

GLV Mechanical Bill of Materials

Reference Designator	Value	Description	Manufacturer	Manufacturer P/N	Supplier	Supplier P/N	Unit Cost
Battery	24V, 10AH	Lithium Iron Phosphate Rechargeable Lithium Battery	PowerStream	LFP256099	PowerStream	LFP256099	\$295.00
Battery Charger	24V	Battery charger UL approved	PowerStream	PST-G100-24F8	PowerStream	PST-G100-24F8	\$50.00
Battery Enclosure		Battery Box	PowerStream	69995K81	PowerStream	69995K81	\$13.13
BRBRS (Left side E-stop)		22MMHW SeriesEmergency Stop Switches	IDEC	HW1E-LV402Q4R			
BRBLS (Right side E-stop)		22MMHW SeriesEmergency Stop Switches	IDEC	HW1E-LV402Q4R			
BRB (Driver Accessible)		22MMHW SeriesEmergency Stop Switches	IDEC	HW1E-LV402Q4R			
Master Reset		Momentary Push Button (Non-Illuminated)	NEMA	22PB-NO-X-PM-GN			
CPR		Momentary Push Button (Non-Illuminated)	NEMA	22PB-NO-X-PM-GN			
GLVMS		Car Rotating Battery/Electrical Master Switch					
TSVMS		Car Rotating Battery/Electrical Master Switch					
Interia Switch	24V	First Technology Inertia Switch	First Tech		EVWEST		52.8
Cruise Control Switch (SCADA I/O 1)	5V	SWITCH PUSH SPST-NO 0.15A 5V	Greyhill	30-601 RED	Digikey	GH1368-ND	3.04
Scroll Menu Button (SCADA I/O 2)	5V	SWITCH PUSH SPST-NO 0.15A 5V	Greyhill	30-601 BLK	Digikey	GH1367-ND	3.04
Select Menu Item Buttom (SCADA I/O 3)	5V	SWITCH PUSH SPST-NO 0.15A 5V	Greyhill	30-601 BLK	Digikey	GH1367-ND	3.04
Drive Button	5V	SWITCH PUSH SPST-NO 0.15A 5V	Greyhill	30-601 RED	Digikey	GH1368-ND	3.04
GLV LED	24V	Panel Mount Indicator (Green)	Dialight	6823235142F	Digi-Key	350-4053-ND	\$8.94
Safety LED	24V	Panel Mount Indicator (Green)	Dialight	6823235142F	Digi-Key	350-4053-ND	\$8.94
AIRs LED	24V	Panel Mount Indicator (Green)	Dialight	6823235142F	Digi-Key	350-4053-ND	\$8.94
HV LED	24V	Panel Mount Indicator (Red)	Dialight	682-3132-141F	Digi-Key	350-4050-ND	\$6.97
Drive LED	24V	Panel Mount Indicator (Green)	Dialight	6823235142F	Digi-Key	350-4053-ND	\$8.94
Fault LED	24V	Panel Mount Indicator (Red)	Dialight	682-3132-141F	Digi-Key	350-4050-ND	\$6.97
IMD Fault LED	24V	Panel Mount Indicator (Red)	Dialight	682-3132-141F	Digi-Key	350-4050-ND	\$6.97
Cruise LED	24V	Panel Mount Indicator (Green)	Dialight	6823235142F	Digi-Key	350-4053-ND	\$8.94
TSEL	24V	Tractive System Energized Light	Encell	STB-A35	Amazon	STB-A35	\$30
GLV Battery Connector (J1)		DT04-2P	Deutsch	DT04-2P			
Left Exterior Panel Connector (J3)		DT04-2P	Deutsch	DT04-2P			
TSEL Connector (J14)		DT04-2P	Deutsch	DT04-2P			
Dyno Load Connector (J15)		DT04-2P	Deutsch	DT04-2P			
UART Connector (J7)		DT04-3P	Deutsch	DT04-3P			
VSCADA I/O Connector (J13)		DT04-3P	Deutsch	DT04-3P			
Safety Loop Connector (J9)		DT04-4P	Deutsch	DT04-4P			
Right Exterior Panel Connector (J4)		DT04-6P	Deutsch	DT04-6P			
Cooling Connector (J10)		DT04-6P	Deutsch	DT04-6P			
Motor Data (J16)		DT04-6P	Deutsch	DT04-6P			
Cockpit Panel Connector (J6)		DT04-12P	Deutsch	DT04-12P			
USB Connector (J11)		USB Panel Mount Connector					
Ethernet Connector (J12)		Ethernet Panel Mount Connector					
HDMI Connector (J5)		HDMI Panel Mount Connector					
Pi		Raspberry Pi					
CB1		Circuit breaker 15A	TE Connectivity	W28-XQ1A-15	Digikey	PB192-ND	
CB2		Circuit breaker 8A	TE Connectivity	W28-XQ1A-8	Digikey	PB189-ND	
L17_GLV_01_1		Basic Safety Loop Panel					
L17_GLV_02_1		External Panel (Dyno room only)	Hammond Manufacturing	PBPS19014BK2	Mouser	546-PBPS19014BK2	
L17_GLV_03_1		Internal Panel (Dyno room only)	Hammond Manufacturing	PBPS19014BK2	Mouser	546-PBPS19014BK2	
L17_GLV_04_1		Enclosure Plate					
L17_GLV_05_1		Left Side Enclosure Side Panel					

L17_GLV_06_1		Right Side Enclosure Side Panel					
L17_GLV_07_1		GLV PCB					
L17_GLV_08_1 (GLV/SCADA Enclosure)		Weather-Resistant Enclosure 16" x 12" x 6"	McMaster-Carr	7649K13	McMaster-Carr	7649K13	\$120.37
VSCADA Display		Raspberry Pi Display	Adafruit	2718	Adafruit	2718	\$79.95
GLV Enclosure Multimeter Display		Digital Display Multimeter	Bayite	PZEN-31	Amazon		\$14.99
Terminal Blocks	600V, 20A	4 x Feed-Through Terminal Blocks	Amphenol PCD	ATB2			
Din Rail		35 mm DIN Mounting Rail	Square D	9080MH379			
Rack Mount Plate for GLV Enclosure		14U Steel Rack Panel	Hammond Manufacturing	546-PBPS19014BK2	Mouser	546-PBPS19014BK2	
Screws for mounting GLV Enclosure to Rack Mount Plate		4 x Alloy Steel Socket Head Screws (10-24)					
Screws for mounting L17_GLV_01/02/03 to Rack		10 x Rack mount screws (10-32)					
Screws for din rail on L17_GLV_04_1		2 x Press Fit Nuts for sheet metal (10-32)	McMaster-Carr	95185A185	McMaster-Carr	95185A185	\$6.26
Screws for GLV board and Pi on L17_GLV_04_1		8 x Press Fit Nuts for sheet metal (2-56)	McMaster-Carr	95185A105	McMaster-Carr	95185A105	\$9.40
Spacers for board and pi screws on L17_GLV_04_1		2 x Nylon unthreaded spacers	McMaster-Carr	94639A703	McMaster-Carr	94639A703	\$7.51
Spacers for din rail screws on L17_GLV_04_1		8 x Nylon unthreaded spacers	McMaster-Carr	94639A351	McMaster-Carr	94639A351	\$7.68
Screws for board and pi screws on L17_GLV_04_1		Steel Phillips Screws 10-32	McMaster-Carr	90272A827	McMaster-Carr	90272A827	\$3.95
Screws for din rail screws on L17_GLV_04_1		Steel Phillips Screws 2-56	McMaster-Carr	90272A079	McMaster-Carr	90272A079	\$3.28
Screws for DT04-06 on L17_GLV_05/06_1		6 x M5 by 0.8mm Hex Head Screws	McMaster-Carr	91280A223	McMaster-Carr	91280A223	\$9.39
L17_GLV_05/06_1 Screws (minus DT04-06 screws)		44 x 8-32 Steel Phillips Rounded Head Screws	McMaster-Carr	90272A197	McMaster-Carr	90272A197	\$4.10