

## CHAPTER 1 — GENERAL INFORMATION

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## GENERAL INFORMATION

### 1-1. SCOPE OF THIS MANUAL

This Maintenance Manual (MM) provides the data that is needed to do the maintenance and repair of Model 206A, 206B, and 206B3 helicopters. This manual should be used in conjunction with the [BHT-206A/B-M&O](#) for Models 206A and 206B and the [BHT-206B3-CR&O](#) for Model 206B3.

#### NOTE

When the [BHT-206A/B-SERIES-CR&O](#) is called out as a reference within this manual, use the [BHT-206A/B-M&O](#) or [BHT-206B3-CR&O](#), as applicable.

The [BHT-206B3-CR&O](#) may also be used for applicable components used on Model 206A and 206B helicopters.

This MM is backed by other Bell Helicopter publications. These other publications are also used on other helicopter models. These other publications are the [BHT-SPECTOOL-IPB](#), the [BHT-ALL-SPM](#), the [BHT-ELEC-SPM](#), and the [CSSD-PSE-87-001](#).

### 1-2. USE OF THIS MANUAL

The instructions that are provided in this manual and those that have been changed by [Alert Service Bulletins](#), issued by Bell Helicopter Textron Inc., and by [Airworthiness Directives](#), issued by the local Aviation Authority, shall be strictly followed.

Before you do any repairs that are not specified in this manual or related publications, contact Product Support Engineering.

The standard repair procedures are not given in this manual. Refer to FAA Publication, AC 43.13-1A, Aircraft Inspection and Repair Manual for the standard repair procedures. The standard repairs must not be more than the component repair limits as published by Bell Helicopter Textron for the Model 206A, 206B, and 206B3. Do not do repairs if the weight and balance, structural integrity, interchangeability, or operational characteristics are changed in a negative manner. For more information, contact Product Support Engineering.

### 1-3. CUSTOMER FEEDBACK

Bell Helicopter Textron strives to give you, the customer, accurate and straightforward manuals. Sometimes, we may make mistakes. If you find any mistakes, we would appreciate it if you told us. Your observation, suggestion, or complaint will be acknowledged.

For your convenience, we include a Customer Feedback Form at the beginning of this manual. You can send it by fax or mail it to us. When you tell us about a mistake that is found in the Maintenance Manual, please be as specific as possible. Your help to make sure that the manual is correct is very much appreciated.

### 1-4. CONTENT AND ARRANGEMENT

The breakdown of the helicopter by systems in this manual is done under a modified Airline Transportation Association (ATA) chapter system. The manual is separated into 13 volumes and 34 chapters to make it easy to find data.

### 1-5. REVISION STATUS AND LIST OF EFFECTIVE PAGES

The revision status of the manual is provided in the Log of Revisions (page A) and in the title page of the manual. The Log of Pages provides the revision status of every page in the manual.

### 1-6. VOLUMES AND CHAPTERS

A volume groups the chapters into general categories to permit quick access to data.

- **VOLUME 1 — GENERAL INFORMATION**
- [Chapter 1](#) — General Information
- [Chapter 4](#) — Airworthiness Limitations Schedule
- [Chapter 5](#) — Inspections and Component Overhaul Schedule
- **VOLUME 2 — HANDLING AND SERVICING**
- [Chapter 6](#) — Dimensions and Charts

- [Chapter 7](#) — Lifting and Jacking
- [Chapter 8](#) — Weight and Balance
- [Chapter 9](#) — Towing
- [Chapter 10](#) — Parking and Mooring
- [Chapter 11](#) — Placards and Markings
- [Chapter 12](#) — Servicing
- [Chapter 18](#) — Vibration and Noise
- **VOLUME 3 — EQUIPMENT**
- [Chapter 21](#) — Air Distribution (Ventilation)
- [Chapter 25](#) — Equipment and Furnishings
- [Chapter 26](#) — Fire Protection
- **VOLUME 4 — FUEL/HYDRAULICS**
- [Chapter 28](#) — Fuel System
- [Chapter 29](#) — Hydraulic System
- **VOLUME 5 — AIRFRAME**
- [Chapter 30](#) — Ice and Rain Protection
- [Chapter 32](#) — Landing Gear
- [Chapter 52](#) — Doors and Windows
- [Chapter 53](#) — Fuselage
- **VOLUME 6 — MAIN ROTOR/MAIN ROTOR DRIVE SYSTEM**
- [Chapter 62](#) — Main Rotor
- [Chapter 63](#) — Main Rotor Drive System
- **VOLUME 7 — TAIL ROTOR/TAIL ROTOR DRIVE SYSTEM**
- [Chapter 64](#) — Tail Rotor
- [Chapter 65](#) — Tail Rotor Drive System
- **VOLUME 8 — FLIGHT CONTROLS**
- [Chapter 67](#) — Flight Controls
- **VOLUME 9 — POWER PLANT**
- [Chapter 71](#) — Power Plant
- [Chapter 75](#) — Air System
- [Chapter 76](#) — Engine Controls
- [Chapter 79](#) — Engine Oil System
- **VOLUME 10 — INSTRUMENTS/ELECTRICAL**
- [Chapter 95](#) — Instrument System
- [Chapter 96](#) — Electrical System
- **VOLUME 11 — AVIONICS**
- [Chapter 97](#) — Avionics
- **VOLUME 12 — WIRING DIAGRAMS**
- [Chapter 98](#) — Wiring Diagrams
- **VOLUME 13 — KITS**
- [Chapter 99](#) — Auxiliary Equipment Kits

#### 1-7. TABLE OF CONTENTS

To locate the required information, every chapter has a table of contents.

You may also consult the list of volumes ([paragraph 1-6](#)) and look for the volume and chapter in which the necessary data is most likely to be found.

#### 1-8. PARAGRAPH, PAGE, FIGURE, AND TABLE NUMBERING

Paragraphs, pages, figures, and tables start at number 1 within a chapter.

#### 1-9. BULLETINS

Technical Bulletins ([TBs](#)) and Alert Service Bulletins ([ASBs](#)) are published when they are necessary. These documents supplement the Maintenance Manual and provide instructions and data to change components, systems, and maintenance practices on the helicopter. When a bulletin affects the way the helicopter is

maintained, it is incorporated in the Maintenance Manual at the next available opportunity. Refer to the [Bulletin Record](#) (page BR) for the list of bulletins that have been incorporated in this manual.

## 1-10. TEMPORARY REVISIONS

Temporary revisions are published when necessary. Refer to the [Temporary Revision Record](#) (page TR) for a listing of active temporary revisions against this manual.

## 1-11. CONSUMABLE MATERIALS

**WARNING**

MAKE SURE ALL SAFETY PRECAUTIONS ARE FOLLOWED WHEN HANDLING AND USING CONSUMABLE MATERIALS. FAILURE TO DO SO CAN CAUSE INJURY OR DEATH.

**CAUTION**

HANDLING, STORAGE, AND SAFETY PRECAUTIONS FOR CONSUMABLE MATERIALS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, UNLESS OTHERWISE SPECIFIED IN THIS MANUAL.

Most of the maintenance procedures require the use of consumable materials. All of the necessary consumable materials are listed in a "Materials Required" table at the beginning of every applicable maintenance procedure. The consumable materials are also called out by nomenclature and c-code number in the text (e.g., drycleaning solvent ([C-304](#))). The c-code number is a unique identification code for each material to be referenced in the Standard Practices Manual ([BHT-ALL-SPM](#), [Chapter 13](#)).

On occasion, the materials that are used in maintenance tasks will change properties, change suppliers, or be discontinued. Also, new or improved materials may become available. If there is ever a difference between the Maintenance Manual and the Standard Practices Manual ([BHT-ALL-SPM](#)), the

manual that has the latest date of issue or revision shows the preferred material. However, either material may be used for the maintenance task, unless otherwise specified in the procedure.

## 1-12. SPECIAL TOOLS

Some maintenance procedures require the use of Bell Helicopter Textron (BHT) special tools, commercial tools, or workaids. All of the necessary tools are listed in a "Special Tools" table at the beginning of every applicable maintenance procedure.

A description and illustration of the BHT special tools are found in the Special Tools Illustrated Parts Breakdown manual ([BHT-SPECTOOL-IPB](#)). Supplier information for the commercial tools is provided when tools are too specific and may be difficult to find. Other commercial tool brands with equivalent or similar tools may be used to accomplish the tasks. Dimensions and materials necessary to make the workaids are shown in the applicable figures.

## 1-13. TORQUES

When a torque value is not shown, the standard torque value for that combination of fasteners shall be used. Standard torque values for various combinations of fasteners are found in the Standard Practices Manual ([BHT-ALL-SPM](#)).

## 1-14. WARNINGS, CAUTIONS, AND NOTES

**WARNING**

A MAINTENANCE PROCEDURE, PRACTICE, ETC. THAT, IF NOT STRICTLY OBSERVED, COULD RESULT IN PERSONAL INJURY OR DEATH.

**CAUTION**

A MAINTENANCE PROCEDURE, PRACTICE, ETC. THAT, IF NOT STRICTLY OBSERVED, COULD RESULT IN DAMAGE TO EQUIPMENT OR TO THE HELICOPTER.

## NOTE

A note provides supplemental data about the procedure, practice, condition, etc. for the required maintenance task.

Warnings, cautions, and notes are used throughout the manual to emphasize important and critical instructions. They normally appear ahead of the procedure they apply to. Notes used in tables and figures are numbered in sequence, starting at 1. When the number is highlighted with a symbol (e.g.,  $\triangle$ ), the note applies to specific data contained in the table or figure. When the number is not highlighted, the note applies to all of the content.

### 1-15. STANDARD PRACTICES

Standard maintenance practices and procedures that are not given in this manual are found in the Standard Practices Manual ([BHT-ALL-SPM](#)) and the Electrical Standard Practices Manual ([BHT-ELEC-SPM](#)).

### 1-16. WEAR, DAMAGE, AND REPAIR LIMITS



THE METRIC EQUIVALENTS TO U.S. STANDARD WEIGHTS AND MEASURES ARE PROVIDED IN THIS MANUAL. HOWEVER, USE ONLY THE U.S. STANDARD VALUES WHEN YOU TAKE A MEASUREMENT TO ESTABLISH A SPECIFIC DIMENSION OR TO DETERMINE THE SERVICEABILITY OF A COMPONENT.

Throughout the Maintenance Manual (MM), wear, damage, and repair limits, including fits and tolerances, are provided in the inspection and repair procedures to determine if the parts are serviceable. It is not intended that all dimensions provided be examined as a prescribed maintenance procedure. However, you must examine the dimensions of parts that show signs of wear or physical damage.

Non-Destructive Inspection (NDI) of a part or component of an assembly is required only when the MM or another Bell Helicopter Textron (BHT) approved document specifically instructs the maintainer to do so (e.g., when written steps of an inspection or other


procedure call for NDI procedures to be carried out on specific parts). However, NDI is to be accomplished when indications resulting from a visual inspection convey that a crack or other defect may exist and that further inspection is required using NDI procedures ([BHT-ALL-SPM](#), [Chapter 6](#)) to ensure the airworthiness of the part or component.

As applicable, the [BHT-ALL-SPM](#), [BHT-ALL-SRM](#), and [BHT-ELEC-SPM](#) contain all of the common information and procedures required during the inspection and repair of parts.

### 1-17. REPLACEMENT PARTS AND ASSEMBLIES

Replacement parts and assemblies that are necessary for the correct and proper maintenance of the helicopter and its components are provided in the [BHT-206A/B-SERIES-IPB](#).

### 1-18. MODEL DESIGNATION SYMBOLS

Inverse symbols  with model designation are used throughout the manual in text and illustrations to show procedures, components, etc., that are peculiar to the model indicated on the symbol. Helicopter model designations and effectivities are as follows:

- A** 206A JetRanger S/N 4 through 600 and S/N 672 through 715
- B** 206B JetRanger II S/N 661 through 671 and S/N 716 through 2211
- B3** 206B3 JetRanger III S/N 2212 and subsequent

### 1-19. HELICOPTER DESCRIPTION

Major installations and assemblies are shown in [Figure 1-1](#).

The fuselage assembly consists of the forward fuselage and tailboom. The forward fuselage encloses the cabin and fuel cells, and provides pylon and engine supports.

The basic structure of the forward fuselage consists of a lower-curved honeycombed sandwich panel and an upper longitudinal aluminum beam. The core of the sandwich structure is aluminum alloy throughout, and is faced with aluminum alloy except in the fuel cell region, where fiberglass is used. The rotor,

transmission, and engine are supported by the upper longitudinal beam, which is connected to the lower structure by three fuselage bulkheads and a center post to form an integrated structure. The most forward and aft bulkheads act as carry-through structures for the landing gear crosstubes. The tailboom is a full monocoque structure with aluminum skin and aluminum substructure.

**A** 206A helicopters are powered by a Rolls-Royce 250-C18, turboshaft, internal combustion engine, consisting of six stage axial and single stage centrifugal flow compressor, a single stage combustion chamber, two stage gas producer turbine, and two stage power turbine.

**B** 206B S/N 2212 through 3566 helicopters are powered by a Rolls-Royce model 250-C20, turboshaft, internal combustion engine, consisting of six stage axial and single stage centrifugal flow compressor, a single stage combustion chamber, two stage gas producer turbine, and two stage power turbine.

**B3** 206B3 S/N 2212 through 3566 helicopters are powered by a Rolls-Royce model 250-C20B,

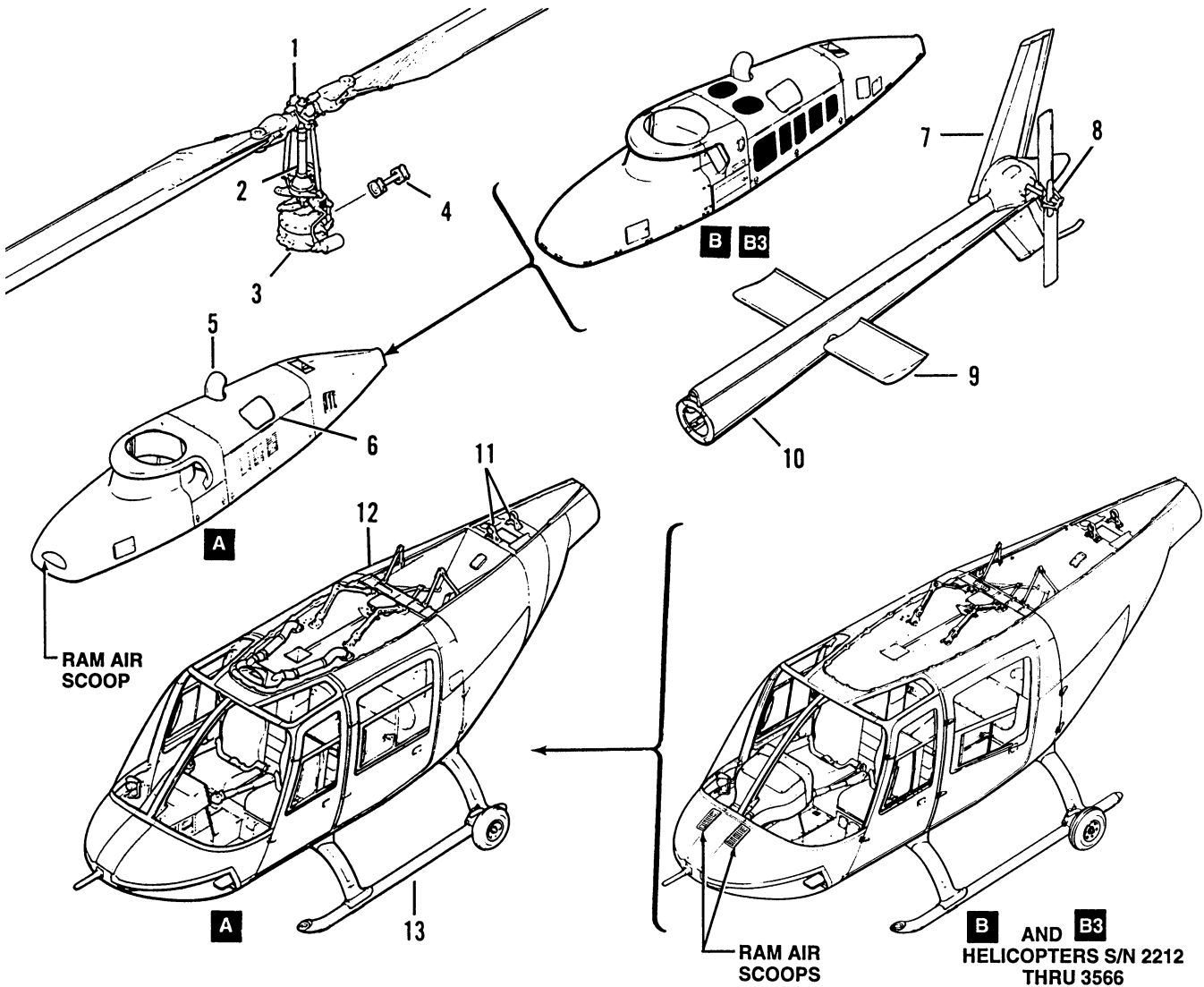
turboshaft, internal combustion engine, consisting of six stage axial and single stage centrifugal flow compressor, a single stage combustion chamber, two stage gas producer turbine, and two stage power turbine.

**B3** 206B3 S/N 3567 and subsequent helicopters are powered by a Rolls-Royce model 250-C20J, turboshaft, internal combustion engine, consisting of six stage axial and single stage centrifugal flow compressor, a single stage combustion chamber, two stage gas producer turbine, and two stage power turbine.

Refer to Rolls-Royce Operation and Maintenance Manuals, 5W2 (250-C18 engine), and 10W2 (250-C20 series engines) for detailed description of engines, engine components, and engine specifications.

**A B B3** Helicopters S/N 4 through 3566 have usable fuel capacity of 76 U.S. gallons (287.7 L).

**B3** Helicopters S/N 3567 and subsequent have a usable fuel capacity of 91 U.S. gallons (344.4 L).



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3	Transmission Assembly	6	63
4	Main Driveshaft Assembly	6	63
5	Engine Installation	9	71
6	Cowling Installation	9	71
7	Vertical Fin Installation	5	53
8	Tail Rotor Hub and Blade Installation	6	64
9	Horizontal Stabilizer Installation	5	53
10	Tailboom Assembly	5	53
11	Tail Rotor Driveshaft Installation	7	65
12	Fuselage Structure Assembly	5	53
13	Landing Gear Assembly	5	32

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Figure 1-1. Major Installations and Assemblies



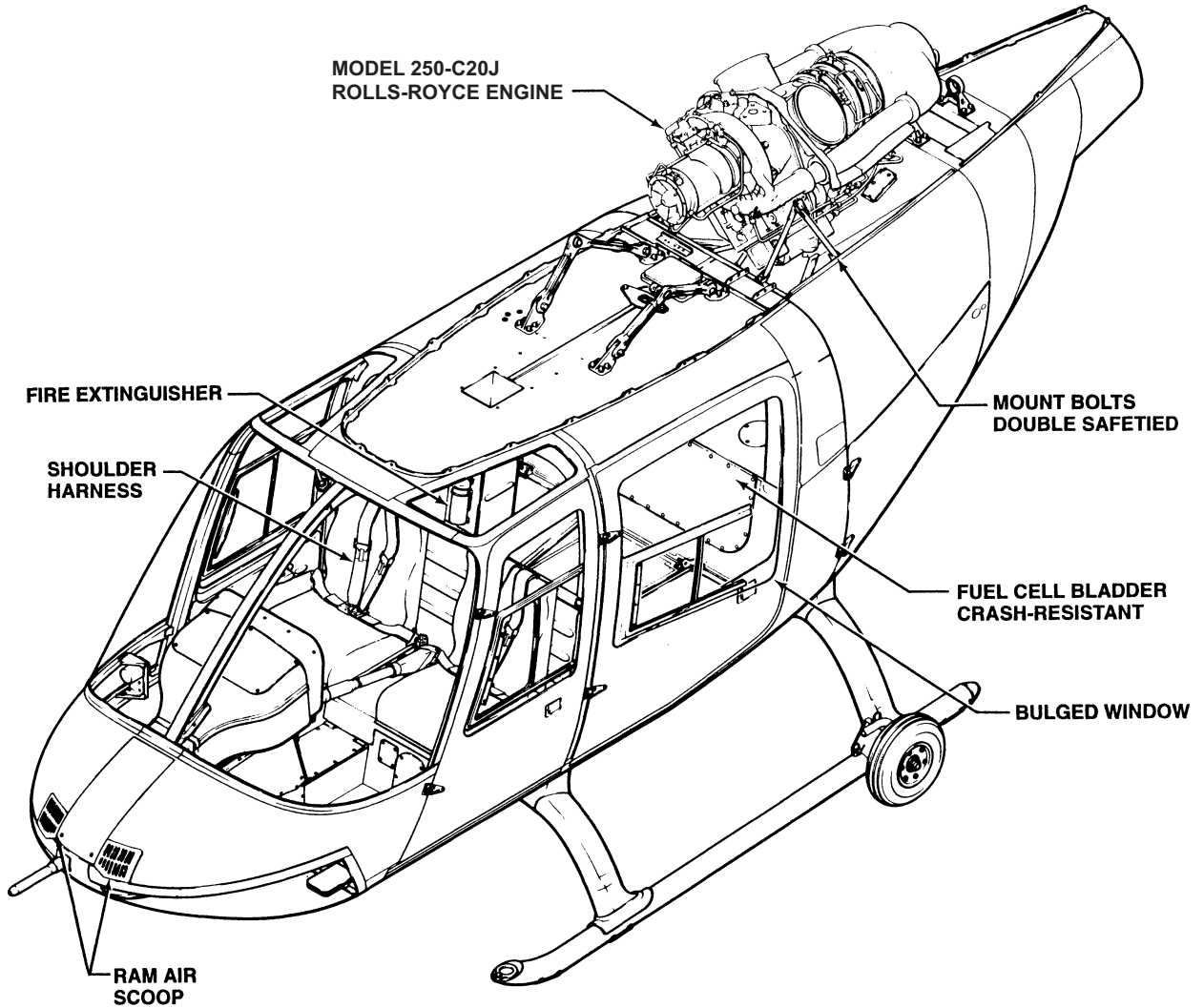


Figure 1-2. **B3** Helicopters, S/N 3567 and Subsequent, Feature Differences

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