



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

General Aviation Airworthiness Alerts

AC No. 43-16



**ALERT NO. 218
SEPTEMBER 1996**

**Improve Reliability-
Interchange Service
Experience**

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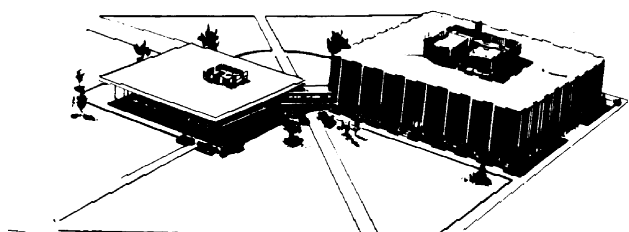
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**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

GENERAL AVIATION AIRWORTHINESS ALERTS



FLIGHT STANDARDS SERVICE
Mike Monroney Aeronautical Center

The General Aviation Airworthiness 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 of you 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: Maintenance Support Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRCRAFT

AERONCA

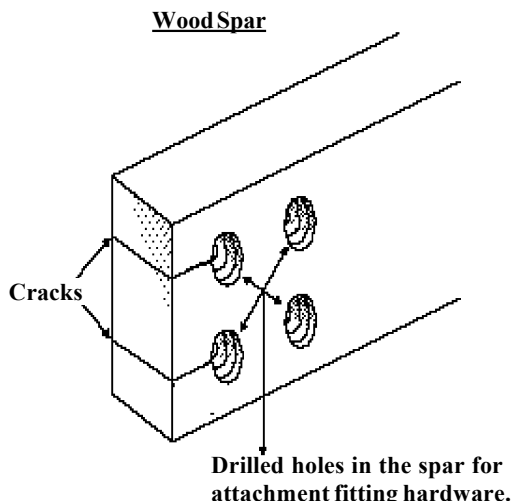
Aeronca Model 7AC Champ	Wing Spar Cracks 5740
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While dismantling the left and right wings for recovering, both wing spars were found cracked.

The cracks emanated from the two inboard attachment holes and ran through the end of the spars. (Refer to the following illustration.) This damage necessitated replacing the wing spars. It was recommended that, at every opportunity, close attention be given to all of

the spar attachment points, especially on older or high time aircraft.

Part total time-3,721 hours.



AEROSPATIALE

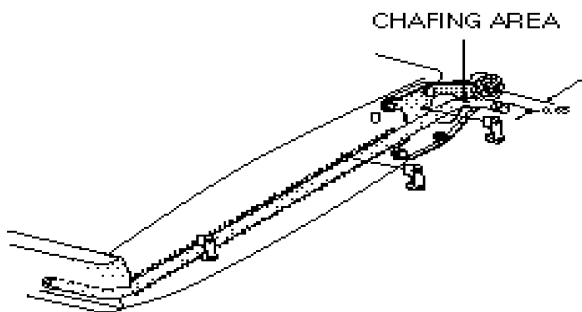
**Aerospatale
Model TBM 700**

**Deice Tube Chafed
Through
3010**

During an annual inspection, the air tube for the right elevator horn deice boot was found chafed through.

The deice tube (P/N T700A3031002101) was chafed at the point where it makes a 90 degree bend and enters the elevator tip. (Refer to the following illustration.) The tube had a small hole at the point of contact. This type defect degrades the operation of the deice system and leads to the possibility of the elevator jamming in icing conditions. Airworthiness Directive 95-11-16 and Service Bulletin 70-020-30 deal with this subject and should be consulted for requirements and applicability.

Part total time-759 hours.



AMERICAN CHAMPION

**American Champion
Model 8GCBC
Scout**

**Defective Engine
Air Inlet
7160**

During an annual inspection, it was found that "Bondo" had been used as an overlay patch on the fiberglass carburetor air inlet. The "Bondo" material had begun to crack.

While probing this area, a .5-inch by 1.5-inch piece of the "Bondo" material was easily removed. An air pocket was discovered inside

the "Bondo" material which prevented adherence to the fiberglass. Pieces of the "Bondo" material could have dislodged and been ingested into the engine or the "Bondo" material could have restricted the engine inlet air. This aircraft was only 1 year old. It would be wise to scrutinize this area closely during inspections and maintenance.

Part total time-134 hours.

BEECH

**Beech
Model G35
Bonanza**

**Chafed Fuel Line
2820**

During a landing gear retraction test in conjunction with an annual inspection, a fuel line (P/N 35-921221-69) from the auxiliary fuel tank was found chafed in the top of the right main gear well.

The line passes across the top of the landing gear and was "contacted" by a grease fitting on the forward roller when the gear was cycled. The fuel line had been chafed through approximately half of the wall thickness. This is a possible accident source, which can be eliminated by ensuring proper clearance is maintained.

Part total time-5,325 hours.

**Beech
Model A36
Bonanza**

**Electrical System
Failure
2460**

The aircraft was presented to maintenance for correction of extensive electrical system damage.

After an extensive investigation, it was found that the wire bundle from the landing gear indicator light and the gear selector handle assembly had chafed against the "lighting bus bar." When the wire insulation was penetrated, unregulated electrical current flowed through the aircraft causing extensive damage to electrical components. This type defect is certainly preventable and requires only close attention when installing

components. Although, in many cases, aircraft components and wiring seem to be an afterthought when aircraft are designed. We must be diligent in our effort to eliminate unsafe operating conditions.

Part total time not reported.

Beech Model 58P Baron	Nose Landing Gear Failure 3230
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During a landing gear retraction test in conjunction with an annual inspection, the nose gear doors remained open approximately 1.5 inches when the landing gear was retracted.

The nose gear tire was contacting the right nose gear door. By applying slight hand pressure, the nose gear retracted, and the doors closed. After a thorough investigation, the nose gear retraction arm assembly (P/N 104-820050-3) was found cracked. A new part was installed, and the gear functioned properly. The submitter stated, due to a heavy coat of white paint on the cracked part, this defect could have gone unnoticed for a long time. To allow easier detection of defects, it was suggested that the manufacturer use only a primer coat of paint on new parts. This report and suggestion have been sent to the responsible FAA aircraft certification office for action.

Part total time-3,832 hours.

Beech Model 58P Baron	Fuel Servo Malfunction 7322
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The pilot reported the right magneto on the left engine would “go dead” during cruise flight above 14,000 feet. At the same time, fuel was observed venting from the inboard upper cowling vent.

While investigating the cause of this defect, the fuel system was pressure tested, and no leaks were found. When the duct from the inner cooler to the fuel servo was removed, a strong fuel odor was detected. After further inspection, the magneto pressurization filter

had the same fuel odor. The magneto was disassembled, and fuel was found inside. The fuel servo was found to have a torn diaphragm. The submitter speculated that, when the aircraft was operated at altitude, fuel was allowed into the air side of the chamber and vented out through the magneto filter drain. This also allowed fuel to enter the magneto case.

Part total time-2,480 hours.

Beech Model 58TC Baron	Main Landing Gear Collapse 3230
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The pilot reported the right main landing gear collapsed during landing.

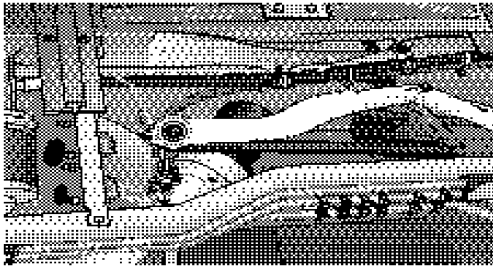
After recovering the aircraft from the runway, it was placed on jacks. The following parts were found damaged and replaced: retraction rod (P/N 35-815125-47), inboard gear door (P/N 35-8150055-169), brake assembly (P/N 03014500), flap shaft (P/N 3XK720A63-5/16), and the flap actuator wires.

An operational test of the landing gear system was then conducted. The gear was manually operated through approximately eight cycles, and all of the rigging was checked and adjusted. The gear was then electrically operated through approximately 20 cycles. At that time, the gear failed to extend. The retraction rod was found bent and had been pushed into the rear spar web, which caused damage to the web. (Refer to the following illustration.)

Further investigation revealed the right landing gear leg (P/N 60-810103-1) was not the correct part for this application. The correct part for this aircraft is (P/N 60-810028-17). The gear leg had hung on a nut, used to secure the uplock stop, which was attached to the downlock support assembly. It was concluded that the downlock support assembly (P/N 60-810083-2) attachment point was worn. In conjunction with the incorrect part being installed, the support assembly was allowed to move laterally, during gear transit, and contact the gear leg (P/N 60-810103-1).

The submitter recommended the downlock support assembly be inspected for lateral movement, with the landing gear leg at a 45 degree angle. In addition, the manufacturer's technical data should be consulted for the correct "usable on code" for individual aircraft.

Part total time-2,649 hours.



**Beech
Model 65
Queen Air** **Defective Main
Landing Gear
3210**

During a routine inspection, the left main landing gear upper torque knee was found cracked.

The torque knee (P/N 50-810032-4) was cracked in two places. If this defect was not detected, it could have led to loss of the lower strut, along with serious aircraft damage, and/or personal injuries. The submitter did not offer a cause or cure for this defect. It was recommended that a closer inspection of this area be accomplished during preflight inspections and at every other opportunity.

Part total time not reported.

**Beech
Model B200
King Air** **Defective Cabin
Entry Steps
5210**

The pilot reported that during a preflight inspection, excessive "play" was found in the cabin-entry doorsteps.

An investigation disclosed the lower cable assembly (P/N 101-430120-1) was badly frayed.

The submitter stated this is a common problem with these doorsteps, depending on the use and weight of the user. It was recommended, the manufacturer design a better entry (using a heavier cable). This report and recommendation has been sent to the responsible FAA aircraft certification office for action.

Part total time-4,060 hours.

**Beech
Model BE200
Super King Air** **Oil System
Contamination
7920**

The pilot reported that during flight, the left engine torque meter began to fluctuate, and the oil pressure fell to 60 PSI. The engine was shut down, and an uneventful landing was made.

An investigation determined the oil system was contaminated with a rubber substance. The source of this contamination was found to be the inner liner of an oil hose (P/N 624023-12D0280). The rubber substance had plugged the bypass valve and the screen, thereby, contaminating the torque meter and the oil pressure indicating source. Contamination and/or damage was also found on the sun gear, reduction gears, oil pump, propeller governor, scavenge pump, and oil cooler. The submitter did not give the age of the oil hose or any cause for its disintegration.

Part total time not reported.

**Beech
Model B300C
Super King Air** **Wing Flap Actuator
Damage
2752**

During a scheduled inspection, the wing flaps were found to move erratically.

An inspection of the system disclosed the left outboard actuator had a crack, approximately 5.5 inches long, which ran the entire length of the actuator. The submitter recommended closer inspection of these actuators while they are in the extended position. This report did not offer a cause for this defect.

Part total time-416 hours.

**Beech
Model 2000
Star Ship** **Main Landing Gear
Corrosion
3210**

During a scheduled inspection, severe corrosion was found on the right outboard main landing gear axle (P/N 122-810079-1).

The corrosion formed a band, approximately .300 inch wide, which ran all the way around the axle. The corrosion depth measured .030 inch, and the defect was located at the point where the brake caliper rides. The inboard axle also displayed evidence of corrosion, which was just beginning. This damage required replacement of the axle assembly. It would be wise to inspect this area at every opportunity.

Part total time-1,027 hours.

CESSNA

**Cessna
Model 172M
Skyhawk** **Wing Strut
Corrosion
5740**

During an annual inspection, the right wing strut was found corroded.

The corrosion was located on the lower aft bulkhead stiffener and covered approximately the lower 60 percent of the wing strut. This aircraft had not been flown very often and was "hangared" on a farm airstrip. The maintenance records indicated rodent problems had been experienced. This fact was evidenced by droppings and a persistent odor. The submitter speculated that a combination of humidity and rodent deposits caused this defect. It would be wise to exercise rodent control measures to eliminate infestation and damage to aircraft.

Part total time-1,285 hours.

**Cessna
Model 172P
Skyhawk** **Defective
Carburetor Air Box
7160**

During an annual inspection, the carburetor air box was found to have loose rivets.

When the air box was removed for repair, it was discovered the carburetor heat "flapper valve" was held in place with only one rivet. The submitter speculated this may have been caused by improper rigging of the carburetor heat control cable. If the air box had not been removed for repair, this defect may have gone undetected until there was a complete failure. If the carburetor heat "flapper valve" had come loose, it could have resulted in engine failure. Close attention to this area, during scheduled inspections and maintenance, was recommended.

Part total time-4,228 hours.

**Cessna
Model R172K
Hawk XP** **Propeller Spinner
Cracks
6113**

The pilot complained that the engine ran "rough" during landing approaches.

An investigation revealed the propeller spinner bulkhead (P/N 0550339-1) was cracked (approximately 95 percent) at the point where it is attached to the crankshaft. Further inspection disclosed the spinner bulkhead stabilizer (P/N 0550340-1) was missing from the propeller hub. It is likely, the missing bulkhead stabilizer caused the bulkhead to fail. Close attention to detail during assembly and scheduled inspections should go a long way in preventing reoccurrence of this, and other defects.

Part total time not reported.

**Cessna
Model TR182
Turbo Skylane RG** **Engine Starter
Contactor Failure
7430**

While preparing to start the engine, after a scheduled oil change, the propeller rotated when the master switch was placed in the "on" position.

Rotation of the propeller could only be stopped by placing the master switch in the "off" position. During an investigation, the starter contactor activation wire was disconnected to determine if the switch was faulty. The propeller again rotated when the

master switch was activated. After further investigation, the starter contactor (P/N S1577-A1) was discovered stuck in the "closed" position, due to an internal failure.

Part total time-1,527 hours.

Cessna Model T210M Centurion	Landing Gear Failure 3230
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The pilot reported that during a landing approach, the green "down-and-locked" light failed to illuminate, and the "gear up" light continued to flicker. All efforts to get the landing gear to the "down-and-locked" position failed, and the gear collapsed during an emergency landing.

During an investigation, a hydraulic tube (P/N 1280509-81), located adjacent to the hydraulic powerpack, was found broken. Fluid leaking from the broken tube purged the hydraulic system of all fluid and caused the landing gear to fail. The submitter did not offer a reason for failure of the hydraulic line. It is likely, that vibration-induced metal fatigue may have been a factor.

Part total time not reported.

Cessna Model 441 Conquest	Pressurization System Malfunction 2133
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The pilot reported that during takeoff, the aircraft began to pressurize, and there was no control over the system. Pressurization continued to increase until maximum differential pressure was reached, and the safety valve actuated to relieve the excess pressure. A safe landing was made, and the aircraft was delivered to maintenance for repair.

While inspecting the system, the outflow valve (P/N 103576-20RX) was found with the screws (holding the differential section of the controller) pulled out of the valve. The screws were properly torqued and had not backed out or become loose. The threads pulled out of the plastic valve body, allowing the spring to unseat, and made control of the system

impossible. These screws should not be overtorqued or undertorqued during installation.

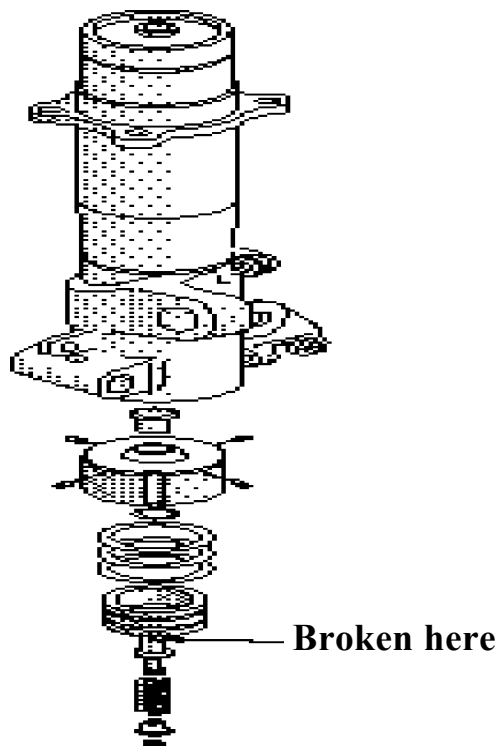
Part total time-250 hours.

Cessna Model 500 Citation	Broken Landing Gear Piston 3222
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When the left main landing gear was disassembled for an axle change, the isolation piston (P/N 6541000-200) was found broken.

This piston is surrounded by the dampening spring, and was broken at the top of the piston housing. (Refer to the following illustration.) It appeared the piston stem had been broken for some time. The submitter speculated this defect was caused by landing with the strut improperly serviced or by taxiing/towing with a flat strut.

Part total time-4,127 hours.



Cessna Model 500 Citation	Horizontal Stabilizer Attachment 5510
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While removing the horizontal stabilizer, to facilitate other maintenance, fasteners were discovered loose.

Six of the eight forward attachment bolts were loose, and two of the spacers used between the horizontal and vertical stabilizer attachments displayed signs of rubbing. The submitter recommended all operators of these aircraft conduct a one-time inspection of the forward and aft stabilizer attachment bolts for proper torque.

Part total time-4,127 hours.

Cessna Model 500 Citation	Fuel Valve Failure 2823
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During an engine starting sequence, prior to flight, the left engine would not start, and the left low fuel pressure annunciator light remained illuminated.

After an investigation, it was determined the left engine fuel firewall shutoff valve (P/N 9912014-2C) was in the "closed" position. The pilot had tested the fuel firewall shutoff valves during preflight inspection, and had returned their respective controls to the "open" position; however, the left engine shutoff valve failed in the "closed" position.

Part total time-535 hours.

Cessna Model 560 Citation	Cabin Door Failure 5210
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The flightcrew reported that after landing, the cabin entrance door would not open. It was necessary to exit the aircraft through the emergency escape hatch.

Initially, maintenance technicians discovered that three of the lower forward locking pins failed to retract. It was necessary to disassemble the door-locking mechanism to open the door. Further investigation disclosed

evidence that the pins had contacted the doorframe, which caused the door linkage tube (P/N 5511232-130) to slightly bend. Even the slight bend was enough to restrict full travel of the locking pins. It was the opinion of this submitter that the flightcrew had not checked the position of the locking pins prior to attempting to close the door. It was recommended a placard be applied to the entrance door advising the flightcrews to check the position of the locking pins prior to closing the door.

Part total time not reported.

PIPER

Piper Model PA 28-140 Cherokee	Gascolator Fuel Leakage 2821
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During a scheduled inspection, fuel stains were found on the gascolator bowl.

After replacing the gasket, between the bowl and the cover, a pressure test revealed the leak still existed. Further investigation, using a straight edge, disclosed the cover was bowed, preventing the gasket from sealing the two surfaces. The submitter speculated this was caused by "many years of overtightening the gascolator bale." The submitter has found two other like aircraft with this same condition. It was recommended, the gascolator mating surfaces be inspected (using a straight edge) each 500 hours of operation.

Part total time-4,600 hours.

Piper Model PA 28-140 Cherokee	Cracked Aileron Bellcrank Support 2710
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During a scheduled inspection, a crack was found in the right aileron bellcrank support (P/N 62102-001).

The crack emanated from the forward mount bolt hole. The submitter stated this defect was caused by the aileron control system not being properly rigged. The left and right aileron bellcranks were not making contact with the

aft stops by approximately .5 inch. Both of the stops had been adjusted out until they were almost out of the nuts. The misrigging was blamed for creating excessive stress on the bellcrank support, which resulted in the crack.

Part total time-2,840 hours.

**Piper
Model PA 28-140
Cherokee** **Elevator Trim
System Damage
2731**

During an annual inspection, the elevator trim tab arm assembly nut plates were found severely deteriorated.

All four nut plates, used to secure the stabilizer trim tab arm assembly (P/N 65248-000), were split and had been consumed by corrosion. The submitter speculated that moisture and other contaminants caused the corrosion, which had gone unattended for a long period of time. It was recommended these nut plates be closely inspected during scheduled inspections and maintenance.

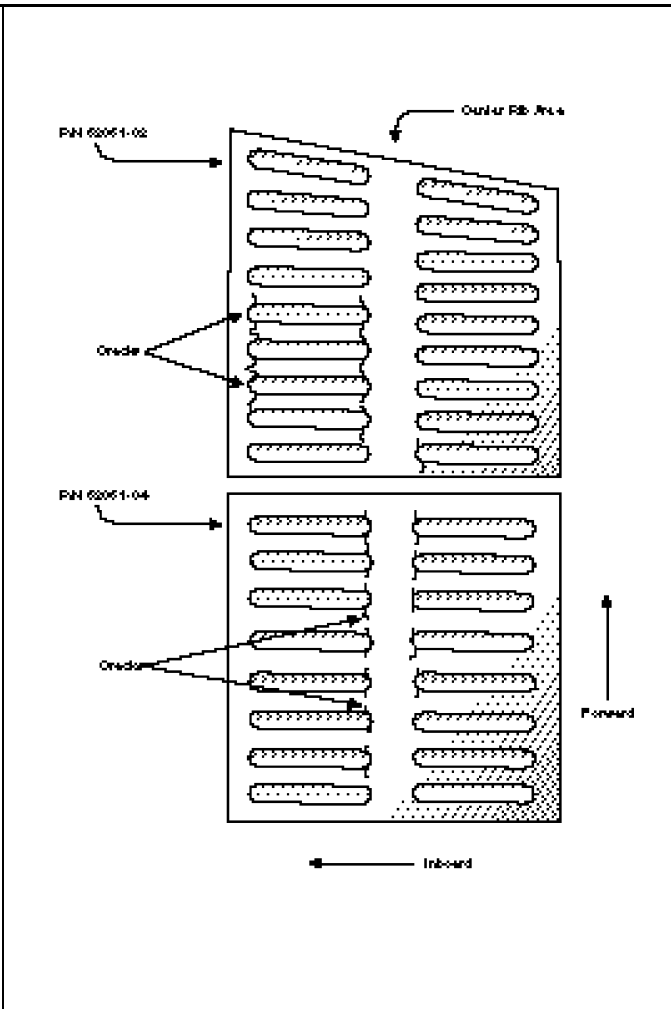
Part total time-4,113 hours.

**Piper
Model PA 28-151
Warrior** **Wing Stiffener
Cracks
5730**

During an annual inspection, cracks were found in the stiffener corrugation ends of the doubler skin (underneath the wing walk-way area). (Refer to the following illustration.)

The aircraft had inspection holes below and outboard of the cracked area; however, most of the damage was inboard of a wing rib, which made finding the cracks very difficult. One indication of the existence of these defects was a "soft or spongy" feeling when weight was placed on the wing walk-way area.

Part total time-9,135 hours.



**Piper
Model PA 31T
Cheyenne** **Rudder And Elevator
Trim Control Cable
Corrosion
2721 And 2731**

During a scheduled inspection, the rudder and elevator trim control cables were found severely corroded.

The area of corrosion was located under the cabin floor boards. When the cables were removed, the severity of the corrosion and the cable condition, required their replacement. The submitter suggested these cables be removed for inspection each 2,000 hours or 5 years. In this case, these defects represent a definite degradation of safety, which could have resulted in loss of aircraft control.

Part total time-4,509 hours.

**Piper
Model PA 31-310
Navajo**

**Landing Gear
Failure
3230**

The pilot reported the landing gear failed to respond when selected to the "down" position. The gear was extended, using the emergency system, and a safe landing was made.

An investigation revealed evidence of a severe hydraulic leak, and the hydraulic system fluid was depleted. Further inspection disclosed a fitting (P/N AN837-4D) was broken, and it was determined to be the source of exit for the hydraulic fluid. This fitting was used on the door close cylinder, and the submitter speculated it was broken during the retraction cycle. The fitting had no evidence of a prior crack pattern; therefore, it appeared to have been cleanly broken. It is suggested all landing gear parts be checked for clearance during scheduled inspections.

Part total time not reported.

**Piper
Model PA 31-350
Chieftain**

**Turbocharger
Security
5345**

A report was received stating "the bolts used to secure the turbocharger mount truss to the engine mount pylon continually work loose. The nuts chatter on the threads and wear to the point that torquing is not possible."

The submitter speculated the problem is caused by the steel boss on the truss mount wearing away the aluminum pylon mount. It was suggested the manufacturer design a steel shoulder bushing, which could be press fitted into the aluminum engine mount pylon. This would allow the bushing to bear the stress of the turbocharger mount. A drilled bolt, with castellated nut and cotter key, would prevent loosening of the hardware.

Part total time-1,300 hours.

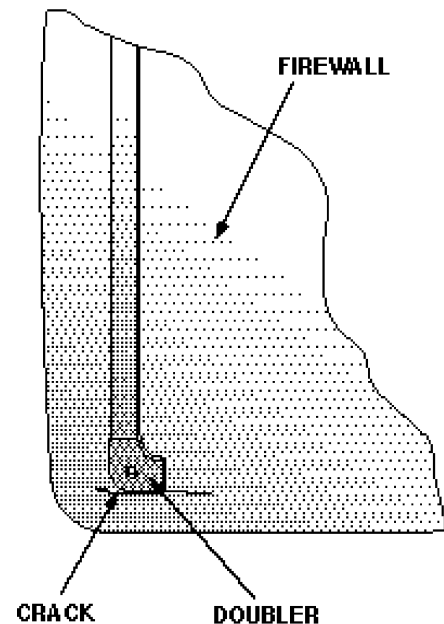
**Piper
Model PA 32-300
Cherokee Six**

**Firewall Crack
5412**

During an annual inspection, the engine firewall was found cracked.

The crack was located between the lower right engine mount attachment point and the cowling flange. It was approximately 2.5 inches long and ran horizontal. (Refer to the following illustration.) The submitter speculated this defect was caused by metal fatigue (due to age). It was recommended that a close and detailed inspection be conducted, at frequent intervals, in the area of the firewall.

Part total time-7,020 hours.



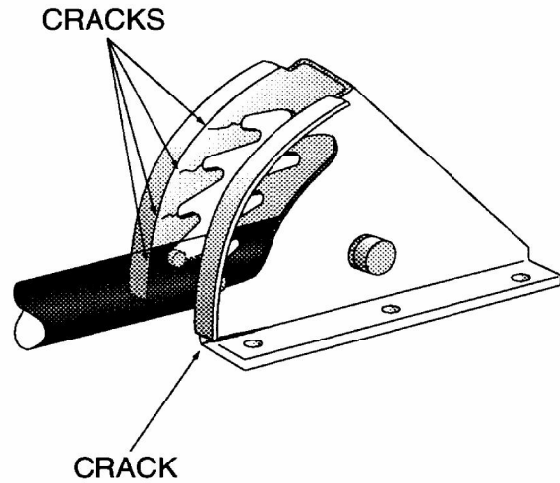
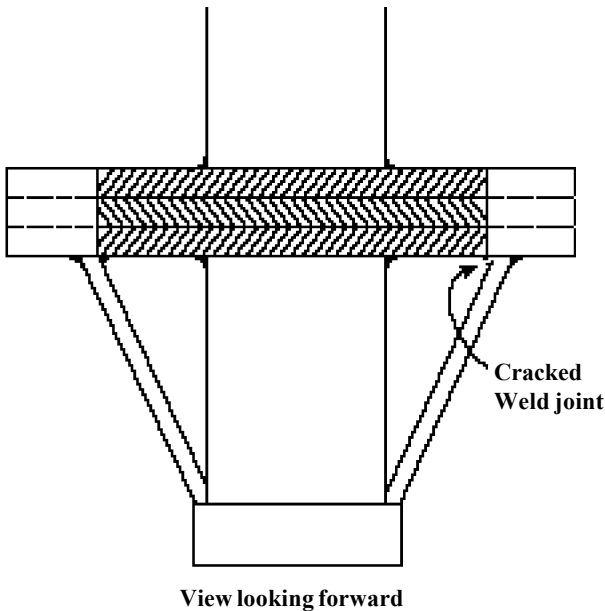
**Piper
Model PA 34-200
Seneca**

**Landing Gear
Crack
3222**

During an annual inspection, the nose landing gear trunnion was found cracked.

The crack was located on the right side of the nose gear trunnion (P/N 95723-00) "stay arm." (Refer to the following illustration.) The defect was adjacent to the weld joint and was approximately .25 inch long. This area should be closely checked during scheduled inspections and maintenance.

Part total time-5,633 hours.



**Piper
Model PA 34-200T
Seneca**

**Wing Flap Control
Cracks
2750**

During an annual inspection, the wing flap control handle detent bracket was found cracked.

The detent bracket (P/N 95504-000) was cracked in two of the detent notch radii. (Refer to the following illustration.) The submitter has found several other defects of this type on other like aircraft. It was suggested this area be given close scrutiny during inspections and maintenance, especially on high time aircraft.

Part total time-12,035 hours.

TAYLORCRAFT

**Taylorcraft
Model DC-65**

**Propeller
Deterioration
6111**

This aircraft was equipped with a Sensenich, Model 72A48 propeller. The pilot reported the propeller suddenly began to vibrate during flight.

An investigation found the metal "tipping" had separated from the propeller. The wooden propeller was deteriorated under the "tipping," and the submitter speculated this caused the separation. It was recommended the propeller blades be inspected for signs of deterioration, adjacent to the application of tip metal. Also, the rivets attaching the metal should be checked for any signs of looseness or working. One indication of a problem is the appearance of dark streaks along the propeller and/or along the edge of the tip metal.

Part total time not reported.

HELICOPTERS

AMERICAN EUROCOPTER

American Eurocopter Model AS350B Ecureuil	Tail Rotor Abrasion Strip Shedding 6410
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During flight, approximately 6 inches of paint departed the poly-abrasion strip at the tail rotor blade tip. A high pitch vibration began, and an immediate landing was executed. The submitter stated this problem occurred because the polyurethane sheet had become soft and gummy; therefore, the paint came off easily due to the lack of adhesion. The submitter further stated a solution appears to be in the replacement or redesign of the material, due to its susceptibility to this type occurrence when operating in a humid environment.

Part total time-1,426 hours.

American Eurocopter Model BO-105S	Main Rotor Transmission Sun Gear Failure 6320
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Following the accident of a BO-105S, an investigation revealed that the sun gear (P/N 4638-304-001) in the main rotor transmission had failed.

The exact cause of the sun gear failure has not been determined. This same sun gear had been in the main rotor transmission of an aircraft that was involved in a catastrophic accident. In that accident, the aircraft impacted the ground in an inverted attitude.

Part total time since overhaul-1,591 hours.

BELL

Bell Model 47G5	Main Transmission Oil Supply Elbow Restricted 6320
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While performing cleanup and inspection of the main rotor transmission parts during overhaul, it was discovered that the oil supply fitting (P/N MS20823-4) had a "restrictor" orifice installed. It was noted, this fitting was similar to P/N 47-712-035-1, which is the part number for a manifold pressure gage line "restrictor." The submitter stated this fitting could have caused transmission failure from oil starvation.

Part total time not reported.

Bell Model 222U	Oil Cooler Blower Shaft Sheared 7921
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While in flight, the pilot noticed the Number 2 engine oil pressure was dropping, and the oil temperature was rising. The engine was secured, and a single-engine landing was performed. While investigating the cause of this problem, maintenance personnel discovered that the oil cooler blower driveshaft assembly (P/N 24782-1) had sheared next to the splined adapter. Furthermore, it appeared that the impellers had seized inside the housing.

Part total time not reported.

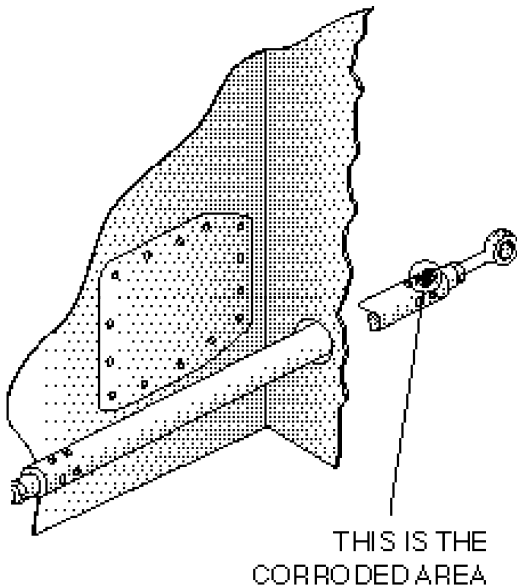
SIKORSKY

Sikorsky Model S-76A Mark II	Corroded Main Landing Gear Tube 3230
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While performing an inspection, it was discovered that a "HI-LOCK" fastener

(P/N 1528-20), on the right-hand side of the damper tube (P/N 76250-02102-041), was sticking out approximately .0625 inch on both ends of the tube. (Refer to the following illustration.) The "HI-LOCK" fastener had corroded in the center and subsequently broke. The submitter recommended that a one-time inspection and replacement of all "HI-LOCK" fasteners on this tube be implemented. Additionally, an inspection was recommended every 3,000 hours, for corrosion and pitting, on the inside of the tube assembly.

Part total time-8,015 hours.



AGRICULTURAL AIRCRAFT

AIR TRACTOR

Air Tractor Model 402 **Fuel Drain Failure 2810**

The experience of numerous annual inspections prompted the submission of this report. The submitter stated, that during inspections, approximately 15 percent of the

"Curtis" fuel drains (P/N CCA-1650) were found cracked.

The fuel drains were cracked at the top of the drain fitting, near the sealing surface. Complete failure of this part could lead to the inner parts of the drain fitting falling out and loss of fuel. It was recommended the fuel drain fittings be closely checked during scheduled inspections and maintenance.

Part total time-463 hours.

AYRES

Ayres Model S2R **Horizontal Stabilizer Corrosion Thru 5510**

During replacement of the fabric covering on the empennage, corrosion was found where the old fabric contacted the structural tubing.

The white interior of the fabric was stained a "rusty color" by the corrosion. After removing the paint from the horizontal stabilizer, four rib tubes were found corroded completely through the wall thickness. The available evidence indicated the corrosion had started inside the tubes. The severity of the corrosion made it necessary to replace five tubes. The remaining tubes were drilled to facilitate oiling the interior of the tubes. The submitter recommended a comprehensive inspection of the structural tubing when the fabric covering is replaced.

Part total time not reported.

WEATHERLY

Weatherly Model 210C **Landing Gear Failure 3222**

During landing, the left main landing gear failed, and the aircraft "nosed over."

An inspection revealed the left main gear torque link (P/N 40212-9) had broken. Damage was confined to the engine, propeller, and the

left main gear. The submitter recommended all operators of like aircraft conduct an inspection of the torque links to determine their airworthiness. The cause of this failure could not be determined.

Part total time not reported.

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

CHRISTEN EAGLE

Christen Eagle	Main Landing
Model Christen Eagle II	Gear Lockup
	3240

While performing a high-speed taxi check of the brake system, the pilot experienced a brake lockup. The aircraft slid off the runway with minor damage to the aircraft and no injury to the pilot. The pilot, who was also the builder, stated that postflight inspection of the brake system did not reveal any discrepancies with the brake system.

Part total time-2 hours.

KITFOX

Kitfox	Fuel Line
Model Five	Deterioration
	2820

While performing an engine runup, prior to a test flight, the engine demonstrated symptoms of fuel starvation. The engine was secured, and an inspection of the fuel system was performed. When the fuel supply line (which goes to the fuel filter) was removed, there were significant amounts of blackened fuel and rubber globules. The fuel filter was fouled to the point that it was impossible to blow air through the line going to the fuel filter. All the fuel lines were removed and were split open. On the inside of one fuel line, deterioration extended approximately 18 inches. Further testing of one fuel line, in a container of fuel, showed significant and rapid deterioration.

The submitter stated that 93 octane AMECO white gas was used at the time of the incident. It was stated that the presence of the oxygenation additive could not be determined. Due to most fuel lines not having shelf expiration dates, it is recommended that fuel lines be monitored regularly. This aircraft had only been operated approximately 6 hours in the past year.

Part total time-6 hours.

PROPELLERS AND POWERPLANTS

TEXTRON LYCOMING

Textron Lycoming	Oil Leak
Model 0-360	8550

After several attempts to repair a persistent engine oil leak on the Number 2 cylinder push rod, the cause was found.

The oil leak appeared to originate near the crankcase. While changing the push-rod tube seal, the push-rod retainer (P/N LYC-65007) (which is pressed into the crankcase) was found cracked. The crack traveled around approximately 25 percent of the retainer circumference. The submitter stated the cause of this defect could not be determined.

Part time since major overhaul-500 hours.

TELEDYNE CONTINENTAL

Teledyne Continental	Oil System
Model IO-520	Restriction
	8550

This engine had been installed in a Beech, Model A36 aircraft.

When the engine was removed and disassembled for a major overhaul, an excessive amount of "sludge" was found in the crankcase and oil sump. The "sludge" buildup in the oil sump had restricted approximately

80 percent of the pickup tube screen. Phillips XC oil had been used in the engine. The submitter speculated that since the oil drain is forward of the oil pickup tube, all of the oil and contamination cannot be eliminated when the nose of the aircraft is high. It was suggested the nose of the aircraft be lowered before draining the oil and allowing it to drain overnight to purge as much of the contaminates as possible.

Part total time-1,761 hours.

ACCESSORIES

TURBOCHARGER REPAIR

Information for the following article was furnished by Mr. Paul Foster, an Airworthiness Inspector with the FAA's Flight Standards District Office located in Long Beach, California. (This information is published exactly as it was received.)

Recently, Garrett Airesearch Industrial Division, a manufacturer of aircraft turbochargers, has been receiving units back into their repair station with previous repairs which may cause an unairworthy condition. Many of the impeller units are being returned with rework which includes welding and plating. These practices are prohibited by the Airesearch Aircraft Overhaul Manual (TP20-0128), dated August 15, 1985. Many of these units are developing cracks in the rework area. The following are excerpts from specific paragraphs of that manual which prohibit certain types of repairs:

- (1) The welding of the turbine housing (2.17);
- (2) The straightening of compressor wheel blades (2.17);
- (3) The reboring of the center housing bearing bores (2.15);
- (4) The restoration, repair, or buildup of metal on the compressor wheel blade tips (2.30);
- (5) The chrome plating, plasma spray, or equivalent restoration of turbine wheel shaft journals and wheel hub surfaces (2.30).

As a reminder, Title 14 of the Code of Federal Regulations (14 CFR) part 43, section 43.13(a) states: "Each person performing maintenance, alteration, or preventive maintenance on an aircraft, engine, propeller, or appliance shall use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual."

AIRNOTES

DANGEROUS GOODS ADVISORY BULLETIN

This Advisory Bulletin (DGAB-96-01), dated July 16, 1996, was issued by the FAA's Associate Administrator for Civil Aviation Security, ACS-1, located in Washington, D.C. It concerns the prohibition of oxygen generators (chemical) aboard passenger aircraft. (This Dangerous Goods Advisory Bulletin is published exactly as it was

received.)

**“Civil Aviation Security
Dangerous Goods
Advisory Bulletin**

**Information of Concern to Aviation Cargo
and Cargo Security Personnel Current
Cargo Acceptance and Handling
Procedures Should be Reviewed in Light
of this Information**

**Subject: Prohibition of Oxygen
Generators (Chemical)
Aboard Passenger Aircraft**

Number: DGAB-96-01

Date: July 16, 1996

INFORMATION: The National Transportation Safety Board and the FAA are investigating a recent accident involving a passenger-carrying aircraft. Preliminary evidence indicates that oxygen generators (chemical) may have caused the accident, or contributed to its severity. On May 24, 1996, the Research and Special Projects Administration (RSPA) of the Department of Transportation, issued an interim final rule to amend the Hazardous Materials Regulations to prohibit the offering, acceptance or transportation of oxygen generators as cargo in passenger-carrying aircraft. This interim final rule applies to both foreign and domestic passenger-carrying aircraft entering, leaving, or operating in the U.S. This regulation applies to oxygen generators (chemical) and not to cylinders containing compressed oxygen.

FAA COMMENT: Since the issuance of the interim final rule, the FAA has learned of instances in which oxygen generators are still being offered and carried aboard passenger aircraft. We believe that these occurrences are primarily due to confusion on the part of shipping and transportation personnel caused the Proper Shipping Name (PSN) and basic description assigned

to oxygen generators (chemical). The current authorized shipping description for an oxygen generator (chemical) containing sodium chlorate as the primary constituent is “Oxidizing solid, n.o.s., 5.1, UN1479, II.” In addition, the technical names of the two components which most predominantly contribute to the hazards of the oxygen generator (chemical) must be entered in parentheses in association with the basic description (see 49 CF 172.203(k)). For example, “Oxidizing solid, n.o.s., (contains sodium chlorate and barium peroxide), 5.1, UN1479, II.”

FAA investigations have established, however, that in actual practice oxygen generators are also being shipped under various other basic descriptions. Air carrier cargo acceptance personnel should be aware that oxygen generators (chemical) might be offered as cargo under any of the following basic descriptions:

1. **Oxidizing solid, n.o.s., 5.1, UN1479,II**
2. **Oxidizing substances, solid, n.o.s., 5.1, UN1479, II**
3. **Sodium chlorate, 5.1, UN1495, II**
4. **Barium peroxide, 5.1, UN1449, II**
5. **Potassium perchlorate, solid, 5.1, UN1489, II**
6. **Potassium superoxide, 5.1, UN2466, I**

The FAA strongly advises all passenger air carrier cargo acceptance and handling personnel to be alert to any shipments being offered under any of the shipping descriptions noted above. Should such a shipment be encountered, carriers are strongly advised to question the offeror of the shipment as to the actual contents of the package and, if there is any doubt, conduct a physical inspection of the package. Under no circumstances should shipments using the above noted shipping descriptions be transported until the air carrier is satisfied that the package does **NOT** contain oxygen generators (chemical).

Air carrier repair station and cargo personnel are reminded to pay particular attention to shipments of company material (COMAT) that might contain oxygen generators, including those possibly contained in passenger service units or seat back assemblies being shipped as replacement or spares. Such shipments are, of course, prohibited aboard passenger aircraft, and must be otherwise shipped in full compliance with all hazardous materials regulations aboard cargo-only aircraft or via surface transportation.

(NOTE: RSPA anticipates adding a specific name, "Oxygen generator (chemical)", to the Hazardous Materials Table in the near future. Until that change becomes effective, however, RSPA has requested that anyone shipping oxygen generators (chemical) take the following additional precautions: Mark each shipping paper and package "Oxygen generator (chemical)" in association with the shipping description on each shipping paper and the marked proper shipping name on each package. If there is any likelihood that a shipment might be transported via air, insure that the "cargo aircraft only" marking is included.)

If any oxygen generator (chemical) is offered for transportation as cargo aboard a passenger air carrier, the air carrier should report such information by telephone, as soon as practicable, to the nearest Civil Aviation Security Office.

DISSEMINATION AND ACTION

REQUIRED: This Dangerous Goods Advisory Bulletin is releasable to, and should be immediately provided to all U.S. passenger and cargo air carriers for the information of all corporate cargo/security/operations management personnel, all cargo acceptance/handling personnel, all certified aircraft repair station and maintenance facility personnel involved in the shipment of aircraft parts, and all cargo security personnel.

/s/ Cathal L. Flynn
Associate Administrator for
Civil Aviation Security"

For further information on this subject, you may contact Mr. Chris Glasow (a Dangerous Goods Specialist) in the Civil Aviation Security Office, which is located in Washington, D.C. Mr. Glasow's telephone number is (202) 267-3952.

ADVISORY CIRCULAR 43.13-1B UPDATE REQUEST FOR COMMENTS ON THE REVISION OF AC 43.13-1B, Acceptable Techniques And Practices - Aircraft Inspection And Repair

This is the last call for comments from interested parties on the final draft of AC 43.13-1B.

All final comments on the text of this AC must be identified by page number, chapter number, and paragraph number, in order to speed the last revision process. If a substantial change is recommended, it must be supported by additional references or standards.

The FAA will honor all requests to have the final draft of the AC sent to individual parties up to October 15. Due to the size of the document, the final draft of the AC is over 700 pages, and publication costs, we can offer only a limited number (300 copies) of the draft AC. We intend to put a text copy of the draft AC in FedWorld, on the Internet, so the information will be available to everyone.

All industry or individual comments on the AC must be received no later than November 15 to ensure FAA review.

Since June, the FAA has reviewed, revised, and incorporated (as necessary) over 900 of the aviation community's comments that were sent in response to the "Request For Comments," published in the May 28 issue of the Federal Register and the June issue of this publication. The FAA revisions of the AC were also reviewed for accuracy, completeness, and clarity by 12 industry subject-matter experts.

You may request a final draft copy of the AC, for review and comment, by writing to:

FAA, Regulatory Support Division
ATTN: AFS-610, George Torres
 P.O. Box 25082
 Oklahoma City, OK 73125

You may also request a final draft copy of the AC, or send your comments, via FAX.

FAX number: (405) 954-4104

FCC INTERNET ADDRESS CORRECTION

In the June and July 1996 editions of this publication, we printed an article entitled "GOOD NEWS FROM THE FCC." The subject of the article was a Notice of Proposed Rule Making issued by the Federal Communication Commission (FCC) which would eliminate the present requirement for radio station licensing requirements for many aircraft.

The Internet address for the FCC was incorrect. The following is the correct address:

<http://.fcc.gov/wtb.avmarsrv.html>

We apologize for any inconvenience this error may have caused.

ALERTS ON LINE

We have received several requests to make the information contained in this publication available electronically. Therefore, this publication is now available through the FedWorld Bulletin Board System (BBS), via the Internet.

You may directly access the FedWorld BBS at telephone number (703) 321-3339. To access

AC 43-16, General Aviation Airworthiness Alerts, through the Internet, use the following address.

<http://www.fedworld.gov/ftp.htm>

This will open the "FedWorld File Transfer Protocol Search And Retrieve Service" screen. Page down to the heading "Federal Aviation Administration" and select "FAA-ASI". The file names will begin with "ALT", followed by three characters for the month, followed by two digits for the year (e.g. "ALTJUN96.TXT"). The extension "TXT" indicates the file is viewable on the screen and also available to download. In the future, we will use the Adobe Acrobat software program format to upload this monthly publication. At that time, they will appear with a "PDF" extension, and it will be necessary to download the files for viewing. This change is necessary to accommodate inclusion of the illustrations associated with various articles. The Adobe Acrobat Viewer is available for download from the Internet (free of charge) and will allow the files to be read.

Also available at this location are the Service Difficulty Reports which may be of interest.

The Regulatory Support Division (AFS-600) has established a home page on the Internet, through which the same information is available. The address for the AFS-600 home page is:

<http://www.mmac.jccbi.gov/afs/afs600>

Also, this address has a large quantity of other information available. There are "hot buttons" to take you to other locations and sites where FAA Flight Standards Service information is available. Try it, you will like it. If problems are encountered, you can "E-mail" us at the following address.

Other requests have been received indicating a need to make the staff of this publication more available to our readers. To provide greater and more flexible access for you to

offer information and ask questions, you may use any of the following methods to contact us.

Editor: Phil Lomax, AFS-640

Telephone Number: (405) 954-6487

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ATTN: Maintenance Support Branch, AFS-640

P.O. Box 25082

Oklahoma City, OK 73125-5029

We hope this will allow you to contact us by a means which will be convenient and save some of your precious time. We welcome the submission of aircraft maintenance information via any form or format. Through this publication, you are provided the opportunity to inform the aviation community

of problems you have encountered, as well as, bringing them to the attention of those who can resolve these problems. Your participation is vital to the Service Difficulty Reporting (SDR) program, and the more it is used the better and more reliable the end product, which is accurate maintenance information, will be.

FAA FORM 8010-4, MALFUNCTION OR DEFECT REPORT

For your convenience, FAA Form 8010-4, Malfunction or Defect Report, will be printed in every issue of this publication.

Simply complete the form, fold, staple, and return it to the address printed on the form. (No postage is required.)

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		OPER. Control No.		3. Comments (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)	REPORT OFFICE	OPERATOR IDENTIFICATION
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		1. A/C Reg. No. N				
Enter pertinent data	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER			
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3	POWERPLANT					
4	PROPELLER					
5. SPECIFIC PART (of component) CAUSING TROUBLE						
Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location			
6. APPLIANCE COMPONENT (assembly that includes part)						
Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number			
Part ID	Part TSO	Part Condition	T. Date Sub.	Optional Information:		
				Check a box below, if this report is related to an aircraft		
				<input type="checkbox"/> Accident; Date _____ <input type="checkbox"/> Incident; Date _____		

FAA Form 8040-4 (10-99) SUPERSEDES PREVIOUS EDITIONS

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of Transportation

**Federal Aviation
Administration**

Flight Standards Service
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P.O. Box 25082
Oklahoma City, OK 73125

AFS-640

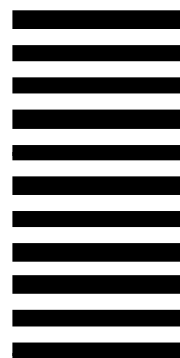
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