

ERA22FA279

AIRWORTHINESS

Group Chair's Factual Report - Attachment 7
MARPAT Aviation Work Order Nos. 22-02 and 21-06

Work Order Form Cover

Name, Initials, and Signature of Each Person Performing Work Under This Work Order

Work Order Number: 22-02

| Name | Initials | Signature |
|---------------|------------|------------|
| Jeff Holbrook | [Redacted] | [Redacted] |
| Mike Holbrook | [Redacted] | [Redacted] |
| Ryan Craddock | [Redacted] | [Redacted] |
| Paul Chambers | [Redacted] | [Redacted] |
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N98F ACTT: 9029.3 ENG. SMOH: 569

Work Order Form

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| 1 Work Order Number: 22-02 | | 2 Work Order Date: 3/21/22 | |
| <i>Customer Information</i> | | | |
| 3 Customer: MARPAT Aviation | | 4 Nationality of Customer: US | |
| 5 RO Number: N/A | | 6 Work Requested: Annual Inspection | |
| 7 Maintenance Data: Part 43 Appendix D, FAA Website for ADs, Owner supplied documents | | | |
| 8 Maintenance Data Verified? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| <i>Incoming Review and Inspection of Article Received</i> | | | |
| 9 Nomenclature/Name: UH-1B | | | |
| 10 Serial Number: 488 | | 11 Part Number: N/A | |
| 12 Model Number: UH-1B | | 13 Manufacturer: Bell/Wilco | |
| 14 ATA Number: N/A | | 15 Other ID: N98F | |
| 16 Review/Inspection Results: | | ACTT: 9029.3 Engine SMOH: 569.0 | |
| 17 Hidden Damage Reported: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | 18 Notes: | |
| 19 Hidden Damage Inspection Requirements: N/A | | | |
| <i>Initial Discrepancy/Work Instructions</i> | | | |
| 20 Trouble Reported: | | | |
| 21 Work Required: As Needed | | | |
| 22 Special Instructions: | | | |
| WO#: 22-02 | | | |

Work Order Form

Summary of Work Performed

²³ This aircraft has been inspected IAW Part 43 Appendix D, annual inspection. Cleaned entire aircraft. R&R Main Transmission oil. R&R Tail rotor gearbox oil. R&R 42 degree gearbox oil. Performed global vertical fin spar 100 and 300 hour inspections, no defects found. R&R left windscreen. R&R main transmission oil filter. Inspected ELT IAW 91.207d, no defects found. Batteries due March 2031.
Complied with all applicable ADs:
AD 83-03-03 complied with visual inspection IAW par.C, no defects found, next due 9129.3. Radiographic inspection due @ 9066.8 ACTT.
AD 99-25-12 vertical fin spar, complied with visual inspection IAW par. B&C, and performed global helicopter 100 hour inspection, no defects found. Next due 9129.3 ACTT.
AD 75-26-05 complied with main rotor blade wipe and tap test, no defects found. Next due 9129.3 ACTT.
AD 2021-15-14 complied with visual inspection, no defects found. Next due 9129.3 ACTT. Pre flight check due prior to first flight of the day, supplement attached to POH.
Landing light extend/retract, inop. Placarded.
Serviced main rotor dampers. Lubed aircraft IAW lube chart. Checked tail rotor rigging, no defects found.

R&R engine oil. R&R engine fuel filters. Cleaned intake air screens. Performed compressor wash and rinse. Ground ran engine, no leaks detected, all gauges within operating range.

**Copy of this work order has been furnished to owner.
THIS AIRCRAFT IS APPROVED FOR RETURN TO SERVICE FOR WORK PERFORMED.**

²⁴ Progressive Inspections: N/A

²⁵ Corrective Action(s): N/A

Parts Used

| ²⁶ Part Number | ²⁷ Description | ²⁸ Quantity | ²⁹ P.O.# |
|---------------------------|---------------------------|------------------------|---------------------|
| 047546-02 | filter | 3 | stock |
| | | | stock |
| | | | stock |
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| WO# 22-02 | | | |

| Work Order Form | | | |
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| <i>Final Inspection</i> | | | |
| ³⁰ Date work was completed: | WO#: 22-02 3/29/22 | | |
| ³¹ Inspector: | Mike Holbrook | ³² Date: | 3/29/22 |
| ³³ Authorized Signature: | [Redacted] | ³⁴ Date: | 3/29/22 |

WO#: 22-02

This aircraft, or part, is found airworthy and approved for return to service for maintenance performed.
See work order on file:

Work Order#: 22-02

MARPAT Aviation LLC
Logan County Airport (6L4)
Logan, WV. 25601
304-752-0094

CRS: ZWMR912K

Date: 3-29-22

Signature: [Redacted]

SMOIT

Appendix D to Part 43

3-21-22 Scope and Detail of items to be included in Annual and 100 hour inspections.

a) Each person performing an annual or 100 hour inspection shall, before that inspection, remove or open all necessary inspection plates, access doors, fairing, and cowling. He shall thoroughly clean the aircraft and engine.

b) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the fuselage and hull group:

(1) Fabric and skin- for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings.

(2) Systems and components- for improper installation, apparent defects, and unsatisfactory operation.

AS/A
(3) Envelope, gas bags, ballast tanks, and related parts- for poor condition.

c) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the cabin and cockpit group:

(1) Generally- for cleanliness and loose equipment that might foul the controls.

(2) Seats and safety belts- for poor condition, mounting, marking, and improper operation.

(3) Windows and windshields- for deterioration and breakage.

(4) Instruments- for poor condition, mounting, marking, and improper operation.

(5) Flight and engine controls- for improper installation and improper operation.

(6) Batteries- for improper installation and improper charge.

██████████ (7) All systems- for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.

██████████ d) Each person performing an annual or 100 hour inspection shall inspect (where applicable) components of the engine and nacelle group as follows:

██████████ (1) Engine section- for visual evidence of excessive oil, fuel, or hydraulic leaks, and sources of such leaks.

██████████ (2) Studs and nuts- for improper torquing and obvious defects.

N/A
██████████ (3) Internal engine- for cylinder compression and for metal particles or foreign matter on screens and sump drain plugs. If there is weak cylinder compression, for improper internal condition and improper internal tolerances.

██████████ (4) Engine mount- for cracks, looseness of mounting, and looseness of engine to mount.

N/A
██████████ (5) Flexible vibration dampeners- for poor condition, and deterioration.

██████████ (6) Engine controls- for defects, improper travel, and improper safetying.

██████████ (7) Lines, hoses, and clamps- for leaks, improper condition, and looseness.

██████████ (8) Exhaust stacks- for cracks, defects, and improper attachment.

██████████ (9) Accessories- for apparent defects in security of mounting.

██████████ (10) All systems- for improper installation, poor general condition, defects, and insecure attachment

██████████ e) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the landing gear group:

██████████ (1) All units- for poor condition and insecurity of attachment.

N/A
[Redacted]

(2) Shock absorbing devices- for improper oleo fluid level.

[Redacted]

(3) Linkages, trusses, and members- for undue or excessive wear fatigue, and distortion.

N/A
[Redacted]

(4) Retracting and locking mechanism- for improper operation.

N/A
[Redacted]

(5) Hydraulic lines- for leakage.

N/A
[Redacted]

(6) Electrical system- for chafing and improper operation of switches.

N/A
[Redacted]

(7) Wheels- for cracks, defects, and condition of bearings.

N/A
[Redacted]

(8) Tires- for wear and cuts.

N/A
[Redacted]

(9) Brakes- for improper adjustment.

N/A
[Redacted]

(10) Floats and skis- for insecure attachment and obvious or apparent defects.

[Redacted]

(g) Each person performing an annual or 100 hour inspection shall inspect (where applicable) all components and systems that make up the complete empennage assembly for poor general condition, fabric or skin deterioration, distortion, evidence of failure, insecure attachment, improper component installation, and improper component operation.

N/A
[Redacted]

h) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the propeller group:

N/A
[Redacted]

(1) Propeller assembly- for cracks, nicks, binds, and oil leakage.

N/A
[Redacted]

(2) Bolts- for improper torque and safety wire.

N/A
[Redacted]

(3) Anti-icing devices- for improper operation, and obvious defects.

N/A
[Redacted]

(4) Control mechanisms- for improper operation, insecure mounting, and restricted travel.

[REDACTED] i) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the radio group:

[REDACTED] (1) Radio and electronic equipment- for improper installation and insecure mounting.

[REDACTED] (2) Wiring and conduits- for improper routing, insecure mounting, and obvious defects.

[REDACTED] (3) Bonding and shielding- for improper installation and poor condition.

[REDACTED] (4) Antenna including trailing antenna- for poor condition, insecure mounting, and improper operation.

[REDACTED] j) Each person performing an annual or 100 hour inspection shall inspect (where applicable) each installed miscellaneous item that is not otherwise covered by this listing for improper installation and improper operation.

[REDACTED] k) Each person performing an inspection required by Part 91 on a rotorcraft shall inspect the following systems in accordance with the maintenance manual or Instructions for Continued Airworthiness of the manufacturer concerned:

[REDACTED] (1) The drive shafts or similar systems.

[REDACTED] (2) The main rotor transmission gear box for obvious defects.

[REDACTED] (3) The main rotor and center section (or equivalent area).

[REDACTED] (4) The auxiliary rotor on helicopters (tail rotor).

N/A
[REDACTED] l) Each person approving a reciprocating engine powered aircraft for return to service after an annual or 100 hour inspection shall, before that approval, run the aircraft engine, or engines, to determine satisfactory performance in accordance with the manufacturer's recommendations for:

N/A
[REDACTED] (1) Power output (static and idle rpm).

n/a

(2) Magnetos.

n/a

(3) Fuel and oil pressure.

n/a

(4) Cylinder and oil temperature.

m) Each person approving a turbine powered aircraft for return to service after an annual, 100 hour, or progressive inspection shall, before that approval, run the aircraft engine, or engines, to determine satisfactory performance in accordance with the manufacturer's recommendations.

n) 91.207 Emergency Locator Transmitter (ELT): The ELT required by paragraph "a" of this section, must be inspected within the last 12 months for:

(1) Proper installation.

(2) Battery: condition, expiration, corrosion, etc.

MARCH 2031

(3) Operation of controls and crash sensor.

(4) The presence of sufficient signal.

(5) Enter battery expiration and next due date into aircraft logbook.

o) Review aircraft records for 337's and or STCs. Comply with applicable Instructions For Continued Airworthiness (ICW).

Work Order Form Cover

Name, Initials, and Signature of Each Person Performing Work Under This Work Order

Work Order Number: 21-06 _____

| Name | Initials | Signature |
|-----------------|------------|------------|
| | | |
| Mike Holbrook | [REDACTED] | [REDACTED] |
| Jeff Holbrook | [REDACTED] | [REDACTED] |
| Justin Bradbury | | |
| Paul Chambers | | |
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N98F ACTT: 8968.5 Engine SMOH: 508.2
Engine TT: 5428

Work Order Form

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|---|--|--|--|
| 1 Work Order Number: 21-06 | | 2 Work Order Date: 4/28/21 | |
| <i>Customer Information</i> | | | |
| 3 Customer: 1 MARPAT Aviation | | 4 Nationality of Customer: US | |
| 5 RO Number: N/A | | 6 Work Requested: Annual Inspection | |
| 7 Maintenance Data: Part 43 Appendix D, FAA Website for ADs, Owner supplied documents | | | |
| 8 Maintenance Data Verified? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | |
| <i>Incoming Review and Inspection of Article Received</i> | | | |
| 9 Nomenclature/Name: UH-1B | | | |
| 10 Serial Number: 488 | | 11 Part Number: N/A | |
| 12 Model Number: UH-1B | | 13 Manufacturer: Bell/Wilco | |
| 14 ATA Number: N/A | | 15 Other ID: N98F | |
| 16 Review/Inspection Results: ACTT: 8968.5 Engine SMOH: 508.2 Engine TT: 5428 Tach: 3386.4 | | | |
| 17 Hidden Damage Reported: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | 18 Notes: | |
| 19 Hidden Damage Inspection Requirements: N/A | | | |
| <i>Initial Discrepancy/Work Instructions</i> | | | |
| 20 Trouble Reported: None | | | |
| 21 Work Required: As Needed | | | |
| 22 Special Instructions: | | | |
| WO#: 21-06 | | | |

Work Order Form

Summary of Work Performed

²³ This aircraft has been inspected IAW Part 43 Appendix D, annual inspection. Cleaned entire aircraft. R&R main rotor gearbox oil, tail rotor gearbox oil, and 42 gearbox oil. Cleaned and repacked all driveshaft bearings. Performed global vertical fin spar 100 and 300 hr. inspections, no defects found.

Complied with all applicable ADs:

AD 83-03-03 complied with visual inspection IAW par. C, next due 9066.8 ACTT, no defects found.

AD 99-25-12 vertical fin spar complied with visual inspection IAW par. B&C, no defects found, next due 9066.8 ACTT.

AD 75-26-05 complied with main rotor WD-40 blade wipe and tap test, next due 9066.8 ACTT.

Inspected ELT IAW 91.207d, no defects found, batteries due March 2022.

Installed TailBeaconX ADSB out. Ground test was done using transponder ramp tester IAW CFR14-91.227, no defects found.

R&R engine fuel filters. R&R engine oil. Cleaned intake air screens. Found torque pressure transducer leaking, replaced with new unit. Performed compressor wash and rinse. Ground run of engine, no defects found.

Copy of this work order has been furnished to owner.

THIS AIRCRAFT IS APPROVED FOR RETURN TO SERVICE FOR WORK PERFORMED.

²⁴ Progressive Inspections: N/A

²⁵ Corrective Action(s): N/A

Parts Used

| ²⁶ Part Number | ²⁷ Description | ²⁸ Quantity | ²⁹ P.O.# |
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| WO# 21-06 | | | |

| Work Order Form | | | |
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| <i>Final Inspection</i> | | | |
| ³⁰ Date work was completed: | WO#: 21-06 | 6/17/21 | |
| ³¹ Inspector: | Mike Holbrook | ³² Date: | 6/17/21 |
| ³³ Authorized Signature: | [Redacted] | ³⁴ Date: | 6/17/21 |

WO#: 21-06

This aircraft, or part, is found airworthy and approved for return to service for maintenance performed.
See work order on file:

Work Order#: 21-06

MARPAT Aviation LLC
Logan County Airport (6L4)
Logan, WV. 25601
304-752-0094

CRS: ZWMR912K

Date: 6-17-21

Signature: [Redacted]

Appendix D to Part 43

4)-28-25 Scope and Detail of items to be included in Annual and 100 hour inspections.

[REDACTED] a) Each person performing an annual or 100 hour inspection shall, before that inspection, remove or open all necessary inspection plates, access doors, fairing, and cowling. He shall thoroughly clean the aircraft and engine.

[REDACTED] b) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the fuselage and hull group:

[REDACTED] (1) Fabric and skin- for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings.

[REDACTED] (2) Systems and components- for improper installation, apparent defects, and unsatisfactory operation.

N/A [REDACTED] (3) Envelope, gas bags, ballast tanks, and related parts- for poor condition.

[REDACTED] c) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the cabin and cockpit group:

[REDACTED] (1) Generally- for cleanliness and loose equipment that might foul the controls.

[REDACTED] (2) Seats and safety belts- for poor condition, mounting, marking, and improper operation.

[REDACTED] (3) Windows and windshields- for deterioration and breakage.

[REDACTED] (4) Instruments- for poor condition, mounting, marking, and improper operation.

[REDACTED] (5) Flight and engine controls- for improper installation and improper operation.

[REDACTED] (6) Batteries- for improper installation and improper charge.

(7) All systems- for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.

d) Each person performing an annual or 100 hour inspection shall inspect (where applicable) components of the engine and nacelle group as follows:

(1) Engine section- for visual evidence of excessive oil, fuel, or hydraulic leaks, and sources of such leaks.

(2) Studs and nuts- for improper torquing and obvious defects.

N/A
(3) Internal engine- for cylinder compression and for metal particles or foreign matter on screens and sump drain plugs. If there is weak cylinder compression, for improper internal condition and improper internal tolerances.

(4) Engine mount- for cracks, looseness of mounting, and looseness of engine to mount.

N/A
(5) Flexible vibration dampeners- for poor condition, and deterioration.

(6) Engine controls- for defects, improper travel, and improper safetying.

(7) Lines, hoses, and clamps- for leaks, improper condition, and looseness.

(8) Exhaust stacks- for cracks, defects, and improper attachment.

(9) Accessories- for apparent defects in security of mounting.

(10) All systems- for improper installation, poor general condition, defects, and insecure attachment

e) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the landing gear group:

(1) All units- for poor condition and insecurity of attachment.

N/A
[REDACTED] (2) Shock absorbing devices- for improper oleo fluid level.

[REDACTED] (3) Linkages, trusses, and members- for undue or excessive wear fatigue, and distortion.

N/A [REDACTED] (4) Retracting and locking mechanism- for improper operation.

N/A
[REDACTED] (5) Hydraulic lines- for leakage.

N/A
[REDACTED] (6) Electrical system- for chafing and improper operation of switches.

N/A
[REDACTED] (7) Wheels- for cracks, defects, and condition of bearings.

N/A
[REDACTED] (8) Tires- for wear and cuts.

N/A
[REDACTED] (9) Brakes- for improper adjustment.

N/A
[REDACTED] (10) Floats and skis- for insecure attachment and obvious or apparent defects.

[REDACTED] (g) Each person performing an annual or 100 hour inspection shall inspect (where applicable) all components and systems that make up the complete empennage assembly for poor general condition, fabric or skin deterioration, distortion, evidence of failure, insecure attachment, improper component installation, and improper component operation.

N/A
[REDACTED] h) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the propeller group:

N/A
[REDACTED] (1) Propeller assembly- for cracks, nicks, binds, and oil leakage.

N/A
[REDACTED] (2) Bolts- for improper torque and safety wire.

N/A
[REDACTED] (3) Anti-icing devices- for improper operation, and obvious defects.

N/A
[REDACTED] (4) Control mechanisms- for improper operation, insecure mounting, and restricted travel.

4-29-21

[REDACTED] i) Each person performing an annual or 100 hour inspection shall inspect (where applicable) the following components of the radio group:

[REDACTED] (1) Radio and electronic equipment- for improper installation and insecure mounting.

[REDACTED] (2) Wiring and conduits- for improper routing, insecure mounting, and obvious defects.

[REDACTED] (3) Bonding and shielding- for improper installation and poor condition.

[REDACTED] (4) Antenna including trailing antenna- for poor condition, insecure mounting, and improper operation.

[REDACTED] j) Each person performing an annual or 100 hour inspection shall inspect (where applicable) each installed miscellaneous item that is not otherwise covered by this listing for improper installation and improper operation.

[REDACTED] k) Each person performing an inspection required by Part 91 on a rotorcraft shall inspect the following systems in accordance with the maintenance manual or Instructions for Continued Airworthiness of the manufacturer concerned:

[REDACTED] (1) The drive shafts or similar systems.

[REDACTED] (2) The main rotor transmission gear box for obvious defects.

[REDACTED] (3) The main rotor and center section (or equivalent area).

[REDACTED] (4) The auxiliary rotor on helicopters (tail rotor).

N/A [REDACTED] l) Each person approving a reciprocating engine powered aircraft for return to service after an annual or 100 hour inspection shall, before that approval, run the aircraft engine, or engines, to determine satisfactory performance in accordance with the manufacturer's recommendations for:

N/A [REDACTED] (1) Power output (static and idle rpm).

N/A

[REDACTED] (2) Magnetos.

N/A

[REDACTED] (3) Fuel and oil pressure.

N/A

[REDACTED] (4) Cylinder and oil temperature.

[REDACTED] m) Each person approving a turbine powered aircraft for return to service after an annual, 100 hour, or progressive inspection shall, before that approval, run the aircraft engine, or engines, to determine satisfactory performance in accordance with the manufacturer's recommendations.

[REDACTED] n) 91.207 Emergency Locator Transmitter (ELT): The ELT required by paragraph "a" of this section, must be inspected within the last 12 months for:

[REDACTED] (1) Proper installation.

[REDACTED] (2) Battery: condition, expiration, corrosion, etc.

MR, 2022

[REDACTED] (3) Operation of controls and crash sensor.

[REDACTED] (4) The presence of sufficient signal.

[REDACTED] (5) Enter battery expiration and next due date into aircraft logbook.

[REDACTED] o) Review aircraft records for 337's and or STCs. Comply with applicable Instructions For Continued Airworthiness (ICW).