

Task / Item	In Progress Projected (%)	In Progress Actual (%)	Complete	Dependencies
Motor Spinning in Dyno Room	50.00%	50.00%	No	Motor Purchased Motor Controller Purchased Pulley / Shaft Fabricated Motor Installed in Motor Mount MCS Installed in Fixture Pulley / Shaft Connected to Motor
Motor Purchased	100%	100%	Yes	
Motor Controller Purchased	100%	100%	Yes	
Motor Controller Connected to TSI, Cooling, and Motor in Dyno Room	50.00%	33.30%	No	Motor Controller Purchased MCS / TSI / Cooling Fixture Fabricated TSI Board Complete TSI Mounting Plate Complete
Motor Mount Fabricated	67%	33%	No	
Motor Installed in Motor Mount in Dyno Room	66.67%	50.00%	No	Motor Purchased Motor Mount Fabricated
Pulley / Shaft Fabricated	80%	60%	No	
Pulley / Shaft Connected to Motor and Mounted in Dyno Room	63.64%	45.45%	No	Motor Purchased Pulley / Shaft Fabricated
MCS / TSI / Cooling Fixture Fabricated	100%	33%	No	
Dyno Room Testing Plan Complete	100%	100%	Yes	
Dyno Room Wiring Diagram Complete	100%	100%	Yes	
GLV Board Manufactured	85.71%	85.71%	No	
GLV Mounting Plate Manufactured	66.67%	66.67%	No	
Safety Loop Testing Panel Mounted in Dyno Room Rack	100%	75%	No	
Safety Loop Functional In Dyno Room	17%	0%	No	GLV Board Manufactured
TSI Board Manufactured	64.29%	50.00%	No	
TSI Mounting Plate Manufactured	66.67%	67%	No	
TSI Throttle / Brake Control Panel Manufactured	71.34%	28.57%	No	TSI Board Manufactured TSI Mounting Plate Manufactured
Cooling Loop Filled with Water and Tested For Leaks	66.67%	66.67%	No	
Cooling System Mounted on Fixture in Dyno Room	100%	50%	No	MCS / TSI / Cooling Fixture Fabricated
Cooling System Connected to MCS and Motor in Dyno Room	63%	50%	No	MCS / TSI / Cooling Fixture Fabricated
Cooling System Connected to TSI in Dyno Room	80%	20%	No	MCS / TSI / Cooling Fixture Fabricated
TSV Packs Manufactured	30%	10%	No	
TSV Packs Connected to Motor Controller in Dyno Room	0%	0%	No	
TSV CellMan Boards Fabricated	33%	22%	No	
TSV PackMan Boards Fabricated	25%	0%	No	
TSV SegMan Boards Fabricated	29%	0%	No	
TSV Powering Motor via Motor Controller	0%	0%	No	TSV Packs Manufactured PackMan Boards Fabricated CellMen Boards Fabricated SegMen Boards Fabricated Motor Controller Purchased Motor Purchased
SCADA Recording Data and Writing to a File	75.00%	38%	No	
SCADA Displaying Data to Rack Monitor in Dyno Room	75%	75%	No	
SCADA Communicating with GLV in Dyno Room	50%	0%	No	GLV Board and Mounting Plate Integrated
SCADA Communicating with TSI in Dyno Room	50%	25%	No	TSI Board and Mounting Plate Integrated
SCADA Communicating with TSV in Dyno Room	0%	0%	No	TSV Packs Manufactured PackMan Boards Fabricated CellMen Boards Fabricated SegMen Boards Fabricated
SCADA Communicating with Motor Controller in Dyno Room	50%	50%	No	
All Connecting Wires Produced with Correct Connector Types	17%	8%	No	
All Subsystems fully wired in Dyno Room	0%	0%	No	Dyno Room Wiring Diagram Complete
All Tests According to Test Plan Run in Dyno Room	0%	0%	No	Dyno Room Testing Plan Complete

Integration Task	Related WBS Items	In Progress WBS Items	Projected Completion (%)	Completed WBS Items	Actual Completion (%)
Motor Spinning in Dyno Room	PART.4.1 - Motor Controller Purchase Order Submitted PART.4.2 - Motor Controller Acquired PART.5.1 - Motor Purchase Order Submitted PART.5.2 - Motor Acquired PART.5.3 - Motor Mounted in Motor Mount PART.6.1 - Motor / Pulley Connected PART.6.2 - Pulley Connected to Dyno Belt PART.6.3 - Motor Controller Connected to Motor	None	50.00%	PART.4.1 - Motor Controller Purchase Order Submitted PART.4.2 - Motor Controller Acquired PART.5.1 - Motor Purchase Order Submitted PART.5.2 - Motor Acquired	50.00%
Motor Purchased	PART.5.1 - Motor Purchase Order Submitted PART.5.2 - Motor Acquired	None	100.00%	PART.5.1 - Motor Purchase Order Submitted PART.5.2 - Motor Acquired	100.00%
Motor Controller Purchased	PART.4.1 - Motor Controller Purchase Order Submitted PART.4.2 - Motor Controller Acquired	None	100.00%	PART.4.1 - Motor Controller Purchase Order Submitted PART.4.2 - Motor Controller Acquired	100.00%
Motor Controller Connected to TSI, Cooling, and Motor in Dyno Room	PART.4.1 - Motor Controller Purchase Order Submitted PART.4.2 - Motor Controller Acquired TSI.1 - TSI Board Delivered COOL.2.3 - Cooling System Mounted in Dyno Room COOL.3.1 - Cooling System Connected to MCS COOL.3.3 - Cooling System Moving Water to All Connected Systems	TSI.1 - TSI Board Delivered	50.00%	PART.4.1 - Motor Controller Purchase Order Submitted PART.4.2 - Motor Controller Acquired	33.33%
Motor Mount Fabricated	PART.1.1 - Motor Mount Mechanical Drawing Submitted to Machine Shop and Accepted PART.1.2 - Motor Mount Fabricated PART.1.3 - Motor Mount Secured in Dyno Room	PART.1.2 - Motor Mount Fabricated	66.67%	PART.1.1 - Motor Mount Mechanical Drawing Submitted to Machine Shop and Accepted	33.33%
Motor Installed in Motor Mount in Dyno Room	PART.1.1 - Motor Mount Mechanical Drawing Submitted to Machine Shop and Accepted PART.1.2 - Motor Mount Fabricated PART.1.3 - Motor Mount Secured in Dyno Room PART.5.1 - Motor Purchase Order Submitted PART.5.2 - Motor Acquired PART.5.3 - Motor Mounted in Motor Mount	PART.1.2 - Motor Mount Fabricated	66.67%	PART.1.1 - Motor Mount Mechanical Drawing Submitted to Machine Shop and Accepted PART.5.1 - Motor Purchase Order Submitted PART.5.2 - Motor Acquired	50.00%
Pulley / Shaft Fabricated	PART.2.1 - Pulley Mechanical Drawing Submitted PART.2.2 - Shaft Drawing Submitted PART.2.3 - Pulley Manufactured / Purchased PART.2.4 - Shaft Manufactured / Purchased PART.2.5 - Pulley System Mounted in Dyno Room	PART.2.4 - Shaft Manufactured / Purchased	80.00%	PART.2.2 - Shaft Drawing Submitted PART.2.1 - Pulley Mechanical Drawing Submitted PART.2.3 - Pulley Manufactured / Purchased	60.00%
Pulley / Shaft Connected to Motor and Mounted in Dyno Room	PART.1.1 - Motor Mount Mechanical Drawing Submitted to Machine Shop and Accepted PART.1.2 - Motor Mount Fabricated PART.1.3 - Motor Mount Secured in Dyno Room PART.5.1 - Motor Purchase Order Submitted PART.5.2 - Motor Acquired PART.5.3 - Motor Mounted in Motor Mount PART.2.1 - Pulley Mechanical Drawing Submitted PART.2.2 - Shaft Drawing Submitted PART.2.3 - Pulley Manufactured / Purchased PART.2.4 - Shaft Manufactured / Purchased PART.2.5 - Pulley System Mounted in Dyno Room	PART.1.2 - Motor Mount Fabricated PART.2.2 - Shaft Drawing Submitted	63.64%	PART.1.1 - Motor Mount Mechanical Drawing Submitted to Machine Shop and Accepted PART.5.1 - Motor Purchase Order Submitted PART.5.2 - Motor Acquired PART.2.1 - Pulley Mechanical Drawing Submitted PART.2.3 - Pulley Manufactured / Purchased	45.45%
MCS / TSI / Cooling Fixture Fabricated	PART.3.1 - Fixture Mechanical Drawing Submitted to Machine Shop PART.3.2 - Fixture Fabricated PART.3.3 - Fixture Mounted in Dyno Room	PART.3.2 - Fixture Fabricated PART.3.3 - Fixture Mounted in Dyno Room	100.00%	PART.3.1 - Fixture Mechanical Drawing Submitted to Machine Shop	33.33%

Integration Task	Related WBS Items	In Progress WBS Items	Projected Completion (%)	Completed WBS Items	Actual Completion (%)
GLV Board Manufactured	GLV.1.1 - GLV BoB Circuit Schematic Complete	GLV.1.7 - GLV BoB Installed on Mount in Rack in Dyno Room	100.00%	GLV.1.1 - GLV BoB Circuit Schematic Complete	85.71%
	GLV.1.2 - GLV BoB PCB Layout Complete and Approved			GLV.1.2 - GLV BoB PCB Layout Complete and Approved	
	GLV.1.3 - GLV BoB PCB Purchase Order Approved and Submitted			GLV.1.3 - GLV BoB PCB Purchase Order Approved and Submitted	
	GLV.1.4 - GLV BoB Acquired			GLV.1.4 - GLV BoB Acquired	
	GLV.1.5 - GLV BoB Mount Mechanical Drawing Submitted to Machine Shop			GLV.1.5 - GLV BoB Mount Mechanical Drawing Submitted to Machine Shop	
	GLV.1.6 - GLV BoB Mount Fabricated			GLV.1.6 - GLV BoB Mount Fabricated	
	GLV.1.7 - GLV BoB Installed on Mount in Rack in Dyno Room				
GLV Mounting Plate Manufactured	GLV.1.5 - GLV BoB Mount Mechanical Drawing Submitted to Machine Shop	GLV.1.7 - GLV BoB Installed on Mount in Rack in Dyno Room	100.00%	GLV.1.5 - GLV BoB Mount Mechanical Drawing Submitted to Machine Shop	66.67%
	GLV.1.6 - GLV BoB Mount Fabricated			GLV.1.6 - GLV BoB Mount Fabricated	
	GLV.1.7 - GLV BoB Installed on Mount in Rack in Dyno Room				
Safety Loop Testing Panel Mounted in Dyno Room Rack	GLV.2.1 - Left Side Panel Block Diagram Delivered	GLV.3.1 - Dyno Safety Loop Block Diagram Complete and Submitted	100.00%	GLV.2.1 - Left Side Panel Block Diagram Delivered	75.00%
	GLV.2.2 - Left Side Panel BoM Purchase Order Approved and Purchased	GLV.3.2 - Dyno Power Supply Safety Loop On/Off Mechanism Delivered		GLV.2.2 - Left Side Panel BoM Purchase Order Approved and Purchased	
	GLV.2.3 - Left Side Panel Mechanical Drawing Submitted to Machine Shop	GLV.3.3 - Left Side Panel Connected to GLV In Dyno Room		GLV.2.3 - Left Side Panel Mechanical Drawing Submitted to Machine Shop	
	GLV.2.4 - Left Side Panel Fabricated and Wired with Needed Buttons / Switches	GLV.3.4 - Right Side Panel Connected to GLV In Dyno Room		GLV.2.4 - Left Side Panel Fabricated and Wired with Needed Buttons / Switches	
	GLV.2.5 - Right Side Panel Block Diagram Delivered	GLV.3.5 - Dyno Power Supply Connected to GLV Safety Loop		GLV.2.5 - Right Side Panel Block Diagram Delivered	
	GLV.2.6 - Right Side Panel BoM Purchase Order Approved and Purchased			GLV.2.6 - Right Side Panel BoM Purchase Order Approved and Purchased	
	GLV.2.7 - Right Side Panel Mechanical Drawing Submitted to Machine Shop			GLV.2.7 - Right Side Panel Mechanical Drawing Submitted to Machine Shop	
	GLV.2.8 - Right Side Panel Fabricated and Wired with Needed Buttons / Switches			GLV.2.8 - Right Side Panel Fabricated and Wired with Needed Buttons / Switches	
	GLV.2.9 - Left Side Panel Installed in Dyno Room			GLV.6.1 - Dashboard Panel Block Diagram Delivered	
	GLV.2.10 - Right Side Panel Installed in Dyno Room			GLV.6.2 - Dashboard Panel BoM Purchase Order Approved and Purchased	
	GLV.3.1 - Dyno Safety Loop Block Diagram Complete and Submitted			GLV.6.3 - Dashboard Panel Mechanical Drawing Submitted to Machine Shop	
	GLV.3.2 - Dyno Power Supply Safety Loop On/Off Mechanism Delivered			GLV.6.4 - Dashboard Panel Fabricated and Wired with Needed Buttons / Switches	
	GLV.3.3 - Left Side Panel Connected to GLV In Dyno Room			GLV.2.9 - Left Side Panel Installed in Dyno Room	
	GLV.3.4 - Right Side Panel Connected to GLV In Dyno Room			GLV.2.10 - Right Side Panel Installed in Dyno Room	
	GLV.3.5 - Dyno Power Supply Connected to GLV Safety Loop			GLV.6.5 - Dashboard Panel Installed in Dyno Room	
	GLV.6.1 - Dashboard Panel Block Diagram Delivered				
	GLV.6.2 - Dashboard Panel BoM Purchase Order Approved and Purchased				
GLV.6.3 - Dashboard Panel Mechanical Drawing Submitted to Machine Shop					
GLV.6.4 - Dashboard Panel Fabricated and Wired with Needed Buttons / Switches					
GLV.6.5 - Dashboard Panel Installed in Dyno Room					
Safety Loop Functional In Dyno Room	GLV.3.6 - Demo of Left Side Panel Closing / Opening Safety Loop	GLV.4.8 - GLV and Safety Loop Connected	16.67%		0.00%
	GLV.3.7 - Demo of Right Side Panel Closing / Opening Safety Loop				
	GLV.3.8 - Demo of Safety Loop shutting off the Dyno Power Supply from Safe Distance				
	GLV.3.9 - Demo of Dashboard Panel Closing / Opening Safety Loop				
	GLV.3.10 - Demo of Dashboard Panel Putting Car / Dyno into Drive Mode				
	GLV.4.8 - GLV and Safety Loop Connected				

Integration Task	Related WBS Items	In Progress WBS Items	Projected Completion (%)	Completed WBS Items	Actual Completion (%)
TSI Board Manufactured	TSI.1.1 - TSI Block Diagram Delivered and Approved	TSI.1.5 - TSI PCB Purchased and Delivered	64.29%	TSI.1.1 - TSI Block Diagram Delivered and Approved	50.00%
	TSI.1.2 - TSI Circuit Schematic Delivered and Approved	TSI.1.6 - TSI PCB Populated and Verified		TSI.1.2 - TSI Circuit Schematic Delivered and Approved	
	TSI.1.3 - TSI PCB Layout Complete and Approved			TSI.1.3 - TSI PCB Layout Complete and Approved	
	TSI.1.4 - TSI PCB BoM Purchase Order Approved and Purchased			TSI.1.4 - TSI PCB BoM Purchase Order Approved and Purchased	
	TSI.1.5 - TSI PCB Purchased and Delivered			TSI.1.8 - Precharge Circuitry Incorporated	
	TSI.1.6 - TSI PCB Populated and Verified			TSI.1.11 - TSI Mounting Plate Mechanical Drawing Submitted	
	TSI.1.7 - IMD Installed on TSI PCB			TSI.1.12 - TSI Mounting Plate BoM Purchase Order Approved and Purchased	
	TSI.1.8 - Precharge Circuitry Incorporated				
	TSI.1.9 - TSI Testing Plan Delivered				
	TSI.1.10 - TSI PCB Debugged and Complete				
	TSI.1.11 - TSI Mounting Plate Mechanical Drawing Submitted				
	TSI.1.12 - TSI Mounting Plate BoM Purchase Order Approved and Purchased				
	TSI.1.13 - TSI Base Plate Fabricated, Wired, and Populated				
	TSI.1.14 - TSI Base Plate Installed in DYNO Room				
TSI Mounting Plate Manufactured	TSI.1.11 - TSI Mounting Plate Mechanical Drawing Submitted	None	66.67%	TSI.1.11 - TSI Mounting Plate Mechanical Drawing Submitted	66.67%
	TSI.1.13 - TSI Mounting Plate Fabricated			TSI.1.12 - TSI Mounting Plate Fabricated	
	TSI.1.14 - TSI Installed on Mount in Dyno Room				
TSI Throttle / Brake Control Panel Manufactured	TSI.4.1 - 2017 TSI Test Panel Located	TSI.4.2 - Test Panel Fabricated and Wired with Needed Buttons/Switches	71.43%	TSI.4.1 - 2017 TSI Test Panel Located	28.57%
	TSI.4.2 - Test Panel Fabricated and Wired with Needed Buttons/Switches	TSI.4.4 - TSI Base Plate Block Diagram Delivered		TSI.1.11 - TSI Mounting Plate Mechanical Drawing Submitted	
	TSI.4.3 - Test Panel Installed in DYNO Room	TSI.4.6 - TSI Base Plate Mechanical Drawing Submitted to Machine Shop			
	TSI.1.11 - TSI Mounting Plate Mechanical Drawing Submitted				
	TSI.1.12 - TSI Mounting Plate BoM Purchase Order Approved and Purchased				
	TSI.1.13 - TSI Base Plate Fabricated, Wired, and Populated				
TSI.1.14 - TSI Base Plate Installed in DYNO Room					

Integration Task	Related WBS Items	In Progress WBS Items	Projected Completion (%)	Completed WBS Items	Actual Completion (%)
Cooling Loop Filled with Water and Tested For Leaks	COOL.2.1 - Cooling loop filled with water and tested for leaks		66.67%	COOL.2.1 - Cooling loop filled with water and tested for leaks	66.67%
	COOL.2.2 - Leaks in loop identified and repaired			COOL.2.2 - Leaks in loop identified and repaired	
	COOL.2.3 - Cooling System mounted on Fixture in Dyno Room				
Cooling System Mounted on Fixture in Dyno Room	COOL.1.1 - Mechanical Drawing of Mounting Delivered	PART.3.2 - Fixture Fabricated	100.00%	COOL.1.1 - Mechanical Drawing of Mounting Delivered	50.00%
	PART.3.1 - Fixture Mechanical Drawing Submitted to Machine Shop	PART.3.3 - Fixture Mounted in Dyno Room		PART.3.1 - Fixture Mechanical Drawing Submitted to Machine Shop	
	PART.3.2 - Fixture Fabricated				
	PART.3.3 - Fixture Mounted in Dyno Room				
Cooling System Connected to MCS and Motor in Dyno Room	PART.4.1 - Motor Controller Purchase Order Submitted	PART.5.3 - Motor Mounted in Motor Mount	62.50%	PART.4.1 - Motor Controller Purchase Order Submitted	50.00%
	PART.4.2 - Motor Controller Acquired			PART.4.2 - Motor Controller Acquired	
	COOL.2.3 - Cooling System Mounted in Dyno Room			PART.5.1 - Motor Purchase Order Submitted	
	COOL.3.1 - Cooling System Connected to MCS			PART.5.2 - Motor Acquired	
	COOL.3.3 - Cooling System Moving Water to All Connected Systems				
	PART.5.1 - Motor Purchase Order Submitted				
	PART.5.2 - Motor Acquired				
	PART.5.3 - Motor Mounted in Motor Mount				
Cooling System Connected to TSI in Dyno Room	COOL.2.3 - Cooling System Mounted in Dyno Room	TSI.1 - TSI Board Delivered	80.00%	PART.3.1 - Fixture Mechanical Drawing Submitted to Machine Shop	20.00%
	TSI.1 - TSI Board Delivered	PART.3.2 - Fixture Fabricated			
	PART.3.1 - Fixture Mechanical Drawing Submitted to Machine Shop	PART.3.3 - Fixture Mounted in Dyno Room			
	PART.3.2 - Fixture Fabricated				
	PART.3.3 - Fixture Mounted in Dyno Room				

Integration Task	Related WBS Items	In Progress WBS Items	Projected Completion (%)	Completed WBS Items	Actual Completion (%)
TSV Packs Manufactured	TSV.1.1 - Pack High Level Electrical Block Diagram Delivered and Accepted	TSV.1.2 - Pack Mechanical Drawing Submitted and Accepted	30.00%	TSV.1.1 - Pack High Level Electrical Block Diagram Delivered	10.00%
	TSV.1.2 - Pack Mechanical Drawing Submitted and Accepted	TSV.1.3 - Pack BoM Purchase Order Approved and Purchased			
	TSV.1.3 - Pack BoM Purchase Order Approved and Purchased				
	TSV.1.4 - Pack 1 Enclosure Fabricated				
	TSV.1.5 - Pack 2 Enclosure Fabricated				
	TSV.1.6 - Pack Testing Plan Submitted and Approved				
	TSV.1.7 - Pack 1 Populated and Verified with Testing Plan				
	TSV.1.8 - Pack 2 Populated and Verified with Testing Plan				
	TSV.1.9 - Demo of Pack 1 Functionality with Testing Plan				
	TSV.1.10 - Demo of Pack 2 Functionality with Testing Plan				
TSV Packs Connected to Motor Controller in Dyno Room	WIRE.3.11 - TSV - Motor Controller Connected	None	0.00%	None	0.00%
TSV CellMen Boards Fabricated	TSV.2.1 - CellMen Block Diagram Delivered and Approved	TSV.2.4 - CellMen BoM Purchase Order Approved and Purchased	33.33%	TSV.2.1 - CellMen Block Diagram Delivered and Approved	22.22%
	TSV.2.2 - CellMen Circuit Schematic Delivered and Approved			TSV.2.2 - CellMen Circuit Schematic Delivered and Approved	
	TSV.2.3 - CellMen PCB Layout Complete and Approved				
	TSV.2.4 - CellMen BoM Purchase Order Approved and Purchased				
	TSV.2.5 - CellMen Purchased and Delivered				
	TSV.2.6 - CellMen Boards Populated and Verified				
	TSV.2.7 - 1st CellMen Board Debugged and Tested				
	TSV.2.8 - CellMen Testing Plan Delivered				
	TSV.2.9 - CellMen Boards Debugged and Tested				
TSV PackMan Boards Fabricated	TSV.3.1 - PackMan Block Diagram Delivered and Approved	TSV.3.1 - PackMan Block Diagram Delivered and Approved	25.00%	None	0.00%
	TSV.3.2 - PackMan Circuit Schematic Delivered and Approved	TSV.3.2 - PackMan Circuit Schematic Delivered and Approved			
	TSV.3.3 - PackMan PCB Layout Complete and Approved				
	TSV.3.4 - PackMan BoM Purchase Order Approved and Purchased				
	TSV.3.5 - PackMan Purchased and Delivered				
	TSV.3.6 - PackMan Populated and Verified				
	TSV.3.7 - PackMan Testing Plan Delivered				
	TSV.3.8 - PackMan Boards Debugged and Tested				
TSV SegMan Boards Fabricated	TSV.4.1 - SegMan Block Diagram Delivered and Approved	TSV.4.1 - SegMan Block Diagram Delivered and Approved	28.57%	None	0.00%
	TSV.4.2 - SegMan Circuit Schematic Delivered and Approved	TSV.4.2 - SegMan Circuit Schematic Delivered and Approved			
	TSV.4.3 - SegMan PCB Layout Complete and Approved				
	TSV.4.4 - SegMan Purchased and Delivered				
	TSV.4.5 - SegMan Populated and Verified				
	TSV.4.6 - SegMan Testing Plan Delivered				
	TSV.4.7 - SegMan Boards Debugged and Tested				
TSV Powering Motor via Motor Controller	WIRE.3.11 - TSV - Motor Controller Connected	None	0.00%	None	0.00%

Integration Task	Related WBS Items	In Progress WBS Items	Projected Completion (%)	Completed WBS Items	Actual Completion (%)
SCADA Recording Data and Writing to a File	SCADA.1.2 - SCADA Collecting Data From Subsystems and Writing Data to File SCADA.1.3 - SCADA Writing Raw and Calibrated Data to Database	SCADA.3.2 - VSCADA Receiving Data from GLV Sensors SCADA.4.2 - VSCADA Receiving Data from MCS Sensors	75.00%	SCADA.1.2 - SCADA Collecting Data From Subsystems and Writing Data to File SCADA.1.3 - SCADA Writing Raw and Calibrated Data to Database	37.50%
	SCADA.2.2 - VSCADA Receiving Data from TSI Sensors SCADA.3.2 - SCADA Receiving Data from GLV Sensors SCADA.4.2 - VSCADA Receiving Data from MCS Sensors SCADA.5.2 - VSCADA Receiving Data from Cooling System SCADA.6.2 - VSCADA Receiving Data from TSV sensors SCADA.7.3 - SCADA Logging Data with Timestamps	SCADA.7.3 - SCADA Logging Data with Timestamps		SCADA.2.2 - VSCADA Receiving Data from TSI Sensors	
SCADA Displaying Data to Rack Monitor in Dyno Room	SCADA.1.1 - Individual Data Acquisition Tests Performed Showing Data SCADA.1.2 - SCADA Collecting Data From Subsystems and Writing Data to File SCADA.1.3 - SCADA Writing Raw and Calibrated Data to Database SCADA.1.4 - Demo of SCADA Collecting Data and Displaying Meaningfully to Viewer	None	75.00%	SCADA.1.2 - SCADA Collecting Data From Subsystems and Writing Data to File SCADA.1.3 - SCADA Writing Raw and Calibrated Data to Database SCADA.1.4 - Demo of SCADA Collecting Data and Displaying Meaningfully to Viewer	75.00%
SCADA Communicating with GLV in Dyno Room	SCADA.3.1 - VSCADA and GLV Connected via CAN and GPIO SCADA.3.2 - VSCADA Receiving Data from GLV Sensors SCADA.3.3 - VSCADA Sends Warnings for Error Sensor Data GLV.1.7 - GLV BoB Installed on Mount in Rack in Dyno Room	SCADA.3.1 - VSCADA and GLV Connected via CAN and GPIO SCADA.3.2 - VSCADA Receiving Data from GLV Sensors GLV.1.7 - GLV BoB Installed on Mount in Rack in Dyno Room	50.00%	None	0.00%
SCADA Communicating with TSI in Dyno Room	SCADA.2.1 - VSCADA and TSI Connected via CAN SCADA.2.2 - VSCADA Receiving Data from TSI Sensors SCADA.2.3 - VSCADA Transmitting Cruise Control Information TSI.1.13 - TSI Installed on Mount in Dyno Room	SCADA.2.1 - VSCADA and TSI Connected via CAN	50.00%	SCADA.2.2 - VSCADA Receiving Data from TSI Sensors	25.00%
SCADA Communicating with TSV in Dyno Room	SCADA.6.1 - VSCADA and TSV Connected via CAN SCADA.6.2 - VSCADA Receiving Data from TSV sensors	None	0.00%	None	0.00%
SCADA Communicating with Motor Controller in Dyno Room	SCADA.4.1 - VSCADA and MCS Connected via CAN SCADA.4.2 - VSCADA Receiving Data from MCS Sensors SCADA.4.3 - SCADA Outputs a Throttle Control to the Motor Controller PART.4.2 - Motor Controller Acquired	None	50.00%	PART.4.2 - Motor Controller Acquired SCADA.4.3 - SCADA Outputs a Throttle Control to the Motor Controller	50.00%

Integration Task	Related WBS Items	In Progress WBS Items	Projected Completion (%)	Completed WBS Items	Actual Completion (%)
Dyno Room Testing Plan Complete	TEST.1.1 - List of tests to be performed on motor detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.1.2 - Risk assessment of each test for motor produced with solution plan for failure TEST.2.1 - List of tests to be performed on GLV detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.2.2 - Risk assessment of each test for GLV produced with solution plan for failure TEST.3.1 - List of tests to be performed on TSI detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.3.2 - Risk assessment of each test for TSI produced with solution plan for failure TEST.4.1 - List of tests to be performed on TSV detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.4.2 - Risk assessment of each test for TSV produced with solution plan for failure TEST.5.1 - List of tests to be performed on SCADA detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.5.2 - Risk assessment of each test for SCADA produced with solution plan for failure TEST.6.1 - List of tests to be performed on Full Dyno detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.6.2 - Risk assessment of each test for Full Dyno produced with solution plan for failure	TEST.1.1 - List of tests to be performed on motor detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.1.2 - Risk assessment of each test for motor produced with solution plan for failure TEST.2.1 - List of tests to be performed on GLV detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.2.2 - Risk assessment of each test for GLV produced with solution plan for failure TEST.3.1 - List of tests to be performed on TSI detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.3.2 - Risk assessment of each test for TSI produced with solution plan for failure TEST.4.1 - List of tests to be performed on TSV detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.4.2 - Risk assessment of each test for TSV produced with solution plan for failure TEST.5.1 - List of tests to be performed on SCADA detailed with specific desired outcomes printed and posted in Test Plan Binder TEST.5.2 - Risk assessment of each test for SCADA produced with solution plan for failure TEST.6.2 - Risk assessment of each test for Full Dyno produced with solution plan for failure	100.00%	TEST.6.1 - List of tests to be performed on Full Dyno detailed with specific desired outcomes printed and posted in Test Plan Binder	8.33%
Dyno Room Wiring Diagram Complete	WIRE.1.1 - Dyno Room Wiring Diagram Complete WIRE.1.2 - Dyno Room Wiring Diagram Printed and Posted in AEC 400 WIRE.1.3 - Dyno Room Wiring Diagram Printed and Posted in AEC 134	None	100.00%	WIRE.1.1 - Dyno Room Wiring Diagram Complete WIRE.1.2 - Dyno Room Wiring Diagram Printed and Posted in AEC 400 WIRE.1.3 - Dyno Room Wiring Diagram Printed and Posted in AEC 134	100.00%
All Connecting Wires Produced with Correct Connector Types	WIRE.2.1 - Full Wiring BOM Submitted and Approved WIRE.2.2 - Full Wiring BOM Purchase Order Submitted and Approved WIRE.2.3 - TSI - MCS Wires Complete WIRE.2.4 - TSI - Cooling Wires Complete WIRE.2.5 - TSI - Pedal Throttle Fixture Wires Complete WIRE.2.6 - TSI - Test Panel Wires Complete WIRE.2.7 - TSI - TSV Wires Complete WIRE.2.8 - GLV - Safety Loop Wires Complete WIRE.2.9 - GLV - TSI Wires Complete WIRE.2.10 - GLV - Cooling Wires Complete WIRE.2.11 - GLV - TSV Wires Complete WIRE.2.12 - Safety Loop Panels - Dyno Supply Wires Complete	WIRE.2.3 - TSI - MCS Wires Complete WIRE.2.4 - TSI - Cooling Wires Complete	16.67%	WIRE.2.2 - Full Wiring BOM Purchase Order Submitted and Approved	8.33%
All Subsystems fully wired in Dyno Room	WIRE.3.1 - TSI - MCS Connected WIRE.3.2 - TSI - Cooling Connected WIRE.3.3 - TSI - Pedal Throttle Fixture Connected WIRE.3.4 - TSI - Test Panel Connected WIRE.3.5 - TSI - TSV Connected WIRE.3.6 - GLV - Safety Loop Connected WIRE.3.7 - GLV - TSI Connected WIRE.3.8 - GLV - Cooling Connected WIRE.3.9 - GLV - TSV Connected WIRE.3.10 - Safety Loop Panels - Dyno Supply Connected WIRE.3.11 - TSV - Motor Controller Connected WIRE.3.12 - MCS and Motor Connected WIRE.3.13 - Cooling System and Motor Connected WIRE.3.14 - Cooling System and MCS Connected		0.00%		0.00%
All Tests According to Test Plan Run in Dyno Room	TEST.1.3 - Tests performed on motor according to testing plan TEST.1.4 - Testing Analysis of Motor Testing Data complete and submitted TEST.1.5 - Re-testing of Motor following adjustments to meet desired test outcomes TEST.2.3 - Tests performed on GLV according to testing plan TEST.2.4 - Testing Analysis of GLV Testing Data complete and submitted TEST.2.5 - Re-testing of GLV following adjustments to meet desired test outcomes TEST.3.3 - Tests performed on TSI according to testing plan TEST.3.4 - Testing Analysis of TSI Testing Data complete and submitted TEST.3.5 - Re-testing of TSI following adjustments to meet desired test outcomes TEST.4.3 - Tests performed on TSV according to testing plan TEST.4.4 - Testing Analysis of TSV Testing Data complete and submitted TEST.4.5 - Re-testing of TSV following adjustments to meet desired test outcomes TEST.5.3 - Tests performed on SCADA according to testing plan TEST.5.4 - Testing Analysis of SCADA Testing Data complete and submitted TEST.5.5 - Re-testing of SCADA following adjustments to meet desired test outcomes TEST.6.3 - Tests performed on Full Dyno according to testing plan TEST.6.4 - Testing Analysis of Full Dyno Testing Data complete and submitted TEST.6.5 - Re-testing of Full Dyno following adjustments to meet desired test outcomes		0.00%		0.00%