07/2000    |
| DHC6300 | PT6A20 | C6WM140031 | WING MISC | 2000081800085 |

(AUS) LEFT WING STRUT CORRODED IN AN AREA LOCATED APPROXIMATELY 355.6 MM (14 INCHES) OUTBOARD FROM THE LOWER ATTACHMENT FITTING ON THE AFT WEB. FOUND DURING INSPECTION IAW AD/DHC6/58 AND SB6-474. (X)

|          |        |            |              |               |
|----------|--------|------------|--------------|---------------|
| EMB      | PWA    | FITTING    | WORN         | 03/13/2000    |
| EMB110P1 | PT6A34 | 1103216321 | ELEVATOR/TAB | 2000081100109 |

(AUS) ELEVATOR TRIM FITTING AND HINGE HAD EXCESSIVE PLAY. FURTHER INVESTIGATION FOUND THE TRIM FITTING CRACKED.

|        |           |       |              |               |
|--------|-----------|-------|--------------|---------------|
| GULSTM | LYC       | BOLT  | SEPARATED    | 02/29/2000    |
| 114    | IO540T4B5 | AN415 | LANDING GEAR | 2000081800084 |

(AUS) NOSE LANDING GEAR RETRACTION RAM TO NOSE LANDING GEAR STRUT SEPARATED DUE TO BOLT, NUT, WASHER AND SPLIT PIN SECURING THE TWO ITEMS COMING LOOSE.

|        |           |            |              |               |
|--------|-----------|------------|--------------|---------------|
| GULSTM | LYC       | DRAG BRACE | FRACTURED    | 04/04/2000    |
| 500S   | IO540E1B5 | ES10107    | LANDING GEAR | 2000072700104 |

(AUS) NOSE LANDING GEAR DRAG BRACE FAILED WHEN THE AIRCRAFT STRUCK A KANGAROO ON TAKEOFF. NLG COLLAPSED DURING LANDING.

|        |           |           |             |               |
|--------|-----------|-----------|-------------|---------------|
| HUGHES | LYC       | BOOT      | TORN        | 05/18/2000    |
| 269C   | HIO360D1A | 269A59993 | FAN HOUSING | 2000080400213 |

(CAN) WHILE PERFORMING A POST-FLIGHT INSPECTION, THE PILOT NOTED GREASE ON THE FAN HOUSING (SCROLL ASSY). INSPECTION SHOWED A TEAR ON BOOT 269A-5473 INSTALLED ON ADAPTER 269A5411. DRIVESHAFT GREASE HAS LEAKED RADIALLY FROM BOOT. BOOT STILL CONTAINED SUFFICIENT GREASE TO LUBRICATE DRIVESHAFT.

|        |         |           |             |                  |               |
|--------|---------|-----------|-------------|------------------|---------------|
| HUGHES | ALLSN   | TIP CAP   | CRACKED     | 07/18/2000       | 2695          |
| 369D   | 250C20B | 369D23601 | 369D2363312 | RIGHT STABILIZER | 2000080800065 |

(CAN) DURING FLIGHT A VIBRATION WAS FELT IN THE FLOOR AND WENT AWAY AS THE AIRCRAFT WAS RETURNING TO THE LANDING SITE. THE ENGINEER INSPECTED THE AIRCRAFT AND FOUND THE TIP PLATE OF THE R/H SIDE OF THE HORIZONTAL STABILIZER WAS MISSING.

|        |  |             |            |               |      |
|--------|--|-------------|------------|---------------|------|
| HUGHES |  | BLADE       | CRACKED    | 07/12/2000    | 6195 |
| 369E   |  | 369D2161531 | TAIL ROTOR | 2000081900070 |      |

PILOT FOUND TAIL ROTOR BLADE ROOT FITTING CRACKED ON A PRE-FLIGHT INSPECTION. THIS IS THE SECOND OCCURRENCE ON THIS AIRCRAFT. THE LAST BLADE, S/N 009999-1489, ONLY TWO SERIAL NUMBERS DIFFERENCE. (X)

|        |  |             |            |               |      |
|--------|--|-------------|------------|---------------|------|
| HUGHES |  | BLADE       | CRACKED    | 03/09/2000    | 5700 |
| 369E   |  | 369D2161531 | TAIL ROTOR | 2000081900071 |      |

CRACKED BLADE WAS FOUND ON POST-FLIGHT AFTER THE PILOT FELT AN IN-FLIGHT VIBRATION. THE TAIL ROTOR BLADE WAS CRACKED FROM THE INBOARD ROOT FITTING, 1.5 INCHES LONG WITH A 90-DEGREE TURN FOR ANOTHER .5

|       |        |          |              |               |
|-------|--------|----------|--------------|---------------|
| MAULE | CONT   | PLUNGER  | DETERIORATED | 02/01/2000    |
| M4210 | IO360A | 07560106 | FUEL STORAGE | 2000080100170 |

(AUS) FIREWALL MOUNTED FUEL STRAINER PLUNGER RUBBER NOT COMPATIBLE WITH FUEL PREVENTING FUEL FROM BEING DRAINED FROM STRAINER. PLUNGER WAS PURCHASED AND FITTED IN SEPTEMBER 1999.

|      |         |          |         |                  |               |
|------|---------|----------|---------|------------------|---------------|
| PAC  | CONT    | CONT     | FITTING | DAMAGED          | 02/09/2000    |
| CT4A | IO360HB | 63135111 | AN78022 | ENGINE FUEL DIST | 2000081100092 |

(AUS) DISTRIBUTOR VALVE TO FUEL INJECTOR LINE FITTING LOOSE. INVESTIGATION FOUND DAMAGED THREADS WHICH ALLOWED THE NUT TO LOOSEN. FUEL LEAKING FROM FITTING.

|        |           |        |          |              |               |
|--------|-----------|--------|----------|--------------|---------------|
| PARTEN | LYC       | PARTEN | MOUNT    | CRACKED      | 01/25/2000    |
| P68B   | IO360A1B6 | P68B   | 68120251 | ENGINE MOUNT | 2000080100052 |

(AUS) LEFT AND RIGHT ENGINE MOUNTS CRACKED AND CORRODED.

|        |  |            |          |               |       |
|--------|--|------------|----------|---------------|-------|
| PILATS |  | BOOT       | UNBONDED | 04/25/2000    | 28400 |
| PC1245 |  | 9598901035 | L/H STAB | 2000072700051 |       |

(CAN) DURING PREFLIGHT INSPECTION, THE PILOT NOTICED THE DE-ICE BOOT HAD BECOME UNGLUED ON THE TOP FOR A DISTANCE OF ABOUT TWO FEET. THE BOOT WAS REPLACED WITH A NEW UNIT. THE SUBMITTER STATES THAT THE OLD BOOT WAS EASILY REMOVED AND DID NOT APPEAR TO BE PROPERLY ADHERING TO THE STABILIZER

|         |         |       |         |                 |               |       |
|---------|---------|-------|---------|-----------------|---------------|-------|
| PIPER   | LYC     | PIPER | HINGE   | CRACKED         | 05/23/2000    | 31270 |
| PA24180 | O360A1D | 20730 | 2070702 | UP HNG VERT FIN | 2000081100004 |       |

(CAN) UPON STRIPING OF THE VERTICAL STABILIZER, A CRACK WAS NOTED IN THE UPPER HINGE. THIS AIRCRAFT HAS THE RUDDER BALANCE WEIGHT INSTALLATION. PIPER KIT NR 760705 INSTALLED MARCH 15, 1973. THIS AIRCRAFT WAS VANDALIZED BUT NO VISIBLE DAMAGE TO CONTROL WAS NOTED. THE CRACK MAY HAVE BEEN A RESULT OF PRE-RUDDER BALANCE FLUTTER OR AN ORIGINAL INSERTION OF THE BEARING, NO INDICATION OF OF NEW BEARING

INSTALLED. HINGE REPLACED.

|         |         |     |          |                  |               |  |
|---------|---------|-----|----------|------------------|---------------|--|
| PIPER   | LYC     | LYC | RETAINER | MISSING          | 04/01/2000    |  |
| PA28161 | O320D3G |     | 8734902  | ENGINE AIR INTAK | 2000081800002 |  |

(AUS) FOAM AIR FILTER ELEMENT INGESTED INTO THE CARBURETTOR. INVESTIGATION FOUND ONLY ONE FILTER RETAINER WAS FITTED INSTEAD OF TWO. FURTHER CHECKING FOUND THAT THE IPC MAY BE MISLEADING IN THE NUMBER OF RETAINERS TO BE FITTED.

|          |          |  |           |            |               |      |
|----------|----------|--|-----------|------------|---------------|------|
| PIPER    | LYC      |  | BELLCRANK | CRACKED    | 06/27/2000    | 3023 |
| PA28R200 | IO360C1C |  | 677550100 | RIGHT WING | 2000081800098 |      |

(CAN) THE RIGHT AILERON CONTROL BELLCRANK LOWER ANGLE WAS FOUND CRACKED DURING INSPECTION.

|          |  |  |         |                |               |      |
|----------|--|--|---------|----------------|---------------|------|
| PIPER    |  |  | MOUNT   | BROKEN         | 09/30/1999    | 7476 |
| PA28R201 |  |  | 6711957 | AFT DRAG STRUT | 2000072700065 |      |

DURING SCHEDULED INSPECTION, FOUND MOUNT BROKEN AT DRAG STRUT ATTACH POINT ON RIGHT SIDE. PILOT HAD NOTED THE GEAR UNSAFE LIGHT WAS COMING ON ONLY DURING DESCENT. THE MICROSWITCH FOR THE UNSAFE LIGHT IS MOUNTED ABOVE THE BROKEN AREA. WHEN POWER WAS REDUCED AND TORQUE WENT DOWN, THE MOUNT SEPARATED AND THE SWITCH WAS NOT CONTACTING. THIS BROKEN AREA IS THE WEAKEST PART OF THE MOUNT AND MAY HAVE BEEN BROKEN FROM A HARD LANDING ON NOSE. (X)

|           |          |  |       |                  |               |  |
|-----------|----------|--|-------|------------------|---------------|--|
| PIPER     | CONT     |  | STUD  | CRACKED          | 07/10/2000    |  |
| PA28R201T | TSIO360F |  | 95299 | WING, LANDING GR | 2000081800079 |  |

(AUS) LEFT AND RIGHT MAIN LANDING GEAR SIDE BRACE STUDS CRACKED. FOUND DURING MAGNETIC PARTICLE INSPECTION IAW AD/PA28/91. (X)

|       |        |  |         |                  |               |  |
|-------|--------|--|---------|------------------|---------------|--|
| PIPER | LYC    |  | PIPE    | LEAKING          | 04/02/2000    |  |
| PA30  | IO320* |  | 2405105 | ACFT FUEL INDICA | 2000072700255 |  |

(AUS) RIGHT FUEL FLOW LINE LOCATED AT BACK OF INSTRUMENT INADEQUATELY FLARED. FUEL LEAKING.

|       |          |  |       |                  |               |  |
|-------|----------|--|-------|------------------|---------------|--|
| PIPER | LYC      |  | LEVER | FOULED           | 05/17/2000    |  |
| PA30  | IO320B1A |  |       | LANDING GEAR SEL | 2000081800035 |  |

(AUS) LANDING GEAR MANUAL EXTENSION SYSTEM LEVER OBSTRUCTED BY THE SEAT MOUNTED PORTABLE FIRE EXTINGUISHER IN SOME SEAT POSITIONS.

|       |          |           |           |         |               |  |
|-------|----------|-----------|-----------|---------|---------------|--|
| PIPER | LYC      |           | ROTOR     | SHORTED | 05/10/2000    |  |
| PA30  | IO320B1A | ALX842ILS | ALH212851 | DC      | 2000081800036 |  |

(AUS) LEFT ALTERNATOR SHORT CIRCUITED. COMPLETE ELECTRICAL FAILURE. A PROBLEM LOWERING THE LANDING GEAR RESULTED IN A GEAR UP LANDING CAUSING DAMAGE TO THE AIRCRAFT. SEE SDR AU000404 FOR PIPER LYC

|           |           |        |            |           |               |       |
|-----------|-----------|--------|------------|-----------|---------------|-------|
| AEROSONIC | ALTIMETER | FAILED | 04/18/2000 |           |               |       |
| PA31      | TIO540A2B |        | 1063701696 | ALTIMETER | 2000081800015 | 33000 |

(CAN) NEEDLES BECAME ERRATIC AND LOOSE AFTER A FEW HOURS. ITEM RETURNED ON WARRANTY AND REPAIRED. RE-INSTALLED. FAILED AFTER 32.5 HOURS. INSTRUMENT REPLACED AGAIN. OVERHAULER SAYS THAT THIS INSTRUMENT WAS WORN.

|         |           |       |           |                  |               |  |
|---------|-----------|-------|-----------|------------------|---------------|--|
| PIPER   | LYC       | PIPER | STRUCTURE | DAMAGED          | 02/17/2000    |  |
| PA31310 | TIO540A2B |       | 31420     | FUSELAGE MAIN ST | 2000080100048 |  |

(AUS) FUSELAGE SKIN CRACKED IN AREA OF LEFT WING FORWARD ATTACHMENT FITTING. INTERNAL STRUCTURE ALSO DAMAGED IN THE SAME AREA. CENTER SECTION LOWER FUSELAGE FRAMES BUCKLED AND LOWER SKIN

|         |             |       |          |            |               |       |
|---------|-------------|-------|----------|------------|---------------|-------|
| PIPER   | LYC         | PIPER | BULKHEAD | CRACKED    | 04/29/2000    | 93640 |
| PA31350 | LTIO540J2BD |       | 4475800  | LWR ATTACH | 2000081100005 |       |

(CAN) THE LEFT AND RIGHT FUSELAGE MOUNTED FORWARD WING SUPPORT BULKHEADS WERE INSPECTED AND FOUND TO BE CRACKED ON THEIR LOWER MOUNTING FLANGES. (P/NS 44758-00 AND 44758-01).

|         |             |       |          |            |               |       |
|---------|-------------|-------|----------|------------|---------------|-------|
| PIPER   | LYC         | PIPER | BULKHEAD | CRACKED    | 04/29/2000    | 87070 |
| PA31350 | LTIO540J2BD |       | 4475800  | LWR ATTACH | 2000081100006 |       |

(CAN) THE LEFT AND RIGHT MOUNTED FWD WING SUPPORT BULKHEADS WERE INSPECTED AND FOUND TO BE CRACKED ON THEIR LOWER MOUNTING FLANGES. (P/NS 44758-00 L/H & 44758-01 R/H)

|         |             |  |          |        |               |  |
|---------|-------------|--|----------|--------|---------------|--|
| PIPER   | LYC         |  | MOTOR    | FAILED | 06/02/1999    |  |
| PA31350 | LTIO540J2BD |  | 12020001 | MOTOR  | 2000081800013 |  |

(CAN) FLAPS STUCK DOWN ON APPROACH. C/B WOULD NOT RESET. FLAP MOTOR REPLACED. SYSTEM SERVICEABLE.

|         |            |  |          |                  |               |  |
|---------|------------|--|----------|------------------|---------------|--|
| PIPER   | LYC        |  | SELECTOR | CORRODED         | 05/05/2000    |  |
| PA31350 | TIO540J2BD |  | 492239   | FUEL SELECTOR/SH | 2000081800007 |  |

(AUS) FUEL SELECTOR VALVE SEVERELY CORRODED (RUSTED) INTERNALLY. FOUND APPROXIMATELY 25 HOURS AFTER COMPLIANCE WITH AD/GEN/81. A SECOND SELECTOR VALVE WAS ALSO FOUND IN THE SAME CONDITION.

|         |            |          |          |             |               |       |
|---------|------------|----------|----------|-------------|---------------|-------|
| PIPER   | LYC        | PIPER    | CABLE    | FRAYED      | 04/14/2000    | 13540 |
| PA31350 | TIO540J2BD | DWG53335 | 44523002 | PAX ENTRNCE | 2000081800011 |       |

(CAN) CABLE FOUND TO BE FRAYED MORE THAN 50 PERCENT AT UPPER SWAGED FITTING. SUBMITTER STATED THAT CABLE COMES COVERED WITH A .1250 INCH THICK PLASTIC TRANSPARENT SLEEVE COVERING ALL THE CABLE UP TO THE SWAGED FITTING. THIS MAKES IT ALMOST IMPOSSIBLE TO INSPECT CABLE AT THE FITTING. SUBMITTER SUGGESTS THAT 1 INCH OF THE SLEEVE BE CUT BACK TO ALLOW FOR INSPECTION AT THIS VULNERABLE AREA FOR

|       |        |  |         |                 |               |       |
|-------|--------|--|---------|-----------------|---------------|-------|
| PIPER | PWA    |  | TUBE    | DISCONNECTED    | 05/08/2000    | 85000 |
| PA31T | PT6A28 |  | 8124402 | FWD PRT OF TUBE | 2000072700070 |       |

(CAN) AIRCRAFT MADE AN IN-FLIGHT RAPID DECOMPRESSION. THE FORWARD PART OF THE FRESH AIR DISTRIBUTION TUBE WAS FOUND TO BE DISCONNECTED. THE CLAMPS WERE REMOVED, INSPECTED, REINSTALLED, AND LOC WIRED TO PREVENT SLIPPAGE. THE SUBMITTER STATES THAT ALTHOUGH LOCKWIRING THE CLAMPS IS NOT IN THE MAINTENANCE MANUAL, LOCKWIRING GIVES BETTER SECURITY.

|       |        |       |          |               |               |  |
|-------|--------|-------|----------|---------------|---------------|--|
| PIPER | PWA    | PIPER | ELEVATOR | WORN          | 06/23/2000    |  |
| PA31T | PT6A28 |       | 4030700  | LOWER BEARING | 2000081800104 |  |

(CAN) DURING INSPECTION BELLCRANK FOUND TO BE WORN IN BEARING LOCATION WHERE ELEVATOR PUSH-PULL ROD ATTACHES, TO THE POINT WHERE THE BEARING WAS LOOSE IN BELLCRANK. PROBLEM SEEMED TO BE CAUSED BY BEARING BECOMING SEIZED.

|        |         |  |        |            |               |  |
|--------|---------|--|--------|------------|---------------|--|
| PIPER  | PWA     |  | SWITCH | OUT OF ADJ | 06/28/2000    |  |
| PA31T2 | PT6A135 |  | 487862 | NLG        | 2000072800161 |  |

(CAN) - PILOT DID NOT RECEIVE NOSE GEAR DOWN LIGHT INDICATION AFTER CYCLING GEAR DOWN FOR LANDING. MAINTENANCE ADVISED PILOT TO USE RUDDER PEDALS TO ACTIVATE NOSE GEAR DOWN MICROSWITCH. THIS ACTION GAVE NOSE GEAR DOWN INDICATION TO PILOT. THE AIRCRAFT WAS LANDED WITHOUT ANY INCIDENT. MAINTENANCE JACKED THE AIRCRAFT, CYCLED GEARS AND ADJUSTED THE NOSE GEAR DOWN MICROSWITCH.

|        |         |         |        |            |               |       |
|--------|---------|---------|--------|------------|---------------|-------|
| PIPER  | PWA     |         | BOLT   | SHEARED    | 06/28/2000    | 11272 |
| PA31T2 | PT6A135 | 4531400 | AN3H7A | TOP OF CYL | 2000080100014 |       |

(CAN) UPON LANDING THE AIRCRAFT, THE PILOTS NOTICED A PULLING TO THE LEFT. AFTER A BRIEF INSPECTION, THE THREE UPPER AN3 BOLTS, WHICH HOLD THE STEERING ARM AND BRACKET TO THE NOSE GEAR CYLINDER, WERE FOUND TO BE SHEARED.

|        |         |  |          |              |               |       |
|--------|---------|--|----------|--------------|---------------|-------|
| PIPER  | PWA     |  | TRUNNION | CRACKED      | 05/25/2000    | 79530 |
| PA31T2 | PT6A135 |  | 4028800  | REINFORCEMNT | 2000081000008 |       |

(CAN) DURING INSPECTION, A CRACK WAS FOUND ON THE AFT RIGHT MAIN LANDING GEAR TRUNNION ASSEMBLY. THE CRACK WAS FOUND TO BE ON THE UPPER REINFORCEMENT RIB. THE PART WAS REPLACED WITH NEW.

|         |           |  |         |              |               |     |
|---------|-----------|--|---------|--------------|---------------|-----|
| PIPER   | LYC       |  | MAGNETO | FAILED       | 07/10/2000    | 200 |
| PA32300 | IO540K1G5 |  | 6351    | CAM FOLLOWER | 2000080100031 |     |

DUE TO NOT HAVING AN OIL FELT WIPER, A VERY HIGH NUMBER OF NEW OR OVERHAULED SLICK MAGS ARE HAVING EXCESSIVE WEAR ON POINTS CAM FOLLOWER, AND POINTS ARE SLOWLY CLOSING. SUBMITTER STATED E-GAP MUST NOT ONLY BE CHECKED EVERY 100-HOURS, BUT IN MOST CASES ADJUSTED. (X)

|          |  |        |              |               |               |  |
|----------|--|--------|--------------|---------------|---------------|--|
| PIPER    |  | SCOTT  | SEAL         | MELTED        | 07/17/2000    |  |
| PA34200T |  | 236405 | 12444LH12424 | FUEL SELECTOR | 2000081800086 |  |

(AUS) DURING SCHEDULED MAINTENANCE, THE FUEL COULD NOT BE TURNED OFF FULLY AND FUEL WAS CROSS-FEEDING. THE SELECTOR VALVES WERE REMOVED AND FOUND THAT THE SEALS HAD DISSOLVED. SUBMITTER SUSPECTED INCORRECT SEALS OR INCORRECT SOLVENT USED IN COMPLYING WITH AD/GEN/81.

|          |  |  |          |      |               |      |
|----------|--|--|----------|------|---------------|------|
| PIPER    |  |  | BUSHING  | WORN | 06/08/2000    | 2957 |
| PA34220T |  |  | 96003000 | TAIL | 2000080100029 |      |

EXCESSIVE PLAY IN ELEVATOR TRIM TABS. HOLES IN UPPER LINK, PN 96003-000, WORN OUT. NEW PARTS HAVE BRASS BUSHINGS INSTALLED IN THESE HOLES, BUT IT IS NOT CALLED OUT IN THE PARTS MANUAL OR BY A SERVICE

|          |  |  |      |             |               |  |
|----------|--|--|------|-------------|---------------|--|
| PIPER    |  |  | BOOT | SEVERED     | 06/15/2000    |  |
| PA34220T |  |  |      | PROP DE-ICE | 2000080200131 |  |

FOUND ALL 3 DEICE BOOT LEADS SEVERED AT CONNECTOR MOUNT BRACKET. DETERMINED PROPELLER OVERHAUL SHOP INSTALLED INCORRECTLY. RECOMMEND INSTALLATION PROCEDURES OUTLINED IN PIPER MM AND BFG SB 3-84070 DATED OCT 1989 FOR PROPER BOOT INSTALLATION. SUBMITTER STATED THIS HAS BEEN A REPETITIVE

|         |           |           |           |         |               |      |
|---------|-----------|-----------|-----------|---------|---------------|------|
| PIPER   | LYC       | PIPER     | FITTING   | CRACKED | 07/17/2000    | 3981 |
| PA60600 | IO540K1J5 | 220000999 | 220015001 | FITTING | 2000081800105 |      |

(CAN) AN A INSPECTION WAS BEING ACCOMPLISHED ON THE AIRCRAFT. DURING THIS INSPECTION, A CRACK WAS FOUND ON THE AFT VERTICAL STABILIZER ATTACH FITTING. THE CRACK WAS CONFIRMED USING EDDY CURRENT INSPECTION METHOD. AFTER THE FITTING WAS REMOVED FROM THE STABILIZER A FURTHER EDDY CURRENT INSPECTION INDICATED A TOTAL OF 5 DIFFERENT CRACKS IN THE FITTING. THE CRACKS ALL EXTEND GRAIN-WISE BETWEEN FASTENER HOLES ON BOTH FLANGES OF THE FITTING. THE FITTING WAS REPLACED WITH A NEW FITTING. CONAIR WILL BE CONDUCTING A FLEET CAMPAIGN TO INSPECT THE AFT VERTICAL STABILIZER ATTACH FITTING TO DETERMINE THE EXTENT OF THE PROBLEM AND RECTIFY (I.E. REPLACE) DEFECTIVE FITTINGS.

|          |        |  |              |                 |               |       |
|----------|--------|--|--------------|-----------------|---------------|-------|
| RAYTHN   | PWA    |  | TORQUE TUBE  | WORN            | 05/27/2000    | 57800 |
| 100BEECH | PT6A28 |  | 115610010325 | TAPER PIN HOLES | 2000080100056 |       |

(CAN) AUDITOR INSPECTION OF AIRCRAFT NOTICED LOOSE ELEVATOR TORQUE TUBES. FOUND LEFT ELEVATOR TORQUE TUBE HOLES WORN BEYOND LIMITS. EXAM OF HOLES NOTED HOLES NOT ROUND, APPEARED THAT FACTORY REAMER CHATTERED MAKING LEDGES IN HOLE. ALSO NOTED FACTORY INSTALLED TAPER PINS ALREADY BEYOND LIMITS OF PROTRUSION. RAYTHEON CONTACTED. TORQUE TUBE ASSEMBLY REPLACED.

|          |        |     |         |           |               |       |
|----------|--------|-----|---------|-----------|---------------|-------|
| RAYTHN   | PWA    | PWA | TUBE    | CRACKED   | 05/15/2000    |       |
| 200BEECH | PT6A41 |     | 3026779 | AFT B NUT | 2000081000011 | 26060 |

(CAN) AFTER TAKEOFF, FUEL VAPOR SMELL IN CABIN, SHUT OFF BLEED AIR, SMELL WENT DOWN. AIRCRAFT RETURNED TO YQB. FOUND FUEL PRESSURE TUBE ASSY CRACKED JUST AFT OF B-NUT.

|          |        |  |           |                  |               |  |
|----------|--------|--|-----------|------------------|---------------|--|
| RAYTHN   | PWA    |  | CIRCUIT   | CORRODED         | 02/29/2000    |  |
| 200BEECH | PT6A41 |  | 507250101 | DC POWER DISTRIB | 2000081800025 |  |

(AUS) CIRCUIT BREAKER PANEL CORRODED DUE TO WATER INGRESS THROUGH THE COPILOT'S DV WINDOW.

|          |        |     |         |                  |               |  |
|----------|--------|-----|---------|------------------|---------------|--|
| RAYTHN   | PWA    | PWA | NOZZLE  | IMPROPER PART    | 04/11/2000    |  |
| 200BEECH | PT6A42 |     | 3017957 | FUEL INJECTOR NO | 2000080100054 |  |

(AUS) NR 13 FUEL NOZZLE TIP INCORRECT PART. PART FITTED IS PN 3017957. CORRECT PN 3019424. UNAPPROVED

|        |        |  |            |                 |               |     |
|--------|--------|--|------------|-----------------|---------------|-----|
| RAYTHN | CONT   |  | PISTON PIN | BROKEN          | 06/14/2000    | 140 |
| 95B55  | IO470L |  | SA539467   | CYLINDER/PISTON | 2000080100024 |     |

PORTION OF THE NR 6 CYLINDER PISTON PIN PLUG BROKE OFF AND CAUSED THE PISTON TO DISINTEGRATE. THIS CAUSED DAMAGE TO THE CONNECTING ROD ON THE NR 5 CYLINDER AND DAMAGE TO THE CRANKCASE. NO RECOMMENDATION TO PREVENT THIS AT THIS TIME. (X)

|        |        |  |             |                 |               |  |
|--------|--------|--|-------------|-----------------|---------------|--|
| RAYTHN | PWA    |  | ACTUATOR    | SEIZED          | 05/05/2000    |  |
| 99     | PT6A20 |  | 99810057652 | RT MLG INTERNAL | 2000072700053 |  |

(CAN) THE CREW ON A TRAINING FLIGHT NOTICED, AFTER A NUMBER OF TIMES CYCLING THE GEAR, THE GEAR HANDLE RED LIGHT REMAINING ON. AS THE AIRCRAFT LANDED, THE RIGHT LANDING GEAR COLLAPSED. MAINTENANCE FOUND THE RIGHT LANDING GEAR ACTUATOR SEIZED IN THE PARTIALLY RETRACTED POSITION. THE ACTUATOR IS BEING SENT OUT FOR EVALUATION.

|        |        |            |            |              |               |       |
|--------|--------|------------|------------|--------------|---------------|-------|
| RAYTHN | PWA    | BEECH      | SPAR       | CRACKED      | 06/11/1999    | 12474 |
| A100   | PT6A28 | 9763000601 | 9763000023 | CENTRE ATTCH | 2000081100015 |       |

(CAN) THE RUDDER WAS REMOVED TO REPAIR SOME LOOSE RIVETS ON THE TORQUE TUBE, BUT A CRACK ABOUT 1 CENTIMETER LONG WAS DISCOVERED ON THE RUDDER SPAR (P/N 96-630000-307). THE SPAR WAS ALSO FOUND TO BE CRACKED IN BEHIND. THE CRACKS ORIGINATED FROM THE NUTPLATE INSIDE THE RUDDER SPAR ON THE CENTER ATTACH POINT AT STATION 22.5. THE SPAR AND DOUBLER WERE REPLACED. TWO OTHER KING AIRS IN FLEET WERE

DISCOVERED TO HAVE THE SAME CRACKS IN THIS AREA. THE SUBMITTER NOTED THAT IT IS VERY DIFFICULT TO SEE THE CRACKS WITH THE RUDDER ON THE AIRCRAFT AS THE HINGE BRACKET (P/N 97-630012-1) IS COVERING THIS AREA.

|        |        |            |                 |               |     |
|--------|--------|------------|-----------------|---------------|-----|
| RAYTHN | CONT   | PAN        | CRACKED         | 10/13/1999    | 155 |
| A36    | IO550B | 0024100143 | FWD ENG COWLING | 2000072700180 |     |

DURING AN ANNUAL INSPECTION, THE PN 002-410014-3 "PAN", LOCATED AT THE FORWARD NOSE COWLING AREA, BELOW THE ENGINE CRANKSHAFT FLANGE, AND ABOVE THE AIR FILTER, HAD LARGE CRACKS WITH A PIECE MISSING APPROXIMATELY 2 INCH BY 4 INCH. SUBMITTER SUSPECTED SOME TYPE VIBRATION PROBLEM. LEFT, AFT BAFFLE AT OIL COOLER ALSO CRACKED. (X)

|        |        |             |                  |               |  |
|--------|--------|-------------|------------------|---------------|--|
| RAYTHN | PWA    | FRAME       | CRACKED          | 07/11/2000    |  |
| B200C  | PT6A42 | 10112002117 | FUSELAGE MAIN FR | 2000081800077 |  |

(AUS) LEFT FUSELAGE FRAME NR 207 CRACKED. LEFT AND RIGHT STIFFENER PN 101-120021-17 AND PN 101-120021-18 ALSO CRACKED. (X)

|         |         |        |       |             |               |
|---------|---------|--------|-------|-------------|---------------|
| ROBSIN  | LYC     | ROBSIN | CONE  | CHAFED      | 03/13/2000    |
| R22BETA | O320B2C | B1741  | A1874 | CIR OF CONE | 2000072500086 |

(CAN) THE LENGTH OF THE SCREW THAT ATTACHES INSPECTION PLATE P/N D229-4 TO SCROLL SET P/N R7156 WAS EXTENDED THROUGH SCROLL SET TO A DEPTH THAT IT CONTACTED CONE P/N A187-4 CAUSING IT TO CHAFE AS THE FAN WHEEL ROTATED. UNABLE TO DETERMINE AT THIS TIME THE P/N OF THE SCREW THAT WAS INSTALLED. THE CORRECT P/N FROM ROBINSON R2 ILLUSTRATED PARTS CATALOG IS MS35206-227. IT IS SUSPECTED THAT AN OVERLY LONG SCREW WAS INSTALLED DURING THE ROTORCRAFT "SOVERHAUL."

|        |        |            |               |            |               |
|--------|--------|------------|---------------|------------|---------------|
| SKRSKY | ALLSN  | SKRSKY     | SPAR          | CRACKED    | 05/21/2000    |
| S76A   | 250C30 | 7615009000 | 7615009000045 | MAIN ROTOR | 2000080800060 |

(AUS) MAIN ROTOR BLADE SPAR CRACKED FROM OUTBOARD LOWER FORWARD BLADE ATTACHMENT BOLT HOLE. LENGTH OF VISIBLE PORTION OF CRACK APPROXIMATELY 44.45 MM (1.75 INCHES). FOUND DURING INSPECTION IAW

|         |          |            |       |               |               |      |
|---------|----------|------------|-------|---------------|---------------|------|
| SNIAS   | TMECA    | TMECA      | WHEEL | COKED         | 06/28/2000    | 2999 |
| AS350B1 | ARRIEL1D | 70BM035240 |       | GAS GENERATOR | 2000080900017 | 175  |

(CAN) THIRD OCCASION THAT THE COMPRESSOR SECTION HAD BECOME DIFFICULT TO TURN DUE TO COKING AROUND LABYRINTH SEAL AT INJECTION WHEEL. ONLY SOLUTION IS TO REMOVE ENGINE M.O.2 SECTION SENT TO OVERHAUL FACILITY FOR REPAIR. TURBOMECA IS NOW LOOKING INTO THIS PROBLEM DUE TO OTHER OCCURRENCES OF THIS

|         |  |              |             |               |     |
|---------|--|--------------|-------------|---------------|-----|
| SNIAS   |  | BLADE        | DELAMINATED | 05/20/2000    |     |
| AS350BA |  | 355A12003108 | TAIL ROTOR  | 2000080800064 | 382 |

(AUS) AFTER APPROXIMATELY A ONE HOUR FLIGHT IN HEAVY RAIN, THE PILOT DISCOVERED THE DELAMINATION ON ONE TAIL BLADE HAD PROPAGATED TO APPROXIMATELY 3.5 CM (1.37 INCH). PROBLEM WAS INITIALLY FOUND ABOUT 18 HOURS EARLIER, HOWEVER, THE DELAMINATION WAS WITHIN LIMITS AND REPAIRED (SEALED) IAW MRR.

|         |          |            |              |            |               |       |
|---------|----------|------------|--------------|------------|---------------|-------|
| SNIAS   | TMECA    |            | BEARING      | ROUGH      | 05/15/2000    | 10040 |
| AS350BA | ARRIEL1B | 350A332004 | 704A33651003 | TAIL ROTOR | 2000072800242 |       |

(CAN) WHILE PERFORMING AN INSPECTION OF THE TAIL ROTOR PITCH CHANGE SPIDER BEARINGS FOR ROUGHNESS, DRAG AND TORQUE, (AWD 1999-085-076(A)R2). IT WAS DISCOVERED THAT BEARING WAS VERY ROUGH AND RATCHETY. THE AWD IS A REPETITIVE AWD FOR EVERY 50 HOURS. MANUFACTURES P/N 60102RS1HT33CA.

|      |            |             |        |               |     |
|------|------------|-------------|--------|---------------|-----|
| WACO |            | HINGE       | BROKEN | 07/06/2000    | 276 |
| YMF  | MS2124254K | RCM334TC10Z | RUDDER | 2000080100020 |     |

FOUND ON ANNUAL INSPECTION, LOWER RUDDER HINGE BROKEN. CAUSE UNKNOWN. PART TT: 275.9 HOURS. (X)

|   |                        |                    |                       |   |                 |  |
|---|------------------------|--------------------|-----------------------|---|-----------------|--|
| DEPARTMENT OF TRANSPORTATION<br>FEDERAL AVIATION ADMINISTRATION |                        | OPER. Control No.  |                       | 8. Comments (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)                     | DISTRICT OFFICE | OPERATOR DESIGNATOR                                |
| <b>MALFUNCTION OR DEFECT REPORT</b>                             |                        | ATA Code           |                       |   |                 |  |
|   |                        | 1. A/C Reg. No. N- |                       |   |                 |  |
|   |                        |                    |                       |   |                 |  |
| Enter pertinent data  | MANUFACTURER           | MODEL/SERIES       | SERIAL NUMBER         |   |                 |  |
| 2.  | AIRCRAFT               |                    |                       | Optional Information:<br>Check a box below, if this report is related to an aircraft<br><input type="checkbox"/> Accident; Date _____ <input type="checkbox"/> Incident; Date _____ | OTHER           | SUBMITTED BY: _____<br>TELEPHONE NUMBER: ( ) _____ |
| 3.  | POWERPLANT             |                    |                       |   | COMPUTER        |  |
| 4.  | PROPELLER              |                    |                       |   | FAA             |  |
| 5. SPECIFIC PART (of component) CAUSING TROUBLE                 |                        |                    |                       |   | MFG.            |  |
| Part Name   | MFG. Model or Part No. | Serial No.         | Part/Defect Location. | AIR TAXI  | MECH.           |  |
|   |                        |                    |                       |   |                 |  |
| 6. APPLIANCE/COMPONENT (Assembly that includes part)            |                        |                    |                       |   | OPER.           |  |
| Comp/Appl Name  | Manufacturer           | Model or Part No.  | Serial Number         |   |                 |  |
|   |                        |                    |                       |   |                 |  |
| Part TT   | Part TSO               | Part Condition     | 7. Date Sub.          |   | REP. STA.       |  |
|   |                        |                    |                       |   |                 |  |

FAA Form 8010-4 (10-92) SUPERSEDES PREVIOUS EDITIONS

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**Federal Aviation  
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**AFS-640**

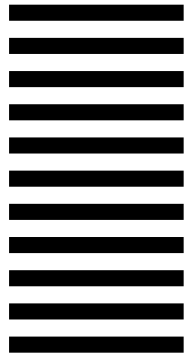
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