



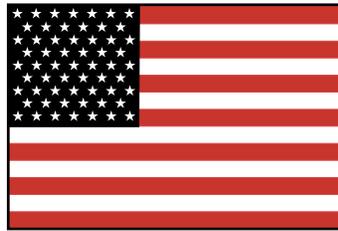
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AVIATION MAINTENANCE ALERTS



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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

FEATHERING OF PISTON TWIN ENGINE PROPELLER INSTALLATIONS

Recently the FAA received a Safety Recommendation on a small piston powered twin engine aircraft. The Safety Recommendation was generated as a result of an accident involving inappropriate management of the flight after the pilot encountered a blocked propeller that could not be feathered.

The FAA contacted the manufacturer of the accident aircraft and type club representative to discuss the potential for additional accidents of a similar nature involving a propeller that could not be feathered either with or without engine rotation. The aircraft manufacturer and the FAA agreed that there was information in the Pilots Operating Handbook (POH) and the FAA Approved Aircraft Flight Manual (AFM) relative to warning the pilot of the consequences of single engine operation with a windmilling (blocked) or non-feathered propeller. However, the manufacturer agreed to emphasize the critical operational configuration of the windmilling/blocked propeller on an inoperative engine by "duplicating, or moving, this warning to other places" in the POH/AFM. This article is being published to emphasize to pilots the important details concerning this subject. If a small, wing mounted, piston powered, twin engine airplane is configured with a propeller on an inoperative engine that is not feathered it is very possible that this airplane will not be capable of sustaining level flight at any altitude. Also, any in-flight engine out configuration that involves operation of the airplane with a non-feathered propeller will decrease the engine(s) out glide distance.

The Safety Recommendation identified above included information on potential sources of blocked propellers on piston powered propeller driven airplanes. These include failed crankshafts and those induced by pilots failing to feather a propeller before it windmills down to a speed that results in the engagement of the start locks. Blocked propellers will also result if pilots do not recognize the consequences of attempting an engine restart. A restart attempt might result in the engagement of the start locks without the possibility of their releasing a windmilling or blocked propeller if a restart is not obtained. Failure to properly accomplish the preflight procedures that should be published in the POH/AFM applicable to feathering checks could also result in pilots encountering situations that result in a windmilling or blocked propeller.

The FAA is presently encouraging airplane manufacturers to consider expanding information in the POH and AFM manuals to increase pilot awareness to the importance of verifying the capability of the propeller to feather during preflight checks as well as providing additional information on in-flight

operations involving a windmilling/blocked propeller. Maintenance personnel are also cautioned to be alert during routine inspections of propeller installations to ensure that the start lock (centrifugal, pressure, and inertia latching provisions), installed on wing mounted piston twin engine airplanes, are being maintained in an airworthy manner.

Any comments that may be received on this subject will be used to assist the FAA in determining if additional advisory or regulatory changes are necessary.

BEECH

Beech; Model V35A; Bonanza; Severe Structural Corrosion; ATA 5313

The aircraft owner asked a repair facility to refurbish and clean the lower fuselage area under the floorboards.

When the technician removed the floorboards, it appeared the floorboards had not been taken up since the aircraft was new. He removed the large floorboard section, just aft of the wing spar, and found severe structural corrosion on the two center/middle channel assemblies (P/N's 95-420015-49 and -50). These channels are used to accommodate mounting for seat rails. The corrosion had progressed to the extent that one channel had a 2-inch section completely consumed, and the other channel had a 1-inch section completely consumed. (Refer to the illustration.) He speculated dissimilar metals, the steel attachment screws, and the aluminum channels contacted each other and caused the corrosion.



From this report, it seems evident that past inspections were not properly accomplished. This area should be inspected and discrepancies repaired during each annual inspection. A word to the wise should be sufficient.

Aircraft total time not reported.

Beech; Model A36; Bonanza; Defective Engine Starter Drive; ATA 8011

While attempting to start the engine prior to flight, the starter would not crank the engine.

The technician discovered the starter drive was severely galled, heat damaged, and seized. He was familiar with the maintenance history of this aircraft and stated this was the fifth starter drive failure in the past 300 hours of operation. This finding, along with the aircraft history, prompted him to investigate further.

The technician discovered the oil galley for the starter drive was plugged, and he could not clean it. Normally, the oil galley supplies lubricating oil for the starter drive from the rear camshaft bearing. After disassembling the engine, he found the entire length of the galley plugged with a "Silicone" type substance. He did not find any other "Silicone" inside the engine. He suspected the "Silicone" was injected into the oil galley, probably during the last engine overhaul. The last engine overhaul was

accomplished 8 years and 300 operating hours prior to this occurrence. He found further damage inside the engine including destruction of the crankcase and oil pump bearing surfaces along with large amounts of steel in the oil sump.

The technician attempted to contact the repair station that performed the previous engine overhaul; however, the repair station is now out of business.

Engine time since overhaul-300 hours.

Beech; Model 65-B80; Queen Air; Severe Rudder Corrosion; ATA 5550

During an annual inspection, the technician discovered severe corrosion on the rudder attachments.

The upper and middle rudder attachment fitting plates (P/N's 96-640000-93 and -97) displayed exfoliation of corrosion products. These plates retain the pivot bearing for operating the rudder. The upper attachment plate was completely consumed by the corrosion, and the attachment to the vertical stabilizer was severed. When the upper attachment failed, the rudder moved approximately 6-inches outside the normal plane of rotation.

This condition might lead to the rudder separating during the next flight and possibly a loss of aircraft control. The submitter speculated that insufficient or infrequent inspections allowed the corrosion to progress to the extent found. It seems plausible that the aircraft had not been flown for a long period of time.

Part total time-3,279 hours.

Beech; Model E90; King Air; Pressurization System Defect; ATA 2130

After returning from a flight, the crew delivered the aircraft to a maintenance facility and reported the cabin pressurization system differential pressure was low.

The technician found the "outflow valve" (P/N 103598-2) cone would "hang up" intermittently. He removed and replaced the "outflow valve." He disassembled the old valve to determine the cause for the defect. He found the guide pin, used to align the cone in the valve assembly, was broken.

The submitter could not determine a cause for the guide pin failure.

Part total time over 5,000 hours.

Beech; Model BE99; Airliner; Rudder Pedal Defect; ATA 2720

While conducting a scheduled inspection, the technician discovered the rudder pedal pivot holes were severely elongated.

The technician believed the hole elongations were caused by "normal wear" and possibly inadequate lubrication. After removing and replacing the rudder pedal arm (P/N 50-524326-9), he lubricated the entire assembly. Considering the high number of operating hours on this aircraft, the defect found does not seem unusual. However, operators of like aircraft with a high number of operating hours should be alert for this type of defect during inspections and maintenance.

Aircraft and part total time-38,272 hours.

Beech; Model A100; King Air; Engine Fire Detection System Anomaly; ATA 2610

The flightcrew reported that during flight, they experienced a “Fire Warning” indication on the right engine. The pilot shut down the engine and made a safe single-engine landing.

The technician conducted tests and inspections and determined the fire warning was a false indication. He traced the cause of the problem to wet electrical wire insulation, which contributed to electrical power bleeding into the fire warning indicating system. Electrical power from the auto-ignition system wiring bled through the wet insulation and was inducted into the fire warning system. These wires are located in a main wire bundle for the right engine just forward of the firewall.

After separating the wire bundle and drying the wires, the technician used “Heat Shrink” to further insulate the wires, and the system tested satisfactorily. This finding prompted the technician to check another like aircraft. Using a “multi-meter,” he discovered there was no stray electrical voltage in the DRY wire bundle. However, when he sprayed the wire bundle with water, he found stray voltage seeping through the insulation of the wires.

The submitter suggested that all operators of like aircraft be aware of this anomaly and take precautions to exclude moisture from this wire bundle.

Aircraft total time-15,754 hours.

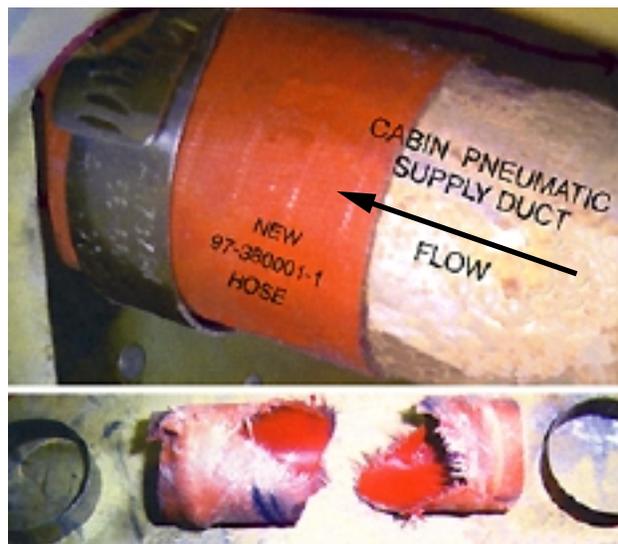
Beech; Model 100; King Air; Inefficient Cabin Pressurization System Operation; ATA 2120

While troubleshooting a flightcrew report of poor cabin pressurization system operation, the technician discovered that an air supply line had failed.

The hose (P/N 97-380001-1), located in the left engine airline supplying air to the cabin, was completely separated. (Refer to the illustration.) Failure of the hose eliminated input air to the cabin from the left flow pack. The technician stated the “cure date” on the hose was not readable; however, it appeared the hose failed due to excessive age. Other similar hoses in the system had “cure dates” ranging from 1976 to 1996. The manufacturer’s technical data lists a life limit of 5 years for these hoses.

The location of the failed hose makes proper inspection very difficult, and the submitter believes they are commonly overlooked during scheduled inspections. He recommended that maintenance personnel expend the extra effort necessary to properly assess the condition of the pressurization system hoses during inspections. He also suggested strict adherence to the established life limits.

The age of the hose was in excess of 5 years.



Beech; Model 200; King Air; Improper Hydraulic System Filter Installation; ATA 3230

While conducting a scheduled inspection, the inspector discovered a hydraulic system filter was improperly installed.

The filter (P/N 30579), intended for use in the landing gear emergency system hand pump suction line, was installed in the powerpack fill line. This report gave no details concerning how this mistake was made.

The submitter suggested that all technicians exercise rigorous attention to detail during maintenance and inspections.

Part total time-611 hours.

Beech; Model 400; Beechjet; Defective Engine Igniters; ATA 7421

During a scheduled inspection, the technician found the engine igniters were defective.

After removing the igniters (P/N FHE246-4), the technician determined that all four units were not airworthy. The center electrodes were loose and moved "side to side" and "fore and aft." When lightly shaken, the electrode "rattled" inside the igniter.

The maintenance records revealed that two of the igniters were installed in each engine during the previous scheduled inspection.

Part total time-184 hours.

Beech; Model 1900C; Airliner; Landing Gear Malfunction; ATA 3230

The crew reported the right main landing gear would not retract during the aftertakeoff climb.

The technician discovered that even though the right main landing gear actuator (P/N 114-380041-5) was being supplied with hydraulic pressure, it would not extend the gear. After he removed the actuator and conducted a bench test, he discovered the actuator was internally bypassing hydraulic fluid pressure.

The submitter did not give a cause for the actuator.

Part total time not reported.

BELLANCA**Bellanca; Models 14-19, 14-19-2, and 14-19-3; Cruisemaster; Elevator Trim Tab Flutter; ATA 2731**

This article is a revision of a previous article published in this publication in May 1998, Alert number 238.

This article was submitted by the FAA Aircraft Certification Office (ACO), ACE-115C, located in Chicago, Illinois.

Five reports have been investigated concerning in-flight tail flutter and/or vibration problems. Bellanca and the ACO are concerned that Airworthiness Directive (AD) 53-16-1 and Bellanca Service Bulletin (SB) 1 may not be adequate to prevent further trim tab failures. The trim tab forward tube, actuator arm and taper pin may be damaged by over-tightening. Over-tightening the taper pin may be

the cause of some flutter/vibration problems. Special attention should be given to the taper pin fastener. If any damage is found, it is suggested that the entire trim tab assembly be replaced prior to next flight.

Earlier Bellanca models may not be affected; however, they should be inspected for the conditions previously stated. Bellanca models 14-19-3A and the 17 series have different trim tab systems and should be inspected in accordance with AD 68-23-8 and Bellanca SB's 45 and 46.

It is recommended that all operators of like aircraft immediately inspect the elevator trim tab system in accordance with AD 53-16-1, Bellanca SB 1, and Bellanca Service Letter (SL) number B-109, dated September 2001. Service Letter B-109 provides instructions for a more detailed inspection of the trim tab system, procedures to replace worn and/or damaged parts, and guidance for keeping the airplanes in service. It should be noted that the FAA has not received any further reports of in-flight tail flutter and/or vibration problems of these airplanes since the last report of July 11, 1994.

Part total time not applicable.

CESSNA

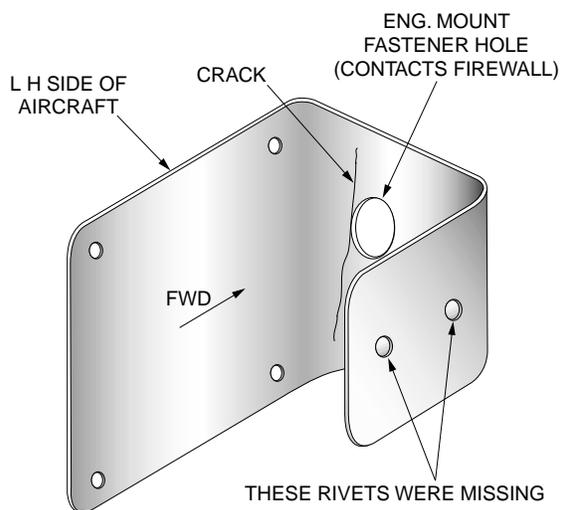
Cessna; Model 172RG; Cutlass; Firewall Crack; ATA 5412

During an engine change, the technician removed the engine mounts for inspection.

The technician discovered the upper left engine mount bracket (P/N 2413024-11) was cracked at the mount fastener hole. (Refer to the illustration.) The inboard two rivets, used to attach the bracket to the longeron hat section, were missing. He speculated the missing fasteners caused the crack.

The submitter recommended inspecting this area for the presence of all fasteners at every opportunity.

Part total time-6,324 hours.



Cessna; Model 172R; Skyhawk; Defective Flight Instrument; ATA 3422

A pilot reported the directional gyro “tumbled” in flight and would not re-erect.

A technician could not find a defect with the instrument air supply. After he removed and replaced the directional gyro instrument (P/N 10149-015-9), the system functioned properly.

The submitter reported seeing several like gyro instruments that have failed prematurely. He stated, "This does not inspire confidence during instrument meteorological conditions (IMC)."

Part total time-295 hours.

Cessna; Model 172S; Skyhawk; Defective Propeller Spinner; ATA 6113

While conducting a postflight inspection, the technician discovered the propeller spinner bulkhead was cracked.

The corner of the spinner bulkhead assembly (P/N 0550321-10) was completely ripped away, and the edge of the spinner was beginning to peel up. (Refer to the illustration.) The submitter suspects this defect was caused by a manufacturing defect.



The FAA Service Difficulty Program data base contains three additional reports concerning propeller spinner defects. The part total times for these reports are 143, 50, and 41 hours operating time. Considering the low number of operating hours for these failures, it seems appropriate to conduct frequent and rigorous inspections of the propeller spinner assembly.

Part total time-42 hours.

Cessna; Model 175; Skylark; Defective Electrical Wiring; ATA 2400

The aircraft owner asked a repair facility to "clean up" the electrical wiring behind the instrument panel.

After a look behind the instrument panel, the technician immediately disconnected the aircraft battery. The wiring was in a complete state of disarray and presented the distinct possibility of electrical short and/or fire.

The technician found exposed solder splices in electrical power feed wires, there were four splices and one inline fuse in less than 16 inches of wire (18 AWG) length. He also discovered several wires were twisted together, poorly soldered, and poorly connected to the avionics master switch. The wiring was routed in a haphazard way and not properly supported. He also found several less serious defects.

The submitter did not give information concerning the origin of this defect; however, it seems inconceivable that an FAA Certified A&P technician would produce such poor and dangerous workmanship.

Aircraft total time-1,905 hours.

Cessna; Model 182Q; Skylane; Flightcrew Restraint System Failure; ATA 2510

After returning from a flight, the pilot reported the copilot's shoulder harness inertia reel "locked up" and would not release.

A technician determined the coil spring, that is inside the inertia reel housing, had broken and jammed the roller. The "date stamp" (0401) on the inertia reel assembly (P/N 503096-401-1023) indicated it was

manufactured in April 2001, it was installed on this aircraft on June 1, 2001, and it failed on the date of this report, June 7, 2001.

The submitter recommended performing a functional test of the inertia reel assembly during preflight and postflight inspections.

Part total time-3 hours.

Cessna; Model 320F; Skynight; Landing Gear Failure; ATA 3232

An aircraft incident occurred when the pilot could not extend the nose landing gear prior to landing.

The technician investigated the incident and discovered the left nose gear door was jammed into the wheel well, the door linkage was separated, and the bellcrank was broken. He determined the incident occurred when the left nose gear door actuating rod attachment clevis pin “fell out.” When the gear was retracted, the door became entangled. The gearbox continued to exert pressure to retract the gear and it jammed into the wheel well. The excessive pressure also caused the bellcrank (P/N 0842102-2) to fail. He recovered the door retention pin and discovered that it was a cowling safety pin (P/N AN 416) instead of the proper clevis pin (P/N MS20392-2C11).

The submitter stated the use of proper parts would solve type of defect.

Part total time-3,644 hours.

Cessna; Model 340A; Fuel Leak; ATA 2820

The aircraft owner reported a fuel odor inside the aircraft and asked a technician to investigate.

The technician discovered the fuel crossfeed line beneath the floor was seeping fuel through several “pin holes.” This fuel line (P/N 5300108-41) is routed from the left main fuel tank under the floor to the right fuel selector valve. It appeared the “pin holes” were caused by corrosion. After replacing the line, he cut the old line open and found the corrosion originated inside the line. He believes water accumulated inside the line, and the fuel system sump drains were not used for an extended period of time to remove the water. If the fuel line broke, there was no way to shut off the fuel supply coming from the tank.

Any aircraft fuel leak poses a very serious hazard to flight safety and should be given due respect and attention. The submitter suggested giving more attention to checking all the fuel sump drains for the presence of water.

Part total time-3,792 hours.

Cessna; Model 402B; Businessliner; Fuel Tank Bulkhead Cracks; ATA 5712

While conducting a scheduled inspection, the technician discovered a crack in the left main fuel tank aft bulkhead.

The crack was located in a bend radius on the inboard side of the bulkhead (P/N 0823400-63). The technician inspected the right main fuel tank bulkhead and found a similar defect at the same location.

This operator has a fleet of four like aircraft and out of the eight main fuel tank aft bulkheads they found six cracked in essentially the same manner. In each case, they replaced the bulkhead. These failures occurred on aircraft with operating times between 4,000 and 12,000 hours.

The submitter speculated the bulkheads are not structurally sufficient to bear the loads imposed during flight. This is especially true when the aircraft is landed with full main fuel tanks. He recommended that the manufacturer consider designing a reinforcement kit for the existing bulkhead or design a new bulkhead constructed of more substantial material.

Part total times are as given above.

Cessna; Model 414; Fuel Tank Bulkhead Crack; ATA 2820

During an annual inspection, a technician discovered a crack in the left tiptank bulkhead.

The crack was approximately 2 inches long and extended through the bend radius. The defect was located .25 inch above the top rivet hole used to attach the forward doubler to the bulkhead (P/N 0823400-109). The submitter reported finding a similar defect on a Cessna Model 340A aircraft. As reported in previous editions of this publication, Cessna Model 310 aircraft are also susceptible to cracking in this area.

The submitter suggested inspecting this area closely, since it appears to be subject to high stress loads.

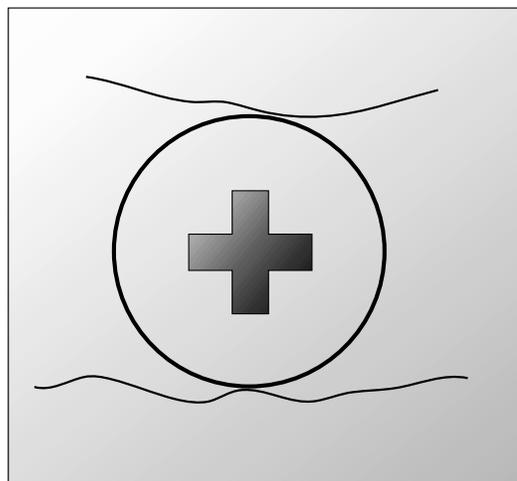
Part total time-4,896 hours.

Cessna; Model C550; Citation; Aileron Structural Defect; ATA 5751

During a scheduled inspection, the technician removed the aileron and discovered a structural defect associated with the balance weight.

After removal of the aileron (P/N 6524126-3) leading edge skin, the technician found two parallel cracks adjacent to a loose balance weight attachment screw (P/N MS24694S62). The cracks were approximately .5 inch long and were located on either side of the screw. (Refer to the illustration.) The technician inspected the right aileron and found two loose balance weight attachment screws; however, cracks had not developed.

The submitter suspects the small diameter nuts and washers, used to secure the aileron balance weights, are not sufficient for the loads imposed during flight. This is the third occurrence of this defect he has found in this operator's fleet of like aircraft.



Part total time-7,856 hours.

GRUMMAN AMERICAN

Grumman American; Model AA-5; Traveler; Defective Aileron; ATA 5751

During a flight, the pilot noticed the right wing seemed heavy. After landing the aircraft safely, he inspected the aircraft and found the right aileron was detached from the wing at the outboard end.

A technician discovered the right outboard aileron hinge (P/N 902010-504) point was broken and separated. The aircraft is normally parked outside on a ramp. He speculated the damage was caused by high winds.

The aileron was in imminent danger of complete separation from the aircraft, which could cause loss of aircraft control. If a thorough preflight inspection was conducted, this defect should have been discovered before flight.

Part total time-1,773 hours.

PIPER

Piper; Model PA 18-150; Super Cub; Defective Exhaust System; ATA 7800

During a scheduled inspection, the technician discovered the engine exhaust system was cracked.

The exhaust system "Y" pipe was cracked adjacent to the weld and was in danger of separation. After removing the "Y" pipe, the technician discovered the inner baffle was also cracked. Some of the exhaust system replacement parts are difficult or impossible to obtain.

The engine exhaust system deserves close attention during inspections and maintenance.

Part total time-538 hours.

Piper; Model PA 28-161; Warrior; Engine Starter Malfunction; ATA 8011

The pilot reported that the starter continued cranking the engine after the key was removed. He also reported the starter turned the engine anytime battery power was present.

During an investigation, a technician discovered the wrong starter solenoid (P/N 71-109225-2) was installed. A review of the aircraft maintenance records revealed the starter solenoid was installed as original equipment when the aircraft was manufactured. After removing and disassembling the starter solenoid, he discovered the electrical contacts were welded together.

The submitter operates a flight school and maintains approximately 40 like aircraft. The correct starter solenoids (P/N's 26898-03 or 487152) were installed on the remaining fleet of aircraft.

Part total time-2,109 hours.

Piper; Model PA 30; Twin Comanche; Defective Induction Airbox; ATA 7160

The pilot lost directional control of the aircraft during takeoff. The aircraft departed the runway, and the resulting aircraft damage required completion of an incident report. The pilot reported the right engine would not develop full power during the takeoff run.

The technician discovered the alternate airbox (P/N 23810-000) door was loose in the air induction system and restricted airflow to the intake. He inspected the left engine air induction system and found the alternate air door in the bottom of the cowling.

The submitter suggested the manufacturer redesign the engine induction system to eliminate this type of defect.

Part total time not reported.

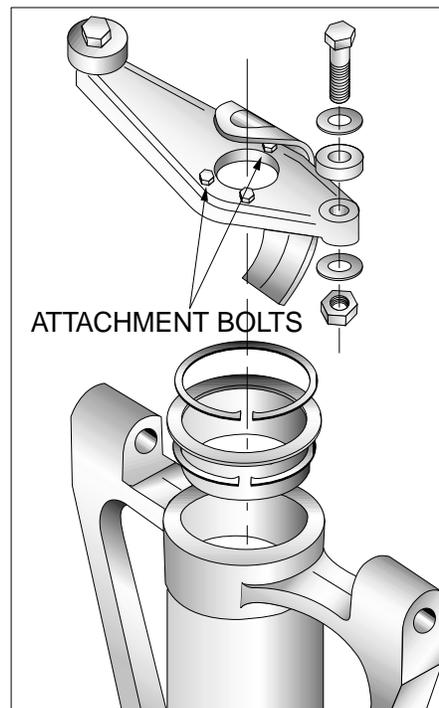
Piper; Model PA 31T1; Cheyenne; Nose Gear Steering Failure; ATA 3251

The pilot reported losing directional control after landing the aircraft. Before he could stop the aircraft, it departed the runway. This resulted in an aircraft incident and damage to the aircraft.

A technician discovered the nose gear steering arm (P/N 44386-00), attached to the top of the nose gear strut (P/N 45333-07) housing, had separated. It appeared the attachment bolts had loosened before they sheared. (Refer to the illustration.) He did not give a reason for the attachment bolts loosening.

The submitter recommended checking for proper torque on the steering arm attachment bolts during scheduled inspections and maintenance.

Part total time not reported.



Piper; Model PA 31-350; Chieftain; Defective Fuel Pump; ATA 7314

While performing an engine operational test in conjunction with a scheduled inspection, the operator observed the right engine fuel pressure was low.

The fuel pressure was 34 PSI at 1500 RPM. The technician adjusted the engine-driven fuel pump (P/N RG8090J4A/M) up one-half turn. Another test revealed the fuel pressure was unchanged. After several adjustments without improvement, he removed and replaced the fuel pump. The midrange fuel pump adjustment was ineffective. The fuel pressure remained at 34 PSI from idle to approximately 1,900 RPM.

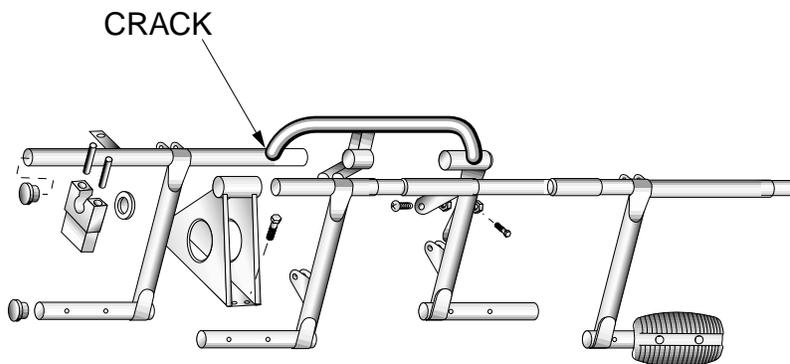
The submitter reported finding eight “new” style (/M) fuel pumps. The fuel pumps produced low fuel pressure with no low to midrange adjustment. In addition, the FAA, Service Difficulty Program data base contains nine other reports concerning various defects with these fuel pumps.

Part total time-341 hours.

Piper; Model PA 32-260; Cherokee Six; Defective Rudder Control Linkage; ATA 2720

During a scheduled inspection, the technician discovered the rudder pedal linkage was cracked.

The left rudder bar (P/N 63420-04) was cracked at a weld that attaches the straight tube to the carry-through tube (P/N 63459-13). (Refer to the illustration.) The submitter reported finding numerous similar defects numerous on like aircraft. The crack rendered the assembly in imminent danger of complete failure and a hazard to flight safety.



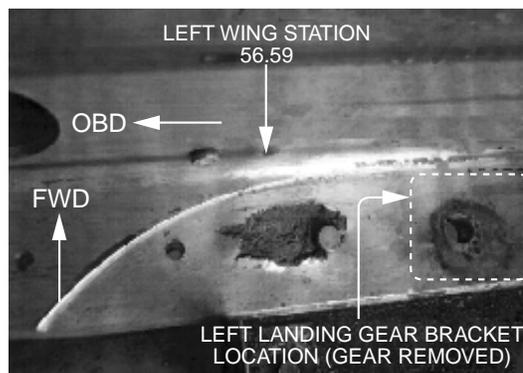
On later model aircraft, the rudder bar assembly is reinforced with a gusset plate welded on at the failure location. Considering the long service life of this part, it seems likely that metal fatigue contributed to this failure.

Part total time-11,045 hours.

Piper; Model PA 32-300; Cherokee Six; Wing Spar Structural Damage; ATA 5711

While replacing a wing skin, a technician discovered severe corrosion damage on a wing spar.

The left wing lower aft surface of the forward spar (P/N 62070-06) was damaged just outboard of the main gear attachment casting. (Refer to the illustration.) The corrosion was centered around a rivet, and the metal was badly exfoliated. There were several other corrosion sites in the same area that had not progressed to the severe stage. Also, a fastener hole for the attachment of the main gear casting displayed signs of serious corrosion.



The remainder of the wing interior had no evidence of corrosion and was in good condition. The corrosion noted in this case may have resulted from an inclusion in the metal causing intergranular corrosion.

Part total time-3,195 hours.

Piper; Model PA 32R-300; Cherokee Lance; Electrical System Anomaly; ATA 2400

The pilot reported that during flight, he noticed the amp meter fluctuated just before he lost electrical power to the avionics systems. After making a safe landing, he delivered the aircraft to a maintenance facility.

A technician discovered the avionics wire terminals on the master switch were loose. The terminal retaining screws were not properly tightened during the previous installation. There was evidence of

arcing between the wire terminals and the master switch; therefore, he replaced the wire terminals. After the repairs were complete, the electrical system functioned properly.

Maintenance technicians should be alert for this type of defect during inspections and maintenance.

Part total time not reported.

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

During a landing approach, the pilot attempted to lower the landing gear without success. When he used the emergency-extension system, the landing gear went to the “down-and-locked” position, and he made a safe landing.

A technician discovered the hydraulic system reservoir was empty. Investigating further, he found a seal inside the nose landing gear actuator was deteriorated and allowing hydraulic fluid to leak. This depleted the hydraulic system fluid and prevented normal extension of the landing gear.

Part total time-7,072 hours.

Piper; Model PA 46-310P; Malibu; Defective Engine Mount; ATA 7120

While changing the engine, a technician noticed a damaged engine mount.

The engine control cables were chafing hard against the lower left engine mount tube assembly (P/N 84010-02). The engine mount assembly also gives structural support to the nose landing gear installation. The technician determined the chafing damage was beyond acceptable limits. He removed the assembly and sent it to a repair station for a nondestructive inspection. He determined this damage was caused by improper support of the engine and propeller control cables. The “Adel” clamps, used to provide clearance and support, were not installed. The nondestructive inspection revealed six cracks and severe corrosion at various points on the engine mount assembly.

The submitter suggested giving this subject special consideration during scheduled inspections and maintenance.

Part total time-3,890 hours.

HELICOPTERS

FAA FIELD NOTIFICATION CONCERNING POTENTIALLY UNAIRWORTHY HELICOPTERS

Information for this article was furnished by the FAA, Southern Regional Office, ASO-250. Based on information gained during an investigation, ASO-250 issued a Field Notification to advise all helicopter operators of their findings.

During an investigation of a helicopter repair facility in Clearwater, Florida, a number of helicopter airframes and components were identified from records and loose data plates as being unairworthy. Specifically, this uncertified facility was operating for many years repairing helicopters. Based on the

information gathered during the investigation, the lack of records, and the length of time this facility was in operation, it is believed that a substantial number of helicopters that were repaired or maintained by this facility could be affected by this notice.

The repair facility was operated under various names including: Clearwater Helicopters, Inc., Dynamic Helicopters, Inc., Naylor Helicopters, Inc., Richard P. Naylor, Inc., Tampa Bay Helicopters, Inc., Thunderbird Helicopter Services, Inc., and World Helicopters, Inc. Any helicopter that may have been associated in any way with any of these companies could have suspect components, switched engines (Non-Type Certificated "Military" installed in place of the correct Type Certificated Civil powerplant), and/or Life Limited parts that have exceeded their specified times.

A number of helicopters for which records and data plates were found have been reported to have crashed. At the very minimum, any helicopter or component that may have been repaired, brokered, purchased, or sold through any of the listed companies, should be inspected by an appropriately rated person for conformity to its Type Design, and to ensure it is in a condition for safe operation.

BELL

Bell; Model 407; Tail Rotor Gearbox Damage; ATA 6520

During a scheduled inspection, the tail rotor gearbox was removed and sent to the repair shop for a scheduled overhaul.

During the teardown and inspection process, a technician discovered the inboard splines were corroded and pitted. Since the damage was beyond repairable limits, he installed a new spline shaft (P/N 406-040-016-101).

The submitter believes this damage was caused by a breakdown of the lubricating grease. He suggested periodically removing the tail rotor hub and blade assembly to inspect and lubricate the spline shaft.

Part total time-2,500 hours.

EUROCOPTER

Eurocopter; Model BK117-A3; Space Ship; Uncommanded Yaw and Roll; ATA 6710

During a flight, the pilot experienced an uncommanded yaw-and-roll motion while landing. The loss of control was quite severe; however, the pilot landed the helicopter safely.

A technician inspected the helicopter flight control system and discovered the lateral cyclic bellcrank (P/N 1117-441011) center bearing had failed. The bearing failure allowed excessive "free play" and resulted in loss of positive cyclic control. All the balls from the bearing were missing, and it appeared the installation slots might have lined up allowing the balls to be ejected from the bearing.

Part total time-6,065 hours.

Eurocopter; Model AS350-B2; Defective Vibration Absorber Assembly; ATA 6210

During a scheduled inspection, the technician discovered the vibration absorber assembly (P/N 350A31003306) was defective.

The additional weight came loose and caused severe damage to the weight assembly. The submitter speculated this damage began because the attaching hardware was not properly torqued during the initial installation or the locking tabs were not set against the hardware. Also, it is possible the soft nature of the lead weight material may have contributed to the loss of torque.

The submitter recommended that the manufacturer redesign the additional weight attachment to provide positive security during operation.

Part total time-1,000 hours.

McDONNELL DOUGLAS**McDonnell Douglas; Model 369E; Transmission Defect; ATA 6320**

During a flight, the pilot heard a loud bang followed by an airframe vibration. He made a safe landing and summoned maintenance personnel.

A technician discovered a large piece of metal in the area of the chip detector. The metal fragment was so large that it could not fall down sufficiently to bridge the gap on the chip detector.

Investigating further, the technician determined the metal fragment was a tooth from a transmission gear (P/N 369D25127-11). He removed the gear and sent to the manufacturer for a "hardness test" and analysis to determine the cause of this failure.

Part total time-4,580 hours.

ROBINSON**Robinson; Model R22; Mariner; Tail Boom Drive Shaft Separation; ATA 6510**

During a normal engine runup prior to takeoff, the tail rotor drive shaft broke and severed the tail boom.

The technician determined the incident occurred when the tail rotor drive shaft damper clip failed. The damper failure allowed the drive shaft to whip around, fracture, cut off the tail boom, and cause severe collateral damage to the airframe.

There have been other instances involving failure of the tail rotor drive shaft damper clip. In October 1981, Robinson issued Service Bulletin (SB) 14 affecting R22 rotorcraft, which changed the arm material from aluminum to steel. In addition, the manufacturer issued SB 20, dated May 1982, which calls for a runup inspection and friction test of the damper every 100 hours. It is interesting to note that the 100-hour inspections suggested in SB 20 have not been incorporated into inspection requirements contained in the maintenance manual issued in December 1998.

Part total time not reported.

POWERPLANTS AND PROPELLERS

PRATT & WHITNEY

Pratt & Whitney; Model PW127; Engine Failure; ATA 7900

The engine was installed in an Aerospatiale, Model ATR-72 aircraft.

The pilot reported that during a flight, he noticed the right engine oil pressure light illuminated intermittently. He declared an emergency and landed at the nearest airport.

Maintenance removed and disassembled the engine for inspection. A technician discovered the scavenge oil filter was full of metal; however, he could not determine the source of the metal. There was damage to the number 14 bearing and the propeller brake coupling (P/N 3111130-01) was considered as "secondary damage." Also, it appeared the metal found in the filter and the chip detector entered the reduction gearbox at this point.

The submitter offered no further details concerning this defect.

Part total time-14,734 hours.

TELEDYNE CONTINENTAL

Teledyne Continental; Model GTSIO-520-H; Propeller Attachment Shaft Failure; ATA 8510

This engine was installed on the right wing of a Cessna Model 421B aircraft.

The pilot reported that during a landing approach, the right engine propeller went into feather without command.

After making a safe landing, the pilot restarted the right engine. The propeller (McCauley P/N 3AF34C92-PR) separated from the engine and fell onto the ramp. Investigating this incident, a technician discovered the propeller shaft had sheared allowing separation of the propeller assembly.

The maintenance records indicated there was a "propeller strike" approximately 400 hours prior to this occurrence. The submitter speculated the required inspections were not properly completed after the propeller strike incident. What seems amazing is the fact that the propeller remained attached to the engine for 400 hours of operation.

Part total time not reported.

TEXTROONLYCOMING

Textron Lycoming; All Direct Drive Engine Models; Improper Propeller Installation; ATA 7100

Mr. Rocco Viselli of the FAA Aircraft Certification Office, (ANE-171) furnished this article.

A FAA Flight Standards District Office (FSDO) in Alabama identified and reported finding 12 aircraft, using Textron Lycoming engines, which had the constant speed propeller installed incorrectly.

Improper installation of the propeller can result from an incorrect interpretation of the diagram views presented in Textron Lycoming Service Instruction (SI) 1098F. As a consequence, the bushings may be installed in the wrong location on the crankshaft flange. The incorrect installation of the bushings on the crankshaft flange could contribute to the following:

1. Hand propping accidents due to improper blade position during impulse coupling engagement.
2. Excessive propeller blade stresses

To clarify the views of the two (2) diagrams shown in SI 1098F, Textron Lycoming has issued a revision to SI 1098G, dated April 30, 2001, which added the following "Note" to the crankshaft flange bushing installation diagrams:

"NOTE: These are viewed from the front of the engine looking aft."

Part total time not applicable.

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

CHALLENGER

Challenger; Model II; Flight Control Interference; ATA 2710

While inspecting this aircraft during an airworthiness certification, an FAA inspector discovered the aileron system could jam and restrict travel.

The tandem flight control sticks come as a pre-manufactured assembly that bolts into the fuselage. When this assembly is installed, extreme forward movement of the front control stick can cause the rear control stick to lockup against the aft seat frame assembly causing loss of aileron control.

At this time, it is not known if this is a systemic problem or a one-time occurrence.

Part total time not reported.

HIRTH REDUCTION DRIVES

While flying a Air Command Elite tandem gyroplane powered by a Hirth F-30 engine, with a Hirth reduction drive, the engine made a “ripping” sound. The pilot shut down the engine and made a precautionary landing in a field adjacent to the airport. This gyroplane is an ultralight, two-seat trainer, registered with Aero Sports Connection, and flown using their exemption.

The pilot and student checked the engine by turning the propeller and discovered the propeller turned relatively freely as if the reduction drive were no longer connected. The gyroplane was towed back to the hangar, and the reduction drive was disassembled. The oil from the reduction drive had the silvery appearance of metal contamination and drained out very slowly. The reduction drive housing did not appear to be damaged, and all the Allen-head cap screws holding it on were very tight. The Hirth reduction drive has a large tooth-driven gear to drive the propeller. The gear did not appear to be damaged. The reduction drive has a smaller drive gear that is driven from the output shaft of the centrifugal clutch. There were no teeth left on this gear, and it appeared as if it had been smoothed off in a lathe. The gear teeth were found in the bottom of the reduction drive housing and were obstructing the oil drain hole.

The submitter believes the gear had not been adequately heat-treated when it was manufactured. The centrifugal clutch, which is not part of the reduction drive, was broken. This mechanism has two pieces of semi-circular metal held together at their ends by small springs attached to tabs. The springs hold the clutch to the engine PTO shaft at low RPM. At higher engine RPMs, centrifugal force throws the clutch pieces outward to engage the reduction drive. One of the tabs was snapped off on a centrifugal clutch part.

The submitter stated his belief that since manufacturers make parts in lots, it is possible that other Hirth reduction drive gears in service might not be adequately heat-treated. The reduction drive, along with supporting information, was returned to Hirth. The company agreed to investigate the batch number and inspect their stock for these parts. The submitter has information concerning four additional gear failures.

Part total time not reported.

VANS

Vans; Model RV-4; Propeller Separation; ATA 6110

During cruise flight (2,500 RPM) at an altitude of 7,500 feet, the propeller separated from the aircraft. The pilot was able land the aircraft, although serious damage was sustained.

While investigating, a technician discovered one of the propeller attachment bolts (P/N AN6-57A) was missing and the nut (P/N MS20365-624) on another bolt was loose enough to be removed by hand. The remaining nuts and bolts were still intact. The submitter speculated the two nuts loosened and the severity of the vibration caused the propeller to separate from the aircraft. It is interesting to note that the bolts with the loose nuts were replaced approximately 124 operating hours prior to this event.

It seems prudent to ensure proper installation and torque when installing the propeller bolts and assess the condition and appropriate hardware for the installation.

Part total time-124 hours.

AIRNOTES

THE AVIATION FAMILY IN TURMOIL

With the tragic events of September 11 still fresh in our minds, the “Family of Aviation Maintenance Technicians” will come together as a family to meet the challenges and overcome the obstacles presented by the attack on our country and our way of life.

As in times past, our disagreements and differences will be put aside and we will unite as a family for one common purpose and cause. Like the rest of our Nation, we will grieve the losses we sustained, put our lives back together, and become even more dedicated to the purpose of improving aviation maintenance safety. I am ecstatically proud to be counted one among you.

Even though it is very difficult to write of the excruciating pain and violation we all feel let us unite to demonstrate our determined resolve and not be deterred from the principals upon which this country was brought to life. As we pray for the victims and survivors let us remain resolute in our determination and dedication to the principals of Freedom, those principals that make up our way of life and the fabric of our Nation.

May God once again Bless America.

ALL AIRWORTHINESS DIRECTIVES ARE ON THE WEB

The FAA, Aircraft Certification and Flight Standards Services are pleased to announce that all Airworthiness Directives (ADs) are now available on the Internet in the Regulatory and Guidance Library (RGL).

The Internet address is: <<http://www.airweb.faa.gov/rgl>>

In addition, you can find the ADs from the FAA homepage by clicking on “FAA Organizations” and then “Aircraft Certification Service.”

This improvement should be of great benefit to aircraft owners, operators, technicians, pilots, and other interested persons.

SUBSCRIPTIONS

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In the past, we furnished the GPO subscription form in this publication. The older issues which contain the subscription form, may not have current pricing information. Since GPO controls price increases, contact GPO for current subscription information.

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 and 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:

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Service Difficulty Program Manager
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P.O. Box 25082
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ADDRESS CHANGES

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

You may also send your address change to GPO via FAX at: (202) 512-2168. If you FAX your address change, please address it to the attention of: **SSOM, ALERT-2G**. Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

Editor: Phil Lomax (405) 954-6487
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You can access current and back issues of this publication from the internet at: <http://afs600.faa.gov>

When the page opens, select “AFS-640” and then “Alerts” from the drop-down menu. The monthly issues of the Alerts are available back to July 1996, with the most recent edition appearing first.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between August 20, 2001, and September 18, 2001, 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	ENG MAKE	COMPMAKE	PART NAME	PART CONDITION	DIFF-DATE	T TIME
ACFTMODEL	ENG MODEL	COMPMODEL	PART NUMBER	PART LOCATION	OPER CTRL NO.	TSO
REMARKS						

	ALLSN		TURBINE	SEPARATED	07/18/2001	373
	250C20B		23065833	ENGINE	CA010809005	373

(CAN) AFTER AN INFLIGHT SHUTDOWN, THE ENGINE WAS DISMANTLED AT THE VANCOUVER SERVICE CENTRE OF STANDARD AERO. THE LOCALTSB, ROLLS ROYCE AND CUSTOMER WERE ALL PRESENT DURING THE TEARDOWN INVESTIGATION. IN THE DISMANTLING OF THE TURBINE ASSEMBLY, THE 3RD STAGE TURBINE WHEEL WAS MISSING ONE ENTIRE BLADE. THE BLADE HAD SEPARATED AND CAUSED SIGNIFICANT DOWNSTREAM DAMAGE. THE EXACT CAUSE OF THE FAILURE IS CONSIDERED UNKNOWN. IN CONJUNCTION WITH THE TSB IN VANCOUVER, THE FAILED PARTS WILL BE FORWARDED TO ROLL ROYCE IN INDIANAPOLIS FOR A FULL METALURGICAL INVESTIGATION.

	LYC IO540K1G5		COLLET LW12933	INCORRECT CYLINDER	08/01/2001 AUS20010797	
(AUS) ENGINE CYLINDER KIT PN 05K21102 FAULTY. CYLINDER PN LW012993 CONTAINED ONE CORRECT AND ONE INCORRECT (SMALLER) VALVE RETAINING COLLET FITTED TO THE EXHAUST VALVE. THE INCORRECT COLLET HAD DAMAGED THE VALVE STEM RENDERING IT UNSERVICEABLE.						
AIRTRC AT301	PWA R1340*		CYLINDER 366249	CRACKED ENGINE	07/03/2001 2001FA0000195	6375
THE NR 3 CYLINDER HEAD CRACKED AT THE ROCKER BOSS, ENGINE LOST POWER, AIRCRAFT EMERGENCY LANDED IN A FIELD. 2ND OCCURANCE.						
BBAVIA 7AC	CONT A65*		SPAR	CRACKED WING	07/12/2001 2001F00205	
SPAR CRACKED						
BBAVIA 8GCBC	LYC VO360*		CONTROL ARM 19940	FAULTY ENGINE	08/06/2001 2001FA0000194	182
WHEN MOVING CARBURETOR HEAT CONTROL, CARB HEAT CONTROL ARM (PN 1-9940) CONTACTS JAM NUT ON THE THROTTLE CONTROL ROD CLEVIS (PN A31800), MOVING THE THROTTLE OUT OF POSITION.						
BBAVIA 8KCAB	LYC AEIO360H1A		RIB	DAMAGED LT&RT WING	07/03/2001 2001FA0000259	1511
FOUND LOOSE AND/OR MISSING NAILS AT RIB/FRONT SPAR CONNECTION. 2 RIBS ON RT WING AND 2 RIBS ON LT WING FOUND DAMAGED WHILE INSPECTING PER REGMENTS OF AD.						
BEECH 1900D			SOCKET 5081032019	CRACKED TORQUE ARM	06/27/2001 2001FA0000202	9947
DURING LIQUID PENETRANT INSPECTION IAW MM NDT WE HAVE FOUND CRACKS ON THE LOWER LUGS WERE THE TORQUE ARM ATTACHED, DEPTH OF CRACKS ARE UNKNOWN, BUT VISUAL INSPECTION WILL REVEAL CRACKS WITH ANY USE OF MAGNIFICATION DEVICES OR PENETRANT DYE. WHEN WE RECEIVED UNITS, THEY NEVER HAVE THE DASH NUMBER JUST THE SERIES 50-810320. ALL SOCKETS SHOULD BE CONSIDERED. CAUSE IS UNKNOWN.						
BEECH 200BEECH	PWA PT6A41		ENGINE PT6A41	FAILED LEFT	07/30/2001 2001FA0000227	10206 1596
LEFT ENGINE SHUT DOWN DUE TO CHIP DETECTOR LIGHT ON ENGINE SURGING AND OIL PRESSURE FALLING OFF. ON INITIAL INSPECTION SUSPECTS COMPRESSOR, NR1 OR NR 2 MAIN LINE BEARING FAILURE.						
BEECH 200BEECH	PWA PT6A42	PWA PT6A42	COMPRESSOR PCE93406	FOD TURBINE ENGINE C	06/28/2001 AUS20010921	
(AUS) ENGINE COMPRESSOR EXTENSIVELY DAMAGED BY FOD. INVESTIGATION FOUND A DAMAGED WASHER IN THE COWL. SUSPECT CAME FROM BOLT SECURING COMPRESSOR SCREEN REMOVED DURING MAINTENANCE PRIOR TO THIS FLIGHT. PERSONNEL/MAINTENANCE ERROR.						
BEECH 200BEECH	PWA PT6A42		ROD END 1317652F	OUT OF ADJ POWER LEVER	07/26/2001 AUS20010800	
(AUS) LT ENGINE POWER LEVER CABLE TO POWER INPUT LEVER ROD END OUT OF ADJUSTMENT AND THE LOCKNUT WAS LOOSE. THE ROD END AND LOCKNUT HAD NOT BEEN CORRECTLY INSTALLED FOLLOWING FCU CHANGE. PERSONNEL/MAINTENANCE ERROR.						
BEECH 400A	PWA JT15D5		BOLT 5010720	BROKEN MLG WHEEL	07/17/2001 2001FA0000233	1000
1 MAIN WHEEL TIE BOLT BROKE AND DEPARTED AIRCRAFT, RESULTING IN UNSEATING OF WHEEL HALF SEALING O-RING AND SUBSEQUENT LOSS OF AIR PRESSURE. BOLT WAS MAGNAFLUXED 14 HOURS PREVIOUS WITH NO DEFECTS						
BEECH 58	CONT IO520C		BOLT AN36A	WORN AILERON TAB	07/12/2001 AUS20010908 (AUS) ELEVATOR	
TRIM TAB ACTUATOR TO TRIM TAB ROD ATTACHMENT BOLTS WORN. FOUND DURING INSPECTION IAW AD/B55/59.						
BEECH 76	LYC VO360*		CHANNEL 10598000021	BROKEN ENGINE MOUNT	09/06/2001 2001FA0000246	
BOTH UPPER OUTBOARD ENGINE MOUNT CHANNELS BROKEN THROUGH JUST ABOVE NUT PLATE HOLE. MAY HAVE BEEN CAUSED BY STRESSES IMPOSED BY THE COUNTER ROTATING ENGINES AND/OR UNREPORTED HARD LANDINGS.						
BEECH 95B55	CONT IO470*		NUT 12NB108	CRACKED WING	06/21/2001 2001FA0000219	
DURING INSPECTION FOR ANNUAL, CRITERION AND FREQUENCY FOR WING BOLT INSPECTION. RECEIVED NEW HARDWARE. SENT OUT HARDWARE FOR MAGNETIC PARTICLE PROCESS PER MM. NDT PERSONAL INFORMED OF CONDITION OF NEW NUTS, STATING ROUGH INSIDE SURFACE AND LINEAR INDICATION ON INSIDE APPEARING AS CRACK INDICATIONS. BOTH NUTS WERE RED TAGGED AND BOTH PARTS RETURNED WITH 8130S FOR FURTHER						
BEECH 95C55	CONT IO520*		SPAR	CRACKED LT WING	07/28/2001 2001FA0000226	
CRACK DEVELOPED ON TOP OF LEFT WING. INVESTIGATION REVEALED LOWER FORWARD WING SPAR HINGES AND PINS WORN OUT RESULTING IN EXCESS OF MOVEMENT IN THE LEADING EDGE OF WINGS. NEW WING SPARS						
BEECH C23	LYC VO360*		STRUCTURE 169420036147	BROKEN LT DOOR	09/06/2001 2001FA0000245	8100
PILOTS REPORTED SEVERE BUFFET DURING SLOW FLIGHT, APPROACH TO LANDING, ROUND-OUT, AND FLARE. BUFFET WAS AGGRAVATED BY LEFT SLIP. FOUND BOTTOM DOOR GASKET MISSING AND FIBERGLASS DOOR STRUCTURE BROKEN AT LAST RIVET ON DIAGONAL GUSSET. THIS ALLOWED AIR ESCAPING FROM CABIN TO DISRUPT AIRFLOW OVER THE WING AND STABILATOR. FABRICATED HAT SECTION CHANNEL FROM 0.032 2024-T3, BONDED TO FIBERGLASS CHANNEL WITH HYSOL EA9309, AND RIVETED THROUGH OUTSIDE SKIN. INSTALLED NEW DOOR GASKET. FOUND RIGHT CABIN DOOR BROKEN ALSO. SUSPECT CAUSE IS DUE TO PILOTS LEAVING DOORS OPEN AND UNATTENDED TO COOL CABIN AND WIND OPENING DOOR HARD AGAINST THE STOP.						
BELL 206B	ALLSN 250C20	20604000005	BEARING 2060400321	SPALLED TRANSMISSION	07/06/2001 CA010808003	7617 2233
(CAN) TRANSMISSION REMOVED FROM A/C DUE TO METAL CONTAMINATION AND EXCESSIVE NOISE. ON DISASSEMBLY, MAIN INPUT GEAR SHAFT P/N 206040040003 WAS FOUND TO HAVE VERTICAL PLAY. AFTER REMOVING THE SHAFT AND THE DUPLEX THRUST BEARING P/N 2060400321 THE TOP BEARING OF THE THRUST BEARING WAS FOUND TO BE BADLY SPALLED ON ALL THE BALLS. THE VERTICAL MOVEMENT OF THE SHAFT AND RING GEAR ALSO CAUSED EXCESSIVE WEAR OF THE PINON AND RING GEAR.						
BELL 206L	ALLSN 250C20J	6890550	CASE	DAMAGED ENGINE	07/22/2001 CA010809016	4168 982
(CAN) ON WINDUP FROM GROUND IDLE TO FLIGHT IDLE, THE PILOT HEARD A POPPING NOISE AND A STEADY SOUND OF RUSHING AIR. THE TURBINE OUTLET TEMPERATURE (TOT) HAD CLIMBED INTO THE YELLOW ARC. DURING TROUBLE SHOOTING THE COMPRESSOR CASE HALF WAS MISSING AND STATOR (NEXT TO THE SPLIT LINE) AT THE 4TH STAGE STATION LINE. THIS STATOR WENT BACK AND DAMAGED THE REMAINING STATORS AND WHEELS. COMPRESSOR WAS REPLACED AND THE AIRCRAFT RETURNED TO SERVICE.						

BELL 206L1		RADIO 064101900	MALFUNCTIONED VHF COMMS	08/21/2001 HEEA075574	
WOULD NOT CHANGE FREQUENCY. REPLACED BAD KHZ KNOB/SHAFT AND RESOLDERED COLD SOLDER ON SW102 SWITCH. REPAIRED. ALIGNED RECEIVER AND ADJUSTED C/N SQUELCH, MIC GAIN AND SIDETONE. REPLACED BAD DISPLAY LENS. BENCH CHECK GOOD.					
BELL 206L1	ALLSN 250B*	TUBE 2060405441	CORRODED ENGINE	07/16/2001 2001FA0000254	5885
MAIN GEARBOX TO OIL COOLER TRANSFER TUBE LEAKING DUE TO CORROSION PITTING. AREA WHERE TUBE RUNS THRU AREA IS FILLED WITH LOOSE FIBERGLASS SOUND PROOFING WHICH HOLDS MOISTURE AND CAUSES CORROSION. RECOMMEND REMOVING INSULATION FROM THESE AREAS.					
BELL 206L3		RADIO 064101900	WEAK VHF COMMS	08/21/2001 HEEA075573	
GARBLED AND WEAK. PERFORMED PRELIMINARY INSPECTION. FOUND UNIT HAD TOO MUCH POWER OUT BUT GOOD MODULATION. THEN MODULATORS BECAME VERY WEAK AND DISTORTED. FOUND Q121, Q122 TRANSISTORS BAD. REPLACED Q121 AND Q122 TRANSISTORS. ADJUSTED MIC GAIN AND SIDETONE. REPAIRED. FOUND MEMORY NOT WORKING DUE TO BROKEN FOIL ON SW102 SWITCH. REPAIRED BROKEN FOIL. REPAIRED. BENCH CHECK GOOD.					
BELL 206L3		TRANSCEIVER 066106200	FAILED VHF COMMS	08/24/2001 HEEA075585	
UNIT FAILED ALTITUDE CERTIFICATION. UNIT TRANSMITS IMPROPER CODES BETWEEN 700 AND 900 PA. PERFORMED PRELIMINARY INSPECTION. ADJUSTED TUBE FOR PROPER FREQUENCY BAND WIDTH. BENCH CHECK GOOD.					
BELL 206L3		RECEIVER 13824120234	MALFUNCTIONED GPS	08/28/2001 HEEA075615	
CLEARS ITSELF WHEN TURNED OFF, HAS TO HAVE MGUA CODE ENTERED AND UNABLE TO DISABLE SAFEGUARD. PERFORMED PRELIMINARY INSPECTION. CLEANED MEMORY AND REPROGRAMMED. ALSO DISABLED SAFEGUARD CODE. REPAIRED. BENCH CHECK GOOD.					
BELL 206L3		GEARBOX 206040402105	DAMAGED TAIL ROTOR	08/21/2001 HEEA075502	8684
PLAY IN OUTPUT SHAFT, UNABLE TO BALANCE TAIL ROTOR. REPLACED WITH SERVICEABLE PART.					
BELL 206L3	ALLSN 250C30	GOVERNOR 252469211	MALFUNCTIONED ENGINE	08/21/2001 HEEA075555	
UNABLE TO CORRECT OVERSPEED. FOUND GOVERNOR BREAK RESPONDED 100 RPM EARLY. TESTED SATISFACTORY.					
BELL 206L3	ALLSN 250C30	FUEL CONTROL 25490925	MALFUNCTIONED ENGINE	08/21/2001 HEEA075556	2534
ENGINE WOULD NOT ACCELERATE ON START, ADJUSTING START DERICHMENT AND START ACCELERATION TO MAXIMUM HAD NO EFFECT. FOUND PRESSURIZING VALVE TO BE STICKING. REMOVED VALVE AND POLISHED. VALVE WOULD STILL HANG UP. REPLACED VALVE AND UNIT TESTED SATISFACTORY.					
BELL 206L3	ALLSN 250C30P	TURBINE 23053299	DAMAGED ENGINE	08/21/2001 HEEA075479	1904
ENGINE REMOVED DUE TO 2000 HOUR INSPECTION. UPON INSPECTION OF TURBINE PARTS NOTED SULFIDATION ON LEADING EDGE OF NR 1 WHEEL BLADES. SCRAPPED AND REPLACED WITH SERVICEABLE PART.					
BELL 206L4		TRANSCEIVER 066106200	MALFUNCTIONED VHF COMMS	08/24/2001 HEEA075583	
NO REPLY. PERFORMED PRELIMINARY INSPECTION. FOUND REPLY LIGHT VERY DIM DUE TO BAD PHOTOCCELL. REPLACED V301 PHOTOCCELL. REPAIRED PROBLEM. ALSO REPLACED BAD R477 RESISTOR AND ADJUSTED FREQUENCY AND PULSE WIDTH. BENCH CHECK GOOD.					
BELL 212	PWA PT6T3B	BLADE 212015501115	DELAMINATED MAIN ROTOR	08/02/2001 AUS20010852	
(AUS) MAIN ROTOR BLADE SKIN DELAMINATED AT THE BLADE TIP JUST AFT OF THE D' SPAR. AREA OF DELAMINATION 55MM BY 75MM (2IN BY 3IN).					
BELL 407		CONNECTOR 407076502103S	CORRODED CABIN	08/27/2001 HEEA075607	
CANNON PLUG CORRODED. REPEATED PROBLEM WITH CANNON PLUG, SENDING IN FOR EVALUATION FOR POSSIBLE MFG DEFECT.					
BELL 412		CAP 412061668101	DAMAGED FUEL CELL	08/21/2001 HEEA075571	
CAP CAN TURN BEYOND OPEN POSITION OR OFTEN MISPOSITIONS CLOSURE CLAWS CAUSING CAP TO BE DIFFICULT TO REMOVE. REPLACED WITH SERVICEABLE ASSY.					
BELL 412		TRANSPONDER 066107100	FAILED ATC	08/24/2001 HEEA075587	
WENT DEAD. PERFORMED PRELIMINARY INSPECTION. FOUND CR106 DIODE BURNT AND C111 CAPACITOR SHORTED. ALSO FOUND C115 CAPACITOR BAD. REPLACED CR106 DIODE AND C111 AND C115 CAPACITORS. ADJUSTED MTL. UNIT BENCH CHECK GOOD.					
BELL 412		ALTIMETER 066304400	INOPERATIVE COCKPIT	08/27/2001 HEEA075590	
DH LIGHT IS INOPERATIVE. PERFORMED PRELIMINARY INSPECTION. FOUND DH SWITCH BROKEN AND LENS CLAMP BROKEN. INSTALLED DH SWITCH AND LENS CLAMP. ALSO REPLACED THE PHOTOCCELL. THE DH LIGHT STAYS ON AT ALL TIMES AND NO SELF TEST. SENT TO GREAT LAKES AVIONICS FOR INSPECTION AND REPAIR.					
BELL 412		SADDLE 412050015110	MISDRILLED SKID TUBE	08/21/2001 HEEA075487	
MISDRILLED HOLES. THE HOLES FOR THE BOLTS (99-13-1), THAT ATTACHES THE FWD. CROSSTUBE TO THE SKID TUBE SADDLE ARE DRILLED FOR AN4 BOLTS.					
BELL 412		INDICATOR 1113025	MALFUNCTIONED HSI	08/28/2001 HEEA075611	
COURSE NEEDLE WILL NOT FOLLOW COPILOT'S COURSE NEEDLE.					
BELL 412	PWA PT6T3B	IGNITER CH34055	FAILED ENGINE	08/07/2001 AUS20010861	
(AUS) NR 1 ENGINE LOWER IGNITER CENTRE CORE MISSING. P3 AIR LEAKING INTO ENGINE BAY.					
BOLKMS BK117A1		STRUCTURE 11730550	DETERIORATED HORIZONTAL STAB	08/28/2001 HEEA075663	PAINT
DETERIORATED, STRIP. METAL TRAILING EDGE ALODINED AND PRIMED. RIGHT DEVORE FLOODLIGHT INSERT					
BOLKMS BK117B2		ALTIMETER 1042011968E	INOPERATIVE COCKPIT	11/14/2000 TI1R001371	
ENCO ALTIMETER, CODE OFF, FLAG WILL NOT PULL. REMOVED AND REPLACED.					

BOLKMS		PINION GEAR	SPALLED	08/21/2001	
BO105S	4638001004	4638302002	M/R GEARBOX	HEEA075655	
GEAR TEETH SPALLING AT TOOTH TIP. REPLACED WITH SERVICEABLE PART.					
BOLKMS	ALLSN	SPRING	CRACKED	07/24/2001	
BO105S	250C20B	1056058312	NR 2 ENGINE	CA010809002	
(CAN) DURING A POWER ASSURANCE CHECK NR 2 ENGINE HAD TOT AND TORQUE FLUCTUATIONS. ENGINE POWER RETURNED TO OPERATIVE LIMITS AND A/C LANDED AT MAINTENANCE FACILITY. DURING POST FLIGHT INSPECTION, SPRING WAS FOUND TO BE CRACKED OFF FROM GOVERNOR ARM. NEW ONE INSTALLED.					
BOLKMS	ALLSN	COVER	CRACKED	08/21/2001	
BO105S	250C20B	6898735	23033861	SUMP	HEEA075478
TURBINE REMOVED DUE TO NR 1 & 2 WHEEL CYCLES. UPON INSPECTION OF TURBINE NOTED NR 8 SUMP NUT BRAZEMENT ERODED AND CRACKED. SCRAPPED COVER AND REPLACED WITH SERVICEABLE PART.					
CESSNA	CONT	MAGNETO	INOPERATIVE	08/25/2001	
150G	O200A	4301	ENGINE	2001FA0000286	
INSTALLED NEW LEFT AND RIGHT SIDE SLICK (UNISON) MAGNETOS AND IGNITION HARNESS. TEST RUN OK. ON FIRST FLIGHT AFTER 15 MIN. ENGINE POWER LOSS OCCURED. AFTER LANDING FOUND LEFT MAG INOP. REMOVED MAG AND FOUND THAT COIL INSULATION HAD BURNED THROUGH AND HIGH VOLTAGE WAS ARCING TO CASE OF MAG THROUGH					
CESSNA	LYC	CARBURETOR	MALFUNCTIONED	07/29/2001	
152	O235L2C	105199	ENGINE	CA010808002	650
(CAN) ENGINE STARTED LOSING POWER WHILE IN CRUISE AT 2500 FT & 30 SEC LATER QUIT RUNNING. PILOT INSTRUCTOR MADE A FORCED LANDING IN HAY FIELD. ENGINE WOULD NOT START AGAIN. CARBURATOR WAS REPLACED AND ENGINE STARTED TO RUN NORMALLY AND AIRCRAFT WAS FLOWN OFF FIELD. NOTE: LAST SUMMER A SIMILAR INCIDENT OCCURRED ON ANOTHER OF OUR C-152'S EXCEPT THAT THE ENGINE DID NOT QUIT COMPLETELY					
CESSNA	LYC	PLACARD	FOD	08/08/2001	42
152	O235L2C		CARBURETOR	2001FA0000211	42
DURING TOUCH AND GO LANDING AS CARB HEAT WAS APPLIED, ENGINE LOST POWER. REMOVING CARB HEAT DID NOT IMPROVE PERFORMANCE. DURING INVESTIGATION AND CARB REMOVAL, FOUND STARTER LUBRICATION DECAL LODGED IN VENTURI. AFTER REMOVAL AND REINSTALLATION OF CARB. ENGINE POWER RETURNED TO NORMAL. RECOMMEND THESE DECALS BE REMOVED PRIOR TO STARTER AND CARBURETOR INSTALLATION ON ENGINE. (FOUND WARRANTY WARNING DECAL ON OVERHAULED CARB)					
CESSNA	LYC	SCREEN	CRUSHED	06/13/2001	120
172L	O360*	70484	OIL FILTER	2001FA0000261	
METAL IN FILTER. FOUND SCREEN CRUSHED (FROM FACTORY BUILDUP) ALLOWED METAL TO CONTAMINATE ENGINE.					
CESSNA	LYC	CRANKCASE	MISMANUFACTURE	06/13/2001	
172L	O360*		ENGINE	2001FA0000262	
TOOLING-MACHINE CHATTER LEFT ROUGH, UNFINISHED AREA FOR CYL BASE O-RING TO SEAT AGAINST ALL FOUR CASE CYLINDER HOLES.					
CESSNA	LYC	PISTON PIN	WORN	06/13/2001	120
172L	O360*	LW11775	ENGINE	2001FA0000263	
METAL IN FILTER. PISTON PIN PLUG- EXCESSIVE WEAR. ONE PIN WORN DOWN .500 INCH. ALL PLUGS WORN.					
CESSNA	LYC	HOSE	LEAKING	07/31/2001	
172M	O320E2D	O320E2D	111F4176S0220	ENGINE OIL DISTR	AUS20010826
(AUS) ENGINE OIL COOLER HOSE POROUS AND LEAKING IN THE AREA ON THEOUTSIDE OF THE BEND AT THE ENGINE END. FIRE SLEEVINGCONTAMINATED. HOSE MANUFACTURED 30 DECEMBER 1996.					
CESSNA	LYC	FACET	FLOAT	DAMAGED	08/22/2001
172M	O320E2D	MA4SPA	30804	FUEL	AUS20010930
(AUS) CARBURETTOR FLOAT CONTAMINATED WITH FUEL CAUSING CARBURETTOR TO FLOOD.					
CESSNA	LYC	SHROUD	CHAFED	08/17/2001	
172N	O320*	17500117	ENGINE	2001FA0000191	
NOTED: DURING ANNUAL INSPECTION ON NUMEROUS AIRCRAFT, SCREEN INSIDE OF CARB HEAT SHROUD VIBRATING AND CHAFING ITSELF TO PIECES BE ALLOWED TO BE SUCK INTO THE CARB INLET. (SHROUD LOCATED ON CYLINDER STACK ASSEMBLY WITH CLAMPS).					
CESSNA	LYC	SKIN	CORRODED	07/18/2001	7177
172N	O320*	052301158	RT WING	2001FA0000218	
ON INSPECTION OF RIGHT WING ASSEMBLY, MECH NOTICED THAT A LOT OF RIVETS HAD POPPED FROM CORROSION UNDER THE LEADING EDGE SKIN AT THE FORWARD SPAR. THE WING WAS REMOVED FROM THE AIRCRAFT, BROUGHT TO THIS FACILITY FOR REPAIR. WING WAS DISASSEMBLED FOR REPAIR AND CORROSION REMOVAL. THE WING WAS FOUND TO HAVE MORE THAN AVERAGE AMOUNT OF HEAVY CORROSION TO SKINS, RIBS, SPARS AND STRINGERS. FOUR NOSE RIBS WHERE CORRODED THOUGH REQUIRING REPLACEMENTS. ALSO ALL SKINS WERE REPLACED. THE REMAINDER OF THE PARTS REQUIRED REMOVAL OF CORROSION, CLEANING AND TREATING OF PARTS. OWNER STATED THAT THE WING WAS NOT THAT BAD A YEAR AGO.					
CESSNA	LYC	ROLLER	CRACKED	08/01/2001	5300
172N	O320*	052390	T/R FLAP	2001FA0000265	
FLAP ROLLER FOUND NOT TURNING. REMOVED AND FOUND CRACKS. THIS IS NOT THE FIRST TIME THIS CONDITION WAS FOUND. LACK OF PROPER MAINTENANCE. DIRTY AND DRY ROLLER BEARINGS.					
CESSNA		ACTUATOR	CRACKED	07/11/2001	4503
172RG		98820152	MLG	2001FA0000199	
BOTH ACTUATORS WERE INSPECTED IAW SB, CRACKS WERE FOUND IN THE AREA THAT ACCOMPLISHMENT INSTRUCTIONS INDICATED. PARTS WERE REMOVED FROM SERVICE.					
CESSNA	LYC	PIVOT	FAULTY	06/12/2001	
172RG	O360F1A6	244110010	LANDING GEAR	AUS20010873	
(AUS) MAIN LANDING GEAR PIVOTS FAILED PROVISIONS OF CESSNA SERVICEBULLETIN SEB 90-1 REVISION3.					
CESSNA	LYC	BULKHEAD	CRACKED	07/17/2001	
172S	IO320*	055032110	SPINNER	2001FA0000225	
UPON A POSTFLIGHT INSPECTION, THE PROPELLER SPINNER BULKHEAD AND SPINNER ASSEMBLY WERE DISCOVERED CRACKED. THE CORNER PORTION OF THE BULKHEAD WAS COMPLETELY RIPPED AWAY AND THE EDGE OF THE SPINNER WAS PEELING UP AND TORN. PROBABLE CAUSE: MANUFACTURING DEFECT SUSPECTED.					
CESSNA	CONT	BLOCK	CORRODED	08/02/2001	
175A	GO300*	0512122	WING ATTACH	2001FA0000257	
DISSIMILAR METAL CORROSION ON WING ATTACH POINTS. BLOCK ARE ATTACHED TO FUSELAGE SPAR ASSEMBLY PN 05121246 WITH (4) AW320A BOLTS. REMOVE FOR INSPECTION.					
CESSNA	CONT	BLOCK	CORRODED	08/02/2001	2142
175A	GO300*	0411129	WING ATTACH	2001FA0000258	
DISSIMILAR METAL CORROSION ON WING ATTACH POINTS. BLOCKS ARE ATTACHED TO FUSELAGE SPAR ASSEMBLY. PN 0511162-S WITH (4) AN3-21A BOLTS. REMOVE FOR INSPECTION.					

CESSNA 182H	CONT O470R	CONT O470R	PIPE	CORRODED ENGINE OIL PRESS	08/10/2001 AUS20010863	7167
(AUS) ENGINE OIL PRESSURE PIPE FROM FIREWALL TO GAUGE CORRODED IN AREA OF CONTACT WITH SOUNDPROOFING MATERIAL. PIPE IS MANUFACTURED FROM ALUMINIUM.						
CESSNA 182R	CONT O470*		DETECTOR S16729	INOPERATIVE WING	07/16/2001 2001F00248	
UPON INSTALLING NEW LIFT DETECTION NOTED THAT WHEN WIRED AS ORIGINALLY REMOVED FROM AIRCRAFT, WITH HEAT TURNED ON, DETECTION WAS INOPERATIVE. GROUND FOR HEATER WAS INSTALLED ON COMMON FOR DETECTION; CAUSING A NO POTENTIAL WHEN HEATER TURNED ON.						
CESSNA 208			WIRE LF11	CHAFED BEACON	08/15/2001 2001FA0000207	9647
WIRES LF11 AND LF12 ARE ROUTED THROUGH THE VERTICAL STABILIZER WITHOUT PROTECTION OR SUPPORT. THESE WIRES POWER THE FLASHING RED BEACON MOUNTED ON THE TOP OF THE FIN. BOTH WIRES CHAFED AGAINST THE EDGE OF THE HOLE IN THE STABILIZER RIB THROUGH WHICH THEY WERE ROUTED AND WORE THROUGH THE INSULATION CAUSING A SHORT CIRCUIT AND THE BREAKER TO OPEN.						
CESSNA 208B	PWA PT6A114A	CESSNA 208B	ROLL PIN NAS561F824	BENT ROLL PIN	07/19/2001 CA010907020	13231
(CAN) IT APPEARS SOMEONE TRIED TO UNLATCH THE UPPER CARGO DOOR WITHOUT PUSHING (ITEM #41) RELEASE KNOB TO RELEASE THE INNER HANDLE FROM THE LOCK PLATE (ITEM #46) EXCESSIVE FORCE WAS APPLIED THUS DAMAGING MECHANISM (ROLL PIN ITEM #2), WITH THIS CONDITION, IF THE INNER HANDLE WAS POSITIONED IN THE LOCK PLATE THEN THE LOCK PINS WOULD BE RETRACTED ALLOWING THE DOOR TO COME OPEN. DOOR WARNING SYSTEM CHECKED AFTER REPAIRS AND FUNCTIONED NORMALLY. PILOT REPORTED THAT DOOR WARNING LIGHT						
CESSNA 210L	CONT IO520*		ACTUATOR 12416195F	CRACKED MLG	08/11/2001 2001FA0000282	
LEFT MAIN GEAR ACTUATOR CRACKED, RESULTING IN THE LOSS OF HYDRAULIC FLUID. AIRCRAFT MADE A GEAR UP LANDING, AIRCRAFT HAS SUBSTANTIAL DAMAGE TO HORIZONTAL STABILIZER AND ELEVATOR.						
CESSNA 337D	CONT IO360CB		BEVEL GEAR 632617	FAILED ACCESSORY DRIVE	08/29/2001 2001FA0000230	
TROUBLESHOT LOSS OF VACUUM ON REAR ENGINE AND DETERMINE ACCESSORY DRIVE ASSEMBLY GEAR BOX FOR VACUUM PUMP AND HYDRAULIC PUMP INOPERABLE. REMOVE AND DISASSEMBLED GEAR BOX AND FOUND BEVEL GEAR PN 632617 STRIPPED OF ALL GEAR TEETH. ENGINE HAD BEEN RECENTLY OVERHAULED. OIL LEVEL AT CORRECT CAPACITY. POSSIBLE CAUSE OF FAILURE MAY BE DUE TO IMPROPER GEAR MESH OF BEVEL GEARS FROM WORN OR INCORRECT SHOULDER THICKNESS ON BUSHING. MFG IS NOW AWARE OF THE GEAR MESH PROBLEM AND HAS CORRECTED IT VIA A SB AND ISSUED THE MODIFIED ADAPTER ACCESSORY DRIVE FOR REPLACEMENT.						
CESSNA 404	CESSNA ALV9501R		ALTERNATOR ALV9501R	FAILED ENGINE	08/08/2001 AUS20010856	
(AUS) ALTERNATOR FAILED IN FLIGHT. INVESTIGATION FOUND THE ALTERNATOR HOUSING ASSEMBLY BOLTS LOOSE WITH TWO OF THE BOLTS HAVING COMPLETELY SEPARATED AND LAYING IN THE BOTTOM OF THE ENGINE COWL. REAR BEARING COLLAPSED. INCORRECT TAB WAS USED. TAB WASHERS WERE FOR USE ON A 6.35MM (0.25IN) BOLT WHEREAS THE BOLTS USED ON THE ALTERNATOR WERE 4.762MM (0.185IN). UNAPPROVED PART.						
CESSNA 421B	CONT GTSIO520H	CONT GTSIO520H	BEARING 634503	FAILED RECIPROCATING	08/20/2001 AUS20010943	600
(AUS) ENGINE OIL FILTER CONTAMINATED WITH METAL. INVESTIGATION FOUND NO1 AND NO2 BEARINGS HAD COMPLETELY FAILED WITH THE BEARING SHELLS BROKEN IN HALF. TRANSVERSE CRACKS WERE FOUND AROUND THE CRANKSHAFT NO2 MAIN JOURNAL WITH CATASTROPHIC FAILURE IMMINENT.						
CESSNA 441			HINGE 51310103	MISMANUFACTURE RUDDER	08/03/2001 AUS20010843	
(AUS) LOWER RUDDER HINGE BRACKET INSTALLED UPSIDE DOWN. FOUND DURING INSPECTION IAW CESSNA CQB00-2 R1. MANUFACTURING ERROR.						
CESSNA 500	PWA JT15D1A		FUEL CONTROL	MALFUNCTIONED RT ENGINE	07/08/2001 2001FA0000248	
DURING A CLIMB THROUGH FL 290, THE RIGHT ENGINE FAN SPEED DECREASED TO 82 PERCENT. ENGINE IGNITION WAS SELECTED ON TO NO EFFECT. AND EMERGENCY WAS DECLARED AND A SAFE LANDING WAS MADE. SUSPECT THAT THE FUEL CONTROL UNIT MALFUNCTIONED.						
CESSNA 550			TIRE 22X80010	FAILED MLG	08/14/2001 AMB20011	
DURING A DAILY INSPECTION THE SIDE WALL WAS FOUND TORN OUT WHERE THE SIDE WALL AND TIRE TRED ARE BONDED TOGETHER. THERE IS ANOTHER AREA APPROX. 6 INCHES AWAY FROM THIS TEAR, WHERE YOU CAN SEE THAT THE RUBBER IS ALSO STARTING TO SEPARATE. THE INNER AREA OF THE TEAR HAS SOFT RUBBER COMING OUT IT HAS THE CONSISTENCY AND FEEL OF RUBBER THAT HAS NOT FULLY CURED. THIS TIRE WAS PULLED FROM SERVICE AND A REPLACEMENT INSTALLED. WE ARE GOING TO SUBMIT THIS TO GOOD YEAR FOR THEM TO EVALUATE.						
CESSNA 550	PWA JT15D4	13035616	CONTROLLER 13035616	INTERNAL	06/15/2001 CA010814020	207
(CAN) PRESSURIZATION PROBLEMS OCCURRED SHORTLY AFTER TAKEOFF BACK TO OTTAWA (CONTROL). ON DESCENT THROUGH 23,000 FEET. CREW EXPERIENCED RAPID DEPRESSURIZATION. MASKS WERE DONNED AND DESCENT ACCELERATED TO BELOW 10,000 FT. MAINTENANCE DETERMINED THE CAUSE TO BE THE PRESSURIZATION CONTROLLER, CONTROLLER REPLACED. NO FURTHER ACTION REQUIRED.						
CESSNA 650			MOTOR 4502131	FAILED LANDING LIGHT	09/12/2001 2001FA0000270	
UNIT RECEIVED AND INSTALLED. OPERATED UNIT 3 CYCLES AND ON 4 EXTENSION UNIT WOULD NOT EXTEND AND MOTOR SEIZED AND SMELLED OF BURNING ELECTRICAL WIRING. UNIT WAS PURCHASED THRU CESSNA AS AN OVERHAULED PART BY AN OUTSIDE VENDOR. THE UNIT HAS A HISTORY OF EARLY FAILURE AFTER OVERHAUL. THIS COMPANY HAS HAD FIVE WARRANTY ACTIONS CLAIMED ON THIS PART NUMBER.						
CESSNA A185E	CONT IO520*		VALVE SEAT 6375506	CRACKED CYLINDER	08/16/2001 2001FA0000231	
DURING A ROUTINE COMPRESSION CHECK. A LEAK WAS FOUND IN THIS CYLINDER (AIR WAS ESCAPING FROM IN BETWEEN COOLING FINS). UPON REMOVAL OF CYLINDER, 2 CRACKS APPROX. 1 INCH AND .7500 INCH LONG, WERE FOUND TO BE EMANATING FROM THE EXHAUST VALVE SEAT.						
CESSNA TU206G	CONT TSIO520M	CONT	SPRING 1051324	BROKEN IMPULSE	08/15/2001 2001FA0000206	11
THE MAGNETO IMPULSE COUPLING SPRING BROKE ABOUT 6 INCHES FROM THE OUTER END OF THE SPRING. THE FAILURE WAS DISCOVERED BECAUSE THE IMPULSE COUPLING WOULD NOT ENGAGE DURING THE ENGINE STARTING						

CESSNA	CONT		BEARING	WORN	08/24/2001	473
U206G	C85*		0523920	FLAP TRACK	2001FA0000244	
INNER BEARING WAS PUSHED OUT TO ONE SIDE SHOWING EXCESSIVE WEAR.						
CIRRUS			FAIRING	LOOSE	08/10/2001	69
SR20			12446105	NLG	2001FA0000208	
BRACKETS THAT HOLD THE NOSE WHEEL FAIRING TO THE NOSE GEAR FORK PART NUMBER 1799-001, ARE HELD TO THE FORK BY BOLTS THAT ARE NOT DRILLED FOR SAFETY WIRE, THEY DO NOT THREAD INTO SELF LOCKING NUTS PLATES, NOR DO THEY CALL OUT FOR LOCK WASHERS. THE BOLTS LOOSEN UP, THE FAIRING MOVES AROUND, AND LEAVES THE AIRPLANE. EXAMINED OTHER SAME MODEL AIRCRAFT, AND FOUND LOOSE FAIRINGS. BROUGHT THIS CONDITION TO THE OPERATORS ATTENTION. CONDITION NOTED BY: JACK D. TOBIN A&P 2250313.						
DHAV			LINK	BROKEN	08/06/2001	
DHC2MK3			6A0720401	NLG	2001FA0000235	
UPON LANDING AT BFI, BOTH NOSE WHEEL BEGAN TO SHIMMY, PILOT PULLED NOSE WHEELS OFF OF RUNWAY UPON TOUCHDOWN AGAIN, SEVERE SHIMMY OCCURRED. RIGHT NOSE GEAR LINK RAM END BROKE ALLOWING GEAR TO DEPART FROM AIRCRAFT.						
DIAMON	ROTAX		LINE	BROKEN	06/16/2001	
DA20A1	ROTAX912		956470	OIL SUCTION	2001FA0000197	
OIL SUCTION LINE/ NR 3 CONNECTING ROD BROKE AT CRANKSHAFT. ROD PROTRUDED THROUGH ENGINE CASING. SB ADDRESSES SUBJECT OIL LINES TO BE INSPECTED FOR KINKS AND SHARP BENDS. ALSO, NONCOMPLIANCE COULD RESULT IN ENGINE DAMAGE. SUSPECT THAT OIL MAY HAVE BEEN RESTRICTED FROM ENTERING INTO ENGINE CASING DUE TO DEFECTIVE OIL LINES. DEFECTIVE OIL LINES. RECOMMEND AD AT 100 HR INTERVALS.						
DIAMON	ROTAX		LINE	DEFECTIVE	06/16/2001	
DA20A1	ROTAX912		956476	OIL PRESS	2001FA0000198	
OIL PRESSURE LINE-NR 3 CONNECTING ROD BROKE AT CRANKSHAFT. ROD PROTRUDED THROUGH ENGINE CASING. SERVICE INSTRUCTION ADDRESSES SUBJECT OIL LINES TO BE INSPECTED FOR KINKS AND SHARP BENDS. ALSO, NONCOMPLIANCE COULD RESULT IN ENGINE DAMAGE. SUSPECT OIL MAY HAVE BEEN RESTRICTED FROM ENTERING INTO ENGINE CASING DUE TO DEFECTIVE OIL LINES. RECOMMEND AD AT 100 HR INTERVALS.						
DOUG			CONTROL ROD	DAMAGED	09/07/2001	
600N			500N711311	NOTAR FAN	2001FA0000296	
DURING REMOVAL OF THE AFT FAN (NOTOR) CONTROL ROD P/N 500N7113-11 WE FOUND SOME CONTACT DAMAGE. IT APPEARS THIS ROD IS MAKING LIGHT CONTACT WITH THE FAN GEARBOX OUTPUT GEARSHAFT I.D. AND THE FAN						
EMB	PWA		ROLLER	WORN	08/08/2001	
EMB120	PW118A			TRAILING EDGE FL	AUS20010881	
(AUS) RH OUTBOARD FLAP JAMMED. INVESTIGATION FOUND ALL FOUR ROLLERS WORN AND FLAP TRACK SCORED WITH RAISED METAL AREAS.						
ENSTRM	LYC	LYC	TURBOCHARGE	FOD	07/26/2001	
F28C	HIO360E1AD	HIO360E1AD	3BT5EE10J2	EXHAUST	AUS20010932	
(AUS) ENGINE TURBOCHARGER INGESTED A NUT FROM THE AIR STATIC TUBE LOCATED INSIDE THE AIR CLEANER. FOD.						
GULSTM	LYC	LYC	BEARING	DELAMINATED	08/13/2001	
500S	IO540E1B5	IO540E1B5	SL13884M06	RECIPROCATING	AUS20010875	118
(AUS) ENGINE FRONT MAIN BEARING DEFECTIVE. BEARING MATERIAL APPEARS TOBE DELAMINATED FROM BEARING SHELL. METAL CONTAMINATION OF OIL SYSTEM. SUSPECT MANUFACTURING FAULT.						
GULSTM	LYC	LYC	STUD	SHEARED	08/14/2001	
500S	IO540E1B5	IO540E1B5	L1959448	RECIPROCATING	AUS20010904	1340
(AUS) LH ENGINE NO4 CYLINDER HOLDDOWN STUDS (3OFF) SHEARED. FOLLOWING REMOVAL OF THE CYLINDER THE CRANKCASE WAS FOUND TO BE CRACKED THROUGH THE AREA OF THE HOLDDOWN STUDS.						
GULSTM			CHARGER	FAILED	08/16/2001	359
GIV			1159SCAV5201	TAIL	GAC081601	DURING NORMAL
MAINTENANCE WHILE ON THE GROUND THE BATTERY CHARGER BEGAN TO SMOKE AND THE CIRCUIT BREAKER POPPED. REMOVED AND REPLACED BATTERY CHARGER WITH REPAIRED UNIT.						
HUGHES	ALLSN	HUGHES	MAIN ROTOR	CRACKED	08/22/2001	3340
369D	250C20B	369D21200503	369D21100523	LWR SKIN ROOT	CA010831010 (CAN)	1 1/2"- 2"
CHORDWISE CRACKS IN LOWER ROOT DOUBLER ADJACENT TO OUTBOARD END OF ROOT END FITTING. TWO BLADES FROM SAME SET WITH SIMILAR CRACKS S/N'S 009999-K068,-K070. *TORQUE EVENTS CALCULATED BY TSNX20 (REF: BOEING SERVICE BULLETIN SB 369D195R3)						
HUGHES	ALLSN	HUGHES	SHAFT	DISTORTED	08/24/2001	
369HS	250C20	369A5400	369A54083	TAIL ROTOR	AUS20010925	344
(AUS) TAIL ROTOR GEARBOX OUTPUT SHAFT BEARINGS BREAKING UP AND SHAFTRUNOUT EXCESSIVE. SHAFT RUNOUT APPROXIMATELY 0.457MM (0.018IN). MAXIMUM RUNOUT 0.0254MM (0.001IN).						
MOONEY	LYC		COIL	CRACKED	08/14/2001	478
M20E	IO360A1A		AB3571651	MAGNETO	2001FA0000250	
WHILE REPAIRING LEFT BENDIX S20 SERIES MAGNETO, FOUND MAGNETO COIL CRACKED. REPLACED COIL WITH A NEW TCM COIL PN 10-357165 COIL. ALSO FOUND CRACK IN DISTRIBUTOR BLOCK. REPLACED.						
MOONEY	LYC		IMPELLER	DAMAGED	08/14/2001	478
M20E	IO360A1A			OIL PUMP	2001FA0000251	
OIL PUMP IMPELLERS S1B 524, FOUND OIL PUMP GEARS TO BE STEEL TYPE BUT NO DOCUMENTATION AS TO WHAT PN THE GEARS WERE. FOUND GEARS HAD FOREIGN MATERIAL HAD PASSED THROUGH THE OIL PUMP. OIL PUMP GEARS WERE NOT AIRWORTHY REGARDLESS OF PART NUMBERS. INSTALLED IMPELLER KIT PN 05K19423S. (ATTACHED						
MOONEY	LYC		HOUSING	GALLED	08/14/2001	478
M20E	IO360A1A		78531	OIL PUMP	2001FA0000252	
WHEN COMPLYING WITH AD, OIL PUMP IMPELLERS, S1B524, FOUND OIL PUMP BODY GALLED DUE TO FOREIGN MATERIAL PASSING THROUGH OIL PUMP ASSEMBLY. REPLACED OIL PUMP BODY WITH NEW PART. (PHOTOS						
MOONEY	CONT		TUBE	CORRODED	06/18/2001	880
M20K	TSIO520*		730048503	AILERON	2001FA0000267	
FATAL INTERNAL CORROSION, CAUSED BY TRAPPED MOISTURE INSIDE PUSH PULL CONTROL TUBE FOR AILERON. CORROSION WAS FOUND DURING ANNUAL INSPECTION.						
MOONEY	CONT		THROTTLE	WORN	08/20/2001	322
M20R	IO550*		TCM646224A	COCKPIT	2001FA0000268	
THE PRESSED IN BUSHING AT THE END OF THE THROTTLE ARM WAS WORN THRU. THE BRONZE SECTION. (ATTACHED						

PIPER PA18150	LYC O360*	VALVE SEAT 72057	LEAKING INTAKE PORT	07/20/2001 2001FA0000217	
DURING COMPRESSION CHECK, LOW CYLINDER PRESSURE WAS DISCOVERED. LEAKAGE WAS DETERMINED TO BE BETWEEN NUMBER FOUR CYLINDER INTAKE VALVE AND VALVE SEAT. AFTER REMOVING INTAKE VALVE, FURTHER INSPECTION REVEALED POOR CONDITION OF VALVE SEAT IN REGARDS TO A LACK OF A DISTINCT CONTACT WEAR PATTERN WITH VALVE. APPROXIMATELY ONLY ONE QUARTER OF THE DIAMETER OF THE VALVE SEAT SHOWED CLEAN CONTACT WITH THE VALVE WHILE THE OTHER THREE QUARTERS APPEARED ROUGH WITH EVIDENCE OF COMPRESSION BLOWBY. LEAKAGE CAUSED BY POOR SEAL BETWEEN VALVE AND SEAT DUE TO POSSIBLE IMPROPER VALVE SEAT INSTALLATION, VALVELAPPING OR VALVE GUIDE BOSS NOT TRUE WITH VALVE SEAT FACE.					
PIPER PA23250	LYC TIO540*	VALVE 23D04	DEFECTIVE HEATER	07/06/2001 2001FA0000247	
AFTER COMPLYING WITH AD AND SB, VALVE WAS DEEMED AIRWORTHY AND REINSTALLED IN AIRCRAFT. CONNECTED A PRESSURE GAUGE TO VERIFY THAT SETTING WAS CORRECT BECAUSE OF THE QUANTITY OF SOOT IN THE EXHAUST PIPE AND STREAM. WHILE REMOVING TEE FITTING AND GAUGE, THE FUEL DID NOT STOP DRIPPING FROM THE VALVE OUTLET. ENERGIZED THE FUEL PUMP BRIEFLY TO PRESSURIZE THE VALVE AND THE FUEL DID NOT STOP, PN OF VALVE IS NOT READABLE. IT APPEARS TO HAVE BEEN SALVAGED FROM ANOTHER AIRCRAFT BECAUSE THE PAINT ON IT DOES NOT MATCH THIS AIRCRAFT. NEW VALVE IN ORDER.					
PIPER PA24250	LYC O540A1A	SWITCH	MISINSTALLED MLG	07/23/2001 AUS20010851	
(AUS) RT MAIN LANDING GEAR DOWN LIMIT MICROSWITCH INCORRECTLY WIRED. WHEN THE NLG MICROSWITCH WIRES WERE DISCONNECTED THE DOWN LIGHT WAS STILL ON. INVESTIGATION FOUND THE RT LANDING GEAR MICROSWITCH WIRING WAS INCORRECT. PERSONNEL/MAINTENANCE ERROR.					
PIPER PA28161		CONTROL 62701114	FRAYED STABILIZER	06/22/2001 2001FA0000228	7000
RIGHT FORWARD STABILATOR CABLE- THIS LOCATION HAS SEVERAL PULLIES THAT DO NOT HAVE BEARINGS, WHEN THEY GET STUCK (NOT MUCH CABLE DEFLECTION AND THEREFORE NOT MUCH PRESSURE TO TURN THE PULLEY) THE CABLE WEARS THIN AND EVENTUALLY FRAYS. DIFFICULT TO DETECT WITHOUT CLEANING CABLE AND CHECKING WITH FINGERNAIL OR RAG. THIS CABLE LOOKED FINE BUT HAD 50 PERCENT BROKEN STRANDS WHEN IT WAS					
PIPER PA28180	LYC O360*	LINE 63201000	CORRODED OIL SYSTEM	07/27/2001 2001FA0000216	1830
ON THE THIRD FLIGHT AFTER UPDATING THE OIL PUMP IN THE ENGINE PER AD, AN OIL FILM WAS NOTED AT THE FIREWALL ADJACENT TO THE SPOT WHERE THE OIL PRESSURE LINE PASSES THROUGH A GROMMET (DISC, FIREWALL PN 63915-003). OIL WAS ALSO PRESENT ON THE FIREWALL BLANKET ON THE INSIDE OF THE COCKPIT. AFTER DISASSEMBLING THE DISC A RETAINERS FROM THE FIREWALL, ABOUT 10-15 LBS PRESSURE WAS EXERTED ON THE ALUMINUM OIL LINE ASSEMBLY. IT SEPARATED INTO TWO PIECES DUE TO CORROSION OF THE METAL, INSIDE THE AREA WHERE IT PASSES THROUGH THE DISC/RETAINER ASSEMBLY. THIS PART HAS A TOTAL TIME OF ONLY 1830					
PIPER PA31350	LYC TIO540J2BD	LYC TIO540J2BD	HOSE 3999505	DETERIORATED ENGINE OIL DISTR	04/12/2001 AUS20010818
(AUS) ENGINE OIL COOLER HOSE DETERIORATED DUE TO BEING INCORRECTLY ROUTED CLOSE TO TURBOCHARGER. HOSE ALSO HAD EXCESSIVE BEND RADIUS.					
PIPER PA31350	LYC TIO540J2BD	LYC TIO540J2BD	HOSE	DETERIORATED ENGINE OIL DISTR	04/24/2001 AUS20010829
(AUS) TURBOCHARGER OIL PRESSURE HOSE INCORRECTLY ROUTED. HOSE DETERIORATED DUE TO HEAT. HOSE LOOSE ON END FITTING. PERSONNEL/MAINTENANCE ERROR.					
PIPER PA31350	LYC TIO540J2BD		BOLT	UNAPPROVED ELEVATOR	05/10/2001 AUS20010808
(AUS) ELEVATOR PUSHROD BOLTS INCORRECT TYPE AS REQUIRED BY AD/PA31/121AMDT1. UNAPPROVED PART. PERSONNEL/MAINTENANCE ERROR.					
PIPER PA31350	LYC TIO540J2BD		HANDLE 4225000	MISREPAIRED PAX DOOR	05/15/2001 AUS20010810
(AUS) CABIN DOOR INNER HANDLE HAD UNAPPROVED REPAIR. HANDLE HAD BEEN WELDED IN TWO PLACES. PERSONNEL/MAINTENANCE ERROR. UNAPPROVED REPAIR.					
PIPER PA31350	LYC TIO540J2BD	LYC TIO540J2BD	ROD END 24894	WRONG PART POWER LEVER	04/12/2001 AUS20010817
(AUS) RT ENGINE CONTROL ARM ROD END INCORRECTLY ASSEMBLED ON THE WRONG SIDE OF THE ARM CAUSING LOAD ON THE CABLE BALL END.					
PIPER PA31350	LYC TIO540J2BD	LYC TIO540J2BD	EXHAUST PIPE	MISINSTALLED ENGINE	04/12/2001 AUS20010820
(AUS) LT TAILPIPE INCORRECTLY FITTED TO TURBOCHARGER CAUSING BURNING OF THE EXHAUST CLAMP.					
PIPER PA31T	PWA PT6*		O-RING	LEAKING FUEL PROBE	07/20/2001 2001FA0000239
AFTER FUELING AIRCRAFT, FUEL STARTED LEAKING FROM RIGHT NACELLE FUEL PROBE COVER. FOUND O-RING BETWEEN MOUNT PLATE AND TOP OF PROBE EXTRUDED IN 2 AREAS. FUEL WAS RUNNING OUT OF THOSE AREAS. DEFUELED AND REPLACED PROBE WITH SERVICEABLE UNIT.					
PIPER PA32R300	LYC TIO540*		DOWNLOCK 3807802	BROKEN NLG	08/27/2001 2001FA0000243
NOSE GEAR DROPPED OUT OF WHEEL WELL IN FLIGHT. FOUND DOWNLOCK BROKEN WHERE NOSE ACTUATOR ROD ATTACHES. THIS HAS HAPPENED ON MORE THAN ONE OCCASION WITH SAME TYPE OF AIRCRAFT IN THE PAST.					
PIPER PA32RT300	LYC IO540K1G5D		MUFFLER 6751700	SPLIT ENGINE	08/06/2001 2001FA0000220
THE CENTER MUFFLER HOUSING SPLIT OPEN AT THE UPPER WELD SEAM ALLOWING EXHAUST TO DAMAGE THE UPPER ALUMINUM MUFFLER ASSEMBLY SHROUD AND THE ENGINE INDUCTION COVER. SUGGEST THAT A VERY CLOSE INSPECTION BE DONE BY BOTH VISUAL AND PRESSURE CHECK METHODS OF ALL MUFFLER AND EXHAUST STACK WELD					
PIPER PA46500TP	PWA PT6*		RELAY 688498	DAMAGED COCKPIT	08/01/2001 2001FA0000240
PILOT REPORTED SMOKE IN COCKPIT AND THEN CABIN FAN CIRCUIT BREAKER POPPED. FOUND LOAD BUS RELAY PN 688498 LOCATED BELOW RIGHT CIRCUIT BREAKER PANEL, WITH A HOLE BURNED IN IT. WITH CIRCUIT BREAKER PULLED, THE SMOKE WENT AWAY. PILOT RETURNED AIRCRAFT TO FACTORY FOR REPAIR.					
RK WELL NA26565	GARRIT TFE7313R1D		CLEVIS PIN 2653361203	CRACKED MLG ACTUATOR	08/31/2001 2001FA0000238
CRACKED PIN FOUND AS A RESULT OF CONDUCTING MAGNETIC PARTICLE INSPECTION OF MAIN LANDING GEAR ACTUATOR ROD CLEVIS PIN AND ATTACHING HARDWARE IN ACCORDANCE WITH SMIP ATA CODE 323076. CRACK IS LOCATED IN RELIEF AREA RADIUS DIRECTLY UNDER CLEVIS PIN HEAD.					

ROBSIN	LYC	BELT	FRAYED	08/07/2001	
R22BETA	O320B2C	A1902	TRANSMISSION	AUS20010850	
(AUS) REAR DRIVE BELT FRAYED, SPLIT AND ROLLED OFF PULLEY.					
ROBSIN	LYC	FRAME	CRACKED	08/03/2001	
R22BETA	O320B2C	A0202	FUSELAGE	AUS20010855	
(AUS) UPPER FUSELAGE FRAME CRACKED. FOUND DURING MAGNETIC PARTICLE INSPECTION.					
ROBSIN	LYC	ROBSIN	BOOT	SPLIT	08/29/2001 153
R22BETAII	VO360*	A4801	SWASHPLATE	2001FA0000297	
FOUND SWASHPLATE BOOT SPLIT OPEN AT THE CENTER FOLD. SPLIT WAS APPROX 4 TO 6 INCHES IN LENGTH.					
ROBSIN	LYC	ROBSIN	SWITCH	WORN	07/24/2001 841
R44	O540F1B5	C0511	V31001	ACTUATOR	CA010809009
(CAN) AT 100 HR INSPECTION. TEST OF ACTUATOR SWITCHES-ONE SWITCH FAILED THE TEST. INSPECTION OF THE SWITCH REVEALED THAT THE ACTUATOR BUTTON ON THE SWITCH WAS WORN TO ABOUT 1/2 OF IT'S ORIGINAL HEIGHT. INSTALLED A NEW SWITCH. SUSPECT FAN IMBALANCE TO BE THE CAUSE OF THIS WEAR.					
SNIAS		ROD	WORN	10/25/1999	
AS350B2		350A33214501	PITCH CONTROL	HCMMA075234	
PART IS WORN BEYOND LIMITS. TIME ON PARTS IS UNKNOWN. PLEASE OVERHAUL PC LINKS.					
SNIAS		BLADE	CRACKED	08/14/2001	874
AS350B2		355A12004008	TAIL ROTOR	HCMMA075388	
TAIL ROTOR BLADE CRACKED.					
SNIAS		BLADE	CRACKED	08/24/2001	3850
AS350B2		355A12004008	TAIL ROTOR	HEEA075659	
TAIL ROTOR BLADE HAS A CRACKED SPAR.					
SNIAS		BEARING	WORN	08/08/2000	737
AS350BA		350A33215300	TAIL ROTOR	HCMMA075297	
BEARING IS WORN BEYOND LIMITS.					
SWFTMS	CONT	KEY	SHEARED	07/20/2001	1389
GC1B	IO360C	AN280H205	MLG	2001FA0000203	186
AIRCRAFT EXPERIENCED GEAR COLLAPSE ON ROLL OUT AFTER LANDING. UPON DISASSEMBLY OF RIGHT GEAR RETRACTION UNIT. WOODRUFF KEY NR1 WAS FOUND SHEARED AND PINION NR 8 WAS FOUND ROTATED APPROXIMATELY .1250 OF AN INCH PAST A CONDITION WHICH WOULD HAVE ALLOWED THE GEAR TO BE DOWN AND LOCKED. IT IS UNKNOWN WHETHER THE KEY SHEARED BEFORE OR AFTER THE COLLAPSE. PROBABLE CAUSE IS A CONDITION, EITHER THE HYDRAULIC POWER PACK PRIMARY CIRCUIT BEING TRIPPED OR A STUCK MICROSWITCH, GIVING A FALSE INDICATION OF GEAR DOWN AND LOCKED. NO DAMAGED TO THE DOWN LOCK WOULD INDICATE INSUFFICIENT PRESSURE. NOTE:TO PREVENT OCCURANCE OF THIS A DOUBLE GREEN LIGHT SYSTEM OR A CIRCUIT					
UROCOP	TMECA	HOUSING	CORRODED	07/12/2001	597
EC120B	ARRIU2F	C632A2115101	MAIN ROTOR	2001FA0000223	597
MFG CONCESSION APPLIED TO MGB- INSTALLATION OF BEVEL GEAR AND BEVEL PINION GEAR. DISASSEMBLY OF MGB FOR MODIFICATION, CORROSION WAS ON SUPPORT STUDS OF THE LOWER HOUSING AND THE BORES OF MAIN MODULE OF THE AFFECTED STUDS, INSP REVEALED CORROSION IN THE BORES. CLEANED AND TREATED THE BORES AND STUDS TO ACCEPTABLE STANDARDS, RECORDS OF THE MGB WERE REVIEWED, INDICATING THE COMPONENT WAS MANUFACTURED 8/98, WITH TOTAL TIME SINCE NEW-597.3 HOURS. THE OVERHAUL INTERVAL OF THE MGB IS 2000 HRS. THE MM WAS FOLLOWED FOR THE PROCEDURES OF DISASSEMBLY, ASSEMBLY AND COMPLETION OF THIS MODIFICATION, AND NOMENTION OF CORROSION IN THIS AREA OF THE MGB. FOLLOWED THE SPM FOR CORROSION					
UROCOP	PWA	SWASHPLATE	EXCESS PLAY	04/09/2001	1034
EC135P1	PW206A	L623M2005101	MAIN ROTOR	TI1R001444	
SWASHPLATE, REMOVED AT AEC REQUEST, EXCESSIVE PLAY. REMOVED AND REPLACED.					
WSK	WSK	ENGINE	MALFUNCTIONED	08/07/2001	
M18DROMADER	PZLM18	NACELLE	2001FA0000287		
FLYING IN CRUISE WHEN BUTTERFLY ON INTAKE STARTED FLUCUATING. PULLED UP AND REDUCED POWER. APPROXIMATELY 10 SECONDS LATER LOST POWER. ACFT. HIT LOW LEVEE SKIDDED ACROSS FIELD AND HIT SECOND LEVEE. UPON STRIKING SECOND LEVEE ACFT. ROLLED OVER ON ITS NOSE AND SKIDDED TO A REST UPSIDE DOWN IN A					
WTHRLY	PWA	VALVE SPRING	BROKEN	07/25/2001	6170
620B	R985AN1	28160	NR 1 CYLINDER	2001FA0000255	
ENGINE BEGAN BACKFIRING AND POWER DECREASED, AIRCRAFT LANDED AS A RESULT OF RUNNING THROUGH A FENCE. FOUND NR 1 CYLINDER INTAKE VALVE SPRINGS BROKEN. REPLACED SPRINGS, OPERATION NORMAL. APPEARED TO BE SMALL RUST PITS IN BREAK AREAS.					

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MALFUNCTION OR DEFECT REPORT		ATA Code				
Enter pertinent data		1. A/C Reg. No. N-				
2. AIRCRAFT	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER		OTHER	
3. POWERPLANT					COMPUTER	
4. PROPELLER					FAA	
5. SPECIFIC PART (of component) CAUSING TROUBLE					MFG.	
Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.		AIR TAXI	
					MECH.	
6. APPLIANCE/COMPONENT (Assembly that includes part)					OPER.	
Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number		REP. STA.	
Part TT	Part TSO	Part Condition	7. 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 _____		
				SUBMITTED BY:		TELEPHONE NUMBER: () _____

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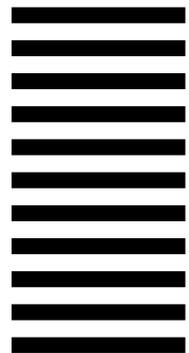
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