JIREH

CX0450 Rev 03.1

Actuated Probe Lift

SAFETY WARNINGS / PRECAUTIONS

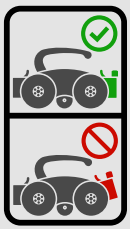
KEEP THIS MANUAL – DO NOT LOSE

THIS MANUAL IS PART OF THE ACTUATED PROBE LIFT AND MUST BE RETAINED FOR THE LIFE OF THE PRODUCT. PASS ON TO SUBSEQUENT OWNERS.
Ensure any amendments are incorporated with this document.

WARNING! The Actuated Probe Lift is designed for a specific use. Using the Actuated Probe Lift outside of its intended use is dangerous. Failure to comply with the warnings, instructions, and specifications in this manual could result in **SEVERE INJURY** or **DEATH**. Read and understand this manual before using.

WARNING! Do **NOT** operate Actuated Probe Lift in an explosive environment. Do **NOT** operate actuated probe lift in the presence of volatile substances.

WARNING! FALLING OBJECT HAZARD. Always loosen set screws when using the Navic with any other accessory.



WARNING! ONLY USE ACTUATED PROBE LIFTS WHEN SWIVEL MOUNT IS LOCKED IN THE HORIZONTAL POSITION.

WARNING! DO NOT DISASSEMBLE. No user-serviceable parts. Disassembling any of the components in this product, beyond the instructions in this user manual, could void the regulatory certifications and/or effect the safety of the product.

CAUTION! DO NOT DISCONNECT UNDER LOAD. Shut off power before connecting or disconnecting. Permanent damage to electronics could occur.

The **WEEE** symbol indicates that the product must not be disposed of as unsorted municipal waste, but should be collected separately.

(see "Disposal" on page 30 for additional details).

TABLE OF CONTENTS

IDENTIFICATION

1.1. Product Brand

This user manual describes the proper safety precautions, setup and use of the actuated probe lift.

1.2. Manufacturer

Distributor:

Manufacturer:

Jireh Industries Ltd.

53158 Range Road 224
Ardrossan, Alberta, T8E 2K4
Canada

Phone: 780.922.453

jireh.com

1.3. Compliance Declarations

1.3.1. ISED Emissions Compliance (Canada)

CAN ICES-003(A) / NMB-003(A)

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

1.3.2. FCC Suppliers Declaration of Conformity (United States)

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.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

RESPONSIBLE PARTY NAME:	Jireh Industries
ADDRESS:	2955 S Sam Houston Pkwy E Suite 300 Houston, Texas United States 77047
TELEPHONE:	832-564-0626

1.3.3. European Union CE Declarations

Jireh Industries hereby declares that the Actuated Probe Lift product complies with the essential requirements and other relevant provisions of the following European Union directives:

2014/30/EU	EMC Directive
2014/35/EU	Low Voltage Directive
2012/19/EU	Directive on Waste Electrical and Electronic Equipment
2011/65/EU	Directive on Restriction of Hazardous Substances (RoHS)

1.3.4. UKCA Declarations

Jireh Industries hereby declares that the Actuated Probe Lift product complies with the essential requirements and other relevant provisions of the following UK directives.

Title	Edition/Date of Issue
Electromagnetic Compatibility Regulations	2016
Electrical Equipment (Safety) Regulations	2016
Waste Electrical and Electronic Equipment Regulations	2013
Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations	2012

PRODUCT SPECIFICATIONS

2.1. Intended Use

The actuated probe lift is intended to:

- only be used with the **NAVIC** crawler
- hold, lift and lower the probe within the standard operating limits *(see "Operating Limits" on page 3)*.

2.1.1. Operating Limits

	Minimum	Maximum
External, circumferential scans:	61 cm *(24 in)* OD	Flat
External, longitudinal scans:	61 cm *(24 in)* OD	Flat
Maximum probe weight		.9 kg *(2 lb)*

2.1.2. Operating Environment

The actuated probe lift is designed for use in an industrial environment with an ambient temperature between -20° C *(-4° F)* and 50° C *(122°F)*.

2.1.3. User

The actuated probe lift is intended to be used by persons who have read and understood this user manual and the associated product user manual.

2.2. Unintended Use

The actuated probe lift is **NOT** intended for:

- use on any crawler other than the **NAVIC**

2.3. Dimensions and Weight

Actuated probe lift width *(Fig. 1-1)*:	15.2 cm	6 in
Actuated probe lift depth *(Fig. 1-2)*:	16 cm	6.3 in
Actuated probe lift height *(Fig. 1-3)*:	8.9 cm	3.5 in
Actuated probe lift weight:	0.76 kg	1.7 lb

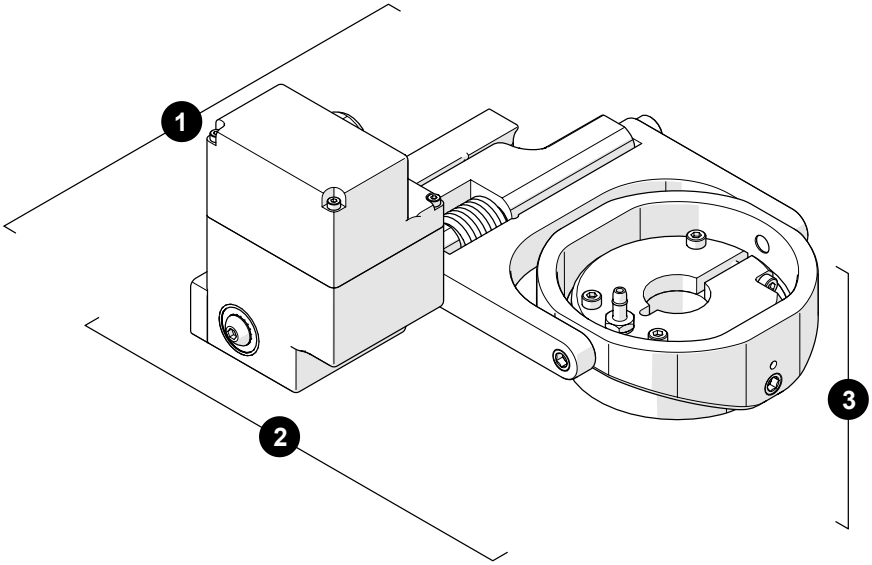


Fig. 1 - Actuated probe lift dimensions

2.4. Power Requirements

CAUTION! DO NOT DISCONNECT UNDER LOAD. Shut off power before connection or disconnecting. Permanent damage to electronics could occur.

Input Voltage:	25-45VDC
Input Power:	20 W

2.5. Environmental Sealing

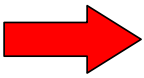
Dust-tight, watertight *(not submersible)*.

2.6. Performance Specifications

Move time *(typical)*	3 seconds	
Actuated probe lift spring force	1.6 kg	3.5 lb

DEFINITIONS

3.1. Definition of Symbols

	Instructions to ‘look here’ or to ‘see this part’.
	Denotes movement. Instructing user to carry out an action in a specified direction.
	Indicates alignment axis
	Alerts the user that the view has changed to a reverse angle.

3.2. Definitions of Terms

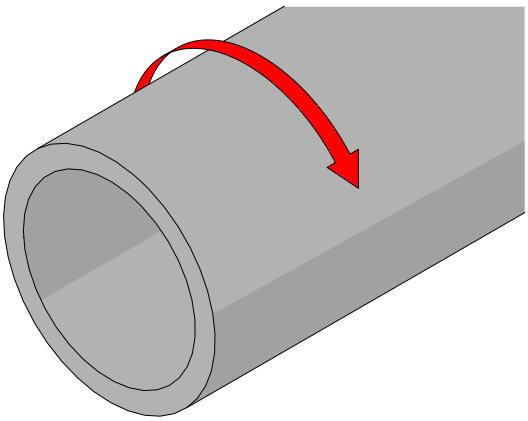


Fig. 2 - Circumferential scanning

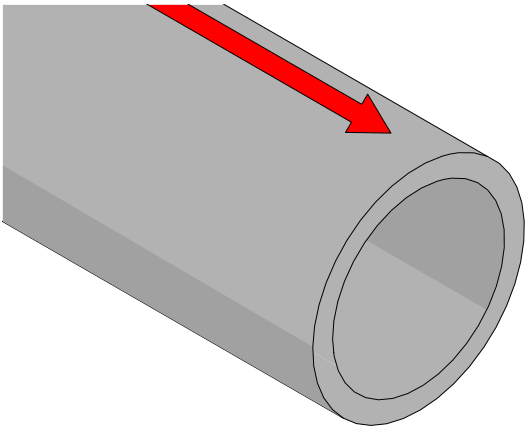


Fig. 3 - Longitudinal scanning

Circumferential	Direction of scan travel is around the circumference of the pipe/tube *(Fig. 2)*.
Longitudinal	Direction of scan travel is lengthwise of the pipe/tube *(Fig. 3)*.

3.3. Safety Symbols

The following safety symbols might appear on the product and in this document. Read and understand their meaning below:

 General warning symbol	This symbol is used to alert the user to potential hazards. All safety messages that follow this symbol shall be obeyed to avoid possible harm or material damage.
 Shock hazard caution symbol	This symbol is used to alert the user to potential electric shock hazards. All safety messages that follow this symbol shall be obeyed to avoid possible harm.

3.4. Safety Signal Words

The following safety signal words might appear in this document. Read and understand their meaning below:

DANGER!	The DANGER signal word indicates an imminently hazardous situation. It calls attention to a procedure, practice, or the like that if not correctly performed or adhered to will result in death or serious personal injury. Do not proceed beyond a DANGER signal word until the indicated conditions are fully understood and met.
WARNING!	The WARNING signal word indicates a potentially hazardous situation. It calls attention to a procedure, practice, or the like that if not correctly performed or adhered to could result in death or serious personal injury. Do not proceed beyond a WARNING signal word until the indicated conditions are fully understood and met.
CAUTION!	The CAUTION signal word indicates a potentially hazardous situation. It calls attention to a procedure, practice, or the like that if not correctly performed or adhered to may result in minor or moderate personal injury, material damage, particularly to the product, destruction of part or all of the product, or loss of data. Do not proceed beyond a CAUTION signal word until the indicated conditions are fully understood and met.

4.1. Component Identification

4.1.1. Base System

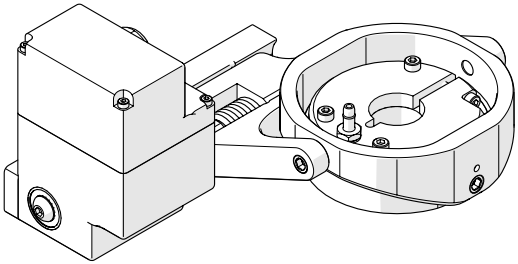


Fig. 4 - Corrosion actuated probe lift
CXA027-

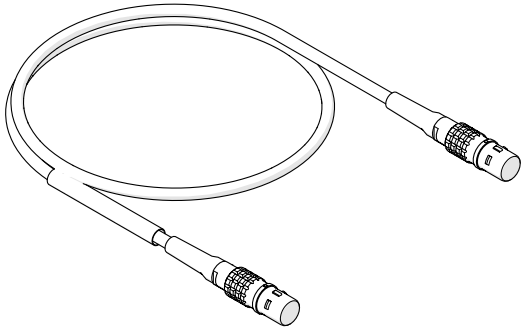


Fig. 5 - Auxiliary cable
UMA017-

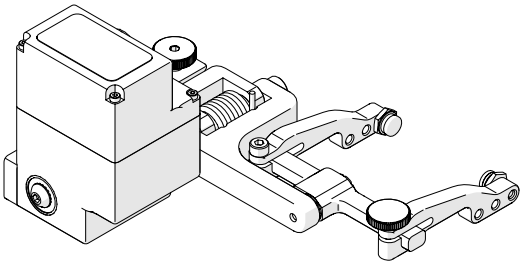


Fig. 6 - Actuated probe lift
CXA046-

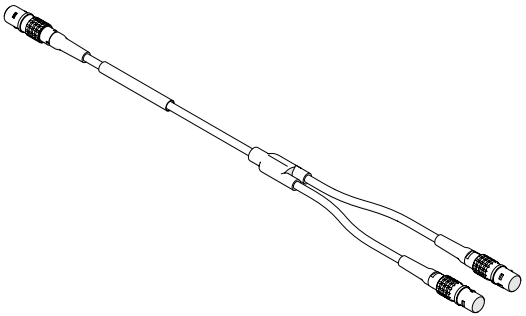


Fig. 7 - Split auxiliary cable
UMA053-

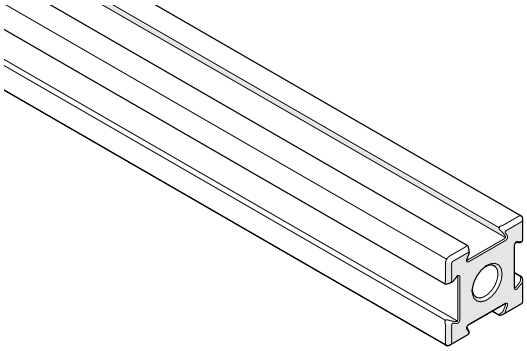


Fig. 8 - Frame bar
BG0038-

4.1.2. Parent Products

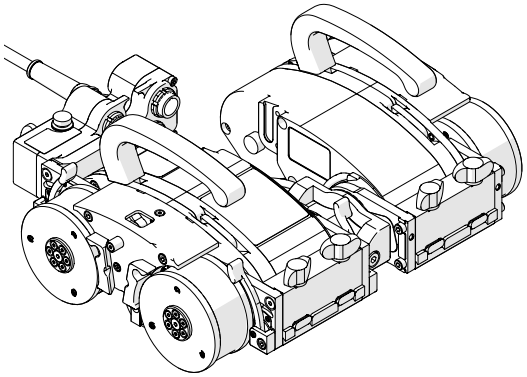


Fig. 9 - NAVIC system
CXG023-

4.2. Tools

4.2.1. Included Tools

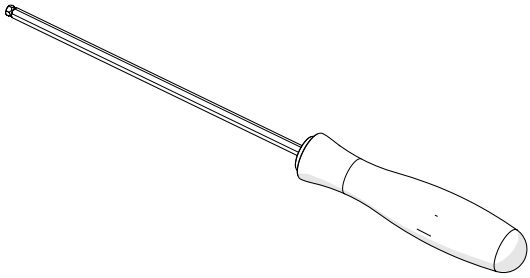


Fig. 10 - 2 mm hex driver

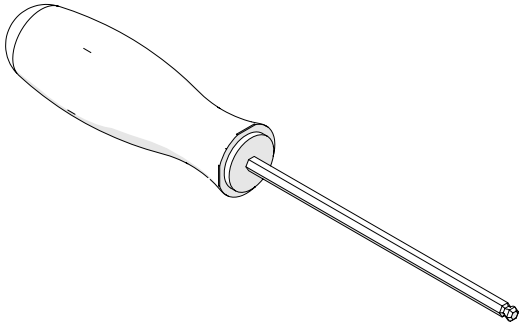


Fig. 11 - 2.5 mm hex driver

The Actuated Probe Lifts include a 2 mm hex driver *(Fig. 10)*. This driver is used to tighten the swivel mount of the **NAVIC**.

A 2.5 mm hex driver is included with the Corrosion Actuated Probe Lift. This driver is used to loosen and tighten the probe slot *(Fig. 11)*.

5.1. NAVIC Use

WARNING! Read and understand the NAVIC's user manual. Failure to comply with the warnings, instructions, and specifications in the Navic's user manual could result in **SEVERE INJURY** or **DEATH**.

5.1.1. Corrosion Actuated Probe Lift

CAUTION! DO NOT DISCONNECT UNDER LOAD. Shut off power before connection or disconnecting. Permanent damage to electronics could occur.

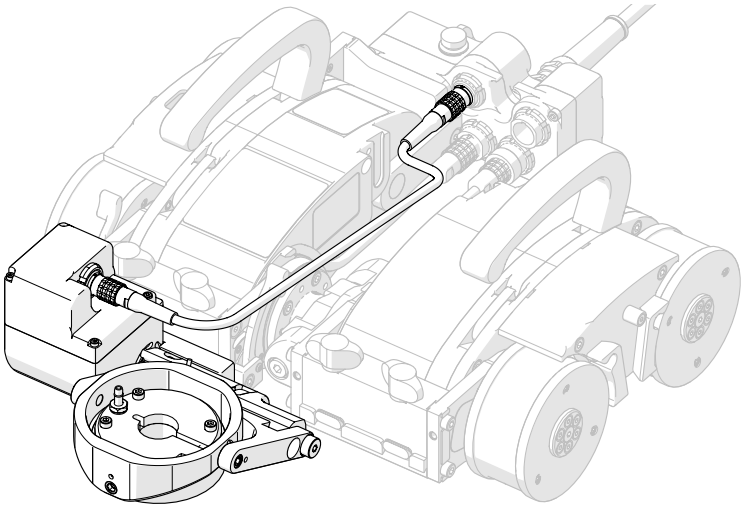


Fig. 12 - Actuated probe lift

The actuated probe lift raises and lowers a corrosion thickness probe holder via the handheld controller. To attach the actuated probe lift to a **NAVIC**, follow these steps:

1. Ensure power to the crawler has been turned off.

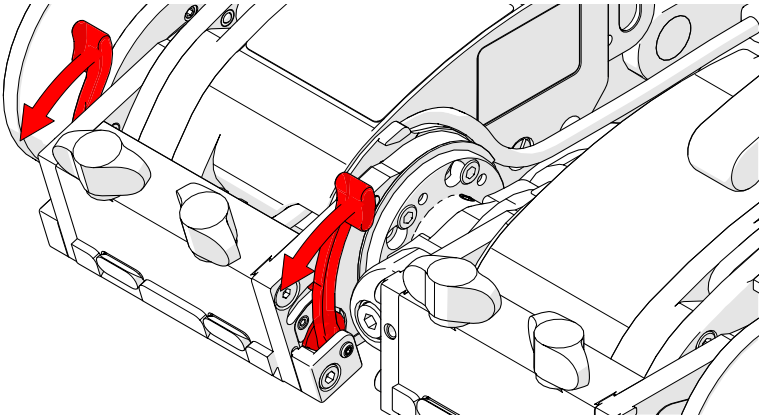


Fig. 13 - Release swivel mount adjustment levers

2. Release the swivel mount adjustment levers *(Fig. 13)*.

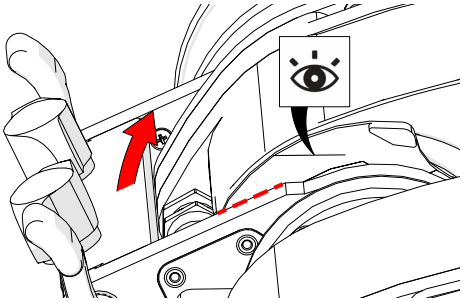


Fig. 14 - Align swivel mount with horizontal etched line

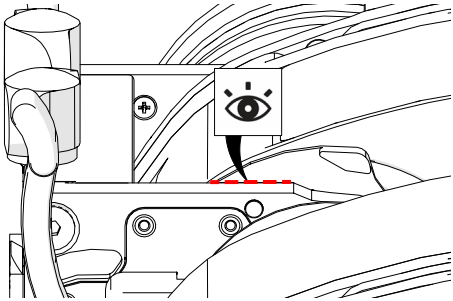


Fig. 15 - Align swivel mount with horizontal etched line

3. Adjust the right drive module's swivel mount to align slightly below the horizontal etched line *(Fig. 14)*.

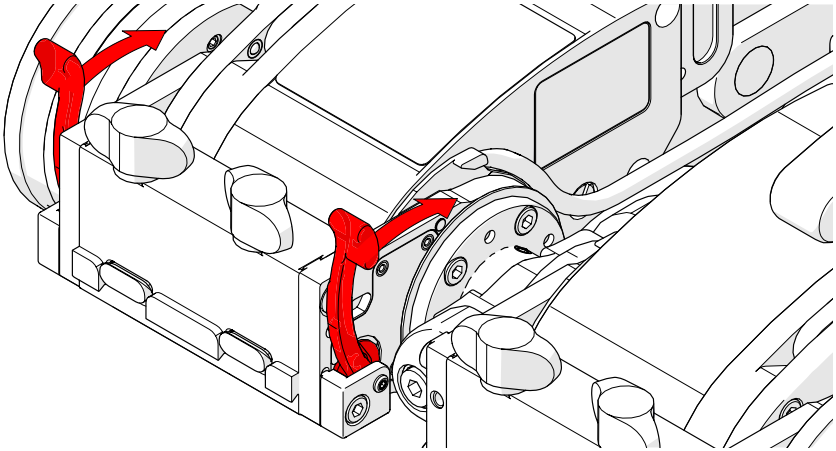


Fig. 16 - Lock swivel mount adjustment levers

4. Lock the swivel mount adjustment levers *(Fig. 16)*.

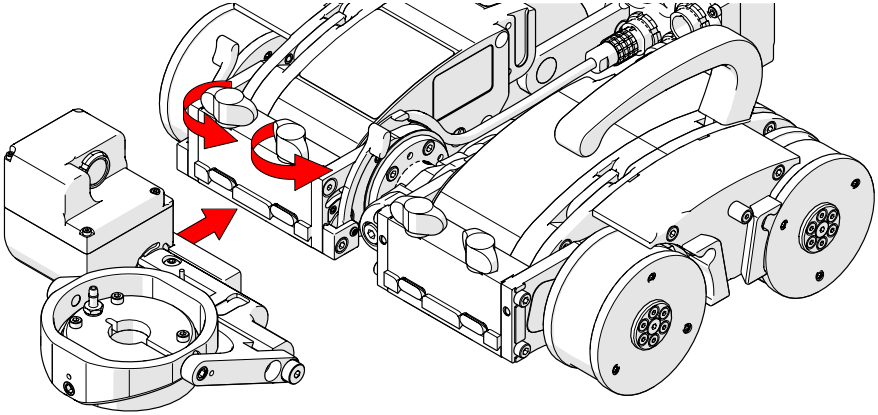


Fig. 17 - Loosen black wing knobs and mount to crawler

5. Loosen the two black wing knobs on the right drive module *(Fig. 17)*.
6. Place the actuated probe lift's dovetail over the right drive module's dovetail jaws *(Fig. 17)*.

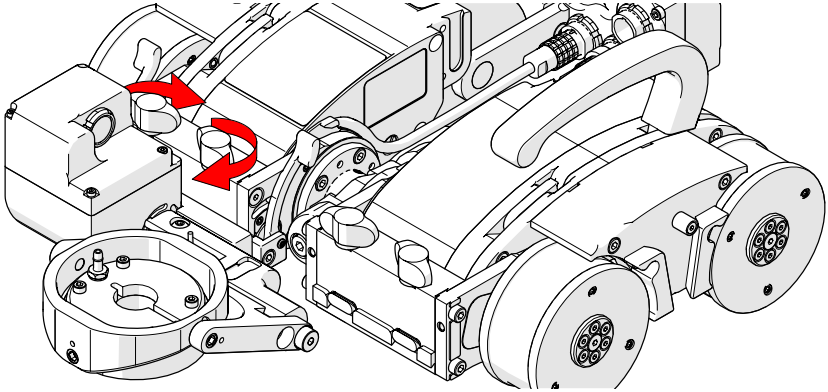


Fig. 18 - Tighten black wing knobs

7. Tighten the two black wing knobs to affix the actuated probe lift to the crawler *(Fig. 18)*.

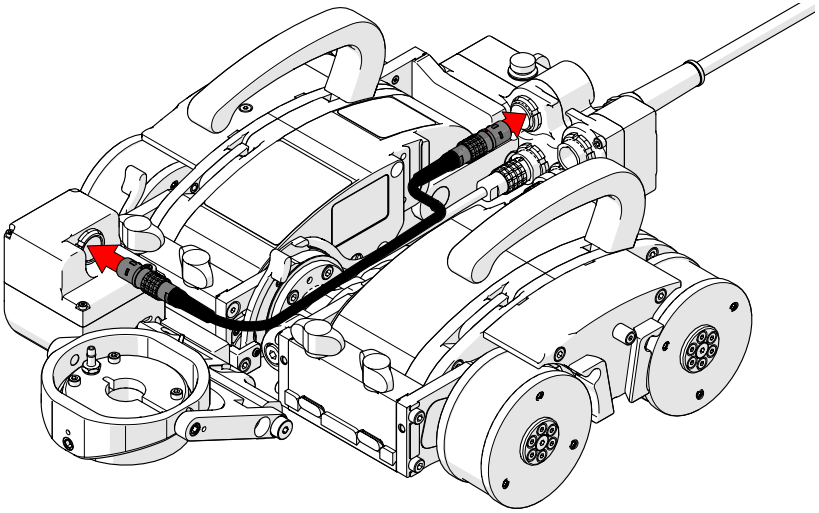


Fig. 19 - Connect auxiliary cable

8. Connect the auxiliary cable to the actuated probe lift *(Fig. 19)*.
9. Connect the auxiliary cable to the auxiliary port of the **NAVIC** umbilical *(Fig. 19)*.
10. Turn on power to the crawler *(see* **NAVIC** *user manual)*.

> ***NOTE:*** *Only lower the probe holder when the crawler is oriented in the desired scanning direction. Lift the probe holder from the scan surface during travel between scan locations.*

11. Utilize the handheld controller to operate the corrosion actuated probe lift remotely *(see "Actuated Probe Lift Operation" on page 20 for additional details).*

5.1.2. Actuated Probe Lifts

CAUTION! DO NOT DISCONNECT UNDER LOAD. Shut off power before connection or disconnecting. Permanent damage to electronics could occur.

WARNING! ONLY USE ACTUATED PROBE LIFTS WHEN SWIVEL MOUNT IS HORIZONTAL.

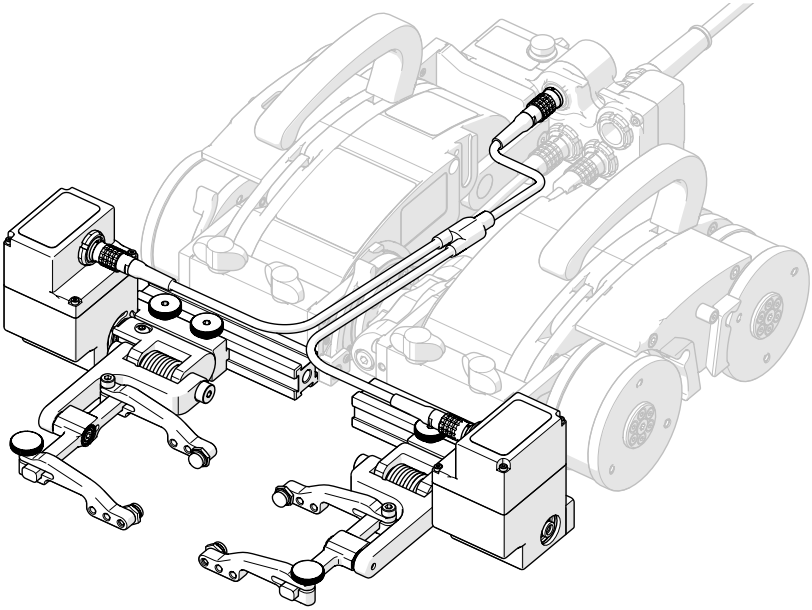


Fig. 20 - Actuated probe lifts

The actuated probe lifts, raise, and lower probe holders via the handheld controller. To attach the actuated probe lifts to a **NAVIC**, follow these steps:

1. Ensure power to the crawler has been turned off.

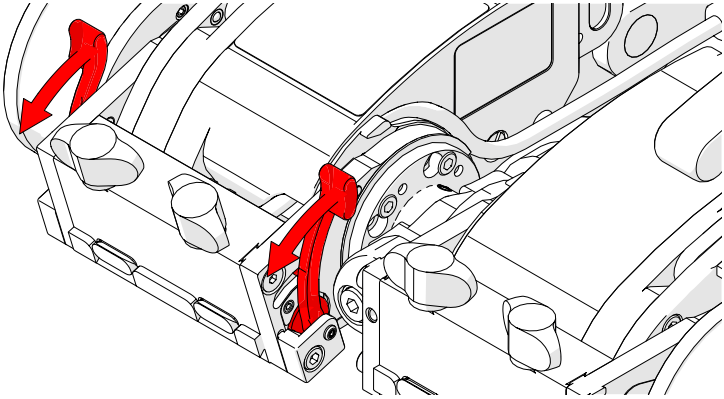


Fig. 21 - Release swivel mount adjustment levers

2. Release the swivel mount adjustment levers *(Fig. 21)*.

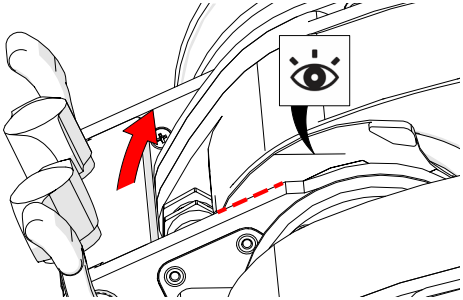


Fig. 22 - Align swivel mount with horizontal etched line

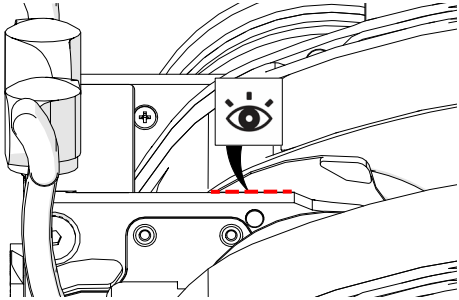


Fig. 23 - Align swivel mount with horizontal etched line

3. Adjust the right drive module swivel mount to align slightly below the horizontal etched line *(Fig. 22)*.

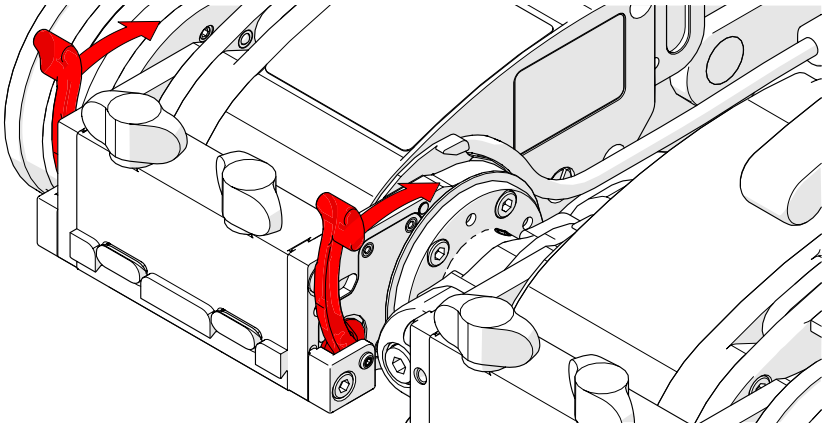


Fig. 24 - Lock swivel mount adjustment levers

4. Lock the swivel mount adjustment levers *(Fig. 24)*.

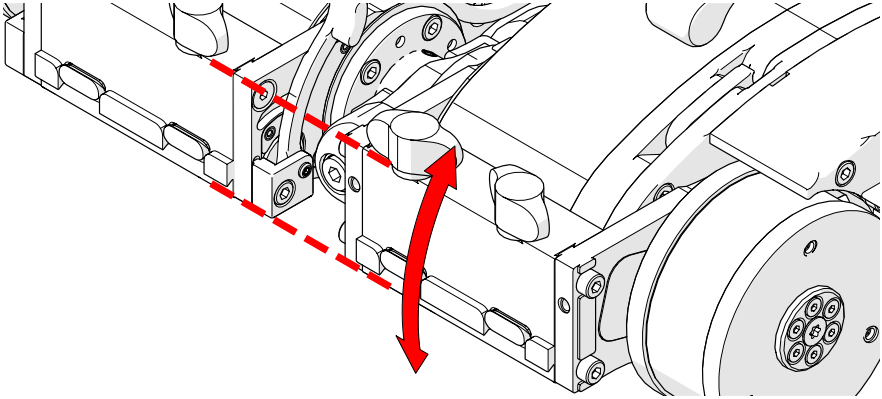


Fig. 25 - Align left swivel mount with right swivel mount

5. Align the left drive module's swivel mount with the right drive module's swivel mount *(Fig. 25)*.

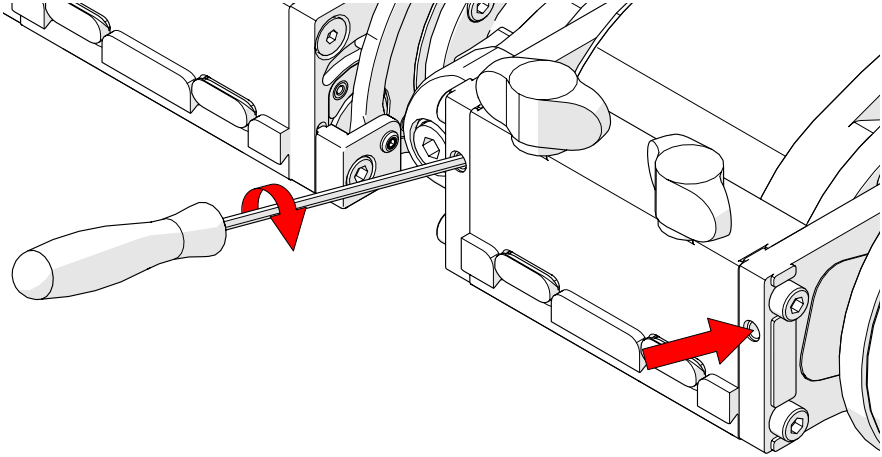


Fig. 26 - Tighten the set screws of the swivel mount.

WARNING! FALLING OBJECT HAZARD.
Always loosen set screws when using the **NAVIC** with any other accessory.

6. Using the 2 mm hex driver, tighten the set screws of the left drive module's swivel mount. Preventing the swivel mount from movement *(Fig. 26)*.

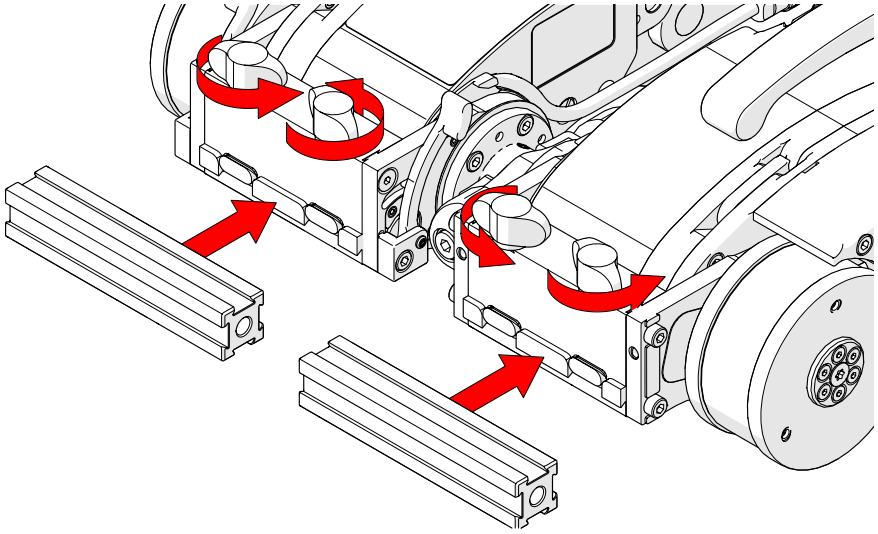


Fig. 27 - Mount frame bars to the swivel mounts

7. Loosen the black wing knobs to mount the frame bars to the swivel mounts *(Fig. 27)*.
8. Tighten the black wing knobs to secure the frame bars.

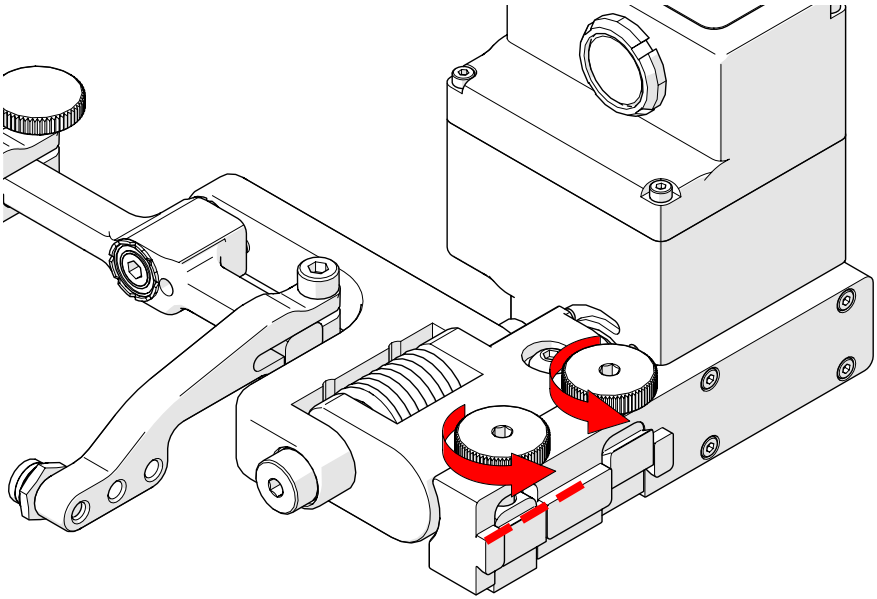


Fig. 28 - Loosen probe holder adjustment knobs

9. Loosen the probe holder adjustment knobs to align the dovetail jaws with the mount's grooves *(Fig. 28)*.

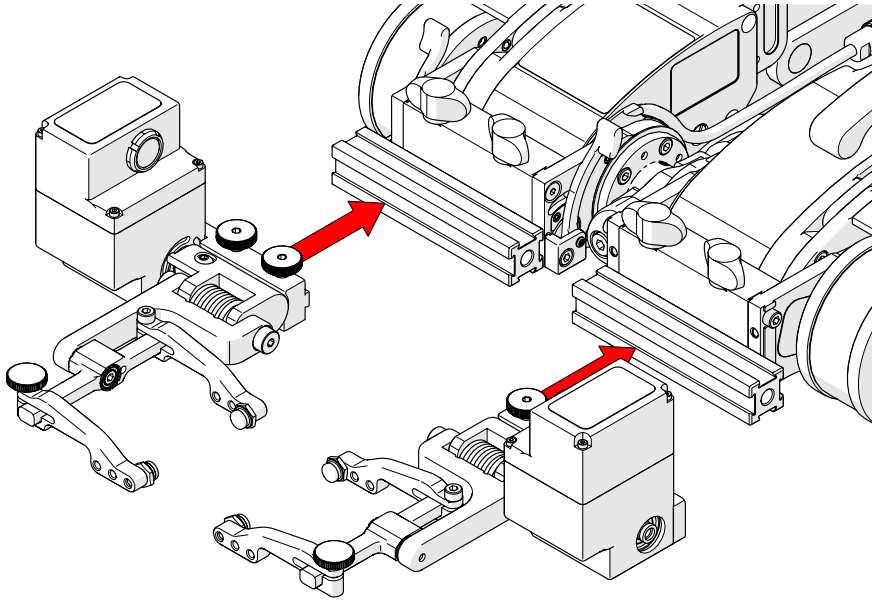


Fig. 29 - Attach actuated probe lifts

10. Attach the actuated probe lifts to the frame bars and tighten the probe holder adjustment knobs *(Fig. 29)*.

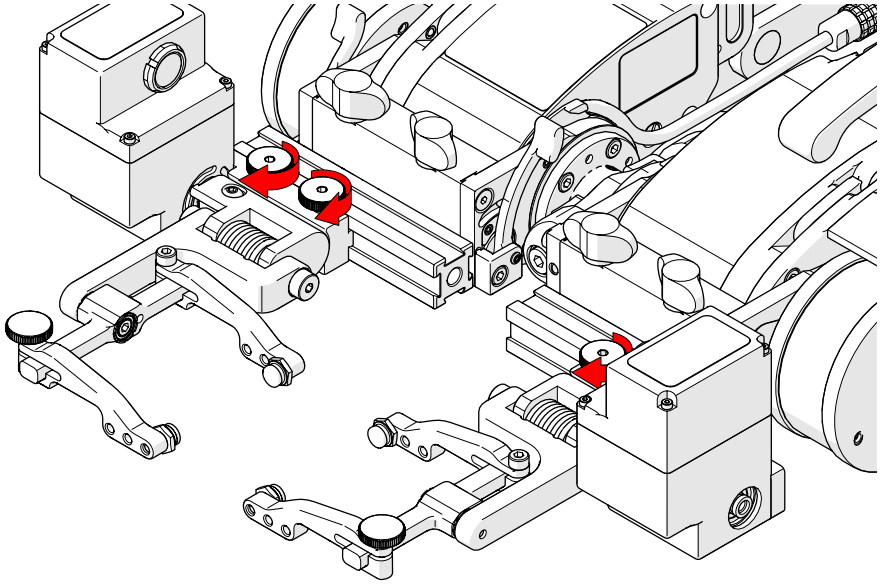


Fig. 30 - Attach actuated probe lifts

11. Tighten the probe holder adjustment knobs *(Fig. 30)*.

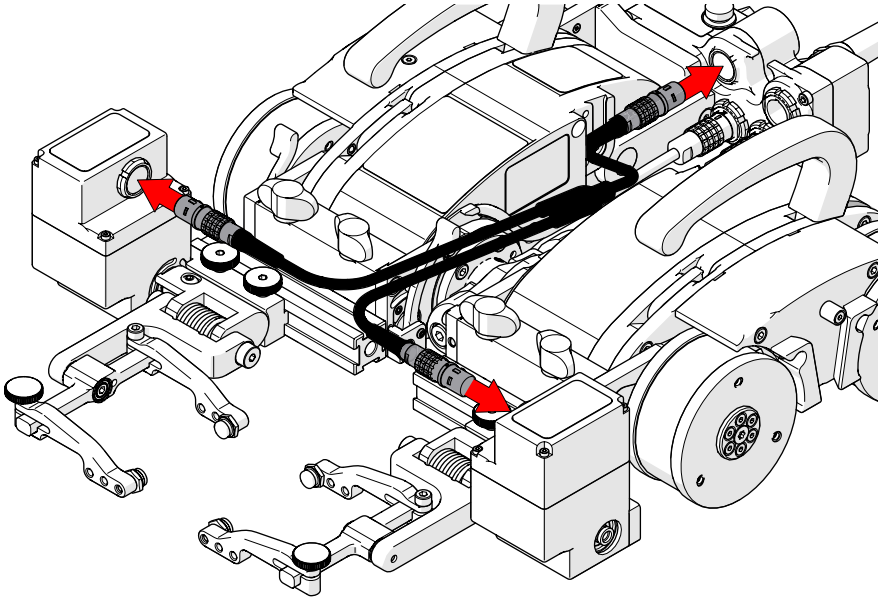


Fig. 31 - Connect split auxiliary cable

12. Connect the split auxiliary cable's dual side to each actuated probe lift *(Fig. 31)*.
13. Connect the single side of the split auxiliary cable to the auxiliary port of the **NAVIC** umbilical *(Fig. 31)*.
14. Turn on power to the crawler *(see* **NAVIC** *user manual)*.

> ***NOTE:*** *Only lower the probe holders when the crawler is oriented in the desired scanning direction. Lift the probe holder from the scan surface during travel between scan locations.*

15. Utilize the handheld controller to operate the actuated probe lifts remotely *(see "Actuated Probe Lift Operation" on page 20 for additional details).*

5.1.3. Preparation before installing NAVIC on inspection surface

Always ensure the actuated probe lift is in the raised position before installing the **NAVIC** crawler onto a scan surface. When the actuated probe lift is in the lowered position prior to installation on a scan surface *(Fig. 32)*, complete the following:

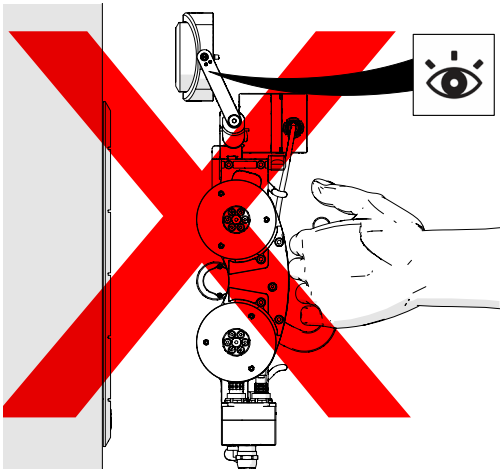


Fig. 32 - Incorrect actuated probe lift position for installation

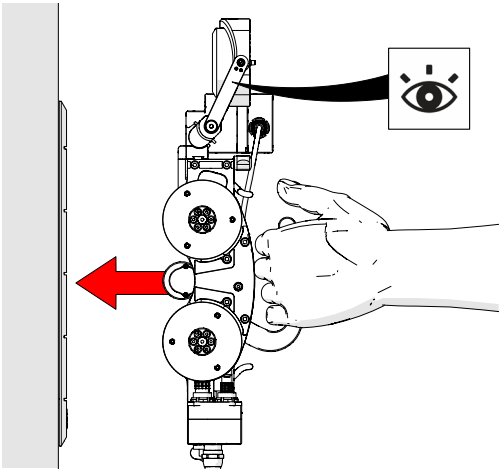


Fig. 33 -Raised actuated probe lift ready for installation

Initialize the system as instructed in the **NAVIC** user manual. Using the handheld controller, press the **Lift** button to raise the actuated probe lift to an elevated position *(Fig. 33)*.

6.1. Actuated Probe Lift Operation

CAUTION! DO NOT DISCONNECT UNDER LOAD. Shut off power before connection or disconnecting. Permanent damage to electronics could occur.

NOTE: *Be sure to follow instructions noted in (see "Preparation before installing NAVIC on inspection surface" on page 19) before use.*

When the actuated probe lift is properly connected to the **NAVIC**, a **Lower** and **Lift** toggle appears in the handheld controller's bottom left corner of the jog screen.

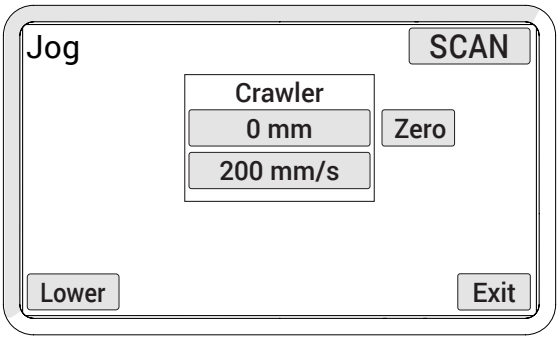


Fig. 34 - Jog screen with actuated probe lift toggle button

NOTE: *Only lower the probe holder when the crawler is oriented in the desired scanning direction. Lift the probe holder from the scan surface during travel between scan locations.*

Press **Lower** to depress the probe holder to the scan surface.

Press **Lift** to raise the probe holder from the scan surface.

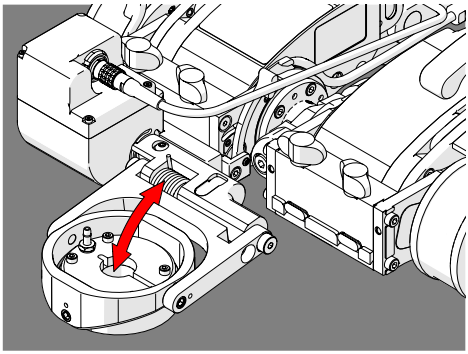


Fig. 35 - Lower/Lift actuated probe lift

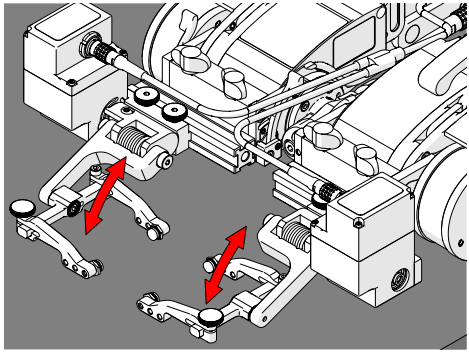


Fig. 36 - Lower/Lift actuated probe lifts

MAINTENANCE

7.1. Maintenance Schedule

The actuated probe lift must be maintained according to the following schedule.

Maintenance Item	Frequency
Inspect cables and connectors Inspect the auxiliary cable for damage. Have any damaged cable repaired by a qualified person or replace the cable assembly as necessary. Inspect all connectors for damage or moisture. Straighten bent pins. Dry connectors before using.	Every Use
General cleaning Ensure the actuated probe lift stays relatively clean by wiping off any excess dirt or other contaminants after every use.	

7.2. Cleaning

General cleaning of components is important to keep your system working well. All components that have no wiring or cables are completely waterproof. Components can be washed with warm water, dish soap and a medium bristle brush.

Before using the actuated probe lift, ensure all connectors are free of water and moisture.

NOTE: *All components with wiring, cables or electrical connections are splashproof. However, these components are* **NOT** *submersible.*

NOTE: *Never use strong solvents or abrasive materials to clean your actuated probe lift components.*

NOTE: *Always turn off the system power before connecting or disconnecting devices.*

Problem	Possible Cause	Solution
Actuated probe lift button does not appear on the screen.	Cable is not connected, or the connection is faulty.	Unplug and plug in both sides of the auxiliary cable with the system powered off.
Pressing the button on screen does not raise or lower the actuated probe lift.	Repair required.	Contact manufacturer *(see "Jireh Industries Ltd." on page 1).*

8.1. Technical Support

For technical support, contact JIREH Industries *(see "Jireh Industries Ltd." on page 1)*

SERVICE AND REPAIR

WARNING! DO NOT DISASSEMBLE. No user-serviceable parts. Disassembling any of the components in this product, beyond the instructions in this user manual, could void the regulatory certifications and/or effect the safety of the product.

SPARE PARTS

To order accessories or replacement parts for the actuated probe lift. *(see "Jireh Industries Ltd." on page 1)*

> ***NOTE:*** *These drawings are for parts order. This is not a list of kit contents.*

10.1. Corrosion Actuated Probe Lift

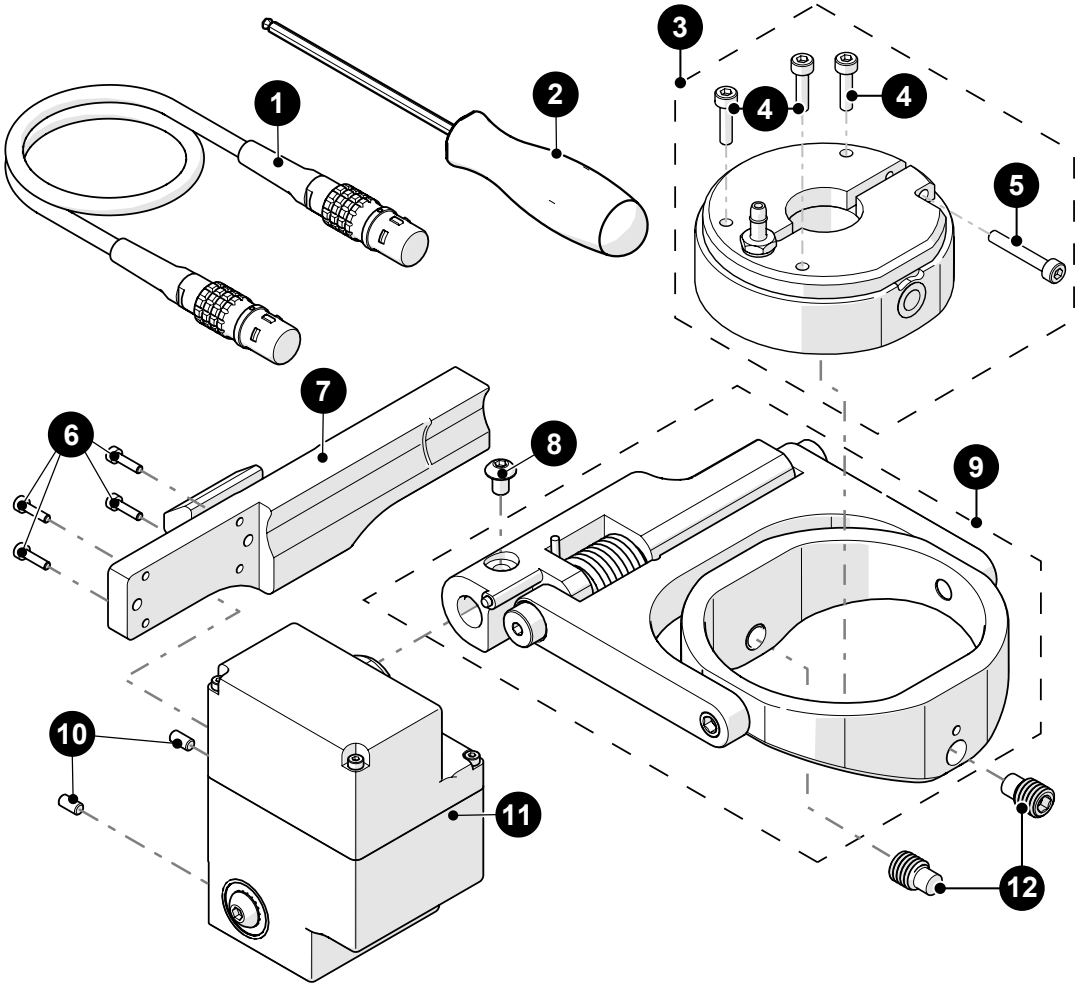


Fig. 37 - Corrosion actuated probe lift

BOM ID	Description	Description
1	UMA017-00.4	Auxiliary Cable 40 cm *(1.3 ft)*
2	EA599	2.5 mm *(0.098 in)* hex driver
3	*See Probe Holder Receptacle and Wear Plate*	
4	MD049-012	SHCS, M3x0.5 x 12 mm, SST
5	MD049-020	SHCS, M3x0.5 x 20 mm, SST
6	MD047-008	SHCS, M2x0.4 X 8 mm, SST
7	CX0414	Probe Lift Mounting Bracket
8	MD073-006	BHCS, M4x0.7 X 6 mm, SST
9	PHS073	Actuated Probe Lift Arm Assembly
10	MA240	PIN, Ø3 mm (h7) x 6 mm 440C Dowel
11	CXA026	Rotary Actuator Assembly
12	MA264	SHSS, M8 x 1.25 x 12 mm, dog point, SST

Fig. 38 - Corrosion actuated probe lift

10.2. Probe Holder Receptacle and Wear Plate

Part #	Wear Plate	Receptacle	Part #	Wear Plate	Receptacle
PHS066-A	Curved	9.53 mm (0.375 in) dia.	PHS066-B	Curved	12.7 mm (0.5 in) dia.
PHS066-C	Curved	19 mm (0.75 in) dia.	PHS066-E	Curved	25.4 mm (1 in)
PHS067-A	Flat	9.53 mm (0.375 in) dia.	PHS067-B	Flat	12.7 mm (0.5 in) dia.
PHS067-C	Flat	19 mm (0.75 in) dia.	PHS067-D	Flat	Technisonic
PHS067-E	Flat	25.4 mm (1 in)			

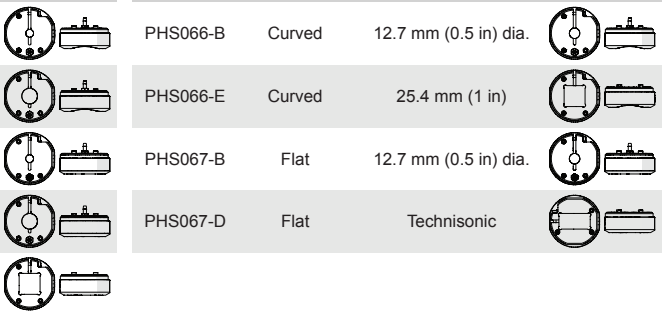


Fig. 39 - Probe holder receptacle and wear plate selection

10.3. Actuated Probe Lifts

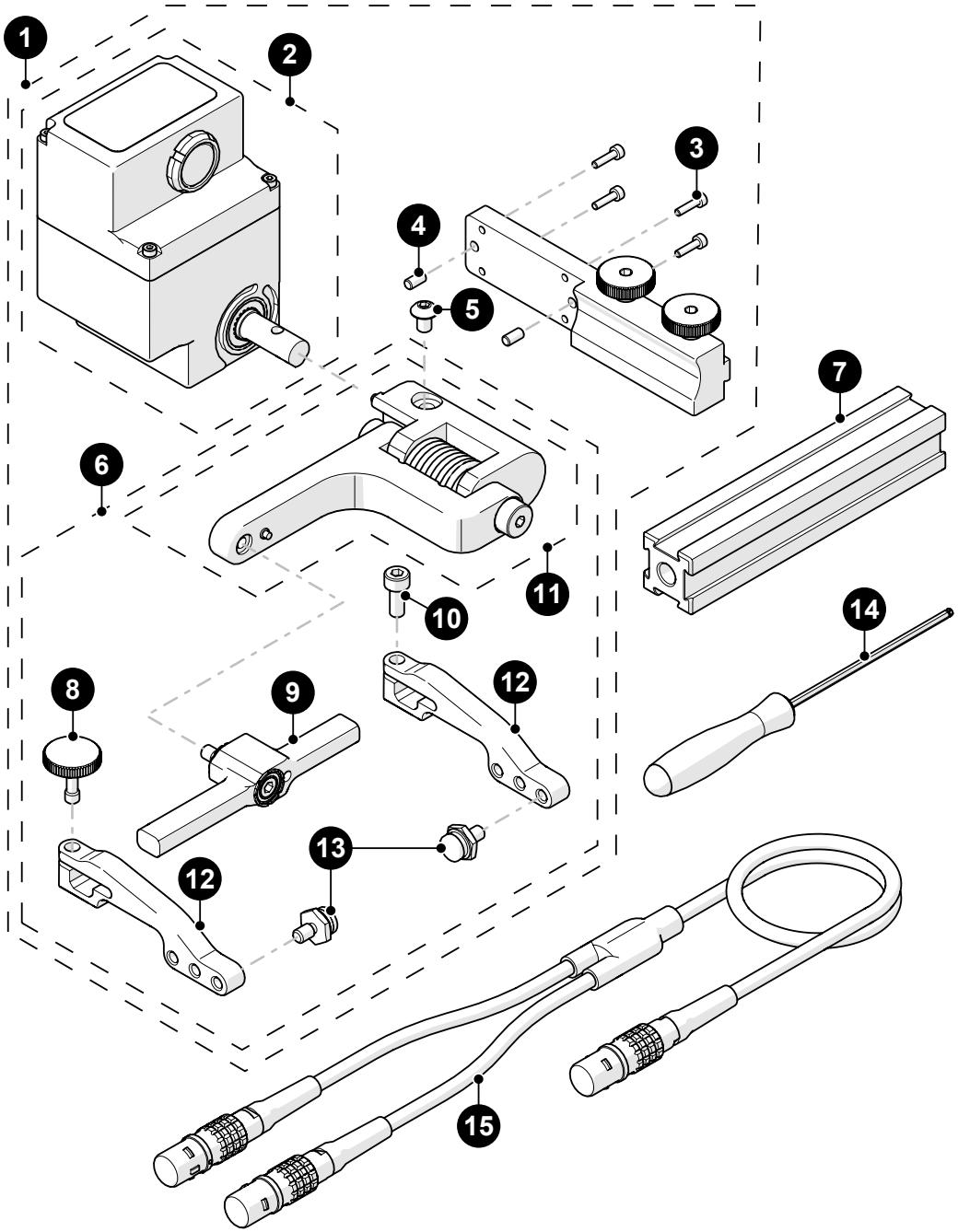


Fig. 40 - Actuated Probe Lifts

BOM ID	Part #	Description
1	CXA046-X-YY-R	Actuated Probe Lift *(X - see arm style) (Y - see pivot button style) (R - Right side)*
2	CXA026	Rotary Actuator Assembly - Right *(CXA047 left is also available)*
3	MD047-008	SHCS, M2x0.4 X 8 mm, SST
4	MA240	PIN, Ø3 mm (h7) x 6 mm 440C DOWEL
5	MD073-006	BHCS, M4x0.7 X 6 mm, SST
6	PHS087-X-YY-R	Actuated Probe Lift Arm Assembly *(X - see arm style) (Y - see pivot button style) (R - Right side)*
7	BG0038-10	Frame Bar: 10 cm *(3.9 in) (see frame bars)*
8	PH0082	Knurled knob, M4 x 0.7 x 10 mm, 3 mm stand off, SST
9	PHS063	Yoke Style: wide, 7.9 cm *(3.06 in) (see yoke style)*
10	MD050-010	SHCS, M4x0.7 X 10mm, SST
11	PHS091-R	Actuated Probe Lift Arm Sub-Assembly: Right
12	*see Arm Style*	
13	*see Pivot Button Style*	
14	EA476	2 mm *(0.078 in)* hex driver
15	UMA053-01	Split Auxiliary Cable: 1 m *(3.3 ft)*

> ***NOTE:*** *This list identifies parts available for the rigth side actuated probe lift. Similar parts for the left side are also available (contact Jireh Industries Ltd. on page 1).*

10.4. Probe Holder Components

10.4.1. Arm Style

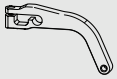
	Arm Style	Part #			Arm Style	Part #	
A	Standard, Flat	PH0090		**B**	Short, Flat	PH0089	
C	Long, Flat	PH0099		**D**	Standard, Drop	PH0093	
E	Short, Drop	PH0092		**F**	Long, Drop	PH0094	
G	Standard, Extra-Drop	PH0096		**H**	Short, Extra-Drop	PH0095	
I	Extra-Short, Flat	PH0159		**J**	Extra-Short, Drop	PH0161	

Fig. 41 - Probe holder arm selection

10.4.2. Yoke Style

	Yoke Style	Part #	Length	
S	Standard	PHS052	6.3 cm *(2.47 in)*	

	Yoke Style	Part #	Length	
W	Wide	PHS063	7.9 cm *(3.06 in)*	

Fig. 42 - Probe holder yoke selection

10.4.3. Pivot Button Style

	Pivot Hole Size	Wedge Type	
01	8.0 mm *(0.315 in)*	Olympus PA	
03	2.7 mm *(0.106 in)*	Sonatest DAAH PA	
06	3.0 mm *(0.118 in)*	-	
08	Conical Head	-	
11	3 mm *(0.118 in)* Internal	-	

	Pivot Hole Size	Wedge Type	
02	5.0 mm *(0.197 in)*	Olympus TOFD	
04	9.5 mm *(0.375 in)*	-	
07	2.3 mm *(0.09 in)*	-	
09	5 mm *(0.197 in)* Internal	Zetec PA/TOFD	
14	4 mm *(0.157 in)*	-	

Fig. 43 - Pivot button selection

> ***NOTE:*** *Additional probe holder pivot button types available. (contact Jireh Industries Ltd. on page 1)*

10.5. Variable Components

10.5.1. Frame Bar

Part #	Length	
BG0038-05	5 cm *(1.97 in)*	
BG0038-15	15 cm *(5.91 in)*	
BG0038-25	25 cm *(9.84 in)*	
BG0038-35	35 cm *(13.78 in)*	
BG0038-45	45 cm *(17.72 in)*	
BG0038-55	55 cm *(21.65 in)*	

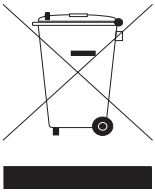
Part #	Length	
BG0038-10	10 cm *(3.94 in)*	
BG0038-20	20 cm *(7.87 in)*	
BG0038-30	30 cm *(11.81 in)*	
BG0038-40	40 cm *(15.75 in)*	
BG0038-50	50 cm *(19.69 in)*	

Fig. 44 - Frame bar selection

DISPOSAL

WEEE Directive

In accordance with European Directive on Waste Electrical and Electronic Equipment (WEEE), this symbol indicates that the product must not be disposed of as unsorted municipal waste, but should be collected separately. Refer to Jireh Industries for return and/or collection systems available in your country.



LIMITED WARRANTY

WARRANTY COVERAGE

Jireh Industries warranty obligations are limited to the terms set forth below: Jireh Industries Ltd. (“Jireh”) warrants this hardware product against defects in materials and workmanship for a period of THREE (3) YEARS from the original date of purchase. If a defect exists, at its option Jireh will (1) repair the product at no charge, using new or refurbished replacement parts, (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product, or (3) refund the purchase price of the product. A replacement product/part assumes the remaining warranty of the original product or ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes Jireh’s property. When a refund is given, your product becomes Jireh’s property.

OBTAINING WARRANTY SERVICE

To utilize Jireh’s warranty service you must ship the product, at your expense, to and from Jireh Industries. Before you deliver your product for warranty service you must phone Jireh and obtain an RMA number. This number will be used to process and track your product. Jireh is not responsible for any damage incurred during transit.

EXCLUSIONS AND LIMITATIONS

This Limited Warranty applies only to hardware products manufactured by or for Jireh Industries. This warranty does not apply: (a) to damage caused by accident, abuse, misuse, misapplication, or non-Jireh products; (b) to damage caused by service (including upgrades and expansions) performed by anyone who is not a Jireh Authorized Service Provider; (c) to a product or a part that has been modified without the written permission of Jireh.

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Changes or modifications to this unit or accessories not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

All specifications are subject to change without notice.

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