
**Diamond
DA-40-180**

N541DS

**Miscellaneous
Maintenance Records**



The National Transportation Safety Board

ACCIDENT/INCIDENT QUERY

This report contains information from 1962 and later and is acquired through a query of the records maintained by the NTSB



Federal Aviation Administration

The National Aviation Safety Data Analysis Center

ACCIDENT/INCIDENT DATA

This report contains information from 1978 and later.

N541DS, Diamond Aircraft Ind GmbH DA 40, Serial Number 40041

No Results Found

N541DS FROM 07/01/2001 TO PRESENT

10/14/2014

18232- TB

Diamond Star N541DS's MAINTENANCE OVERVIEW

Aircraft Serial Number 40041

Aug 01		SD – Engine Fuel Pump Changed j80
Feb/Mar 04		Prop Leaking – j84/85
Feb 2004		MSB 40—012 NA but Mixture Cable Replaced
Apr 04		Garmin 530 and 330 Installed new W&B
Oct 05	260	Rear Door Hinges and Piston Changed
Oct 05		Replaced Engine driven fuel pump j54
Oct 05	260.4	Replaced Alternator Belt
Jan 06	315.1 H	Replaced Left MAG j55 at
Mar 06		Exhaust Bracket MSB/AD Complied by replacement
Mar 06		Replaced Main TIRES Goodyear Flight Specials
Aug 06	318.3	TANIS TAS100-01 with Optional TAS301 element Installed by Modern Aero (MN) (Eng Log)S/N 39671
Nov 06	363.8	SKY-TEC STARTER replaced with Overhauled SKY-TEC Starter
May 07		PROP Overhauled – j89 – MT Prop
May 07	394.1	FUEL SHAFT Replaced by Modern Aero Eliminates MSB 40-030/3 AD
May 07	394.1	Left Wing & Fuel Tank Removed – Replaced FUEL TANK Interconnect Vent Hoses and Clamps - by Modern Aero
May 07	394.1	Replaced Emergency Batteries - by Modern Aero
May 07	394.1	Replaced RUDDER CABLES - by Modern Aero
May 08	544.7	New Muffler Bracket – by Premier
May 08	544.7	New Muffler Bracket – by Premier
May 08	544.7	Replaced Nose Wheel Shock Disks – by Premier
May 08	544.7	Repaired and Painted Right Wing Tip and Nose Pant – by Premier
Jun 09	693.1	Right Mag replaced j66 by Premier
Jun 09	693.1	Aileron Hardware by Premier
Jun 09	693.1	L & R TIRES with Condor 600-6-6 by Premier
Jun 09		Replaced AC BATTERY RG24-15M by Premier
Aug 09	731.5	Replaced BRAKE Pads
Jul 10		Fuel Line AD Complied with j70
		MultiCorp Aviation Roger Battiston Land O Lakes FL
Mar 11	1148.4 H	Replaced Fuel Boost Pump – Hobbs
Mar 11		MSD/AD 2010-25-01 – Replaced Rear Door Bracket AD Compliance
Aug 11		Prop Repaired – excessive leaking R&D j91 j90 100 hours –
Aug 11		Heater Hose Replaced (Brookshire Texas)
Mar 12		AD2009-10-04 NOSE GEAR landing inspection – Annual or 200 hours http://support.diamond-air.at/fileadmin/uploads/files/after_sales_support/DA40-FP/Service_Information/SI40-108-FAA-AD-No-2009-10-04-NLG-Inspection.pdf Nose gear fork pn# d44-3223-30—1 replaced – terminates this annual inspection
Mar 12		Replaced the 5 Nose Wheel Rubber Dampers
Mar 12		Electrical Bond Check complete – Texas Flight Maint – pdf Invoice 31.
Mar 12	1089	Prop Overhauled – j92/93/94/95 – R&D Prop TX
Mar 12	1089.8	RUDDER CABLES Replaced in Annual
Mar 12	1090	Changed Left Mag – j72
Mar 12		Complied with MSB-40-064 replacing Emergency Actuation Lever
Mar 12	1089.8	MT Prop Overhauled BLADES Replaced – R&D Prop Service TX (Prop Log)
Apr 12	1310H	Installed 100 Ohm Resistor MSB-40-058 Hobbs 1310.0
Apr 12	1310H	Installed ASPEN 1000 PRO PFD – Aerotech Int

Diamond Star N541DS's MAINTENANCE OVERVIEW

Aircraft Serial Number 40041

Apr 12	1310H	Installed Slickstart Magnetos LH 4347 SN 12011377 RH 4370 S/N 12030177
Apr 12	1310H	Installed X Vision HID Lights IAW with STC SA01782SE
Jun 12	1111.9	Replaced Right Mag with Slick Mag – j73
Jun 12	NA	Aircraft Repainted & Interior Redone – Hawk AC Painting Tampa FL
Jul 12	1121.5	Replaced Wing Walks – Shearer
Nov 12	1173.7	Replaced Nose TIRE and Tube McCreary Airhawk 5.00x 6 ply SN B3D44410– Shearer
Mar 13	1188.1	Replaced all Teflon Plugs on ROCKER Shafts, Replaced all 4 Oil Return Lines – Shearer
Mar 13	1188.1	Replaced THROTTLE Cable and both the Throttle and Mixture attachment bolts Lines – Shearer
Mar 13	1188.1	Resealed both pilots Toe Brake Cylinders – Shearer
Mar 13	1188.1	Repainted Face of PROP Blades Lines – Shearer
Mar 13	1188.1	Replaced Left Main TIRE TACH 1188.1 Goodyear Flight Custom III 6.00x 6 ply SN21122106 Lines – Shearer
Mar 13	1188.1	Installed New ACK E-04 S/N 5594 406 ELT – SMART Avionics
Mar 13	1196.4	POWERFLOW installed by Premier Ft Lauderdale
Apr 13	1210.9	#3 CYLINDER Repaired by Penn Yan TACH
Jul 13	1241.6	Replaced both BRAKE Linings – conditioned new brake linings - Shearer
Apr 14		Replaced STARTER with Rebuilt Starter
N541DS – Purchased by Tom Bowe		
Nov 14	1420	Replaced Rear Door Hinges with Diamond Hinges & Replaced Back-up batteries
Jan 15	1430	Replaced Brake Pads and Rotors – Wold Aviation
Jun 15		Annual – Repaired Right Wheel Pant crack (aircraft tilting back on its tail from snow and cracking on a thick wood wheel chalk) – Wold Aviation
Jun 15		Replaced Plugs with 8 Tempest Fine Wire Plugs – Wold Aviation
Oct 15		Replaced Left Wing Ballast for Landing Light – Wold Aviation
Feb 16		Repaired Prop with New Piston - Sensenich Propeller Service

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WITIA

As of Feb 27, 2015

Tom Bowe 610-666-4776

**Diamond Star N541DS's
MAINTENANCE OVERVIEW**

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Service Time Record DA40

Date of Manufacture:

Date: AUGUST 21, 2001 Reg #: N541DS S/N #: 40041

Item	Serial Number	Subject	Compliance Frequency	Compliance Date or Time	Compliance Next Due
25 Hour Inspection		DA40 Maintenance Practices	25 hours		25.0 HRS
50 Hour Inspection		DA40 Maintenance Practices	50 hours		50.0 HRS
100 Hour Inspection		DA40 Maintenance Practices	100 hours		100. HRS
200 Hour Inspection		DA40 Maintenance Practices	200 hours		200. HRS.
1000 Hour Inspection		DA40 Maintenance Practices	1000 hours or every 12 years (which ever comes first)		1000 HR OR AUG 2013
Annual Inspection		DA40 Maintenance Practices Maintenance not done to FAR 91.	Every 12 months (200 hour insp.)		
Annual Inspection (US Registered)		DA40 Maintenance Practices Maintenance done to FAR 91.	Every 12 months (100 hour insp.)		AUG 2002
Engine Overhaul		Lycoming IO-360 M1A – Refer to Lycoming Service Instruction 1009 (latest issue).	2000 hours or 12 years (which ever comes first)		2000 HRS. OR. OCT 2012
LASAR Ignition Controller, Slick		Overhaul Ignition Controller, Slick.	Overhaul with engine		2000 HR.
Magneto Slick 4770/4771		Overhaul magneto slick. Refer to Slick Maintenance and Overhaul Manual L-1503 (latest issue).	Overhaul with engine		2000 HR.
Propeller Overhaul		Overhaul MT-Propeller MTV-12-B/180-17	1800 hours or 6 years (which ever comes first)		1800 HR. OR JAN 2007
Electrical fuel pump, Dukas		Overhaul electrical fuel pump.	10 years from date of overhaul (marked on pump)		MAY 2011
Alternator		Overhaul alternator ALU-8421LS-T	2000 hours		2000
Propeller governor		Overhaul propeller governor, Woodward C210776A	2000 hours		2000
Ignition switch, ACS		Overhaul ignition switch. Refer to current ACS Service letters and Instructions	2000 hours		2000
3 point safety harness		Replace front harnesses	12 years		AUG 2013
3 point safety harness		Replace rear harnesses	12 years		AUG 2013
Brake fluid		Replace brake fluid, Fluid 4.	3 years		AUG 2004
Fuel hoses		Replace fuel hoses connecting main (inner) fuel tanks to auxiliary (outer) fuel tanks.	1000 hours		1000.
Air filter		Replace air filter K + N RU-0810	500 hours		500.
Rudder Cables		Replace rudder cables 3.2mm (1/8 inch) diameter.	3000 hours or 5 years (which ever comes first)		3000 HRS OR MAY 2006.
Engine Shock Mounts		Replacement of engine shock mounts	2000 hours		2000
Electric flap motor		Replacement of electric flap motor.	30,000 landings		30,000 Ldg.
DPU battery		Replacement of DPU battery memory pack for VM 1000 engine instrument unit.	2 years		AUG 2003
Tachometer		Tachometer Accuracy Check	Annually		AUG 2002.
Fire Extinguisher		Fire Extinguisher Inspection and Weigh	Annually		AUG 2002.
Compass		Compass Swing	Annually		AUG 2002.
ELT		Recertify ELT	Annually		MAR 2002
ELT Battery		Replace ELT Battery	5 years		MAR 2006.
Static System		Pitot Static System Check	2 years		AUG 2003
Altimeter		Recertify Altimeter	2 years		MAR 2003
Transponder		XPNDR Data Correlation Check	2 years		AUG 2003.

**Customer Support
Acceptance Protocol DA 40**

FORM CS25-H June 1, 2001



Comments / Remarks: _____ _____ _____	Date / Rectified by: _____ _____ _____
-------------------------------------------------------	--------------------------------------------------------

Owner:	Technical Publications Required: <input checked="" type="checkbox"/> AFM <input type="checkbox"/> MM <input type="checkbox"/> IPC <input type="checkbox"/> SB <input type="checkbox"/>
Company Name: _____	Contact Name: _____
Address: _____	Title: _____
State / Province: _____	Phone: _____
Country: _____	Fax: _____
Postal Code: _____	e-mail: _____

Operator:	Technical Publications Required: <input checked="" type="checkbox"/> AFM <input type="checkbox"/> MM <input type="checkbox"/> IPC <input type="checkbox"/> SB <input type="checkbox"/>
Company Name: _____	Contact Name: _____
Address: _____	Title: _____
State / Province: _____	Phone: _____
Country: _____	Fax: _____
Postal Code: _____	e-mail: _____

Maintenance Facility:	Technical Publications Required: <input checked="" type="checkbox"/> AFM <input type="checkbox"/> MM <input type="checkbox"/> IPC <input type="checkbox"/> SB <input type="checkbox"/>
Company Name: _____	Contact Name: _____
Address: _____	Title: _____
State / Province: _____	Phone: _____
Country: _____	Fax: _____
Postal Code: _____	e-mail: _____

Aircraft Equipment, Accessories and Documentation has been review and a Ground Run / Flight test completed. All deficiencies have been accepted as noted above.

Print 	Print PETER OTT
Sign 	Sign
Date: 10-3-2001	Date: 3rd Oct 2001
Authorized Customer Agent	Diamond Aircraft Inc. Representative



Parts Phone: (519) 457-4051
 Parts Fax: 1-800-934-3519
 A/R Inquiries: (519) 457-4013

INVOICE

Diamond Aircraft Industries Inc.
 1560 Crumlin Sideroad
 London, Ontario N5V 1S2

Invoice Number: **SI041231**

Invoice Date: 29/04/04

Page: 1

Bill To:

SUPERDRONE AVIATION INC.
 34 Sky Manor Road
 Pittstown, NJ 08867
 USA
 Bob Argila

Ship To:

SUPERDRONE AVIATION INC.
 34 Sky Manor Road
 Pittstown, NJ 08867
 USA
 Bob Argila

GST# 138048400
 Ship Via Free on Board London
 Ship Date 29/04/04
 Due Date 29/04/04
 Terms Credit Card

Customer ID C10087
 P.O. Number
 P.O. Date 29/04/04
 Our Order No. SO040433
 SalesPerson Kent Billingham

Item/Description	Orig	HS#	Unit	Order Qty	Quantity Shipped	Unit Price	Total Price
130171	CA	88033000	EAC	1	1	0.245	0.25
TERMINAL, RING							
173250	AT	88033000	EAC	1	1	65.009	65.01
Safety Switch Cover Sicherheitsabdeckung							
111-9694	AT	88033000	Mete	1	1	15.365	15.37
Copper Grating Use QQB575F36T0500							
AA-BATTERIES	CA	88033000	EAC	28	28	3.826	107.13
Battery, Duracell, AA-M3 Tech							
D41-2560-90-00	CA	88033000	EAC	1	1	240.872	240.87
Emergency Power Supply							
DA4-2406-22-00	CA	88033000	EAC	1	1	35.572	35.57
Bonding Cable, Lower, RH, Eng.							
DA4-2406-23-00	CA	88033000	EAC	1	1	30.924	30.92
Bonding Cable, Upper, LH, Eng.							
Transferred to page 2.....							495.12



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 London, Ontario N5V 1S2

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Item/Description	Orig	HS#	Unit	Order Qty	Quantity Shipped	Unit Price	Total Price
Transferred from page 1							495.12
DA4-2406-24-00	CA	88033000	EAC	1	1	50.041	50.04
Bonding Cable, Upper, RH, Eng. Engine Bonding Cable							
DA4-2406-25-00	CA	88033000	EAC	1	1	31.209	31.21
Bonding Cable, Lower, LH, Eng. N/A							
DA4-3120-40-02	AT	88033000	EAC	1	1	14.967	14.97
Guard, Artificial Horizon							
DIN125A-M5-A2	CA	88033000	EAC	2	2	0.031	0.06
Washer, Stainless							
DIN125A-M6-A4	CA	88033000	EAC	14	14	0.031	0.43
Washer, Stainless							
DIN9021-M5	CA	88033000	EAC	2	2	0.092	0.18
Washer							
DIN9021-M5-A2	CA	88033000	EAC	3	3	0.092	0.28
Washer, Stainless (BN 1356)							
Transferred to page 3							592.29



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Transferred from page 2.....							592.29
DIN931-M6X16-A2	CA	88033000	EAC	1	1	5.999	6.00
BOLT, HEXAGON HEAD, (BN 623)							
DIN980V-M6-A2	CA	88033000	EAC	7	7	0.428	3.00
Nut, Hexagon, Fire Retardant BN 5242							
DIN985-M5-A2	CA	88033000	EAC	2	2	0.245	0.49
Nut, Hexagon, Stainless MUTTER							
L-LW-25H0.75	CA	88033000	EAC	1	1	27.081	27.08
Bolt, Drilled Head SCHRAUBE							
LN9037-M5X16	CA	88033000	EAC	2	2	1.224	2.45
Bolt, Small Hexagon SCHRAUBE							
LN9037-M6X14	CA	88033000	EAC	4	4	1.132	4.53
Bolt, Small Hexagon SCHRAUBE							
LN9037-M6X20	CA	88033000	EAC	1	1	1.194	1.19
Bolt, Small Hexagon SCHRAUBE							
Transferred to page 4.....							637.02



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Transferred from page 3.....							637.02
LN9037-M6X30	CA	88033000	EAC	2	2	4.499	9.00
Bolt, Small Hexagon SCHRAUBE							
LN9037-M6X64	CA	88033000	EAC	1	1	15.028	15.03
Bolt, Small Hexagon SCHRAUBE							
MS24524-23	US	88033000	EAC	1	1	69.967	69.97
Switch, Toggle							
Sales Discounts, A/C Parts			EAC	1	1	-345.00	-345.00
Sales, Shipping - USA			EAC	1	1	20.37	20.37
Invoice Rounding				1	1	0.003	0.00

Amount Subject to 0.00 Amount Exempt fr 406.39

Subtotal: 406.39
 Invoice Discount: 0.00
 Total Tax: 0.00

Total: 406.39
USD

Please return defective parts within 30 days for credit.

HENLEY'S TRAINING ACADEMY, Inc.
 15841 Addison Road
 Addison, Texas 75001
 972 934-0875

Shop Order #: 1042

Page 1
 Date Printed: 11/22/200

Sold To: luis Yofe
 4430 Cedar Elm Circle
 Richardson TX 75082

Account # : N541DS
 Date Opened: 11/09/2004
 Date Closed: 11/13/2004

Department : SHOP

=====
 Aircraft Number: N541DS
 Type : DIAMOND DA 40
 Serial # : 40041
 Total Time: 82.9 Hobbs Time: 82.9
 Engine Serial #: L-29410-51A Time: 82.9 Cycles:
 Engine Type : LYCO IO-360-M1A
 =====

Discrepancy: 1
 Problem: CHANGE OIL AND FILTER.
 A/T -> CHANGED OIL AND FILTER SERVICED WITH 8 QUARTS AEROSHELL 15W50 AND
 A CH48110-1 FILTER.
 Charges This Item: Flat Fee Charges : 125.00

Discrepancy: 2
 Problem: WASH AND CLEAN THE AIRPLANE.
 A/T -> SUBLET - WASH AND CLEAN THE AIRPLANE.
 Charges This Item: Outside Repair-Labor : 95.00

Discrepancy: 3
 Problem: INSTALL FACTORY CABIN DOOR LOCKS AND IGNITION SWITCH.
 A/T -> INSTALLED FACTORY CABIN DOOR LOCKS AND MATCHING IGNITION SWITCH.
 Charges This Item: 10.00 hrs @ 75.00: 750.00

Quantity	Part Number	Description	List Price	Dsc	Unit Price	Price	Extended
1	CH48110 1	FILTER	25.50			25.50	25.50
8	A-SHELL15W50	OIL	7.64			7.64	61.12
2	DA4 5200 10 01		32.55			32.55	65.10
		CANOPY LATCH PLATE			Freight		35.00
10	SSD 44 SS A2	RIVETS	.29			.29	2.90
10	0561 663 2	GROMMET	.26			.26	2.60
4	BU2 06 3.5 0060C	BUSHING	5.75			5.75	23.00
4	DIN134 M3 ZP	WASHER ZINC	.20			.20	.80
4	D41 1123 10 07		11.82			11.82	47.28
		PLACARD EMERG EXIT					
1	16630		57.25			57.25	57.25
		STATIC WICK, DISCHARGE			Freight		5.00

=====
 MISCELLANEOUS CHARGES:
 Misc Supplies : 25.00
 =====

SUMMARY OF CHARGES
 Outside Repair-Labor : 95.00 Parts : 285.55
 Flat-Fee Charges : 125.00 Freight Charges : 40.00

HENLEY'S TRAINING ACADEMY, Inc.
15841 Addison Road
Addison, Texas 75001
972 934-0875

Shop Order #: 1042

Page 2

Date Printed: 11/22/200

Labor-	10.00 Hours:	750.00	Misc Supplies	:	25.00
=====					
			Subtotal	:	1,320.55
			Sales Tax	:	25.62

			Total Due	:	1,346.17
			Balance Added To Acct	:	1,346.17
=====					

General Comments:

***** THANK YOU FOR YOUR BUSINESS LUIS *****

HENLEY'S TRAINING ACADEMY, Inc.
15841 Addison Road
Addison, Texas 75001
972 934-0875

Shop Order #: 1151

Page 1
Date Printed: 3/31/2005

Sold To: luis Yofe
4430 Cedar Elm Circle
Richardson TX 75082

Account # : N541DS
Date Opened: 3/28/2005
Date Closed: 3/28/2005

Department : SHOP

=====
Aircraft Number: N541DS
Type : DIAMOND DA 40
Serial # : 40041
Total Time: 149.8 Hobbs Time: 149.8
Engine Serial #: L-29410-51A Time: 149.8 Cycles:
Engine Type : LYCO IO-360-M1A
=====

Discrepancy: 1

Problem: PARKING BRAKE WILL NOT RELEASE.

A/T -> REPAIRED PARKING BRAKE BY INSTALLING A NEW CONTROL CABLE AND
ADJUSTING BRAKE VALVE.

Charges This Item: 8.00 hrs @ 75.00: 600.00
=====

MISCELLANEOUS CHARGES:

Misc Supplies : 25.00
General Freight : 5.00
=====

SUMMARY OF CHARGES

Labor- 8.00 Hours: 600.00 Misc Supplies : 25.00
Freight Charges : 5.00
=====

Subtotal : 630.00
Sales Tax : 2.06

Total Due : 632.06
Balance Added To Acct : 632.06
=====

General Comments:

***** THANK YOU FOR YOUR BUSINESS LUIS *****

4. Approved organization name and address
Diamond Aircraft Industries Inc.
1560 Crumlin Sideroad
London, Ontario N5V 1S2

5. Work order/contract/invoice

S1072768

6. Item	7. Description	8. Part No.	9. Eligibility *	10. Qty.	11. Serial/batch No.	12. Status/work
1	Rudder Cable, 1600mm (5.25ft)	CA1-1600-WIP		4	MP0702159,	Manufactured


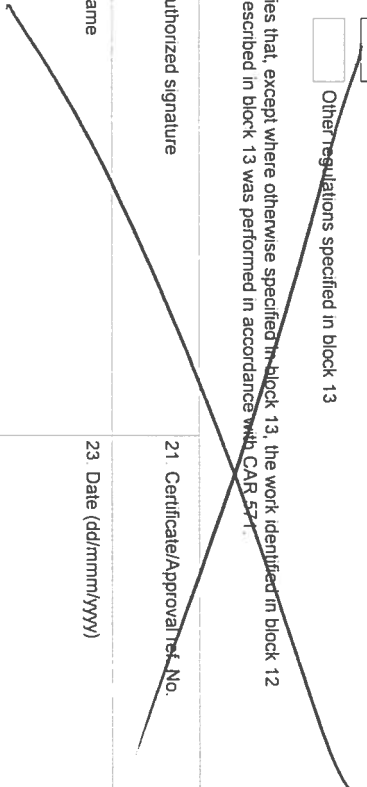
13. Remarks **Customer Reference M11488**

14. Certifies that the items identified above were manufactured in conformity to:

- Approved design data and are in condition for safe operation
 Non approved design data specified in block 13

19. CAR 571.10 Maintenance release
 Other regulations specified in block 13

~~Certifies that, except where otherwise specified in block 13, the work identified in block 12 and described in block 13 was performed in accordance with CAR 571.~~

15. Authorized signature 	16. Certificate/Approval ref. No. /161-93	20. Authorized signature 	21. Certificate/Approval ref. No.
17. Name Kent Billingham	18. Date (dd/mm/yyyy) 25/Apr/2007	22. Name	23. Date (dd/mm/yyyy)

User/Installer Responsibilities

- This document does not constitute authority to install the part.
- Where the installer works in accordance with the national regulations of an airworthiness authority other than the authority specified in Block 1, the installer must ensure that his/her airworthiness authority accepts products or maintenance from the airworthiness authority specified in Block 1.
- Statements 14 and 19 do not constitute installation certification. In all cases the aircraft technical record must contain an installation certification, issue accordance with the national regulations of the state of registry, before the aircraft may be flown.

12/09/2003 *Installer must cross-check eligibility with approved data

the state of registry, before the aircraft may be flown

12/09/2003

*Installer must cross-check eligibility with approved data

1 Approving national aviation authority/country
Transport Canada

Authorization Release Certificate
 TCCA 24-0078

S1072530

4. Approved organization name and address
Diamond Aircraft Industries Inc.
1560 Crumlin Sideroad
London, Ontario N5V 1S2

5. Work order/contract/invoice

S1072530

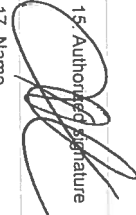
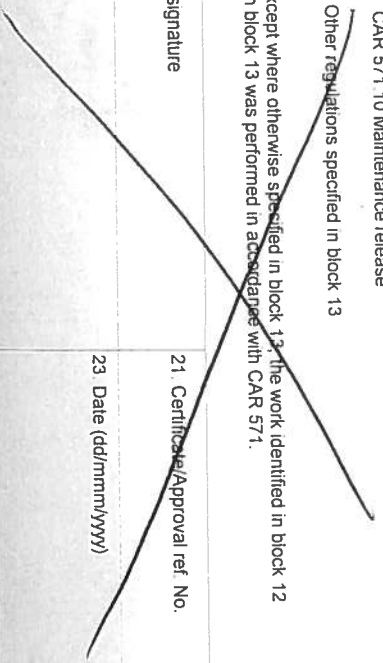
6. Item	7. Description	8. Part No.	9. Eligibility *	10. Qty.	11. Serial/batch No.	12. Status/work
1	Pump, Fuel, Electric, Duke	6400-00-9		1	RC9999349-7154,	
2	Manual, Flight, DAA0-180 AEM	DAA0-180 AEM		1		
3	Axis, NLG	D41-3223-00-32		1	RC,	
4	Fuel Selector Shaft Field Service	D41-2823-20-00CS		1	RC,	
5	Simrod, Wttrfr Replacement Component Only	BA49-4		1		
13. Remarks Customer Reference M11420						Manufactured

14. Certifies that the items identified above were manufactured in conformity to:

- Approved design data and are in condition for safe operation
- Non approved design data specified in block 13

19. CAR 571.10 Maintenance release
 Other regulations specified in block 13

12 Certifies that, except where otherwise specified in block 12, the work identified in block 12 and described in block 13 was performed in accordance with CAR 571.

15. Authorized signature 	16. Certificate/Approval ref. No. /161-93	20. Authorized signature 	21. Certificate/Approval ref. No.
17. Name Kent Billingham	18. Date (dd/mm/yyyy) 17/Apr/2007	22. Name User/Installer Responsibilities	23. Date (dd/mm/yyyy)

1 This document does not constitute authority to install the part.
 2 Where the installer works in accordance with the national regulations of an airworthiness authority other than the authority specified in Block 1, the installer must ensure that his/her airworthiness authority accepts products or maintenance from the airworthiness authority specified in Block 1.
 3 Statements 14 and 19 do not constitute installation certification. In all cases the aircraft technical record must contain an installation certification, issue accordance with the national regulations of the state of registry, before the aircraft may be flown.
 12/09/2005 *Installer must cross-check eligibility with approved data

1. Approving national aviation authority/country
Transport Canada

2. Authorization Release Certificate
TCCA 24-0078

5. Work order/contract/invoice
S1072761

4. Approved organization name and address
**Diamond Aircraft Industries Inc.
 1560 Crumlin Sideroad
 London, Ontario N5V 1S2**

S1072761

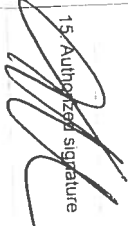
6. Item	7. Description	8. Part No.	9. Eligibility *	10. Qty.	11. Serial/batch No.	12. Status/work
1	Shroud, Muffler Replacement Component Only	DA40-4		2		
2	Muffler Shroud Spacer	D41-7806-20-03		2	RC,	
3	Muffler Shroud Doubler	D41-7806-20-04		2	RC,	Manufactured

13. Remarks **Customer Reference REPLACEMENTS**

14. Certifies that the items identified above were manufactured in conformity to:

Approved design data and are in condition for safe operation
 Non approved design data specified in block 13

19. CAR 571.10 Maintenance release
 Other regulations specified in block 13
 Certifies that, except where otherwise specified in block 13, the work identified in block 12 and described in block 13 was performed in accordance with CAR 571.

15. Authorized signature


16. Certificate/Approval ref. No.
 /161-93

20. Authorized signature

21. Certificate/Approval ref. No.

17. Name
Kent Billingham

22. Name

23. Date (dd/mm/yyyy)
25/Apr/2007

User/Installer Responsibilities

1 This document does not constitute authority to install the part.
 2 Where the installer works in accordance with the national regulations of an airworthiness authority other than the authority specified in Block 1, the installer must ensure that his/her airworthiness authority accepts products or maintenance from the airworthiness authority specified in Block 1.
 3 Statements 14 and 19 do not constitute installation certification. In all cases the aircraft technical record must contain an installation certification, issue accordance with the national regulations of the state of registry, before the aircraft may be flown

12/09/2003 *Installer must cross-check eligibility with approved data



Parts Phone: (519) 457-4051
 Parts Fax: 1-800-934-3519
 A/R Inquiries: (519) 457-4013

SHIPMENT

Diamond Aircraft Industries Inc.
 1560 Crumlin Sideroad
 London, Ontario N5V 1S2

Shipment Number: SH124559

Shipment Date: 03/22/12

Page: 1

Bill
 To: TEXAS FLIGHT MAINTENANCE
 20803 Stuebner Airline 29
 David Wayne Hooks Airport
 Spring, TX 77379
 USA
 Josh Hulet

Ship
 To: TEXAS FLIGHT MAINTENANCE
 20803 Stuebner Airline 29
 David Wayne Hooks Airport
 Spring, TX 77379
 USA
 Josh Hulet

HST No. 138048400RT0001
 Ship Via Free on Board London

Customer ID C11976
 P.O. Number PHIL LEEDERS
 P.O. Date 03/21/12
 Our Order No. SD107834
 SalesPerson David Stollar

Shipping Agent UPS
 Tracking No. 1Z4R6V851260366220

Item No.	Description	Unit	Ordered	Shipped	Back Ordered
DA4-5310-11-00	Seal Cover	EACH	1	1	
AS9380	Terostat 9380, White, 310ml IDH# 100149	EACH	1	1	
DA4-2406-44-00SB	Circuit Board, 100 Ohm, Assy Customer Support Sales, Shipping - USA 1Z4R6V851260366220	EACH	1	1	

DISTRIBUTOR'S RELEASE CERTIFICATION

I HEREBY CERTIFY THAT THE AIRCRAFT PARTS DESCRIBED
 HEREIN WERE ACQUIRED FROM A SOURCE OF SUPPLY THAT IS
 CONSISTENT WITH THE CONDITIONS UNDER WHICH DOT
 DISTRIBUTOR APPROVAL HAS BEEN GRANTED

DATE: 3-22-12 SIGNED: 

DA
PDR 8

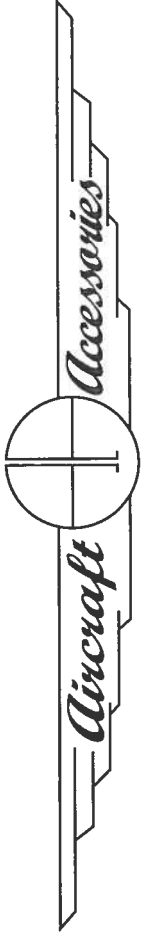
N #: 541DS	DATE: 4/19/2012 S/N 40.041	H.M.: 1310.0	
This is a permanent part of the		Aircraft	Records
The following inspection, maintenance, repairs or replacements were accomplished.			
1 Removed LH INCORRECT MAGNETO 4371 2 INSTALLED OSB40-027 SLICK START SYSTEM WITH MAGNETOS: LH 4347 S/N 12011377 AND RH 4370 S/N 12030177 3 INSTALLED SLICK START CONTROL MODULE 08-01000 S/N 12002932 4 INSTALLED SERVICE BULLETIN MSB-40-058, F4-014, 100 OHM RESISTOR ON AUX WIRE ON ALTERNATOR 5 INSTALLED WORK INSTRUCTION RSB 40-052, D4-069, F4-018 FIREWALL EDGE GUARDS			
I certify this aircraft or component has been inspected & repaired in accordance with applicable F.A.R.'s and found to be in an airworthy condition. Approved for return to service in accordance to work performed.			
A&P RANDALL WOOD 3251612		<i>Randall Wood</i>	

Ron

Service

Sales

Overhaul



Invoice #: 50650

OF OKLAHOMA, INC.

FAA APPROVED REPAIR STATION NO. RV3R829L
 2740 N. SHERIDAN RD. • TULSA, OKLAHOMA 74115
 1-800-255-9924 • PHONE: 918-835-9924 • FAX: 918-835-3681
 E-MAIL: airacc@aircraftaccessoriesofok.com

TAX E.I.N.: 73-0945940

Invoice Date: 04/10/2012

Bill To: AEROTECH INTERNATIONAL P. O. BOX 3105 HOT SPRINGS, AR 71914		Ship To: AEROTECH INTERNATIONAL 525 AIRPORT ROAD HANGAR A5 HOT SPRINGS, AR 71913	
Phone: 501-623-8415	Fax:	Ship Date: 04/10/2012	
Cust #: AERINT	PO #: 476	Mech: PAR	CC: ----- Via: UPS GROUND
QTY	PART NUMBER	DESCRIPTION	ITEM TOTAL
1	4347	NX MAGNETO SN= 12011377 Total Core Charge.....	\$875.00 \$150.00

NOTE: To Receive your core credit or refund, An acceptable core must be returned within 30 days.

A 1 1/2% LATE CHARGE ON INVOICES OVER 30 DAYS		10% RESTOCKING FEE ON ALL RETURNED GOODS	TOTAL LABOR
Terms: COD			TOTAL PARTS & CORES \$1025.00
			SUB TOTAL \$1025.00
			MISC.
			DISCOUNT
			TAX
			FREIGHT \$31.74
			TOTAL \$ \$1056.74

WORK ORDER: **No. 50650**

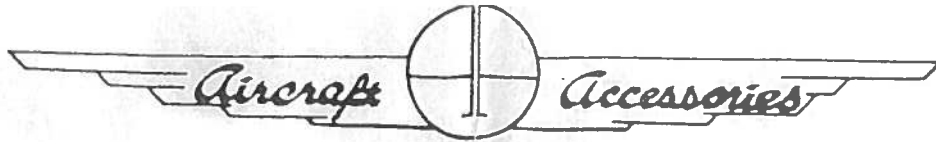
PLEASE PAY FROM THIS INVOICE



50650

SERVICE BULLETINS

AD's
O/H MANUAL #



OF OKLAHOMA, INC.
FAA APPROVED REPAIR STATION
CRS # RV3R829L
2740 N. SHERIDAN - TULSA, OK 74115
800-255-9924 - PH.918-835-9924 - FAX 918-835-3681

P.O.# 476
SHIP VIA

MAINTENANCE TRAVELER

OVERHAUL REPAIR EXCHANGE SALE
CUSTOMER Aerotech International WORK ORDER # 50650 DATE 4.10.12

MAGNETO
P/N 4347 MFG. slick S/N 12011377
Housing Bearing Seal Block Point Condenser Coil Gear Rotor
Cam Coupling Brush Assemble Test

VACUUM PUMP
P/N MFG. S/N
Housing Drive Vanes Bearings Rotor Seals Collar Cover Assemble
Test With Without Fittings

PART # & NAME	P.O.#	QUANTITY	COST
<i>new</i>			

LABOR
PARTS
SUBTOTAL
TAX
FREIGHT
TOTAL

MECHANIC *(Signature)*

INSPECTOR



4245 Airport Road, Ogden UT 84405-3301
Office: 801-622-7000 Fax: 801-622-7277
www.XeVision.com

April 3, 2012

Roger Battistoni/Aerotech Intl.,

This letter serves as permission to use XeVision's STC # SA01782SE for your DA40 N541DS for 2 lights. You may optionally use this STC to install the 2 lights without the pulsing unit. If additional XeVision HID lighting kits are purchased in the future, a fee will be required for further use of the mentioned STC.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Blumel". The signature is written in a cursive style with a large, looping initial "D".

Daniel Blumel
President

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number SA01782SE

This certificate, issued to:

Reliable Equipment & Engineering, Inc.
4245 Airport Road
Ogden, UT 84405

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 23 of the Code of Federal Regulations.

Original Product — Type Certificate Number: A47CE
Make: Diamond Aircraft Industries GmbH
Model: DA 40

Description of the Type Design Change: Replace existing incandescent wing leading edge landing and taxi lights with XeVision High Intensity Discharge (HID) lights. Installation in accordance with FAA-approved Master Drawing List FastCap, LLC document FC-MDL, Revision B, dated August 22, 2007, or later FAA-approved revision. This modification must be inspected and maintained in accordance with the FAA-approved Instructions for Continued Airworthiness (ICA), FastCap, LLC document FC102, Revision IR, dated August 16, 2007, or later FAA-approved revision.

Limitations and Conditions: Approval of this change in type design applies to only the Diamond DA 40 model aircraft. This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft. Aircraft modified in accordance with this STC must be operated in accordance with a copy of the FAA-approved FastCap, LLC Airplane Flight Manual Supplement, Document FC112, Revision IR, dated August 23, 2007, or later FAA-approved revision.

A copy of this certificate, FAA-approved AFMS and ICA must be maintained as part of the permanent records of the modified aircraft. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data, which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: March 3, 2006

Date reissued: April 15, 2008

Date of issuance: August 24, 2007

Date amended: April 15, 2008



By direction of the Administrator

[Handwritten Signature]

(Signature)

Acting Manager, Seattle Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

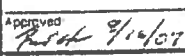
This certificate may be transferred in accordance with FAR 21.47.

**FastCap, LLC HID Landing and Taxi Light System
Instructions for Continued Airworthiness**

- 1 *Introduction:* These ICA pertain to the High Intensity Discharge (HID) landing and taxi light system.
- 2 *Description:* The HID landing and taxi light system consists of landing and taxi lamp units, (2) ballast units, a pulse unit with associated relay and related wiring, switches and circuit breakers.
- 3 *Control operation information:* No special operating procedures are required. All operations are as there were with the old system except the pulse unit which is detailed in the AFM supplement, FC112.
- 2 *Servicing information:* Not Applicable.
- 3 *Maintenance instructions:* Not Applicable.
4. *Troubleshooting information:* Troubleshooting is limited to removal and replacement.
- 5 *Removal and replacement information:* See section FC100 for installation/removal information.
- 6 *Diagrams:* See section FC100 for schematic diagram.
7. *Special inspection requirements:* Not Applicable.
- 8 *Application of protective treatments:* Not Applicable.
- 9 *Data:* Not Applicable.
- 10 *List of special tools:* Not Applicable.
- 11 *For commuter aircraft:* Not Applicable.
- 12 *Recommended overhaul periods:* No additional overhaul time limitations.
13. ***Airworthiness limitations:*** There are no limitations on the operation of the aircraft due installation of the HID landing and taxi light system.

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Secs. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternate program has been FAA approved.

14. *Revision:* These Instructions for Continued Airworthiness have been reviewed and accepted by the FAA. In the event a revision is required, FastCap, LLC will submit the revision to the FAA for review and approval. The revised ICA will be mailed to the owner of record of each modified aircraft. The revised ICA must become a part of the aircraft records and a logbook entry made noting the revision.

Drawn REH 8/16/07	FastCap, LLC 3725 Irongate Rd., Ste 105, Bellingham, WA 98226-7631	Title: High Intensity Discharge (HID) Light Installation - Instructions for Continued Airworthiness
Approved  9/10/07		Drawing: FC102 Rev. ir Sht: 1 / 1

Dwg	Sht	Title	Revision
FC100	1	High Intensity Discharge (HID) Light Installation	B 08/22/07
FC100	2	High Intensity Discharge (HID) Light Installation	B 08/22/07
FC100	3	High Intensity Discharge (HID) Light Installation	B 08/22/07
FC100	4	High Intensity Discharge (HID) Light Installation	A 07/23/07
FC101	1	High Intensity Discharge (HID) Light Installation - Details	A 07/23/07
FC101	2	High Intensity Discharge (HID) Light Installation - Details	A 07/23/07
FC101	3	High Intensity Discharge (HID) Light Installation - Details	A 07/23/07
FC101	4	High Intensity Discharge (HID) Light Installation - Details	A 07/23/07

Drawn REH 8/22/07

FastCap, LLC
 3725 Irongate Rd., Ste 105,
 Bellingham, WA 98226-7631

Title

High Intensity Discharge (HID)
 Light Installation - Master Drawing List

Approved *REH* 8/22/07

Drawing: FC-MDL

Rev B

Sht 1 / 1



Aerotech International, LLC

PO BOX 3105
Hot Springs, AR 71914

Invoice

Date	Invoice #
4/29/2012	1994

Bill To
LARRY GREEN 312 LOGAN AVENUE READING, PA 19610



Ship To
LARRY GREEN 312 LOGAN AVENUE READING, PA 19610

P.O. Number	Terms	Ship	Via	N NUMBER
	Due on receipt	4/29/2012		

Quantity	Item Code	Description	Price Each	Amount
1	GENERAL SALE	AVEO ENGINEERING REBARON LED ANTI COLLISION LIGHT, P/N 11-10535	895.00	895.00T
1	SHIPPING	UPS RED	72.00	72.00T
1	GENERAL SALE	CONTRACT LABOR FOR INSTALLATION	550.00	550.00T
1	GENERAL SALE	3% NON-CASH TRANSACTION FEE	45.51	45.51T

Sales Tax (8.625%)	\$134.77
Payments/Credits	\$-1,697.28
Balance Due	\$0.00

It is always a pleasure working with you. Ron	Total	\$1,697.28
-----------------------------------------------	--------------	------------

E-mail	Web Site
jurgen@aerotechinternational.com	www.aerotechinternational.com

BELLY + TAIL BERCON
MANUFACTURER

Contacts

- ⊕ Aveo Engineering Group s.r.o. (Headquarters)
- ⊖ Aveo Engineering LLC, Florida (Factory & Engineering Subsidiary)

Flagler Airport, FL, USA

Aveo Engineering LLC of Florida is an independent company that works on custom technical solutions with OEM manufacturers.

Aveo Engineering, LLC
4863 N.W. Palm Coast Parkway Suite 5
Palm Coast, FL 32137

Christian Nielsen

CEO

christian@aveoengineering.com (mailto:christian@aveoengineering.com)

Damien Esmond

Logistics

631-935-8483

damien@aveoengineering.com (mailto:damien@aveoengineering.com)

Aveo Engineering USA, LLC (Independent Reseller, not an Aveo
⊕ Subsidiary)

Kestrel-Air / Aveo Northwest (Independent Reseller, not an Aveo Subsidiary)
⊕

Aveo Engineering Southwest LLC (Independent Reseller, not an Aveo
⊕ Subsidiary)

Aveo Engineering Europe (Independent Reseller, not an Aveo Subsidiary)
⊕



aveoflash

LIMITED AIRCRAFT-LIFETIME WARRANTY

Aveo Engineering Group s.r.o. warrants its AveoFlash product to be free of manufacturing defects in material and improper workmanship, provided that the product has been installed and operated in accordance with AveoEngineering's recommendations, instructions and specifications, for the following time period: from the date of purchase by the original purchaser and installation upon the aircraft registered for such product warranty until such aircraft is sold or otherwise transferred, sustains damage or is in an accident, or is grounded. During the warranty period and subject to the conditions set forth below, AveoEngineering will, without charge for parts or labor, repair or replace (at its option) any parts or unit assemblies which, in AveoEngineering's sole discretion and final decision, are found to be defective. This warranty is void if the product has been tampered with, abused, misused, altered by the user, installed improperly or operated outside the parameters of its specifications or with improper transformers, regulators or power sources. Special care and waterproofing precautions should be taken for electronics that may be subjected to moisture, which if moisture exposure is evident and a cause of product failure, this warranty is void. Care should be taken to follow installation instructions and failure to do so may result in voidance of this warranty.

This warranty is solely between the registered end-consumer (ultimate user) and AveoEngineering. The Aveo light warranty applies to the registered installation of an AveoFlash light product on an aircraft for so long as that light is utilized in such registered installation and the light has not sustained any damage of any kind. The warranty is not transferable to any other owner of the aircraft on which the light has been installed without application to AveoEngineering, payment of a warranty transfer and registration extension fee by such owner, and acceptance by AveoEngineering in its sole discretion.

Conditions: All warranty claims must be accompanied by a dated proof of purchase and by proof of registration of warranty within 30 days of purchase of the AveoFlash product. The online Warranty Registration Form must be completed and submitted to AveoEngineering within thirty days of purchase via the internet at: <http://www.AveoEngineering.com> The product must not have been previously repaired or serviced by anyone other than AveoEngineering service facilities. The serial number on the product must not have been altered or removed. The product must be shipped, prepaid, either in its original packaging or similar packaging affording an equal degree of protection and indicating a location where the repaired product may be returned. All accessories that are enclosed with the product must be individually listed on the packing slip. AveoEngineering has no liability for loss or damage to any accessories which are not listed separately. Defective accessories should be returned to AveoEngineering as a separate claim item. Items repaired under warranty shall be shipped freight prepaid to the customer.

AveoEngineering reserves the right to discontinue, modify or upgrade any products it manufactures with design improvements without prior notice and without obligation to prior purchasers.

There are no other warranties, expressed or implied, including, but not limited to, any implied merchantability or fitness for a particular use. There are no warranties which extend beyond the description on the face hereof. This warranty does not extend to damage to any property, person, plant, animal or non-product item. Warranty is void if the product is misused or damaged in any way. This warranty does not cover regular product maintenance. This warranty excludes normal LED bulb burnout and wear and tear damage resulting from accident, alteration, or misuse. Normal LED bulb burnout is a user maintenance item. If the returned product/unit/assembly failed from neglect (not defect) the customer will be responsible for all costs and shipping charges.

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, AND WHETHER ARISING BY LAW, BY STATUTE, BY COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, UNDER NO CIRCUMSTANCES SHALL AVEOENGINEERING BE LIABLE FOR AN AMOUNT GREATER THAN THE ACTUAL PURCHASE PRICE OF THE PRODUCT OR FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES SUSTAINED IN CONNECTION WITH SAID PRODUCT. AVEOENGINEERING NEITHER ASSUMES NOR AUTHORIZES ANY REPRESENTATIVE OR OTHER PERSON TO ASSUME FOR IT ANY OBLIGATION OR LIABILITY OTHER THAN SUCH AS IS EXPRESSLY SET FORTH HEREIN.

**Advanced Lancaster LP**

530 Airport Rd.
 Lititz, PA 17543
 Phone: 717-735-5179
 Fax: 717-735-5399
 Email: joel@flyadvanced.com
 Date: 12/19/2014, 8:55 AM

CUSTOMER INFORMATION

Tom Bowe
 1540 KRIEBEL MILL RD
 COLLEGEVILLE, PA 19426
 610-666-4776
 tom.bowe@pjm.com
 Reg. No: N541DS
 2001 Diamond DA40-180
 Current A/C TT: 1416.7, Hobbs: 1745.5
 A/C Serial: 40.041

Customer Invoice
Work Order: 3672-11-2014

Item: 1 - Customer Recommended

Discrepancy	Hours	Subtotal
Both rear door hinges are broken.	13.00	1,241.50

Corrective Action
 Removed and replaced the rear passenger door hinges, primed and painted.

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
1	EA	DA4-5221-25-00_1	PAX DOOR HINGE 1 (AFT) (P/O: Maint-5575) (Ship: 10.29)		123.97	123.97
1	EA	DA4-5221-26-00	PAX DOOR HINGE 2 (FWD) (P/O: Maint-5575) (Ship: 10.29)		123.97	123.97

Labor: \$1,241.50	Parts: \$247.94	Shipping: \$20.58	Outside Repair: \$0.00	Item Subtotal:	\$1,510.02
--------------------------	------------------------	--------------------------	-------------------------------	-----------------------	-------------------

Item: 2 - Customer Recommended

Discrepancy	Hours	Subtotal
Emergency backup batteries, check logs and batteries. Safety switch.	1.00	95.50

Corrective Action
 Removed and replaced the emergency back up batteries, Ops checked and safetied the switch.

Qty	Unit	Part Number	Description	Serial Number	Unit Price	Subtotal
28	EA	PC1500	ALKALINE BATTERY, DURACELL PROCELL, "AA" (P/O: Maint-5524)		0.66	18.54

Labor: \$95.50	Parts: \$18.54	Shipping: \$0.00	Outside Repair: \$0.00	Item Subtotal:	\$114.04
-----------------------	-----------------------	-------------------------	-------------------------------	-----------------------	-----------------

Item: 3 - Customer Recommended

Discrepancy	Hours	Subtotal
Safety the rear passenger door emergency handle.	N/C - 0.00	0.00

Corrective Action
 Inspected the rear passenger door emergency handle for operation, and safetied the handle.

Labor: \$0.00	Parts: \$0.00	Shipping: \$0.00	Outside Repair: \$0.00	Item Subtotal:	\$0.00
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Please see the next page for the totals for this invoice

Labor Summary	
Shop Labor: \$1,337.00	Outside Repair: \$0.00

14.00 hours were needed to complete this Work Order
[*DEPARTBREAKDOWN*]

Total Labor:	\$1,337.00
Total Parts:	\$266.48
Total Shipping:	\$20.58
Total Outside Repair:	\$0.00
Additional Charges:	\$93.59
PA Sales Tax:	\$0.00
Amount Due:	\$1,717.65
Deposit:	\$0.00
Balance Due:	\$1,717.65

Important Information

Additional charges account for the recovery of airport fees.

PAYMENT IS DUE IN FULL AT TIME OF DELIVERY OF SERVICES. We accept Check, Visa, Mastercard, AMEX and Discover payment options.

MFG Warranty Issues:

As a Cirrus Design and Diamond Aircraft Service Center, any discrepancies that are found to be under manufacturer warranty will be directly billed to Cirrus or Diamond.

If any warranty item is not approved by the manufacturer, Advanced Lancaster, LP reserves the right to bill the aircraft owner/operator for the warranty service and/or part invoice balance(s) due upon receipt of warranty disapproval notification from the manufacturer.

Tom Bowe or Authorized Representative

Date



U.S. Department of Transportation Federal Aviation Administration ADS-B Compliance Monitor

ADS-B Aircraft Operation Compliance Report

ICAO: A6DBFF (51555777) Tail Number: N541DS

Flight Id: N541DS

Period: 11-30-2014 18:04:27 to 11-30-2014 19:05:16

Aircraft: 2001 - DIAMOND AIRCRAFT IND GMBH DA 40

Year - Make / Model

Non-Compliance Issues Identified

Items high-lighted in red within this report indicate the ADS-B Out system installed on this aircraft failed to meet the corresponding performance requirement as specified in § 91.227. Prior to January 1, 2020, the owner/operator must take action to correct identified system performance deficiencies as soon as practical. After January 1, 2020, system performance issues must be corrected prior to operation of the aircraft in the airspace specified in §91.225. Requests for authorization to deviate from §91.225 to support movement of the aircraft to effect ADS-B Out system repairs and testing may be made to the appropriate ATC facilities per §91.225(g).

	Analysis	Exceptions
Airborne 1090	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Surface 1090	<input type="checkbox"/>	<input type="checkbox"/>
Surface RWY/Taxi 1090	<input type="checkbox"/>	<input type="checkbox"/>
Airborne UAT	<input type="checkbox"/>	<input type="checkbox"/>
Surface UAT	<input type="checkbox"/>	<input type="checkbox"/>
Surface RWY/Taxi UAT	<input type="checkbox"/>	<input type="checkbox"/>

Prepared For Owner of Record:

LWG ARCHER LLC
312 LOGAN AVE

READING, PA 19610-2708

Prepared By

Surveillance and Broadcast Services (SBS) Program
ADS-B Compliance Monitor

December 02, 2014

Airborne 1090 Analysis Summary

Start Time: 11-30-2014 18:04:27

End Time: 11-30-2014 19:05:16

Duration (s): 01:00:48

Processed Reports: 2212

Total Reports: 12327

Service Volume Initial: 123 - Allentown

Service Volume Final: 123 - Allentown

Link Version: 2

Out Capability: 1090

In Capability: DUAL

Emitter Category: 1 - Light (<15,500lbs)

Antenna(s): 1 - Single

SILsupp: 0 - Per Hour

Flight Id: N541DS

Vert Velocity Baro

Mode 3A: 1200

Vert Velocity Geo

Exceptions:

Rule	Miss Ele	Int \ Acc	Kin	Other	NIC	NACp	NACv	SIL	SDA
Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	No

Class A	Class B	Class C	Class D	Class E	Part91AppD
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Distributions

NIC - Horizontal Containment Bound

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Unkn	<20NM	<8NM	<4NM	<2NM	<1NM	<.6NM	<.2NM	<.1NM	<75m	<25m	<7.5m	XXX	XXX	XXX	XXX
100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2212	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NACp - 95% Horizontal Accuracy Bound (EPU)

NA	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	$\geq 10\text{NM}$	$< 10\text{NM}$	<4NM	<2NM	<1NM	<.5NM	<.3NM	<.1NM	$< .05\text{NM}$	<30m	<10m	<3m	XXX	XXX	XXX	XXX
0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1	2211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NACv - 95% Horizontal Velocity Error

NA	0	1	2	3	4	5	6	7
	$\geq 10\text{m/s}$	<10m/s	<3m/s	<1m/s	<.3m/s	Reserved	Reserved	Reserved
0.1%	99.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2	2210	0	0	0	0	0	0	0

SIL - Source Integrity Level

0	1	2	3
$> 1 \times 10^{-3}$	$\leq 1 \times 10^{-3}$	$\leq 1 \times 10^{-5}$	$\leq 1 \times 10^{-7}$
0.0%	0.0%	0.0%	100.0%
1	0	0	2211

SILs - SIL Supplement

0	1
/Hour	/Sample
100.0%	0.0%
2212	0

SDA - System Design Assurance

0	1	2	3
$> 1 \times 10^{-3}$	$\leq 1 \times 10^{-3}$	$\leq 1 \times 10^{-5}$	$\leq 1 \times 10^{-7}$
0.0%	0.0%	100.0%	0.0%
1	0	2211	0

GVA - Geometric Velocity Accuracy

0	1	2	3
>150m	$\leq 150\text{m}$	$\leq 45\text{m}$	Reserved
100.0%	0.0%	0.0%	0.0%
2212	0	0	0

Bowe, Thomas

From: Ty.CTR.Prettyman@faa.gov on behalf of 9-AWA-AFS-300-ADSB-AvionicsCheck@faa.gov
Sent: Wednesday, January 07, 2015 2:25 PM
To: Bowe, Thomas
Subject: RE: Request ADS-B Compliance Report for N541DS
Attachments: ACR_20150102_A6DBFF_2144794.pdf; ADS-B Avionics Check Results Guide BII.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

External Email! Think before clicking links or attachments.

Requested report attached. Good news - everything looks ok. Suggest you submit another request after aircraft has flown a few more times to make sure everything is stable.

Provided by:
Federal Aviation Administration
Flight Standards Service
Aircraft Maintenance Division
Avionics Branch (AFS-360)
Washington, DC

From: <Tom.Bowe@pjm.com>

To: 9-AWA-AFS-300-ADSB-AvionicsCheck/AWA/FAA@FAA,
Date: 01/07/2015 09:16 AM
Subject: RE: Request ADS-B Compliance Report for N541DS

I have recently taken my DA40 N541DS back to the avionics shop in order to address the items highlighted in the Compliance Report provided in early December.

I am asking to see if many if not all of the issues have been addressed?

Thank You

Tom Bowe
610-666-4776

From: Ty.CTR.Prettyman@faa.gov [mailto:Ty.CTR.Prettyman@faa.gov] **On Behalf Of** 9-AWA-AFS-300-ADSB-AvionicsCheck@faa.gov
Sent: Tuesday, December 02, 2014 7:35 AM
To: Bowe, Thomas

3. Removed the Aircraft Flight Manual Supplement for the GTX 330 and installed a GTX330 with ADS-B Out AFM Supplement P/N 190-00734-15, into the Aircraft Flight Manual.

Thank You for your assistance.

Tom Bowe

610-666-4776

[attachment "ACR_20141130_A6DBFF_1393265.pdf" deleted by Ty CTR Prettyman/AWA/CNTR/FAA]



US Department of Transportation
Federal Aviation Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020
2/28/2011

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. §44701). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a))

1. Aircraft	Nationality and Registration Mark N541DS	Serial No. 40041
	Make DIAMOND	Model DA40
2. Owner	Name (As shown on registration certificate) LWG ARCHER LLC	Address (As shown on registration certificate) 312 LOGAN AVE
		City READING
		State PA
		Zip 19610-2708
		Country UNITED STATES

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIRFRAME	_____	(As described in Item 1 above)	_____
<input type="checkbox"/>	<input type="checkbox"/>	POWERPLANT			
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type		
			Manufacturer		

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name	PREMIER AIRCRAFT SERVICE INC	<input type="checkbox"/> U. S. Certificated Mechanic	<input type="checkbox"/> Manufacturer
Address	5540 NW 23rd Ave.	<input type="checkbox"/> Foreign Certificated Mechanic	C. Certificate No.
City	ET LAUDERDALE State FL	<input checked="" type="checkbox"/> Certificated Repair Station	9PRR402B
Zip	33309 Country UNITED STATES	<input type="checkbox"/> Certificated Maintenance Organization	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Extended range fuel per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual RICHARD QUILES 3-25-2013
------------------------------------------------------------------------	----------------------------------------------------------------------

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is Approved Rejected

BY	FAA Fit. Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee <input checked="" type="checkbox"/>	Repair Station	Inspection Authorization	Other (Specify)

Certificate or Designation No. 9PRR402B	Signature/Date of Authorized Individual RICHARD QUILES 3-25-2013
--------------------------------------------	----------------------------------------------------------------------

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

N541DS

03-25-2013

Nationality and Registration Mark

Date

- 1) Removed existing exhaust system and installed Power Flow Systems, Inc. tuned exhaust system in accordance with STC# SA03281AT held by Power Flow Systems, Inc., Daytona Beach, FL. Work carried out per Installation Instructions kit # PFS-15102, Rev. E dated 6/10/2010.
- 2) Reference Power Flow Systems, Inc. kit # PFS-15102, Rev. E step 5 for Instructions for Continued Airworthiness.
- 3) Installed placard as required.
- 4) Updated aircraft POH and revised aircraft weight and balance as applicable.

END

Repair	Version	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIRFRAME		As described in item 1 above	
<input type="checkbox"/>	<input type="checkbox"/>	POWERPLANT			
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE			

8. Controlling Agency

Agency's Name and Address: PREMIER AIRCRAFT SERVICE INC, 5240 W. 23rd Ave, FT LAUDERDALE, FL 33308, UNITED STATES

Signature of Authorized Individual: RICHARD OUILES, 3-25-2013

7. Approval for Return to Service

Signature of Authorized Individual: RICHARD OUILES, 3-25-2013

Signature of the Federal Aviation Administration and the Administrator: [Signature]

FAA Designee	<input checked="" type="checkbox"/>	Repair Station	Manufacturer	Maintenance Organization	Department of Defense
FAA Part 135	<input type="checkbox"/>	FAA Part 135	FAA Part 135	FAA Part 135	FAA Part 135

Additional Sheets Are Attached

PHOTOCOPY OF STC

United States of America
Department of Transportation -- Federal Aviation Administration
Supplemental Type Certificate

Number SA03281AT

This certificate issued to

Power Flow Systems, Inc.
1585 Aviation Center Parkway
Hangar 804
Daytona Beach, FL 32114

Not Valid without letter of
authorization for Power
Flow Systems, Inc.

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 23 of the Federal Aviation Regulations.

Original Product - Type Certificate Number : A47CE

Make : Diamond

Model : DA 40 ; DA 40 F

Description of Type Design Change: Install a Power Flow Systems, Inc. tuned exhaust system featuring new headers, new collector assembly and new tail pipe on the applicable airplane model per the matrix shown on Continuation Sheet, Page 3.

(See continuation sheet 3 of 3)

Limitations and Conditions: Instructions for Continued Airworthiness are part of this STC. "This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated, unless it is determined by the installer that the interrelationship between this change and any other previously approved modifications will produce no adverse effect upon the airworthiness of that airplane. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission."

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application : March 30, 2006

Date reissued :

Date of issuance : June 07, 2006

Date amended :



By direction of the Administrator

Christina X. Marsh
(Signature)

for Melvin D. Taylor, Manager
Atlanta Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

United States of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate
(Continuation Sheet)

Number SA03281AT
Date of Issuance: June 07, 2006

Description of Type Design Change (Continued):

Power Flow Systems, Inc. Improved performance exhaust system installation information

Model	Master Drawing List Report no. *	Installation Instructions & ICA Report No. * **
DA 40	PFS-15240-00, Rev. IR, Dated: 6/02/06	PFS-15250-00, Rev. IR, Dated: 4/17/06
DA 40 F	PFS-15140-00, Rev. IR, Dated: 3/30/06	PFS-15150-00, Rev. IR, Dated: 3/30/06

* Or later FAA approved revision

** Contains Instructions for Continued Airworthiness (ICA)

END



Service Time Record DA40
Date of Manufacture:

Date: *AUGUST 21/2001* Reg #: *N541DS* S/N #: *40041*

Item	Serial Number	Subject	Compliance Frequency	Compliance Date or Time	Compliance Next Due
25 Hour Inspection		DA40 Maintenance Practices	25 hours		<i>25.0 HRS</i>
50 Hour Inspection		DA40 Maintenance Practices	50 hours		<i>50.0 HRS</i>
100 Hour Inspection		DA40 Maintenance Practices	100 hours		<i>100 HRS</i>
200 Hour Inspection		DA40 Maintenance Practices	200 hours		<i>200 HRS</i>
1000 Hour Inspection		DA40 Maintenance Practices	1000 hours or every 12 years (which ever comes first)		<i>1000 HR OR AUG 2013</i>
Annual Inspection		DA40 Maintenance Practices Maintenance not done to FAR 91.	Every 12 months (200 hour insp.)		
Annual Inspection (US Registered)		DA40 Maintenance Practices Maintenance done to FAR 91.	Every 12 months (100 hour insp.)		<i>AUG 2002</i>
Engine Overhaul		Lycoming IO-360 M1A – Refer to Lycoming Service Instruction 1009 (latest issue).	2000 hours or 12 years (which ever comes first)		<i>2000 HRS. OR. OCT 2012</i>
LASAR Ignition Controller, Slick		Overhaul Ignition Controller, Slick.	Overhaul with engine		<i>2000 HR.</i>
Magneto Slick 4770/4771		Overhaul magneto slick. Refer to Slick Maintenance and Overhaul Manual L-1503 (latest issue).	Overhaul with engine		<i>2000 HR.</i>
Propeller Overhaul		Overhaul MT-Propeller MTV-12-B/180-17	1800 hours or 6 years (which ever comes first)		<i>1800 HR. OR JAN 2007</i>
Electrical fuel pump, Dukes		Overhaul electrical fuel pump.	10 years from date of overhaul (marked on pump)		<i>MAY 2011</i>
Alternator		Overhaul alternator ALU-8421LS-T	2000 hours		<i>2000</i>
Propeller governor		Overhaul propeller governor, Woodward C210776A	2000 hours		<i>2000</i>
Ignition switch, ACS		Overhaul ignition switch. Refer to current ACS Service letters and Instructions	2000 hours		<i>2000</i>
3 point safety harness		Replace front harnesses	12 years		<i>AUG 2013</i>
3 point safety harness		Replace rear harnesses	12 years		<i>AUG 2013</i>
Brake fluid		Replace brake fluid, Fluid 4.	3 years		<i>AUG 2004</i>
Fuel hoses		Replace fuel hoses connecting main (inner) fuel tanks to auxiliary (outer) fuel tanks.	1000 hours		<i>1000.</i>
Air filter		Replace air filter K + N RU-0810	500 hours		<i>500.</i>
Rudder Cables		Replace rudder cables 3.2mm (1/8 inch) diameter.	3000 hours or 5 years (which ever comes first)		<i>3000 HRS OR MAY 2006.</i>
Engine Shock Mounts		Replacement of engine shock mounts	2000 hours		<i>2000</i>
Electric flap motor		Replacement of electric flap motor.	30,000 landings		<i>30,000 LNDGS</i>
DPU battery		Replacement of DPU battery memory pack for VM 1000 engine instrument unit.	2 years		<i>AUG 2003</i>
Tachometer		Tachometer Accuracy Check	Annually		<i>AUG 2002</i>
Fire Extinguisher		Fire Extinguisher Inspection and Weigh	Annually		<i>AUG 2002</i>
Compass		Compass Swing	Annually		<i>AUG 2002</i>
ELT		Recertify ELT	Annually		<i>MAR 2002</i>
ELT Battery		Replace ELT Battery	<i>5</i> years		<i>MAR 2006.</i>
Static System		Pitot Static System Check	2 years		<i>AUG 2003</i>
Altimeter		Recertify Altimeter	2 years		<i>MAR 2003</i>
Transponder		XPDR Data Correlation Check	2 years		<i>AUG 2003</i>

AIRCRAFT TECHNICAL LOG

Instruction For Use

1. This log is issued under the authority of the Minister of Transport and shall be maintained in accordance with the Air Regulations and Air Navigation Order, Series VIII, No. 3. The log shall be kept in conjunction with an Aircraft Journey Log maintained in accordance with Air Navigation Order, Series VIII, No.2.
2. The log shall be maintained at the base of operation of the aircraft. The log should not be transported in the aircraft for which it is kept if other suitable means of transportation are available.
3. It shall be available for inspection on request by an authorized representative of the Department.
4. The owner shall be responsible for all necessary entries being made in the log. Entries may be made by the pilot, engineer or owner as may be applicable.
5. The purpose of this log is to provide a complete maintenance record for the aircraft. Where maintenance is performed while an aircraft is away from base such maintenance shall be recorded in the Journey Log and either a certified copy of the entry made in the Technical Log or an appropriate log entry made on a separate sheet shall be attached to the appropriate page of the Technical Log on the aircraft's return to base.
6. Outline of Contents – NOTE: The log shall consist of those sections necessary for the type of aircraft.

(a) Section I

Airframe Log – This log forms the control section of the Aircraft Technical Log. All entries of time shall be entered as daily totals from the Aircraft Journey Log.

(b) Section II

Airframe Log – Record of Installations and Modifications. – This log shall contain a record of each engine and propeller installed or removed. A record of all airframe airworthiness directives etc., which have been complied with shall be kept in the space provided at the rear of the log.

(c) Section III

Engine Log (s) – This log shall be kept to provide a complete history of the engine (s) currently installed. A record of all engine airworthiness directives etc., which have been complied with shall be kept in the space provided at the rear of the log. Time entries shall be made at each periodic inspection, repair, adjustment, modification, or removal from the aircraft and shall include all the time recorded in Section I of the Aircraft Technical Log since the previous entry. This log will be removed from the binder and accompany the engine for which it is kept when the engine is removed from the aircraft. The corresponding log for the replacement engine installed will be placed in the technical log.

(d) Section IV

Propeller Log (s) – This log shall be kept to provide a complete history of the propeller (s) currently installed. A record of all propeller airworthiness directives etc., which have been complied with shall be kept in the space provided at the rear of the log. Time entries shall be made at each periodic inspection, repair, adjustment, modification or removal from the aircraft and shall include all the time recorded in Section I of the Aircraft Technical Log since the previous entry. This log will be removed from the binder and accompany the propeller for which it is kept when the propeller is removed from the aircraft. The corresponding log for the replacement propeller installed will be placed in the technical log.

(e) Section V

Component Log – This log consists of two forms, the "Component History" and the "Component Replacement Record" forms.

Component History Form – A separate form shall be kept for each component that has a time-in-service life. Time entries shall be made when adjustment, repair, removal, inspection, modification, or overhaul of the unit has been accomplished. This form will be removed from the binder and accompany the component for which it is kept when the component is removed from the aircraft. The corresponding form for each replacement component installed will be placed in the log.

Component Replacement Record – This form shall be used to record the date and time in service at installation and removal of each component for which a component History Form is required. Completed forms will be retained in the log.

AIRCRAFT TECHNICAL LOG Instruction For Use

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Service Time Record DA40

Date of Manufacture:

Date: *AUGUST 21/2001* Reg #: *N541DS* S/N #: *40041*

Item	Serial Number	Subject	Compliance Frequency	Compliance Date or Time	Compliance Next Due
25 Hour Inspection		DA40 Maintenance Practices	25 hours		<i>25.0 HRS</i>
50 Hour Inspection		DA40 Maintenance Practices	50 hours		<i>50.0 HRS</i>
100 Hour Inspection		DA40 Maintenance Practices	100 hours		<i>100. HRS</i>
200 Hour Inspection		DA40 Maintenance Practices	200 hours		<i>200. HRS.</i>
1000 Hour Inspection		DA40 Maintenance Practices	1000 hours or every 12 years (which ever comes first)		<i>1000 HR OR AUG 2013</i>
Annual Inspection		DA40 Maintenance Practices Maintenance not done to FAR 91.	Every 12 months (200 hour insp.)		
Annual Inspection (US Registered)		DA40 Maintenance Practices Maintenance done to FAR 91.	Every 12 months (100 hour insp.)		<i>AUG 2002</i>
Engine Overhaul		Lycoming IO-360 M1A – Refer to Lycoming Service Instruction 1009 (latest issue).	2000 hours or 12 years (which ever comes first)		<i>2000 HRS. OR. OCT 2012</i>
LASAR Ignition Controller, Slick		Overhaul Ignition Controller, Slick.	Overhaul with engine		<i>2000 HR.</i>
Magneto Slick 4770/4771		Overhaul magneto slick. Refer to Slick Maintenance and Overhaul Manual L-1503 (latest issue).	Overhaul with engine		<i>2000 HR.</i>
Propeller Overhaul		Overhaul MT-Propeller MTV-12-B/180-17	1800 hours or 6 years (which ever comes first)		<i>1800 HR. OR JAN 2007</i>
Electrical fuel pump, Dukes		Overhaul electrical fuel pump.	10 years from date of overhaul (marked on pump)		<i>MAY 2011</i>
Alternator		Overhaul alternator ALU-8421LS-T	2000 hours		<i>2000</i>
Propeller governor		Overhaul propeller governor, Woodward C210776A	2000 hours		<i>2000</i>
Ignition switch, ACS		Overhaul ignition switch. Refer to current ACS Service letters and Instructions	2000 hours		<i>2000'</i>
3 point safety harness		Replace front harnesses	12 years		<i>AUG 2013</i>
3 point safety harness		Replace rear harnesses	12 years		<i>AUG 2013</i>
Brake fluid		Replace brake fluid, Fluid 4.	3 years		<i>AUG 2004</i>
Fuel hoses		Replace fuel hoses connecting main (inner) fuel tanks to auxiliary (outer) fuel tanks.	1000 hours		<i>1000.</i>
Air filter		Replace air filter K + N RU-0810	500 hours		<i>500.</i>
Rudder Cables		Replace rudder cables 3.2mm (1/8 inch) diameter.	3000 hours or 5 years (which ever comes first)		<i>3000 HRS OR MAY 2006.</i>
Engine Shock Mounts		Replacement of engine shock mounts	2000 hours		<i>2000</i>
Electric flap motor		Replacement of electric flap motor.	30,000 landings		<i>30,000 LDGS.</i>
DPU battery		Replacement of DPU battery memory pack for VM 1000 engine instrument unit.	2 years		<i>AUG 2003</i>
Tachometer		Tachometer Accuracy Check	Annually		<i>AUG 2002.</i>
Fire Extinguisher		Fire Extinguisher Inspection and Weigh	Annually		<i>AUG 2002.</i>
Compass		Compass Swing	Annually		<i>AUG 2002.</i>
ELT		Recertify ELT	Annually		<i>MAR 2002</i>
ELT Battery		Replace ELT Battery	<i>5</i> years		<i>MAR 2006.</i>
Static System		Pitot Static System Check	2 years		<i>AUG 2003</i>
Altimeter		Recertify Altimeter	2 years		<i>MAR 2003</i>
Transponder		XPNDR Data Correlation Check	2 years		<i>AUG 2003.</i>

Rocky Mountain Sheepskin Co.

1711 Branham Lane, Ste A 11
San Jose, CA 95118

1-800-428-7216 or 408-266-2114
Mo - Fr 10am - 6pm PST
Sa 10am - 4pm PST



Invoice Statement

Date	Invoice #
2/3/2015	18188

Bill To
Thomas Bowe 1540 Kriebel Mill Rd Collegeville PA 19426 tom.bowe@pjm.com

Ship To
Thomas Bowe 1540 Kriebel Mill Rd Collegeville, PA 19426 tom.bowe@pjm.com

Phone Number	Rep	Paid By	Year	Make	Model	SIAB	HR Velcro
610-666-4776	ADAM	MC	2001	Diamond S...	DA-40-180		

Item	Description	Qty	Rate	Amount
3621A	Airplane sheepskin seat cover, lowback, tailor-made, color: Pewter	2	245.00	490.00
3624A	Airplane Bench Seat Cover, tailor-made, 100% sheepskin, color: Pewter	1	469.99	469.99
shipping	Shipping Charges	1	25.00	25.00
	Out-of-state sale, exempt from sales tax		0.00%	0.00

Four year warranty on craftsmanship, three years on material on tailor-made items.
15% re-stocking fee

Total (paid) \$984.99

Shipping, velcro and alterations are non-refundable. DO NOT install seat covers over side impact airbags unless altered for airbags. User accepts all responsibility for correct installation. Tailor-made items will arrive approx. 4-5 weeks after order is placed. There is a 15% restocking fee on returned/canceled tailor-made items. Our warranty covers defects in craftsmanship, seams and broken straps, it does not cover color fading or normal wear and tear. Unused items can be returned within 30 days of purchase received.

Phone #	Fax #	E-mail	Web Site
800-428-7216	408-266-6535	rocky@rmsheepskin.com	www.rmsheepskin.com

ROCKY MOUNTAIN SHEEPSKIN CO.

PRODUCT CARE AND WARRANTY INFORMATION

PRODUCT CARE:

Your sheepskin has been tanned, cured and dyed using only the highest quality chromium tanning methods. Only high grade, plush Australian merino sheepskins are used in our seat covers therefore minimal care is needed.

- 1) Once every few month we recommend brushing your seat covers with a curry comb or pet brush. This pulls up the wool pile and helps keep the fleece from matting and tangling.
- 2) Rotate the seat covers from driver's side to passenger side once per year (unless altered for side impact airbags). This should double the life of your seat covers.
- 3) Use spot remover or foaming carpet cleaner for spills or soiled areas, then vacuum.
- 4) We recommend dry cleaning by a professional fur cleaner only – most local dry cleaners can refer you to one.

WARRANTY INFORMATION

For the length of time written on your receipt, your sheepskin seat covers are warranted against: unstitched seams, broken straps and any defects in craftsmanship. All repairs will be done locally by us. Our warranty does not cover normal wear and tear or color fading. If you follow our care instructions, your sheepskin seat covers should provide you with long lasting comfort and protection.

THANK YOU,

The staff at Rocky Mountain Sheepskin Company



Aircraft Installation Instructions

We design our sheepskin aircraft seat covers to be durable, functional and easy to install. Most smaller aircraft have non-electric seats and plenty of room under the seats for easy access. Our covers are designed as a one piece style so there are less straps to fuss with and provide a better fit for flatter aircraft seats. If you are having a difficult time please give us a call and we can give you more detailed installation information for your airplane at 1-800-428-7216. The following is a general installation guide to help with most aircraft applications.

1. If you have lowback seats with separate headrests, remove headrests from top of seat. Most headrests simply pull out with little effort. A few seats have non-removable or difficult to remove headrests and velcro will be added to the top of seat cover.
2. Once headrests are removed, place top part of seat cover (hooded part with single back strap) over top of seat and snug down firmly.
3. Strap Placement
 - a) Push the two center straps through the middle crack in the seat and pull them through to the back of the seat. Loop these over the single back strap and hook them to the two straps on the front base of the cover.
 - b) Wrap the two side straps around the lower back of the seat and hook to each other.
 - c) Be careful not to obstruct movement of seat or tracks with the straps.
4. For lowback seats, carefully cut small holes for headrests and any seat knobs with a sharp utility knife. Push headrests back in place. For non-removable headrests with velcro, cut small slits in velcro for headrests posts once seat cover is installed then stretch velcro closed evenly for a nice seam.....Good job, you're done, now go take a nice long comfortable flight!

Cirrus seats: Before installing, unbolt the seatbelts at the lower side of the seat and feed through the holes in the seat cover. Complete the cover install and then re-bolt the seatbelts back to the seats.

If you experience any problems, call us at 1-800-428-7216 and we will be glad to help



**Rocky Mountain Sheepskin
1711 Branham Lane
San Jose, CA 95118**



5000 N. Highway 251 ■ Davis Junction, IL 61020
 815.393.4600 ■ 815.393.3205 (fax)
 Info@SkandiaInc.com ■ www.SkandiaInc.com

VERTICAL FLAMMABILITY TEST RESULTS 14 CFR Part 25.853 (a) Amdt 25-116 Appendix F Part I (a)(1)(ii)			Skandia, Inc. WO # 242185-12 Client PO Rocky	
Rocky Mountain Sheepskin Co 1711 Branham Lane A11 San Jose CA 95118 USA 800-428-7216 rocky@rmsheepskin.com			Doc ID: 12NW-262396 Test Plan # Rev	
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION				
Make:		Model:		Serial:
				Tail:
Conditioning Room Data:		Date In: 06/18/2012 Time In: 09:30		Date Out: 06/19/2012 Time Out: 10:50
SPECIMEN MATERIALS				
Part No: 5 US Sheepskin: Sheepskin, Gray				
Lot No 5				
Set	Flame Application (seconds)	Flame Time (seconds)	Burn Length (inches)	Drip Flame Time (seconds)
1	12	0.0	0.6	0.0
2	12	0.0	0.7	0.0
3	12	0.0	0.7	0.0
Average:		0.0	0.7	0.0
<i>Vertical (12 second) Burn Test: Average Self-Extinguish time may not exceed 15 seconds. Average Burn Length may not exceed 8 inches. Average Dripping may not exceed 5 seconds after falling.</i>				
Comments:				
<input checked="" type="checkbox"/> Passed <input type="checkbox"/> Failed				
CERTIFICATION: I certify that after testing these specimens, the above results were obtained in accordance with the procedures and equipment specified by Code of Federal Regulations Title 14 Part 25, revised as of January 1, 2004 and the Aircraft Materials Fire test Handbook dated April, 2000.				
Donna J. Parrish - FAA DER			06/19/2012	
WITNESS			DATE	

aero-space REPORTS

P.O. Box 720452 * Oklahoma City, Oklahoma 73172 * Office: (405) 722-1030/(800)765-2336

Email: info@aerospacereports.com

Fax: (405)728-2336

Aircraft Title Status Report - Account #: 18232

Issued To

Name: Thomas Bowe
Address: 1540 Kriebel Mill Road
Collegeville, PA 19426

Dated this 14th day of October, 2014 as of 7:29 AM Central Time.

1. Aircraft:

FAA Registration #: N541DS

MFG: DIAMOND AIRCRAFT
IND., INC.

Model: DA 40

Date of Purchase: 05/03/12

Serial#: 40041

Type Ownership: LLC

Registered Owner: LWG Archer, LLC*
312 Logan Avenue
Reading, PA 19610

Previous Owner: MultiCorp, LLC
17734 Glenapp Drive
Land O Lakes, FL 34638

2. Liens or Encumbrances

- | | | |
|------------------------------------------|-----------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Lease | <input type="checkbox"/> Conditional Sales Contract | <input checked="" type="checkbox"/> Security Agreement |
| <input type="checkbox"/> Mechanic's Lien | <input type="checkbox"/> Lease w/Purchase | <input type="checkbox"/> Chattel Mortgage |
| <input type="checkbox"/> Tax Lien | <input type="checkbox"/> Amendment | <input type="checkbox"/> Assignment |
| | <input type="checkbox"/> Other | |

Dated: 05/03/12 Recorded: 05/17/12 Amount: \$109,900.00 Document: SG007610

By: LWG Archer, LLC

To: U.S. Aviation Finance, LLC
Box 999, Richmond, VT 05477

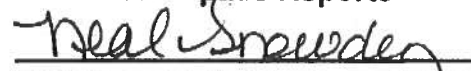
Assigned: BankFive
79 North Main Street, Fall River, MA 02720

3. Other Information or Remarks

*LLC is managed by Member, Larry W. Green, who may act independently.

NB \ VH

Aero-Space Reports



This report contains information acquired through examination of the records maintained by the FAA, including the indices of in-process documents. Because our examination is limited to records maintained by the FAA, this report does not cover any liens, claims, encumbrances or judgments that have not been filed with the FAA, or have not been indexed by the FAA under the description shown on this report.

WOLD AVIATION

2415 MILFORD SQUARE PIKE
QUAKERTOWN, PA 18951

Invoice

Date	Invoice #
3/7/2015	53

Bill To
TOM BOWE

P.O. No.	Terms	Project

Quantity	Description	Rate	Amount
1	CONSUMABLES	35.00	35.00
4	EXHAUST GASKET	8.00	32.00
1	INTAKE BOLT HEATER	140.00	140.00
1	ALTERNATE AIR CABLE	70.00	70.00
18	ANNUAL INSPECTION	83.00	1,494.00
2	C/W POWER- FLOW ICA'S	83.00	166.00
1.5	R&R ALTERNATE AIR CABLE	83.00	124.50
1.5	REPAIRED RIGHT WHEEL FAIRING	83.00	124.50
1	INSTALLED MISSING STARTER HARDWARE, BROKEN TAIL PIPE STRAP. CABIN HEAT DUCTING AND TANIS INTAKE BOLT HEATER	83.00	83.00

Thank you for your business.

Total

\$2,269.00



652 Oliver Street
Williamsport, PA 17701 U.S.A.

Tel. +1-800-258-3279 (U.S. and Canada)
Tel. +1-570-323-6181 (International)
Fax. +1-570-327-7101
www.lycoming.com

MANDATORY

SERVICE BULLETIN

January 23, 2014

Supplement No. 2

To

Service Bulletin No. 342G

This supplement No. 2 to Service Bulletin No. 342G:

1. Deletes the 8-inch approximate space between fuel clamps in step 5 on page 3 and also in the checklist on page 4 as follows:

Change, Step 5 on page 3 from:

5. Fuel lines must be held in place securely using clamps with cushions. The clamps must be approximately 8 in. (20 cm) apart.

To:

5. Fuel lines must be held in place securely using clamps with cushions.

Change, text in 1st column on left, 2nd row in checklist on page 4 from:

Clamps (with cushions) attached to fuel lines. Fuel lines must be held in place securely with clamps in position approximately 8 in. (20 cm) apart.

To:

Clamps (with cushions) attached to fuel lines. Fuel lines must be held in place securely with clamps.



**General Aviation
Manufacturers Association**

ISSUED			REVISED			PAGE NO.	REVISION	G-Sup.2
MO	DAY	YEAR	MO	DAY	YEAR			
01	23	14	--	--	--	1 of 2	---	

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Lycoming Engines is a division of Avco Corporation

SHIP TO:

TOM BOWE
ATTN: THOMAS BOWE
1540 KRIEBEL MILL RD
COLLEGEVILLE, PA 19426
UNITED STATES



JEPPesen's ONLINE STORE
Attn: Customer Returns
6961 South Quentin Street
Centennial, CO 80112

Tel: (800) 621-5377
(303) 328-4274
Fax: (303) 328-4153
www.jeppesen.com

TOM BOWE
ATTN: THOMAS BOWE
1540 KRIEBEL MILL RD
COLLEGEVILLE, PA 19426
UNITED STATES

PACKING SLIP

Order Number: 7485184 Delivery ID: 192636295 Customer Number: 1436667 Page 1 of 1

Purchase Order Number: Requested Date: 06-MAY-2015

Line Number	Item Number	Item Description	Quantity Ordered	Quantity Shipped
1	10537238	Additional Blank Card Kit.NavData.Garmin 16 MB.Orange *** End of Pack Slip ***	1	

**THANK YOU FOR YOUR ORDER
THIS IS NOT AN INVOICE**

RETURN POLICY

- (1) Please call for a Return Merchandise Authorization (RMA).
- (2) Please visit: <http://Jeppdirect.com/returns>

Pack Slip Notes:

These commodities, technology, or software were exported in accordance with the Export Administration Regulations. Diversion contrary to U.S. law is prohibited. [15 C.F.R. Parts 730-774]

WOLD AVIATION

2415 MILFORD SQUARE PIKE
QUAKERTOWN, PA 18951

Invoice

Date	Invoice #
5/2/2015	80

Bill To
TOM BOWE

P.O. No.	Terms	Project

Quantity	Description	Rate	Amount
1	OIL FILTER	34.00	34.00
8	AEROSHELL OIL	8.50	68.00
1	SPARK PLUG	35.00	35.00
1	R&R OIL AND FILTER	83.00	83.00
1	CLEAN, INSPECT, REGAPPED AND TEST SPARK PLUGS	83.00	83.00

Thank you for your business.	Total	\$303.00
------------------------------	--------------	----------



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: BOWE, THOMAS T

BOWE, THOMAS T
1540 KRIEBEL MILL ROAD
COLLEGEVILLE, PA 19426

FCC Registration Number (FRN): 0024605560

FAA Number/FCC Call Sign	Radio Service	File Number
N 541DS	AC - Aircraft	0006807348
Type of License	Number in Fleet	Classification
Regular		Private Aircraft

Grant Date	Effective Date	Expiration Date	Print Date
05-20-2015	05-20-2015	05-20-2025	05-20-2015

Waivers/Conditions:

NONE

THIS AUTHORIZATION IS NOT TRANSFERABLE

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

F	7		6		5		4		3		2		1									
	Landeklappen		Querruder		Höhenruder		Trimmruder		Höhenruder		Seitenruder											
	Reisstellung	Startstellung	Landstellung	links	rechts	links	rechts	links	rechts	HR i0° gezogen	HR neutral	HR 10° gedreht	oben	unten	links	rechts						
	links	rechts	links	rechts	links	rechts	links	rechts	links	rechts	links	rechts	links	rechts	links	rechts						
Soilweg [mm]	0 ±4	81 ±8	187 ±4		69 ±7	0 ±3,5	46 ±7/-0			61,5 ±3,5	61,5 ±3,5	61,5 ±3,5	97 ±4	82 ±4	130 ±5	140 ±5						
Istweg [mm]										61,5 ±3,5	61,5 ±3,5	61,5 ±3,5										
Soilwinkel [°]	0 ±1°	+20° ±2°	+42° ±1°		-20° ±2°	0° ±1°	+13° ±2°/0°			-20° ±2°	-16° ±1°	-20° ±2°	-23° ±1°	+15° ±1°	+29° ±1°	-31° ±1°						
Istwinkel [°]	0	20,5	42,5	42	-20	0	14	14	14	-40	-23	8	-34	-16	18	-27	-7	30	-23	15	29	-31
E																						
D																						
C																						
B																						
A	<p> Aircraft S/N 40041 Datum 28. Mai. 01 Ersteller Hr. Klenbink </p> <p> <small> Diese Zeichnung ist eine Spezialzeichnung und darf nicht ohne schriftliche Genehmigung der Firma DIAMOND AIRCRAFT INDUSTRIES GMBH kopiert, vervielfältigt oder nach außen mitgeteilt werden. UEBERTRAGUNG, VERBREITUNG, ENTLEHNUNG ODER VERWENDUNG NACH DEM URSCHRIFTLICHEN ZUSTAND IST NACHDRUCK VERBODEN. </small> </p> <p> Modell: Ruderreinstellbericht Benennung: Ruderreinstellbericht Dat.-Tele. Nr.: 00.0000 </p> <p> Zeichnungs Nr.: D41-0827-10-00 Blatt: 1 Ex. Ges.: </p> <p> Diamond Industries Aircraft GmbH A-2300 Wiener Neustadt, N. A. Olo-Siv. 3 </p>																					

WOLD AVIATION

2415 MILFORD SQUARE PIKE
QUAKERTOWN, PA 18951

Invoice

Date	Invoice #
6/29/2015	104

Bill To
TOM BOWE

P.O. No.	Terms	Project

Quantity	Description	Rate	Amount
8	TEMPEST FINE WIRE SPARK PLUGS	80.00	640.00
1	OIL FILTER	34.00	34.00
19	AEROSHELL OIL	8.50	161.50
1	DUCTING	15.00	15.00
1	R&R OIL AND FILTER	83.00	83.00
1	OIL KIT	35.00	35.00
0.75	R&R SPARK PLUGS	83.00	62.25

Thank you for your business.

Total

\$1,030.75

Invoice

WOLD AVIATION

2415 MILFORD SQUARE PIKE
QUAKERTOWN, PA 18951

Date	Invoice #
8/25/2015	133

Bill To
TOM BOWE

P.O. No.	Terms	Project

Quantity	Description	Rate	Amount
1	OIL FILTER	34.00	34.00
1	OIL KIT	35.00	35.00
7	AEROSHELL OIL	8.50	59.50
1	R&R OIL AND FILTER	83.00	83.00
Thank you for your business.		Total	\$211.50

WOLD AVIATION

2415 MILFORD SQUARE PIKE
QUAKERTOWN, PA 18951

Invoice

Date	Invoice #
10/26/2015	158

Bill To
TOM BOWE

P.O. No.	Terms	Project

Quantity	Description	Rate	Amount
1	TIRE	150.00	150.00
2	AIRSTOP TUBE	90.00	180.00
1	AIRSTOP TUBE	90.00	90.00
7	AEROSHELL OIL	8.50	59.50
1	OIL FILTER	34.00	34.00
1	BALLAST	300.00	300.00
1	R&R OIL AND FILTER	83.00	83.00
1.5	TROUBLESHOOTING AND REPLACED LEFT WING BALLAST	83.00	124.50

Thank you for your business.	Total	\$1,021.00
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WOLD AVIATION

2415 MILFORD SQUARE PIKE
QUAKERTOWN, PA 18951

Invoice

Date	Invoice #
2/17/2016	185

Bill To
TOM BOWE

P.O. No.	Terms	Project

Quantity	Description	Rate	Amount
3.5	REMOVED AND REINSTALLED PROPELLER	85.00	297.50
1	PROPELLER WORK	2,083.30	2,083.30
<i>pd in full A. Wold</i>			

Thank you for your business.	Total	\$2,380.80
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AVIATION LABORATORIES

ANALYSIS RESULTS

910 MARIA STREET
KENNER, LOUISIANA 70062
(504) 469-6751

SHEARER AVIATION SERVICES
Attn: JAY SHEARER
398C S RAMONA RD
HANGAR 1 DECK AIRPORT
LEBANON PA 17042
United States

Aircraft: DA40
S/N: 40041
Tail No.: N541DS-F

Date: 9/14/2012
Engine S/N: L2941051A
Engine Model: LYC. 360

Values in (parenthesis) below your results are average values from all our analysis data for the same engine model with similar engine hours and oil hours. See www.avlab.com/explain for detailed explanation of the statistical analysis used with your laboratory results.

CURRENT SAMPLE		SAMPLE APPEARS NORMAL. Send next sample at normal interval.										
Sample Date: 8/1/2012 Analysis Date: 9/6/2012 Sample Number: P92 Cylinder Type: steel TSN/TSO: 1146.4 Oil Hours: 24.9 Filter Hours: 24.9 Oil Added: 2 Filter Wt. (mgs): Flashpoint(deg. F): H2O (ppm): Total Acid No.:	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	14.8 (23.3)	1.3 (6.3)	0.8 (1.3)	0.8 (3.2)	N/A	N/A	1.5 (3.9)	1423 (3250)	0.8 (4.5)	N/A	< 0.1 (0.1)	N/A
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
Amount:												
Type:												
Form:												
Comments:												

PREVIOUS SAMPLE 1		** SEE LAB COMMENTS **										
Sample Date: 10/27/2010 Analysis Date: 12/1/2010 Sample Number: P134 Cylinder Type: steel TSN/TSO: 1093.1 Oil Hours: unknown Filter Hours: Oil Added: Filter Wt. (mgs): Flashpoint(deg. F): H2O (ppm): Total Acid No.:	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	35.6 (N/A)	4.5 (N/A)	3.3 (N/A)	3.1 (N/A)	N/A	N/A	6.2 (N/A)	3961 (N/A)	20.4 (N/A)	N/A	< 0.1 (N/A)	N/A
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
Amount:												
Type:												
Form:												
Comments: OIL HOURS NOT GIVEN. PLEASE INCLUDE INFORMATION WITH ALL SAMPLES FOR ACCURATE ANALYSIS RESULT INTERPRETATION AND WEAR METAL TREND MONITORING.												

PREVIOUS SAMPLE 2		SAMPLE APPEARS NORMAL. Send next sample at normal interval.										
Sample Date: 6/21/2010 Analysis Date: 7/12/2010 Sample Number: P20 Cylinder Type: steel TSN/TSO: 859.1 Oil Hours: 38.5 Filter Hours: 38.5 Oil Added: Filter Wt. (mgs): Flashpoint(deg. F):	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	41.1 (22.6)	4.5 (5.4)	1.2 (1.5)	2.7 (3.1)	N/A	N/A	3.8 (3.9)	3668 (3658)	5.0 (4.2)	N/A	< 0.1 (0.1)	N/A
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
Amount:												
Type:												
Form:												

ANALYSIS RESULTS

AVIATION SPECIALTY SERVICES
Attn:
4861 NW 7TH DR

Aircraft: DA40
S/N: 40041
Tail No.: N541DS-F

Date: 7/15/2010
Engine S/N: L2941051A
Engine Model: LYC. 360

PLANTATION FL 33317
United States

Values in (parenthesis) below your results are average values from all our analysis data for the same engine model with similar engine hours and oil hours. See www.avlab.com/explain for detailed explanation of the statistical analysis used with your laboratory results.

CURRENT SAMPLE		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **										
Sample Date: 6/21/2010 Analysis Date: 7/12/2010 Sample Number: P20 Cylinder Type: steel TSN/TSO: 859.1 Oil Hours: 38.5 Filter Hours: 38.5 Oil Added: Filter Wt. (mgs): Flashpoint(deg. F): H2O (ppm): Total Acid No.:	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	41.1 (23.4)	4.5 (5.6)	1.2 (1.4)	2.7 (3.4)	N		3.8 (3.6)	3668 (4090)	5.0 (4.1)		< 0.1 (0.1)	
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
	Amount:											
	Type:											
	Form:											
	Comments:											
	PREVIOUS SAMPLE 1		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **									
Sample Date: 3/10/2010 Analysis Date: 3/29/2010 Sample Number: P22 Cylinder Type: steel TSN/TSO: 820.6 Oil Hours: 67.0 Filter Hours: 67.0 Oil Added: Filter Wt. (mgs): Flashpoint(deg. F): H2O (ppm): Total Acid No.:	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	35.1 (26.2)	13.3 (8.1)	2.0 (1.5)	3.4 (2.8)	N/A	N/A	3.5 (3.4)	4448 (5434)	3.7 (4.0)		< 0.1 (0.1)	N/A
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
	Amount:											
	Type:											
	Form:											
	Comments:											
	PREVIOUS SAMPLE 2		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **									
Sample Date: 10/7/2009 Analysis Date: 10/21/2009 Sample Number: P65 Cylinder Type: steel TSN/TSO: 753.6 Oil Hours: 60.5 Filter Hours: 60.5 Oil Added: 4 Filter Wt. (mgs): Flashpoint(deg. F): H2O (ppm): Total Acid No.:	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	41.2 (24.6)	6.9 (8.3)	0.9 (1.5)	4.4 (2.9)	N/A	N/A	3.9 (3.3)	4960 (5390)	1.6 (4.1)	N/A	0.2 (0.1)	N/A
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
	Amount:											
	Type:											
	Form:											
	Comments:											

AVIATION LABORATORIES

910 MARIA STREET
KENNER, LOUISIANA 70062
(504) 469-6751

ANALYSIS RESULTS

LUIS O SHERYLE YOFE
attn:
501 SE 2ND ST. #1507

Aircraft: DA40
S/N: 40041
Tail No.: N541DS-F

Date: 3/31/2010
Engine S/N: L2941051A
Engine Model: LYC. 360

FORT LAUDERDALE FL 33301
United States

CURRENT SAMPLE		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **											
Sample Date:	3/10/2010	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
Analysis Date:	3/29/2010	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
Sample Number:	P22	35.1	13.3	2.0	3.4	< 0.1	< 0.1	3.5	4448	3.7	< 0.1	< 0.1	< 0.1
TSN:	820.6	*** FILTER ANALYSIS RESULTS ***											
TSO:		Stainless Steel		Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
Oil Hours:	67.0	Material:											
Filter Hours:	67.0	Amount:											
Oil Added:		Type:											
Filter Wt. (mgs):		Form:											
Flashpoint(deg. F):													
H2O (ppm):													
Total Acid No.:													

PREVIOUS SAMPLE 1		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **											
Sample Date:	10/7/2009	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
Analysis Date:	10/21/2009	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
Sample Number:	P65	41.2	6.9	0.9	4.4	< 0.1	1.4	3.9	4960	1.6	< 0.1	0.2	< 0.1
TSN:	753.6	*** FILTER ANALYSIS RESULTS ***											
TSO:		Stainless Steel		Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
Oil Hours:	60.5	Material:											
Filter Hours:	60.5	Amount:											
Oil Added:	4	Type:											
Filter Wt. (mgs):		Form:											
Flashpoint(deg. F):													
H2O (ppm):													
Total Acid No.:													

PREVIOUS SAMPLE 2		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **											
Sample Date:	8/16/2007	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
Analysis Date:	8/29/2007	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
Sample Number:	P71	36.0	24.9	3.2	3.8	< 0.1	0.1	2.3	4826	5.8	0.1	1.2	0.4
TSN:	453.2	*** FILTER ANALYSIS RESULTS ***											
TSO:		Stainless Steel		Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
Oil Hours:	59.1	Material:											
Filter Hours:	59.1	Amount:											
Oil Added:		Type:											
Filter Wt. (mgs):		Form:											
Flashpoint(deg. F):													
H2O (ppm):													
Total Acid No.:													

AVIATION LABORATORIES

910 MARIA STREET
KENNER, LOUISIANA 70062
(504) 469-6751

ANALYSIS RESULTS

LUIS O SHERYLE YOFE
attn:
2900 THOMAS AVE S #1729

Aircraft: DA40
S/N: 40041
Tail No.: N541DS-F

Date: 9/4/2007
Engine S/N: L2941051A
Engine Model: LYC.IO-360

MINNEAPOLIS MN 55416
United States

CURRENT SAMPLE		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **										
Sample Date: 8/16/2007 Analysis Date: 8/29/2007 Sample Number: P71 TSN: 453.2 TSO: Oil Hours: 59.1 Filter Hours: 59.1 Oil Added: Filter Wt. (mgs): Flashpoint(deg. F): H2O (ppm): Total Acid No.:	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	36.0	24.9	3.2	3.8	< 0.1	0.1	2.3	4826	5.8	0.1	1.2	0.4
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Steel	Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.
	Amount:											
Type:												
Form:												

PREVIOUS SAMPLE 1		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **										
Sample Date: 4/10/2007 Analysis Date: 4/20/2007 Sample Number: P23 TSN: 394.1 TSO: Oil Hours: 20.3 Filter Hours: 20.3 Oil Added: Filter Wt. (mgs): Flashpoint(deg. F): H2O (ppm): Total Acid No.:	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	17.1	14	1.9	2.1	< 0.1	0.2	2.8	3611	6.8	< 0.1	< 0.1	< 0.1
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Steel	Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.
	Amount:											
Type:												
Form:												

AVIATION LABORATORIES

910 MARIA STREET
KENNER, LOUISIANA 70062
(504) 469-6751

ANALYSIS RESULTS

LUIS O SHERYLE YOFE
attn:
2900 THOMAS AVE S #1729

Aircraft: DA40
S/N: 40041
Tail No.: N541DS

Date: 4/24/2007
Engine S/N: L2941051A
Engine Model: IO-360

MINNEAPOLIS MN 55416
United States

CURRENT SAMPLE		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **										
Sample Date: 4/10/2007 Analysis Date: 4/20/2007 Sample Number: P23 TSN: 394.1 TSO: Oil Hours: 20.3 Filter Hours: 20.3 Oil Added: Filter Wt. (mgs): Flashpoint(deg. F): H2O (ppm): Total Acid No.:	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	17.1	14	1.9	2.1	< 0.1	0.2	2.8	3611	6.8	< 0.1	< 0.1	< 0.1
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
	Amount:											
	Type:											
Form:												

PREVIOUS SAMPLE 1		** SAMPLE APPEARS NORMAL, SEND NEXT SAMPLE AT THE NORMAL INTERVAL. **										
Sample Date: 1/22/2002 Analysis Date: 2/1/2007 Sample Number: P21 TSN: 374 TSO: Oil Hours: 56 Filter Hours: 56 Oil Added: Filter Wt. (mgs): Flashpoint(deg. F): H2O (ppm): Total Acid No.:	*** OIL ANALYSIS RESULTS IN PARTS PER MILLION ***											
	Iron	Copper	Nickel	Chromium	Silver	Magnesium	Aluminum	Lead	Silicon	Titanium	Tin	Moly.
	40.0	15.7	5.7	5.0	< 0.1	1.0	6.7	5436	6.8	< 0.1	1.4	< 0.1
	*** FILTER ANALYSIS RESULTS ***											
	Material:	Stainless Steel	Carbon Steel	Alloy Steel	Bearing Alloy	Copper	Silver	Magn.	Alum.	Grit	Misc.	
	Amount:											
	Type:											
Form:												



SON OF:
stavelevservices
 FLUIDS ANALYSIS

AVIATION OIL ANALYSIS
 3319 W. Earll Dr. • P.O. Box 29074 (85038)
 Phoenix, AZ 85017

AVIATION OIL ANALYSIS
 SINCE 1976

Ph: 800-445-7930, email: aoa@ctclink.com
 Web access: <http://aoa.ctclink.com>

CUSTOMER: AERO RESTORATIONS
 4660 JIMMY DOOLITTLE DR

ADDISON TX 75001

CONTACT: MIKE
 PHONE: 972-716-9709 FAX: 972-716-0148

TAIL NUMBER: N541DS
 AIRCRAFT MODEL: DA-40
 COMPONENT MODEL: LYCOMING
 POSITION: S
 POS DESCR: SINGLE
 COMPONENT S/N: L-29410-51A
 OIL TYPE: A/S 100

Sample Number	Taken Processed	Oil Hours Oil Added	TSN TSO	Aluminum	Iron	Copper	Nickel	Chrome	Lead	Silver	Silicon (dirt)	Magnesium	Recommendation Codes
877912	09/15/05 09/28/05	50	260	5	16.8	16.9 ***	9	2	N/A	0	7	N/A	103 170
888731	03/01/06 03/07/06	50	333	5	22.1	12.4	2	2	N/A	0	5	N/A	100

*** Values Abnormal

Wear Metals Reported In Parts Per Milli

RESULT CODES

100 ALL VALUES APPEAR NORMAL

second sample

COMMENTS:

OTHER TESTS:



SON OF:
staveley services
 FLUIDS ANALYSIS

AVIATION OIL ANALYSIS
 3319 W. Earll Dr. • P.O. Box 29074 (85038)
 Phoenix, AZ 85017

AVIATION OIL ANALYSIS
 SINCE 1976

Ph: 800-445-7930, email: aoa@ctclink.com

Web access: <http://aoa.ctclink.com>

CUSTOMER: AERO RESTORATIONS
 4660 JIMMY DOOLITTLE DR

ADDISON TX 75001

CONTACT: KELLY SHOBE
 PHONE: 972-716-9709

FAX: 972-716-0148

TAIL NUMBER: N541DS
 AIRCRAFT MODEL: DA-40
 COMPONENT MODEL: LYCOMING
 POSITION: S
 POS DESCR: SINGLE
 COMPONENT S/N: L-29410-51A
 OIL TYPE: A/S 100

Sample Number	Taken Processed	Oil Hours Oil Added	TSN TSO	Aluminum	Iron	Copper	Nickel	Chrome	Lead	Silver	Silicon (dirt)	Magnesium	Recommendation Codes
877912	09/15/05 09/28/05	50	260	5	16.8	16.9	9	2	N/A	0	7	N/A	103 170

First sample

*** Values Abnormal

Wear Metals Reported In Parts Per Milli

RESULT CODES

- 103 COPPER APPEARS SLIGHTLY HIGH
- 170 RESAMPLE NEXT OIL CHANGE TO CHECK WEAR TREND

COMMENTS:

OTHER TESTS:

Since Aviation Oil Analysis services are based on samples and information supplied by others, and since corrective action, if any, is necessarily taken by others, these services are rendered without any warranty or liability of any kind beyond the actual amount paid to **Staveley Services Fluids Analysis** for the services.



OIL REPORT

LAB NUMBER: G90381 UNIT ID: N541DS
 REPORT DATE: 7/21/2015 CLIENT ID: 55142
 CODE: 20/75 PAYMENT: CC: Visa

UNIT	MAKE/MODEL: Lycoming IO-360-M1A	OIL TYPE & GRADE: Aeroshell 15W/50
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 31 Hours
	ADDITIONAL INFO: DA46, S/N L-29410-51A	

CLIENT	ALLEN WOLD	PHONE: (215) 536-9463
	WOLD AVIATION	FAX:
	2415 MILFORD SQUARE PIKE	ALT PHONE:
	QUAKERTOWN, PA 18951-2238	EMAIL: woldallen8@hotmail.com

COMMENTS
 ALLEN: It's always nice when a first sample shows an engine that's in good shape mechanically and that's what we have here. Universal averages show typical wear levels for this type of engine after about 40 hours on the oil. The metals compare well with averages after the 30.9 hours we have here. There's no moisture or excess fuel present and low insolubles and silicon show excellent oil and air filtration. No issues that we can see at 1,506 hours SNew.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	31	UNIT / LOCATION AVERAGES					UNIVERSAL AVERAGES
	MI/HR on Unit	1,506						
	Sample Date	7/8/2015						
	Make Up Oil Added							
ALUMINUM	3	3					5	
CHROMIUM	1	1					3	
IRON	18	18					21	
COPPER	6	6					8	
LEAD	3612	3612					4222	
TIN	2	2					1	
MOLYBDENUM	0	0					0	
NICKEL	2	2					2	
MANGANESE	0	0					0	
SILVER	0	0					0	
TITANIUM	0	0					0	
POTASSIUM	0	0					1	
BORON	1	1					1	
SILICON	5	5					6	
SODIUM	2	2					1	
CALCIUM	2	2					27	
MAGNESIUM	0	0					1	
PHOSPHORUS	1017	1017					785	
ZINC	12	12					18	
BARIUM	0	0					0	

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	96.0	82-105				
	cSt Viscosity @ 100°C	19.42	16.0-21.8				
	Flashpoint in °F	460	>440				
	Fuel %	<0.5	<1.0				
	Antifreeze %	-					
	Water %	0.0	<0.1				
	Insolubles %	0.3	<0.6				
	TBN						
	TAN						
	ISO Code						

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com



OIL REPORT

LAB NUMBER: H13353 UNIT ID: N541DS
 REPORT DATE: 11/5/2015 CLIENT ID: 55142
 CODE: 20/32 PAYMENT: CC: Visa

UNIT	MAKE/MODEL: Lycoming IO-360-M1A	OIL TYPE & GRADE: Aeroshell 15W/50
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 75 Hours
	ADDITIONAL INFO: DA40, S/N L-29410-51A	

CLIENT	ALLEN WOLD	PHONE: (215) 536-9463
	WOLD AVIATION	FAX:
	2415 MILFORD SQUARE PIKE	ALT PHONE:
	QUAKERTOWN, PA 18951-2238	EMAIL: woldallen8@hotmail.com

COMMENTS
 ALLEN: Well, considering how long this oil run was, we're not surprised to see some increases in iron and lead. Both metals still look good compared to averages, and averages are only based on about 40 hours on the oil, so we're not seeing anything here that looks like trouble. Not all engines can get away with 75 hours on an oil change, but an active engine that's wearing well to begin with can handle them just fine. This Lycoming is a great example of that. Nice report! Keep up the good work.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	75	UNIT / LOCATION AVERAGES	31					
	MI/HR on Unit	1,909		1,506					UNIVERSAL AVERAGES
	Sample Date	10/26/2015		7/8/2015					
	Make Up Oil Added								
ALUMINUM	5	4	3						5
CHROMIUM	2	2	1						3
IRON	32	25	18						21
COPPER	8	7	6						8
LEAD	4855	4234	3612						4274
TIN	1	2	2						1
MOLYBDENUM	1	1	0						0
NICKEL	1	2	2						2
MANGANESE	0	0	0						0
SILVER	0	0	0						0
TITANIUM	0	0	0						0
POTASSIUM	3	2	0						1
BORON	1	1	1						1
SILICON	4	5	5						6
SODIUM	5	4	2						1
CALCIUM	1	2	2						28
MAGNESIUM	0	0	0						1
PHOSPHORUS	1234	1126	1017						772
ZINC	18	15	12						18
BARIIUM	0	0	0						0

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	94.7	82-105	96.0					
	cSt Viscosity @ 100°C	19.11	16.0-21.8	19.42					
	Flashpoint in °F	445	>440	460					
	Fuel %	<0.5	<1.0	<0.5					
	Antifreeze %	-		-					
	Water %	0.0	<0.1	0.0					
	Insolubles %	0.4	<0.6	0.3					
	TBN								
	TAN								
	ISO Code								

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com



OIL REPORT

LAB NUMBER: H24996
 REPORT DATE: 1/6/2016
 CODE: 20/32

UNIT ID: N541DS
 CLIENT ID: 55142
 PAYMENT: CC: Visa

UNIT	MAKE/MODEL: Lycoming IO-360-M1A	OIL TYPE & GRADE: Aeroshell W100 (AD)
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 60 Hours
	ADDITIONAL INFO: DA40, S/N L-29410-51A	<i>NOTE: OIL WAS CHANGED @ 30 HRS - JUST MISSED SAMPLE</i>

CLIENT	ALLEN WOLD	PHONE: (215) 536-9463
	WOLD AVIATION	FAX:
	2415 MILFORD SQUARE PIKE	ALT PHONE:
	QUAKERTOWN, PA 18951-2238	EMAIL: woldallen8@hotmail.com

COMMENTS ALLEN: Here's another great sample to add to N541DS's history. Metals are in great shape and don't show any obvious problems. The only mark was for a small amount of fuel, which is hardly anything to be worried about. It's probably from priming or cold sampling. It'll probably clear up next time without any action on your part. No moisture or excess dirt turned up. Just keep up the good work with this IO-360. It looks great from our end as of 12/17/15, the sample date.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	60	UNIT / LOCATION AVERAGES	75	31					UNIVERSAL AVERAGES
	MI/HR on Unit	1,592		1,909	1,506					
	Sample Date	12/17/2015		10/26/2015	7/8/2015					
	Make Up Oil Added									
ALUMINUM	4	4	5	3						5
CHROMIUM	1	1	2	1						3
IRON	20	23	32	18						21
COPPER	8	7	8	6						8
LEAD	3119	3862	4855	3612						4262
TIN	0	1	1	2						1
MOLYBDENUM	0	0	1	0						0
NICKEL	1	1	1	2						2
MANGANESE	0	0	0	0						0
SILVER	0	0	0	0						0
TITANIUM	0	0	0	0						0
POTASSIUM	1	1	3	0						1
BORON	2	1	1	1						1
SILICON	9	6	4	5						6
SODIUM	5	4	5	2						1
CALCIUM	1	1	1	2						28
MAGNESIUM	0	0	0	0						1
PHOSPHORUS	1327	1193	1234	1017						771
ZINC	12	14	18	12						18
BARIIUM	0	0	0	0						0

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	90.9	86-105	94.7	96.0		
	cSt Viscosity @ 100°C	18.19	17.0-21.8	19.11	19.42		
	Flashpoint in °F	455	>460	445	460		
	Fuel %	TR	<1.0	<0.5	<0.5		
	Antifreeze %	-	-	-	-		
	Water %	0.0	<0.1	0.0	0.0		
	Insolubles %	0.4	<0.6	0.4	0.3		
	TBN						
	TAN						
	ISO Code						

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com

Bowe, Thomas

From: Kristin Huff <khuff@blackstone-labs.com>
Sent: Monday, January 11, 2016 4:44 PM
To: Bowe, Thomas
Subject: Re: BSL Question

External Email – Think before clicking links or attachments.

Hi Tom,

Thanks for the note. We're pleased to be helping you keep up with oil analysis too!

I can correct the time on the oil to 30 hours. The only thing that changes is, the report goes from being "Wow, these metals look really terrific for 60 hours on the oil!" to "This is a good, solid sample and metals are where we'd expect for about 30 hours on the oil" The metals are well balanced and that's great. It's still a fine report.

Have a great week!

Kristin Huff
Blackstone Labs

----- Original Message -----

From: <bstone@blackstone-labs.com>
To: "Kristin Huff" <khuff@blackstone-labs.com>
Sent: Monday, January 11, 2016 4:27 PM
Subject: BSL Question

Name = Tom Bowe
Address =
Address2 =
City =
State = PA
Zip =
Country =
Phone = 610-666-4776
Email = tom.bowe@pjm.com
HearAboutUs = A Friend

Comments = Oil Report on N541DS-121715 (lab number H24996) Good Morning, As the owner of N541DS I appreciate your labs work assessing the condition of my engine with your analysis. I became a believer in oil analysis from my years in the Army, so I am happy to continue doing using such analysis with something I actually own. I do have a question on my last report my AP changed the oil and filter really about 30 hours before this sample was taken. We just failed to get a sample off to you for testing. As such, looking at these numbers from a 30 hour level of usage versus a 60 hour level of usage would it in any way change your



OIL REPORT

LAB NUMBER: H24996
 REPORT DATE: 1/6/2016
 CODE: 20/32

UNIT ID: N541DS
 CLIENT ID: 55142
 PAYMENT: CC: Visa

UNIT	MAKE/MODEL: Lycoming IO-360-M1A	OIL TYPE & GRADE: Aeroshell W100 (AD)
	FUEL TYPE: Gasoline (Leaded)	OIL USE INTERVAL: 30 Hours
	ADDITIONAL INFO: DA40, S/N L-29410-51A	

CLIENT	ALLEN WOLD	PHONE: (215) 536-9463
	WOLD AVIATION	FAX:
	2415 MILFORD SQUARE PIKE	ALT PHONE:
	QUAKERTOWN, PA 18951-2238	EMAIL: woldallen8@hotmail.com

COMMENTS
 ALLEN: Amended report to correct time on the oil to 30 hours. Even with this being a shorter oil change than we thought, this is still a great sample to add to N541DS's history. Metals are fine and show no problems. The only mark was for a small amount of fuel, which is hardly anything to be worried about. It's probably from priming or cold sampling. It'll probably clear up next time without any action on your part. No moisture or excess dirt turned up. Just keep up the good work with this IO-360. It looks great from our end as of 12/17/15, the sample date.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	30	UNIT / LOCATION AVERAGES	75	31				
	MI/HR on Unit	1,592		1,909	1,506				UNIVERSAL AVERAGES
	Sample Date	12/17/2015		10/26/2015	7/8/2015				
	Make Up Oil Added								
ALUMINUM	4	4	5	3					5
CHROMIUM	1	1	2	1					3
IRON	20	23	32	18					21
COPPER	8	7	8	6					8
LEAD	3119	3862	4855	3612					4262
TIN	0	1	1	2					1
MOLYBDENUM	0	0	1	0					0
NICKEL	1	1	1	2					2
MANGANESE	0	0	0	0					0
SILVER	0	0	0	0					0
TITANIUM	0	0	0	0					0
POTASSIUM	1	1	3	0					1
BORON	2	1	1	1					1
SILICON	9	6	4	5					6
SODIUM	5	4	5	2					1
CALCIUM	1	1	1	2					28
MAGNESIUM	0	0	0	0					1
PHOSPHORUS	1327	1193	1234	1017					771
ZINC	12	14	18	12					18
BARIIUM	0	0	0	0					0

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	90.9	86-105	94.7	96.0				
	cSt Viscosity @ 100°C	18.19	17.0-21.8	19.11	19.42				
	Flashpoint in °F	455	>460	445	460				
	Fuel %	TR	<1.0	<0.5	<0.5				
	Antifreeze %	-		-	-				
	Water %	0.0	<0.1	0.0	0.0				
	Insolubles %	0.4	<0.6	0.4	0.3				
	TBN								
	TAN								
	ISO Code								

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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