

WORK ORDER NUMBER**35120****APPROVED TURBO COMPONENTS, Inc**

1545 E. Acequia

Visalia, CA 93292

1-800-523-4809

559-627-3600 (Local / Intl.)

559-627-2873 (Fax)

www.approvedturbo.com

**Approved Turbo Components**

Received Date: 07/19/16

CUSTOMER INFORMATION

Invoice Number: 13384

Contact Name: **Matt P.O. PO16-00827**Company Name: **Woodland Aviation**

Address: [REDACTED]

City: **Davis** State: **CA** Zip: **95616** Country:Phone: **800-442-1333** Fax: Cell No: Email:Drop Ship ☐

Company Name:

Contact Name:

Phone:

Address:

City:

State:

Zip:

UNIT INFORMATIONManufacturer: **Hartzell Engine Technologies**Description: **Turbocharger**Part Number: **646677**Alternate Part Number: **466304-9003**Serial Number: **IBL00293**Maintenance Requested: **Overhauled Exchange**

Special Instructions:

FINAL DISPOSITION OF UNIT

Overhauled and returned to service

DOCUMENTATION

FAA Form 8130-3 Overhaul

DATA USED TO PERFORM MAINTENANCE

400600-0000 Rev B/ATC/FAA Approved Data

EA09-26 ☒Fittings: Y ☒ N Brackets: Y ☒ Confirmed By: [REDACTED]

WORK ORDER INSPECTION BY: [REDACTED]

Completed Date: 07-19-16

Greg Flores**ADDITIONAL FORMS ATTACHED**1002-1 Receiving Inspection ☒1002-2 Preliminary Inspection ☒1002-9 Penetrant Inspection ☒1002-5 Turbo Final ☒1002-6 Control Final ☐1002-7 Parts Issue ☒1015 Hidden Damage ☐

FAA APPROVED REPAIR STATION NUMBER

O7TR2100

Full details of the maintenance performed on this unit are available upon request

Receiving Inspection

FITTINGS
 Inlet ☐ YES ☐ NO ☒
 Position
 Type
 Outlet ☐ Position
 Type
 Drain ☐ Position
 Type
 Cover Port ☐ Position
 Type
 Other ☐ Position
 Type

VAPC ARM YES ☐ NO ☒
 Position: UP DOWN 3 NUB: IN OUT 1 2 3 4

CHECK VALVES YES ☐ NO ☒
 IN ☐
 OUT ☐

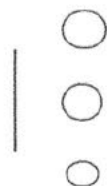
BRACKETS YES ☐ NO ☒
 Bolt Locations
 Position/Type
 Clamp under Bracket YES ☐ NO ☐
 Clamp Shares and

HEAT BLANKETS
 YES ☐ NO ☒

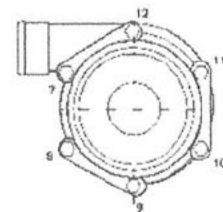
HIDDEN DAMAGE INSPECTION REQUIRED
 YES ☐ NO ☒

MOUNTING HARDWARE
 YES ☐ NO ☒

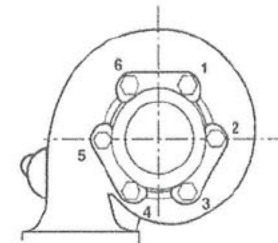
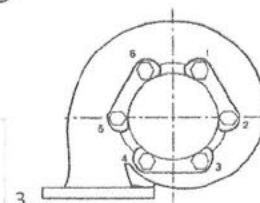
OTHER _____



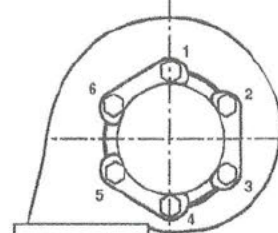
T4



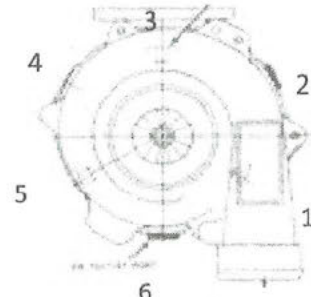
T4



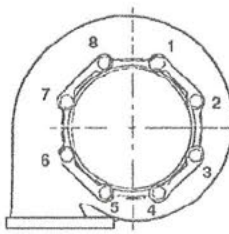
TH08



TE06



600



T18

SPECIAL INSTRUCTIONS FROM CUSTOMER/ EASA INSTRUCTIONS

INITIAL OBSERVATIONS/ SQUAWK

OIL LEAK	FOD	MP	BRGS	TBO	EX LEAK	TEST	FROZEN
CS TS BOTH	CS TS BOTH	LOW HIGH	A R	OTHER			

WG ACT. LOC.

PRV TEST RESULT

RECEIVED PART NUMBER

646677

RECEIVED SERIAL NUMBER

N/A

WORK ORDER NUMBER

35120

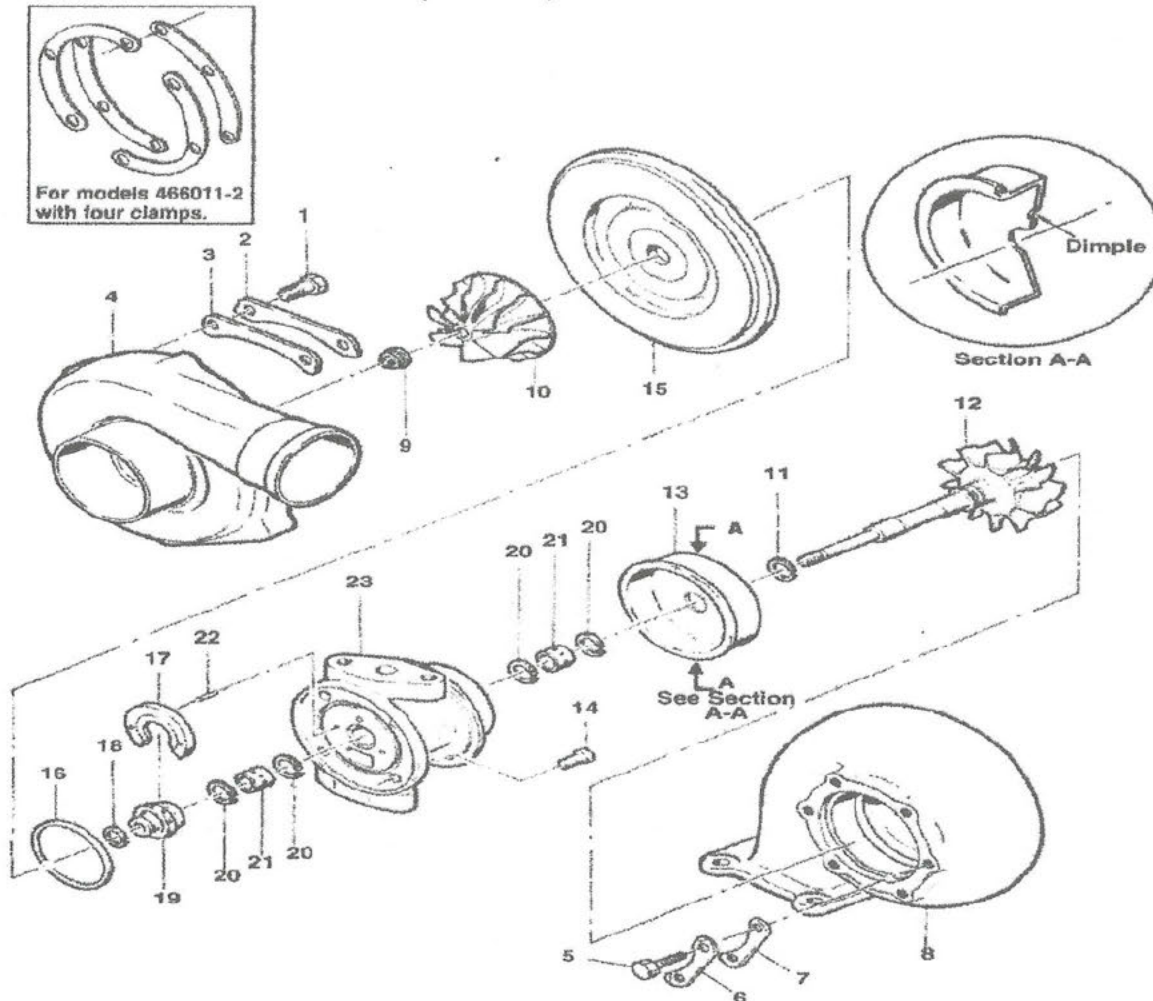
INSPECTED BY

INSPECTED DATE

7-19-16

CR# 4677

PRELIMINARY TASK CARD (#1002-2) FOR PART NUMBER 466304-3



	Qty.	Rejected	Repairable	Serviceable	Diagram No.	Reason for rejection or repair needed
407875	4			✓	3	
408274-23	1			✓	4	
406908-2	3			✓	7	
441990-38	1			✓	8	
409826-11	1			✓	10	
410188-25	1			✓	12	
410952	1			✓	13	
408045-34	1			✓	15	
408792	1			✓	19	
441320-12	1	✓			23	Heat Fused

* per EA09-26

ALL PART NUMBERS TO BE VERIFIED BY CURRENT OEM MANUAL / APPROVED DATA

WORK ORDER NUMBER

35720

INSPECTED BY

INSPECTED DATE

7-19-16FAA APPROVED REPAIR STATION
O7TR2100

Task Card No 1002-2

CUSTOMER COMMUNICATION TASK CARD

STANDARD OVERHAUL
REPLACEMENT PARTS
QUOTE AMOUNT
EA09-26 APPLICABLE
WEIGHT
BOX DIMENSION

949 ✓
489 ✓
YES NO

QUOTE NUMBER
QUOTE APPROVED BY
SHIP VIA

REJECTED PARTS CODES

TURBO	WG	CONT	PRV
BP	AS	AS	B
CH	C	BB	C
CW	CAP	BC	F
MR	CP	BR	S
SS	CYL	BS	V
TC	D	C	
TH	HS	CF	
TS	OS	CV	
TW	P	H	
VB	R	MB	
WS	S	P	
	T	S	
	WGV	SP	
	WGVH	VC	
		VCB	
		VS	

Other Method
BILL CUST ACCT#

ADDITIONAL PARTS

Part number	Qty	Cost ea	Ext
636465 gasket			
652456 gasket			
652457 gasket			
75845 gasket			
640877 gasket			

PAYMENT CREDIT CARD
OPEN ACCOUNT
COD CERTIFIED CHECK
EXP
ZIP

BILL TO/SHIP TO SAME
BILLING ADDRESS

CUSTOMER COMMENTS

SERVICE RECOMMENDATION TO INCLUDE ON QUOTE

FAILURE ANALYSIS

Minor oil leaking onto C/H
past Seal Plate
B/H shoulder Heat Exposed

WORK ORDER NUMBER

INSPECTED BY

INSPECTED DATE

PENETRANT INSPECTION REPORT

Method

Type I Method A (fluorescent) Cleaner: SKC-S Penetrant: ZL-60D Developer: SKD-S2

Exp Date Check: Aug 2020 Exp Date Check: June 2021 Exp Date Check: Oct 2020

Type II Method A (color contrast) Cleaner: SKC-S Penetrant: SKL-WP2 Developer: SKD-S2

Exp Date Check: 9 Exp Date Check: 0 Exp Date Check: 0

Penetrant Dwell Time: 10 -60 minutes

☐

Water Pres (40 psi max)

☐

Water temp (50 deg f min 100 deg f max)

☐

Dry Time: 30 minutes (max) Part temp (160 deg f max)

☐

Time between excess penetrant removal and developer application
did not exceed 30 minutes

☐

Developer Dwell Time 10 minutes (min)

☐

FINAL INSPECTION RESULTS

TURBINE HOUSING:

ACCEPT

☒

REJECT

☐

NA

☐

Greg Flores

TURBINE WHEEL:

ACCEPT

☐

REJECT

☐

NA

☒

Greg Flores

COMPRESSOR WHEEL:

ACCEPT

☒

REJECT

☐

NA

☐

Greg Flores

INSPECTION CRITERIA

Turbine housing discontinuities are in accordance with the allowable limits listed
in the latest revision to overhaul manual 400600-0000

Turbine wheel: NO CRACKS ALLOWED

Compressor wheel: NO CRACKS ALLOWED

WORK ORDER NUMBER

35120

INSPECTED BY

[Signature]

INSPECTED DATE

7-19-16

Task Card Number
1002-9

Repair Station No. 07TR2100

Inspected

400 series

Center Hsg. Brg. Bore (T4 Series)	IN TOLERANCE	300	
Center Housing Seal Bore (T4 Series)	IN TOLERANCE	100	
Backplate Seal Bore (T4 Series)	IN TOLERANCE	300	
Thrust Collar Piston Ring Groove Width (T4 Series)	IN TOLERANCE	700	
Thrust Collar Thrust Bearing Groove Width (T4 Series)	IN TOLERANCE	700	
Thrust Bearing Thickness (T4 Series)	IN TOLERANCE	400	
Thrust Spacer Piston Ring Groove (TEO6/THO8/T18)	IN TOLERANCE	700	
Turbine Wheel Balanced (ALL MODELS)	IN TOLERANCE	600	
Compressor Impeller Balanced (ALL MODELS)	IN TOLERANCE	600	
Compressor Wheel Bore (ALL MODELS)	IN TOLERANCE	400	
Turbine Wheel Hub (ALL MODELS)	IN TOLERANCE	400	
Turbine Wheel Journal (ALL MODELS)	IN TOLERANCE	400	
Turbine Wheel Piston Ring Groove Width (ALL MODELS)	IN TOLERANCE	700	
Turbine Wheel Piston Ring Groove OD (TEO6/THO8/T18)	IN TOLERANCE	700	
Center Hsg. Brg. Bore TEO6/THO8/T18	IN TOLERANCE	200	
Center Hsg Seal Bore TEO6/THO8/T18	IN TOLERANCE	200	
Backplate Seal Bore TEO6/THO8/T18	IN TOLERANCE	100	
Thrust Collar Thickness TEO6/THO8/T18	IN TOLERANCE	400	
Thrust Collar Bore TEO6/THO8/T18	IN TOLERANCE	400	
Thrust Spacer O.D TEO6/THO8/T18	IN TOLERANCE	400	
Wheel Shroud (ALL MODELS)	IN TOLERANCE	2700	

600 Series

Area Inspected	Results	MTE# Used	Inspected
Turbine Housing Pilot Diameter (4.474 max. 4.470 min)	IN TOLERANCE	700	
Turbine Wheel Groove Width (.065 max)	IN TOLERANCE	700	
Turbine Wheel Seal Shoulder Diameter (.783 min.)	IN TOLERANCE	700	
Turbine Wheel Journal Diameter (.5297 min)	IN TOLERANCE	400	
Turbine Wheel Blade Thickness (.037 min)	IN TOLERANCE	700	
Overall Diameter (2.960 min)	IN TOLERANCE	700	
Turbine Wheel Balanced	IN TOLERANCE	600	
Compressor Impellerd Balanced	IN TOLERANCE	600	
Heat Shield Flatness (.010 TIR)	IN TOLERANCE	2700	
Spring Ring Finger Height (.485 min .515 max)	IN TOLERANCE	700	
Bearing Housing Bearing Bore (.801 max)	IN TOLERANCE	200	
Bearing Housing Pilot Diameter (4.463 min)	IN TOLERANCE	700	
Compressor Impeller Bore Dia. (.3504 max)	IN TOLERANCE	400	
Compressor Impeller Outside Diameter (3.005 min)	IN TOLERANCE	700	
Bearing to Shaft Clearance (.004 - .006)	IN TOLERANCE	feeler gage	
Bearing to Housing Clearance (.001 - .003)	IN TOLERANCE	feeler gage	
Total Shaft End/Axial Play (.004 - .010)	IN TOLERANCE	2100	
Maximum Shaft Radial Play (.020 TIR)	IN TOLERANCE	2100	
Axial Impeller to Housing Clearance Near Tip (.015 - .020)	IN TOLERANCE	feeler gage	
Radial Impeller to Housing Clearance at Inducer (.010 min)	IN TOLERANCE	feeler gage	

WORK ORDER NUMBER

3512 v

INSPECTED BY

INSPECTED DATE

7-18-2016

Task Card 1002-5

Rev: 6

FAA APPROVED REPAIR STATION NUMBER

O7TR2100

PARTS ISSUE TASK CARD FOR PART NUMBER

466304-3

	Qty.	Replaced	Serviceable	New	Lot/Batch/P.O	EXPIRATION DATE
STANDARD OVERHAUL COMMON						
406909-0000	3			X	12885	
406908-0002	3		X			
403818-0009	1			X	1429	
410952-0000	1		X			
400834-0202	4			X	1442	
400424-0000	1			X	1439	UNLIMITED
407634-0000	1			X	1429	
408049-0002	1			X	1429	
400568-0000	4			X	1429	
406902-0000	2			X	1442	
400705-0000	2			X	1439	
441320-0012	1			X	6432	
STANDARD OVERHAUL SPECIFIC BY PART NUMBER						
400572-0301	6			X	1215	
407875-0000	3		X			
407876-0000	3			X	0218	
400573-0010	2			X	1407	
400768-0011	1			X	0212	
400573-0008	4			X	1432	
CHARGEABLE PARTS NOT INCLUDED IN STANDRD OVERHAUL						
408792-0000	1		X			
408045-0034	1		X			
408274-0023	1		X			
(Only parts in serviceable condition receive in house NDT inspections)						
441990-0038	1		X			
409826-0011	1		X			
410188-0025	1		X			
AD Compliance						
☒						
☐						
☐						
SB Compliance						
☒						
☐						
☐						

C/H Bolts
C/H Clamp Plates
CH Lockplates
T/H Bolts
Shaft Nut
TH Bolts

Thrust Collar
Backplate Assy
Comp. Hsg

DO NOT INSTALL OUTLET FITTINGS

REF: AD 84-25-05

Unless P/N 646954 & 646955 fittings
have been installed complying with AD

WORK ORDER NUMBER

35120

INSPECTED BY

INSPECTED DATE

7-18-16

Task Card Number
1002-7

FAA APPROVED REPAIR STATION NUMBER
O7TR2100

1. Approving Civil Aviation
Authority/Country

FAA/United States

2.

AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking Number:

018789

4. Organization Name and Address:

Approved Turbo Components, Inc.
1545 E. Acequia
Visalia, CA 93292 USA
USA

FAA Repair Station
No. O7TR2100
(800)523-4809

5. Work Order/Contract/Invoice
Number:

35120

6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
1	HET TURBOCHARGER	646677	1	IBL00293	OVERHAULED

12. Remarks:

OVERHAULED IN ACCORDANCE WITH: Hartzell Engine Techs. Ovhl. Manual P/N 400600-0000 Rev B Rev. Date 09/12/2014 & Garrett Manual TP20-0128, EA09-26
FULL DETAILS HELD ON WORK ORDER NUMBER 35120
ALTERNATE APPROVED PART NUMBER: 466304-9003
IMPORTANT NOTICE FOR TURBOCHARGERS
In accordance with Hartzell Engine Technologies Service Bulletin No. 23 the "TURBOCHARGER SYSTEM OPERATIONAL TESTS MUST BE PERFORMED PRIOR TO RETURN TO SERVICE".
A copy of Service Bulletin No.23 can be obtained from us or the web @ <http://hartzell.aero/wp-content/uploads/2014/10/SB-023.pdf>

13a. Certifies the items identified above were manufactured in conformity to:

- ☐ Approved design data and are in a condition for safe operation.
☐ Non-approved design data specified in Block 12.

14a.

☒ 14 CFR 43.9 Return 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 Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.

13b. Authorized Signature:

13c. Approval/Authorization No.:

14b. Authorized Signature:

14c. Approval/Certificate No.:

O7TR2100

13d. Name (typed or Printed):

13e. Date (dd/mm/yyyy):

14d. Name (Typed or Printed):

14e. Date (dd/mm/yyyy):

Greg Flores

19/Jul/2016

User/Installer Responsibilities

It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article. Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engine(s)/propeller(s)/article(s) from the airworthiness authority of the country 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.