

BELL 429

ROTORCRAFT FLIGHT MANUAL

SUPPLEMENT

TRAKKABEAM A800/TLX SEARCHLIGHT

**429-899-420
429-899-865
EA429E8008**

**CERTIFIED
3 OCTOBER 2013**

This supplement shall be attached to the BHT-429-FM-1 when the Trakkabeam A800/TLX Searchlight kit (429-899-420 or 429-899-865 or EA429E8008) 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.

COPYRIGHT NOTICE
COPYRIGHT 2020
BELL TEXTRON INC. AND
BELL TEXTRON CANADA LIMITED.

ALL RIGHTS RESERVED



POST OFFICE BOX 482 • FORT WORTH, TEXAS 76101

NOTICE PAGE

PROPRIETARY RIGHTS NOTICE

These data are proprietary to Bell Textron Inc. Disclosure, reproduction, or use of these data for any purpose other than helicopter operation or maintenance is forbidden without prior written authorization from Bell Textron Inc.

DESTINATION CONTROL STATEMENT

WARNING — This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751, et. seq.) or the Export Administration Act of 1979, as amended, Title 50, U.S.C., App. 2401 et. seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

LOG OF REVISIONS

Original	0.....	03 OCT 13	Reissue.....	0	20 OCT 15
Revision	1.....	06 MAR 14	Reissue.....	0	06 NOV 20
Reissue	0.....	02 JUL 14			

LOG OF PAGES

PAGE	REVISION NO.	PAGE	REVISION NO.
Title.....	0		
NP	0		
A/B	0		
C/D	0		
i/ii	0		
1 - 4	0		

NOTE


Revised text is indicated by a black vertical line. A revised page with only a vertical line next to the page number indicates that text has shifted or that non-technical correction(s) were made on that page. Insert latest revision pages; dispose of superseded pages.

LOG OF TC APPROVED REVISIONS

Original	0.....	03 OCT 13	Reissue.....	0	20 OCT 15
Revision	1.....	06 MAR 14	Reissue.....	0	06 NOV 20
Reissue	0.....	02 JUL 14			

APPROVED

DATE


ANDREAS HARTONO

06 NOV '20

A/
CHIEF, FLIGHT TEST
FOR
DIRECTOR — NATIONAL AIRCRAFT CERTIFICATION
TRANSPORT CANADA

GENERAL INFORMATION

The gimbal mounted Trakkabeam A800/TLX Searchlight installation (429-899-420 or 429-899-865 or EA429E8008) 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 either the Meeker tailboom or nose utility mount that is designed to provide attachment for the Trakkabeam A800/TLX on the Bell 429 helicopter. The mount is located on the underside of the tailboom, or per installation BHP 258 000 Z, under the nose of the helicopter.

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

The pilot/copilot control in the pedestal and the grip controller provide a user interface between the A800/TLX system and operator. It contains displays to indicate filter number and current system status. It also includes all switches and a joystick to control system operation.

Additionally, the A800/TLX installation (429-899-865) provides a 4 way hat switch to control the searchlight on the Pilot and Copilot collectives.

The Infra-Red (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 VISIBLE LIGHT BEAM AT ANYONE WITHIN 250 FEET (76M) AND 50 FEET (15M) FOR IR LIGHT.

Infra-Red (IR) 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. SEARCH LIGHT pushbutton annunciator — Blank (off).
2. Trakkabeam ARM switch — Down (off).
3. Trakkabeam searchlight grip controller — Check stowed.

2-9. IN-FLIGHT OPERATIONS

1. SEARCH LIGHT switch — PWR 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 SYS PWR switch — ON.
3. Trakkabeam ARM switch — ON.
4. Trakkabeam DEPLOY switch — Depress to put searchlight into DEPLOY position.
5. Trakkabeam LAMP ON/OFF switch — Press once to activate lamp.



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

6. Trakkabeam JOYSTICK — Aim as desired.
7. Trakkabeam ZOOM toggle — Depress to increase or decrease beam width as desired.
8. Trakkabeam STOW switch — Depress once to move the searchlight to the STOW position and extinguish the lamp.

CAUTION

DO NOT SWITCH SYSTEM POWER 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 STOW switch — Depress once to move the searchlight to the STOW position and extinguish the lamp.

CAUTION

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

2. Trakkabeam ARM switch — Down (off).
3. Trakkabeam SYS PWR — OFF.

2-12. POSTFLIGHT CHECK

1. SEARCH LIGHT switch — Blank (off).

Section 3

EMERGENCY AND MALFUNCTION PROCEDURES

CAUTION

SHUT OFF SEARCHLIGHT WHEN EMERGENCY FLOATS ARE DEPLOYED.

Section 4

PERFORMANCE

No change from basic manual.