

	Document#:	ECO-MAR-025-GRB-001	Date:	5/2/2018	Author:	aeg
	Rev. #:	A				
ECO new vertical motor gearbox	Engineering Approval:	aeg	Date:	5/2/2018	Quality Approval	DO

P/N #:	ECO-MAR-025-GRB	Effective Date:	May 2, 2018
Title:	New vertical motor gearbox		

1.0 Purpose / Summary

The gearbox used on the PRO4 vertical thruster went EOL. A replacement of the same model series but with a different gear ratio will be used.

The only observed side effect was a slight increase in vertical thrust

2.0 Parts Affected

Part Number	Notes	Removed	Added	New	Modified
MAR-025-GRB	MAR-025-GRB revision incremented	☐	☐	☐	☒

3.0 Detail

The original gear box (AC4034) from the supplier (MAXX PRODUCTS) has gone end of life.

The ACC4033 is an identical match other than gear ratio. The ACC4033 has a gear ratio of 3.3:1 vs the 4.3:1 ACC4034 resulting in a higher RPM for a given shaft speed.

The new gear box was installed in a PRO4 and tested in our test tank. No subjective change in flight characteristics (manual or auto) was observed. There was a slight measurable increase in vertical speed, but it was generally imperceptible to the pilot.

A test ROV was field tested by Steve Van Meter on 2 jobs for greater 10hrs of flight time, there was no discernable effect on performance.

As there appears to be no noticeable impact and fit/form/function are identical no new part numbers will be issued, this is a revision increment of the part.

4.0 Disposition of Material

No old stock will be removed.

No old stock will be reworked.

Production / Repairs may use either part revision.

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5.0 Action Items

Action	Department	Acknowledgement Initials
Notify PPI of ECO and release new gear box for purchase	PE	AEG
Notify repair and production department of change	PE	AEG
Purchasing to procure ACC4033 as needed	PURCHASING	NS

6.0 Modified / Referenced Documents:

Document	Current Revision
NA	NA

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
5/2/2018		Initial release	aeg