R22-series Cockpit Camera Installation Kit Instructions

Eligible for installation on R22 helicopter S/N 4825 and subsequent, with factory-installed camera provisions.

NOTE

Visit https://robinsonheli.com to verify kit instructions are current revision. Review instructions before installation; contact RHC Technical Support with questions. Verify kit contents match list; contact RHC Customer Support if parts are missing or damaged.

ITEM	PART NUMBER	KIT CONTENTS	QTY
1	KI-271-1Instr.	Kit Instructions	1
2	A142-5	Screw	4
3	D275-205	Fuse	1
4	F039-1	Enclosure Assembly – Cockpit Camera	1
5	F714-2	Antenna Assembly	1
6	F714-4	Flash Drive Assembly	1
7	MT640-1	Key (headset jack)	1

Consumables

Refer to R22 Maintenance Manual (MM) § 23-70 for approved materials list.

- B270-8 Adhesive
- B270-20 Adhesive

Kit Instructions

1. Ensure battery and avionics switches are off. Pull open and lockout AUDIO PANEL and GAGES circuit breakers.

CAUTION

Standard headset jack installation screws are installed using Loctite®. Care must be taken to remove screws without cracking jack. Apply heat to end of screw from inside enclosure using a soldering iron until screw can be rotated with minimum force (less than 4 in-lb of torque). If resistance occurs before screw is completely removed, repeat heating process.

2. Refer to R22 Illustrated Parts Catalog (IPC) Figure 33-13. Remove and retain hardware securing A712 cover to roof. Carefully lower cover; remove and retain spacers. Mark headset jacks with installed positions, LH & RH; remove headset jacks from cover. Remove and retain hardware securing maplight ground wire to bulkhead; disconnect maplight switch from airframe harness. Remove and discard cover.

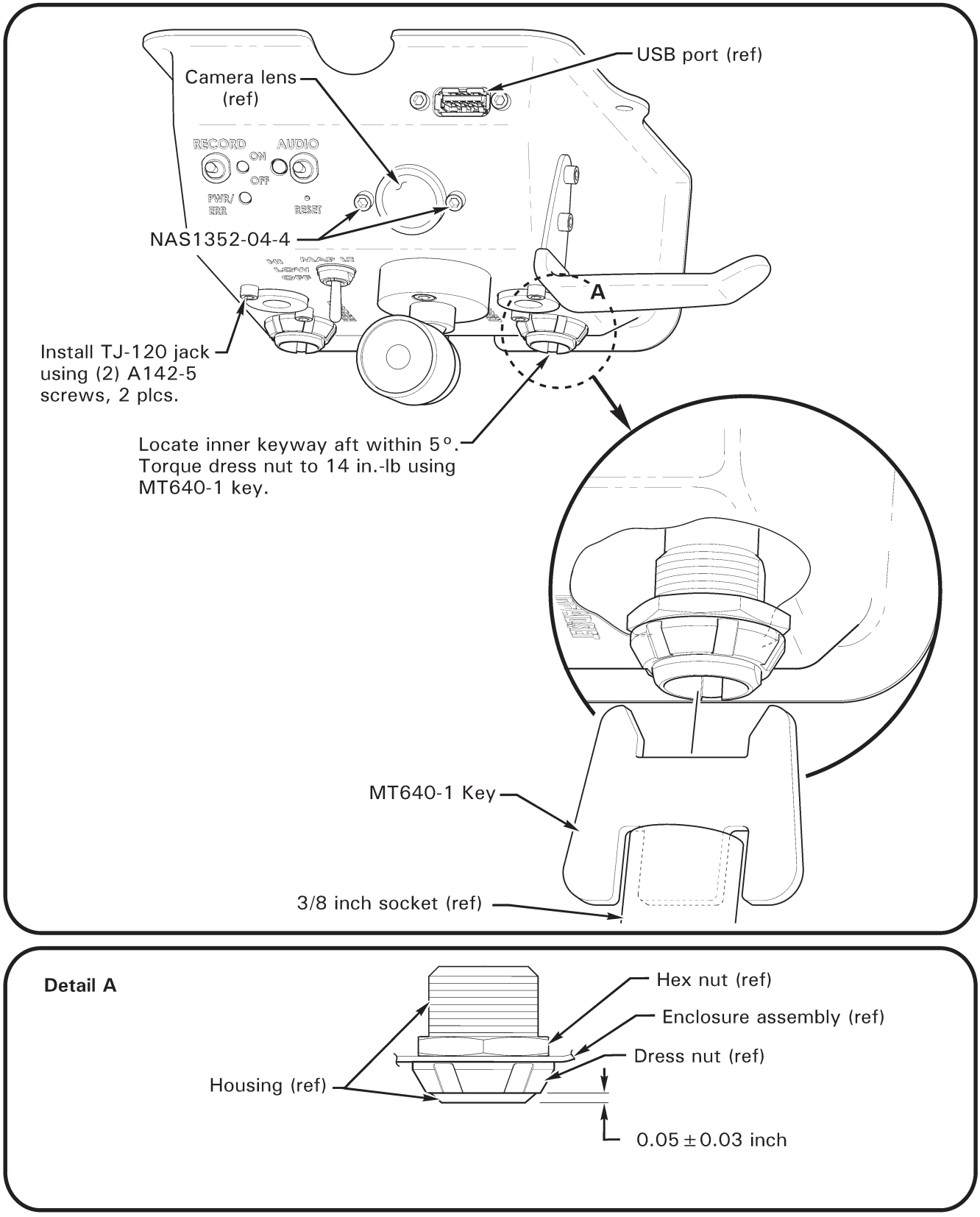


FIGURE 1 Headset jacks installation

Kit Instructions (continued)

3. Refer to R22 IPC Figure 96-37. Carefully connect RV-BATT-LIPO500 Battery connector to circuit board.

NOTE
Parenthetic dash numbers, such as (-2886), indicate number marked on wiring.

4. Refer to Figure 1. Connect F039-1 enclosure assembly camera plug to newly installed airframe harness receptacle. Install spotlight ground wire (-1858) terminal to bulkhead using retained hardware. Install Bose® headset jacks in correct position (as marked when removed), locating keyway aft within 5 degrees. Hold jack in position using 1/2 inch open end wrench on housing flats. Position dress nut to achieve dimension as shown in Figure 2, Detail A; snug hex nut to enclosure. Torque dress nut to 14 in.-lb using MT640-1 key, fitted to a 6-point, 3/8 inch socket. Verify dress nut is 0.05 inch to housing.

5. Install TJ-120 headset jacks in correct position (as marked when removed), using (4) A142-5 screws with B270-20 adhesive sparingly applied to threads; torque to 2 in-lb.

6. Refer to Figure 2 and IPC Figure 96-37. Connect F714-2 antenna assembly to fitting in enclosure assembly; route antenna forward. Install enclosure assembly to cabin roof using retained hardware and spacers.

7. Carefully separate headliner from roof only as necessary to access antenna installation location. Position antenna with metal side down, opposite of roof surface as shown. Remove backing from tape on antenna and press in place on roof. Using B270-8 adhesive, install headliner to roof as required, tucking antenna wire inside headliner.

8. Refer to R22 IPC Figure 25-1. Remove A445-2 cover below center collective stick. Install D275-205 fuse in holder located on inboard side of A292-1 LH keel panel. Install A445-2 cover.

9. Remove lockout rings from, and push closed, AUDIO PANEL and GAGES circuit breakers.

10. Ensure battery and avionics switches are on. Function check camera installation:

    a. Refer to Cockpit Camera Quick Start Guide available at https://robinsonheli.com.

    b. Refer to Figure 1. Insert F714-4 flash drive assembly into USB port of F039-1 enclosure. Toggle helicopter battery switch ON for minimum 30 seconds; video will record automatically. While video is recording, activate & route an audio source (such as ATIS) to copilot headset. Toggle helicopter battery switch OFF.

    c. Transfer flash drive to a computer and view video. If video is level with cockpit, camera lens is properly adjusted. If no audio is heard, check newly connected wiring.

    d. If horizon slants to the right (as shown in Figure 3), adjust angle by loosening two NAS1352-04-04 screws holding lens (see Figure 1) and rotate lens counterclockwise while facing lens; if horizon slants to the left, rotate lens clockwise. Tighten screws. Repeat steps b & c.

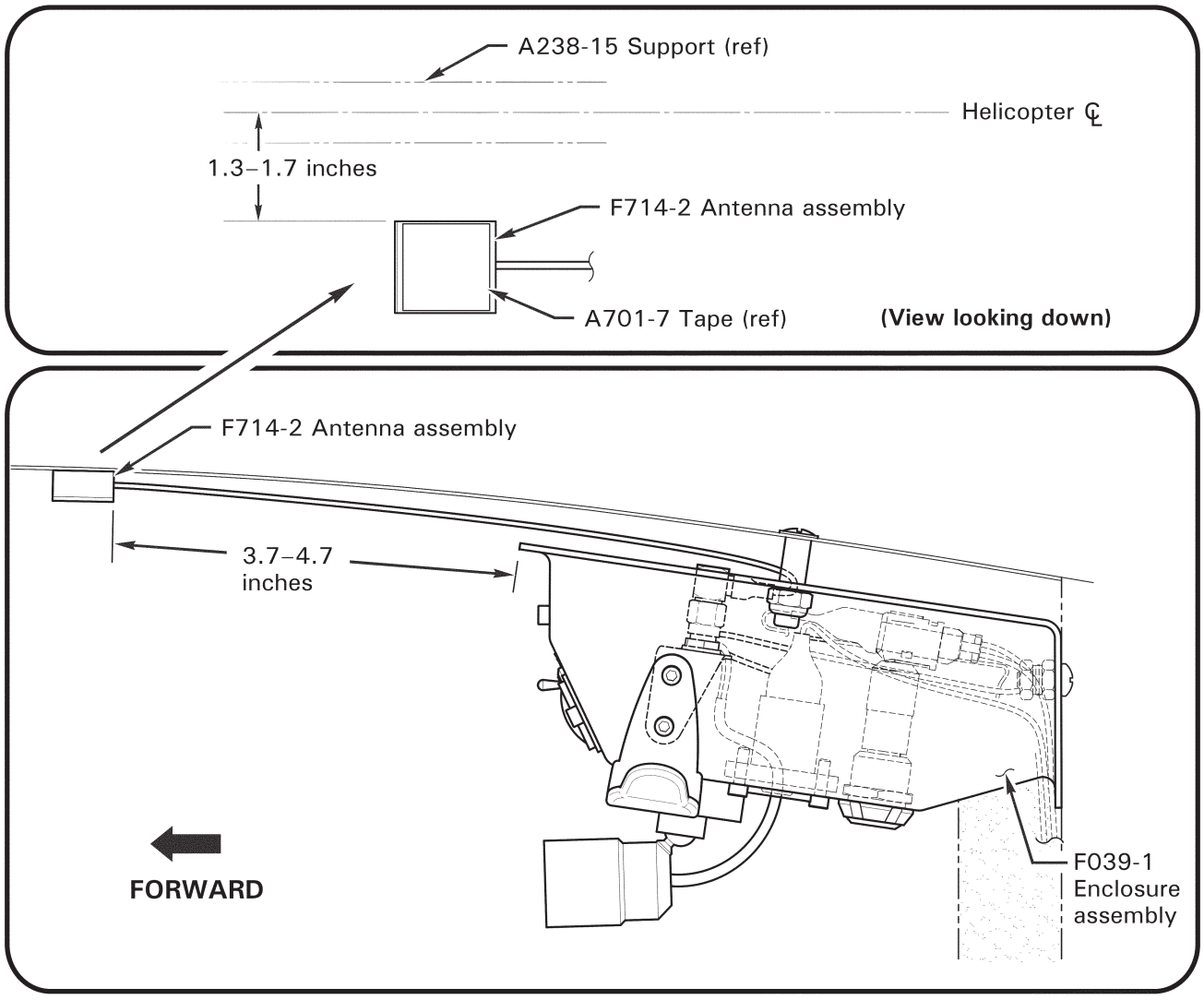


FIGURE 2 Enclosure and antenna installation

Kit Instructions (continued)

11. Revise helicopter's Weight and Balance Record in R22 Pilot's Operating Handbook (POH) Section 6 to reflect this installation by incorporating the following data:

    Add:

Item	Weight	Long. Arm	Long. Moment	Lat. Arm	Lat. Moment
KI-271-1 Cockpit Camera Installation Kit	+0.23 lb	92.1 in.	+21.2 in-lb	-0.07 in.	-0.02 in-lb

12. Make appropriate maintenance record entries.

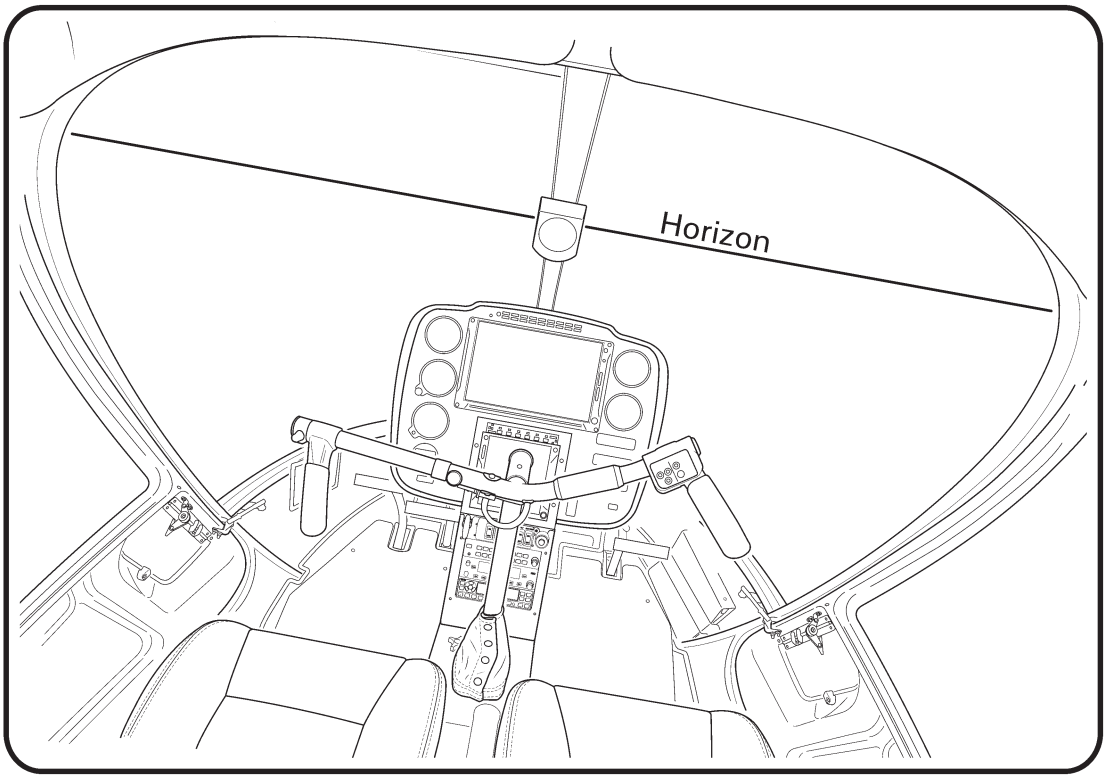


FIGURE 3 Camera view angle
(angle shown requires adjustment)