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updated on:

Task #	Task	What/When	Example Link
1	Assumption List	Create & review for the Harness system in the beginning of the 3D design.	ASSUMPTION LIST
2	Bill of Material	Create for supplier identification and part number cross-reference	BILL OF MATERIAL
3	Work plans	Create/review in conjuction with the harness supplier to identify all the steps required to build the harness.	WORK PLAN
4	Bench Marking	Review competitive engines for similar design ITEC & Supplier	
5	Quality History	Conduct at beginning of design phase. Review past history design issues, 8Ds campaign issues, warranty claims, etc., capturing "lessons learned"	LESSONS LEARNED
6	Concept Sheets	From start to end of program, Includes engineering calculation, analysis, etc- MAJOR PORTION OF ENGINEER's TIME	CONCEPT DESIGN
7	Boundary Diagrams	Create at start of concept, complete by PA, update throughout design phase	BOUNDARY DIAGRAMS
8	P-Diagrams	Define Noise, Control Factors, Output and Error States	P-DIAGRAM
9	DFMEA (Design Failure Modes and Engineering Analysis)	Identify and Address potential failure modes	DFMEA
10	DVP&R (Design Verification Plan & Report)	Define detailed test plan to ensure quality and reliability targets are met	DVP&R
11	Design Freeze Checklist	Create for each 3D design level, sign-off by sub-section owners that interface with the harness mounting	DESIGN FREEZE CHECKLIST
12	3D Sub-Unit Ass'y 3D model interface/virtual build/customer vehicle packaging	Populate for each build phase (if new parts), and before 3D made[Interface Conduct review for each build phase, for each part, before Build Sign-off	Team Center
13	3D Models	Complete for each new design, with each program build change as needed,	3D MODEL
14	Calculations	Conduct necessary calculation, such as wire resistance, voltage drop, bundle size etc, before design is complete	WIRE RESISTANCE
15	2D Drawing	Create for each phase level, prototype and production.	
16	Checking Package/checking	Must complete before issuing DVR	
17	DVR (Design Verification)	Create for each new part, each build phase: engineering prototype release	DVR
18	PCR (Product Change Request)	Create for each change for approval after design is released.	PCR
19	Build manual	special instructions, inspection, torques, etc.	BUILD MANUAL
20	System Meetings Functional Objective Status us/Design Reviews	At least –once a week or more frequent (as needed), documenting minutes for addressing concerns and actions. Review and report for each build phase (as needed), by Build Sign-off Date	
21	Manufacturing Review/Sign-off	Review design over course of program/build-phase obtain sign-off for production by DV2	
22	Build Sign-Of f	Compile all above information indicating readiness for build phase	
23	MDA (Material Deviation Approval)		MDA
24	8D/FRACAS Reviews	8D created for each failure, corrective actions driven into next build phase –and retrofit into existing design phase as needed	8D

	Computer Skills	
1	3D CAD	NX
	2D CAD	NX
	Access database	
	Spreadsheet	
	MicrosoftProject	
2	Connector knowledge	
	Sealed and Unsealed type	
	Suppliers popular brands: Metri-pack, Weather-pack, DT, Econoseal, Kompak 4, MX150	
	Terminal sizes: .64, 1.2, 1.5, 2.8, 6.3, 9.0	
	Automotive Wire types TXL, GXL, silicone block, Tefzel	
	Pass-thru connectors type: o'ring, face seal..	
3	Harness retation types	
	Harness covering types: conduit, sleeve, foam, channels	
4	Electrical Troubleshooting skllis	
5		