

# BELL 429

## ROTORCRAFT FLIGHT MANUAL

### SUPPLEMENT

## TRAKKABEAM A800/TLX SEARCHLIGHT

EA429E8062,  
EA429E8136.

CERTIFIED  
14 JULY 2016

This supplement shall be attached to the BHT-429-FM-1 when the Trakkabeam A800/TLX Searchlight kit (EA429E8062) or (EA429E8136) has been installed.

Information contained herein supplements information in the basic Flight Manual. For Limitations, Procedures, and Performance Data not contained in this supplement, refer to the basic Flight Manual.

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## NOTICE PAGE

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## GENERAL INFORMATION

The gimbal mounted Trakkabeam A800/TLX Searchlight installation (EA429E8062) or (EA429E8136) is an 800-watt intensity xenon arc lamp with up to six optional filters including infra-red (IR) and zoom mechanism. The gimbal assembly of the lamp system is attached to the Meeker tailboom utility mount that is designed to provide attachment for the Trakkabeam A800/TLX on the Bell 429 helicopter.

The gimbal contains adjustable hard stops in both elevation and azimuth to prevent movement into unsafe regions and cannot be rotated manually.

The remote mount control interface (CIU) and the grip controller provide a user interface between the A800/TLX system and operator. The grip controller contains displays to indicate filter number and current system status. It also includes all switches and a joystick to control system operation. The function of the grip controller power switch is not enabled and replaced by the MISSION EQUIP BUS pushbutton annunciator (PBA) with electrical power from the non-essential bus. The lamp is disabled with weight on the landing gear.

The TLX Installation (EA429E8136) also provides a 5 way hat switch to control the searchlight on the Pilot Collective. The stow position may be set while the aircraft is on the ground and the STOW SET magnetic latching switch is in the STOW SET position. After setting the stow position the switch may be returned to the FLY position or the aircraft power can be cycled which will return the switch to the FLY position.

The IR filter is not authorized for Civil Aircraft Operations; however, it may be permissible in Public Use Law Enforcement Operations. It is essential to be aware that with the IR filter installed, the emitted light is not visible and can cause eye damage to the crew and bystanders.



# Section 1

## LIMITATIONS

### 1-3. TYPES OF OPERATION



THE CIVIL AVIATION AUTHORITY HAS NOT ASSESSED THE HAZARDS ASSOCIATED WITH THE IR SEARCHLIGHT FEATURE AND HAS NOT VALIDATED MANUFACTURER SAFETY OR HAZARD ASSESSMENTS.



SEARCHLIGHT BEAM WITH OR WITHOUT INFRARED FILTER CAN BE HAZARDOUS TO PEOPLE AND CERTAIN MATERIALS AT CLOSE RANGE, PARTICULARLY AT DISTANCES LESS THAN 10 FEET (3 M). WITH INFRARED FILTER INSTALLED, THE EMITTED LIGHT IS NOT VISIBLE AND CAN CAUSE EYE DAMAGE TO CREW AND BYSTANDERS.



DO NOT SHINE BEAM AT ANYONE WITHIN 250 FEET (76 M).

IR (infrared) filtered searchlight operation is not approved for civil operations.

The IR function of the searchlight is physically disabled.

Trakkabeam A800/TLX searchlight beam operation is prohibited below 50 feet AGL and/or during IMC/dense fog conditions.

### 1-4. FLIGHT CREW

Operation of Trakkabeam searchlight grip controller is limited to the non-flying pilot.

### 1-6. WEIGHT AND CENTER OF GRAVITY

Actual weight change will be determined after kit installation. Ballast will then be adjusted, as required, to return empty weight CG to within allowable limits.

### 1-7. AIRSPEED

$V_{NE}$  for Trakkabeam A800/TLX operation is 140 KIAS.

### 1-20. INSTRUMENT MARKINGS AND PLACARDS

Refer to [Figure 1-3](#) for Placards and Decals.

**IR SEARCHLIGHT OPERATION IS NOT CIVIL AVIATION AUTHORITY APPROVED**

Location: Center pedestal

429\_FMS-23\_0001

**Figure 1-3. Placards and Decals**

# Section 2

## NORMAL PROCEDURES

### 2-1. INTRODUCTION

Refer to Trakkabeam A800 Searchlight System Manual P/N 051002-3, Rev. B or later, (or Manual P/N 508400-1640009, Rev D or later for the TLX Searchlight), for system operation.

### 2-3. PREFLIGHT CHECK

#### 2-3-B. EXTERIOR CHECK



**ENSURE TRAKKABEAM SEARCHLIGHT HAS COOLED BEFORE HANDLING.**

1. Trakkabeam searchlight — Stowed position; security and wiring. Lens for cleanliness and damage.

### 2-4. INTERIOR AND PRESTART CHECK

#### 2-4-A. INTERIOR CHECK

1. TRAKKA PLT CONTROL PBA — Blank (off).
2. Trakkabeam searchlight grip controller — Check stowed.

### 2-9. IN-FLIGHT OPERATIONS

1. MISSION EQUIP BUS PBA — ON.

#### NOTE

Initialization of Trakkabeam searchlight should not be carried out at greater than 40 KIAS.

#### NOTE

The optional laser is not included in this installation.

2. Trakkabeam grip controller DEPLOY switch — Depress to put searchlight into DEPLOY position.
3. Trakkabeam grip controller LAMP ON/OFF switch — Press once to activate lamp.



**DO NOT AIM THE BEAM TOWARD OTHER AIRCRAFT OR VEHICLES BECAUSE OF TEMPORARY BLINDING EFFECT.**

4. Trakkabeam grip controller JOYSTICK — Aim as desired.
5. Trakkabeam grip controller ZOOM toggle — Depress to increase or decrease beam width as desired.
6. TRAKKA PLT CONTROL PBA — ON; to have directional and lamp power control through 5-way SRCH LT switch on pilot collective.
7. Trakkabeam grip controller STOW switch — Depress once to move the searchlight to the STOW position and extinguish the lamp.



DO NOT SWITCH MISSION EQUIP BUS OFF UNTIL THE LAMP COOLING FAN HAS AUTOMATICALLY STOPPED. THE FAN WILL RUN FOR 2 MINUTES AFTER THE LAMP IS TURNED OFF.

## 2-10. DESCENT AND LANDING

### 2-10-A. BEFORE LANDING

1. Trakkabeam grip controller STOW switch — Depress once to move the searchlight to the STOW position and extinguish the lamp.

2. TRAKKA PLT CONTROL PBA — Blank (off).



DO NOT SWITCH MISSION EQUIP BUS OFF UNTIL THE LAMP COOLING FAN HAS AUTOMATICALLY STOPPED. THE FAN WILL RUN FOR 2 MINUTES AFTER THE LAMP IS TURNED OFF.

## 2-12. POSTFLIGHT CHECK

1. MISSION EQUIP BUS PBA — Blank (off).

# Section 3

## *EMERGENCY AND MALFUNCTION PROCEDURES*



SHUT OFF SEARCHLIGHT WHEN EMERGENCY FLOATS ARE DEPLOYED.