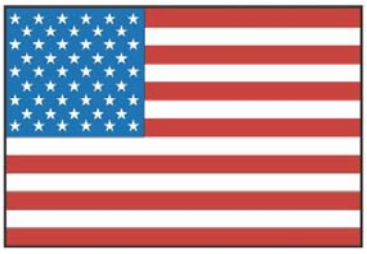
U.S. Department of Transportation
Federal Aviation Administration

AFS-600
Regulatory Support Division

ADVISORY CIRCULAR

43-16A

AVIATION MAINTENANCE ALERTS



ALERT NUMBER 345

APRIL 2007

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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, cooperating 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 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 a Mechanical Reliability Report (MRR), a Malfunction or Defect Report (M or D), or a Service Difficulty Report (SDR). Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Aviation Data Systems Branch (AFS-620); P.O. Box 25082; Oklahoma City, OK 73125-5029.

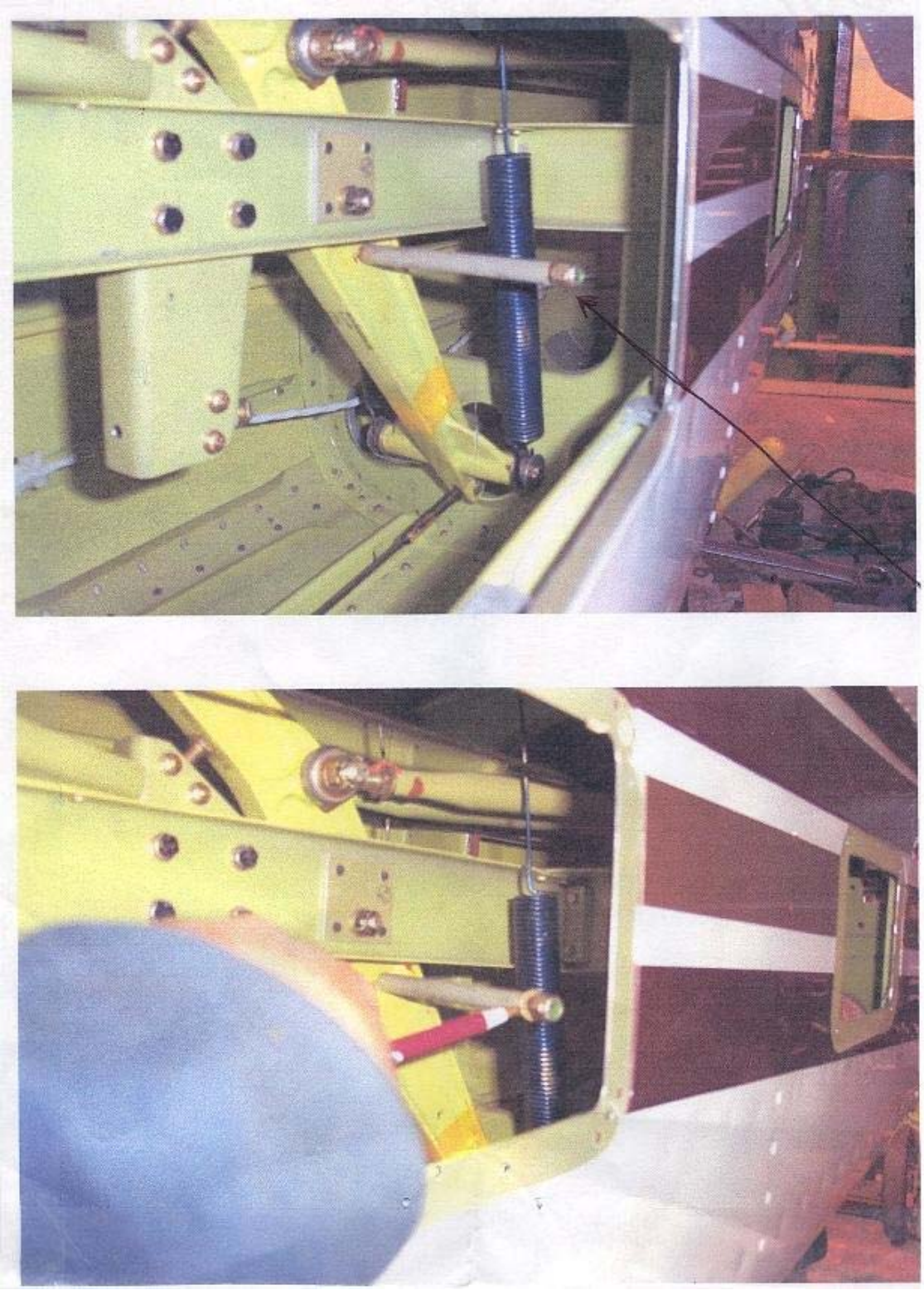
(Editor's notes are provided for editorial clarification and enhancement within an article. They will always be recognized as italicized words bordered by parentheses.)

AIRPLANES

BEECH

Beech: A36; Loose Auto-Pilot Connecting Rod, ATA 2730

A submitter writes, "The auto-pilot hook-up rod should be tightened up or removed from the aircraft at the factory. This is the second aircraft in one week *(in which)* this rod *(and/or its attachment nuts)* has been found loose...." *(Elevator control bell crank P/N: 002-524024-51.)*



Part Total Time: 140.0 hours.

CESSNA

Cessna: 152; Broken Flap Cable; ATA 2750

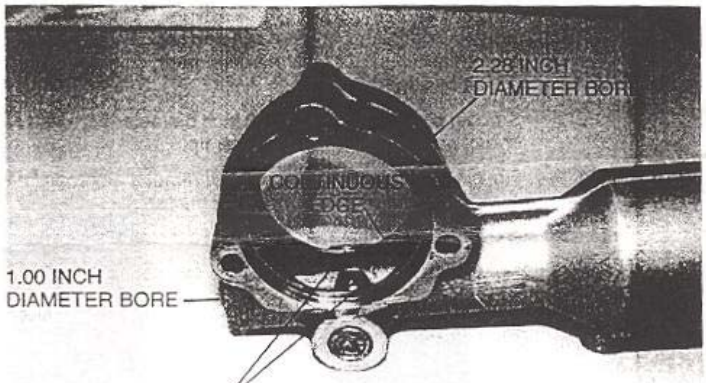
"On final," states an unidentified submitter, "the student selected 30 degrees flaps: a loud 'pop' was heard, the R/H flap came down to 30 degrees, but there was no movement at the L/H flap. The aircraft landed without incident. Investigation revealed the swaged ball end broke from the remaining cable (P/N 0400107-146). *(I)* suspect high time and cycles as contributing factors *(to this failure)*."(A search of the FAA Service Difficulty Reporting System data base revealed 14 additional entries answering the base part number.)

Part Total Time: 12,872.0 hours.

Cessna: R172E; Cracked Main Landing Gear Actuator; ATA 3233

"While complying with Service Bulletin number SEB01-2 R1," writes the submitter, "I found the large bore *(of this actuator)* cracked (see attached illustration)." *(Provided actuator P/N: 9882015-2. See January 2006 Alerts for a more thorough description of this same defect.)*

SEB01-2
Revision 1



INSPECTION AREA
NOTE: INSPECT CONTINUOUS EDGE OF SADDLE-SHAPED HOLE AND CIRCUMFERENCE OF 2.28 INCH DIAMETER BORE AND STEP.

FIGURE 1. MAIN LANDING GEAR ACTUATOR INSPECTION

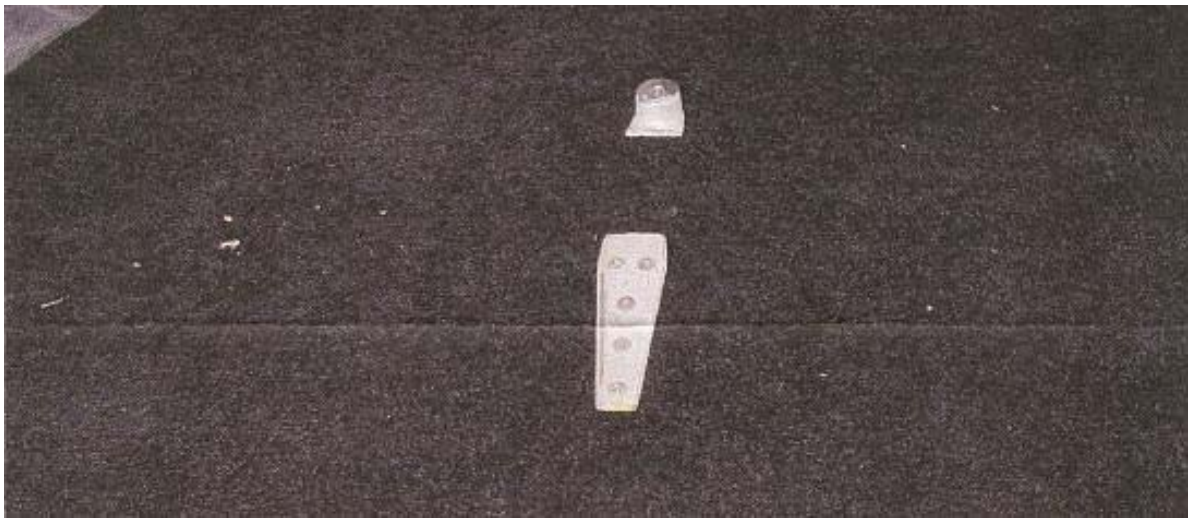
Page 4

(A search of the FAA Service Difficulty Reporting System data base revealed 38 entries for this exact part number, 44 for the base number.)

Part Total Time: (unknown).

Cessna: T207A; Broken Horizontal Stabilizer Attach Fitting; ATA 5340

A repair station technician states, "The pilot found the horizontal stabilizer loose on preflight. Maintenance inspected and found the R/H forward attachment fitting broken. (I) replaced both forward fittings (P/N 1232013-2F) with new parts." *(A search of the FAA Service Difficulty Reporting System data base revealed five additional entries for the part's base number.)*



Part Total Time: 14,703.8 hours.

Cessna: CE 750; Failed Flap PDU and Display; ATA 2751

"Shortly after takeoff," states the submitter, "the flap lever was selected to the zero degree position. We immediately received a 'flaps fail' amber caution advisory message. We referred to the Abnormal Checklist and exhausted all efforts to regain control of the flaps—to no avail. We then requested holding so we could burn off fuel and get the aircraft weight to within landing limits. We then made an uneventful landing back at (the airport) where maintenance personnel were standing by." Corrective maintenance action indicated replacement of the flap P.D.U.—position display unit (P/N 9914615-3) and the 'soft start relay' (P/N not provided). *(A search of the FAA Service Difficulty Reporting System data base revealed two additional entries for this part number.)*

Part Total Time: 1,150.0 hours.

PIPER

Piper: PA34-200; Worn Landing Gear Mount Holes; ATA 3211

(Reference an almost identical discrepancy for a PA28 in last January's Alerts.)

This description is written by a mechanic who also functions as the Director of Maintenance for his operation. "The main landing gear pivot casting (forward trunnion fitting assembly) attach hardware continually comes loose, allowing chaffing between the casting and the wing spar—enlarging the attach bolt holes in *(both)* the casting and the spar. The effected L/H casting had been previously removed, inspected, and installed per the Piper maintenance for this *(specific)* reason only 100 hours prior to this *(second)* occurrence. This condition had been noted on the R/H casting at the same inspection and had been corrected by replacing the casting. *(The attachment holes)* in the casting and spar were reamed to accept AN5 bolts rather than the original AN4. The original nut-plates on the forward side of the wing spar (MS21047) do not seem to adequately accept the stresses imposed

on them and are likely the leading factor in the continual loosening of the casting. *(They)* were replaced with MS21078-5 nut-plates which provide more strength and *(apparently)* prevent the attach bolts from loosening. We operate a fleet of PA34-200, -200T, and -220T Senecas. The-200 and -200T *(aircraft)* have exhibited the same tendency regarding the loosening of the forward pivot casting attach hardware. *(I)* suggest inspecting the pivot casting attach hardware regularly and replacing hardware as stated above."

(A search of the FAA Service Difficulty Reporting System data base revealed three additional entries for the base part number.)

PIPER AIRCRAFT
PA-34-200 SENECA
AIRPLANE PARTS CATALOG

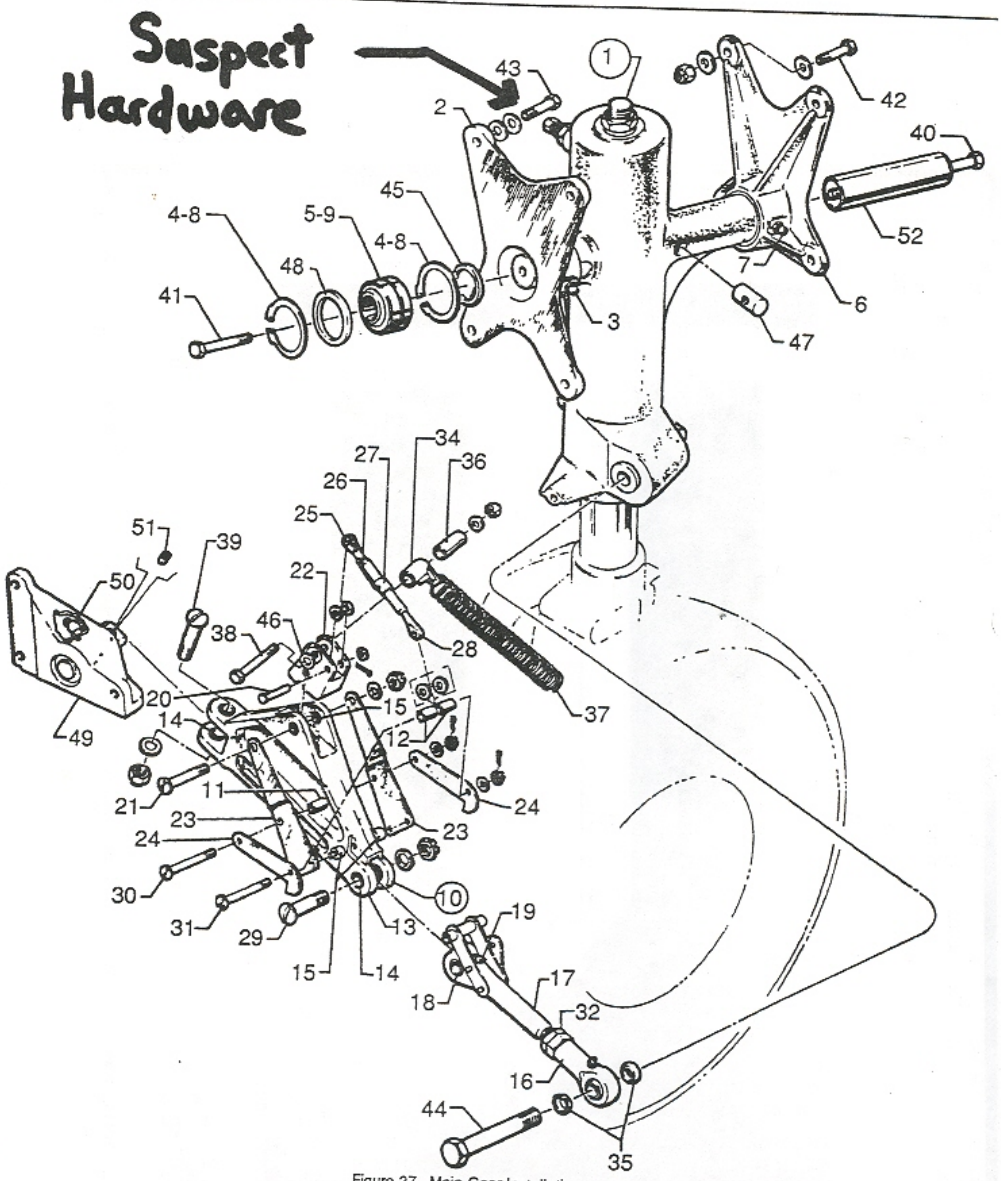
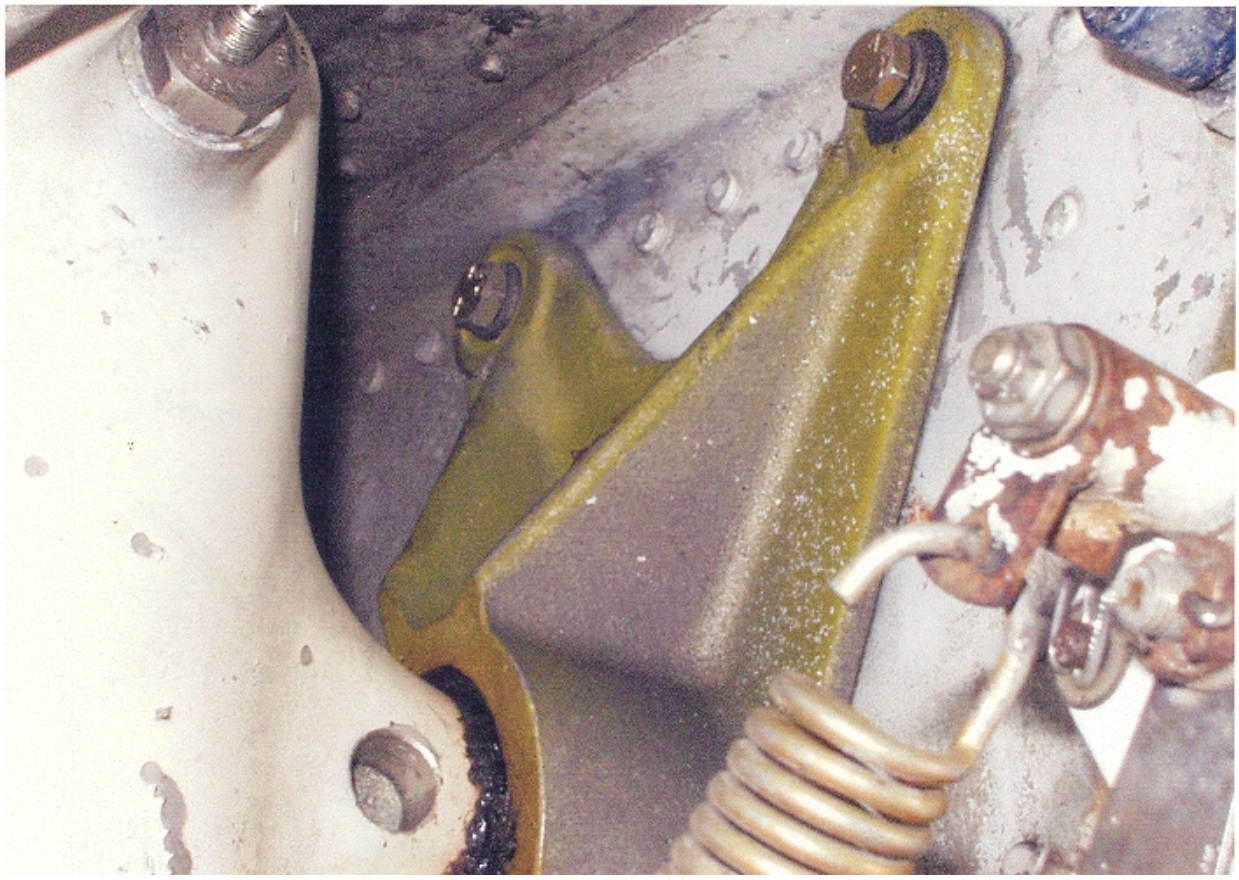


Figure 27. Main Gear Installation

Reissued: June 1, 1990

1F4



Part Total Time: 5,966.6 hours.

HELICOPTERS

AEROSPATIALE

Aerospatiale: SA365N1; Corroded Floor Panels; ATA 5321

A repair station submitter writes, "During a pre-buy inspection, the Loncoin rubber mats were pulled up from the cockpit floors. Under the pilot's side of these mats major corrosion accumulation was discovered. These mats were still damp underneath, *(indicating)* why this corrosion existed. We suspect salt laden water from the pilots feet during winter operations contributed to this corrosion. The rubber mats allowed the moisture to penetrate, but would not let it dry. This floor panel *(P/N 365-21-0059-0501)* is completely destroyed and must be replaced. More stringent cleaning and inspection *(procedures)* must be practiced in *(such)* environments."

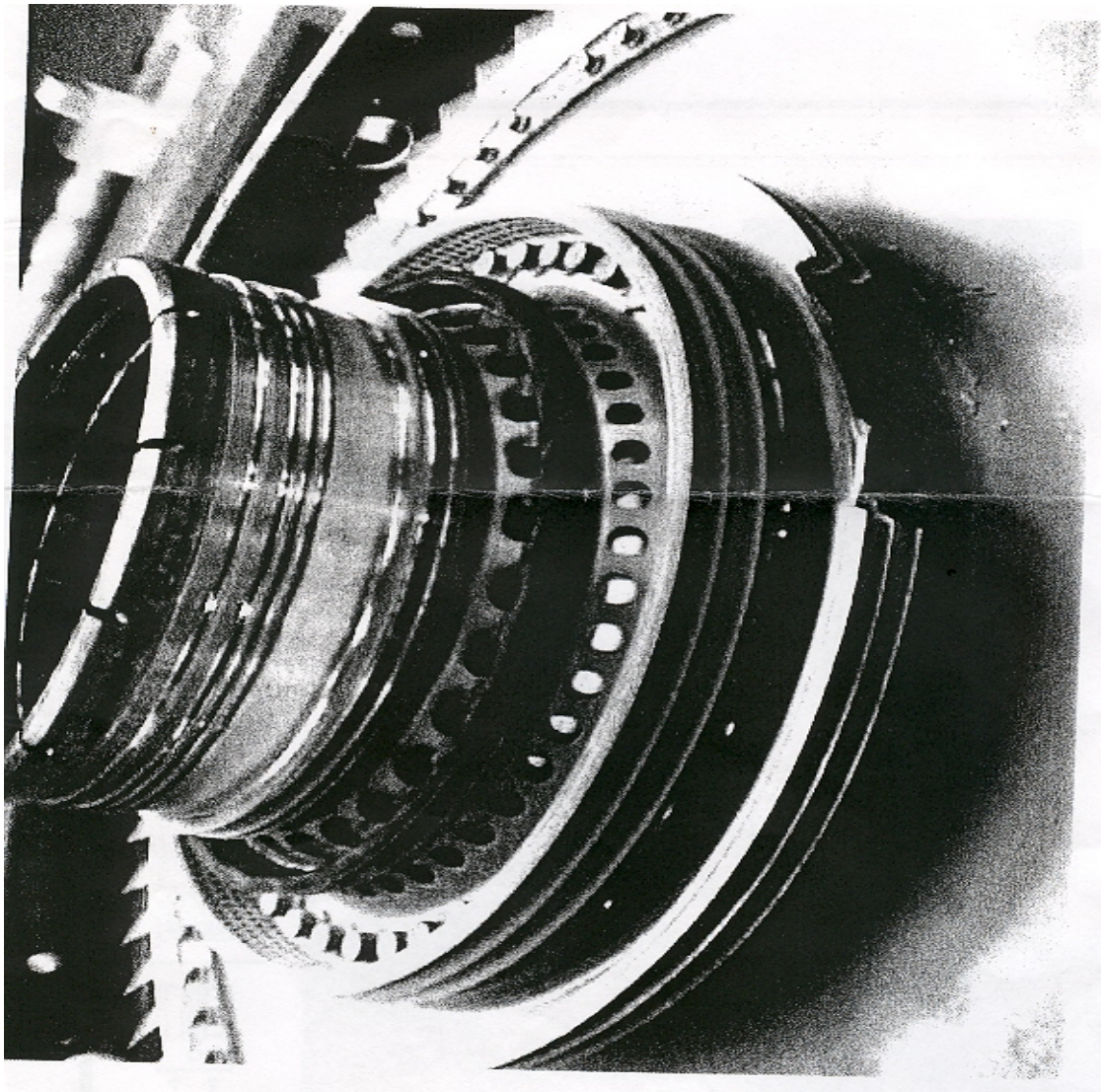
Part Total Time: (unknown).

POWERPLANTS

CFM

CFM: 56-3CI; Failed HP Turbine Shaft-Seal Rack Structure; ATA 7250

"A Boeing 737...suffered an aborted take-off," states this submitter. "Investigation revealed failure and liberation of the HPT *(high pressure turbine)* rear shaft where a section of material measuring 3.5 inches of circumference had liberated around the three seal tooth rack. Similar failures have been experienced on the CFM56-3 engine. The parts were returned to CFM for investigation. *(Shaft P/N: 9514M71P04.)*



(A search of the FAA Service Difficulty Reporting System data base revealed two additional entries for the base part number.)

Part Total Time: 30,987.0 hours.

ACCESSORIES

KELTECH WATER HEATER

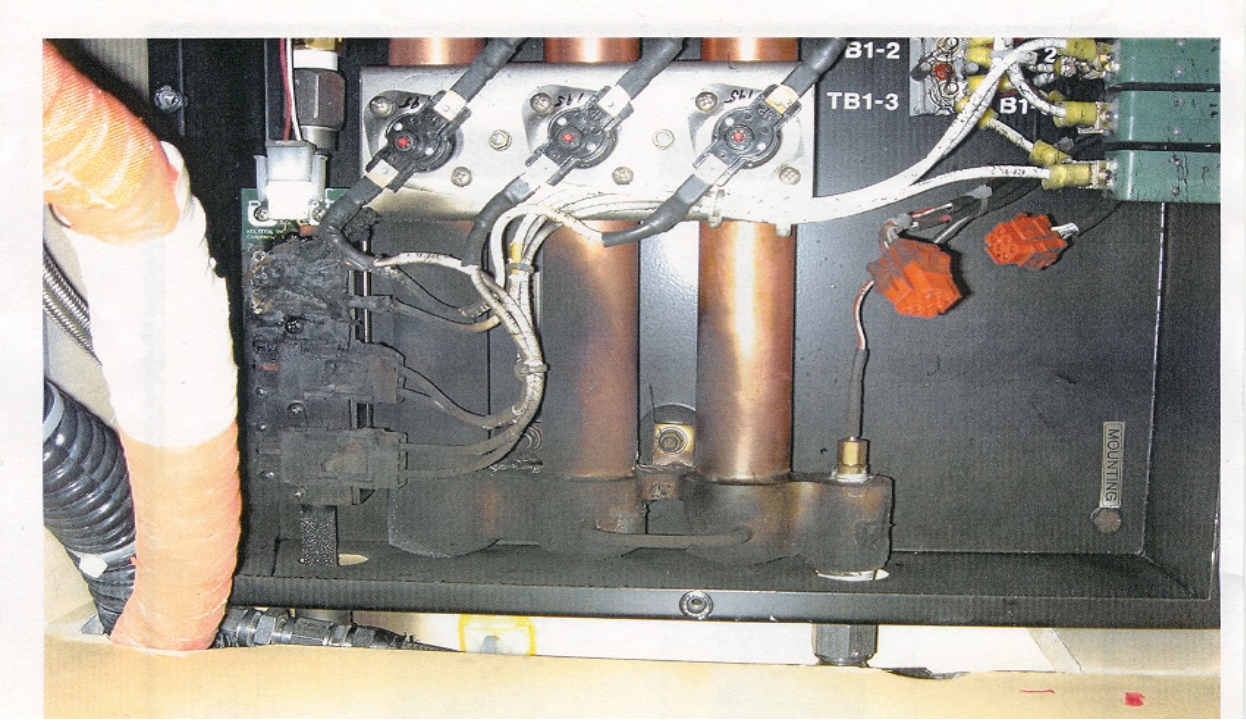
Keltech Water Heater: ES7.1-183/206-400DK; Failed Fire Protection; ATA 3820

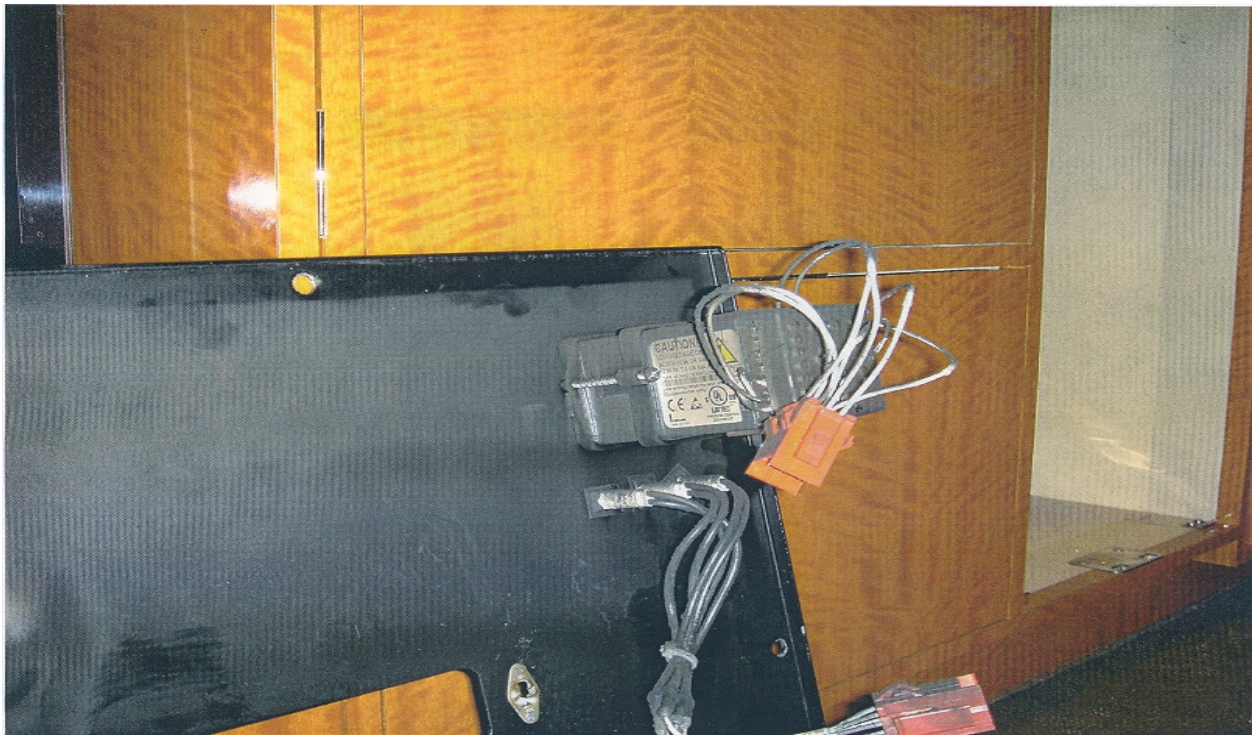
(The following defect report describes a Boeing 767-2AX having a VIP interior package including a specific type hot water heater.)

A repair station submitter states, “The flight attendants complained about no hot water at the galley sink shortly before landing, after a transatlantic flight. Once on the ground, maintenance personnel exposed the water heater and got a heavy burned smell. Once they removed the false panel covering the water heater, they noted no circuit breaker either on the unit itself or on the galley circuit breaker panel had tripped.

“They decided to look at the inside of the installed unit to see if there was something they could repair. It looked as though there *(had been)* a fire inside the unit. It *(had)* burned itself out and no external damage was done. Prior to the opening *(of the heater enclosure area)* there was no smell anywhere in the galley from the fire and no circuit breakers *(had been)* tripped. The unit was removed from the aircraft and sent to the manufacturer for teardown and troubleshooting—to find the cause *(of the fire)*—and to repair this water heater. No reason or cause has been found at this time. This water heater is installed in an aircraft with a VIP interior under an STC *(supplemental type certificate)*. These units have been installed in a variety of VIP interior installations by several completion centers throughout the world.”

(The unit is described as a Keltech Water Heater, P/N ES7.1-183/206-400DK. The pictures are dramatic—period.)





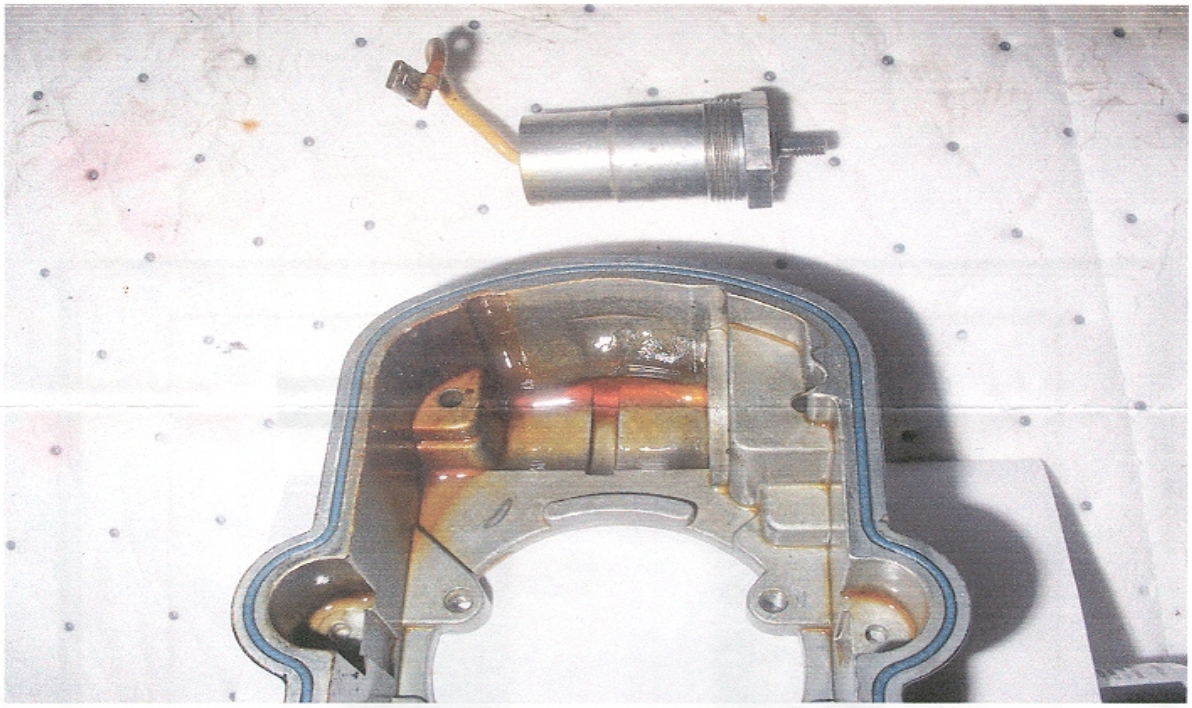
Part Total Time: (unknown).

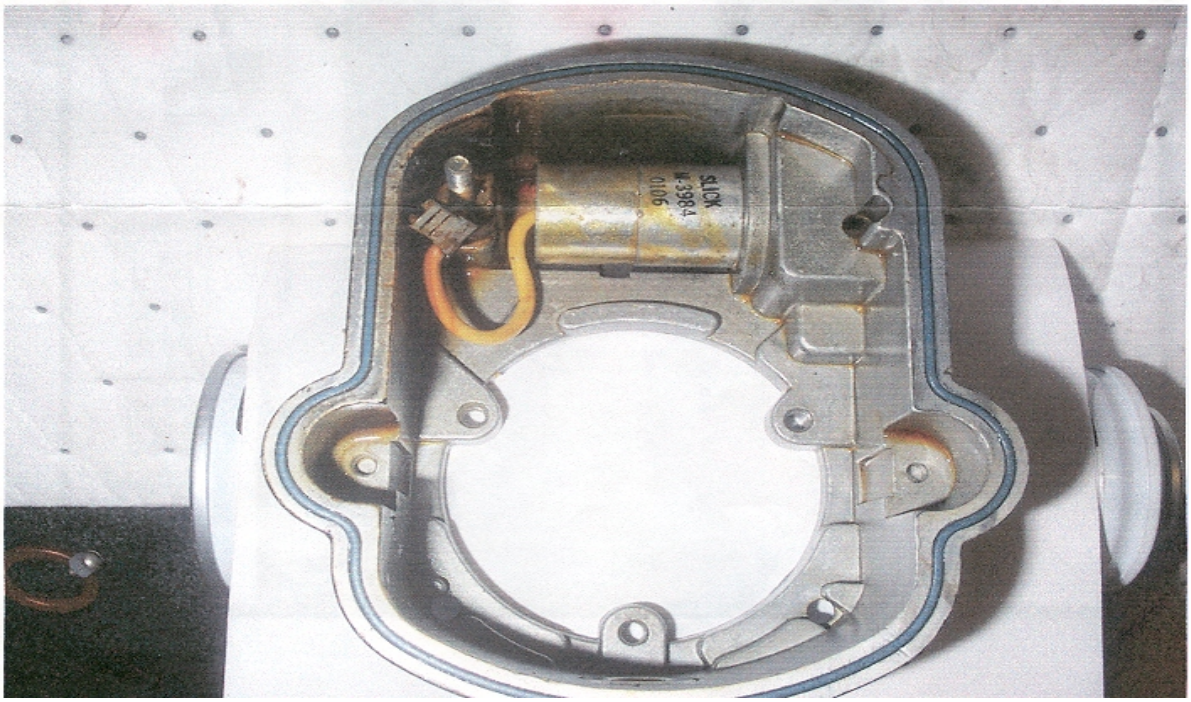
SLICK MAGNETO

Slick Magneto: 6361; Leaking Capacitor; ATA 7414

(This report concerns a Piper PA32R-301T powered by a Lycoming TIO-540-AH1A.)

A repair station technician states, "*(I)* opened the pressurized magneto to inspect for corrosion during an annual inspection *(and found)* a large amount of oil in the aft case *(housing)*. Further investigation revealed *(this oil)* to be dielectric fluid from the capacitor. *(I)* tested the capacitor with a Simpson meter and found it to have failed. Magneto failure *(was probably)* imminent due to oil contamination to the points and distributor. *(I)* suggest inspection of all magnetos containing this part number capacitor (P/N M-3984) before further flight."





Part Total Time: 281.8 hours.

AIR NOTES

INTERNET SERVICE DIFFICULTY REPORTING (iSDR) WEB SITE

The Federal Aviation Administration (FAA) Internet Service Difficulty Reporting (iSDR) web site is the front-end for the Service Difficulty Reporting System (SDRS) data base that is maintained by the Aviation Data Systems Branch, AFS-620, in Oklahoma City, Oklahoma. The iSDR web site supports the Flight Standards Service (AFS), Service Difficulty Program by providing the aviation community with a voluntary and electronic means to conveniently submit in-service reports of failures, malfunctions, or defects on aeronautical products. The objective of the Service Difficulty Program is to achieve prompt correction of conditions adversely affecting continued airworthiness of aeronautical products. To accomplish this, Mechanical Reliability Reports (MRRs), Malfunction or Defect Reports (M or Ds), or Service Difficulty Reports (SDRs) as they are commonly called, are collected, converted into a common SDR format, stored, and made available to the appropriate segments of the FAA, the aviation community, and the general public for review and analysis. SDR data is accessible through the "Query SDR data" feature on the iSDR web site at: http://av-info.faa.gov/sdrx/.

In the past, the last two pages of the Alerts contained a paper copy of FAA Form 8010-4, Malfunction or Defect Report. To meet the requirements of *Section 508, this form will no longer be published in the Alerts; however, the form is available on the Internet at: http://forms.faa.gov/forms/faa8010-4.pdf. You can still download and complete the form as you have in the past.

*Section 508 was enacted to eliminate barriers in information technology, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals.

A report should be 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 may impair its future function, it is considered defective and should be reported under the Service Difficulty Program.

The collection, collation, analysis of data, and the rapid dissemination of mechanical discrepancies, alerts, and trend information to the appropriate segments of the FAA and the aviation community provides an effective and economical method of ensuring 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, 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 (ADs) to address a specific problem.

The iSDR web site provides an electronic means for the general aviation community to voluntarily submit reports, and may serve as an alternative means for operators and air agencies to comply with the reporting requirements of 14 Title of the Code of Federal Regulations (CFR) Section 121.703, 125.409, 135.415, and 145.221, if accepted by their certificate-holding district office. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft maintenance surveillance as well as accident and incident investigations.

The SDRS data base contains records dating back to 1974. At the current time, we are receiving approximately 40,000 records per year. Reports may be submitted to the iSDR web site on active data entry form or submitted hardcopy to the address below.

The SDRS and iSDR web site point of contact is:

Tom Marcotte
Service Difficulty Reporting System, Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125
Telephone: (405) 954-6500
SDRS Program Manager e-mail address: 9-AMC-SDR-ProgMgr@faa.gov

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: Daniel Roller (405) 954-3646
FAX: (405) 954-4570 or (405) 954-4655

E-mail address: Daniel.Roller@faa.gov

Mailing address: FAA, **ATTN: AFS-620 ALERTS**, P.O. Box 25082, Oklahoma City, OK 73125-5029

You can access current and back issues of this publication from the internet at: http://av-info.faa.gov/. Select the General Aviation Airworthiness Alerts heading.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted for the previous month, 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

To retrieve the complete report, click on the Control Number located in each report. These reports contain raw data that has not been edited. Also, because these reports contain raw data, the pages containing the raw data are not numbered.

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.

Control Number	Aircraft Make	Engine Make	Component Make	Part Name	Part Condition
Difficulty Date	**Aircraft Model**	**Engine Model**	**Component Model**	**Part Number**	**Part Location**
2007FA0000149				MAGNETO	MALFUNCTIONED
2/9/2007				6310	ENGINE
MAGNETO IS MISSING AT HIGH ALTITUDE. (K)					
2007FA0000150				MAGNETO	MALFUNCTIONED
2/9/2007				6310	ENGINE
MAGNETO`S MISSING AT HIGH ALTITUDE. (K)					
2007FA0000190			MCAULY	HUB	CRACKED
2/21/2007				C4201C58	PROPELLER
HUB RECEIVED DISASSEMBLED, CLEANED AND ANODIZED WITH NO CERTIVICATION. BLADE RETENTION THREADS EDDY CURRENT INSPECTED. NR 1 BLADE RETENTION THREAD, 4 THREADS IN AT APPROXIMATELY 6 O`CLOCK POSITION FOUND CRACKED. HUB REMOVED FROM SERVICE. (K)					
2007FA0000254			PREAIR	FLOAT	FAILED
3/19/2007			MA45	30802	CARBUETOR
THE CARBURETOR WAS SENT INTO MY REPAIR STATION FOR OVERHAUL. WHEN DISASSEMBLED, IT WAS FOUND THAT THE FLOAT HAD TAKEN ON FUEL AND WAS SUNK. IT IS RECOMMENDED THAT ALL POLYMER FLOATS PRODUCED BY MFG BE RECALLED, AN AD ISSUED, AND THE NEW COMPOSITE FLOAT BE INSTALLED AS SOON AS POSSIBLE. THE POLYMER FLOATS HAVE A SIGNIFICANTLY REDUCED WEAR LIFE OF ONLY ABOUT 500 HOURS INSTEAD OF 2,000 HOURS FOR THE CARBURETORS THAT THIS FLOAT IS INSTALLED IN. THIS INSTANCE WAS NOT A FIRST FOR THIS REPAIR STATION.					
2007FA0000239	AIRTRC			LIGHT	FAILED
10/20/2006	AT802			1220	
PULSELIGHT UNIT FAILED. EVALUATION OF FAILED UNIT REVEALED HIGH HEAT GENERATED WITHIN UNIT AND SIGNIFICANT BURNING.					
2007FA0000187	AMD	GARRTT		COUPLING	DEFECTIVE
2/22/2007	FALCON10	TFE7312		285683	HYDRAULIC SYS
THIS COUPLING IS A QUICK-DISCONNECT TYPE FITTING THAT IS IN LINE OF THE ENGINE DRIVEN HYDRAULIC PUMP AND LOCATED IN THE ENGINE PYLON. THERE IS ONLY ONE ON EACH ENGINE AND ONLY ON THE SUCTION LINE. THESE FITTINGS HAVE NO TIME CHANGE REQUIREMENT. WHEN THIS PART WAS CHANGED (DUE TO EXTERNAL LEAKAGE) IT WAS EXTREMELY DIFFICULT TO SEPARATE. ONCE SEPARATED, THE LOCKING BALLS HAD DUG SO DEEPLY INTO THE LOCK RING THAT PARTIAL UNSEATING OF THE O-RING HAD OCCURRED. THERE QUICK DISCONNECT COUPLINGS (LT AND RT) SHOULD BE REQUIRED TO BE INSPECTED AT EACH ENGINE REMOVAL AND REPLACED IF WEAR IS DETECTED. (K)					
AMTR02022007	AMTR			KEELBEAM	CORRODED
2/2/2007	SPENCERAIRCR				FUSLEAGE
DURING AN ACCIDENT INVESTIGATION OF A S12D, THE AIRFRAME REAR KEEL SUPPORT WAS FOUND TO HAVE EXCESSIVE CORROSION AND THE WOODEN STRUCTURE ATTACHED TO THE KEEL WAS DRY ROTTED. ALTHOUGH					

THE CORROSION IS EVIDENT, WE BELIEVE IT WAS NOT A CAUSE OF THE ACCIDENT. THE AIRCRAFT WAS BUILT IN 1975 AND WAS OPERATED IN A SALT WATER ENVIRONMENT. THE AIRCRAFT HAD JUST RECEIVED A CONDITION INSPECTION. THERE WAS NO ACCESS TO INSPECT THE KEEL SUPPORT WHICH IS LOCATED AFT OF THE PASSENGER COMPARTMENT. IT IS RECOMMENDED THAT AN ACCESS PANEL BE MADE TO INSPECT THE KEEL ASSEMBLY AND THAT IT BE INSPECTED AT LEAST EVERY CONDITION INSPECTION.

2007FA0000151	BBAVIA	LYC	FASTENER	OUT OF POSITION
2/14/2007	7ECA	O235*		WING

RIB NAILS PULLING OUT IN ALMOST EVERY RIB. RT TIP RIB HAS ALL NAILS PULLED OUT AND A SPACE BETWEEN RIBS AND SPARS, BOTH FRONT AND REAR LOCATIONS. LT WING HAS ONE NAIL THAT IS ABOUT TO FALL OUT AS IT IS PULLED/WORKED OUT .4375 INCH. 80 PERCENT OF RIBS HAVE AT LEAST ONE NAIL OUT OVER .1250 INCH, AND ONLY APPROX 10 PERCENT OF TOTAL NAILS ARE NOT MOVING. HAVE NOT DISASSEMBLE YET FOR SPAR DAMAGE, BUT HAVE SEEN A FEW NAILS THAT ARE (SMOKING) WHERE THEY CONTACT THE ALUMINUM RIB. ALL FOUND DURING ROUTINE INSPECTION AT ANNUAL IAW AD AND APPLICABLE SB`S IAW THE AD. (K)

2007FA0000243	BEECH	CONT	ANTENNA	MISINSTALLED
2/26/2007	35B33	IO470*	VP10	VHF SYSTEM

THE DOUBLER FOR THE VHF ANTENNA APPEARS TO HAVE BEEN TOO SMALL(SLIGHLY LARGER THAN THE BASE OF THE ANTENNA)AND WAS NOT RIVITED TO THE FUSELAGE,ALLOWING THE ANTENNA TO FLUTTER WHILE AIRBORNE.ON POST FLIGHT INSPECTION THE PILOT DISCOVERED TEARING ON THREE SIDES ON TOP OF THE FUSELAGE AROUND THE BASE OF THE ANTENNA.NOTE THE TACH ONLY READS 94.5

2007FA032201	BEECH		SERVO	MALFUNCTIONED
3/8/2007	400A		6226717104	ELEVATOR CONTROL

DIFFICULTY OCCURRED UPON DESCENT. PILOT DISENGAGED AUTO-PILOT AND FELT RESISTANCE IN THE ELEVATOR CONTROL SYSTEM. ON INSPECTION OF THE SYSTEM THE AUTO-PILOT ACTUATOR WAS FOUND PARTIALLY ENGAGED. UNIT WAS REPLACED AND THE AIRCRAFT RETURNED TO SERVICE. THIS AIRCRAFT WAS LAST INSPECTED ON 11/28/2006 AT 218HR.

2007FA0000160	BEECH	PWA	BEECH	BRACKET	CRACKED
12/16/2006	400A	JT15D5		45A21085003	HORIZ STAB

DURING INSPECTION OF HORIZONTAL STABILIZER ROLLER BRACKETS AND STRUCTURE IAW COMMUNIQUÉ NR 70, FOUND LT HORIZONTAL STABILIZER FWD ROLLER BRACKET, PN 45A21085-003, AND LT AFT ROLLER BRACKET, PN 45A21086-003, BOTH CRACKED. MFG AC TECH SUPPORT BELIEVES IMPROPER VERTICAL STABILIZER TO ROLLER GAP CLEARANCES MAY BE CONTRIBUTING TO PROBLEM. INSPECTION AREA NOT CURRENTLY NOTED ON MM AND 5-20-02 INSPECTION GUIDES, REQUIRES BORESCOPE TO INSPECT UNDERLYING STRUCTURE. RECOMMEND A 1-TIME SB AND/OR SAIB. SHOULD BE ADDED TO INSPECTION GUIDES. (K)

2007FA0000247	BEECH	CONT	CLAMP	FAILED
2/27/2007	58P	TSIO520L	11702	LT ENGINE

LT ENGINE REPORTED TO BE ROUGH RUNNING. INDUCTION HOSE CLAMP(P/N-RAM 1170-2)FAILED; ALLOWING INDUCTION COUPLER(P/N-632323) TO SEPARATE FROM INDUCTION TUBE. THIS INDUCTION LEAK OCCURRED BETWEEN THE Y AND INTAKE TUBES TO CYLINDERS NR 2, NR 4 AND NR 6.

PAI52007S4508	BEECH	PWA	CONDITION LEVER	LOOSE
3/22/2007	B300	PT6A6	10052417717	COCKPIT

PILOT NOTED RT ENGINE CONDITION LEVER CONTROL FELT LOOSE AND IDLE N1 SPEED LOW. UPON INSPECTION, MAINTENANCE FOUND ALL SCREWS ATTACHING CONDITION LEVER TO QUADRANT LOOSE TO THE POINT OF ALMOST FALLING OUT.

J0UR200700001	BEECH	PWA	MOTOR	FAILED
2/18/2007	C90A	PT6*	EM6039	BLOWER

AIR CONDITIONING / VENT BLOWER MOTOR ASSEMBLY FAILED CAUSING SMOKE IN COCKPIT. PILOT DECLARED

EMERGENCY AND LANDED AT CLOSEST AIRPORT WITHOUT FURTHER INCIDENT.

2007FA0000215	BEECH	PWA	BEARING	SEIZED
3/1/2007	F90	PT6A135	MS2764816	MLG

PERFORMING A ROUTINE 6 YEAR LANDING GEAR OVERHAUL, THE LT LANDING GEAR GEARBOX-ACTUATOR TORQUE TUBE HAD A SEIZED MAIN SUPPORT BEARING. THIS MADE THE TORQUE TUBE EXTREMELY HARD TO TURN. THE BEARING WAS FOUND TO BE RUSTED, AND SEIZED. BEARING WAS REPLACED WITH NEW.

2007FA0000258	BEECH	PWA	BEARING	SEIZED
3/1/2007	F90	PT6A135	MS2764816	LT MLG

PERFORMING A ROUTINE 6 YEAR LANDING GEAR OVERHAUL, THE LT LANDING GEAR GEARBOX-ACTUATOR TORQUE TUBE HAD A SEIZED MAIN SUPPORT BEARING. THIS MADE THE TORQUE TUBE EXTREMELY HARD TO TURN. THE BEARING WAS FOUND TO BE RUSTED, AND SEIZED. BEARING WAS REPLACED WITH NEW.

2007FA0000197	BOEING	AIRCRUISERS	RING	ELONGATED
9/4/2006	72722C		BACR12BU9B	EVAC SLIDE

DURING ROUTINE C-CHECK INSPECTION OF FORWARD DOOR EMERGENCY ESCAPE SLIDE, THE SLIDE BUSTLE LATCH CHAIN WAS FOUND DETACHED FROM THE SPLIT RING. THE SPLIT RING HAD BECOME ELONGATED AND THE RING COILS HAD SEPARATED THUS ALLOWING THE CHAIN TO DETACH. THE SLIDE WOULD NOT HAVE INFLATED IF REQUIRED. THE SPLIT RING HAS BEEN REPLACED. (K)

2007FA0000137	BOEING	GE	STRINGER CLIP	CRACKED
9/18/2006	737300	CFM56*	693535214	FUSELAGE

PASSENGER CABIN, STATION 639 AT STRINGER 4L, STRINGER CLIP, CRACKED. (K)

2007FA0000138	BOEING	GE	FRAME	CRACKED
9/18/2006	737300	CFM56*		FUSELAGE

MID CABIN, STATION 480 FRAME, AT STRINGER 8L, CRACKED AT PSU MOUNT RAIL ATTACH POINT. (K)

2007FA0000140	BOEING	GE	SUPPORT	CRACKED
9/18/2006	737300	CFM56*	69773671	R2 DOOR

AT FWD CABIN STA 328+6, DOOR 2R AFT STOP FTG INTERCOSTAL TEE SUPPORT, CRACKED. (K)

2007FA0000139	BOEING	GE	FRAME	CRACKED
9/18/2006	737300	CFM56*	6546533	FUSELAGE

MID CABIN, STATION 500A FRAME, BETWEEN STRINGER 8 AND 9L, CRACKED AT PSU MOUNT RAIL ATTACH POINT. (K)

2007FA0000129	BOEING	GE	FLOORBEAM	GOUGED
9/24/2006	737301	CFM56*	BAC1518399	FUSELAGE

CABIN FLOORBEAM, STA 827, WL 203.6, RBL 10, LOWER T-CAP, AFT FLANGE, GOUGED. (K)

2007FA0000136	BOEING	GE	FITTING	CORRODED
9/24/2006	737301	CFM56*	6580736689	FUSELAGE

DOOR 1R, BS 306-312, WL 248-249, LBL 57-63, SERPENTINE PLATE CASTING CORRODED AROUND FASTENER HOLES. (K)

2007FA0000191	BRAERO	GARRTT	SKIN	CORRODED
2/27/2007	HS125700A	TFE731*	S25WS3001	RT WING

RT WING LEADING EDGE(S) HAD SEVERE CORROSION WHERE THE TKS PANELS ATTACH. AFTER COMPLETE DISASSEMBLY IT WAS DETERMINED TO BE BEYOND ECONOMICAL REPAIR. RT WING LEADING EDGE HAD BEEN INSPECTED AT MFG 2.5 YEAR PRIOR TO THIS DISCOVERY. (K)

2007FA0000194	BRAERO	GARRTT		SKIN	CORRODED
2/21/2007	HS125700A	TFE731*		25TP1001A	HORIZ STAB

LT AND RT HORIXONTAL STABILIZER LEADING EDGES HAD SEVERE CORROSION WHERE THE TKS PANELS ATTACH. AFTER COMPLETE DISASSEMBLY, IT WAS DETERMINED TO BE BEYOND ECONOMICAL REPAIR. THIS AREA HAD BEEN INSPECTED AT MFG 2.5 YEARS PRIOR TO THIS DISCOVERY. (K)

2007FA0000192	BRAERO	GARRTT		SKIN	CORRODED
2/27/2007	HS125700A	TFE731*		S25WS3002	RT WING LE

RT WING LEADING EDGE(S) HAD SEVERE CORROSION WHERE THE TKS PANELS ATTACH. AFTER COMPLETE DISASSEMBLY, IT WAS DETERMNED TO BE BEYOND ECONOMICAL REPAIR. RT WING LEADING EDGE HAD BEEN INSPECTED AT MFG 2.5 YEARS PRIOR TO THIS DISCOVERY. (K)

2007FA0000186	CESSNA	CONT	BENDIX	BUSHING	LOOSE
2/22/2007	172D	O300D			MAGNETO

BRONZE BUSHING, VERY LOOSE IN DISTRIBUTOR BLOCK AND DISTRIBUTOR ARM WAS CONTACTING PINS IN BLOCK. MAG WOULD NOT OPERATE CORRECTLY. (K)

2007FA0000210	CESSNA	CONT	CONT	ROCKER	INCORRECT
2/20/2007	172H	O300D	O300D	639614639615	ENGINE

PILOT REPORTED LOSS OF POWER (600 RPM DROP) SIGNIFICANT ENGINE ROUGHNESS DURING CLIMB. ENGINE RECOVERED SHORTLY AFTERWARDS. PILOT ELECTED TO CONTINUE AND HAD SAME PROBLEM AGAIN DURING CRUISE FLIGHT. ENGINE RECOVERED ON ITS OWN ONCE AGAIN. PILOT SAID CARB HEAT DID NOT MAKE ANY IMPROVEMENT DURING BOTH OCCURRENCES. AIRCRAFT WAS TURNED OVER TO MAINTENANCE. THE ONLY ABNORMALITY DISCOVERED WAS THAT THE EXHAUST VALVES ON 4 OF THE 6 CYLINDERS HAD INCORRECT ROCKER INSTALLED (639614, INTAKE ROCKER). PARTS MANUAL CALLS FOR 639615 (EXHAUST ROCKER) TO BE INSTALLED ON EXHAUST POSITION.

2007FA0000212	CESSNA	CONT	CONT	SUMP	LEAKING
12/21/2005	172H	O300D	O300D		ENGINE

DURING NEWLY OVERHAULED ENGINE INSTALLATION AN OIL LEAK WAS DISCOVERED. WHEN BREAK-IN OIL WAS ADDED TO OIL SUMP FOR INITIAL ENGINE RUN, OIL WAS OBSERVED LEAKING ONTO NOSE TIRE. FURTHER EXAMINATION REVEALED OIL LEAK WAS ORIGINATING FROM LEFT REAR OF ENGINE WHERE THE OIL SUMP AND ACCESSORY HOUSING MATE TOGETHER. CAUSE OF LEAK WAS IMPROPER SEALING OF OIL SUMP AND ACCESSORY HOUSING DURING ASSEMBLY.

2007FA0000189	CESSNA	LYC		CONTROL CABLE	FRAYED
2/26/2007	172N	O320*		051010593	TE FLAPS

PILOT REPORTED EXCESSIVE MOVEMENT IN LT FLAP DURING PRE-FLIGHT WALK AROUND OF AIRCRAFT. INITIAL INVESTIGATION BY MAINTENANCE PERSONNEL CONFIRMED FINDINGS. MAINTENANCE PERSONNEL DISCOVERED THAT CABLE P/N 0510105-93 HAD MULTIPLE BROKEN STRANDS/FRAYING NEAR THE TURNBUCKLE END. SUSPECTED CAUSE OF DAMAGE TO CABLE IS DUE TO EXCESSIVE FLEXING BETWEEN TURNBUCKLE END AND FLAP POSITION INDICATOR CLAMP, P/N 0560037-1. AD 80-06-03 HAD BEEN COMPLIED WITH ON 10/11/1982 BY INSTALLATION OF KIT SK172-60A.

2007FA0000246	CESSNA	LYC		LINE	CHAFED
3/13/2007	172R	IO360L2A		050011849	FUEL SYSTEM

DURING PREFLIGHT INSP. PILOT FOUND FUEL ON RAMP UNDER CENTER FUSELAGE MECHANIC INVESTIGATED INSIDE COCKPIT FLOOR AND FOUND ALUMINUM FUEL LINE CHAFING AGAINST RT STEERING TUBE, CAUSING THE FUEL LEAK. MECHANIC INSPECTED 6 OTHER 2005/2006 172R AIRCRAFT IN OUR FLEET AND FOUND CHAFING IN (3) OTHER AIRCRAFT, WITH ANOTHER LEAK IMMINENT. ALL AC UNDER 900 HRS AFTT. OUR AIRCRAFT CAME FROM THE FACTORY WITH THIS FUEL LINE/STEERING TUBE CONFIGURATION. SUBMITTER SUGGESTS IMMEDIATE INSPECTION FOR THIS CONDITION. NOTE: FUEL WAS NOT SMELLED IN COCKPIT.

2007FA0000202	CESSNA	LYC		CRANKSHAFT	CORRODED

2/23/2007	172R	IO360L2A	V537925914	ENGINE

DURING SCHEDULED OVERHAUL, THIS CRANKSHAFT WAS FOUND PITTED IN THE INNER BORE. THIS ENGINE WAS A FACTORY OVERHAUL JULY 2002, AND DID HAVE THE PID COATING. THE COATING DOES NOT SEEM TO BLOCK THE CORROSION. (K)

2007FA0000201	CESSNA	LYC	CRANKSHAFT	CORRODED
2/21/2007	172R	IO360L2A	V53793493	ENGINE

THIS CRANKSHAFT WAS LAST INSPECTED AND PID COATED AT THE FACTORY APRIL 23, 2002, YET 6 YEARS AND 2196 HOURS LATER, IT WAS PITTED, AND REQURIED FURTHER MACHINING. THE PID COATING DOES NOT SEEM TO HOLD UP, OR BLOCK THE CORROSION. (K)

2007FA0000238	CESSNA	LYC	BRAKE PADS	FRACTURED
3/16/2007	172RG	O360F1A6	RA66109	MLG

DURING A 50 HR OIL CHANGE AND INSPECTION, FOUND BOTH LT AND RT BRAKE PADS FALLING APART, SEVERELY CRACKED WITH LARGE PIECES MISSING. BOTH SIDES WERE CHANGED AT THE PREVIOUS 100 HOUR INSPECTION. THIS HAS BEEN A FREQUENT PROBLEM WITH THESE BRAKE PADS ON ALL OF OUR AIRCRAFT (2 C152, 1 C172, 1 C172RG), NEW PADS FAILING WITHIN 200 HOURS OR LESS SINCE WE STARTED USING THEM. PREVIOUSLY, WE USED OTHER MFG PADS WITH VERY FEW PROBLEMS.

2007FA0000227	CESSNA	LYC	STARTER	STUCK
1/19/2007	172S	IO360L2A	85A34117	ENGINE

STARTER STUCK IN ENGAGED POSITION.

2007FA0000214	CESSNA	LYC	STARTER	SPINNING
3/7/2007	172S	IO360L2A	85562020	ENGINE

STARTER SPINS AND WILL NOT ENGAGE.

2007FA0000141	CESSNA		FUEL LINE	WORN
2/5/2007	180		0500106326	FUEL SYS

FLAP CABLE WEARING INTO FUEL LINE. FUEL LINE WAS INCORRECTLY ASSEMBLED. VISUAL INSPECTION OF AREA AT ANNUAL OR 100 HR INSPECTIONS. (K)

2007FA0000207	CESSNA	CONT	BATTERY	LEAKING
3/1/2007	180	O470*	G35	

BATTERY ACID LEAKED OR TRANSFERRED TO AFT, LOWEST CELL (AIRCRAFT TAIL WHEEL) AND SPILLED OUT. CORRODED HOLE IN BATTERY BOX AND SPILLED INTO BELLY OF AIRCRAFT.

2007FA0000208	CESSNA	CONT	BATTERY	LEAKING
3/1/2007	180	O470*	G35	

BATTERY ACID LEAKED OR TRANSFERRED TO AFT, LOWEST CELL (AIRCRAFT TAIL WHEEL) AND SPILLED OUT. CORRODED HOLE IN BATTERY BOX AND SPILLED INTO BELLY OF AIRCRAFT.

2007FA0000199	CESSNA	LYC	SUPPORT	CRACKED
3/1/2007	182T	IO540*	07120591P	BATTERY BOX

FOUND BATTERY SUPPORT CRACKED. TOTAL AIRFRAME TIME 1075. THIS IS THE 3RD ONE THAT WE FOUND. SUPPORTS NEED TO BE BEEFED UP, THEY ARE TOO LIGHT FOR THE APPLICATION. (K)

2007FA0000200	CESSNA	LYC	SUPPORT	CRACKED
3/1/2007	182T	IO540*	07120591P	BATTERY BOX

FOUND BATTERY SUPPORT CRACKED. TOTAL AIRFRAME TIME 1716. THIS IS THE THIRD ONE THAT WE FOUND SUPPORTS NEED TO BE BEEFED UP, THEY ARE TOO LIGHT FOR THE APPLICATION. (K)

2007FA0000175	CESSNA	LYC	PLACARD	FADED

2/16/2007	206CESSNA	TIO540AJ1A	070507109	WING

P/N 0705071-9) FUEL QUANTITY AND TYPE PLACARDS HAVE BEEN REPLACED ABOUT ONCE A YEAR DUE TO FADING. THIS AIRCRAFT IS HANGARED. THIS FADING HAS BEEN NOTED WITH OTHER MFG AIRCRAFT. RETAIL COST LAST YEAR NR 50.00+. THIS HAS NOW DOUBLED. OWNERS DON'T PLACARD IMPORTANCE FOR AIRWORTHINESS.

2007FA0000152	CESSNA	CONT	CYLINDER	CRACKED
10/20/2006	207A	IO520F	SA52006A1	

PRESSURE TESTED AT 90 PSI WITH SOAPY WATER APPLIED TO EXHAUST SIDEWALL. AIR LEAKAGE NOTED BETWEEN FINS 19/20 & 20/21. (K)

2007FA0000153	CESSNA	CONT	CYLINDER	CRACKED
10/20/2006	207A	IO520F	SA52006A1	

PRESSURE TESTED AT 90 PSI WITH SOAPY WATER APPLIED TO EXHAUST SIDE WALL. AIR LEAKAGE NOTED BETWEEN FINS 19/20 AND 20/21. (K)

2007FA0000154	CESSNA	CONT	CYLINDER	CRACKED
10/20/2006	207A	IO520F	SA52006A1	

PRESSURE TESTED AT 90 PSI WITH SOAP WATER APPLIED TO EXHAUST SIDEWALL. AIR LEAKAGE NOTED BETWEEN FINS 19/20 AND 20/21. (K)

2007FA0000216	CESSNA	CONT	CYLINDER	CRACKED
8/21/2006	207A	IO520F	SA52006A1	

PENETRANT TEST INDICATES CRACKS BETWEEN FINS 20/21 ADJACENT TO THE EXHAUST SEAT AND BETWEEN 19/20 NEARER TO THE UPPER SPARK SPLUG SIDE OF THE EXHAUST CHAMBER. (K)

2007FA0000161	CESSNA	WILINT	TRANSISTOR	SHORTED
12/13/2006	525	FJ44		COCKPIT

INVESTIGATED COCKPIT OVERHEAD FLOODLIGHTS TRIPPING ASSOCIATED CB WHEN BATTERY POWER APPLIED TO AIRCRAFT. FOUND ATTACHING SCREW FOR QC001 TRANSISTOR SHORTING TO AIRFRAME. ALSO, FOUND RESISTOR NR150 ON THRUST ATTENTUATOR PC BOARD NZ017 BURNED. REPAIRS REQUIRED REPLACING QC001 TRANSISTOR AND BASE, INSULATING QC001 ATTACHING SCREW, REPLACING DIODE DC046, AND REPLACING PC BOARD JC045. RECOMMENDED FURTHER INVESTIGATION TO DETERMINE IF A FLEET PROBLEM REQUIRING MODIFICATIONS TO PREVENT TRANSISTOR ATTACHING SCREW FROM SHORTING TO AIRFRAME. (K)

2007FA0000142	CESSNA	VALVE	OUT OF POSITION
11/26/2006	550	MJV3	CABIN DOOR

AT G; 390 15A, -12 DEGREES CABIN DOOR SEAL DEFLATED NECESSATING AN EMERGENCY DESCENT TO 10,000 FT. AFTER 5-8 MINUTES, DOOR SEAL RE-INFLATED OPERATION WAS NORMAL, CONDITION DID NOT REOCCUR. FOUND DOOR SEAL VALVE WARM AIR TUBE BLAOCKED BY TAPE AND OUT OF POSITION. REMOVED TAPE, POSITIONED WARM AIR TUBE PROPERLY. (K)

2007FA0000262	CESSNA	DUCT	UNKNOWN
3/22/2007	550	655503011	ENGINE

UPON RECEIVING THE NEW PART P/N 6555030-11 IT WOULD NOT FIT THE ENGINE. THE ORIGINAL DUCT IS 27 .2500 INCH OUTSIDE AND 25.5 INCH INSIDE. THE NEW UNIT IS A FULL .5 INCH SMALLER IN DIAMETER ALL AROUND. THIS IS THE SECOND ISSUE WITH THESE DUCTS THE FIRST WERE MIS-DRILLED BY 2 DEGREES AT THE 1 AND 5 O'CLOCK POSITION. THIS NEW DUCT IS NOT EVEN CLOSE TO FITTING.

2007FA0313001	CESSNA	PWA	CESSNA	HINGE	CRACKED
3/13/2007	550	JT15D4		55123515	PAX DOOR

DESCRIPTION AMENDED TO SAY THAT THE LOWER LUG WAS CRACKED INSTEAD OF THE UPPER LUG.

2007FA0000256	CESSNA	PWA		DUCT	MISMANUFACTURED
3/14/2007	550	JT15D4		655503011	EXHAUST ASSY

DURING INSPECTION MULTIPLE PATCHES WERE FOUND ON EXHAUST DUCT ASSY P/N 6555030-11. A REPLACEMENT WAS ORDERED AND FOUND TO HAVE 2 HOLES MISDRILLED BY 2 DEGREES. MFG WAS CONTACTED AS TO WHAT COULD BE DONE AND AFTER CONFIRMING THAT IN TRUTH 2 HOLES WERE NOT PROPERLY PLACED WE WERE TOLD THAT IN FACT 4 DUCTS WERE FOUND NOT BUILT CORRECTLY AND 1 HAD GOTTEN TO THE FIELD. MFG HAS AGREED TO ACCEPT THE DUCT BACK FOR REPAIR BUT WANTS TO BILL US FOR THE FIX ON A NEW PART. AFTER REPAIR, WE ARE TO SUBMIT FOR FINANCIAL REIMBURSEMENT FOR THERE ENGINEERING REPAIR.

2007FA0000261	CESSNA	PWA		SEAL	MISMANUFACTURED
3/22/2007	550	JT15D4		99120754	CABIN DOOR SEAL

WHILE INSTALLING THIS FACTORY NEW SEAL IT WAS NOTED THAT THE SEAL WAS VERY TIGHT GOING AROUND THE DOOR. UPON CABIN PRESS TEST THE SEAL WILL NOT INFLATE DUE TO BEING TO TIGHT. (2) SEAL FROM STOCK WERE TRIED WITH THE SAME AFFECT. THE LAST SEAL WAS INSTALLED AND INFLATED AS SHOULD BE. THE FACTORY NEEDS TO CHECK THERE SEALS CLOSER UPON RECEIPT FROM THERE VENDORS.

2007FA0000253	CESSNA	PWA		ACTUATOR	BINDING
3/7/2007	550	JT15D4		65651412	ELEVATOR

WHILE REPLACING TRIM ACTUATOR P/N 6565141-2 WITH WHAT MFG SAID WAS AN APPROVED SUB PART P/N 5565450-92. IT WAS FOUND THAT THE LOLLIPOPS (JACK SCREWS) WERE 5.5 INCHES LONG AND THE ORIGINAL LOLLIPOPS ARE 5.75 INCHES LONG. IF YOU LOOK AT THE COMPONENT MANUAL FOR THIS ACTUATOR 6565141-2 IT SHOWS 4 DIFF. DASH NUMBERS. -4 AT 5.5 INCHES, -7 AT 5.5 INCHES, -15 AT 4.85 INCHES, AND -21 AT 5.75 INCHES ALL WHICH IS TO THE SAME LOLLIPOP P/N. THE -92 ACTUATORS FITS UNITS 692 TO 924, WHILE OUR UNIT IS 232. MFG NEEDS TO FIX THESE P/NS AND CLEAR THE WAY THESE MANUALS ARE WRITTEN FOR CLARITY. TO MANY ACTUATORS ARE TO ANOTHER P/N WITH INCORRECT JACKSCREW LENGTHS.

2007H0002	CESSNA	PWA		ACTUATOR	MISOVERHAULED
3/5/2007	550	JT15D4		556545092	ELEVATOR

ACTUATOR RODS PROVIDED WITH UNIT WERE TOO SHORT TO MOVE ELEVATOR TABS THE REQUIRED AMOUNT.

2007FA0000176	CESSNA	PWA		ROLL PIN	BROKEN
2/22/2007	550	JT15D4		55651904	SPROCKET

DURING A PHASE 5 INSPECTION THE FLAPS SEAMED TO BE SLOW AND BINDING. AT CLOSER INSPECTION IT WAS FOUND THAT THE ROLL PIN HAD BROKEN ALLOWING THE SPROCKET TO MOVE FWD. ON THE P/N 5565190-9 BRAZE ASSY-DRIVE THIS CAUSED BINDING AND ALLOWED THE SPROCKET TO EVEN DROP DOWN ON TO THE P/N 6565193-9 CHAIN GUARD-LOWER FWD. THIS IS A HARD AREA TO LOOK AT EVEN WITH A MIRROR. A FEW MORE ACTIONS WITH THE FLAP WOULD HAVE LED TO TOTAL FAILURE OF THIS SYSTEM.

20582007TJ001	CESSNA	PWA	CESSNA	HINGE	CRACKED
3/13/2007	550	JT15D4		551123515	PAX DOOR

DURING A DAILY INSPECTION OF THE AIRCRAFT A CRACK WAS FOUND ON THE UPPER LUG OF THE DOOR HINGE. DURING REPLACEMENT OF THE HINGE THE LUG COMPLETELY BROKE IN (2) PEICES.

2007FA0000244	CESSNA	CONT		BRACKET	CRACKED
3/1/2007	A185F	IO520*		071204221	HORIZONTAL STAB

DURING A DETAILED INSPECTION OF THE EMPENAGE, THE RT HORIZONTAL STABILIZER HINGE BRACKET P/N 0712042-2 WAS FOUND CRACKED AND HAD (2) SHEARED RIVETS. UPON DISASSEMBLY THE LT BRACKET P/N 0712042-1 WAS FOUND TO HAVE (2) SHEARED RIVETS. THESE PARTS ARE IN THE MFG 180/185 IPC FIG 32 INDEX NR 36 AND NR 37.THERE IS NOTHING IN THE RECORDS THAT SHOW THESE PARTS CHANGED, HOWEVER THE RT BRACKET DID HAVE (2) NR 5 RIVETS WHERE ALL OF THE REST ON BOTH BRACKETS WERE NR 4S. LEADING US TO BELIEVE THAT IT MAY HAVE BEEN REPLACED BEFORE.

2007FA0000211	CESSNA	CONT	CONT	BEARING	NOISY

7/29/2003	R172E	IO360DB	IO360DB	STARTER

DURING 100 HOUR INSPECTION A NOISE WAS HEARD COMING FROM STARTER ADAPTER WHILE PROP WAS BEING PULLED THRU FOR COMPRESSION CHECKS. STARTER ADAPTER WAS REMOVED AND INSPECTED. NO OBVIOUS DEFECTS WERE NOTED. ASSEMBLY (635048A1) SENT OUT FOR EVALUATION/REPAIR AND A NEW CLUTCH SPRING BEARING WAS INSTALLED.

2007FA0000155	CESSNA	CONT	CYLINDER	CRACKED
2/12/2007	U206B	IO520F		ENGINE

CRACKED CYLINDER HEAD BETWEEN 4TH AND 5TH FIN IB OF TOP SPARK PLUG. CRACKS HEADED TOWARD VALVE SEAT. (K)

2007FA0000157	CESSNA	CONT	CYLINDER	CRACKED
2/12/2007	U206F	IO520F	AEC63139	ENGINE

CRACKED CYLINDER BETWEEN 2ND AND 3RD FIN IB OF UPPER SPARK PLUG ORIENTED DOWN SIDE OF CYL HEAD. LARGE NEAR SEPARATION. (K)

2007FA0000158	CESSNA	CONT	CYLINDER	CRACKED
2/12/2007	U206F	IO520F	AEC631397	ENGINE

CYLINDER HEAD CRACKED AT UPPER SPARK PLUG HOLE THRU BEND TO EXHAUST SEAT. (K)

R022366	CIRRUS	CONT	SEAL RING	DEBONDED
3/16/2007	SR22	IO550F	A20742	PROPELLER BLADE

TEFLON (BLADE SEAL) DEBONDED FROM THE SHANK OF BLADE SN A0336 CAUSING GREASE LEAK.

CA070110004	DHAV	BFGOODRICH	BRAKE DISC	DAMAGED
1/9/2007	DHC5A			NR 1 BRAKES

(CAN) DURING B4 CHECK ON THE AIRCRAFT, THE NR 1 TIRE WAS REMOVED TO SERVICE THE WHEEL BEARINGS, AT THIS TIME, A PIECE OF THE BRAKE DISC FELL FROM THE BRAKE UNIT. THE BRAKE UNIT WAS REMOVED AND A SERVICEABLE ONE WAS INSTALLED. UPON INVESTIGATION OF THE UNIT IT HAS BEEN DETERMINED THAT A BRAKE ADJUSTER HAD SEIZED RESULTING IN THE BRAKE DISC SITTING AT AN ANGLE INSTEAD OF AT 90 DEGREES TO THE AXLE LINE, THIS RESULTING FORCE CAUSED STRESS TO BE PLACED ON THE DISC RESULTING IN ITS FRACTURE, THIS ALSO CAUSED THE BRAKE PUCKS TO SCORE AND DAMAGE DISC FACE. IAW THE INSPECTION SCHEDULE, THE MAIN WHEELS ARE REMOVED EVERY 200 HOURS (B CHECK) TO INSPECT THE BRAKES AND WHEEL BEARINGS. THERE WAS NO FAULTS NOTED ON THE LAST B3 CHECK INDICATING THERE WAS ANY PROBLEMS AT THAT TIME. (TC NR 20070110004)

DU4R2007060	DOUG		VENT	CORRODED
2/27/2007	MD83			LT WING

S/O 244001 N/R 22938 N/R 22839 CORROSION ON I/B END OF EXISTING REPAIR ON AFT L/H WING VENT BOX REPAIRED BY REMOVING EXISTING DOUBLER, FLAP PEENED CORROSION IAW BWIA DWG BW-D9-57-A/5120 AND MD-80 MM 20-10-10. FABRICATED AND INSTALLED DOUBLER 41.9 X 3.5, FILLER 1.5 X .9 FROM 2024-T3 0.100 IAW BWIA DWG BW-D9-57-A/5120 AND MD-80 SRM 51-30-2 AND 51-30-1.

2007FA0000248	DOUG		WIRE HARNESS	CHAFED
12/16/2006	MD83			BS 905

MAIN CABIN AT RT STATION 905 WIRING BUNDLE CHAFED THROUGH ON PARTITION CAUSING FIRE AND SMOKE DAMAGE. THE PARTITION AND THE WIRING BUNDLE LOCATIONS WERE INSTALLED AND POSITION AS PART OF AN EXECUTIVE CABIN INTERIOR MODIFICATION. 50 + WIRES, INTERIOR PANELS, INSULATION BLANKETS AND ONE CEILING RAIL WERE DAMAGED.

2007FA0000209	GULSTM	PWA	AUDIO CONTROL	SHORTED
3/6/2007	G1159	PW530A	9903334446	COCKPIT

UNIT WAS MANUFACTURED IN AUGUST 06 AND WAS INSTALLED IN DECEMBER 06. THE UNIT POPPED THE CIRCUIT

BREAKER ON THE FIRST TRIP. THE UNIT WAS SENT IN FOR REPAIR AND REINSTALLED IN FEBRUARY 07 AND FAILED AGAIN ON THE FIRST FLIGHT.

2007FA0000114	GULSTM			CONNECTOR	LOOSE
2/6/2007	GULFSTREAMGV			W70120TE	FUEL LINE

FUEL LINE CONNECTOR IN MAIN WHEEL WELL COMING LOOSE, RESULTING IN FUEL LEAKING INTO WHEEL WELL.REFERENCE MFG ILLUSTRATED PARTS CATALOG; 28-26-00, FIGURE 5, PAGE 2, ITEM 205, PN W701-20TE. WE ARE HAVING THIS PROBLEM ON MORE THAN ONE OF OUR AIRCRAFT. THERE IS NO WAY TO SAFETY THIS FITTING. THIS SITUATION COULD RESULT IN FUEL BEING SPRAYED ON A HOT BRAKE RESULTING IN A FIRE.

2007FA0000162	LEAR	GARRTT	LEAR	SPAR CAP	CORRODED
2/6/2007	35A	TFE731*		233201015	HORIZ STAB

VISUAL CONDITION CHECK PERFORMED ON HORIZONTAL STABILIZER AFT SPAR CAP AND ELEVATOR HINGE BRACKETS FOR CORROSION, BROKEN FASTENERS, ETC. FOUND SEVERE CORROSION ON UPPER SPAR CAP ASSEMBLY ALONG ENTIRE LENGTH. THIS REQUIRED REMOVAL AND REPLACEMENT OF UPPER SPAR CAP. CORROSION CAUSED BY OPERATING CONDITIONS, LACK OF CONSISTENT WASHING PROGRAM AND POSSIBLE EXPOSED, UNPROTECTED METAL. RECOMMENDA CONSISTENT AIRCRAFT WASHING PROGRAM WHEN OPERATIONS ARE IN OR NEAR COSTAL REGIONS AND ENSURING ALL EXPOSED SURFACES ARE PROPERLY TREATED AND PAINTED. (K)

2007FA0000165	LEAR	GARRTT		SPAR CAP	CORRODED
2/6/2007	36LEAR	TFE731*		233201015	HORIZ STAB

VISUAL CONDITION CHECK PERFORMED ON HORIZONTAL STABILIZER AFT SPAR CAP AND ELEVATOR HINGE BRACKETS FOR CORROSION, BROKEN FASTENERS, ETC. FOUND MODERATE CORROSION ON UPPER SPAR CAP ASSY AT LT OB ELEVATOR HINGE AREA. THIS REQUIRED REMOVAL AND REPLACEMENT OF UPPER SPAR CAP. CORROSION CAUSED BY OPERATING CONDITIONS, LACK OF CONSISTENT WASHING PROGRAM AND POSSIBLE EXPOSED, UNPORTECTED METAL. RECOMMEND A CONSISTENT AC WASHING PROGRAM WHEN OPERATIONS ARE IN OR NEAR COASTAL REGIONS AND ENSURING ALL EXPOSED SURFACES ARE PROPERLY TREATED AND PAINTED. (K)

HAG07002	LEAR	GARRTT		PANEL	CRACKED
2/22/2007	45LEAR	TFE7312B		4555030001804	VERTICAL STAB

DURING INSPECTION, FOUND RT SIDE VERTICAL STABILIZER CENTER BULLET FAIRING PANEL CRACKED IN 5 LOCATIONS.

HAG2007001	LEAR	PWA	GARKENYON	SUPPORT BRACKET	FAILED
2/23/2007	60LEAR	PW305A	26044	2322330177	ZONE 500

DURING FLAP OPERATION, FLAP ACTUATOR SUPPORT BRACKETS FAILED CAUSING FLAP ACTUATOR TO DAMAGE LT WING RIB SEGMENT.

2007FA0703221	MOONEY	LYC		HANDLE	BROKEN
3/22/2007	M20A	O360*		5059	MLG

GEAR HANDLE (MECHANICAL RETRACTION HANDLE) BROKE OFF IN THE PILOT'S HAND DURING GEAR EXTENSION ON LANDING APPROACH. THE LANDING GEAR DISENGAGED BUT IT DID NOT EXTEND FULLY. THE BREAK WAS JUST BELOW THE WELD.

2007FA0000203	PARTEN			STRUT	BROKEN
2/13/2007	P68TCOBS			LW18607	TURBO

UPON REMOVING ENGINE FROM SHIPPING CRATE, FOUND (NEW) TURBO SUPPORT STRUT CRACKED. THESE BRACKETS CRACK ALL THE TIME ON THE AIRPLANE. VERY POOR DESIGN! (K)

2007FA0000204	PARTEN			STRUT	BROKEN
2/13/2007	P68TCOBS			LW18607	TURBO

UPON REMOVING ENGINE FROM SHIPPING CRATE, FOUND (NEW) TURBO SUPPORT STRUT, CRACKED. THESE BRACKETS CRACK ALL THE TIME IN THE AIRPLANE. VERY POOR DESIGN! (K)

2007FA0000168	PIPER		SPAR	CRACKED
2/6/2007	J3C65			WING

DURING REMOVAL OF LT WING FOR INSTALLATION OF WING FUEL TANK, A QUESTIONABLE PREVIOUS REPAIR WAS FOUND AT THE FRONT WOOD SPAR ROOT. FURTHER INVESTIGATION FOUND LONGNATUDINAL CRACKS OF THE LT AND RT, FOR AND AFT WOOD WING SPARS. THESE CRACKS WERE VISIBLE WITH A BARE EYE WHEN THE FRONT SPAR CARRY ATTACH INSPECTION PANEL WAS REMOVED AND INSPECTED FROM THE FRONT CABIN AREA. CRACKS ARE NOT UNCOMMON AFTER 60 YEARS OF HARD SERVICE AND NATURAL DEGRADATION OF THE WOOD. (K)

2007FA0000148	PIPER	LYC	LEVER	BROKEN
2/14/2007	PA23250	TIO540*	761213	COCKPIT

LANDING GEAR LEVER BROKE AT THE RIVET DURING TAKEOFF, AFTER RAISING LANDING GEAR LEVER UP TO RETRACT LANDING GEAR. (K)

2007FA0000213	PIPER	LYC	LYC	CRANKCASE	CRACKED
6/27/2006	PA28161	O320D3G	O320D3G	LW18372	ENGINE

DURING 100 HOUR INSPECTION A CRACK WAS DISCOVERED ON RT CRANKCASE HALF. THE CRACK (APPROXIMATELY 1 INCH) ORIGINATED FROM A LOWER PARTING FACE BOLT HOLE AND SHOWED EVIDENCE OF OIL LEAKAGE ONTO MUFFLER SHROUD (BURNED OIL). SPECIFIC CAUSE OF CRACK UNKNOWN.

2007FA0000259	PIPER	LYC	STARTER	WORN
3/1/2007	PA28236	O540J3A5	PM1201	ENGINE

THIS AIRCRAFT HAS HAD (5) PM1201 STARTERS INSTALLED SINCE 03-08-2004. THE STARTERS HAD TO BE REPLACED AT THE FOLLOWING INTERVAL: 58 HOURS TIME IN SERVICE, 18 HOURS TIME IN SERVICE, 11 HOURS TIME IN SERVICE, 5 HOURS TIME IN SERVICE, 28 HOURS TIME IN SERVICE. ALL STARTERS SUFFER THE SAME PROBLEM. AFTER THE ENGINE IS STARTED AND THE AIRCRAFT HAS FLOWN FOR A SHORT PERIOD OF TIME, (LESS THAN ONE HOUR) THE BENDIX GEAR WILL BEGIN TO CREEP OUT AND TRY TO ENGAGE/RUB THE RING GEAR. IN FEW FLIGHT HOURS THE BENDIX GEAR WILL START SHOWING WEAR ON BOTH THE BENDIX GEAR AS WELL AS THE RING GEAR ON THE FLYWHEEL. ALL THE STARTERS WERE REPORTED TO HAVE HAD THE SAME PROBLEM. THE OWNER DECIDED TO REMOVE THE STARTER FROM HIS AIRCRAFT AND HAVE ANOTHER MANUFACTURERS STARTER INSTALLED. THE MAINTENANCE FACILITY HAS CONTACTED MFG CONCERNING THE STARTER FAILURES. MFG ACKNOWLEDGE ISSUES WITH THEIR STARTER GEARS AND SPRINGS.

2007FA0000163	PIPER	LYC	FITTING	CRACKED
2/1/2007	PA32301T	TIO540S1AD		TURBOCHARGER

THIS PART IS BOLTED TO THE TURBOCHARGER ASSY BETWEEN THE HOT AND COLD SECTIONS. THE HIGH PRESSURE OIL LINE CONNECTS TO THIS PART VIA A FITTING IN THE TOP OF THE PART. AFTER AN ANNUAL INSP, THE ENG WAS RUN-UP AND SYSTEM CHECKED. AN OIL SEEP WAS NOTED IN THE TURBOCHARGER AREA. THE HIGH PRESSURE OIL LINE AND FITTING WAS REMOVED. PN LW 14465 WAS REMOVED AND CLEANED. THE CRACK WAS NOTED. THE PART WAS REPLACED WITH NEW. AFTER RESEARCHING THE AC RECORDS, IT WAS NOTED THAT EXHAUST SYS, INCLUDING TURBOCHARGER WASTE GATE AND CONTROL ROD END WAS NOT OVERHAULED WITH THE ENGINE CORE AS REQUIRED BY MFG. TURBOCHARGER WAS REPLACED WITH NEW UNIT AT TIME OF O/H. UNKNOWN IF PN LW-14465 WAS REPLACED AT THAT TIME. PART IS CRITICAL TO SAFETY OF FLIGHT FOR FOLLOWING REASON. ANOTHER AC HAD THIS FITTING COME APART IN FLIGHT. IT CAUSED AN OIL FED IN-FLIGHT FIRE. EXAMINATION AFTER AN EMERGENCY LANDING REVEALED THAT THE HIGH PRESSURE OIL LINE WAS STILL CONECTED TO THE FITTING AND THE THREADS IN THE FITTING AND ADAPTER WERE STILL INTACT, NOT STRIPPED. A CRACK WAS DISCOVERED IN THAT PART AS WELL. IT IS ASSUMED THAT THE CRACK SWELLED WHEN HEATED TO OPERATING TEMP AND PARTS SEPARATED. PART LOOKS TO BE CAST ALUMINUM, MAYBE A STRONGER MATERIAL SHOULD BE CONSIDERED. (K)

2007FA0000182	PIPER	LYC	AILERON	MISREPAIRED
2/23/2007	PA44180	O320*	86562025	WING

DURING POWER OFF (CLEAN CONFIGURATION) STALLS, THE AIRCRAFT WOULD SUDDENLY BREAK LT AND IF NOT IMMEDIATELY STOPPED COULD LEAD TO A SPIN. AFTER RERIGGING ALL FLIGHT CONTROLS, CHECKING THE AIRCRAFT ALIGNMENT WITH A LASER AND SEVERAL TEST FLIGHTS BOTH BY COMPANY PILOTS AND MFG FACTORY TEST PILOT, IT WAS DETERMINED THAT WE HAD (FAT) AILERONS ON OUR FLEET. MFG HAS A HISTORY OF AILERON SKIN CRACKING. (FOR US, IT HAS JUST BEEN THE RT AILERON THAT HAS HAD THE CRACKING PROBLEM.) ONCE THE CRACK IS PAST A CERTAIN POINT YOU EITHER HAVE TO REPLACE THE AFFECTED SKIN OR REPLACE THE AILERON. DURING SKIN REPLACEMENT, IF THE PREFORMED FACTORY SKIN IS SPREAD APART EVEN A LITTLE THE TRAILING EDGE TAKES ON A (FAT) CONDITION.

2007FA0000206	PIPER	LYC	AILERON	MISREPAIRED
2/23/2007	PA44180	O360*	86562025	WING

DURING POWER OFF (CLEAN CONFIGURATION) STALLS, THE AC WOULD SUDDENLY BREAK LEFT AND IF NOT IMMEDIATELY STOPPED COULD LEAD TO A SPIN. AFTER RERIGGING ALL FLIGHT CONTROLS, CHECKING THE AIRCRAFT ALIGNMENT WITH A LASER AND SEVERAL TEST FLIGHTS BOTH BY COMPANY PILOTS AND MFG TEST PILOT, IT WAS DETERMINED THAT WE HAD (FAT) AILERONS ON OUR FLEET. THIS MAKE OF AIRCRAFT HAS A HISTORY OF AILERON SKIN CRACKING. (FOR US, IT HAS JUST BEEN THE RT AILERON THAT HAS HAD THE CRACKING PROBLEM). ONCE THE CRACK IS PAST A CERTAIN POINT , YOU EITHER HAVE TO REPLACE THE AFFECTED SKIN OR REPLACE THE AILERON. DURING SKIN REPLACEMENT, IF THE PREFORMED FACTORY SKIN IS SPREAD APART EVEN A LITTLE, THE TRAILING EDGE TAKES ON A (FAT) CONDITION. THIS LEADS TO THE AILERON NOT HAVING THE PROPER PROFILE AND CREATING (LIFT) AT THAT PORTION OF THE AILERON AND CAUSING CONTROL PROBLEMS. SEEMS LIKE A SMALL PROBLEM BUT IT CAN HAVE BIG CONSEQUENCES. ANOTHER THING, WHEN REPLACING THE SKINS, THE MECHANIC MUST BE AWARE OF AND MAINTAIN THE 1.79 DEGREE TWIST BUILT INTO THE FACTORY AILERON. UNFORTUNATELY, THIS INFORMATION IS NOT CURRENTLY IN THE MM. AT THIS POINT WE HAVE REPLACED ALL OF OUR RIGHT AILERONS WITH NEW MFG UNITS AND THE AIRCRAFT NOW EXHIBITS NORMAL FLIGHT CHARACTERISTICS. (K)

2007FA0000178	PIPER	LYC	AILERON	MISREPAIRED
2/23/2007	PA44180	O360*	86562025	WING

DURING POWER OFF (CLEAN CONFIGURATION) STALLS, THE AIRCRAFT WOULD SUDDENLY BREAK LT AND IF NOT IMMEDIATELY STOPPED COULD LEAD TO A SPIN. AFTER RERIGGING ALL FLIGHT CONTROLS, CHECKING THE AIRCRAFT ALIGNMENT WITH A LASER AND SEVERAL TEST FLIGHTS BOTH BY COMPANY PILOTS AND PIPER FACTORY TEST PILOT, IT WAS DETERMINED THAT WE HAD (FAT) AILERONS ON OUR FLEET. PIPER HAS A HISTORY OF AILERON SKIN CRACKING. (IT HAS BEEN THE RT AILERON THAT HAS HAD THE CRACKING PROBLEM). ONCE THE CRACK IS PAST A CERTAIN POINT YOU EITHER HAVE TO REPLACE THE AFFECTED SKIN OR REPLACE THE AILERON. DURING SKIN REPLACEMENT, IF THE PREFORMED FACTORY SKIN IS SPREAD APART EVEN A LITTLE THE TRAILING EDGE TAKES ON A (FAT) CONDITION. THIS LEADS TO THE AILERON NOT HAVING THE PROPER PROFILE AND CREATING (LIFT) AT THAT PORTION OF THE AILERON AND CAUSING CONTROL PROBLEMS. SEEMS LIKE A SMALL PROBLEM BUT IT CAN HAVE BIG CONSEQUENCES. ANOTHER THING, WHEN REPLACING THE SKINS, THE MECHANIC MUST BE AWARE OF AND MAINTAIN THE 1.79 DEGREE TWIST BUILT INTO THE FACTORY AILERON. UNFORTUNATELY, THIS INFORMATION IS NOT CURRENTLY IN THE MFG MM. AT THIS POINT WE HAVE REPLACED ALL OF OUR RT AILERONS WITH MFG UNITS AND THE AIRCRAFT NOW EXHIBIT NORMAL FLIGHT CHARACTERISTICS.

2007FA0000179	PIPER	LYC	AILERON	MISREPAIRED
2/23/2007	PA44180	O360*	86562025	WING

DURING POWER OFF (CLEAN CONFIGURATION) STALLS, THE AIRCRAFT WOULD SUDDENLY BREAK LT AND IF NOT IMMEDIATELY STOPPED COULD LEAD TO A SPIN. AFTER RERIGGING ALL FLIGHT CONTROLS, CHECKING THE AIRCRAFT ALIGNMENT WITH A LASER AND SEVERAL TEST FLIGHTS BOTH BY COMPANY PILOTS AND MFG FACTORY TEST PILOT, IT WAS DETERMINED THAT WE HAD (FAT) AILERONS ON OUR FLEET. MFG HAS A HISTORY OF AILERON SKIN CRACKING. (FOR US, IT HAS JUST BEEN THE RT AILERON THAT HAS HAD THE CRACKING PROBLEM.) ONCE THE CRACK IS PAST A CERTAIN POINT YOU EITHER HAVE TO REPLACE THE AFFECTED SKIN OR REPLACE THE AILERON. DURING SKIN REPLACEMENT, IF THE PREFORMED FACTORY SKIN IS SPREAD APART EVEN A LITTLE THE TRAILING EDGE TAKES ON A (FAT) CONDITION.

2007FA0000180	PIPER	LYC	AILERON	MISREPAIRED
2/23/2007	PA44180	O360*	86562025	WING

DURING POWER OFF (CLEAN CONFIGURATION) STALLS, THE AIRCRAFT WOULD SUDDENLY BREAK LT AND IF NOT IMMEDIATELY STOPPED COULD LEAD TO A SPIN. AFTER RERIGGING ALL FLIGHT CONTROLS, CHECKING THE AIRCRAFT ALIGNMENT WITH A LASER AND SEVERAL TEST FLIGHTS BOTH BY COMPANY PILOTS AND PIPER FACTORY TEST PILOT, IT WAS DETERMINED THAT WE HAD (FAT) AILERONS ON OUR FLEET. MFG HAS A HISTORY OF AILERON SKIN CRACKING. (FOR US, IT HAS JUST BEEN THE RT AILERON THAT HAS HAD THE CRACKING PROBLEM). ONCE THE CRACK IS PAST A CERTAIN POINT YOU EITHER HAVE TO REPLACE THE AFFECTED SKIN OR REPLACE THE AILERON. DURING SKIN REPLACEMENT, IF THE PREFORMED FACTORY SKIN IS SPREAD APART EVEN A LITTLE THE TRAILING EDGE TAKES ON A (FAT) CONDITION.

2007FA0000177	PIPER	LYC	AILERON	MISREPAIRED
2/23/2007	PA44180	O360*	86562025	WING

DURING POWER OFF (CLEAN CONFIGURATION) STALLS, THE AIRCRAFT WOULD SUDDENLY BREAK LT AND IF NOT IMMEDIATELY STOPPED COULD LEAD TO A SPIN. AFTER RERIGGING ALL FLIGHT CONTROLS, CHECKING THE AIRCRAFT ALIGNMENT WITH A LASER AND SEVERAL TEST FLIGHTS BOTH BY COMPANY PILOTS AND MFG FACTORY TEST PILOT, IT WAS DETERMINED THAT WE HAD (FAT) AILERONS ON OUR FLEET. MFG HAS A HISTORY OF AILERON SKIN CRACKING. (FOR US, IT HAS JUST BEEN THE RT AILERON THAT HAS HAD THE CRACKING PROBLEM). ONCE THE CRACK IS PAST A CERTAIN POINT YOU EITHER HAVE TO REPLACE THE AFFECTED SKIN OR REPLACE THE AILERON. DURING SKIN REPLACEMENT, IF THE PREFORMED FACTORY SKIN IS SPREAD APART EVEN A LITTLE THE TRAILING EDGE TAKES ON A (FAT) CONDITION. THIS LEADS TO THE AILERON NOT HAVING THE PROPER PROFILE AND CREATING (LIFT) AT THAT PORTION OF THE AILERON AND CAUSING CONTROL PROBLEMS. SEEMS LIKE A SMALL PROBLEM BUT IT CAN HAVE BIG CONSEQUENCES. ANOTHER THING, WHEN REPLACING THE SKINS, THE MECHANIC MUST BE AWARE OF AND MAINTAIN THE 1.79 DEGREE TWIST BUILT INTO THE FACTORY AILERON. UNFORTUNATELY, THIS INFORMATION IS NOT CURRENTLY IN THE MFG MM. AT THIS POINT WE HAVE REPLACED ALL OF OUR RT AILERONS WITH NEW MFG UNITS AND THE AIRCRAFT EXHIBIT NORMAL FLIGHT CHARACTERISTICS.

2007FA0000217	PIPER	PWA	TUBE	CRACKED
2/16/2007	PA46500TP	PT6A42	3033981	FUEL SYS

PILOT DESCRIVED LOSS OF POWER. CONTINUED FLIGHT. ENGINE QUIT ON LANDING. FIRE DEPT RESPONDED, NO ACTION REQUIRED EXCEPT FOR FUEL ABSORBENT TO COLLECT FUEL DRIPPING FROM BELLY. FOUND CRACKED TUBE AT FUEL CONTROL UNIT. TUBE (PN 3033981. REASON UNKNOWN. FUEL STREAMED FULL LENGTH OF FUSELAGE AND DRIPPING OFF. (K)

2007FA0000257	UNIVAR	FRNKLN	ROCKER SHAFT	BROKEN
2/24/2007	1081	6A4150*		NR 3 CYLINDER

THE NR 3 CYLINDER ROCKER ARM SHAFT FAILED (BROKE) AT THE CENTER SUPPORT POSITION. ADDITIONALLY, (2) OF THE (3) ROCKER ARM BOSS SECURING BOLTS FAILED AND THE THIRD BOLT PULL OUT OF THE HEAD.

END OF REPORTS