

BILL OF MATERIAL (CURRENT LEVEL)

ITEM	PT/ASSY	DESCRIPTION	TYPE	QTY.
1	02629	(A7-4) T1.5/T2 REMOTE NO LIGHT	ASSEMBLY	1
2	09614	HELICOPTER TUG CRADLE (L)	ASSEMBLY	1
3	09615	TIH2 SHROUD ASSEMBLY	ASSEMBLY	1
4	09616	TIH2 ENCLOSURE	ASSEMBLY	1
5	09617	TIH2 TRACK ASSEMBLY	ASSEMBLY	1
6	09829	T2V2 PC BOARD	ASSEMBLY	1
7	09891	HELI DUAL GEARBOX	ASSEMBLY	1
8	09892	HELI TUG GEARBOX	ASSEMBLY	1
9	22391	LARGE ACETAL SPACER	PART	2
10	22422	TUG SHAFT RETAINER	PART	11
11	22646	T1.5 SPROCKET	PART	2
12	23490	INNER ROLLER SPACER	PART	2
13	23491	OUTTER ROLLER SPACER	PART	4
14	23559	7 TOOTH T2 DRIVE SPROCKET	PART	4
15	24002	TT AXLE	PART	4
16	24004	TT 2.0" ROLLER	PART	2
17	24026	TT TRACK STANDOFF	PART	4
18	24065	HELI RAIL SUPPORT	PART	1
19	24086	GEARBOX COVER 1	PART	1
20	24087	GEARBOX COVER 2	PART	1
21	24110	12 PITCH, 24 TOOTH, 2" PD	PART	1
22	24123	TIH2 HELI MAIN PLATE	PART	1
23	24124	HELI RAIL END RIGHT	PART	1
24	24125	HELI RAIL END LEFT	PART	1
25	24126	HELI 5/8" AXLE	PART	1
26	24127	HELI AXLE SPACER LARGE	PART	2
27	24128	HELI AXLE SPACER SMALL	PART	1
28	24135	SPEED CONTROL BRACKET	PART	1
29	24286	TIH2 FIXED RAIL PLATE	PART	1
30	24287	TIH2 ADJ. RAIL PLATE	PART	1
31	24290	TIH2 RAIL SUPPORT ADJUST	PART	1
32	24291	TIH2 RAIL SUPPORT SPACER	PART	2
33	24292	TIH2 TRACK COVER MOUNT	PART	2
34	24293	TIH2 RAIL ADJUST BLOCK	PART	1
35	24294	TIH2 RAIL ROLLER AXLE	PART	6
36	24326	AXLE MOUNT BRACKET	PART	4
37	24401	TIH2 GEAR TRAIN STEEL INSERT	PART	10
38	24416	TIH2 ALUMINUM SIDE PLATE	PART	1
39	24418	12 Pitch, 16 teeth, 20°PA	PART	5
40	24419	TIH2 CENTER ROLLER	PART	6

41	24427	TIH2 COVER LARGE HINGE	PART	2
42	24454	HELI RAIL SHORT RIGHT	PART	1
43	24455	HELI RAIL SHORT LEFT	PART	1
44	24456	HELI RAIL SPACER PLATE	PART	1
45	24457	HELI SHAFT HOLDER	PART	2
46	24458	HELI TUG SPROCKET 2	PART	2
47	24461	INNER ROLLER SPACER	PART	2
48	24472	HELI-TUG SIDE ROLLER	PART	4
49	24473	SIDE ROLLER MOUNT BLOCK	PART	4
50	24474	SIDE ROLLER SHAFT	PART	4
51	24479	HELI RAIL SUPPORT SWIVEL	PART	1
52	24509	TIH2 V2 PCB SUPPORT	PART	2
53	24543	GEARBOX PLUG	PART	1
54	24544	GEARBOX COVER	PART	1
55	24577	TIH2 MOTOR COVER	PART	2
56	24587	TIH2 CRADLE SPACER	PART	2
57	24590	TIH2 WHEEL TUG SHORT AXLE	PART	2
58	91285	10-32 X 5/8" L SS FLAT HEAD	PART	4
59	91455	1/4"-20 X 1-1/8" L CAP SCREW	PART	3
60	92039	PUSH MOUNT CABLE TIE	PART	4
61	92161	SCREW 10-24X.5"L SOCKET HEAD	PART	8
62	92361	4-40X5/16"L FLAT HD SCW, PHIL	PART	2
63	92524	8-32 UNC X 1/8 SET SCREW	PART	2
64	92542	1/4-20 X .500"L SET SCREW SS	PART	4
65	92609	10-24 X 1-1/8" CAP SCREW	PART	2
66	92702	TIH2 RIGID BATTERY HOLDR	PART	2
67	92703	TIH2 SPR BATTERY HOLDER	PART	2
68	92704	10-32 X 1-1/8" L SOCKET HEAD	PART	2
69	92705	10-32 PAN HEAD PHILLIPS 5/16"L	PART	12
70	92721	10-32 X 3/8" L BUTTON HD W THR LOCK	PART	12
71	93539	10-32 X 3/4" L CAP SCREW	PART	4
72	94055	3/8"-16 X 1" FLANGE HEX BOLT	PART	2
73	95016	1/4"-20 X 5/8" SOCKET CAP	PART	8
74	95021	10-32 X 7/16" PAN HEAD	PART	10
75	95025	1/2" BALL BEARING	PART	22
76	95026	1/8" SQ. X .400"L KEY STOCK	PART	2
77	95092	10-32 X 3/8"L FLAT HEAD	PART	11
78	95117	1/4"-20 X 3/4" SOCKET CAP	PART	9
79	95158	1/4" X .125" NYLON SPACER	PART	4
80	95200	1/4"-20 X 1"L SOCKET CAP	PART	8
81	95292	1/4"-20 X 2" L SOCKET CAP SCREW	PART	2
82	95304	1/4"-20 X .875 SOCKET HEAD	PART	36
83	95308	1-3/8" X 5/8" ROLLER BEARING	PART	4

A Touch of Brass
A TOUCH OF BRASS INC

13832 MAGNOLIA AVE.
CHINO, CA 91710-7027
909-464-1000

TIH2 TUG

DWG. NO. 09612

REV 1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

SCALE 0.034

APPR.

SHEET 1 OF 11

84	95415	1/4"-20 X 1/2" L PAN HEAD	PART	4
85	95449	1/4"-20 X 1-5/8"L SS CAP SCREW	PART	2
86	95518	10-24 X 1-1/4" SOCKET CAP	PART	5
87	95553	SPEED CONTROL 2020	PART	2
88	95554	4-24 THREAD-FORMING SCREW PAN	PART	8
89	95564	3/4" SQ. x 1.000"L KEY STOCK	PART	4
90	95566	8" X 3" WHEEL, 25 MM AXLE	PART	2
91	95567	3/8"-16 UNC x 1-5/8"L SOCKET	PART	8
92	95584	1/4"-20 X 2.75 SOCKET CAP	PART	6
93	95591	1/4"-20 X 2.25" CAP SCREW	PART	2
94	95609	24V BATTERY 10AH	PART	2
95	95613	TIH2 ROLLER SPACER	PART	12
96	95625	10-24, 1-1/2" LONG SOCKET HEAD	PART	1
97	95627	TIH2 OUTSIDE COVER	PART	1
98	95628	10-32 x 3/4" L Flat Head Screw	PART	2
99	95644	TIH2 LARGE ROLELR SPACER	PART	2
100	95645	TIH2 SPROCKET SM SPACER	PART	2
101	95649	1/2"-13 X 1" FLAT HEAD SCREW	PART	12
102	95650	1/2"-13 X 3/4" BUTTON HEAD	PART	4
103	95651	1/2" FLAT WASHER SS	PART	4
104	95652	3/4" X 1-5/8" BEARING	PART	8
105	95654	1/8" SS SQUARE KEY X 1.000"L	PART	1
106	96200	TIH2 ACETAL ROLLER WASHER	PART	4
107	96201	TIH2 CURVED FIXED WHEEL SPACER	PART	4
108	97021	6-32 X 3/8"L PHILIPS SCREW	PART	4
109	98009	.875"OD, .375"ID, SHIELDED BAL	PART	10
110	98011	3/8" DIA. X 1-3/8"L DOWEL PIN	PART	5
111	98012	1/4"-20 X 3/4" FLAT HEAD	PART	6
112	09612R	TIH2 TUG (LEFT)	ASSEMBLY	1

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TIH2 TUG

DWG. NO. 09612

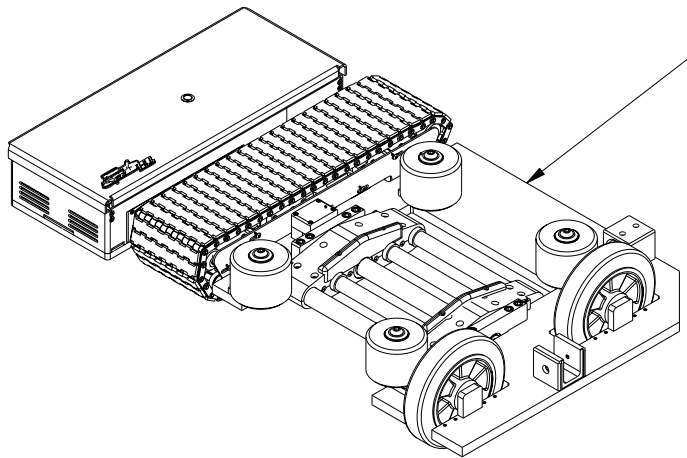
REV 1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

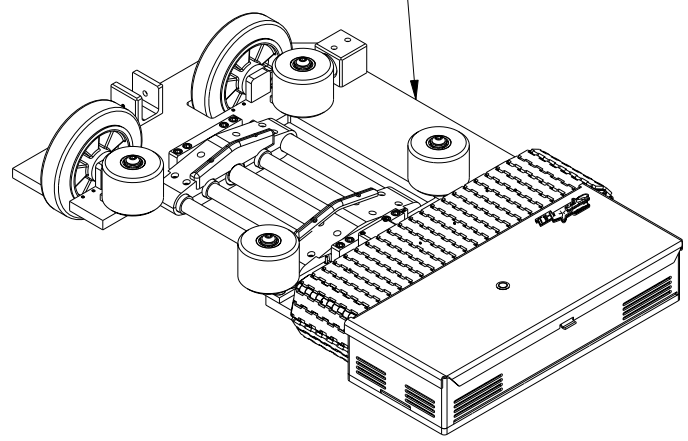
SCALE 0.220

APPR.

SHEET 2 OF 11



09612 (RIGHT SIDE)



09612 (LEFT SIDE)

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TIH2 TUG

DWG. NO. 09612

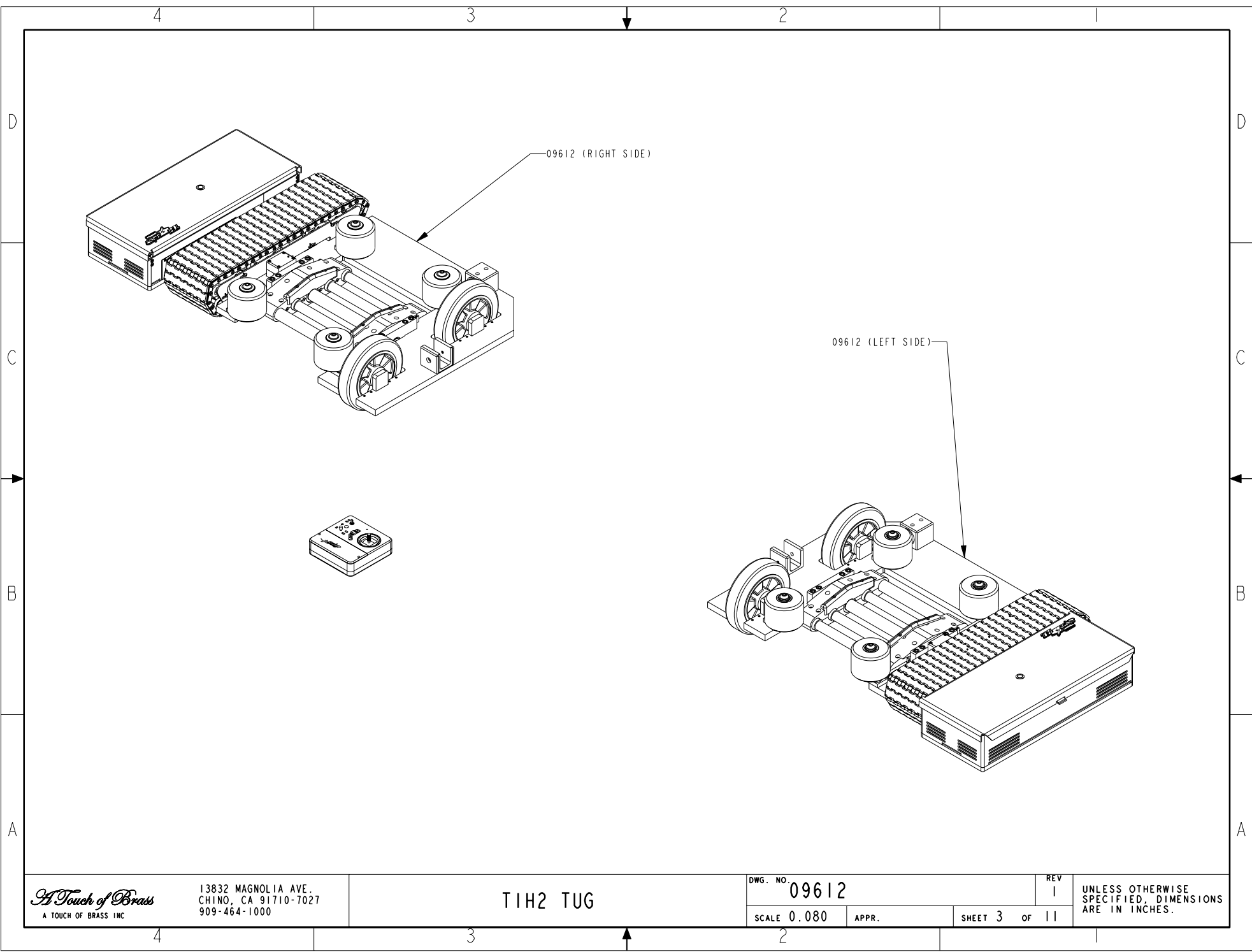
REV
1

UNLESS OTHERWISE
SPECIFIED, DIMENSIONS
ARE IN INCHES.

SCALE 0.080

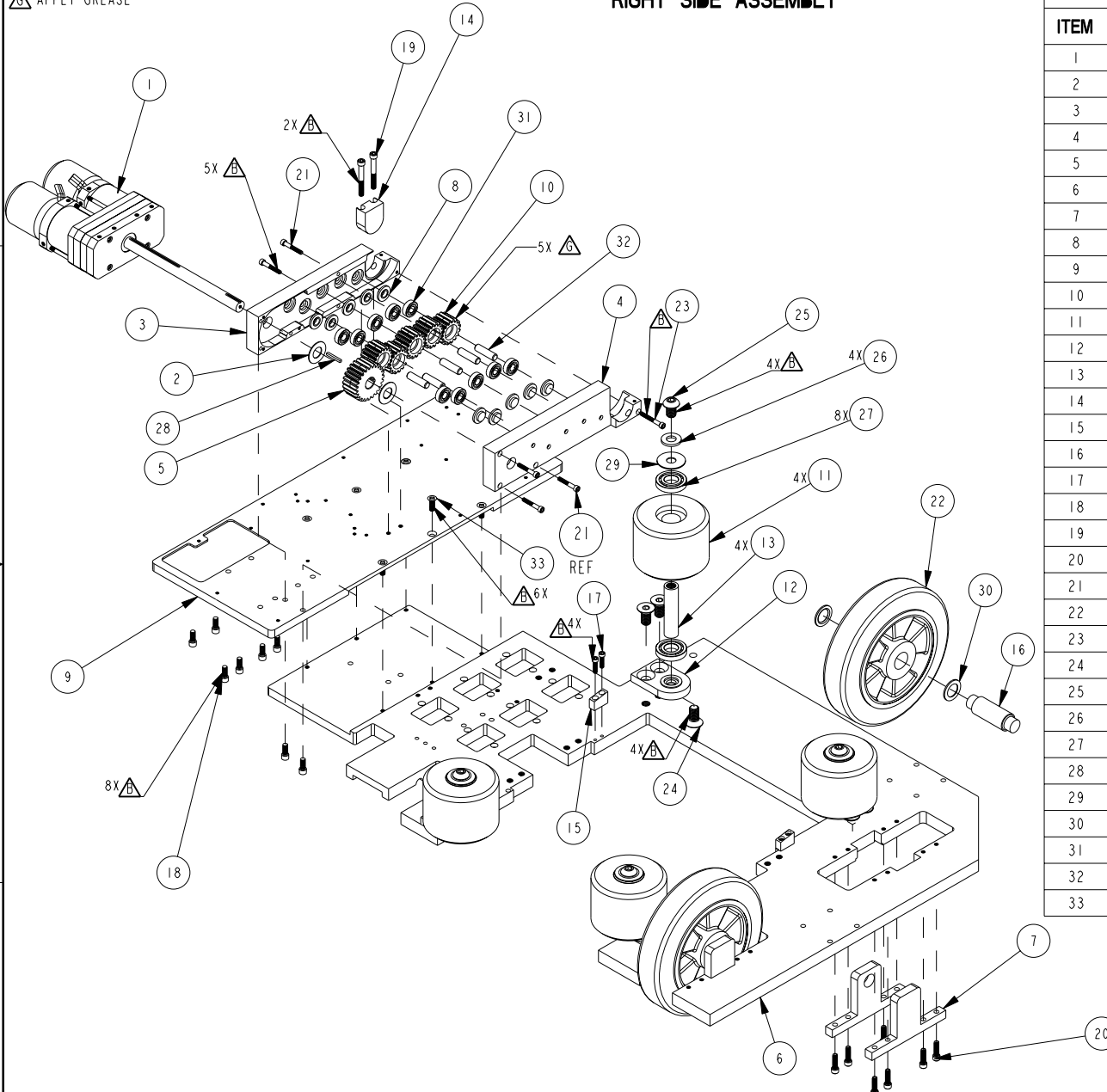
APPR.

SHEET 3 OF 11



- BLUE REMOVABLE LOCTITE
- APPLY GREASE

RIGHT SIDE ASSEMBLY



BILL OF MATERIAL (CURRENT LEVEL)

ITEM	PT/ASSY	DESCRIPTION	TYPE	QTY.
1	09891	HELI DUAL GEARBOX	ASSEMBLY	1
2	22391	LARGE ACETAL SPACER	PART	2
3	24086	GEARBOX COVER 1	PART	1
4	24087	GEARBOX COVER 2	PART	1
5	24110	12 PITCH, 24 TOOTH, 2" PD	PART	1
6	24123	TIH2 HELI MAIN PLATE	PART	1
7	24326	AXLE MOUNT BRACKET	PART	4
8	24401	TIH2 GEAR TRAIN STEEL INSERT	PART	10
9	24416	TIH2 ALUMINUM SIDE PLATE	PART	1
10	24418	12 Pitch, 16 teeth, 20°PA	PART	5
11	24472	HELI-TUG SIDE ROLLER	PART	4
12	24473	SIDE ROLLER MOUNT BLOCK	PART	4
13	24474	SIDE ROLLER SHAFT	PART	4
14	24543	GEARBOX PLUG	PART	1
15	24587	TIH2 CRADLE SPACER	PART	2
16	24590	TIH2 WHEEL TUG SHORT AXLE	PART	2
17	93539	10-32 X 3/4" L CAP SCREW	PART	4
18	95016	1/4"-20 X 5/8" SOCKET CAP	PART	8
19	95292	1/4"-20 X 2" L SOCKET CAP SCREW	PART	2
20	95304	1/4"-20 X .875 SOCKET HEAD	PART	16
21	95518	10-24 X 1-1/4" SOCKET CAP	PART	5
22	95566	8" X 3" WHEEL, 25 MM AXLE	PART	2
23	95625	10-24, 1-1/2" LONG SOCKET HEAD	PART	1
24	95649	1/2"-13 X 1" FLAT HEAD SCREW	PART	12
25	95650	1/2"-13 X 3/4" BUTTON HEAD	PART	4
26	95651	1/2" FLAT WASHER SS	PART	4
27	95652	3/4" X 1-5/8" BEARING	PART	8
28	95654	1/8" SS SQUARE KEY X 1.000"L	PART	1
29	96200	TIH2 ACETAL ROLLER WASHER	PART	4
30	96201	TIH2 CURVED FIXED WHEEL SPACER	PART	4
31	98009	.875"OD, .375"ID, SHIELDED BAL	PART	10
32	98011	3/8" DIA. X 1-3/8"L DOWEL PIN	PART	5
33	98012	1/4"-20 X 3/4" FLAT HEAD	PART	6

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TIH2 TUG

DWG. NO. 09612

REV 1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

SCALE 0.115

APPR.

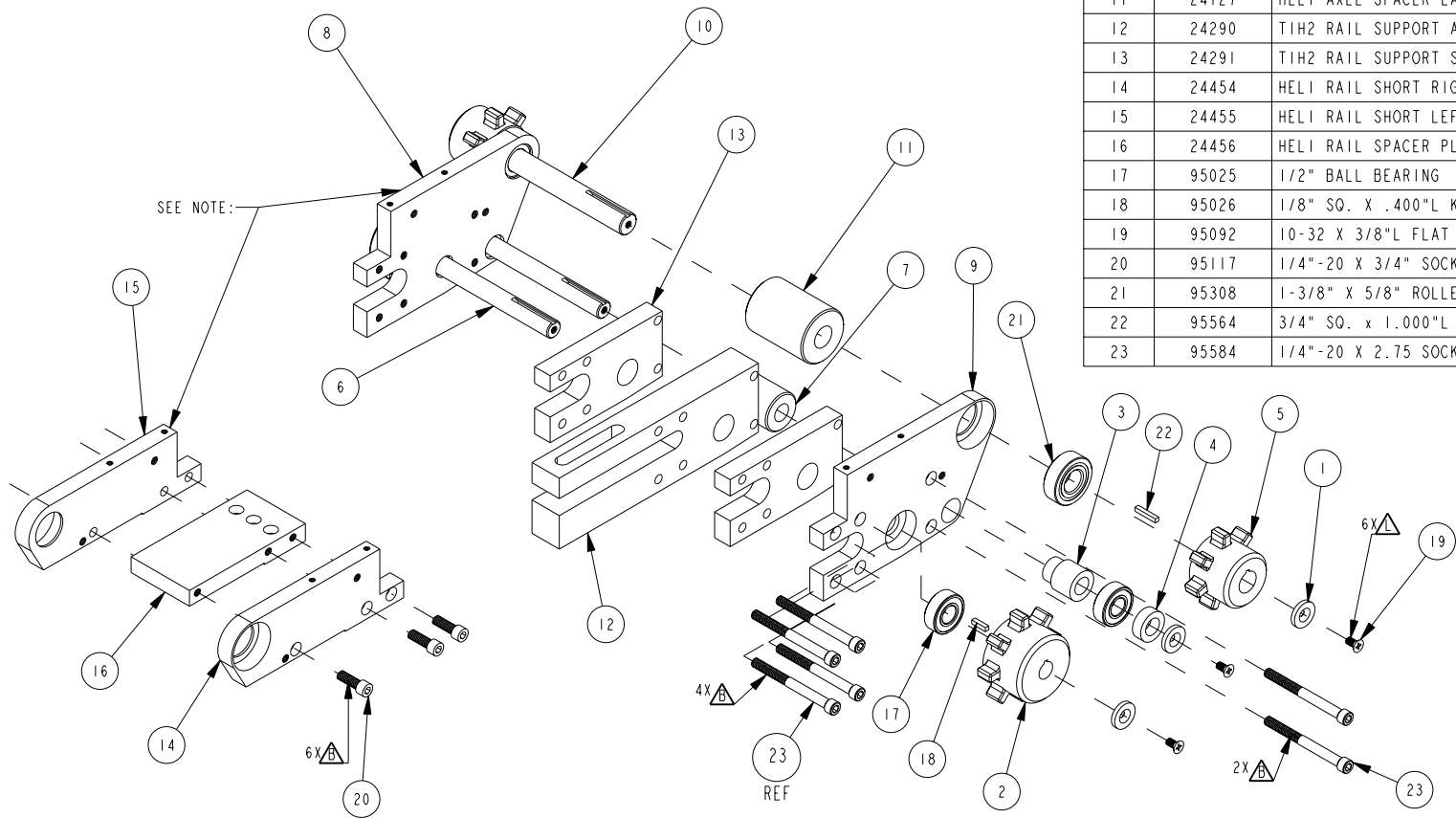
SHEET 4 OF 11

 BLUE REMOVABLE LOCTITE
 LOCTITE JOINT (GREEN)

NOTE:
 ASSEMBLE RAIL ENDS PRIOR TO PLACING ONTO THE MAIN ASSEMBLY (09612)

BILL OF MATERIAL (CURRENT LEVEL)

ITEM	PT/ASSY	DESCRIPTION	TYPE	QTY.
1	22422	TUG SHAFT RETAINER	PART	6
2	22646	T1.5 SPROCKET	PART	2
3	23490	INNER ROLLER SPACER	PART	2
4	23491	OUTTER ROLLER SPACER	PART	2
5	23559	7 TOOTH T2 DRIVE SPROCKET	PART	2
6	24002	TT AXLE	PART	2
7	24004	TT 2.0" ROLLER	PART	1
8	24124	HELI RAIL END RIGHT	PART	1
9	24125	HELI RAIL END LEFT	PART	1
10	24126	HELI 5/8" AXLE	PART	1
11	24127	HELI AXLE SPACER LARGE	PART	1
12	24290	TIH2 RAIL SUPPORT ADJUST	PART	1
13	24291	TIH2 RAIL SUPPORT SPACER	PART	2
14	24454	HELI RAIL SHORT RIGHT	PART	1
15	24455	HELI RAIL SHORT LEFT	PART	1
16	24456	HELI RAIL SPACER PLATE	PART	1
17	95025	1/2" BALL BEARING	PART	4
18	95026	1/8" SQ. X .400"L KEY STOCK	PART	2
19	95092	10-32 X 3/8"L FLAT HEAD	PART	6
20	95117	1/4"-20 X 3/4" SOCKET CAP	PART	6
21	95308	1-3/8" X 5/8" ROLLER BEARING	PART	2
22	95564	3/4" SQ. X 1.000"L KEY STOCK	PART	2
23	95584	1/4"-20 X 2.75 SOCKET CAP	PART	6



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TIH2 TUG

DWG. NO. 09612



REV 1

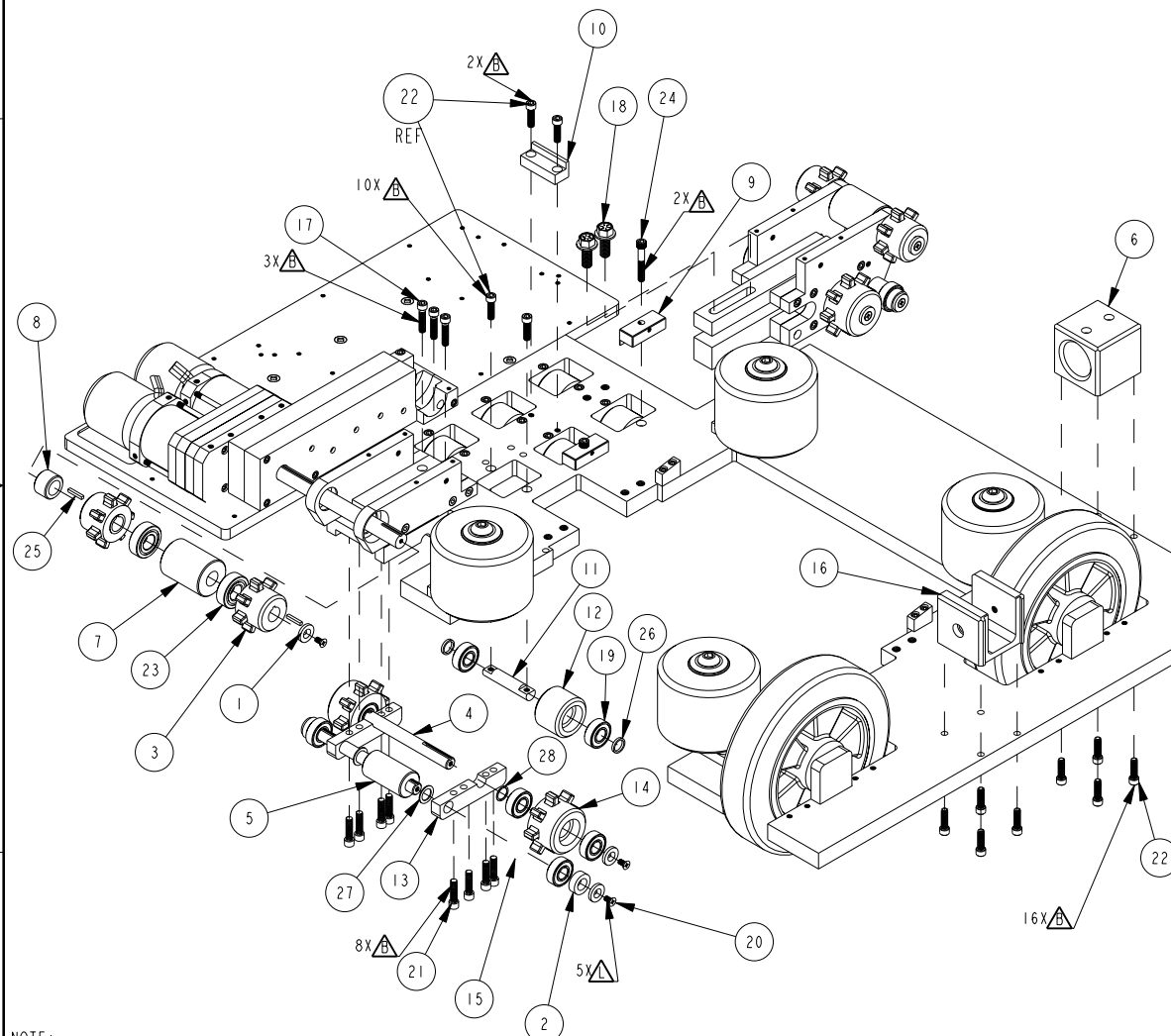
SCALE 0.210

APPR.

SHEET 5 OF 11

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

-  BLUE REMOVABLE LOCTITE
-  LOCTITE JOINT (GREEN)



BILL OF MATERIAL (CURRENT LEVEL)

ITEM	PT/ASSY	DESCRIPTION	TYPE	QTY.
1	22422	TUG SHAFT RETAINER	PART	5
2	23491	OUTTER ROLLER SPACER	PART	2
3	23559	7 TOOTH T2 DRIVE SPROCKET	PART	2
4	24002	TT AXLE	PART	2
5	24004	TT 2.0" ROLLER	PART	1
6	24065	HEL1 RAIL SUPPORT	PART	1
7	24127	HEL1 AXLE SPACER LARGE	PART	1
8	24128	HEL1 AXLE SPACER SMALL	PART	1
9	24292	TIH2 TRACK COVER MOUNT	PART	2
10	24293	TIH2 RAIL ADJUST BLOCK	PART	1
11	24294	TIH2 RAIL ROLLER AXLE	PART	6
12	24419	TIH2 CENTER ROLLER	PART	6
13	24457	HEL1 SHAFT HOLDER	PART	2
14	24458	HEL1 TUG SPROCKET 2	PART	2
15	24461	INNER ROLLER SPACER	PART	2
16	24479	HEL1 RAIL SUPPORT SWIVEL	PART	1
17	91455	1/4"-20 X 1-1/8" L CAP SCREW	PART	3
18	94055	3/8"-16 X 1" FLANGE HEX BOLT	PART	2
19	95025	1/2" BALL BEARING	PART	16
20	95092	10-32 X 3/8"L FLAT HEAD	PART	5
21	95200	1/4"-20 X 1" SOCKET CAP	PART	8
22	95304	1/4"-20 X .875 SOCKET HEAD	PART	28
23	95308	1-3/8" X 5/8" ROLLER BEARING	PART	2
24	95449	1/4"-20 X 1-5/8" SS CAP SCREW	PART	2
25	95564	3/4" SQ. X 1.000"L KEY STOCK	PART	4
26	95613	TIH2 ROLLER SPACER	PART	12
27	95644	TIH2 LARGE ROLLER SPACER	PART	2
28	95645	TIH2 SPROCKET SM SPACER	PART	2

NOTE:
NOSE SPRING (95565) TO BE PRESSED IN
UNTIL BOTTOM FLUSHED WITH BOTTOM OF
PLATE (24123)

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TIH2 TUG

DWG. NO. 09612

REV 1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

SCALE 0.135

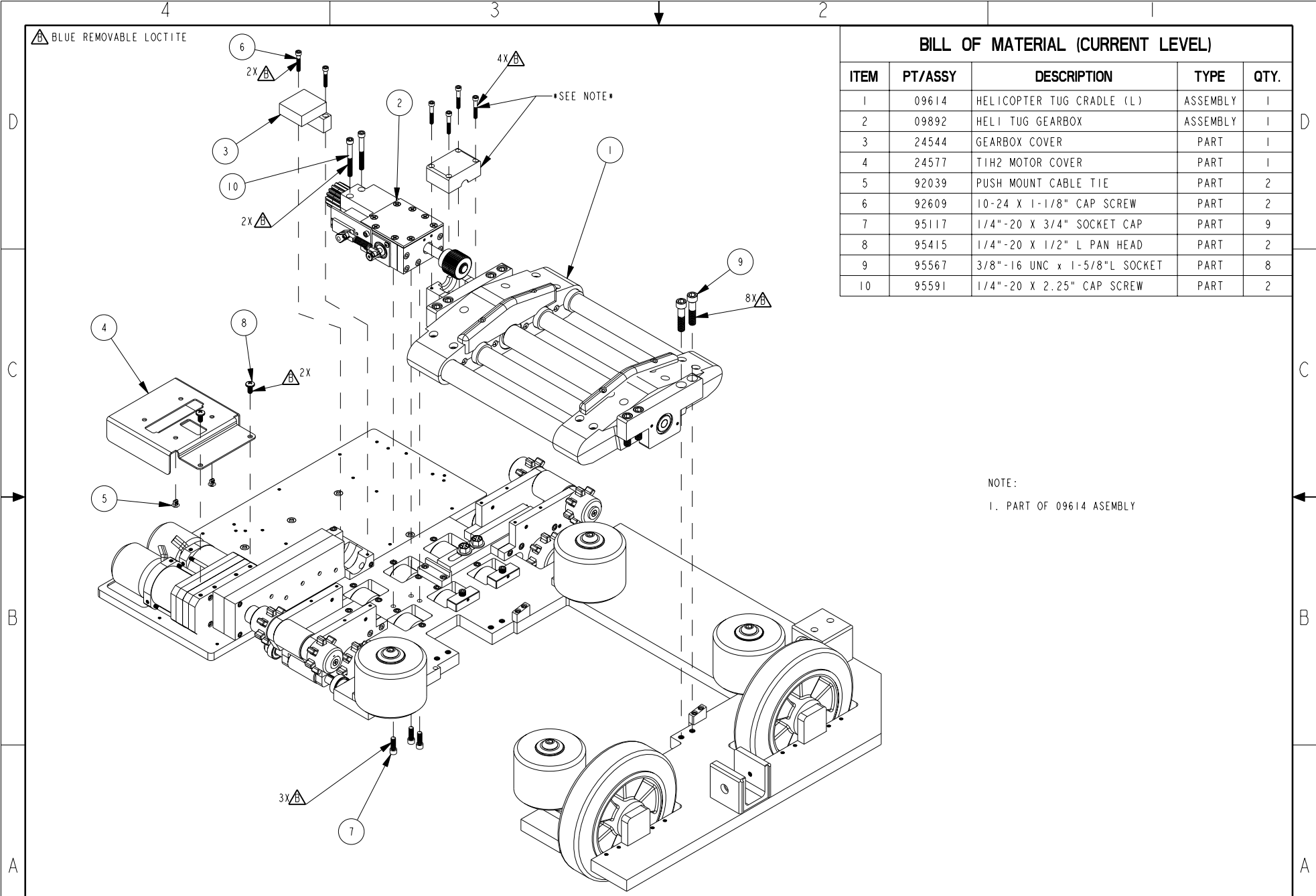
APPR.

SHEET 6 OF 11

▲ BLUE REMOVABLE LOCTITE

BILL OF MATERIAL (CURRENT LEVEL)

ITEM	PT/ASSY	DESCRIPTION	TYPE	QTY.
1	09614	HELICOPTER TUG CRADLE (L)	ASSEMBLY	1
2	09892	HELI TUG GEARBOX	ASSEMBLY	1
3	24544	GEARBOX COVER	PART	1
4	24577	TIH2 MOTOR COVER	PART	1
5	92039	PUSH MOUNT CABLE TIE	PART	2
6	92609	10-24 X 1-1/8" CAP SCREW	PART	2
7	95117	1/4"-20 X 3/4" SOCKET CAP	PART	9
8	95415	1/4"-20 X 1/2" L PAN HEAD	PART	2
9	95567	3/8"-16 UNC x 1-5/8"L SOCKET	PART	8
10	95591	1/4"-20 X 2.25" CAP SCREW	PART	2



NOTE:
1. PART OF 09614 ASSEMBLY

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909-464-1000

TIH2 TUG

DWG. NO. 09612

REV 1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

SCALE 0.140

APPR.

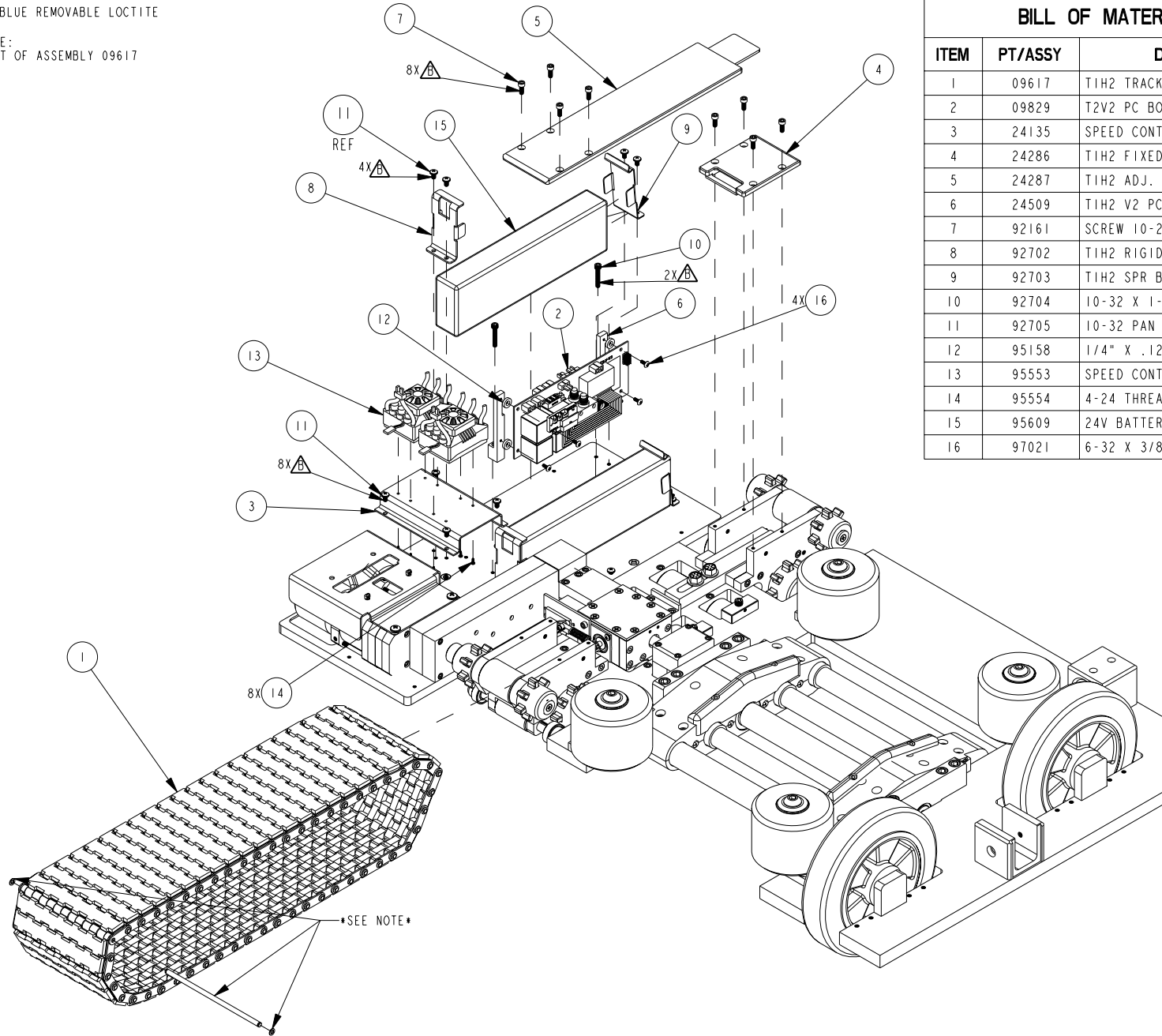
SHEET 7 OF 11

▲ BLUE REMOVABLE LOCTITE

NOTE:
PART OF ASSEMBLY 09617

BILL OF MATERIAL (CURRENT LEVEL)

ITEM	PT/ASSY	DESCRIPTION	TYPE	QTY.
1	09617	TIH2 TRACK ASSEMBLY	ASSEMBLY	1
2	09829	T2V2 PC BOARD	ASSEMBLY	1
3	24135	SPEED CONTROL BRACKET	PART	1
4	24286	TIH2 FIXED RAIL PLATE	PART	1
5	24287	TIH2 ADJ. RAIL PLATE	PART	1
6	24509	TIH2 V2 PCB SUPPORT	PART	2
7	92161	SCREW 10-24X.5" L SOCKET HEAD	PART	8
8	92702	TIH2 RIGID BATTERY HOLDR	PART	2
9	92703	TIH2 SPR BATTERY HOLDER	PART	2
10	92704	10-32 X 1-1/8" L SOCKET HEAD	PART	2
11	92705	10-32 PAN HEAD PHILLIPS 5/16" L	PART	12
12	95158	1/4" X .125" NYLON SPACER	PART	4
13	95553	SPEED CONTROL 2020	PART	2
14	95554	4-24 THREAD-FORMING SCREW PAN	PART	8
15	95609	24V BATTERY 10AH	PART	2
16	97021	6-32 X 3/8" L PHILIPS SCREW	PART	4



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TIH2 TUG

DWG. NO. 09612



REV 1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

SCALE 0.135

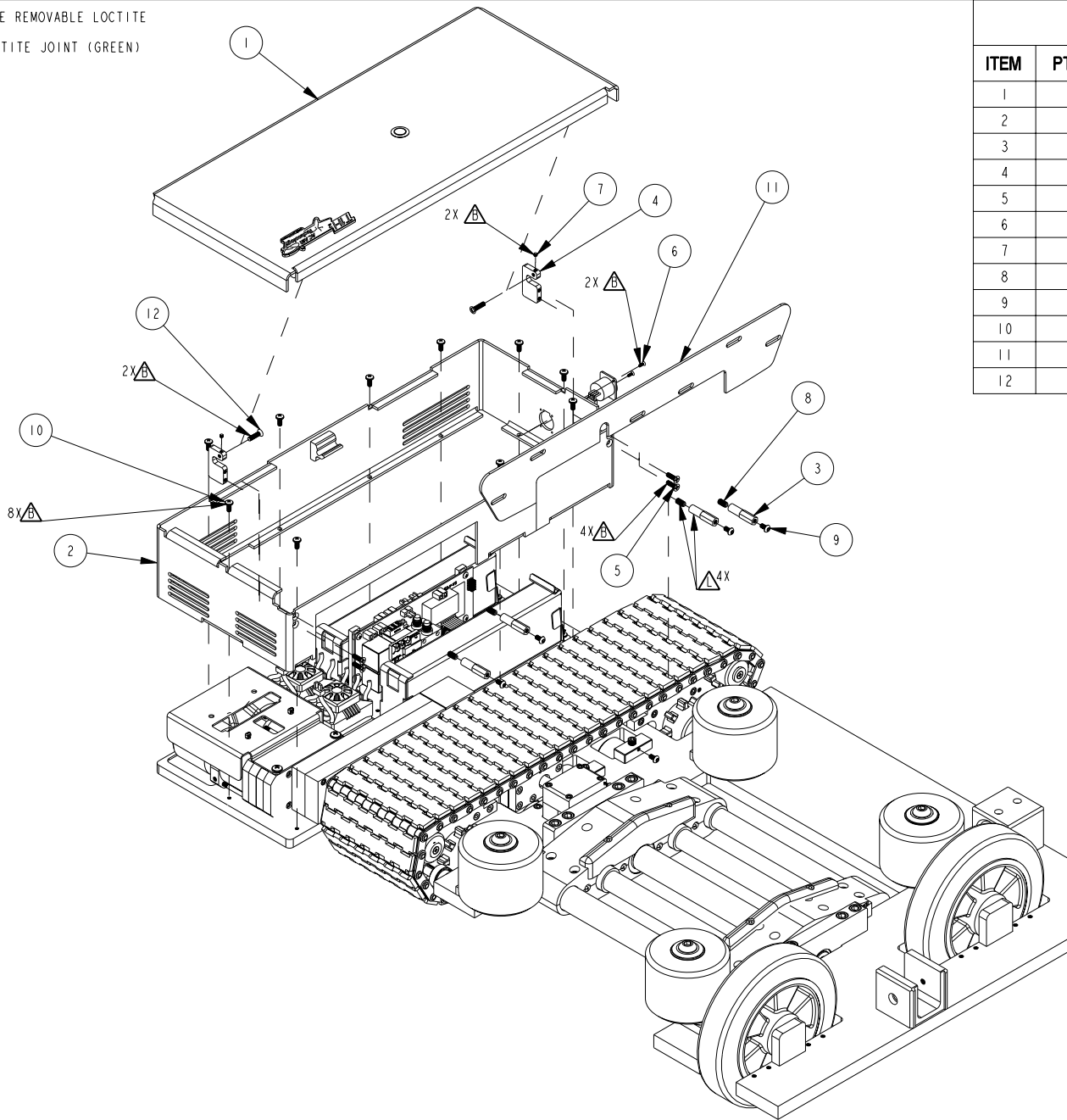
APPR.

SHEET 8 OF 11

-  BLUE REMOVABLE LOCTITE
-  LOCTITE JOINT (GREEN)

BILL OF MATERIAL (CURRENT LEVEL)

ITEM	PT/ASSY	DESCRIPTION	TYPE	QTY.
1	09615	TIH2 SHROUD ASSEMBLY	ASSEMBLY	1
2	09616	TIH2 ENCLOSURE	ASSEMBLY	1
3	24026	TT TRACK STANDOFF	PART	4
4	24427	TIH2 COVER LARGE HINGE	PART	2
5	91285	10-32 X 5/8" L SS FLAT HEAD	PART	4
6	92361	4-40X5/16"L FLAT HD SCW, PHIL	PART	2
7	92524	8-32 UNC X 1/8 SET SCREW	PART	2
8	92542	1/4-20 X .500"L SET SCREW SS	PART	4
9	92721	10-32 X 3/8" L BUTTON HD W THR	LOCKWART	6
10	95021	10-32 X 7/16" PAN HEAD	PART	10
11	95627	TIH2 OUTSIDE COVER	PART	1
12	95628	10-32 x 3/4" L Flat Head Screw	PART	2



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909-464-1000

TIH2 TUG

DWG. NO. 09612

REV 1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

SCALE 0.130

APPR.

SHEET 9 OF 11

4

3

2

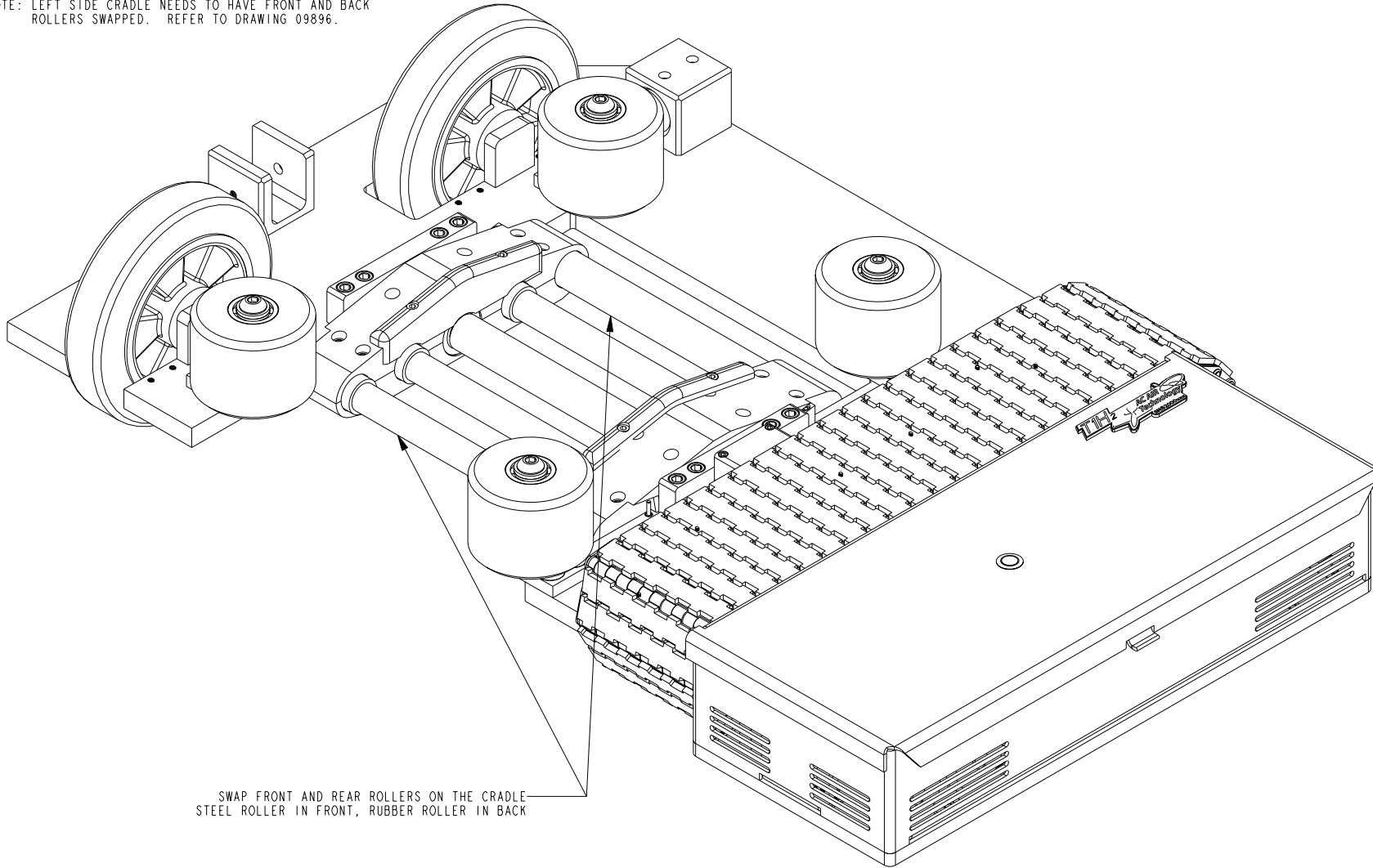
LEFT SIDE ASSEMBLY

BILL OF MATERIAL (CURRENT LEVEL)

ITEM	PT/ASSY	DESCRIPTION	TYPE	QTY.
1	09612R	TIH2 TUG (LEFT)	ASSEMBLY	1

NOTE: RIGHT SIDE IS MIRROR IMAGE OF LEFT SIDE EXCEPT FOR PARTS LISTED BELOW.
 1. MAIN PLATE 24123 BECOMES 24336
 2. SIDE PLATE 24416 BECOMES 24417
 3. ENCLOSURE 09616 BECOMES 09623

NOTE: LEFT SIDE CRADLE NEEDS TO HAVE FRONT AND BACK ROLLERS SWAPPED. REFER TO DRAWING 09896.



SWAP FRONT AND REAR ROLLERS ON THE CRADLE
 STEEL ROLLER IN FRONT, RUBBER ROLLER IN BACK

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 909-464-1000

TIH2 TUG

DWG. NO. 09612

REV 1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.

SCALE 0.200

APPR.

SHEET 10 OF 11

4

3

2

D

D

C

C

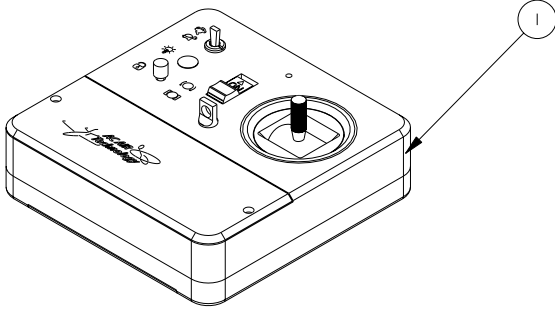
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B

A

A

BILL OF MATERIAL (CURRENT LEVEL)				
ITEM	PT/ASSY	DESCRIPTION	TYPE	QTY.
1	02629	(A7-4) TI.5/T2 REMOTE NO LIGHT	ASSEMBLY	1



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 CHINO, CA 91710-7027
 909-464-1000

TIH2 TUG

DWG. NO. 09612	REV 1	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.
SCALE 0.250	APPR.	