



Design Verification Plan and Report
24 Way Hybrid Connector System with Shorting Bar
Apex 150 Gold & Apex 2.8mm Tin Terminal Systems
PV Level

DVP NUMBER FCINPEL-24WayHybridSBPV_07-168	DEPT
PLAN DATE	PLAN ORIGINATOR F. Holub
CONCURRENCE	MANAGER APPVL R. Johannes
REPORT DATE 11/9/07	REPORTING ENGR F. Holub

MY:	Applications:	P/N: See last page
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Procedure or Standard	Test Description	Timing		Quantity		Results				Acceptance Criteria	Notes
		Start	Compl.	Conn.	Term.	Avg.	Max.	Min.	Pass/Fail		
SAE/USCAR-2, revision 5 (Draft)											
5.9.5 Connector System Mechanical Tests Flow Chart											
	Seq. ID G										
5.4.2	Connector-Connector Engage/ Disengage										
	Mate with primary lock (with terminals)	10/16/07	10/18/07	15	360	49.05	58.43	44.31	Pass	≤ 75N	
	Unmate with primary lock (without terminals)	10/16/07	10/18/07	5	0	247.34	252.12	241.87	Pass	≥ 110N	
	Unmate without primary lock (without terminals)	10/16/07	10/18/07	5	0	26.78	28.62	24.59	Pass	≤ 75N	
	Unlatching force	10/16/07	10/18/07	5	0				Pass	≤ 70N	
5.9.6 Connector System Electrical Tests Flow Chart											
	Seq. ID M										
5.4.6	Vibration-Mechanical Shock										Not-coupled-to-engine profile
5.1.9	Discontinuity	9/23/07	10/1/07	5	120				Pass	no loss > 1µs	
	Apex 150 terminal										
5.3.1	Dry circuit delta across shorting bar	9/14/07	10/1/07	7	112	0.801	9.055	-3.115	Pass	< 40mΩ	
5.1.8	Visual inspection	10/1/07	10/1/07	10	240				Pass	**see below	
	Seq. ID N										
5.6.1	Thermal Shock										85°C maximum
5.1.9	Discontinuity	10/19/07	10/22/07	5	120				Pass	no loss > 1µs	
	Apex 150 terminal										
5.3.1	Dry circuit delta across shorting bar	10/16/07	10/26/07	5	80	2.924	4.450	1.130	Pass	< 40mΩ	
5.1.8	Visual inspection	10/26/07	10/26/07	10	240				Pass	**see below	
	Seq. ID O										
5.6.2	Temperature Humidity Cycling										85°C maximum
	Apex 150 terminal										
5.3.1	Dry circuit delta across shorting bar	9/6/07	10/5/07	10	160	7.073	15.120	1.425	Pass	< 40mΩ	
5.1.8	Visual inspection	10/5/07	10/5/07	10	240				Pass	**see below	

