

	Doc or ECO #:	ECO-70472-001	Date:	4/3/2019	Author:	JK
	Rev. #:	A				
Engineering Change Order (ECO)	Engineering Approval:	aeg	Date:	4/4/2019	Quality Approval	DO

P/N #:	70472	Effective Date:	April 3, 2019
Title:	Hot Isostatic Press Shaft Update		

1.0 Purpose / Summary

The production method for M5 Thruster 2.0 5mm Motor Shaft Zirconia [70472] has been updated for increased flexural strength.

2.0 Parts Affected

Part Number	Notes	Removed	Added	Modified	REV
70472	Add Hot Isostatic Press Note, Chamfer to Shaft Ends	☐	☐	☒	D

3.0 Detail

A substantial number of M5 Thruster 2.0 Assembly [70503] have failed in the field when the M5 Thruster 2.0 5mm Motor Shaft Zirconia [70472] encounters large bending loads resulting in breakage.

The production shafts were originally produced by unidirectional pressing, the switch to Hot Isostatic Press (HIP) production process increased the shaft break strength in bending by 63% on average in our test samples.

This ECO makes the HIP revision of the shaft the production standard. M5 Thruster 2.0 5mm Motor Shaft Zirconia [70472] produced by the HIP process can easily be distinguished from those produced by the unidirectional pressing because the unidirectional shafts are white, and the HIP shafts are tan.

There were some minor geometry improvements (chamfer to shaft ends) included in this revision as well.

4.0 Disposition of Material

All unidirectional pressed shafts (Rev B) (white) should be removed from inventory and transferred to engineering.

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5.0 Action Items

Action	Department	Acknowledgement Initials
Update Part Revision in Epicor	Engineering	RN
Transfer Inventory of Rev B Shafts to Engineering	Inventory	SL

6.0 Modified / Referenced Documents:

Document	Current Revision
-	-

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
4/3/2018	-	Initial Draft	JK