

Airworthiness Group Chairman's Factual Report

Appendix D:

Maintenance Record Excerpts

NTSB Aircraft Accident Case No. NYC99MA178
Vineyard Haven, Massachusetts
July 16, 1999
Piper PA-32R-301; N9253N

C&W AERO SERVICES INC.
19 WRIGHT WAY SUITE # 3
ESSEX COUNTY AIRPORT
FAIRFIELD, NJ 07004
FAA Certified Repair Station HX1R208K
Phone 973-227-5750
Fax 973-992-6770

Statement by Neil Nederfield
 C&W Aero Services General Manager

7/19/99

1. Meet John Kennedy in July of 1998 when he had us install avionics in his Cessna 182.
2. Worked on that aircraft until he sold it in April or May of 1999.
3. We repurchased his latest aircraft N9253N on April 16 1999.
4. The aircraft was found to be in very good condition, with only a few minor discrepancies. John was given a list of the items.
5. The first work we did on the new plane was the annual inspection which we started on 6/15/99 (Tach Time 622.8, Work Order 11887) The items given to us by John were:
 - a. Check airspeed indicator because the performance numbers he was getting were about 10 knots less than the book said he should get. The airspeed indicator was checked during the Pitot/Static check and the error was only 2 knots low.
 - b. The air conditioner was inop. We found that the drive belt was missing. So we replaced both the air conditioner belt and the alternator drive belt.
 - c. The rear window latch was broken. We repaired it.
6. All other items on the annual work order were found while performing the inspection.
7. The annual inspection was completed on 6/18/99 and Returned to Service on 6/25/99. The difference in dates is because a mistake was found on the registration form on the exact model of the aircraft and a new registration had to be sent to John for his signature with the correct aircraft model on it.
8. On 6/29/99 we recertified the Pitot/Static system and transponder. And charged the air conditioning system.
9. Early in the week of July 12th John called with the following items, (they were repaired on 7/15/99)
 - a. The air conditioner was not cooling. We found that the expansion valve was sticking and a new part was ordered.
 - b. The mic bracket was broken. We found the screws holding the bracket were loose, so they were tightened.
 - c. The wing tip light was still inop. I told him the part was still on back order from the factory.
 - d. Check the Bose headset it didn't appear to be working correctly. We found that there was no battery in the battery pack so we installed batteries and the unit worked OK.
 - e. He wanted us to check the compass and the HSI because they didn't agree with the GPS. I discussed with him the difference between heading and track angle, one being a magnetic heading or direct on the aircraft was pointing and the other being your track angle across the ground but was unable to make the connection. So on 7/13/99 we took the aircraft to the airport's Compass Rose and checked if the compass and HSI. The compass was within 1 or 2 degrees on all cardinal headings (exactly what was on correction card) and the HSI dead on.
10. On the afternoon of 7/15/99 I called John's office and talked to Debbie and told her what had been done on the aircraft and that the air conditioner would be repaired the following week when the part came in.
11. Most of the time when I called John I would talk to either Rosemary or Debbie and they would have him call me back if he needed to talk to me.
12. John himself would usually call if he had any discrepancies on the plane.
13. I only meet him 2 or 3 times in person, both were short encounters. Once was with his old airplane, he had a question on how one of the radios worked. The other was during the annual inspection of N9253N he came out to the shop so we could demonstrate how the emergency gear extension worked and to answer any questions he might have about the airplane components in general.
14. John was not the type person that questioned any repairs that needed to be done to his aircraft.

Neil Nederfield

Date

7-20-99



C&W AERO SERVICES PREPURCHASE CHECK LIST

Reg No N9253N Work Order _____ Make Piper Model PA-32R-301 Year 94
 Serial No 3213100 Tach Hobbs 581.9 A/C Total Time 581.9
 Engine Make Lycoming Model TQ-540-K165 Total Time 581.9 TSMO _____
 Propeller Make Hartzell Model _____ Date Last Overhaul _____
 Ground Runup Check () OK Comments: Throttle moved 1/4 inch before anything happens

Compressions Left #1 78/80 #2 78/80 #3 76/80 #4 78/80 #5 78/80 #6 76/80 HOT
 Right #1 _____ #2 _____ #3 _____ #4 _____ #5 _____ #6 _____

Spark Plug Cond. POOS Oil Filter Screen Cond. good Engine Compartment Flex Hose Cond. OK Date 11/94
 Oil Leaks (yes) (no) _____ Locations front of engine
 Engine Mount Cond. good Shock Mount Cond. good Exhaust System Cond. good

CALENDAR ITEMS

Annual Due 7/99 Static Due 6-99 Transponder Due 6-99 Heater Due _____ Oxygen Bottle _____

F-1T Battery Due 8-99

AIRFRAME CONDITION

Tires, Nose OK Rt Main OK Lt Main OK Brakes OK Paint good Colors white, Red, Gold, blue

AVIONICS

Audio Panel KMA 84 HSI KC-557 Com 1 KX 165 TSO Nav 1 _____ Com 2 KX 165 TSO
 Nav 2 _____ DME KN 62A TSO ADF KPE 7 TSO Transponder KT 71 TSO GPS KLK 90B TSO
 Loran _____ Radar BFG Stormscope Autopilot KFC 150 Encoder _____
 Fuel Flow _____ Engine Monitor _____ Additional Equipment: AI Pipe/Turner/CD Player CDA -75

DOCUMENTS

Registration Airworthiness Compass Card POH Weight and Balance Radio License _____
 Airframe Log Review Engine Log Review Damage History (yes) _____ (no) Dates _____

DISCREPANCIES

Item No _____ Est Cost Of Repair _____

- ① Spark Plugs Worn
- ② Possible broken restorer in muffler
- ③ Hose leaking right gear actuator
- ④ Paint chipping off right stabilator tip
- ⑤ Paint chipping off left stabilator tip
- ⑥ 5-22-98 Eng sent to Matituck for repair, rusted cylinders + cone. Check with Matituck cylinders were bored and new rings installed, Con. Replaced and several tappets replaced.

LOCATION ESSEX COUNTY AIRPORT
 19 WRIGHT WAY FAIRFIELD, NJ 07004
 TEL: (973) 227-5750 FAX: (973) 882-6670

WORK ORDER NO.

RELAY TO
 P.O. BOX 568
 W. CALDWELL, NJ 07007

Name: *Random Ventures* Address: *7/13/99*

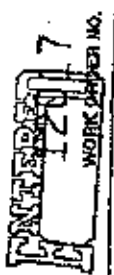
PLATE AND MODEL: *PA32R301* AIRCRAFT: *3213100* SERIAL NO.:
 ENGINE: P or PWD L or APT
 EST DUE DATE: TRANSPORTATION TRANSPORTATION TRANSPORTATION

REGISTRATION NO. CUSTOMER PHONE NO. SERVICES

ITEM	DESCRIPTION	MECH	DATE
1	<i>Air conditioning was again. Blows only hot air</i>		
2	<i>Light on wing tip and. Back ordered</i>		
3	<i>Swing compass</i>		
4	<i>Compass ADJUSTED</i>		
5	<i>Swing HSI complete</i>		
6	<i>Misc bracket brake off</i>		
	<i>Screws not all the way in</i>		
	<i>to loose head set sec what we need to make it work. installed batteries</i>		

TOTAL PARTS THIS PAGE: \$ TOTAL LABOR THIS PAGE: \$

NAME *JFK*



C&W AERO SERVICES INC.
 FAA REPAIR STATION: EXC1200X
 ESSEX COUNTY AIRPORT

LOCATION: 19 WRIGHT WAY
 FAIRFIELD, NJ 07004
 TEL: (973) 227-5750 FAX: (973) 482-6670

FAA ORDER NO. 12017
 WORK ORDER NO. 6-29-99

NAME: Randon Ventures
 ADDRESS: 1633 Broadway 41st Floor
 CITY: NY NY STATE: NY ZIP: 10019-6708
 MAKE AND MODEL: A320R301 SERIAL NO.: 3213100
 REGISTRATION NO.: A1253N AIRCRAFT TYPE: Eng
 CUSTOMER PHONE NO.: 10019-6708

QTY.	PART NUMBER	DESCRIPTION	PRICE	TOTAL
1	<u>Altitude Rest 320 1K389</u>			<u>105.-</u>
1	<u>16 R-12 Relay</u>		<u>4.95</u>	

ITEM	SERVICES	LABOR COST
1	<u>Pull authority for receipt. Reinstall same and certify status. Checked to 20K</u>	<u>70.-</u>
2	<u>Receipt by Transponder KT71 3N 2462</u>	
3	<u>All conductance 100% Breaks like Charge system. Good check ok</u>	
<u>Total Air & Labor 4hrs</u>		

TOTAL SERVICE	<u>228.-</u>
TOTAL PARTS	<u>49.95</u>
OUTSIDE REPAIRS	<u>105.-</u>
SUB-TOTAL	<u>382.95</u>
TAX	<u>13.97</u>
TOTAL DUE UPON RECEIPT	<u>4405.92</u>

The detailed description appearing in this parts listed invoice was those which may be entered in the maintenance log and are not necessarily complete and exhaustive, either in respect to the nature or extent of any work performed or the responsibility of others for a particular repair and/or other related work. The customer is advised that the responsibility for the accuracy of the information furnished with this bill of materials and work order is the responsibility of the customer. The customer is advised that the company will not be held responsible for any damage to the aircraft, loss of profits, or other consequential damages, in primary equipment for loss of use, loss of time, or other consequential damages.

RESPONSE OR REPAIRED PLANE: In case of delivery of your aircraft, the undersigned has read and approved all conditions in this "Invoices and Recommendations" document and has agreed to the terms of conditions of the repair and services were originally ordered as set forth herein above, hereby releasing the original repair services except as modified.

OWNER'S SIGNATURE _____ DATE _____
 ALL DISCOUNTS AND ADJUSTMENTS NULL AND VOID IF NOT PAID WITHIN 10 DAYS OF ISSUE

TOTAL PARTS THIS PAGE: \$
 PARTS FORWARDED FROM OTHER PAGE: \$
 TOTAL PARTS: \$

WORK ORDER NO. 12017 DATE 6-1-99
 FOR C&W AERO SERVICES
 EXC1200X ESSEX COUNTY AIRPORT, FAIRFIELD, NEW JERSEY
 (973) 227-5750

7-05
 87/12/99 18132
 8 12015751033
 D-I

C&W AEREO SERVICES INC.
 FAA REPAIR STATION REG.#0088
 ESSEX COUNTY AIRPORT
 LOCATION: 19 WRIGHT WAY
 FAIRFIELD, NJ 07004
 TEL: (973) 227-5750 FAX: (973) 882-6070

WORK ORDER NO. 11001
ISSUE DATE: 6-28-99

RELAY TO: P.O. BOX 568
 W. CALDWELL, NJ 07007

ADVT DATE	DESCRIPTION	PRICE
6/00	ANNUAL WEIGHT INSPECTION	
6/01	DUPLET EXCHANGE	
6/01	WEIGHT OILY TEST	
6/01	MAGNET TEST	
6/01	WATER TEST	
6/01	AC WEARING	

MAKE AND MODEL	AIRCRAFT	REGISTRATION NO.	TYPE/STATUS	ELI Due Date
PA32R-801	Engine	3313100	TT	6/30/88
N9253N	R of PWD	L-25552-48A	TT	

ITEM	SERVICES	LABOR COST
1	Approved inspection. Change oil & filter. Oil filter & check for rapidly worn to-d. Spark with 119/2. Prop shaft 15/50. Perform extraction. Test Normal. Emergency. Research AD's & covered items listed below.	157.36
2	Check Air pump reported 10 knots off Airspeed error 2 knots too.	65.-
3	Check Accumbation was. Belt missing. Replac both AIG and all belt. Put extra belts in baggage compartment.	98.-
4	Repair and check hatch.	77.18
5	Replace left main tire & tube.	5.25
6	Spark plugs worn beyond limits. Replaced.	22.94
7	Left roller cracked. Remove repair, install.	769.23
8	Stop drill check in left main gear door.	
9	Adjust closing of belt inside gear door.	
10	Left nacelle 14.18. 1 new. Belts on cabin.	

OWNER'S SIGNATURE	DATE
<i>[Signature]</i>	6/28/99

ACCEPTANCE OF REPAIR PLAN: It is the policy of this company that all work shall be performed by FAA and FAA licensed mechanics at the time and service most efficiency unless it is found herein below, hereby making the original repair work subject to modification.

TOTAL SERVICE	TOTAL PARTS	OUTSIDE REPAIRS	SUB-TOTAL	TAX	TOTAL DUE UPON RECEIPT
296.4	769.23	45.-	3778.23	226.69	4004.92

WORK ORDER NO. 11887 **DATE** 6/25/99

TOTAL PARTS THIS PAGE: \$
PARTS FORWARDED FROM OTHER PAGE: \$
TOTAL PARTS: \$

ALL DISCOUNTS AND ADJUSTMENTS NULL AND VOID IF NOT PAID WITHIN 10 DAYS OF ISSUE

C&W AERVO SERVICES INC.
 FAA Repair Station HRLR208K
 ESSEX COUNTY AIRPORT
 LOCATION: 19 WRIGHT WAY
 FAIRFIELD, NJ 07004
 TEL: (973) 227-5750 FAX: (973) 892-6670
 MAIL TO: P.O. BOX 568
 W. CALDWELL, NJ 07007

11887.2

WORK ORDER NO.

Name: **Random Ventures**

Address: _____

ITEM NO.	DESCRIPTION	PRICE
	AMBER W/AL. REFLECTOR	
	OR FUELER CHANGE	
	WHEEL BEAR TEST	
	FUEL SYSTEM TEST	
	TRANSMISSION TEST	
	A/C MEASURE	

Make and Model	Serial No.	ELI Due Date
AIRCRAFT		
Engine		
R or PWD		
LOGART		
Registration No.		
N9253N		
Customer Phone No.		

ITEM	SERVICES	MECH	DATE
	Extra light ordered, will be put in package with extra parts		
11	ELI Battery and tested replaced.		
12	Replace vacuum regulator & hose		
13	No gross log found with logs. Fillant new log		
14	Comply with AD 93-02-05 Fuel injector line & clamp inspection. OK		
15	Comply with AD 95-26-13 O.I. cooler hose inspection OK		
16	Comply with AD 76-07-12 Bendix ignitor switch function test OK		
17	Comply with AD 99-05-09 Induction Air Filter Replace with Basket Filter Assy		
18	History model number for aircraft. Refer to registration. Supply key change with correct data.		
	Total Air Labor 5.2 hrs		8/24/00

TOTAL PARTS THIS PAGE \$

TOTAL LABOR THIS PAGE \$

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P. 83

N 12815251833

18138

87/12/99

By certifying the shipping work on the invoice, the customer agrees to the terms of the invoice and to the terms of the repair order. The customer agrees to pay for the repair order and to the terms of the repair order. The customer agrees to pay for the repair order and to the terms of the repair order. The customer agrees to pay for the repair order and to the terms of the repair order.

FAA REPAIR STATION: HERTZBERG
 ESSEX COUNTY AIRPORT
 LOCATION: 10 WRIGHT WAY
 FAIRFIELD, NJ 07004
 TEL: (973) 227-5750 FAX: (973) 882-6670
 REPAIR TO: P.O. BOX 968
 W. CALDWELL, NJ 07007
 BILLING DATE: 5-6-99

NAME	ISSUE DATE	ELI DUE DATE	PRICE	LABOR COST
Random Ventures	4/16/99	8-99	19.00	
41st Floor, 1633 Broadway				
New York, NY 10019-6208				
AIRCRAFT: A-32R-301	Serial No. 3213100	587.9		
Registration No. N9253N	Reg. PWD L-26552-48A			
Customer Phone No.				

ITEM	SERVICES	LABOR COST
1	Pre-purchase aircraft. Fax over results on prepurchase check list. See attached copy.	250.-
	ATE Labor 5 hrs	

DESCRIPTION	PRICE
TOTAL SERVICE	250.-
TOTAL PARTS	19.-
OUTSIDE REPAIRS	
SUB-TOTAL	269.-
TAX	16.14
TOTAL DUE UPON RECEIPT	285.14

PART NUMBER	DESCRIPTION	PRICE	TOTAL
CH48110	Oil Filter	19.00	

WORK ORDER NO. 11777 DATE 1/1/11
 SIGNED: _____ FOR: CAMY AERO SERVICES
 ESSEX COUNTY AIRPORT, FAIRFIELD, NEW JERSEY
 REMAINS AND RECOMMENDATIONS FOR REPAIRS: _____
 OWNER'S SIGNATURE: _____ DATE: _____
 ALL DISCOUNTS AND ADJUSTMENTS NULL AND VOID IF NOT PAID WITHIN 10 DAYS OF ISSUE



MARTIN STATE AIRPORT
 POST OFFICE BOX 4942
 BALTIMORE, MARYLAND 21220
 TELEPHONE 410 / 574-4144
 FAX 410 / 687-2927

SUPPLEMENT WEIGHT & BALANCE DATA AND EQUIPMENT LIST REVISION

DESCRIPTION OF CHANGE	WEIGHT	ARM	MOMENT
COMPUTATIONS OF WEIGHT & BALANCE DATED:			
June 8, 1995	2419.5	83.6	202288
Installed the following equipment:			
1.) B.F. Goodrich WX 1000 Processor	6.5	178.2	1158.3
2.) B.F. Goodrich WX 1000 Display	2.3	63.5	146.0
3.) B.F. Goodrich WX 1000 Antenna	.5	183.2	91.6
4.) Comant AM/FM Antenna	.3	92.2	27.66
5.) P.S. Engineering Intercom	.7	63.2	44.24
6.) P.S. Engineering Crew Module	.7	63.0	44.1
7.) Alpine CD Player	3.5	62.5	218.75
	<u>2434</u>	<u>83.8</u>	<u>204019</u>

NORMAL CATEGORY: _____
 EMPTY WEIGHT 2434
 NEW C.G. 83.8
 NEW USEFUL LOAD 1181
 NEW GROSS WEIGHT 3615
 ACFT. MAKE Piper
 REGISTRATION NO. N9253N

UTILITY CATEGORY: _____
 EMPTY WEIGHT _____
 NEW C.G. _____
 NEWS USEFUL LOAD _____
 NEW GROSS WEIGHT _____
 MODEL: PA32R-301 SERIAL NO. 3213100
 DATE: 01/04/96 PREPARED BY: Joseph Rodman

SKYTECH, INC.
 MARTIN STATE AIRPORT
 BALTIMORE, MD 21220
 LFIR294K



MARTIN STATE AIRPORT
POST OFFICE BOX 4942
BALTIMORE, MARYLAND 21220
TELEPHONE 410 / 574-4144
FAX 410 / 687-2927

SUPPLEMENTAL WEIGHT & BALANCE DATA AND EQUIPMENT LIST REVISION

DESCRIPTION OF CHANGE	WEIGHT	ARM	MOMENT
Removed the following equipment:			
1.) Pilots clock MD88P	2434	83.8	204019
	-4	67.4	27
Installed the following equipment:			
1.) PCR systems clock/recorder 300i	+5	67.4	33.7
	<u>2434.1</u>	<u>83.81</u>	<u>204026</u>

NORMAL CATEGORY:

EMPTY WEIGHT 2434.1

NEW C.G. 83.81

NEW USEFUL LOAD 1180.9

NEW GROSS WEIGHT 3615

ACFT. MAKE Piper

REGISTRATION NO. N9253N

UTILITY CATEGORY:

EMPTY WEIGHT _____

NEW C.G. _____

NEWS USEFUL LOAD _____

NEW GROSS WEIGHT _____

MODEL: PA32R-301 SERIAL NO: 321311

DATE: 6 June 96 PREPARED BY: _____

Joseph Rodman

SKYTECH, INC.
MARTIN STATE AIRPORT
BALTIMORE, MD 21220
LFIR294K

TEXTRON Lycoming

DATE: May 14, 1995

TO: Mustang Aviation, Inc.

ATTN: Mr. Tim Smith

FAX NO: (973) 244 - 1884

FROM: **PRODUCT SUPPORT**
EDWARD D. COUDON, MANAGER PRODUCT SUPPORT
 [REDACTED] **FAX NO: (717)-327-7101**

SUBJECT: Mr. Loutit's IO-540-K1G5, Engine Serial Number L-25552-48A

I have reviewed your fax concerning the above engine. In reviewing the history I found as you stated that the engine has a period of relative inactivity from June of 1995 to January of 1996 while most probably located in Florida.

The Lycoming Warranty as you are aware does not cover corrosion issues. However since I do not believe the customer did anything to contribute to the problem, considering the flying activity after purchase of the aircraft. Lycoming would like to participate on a customer concession basis to provide the following parts under warranty.

- 1 ea. Camshaft
- 1 ea. Tappet Set (12)
- 6 ea. Exhaust Guides
- 6 ea. Ring Sets
- 1 ea. Engine Overhaul Gasket
- 1 ea. Set of Rod Bearings
- 1 ea. Set of Main Bearings

Please feel free to contact me if you have any questions.

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Mattituck Airbase, Inc.

Alway Drive
 P. O. Box 1432
 Mattituck, New York 11952
 (516) 298-8330
 Outside NY - (800) 824-6880

**POINCIANA LLC
 % MUSTANG AVIATION
 19 WRIGHT WAY, STE. 1
 FAIRFIELD NJ 07004**

INVOICE	
INV # : 102861	
Date : 07/14/98	

D-11						
Engine disassembled, inspected and repaired per S.B. 388B - Lycoming warranty to be applied for						
LABOR						
Parts						
Sub Total						
Freight						
TOTAL						
			3,100.00			3,100.00
			5,029.32			5,029.32
			200.00			200.00
			\$ 8,329.32			\$ 8,329.32

W.C. 10-377-116

MUSTANG AVIATION MAINTENANCE

715.819.1111
 DIRECTOR OF MAINTENANCE
 19 BRIDGE STREET
 WILLIAMSPORT, PA 17701

Telephone: 717-815-1111
 Fax: 717-241-1111

MR. ED COUDEN
 TEXTRON LYCOMING
 652 OLIVER STREET
 WILLIAMSPORT, PA 17701

MAY 8, 1998

RE: IO-540-K1G5
 S/N L-25552-48A

DEAR MR. COUDEN

THE ABOVE CAPTIONED ENGINE IS INSTALLED IN A 1995 PIPER PA32R101, N9253N OWNED BY POINCIANA L.L.C. (MR. DOUG LOUITT) AND HAS A TOTAL TIME SINCE NEW OF 387.1 HOURS.

WE ARE PRESENTLY PERFORMING A 100 HOUR/ANNUAL INSPECTION ON N9253N.

IN KEEPING WITH THE OWNERS WISIES TO KEEP THE AIRCRAFT IN COMPLIANCE WITH ALL APPLICABLE SERVICE BULLETINS, WE PERFORMED AN INSPECTION OF THE ENGINE IN ACCORDANCE WITH TEXTRON LYCOMING SERVICE BULLETIN 388B ON MAY 6, 1998 WITH DISTURBING RESULTS. CYLINDER #2 WAS FOUND TO BE WITH IN LIMITS, THE REMAINING FIVE CYLINDERS WHERE FOUND TO HAVE EXCESSIVE CLEARANCE IN THE EXHAUST VALVE GUIDES. ALL SIX CYLINDERS WHERE REMOVED FOR FURTHER INSPECTION ON MAY 7, 1998. THE INTERIOR SURFACES OF THE CYLINDER WALLS WHERE FOUND TO HAVE EVIDENCE OF CORROSION RANGING FROM DISCOLORATION AND MINOR SURFACE IMPERFECTIONS TO DEEP PITTING.

A VISUAL INSPECTION INSIDE THE ENGINE REVEALED PITTING ON THE FACES OF SEVERAL VALVE TAPPETS. A PHONE CALL TO TEXTRON LYCOMING WAS MADE DURING WHICH I SPOKE TO MR. BOB OHNMEISS IN YOUR TECH SERVICE DEPARTMENT ABOUT OUR FINDINGS. HIS FEELINGS WHERE THAT LEFT UNATTENDED TO, PITTED TAPPETS WILL WEAR OUT THE CAMSHAFT PREMATURELY AND SHOULD NOT BE LEFT IN SERVICE.

I AGREE WITH MR. OHNMEISS 100%.

AT THE SUGGESTION OF MR. OHNMEISS I THEN SPOKE TO MR. BRAD HORAK (I APOLOGIZE IF I AM SPELLING HIS NAME INCORRECTLY) IN YOUR WARRANTY DEPARTMENT.

D-12

DEALER/CUSTOMER WARRANTY APPLICATION

1. Date of Occurrence ✓ 1. 5-7-98

2. Customer's Name ✓ 2. POINCANA L.L.C.
Address 410 EAST PENNOYAN CR.
City, State, Zip Code WILMINGTON, N.C. 28403

3. Complete Engine Model (Use this line for single eng. a/c) ✓ 3. TD540 K165

4. Engine Serial Number ✓ 4. L-25552-48A

5. Dealer's Business Name (Shop Name) ✓ 5. METSTALE AV
City, State _____

6. Dealer's Posted Shop Rate ✓ 6. 48- / HR

7. Total Engine Hours (Hours Used) ✓ 7. 387.1

8. Description of Difficulty (Be Specific) COMPLIANT WITH SB 3823 R.
SOOTY 6 CYL. HAD EXCESSIVE CLEARANCE. AFTER INSPECTING
CYLINDERS FOUND 441. WALLS & TAPPETS PITCH.

9. In Service Date 9. 1-5-96

Check One: Engine (M)
Parts ()

Check One: New
 Remanufactured ()

Return Material Information

Orig. Part No.	Replacement Part No.	Nomenclature	Qty.	Serial No. Assy.

10. Aircraft Model ✓ 10. PIPEL PA32R230-1

11. Registration No. ("N" Number) ✓ 11. N9253N

12. Aircraft Serial No. 12. 32-13100

13. Labor Hours Used N/A

14. Purchaser's Invoice No. _____

15. Dealer's Signature _____

16. Date 5-15-98

IMPORTANT! DO NOT
DISTRIBUTE INFO

Fax Transmittal Memo
To: TIM SMITH
From: MICHAEL VONSIK

USED AS A DEALER TO

I N V O I C E
=====

Mattituck Aviation
Airway Drive
Mattituck, NY 11952
(516) 298-8330

Inv # : 00000

Date : 07/14/98

POINCIANA L.L.C.
* MUSTANG AVIATION
19 WRIGHT WAY, STE. 1
FAIRFIELD NJ 07004

P O Date : 07/14/98 Due Date : ASAP Ship Via :

Qty	Part #	Description	List	Extension
1	73185-1	Seal & Gasket Set	352.25	352.25
1	MS9144-01	Gasket Prop Governor	16.64	16.64
12	LW-12186	Nut	3.40	40.80
12	74309	Bearing	18.50	222.00
6	73772	NOZZLE	16.45	98.70
2	LW-13685	BEARING	129.50	259.00
6	LW-13683	BEARING	54.05	324.30
6	STD-1821	Hose	1.40	8.40
1	LW-19340	Camshaft	1,650.65	1,650.65
12	72877	Tappet Body	82.10	985.20
1	LW-12034	GASKET SET TOP OVR	111.50	111.50
12	74241	Ring	27.75	333.00
6	14H21950	Ring	26.05	156.30
12	60828	Plug	6.30	75.60
2	67542	Bearing	24.65	49.30
1	AN-565-31032-MS	SCREW	3.30	3.30
4	LW-13641	Cushion	5.45	21.80
1	STD-2209	*Bolt	11.95	11.95
8	71907	Plate	22.05	176.40
8	LW-14820	Ring	.80	6.40
2	CH48130	OIL FILTER	18.24	36.48
1	LW-13383	Baffle	89.35	89.35

Sub-Total : 5,029.32

Tax : 00

Frg : 00

Total : 5,029.32

PARTS LIST
LYC. IO-540-K1GS
S/N L-25552-48A
W.O. 14921

LOG OF AIRCRAFT ENGINE TEST

MATTITUCK AIRBASE INC.

Mattituck, N.Y., U.S.A.

UNITED STATES FEDERAL AVIATION ADMINISTRATION

APPROVED REPAIR STATION NO. 0X2R126L

DATE 13 Jul 98
 W/D NO. 14921
 CUST. MUSTANG
 MFG. LYCOMING

MM () SS ()
 MH () MISC (X)

Model 10-540-K1G5 Engine Total Time 387.1 Hrs
 Serial No. L25552-48A Manifold Valve HLS Visual
 S.L. Rated 300 H.P. @ 2700 R.P.M. None Nozzle Ident 252486 (15950) Con
 Fuel AVIAPS Octane 100 Carb. Model DNA Mag. Model HLS Visual
 Fuel Pump Model HLS Carb. Serial --- R.H. Mag Serial ---
 Fuel Pump Serial --- L.H. Mag Serial --- Ign Timing 20
 Starter Model TESTCELL Fuel Inj. Model HLS Visual Spark Plugs HLS

TIME	POWER		OIL SYSTEM		FUEL SYSTEM			ATMOSPHERE			CYLINDER HEAD TEMP						EGT					
	Min.	RPM	Press. PSI	Temp °F	Cons. Gals/hr	High Speed	Normal	Low	Inlet °F	Turbo Press	Case Press	Coil. Bar.	No. 1	No. 2	No. 3	No. 4		No. 5	No. 6	No. 7	No. 8	
1	10	1000	68	105		22	25.1	94				30.1	198	206	216	233	230	225				MS
2	10	1200	62	150		28	25.0	77				30.1	229	232	244	272	268	269				540
3	10	1500	62	168		36	24.6	100				30.1	239	245	254	288	280	275				1028
4	10	1800	68	176		54	23.9	103				30.1	248	261	275	296	290	288				1101
5	10	2000	70	184		75	22.4	106				30.1	250	263	265	279	275	288				1075
6	8	2200	73	187		100	22.8	108				30.1	255	262	278	230	246	270				1080
7	5	2700	80	184		158	21.0	110				30.1	259	266	271	305	279	296				1155
8	5	1000	50	178		10	24.8	100				30.1	253	260	260	292	240	291				

COMPRESSION TEST
 80 75 75 76 74 77 72 X

CYLINDER TYPE
 R.H. 1230 L.H. 1730
 Drop R.H. 70 L.H. 20
 Idle Mixture 70 Fuel Cut Off 70

TEST OPERATOR
 ACCEPTED [Signature]

MATTITUCK AIRBASE, INC. ENGINE OVERHAUL INSPECTION REPORT

WORK ORDER No. 14921 DATE 6/24/98

MODEL 10-540-K125

CUSTOMER WESTALG AVIATION

ENGINE S/N L-25232-48A

EXHAUSTING PARTS ONLY

CRANKCASE

Cracks OK R% L%
 Heated Studs Alt mount Between cyls
 Finished surfaces OK Repaired
 Studs OK Repl.
 Oil passages OK Repaired
 Idler shaft holes OK Reworked
 Cam bearings OK Repaired
 Main bearing saddles OK Repaired
 Main bearing dowels OK Repl. N/A
 Thrust bearings OK Repl. Repaired
 Main bearings OK Repl.
 Front main bearings OK Repl. Undersize
 Gearshaft & bearing holes OK Repaired N/A
 Starter drive bearings OK Repl. N/A
 Remarks Rep. w/ OVH Crankcase

STEEL BOX

Piston pins OK Repl. Honed
 Piston pin plugs OK Repl. ALL
 Intake rockers OK Rebrush Refaced
 Exhaust rockers OK Rebrush Refaced
 Rocker pins OK Repl.
 Crankgear OK Repl.
 Magneto idler gear OK Repl.
 Magneto idler shafts OK Repl.
 Piston oil jets OK Repl. ALL N/A
 Vac. pump gear shaft OK Repl. N/A
 Tech shaft assembly OK Repl.
 Fuel pump gears OK Repl. N/A
 Push rods OK Repl.
 Magneto drive gears OK Repl.
 Counterwts. OK Repl. N/A
 Counterwt. pins OK Repl. N/A
 Counterwt. plates OK Repl. ALL N/A
 Counterwt. snap rings OK Repl. ALL N/A
 Gov. drive gears OK Repl. Rebrush N/A
 Gov. idler shaft OK Repl. N/A
 Transfer collar OK Repl. N/A
 Starter shafts & brgs OK Repl. N/A
 Gen. drive gears OK Repl. N/A
 Starter drive gears OK Repl. N/A
 Cross shaft gears OK Repl. N/A
 Remarks

CRANKSHAFT

C/S Non C/S N/A
 OK Polished Worn regrind N/A
 Finished surfaces OK Repl. N/A
 Crankgear dowel OK Repl. N/A
 All threads OK Repaired
 Oil tubes OK N/A
 Crank cwt bushings OK Repl. N/A
 Crank gear surfaces OK Repaired N/A
 Crank gear bolt OK Repl. N/A
 Thrust surfaces OK Repaired
 Prop control plug OK Repl. N/A
 Rotation Right Left N/A
 Spline OK N/A
 Sludge tubes OK Repl. N/A
 Transfer collar clearance OK N/A
 Crankshaft serial number V15985

PISTONS No. 102-10207 OK Repl. All
 Skirt size 5.1165
 Ring lands OK Side clearance 1003
 Pin hole OK
 Finished surfaces OK
 Remarks

Main journal measurements Rod journal measurements
 Front to rear
 1 2.6753 4 2.620 N/A 2.2475 6 2.2498 N/A
 2 2.636 5 N/A 3.2496 7 N/A
 3 3.2507 6 N/A 4.2249 8 N/A
 Brg. journals All Std. N/A
 Brg. journals Undersize N/A
 Alignment OK
 Flange runout .001 N/A
 Pilot runout .001 N/A
 Remarks

CONNECTING RODS No. 102-19332 N/A
 Alignment OK Repair
 Pin bushings OK Rebrush
 Bolt holes Std Oversize
 Bearing bore Std Oversize
 Finished & thrust surfaces OK Repair
 Felpro OK N/A
 Remarks SIZE ALL RODS
REUSED ALL ROD BOLTS, ALL BOLTS MEASURED
2.249. RE MAGNAFLOWED ALL ROD BOLTS

PROP SHAFT Measurements N/A
 Front Rear

INTERMEDIATE SHAFT Measurements N/A
 Front Rear

Lobes	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Failed	
Brg. journals	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Oversize	
Cam drive gear	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	
Cam drive gear bolts	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Gov drive gear	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Keyway	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Worn	<input type="checkbox"/> N/A
Tappets	<input checked="" type="checkbox"/> OK	<input checked="" type="checkbox"/> Repl.	<i>JUST OILED</i>
Hyd. units No. <u>78290</u>	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A

Remarks REPL. CAM & TAPPETS WITH EXHAUST PARTS early PER W.O.

ACCESSORY HOUSING

Finished surfaces	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repair	<input type="checkbox"/> N/A
Studs & threads	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repair	<input type="checkbox"/> N/A
Oil passages	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repair	<input type="checkbox"/> N/A
Tach seal bore	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repair	<input type="checkbox"/> N/A
Vernatherm	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Vernatherm seat	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Filter adapter	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Oil screen housing	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Oil screen	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Seals	<input checked="" type="checkbox"/> OK	<input checked="" type="checkbox"/> Repl.	<input type="checkbox"/> N/A

Remarks

SUMP

Finished surfaces	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repair	
Studs & threads	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repair	
Plugs	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	
Screen & nut	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Oil pick-up	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repair	
Intake manifold	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repair	
Intake pipes	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	

Remarks

OIL PUMP

Driveshaft No. <u>74641</u>	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> Reversed
Drive gear No. <u>171092</u>	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> Reversed
Driven gear No. <u>181100</u>	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> Reversed
Housing	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	
Plates	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Scavenge gears	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A

Remarks S.B. 524 (1/11)

OIL RELIEF VALVES

Springs	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	
Seats	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	
Plungers	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	
Body	<input checked="" type="checkbox"/> OK	<input checked="" type="checkbox"/> Repl.	<i>Revised</i>

Remarks REPL. DAMAGED O.R.V. VALVE PER CUSTOMERS INSTRUCTIONS.

PARK PLUGS

Type <u>REM. 30F</u>	<input type="checkbox"/> Repl.	<input checked="" type="checkbox"/> Reused
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Remarks

S.B. 518C N/A BY SERIAL NO.

MISCELLANEOUS

Inter cyl. baffles	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Harness	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	
Mount legs	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Alt. bracket & arms	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Dialstick	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Dialstick tube	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Rocker drain tubes	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Rocker covers	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	
Pushrod tubes	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	
Fuel inj. lines	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Oil cooler	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Starter drive clutch	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> OVH	<input type="checkbox"/> N/A
Starter gear & support	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> gear <input type="checkbox"/> N/A
Breather	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	

Remarks

TURBOCHARGER

	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
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Remarks

GEAR DRIVEN SUPERCHARGER

Impeller assembly	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Drive gears	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Seals	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Thrust washers	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Impeller end play			<input type="checkbox"/> N/A
Impeller clearance			<input type="checkbox"/> N/A

Remarks

GEARED NOSE ASSEMBLY

Finished surfaces	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Oil passages	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Bearings	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Prop. shaft	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Prop. shaft in crank bushing clearance			<input type="checkbox"/> N/A
Ring gear	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Slinger	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Pinion cage	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Pinion gears	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Pinion shafts	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Star onary gear	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Governor gears	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Seal rings	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Magneto drive shafts	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A
Prop shaft nut	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Repl.	<input type="checkbox"/> N/A

Remarks

Magnaflexed by CB

Inspected by JP

- A.D. C/W AD 91-14-23 256. 4278 CRANKSHAFT GEAR
- C/W AD 93-02-05 258. 3428 FUEL INT LINES.
- S.B. AC/W AD 96-09-10 OIL PUMP IMPELLERS
- INSTALLED PER S.B. 524
- S.B. C/W AD 96-23-03 NOW AFFECTED FUEL PUMP
- INSTALLED.
- C/W AD 97-15-11 NOW AFFECTED PISTON

MATTITUCK AIRBASE, INC. - QX2R125L
ENGINE RECEIVING & SHIPPING LIST

N.O. NO. 14921 OWNER AVIATION DATE 6-1-98 RECEIVED BY [Signature]
 MAKE CYC MODEL 10-500-K165 S/N L75532-100 SHIPPED BY TR

	YES	NO		YES	NO
BAFFLE, VENTRAL		X	MAG. DRIVE ADAPTOR	X	
BAFFLES, FRONT		X	MANIFOLD PRES. FITTING	X	
BAFFLES, REAR		X	MOUNT LEGS	X	
BAFFLES, SIDE		X	NOSE SEAL RETAINING KIT	X	
BREATHER FITTING	X		OIL COOLER		X
BREATHER TUBE		X	OIL COOLER FITTING		X
CARBURETOR OR FUEL INL.	X		OIL FILLER NECK & CAP		
CARBURETOR INLET FITTING	X		OIL PRESSURE FITTING		
CARBURETOR HEAT BOX		X	OIL SCREEN		X
CYL. HEAD TEMP. FITTINGS		X	OIL SCREEN HOUSING		X
CYL. HEAD TEMP. LOCATION		X	OIL SUMP		X
DIPSTICK	X		OIL TEMP. FITTING		X
DIPSTICK TUBE	X		PRIMER JETS & LINES		X
EXHAUST STACKS		X	PROP. GOVERNOR		X
FILTER CONDENSERS		X	PROP. GOV. LINE		X
FLOW DIVIDER	X		PROP. HUBS & ADAPTER		X
FUEL INJ. NOZZLES & LINES	X		ROCKER DRAIN	X	
FUEL PUMP	X		ROCKER BOX DRAIN TUBES	X	
GENERATOR OR ALTERNATOR		X	SPARK PLUGS	X	
GENERATOR BELT		X	STARTER		X
GENERATOR BRACKET		X	STARTER CLUTCH		X
GENERATOR CONTROL ARMS		X	STARTER GEAR SUPPORT		X
GROUND STRAPS		X	SUMP PLUGS / Right Side	X	
HARNES	X		TACH GENERATOR		X
HEAT SHIELDS		X	THROTTLE ARMS	X	
HYDRAULIC PUMP		X	TURBO		X
HYDRAULIC PUMP DRIVE		X	TURBO CONTROLLERS		X
INTAKE PIPES	X		TURBO PLENUM		X
INTER-CYL. BAFFLES	X		TURBO WASTE GATE		X
LIFTING EYES	2		VACUUM PUMP		X
LOG BOOKS	1		VACUUM PUMP DRIVE	X	
MAGNETOS	X		VERNATHERM		X

THIS ENGINE WAS RECEIVED WITH THE ACCESSORIES INDICATED, PLEASE ADVISE IMMEDIATELY OF ANY DISCREPANCY!

REMARKS MAG 6350 Quick Drain has slight bowing
MAG 6351
INJ 2524073-12
DIV 2524033-2

WORK ORDER NO. 14921 DATE 6/24/98 MODEL 10-SVO-S165
 OWNER'S NAME WILSTADT AVIATION SERIAL NO. L-2012-48A
 MECHANIC _____ INSPECTOR _____

Crankshaft - size _____ Rods STD U.S. _____ JB
 Main STD U.S. _____ JB
 Crankshaft Sludge Tubes & Plugs. _____ JB
 Crankshaft Counterweights & Circlips _____ JB
 Connecting Rod Bearings STD U.S. _____ JB
 Main Bearings STD U.S. _____ JB
 Connecting Rod Bolts & Safety _____ JB
 Crankshaft Gear Safety _____ JB Stretch Ck. DE
 Check Transfer Collar _____ JB Torque Ck. 3.0
 Check Cam Bearing _____ JB

Check Crankshaft Oil Slinger in Case _____ JB
 Camshaft New Regrind _____ JB
 Cam Gear & Safety _____ JB Torque Ck. _____
 Crankcase Oil Galley Plugs _____ JB
 Tappets Installed _____ JB

Inspect All Thru Bolts, Torque, Check End Play & Freedom _____ JB
 Camshaft Fit in Case _____ JB
 Camshaft and Crankshaft Gear Timing _____ JB
 Crankcase Bolts and Safety _____ JB
 Safety of Accessory Gear Shafts _____ JB
 Installation of All Gear and Safety _____ JB

Assembly of Oil Pump _____ JB
 Installation of Accessory Case _____ JB
 Installation of Nose Case _____ JB
 Installation of Oil Pans _____ JB
 Installation of Oil Screens & Oil Pressure Relief _____ JB
 Engine Mounts Legs _____ JB

Hydraulic Units Installed _____ JB
 Cylinder Size STD 5.1265 O.S. _____ JB Rings _____
 Steel _____ Chrome _____ Nitrided _____ JB
 Piston Size STD 5.117 O.S. _____ JB
 Piston Oil Jets Installed _____ JB
 Piston Rings Installed STD O.S. _____ JB
 Piston Rings Compatible with Cylinder Barrel _____ JB
 Piston Clearance Cylinder .0095 _____ JB
 Cylinders Installed & Safetied TORQUED to 300 & 600 _____ JB
 Push Rods, Rockers and Pin Installed _____ JB Piston No. 6511209
 N E W { 742141 14421950 11.5 USED JP

Inter-Cylinder Baffles _____ JB
 Intake Manifold _____ JB
 Magnetos - Timed to Engine Specs. 20 _____ JB
 Spark Plugs Installed _____ JB
 Ignition Harness Installed _____ JB
 Starter _____ JB
 Generator/Alternator _____ NOV
 Carburetor/Fuel Injection _____ NOV
 Fuel Pump _____ SENT
 _____ JB

Turbo Rack Installed _____ JP
 Turbo Fuel Lines & Hoses _____ JP
 Fuel, Oil, Air, Hydraulic Lines, Wrench Ck. _____ JP

Install Crankshaft Plug _____ JP
 Install Cap Plugs _____ JP

FINAL INSPECTOR _____
 D-19

7/11/98
JP