

GEN3-to-GEN4 LSU4.2-to-LSU4.9 WBO2 Adapter Kit Instructions

The GEN3 PRO SEFI's Bosch LSU4.2 WBO2 sensor cannot be used with the GEN4 PRO XTREME System. The GEN4 PRO XTREME System is only compatible with the Bosch LSU4.9 WBO2 Sensor. Therefore, if you plan to use your existing GEN3 PRO SEFI system Main Wire Harness (MWH) and want to switch back and forth between a GEN3 PRO SEFI ECU and GEN4 PRO XTREME ECU, the GEN3 PRO SEFI System's MWH needs to be modified to accommodate the ability to switch between the Bosch LSU4.2 sensor for the GEN3 system and the Bosch LSU4.9 LSU sensor for the GEN4 system.

The GEN3-to-GEN4 LSU4.2-to-LSU4.9 WBO2 adapter kit provides the necessary LSU4.9 WBO2 jumper harness and Molex MX150 6-way Male "Blade Side" & Female "Receptacle Side" Connector & Terminal kits to make the adaptation.

Below are the required steps to make the adaptation;

1. Cut off the GEN3 PRO SEFI's System LSU4.2 WBO2 Main Wire Harness lead about 11" back from the end of the WBO2 wire harness lead. Do not discard the 11" length of cut off LSU4.2 WBO2 Main Wire Harness lead. It will be used to make the GEN3 LSU4.2 WBO2 jumper harness using the provided Molex MX150 6-way Male "Blade Side"- Connector & Terminal kit.
2. Slide the GEN3 PRO SEFI MWH's braiding back and strip wire sleeving back ~1/4" to expose wires on all six wire leads. At this point, you may want to slip a 1/2" diameter heatshrink sleeving over the braiding if you do not plan to use tape to hold braiding in place after installing the Molex MX150 6-way Female "Receptacle Side" Connector & Terminal kit.
3. Carefully place a Molex Female terminal onto wire sleeving/exposed wire lead ensuring proper position. Once properly positioned, crimp terminal onto wire. Make sure the terminal is properly crimped onto wire by pulling terminal to make sure it does not come off.
4. Repeat Step 3 for the remaining wire leads.
5. Insert the (6) crimped female terminal/wire assemblies into the proper pin locations of the enclosed Molex 6-way Female "Receptacle Side" connector as shown below. Ensure the terminals are properly positioned and seated into the connector by pulling on the wires to ensure they do not come out of the connector. (See Molex Terminal installation overview on page 4 below).
6. Once the (6) crimped female terminal/wire assemblies are inserted into the Molex 6-way Female "Receptacle Side" connector push down on the white TPA retainer until fully seated. (See Molex Seating the TPA Receptacle Side overview on page 3 below).
7. Finish by taping or heatshrinking the MWH WBO2 harness lead's braiding.

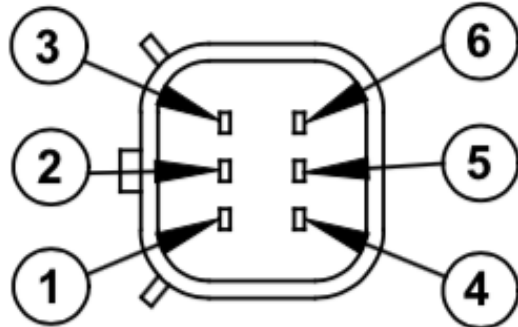
The next step is to make the LSU4.2 WBO2 jumper harness using the cut off LSU4.2 WBO2 Main Wire Harness lead and Molex 6-way Male "Blade Side" Connector & Terminal Kit.

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8. Start by sliding the braiding back on the 11" length of cut off LSU4.2 WBO2 Main Wire Harness lead and strip wire sleeving back ~1/4" to expose wires on all six wire leads. At this point, you may want to slip a 1/2" diameter heatshrink sleeving over the braiding if you do not plan to use tape to hold braiding in place after installing the Molex 6-way Male "Blade Side" Connector & Terminal kit.
9. Carefully place a Molex Male terminal onto wire sleeving/exposed wire lead ensuring proper position. Once properly positioned, crimp terminal onto wire. Make sure the terminal is properly crimped onto wire by pulling terminal to make sure it does not come off.
10. Repeat Step 9 for the remaining wire leads.
11. Insert the (6) crimped male terminal/wire assemblies into the proper pin locations of the enclosed Molex 6-way Male "Blade Side" connector as shown below. Ensure the terminals are properly positioned and seated into the connector by pulling on the wires to ensure they do not come out of the connector. (See Molex Terminal installation overview on page 4 below).
12. Once the (6) crimped Male terminal/wire assemblies are inserted into the Molex 6-way Male "Blade Side" connector push down on the white TPA retainer until fully seated. (See Molex Seating the TPA Blade Side overview on page 3 below).
13. Finish by taping or heatshrinking the GEN3 LSU4.2 WBO2 jumper harness lead's braiding.

MOLEX 6-WAY CONNECTOR LSU4.2/4.9 WBO2 PIN OUT

PIN #	WIRE COLOR
1	BLACK
2	GRAY
3	YELLOW
4	GREEN
5	WHITE
6	RED

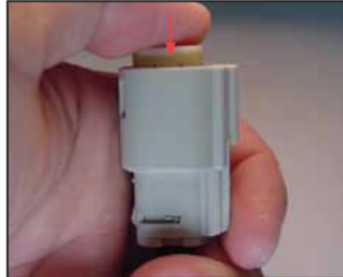


FEATURES AND SPECIFICATIONS



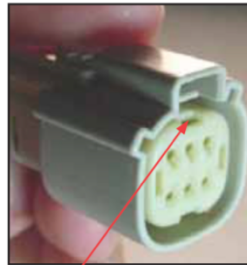
Seating the TPA Receptacle Side

- With the receptacle terminals fully installed, the TPA can be seated into its final lock position by applying an even force to both ends until it comes to a stop with an audible “click”. TPA movement distance from pre-lock to final lock is 5.00mm (.197”)
 - The TPA should never be fully removed from the connector housing

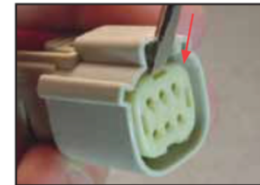


TPA Servicing Receptacle Side

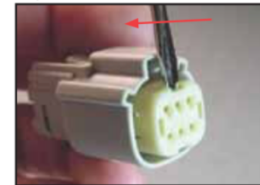
- Step 1: Insert a small screwdriver (max. width of 3.00mm (.118”) into the designated pry point
- Step 2: Using the housing as a pivot point, gently pry out the TPA until it reaches pre-lock position (5.00mm (.197”) travel)
 - The TPA should never be fully removed from the connector housing. Excessive force can damage the TPA



Pry Point



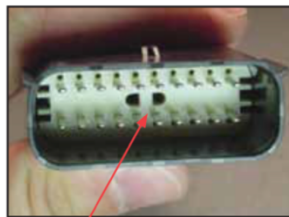
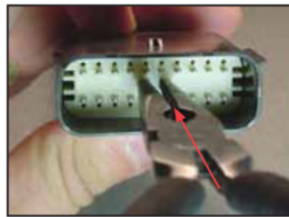
Step 1



Step 2

Seating the TPA Blade Side

- A modified process can be used for the Blade terminal. Using a pair of needle nose pliers, apply even pressure to the TPA. If the TPA resists, it may be detecting a partially installed terminal. Pull the TPA back into its pre-lock position and make sure all terminals are fully installed. Upon completion, the TPA can be seated. TPA movement distance from pre-lock to final lock is 5.00mm (.197”)
 - Step 1: Insert a small pair of needle nose pliers to the designated grab point
 - Step 2: Pull back 5.00mm (.198”) , gently, until the TPA reaches pre-lock position
 - The TPA should never be fully removed from the connector



Grab Point



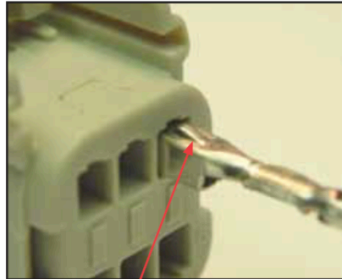
Pull back gently approximately 5.0mm (.197”)

FEATURES AND SPECIFICATIONS

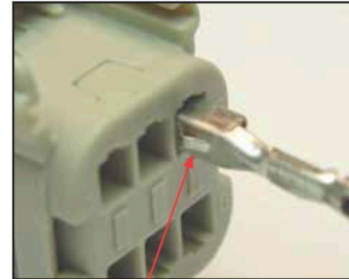


Terminal Installation

- With TPA still in pre-lock position, orient terminal to rear of connector. Grip the wire no less than 30.00mm (1.181") from the terminal insulation crimp align the orientation feature and insert through appropriate circuit opening. If resistance is encountered, retract the terminal and adjust the angle of insertion. Continue inserting the terminal until it stops and locks up on the lock finger with an audible click



Correct Orientation



90° Mis-orientation

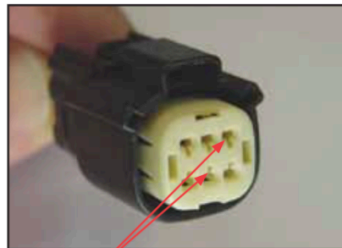
Terminal Removal

- Once the Lock finger is disengaged, gently pull on the wire to release the terminal. If the terminal resists, the service tool may not be fully engaged. Push the service tool straight into the service opening to ensure that it has fully disengaged the locking finger

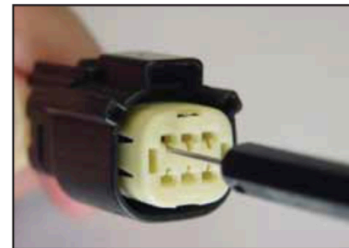
- Do not insert the service tool into the terminal opening
- Do not use excessive force, excessive force can damage the lock finger
- Do not insert the service tool at an angle, this may cause damage to the terminal
- Do not apply any lateral force, this may damage the terminal or lock finger

- Using the 1.50mm (.059") service tool #63813-1500, insert the tip into the terminal service hole adjacent to the terminal to be serviced. Push straight down gently and apply pressure to release-locking finger. This motion will release the locking finger, "picking" is not required. Cavity plugs are removed in the same manner

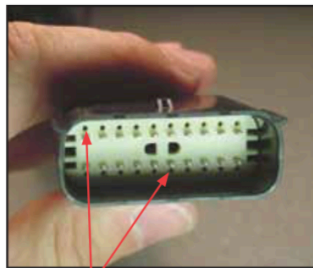
- Do not apply any lateral force, this may damage the tool, or the locking finger
- Do not use excessive force, excessive force can damage the lock finger
- Do not insert the service tool at an angle, this may cause damage to the terminal



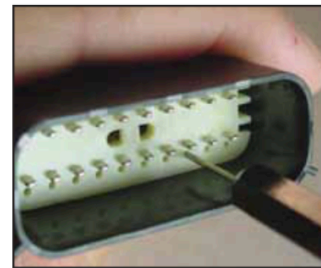
Service Ports



Service Tool must be 90° to the connector face



Service Ports



Service Tool must be 90° to the connector face

Please note that the full MX150 Serviceability Manual can be viewed on www.molex.com/ind/mx150.html