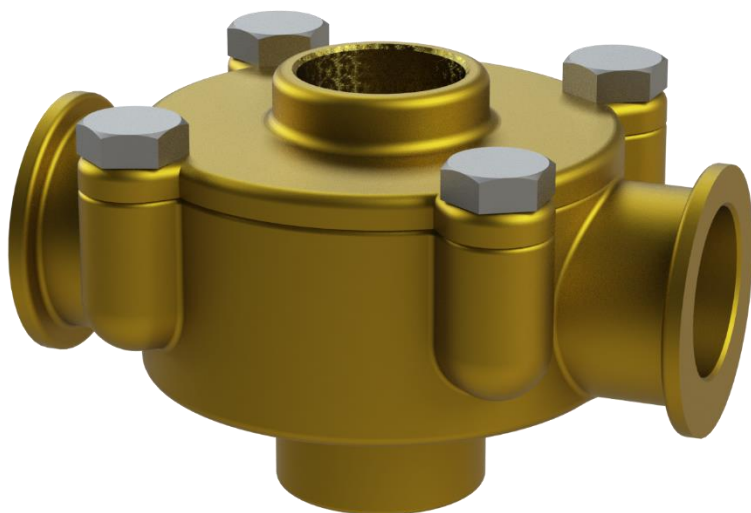




3905 QUICK RELEASE VALVE

Owner's Operation, Installation & Maintenance Manual



Jan 2022
(Rev A)

NOTES:

[illegible]

RECORD DATA BEFORE INSTALLATION FOR FUTURE REFERENCE

Model #:	
Serial #:	
Date of Purchase:	
Date of Installation:	

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1 INTRODUCTION

1.1 CONTACT

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This document is intended to clearly present comprehensive product data and provide technical information to assist the end user in design applications. Kobelt reserves the right, without notice, to change the design, or construction, of any products and to discontinue or limit distribution of any products. Kobelt also reserves the right to change, or update, without notice, any technical information contained within this document.

Kobelt recommends that customers visit our website to check for updates to this Manual. Once a product has been selected for use, it should be tested by the user to ensure proper function in all possible applications. For further instructions, please contact our distributors or visit our website.

1.2 COMPLIANT USE

This device is only intended for use by persons trained in operating marine systems.

The installer shall:

- Only use non-defective products.
- Check the safety of operation and the condition of the device before each use.
- Verify that the product is operational at all times and keep it in good working conditions.

Only Kobelt Manufacturing Co. Ltd. Authorized Dealers or Authorized Technicians are to repair Kobelt products.




1.3 COPYRIGHTS & TRADEMARKS

All product names, logos and brands are property of their respective owners. All company, product and service names used in this manual are for identification purposes only. Use of these names, logos, and brands does not imply endorsement.

2 SAFETY

2.1 SAFETY ALERTS

Throughout this manual, the following symbols, and their accompanying explanation, are used to alert the user to special instructions concerning a service or operation that may be hazardous if performed incorrectly or carelessly. The associated risk levels are stated below.


 DANGER	This symbol indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	This symbol indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	This symbol indicates a hazardous situation, which if not avoided, could result in minor or moderate injury.
NOTICE	This symbol informs the reader of events not related to personal injury but which there is a risk of damage to property or equipment.
SAFETY INSTRUCTIONS	This symbol informs the reader of safety-related instructions or procedures.

2.2 NOTICE TO INSTALLER

Disregarding the following safety measures can result in an accident causing severe injury to personnel and damage to material assets.

- Only use the product as directed in this manual.
- Never put the product into service if there is evidence of visible damage.
- Never put the product into service before fully completing installation and commissioning.
- Do not carry out any modifications to the product.
- Only use authentic Kobelt spare parts.
- Observe all local regulations, directives and laws during the installation of this product.
- All installation, commissioning, and maintenance work must only be conducted by qualified personnel. (For the purpose of this manual, qualified personnel are persons who are familiar with the assembly, installation, commissioning, and operation of the product and who have the qualifications necessary for their occupation.)
- Observe all specifications in this manual. If these guidelines are not followed and damage occurs, the warranty will be voided.

2.3 PRODUCT HAZARDS

**WARNING**

High Pressure Operation: This product uses high pressure air. Ensure all pressure is exhausted and power sources are locked out prior to performing work.

3 PRODUCT DESCRIPTION

3.1 PRODUCT DESCRIPTION

The diagram below depicts a Kobelco release valve:

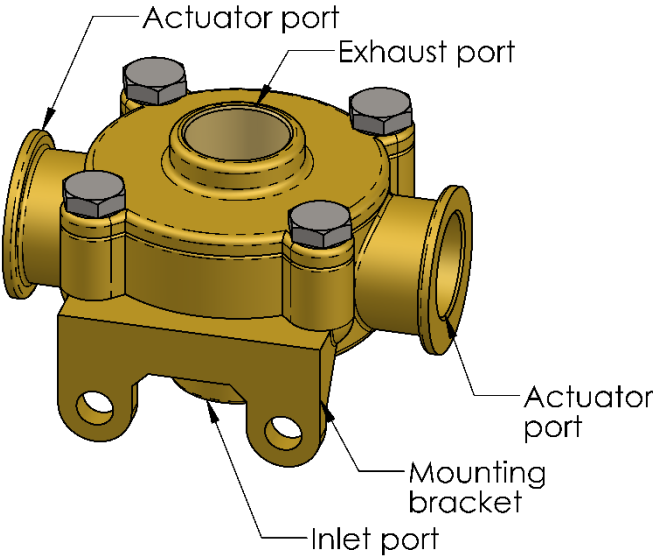


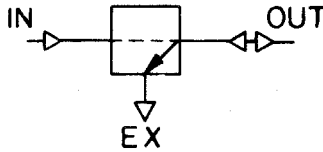
Figure 1: 3905 Overview Diagram

3.2 TECHNICAL SPECIFICATIONS

Table 1: Technical Specifications

MODEL	3905
SUPPLY PRESSURE	200 psi [13.8 bar] MAX
PORT SIZES	½ NPT
OPERATING TEMPERATURE	-40°F to 194°F [-40°C to 90°C]
PRODUCT WEIGHT	1.1 lbs [0.5 kg]

3.3 SCHEMATIC SYMBOL



4 INSTALLATION

4.1 MECHANICAL

Mount the valve to a flat surface with enough rigidity to prevent excessive flexing from vibrations. When installing the mounting fasteners, it is recommended to use a thread locking product such as Loctite® to ensure a vibration resistant and secure joint.

4.2 PIPING

The valve ports are plugged to prevent contamination of the seals. Remove the plugs prior to connection to the piping.

The piping to the brakes must be adequately sized to ensure rapid response times in all weather conditions. The piping must be selected to safely withstand the pressures required to operate the brakes. Secure the piping against vibration with pipe clamps per the schedule in the table below.

Table 2: Pipe Clamp Table

PIPE CLAMP TABLE			
PIPE SCHEDULE	3/8"-1/2" tube [DN6]	1/4" – 1/2" pipe 1/2"-3/4" tube [DN8-DN15]	3/4" pipe 1"-1.25" tube [DN20]
CLAMP SPACING	3 ft [914 mm]	4 ft [1219 mm]	5 ft [1524 mm]

All piping must be cleaned prior to connection to the valve. Welded carbon steel piping must be pickled to remove the scale produced by welding.

Install the port fitting using thread sealant and tighten to 2 - 3 turns from finger tight. Use brass pipe fittings as steel fittings are too heavy and may split the port.

NOTICE

Do not over tighten the fitting in the ports as damage to the valve may occur.

For operation in sub-zero temperatures down to a minimum of 0°F [-20°C] the air must be dried to a dew point of -50°F [-44°F]

**WARNING**

Failure to adequately dry the compressed air supply may result in the brake valve freezing and rendering the brakes inoperable in sub-zero weather conditions.

5 COMMISSIONING

5.1 FUNCTIONAL TEST

After installation perform a function test to ensure the ports are connected properly.

**CAUTION**

The Function Test should be carried out with the connected equipment in a safe state.

6 OPERATION

6.1 SERVICE LIMITS

Do not allow the supply pressure to exceed the values given in the [Technical Data](#) section. If the available supply pressure exceeds the maximum allowable working pressure, then some form of a pressure regulator is required. Also, the pressure supply system must be equipped with a safety relief valve to ensure the given maximum allowable working pressure.

7 MAINTENANCE

7.1 PREVENTATIVE MAINTENANCE

- Quarterly (4 times/year)
 - Inspect connections for leaks.
- Every two years
 - Operate the valve and ensure poppet seals.

7.2 RECOMMENDED SPARE PARTS

As a minimum Kobelt recommends the following spare parts are on-hand:

Table 3: Recommended Spares

RECOMMENDED SPARES		
QTY	ITEM	KOBELT PART #
1	Repair kit	3905-RK

When purchasing spare parts refer to Appendix B: Parts List at the back of this manual for Kobelt component Part Numbers. See instructions at the end of this manual for shaft seal replacement.

NOTICE

It is recommended that any required service work on a Kobelt product be performed by a factory authorized service representative. Please contact the nearest Kobelt authorized distributor for assistance.

8 WARRANTY

Kobelt Manufacturing Co. Ltd. ("Kobelt") warrants the Products and Parts manufactured by Kobelt to be free from defects in workmanship or material and that said products are designed mechanically and functionally to perform to specifications.

This warranty is effective providing:

- The equipment is used within the intended operating conditions and in accordance with Kobelt recommendations
- The equipment is installed according to equipment diagrams, specifications and recommendations which Kobelt has provided

This warranty becomes invalid if the factory supplied serial number has been removed or altered on the product. This warranty does not cover cosmetic damage or damage caused by an act of God, accident, misuse, abuse, negligence or modification of any part of the product. This warranty does not cover damage due to improper operation or maintenance, connection to inappropriate equipment or attempted repair by anyone other than an authorized Kobelt representative.

Upon identification of a potential issue or defect with a Kobelt Product or Part, the Warranty Applicant ("Applicant") must immediately contact Kobelt and describe the issue in writing, by letter, fax, email or other electronic conveyance. Kobelt will then assess the cause of the defect and determine warranty applicability and appropriate remediation.

If any part is found to be defective, Kobelt will replace said part FOB the Kobelt factory provided that any such defective part is returned by the Buyer with freight and applicable forwarding charges prepaid by the Buyer. Kobelt's sole obligation to the Applicant will be to repair or replace the defective part with same or similar product, to a maximum value of the list price of the product or part. The Kobelt warranty does not cover labour charges, travel or any other associated expenses.

All Products and Parts manufactured by Kobelt, are subject to a warranty against manufacturer's defects in materials or workmanship for a period of two (2) years from the date of purchase.

Kobelt will be responsible for all Products or Parts sold by Kobelt but manufactured by 3rd party manufacturing companies. However, these products and parts are subject to applicable 3rd party warranties and may not be the same as the Kobelt warranty.

9 APPENDIX A: INSTALLATION DIMENSIONS

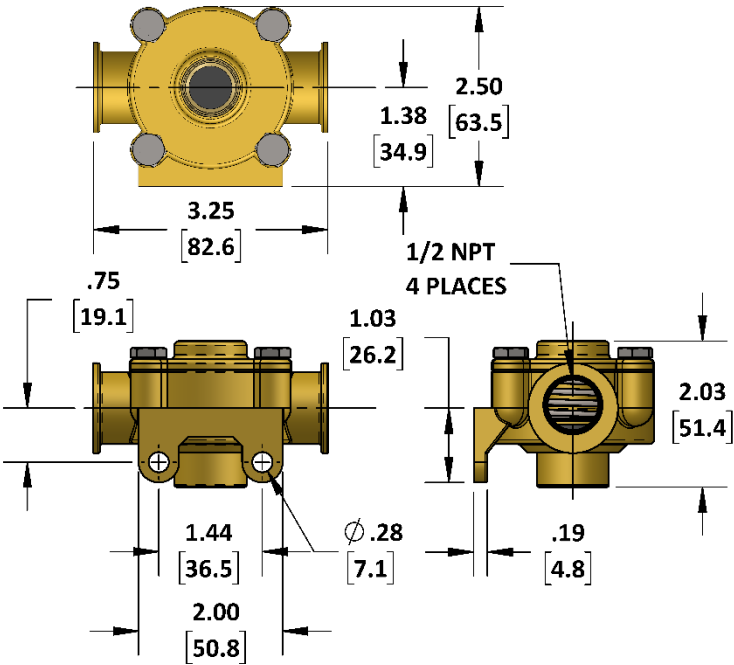


Figure 2: Installation Dimensions

10 APPENDIX B: PARTS LIST

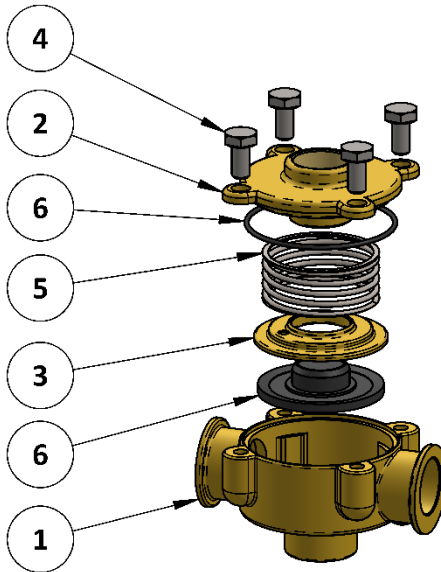


Figure 3: Parts Diagram

Table 4: Parts List

ITEM	QTY	PART NO.	DESCRIPTION
1	1	3905-0001	VALVE BODY, 3905 QUICK RELEASE
2	1	3905-0002	END CAP, 3905 QUICK RELEASE
3	1	3905-0003	PISTON, 3905 QUICK RELEASE
4	4	1001-1008	SCREW - HX HD; 1/4 UNC X 1/2 LG, 18-8
5	1	1201-0014	SPRING, COMPRESSION, 1.625 OD X .08 WIRE X 1.375L
6	1	3905-RK	REPAIR KIT, 3905 VALVE

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