



U.S. Department
of Transportation

**Federal Aviation
Administration**

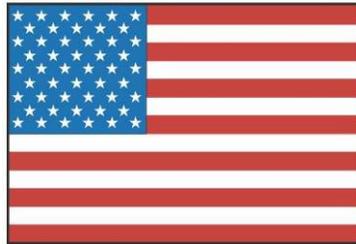
AFS-600

Regulatory Support Division

ADVISORY CIRCULAR

43-16A

AVIATION MAINTENANCE ALERTS



**ALERT
NUMBER
400**



**NOVEMBER
2011**

CONTENTS

AIRPLANES

BEECHCRAFT.....	1
CESSNA	4
ZENAIR.....	9

HELICOPTERS

EUROCOPTER	13
------------------	----

POWERPLANTS

LYCOMING.....	16
---------------	----

ACCESSORIES

TCM MAGNETO.....	21
------------------	----

AIR NOTES

INTERNET SERVICE DIFFICULTY REPORTING (iSDR) WEB SITE.....	22
IF YOU WANT TO CONTACT US	24
AVIATION SERVICE DIFFICULTY REPORTS	24

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

AVIATION MAINTENANCE ALERTS

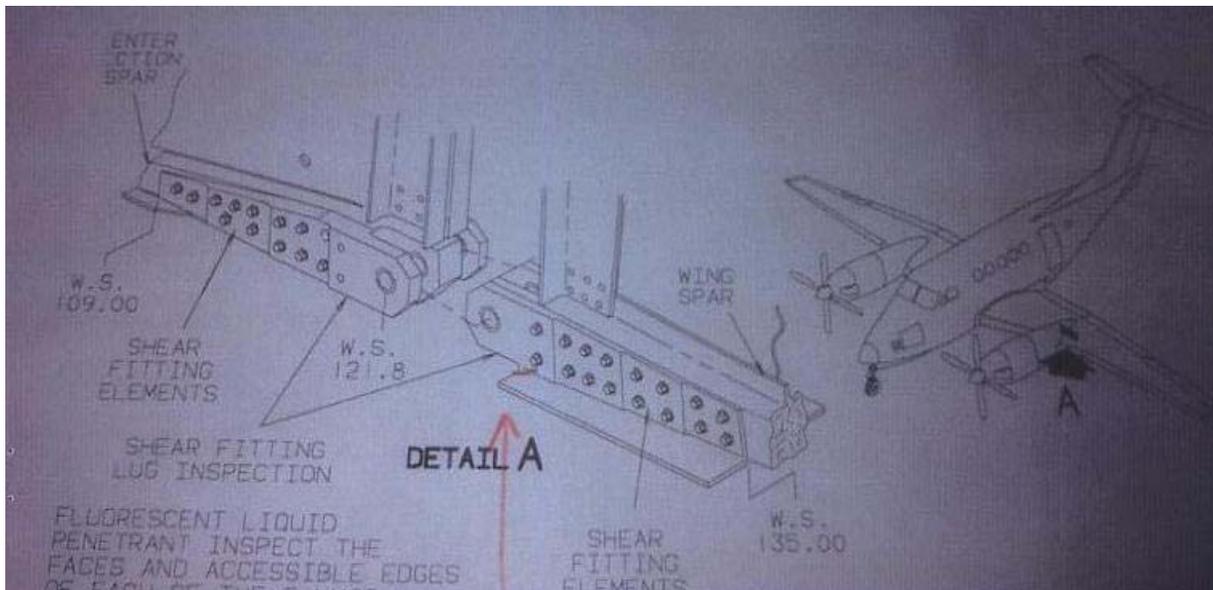
The Aviation Maintenance Alerts provides the aviation community with an economical means to exchange service experiences and to assist the FAA in improving aeronautical product durability, reliability, and safety. We prepare this publication from information operators and maintenance personnel who maintain civil aeronautical products pertaining to significant events or items of interest. At the time we prepared this document, we have not fully evaluated the material. As we identify additional facts such as cause and corrective action, we may publish additional data in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported to the FAA Service Difficulty Reporting System (SDRS). We welcome your participation, comments, and suggestions for improvement. Send to: FAA; ATTN: Aviation Data Systems Branch (AFS-620); P.O. Box 25082; Oklahoma City, OK 73125-5029.

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

AIRPLANES

Beechcraft: 200; Cracked Spar Attach Fitting; ATA 5740

A general aviation submitter states, "While accomplishing a wing bolt inspection, the L/H lower wing spar attach shear fitting was found cracked (P/N 1011100731). This crack is approximately 0.75 inches long—located in the forward flange area."







Part Total Time: 13,141.0 hours

Cessna: Cracked Main Landing Gear Casting; ATA 5343

"The (*main landing gear attach*) casting crack was found by visual inspection," says the repair station technician. "The crack is located on the forward end of the support casting, and (*starts*) 0.25 inches from the mount holes on the outboard side (*and extends*) to within 0.25 inches of the mount holes on the inboard side of the casting (*P/N 07416031*)."



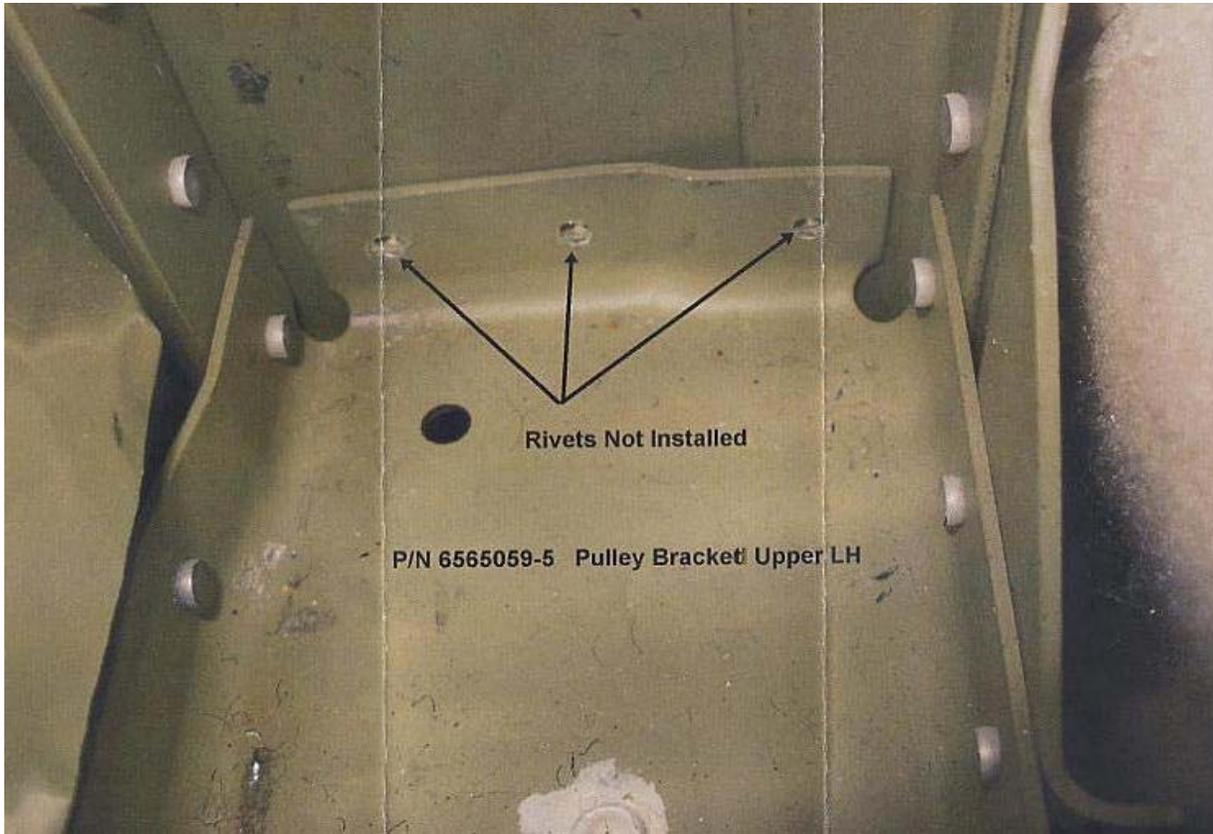
(No part numbers were provided with this report—Ed.)

Part Total Time: 2,690 hours

Cessna: 560; Flap Pulley Brackets Missing Rivets; ATA 5320

A repair station mechanic states, "Three each rivets were found missing from the upper and lower flap interconnect pulley brackets (P/N's 6565059-5 and 6565059-3) at fuselage station 354.00. *(These)* rivets were found missing while performing an under-floor inspection—presumably omitted during production."





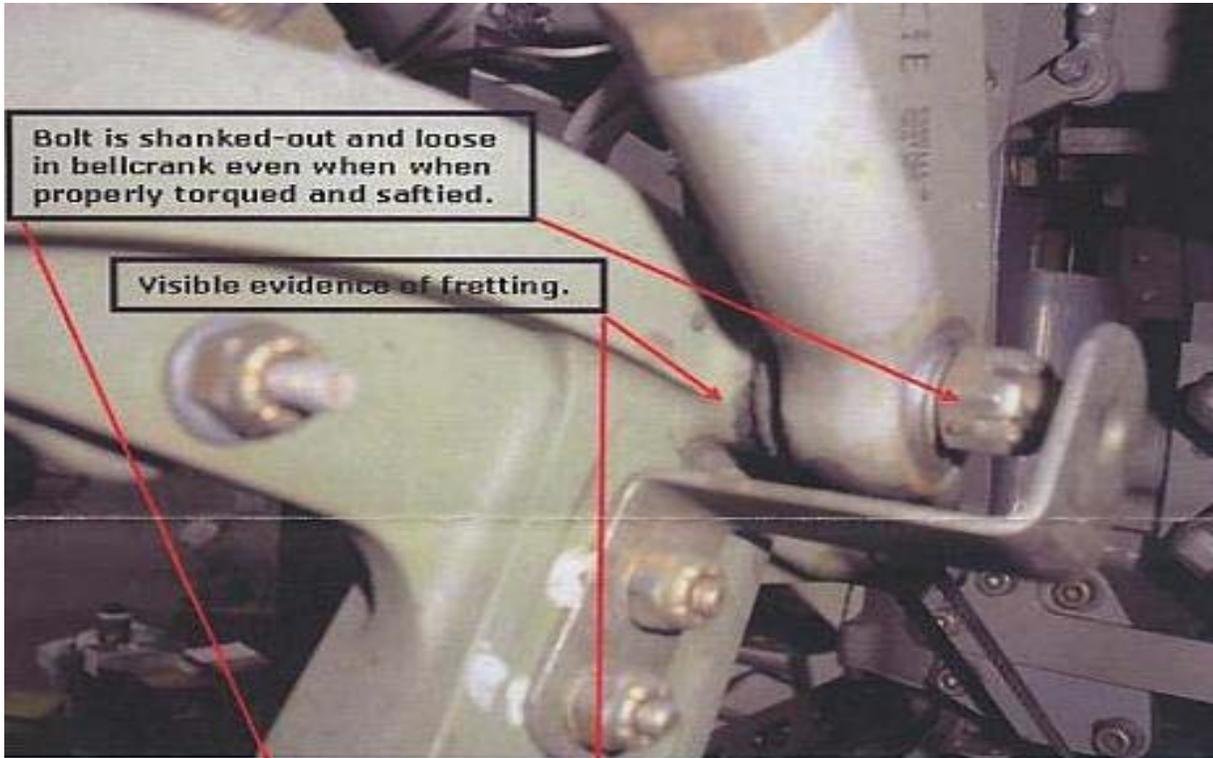


Part Total Time: 2,001.3 hours

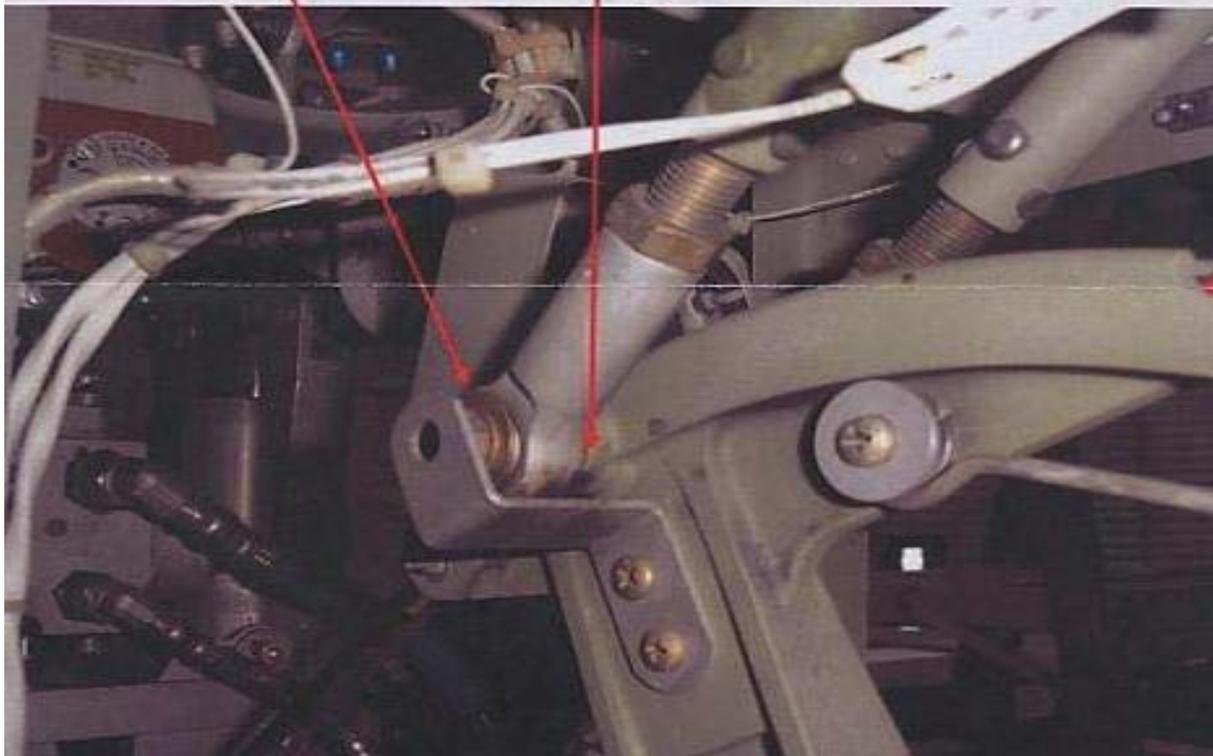
Cessna: 560XLS; Loose Elevator Push-pull Tubes; ATA 2730

"(Note: *the location of this defect...*) is the rear of the aircraft in the compartment below the horizontal stabilizer attach point," says this repair station technician. "Two push-pull tubes that attach to the aft elevator bell crank (*have nuts*) that shank-out on the bolt. This allows the bolts to be rotated by hand, causing wear in the bell crank attach hole." "(Now) the bolt begins to rock back and forth in the hole, resulting in chafing between the attached parts.

"Recommendation: When installing hardware, assure the nut does not shank-out on the bolt. Replace the bolt if worn, and add washers as required to prevent the nut from (*bottoming on the bolt's shank*)."

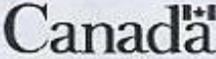


Cessna 560XL SN 560-5805 @ 2347.0 Hrs TT LND 1802



Part Total Time: 2,347.0 hours

Zenair: CH2000 (series); Nose Landing Gear Cracks; ATA (N/A)*(Transport Canada provides the following Safety Alert.)*

 Transport Canada Transports Canada		Document No. /Document n° : CASA 2011-04 Date : 2011-09-02 Page : 1 of/de 4
CIVIL AVIATION SAFETY ALERT		ALERTE À LA SÉCURITÉ DE L'AVIATION CIVILE
ATTENTION: OWNERS AND MAINTAINERS OF ZENAIR CH2000 SERIES AEROPLANES		À L'ATTENTION DE : PROPRIÉTAIRES ET SPÉCIALISTES DE LA MAINTENANCE DES AÉRONEFS ZENAIR DE LA SERIE CH2000
ZENAIR CH2000 NOSE LANDING GEAR WELD CRACKING		FISSURAGE D'UNE SOUDURE DU TRAIN AVANT DU ZENAIR CH2000
PURPOSE: This CASA is issued to inform owners and maintainers of the CH2000 series aeroplanes of a potential unsafe condition regarding the cracking of the Nose Landing Gear (NLG) weld.		OBJET : La présente ASAC est publiée pour informer les propriétaires et les spécialistes de la maintenance des aéronefs Zenair de la série CH2000 au sujet d'une situation potentiellement dangereuse à l'égard de fissurage d'une soudure du train avant.
BACKGROUND: The Federal Aviation Administration (FAA) informed Transport Canada Civil Aviation (TCCA) of a NLG weld failure and crack findings of another NLG weld of a CH2000 aeroplane. The incident report states that the first landing by a flight instructor and student was smooth and uneventful. While the second landing was also smooth, when the nose touched down, the instructor noticed the nose gear fork exit on the left side of the aeroplane and shot past the nose of the aeroplane. The remaining nose gear leg contacted the runway surface and supported the nose but the reduced clearance allowed the propeller blades to contact the runway. Inspection of the aeroplane showed that the plate welded onto the bottom of the nose gear leg (Photo 1) failed, causing the nose gear fork to separate from the nose gear leg.		CONTEXTE : La Federal Aviation Administration (FAA) a fait part à Transports Canada, Aviation civile (TCAC) de la défaillance d'une soudure et de la présence de fissures sur une autre soudure du train avant d'un CH2000. Le rapport d'incident stipule que le premier atterrissage effectué par un instructeur de vol et son élève s'est fait en douceur et sans encombre. Bien que le deuxième atterrissage a été fait également en douceur, au moment où le nez de l'aéronef se posait au sol, l'instructeur a vu la fourche du train avant filer du côté gauche de l'aéronef et se diriger au-delà du nez de l'appareil. La partie restante de la jambe du train avant a touché la surface de la piste et a continué à supporter le nez, mais la garde au sol étant devenue insuffisante, a permis les pales de l'hélice à heurté la piste. L'inspection de l'aéronef a révélé que la plaque soudée à la base de la jambe du train avant (photo 1) avait cédé, entraînant la séparation de la fourche par rapport au reste de la jambe du train avant.
- RDIMS Document number / Numéro du document du SGDDI : 4965407		
- File Classification Number / Numéro du dossier de classification : Z 5000-35 <small>(For internal use only - Pour usage interne seulement)</small>		

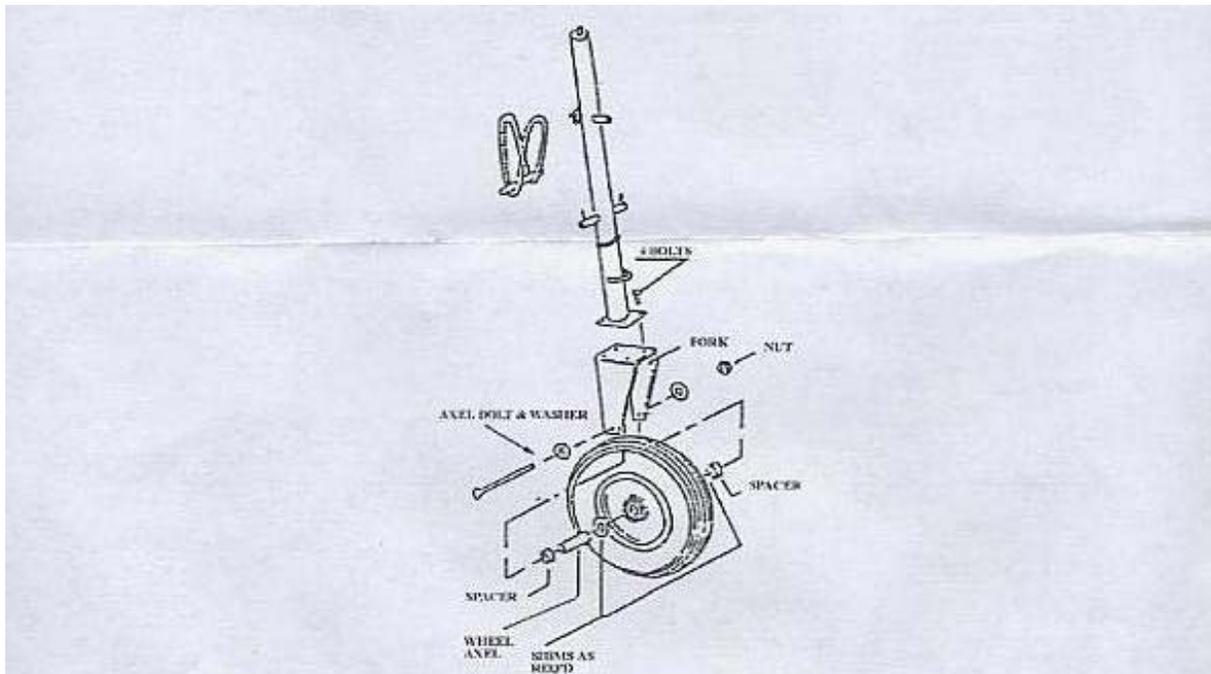


Photo 1: Nose Landing Gear Assembly

Photo 1 : Train avant

Additionally, the operator found cracks developing in the weld of another CH2000 aeroplane's NLG (Photo 2).

De plus, l'exploitant aérien a trouvé d'autres fissures en formation sur une soudure du train avant d'un autre CH2000 (photo 2).

- PDIMS Document number /
 Numéro du document du SGDDI : 4965407

- File Circulation Number /
 Numéro de dossier de classification : Z 5000-35

(For internal use only / Pour usage interne seulement)



Photo 2: Cracking on the NLG leg and plate weld

A review of Service Difficulty Reports did not find additional occurrences. An investigation by Zenair did not reveal a root cause. It is believed that the weld cracking is due to "excessive hard NLG landing, exceeding the design limits. The nose wheel fork may flex and bend the square steel plate welded to the structure resulting in possible metal fatigue and eventual cracking."

TCCA Comments:

The Design approval holder, Zenair Ltd., has investigated the issue and has published a Service Bulletin in February 2011 that details preventative measures and initiates a visible and/or fluorescent liquid penetrant inspection of the nose land gear weld. These measures are also incorporated in the Zenair Ltd. Service Manual.

RECOMMENDED ACTION:

TCCA strongly recommends all affected owners and operators pay close attention to the NLG weld area both during scheduled maintenance activities and following every hard landing per Zenair Ltd. Service Manual instructions.

Defects, malfunctions and failures occurring on aeronautical products are to be reported to Transport Canada, Continuing Airworthiness in accordance with CAR 521 mandatory Service Difficulty Reporting requirements.

Photo 2 : Fissures sur la jambe du train avant et qui joint la plaque soudée

Aucune autre occurrence n'a été relevée à la suite d'un examen des rapports de difficultés en service. Une enquête menée par Zenair n'a pas permis de découvrir l'origine du problème. On croit que le fissurage de la soudure a été causé par un contact dur du train avant avec le sol à l'atterrissage qui aurait dépassé la tolérance de construction. La fourche du train avant peut tordre et plier la plaque carrée en acier soudée à la structure, ce qui peut entraîner une fatigue du métal suivie du fissurage de la pièce.

Commentaires de TCAC :

Le titulaire de l'approbation de conception, Zenair Ltd, a examiné la question et a publié un bulletin de service en février 2011, lequel préconise des mesures préventives et une inspection visuelle et/ou une inspection par ressuage fluorescent de la zone. Ces mesures ont aussi été intégrées au manuel d'entretien de Zenair Ltd.

MESURE RECOMMANDÉE :

TCAC recommande fortement à tous les propriétaires et exploitants visés de porter une attention particulière à la zone de soudure du train avant pendant les travaux de maintenance périodiques et à la suite de chaque atterrissage dur, conformément aux instructions du manuel d'entretien de Zenair Ltd.

Les défauts, les mauvais fonctionnements et les pannes de produits aéronautiques devraient être signalés au Maintien de la navigabilité aérienne de Transports Canada, conformément aux exigences du RAC 521 qui obligent à transmettre des rapports de difficultés en service.

- FDIMS Document number /
Numéro du document du SGDDI :

4965407

File Classification Number /
Numéro de dossier de classification :
(For internal use only - Pour usage interne seulement)

Z 5000-35

Page 3 of/ de 4

CONTACT OFFICE:

For related service information, contact :

Zenair Ltd.
Huronis Airport
Midland, ON L4R 4K8
CANADA
Tel: 705 526-2871
Fax: 705 526-8022

For further information, contact a Transport Canada Centre, or Ms. Yosha Mendis, Continuing Airworthiness, Ottawa at 613-952-4357, facsimile 613-996-9178, or email CAWWEBFeedback@tc.gc.ca

Note: For the electronic version of this document, please consult the following Web address: www.tc.gc.ca/CivilAviation/certification/menu.htm

For the Director, National Aircraft Certification

BUREAU RESPONSABLE :

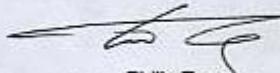
Pour obtenir plus de renseignements sur le service, communiquer avec :

Zenair Ltd.
Huronis Airport
Midland ON L4R 4K8
CANADA
Téléphone : 705-526-2871

Pour de plus amples renseignements, communiquer avec un Centre de Transports Canada ou avec Ms. Yosha Mendis, Maintien de la navigabilité aérienne, à Ottawa, téléphone 613-952-4357, télécopieur 613-996-9178 ou courriel CAWWEBFeedback@tc.gc.ca

Nota : La version électronique de ce document se trouve à l'adresse Web suivante : www.tc.gc.ca/aviation/civil/certification/menu.htm

Pour le directeur, certification nationale des aéronefs



Philip Tang
Acting Chief, Continuing Airworthiness
Chef intérimaire, Maintien de la navigabilité aérienne

<p>THE TRANSPORT CANADA CIVIL AVIATION SAFETY ALERT (CASA) IS USED TO CONVEY IMPORTANT SAFETY INFORMATION AND CONTAINS RECOMMENDED ACTION ITEMS. THE CASA STRIVES TO ASSIST THE AVIATION INDUSTRY'S EFFORTS TO PROVIDE A SERVICE WITH THE HIGHEST POSSIBLE DEGREE OF SAFETY. THE INFORMATION CONTAINED HEREIN IS OFTEN CRITICAL AND MUST BE CONVEYED TO THE APPROPRIATE OFFICE IN A TIMELY MANNER. THE CASA MAY BE CHANGED OR AMENDED SHOULD NEW INFORMATION BECOME AVAILABLE.</p>	<p>L'ALERTE À LA SÉCURITÉ DE L'AVIATION CIVILE (ASAC) DE TRANSPORTS CANADA SERT À COMMUNIQUER DES RENSEIGNEMENTS DE SÉCURITÉ IMPORTANTS ET CONTIENT DES MESURES DE SUIVI RECOMMANDÉES. UNE ASAC VISE À AIDER LE MILIEU AÉRONAUTIQUE DANS SES EFFORTS VISANT À OFFRIR UN SERVICE AYANT UN NIVEAU DE SÉCURITÉ AUSSI ÉLEVÉ QUE POSSIBLE. LES RENSEIGNEMENTS QUELLE CONTIENT SONT SOUVENT CRITIQUES ET DOIVENT ÊTRE TRANSMIS RAPIDEMENT PAR LE BUREAU APPROPRIÉ. L'ASAC POURRA ÊTRE MODIFIÉE OU MISE À JOUR SI DE NOUVEAUX RENSEIGNEMENTS DEVIENNENT DISPONIBLES.</p>
--	---

- RDIMS Document number / Numéro du document du SGDI :	4965407
- File Classification Number / Numéro de dossier de classification: <small>(For internal use only - Pour usage interne seulement)</small>	Z 5000-35

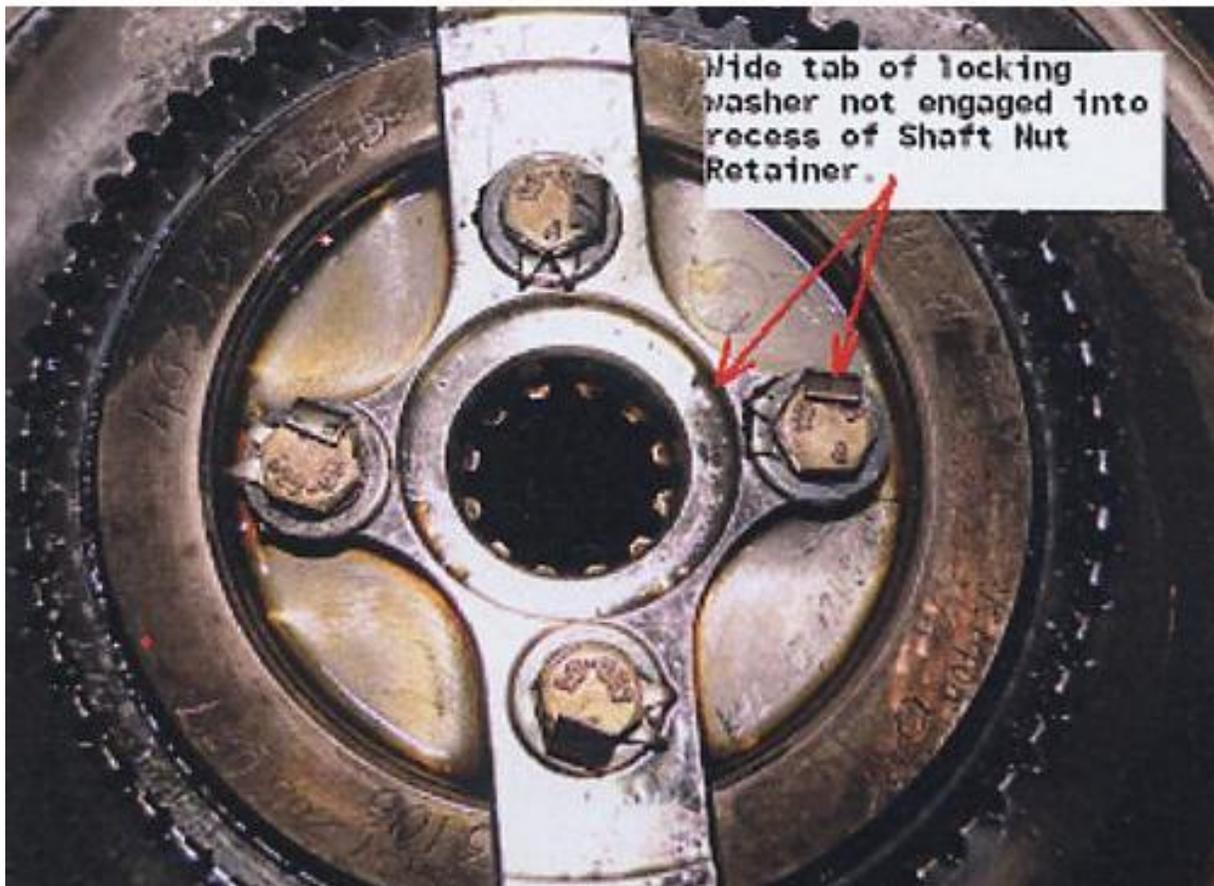
Part Total Time: (N/A)

HELICOPTERS

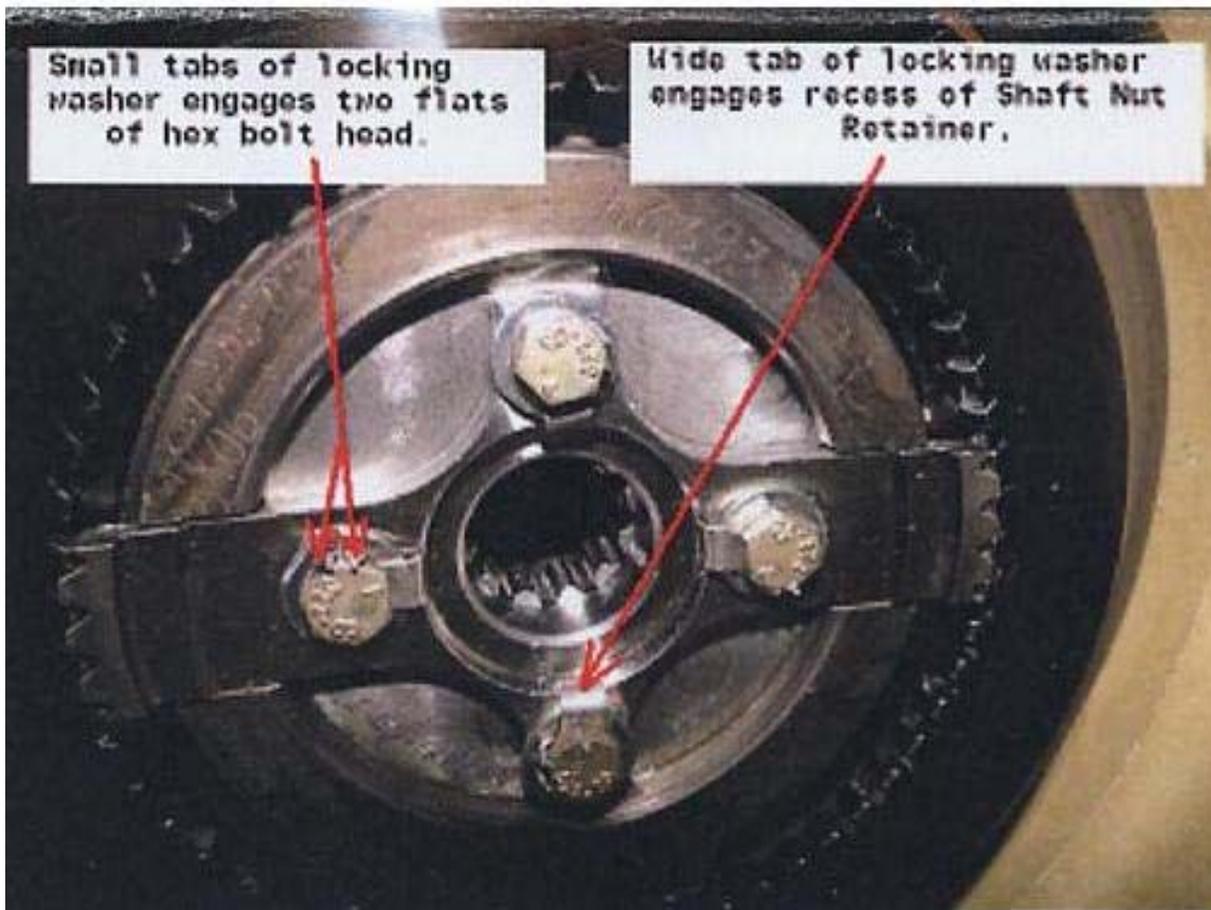
Eurocopter: SA365N3; Improper Safety on Rotor Shaft; ATA 6320

"The incorrect application of locking washers on the Rotor Shaft Nut retainer lock (P/N 117-12118-01) occurred during installation of the replacement Rotor Shaft," says this technician. It was discovered while performing Main Gearbox lower casing repair (removal of the rotor shaft is required)." (*Lock washer P/N: LN9023B5-145449.*)

IMPROPER



PROPER



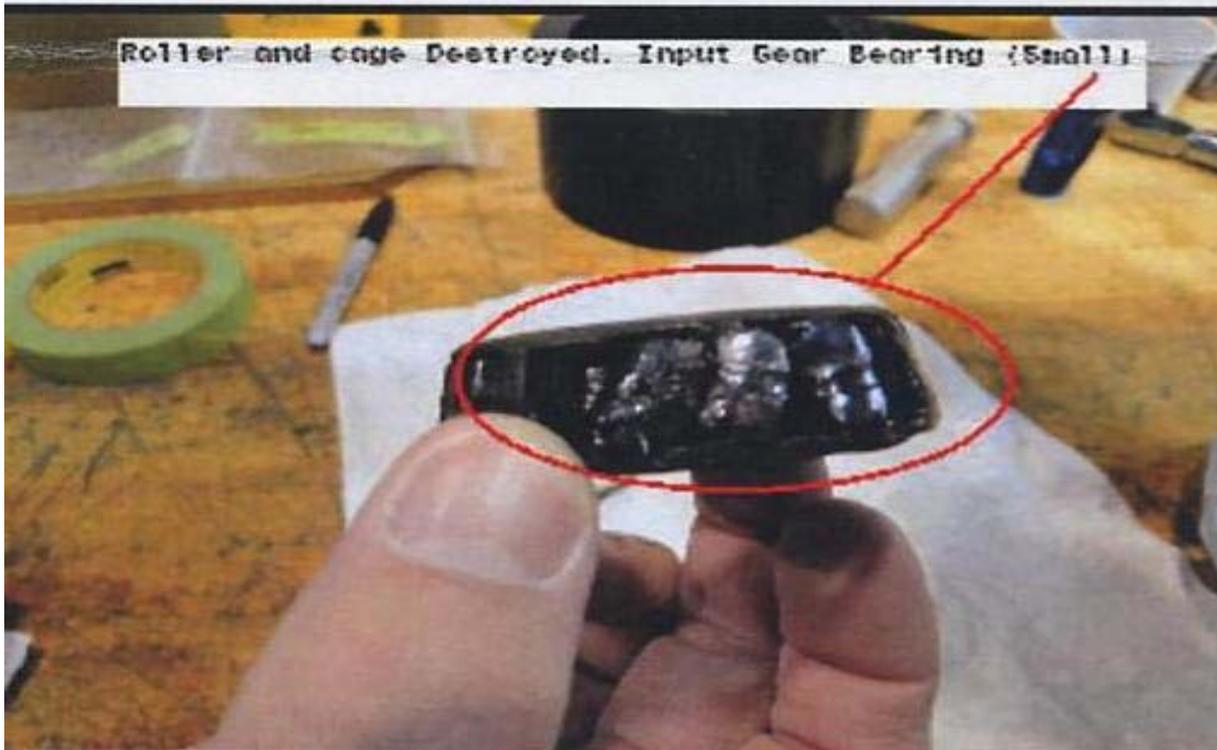
Part Total Time: 94.1 hours

Eurocopter: SA365N3; Failed Pinion Roller Bearing; ATA 6520

A mechanic states, "Failure of the Input Pinion Tapered Roller bearing (in the Tail Rotor Gearbox) occurred during ground run after maintenance. This gearbox is discolored due to overheating of the failed (seized) bearing." (*Bearing P/N: 704A33-652-044; Gearbox P/N: 365A33-6005-08.*)



Close-up of initial over temp indication.



Roller and cage Destroyed. Input Gear Bearing (Small)

Part Total Time: 0.0 hours

POWERPLANTS

Lycoming: LT10540-J2BD; Failed Turbocharger; ATA 8120

An air carrier submission says, "After landing touch-down, smoke was noticed exiting the rear of the R/H engine." "The turbocharger's main bearing (*had failed*), allowing the impeller to hit the housing, causing it to loose blades. Oil was able to get through the seals on the compressor (extremely hot turbine side), causing the fire and smoke. There was no external fire in the engine compartment. (*Existing*) fire was contained within the exhaust system, (*allowing for*) no visible fire damage...when the engine was inspected." (*Turbocharger P/N: LW12463W.*)







Part Total Time: 1,685.0 hours

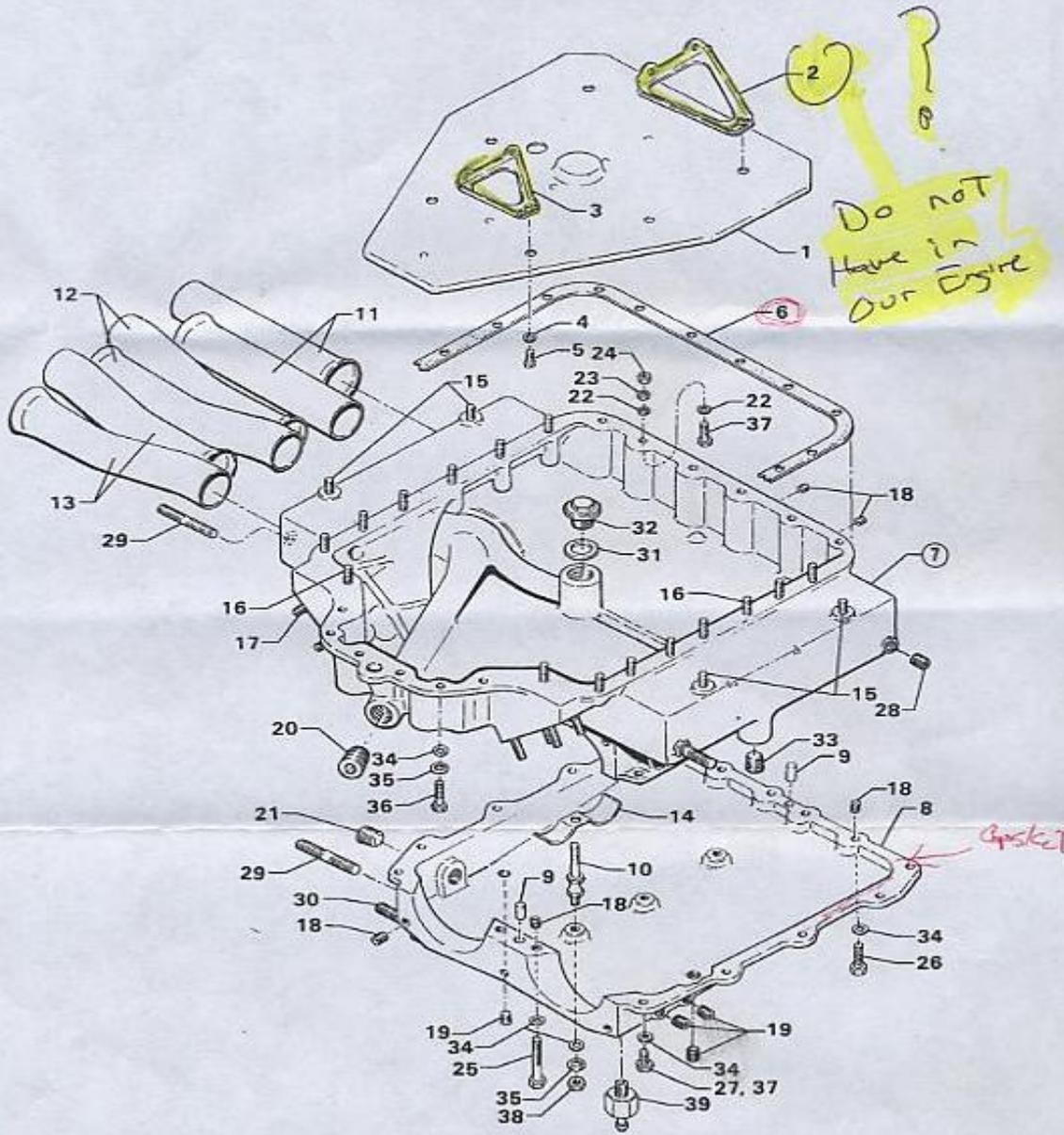
Lycoming: TIO540-AE2A; Cracked Oil Baffle; ATA 8550

"This baffle (P/N LW-13383) has been replaced by a second (P/N 56G23399) and a third (P/N 56G26069)," states this mechanic. "During the first 50 hour inspection, the suction oil screen was removed for condition inspection. (I) found the head of a steel rivet in the screen. I consulted the parts catalogue figure 23 (*for the broken rivet's possible original location*) and found baffle (item 1) to have a rivet assembly. I then removed the oil sump and induction housing." "The oil baffle had one rivet head missing, and I noted three of the six attaching holes had circular cracks emanating from under the washers. After removal of all the attaching bolts and washers, it was noted all (*housing*) attaching (*points*) had been (*scored*) by the sharp edges of the washers."

TEXTRON Lycoming

Williamsport Plant

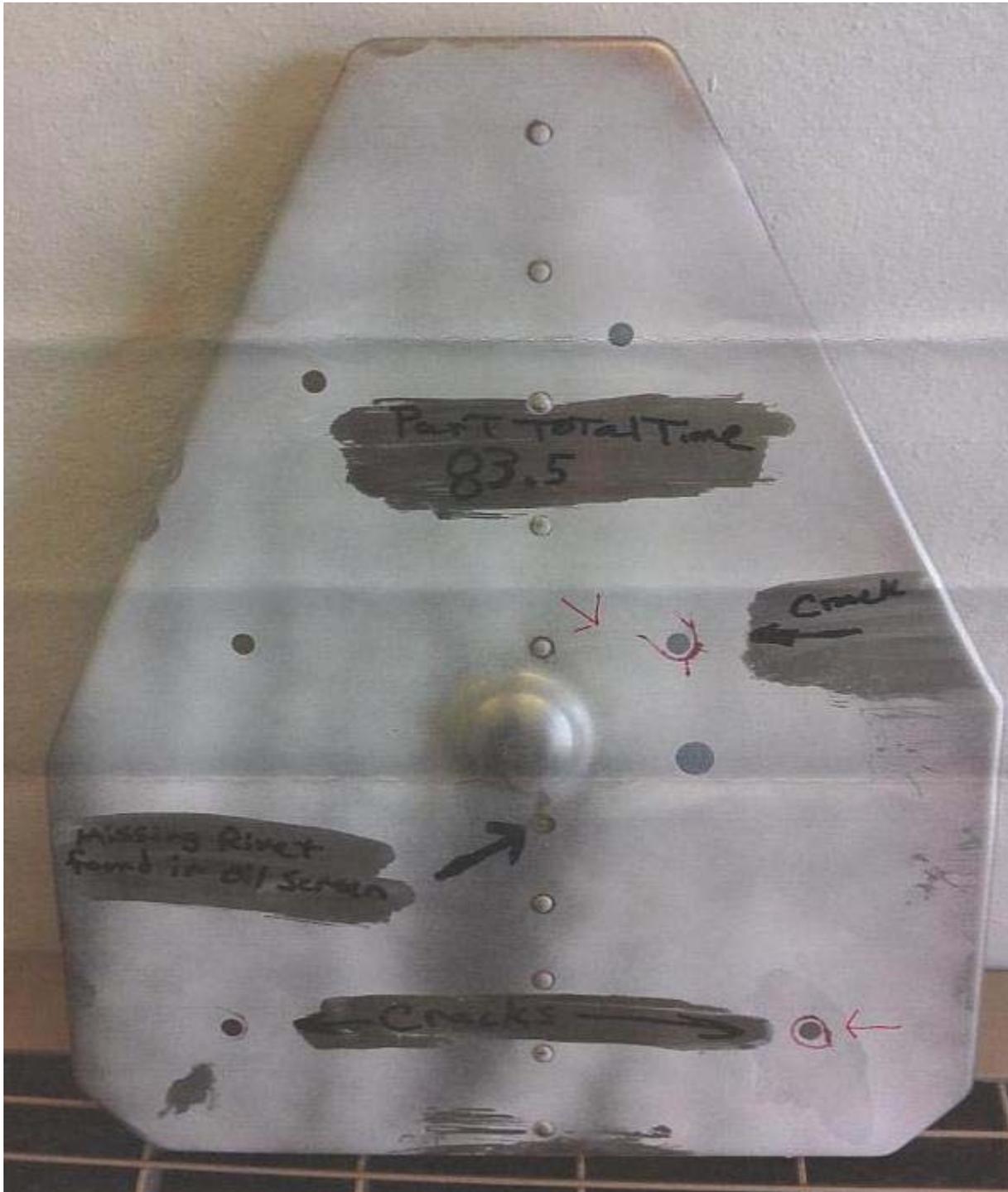
TIO-540-AE2A PARTS CATALOG
WIDE CYLINDER FLANGE CRANKCASE MODEL ENGINE



3181

Figure 23. OIL SUMP AND INDUCTION HOUSING ASSEMBLY

6-2



(This part number reflects 12 entries in the SDRS database.)

Part Total Time: 83.5 hours

ACCESSORIES

TCM Magneto: S6LN-1209; Loose Distributor Gear; ATA 7414

A mechanic says, "The pilot reported the R/H magneto failure. (*This unit*) was inspected for security of attachment and correct timing to the engine." "The magneto (*P/N BL-349310-1*) was removed and disassembled. Upon inspection, the brass (or brass appearing...) metal shavings (*were observed*) under the distributor cap and near the gear. The distributor gear was loose in the bearing— allowing the (*rotor*) to contact the ignition studs (four of six), wearing them down excessively. This caused the gaps to be excessive, (*resulting*) in the magneto failing to produce spark. We were informed only 60 hours (and 11 months) of service had (*accumulated*) on this magneto. This unit is a remanufactured magneto. No other damage was observed." "A replacement unit was installed and operationally tested without defect."





(Note: the submitter says these photos were sent by I-phone! Ed.)

Part Total Time: 60.0 hours

AIR NOTES

INTERNET SERVICE DIFFICULTY REPORTING (iSDR) WEB SITE

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

In the past, the last two pages of the Alerts contained a paper copy of FAA Form 8010-4, Malfunction or Defect Report. To meet the requirements of *Section 508, this form will no longer be published in the Alerts; however, the form is available on the Internet at: <http://forms.faa.gov/forms/faq8010-4.pdf>. You can still download and complete the form as you have in the past.

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

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

The collection, collation, analysis of data, and the rapid dissemination of mechanical discrepancies, alerts, and trend information to the appropriate segments of the FAA and the aviation community provides an effective and economical method of ensuring future aviation safety.

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

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

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

The SDRS and iSDR web site point of contact is:

Pennie Thompson
Service Difficulty Reporting System, Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125
Telephone: (405) 954-5313
SDRS Program Manager e-mail address: 9-AMC-SDR-ProgMgr@faa.gov

IF YOU WANT TO CONTACT US

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

Editor: Daniel Roller (405) 954-3646

FAX: (405) 954-4570 or (405) 954-4655

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

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

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

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports processed for the previous month, which have been entered into the FAA Service Difficulty Reporting System (SDRS) database. This is not an all-inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA

Aviation Data Systems Branch, AFS-620

PO Box 25082

Oklahoma City, OK 73125

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

If you require further detail please contact AFS-620 at the address above.

Federal Aviation Administration

Service Difficulty Report Data

Sorted by aircraft make and model then engine make and model. This report derives from unverified information submitted by the aviation community without FAA review for accuracy.

Control Number	Aircraft Make	Engine Make	Component Make	Part Name	Part Condition
Difficulty Date	Aircraft Model	Engine Model	Component Model	Part Number	Part Location
CHIR20110829001				SERVO VALVE	LEAKING
8/29/2011				114HS5801	NR 2 ROLL
HEADS MISSING ON 2 OF 4 CAP SCREWS ON TORQUE MOTOR DUST COVER DUE TO APPARENT LEAK AT TORQUE MOTOR/SERVO VALVE JOINT. NO APPARENT TORQUE MOTOR/SEALING SURFACE OR O-RING DAMAGE OBSERVED UPON DISSASSEMBLY--UNIT TESTED NORMALLY.					
2011FA0000564				FLOAT	WORN
8/10/2011				AV30768	CARBURETOR
BRASS FLOATS, PN AV30-768 WITH PN 29-182 TYPE NEEDLE RETRACTION CLIPS HAVE BEEN FOUND WITH SEVERE WEAR IN THE FLOAT FRAME CAUSED BY THE END OF THE 29-182 TYPE CLIP WORKING AGAINST THE BRASS FLOAT FRAME. THESE FLOATS AND CLIPS WERE FOUND IN HA-6 CARBURETORS ORIGINALLY MADE. THE 29-182 TYPE CLIP IS INTENDED FOR USE WITH FLOAT FRAMES MADE OF STAINLESS STEEL. THE BRASS FLOATS EQUIPPED WITH THE 29-182 TYPE CLIPS APPEAR TO HAVE HAD THE BRACKET, PN 178-48, REMOVED TO WHICH THE PROPER WIRE FORM NEEDLE RETRACTION CLIP PN 29-194 ATTACHES. EXCESSIVE WEAR OF THE FLOAT FRAME COULD RESULT IN THE FLOAT SYS STICKING AND COULD RESULT IN FUEL FLOW TO THE ENGINE BEING INTERRUPTED OR RESTRICTED. PN 29-182 FLOAT CLIPS ARE NOT APPROVED BY THE CARBURETOR MFG FOR USE WITH BRASS FLOAT FRAMES. SUBMITTER RECOMMENDS THAT CLIP TYPE 29-182 NEVER BE USED WITH BRASS TYPE FLOATS.					
CA110126003				CONTROL UNIT	MISOVERHAULLED
1/25/2011					SPOILERS
INSTALLED 13 HRS, 16 CYCLES, FLIGHT SPOILERS CAUTION MESSAGE AT GATE UNIT. R & R AT ACFT IAW AMM AND UNIT RETURNED TO MFG FOR REPAIR. UPON INVESTIGATION THAT THERE ARE SUSPECTED UNAPPROVED PARTS AND INCORRECT SOFTWARE INSTALLED ON THE CIRCUIT CARDS. INCOMING INSPECTION OF THE SPOILER ELECTRONIC CONTROL UNIT HAS REVEALED THAT QUALITY CONTROL INSPECTION, SEALS WERE BROKEN AND COMPONENTS FITTED ON 2 DIFFERENT ASSEMBLIES WERE NOT APPROVED OR SPECIFIED BY THE ORIGINAL MFG FOR THIS EQUIPMENT. ASSEMBLIES: -INTERFACE ASSEMBLY PN 7743-00258-01, SN 02193 PARTS AFFECTED: PROGRAMMABLE LOGIC DEVICE U1 & U101 ARE NOT AS SPECIFIED IN CMM AND ARE LABELLED RJHC INSTEAD OF RJNN (INCORRECT HARDWARE AND SOFTWARE INSTALLED FOR THE CONFIGURATION OF THE UNIT) -OUTPUT COMMON ASSY, PN 7743-00272-02, SN 02130, PARTS AFFECTED: FUSE F2 & F3 ARE NOT AS SPECIFIED IN THE OEM CMM. A SUSPECTED UNAPPROVED PARTS REPORT WILL BE FILED WITH THE FAA.					
CA110512005				YOKE	WORN
2/19/2011					PROPELLER
PROP LEAKING OIL, REPLACED PROP ACTUATOR. TEAR DOWN REPORT INDICATES CHROME WORN ON YOKE INSIDE DIAMETER AND EARS.					
CA110526008				DISPLAY	MISOVERHAULLED
5/26/2011				100601702002	
RECENTLY RECEIVED A MCDU FOR REPAIR. WHILE CONDUCTING MX, NOTED THAT DURING A PREVIOUS REPAIR THAT SOMEONE HAD REPLACED A FUSE F1 ON THE 28 VOLT INPUT LINE OF THE LIGHTNING PROTECTION CIRCUIT BOARD WITH A SOLID WIRE. THE PRODUCT IS BEING REPAIRED AND BROUGHT BACK TO CONFORMITY AND DWG SPECIFICATION. NOTE: ADDED MAY 27 BY PRM: SUBSEQUENT EXPLANATION RECEIVED FROM AIRLINE,					

EXPLAINING THAT THE CONDITION DETECTED WAS INDUCED DURING TROUBLESHOOTING PRIOR TO RETURNING THE UNIT TO CMC FOR REPAIR.

CA110620001		HUB	CRACKED
6/20/2011		D65211	PROPELLER

PROPELLER HAD A .2500" CRACK WAS FOUND FROM A BALANCE WEIGHT SCREW HOLE.

CA110620002		WIRE	BROKEN
6/14/2011		SMR22931	PROP DE ICE

DE-ICE HARNESS WIRES FOUND BROKEN.

CA110620003	HARTZL	PLUG	DISLODGED
6/20/2011			PROP GOVERNOR

GOVERNOR LEAKING OIL. FOUND THE PLUG FOR THE PRESSURE RELIEF VALVE WAS HANGING BY PIECE OF LOCK WIRE AND THE THREADS WERE STRIPPED.

FCPA201108230008		HUB	GOUGED
8/23/2011			PROPELLER

PROPELLER IN SHOP FOR LEAKING OIL. UPON DISASSEMBLY, FOUND CYLINDER MOUNT SURFACE ON HUB GOUGED. NO DAMAGE OR REPAIR PERMITTED IN THIS AREA IAW SPM 100, 61-11-02. PROPELLER BLADES, PN 93KB-0, SN'S: BC164, BC039 AND K79615 ALL SCRATCHED ON BLADE SHANKS AT SECTION D-E. NO SCRATCHES, CORROSION OR REPAIRS ALLOWED IN THIS AREA IAW SPM 61-10-02. THIS PROPELLER AFFECTED BY NE-09-48 DATED AUG. 14, 2009.

FCPA201108250009		HUB	GOUGED
8/25/2011			PROPELLER

PROPELLER DISASSEMBLED FOR INSPECTION IAW CUSTOMER REQUEST. UPON DISASSEMBLY, FOUND CYLINDER MOUNT SURFACE ON HUB GOUGED. NO DAMAGE OR REPAIRS ALLOWED IN THIS AREA IAW MFG SPM 100. 61-11-02. PROPELLER BLADES PN:93KB-0, S/N: BE027, BE119 AND BE125 ALL SCRATCHED ON BLADE SHANKS AT SECTION D-E. NO SCRATCHES, CORROSION OR REPAIRS ALLOWED IN THIS AREA IAW , MFG SPM 61-10-02. THIS PROPELLER AFFECTED BY NE-09-48 DATED AUG. 14,2009.

3HCR20110902001	ALLSN	FUEL CONTROL	FAILED
9/2/2011	250C30	2549092723070613	FUEL CONTROL

FUEL CONTROL BENCH CHECKED. FOUND CUT-OFF IMPROPERLY WORKING DURING TEST.

CA110624005	GE	NUT	MISINSTALLED
6/23/2011	CF343B1	3020T63P10	HP TURBINE DISK

SCHEDULED HEAVY MX WAS BEING PERFORMED ENGINE. DURING SEPARATION OF THE STAGE 1 AND 2 HIGH PRESSURE TURBINE DISKS, ONE RETAINING STUDS WAS HEARD TO UNSEAT AND FALL ONTO THE STAGE 2 DISK. WHEN THE 2 DISKS WERE SEPARATED, THE NUT WAS EVALUATED AND WITNESS MARKS ON THE NUT-THREADS INDICATED THAT ONLY ONE THREAD WAS RETAINING ON THE THE STUD.

2011FA0000565	LYC	FITTING	MISINSTALLED
8/10/2011	O290*		CARBURETOR

THIS CARBURETOR WAS SENT IN FOR FUEL FLOW TEST BY THE CUSTOMER. UPON INSP OF THE CARBURETOR, THE TECH FOUND THAT THREAD SEALANT HAD BEEN APPLIED TO THE FUEL INLET FITTING. AS STATED IN SB-10 "THREAD SEALANT CAN BREAK AWAY INSIDE A CARBURETOR, CLOG FUEL PASSAGES, AND RESULT IN PARTIAL OR COMPLETE LOSS OF ENGINE POWER. A PREVIOUS SB A1-659 AND AD 69-24-03, DEALT WITH A SIMILAR ISSUE WHERE IN THREAD LUBRICANT WAS DISCOVERED IN CARBURETORS. SUBMITTER RECOMMENDS FOLLOWING THE INSTRUCTIONS CONTAINED IN THE APPROPRIATE CARBURETOR O/H MANUAL AS WELL AS OTHER APPLICABLE SERVICE INFO.

CA110617001	PWA	BEARING CAGE	CRACKED
-----------------------------	-----	--------------	---------

6/16/2011 JT15D5 310749301 NR 3 BEARING
ENGINEERING INVESTIGATION REPORT. CONFIRMED THAT ENGINE DID HAVE METAL CONTAMINATION OF THE OIL SYS. THE SOURCE OF METAL CONTAMINATION WAS THE NR 3 BEARING (PN 3107493-01, S/N FC153527) WHICH HAD A THROUGH GOING CRACK ON THE ROLLER CAGE. THE CRACK ALLOWED THE CAGE TO EXPAND AND THE ADJACENT ROLLER ELEMENT TO TURN SIDEWAYS WITHIN THE POCKET RESULTING IN HEAVY SCORES/GOUGES THE OUTER RACE. THE REASON WHY THE CAGE ON THE BEARING CRACKED COULD NOT BE DETERMINED.

[CA110615003](#) PWA BEARING CAGE CRACKED
6/14/2011 JT15D5 310749301 NR 3 BEARING
DURING EIR JT15D 2011-006, WAS ABLE TO CONFIRM THAT ENGINE DID HAVE METAL CONTAMINATION OF THE OIL SYS. THE SOURCE OF METAL CONTAMINATION WAS THE NR 3 BEARING WHICH HAD A CRACK ON CAGE WHICH ALLOWED THE ADJACENT ROLLER ELEMENT TO TURN SIDEWAYS WITHIN THE POCKET AND HEAVILY SCORED & GOUGED THE OUTER RACE. THE REASON WHY THE CAGE ON THE BEARING CRACKED COULD NOT BE DETERMINED.

[CA110609001](#) PWA BLADE FAILED
6/6/2011 PT6A28 ENGINE
EIR PT6A 2011-051 CONFIRMED INTERNAL ENGINE FAILURE. THE INTERNAL ENGINE FAILURE WAS CAUSED BY A CT BLADE FAILURE. THE BLADE FAILED AT THE LAST FIRTREE SERRATION CAUSING HEAVY IMPACT DAMAGE OF THE SHROUD AND ITS HSG AND ALSO CAUSING HEAVY IMPACT DAMAGE OF THE REMAINING CT BLADES. THE LIBERATED PARTS FURTHER DAMAGED THE DOWNSTREAM PT VANE, T5 PROBES AND PT BLADES. THE LIBERATION OF THE CT BLADE ALSO CAUSED COMPRESSOR TO BECOME OUT OF BALANCE CAUSING RUBBING DAMAGE OF THE IMPELLER, SPACERS AND AIRSEALS WITH THEIR MATING PARTS. THE FACT THAT THE FAILED BLADE WAS BROKEN AT THE FIRTREE IN THE RADIUS MAY INDICATE THAT THE CAUSE OF THE FAILURE WAS A CRACK IN THE FIRTREE AREA. THE CT VANE AND THE SMALL EXIT DUCT BURNING DAMAGE IS MOST LIKELY RESULT OF THE FAULTY FUEL NOZZLE. THE FUEL NOZZLE FAULTY FUEL SPRAY CREATED A HOT SPOT IN THE HOT SECTION DAMAGING THE SMALL EXIT DUCT AND THE CT VANE. THE BURNED CT VANE AIRFOIL EXPOSED THE CT BLADES TO THE DIRECT AXIAL AIRFLOW WHICH PROBABLY AFFECTED THE TURBINE EFFICIENCY AND THE BLADE AIRFOILS HEAT EXPOSURE. IT IS POSSIBLE THAT THIS CONDITION CONTRIBUTED TO THE BLADE FAILURE.

[CA110615009](#) PWA SUN GEAR CHIPPED
6/9/2011 PT6A41 3028456 ENGINE
OPERATOR REPORTED METAL CONTAMINATION IN THE ENGINE OIL SYS. ACCESS OF THE FIRST STAGE GEAR TRAIN REVEALED THAT THE MAJORITY OF ONE GEAR TOOTH WAS MISSING FROM THE FIRST STAGE SUN GEAR. SEVERAL OTHER FIRST STAGE SUN GEAR TEETH HAD SIGNIFICANT GEAR TOOTH DAMAGE. VISUAL INSPECTION OF THE FIRST STAGE PLANET GEARS REVEALED SOME SECONDARY IMPACT DAMAGE AND DENTING. 1 OF THE 3 GEARS, HAD A PIECE OF EMBEDDED MATERIAL ON ONE GEAR TOOTH THAT APPEARED TO BE A SMALL PIECE OF THE FIRST STAGE SUN GEAR. THE FIRST STAGE RING GEAR HAD ONE GEAR TOOTH THAT WAS CHIPPED AND MISSING MATERIAL.

[CA110516016](#) PWA GASKET LEAKING
5/9/2011 PT6A64 ENGINE OIL SYS
(CAN) OIL LEAK 5 MILES OUT, THE ENGINE HAD A MAJOR OIL LOSS. THE PILOT ELECTED TO RETURN TO THE DEPARTURE AIRPORT WITHOUT SHUTTING THE ENGINE DOWN. AN UNEVENTFUL LANDING WAS MADE. GROUND INSP FOUND NO OIL LEFT IN THE ENGINE. THE PROBLEM WAS TRACED BACK TO A LEAK FROM THE OVERSPEED GOVERNOR PAD GASKET. THE GASKET WILL BE RETURNED TO SERVICE INVESTIGATION FOR EXAMINATION AND THE ENGINE WILL LIKELY BE REMOVED AND SENT FOR REPAIRS.

[CA110627001](#) PWA TURBINE BLADES FRACTURED
5/24/2011 PT6A65B ENGINE
POST FLIGHT INSPECTION DISCOVERED THERE WAS 1EA 2ND STAGE PT ROTOR BLADE SEPARATED FROM THE MIDDLE SPAN OF BLADE. THE PILOTS REPORTED EVERYTHING WAS NORMAL DURING THE FLIGHT. INVESTIGATION REVEALED BLADE FRACTURED BY FATIGUE. MFG RECOMMENDS THE SDR BE CLOSED ON THE BASIS OF THE FOLLOWING INFORMATION.

CA110614004		PWA		GOVERNOR	MALFUNCTIONED
6/8/2011		PT6A67D			PROPELLER
ABORTED TAKEOFF DURING TAKEOFF ROLL, AS THE PILOT ADVANCED THE POWER LEVER, THE ENGINE ACCELERATED AND WITH A TARGET PROPELLER SPEED OF 1700 RPM SET, IT WENT TO 1803 RPM AND THE SPEED COULD NOT BE CONTROLLED. THE T/O WAS ABORTED. TROUBLESHOOTING IS FOCUSING ON A FAULTY PROPELLER GOVERNOR. RECOMMENDS THE SDR BE CLOSED ON THE BASIS OF THE FOLLOWING INFORMATION.					
CA110606009		PWA		BEARING	MAKING METAL
6/1/2011		PW119B			RGB
EIR PW100 2011-034 WAS ABLE TO CONFIRM THE OPERATORS REPORT OF METAL CONTAMINATION IN THE RGB OIL SYS. THE SOURCE OF THE METAL CONTAMINATION WAS DETERMINED TO BE THE RT NR 14 BEARING WHICH HAD A CRACKED AND SPALLED INNER RACE. THE CAUSE OF THE FAILURE COULD NOT BE DETERMINED.					
CA110614002		PWC		FUEL CONTROL	MALFUNCTIONED
6/7/2011		PW617FE			
POWER ROLL BACK DURING INITIAL CLIMB N1 SPEED DROPPED TO 50 PERCENT AND T/O RESERVE WAS ACTIVATED. AFTER A FEW SECONDS, THE ENGINE RECOVERED AND OPERATED NORMALLY. AFTER LANDING AT HOME BASE, THE ENGINE WAS VISUALLY INSPECTED AND NO DAMAGE WAS FOUND. ANALYSIS OF THE DATA RECORDER CONFIRMED THE POWER ROLL BACK. TROUBLESHOOTING IS FOCUSING ON A FAULTY FADEC. RECOMMENDS THE SDR BE CLOSED ON THE BASIS OF THE FOLLOWING INFORMATION.					
CA110204010	AEROSP	TMECA		BELT	CRACKED
2/4/2011	AS355*	ARRIEL1D1		POLYV597K4	HYD PUMP
DURING ROUTINE MX, THE HYD DRIVE WAS DISASSEMBLED AND UPON INSP THE HYD PUMP DRIVE BELT WAS FOUND TO HAVE A SMALL CRACK ACROSS THE V-GROOVES. THE BELT WAS REPLACED.					
EE4Y1010520	AIRBUS		AIRBUS	SPAR	CORRODED
9/8/2011	A319132			54530252200	ZONE 400
LT WING T/E PYLON AFT FAIRING BONDING JUMPER ATTACHMENT POINT WITH CORROSION. THE PART IS GOING TO BE REPLACED.					
EE4Y20110527	AIRBUS		AIRBUS	SKIN	DEBONDED
9/14/2011	A319132			D5547100400000	RUDDER
VERTICAL STABILIZER, RUDDER LT SIDE PANEL WITH WATER INGRESS INSIDE THE HONEYCOMB CORE AROUND HOISTING POINT NR 3. NOTE: THE RUDDER LT SIDE PANELS REQUIRES A MAJOR REPAIR IAW GUIDELINES.					
EE4Y20110534	AIRBUS		AIRBUS	ANCHOR FITTING	CORRODED
9/14/2011	A319132			D57259162001	ZONE 600
RT WING, INNER SPAR BETWEEN RIB 2 AND RIB 3, MLG RETRACTION JACK ANCHORAGE FITTING'S BORE AND LOWER FACE WITH CORROSION.					
EE4Y20110535	AIRBUS		AIRBUS	ANCHOR FITTING	CORRODED
9/14/2011	A319132			D57259162000	ZONE 500
LT WING, INNER SPAR BETWEEN RIB 2 AND RIB 3, MLG RETRACTION JACK ANCHORAGE FITTING'S BORE AND LOWER FACE WITH CORROSION.					
EE4Y20110521	AIRBUS		AIRBUS	FLOOR SUPPORT	CORRODED
9/13/2011	A319132			D5347217220500	ZONE 200
PAX CABIN, UPPER REAR FUSELAGE FLOOR SUPPORT WITH CORROSION AT C67 -Y1292.0.					
EE4Y20110523	AIRBUS		AIRBUS	HINGE FITTING	CRACKED
9/13/2011	A319132			D55982000200	LT ELEVATOR

LT ELEVATOR HINGE FITTING NR 1 ANTI-ROTATION TAB, CRACKED. REPAIRED IAW MSG NR 70522342/003.

EE4Y20110524	AIRBUS			FLOOR SUPPORT	CORRODED
9/13/2011	A319132			D5347219620000	FUSELAGE

PAX CABIN AFT ENTRY FLOOR SUPPORT AREA FROM FR68 TO FR70, FLOORBEAM WITH CORROSION. REPAIRED FLOOR SUPPORT FROM FR68 TO FR70 AFT ENTRY AREA IAW SRM 51-72-11, PAR 4 AND 6.

EE4Y20110522	AIRBUS			FLOOR SUPPORT	CORRODED
9/14/2011	A319132			D5347213320700	ZONE 200

PAX CABIN FLOOR SUPPORT WITH CORROSION AT FRAME 66 -Y1292.0. NOTE: THE FLOOR SUPPORT WILL BE REPLACED IAW SRM.

EE4Y20110528	AIRBUS	IAE		SKIN	CORRODED
9/14/2011	A319132	V2524A5	V2524A5		NR 1 PYLON

NR 1 PYLON SECTION INBD AND OTBD AFT FIXED FAIRING PANELS WITH CORROSION. NOTE: THE INBD AND OTBD FIXED FAIRING PANELS WILL BE REPLACED IAW SRM 51-72-11, PARAGRAPH 4 AND 6.

EE4Y20110529	AIRBUS	IAE		SKIN	CORRODED
9/14/2011	A319132	V2524A5	V2524A5		NR 2 PYLON

NR 2 PYLON SECTION INBD AND OTBD AFT FIXED FAIRING PANELS WITH CORROSION. NOTE: THE INBD AND OTBD AFT FIXED FAIRING PANELS WILL BE REPLACED IAW SRM 51-72-11, PARAGRAPH 4 AND 6.

EE4Y20110530	AIRBUS	IAE	BFGOODRICH	PLATE	WORN
9/14/2011	A319132	V2524A5			THRUST REVERSER

NR 1 THRUST REVERSER INBD C DUCT, PAD DOWN WITH WEAR. NOTE: PAD DOWN PLATE WILL BE REPAIRED IAW SRM 54-30-00, REPAIR 038.

EE4Y20110525	AIRBUS	IAE	AIRBUS	SKIN	CORRODED
9/14/2011	A319132	V2524A5		D54530052203	NR 2 PYLON

NR 2 PYLON AFT FIXED FAIRING, OTBD AND INBD LATERAL SKIN PANEL WITH CORROSION. NOTE: THE FAIRING SKIN PANELS REQUIRE A MAJOR REPAIR IAW SRM GUIDELINES.

EE4Y20110531	AIRBUS	IAE	BFGOODRICH	PAD	WORN
9/14/2011	A319132	V2524A5			THRUST REVERSER

NR 1 THRUST REVERSER OTBD C-DUCT, PAD DOWN WITH WEAR. NOTE: PAD DOWN WILL BE REPAIRED IAW SRM 54-30-00, REPAIR 038.

EE4Y20110526	AIRBUS	IAE	AIRBUS	SKIN	CORRODED
9/14/2011	A319132	V2524A5		D54530052202	NR 1 PYLON

ENGINE NR 1, PYLON AFT FIXED FAIRING, OTBD AND INBD LATERAL SKIN PANEL WITH CORROSION. NOTE: THE FAIRING SKIN PANELS REQUIRE A MAJOR REPAIR IAW SRM GUIDELINES.

EE4Y20110532	AIRBUS	IAE	BFGOODRICH	PAD	WORN
9/14/2011	A319132	V2524A5			THRUST REVERSER

NR 2 ENGINE INBD THRUST REVERSER C DUCT INNER SIDE AFT SECTION PAD DOWN PLATE WITH WEAR. NOTE: THE PAD DOWN WILL BE REPAIRED IAW SRM 54-30-00, REPAIR 038.

EE4Y20110533	AIRBUS	IAE	BFGOODRICH	PAD	WORN
9/14/2011	A319132	V2524A5			THRUST REVERSER

NR 2 ENGINE OTBD THRUST REVERSER C DUCT INNER SIDE AFT SECTION, PAD DOWN PLATE WITH WEAR. NOTE: PAD DOWN WILL BE REPAIRED IAW SRM 54-30-00 REPAIR 038.

EE4Y20110504	AIRBUS	IAE	FLOOR SUPPORT	CORRODED
9/7/2011	A319132	V2524A5	D5347219320000	ZONE 200

UPPER FUSELAGE PAX CABIN AFT ENTRANCE AREA FROM FR67 TO FR68 Y-765 FLOOR SUPPORT CORRODED. REPLACED FLOOR SUPPORT IAW SRM 51-72-11 PAR 4 AND 6.

EE4Y20110505	AIRBUS	IAE	FLOOR SUPPORT	CORRODED
9/7/2011	A319132	V2524A5	D5347218820400	ZONE 200

UPPER FUSELAGE PAX CABIN AFT ENTRANCE AREA FROM FR68 TO FR69 AT Y1162.5 FLOOR SUPPORT WITH CORROSION. REPLACED FLOOR SUPPORT IAW SRM 51-72-11, PAR 4 AND 6.

EE4Y20110506	AIRBUS	IAE	FLOOR SUPPORT	CORRODED
9/7/2011	A319132	V2524A5	D5347218920400	ZONE 200

UPPER FUSELAGE PAX CABIN AFT ENTRANCE AREA FROM FR68 TO FR69 Y-1162.5 LATERAL FLOOR SUPPORT CORRODED. REPLACED FLOOR SUPPORT IAW SRM 51-72-11 PAR 4 AND 6.

EE4Y20110507	AIRBUS	IAE	FLOOR SUPPORT	CORRODED
9/7/2011	A319132	V2524A5	D5347217220500	ZONE 200

UPPER FUSELAGE PAX CABIN AFT ENTRANCE AREA FROM FR67 TO FR68 BETWEEN Y-1292 Y-1162.5 LATERAL SUPPORT CORRODED. REPLACED FLOOR SUPPORT IAW SRM 51-72-11, PAR 4 AND 6.

EE4Y20110508	AIRBUS	IAE	FLOOR SUPPORT	CORRODED
9/7/2011	A319132	V2524A5	D5347217220400	ZONE 200

UPPER FUSELAGE PAX CABIN AFT ENTRANCE AREA FROM FR67 TO FR68 BETWEEN Y1292 AND Y1162.5 LATERAL FLOOR SUPPORT CORRODED. REPLACED FLOOR SUPPORT IAW SRM 51-72-11 PAR 4 AND 6.

EE4Y20110509	AIRBUS	IAE	SKIN	CORRODED
9/7/2011	A319132	V2524A5	V2524A5	NR 1 PYLON

NR1 ENGINE, PYLON AFT LOWER SECTION INBD AND OTBD SKIN WITH CORROSION. REPLACED NR 1 ENGINE PYLON AFT LOWER T/E INBD AND OTBD SKIN PANELS IAW SRM 51-72-11, PAR 5 AND 6.

EE4Y20110510	AIRBUS	IAE	SKIN	CORRODED
9/7/2011	A319132	V2524A5	V2524A5	NR 2 PYLON

NR 2 ENGINE, PYLON AFT LOWER SECTION INBD AND OTBD SKIN WITH CORROSION. REPLACED NR 2 ENGINE PYLON AFT LOWER T/E INBD AND OTBD SKIN PANELS IAW SRM 51-71-11 PAR 5 AND 6.

2011FA0000547	AIRPTS		SPRING	BROKEN
6/14/2011	A9B			BREAKER POINTS

THE CAM FOLLOWER SPRING THAT IS A PART OF THE BREAKER POINT ASSY IN THE RT MAGNETO BROKE COMPLETELY OFF AT APPROX ITS MID POINT, RESULTING IN TOTAL FAILURE OF THAT MAGNETO.

2011FA0000548	AIRPTS		SLICK	CAM FOLLOWER	BROKEN
7/20/2011	A9B		M3081		BREAKER POINTS

THE CAM FOLLOWER SPRING THAT IS A PART OF THE BREAKER POINT ASSY IN THE LT MAGNETO BROKE COMPLETELY OFF AT APPROX ITS MID POINT, RESULTING IN TOTAL FAILURE OF THAT MAGNETO. NOTE: THIS FAILURE OCCURRED APPROX 18 OPERATIONAL HOURS FOLLOWING AN IDENTICAL SUCH FAILURE IN THE RT MAGNETO (REPORTED 6/14/2011). THESE FAILURES OCCURRED ON MAGNETOS WITHIN THE SPECIFIC SN BLOCKS IDENTIFIED IN MSB SB2-08A AND SB3-08A AS POSSIBLY HAVING OTHER DEFECTIVE INTERNAL PARTS (CARBON BRUSH AND CAM. STRONGLY SUSPECT THAT THE SAME SUPPLIER MFG THE OBVIOUSLY DEFECTIVE BREAKER POINTS). STRONGLY SUGGEST THIS TO BE A SERIOUS ISSUE AND POSSIBLY WORTHY OF AIRWORTHINESS DIRECTIVE ACTION (CONSIDER THE 18 HOUR TIME PERIOD BETWEEN FAILURES- COULD HAVE EASILY BEEN 18

MINUTES, WHICH WOULD HAVE RESULTED IN TOTAL ENGINE FAILURE).

2011FA0000567	AIRTRC	PWA	ENGINE	POWER LOSS
8/4/2011	AT301	R1340*	ZP101988	

TOTAL LOSS OF POWER ON TAKEOFF. 500 HOURS SINCE O/H.

CA110601009	AIRTRC		TUBE	CRACKED
5/30/2011	AT802A		1102910	FUSELAGE

CRACK FOUND UPPER DIAGONAL TUBE IN AFT FUSELAGE. ACFT IN MOUNTED ON FLOATS.

CA110615004	AIRTRC		ROLL PIN	MIGRATED
6/9/2011	AT802A			TRIM WHEEL

RUDDER TRIM WHEEL SPINNING FREELY. DURING INVESTIGATION, FOUND ROLL PIN MIGRATED OUT OF TRIM WHEEL (ACTS AS A DOWL PIN) RE-INSTALLED ROLL PIN.

CA110615008	AIRTRC	PWA	PACKING	SPLIT
6/12/2011	AT802A	PT6A65AG	MS28775314	MLG ACTUATOR

ON WALK AROUND, HYD FLUID WAS NOTICED ON RAMP AND ON LT MLG WHEELS. AC POWER WAS TURNED ON AND HYD PUMPS CYCLED AND IT WAS DETERMINED THAT HYD FLUID WAS LEAKING FROM FWD END OF MLG ACTUATOR SHAFT. LT MLG ACTUATOR DISSASSEMBLED AND FOUND PACKING ITEM 38 WAS SPLIT, ALL SEALS REPLACED AND GEAR FUNCTION LEAK CHECKED OK

CA110607011	AIRTRC	PWA	TUBE	CRACKED
6/6/2011	AT802A	PT6A67A	1102910	FUSELAGE

CRACK FOUND UPPER DIAGONAL TUBE IN AFT FUSELAGE WHILE DOING SL266 ON THIS TUBE. NOTE: THIS ACFT IN MOUNTED ON FLOATS.

CA110613008	AIRTRC	PWA	MOTOR	INTERMITTENT
6/8/2011	AT802A	PT6A67A	D186126	FLAP SYSTEM

(CAN) FLAPS WOULD NOT RETRACT. DEAD SPOT IN FLAP MOTOR CAUSES INTERMITTENT OPERATION. THIS IS A RECURRING DEFECT IN THESE MOTORS. EXPERIENCED THE SAME SNAG LAST YEAR (2010).

2011FA0000572	AMD	GARRTT	THROTTLE CABLE	BINDING
8/28/2011	FALCON900EX	TFE73160	4808655	ZONE 100

AT TOP OF DESCENT, NR 2 THROTTLE STUCK AT FULL FWD POSITION , AUTO THROTTLES DISCONNECTED, MANAGED TO GET THROTTLE BACK TO IDLE HOWEVER IT WAS STUCK THERE AND WOULD NOT ADVANCE. APPEARED TO FREE UP AT AROUND 14000 FT . FLEW 2 ENG APPROCH. NR 2 TELEFLEX CABLE BETWEEN FRAME 34 AND ENG REMOVED , MOISTURE FOUND AT FRAME 34 CONNECTION. NITROGEN BLOWN THROUGH CABLE. CABLE RE-INSTALLED AND RIGGING CHECKED .

2011FA0000566	AMTR	AMTR	CRANKSHAFT	BROKEN
8/4/2011	SONEX	4AR1200VOLKS		ENGINE

CRANK BROKEN AT FLANGE. CAST CRANKSHAFT FAILURE.

CA110516008	AYRES	PWA	ENGINE	POWER LOSS
5/6/2011	S2RT65	PT6A34AG		

POWER LOSS (SINGLE ENGINE DURING T/O ROLL, THE ENGINE HAD A POWER LOSS. THE PILOT ABORTED T/O, REDUCED POWER TO IDLE AND SHUT THE ENGINE DOWN. THE ACFT WAS TOWED BACK TO ITS PARKING SPACE AND A GROUND RUN COULD NOT REPRODUCE THE PROBLEM. THE FUEL CONTROL WILL BE REPLACED AS PRECAUTIONARY MEASURE BEFORE THE ACFT IS RETURNED TO SERVICE.

CA110531006	BBAVIA	LYC	CONTROL HANDLE	FAILED
5/26/2011	8GCBC	O360C2E	31700	TE FLAPS

PILOT WAS GOING FROM 2 ND TO 4 TH NOTCH OF FLAP AND THE HANDLE FAILED. TT ON PART 1502 HRS.

CA110512002	BBAVIA	LYC	CYLINDER HEAD	CRACKED
5/11/2011	8GCBC	O360C2E	LW12427	ENGINE

DURING A 100HR INSP, A CRACK WAS DISCOVERED COMING FROM THE LOWER SPARK PLUG HOLE PROCEEDING TOWARDS THE EXHAUST VALVE. IT IS COMMON PRACTICE IN THE FACILITY TO BORESCOPE THE CYLINDERS AT EACH 100 HR INSP TO LOOK FOR SUCH CRACKS AS PREVENTITIVE MX TO REDUCE THE NR OF IN FLIGHT FAILURES.

CA110610008	BEECH	PWA	PRECOOLER	CRACKED
6/5/2011	1900D	PT6A67D	1143800025	RT ENGINE AIR

THE PILOT REPORTED THE ENGINE HAD MARGINAL PERFORMANCE DURING HIGH AMBIENT TEMP CONDITIONS WITH ANTI-ICE ON THE ENGINE WAS TEMPERATURE LIMITED. ALL ENGINE AIR SYS WERE INSPECTED AND MX DISCOVERED THE RT ENGINE PRECOOLER HAD CRACKED ON THE INLET SIDE WELD JOINT, AS WELL AS THERE WAS HEAT DAMAGE TO THE ENGINE OIL COOLER WHERE THE HOT AIR LEAK HAD MELTED SOME FINS. BOTH ASSEMBLIES WERE REPLACED AND THE ACFT WAS RETURNED TO SERVICE.

2011FA0000689	BEECH	BEECH	ATTACH FITTING	CRACKED
10/19/2011	200BEECH		1011100731	ZONE 500

WHILE ACCOMPLISHING A WING BOLT INSPECTION, THE LEFT HAND, LOWER WING SPAR ATTACH SHEAR FITTING WAS FOUND CRACKED. THE CRACK WAS APPROXIMATELY 0.75" LONG AND LOCATED IN THE FORWARD FLANGE AREA.

CA110530012	BEECH	PWA	BEARING	SEIZED
5/20/2011	200BEECH	PT6A41	21400100	NOSE AXLE

UPON INSPECTION OF THE NOSE WHEEL ASSY, IT WAS NOTICED THAT THE RETAINING NUT PN AN7502-24 WAS BACKED OFF AND THE COTTER PIN HAD BEEN SHEARED. THE PIN & NUT WAS REMOVED AND THE WASHER PN MS21258C24 HAD TURNED AND SHEARED THE LOCK TAB OFF AND WAS STUCK TO THE SPACER. THE WHEEL BEARINGS WERE DESTROYED AND SEIZED ONTO THE AXLE. THE WHEEL ASSY HAD TO BE REMOVED BY BEATING IT WITH A HAMMER BY 3 MX. THE WHEEL ASSY WAS REPLACED WITH A SERVICABLE UNIT AND THE ACFT WAS RETURNED TO SERVICE.

2011FA0000583	BEECH	CONT	BULB	BROKEN
9/9/2011	A45	IO550*		OIL TEMP

OIL TEMP BULB BROKEN IN HALF. ELECTRICAL HALF FELL OUT WITH CONNECTOR, LEAVING HOUSING IN OIL COOLER AND LEAKING.

CA110531007	BEECH	PWA	SEAL	LEAKING
5/12/2011	B200	PT6A42	3022375	FCU DRIVE

ENGINE LOST 3-4 QUARTS DURING PREVIOUS FLIGHT. DURING INVESTIGATION OIL WAS FOUND TO BE COMING FROM THE HIGH PRESSURE FUEL PUMP DRAIN BETWEEN THE ENGINE AND FCU. FCU AND FUEL PUMP WERE REMOVED AND THE SEAL AT THE ENGINE DRIVE WAS FOUND TO HAVE MIGRATED COMPLETELY OUT OF ITS CARRIER AND LYING ON THE SHAFT. SEAL AND CARRIER WERE REPLACED AS WELL AS THE FCU AS A PRECAUTIONARY MEASURE AND THE ACFT RETURNED TO SERVICE.

CA110613015	BEECH	PWA	OIL FILTER	BYPASSING
6/13/2011	C90A	PT6A21	307097601	LT ENGINE

OPS 3 AND 4 INSPECTION UNDER WAY FOUND LT ENGINE OIL MAIN FILTER BYPASS CONE SEPARATED AT THE END. REPLACED WITH NEW.

VJ3R20110901001	BEECH	CONT	CIRCUIT BREAKER	FAILED
9/1/2011	F33A	IO520BB	35380132103	BEACON LIGHT

PILOT REPORTED BEACON LIGHT INOP. ON TROUBLESHOOTING, TECH FOUND CIRCUIT BREAKER/ SWITCH TO BE AT FAULT. AD 2008-13-17 HAD BEEN COMPLETED 2466 FLIGHT HOURS PRIOR. NO PROBABLE CAUSE OR

RECOMMENDATIONS AT THIS TIME.

VJ3R20110901002	BEECH	CONT		CIRCUIT BREAKER	FAILED
9/1/2011	F33A	IO520BB		35380132103	LANDING LIGHT

PILOT REPORTED LANDING LIGHT INOPERATIVE. ON TROUBLESHOOTING, TECH FOUND CIRCUIT BREAKER/ SWITCH TO BE AT FAULT. AD 2008-13-17 HAD BEEN COMPLETED 2079 FLIGHT HOURS PRIOR AND ESTIMATED CYCLES 8316. NOTICED NEW CIRCUIT BREAKER MFG. NO PROBABLE CAUSE OR RECOMMENDATIONS AT THIS TIME.

VJ3R20110901003	BEECH	CONT		CIRCUIT BREAKER	FAILED
9/1/2011	F33A	IO520BB		35380132103	LANING LIGHT

PILOT REPORTED LANDING LIGHT INOPERATIVE. ON TROUBLESHOOTING TECH FOUND CIRCUIT BREAKER/ SWITCH TO BE AT FAULT. AD 2008-13-17 HAD BEEN COMPLETED 1552 FLIGHT HOURS PRIOR AND ESTIMATED CYCLES 6208. NOTICED NEW CIRCUIT BREAKER MFG. NO PROBABLE CAUSE OR RECOMMENDATIONS AT THIS TIME.

VJ3R20110901004	BEECH	CONT		CIRCUIT BREAKER	FAILED
9/1/2011	F33A	IO520BB		35380132101	NAVAGATION LIGHT

MECHANIC REPORTED NAV LIGHT CIRCUIT BREAKER FELT WEAK. AD 2008-13-17 HAD BEEN COMPLETED 1552 FLIGHT HOURS PRIOR AND ESTIMATED CYCLES 6208. NOTICED NEW CIRCUIT BREAKER MFG. NO PROBABLE CAUSE OR RECOMMENDATIONS AT THIS TIME.

CA110509012	BELL	ALLSN		BLADE	CRACKED
5/6/2011	206B	250C20		206016201131	TAIL ROTOR

DURING AN AFTER LAST FLIGHT CHECK, A CRACK WAS FOUND ON THE TAIL ROTOR BLADE RUNNING PARALLEL WITH THE T/E, ADJACENT TO THE CHORDWISE BALANCE WEIGHT.

CA110503008	BELL	ALLSN		BULKHEAD	CRACKED
5/3/2011	206B	250C20	031004159	206030446001F	TAILBOOM

2 CRACKS FOUND ON TAILBOOM BULKHEAD. CRACKS GENERATED FROM THE HOLES FOR T/R GEARBOX STUDS, FOUND DURING TAIL ROTOR GEAR BOX ATTACHMENT CHECK ON 300 HOUR AIRFRAME INSPECTION.

2011FA0000574	BELL	ALLSN		STUD	WORN
9/3/2011	206L1	250C28		68870991	OIL CAP

ACFT WAS IN CRUISE FLT, PILOT NOTICED OIL PRESSURE DEMINISHING, PILOT INITIATED LANDING. ONCE ACFT WAS ON THE GROUND PILOT NOTICED OIL PRESSURE AT FLUCTUATING FROM ZERO TO 30 PSI, AND ALSO NOTICED SMOKE COMING FROM ENGINE. ENGINE WAS SHUTDOWN AND MX WAS CALLED OUT. UPON ARRIVAL, TECH NOTICED OIL ON BOTH SIDES OF MID FUSELAGE. UPON FURTHER INSPECTION, WITH ENGINE COWLING REMOVED, NOTICED THAT THE ENGINE OIL FILTER CAP WAS NOT FULLY SEATED. PROCEEDED TO FURTHER INSPECT AND FOUND THAT 1 OF THE STUDS THAT SECURES THE CAP DOWN HAD WORN THREADS.

CA110206002	BELL	PWA		STIFFENER	CRACKED
1/28/2011	212	PT6T3B		212030099027	TAILBOOM

STIFFENER, IN BASE OF FIN FOUND CRACKED ALONG FLANGE AGAINST SKIN.

CHIR20110902001	BOEING	GE	GE	PIN	WORN
9/2/2011	1072	CT581101		82609	PRUIIFIER SHAFT

CENTRIFUGAL PURIFIER RECEIVED FOR REPAIR DUE TO REPORTED LOOSE SHAFT. DISCREPANCY CONFIRMED AND FOUND PIN HOLDING SHAFT IN PLACE SEVERELY WORN.

EE4Y1108001	BOEING			ANGLE	CRACKED
8/29/2011	7372H4				ZONE 100

PAX CABIN BS 597 BETWEEN S-17L AND S-18L WITH ANGLE CRACKED. THE PART CRACKED WAS REPLACED.

EE4Y1108002	BOEING		STRINGER CLIP	CRACKED
8/29/2011	7372H4		69353642	ZONE 200

PAX CABIN BS 1006 STRINGERS CLIP CRACKED. THE PARTS WERE REPLACED.

EE4Y1108003	BOEING		BEAM	CRACKED
8/29/2011	7372H4		654653723	ZONE 200

UPPER FUSELAGE BS 578, RBL 65 STUB BEAM UPPER CHORD CRACKED. THE PART CRACKED WAS REPLACED.

EE4Y20110919001	BOEING		SKIN	DENTED
9/19/2011	7372H4		654577453	ZONE 100

LOWER FUSELAGE STA 774, BETWEEN STRINGER 24L AND STRINGER 25L SKIN WITH DENT. A PERMANENT REPAIR IS INSTALLED FOLLOWING MFG REPAIR GUIDELINES UNDER WO Z10226, ITEM 1-101.

EE4Y20110919002	BOEING		SKIN	DENTED
9/19/2011	7372H4		654577453	ZONE 100

LOWER FUSELAGE BS 816, STRINGER 20 SKIN WITH DENT. A PERMANENT REPAIR IS INSTALLED FOLLOWING MFG REPAIR GUIDELINES UNDER WO Z10226, ITEM 1-44.

EE4Y20110919003	BOEING		SKIN	DENTED
9/19/2011	7372H4		654577453	ZONE 100

LOWER FUSELAGE AT STA 819 BETWEEN STRINGER 22L AND STRINGER 23L SKIN WITH DENT. A PERMANENT REPAIR IS INSTALLED IAW REPAIR GUIDELINES UNDER WO Z10226 ITEM 1-43.

5PHR20110831001	BOEING	PWA	PLUG	MISINSTALLED
7/18/2011	767	PW4060	38311466	FUEL/OIL COOLER

EVALUATION CONDUCTED BY MFG. REPAIR ACTIONS AND HISTORY PRIOR TO INVESTIGATION, TO BE PROVIDED BY OPERATOR OR ITS SUPPLIER. HISTORY OF OVERTEMP/ENGINE SHUTDOWN. UNIT WAS REPAIR AT OPERATOR, VENDOR GA TELESIS. THE VALVE FAILED TO OPERATE DURING RECEIVING TESTS. THE FAILURE WAS ISOLATED TO THE LAP ASSY SECTION SINCE THE SOLENOID MET ALL TEST REQUIREMENTS. DISASSEMBLY AND INSP OF THE LAP ASSY SHOWED THE UNIT WAS INCORRECTLY ASSEMBLED. THE PLUG IN THE LAP ASSEMBLY WAS INSTALLED INCORRECTLY (BACKWARDS). THE RESULT WAS NO SPRING LOAD TO HOLD THE SLIDE ASSY IN THE CORRECT OPERATIONAL POSITION. THE SLIDE ASSY WAS FREE TO SHUTTLE TO THE BYPASS OR NORMAL OPERATION MODE NEGATING THE INTENT OF THE SOLENOID ASSY TO CORRECTLY DIRECT THE INLET FLOW TO THE OUTLET OR BYPASS PORTS.

2011FA0000569	BOEING		BRAKE	FRACTURED
8/10/2011	767424ER			NR 7

AFTER ACFT DEPARTURE, THE AIRPORT AUTHORITY FOUND SEVERAL BRAKE DEBRIS ON THE INNER TAXIWAY NEAR THE POSITION 17. THE DEBRIS HAVE BEEN GIVEN TO OUR LINE MX PERSONNEL, AND HAVE MX STORE. FOLLOWING THIS QUICK INVESTIGATION, IT APPEARS THAT THE BRAKE DISK AND PISTON DEBRIS FOUND ON THE TAXIWAY ARE VERY SIMILAR TO THE DISK INSPECTED ON THE SPARE BRAKE. FURTHER TO THIS RESULT, MX HAS BEEN INFORMED AND PICTURES OF THE DEBRIS SENT TO THEM FOR DEEPER INVESTIGATION. THE ACFT HAD BEEN INSPECTED BEFORE FLIGHT AND ETOPS PRE-DEPARTURE CHECK PERFORMED. DURING THE INSP/CK NO REMARKS OR DISCREPANCIES HAD BEEN REPORTED. AFTER ACFT ARRIVAL, MX CONFIRMED THAT THE AFT INNER BRAKE (NR 7) WAS DAMAGED AND THAT THE DEBRIS FOUND WERE COMING FROM THAT BRAKE.

2011FA0000571	CESSNA	CONT	CESSNA	BELLCRANK	LOOSE
9/4/2011	150C	O200A			RUDDER

HAVING REMOVED THE RUDDER FOR AN UNRELATED ISSUE, IT WAS FOUND THAT THE BELLCRANK WAS LOOSE. FURTHER EXAMINATION REVEALED THAT ALL THE RIVETS SUPPORTING THE BELLCRANK AND ADJACENT STRUCTURES WERE LOOSE IN THEIR RESPECTIVE MOUNTING HOLES. THE BOTTOM OF THE RUDDER SPAR, PN 0431001-16 WAS CRACKED IN 2 PLACES. LIKewise, THE BOTTOM RIB, PN 0431001-17 WAS ALSO CRACKED.

EVIDENCE SUGGESTS THAT THE RUDDER INSTALLED IS NOT ORIGINAL.

CA110621010	CESSNA	LYC	CAMSHAFT	WORN
6/21/2011	152	O235L2C	SL75706	ENGINE

INTAKE LOBE NR 1 IS ALMOST COMPLETELY WORN DOWN.

CA110609005	CESSNA	LYC	TUBE	SPLIT
6/9/2011	172N	O320H2AD	500X5	TIRE

ACFT WAS PARKED ON RAMP AFTER FLIGHT AND A COUPLE HOURS LATER A PASSING PILOT NOTICED THE NOSE TIRE COMPLETELY FLAT. MX REMOVED THE TIRE AND DISCOVERED THAT THE TUBE HAD A 1" LONG SPLIT IN IT. THIS HAS BEEN A COMMON OCCURRENCE ON THIS SIZE OF TUBE OVER THE LAST WHILE. TUBE WAS REPLACED.

CA110613010	CESSNA	LYC	BULKHEAD	CRACKED
6/10/2011	172P	O320D2J	05503214	PROP SPINNER

PROPELLER SPINNER BULKHEAD HAS SEVERAL CRACKS AROUND BOLT HOLES.

CA110601011	CESSNA	LYC	COVER	CRACKED
6/1/2011	172R	IO360L2A		FLOW DIVIDER

ON SCHEDULED INSPECTION, THE FLOW DIVIDER COVER PLATE WITH THE 4 COUNTERSUNK SCREWS HOLDING IT DOWN WAS FOUND TO HAVE MULTIPLE CRACKS FROM 3 OUT OF THE 4 BOLT HOLES ON BOTH SIDES.

CA110608006	CESSNA	LYC	TERMINAL	BROKEN
6/6/2011	172R	IO360L2A		ALTERNATOR

ALTERNATOR FAILURE IN FLIGHT, UNSCHEDULED LANDING, ON T/S SYS FOUND THE ALTERNATOR B & WIRE TERMINAL END BROKEN OFF AT THE B+ CONNECTION AT ALTERNATOR. TIME ON THE ACFT IS 5662, UNKNOWN IF TERMINAL END HAS BEEN CHANGED IN THE PAST.

CA110613012	CESSNA	LYC	GROUND WIRE	CORRODED
6/10/2011	172R	IO360L2A		ALTERNATOR

THE GROUND TERMINAL OF THE ALTERNATOR WAS CORRODED/DIRTY MAKING BAD CONTACT. THE OIL TEMPERATURE GAUGE WAS "BACK READING" OFF THIS WHICH CAUSED THE GAUGE TO READ HIGH. CESSNA TECH REP WAS ADVISED OF THE PROBLEM AND RECOMMENDED THIS TO CHECK AS A SOLUTION WHICH FIXED THE INDICATION PROBLEM. THE INITIAL PROBLEM WAS THE OIL TEMP GAUGE WENT TO THE RED LINE DURING FLIGHT.

2011FA0000579	CESSNA		SWITCH	FAILED
9/8/2011	172S		CM35895	NAVIGATION LIGHT

ALL NAV LIGHTS INOPERATIVE ON PREFLIGHT , TROUBLESHOOT SYS FOUND SWITCH CM3589-5 FAILED, THIS IS THE 5TH SWITCH OF THIS PN CHANGED ON THIS MODLE OF ACFT. HOURS VARY FROM 500 TO 3714.

CA110610005	CESSNA	LYC	CONTROL CABLE	WORN
6/7/2011	172S	IO360L2A	052264710	AILERONS

STAINLESS STEEL AILERON CABLES FOUND WORN AT FAIRLEAD IN RT WING ABOVE ROLL SERVO, AT FAIRLEAD IN LT WING, AND AT THE 3 SMALL PULLEYS IN THE CABIN CEILING. TT 1645, RT AILERON CABLES SHOWED THIS SAME PROBLEM AT ABOUT 600 TT, CABLES WERE REPLACED AND SDR SUBMITTED AT THAT TIME. REF US FAA SAIB CE-11-36. MFG IS ADDRESSING THE PROBLEM.

CA110620008	CESSNA	LYC	DISTRIBUTOR GEAR	LOOSE
6/17/2011	172S	IO360L2A	K3008	MAGNETO

AT ROUTINE 500 HR MAGNETO INSPECTION, THE DISTRIBUTOR FINGER OF THE DISTRIBUTOR GEAR WAS FOUND TO BE LOOSE - DISTRIBUTOR GEAR REPLACED.

2011FA0000675	CESSNA	CONT	CASTING	CRACKED
10/13/2011	182G	O470R	07416031	MLG ATTACH

CASTING CRACK FOUND BY VISUAL INSPECTION DURING COURSE OF ANNUAL INSPECTION. THE CRACK IS LOCATED ON THE FORWARD END OF THE SUPPORT CASTING AND RUNS FROM 1/4 INCH FROM MOUNT HOLES ON THE OUTBOARD SIDE TO WITHIN 1/4 INCH OF THE MOUNT HOLES ON THE INBOARD SIDE OF THE CASTING.

2011FA0000561	CESSNA	CONT	CESSNA	BULKHEAD	CRACKED
7/28/2011	182M	O470R		07126161	TAIL CONE

WHILE PERFORMING A VISUAL INSP OF THE AFT FUSELAGE BULKHEAD IAW AD 72-07-09; DISCOVERED CRACKS IN THE AFT BULKHEAD BETWEEN THE RUDDER CABLE CUTOUT AND THE BULKHEAD FLANGE (BOTH SIDES). FOLLOWING THE INSTRUCTIONS IN THE AD, PERFORMED A TORQUE CHECK OF THE BOLTS IN THE FORWARD VERTICAL STABILIZER SPAR AND DISCOVERED THAT THEY WERE LOOSE. THE BULKHEAD HAS BEEN REPLACED, ALL AD REQUIREMENTS HAVE BEEN MET, AND THE ACFT RETURNED TO SERVICE. THIS MALFUNCTION/DIFFICULTY REPORT IS BEING SUBMITTED TO COMPLY WITH THE REPORTING REQUIREMENTS OF THE AD.

CA110611001	CESSNA	PWA	B-NUT	BROKEN
6/8/2011	208	PT6A114		HYD SYSTEM

THE ACFT LANDED AND WAS PROCEEDING DOWN THE RUNWAY NORMALLY UNTIL THE PILOT APPLIED THE BRAKES IN PREPARATION FOR LT TURN ONTO TAXIWAY, THE ACFT STARTED TURNING TO THE LT AND PROCEEDED OFF THE RUNWAY AND DOWN AN EMBANKMENT JUST BEFORE THE TAXIWAY TURNOFF. THE PILOT NOTICED THAT THE RT BRAKE FELT SPONGY AS COMPARED TO THE LT. AFTER INSPECTING THE BRAKE ASSEMBLIES, IT WAS NOTICED THAT THE BRAKE LINE FOR THE RT SIDE BRAKE (NR 4 UNIT) WAS NOT ATTACHED TO THE BRAKE ASSY AS THE B-NUT WAS MISSING FROM THE HOSE. A SEARCH WAS CARRIED OUT FOR THE B-NUT BUT IT WAS NOT FOUND.

2011FA0000582	CESSNA	CONT	GEAR	SHEARED
8/12/2011	421B	GTSIO520H	AEC646655	ALTERNATOR

PILOT REPORTED IN FLIGHT LOSS OF ALTERNATOR. ACFT LANDED W/O INCIDENT. INVESTIGATION REVEALED ALTERNATOR DRIVE CLUTCH GEAR. MISSING DAMPNER MATERIAL AND ALTERNATOR SHAFT BROKEN AT END OF ARMATURE. CUT OIL FILTER OPEN, FOUND TO BE FULL OF STEEL FILINGS. ALTERNATOR AND DRIVE CLUTCH INSTALLED 12-2009. LAST OIL CHANGE ON THIS ENGINE 13 HRS PRIOR. NO METAL DETECTED IN FILTER MEDIA AT THAT TIME. NO OPERATIONAL PROBLEMS NOTED PRIOR TO FAILURE.

2011FA0000568	CESSNA		BOLT	MISINSTALLED
8/25/2011	525			MLG

DURING A ROUTINE OPS CHECK OF THE LANDING GEAR EMERGENCY EXTENSION SYS, THE TEST FAILED TO ACTIVATE THE EMERGENCY BLOW DOWN SYS. UPON FURTHER INVESTIGATION, IT WAS FOUND THAT THE ATTACHING BOLT CONNECTING THE ACTIVATION CABLE TO THE ARM OF THE NITROGEN BOTTLE HAD BEEN INSTALLED AT A HORIZONTAL POSITION. THIS CAUSED THE BOLT HEAD TO COME IN CONTACT WITH THE SUPPORT BRACKET THAT MOUNTS THE BOTTLE. THIS CAUSED THE BOLT HEAD TO JAM IN THIS POSITION BEFORE ACTIVATION OF THE BOTTLE, THUS NOT EXTENDING THE LANDING GEAR FULLY. DURING REINSTALLATION THE BOLT WAS ROTATED 90 DEGREES TO END UP BEING MOUNTED VERTICALLY AND THE PROBLEM WAS ELIMINATED.

2011FA0000546	CESSNA	WILINT	BEARING	NOISY
8/10/2011	525	FJ44	060001501	NR 2 GYRO

NR 2 COMPASS SYS PRECESSING. ON INITIAL POWER ON NR 2 GYRO (KG-102A) BEARINGS SOUND NORMAL. 15 MINUTES LATER BEARINGS SOUND LIKE GRAVEL.

Z5FA2011F00191	CESSNA	WILINT	FUEL CONTROL	FAILED
9/1/2011	525B	FJ443A	77697	ENGINE

RIGHT ENGINE FUEL DELIVERY UNIT FAILED IN FLIGHT, R & R AND THE ACFT RETURNED TO SERVICE.

2011FA0000575	CESSNA	WILINT	CESSNA	VALVE	CRACKED
9/7/2011	525B	FJ443A		420001263	ZONE 100
PRESSURE CYLINDER REGULATOR VALVE FOR THE EMERGENCY EXTENSION OF THE LANDING GEAR AND EMERGENCY BRAKES FOR THE AIRCRAFT HAD A CRACK IN IT. FAILURE OF THE VALVE DUE TO CRACKING WOULD RESULT IN LOSS OF PRESSURE TO EXTEND THE LANDING GEAR IN THE EMERGENCY EXTENSION MODE OR FAILURE OF THE WHEEL BRAKES TO OPERATE IN THE EMERGENCY MODE.					
2011FA0000551	CESSNA	PWA		BULKHEAD	CRACKED
8/29/2011	550	JT15D4		551202035	ZONE 200
DURING POST FLIGHT VISUAL CHECK, THE MECHANIC NOTICED EVIDENCE OF A CRACK IN THE TAILCONE LT BULKHEAD FRAME AFT OF ENGINE CARRY-THROUGH BEAM AT FS 367.48. THE CRACK WAS VERY SMALL IN THE RADIUS. R & R BY DIRECT REPLACEMENT WITH NEW PART FROM MFG.					
CWQR20110831016	CESSNA			CONTROL CABLE	FRAYED
8/31/2011	560XL			666000134	ELEVATOR TRIM
DURING A SCHEDULED INSPECTION FOUND ELEVATOR TRIM CABLE FRAYED AT LEAST HALF WAY THROUGH. THIS CABLE IS A PART OF A LARGER CABLE ASSY, PN 6660003-1. THIS CABLE HAS BEEN A SUBJET OF SL, BUT THESE CABLES HAVE IN THE PAST AND CONTINUE TO FRAY PREMATURELY. A SERVICE CONDITION REPORT HAS BEEN FILED WITH MFG UNDER NR 585949.					
CA110613016	CESSNA	CONT		CONTROL CABLE	BROKEN
6/8/2011	A185F	IO550D			RUDDER
DURING INSPECTION OF CONTROL CABLES, FOUND RT RUDDER RETURN CABLE BROKEN AT SWAGED BALL TERMINAL.					
CA110531008	CESSNA	CONT		WIRE	BURNED
5/31/2011	U206F	IO520F			ALTERNATOR
ACFT LOST RADIO COMMUNICATIONS IN FLIGHT. RETURNED TO DEPARTURE AIRPORT. MX FOUND A BURNED WIRE ON THE ALTERNATOR AND REPAIRED. ALTERNATOR REPLACED.					
FCPA201108260011	CIRRUS			TRANSMITTER	LEAKING
8/26/2011	SR22			151415001	FUEL FLOW
DURING ENGINE 100 HR INSP, FOUND FUEL FLOW TRANSMITTER LEAKING FUEL AT TOP CAP.					
JR2R2011090100358	CNDAIR			INTERCOSTAL	CRACKED
9/1/2011	CL6002D24			SH69037060	FUSELAGE
INTERCOSTAL CRACKED AT STATION 855 AND STR 25R.					
3S8R201109020003	DHAV			DOUBLER	CRACKED
9/2/2011	DHC8102			85410893106	NACELLE
419CT HAS CRACKED DOUBLER AT POINT OF FINGERNAIL. REPLACED DOUBLER IAW SRM 51-42-05.					
3S8R201109020004	DHAV			SUPPORT ANGLE	CRACKED
9/2/2011	DHC8102			85350282103	
LEFT UPPER T-DUCT SUPPORT ANGLE CRACKED. REPLACED ANGLE IAW DHC8102, SRM 51-42-05 AND AC43,13-1B, PAGE 4-22, PAR 4-57.					
3S8R201109020005	DHAV			SUPPORT ANGLE	CRACKED
9/2/2011	DHC8102			85350282104	
RT UPPER T-DUCT SUPPORT ANGLE CRACKED. REPLACED ANGLE IAW DHC8102 SRM 51-42-05 AND AC43, 13-1B, PAGE 4-22, PAR 4-57.					

3S8R201109020006	DHAV			FRAME	CRACKED
9/2/2011	DHC8102			85310380	FUSELAGE
NLG WHEEL WELL FRAME CRACKED AT Z112.000 AND X110.000, RT OF CTR LINE (GEAR RELEASE CABLE HOLE). CUT OUT DAMAGE AND INSTALLED REPAIR PARTS IAW DHC8102 RD 8-53-7878 AND 11973.					
3S8R201109020002	DHAV	PWA		RIB	CRACKED
9/2/2011	DHC8102	PW120A		85411377101A	NACELLE
429CT FITTING CRACKED ON FINGERNAIL. REPLACED FITTING IAW SRM 54-78-11 AND 51-40-00.					
3S8R201109020007	DHAV			BRACKET	CRACKED
9/2/2011	DHC8103			83210014009	FAIRING
LEFT MLG DRAG STRUT AFT FAIRING ATTACHMENT BRACKET CRACKED IN 2 PLACES. R & R ATTACHMENT BRACKET IAW SRM 51-40-11.					
3S8R201109020009	DHAV			HEAT SHIELD	GOUGED
9/2/2011	DHC8103			85410726	ENGINE EXHAUST
NR 2 ENGINE FINGERNAIL UPPER SURFACE PATCH (HEAT SHIELD) DAMAGED. R & R FINGERNAIL PATCH IAW RD 8-54-177.					
3S8R201109020008	DHAV			ANGLE	CRACKED
9/2/2011	DHC8103			8541073410110	NACELLE
RT OTBD ENGINE AFT NACELLE LOWER STIFFENER ANGLES CRACKED. COMPLIED WITH PERMANENT REPAIR OF BOTH ANGLES, IAW 8-54-310.					
CA110516011	DIAMON	ROTAX	GOODYEAR	TUBE	FAILED
5/13/2011	DA20A1	ROTAX912F3			TIRE
AFTER A NORMAL LANDING, THE PILOT FOUND THE ACFT PULLING TOWARD THE RT AND ENDED UP STOPPING IN GRASS BESIDE THE RUNWAY. FOUND THAT THE RT MAIN TIRE WAS COMPLETELY FLAT. MX REPLACED THE TIRE AND TUBE AND FOUND THE TUBE HAD FAILED AND HAD A .2500" LONG SPLIT IN THE TUBE. THIS TUBE WAS IN SERVICE FOR LESS THAN A YEAR AND IT HAS BEEN A COMMON PROBLEM WITH THIS SIZE OF TUBE IN THE LAST COUPLE OF YEARS. THE TUBE IS MADE A LOT SMALLER THAN PREVIOUSLY MADE IN THAT THE TUBE MUST STRETCH A LOT BEFORE IT EXPANDS TO THE SIZE OF THE TIRE. PREVIOUSLY THE TUBE WAS MADE TO BE THE SAME SIZE AS THE TIRE. HAVE TRIED DIFFERENT BRANDS AND HAVE COMPLAINED TO SUPPLIERS BUT ALL THE TUBES, EVEN OF DIFFERENT BRANDS, SEEM TO BE MADE THE SAME.					
CA110607013	DIAMON	ROTAX		TUBE	SPLIT
6/6/2011	DA20A1	ROTAX912F3		5005	RT TIRE
AFTER LANDING PILOT DISCOVERED RT TIRE WAS FLAT. TIRE WAS REMOVED AND DISSASSEMBLED AND LARGE SPLIT FOUND IN TUBE (THERE WAS NO EVIDENCE OF PUNCTURE). THIS HAS BEEN HAPPENNING TOO OFTEN LATELY WITH THIS SIZE OF TIRE TUBE. IN MY OPINION THE TUBE IS MADE TOO SMALL FOR THE SIZE OF TIRE AND IT HAS TO EXPAND TOO MUCH TO MEET THE SIZE OF THE TIRE. ALL MFG SEEM TO MAKE THEM THE SAME.					
CA110601006	DIAMON	ROTAX		LIFTER	WORN
5/20/2011	DA20A1	ROTAX912F3		881831	ENGINE
WHILE TROUBLESHOOTING HIGH OIL CONSUMPTION THE OWNER DISCOVERED UNUSUAL WEAR ON NR 2 EXHAUST LIFTER. THE LIFTER CONTACT SURFACE WAS FOUND TO BE WORN WITH PITTING MARKS. 2 OF THE OTHER LIFTERS APPEAR NORMAL IN WEAR PATTERN WITH NO PITTING BUT THE REST OF THE LIFTERS ALSO SHOW SLIGHT WEAR/PITTING MARKS THAT ARE CONSISTENT WITH THE WEAR ON THE NR2 EXHAUST LIFTER. THE CAMSHAFT APPEARS NORMAL. ENGINE WILL BE REPAIRED WITH NEW LIFTERS AND A NEW CAM AS A PRECAUTIONARY MEASURE. IT IS NOT KNOWN IF THE HIGH OIL CONSUMPTION WAS RELATED TO THE LIFTER WEAR.					
CA110512001	DIAMON	CONT		LEVER	WORN

5/11/2011 DA20C1 IO240B 63255512 THROTTLE
DURING CRUISE FLIGHT PILOT REPORTEDLY TRIED TO REDUCE POWER TO IDLE, WAS UNABLE, RETURNED TO HOMEBASE AND LANDED UNEVENTFULLY USING MIXTURE IDLE CUT-OFF. UPON INSP OF THROTTLE LINKAGE IT WAS DISCOVERED SPLINES ON THROTTLE LEVER AND SHAFT WORN. IT IS SPECULATED THAT THE LEVER WAS INSTALLED ON SHAFT WITH SPLINES MISALIGNED, AFTER AN UNDETERMINED AMOUNT OF TIME SPLINES MAY HAVE REALIGNED THEMSELVES BUT WITH SOME 'PLAY' IN ACTUATION, CAUSING ADDITIONAL WEAR TO CONTINUE UNTIL SUCH TIME LEVER WOULD ROTATE ON SHAFT WITHOUT ROTATING LEVER. ORIGINALLY MFG HAD "NO" SPLINES ON LEVER, BUT LEVER WAS MADE FROM A SOFTER MATERIAL, IE BRONZE, ALLOWING IT TO "SET" IN PLACE ON SS, THROTTLE SHAFT.

[CA110531005](#) DIAMON CONT TUBE WORN
5/27/2011 DA20C1 IO240B 2227271100 RUDDER PEDAL

PRIOR TO START-UP THE PILOT NOTICED THAT HE WASN'T ABLE TO ADJUST THE RUDDER PEDALS, AFTER A VISUAL INSPECTION THE AME NOTICED THAT THE LT PILOT SIDE RUDDER PEDALS "S" TUBE HAD THE RUDDER CABLE PROTRUDING FROM ONE OF THE BEND. BOTH PILOT SIDE RUDDER PEDALS WERE REPLACED AND FURTHER INSP REVEALED THAT THE RT SIDE HAD SOME SIGNIFICANT WEAR. ALL OF FLEET HAS BEEN VISUALLY INSPECTED AND NO FURTHER PROBLEMS FOUND. THE MFG HAS NO TIME LIMITS ON THE PEDALS, WE WILL IMPLEMENT A MANDATORY "S" TUBE REPLACEMENT AT THE RUDDER CABLES REPLACEMENT. (3000 HRS)

[2011FA0000563](#) DIAMON CONT PUMP LEAKING
7/22/2011 DA20C1 IO240B 5367001 FUEL BOOST

ENGINE SHUTDOWN IN FLIGHT. UPON INSPECTION, FOUND A FINE DARK PARTICULATE CONTAMINATING FUEL SYS. AIRFRAME BOOST PUMP APPEARED TO BE SOURCE OF CONTAMINATION. THE AIRFRAME BOOST PUMP WAS LEAKING FUEL FROM ISOLATION CHAMBER BETWEEN PUMP AND MOTOR SECTIONS OF BOOST PUMP AND FROM THE SEAM WHERE THE PUMP SECTION ATTACHES TO THE ISOLATION CHAMBER. PUMP O/H 11/10/09.

[2011FA0000545](#) DIAMON LYC INSERT DEFORMED
8/8/2011 DA40 IO360M1A PFS8016 MUFFLER

FOUND MUFFLER INSERT INNER BAFFLE DEFORMED DURING AN ANNUAL INSPECTION.

[2011FA0000552](#) EMB STATIC PORT MISREPAIRED
8/24/2011 EMB500 100442107 ZONE 100

PRIOR TO INSTALLATION OF AN OVERHAULED DUAL STATIC PORT IT WAS NOTED THAT 1 OF THE AN FITTINGS THAT CONNECTS TO 1 OF THE STATIC LINES WAS DAMAGED ON THE SEATING SURFACE. A BENCH LEAK CHECK WAS PERFORMED AND THE LEAK RATE WAS BEYOND LIMITS. MFG SUPPLIED INSTALLATION DATA TO INSTALL A NEW FITTING, A SECOND LEAK CHECK WAS PERFORMED AND NO LEAKS WERE DETECTED. ON 4 OTHER OCCASIONS STARTING ON 2/26/2011 WE HAVE HAD SIMILAR ISSUES WITH DUAL STATIC PORTS, PN 100442-105, SN 807475 AND 804159, 100442-106, SN 807584, AND 100442-107, SN 835466, ALL OVERHAULED OR REPAIRED BY O/H FACILITY THAT HAVE LEAKED PRIOR TO INSTALLATION. IN MOST CASES THE CONNECTING AN FITTINGS WERE VISIBLY DAMAGED. ALL HAD 8130S ATTACHED.

[CA110617005](#) GRUMAN WRIGHT CARBURETOR MALFUNCTIONED
6/15/2011 FIRECAT 982C9HE2 PD12K18 ENGINE

NR 1 ENGINE RUNNING EXTREMELY RICH DURING PREFLIGHT RUNUP, CARBURETOR REPLACED.

[2011FA0000544](#) GULSTM CONT BOLT LOOSE
8/22/2011 112A IO360* AN46A7A HORIZONTAL STAB

WHILE COMPLYING WITH AD 11-07-13 LT AND RT ELEVATOR SPAR, IT WAS NOTED THAT THE HORIZONTAL STAB WAS LOOSE AT BOTH THE FRONT AND REAR MOUNTING POINTS. MOVEMENT WAS MOST NOTED AT THE FWD PORTION OF THE STAB WITH A ROCKING MOVEMENT SIDE TO SIDE. UPON INVESTIGATION IT WAS FOUND THAT ALL 10 BOLTS WERE TURNED A COMPLETE REVOLUTION TO TORQUE. REMOVED BOLTS AND EXAMINED HOLES FOR ELONGATION AND DAMAGE. NONE NOTED. TORQUED BOLTS TO FACTORY RECOMMENDED TORQUE VALVES. RECOMMENDED THAT THIS TORQUE VALVE BE CHECKED IMMEDIATELY, AND AT YEARLY INSPECTION. LOG BOOK RESEARCH SHOW THAT BY RECORD NO WORK HAD BEEN DONE TO EITHER THE HORIZONATAL OR TO

THE VERTICAL FIN.

GR4D20110907001	GULSTM	GULSTM	LINK	CORRODED
9/7/2011	GIV		1159M413235	ZONE 400

LEFT SUSPENSION LINK CORRODED.

CA110620011	HUGHES	ALLSN	SHAFT	SHEARED
6/18/2011	369D	250C20B		GOVERNOR

PILOT WAS IN A HOVER, NOTICED THAT THE NR/N2 RPM HAD INCREASED BY 3 PERCENT, BEEPED RPM DOWN AND CONTINUED HOVERING OPERATION AND THE RPM INCREASED AGAIN. ELECTED TO LAND AND UPON LANDING THE ENGINE STARTED TO OVERSPEED SO THE PILOT ROLLED THROTTLE OFF IMMEDIATELY. UPON REMOVAL OF THE GOVERNOR IT WAS DISCOVERED THAT THE SHAFT HAD SHEARED JUST BEHIND THE SPRING, JUST FORWARD OF THE NUT ON THE SHAFT.

CA110517002	MOONEY	LYC	CAMSHAFT	MAKING METAL
4/25/2011	M20F	IO360A1A	LW1884015B26064	ENGINE

INSPECTION OF OIL FILTER DURING ROUTINE MX REVEALED SMALL FERROUS METAL PARTICLES THAT WARRANTED FURTHER INVESTIGATION RESULTING IN THE REMOVAL OF NR 1 CYLINDER. IT WAS DISCOVERED THAT THE NR1 INTAKE TAPPET WAS SEVERELY GALLED. THE ENGINE WAS REMOVED FOR REPAIR AND SENT TO ENGINE FACILITY. UPON DISASSEMBLY ALL CAMSHAFT LOBES WERE FOUND TO BE WORN AND DAMAGED TO VARYING DEGREES. ALL BUT 2 OF THE TAPPET BODIES WERE SEVERELY GALLED. THE REMAINING 2 SHOWED SIGNS OF DISTRESS AND SURFACE IRREGULARITY (1 & 3 EXHAUST). AS A RESULT OF THE METAL CONTAMINATION THE FOLLOWING COMPONENTS WERE RENDERED UNSERVICEABLE: OIL PUMP HSG, ALL BRGS (MAINS AND RODS), 8 PISTON PIN PLUGS AND ALL 4 PISTONS (SKIRT DAMAGE). ENG WAS O/H 132.0 HRS. AGO AND CAMSHAFT AND LIFTERS WERE INSTALLED NEW.

2011FA0000577	NAMER	STRUT	FAILED
8/6/2011	T28C	G75482	NLG

DURING ROLLOUT AND AT APPROX 500' AFTER NOSE WHEEL TOUCHED DOWN AT LANDING, THE LOWER SECTION OF THE NOSE STRUT BROKE OFF. STRUT BROKE AT POINT WHERE THROUGH-BOLT IS INSTALLED. THIS BOLT HOLDS THE LOWER SECTION OF THE OLEO STRUT (PISTON) TO THE NOSE GEAR FORK.

2011FA0000581	PIAGIO	HYDRAULIC SYSTEM	MALFUNCTIONED
9/8/2011	P180		

DURING GEAR RETRACTION LOSS OF HYD POWER DUE TO POPPED CIRCUIT BREAKER. RE-ENGAGED C/B AND PERFORMED 20 MORMAL EXTENSIONS & RETRACTIONS OF THE LANDING GEAR, EACH TIME THE LANDING GEAR AND HYD SYS OPERATED NORMAL IAW 32-30-00, COULD NOT DUPLICATE CREW DISCREPANCY.

CA110525006	PIAGIO	PWA	HOSE	COLLAPSED
5/24/2011	P180	PT6A66	80337485001	BLEED AIR SYS

FOUND DURING A SCHEDULED INSPECTION, RIGHT ENGINE BLEED AIR SUPPLY HOSE INTERIOR WALL COLLAPSED WHILE THE EXTERIOR WALL WAS STILL SERVICEABLE.

XHCR20110831001	PILATS	BOOT	FAILED
8/31/2011	PC1245		ZONE 600

AFTER INSTALLATION OF A FULL SET OF PNEUMATIC DEICE BOOTS ON THE ACFT, PROCEEDED TO PERFORM THE OPS TEST OF THE PNEUMATICE DEICE BOOT SYSTEM. AT WHICH TIME, IN THE APPROPRIATE TIME IN THE SEQUENCE OF INFLATION, THE RT WING INBD BOOT HAD INFLATED PROPERLY, BUT BEFORE THE SEQUENCE WAS ENDED AND IT WAS DEFLATING, THE BOTTOM, INBD, AFT SECTION OF THE BOOT RELIEVED THE AIR PRESSURE AT A HIGH RATE. HALTED THE OPS CYCLE AT THAT TIME. UPON INSPECTION OF THE BOOT, FOUND THE "WING SIDE OF THE BOOT HAD ADHERED TO THE WING PROPERLY AND WAS NOT AT FAULT, BUT THE "STITCHING" THAT FORMS THE CHANNELS IN THE BOOT, HAD LET GO AND CONSEQUENTLY SPLIT THE SEAM ON THE AFT SIDE OF THE BOOT, SEPARATING THE LAYERS OF THE BOOT, CAUSING IT TO DUMP AIR OVERBOARD.

5/1/2011 PA18150 O360C4P 0360C4P

THE ENGINE NEVER DEVELOPED RATED HP. SINCE NEW. THEN FAILED TO MEET STATIC RPM. THE ENGINE ALWAYS GENERATED AN EXCESSIVE AMOUNT OF METAL. OIL SCREEN WAS CHECKED AND STEEL WAS PRESENT. ENGINE RETURNED TO MFG FOR THE SECOND TIME FOR TESTING.

[CA110518011](#) PIPER LYC HOSE BROKEN
5/17/2011 PA31350 LTIO540J2BD 19310004D0330PT FUEL INDICATING

PILOTS REPORTED HIGHER THAN NORMAL FUEL FLOW ON RT ENGINE. FOUND SENSE HOSE, THAT RUNS BETWEEN ENGINE INTAKE MANIFOLD TO DIFFERENTIAL PRESSURE CONTROLLER, BROKEN NEAR THE CONTROLLER HOSE FITTING. HOSE ASSY. REPLACED. NOTE: THIS PARTICULAR HOSE HAS BEEN FOUND BROKEN/CRACKED ON NUMEROUS ENGINE INSTALLATIONS. THIS HOSE IS EXPOSED TO EXCESSIVE HEAT AT THE CONTROLLER AREA AND PREMATURELY BECOMES VERY BRITTLE AND EVENTUALLY BREAKING. THE HOSE MATERIAL AT PRESENT IS REINFORCED RUBBER COMPOUND. SUGGEST A HIGH TEMP STEEL BRAIDED OR HIGH TEMP FIRE SLEEVE PROTECTED HOSE BE USED IN THIS INSTALLATION.

[2011FA0000570](#) PIPER BEARING TORN
9/2/2011 PA31T 80859002 RUDDER PEDAL

DURING EVENT 1 INSPECTION RUDDER PEDAL TORQUE TUBE SUPPORT BEARING, PN 80859-002 WAS FOUND TO BE TORN FREE FROM THE FUSELAGE STRUCTURE WHERE IT ATTACHES BELOW THE CENTER INSTRUMENT PANEL.

[2011FA0000555](#) PIPER HOSE LEAKING
4/7/2011 PA31T AE7010201K0240 OIL PRESSURE

ACFT HAD DEPARTED AND WAS ENROUTE AT CRUISE ALTITUDE. PILOT NOTICED DROP IN OIL PRESSURE ON LT ENGINE. DIVERTED, UPON ARRIVAL WHEN EXITING ACFT, FOUND ENGINE OIL SPREAD FROM REAR OF LT ENGINE COWLING ACROSS LT LOWER WING AND FLAP AND ONTO REAR FUSELAGE. OIL LEVEL ON LT ENGINE DIPSTICK SHOWED AT BOTTON OF DIPSTICK. REMOVED TOP LT COWLING AND INSPECTED ACCESSORY SECTION OF ENGINE. NO OBVIOUS SIGNS OF LEAK. WASHED ENGINE AND SERVICED WITH 8 QTS. BP2380 AND MOTORED ENGINE TO BUILD UP OIL PRESSURE. PRESSURE CAME UP TO 60 P.S.I. AND RECHECKED ACCESSORY SECTION. FOUND OIL DRIPPING OFF OF LOWER HOSE BETWEEN OIL COOLER AND ACCESSORY SECTION. REMOVED HOSE AND FOUND HOSE SATURATED UNDER FIRESLEEVE. REMOVED FIRESLEEVE AND FOUND IN AREA WHERE RADIUS WAS VERY TIGHT STEEL BRAIDING HAD CRACKED AND CUT INTO RUBBER HOSE. REPLACED HOSE ASSY WITH NEW HOSE ASSY, PN AE7010201K0240. WASHED ACCESSORY SECTION WITH SOLVENT AND PERFORMED LOW POWER ENGINE RUN. NO LEAKS FOUND. TOPPED OFF ENGINE OIL. OWNER PERFORMED LOCAL FLIGHT AND ON RETURN ONLY RESIDUAL OIL WAS FOUND COMING FROM LOWER COWLING. ACCORDING TO OWNER ALL ENGINE HOSES HAD BEEN REPLACED A SHORT TIME BEFORE THIS INCIDENT.

[2011FA0000580](#) PIPER LYC POWERPACK FAILED
8/15/2011 PA32R301T TIO540* HYC5005 HYD SYSTEM

LANDING GEAR HYD POWER PACK FAILED ON FIRST FLIGHT AFTER INSTALLATION. POWER PACK WAS O/H REF WO 3505.

[C41R20110907102](#) PIPER GUARD TORN
9/6/2011 PA46350P 105892002 LWR CABIN DOOR

DURING 100 HR INSPECTION, FOUND LOWER DOOR SUPPORT CABLE SHEATHS TORN. REPLACED CABLES. BELIEVE THIS IS CAUSED BY THE SHEATH NOT BEING SECURED TIGHTLY TO THE CABLE THE FULL LENGTH. WHEN PASSENGERS DEPART THE PLANE, THEY GRAB THE CABLE AND THE SHEATH SLIPS, CAUSING THE EXCESS STRESS, CAUSING THE TEARS. THIS SHEATH SHOULD BE GLUED THE FULL LENGTH, OR REPLACED WITH A LOOSELY FITTING LEATHER COVERING ATTACHED WITH VELCRO. THIS WOULD ALSO ALLOW FOR INSPECTION OF THE CABLE.

[C41R20110907101](#) PIPER SWITCH OUT OF ADJUST
9/6/2011 PA46350P 688345 TE FLAPS

OWNER REPORTED FLAPS INTERMITTENTLY WOULD NOT GO FROM 10 TO 20 DEGREES UNLESS SELECTOR

HANDLE WAS MANIPULATED. FOUND FLAP SWITCHES ON SELECTOR CAM TO BE OUT OF ADJUSTMENT. SLIGHT PRESSURE ON SELECTOR HANDLE ROD WOULD ACTUATE FLAPS AS NORMAL. ADJUSTED FLAP SWITCHES IAW MM. OPS CKS OK.

E81R20110830001	RAYTHN		PIN	MISSING
8/30/2011	G36		116X12	FRONT SEAT ASSY

INVESTIGATED PILOT COMPLAINT OF NOT BEING ABLE TO MOVE COPILOT'S SEAT FORWARD OR AFT. FOUND CENTER TRACK LOCKING PIN NOT LIFTING HIGH ENOUGH TO DISENGAGE FROM TRACK LOCK HOLES. AFTER REMOVING SEAT AND PARTIALLY DISASSEMBLING TRACK LOCKING MECHANISM, FOUND .032" STAINLESS STEEL SAFETY WIRE SUBSTITUTED FOR PN .0625 X .5 LOCKING PIN THAT SECURES PN 36-530026-49 TRACK LOCKING PIN TO OPERATING MECHANISM. SAFETY WIRE HAD ELONGATED LOCKING PIN HOLE IN TRACK LOCK PIN TO EXTENT EXCESSIVE SLOP IN MECHANISM WOULD NOT ALLOW TRACK LOCKING PIN TO OPERATE HIGH ENOUGH TO RELEASE SEAT. REPLACED THE TRACK LOCK PIN AND INSTALLED WITH CORRECT HARDWARE IAW THE G36 IPC. SEAT OPERATIONS NORMAL FOLLOWING REPAIR. MAINTENANCE RECORDS UNAVAILABLE, NOT KNOWN IF SEAT WAS REPAIRED FOLLOWING AIRCRAFT BUILD.

CA110517004	ROBSIN	LYC	YOKE	WORN
5/16/2011	R22BETA	O320B2C	A9084	M/R GEARBOX

MAIN ROTOR GEARBOX YOKE FOUND LOOSE ON 100HR INSPECTION. FLEX PLATE WAS REMOVED TO REVEAL NUT AND COTTER PIN INTACT. WASHER UNDER NUT HAD A STEP WORN IN IT. BACK OF NUT WAS FOUND TO HAVE WEAR. YOKE HAS VISIBLE STEPS WORN IN IT. ADVISED RHC. THEY REQUESTED PICTURES FOR DIAGNOSIS. PICTURES OF NUT/WASHER, YOKE AND MRGB INPUT SPLINES PROVIDED. RHC ADVISED TO INSTALL NEW YOKE, WASHER AND NUT. TORQUE NUT TO HIGH SIDE OF TORQUE SPREAD, LOCTITE YOKE ON SPLINE AND CHECK FOR MOVEMENT AND LOOSNESS EVERY OIL CHANGE.

CA110420011	ROBSIN	LYC	CONTROLLER	FLUCTUATES
4/15/2011	R44	O540F1B5	D2781	ENGINE GOVERNOR

ENGINE RPM FLUCTUATING. REPLACED GOVERNOR CONTROLLER.

CA110204003	ROBSIN	LYC	GEAR	CHIPPED
2/2/2011	R44	O540F1B5		STARTER BENDIX

(CAN) DURING 50 HOUR INSPECTION STARTER WAS FOUND TO HAVE CHIPPED BENDIX TEETH. STARTER REPLACED.

CA110215012	ROBSIN	LYC	POINTS	CHATTERING
2/13/2011	R44	O540F1B5		MAGNETO

POINTS CHATTERING. REPLACED MAGNETO.

CA110214022	ROBSIN	LYC	CARBURETOR	FAILED
2/7/2011	R44	O540F1B5	10603511	ENGINE

CARBURETOR WILL NOT PROVIDE FUEL DURING GROUND RUN. CARBURETOR REPLACED.

CA110519003	ROBSIN	LYC	BRACKET	BROKEN
5/18/2011	R44	O540F1B5	B2001	ALTERNATOR

ON 50 HR INSPECTION, ENGINEER NOTED ALOT OF BLACK SMOKE AROUND THE ALTERNATOR, UPON CLOSER INSPECTION, IT WAS FOUND THAT THE ALTERNATOR BRACKET INBD ARM HAD BROKEN OFF AND THE ALTERNATOR WAS HANGING FROM THE REMAINING ARM. THE BRACKET WAS BROKEN THRU THE BOLT HOLE. ALSO THE BUSHING IN THE ALTERNATOR SUPPORT EAR WAS FOUND TO BE LOOSE. BOTH WERE REPLACED AND THE ACFT RETURNED TO SERVICE.

CA110414005	ROBSIN	LYC	SERVO	LEAKING
3/11/2011	R44RAVENII	IO540AE1A5	D2121	HYD SYSTEM

HYD SERVO LEAKING. REPLACED SERVO.

CA110621011	ROBSIN	LYC	DRIVE ASSY	FAILED
6/17/2011	R44RAVENII	IO540AE1A5		STARTER
STARTER BENDIX DRIVE WAS FOUND TO BE DISENGAGING PREMATURELY. STARTER REPLACED.				
CA110415008	ROBSIN	LYC	STARTER	FAILED
4/12/2011	R44RAVENII	IO540AE1A5	14924HTH	ENGINE
ACFT WOULD NOT START. STARTER REPLACED.				
CA110420010	ROBSIN	LYC	RESERVOIR	LEAKING
4/18/2011	R44RAVENII	IO540AE1A5	D2112	HYD SYSTEM
HYD RESERVOIR LEAKING FROM VENT CAP HOLES. RESERVOIR REPLACED.				
CA110518009	ROBSIN	LYC	MUFFLER	CRACKED
5/6/2011	R44RAVENII	IO540AE1A5	C16932	EXHAUST
FOUND CRACKED UNDER HEATER MUFF SHROUD.				
CA110527004	ROBSIN	LYC	SPRAG CLUTCH	CRACKED
5/27/2011	R44RAVENII	IO540AE1A5	C1883	MAIN ROTOR
NOISE HEARD ON SHUTDOWN. CLUTCH DISASSEMBLED AND INSPECTED. FOUND THE SPRAG CLUTCH CAGE CRACKED IN SEVERAL PLACES, ALSO INDIVIDUAL SPRAGS CRACKED.				
CA110530005	ROBSIN	LYC	RESERVOIR	LEAKING
5/2/2011	R44RAVENII	IO540AE1A5	D2112	HYD SYSTEM
HYD RESEVOIR LEAKING. HYD RESEVOIR REPLACED.				
CA110613005	ROBSIN	LYC	LINE	CRACKED
5/22/2011	R44RAVENII	IO540AE1A5	D7531	ENGINE OIL SYS
PILOT NOTED LOW OIL PRESSURE AND INCREASED OIL TEMP IN FLIGHT. PILOT LANDED AND ACFT WAS INSPECTED. ENGINEER FOUND A LARGE OIL LEAK IN THE AREA OF THE OIL COOLER. INSPECTION FOUND AN OIL LINE SHEARED AT A SWAGE LOK FITTING THAT WAS INSTALLED AS PART OF STC SH06-43 CONFIGURATION 2. FURTHER INVESTIGATION DETERMINED THAT SWAGE LOCK FITTING REQUIRES A MINIMUM LINE THICKNESS OF 0.035". LINES HAVE A WALL THICKNESS OF 0.018" - 0.020". COMPANY REMOVED STC SH06-43 MODIFICATION FROM ALL 16 COMPANY ACFT UNTIL SUCH TIME AS A SUITABLE AMENDMENT CAN BE MADE TO THIS APPROVAL.				
CA110504006	SCWZER		SPAR	MISREPAIRED
4/25/2011	SGS233A			WING
DURING INSPECTINO, PAINT WAS REMOVED FROM WING AND A LARGE AMOUNT OF FILLER WAS DISCOVERED NEAR THE WING TIP. UPON REMOVAL OF THE FILLER AN UNDOCUMENTED PATCH WAS DISCOVERED. UPON FURTHER INVESTIGATION IT WAS DISCOVERED THAT THE TIP RIB PN 33408-4 AND THE NEXT INBD RIB PN 33411G-4 HAD UNDOCUMENTED DOUBLERS INSTALLED ON THEM. THIS LEAD TO FURTHER INVESTIGATION INTO THE AREA WHICH REVEALED THAT THE MAIN SPAR WEB PN 33402-15 HAD SOME RIPPLING IN IT FROM STA 292.0 OUT TO THE TIP WITH AN UNDOCUMENTED DOUBLER INSTALLED FROM STATION 293.5 TO 299.0. IT WAS ALSO DISCOVERED THAT THE UPPER SPAR CAP ANGLE PN 33402-3 HAD BEEN SPLICED AT STA 280.5 AND THE LOWER SPAR CAP ANGLE PN 33402-3 HAD BEEN SPLICED AT STA 282.0. BOTH OF THESE SPLICES WERE COMPLETED WITH JUST A SMALL PIECE OF STEEL ANGLE BEING ATTACHED TO THE INSIDE OF THE ANGLE, AND WERE NOT DOCUMENTED. UPON TALKING TO THE TYPE CERTIFICATE HOLDER ALL OF THE FOUND UNDOCUMENTED REPAIRS HAVE NOT BEEN COMPLETED PROPERLY AND REQUIRE REPLACEMENT.				
CA110504005	SCWZER		RIB	MISREPAIRED
4/25/2011	SGS233A		3340611	
(CAN) AN UNDOCUMENTED REPAIR WAS FOUND ON THE LEFT HAND WING AT STATION 214.0. UPON REMOVAL OF THE PATCH THE RIB WAS FOUND TO BE BENT OVER. BOTH THE WING SKIN REPAIR AND THE RIB WERE NOT COMPLETED AS PER ANY APPROVED OR ACCEPTED DATA, AND WERE NOT RECORDED IN ANY OF THE				

AIRCRAFTS LOGS. THIS WORK IS BELIEVED TO HAVE BEEN COMPLETED AS THE ACFT WAS PURCHASED, THERE PREVIOUS REGISTRATION IS N1174S.

3S8R2011041600016	SNIAS	TMECA	BEAM	DAMAGED
4/16/2011	SA330J	TURMO4C		BS 3855-5295

RT LONGITUDINAL BEAM LOWER SKIN AND BEAM DAMAGED. REPAIR TO BE CARRIED OUT IAW MX 20-03-05-420. DAMAGE IS BETWEEN FS 3855 AND 5295.

3S8R2011041600017	SNIAS	TMECA	BUSHING	CORRODED
4/16/2011	SA330J	TURMO4C		LT MLG

LEFT MLG STRUT, EXTERNAL FITTING BUSHING CORRODED AND WORN BEYOND DIMENSIONAL LIMITS. PART WAS REPLACED WITH NEW IAW MFG RE-WORK SHEET 330 21 505 00 BY FACTORY TECHS. ADDITIONALLY, CORROSION WAS REMOVED OUTSIDE THE BALL BUSHING SEAT IAW SAME RE-WORK SHEET.

3S8R2011041600018	SNIAS	TMECA	BUSHING	CORRODED
4/16/2011	SA330J	TURMO4C		CTR FUSELAGE

RIGHT MLG STRUT EXTERNAL FITTING BUSHING CORRODED BEYOND LIMITS. PART WAS REPLACED WITH NEW IAW MFG RE-WORK SHEET 330 21 505 00 BY FACTORY TECHS. ASSEMBLY, CORROSION WAS REMOVED OUTSIDE THE BALL BUSHING SEAT IAW SAME RE-WORK SHEET.
