



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

# Aviation Maintenance Alerts

**AC No. 43-16A**

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**ALERT NO. 258  
JANUARY 2000**

**Improve Reliability-  
Interchange Service  
Experience**

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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.

**PROPOSED CHANGE  
BULLETIN**

**ADVISORY CIRCULAR 43.13-2A**

The Federal Aviation Administration (FAA) Continuous Airworthiness Maintenance Division (AFS-300) developed the following proposed change bulletin for Advisory Circular (AC) 43.13-2A, Acceptable Methods, Techniques, and Practices Aircraft Alterations.

The following information has been proposed as an FAA Flight Standards Information Bulletin for Airworthiness (FSAW) and, if approved, will be added to FAA Order 8300.10, Airworthiness Inspector's Handbook, appendix 4. The FAA should complete action on this proposal soon.

The purpose of the change is to establish an FAA-wide policy that will direct FAA Aviation Safety Inspectors (ASI's) Airworthiness (A/W) to delete Paragraph 166, Simplified Installation Criteria, of AC 43.13-2A.

The manager of the FAA, Small Airplane Directorate, Aircraft Certification Service (ACE-100) wrote a letter to the manager of

the Continuous Airworthiness Maintenance Division (AFS-300), recommending amendment of AC 43.13-2A, paragraph 166, to increase the test load of 500 pounds on added shoulder harness restraint mounts to 814 pounds for normal-category aircraft and 910 pounds for utility or acrobatic-category aircraft. These higher load requirements are in accordance with AC 23-4, Static Strength Substantiation of Attachment Points for Occupant Restraint System Installations, and meet the 9.0-g requirements of Title 14 of the Code of Federal Regulations (14 CFR) part 23, section 23.561(b)(2)(ii). Since paragraph 166 recommends testing the mount while it is installed in the aircraft structure, raising the test pull to 814 pounds on the mount would deform the airframe structure; therefore, authorities decided to delete paragraph 166.

When the FSAW becomes effective, all FAA ASI's and other holders of FAA Order 8300.10 will be advised to immediately delete paragraph 166 by crossing out the information in the paragraph and subparagraphs using a pen or felt marker and referencing the FSAW's number in the margin alongside paragraph 166. We recommend that ASI's notify the aviation industry members that the information in paragraph 166 is no longer applicable and

inspectors will deny all requests for field approvals of shoulder harness installations using paragraph 166.

This bulletin was developed and proposed for approval by the Continuous Airworthiness Maintenance Division (AFS-300) and the General Aviation and Commercial Branch (AFS-305). If you have any questions regarding this bulletin, contact AFS-305 at (202) 267-3796.

## AIRPLANES

### AMERICAN CHAMPION

#### **American Champion (Aeronca); Model 7AC; Champ; Unauthorized Air Filter Modification; ATA 7160**

During an annual inspection, the technician discovered a previous modification on the air filter assembly.

The technician could not determine how long the unapproved modification of the air filter assembly (P/N 2-849) had been in service. He stated the inside of the filter assembly was removed and altered to accept a "Bracket" air filter element (P/N BA94106). During the previous modification, a technician cut the filter element "to size" to allow for the installation of the air filter. The aircraft maintenance records did not reveal the modification or the technician who made the modification. This installation created a hazard and compromised flight safety.

Aircraft total time-2,383 hours.

#### **American Champion (Bellanca); Model 8KCAB; Super Decathlon; Engine Mount Failure; ATA 7120**

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

The engine mount (P/N 7-1503) cross tube broke above the magneto installation. The submitter believed this failure occurred when the engine mount flexed excessively due to sagging and wornout Lord mounts. The submitter noted that pilots used this aircraft during aerobatic training.

Part total time-2,276 hours.

## BEECH

#### **Beech; Model H18; Wing Structural Defects; ATA 5711**

While complying with part of the inspection requirements of Airworthiness Directive (AD) 75-27-09, revision 2, the technician found numerous structural defects. (Another authority complied with the remaining inspection items required by the AD.)

The technician conducted the required radiographic and dye-penetrant inspections which included the left, right, and center wing lower surfaces, as well as the lower surface of the wing spar. He recorded 26 areas of severe corrosion, 3 primary structure crack indications, and 1 crack indication in a weld.

The requirements of the AD are critical to safe operation of the affected aircraft and deserve close and prompt attention.

Aircraft total time-8,759 hours.

#### **Beech; Model C-23; Sundowner; Wing Flap Cable Wear; ATA 2750**

During an annual inspection, the technician discovered a frayed wing flap control cable.

When the technician lowered the flaps and cleaned the cables, he discovered the cable (P/N 169-524047-17) damage around the torque tube. This area is difficult to inspect; therefore, technicians often overlook the defect. The submitter stated that this area had not received a proper inspection in a long time!

Part total time-7,420 hours.

**Beech; Model F33A; Bonanza; Elevator Trim System Failure; ATA 5523**

The pilot reported the elevator trim system became immovable during flight.

While investigating the cause of this defect, the technician discovered a broken elevator trim system tension bracket (P/N 35-524554). This defect allowed the trim system to bind and become immovable. The submitter did not offer a cause for this defect.

Part total time-1,019 hours.

**Beech; Model M35; Bonanza; Alternator Failure; ATA 2434**

The pilot reported the alternator failed during a cross-country flight.

A technician discovered a broken field wire just behind the alternator terminal. Further investigation revealed a broken alternator support brace (P/N 35-369018-17). The submitter speculated that the broken brace allowed excessive vibration to work-harden and break the alternator field wire.

Part total time-3,614 hours.

**Beech; Model 58; Baron; Fuel Leak; ATA 2810**

The owner delivered the aircraft to maintenance personnel with a report that the fuel tank leaked.

While inspecting the fuel system, the technician discovered that the left outboard fuel cell (P/N 002-920013-1) nipples were broken. The technician identified the fuel cell as a Goodyear, Model BTC-67. He remembered complying with Airworthiness Directive (AD) 78-05-06, which applied to Goodyear BTC-39 fuel cells, on other aircraft. He also remembered finding the same type defects on BTC-39 fuel cells.

The submitter suggested revising AD 78-05-06 to include other fuel cells that may experience failure. If you need further information on this subject, refer to AD 78-05-06 and Beech Service Instruction 0895.

The part time in service was not given; however, its age was approximately 33 years.

**Beech; Model 58; Baron; Landing Gear Failure; ATA 3230**

During a scheduled inspection, the technician conducted a landing gear operational test. During the test, the landing gear failed to extend.

The landing gear circuit breaker opened the electrical circuit when the technician selected the "down" position. When the technician retracted the gear, the gearbox jammed at the full "up" position. The technician suspects that the dynamic brake relay (P/N 98-810017-23) did not stop the gear motor soon enough during the retraction cycle. After replacing the gearbox and relay, the landing gear functioned properly.

Part total time not reported.

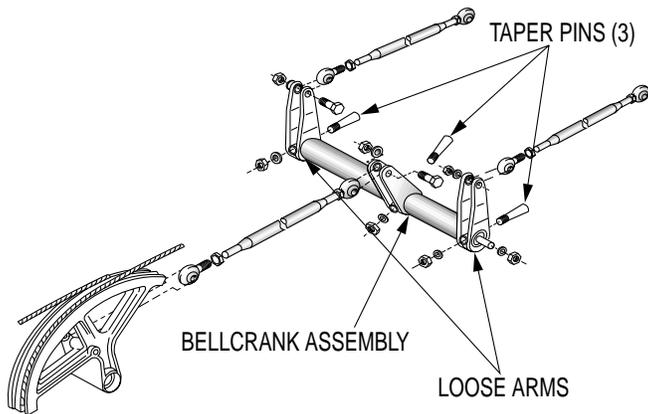
**Beech; Model C-99; Airliner; Elevator Bellcrank Defect; ATA 2730**

During a scheduled inspection, the technician detected excessive "free play" in the elevator control system.

The technician traced the "free play" to the elevator bellcrank assembly where the taper pins (P/N 115-524046-3), used to secure the control arms, were loose on the shaft. (Refer to the following illustration.) The technician could not tighten the taper pins without running out of the head-depth clearance required by the maintenance manual. According to the submitter, the aircraft manufacturer drilled oversized taper pin

holes during assembly. The submitter also expressed concern for the cost of this part and the short lifespan.

Part total time-300 hours.




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**Beech; Model B100; King Air; Pressurization System Failure; ATA 2120**

The flightcrew reported that the aircraft would not pressurize during flight.

During an investigation, the technician discovered a leak in the air-conditioning system's nose distribution duct. Further inspection revealed a crack in the welded aluminum section of the crossover duct (P/N 100-554044-1). The duct crack measured approximately 10.2 inches long and had separated. The crack appeared adjacent to the upper forward lateral weld seam. The location of the crossover duct makes inspection very difficult, if not impossible, without its removal. The submitter did not give a cause for this defect.

Part total time-6,965 hours.

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**Beech; Model B100; King Air; Generator Failure; ATA 2435**

The pilot reported that the left generator failed. After he reset the left generator, both the left and right generators went off-line.

A technician discovered that both generators worked independently; however, they would not work at the same time. The technician solved the problem by replacing the left generator.

Part time since overhaul-753 hours.

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

The flightcrew reported the landing gear seemed to travel to the "down-and-locked" position during the landing approach; however, they did not receive any indication confirming the landing gear was actually down and locked.

After a tower fly-by, the controller reported that all three gears appeared to be down. The flightcrew did not use the emergency landing gear extension system during the landing. The landing gear collapsed after contacting the runway.

At the time of this writing, the accident investigation is incomplete. At the present time, the investigators know that the landing gear motor circuit breaker opened and did not allow normal operation of the landing gear system.

Aircraft total time not reported.

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## BRITISH AEROSPACE AND ENGINEERING

### Pins BAE; Model 41; Jetstream; Defective Steering Selector Roll; ATA 3251

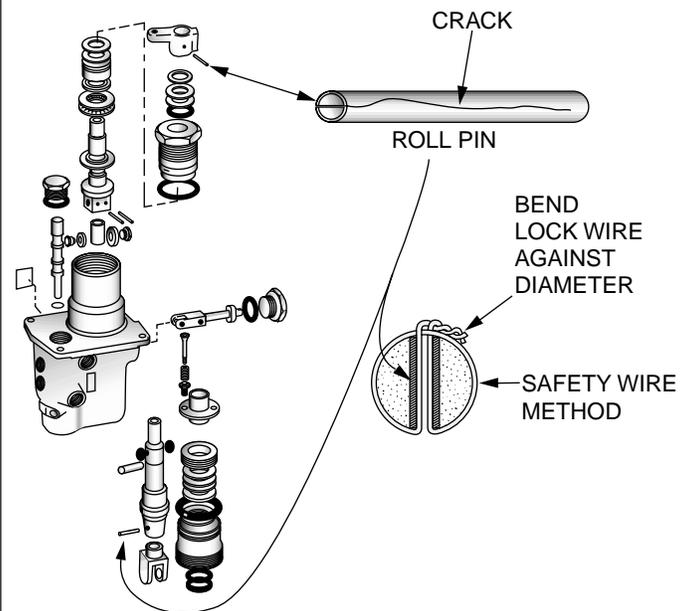
During a scheduled inspection, the maintenance technician discovered a defect in the nose steering selector output shaft roll pin.

The roll pin cracked laterally, and the technician could not remove it by hand pressure. (Refer to the following illustration.) The roll pin (P/N ADS312A83) is used to secure the steering selector (P/N AIR86012/4) output shaft to the nose gear. If the roll pin had migrated out of position, loss of directional control would have resulted.

APPH Precision Hydraulics manufactured the steering selector unit, and they issued Service Bulletin (SB) AIR86012-32-01 which is applicable to the Jetstream 41 aircraft. This SB gives an illustration for safety wiring the roll pins. Also, APPH Precision Hydraulics issued two additional SB's, AIR8668-32-01 and AIR86002-32, which apply to the Jetstream 31-series aircraft steering selector units. There may be many like aircraft now in operation that may not have the roll pin safety wire installed.

The submitter suggested that all operators inspect their aircraft and safety wire the steering selector roll pins in accordance with the applicable SB, if safety wire is not already installed. He discovered a similar crack in the steering selector input shaft roll pin (P/N ADS312/A62). The submitter stated that it is not uncommon to find this defect and suggested checking the roll pins during each scheduled inspection.

Part total time not applicable.



## CESSNA

### Cessna; Model 172; Skyhawk; Elevator Torque Tube Failure; ATA 2730

The pilot experienced a loss of pitch control effectiveness during flight and made an uneventful landing.

An inspection revealed the rivets used to attach the left elevator torque tube to the elevator bellcrank were sheared.

Part total time-5,500 hours.

### Cessna; Model R172E; Hawk; Cracked Fuel Line; ATA 2820

During an accident investigation, the inspector discovered a crack in the fuel line that runs from the firewall to the inlet side of the gascolator.

The crack was located at a bend which is directly behind the ferrule sleeve and "B-nut" at the gascolator end. The inspector stated the crack was old and was not caused by an

accident. He suspected that the fuel had been leaking at this point for an extended period of time.

Part total time not reported.

**Cessna; Model 172G; Skyhawk; Landing Gear Leg Failure; ATA 3213**

During a landing, the right main landing gear leg sheared off just above the axle.

During the investigation, the technician found that the gear leg step was welded to the strut. It was apparent that the weld penetration points set up stress and caused gear leg failure. (Refer to the following illustration.) The left gear leg step was also welded and failure was imminent. The manufacturer suggests bonding the gear leg steps instead of welding them.

Part total time-5,218 hours.



**Cessna; Model 172S; Skyhawk; Cracked Wing and Flap Skins; ATA 5710 and 5750**

During a phase-3 inspection, the technician found a crack in the left upper wing trailing edge skin.

The area around the third rivet from the inboard trailing edge had a 1-inch crack emanating from the rivet hole. The technician discovered cracks around two of the rivets on

the right flap trailing edge skin. These cracks emanated from the thirteenth and sixteenth rivets from the inboard end. One crack was .5 inch long and the other crack was .25 inch long. The submitter did not know what caused the cracks.

Aircraft total time-482 hours.

**Cessna; Model 177RG; Cardinal; Nose Landing Gear Door Grommet Failure; ATA 5280**

While investigating a “nose gear up” landing, the inspector determined that the grommet (P/N MS35489-34) that is normally installed in the nose gear door bracket (P/N 2052036-1) was missing.

Failure or loss of this grommet which is used as the attach pivot point for the nose gear door linkage clevis (P/N MS21253-3RS) causes excessive fore-and-aft movement about the clevis attachment. This condition allows airflow to move the nose gear door aft and causes contact with the nose gear strut during gear extension. This contact damages the nose gear door and prevents full extension of the nose gear. The submitter suggested that technicians change the grommet during every annual inspection.

Part total time not reported.

**Cessna; Model A185E; Skywagon; Mixture Control Rod-End Failure; ATA 7602**

The pilot reported that during flight, the engine gradually lost power. Due to the loss of power, the pilot made an off-airport landing which resulted in an accident.

An investigation revealed that the threaded end of the mixture cable (P/N C299507-0201) terminal had separated from the rod-end in the engine compartment. The tips of the eleven threads on the terminal end of the cable were worn and could be inserted into the rod-end with little resistance. The technician found the terminal end jamnut on the good threads adjacent to the worn threads.

Aircraft total time-5,890 hours.

**Cessna; Model 210E; Horizontal Stabilizer Trim Actuator Bracket Failure; ATA 2731**

The pilot reported that the aircraft could not be trimmed from the takeoff setting to the cruise setting.

An inspection by maintenance personnel revealed that the trim tab actuator bracket (P/N 1232139-1) broke and released the trim tab actuator. The submitter speculated that metal fatigue caused this failure.

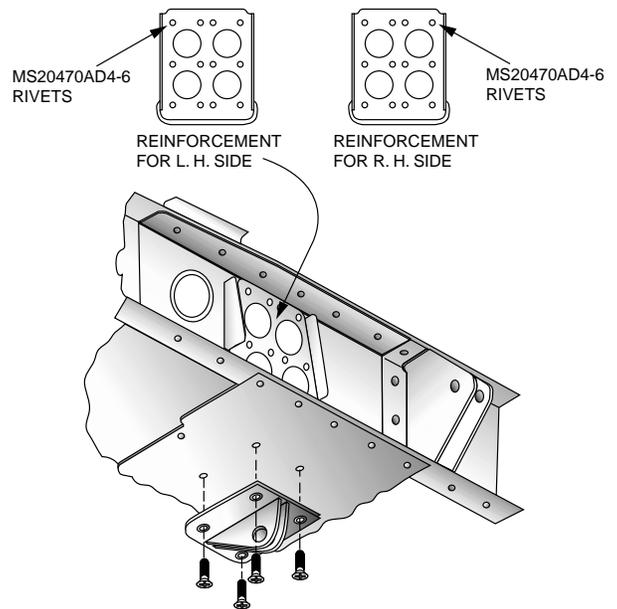
Part total time-4,502 hours.

**Cessna; Model T210L; Centurion; Cracked Horizontal Stabilizer Fitting; ATA 5510**

During a scheduled inspection, the technician discovered a cracked horizontal stabilizer reinforcement (P/N 1232624-1).

The technician removed the horizontal stabilizer and discovered that both of the forward mount fittings (P/N 0732601) were loose. One of the two top rivets was sheared, and the other rivet was loose on both sides. (Refer to the following illustration.) The sheared rivet still had the machine head and the upset head in place. The submitter stated this problem could be precluded by complying with Cessna, Service Information Letter (SE) 84-17, Revision 1.

Part total time-3,781 hours.



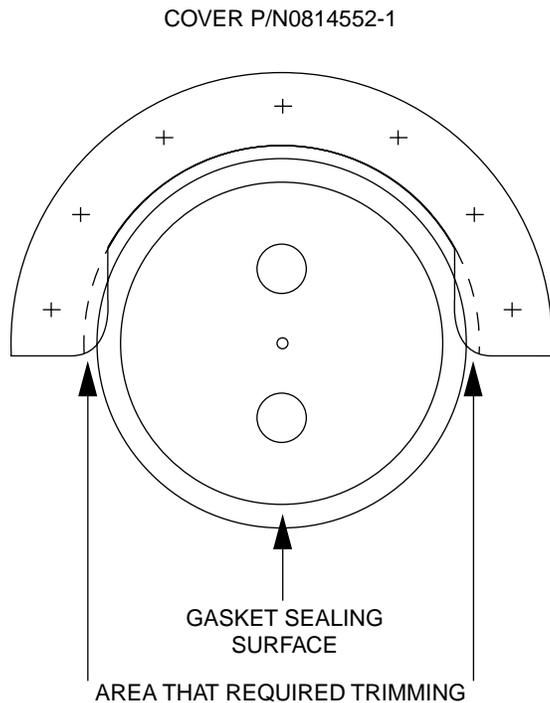
**Cessna; Model 310R; Defective Instrument Air Filter Shroud; ATA 2120**

During scheduled instrument air filter replacement, the technician discovered a defect with the filter shroud.

The technician determined that the plastic cover (P/N 0814552-1) for the filter interfered with the filter gasket and prevented it from sealing completely. The technician trimmed the inner edges of the flange to allow the

gasket to seal properly. (Refer to the following illustration.) The submitter reported finding this condition on another like aircraft.

Aircraft total time-7,220 hours.



**Cessna; Model 414 and 421 Series; Window Cracks; ATA 5600**

The following article was furnished by the FAA's Aircraft Certification Office (ACE-118W) located in Wichita, Kansas.

The 414 and 421-series aircraft have a pressurized cabin system, and there have been several reports concerning badly cracked windows. The cracks manifest at the mounting holes and are difficult to detect with the window installed. The Cessna Maintenance Manual provides an inspection procedure using a prism. Cessna issued a Multi-Engine Service Bulletin (MEB) 87-4, dated May 29, 1987. MEB 87-4 allows for the addition

of an inner retainer ring around the edge of the upper window of the escape hatch and the cabin door window.

The FAA recommends compliance with MEB 87-4 and suggests the use of the prism tool inspection procedure to monitor cracks at the edge of the cabin window.

Part total time not applicable.

**Cessna; Model 421C; Golden Eagle III; Pilot's Windscreen Failure; ATA 5610**

The pilot reported that while flying at 17,000 feet, his windscreen failed and the cabin suddenly decompressed.

The cause of the windscreen failure is unknown at this time. The submitter suggested that the windscreen was weakened when a technician "reworked" it to remove scratches. He recommended following the manufacturer's technical data for scratch removal limits.

Aircraft total time-4,449 hours.

**Cessna; Model 425; Conquest; Engine Oil Cooler Hose Failure; ATA 7920**

The flightcrew reported that the right engine lost oil pressure and quantity during flight. The pilot shut down the engine and made a safe single engine landing.

Maintenance personnel discovered that the side wall of the right engine oil cooler hose (P/N AE705976) ruptured. The failure occurred at the point where the hose makes a sharp bend. It appeared that there were no signs of previous leakage prior to the hose failure. The submitter recommended the installation of a longer hose (P/N AE7013002K0204) and indicated that such an installation requires an FAA field approval.

Part total time-117 hours.

## LEAR

### **Lear; Model 35; Defective Pressurization System Component; ATA 2130**

Due to a recent aircraft accident involving a like aircraft, maintenance technicians inspected the pressurization system.

The submitter suspected the safety valves installed in early serial-numbered aircraft, prior to serial number 171, may have unprotected pressurization system safety valves located in the aft baggage compartment. The location of the safety valves, and the fact that they are unprotected, can lead to abuse and damage when cargo is loaded or shifts during flight.

In this case, technicians discovered the safety valve (Lear P/N 6600207-3), installed in 1995, was cracked at the filter mounting nipple. The crack traveled around approximately 75 percent of the nipple circumference and had separated slightly. (Refer to the following illustration.)

We urge all operators to inspect the pressurization safety valves located in the aft baggage compartment as soon as possible. Briefing flightcrews and passengers regarding the importance of securing baggage and cargo may prevent damage to the safety valve.

Part total time not reported.



## MAULE

### **Maule; Model MXT-7-180A; Flight Control Cable Damage; ATA 2710**

During a conformity inspection, the FAA inspector discovered two frayed aileron control cables.

The left and right lower aileron cables were severely frayed at the point where they exited the lower wing skin. The damaged area of the cables was approximately 6 inches from the thimble-eye splice. It appeared the right cable damage was caused when the cable wore through the fairlead and then wore into the wing skin. The inspector could not determine the exact cause for the damage to the left cable; however, he found that the inspection cover, adjacent to the fairlead, could be moved to a position which caused the cable to "ride hard" against one edge of the fairlead. Considering the small number of operating hours, this area deserves special attention during scheduled inspections and maintenance.

Part total time-88 hours.

## PIPER

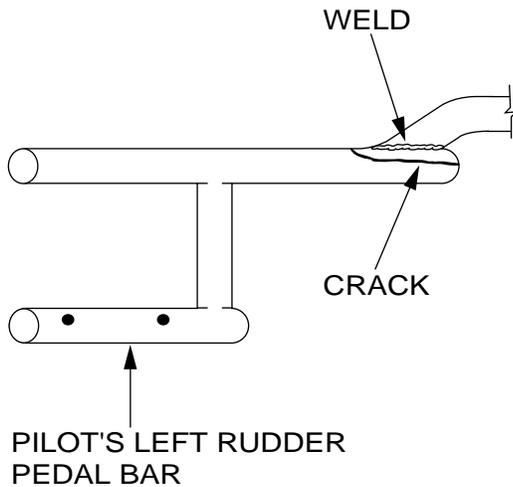
### **Piper; Model PA 28-140; Cherokee; Loss of Rudder Control; ATA 2730**

While attempting a crosswind landing, the student pilot discovered there was no response to left rudder pedal inputs. After a successful landing, the pilot noticed that taxiing to the left was almost impossible.

An inspection by a maintenance technician revealed a broken left rudder pedal bar (P/N 63420-05). (Refer to the following illustration.) The rudder bar broke adjacent to a welded joint on the pilot's side of the aircraft. It appeared that a crack developed at

the weld site and progressed to the point of failure. This area warrants close attention during scheduled inspections.

Part total time-4,221 hours.



**Piper; Model PA 28-140; Cherokee; Aileron Balance Weight Loose; ATA 5751**

While conducting a scheduled inspection, the technician discovered that the left aileron balance weight was loose.

The technician discovered severe corrosion between the outboard aileron rib and the balance weight attachment bracket. Nine rivets (P/N MS20470-AD-3) secure the bracket assembly. Corrosion weakened the rivets to the point they sheared. It appeared the corrosion resulted from contact between "dissimilar" metals. The submitter recommended thoroughly inspecting the security of the balance weight. He also suggested cleaning and treating the assembly for corrosion during scheduled inspections.

Part total time not reported.

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

The owner delivered the aircraft to a maintenance shop reporting that the engine ran rough.

Upon investigation, a maintenance technician discovered that the fastener lock tabs were still in place, but the carburetor bowl was loose. He replaced the entire carburetor (Precision Airmotive, Model MA-4SPA) assembly and ran a successful operational test. The submitter stated this was the third similar occurrence of this defect in the past 8 months. He suggested checking the carburetor bowl for looseness and the fasteners for proper torque during scheduled inspections.

Part total time-362 hours.

**Piper; Model PA 28-180; Cherokee; Main Landing Gear Defect; ATA 3211**

During an annual inspection, the technician discovered a defective right main landing gear retraction fitting.

The technician discovered a broken lug on the retraction fitting (P/N 67031-03). One must remove the drag brace before this defect is visible. The submitter suspected that the attachment bolt may have been improperly tightened. He recommended thoroughly cleaning and checking this area during scheduled inspections. He also suggested checking the actuator bolt torque during scheduled inspections.

Part total time-970 hours.

**Piper; Model PA 28R-200; Arrow; Main Landing Gear Damage; ATA 3211**

During a 100-hour inspection, the technician discovered a loose right main landing gear.

A further investigation revealed the forward attachment fitting moved in all directions. The technician removed the landing gear and found the entire nut plate was broken. The landing gear trunnion movement elongated

the holes in the spar web and the trunnion. The technician torque checked both of the main gear trunnion bolts and discovered one loose aft bolt on each gear. The submitter recommended that all trunnion bolts be torque checked during each 100-hour/annual inspection.

Part total time-5,862 hours.

**Piper; Model PA 32R-300; Cherokee Six; Landing Gear Failure; ATA 2913**

The pilot reported the landing gear failed during a landing approach. The pilot lowered and locked down the gear using the manual system (free fall) and made a safe landing.

While investigating this problem, the technician discovered the landing gear hydraulic powerpack (P/N HYC5005) motor would not operate. Further checking disclosed the motor did not have an electrical ground to complete the circuit. The submitter did not mention the cause for the loss of electrical ground.

Part time since overhaul-202 hours.

**Piper; Model PA 32-301T; Turbo Saratoga; Aileron Control Failure; ATA 2710**

During a preflight inspection, the pilot heard a "snapping" sound while checking the flight control movement. A further inspection revealed the left aileron did not respond to control movements.

A maintenance technician discovered that the left aileron push-pull rod (P/N 35476-03) broke flush with the rod-end jamnut. He inspected the broken rod-end and could not determine if intergranular corrosion or a manufacturing defect caused this problem.

In the interest of safety, the aircraft owner asked the technician to replace the left and right ailerons, as well as the stabilator push-pull rods, with new parts.

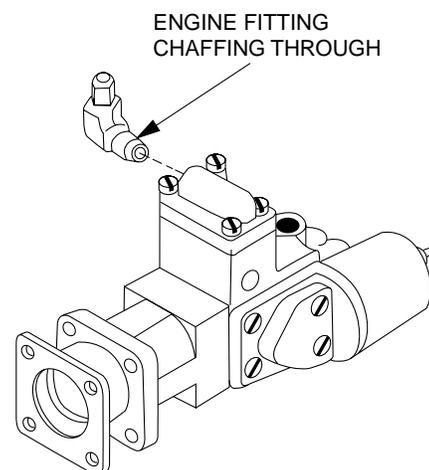
Part total time not reported.

**Piper; Model PA 34-200T; Seneca II; Engine Compartment Fuel Leak; ATA 7320**

Mr. Karman Johnson, an FAA Aviation Safety Inspector (Airworthiness), discovered the following defect during an inspection. This aircraft was used in accordance with Title 14 of the Code of Federal Regulations (14 CFR) part 135 for passenger-carrying operations.

While conducting an inspection, the Principal Maintenance Inspector (PMI) discovered a fuel leak in the left engine cowling. Further investigation revealed the fuel leak came from a fuel injection pump brass return fitting. (Refer to the following illustration.) There are four different fittings used at this location. Some fittings are made of brass and some of steel. The engine nose cowling chafed hard against the injection pump return elbow fitting, and the chafing action penetrated the fitting wall thickness. This finding prompted an inspection of the right engine injection pump fittings and the PMI discovered chafing against the nose cowling. The PMI found that the chafing on the right engine was not as severe and had not penetrated the fitting wall thickness; however, a dangerous situation remained.

The submitter urges all operators of like aircraft to inspect for this condition at the earliest opportunity!



**Piper; Model PA 38-112; Tomahawk; Fuel Pressure Transducer Failure; ATA 2840**

The aircraft owner reported erratic fuel pressure indications.

The technician discovered the fuel pressure transducer (P/N 486-439) did not operate properly. The technician stated he found two other occurrences of this problem in the past 5 months. He speculated the original location of the fuel pressure transducer, as well as the oil pressure transducer, exposes them to excessive heat and vibration which contributes to premature failure. The technician discovered that moving the transducers to the firewall and connecting them to their original mounting via reference hoses solves the premature failure problem. He uses this method on Beech, Model 76 aircraft, and they rarely experience premature transducer failure. It would, of course, require an FAA field approval to relocate these components in the manner previously described.

Part total time-65 hours.

**Piper; Model PA 42-720; Cheyenne III; Landing Gear Extension Failure; ATA 3231**

The pilot noticed the main landing gear did not extend when he selected the "down" position. When the pilot used the emergency landing gear extension system, the right main landing gear came down but the left main landing gear did not. Eventually, the left main landing gear came down, and the pilot made a safe landing.

The technician placed the aircraft on jacks and conducted an operational test of the landing gear system. During the test, the gear extended using the normal system, and the technician could not duplicate the problem. He speculated that the inboard gear door solenoid valve (P/N 756-555) stuck momentarily in the "door-closed" position. After further investigation, the technician found and repaired a broken wire going to the left main

gear "blow-down" bottle. The broken wire caused the left gear to extend slowly when the pilot activated the emergency system.

Part total time-6,372 hours.

## HELICOPTERS

### BELL

**Bell; Model 206B; Jet Ranger; Loss of Main Rotor Blade Weight; ATA 6210**

During a flight, the pilot experienced a severe main rotor blade vibration. The pilot made an immediate and successful emergency landing.

Maintenance personnel investigated, finding a dislodged factory-installed main rotor blade (P/N 206-010-200-133) weight. The weight struck the blade tip cap as it departed and bent the tip cap trailing edge outboard approximately 30 degrees. Approximately 1 inch of the blade weight penetrated the outboard end of the blade spar. The upper and lower main rotor blade skins ballooned outward from the impact. The submitter sent these parts to the manufacturer for evaluation.

Part total time-2,769 hours.

**Bell; Model 212; Ferrous Metal Generation; ATA 6320**

During a scheduled inspection, a technician discovered excessive ferrous metal deposits in the main rotor transmission.

After the technician removed and disassembled the transmission (P/N 212-040-001-141) for inspection, he found the lower spider gear (P/N 204-040-783-003) broken near one of the "spider" legs. This unit operated 2,313 hours since the last overhaul. During the last overhaul, the technician complied with the manufacturer's Alert

Service Bulletin (ASB) 212-99-61A and ASB 212-99-66, revision A, and did not find any defects.

Part total time-5,822 hours.

**Bell; Model 214ST; Float System Hose Failure; ATA 3246**

The FAA's Rotorcraft Certification Office (ASW-170) located in Fort Worth, Texas, submitted the following article. This information applies to Bell, Model 214ST, serial numbers 28101 through 28200.

Bell recently issued Alert Service Bulletin (ASB) 214ST-93-62, revision A, dated 10/08/99. Bell initiated this action after receiving two reports of float system pneumatic hose failures during routine manual inflation inspections. Investigations of failed hoses indicate the liner material is susceptible to deterioration due to age and the operating environment. Also, the rate of deterioration is directly proportional to age and the severity of the operating environment, particularly excessive exposure to heat. The affected hoses (P/N's 214-706-120-101, -103, 107, or -109) are part of the "Emergency Float Auxiliary Equipment Kit."

Part I of ASB 214ST-93-62 assigns a 6-year calendar life, calculated from the date of installation, for the hose part numbers previously listed. Older hoses did not have life limits. Part II of ASB 214ST-93-62 establishes a replacement time of 15 days after receipt of the ASB, for existing hoses installed in the reservoir assemblies. Part III advises replacing the remaining float system hose assemblies within 90 days after receiving the ASB. Part IV advises that hose assemblies manufactured by a specific vendor are no longer approved and should be removed from service.

Copies of ASB 214ST-93-62, revision A, may be obtained from: Bell Helicopter Textron, Inc.; P.O. Box 482; Fort Worth, TX 76101.

**EUROCOPTER**

**Eurocopter; Model BO 105CBS-5; Engine Governor Drive Failure; ATA 7323**

After a preflight inspection, the pilot started the left engine and allowed it to warm up. When the pilot moved the throttle lever to the "flight-idle" position, the engine went to 90 percent torque with a rotor RPM of 110 percent. Since the turbine speeds (N1 and N2) were very erratic, the pilot shut down the engine.

When the technician isolated the line (PR) from the governor (Allied Signal P/N 23057869) to the fuel control, the fuel control responded normally to throttle movements. After the technician removed the governor, he noticed the governor drive-shaft coupling was slipping or over-running. The technician suspected the slipping caused this defect.

Part total time since overhaul-946 hours.

**Eurocopter; Model 355-F1; Twin Star; Chip Light Illumination; ATA 6320**

The pilot reported that during landing procedures, the main rotor chip light illuminated. The pilot completed the landing without mishap.

A technician removed the chip detector plug and found several metal chips. When the technician examined the oil filter, he found copious amounts of aluminum. For inspection purposes, the technician removed the tapered reduction gearbox (P/N 355A32-0600-03) and the combining gearbox. Both components displayed severe wear and needed repair. The required overhaul time for these units is 3,000 hours, and only 2,359 hours had accumulated since the last overhaul.

Part total time since overhaul-2,359 hours.

**HILLER**

**Hiller; Model UH-12E; Control Rotor Cuff Assembly Failure; ATA 2700**

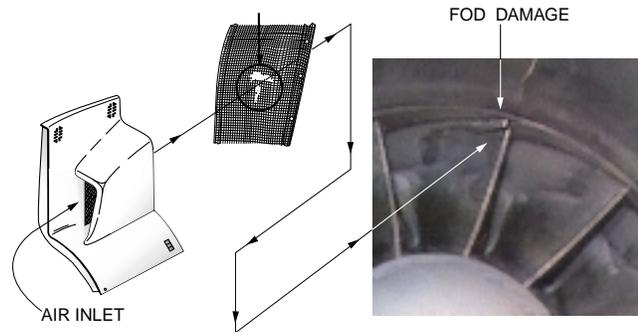
While investigating an accident, the investigators found the rotor control cuff failed.

The cuff (P/N 36124) split at the inboard bolt hole and the outboard section; along with the control rotor tube assembly which separated from the helicopter. This resulted in loss of helicopter control. The evidence indicated that this defect began as a crack at the inboard cuff bolt hole and progressed to the point of ultimate failure. After the investigators recovered both halves of the control rotor cuff, they sent them to the National Transportation Safety Board (NTSB) laboratory for analysis.

Part total time-2,845 hours.

screen's operating environment and conditions, the submitter stated the screens presently used are not structurally reliable.

Part total time-142 hours.



**SIKORSKY**

**Sikorsky; Model 76C; Foreign Object Damage (FOD); ATA 7230**

While conducting a postflight inspection, the technician discovered foreign object damage (FOD) in the number one engine's inlet compressor section.

An investigation revealed that the compressor section damage was the result of broken and missing wire segments from the engine airframe cowling plenum screen. (Refer to the following illustration.) The submitter recommended inspecting the engine cowling screens (P/N 1 76302-07028-061 and P/N 2 76302-07028-062) daily for broken or missing wire segments. Considering the

**AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT**

**FLY BABY**

**Fly Baby; Landing Gear Damage; ATA 3211**

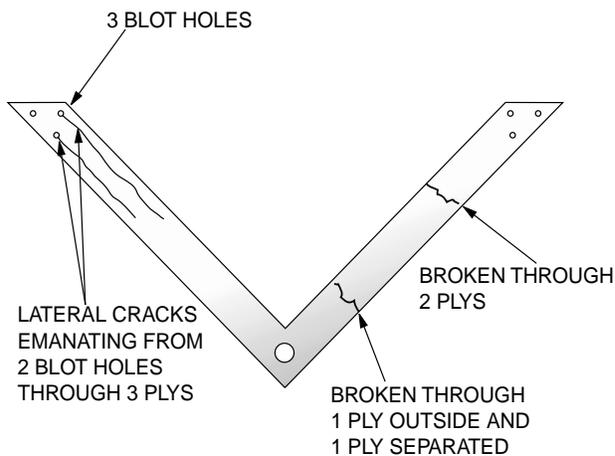
A landing incident prompted an inspection of the landing gear components.

The inspector discovered that the "V-shaped" strut displayed damage at several locations. (Refer to the following illustration.) The strut is constructed of a four-part laminate which is designed to fail and prevent fuselage damage caused by hard landings or other abuse.

The submitter suggested that operators of like aircraft keep this information in mind during landings and ground handling. The submitter

also suggested that operators thoroughly inspect the landing gear "V-shaped" strut during preflight inspections.

Part total time not reported.



## POWERPLANTS AND PROPELLERS

### TEXTRON LYCOMING

#### **Textron Lycoming; Model W-670-6A; Metal in the Oil Screens; ATA 8530**

This engine powered a Boeing, Model E-75 aircraft.

After a refueling stop on a long cross-country flight, the pilot noticed a rapid rise in oil pressure and the oil pressure fluctuated between "0" and "20" PSI approximately 15 minutes after takeoff. When the pilot made an emergency off-airport landing, the aircraft nosed-over.

During an investigation, a technician discovered large pieces of metal in the scavenge oil screens. The amount of metal almost completely blocked the oil screens. When the technician removed and

disassembled the number 2 cylinder, he could not find the ball bearing cages. The ball bearing cages disintegrated and caused extensive peening damage throughout the crankcase. The technician stated the metal recovered from the oil screens came from the ball bearing cages. The submitter could not determine a cause for this defect.

Part total time-637 hours.

### TURBOMECA

#### **Turbomeca; Model Arriel 1D1; Turbine Blade Failure; ATA 7250**

This powerplant is used in a Eurocopter, Model AS-350-B2 helicopter.

During final approach to landing, the pilot experienced yawing of the helicopter. The pilot made a normal landing and shutdown the helicopter.

A technician conducted a postflight inspection which revealed damage to the power turbine blades. After disassembly, the technician discovered that several of the second stage (T2) gas generator turbine blades were broken at the blade root. The compressor, gas generator, and power-turbine components displayed significant rubbing damage. At the time of this report, the submitter had not determined a cause for this defect.

Part total time-1,661 hours.

## AIR NOTES

### Y2K NAVIGATION EQUIPMENT ALERT

The following article was submitted for publication by the FAA Rotorcraft Certification Office (ASW-110), located in Fort Worth, Texas.

The FAA has received information from Eurocopter that the Direction Generale De L'Aviation Civile (DGAC), the French airworthiness authority, has issued two Airworthiness Directives (AD's) for certain navigation equipment that may not function properly January 1, 2000, and beyond.

French AD 1999-409 (AB), dated October 20, 1999, advises that certain Allied Signal navigation equipment, that is not coupled with an inertial sensor, may provide incorrect readings, particularly at extreme northern and southern latitudes. The equipment may be installed on Falcon, Dornier 228, Eurocopter, and possibly other aircraft. The French AD 1999-409 requires that the flight manual be revised to prohibit the use of the equipment beyond certain northern and southern latitudes. This French AD may be found on the internet at:

<<http://194.2.31.123/eurocopter/y2k/dgac/gsac-1999-409-ab.html>>

Also, French AD 1999-472 (AB), dated December 1, 1999, advises that Omega and Omega/VLF receivers may not function properly and requires deactivation and/or removal of the equipment. An extensive, although partial, list of equipment that

may be affected is provided in the text of AD 1999-472 which may be found on the internet at:

<<http://194.2.31.123/eurocopter/y2k/dgac/gsac-1999-472-ab.html>>

### CORRECTION

An error appeared in the December 1999 edition of this publication. An article entitled "Aviation Service Difficulty Reports," gave incorrect dates of "July 21, 1999, and August 20, 1999." These dates should have been "October 21, 1999, and November 20, 1999." The data contained in the article is valid and from the correct dates. We hope this error did not cause any consternation among our readers.

### 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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## SUBSCRIPTION FORM

Many of our readers voiced their concern when, due to a budget reduction, it was necessary to stop printing and distributing paper copies free of charge.

The Government Printing Office (GPO) agreed to print and distribute the Alerts. However, there will be a 1-year subscription charge for this service. The charge will be \$25 per year for domestic mailings and \$31.25 per year for foreign mailings. For your convenience, a subscription form is included in this publication.

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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.

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You can access current and back issues of this publication from the internet at:

<http://www.mmac.jccbi.gov/alerts>

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

The "Fedworld" web site is:

<http://www.fedworld.gov/pub/faa-asi/faa-asi.htm>

The "Fedworld" web site has approximately 5 years of back issues listed. The files are titled using eight characters. The first three characters are ALT. The second three characters indicate the month (Jan, Feb, etc.). The last two characters indicate the year (98, 99, etc.). The more recent files are in Adobe Acrobat (PDF) format and can be viewed and downloaded. To download individual monthly files, place the mouse pointer at the desired file, and click the right mouse button. This will produce a drop-down

menu. Select "save target as" from the drop-down menu, and click the left mouse button. Select a location for the downloaded files to reside. You can print the downloaded file(s). **NOTE:** The Service Difficulty Report (SDR) files are at the end of the ALT files.

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## **AIRWORTHINESS DIRECTIVES (AD's) ISSUED IN NOVEMBER 1999**

**99-22-12;** Eurocopter France; Rotorcraft: AS332C, L, and L1

**99-22-13;** Bell; Rotorcraft: 407

**99-23-01;** Robinsons; Rotorcraft: R44

**99-23-02;** Eurocopter France; Rotorcraft: SA-365N, SA-365N1, and AS-365N2

**99-23-03;** Bell; Rotorcraft: 430

**99-23-04;** Bell; Rotorcraft: 222, 222B, and 222U

**99-23-07;** Eurocopter France; Rotorcraft: SA330F or G, SA330J, and AS332C, L, and L1

**99-23-17;** Eurocopter France; Rotorcraft: AS 332C, L, and L1

**99-23-18;** Bell; Rotorcraft: 407

**99-23-19;** Learjet; 31, 31A, 35, 35A, and 60

**99-23-23;** Bell; Rotorcraft: 412, 412EP, and 412CF

**99-23-24;** AlliedSignal; Appliance: RIA-32A instrument landing system (ILS) navigation receivers

**99-24-05;** Eurocopter Deutschland; Rotorcraft: BO-105CB-5 and BO-105CBS-5

**99-19-08;** Lockheed; L-14 and L-18 Series

**99-22-01;** Eurocopter Deutschland; Rotorcraft: EC135 P1 and T1

**99-24-09;** Pilatus; PC-12 and PC-12/45

**99-24-10;** Precise Flight; Appliance: SVS III standby vacuum systems

**99-24-18;** Eurocopter France; Rotorcraft: AS-350B, B1, B2, B3, BA D, AS-355E, F, F1, F2, and N

**99-25-08;** MD Helicopters; Rotorcraft: 500N

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## AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between November 16, 1999, and December 17, 1999, 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.

### SERVICE DIFFICULTY REPORT DATA

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

ACFT MAKE ACFT MODEL REMARKS	ENGMKAKE ENGMODEL	COMP MAKE COMP MODEL	PART NAME PARTNUMBER	PART CONDITION PART LOCATION	DIFF-DATE FAA REPORT NO.	T TIME TSO
	NUT ASSY	FAILED 11581002917	11/24/1999 MLG ACTUATOR			
THREADS PULLED OUT FROM INSIDE OF NUT ASSY DURING TESTING OF MLG ACTUATOR.						
	SEAL 50105201	FAILED 7010FS9545708	12/01/1999 BRAKE	1469 1999121800186		
BRAKE ASSEMBLY, P/N 50-10520-1, FAILED PREMATURELY. THREE EACH PISTONS LEAKING FROM INSULATOR AREA. PISTONS INTERNALLY FILLED WITH FLUID. EVIDENCE OF T-SEAL FAILURE. THIS IS A CONTINUAL DISCREPANCY. FACTORY NEW BRAKE ASSEMBLY.						
	ACTUATOR	FAILED 9638002117	12/01/1999 COWL FLAP	1999121800695		78
BEGINNING 9-20-99 AT 646.5 HOBBS, COWL FLAP ACTUATOR WAS REPLACED. A PART WAS ORDERED THROUGH BEECHCRAFT. THE NEXT FAILURE OCCURRED AT 9-30-99 AT 672.4 HOBBS, AND, THEREAFTER, 10-19-99 AT 704.7 HOBBS, 11-4-99 AT 763.0 HOBBS, AND 11-30-99 AT 840.8 HOBBS. AT EACH FAILURE, THE COMPONENT WAS REPLACED WITH A NEW OR OVERHAULED PART WITH A BEECHCRAFT PART NUMBER. ALL FAILURES OCCURRED UNDER NORMAL OPERATING CIRCUMSTANCES AND SEEM TO HAVE A LIFE LIMITED TIME OF AN AVERAGE 48.5 HOURS.						
	LYC TIO540J2BD		BUSHING	MISINSTALLED CONNECTING ROD	12/13/1999 1999121800072	1044
ALL CONNECTING ROD BUSHINGS FOUND CRACKED. FOUND BUSHINGS INSTALLED AT 90 DEGREE ANGLE VICE 45 DEGREE ANGLE PER SERVICE INSTRUCTION. THIS WAS AN ICELANDIC AIRCRAFT. HOWEVER, THE ENGINES WERE OVERHAULED BY LYCOMING.						
AEROSP ATR72	AUXILEC	ARMATURE 8260121	FAILED P6048233	12/02/1999 STARTER/GEN	1999121800190	1756
STARTER/GENERATOR P/N 8260-121 FAILED. ARMATURE DRIVE END COPPER BAND FAILED CAUSING CATASTROPHIC DAMAGE TO STATOR AND SPEED SENSOR. UNIT IS MADE BY A FOREIGN MANUFACTURER.						
AMD FALCON10	ABEX	HYDRAULIC	FAILED AP09V0303	11/29/1999 LT ENGINE	1999121800696	88
THE SERIAL NUMBERED PUMP WAS INSTALLED ON THIS AIRCRAFT AS A REPLACEMENT OF AN OVERHAULED PUMP BY THIS VENDOR (THE ZEE CO) WHICH FAILED AFTER 157 HOURS OF OPERATION. THIS PUMP, SN AH-49579A, WAS IN OPERATION ONLY 87.9 HOURS BEFORE IT HAD A FAILURE WHICH CAUSED ITS REPLACEMENT. HYDRAULIC FLUID WAS NOTICED ON THE BOTTOM OF THE COWLING AND AFTER INVESTIGATING, FOUND ONE OF THE HEX CAP SCREW HEADS HAD SHEARED OFF. THE CAP HEAD DANGLED FROM THE PUMP BY THE SAFETY WIRE.						

AMD FALCON10		BRACKET	DAMAGED	12/09/1999	
SLAT (OUTBOARD) NR 3 RAIL MOUNT BRACKET ATTACHED TO SLAT RUBBING LEADING EDGE CAUSING DAMAGE TO THE BRACKET. THIS HAS ALSO BEEN NOTICED ON FALCON10, SN 131.					
AMD FALCON900		LINE	CHAFED	12/09/1999	
PRESSURIZATION LINE IN HARD CONTACT WITH GALLEY UPPER ATTACH BRACKET AT FRAME 6. ORIGINAL INTERIOR INSTALLATION FAILED TO RELOCATE LINE TO PREVENT INTERFERENCE.					
AMTR FALCONARF10		LINE	CHAFED	12/13/1999	
RUDDER SERVO HYDRAULIC LINES CHAFING EACH OTHER CAUSING LEAK. THIS HAS BEEN NOTICED ON F10, S/N 162, ALSO. S/N 131 HAD HOLE WORN INTO HARD LINE P/N F10A755401 FROM BRAIDED LINE, P/N 000AE90-4-0232. BRAIDED LINE NEEDS TO BE REPOSITIONED AND POSSIBLY SOME TYPE OF CHAFF PROTECTION ADDED.					
CESSNA 152		BRACKET	WORN	11/29/1999	6600
BOLT HOLES ELONGATED OVER TIME ALLOWING RUDDER FOOT TO CONTACT TAIL AND RUB. REPLACED UPPER AND LOWER BRACKETS. NR 5 UPPER AND LOWER RUDDER BRACKET (HINGE), P/N 0451028-1 AND -2 LOWER; -5 AND -6					
CESSNA 172N	LYC O320H2AD		LINE	CRACKED	11/22/1999 3222
INVESTIGATED OIL LEAK. FOUND CRANKCASE TO BE CRACKED AT LEFT FRONT OF CASE. CRACK STARTS AT LOWER THROUGH STUD HOLE, RUNS BACK HORIZONTALLY .50 INCH THEN VERTICAL 2.50 INCHES. AIRCRAFT WAS INVOLVED IN A PROPELLER STRIKE 1,330 HOURS AGO. SUSPECT THIS MAY HAVE LED TO THE CRACK.					
CESSNA 172R		SWITCH	MALFUNCTIONED	11/22/1999	691
FUNCTION TESTED ELT SYSTEM DURING 100-HOUR INSPECTION. ELT COULD NOT BE ACTIVATED BY REMOTE SWITCH OR COPILOT'S INSTRUMENT PANEL. INSTALLED SERVICEABLE ELT AND OPERATED NORMALLY, HOWEVER, RED LAMP ON REMOTE SWITCH DID NOT ILLUMINATE. INSTALLED NEW SWITCH AND ALL FUNCTIONS CHECKED NORMAL. MASTER SWITCH ON ORIGINAL ELT AND THE G-SWITCH BOTH SEEMED TO OPERATE CORRECTLY WITH UNIT REMOVED FROM AIRCRAFT. ELT MODEL, 3000-11. SWITCH, P/N 2019-10.					
CESSNA 172R	LYC IO360L2A		ENGINE	MALFUNCTIONED	11/29/1999 1184
THE PILOT REPORTED A MOMENTARY POWER LOSS. THERE WERE TWO SUCCESSIVE PERIODS OF POWER LOSS EACH TIME THE ENGINE RESTARTED. A COMPLETE INSPECTION OF THE ENGINE AND ENGINE SYSTEMS FOUND NO					
CESSNA 172RG	LYC O360F1A6		CONNECTING	FAILED	12/09/1999 6287
AIRCRAFT ENGINE SEIZED IN-FLIGHT AND CRACKED LEFT ENGINE CASE HALF. WEATHER CONDITIONS DID NOT EFFECT OUTCOME. ENGINE HAS BEEN 50-HOUR, 100-HOUR, AND ANNUALIZED ITS ENTIRE LIFE. OIL ANALYSIS WAS TAKEN LAST. NO ABNORMAL SIGNS OF WEAR. POSSIBLE CAUSE SHOWED SEIZURE OF NR 4 CONNECT ROD ON					
CESSNA 172S		SKIN	CRACKED	11/23/1999	
DURING FIRST PHASE 3 INSPECTION, FOUND LT UPPER WING TRAILING EDGE SKIN ASSY CRACKED. THE 3RD RIVET FROM INBOARD TRAILING EDGE HAD A 1 INCH CRACK EMANATING FROM THE RIVET HEAD. REPLACED TRAILING EDGE SKIN AND RE-PAINTED.					
CESSNA 172S		SKIN	CRACKED	11/23/1999	
DURING FIRST PHASE 3 INSPECTION, FOUND RT UPPER WING TRAILING EDGE SKIN ASSY CRACKED. THE THIRD RIVET FROM INBOARD TRAILING EDGE HAD A ONE INCH CRACK EMANATING FROM THE RIVET HEAD. REPLACED TRAILING EDGE SKIN AND RE-PAINTED.					
CESSNA 172S		RIVET	CRACKED	11/23/1999	
DURING FIRST PHASE 3 INSPECTION WITH TOTAL AIRFRAME TIME OF 482.8 HOURS, FOUND RT FLAP TRAILING EDGE RIVETS HAD CRACKS AROUND 2 RIVETS. THE CRACKS WERE AROUND THE 13TH AND 16TH RIVETS FROM THE INBOARD END. ONE CRACK .50 INCH IN LENGTH, THE OTHER .25 INCH IN LENGTH. REPLACED FLAP UNDER WARRANTY.					
CESSNA 172S	SIGMATEK	INDICATOR	FAILED	11/23/1999	483
ATTITUDE INDICATOR TUMBLED FOR ABOUT 45 MINUTES ON A CROSS-COUNTRY FLIGHT BEFORE RE-ERECTING. VACUUM SYSTEM TESTS SATISFACTORY, NO OTHER DEFECTS NOTED. REPLACED GYRO, FURTHER OPERATION					
CESSNA 172S		THERMOCOUPLE	INOPERATIVE	11/23/1999	
EGT THERMOCOUPLE INOPERATIVE. WIRES ARE SEPARATED FROM PROBE. TOTAL AIRFRAME TIME 482.8 HOURS AND SUBMITTER STATED THIS IS THE SECOND EGT THERMOCOUPLE REPLACED ON THIS AIRCRAFT. REPLACED EGT THERMOCOUPLE, OPERATIONAL CHECKED SATISFACTORY.					
CESSNA 175B	CONT GO300D		VALVE SEAT	SEPARATED	11/28/1999 112
DURING FLIGHT, PILOT/OWNER HAD A LOSS OF POWER AND ENGINE RAN ROUGH. PILOT RETURNED TO AIRPORT WITH ENGINE PRODUCING REDUCED POWER. UPON INSPECTION MAINTENANCE FOUND THE INTAKE VALVE SEAT HAD COME LOOSE FROM CYLINDER. THE ENGINE HAD RECENTLY HAD A TOP OVERHAUL 112 HOURS EARLIER WITH NEW					
CESSNA 180	CONT O470L		CAMSHAFT	FAILED	11/22/1999 2039
ENGINE					

FERROUS MATERIAL FOUND IN OIL FILTER. ENGINE DISASSEMBLED, PROBLEM FOUND TO BE FAILED CAMSHAFT AND LIFTER BODIES.

CESSNA	CONT		CAMSHAFT	MAKING METAL	11/22/1999	2142
182Q	O470S		SA535661	ENGINE	1999121800210	118

FERROUS MATERIAL FOUND IN OIL FILTER. ENGINE DISASSEMBLED, PROBLEM FOUND TO BE FAILED CAM AND LIFTER

CESSNA		EXHAUST PIPE	CRACKED	12/06/1999		
401A			085071123	LTENGINE	1999121800683	

LEFT EXHAUST TAIL PIPE WAS FOUND CRACKED AND A PIECE OF THE PIPE APPROXIMATELY 2 INCHES BY 2.50 INCHES WAS MISSING. IT APPEARED THE CRACKING WAS MOST LIKELY CAUSED BY VIBRATION. EXHAUST GAS LEAKING FROM THIS TAIL PIPE CAN CAUSE DAMAGE TO THE WING SPAR.

CESSNA	CONT		CAMSHAFT	MAKING METAL	11/22/1999	1948
U206F	IO520F		535661	ENGINE	1999121800209	213

FERROUS MATERIAL FOUND IN OIL FILTER. ENGINE DISASSEMBLED, PROBLEM FOUND TO BE FAILED CAMSHAFT AND LIFTER BODIES.

DHAV	BFGOODRICH	CARRIER	FAILED	12/03/1999		
DHC8*		21565	2445902	BRAKE ASSY	1999121800188	

BRAKE ASSEMBLY PN 2-1565 FAILED PREMATURELY. NR 2 CARRIER AND LINING ASSY BROKEN IN HALF. THIS IS A CONTINUAL DISCREPANCY.

DOUG	BFGOODRICH	GIRT ASSY	UNAPPROVED	11/29/1999		
DC1030F		SWD230300201	SWD230305100	CABIN	1999121800202	

GIRT ASSY WAS MADE FROM AN UNKNOWN FABRIC AND IDENTIFIED WITH THE MANUFACTURER'S (BFG) P/N SWD230305-100, AND WITHOUT THE MANUFACTURER'S INSPECTION STAMP AND INSPECTION DATE. THIS PART IS NOT PER THE MANUFACTURER'S DRAWING AND IS CONSIDERED A SUSPECTED UNAPPROVED PART.

DOUG		GIRT ASSY	UNAPPROVED	11/29/1999		
DC1030F		SWD230100101	SWD230105103	CABIN	1999121800203	

GIRT BAR FLAP ASSY WAS MADE FROM AN UNKNOWN FABRIC AND IDENTIFIED WITH THE MANUFACTURER'S (BFG) P/N SWD230105-103, AND WITHOUT THE MANUFACTURER'S INSPECTION STAMP AND INSPECTION DATE. THIS PART IS NOT PER THE MANUFACTURER'S DRAWING AND IS CONSIDERED A SUSPECTED UNAPPROVED PART.

DOUG		GIRT ASSY	UNAPPROVED	11/29/1999		
DC1030F		SWD230300201	SWD230305102	CABIN	1999121800204	

GIRT ASSY (LOWER) WAS MADE FROM AN UNKNOWN FABRIC AND IDENTIFIED WITH THE MANUFACTURER'S (BFG) P/N SWD230305-102 AND WITHOUT THE MANUFACTURER'S INSPECTION STAMP AND INSPECTION DATE. THIS PART IS NOT PER THE MANUFACTURER'S DRAWING AND IS CONSIDERED A SUSPECTED UNAPPROVED PART.

EMB	BFGOODRICH	STATOR	FAILED	11/30/1999		1729
EMB120		21585	1331096	BRAKE ASSY	1999121800187	

BRAKE ASSEMBLY, P/N 2-1585, FAILED PREMATURELY. NR 1 STATOR BROKEN AND BINDING IN TORQUE TUBE KEY SLOTS. THIS IS A CONTINUAL DISCREPANCY. BRAKE ASSY SHOULD LAST 2,500 CYCLES.

EMB	BFGOODRICH	STATOR	FAILED	11/30/1999		604
EMB120		21585	1331096	BRAKE ASSY	1999121800189	

BRAKE ASSEMBLY, P/N 2-1585, FAILED PREMATURELY. NR 1 STATOR BROKEN IN TWO PIECES. STATOR TANGS BROKEN AND BINDING IN TORQUE TUBE KEY SLOTS DAMAGING BEYOND SERVICEABLE LIMITS. THIS IS A CONTINUAL DISCREPANCY. BRAKE ASSY SHOULD LAST 2,500 CYCLES.

GULSTM		PLANK	CORRODED	11/24/1999	9364	
G1159B				WING	1999121800703	

DURING NDT OF WING CLOTHESPIN FITTINGS, FOUND CORROSION ON TOP OF UPPER AFT WING PLANK. CORROSION MAY BE DUE TO HARSH AREA THAT IT IS SUBJECTED TO.

GULSTM		FOOD WARMER	SHORT	11/22/1999		5319
GIV			CRONSTONT C71	GALLEY	1999121101048	

ON CLIMB-OUT, SMOKE NOTICED COMING FROM THE FOOD WARMER. THE PROBLEM WAS DETERMINED TO BE FLUID LEAKING FROM ONE OF THE HOT PLATES ON TO THE OVEN RAILS CAUSING THE BOTTOM RAIL TO SHORT TO GROUND. SUBMITTER STATED IF THE BOTTOM OF THE OVEN WAS MADE OF A NON-CONDUCTIVE MATERIAL, THERE WOULD BE

HELIO	LYC		VALVE SEAT	SEPARATED	11/22/1999	2
H295	GO480G1D6		71895P10	ENGINE	1999121800074	

THE EXHAUST VALVE SEAT WAS FOUND TO HAVE COME OUT FOLLOWING THE ENGINE TEST STAND RUN AND PRIOR TO THE INITIAL INSTALLATION RUN ON THE AIRCRAFT. A 'RATTLE' WAS NOTED AS THE ENGINE WAS TURNED THROUGH BY HAND. THE CYLINDER OVERHAUL SHOP HAS BEEN ALERTED AND OTHER CYLINDERS OF THE SAME BATCH CHECKED. THE CYLINDER WAS MACHINED TO ACCEPT A P-20 SEAT, BUT A P-10 WAS INSTALLED.

MOONEY	CONT		PISTON	FAILED	11/22/1999	1800
M20K	TSIO360LB	652955A1	646743	ENGINE	1999121101026	

AIRCRAFT LOST POWER IN CLIMB AND MADE AN OFF-FIELD LANDING. FOUND CYLINDER NR 1 BROKEN APPROXIMATELY 2 INCHES UP FROM BASE AND SEPARATED FROM CYLINDER BASE. NR 1 PISTON FOUND BROKEN THROUGH PISTON PIN BORE. UPPER HALF OF PISTON REMAINED IN CYLINDER WHILE LOWER HALF OF PISTON WAS GROUND UP IN ENGINE. PISTON PIN REMAINED INTACT IN ROD. SUBMITTER SUSPECTED PISTON FAILED AND SUBSEQUENTLY CAUSED CYLINDER BARREL TO FAIL AS IT WAS KNOCKED AROUND BY THE ROD/PIN.

PIPER	LYC		GEAR	CRACKED	12/09/1999	1627
PA18150	O320A2B		SL18109AS	OIL PUMP	1999121101036	

OIL PUMP CRACKED. KIT INSTALLED (LOG BOOK ENTRY) 12-19-86.

PIPER	SWITCH	INOPERATIVE	11/22/1999		3591
PA31350		1CH214	RTMLG	1999121800065	

PILOT REPORTED RT MAIN LANDING GEAR DID NOT INDICATE DOWN AND LOCKED AND THE LANDING GEAR SELECTOR DID NOT RETURN TO NEUTRAL WITH NORMAL OR EMERGENCY HAND PUMP OPERATION. AFTER AN UNEVENTFUL LANDING WAS MADE, ACFT DELIVERED TO MAINT. MAINT DETERMINED THE RT MLG DOWN AND LOCKED SWITCH WAS DEFECTIVE PREVENTING A GREEN GEAR INDICATION AND PREVENTING THE INNER LANDING GEAR DOORS FROM CLOSING. A NEW SWITCH WAS INSTALLED IAW THE PIPER MM. THE GEAR WAS OPERATIONALLY CHECKED AND THE ACFT RETURNED TO SERVICE. THE SWITCH APPEARED TO BE THE ORIGINAL ONE INSTALLED AT BUILD. SUSPECT SWITCH FAILED DUE TO NORMAL WEAR AND TEAR.

PIPER	TORQUE LINK	FAILED	12/13/1999		31
PA34200T		95829JJ	NLG	1999121800052	

ON ROLL-OUT AT 8 TO 10 KNOTS, NOSE GEAR UNLOCKED.

RAYTHN	CONT	CYLINDER	WORN	12/02/1999	304
F33A	IO520BB	635448	NR'S 2 & 4	1999121800211	

AT 303.67 HOURS, THESE CYLINDERS HAD WORN OUT BORES AND EXHAUST VALVE GUIDES WORN BEYOND SERVICEABLE LIMITS. THE ENGINE WAS FACTORY REBUILT/ZERO TIMED 1995.

RAYTHN	TUBE	CHAFED	11/29/1999		
V35A			COCKPIT GYRO	1999121800697	

LOST FLIGHT INSTRUMENTS SHORTLY AFTER TAKEOFF. FOUND THE GYRO INSTRUMENTS WOULD TUMBLE WHEN THE GEAR WAS RETRACTED AND INSTRUMENT AIR PRESSURE DROP TO NEAR ZERO. AIR PRESSURE AND INSTRUMENT OPERATION RETURNED TO NORMAL WHEN GEAR WAS EXTENDED. INSPECTION FOUND THE PLASTIC TUBING PROTRUDED INTO THE WHEEL WELL FAR ENOUGH FOR THE NOSE WHEEL TO CONTACT AND OBSTRUCT IT WHEN THE GEAR WAS RETRACTED. EVIDENCE OF THE SAME CONDITION WAS NOTED ON ANOTHER AIRCRAFT MODEL V35B, S/N

DEPARTMENT OF TRANSPORTATION 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						
2. AIRCRAFT		MANUFACTURER	MODEL/SERIES	SERIAL NUMBER	OTHER	COMPUTER
3. POWERPLANT					FAA	
4. PROPELLER					MFG.	
5. SPECIFIC PART (of component) CAUSING TROUBLE					AIR TAXI	
Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.		MECH.	SUBMITTED BY:
					AIR TAXI	
6. APPLIANCE/COMPONENT (Assembly that includes part)					MFG.	
Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number		MECH.	
					OPER.	TELEPHONE NUMBER: ( ) -
Part TT	Part TSO	Part Condition	7. Date Sub.		REP. STA.	
					<b>Optional Information:</b>	
					Check a box below, if this report is related to an aircraft	
					<input type="checkbox"/> Accident; Date _____ <input type="checkbox"/> Incident; Date _____	

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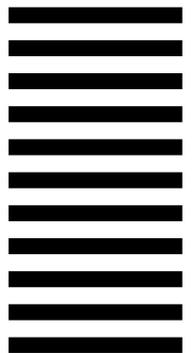
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