

Engineering Department

Engineering Change Order (ECO)

ECO #: ECO-52366-001

Effective Date: July 18, 2017

Title: Pro4 ROV Horizontal Propeller installation

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Engineering Approval: aeg
Operations Approval: aeg

Date: July 18, 2017
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Date: July 17, 2017

Summary:

In an effort to avoid Pro4 and Voyager horizontal thruster shaft from bending, the horizontal propellers will be removed before shipping ROVs to customers.

An insert document will be provided with each system to help customers install horizontal propellers correctly.

Parts Affected:

Part Number	Notes	Removed	Added	Modified
52366	Pro4 Horizontal Propeller Installation Insert Document	☐	☒	☐
PRO4-SUB-X	Pro4 Horizontal Propeller Installation Insert Document	☐	☐	☒
52366	Pro4 Horizontal Propeller Installation Insert Document	☐	☐	☒

Detail:

There have been multiple reports of horizontal shafts bending during shipping from customers. This includes Pro4 and Voyager ROVs only.

As a solution, Videoray will ship ROVs without the horizontal propellers installed. Customers are encouraged to follow the same procedure before transporting the system. An insert document will be provided with each system to help customers install the propellers correctly.

Action Item:

Action	Department	Acknowledgement Initials
- Remove horizontal propellers on all Pro4 and Voyagers ROVs before shipping. - Included "Pro4 Horizontal Propeller Installation Insert Document" with all Pro4 and Voyager ROVs being shipped.	Production	KK
- Remove horizontal propellers on all Pro4 and Voyagers ROVs before shipping repairs. - Included "Pro4 Horizontal Propeller Installation Insert Document" with all repaired Pro4 and Voyager ROVs being shipped.	Repairs	JK
Follow updated "Pro4 Manual Rev.B" "Explorer-Scout Manual Rev.B" and "Pro 4 ULTRA Manual Rev.B" QC sheet on every Pro4 and Voyager ROV being shipped.	QC	KK

Modified / Referenced Documents:

Document	Current Revision
52366 - Pro4 Horizontal Propeller Installation Insert	A
Pro4 Manual Rev.B	B
Explorer-Scout Manual Rev.B	B
Pro 4 ULTRA Manual Rev.B	B

-- END OF ORDER --