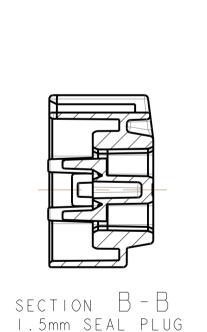
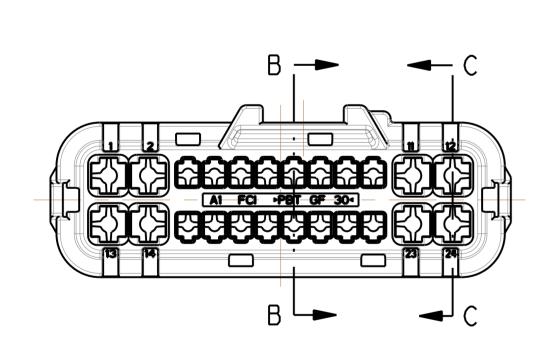
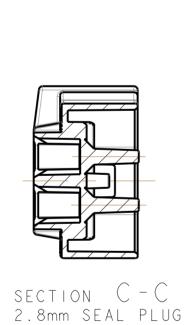
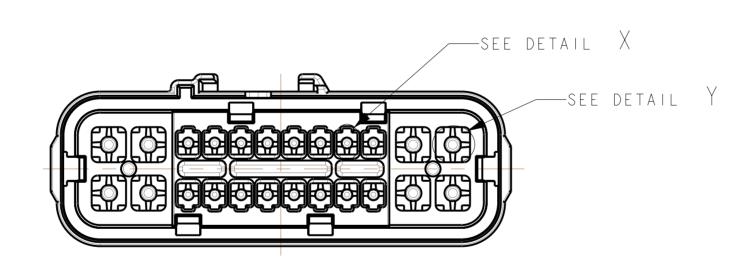
		23		22		21	20		19			{	3			17				6		15	4		13								
	MVL		DELPHI	KEY		CLIP SLOT	COMPONENTS SEE COMMON PART NUMBER CHART FOR OTHERS INCLUDED					PLUGGED (X) SEAL POSITIONS TEST ME							TEST METHOD	MATING MALE PART NO. R	CONNECTOR EFERENCE												
	P A R T N U M B E R	REV	PART NUMBER RE		NS COLOR	OPTIONS (SLIDER)	HOUSING	SLIDING SHROUD	RETAINER	СРА	1 2	3 4 5	6 7 8	8 9 1	10   1   12   1	3   14   1	5   16   1	7   18   19	20 21 2	2 23 2	NO. OF 4 CIRCUITS PLUGGED	SEE NOTE #2	MVL	DELPHI									
	PP10000655	А	13767809 0	А	BLACK	N / A	PP10000711													0		PP10000678 F552000	3672210   33511780										
	PP10000659	А	33511795 0	В	GRAY	N / A	PP10000712			N/A											0	USCAR-2 Rev 5 Class 3 (125°C)	PP10000679 F652000	335  772 335  78									
R	PP10000660	А	33511796 0	С	BROWN	N/A	PP10000713														0		PP10000680	33511774									
	PP10000662	А	33511798 0	D	GREEN	N/A	PP10000714														0		PP10000681	33511776									
	PP10000656	А	13795018 0	А	BLACK	N/A	PP10000711	000	<u> </u>												0		PP10000678	13672210									
	PP10000658	А	33511794 0	В	GRAY	N/A	PP10000712	7 7 0	— ∞ —												0	USCAR-2 Rev 5	PP10000659	33511795									
	PP10000661	А	33511797 0	С	BROWN	N / A	PP10000713		0 0 0 1							0	0	Class 3 (125°C)	PP10000680 F752000	33511774 33511782													
	PP10000664	А	33511799 0	D D	GREEN	N / A	PP10000714	F870000	PP10000676												0		PP10000681 F852000	33511776 33511783									
	PP10000665	А	33511800 0	E	YELLOV	N/A	PP10000715											19											0	USCAR-2 Rev 5	PP10000682 F952000	335  778 335  784	
	F322000	А	33511801 0	F	YELLOV	N/A	PP10001770												0 0 0	000											0	Class I (85°C)	F252000 F062000
	F622000	В	33510808 0	D	BLACK	l	F   PP10001773																		0	USCAR-2 Rev 5	F 462000	33511786					
Р	F722000	В	33510809 0	D	BLACK	2															0	Class 3 (125°C)	F 462000	33511786									
	F668000	В	13780226 0	А	BLACK	N/A								X	X		<	( X	X .	<	7		F 568000	13780225									
	F641800	А	33510810 0	А	BLACK	N / A					XX				XXX	(		X 6		F151800	33511788												
	F741800	А	F741800 0	A	BLACK	N / A		F770000	000	2 9		XX			XX						4		F251800	33511789									
	N / A	-	33400404 0	А	BLACK	N/A	PP10000711		0 - 4				N/A	N / A -	N / A				X	X	X	<   X   >	$\langle   \times   \times  $	X .	<	12	USCAR-2 Rev 5 Class 3 (125°C)						
	N / A	-	33400885 0	A	BLACK	N/A				_	_	_				NI / A	N. / A					X				,	<	3					
	N / A	-	33400886 0	A	BLACK	N/A										X	X				,		4										
	N / A	-	15512769 0	A	BLACK	N/A								X	X		<   X   >	$\langle   \times   \times  $	X X		10												

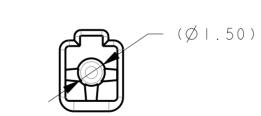


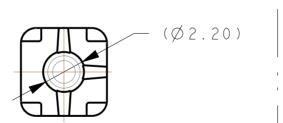






EXEMPLARY VIEWS: RETAINER WITH PLUGGED 1.5MM & 2.8MM CAVITIES



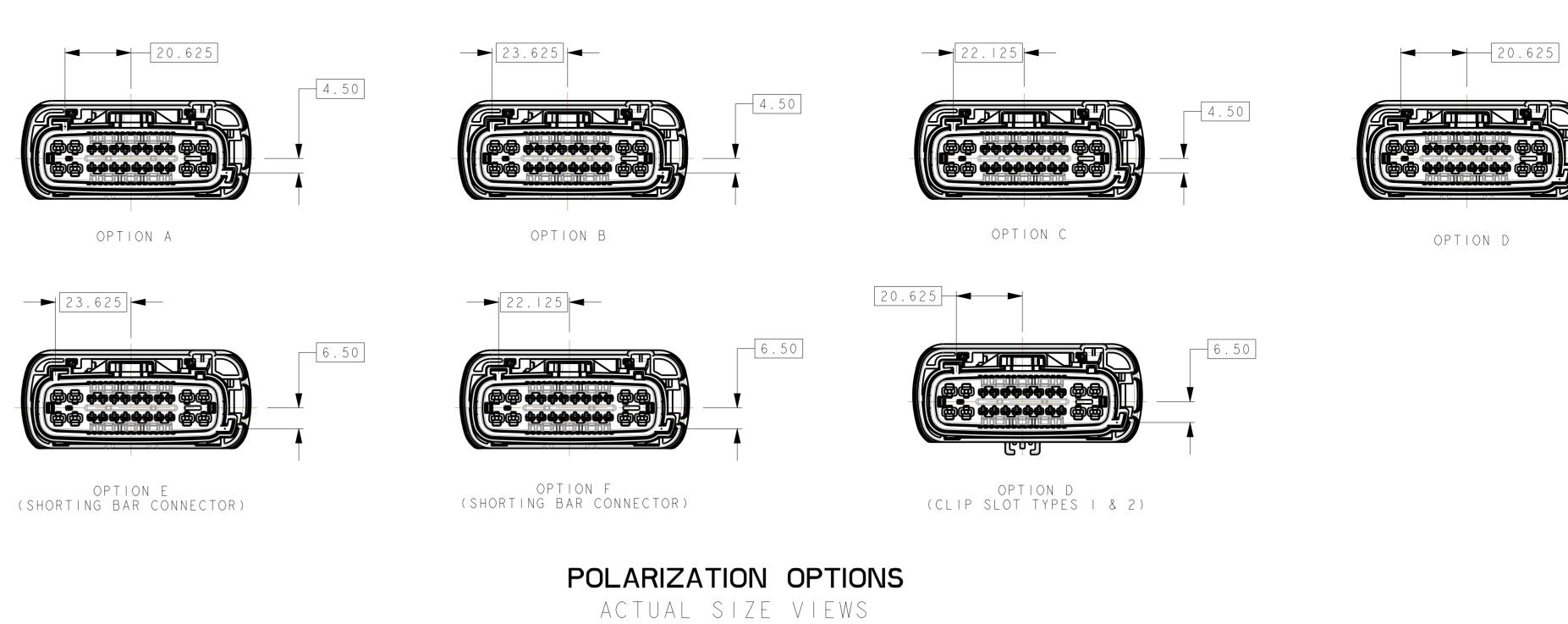


DETAIL X
SCALE 5.000

DETAIL Y
SCALE 5.000

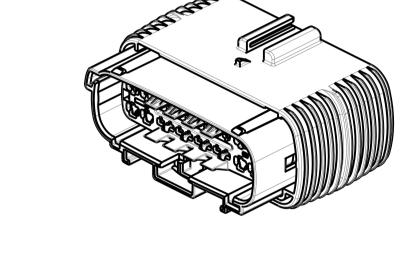
APLICABLE COMPONENTS									
SUPPLI	ER	DELPHI	DESCRIPTION	PLATING/	GRIP				
PART NO.	NAME PART NO.		DESCRIPTION	MATERIAL	SIZE				
54001625	MVL	13613157	APEX 150 TERMINAL	TIN	16,18				
54002000	MVL	13624983	APEX 150 TERMINAL	TIN	20,22				
54001627	MVL	13779834	APEX 150 TERMINAL	GOLD	16,18				
54002002	MVL	13725913	APEX 150 TERMINAL	GOLD	20,22				
54001208	MVL	15422738	APEX 2.8 TERMINAL	TIN	12				
54001400	MVL	10762803	APEX 2.8 TERMINAL	TIN	14,16				
54001800	MVL	10757690	APEX 2.8 TERMINAL	TIN	18				
54240002	MVL	13770939	APEX 150 2.8mm SEAL PLUG - FEMALE	PA66 GF35					
54241629	MVL	13613164	APEX 150 UNIVERSAL SEAL PLUG	PA66 GF35					
54200010	MVL	13768145	DOUBLE X-MAS TREE CLIP W/FORWARD STOP	PA66	FOR CLIP				
15-002775	ITW	15451401	SINGLE X-MAS TREE CLIP	PA66	SLOT				
437839 -	TYCO	10763674	DOUBLE X-MAS TREE CLIP (UNIVERSAL)	PA66	TYPE I				

COMMON PART NUMBER CHART ONE EACH INCLUDED IN ASSEMBLY										
ITEM	MVL P/N	DESCRIPTION	MATERIAL							
2	PP10001319	TPA	PBT GF30							
5	PP10001603	RING SEAL	SILICONE							
6	PP10001599	MATT SEAL	SILICONE							
7	PP10001727	GEAR CAM	PBT GF30							



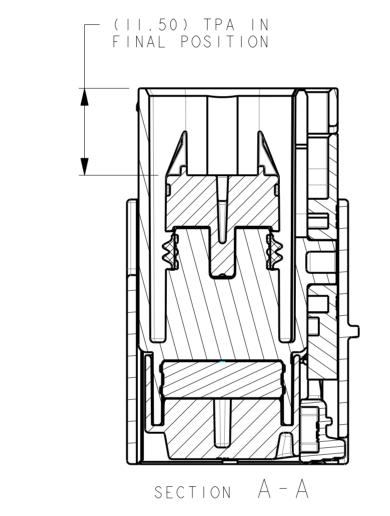
BASIC DIMENSIONS SHOWN ARE FOR REFERENCE ONLY

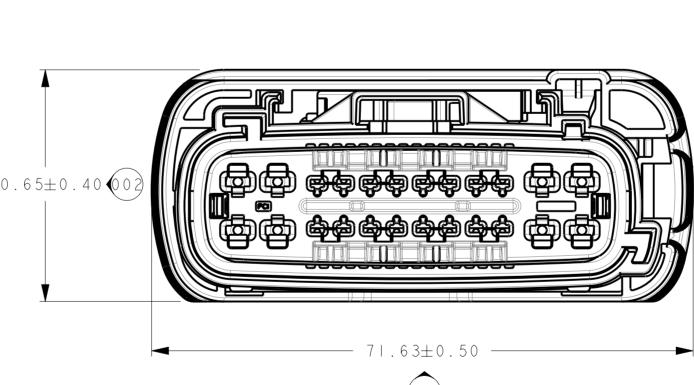


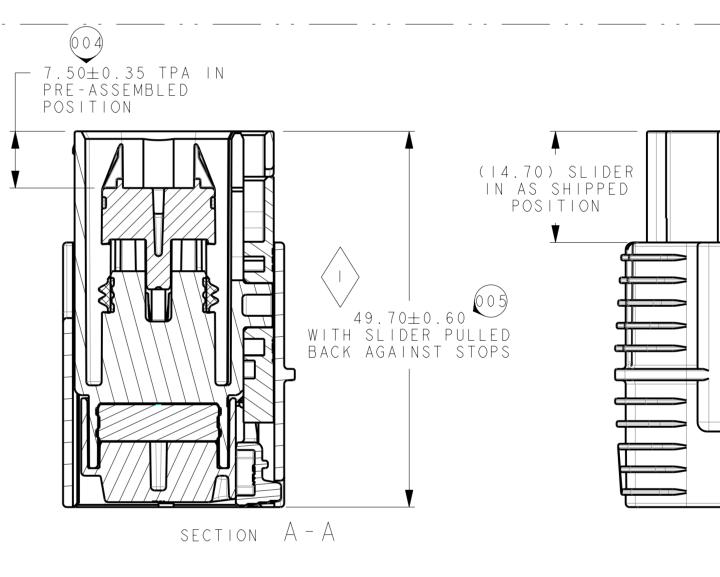


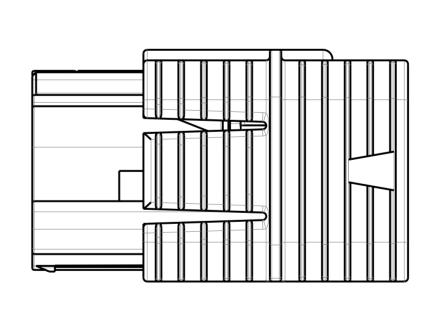
NO CLIP SLOT TYP

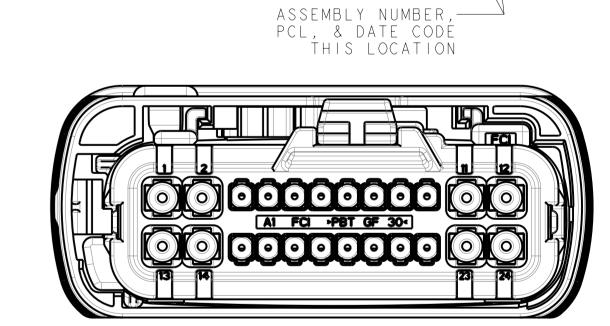
CLIP SLOT OPTIONS ON SLIDING SHROUD SCALE 1:1











- I) MAXIMUM TEMPERATURE CLASS: CLASS | | | (125°C)
- 2) CONFORMS TO TEST METHOD AS SHOWN IN CHART WITH THE FOLLOWING EXCEPTION(S):
- USCAR-2 REV 5 SECTION 5.4.7 (AUDIBLE CLICK)
- 3) CONNECTOR MAY BE USED WITH THE FOLLOWING RANGE OF WIRE SIZES AND/TYPES:
- -APEX 150 TERMINALS: -SIZE: 22 GAGE- 16 GAGE- 1.50mm MIN O.D. TO 2.41mm MAX O.D. -TYPE: TXL (MIL123-A / MS-8288)
- ALTERNATIVELY:
  -SIZE: 0.5mm² TO 1.5mm² / 1.40mm MIN O.D. TO 2.40mm MAX O.D.
  -TYPE: FLR2X (125°C PE-X) or FLRYW (125°C PVC)
  (STRUCTURE & PROPERTIES ACC. ISO6722)
- (STRUCTURE & PROPERTIES ACC. ISO6722)
  -APEX 2.8 TERMINALS:
  -SIZE; 18 GAGE- 12 GAGE- 1.90mm MIN O.D. TO 3.35mm MAX O.D.
- -TYPE: TXL (MILI23-A / MS-8288) ALTERNATIVELY:
- -SIZE: 0.75mm<sup>2</sup> TO 3.0mm<sup>2</sup> / I.70mm MIN O.D. TO 3.20mm MAX O.D. -TYPE: FLR2X (I25°C PE-X) or FLRYW (I25°C PVC) (STRUCTURE & PROPERTIES ACC. ISO6722) -CONTACT MVL ENGINEERING REGARDING USE OF OTHER WIRE SIZES AND/OR TYPES
- 4) CONNECTOR MAY BE USED WITH THE FOLLOWING TERMINALS:
  -MVL APEXI50 AND APEX 2.8 WITH WIRE SIZES DEFINED IN NOTE 3.
  SEE MVL DRAWINGS J54009 AND CI5004 FOR SPECIFIC PART NUMBERS
  AND CRIMPING REQUIREMENTS.
  -CONTACT MVL ENGINEERING REGARDING USE OF COMPATIBLE NON MVL TERMINALS
- 5) ANNUAL QUALITY REQUIREMENTS:
  IT IS PERMISSIBLE TO PERFORM CONTINUOUS CONFORMANCE PER
  MVL SPECIFICATION #AQA-001 INSTEAD OF ANNUAL LAYOUT AND ANNUAL
  PV REQUIREMENTS OF QS-9000 SECTION 2 AND SAE/USCAR-2 REV 4.

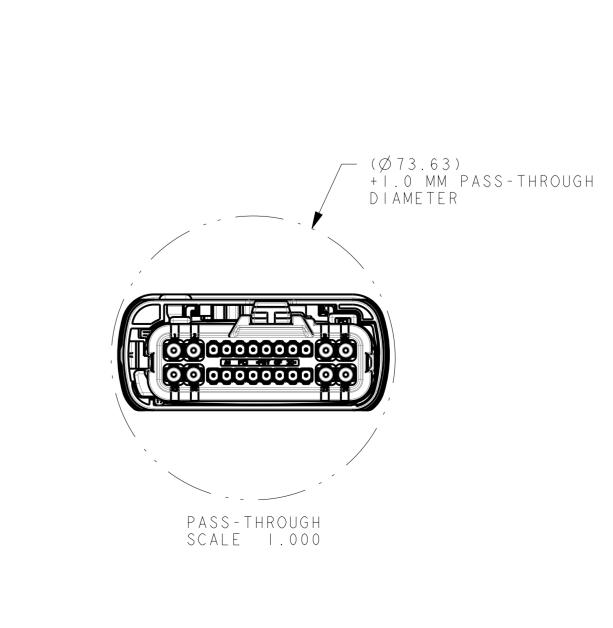
-CONTACT MVL ENGINEERING FOR SPECIFIC PACKAGING REQUIREMENTS

FOR TERMINAL TO CONNECTOR AND TPA TO CONNECTOR ONLY.

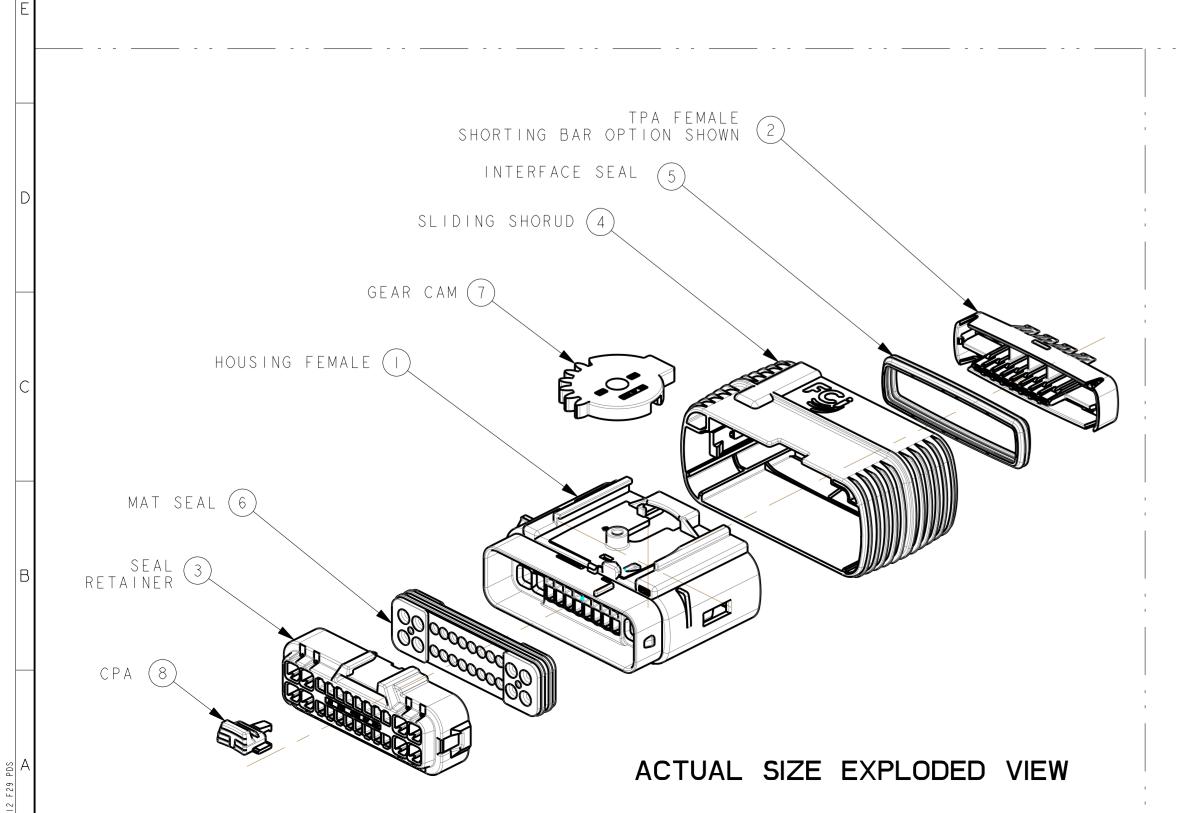
6) FEMALE CONNECTORS EQUIPPED WITH OPTIONAL CLIPSLOT CAN ONLY BE MATED TO MALE CONNECTORS WITHOUT CLIPSLOT FEATURE. KEY OPTION D IS TO BE USED FOR FEMALE CONNECTORS

WITH CLIPSLOT FEATURES AND THEIR MALE COUNTERPARTS.

WHEN USING THESE CONFIGURATIONS
7) QUALITY ASSURANCE REQUIREMENTS SPC DATA REQUIRED (1



13-00492 CHART ECO 422258 - ADDED P/N'S 33400885, 33400886 & 15512769. COMMON PARTS & COLUMNS REMOVED FROM MAIN P/N CHART. ADDED COLUMN FOR NUMBER OF CIRCUITS PLUGGED IN THE CHART |2-0|6|8 CHART ADDED P/N 33400404 10458 NOTES REMOVED USCAR-2 EXCEPTIONS FOR POLARIZATION & MOUNTING FEATURE 10172 NOTES KEY D WAS J FOR P/N'S F622000 & F722000) (CLIP SLOT 182) , REVISED NOTE #6, ADDED NOTE #7 NOTES REMOVED P/N'S F422000 & F522000 (KEYS G & H) AND RELATED VIEWS, H-6 ADDED DIAMOND TO DIMENSION #005 10066 CHART CLIP SLOT AND HOUSING NUMBER REVISED FOR F668000 10049 CHART REPLACED RETAINER NUMBER FOR PART NUMBER F668000 REPLACED FORMAT, DRAWING NUMBER PCC0377483 WAS PC10377483 CHART REVISED MATING MALE CONNECTOR PART NUMBERS CHART ADDED PART NUMBER F668000, ADDED INFO TO "TEST METHOD" 9459 H-5 (14.70) WAS 14.70±0.60 (#001) - REVISED DRAWING LAYOUT NOTES REVISED NOTE #2, #3 , #4 AND #6 D-15 ADDED APP COMP CHART 9451 - RELEASED ECN-NO. ZONE CHANGE DESCRIPTION COPYRIGHT DELPHI CORPORATION AND/OR ITS AFFILIATES. ALL RIGHTS RESERVED. REVISE THIS DRAWING IS THE PROPERTY OF DELPHI CORPORATION AND CONTAINS DELPHI CONFIDENTIAL INFORMATION. THE REPRODUCTION, DISTRIBUTION AND UTILIZATION OF THIS DOCUMENT OR ITS RELATED CAD MATH DATA, AS WELL AS COMMUNICATION OF ANY CONTENT TO OTHERS, WITHOUT EXPRESS AUTHORIZATION, IS PROHIBITED. APEX 150 DELPHI CAD SYSTEM NOT MEASURE DRAWING 24-WAY FEMALE ASSEMBLY 2006/10/25 Frank HOLUB SERIAL RELEASED See Table 77483 DOCUMENT UNDER POS CONTROL NO MODIFICATION ALLONED OUTSIDE



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