

---

# CRT-1

COLLAR REMOVING TOOL  
CRT-1  
14-51-1400

## INSTRUCTION MANUAL

---



**MANUAL NUMBER 21-11-1060**  
Revision A

Issued November 1997  
Revised April 2020

---

Copyright 1997, Galiso, Inc.  
22 Ponderosa Ct., Montrose, CO 81401  
(970) 249-0233 (800) 854-3789  
[www.galiso.com](http://www.galiso.com)

---



**!!!DANGER!!!**

**DO NOT USE THIS EQUIPMENT TO  
PURGE TOXIC OR FLAMMABLE GAS**

**AND**

**DO NOT USE THIS EQUIPMENT UNDER  
FLAMMABLE, VOLATILE OR TOXIC  
ENVIRONMENTAL CONDITIONS**



## TABLE OF CONTENTS

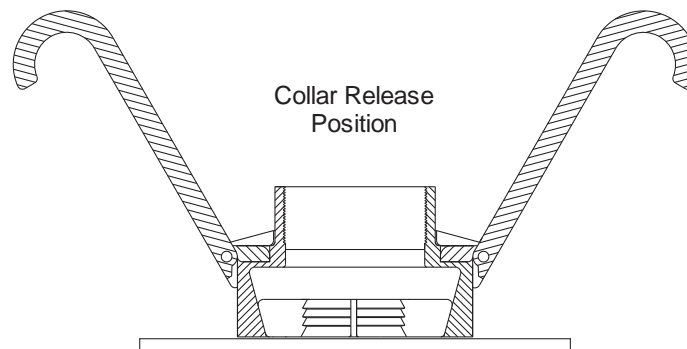
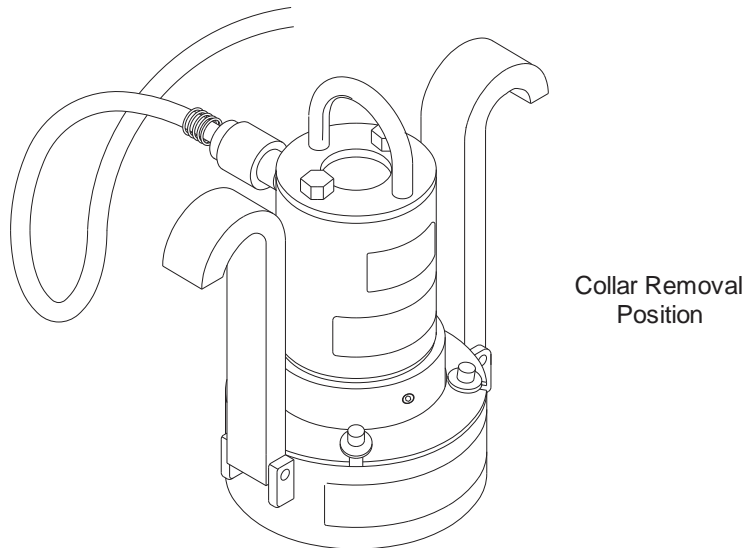
---

Section/Title	Page
1.0 Introduction .....	1-1
2.0 Specifications.....	2-1
3.0 Safety.....	3-1
4.0 Operation .....	4-1
5.0 Maintenance .....	5-1

---

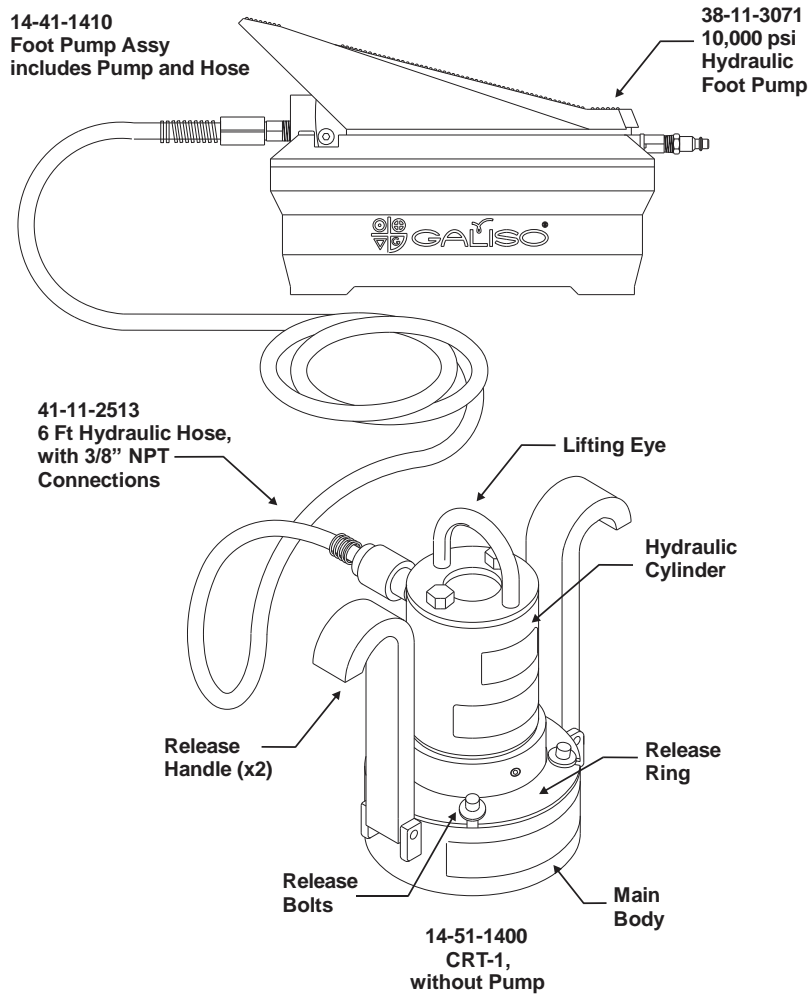
## 1.0 INTRODUCTION

The CRT-1 Collar Removing Tool is a universal tool designed to remove any Pressed Steel Collar from any cylinder in 30 seconds or less. The CRT-1 fits over collars without twisting, or having to thread to connect, and removes the collar by the use of hydraulic ram force. The collar is released from the tool with a single action from both release handles. The CRT-1 has a convenient Lifting Eye for use with an overhead hoist.



This page intentionally left blank.

## 2.0 SPECIFICATIONS



**Dimensions (Main Body):** 10" H x 5.5" Diameter

**Weight:** 27 lbs

**Capacity:** Removal of a minimum of 60 Collars per hour. Collar removal time is approximately 20 seconds. Ram return time is approximately 20 seconds.

**Removing Force:** 25 Tons

**Collar Size:** 3" – 3.25" Diameter standard size collars.

❖ Other sizes are available to suit different Collar sizes.

Requirements:

**Air:** Shop air supply 90-120 psi (6.2 – 8.2 bar)

**Hydraulic:** 10 cu in. per minute at 10,000 psi.

**Hydraulic Oil:** Viscosity 100

An air operated 10,000 psi Hydraulic Foot Pump and Hose are available, part number 14-41-1410. An air supply line of .375" I.D. @ 90 psi is required for this foot pump.

A repair kit for the Hydraulic Ram is also available, part number 38-11-6050.

This page intentionally left blank.

---

### 3.0 SAFETY

Read all instructions before attempting to install or operate this machine.

**GALISO, INCORPORATED IS NOT RESPONSIBLE FOR DAMAGE OR INJURY CAUSED BY UNSAFE USE, MAINTENANCE, APPLICATION, MODIFICATION OR IMPROPER INSTALLATION OF THIS MACHINE.**

Please contact Galiso, Inc. for guidance when you are in doubt as to the proper safety precautions to be taken when installing or operating this machine.

1. Face Shield and Gloves are mandatory PPE (Personal Protection Equipment) for the CRT-1.
2. Always use two hands when holding the CRT-1 in place.
3. The CRT-1 Release Handles **MUST BE** in an upright/vertical position before applying hydraulic pressure.
4. Keep hands, fingers and clothing out of and away from the jaws when the hydraulic supply is connected.
5. Do not operate the CRT-1 if it has worn or broken parts. Contact Galiso Customer Service at 1 (800) 854-3789 or 1 (970) 249-0233 for replacement parts.
6. Do not attach a worn or cracked hydraulic line to the CRT-1.
7. Keep a clean, dry floor area for proper footing while operating the CRT-1.
8. Do not operate the CRT-1 under flammable, volatile, or toxic conditions.
9. For safe holding of the CRT-1, keep the CRT Body clean, dry and with no hydraulic oil on or around it.
10. For securely grasping and holding of the Collar, keep the Jaws and CRT Body clean, dry and with no hydraulic oil on or around it.

**NOTE: Warranty is voided if Enerpac<sup>®</sup> Oil is not used exclusively in the foot pump.**



This page intentionally left blank.

## 4.0 OPERATION

1. Connect the 3/8" NPT Hydraulic Hose end to the Foot Pump and the 3/8" Quick Connect end to the CRT.
2. Connect the Foot Pump to shop air supply (90-120psi, 6.2-8.2 bar).

Be certain to **Vent** the Foot Pump before use! Using either the Vent Screw or Vent Fill Plug, vent excess pressure before using the pump. Failure to do so may cause cavitation and pump damage, thus **voiding the warranty**.

- a. Vent Screw: Use the vent screw only if the pump is in the horizontal position. Do not open the vent screw if pump is sitting vertical. The vent screw is located near the hydraulic outlet port, on the top of the reservoir.



- b. Vent / Fill Plug: Pull up on the outer hex of plug to the first dentation for venting.



---

#### 4.0 OPERATION, continued

3. Ensure the cylinder is stabilized or held in place as to not tip over.
4. With the release handles in the removal position (handles vertical, next to the hydraulic cylinder), place the CRT-1 fully over the collar to be removed.
5. Apply hydraulic pressure to the CRT-1. If using the Galiso air operated Hydraulic Foot Pump, actuate the foot pedal to apply pressure. This will extend the hydraulic ram and pull the collar of the cylinder neck.

**IMPORTANT:** Never apply hydraulic pressure to the CRT-1 with the handles in the release position (horizontal, away from the CRT Body).

6. Relieve the hydraulic pressure from the CRT-1 to retract the ram. This can be done by applying pressure to the heel end of the foot pedal to retract the ram.
7. Keeping the CRT Handles in a vertical position, lift the CRT-1 and extracted collar off of the cylinder.

#### **CAUTION!:**

Ensure the extracted collar is over a table or cart before moving the release handles. Collars can be heavy and injury, to feet or toes may occur, if collar is not released over an appropriate surface.

8. Move the release handles outward (away from the CRT body) to the release position. This will release the collar from the CRT-1. Keeping the handles in the same position, lift the CRT from the collar.

Repeat steps 3-8 for removal of any additional cylinder collars.

NOTE: Be certain that all pressure has been released, and the Ram Adapter Block is in the fully retracted position before reapplying hydraulic pressure. If the Adapter Block is not fully retracted, the collar will not be grasped completely, and the CRT may be damaged.

\*\* If the Collar has not been pulled free of the cylinder after the complete actuation of the ram, release the hydraulic pressure, release the collar and allow the Ram Adapter to fully retract. Ensure the Ram Adapter is fully retracted and repeat the removal process.

## 5.0 MAINTENANCE

1. Check the jaws and release bolts, periodically for wear. Do not operate the CRT-1 if it has worn or broken parts. Replacement parts are available from Galiso, Incorporated at 1 (800) 854-3789.
2. Inspect the hydraulic fittings for leaks or signs of wear. Replace the fittings if needed.
3. Regularly clean or replace the filter element that supplies air to the hydraulic supply.
4. Maintain a full level of Enerpac<sup>®</sup> oil in the Foot Pump. Check the sight glass in the front of the pump. The oil level should be kept at approximately half way in the middle of the sight. **NOTE: Warranty is voided if Enerpac<sup>®</sup> Oil is not used exclusively in the foot pump.**
5. Regularly check all lines for leaks. Repair or replace damaged lines as needed.

**REMEMBER: DO NOT** operate the CRT-1 with a worn or cracked hydraulic line.

6. Check the Jaws inside of the CRT-1 daily (or more often) to ensure that the internal area is free from debris. Make sure the internal area is clean and greased. Galiso, Inc. recommends using Dow Corning Molykote 33 Medium, Galiso part number 54-11-0008.
7. Check the Adapter Block inside of the CRT-1 for tightness.
8. When replacing the Enerpac 20 ton Ram, leave only 11 or 12 threads showing above the housing.

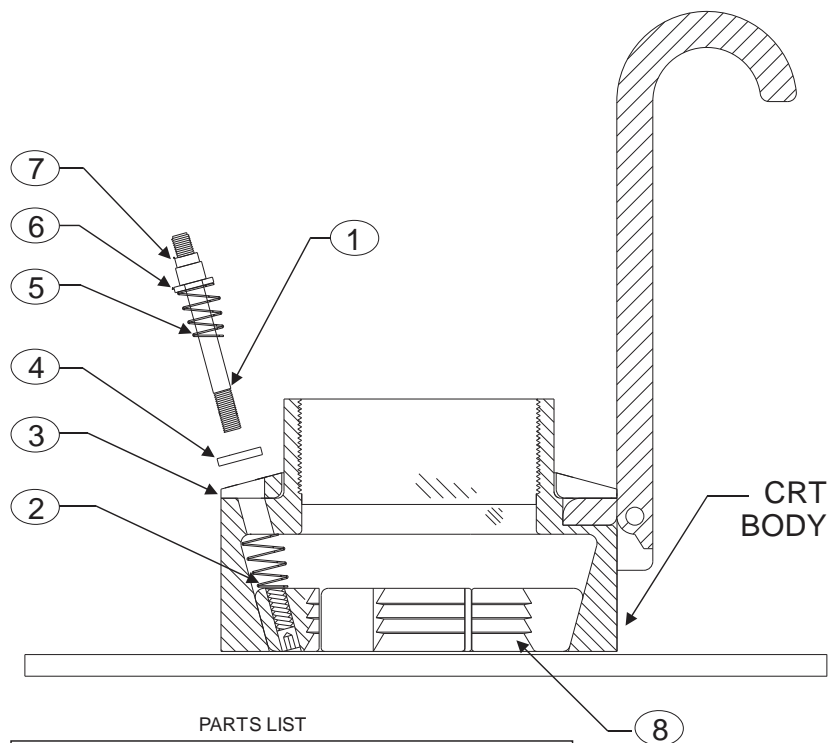


Clean and grease areas under and behind the jaws.

## 5.0 MAINTENANCE, continued

### Bolt Replacement:

1. Position the jaw inside of the CRT Body with 1 Ball Head Bolt (item 1) thru each Jaw, one Spring (item 2) and the CRT Body.
2. Slide the Release Ring (item 3) over the CRT Body.
3. Place one Washer/Spacer (Item 4), one Spring (item 5), one Washer (item 6), and one Nylock Nut (item 7) over each of the Bolts.
4. Tighten each of the Nuts until the Jaw is flush with the bottom and there is no play within the other components.



PARTS LIST

ITEM #	P/N #	DESCRIPTION	QTY
1	14-31-1423A	BOLT, BALL HD, 1/4 -20 X 3 -1/4"	4 EA.
2	51-33-0050	CONICAL SPRING	4 EA.
3	14-31-1404C	RING RELEASE, CRT-1	1 EA.
4	14-31-1421A	WASHER, BOLT SPACER	4 EA.
5	51-33-0041	SPRING MUSIC WIRE #2808	4 EA.
6	63-83-0020	FF, WASHER, FLAT, 1/4	4 EA.
7	62-83-5800	NUT, NYLOCK, 1/4 -20	4 EA.
8	14-31-1416	JAW, SET OF 4, 1" TOOTH	1 EA.

1. **DURATION:** Galiso provides a one-year warranty from date of purchase, to the original purchaser, for standard products, unless otherwise specified. For all spare parts purchases, Galiso provides a 90-day warranty unless otherwise specified. Soft goods such as our speed seals, and O-rings, which are subject to wear in the normal course of operation, are not covered under this warranty.
2. **COVERAGE:** Galiso manufactured equipment is warranted against defective materials or workmanship. THIS WARRANTY IS VOID IF:
  - A) THE EQUIPMENT HAS BEEN DAMAGED BY ACCIDENT OR UNREASONABLE USE, IMPROPER SERVICE/MAINTENANCE, IMPROPER INSTALLATION, ABNORMAL OPERATING CONDITIONS, NEGLIGENCE, REPAIR BY ANY PERSON NOT AUTHORIZED BY GALISO, INC. OR OTHER CAUSES NOT RELATED TO MATERIAL DEFECTS OR WORKMANSHIP.
  - B) THE SERIAL NUMBER HAS BEEN ALTERED OR DEFACED.
3. **PERFORMANCE:** Galiso reserves the right to make warranty determination only after inspecting the item at the Galiso manufacturing facility. If the warranty determination indicates that the defective item is covered under warranty, the item will be repaired or replaced with the same parts/items or parts/items of equivalent quality, at the option of Galiso. In the event of replacements, the replacement unit will continue under the original equipment warranty or carry a 90-day warranty, whichever is longer. No charge will be made for warranty repairs, and/or replacements. All freight charges to and from Galiso Inc. or a Galiso Inc. authorized repair facility, are the responsibility of the customer requesting warranty service.

If the warranty determination indicates that the item is **not** covered by warranty, a repair/replacement cost estimate will be submitted to the customer/purchaser for approval prior to initiating any repair work.

4. **CLAIMS:** In the case of equipment malfunction, notify Galiso (1-800-854-3789) and provide the Model Name, Model Number, Serial Number and a description of the problem. Return Authorization Number, shipping and/or service information will be provided on receipt of the required information.
5. **SERVICE EQUIPMENT:** Galiso attempts to make available, whenever possible, a limited amount of service equipment at a minimal use charge, plus freight expense, for those customers wishing to avoid downtime during repair of their equipment. Such items are available on a first come, first served basis and are billable at the specific service charge applying with a one-month minimum.
6. **MODEL CHANGES:** Galiso reserves the right to make changes in materials and specifications, without notice. Galiso may offer, for a stipulated fee, the opportunity to upgrade your equipment to the latest configuration.
7. **DISCLAIMERS:** Galiso provides technical data and assistance to aid customers in the selection and use of our products. There are no implied warranties of merchantability nor suitability for a particular purpose associated with the transmittal of technical data and/or customer assistance.

Galiso does not assume liability for any consequential, incidental, or special damages. Liability under this warranty is limited to repairing, or replacing Galiso equipment items returned to the factory or an authorized facility.

8. **COMPUTER AND NETWORK VIRUS PROTECTION:** Galiso Inc. equipment, which utilizes internet access, comes equipped with a subscription to virus protection software. It is the responsibility of the equipment owner to maintain this virus protection subscription or other virus protection at their cost. Current virus subscriptions are mandatory to maintain the benefits of this warranty. Galiso does not assume liability for any or all damages related to or are the result of internet or network failure or malware or computer viruses or any other type of internet or network malfunction or attack.