



AOPA Title Services

Provided by AIC Title Services, LLC
5924 N. W. 2nd Street Suite. 650 Oklahoma City, OK 73127
1-800-711-0087

Service Difficulty Report

7314	FUEL PUMP	1	.50%
7322	FUEL CONTROL/CARBURETOR	3	1.51%
7414	MAGNETO/DISTRIBUTOR	12	6.03%
7421	SPARK PLUGS/IGNITERS	1	.50%
7430	SWITCHING	1	.50%
7602	MIXTURE CONTROL	1	.50%
7603	POWER LEVER	3	1.51%
7810	COLLECTOR/NOZZLE	3	1.51%
7910	OIL STORAGE (AIRFRAME FURNISH)	1	.50%
7920	ENG OIL DIST (AIRFRAME FURN)	1	.50%
7921	COOLER	2	1.01%
7922	TEMPERATURE REGULATOR	5	2.51%
8010	CRANKING	1	.50%
8500	ENGINE (RECIPROCATING)	1	.50%
8520	ENGINE POWER SECTION	5	2.51%
8530	ENGINE CYLINDER SECTION	9	4.52%
8550	ENGINE OIL SYSTEM	3	1.51%

Total Number of Report 199



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 2410 **ALTERNATOR-GENERATOR DRIVE SYSTEM** **Name of part:** ALTERNATOR
Date: 27-APR-01 **Aircraft Model Number:** 177 **Part Number:** DOFF10300J
Details:
ALTERNATOR OVERHAULED, INSTALLED ON AC. FRONT BEARING BALL CAGE BROKE APART AND ALLOWED BALLS TO COLLECT ON ONE SIDE OF BEARING, LOCKING THE ALTERNATOR SHAFT. FAILURE OCCURRED ON 2/10/2001 AFTER 126 HOURS TSOH.

Air Transport (ATA) code: 2421 **AC GENERATOR-ALTERNATOR** **Name of part:** ROTOR
Date: 16-JUL-03 **Aircraft Model Number:** 177B **Part Number:** ES4145
Details:
(CAN) ALTERNATOR WAS REMOVED AT 225.9 HRS BECAUSE OF DECREASING OUTPUT & VOLTAGE AS ELECTRICAL LOAD WAS APPLIED. ON DISASSEMBLY, TWO DEFECTS WERE FOUND. THE ROTOR SHAFT BEARING JOURNAL AT THE DRIVE END WAS FOUND LOOSE TO THE BEARING BY ABOUT .080 INCHES, ALLOWING THE ROTOR TO RUB ON THE STATOR STACKS. THE BEARING WAS ALSO SLIGHTLY WORN ON THE INSIDE BORE. ESSENTIALLY THE SHAFT MATERIAL WAS WORN AWAY. OTHER DEFECT LIKELY CAUSED OUTPUT SNAG. THREE POWER OUTPUT WIRES CONNECTING STATOR TO RECTIFIER ASSEMBLY WERE CHAFED & HAD BEEN SHORTING AGAINST INSIDE OF REAR HOUSING. THERE WAS NO SLEEVING OR SILICONE ADHESIVE TO PROTECT AGAINST CHAFING.

Air Transport (ATA) code: 2434 **DC GENERATOR-ALTERNATOR** **Name of part:** ROTOR
Date: 29-JUL-02 **Aircraft Model Number:** 177B **Part Number:** ES4145
Details:
(CAN) NEW ROTOR WAS INSTALLED AT OVERHAUL. AFTER 374 HRS, UNIT FAILED TO PRODUCE OUTPUT. ON DISASSEMBLY AND INSPECTION, ONE BRUSH WAS FOUND COMPLETELY WORN OUT, AND THE BRUSH SHUNT BRAIDED LEAD WAS CHAFED IN TWO. FOUND THAT THE SLIP RINGS ON THE ROTOR WERE OUT OF CONCENTRICITY BY 0.005 OF AN INCH TIR. THIS CONDITION WOULD CAUSE RAPID BRUSH WEAR. WHEN THE NEW ROTOR WAS INSTALLED, THE WORK ORDER DID NOT INDICATE THAT THE SLIP RINGS WERE INSPECTED FOR RUNOUT (TIR). THEY WERE EITHER OUT AT THAT TIME BUT IT WAS NOT DETECTED, OR THE SLIP RING ASSEMBLY HAS MOVED ON THE ROTOR SHAFT WHILE IN SERVICE.

Air Transport (ATA) code: 2434 **DC GENERATOR-ALTERNATOR** **Name of part:** ALTERNATOR
Date: 20-JUN-02 **Aircraft Model Number:** 177RG **Part Number:** DOFF10300J
Details:
UNUSED RECTIFIER POST BECAME LOOSE AND FELL INTO BOTTOM OF ALTERNATOR CASE. VIBRATION CAUSED LOOSE BOLT TO SHORT STATOR WINDINGS AND INTERMITTENTLY CAUSE DISCHARGE SPIKE IN BUS SYSTEM SPIKE WOULD CAUSE AVIONICS TO TURN OFF AND LOOSE NAVIGATION INFORMATION.

Air Transport (ATA) code: 2460 **DC POWER DISTRIBUTION SYSTEM** **Name of part:** RESISTOR
Date: 21-JUN-99 **Aircraft Model Number:** 177RG **Part Number:** S20415016
Details:
DURING ANNUAL INSP, SMOKE NOTICED COMING OUT OF RADIO STACK. INVEST SHOWED THE S2041-50-1.6 RESISTOR FOR THE CIGARETTE LIGHTER DAMAGED AND SMOKING. SMOKE AND BURN MARKS NOTED ON BOTH SIDES OF GLOVE BOX SIDEWALL WHERE RESISTOR WAS MOUNTED. THE NYLON LOCKING PORTION OF MOUNTING NUTS WAS MELTED AWAY. INSP SHOWED THE CERAMIC INSULATOR INSIDE THE BASE OF THE 0513052-20 CIGARETTE LIGHTER WAS BROKEN. NEITHER THE 7-AMP FUSE OR THE 10-AMP C/B ACTIVATED.

Air Transport (ATA) code: 2510 **FLIGHT COMPARTMENT EQUIPMENT** **Name of part:** SEAT TRACK
Date: 21-SEP-00 **Aircraft Model Number:** 177RG **Part Number:** 201101510
Details:
INTERGRANULAR CORROSION FOUND ON VERTICAL LEG OF SEAT TRACK STARTING AT LAST SEAT ADJUSTMENT PIN HOLE (APPROX 20.25 INCHES FROM MOST FORWARD HOLE). CORROSION STARTED AT AFT EDGE OF HOLE AND PROGRESSED AFT ONE INCH. SURFACE METAL ON RIGHT SIDE OF VERTICAL LEG WAS FOUND EXFOLIATING APPROXIMATELY 2.5 PERCENT OF TOTAL THICKNESS. POSSIBLE CAUSE IS EXPLAINED IN AC 43.13-1B, PAGES 6-17 AND 6-18, PROPER PERIODIC INSPECTIONS. (X)

Air Transport (ATA) code: 2560 **EMERGENCY EQUIPMENT** **Name of part:** ELT
Date: 01-AUG-99 **Aircraft Model Number:** 177RG **Part Number:** TJ4194
Details:
DURING INSPECTION IAW FAR 91.207, THE UNIT COULD NOT BE ACTIVATED BY MEANS OF THE 'G' SHOCK SWITCH.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 2562 **EMERGENCY LOCATOR BEACON** **Name of part:** ELT
Date: 08-MAY-00 **Aircraft Model Number:** 177RG **Part Number:** AK450
Details:
ELT UNIT RECEIVED FROM MANUFACTURER AS AN EXCHANGE UNIT. ELT FAILED TEST AFTER REINSTALLATION. NO SWEEPS COULD BE HEARD ON 121.5. AN OCCASIONAL SHORT "CHIRP" COULD BE HEARD, BUT NO SWEEPS. (X)

Air Transport (ATA) code: 2562 **EMERGENCY LOCATOR BEACON** **Name of part:** ELT
Date: 15-APR-96 **Aircraft Model Number:** 177RG **Part Number:** 910
Details:
ELT HAS CORROSION ON MOUNT FOR THE CASE COVER ATTACHMENT AND ON THE CASE COVER. APPEARS TO BE DISSIMILAR METAL CORROSION FROM COPPER MOUNTING SURFACE AND ALUMINUM MOUNT BRACKET. SUBMITTER STATED TO CORROSION-PROOF MOUNT BRACKET BY PAINTING OR ALODINING.

Air Transport (ATA) code: 2562 **EMERGENCY LOCATOR BEACON** **Name of part:** CASE
Date: 07-MAR-96 **Aircraft Model Number:** 177RG **Part Number:**
Details:
DURING PRE-BUY INSPECTION, FOUND ELT INOPERATIVE DURING IMPACT TEST REQUIRED BY 91.207. CORROSION FOUND ON CIRCUIT BOARD. ELT SENT OUT FOR REPAIRS AND DETERMINED TO BE NON-REPAIRABLE DUE TO CRACKED CASE.

Air Transport (ATA) code: 2562 **EMERGENCY LOCATOR BEACON** **Name of part:** ELT
Date: 08-FEB-00 **Aircraft Model Number:** 177RG **Part Number:** AK450
Details:
ELT FAILED TEST PER FAR 91.207. NO SWEEPS COULD BE HEARD ON 121.5. UNIT WAS REPAIRED FOR SAME PROBLEM 11 MONTHS EARLIER ON 1-19-99. (X)

Air Transport (ATA) code: 2710 **AILERON CONTROL SYSTEM** **Name of part:** BEARING
Date: 30-AUG-04 **Aircraft Model Number:** 177 **Part Number:**
Details:
IN FLIGHT, NOTICED THAT LOSS OF AILERON CONTROL INPUT HAD OCCURRED, AND UPON ADDED FORCE TO CONTROL YOKE, DETERMINED THAT TOTAL SEIZURE OF THE AILERONS HAD OCCURRED. LANDED WITH RUDDER CONTROL ONLY. REMOVED TUBE ASSY FROM FIREWALL AND FOUND SHAFT AND BEARING TO BE SEVERELY WORN, APPARENT NEEDLE BEARING DISLODGING CAUSED INABILITY TO ROTATE YOKE FOR AILERONCONTROL INPUT.

Air Transport (ATA) code: 2710 **AILERON CONTROL SYSTEM** **Name of part:** BOLT
Date: 01-APR-96 **Aircraft Model Number:** 177RG **Part Number:** NAS428310
Details:
AILERON STOP BOLT NAS428-3-10 SECURED TO A NUTPLATE ON A BRACKET ASSEMBLY PN 1221088-8 SECURED TO MAIN SPAR ASSEMBLY AND IS USED AS A STOP FOR UP-AILERON TRAVEL, FAILED TO STOP THE UP-TRAVEL OF THE RIGHT AILERON. BOLT DEFLECTED AND BOLT HEAD BECAME WEDGED ON AILERON BELLCRANK PN 122187-2 WHICH, IN TURN, LOCKED THE AILERON CONTROL SYSYEM IN FULL UPRIGHT AILERON. NO AMOUNT OF PRESSURE APPLIED TO CONTROL WHEELS WOULD FREE LOCKED AILERON BELLCRANK. PRESS APPLIED TO AILERON WOULD ALSO NOT FREE LOCKED BELLCRANK. THIS INCIDENT TOOK PLACE ON THE GROUND. INSP OF AFFECTED AREAS REVEALED STOP BOLTHAD SLIGHT BEND, PROBABLY DUE TO HARD AND VIOLENT MOVEMENT OF AILERONS FROM STOP-TO-STOP OVER A PERIOD OF TIME.

Air Transport (ATA) code: 2710 **AILERON CONTROL SYSTEM** **Name of part:** BOLT
Date: 01-OCT-96 **Aircraft Model Number:** 177A **Part Number:** AN410A
Details:
DURING AN ANNUAL INSPECTION IT WAS FOUND THAT THE AN 4-10A BOLT CONNECTING THE PUSH/PULL ROD TO THE LEFT AILERON HORN HAD BACKED OUT TO THE POINT THAT BY MOVING THE AILERON BY HAND, THE BOLT FELL OUT COMPLETELY. THE BOLT WAS NOT SAFETIED.FURTHER INSPECTION OF THE RIGHT AILERON FOUND THAT THE BOLT WAS LOOSE AND WAS ALSO AN 4-10A AND NOT SAFETIED. BOTH AN 4-10A BOLTS WERE REPLACED WITH AN 4H-10A AND PROPERLY SAFETIED.



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Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 2710 **AILERON CONTROL SYSTEM** **Name of part:** CONTROL TUBE
Date: 14-JAN-04 **Aircraft Model Number:** 177 **Part Number:** 176703013
Details:
AILERON CONTROL SHAFT, WHERE IT MOUNTS TO FIREWALL BEARING WAS RUSTED AND GROVED BEYOND LIMITS, REPLACED LT AND RT SHAFTS AND BEARINGS. BEARING PN 0760633-1 END.

Air Transport (ATA) code: 2710 **AILERON CONTROL SYSTEM** **Name of part:** BEARING
Date: 28-AUG-03 **Aircraft Model Number:** 177 **Part Number:**
Details:
(CAN) SNAPPING NOISE HEARD WHEN AILERON MOVED. BEARING AREAS ON CONTROL TUBES FRONT OF FIREWALL FOUND SEVERELY BRINELLED.

Air Transport (ATA) code: 2721 **RUDDER TAB CONTROL SYSTEM** **Name of part:** SCREW ACTUATOR
Date: 22-MAY-96 **Aircraft Model Number:** 177B **Part Number:** 17670667
Details:
(CAN) ON APPROACH IN A FORWARD SLIP, RUDDER TRIM INOPERATIVE. RUDDER TRIM SCREW ACTUATOR SHAFT BROKEN MID SHAFT AT THE SHOULDER OF TRAVERSE THREAD.

Air Transport (ATA) code: 2731 **ELEVATOR TAB CONTROL SYSTEM** **Name of part:** BELLCRANK
Date: 16-MAR-95 **Aircraft Model Number:** 177RG **Part Number:** 17121421
Details:
DURING PRE-BUY INSPECTION, FOUND STABILATOR TRIM TAB TO HAVE EXCESSIVE FREE PLAY. THE BELLCRANK AT THE STABILATOR WAS WORN. THE BOLT HOLES WERE ENLARGED AND THE RIVETS ATTACHING THE STIFFENER WERE LOOSE. SUBMITTER SUGGESTS CLOSE INSPECTION OF FLIGHT CONTROLS DURING ALL INSPECTIONS.

Air Transport (ATA) code: 2810 **FUEL STORAGE** **Name of part:** NUT
Date: 24-APR-99 **Aircraft Model Number:** 177 **Part Number:**
Details:
SELF-LOCKING NUT ON FUEL CAP LOCKING MECHANISM COULD BE TURNED BY HAND. THE LOOSENING OF THE NUT ALLOWED THE LOCKING MECHANISM TO DISENGAGE FROM SHAFT. THIS ALLOWED THE FUEL CAP TO COME OUT OF TANK OPENING AND ALLOWED FUEL TO BE SIPHONED OUT OF THE TANK. THIS CAUSED A FUEL EXHAUSTION ACCIDENT.

Air Transport (ATA) code: 2810 **FUEL STORAGE** **Name of part:** CAP
Date: 08-JUL-96 **Aircraft Model Number:** 177B **Part Number:** 17260424
Details:
FLUSH FUEL CAPS ALLOWING WATER TO LEAK INTO FUEL TANKS. BEING A WET WING AIRCRAFT, IT IS VERY DIFFICULT TO BE SURE ALL WATER IS REMOVED. INSTALLING NEW SEALS OR CAPS IS ONLY A TEMPORARY SOLUTION. PERMANENT FIX IS TO INSTALL STC SA2457CE PLATES AND CAPS OR OTHER TYPE RAISED INLET.

Air Transport (ATA) code: 2810 **FUEL STORAGE** **Name of part:** CAP
Date: 09-MAR-95 **Aircraft Model Number:** 177RG **Part Number:**
Details:
REPLACED ORIGINAL GAS CAP WITH CAPS MFG BY MONARCH AIR & DEVELOPMENT, INC., AND APPROVED BY FAA STC SA2458CE.

Air Transport (ATA) code: 2820 **FUEL DISTRIBUTION** **Name of part:** PUMP
Date: 08-MAR-00 **Aircraft Model Number:** 177 **Part Number:** 154729606
Details:
NEW FUEL PUMP DOES NOT ATTAIN RATED FUEL PRESSURE/FUEL FLOW. THE HIGHEST PRESSURE ATTAINED WAS LESS THAN 2 PSIG AT IDLE AND DROPPED TO NEAR ZERO AS RPM INCREASED. AFTER EXTENSIVE TROUBLESHOOTING OF AIRCRAFT FUEL SYSTEMS, CAME TO THE CONCLUSION THE PUMP MUST BE FAULTY. INSTALLED ANOTHER NEW PUMP AND OPERATIONAL CHECK WAS SATISFACTORY. SUBMITTER SUGGESTED THAT ALL LYCOMING/AC PUMPS OF THIS BATCH (DATE CODE 9606) SHOULD BE CHECKED FOR PROPER OPERATION. (X)



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Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 2820 **FUEL DISTRIBUTION** **Name of part:** VENT LINE
Date: 27-DEC-95 **Aircraft Model Number:** 177B **Part Number:** 20000104
Details:
ALUMINUM VENT LINE FROM FUEL TANK PITTED TO FAILURE DUE TO CORROSION. NOTED WHEN TANKS WERE FILLED. FUEL LEAKED INSIDECABIN REAR SIDE WINDOW. BARE TUBING IN CONTACT WITH VENT DUCTING. POINT OF CONTACT WAS SITE OF PIT. SUSPECT CAUSE DUE TO DISSIMILAR MATERIALS IN THE PRESENCE OF MOISTURE. SUBMITTER RECOMMENDS SHEATHING ENTIRE LENGTH OF VENT LINE WITH NON-CONDUCTIVE MATERIAL TO PREVENT CONTACT BETWEEN FUEL TANK VENT LINE AND VENTILATION DUCTING.

Air Transport (ATA) code: 2823 **FUEL SELECTOR/SHUTOFF VALVE** **Name of part:** VALVE
Date: 14-FEB-97 **Aircraft Model Number:** 177 **Part Number:**
Details:
DURING ANNUAL INSPECTION IT WAS DETECTED THAT WHEN TESTING OR OPS CHECKING, THE FUEL SELECTOR VALVE TO DETERMINE DETENTOPERATION, MOVEMENT OF THE VALVE CAUSED FUEL TO LEAK OUT THE TOP OF VALVE AROUND THE SHAFT. THIS HAD BEEN IN PROCESS FOR SOME TIME BECAUSE THE BELLY WAS FUEL STAINED ALSO.

Air Transport (ATA) code: 2910 **HYDRAULIC,MAIN SYSTEM** **Name of part:** HOSE
Date: 26-JUL-05 **Aircraft Model Number:** 177RG **Part Number:** S1236C40134
Details:
HYDRAULIC HOSE TO NOSE LANDING GEAR CYLINDER FAILED IN FLIGHT. THIS CAUSED TOTAL DEPLETION OF HYDRAULIC FLUID AND SUBSEQUENT HYDRAULIC PUMP FAILURE. PILOT WAS UNABLE TO EXTEND LANDING GEAR MANUALLY BECAUSE OF NOT ENOUGH FLUID. A GEAR UP LANDING WAS MADE WITH MINOR DAMAGE TO AIRCRAFT.

Air Transport (ATA) code: 2910 **HYDRAULIC,MAIN SYSTEM** **Name of part:** LINE
Date: 01-APR-03 **Aircraft Model Number:** 177RG **Part Number:**
Details:
INBOUND TO RIC THE LEFT HYDRAULIC SYSTEM QUANTITY WENT TO ZERO AND PRESSURE WENT TO ZERO. CREW CONTINUED TO DESTINATIONAND PERFORMED MANUAL GEAR EXTENSION ON APPROACH. ALL COM PROCEDURES COMPLIED WITH AND THE LANDING WAS UNEVENTFUL. MAINTENANCE INSTALLED GEAR PINS AFTER LANDING AND THE AIRCRAFT WAS TOWED TO THE GATE. A TEMPORARY HYDRAULIC LINE WAS FOUND TOHAVE RUPTURED IN THE LEFT WING TRAILING EDGE AREA AND WAS REPLACED. NR 2 ENGINE DRIVEN HYDRAULIC PUMP AND FILTERS WERE ALSO REPLACED. AIRCRAFT HAS RETURNED TO SERVICE.

Air Transport (ATA) code: 2910 **HYDRAULIC,MAIN SYSTEM** **Name of part:** HYDRAULIC LINE
Date: 01-SEP-02 **Aircraft Model Number:** 177RG **Part Number:** 208010015
Details:
HOSE ASSEMBLY SEPARATED AT SWEDGED END/ AT ACTUATOR NO CHAFFING OR OTHER APPARENT WEAR ON HOSE.

Air Transport (ATA) code: 2910 **HYDRAULIC,MAIN SYSTEM** **Name of part:** HOSE
Date: 20-OCT-99 **Aircraft Model Number:** 177RG **Part Number:** 5217840150
Details:
HOSE BLEW APART AT FITTING WHILE IN-FLIGHT. SHOWED NO OUTWARD SIGNS OF FAILURE. LOSS OF ALL HYDRAULIC FLUID. SUBMITTER SUGGESTED MANDATORY REPLACEMENT TIME OF HOSES BE ESTABLISHED BY MANUFACTURER.

Air Transport (ATA) code: 2910 **HYDRAULIC,MAIN SYSTEM** **Name of part:** LINE
Date: 22-OCT-97 **Aircraft Model Number:** 177RG **Part Number:** 20801179
Details:
HYDRAULIC LINE BEGAN LEAKING ON GEAR RETRACTION CAUSING HYDRAULIC MOTOR/PUMP TO PUMP ALL USABLE HYDRAULIC FLUID OVERBOARD. RESULT WAS LANDING WITH GEAR DANGLING FROM AIRCRAFT. THE CAUSE OF THE LEAK WAS A CORROSION PIT. LINE IS LOCATED INTHE COCKPIT PEDESTAL CAUSING INSPECTABILITY PROBLEM.



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Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 2910 **HYDRAULIC,MAIN SYSTEM** **Name of part:** LINE
Date: 11-FEB-05 **Aircraft Model Number:** 177RG **Part Number:**
Details:
WHILE INVESTIGATING A GEAR UP LANDING, IT WAS NOTED THAT THE HYDRAULIC LINE FROM THE LANDING GEAR PUMP WAS CHAFING AGAINST THE FLIGHT CONTROL CABLES ROUTED IN THE BATTERY COMPARTMENT AREA. SUGGEST INSPECTING THIS AREA FOR CHAFING AND RE-ROUTE HYDRAULIC LINE TO PREVENT CHAFING. WAS REPLACING INTERIOR PANEL AND MAY HAVE BENT THE LINE INTO THE CABLES. (K)

Air Transport (ATA) code: 2910 **HYDRAULIC,MAIN SYSTEM** **Name of part:** HOSE
Date: 05-JUN-05 **Aircraft Model Number:** 177RG **Part Number:** S217840150A
Details:
PILOT SELECTED GEAR DOWN ON FINAL APPROACH AND THE GEAR FAILED TO EXTEND. THE INVESTIGATION FOUND THAT THE NOSE GEAR DOWN LINE WAS LEAKING AT THE BULKHEAD END CAUSING TOTAL LOSS OF HYDRAULIC FLUID. THE AIRCRAFT LANDED GEAR UP WITH NO INJURIES AND MINOR DAMAGE TO THE EXTERIOR OF THE AIRCRAFT. (WP23200509350) (K)

Air Transport (ATA) code: 2913 **PUMP,MAIN** **Name of part:** COMMUTATOR
Date: 09-DEC-02 **Aircraft Model Number:** 177RG **Part Number:** 105932E
Details:
PUMP OPERATED SLOWLY. SENT FOR OVERHAUL WHICH SHOWED THAT MOTOR BRUSHES WERE WORN AND THE COMMUTATOR WAS WORN IRREGULARLY. LED TO SLOW OPERATION OF THE LANDING GEAR.

Air Transport (ATA) code: 2913 **PUMP,MAIN** **Name of part:** POWER PACK
Date: 04-MAR-96 **Aircraft Model Number:** 177RG **Part Number:** 105932E
Details:
(AUS) HYDRAULIC POWER PACK ELECTRIC MOTOR RUNNING SLOW - SLOW TO BUILD UP HYDRAULIC PRESSURE

Air Transport (ATA) code: 2916 **RESERVOIR,MAIN** **Name of part:** RESERVOIR
Date: 18-JUN-95 **Aircraft Model Number:** 177RG **Part Number:** 105931S
Details:
ON APPROACH INTO AIRCRAFT, WAS UNABLE TO EXTEND OR RETRACT LANDING GEAR. AIRCRAFT MADE EMERGENCY LANDING CAUSING GEAR TO COLLAPSE. FURTHER INVESTIGATION OF THE INCIDENT SHOWED THERE HAD BEEN MAINTENANCE PERFORMED ON LANDING GEAR SYSTEM BY PERSONS UNKNOWN. DURING INVESTIGATION, HYDRAULIC RESERVOIRS WERE FOUND LOW AND NOT SERVICED CORRECTLY CAUSING LANDING GEAR TO MALFUNCTION

Air Transport (ATA) code: 3201 **LANDING GEAR/WHEEL FAIRING** **Name of part:** WHEEL PANT
Date: 21-JUL-98 **Aircraft Model Number:** 177B **Part Number:**
Details:
INSPECTION FOUND LEFT HAND FIBERGLASS WHEEL PANTS ATTACHING BOLT HOLE MOUNT HOLE HAS 2 INCH LONG CRACK.

Air Transport (ATA) code: 3211 **MAIN LANDING GEAR ATTACH SEC** **Name of part:** SUPPORT
Date: 05-FEB-05 **Aircraft Model Number:** 177RG **Part Number:** 20410141
Details:
AFTER GEAR EXTENSION PILOT DID NOT GET DOWN AND LOCKED GREEN LIGHT. EMERGENCY PROCEDURES WERE COMPLETED WITH SAME RESULTS. GEAR APPEARED DOWN AND LOCKED BY OBSERVERS ON THE GROUND, DURING LOW APPROACH. UPON TOUCH DOWN THE PILOT REPORTED ASAFE GEAR INDICATION. MAINTENANCE INSPECTION REVEALED MAIN GEAR ACTUATOR SUPPORT BRACKETS (LT AND RT) WERE CRACKED. ALSO FOUND ACTUATOR THROUGH PIN TO BE FRACTURED ON RT SIDE. SPECIFIC CAUSE OF FAILURE UNKNOWN. GEAR SYSTEM OPERATIONALLY CHECKED SATISFACTORY AFTER REPLACEMENT OF DAMAGED PARTS. AIRCRAFT HAD RECEIVED 100 HOUR INSPECTION 70 HOURS PRIOR WITHNO ABNORMALITIES NOTED IN MAIN GEAR ACTUATOR SYSTEM.



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Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 3211 **MAIN LANDING GEAR ATTACH SEC** **Name of part:** BOLT
Date: 03-AUG-00 **Aircraft Model Number:** 177RG **Part Number:** AN425A
Details:
LANDING GEAR RIGGING WAS BEING CHECKED. DISCOVERED BOLT SHEARED AT MOUNT ATTACH POINT, MAIN LANDING GEAR SUPPORT ASSEMBLY. REPLACED BOTH BOLTS. AC TT: 6,552.00 HOURS. (X)

Air Transport (ATA) code: 3213 **MAIN GEAR STRUT/AXLE/TRUCK** **Name of part:** AXLE
Date: 10-JAN-02 **Aircraft Model Number:** 177RG **Part Number:**
Details:
DURING FLOURESCENT PENETRANT INSPECTION, FOUND CRACK IN RADIUS OF AXLE SHAFT (AREA 1A)

Air Transport (ATA) code: 3220 **NOSE/TAIL LANDING GEAR** **Name of part:** MECHANISM
Date: 05-AUG-04 **Aircraft Model Number:** 177RG **Part Number:**
Details:
NOSE LANDING GEAR FAILED TO EXTEND DURING APPROACH 8/5/04. NOSE GEAR WAS CONFIRMED TO NOT BE EXTENDED BY COCKPIT INDICATION AND WING MOUNTED MIRROR. SEVERAL ATTEMPTS WERE MADE TO EXTEND NOSE GEAR, TO NO AVAIL. MANUAL NOSE GEAR EXTENSION WAS ALSO ATTEMPTED, EMERGENCY CK LIST, TO NO AVAIL. EMERGENCY DECLARED, AC LANDED NOSE GEAR UP. WHEN AC WAS LIFTED, NOSE GEAR DOORS FELL OPEN, NOSE GEAR WAS ABLE TO BE PUMPED DOWN. INSP, NO OBVIOUS CAUSAL FACTOR OF INCIDENT COULD BE DETERMINED. AC TO BE REPAIRED. (1ST OCCURRENCE. JULY, 2000 SAME AS ABOVE, NO SINGLE CAUSE IDENTIFIED. AC REPAIRED, FLOWN APPROX 700 HRS TIL THIS INCIDENT.) (NM05200400085) (K)

Air Transport (ATA) code: 3220 **NOSE/TAIL LANDING GEAR** **Name of part:** BOLT
Date: 30-MAY-01 **Aircraft Model Number:** 177RG **Part Number:** NAS4645A15
Details:
NOSE GEAR COLLAPSED ON LANDING ROLL OUT, DOWN LOCK LINK BOLT (LOWER) WAS FOUND MISSING PN NAS4645A15, NO MEANS OF SAFETY MAY BE USED WITH THIS DESIGN, ONLY LOCTITE CV SEALANT AS STATED IN SERVICE MANUAL. PART HAD 5311 HOURS.

Air Transport (ATA) code: 3221 **NOSE/TAIL GEAR ATTACH SECTION** **Name of part:** BEARING
Date: 17-FEB-99 **Aircraft Model Number:** 177RG **Part Number:** 204300020
Details:
FOUND UPPER TRUNNION BEARING PN S1997-40G12 COMPLETELY RUSTED AND THE BARREL ASSY PN 2043003-4 UPPER BEARING SURFACE WORN WITH .1250 INCH GROOVE. FOUND DURING INSPECTION FOR NOSE WHEEL SHIMMY PROBLEM.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** BELL CRANK
Date: 30-APR-03 **Aircraft Model Number:** 177RG **Part Number:** 204303112
Details:
NOSE GEAR FAILED TO EXTEND ON LANDING SUBSTANTIAL DAMAGE OCCURRED. JACKED AIRCRAFT, CYCLED GEAR TO UP POSITION WITH AFT LG DOORS DISCONNECTED. ON EXTENTION, NOSE GEAR FAILED ONCE AGAIN. MECHANICAL UPLOCK FAILED TO RELEASE. SUSPECT OUT OF ADJUSTMENT.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** ROD END
Date: 25-JUN-00 **Aircraft Model Number:** 177RG **Part Number:** S20496FG
Details:
WHEN PILOT SELECTED GEAR DOWN, HE HEARD A POP/BANG UNDER THE FLOOR AND THE MAIN GEAR FAILED TO EXTEND. ACFT WAS LANDED GEAR UP WITH MINIMAL AIRFRAME DAMAGE. INVEST REVEALED MAIN GEAR ACTUATOR ROD END BEARING PN S2049-6FG HAD FAILED AND SPLIT APART AT THE SPHERICAL END. FAILURE APPEARS TO HAVE STARTED AT THE HOLE IN THE ROD END USED FOR GREASING. AREA INSP APPROX 8 HRS PRIOR, DURING ANNUAL, WITH NO VISUAL DEFECTS. FOUND OLD CESSNA SI LETTER SE79-37 RECOMMENDING ROD END REPLACEMENT WITH PN S2426-6, WHICH IS NOW SUPERCEDED TO PN S3469-1. NEW P/N IS A SEALED UNIT WITH NO GREASER HOLE. SUBMITTER RECOMMENDED CESSNA RE-ADDRESS THIS AS A SERVICE BULLETIN WITH HIGHER PRIORITY. (X)



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** PLUNGER
Date: 30-MAR-00 **Aircraft Model Number:** 177RG **Part Number:** 204101738
Details:
WHEN THE GEAR WAS RETRACTED, THE SOLENOID PLUNGER EXTENSION WAS NOT PULLING THE DOWNLOCK MECHANISM COMPLETELY OPEN. WHEN THE GEAR WAS THEN EXTENDED AND THE GEAR HIT THE DOWNLOCK MECHANISM, IT WOULD DRIVE IT OVERCENTER BACKWARDS. REPLACING WORN PARTS FIXED THE PROBLEM. (X)

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** HOSE
Date: 11-SEP-98 **Aircraft Model Number:** 177RG **Part Number:** 5217840134
Details:
CRUISE FLIGHT AT 5,500 FEET, PILOT HEARD A BANG. NO ABNORMAL ENGINE CHANGES. AIRSPEED DROPPED 10-15 KNOTS. PILOT DECIDED TO LAND AT NEAREST AIRPORT. LANDING GEAR WOULD NOT EXTEND. FLY-BY SHOWED GEAR HANGING. MANUAL EXTENSION WOULD NOT LOWER GEAR. PILOT LANDED ON BELLY OF AIRCRAFT. FOUND UP LINE HOSE TO NOSE GEAR ACTUATOR BURST.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** SUPPORT
Date: 01-MAR-98 **Aircraft Model Number:** 177RG **Part Number:** 20410141
Details:
MAIN LANDING GEAR ACTUATOR SUPPORTS CRACKED.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** PIN
Date: 17-OCT-97 **Aircraft Model Number:** 177RG **Part Number:** MS16555354
Details:
(AUS) LANDING GEAR DOWNLOCK PINS BENT DUE TO DEFECTIVE PADS (SEE MDR97/1389). WHEN THE DAMAGED PINS WERE REMOVED AND COMPARED TO THE REPLACEMENT ITEMS THEY APPEARED TO BE MANUFACTURED FROM A SOFTER MATERIAL (AN5 BOLTS). PERSONNEL/MAINTENANCE ERROR.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** BOLT
Date: 20-NOV-96 **Aircraft Model Number:** 177RG **Part Number:** 20430156
Details:
INSP FOUND DRAG LINK ASSY BOLT BROKEN.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** LOCK VALVE
Date: 25-JUL-96 **Aircraft Model Number:** 177RG **Part Number:** 12805201
Details:
PILOT WAS UNABLE TO EXTEND LANDING GEAR EITHER BY THE NORMAL OR THE EMERGENCY HYDRAULIC SYSTEM. A GEAR UP LANDING WAS MADE AND MINOR DAMAGE. WHEN ACFT WAS JACKED UP PRIOR TO REMOVING IT, NOTED THE LANDING GEAR COULD NOT BE PUSHED INTO LOCKS. WHEN MAIN GEAR WAS MOVED TO DOWN AND LOCK POSITION, NOSE GEAR WOULD RETRACT, AND WHEN MAINS WERE MOVED TO WHEELWELLS, NOSE WOULD GO INTO ITS DOWN AND LOCKED POSITION. HYDRAULIC PRESSURE WAS TRAPPED IN RETRACT 'SIDE' OF HYD SYS. A B-NUT ON THE RETRACT PORT OF NOSE GEAR HYD ACTUATOR WAS LOOSE TO ALLOW FLUID TO ESCAPE AND THE HAND PUMP WAS THEN USED TO PUMP LANDING GEAR TO A 'DOWN AND LOCKED' POSITION ALLOWING ACFT TO BE TOWED FROM RUNWAY.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** ROD END
Date: 13-NOV-95 **Aircraft Model Number:** 177RG **Part Number:** 520496FG
Details:
DURING FLIGHT, BOTH MAIN LANDING GEARS DROPPED TO TRAIL. GEAR-UP LANDING WAS MADE. ON MAINTENANCE CHECK, THE ROD END ON THE MAIN GEAR ACTUATOR CYLINDER WAS FOUND BROKEN.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name:	CESSNA	Aircraft manufacturer's series number:	177
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Air Transport (ATA) code:	3230	GEAR EXTENSION AND RETRACT SYSTEM	Name of part: BEARING
Date:	25-NOV-95	Aircraft Model Number: 177RG	Part Number: S20496FG
Details: MLG WOULD NOT FULLY EXTEND. WITH SECOND PILOT FLYING AIRCRAFT, PILOT USED A MODIFIED GOLF CLUB TO PULL GEAR INTO LOCK POSITION THROUGH OPENED PILOT'S DOOR. INVESTIGATION FOUND ROD END BEARING BROKEN. SUBMITTER RECOMMENDED AD BE ISSUED REMOVING THIS PART AND INSTALLING NEW MODIFIED PART THAT IS NOW AVAILABLE. THIS WOULD PREVENT A GEAR-UP LANDING.			

Air Transport (ATA) code:	3230	GEAR EXTENSION AND RETRACT SYSTEM	Name of part: DOWNLOCK SUPPORT
Date:	10-MAY-96	Aircraft Model Number: 177RG	Part Number: 204101744
Details: DOWNLOCK SUPPORT LOWER PIN FOUND BROKEN OFF CAUSING POWERPACK MOTOR TO NOT SHUT OFF. BATTERY DRAINED VERY LOW. ELECTRICAL SYSTEMS OPERATED VERY MARGINAL DURING IFR FLIGHT. FOUND LEFT DOWNLOCK SUPPORT LOWER PIN CRACKED. THIS CRACK NOT VISIBLE WITH DOWNLOCK ASSEMBLED. SUSPECT CAUSE, AIRCRAFT OPERATED ON ROUGH LANDING STRIP. SUBMITTER RECOMMENDS DISASSEMBLY OF LOCK TO ZYGLOW PINS IF ACFT IS OPERATED ON ROUGH LANDING STRIPS.			

Air Transport (ATA) code:	3230	GEAR EXTENSION AND RETRACT SYSTEM	Name of part: SUPPORT
Date:	10-MAY-96	Aircraft Model Number: 177RG	Part Number: 204101743
Details: DOWNLOCK SUPPORT LOWER PIN FOUND CRACKED. THIS CONDITION WAS FOUND AFTER FINDING RT DOWNLOCK SUPPORT LOWER PIN BROKEN OFF. THIS CRACK NOT VISIBLE WITH DOWNLOCK ASSEMBLED ON AIRCRAFT. SUSPECT CAUSE: AIRCRAFT OPERATED ON ROUGH LANDING STRIP. RECOMMEND DISASSEMBLY OF LOCK TO ZYGLOW PINS IF A/C IS OPERATED ON ROUGH LANDING STRIPS.			

Air Transport (ATA) code:	3230	GEAR EXTENSION AND RETRACT SYSTEM	Name of part: ROD END
Date:	17-JUN-96	Aircraft Model Number: 177RG	Part Number: S24266
Details: AT ANNUAL INSPECTION, THIS PART WAS FOUND BROKEN. SUBMITTER STATED SL SE79-37 OBVIOUSLY WAS NEVER COMPLIED WITH. SUGGEST THAT THIS SERVICE LETTER BE MADE MANDATORY.			

Air Transport (ATA) code:	3230	GEAR EXTENSION AND RETRACT SYSTEM	Name of part: BOLT
Date:	31-JUL-96	Aircraft Model Number: 177RG	Part Number: 20430156
Details: BOLT WHICH CONNECTS THE FORWARD AND AFT NOSE LANDING GEAR DRAG LINKS WAS FOUND LOOSE. FURTHER INSPECTION SHOWED BOLT HAD BROKEN THROUGH THE CENTER OF LUBRICATION PORT WHICH IS A HOLE DRILLED INTO THE DIAMETER OF THE BOLT WHICH MEETS A HOLEDRILLED IN THE AXIS OF THE BOLT. NLG FAILURE WAS IMMINENT.			

Air Transport (ATA) code:	3230	GEAR EXTENSION AND RETRACT SYSTEM	Name of part: PAD
Date:	17-OCT-97	Aircraft Model Number: 177RG	Part Number: 24136
Details: (AUS) LANDING GEAR PADS MISSING. PADS ARE VULCANISED/BONDED TO A STELSHELL. CORROSION APPEARS TO HAVE SPREAD BETWEEN THE PAD AND THE SHELL CAUSING DELAMINATION.			

Air Transport (ATA) code:	3230	GEAR EXTENSION AND RETRACT SYSTEM	Name of part: SUPPORT
Date:	01-MAR-98	Aircraft Model Number: 177RG	Part Number: 20410142
Details: MAIN LANDING GEAR ACTUATOR SUPPORTS CRACKED.			



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** GEAR
Date: 17-JUN-98 **Aircraft Model Number:** 177RG **Part Number:** 20810018
Details:
MAIN LANDING GEARS FAILED TO EXTEND. FROM CHASE PLANE, OBSERVED NOSE GEAR WOULD RETRACT AND EXTEND. THE MAINS WOULD NOT MOVE, AND THE AIRCRAFT WAS LANDING WITH BOTH MAINS IN TRAIL. HOISTING THE AIRCRAFT, FOUND RT MAIN WAS EASILY MOVED TO THE DOWN POSITION. IT TOOK SEVERAL BACK AND FORTH MOVEMENTS TO GET THE LT HAND GEAR DOWN. ON INSPECTION, FOUND BOTH SECTOR GEAR BOLTS SHEARED. ONE TOOTH FROM THE LT HAND PINION GEAR WAS LYING IN THE BELLY. SUBMITTER BELIEVES THE SEQUENCE OF FAILURE WAS THAT A TOOTH BROKE OFF THE PINION GEAR AND JAMMED THE MAIN GEARS. ON LANDING, THE SECTOR BOLTS FAILED FROM THE WEIGHT OF THE AIRCRAFT FORCING THE GEARS UP.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** BOLT
Date: 28-SEP-98 **Aircraft Model Number:** 177RG **Part Number:** 20430156
Details:
DURING AN ANNUAL INSPECTION, THE NOSE GEAR DRAG BRACE ASSY KNEE JOINT BOLT WAS FOUND SHEARED IN HALF. THIS BOLT IS DRILLED AND ZERKED FOR LUBRICATING. THE BOLT WAS BROKEN AT THE CENTER HOLE WHERE THE GREASE COMES OUT INSIDE THE BRACE BUSHINGS. BOLT WAS REPLACED WITH NEW. SUBMITTER SUGGESTED REMOVING THIS BOLT AT EVERY INSPECTION AS THERE WAS NO REAL NOTICEABLE PROBLEM PRIOR TO REMOVAL.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** SPRING
Date: 23-AUG-02 **Aircraft Model Number:** 177RG **Part Number:** 14141162
Details:
DURING LANDING GEAR RETRACTION TEST, NOSE GEAR WOULD NOT FULLY RETRACT. THE BELLCRANK WAS FOUND OVERCENTER, CAUSING THE ROLLER TO MISS THE UNLOCK HOOK AND RESTRICT THE NOSE GEAR TRAVEL. THE SPRING WAS FOUND STRETCHED AND NOT PROVIDING ADEQUATE TENSION. THE SPRING WAS REPLACED AND OPERATION WAS NORMAL. THIS DEFECT CAUSED THE NOSE GEAR TO STAY PARTIALLY OUT OF THE WHEEL WELL AND THE GEAR DOORS TO REMAIN APPROXIMATELY 30 DEGREES OPEN. THIS COULD RESULT IN FAILURE OF THE DOORS AND POSSIBLE JAMMING OF THE NOSE GEAR.

Air Transport (ATA) code: 3230 **GEAR EXTENSION AND RETRACT SYSTEM** **Name of part:** LANDING GEAR
Date: 02-OCT-01 **Aircraft Model Number:** 177RG **Part Number:**
Details:
NOSE GEAR IN UP POSITION HAD HYDRAULIC LOCK. KEEPING THE NOSE GEAR IN THE UP POSITION EXTENDED GEAR, MAIN GEAR LOCKED DOWN, NOSE GEAR DID NOT FULLY EXTEND DUE TO HYDRAULIC LOCK IN THE RETURN LINE.

Air Transport (ATA) code: 3233 **LANDING GEAR ACTUATOR** **Name of part:** BEARING
Date: 12-OCT-03 **Aircraft Model Number:** 177RG **Part Number:** S24266
Details:
(CAN) PILOT WAS COMING INTO LAND SELECTED GEAR DOWN. HEARD LOUD BANG FROM REAR OF A/C AND GOT NO GREEN DOWN LIGHT INDICATION. ABORTED APPROACH & TRIED SEVERAL TIMES TO GET GEAR DOWN, NO SUCCESS. PUT GEAR HANDLE DOWN & DID FLY-BY. TOWER REPORTED HE HAD NOSE GEAR DOWN BUT MAIN GEAR WAS PARTIALLY DOWN. PILOT ELECTED TO DO LANDING ON GRASS BESIDE RUNWAY. LANDED SUCCESSFULLY LITTLE DAMAGE TO AIRCRAFT. NLG WAS DOWN & LOCKED. A/C LIFTED UP AND GEAR WAS LOCKED DOWN. AIRCRAFT WAS PUT ON JACKS AT HANGER. FLOOR WAS LIFTED & FOUND ROD END ATTACHING MLG ACTUATOR TO MLG LINKAGE BROKEN, PART HAD BROKEN OFF GOT UNDERNEATH LINKAGE & STOPPED GEAR FROM LOCKING DOWN. ROD END REPLACED & GEAR SWING COMPLETED WITH NO PROBLEMS.

Air Transport (ATA) code: 3233 **LANDING GEAR ACTUATOR** **Name of part:** ACTUATOR
Date: 13-JUN-01 **Aircraft Model Number:** 177RG **Part Number:** 12815041
Details:
DURING CRUISE FLIGHT PILOT REPORTED BUFFET AND LOSS OF GEAR UP INDICATION. PILOT SLOWED TO GEAR SPEED AND DESCENDED TO VFR CONDITIONS AND RETURNED TO DEPARTURE AIRPORT. SELECTED GEAR DOWN AND COULD NOT GET GEAR DOWN INDICATION. EMERGENCY EXTENDED GEAR AND OBTAINED A GEAR DOWN INDICATION. UNEVENTFUL LANDING. ON INSPECTION FOUND THE LEFT MAIN GEAR DOWN LOCK ACTUATOR #1281504-1 HAD RUPTURED END SHAFT SEAL AND MOST OF HYDRAULIC FLUID HAD LEAKED FROM SYSTEM. DISSASSEMBLED AND FOUND NO DEFECTS EXCEPT FAILED SEAL. REPLACED SEAL AND FUNCTION TEST OK.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 3233 **LANDING GEAR ACTUATOR** **Name of part:** BEARING
Date: 09-JAN-98 **Aircraft Model Number:** 177RG **Part Number:** S24266
Details:
MAIN LANDING GEAR ACTUATOR ROD-END FAILED DURING FLIGHT. LANDING GEAR COULD NOT BE LOWERED AND LOCKED DOWN. PILOT MADE A LANDING WITH GEAR UP. THE AIRCRAFT AND THE PARTICULAR PART IN QUESTION WERE INSPECTED 5 HOURS PRIOR WITH NO VISIBLE DISCREPANCY.

Air Transport (ATA) code: 3233 **LANDING GEAR ACTUATOR** **Name of part:** JAM NUT
Date: 03-MAY-95 **Aircraft Model Number:** 177RG **Part Number:** AN3167R
Details:
WHILE PERFORMING GEAR SWING, FOUND MAIN GEAR ACTUATOR JAM NUT LOOSE. THIS IS THE 2ND CARDINAL RG FOUND THIS WAY. FIRST CARDINAL, THE ROD END HAD ROTATED OUT OF PISTON ENOUGH TO CAUSE GEAR NOT TO LOCK DOWN. THERE IS NO SAFETY ON JAM NUT TO PREVENT BACKING OFF OF ROD. SUBMITTER RECOMMENDS CHECKING JAM NUT WHENEVER ACTUATOR IS ACCESSIBLE.

Air Transport (ATA) code: 3233 **LANDING GEAR ACTUATOR** **Name of part:** BEARING
Date: 12-OCT-03 **Aircraft Model Number:** 177RG **Part Number:** S24266
Details:
(CAN) ON APPROACH FOR LANDING PILOT SELECTED GEAR DOWN AND HEARD A LOUD BANG FROM BEHIND HIM RECEIVING NO GREEN DOWN LIGHT THE PILOT ABORTED HIS LANDING. HE CIRCLED THE AIRPORT AND TRIED NUMEROUS TIMES TO GET HIS GEAR DOWN. FINALLY HE SELECTED GEAR DOWN AND DID A FLY BY OF THE TOWER. TOWER PERSONNEL SAW TOLD HIM THAT HIS NOSE GEAR WAS DOWN BUT HIS MAIN GEAR WAS JUST HANGING THERE. PILOT LANDED ON GRASS BESIDE RUNWAY AND LANDED SAFELY. THE NOSE GEAR WAS LOCKED DOWN BUT THE MAIN GEAR WAS NOT. THE FLOOR WAS LIFTED AND DISCOVERED THAT THE MAIN GEAR ACTUATOR ROD END THAT IS ATTACHED TO THE GEAR HAD BROKEN AND THE BROKEN PIECE HAD FALLEN INTO THE GEAR BELL CRANK AND JAMMED STOPPING THE GEAR FROM LOCKING DOWN CORRECTLY.

Air Transport (ATA) code: 3234 **LANDING GEAR SELECTOR** **Name of part:** SELECTOR SWITCH
Date: 23-OCT-02 **Aircraft Model Number:** 177RG **Part Number:** 8857K44
Details:
PILOT INEVITABLY BUMPED MLG SWITCH ON SHORT FINAL WHILE MOVING THE TRIM WHEEL, CAUSING A GEAR-UP LANDING. THE SAFETY FAILED TO WORK ON MLG SWITCH. UPON INVESTIGATION FOUND THAT THE SWITCH KNOB WHEN SCREWED COMPLETELY ONTO SWITCH CAUSED THE SPRING LOADED SAFETY TO COME OFF THE SWITCH. THIS CAUSED THE SAFETY NOT TO WORK AND MADE IT EASY TO MOVE THE SWITCH WITHOUT PULLING OUT ON THE KNOB TO MOVE SWITCH INTO THE UP POSITION OR DOWN POSITION. INSTALLED A NEW SWITCH AND KNOB AND CHECKED THE OPERATION AND WAS FOUND TO WORK PROPERLY.

Air Transport (ATA) code: 3246 **WHEEL/SKI/FLOAT** **Name of part:** HUB
Date: 02-DEC-02 **Aircraft Model Number:** 177RG **Part Number:** D30259
Details:
CENTER SECTION OF WHEEL FOUND CRACKED BOTH MAIN WHEELS. WHEELS REPLACE WITH NEW CLEVELAND TWO PIECE TYPE WHEELS.

Air Transport (ATA) code: 3246 **WHEEL/SKI/FLOAT** **Name of part:** HUB
Date: 01-MAR-97 **Aircraft Model Number:** 177RG **Part Number:** C30482
Details:
CIRCUMSTANCE UNKNOWN. FOUND DURING ANNUAL INSPECTION. HUB THREAD CRACKS LOOK LIKE OVERTORQUE ON A VERY THIN BOSS. 1,070 HOURS ON AIRCRAFT AND DEFECTIVE PART.

Air Transport (ATA) code: 3250 **LANDING GEAR STEERING SYSTEM** **Name of part:** SHIMMY DAMPENER
Date: 20-JAN-05 **Aircraft Model Number:** 177RG **Part Number:** 204301410
Details:
DURING PRE-INSPECTION RUN UP/TASK, STEERING WAS RESTRICTED TO RT. FOUND THAT WHOEVER HAD THE SHIMMY DAMPENER OFF LAST, REVERSED THE GIMBAL THAT ATTACHES IT TO THE ENGINE MOUNT. THERE SHOULD BE A WARNING PLACARD OR MODIFICATION THAT MAKES REVERSAL IMPOSSIBLE. (K)



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 3252 **SHIMMY DAMPER** **Name of part:** SHIMMY DAMPENER
Date: 24-FEB-00 **Aircraft Model Number:** 177B **Part Number:**
Details:
AFTER REPLACING AN OLD SHIMMY DAMPENER WITH A NEW ONE AT APPROXIMATELY 100 HOURS IN SERVICE, THE NEW PART BROKE AT THE OUTER C-CLAMP RING SPLITTING THE OUTER CYLINDER CASE. THIS HAPPENED AS THE AIRCRAFT STOPPED SHIMMING. THE END PLUG, C-CLAMP AND ALL FLUID WERE LOST. NO INJURIES TO OCCUPANTS. THIS IS THE NEW STYLE CYLINDER. SUBMITTER STATED THIS CYLINDER MAY NEED MORE END DISTANCE OR THICKNESS. PART TOTAL TIME, 100 HOURS. (X)

Air Transport (ATA) code: 3252 **SHIMMY DAMPER** **Name of part:** CYLINDER
Date: 03-JUL-97 **Aircraft Model Number:** 177B **Part Number:** 17430213
Details:
SHIMMY DAMPENER HOUSING FAILED DURING FLIGHT. UNIT FAILED AT THE OUTER PORTION OF OUTER RETAINING RING FLANGE. FAILURE WAS ON DOWN-WIND LEG AFTER A NORMAL TOUCH AND GO. SUBMITTER STATES OWNER MENTIONED SEVERAL YEARS AGO, TWO SEPARATE SEVERE SHIMMY INSTANCES THAT COULD HAVE CREATED CRACKS. PRIOR TO FAILURE, UNIT WAS VISUALLY INSPECTED FOR LEAKS AND CHECKED FULL STROKE FOR AIR IN SYSTEM.

Air Transport (ATA) code: 3260 **LG POSITION AND WARNING** **Name of part:** WIRE
Date: 04-JUN-04 **Aircraft Model Number:** 177RG **Part Number:** 20700291
Details:
(CAN) PILOT EXPERIENCED NO GEAR DOWN AND LOCK INDICATION LIGHT AFTER GEAR HAD COMPLETED CYCLE. AFTER AN UN-EVENTFUL LANDING AND INSPECTION, FOUND NOSE GEAR DOWN LOCK SWITCH WIRE WAS BROKEN AT BASE OF SWITCH.

Air Transport (ATA) code: 3260 **LG POSITION AND WARNING** **Name of part:** SWITCH
Date: 01-NOV-98 **Aircraft Model Number:** 177RG **Part Number:** 20700174
Details:
ON GEAR RETRACTION, BOTH THE UP AND DOWN LIGHTS WERE ON. PLACED GEAR SELECTOR IN DOWN POSITION AND GEAR STAYED UP. WHEN EMG PUMP GIVEN STROKES, NOSE GEAR STARTED DOWN. THE PUMP THEN CAME ON AND GEARS STARTED TO EXTEND. WHEN THE NOSE GEAR LOCKED DOWN THE PUMP STOPPED, LEAVING MAINS IN TRAIL POSITION. CONTINUED TO PUMP EMG PUMP, BOTH MAINS LOCKED DOWN. ON INSPECTION, GEAR DOWN MAGNET FOR RT GEAR WAS WELDED CLOSED, AND LT WAS INTERMITTENT. REPLACED BOTH SWITCHES AND ALL SYSTEMS OK TO NORMAL.

Air Transport (ATA) code: 3260 **LG POSITION AND WARNING** **Name of part:** SWITCH
Date: 01-NOV-98 **Aircraft Model Number:** 177RG **Part Number:** 20700171
Details:
ON GEAR RETRACTION, BOTH THE UP AND DOWN LIGHTS WERE ON. PLACED GEAR SELECTOR IN DOWN POSITION AND GEAR STAYED UP. WHEN EMG PUMP GIVEN STROKES, NOSE GEAR STARTED DOWN. THE PUMP THEN CAME ON AND GEARS STARTED TO EXTEND. WHEN THE NOSE GEAR LOCKED DOWN THE PUMP STOPPED, LEAVING MAINS IN TRAIL POSITION. CONTINUED TO PUMP EMG PUMP, BOTH MAINS LOCKED DOWN. ON INSPECTION, GEAR DOWN MAGNET FOR RT GEAR WAS WELDED CLOSED, AND LT WAS INTERMITTENT. REPLACED BOTH SWITCHES AND ALL SYSTEMS OK TO NORMAL.

Air Transport (ATA) code: 3260 **LG POSITION AND WARNING** **Name of part:** SWITCH
Date: 09-APR-97 **Aircraft Model Number:** 177RG **Part Number:** 20700291
Details:
(AUS) NOSE LANDING GEAR DOWN MICROSWITCH WIRE BROKEN OFF

Air Transport (ATA) code: 3260 **LG POSITION AND WARNING** **Name of part:** SWITCH
Date: 25-JUL-95 **Aircraft Model Number:** 177RG **Part Number:** 20700291
Details:
(CAN) GEAR PROXIMITY SWITCH FAILED. GEAR DOWN AND LOCKED BUT LIGHT FAILED TO COME ON. SWITCH REPLACED AND AIRCRAFT RETURNED TO SERVICE.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 3260 **LG POSITION AND WARNING** **Name of part:** HORN
Date: 16-MAR-96 **Aircraft Model Number:** 177RG **Part Number:** S20771
Details:
DURING PRE-BUY INSPECTION, FOUND LANDING GEAR WARNING HORN INOPERATIVE. TROUBLESHOT SYSTEM AND FOUND GEAR HORN DEFECTIVE. OWNER CONFIRMED GEAR HORN HAD BEEN INOPERATIVE, BUT ANNUAL WAS SIGNED OFF 8/95 ANYWAY. SUSPECT CAUSE, VIBRATION CAUSED HORN TO COME APART INTERNALLY.

Air Transport (ATA) code: 3260 **LG POSITION AND WARNING** **Name of part:** SUPPORT
Date: 01-APR-02 **Aircraft Model Number:** 177RG **Part Number:** 204101744
Details:
PILOT REPORTED THAT THE LANDING GEAR PUMP MOTOR CONTINUED TO RUN AFTER THE GEAR WAS PUT IN THE DOWN POSITION AND THAT THE GEAR DOWN LIGHT DID NOT COME ON. THE PILOT MADE AN UNEVENTFUL LANDING AFTER A LOW PASS AND GROUND PERSONNEL VERIFIED THE LANDING GEAR APPEARED TO BE DOWN. TROUBLESHOOTING FOUND THAT THE RIGHT LANDING GEAR DOWN LOCK SWITCH WAS NOT MAKING DUE TO A BROKEN DOWN LOCK SUPPORT BRACKET. THE BROKEN SUPPORT BRACKET ROTATED IN THE HOUSING AND DID NOT ALLOW THE RIGHT MAIN LANDING GEAR TO LOCK DOWN. REPLACED THE BROKEN PART WITH A NEW MFG PART AND RIGGED IAW SM. OPS CHECKED GOOD. THE BROKEN PART HAD THE LOWER PIN SHEARED OFF. IT ALSO SHOWED SIGNS OF HEAT WHERE IT WAS WELDED.

Air Transport (ATA) code: 3260 **LG POSITION AND WARNING** **Name of part:** DOWNLOCK SWITCH
Date: 09-DEC-02 **Aircraft Model Number:** 177RG **Part Number:** 20700174
Details:
FOUND THAT RT MLG DOWNLOCK SWITCH TO BE STUCK IN THE CLOSED POSITION WHICH, WHEN COMBINED WITH THE LT MLG DOWNLOCK SWITCH OPERATING IMPROPERLY, LED TO A LANDING WHERE THE MAIN GEAR COLLAPSED WITH A GREEN DOWN AND LOCKED LIGHT.

Air Transport (ATA) code: 3416 **ALTIMETER, BAROMETRIC/ENCODER** **Name of part:** CASTING
Date: 11-APR-97 **Aircraft Model Number:** 177B **Part Number:** 3431
Details:
INCOMING INSPECTION CHECKS ON ALTIMETER REVEALED JUMPS IN THE OPERATION OF 100 FEET TO 200 FEET. THE END-SHAKES ON THE MECHANISM SHAFTS WERE MEASURED. ONE END-SHAKE MEASURED ZERO. THE OH MANUAL CALLS OUT A MINIMUM END-SHAKE OF .0020 INCH ON ALL THREE CRITICAL ROTATING SHAFTS. BECAUSE OF THIS ZERO END-SHAKE CONDITION, FOUND THE JUMPY CONDITION AT ROOM TEMP, AND THE INSTRUMENT WOULD HANG UP THE POINTERS WHEN OPERATED IN A COLD ENVIRONMENT. THE MANUFACTURER INDICATED THAT A SHAFT END-SHAKE OF .0004 INCH OR LESS WILL CAUSE AN INSTRUMENT HANG-UP UNDER COLD OPERATING CONDITIONS ACCORDING TO THEIR TESTING.

Air Transport (ATA) code: 3418 **STALL WARNING SYSTEM** **Name of part:** STALL WARNING
Date: 03-SEP-03 **Aircraft Model Number:** 177RG **Part Number:** S16722
Details:
STALL WARNING SYSTEM FUNCTION TEST AT ANNUAL INSPECTION WAS CORRECT. SYSTEM WOULD NOT OPERATE WHEN PITOT HEAT WAS SWITCHED ON. REMOVED STALL SWITCH AND CLEANED CORROSION FROM GROUND. BOTH STALL WARNING AND PITOT HEAT WOULD OPERATE CORRECTLY THEN. PREVIOUSLY, THE STALL WARNING SYSTEM WOULD FIND A GROUND THROUGH THE PITOT HEATER VIA THE STALL WARNING HEATER. WHEN THE PITOT HEAT WAS TURNED ON, THE STALL WARNING WOULD NOT GROUND.

Air Transport (ATA) code: 3457 **GLOBAL POSITIONING SYSTEM** **Name of part:** GPS
Date: 06-MAY-03 **Aircraft Model Number:** 177RG **Part Number:** GNS530
Details:
GPS SCREEN WENT TOTALLY BLANK. UNIT STILL RECEIVING AND TRANSMITTING COMMUNICATION DATA. SCREEN FAILED 2-3 MINUTES AFTER POWER UP. REPORTED THAT HIGH VOLTAGE TRANSFORMER FAILED UNDER IFR FLIGHT COULD BE FATAL.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 3700 **VACUUM SYSTEM** **Name of part:** VACUUM PUMP
Date: 19-AUG-98 **Aircraft Model Number:** 177RG **Part Number:** 211CC
Details:
PART FAILED UPON THROTTLE REDUCTION FOR LANDING AFTER A 2.9 HOUR FLIGHT. LOW-VAC WARNING LIGHT ILLUMINATED. THE ALTERNATE VAC STANDBY SYSTEM OPERATED AUTOMATICALLY. PART INSTALLED TO REPLACE ORIG VAC PUMP WHICH FAILED AT 1872.1 HRS. ATINSTALLATION OF THIS RAPCO REBUILT UNIT, A COMPLETE VAC SYSTEM INSPECTION CONDUCTED. ALL FILTERS REPLACED, AND THE HOSES BLOWN DOWN AND REPLACED AS NECESSARY. NO SYSTEM DEFECTS FOUND. UPON DISASSEMBLY, RAPCO REPORTED FAILURE DUE TO 'FOREIGN OBJECT INJECTION', AND 'OIL CONTAMINATION'. SUBMITTER SUSPECTS FAULTY OVERHAUL. RAPCO UNIT REPLACED WITH A SIGMA-TEK NEW UNIT WHICH HAS OPERATED FOR OVER 50 HRS TO-DATE WITHOUT FAILURE.

Air Transport (ATA) code: 3710 **VACUUM DISTRIBUTION SYSTEM** **Name of part:** VALVE
Date: 15-APR-02 **Aircraft Model Number:** 177B **Part Number:** 13695
Details:
VALVE WAS REPLACED WAS WITH IN SERIAL NUMBERS TO BE RE-USED IN MOD TO SVS V SYSTEM TO COMPLY WITH ALTERNATE METHOD OF COMPLAIANCE TO AD. VALVE WAS FOUND TO HAVE FAILED INT HE OPEN POSITION ON BACK UP SIDE.

Air Transport (ATA) code: 3710 **VACUUM DISTRIBUTION SYSTEM** **Name of part:** COUPLING
Date: 13-DEC-99 **Aircraft Model Number:** 177B **Part Number:**
Details:
(CAN) DURING CRUISE FLIGHT, THE VACUUM SYSTEM FAILED. MAINTENANCE FOUND THE VACUUM PUMP FAILED AT THE DRIVE COUPLING.

Air Transport (ATA) code: 5312 **BULKHEADS (MAIN FUSELAGE)** **Name of part:** BULKHEAD
Date: 08-NOV-05 **Aircraft Model Number:** 177RG **Part Number:** 17121042
Details:
BULKHEAD CRACKED AROUND BOTH VERTICAL FIN FORWARD ATTACH BOLTS.

Air Transport (ATA) code: 5312 **BULKHEADS (MAIN FUSELAGE)** **Name of part:** BULKHEAD
Date: 05-JUL-96 **Aircraft Model Number:** 177B **Part Number:** 17121541
Details:
BULKHEAD WAS INSPECTED AFTER GROUND ACCIDENT AND FOUND CRACKED AT LOWER INNER FLANGE. THIS PART WAS PENETRANT TESTED IAW MIL-STD-6866 NC/1, DATED OCTOBER 4, 1989. MECHANIC SAID CRACK WAS NOT CAUSED BY ACCIDENT. BULKHEAD WAS REPAIRED ANDREINSTALLED.

Air Transport (ATA) code: 5312 **BULKHEADS (MAIN FUSELAGE)** **Name of part:** BULKHEAD
Date: 08-NOV-05 **Aircraft Model Number:** 177RG **Part Number:** 17121042
Details:
BULKHEAD CRACKED AROUND BOTH VERTICAL FIN FORWARD ATTACH BOLTS.

Air Transport (ATA) code: 5320 **FUSELAGE AUXILIARY STRUCTURE** **Name of part:** RUB STRIP
Date: 03-APR-04 **Aircraft Model Number:** 177RG **Part Number:** 20430129
Details:
DURING ANNUAL INSPECTION LANDING GEAR RETRACTION TEST WAS PERFORMED AND THE NOSE GEAR DOORS WOULD NOT FULLY CLOSE. INVESTIGATION FOUND THE TEFLON RUB STRIP ON THE NOSE LANDING GEAR DOOR ACTUATOR MISSING.

Air Transport (ATA) code: 5320 **FUSELAGE AUXILIARY STRUCTURE** **Name of part:** STIFFENER
Date: 19-DEC-97 **Aircraft Model Number:** 177A **Part Number:** 17120523
Details:
(CAN) LT AND RT LANDING GEAR UPPER ATTACHMENT CRACKED AT ATTACHMENT HOLES. HOLE EDGE DISTANCE VERY CLOSE.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 5320 **FUSELAGE AUXILIARY STRUCTURE** **Name of part:** PANEL
Date: 09-SEP-01 **Aircraft Model Number:** 177B **Part Number:**
Details:
OWNER/OPERATOR REPORTED THAT CONTROL YOKE WOULD NOT PULL BACK TO RAISE THE ELEVATOR. ON INSPECTION IT WAS FOUND THAT THE PANEL MOUNT TRAY FOR THE TRANSPONDER ON THE RIGHT SIDE OF THE PANEL HAD DROPPED .2500 OF INCH AND WAS CONTAINING AND RESTRICTING AFT MOVEMENT OF THE CONTROL YOKE. THE AIRCRAFT COULD NOT ROTATE ON TAKEOFF AND IT WAS A CLOSE CALL. AN ADDITIONAL SUPPORT WAS INSTALLED ON THE BACK OF THE TRAY. AVIONICS INSTALLER OVER-LOOKED THE POSSIBILITY OF THE TRAY DROPPING DOWN. UNDER PANEL AREA SHOULD BE INSPECTED AT EACH ANNUAL, 100 HOUR AND AFTER NEW AVIONICS INSTALLATION.

Air Transport (ATA) code: 5320 **FUSELAGE AUXILIARY STRUCTURE** **Name of part:** RIVETS
Date: 17-FEB-99 **Aircraft Model Number:** 177RG **Part Number:**
Details:
FOUND ALL 4 AFT HIGH SHEAR RIVETS LOOSE, PN NAS1054-8-7 AND NAS1054-6-8 IN THE SUPPORT ASSY. REPLACED WITH OVERSIZED HIGH LOC RIVETS. FOUND DURING ANNUAL INSPECTION.

Air Transport (ATA) code: 5343 **GEAR ATTACH FITTINGS (ON FUSELAGE)** **Name of part:** BRACKET
Date: 07-NOV-05 **Aircraft Model Number:** 177RG **Part Number:** 20130035
Details:
WHILE ATTEMPTING TO RIGG THE NOSE GEAR AFTER DOING AN ENGINE AND MOUNT OVERHAUL, IT WAS IMPOSSIBLE TO MAINTAIN THE PROPER CLEARANCES AND THE LOCK WOULD NOT SNAP OVER CENTER ON THE DOWN CYCLE. WHILE WATCHING THE ACTUATOR IT SEEMED THE MOVE. UPON FURTHER INSPECTION AT THE UPPER ATTACH POINT (USING A BRIGHT LIGHT) THE BRACKET ASSY WAS FOUND TO BE SEVERLY CRACKED. WOULD RECOMMEND CLOSE VISUAL INSPECTION AT EACH ANNUAL. (K)

Air Transport (ATA) code: 5500 **EMPENNAGE STRUCTURE** **Name of part:** ARM
Date: 21-APR-03 **Aircraft Model Number:** 177 **Part Number:** 17320345
Details:
WITH GUST LOCK INSTALLED BALANCE ARM LOCKED ON DOWN STOP WHILE A/C WAS TIED DOWN IN GUSTY WIND CONDITIONS.

Air Transport (ATA) code: 5510 **HORIZONTAL STABILIZER** **Name of part:** BRACKET
Date: 13-JUN-00 **Aircraft Model Number:** 177RG **Part Number:** 17320311
Details:
THREE OF FOUR BALANCE WEIGHT SUPPORT BRACKETS WERE CRACKED ALONG THE BEND RADIUS. CRACKS WERE 1.25 INCHES, 1.50 INCHES, AND 1.75 INCHES ON EACH. THIS WAS NOTICED DURING STABILIZER BEARING REPLACEMENT WITH THE STABILIZER OFF THE AIRCRAFT. SUBMITTER RECOMMENDED FREQUENT INSPECTIONS. UNKNOWN CAUSE. (X)

Air Transport (ATA) code: 5510 **HORIZONTAL STABILIZER** **Name of part:** BRACKET
Date: 22-MAR-95 **Aircraft Model Number:** 177RG **Part Number:** 17320103
Details:
DURING ANNUAL INSPECTION, FOUND CRACK IN BEND RADIUS OF ONE FORWARD AND ONE AFT STABILATOR BALANCE ARM SUPPORT BRACKET ON STABILATOR. RECOMMEND REPLACEMENT OF THESE WITH LATER STEEL BRACKETS, PN 1732063-1 AND DASH 2, AND 1732064-1, AND DASH 2 PER CESSNA SEB 89-1, REV 3.

Air Transport (ATA) code: 5510 **HORIZONTAL STABILIZER** **Name of part:** BRACKET
Date: 22-MAR-95 **Aircraft Model Number:** 177RG **Part Number:** 17320313
Details:
DURING ANNUAL INSPECTION, FOUND CRACK IN BEND RADIUS OF ONE FORWARD AND ONE AFT STABILATOR BALANCE ARM SUPPORT BRACKET ON STABILATOR. RECOMMEND REPLACEMENT OF THESE WITH LATER STEEL BRACKETS, PN 1732063-1 AND DASH 2, AND 1732064-1, AND DASH 2 PER CESSNA SEB 89-1, REV 3.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 5510 **HORIZONTAL STABILIZER** **Name of part:** BRACKET
Date: 13-JUN-00 **Aircraft Model Number:** 177RG **Part Number:** 1732010
Details:
THREE OF FOUR BALANCE WEIGHT SUPPORT BRACKETS WERE CRACKED ALONG THE BEND RADIUS. CRACKS WERE 1.25 INCHES, 1.50 INCHES, AND 1.75 INCHES ON EACH. THIS WAS NOTICED DURING STABILIZER BEARING REPLACEMENT WITH THE STABILIZER OFF THE AIRCRAFT. SUBMITTER RECOMMENDED FREQUENT INSPECTIONS. UNKNOWN CAUSE. (X)

Air Transport (ATA) code: 5510 **HORIZONTAL STABILIZER** **Name of part:** BRACKET
Date: 23-SEP-96 **Aircraft Model Number:** 177RG **Part Number:** 17320311
Details:
DURING ANNUAL INSPECTION, CRACKS WERE NOTED ON (3 OF THE 4) STABILATOR WEIGHT ARM MOUNT BRACKETS. CAUSE, NORMAL WEAR AND VIBRATION. SUBMITTER RECOMMENDS CLOSER INSPECTION AND DYE CHECK. ALSO INCLUDES FORWARD MOUNT P/N 1732010-1 AND DASH2.

Air Transport (ATA) code: 5510 **HORIZONTAL STABILIZER** **Name of part:** BRACKET
Date: 23-SEP-96 **Aircraft Model Number:** 177RG **Part Number:** 17320312
Details:
DURING ANNUAL INSPECTION, CRACKS WERE NOTED ON (3 OF THE 4) STABILATOR WEIGHT ARM MOUNT BRACKETS. CAUSE, NORMAL WEAR AND VIBRATION. SUBMITTER RECOMMENDS CLOSER INSPECTION AND DYE CHECK. ALSO INCLUDES FORWARD MOUNT P/N 1732010-1 AND DASH2.

Air Transport (ATA) code: 5510 **HORIZONTAL STABILIZER** **Name of part:** BRACKET
Date: 21-NOV-95 **Aircraft Model Number:** 177B **Part Number:** 17320631
Details:
AFTER RECEIVING PARTS FROM CESSNA PARTS DIVISION TO ACCOMPLISH SEB 89-1, 'STABILATOR BALANCE WEIGHT ATTACH BRACKETS' NOTICED THAT LT BRACKET WAS MANUFACTURED BACKWARDS TO RESEMBLE THE DASH 2 RT BRACKET. LATER, WAS NOTIFIED THE WHOLE BATCH FROM CESSNA WAS MADE WRONG.

Air Transport (ATA) code: 5510 **HORIZONTAL STABILIZER** **Name of part:** BRACKET
Date: 18-MAR-97 **Aircraft Model Number:** 177RG **Part Number:** 17320311
Details:
(AUS) STABILATOR WEIGHT ARM REAR MOUNTING BRACKETS PNO 1732031-1 AND PNO 1732031-2 CRACKED ON VERTICAL BENDS

Air Transport (ATA) code: 5510 **HORIZONTAL STABILIZER** **Name of part:** BRACKET
Date: 13-JUN-00 **Aircraft Model Number:** 177RG **Part Number:** 17320312
Details:
THREE OF FOUR BALANCE WEIGHT SUPPORT BRACKETS WERE CRACKED ALONG THE BEND RADIUS. CRACKS WERE 1.25 INCHES, 1.50 INCHES, AND 1.75 INCHES ON EACH. THIS WAS NOTICED DURING STABILIZER BEARING REPLACEMENT WITH THE STABILIZER OFF THE AIRCRAFT. SUBMITTER RECOMMENDED FREQUENT INSPECTIONS. UNKNOWN CAUSE. (X)

Air Transport (ATA) code: 5531 **SPARS/RIBS (ON VERT STAB)** **Name of part:** SPAR
Date: 17-NOV-97 **Aircraft Model Number:** 177RG **Part Number:** 17330021
Details:
VERTICAL FIN SPAR CRACKED ON BOTH SIDES RIGHT BEHIND TOP RUDDER HINGE. CRACKS MEASURE CLOSE TO .75 INCH ON BOTH SIDES. VERTICAL FIN NOT DISTORTED AND RUDDER HINGE SHOWS NO DAMAGE. CAUSE OF CRACKS UNKNOWN.

Air Transport (ATA) code: 5540 **RUDDER** **Name of part:** ATTACH FITTING
Date: 13-JAN-03 **Aircraft Model Number:** 177RG **Part Number:**
Details:
FOUND LT RUDDER STOP RIDING OVER HORN AREA. THIS CAUSED DEFLECTION OF HORN ATTACHMENT AND CRACK. STOP BOLTS NOT HITTING HORN SQUARELY, CAUSING HORN TO RIDE UP OR DOWN UNDER STOP BOLT. ASSURE STOP BOLTS HIT HORN SQUARELY.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 5551 **HORIZONTAL STAB ATTACH FITTING** **Name of part:** ARM
Date: 18-MAR-97 **Aircraft Model Number:** 177RG **Part Number:** 17320311
Details:
(AUS) STABILATOR WEIGHT ARM LH AND RH REAR MOUNTING BRACKETS PNO1732031-1 AND PNO 1732031-2 CRACKED ALONG VERTICAL BENDS

Air Transport (ATA) code: 5711 **SPAR (ON WING)** **Name of part:** SPAR
Date: 11-OCT-02 **Aircraft Model Number:** 177RG **Part Number:** 17107036
Details:
OBSERVED THE CARRY THRU SPAR CORROSION WHEN LOOKING AT THE AIRCRAFT. THIS ITEM HAD SURFACE CORROSION THAT HAS BLISTERING THAT COULD BE PICKED AT AND MOST OF THE SURFACE AREA HAD WHITE DUSTING AND DISCOLORATION INDICATING CORROSION THAT REQUIRES TREATMENT. CAUSE IS PROBABLY FROM EXPOSURE TO OUTSIDE STORAGE.

Air Transport (ATA) code: 5711 **SPAR (ON WING)** **Name of part:** SPAR
Date: 09-MAY-01 **Aircraft Model Number:** 177RG **Part Number:**
Details:
DURING THE INSTALLATION OF SHOULDER HARNESS KITS THE HEAD LINER WAS REMOVED. CORROSION WAS PRESENT AT FORE AND AFT UPPER, SPAR CAPS AND SKINS. OWNER WAS ADVISED. FURTHER INSPECTION FOUND CORROSION PRESENT UNDER LEAD SHEETS IN THE SAME AREA. LEFT AND RIGHT ROOT RIB ASSEMBLIES ALSO HAD CORROSION PRESENT AS WELL AS A CRACK IN THE LEFT HAND ROOT RIB. PROPERINSPECTION PROCEDURE SHOULD HAVE CAUGHT THIS PRIOR TO REACHING THIS STAGE OF CORROSION.

Air Transport (ATA) code: 5711 **SPAR (ON WING)** **Name of part:** SPAR
Date: 01-JUN-97 **Aircraft Model Number:** 177B **Part Number:** 17107036
Details:
FOUND ON ANNUAL INSPECTION, INTERGRANULAR CORROSION ON CARRY-THROUGH SPAR. SOME SPOTS 2 INCHES AND .0625 INCH DEEP, PLUS OTHER CORROSION. SUBMITTER STATED THIS IS HARD TO SEE WITHOUT REMOVING HEADLINER.

Air Transport (ATA) code: 5712 **RIBS/BULKHEADS (ON WING)** **Name of part:** RIB
Date: 09-MAY-01 **Aircraft Model Number:** 177RG **Part Number:**
Details:
DURING THE INSTALLATION OF SHOULDER HARNESS KITS, THE HEADLINER WAS REMOVED. CORROSION ON CARRY THRU SPAR FORE AND AFTTOP SPAR CAPS AND SKIN WAS NOTICED. CORROSION WAS ALSO PRESENT AT LEFT AND RIGHT ROOT RIBS. LEFT ROOT RIB HAD SMALL CRACK. NO FURTHER ACTION TAKEN.

Air Transport (ATA) code: 5730 **PLATES/SKINS (ON WING)** **Name of part:** SKIN
Date: 12-MAY-05 **Aircraft Model Number:** 177A **Part Number:** 17220044
Details:
DURING AN ANNUAL INSP, RT WING IB L/E SKIN WAS FOUND CORRODED THROUGH BENEATH STRINGER. A POSSIBLE CAUSE FOR THE EXCESSIVE CORROSION MAY BE WATER SEEPING THROUGH THE AIR INLET HOSE INSTALLED ABOVE THE AFFECTED AREA. THIS WATER ENTERS THROUGH THE L/E AIR INLET AND CREATES RUST IN THE STEEL WIRE WOUND HOSE AND DRIPS RUST CONTAMINATED WATER ON THE WING SURFACE BELOW WHICH MAY ACCELERATE THE CORROSION PROCESS. IT IS RECOMMENDED THAT CLOSE ATTENTION BE PAID TO THAT PART OF THE WING AND TO THE CONDITION OF THE VENT HOSE DIRECTLY ABOVE IT ESPECIALLY IN AIRCRAFT THAT ARE STORED OUTDOORS. APPLYINGCORROSION RESISTANT CHEMICAL TO INSIDE OF WING WOULD ALSO HELP SITUATION. (K)

Air Transport (ATA) code: 5741 **FUS (ATTACH FITTING ON WING)** **Name of part:** FITTING
Date: 01-APR-98 **Aircraft Model Number:** 177RG **Part Number:** 202200556
Details:
(AUS) INSPECTION OF WING FITTINGS REVEALED RELATIVE MOVEMENT BETWEEN FITTINGS AND SPAR. THE AIRCRAFT HAD BEEN TREATED WITH 'BOESHIELD' IN FEB 93. PART TC: 4,830.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 5741 **FUS (ATTACH FITTING ON WING)** **Name of part:** FITTING
Date: 03-DEC-96 **Aircraft Model Number:** 177B **Part Number:**
Details:
DURING ANNUAL INSPECTION, IT WAS DISCOVERED THAT THERE WAS MOVEMENT IN THE WING ATTACH FITTINGS WHERE ATTACH PIN ATTACHES WING TO FUSELAGE. THE AMOUNT OF MOVEMENT WAS .0035 INCH BY MEASUREMENT.

Air Transport (ATA) code: 5751 **AILERONS** **Name of part:** HINGE
Date: 23-AUG-95 **Aircraft Model Number:** 177 **Part Number:** 12210897
Details:
DURING A 100-HOUR INSPECTION, BOTH CENTER AILERON HINGES WERE FOUND BENT AND THE LEFT HINGE WAS CRACKED APPROXIMATELY 3INCHES FORWARD OF HINGE BEARING. THERE IS NO OTHER APPARENT DAMAGE TO AILERON, WING, OR INBOARD AND OUTBOARD HINGES (WHICH SEEMS IMPOSSIBLE) AND IT HAS NOT BEEN SUBJECTED TO HIGH WINDS.

Air Transport (ATA) code: 6110 **PROPELLER ASSEMBLY** **Name of part:** BEARING RACE
Date: 01-JUL-96 **Aircraft Model Number:** 177B **Part Number:** C3411
Details:
BEARING RACE CORRODED.

Air Transport (ATA) code: 6111 **PROPELLER BLADE SECTION** **Name of part:** BLADE
Date: 12-APR-99 **Aircraft Model Number:** 177B **Part Number:** 82PA6
Details:
(AU) PROPELLER RECEIVED FOR CORROSION INSPECTION. THE PROPELLER BLADES WERE FOUND CORRODED ON THE LEADING EDGES AND THE BUTTS. THIS PROPELLER WAS LAST INSPECTED ON 7 NOVEMBER 1990.

Air Transport (ATA) code: 6111 **PROPELLER BLADE SECTION** **Name of part:** BLADE
Date: 01-SEP-96 **Aircraft Model Number:** 177RG **Part Number:** G78TCA0
Details:
BLADE, SN DF052, FOUND CORRODED.

Air Transport (ATA) code: 6111 **PROPELLER BLADE SECTION** **Name of part:** SNAP RING
Date: 15-JUN-95 **Aircraft Model Number:** 177RG **Part Number:**
Details:
UPON INSPECTION, THE STEEL SNAP RING AT THE BASE OF THE BLADES WAS FOUND SEVERELY CORRODED. THIS CONDITION INCLUDED THE BLADES NEXT TO THE SNAP RINGS AS THE PAINT ON BLADES WAS LOOSE AND WHITE POWDER WAS FOUND UNDER THE PEELED PAINT. THIS PROP WAS NEW AND HAD BEEN IN SERVICE 80.7 HOURS. AIRCRAFT WAS ALWAYS KEPT IN HANGAR SINCE PROP INSTALLATION.

Air Transport (ATA) code: 6111 **PROPELLER BLADE SECTION** **Name of part:** BLADE
Date: 01-SEP-96 **Aircraft Model Number:** 177RG **Part Number:** G78TCA0
Details:
BLADE, SN DF067, FOUND CORRODED.

Air Transport (ATA) code: 6111 **PROPELLER BLADE SECTION** **Name of part:** BLADE
Date: 25-MAR-97 **Aircraft Model Number:** 177RG **Part Number:** D5044
Details:
(CAN) STONE DAMAGE ON THE LEADING EDGE AND THE FACE OF THE PROPELLER BLADE. THE BLADE REQUIRED FILING AND GRINDING. THE PROPELLER HUB BREATHER SEALANT WAS MISSING.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 6111 **PROPELLER BLADE SECTION** **Name of part:** BLADE
Date: 02-JUN-98 **Aircraft Model Number:** 177B **Part Number:** 82PCAC
Details:
(CAN) PROPELLER RECEIVED FOR CORROSION INSPECTION. PROPELLER BLADE FOUND DAMAGED. BLADE REPAIRED AND BLADE ANODIZED.

Air Transport (ATA) code: 6111 **PROPELLER BLADE SECTION** **Name of part:** BLADE
Date: 11-APR-97 **Aircraft Model Number:** 177 **Part Number:**
Details:
(CAN) PROPELLER RECEIVED FOR CORROSION INSPECTION. MANY GOUGES AND DENTS WERE FOUND. PROPELLER WAS LAST IN THE SHOP IN 1968. THE PROPELLER WAS OVERHAULED.

Air Transport (ATA) code: 6111 **PROPELLER BLADE SECTION** **Name of part:** BLADE
Date: 04-MAY-98 **Aircraft Model Number:** 177B **Part Number:** G82PCA6
Details:
(CAN) PROPELLER RECEIVED FOR CORROSION INSPECTION. THE LEADING EDGES OF THE PROPELLER BLADES WERE FOUND NICKED. THE BLADES HAD NOT BEEN REPAIRED PER THE MCCAULEY MANUAL.

Air Transport (ATA) code: 6114 **PROPELLER HUB SECTION** **Name of part:** HUB
Date: 10-OCT-02 **Aircraft Model Number:** 177 **Part Number:** D5044
Details:
RETIRED HUB DUE TO SURFACE CORROSION ON EXTERIOR, HUB NOT PAINTED.

Air Transport (ATA) code: 6114 **PROPELLER HUB SECTION** **Name of part:** HUB
Date: 01-JUN-96 **Aircraft Model Number:** 177 **Part Number:** D4326C207
Details:
CORROSION FOUND ON HUB.

Air Transport (ATA) code: 6114 **PROPELLER HUB SECTION** **Name of part:** HUB
Date: 01-MAR-96 **Aircraft Model Number:** 177 **Part Number:** 220117
Details:
HUB GREASE FITTING HOLE DAMAGED

Air Transport (ATA) code: 6114 **PROPELLER HUB SECTION** **Name of part:** HUB
Date: 01-JUL-96 **Aircraft Model Number:** 177 **Part Number:** D4326C211
Details:
HUB FOUND CORRODED.

Air Transport (ATA) code: 6114 **PROPELLER HUB SECTION** **Name of part:** HUB
Date: 25-MAY-00 **Aircraft Model Number:** 177 **Part Number:** D4326C211
Details:
EXTERIOR SURFACE OF HUB CORRODED BEYOND LIMITS.

Air Transport (ATA) code: 6114 **PROPELLER HUB SECTION** **Name of part:** HUB
Date: 01-OCT-96 **Aircraft Model Number:** 177B **Part Number:** C208
Details:
HUB FOUND CORRODED.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 6114 **PROPELLER HUB SECTION** **Name of part:** CYLINDER
Date: 15-JAN-99 **Aircraft Model Number:** 177B **Part Number:** C4645
Details:
(CAN) PROPELLER CYLINDER WORN BEYOND MANUFACTURER'S LIMITS.

Air Transport (ATA) code: 6120 **PROPELLER CONTROLLING SYSTEM** **Name of part:** CONTROL CABLE
Date: 28-JUL-97 **Aircraft Model Number:** 177 **Part Number:** 2995060105
Details:
WHILE RELOCATING THIS AIRCRAFT FOLLOWING AN ANNUAL INSPECTION, THE AIRCRAFT WAS TAXIED TO THE RUN-UP AREA FOR A RUN-UP. PILOT NOTICED PROPELLER CONTROL WAS VERY SENSITIVE AND COULD ONLY GET 1,900 RPM MAX FROM THE ENGINE. AFTER SHUTTING DOWN AND REMOVING ENGINE COWLING TO INVESTIGATE, MECHANIC NOTED THE PROPELLER GOVERNOR CABLE WAS CONNECTED TO THE PROPELLER GOVERNOR LEVER IN A HOLE THAT WOULD NOT ALLOW FULL TRAVEL. THE CABLE WAS DISCONNECTED AND RECONNECTED IN THE PROPER HOLE. ENGINE PERFORMED WITHOUT FURTHER TROUBLE. THIS AIRCRAFT HAD BEEN SIGNED OFF WITH A FRESH ANNUAL BY AN APPROPRIATELY RATED IA. THE CABLE WAS DISCONNECTED TO REPLACE THE CONNECTING BOLT. AIRCRAFT TOTAL TIME BEING 1,169.5 HOURS.

Air Transport (ATA) code: 6122 **PROPELLER GOVERNOR** **Name of part:** PROP GOVERNOR
Date: 06-JAN-97 **Aircraft Model Number:** 177RG **Part Number:** C290D3KT12
Details:
THE CESSNA SM AND LYC ENGINE OVERHAUL DO NOT CONTAIN THE REQUIREMENT TO USE A PROPELLER GOV PAD PLATE, PN LW-12347, WHEN INSTALLING A MCCAULEY GOVERNOR ON LYC 4 OR 6 CYLINDER ENGINE WITH REAR MOUNTED DUEL MAG INSTALLATIONS. THIS PLATE WAS LEFT OUT DURING REINSTALLATION OF THE ENGINE AND THE ACFT MADE A FORCED LANDING DUE TO LOSS OF ENGINE OIL THROUGH THE GOVERNOR ADAPTER PLATE SCREW.

Air Transport (ATA) code: 7160 **AIR INTAKE** **Name of part:** AIR FILTER
Date: 05-OCT-04 **Aircraft Model Number:** 177 **Part Number:** BA5710
Details:
DURING TROUBLESHOOTING FOR EXCESSIVE MAGNETO DROP, FOUND FACE OF AIR FILTER ELEMENT DETERIORATED. THE INSTALLATION IS FOR A BRACKETT FILTER. REMOVED ELEMENT AND FOUND THAT ELEMENT WAS AN UNAPPROVED PART. THE (FILTER) WAS HAND CUT FROM A PIECE OF GREEN FOAM .6250 INCH THICK. IT APPEARS THE FACE OF THE FOAM WAS PAINTED BLACK SO AS TO LOOK LIKE A GENUINE BRACKETT FILTER. HAD THE FILTER DETERIORATED, INGESTION IN THE CARBURETOR COULD HAVE CAUSED A LOSS OF ENGINE POWER WITH POTENTIAL FATAL RESULTS. THIS PRESENTS A SERIOUS SAFETY PROBLEM AND REPRESENTS A LACK OF REGARD FOR SAFETY. NO LOGBOOK ENTRY COULD BE FOUND FOR RECENT INSTALLATION OF FILTER. ANNUAL INSPECTION WAS SIGNED OFF IN AUGUST OF 2004.

Air Transport (ATA) code: 7160 **AIR INTAKE** **Name of part:** AIR FILTER
Date: 07-MAY-96 **Aircraft Model Number:** 177RG **Part Number:** AM107635FP
Details:
DURING ROUTINE OIL CHANGE, OBSERVED AIR INDUCTION FILTER 'LAYING' IN ENGINE BAFFLE. UPON FURTHER INVESTIGATION, FOUND BOTH MOUNTING BRACKETS HAD BROKEN/SHEARED FROM THE INDUCTION FILTER BODY. SUSPECT CAUSE, INADEQUATE METHOD OF ATTACHMENT OF BRACKETS TO FILTER BODY/ASSY. SUBMITTER STATED METHOD OF ATTACHMENT APPEARS TO BE 'SPOT WELDS'. PERHAPS RIVETING OF THE BRACKETS TO THE FILTER ASSY MAY BE MORE SUITABLE.

Air Transport (ATA) code: 7160 **AIR INTAKE** **Name of part:** AIR FILTER
Date: 14-JUN-95 **Aircraft Model Number:** 177B **Part Number:** AM107635FP
Details:
AIR FILTER WAS REMOVED DURING AN ANNUAL INSPECTION, ONE MOUNT TAB (WHICH WAS SPOT WELDED TO THE FRAME) WAS BROKEN OFF. ALSO, THE NEOPRENE GASKET WAS LOOSE AND SUCKING INTO THE INDUCTION SYSTEM.

Air Transport (ATA) code: 7160 **AIR INTAKE** **Name of part:** AIR FILTER
Date: 16-APR-97 **Aircraft Model Number:** 177RG **Part Number:** BA5710
Details:
AIR FILTER GASKET HAS TURNED TO MUSH FROM THE OIL THEY USE IN THE AIR FILTER, MAYBE A NEW TYPE OF GASKET IS CALLED FOR. PART HAS BEEN REPLACED.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 7160 **AIR INTAKE** **Name of part:** DOOR
Date: 05-JUL-02 **Aircraft Model Number:** 177RG **Part Number:**
Details:
ALTERNATE AIR DOOR CAME LOOSE FROM PLENUM CHAMBER. DOOR WENT INTO FUEL SERVO INLET, CAUSING ENGINE TO QUIT.

Air Transport (ATA) code: 7160 **AIR INTAKE** **Name of part:** SEAL
Date: 01-DEC-98 **Aircraft Model Number:** 177B **Part Number:** 17520789
Details:
THE RUBBER SEAL AROUND THE EDGE OF THE VALVE RIPPED AND LOOKED LIKE IT WOULD HAVE BEEN SUCKED INTO THE ENGINE IN A COUPLE OR MORE HOURS. SUBMITTER STATED THE RUBBER SEAL LOOKED LIKE IT WAS MADE FROM THE WRONG MATERIAL. TT ON PART, 8 HOURS.

Air Transport (ATA) code: 7160 **AIR INTAKE** **Name of part:** AIR DOOR
Date: 21-OCT-98 **Aircraft Model Number:** 177RG **Part Number:** 16500196
Details:
OWNER OF AIRCRAFT SAID FUEL FLOW WAS LOW. RAN UP, OPS CHECKED FUEL FLOW AT 14 PSI AT FULL POWER. INSPECTED ACFT AND FOUND TWO BOLTS MISSING FROM THROTTLE CABLE MOUNT ON BOTTOM OF ENGINE AND ALTERNATE AIR DOOR LAYING IN THE AIRBOX ASSY. INSTALLED TWO NEW BOLTS IN THROTTLE CABLE MOUNT AND INSTALLED NEW ALTERNATE AIR DOOR AND HINGE AND SPRING IN AIR BOX ASSY. (ACFT HAS 10 HRS FROM LAST ANNUAL INSPECTION). NEEDS INSPECTION OF AIR BOX ASSY AND ALTERNATE AIR DOOR ASSY (VISUALINSPECTION).

Air Transport (ATA) code: 7160 **AIR INTAKE** **Name of part:** AIR FILTER
Date: 05-JAN-04 **Aircraft Model Number:** 177B **Part Number:** AM107635FP
Details:
FACTORY NEW PART- SCREEN ATTACH TABS ARE BENT 90, AND SPOT WELDED ON TO SCREEN FRAME. WELDS DO NOT PENETRATE BASE MATERIAL. ATTACH TABS WORK LOOSE. HAVE FOUND THIS CONDITION 3 TIMES. SOME HAVE BEEN REPAIRED WITH SHEET METAL SCREWS. TABS SHOULD BE RIVETED ON OR, BETTER WELDS.

Air Transport (ATA) code: 7261 **OIL SYSTEM** **Name of part:** CONNECTOR
Date: 09-AUG-05 **Aircraft Model Number:** 177 **Part Number:** 69675
Details:
(CAN) OIL LEAK DISCOVERED. UPON LANDING, THE PILOT NOTICED THAT THERE WAS OIL IN THE WHEEL PAN. THE PILOT CARRIED OUT ONE MORE FLIGHT AND THE LEAK WAS REPAIRED AT A FACILITY. VERIFICATION REVEALED THAT THE CONNECTOR ASSEMBLY TO THE HSG COOLER INLET HOSE WAS CRACKED, AND ONCE IT WAS REMOVED, IT EMPTIED ALL ITS OIL. REPLACED THE CONNECTOR (P/N 69675) AND THE ANNULAR GASKET (P/N STD 294).

Air Transport (ATA) code: 7310 **FUEL DISTRIBUTION** **Name of part:** HOSE
Date: 03-JUL-97 **Aircraft Model Number:** 177B **Part Number:** 38B0100006D0210
Details:
DURING ANNUAL INSPECTION, FUEL WAS SHUT OFF FOR CLEANING CARBURETOR, DRAIN, AND GASULATOR. UPON TURNING FUEL ON, FUEL LEAKED FROM HOSE IN A STEADY STREAM. HOSE WAS LOCATED ON LOW PRESSURE SIDE FEEDING ENGINE DRIVEN PUMP. HOSE WAS ALSO IN A LOCATION WHERE IT WAS NOT AGITATED BY THE PREVENTATIVE MAINTENANCE. SUBMITTER STATED THIS IS THE SECOND DEUTSCH HOSE FAILURE ON THIS AIRCRAFT WITH LOW TIME.

Air Transport (ATA) code: 7310 **FUEL DISTRIBUTION** **Name of part:** HOSE
Date: 24-OCT-96 **Aircraft Model Number:** 177B **Part Number:** 60100030092
Details:
PILOT REPORTED A FUEL LEAK FROM THE ENGINE COMPARTMENT. FOUND THE FUEL PRESSURE HOSE LEAKING. THIS PROBLEM HAS BEEN ADDRESSED BY AEROQUIP SB AA135. THIS HOSE WAS DATED 2Q86. ALTERNATE P/N FROM CESSNA: S1236-3-0092.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 7310 **FUEL DISTRIBUTION** **Name of part:** HOSE
Date: 03-SEP-96 **Aircraft Model Number:** 177RG **Part Number:** S1236C30420
Details:
PILOT REPORTED A TOTAL DROP IN FUEL PRESSURE DURING CLIMB-OUT LANDING WITHOUT INCIDENT. UPON INSPECTION, FOUND FUEL PRESSURE HOSE FROM FIREWALL TO FLOW DIVIDER LEAKING PROFUSELY WHERE THE RE-USABLE SOCKET THREADS TO HOSE. THIS HOSE WAS PURCHASED FROM CESSNA ON 8-93 AND INSTALLED. THE METAL IDENTIFICATION BAND HAD AN ASSEMBLY DATE OF 4-85. RECOMMEND CESSNA REVIEW THEIR POLICY ON SHELF LIFE OF HOSES WHICH AT PRESENT IS CONTRARY TO THE HOSE MANUFACTURER. SUBMITTER STATED THIS SITUATION COULD HAVE BEEN CATASTROPHIC.

Air Transport (ATA) code: 7310 **FUEL DISTRIBUTION** **Name of part:** HOSE
Date: 25-OCT-96 **Aircraft Model Number:** 177 **Part Number:** 883410000600094
Details:
NOTICED FUEL STAIN ON STEEL BRAID HOSE. REMOVED AND TESTED. FOUND SEEP HOLE. NOTIFIED SUPPLIER AND SENT FOR FACTORY INSPECTION. (SEEP WAS DETECTABLE WITH SHOP AIR AND SOAPY WATER.)

Air Transport (ATA) code: 7314 **FUEL PUMP** **Name of part:** CAPACITOR
Date: 25-APR-05 **Aircraft Model Number:** 177RG **Part Number:** ES10382807
Details:
THE MAGNETO WAS OVERHAULED 70 HOURS AGO, THE CAPACITORS WERE SUPPLIED BY OVERHAULER. THE OVERHAUL WAS DONE AND CAPACITORS ARE FAA PMA'D.

Air Transport (ATA) code: 7322 **FUEL CONTROL/CARBURETOR** **Name of part:** CARBURETOR
Date: 28-JUN-05 **Aircraft Model Number:** 177 **Part Number:** 272
Details:
CUSTOMER REPORTS THAT ENGINE QUIT ON FINAL. ON THE GROUND PILOT WITNESSED GAS POURING OUT FROM BOTTOM OF COWL. (K)

Air Transport (ATA) code: 7322 **FUEL CONTROL/CARBURETOR** **Name of part:** FLOAT BRACKET
Date: 23-JAN-96 **Aircraft Model Number:** 177 **Part Number:** 13662
Details:
ENGINE LOST POWER IN CRUISE FLIGHT. AFTER SAFE LANDING AT NEARBY AIRPORT, REMOVED CARBURETOR AND DISASSEMBLED. FOUND FLOAT BRACKET BROKEN IN BEND RADIUS ALLOWING EXCESS FUEL TO ENTER CARBURETOR WHEN FLOAT VALVE COULD NOT SEAT. BEND RADIUS OF FLOAT BRACKET APPEARED TO BE 90 DEGREES. SUBMITTER STATED LARGER BEND RADIUS MIGHT PREVENT UNUSUAL STRESSES IN THE METAL REDUCING THE POSSIBILITY OF BREAKAGE.

Air Transport (ATA) code: 7322 **FUEL CONTROL/CARBURETOR** **Name of part:** CONTROL BOLT
Date: 26-JUN-95 **Aircraft Model Number:** 177 **Part Number:**
Details:
AT ABOUT 700 FEET ALTITUDE AFTER DEPARTURE, ENGINE WENT TO IDLE. AFTER A SUCCESSFUL OFF AIRPORT LANDING WAS MADE, BOLT AND HARDWARE CONNECTING THROTTLE CONTROL TO CARBURETOR WERE FOUND MISSING. INSTALLED NEW BOLT, NUT, SPACER, AND WASHERS. AIRCRAFT TOWED TO A ROAD AND WITH CHP PERMISSION, RETURNED TO AIRPORT. SUBMITTER STATED BOLT AND CASTELLATED NUT HAD PROBABLY BEEN OVERTORQUED. MAYBE MANY TIMES IN PAST. SUBMITTER SUGGESTS REPLACING AT OVERHAUL AND DO NOT OVERTORQUE.

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** GEAR
Date: 05-OCT-04 **Aircraft Model Number:** 177 **Part Number:** 10357586
Details:
LOST POWER ON TAKEOFF. VERIFIED PROBLEM OF LT MAGNETO INOPERATIVE. INSPECTED AND FOUND MAGNETO DISTRIBUTOR GEAR MISSING SEVERAL TEETH. GEAR WAS LOOSE ON SHAFT WHICH PROBABLY CONTRIBUTED TO BREAKAGE. SUSPECT CAUSE WAS LACK OF PROPER MAINTENANCE OVER LIFE OF MAGNETO. ANNUAL INSPECTION WAS SIGNED OFF IN AUGUST 2004.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** BUSHING
Date: 30-MAY-97 **Aircraft Model Number:** 177A **Part Number:** 1051659
Details:
ROUGH ENGINE, LEFT MAG DEAD ON RUN-UP. REMOVED LEFT MAG AND FOUND SHOULDERED MAGNETO DRIVESHAFT BUSHING WITH SHOULDER MISSING. UPON EXAMINATION OF BUSHING, DETERMINED IT WAS THE OLD STYLE, SINTERED IRON PN 10-51659. IT SHOULD HAVE HAD AMACHINED STEEL BUSHING PN 10-163049 INSTALLED. REF: TCM SB 556C OR AD 74-26-09.

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** IMPULSE SPRING
Date: 11-APR-96 **Aircraft Model Number:** 177RG **Part Number:** 1051324
Details:
(CAN)ON CLIMBOUT, ENGINE RPM DROPPED TO IDLE. EXAMINATION REVEALED THE DUAL MAGNETO IMPULSE SPRING BROKEN. AWD 78-09-07NOT COMPLIED WITH.

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** COIL
Date: 05-APR-95 **Aircraft Model Number:** 177 **Part Number:**
Details:
THE MAGNETO COIL CRACKED CAUSING MAG TO FAIL. THIS REPORT IS IN CONJUNCTION WITH AN ADDITIONAL REPORT ON THE SAME AIRPLANE AT THE SAME TIME A DUAL MAG FAILURE OCCURRED ON LANDING ROLL OUT. INSPECTIONS ON THE MAGNETOS DO NOT REQUIRE REMOVAL OF COIL TO SATISFY INPSECTION, BUT IT WOULD BE HIGHLY RECOMMENDABLE TO DO SO. SHOP HAS NOW FOUND 4 CRACKED SLICK COILS.

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** COIL
Date: 05-APR-95 **Aircraft Model Number:** 177 **Part Number:**
Details:
THE MAGNETO COIL CRACKED ITS OUTER CASING. THERE DID NOT SEEM TO BE ANY EVIDENCE OF ABUSE, BUT THE LEFT MAGNETO ON THESAME ENGINE FAILED BY CRACKING ALSO, AND, IT ONLY HAD 180 HOURS TIME IN SERVICE, AN ADDITIONAL MALFUNCTION AND DEFECT REPORT WILL BE FILED FOR IT. SUBMITTER RECOMMENDS ACTUALLY REMOVING COILS FROM THE MAGNETOS DURING ANY 100-HOUR OR ANNUALINSPECTION TO DETECT CRACKS ON THE BOTTOM OF THE COILS.

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** IMPULSE CAM
Date: 22-JUL-96 **Aircraft Model Number:** 177RG **Part Number:** 103493576
Details:
INSPECTED MAGNETO RIVETED CAM ASSY AND FOUND WORN BEYOND 'X' PLUS .014 INCH. SUBMITTER STATES THESE EARLY RIVETED UNITSSHOULD BE CHANGED OUT TO THE SNAP RING STYLE AT 500 HOURS. NEW STYLE FOR THIS APPLICATION IS 10-400167-9.

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** BEARING
Date: 16-NOV-98 **Aircraft Model Number:** 177 **Part Number:** 1081806
Details:
PILOT REPORTED NORMAL MAG CHECK PRIOR TO 10-MINUTE FLIGHT. AFTER LANDING NOTICED OIL DRIPPING FROM COWL. FOUND LT MAGNETO WITH LOWER MOUNTING EAR BROKEN OFF AND MAG PULLED AWAY FROM ACCESSORY CASE. THE MAGNETO CASE WAS GAPPED OPEN AND ONLY 2 SCREWS REMAINED HOLDING IT TOGETHER. REMOVED MOUNTING NUTS AND FOUND A SMALL PIECE BROKEN FROM UPPER MOUNTING EAR.LW12706 ADAPTER BROKEN IN SEVERAL PIECES AND LOWER MOUNTING STUD BENT. MAG DISSASSEMBLY FOUND DRIVE END BEARING DESTROYED, SHAFT BENT, AND DISTRIBUTOR GEAR BROKEN. ELECTROSYSTEMS BELIEVES BEARING FAILURE MAY HAVE BEEN INITIAL CAUSE OF FAILURE. COMPONENT P/N S4LN-2110-51360-37.

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** MAGNETO
Date: 26-NOV-02 **Aircraft Model Number:** 177RG **Part Number:** 1038255511
Details:
ON OCT 12, 2002 AT APPROX. 2030, AIRCRAFT WAS SUBSTANTIALLY DAMAGED WHILE EXECUTING AN ENGINE OUT, GEAR UP, FORCED LANDING, NEAR SOUTH VIENNA, OHIO. PILOT AND PASSENGER WERE SERIOUSLY INJURED. ACCORDING TO THE PILOT, HE WAS CRUISING AT 2500FT, WHEN HE NOTICED AN UNUSUAL ODOR AND SHORTLY AFTER THAT, THE ENGINE QUIT. AFTER ATTEMPT TO RESTART THE ENGINE, MADEA FORCED LANDING. AIRCRAFT TOUCHED DOWN HARD, BREAKING THE LT WING SPAR AND WRINKLING THE FUSELAGE, EMPENNAGE, FIREWALLAND DAMAGING THE PROPELLER. EXAMINATION BY AN FAA SAFETY INSPECTOR, REVEALED THAT THE MOUNTING HARDWARE FOR THE SINGLE MOUNTED, DUAL MAGNETO WAS MISSING AND THE MAGNETO HAD WORKED LOOSE AND WAS LAYING IN THE ACCESSORY SECTION.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** CONDENSER
Date: 11-JUL-00 **Aircraft Model Number:** 177B **Part Number:** ES10349276
Details:
THE AIRCRAFT MADE AN EMERGENCY LANDING IN A FIELD AFTER A LOSS OF ENGINE POWER. INSPECTION BY A MECHANIC REVEALED THE POINTS WERE BURNED AND THE CONDENSER WERE PART OF A NEWLY INSTALLED FACTORY REMANUFACTURED MAGNETO. THE POINTS AND CONDENSER WERE REPLACED, AND THE MAGNETO REINSTALLED AND RETURNED TO ENGINE. ENGINE PERFORMED SATISFACTORILY. (X)

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** GASKET
Date: 15-MAR-99 **Aircraft Model Number:** 177RG **Part Number:**
Details:
DURING 100-HOUR ANNUAL INSPECTION, MAGNETO TYPE BENDIX D2000 SERIES REMOVED FOR CONTACT BREAKER REPLACEMENT AND INTERNALTIMING CHECK. MAGNETO REFITTING WITH LYCOMING GASKET P/N 62224 INSTEAD OF LW-12681. THE MAGNETO BECAME LOOSE AND BACKED OFF FROM THE ENGINE DRIVE. THE ENGINE STOPPED IN-FLIGHT AND THE AIRCRAFT WAS FORCED TO LAND ON A NEARBY AIRFIELD. THERE WAS NO DAMAGE OR INJURY SUSTAINED TO AIRCRAFT OR PERSONNEL.

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** POINTS
Date: 02-AUG-99 **Aircraft Model Number:** 177B **Part Number:** 10382585
Details:
(CAN) ACCELERATED WEAR OF POINTS IN MAGNETO SUSPECTED BY OPERATOR.

Air Transport (ATA) code: 7414 **MAGNETO/DISTRIBUTOR** **Name of part:** MAGNETO
Date: 14-APR-03 **Aircraft Model Number:** 177B **Part Number:** ES1068255511
Details:
(CAN) MAGNETO FAILED ON LT PORTION (DUAL MAG) ON RUN UP. MAGNETO WAS REMOVED AND EXAMINED, BUT NO OBVIOUS DAMAGE OR FAILURE WAS EVIDENT. AS THE PART ONLY HAD 72.5 HOURS SINCE ENGINE WAS OVERHAULED. REPAIRED THE MAGNETO. WHEN I RECEIVED THE MAGNETO BACK AFTER REPAIR, I BENCH TESTED IT AND DISCOVERED THAT THE SPARK WAS WEAK AND NOT OCCURRING AT THE PROPER TIME. UPON FURTHER INVESTIGATION I DISCOVERED THAT THE MAGNETO ROTOR WAS NOT TIMED CORRECTLY TO THE DISTRIBUTOR GEARS. I RETIMED THE MAGNETO ROTOR TO THE DISTRIBUTOR GEARS, RETESTED ON THE BENCH AND NOW THE MAGNETO FUNCTIONS PROPERLY.

Air Transport (ATA) code: 7421 **SPARK PLUGS/IGNITERS** **Name of part:** SPARK PLUG
Date: 08-OCT-97 **Aircraft Model Number:** 177 **Part Number:** SR87
Details:
ENGINE RPM DROPPED TO APPROXIMATELY 2,000 RPM ON CLIMB-OUT. GROUND RUN-UP WAS NORMAL BEFORE AND AFTER FLIGHT AND DURING FIRST 200 FEET OF CLIMB OUT. INSPECTION OF INDUCTION, FUEL AND IGNITION SYSTEMS, REVEALED TWO AUBURN SR-87 AC PLUGS WITH BROKEN INSULATORS ON THE COMBUSTION END. EACH INSULATOR WAS IN TWO PIECES BROKEN LENGTHWISE WITH CENTER ELECTRODE. CAUSE OF BROKEN INSULATORS UNDETERMINED.

Air Transport (ATA) code: 7430 **SWITCHING** **Name of part:** SWITCH
Date: 19-MAR-96 **Aircraft Model Number:** 177RG **Part Number:** C12925010105
Details:
DURING PRE-BUY INSPECTION, FOUND IGNITION KEY COULD BE REMOVED FROM SWITCH IN ANY POSITION. DURING LOG BOOK REVIEW, FOUND SWITCH HAD BEEN MODIFIED PER AD 93-05-06 BY INSTALLING ACS/GERDES KIT A-3600. THIS MODIFICATION WAS DONE AT LAST ANNUAL (8/95) 58 HOURS PREVIOUSLY. THIS CREATED A HAZARDOUS SITUATION AS KEY COULD BE REMOVED WITH MAGS STILL HOT. SUSPECT CAUSE WAS HIGH TOTAL TIME. LACK OF PROPER MAINTENANCE/INSPECTION COULD HAVE CAUSED SERIOUS INJURY.

Air Transport (ATA) code: 7602 **MIXTURE CONTROL** **Name of part:** LEVER
Date: 25-JAN-01 **Aircraft Model Number:** 177B **Part Number:** S12345
Details:
MIXTURE CONTROL BROKE ON GROUND RUN UP. BREAK APPEARS TO BE DEFECT IN MATERIAL.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 7603 **POWER LEVER** **Name of part:** CABLE
Date: 09-FEB-00 **Aircraft Model Number:** 177B **Part Number:** 565549013
Details:
(CAN) DURING APPROACH ENGINE POWER INCREASED. PILOT COULD NOT CNTL ENGINE WITH THROTTLE CNTL AND CARRIED OUT A MISSED APPROACH. ON A SUBSEQUENT APPROACH AND LANDING, PILOT USED MIXTURE CNTL TO SHUT DOWN ENGINE PRIOR TO TOUCHDOWN. A/C HAD TO BE TOWED FROM RUNWAY. EXAMINATION OF THROTTLE CNTL FOUND THREADED END OF CNTL HAD SEPARATED FROM ROD END WHICH WAS STILL ATTACHED TO CARBURETOR THROTTLE ARM. SUBMITTER SUGGESTS THIS HAPPENED BECAUSE ROTATION OF CNTL KNOB ON THIS CABLE ASSY TRANSMITTED A ROTATIONAL FORCE TO OTHER END OF THE CNTL CABLE WHICH MAY HAVE LOOSENED JAM NUT AND ALLOWED CABLE END TO BACK OUT OF ROD END.

Air Transport (ATA) code: 7603 **POWER LEVER** **Name of part:** CONTROL CABLE
Date: 23-FEB-96 **Aircraft Model Number:** 177RG **Part Number:** C299500401
Details:
PILOT REDUCED POWER TO LAND WITH NO RESPONSE TO ENGINE. LANDED UNEVENTFULLY. THROTTLE CONTROL CABLE BROKEN.

Air Transport (ATA) code: 7603 **POWER LEVER** **Name of part:** CONTROL CABLE
Date: 13-JUL-95 **Aircraft Model Number:** 177 **Part Number:** S122219
Details:
DURING A SCHEDULED INSPECTION, FOUND THROTTLE CABLE BENT AND CRACKED AT THE BEND LOCATED AT THE THREADED END WHERE THE ROD END ATTACHES TO THE CABLE. IT APPEARED WHEN THE THROTTLE HIT ITS STOP, THE THROTTLE CABLE CONTINUED TO BE PUSHED. THE CABLE HAD TO BE REPLACED WHICH IS VERY COSTLY.

Air Transport (ATA) code: 7810 **COLLECTOR/NOZZLE** **Name of part:** SHROUD
Date: 16-JUN-03 **Aircraft Model Number:** 177B **Part Number:** 17500115
Details:
THE SCREEN THAT KEEPS FOREIGN MATERIAL FROM ENTERING CARBURETOR WHEN CARB HEAT IS ON. SPOT WELDS THAT HOLD SCREEN IN PLACE ARE COMING LOOSE AND LETTING SCREEN VIBRATE AND COME APART. THIS WOULD LET PIECES OF THE SCREEN GO INTO ENGINE WHEN CARB HEAT IS ON.

Air Transport (ATA) code: 7810 **COLLECTOR/NOZZLE** **Name of part:** STACK
Date: 18-JUL-96 **Aircraft Model Number:** 177B **Part Number:**
Details:
EXIT STACK OF MUFFLER SEPARATED FROM THE MUFFLER. APPEARS WELDS MAY NOT HAVE BEEN 'NORMALIZED' CAUSING A BRITTLE AREA AROUND THE WELD. THIS WAS AN FAA/PMA PART. ENGINE SHOWED NO SIGNS OF VIBRATION. EXHAUST EXITED THE MUFFLER INTO COWLING, GASCOLATOR, AND CARBURETOR AREA.

Air Transport (ATA) code: 7810 **COLLECTOR/NOZZLE** **Name of part:** MUFFLER
Date: 15-JUL-96 **Aircraft Model Number:** 177B **Part Number:**
Details:
EXIT STACK OF MUFFLER SEPARATED FROM THE MUFFLER. SUBMITTER STATED APPEARS WELDS MAY NOT HAVE BEEN 'NORMALIZED' CAUSING A BRITTLE AREA AROUND THE WELD. THIS WAS AN FAA/PMA PART. ENGINE SHOWED NO SIGNS OF VIBRATION. EXHAUST EXITED THE MUFFLER INTO COWLING, GASCOLATOR, AND CARBURETOR AREA.

Air Transport (ATA) code: 7910 **OIL STORAGE (AIRFRAME FURNISH)** **Name of part:** TUBE
Date: 07-JUN-99 **Aircraft Model Number:** 177RG **Part Number:** 20500111
Details:
AFTER 15 MINUTES FLIGHT TIME OF 1ST FLT AFTER ANNUAL, PILOT NOTICED PROP OVERSPEEDING AND ENG OIL PRESS DROPPING TO ZERO. PILOT ACCOMPLISHED SUCCESSFUL PARTIAL POWER, DOWNWIND, EMERG LANDING. ENG STOPPED WHEN ACFT HAD CLEARED RUNWAY. ENG COMPT AND BELLY COVERED WITH OIL, NO OIL SHOWED ON THE DIPSTICK. NO LEAKS FOUND. DRAIN VALVE FUNCTIONED PROPERLY. WHILE CHECKING OIL QUICK DRAIN, NOTED ATTACHED OIL DRAIN TUBE, PN 2050011-1, HAD A DENT ON LOWER END AND THE NOSE GEAR TRUNNION HAD FRESHLY CHIPPED PAINT ON UPPER LT PORTION. OIL DRAIN TUBE BECAME LOOSE UNDER VIBRATION AND AIR LOAD, FOULED NOSE GEAR TRUNNION. WITH NOSE GEAR FULLY RETRACTED, OIL QUICK DRAIN FORCED OPEN ALLOWING ALL OIL TO VENT OVERBOARD.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 7920 **ENG OIL DIST (AIRFRAME FURN)** **Name of part:** HOSE
Date: 26-SEP-95 **Aircraft Model Number:** 177B **Part Number:**
Details:
DURING ANNUAL INSPECTION, FOUND ALL FUEL AND OIL HOSES IN ENGINE COMPARTMENT TO BE ORIGINAL - 18 YEARS OLD. SUBMITTER SUGGESTS THE MECHANICS AND I.A.'S IN THE FIELD NEED MANDATORY TIME CHANGE REQUIREMENTS FOR FLEXIBLE HOSES.

Air Transport (ATA) code: 7921 **COOLER** **Name of part:** COOLER
Date: 08-APR-97 **Aircraft Model Number:** 177RG **Part Number:** 8406J
Details:
AIRCRAFT WAS IN DOWN WIND FOR LANDING WHEN STUDENT NOTICED 'WET' GEAR LEG AND WHEEL. UPON EXAMINATION, FOUND OIL COOLERSUFFERED INTERNAL FAILURE, LOSS OF SUBSTANTIAL OIL. SUBMITTER STATED ENGINE FAILURE WOULD HAVE BEEN IMMINANT. OUTSIDETEMP 58 DEGREES.

Air Transport (ATA) code: 7921 **COOLER** **Name of part:** COOLER
Date: 11-APR-96 **Aircraft Model Number:** 177RG **Part Number:** 8406E
Details:
OIL COOLER WAS REMOVED DUE TO LEAKING. THERE WAS NO APPARENT REASON FOR THE LEAK SUCH AS EXTERNAL DAMAGE.

Air Transport (ATA) code: 7922 **TEMPERATURE REGULATOR** **Name of part:** VALVE
Date: 17-OCT-97 **Aircraft Model Number:** 177RG **Part Number:** 75944
Details:
(AUS) ENGINE OIL COOLER BYPASS VALVE (VERNATHERM) FACE BADLY SCORED FROM CONTACT WITH VALVE SEAT WHICH WAS ALSO DAMAGED.FOUND DURING INSPECTION IAW AD/LYC/78 AMDT5 WHICH WAS OVERDUE BY SEVERAL HUNDRED HOURS. PERSONNAL/MAINTENANCE ERROR.

Air Transport (ATA) code: 7922 **TEMPERATURE REGULATOR** **Name of part:** VALVE
Date: 06-JUN-95 **Aircraft Model Number:** 177B **Part Number:** 75944
Details:
C/W SB 518C (LYC) CHECKED VERNATHERM NUT, FOUND LOOSE, NOT CRIMPED CORRECTLY. NEW PART ON ORDER. PREVIOUSLY FOUND 3 OTHER AIRCRAFT OUT OF 5 AIRCRAFT CHECKED WITH VERNATHERM NUTS LOOSE, AND THEY WERE REPLACED WITH NEW VERNATHERM VALVES AFTER INSPECTION TO C/W SB 518B.

Air Transport (ATA) code: 7922 **TEMPERATURE REGULATOR** **Name of part:** VALVE
Date: 09-MAY-95 **Aircraft Model Number:** 177B **Part Number:** 75944
Details:
DURING AN OIL CHANGE, THE THERMOSTATIC BYPASS VALVE WAS REMOVED FROM INSPECTION PER LYCOMING MANDATORY SB 518A. THE CRIMP NUT ON VALVE WAS FOUND LOOSE AND VALVE SEAT WORN. WHILE INSPECTING A BEECH SPORT, PIPER CHEROKEE 180 AND AN ENSTORM280F HELICOPTER, IT WAS FOUND THEIR VALVES HAD LOOSE CRIMP NUT AND WORN VALVE SEAT. THE DEFECTIVE VALVES WERE ALL REPLACED WITH SUPERIOR AIR PARTS SL 53E19600 WHICH HAS DRILLED NUT AND ROLL PIN.

Air Transport (ATA) code: 7922 **TEMPERATURE REGULATOR** **Name of part:** VALVE
Date: 04-MAY-95 **Aircraft Model Number:** 177B **Part Number:** 53E19600
Details:
PER AIRCRAFT ANNUAL INSPECTION, CHECKED THERMOSTATIC VALVE CONDITION. FOUND THE SERIAL NUMBER OF THIS VALVE IS NOT SUBJECT TO INITIAL INSPECTION, BUT FOUND THIS THERMOSTATIC VALVE TO HAVE A LOOSE CRIMP NUT. ALL THERMOSTATIC VALVES NEED TOBE CHECKED OR A NEW DESIGN OF SAFETING CRIMP NUTS.

Air Transport (ATA) code: 7922 **TEMPERATURE REGULATOR** **Name of part:** VALVE
Date: 06-APR-95 **Aircraft Model Number:** 177RG **Part Number:** 53E19600
Details:
DURING COMPLIANCE WITH LYCOMING SB 518A DATED 2-3-95, THE CRIMP NUT ON THE THERMOSTATIC BYPASS VALVE WAS FOUND MISSING.



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Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 8010 **CRANKING** **Name of part:** DIODE
Date: 11-AUG-98 **Aircraft Model Number:** 177RG **Part Number:** 07707192
Details:
AUXILIARY POWER WAS PLUGGED IN AND PROPELLER STARTED SPINNING. FOUND DIODE ON BUSS RELAY SHORTED.

Air Transport (ATA) code: 8500 **ENGINE (RECIPROCATING)** **Name of part:** ENGINE
Date: 11-NOV-98 **Aircraft Model Number:** 177RG **Part Number:** 61510
Details:
MISISNG OIL RESTRICTOR ORFICE AND LOW OIL PRESSURE. FACTORY OVERHAULED ENGINE FROM AVCO-LYCOMING WOULD NOT MAKE PROPEROIL PRESSURE AFTER INSTALLATION. PROPELLER WOULD NOT RESPOND TO PITCH CHANGES. AFTER SENDING PROPELLER AND GOVERNOR TOPROP SHOP, DISCOVERED THE OIL RESTRICTOR ORFICE WAS NOT INSTALLED IN THE NEW REPLACEMENT ENGINE. AFTER THE PLUG WAS INSTALLED, THE OIL PRESSURE WAS RED LINED AND WOULD NOT COME DOWN. HAD WRONG OIL PRESSURE REGULATOR SPRING INSTALLED ALSO. ONE FOR FIXED PITCH PROP ENGINE. SUBMITTER RECOMMENDED COMPARING NEW ENGINE TO OLD ENGINE BEFORE INSTALLATION.

Air Transport (ATA) code: 8520 **ENGINE POWER SECTION** **Name of part:** BEARING
Date: 17-SEP-03 **Aircraft Model Number:** 177RG **Part Number:** SL13212A
Details:
NR 2 CYLINDER CONNECTING ROD FAILED AT THE CRANKSHAFT DUE TO OIL STARVATION AOF THE CONNECTING ROD BEARING. POSSIBLE OIL QUICK DRAIN VALVE OPENED IN FLIGHT AND DEPLETED ENGINE OIL SUPPLY.

Air Transport (ATA) code: 8520 **ENGINE POWER SECTION** **Name of part:** SHAFT
Date: 26-JAN-01 **Aircraft Model Number:** 177A **Part Number:** SL13790A
Details:
ROUGH GRIND FINISH CAUSED ALMOST ALL 8 ROCKER ARM BUSHINGS TO WEAR AND CONTAMINATE OIL WITH BRASS, METAL PARTICLES. BUSHINGS AND ROCKER SHAFTS WERE DEFECTIVE FROM WEAR AND WERE REPLACED.

Air Transport (ATA) code: 8520 **ENGINE POWER SECTION** **Name of part:** CAMSHAFT
Date: 04-SEP-98 **Aircraft Model Number:** 177RG **Part Number:** SL18840
Details:
(CAN) THE ENGINE WAS REMOVED DUE TO METAL CONTAMINATION IN THE OIL. DURING DISASSEMBLY OF THE ENGINE, PREMATURE WEAR WAS NOTICED OF THE LIFTER BODY FACE AND OF THE INTAKE AND EXHAUST VALVES OF NR 1 CYLINDER; OF THE INTAKE VALVE OF NR 3 CYLINDER IN THE FORM OF SPALLING AND GALLING AND OF THE AFFECTED CAMSHAFT LOBES. THE FOUR PISTONS HAD SCRATCHES AND MANY METAL PARTICLES IMPREGNATED IN THE PISTON FACE. ALL DEFECTIVE PARTS WERE REPLACED AND THE ENGINE WAS REPAIRED.

Air Transport (ATA) code: 8520 **ENGINE POWER SECTION** **Name of part:** CRANKCASE
Date: 10-APR-98 **Aircraft Model Number:** 177RG **Part Number:** 11B200511DL
Details:
DISCOVERED 5.50 INCH LONG CRACK ON CRANKCASE BELOW NR 2 CYLINDER FLANGE. CRACK WAS APPROXIMATELY 1 INCH BELOW BOTTOM FLANGE OF CYLINDER AND FOLLOWED ENTIRE BOTTOM CIRCUMFERENCE OF CYLINDER. CRACK WAS DISCOVERED AFTER PILOT REPORT OF A LARGE OIL LEAK FROM FORWARD LEFT SIDE OF COWLING AND STREAKING UNDER AIRCRAFT BELLY.

Air Transport (ATA) code: 8520 **ENGINE POWER SECTION** **Name of part:** CRACKCASE
Date: 11-JUL-96 **Aircraft Model Number:** 177B **Part Number:** LW12372
Details:
(CAN) CRACK DETECTED VISUALLY ON CRANKCASE AT UPPER LEFT HAND FORWARD OF #2 CYLINDER MOUNT STUD. NO OIL LEAK WAS EVIDENT, HOWEVER THE CRACK APPEARED TO ORIGINATE IN THE AREA OF A PREVIOUS WELDED REPAIR.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 8530 **ENGINE CYLINDER SECTION** **Name of part:** VALVE
Date: 01-JUN-03 **Aircraft Model Number:** 177RG **Part Number:**
Details:
(CAN) PILOT REPORTED HEARING A BANG DURING CLIMB, FOLLOWING BY PARTIAL POWER LOSS AND VIBRATION WAS FELT. AN EMERGENCY WAS DECLARED AND AIRCRAFT RETURN FOR AN UNEVENTFUL LANDING. INITIAL INVESTIGATION REVEALED NR 3 CYLINDER HAS A VALVE HEAD SEPARATED AND IS STICKING OUT OF BOTTOM SPARK PLUG HOLE AREA. FURTHER DETAIL WILL BE SUBMITTED UPON ENGINE TEARDOWN.

Air Transport (ATA) code: 8530 **ENGINE CYLINDER SECTION** **Name of part:** CYLINDER
Date: 30-OCT-00 **Aircraft Model Number:** 177B **Part Number:** SL3600WA20P
Details:
THE PUSH ROD TUBE RETAINER CLIPS, PN SL14995, IN NR 2, NR 3, AND NR 4 VALVE COVERS WERE BROKEN OFF AT THE BOLT HEADS. DETECTION WAS DUE TO A DENT IN THE VALVE COVER OF NR 2 CYLINDER. SUBMITTER STATED IT APPEARED TO BE A MATERIAL DEFECT.(X)

Air Transport (ATA) code: 8530 **ENGINE CYLINDER SECTION** **Name of part:** CYLINDER
Date: 30-OCT-00 **Aircraft Model Number:** 177B **Part Number:** SL3600WR20P
Details:
THE PUSH ROD TUBE RETAINER CLIPS, PN SL14995, IN NR 2, NR 3, AND NR 4 VALVE COVERS WERE BROKEN OFF AT THE BOLT HEADS. DETECTION WAS DUE TO A DENT IN THE VALVE COVER OF NR 2 CYLINDER. SUBMITTER STATED IT APPEARED TO BE A MATERIAL DEFECT.(X)

Air Transport (ATA) code: 8530 **ENGINE CYLINDER SECTION** **Name of part:** CYLINDER
Date: 30-OCT-00 **Aircraft Model Number:** 177B **Part Number:** SL3600WA20P
Details:
THE PUSH ROD TUBE RETAINER CLIPS, SL 14995, IN NR 2, NR 3, AND NR 4 VALVE COVERS WERE BROKEN OFF AT THE BOLT HEADS. DETECTION WAS DUE TO A DENT IN THE VALVE COVER OF NR 2 CYLINDER. SUBMITTER STATED IT APPEARED TO BE A MATERIAL DEFECT. (X)

Air Transport (ATA) code: 8530 **ENGINE CYLINDER SECTION** **Name of part:** CYLINDER
Date: 11-JUN-99 **Aircraft Model Number:** 177B **Part Number:**
Details:
NR 2 CYLINDER DEVELOPED AN OIL LEAK DIAGNOSED AS A CRACK THROUGH THE CYLINDER CASTING IN THE AREA OF THE INTAKE VALVE SEAT. UPON REMOVING THE CYLINDER FOR EXCHANGE UNDER WARRANTY, THE EXHAUST AND INTAKE ROCKER ARMS WERE DISCOVERED SWAPPED AS DELIVERED FROM THE FACTORY. THE OTHER 3 CYLINDERS WERE CHECKED, AND THE ROCKER ARMS WERE IN THE CORRECT PLACES ON THOSE CYLINDERS.

Air Transport (ATA) code: 8530 **ENGINE CYLINDER SECTION** **Name of part:** HEAD
Date: 26-AUG-98 **Aircraft Model Number:** 177RG **Part Number:** LW12993
Details:
PILOT REPORTED FAILURE OCCURRED AFTER TAKEOFF WHILE TURNING DOWN WIND AT 1,100 FEET AGL. A LOUD BANG HEARD FROM THE ENGINE WITH SMOKE AND OIL COVERING W/S FOLLOWED BY A LOSS IN OIL PRESSURE. ENGINE SHUT DOWN, UNEVENTFUL DEAD STICK LANDING MADE. INVESTIGATION REVEALED A HOLE IN THE COWLING AND ACFT COVERED WITH OIL FROM ENGINE. REMOVED TOP COWLING TO FIND NR 1 CYL HEAD SEPARATED FROM CYL BARREL. ENGINE HAS 894.0 HRS SMOH WITH CERMICROME CYL. A COMP TEST, 20 HRS BEFORE FAILURE OCCURRED, WAS 72/80. NO INDICATION OF LEAKAGE; CYL HEAD APPEARED CRACKED ABOUT HALF-WAY AROUND CYL BARREL FOR SOME TIME. FAILURE OCCURRED WHERE CYL HEAD THREADS ON TO BARREL. RECOMMEND FAA INVESTIGATE. SUSPECT CAUSE TO BE MFG OR CYL O/H PROCESS.

Air Transport (ATA) code: 8530 **ENGINE CYLINDER SECTION** **Name of part:** CYLINDER
Date: 26-AUG-98 **Aircraft Model Number:** 177RG **Part Number:** LW12993
Details:
PILOT REPORTED FAILURE OCCURRED AFTER TAKEOFF WHILE TURNING DOWN WIND AT 1,100 FEET AGL. A LOUD BANG WAS HEARD FROM THE ENGINE WITH SMOKE AND OIL COVERING WINDSHIELD FOLLOWED BY A LOSS IN OIL PRESSURE. ENGINE SHUT DOWN AND UNEVENTFUL DEAD STICK LANDING MADE. INVESTIGATION REVEALED A HOLE IN THE COWLING AND ACFT COVERED WITH OIL FROM ENGINE. REMOVED TOP COWLING TO FIND NR 1 CYL HEAD SEPARATED FROM CYL BARREL. ENGINE HAS 894.0 HRS SINCE MAJOR O/H WITH CERMICROME CYLINDERS. A COMPRESSION TEST 20 HRS BEFORE FAILURE OCCURRED WAS 72/80. THERE WAS NO INDICATION OF LEAKAGE FROM CYL. HOWEVER, CYL HEAD APPEARED CRACKED ABOUT HALF WAY AROUND CYL BARREL FOR SOME TIME. FAILURE OCCURRED WHERE CYL HEAD TREADS ONTO THE BARREL.



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Service Difficulty Report

Aircraft Series Detail

Aircraft manufacturer's name: CESSNA **Aircraft manufacturer's series number:** 177

Air Transport (ATA) code: 8530 **ENGINE CYLINDER SECTION** **Name of part:** CAP VALVE STEM
Date: 26-SEP-96 **Aircraft Model Number:** 177RG **Part Number:** 62388
Details:
(CAN) ENGINE WAS OVERHAULED 15 AUGUST 1994. ANNUAL 100 HOUR INSPECTION JULY 1995 FOUND #1 CYLINDER COMPRESSION LOW (50 PSI), CYLINDER WAS REMOVED, REPAIRED AND REINSTALLED UNDER WARRANTY BY OVERHAULER. NEXT 103.3 HOUR ANNUAL INSPECTION FOUND FOUR (4) ROCKER BOX COVERS LEAKING, #1 CYLINDER INTAKE CAP VALVE STEM MISSING AND METAL CONTAMINATION IN THE OIL FILTER.

Air Transport (ATA) code: 8530 **ENGINE CYLINDER SECTION** **Name of part:** ROCKER SHAFT
Date: 17-JUL-95 **Aircraft Model Number:** 177 **Part Number:** 60401
Details:
DURING THE CHANGING OF THE PUSHROD HOUSING TUBE SEALS WHICH INVOLVES REMOVING THE ROCKER BOXES, FOUND THE VALVE ROCKER SHAFT ON THE EXHAUST SIDE OF CYLINDER NR 3 CRACKED ABOUT ONE-HALF THE WAY AROUND AND .25 INCH FROM THE END.

Air Transport (ATA) code: 8550 **ENGINE OIL SYSTEM** **Name of part:** ENGINE
Date: 06-JUL-99 **Aircraft Model Number:** 177RG **Part Number:**
Details:
APPROXIMATELY ONE HOUR OPERATION AFTER COMING OUT OF MAINTENANCE WHICH INCLUDED OIL AND OIL FILTER CHANGE AND REINSTALLING AN OVERHAULED PROP AND PROP GOVERNOR, THE ENGINE OIL PRESSURE DROPPED, ENGINE OIL PRESSURE DROPPED, ENGINE OIL EXITED, AND THE ENGINE SEIZED. CAUSE UNKNOWN.

Air Transport (ATA) code: 8550 **ENGINE OIL SYSTEM** **Name of part:** TUBE DRAIN
Date: 23-AUG-96 **Aircraft Model Number:** 177RG **Part Number:** LW11847
Details:
(CAN) OIL LEAK WAS NOTED ON #2 CYLINDER ON INSPECTION. FLARE ON OIL RETURN TUBE FOUND TO BE CRACKED APPROXIMATELY 2/3 AROUND ITS CIRCUMFERENCE.

Air Transport (ATA) code: 8550 **ENGINE OIL SYSTEM** **Name of part:** ELBOW
Date: 07-FEB-96 **Aircraft Model Number:** 177RG **Part Number:** MS208234D
Details:
(CAN) SLIGHT OIL LEAK NOTED AT #1 CYLINDER. FOUND OIL RETURN FITTING ON CYLINDER HEAD CRACKED AROUND 90 PERCENT OF THE CIRCUMFERENCE AT PIPE THREADS FLUSH WITH BOSS.
