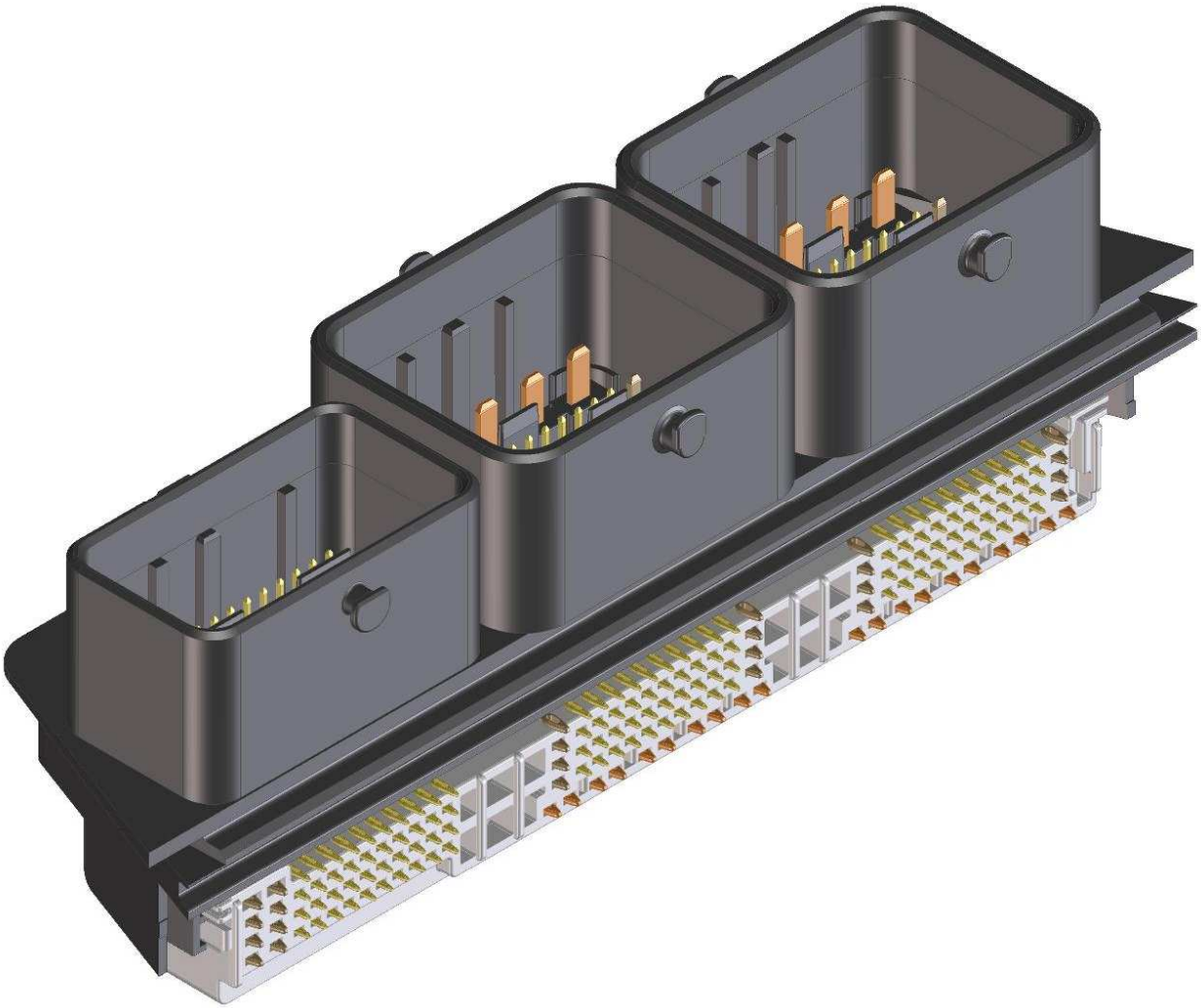
APPLICATION SPECIFICATION

154 WAY CMCHEADER



REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
C	EC No: **UAU2012-1574** DATE: **06/15/2012**	**154 WAY CMC HEADER**	**1** of **16**

DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
AS-34763-001	**Brian Zelinski**	**Dave Krawczyk**	**Ron Bauman**

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

APPLICATION SPECIFICATION

154 WAY CMC HEADER

Table of Contents

- 154 way CMC Product Introduction
- 154 way CMCProduct Summary
- 154way CMCHeader Overview
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- 154 way CMC Header Product Identification
- 154 way CMC Header Packaging
- 154 way CMC Header-to-PCB Assembly Instructions
- 154 way CMC Header-to-PCB Assembly Tooling
- 154 way Header PCB Side Probing
- 154 way Harness Side Probing
- 53 wayand 48 way CMC Connector Mating &Unmating

APPLICATION SPECIFICATION

154 WAY CMC HEADER

PRODUCT INTRODUCTION

154 Way CMCHeader

- Terminal Header Blades
  - The three-bay CMC Header assembly consisting of 154 blade contacts.
  - The blade contact interfaces are 0.6 mm, 1.50 mm and 2.80 mm.
  - This header assembly is intended to be attached to a printed circuit board by a press-fit compliant contact.

Molex 53 / 48-wayCMC Connector System:

- This is a sealed connection system.
- 53Way CMC Harness Connector – 64321xxxx / 98995xxxx
- 48Way CMC Harness Connector – 64320xxxx / 98993xxxx

- Terminals used in the CMC connector system:
  - CP0.6 Sn Receptacle Terminal – 6432210x9 – 0.35mm^2 - 0.75mm^2 wire
  - CP0.6 Au Receptacle Terminal – 6432212x9 – 0.35mm^2 - 0.75mm^2 wire
  - CP1.5 Sn Receptacle Terminal – 6432310x9 – 0.5mm^2 - 2.0mm^2 wire
  - CP1.5 Au Receptacle Terminal – 643231x19 – 0.5mm^2 - 2.0mm^2 wire
  - CP2.8 Sn Receptacle Terminal – 6432410x9 – 2.5mm^2 - 5.0mm^2 wire

Applicable Documents and Specifications

- 154way CMC Header Assembly – SD-34763-001
- 53way CMC Harness Connector – SD-64321-001
- 48way CMC Harness Connector – SD-64320-001
- CP0.6 Sn Receptacle Terminal – SD-64322-001
- CP1.5 Sn Receptacle Terminal – SD-64323-001
- CP2.8 Sn Receptacle Terminal – SD-64324-001
- EON 0.64 – SD-34481-012
- EON 1.5 / 2.8 – SD-78007-012
- 32 and 48 CMC connector User Manual – AS-64319-001
- 53 way CMC connector User Manual –AS-64321-001

APPLICATION SPECIFICATION

154 WAY CMC HEADER

154 WAY CMC HEADER PRODUCT SUMMARY

HIGHLIGHTS:

- Connector is sealed.
- Connector provides temporary retention to the header before the Lever Arm is activated.
- Lever Arm remains in locked position until the harness connector is in pre-lock position on the header/controller.

Compliant Interface

- EON on 0.64 blades per SD-34481-012
- EON on 1.50 & 2.80 blades per SD-78007-012
- PCB specification
  - PCB in accordance with IEC 60352-5
  - Material FR4 min. TG 130
  - Single layer thickness larger than 0.8 mm
  - Total thickness of PCB from 1.5 to 2.4 mm in accordance with the IEC 60326-3. If other
  - PCB thickness required, Molex Engineering to approve.

Temperature

Operating: -40°C to +105°C

Current

- The maximum test current capability per USCAR-2 rev5:
  - 0.6 blade mated to a CP0.6 Sn or Au plated receptacle crimped to 0.75mm^2 wire – 8.0 A
  - 1.50 blade mated to a CP1.5 Snor Au plated receptacle crimped to 2.0mm^2 wire – 10.5 A
  - 2.80 blade (single strap) mated to a CP2.8 Sn plated receptacle crimped to 5.0mm^2 wire – 13.5 A
  - 2.80 blade (dual strap) mated to a CP2.8 Sn plated receptacle crimped to 5.0mm^2 wire – 17.0 A

Voltage

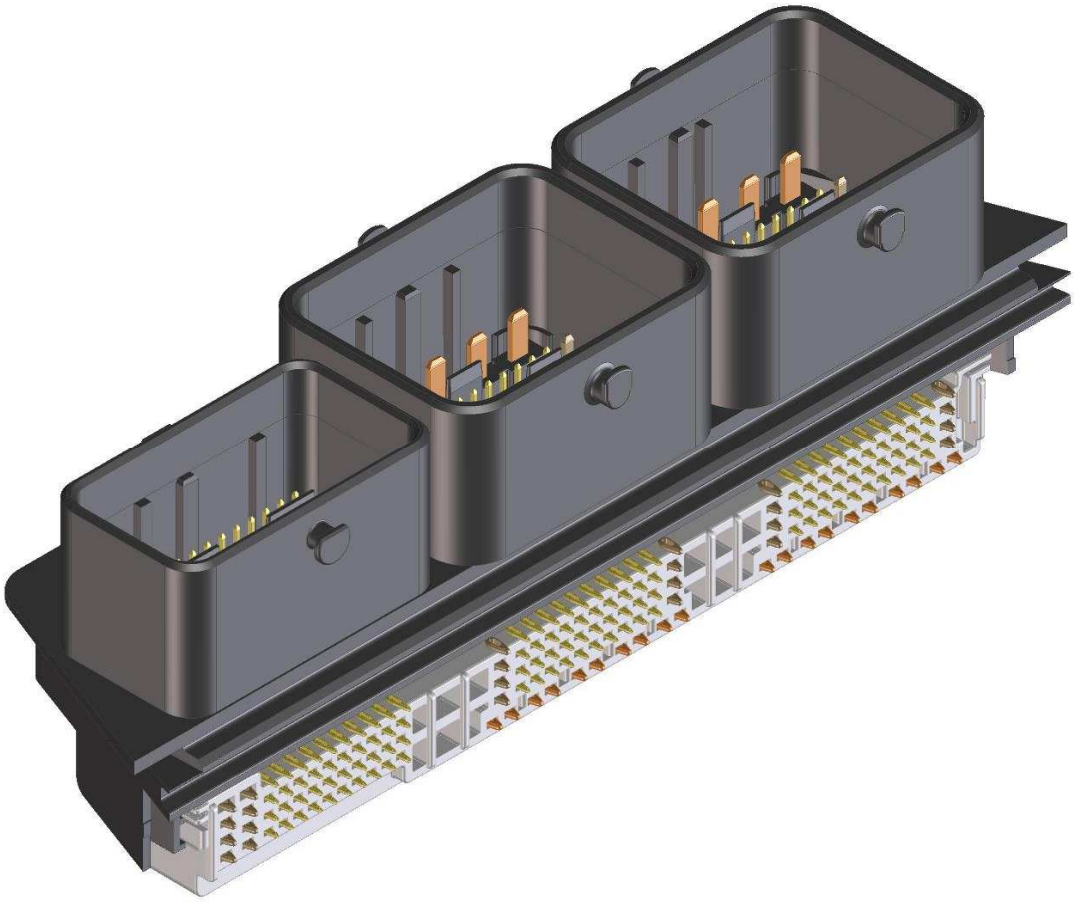
250V_{AC} per PS-64321-001 and PS-64319-001

For product ordering information, please contact your Molex Inside Sales Representative at (800)786-6539.
For electronic copies and future updates of this document, and the Connector Reference Manual, refer to the Molex Website at http://www.molex.com/

APPLICATION SPECIFICATION

154 WAY CMC HEADER

THIS PROCEDURE APPLIES TO ALL PART NUMBERS IN THE 34763-00xxSERIES



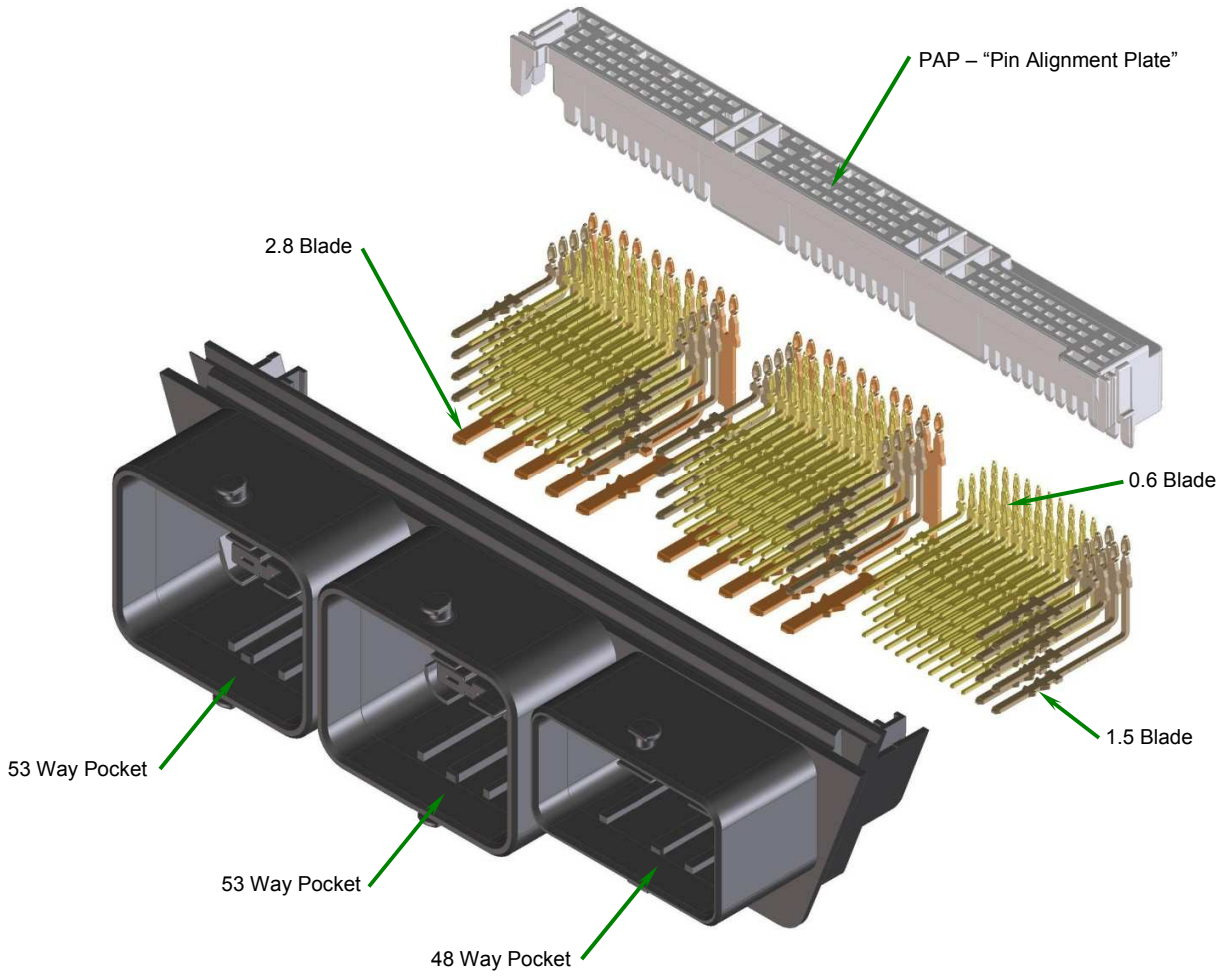
REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
C	EC No: **UAU2012-1574** DATE: **06/15/2012**	**154 WAY CMC HEADER**	**5** of **16**

DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
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APPLICATION SPECIFICATION

154 WAY CMC HEADER

HEADER OVERVIEW



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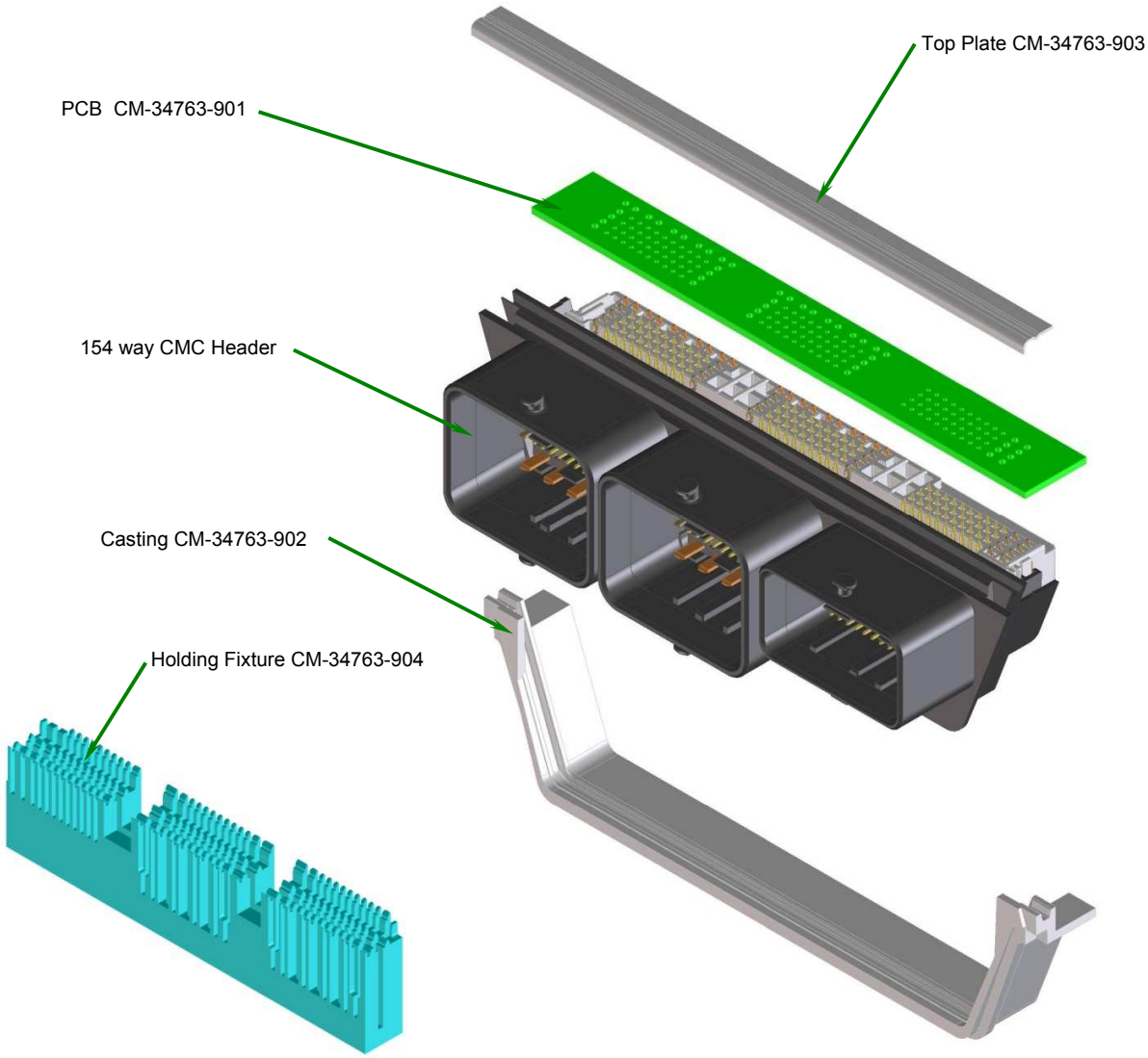
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
AS-34763-001	**Brian Zelinski**	**Dave Krawczyk**	**Ron Bauman**

APPLICATION SPECIFICATION

154 WAY CMC HEADER

154 way CMC CAD MODEL REFERENCE

CMC CADmodel reference for 154 way CMC header Top Plate, PCB and Casting. All CADmodels are to be used as ***REFERENCE ONLY***. ALL FINAL DESIGNS FROM ALL CAD MODELS ARE THE RESPONSIBILITY OF THE CUSTOMER.



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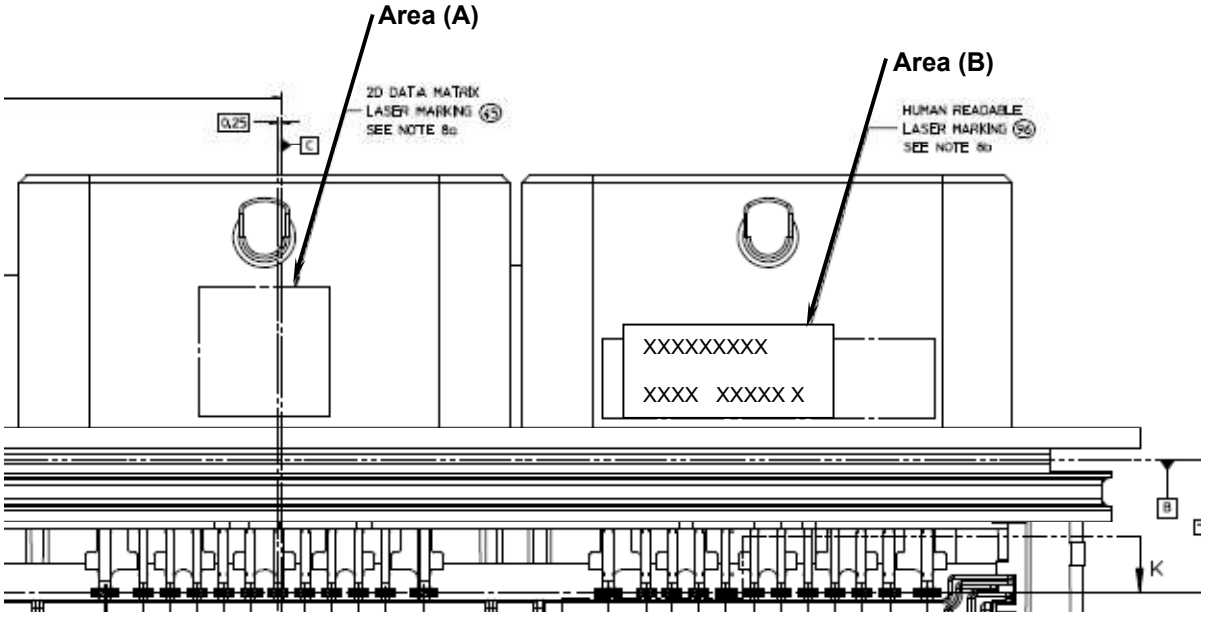
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
AS-34763-001	**Brian Zelinski**	**Dave Krawczyk**	**Ron Bauman**

154 WAY CMC HEADER

154 WAY CMC HEADER PRODUCT IDENTIFICATION

- All parts are laser marked with:
  Area (A)
  - Marking and Reading Standard: Data Matrix (ECC200)
  - Information Encoded:
    - CC – Configuration Number Per Configuration / BOM Table
    - YY – Year
    - DDD – Day of year
    - SSSS – Incremental Serial Number
    - MXN – Supplier Designation/Manufacturing Location

  Area (B)
  - Human readable code (HRC)
  - Information Encoded:
    - 9 Digit Molex Material Number
    - 4 Digit Julian Manufacturing Date Stamp DDDY
    - 4 Digit Incremental Serial Number
    - 1 Digit Molex Manufacturing Code



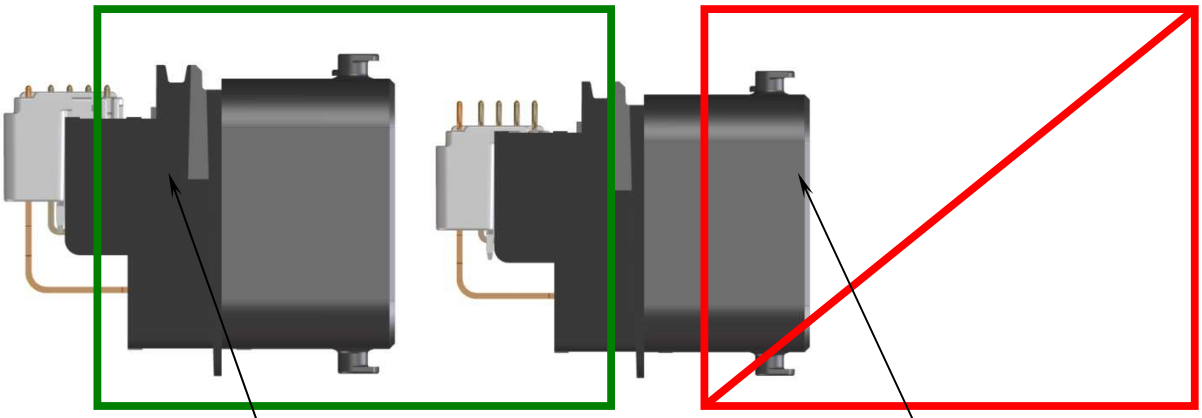
APPLICATION SPECIFICATION

154 WAY CMC HEADER

154 WAY CMC HEADER PACKAGING

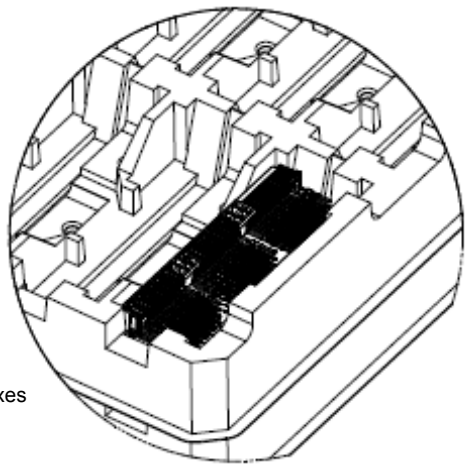
Molex recommends moving the cell pack box directly to the assembly line, this will insure against damage. Headers should remain in the Molex cell pack until assembled.

Parts as received in cell pack



PAP is shipped in pre-lock position

PAP is not in pre-lock position scrap header



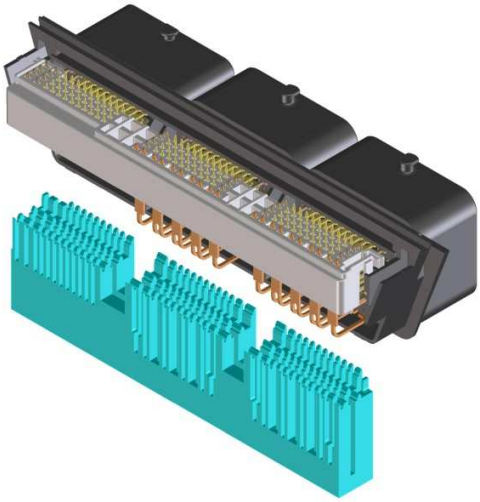
All headers shipped in cell packed boxes

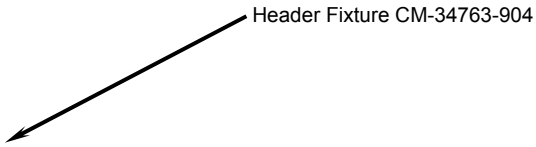
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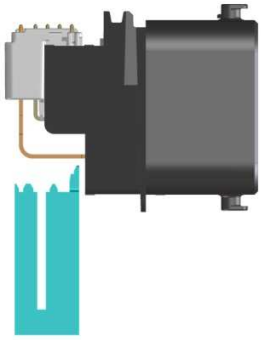
154 WAY CMC HEADER

154 WAY CMC HEADER-TO-PCB ASSEMBLY INSTRUCTIONS

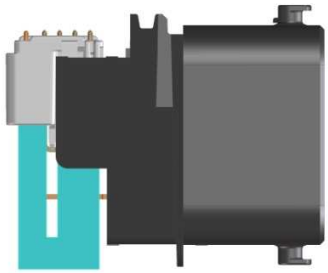
(Recommended header mounting strategies and mounting steps: areas where to apply force to seat header to the PCB)



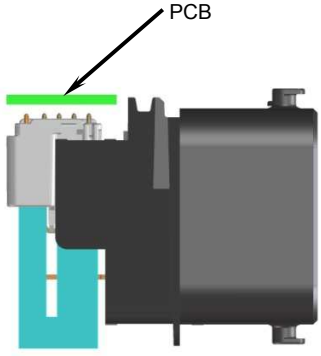




Step 1 - Line up CMC to Fixture



Step 2 – Slide CMC Header on Fixture

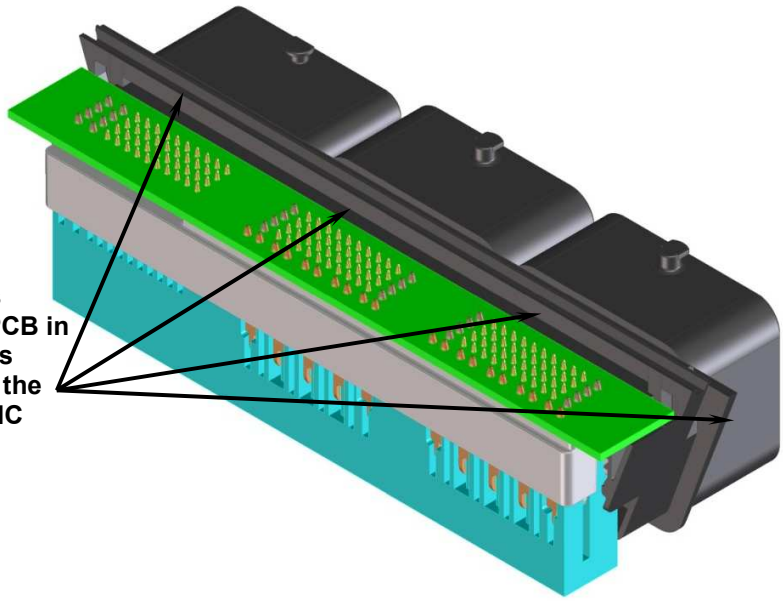


Step 3 – Place PCB on CMC Header

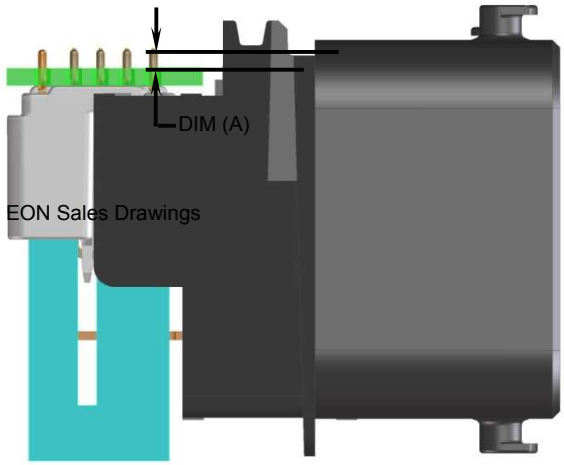
REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
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AS-34763-001	**Brian Zelinski**	**Dave Krawczyk**	**Ron Bauman**

APPLICATION SPECIFICATION



Step 4 – Press down on the PCB in these locations ONLY to mate the PCB to the CMC header



DIM (A) – see EON Sales Drawings

NOTE: DO NOT APPLYANY PRESSURE TO PINS. PRESSURE PLACED ON THE HEADER PINS MAY DAMAGE THE ASSEMBLY.

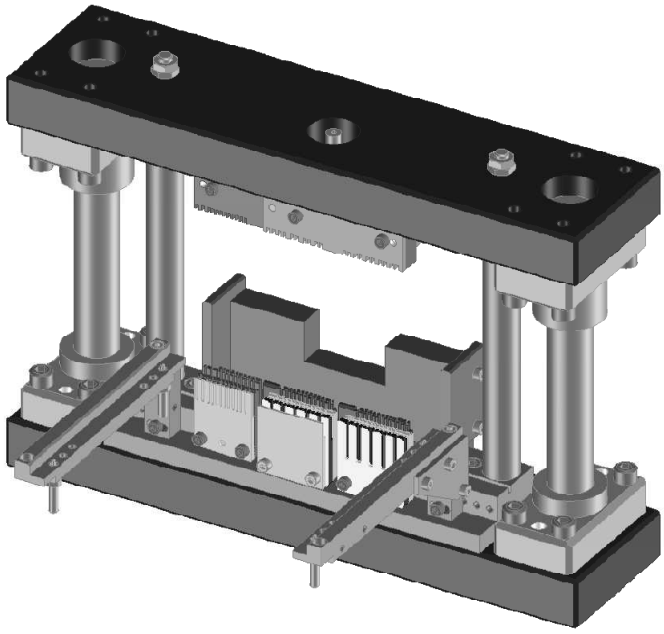
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APPLICATION SPECIFICATION

154 WAY CMC HEADER

154 WAY CMC HEADER-TO-PCB ASSEMBLY TOOLING



Molex also offers a low volume PCB to header assembly tool for the 154way CMC Header.

For product ordering information, please contact your Molex Inside Sales Representative at (800)786-6539.

Reference- 154 Way PCB Insertion Tool Operation Manual Order No. 62203-0500

APPLICATION SPECIFICATION

154 WAY CMC HEADER

154 WAY HEADER PCB SIDE PROBING

Electrical continuity check list

Probe pin recommendations:

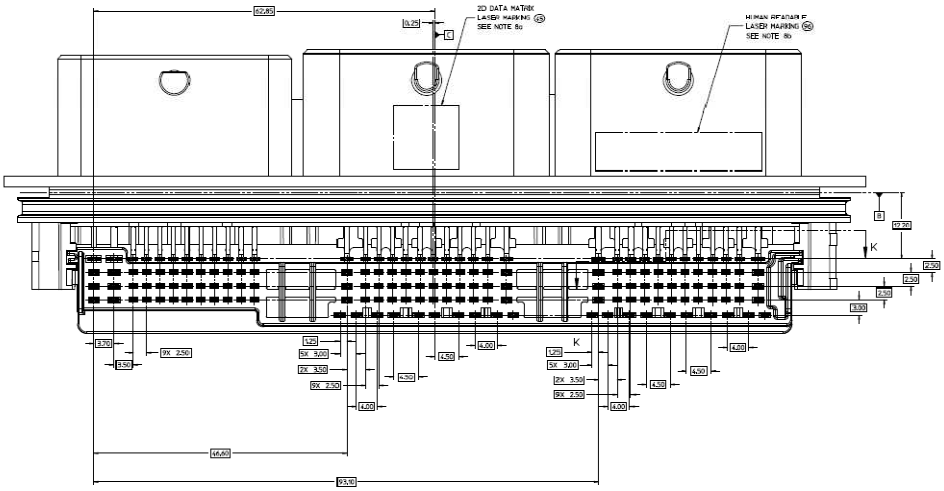
1. When testing the header for continuity it is imperative that you do not damage the pins.
2. Pogo pins should be checked for damage or sticking several times a shift. This should assure containment if an issue is found.
3. First a visual inspection of all the pins for damage should be performed.
4. Next a testing block should be used to depress all the pogo pins up into the barrel. If there is a bent or sticking pin, it should remain stuck in the barrel of the pogo pin. A damaged or stuck pin should be replaced before any additional testing is performed.

Probing damage can occur:

1. If a sharp ended probe is used to contact the end terminal it may damage the pin tip and plating and increase contact resistance and mate force.
2. If a probe is inserted into the header on an angle or off center it may damage the pins, and or the connector.

154 way CMC*PCB SIDE*LAYOUT

(see SD-34763-001)



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AS-34763-001	**Brian Zelinski**	**Dave Krawczyk**	**Ron Bauman**

APPLICATION SPECIFICATION

154 WAY CMC HEADER

154 WAY HEADER *HARNESS SIDE*PROBING

Electrical continuity check list

Probe pin recommendations:

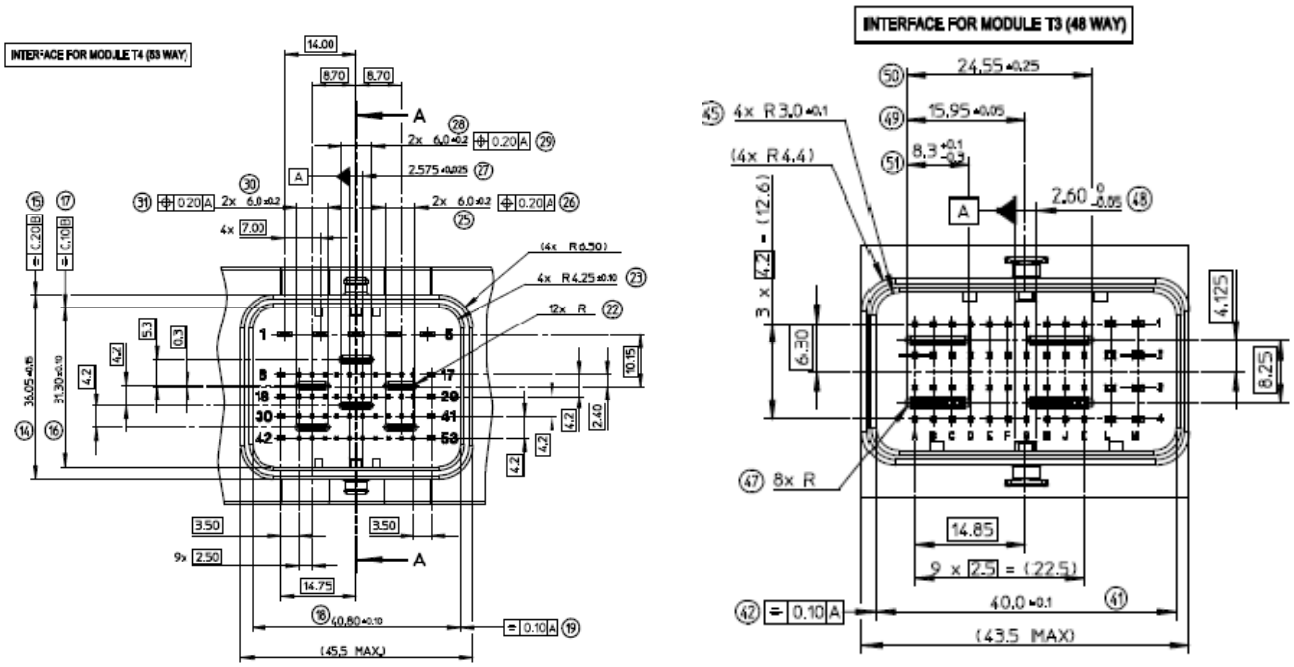
5. When testing the header for continuity it is imperative that you do not damage the pins.
6. Pogo pins should be checked for damage or sticking several times a shift. This should assure containment if an issue is found.
7. First a visual inspection of all the pins for damage should be performed.
8. Next a testing block should be used to depress all the pogo pins up into the barrel. If there is a bent or sticking pin, it should remain stuck in the barrel of the pogo pin. A damaged or stuck pin should be replaced before any additional testing is performed.

Probing damage can occur:

3. If a sharp ended probe is used to contact the end terminal it may damage the pin tip and plating and increase contact resistance and mate force.
4. If a probe is inserted into the header on an angle or off center it may damage the pins, and or the connector.

154 way CMC *HARNESS SIDE*LAYOUT

(see SD-34763-001)



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APPLICATION SPECIFICATION

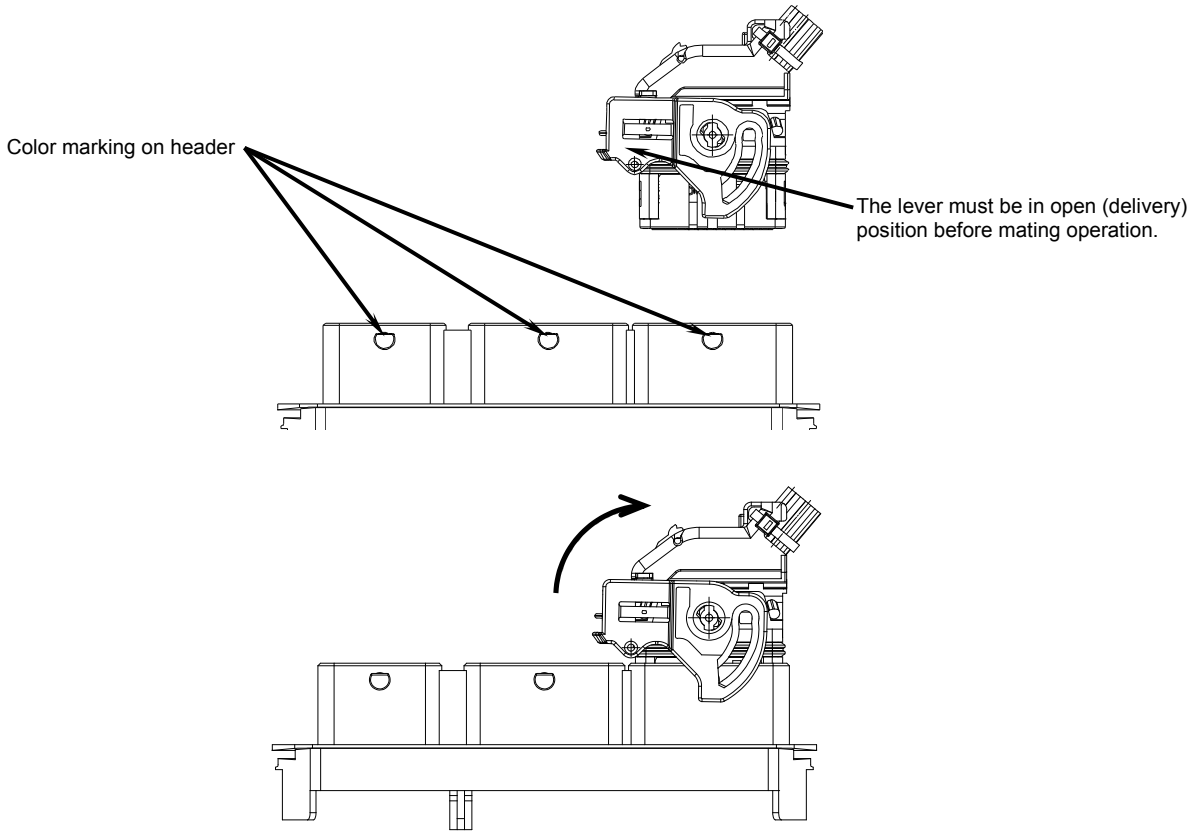
154 WAY CMC HEADER

53 WAY AND 48WAY CMC CONNECTOR MATING& UNMATING

The color marking on the cam Posts on the CMC header corresponds to the color of the front face of the connector that is to be mated to the correct bay.

Mating the connector:

1. The lever must be in open (delivery) position before mating operation.
2. Insert the connector till it stops in the header pocket.
3. Rotate the lever and lock it on the wire cap.



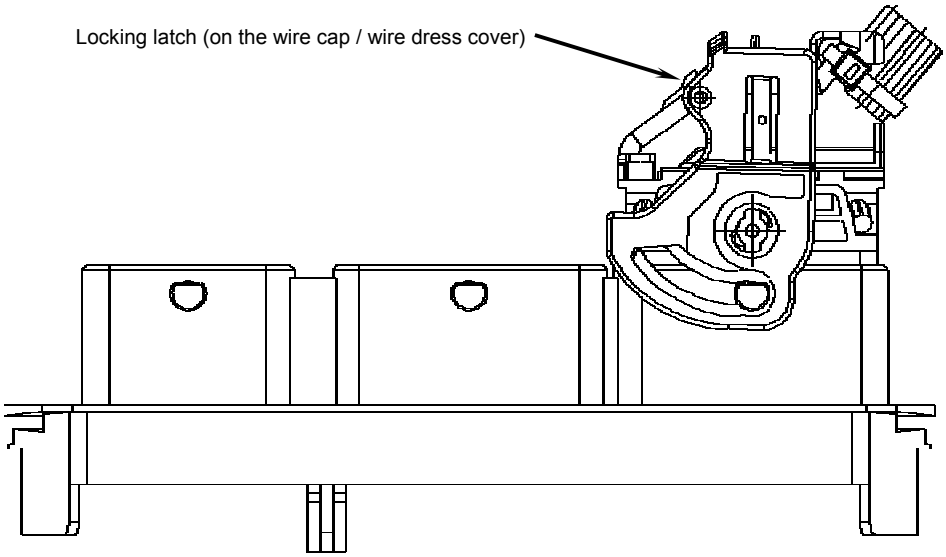
- Insert the connector till it stops in the header pocket.

- Rotate the lever till the stop and the locking on the cover

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APPLICATION SPECIFICATION



Unmating the connector:

1. Press on the locking located on the wire cap and rotate the lever until its locking on the female housing
2. Remove the female connector from the header

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molex:

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