

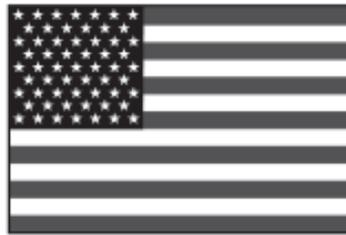


U.S. Department
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Administration**

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AVIATION MAINTENANCE ALERTS



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

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

AVIAT

Aviat; Model A-1; Husky; Wing Flap Control Structural Defect; ATA 2750

While replacing the wing flap control handle, the technician discovered a crack.

The technician removed the wing flap setting stop assembly (P/N 35128-001) and noticed a crack in the "full flap notch." He had removed the flap-stop assembly for inspection 129 operating hours prior, and no defects were present at that time.

The submitter stated this defect was in danger of imminent failure. He found a similar defect on another like aircraft and cautioned all owners, operators, and maintenance technicians to check the wing flap setting stop assembly closely at every opportunity.

Part total time-4,048 hours.

BEECH

Beech; Model A-36; Bonanza; Magneto Defect; ATA 7414

During an engine runup check prior to flight, the pilot noticed a smooth 200-RPM drop on the left magneto. He returned to the parking ramp and asked maintenance personnel to investigate.

A technician found that the engine timing was retarded approximately 7 degrees. He removed the magneto and discovered that the impulse coupling (P/N 10-76232) spring was broken. He replaced the impulse coupling with a new unit.

The submitter recommended that the manufacturer establish a 1,000 operating hour life limit for the impulse coupling and a 500 operating hour disassembly and inspection requirement.

Part total time-1,958 hours.

Beech; Model A-36; Bonanza; Nose Landing Gear Wheel Defect; ATA 3246

While changing the nosewheel tire, the technician discovered that the wheel bearings were damaged.

The technician found that the right side bearing seal (P/N 154-03200) was not securely installed, which allowed water and other contaminants to enter the bearings. The right side bearing was severely corroded, and the evidence indicated the inner bearing race was turning on the axle. He replaced the axle because it was damaged beyond limits. Cleveland manufactured the nosewheel assembly (model number 40-87D).

The submitter cautioned all technicians to ensure the bearing seal is properly and securely installed and alluded that there may be a design defect with the seal.

Part total time-1,049 hours.

Beech; Model 58; Baron; Engine Starter Failure; ATA 8011

While preparing for a flight, the pilot could not start the left engine.

Even though the battery electrical system was in good and serviceable condition, the left engine would not rotate when the starter was engaged. The technician discovered the starter adapter (P/N 642083A5) clutch assembly spring was broken.

The unit had recently been installed after it was overhauled. The submitter stated, "I have replaced approximately 20 starter adapters this year (2002), all with about 500 hours time in service." The FAA Service Difficulty Program data base does not reflect the additional 19 entries; however, the submitter may not have reported them!

Part total time since overhaul-59 hours.

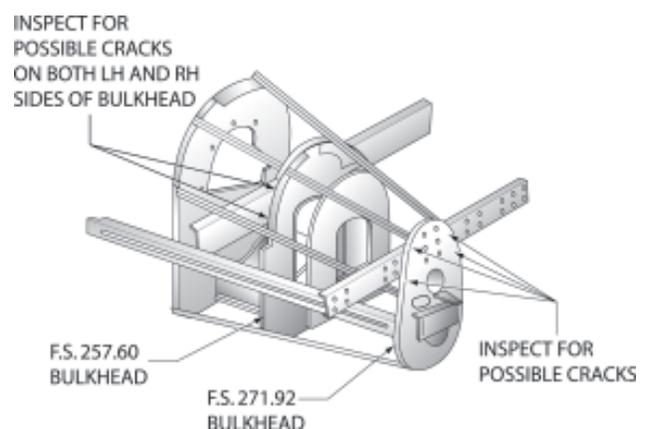
Beech; Model 58; Baron; Fuselage Structural Defects; ATA 5300

During an annual inspection, a technician discovered cracks in the fuselage structure.

The cracks were located in a bulkhead (P/N 002-440023-77) at fuselage station (FS) 257.6. (Refer to the illustration.) These defects are described in Beech, Class I Service Instruction (SI) Number 0990, Revision II. However, SI 0990 is not applicable to this particular aircraft serial number.

The submitter recommended that the manufacturer research other possible aircraft serial numbers for inclusion in SI 0990.

Part total time-6,163 hours.



Beech; Model 58; Baron; Air-Conditioning System Defect; ATA 2100

During a scheduled inspection, a technician discovered an air-conditioning system bracket was cracked.

The crack was located on the upper arm of the air-conditioning system compressor bracket (P/N 58-555011-1) on the left engine. (Refer to the illustration.) The submitter stated it appeared the bracket was not shimmed correctly during the previous installation. The crack had progressed to the point of making complete failure of the bracket imminent. He speculated that without proper shimming, the bracket was subjected to preload stress during assembly.

The submitter suggested that technicians use the correct shimming technique listed in the manufacturer's technical data.

Part total time-94 hours.



Beech; Models 60, A60, and B60; Duke; Starter and Generator Wire Defects; ATA 2430

Information for the following article was furnished by the FAA, Aircraft Certification Office (ACO), ACE-115W, located in Wichita, Kansas. (*This article is printed as it was received.*)

During an aircraft accident investigation, an investigator discovered that the starter and the generator 6-gauge wires had numerous lateral splits in the wire insulation. However, the accident cause was not related to the defective wire insulation.

Splitting of the wire insulation appears as small, fine dark scratches on the outer covering of the wires and runs lengthwise along the wire. In some cases, the wire insulation splitting has penetrated the covering and exposed the center electrical conductor. This defect presents the possibility of electrical arcing of the high amperage direct current (DC) carried by these wires. The wires may be subjected to carrying high amperage electrical power for short periods of time during operation. The manufacturer's maintenance manual contains general wiring inspection criteria, but does not specify inspection criteria that specifically addresses "splitting" of the wire insulation. These types of large gauge electrical wire (P/N M22759/7) may be used on several other make and model of aircraft.

The FAA has issued Safety Recommendation number 01.172 and an Airworthiness Concern Sheet, dated October 2, 2001, both of which deal with this subject.

It was recommended that the starter and generator wires be inspected for the defects mentioned here at least once a year. If wire insulation splitting is discovered the wire should be replaced.

Part total times are various.

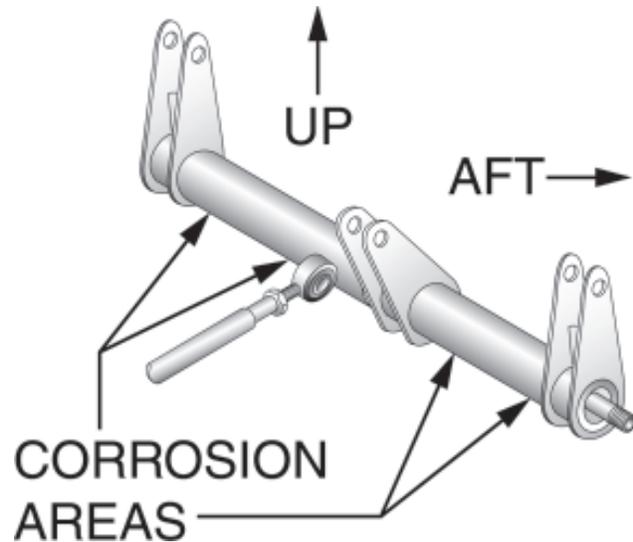
Beech; Model C-99; Airliner; Defective Elevator Control System; ATA 2730

During a scheduled inspection, a technician discovered a serious defect related to the elevator control system.

The technician found severe corrosion in the empennage, which compromised the elevator control. The corrosion had penetrated the elevator bellcrank torque shaft (P/N 115-524046-5) at four locations. (Refer to the illustration.) The torque tube shaft is made of steel, and the corrosion had progressed to the point of impending failure.

The submitter suggested that technicians use a bright light and an inspection mirror to check the bottom side of the shaft for any sign of corrosion at every opportunity.

Part total time-10,096 hours.



Beech; Model 200; King Air; Defective Propeller Deice System; ATA 3060

After returning from a flight, the pilot reported that the right propeller deice system circuit breaker (switch) tripped open.

The right engine propeller was recently overhauled, and the deice brush block assembly (P/N 3E2090-1) was replaced. Maintenance personnel performed an operational test and could not duplicate the problem. A technician inspected the right engine propeller; and when he applied “side pressure” to the right side of the brush block stack, the washers on the wiring attachment screws contacted each other. Due to the contact, an electrical short circuit occurred, which tripped the circuit breaker. Normally, a nylon spacer is used to raise one of the terminals and prevent contact with the adjacent terminal; however, the difference in height was not sufficient in this case. He used a “slightly taller” nylon spacer to increase the clearance, and the deice system flight test was satisfactory.

Part total time-6 hours.

Beech; Model 300; King Air; In-Flight Separation; ATA 7110

During a flight, a portion of the left engine cowling separated from the aircraft. The aircraft sustained substantial damage.

The pilot was able to land the aircraft safely without personal injury or further aircraft damage. The accident occurred approximately 10 minutes after takeoff and was investigated by an FAA inspector.

The pilot first noticed the inboard section of the left engine cowling raised into the airstream and separated within 5 seconds. When the lower section of cowling (P/N 130-910031-40) or replacement part (P/N 130-910035-4) departed, it contacted the fuselage causing approximately an 8-inch long gash in the left side of the fuselage skin puncturing the pressure vessel.

The cowling section, which separated, was not recovered. The submitter was unable to determine the cause for this defect.

Part total time not reported.

Beech; Model 1900C; Airliner; Defective Landing Gear Bolt; ATA 3230

During a scheduled inspection, a technician complied with the inspection required by Beech, Safety Communiqué number 197.

The subject of the inspection is the center bolt (P/N 101-810090-3) installed in the main landing gear drag brace. The technician discovered the bolt installed in the right main gear did not have the required grease passage. He removed and replaced the bolt with one that had the grease passage (same part number).

The submitter recommended that all concerned personnel comply with Safety Communiqué number 197 as soon as possible.

Part total time-24,142 hours.

CESSNA**Cessna; Model 152; Rudder Control System Defect; ATA 2720**

After returning from a training flight, the instructor reported that the copilot's left rudder pedal seemed loose and was not very responsive.

A technician investigated the report and discovered the right rudder cable was damaged where it passed through the aft fuselage bulkhead. The cable (P/N 0400107-150) was held together by only two strands. The cable had worn through the phenolic rub block on the aft bulkhead and was damaged when it contacted the metal bulkhead.

The submitter stated the damage occurred because the cable had been misrouted during the previous installation. In his opinion, the cable would have failed in a short time.

Part total time-518 hours.

Cessna; Model 172R; Skyhawk; Defective Seat Lock Assembly; ATA 2510

During a scheduled inspection, the technician discovered the pilot and copilot seat locking mechanisms were weak.

The submitter believes that over time, the seat locking assembly (P/N 0514213-2) becomes weak and allows the seat to recline abruptly when pressure is applied to the seat back. He recommended that technicians closely inspect the seat lock assembly for serviceability during scheduled inspections and maintenance.

Part total time-3,070 hours.

Cessna; Model 172R; Skyhawk; Erroneous Fuel System Indication; ATA 2841

The maintenance department of a large flight school received numerous reports of the “Low Fuel” warning light flickering during flight. Some of the reports stated the light flickered too fast to determine if it was for the left or right side light.

This operator experienced this problem on 9 out of the 10 like aircraft they operate. The problem is almost always intermittent, which makes ground duplication very difficult. The technicians were unable to duplicate the discrepancy on the ground.

After a recent report, the technician removed the left fuel quantity sending unit (P/N S3594-1) from the tank. After moving the sending unit float arm to approximate the “24-gallon” level, he observed the left “Low Fuel” light illuminate; and the left fuel quantity indicator went to zero. While the aircraft was taxied, he observed the same problem. In this case, he discovered the left tank fuel quantity sending unit was defective.

Part total time-1,742 hours.

Cessna; Model 177RG; Cardinal; Engine Failure Accident; ATA 7160

During a flight, the engine lost power and stopped resulting in an off-airport accident.

While investigating the accident, an FAA inspector discovered that the engine induction system alternate air door was dislodged and residing in the fuel servo inlet. The submitter speculated the engine failed due to obstruction of inlet air system.

Cessna Service Letter (SL) SE71-32 deals with this subject and provides instructions for relocation of the alternate air door. At the time of the accident, SL SE71-32 had not been accomplished.

It is recommended that all operators of aircraft affected by SL SE71-32 comply with it as soon as possible.

Part total time-3,126 hours.

Cessna; Model R182; Skylane; Landing Gear Warning Malfunction; ATA 3260

Following a gear-up landing, the flightcrew stated there was no audible gear warning during the approach.

While investigating, a technician discovered that the throttle microswitch (P/N S2327-1) electrical lead was broken at the switch terminal. The pilot of the previous flight stated the landing gear warning system functioned properly at that time.

The submitter suggested that a “press-to-test” feature with an accompanying “before-takeoff” checklist item would prevent this hazard.

Part total time-5,973 hours.

Cessna; Model T182T; Turbo Skylane; Electrical System Design Difficulty; ATA 2420

While changing the alternator control unit and relay, the technician experienced difficulty in removing the electrical system junction-box cover.

The technician could not remove the plastic junction-box cover (P/N M52-0007) because of interference with the engine-mount assembly and the aluminum cooling cover. The interference would not allow the plastic junction-box cover to flex enough for removal. He stated, “The only way to remove the junction-box cover is to remove the junction box from the firewall, remove the engine mount from the firewall, or break the cover.” Also, the screws used to mount the cooling cover are installed from inside the junction box, and the nut plates are on the outside of the cooling cover.

The submitter stated, “If these parts were reversed, the cooling cover could be removed and then the junction box cover.” He recommended that the manufacturer redesign this assembly to facilitate easier removal of the junction-box cover.

Part total time-117 hours.

Cessna; Model TU206F; Turbo Stationair; Loss of Directional Control; ATA 3250

The pilot lost directional control during a landing, and the aircraft departed the runway. The nose gear supported the aircraft, and there were no injuries or damage.

While recovering the aircraft, a technician discovered that the forward attachment bolt (P/N AN3H3A) on the steering collar was broken. He stated it appeared that the nose strut was overinflated and caused the bolt to shear during towing operations.

The submitter suggested that prior to towing or ground positioning an aircraft, personnel should check the nose gear strut for proper inflation.

Part total time not reported.

Cessna; Model 208B; Caravan; Defective Wing Strut Attachment; ATA 5740

While conducting a scheduled inspection, a technician discovered light amount of corrosion on the lower right wing strut attachment hardware.

Investigating further, the technician discovered a crack through one of the wing strut attachment nuts. In this condition, the nut was ineffective for its intended purpose. He stated, "The attaching hardware might have been overtorqued when previously installed."

The submitter recommended that technicians consult the appropriate technical data and apply the required torque values when installing this, as well as all aircraft hardware!

Part total time-1,023 hours.

Cessna; Model 402C; Businessliner; Defective Aileron; ATA 5751

While inspecting the aircraft prior to a flight, a technician found that the ailerons could not be moved.

The technician discovered that the left aileron (P/N 5124000-97) was locked to the outboard end of the wing flap by a 90-degree angle piece of metal protruding from the aileron trailing edge and engaged in the flap trailing edge. He found that the metal angle came from inside the aileron and was bonded to the skin to prevent the skin from "oil-canning." Evidently, the angle dislodged and migrated aft and then inboard until it engaged in the flap trailing edge. The metal angle is approximately 8-inches long, .375-inch wide, and .016-inch thick.

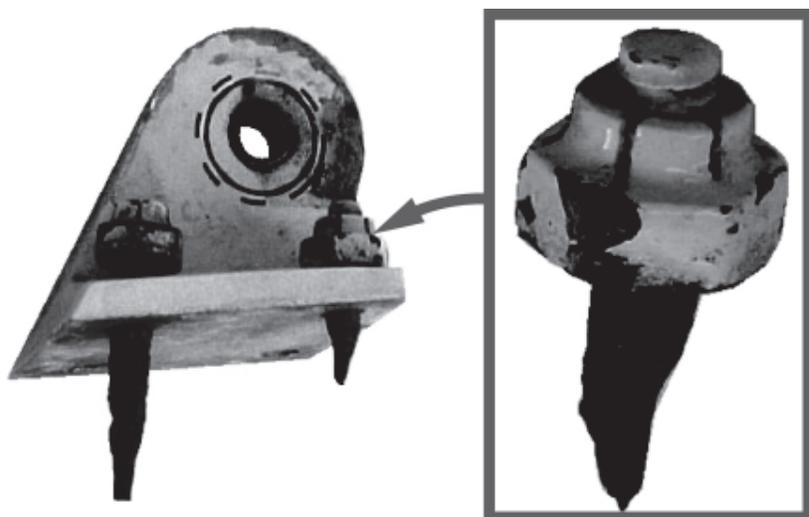
Part total time not reported.

Cessna; Model 414; Elevator Trim System Defective Fasteners; ATA 5523

During a scheduled inspection, the technician discovered the elevator trim tab bearing was "loose" and needed to be replaced.

In the process of changing the bearings, the technician removed the trim tab horn assembly (P/N 0831000-50) which contained the defective bearing. When he applied force to the nuts, the two aft screws (P/N AN515-832R26) broke. The nuts (P/N MS21042L06) used on the two aft screws (P/N MS35206-251) offered no resistance when he removed them. This hardware is proper according to the manufacturer's Illustrated Parts Breakdown (IPB).

Corrosion had completely compromised the two broken screws, which were held in place by a heavy coat of Imron® paint. Approximately 90 percent of the diameter of one screw was corroded and 100 percent of the other screw diameter was corroded. (Refer to the illustration.) The two aft horn attachment screws are enclosed inside the elevator trim tab when installed. The submitter stated it



appears the “foam filling” traps and holds water and other contaminants inside the trim tab and contributes to the defect found in this case.

It is interesting that the Cessna IPB calls for two each of two different types of screws for this installation. Both screw types are nonstructural, have cut threads instead of rolled threads, and have full shank threads. The submitter recommended the manufacturer consider changing these fasteners to a fastener that is designed for structural applications.

Part total time-5,800 hours.

LEAR

Lear; Models 25 and 35; Improper Tire Marking; ATA 3244

The maintenance department for the air taxi operator ordered a large quantity of replacement main gear tires from a distributor. When the tires were received, a technician discovered that one tire was misidentified.

The operator uses Goodyear 12-ply tires, size 17.5 x 5.75-8 (P/N 185F03-5). The sticker on the misidentified tire indicated it was the proper part number and was a 12-ply tire; however, the tire markings indicated it was a 10-ply tire. The load rating difference between the 10-ply tires and the 12-ply tires is 4,000 pounds, which could present a dangerous situation.

The submitter recommended that technicians verify that the sticker markings agree with the actual markings on the tires prior to installation. Technicians should also be aware of this misidentification problem when dealing with other tire manufacturers, tire sizes, and different makes and models of aircraft.

Part total time-0 hours.

PIPER

Piper; Models PA-24 and PA-30; Comanche and Twin Comanche; Defective Elevator Security; ATA 5520

While flying a PA-30 aircraft prior to an annual inspection, a technician/pilot noticed the elevator trim changed several times without input.

A technician inspected the elevator control system and discovered “noticeable free motion” at the elevator surface. He removed the elevator and discovered the two bolts (P/N AN175C33A), used to attach the elevator torque tube to the control horn, were severely corroded and worn in the contact area. Due to the corroded and worn bolts, the elevator torque tube rotated in the control horn.

The submitter stated the defective bolts were subject to imminent shear failure, which would completely disable the elevator control. He inspected seven other aircraft consisting of PA-24 and PA-30 models. All the aircraft he inspected displayed evidence of severe corrosion on the bolts; however, there was not yet “free motion” of the elevator control surface. All the aircraft inspected had accumulated more than 5,000 operating hours.

The submitter recommended the FAA consider issuing an Airworthiness Directive to address this problem. The appropriate FAA Aircraft Certification Office has been made aware of this information; and a Safety Recommendation was submitted.

Part total time as previously stated.

Piper; Model PA 31-350; Chieftain; Heater Fuel Leak; ATA 2140

During a scheduled inspection, a technician discovered that fuel was leaking from the combustion heater drain.

Investigating further, the technician discovered the fuel was coming from the heater (JanAero A23D04) fuel pressure regulator. The regulator was leaking at the diaphragm joint on the case.

The fuel pressure regulator is the subject of Airworthiness Directive (AD) 2001-17-13 and JanAero Devices, Service Bulletin number A-107. The FAA Service Difficulty Program data base contains 11 additional failure reports for this part number. Since there are eight different part numbers for the fuel pressure regulator listed in AD 2001-17-13, it is recommended that all concerned persons consult the listed documents for applicability.

Part total time-960 hours.

Piper; Model PA 32-260; Cherokee Six; Smoke in the Cockpit; ATA 3243

The pilot delivered the aircraft to a maintenance shop and reported there was smoke in the cockpit during operation.

A technician investigated the report and discovered hydraulic fluid leaking from the wheel brake reservoir (P/N 68464-00). The fluid dripped onto the defrost hose (scat duct), saturated the duct hose, and was atomized and distributed into the cockpit by the defrost system. The leak was coming from a cracked attachment fitting on the brake reservoir.

The submitter gave no cause for the cracked fitting.

Part total time-14,778 hours.

Piper; Model PA 32RT-300; Lance; Cockpit Fuel Odor; ATA 2841

The pilot detected a strong fuel odor in the cockpit and landed the aircraft as soon as possible.

A technician discovered a leak in the fuel line (P/N 67700-51) that runs from the fuel pressure indicator to the forward bulkhead at fuselage station (FS) 53.6. He determined the fuel was leaking from an area that displayed severe corrosion. The area was about 1.5 inches long and was located approximately 3 inches aft of the bulkhead fitting. He speculated that water and other contaminants leaked from the defrost ducts or windshield and dripped onto the fuel line.

The submitter suggested that technicians that inspect similar aircraft give this area special attention.

Part total time not reported.

Piper; Model PA 32RT-300T; Turbo Lance; Accident Investigation; ATA 7414

During an aftertakeoff climb, the engine lost power resulting in an off-airport accident.

An FAA inspector investigated the accident and concluded magneto failure caused the accident. The magneto (TCM P/N BL-682560-13) was expelled from the engine case and was found inside the cowling. While examining the magneto, he discovered the case was cracked. It appeared the magneto housing failed due to metal fatigue, which developed over a short period of time.

The submitter urged all technicians to be extra observant when inspecting the magneto case during scheduled inspections.

Part total time-18 hours.

Piper; Model PA 34-200; Seneca; Nose Landing Gear Failure; ATA 3230

During a landing approach, the nose landing gear failed to extend when the pilot selected the “down” position. All attempts to extend the nose gear failed, and he landed the aircraft without aid of the nose gear.

While moving the aircraft off of the runway, a technician found that the nose gear was not held by the uplock and was free to move. However, the nose gear was held in the “up” position by hydraulic pressure on the “up” side of the actuator. When he relieved the hydraulic pressure, the nose gear extended and locked in the “down” position.

The technician removed the hose (P/N 63901-70) from the actuator “down” port and discovered it was completely plugged with rubber particles and other debris. The hose inner lining was deteriorated and had collapsed. The markings on the hose indicated the cure date was “2nd quarter 1972.” This made the hose far beyond the manufacturer’s life limit for the hose assembly. He removed and replaced all hoses that had expired cure dates and purged the system to remove any remaining contamination.

This is just one more case of outdated flexible hoses causing or contributing to aircraft damage!

Part total time-7,209 hours.

Piper; Model PA 34-220T; Seneca; Defective Engine Throttle Cable; ATA 7603

After returning from a flight, the pilot reported the left engine throttle control was very stiff and difficult to operate.

The technician discovered that the throttle push-pull cable (P/N 554-321) was damaged in the engine nacelle. The cable runs through the firewall and is routed in the area of the turbocharger. The damage was located in the section of the cable that is affected by extreme heat that is generated by the engine turbocharger. The heat causes distortion of the cable’s inside lining and produces throttle control binding.

The submitter recommended the manufacturer design a heat shield or some means of protecting the throttle cables from heat damage. This problem affects both engine throttle controls.

Part total time-303 hours.

Piper; Model PA 38-112; Tomahawk; Defective Landing Gear Attachment; ATA 3211

Because of a finding on a like aircraft, the technician removed the main landing gear attachment bolts for inspection.

During the inspection, he discovered that both main gear inboard attachment bolts (P/N AN7-17A/401-511) were bent in the shank area. The shank of one bolt was displaced by approximately .012 inch. He stated it appears that excessive side loads during landing caused this defect.

Airworthiness Directive (AD) 90-19-03 and Piper Service Bulletin 673B deal with landing gear defects; however, they do not address these bolts. The submitter recommended the manufacturer establish a life limit and inspection interval for these bolts.

Part total time-6,584 hours.

Piper; Model PA 42-720; Cheyenne; Landing Gear Failure; ATA 3230

During a landing approach, the pilot selected the landing gear to the “down” position; however, the system did not respond. He used the emergency landing gear extension system to deploy the gear and made a safe landing.

A maintenance technician investigated the report and discovered that the inboard portion of the left wing was covered with hydraulic fluid. After removing the wing leading edge and the nacelle panels, he discovered the leak was coming from the engine-driven hydraulic pump pressure line (P/N 5774-02). The hydraulic line was chafed through the wall thickness where it enters the wing leading edge (P/N 72616-02) from the nacelle. The line had chafed against a leading edge/nacelle panel screw that was too long.

The submitter stated the panel is seldom removed during normal service and may be attached with rivets on some like aircraft. He recommended checking installations that use screws for proper screw length during the next scheduled inspection.

Part total time-4,516 hours.

Piper; Model PA 46-350P; Malibu Mirage; Defective Nose Landing Gear; ATA 3222

During an annual inspection, a technician discovered the nose landing gear trunnion was defective.

The nose trunnion (P/N 83606-07) was cracked where the actuator attaches. One of the trunnion attachment lugs was severely cracked and in danger of failure. The technician stated, “Exceeding the turn limits while towing the aircraft might have caused this damage.”

The submitter recommended that all technicians inspect this area closely during scheduled inspections. Any suspect area should be confirmed by conducting an appropriate nondestructive inspection technique.

Part total time-1,914 hours.

STINSON**Stinson; Model 108-3; Voyager; Accident Investigation; ATA 2800**

During an investigation of an aircraft accident, the pilot stated he lost engine power at approximately 80 feet altitude.

The investigator examined the aircraft and found no obvious cause for the engine failure. The fuel venting and quantity systems on the left side were severely damaged. He could not determine if they were functional prior to the accident. The right fuel tank was empty.

When the technician put a small amount of fuel in the right fuel tank, the engine started and operated properly. It was concluded that the accident was caused by fuel starvation!

All operators should check the entire fuel system for correct operation. This includes physically checking the fuel quantity prior to flight.

Part total time since overhaul-180 hours.

AGRICULTURAL AIRCRAFT**AYRES****Ayres; Model S2R; Thrush; Fuel Tank Contamination; ATA 2810**

While investigating an engine failure accident, an FAA inspector found that the engine fuel supply was interrupted.

The inspector interviewed the pilot, examined the evidence, and reviewed the aircraft records. He discovered that the fuel tanks were left open for an extended period of time for resealing. When the aircraft was returned to service, the accident occurred during the first flight. The carburetor fuel filter was plugged with a "dirt-like" substance, which was traced to the header tank (P/N 56150-4) located in the center lower fuselage.

The submitter recommended that when technicians open the fuel system, they should use plugs and caps to exclude contamination. Also, he suggested that when significant fuel tank work is accomplished, technicians should purge the entire fuel system and replace all filters before approving the aircraft for return to service.

Aircraft total time-8,577 hours.

Ayres; Model S-2R-G10; Defective Engine Oil Vent Hose; ATA 7920

While performing maintenance, a technician discovered that the engine oil tank vent hose was partially obstructed.

The oil vent hose (P/N 21713T009) is a one-half inch diameter hose constructed from MIL-H-6000 stock. The inside diameter of the hose was reduced to less than .125 inch by swelling of the interior hose lining. It was evident to the submitter that the damage was caused by a combination of constant exposure to an "oil mist" and excessive heat from the adjacent gas generator.

The submitter has found this type of problem several times in the past. He suggested the manufacturer consider replacing the hose with an aluminum line.

Part total time-1,945 hours.

HELICOPTERS

BELL

Bell; Model 206 Series; Tail Rotor Defects; ATA 6500

The National Transportation Safety Board (NTSB) submitted the following article. *(This article is printed as it was received.)*

Bell Helicopter Textron recently reviewed several incidents where the tail rotor disc pack coupling (Thomas Coupling) hardware was found disconnected shortly after maintenance was accomplished.

Although the cause of the disconnects could not be shown to be poor maintenance procedures, no other cause was found during the investigations. Bell has recently published an Operational Safety Notice (OSN), number 206-02-37, and a temporary revision to the 206 series maintenance manuals. The maintenance manual revision adds an additional torque check between 10 to 25 operating hours after any installation or maintenance on a disc pack coupling. The maintenance manual revision also requires the use of torque seal after the torque check.

The NTSB recommends that all concerned personnel be aware of these circumstances and take appropriate action to comply with OSN 206-02-37 and the requirements of the maintenance manual revision.

Bell; Model 206L-4; Long Ranger; Defective Tail-Boom Attachment Fitting; ATA 5500

During a scheduled inspection, a technician discovered a defective tail-boom attachment fitting.

The cracked fitting (P/N 206-031-329-103S) was located on the fuselage side of the tail-boom attachment at the left upper position. The fitting was cracked on the outboard flange between the two aft rivets.

The submitter suggested that technicians check this area closely during inspections and maintenance.

Part total time-1,400 hours.

Bell; Model 212; Uncommanded External Load Release; ATA 2550

The aircraft was being used for fire fighting and carried a “Bambi” bucket as an external load.

After experiencing an uncommanded external load release, a technician suspected a problem with the “D” ring and cargo hook (P/N 212-072-915-103) combination. He inspected the system and conducted several hook-up and load releases and could find no defects. Believing that the problem was related to improper locking of the cargo hook, he released the helicopter for service.

Later in the same day, the flightcrew experienced another uncommanded load release and summoned maintenance personnel. The technician conducted a thorough check of the external load manual release system rigging and electrical wiring. He found discrepancies in the manual release system rigging. After he corrected the rigging problems, the functional check was successful, and the helicopter was approved for return to service.

Part total time not reported.

EUROCOPTER**Eurocopter; Model BK117-B1; Abnormal Hydraulic System Indication; ATA 2931**

During a flight, the crew experienced several abnormal hydraulic system indications.

There was intermittent illumination of the “master caution light” accompanied by illumination of the “HYD 2” warning light. There were no flight control abnormalities, and the hydraulic system pressures were normal and steady. The master caution system was reset, and the “HYD 2” light extinguished.

Approximately 2 minutes later, the “master caution light” and “HYD 2” lights illuminated again, accompanied by fluctuation of the number 2 hydraulic system pressure. The problem “corrected itself after a few seconds.”

After about 10 minutes, the same warning lights illuminated again, accompanied by a loss of pressure on both hydraulic systems. Still, there was no feedback in the flight control system. The crew made a successful precautionary landing to investigate the problem.

While inspecting the hydraulic systems, a technician found corrosion and moisture on both hydraulic system pressure transducer electrical cannon plugs. The day prior to this flight, the helicopter was exposed to heavy thunderstorms and rain. After cleaning the cannon plugs, the hydraulic systems functioned properly.

The submitter cautioned all maintenance and operational personnel to be aware of these circumstances and take appropriate action to ensure the hydraulic system cannon plugs are clean and dry, especially after exposure to rain.

Part total time not reported.

MCDONNELL DOUGLAS

McDonnell Douglas; Model; 500D (369D); Clutch Assembly Defect; ATA 6310

During a scheduled inspection, a technician removed the clutch assembly for service. When the clutch (P/N 369A5350-51) was serviced and inspected, he discovered that a lockwasher (P/N 369A5358) was broken.

The lockwasher had broken in three places, and the fragments were dislodged by centrifugal force. The clutch support housing (P/N 369A5351) contained the fragments. The fragments cut a groove through approximately two-thirds of the housing wall thickness. The displaced lockwasher caused an imbalance at the carrier bearing (P/N 369A5361) and led to abnormal wear requiring replacement of the bearing.

The submitter recommended that technicians use proper torque values and installation procedures listed in the appropriate technical data.

Part total time-182 hours.

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

AEROCOMP

Aerocomp; Model 7SL; Comp Air 7; Landing Accident; ATA 3221

During a landing, the pilot lost directional control of the aircraft resulting in collapse of the main landing gear. The aircraft sustained damage to the fuselage, wings, and engine.

While investigating the accident, an FAA Airworthiness Inspector discovered that the tailwheel spring broke, and the rudder control surface jammed. Due to the jammed rudder, the pilot lost directional control of the aircraft.

Examining the evidence, the inspector found "previous damage at the tailwheel spring failure area." Personnel from the aircraft kit manufacturer inspected the aircraft and determined "the aircraft was operated 800 pounds over gross weight."

Part total time-119 hours.

KITFOX

Kitfox; Model 4-1200; Accident Investigation; ATA 7310

While flying at approximately 800 feet altitude, the pilot smelled fuel, the engine lost power, and smoke came into the cockpit from the engine compartment. He secured the engine and made an off-airport landing. When the aircraft was on the ground, it flipped upside down and was engulfed in fire. He was able to escape without injury, but the aircraft was destroyed.

While investigating the cause of this accident, a technician discovered the remains of a bird inside the engine cowling. The engine electronic fuel primer bracket was bent approximately 50 degrees, and the attaching fuel line fittings were broken. After finding this damage, the accident cause was evident.

Part total time not reported.

AIRNOTES

FLIGHT CONTROL HARDWARE INSTALLATIONS

The Federal Aviation Administration (FAA), Suspected Unapproved Parts Program Office, has learned that during the removal and repainting of flight control surfaces, improper screws and other standard hardware are being installed rather than the proper hardware that is directed by the manufacturer or other approved data. Generally, the original hardware is replaced with stainless steel hardware similar to the proper hardware. It is important to note that even though the hardware appears to be similar and suitable, some aspects of its length, strength, corrosion, and/or metallurgical properties are different; therefore, they should not be used in this critical application. To prevent the installation of incorrect hardware after the flight control surface is painted or worked on, the FAA recommends that you carefully scrutinize replacement hardware.

Remember, regulations require that type-certificated products conform to their type design. Standard hardware is part of a product's type design. The FAA recommends that owners, operators, and maintenance entities closely examine the reinstallation of flight control hardware to ensure the use of only proper hardware.

SUBSCRIPTIONS

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ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

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

<http://av-info.faa.gov/isdr/>

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

SERVICE DIFFICULTY REPORTING PROGRAM

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

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

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

The consolidation, collation and analysis of the data, and the rapid dissemination of trends, problems and alert information to the appropriate segments of the aviation community and FAA effectively and economically provides a method to ensure future aviation safety.

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

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

The SDR database contains records dating back to 1974. Reports may be submitted on the Internet through an active data entry form or on hard copy. The electronic data entry form is in the AFS-600 Aviation Information web site under the heading SDR Main Menu. The URL is: <<http://av-info.faa.gov>>

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

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

Point of contact is:

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

Telephone: (405)954-6486
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ADDRESS CHANGES

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to: U.S. Government Printing Office, **ATTN: SSOM, ALERT-2G**, 710 N. Capital Street N. W., Washington, DC 20402

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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://afs600.faa.gov>

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AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between August 27, 2002, and September 27, 2002, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

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

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION

Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFTMAKE ACFTMODEL REMARKS	ENG MAKE ENGMODEL	COMPMAKE COMPMODEL	PART NAME PART NUMBER	PART CONDITION PART LOCATION	DIFF-DATE OPER CTRL NO.	T TIME TSO
	CONT IO520D		CRANKCASE	CRACKED ENGINE	07/31/2002 2002FA0000978	
DURING OVERHAUL. THE LIQUID PENETRANT INSPECTION REVEALS CRACKS IN MAIN BEARING BOSSES, CENTER ON LEFT SIDE. DOWN IN OIL CHANNEL RADIUS. THIS CRANKCASE IS PHASE III 7TH STUD STYLE.						
AMRGEN AA5	LYC O320*		PANEL 5102299902	DELAMINATED WING	08/27/2002 2002FA0001104	
HONEYCOMB SIDEPANELS HAVE BECOME DELAMINATED IN NUMEROUS AREAS, EVEN IN THE AREA THAT THE CARRY THROUGH SPAR IS BOLTED TO. THE DELAMINATION OF THE HONEYCOMB PANELS IN THIS AREA REDUCE THE STRUCTURAL INTEGRITY AND MAY ALLOW POSSIBLE SPAR SLIPPAGE AFFECTING THE ANGLE OF INCIDENCE OF THE WINGS WHICH WILL DIRECTLY AFFECT THE FLIGHT CONTROLS BY BINDING THE FLAP AND AILERON TORQUE TUBES. LARGE AMOUNT OF MFG AIRCRAFT WERE BUILT USING A PURPLE GLUE. THIS GLUE WAS WIDELY USED IN THE MID 1970'S AND WAS SUSCEPTIBLE TO BONDED SKIN SECTIONS AND REFERS TO DELAMINATION. (200206996)						
AMTR PSE1			SCREW 1159WM5153511	INCORRECT LT WING	03/13/2002 2002FA0000910	
LEFT WING (D) TRACK ABOVE INBOARD EDGE 4 SCREWS TOO SHORT IN COVE PANEL. SHORT SCREWS AND INSTALLED CORRECT SCREWS PERB/P.						
AMTR RV8	CONT IO360*		HUB FE248	UNAPPROVED PROPELLER	08/19/2002 AUS20020930	
(AUS) PROPELLER HUB IS A SUSPECT UNAPPROVED PART. INVESTIGATION FOUND THAT THE HUB SERIAL NUMBER IS NOT USED ON THIS TYPE OF AIRCRAFT. HUB FLANGE TYPE ALSO INCORRECT. FURTHER INVESTIGATION FOUND THAT THE ORIGINAL MODEL STAMPINGS HAD BEEN PREVIOUSLY REMOVED. PERSONNEL/MAINTENANCE ERROR. UNAPPROVED PART.						
AMTR RV8	CONT IO360*		BLADE F7666A2	UNAPPROVED PROPELLER	08/16/2002 AUS20020931	
(AUS) PROPELLER BLADE SUSPECT UNAPPROVED PART. INVESTIGATION FOUND THAT THE BLADE HAD ORIGINALLY BEEN AN FC7666A BLADE BUT HAD BEEN ILLEGALLY MODIFIED BY UNKNOWN PARTIES TO AN F7666A BLADE. THE BLADE MANUFACTURER WAS CONTACTED AND CONFIRMED THAT THE BLADE WITH THE SN E1230 WAS ORIGINALLY AN FC8468-6R BLADE. SUSPECT SERIAL NUMBER STAMPED ON BLADE WAS A BOGUS NUMBER. UNAPPROVED PART. PERSONNEL/MAINTENANCE ERROR.						

AYRES	GARRTT	HOSE	DETERIORATED	08/06/2002
1945				
S2RG10	TPE331*	21713T009	OIL TANK VENT	2002FA0000975
(HOSE) DURING ROUTINE MAINTENANCE, THE 5000 INCH OVERBOARD VENT HOSE FROM THE ENGINE OIL TANK WAS FOUND TO BE RESTRICTED. THE 5000 HOSE WAS REDUCED TO .1250 OR LESS DIAMETER WHERE IT PASSED FROM THE OIL TANK, ALONG THE GAS GENERATOR. THE COMBINATION OF HEAT AND OIL MIST IS CAUSING THE DETERIORATION OF THE INSIDE OF THE HOSE. THIS IS NOT THE FIRST OCCURRENCE OF THIS PROBLEM. RECOMMEND THAT THE MANUFACTURER INSTALL A .5000 INCH ALUMINUM TUBE IN PLACE OF THE HOSE FROM THE OIL TANK PAST THE ENGINE (APPROXIMATELY 3.5 FT), WHERE THE HOSE COULD THEN BE USED.				
BBAVIA	LYC	CONTROL	FRAYED	03/07/2002
7ECA	O235K2C		ELEVATOR	CA020322006
(CAN) DURING ACCEPTANCE INSPECTION BEFORE ADDITION TO FLEET, THE TRIM CABLES WERE FOUND TO BE CHAFING ON THE TOP ELEVATOR CABLE. THESE CABLES RUN IN CLOSE PROXIMITY TO ONE ANOTHER AND IT APPEARS THAT THE ELEVATOR CABLE WAS RUN OVER THE TRIM CABLES RATHER THAN UNDER, AND CHAFING RESULTED. ONE TRIM CABLE WAS FRAYED AND THE OTHER HAD A WORN AREA WITHOUT BROKEN WIRES. THE ELEVATOR CABLE HAD ONE BROKEN WIRE. THE DEFECT APPEARS TO HAVE EXISTED SINCE AIRCRAFT MANUFACTURE.				
BBAVIA	LYC	BRACKET	MISINSTALLED	09/05/2002 1141
8KCAB	AEIO360*		WING ROOT	2002FA0001090
DURING AN ANNUAL INSPECTION, FOUND WING ROOT FAIRING BRACKET AGAINST LOWER PART OF FORWARD SPAR (LEFT WING). THE BRACKET APPEARS TO HAVE BEEN INSTALLED TOO CLOSE TO THE SPAR AT MANUFACTURE, CAUSING LOCAL MINOR DAMAGE. REPAIRED LOCAL DAMAGE. INSPECTED ENTIRE LENGTH OF FORWARD AND AFT SPARS IN BOTH WINGS AND FOUND NO OTHER DAMAGE.				
BEECH	LYC	HINGE	MISALIGNED	08/22/2002 78
58	O360*		AILERON	2002FA0001056
DURING ROUTINE MAINTENANCE, TECH NOTICED LT AILERON MISALIGNED WITH TRAILING EDGE OF WING AT AILERON WELL. FOUND THAT OUTBOARD AILERON HINGE BOTTOM ATTACH SCREWS NOT IN HINGE ATTACH HOLES BUT CAUGHT BETWEEN AFT PORTION OF HINGE AND AILERON ATTACH HOLES. SCREWS HAD ENOUGH BINDING FORCE TO FEEL AS THOUGH THREADING IN HINGE ATTACH HOLES, THIS CONDITION CAUSED AILERON MISALIGNMENT. AIRCRAFT PAINTED 12/01 HAD FLIGHT CONTINUES REMOVED AND BALANCED. AIRCRAFT FLEW 78 HOURS IN THIS CONDITION.				
BEECH	CONT	PANEL	SHORTED	08/27/2002 3649
58P	TSIO520*	10238400415	COCKPIT	2002FA0001059
PANEL ON SWITCH PANEL LIGHTING SHORTED WHICH MADE THE INVERTER EMITTED SMOKE INTO THE COCKPIT. BOTH PARTS WERE REPLACED WITH NEW PARTS FROM MFG.				
BEECH	CONT	THROTTLE	BINDING	09/04/2002 100
58P	TSIO520*	640791A5	LEFT ENGINE	2002FA0001078
PILOT REPORTED BINDING OF LEFT ENGINE THROTTLE. INVESTIGATION REVEALED GALLING OF MIXTURE ADJUSTMENT ROD WHERE IT ATTACHES TO THE THROTTLE LEVER, WITH A SIGNIFICANT AMOUNT OF TRANSFER OF METAL FROM THE LEVER TO THE ROD, PREVENTING FULL THROTTLE MOVEMENT. THIS THROTTLE LEVER APPEARS TO BE MADE FROM A MATERIAL DIFFERENT FROM WHAT WAS PREVIOUSLY USED.				
BEECH	LYC	ROD END	SEPARATED	08/13/2002 549
76	O360A1G6D	SL13521	ENGINE	2002FA0000981
METAL CONTAMINATION FOUND IN SUCTION SCREEN AND FILTER. DISASSEMBLY OF ENGINE NOTED BABBIT SEPARATION FROM NR 1 ROD CAP BEARING SHELL. THE REMAINDER OF THE OTHER ROD BEARINGS SHOWED SIGNS OF STARTING TO SEPARATE.				
BEECH		AXLE	CRACKED	09/05/2002 1546
A100		50810318	MLG	2002FA0001089
PISTON/ AXLE ASSEMBLY HOUSING HAS AN INDICATION OF A CRACK ON BOTH SIDES AT THE CASTING LINE. ONE SIDE HAS AN INDICATION APPROXIMATELY 2 INCHES LONG. THE OTHER SIDE HAS AN INDICATION APPROXIMATELY 0.5 INCH LONG THESE INDICATIONS WERE FOUND DURING A ROUTINE 6 YEAR INSPECTION.				
BEECH		SWITCH	BROKEN	07/26/2002
B100		50301008	MLG MOTOR	CA020903005
(CAN) WHILE THE LANDING GEAR WAS BEING STRETCHED, THE LANDING GEAR STAYED DOWN AND THE AIRCRAFT RETURNED TO ITS BASE. SWITCH WAS FOUND BROKEN IN THE CONTROL RELAY IN THE GEAR MOTOR. THE SWITCH WAS REPLACED AND LANDING GEAR RETRACTIONS WERE PERFORMED.				
BEECH	PWA	ISOLATION	DEBONDED	08/21/2002
B200C	PT6A42	9090771S	ENGINE	CA020821002
(CAN) DURING A ROUTINE INSPECTION OF THE RT ENGINE. THE UPPER INBOARD VIBRATION ISOLATOR ENGINE MOUNT WAS FOUND TO BE DEBONDED, THE BACK HALF OF THE RUBBER WAS DEBONDED FROM THE METAL FACEPLATE. THE MOUNT WAS REPLACED AND THE AIRCRAFT RETURNED TO SERVICE.				
BEECH	PWA	BULKHEAD	CRACKED	06/24/2002
B200C	PT6A42		FUSELAGE	AUS20020861
(AUS) LOWER REAR PRESSURE BULKHEAD CRACKED. CRACK IS LOCATED IN THE AREA ONE ROW OF RIVETS DOWN FROM THE LAP JOINT AND DIRECTLY ABOVE THE OUTFLOW VALVE. CRACKING IS SIMILAR TO THAT DESCRIBED IN AD/B200/67 BUT WAS NOT FOUND DURING THE AD CHECK. THE AIRCRAFT HAS 321 CYCLES TO RUN UNTIL THE NEXT INSPECTION IAW AD/B200/67.				
BEECH		CONTROL	DAMAGED	07/16/2002
C90			FUEL PANEL	025686FLTLOG BATTERY
CHARGE LIGHT CAME ON IN FLT, LT BOOST PUMP & LT TRANSFER PUMP CIRCUIT BREAKER POPPED: RESET CIRCUIT BREAKER & LANDED ASAP. UPON INSPECTION FOUND FUEL PANEL DIODES AND WIRING CORRODED. R&R DIODES, CIRCUIT BREAKER AND HARDWARE AND CLEANED CORROSION FROM WIRING AND PANEL AND REINSTALLED PANEL.				
BEECH	PWA	CLEVELANDXXX	BOLT	08/30/2002
C90A	PT6A21	30144	AN37A	CA020903007
(CAN) AFTER LANDING, DISCOVERED BRAKE FLUID LEAKING FROM AFT CALIPER AFT PISTON BORE GUIDE BOLT, CAUSED BY BOLT BEING UNDER TORQUED. PISTON BORE GUIDE BOLT TIGHTENED TO 30 INCH POUNDS PER CLEVELAND MM. BRAKE RESERVOIR TOPPED OFF, BRAKES CHECKED SERVICEABLE. ALL GUIDE BOLTS THIS AIRCRAFT 8 TOTAL TORQUE CHECKED AND 5 OTHERS FOUND BELOW SPECIFIED TORQUE.				
BEECH	LYC	RIB	CRACKED	04/08/2002
D95A	IO360B1B	3516505084	RT TE FLAP	CA020418004
(CAN) THE RIB WAS CRACKED AND BROKEN IN THE NOSE AREA AND THE FORWARD ANCHOR NUT FOR THE FLAP ACTUATOR ATTACH BRACKET WAS BROKEN. WITH THE FLAPS UP THE AME STEPPED ON THE FLAP WALKWAY AND A LOUD NOISE WAS HEARD. HE APPLIED UP AND DOWN LOADS TO THE FLAP AT THE TRAILING EDGE AND THE ACTUATOR ATTACH BRACKET FORWARD ANCHOR NUT AND A PORTION OF THE RIB PULLED THROUGH THE SKIN. THE RIB AND BRACKET WERE REPLACED WITH FACTORY NEW PARTS AND THE SKIN WAS REPAIRED WITH A FLUSH PATCH USING STANDARD SHEET METAL PRACTICES.				
BEECH		WIRE	CORRODED	09/09/2002
E90			FUEL PANEL	A152
DURING INSPECTION OF FUEL PANEL DIODES: FOUND FUEL PANEL DIODES AND WIRING CONNECTION CORRODED: CLEANED, TREATED AND REINSTALLED PANEL.				

BEECH E90	PWA PT6A60A	BOLT 3012534	CRACKED GOVERNOR	09/05/2002 2002FA0001079	5858
RIGHT ENGINE HAD NO REVERSE, FOUND FORWARD REVERSING CABLE/GOVERNOR BLEED LINK BOLT CRACKED AND SPLIT OPEN AT HOLE IN BOLT FOR REVERSING CABLE TO THREAD THROUGH. REVERSING CABLE COULD MOVE FORWARD AND AFT WITHOUT CONTROLLING GOVERNOR. POSSIBLE BOLT HAD BEEN OVERTORQUED IN THE PAST. C/A: INSTALLED NEW BOLT PN 3012534, AND RIGGED CONTROL. (NE032002B6857)					
BELL 205A1	LYC T5313A	BELL 205812001	BOLT 204011151001	CRACKED MAIN ROTOR HEAD	07/09/2002 AUS20020899
(AUS) MAIN ROTOR BLADE BOLT SUSPECT CRACKED. FOUND DURING FLUORESCENT MAGNETIC PARTICLE INSPECTION.					
BELL 206B			FITTING 2060313291	CRACKED TAILBOOM	08/06/2002 2002FA0001070
DURING A 100 HOUR, INSPECTION, THE LEFT UPPER TAILBOOM ATTACH FITTING WAS FOUND TO BE CRACKED. THE CRACK WAS FROM THE LOWER AFT RIVET HOLE, THRU THE UPPER AFT RIVET HOLE, AND EXTENDED TO THE UPPER EDGE OF THE FITTING. (WPO12002B6504)					
BELL 206B	ALLSN 250C20	BELL 206040015	GOVERNOR 104100A13A8	FAILED ENGINE	08/15/2002 CA020830001
(CAN) PILOT NOTICED GOVERNOR OVERSPEEDING BEYOND SET LIMITS AND SHUT DOWN ENGINE. GOVERNOR WAS A REPAIR BY HONEYWELL AUG10/00. W. O. T345030 INSTALLED AUG 09/02 13494. 1) TIME SINCE REPAIR REMOVED AUG 15/02 13503.)3 9. 2 HOURS					
BELL 206L	ALLSN 250C20B	BELL	SUN GEAR 206040662101	CRACKED M/R GEARBOX	07/31/2002 CA020827008
(CAN) CUSTOMER REPORTED TRANSMISSION P/N 206-040-004-101, S/N BMC-45203 TO BE MAKING METAL AT 185. 1 SINCE OVERHAUL. TRANSMISSION RETURNED TO OUR FACILITY FOR TEARDOWN AND INSPECTION. ON TEARDOWN IT WAS FOUND THAT THE SUN GEAR HAD FAILED. THE SUN GEAR WAS INSTALLED NEW AT THE TIME OF OVERHAUL.					
BELL 206L1	ALLSN 250C28B	BELL	SPRING 206040106001	BROKEN INSIDE COUPLING	08/21/2000 CA020905003
(CAN) BROKEN SPRING INSIDE COUPLING. DAMAGE TO SPHERICAL COUPLING AND END CAP. PROBLEM FOUND DURING 600 HR / 12 MTH LUBRICATION.					
BELL 206L3			BEARING 206010443001	ROUGH SWASHPLATE	08/08/2002 YT2R01050763
SWASHPLATE BEARING SERIAL NUMBER F02-09999 IS ROUGH AND HAS A CATCH TO IT WHEN INSTALLED. CAUSED HIGH					
BELL 206L4	ALLSN 250C30P		SHAFT 357950111452	WORN WORN	08/19/2002 YTRR080718
OIL PUMP SPLINES WORN EXCESSIVELY.					
BELL 206L4	ALLSN 250C30P		SHAFT 357950111452	WORN OIL PUMP	08/19/2002 YTRR080719
OIL PUMP SPLINES WORN EXCESSIVELY.					
BELL 206L4	ALLSN 250C30P		SHAFT 357950111452	WORN OIL PUMP	08/19/2002 YTRR080720
OIL PUMP SPLINES WORN EXCESSIVELY					
BELL 212	PWA PT6T3B		ACTUATOR	SEIZED ROTARY	03/22/2002 CA020409003
(CAN) ROTARY ACTUATOR SEIZED AND HAS NO SCHEDULED MAINTENANCE OR CHECK INTERVAL.					
BELL 407	ALLSN 250C20		BLADE 407015001117	DELAMINATED MAIN ROTOR	07/16/2002 2002FA0001006
DURING HEAVY RAINFALL, AIRCRAFT EXPERIENCED VIBRATION ON MAIN ROTOR SYSTEM. PILOT PERFORMED A PRECAUTIONARY LANDING. MECHANIC INSPECTED THE MAIN ROTOR BLADES AFTER SHUT DOWN. MECHANIC FOUND BOTTOM SIDE OF ONE BLADE 2 INCHES AFT OF LEADING EDGE WITH METAL SKIN DELAMINATED FROM COMPOSITE BLADE.					
BELL 407	ALLSN 250C47B	BELL	BEARING 407310102101	SEPARATED M/R HUB	08/28/2002 2002FA0001069
ELASTOMERIC PORTION OF BEARING COMPLETELY DEBONDED FROM BASE. FOUND AT ROUTINE INSPECTION. THIS BEARING IS ONE OF A BATCH OF DEFECTIVE BEARINGS MANUFACTURED BEFORE 1998. RECOMMEND THAT BEARING BE BONDED WITH BETTER MATERIAL OR ADHESIVE.					
BELL 412	PWA PT6T3B	PWA PT6T3BF	HEATER 10544F	LEAKING FUEL HEATER	08/05/2002 AUS20020960
(AUS) FUEL/OIL HEATER LEAKING FROM WELD ON THE TOP OF THE HEATER. NO CRACK OR HOLE WAS VISIBLE USING A X10 MAGNIFYING GLASS.					
CESSNA 152	LYC O235L2C		SPAR 043200115	CRACKED STABILIZER	05/15/2002 CA020904001
(CAN) UPON REMOVAL OF BRACKET TO GAIN ACCESS TO NUT PLATES DISCOVERED THE REINFORCEMENT AND RT SPAR CRACKED ALONG BEND RADIUS UNDER THE BRACKET. CRACKS COULD NOT BE SEEN UNTIL BRACKET WAS REMOVED.					
CESSNA 172	CONT O300*		HINGE PIN 0523807	DAMAGED AILERON	08/22/2002 2002FA0001101
DURING AN ANNUAL INSPECTION IT WAS FOUND THAT THE RIGHT OUTBOARD AILERON HINGE PIN HAD COME OUT OF THE HINGE ABOUT 5 INCHES. ONE COTTER PIN WAS STILL IN PLACE AND THE OTHER COTTER PIN WAS ONLY HALF THERE.					
CESSNA 172K	LYC O320E2D		STRAP 05235221	BROKEN FUEL STORAGE	08/21/2002 AUS20020945
(AUS) LH FUEL TANK REAR STRAP ASSEMBLY LOOSE. RH FUEL TANK REAR STRAP ASSEMBLY BROKEN NEAR THE SCREW END. FOUND DURING INSPECTION IAW CESSNA CONTINUED AIRWORTHINESS PROGRAM 28-30-01.					
CESSNA 172M	LYC O320E2D		SENSOR 0560	FAILED OVER VOLTAGE	08/02/2002 CA020830006
(CAN) - HIGH VOLTAGE LIGHT CAME ON DURING FLIGHT. FLIGHT TERMINATED. COMMUNICATION BY CELL PHONE. OVER VOLTAGE SENSOR FAILED. RESULTED IN DAMAGE TO VOLTAGE REGULATOR AND BATTERY CONTACTOR. ELECTRICAL COMPONENTS REPLACED.					
CESSNA 172M	LYC O320E2D	LYC O320E2D	CABLE S123411	WORN MIXTURE	07/25/2002 AUS20020914
(AUS) MIXTURE CONTROL CABLE INNER WIRE WORN TO LESS THAN 50% OF NORMAL THICKNESS. CABLE DIAMETER WAS 62MM (0. 024IN) INSTEAD OF THE NORMAL DIAMETER 1. 6MM (0. 062IN).					
CESSNA 172M	LYC O320E2D		RISER 17540071	CRACKED ENGINE EXHAUST	08/20/2002 CA020830013
(CAN) FOUND CRACK JUST BELOW THE EXHAUST FLANGE WELD. CRACK HAD PROGRESSED HALF WAY AROUND THE BACK OF THE RISER ASSEMBLY. CRACK WAS FOUND DURING A REGULARLY SCHEDULED INSPECTION. CRACK HAD NOT BEEN VISIBLE AT THE PREVIOUS INSPECTION, SO CRACK DID PROGRESS QUITE QUICKLY. RISER ASSEMBLY WAS REPLACED WITH A SERVICEABLE UNIT, WHILE ORIGINAL WAS SENT IN FOR CORE.					

CESSNA 172N	LYC O320*	SPAR 053200198	CRACKED HORIZONTAL STAB	08/14/2002 2002FA0001035	
CRACKS IN FORWARD OVERLAPPING SPARS FOUND AT LIGHTENING HOLE LOCATED IN CENTER OF HORIZONTAL STABILIZER. 100-HOUR INSPECTION WAS BEING PERFORMED AT THIS TIME. UPON REMOVAL, ADDITIONAL CRACKS WERE FOUND ON THE OVERLAPPING SKIN. THE ADDITIONAL CRACKS COULD NOT BE SEEN UNLESS HORIZONTAL STABILIZER IS REMOVED. PROBABLE CAUSE: HIGH STRESS IN FLIGHT OR PUSHING DON ON OUTBOARD OF TAIL. POSITIVELY SURFACE CORROSION ALSO LOCATED IN THE AREA.					
CESSNA 172P		SEAT TRACK 051418215	WORN COCKPIT	09/11/2002 2002FA0001064	10012
AN INSPECTION OF THE SEAT FRAME REVEALED WEAR BETWEEN THE PEDESTAL FRAMES AND THE TORQUE TUBES. THIS ALLOWED THE SEAT FRAME TO "RACK" FROM SIDE TO SIDE WITH THE WEIGHT OF THE PILOT SITTING IN IT. AT TIMES THIS WOULD CAUSE ONLY ONE SEAT PINTO PARTIALLY ENGAGE THE SEAT RAIL. WIGGLING THE SEAT AROUND WOULD ALLOW BOTH SEAT PINS TO FULLY ENGAGE THE SEAT RAILS. WITHOUT THE WEIGHT OF A PERSON IN THE SEAT THE SEAT PERFORMED SATISFACTORILY. THE AIRCRAFT WAS IN COMPLIANCE WITH AD 87-20-03 R2 AND THE SEAT RAILS HAD BEEN REPLACED 1159 HOURS AGO. THE AIRCRAFT HAD 183 HOURS SINCE ITS LAST ANNUAL INSPECTION.					
CESSNA 172R		LOCK 05142132	WEAK SEAT BACK	07/12/2002 2002FA0000985	
THE LOCK CYLINDER RECLINE MECHANISM BECOMES WEAK OVER TIME. SEAT BACK WOULD RECLINE ABRUPTLY WHEN PRESSURE WAS APPLIED TO THE SEAT BACK, SUCH AS TAKEOFF. THIS COULD CAUSE THE PILOT TO LOOSE CONTROL OF THE AIRCRAFT.					
CESSNA 172R		WIRE HARNESS	CHAFED INSTUMENT PANEL	09/05/2002 2002FA0001037	
WHEN THE PILOTS CONTROL COLUMN WAS PULLED AFT AND ROTATED, THE AILERON CABLE TURNBUCKLES AND ASSOCIATED HARDWARE CHAFED AGAINST A WIRE BUNDLE FORWARD OF THE INSTRUMENT PANEL. THIS CAUSED TWO WIRES FROM THAT BUNDLE TO SHORT OUT AND BREAK, THUS RESULTING IN SPARKS COMING FROM UNDER THE INSTRUMENT PANEL. BOTH FUEL QUANTITY INDICATORS IMMEDIATELY LOST POWER AND WENT TO ZERO.					
CESSNA 172R	LYC IO360A1A	ALTERNATOR 991059111	FAILED ENGINE	08/21/2002 2002FA0001018	116
THE ALTERNATORS INSTALLED ARE FAILING CONSISTENTLY. THEY USUALLY LAST BETWEEN 100 AND 500 HOURS FOR WHATEVER REASON THE RESISTANCE IN THE FIELD CIRCUIT INCREASES TO THE (MEGA OHM) RANGE, RENDERING THE ALTERNATOR TOTALLY INOPERATIVE DUE TO THE NATURE OF THE WARRANTY I AM NOT PERMITTED TO OPEN THE ALTERNATOR TO DETERMINE THE EXACT CAUSE.					
CESSNA 172R	LYC IO360L2A	MANIFOLD	MALFUNCTIONED FUEL SYSTEM	09/19/2002 2002FA0001084	
THE CREW REPORTED A MOMENTARY POWER ROUGHNESS. THE AIRCRAFT FUEL CONTROL SYSTEM AND IGNITION SYSTEM WERE INSPECTED. THE FUEL MANIFOLD WAS REPLACED ALONG WITH 2 INJECTOR NOZZLES. A GROUND OPERATIONAL CHECK WAS PERFORMED. FOLLOWING THAT A FUNCTIONAL CHECK FLIGHT WAS PERFORMED. NO DISCREPANCIES DURING THAT FLIGHT WERE NOTED. THIS OPERATOR HAS MANY 172R AND 172S MODEL AIRCRAFT. THERE HAVE BEEN NUMEROUS MOMENTARY POWER LOSS, ROUGHNESS REPORTS AND IRREGULAR IDLE DIFFICULTIES WITH THIS MODEL AIRCRAFT.					
CESSNA 172S	LYC IO360L2A	BEARING SL16711	SEPARATED ENGINE	08/13/2002 2002FA0000982	974
CONTAMINATION FOUND IN SUCTION SCREEN. DISASSEMBLY OF ENGINE FOUND ONE OF THE CENTER MAIN BEARINGS BABBIT MATERIAL STARTED TO SEPARATE FROM SHELL. DATE CODE ON BEARING IS (07-2000).					
CESSNA 180A	CONT O470K	MOUNT 075100123	CRACKED ENGINE	08/09/2002 CA020830016	59044
(CAN) ENGINE MOUNT HAD BROKEN TUBE JUST ABOVE FISHMOUTH WELD 11 INCHES BELOW UPPER RT FUSELAGE					
CESSNA 180C	CONT O470R	STRINGER 0713006	CRACKED FUSELAGE	08/01/2002 AUS20020820	
(AUS) RT LOWER ENGINE MOUNT STRINGER CRACKED IN LOWER RH RADIUS OF "U" SECTION. CRACK RUNS FROM THE FORWARD EDGE AND ALONG THE AFT BEND.					
CESSNA 182	CONT O470*	RHEOSTAT 04131267	SHORTED INTERNAL	12/03/2001 2002FA0001052	3026
FLYING LOW THROUGH A MOUNTAIN PASS TRIED TO TURN ON INSTRUMENTS LIGHTS. SMOKE IN CABIN. TURNED OFF MASTER. FOUND RESISTOR WINDINGS FAILED. CONTACT ARM BURNED THRU TO CASE. ALSO CIRCUIT BREAKER DID NOT OPEN.					
CESSNA 182Q	CONT O470U	CONT O470U	BEARING SA42720	FAILED RECIPROCATING	07/01/2002 AUS20020937
(AUS) CRANKSHAFT MAIN BEARINGS SHOWED INDICATIONS OF PREMATURE FAILURE. BEARINGS PNO SA 633136 (2OFF) AND PNO SA 642720(6OFF). ENGINE WAS BEING BULK STRIPPED FOLLOWING PROPELLER STRIKE.					
CESSNA 182S	LYC IO540AB1A5	VALVE GUIDE 74230	SEIZED EXHAUST	08/23/2002 2002FA0001046	
NR 2 CYLINDER EXHAUST VALVE SEIZED IN VALVE GUIDE POSSIBLY DUE TO CARBON BUILD UP. NR 2 PUSHROD AND PUSHROD SHROUD WERE BENT. NR 2 EXHAUST PLUNGER ALSO REPLACED AT MFG RECOMMENDATION.					
CESSNA 195	JACOBP R755A2	JACOBP R755A2	SEAL 105413Y	DETERIORATED MAGNETO/DISTRIB	06/04/2002 AUS20020819
(AUS) MAGNETO/DISTRIBUTOR OIL SEAL DETERIORATED AND LEAKING. FURTHER INVESTIGATION ALSO FOUND CONTACTS BURNT AND PITTED. CAPACITOR UNSERVICEABLE.					
CESSNA 208B	PWA PT6A114A	COOLING FAN FN100	FAILED AIR DISTRIBUTION	08/17/2002 CA020820007	
(CAN) AIRCRAFT RETURNED TO BASE DUE TO SMOKE AND ELECTRICAL SMELL IN COCKPIT. ALL AVIONICS EQUIPMENT, WIRING, LIGHTING, RHEOSTATS, INSPECTED SATISFACTORY. FAULT FOUND IN GPS COOLING FAN. THE FAN WAS REPLACED AND THE AIRCRAFT RETURNED TO SERVICE. NO FURTHER EVIDENCE OF SMOKE OR SMELLS IN COCKPIT OCCURRED.					
CESSNA 310R	CONT IO520*	TORQUE TUBE 504501033	CRACKED LT MLG	08/22/2002 AUS20020961	
(AUS) LT MAIN LANDING GEAR TORQUE TUBE CRACKED IN WELDED AREA AROUND THE FORK BOLT. TORQUE TUBE INTERNALLY CORRODED.					
CESSNA 320D	CONT IO520*	TUBE 08421211	FAILED NLG DRIVE	08/22/2002 2002FA0001054	
NOSE GEAR FAILED TO RETRACT ON CROSS-COUNTRY FLIGHT. PILOT LANDED AT DESTINATION WITH MAINS LOCKED, AND HITTING THE NOSE, NOSE GEAR DOORS AND BOTH PROPS (SEVERE) UPON LANDING.					
CESSNA 402B	CESSNA	SWITCH MS252534	FAULTY MLG	08/30/2002 2002FA0001060	
LANDING GEAR WILL NOT RETRACT. DURING NORMAL TAKEOFF, FAULTY SWITCH FOUND ON. SAFETY SWITCH ASSEMBLY ON LT MLG ASSEMBLY. REPLACED SWITCH AND CHECK OPS OK. AIRCRAFT RETURNED TO SERVICE.					
CESSNA 404CESSNA	CONT GTSIO520M	CONT GTSIO520M	STUD 537750	SHEARED RECIPROCATING	07/20/2002 AUS20020911
(AUS) CYLINDER ROCKER SHAFT BOLTS LOOSE. ONE STUD FRACTURED WITH SUBSEQUENT DAMAGE TO THE INLET VALVE PUSHROD AND TUBE.					

CESSNA	CONT	CONT	CRANKCASE	CRACKED	07/07/2002	
404CESSNA	GTSIO520M	GTSIO520M	65411912A2	RECIPROCATING	AUS20020912	1077
(AUS) ENGINE CRANKCASE CRACKED. NO5 CYLINDER REAR HOLD DOWN STUD NUT LOOSENEED LEADING TO FAILURE OF THE OTHER HOLD DOWN NUTS AND SEPARATION OF THE CYLINDER.						
CESSNA	CONT		INDICATOR	LEAKING	07/17/2002	
414A	TSIO520*		C6610550103	COCKPIT	2002FA0000979	
AIRCRAFT LOST GYRO INSTRUMENTS AFTER TAKEOFF INTO IFR CONDITIONS. TROUBLESHOT PROBLEM AND FOUND CO-PILOTS ART HORIZON CASE LEAKING. CABIN PRESSURE DURING CLIMBOUT PRESSURIZED VACUUM SYSTEM CAUSING VACUUM FAILURE.						
CESSNA	CONT		CYLINDER	CRACKED	08/16/2002	
414A	TSIO520*		646657A2	NR 2	2002FA0001016	
UPON LANDING, PILOT REPORTED EXTREMELY ROUGH RUNNING ENGINE ON RIGHT SIDE. INSPECTED AND FOUND NR2 CYLINDER ON RIGHT SIDE TO BE CRACKED ALL THE WAY AROUND CYLINDER BETWEEN HEAD AND BARREL. PILOT ALSO REPORTED ENGINE HAD HIGH CHT JUST BEFORE CHT DROPPED TO (0).						
CESSNA	CONT		SPACER	BURNED	08/23/2002	
421C	GTSIO520L			FUEL CELL	2002FA0000998	
LT ENGINE AUX FUEL TANK ASSY HAS INCURRED HEAT RELATED DAMAGE ON THE ENGINE FIREWALL SIDE. THE FIRE SPACER SCREEN AND THE RETARDANT COATING ON THE TANK ASSY HAS SINGED AND MELTED ALONG THE FIREWALL SIDE AND UNDERSIDE OF ASSY. IN SOME AREAS THE COATING HAS RECEDED EXPOSING THE ALUMINUM LINER. THE VENT LINE FROM THE ENGINE HAS MELTED AN IMPRESSION INTO THE COATING. ADHESIVE USED TO SECURE THE TANK WAS SIMILARLY DAMAGED. DAMAGE IS APPARENT BOTH ON THE TANK BODY AND IN THE CAVITY.						
CESSNA	PWA		CABLE	FRAYED	08/21/2002	
550	PW530A			TRAILING EDGE FL	AUS20020926	
(AUS) TRAILING EDGE FLAP CABLES (14OFF) FRAYED. FLAP CABLE PART NUMBERS ARE:- PNO 6565007-102-1CR, PNO 6565007-100-1CR, PNO 6565007-114CR, PNO 6565007-112CR, PNO 6565007-401, PNO6565007-90CR, PNO 5565150-16CR (2OFF), PNO 5565150-3CR(2OFF), PNO 5565150-2CR, PNO 5565150-4CR, PNO 6565007-97-1CR & PNO6565007-95-1CR. CABLES ARE FRAYED ON THE INSIDE OF A TIGHT BEND RADIUS WHERE THEY ARE ATTACHED TO BELLCRANKS.						
CESSNA	PWA		CABLE	FRAYED	08/08/2002	
560CESSNA	JT15D5		556555037R	AILERON CONTROL	AUS20020952	
(AUS) LH AILERON INTERCONNECT CABLE FRAYED IN AREA WHERE THE CABLE PASSES OVER THE CONTROL COLUMN UPPER PULLEY. PULLEY IS LOCATED APPROXIMATELY 200MM (8IN) BELOW THE CONTROL WHEEL.						
CESSNA	GARRIT		CONTROL	FRAYED	08/28/2002	
650	TFE7313C		626023248	RUDDER	CA020829002	
(CAN) DURING PHASE "A" INSPECTION. MAINTENANCE PERSONNEL WHEN THROUGH THE TAIL CONE AREA TO COMPLETE A VISUAL INSPECTION. ON THE LT SIDE OF THE TAIL CONE TECHNICIAN DISCOVERED THE RUDDER LT OUTBOARD CABLE WAS FRAYED BETWEEN THE PULLEY AND THE SAFETY PIN. CABLE REPLACED & RIGGED RUDDER SYSTEM IAW C650 AMM 27-20-00.						
CESSNA	CONT		SCREW	MISSING	07/29/2002	
A185F	IO520*			ALTERNATOR	2002FA0001002	103
THIS OVERHAULED ALTERNATOR WAS INSTALLED 06/28/02 AT TACH:642. 0. REMOVED 07/27/02 TACH:745. 0. PILOT COMPLAINED OF LOW READING ON AMG GAUGE. UPON INSPECTION OF THE ALTERNATOR, FOUND 1 CASE SCREW MISSING AND THE OTHER 2 COMING OUT OF CASE HALF. THESE SCREWS WERE NOT SAFETY WIRED NOR DID THEY HAVE HOLES FOR WIRE.						
CESSNA	LYC		LINE	FAILED	08/21/2002	
R182	O540J3C5			HYD SYSTEM	2002FA0001026	
WHEN PILOT SELECTED GEAR DOWN AND PRESSURE WAS APPLIED TO DOWN HOSE. THE HOSE FAILED AT THE SWAGED END BLOWING ALL HYDRAULIC FLUID OVERBOARD. RECOMMEND CLOSER INSPECTION OF HOSES AND A MANDATORY TIME CHANGE OR BOTH HOSES. (PN S217840102) DOWN AND (PN S217840096) UP.						
CESSNA	PWA		STATOR	CRACKED	09/05/2002	1755
S550	JT15D4		3040761	TURBINE SECTION	2002FA0001038	1755
AT HOT SECTION INSPECTION THE HT STATOR WAS FOUND TO HAVE AXIAL CRACKS IN SEVERAL PLACES IN THE INNER SHROUD RUNNING FROM THE TRAILING EDGE FORWARD TO 1/2IN. FROM INNER LUGS. AT ONE CRACK THE INNER SHROUD TRAILING EDGE LIFTED UP ENOUGH TO MAKE CONTACT WITH THE HT DISK FRONT FACE IN THE FIR TREE AREA.						
CESSNA	CONT		MAGNETO	CORRODED	08/14/2002	
T210L	TSIO520*		6220	ENGINE	2002FA0000989	
DURING MAINTENANCE, IT WAS NOTED THAT THE MAGNETOS WERE HAVING TROUBLE HOLDING THEIR TIMING POSITIONS. RT MAGNETO WAS DISASSEMBLED AND FOUND THAT THE DRIVE AND DRIVEN GEARS HAD ROTTED TO THE POINT OF LOSING TEETH. NOTED THAT THE CARBON BUTTON THAT RIDES ON THE COIL TAB HAD WORN THROUGH AND THE BUSHINGS THAT SUPPORT THE DISTRIBUTOR GEAR HAD BEEN SEVERELY WORN. ALL OF THE INTERNAL HARDWARE WAS SEVERELY CORRODED. BOTH POINT CAMS WERE BADLY WORN AND THE POINTS WERE WORN TO THE POINT OF BEING INOPERATIVE. DEFECTS WERE FOUND IN RT AND LT MAGNETOS. THE DRAIN FOR MAGNETO PRESSURIZATION FILTER HAD BEEN SILICONED CLOSED.						
CESSNA			HUB	CRACKED	08/19/2002	4390
T310R			D30321	NGL WHEEL	11518	350
WHEEL REPLACED DUE TO THE FACT WE HAVE FOUND MANY HUBS CRACKED ON THREE-PIECE MCCAULEY WHEELS. WE FOUND THE CRACKS AFTER THE WHEEL WAS REMOVED AND COMPLETELY TAKEN APART. RECOMMEND ALL THREE PIECE MCCAULEY WHEELS BE COMPLETELY DISASSEMBLED FOR INSPECTION IMMEDIATELY, AND EACH ANNUAL THERE AFTER OR UNTIL THEY ARE REPLACED WITH A BETTER WHEEL. (IE: TIRE MUST BE REMOVED FROM WHEEL.)WE RECOMMEND CLEVELAND WHEELS AS THEY ARE TWO PIECE WHEELS.						
CESSNA	CONT		GEAR	DAMAGED	08/29/2002	
TU206G	TSIO520M		653631	CRANKSHAFT	2002FA0001030	
DURING PRE-FLIGHT INSPECTION PROPELLER WAS ROTATED BACKWARDS BY HAND TO CHECK COMPRESSION OF CYLINDERS. PROPELLER PHYSICALLY STOPPED BY SOMETHING INTERNAL IN ENGINE. AFTER INSPECTION BY REMOVING THE STARTER ADAPTER ASSEMBLY, THE CRANKSHAFT GEAR WAS FOUND TO BE MISSING ONE TOOTH FROM THE GEAR.						
CESSNA	CONT		WHEEL	CRACKED	07/25/2002	
U206G	IO520F		4075D	WHEEL/SKI/FLOAT	AUS20020859	
(AUS) WHEEL CRACKED ALONG INBOARD EDGE OF BEAD SEAT. CRACK LENGTH APPROXIMATELY 120MM (4. 72IN).						
CIRRUS			GROMMET	DEFORMED	09/10/2002	222
SR22			10209001	MLG	2002FA0001048	
DURING ANNUAL INSPECTION FOUND BOTH MAIN GEAR LEG ATTACH BRACKET GROMMETS SEVERELY CRACKED AROUND FLANGES AND DISTORTED. HAVE FOUND SIMILAR CONDITION ON SEVERAL CIRRUS SR20 AND SR22 AIRCRAFT WITH TOTAL TIME IN SERVICE AS LOW AS 105 HOURS. TOTAL FAILURE OF THE GROMMET WILL RESULT IN DAMAGE TO THE LAMINATED MAIN GEAR LEG THAT WILL RENDER IT UNSERVICEABLE. SUGGEST CLOSE ATTENTION TO THESE PARTS DURING SCHEDULED INSPECTIONS AND AFTER HARD LANDINGS.						

CIRRUS	CONT	PLATE	DELAMINATED	08/30/2002	
SR22	IO550N		FUSELAGE	R895W25	

DURING ANNUAL INSPECTION, FOUND LOWER FORWARD FUSELAGE EXHAUST HEAT PLATE DELAMINATED. FURTHER INSPECTION REVEALED HOT SPOT UNDERNEATH CO-PILOT'S RUDDER PEDAL INSPECTION PANEL ABOVE THE EXHAUST AREA OUTLET. ALSO FOUND VISIBLE LIGHT SHOWING THROUGH THE COMPOSITE STRUCTURE AT THE FIREWALL AND FUSELAGE BELLY. INVESTIGATED AIRCRAFT N225CD, SN: 0031 AND FOUND SAME HOT SPOT CREATED BY THE SHORT EXHAUST SYSTEM. SUSPECT THE EXHAUST TAILPIPE IS TOO SHORT FOR EXHAUST GASES TO CLEAR THE COMPOSITE FUSELAGE LOWER STRUCTURE. CIRRUS CONT GROMMET

DEFORMED	08/16/2002	566			
SR22	IO550N	10209001	MLG	2002FA0001042	

DURING ANNUAL INSPECTION FOUND MAIN GEAR LEG ATTACH BRACKET GROMMETS SEVERELY CRACKED AROUND FLANGES AND DISTORTED. HAVE FOUND SIMILAR CONDITION ON SEVERAL CIRRUS SR20 AND SR22 AIRCRAFT WITH TOTAL TIME IN SERVICE AS LOW AS 105 HOURS. TOTAL FAILURE OF THE GROMMET WILL RESULT IN DAMAGE TO THE LAMINATED MAIN GEAR LEG THAT WILL RENDER IT UNSERVICEABLE. SUGGEST CLOSE ATTENTION TO THESE PARTS DURING SCHEDULED INSPECTIONS AND AFTER HARD LANDINGS.

DHAV	PWA	TORQUE TUBE	CRACKED	08/22/2002	
DHC2MK1	R985AN14B	C2UT473	WATER RUDDER	CA020826010	

(CAN) WATER RUDDER (TAIL WHEEL) TORQUE TUBE FOUND TO HAVE A SPIRAL CRACK ENCIRCLING THE VERTICAL PORTION OF THE TUBE. EXTERNALLY THE TUBE ASSEMBLY SHOWED NO MAJOR DEFECTS. INTERNALLY THE TUBE WAS SEVERELY CORRODED AT THE INTERFACE OF THE TUBE JOINT AND THE WELDED SPLINE SHAFT. THE SUBMITTER SUGGESTS THAT AN INTERNAL CORROSION PREVENTATIVE COMPOUND BE APPLIED BEFORE THE UNIT IS PUT INTO SERVICE. DHAV WSK CYLINDER CRACKED

07/19/2002

DHC2MK2	PZL3S	20330160	EXHT VALVE SEAT	CA020830010	
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(CAN) ON A 100 HOUR INSPECTION, NR 2 & 7 CYLINDER HAD VERY LOW COMPRESSION. AFTER REMOVAL OF BOTH CYLINDERS IT WAS NOTICED THAT THE EXHAUST VALVE SEATS WERE CRACKED. THE CYLINDERS WERE REPLACED AND THE AIRCRAFT WAS RETURNED TO SERVICE. NOTE: THE PILOT DO NOT NOTICE ANY PERFORMANCE LOSS.

GROB	LYC	BRACKET	CORRODED	08/08/2002	1872
G115C	O320*	115C1155	ELEVATOR TRIM	2002FA0001000	

SUBJECT PART IS A BRACKET MOUNTING, A TORQUE TUBE FOR THE ELEVATOR TRIM CONTROL SYSTEM TO THE REAR SPAR OF THE HORIZONTAL STABILIZER, AND WAS BEING REPLACED DURING COMPLIANCE OF MFG SB. PART WAS FOUND WITH SEVERE EXFOLIATION CORROSION OF THE ALUMINUM UNDER THE SURFACE PLATING. POSSIBLY A PROBLEM IN THE FABRICATION OF THE BASE MATERIAL OR THE PART ITSELF. CONDITION OF THIS COMPONENT SHOWS POTENTIAL FOR SAME PROBLEM TO BE FOUND ON COMPONENTS OF SIMILAR CONSTRUCTION ON THIS MODEL AIRCRAFT.

GULSTM	CONT	SPAR	CRACKED	03/27/2002	4592
500A	IO470*		HORIZONTAL STAB	2002FA0001055	

FORWARD SPAR CRACKED IN RADIUS OF BEND. SB COVERS THIS CONDITION.

HILLER	LYC	LYC	SCREW	FAILED	06/14/2002
UH12E	VO540C2A	VO540C2A	STD2208	RECIPROCATING	AUS20020789

(AUS) ENGINE ACCESSORY DRIVE GEAR PNO 67609 TO STARTER DRIVE GEAR PNO 67583 ATTACHMENT STUDS (6OFF) PNO STD-2208 AND DOWELS (3OFF) PNO72139 SHEARED.

HUGHES	LYC	PLUG	MISSING	08/08/2002	1565
269C1	HO360C1A		PULLEY DRIVE	2002FA0001001	

SCHEDULED INSPECTION AND MAINTENANCE, WHILE PERFORMING A COMPRESSION CHECK, IT WAS NOTED THAT THE ENGINE TURNING TOOL WENT INTO THE LOWER PULLEY DRIVE SPLINE FARTHER THAN NORMAL. FURTHER INVESTIGATION REVEALED THE ENGINE DRIVE SHAFT TO BE IMPROPERLY POSITIONED IN THE LOWER PULLEY. THE BELT DRIVE ASSEMBLY WAS REMOVED FROM THE HELICOPTER. EXAMINATION OF THE ENGINE-MOUNTED DRIVE ADAPTER REVEALED THE PN 77416 FORWARD LOWER COUPLING BUMPER PLUG WAS MISSING. THIS PLUG DETERMINES THE POSITION OF THE DRIVE SHAFT IN BOTH THE ENGINE AND THE LOWER PULLEY OF THE BELT DRIVE.

PIPER	LYC	FUEL CAP	BLOCKED	09/06/2002	
PA22150	O320A2A	UNKNOWN	RT TANK	2002FA0001105	

AIRCRAFT WAS AT A CRUISE ALTITUDE OF 1800 FT WHEN ENGINE QUIT RUNNING. MADE AN EMERGENCY LANDING IN A HAY FIELD. FUEL SELECTOR WAS SELECTED ON RT TANK. POST INSPECTION FOUND ORIGINAL TYPE FUEL CAP VENTING WAS BLOCKED (RT TANK). INSPECTION OF FUEL AND OIL SCREENS WERE NORMAL. ENGINE SUBSEQUENTLY STARTED AND RAN NORMALLY. CAUSE OF BLOCKAGE IN FUEL CAP IS UNKNOWN.

PIPER		LINE	BROKEN	08/29/2002	
PA23250		3153600	HYD SYSTEM	2002FA0001068	

DURING LANDING APPROACH, LANDING GEAR FAILED TO EXTEND EITHER NORMALLY OR BY USING HAND PUMP. LANDING GEAR WAS EXTENDED BY USING BLOW DOWN BOTTLE, NOSE AND RIGHT REAR DID NOT EXTEND AND AIRCRAFT WAS SUBSTANTIALLY DAMAGED DURING LANDING. INSPECTION REVEALED THE RIGHT MAIN LANDING GEAR DOWN LINE IN NACELLE HAD FAILED AT THE SLEEVE/FLARE AREA.

PIPER	LYC	BOLT	CORRODED	07/07/2002	5515
PA24	O360*	AN175C33A	STABILATOR	2002FA0001098	

DURING ANNUAL INSPECTION STABILATOR WAS REMOVED FOR FURTHER INSPECTION. THIS IS DUE TO PREVIOUS PROBLEMS ON OTHER PA24 AND PA30 AIRCRAFT WITH STABILATOR TORQUE TUBE AND ATTACHMENT BOLTS WITH EXCESSIVE CORROSION. BOTH BOLTS (PN AN175C33A) THAT ATTACHES THE STABILATOR HORN ASSEMBLY TO THE TORQUE TUBE WERE SEVERELY CORRODED. HORN ASSEMBLY, BOLTS, TOTAL AIRFRAME APPROXIMATELY 5515.0. NO INDICATION THAT STABILATOR HAD BEEN REMOVED PREVIOUSLY. FILED WITH FAA. (SW15200210929)

PIPER	LYC	LYC	BOLT	LOOSE	07/22/2002
PA25235	O540A1D5	O540A1D5	STD2209	RECIPROCATING	AUS20020942

(AUS) ENGINE CRANKSHAFT GEAR RETAINING BOLT LOOSE. THE BOLT HEAD WAS WORN DOWN FROM RUBBING ON THE INSIDE OF THE OIL PUMP DRIVESHAFT. THE CRANKSHAFT GEAR ROTATED ON THE BOLT, SHEARING THE DRIVE DOWEL AND GEAR TEETH. THE LH MAGNETO DRIVE GEAR DAMAGED IN AREA WHERE THE DRIVE COUPLING LUGS CONTACTED THE SIDES OF THE CUSHION RETAINING POCKET. GEAR TOOTH DAMAGE TRANSFERRED BETWEEN GEARS, WITH BROKEN TOOTH FOUND WEDGED BETWEEN THE TEETH OF THE IDLER GEAR. ONE TOOTH BROKEN OFF IDLER GEAR. LH MAGNETO DISTRIBUTOR GEAR TEETH STRIPPED. OIL PUMP HOUSING SCORED. GEAR PNO 13S19647. BOLT PNO STD 2209. CRANKSHAFT PNO 75039.

PIPER	LYC	SKIN	CRACKED	08/20/2002	
PA28180	O360A4A	6206102	RT WING	CA020904010	

(CAN) WINGS REMOVED FOR INSPECTION AFTER HARD LANDING WITH RT WING REMOVED FORWARD AND AFT WING WALKS UNDER UPPER WING SKINS INSPECTED AND CRACKS FOUND AT END RADIUS OF STAMPED STIFFENER SECTIONS. WING WALK FWD RT P/N 62061-02 WING WALK AFT RT P/N 62061-04

PIPER	LYC	FITTING	CORRODED	08/13/2002	
PA28RT201	IO360C1C6		VERTICAL STABILI	AUS20020933	

(AUS) VERTICAL FIN ATTACHMENT FITTING HEAVILY CORRODED. FIN SPAR ALSO CORRODED WITH RIVETS MISSING. PART NUMBERS OF AFFECTED ITEMS:-PNO 86548-02, PNO 78935-27, PNO 35697-02 & PNO 38622-02.

PIPER PA30	LYC IO320*	BENDIX	POINTS 10357174	BURNED MAGNETO	07/01/2002 2002FA0001093	195
DURING ENGINE RUN AND MAGNETO CHECK, MAGNETO WOULD RUN. FOUND POINTS BURNED, PITTED AND WORN. TOTAL HOURS ON ITEM: 195. 0. REPLACED BREAKER POINTS. (SW15200210915)						
PIPER PA30	LYC IO320*		BOLT AN175C33A	CORRODED STAB TORQUE	07/01/2002 2002FA0001095	
DURING ANNUAL INSPECTION STABILATOR WAS REMOVED FOR FURTHER INSPECTION. THIS IS DUE TO PREVIOUS PROBLEMS ON OTHER PA24 AND PA30 AIRCRAFT WITH STABILATOR TORQUE TUBE AND ATTACHMENT BOLTS WITH EXCESSIVE CORROSION. BOTH BOLTS (PN AN175C33A) THAT ATTACHES THE STABILATOR HORN ASSEMBLY TO THE TORQUE TUBE WERE SEVERELY CORRODED. HORN ASSEMBLY, TOTAL AIRFRAME APPROXIMATELY 5050. 0 NO INDICATION THAT STABILATOR HAD BEEN REMOVED PREVIOUSLY. FILED FAA. (SW 15200210910)						
PIPER PA30	LYC IO320B1A	PIPER PA30160	SPAR 2355100	CORRODED WING SPAR	08/21/2002 AUS20020928	
(AUS) LH WING INBOARD SPAR LOWER SPAR CAP ASSEMBLY SEVERELY CORRODED. CORROSION IS INITIATED BY INGRESS OF EXHAUST GASSES THROUGH A FUEL DRAIN HOLE IN A PANEL FORWARD OF THE SPAR. THE FUEL DRAIN IS PART OF CANCELLED AD/PA30&39/20.						
PIPER PA31	LYC TIO540A2B		ENGINE	FLUCTUATES RIGHT	06/06/2002 CA020607018	
(CAN) JUNE 6, 2002. DURING CRUISE FLIGHT BETWEEN YVR & YYJ, THE RT ENGINE FLUCTUATED SLIGHTLY AND LOST POWER, HOWEVER, THE R/H TACH SHOWED OVERSPEED AS THE CREW SHUT THE ENGINE DOWN. THE CREW CONTINUED TO VICTORIA AND LANDED. INVESTIGATION REVEALED THE ENGINE TO BE INTACT WITH NO OUTWARD SIGNS OF FAILURE, HOWEVER, DRIVE BETWEEN THE PROPELLER AND REAR CASE HAS BEEN AFFECTED. THE ENGINE WAS REPLACED WITH A SERVICEABLE ENGINE. THE ENGINE IS IN OUR SHOP AND SHOULD BE OPENED NEXT WEEK TO DETERMINE THE CAUSE OF THE POWER LOSS. ONCE DETERMINED, SUPPLEMENTAL DATA WILL BE SUPPLIED.						
PIPER PA31350	LYC TIO540J2BD		CABLE 4173404	BROKEN ELEVATOR TAB	07/30/2002 AUS20020782	
(AUS) REAR ELEVATOR TRIM CABLE PNO 41734-78 BROKEN AT TRIM SERVO. INSPECTION OF FORWARD ELEVATOR TRIM CABLE PNO 41734-77 DAMAGED DUE TO CABLE OVERRUN ON DRUM.						
PIPER PA31350	LYC TIO540J2BD		PUMP RG9080J4A	FAILED RT ENGINE FUEL	08/14/2002 CA020829010	
(CAN) WHILE TAXIING FOR TAKEOFF, THE RT ENGINE QUIT AFTER TURNING ON EMERGENCY PUMP. FUEL FLOW GAUGE SPIKED UP ON SECOND TRY AND DID THE SAME. FOUND ENGINE DRIVEN PUMP BYPASSING FUEL THRU AIR SIDE OF FUEL INJECTOR. E/D PUMP REPLACED AND OPERATION NORMAL.						
PIPER PA34220T	CONT TSIO360KB	CONT TSIO360KB	EXHAUST 646460	WORN RECIPROCATING	08/07/2002 AUS20020855	1071
(AUS) NO3 CYLINDER EXHAUST VALVE TIP WORN EXCESSIVELY. CORRESPONDING ROCKER DAMAGED ON CONTACT AREA. EXHAUST VALVES PNO 646460 AND INLET VALVES PNO 646459 IN OTHER CYLINDERS ALSO SHOWING SIGNS OF PITTING ON THE TIPS.						
PIPER PA34220T	CONT TSIO360KB	CONT TSIO360KB	PISTON PIN 629690	DAMAGED RECIPROCATING	08/02/2002 AUS20020822	661
(AUS) NO1 ENGINE PISTON PINS (6OFF) HAD SEVERE DAMAGE TO THE ALUMINUM END CAPS. THE END CAPS HAD MIGRATED OUTWARDS AND WERE RUBBING ON THE CYLINDER WALLS. METAL CONTAMINATION OF ENGINE OIL SYSTEM.						
PIPER PA38112	LYC O235L2C	PRESTOLITE MZ4204	DRIVE GEAR	DISINTEGRATED STARTER MOTOR	08/09/2002 CA020814006	
(CAN) PILOT REPORTED NOISE ON TAKEOFF RUN AND ABORTED TAKEOFF. INSPECTION REVEALED DISINTEGRATION OF STARTER MOTOR DRIVE GEAR AND FRONT STARTER BUSHING IN CONTACT WITH SPINNER BACKING PLATE. THE DRIVE GEAR APPARENTLY DID NOT DISENGAGE AFTER STARTUP AND THE ENGINE DROVE THE STARTER MOTOR TO FAILURE. IT APPEARS THE ARMATURE SEIZED ON ITS BEARINGS, THEN THE DRIVE GEAR TRYING TO STILL TURN THE MOTOR PUSHED THE ARMATURE FORWARD ALONG WITH THE NOSE BUSHING INTO THE PERIPHERY OF THE SPINNER BACKING PLATE AT WHICH POINT THE DRIVE GEAR DISINTEGRATED.						
PIPER PA44180	LYC O360*		FLANGE	FAILED AIR BOX	08/02/2002 2002FA0000980	400
THE COMPONENT AS DESCRIBED WAS BROUGHT FOR INSPECTION AND WARRANTY REPAIR DUE TO FAILURE OF MOUNTING FLANGE TO THE TUBE. THE MOUNTING FLANGE SEPARATED FROM THE TUBE IN THE HEAT AFFECTED ZONE OF THE ATTACHING WELD. ADDITIONAL CONDITIONS THAT CONTRIBUTED TO THE FAILURE IS THE TUBE IS BEADED AT THIS ATTACH POINT. THE TUBE BASE MATERIAL APPEARS TO BE STRETCHED AND STRUCTURALLY CHALLENGED DUE TO BEADING OF THE TUBE. THE AIR BOX WAS INSPECTED IAW SB AND NO PROBLEM WAS OBSERVED. AN ADDITIONAL CRACK WAS REPAIRED ON THE MOUNTING EAR OF THE FLANGE.						
PIPER PA44180	LYC O360E1A6		WINDOW 86602	SEPARATED EMERGENCY EXITS	08/18/2002 AUS20020917	
(AUS) EMERGENCY EXIT WINDOW SEPARATED FROM AIRCRAFT. THE EMERGENCY EXIT HAD BEEN REMOVED AND REINSTALLED THREE DAY PREVIOUSLY TO CARRYOUT AD/GEN/37 (EMERGENCY EXIT INSPECTION). THE WINDOW SEPARATED DURING THE FIRST FLIGHT FOLLOWING THE INSPECTION. INVESTIGATION FOUND THAT THE FORWARD LOCKING LUG MAY NOT HAVE BEEN COMPLETELY ENGAGED. THE CORRECT LOCKING OF THE FORWARD LUG CANNOT BE POSITIVELY CONFIRMED AS THERE IS NO INSPECTION HOLE.						
PIPER PA46350P	LYC TIO540*		ROD 83699003	BROKEN NLG	09/10/2002 2002FA0001092	
NOSE GEAR EMERGENCY EXTENSION DOWN SPRING ROD. BROKEN AT 71 CYCLES DUE TO INFERIOR WELD OF THE FITTING ON THE END OF THE ROD. VIOLENTLY SEPARATES FROM THE AIRCRAFT WHEN EITHER END BRAKES.						
PIPER PA46500TP	PWA PT6A42		BREATHER	CHAFED ENGINE	08/05/2002 CA020821006	
(CAN) ENGINE BREATHER, ENGINE ACCESSORIES DRAIN MANIFOLD HAS CHAFED THROUGH ABOUT 50 PERCENT OF THE TUBE WALL THICKNESS PRETTY MUCH ALL AROUND. BREATHER IS CHAFING ON CIRCUMFERENCE OF THE HOLE IT GOES THROUGH IN THE COWLING. THERE IS NO GROMMET, IT IS JUST A HOLE IN THE ALUMINUM SKIN WITH A TUBE GOING THROUGH IT WITH LITTLE CLEARANCE. THE TUBE IS NOT SUPPORTED VERY MUCH AND VIBRATES A LOT.						
ROBSIN R22BETA	LYC O320B2C	LYC O320B2C	OIL FILTER CH48108	SEPARATED RUB FLAPPER VLV	08/19/2002 CA020828004	
(CAN) AIRCRAFT HAD OIL PRESSURE FLUCTUATIONS IN CRUISE AND RETURNED TO BASE. GROUND RUNS CONFIRMED LOW OIL PRESSURE AT IDLE. OIL FILTER WAS CUT OPEN & THE RUBBER FLAPPER VALVE WAS FOUND LOOSE AND MISSING AT 3/8" X 3/8" PIECE. MISSING PART WAS FOUND IN OIL PRESSURE REGULATOR. ALL PARTS OF RUBBER WERE FOUND. OIL FILTER REPLACED AND AIRCRAFT RETURNED TO SERVICE. NOTE: OIL FILTER SYSTEM IS A AIRWOLF FILTER STC NUMBER SH1052WE						
ROBSIN R22BETA	LYC O360*		SWITCH V31001	FAILED ACTUATOR	08/28/2002 2002FA0001061	24
ENGINE WOULD NOT CRANK, NOR WOULD CLUTCH ENGAGE (BELT TENSION MOTOR WOULD NOT ENERGIZE); ELECTRIC POWER DID NOT PASS THROUGH A NORMALLY CLOSED SWITCH IN THE ACTUATOR ASSEMBLY. REMOVED ASSEMBLY FROM AIRCRAFT; REMOVED SWITCH FROM ASSEMBLY. THE SWITCH WAS INOPERATIVE AND HAD LOOSE COMPONENTS RATTLING INSIDE ITS CASE.						

SKRSKY	TMECA		WIRE	SHORTED	09/06/2002	1694
S76C	ARRIEL1S1			A/C COMPRESSOR	2002FA0001039	

DURING A SCHEDULED PART 91 PAX CARRYING FLIGHT, THE CREW NOTICED THE AUTOPILOT AND EFIS SYSTEM DROP OFF LINE MOMENTARILY. THE AMMETER PEGGED OUT AT 300 AMPS PRIOR TO THE AIR-CONDITIONING SYSTEM FAILING. AFTER THEIR SCHEDULED LANDING AND SUBSEQUENT TROUBLESHOOTING, IT WAS DETERMINED TO BE AN ELECTRICAL SHORT OF THE AIR-CONDITIONING COMPRESSOR MAIN POWER SOURCE WIRE. THE WIRE CHAFFED AGAINST THE EDGE OF THE COMPRESSOR MOTOR WHICH DESTROYED THE MOTOR, RELAYS AND WIRE. OUR MAIN CONCERN IS THAT THE 130 AMP CURRENT LIMITER (FUSE) DID NOT BLOW. THE POWER SOURCE WIRE (3/8 INCH DIAMETER) MELTED COMPLETELY THROUGH WHICH OPENED THE CIRCUIT. A DESIGN CHANGE SHOULD BE INTRODUCED TO ELIMINATE ANY FUTURE OCCURRENCES.

SNIAS	TMECA		BRUSHES	FAILED	08/01/2002	2922
AS350B2	ARRIEL1D1			STARTER GEN	2002FA0001004	

PILOT REPORTED ELECTRICAL SYSTEM FAILURE AND ACCOMPLISHED AN EMERGENCY LANDING AT AIRPORT. REMOVED STARTER/GENERATOR, SUBSEQUENT INSPECTION REVEALED ONE SET OF BRUSHES HAD FAILED. THE RESULT OF THIS WAS A GRADUAL DROP OF OUTPUT COMPENSATED FOR BY THE AIRCRAFT BATTERY UNTIL THE BATTERY WAS DEPLETED. SNIAS TMECA

MOTOR	WORN	05/20/2002				
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AS350B3	ARRIEL2B		9696	OIL COOLER FAN	CA020830014	
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(CAN) ON SHUTDOWN PILOT HEARD FAN MAKING A DIFFERENT SOUND. ON INSPECTION OF FAN, IT WAS FOUND TO BE LOOSE. INDICATING WORN ARMATURE BEARING JOURNALS. AT THIS TIME A NEW DC MOTOR WAS INSTALLED. ON TEAR DOWN OF MOTOR IT WAS FOUND THAT IT NEEDED 2 NEW BEARING 4 NEW BUSHING 1 ARMATURE - WORN JOURNALS

ZLIN	LYC	SLICK	RIVET	LOOSE	08/20/2002	
Z242L	AEIO360A1B6	4372	M3100	IMPULSE	CA020904011	

(CAN) AFTER TWO COMPLETE IMPULSE COUPLING FAILURES WHICH RESULTED IN THE ENGINES BEING REMOVED FOR REPAIR, IT WAS DECIDED THAT AT EVERY 100 HOUR INSPECTION THE LT MAGNETO WOULD BE REMOVED AND THE IMPULSE COUPLING INSPECTED. ON THIS IMPULSE COUPLING ONE PAWL RIVET WAS LOOSE AND COULD BE EASILY ROTATED. THE PAWL GAP WAS NOT BEYOND LIMITS IN ACCORDANCE WITH UNISON 4300/6300 SERIES MAINTENANCE AND OVERHAUL MANUAL L-1363 CHAPTER 3 SECTION 3. 3. 4B. THE IMPULSE COUPLING WAS REPLACED WITH A NEW ONE. THE 100-HOUR INSPECTION INTERVAL ON THE IMPULSE COUPLINGS WILL BE CONTINUED AS COMMON PRACTICE.

ZLIN	LYC	MUHBR	BEARING	WORN	08/28/2002	
Z242L	AEIO360A1B6		A915B	PROP HUB	CA020904012	

(CAN) T57006 PROPELLER REMOVED AT SCHEDULED 100-HOUR INSPECTION. DURING ROTATION OF PROP BY HAND AN OBJECT COULD BE HEARD TUMBLING AROUND INSIDE HUB. NOTE THAT JUST PRIOR TO REMOVAL OF THE PROP A REPORT WAS RECEIVED STATING THAT THE PROPELLER WOULD NOT RETAIN ITS SETTING AND WOULD KEEP UP BY 200 - 300 RPM. HUB BLADE BORES WORE ENOUGH FOR GREASE TO LEAK OUT OF PROP. BALL BEARING SEPARATORS WORE AND CAME OUT OF BEARINGS. BALLS WOULD THEN CONTACT EACH OTHER GIVING SOUND OF RATTLING.

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Enter pertinent data MANUFACTURER MODEL/SERIES SERIAL NUMBER						
2. AIRCRAFT						OTHER COMMUTER FAA MFG. AIR TAXI MECH. OPER.
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/App'l Name	Manufacturer	Model or Part No.	Serial Number			
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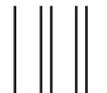
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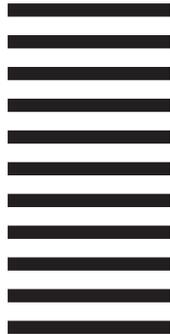
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