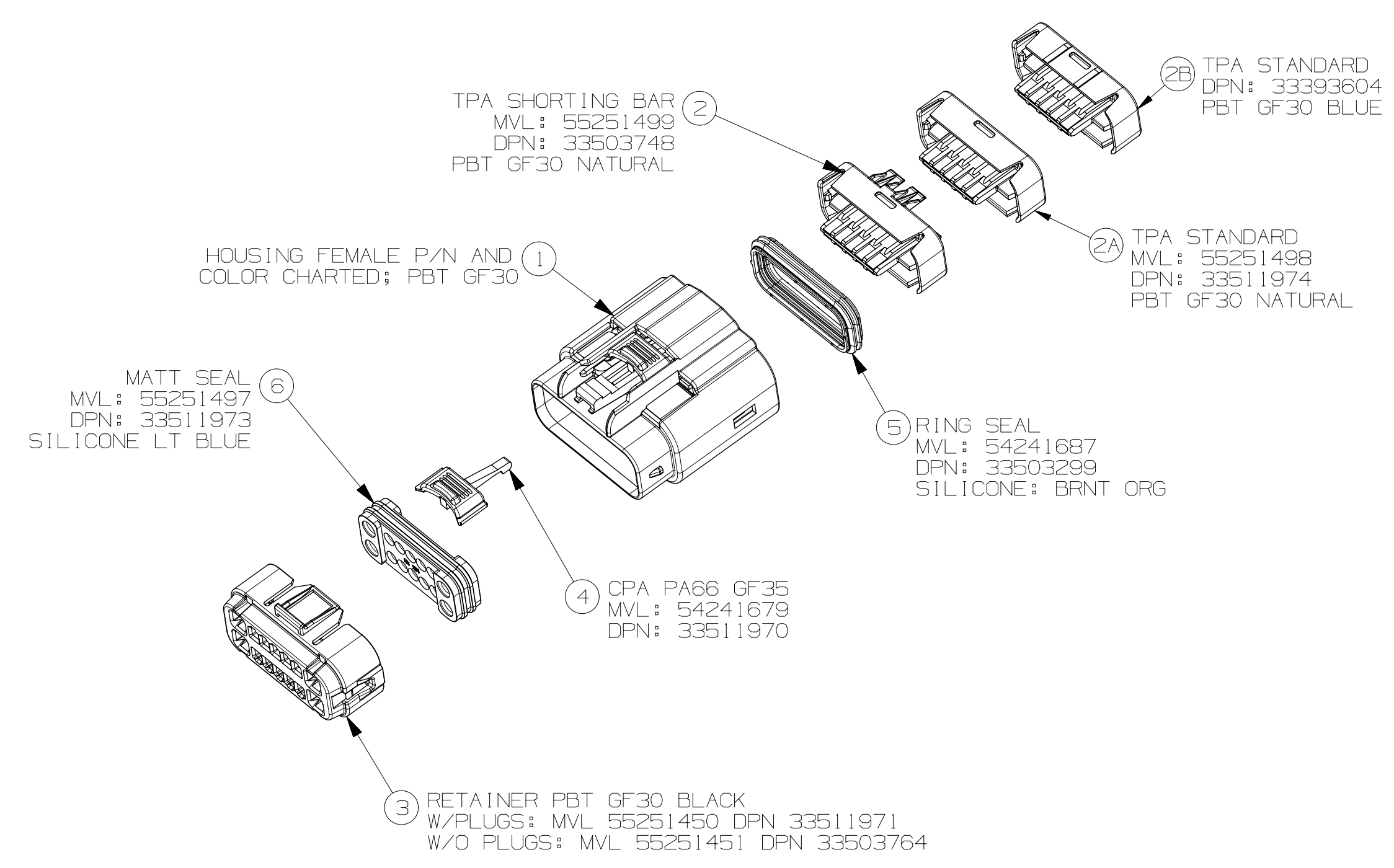


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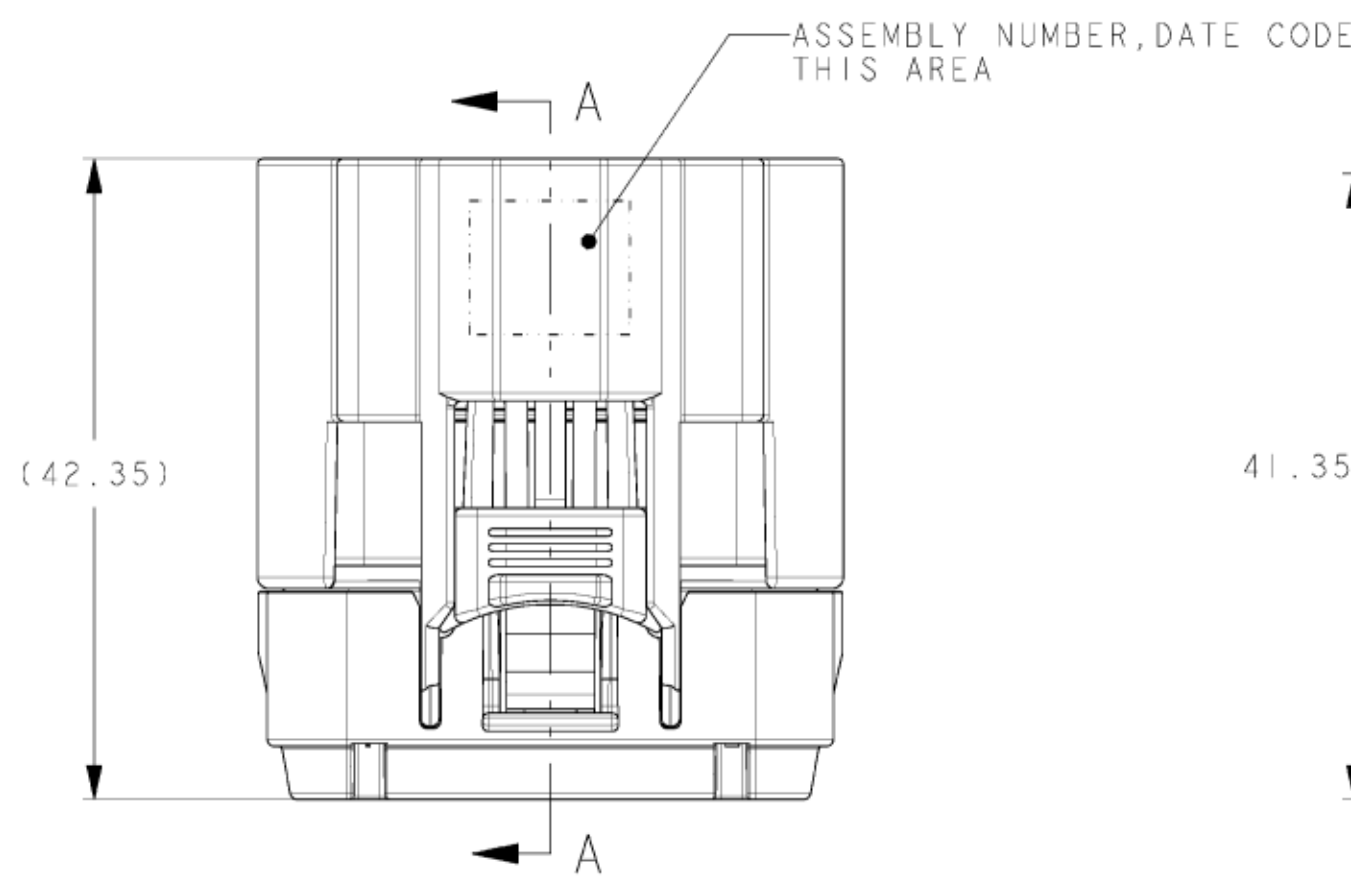
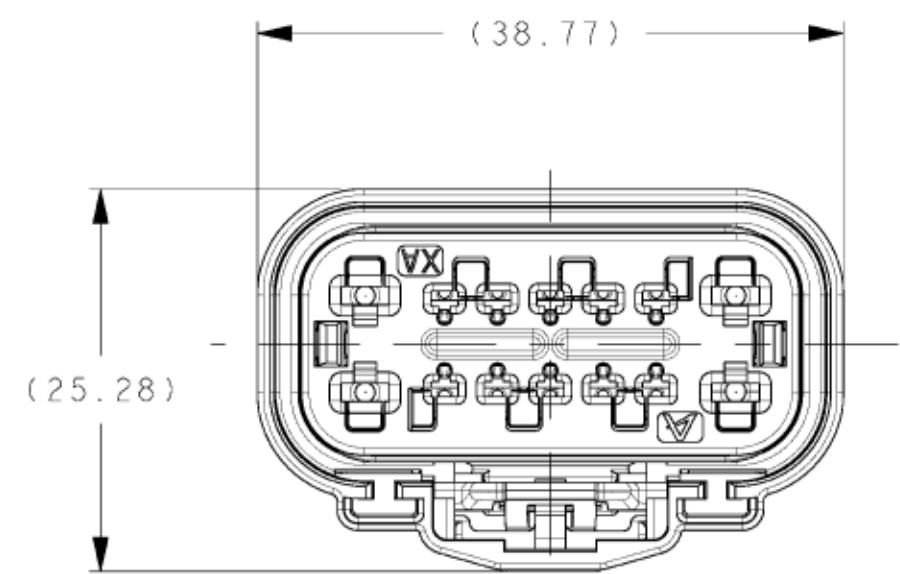
12		11		10		9		8		7		6		5		4		3		2		1																					
ASSEMBLY NUMBERS				REV LEVEL		KEY OPTIONS	COLOR	COMPONENTS				Plugged (X) Seal Positions														OPEN CIRCUITS			MATING P/N REFERENCE														
WITH CPA		W/O CPA		MVL	DELPHI			HOUSING		TPA		RETAINER		2,8		---1,5---		2,8		---1,5---		2,8		1,5	2,8	TOTAL	MVL	DELPHI															
MVL	DELPHI	MVL	DELPHI					MVL	DELPHI	MVL	DELPHI	MVL	DELPHI	MVL	DELPHI	1	2	3	4	5	6	7	8						9	10	11	12	13	14									
F593310	33511696	-	-	A	01	A	BLACK	55251488	33511972	55251498	33511974	55251450	33511971		X			X	X	X	X	X		4	2	6	-	-															
F693310	33511697	-	-	A	01																									8	4	12	-	-									
F793310	33511698	-	-	A	01																									2	1	3	-	-									
F893310	33511699	-	-	A	01																									2	2	4	-	-									
F993310	33511700	-	-	A	01																									4	3	7	-	-									
F004310	33511701	-	-	A	01																									5	4	9	-	-									
F104310	33511702	-	-	A	01																									5	2	7	-	-									
F204310	33511703	-	-	A	01																									5	2	7	-	-									
F067310	33511704	F167310	33511714	A	01																									5	3	8	F967310	33511510									
F267310	33511705	-	-	A	01									E	YELLOW	55251492	33503674	55251499	33503748	55251450	33511971	X	X			X	X	X	X	X		4	1	5	-	-							
F367310	33511706	-	-	A	01																									4	2	6	-	-									
F649310	33511707	-	-	A	01																									6	2	8	-	-									
F749310	33511708	-	-	A	01																									4	2	6	-	-									
F959410	33511709	-	-	A	01																									5	2	7	-	-									
F069410	33511710	-	-	A	01	A	BLACK	55251488	33511972	55251498	33511974	55251450	33511971										X	X	X		X	X	X		6	2	8	-	-								
F169410	33511711	-	-	A	01																																	5	0	6	-	-	
F269410	33511712	-	-	A	01																																	5	0	5	-	-	
F033510	33511713	-	-	A	01																	B	GRAY	55251489	33503671	-	3393604	55251451	33503764					X	X	X	X	X	4	2	6	-	-
-	35042900	-	-	A	01																	A	BLACK	55251488	33511972	-	3393604	55251451	33503764					X	X	X	X	X	10	4	14	-	-
-	-	-	35174934	-	01									B	GRAY	55251489	33503671	-	33511974	55251450	33511971	X	X	X	X	X	X	X	X	1	1	2	-	35142031									
-	-	-	35176120	-	01									B	GRAY	55251489	33503671	55251498	33511974	55251450	33511971					X	X	X	X	5	4	9	-	35176122									
-	-	-	35176121	-	01									B	GRAY	55251489	33503671	55251498	33511974	55251450	33511971	X	X					X		8	4	12	-	35176123									
-	35201855	-	-	02	E									YELLOW	55251492	33503674	-	3393604				X	X	X	X	X	X	X		6	2	8	-	-									



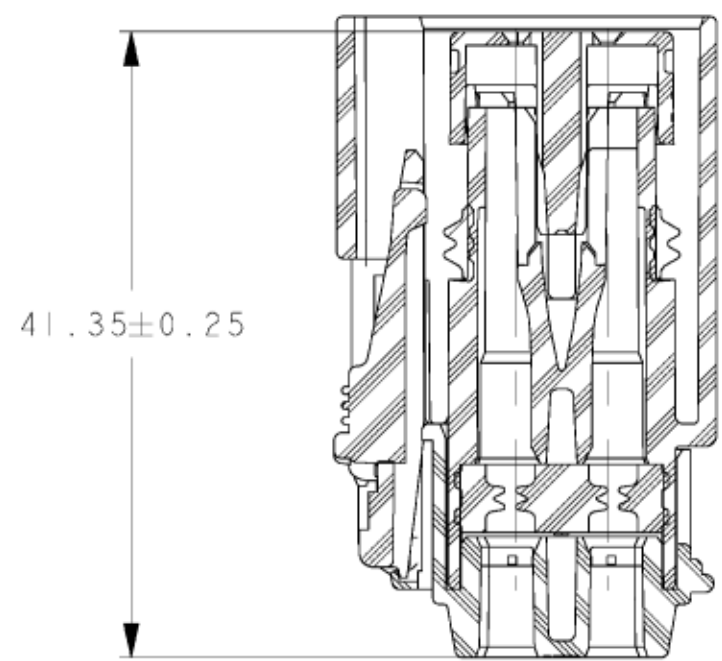
EXPLODED VIEWS FOR REFERENCE

-	-	EOD 443553 - 35201855 - UPDATED "ASSEMBLY NUMBERS" INFO ON CHRY	
-	-	EOD 440045 - 35201855 - UPDATED PART AVAILABILITY	
-	-	EOD 435558 - 35126120 & 21 - UPDATED PART AVAILABILITY AND UPDATED MAL TPA COMPONENT	
-	-	EOD 435512 - 35201855 - RELEASED	
-	-	EOD 438555 - 35178120 & 21 - RELEASED 35141934 - WAS IN "WITH CPA" COLUMN & TPA WAS 30338604	
-	-	EOD 438043 - 35141934 - RELEASED	
-	-	EOD 436103 - 13785555 - UPDATED 2,8 & TOTAL CIRCUITS	
-	-	EOD 435629 - 35042800 - RELEASED	
-	-	EOD 434737 - ALL PARTS - ADDED 130799383 & 15543466 ON "APPLICABLE COMPONENTS" IN SEE SHEET #2	
-	-	EOD 434482 - 13078550 - TPA WAS 35511974 AND UPDATED EXPLODED VIEW	
-	-	EOD 433997 - ALL PARTS - UPDATED CRIMP SIZE ON CONNECTOR USAGE NOTE AND ADDED TERMINALS 54001402 & 54001802, SEE SHEET #2	
13-00981	-	EOD 426307 - DELPHI PART NUMBERS ADDED FOR HIGH LEVELS FOR M/LM PARTS CHARTS, NOTES AND EXPLODED VIEWS UPDATED	
13-01065	PA	PA 54004687 WAS 55014187, NOTES & TITLE BLOCK UPDATED REPLACED FCU BY M/LM	
12-01190	PI-4	PA F023510 ADDED IN 2014 SCR PLANCE CONNECTION WITH 6 OPEN CIRCUITS, PINS 100000 AND PINS 5 ADDED IN EXPLODED VIEW CHART REVISED AND UPDATED	
12-01094	CHART	15551408 WAS 15551408 AND PINS 100000 AND PINS 5 ADDED IN EXPLODED VIEW CHART	
12-00963	CHART	PART NUMBERS F055410,F059410,F169410,F259410 ADDED, (P#IN01) ADDED PINS F04610 FOR 8 CIRCUITS AND F74610 FOR 6 CIRCUITS PINSOUT FOR X2013 IN-LINE SAE APPLICATIONS, IN NOTES 3,3mm MAX OD WAS 3,3mm MAX OD	
12-00376	014	ADDED NEW PART NUMBERS, UPDATED	
12-00296	CHART	ALL MIGRATED TO PPS, METRIC HOLE CALLOUT NUMS #1 CORRECTED, 0.75mm WAS 0.5mm	

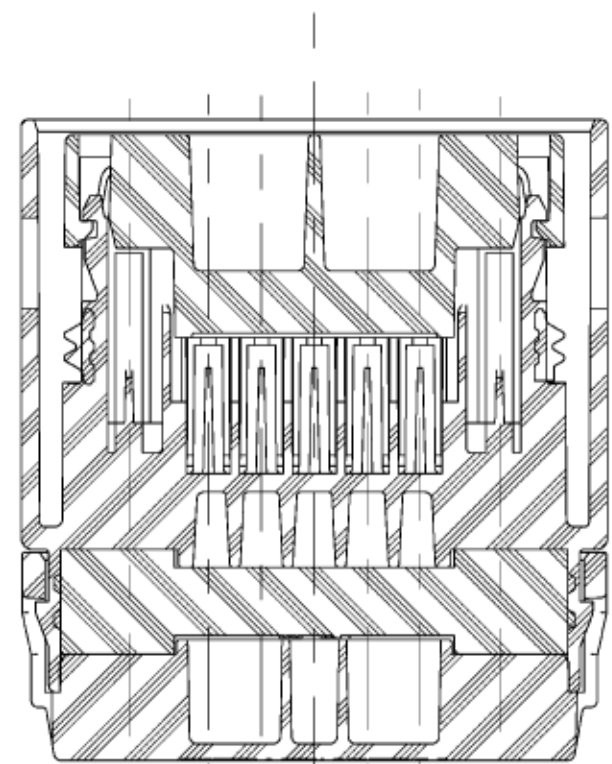
REPORT NO.	ZONE	PROBING SPEC.	APPLICATION SPEC.	OWNER DESCRIPTION	
APX 150				COPYRIGHT © 1984 CROWN INVENTOR'S ATTORNEYS. ALL RIGHTS RESERVED. REPRODUCTION OR TRANSMISSION IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING, IS PROHIBITED. THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED AND THE USE OF THIS INFORMATION IS UNRESTRICTED AND UNLIMITED.	DELPHI CORP. INVENTOR'S ATTORNEYS. ALL RIGHTS RESERVED. REPRODUCTION OR TRANSMISSION IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING, IS PROHIBITED. THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED AND THE USE OF THIS INFORMATION IS UNRESTRICTED AND UNLIMITED.
TELEPHONE	SEE DRAWING	MATERIAL	DATE FINISH	DELPHI CORP. INVENTOR'S ATTORNEYS. ALL RIGHTS RESERVED. REPRODUCTION OR TRANSMISSION IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING, IS PROHIBITED. THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED AND THE USE OF THIS INFORMATION IS UNRESTRICTED AND UNLIMITED.	
IDENTIFY NO.	K53001	22.00 IN.	SEE EXP. VIEWS	DELPHI CORP. INVENTOR'S ATTORNEYS. ALL RIGHTS RESERVED. REPRODUCTION OR TRANSMISSION IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING, IS PROHIBITED. THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED AND THE USE OF THIS INFORMATION IS UNRESTRICTED AND UNLIMITED.	
NO. OF MEASURE DRAWING		22.00 IN.	A-130	IND. LOC. CODE	AN
PROBING METHOD	DATE	NAME	TITLE	DRAWING NUMBER	
APX 150			APX 150	K53002	
APX 150			ASSEMBLY 14 WAY HYBRID FEMALE	REV.	
APX 150			APX 150 14-WAY K53 HYBRID	SERIAL RELEASED	
APX 150			APX 150 14-WAY K53 HYBRID	REV.	



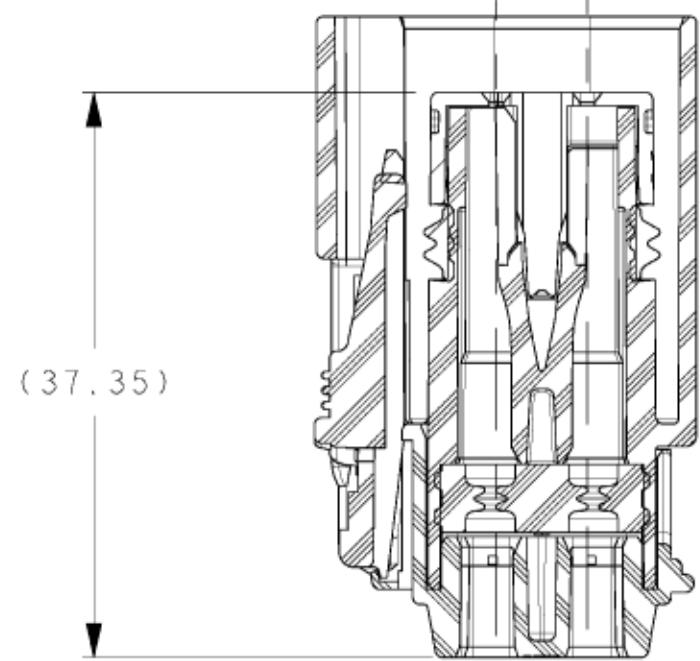
SCALE 2:1



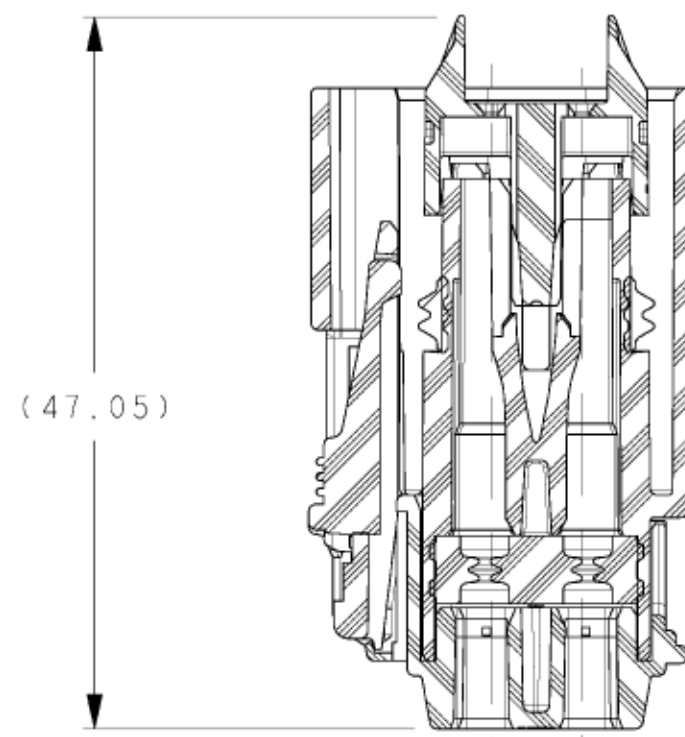
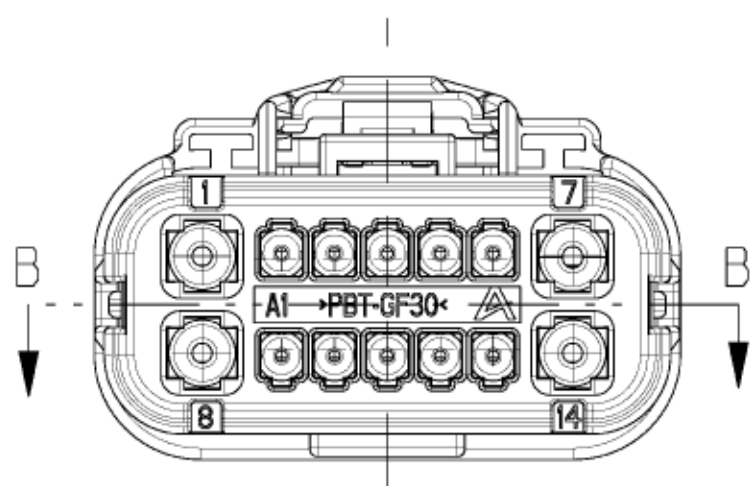
SECTION A-A
CPA & TPA IN PRE-ASSEMBLED POSITION



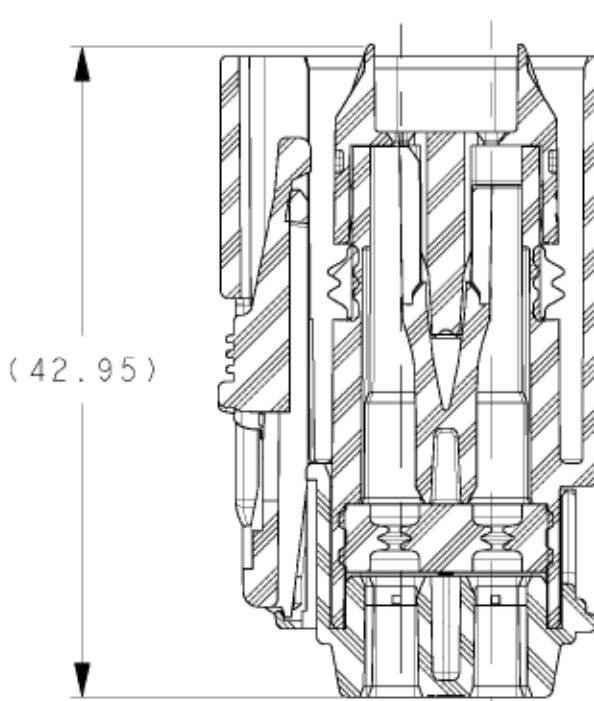
SECTION B-B



SECTION
CPA & TPA IN FINAL POSITION



SECTION A-A
TPA IN PRE-LOCK POSITION



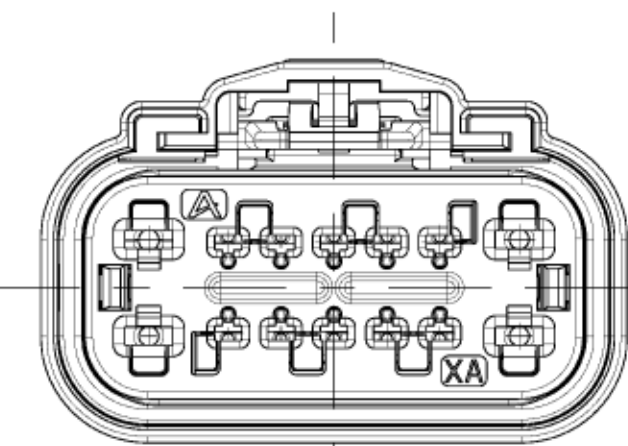
SECTION A-A
TPA IN FINAL LOCK POSITION

APPLICABLE COMPONENTS				
SUPPLIER		ITEM DESCRIPTION	PLATING OR COLOR	GRIP SIZE
MVL	DELPHI			
54001625	13613157	APEX 150 TERMINAL	TIN	16,18
54002000	13624983	APEX 150 TERMINAL	TIN	20,22
54001627	13779834	APEX 150 TERMINAL	GOLD	16,18
54002002	13725913	APEX 150 TERMINAL	GOLD	20,22
54001208	15422738	APEX 2.8 TERMINAL	TIN	12
54001400	10762803	APEX 2.8 TERMINAL	TIN	14,16
54001800	10757690	APEX 2.8 TERMINAL	TIN	18
54001402	10762770	APEX 2.8 TERMINAL	TIN	14
54001802	10762772	APEX 2.8 TERMINAL	TIN	18
54240002	13770939	APEX 150 2.8mm SEAL PLUG - FEMALE	NATURAL	-
54241629	13613164	APEX 150 UNIVERSAL SEAL PLUG	NATURAL	-
F379410	13979933	APEX 2.8 TERMINAL	TIN	14,16
F176410	15543466	APEX 2.8 TERMINAL	TIN	18,20

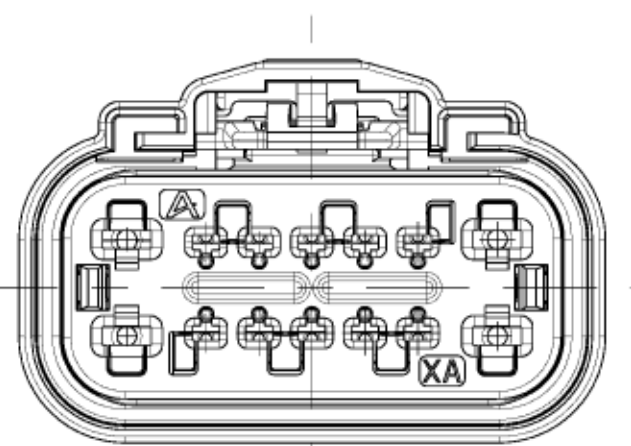
COMMON PART NUMBER CHART ONE EACH INCLUDED IN ASSEMBLY				
ITEM	PART NUMBERS		DESCRIPTION	MATERIAL
	MVL	DELPHI		
5	54241687	33503289	RING SEAL	SILICONE
6	54251497	33511964	MATT SEAL	SILICONE

NOTES:

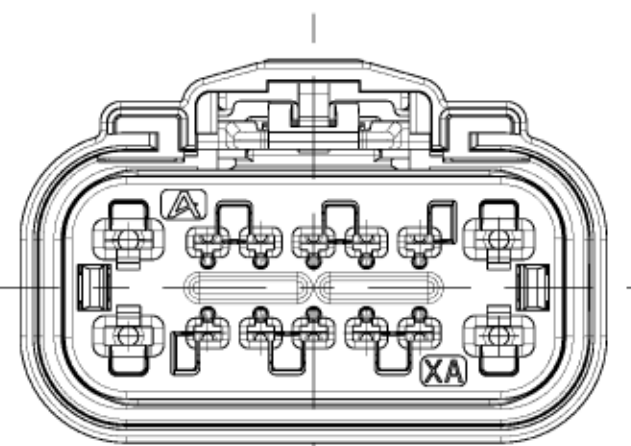
- TEMPERATURE CLASS: 3 (-40° C to +125° C)
- SEE CHART FOR TEST METHOD
SEE CHART
- CONNECTOR MAY BE USED WITH THE FOLLOWING RANGE OF WIRE SIZES AND TYPES:
 - APEX 150 TERMINALS:
 - SIZE : 22AWG TO 18AWG (Ø 1.50 TO Ø 2.41 INSULATION O.D.)
 - TYPE : TXL (MIL123-A / MS-R298)
 - ALTERNATELY :
 - SIZE : 0.75mm² TO 1.0mm² (Ø 1.70 TO Ø 2.40 INSULATION O.D.)
 - TYPE : FLRZX (125° C PE-X) or FLRYW (125° C PVC)
 - (STRUCTURE & PROPERTIES PER 1506722)
 - APEX 2.8 TERMINALS:
 - SIZE : 18AWG TO 12AWG (Ø 1.90 TO Ø 3.35 INSULATION O.D.)
 - TYPE : TXL (MIL123-A / MS-R298)
 - ALTERNATELY :
 - SIZE : 1.00mm² TO 2.50mm² (Ø 1.90 TO Ø 3.00 INSULATION O.D.)
 - TYPE : FLRZX (125° C PE-X) or FLRYW (125° C PVC)
 - (STRUCTURE & PROPERTIES PER 1506722)
- CONNECTOR MAY BE USED WITH THE FOLLOWING TERMINALS:
 - MVL APEX150 AND APEX 2.8 WITH WIRE SIZES DEFINED IN NOTE 3
 - SEE MVL DRAWINGS J54009-CUST AND C15004-CUST FOR SPECIFIC PART NUMBERS AND CRIMPING REQUIREMENTS.
 - CONTACT MVL ENGINEERING REGARDING USE OF OTHER WIRE SIZES AND/OR TYPES
- ANNUAL QUALITY REQUIREMENTS:
 - IT IS PERMISSIBLE TO PERFORM CONTINUOUS CONFORMANCE PER MVL SPECIFICATION #ACA-001 INSTEAD OF ANNUAL LAYOUT AND ANNUAL PV REQUIREMENTS OF 05-9000 SECTION 2 AND SAE/USCAR-2, REV.4 FOR TERMINALS TO CONNECTOR AND TPA TO CONNECTOR ONLY.
- PART VALIDATION:
 - SHORTING BAR PER SAE/USCAR-2 REV.4 TEMP CLASS 1, (-40° C +125° C)
 - IN-LINE PER SAE/USCAR-2 REV.4 TEMP CLASS 3 (-40° C +125° C)
 - IN-LINE PER SAE/USCAR-20 REV.2



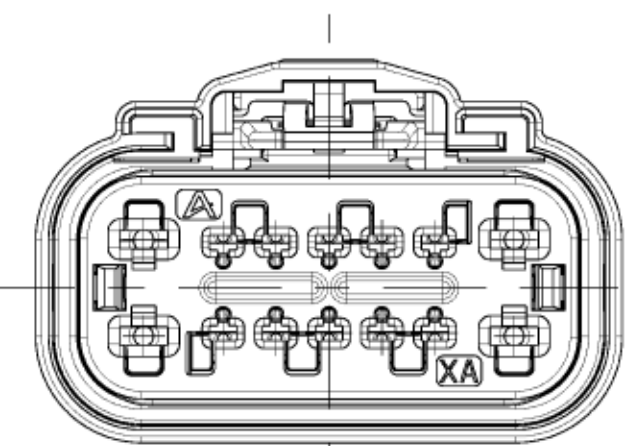
"OPTION - A"



"OPTION - B"

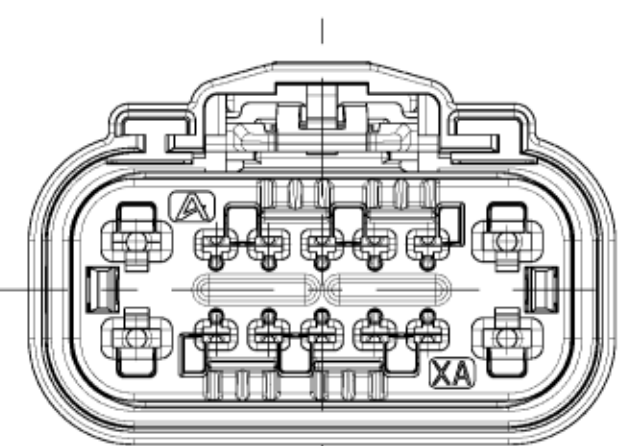


"OPTION - C"

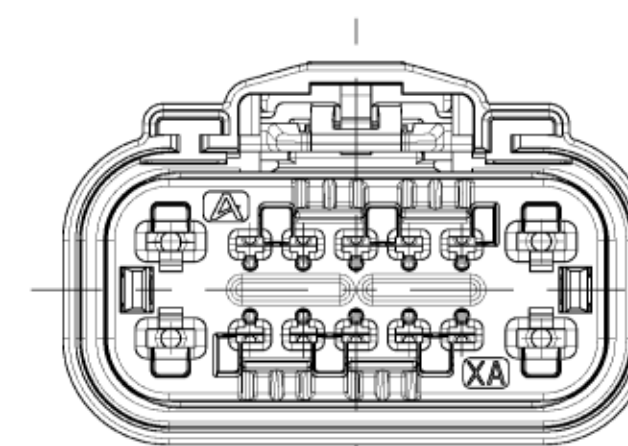


"OPTION - D"

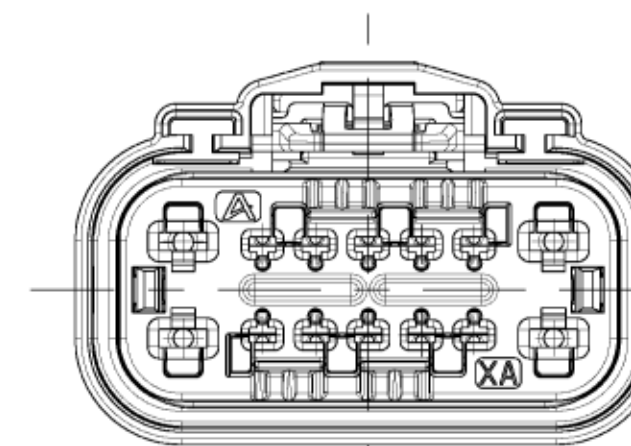
FEMALE ASSEMBLY WITHOUT SHORTING BAR ACTUATING CAM



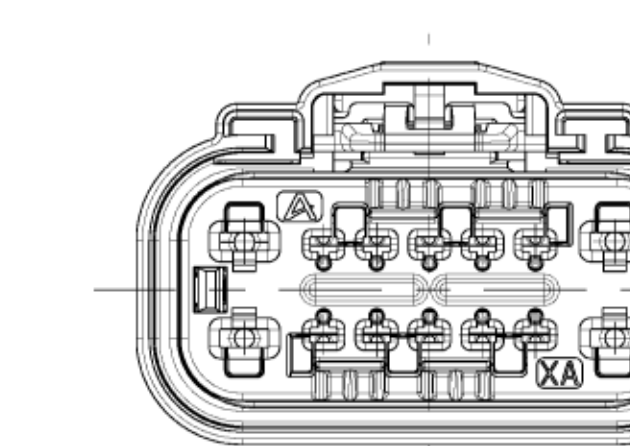
"OPTION - E"



"OPTION - F"



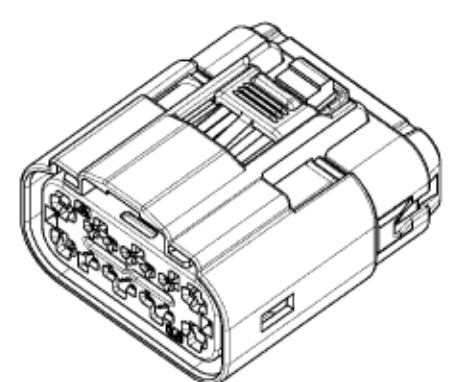
"OPTION - G"



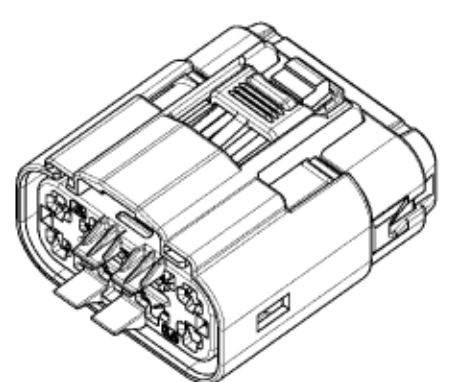
"OPTION - H"

FEMALE ASSEMBLY WITH SHORTING BAR ACTUATING CAM ON TPA

POLARIZATION OPTIONS



VIEW WITHOUT SHORTING
BAR ACTUATING CAM



VIEW WITH SHORTING BAR CAM

ISO-VIEWS, FULL SIZE

SEE SHEET #1 FOR REVISION RECORD									
REV.	DATE	BY	CHKD.	DESCRIPTION	REV.	DATE	BY	CHKD.	DESCRIPTION
1				INITIAL RELEASE	1				INITIAL RELEASE
2				INITIAL RELEASE	2				INITIAL RELEASE
3				INITIAL RELEASE	3				INITIAL RELEASE
4				INITIAL RELEASE	4				INITIAL RELEASE
5				INITIAL RELEASE	5				INITIAL RELEASE
6				INITIAL RELEASE	6				INITIAL RELEASE
7				INITIAL RELEASE	7				INITIAL RELEASE
8				INITIAL RELEASE	8				INITIAL RELEASE
9				INITIAL RELEASE	9				INITIAL RELEASE
10				INITIAL RELEASE	10				INITIAL RELEASE
11				INITIAL RELEASE	11				INITIAL RELEASE
12				INITIAL RELEASE	12				INITIAL RELEASE
13				INITIAL RELEASE	13				INITIAL RELEASE
14				INITIAL RELEASE	14				INITIAL RELEASE
15				INITIAL RELEASE	15				INITIAL RELEASE
16				INITIAL RELEASE	16				INITIAL RELEASE
17				INITIAL RELEASE	17				INITIAL RELEASE
18				INITIAL RELEASE	18				INITIAL RELEASE
19				INITIAL RELEASE	19				INITIAL RELEASE
20				INITIAL RELEASE	20				INITIAL RELEASE
21				INITIAL RELEASE	21				INITIAL RELEASE
22				INITIAL RELEASE	22				INITIAL RELEASE
23				INITIAL RELEASE	23				INITIAL RELEASE

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