

Engineering Department

Engineering Change Order (ECO)

ECO #: ECO-70041-003

Effective Date: February 16, 2018

Title: Two resistor value changes for BOM

Author: gd
Engineering Approval: aeg
Operations Approval: aeg

Date: February 16, 2018
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Summary:

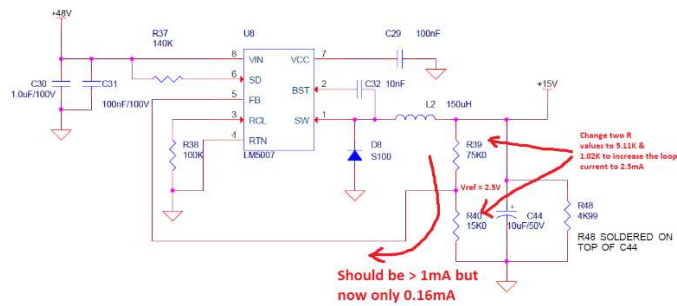
The MSS motor controller PCB electronics on this PCB includes a 48V to 15V DC-DC converter circuitry. Recent failure analysis discovered an error in two resistors in a related voltage divider network. This ECO addresses this issue by changing the two resistor values to rectify the above said error.

Parts Affected:

Part Number	Notes	Removed	Added	New	Modified
R39	Resistor value changed from 75K to 5.11K ohm	☐	☐	☐	☒
R40	Resistor values changed from 15K to 1.02K ohm	☐	☐	☐	☒

Detail:

The MSS motor controller PCB electronics on this PCB includes a 48V to 15V DC-DC converter circuitry. Recent failure analysis discovered an error in two resistors in a related voltage divider network. As shown in the diagram below the loop current in the feedback circuitry does not meet the min required current of 1mA. As a result, the motor controller behavior could be erratic or intermittent. The new values of two resistors R39 (5.11K) and R40 (1.02K) will increase the loop current to 2.5mA meeting the required minimum current of 1mA.



Action Item:

Action	Department	Acknowledgement Initials
Update PCB BOM with new resistor values for R39 & R40	Engineering	GD
Update SharePoint Records	Engineering	
Inform subcontractors of part change and supply new PCB BOM	Engineering	GD

Modified / Referenced Documents:

Document	Current Revision
70041-BOM.xlsx	Click here to enter text.

-- END OF ORDER --