

# ModICE™ SE/LE

Enclosure Assembly Instructions

Assembly and Opening Tools



# Introduction

This instruction manual applies to both the ModICE™ SE and LE enclosure systems.

- Small Enclosure : SE 18, 30 and 48 I/O
- Large Enclosure : LE 30, 48 and 60 I/O
- Blank Headers are also available for specific customer applications

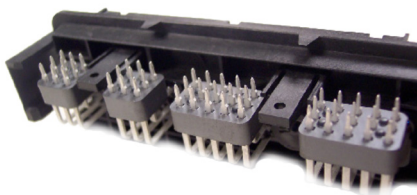
Available options:

- Header with ferrite filter
- Enclosure with 1 or 2 heat sinks
- Enclosure with breather membrane

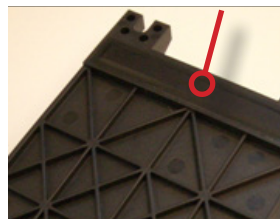
NOTE: The heat sink feature requires additional steps in the assembly of the printed circuit board.



Ferrite filter (optional)



Heat Sink (optional)



Spring Plate for Heat Sink (optional)



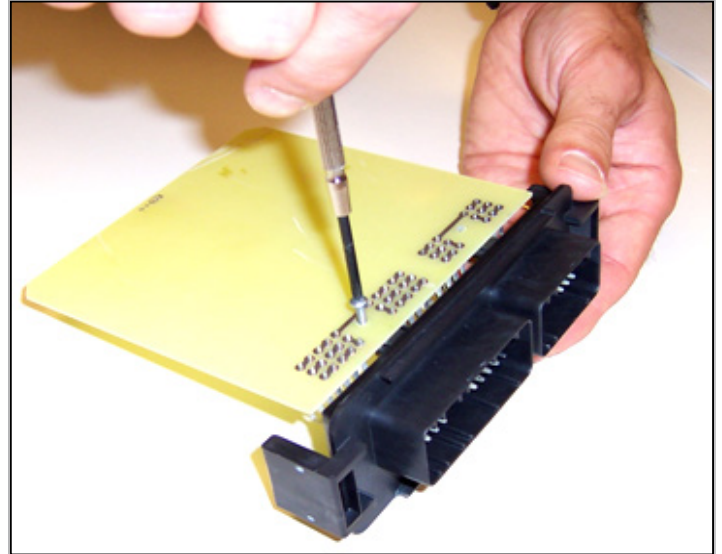
# Printed Circuit Board Assembly

Refer to the Cinch Header drawings on cinch.com for board layout, keep out areas and component height restrictions

## Secure Header onto the board

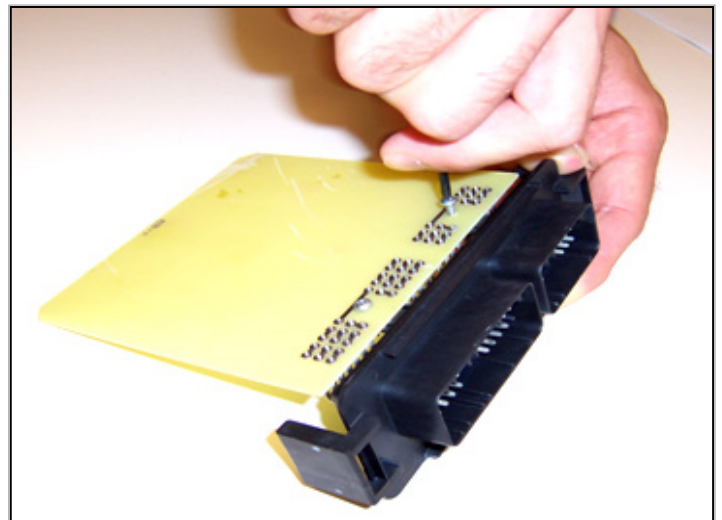
Headers must be secured to the board with 2 screws

- Use two, #4 self-tapping screws
- Torque: 2-3 in-lbs (0.23-0.34 Nm)



Protect the Header functional areas from conformal coating.

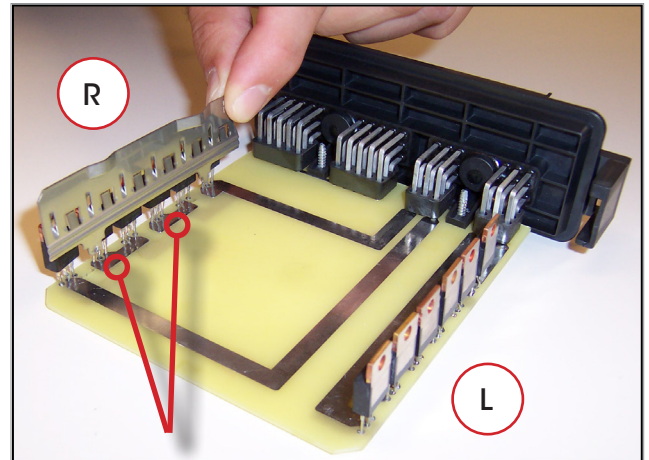
Ferrites must be immobilized by using conformal coating or a bead of epoxy.



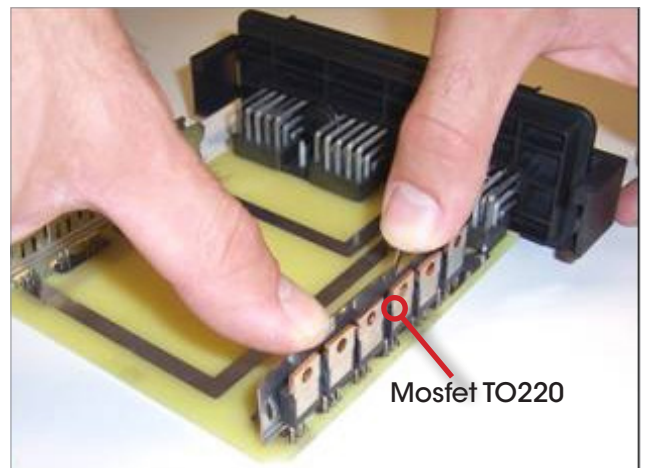
# Heat Sink Option

## Install heat sink spring plates

- Install the spring plates after the printed circuit board has been processed.
- Spring plates are marked “R” and “L” and must be installed as indicated.
- When using a one (1) heat sink, use spring plate “R” only.
- Spring plates and thermally conductive adhesive paste are necessary to guarantee proper heat conduction through the heat sinks; Cinch recommends Loctite 383.

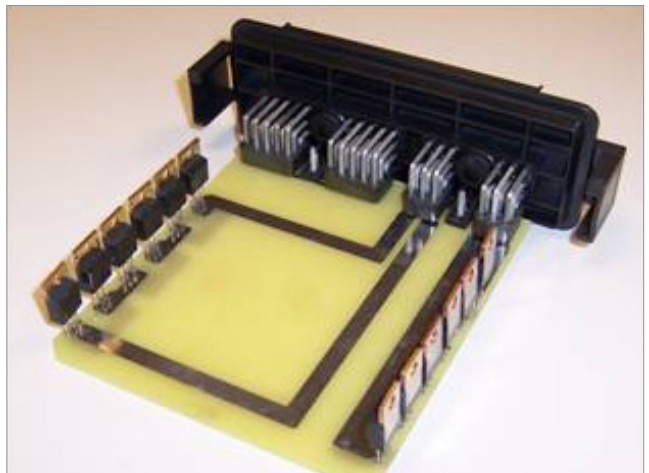


Slots (2) for Spring Plate press fit



Press fit spring plates into board

- Refer to Cinch header prints for specific board layout and spring plate selection.

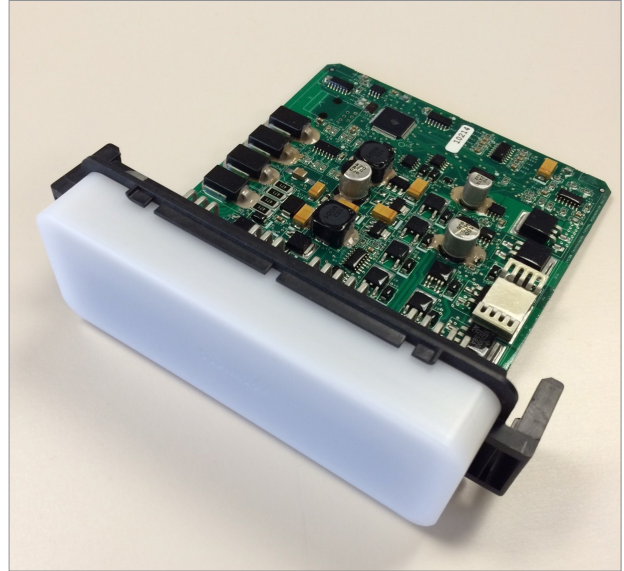


# ModICE™ Assembly

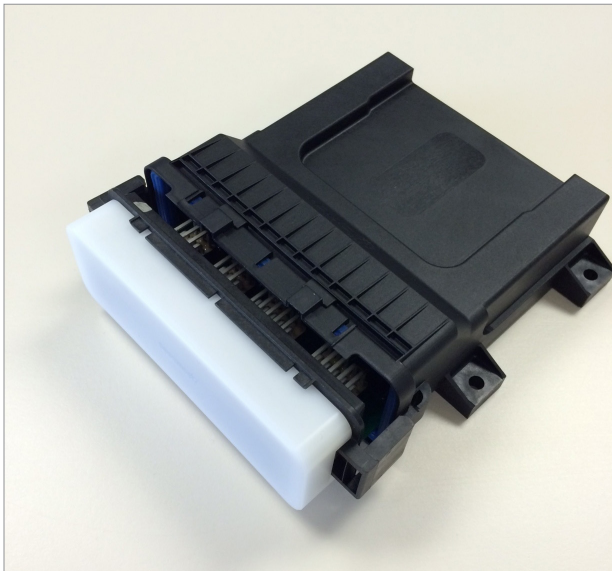
Tool p/n 5991111687 - ModICE SE  
Tool p/n 5991111688 - ModICE LE



Install tool on Header



Pre-stage PCB/Header on enclosure



# ModICE™ Assembly

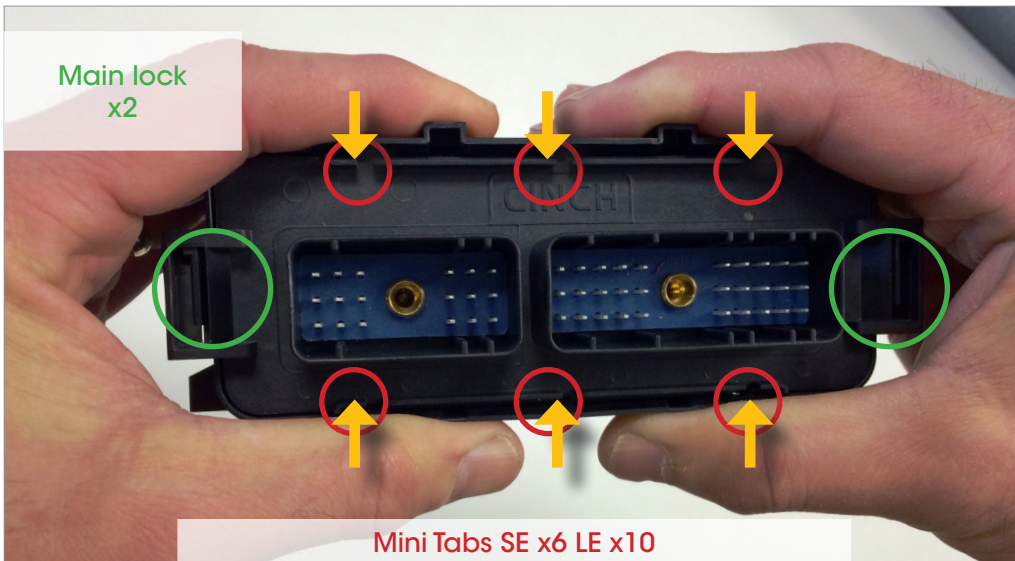
Press down by hand ...



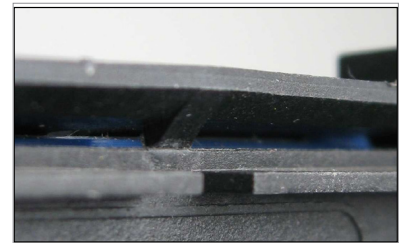
... or bench press



Final Inspection - 100% visual inspection  
Verify proper engagement of all locking tabs.  
If needed, manual pressure will complete engagement of the mini tabs.



Tab Not Engaged



Tab Engaged

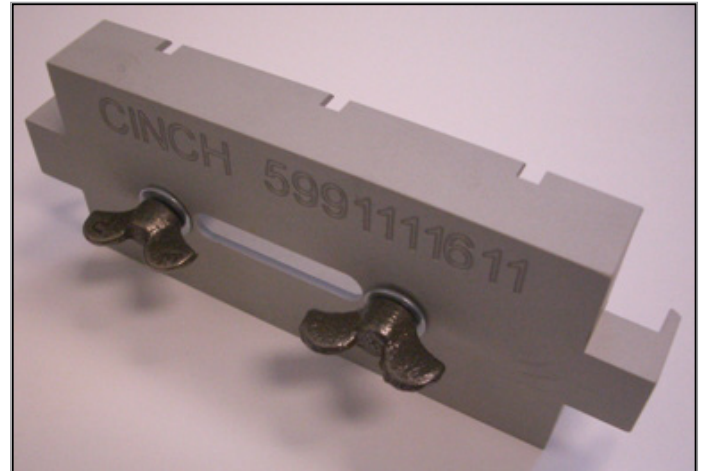


# ModICE™ Opening Tool

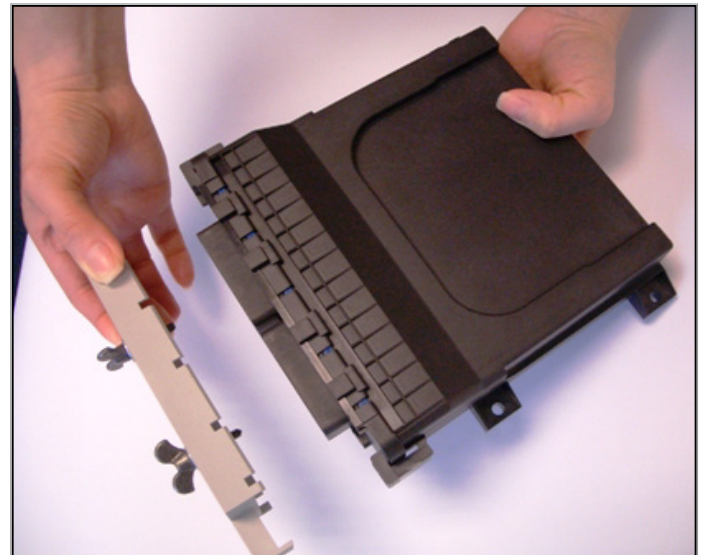
Tool p/n 5991111611 - ModICE SE  
Tool p/n 5991111612 - ModICE LE

In the case of a customized header, customer may be required to modify the opening tool to allow it to work for the specific application.

ModICE™ is designed to be tamper proof.  
Specific tools are required to open the enclosures.

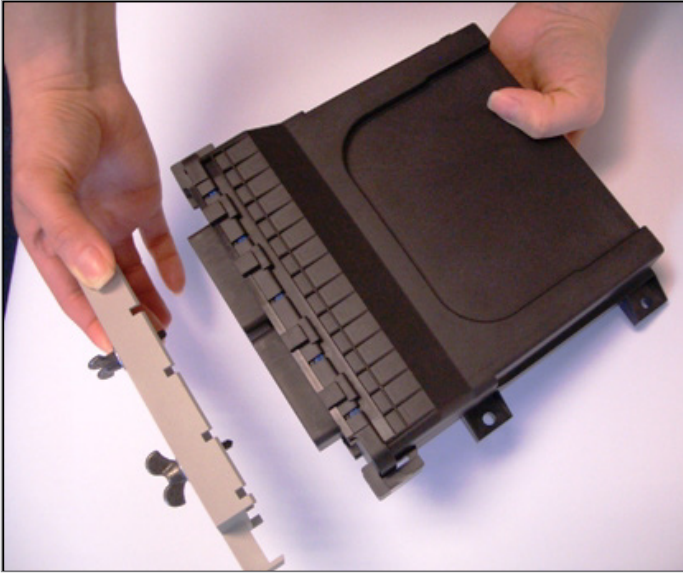


Any attempt to open an enclosure without the recommended tools may result in damaged parts that will affect the mechanical characteristics and the sealing of the enclosure.



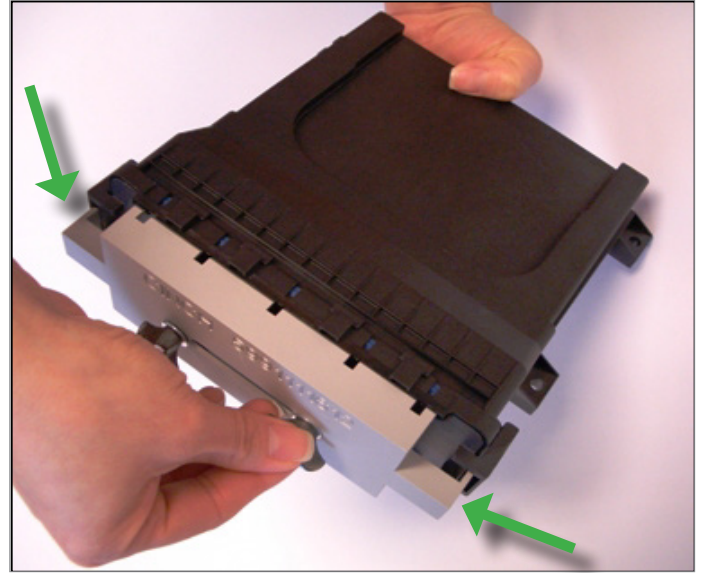
# ModICE™ Opening

## Instructions for headers with two connectors

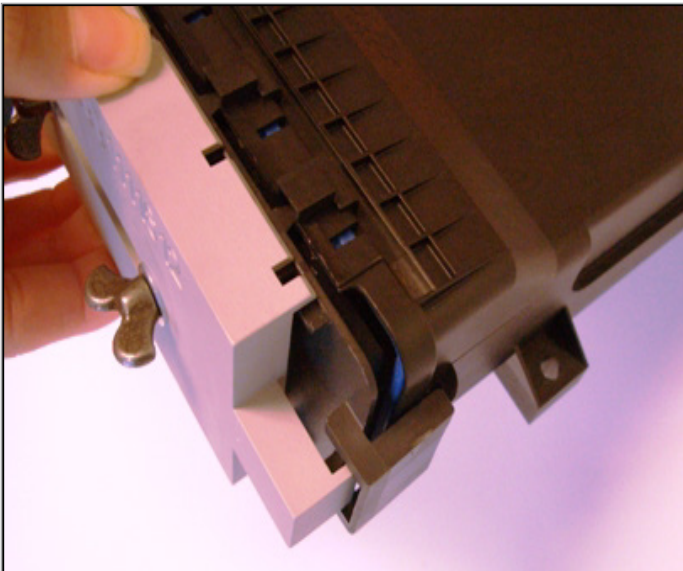


Position the tool so that the screws capture both Header bushings

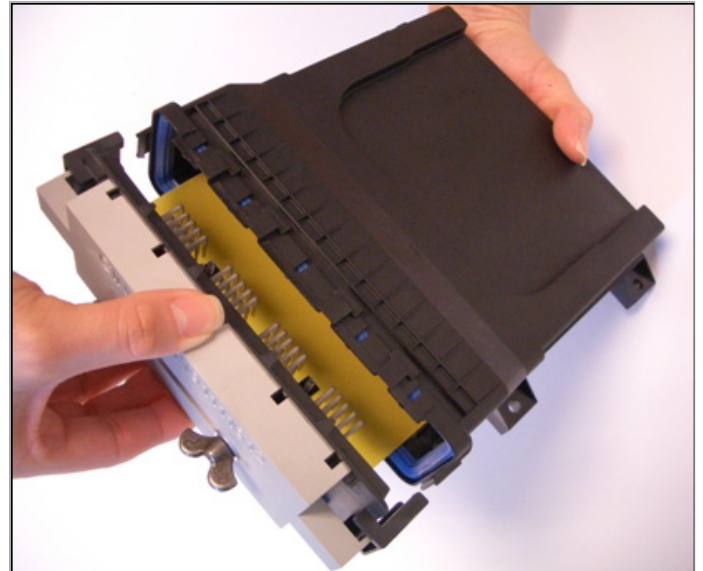
Align tool fingers with side latches



Alternately tighten each screw evenly until release of the Header from the Enclosure (audible snaps)



Both side latches must be unlocked to release the header



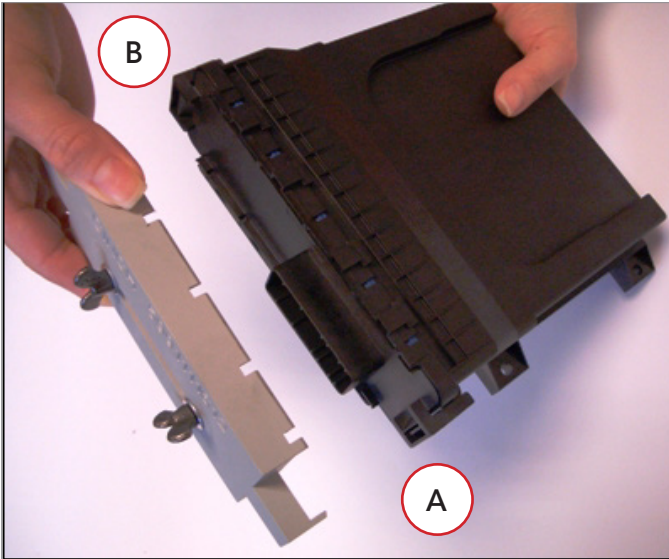
Pull straight out to remove the Header/PCB from the Enclosure

Untighten screws to release the tool from the header

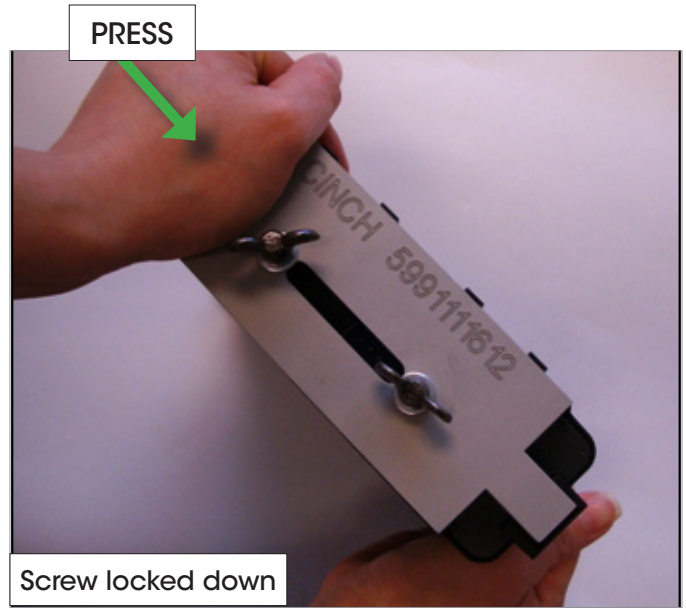


# ModICE™ Opening Tool

## Instructions for headers with one connector



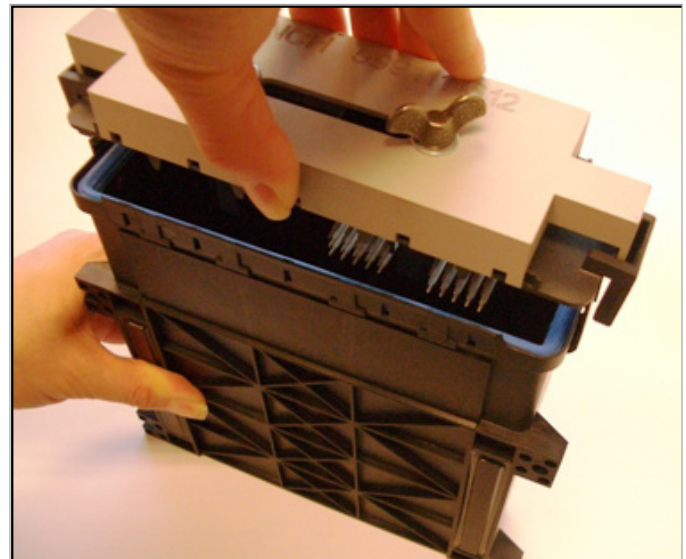
Position the tool so that the screw captures the Header bushing



Tighten screw all the way down to release side latch A (audible snap)



On a flat surface, press on opposite side of the tool to release latch B, Header will pop open



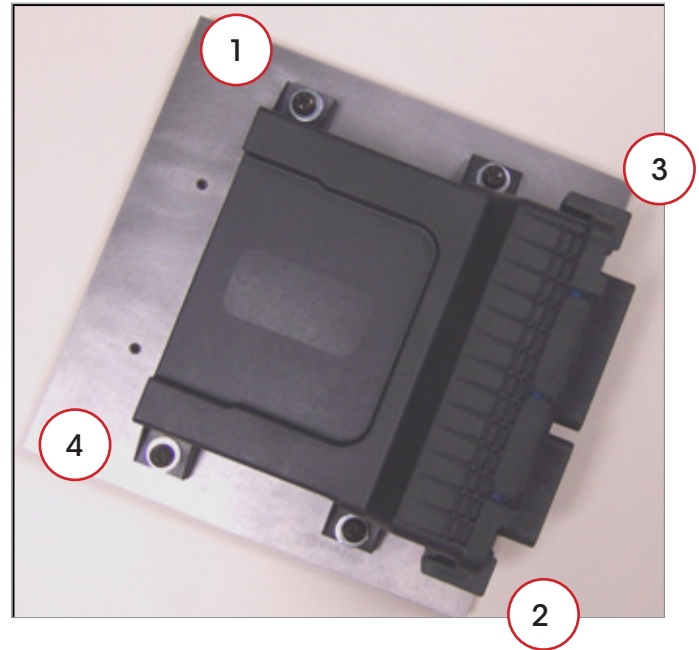
Pull straight out to remove the Header/PCB from the Enclosure

Untighten screws to release the tool from the header

# Mounting of the Enclosure

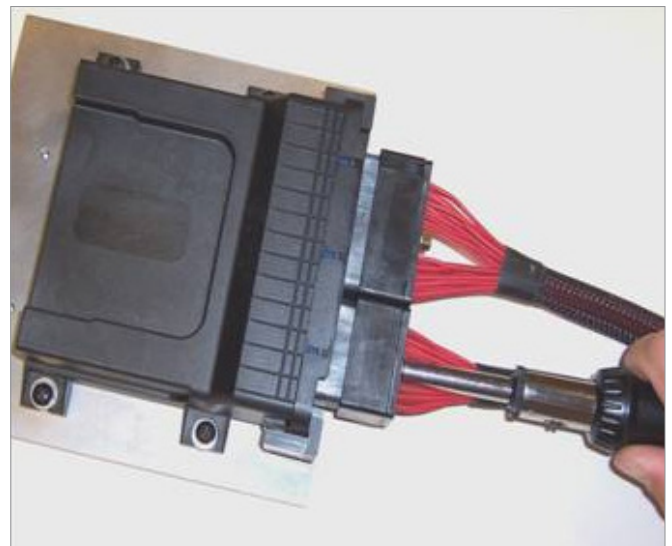
Refer to Cinch enclosure drawings for details on the mounting layout. Customer to select fastener type depending on mounting application.

- Fastening pattern : 1, 2, 3, 4.
- Torque : 10-12 in-lbs (1.13-1.36 Nm)



Refer to Cinch SHS Harness Connector drawings and instructions for information on the mating connectors.

- Connector Mating Torque : 15-20 in-lbs (1.70-2.26 Nm)





## Proven Excellence

For over 70 years, Cinch has been a supplier of quality connector and interconnect products to the computer, telecom, aerospace military and transportation industries. We are a multi-national manufacturer with facilities in the US, Mexico and the UK supplying global customers.

Cinch applies its extensive expertise in interconnection technology to engineer and manufacture connectors, cables and harnesses using state of the art technology and tooling. Mechanical design is accomplished using Pro/E 3D solid modeling supported by nonlinear and linear Finite Element Analysis and Mold Flow software.

Our engineers utilize in-house capabilities in high frequency interconnect simulation, SPICE model generation and high frequency testing to develop the optimum product. All products are validated in Cinch's first article, mechanical, electrical, and environmental test facilities ensuring the finished products meet our customers' most stringent specifications.

Simply stated, your connectors are manufactured in state of the art facilities that are committed to customer satisfaction and continuous improvement.



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