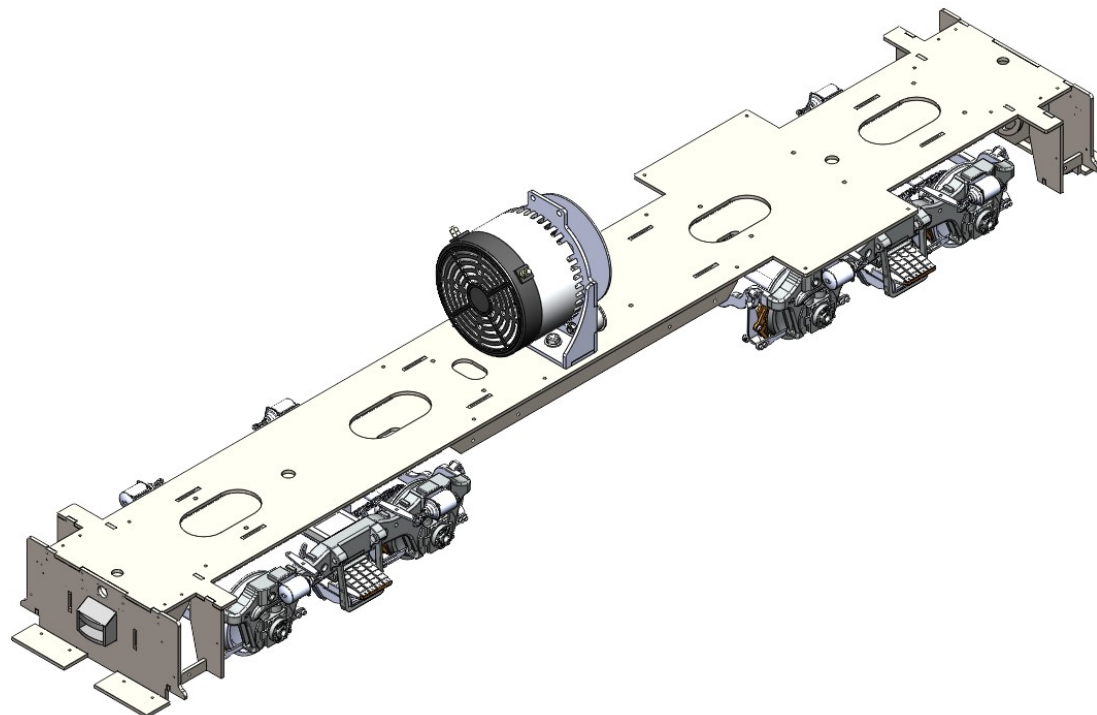


GP9 DRIVETRAIN FOR 1:8 SCALE



INSTRUCTION MANUAL

PACIFIC DESIGN SHOPS

REVISION: A
REVISION DATE: 3/30/25

KIT OVERVIEW

THE INFORMATION CONTAINED IN THIS INSTRUCTION MANUAL IS THE SOLE PROPERTY OF PACIFIC DESIGN SHOPS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PACIFIC DESIGN SHOPS IS PROHIBITED.

Tools you may need to assemble the kit:

- Cordless drill
- Nut drivers
- Socket Set and Ratchets
- Wrenches
- Dead blow hammer

Extra materials you may need:

- Blomberg Trucks (Pike River Shops)
- GP9 Frame (Pacific Design Shops)
- **Loctite Threadlocker 242™ (Blue)**
- Paint

Common acronyms:

- BOM - Bill of Material
- PDS - Pacific Design Shops
- MMC - McMaster Carr

Helpful Tips

- Review instructions to see how the parts go together.
- Snug bolts to hold check and hold alignment, then torque to specifications.
- Retap weld nuts prior to assembly to remove any debris from welding.
- **Use caution when installing trucks to frame as complete assembly is heavy (~150 lbs). Assistance from another individual is recommended.**

See the FAQ page for more helpful tips and answers to common questions.

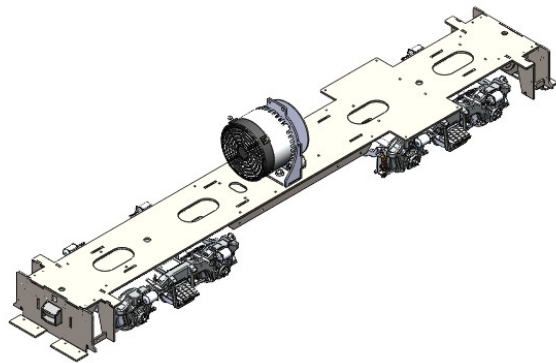
We want your feedback! If you see an area to improve either on the kit or the instructions, please let us know. Send your feedback to info@pacificdesignshops.com.

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BOM OVERVIEW

Use the BOM's below for pages 2-11.

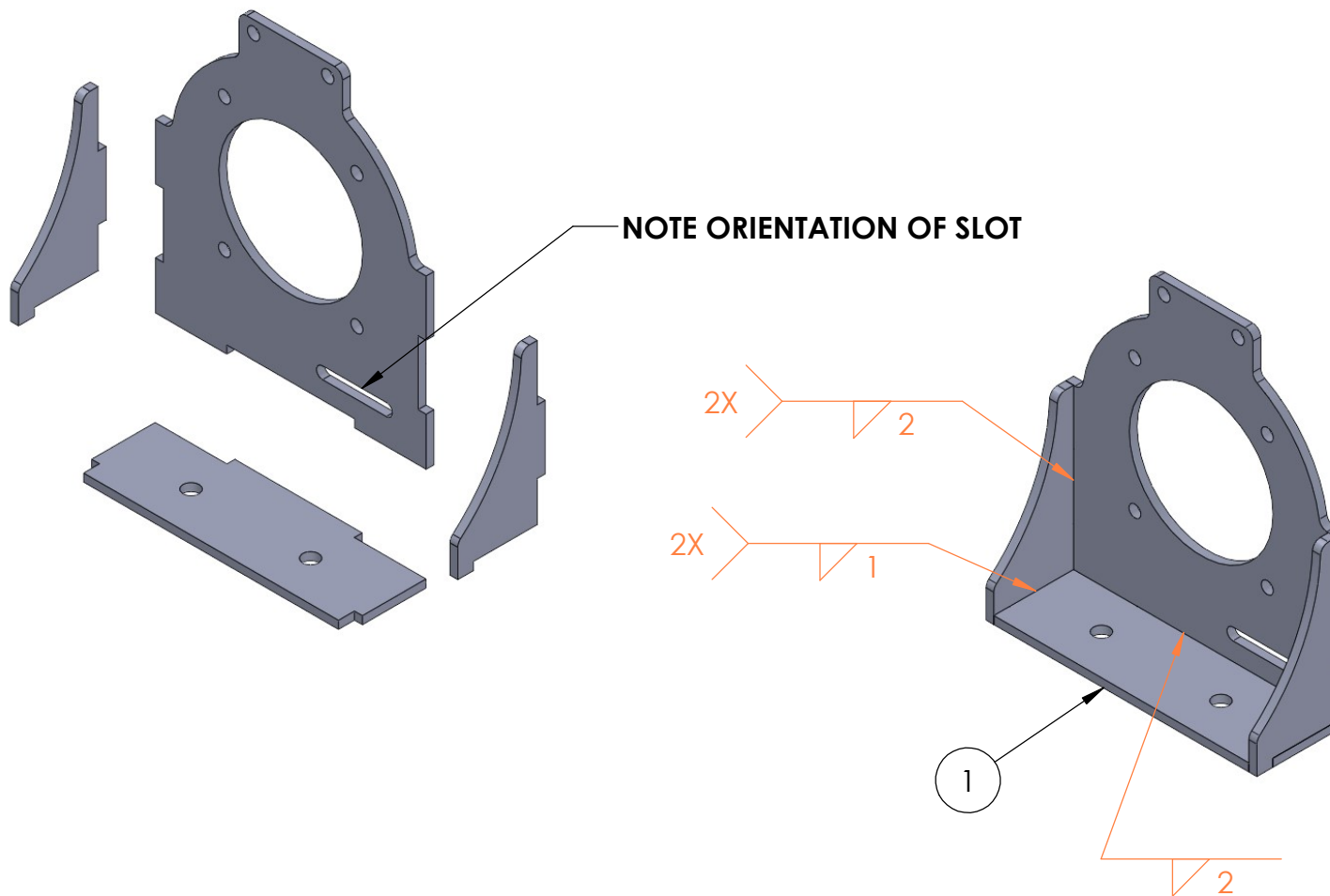


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	-	MotoEnergy Bracket	1
2	-	ME0708 Motor	1
3	-	22 Tooth Pulley w/ Brake Disc	1
4	-	34 Tooth Pulley	1
5	-	8M 30mm Belt, 79 Teeth	1
6	-	3/4" Keyed Shaft	1
7	-	3/4" Bearing Block	2
8	PDS-1005H	Custom 5/8" Shaft w/ Cross Hole	2
9	PDS-5001	5/8" UJ w/ Spline Shafting	2
10	PDS-5002	3/4" UJ w/ Spline Bushing	2
11	MMC_98870A170	3/16" Key, 1 3/4" Long	2
12	MMC_91598A654	3/16" Coiled Spring Pin	4
13	MMC_92620A624	3/8"-16 x 1" Hex Bolt Gr. 8	4
14	MMC_90127A031	3/8" Spring Lock Washer	4
15	MMC_91257A658	3/8"-24 x 1 3/4" Hex Bolt	1
16	MMC_92415A129	3/8" x 5/8" Long Spacer	1
17	MMC_99904A138	3/8"-24 Flange Nut	1
18	MMC_6235K62	Idler Pulley	1
19	MMC_92620A697	7/16"-20 x 1 1/4" Hex Bolt Gr. 8	1
20	MMC_90127A032	7/16" Spring Lock Washer	1
21	MMC_92620A710	1/2"-13 x 7/8" Hex Bolt Gr. 8	2
22	MMC_92620A714	1/2"-13 x 1 1/4" Hex Bolt Gr. 8	4
23	MMC_90127A033	1/2" Spring Lock Washer	6
24	MMC_91090A118	1/2" Oversized Washer	2
25	MMC_6435K15	5/8" Clamping Collar	2
26	MMC_94639A266	3/4" Spacer	4
27	MMC_3088A471	7/8" Spacer	3

STEP 1: MOTOR BRACKET WELDMENT

Assemble motor bracket as shown below, noting orientation of slot. Tack and apply finish welds.

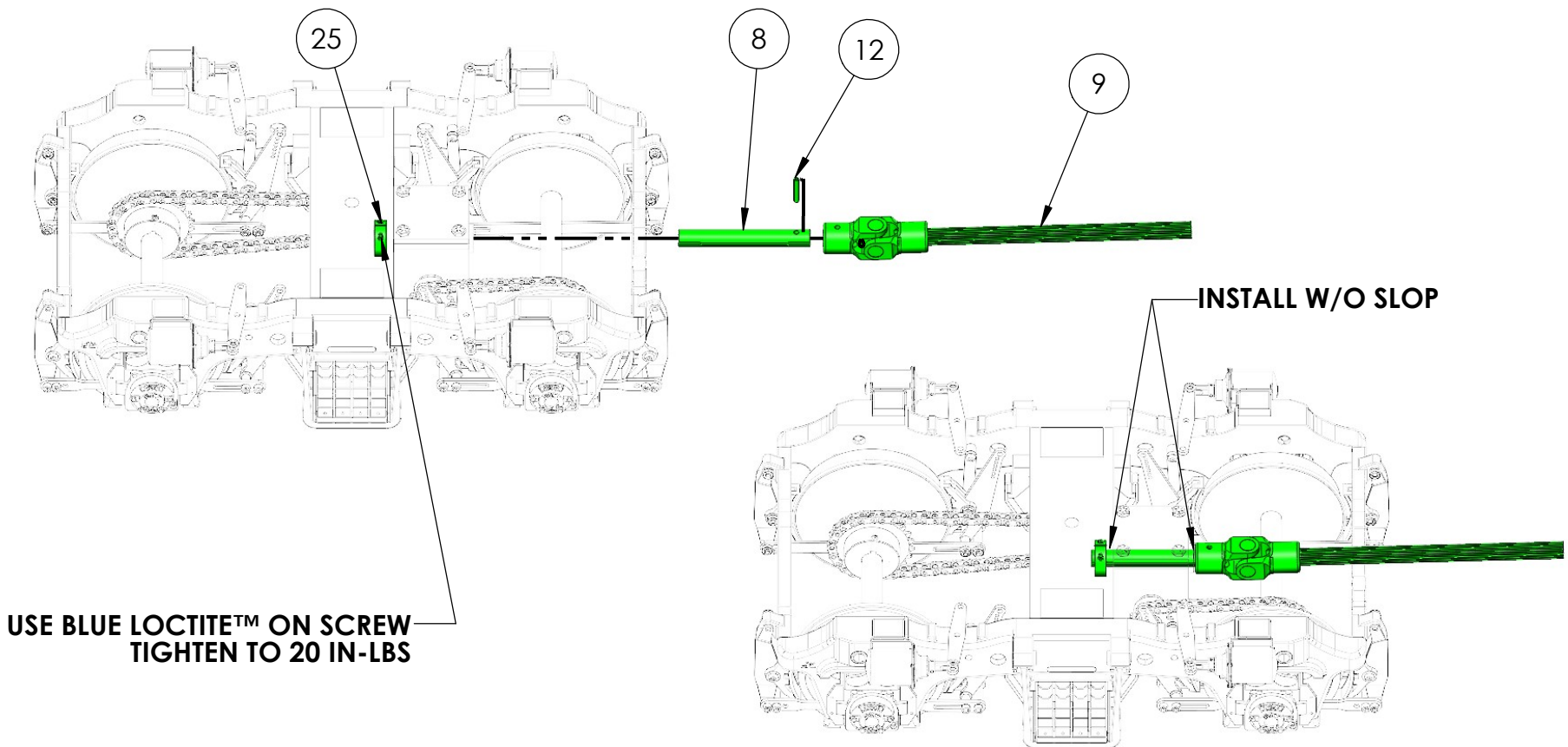
After welding, prepare for paint.



STEP 2: BLOMBERG TRUCK

Insert (8) into (9), and align 3/16" hole between parts. Install pin through parts. Insert assembly into gearbox on Blomberg truck, including keystone included with gearbox.

Install collar on end of shaft, ensuring no slop in shaft.

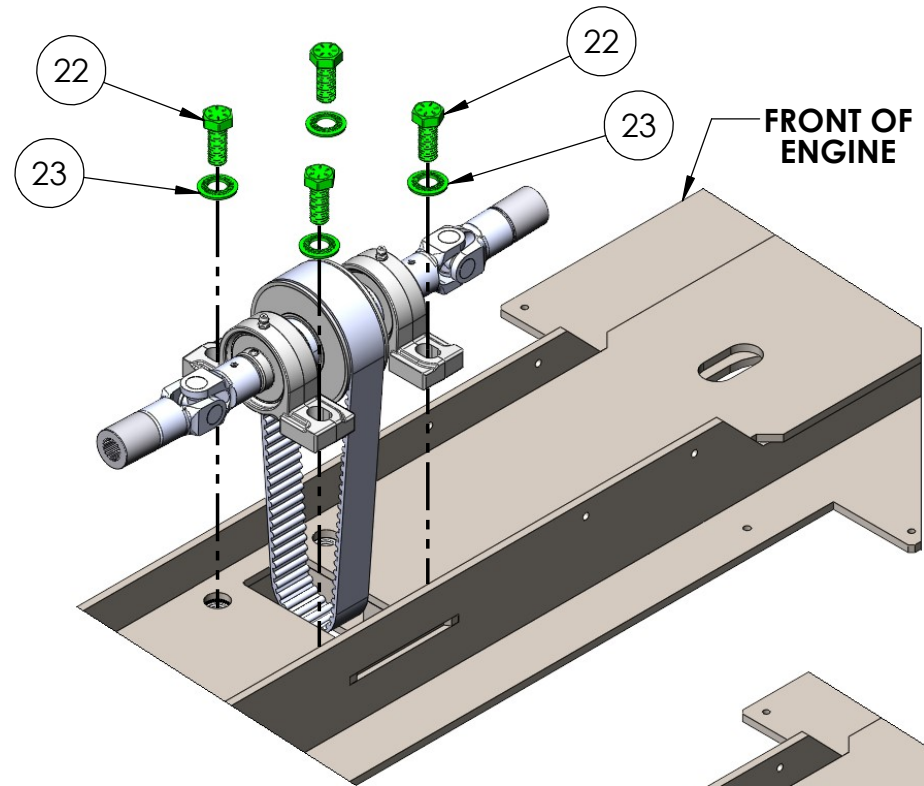


**USE BLUE LOCTITE™ ON SCREW
TIGHTEN TO 20 IN-LBS**

REPEAT 2X

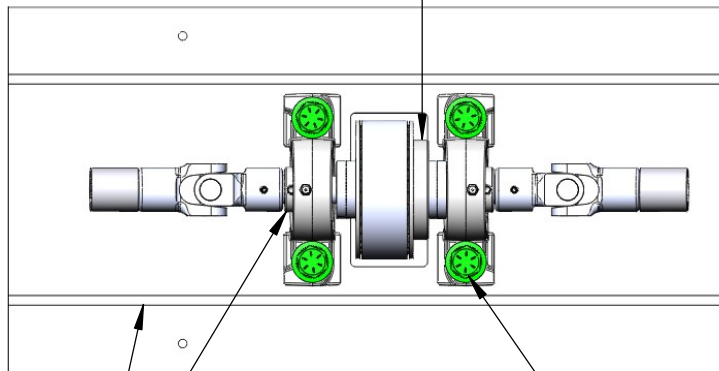
STEP 4: CENTER SHAFT TO FRAME

Assembly center shaft onto frame as shown below. Note orientation of pulley as shown in **Detail A** and align assembly parallel to frame sides.



NOTE ORIENTATION OF PULLEY
STEP TO FACE FRONT

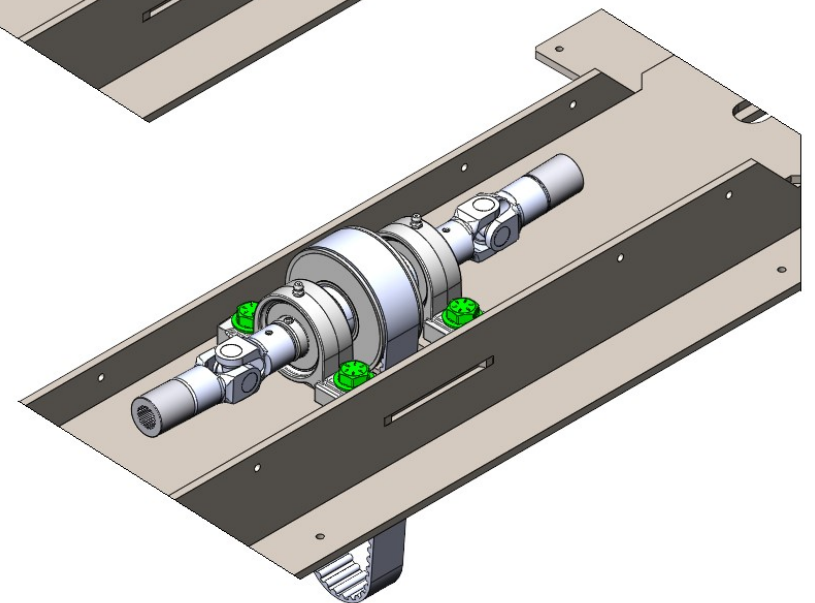
DETAIL A



FRONT OF
ENGINE

TORQUE TO 80 FT-LBS

ALIGN SHAFT AND ASSEMBLY
PARALLEL TO FRAME SIDES



STEP 5: BLOMBERG TRUCKS TO FRAME

Assemble trucks to frame and center shaft as shown below. Use grease on both sides of washer.

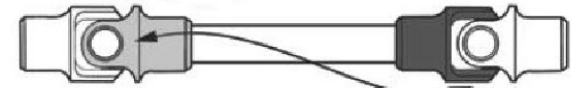
Phase U-Joints as shown in **Detail B**.

Use cotter pin from frame parts to retain trucks.

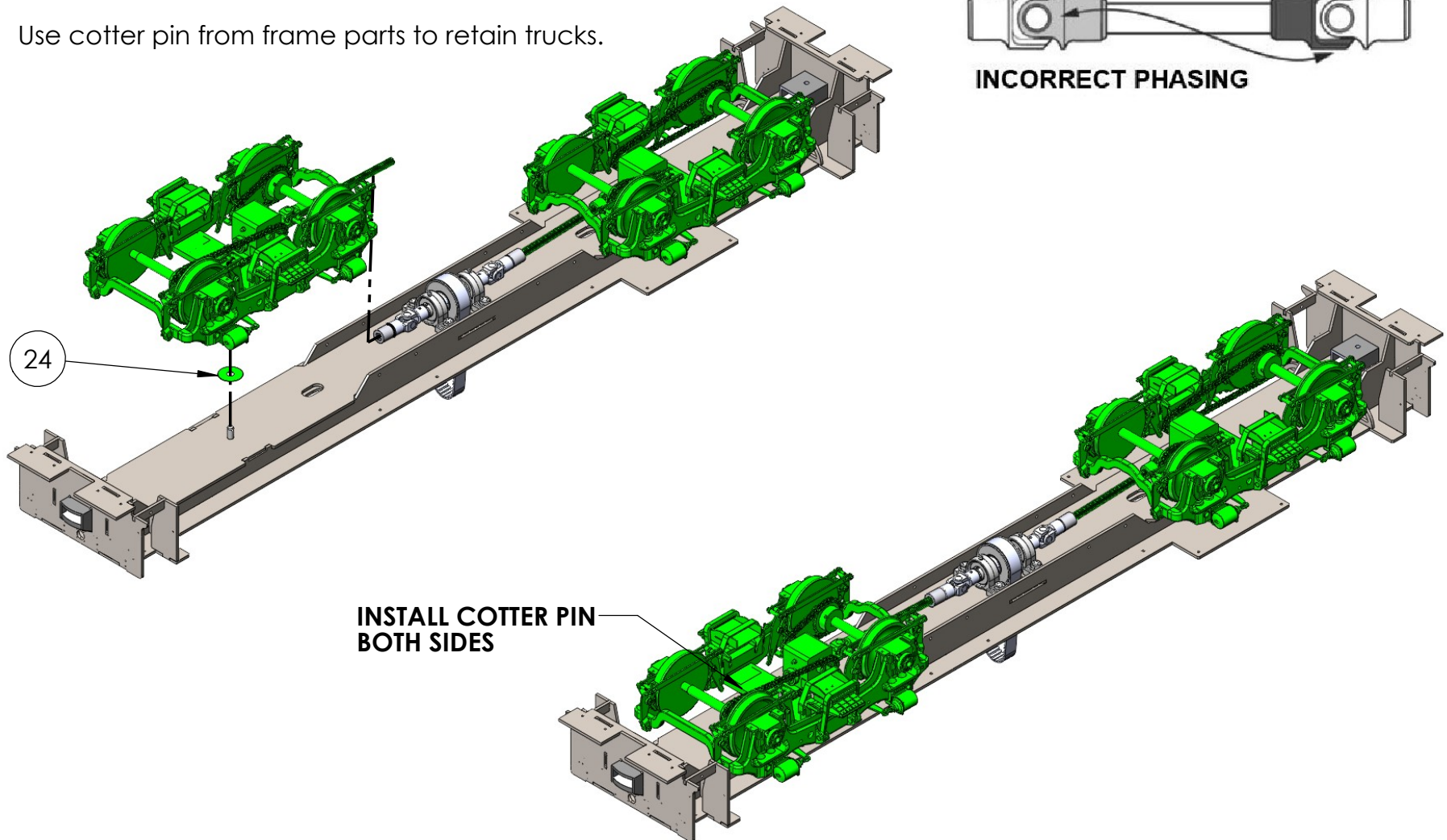
DETAIL B



CORRECT PHASING

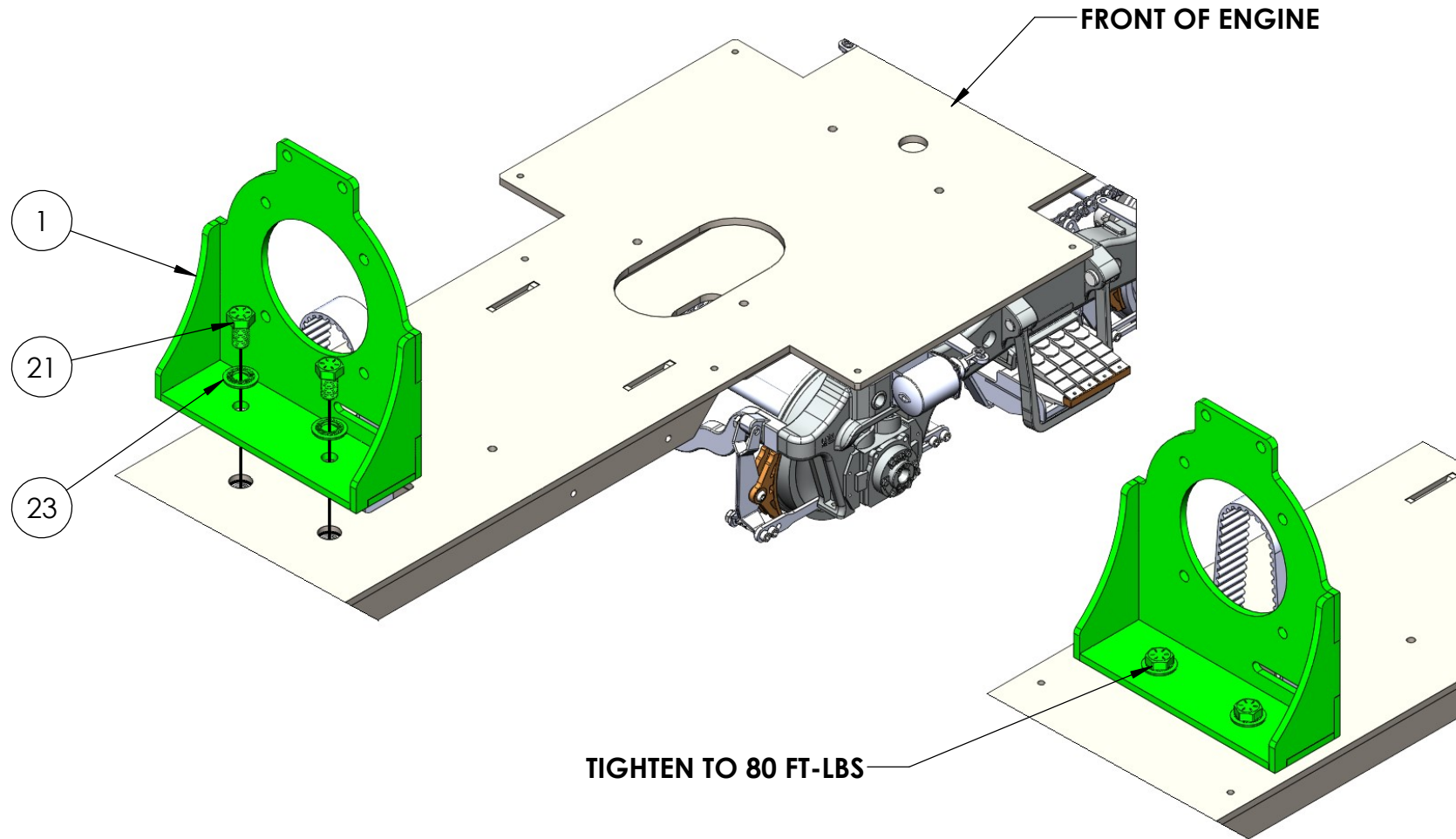


INCORRECT PHASING



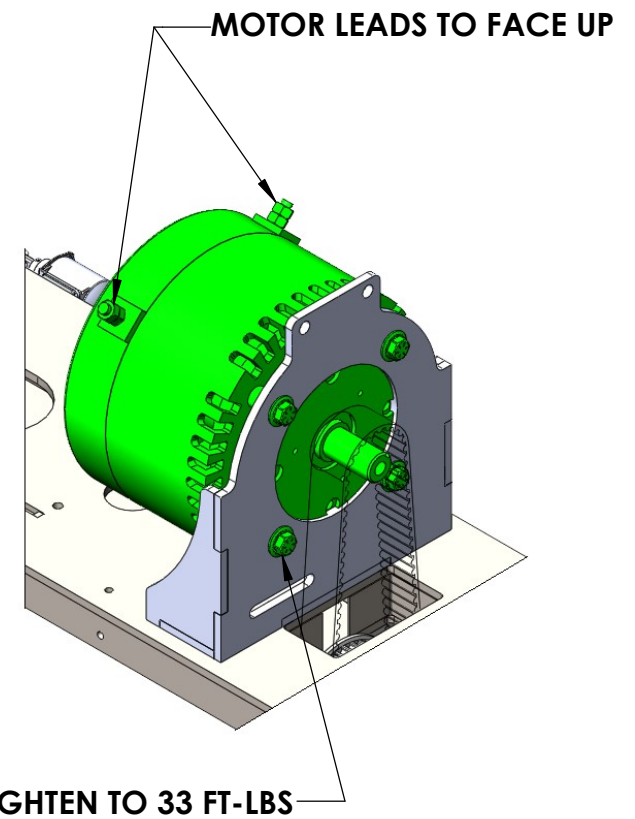
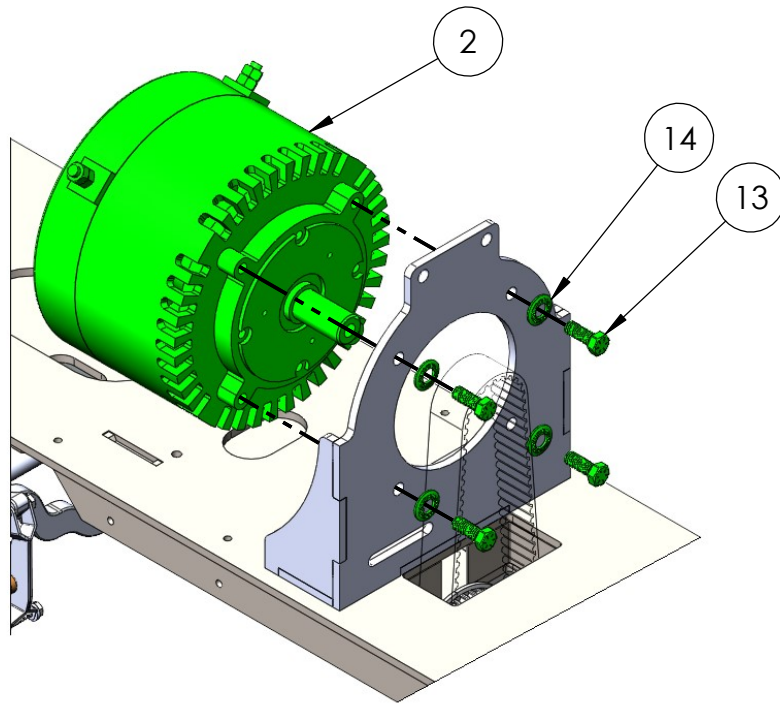
STEP 6: MOTOR BRACKET

Assemble motor bracket to frame as shown below.
Note orientation of bracket to front of engine.



STEP 7: MOTOR

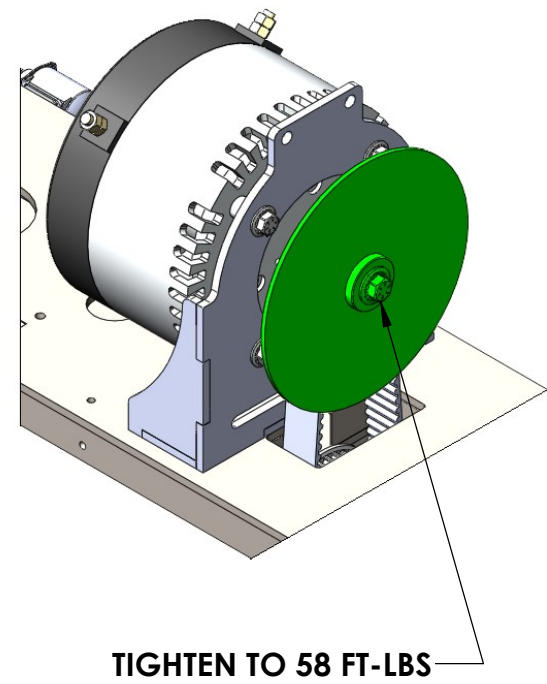
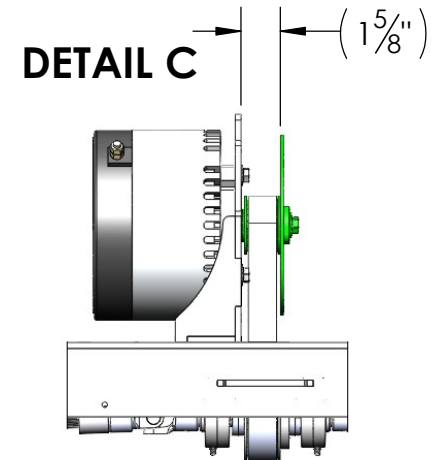
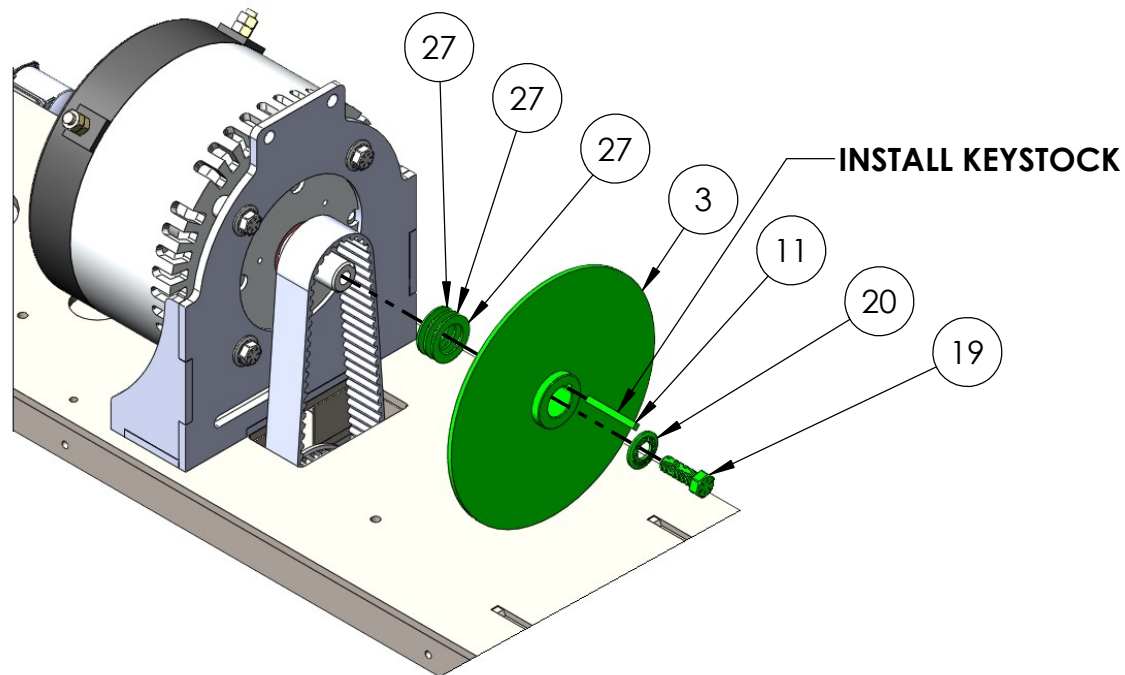
Assemble motor to bracket as shown below. Note orientation of motor leads.



STEP 8: MAIN PULLEY

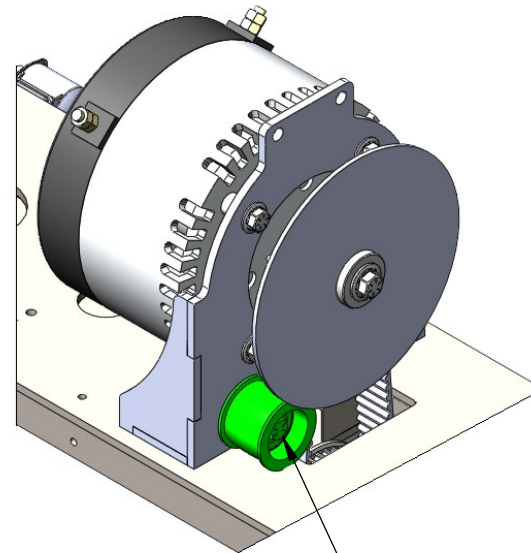
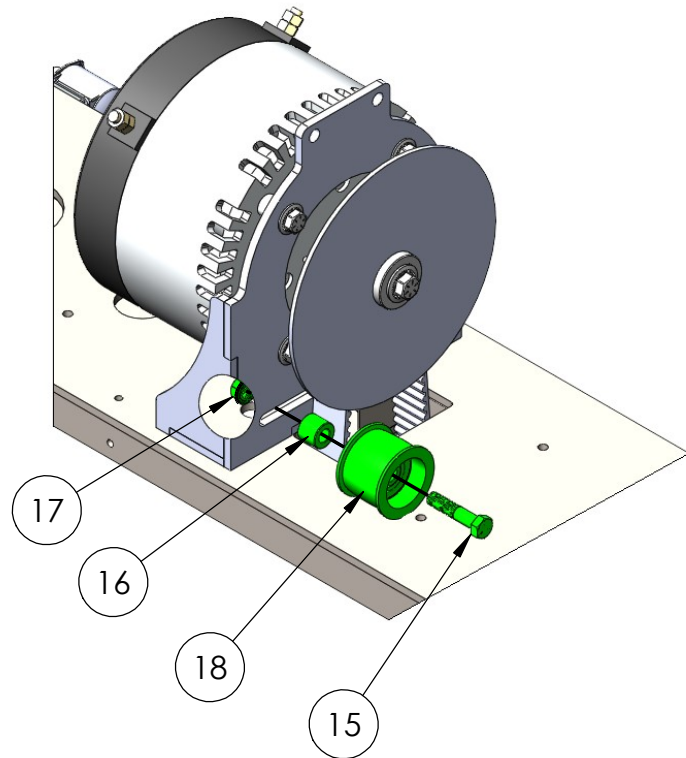
Assemble pulley to motor as shown below. Install belt over pulley. Adjust brake disc for alignment as shown in **Detail C**.

NOTE: Assemble keystone between pulley and shaft.



STEP 9: BELT TENSIONER

Assemble brake tensioner as shown below. Press tensioner into belt before final tightening.



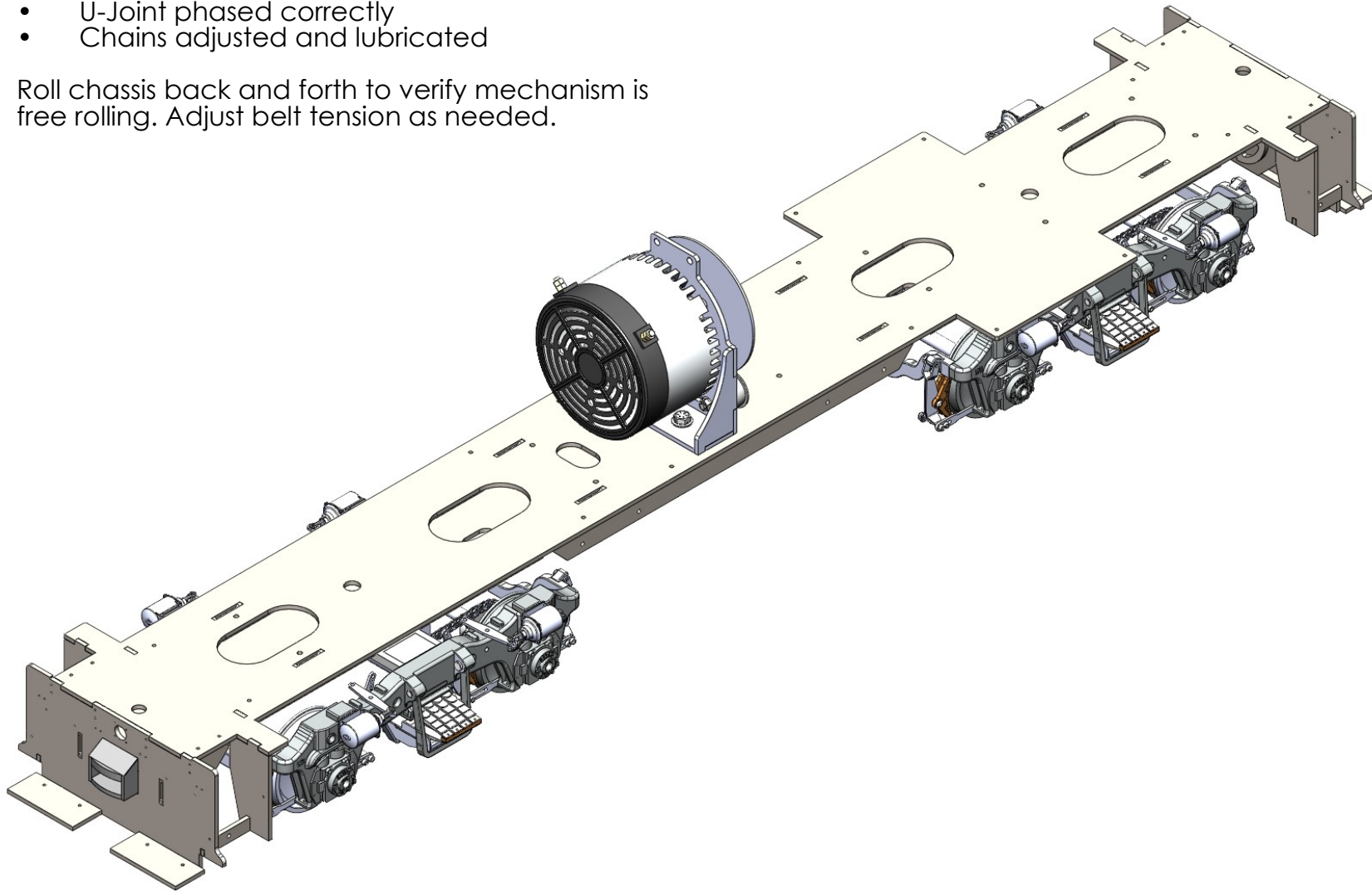
TORQUE TO 37 FT-LBS

FINAL OVERVIEW

Drive Train Checklist:

- Bolts tightened
- Pins installed
- Loctite™ on all set screws
- U-Joint phased correctly
- Chains adjusted and lubricated

Roll chassis back and forth to verify mechanism is free rolling. Adjust belt tension as needed.



FREQUENTLY ASKED QUESTIONS

Q: My frame isn't fitting together and there are gaps, what is going on?

A: Care was taken in the design to incorporate tab and slot construction to avoid having to use jigs or special clamps to hold items in the correct positions for welding but that also increases the locations for interferences to occur. Wiping down all the parts prior to welding is a good first step to remove grit from mating surfaces that may have accumulated from storage or the manufacturing process. Because of the laser cutting process used to cut out the parts, there may be some burrs on the corners. Use a file or grinder to remove them. Making sure to fit all the parts together before welding will help you locate where a problem is before items are welded together. During welding, weld BB's may get stuck to faces and should be grinded off as the steps are followed.