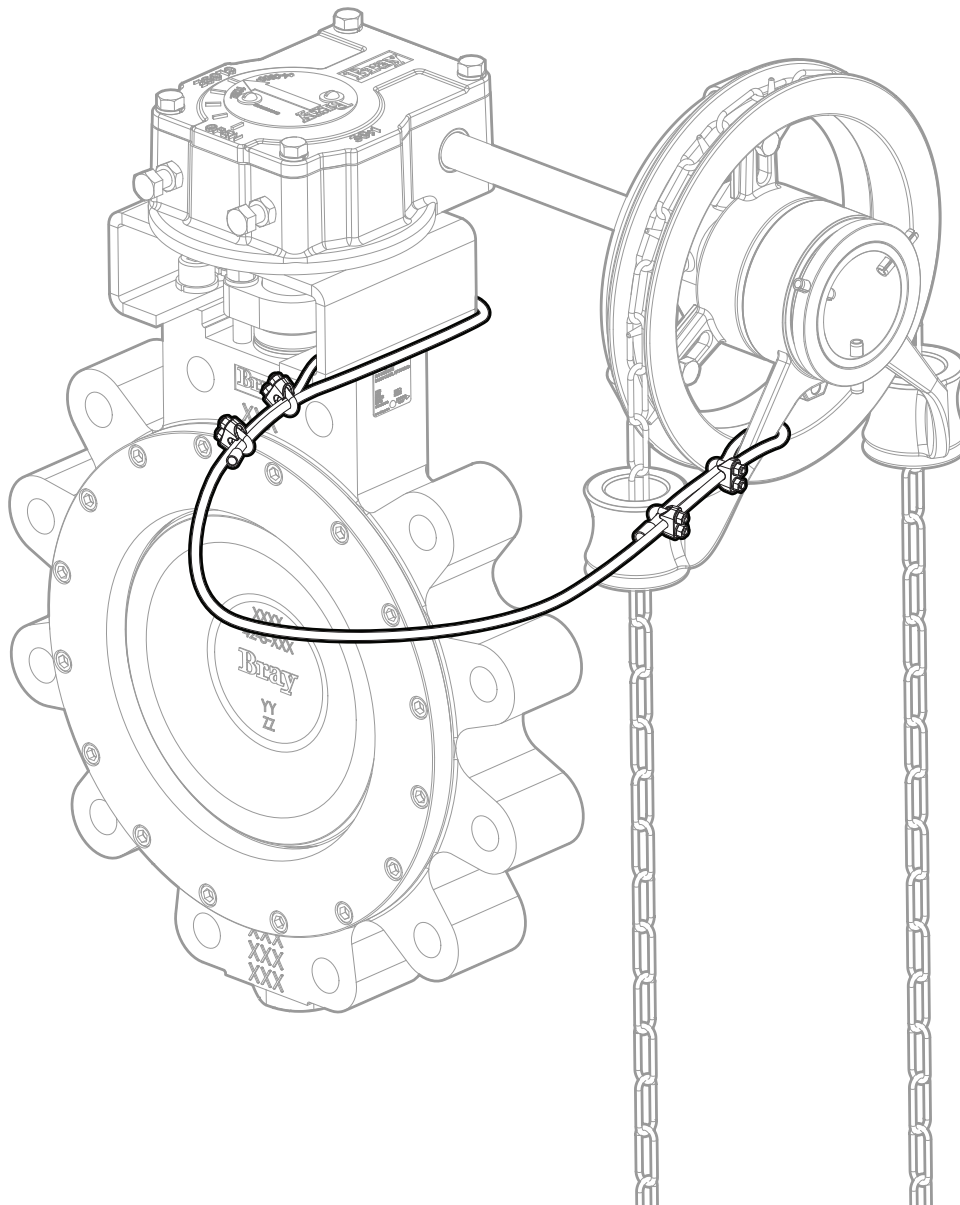


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**SERIES 04**

# RETAINING CABLE KIT FOR HAND WHEEL CHAIN

System Safety and Installation Instructions



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 **Bray**<sup>®</sup>

**CONTENTS**

1.0 Introduction. . . . . 4

2.0 Hazard-free use. . . . . 4

3.0 Warnings . . . . . 5

4.0 8in and 12in Hand Wheel Chain System Installation . . . . . 6

5.0 18in and 24in Hand Wheel Chain System Installation. . . . .7

**READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY.  
SAVE THIS MANUAL FOR FUTURE USE.**

## 0.0 DEFINITION OF TERMS

All information within this manual is relevant to the safe operation and proper care of your Bray valve. Please understand the following examples of information used throughout this manual.

## 0.0 IDENTIFIES CHAPTER HEADING

**0.00** Identifies and explains sequential procedure to be performed.

**NOTE:** Provides important information related to a procedure.

**SAFETY STATEMENTS:** To prevent unwanted consequences. Standard symbols and classifications are:



### **DANGER**

Indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.



### **WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



### **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.



### **NOTICE**

Used without the safety alert symbol, indicates a potential situation which, if not avoided, may result in an undesirable result or state, including property damage.

## 1.0 INTRODUCTION

Bray chainwheels are designed to easily attach to Bray S04 gear operators making them ideal for manual operation of valves positioned in challenging or inaccessible locations. Each chainwheel is equipped with safety cable kits, providing an added layer of safety to prevent accidental detachment from the gear operator.

The safety cable kits are available in both galvanized steel and stainless-steel options.

## 2.0 HAZARD-FREE USE

This device left the factory in proper condition to be safely installed in a hazard-free manner. The notes and warnings in this document must be observed by the user if this safe condition is to be maintained and hazard-free operation of the device assured.

Take all necessary precautions to prevent damage to the retaining safety cable and parts due to rough handling, impact or improper use.

## 3.0 WARNINGS



### 1. WARNING

Failure to read, to understand, and to follow warnings and instructions can result in serious injury or fatality.



### 2. WARNING

Bypassing this safety device may lead to serious injury or fatality.



### 3. WARNING

Wire rope needs proper care and maintenance for optimal safety and long service life. For a better understanding of wire rope we highly recommend the Wire Rope Users Manual by the Wire Rope Technical Board.



### 4. WARNING

Inspect wire rope regularly. Use inspection instructions as guidelines only. Check the general condition of the wire rope. Also, look for localized damage and wear, especially at wire rope attachments. Inspect all parts that come in contact with the wire rope. Look for kinks, broken wires, abrasions, lack of lubrication, rust damage, loose threaded fasteners, crushing, and a reduction of diameter, stretch or other obvious damage. If any of these conditions exists or if there is any other apparent damage to the wire rope, dispose of the wire rope. For specific inspection procedures, refer to various OSHA and ANSI publications.



### 5. WARNING

Attachments must have at least the same Working Load Limit as the wire rope used. Clips, sleeves, shackles, etc. must match in size to provide adequate safety protection. Proper installation of clips to wire, and wire to designated parts of valve is crucial for maximum efficiency and safety.

When applying U-Bolt over dead end of wire rope - live end rests in saddle. Tighten nuts evenly, alternating from one nut to the other. See Figure 2 on Page 3.

When creating a loop around specified equipment, the loop must be secure enough so that it will not slip off.

When applying anchor shackle with cotter pin, make sure nut is securely fastened and cotter pin is installed so that the nut cannot come loose from the bolt. See Figure 3.



### 6. WARNING

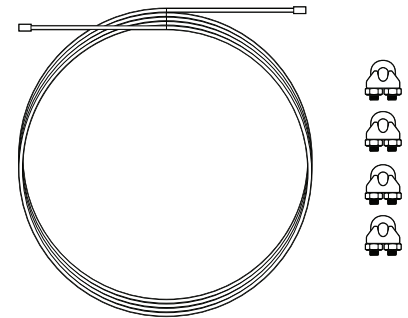
Avoid shock loads. Avoid impacting or jerking of cable. Do not hang from wire rope. Keep out of the line of force of any load. This device is a safety precaution; any unnecessary load placed on the wire rope may reduce its ability to function properly.

**4.0 8IN AND 12IN HAND WHEEL CHAIN SYSTEM INSTALLATION**

Read through and understand all of the instructions before beginning

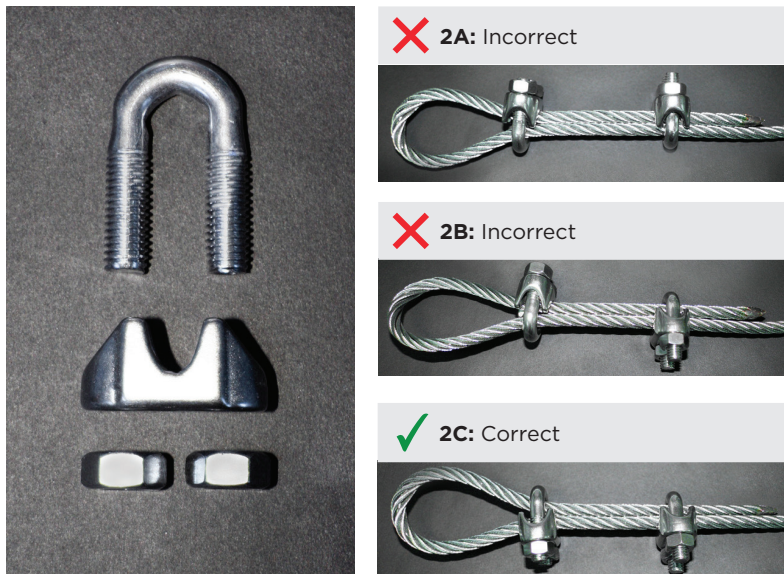
**Each Kit Contains:**

Galvanized Steel Kit	Stainless Steel Kit
One 5 ft long $\frac{3}{16}$ in dia. galvanized wire rope with a stop sleeve on each end	One 5 ft long $\frac{3}{16}$ in dia. SS wire rope with a stop sleeve on each end
Four $\frac{3}{16}$ in galvanized wire rope clips	Four $\frac{3}{16}$ in SS wire rope clips

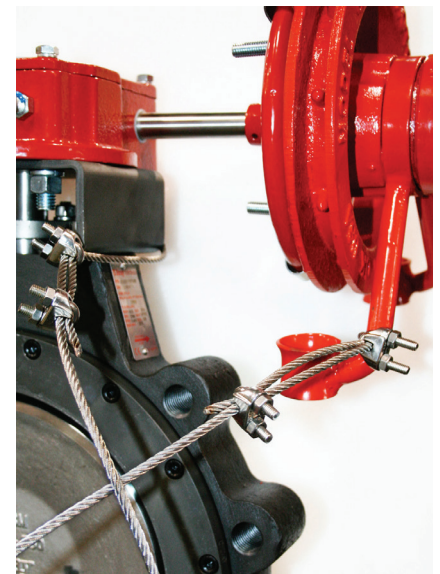


1. Dismantle two wire rope clips.
2. Loop wire rope around bracket or neck of valve. See **Figure 2**.
3. Close the loop by applying a wire rope clip. Secure the loop with the second wire rope clip as tightly as possible. See **WARNING Note 5** and **Figures 1 & 2**.
4. Dismantle the two remaining wire rope clips.
5. Loop wire rope around one “arm” of the chain guide. See **Figure 2**.
6. Close the loop by applying a wire rope clip. Secure the loop with the second wire rope clip as tightly as possible. See **WARNING Note 5** and **Figure 1**.

**Figure 1:** Correct assembly and use of wire rope clips



**Figure 2:** Wire rope secured around the bracket of valve and one “arm” of the chain guide.

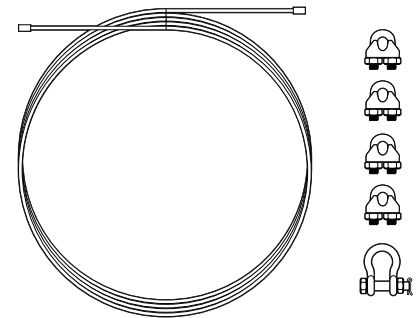


**5.0 18IN AND 24IN HAND WHEEL CHAIN SYSTEM INSTALLATION**

Read through and understand all of the instructions before beginning

**Each Kit Contains:**

<b>Galvanized Steel Kit</b>	<b>Stainless Steel Kit</b>
<b>One</b> 5 ft long ¼ in dia. galvanized wire rope with a stop sleeve on each end	<b>One</b> 5 ft long ¼ in dia. SS wire rope with a stop sleeve on each end
<b>Four</b> ¼ in galvanized wire rope clips	<b>Four</b> ¼ in SS wire rope clips
<b>One</b> ⅜ in - SS bolt anchor shackle with cotter pin	<b>One</b> ⅜ in - SS bolt anchor shackle with cotter pin



1. Dismantle the anchor shackle by removing cotter pin, loosening and removing nut and bolt from the u-shaped body. See **Figure 3**.
2. Insert the shackle through the hole at the top of the chain guide, as shown in **Figure 3**. Start by inserting the bolt into one ear of the anchor shackle. Next, slide the loop at the end of the wire (held in place by the wire clips) onto the bolt. After that, insert the bolt through the second ear of the anchor shackle and tighten the nut to secure it. Finally, add the cotter pin to keep the anchor shackle secure. See **WARNING Note 5** and **Figure 3**.
3. Dismantle the two remaining wire rope clips.
4. Loop wire rope around bracket or neck of valve. See **Figure 4**.
5. Close the loop by applying a wire rope clip. Secure the loop with the second wire rope clip as tightly as possible. See **WARNING Note 5** and **Figures 2 & 4**.

**Figure 3:** Anchor Shackle connected to the chain guide and Anchor Shackle Assembly.

**Figure 4:** Wire rope secured around the neck of the valve.



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**HEADQUARTERS**

**BRAY INTERNATIONAL, INC.**

13333 Westland East Blvd.

Houston, Texas 77041

Tel: +1.281.894.5454

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