WIRE SIZE AWG	WIRE SIZE METRIC	INSULATION DIAMETER MIN	INSULATION DIAMETER MAX	WIRE SEALED PART NO.	WIRE SEALED PART NO. REV.	DELPHI/UNSEALED PART NO.	DELPHI/UNSEALED PART NO. REV.	DELPHI/SEALED PART NO.	DELPHI/SEALED PART NO. REV.	WIRE UNSEALED PART NO.	WIRE UNSEALED PART NO. REV.	DELPHI/UNSEALED PART NO.	DELPHI/UNSEALED PART NO. REV.	CAGE CODE	A	B (C1)	C2	Ø (D1)	D2	K	L	(V1)	(W)	TYPE OF GRIP
18/12	4.5/0.0	4.3/3.0	----	2, 3	3340653-1	01	AA			3451827	1, 5	1551628	01 AA		5.08	6.9		1.18	31.2	8.0	SEALED
			3.0/2.0	2, 3	1355236-1	01	AA	15518023	01 AA								3.20				
				3	3340653-1	5	AA														
16/12	3.5/2.5	3.6/2.3	----	2, 3	1376774-1	01	AA								6.0						
										7334148-2	2, 3										
										7334148-3	3, 4										
12	2.5/3.0	3.4/3.0								7600000-1	1, 5	15000924	0 AA		7.6	2.30	3.2	1.00	31.2	8.0	SEALED
															5.6						
																		0.30			
14/16	1.5/2.5	3.0/2.3	----	2, 3	3340653-1	01	AA								7.6						
				2, 4	3340653-1	01	AA														
				5	3451441-1	5	AA	15518025	01 AA												
				5	3451441-1	5	AA														
				5	1376769	03	AA														
21/18/20	2.1/1.5/1.2	2.2/1.4	1.9/1.2	5	3451391-1	5	AA								4.4	6.3	1.00	1.75	4.3	----	0.60
										7334148-2	2, 3										
										7334148-3	3, 4										
18/20	1.0/0.5	2.2/1.4								3451817	1, 3	15329386			5.5			1.18	31.2	8.0	SEALED
			1.5/2.0	2, 3	3340653-1	01	AA														
				2	1355097-1	01	AA	15525121	01 AA						3.4	4.2	1.00	2.3	----		
				2	1342828-2	01	AA	15518028	01 AA												
				2	1342821-1	01	AA	15519027	01 AA												
				2	1342824-2	01	AA	15518024	01 AA												
				2	1200586	01	AA														
				5	1376775	03	AA														
22	0.35	1.8/1.2		2, 3	1355098-1	01	AA	15525015	01 AA						3.6	1.00	2.2	1.40	2.7	----	0.60
			1.0/1.5	2, 3	1355098-1	01	AA														
				2	1376776	03	AA														
				5	1376776	03	AA														

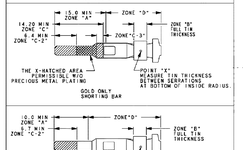
MATERIAL TYPE PLATING OPT.	TYPE 2 OPTION # 1	TYPE 2 OPTION # 2	TYPE 2 OPTION # 3	TYPE 2 OPTION # 4	TYPE 1 OPTION # 5	TYPE 1 OPTION # 6	TYPE 2 OPTION # 7
PLATING	PDST GOLD FLASH PALLADIUM (SHORT WIRE BAR)	PDST GOLD (SHORTING BAR)	PDST SEMI PALLADIUM-GOLD FLASH (IN LINE)	PDST PALLADIUM-GOLD (IN LINE)	PRE-MAT SUP TIN (IN LINE)	PRE TIN/SILVER (IN LINE)	PDST SILVER (IN LINE)
ZONE "A"	SULFAMATE DUCTILE NICKEL	SULFAMATE DUCTILE NICKEL	SULFAMATE DUCTILE NICKEL	SULFAMATE DUCTILE NICKEL	HOT DIP TIN PLATE	TIN SILVER PLATE	ELECTRO DEPOSITED PURE SILVER, NICKEL UNDERPLATE NOT REQ.
ZONE "B"	ELECTRO MATT TIN PLATE	ELECTRO MATT TIN PLATE	ELECTRO MATT TIN PLATE	ELECTRO MATT TIN PLATE	HOT DIP TIN PLATE	TIN SILVER PLATE	ELECTRO MATT TIN PLATE
ZONE "C"	C-1, C-2: PLATE WITH HARD GOLD EAF OVER PURE PALLADIUM.	C-1, C-3: PLATE WITH HARD GOLD	C2 ONLY: PLATE WITH HARD GOLD EAF OVER PURE PALLADIUM	C2 ONLY: PLATE WITH HARD GOLD EAF OVER PURE PALLADIUM	----	----	----
ZONE "D"	ELECTRO MATT TIN PLATE	ELECTRO MATT TIN PLATE	ELECTRO MATT TIN PLATE	ELECTRO MATT TIN PLATE	HOT DIP TIN PLATE	TIN SILVER PLATE	ELECTRO MATT TIN PLATE

5400100RWC	1512726	01	AA	5400100	10752774								
5400600RWA	1512734	01	AA	5400600	10509074								
5400140RWC	1522351	01	AA	5400140	13681974								
5400140RWA	1524503	01	AA	5400140	10757692								
5400130RWA	1524504	01	AA	5400130	10757693								
5400180RWA	1512733	01	AA	5400180	15425613								
5400180RWC	1513652	01	AA										
5400180RWA	1516296	01	AA	5400180	15435215								
5400180RWC	1516292	01	AA										
5400180RWA	1512732	01	AA	5400180	13805590								
5400180RWC	1516297	01	AA										
5400180RWA	1516294	01	AA	5400180	10762775								
5400180RWC	1751022	01	AB										
5400220RWA	1512725	01	AA	5400220	10762776								
5400220RWC	1369981	01	AC										
MVL PERMANENT PART NO.	DELPHI/UNSEALED PART NO.	DELPHI/UNSEALED PART NO. REV.	MVL SEALED PART NO.	DELPHI/SEALED PART NO.	DELPHI/SEALED PART NO. REV.	MODE FROM							
Available Types 0R6 or 0RC													

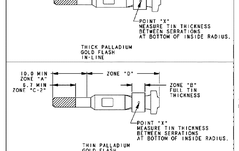
SEE REELING OPTIONS VIEW BELOW.

VIEW OF PRECIOUS PLATING NOT TO SCALE

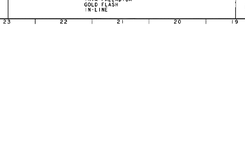
PLATING OPTION # 1



PLATING OPTION # 2

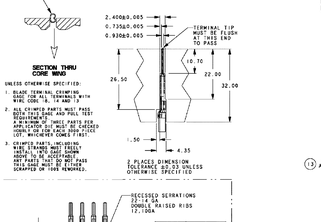


PLATING OPTION # 3

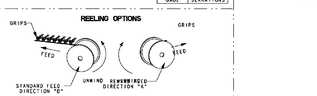


PLATING OPTION # 4

GAGE REQUIREMENTS



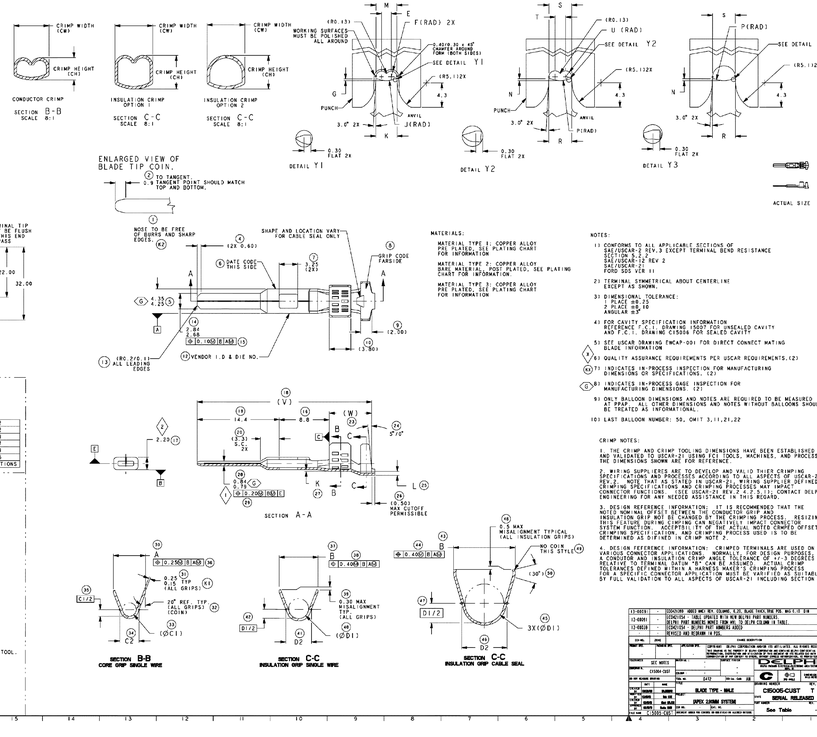
UNLESS OTHERWISE SPECIFIED:
1. GLADE TERMINAL CRIMPING GAGE FOR ALL TERMINALS WITH WIRE CODE: 18, 16 AND 14
2. ALL CRIMPED PARTS MUST PASS BOTH THIS GAGE AND PULL TEST REQUIREMENTS.
   A MINIMUM OF TWELVE PARTS PER LOT MUST BE CHECKED WITH THE GAGE. IF ONE OF EACH BOX FAILS (LOT, WHICHEVER COMES FIRST)
3. CRIMPED PARTS INCLUDING TERMINAL, WIRE SEALED, WIRE UNSEALED, MUST SHOW GAGE ABOVE TO BE ACCEPTABLE. ANY PARTS THAT PASS THIS GAGE MUST BE EITHER SCRAPPED OR THOS MEMORIED.



REELING OPTIONS

VIEW NOT TO SCALE

TERMINALS TO FEED AS SHOWN AFTER BEING REELED OFF PRODUCTION TOOL. PACKAGING: FANFOLD REELS WITH PAPER INTERLEAVE NOTES:
20. DO NOT USE MVL PART NUMBERS FOR NEW ORDERS. MVL PART NUMBERS FOR REFERENCE ONLY.
21. WHEN USING DELPHI PART NUMBERS, ORDER "DELPHI REWOUND PART NUMBER" (EX: 15517726)
22. IF DELPHI PART NUMBER IS NOT AVAILABLE REQUEST DELPHI PLATED PART NUMBER THEN "REWIND DIRECTION (AVOC)" EX. 15520890 REWIND A)



MATERIALS:
MATERIAL TYPE 1: COPPER ALLOY BASE MATERIAL, POST PLATED. FOR INFORMATION
MATERIAL TYPE 2: COPPER ALLOY BASE MATERIAL, POST PLATED, SEE PLATING CHART FOR INFORMATION
MATERIAL TYPE 3: COPPER ALLOY BASE MATERIAL, PRE PLATED. FOR INFORMATION

NOTES:
13 CONFORMS TO ALL APPLICABLE SECTIONS OF SAE/USCAR-2 REV.3 EXCEPT TERMINAL BEND RESISTANCE SAE/USCAR-2 SAE/USCAR-12 SAE/USCAR-21 REV 2 SAE/USCAR-23 FORD SSS VER 11
2) TERMINAL SYMMETRICAL ABOUT CENTERLINE EXCEPT AS SHOWN.
3) DIMENSIONAL TOLERANCE:
   .X PLACE ±0.2
   .XX PLACE ±0.10
   ANGULAR ±3°
4) FOR CAVITY SPECIFICATION INFORMATION REFERENCE "C1" DRAWING 15037 FOR UNSEALED CAVITY AND "C-1" DRAWING 15038 FOR SEALED CAVITY
5) SEE USCAR DRAWING (MCAP-001) FOR DIRECT CONNECT MATING GLADE INFORMATION
6) QUALITY ASSURANCE REQUIREMENTS PER USCAR REQUIREMENTS.(2)
7) INDICATES IN-PROCESS INSPECTION FOR MANUFACTURING DIMENSIONS OR SPECIFICATIONS. (2)
8) INDICATES IN-PROCESS GAGE INSPECTION FOR MANUFACTURING DIMENSIONS. (2)
9) ONLY BALLOON DIMENSIONS AND NOTES ARE REQUIRED TO BE MEASURED AT PPAP. ALL OTHER DIMENSIONS AND NOTES WITHOUT BALLOONS SHOULD BE TREATED AS INFORMATIONAL.
10) LAST BALLOON NUMBER: 50, OMIT 3,11,21,22

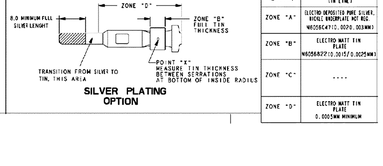
CRIMP NOTES:
1. THE CRIMP AND CRIMP TOOLING DIMENSIONS HAVE BEEN ESTABLISHED AND VALIDATED TO USCAR-21 USING FCT TOOLS, MACHINES, AND PROCESSES. THE DIMENSIONS SHOWN ARE FOR REFERENCE.
2. MATING SUPPLIERS ARE TO DEVELOP AND VALIDATE CRIMPING SPECIFICATIONS AND PROCESSES ACCORDING TO ALL ASPECTS OF USCAR-21 REV.2. NOTE THAT AS STATED IN USCAR-21, WIRING SUPPLIER DEFINED CRIMPING SPECIFICATIONS MAY NOT ACHIEVE ACCEPTABLE GAS TIGHT CONNECTION FUNCTIONS. USE USCAR-21 REVISIONS. CONTACT DELPHI ENGINEERING FOR ANY NEEDED ASSISTANCE IN THIS REGARD.
3. DESIGN REFERENCE INFORMATION: IT IS RECOMMENDED THAT THE INSULATION GRIP NOT BE CHANGED BY THE CRIMPING PROCESS. RESIZING THIS FEATURE DURING CRIMPING CAN NEGATIVELY IMPACT CONNECTOR FUNCTIONS. THE CRIMP HEIGHT (CH) DIMENSION, CRIMP WIDTH (CW) OFFSET, CRIMPING SPECIFICATION, AND CRIMPING PROCESS USED IS TO BE DETERMINED AS DEFINED IN CRIMP NOTE 2.
4. DESIGN REFERENCE INFORMATION: CRIMPED TERMINALS ARE USED ON VARIOUS CONNECTOR APPLICATIONS. NORMALLY, FOR DESIGN PURPOSES, A CONDUCTOR AND INSULATION CRIMP AREA TOLERANCE OF +/- 10 DEGREES ROTATION AROUND THE CENTERLINE OF THE TERMINAL IS ACCEPTABLE. TOLERANCES DEFINED WITHIN A HARNESS MAKER'S CRIMPING PROCESS FOR A SPECIFIC CONNECTOR APPLICATION MUST BE VARIFIED AS SUITABLE BY FULL VALIDATION TO ALL ASPECTS OF USCAR-21 INCLUDING SECTION 4.2.5.

REV	DATE	DWN	APVD	DESCRIPTION
13-0815				CONVERT .0803 AND .0813 COLUMNS, 8.25, BLADE TIPS, PER MVL-0.20
10-0849				CONVERT .0813 SPACING WITH NEW DELPHI PART NUMBERS.
10-0848				DELPHI PART NUMBERS MAKE FROM MVL 12 DELPHI COLUMN IN TABLE.
10-0843				CONVERT DELPHI PART NUMBER TO MVL
				REVISED MAX DIMENSION 4.95.

DO NOT SCALE DRAWING			
SEC NOTES			
CROSS-CUST			
DO NOT SCALE DRAWING	2472	2-14-1997	2-14-1997
BLADE TYPE - MALE		CROSS-CUST 7	
APTIV CONNECTION SYSTEMS		SENECA, PENNSYLVANIA	
DO NOT SCALE DRAWING		See Table	
THIS DRAWING IS THE PROPERTY OF APTIV AND CONTAINS APTIV CONFIDENTIAL INFORMATION. IT SHALL NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN PERMISSION.			

VIEW OF PRECIOUS PLATING NOT TO SCALE

PLATING OPTION #7



MATERIAL TYPE PLATING OPT.	TYPE 2 OPTION # 7
PLATING	POST SILVER (IN LINE) TIN
ZONE "A"	ELECTRO DEPOSITED PURE SILVER, NICKEL UNDERPLATE NOT REQ.
ZONE "B"	ELECTRO MATT TIN PLATE WO2584717.0, 0020.0, 0020MM2
ZONE "C"	----
ZONE "D"	ELECTRO MATT TIN PLATE 0.0015MM MINIMUM

5400144	-	-	15279385	01	-	M6565J00	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400187	-	-	15279386	01	-	M6565J00	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400100	T	N	10762774	03	AH	M6565J00	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400100RWA	T	N	15548841	01	AA	10762774	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400100RWC	T	N	15512726	01	AD	10762774	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400102	T	N	15512230	01	AD	15519823	3	15519823	01	AD	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
	-	N	3340652	01	AE	3351843	7	3351843	01	AC	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400102	T	Y	15516298	01	AB	M6565J00	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400102RWA	T	Y	13111005	01	AA	15516298	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	Y	3340652	01	AD	3351844	7	3351844	01	AB	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
F808800	T	Y	15509074	01	AC	M6565J00	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F808800RWA	T	Y	15512734	01	AC	15509074	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	N	3340652	01	AD	3351841	7	3351841	01	AC	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
-	-	N	3340652	01	AC	3351842	4	3351842	01	AB	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400144	T	N	13681974	01	AB	15519825	3	15519825	01	AB	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400144RWC	T	N	15522351	01	AB	13681974	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400140	T	N	10757692	03	AB	M6565J00	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400140RWA	T	N	15524503	01	AB	10757692	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400140RWC	T	N	10757692	03	AB	10757692	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400130	T	N	10757693	03	AB	M6565J00	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400130RWA	T	N	15524504	01	AB	10757693	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	N	3340652	01	AD	3351840	7	3351840	01	AC	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
F875200	T	N	15509076	01	AB	15520221	4	15520221	01	AB	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400181	T	N	15425613	02	AB	15519829	2	15519829	01	AB	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400181RWA	T	N	15512733	01	AB	15425613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400181RWC	T	N	15513652	01	AB	15425613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400181	T	N	15435215	01	AB	15519827	3	15519827	01	AB	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400181RWA	T	N	15516296	01	AB	15435215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400181RWC	T	N	13971791	01	AB	15435215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400180	T	N	13805590	01	AB	15519824	1	15519824	01	AB	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400180RWA	T	N	15512732	01	AB	13805590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400180RWC	T	N	15516297	01	AB	13805590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400180	T	N	10762775	03	AG	M6565J00	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400180RWA	T	N	15516294	01	AB	10762775	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400180RWC	T	N	13751022	01	AB	10762775	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F975200	T	N	15509077	01	AC	15520917	4	15520917	01	AC	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400223	T	N	13501642	01	AB	13511839	3	13511839	01	AB	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400223RWA	T	N	15512731	01	AB	13501642	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400222	T	N	15520918	02	AB	15520918	2	15520918	01	AB	M6564J00	-	-	-	-	-	-	-	-	-	-	-	-
5400222	T	N	10762776	03	AG	M6565J00	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400220	T	N	15512725	01	AB	10762776	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5400220RWA	T	N	13969981	01	AC	10762776	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PART NUMBER	REV	SEALED	PART NUMBER	REV	N/P	MAT'L SPEC	PLATING PROCESS OPTION	PART NUMBER	REV	N/P	MAT'L SPEC												
MVL			PLATED					UNPLATED															
			APTIV																				

DWG STATUS																							
DATE	SUBSTITUTE	REPLACE	PART	CHG	ZONE	REVISION HISTORY	AUTH	DR	APVD	APVD	
05FE13	R	01	-	-		ALL PARTS - REVISED AND REDRAWN IN PSD SYSTEM, ADDED DELPHI PART NUMBERS AND UPDATED MVL PART NUMBERS	421054	JEG	JAA	DAB	
15FE13	R	02	-	-		ALL PARTS - ADDED NMCI COLUMN ON MVL CHART AND BLADE TIP DETAIL POSITION WAS 0.10.	421399	JEG	JAA	DAB	
14MR13	R	03	-	-		13405512,15512730,10762774 & 15519823 - DIM "C" WAS 1.001; ALL PARTS - UPDATED MVL PARTS UP ONE TO REV LEVEL "T"; DUE TO ORIGINAL PPAP AND ADDED DELPHI FORMAT & CHARTS 13511839-44 - RELEASED	421737	JEG	JAA	DAB	
10OC13	R	04	-	-		13111005 - RELEASED	423999	COD	JAA	DAB	
05NO13	R	05	-	-		15548841 - RELEASED	424541	COD	JAA	DAB	
18MR14	R	06	-	-		ALL PARTS - INSPECTION SYMBOL BALLOON #33 WAS 0.2+0.2 TYP; 10757692,13969990,15524503,13405514-15 & 13511841-42 - ADDED "PLATING OPTION #7" - DIAMETER" INFO ON CHART FOR 14/16 GAGE	425921	COD	JAA	BG	
24JL17	R	07	-	-		13969981,15520890,15520916-17,15519823,15512730,13405512-16,13511840-43 - UPDATED PART AVAILABILITY	437251	SDH	JWW	JOO	
09JL18	R	08	-	-		13405512-14, 13405516; 13511840-41 & 13511843-44 - ADDED "PLATING OPTION #7" VIEW	440242	DAV	JAA	JOO	
04DE18	R	09	-	-		15279385,86 - RELEASED; 15509074, 15512734 - WIRE SIZE WAS 2.5	441331	AHD	AHD	LES	

TOLERANCE UNLESS OTHERWISE SPECIFIED:
DECIMALS ANGULAR/SIDE DIMS
TWO PLACE ±0.03 ±0.5°
THREE PLACE ±.005 SEE DRAWING

THIRD ANGLE PROJECTION
DO NOT SCALE
USE MATH DATA
NX

APVD	JAVIER ESQUIVEL	14MR13	
APVD	J.S. ALVARADO	14MR13	
APVD	GERARDO GOMEZ J.	14MR13	
APVD			
APVD			

SUBSTANCES OF CONCERN AND RECYCLED CONTENT PER ATTY. COMMISS

SEE CHART

TAXI TERM M APEX 2.8 SN

10819199

SIZE	DRAWING NUMBER					REV
A1x3	NONE	SHEET 2 OF 2	1 OF 1	R	09	

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