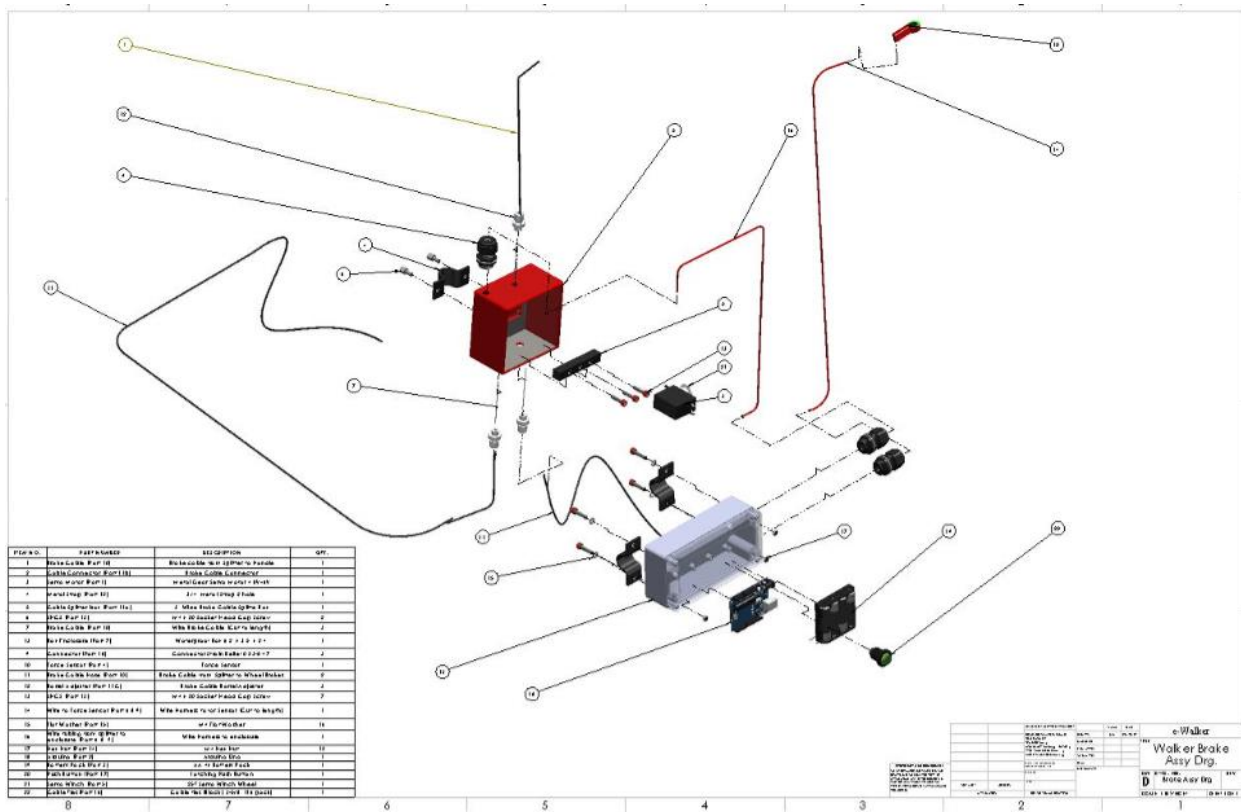


# Team Z7 (e-Walkers) GNG 2101 – Walker Brake System Design and BOM

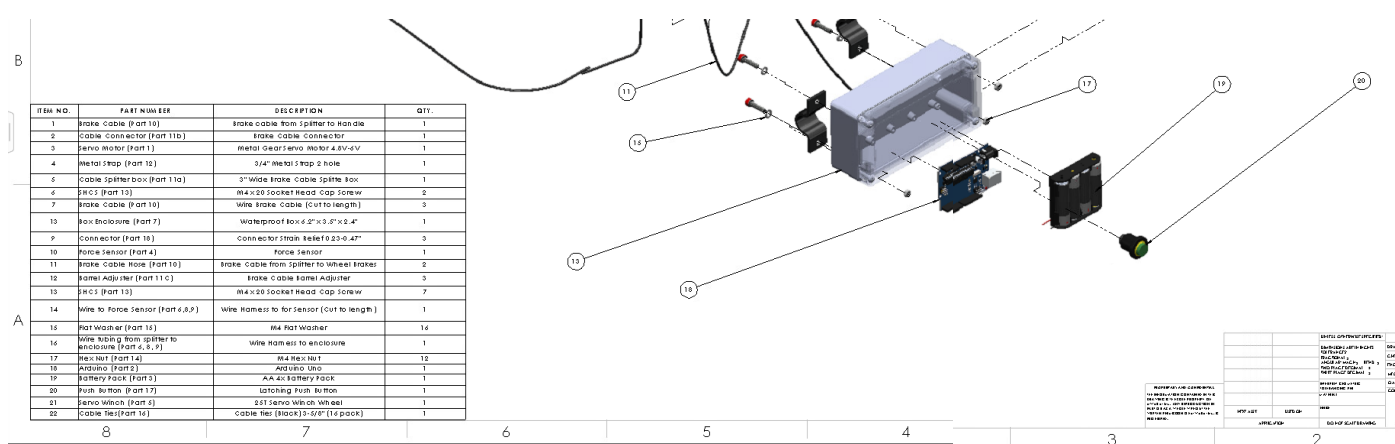
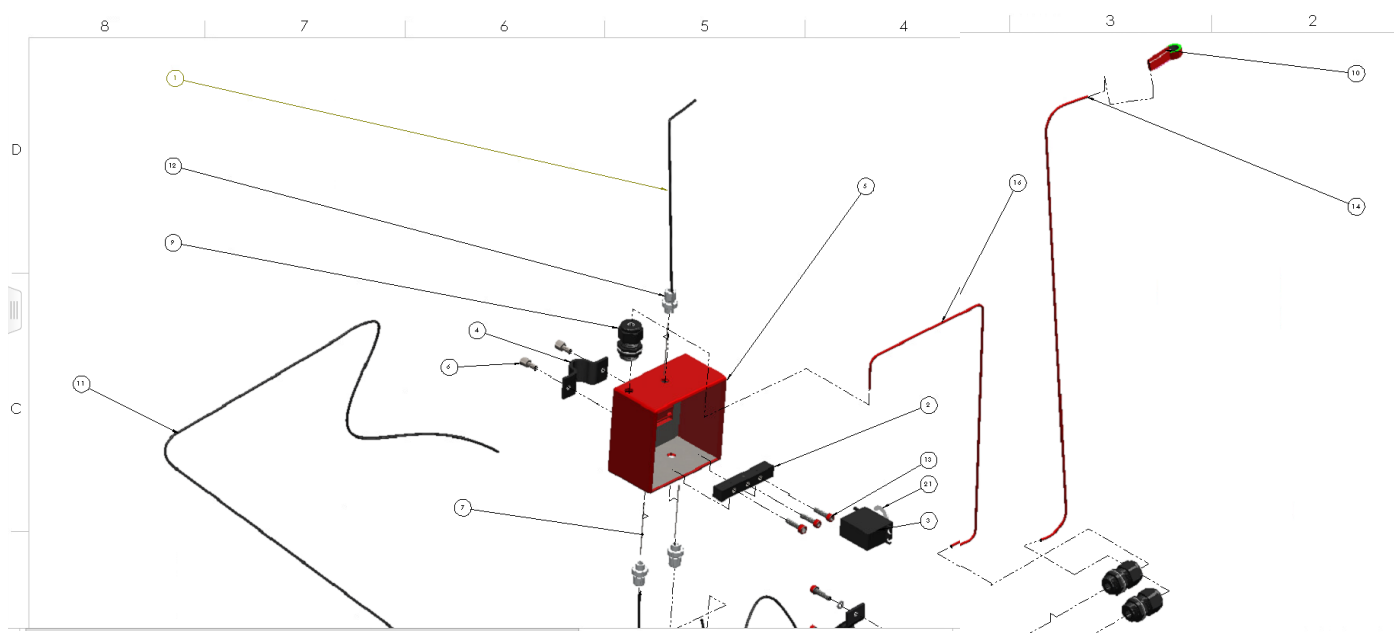
Images of 3D Model of the Walker Brake System using SolidWorks



Detailed Assembly Drawing of Parts (SolidWorks Assembly Drawing)



# Close-up View of Detailed Assembly Drawing Parts



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Brake Cable (Part 10)	Brake cable from splitter to handle	1
2	Cable Connector (Part 11B)	Brake cable connector	1
3	Servo Motor (Part 1)	Metal gear servo motor 4.5V-4V	1
4	Metal Strip (Part 12)	3/4" Metal Strip 2 hole	1
6	Cable Splitterbox (Part 11a)	3" Wide Brake Cable Splitter Box	1
6	PK22 (Part 13)	M4x20 Socket Head Cap Screw	2
7	Brake Cable (Part 10)	Wire Brake Cable (cut to length)	3
13	Box Enclosure (Part 7)	Waterproof Box 2" x 3.5" x 2.4"	1
9	Connector (Part 18)	connector strain relief 9.23-0.47"	3
10	Force Sensor (Part 4)	Force Sensor	1
11	Brake Cable Hose (Part 10)	Brake Cable from splitter to wheel brakes	2
12	Home Adjuster (Part 11C)	Brake Cable Home Adjuster	3
13	PK22 (Part 13)	M4x20 Socket Head Cap Screw	2
14	Wire to Force Sensor (Part 6.8.8)	Wire Homeless to for sensor (cut to length)	1
16	Nut Washer (Part 16)	M4 Nut Washer	14
16	Wire Nibing from splitter to enclosure (Part 6.8.9)	Wire Nibing to enclosure	1
17	Nut Washer (Part 16)	M4 Nut Washer	12
18	Arduino (Part 2)	Arduino Uno	1
19	Battery Pack (Part 3)	AA 4x Battery Pack	1
20	Push Button (Part 17)	Lighting Push Button	1
21	Servo Wrench (Part 5)	S11 Servo Wrench Wheel	1
22	Cable Ties (Part 14)	Cable Ties (Black) 3-6/8" (14 pack)	1

DATE	DESCRIPTION	APP'D	REV
	Issue 1		1
	Issue 2		2
	Issue 3		3
	Issue 4		4
	Issue 5		5
	Issue 6		6
	Issue 7		7
	Issue 8		8
	Issue 9		9
	Issue 10		10
	Issue 11		11
	Issue 12		12
	Issue 13		13
	Issue 14		14
	Issue 15		15
	Issue 16		16
	Issue 17		17
	Issue 18		18
	Issue 19		19
	Issue 20		20
	Issue 21		21
	Issue 22		22

e-Walker  
 Walker Brake  
 Assy Drg.  
 SEE DWG. NO. D-1000-001  
 SCALE: 1:16 (AS SHOWN)  
 SHEET 1 OF 1

STATUS	QUANTITY	PART #	DESCRIPTION	UNIT PRICE	TOTAL
Have	1 ea.	1	Metal Gear Servo Motor 4.8-6V <a href="#">Link</a>	\$6.00	\$6.00
Have	1 ea.	2	Arduino Uno <a href="#">Link</a> (Reuse from Lab Kit)	\$20.00	\$20.00
Have	1 ea.	3	AA 4x Battery Pack <a href="#">Link</a> (Reuse from Lab Kit)	\$1.00	\$1.00
Have	1 ea.	4	Force Sensor <a href="#">Link</a>	\$3.00	\$3.00
Have	1 ea.	5	25T Servo Winch Wheel <a href="#">Link</a>	\$4.47	\$4.47
Stock Can. Tire	1 ea.	6	Polyethylene Tubing ¼"OD x 0.170" ID x 25 ft. <a href="#">Link</a>	\$7.99	\$7.99
On Order Due in July 13th	1 ea.	7	Waterproof Box 6.2"x3.5"x2.4" <a href="#">Link</a>	\$14.99	\$14.99
Stock U of O?	1 ea.	8	5 ft. Red 22awg Wire <a href="#">Link</a>	\$1.60	\$1.60
Stock U of O?	1 ea.	9	5 ft. Black 22awg Wire <a href="#">Link</a>	\$1.60	\$1.60
Stock Can. Tire	1 set	10	Brake Cable and Casing <a href="#">Link</a>	\$8.49	\$8.49
Needs fabrication	1 ea.	11a	3" Wide Cable Splitter Assembly (Custom built) 3" wide C-Channel <a href="#">Link</a> and 3" wide 0.5x0.5 sq. stock <a href="#">Link</a>	\$4.78	\$4.78
Have	1 ea.	11b	Brake Cable Connector	\$0	\$0
Have	1 Bag of 5	12	3/4" Metal Strap (2 hole) <a href="#">Link</a>	\$2.31	\$2.31
Have	6 ea.	13	M4 x 20 Socket Head Cap Screw <a href="#">Link</a>	\$0.10	\$0.60
Have	6 ea.	14	M4 Hex Nut – Zinc Plated <a href="#">Link</a>	\$0.17	\$1.02
Have	12 ea.	15	M4 Washer – Zinc Plated <a href="#">Link</a>	\$0.10	\$1.20
Stock Home Hardware	1 ea.	16	Cable Ties (Black) 3-5/8" (16 Pack) <a href="#">Link</a>	\$2.49	\$2.49
Stock U of O?	2 ea.	17	Latching Push Button Switch <a href="#">Link</a>	\$0.70	\$0.70
Have	3 ea.	18	Connector Strain Relief 0.23-0.47" <a href="#">Link</a>	\$1.68	\$5.04
					\$87.54

SUBTOTAL	\$87.54
SALES TAX	\$11.38
SHIPPING & HANDLING	\$0
<b>TOTAL DUE</b>	<b>\$98.92</b>