



WERK-BRAU

**DLOCK COUPLER
SAFE-FUNCTION HYDRAULIC
KIT**

**FOR USE WITH MACHINES
EQUIPPED WITH FACTORY Q/C PIPING**

D-Lock Coupler Safe-Function Kit

Overview: You have received a hydraulic auxiliary Safe Function kit. Installation of this kit is REQUIRED. Once installed, the coupler will be unable to be disengaged in an unsafe position. The Safe Function kit causes the operator to have the machine in the full curl position before the coupler can be disengaged. In addition to reviewing this installation instruction, please review your “DLOR” DLOCK coupler hydraulic kit which will be needed for this assembly.

Instructions

1. Before you start:
 - a. Relieve any pressure on the bucket curl line.
 - b. Make sure your machine is off.
2. Find the bucket curl port at the base of the machine boom (*see drawing below “General Overview”*):
 - a. Disconnect the hose from the bucket curl port.
 - b. Install the provided T-fitting to the bucket curl port at the base of the boom making sure that the branch port is oriented in a direction so that the fitting may be installed.
Reconnect the bucket curl hose to the top port of the T-fitting.
 - c. Make sure all connection points are tight.
3. Install the straight fitting and jumper hose to T fitting (*see drawing below “General Overview”*):
 - a. Connect the straight adapter FF6400-04-04 to the T fitting branch port.
 - b. Connect the 90deg. hose end (hose w/o guarding) to the straight adapter FF6400-04-04
 - c. Route the jumper hose back towards the Q/C valve; route along the bucket curl hose and be sure to give slack for machine movements.
 - d. Zip tie jumper hose to bucket curl hose once proper slack is determined.
4. Install pressure sensor switch (*see drawing below “General Overview”*):
 - a. Adapt the 2nd straight coupling FF6400-04-04 to the end of jumper hose.
 - b. Connect the O-Ring coupling 6425-04 to the straight connector.
 - c. Install the Pressure Sensor to the free end of the O-ring coupling.
5. Locate the wire harness going from the coupler control switch at the coupler valve. Disconnect the existing wire harness at the coupler valve and connect the provided wire harness between the coupler valve and the original wire harness going to the switch.
 - a. Intercept the existing coupler wiring harness.
 - b. Disconnect the connection point and install the mating ends of the harness.
 - c. Route and secure the wire harness between the coupler valve and pressure switch.
 - d. Connect Harness Male End into the Pressure Switch (End closest to the relay)

D-Lock Coupler Safe-Function Kit

6. You should now be ready to run the machine.
 - a. If installed correctly your coupler should not be able to disconnect until the bucket is in the curled position and pressure is built up over 2800 PSI.
7. Install window decal inside the cab. Place window decal “DECAL-DL-OP” directly on the cab window in clear site so that when operating the coupler, the decal is 100% visible to read the step-by-step instructions for safe operation. An example of the window decal is shown on the following pages.

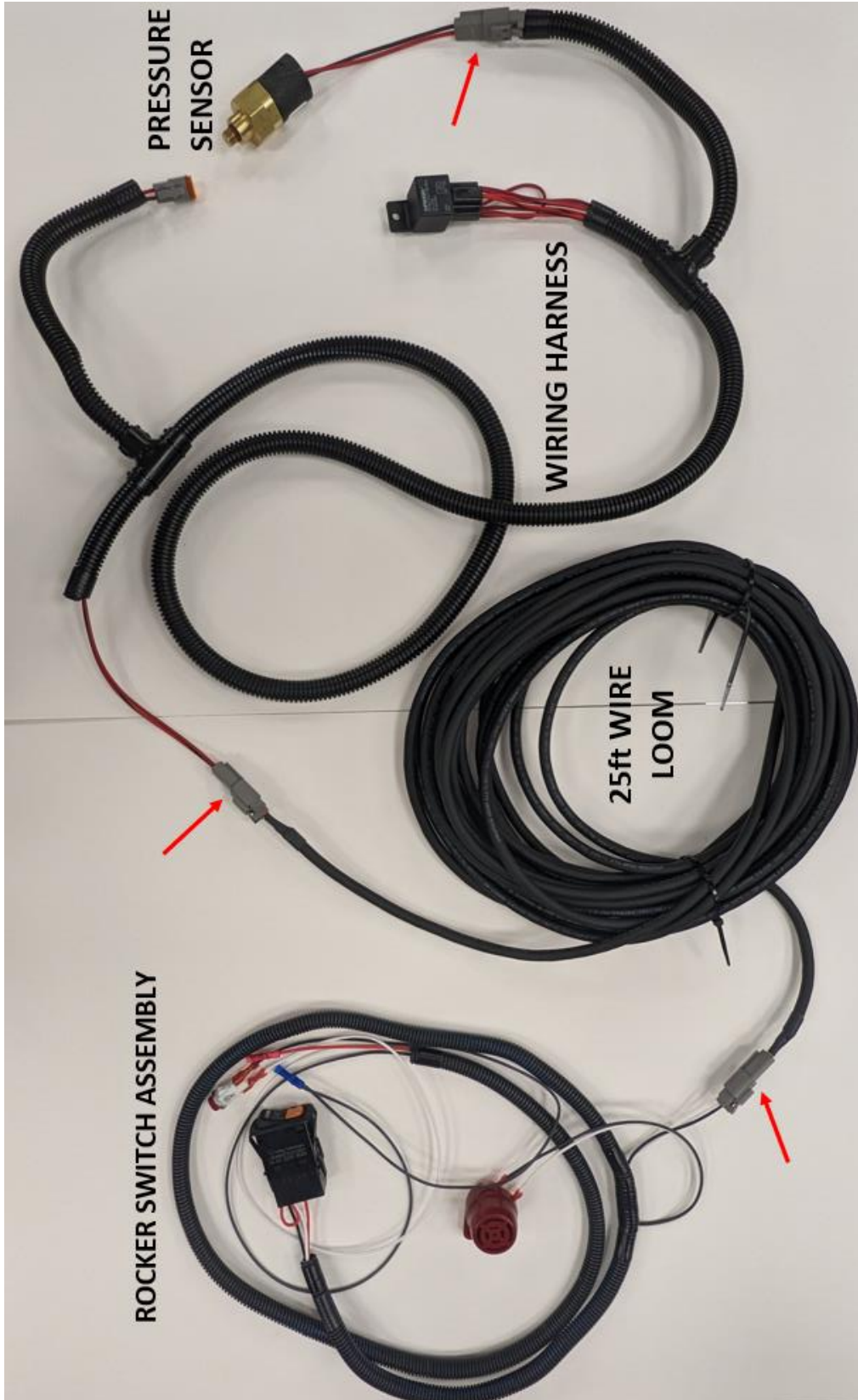
ROCKER SWITCH INSTALLATION

In some cases, your DLOR hydraulic kit will include a rocker switch. If your hydraulic coupler kit includes a rocker switch, it is REQUIRED for installation. See next page for a picture of the rocker switch layout including the rocker switch, wiring loom & wiring harness with the pressure sensor. Each arrow indicates a connecting point between the three components.

1. To install the new rocker switch, remove the factory toggle switch inside the cab. You may need to increase the size of the slot for the new switch to fit.
2. If the machine has a coupler or quick hitch connector in the cab, locate it and use the provided Power/Ground harness and/or accessories included in the kit to supply power to the Rocker Switch. The result will be to provide power to the black and red butt splices of the rocker switch harness.
3. An indicator and buzzer are also included as part of the rocker switch harness. It is not necessary to have the indicator and buzzer visible for the operator, but it may be helpful to
4. Position the buzzer and cable tie it in place so that it is audible for the operator during operation.

D-Lock Coupler Safe-Function Kit

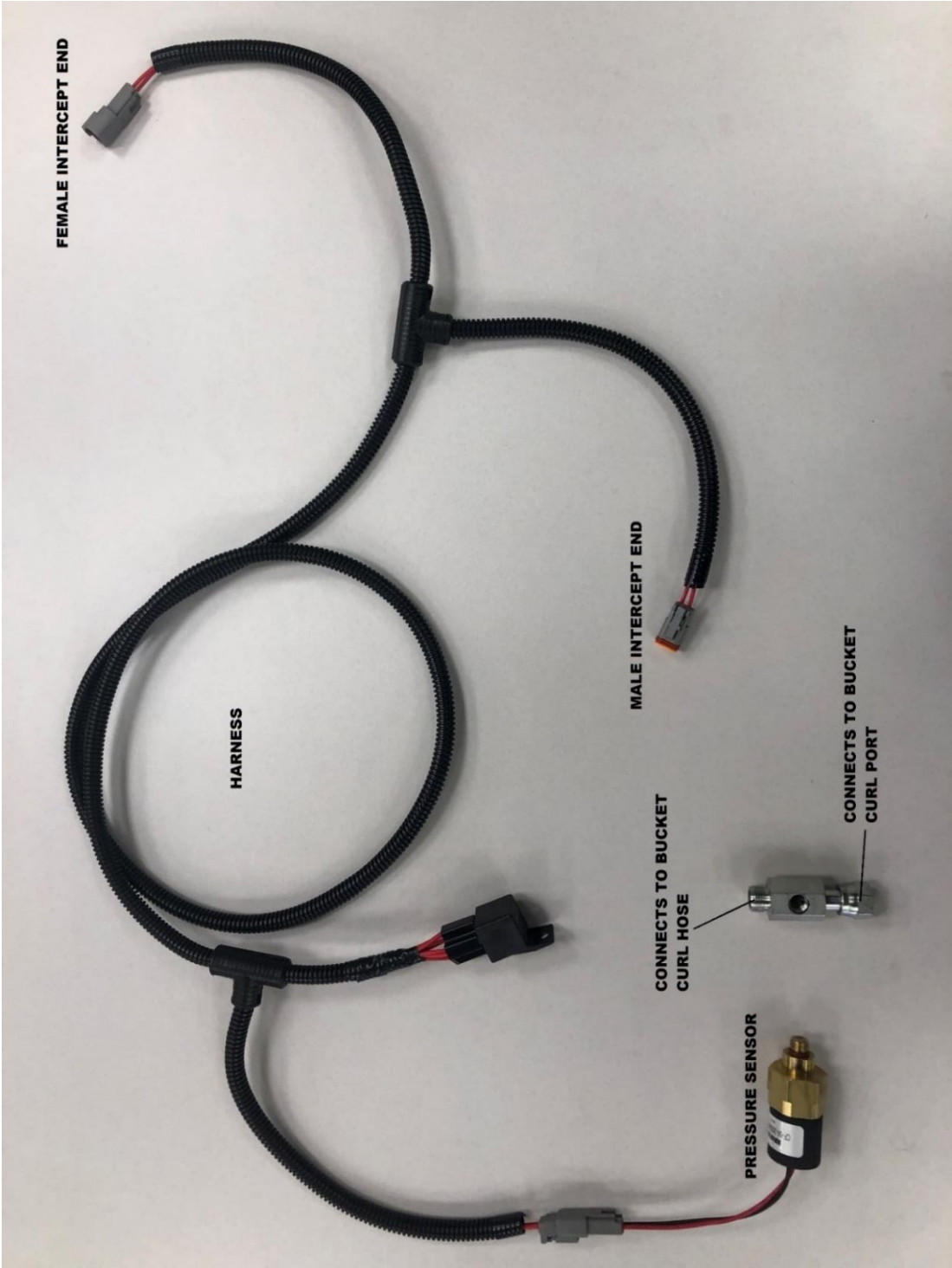
Wiring Harness / Wiring Loom / Rocker Switch / Pressure Sensor



D-Lock Coupler Safe-Function Kit

Wiring Harness & T Fitting

Note: Depending on your machine, your harness may use different connectors. Shown below is an example of the standard wiring harness. No matter the connectors used, the layout will be the same.



D-Lock Coupler Safe-Function Kit

Torque Specifications


Please observe these approved torque specs. Failure to follow these specifications can result in damage and other undesirable results.

Dash Size	Tube O.D. (Ref)	Thread Size	37° Flare		Straight Thread	
			Ft-lbs	Nm	Ft-lbs	Nm
4	1/4	7/16-20	10-12	14-16	15-19	20-25
5	5/16	1/2-20	13-16	18-21	20-25	27-33
6	3/8	9/16-18	20-25	27-33	32-40	43-54
8	1/2	3/4-16	34-42	46-56	54-67	73-90
10	5/8	7/8-14	46-58	62-78	74-92	100-124
12	3/4	1-1/16-12	64-80	87-108	102-128	138-173
14	7/8	1-3/16-12	80-100	109-135	128-160	173-216
16	1	1-5/16-12	97-117	131-158	150-187	203-253
20	1-1/4	1-5/8-12	145-165	197-223	227-264	308-357
24	1-1/2	1-7/8-12	230-250	312-338	363-400	492-542

*Apply enough pipe sealer to contact all threads.

**Do not use an excess amount that will squeeze into the hydraulic lines.

ENGAGE ATTACHMENT



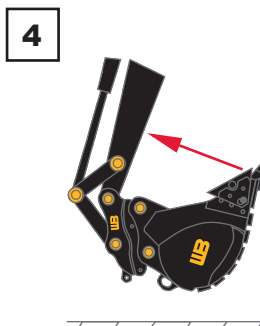
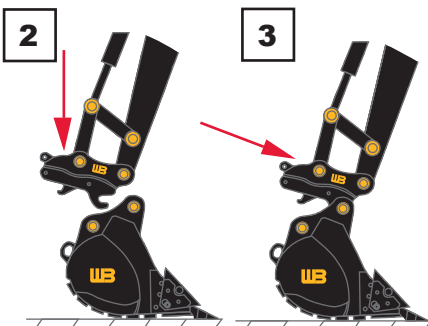
OPERATION MANUAL

Read and understand the manual.

NOTICE

Cycle the coupler at the beginning and end of every shift.

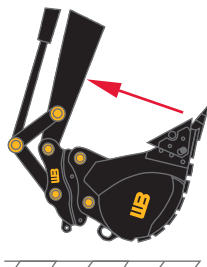
1 DISENGAGE coupler switch



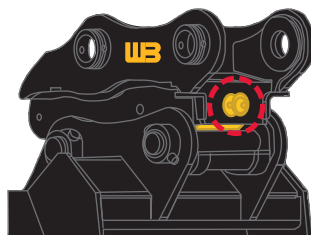
5 ENGAGE coupler switch



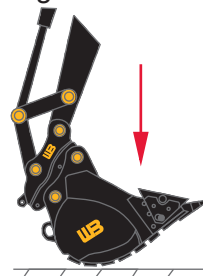
6 Fully curl and hold for 5 SECONDS



7 VISUAL CHECK ENGAGE INDICATORS

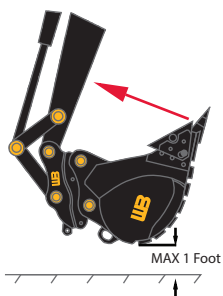


8 Mechanically check coupler connection on ground



DISENGAGE ATTACHMENT

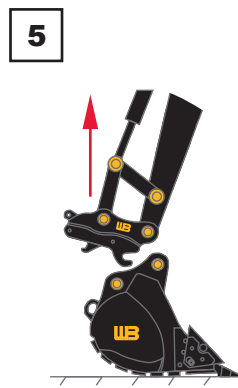
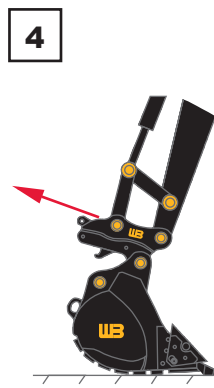
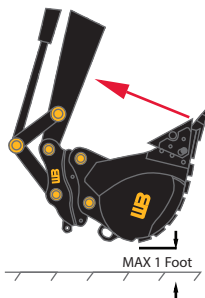
1 Fully curl coupler



2 DISENGAGE coupler switch



3 Fully curl and hold for 5 SECONDS



For More Information & Operation Manual

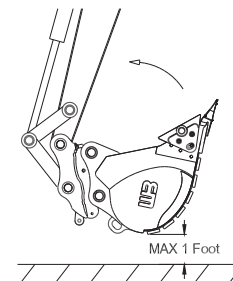


WORK SAFE
"EVERYBODY MATTERS"

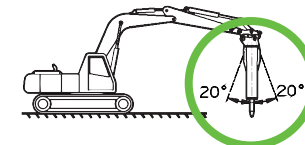
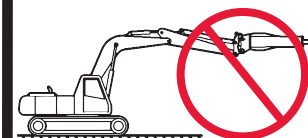
! DANGER



CRUSH HAZARD.
Attachment may drop without warning if not properly attached. Consult owners manual for proper installation procedures. Failure to comply could result in death or serious injury.

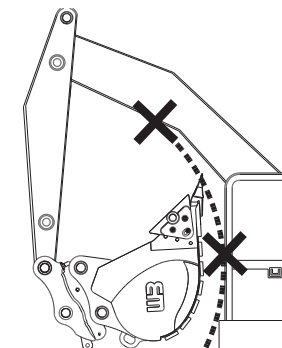


Attachment must be disengaged in the fully curled position. NEVER activate switch in any other attachment position.



Hammers must be used in vertical position. Pulverizers, Cutters, Concrete Busters and Shears are **NOT Approved**

! WARNING



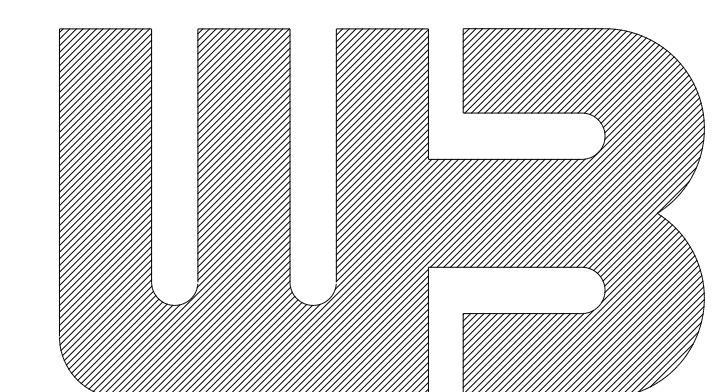
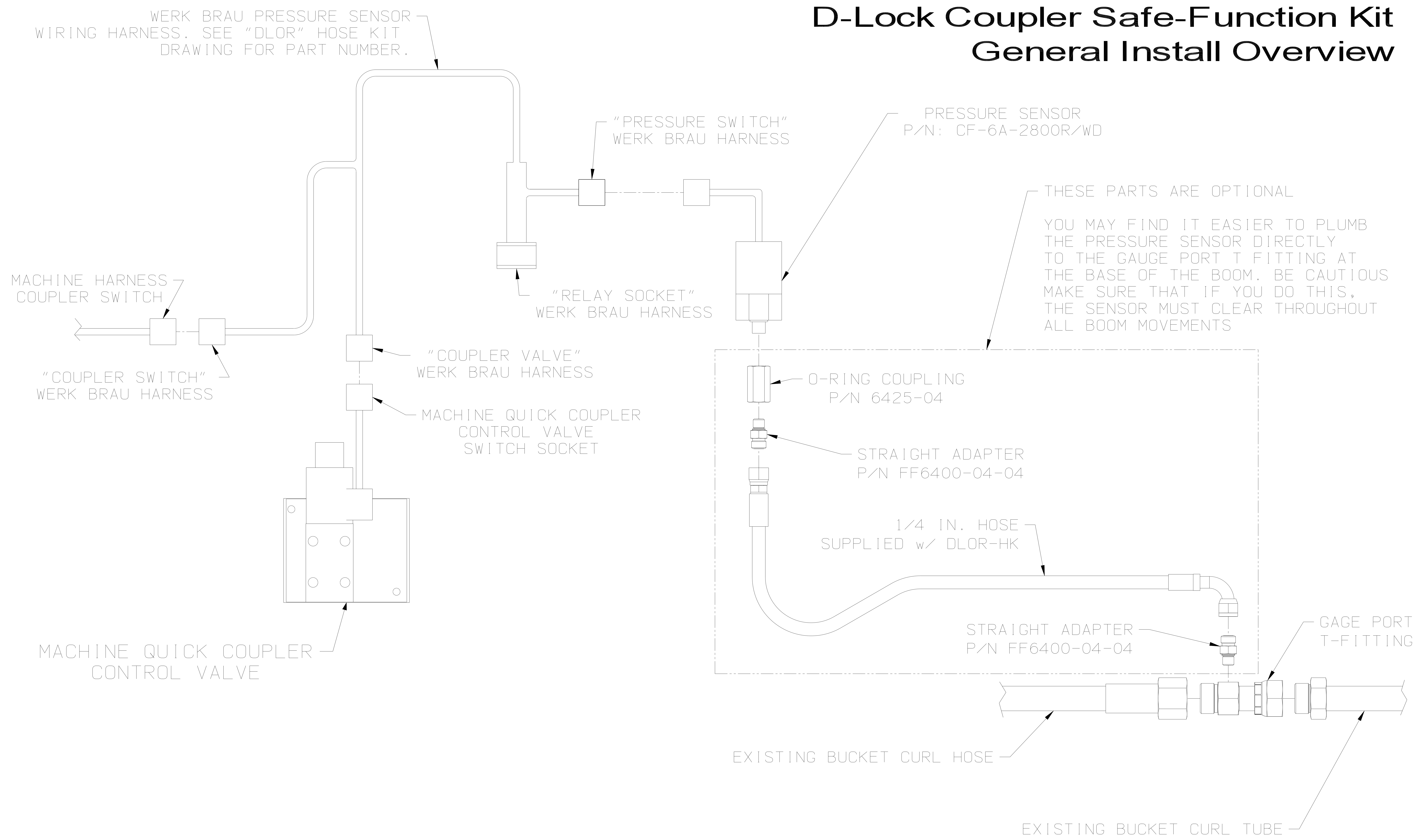
This machine is fitted with a quick coupler. This may lead to interference with the machine.

ECO	REV	DATE	CHANGE DESCRIPTION	BY	CHECKED
-	A	4-17-23	RELEASED TO PRODUCTION	AJZ	-
-	B	6-22-23	REVISED TO SHOW OPTIONAL PARTS	AJZ	-
-	-	-	-	-	-
-	-	-	-	-	-

ENGINEERING NOTES:
 - FOR DETAILS NOT DETAILED ON THIS PRINT, REFERENCE INSTALL MANUAL "INST-D-Lock Coupler Safe Function Kit"

METRIC
 X± 1.50
 X.X:± 0.80
 X.XX:± 0.25
 ANGLE ±0.5°
 NOT TO SCALE

D-Lock Coupler Safe-Function Kit General Install Overview



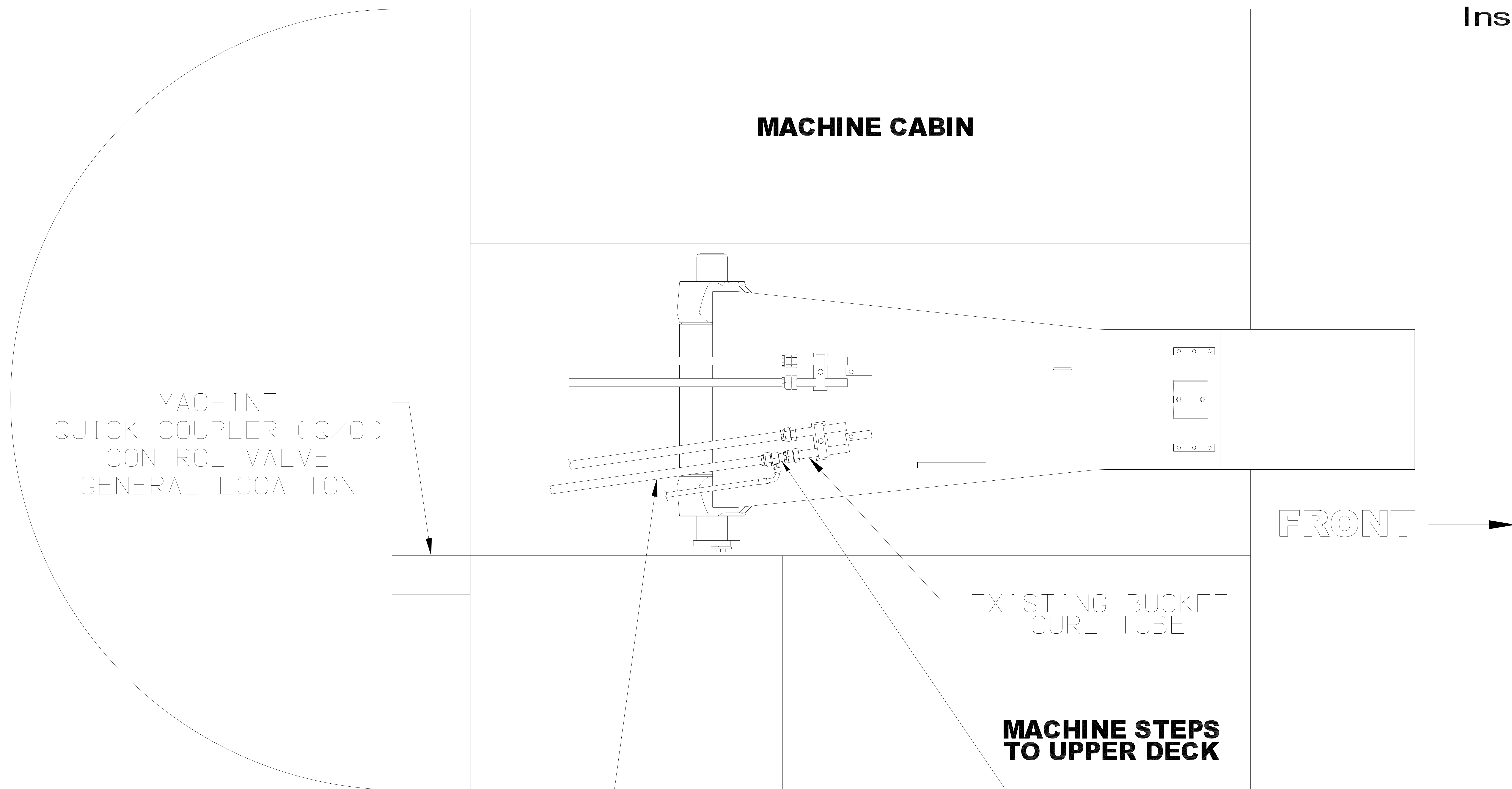
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DESCRIPTION: D-Lock Coupler Safe Function Kit	
DRAWN: AJZ	REVISION
DATE: 4-17-23	

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METRIC
 X± 1.50
 X.X:± 0.80
 X.XX:± 0.25
 ANGLE ±0.5°
 NOT TO SCALE

D-Lock Coupler Safe Function Kit Install Instruction



LOCATE THE EXISTING TUBE WHICH SUPPLIES FLUID TO THE BUCKET CURL CYLINDER PORT (THAT WHICH CURLS THE BUCKET IN TOWARD THE STICK).

**** NOTE, WHAT IS PICTURED HERE MAY NOT BE EXACT TO YOUR MACHINE!! FOLLOW YOUR MACHINES' PHYSICAL BUCKET CURL HOSE BACK FROM THE CYLINDER!! ****

DISCONNECT THIS HOSE, INSERT THE T-FITTING, RECONNECT THE BUCKET CURL HOSE TO THE T-FITTING.

INSERT THE 1/4" STRAIGHT FITTING INTO THE ORB PORT OF THE T-FITTING. CONNECT THE 90° END TO THE 1/4" ADAPTER ON THE T-ASSEMBLY & ROUTE THE OTHER END OF HOSE TO THE QUICK COUPLER VALVE LABELED "Q/C VALVE". SEE "GENERAL OVERVIEW" PAGE FOR FINAL STEPS.

TOP VIEW OF MACHINE
TOP-SIDE HOSE ROUTING STYLE

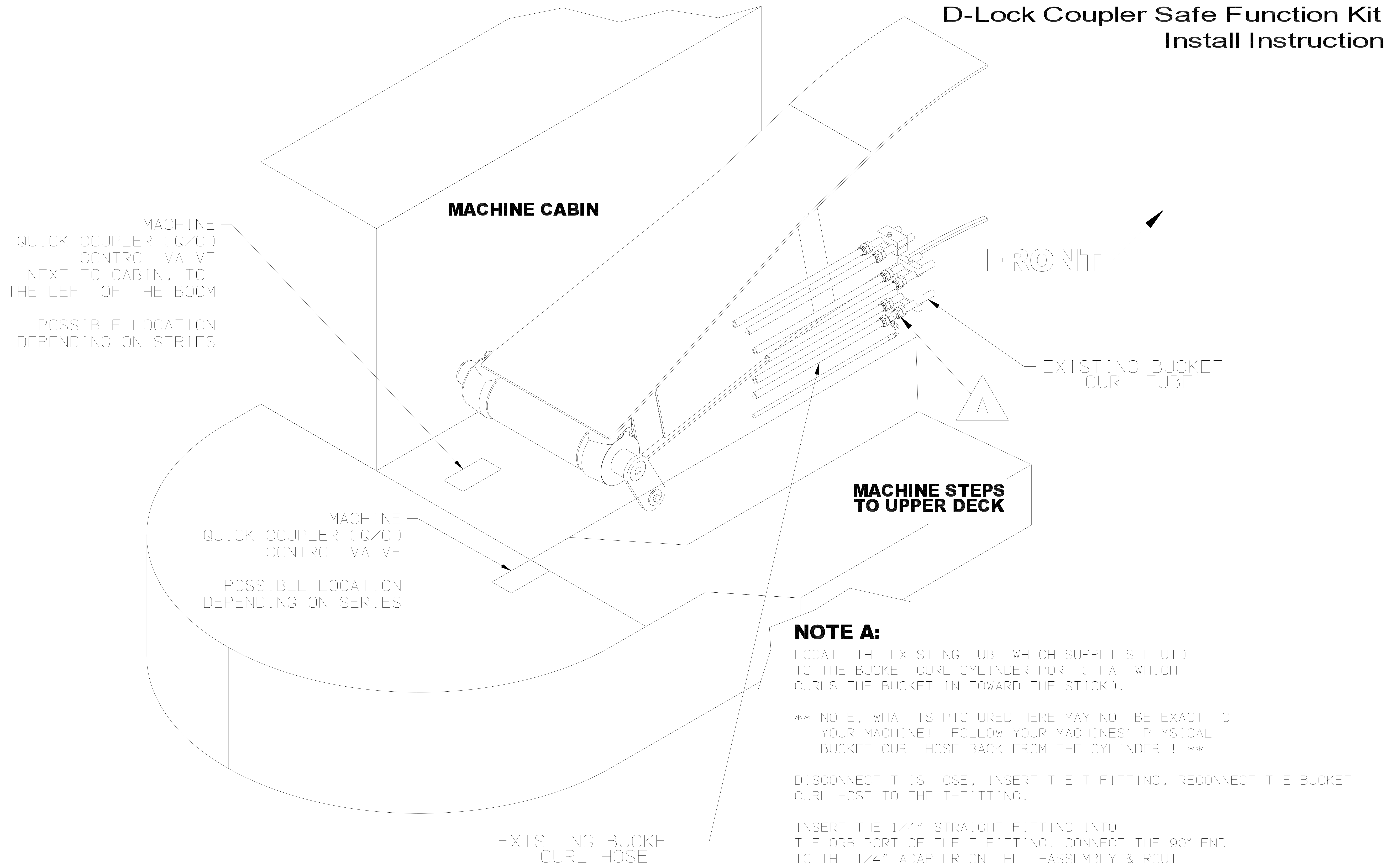


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DESCRIPTION: D-Lock Coupler Safe Function Kit	
DRAWN: AJZ	DATE: 4-17-23

A
REVISION

ECO	REV	DATE	CHANGE DESCRIPTION	BY	CHECKED	ENGINEERING NOTES:	METRIC
-	A	4-17-23	RELEASED TO PRODUCTION	AJZ	-	- FOR DETAILS NOT DETAILED ON THIS PRINT, REFERENCE INSTALL MANUAL "INST-D-Lock Coupler Safe Function Kit"	X± 1.50
-	-	-	-	-	-		X.X:± 0.80
-	-	-	-	-	-		X.XX:± 0.25
-	-	-	-	-	-		ANGLE ±0.5° NOT TO SCALE

D-Lock Coupler Safe Function Kit Install Instruction



ISO VIEW OF MACHINE
SIDE-MOUNT HOSE ROUTING STYLE

FILE NAME: D-Lock Coupler Safe Function Kit.CKD	A REVISION
DESCRIPTION: D-Lock Coupler Safe Function Kit	
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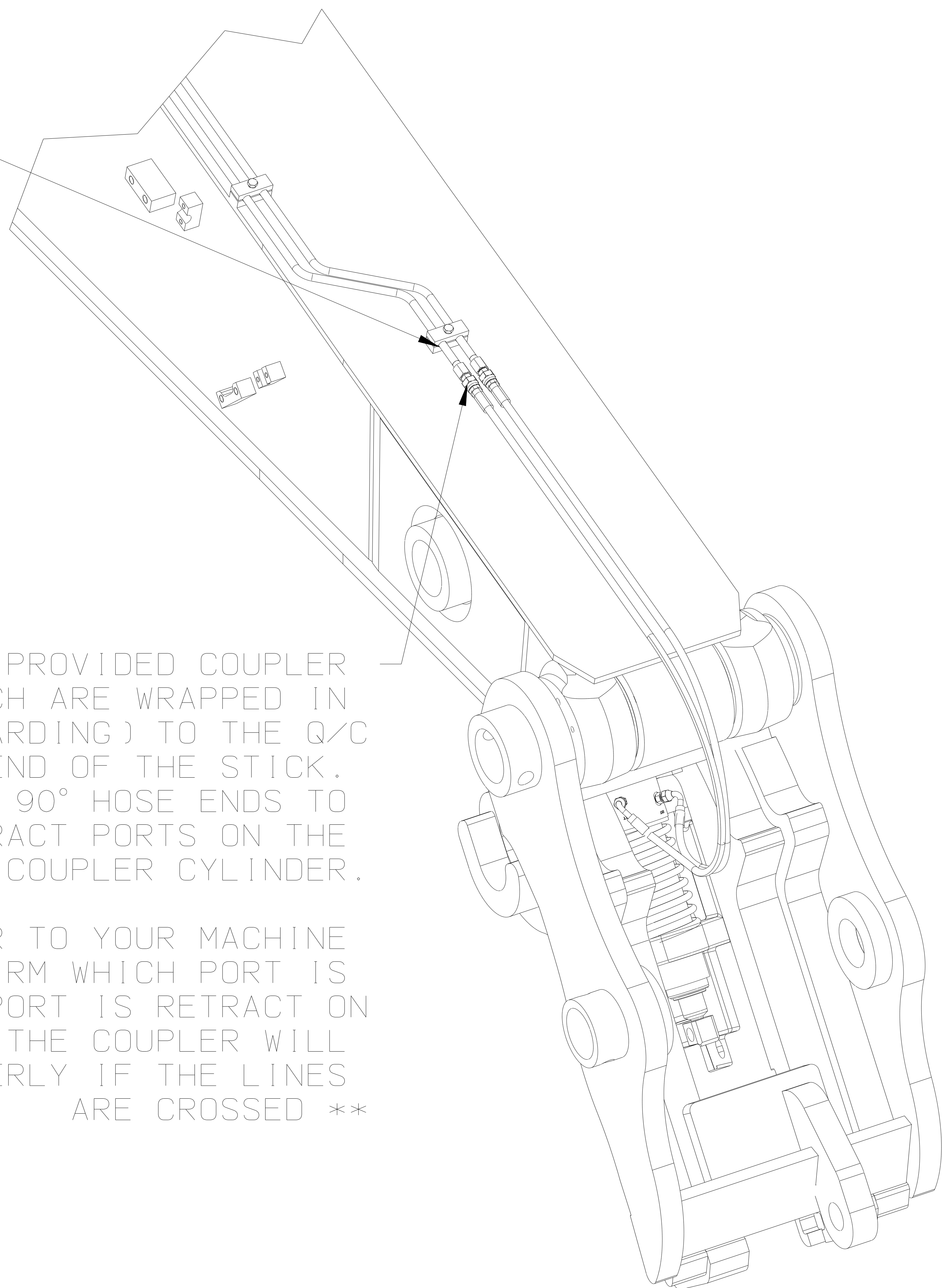
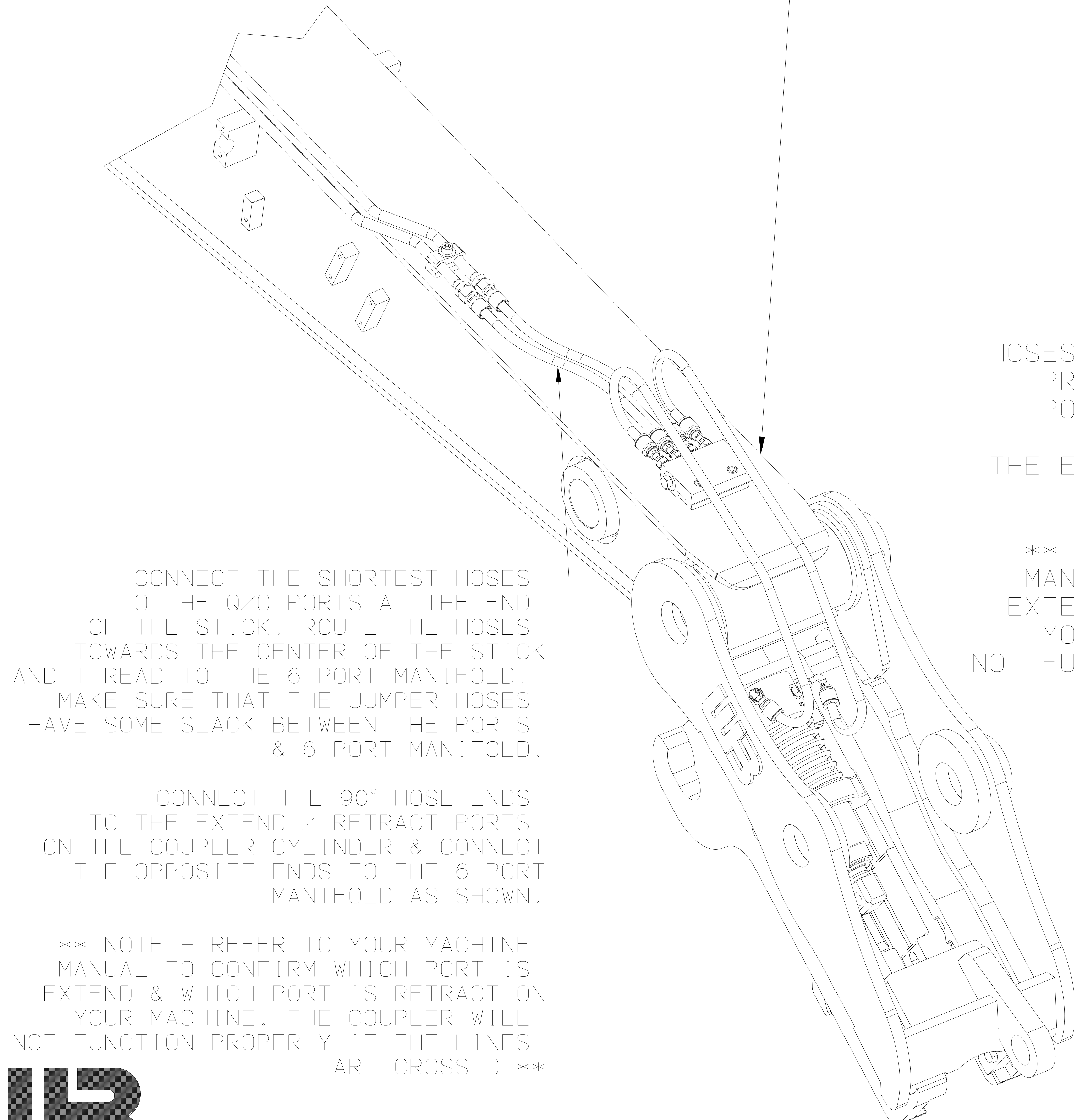
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METRIC
 X± 1.50
 X.X:± 0.80
 X.XX:± 0.25
 ANGLE ±0.5°
 NOT TO SCALE

D-Lock Coupler Safe Function Kit Coupler Hose Routing

DEPENDING ON THE MACHINE QUICK COUPLER PIPING HOSE ROUTING, A 6-PORT MANIFOLD BLOCK MAY BE REQUIRED (PICTURED ON THE LEFT).

IF THE QUICK COUPLER PIPING IS ROUTED DOWN THE MIDDLE OF THE STICK, YOUR "DLOR" HYDRAULIC KIT WILL NOT INCLUDE THE 6-PORT MANIFOLD BLOCK.



CONNECT THE SHORTEST HOSES TO THE Q/C PORTS AT THE END OF THE STICK. ROUTE THE HOSES TOWARDS THE CENTER OF THE STICK AND THREAD TO THE 6-PORT MANIFOLD. MAKE SURE THAT THE JUMPER HOSES HAVE SOME SLACK BETWEEN THE PORTS & 6-PORT MANIFOLD.

CONNECT THE 90° HOSE ENDS TO THE EXTEND / RETRACT PORTS ON THE COUPLER CYLINDER & CONNECT THE OPPOSITE ENDS TO THE 6-PORT MANIFOLD AS SHOWN.

** NOTE - REFER TO YOUR MACHINE MANUAL TO CONFIRM WHICH PORT IS EXTEND & WHICH PORT IS RETRACT ON YOUR MACHINE. THE COUPLER WILL NOT FUNCTION PROPERLY IF THE LINES ARE CROSSED **

CONNECT THE PROVIDED COUPLER HOSES (HOSES WHICH ARE WRAPPED IN PROTECTIVE GUARDING) TO THE Q/C PORTS AT THE END OF THE STICK. CONNECT THE 90° HOSE ENDS TO THE EXTEND / RETRACT PORTS ON THE COUPLER CYLINDER.

** NOTE - REFER TO YOUR MACHINE MANUAL TO CONFIRM WHICH PORT IS EXTEND & WHICH PORT IS RETRACT ON YOUR MACHINE. THE COUPLER WILL NOT FUNCTION PROPERLY IF THE LINES ARE CROSSED **



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