

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A35-008100	ROBOT SHOULDER LINK	1
2	A35-008200	ROBOT UPPER ARM LINK	1
3	A35-008500	ROBOT BASE	1
4	A35-008400	ROBOT FOREARM LINK	1
5	A35-008300	END EFFECTOR GRIPPER	1

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
5	CURRENT VERSION RELEASE	5/22/14	ERS

D

D

C

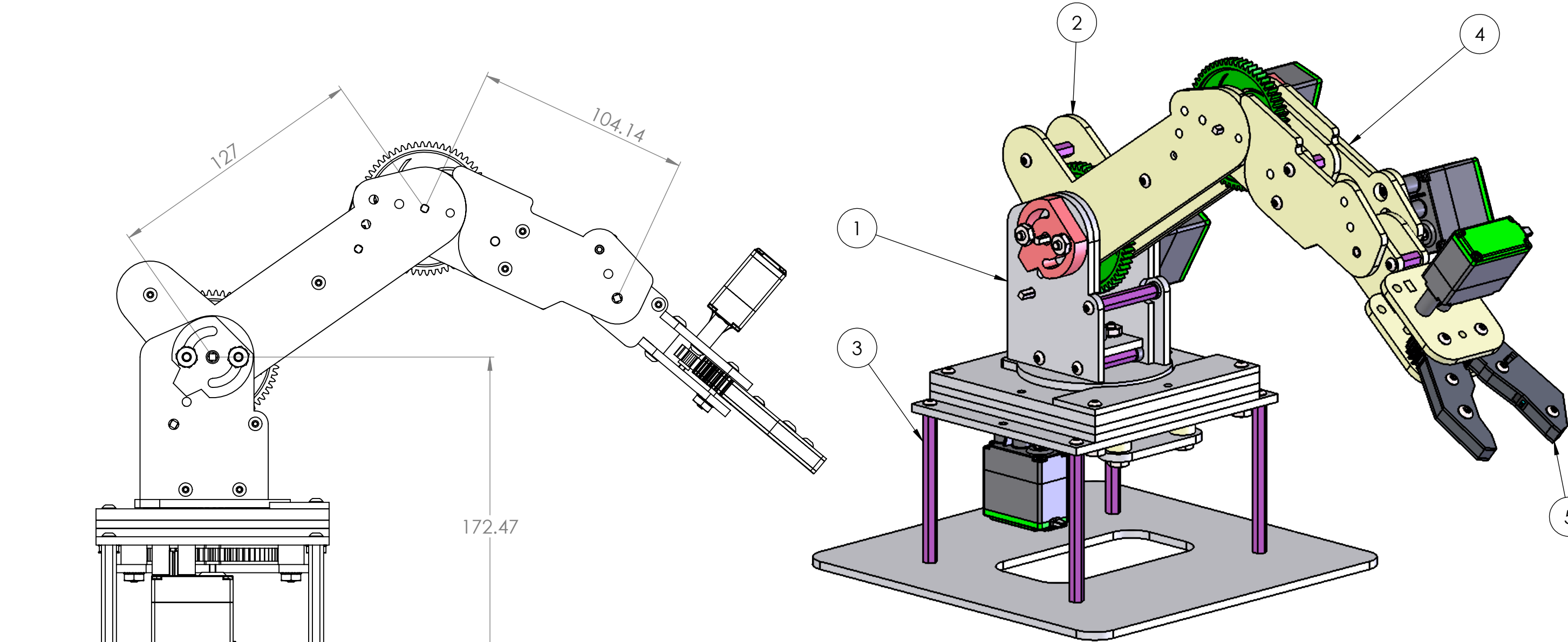
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B

B

A

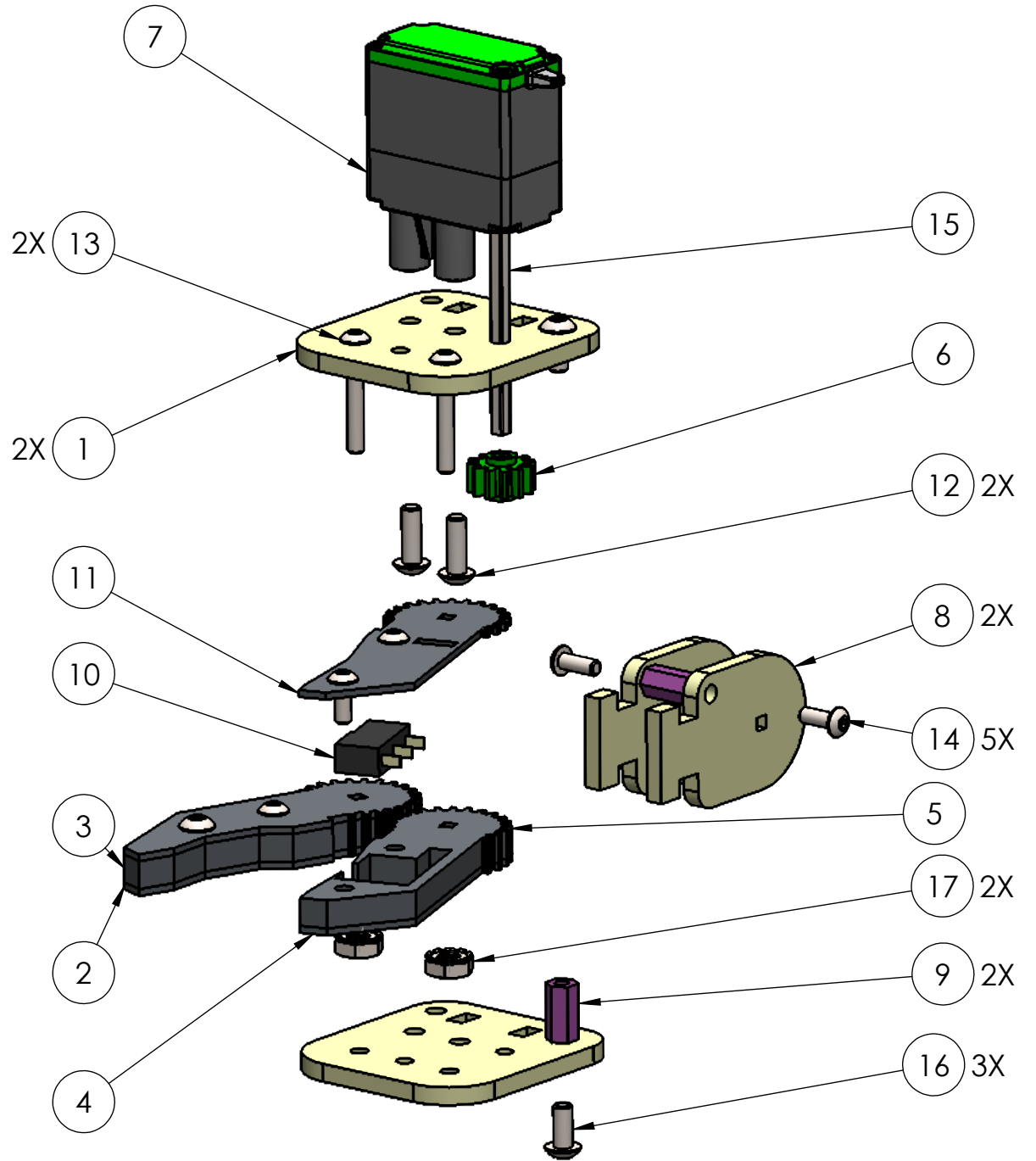
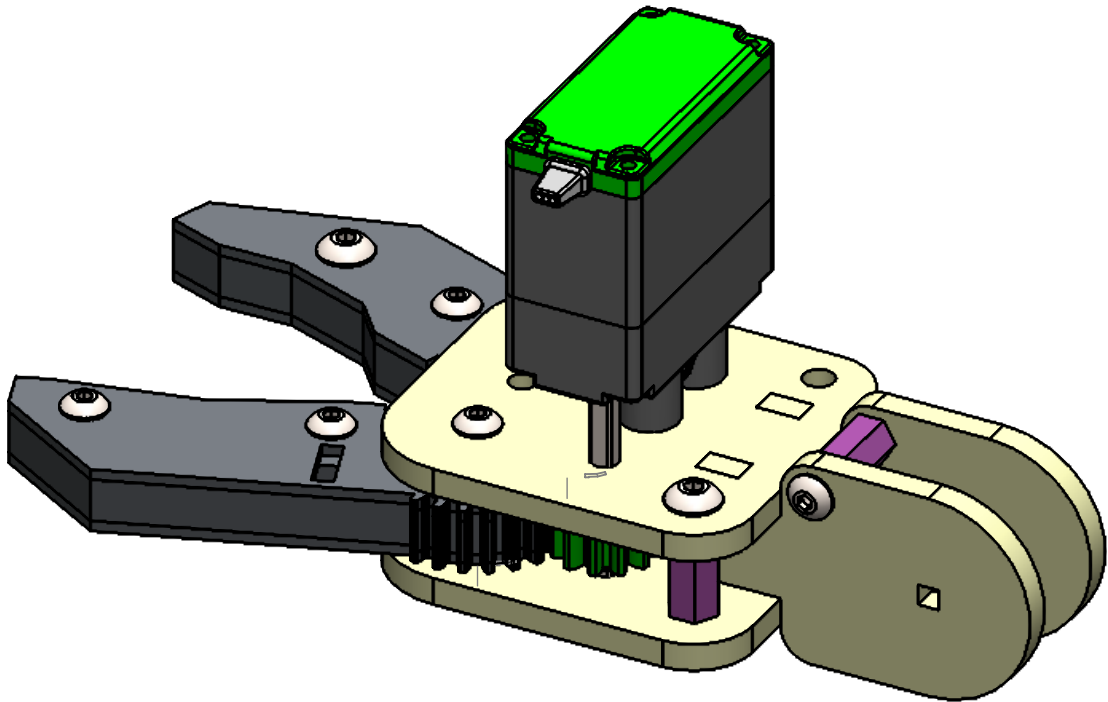
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		UNLESS OTHERWISE SPECIFIED:			NAME	DATE	ESIERRA ENGINEERING	
		DIMENSIONS ARE IN MM[INCHES]	DRAWN		ERS	5/22/14	TITLE: SIERRA ARM	
		TOLERANCES:	CHECKED		ERS	5/22/14		
		FRACTIONAL ±	ENG APPR.		ERS	5/22/14		
		ANGULAR: MACH ± BEND ±	MFG APPR.		ERS	5/22/14		
		TWO PLACE DECIMAL ±0.25	Q.A.		ERS	5/22/14	SIZE DWG. NO. REV	
		THREE PLACE DECIMAL ±0.12	COMMENTS:					
		INTERPRET GEOMETRIC TOLERANCING PER:					B A35-008611 5	
		MATERIAL					SCALE: 1:5 WEIGHT: SHEET 1 OF 1	
		FINISH						
NEXT ASSY	USED ON	DO NOT SCALE DRAWING						
APPLICATION								

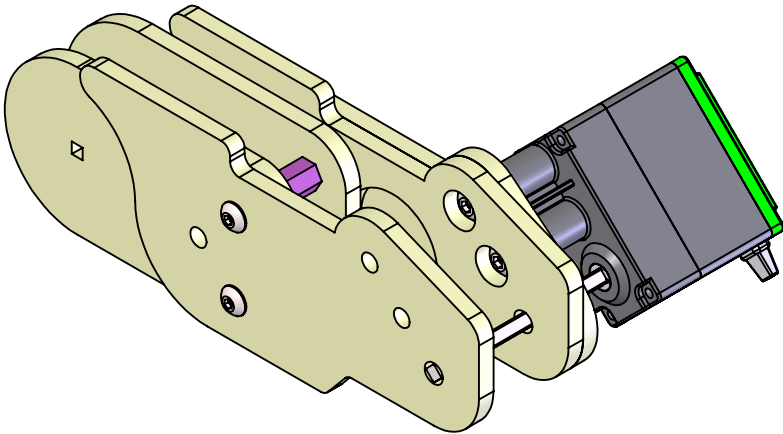
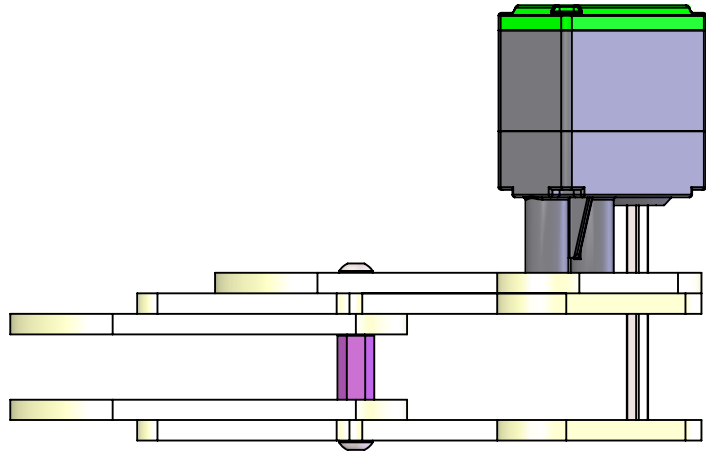
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A45-009993	Gripper Part A	2
2	A45-009987	Digit Cover B	2
3	A45-009987	Gripper Digit B	1
4	A45-009988	Digit sensor cover	1
5	A45-009988	Digit with touch	1
6	271-8900	12 Tooth Gear	1
7	276-2010	Vex DC Motor	1
8	A45-009989	Grippper Part B	2
9	217-2013	1/2" Long Standoff	2
10	234-9045	Touch Sensor On/Off	1
11	A45-009988	Sensor cover/	1
12	91917A122	#8-36 SBHC Screw	2
13	91918A101	1/8-40 SBHC Screw	2
14	91877A101	#6-40 SBHC Screw	5
15	276-2011	2" Steel Shaft	1
16	91918A107	#8-36 SBHC Screw	3
17	90675A011	#10-24 Thread nut	2



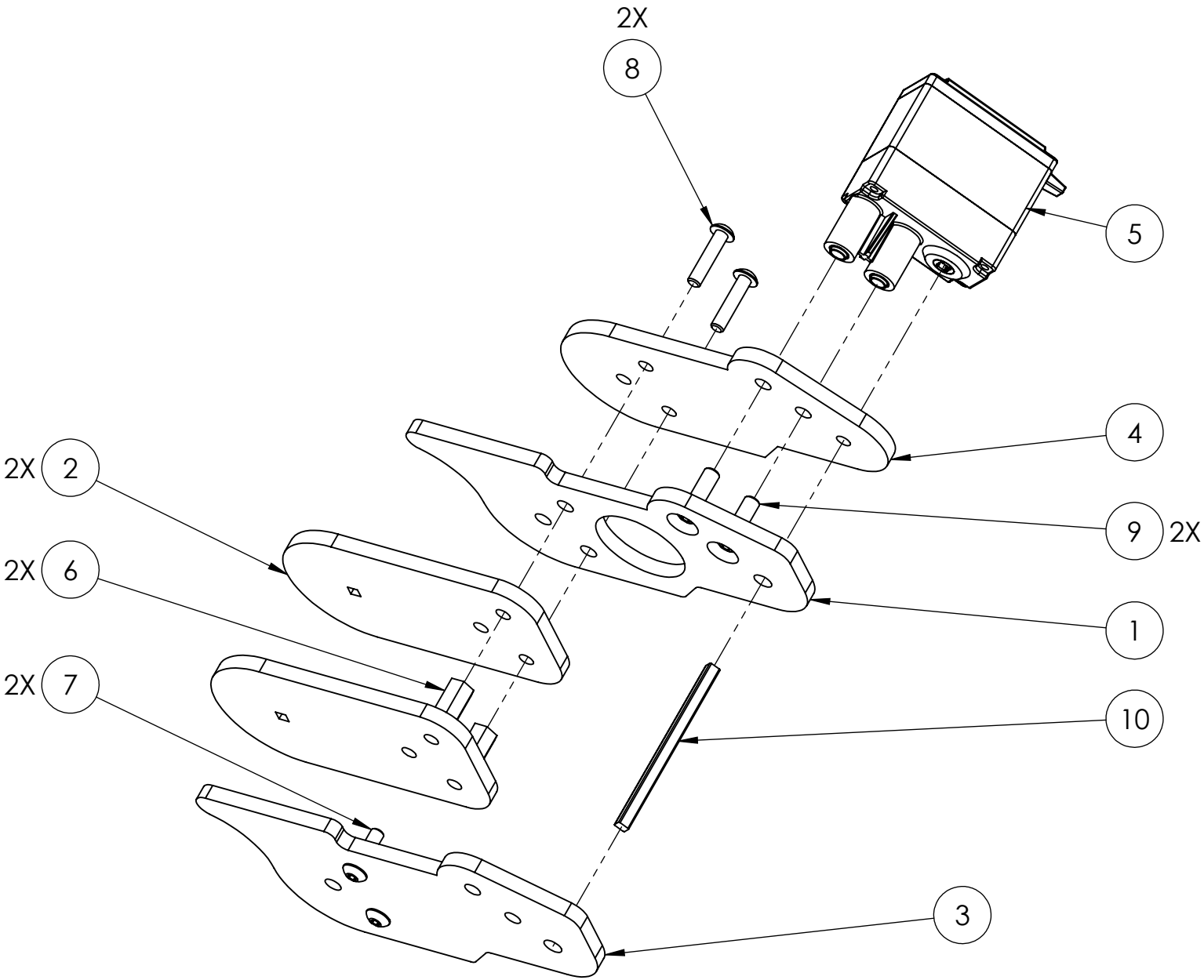
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	INITIAL RELEASE	5/22/14	ERS

		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	ESIERRA ENGINEERING		
		DIMENSIONS ARE IN MM[INCHES]	DRAWN	ERS	5/22/14	TITLE: END EFFECTOR GRIPPER	
		TOLERANCES:	CHECKED	ERS	5/22/14		
		FRACTIONAL ±	ENG APPR.	ERS	5/22/14		
		ANGULAR: MACH ± BEND ±	MFG APPR.	ERS	5/22/14		
		TWO PLACE DECIMAL ±0.25	Q.A.	ERS	5/22/14		
		THREE PLACE DECIMAL ±0.12	COMMENTS:			SIZE DWG. NO. REV B A35-008300 1	
		INTERPRET GEOMETRIC TOLERANCING PER:					
		MATERIAL					
NEXT ASSY	USED ON	FINISH					
APPLICATION		DO NOT SCALE DRAWING	SCALE: 1:1 WEIGHT: SHEET 1 OF 1				

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A45-009995	Arm Part C	1
2	A45-009990	Arm Part A	2
3	A45-009995	Arm Part B	1
4	A45-009994	Arm Part G	1
5	276-2010	Vex DC Motor	1
6	217-2013	1/2" Long Standoff	2
7	91919A222	#6-40 SBHC Screw	2
8	98991A1001	#6-40 SBHC Screw 0.625" L	2
9	91917A122	#8-36 SBHC Screw	2
10	276-2011	2" Steel Shaft	1



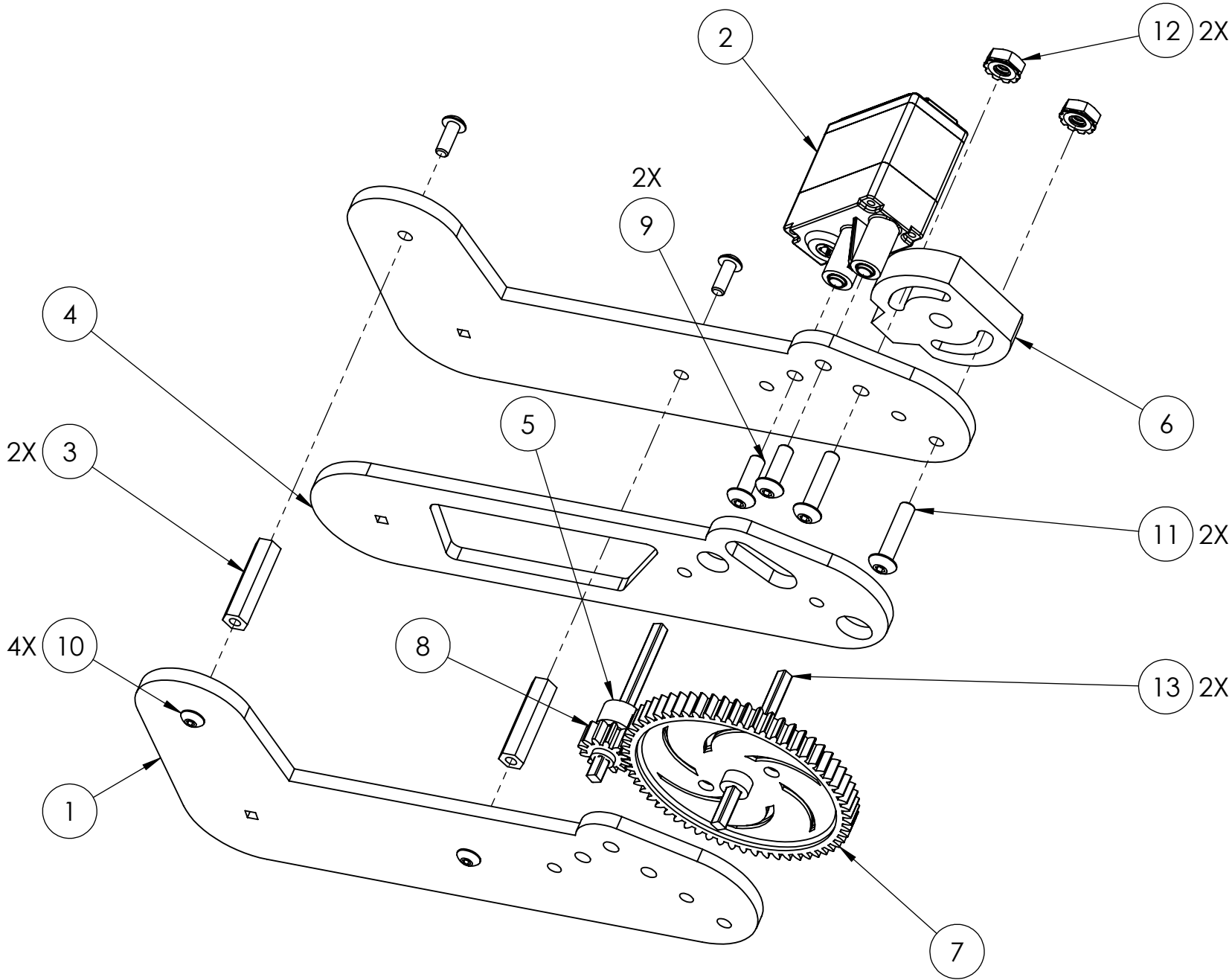
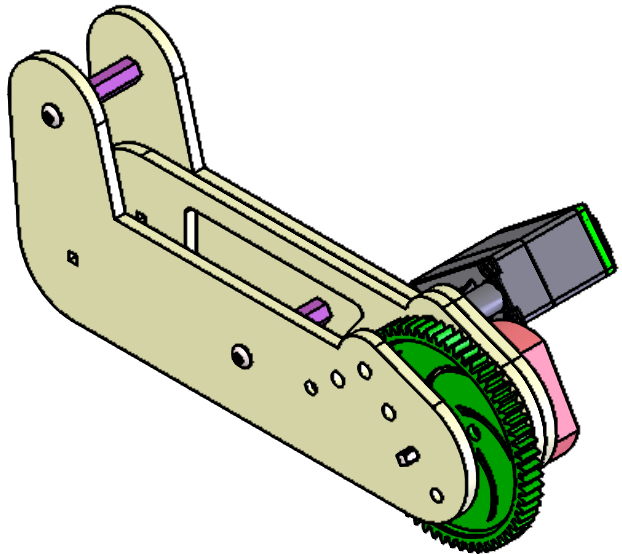
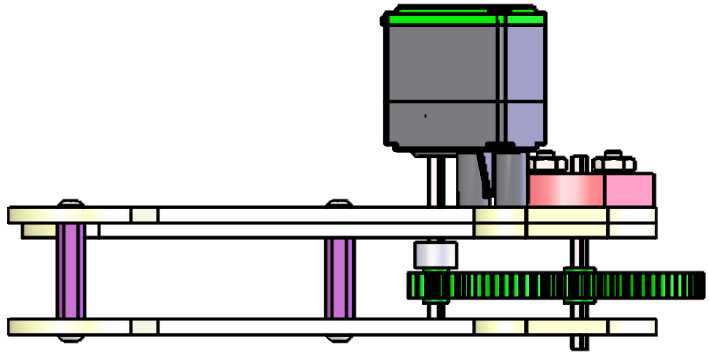
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
5	WEIGHT OPTIMIZED VERSION	5/23/14	ERS



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		DIMENSIONS ARE IN MM([INCHES])	DRAWN	ERS	5/23/14	TITLE: ROBOT FOREARM LINK	
		TOLERANCES:	CHECKED	ERS	5/23/14		
		FRACTIONAL ±	ENG APPR.	ERS	5/23/14		
		ANGULAR: MACH ± BEND ±	MFG APPR.	ERS	5/23/14		
		TWO PLACE DECIMAL ±0.25	Q.A.	ERS	5/23/14		
		THREE PLACE DECIMAL ±0.12	COMMENTS:			SIZE	DWG. NO.
		INTERPRET GEOMETRIC TOLERANCING PER:				B	A35-008400
		MATERIAL				REV	5
NEXT ASSY	USED ON	FINISH				SCALE: 1:1	WEIGHT:
APPLICATION		DO NOT SCALE DRAWING				SHEET 1 OF 1	

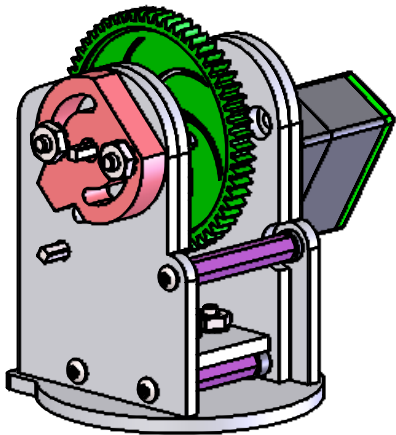
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A45-009991	Forearm Part A	2
2	276-2010	Vex DC Motor	1
3	217-2013	1" Long Standoff	2
4	A45-010013	Forearm Part A	1
5	276-8855	Shaft Collar	1
6	276-2216	Potentiometer	1
7	276-2012	60 Tooth Gear	1
8	271-8900	12 Tooth Gear	1
9	91917A122	#8-36 SBHC Screw	2
10	91877A101	#6-40 SBHC Screw	4
11	98982A100	#8-36 SBHC Screw	2
12	90675A011	#10-24 Thread nut	2
13	276-2011	2" Steel Shaft	2



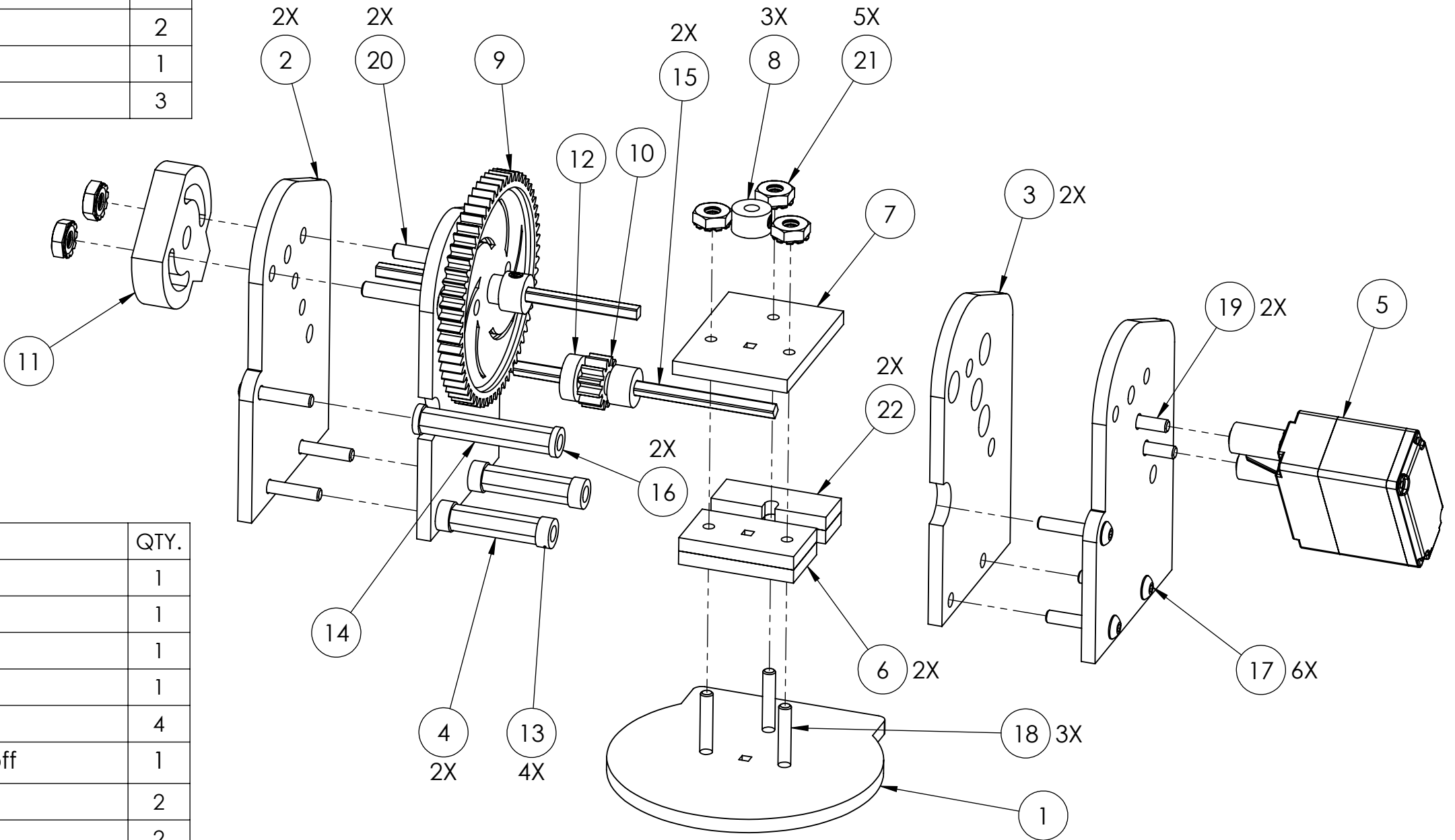
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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	ESIERRA ENGINEERING		
		DIMENSIONS ARE IN MM[INCHES]		DRAWN	ERS	5/23/14	TITLE:	
		TOLERANCES:		CHECKED	ERS	5/23/14	ROBOT UPPER ARM LINK	
		FRACTIONAL ±		ENG APPR.	ERS	5/23/14		
		ANGULAR: MACH ± BEND ±		MFG APPR.	ERS	5/23/14		
		TWO PLACE DECIMAL ±0.25		Q.A.	ERS	5/23/14		
		THREE PLACE DECIMAL ±0.12		COMMENTS:			SIZE	
		INTERPRET GEOMETRIC TOLERANCING PER:	DWG. NO.				REV	
		MATERIAL	A35-008200				5	
		FINISH						
NEXT ASSY	USED ON						SCALE: 1:5	
APPLICATION		DO NOT SCALE DRAWING				WEIGHT:		SHEET 1 OF 1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A45-009998	Shoulder Part E	1
2	A45-009996	Shoulder Part A	2
3	A45-009997	Shoulder Part B	2
4	217-2013	1" Long Standoff	2
5	276-2010	Vex DC Motor	1
6	A45-009999	Shoulder Part D	2
7	A45-009999	Shoulder Part C	1
8	276-8855	Shaft Collar	3



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
9	276-2012	60 Tooth Gear	1
10	271-8900	12 Tooth Gear	1
11	276-2216	Potentiometer	1
12	678-0012	Gear Collar 1	1
13	234-8766	Standoff Collar B	4
14	217-2013	1-1/2" Long Standoff	1
15	276-2011	3" steel Shaft	2
16	234-8766	Standoff Collar C	2
17	91917A111	#6-40 SBHC Screw	6
18	91919A221	#6-40 SBHC Screw	3
19	91919A222	#6-40 SBHC Screw	2
20	98982A100	#8-36 SBHC Screw	2
21	90675A011	#10-24 Thread nut	5
22	A45-010000	Shoulder Part F	2

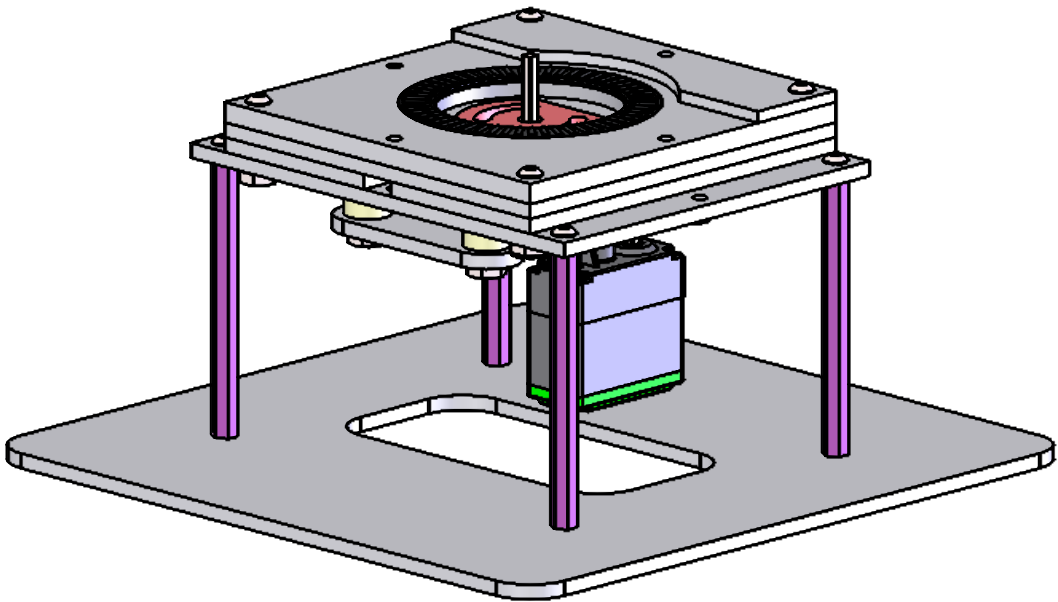


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
5	WEIGHT OPTIMIZED VERSION	5/22/14	ERS

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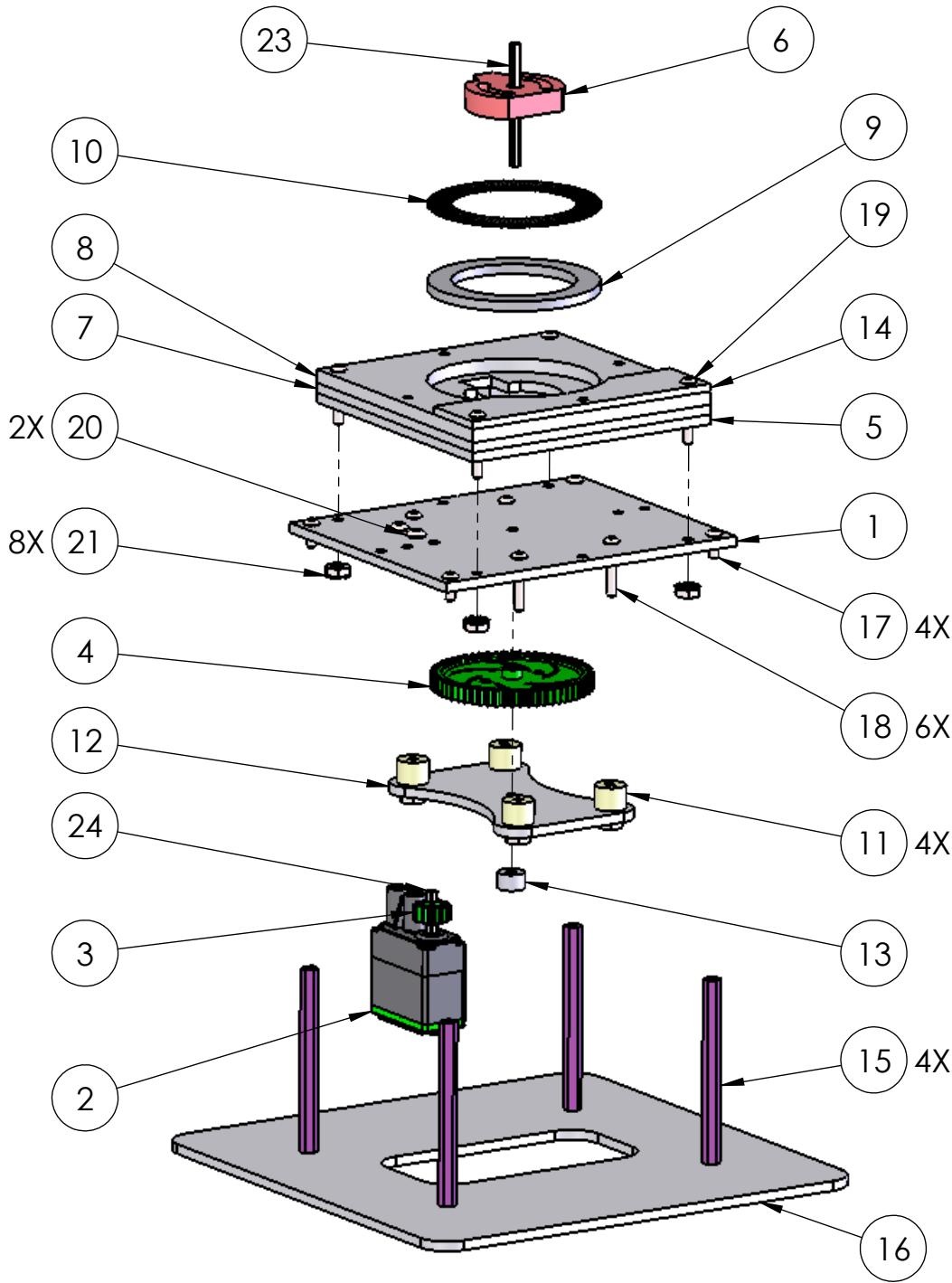
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	ESIERRA ENGINEERING		
		DIMENSIONS ARE IN MM[INCHES]	DRAWN	ERS	5/22/14	TITLE: ROBOT SHOULDER LINK		
		TOLERANCES:	CHECKED	ERS	5/22/14			
		FRACTIONAL ±	ENG APPR.	ERS	5/22/14			
		ANGULAR: MACH ± BEND ±	MFG APPR.	ERS	5/22/14			
		TWO PLACE DECIMAL ±0.25	Q.A.	ERS	5/22/14			
		THREE PLACE DECIMAL ±0.12	COMMENTS:			SIZE DWG. NO. REV B A35-008100 5		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL				SCALE: 1:5 WEIGHT: SHEET 1 OF 1		
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A45-010003	Base Platform 2	1
2	276-2010	Vex DC Motor	1
3	271-8900	12 Tooth Gear	1
4	276-2012	60 Tooth Gear	1
5	A45-010002	Base Platform 3	1
6	276-2216	Potentiometer	1
7	A45-010005	Base Platform 4	1
8	A45-010001	Base Platform 5	1
9	A45-010011	Bearing Load Washer	1
10	5909K43_C	Thrust Bearing	1
11	678-0012	Gear Collar 2	4
12	A45-010004	Base Platform 1	1
13	276-8855	Shaft Collar	1
14	A45-010006	Base Platform 6	1
15	217-2013	3" Long Standoff	4
16	A45-010007	Base Platform 7	1
17	91877A101	#6-40 SBHC Screw	4
18	91919A221	#6-40 SBHC Screw	6
19	91918A101	1/8-40 SBHC Screw	2
20	98979A100	#8-36 SBHC Screw	2
21	90675A011	#10-24 Thread nut	8
22	91917A111	#6-40 SBHC Screw	4
23	276-2011	2" Steel Shaft	1
24	276-2011	1" Steel Shaft	1



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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
5	NEW BASE DESIGN	5/23/14	ERS



		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	ESIERRA ENGINEERING		
		DIMENSIONS ARE IN MM[INCHES]	DRAWN	ERS	TITLE: ROBOT BASE		
		TOLERANCES:	CHECKED	ERS			
		FRACTIONAL ±	ENG APPR.	ERS			
		ANGULAR: MACH ± BEND ±	MFG APPR.	ERS			
		TWO PLACE DECIMAL ±0.25	Q.A.	ERS			
		THREE PLACE DECIMAL ±0.12	COMMENTS:		SIZE	DWG. NO.	REV
		INTERPRET GEOMETRIC TOLERANCING PER:			B	A35-008500	5
		MATERIAL					
		FINISH					
NEXT ASSY	USED ON						
APPLICATION		DO NOT SCALE DRAWING			SCALE: 1:5 WEIGHT: SHEET 1 OF 1		

REV 5