

# Special Instruction

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## Installation Guidelines for the Cat<sup>®</sup> Bluetooth Fob

**SMCS Code:**

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### Introduction

This Special Instruction covers the installation guidelines for the Cat<sup>®</sup> Bluetooth FOB (Cat BTFOB). Do not perform any procedure in this Special Instruction until you have read the information and you understand the information.

### FCC Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and 2. This device must accept any interference received, including interference that may cause undesired operation.

### Industry Canada Notice to Users

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and 2. This device must accept any interference received, including interference that may cause undesired operation of the device.

### Cat Bluetooth FOB Overview

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Illustration 1

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The CAT Bluetooth Fob uses Bluetooth Low Energy technology to enable Operator Identification upon entry into a machine cab. The CAT Key Fob periodically transmits Bluetooth packets with unique identifier information when activated by motion. The packets are picked up by a receiving device on the machine and are then sent over to a Machine Control ECM, enabling Operator Identification or Machine System Security.

# Specifications

## Technical Specifications

Input Voltage	
Battery	Coin Cell CR2450
Battery Chemistry	Manganese Dioxide Lithium
Battery Manufacturer	Panasonic
Battery Nominal Voltage	3V
Bluetooth Communication	
Transmit Frequency	2.400 GHz to 2.480 GHz
Transmit Output Power (max)	0 dBm (1 mW)
Antenna	PCB Trace - Monopole
Antenna Pattern	Omnidirectional
Antenna Linear Average Gain	-1 dBi
Antenna Peak Gain	2.7dBi
Passive RFID Transponder (Read Only)	
Global Compliance	ISO/IEC 11784 and 11785
Current Consumption (max)	
Sleep Mode	5µA
Max Average Current	1mA
Environment	
Operating Temperature	-30° C (-22° F) to 60° C (140° F)
Storage Temperature (battery removed)	-50° C (-58° F) to 85° C (185° F)
Sealing	IP67
Humidity	90% RH
Vibration	4.41 Grms

## Enclosure Dimensions (mm)

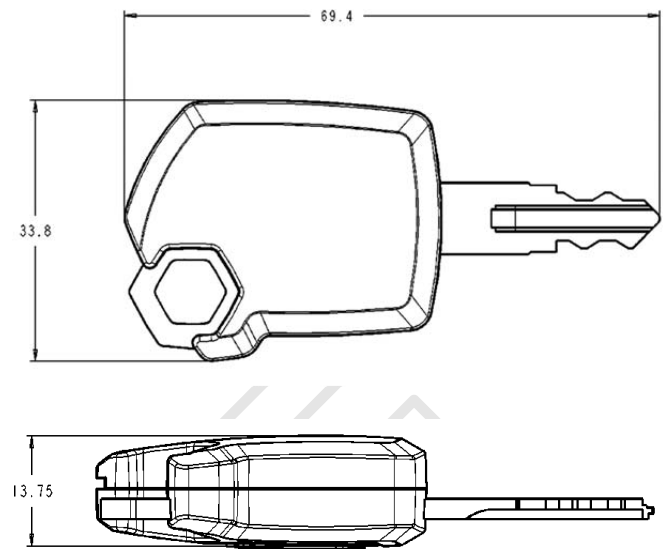


Illustration 2

Physical Specifications	
Enclosure Material	PPE+PA
Material Flammability Rating	UL-94 HB @ 1.5mm
Dimensions (LxWxH)	69.4 mm (2.73 inch) x 33.8 mm (1.33 inch) x 13.75 mm (0.54 inch)
Opening feature	Coin-sized slot for prying open the two-piece housing

## Battery

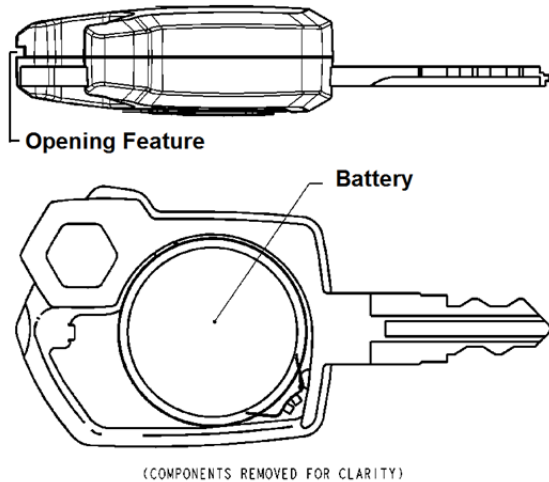


Illustration 3

## Battery Replacement Guidelines

### Opening the Enclosure

Find the opening feature on the housing by locating the slot in the housing next to the hex-shaped metal key ring

Use a coin to assist with the opening of the two-piece housing. Once loosened, pull apart one side of the housing from the other to expose the battery.

**Note:** The slot is designed for a coin the size of a U.S. dime or penny.

After the battery is fully exposed, remove the battery by hand and dispose of in accordance with all applicable federal, state, and local regulations.

Replace the used battery with a new CR2450, align the enclosures back together, and press together the housing until it snaps together. Check that the spacing is even on all sides of the housing.

## Handling and Radio Frequency Guidelines

Ensure that the following guidelines are met when handling the Cat BTFOB

- After inserting the Cat BTFOB into the machine door key slot or the ignition, do not apply more than 0.82 N-m of force when turning the key clockwise or counterclockwise inside of the key slot.
- For machines with key switch ignition, do not remove the Cat BTFOB from the key switch during machine operation. This ensures the engine stays on as well as ensuring reliable wireless transfer data from the key fob to the transceiver.
- For machines with Push to Start capability, do not move the Cat BTFOB more than 1 m (3.3 ft) away from the key switch during machine operation. This ensures reliable wireless transfer of operator ID data from the key fob to the transceiver.

**Note:** The 1 m (3.3 ft) distance requirement is due to the controlled range of the key fob.

- Ensure that the radio frequency propagation is not inhibited. Do not fully enclose the Cat BTFOB in metal such as a metallic lunch box.
- It is recommended to not keep the key in back pants pocket while sitting in the cab.

## Safety Hazard Warnings and Disposal for Manganese Dioxide Lithium Batteries

Ensure that the following guidelines are met when handling the Cat BTFOB

- Do not crush, short, charge incinerate or deform battery. Keep away from children. Replacing batteries use only CR2450 batteries complying EN60086-4 or UL1642
- LiMnO<sub>2</sub> batteries are not hazardous waste per the United States Resource Conservation and Recovery Act(RCRA) - 40 CFR Part 261 Subpart C. Dispose of in accordance with all applicable federal, state and local regulations.







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