

UNITED STATES ARMY AVIATION SCHOOL
Department of Maintenance Training
Fort Rucker, Alabama

File No. 5/69-1756-2
30/42/43-2290-2
55-2406-2

PERFORMANCE OBJECTIVES

INTRODUCTION AND GENERAL INFORMATION, UH-1

1. KNOWLEDGES:

- a. Given a prepared list of questions pertaining to the internal and external load capabilities of the UH-1 series aircraft, the student, should be able to answer the questions with 100 percent accuracy.
- b. Given a diagram of a UH-1 aircraft, the student should be able to identify the eight compartments of the forward cabin section with an accuracy of 100 percent.
- c. Given a matching type worksheet composed of a list of statements pertaining to towing, jacking, parking, and mooring of the UH-1B and a separate list of possible answers, the student should be able to correctly match the answers to the statements without error.
- d. Given a diagram of a UH-1 aircraft with the servicing points numbered and a list giving the correct nomenclature of the components, the student should be able to match the numbered servicing points to the correct nomenclature without error.

2. SKILLS: None.

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300 pts

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STUDENT OUTLINE

INTRODUCTION AND GENERAL INFORMATION, UH-1

1. Introduction to course.

- a. Length of POI.
- b. Chain of command.
- c. Classroom procedures.
- d. Break areas and parking facilities.

2. Description of helicopter.

a. Type. UH-1

utility - low silhouette, compact

b. Manufacturer.

Bell - Fr. Wood Tex

c. Power plant.

varied Lycoming T-53 Engine

L-9 L-9A, L-11, L-13

d. Principal dimensions.

(1) Overall length.

(a) UH-1B and UH-1C. 53'

UH-1C - 540 cgs. rotor head

(b) UH-1D and UH-1H.

auto lock on skids 57'

(2) Height.

(a) UH-1B. 18' 10"

Tied down blades to ground

(b) UH-1C.

(c) UH-1D and UH-1H.

(3) Width. *17'2" high*
Binned down pos. 52'11" (53) *B 8'4"* *9'4"*
outside of skid - to outside skid *D 8'11"* *Synchronized elevators*

(4) Diameters.

Rotor
(a) UH-1B and UH-1C.
44' *tail rotor 8'6" on all models*

(b) UH-1D and UH-1H.

48'

3. Load capabilities.

a. External loads.

4000 lbs. test on hook
all models

b. Internal loads.

(1) Cargo compartment.

175 lbs. per sq. ft. on floor (honeycomb construction) limit to 2 G

(2) Baggage compartment.

rt. hand side (200 lbs. max) B & C models only

4. Airframe group.

a. *Cabin* Forward section.

(1) Construction.

Box-beam semi-monocoque

(2) Description.

2 longitudinal I beams run full length of cabin
Base for all heavy construction

(a) ~~8~~ Compartments, UH-1B and UH-1C.

1. Radio. *nose*

SFC Murray
774 2079

All performance checks
5 standards ~~outside~~

I Booms

2. Pilot and copilot.

1 left = copilot

3. Cargo.

5 seats check chairs for security to floor
1 jump seats Doors - fully opened or closed

4. Fuel.

near, rt. side

5. Heater.

empty in UN + A. Rucke

6. Baggage.

off. 200 lbs.
webbing must be installed

7. Transmission and engine

rt. side fire wall separates engine & transmission

8. Electrical.

2 firewalls
2 separate comp. DC & AC
Battery (80 lbs) ~~in back in fuel panel~~
lower left
top circuit breaker
nose out

(b) Compartments - UH-1D and UH-1H differences.

1. Fuel.

D/H wall around transmission
175 lbs approx

2. Tail boom access.

3. Transmission.

(c) Flow fences.

1. For directional stability (like keel on boat prevents slipping)

2. Location.

a. UH-1B and UH-1C.

1 on top rt. hand side
1 under copilot

b. UH-1D and UH-1H.

2 on bottom

(d) Landing gear.

1. Purpose. supported on ground

2. Location.

3. Construction.

2 longitudinal ^{cross bars} skid tubes & ^{steel} skid shoes
~~connected to~~ I beams

b. Aft section.

(1) Purpose. 4 holes attached to cabin
semi-monocoque construction

(2) Location.

(3) Construction.

90° above t/R
FM antenna, hoist antenna
Tail skid
supports synchronizing adductor
aids control lengthens
takes lifts out
symmet. on A+B
asymmetrical - C+D
check for damage & play

5. Ground handling.

a. Hoisting.

(1) Hoist.

(a) Purpose. to lift out transmission

(b) Location.

1. UH-1B and UH-1C.

on upper work deck

2. UH-1D and UH-1H.

(c) Description.

* Max Towing Wgt.
B-7,400 D 9,500

~~(2) Main rotor retaining nut.~~

has eye for clevis, sling attached

b. Jacking and mooring.

4 jacking points means for leveling a/c
Don't confuse leveling points
and stations

5

- ① under pilot compartment
- ② next to tail boom connection

mooring rings are parts of jack points
secure a/c to ground in adverse weather

(1) Jacking pads.

(a) Purpose.

(b) Location.

(2) Leveling plate.

(a) Purpose.

(b) Location.

(3) Mooring rings.

(a) Purpose.

(b) Location.

c. Parking and mooring procedures.

(1) Normal procedures.

- ① Flat level
- ② main rotor blades secured
- ③ use friction on all controls
- ④ head into wind
- ⑤ engine fuel tanks are full
- ⑥ Tail rotor locked

(2) High winds procedures.

+ 75 knots evacuate a/c from area

d. Towing.

(1) Towing rings.

(a) Purpose. assists in maintenance

(b) Location. towbar attachment ring forward skid

(2) Ground handling wheels.

(a) Purpose.

(b) Location.

(c) Description.

(3) Towing limitations.

(a) Maximum gross weight for towing.

1. UH-1B and UH-1C.

2. UH-1D and UH-1H.

(b) Balancing for towing.

1. UH-1B and UH-1C.

2. UH-1D and UH-1H.

e. All weather covers.

(1) Purpose. *for adverse weather*

(2) Location. *cover rotor, rotor head, cabin, fuselage*

6. Servicing.

a. Purpose. *provide proper fuel & lubrication*

b. Components.

(1) Fuel.

(a) Location. *right side (c legs)*

(b) Description.

1. Specified.

2. Alternate and emergency.

As has gas or auxiliary fuel is used
MIL-T-5624 JP-4
B-165 gals. D 220 US gals.
C-242 US gals.

(2) Engine oil reservoir.

(a) Location.

1. UH-1B and UH-1C.

2. UH-1D and UH-1H.

(b) Description.

(c) Inspection.

(3) Transmission oil.

(a) Location.

(b) Description.

(c) Inspection.

(4) Pillow blocks.

(a) Location.

(b) Description.

(c) Inspection.

(5) Blade grip reservoirs.

same oil

(a) Location. fluid level is 1/2 full.

(b) Description.

(c) Inspection.

(6) 42° gearbox.

(a) Location. at base of tail, end of boom
right gauge

(b) Description.

(c) Inspection.

all reservoirs
are checked
on the hand
side

(7) 90° gearbox.

(a) Location. top of vertical fin same oil

(b) Description. sight gauge must be full

(c) Inspection.

(8) Hydraulic reservoir.

(a) Location.

MIL - 11 - 5606

1. UH-1B and UH-1C.

off side of cabin bulkhead, transmission
compartment

2. UH-1D and UH-1H.

(b) Description.

top of side cabin
1 sight gauge - all red
anytime fluid level is seen, it is low

(9) Stabilizer bar dampers. on rotor head

(a) Location. sight gauge MIL-H-5606

has to be replaced if a bubble is visible

(b) Description.

(c) Inspection. Performance Check Homework

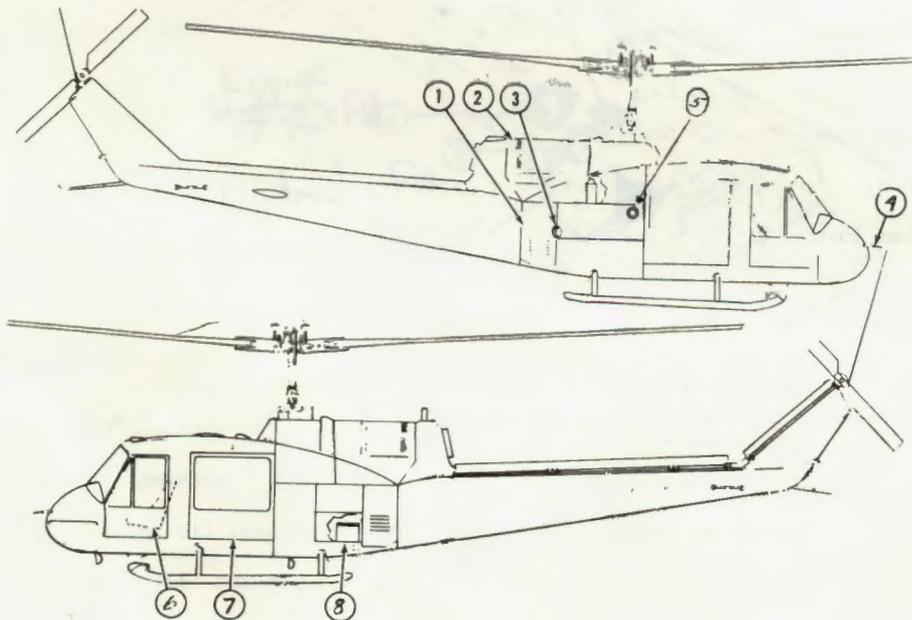
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PERFORMANCE CHECK

INTRODUCTION AND GENERAL INFORMATION, UH-1

1. Answer the following questions on the internal and external load capability.
- a. What is the maximum external cargo load that can be installed on the cargo hook on the UH-1B? **4000**
 - b. What is the maximum cargo hook capacity on the UH-1D? **400 -**
 - c. What is the maximum cargo floor loading capacity? **175 lbs. sq. ft.**



2. Identify the numbered compartments in the forward cabin section by placing the number of the compartment in the space provided by the compartment nomenclature.

<u>4</u> Avionics	<u>1</u> Baggage
<u>6</u> Pilot and copilot	<u>3</u> Heater
<u>7</u> Cargo	<u>2</u> Transmission and engine
<u>5</u> Fuel	<u>8</u> Electrical

3. Match the following statements to the correct answers by placing the correct number in the space provided.

a. 2 Maximum aircraft weight, UH-1B for towing. 7500 lbs

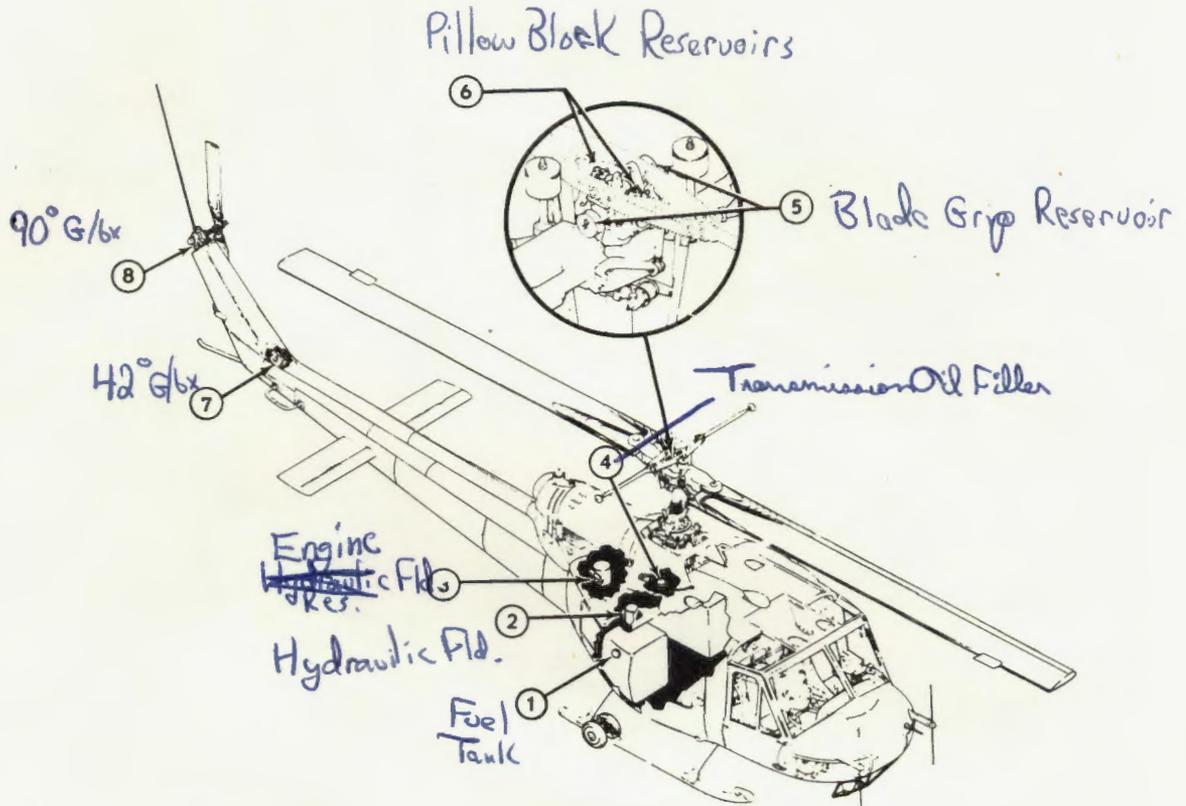
b. 5 High winds, evacuate aircraft. 75 knots

c. 3 Total number of jacking points. 4

d. 4 Secure flight controls. Friction

-
1. 9,500 pounds.
 2. 7,400 pounds.
 3. 4
 4. Friction lock.
 5. 75 knots.
 6. Tie them down.
 7. 2

4. Identify all of the service points by matching the numbers to the correct nomenclature.



- | | | | |
|-------------------------|----------|---------------------------|----------|
| 1. 90° gearbox | <u>8</u> | 5. Fuel | <u>1</u> |
| 2. 42° gearbox | <u>7</u> | 6. Transmission | <u>4</u> |
| 3. Engine oil reservoir | <u>4</u> | 7. Blade grip reservoir | <u>5</u> |
| 4. Hydraulic reservoir | <u>3</u> | 8. Pillow block reservoir | <u>6</u> |