

FASTWIRE

Overview:

The **FastWire** system is designed to simplify the wiring on all **WATERAX** vehicle mounted pumps and accessories. It features an easy plug and play system between the pump and its different available options. You can easily interface between the battery and all the control panel offerings. The FastWire harness is installed on all vehicle mount pumps and control panels; this system greatly reduces installation time and removes risk of incorrect electrical wiring. This document outlines the FastWire engine harness installation and the interface between each component.

Available FastWire products:

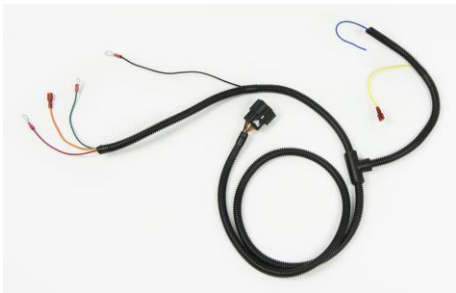


Figure 1: FWC-B-3, B&S18 & 23HP Vanguard FastWire Engine Harness

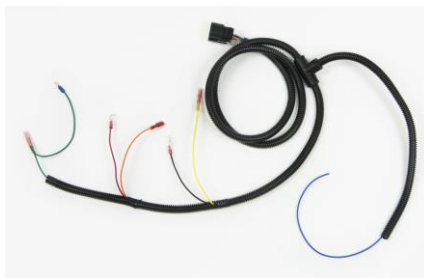


Figure 2: FWC-H1-3, Honda GX270-GX390 FastWire Engine Harness

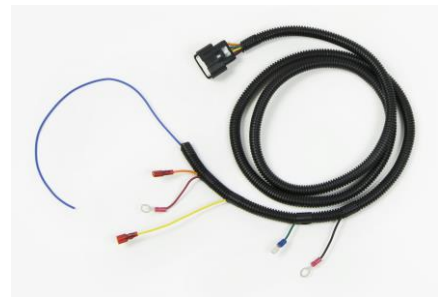


Figure 3: FWC-H-3, Honda GX630 FastWire Engine Harness



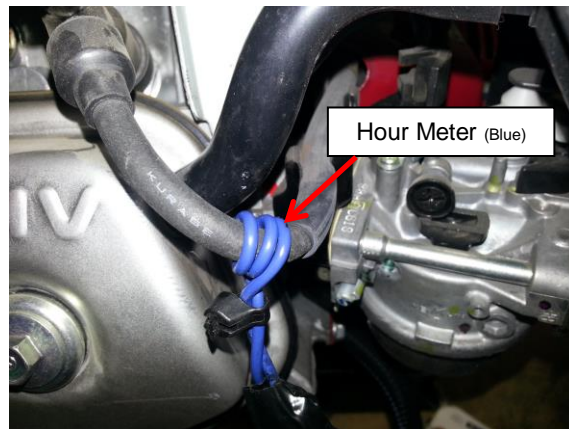
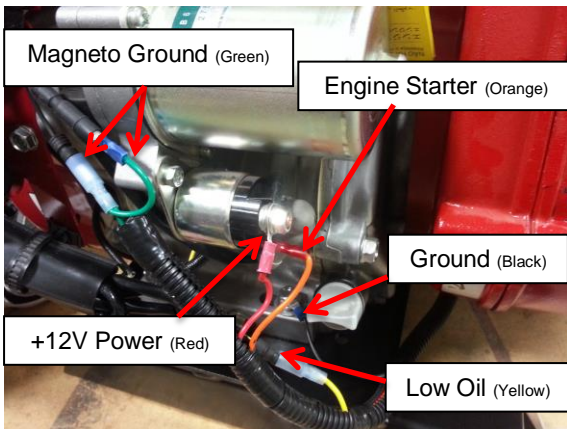
Figure 4: FWX-3, Engine/Panel 3 feet Extension Harness



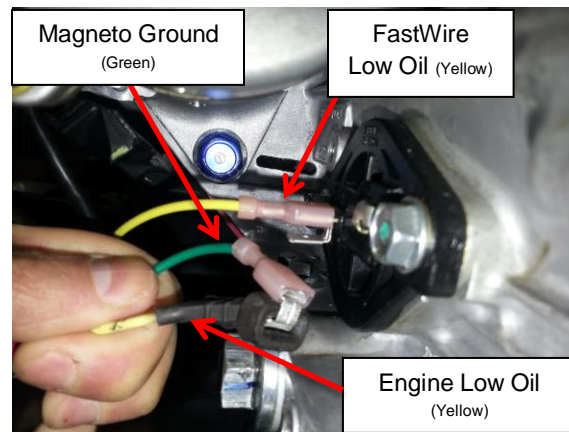
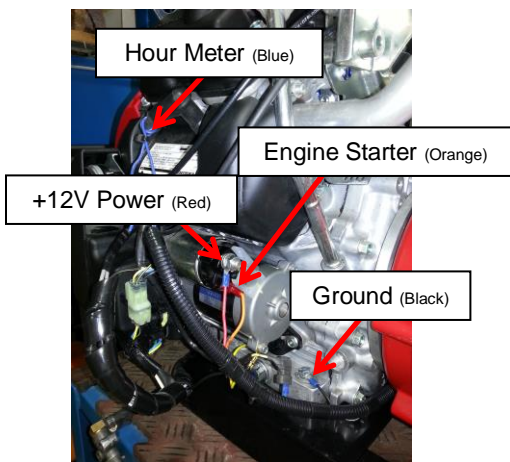
Figure 5: FWP-3, FWP-9, FWP-20, FastWire Power Cable comes in 3, 9 and 20 feet lengths.

USER INSTRUCTIONS

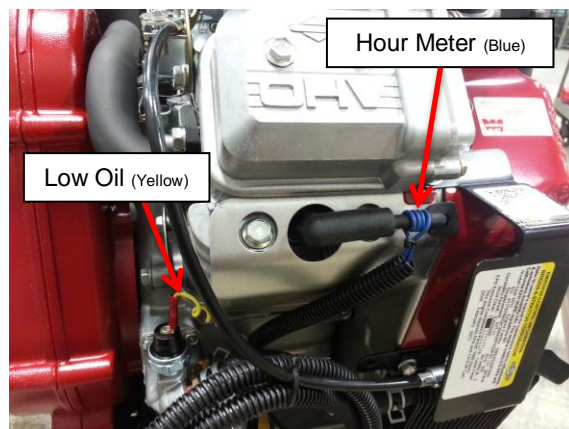
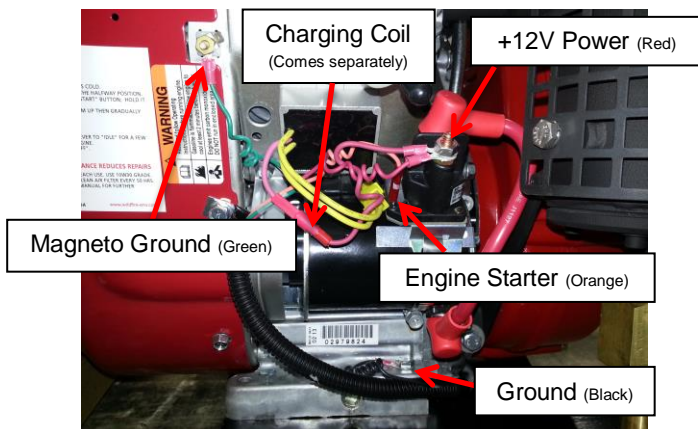
GX270 & GX390 Wiring Installation:



GX630 Wiring Installation:



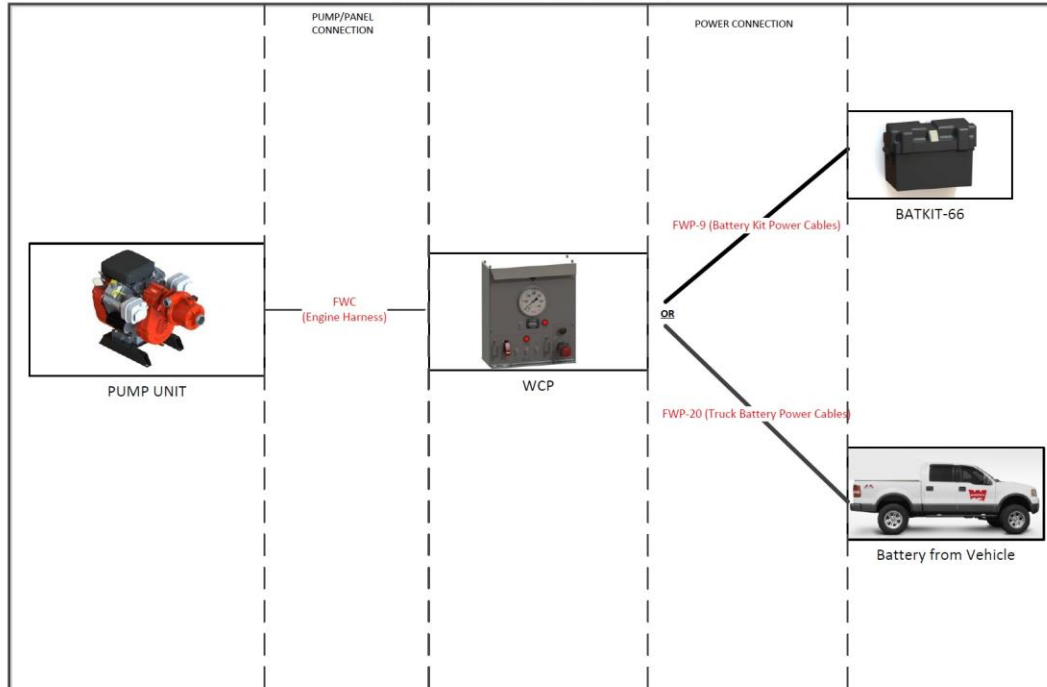
B&S 18HP & 23HP Wiring Installation:



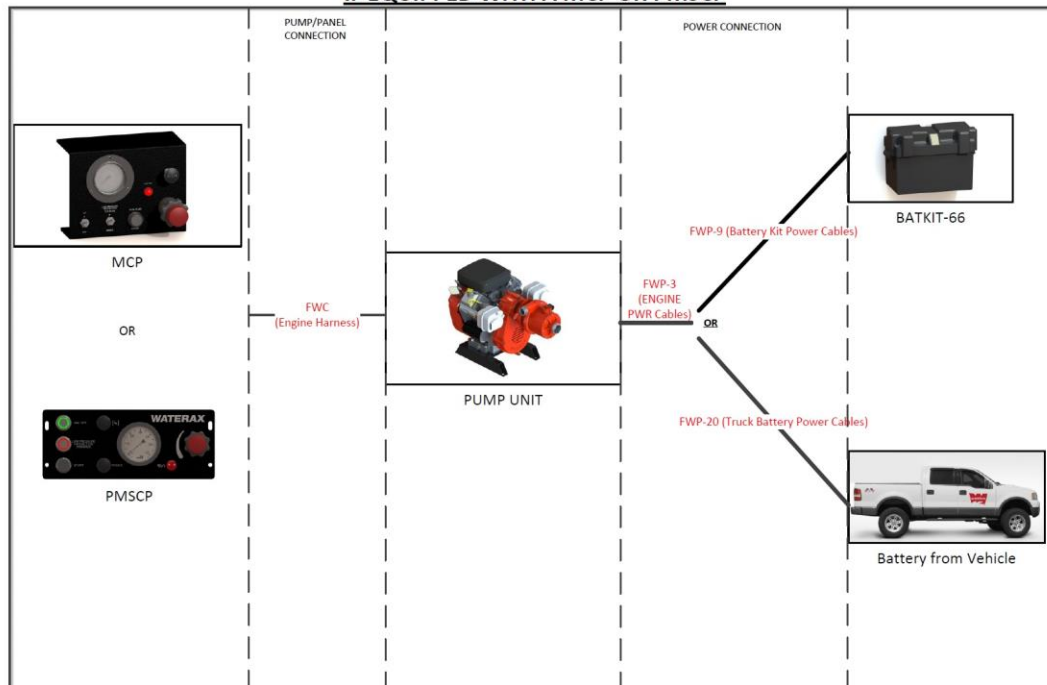
USER INSTRUCTIONS

Inter-Connections:

IF EQUIPPED WITH A WCP



IF EQUIPPED WITH A MCP OR PMSCP



USER INSTRUCTIONS

Operation:

To properly mate the 8-Pin Connectors please refer to the Appendix A where you will find Molex' recommended method to use the connectors.

When plugging and un-plugging the FastWire connectors, make sure all power cables are disconnected to prevent injury and damage to components.

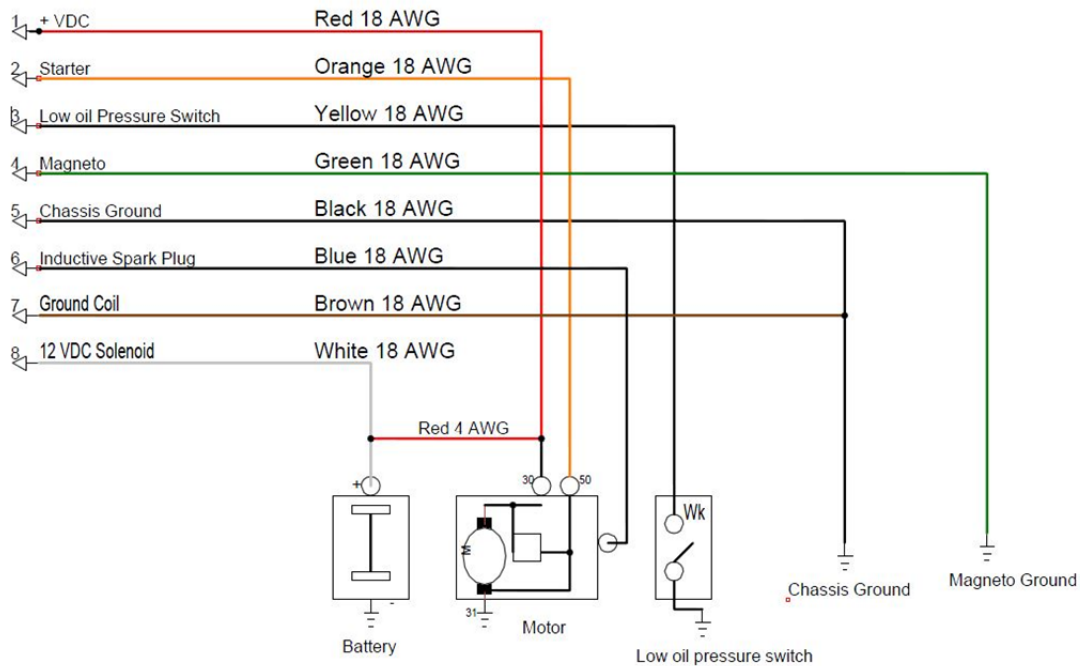
NOTE: As with all connectors, to keep good connections within the connector, connectors should be disconnected and connected as little as possible.



Figure 9: 8-Pin connector with female pins

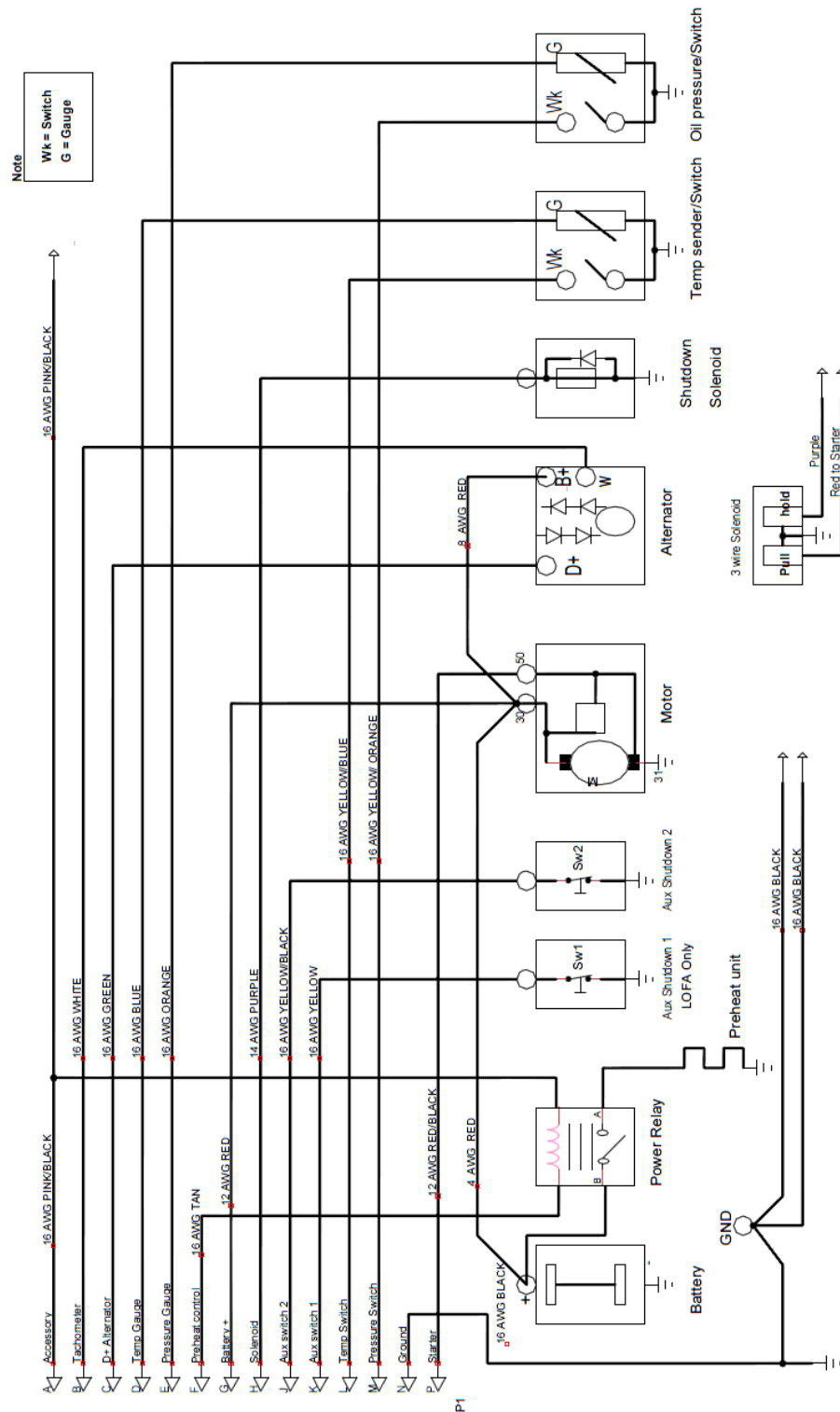
Wiring Schematics

Wiring for gasoline pumps


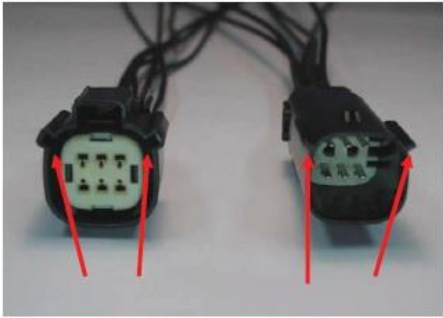
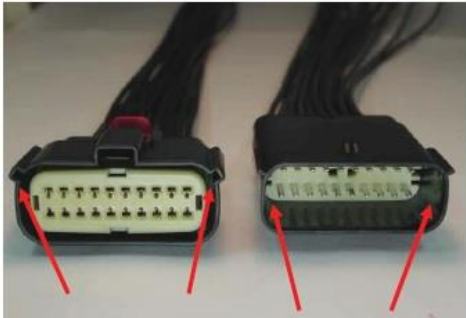

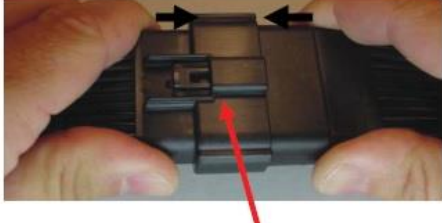


USER INSTRUCTIONS

Wiring for gasoline pumps



APPENDIX A

	<h3>APPLICATION SPECIFICATION</h3>								
<h4>Section 4: Connector Mating</h4> <p>A. Connector mating</p> <p>Note and align connector keying features, from connector to connector. Begin mating procedure by sliding the two connectors together, press firmly until you hear an audible click from the primary latch.</p>									
 <p>Keying features</p>	 <p>Keying Features</p>								
 <p>Primary Latch</p>	 <p>Primary Latch</p>								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><u>REVISION:</u> 2</td> <td style="width: 30%;"><u>ECR/ECN INFORMATION:</u> <u>EC No:</u> UAU2013-1042 <u>DATE:</u> 01/08/2013</td> <td style="width: 45%;"><u>TITLE:</u> <h2 style="text-align: center;">MX150 Application Guide</h2></td> <td style="width: 10%;"><u>SHEET No.</u> 27 of 67</td> </tr> <tr> <td><u>DOCUMENT NUMBER:</u> AS-33472-100</td> <td><u>CREATED / REVISED BY:</u> Tim Skiver</td> <td><u>CHECKED BY:</u> Chris Taylor</td> <td><u>APPROVED BY:</u> Vijy Koshy</td> </tr> </table>		<u>REVISION:</u> 2	<u>ECR/ECN INFORMATION:</u> <u>EC No:</u> UAU2013-1042 <u>DATE:</u> 01/08/2013	<u>TITLE:</u> <h2 style="text-align: center;">MX150 Application Guide</h2>	<u>SHEET No.</u> 27 of 67	<u>DOCUMENT NUMBER:</u> AS-33472-100	<u>CREATED / REVISED BY:</u> Tim Skiver	<u>CHECKED BY:</u> Chris Taylor	<u>APPROVED BY:</u> Vijy Koshy
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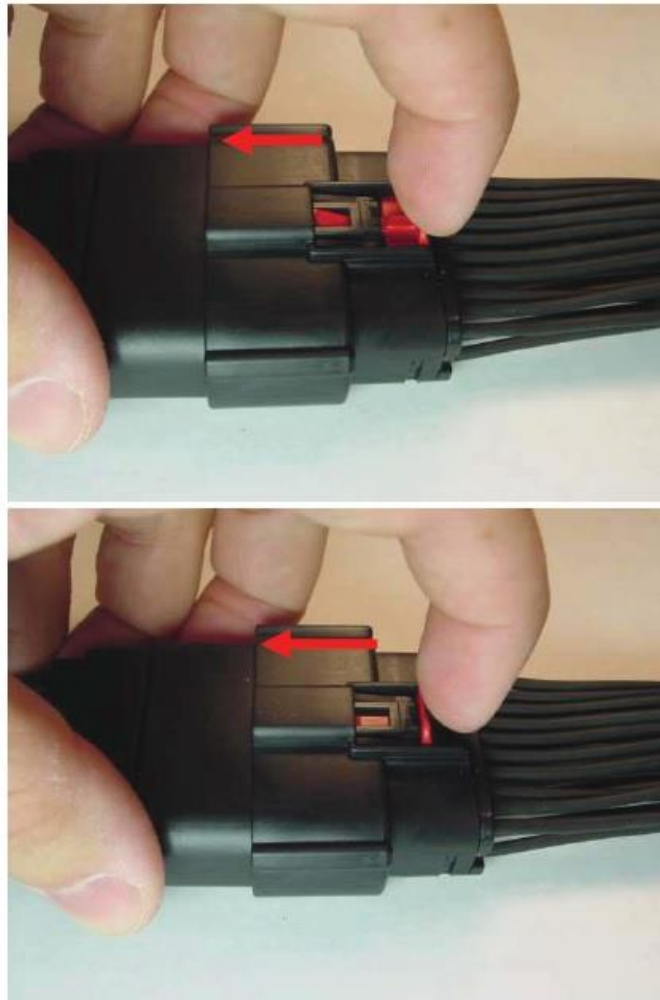


APPLICATION SPECIFICATION

Section 4: Connector Mating

B. Connector mating (continued)

Once together the final step will be locking the CPA. Simply press in to the center of the connector, until you see/feel positive engagement.



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2	EC No: UAU2013-1042 DATE: 01/08/2013	<h2 style="margin: 0;">MX150 Application Guide</h2>		26 of 67
DOCUMENT NUMBER:	CREATED / REVISED BY:			APPROVED BY:
AS-33472-100	Tim Skiver	Chris Taylor	Vijy Koshy	
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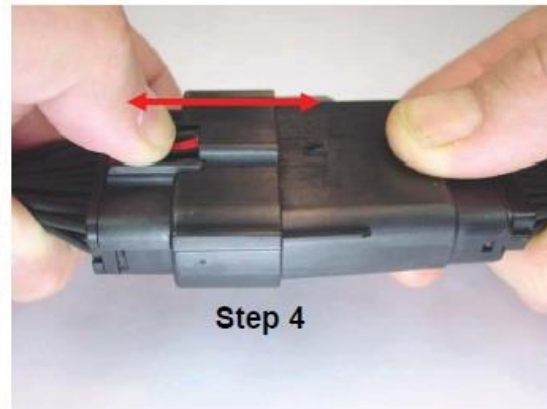
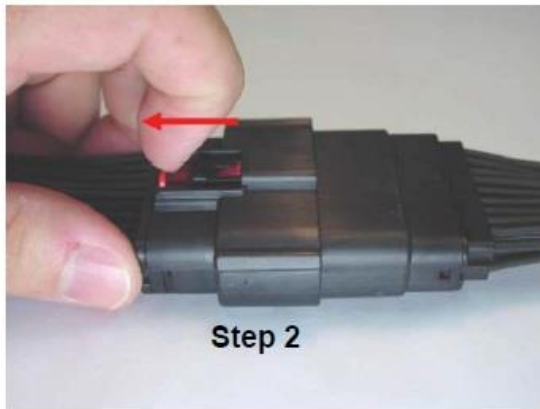
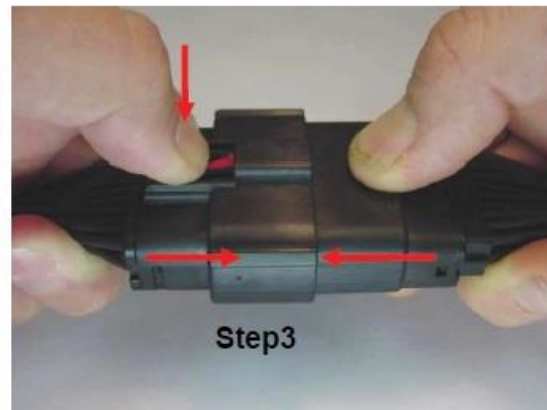
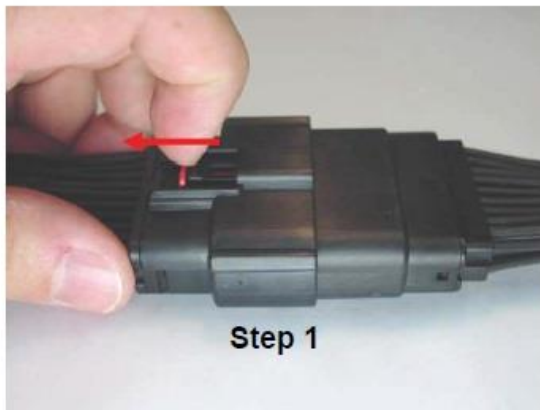


APPLICATION SPECIFICATION

Section 5: Service Instructions

A. Un-mate procedure

To un-mate the connectors, pull back on the CPA (step 1, and step 2). Push connector together to unload the latch system. Then depress the latch with your thumb (step 3). Continue to depress the latch, and gently pull apart connector assemblies (step 4).



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AS-33472-100		Tim Skiver	Chris Taylor	Vijy Koshy

TEMPLATE FILENAME: APPLICATION_SPEC[SIZE_A](V.1).DOC

Appendix B

molex®		PRODUCT SPECIFICATION	
4.3 TEMPERATURE Operating: - 40°C to + 120°C Nonoperating: - 40°C to + 120°C			
5.0 PERFORMANCE			
5.1 ELECTRICAL REQUIREMENTS			
ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Contact Resistance (Low Level)	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA.	10 milliohms MAXIMUM [initial]
2	Insulation Resistance	Un-mate & un-mount connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	20 Megohms MINIMUM
3	Dielectric Withstanding Voltage	Un-mate connectors: apply a voltage of {two times the rated voltage plus 1000 volts} VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown; current leakage < 5 mA
4	Temperature Rise	Mate connectors: measure the temperature rise at the rated current after 4 hours and temperature stabilizes	Temperature rise: +30°C MAXIMUM
5.2 MECHANICAL REQUIREMENTS			
ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
5	Terminal Insertion and Withdrawal Forces	Insert and withdraw terminal (male to female) at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	5.78 N (1.3 lbf) MAXIMUM insertion force & 1.11 N (0.25 lbf) MINIMUM withdrawal force
6	Connector Mate and Un-mate Forces	Mate and un-mate connector (male to female) at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	75 N (16.9 lbf) MAXIMUM insertion force & 110 N (24.7 lbf) MINIMUM withdrawal force
7	Terminal Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	85 N (19.1 lbf) MINIMUM retention force
8	Durability	Mate connectors up to {25 cycles for tin (non-noble) plating OR 100 cycles for gold (noble) plating} at a maximum rate of 10 cycles per minute prior to Environmental Tests.	10 milliohms MAXIMUM (change from initial)
REVISION:	ECR/ECN INFORMATION:	TITLE:	
E	EC No: IPG2013-1943 DATE: 2013 / 06 / 18	MX150L 22-14 AWG WIRE-TO-WIRE & PANEL MOUNT CONNECTOR SYSTEM	
DOCUMENT NUMBER:		CREATED / REVISED BY:	CHECKED BY:
PS-19417-001		WLEUNG	BRUPERT
		APPROVED BY:	
		JFMURPHY	
SHEET No. 6 of 8			
TEMPLATE FILENAME: PRODUCT_SPEC(SIZE_A)(V.1).DOC			

USER INSTRUCTIONS

Warranty, Service and Support

Product and service documentation such as tech notes, data sheets, manuals and information on the limited warranty provided on products manufactured by *WATERAX* can be found on our Web site at: www.waterax.com.

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