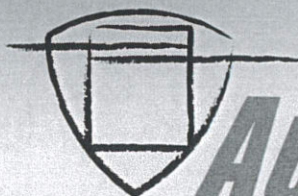


Engine Log Book

Motor Logbuch



Austro Engine

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Motor - Logbuch Nr.:

Engine Log Book:

150**für Hubkolbenmotor**
for piston engine

1

Baumuster:

Type of engine:

E4**Baureihe:**

Model:

Version -B**Motor - Nr.:**

Engine serial no:

E4-B-00115**Hersteller:**

Manufacturer:

Austro Engine GmbH**A-2700 Wiener Neustadt, Rudolf-Diesel-Straße 11, Austria****Kennblatt:**

Data sheet:

EASA.E.200**Baujahr:**

Year of manufacture:

2010

Der oben bezeichnete Motor ist als betriebstüchtig anzusehen, wenn er gemäß der Zivilluftfahrt- und Luftfahrtgeräte -Verordnung idgf und den Betriebs- und Wartungsanweisungen entsprechend betrieben und gewartet wird.

The above mentioned engine is considered to be operationally reliable if operated and maintained in accordance with operational and maintenance instructions.

Bemerkungen: Remarks:

Governor P/N: P-877-16 S/N: 09G520-F/D - Form Tracking Number: 098/10

Prüflauf durchgeführt.

Test run carried out.

Datum:

Date:

11.Mai 2010**Unterschrift:**

Signature:



N/A due to OH see page 18

Motor - Logbuch Nr.:

Engine Log Book:

150

für Hubkolbenmotor

for piston engine

Laumuster:

Type of engine:

E4

Baureihe:

Model:

Version -B

Motor - Nr.:

Engine serial no:

E4-B-00115

2

Motor - Hauptkomponenten / Engine main components

Bezeichnung Designation	Teilenummer Part number	Iss	Seriennummer Serial number	TSN
Motorsteuergerät Engine Electronic Control Unit	E4A-92-100-000	Iss:022	0271	00:00
Motorsteuergerät Software Vers. ECU Software Vers.	E4B-92-200-000	Iss:000	VC33_0_05_11	00:00
Lüftstift Kontroll Box Low Plug Control Unit	E4A-94-200-000	Iss:020	000203	00:00
Motor Kabelbaum Engine Harness	E4A-90-000-000	Iss:010	0044200	00:00
Generator Generator	E4A-91-000-000	Iss:001	00170	00:00
Triebwerke Verbox	E4A-70-000-000	Iss:030	174	00:00
raftstoff Hochdruckpumpe High Pressure Fuel Pump	E4A-30-100-000	Iss:020	62028	00:00
raftstoff Verteilerleitung Common Rail	E4A-33-100-000	Iss:001	0927400-87	00:00
rolader Air Charge	E4A-41-100-000	Iss:020	LJ516094300007	00:00
el Injektors A-Codes #1/#2/#3/#4	E4A-34-000-000	Iss:001	#1:81848S #2:ASRIH #3:7SHH8N #4:BHRWEF	00:00

datum:

te:

11.Mai 2010

Unterschrift:

Signature:



4

[illegible]

N/A due to OH see page 19

SB-Stand und Änderungsstand/SB-Status and Modification record

6

Status der durchgeführten SB (Service Bulletin's) bei Auslieferung.

Status of Airworthiness Directives or modifications effective at delivery.

MSB E4-002 / MSB E4-003/5

Datum:

Date:

Unterschrift & Lizenz Nr.:

Signature & Licence no.:

11 MAI 2010



[Handwritten signature]

Status der durchgeführte Änderungen bei Auslieferung.

Status of amendments or modifications effective at delivery.

Engine SN# E4-B-00115

Engine released in accordance to:

Build Manual E4.08.02

Rev.6

TDD E4.08.01

Rev. 5

Performed modifications (MÄM)

E4-051a / E4-058 / E4-060 / E4-067 / E4-080 / E4-083 / E4-084 / E4-086 / E4-087
E4-089 / E4-090a / E4-091 / E4-092 / E4-095a / E4-096 / E4-108 / E4-109 / E4-110
E4-111 / E4-112 / E4-114 / E4-116

MDC E4-046 / E4-068 / E4-094 / E4-095a / E4-105 / E4-118 / E4-119 / E4-125 / E4-129
E4-130 / E4-133 / E4-134 / E4-135 / E4-136 / E4-140a / E4-142 / E4-145 / E4-147 / E4-162
E4-164 / E4-165 / E4-169 / E4-176 / OÄM E4-001 / OÄM E4-002

Datum:

Date:

Unterschrift & Lizenz Nr.:

Signature & Licence no.:

11 MAI 2010



[Handwritten signature]

Änderungsstand / Modification record

Lufttüchtigkeitsanweisung bzw. Änderung:
Airworthiness directive or modification:

Ges. Std.:
TSN:

Datum:
Date:

Unterschrift & Lizenz Nr.:
Signature & Licensee no.:



Date: July 13, 2010

WO #RO-10-072 & WO# RO-10-076 A/C S/N: 42.AC079 Reg: N49LU TSN 1188.0
LHE Austro E4-B S/N: E4-B-00115 TSN: 0.00 Hrs.

Following AWD's and SB's checked and complied with as applicable

Austro Engine MSB-E4-006 – N/A due to eng. S/N effectivity

Austro Engine MSB-E4-007 – N/A due to eng. S/N effectivity

Austro Engine MSB-E4-008 – LH and RH eng. Oil separator hoses replaced with new, SB C/W

MSB42NG002/4 – software E4-B (AE300) engine C/W

AWDS checked through Bi-Weekly Supplement 2010-15

The maintenance described above has been performed in accordance with the applicable standards of airworthiness.

DIAMOND AIRCRAFT INDUSTRIES AMO 161-93

Signature: _____

Lic or Stamp: _____



Wartungsübersicht / Maintenance record

16

Datum:
Date:

Betriebsstunden:
Engine hours:

Gesamt:
TSN:

Seit letzter GÜ.:
TSO:

Durchgeführte
Work performed

I HAVE CARRIED OUT AN INDEPENDENT CHECK OF THE ENGINE CONTROLS
AFFECTED BY THE WORK ACCOMPLISHED.

Signature

[Signature]

Lic or Stamp

DA
RO12

JUL 13 2010

Date: July 13, 2010



WO #RO-10-076 A/C S/N: 42.AC079 Reg: N49LU TSN 1188.0
LHE Austro E4-B S/N: E4-B-00115 TSN: 0.00 Hrs.

The Following work has been carried out:

New "0" time Austro Engine S/N E4-B-00115 installed I.A.W. OSB42-068/1 using material kits Appendix A Rev. 5 and Appendix B Rev. 2 under AMO work order # RO-10-076.

1000 hr airframe and engine inspection carried out under AMO work order # RO-10-072.

Independent check of the engine controls carried out. Ground run up of the engine and fluid leak check carried out. Found satisfactory.

All snags noted during the above described tasks have been rectified and all pertinent details of the work carried out are on file with this work order.

The maintenance described above has been performed in accordance with the applicable standards of airworthiness.

DIAMOND AIRCRAFT INDUSTRIES AMO 161-93

This aircraft is released subject to the completion of a satisfactory test flight for the evaluation of flight, engine and avionics performance.

Signature:

[Signature]

Lic or Stamp:

DA
RO6

17

Wartungsübersicht / Maintenance record

Datum: <i>Date:</i>	Betriebsstunden: <i>Engine hours:</i>		Durchgeführte Arbeiten <i>Work performed:</i>	Unterschrift & Lizenz Nr.: <i>Signature & Licence no.:</i>
	Gesamt: <i>TSN:</i>	Seit letzter GÜ.: <i>TSO:</i>		



Date: July 15, 2010

WO #RO-10-076 A/C S/N: 42.AC079 Reg: N49LU TSN 1188.0

LHE Austro E4-B S/N: E4-B-00115 TSN: 0.00 Hrs.

RHE Austro E4-B S/N: E4-B-00116 TSN: 0.00 Hrs.

The Following work has been carried out:

LH alternator P/N E4A-91-000-000, S/N 00170, TSN 0.0 hrs. removed and replaced with new "0" time alternator S/N 00172 off new "0" time engine E4-B S/N 00117.

RH alternator P/N E4A-91-000-000 00171, TSN 0.0 hrs. removed and replaced with new "0" time alternator S/N 00173 off new "0" time engine E4-B S/N 0018.

Ground run up of the engines and newly installed alternators function checked for voltage and amperage output and found to be in limits.

The maintenance described above has been performed in accordance with the applicable standards of
airworthiness.

DIAMOND AIRCRAFT INDUSTRIES AMO 161-93

This aircraft is released subject to the completion of a satisfactory test flight for the evaluation
of flight, engine and avionics performance.

Signature: _____

Lic or Stamp: _____



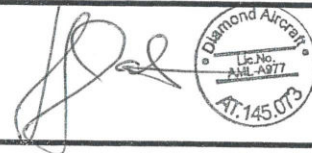
Baumuster: Type of engine:	E4	Baureihe: Model:	Version - B	Motor - Nr.: Engine serial no:	E4-B-00115	18
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Motor Hauptkomponenten / Engine main components

Bezeichnung Designation	Teil Nummer Part number	Revision Revision	Seriennummer Serial number	TSN
Motorsteuergerät Engine Electronic Control Unit	E4B-92-000-000	080	1216	00:00
Motorsteuergerät Software Vers. Engine Electronic Control Unit	E4A-92-200-000	160	VC33_0_05_18	00:00
Glühstift Kontroll Box Glow Plug Control Unit	E4A-94-200-000	042	001454	00:00
Motor Kabelbaum Engine Harness	E4B-95-000-000	010	EWO140501	00:00
Generator Generator	E4A-91-400-000	000	00152	00:00
Getriebe Gearbox	E4A-70-000-000			00:00
Kraftstoff Hochdruckpumpe High Pressure Fuel Pump	E4A-30-000-000	020	11-12-17-03-01241	00:00
Kraftstoff Verteilerleitung Common Rail	E4A-33-100-000	010	1201300231	00:00
Turbolader Turbocharger	E4B-41-100-000	000	QA5023390300033	00:00
Schwungrad Fly Wheel	E4A-73-100-000	000	A-00068	300:00
Fuel Injekt. IMA Code #1 #2 #3 #4 Fuel Inject. IMA-Code #1 #2 #3 #4	E4A-35-000-000	000	#1: 7ZH7A; #2: 45YZ31; #3: 6GHO7A; #4: 6PZZ8A;	00:00

Datum:
Date: 17.12.2014

Unterschrift:
Signature:



SN: E4-B-00115

Status Service Bulletin (SB), Airworthiness Directives (AD) & Service Informations (SI) / Record of engine modification status

19

SB-No	Title	Status	SB-No	Title	Status
MSB-E4-002/1	Configuration Specification of the E4 Engine	observed	RSB-E4-018	Inspection of Engine Harness	observed
MSB-E4-003/15	SW u. HW Versions of the E4 Engine	performed	RSB-E4-016/1	Oil dip stick	performed
MSB-E4-004	Long term conservation of E4 Engines	observed			
MSB-E4-006	Repair of sensor cable for camshaft sensor	Not applicable			
MSB-E4-007/6	Replacement of waste gate controller	Not applicable			
MSB-E4-008/2	Exchange of oil separator hose	performed			
MSB-E4-009/2	Replacement of high pressure pump	performed			
MSB-E4-013/1	Gearbox oil inspection	Not applicable			
MSB-E4-014/2	Replacement of the fuel return line	performed			
MSB-E4-017/1	Check/Exchange of timing chain	at 1000 Hrs			
AD-No	Title	Status	SI-No	Title	Status
2010-0206-E	Superseded by EASA AD 2011-0039		SI-E4-001/1	Life time and TBO extension	observed
2011-0039	Engine fuel&Control-HPP-insp./replacement	performed	SI-E4-002	Gearbox oil check procedure update	observed
2013-0025 R1	Superseded by EASA AD 2013-0213		SI-E4-003	Technical publication and reporting system of AE	observed
2013-0213R1	Engine -waste gate controller-replacement	Not applicable			

The engine modification status consists of the applicable revision of the Overhaul Manual and additional installed approved design changes:

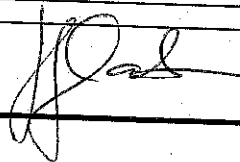
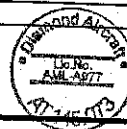
Design changes: None

Overhaul Manual E4.12.01 rev.1

Date: 17.12.2014

Signature of Certifying Staff

Signature:

DAI-A Form/Don

Nr. A16_145 Rev. 4

14.03.2010

1. Approving Competent Authority /Country		2.			3. Form Tracking Number		
Austro Control GmbH Austria		AUTHORISED RELEASE CERTIFICATE EASA FORM 1			073- 739		
4. Organisation Name and Address:		Diamond Aircraft Industries GmbH N. A. Otto-Straße 5 A-2700 Wiener Neustadt, AUSTRIA			5. Work Order / Contract / Invoice ESO140045		
6. Item	7. Description	8. Part No.	9. Qty.	10. Serial No.	11. Status / Work		
1	E4 Engine Configuration B	E4-B-00-000-000	1	E4-B-00115	overhauled		
12. Remarks Engine Overhaul acc. to OHM E4.12.01 rev.1 TSN:1497.0 TSC:00:00, SB's and AD's checked/performed see Engine Log page 19, Gearbox PN: E4A-70-000-000 not installed							
delivered to:							
13a. 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 12				14a. ☒ Part-145.A.50 Release to Service ☐ Other regulation specified in block 12 Certifies that unless otherwise specified in block 12 the work identified in block 11 and described in block 12, was accomplished in accordance with Part 145 and in respect to that work the items are considered ready for release to service.			
13b. Authorised Signature		13c. Approval / Authorisation Number		14b. Authorised Signature		14c. Certificate/ Approval Ref. No	
13d. Name		13e. Date (dd mm yyyy)		14d. Name		14e. Date (dd mm yyyy)	
				G. Stelzer		AT.145.073 17.Dez.2014	
USER / INSTALLER RESPONSIBILITIES This certificate does not automatically constitute authority to install the item(s). Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different from the airworthiness authority specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts items from the airworthiness authority specified in block 1. Statements in blocks 13a and 14a do not constitute installation certification. In all cases the aircraft maintenance record must contain an installation certification issued in accordance with the national regulation by the user/installer before the aircraft may be flown. EASA Form 1-MF/145 Issue 2							

21

Datum
Date:

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	1/23/15
SERIAL #	E4-B-00115	3030 AIRPORT ROAD	A/C TT	758.4
REG #	N236TS	MANKATO, MN 56001	Engine TT	1497.0
Tach.	758.4	CRS NUTR521L		
Left engine		LOGBOOK INSERT	W/O	413

Removed engine model E4B serial number E4-B-00371 and installed overhauled engine E4B S/N E4-B-00115 with an engine total time of 1497.0 by Diamond Aircraft under W/O ESO140045 referencing maintenance manual chapter 71-00-00. Installed gearbox P/N E4A-70-000-000 S/N 597 with 758.4 TSN referencing Austro maintenance manual chapter 85-10-12. Removed EECU P/N E4B-92-000-000 S/N 0592 and installed new EECU P/N E4B-92-000-000 S/N 1216 revision 080 referencing DA42NG maintenance manual chapter 76-00-00. Serviced engine with 7 liters Aeroshell 5W-30 diesel oil. Completed engine test run referencing maintenance manual

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 1/23/15

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	1/23/15
SERIAL #	E4-B-00115	3030 AIRPORT ROAD	A/C TT	758.4
REG #	N236TS	MANKATO, MN 56001	Engine TT	1497.0
Tach.	758.4	CRS NUTR521L		
Left engine		LOGBOOK INSERT	W/O	422

1. Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
2. Completed EECU download and emailed to Austro.
3. Removed and installed new Air filter P/N RU-1620 filter next due for replacement at 765.1 ACTT.
4. Serviced engine coolant with 50/50 mixture of coolant G48 and water and bleed system.
5. Installed new fuel filter
6. All work done referencing Austro maintenance manual AE300 Doc. No. E4.08.
7. AD 2014-08-10 is N/A by revision of waste gate controller Revision 80 is installed
8. Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 1/23/15

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

22

enz Nr.:
no.:

MODEL	DA42NG	NORTH STAR AVIATION	DATE	12/10/15
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	892.2
REG #	N236TS	MANKATO, MN 56001	Engine T.T.	1630.8
Tach.	892.2	CRS NUTR521L	S.M.O.H	133.8
Left engine		LOGBOOK INSERT	W/O	829

Drained oil obtained oil sample removed oil filter inspected no defects noted installed new oil filter using DA42 100 hr. kit reinstalled drain plug and safety wired serviced engine with 6 liters Aeroshell 10W-40 diesel oil all work done referencing maintenance manual chapter 72-00-00 removed and installed new fuel filter referencing maintenance manual chapter 28-20-00. Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up and leak check good.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

SIGNED *Jon Wieland*
Jon Wieland for North Star Aviation FAA CRS NUTR521L

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	2/26/16
SERIAL #	E4-B-00115	3030 AIRPORT ROAD	A/C TT	901.4
REG #	N236TS	MANKATO, MN 56001	Engine TT	1640.0
Tach.	901.4	CRS NUTR521L		
Left engine		LOGBOOK INSERT	W/O	882

1. Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
2. Completed EECU download and emailed to Austro.
3. Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1101.4 ACTT.
4. All work done referencing Austro maintenance manual AE300 Doc. No. E4.08.
5. Drained gearbox and Serviced gearbox with 3 liters of Shell Spirax 75W-80 referencing Austro maintenance manual chapter 85-10-22 leak check good.
6. Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

SIGNED *Jon Wieland*
Jon Wieland for North Star Aviation FAA CRS NUTR521L

23

Date

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	3/16/17
SERIAL #	E4-B-00115	3030 AIRPORT ROAD	A/C TT	1030.6
REG #	N236TS	MANKATO, MN 56001	Engine TT	1769.2
Tach.	901.4	CRS NUTR521L		
Left engine		LOGBOOK INSERT	W/O	1292

1. Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
2. Completed EECU download and emailed to Austro.
3. Drained oil removed oil filter and inspected no defects noted Installed new oil filter contained in 100 HR kit serviced with 7 liters Aeroshell 10W-40 diesel oil.
4. Drained gearbox and Serviced gearbox with 3 liters of Shell Spirax 75W-80 referencing Austro maintenance manual chapter 85-10-22 leak check good.
5. Removed fuel filter and installed new filter P/N WK724-3 referencing maintenance manual chapter 28-20-00.
6. Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1230.6 ACTT
7. Completed ground run up referencing Austro E4A maintenance manual chapter 71-00-03.
8. Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 3/16/17

SIGNED

Jon Wieland for North Star Aviation FAA CRS NUTR521L

MODEL	DA42NG	NORTH STAR AVIATION	DATE	11/3/17
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	1130.9
REG #	N236TS	MANKATO, MN 56001	Engine T.T.	1869.5
Tach.	1130.9	CRS NUTR521L	S.M.O.H	372.5
Left engine		LOGBOOK INSERT	W/O	1632

Drained oil obtained oil sample removed oil filter inspected no defects noted installed new oil filter using DA42 100 hr. kit reinstalled drain plug and safety wired serviced engine with 6 liters Aeroshell 10W-40 diesel oil all work done referencing maintenance manual chapter 72-00-00 removed and installed new fuel filter referencing maintenance manual chapter 28-20-00. Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up and leak check good.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 11/3/17

SIGNED

Jon Wieland for North Star Aviation FAA CRS NUTR521L

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	5/25/18
SERIAL #	E4-B-00115	3030 AIRPORT ROAD	A/C TT	1192.6
REG #	N236TS	MANKATO, MN 56001	Engine TT	1931.2
Tach.	1192.6	CRS NUTR521L	S.M.O H	434.2
Left engine		LOGBOOK INSERT	W/O	1853

24

Nr.:

1. Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
2. Completed EECU download and emailed to Austro.
3. Drained oil removed oil filter and inspected no defects noted Installed new oil filter contained in 100 HR kit serviced with 7 liters Aeroshell 5W-30 Ultra diesel oil.
4. Removed fuel filter and installed new filter P/N WK724-3 referencing maintenance manual chapter 28-20-00.
5. Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1392.6 ACTT
6. Removed high pressure fuel pump P/N E4A-30-000-000 S/N 11-12-17-03-01241 and installed new fuel pump P/N E4A-30-000-000 S/N 1711-03-02-01339 referencing Austro E4 series maintenance manual chapter 73-00-44 run up and leak check good
7. Removed gearbox removed two mass flywheel P/N E4A-73-100-000 S/N A-00068 and installed new flywheel P/N E4A-73-300-000 S/N RC1805288 using new bolts contained in Diamonds 300 hr kit. Reinstalled gear box referencing E4A series maintenance manual chapter 85-10-12.
8. Serviced gearbox oil with Spirax S6GXME75W.
9. Installed new oil drain valve P/N D44-9071-06-01.
10. Complied with AD 2018-07-16 by removing wastegate actuator and installing new wastegate actuator P/N E4A-41-120-000 and installing new spring-loaded circlip P/N E4A-41-100-801 in accordance with Austro Engine mandatory service bulletin MSB-E4-022/3 and E4 series maintenance manual chapter 81-00-33. Ad is next due at 1442.6 A.C.T.T.
11. Completed ground run up referencing Austro E4A maintenance manual chapter 71-00-03.
12. Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 5/25/18

SIGNED

Jon Wierland for North Star Aviation FAA CRS NUTR521L

MODEL	DA42NG	NORTH STAR AVIATION	DATE	2/4/19
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	1130.9
REG #	N236TS	MANKATO, MN 56001	Engine T.T.	2048.4
Tach.	1309.8	CRS NUTR521L	S.M.O.H	551.4
Left engine		LOGBOOK INSERT	W/O	2150

Drained oil obtained oil sample removed oil filter inspected no defects noted installed new oil filter using DA42 100 hr. kit reinstalled drain plug and safety wired serviced engine with 6 liters Aeroshell 10W-40 diesel oil all work done referencing maintenance manual chapter 72-00-00 removed and installed new fuel filter referencing maintenance manual chapter 28-20-00. Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up and leak check good.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 2/4/19

SIGNED

Jon Wiefand for North Star Aviation FAA CRS NUTR521L

iz Nr.:

0.:

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	7/5/19
SERIAL #	E4-B-00115	3030 AIRPORT ROAD	A/C TT	1337.9
REG #	N236TS	MANKATO, MN 56001	Engine TT	2076.5
Tach.	1337.9	CRS NUTR521L	S.M.O.H	579.5
Left engine		LOGBOOK INSERT	W/O	2320

1. Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
2. Completed EECU download and emailed to Austro.
3. Drained oil removed oil filter and inspected no defects noted Installed new oil filter P/N E4A-52-100-802 contained in 100 HR kit serviced with 6 liters Aeroshell 5W-30 Ultra diesel oil.
4. Removed fuel filter and installed new filter P/N WK724-3 referencing maintenance manual chapter 28-20-00.
5. Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1537.9 ACTT
6. Drained gearbox reinstalled drain plug and safety wired. Serviced gearbox oil with Shell Spirax 75W-80. All work done referencing E4A maintenance manual chapter 85-10-22. Leak check good.
7. Completed ground run up referencing Austro E4A maintenance manual chapter 71-00-03.
8. Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 7/5/19

SIGNED

Jon Wiefand for North Star Aviation FAA CRS NUTR521L

MODEL	DA42NG	NORTH STAR AVIATION	DATE	11/27/19
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	1416.1
REG #	N236TS	MANKATO, MN 56001	Engine T.T.	2154.7
Tach.	1416.1	CRS NUTR521L	S.M.O.H	657.7
Left engine		LOGBOOK INSERT	W/O	2616

Drained oil obtained oil sample removed oil filter inspected no defects noted installed new oil filter P/N E4A-52-100-802 using DA42 100 hr. kit reinstalled drain plug and safety wired serviced engine with 6 liters Aeroshell 5W-30 ultra-diesel oil all work done referencing maintenance manual chapter 72-00-00 removed and installed new fuel filter P/N WK724-3 referencing maintenance manual chapter 28-20-00. Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up and leak check good.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 11/27/19

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

26

z Nr.:

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	4/9/2021
SERIAL #	E4-B-00115	3030 AIRPORT ROAD	A/C TT	1504.6
REG #	N236TS	MANKATO, MN 56001	Engine TT	2243.2
Tach.	1504.6	CRS NUTR521L	S.M.O.H	746.2
Left engine		LOGBOOK INSERT	W/O	3181

1. Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
2. Completed EECU download and emailed to Austro.
3. Drained oil removed oil filter an inspected no defects noted installed new oil filter P/N E4A-52-100-802 contained in the 100 HR kit serviced with 7 liters of Aeroshell 5-30 Ultra Diesel oil.
4. Removed fuel filter and installed new filter WK724-3 referencing maintenance manual chapter 28-20-00.
5. Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1704.6 ACTT.
6. Drained gearbox reinstalled drain plug and safety wired. Serviced gearbox with 3 liters Shell Spirax 75W-80. All work done referencing E4A maintenance manual chapter 85-10-22. Leak check good.
7. Installed new oil separator P//N E4A-53-110-000referencing E4 maintenance manual chapter 79-20-00.
8. Complied with AD 2020-22-14 by installing new wastegate controller P/N E4A-41-120-000 and new spring loaded circlip P/N E4A-41-100-801 and installed fail safe bridge in accordance with MSB-E4-022/5 which is terminating action.
9. Completed engine ground run up referencing Austro E4A maintenance manual chapter 71-00-03.
10. Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 4/9/2021

SIGNED

Jon Wieland for North Star Aviation FAA CRS NUTR521L

MKT1116-05-2022 (06-15-2022)

MAKE: Diamond Aircraft Ind
MODEL: Da 42
S/N: 42.AC022
REG. NO.: N236TS
W/O #: MKT1116-05-2022



North Star Aviation, Inc.
FAA Cert: NUTR521L
3030 N Airport Road
Mankato, MN 56001

Page 1 / 2

DATE: 06-15-2022
A/C TT: 1602.70
A/C Tach: 1602.70
ENG TT - L: 2341.30
Engine Make - L: Austro
Engine Model - L: Austro E4-B
Engine O/H Date - L: 12-17-2014
Engine SN - L: E4-B-00115

28

nz Nr.:
10.:

Engine - L Entries

- 2 Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual. I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition
- 8 Removed and installed new Air Filter P/N RU-1620. Filter next due for replacement at 1802.7 ACTT.
- 11 Completed Read out EECU using the AE 300 Wizard. Sent the event log, event recorder, engine data log, data to Austro Engine. Examined the fault code memory of the EECU for failure. All work done in accordance with Austro E4 maintenance manual chapter 76-10-00.
- 13 Removed V-ribbed alternator belt and installed new alternator belt P/N E4A-74-100-801 in accordance with Austro E4 maintenance manual chapter 85-40-00. Belt replacement is next due June 2027.
- 14 Drained oil. Obtained oil sample. Removed oil filter an inspected no defects noted installed new oil filter P/N E4A-52-100-802 contained in the 100 HR kit serviced with 7 liters of Aeroshell 5-30 Ultra Diesel oil. Run up and leak check good.
- 16 Removed fuel filter and installed new filter WK724-3 contained in the 100 hr. kit. In accordance with the DA42 maintenance manual chapter 28-20-00. Leak check good.
- 19 Removed left engine coolant tank cap and installed new cap P/N 11000118. Leak check good.
- 22 Drained gearbox reinstalled drain plug and safety wired. Serviced gearbox with 3 liters Shell Spirax 75W-80. All work done referencing E4A maintenance manual chapter 85-10-22. Leak check good.

MKT1116-05-2022 (06-15-2022)

Page 2 / 2

The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired/inspected in accordance with current requirements of the Federal Aviation Administration and is approved for return to service. Pertinent details of this work order are on file at this Certified Repair Station#NUTR521L

DATE: 06-15-2022

SIGNED:

Jon Wetland
FAA Cert: NUTR521L

WORK ORDER: MKT1116-05-2022
Printed by EBIS (EBISCloud.com)

29

Date
Date

MAKE: Diamond Aircraft Ind
MODEL: Da 42
S/N: 42.AC022
REG. NO: N236TS
ENGINE MAKE - L: AUSTRO
ENGINE MODEL - L: AUSTRO
E4-B
ENGINE O/H DATE - L: 12-17-
2014
ENGINE SN - L: E4-B-00115

**North Star Aviation, Inc.**

FAA Cert: NUTR521L
3030 N Airport Road
Mankato, MN 56001

W/O #: MKT2647-11-2023

DATE: 05-02-2024

A/C TT: 1718.2

A/C Tach: 1718.2

ENG TT - L: 2456.8

Hobbs:

Nr.:

Engine - L Entries

- 3 Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual. I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition
- 8 All applicable Federal Aviation Administration Airworthiness Directives have been researched and complied with up to the date listed on this logbook label.
- 10 Complied with AD 2020-22-14 Preventing Failure of the turbocharger waste gate control rod by replacing Waste gate control rod circlips P/N E4A-41-100-801. Operations check good.
- 19 Removed and Replaced LH engine intercooler with new P/N D64-9081-20-01 S/N 284R-M16. All work done in accordance with Diamond DA42 maintenance manual chapter 81-00-00. Operations and Leak check good.
- 20 Removed and Replaced Rear engine mounts P/N D64-7106-13-00 Forward LH mounts P/N D64-7126-14-70 and Forward RH mounts P/N D64-7126-14-71 in accordance with Diamond DA42 maintenance manual chapter 71-20-00. Operations check good.
- 23 Removed oil sump and replaced broken oil sump bolts with new P/N E4A-05-000-805 and P/N E4A-05-000-806. Reinstalled oil sump with new Gasket P/N E4A-05-000-003. All work done in accordance with Austro E4-B maintenance manual chapter 79-10-00. Operations and leak check good.

The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired/inspected in accordance with current requirements of the Federal Aviation Administration and is approved for return to service. Pertinent details of this work order are on file at this Certified Repair Station#NUTR521L

DATE: 05-02-2024

SIGNED:

Carter Downs

FAA Cert: NUTR521L

WORK ORDER: MKT2647-11-2023

Printed by EBIS (EBISCloud.com)

Hinweise zur Führung des Motor-Logbuches

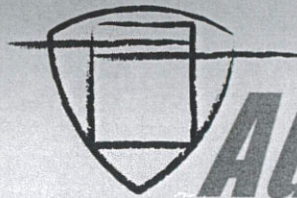
- 1) Der Luftfahrzeughalter ist für die vollständige und wahrheitsgemäße Führung des Motor-Logbuches verantwortlich. Alle Eintragungen haben dauerhaft (mit Tinte, Kugelschreiber und dgl.) zu erfolgen. Unrichtige Eintragungen sind so durchzustreichen, dass sie lesbar bleiben. Freibleibende Spalten und/oder Zeilen sind zu durchkreuzen. Es dürfen keine Blätter entfernt werden. Nach endgültiger Außerbetriebstellung des Motors ist das Motor-Logbuch aufzubewahren.
- 2) Die Eintragungen auf Seite 1 sind ausschließlich von EASA autorisierten Prüfern vorbehalten.
- 3) In der **Motor Ein- und Ausbau-Übersicht** ist einzutragen, wann, in welches Luftfahrzeug, und bei wie viel Betriebsstunden der Motor ein- bzw. ausgebaut wurde. Die Eintragung ist von einem durch die jeweilige Luftfahrtbehörde autorisierten Prüfern bzw. Luftfahrzeugwarten oder Wartungsbetrieben vorzunehmen und zu bestätigen (keine Eintragung ist erforderlich, wenn der Aus- und wieder Einbau in das gleiche Luftfahrzeug z.B. zwecks Motorträgerwechsels erfolgt).
- 4) In den **Änderungsstand** sind sämtliche durchgeführte Lufttüchtigkeitsanweisungen und Änderungen (Lufttüchtigkeitsanweisungen, Störungsmeldungen, Service Instruktionen und dgl.) von Luftfahrzeugwarten oder Wartungsbetrieben einzutragen und zu bestätigen.
- 5) In der **Wartungsübersicht** sind durchgeführte Instandhaltungs- Instandsetzungs- und Änderungsarbeiten (laufende Kontrollen, Reparaturen, Änderungen, Überholungen, Teilüberholungen, Teileaustausch und dgl.) von den ausführenden Luftfahrzeugwarten bzw. Wartungsbetrieben einzutragen und zu bestätigen. Die amtlichen Nachprüfungen durch einen durch die jeweilige Luftfahrtbehörde autorisierten Prüfer der Zivilluftfahrt sind ebenfalls hier einzutragen.
- 6) Im **Austausch von Ausrüstungsteilen** ist der Wechsel der Motorausüstungsteile (Starter, Zündmagnete, Vergaser und dgl.) von Luftfahrzeugwarten bzw. Wartungsbetrieben einzutragen.
- 7) Die Seiten **Sonstige Bemerkungen** sind für alle, nicht unter Punkt 2 bis 6 fallenden Eintragungen vorgesehen.

Some advice for running an engine Log book

- 1) The aircraft keeper is responsible for the complete and truthful keeping of a Log book. All entries have to be made lasting, e.g. in ink, ballpoint or similar. Cross out any incorrect entry such, that it is still decipherable. Vacant columns and lines to be crossed out. The removal of pages is prohibited. After taking the engine definitely out of service the log book has to be kept as document.
- 2) Page 1 is reserved exclusively for entries from certifying staff of the Federal Civil Aviation Authority.
- 3) On the pages of **Engine Change Status**, date on installation or removal of engine, type of aircraft and engine operation period has to be stated: The entries have to be made and confirmed by certifying staff of the Civil Aviation Authority, or aircraft certifying mechanics or Service Centres. No need for entries if engine was removed from and reinstall in the same aircraft, e.g. for change of the engine suspension.
- 4) In the **list of Modification Status** all effective airworthiness directives and modifications (Technical bulletins, Service Information and suchlike) have to be entered and confirmed by an aircraft certifying staff or Service Centre.
- 5) In the **tables of Maintenance Status** all performed maintenance, repair – and replacement work (periodical checks, repair work, changes, general overhaul, semi overhaul, exchange of parts and suchlike) have to be entered and confirmed by the performing aircraft certifying staff or Service Centre. The official verification by an certifying staff of the Civil Aviation Authority has to be registered here too.
- 6) On the **list of Equipment Change**, the exchange of engine equipment (starter, flywheel, carburettor and suchlike) has to be registered by an aircraft certifying staff or Service Centre.
- 7) On the pages of **Other Entries** any note of no significance for section 2 to 6, can be entered.

Engine Log Book

Motor Logbuch



Austro Engine

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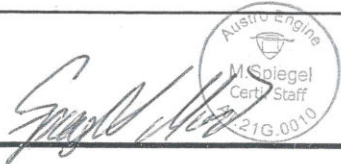
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42-ACORR RHE

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Baumuster: Type of engine:	E4	Baureihe: Model:	Version - B	Motor - Nr.: Engine serial no:	E4-B-00372	1
Hersteller: Manufacturer:	Austro Engine GmbH A-2700 Wiener Neustadt, Rudolf-Diesel-Straße 11, Austria					
Kennblatt: Data sheet:	EASA.E.200			Baujahr: Year of manufacture:	2012	
Der oben bezeichnete Motor ist als betriebstüchtig anzusehen, wenn er gem. der Zivilluftfahrt- und Luftfahrtgeräte-Verordnung, letztgültige Ausgabe und den Betriebs- und Wartungsanweisungen entsprechend betrieben und gewartet wird. <i>The above mentioned engine is considered to be operationally reliable if operated and maintained in accordance with the Zivilluftfahrt- und Luftfahrtgerät-Verordnung, latest legal issue and the pertinent operational and maintenance instructions.</i>						
Bemerkungen: Remarks:	Jedes Wartungsereignis, als auch ein Komponenten Tausch muss im Engine Log dokumentiert werden. <i>Please note that every performed maintenance as well as component replacements have to be documented in the log book.</i>					
Prüflauf durchgeführt Test run carried out.						
Datum: Date:	16. Okt. 2012			Unterschrift Signature:		

Baumuster: Type of engine:	E4	Baureihe: Model:	Version - B	Motor - Nr.: Engine serial no:	E4-B-00372	2
-------------------------------	----	---------------------	-------------	-----------------------------------	------------	---

Motor Hauptkomponenten / Engine main components

Bezeichnung Designation	Teile Nummer Part number	Revision Revision	Seriennummer Serial Number	TSN
Motorsteuergerät <i>Engine Electronic Control Unit</i>	E4A-92-100-000	022	0746	00:00
Motorsteuergerät Software Vers. <i>Engine Electronic Control Unit Rev.</i>	E4B-92-200-000	030	VC33_0_05_14	00:00
Glühstift Kontroll Box <i>Glow plug Control Unit</i>	E4A-94-200-000	030	000838	00:00
Motor Kabelbaum <i>Engine Harness</i>	E4B-95-000-000	000	EWO110758	00:00
Generator <i>Generator</i>	E4A-91-000-000	010	00909	00:00
Getriebe <i>Gearbox</i>	E4A-70-000-000	065	590	00:00
Kraftstoff Hochdruckpumpe <i>High Pressure Fuel Pump</i>	E4A-30-200-000	010	11-12-17-03-01008	00:00
Kraftstoff Verteilerleitung <i>Common Rail</i>	E4A-33-100-000	010	1135000077	00:00
Turbolader <i>Turbocharger</i>	E4B-41-100-000	000	NK520174800014	00:00
Fuel Injekt. IMA-Code #1/#2/#3/#4 <i>Fuel Injector IMA-Code #1/#2/#3/#4</i>	E4A-35-000-000	000	#1: 4FHHZN; #2: 5GY47S; #3: 67RGAI; #4: 5P763W;	00:00
Schwungrad <i>Fly Wheel</i>	E4A-73-300-000	030	00600	00:00

Datum: 16. Okt. 2012

Date:

Unterschrift

Signature:




SB-Stand und Änderungsstand/SB-Status and Modification record**6****Status der durchgeführten SB (Service Bulletin's) bei Auslieferung.**
*Status of Airworthiness Directives or modifications effective at delivery.***Datum:**
*Date:***Unterschrift & Lizenz Nr.:**
Signature & Licence no.:

Engine SN# E4-B-00372

Engine released in accordance to:

Build Manual E4.08.02

Rev.10

LoD E4.08.11

Rev. 8

Effective Service Bulletin's (SB)
NIL

16. Okt. 2012

**Status der durchgeführte Änderungen bei Auslieferung.**
*Status of amendments or modifications effective at delivery.***Datum:**
*Date:***Unterschrift & Lizenz Nr.:**
Signature & Licence no.:

Engine SN# E4-B-00372

Engine released in accordance to:

Build Manual E4.08.02

Rev.10

LoD E4.08.11

Rev. 8

Performed modifications (MDC)

E4-260a, E4-266b, E4-268a, E4-273, E4-276, E4-277, E4-281, E4-283

16. Okt. 2012



Hinweise zur Führung des Motor-Logbuches

- 1) Der Luftfahrzeughalter ist für die vollständige und wahrheitsgemäße Führung des Motor-Logbuches verantwortlich. Alle Eintragungen haben dauerhaft (mit Tinte, Kugelschreiber und dgl.) zu erfolgen. Unrichtige Eintragungen sind so durchzustreichen, dass sie lesbar bleiben. Freibleibende Spalten und/oder Zeilen sind zu durchkreuzen. Es dürfen keine Blätter entfernt werden. Nach endgültiger Außerbetriebstellung des Motors ist das Motor-Logbuch aufzubewahren.
- 2) Die Eintragungen auf Seite 1 sind ausschließlich von EASA autorisierten Prüfern vorbehalten.
- 3) In der **Motor Ein- und Ausbau-Übersicht** ist einzutragen, wann, in welches Luftfahrzeug, und bei wie viel Betriebsstunden der Motor ein- bzw. ausgebaut wurde. Die Eintragung ist von einem durch die jeweilige Luftfahrtbehörde autorisierten Prüfern bzw. Luftfahrzeugwarten oder Wartungsbetrieben vorzunehmen und zu bestätigen (keine Eintragung ist erforderlich, wenn der Aus- und wieder Einbau in das gleiche Luftfahrzeug z.B. zwecks Motorträgerwechsels erfolgt).
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- 6) Im **Austausch von Ausrüstungsteilen** ist der Wechsel der Motorausrüstungsteile (Starter, Zündmagnete, Vergaser und dgl.) von Luftfahrzeugwarten bzw. Wartungsbetrieben einzutragen.
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Some advice for running an engine Log book

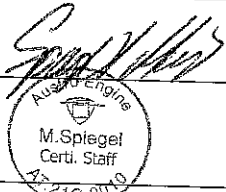
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Austro Engine GmbH
Rudolf-Diesel-Straße 11
2700 Wiener Neustadt, Austria

AIRCRAFT TECHNICAL RECORD

Section 3. ENGINE LOG

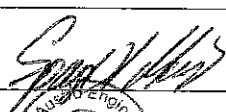
1. Approving Competent Authority /Country Austro Control GmbH Austria		2. AUTHORISED RELEASE CERTIFICATE EASA FORM 1			3. Form Tracking Number AE002954	
4. Organisation Name and Address: Austro Engine GmbH Rudolf Diesel Straße 11 2700 Wiener Neustadt, AUSTRIA				5. Work Order / Contract / Invoice ES120415		
6. Item	7. Description	8. Part No.	9. Qty.	10. Serial No.	11. Status/Work	
1	E4 Configuration B	E4-B-00-000-000 Iss.: 008	1	E4-B-00372 ✓	New	
12. Remarks Item 1: The Engine E4-B-00372 build acc. Build Manual (BM) E4.08.02 Rev.10; List of Drawing (LoD) E4.08.10 Rev.8 Item 1: The engine conforms to the type design approved under the U.S. Type Certificate E00081EN Item 1: is in a condition for safe operation and has undergone a final operation check						
13a. 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 12			14a. ☐ Part-145.A.50 Release to Service ☐ Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with Part-145 and in respect to that work the items are considered ready for release to service.			
13b. Authorised Signature 		13c. Approval / Authorisation Number AT.21G.0010		14b. Authorised Signature		
13d. Name M. Spiegel Certi. Staff		13e. Date (dd mmm yyyy) 15.Oct.2012		14c. Certificate/ Approval Ref. Number		
				14d. Name		
				14e. Date (dd mmm yyyy)		
USER / INSTALLER RESPONSIBILITIES This certificate does not automatically constitute authority to install the item(s). Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts items from the airworthiness authority specified in block 1. Statements in blocks 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.						

EASA Form 1 - 21 Issue 2

Freigabe: 24.Aug. 2012

RECEIVED

FOQ05_Form1_rev1

1. Approving Competent Authority /Country Austro Control GmbH Austria		2. AUTHORISED RELEASE CERTIFICATE EASA FORM 1			3. Form Tracking Number AE002954	
4. Organisation Name and Address: Austro Engine GmbH Rudolf Diesel Straße 11 2700 Wiener Neustadt, AUSTRIA				5. Work Order / Contract / Invoice ES120415		
6. Item	7. Description	8. Part No.	9. Qty.	10. Serial No.	11. Status/Work	
1	E4 Configuration B	E4-B-00-000-000 Iss.: 008	1	E4-B-00372 ✓	New	
12. Remarks Item 1: The Engine E4-B-00372 build acc. Build Manual (BM) E4.08.02 Rev.10; List of Drawing (LoD) E4.08.10 Rev.8 Item 1: The engine conforms to the type design approved under the U.S. Type Certificate E00081EN Item 1: is in a condition for safe operation and has undergone a final operation check						
13a. 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 12			14a. ☐ Part-145.A.50 Release to Service ☐ Other regulation specified in block 12 Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with Part-145 and in respect to that work the items are considered ready for release to service.			
13b. Authorised Signature 		13c. Approval / Authorisation Number AT.21G.0010		14b. Authorised Signature		
13d. Name 		13e. Date (dd mmm yyyy) 15.Oct.2012		14c. Certificate/ Approval Ref. Number		
				14d. Name		
				14e. Date (dd mmm yyyy)		
USER / INSTALLER RESPONSIBILITIES This certificate does not automatically constitute authority to install the item(s). Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts items from the airworthiness authority specified in block 1. Statements in blocks 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.						

EASA Form 1 - 21 Issue 2

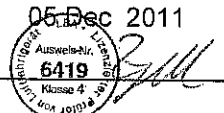
Release: 24.Aug.2010

FOQ05_Form1_rev1

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15 OCT 2012

Geräte-Laufkarte / Equipment Log-Sheet

Geräte Art: <i>Type of Equipment:</i>	Propeller-Regler <i>Propeller Governor</i>	Werk-Nr.: 11G566-F/D <i>Serial No.:</i>	
Baumuster: <i>Partnumber:</i>	P-877-16	Prüfbericht Nr.: 2010002942 <i>Check-off Record No.:</i>	
Hersteller: <i>Manufacturer:</i>	MT Propeller Entwicklung GmbH Flugplatz Straubing-Wallmühle D-94348 Atting Germany		
Bestimmt für Flugzeug: DA42-NG <i>Specific Installation:</i>			
Bestimmt für Triebwerk: Austro Engine E4 <i>Specific Engine:</i>		Ölsorte: - <i>Type of Oil:</i>	
Gerätedaten, Meßbereiche / Technical and Inspection Data:			
Hebelposition / <i>Control Arm position:</i>		355 °	max. Drehzahl / <i>max. Rev.:</i> 2686 RPM
Hebelweg / <i>Control Arm Range:</i>		-- °	min. Drehzahl / <i>min. Rev.:</i> 2010 RPM
ÜV Druck / <i>Relief Valve Pressure low 1:</i>		340 psi @ 2400 RPM	
Stromverbrauch/Power consumption to low rpm		81,5 mA, 24 VDC	
Stromverbrauch/Power consumption to high rpm		90,2 mA, 24 VDC	
Pumpenleistung/Pumpcapacity:		5,75 qts./min @ 150 psi @ 2300 RPM	
Lageerkennung, Widerstand Pin 5-6:		230 Ω bei max RPM	
Position Sensing, Resistance Pin 5-6:		389 Ω bei 2400 RPM	
		124 Ω bei min RPM	
Öldruck zur Steigungsverminderung / <i>Oil pressure to decrease pitch</i>			Drehrichtung / <i>Rotation:</i> LH
Überholung alle: 2000 Std. or 72 Monate <i>Overhaul every (TBO):</i> Hrs. Months		Datum / <i>Date:</i> 05-Dec-2011 Prüfer / <i>Inspector:</i>	



Prüf- und Einbauvermerke / Inspection and Installation Notes

Nr.:	Art der Prüfung und Anlaß / <i>Reason of Inspection</i>			Betriebszeit, seit / <i>Operating Time since</i>			Ort: <i>Locat.:</i>	Firma: <i>Company:</i>
	Ein bzw. Ausbau: <i>Installation or Removal:</i>	Datum <i>Date</i>	Datum <i>Date</i>	Neu <i>New</i>	Überh <i>Overh</i>	Rep. <i>Rep.</i>		
1	New Governor		-	00:00	-	-		
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
Übertrag:								

1. Approving Competent Authority/Country Zuständige Genehmigungsbehörde / Staat Luftfahrt-Bundesamt / Germany		2. AUTHORISED RELEASE CERTIFICATE EASA FORM 1 Freigabebescheinigung EASA-Formblatt 1			3. Form Tracking Number Lfd. Nummer 3250/11 RECEIV		
4. Organisation Name and Address: Name und Anschrift des Unternehmens		MT-Propeller Entwicklung GmbH Airport Straubing-Wallmühle 94348 Atting - Germany			5. Work Order/Contract/Invoice Arbeitsauftrag/Bestellung/Rechnung 2010002942 13006 DA 200		
6. Item Pos.	7. Description Beschreibung	8. Part No. Teile-Nr.	9. Qty. Menge	10. Serial No. Werk-Nr.	11. Status/Work Status/Arbeiten		
1	Governor	P-877-16	1	11G566-F/D ✓	"NEW"		
12. Remarks Bemerkungen		Governor is new Year of construction: 2011 TSN: 00:00 hrs.					
13a. Certifies that the items identified above were manufactured in conformity to: Bescheinigt, dass die oben angegebenen Artikel hergestellt wurden in Übereinstimmung mit: ☒ approved design data and are in a condition for safe operation genehmigten Konstruktionsdaten und sich in einem betriebssicheren Zustand befinden ☐ non-approved design data specified in block 12 nicht genehmigten Konstruktionsdaten gemäß Angabe in Feld 12			14a. ☐ Part-145 A.50 Release to Service Teil-145 A.50 Freigabe ☐ Other Regulation specified in block 12 Andere in Feld 12 angegebene Vorschrift Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with Part 145 and in respect to that work the items are considered ready for release to service. Bescheinigt hiermit, dass, wenn in Feld 12 nichts anderes festgelegt ist, die in Feld 11 aufgeführte und in Feld 12 beschriebene Arbeit in Übereinstimmung mit Teil-145 durchgeführt wurde und dass der Artikel im Hinblick auf diese Arbeit für die Erteilung einer Freigabe geeignet ist.				
13b. Authorised Signature Rechtsgültige Unterschrift		13c. Approval/Authorisation Number Nr. der Genehmigung		14b. Authorised Signature Rechtsgültige Unterschrift		14c. Certificate/Approval Ref. No. Nr. der Genehmigung / Zulassung	
 13d. Name Name Alois Zirngibl		DE.21G.0008 13e. Date (dd mmm yyyy) Datum (TT MMM JJJJ) 05 Dec 2011		 14d. Name Name		14e. Date (dd mmm yyyy) Datum (TT MMM JJJJ)	
USER/INSTALLER RESPONSIBILITIES This certificate does not automatically constitute authority to install the item(s). Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts items from the airworthiness authority specified in block 1. Statements in block 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.							
VERANTWORTLICHKEITEN DES BENUTZERS/AUSRÜSTERS Diese Bescheinigung verleiht nicht automatisch die Befugnis zum Einbau der Artikel. Führt der Benutzer/Ausrüster Arbeiten in Übereinstimmung mit den Vorschriften einer anderen Luftfahrtbehörde als der in Feld 1 angegebenen Luftfahrtbehörde durch, muss der Benutzer/Ausrüster sicherstellen, dass seine Luftfahrtbehörde Artikel der in Feld 1 angegebenen Luftfahrtbehörde akzeptiert. Angaben in den Feldern 13a und 14a stellen keine Einbaubescheinigung dar. In jedem Fall müssen die Instandhaltungsunterlagen des Luftfahrzeugs eine Einbaubescheinigung enthalten, die in Übereinstimmung mit den nationalen Vorschriften vom Benutzer/Ausrüster ausgestellt wurde, bevor ein Flug mit dem Luftfahrzeug durchgeführt werden darf.							

Issuing Competent Authority/Country ige Genehmigungsbehörde / Staat iahrt-Bundesamt / Germany		2. AUTHORISED RELEASE CERTIFICATE EASA FORM 1 Freigabebescheinigung EASA-Formblatt 1			3. Form Tracking Number Lfd. Nummer 3250/11 RECEIVED		
Organisation Name and Address: und Anschrift des Unternehmens MT-Propeller Entwicklung GmbH Airport Straubing-Wallmühle 94348 Atting - Germany					5. Work Order/Contract/Invoice Arbeitsauftrag/Bestellung/Rechnung 2010002942 1300628 DA 002		
7. Description Beschreibung	8. Part No. Teile-Nr.	9. Qty. Menge	10. Serial No. Werk-Nr.	11. Status/Work Status/Arbeiten			
Governor	P-877-16	1	11G566-F/D ✓	"NEW"			
Remarks Governor is new Year of construction: 2011 TSN: 00:00 hrs.							
Certifies that the items identified above were manufactured in conformity to: bestätigt, dass die oben angegebenen Artikel hergestellt wurden in Übereinstimmung mit: approved design data and are in a condition for safe operation genehmigten Konstruktionsdaten und sich in einem betriebssicheren Zustand befinden ICAO approved design data specified in block 12 genehmigten Konstruktionsdaten gemäß Angabe in Feld 12			14a. ☐ Part-145.A.50 Release to Service Teil 145.A.50 Freigabe ☐ Other Regulation specified in block 12 Andere in Feld 12 angegebene Vorschrift Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with Part 145 and in respect to that work the items are considered ready for release to service. Bescheinigt hiermit, dass, wenn in Feld 12 nichts anderes festgelegt ist, die in Feld 11 aufgeführte und in Feld 12 beschriebene Arbeit in Übereinstimmung mit Teil 145 durchgeführt wurde und dass der Artikel im Hinblick auf diese Arbeit für die Erteilung einer Freigabe geeignet ist.				
Authorised Signature rechtsgültige Unterschrift 		13c. Approval/Authorisation Number Nr. der Genehmigung DE.21G.0008		14b. Authorised Signature Rechtsgültige Unterschrift		14c. Certificate/Approval Ref. No. Nr. der Genehmigung / Zulassung	
Name Name Hans Zirngibl		13e. Date (dd mmm yyyy) Datum (TT MMM JJJJ) 05 Dec 2011		14d. Name Name		14e. Date (dd mmm yyyy) Datum (TT MMM JJJJ)	
ALL RESPONSIBILITIES The user/installer does not automatically constitute authority to install the item(s). Where the user/installer performs work in accordance with regulations of an airworthiness authority different than the airworthiness authority specified in block 1, it is essential that the user/installer has his/her airworthiness authority accepts items from the airworthiness authority specified in block 1. Statements in block 13a and 14a do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown. ALLE VERANTWORTLICHKEITEN DES BENUTZERS/AUSRÜSTERS Die Benutzungsanweisung verleiht nicht automatisch die Befugnis zum Einbau der Artikel. Führt der Benutzer/Ausrüster Arbeiten in Übereinstimmung mit den Vorschriften einer anderen Luftfahrtbehörde als der in Feld 1 angegebenen Luftfahrtbehörde durch, muss der Benutzer/Ausrüster sicherstellen, dass seine Luftfahrtbehörde Artikel der in Feld 1 angegebenen Luftfahrtbehörde akzeptiert. Angaben in den Feldern 13a und 14a stellen keine Einbaubescheinigung dar. In jedem Fall müssen die Instandhaltungsunterlagen des Luftfahrzeugs eine Einbaubescheinigung in Übereinstimmung mit den nationalen Vorschriften vom Benutzer/Ausrüster ausgestellt wurde, bevor ein Flug mit dem Luftfahrzeug durchgeführt werden darf.							

ENGINE LOG

7. Make:	Austro Engine GmbH
8. Model:	E4 B
9. Specification:	E00081EN
10. Manufacturer's Serial Number:	E4-B-00372
11. Date of Manufacture:	15 Oct. 2012
12. Aircraft Inspection Cycle:	

Section 3A: Engine Service and Maintenance Log

DATE / /	TIME RUN		TIME SINCE OVERHAUL		CYCLES	
	HOURS	min	HOURS	min	Sub Total	TOTAL
BROUGHT FORWARD			0.00			

INSTALLATIONS, INSPECTIONS



Date: November 20, 2012

WO # RO-12-1058 A/C DA 42NG S/N: 42.AC022 Reg: N236TS TACH: 411.6 Hrs.
RHE Austro E4-B S/N: E4-B-00372 TSN: 0.00 Hrs.

The Following work has been carried out:

- New "0" time RH Austro Engine installed I.A.W. OSB42-068 Rev.14 Appendix 2, Rev. 7.
- New Voltage Regulator P/N E4A-91-200-000 S/N: 115 installed.
- Engine serviced with 7 liters Shell Helix 5W30 oil.
- Gearbox serviced with 2 liters Shell Spirax GSX 75W80 gearbox oil.
- Cooling system topped up with a 50/50 mixture of Glysantin G48 antifreeze & distilled water.
- Ground run up & fluid leak check of the engine performed and determined to be satisfactory.

Following AWD's and SB's checked and complied with as applicable

- Austro Engine MSB-E4-003/9 - Engine Software Version updated to VC33_0_05_14 Incorporated by Austro Engine.
- Austro Engine MSB-E4-006 - N/A due to Eng. S/N affectivity
- Austro Engine MSB-E4-007/1 - N/A due to Eng. S/N affectivity
- Austro Engine MSB-E4-008/1 - LH and RH Eng. Oil separator hoses N/A due to Eng. S/N affectivity.
- Austro Engine MSB-E4-009/2 - New High pressure fuel pumps incorporated by Austro Engine
- Austro Engine MSB-E4-013/1 - Gear Box oil inspection N/A due to S/N affectivity of the gearbox.
- Austro Engine MSB-E4-014/2 - Replacement of the Fuel return line & Banjo fitting. Incorporated by Austro Engine.
- MSB42NG002/8 - Software E4-B (AE300) engine Software version VC33_0_5_14 Incorporated by Austro Engine.
- MSB42NG005/1 - Charged air tube between Turbo Charger & Intercooler C/W.
- MSB42NG-010 - Installation of a protective mesh on coolant and charged air radiator C/W.
- MSB42NG-018/1 - Replacement of turbo connector Assy. C/W.
- OSB42NG-019 - Installation of fuel Pressure Pulsation damper C/W as part of WI OSB42-068/1 Rev. 14.
- MSB42NG-024 - Removal of the LH aft safety rope C/W.
- OSB42-068/1 - Conversion from Thielert engines to Austro Engines C/W.
- RSB-42-072/2 - LH & RH Engines heat detectors P/N X2003-2 Sealed for water protection C/W.
- AD 2011-18-19- RH High Pressure Pump fuel oscillation check. N/A as New fuel pump per MSB-E4-009/2 is installed.

AWDS checked through Bi-Weekly Supplement 2012- 22

The maintenance described above has been performed in accordance with the applicable standards of airworthiness.

DIAMOND AIRCRAFT INDUSTRIES AMO 161-93

Signature: *[Signature]*

Lic or Stamp:



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TOTALS

PREVIOUS
TOTALS

TOTALS
ACE NEW

CARRY FORWARD to Top of Next Page

NAME/
SIGNATURELICENCE:
AME or
AMO/ACA

Date: November 23, 2012

WO#: RO-12-058 S/N: 40.AC022 Reg #: N236TS TTAF: 414.7 Hrs

The Following work has been carried out.

Right engine coolant pressure relief valve P/N X11-0014-00-00.00

Replaced with new valve same P/N S/N 0350

RHE fwd coolant hose clamps to cooler assy retorqued to spec.

R H engine coolant level topped and system pressure tested.

No leaks found

I.A.W. DA42NG M.M. Chapter 75-00-00

The maintenance described above has been performed in
accordance with the applicable standards of airworthiness.

DIAMOND AIRCRAFT INDUSTRIES AMO 161-93

Signature [Signature] Lic or Stamp

MODEL	DA42NG	NORTH STAR AVIATION	DATE	8/15/13
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	521.5
REG #	N236TS	MANKATO, MN 56001		
Tach.	521.5	CRS NUTR521L		
Right engine		LOGBOOK INSERT	W/O	5082

Drained oil obtained oil sample removed oil filter inspected no defects noted installed new oil filter using DA42 100 hr. kit
reinstalled drain plug and safety wired serviced engine with 6 liters of 5W-50 Shell Helix Ultra oil all work done referencing
maintenance manual chapter 72-00-00 removed and installed new fuel filter referencing maintenance manual chapter 28-20-00.
Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up
and leak check good.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the
Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 8/15/13

SIGNED

Jon Wieland for North Star Aviation FAA CRS NUTR521L

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	11/29/13
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	565.1
REG #	N236TS	MANKATO, MN 56001	Engine TT	151.5
Tach.	565.1	CRS NUTR521L		
Right engine		LOGBOOK INSERT	W/O	5204

1. Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
2. Drained oil obtained oil sample removed oil filter and inspected no defects noted Installed new filter and serviced engine
with 6 liters of Shell Helix Ultra 5W-50 oil.
3. Completed EECU download and emailed to Austro.
4. Removed and installed new Air filter P/N RU-1620 filter next due for replacement at 765.1 ACTT.
5. Serviced engine coolant with 50/50 mixture of coolant G48 and water and bleed system.
6. Installed new fuel filter
7. All work done referencing Austro maintenance manual AE300 Doc. No. E4.08.
8. AD 2013-14-08 is N/A by revision of waste gate controller Revision 80 is installed
9. Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy
condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the
Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 11/29/13

SIGNED

Jon Wieland for North Star Aviation FAA CRS NUTR521L

Section 3A: E

ENGINE MODEL: E4-B
ENGINE S/N (R): E4-B-00372
REG. NO: 236TS
WORK ORDER: 6061-04-2014



Premier Aircraft Service, Inc.
Repair Station No. 9PRR402B
5540 NW 23rd Avenue Hanger 14
Fort Lauderdale, FL 33309
Phone: (954) 334-2383

DATE: 4/14/2014
A/C TSN: 665.4
ENG TT (R): 253.8
TACH: 665.4

DATE / /	TIME RUN
	HOURS
BROUGHT FORWARD	

Right Engine Entries

(3) PERFORMED VISUAL AND MECHANICAL INSPECTION OF TWO-MASS FLYWHEEL ASSY P/N E4A-73-300-00, S/N 00600 IAW AE300 M/M CH 85-10-65. FOUND ASSY TO BE AIRWORTHY AT THIS TIME. NEXT INSPECTION DUE AT 300 HRS FROM THIS TIME.

MAINTENANCE RELEASE: IN REFERENCE TO THE WORK PERFORMED, THIS AIRCRAFT, AIRFRAME, AIRCRAFT ENGINE, PROPELLER, AND / OR APPLIANCE WAS REPAIRED AND INSPECTED I.A.W. CURRENT REGULATIONS OF THE FEDERAL AVIATION ADMINISTRATION AND IS APPROVED FOR RETURN TO SERVICE. ALL WORK WAS PERFORMED IAW CURRENT APPLICABLE AIRCRAFT, ENGINE, OR APPLIANCE MAINTENANCE MANUALS AND INSTRUCTIONS. PERTINENT DETAILS ARE ON FILE AT THIS REPAIR STATION OFFICE.

DATE: 4/14/2014

SIGNED

Work Order: 6061-04-2014

Sam Tavaraz
Certified Repair Station No. 9PRR402B

Printed by EBis 3 (datamedia.com)

ECTIONS

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	4/18/14
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	665.4
REG #	N236TS	MANKATO, MN 56001	Engine TT	253.8
Tach.	665.4	CRS NUTR521L		
Left engine		LOGBOOK INSERT	W/O	095
- Completed 100 hr. and 300 hr. engine inspection referencing the Austro Engine maintenance manual AE300 chapter 05-20-00 using 300 hour Kit P/N E4A-00-301-KIT - Drained oil obtained oil sample removed oil filter and inspected no defects noted Installed new filter and serviced engine with 6 liters of Aeroshell 10W-40 Diesel oil. - Completed EECU download and emailed to Austro. - Removed prop and gearbox removed two mass flywheel and reinstalled after inspection by Premier Aircraft service Inc. under W/O # 6061-04-2014 referencing maint. Manual chapter 85-10-62 reinstalled gearbox referencing maint. Manual 85-10-12. - Serviced gearbox with 3 liters of Shell Spirax 75W-80 - Reinstalled propeller using new oring P/N CO48-A referencing DA42NG maintenance manual chapter 61-10-00. - Removed and installed new aircraft fuel filter referencing maint manual chapter 28-20-00 leak check good. - Removed alternator and completed brush inspection installed overhauled brush assembly P/N E4A-91-300-000X reinstalled alternator referencing maintenance manual chapter 24-006 - All work done referencing Austro maintenance manual AE300 Doc. No. E4.08. - Completed ground run referencing maintenance manual 71-10-03 leak check good.				
The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.				
DATE 4/18/14		SIGNED Jon W. Weland Jon Weland for North Star Aviation FAA CRS NUTR521L		

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	1/23/15
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	758.4
REG #	N236TS	MANKATO, MN 56001	Engine TT	346.8
Tach.	758.4	CRS NUTR521L		
Right engine		LOGBOOK INSERT	W/O	422
- Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual. - Drained oil obtained oil sample removed oil filter and inspected no defects noted Installed new filter and serviced engine with 6 liters of Aeroshell 5W-30 diesel oil. - Completed EECU download and emailed to Austro. - Removed and installed new Air filter P/N RU-1620 filter next due for replacement at 958.4 ACTT. - Serviced engine coolant with 50/50 mixture of coolant G48 and water and bleed system. - Installed new fuel filter - All work done referencing Austro maintenance manual AE300 Doc. No. E4.08. - Complied with AD 2014-08-10 removed waste gate controller P/N E4A-41-120-000 and installed new waste gate controller P/N E4A-41-120-000 S/N RC1502578 revision 080 referencing maintenance Austro maintenance manual chapter 81-00-32 no further action required - Run up and leak check good.				
I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.				
The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.				
DATE 1/23/15		SIGNED Jon W. Weland Jon Weland for North Star Aviation FAA CRS NUTR521L		

THIS PAGE TOTALS

PREVIOUS TOTALS

TOTALS SINCE NEW

CARRY FORWARD to Top of Next Page

 Austro Engine	Maintenance Manual	E4.08.04
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Before the measuring is started the spring packages at the inside of the two-mass-flywheel have to be positioned. Therefore the flywheel has to be turned not more than three times into the desired direction with a torque of about 350 Nm. After this the angle measuring system has to be reset to null.

Thereafter the measuring can be done according to the following table. The measured angle values have to be within the minimum and maximum tolerance values. The measuring direction may not be changed during the procedure unless the spring packages will be repositioned for the change of the direction.

Table 1: Tolerance values

Torque [Nm]	Minimum tolerance [°]	Measured Value		Maximum tolerance [°]
		Clockwise turning	Counter- clockwise turning	
25	2	8	8	12
50	2	14	12	18
75	7	16	18	23
100	13	20	18	29
125	18	26	24	34
150	24	30	28	40
175	29	32	35	45
200	34	40	40	50
225	36	44	44	52
250	38	46	46	54
275	39	52	49	55
300	41	54	50	57
325	43	56	52	59
350	44	58	50	60

Tolerance values have been round mathematically due to the handling at the measuring process

Clutch Assy DATA:
P/N EYA-73-300-000
S/N 00600
STWS: Arrowmty

<u>Mechanical Inspection Performed:</u>	
EMMANUEL VICOSO	SAMUEL TAVAREZ
04/14/14	4-14-14
	
FITTER (Name, Date, Signature)	INSPECTOR (Name, Date, Signature)

MODEL	DA42NG	NORTH STAR AVIATION	DATE	12/10/15
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	892.2
REG #	N236TS	MANKATO, MN 56001	Engine T.T.	478.6
Tach.	892.2	CRS NUTR521L		435.6
Right engine		LOGBOOK INSERT	W/O	829

Drained oil obtained oil sample removed oil filter inspected no defects noted installed new oil filter using DA42 100 hr. kit reinstalled drain plug and safety wired serviced engine with 6 liters Aeroshell 10W-40 diesel oil all work done referencing maintenance manual chapter 72-00-00 removed and installed new fuel filter referencing maintenance manual chapter 28-20-00. Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up and leak check good.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 12/10/15

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

LICENCE:
AME or
AMO/ACA

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	2/26/15
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	901.4
REG #	N236TS	MANKATO, MN 56001	Engine TT	487.8
Tach.	901.4	CRS NUTR521L		487.8
Right engine		LOGBOOK INSERT	W/O	882

- Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
- Completed EECU download and emailed to Austro.
- Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1101.4 ACTT.
- Drained gearbox and Serviced gearbox with 3 liters of Shell Spirax 75W-80 referencing Austro maintenance manual chapter 85-10-22 leak check good.
- All work done referencing Austro maintenance manual AE300 Doc. No. E4.08.
- Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 2/26/15

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	3/16/17
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	901.4
REG #	N236TS	MANKATO, MN 56001	Engine TT	1030.6
Tach.	1030.6	CRS NUTR521L		617.0
Right engine		LOGBOOK INSERT	W/O	1292

- Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
- Completed EECU download and emailed to Austro.
- Drained oil removed oil filter an inspected no defects noted installed new oil filter contained in the 100 HR kit serviced with 7 liters of Aeroshell 10-W40 Diesel oil.
- Drained gearbox and Serviced gearbox with 3 liters of Shell Spirax 75W-80 referencing Austro maintenance manual chapter 85-10-22 leak check good.
- Removed gear box removed two-mass flywheel for 600 HR inspection. Reinstalled two-mass flywheel after 600 HR inspection by Premier Aircraft Service under W/O # 7480-02-2017. Reinstalled flywheel using new bolts DIN912-M8X12-12.9 reinstalled gearbox all work done referencing Austro E4A maintenance manual chapter 85-10-60.
- Removed High pressure fuel pump P/N E4A-30-000-000 S/N 11-12-17-03-01008 and installed new pump P/N E4A30-000-000 S/N 16-07-11-02-01023 referencing Astro E4A maintenance manual chapter 73-00-41.
- Removed V belt and installed new belt P/N E4A-74-000-801 S/N RL1702935 referencing Austro E4A maintenance manual chapter 85-40-12.
- Drained engine coolant and serviced with 50/50 mixture of coolant and water and bleed coolant system referencing DA42NG maintenance manual Chapter 12-10-00. Removed right glow plug control mounting bracket and installed new bracket P/N E4A-94-100-502 referencing E4A maintenance manual chapter 80-00-22.
- Removed fuel filter and installed new filter WK724-3 referencing maintenance manual chapter 28-20-00.
- Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1230.6 ACTT.
- Completed engine ground run up referencing Austro E4A maintenance manual chapter 71-00-03.
- Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 3/16/17

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

MODEL	DA42NG	NORTH STAR AVIATION	DATE	12/10/15
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	892.2
REG #	N236TS	MANKATO, MN 56001	Engine T.T.	478.6
Tach.	892.2	CRS NUTR521L		480.6
Right engine		LOGBOOK INSERT	W/O	829

Drained oil obtained oil sample removed oil filter inspected no defects noted installed new oil filter using DA42 100 hr. kit reinstalled drain plug and safety wired serviced engine with 6 liters Aeroshell 10W-40 diesel oil all work done referencing maintenance manual chapter 72-00-00 removed and installed new fuel filter referencing maintenance manual chapter 28-20-00. Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up and leak check good.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 12/10/15

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

LICENCE:
AME or
AMO/ACA

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	2/26/15
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	901.4
REG #	N236TS	MANKATO, MN 56001	Engine TT	487.8
Tach.	901.4	CRS NUTR521L		487.8
Right engine		LOGBOOK INSERT	W/O	882

1. Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
2. Completed EECU download and emailed to Austro.
3. Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1101.4 ACTT.
4. Drained gearbox and Serviced gearbox with 3 liters of Shell Spirax 75W-80 referencing Austro maintenance manual chapter 85-10-22 leak check good.
5. All work done referencing Austro maintenance manual AE300 Doc. No. E4.08.
6. Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 2/26/15

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	3/16/17
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	901.4
REG #	N236TS	MANKATO, MN 56001	Engine TT	1030.6
Tach.	1030.6	CRS NUTR521L		617.0
Right engine		LOGBOOK INSERT	W/O	1292

1. Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
2. Completed EECU download and emailed to Austro.
3. Drained oil removed oil filter inspected no defects noted installed new oil filter contained in the 100 HR kit serviced with 7 liters of Aeroshell 10-W40 Diesel oil.
4. Drained gearbox and Serviced gearbox with 3 liters of Shell Spirax 75W-80 referencing Austro maintenance manual chapter 85-10-22 leak check good.
5. Removed gear box removed two-mass flywheel for 600 HR inspection. Reinstalled two-mass flywheel after 600 HR inspection by Premier Aircraft Service under W/O # 7480-02-2017. Reinstalled flywheel using new bolts DIN912-M8X12-12.9 reinstalled gearbox all work done referencing Austro E4A maintenance manual chapter 85-10-60.
6. Removed High pressure fuel pump P/N E4A-30-000-000 S/N 11-12-17-03-01008 and installed new pump P/N E4A30-000-000 S/N 16-07-11-02-01023 referencing Austro E4A maintenance manual chapter 73-00-41.
7. Removed V belt and installed new belt P/N E4A-74-000-801 S/N RL1702935 referencing Austro E4A maintenance manual chapter 85-40-12.
8. Drained engine coolant and serviced with 50/50 mixture of coolant and water and bleed coolant system referencing DA42NG maintenance manual Chapter 12-10-00. Removed right glow plug control mounting bracket and installed new bracket P/N E4A-94-100-502 referencing E4A maintenance manual chapter 80-00-22.
9. Removed fuel filter and installed new filter WK724-3 referencing maintenance manual chapter 28-20-00.
10. Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1230.6 ACTT.
11. Completed engine ground run up referencing Austro E4A maintenance manual chapter 71-00-03.
12. Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 3/16/17

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

Section 3A: E

DATE / /	TIME RUN HOURS m
BROUGHT FORWARD	

ENGINE MODEL: E4-B
ENGINE S/N (R): E4-B-00372
REG. NO: 236TS
WORK ORDER: 7480-02-2017



Premier Aircraft Service, Inc.
5540 NW 23rd Avenue Hanger 14
Fort Lauderdale, FL 33309
Phone: (954) 334-2393

DATE: 2/15/2017
A/C TSN: 1030.6
ENG TT (R): 819
TACH: 1030.6

CTIONS

Right Engine Entries

(2) PERFORM 600 HR INSPECTION ON TWO-MASS FLYWHEEL P/N EA4-73-300-000-030, S/N 00600 IAW E4A M/M CH 85-10-65. NO DEFECTS NOTED AT THIS TIME.

DATE: 2/15/2017

SIGNED:

SAMUEL TAVAREZ JR.
CRS# 9PRR402B

Work Order: 7480-02-2017

Printed by EBIS 3 (datamedia.com)

MODEL	DA42NG	NORTH STAR AVIATION	DATE	11/3/17
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	1130.9
REG #	N236TS	MANKATO, MN 56001	Engine T.T.	717.3
Tach.	1130.9	CRS NUTR521L		
Right engine		LOGBOOK INSERT	W/O	1632
Drained oil, obtained oil sample removed oil filter inspected no defects noted installed new oil filter using DA42 100 hr. kit reinstalled drain plug and safety wired serviced engine with 6 liters Aeroshell 10W-40 diesel oil all work done referencing maintenance manual chapter 72-00-00 removed and installed new fuel filter referencing maintenance manual chapter 28-20-00. Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up and leak check good. The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station. DATE <u>11/3/17</u> SIGNED <u>Jon Wieland</u> Jon Wieland for North Star Aviation FAA CRS NUTR521L				

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	5/25/18
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	1192.6
REG #	N236TS	MANKATO, MN 56001	Engine TT	779.0
Tach.	1192.6	CRS NUTR521L		
Right engine		LOGBOOK INSERT	W/O	1853
- Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual. - Completed EECU download and emailed to Austro. - Drained oil removed oil filter inspected no defects noted installed new oil filter contained in the 100 HR kit serviced with 7 liters of Aeroshell 5-30 Ultra Diesel oil. - Removed fuel filter and installed new filter WK724-3 referencing maintenance manual chapter 28-20-00. - Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1392.6 ACTT. - Installed new oil drain valve P/N D44-9071-06-01. - Complied with AD 2018-07-16 by removing wastegate actuator and installing new wastegate actuator P/N E4A-41-120-000 and installing new spring-loaded circlip P/N E4A-41-100-801 in accordance with Austro Engine mandatory service bulletin MSB-E4-022/3 and E4 series maintenance manual chapter 81-00-33. Ad is next due at 1442.6 A.C.T.T - Completed engine ground run up referencing Austro E4A maintenance manual chapter 71-00-03. - Run up and leak check good. I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition. The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station. DATE _____ SIGNED _____ Jon Wieland for North Star Aviation FAA CRS NUTR521L				

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TOTALS

PREVIOUS
TOTALS

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CARRY FORWARD to Top of Next Page

MODEL	DA42NG	NORTH STAR AVIATION	DATE	2/4/19
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	1309.8
REG #	N236TS	MANKATO, MN 56001	Engine T.T.	896.2
Tach.	1309.8	CRS NUTR521L		
Right engine		LOGBOOK INSERT	W/O	2150

Drained oil obtained oil sample removed oil filter inspected no defects noted installed new oil filter using DA42 100 hr. kit reinstalled drain plug and safety wired serviced engine with 6 liters Aeroshell 10W-40 diesel oil all work done referencing maintenance manual chapter 72-00-00 removed and installed new fuel filter referencing maintenance manual chapter 28-20-00. Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up and leak check good.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 2/4/19

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

LICENCE:
AME or
AMO/ACA

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	7/5/19
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	1337.9
REG #	N236TS	MANKATO, MN 56001	Engine TT	924.3
Tach.	1337.9	CRS NUTR521L		
Right engine		LOGBOOK INSERT	W/O	2320

- Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
- Completed EECU download and emailed to Austro.
- Drained oil removed oil filter an inspected no defects noted installed new oil filter P/N E4A-52-100-802 contained in the 100 HR kit serviced with 7 liters of Aeroshell 5-30 Ultra Diesel oil.
- Removed fuel filter and installed new filter WK724-3 referencing maintenance manual chapter 28-20-00.
- Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1537.9 ACTT.
- Drained gearbox reinstalled drain plug and safety wired. Serviced gearbox with 3 liters Shell Spirax 75W-80. All work done referencing E4A maintenance manual chapter 85-10-22. Leak check good.
- Completed engine ground run up referencing Austro E4A maintenance manual chapter 71-00-03.
- Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 7/5/19

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

MODEL	DA42NG	NORTH STAR AVIATION	DATE	11/27/19
SERIAL #	42.AC022	3030 AIRPORT ROAD	A/C TT	1416.1
REG #	N236TS	MANKATO, MN 56001	Engine T.T.	1002.5
Tach.	1416.1	CRS NUTR521L		
Right engine		LOGBOOK INSERT	W/O	2616

Drained oil obtained oil sample removed oil filter inspected no defects noted installed new oil filter P/N E4A-52-100-02 using DA42 100 hr. kit reinstalled drain plug and safety wired serviced engine with 6 liters Aeroshell 10W-40 ultra-diesel oil all work done referencing maintenance manual chapter 72-00-00 removed and installed new fuel filter P/N WK724-3 referencing maintenance manual chapter 28-20-00. Completed readout of electronic engine control unit and emailed files to Austro engine referencing AE300 wizard manual. Run up and leak check good.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 11/27/19

SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

Balancing weights:

If the balancing weights are missing the two-mass-flywheel has to be replaced. This is noticeable if weld points can be seen without the balancing weights.

If the weld points are broken the flywheel has to be replaced as well.

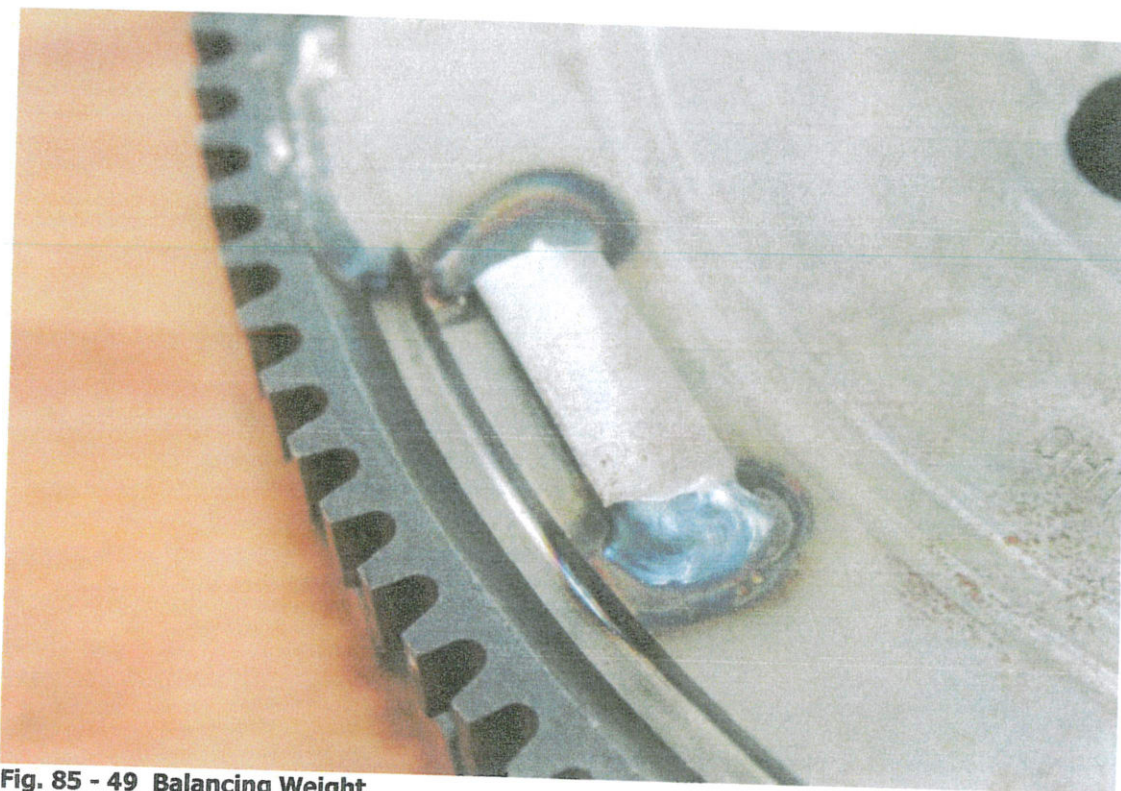


Fig. 85 - 49 Balancing Weight

Visual Inspection Performed:

HADAS GUILBOA

02/15/2017

Hadas Guilboa

FITTER

(Name, Date, Signature)

2-15-17

Samuel Tamariz

INSPECTOR

(Name, Date, Signature)

CRS#9 PRR402B

P/N E4A-73-300-000-030

S/N 00600



Before the measuring is started the spring packages at the inside of the two-mass-flywheel have to be positioned. Therefore the flywheel has to be turned not more than three times into the desired direction with a torque of about 350 Nm. After this the angle measuring system has to be reset to null.

Thereafter the measuring can be done according to the following table. The measured angle values have to be within the minimum and maximum tolerance values. The measuring direction may not be changed during the procedure unless the spring packages will be repositioned for the change of the direction.

Table 1: Tolerance values

Torque [Nm]	Minimum tolerance [°]	Measured Value		Maximum tolerance [°]
		Clockwise turning	Counter- clockwise turning	
25	2	4	6	12
50	2	12	14	18
75	7	16	18	23
100	13	18	20	29
125	18	22	24	34
150	24	30	30	40
175	29	36	38	45
200	34	40	40	50
225	36	44	46	52
250	38	48	50	54
275	39	50	50	55
300	41	52	50	57
325	43	52	52	59
350	44	52	54	60

Tolerance values have been round mathematically due to the handling at the measuring process

Mechanical Inspection Performed:

HADAS GUILBOA

02/15/2017

Hadas Guillboa

FITTER

(Name, Date, Signature)

SAMUEL JAVIER JR

02-15-17

Samuel Javiez Jr

INSPECTOR

(Name, Date, Signature)

CRS# 91PRR402B

P/N - E4A-73-300-000-030

S/N - 00600

Secti

DATE

BROUGHT
FORWARD

MODEL	Austro E4-B	NORTH STAR AVIATION	DATE	4/9/2021
SERIAL #	E4-B-00372	3030 AIRPORT ROAD	A/C TT	1504.6
REG #	N236TS	MANKATO, MN 56001	Engine TT	1091.0
Tach.	1504.6	CRS NUTR521L		
Right engine		LOGBOOK INSERT	W/O	3181

- Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual.
- Completed EECU download and emailed to Austro.
- Drained oil removed oil filter an inspected no defects noted installed new oil filter P/N E4A-52-100-802 contained in the 100 HR kit serviced with 7 liters of Aeroshell 5-30 Ultra Diesel oil.
- Removed fuel filter and installed new filter WK724-3 referencing maintenance manual chapter 28-20-00.
- Removed and installed new Air Filter P/N RU-1620 filter next due for replacement at 1704.6 ACTT.
- Drained gearbox reinstalled drain plug and safety wired. Serviced gearbox with 3 liters Shell Spirax 75W-80. All work done referencing E4A maintenance manual chapter 85-10-22. Leak check good.
- Complied with AD 2020-14-07 by installing new fuel injectors P/N E4A-35-100-00 using new seal rings P/N E4A-03-000-801 and new bolts P/N E4A-03-000-802 and programed IQA codes in EECU. All work done referencing maintenance E4 manual chapter 73-10-01.
- Serviced coolant tank tightened coolant hose clamps all work done referencing maintenance manual chapter 75-00-00.
- Installed new alternator belt P/N E4A-74-000-801 referencing E4 maintenance manual chapter 85-40-00 belt replacement is next due April 2026.
- Installed new oil separator P/N E4A-53-110-000referencing E4 maintenance manual chapter 79-20-00.
- Complied with AD 2020-22-14 by installing new wastegate controller P/N E4A-41-120-000 and new spring loaded circlip P/N E4A-41-100-801 and installed fail safe bridge in accordance with MSB-E4-022/5 which is terminating action.
- Completed engine ground run up referencing Austro E4A maintenance manual chapter 71-00-03.
- Run up and leak check good.

I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

The aircraft, and/or component identified above was repaired and/or inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details are on file at this repair station.

DATE 4/9/2021 SIGNED Jon Wieland
Jon Wieland for North Star Aviation FAA CRS NUTR521L

1 of 1

ENGINE MODEL: Austro E4-B
ENGINE S/N (R): E4-B-00372
REG NO: N236TS
WORK ORDER: 0216-06-2021



North Star Aviation, Inc.

Repair Station No. NUTR521L
3030 N Airport Road
Mankato, MN 56001
Phone: 507-825-6006

DATE: 10/1/2021
A/C TSN: 1514.5
ENG TT (R): 1100.9
TSMOH (R):
TACH: 1514.5

Right Engine Entries

(1) Contacted Diamond Technical support they advised to and bore scope cylinders and downloaded engine data log and event recorder and sent to Diamond. Removed injector cover. Removed fuel injectors and bore scoped cylinders no defects noted. Drained oil obtained oil sample. Removed oil filter. Sent oil sample and filter to lab for analysis no defects noted. Bore scoped oil sump for debris and broken oil sump baffle no defects noted. Completed compression test using compression tester 6230021220 cylinder #1 29 bar #2 32 bar #3 28 bar #4 29 bar. Removed glow plugs and completed differential compression test using compression tester AEP-00243-B1 Cylinder #1 12% #2 12% #3 8% #4 14%. Results of compression test are within limits. Reinstalled glow plugs in accordance with E4A maintenance manual chapter 80-10-00. Reinstalled fuel injectors using new gaskets P/N E4A-03-000-801 and new screws P/N E4A-03-00-201 in accordance with E4A maintenance manual chapter 73-10-01. Installed new oil filter using filter kit P/N E4A-52-300-KIT and serviced with 6 liters Aeroshell 5-30 ultra diesel oil in accordance with E4A maintenance manual chapter 79-20-00. Installed new breather to air/oil separator hose P/N E4A-53-100-501 and new injector cover P/N E4A-53-000-101 in accordance with E4A maintenance manual 79-20-00 and 85-10-00. Run up and leak check good.

The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired/inspected in accordance with current requirements of the Federal Aviation Administration and is approved for return to service. Pertinent details of this work order are on file at this Certified Repair Station#NUTR521L.

DATE: 10/1/2021

SIGNED:

Jon Wieland

Certified Repair Station No. NUTR521L

Work Order: 0216-06-2021

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MAKE: Diamond Aircraft Ind
MODEL: Da 42
S/N: 42.AC022
REG. NO.: N238TS
W/O #: MKT1116-05-2022



North Star Aviation, Inc.
FAA Cert: NUTR521L
3030 N Airport Road
Mankato, MN 56001

DATE: 06-15-2022
A/C TT: 1602.70
A/C Tach: 1602.70
ENG TT - R: 1189.10
Engine Model - R: Austro E4-B
Engine SN - R: E4-B-00372

A4

LICENCE:
AME or
AMO/ACA

Engine - R Entries

- 3 Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual. I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition
- 9 Removed and installed new Air Filter P/N RU-1620. Filter next due for replacement at 1802.7 ACTT.
- 11 Completed Read out EECU using the AE 300 Wizard. Sent the event log, event recorder, engine data log, data to Austro Engine. Examined the fault code memory of the EECU for failure. All work done in accordance with Austro E4 maintenance manual chapter 76-10-00.
- 12 Removed High pressure fuel pump P/N E4A-30-000-000 S/N 16-07-11-02-01023 and installed new pump P/N E4A30-000-BHY S/N 21-09-06-02-02309 in accordance with Austro E4A maintenance manual chapter 73-00-41. Run up and leak check good.
- 15 Drained oil. Obtained oil sample. Removed oil filter an inspected no defects noted installed new oil filter P/N E4A-52-100-802 contained in the 100 HR kit serviced with 7 liters of Aeroshell 5-30 Ultra Diesel oil. Run up and leak check good.
- 17 Removed fuel filter and installed new filter WK724-3 contained in the 100 hr. kit. In accordance with the DA42 maintenance manual chapter 28-20-00. Leak check good.
- 20 Removed right engine coolant tank cap and installed new cap P/N 11000118. Leak check good.
- 23 Drained gearbox reinstalled drain plug and safety wired. Serviced gearbox with 3 liters Shell Spirax 75W-80. All work done referencing E4A maintenance manual chapter 85-10-22. Leak check good.

MKT1116-05-2022 (06-15-2022)

Page 2 / 2

The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired/inspected in accordance with current requirements of the Federal Aviation Administration and is approved for return to service. Pertinent details of this work order are on file at this Certified Repair Station#NUTR521L

DATE: 06-15-2022

SIGNED:

Jon Weland
FAA Cert: NUTR521L

WORK ORDER: MKT1116-05-2022

Printed by EBIS (EBISCloud.com)

MAKE: Diamond Aircraft Ind
MODEL: Da 42
S/N: 42.AC022
REG. NO: N238TS
ENGINE MODEL - R: AUSTR0
E4-B
ENGINE SN - R: E4-B-00372



North Star Aviation, Inc.
FAA Cert: NUTR521L
3030 N Airport Road
Mankato, MN 56001

W/O #: MKT2647-11-2023
DATE: 05-02-2024
A/C TT: 1718.2
A/C Tach: 1718.2
ENG TT - R: 1306.6
Hobbs:

Engine - R Entries

- 5 Completed an annual inspection referencing the checklist contained in the DA42NG maintenance manual. I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition
- 8 All applicable Federal Aviation Administration Airworthiness Directives have been researched and complied with up to the date listed on this logbook label.
- 10 Complied with AD 2020-22-14 Preventing Failure of the turbocharger waste gate control rod by replacing Waste gate control rod circlips P/N E4A-41-100-801. Operations check good.
- 20 Removed and Replaced Rear engine mounts P/N D64-7106-13-00 Forward LH mounts P/N D64-7126-14-70 and Forward RH mounts P/N D64-7126-14-71 in accordance with Diamond DA42 maintenance manual chapter 71-20-00. Operations check good.
- 24 Removed and Replaced RH engine Quick drain P/N D44-9071-06-02 in accordance with Austro E4-B engine overhaul manual.
- 30 Removed and Replaced RH engine gear box P/N E4A-70-000-000-AP gear box screws P/N E4A-73-000-801 and flywheel P/N E4PB-73-000-000-KIT. All work done in accordance with Austro E4-B maintenance manual. Operations and leak check good.

The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired/inspected in accordance with current requirements of the Federal Aviation Administration and is approved for return to service. Pertinent details of this work order are on file at this Certified Repair Station#NUTR521L

DATE: 05-02-2024

SIGNED:

Carter Downs
FAA Cert: NUTR521L

WORK ORDER: MKT2647-11-2023

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AIRFRAME TECHNICAL RECORD

Section 3: Engine Log

This engine log is a part of the permanent technical record for the engine described at the front of this log. Only information that is directly applicable to the engine should be entered into this log. Information relating to the airframe, propellers, or other components having their own permanent technical records, should be entered into separate records. Entries may be made either by writing directly in the log pages, or by completion of separate printed reports, which are then pasted, stapled, or otherwise permanently attached to the applicable sections of the logbook.

Users may adopt different date formats to conform to local convention. Upon commencing a new page, enter an example of the date format to be used in the space provided at the top of each date column. For example:

dd-mm-yyyy	(European format)
mmm dd,yyyy	("Microsoft" format)
yyyy.mm.dd	(military format)

Every effort must be made to remove the inherent ambiguity in dates such as "04/03/06" where the year or month is not immediately apparent. All date entries on that page must then conform to the format indicated. When an entry takes up more than one row, draw a line through the unused cells of the affected rows to prevent the entry of unrelated information.

Maintenance may be recorded directly in this log, together with the applicable maintenance release, or it may be first recorded and certified in the aircraft journey log, and then transcribed into this log no later than thirty days following the events concerned. Where maintenance is originally certified in the journey log, there is no need for a second maintenance release when the details are transcribed into this log, but the name of the person making the transcription must be entered. Persons who transcribe entries are not responsible for the work described, but only for the accuracy of the transcription.

If an entry made in this technical record is **signed** and an **A&P or AME** licence number or an Aircraft Certifying Authority (ACA) reference and AMO number are added adjacent to the signature, the entry constitutes a maintenance release indicating that the maintenance task described has been performed in accordance with the applicable airworthiness requirements.

On bringing this log into use, enter the appropriate volume number, the date, and other applicable information relating to the aircraft in the spaces provided.

Maintenance Task Entry:

Section 3A: Record of maintenance and elementary work

For each maintenance task performed on the engine (including the accomplishment of **Airworthiness Directives** and the removal and installation of items such as propellers, that have their own permanent technical records) enter the date, total air time, total cycles, and a brief description of the task, in the appropriate cells in the first part (Part A) of this log. Where information is transcribed from another record, the name of the person transcribing the information should be printed (not signed) in the signature cell, and a line struck through the "AME or AMO/ACA" cell.

Where the information is being recorded for the first time in this log, and relates to a task that requires a maintenance release, the person issuing the release must sign in the signature cell, and add his **A&P or AME** licence number, or where applicable, the ACA licence and AMO number, in the "AME or AMO/ACA" cell.

Section 3B: Record of Engine Airworthiness Directives

Applicable **Engine Airworthiness Directives**, airworthiness limitations, and equivalent mandatory requirements are recorded in a separate section (3B) in the latter part of this volume