TECHNICAL MANUAL

OPERATOR'S MANUAL
ARMY MODEL OH-58A/C
HELICOPTER

This manual supersedes TM 55-1520-228-10 and TM 55-1520-236-10, 7 April 1978, including all changes.

HEADQUARTERS, DEPARTMENT OF THE ARMY
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OPERATORS MANUAL

FOR

ARMY MODEL OH-58A/C HELICOPTER

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can improve this manual. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter, or DA Form 2028 (Recommended Changes to Publications and Blank Forms), located in the back of this manual, directly to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax, or the World Wide Web. Our fax number is: DSN 788-6546 or Commercial 256-842-6546. Our e-mail address is: 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028. For the World Wide Web use: https://amcom2028.redstone.army.mil.

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CHAPTER 1
INTRODUCTION

1-1. GENERAL.

These instructions are for use by the operator. They apply to all Army OH-58A/C helicopters.

1-2. WARNINGS, CAUTIONS, AND NOTES DEFINED.

Warnings, cautions, and notes are used to emphasize important and critical instructions and are used for the following conditions.

WARNING

Highlights an essential operating or maintenance procedure, practice, condition, statement, etc. which if not strictly observed, could result in injury to, or death of, personnel or long term health hazards.

CAUTION

Highlights an essential operating or maintenance procedure, practice, condition, statement, etc. which if not strictly observed, could result in damage to, or destruction of equipment or loss of mission effectiveness.

NOTE

Highlights an essential operating or maintenance procedure, condition, or statement.

1-3. DESCRIPTION – MANUAL.

This manual contains the complete operating instructions and procedures for the Army OH-58A/C helicopter. The primary mission of this helicopter is that of observation and is designed for landing and take off from prepared and unprepared surfaces. The observance of procedures is mandatory except when modification is required because of multiple emergencies, adverse weather, terrain, etc. Your flying experience is recognized, and therefore, basic flight principles are not included. It is required that THIS MANUAL BE CARRIED IN THE HELICOPTER AT ALL TIMES.

1-4. APPENDIX A, REFERENCES.

Appendix A is a listing of official publications cited within the manual applicable to and available for flight crews.

1-5. INDEX.

The index lists, in alphabetical order, every titled paragraph, figure (F), and table (T) contained in this manual. Chapter 7 performance data has an additional index within that chapter.

1-6. ABBREVIATIONS.

Designator symbols and abbreviations shall be used in conjunction with text contents, headings, and titles to show effectivity of the material. Chapter 7 contains a list of abbreviations used in this publication.

1-7. ARMY AVIATION SAFETY PROGRAM.

Reports necessary to comply with the safety program are prescribed in AR 385-40.

1-8. DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE.

For information concerning destruction of Army materiel to prevent enemy use, refer to TM 750-244-1-5.

1-9. FORMS AND RECORDS.

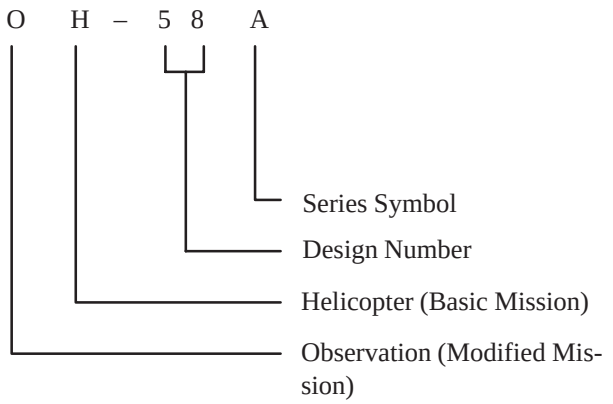
Army aviators flight record and helicopter maintenance records which are to be used by crewmembers are prescribed in DA PAM 738-751 and TM 55-1500-342-23.

1-10. HELICOPTER DESIGNATION SYSTEM.

The designation system prescribed by AR70-50 is used in helicopter designations as follows:

EXAMPLE OH-58A

The designation system prescribed by AR70-50 is used in helicopter designations as follows:



1-11. DESIGNATOR SYMBOLS.

NOTE

All OH-58A and OH-58C model aircraft are now equipped with the T63-A-720 Engine.

Designator symbols **A** OH-58A and **C** OH-58C are used in conjunction with text contents, text headings and illustration titles to show limited effectivity of the material. One or more designator symbols may follow a text heading or illustration title to indicate proper effectivity, unless the material applies to all series and configurations within the manual. If the material applies to all series and config urations, no designator symbols will be used. Where practical, descriptive information is condensed and combined for all models to avoid duplication.

NOTE

Armament subsystems are no longer applicable to OH-58A/C aircraft. All references to armament subsystems have been removed from this manual.

1-12. USE OF WORD SHALL, SHOULD, AND MAY.

Within this technical manual the word “shall” is used to indicate a mandatory requirement. The word “should” is used to indicate a non-mandatory, but preferred, method of accomplishment. The word “may” is used to indicate an acceptable method of accomplishment.

CHAPTER 2
HELICOPTER AND SYSTEMS DESCRIPTION AND OPERATION

SECTION I. HELICOPTER

2-1. GENERAL.

The OH-58A/C helicopter (figure 2-1 A and figure 2-2 C) is a single engine, observation type helicopter designed for landing and takeoff from prepared or unprepared surfaces. The fuselage consists of the forward section, intermediate or transition section, and the aft or tailboom section. The forward section provides the cabin and fuel cell enclosure as well as pylon support. Entrance to the cabin is provided by two doors on each side. The pilot station (figure 2-3 A and figure 2-4 C) is located on the right and the copilot/observer station is located on the left side of the helicopter. The area aft of the pilot and copilot may be used as a cargo/passenger compartment. The intermediate section supports the engine and includes the equipment and electronic compartment. The tailboom supports the horizontal stabilizer, vertical stabilizer, and tail rotor. The basic structure of the forward section consists of a lower-curved honeycomb sandwich panel and an upper longitudinal aluminum beam. The core of the sandwich structure is aluminum alloy throughout. The faces are aluminum alloy except in the fuel cell region, where they are fiberglass. The aluminum alloy sandwich panel is capable of withstanding the specified design cargo loadings, while the fiberglass sandwich supports the fuel cell pressures. The rotor, transmission, and engine are supported by the upper longitudinal beam. The upper and lower structures are interconnected by three fuselage bulkheads and a centerpost to form an integrated structure. The most forward and aft bulkheads act as carry-through structure for the skid landing gear crosstubes. The tailboom is a monocoque structure with aluminum skin and aluminum substructure.

a. Dimensions. Principal dimensions of the helicopter areas are shown in figure 2-5 .

b. Turning Radius and Ground Clearance. (Refer to figure 2-6.)

c. Weights. The helicopter weight empty and gross operating weight will change according to the configuration or equipment installed for the type of mission to be performed. Refer to Chapter 6, Weight/Balance and Loading.

d. Crew Configuration. The crew consists of the pilot alone, pilot and copilot, or pilot and observer.

2-2. PASSIVE DEFENSE.

The armor protection is a combination of ceramic and fiberglass composite with a small amount of dual hardness steel. The armor protection is removable.

Crew Protection. Armor protection is furnished for the pilot and copilot and consists of panels on seat bottom, seat back, and outboard side of each seat.

2-3. LANDING GEAR SYSTEM.

a. Standard System. The landing gear system is a skid type, consisting of two laterally mounted arched crosstubes, attached to two formed longitudinal skid tubes. The landing gear structure members are made from formed aluminum alloy tubing with steel skid shoes to minimize skid wear. The gear assembly is attached with straps/clamps at four points to the fuselage structure, therefore, gear removal for maintenance can easily be accomplished. The manually retractable and quickly removable wheel assemblies have been provided to facilitate helicopter ground handling operations.

b. High Skid Gear. The high skid gear, when installed, will provide and approximate additional 14