



**BELL 212 Pilot Training Manual**

**CHAPTER 18**  
**KITS AND ACCESSORIES**  
**TABLE OF CONTENTS**

<b>INTRODUCTION</b>	<b>3</b>
<b>General</b>	<b>3</b>
<b>AUXILIARY FUEL TANKS</b>	<b>3</b>
Internal	3
<b>LITTER KIT</b>	<b>4</b>
<b>EXTERNAL CARGO HOOK</b>	<b>7</b>
Long Line Provisions	9



**BELL 212 Pilot Training Manual**

**ILLUSTRATIONS**

FIGURE 18-1	LEFT 90 GALLON AUXILIARY FUEL TANK	3
FIGURE 18-2	AUXILIARY FUEL TANK INSTALLATION	4
FIGURE 18-3	LITTER KIT INSTALLATION	5
FIGURE 18-4	CARGO HOOK SYSTEM	6
FIGURE 18-5	CARGO RELEASE ARM	7
FIGURE 18-6	CARGO MIRRORS	7
FIGURE 18-7	MANUAL RELEASE	7
FIGURE 18-8	EFFECTIVE LOADING PRACTICES	8
FIGURE 18-9	CARGO HOOK SWIVEL	9
FIGURE 18-10	LONG LINE CONTROLS	9



**BELL 212 Pilot Training Manual**

**CHAPTER 18**  
**KITS AND ACCESSORIES**

**INTRODUCTION**

There are numerous options offered by Bell Helicopter Textron (BHT) for the model 212. These options come in the form of kits which may be installed by BHT at the time of manufacture, by the owner, or by another service center. Each kit is functionally complete, including all of the parts that are necessary to add a usable capability to the standard configuration.

**General**

When a kit is installed, it is accomplished in compliance with a service instruction. Operational procedures for kits are contained in supplements to the *Flight Manual*. Each kit is identified with a BHT *Flight Manual Supplement (FMS)* number. The numbers for the kits described in this chapter are as follows:

**Auxiliary Fuel**

BHT-212-FMS-4 and -14

**Litters**

BHT-212-FMS-1

**External cargo hook**

BHT-212-FMS-3

Kit numbers not included in this chapter are covered in the chapters associated with the kit function.

**AUXILIARY FUEL TANKS**

**Internal**

The auxiliary fuel kit provides the option of installing either one or two 20 (205-706-044 = capacity 250 U.S. Gallons) or 90 (205-706-045 = Capacity 400 U.S. Gallons) U.S.

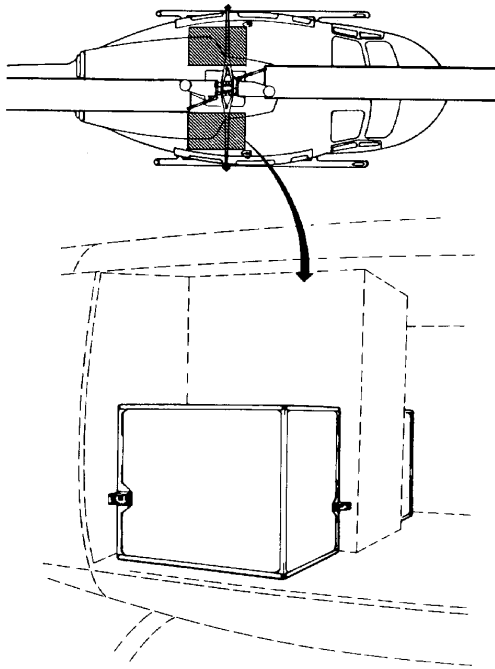
gallon auxiliary fuel tanks on either side of the transmission pylon in the rear of the passenger cabin. Most critical fuel amount for most forward C.G. condition in both cases is 72.6 U.S. gallons



**Figure 18-1 Left 90 Gallon Auxiliary Fuel Tank**



## BELL 212 Pilot Training Manual



**Figure 18-2 Auxiliary Fuel Tank Installation**

The kit also includes a new fuel quantity gage, as well as provisions which allow the auxiliary tanks to be easily removed or

## LITTER KIT

The litter kit provides the capability of transporting one to three litter patients inside the helicopter. (Figure 18-18)

The kit consists of three litters; two litter strap assemblies, six support brackets, two stanchion assemblies, six patient restraining belts, and a single attendant seat with headrest and safety belt. Fire retardant fabric is used in both the litters and the attendant's seat.

The passengers' seats are removed from the cabin for litter kit use. However, two seats on each side of the transmission pylon can remain installed, if required. The litters are then installed across the back of the cabin immediately in front of the pylon island. The attendant's seat can be installed

reinstalled at will. Installation of the 90 gallon tanks results in the loss of two passenger seats for each tank installed (Figure 18-10).

Fueling of the installed auxiliary tanks is accomplished through the same single-point refueling port used to fill the helicopter's internal fuel cells. The auxiliary tanks gravity feed to the under-floor cells, as do the aft internal fuel cells. All cells, including the auxiliary tanks, are jointly vented. There is an additional fuel quantity probe in each auxiliary tank which is interconnected to the internal helicopter fuel quantity system.

There are no operational procedures applicable to the auxiliary fuel system other than those found in the basic *Flight Manual*. The *Flight Manual Supplement* does, however, contain very important weight and balance information.

**Note:** If auxiliary tanks are installed in the helicopter, use only the weight and balance loading charts in the *Flight Manual Supplement* to calculate helicopter CG.

forward of the litters, facing any desired direction. It is usually installed facing aft, toward the litters. Stowing the kit aboard the helicopter during missions other than ones requiring litters is quick, easy, and convenient.

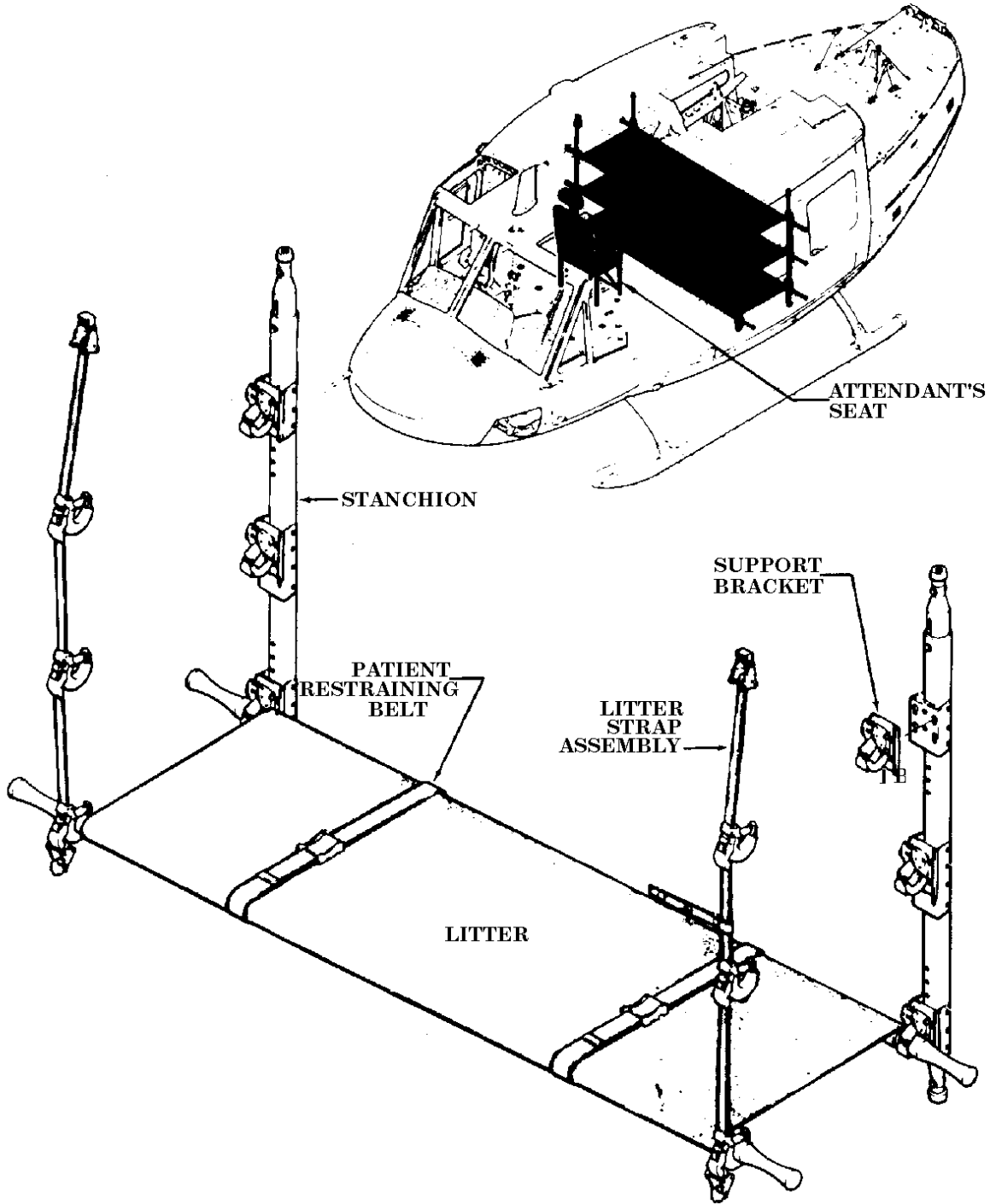
The Federal Aviation Agency (FAA) has approved the installation of the three-litter kit across the cabin. However, military forces frequently install two kits, fore and aft, one on each side of the passenger cabin. With this six-litter installation, one attendant's seat can be installed, but the two pairs of passengers' seats beside the transmission pylon must be removed.

## WARNING

Hoisting or lowering an empty litter in the open position is prohibited.



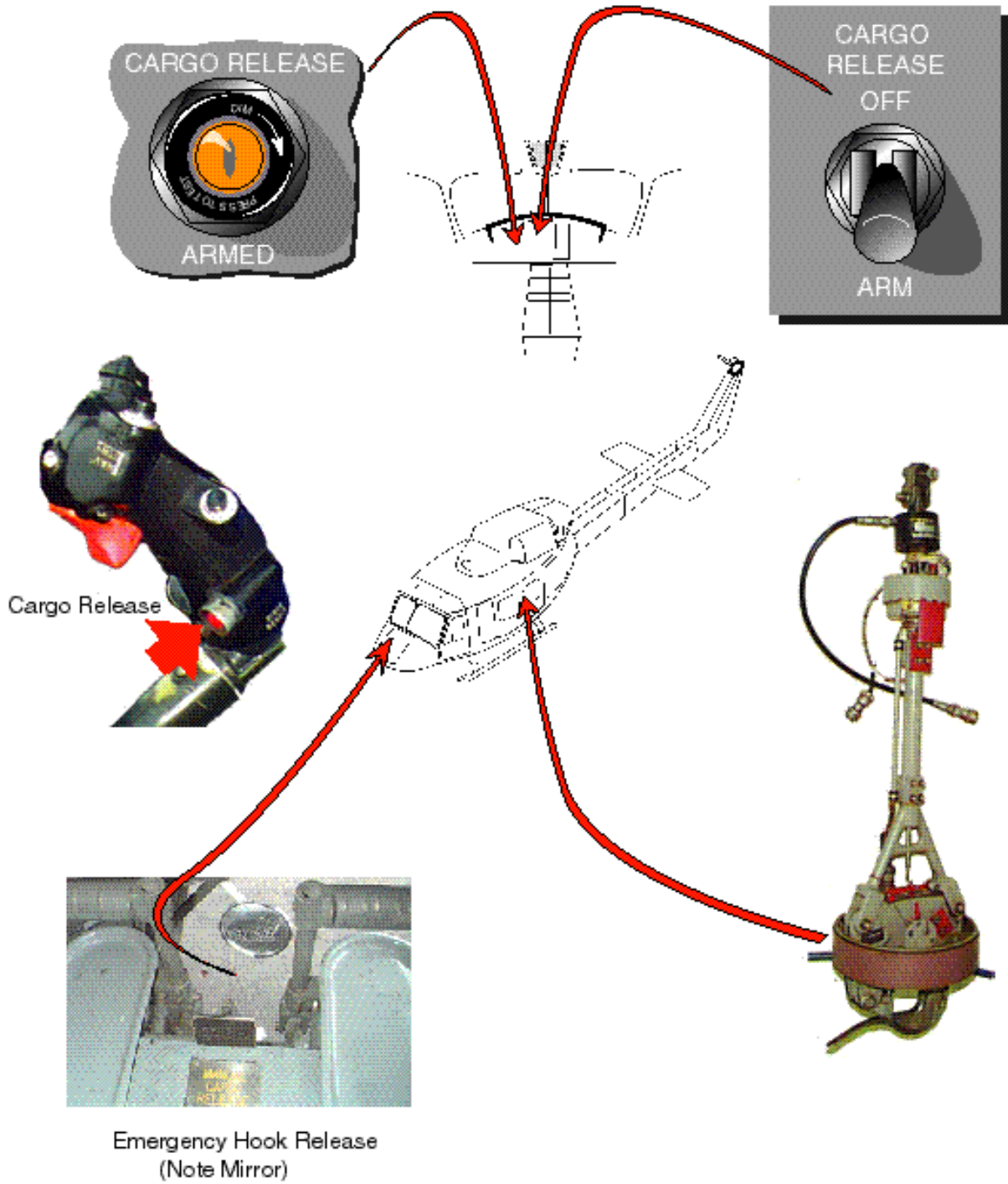
**BELL 212 Pilot Training Manual**



**Figure 18-3 Litter Kit Installation**



**BELL 212 Pilot Training Manual**



**Figure 18-4 Cargo Hook System**



## BELL 212 Pilot Training Manual

### EXTERNAL CARGO HOOK

The cargo hook kit is designed to provide a means of carrying up to 5,000 pounds of external cargo at 2.5-g loading. Electrical and mechanical provisions for the cargo hook are incorporated into the basic helicopter.

System components consist of a suspension assembly, cargo hook, cargo hook bumper, and rearview mirror (Figure 18-21).

The cargo suspension assembly is a single point attachment, suspended from the center of gravity on the main rotor support structure beam. It extends through an opening in the bottom of the lower fuselage skin.



**Figure 18-5 Cargo Release Arm**

The cargo hook bumper is a rubber ring which attaches to the lower fuselage skin surrounding the opening and protects against damage from the swinging hook.

The cargo hook is a horizontal loading with an automatic pickup latch. Both electrical

and manual release provisions are included in the kit.



**Figure 18-6 Cargo Mirrors**



**Figure 18-7 Manual Release**

A rearview mirror attaches to the fuselage beneath the lower right chin bubble to permit pilot observation of the sling load. Use of the mirror is not required by the FAA, but, if installed, it must be covered for night flight. Cargo can be released electrically by positioning the CARGO RELEASE switch on the left overhead console to ARM. (Figure 18-20) With the system armed, the amber CARGO RELEASE ARMED caution light on the instrument panel illuminates. The cargo may then be released with a switch on the pilot's or copilot's cyclic. Mechanical release is accomplished with a foot-operated pedal located between the pilot's directional control pedals. (Figure 18-22) Loads may also be released manually by ground personnel if the helicopter is hovered low enough.

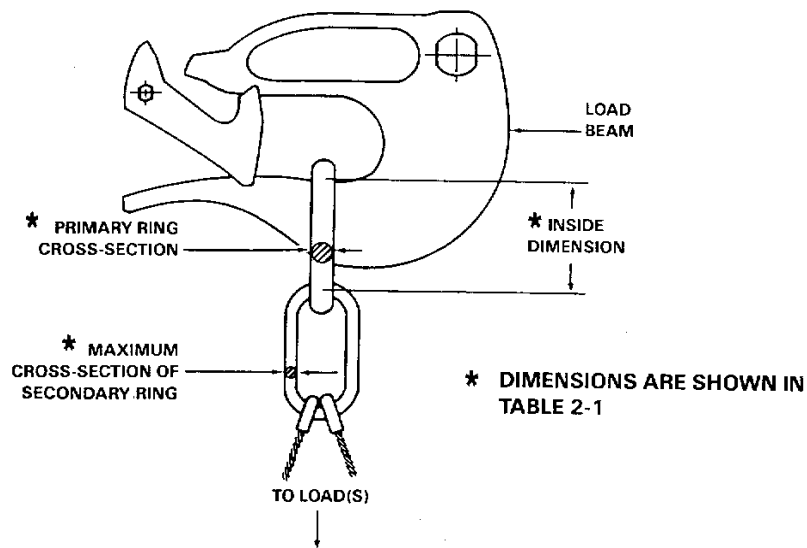


**BELL 212 Pilot Training Manual**

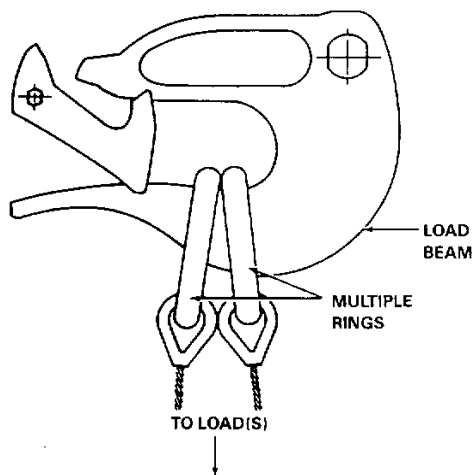
The cargo hook can be configured to swivel or stay in a fixed position depending on where the red retainer is placed. With the red plate locked into the notches for fixed

position or unbolted and reversed for full swivel mode. (Figure 18-24)

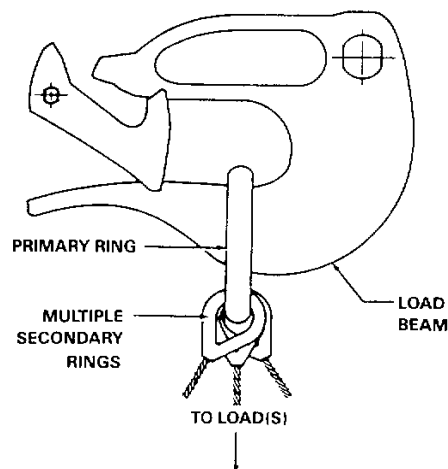
**CORRECT RIGGING**



**INCORRECT RIGGING**



**INCORRECT RIGGING**



212-FMS3-2-1

**Figure 18-8 Effective loading Practices**





**BELL 212 Pilot Training Manual**

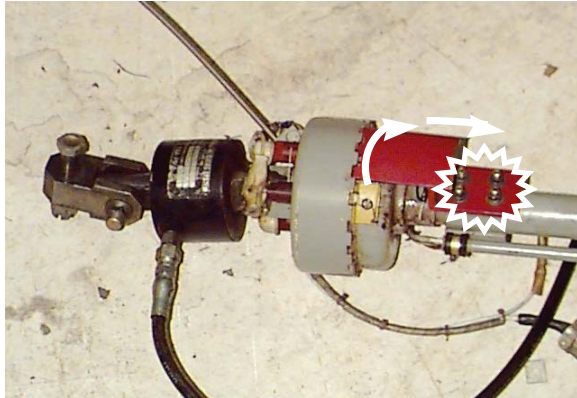


Figure 18-9 Cargo Hook Swivel

**Long Line Provisions**

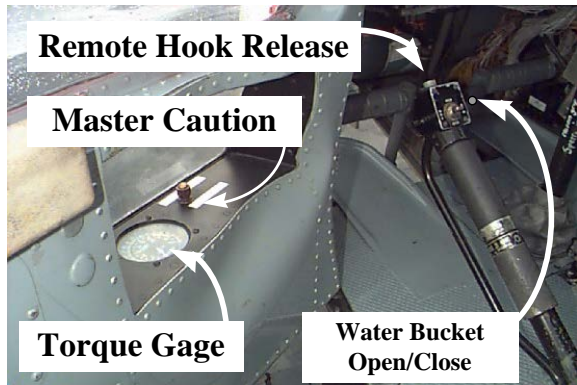


Figure 18-10 Long Line Controls



**BELL 212 Pilot Training Manual**

THIS PAGE INTENTIONALLY LEFT BLANK