

	Doc or ECO #:	ECO-71652-002	Date:	04/03/2023	Author:	JV
	Rev. #:	A				
Engineering Change Order (ECO)	Engineering Approval:	Aeg	Date:	6/22/2023	Quality Approval	aeg

P/N #:	71652	Effective Date:	June 22, 2023
Title:	Hand controller joystick update		

1.0 Purpose / Summary

The original XS-002 rev a joystick has gone EOL. There is a replacement XS-002 rev B but leadtimes and prices are excessive. A new cross joystick was chosen with better leadtimes and cost.

The mods for this joystick allow us to easily drop in a cross compatible option in the future if needed.

2.0 Parts Affected

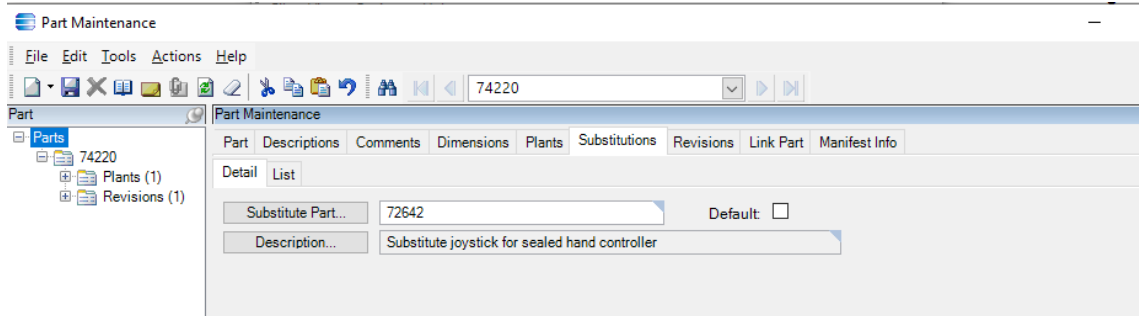
Part Number	Notes	Removed	Added	Modified	REV
71652	Updated rev to track joystick changes	☐	☐	☒	C
52185	Joystick mount hole widened for new joysticks	☐	☐	☒	D
XS-002	Old joystick Removed from BOM	☒	☐	☐	A
74220	Joystick - Athlen 3 Axis Joystick	☐	☒	☐	A
74355	FHPS - 4-40 x 5/8" Sealing 18-8 SS	☐	☒	☐	A
74360	Hand controller anti rotation washer	☐	☒	☐	A
52205	3/8" Grade 8 Zinc-Aluminum Steel Washer	☒	☐	☐	A
71920	Nut #4-40 x 1/4" Nylock	☐	☒	☐	A
72642	(HF46S10) Joystick **substitute for 74220	-	-	-	A
74200	Loctite 425 * consumable	-	-	-	-
74359	HC pot spot drill jig	-	-	-	A
71655	Affected, no rev change (defender joystick)	-	-	-	A
71654	Affected, no rev change (pro5 joystick)	-	-	-	A
71653	Affected, no rev change (pro4 joystick)	-	-	-	B

3.0 Detail

The main joystick hole was opened on 72185 to accommodate two different joysticks of similar comparison. Both are approved for use within the standard handcontroller build.

A jig was created to spot drill the potentiometers before assembly. In conjunction with the addition of an anti-rotation washer, we should see less issues of a loose potentiometer.

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SN Tracking;

HC2023169-176 are in between revs. They feature new joysticks & Loctite 425 on the cord grips.

They do not yet feature the potentiometer updates

4.0 Disposition of Material

All of XS-002 rev A should be used to exhaustion.

All current stock of 52185 should be modified to current rev D

52205 should be removed from production hardware kits.

Older Industrial hand controllers are no longer able to receive joystick repairs, a new handcontroller should be recommended. Alternatively the entire handcontroller could be rebuilt with the modifications detailed in this ECO.

5.0 Action Items

Action	Department	Acknowledgement Initials
Stock inventory from Rev C BOM	PURCHASING	RM
Update BOMS and Epicor	ENGR	JV
71652 PDM / GA update	ENGR	LM
First article 74360, ME drawing to A	ENGR	JV Liam?

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6.0 Modified / Referenced Documents:

Document	Current Revision
WI-71652-001	D
QC-71652	C

7.0 Revision History

Date Revised (mm-dd-yyyy)	Location of Change (section, paragraph no., step no., etc.)	Description of Change Made	Name of Person making the Change
6/22/2023		init	JV