


BOS3 Propeller ASTM Endurance Test	
AC00078-1	21st Nov 2014

Engineering Report: **AC00078-1**

Issue: 1 Date: 21st Nov 2014

Subject: BOS3 Propeller ASTM Endurance Test

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Issue	Details of Change
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1 General

1.1 Description

- The BOS3 propeller is a ground adjustable, 2, 3 or 4 bladed design.
- The propeller has a maximum diameter of 1829mm (72") measured from tip to tip.
- The blades are moulded from Epoxy resin & Carbon Fibre with a small amount of Kevlar.
- The blades use a solid, non-porous core made up from resin and filler material.
- The leading edge is formed out of high-density urethane for abrasion and impact protection.
- The moulding, core design, layup and leading edge design of the propeller blade have been developed by Bolly Props Australia ("Bolly").
- The hub is machined out of 6061 Aluminium, tempered to T6.
- The propeller is a ground adjustable type.

1.2 Applicability

- This report has been prepared to show that Bolly BOS3 propellers which meet the configuration specified in Report AC00038 meet the requirements of ASTM F2506-10 "Standard Specification For Design and Testing of Fixed-Pitch or Ground Adjustable Light Sport Aircraft Propellers".
- Specifically this report addresses §6.4 of the standard: "Endurance Testing".

6.4 Endurance Testing—The propeller shall undergo an endurance test on the intended engine or a vibrationally representative engine that is capable of providing the maximum rated power at the maximum rated propeller rotational speed and diameter. The propeller pitch may be adjusted as necessary to achieve maximum rated takeoff power at maximum rated takeoff RPM. Propeller pitch need not be readjusted for the remainder of the test unless necessary to avoid declared operational speed placards. During the test, it is acceptable to stop the test as needed, but the test should be restarted and continued from the point in the test schedule where it was stopped. The entire endurance test shall be completed by a single propeller and hardware. All propellers must be subjected to one of the following tests:

6.4.2 Propellers without a vibration stress survey must be subjected to one of the following tests:

6.4.2.1 The endurance test shall be conducted according to the schedule, and in the order, shown in Fig. 1. (Figure 1 of this report)

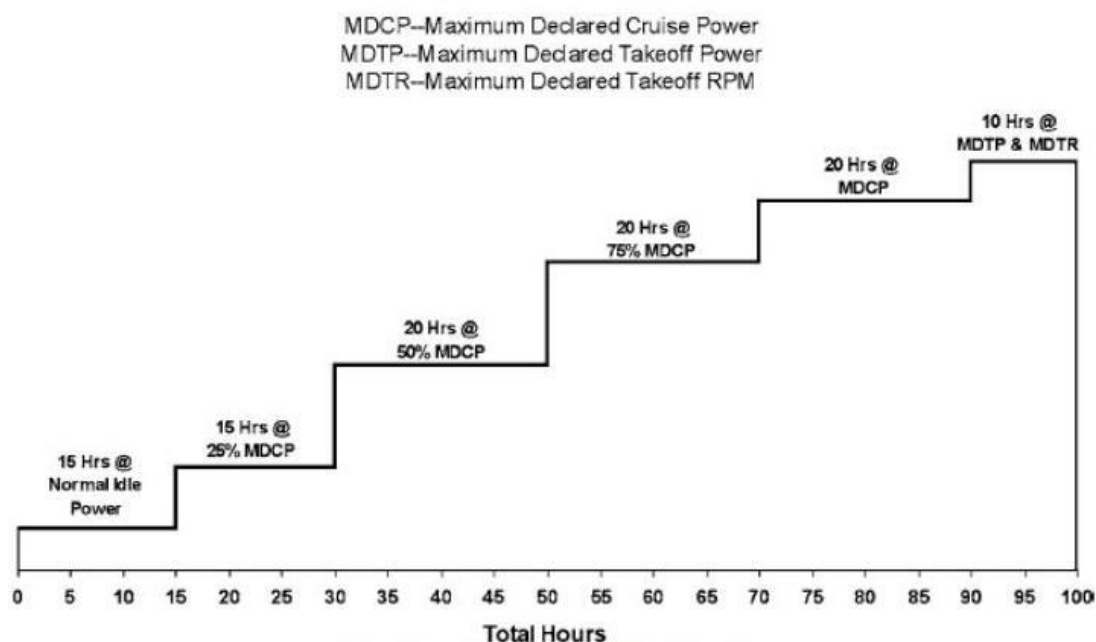


FIG. 1 Propeller Endurance Test Schedule

Figure 1 – Endurance Test Schedule

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2 Test Procedure

2.1 General

- Bolly prepared a special test rig for this process.
- The test rig consisted of an 8-cylinder automotive engine and gearbox affixed to a fixed stand, with controls and support systems affixed directly to the engine.
- RPM was monitored by a tachometer affixed directly to the propeller hub.
- A 3-bladed variant of the propeller was used for this testing.

2.2 Test Article

- Propeller Model: BOS372R/H
- Overall Propeller Assembly S/No. BOS372RA001
- Blade #1 serial number: 076E3
- Blade #2 serial number 075E5
- Blade #3 serial number 083E5
- Front hub S/No: ASTM35001
- Rear hub S/No: ASTM35001

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3 Results

3.1 General

Table 1 - Results

Test Case:	Hours Achieved:	Hours Required:
IDLE	15	15
25% MDCP	16	15
50% MDCP	21	20
75% MDCP	21.5	20
100% MDCP	20	20
MDTR & MDTP	11.25	10

3.2 Propeller Condition / Maintenance

- During testing the propeller assembly was monitored and normal scheduled maintenance carried out. No adverse or unusual features were recorded.
- After testing the propeller assembly was removed from the test rig and disassembled. Inspection showed normal/minimal use/wear markings. No cracks or other wear or damage indications were noted. Balance had been maintained.

3.3 Result Discussion

1. The standard required that the test be carried out using a “vibrationally representative engine”. It is understood that this requirement is included mainly to address direct-drive applications where propellers are subject to much more severe inertial and vibration loading than on a geared application. In this case the propeller is limited to use on Rotax series engines (refer to report AC00038-2 for specific model listing) – all of which are small displacement 4-cylinder 4-cycle or 2 cylinder 2 cycle engines running at high RPM through a reduction gearbox with a ratio of between 2.27:1 and 2.43:1. In the majority of applications this gearbox also contains a rubber coupling to reduce vibration transmission. It is therefore accepted that the power transmitted to the propeller in service will be relatively “smooth” and that the automotive powertrain used is an acceptable analogue.

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4 Appendix A: Test Cards

BOLLY

Prop Type: BOS372 R/H Hub RR Serial No: ASTM 35001 Blade 2 Serial No: 083E5

Prop Serial Number: BOS372RA001 Hub Frt Serial No: ASTM 33001 15 Hrs @

Blade 1 Serial No: 076E3 Blade 3 serial No: 075E5 IDLE PAGE 1 OF 2

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
5/2/13	9:00	9:30	0.5	500	<i>[Signature]</i>	<i>[Signature]</i>	
5/2/13	11:00	11:30	0.5	500	<i>[Signature]</i>	<i>[Signature]</i>	
5/2/13	1:20	2:20	1.0	500	<i>[Signature]</i>	<i>[Signature]</i>	
6/2/13	8:30	9:00	0.5	500	<i>[Signature]</i>		<i>[Signature]</i>
6/2/13	10:00	11:00	1.0	500	<i>[Signature]</i>		<i>[Signature]</i>
6.2.13	1 PM	2 PM	1.0	500	<i>[Signature]</i>		<i>[Signature]</i>
6.2.13	4 PM	5 PM	1.0	500	<i>[Signature]</i>		<i>[Signature]</i>
7.2.13	8:00	11:00	3.0	500	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
8.2.13	8:30	10:00	1.5	500	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

10

Figure 2 – Idle Test Records #1 (10 hours)

BOLLY

Prop Type: BOS372 R/H Hub RR Serial No: ASTM 35001 Blade 2 Serial No: 083E5

Prop Serial Number: BOS372RA001 Hub Frt Serial No: ASTM 33001 15 Hrs @

Blade 1 Serial No: 076E3 Blade 3 serial No: 075E5 IDLE PAGE 2 OF 2

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
9/2/13	10:00	12:00	2.0	500	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
11/2/13	9:00	12:00	3.0	500	<i>[Signature]</i>		<i>[Signature]</i>

15 Hrs ✓

Figure 3 – Idle Test Records #2 (5 hours)

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Prop Type: BOS372R/H

Hub RR Serial No: ASTM 35001

Blade 2 Serial No: 083ES

Prop Serial Number: BOS372RA001

Hub Frt Serial No: ASTM 33001

15 Hrs @

Blade 1 Serial No: 076ES

Blade 3 serial No: 075ES

50% MDCP = 600 RPM

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DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
11/2/13	1.00	2.00	1.0	700	[Signature]	Jones	[Signature]
12/2/13	9.00	10.00	1.0	700	[Signature]	Jones	[Signature]
12/2/13	12.00	12.30	0.5	700	[Signature]	Jones	[Signature]
13/2/13	9.00	10.00	1.0	700	[Signature]	Jones	
13/2/13	1.00	1.30	0.5	700	[Signature]	Jones	
15/2/13	7.00	9.00	2.0	700	[Signature]	Jones	[Signature]
15/2/13	11.00	1.00	2.0	700	[Signature]	Jones	[Signature]
16/2/13	10.00	12.00	2.0	700	[Signature]	Jones	[Signature]
17/2/13	9.00	9.30	0.5	700	[Signature]	Jones	[Signature]

10.5

Figure 4 – 25% MDCP Test Records #1 (10.5 hours)



Prop Type: BOS372R/H

Hub RR Serial No: ASTM 35001

Blade 2 Serial No: 083ES

Prop Serial Number: BOS372RA001

Hub Frt Serial No: ASTM 33001

15 Hrs @

Blade 1 Serial No: 076ES

Blade 3 serial No: 075ES

50% MDCP = 600 RPM

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DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
17/2/13	1.00	1.30	0.5	700	[Signature]	Jones	
20/2/13	9.00	10.00	1.0	700	[Signature]	Jones	
22/2/13	9.00	10.00	1.0	700	[Signature]	Jones	
3/3/13	7.00	9.00	2.0	700	[Signature]	Jones	[Signature]
3/3/13	11.00	12.00	1.0	700	[Signature]	Jones	[Signature]

16 Hrs

Figure 5 – 25% MDCP Test Records #2 (5.5 hours)

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Prop Type: *Bolly OPTIMA Series 3* Hub RR Serial No: *ASTM35001*

Blade 2 Serial No: *083ES*

Prop Serial Number: *BOS372RA001* Hub Frt Serial No: *ASTM33001*

Blade 1 Serial No: *076E3*

Blade 3 serial No: *075E3*

*20 Hrs @
50% MDCP = 1200 RPM*

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
<i>4/3/13</i>	<i>9.00</i>	<i>10.00</i>	<i>1.0</i>	<i>1300</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>5/3/13</i>	<i>10.00</i>	<i>12.00</i>	<i>2.0</i>	<i>1300</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>8/3/13</i>	<i>8.00</i>	<i>10.00</i>	<i>2.0</i>	<i>1300</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>8/3/13</i>	<i>1.00</i>	<i>3.00</i>	<i>2.0</i>	<i>1300</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>10/3/13</i>	<i>8.00</i>	<i>11.00</i>	<i>3.0</i>	<i>1300</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>11/3/13</i>	<i>10.00</i>	<i>12.00</i>	<i>2.0</i>	<i>1300</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>13/3/13</i>	<i>7.00</i>	<i>10.00</i>	<i>3.0</i>	<i>1300</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>14/3/13</i>	<i>7.00</i>	<i>10.00</i>	<i>3.0</i>	<i>1300</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>16/3/13</i>	<i>7.00</i>	<i>10.00</i>	<i>3.0</i>	<i>1300</i>	<i>[Signature]</i>	<i>[Signature]</i>	

21 Hrs.

Figure 6 – 50% MDCP Test Records #1 (21.0 hours)

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Prop Type: BOS372 R/H

Hub RR Serial No: ASTM 35001

Blade 2 Serial No: 083ES

Prop Serial Number: BOS372RA001

Hub Frt Serial No: ASTM 33001

20 Hrs @

Blade 1 Serial No: 076ES

Blade 3 serial No: 075ES

75% MDCP = 1,790

1 of 3

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
20/3/13	6.30	7.30	1.0	1800	[Signature]	[Signature]	
20/3/13	9.00	10.00	1.0	1800	[Signature]	[Signature]	
22/3/13	7.30	8.00	0.5	1800	[Signature]		[Signature]
22/3/13	10.00	10.30	0.5	1800	[Signature]		[Signature]
23/3/13	6.30	8.00	1.5	1800	[Signature]	[Signature]	
24/3/13	8.00	8.30	0.5	1800	[Signature]	[Signature]	[Signature]
24/3/13	10.00	11.00	1.0	1800	[Signature]	[Signature]	[Signature]
25/3/13	6.30	7.30	1.0	1800	[Signature]	[Signature]	
25/3/13	10.00	11.00	1.0	1800	[Signature]	[Signature]	

Figure 7 – 75% MDCP Test Records #1 (8 hours)



Prop Type: BOS372 R/H

Hub RR Serial No: ASTM 35001

Blade 2 Serial No: 083ES

Prop Serial Number: BOS372RA001

Hub Frt Serial No: ASTM 33001

20 Hrs @

Blade 1 Serial No: 076ES

Blade 3 serial No: 075ES

75% MDCP = 1,790

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DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
27/3/13	6.30	7.30	1.0	1800	[Signature]	[Signature]	
27/3/13	9.00	10.00	1.0	1800	[Signature]	[Signature]	
28/3/13	7.00	7.30	0.5	1800	[Signature]	[Signature]	[Signature]
28/3/13	9.00	9.30	0.5	1800	[Signature]	[Signature]	[Signature]
1/4/13	8.00	9.00	1.0	1800	[Signature]	[Signature]	
2/4/13	10.00	10.30	0.5	1800	[Signature]	[Signature]	
3/4/13	6.00	8.00	2.0	1800	[Signature]	[Signature]	
4/4/13	7.30	8.30	1.0	1800	[Signature]	[Signature]	[Signature]
5/4/13	7.00	8.30	1.5		[Signature]	[Signature]	

Figure 8 – 75% MDCP Test Records #2 (9 hours)

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Prop Type: BOS372 R/H

Hub RR Serial No: ASTM 3500/

Blade 2 Serial No: 053E5

Prop Serial Number: BOS372RA00/

Hub Frt Serial No: ASTM 3300/

20 Ans @

Blade 1 Serial No: 076E3

Blade 3 serial No: 075E5

75% MDCP, 1790

3013

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
4/5/13	7.00	7.30	0.5	1800	[Signature]	C Jones	[Signature]
4/5/13	9.00	9.30	0.5	1800	[Signature]	C Jones	[Signature]
6/5/13	6.00	7.00	1.0	1800	[Signature]	C Jones	
7/5/13	8.30	9.30	1.0	1800	[Signature]	C Jones	
8/5/13	9.30	10.30	0.5	1800	[Signature]	C Jones	
8/5/13	1 Pm	2 Pm	1.0	1800	[Signature]	C Jones	

21.5

Figure 9 – 75% MDCP Test Records #3 (4.5 hours)

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1054

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Figure 10 – 100% MDCP Test Records #1 (6.0 hours)



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Figure 11 – 100% MDCP Test Records #2 (5.0 hours)

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Prop Type: *BOS372 R/H*

Hub RR Serial No: *ASTM 35001*

Blade 2 Serial No: *083E5*

Prop Serial Number: *BOS372RA001*

Hub Frt Serial No: *ASTM 33001*

20 hrs @ MDCP
2264

Blade 1 Serial No: *076E3*

Blade 3 serial No: *075E5*

30 hrs

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
<i>26/5/13</i>	<i>7.00</i>	<i>7.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>27/5/13</i>	<i>7.00</i>	<i>7.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>27/5/13</i>	<i>9.00</i>	<i>9.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>28/5/13</i>	<i>8.30</i>	<i>9.00</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>28/5/13</i>	<i>10.00</i>	<i>10.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>3/6/13</i>	<i>6.30</i>	<i>7.00</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	<i>[Signature]</i>
<i>3/6/13</i>	<i>8.30</i>	<i>9.00</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	<i>[Signature]</i>
<i>4/6/13</i>	<i>8.30</i>	<i>9.00</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>4/6/13</i>	<i>10.30</i>	<i>11.00</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	

15.5

Figure 12 – 100% MDCP Test Records #3 (4.5 hours)



Prop Type: *BOS372 R/H*

Hub RR Serial No: *ASTM 35001*

Blade 2 Serial No: *083E5*

Prop Serial Number: *BOS372RA001*

Hub Frt Serial No: *ASTM 33001*

20 hrs @ MDCP
2264

Blade 1 Serial No: *076E3*

Blade 3 serial No: *075E5*

30 hrs

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
<i>5/6/13</i>	<i>7.00</i>	<i>7.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>6/6/13</i>	<i>8.30</i>	<i>9.00</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>7/6/13</i>	<i>9.00</i>	<i>9.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>8/6/13</i>	<i>6.00</i>	<i>6.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	<i>[Signature]</i>
<i>8/6/13</i>	<i>9.00</i>	<i>9.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	<i>[Signature]</i>
<i>10/6/13</i>	<i>10.00</i>	<i>10.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>11/6/13</i>	<i>7.00</i>	<i>7.30</i>	<i>0.5</i>	<i>2,300</i>	<i>[Signature]</i>	<i>Jones</i>	
<i>12/6/13</i>	<i>6.00</i>	<i>6.30</i>	<i>0.5</i>	<i>2300</i>	<i>[Signature]</i>	<i>Jones</i>	<i>[Signature]</i>
<i>12/6/13</i>	<i>7.00</i>	<i>7.30</i>	<i>0.5</i>	<i>2300</i>	<i>[Signature]</i>	<i>Jones</i>	<i>[Signature]</i>

20

Figure 13 – 100% MDCP Test Records #4 (4.5 hours)

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Prop Type: *BOS372R/H*

Hub RR Serial No: *ASTM35001*

Blade 2 Serial No: *083ES*

Prop Serial Number: *BOS372RA001*

Hub Frt Serial No: *ASTM33001*

10 Hrs @

Blade 1 Serial No: *076E3*

Blade 3 serial No: *075-E3*

MDTP + MDTR 2390

1054

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
<i>27/7/13</i>	<i>7.30</i>	<i>7.45</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>28/7/13</i>	<i>5.30</i>	<i>6.00</i>	<i>0.5</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>29/7/13</i>	<i>5.30</i>	<i>6.00</i>	<i>0.5</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>3/8/13</i>	<i>7.00</i>	<i>7.15</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>4/8/13</i>	<i>7.00</i>	<i>7.15</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>5/8/13</i>	<i>6.00</i>	<i>6.30</i>	<i>0.5</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>6/8/13</i>	<i>5.30</i>	<i>6.00</i>	<i>0.5</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>7/8/13</i>	<i>7.00</i>	<i>7.15</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>7/8/13</i>	<i>7.00</i>	<i>7.15</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

3 10.5

Figure 14 – 100% MDTP + MDTR Test Records #1 (3.25 hours)



Prop Type: *BOS372R/H*

Hub RR Serial No: *ASTM35001*

Blade 2 Serial No: *083ES*

Prop Serial Number: *BOS372RA001*

Hub Frt Serial No: *ASTM33001*

10 Hrs @

Blade 1 Serial No: *076E3*

Blade 3 serial No: *075 E3*

MDTP + MDTR 2390

2054

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
<i>17/7/13</i>	<i>7.00</i>	<i>7.15</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>18/7/13</i>	<i>8.00</i>	<i>8.15</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>20/7/13</i>	<i>6.30</i>	<i>6.45</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>22/7/13</i>	<i>8.30</i>	<i>8.45</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>23/7/13</i>	<i>7.00</i>	<i>7.15</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>23/7/13</i>	<i>8.00</i>	<i>8.15</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>25/7/13</i>	<i>9.00</i>	<i>9.15</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	
<i>26/7/13</i>	<i>7.30</i>	<i>7.45</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>
<i>26/7/13</i>	<i>9.00</i>	<i>9.45</i>	<i>0.25</i>	<i>2400</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

2.25

5.5

Figure 15 – 100% MDTP + MDTR Test Records #2 (2.5 hours)

BOS3 Propeller ASTM Endurance Test

AC00078-1

21st Nov 2014



Prop Type: BOS372R/H

Hub RR Serial No: ASTM 35001

Blade 2 Serial No: 083ES

Prop Serial Number: BOS372RA001

Hub Frt Serial No: ASTM 33001

10 Hrs @

Blade 1 Serial No: 076E3

Blade 3 serial No: 075E3

MDTP + MDTR 2390

30154

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
10/7/13	8:00	8:15	0.25	2400	[Signature]	E Jones	
11/7/13	7:00	7:30	0.5	2400	[Signature]	E Jones	
12/7/13	7:00	7:30	0.5	2400	[Signature]	E Jones	
13/7/13	7:30	7:45	0.25	2400	[Signature]	E Jones	
14/7/13	7:30	7:45	0.25	2400	[Signature]	E Jones	[Signature]
14/7/13	8:30	8:45	0.25	2400	[Signature]	E Jones	[Signature]
15/7/13	8:00	8:15	0.25	2400	[Signature]	E Jones	
16/7/13	7:00	7:15	0.25	2400	[Signature]	E Jones	[Signature]
16/7/13	9:00	9:15	0.25	2400	[Signature]	E Jones	[Signature]

2.5

5

Figure 16 – 100% MDTP + MDTR Test Records #3 (2.75 hours)



Prop Type: BOS372R/H

Hub RR Serial No: ASTM 35001

Blade 2 Serial No: 083ES

Prop Serial Number: BOS372RA001

Hub Frt Serial No: ASTM 33001

10 Hrs @

Blade 1 Serial No: 076E3

Blade 3 serial No: 075E3

MDTP + MDTR = 2390

4001

DATE	START TIME	FINISH TIME	TOTAL TIME	RPM	WITNESS	WITNESS	WITNESS
3/7/13	6:00	6:15	0.25	2400	[Signature]	E Jones	[Signature]
3/7/13	9:00	9:15	0.25	2400	[Signature]	E Jones	[Signature]
4/7/13	6:00	6:30	0.5	2400	[Signature]	E Jones	
5/7/13	7:00	7:15	0.25	2400	[Signature]	E Jones	[Signature]
5/7/13	9:00	9:15	0.25	2400	[Signature]	E Jones	[Signature]
6/7/13	7:00	7:15	0.25	2400	[Signature]	E Jones	
7/7/13	7:00	7:30	0.5	2400	[Signature]	E Jones	
8/7/13	8:00	8:15	0.25	2400	[Signature]	E Jones	
9/7/13	7:00	7:15	0.25		[Signature]	E Jones	[Signature]

2.5

1/4

Figure 17 – 100% MDTP + MDTR Test Records #4 (2.75 hours)