

**Helicopter  
Technology  
Company**

# Maintenance Manual

## HTCM-001

**Part Number 500P2100 All Variants, 500P2300 All Variants,  
369D21120 All Variants, 369D21121 All Variants, and  
369D21123 All Variants  
MAIN ROTOR BLADES  
(Installation and Maintenance)**

**Initial Release Date: 04/02/96**

### Revision

**Change Letter: I**

**Change Date: 12/02/2015**

G	Released (Adds -105, -305, and -505 Configurations)	01/ 11/ 2008	GHB
H	Released (Revises Lives of -303, and -305 Configurations)	02/ 12/ 2009	GHB
I	Released (Clarifies and Adds Specific Inspection Requirements)	12/ 02/ 2015	GHB

### Note

All references below are to be found in the Hughes/ MD Helicopters, Inc. Customer Service Publications – Basic Handbook of Maintenance Instructions (CSP-HMI-2) and Basic Handbook of Maintenance Instructions (CSP-H-2).

12902 South Broadway • Los Angeles, California 90061

Sheet 1 of 59 – HTC Proprietary Data Not to be Distributed

## **Table of Contents**

<b>PURPOSE</b>	<b>9</b>
<b>REFERENCE DOCUMENTS</b>	<b>10</b>
<b>500P2100-BSC, -BSC-1, -101, -103, AND -105 AND 500P2300 ALL VARIANTS: FOR 369D, 369E, 369FF, 500N, AND 600N MODELS (CSP-HMI-2)</b>	<b>12</b>
<b>Chapter 4 Airworthiness Limitations</b>	<b>12</b>
Interchangeability and Life Limits	12
04-00-00 Airworthiness Limitations	18
1. General	18
Airworthiness Limitations	18
2. Component Mandatory Replacement	18
3. Component Mandatory Inspections	18
4. Retirement Index Number (RIN)	18
5. Torque Event (TE)	18
6. External Lift and Torque Event (TE) Requirements	18
Table 1. Airworthiness Limitations Component Mandatory Replacement Schedule	18
<b>Chapter 5 Continued Airworthiness</b>	<b>19</b>
05-00-00 Continued Airworthiness	19
Checks/Inspections	19
1. General Description of Inspections	19
05-10-00 Continued Airworthiness	19
Component Overhaul/Recommended Replacement	19
1. Component Overhaul or Recommended Replacement Schedule	19
05-20-00 Continued Airworthiness	19
100-Hour or Annual Inspection Checklist	19
1. 100-Hour or Annual Inspection	19
05-20-10 Continued Airworthiness	20
300-Hour Inspection Checklist	20
1. 300-Hour Inspection	20

**HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL**

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

05-20-15 Continued Airworthiness	20
Yearly Inspection Checklist	20
1. Yearly Inspection	20
05-20-20 Continued Airworthiness	20
Special Inspections	20
1. Special Inspections Hourly and Calendar	20
05-50-00 Continued Airworthiness	21
Conditional Inspections	21
1. Conditional Inspections	21
After a Hard Landing	21
After a Main Rotor Overspeed	21
After Airspeed 10% Beyond $V_{NE}$ Limit	21
After Main Rotor Blade/Drive System Sudden Stoppage	21
After Tail Boom Strike	21
<b>Chapter 18 Vibration and Noise Analysis</b>	<b>22</b>
18-10-00 Main Rotor Track and Balance	22
Maintenance Practices	22
1. Main Rotor Blade Tracking - General	22
Removal/Installation	22
1. Main Rotor System Tracking Equipment Installation	22
Adjustment/Test	22
1. Blade Tracking Procedure	22
8. Main Rotor System Balance Procedure	23
9. Main Rotor Autorotation RPM Check	23
<b>Chapter 62 Main Rotor</b>	<b>24</b>
62-00-00 Main Rotor	24
Fault Isolation	24
1. Main Rotor System - General Information	24
2. Main Rotor System Troubleshooting	24

**HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL**

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

62-10-00 Main Rotor Blade	24
Removal/Installation	24
1. Main Rotor Blade - General	24
2. Main Rotor Blade Replacement	24
3. Main Rotor Blade and Damper Attach Pin Installation and Adjustment	24
Inspection/Check	25
1. Main Rotor Blade Inspection	25
2. Main Rotor Blade and Damper Attach Pin Inspection and Corrosion Protection	25
3. Main Rotor Blade and Damper Attach Pin Disassembly and Special Inspection	25
4. Main Rotor Blade Forward Tip Cap Inspection and Corrosion Protection	25
5. Main Rotor Blade Upper and Lower Root Fitting Attach Lug and Lead-Lag Link Attach Lug	
Inspection (25 Hour)	25
6. Main Rotor Blade Upper and Lower Root Fitting Attach Lug and Lead-Lag Link Attach Lug	
Inspection (100 Hour)	26
7. Main Rotor Blade Leading Edge Abrasion Strip Check (For 500P2100-101, -103, and -105 and 500P2300 All Variants Only)	26
8. Main Rotor Blade Torque Event Inspection	26
Repairs	26
1. Main Rotor Blade Repair (Nicks, Scratches and Wear Spots)	26
2. Main Rotor Blade Repair (Dents, Depressions and Erosion)	26
3. Trim Tab Damage Repair	26
4. Forward Tip Cap Threaded Insert Repair	27
5. Loose Balance Weight Repair	27
6. Loose Trailing Edge Weight Repair	27
7. Loose or Missing Rivets or Aft Tip Cap Repair	27
8. Damper Attach Blade Fitting Bearing Replacement	27
9. Leading Edge Protective Tape Replacement	27
10. Leading Edge Abrasion Strip Sealing (For 500P2100-101, -103, and -105 and 500P2300 All Variants Only)	27
11. Tip Cap Sealing	28
12. Main Rotor Blade Protective Tape Installation	28

**500P2100-301, -303, AND -305: FOR 369A, 369H, 369HE, 369HM, AND 369HS  
MODELS (CSP-H-2 AND CSP-H-4) 29**

**SECTION 2 Servicing and General Maintenance 29**

- 10. Corrosion Control 29
  - F. Corrosion Arresting on Main Rotor Blades 29
- 11. Paint Finish 29
  - C. Main Rotor Blade Repainting 29
- 14. Torque Data 29
  - A. Torque Wrenches 29
- 15. Torque Wrench Load Application 29

**SECTION 7 Main Rotor and Control System 30**

- 2. Main Rotor and Control System Troubleshooting 30
- 4. Main Rotor Blades 30
- 5. Main Rotor Tracking 30
- 6. Main Rotor Tracking Equipment Installation 30
- 7. Main Rotor Blade Track Adjustment 30
  - A. Pitch Control Rod Adjustment 30
  - B. Blade Tab Adjustment 31
  - C. Main Rotor Blade Ground Tracking 31
  - D. Hover Track Verification 31
  - E. Forward Flight Tracking 31
  - F. Autorotation RPM Check 31
  - G. Autorotation RPM Adjustment 31
- 8. Main Rotor Balancing 32
  - A. Balancing Equipment and Balance Spare Kit 32
  - B. Procedural Instruction 32
  - C. Balance Equipment Installation 32
  - D. Balancing Procedure 32
- 9. Main Rotor Blade Replacement 32
  - A. Main Rotor Blade Removal 32
  - B. Main Rotor Blade Installation 33

**HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL**

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

10. Main Rotor Blade Inspection	33
11. Main Rotor Blade Repair	33
A. Nicks, Scratches, and Wear Spots	33
B. Dents, Depressions, and Erosion	33
C. Forward Tip Cap Insert	33
D. Loose Balance Weights	34
E. Loose or Missing Rivets or Aft Tip Cap	34
12. Leading Edge Protection	34
13. Bearing Replacement – Damper Attach, Blade Fitting	34
14. Repair of Trim Tab and Trailing Edge (369A1100 Series)	34
15. Main Rotor Blade and Damper Attach Pin Inspection and Corrosion Protection	35
16. Main Rotor Blade and Damper Attach Pin Disassembly and Special Inspection	35
17. Main Rotor Blade and Damper Attach Pin Adjustment	35
18. Main Rotor Blade Forward Tip Cap Inspection and Corrosion Prevention	35
19. Main Rotor Blade Upper and Lower Root Fitting Attach Lug Inspection (25 Hour)	35
20. Main Rotor Blade Upper and Lower Root Fitting Attach Lug Inspection (100 Hour)	36
7-21. Main Rotor Blade Leading Edge Abrasion Strip Check	36
23. Vibration Absorber	36
A. Vibration Absorber Removal	36
B. Vibration Absorber Installation	36
C. Vibration Absorber Inspection	37
D. Vibration Absorber Disassembly	37
E. Vibration Absorber Repair	37
F. Vibration Absorber Reassembly	37
G. Vibration Absorber Weighing	37

**HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL**

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

<b>Chapter 4 Airworthiness Limitations</b>	<b>38</b>
Interchangeability and Life Limits	38
<b>04-00-00 Airworthiness Limitations</b>	<b>40</b>
1. General	40
Airworthiness Limitations	40
2. Component Mandatory Replacement	40
3. Component Mandatory Inspections	40
4. Torque Events (TE)	40
5. External Lift and Torque Event (TE) Requirements	40
<b>05-00-00 Continued Airworthiness</b>	<b>41</b>
Checks/Inspections	41
1. General Description of Inspections	41
05-20-00 Continued Airworthiness	41
100-Hour or Annual Inspection Checklist	41
1. 100-Hour or Annual Inspection	41
2. Torque Event Attachment	41
05-20-10 Continued Airworthiness	41
300-Hour Inspection Checklist	41
1. 300-Hour Inspection	41
05-20-20 Continued Airworthiness	42
Special Inspections	42
1. Special Inspection Hourly and Calendar	42
05-50-00 Continued Airworthiness	42
Conditional Inspections	42
1. Conditional Inspections	42

<b>HTC SPECIFIC INSPECTIONS</b>	<b>43</b>
<b>For 500P2100 All Variants and 500P2300 All Variants: Honeycomb Rib Section Bond</b>	<b>43</b>
Checks/Inspections	43
<b>For 500P2100-BSC and -BSC-1 ONLY: Leading Edge Erosion</b>	<b>44</b>
Checks/Inspections	44
<b>For 500P2100-301, -303, and -305 ONLY: Pendulum mount washer Bond</b>	<b>45</b>
Checks/Inspections	45
<b>For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE)</b>	
<b>Inspection</b>	<b>46</b>
Checks/Inspections	46
<b>For 500P2100 All Variants and 500P2300 All Variants: Corrosion Inspection and Protection</b>	<b>49</b>
Required Materials	49
Storage Requirements	49
Inspection and Protection Instructions	50
<b>For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Main Rotor Blade Root Fitting Periodic Inspection Requirements</b>	<b>53</b>
Required Root Fitting Inspections	53
<b>For 500P2100-All Variants and 500P2300 All Variants: Main Rotor Blade Abrasion Tape</b>	<b>54</b>
Required Materials	54
Inspection Instructions	54
<b>For 500P2100 All Variants and 500P2300 All Variants: Main Rotor Blade Drain Hole Clearance</b>	<b>57</b>
Required Materials	57
Inspection Instructions	58
<b>HTC SPECIAL NOTES</b>	<b>59</b>
<b>For 500P2100 All Variants and 500P2300 Variants: Appearance of Tip End of Blade Assembly</b>	<b>59</b>
Rib Section and Balance Weight	59

## **PURPOSE**

The purpose of this document is to both provide instructions for Maintenance and Use of HTC produced Main Rotor Blades and to provide an index to the relevant Chapters or Sections of the Hughes/MD Helicopters, Inc. Basic Handbook of Maintenance Instructions. CSP-HMI-2 shall be referenced for 369D, 369E, 369FF, 500N, and 600N Models. CSP-H-2 shall be referenced for 369A, 369H, 369HE, 369HM, and 369HS Models. The referenced Chapters or Sections apply to the installation and maintenance of HTC Rotor Blade Part Numbers 500P2100-BSC, -BSC-1, -101, -103, -105, -301, -303, and -305 and 500P2300-501, -503, and -505 Main Rotor Blades.

It is extremely important that these relevant sections of the Hughes/MD Helicopters, Inc. Maintenance Instructions be followed precisely.

**Note:** All references below are to be found in the Hughes/MD Helicopters, Inc. Customer Service Publications – Basic Handbook of Maintenance Instructions (CSP-HMI-2) or Basic Handbook of Maintenance Instructions (CSP-H-2) as appropriate.

**Note:** HTC has used the best possible materials for the construction of its rotor blades.

<b><i>HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL</i></b>	
<b>HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades</b>	
<b>Change Letter: I</b>	<b>Change Date: 12/02/2015</b>

## Reference Documents

1. Mandatory Service Bulletin – 2100-2R2 – Inspection of Main Rotor Blade, Helicopter Technology Company, Los Angeles, California.
2. Mandatory Service Bulletin – 2100-3R3 – Main Rotor Blade Torque Event Inspection, Helicopter Technology Company, Los Angeles, California.
3. Mandatory Service Bulletin – 2100-4R2 – Main Rotor Blade Corrosion Inspection and Protection, Helicopter Technology Company, Los Angeles, California.
4. Service Notice – 2100-5 – Main Rotor Blade Root Fitting Periodic Inspection Requirements, Helicopter Technology Company, Los Angeles, California.
5. Service Notice – 2100-6 – Main Rotor Blade Abrasion Tape, Helicopter Technology Company, Los Angeles, California.
6. Service Notice – 2100-7R2 – Main Rotor Blade Drain Hole Clearance, Helicopter Technology Company, Los Angeles, California.
7. Customer Service Publications – Basic Handbook of Maintenance Instructions (CSP-HMI-2), Hughes/MD Helicopters, Inc., Mesa, Arizona [for 369D, 369E, 369FF, 500N, and 600N Models].
8. Customer Service Publications – Basic Handbook of Maintenance Instructions (CSP-H-2), Hughes/MD Helicopters, Inc., Mesa, Arizona [for 369A, 369H, 369HE, 369HM, and 369HS Models].

***HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL***

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**


**Change Date: 12/02/2015**

9. Customer Service Publications – Airworthiness Limitations, Overhaul and Replacement Schedules, Periodic Inspections, and Weight and Balance Procedures – Appendix B (CSP-H-4), Hughes/MD Helicopters, Inc., Mesa, Arizona [for 369A, 369H, 369HE, 369HM, and 369HS Models].

<b>HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL</b>	
<b>HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades</b>	
Change Letter: <b>I</b>	Change Date: <b>12/02/2015</b>

# 500P2100-BSC, -BSC-1, -101, -103, AND -105 AND 500P2300 ALL VARIANTS: FOR 369D, 369E, 369FF, 500N, AND 600N MODELS (CSP-HMI-2)

## Chapter 4 Airworthiness Limitations

Revision	Date	FAA Signature and Date
<b>G</b>	<b>01/11/2008</b>	<b>Signature on File</b>
<b>H</b>	<b>02/12/2009</b>	<b>Signature on File</b>
<b>I</b>	<b>05/13/2016</b>	 <b>5/13/16</b>

## Interchangeability and Life Limit

### 500P2100-BSC

The Helicopter Technology Company (HTC) Part Number **500P2100-BSC (STC # SR09172RC)** Main Rotor Blade replaces the Hughes/MD Helicopters, Inc. Main Rotor Blade used on ROKA Model 500 MD Military Helicopters. The HTC blade is **fully interchangeable in any combination**, is **effective on 369D and E (H3WE)**, and carries an **on condition life-limit not to exceed 3,530 hours**.

**Note:** See CSP-HMI-2, Section 04-00-00, Note 37 for Reference to Torque Events (TE's). Perform inspection in accordance with **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE) Inspection** section below.

**500P2100-BSC-1**

The Helicopter Technology Company (HTC) Part Number **500P2100-BSC-1 (STC # SR09172RC)** Main Rotor Blade replaces the Hughes/MD Helicopters, Inc. Main Rotor Blade used on ROKA Model 500 MD Military Helicopters. The HTC blade is **fully interchangeable in any combination, is effective on 369D and E (H3WE)**, and carries an **on condition life-limit not to exceed 3,530 hours**.

**Note:** See CSP-HMI-2, Section 04-00-00, Note 37 for Reference to Torque Events (TE's). Perform inspection in accordance with **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE) Inspection** section below.

**500P2100-101**

The Helicopter Technology Company (HTC) Part Number **500P2100-101 (STC # SR09074RC)** Main Rotor Blade replaces the Hughes/MD Helicopters, Inc. Part Number 369D21100-517 Main Rotor Blade. The HTC blade is **fully interchangeable in any combination, is effective on 369D and E (H3WE)**, and carries the **same life-limit of 3,530 hours**. This blade is also known as Part Number **369D21120-501**.

**Note:** See CSP-HMI-2, Section 04-00-00, Note 37 for Reference to Torque Events (TE's). Perform inspection in accordance with **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE) Inspection** section below.

**500P2100-103**

The Helicopter Technology Company (HTC) Part Number **500P2100-103 (STC # SR09074RC)** Main Rotor Blade replaces the Hughes/MD Helicopters, Inc. Part Number 369D21100-517 Main Rotor Blade. The HTC blade is **fully interchangeable in any combination**, is **effective on 369D and E (H3WE)**, and carries the **same life-limit of 3,530 hours**. This blade is also known as Part Number **369D21120-503**.

**Note:** See CSP-HMI-2, Section 04-00-00, Note 37 for Reference to Torque Events (TE's). Perform inspection in accordance with **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE) Inspection** section below.

**500P2100-105**

The Helicopter Technology Company (HTC) Part Number **500P2100-105 (STC # SR09074RC)** Main Rotor Blade replaces the Hughes/MD Helicopters, Inc. Part Number 369D21100-517 Main Rotor Blade. The HTC blade is **fully interchangeable in any combination**, is **effective on 369D and E (H3WE)**, and carries the **same life-limit of 3,530 hours**. This blade is also known as Part Number **369D21120-505**.

**Note:** See CSP-HMI-2, Section 04-00-00, Note 37 for Reference to Torque Events (TE's). Perform inspection in accordance with **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE) Inspection** section below.

**500P2300-501**

The Helicopter Technology Company (HTC) Part Number **500P2300-501 (STC # SR01050LA)** Main Rotor Blade replaces the MD Helicopters, Inc. Part Number 369D21102-523 Main Rotor Blade. The HTC blade is **fully interchangeable in any combination**, is **effective on 369FF, 500N, and 600N (H3WE)**, and carries the **life-limits: 3,430 hours on Models 369FF and 500N and either 3,200 hours or a Retirement Index Number of 1,000,000 (1,000,000 RIN's) on the Model 600N**. This blade is also known as Part Number **369D21121-501**.

**Note:** See CSP-HMI-2, Section 04-00-00, Notes 32 and 33 for Reference to Retirement Index Numbers (RIN's).

**Note:** See CSP-HMI-2, Section 04-00-00, Note 37 for Reference to Torque Events (TE's). Perform inspection in accordance with **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE) Inspection** section below.

**HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL**

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

**500P2300-503**

The Helicopter Technology Company (HTC) Part Number **500P2300-503 (STC # SR01050LA)** Main Rotor Blade replaces the MD Helicopters, Inc. Part Number 369D21102-523 Main Rotor Blade. The HTC blade is **fully interchangeable in any combination**, is **effective on 369FF, 500N, and 600N (H3WE)**, and carries the **life-limits: 3,430 hours on Models 369FF and 500N and either 3,200 hours or a Retirement Index Number of 1,000,000 (1,000,000 RIN's) on the Model 600N**. This blade is also known as Part Number **369D21121-503**.

**Note:** See CSP-HMI-2, Section 04-00-00, Notes 32 and 33 for Reference to Retirement Index Numbers (RIN's).

**Note:** See CSP-HMI-2, Section 04-00-00, Note 37 for Reference to Torque Events (TE's). Perform inspection in accordance with **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE) Inspection** section below.

**HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL**

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

**500P2300-505**

The Helicopter Technology Company (HTC) Part Number **500P2300-505 (STC # SR01050LA)** Main Rotor Blade replaces the MD Helicopters, Inc. Part Number 369D21102-523 Main Rotor Blade. The HTC blade is **fully interchangeable in any combination**, is **effective on 369FF, 500N, and 600N (H3WE)**, and carries the **life-limits: 3,430 hours on Models 369FF and 500N and either 3,200 hours or a Retirement Index Number of 1,000,000 (1,000,000 RIN's) on the Model 600N**. This blade is also known as Part Number **369D21121-505**.

**Note:** See CSP-HMI-2, Section 04-00-00, Notes 32 and 33 for Reference to Retirement Index Numbers (RIN's).

**Note:** See CSP-HMI-2, Section 04-00-00, Note 37 for Reference to Torque Events (TE's). Perform inspection in accordance with **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE) Inspection** section below.

04-00-00 Airworthiness Limitations

1. General

**Airworthiness Limitations**

2. Component Mandatory Replacement

Refer to Chapter 04-00-00.

3. Component Mandatory Inspections

Refer to Chapter 04-00-00.

4. Retirement Index Number (RIN)

Refer to Chapter 04-00-00.

5. Torque Event (TE)

Refer to Chapter 04-00-00.

6. External Lift and Torque Event (TE) Requirements

Refer to Chapter 04-00-00.

Table 1. Airworthiness Limitations Component Mandatory Replacement Schedule

Refer to Chapter 04-00-00 and Table 1.

## **Chapter 5 Continued Airworthiness**

### **05-00-00 CONTINUED AIRWORTHINESS**

#### **Checks/Inspections**

1. General Description of Inspections

Refer to Chapter 05-00-00.

### **05-10-00 CONTINUED AIRWORTHINESS**

#### **Component Overhaul/Recommended Replacement**

1. Component Overhaul or Recommended Replacement Schedule

Refer to Chapter 05-10-00.

### **05-20-00 CONTINUED AIRWORTHINESS**

#### **100-Hour or Annual Inspection Checklist**

1. 100-Hour or Annual Inspection

Refer to Chapter 05-20-00.

## **05-20-10 CONTINUED AIRWORTHINESS**

### **300-Hour Inspection Checklist**

1. 300-Hour Inspection

Refer to Chapter 05-20-10.

## **05-20-15 CONTINUED AIRWORTHINESS**

### **Yearly Inspection Checklist**

1. Yearly Inspection

**Note:** Not Applicable to Helicopter Technology Company Rotor Blades.

## **05-20-20 CONTINUED AIRWORTHINESS**

### **Special Inspections**

1. Special Inspections Hourly and Calendar

**Note:** Not Applicable to Helicopter Technology Company Rotor Blades.

## **05-50-00 CONTINUED AIRWORTHINESS**

### **Conditional Inspections**

1. Conditional Inspections

After a Hard Landing

Refer to Chapter 05-50-00.

After a Main Rotor Overspeed

Refer to Chapter 05-50-00.

After Airspeed 10% Beyond  $V_{NE}$  Limit

Refer to Chapter 05-50-00.

After Main Rotor Blade/Drive System Sudden Stoppage

Refer to Chapter 05-50-00.

After Tail Boom Strike

Refer to Chapter 05-50-00.

## **Chapter 18 Vibration and Noise Analysis**

### **18-10-00 MAIN ROTOR TRACK AND BALANCE**

#### **Maintenance Practices**

1. Main Rotor Blade Tracking - General

Refer to Chapter 18-10-00.

#### **Removal/Installation**

1. Main Rotor System Tracking Equipment Installation

Refer to Chapter 18-10-00. Please see Figure 401 - Blade Tracking Equipment - Main Rotor Components and Figure 402 - Main Rotor Balancing Equipment Installation.

#### **Adjustment/Test**

1. Blade Tracking Procedure

Refer to Chapter 18-10-00. Please see Figure 501 - Track Conditions and Adjustments - Typical and Figure 502 - Adjustments Main Rotor Blade Tab.

**Note:** When using trim tab bending tool for tab adjustments, do not engage the tab deeper than the radius (i.e. 0.38 inches deep) as this can damage the trailing edge bond of the blade.

***HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL***

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

8. Main Rotor System Balance Procedure

Refer to Chapter 18-10-00.

9. Main Rotor Autorotation RPM Check

Refer to Chapter 18-10-00.

## **Chapter 62 Main Rotor**

### **62-00-00 MAIN ROTOR**

#### **Fault Isolation**

1. Main Rotor System - General Information

Refer to Chapter 62-00-00.

2. Main Rotor System Troubleshooting

Refer to Chapter 62-00-00.

### **62-10-00 MAIN ROTOR BLADE**

#### **Removal/Installation**

1. Main Rotor Blade - General

Refer to Chapter 62-10-00.

2. Main Rotor Blade Replacement

Refer to Chapter 62-10-00.

3. Main Rotor Blade and Damper Attach Pin Installation and Adjustment

Refer to Chapter 62-10-00.

## **Inspection/Check**

1. Main Rotor Blade Inspection

Refer to Chapter 62-10-00.

2. Main Rotor Blade and Damper Attach Pin Inspection and Corrosion Protection

Refer to Chapter 62-10-00.

3. Main Rotor Blade and Damper Attach Pin Disassembly and Special Inspection

Refer to Chapter 62-10-00.

4. Main Rotor Blade Forward Tip Cap Inspection and Corrosion Protection

Refer to Chapter 62-10-00.

5. Main Rotor Blade Upper and Lower Root Fitting Attach Lug and Lead-Lag Link Attach Lug Inspection (25 Hour)

Refer to Chapter 62-10-00 except Slippage Mark Inspection is not applicable to Helicopter Technology Company Rotor Blades.

6. Main Rotor Blade Upper and Lower Root Fitting Attach Lug and Lead-Lag Link Attach Lug Inspection (100 Hour)

Refer to Chapter 62-10-00 except Slippage Mark Inspection is not applicable to Helicopter Technology Company Rotor Blades.

7. Main Rotor Blade Leading Edge Abrasion Strip Check (For 500P2100-101, 103, and -105 and 500P2300 All Variants Only)

Refer to Chapter 62-10-00.

8. Main Rotor Blade Torque Event Inspection

Refer to Chapter 62-10-00.

## **Repairs**

1. Main Rotor Blade Repair (Nicks, Scratches and Wear Spots)

Refer to Chapter 62-10-00.

2. Main Rotor Blade Repair (Dents, Depressions and Erosion)

Refer to Chapter 62-10-00.

3. Trim Tab Damage Repair

Refer to Chapter 62-10-00.

***HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL***

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

4. Forward Tip Cap Threaded Insert Repair

Refer to Chapter 62-10-00.

5. Loose Balance Weight Repair

Refer to Chapter 62-10-00.

6. Loose Trailing Edge Weight Repair

**Note:** Not Applicable to Helicopter Technology Company Rotor Blades.

7. Loose or Missing Rivets or Aft Tip Cap Repair

Refer to Chapter 62-10-00.

8. Damper Attach Blade Fitting Bearing Replacement

Refer to Chapter 62-10-00.

9. Leading Edge Protective Tape Replacement

**Note:** Not Applicable to Helicopter Technology Company Rotor Blades.

10. Leading Edge Abrasion Strip Sealing (For 500P2100-101, -103, and – 105 and 500P2300 All Variants Only)

Refer to Chapter 62-10-00.

***HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL***

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

11. Tip Cap Sealing

Refer to Chapter 62-10-00.

12. Main Rotor Blade Protective Tape Installation

Refer to Chapter 62-10-00.

# **500P2100-301 , -303, AND -305: FOR 369A, 369H, 369HE, 369HM, AND 369HS MODELS (CSP-H-2 AND CSP-H-4)**

## **SECTION 2 Servicing and General Maintenance**

### **10. CORROSION CONTROL**

F. Corrosion Arresting on Main Rotor Blades

Refer to Paragraph F.

### **11. PAINT FINISH**

C. Main Rotor Blade Repainting

Refer to Paragraph C.

### **14. TORQUE DATA**

A. Torque Wrenches

Refer to Paragraph A.

### **15. TORQUE WRENCH LOAD APPLICATION**

Refer to Chapter 15. and Table 2-9. Special Torques (Main Rotor and Controls System and Main Rotor and Control System).

## **SECTION 7 Main Rotor and Control System**

### **2. MAIN ROTOR AND CONTROL SYSTEM TROUBLESHOOTING**

Refer to Chapter 2. and Table 7-1. Troubleshooting Main Rotor Vibrations.

### **4. MAIN ROTOR BLADES**

Refer to Chapter 4. and Figure 7-1. Main Rotor Control System.

### **5. MAIN ROTOR TRACKING**

Refer to Chapter 5. Please see Figure 7-4. Installation of Main Rotor Blade Tracking Strobe, Figure 7-5. Main Rotor Blade Tab Adjustment, Figure 7-6. Typical Tracking Conditions and Adjustments, and Table 7-4. Summary Procedure for Blade Tracking.

### **6. MAIN ROTOR TRACKING EQUIPMENT INSTALLATION**

Refer to Chapter 6. Please see Figure 7-4. Installation of Main Rotor Blade Tracking Strobe System.

### **7. MAIN ROTOR BLADE TRACK ADJUSTMENT**

Refer to Chapter 7. Please see Figure 7-5. Main Rotor Blade Tab Adjustment, Figure 7-6. Typical Tracking Conditions and Adjustments, and Table 7-5 Autorotation RPM Chart.

#### A. Pitch Control Rod Adjustment

Refer to Paragraph A.

B. Blade Tab Adjustment

Refer to Paragraph B.

C. Main Rotor Blade Ground Tracking

Refer to Paragraph C.

D. Hover Track Verification

Refer to Paragraph D.

E. Forward Flight Tracking

Refer to Paragraph E.

F. Autorotation RPM Check

Refer to Paragraph F.

G. Autorotation RPM Adjustment

Refer to Paragraph G.

## **8. MAIN ROTOR BALANCING**

Refer to Chapter 8. Please see Figure 7-7. Main Rotor Hub - Cross Section, Table 2-2. Ground Support Equipment and Special Tools. and Table 7-6. Main Rotor Balancing Hardware.

### A. Balancing Equipment and Balance Spare Kit

Refer to Paragraph A.

### B. Procedural Instruction

Refer to Paragraph B.

### C. Balance Equipment Installation

Refer to Paragraph C.

### D. Balancing Procedure

Refer to Paragraph D.

## **9. MAIN ROTOR BLADE REPLACEMENT**

Refer to Chapter 9. Please see Figure 7-3. Main Rotor Blade Assembly.

### A. Main Rotor Blade Removal

Refer to Paragraph A.

B. Main Rotor Blade Installation

Refer to Paragraph B.

## **10. MAIN ROTOR BLADE INSPECTION**

Refer to Chapter 10. Please see Figure 7-8. Main Rotor Blade Damage and Repair Limits – Nicks, Scratches, Gouges, and Cracks, Figure 7-9. Main Rotor Blade Damage and Repair Limits for Dents and Depressions, and Table 2-4. Maintenance Materials.

## **11. MAIN ROTOR BLADE REPAIR**

Refer to Chapter 11. Please see Figure 7-8. Main Rotor Blade Damage and Repair Limits – Nicks, Scratches, Gouges, and Cracks, Figure 7-9. Main Rotor Blade Damage and Repair Limits for Dents and Depressions, and Table 2-4. Maintenance Materials.

A. Nicks, Scratches, and Wear Spots

Refer to Paragraph A.

B. Dents, Depressions, and Erosion

Refer to Paragraph B.

C. Forward Tip Cap Insert

Refer to Paragraph C.

<b>HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL</b>	
<b>HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades</b>	
<b>Change Letter: I</b>	<b>Change Date: 12/02/2015</b>

D. Loose Balance Weights

Refer to Paragraph D.

E. Loose or Missing Rivets or Aft Tip Cap

Refer to Paragraph E.

## **12. LEADING EDGE PROTECTION**

Refer to Chapter 12. Please see Table 2-4. Maintenance Materials.

## **13. BEARING REPLACEMENT – DAMPER ATTACH, BLADE FITTING**

Refer to Chapter 13. Please see Figure 7-10. Bearing Replacement – Main Rotor Blade Attach Fitting Repair, Table 2-2. Ground Support Equipment and Special Tools, and Table 2-4. Maintenance Materials.

## **14. REPAIR OF TRIM TAB AND TRAILING EDGE (369A1100 SERIES)**

**Note:** This Chapter is also applicable to Helicopter Technology Company Rotor Blades.

Refer to Chapter 14. Please see Figure 7-9. Main Rotor Blade Damage and Repair Limits for Dents and Depressions and Figure 7-11. Repair and Removal of Trim Tab, Main Rotor Blade.

12902 South Broadway • Los Angeles, California 90061
Sheet 34 of 59 – HTC Proprietary Data Not to be Distributed

## **15. MAIN ROTOR BLADE AND DAMPER ATTACH PIN INSPECTION AND CORROSION PROTECTION**

Refer to Chapter 15. Please see Figure 7-3. Main Rotor Blade Assembly, Figure 7-12. Main Rotor Blade and Damper Attach Pin, and Table 2-4. Maintenance Materials.

## **16. MAIN ROTOR BLADE AND DAMPER ATTACH PIN DISASSEMBLY AND SPECIAL INSPECTION**

Refer to Chapter 16. Please see Figure 7-12. Main Rotor Blade and Damper Attach Pin and Table 2-4. Maintenance Materials.

## **17. MAIN ROTOR BLADE AND DAMPER ATTACH PIN ADJUSTMENT**

Refer to Chapter 17. Please see Figure 7-3. Main Rotor Blade Assembly.

## **18. MAIN ROTOR BLADE FORWARD TIP CAP INSPECTION AND CORROSION PREVENTION**

Refer to Chapter 18. Please see Table 2-4. Maintenance Materials.

## **19. MAIN ROTOR BLADE UPPER AND LOWER ROOT FITTING ATTACH LUG INSPECTION (25 HOUR)**

Refer to Chapter 19 except Slippage Mark Inspection is not applicable to Helicopter Technology Company Rotor Blades. Please see Figure 7-13. Main Rotor Blade Root Fitting Attach Lugs and Lead-Lag Link Assembly Inspection and Table 2-4. Maintenance Materials.

## **20. MAIN ROTOR BLADE UPPER AND LOWER ROOT FITTING ATTACH LUG INSPECTION (100 HOUR)**

Refer to Chapter 20 except Slippage Mark Inspection is not applicable to Helicopter Technology Company Rotor Blades. Please see Figure 7-13. Main Rotor Blade Root Fitting Attach Lugs and Lead-Lag Link Assembly Inspection and Table 2-4. Maintenance Materials.

## **21. MAIN ROTOR BLADE LEADING EDGE ABRASION STRIP CHECK**

Refer to Chapter 21.

## **23. VIBRATION ABSORBER**

Refer to Chapter 23. Please see Figure 7-15. Vibration Absorber and Table 2-4. Maintenance Materials.

### A. Vibration Absorber Removal

Refer to Paragraph A.

### B. Vibration Absorber Installation

Refer to Paragraph B.

C. Vibration Absorber Inspection

Refer to Paragraph C.

D. Vibration Absorber Disassembly

Refer to Paragraph D.

E. Vibration Absorber Repair

Refer to Paragraph E.

F. Vibration Absorber Reassembly


Refer to Paragraph F.

G. Vibration Absorber Weighing

Refer to Paragraph G.

<b>HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL</b>	
<b>HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades</b>	
Change Letter: <b>I</b>	Change Date: <b>12/02/2015</b>

## Chapter 4 Airworthiness Limitations

Revision	Date	FAA Signature and Date
<b>G</b>	<b>01/11/2008</b>	<b>Signature on File</b>
<b>H</b>	<b>02/12/2009</b>	<b>Signature on File</b>
<b>I</b>	<b>05/13/2016</b>	 <b>5/13/16</b>

### Interchangeability and Life Limit

#### 500P2100-301

The Helicopter Technology Company (HTC) Part Number **500P2100-301 (STC # SR09184RC)** Main Rotor Blade replaces the Hughes/MD Helicopters, Inc. Part Number 369A1100-507 Main Rotor Blade. The HTC blade is **fully interchangeable in any combination**, is **effective on 369A, H, HE, HM, and HS (H3WE)**, and carries the **same life-limit of 2,440 hours**. This blade is also known as Part Number **369D21123-501**.

#### 500P2100-303

The Helicopter Technology Company (HTC) Part Number **500P2100-303 (STC # SR09184RC)** Main Rotor Blade replaces the Hughes/MD Helicopters, Inc. Part Number 369A1100-507 Main Rotor Blade. The HTC blade is **fully interchangeable in any combination**, is **effective on 369A, H, HE, HM, and HS (H3WE)**, and carries a **life-limit of 2,940 hours**. This blade is also known as Part Number **369D21123-503**.

**500P2100-305**

The Helicopter Technology Company (HTC) Part Number **500P2100-305 (STC # SR09184RC)** Main Rotor Blade replaces the Hughes/MD Helicopters, Inc. Part Number 369A1100-507 Main Rotor Blade. The HTC blade is **fully interchangeable in any combination**, is **effective on 369A, H, HE, HM, and HS (H3WE)**, and carries a **life-limit of 2,940 hours**. This blade is also known as Part Number **369D21123-505**.

## **04-00-00 Airworthiness Limitations**

### 1. General

Refer to Paragraph 1.

## **AIRWORTHINESS LIMITATIONS**

**Note:** This Chapter is also applicable to Helicopter Technology Company Rotor Blades.

Refer to Chapter 4. Please see Table 1. Airworthiness Limitations Component Mandatory Replacement Schedule.

### 2. Component Mandatory Replacement

Refer to Paragraph 2.

### 3. Component Mandatory Inspections

Refer to Paragraph 3.

### 4. Torque Events (TE)

Refer to Paragraph 4.

### 5. External Lift and Torque Event (TE) Requirements

Refer to Paragraph 5.

## **05-00-00 Continued Airworthiness**

### **Checks/Inspections**

1. General Description of Inspections

Refer to Paragraph 1.

## **05-20-00 CONTINUED AIRWORTHINESS**

### **100-Hour or Annual Inspection Checklist**

1. 100-Hour or Annual Inspection

Refer to Section 1. Please see Table 1. 100-Hour or Annual Inspection.

2. Torque Event Attachment

Refer to Section 2. Please see Table 2. Permanent Record of Torque Events.

## **05-20-10 CONTINUED AIRWORTHINESS**

### **300-Hour Inspection Checklist**

1. 300-Hour Inspection

Refer to Section 1. Please see Table 1. 300-Hour Inspection.

## **05-20-20 CONTINUED AIRWORTHINESS**

### **Special Inspections**

1. Special Inspection Hourly and Calendar

Refer to Section 1. Please see Table 1. Special Inspections Hourly and Table 2. Special Inspections Calendar.

## **05-50-00 CONTINUED AIRWORTHINESS**

### **Conditional Inspections**

1. Conditional Inspections

Refer to Section 1. Please see Table 1. Conditional Inspections.

## **HTC SPECIFIC INSPECTIONS**

### **For 500P2100 All Variants and 500P2300 All Variants: Honeycomb Rib Section Bond**

#### **CHECKS/INSPECTIONS**

If any type of blade damage or strike occurs at the outboard 36 inches of the blade: a “Coin Tap” inspection of the honeycomb rib section needs to be performed. The zone to be inspected is bounded from 30.1 inches inboard of the Blade Tip to 4.4 inches inboard of the Blade Tip and 2.9 inches aft of the leading edge to 5.1 inches aft of the leading edge (See **Figure 6** below). Perform this inspection on both the upper and lower surfaces of the blade.

**Note:** If any dis-bonds are detected, please contact HTC for further instructions and disposition of the blade.

## **For 500P2100-BSC and -BSC-1 ONLY: Leading Edge Erosion**

### **CHECKS/INSPECTIONS**

**Daily:** Visually inspect the leading edge of the blade for erosion through the blade skin (purple colored adhesive visible).

**Note:** If any adhesive (purple color) is visible through the leading edge of the blade skin, please contact HTC for further instructions and disposition of the blade.

## **For 500P2100-301, -303, and -305 ONLY: Pendulum Mount Washer Bond**

### **CHECKS/INSPECTIONS**

**Every 100 Hours:** Visually inspect Pendulum Mount Washers for rotational displacement (i.e. mis-alignment of Torque-Seal stripe on washer) or evidence of powdery residue.

**Note:** If rotational displacement or evidence of powdery residue is detected, please contact HTC for further instructions and disposition of the blade.

## **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Torque Event (TE) Inspection**

### **CHECKS/INSPECTIONS**

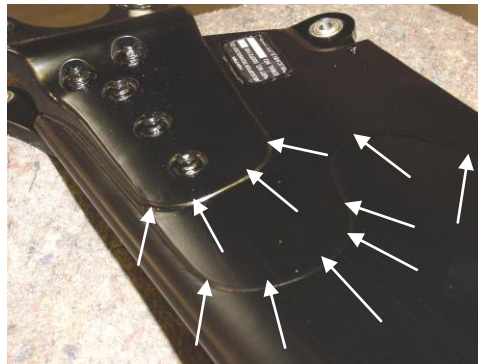
1. Review the definition of a Torque Event (TE) (Reference MD Helicopters, Inc. CSP-HMI-2, Section 04-00-00, Torque Event (TE)).
2. Review Rotorcraft Log Book entries to determine current number of TE's accumulated (actual usage) on each main rotor blade. If the current number of TE's cannot be reliably determined, 13,720 TE's shall be used.
3. Record current number of TE's accumulated (actual usage) on each main rotor blade in Rotorcraft Log Book. Continue to record the number of TE's accumulated (actual usage) throughout the life of the main rotor blades.
4. Determine main rotor blade TE inspection interval using current number of TE's per Limitations Component Mandatory Replacement Schedule (Reference MD Helicopters, Inc. CSP-HMI-2, Section 04-00-00, Table 1. Airworthiness Limitations Component Mandatory Replacement Schedule).

5. Inspect main rotor blades at the required interval per Main Rotor Blade Torque Event Inspection (Reference MD Helicopters, Inc. CSP-HMI-2, Section 62-10-00).

**Note:** A record of TE's must be kept (Reference MD Helicopters, Inc. CSP-HMI-2, Section 04-00-00, Table 1. Airworthiness Limitations Component Mandatory Replacement Schedule)

**Note:** It is recommended to paint the inboard 24 inches (Not to be exceeded) of the blade Gloss White to aid in crack detectability. If this is done, all blades must be painted alike and Re-Balanced (Reference MD Helicopters, Inc. CSP-HMI-2, Section 20-30-00, 4. Main Rotor Blade Paint).

6. In addition, inspect the **Outboard Periphery of the Bottom Doubler and Bottom Root Fitting** for cracking in the metallic components, cracking or delamination of the structural adhesive, or cracking in the sealant or paint (**Figure 1**). **Lift outboard end of the blade off the droop stop** by the blade outboard end. Use a **10x Magnifying Glass**. Any evidence of cracking or delamination renders the blade Unserviceable and requires disposition (See 8. below).



**Figure 1 - Inboard Area of Main Rotor Blade - Bottom Side**

***HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL***

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

7. Record compliance of this Service Bulletin in the Technical Directives and Bulletins section of the rotor blade Serviceable Component Record.
8. For further information and rotor blade disposition, contact Helicopter Technology Company, LLC (HTC) at (310) 523-2750, or FAX (310) 523-2745.

## **For 500P2100 All Variants and 500P2300 All Variants: Corrosion Inspection and Protection**

### **REQUIRED MATERIALS**

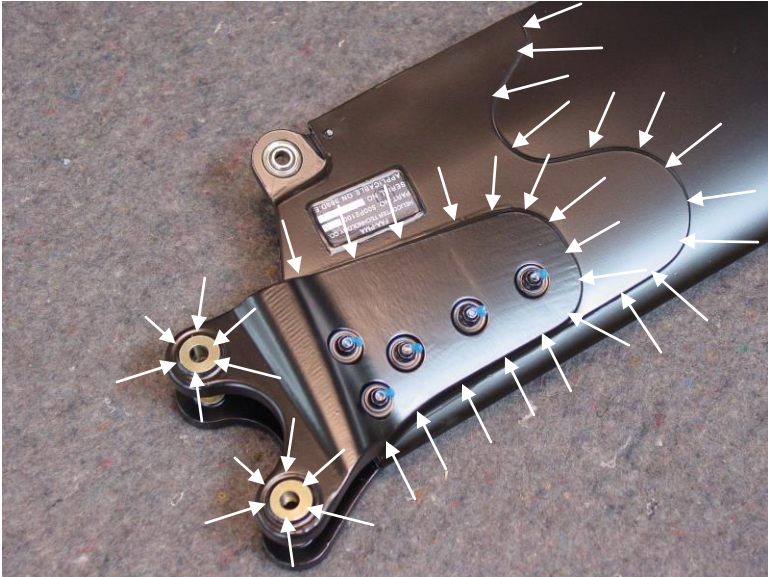
1. Sealant, Two-Part Epoxy, DP-190, 3M Corporation or Sealant per MIL-S-8802, Type II, Class B-2 (e.g. Pro-Seal)
2. Liquid Wax, Turtle Wax T-123, Turtle Wax Inc., Chicago, Illinois or equivalent
3. Naphtha
4. Kim Wipes or equivalent clean lint-free wipes.

### **STORAGE REQUIREMENTS**

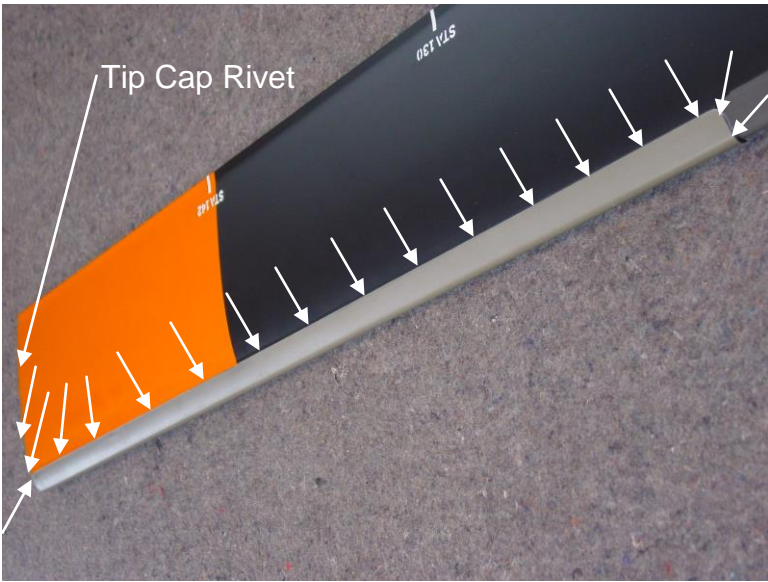
1. Blades shall be stored in a container designed for storage of Blades.
2. Blades shall be stored so that moisture is not enclosed in the container.
3. Blades shall not be permitted to be in contact with standing or pooling water.
4. Blades shall be inspected periodically to verify that there is no visible corrosion.
5. Blades shall have required Sealant in place prior to storage.
6. Blades should be Waxed prior to storage.

## **INSPECTION AND PROTECTION INSTRUCTIONS**

1. Clean area thoroughly with Solvent. Naphtha is recommended. MPK, MEK, or Acetone should not be used as they will remove the pigment from the black paint.
2. Inspect areas as shown in **Figure 2** and **Figure 3** for Active Corrosion. Evidence of corrosion renders the blade Unserviceable and requires disposition (See 6. below). Ensure all Drain Holes on Bottom of Blade and in Aft Tip Cap are open.
3. If areas do not have Sealant in place, apply small bead of Sealant around peripheries (top and bottom surfaces) of Root Fitting Bushings (inside and outside), around peripheries of Root Fitting-to-Doubler Bond-Lines, around peripheries of Doubler-to-Skin Bond-Lines, around Abrasion Strip-to-Skin Bond Lines, and around the Tip End of the Blade as shown in **Figure 2** and **Figure 3** below. Ensure that the center portion of each of the Tip Cap Rivets (2 Places, Top and Bottom Side of Blade – **Figure 3**) are sealed to prevent water/moisture from entering the blade.
4. Wax all painted surfaces of blades in accordance Wax manufacturer's instructions.



**Figure 2** - Main Rotor Blade Root End Affected Areas (Bottom Side Shown  
 – Same Applies to Top Side)



**Figure 3** - Main Rotor Blade Tip End Affected Areas (Top Side Shown  
 – Same Applies to Bottom Side)

***HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL***

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

5. Record compliance of this Service Bulletin in the Technical Directives and Bulletins section of the rotor blade Serviceable Component Record.
6. For further information and rotor blade disposition, contact Helicopter Technology Company, LLC (HTC) at (310) 523-2750, or FAX (310) 523-2745.

## **For 500P2100-BSC, -BSC-1, -101, -103, and -105 and 500P2300 All Variants: Main Rotor Blade Root Fitting Periodic Inspection Requirements**

### **REQUIRED ROOT FITTING INSPECTIONS**

1. Perform Root Fitting Inspection every 100 hours as described in the 100 Hour or Annual Inspection Checklist – Chapter 5 Continued Airworthiness (Reference CSP-HMI-2 and this document, HTCM-001).
2. Perform Torque Event (TE) Inspection every 35 hours or 200 Torque Events (TE's) as described in Airworthiness Limitations - Chapter 4 Airworthiness Limitations (Reference CSP-HMI-2, Reference HTCM-001, this document, Reference FAA AD 2005-21-02, and Reference HTC SB 2100-3R3).
3. Perform Corrosion Inspection and Protection every 100 Hours (Reference HTCM-001, this document, and Reference HTC SB 2100-4R2).
4. Record compliance with these inspections in the Rotorcraft Log Book and/or in the Technical Directives and Bulletins section of the rotor blade Serviceable Component Record, as applicable.
5. For further information and rotor blade disposition, contact Helicopter Technology Company, LLC (HTC) at (310) 523-2750, or FAX (310) 523-2745.

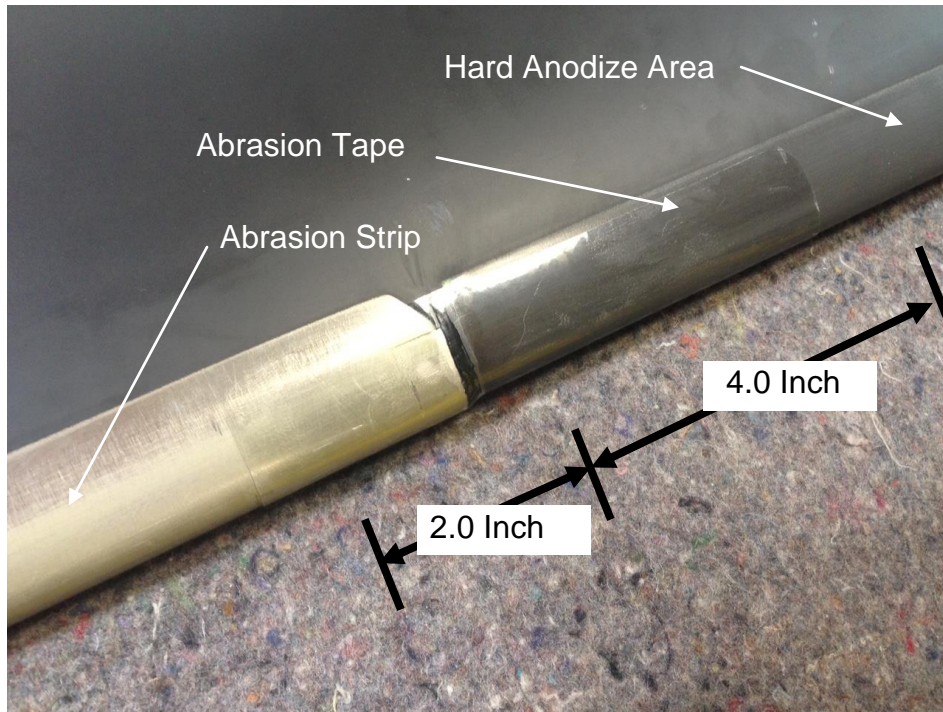
## **For 500P2100 All Variants and 500P2300 All Variants: Main Rotor Blade Abrasion Tape**

### **REQUIRED MATERIALS**

1. Naphtha or Rubbing Alcohol
2. Kim Wipes or equivalent clean lint-free wipes.
3. 10x Magnifying Glass
4. Abrasion Tape, 2.0 inch width **3M Part Number 8671HS** Transparent or equivalent Polyethylene or Polyurethane tapes

### **INSPECTION INSTRUCTIONS**

1. Clean area thoroughly with Solvent. Naphtha or Rubbing Alcohol is recommended. MPK, MEK, or Acetone should not be used as they will remove the pigment from the black paint.
2. Coin Tap area for Abrasion Strip dis-bond. If dis-bonding is discovered, contact HTC Factory for further disposition.
3. Inspect areas with 10x Glass for Active Corrosion. The presence of corrosion calls for Alodine Solution application.
4. Visually inspect areas for Sealant. If areas do not have Sealant in place, apply sealant in accordance with **Corrosion Inspection and Protection** (above, and HTC SB 2100-4R2).



**Figure 4 – Inboard Area of Abrasion Strip (Top Side Shown)**

5. Cut a 6.0 inch long section of Abrasion Tape from roll. Trim all corners round to a 0.12 inch radius. Apply Tape in accordance with tape manufacturer instruction such that the 2.0 inch tape width is centered on the Leading Edge and extends from 4.0 inches inboard of Abrasion Strip (on Hard Anodize Area) and overlaps Abrasion Strip by 2.0 inches. Ensure that air is not entrapped and work all bubbles out to an edge. Do not cut tape while in contact with the Blade. See **Figure 4** above.
6. Record compliance with these inspections in the Rotorcraft Log Book and/or in the Technical Directives and Bulletins section of the rotor blade Serviceable Component Record, as applicable.

***HELICOPTER TECHNOLOGY COMPANY MAINTENANCE MANUAL***

**HTCM-001 500P2100 and 500P2300 All Variants - Main Rotor Blades**

**Change Letter: I**

**Change Date: 12/02/2015**

7. For further information and rotor blade disposition, contact Helicopter Technology Company, LLC (HTC) at (310) 523-2750, or FAX (310) 523-2745.

## **For 500P2100 All Variants and 500P2300 All Variants: Main Rotor Blade Drain Hole Clearance**

### **REQUIRED MATERIALS**

1. Naphtha or Rubbing Alcohol
2. Kim Wipes or equivalent clean lint-free wipes.
3. 5/32 (0.156 inch diameter) Jobber Length Drill Bit
4. #53 (0.060 inch diameter) Jobber Length Drill Bit
5. Touch-Up Paint



**Figure 5 – Tip of Main Rotor Blade - Drain Holes (Bottom Side Shown)**

## **INSPECTION INSTRUCTIONS**

1. Clean Tip-End area thoroughly with Solvent. Naphtha is recommended. MPK, MEK, or Acetone should not be used as they will remove the pigment from the paint. See **Figure 5** above.
2. Visually Inspect areas to find evidence of Drain Hole Blockage. See **Figure 5** above.
3. By hand, ensure that 5/32 Drill bit fits through each of the three (3) Bottom Side Drain Holes to a depth of 0.50 inch maximum. Do not nick far-side Blade Skin from inside with Drill Bit. See **Figure 5** above.
4. If bare metal is exposed during the above step, touch-up paint as required.
5. By hand, ensure that #53 Drill bit fits through the Tip-End Drain Hole to a depth of 0.50 inch maximum. This will slightly increase the diameter on older blades. Do not get FOD inside Blade. See **Figure 5** above.
6. No touch-up paint is required for the above step as it will likely re-block the Tip-End Drain Hole.
7. Record compliance with these inspections in the Rotorcraft Log Book and/or in the Technical Directives and Bulletins section of the rotor blade Serviceable Component Record, as applicable.
8. For further information and rotor blade disposition, contact Helicopter Technology Company, LLC (HTC) at (310) 523-2750, or FAX (310) 523-2745.

## HTC Special Notes

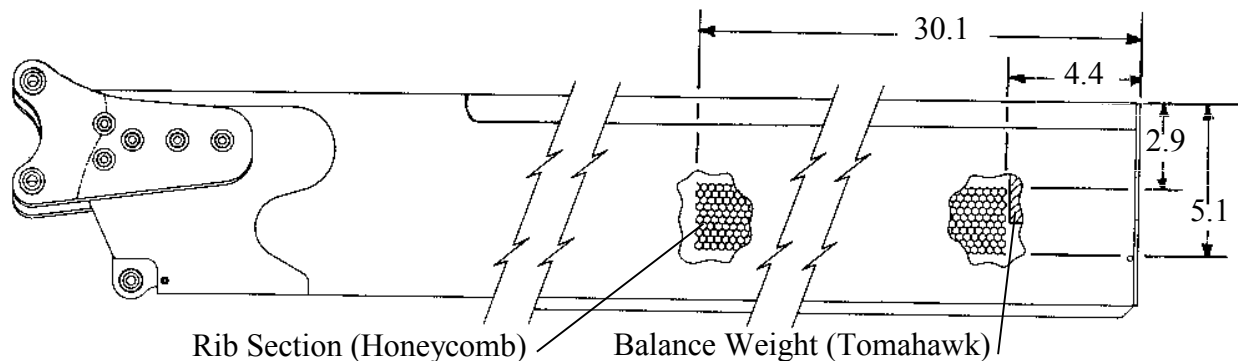
### For 500P2100 All Variants and 500P2300 All Variants: Appearance of Tip End of Blade Assembly

#### RIB SECTION AND BALANCE WEIGHT

On many Blade Assemblies there may be a protrusion or depression around the periphery of the Rib Section (Honeycomb) or Balance Weight (Tomahawk). See **Figure 6** below for location of the Rib Section (Honeycomb) and Balance Weight (Tomahawk). This is a natural effect of the manufacturing process and is not indicative of any disorder with the blade.

**Note:** If the protrusion/depression exceeds 0.025 inches deviation from the airfoil contour, please contact HTC for further instructions and disposition of the blade.

**Note:** A protrusion or depression around the periphery of the Honeycomb Section or Balance Weight (Tomahawk) is not indicative of any disorder with the blade. **This is only applicable to Blade Assemblies that have not been damaged.**



**Figure 6 -**

Location of Honeycomb Section and Balance Weight in Tip End of Blade Assembly