STV300 + GM1

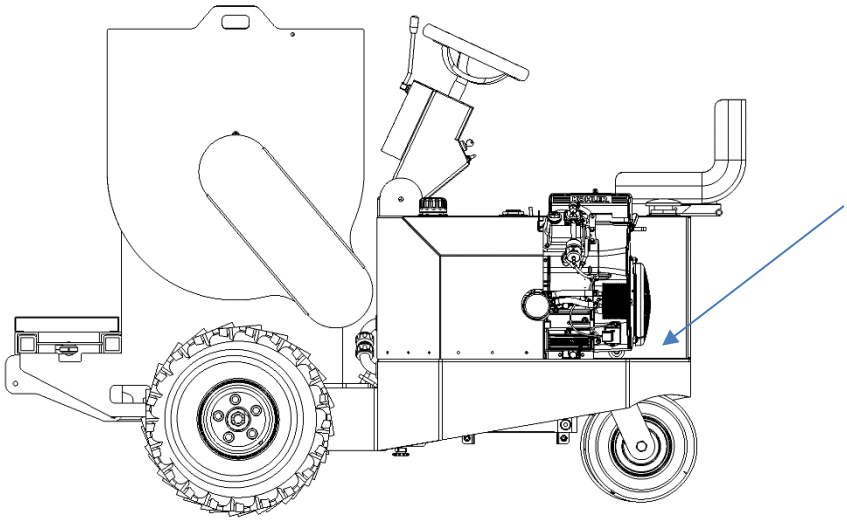
Operator's Manual

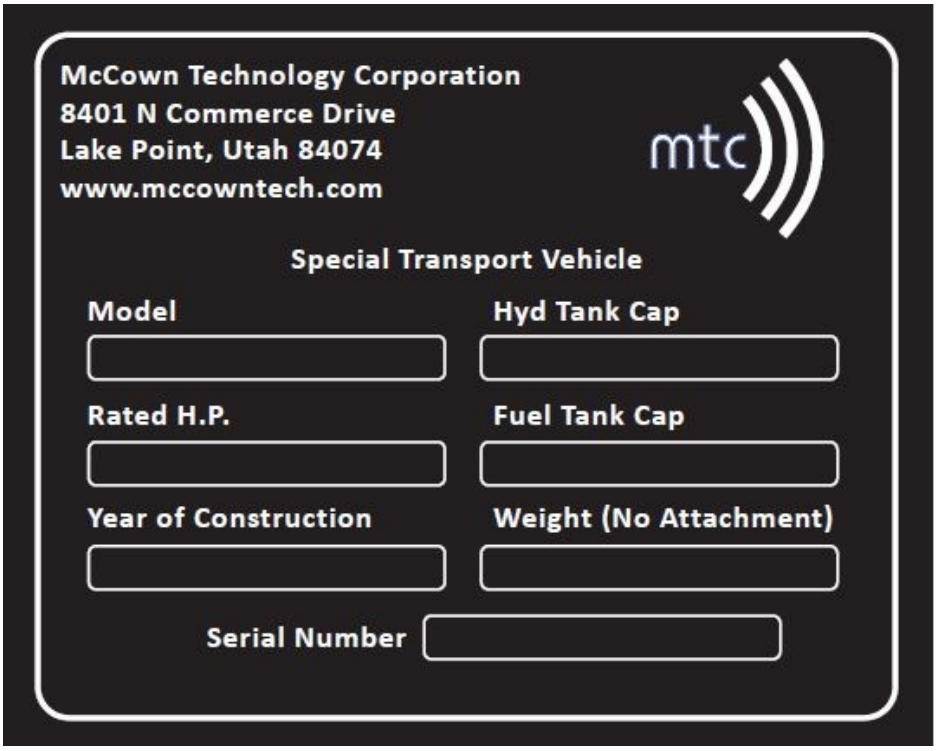
McCown Technology Corporation
8401 N Commerce Drive
Lake Point, Utah 84074
801-250-9503

www.mccowntech.com
www.microtrench.pro

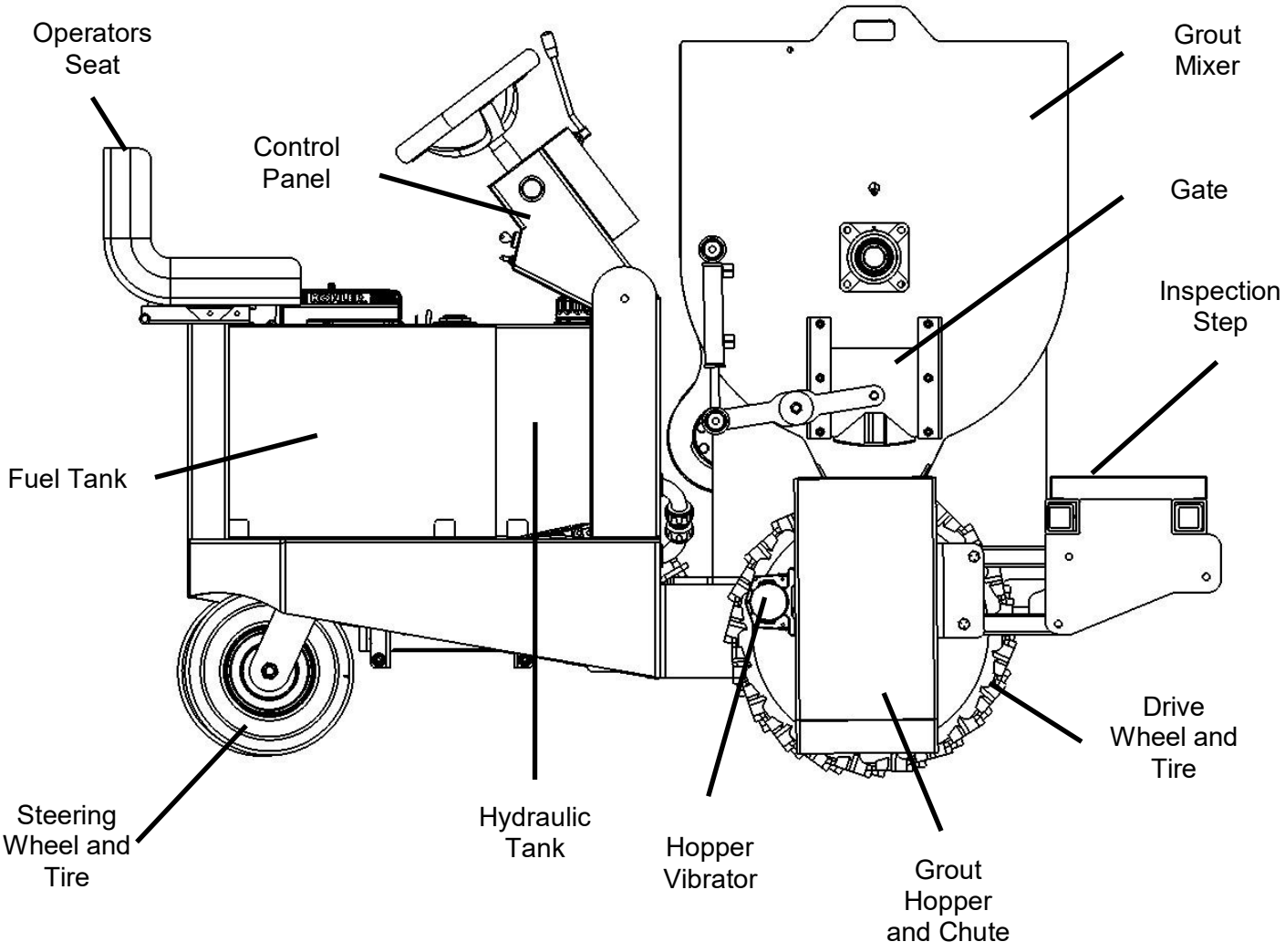
Name Plate Location

Serial numbers, date of manufacture and other information is found on the name plate on the chassis directly behind the engine.

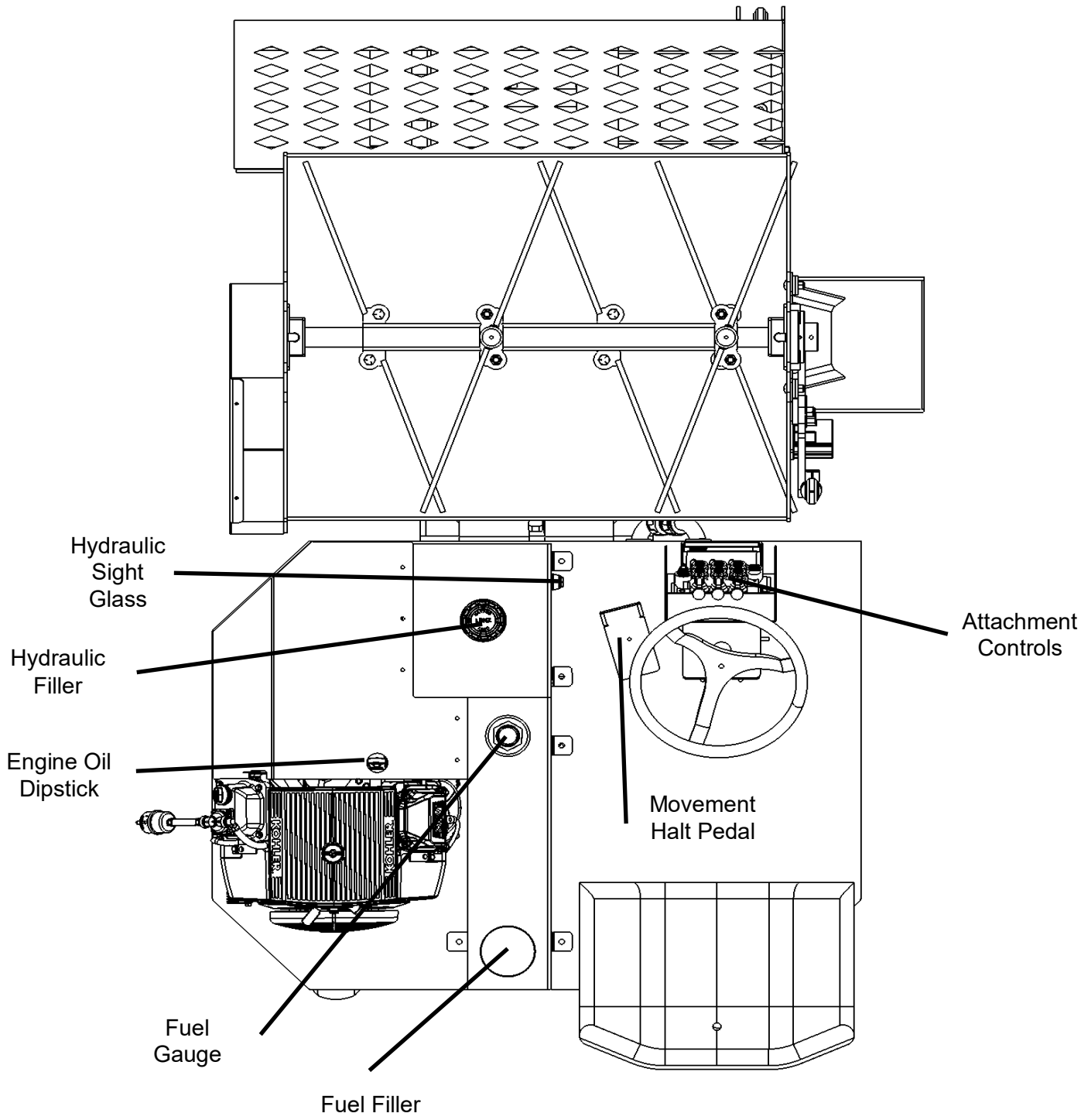


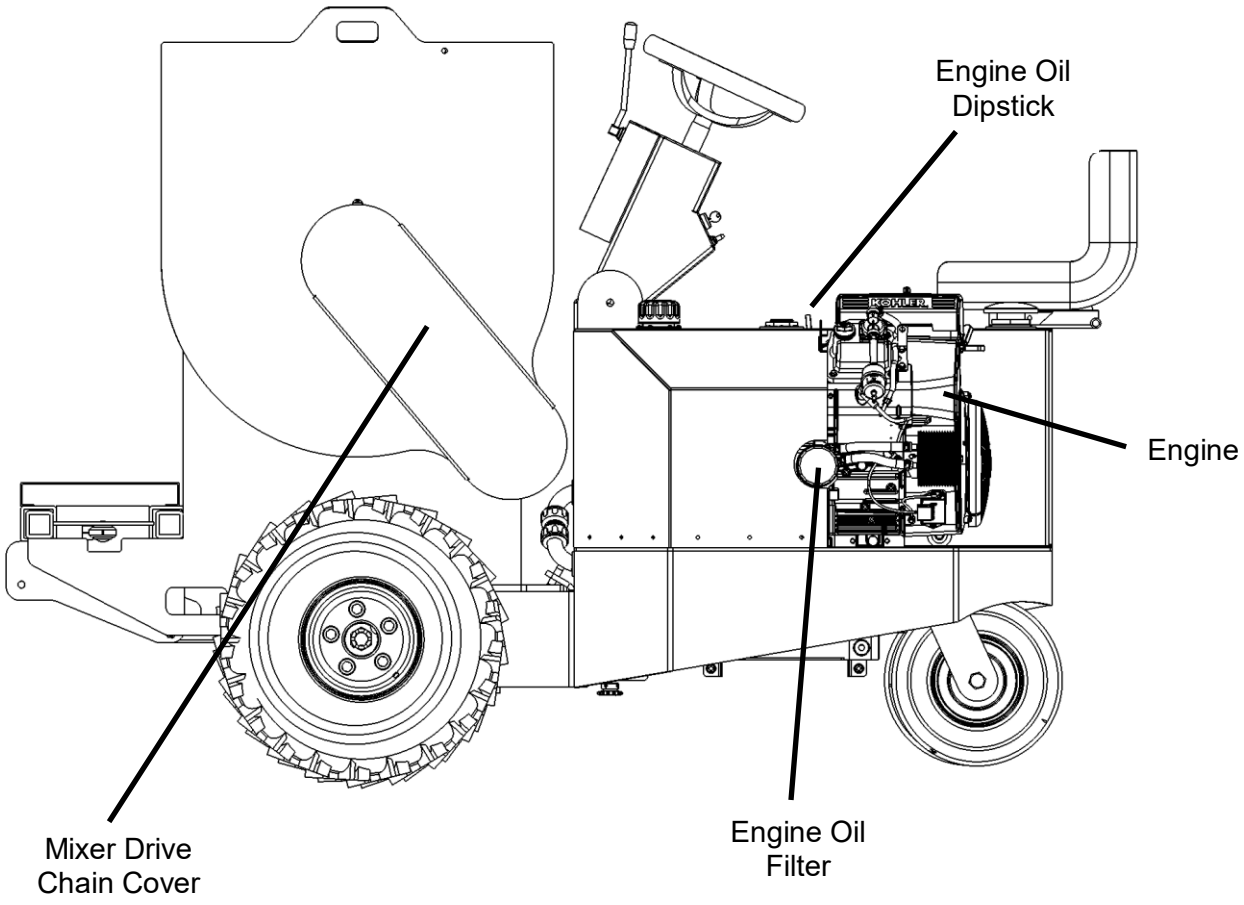


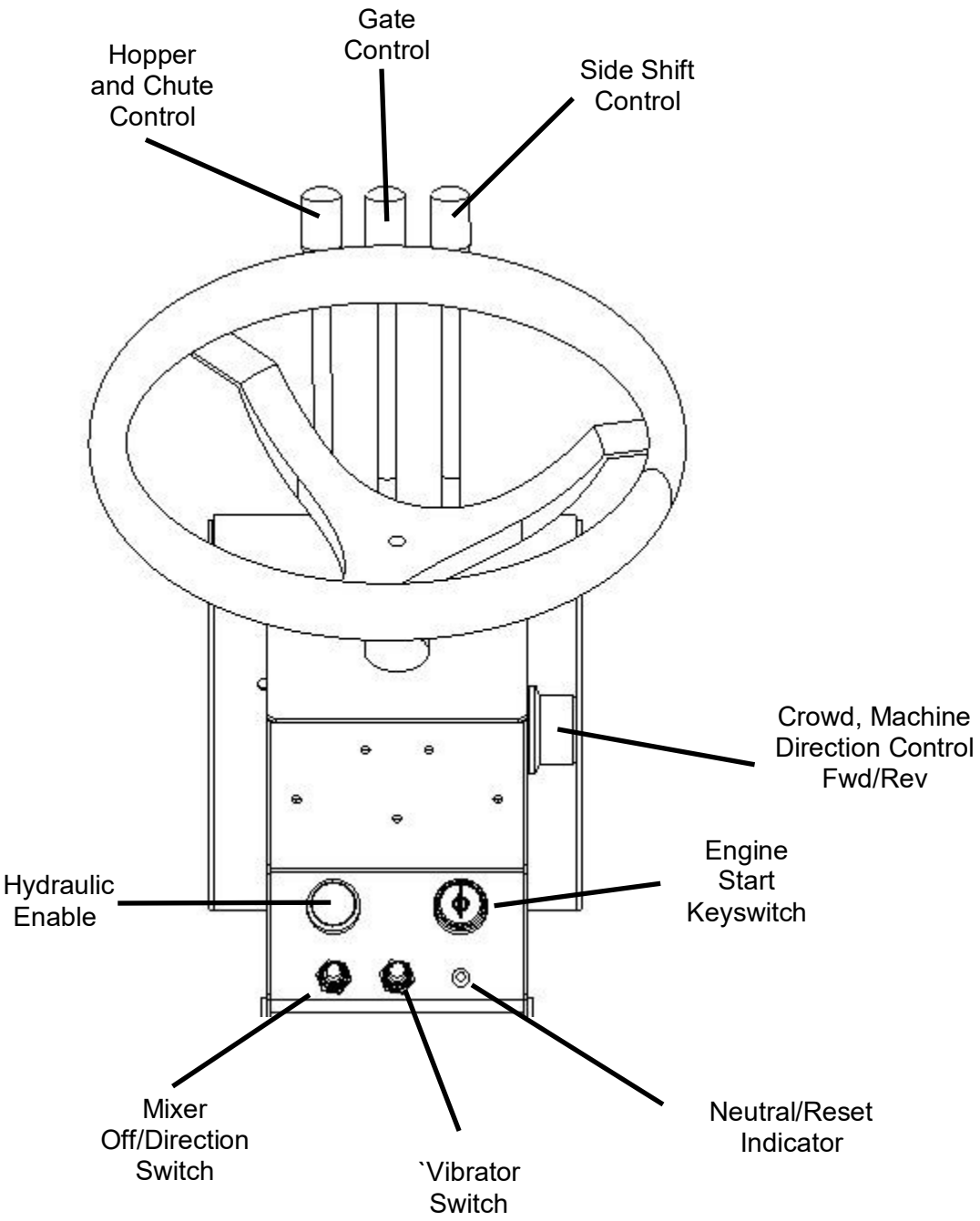
Unit Components



Gauges and Indicators




Engine Oil
Dipstick
Engine
Mixer Drive
Chain Cover
Engine Oil
Filter


Hopper and Chute Control
Gate Control
Side Shift Control
Crowd, Machine Direction Control Fwd/Rev
Engine Start Keyswitch
Hydraulic Enable
Mixer Off/Direction Switch
`Vibrator Switch
Neutral/Reset Indicator

Prepare

Check Materials and Prepare Machine

Supplies

- fuel
- lubricants

Fluid Levels

- fuel
- hydraulic fluid
- battery charge
- engine oil

Condition and Function

- filters (air, oil, hydraulic)
- pumps and motors
- hoses and valves
- signs, guards, and shields

Start Unit

1. Ensure crowd control knob is in the neutral. A center detent can be felt by rotating the control. When in neutral the indicator light should be illuminated.
2. Move throttle to 1/4 open.
3. Choke engine, if needed.
4. Turn ignition switch to start position and release when engine starts. Drive

General Operation

1. Rotate crow control knob to detent/neutral position. Watch for solid green light
2. Depress hydraulic enable button.
3. Operate chute/hopper control to raise the chute off ground.
4. Switch mixer and vibrator as needed.
5. Move ground crowd control knob to forward or reverse.
6. Adjust throttle as needed.
7. Steer with steering while as desired

Slope Operation Guidelines

- If transporting with the mixer loaded with grout, go slow. The machine is top heavy and will tip over if a rapid turn in attempted.
- Avoid starting, stopping, or turning on slopes. If you must turn, go very slow.
- Avoid parking unit on a slope. If parking on a slope cannot be avoided, lower front end and chock wheels.

Shut Down

1. Lower Chute/hopper to ground.
2. Turn crowd control to neutral position.
3. Throttle down. Turn ignition switch to OFF.
4. Remove key.

Service brake: ground drive speed/direction control brakes machine hydraulically when moved to neutral position

Transport

Lift

Points

Lifting points are identified by loading document. Lifting at other points is unsafe and can damage machinery. The machine can be slung from the tie down points in the front and back.

Lift

Procedure

Use a hoist capable of supporting the equipment's size and weight. See “Specifications” or measure and weigh equipment before lifting.

Haul

Load

Start engine and slow to low throttle.

1. Pull front end lift control to raise front end clear of trailer, but keep it low.
2. Move unit to rear of trailer and align with ramps.
3. Move ground drive control forward and slowly move unit onto trailer until tiedown position is reached.

NOTICE:

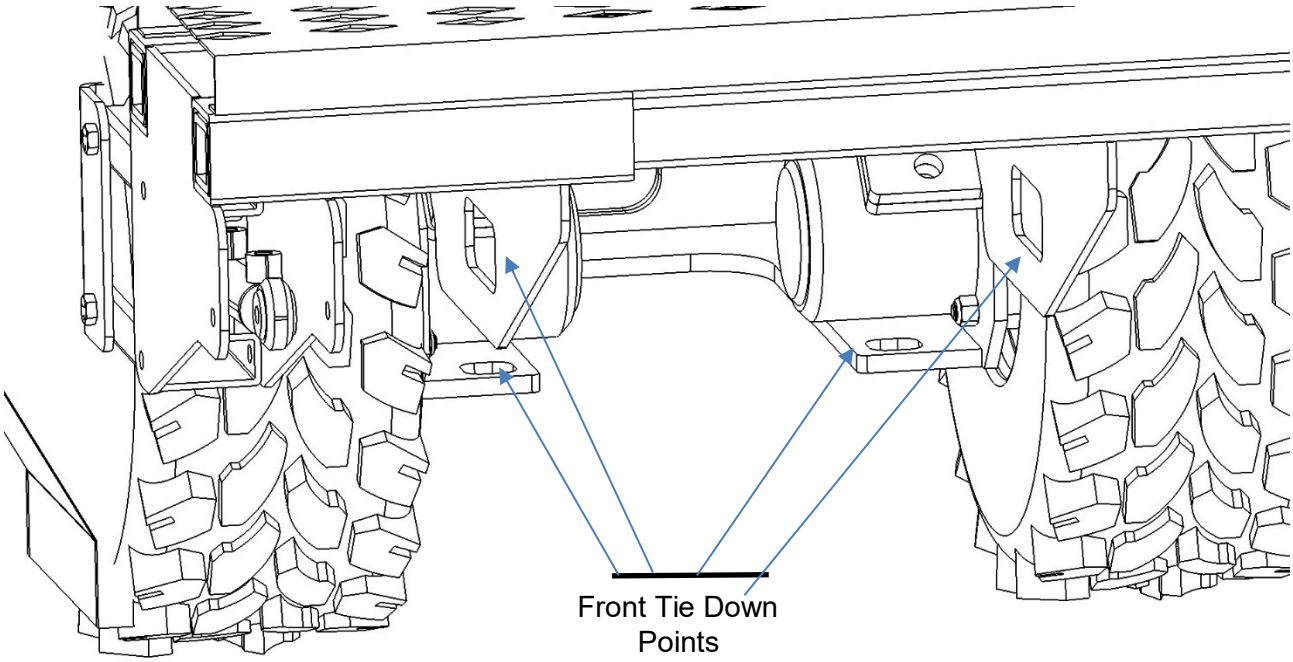
- If loading onto tilt-bed trailer, be prepared for trailer bed to tilt.
- Move all controls to neutral position when stopped.

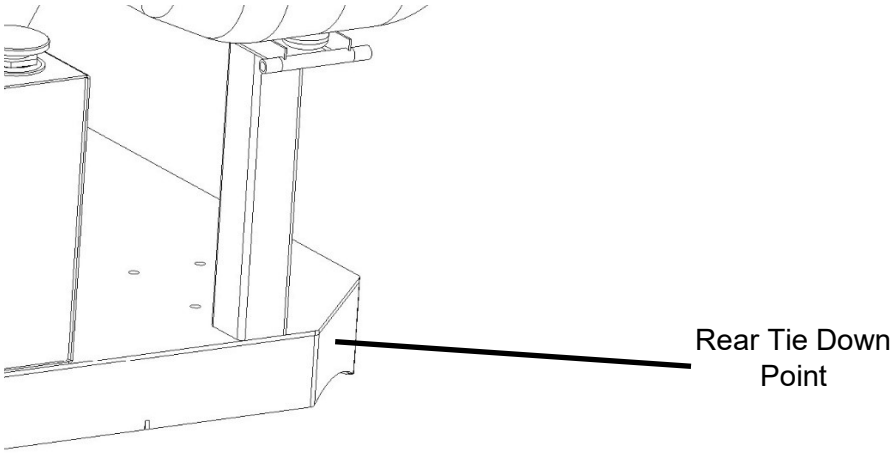
4. Push front end lift control to lower front end to trailer bed.
5. Engage parking brake and turn ignition switch to OFF.
6. Close fuel tank shutoff valve (shown).
7. Tie down unit.

Tie Down

Points

Front tie down points are holes in the lower edge of the front chassis and mixer tub and the seat post in the back of the machine.





Unload

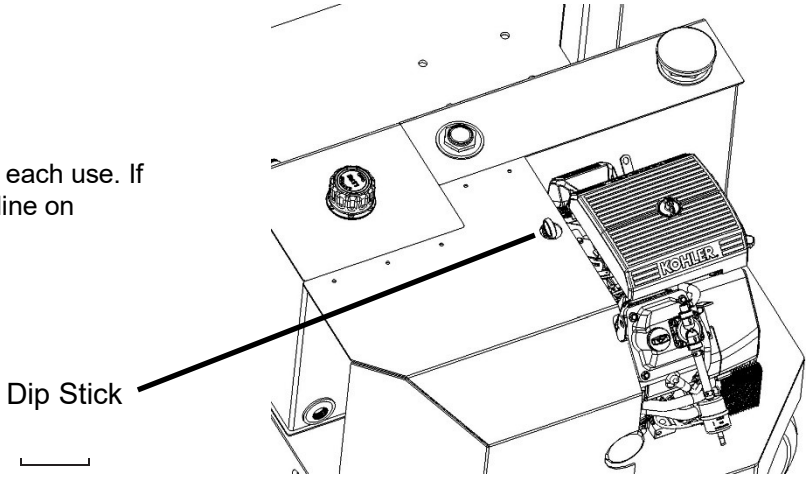
1. Lower trailer or ramps and remove tiedowns.
2. Open fuel tank shutoff valve.
3. Start engine.
4. Pull use lift control to raise the chute
5. Slow engine to low throttle and slowly back unit down trailer or ramps.

If unloading from a tilt-bed trailer, be ready for it to tilt and do not overreact.

Each Use

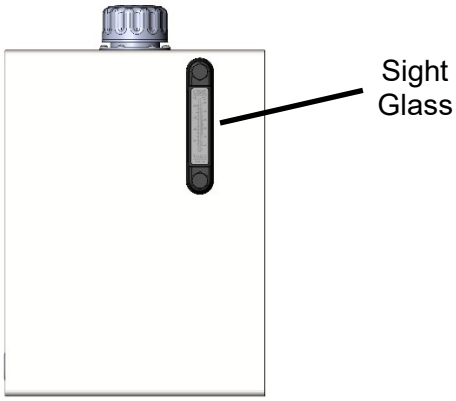
Check Engine Oil Level

Check engine oil at dipstick before each use. If low, add until oil level is at highest line on dipstick



Check Hydraulic Fluid Level

Check hydraulic fluid level at sight glass before each use. If low, add fluid until level is at halfway point on sight glass.



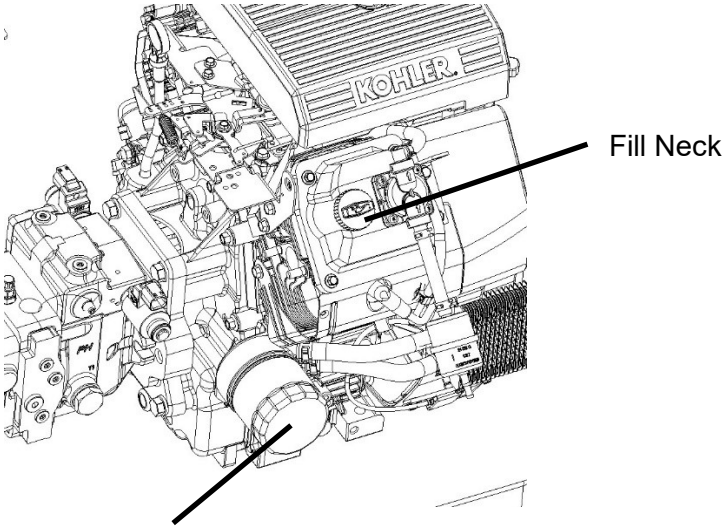
Check Tires

All tires are hard foam filled. Check tires for tread Wear and replace as necessary.

Change Engine Oil and Filter

Change engine oil and filter after the first 20 hours of operation.

1. Move drain hose to front of unit and drain while oil is still warm.
2. Replace plug.
3. Install new filter
4. Add 2 qt (1.9 L) of oil at fill neck.

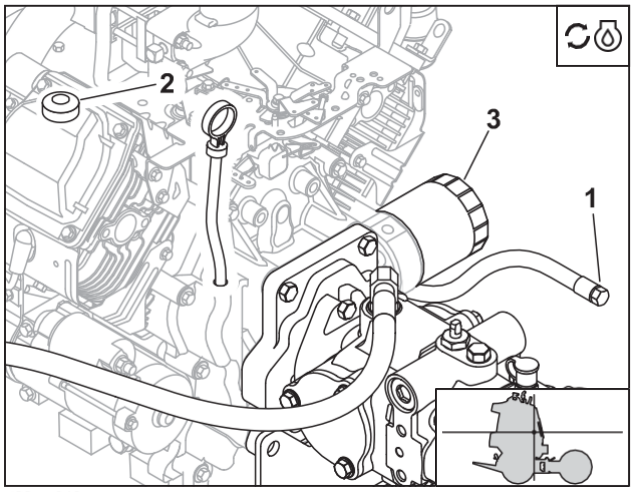


50 Hour

Change Engine Oil and Filter

Change engine oil and filter every 100 hours.

1. Move drain hose (1) to front of unit and drain while oil is still warm.
2. Replace plug.
3. Install new filter (3).
4. Add 2 qt (1.9 L) of GEO at fill neck (2).



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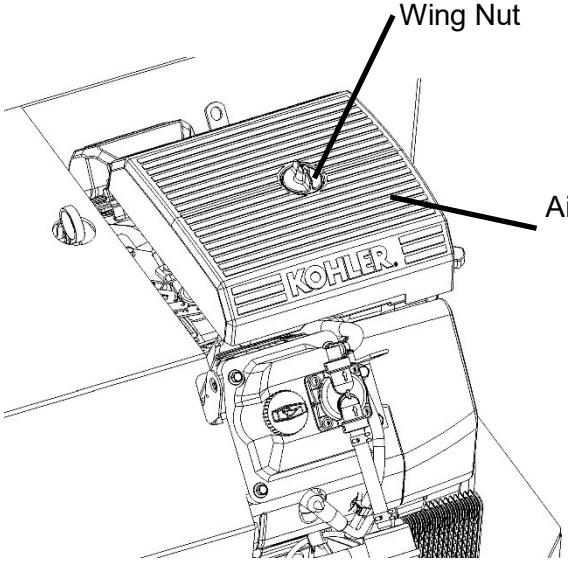
Change Air Filter

Change air filter elements every 100 hours.

To change:

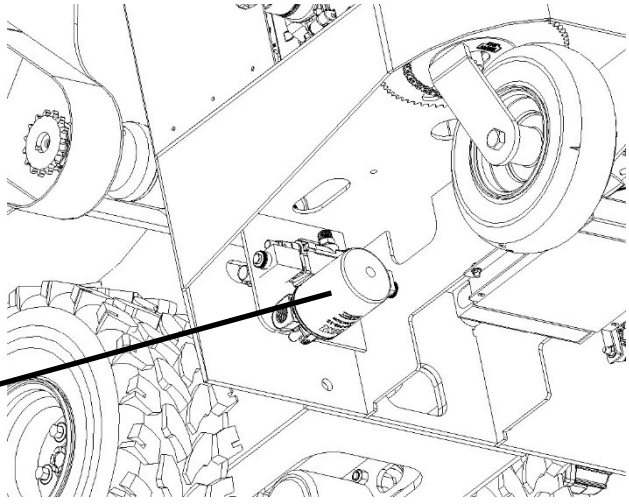
1. Remove wing nut and air cleaner cover.
2. Remove filter element.
3. Reverse procedure to install new filter. Ensure gasket is seated properly.



Change Hydraulic Fluid and Filter

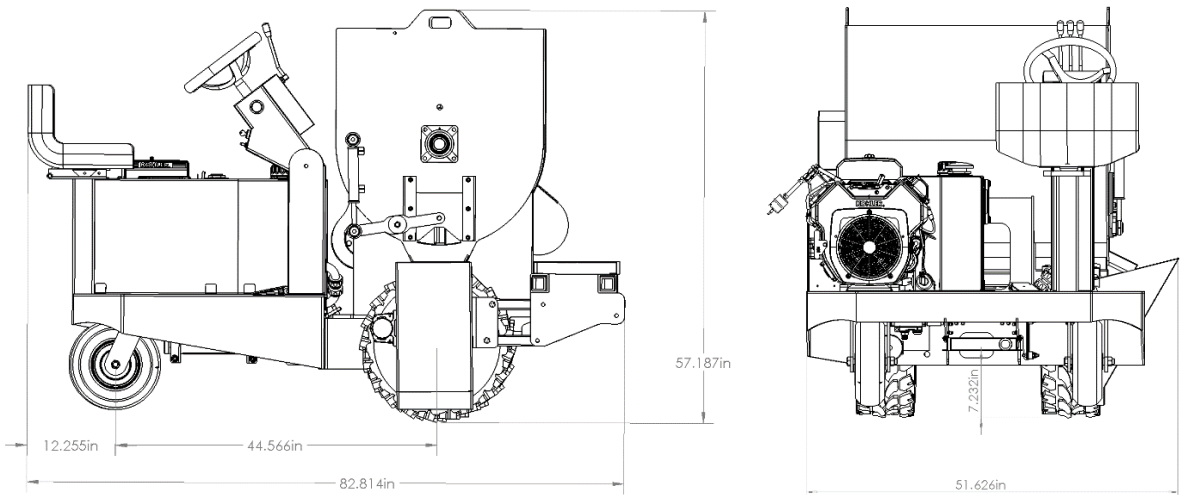
Change hydraulic fluid and filter every 250 hours.

1. Drain hydraulic fluid at drain.
2. Replace plug.
3. Change filter (shown).
4. Add fluid at filler on tank until level is at halfway point on sight glass.



Change Fuel Filter

Close fuel tank shutoff (top illustration) and change fuel filter (bottom illustration) every 200 hours. Open fuel tank shutoff before operating unit.



Dimensions		U.S.	Metric
Overall Length	82.8 in	2.1 m	
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Wheelbase	44.6 in	1.13 m	
Height	57.2 in	1.36 m	
Ground clearance	5.375 in	137 mm	
Overall Width	51.6 in	1.11 m	
Mass	1900 lb	727 kg	
Turning Radius	Right turn	11.3 ft	3.44 m
Turning Radius	Left turn	11.3 ft	3.44m
Operation (based on 18" tires)	**U.S.**	**Metric**	
Ground drive speed	9 Mph	14 kmh	

Power	U.S.	Metric
Engine: Kohler CH730, gasoline		
Cooling medium	air	
Number of cylinders	2	
Displacement	44.24 in^3	725 cc
Bore	3.3 in	83 mm
Stroke	2.6 in	67 mm
Manufacturer's power rating	23.5	17.5 kW
Rated speed	3600 rpm	3600 rpm

Tires		U.S.	Metric
Urethane filled 20 X 10-8, 4 ply, bar lug			
	Pressure	n/a	n/a
	Tire assembly mass	49 lb	22.23 kg

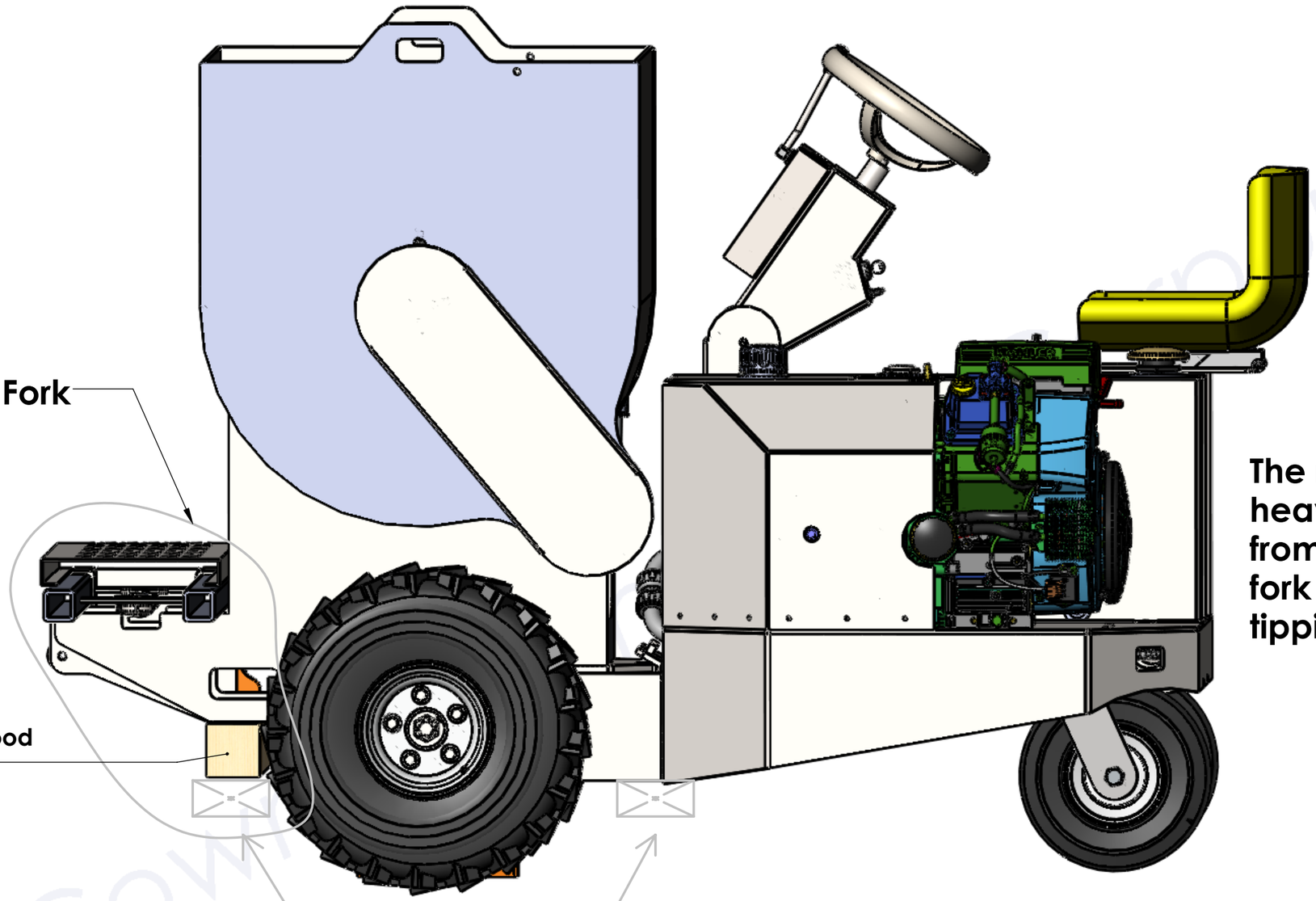
Hydraulic System	U.S.	Metric
Auxiliary: gear pump		
Flow rate	6.23 gpm	23.4L/min
Pressure	3625 psi	250 bar
Ground drive: hydrostat		
Flow rate	17 gpm	64.3 L/min
Pressure	3045 psi	210 bar

Fluid Capacities	U.S.	Metric
Fuel tank	8.3 gal	31.4 L
Engine oil, with filter	2 qt	1.9 L
Hydraulic reservoir	7.2 gal	27.2 L
Total hydraulic system volume	8.5 gal	32.2 L

Battery
SAE reserve capacity 32 min, SAE cold crank @ 0°F (-18°C) 200 amp

Trail wheel: urethane filled 16 X 6.5-8, 2 ply, bar lug

Tire assembly mass	49lb	22.23 kg



The machine is back heavy. The strap from the front step to the fork will prevent it from tipping

Set fork spacing between 24 and 28 Inches Center to Center

NEXT ASSY	USED ON	FINISH	
APPLICATION		DO NOT SCALE DRAWING	

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL

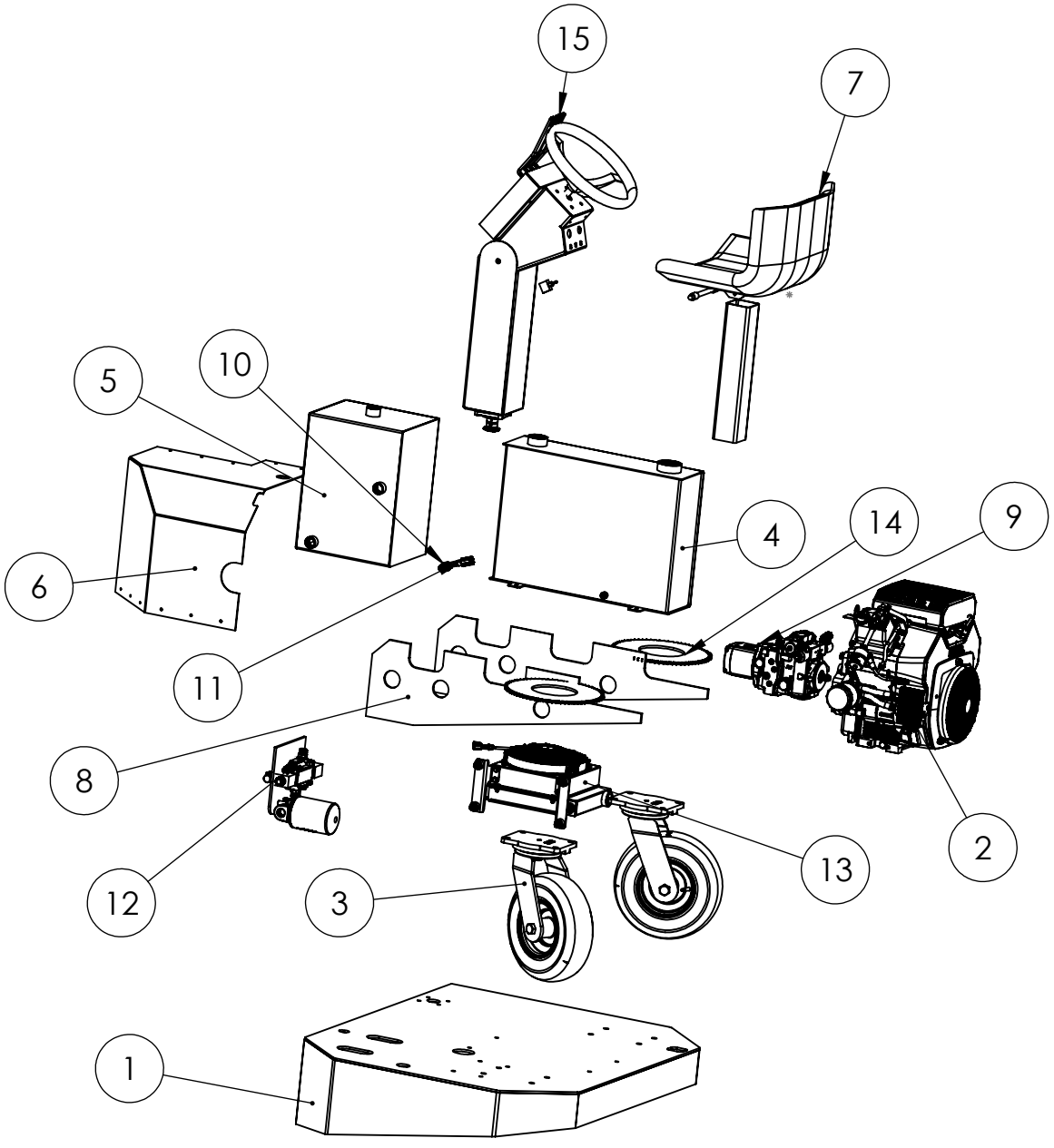
	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

801-250-9503
8401 N
Commerce Dr
Lakepoint
Utah 84074

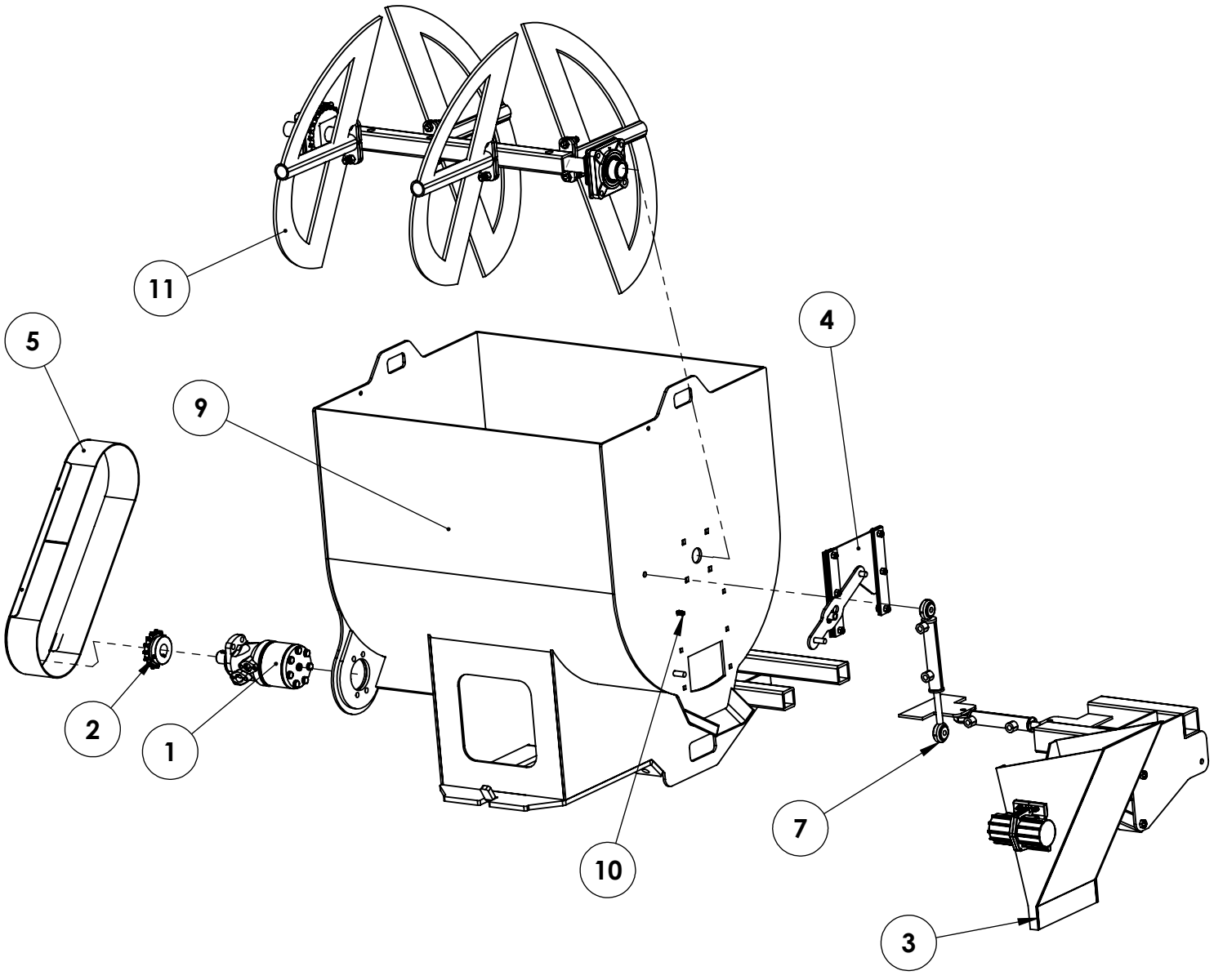
TITLE:

SIZE	DWG. NO.	REV
B	Forklift Loading and Unloading	
SCALE: 1:32	WEIGHT:	SHEET 1 OF 1

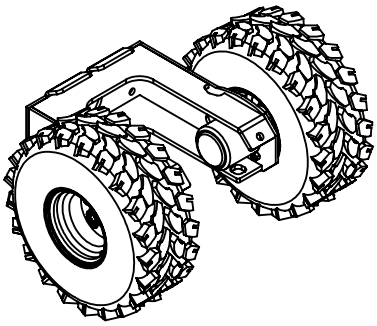
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	860-Back Chassis Assembly	MTC	1
2	760-Kohler EKCH 730-3003 Engine with ring asm (2)	PA-CH730 3003	1
3	760-Caster-S-70124-PR	Hamilton S-7012 Castor filled tires	2
4	860-Gas Tank Combo Assembly Rev 3		1
5	860- Hyd Tank Assy Rev 2		1
6	861-1 x 14 ga Hood Rev 2		1
7	760-Seat Assembly		1
8	861-2 x .250 Gusset Plate Rev 4		2
9	760-Poclain Traction Pump	PM10A18S1P120828R2007A6.5	1
10	6407T859_O-Ring Face Seal Fitting		1
11	630-FFX90-08-08-43		1
12	860-Grout Pump Valve Plate		1
13	760-HY016.1-02A	Hydra Pak Hyd Oil Cooler	1
14	861-.250 Hardox 70 Tooth Sprocket	MTC	2
15	860-Steering Col Chain Dr Assy	Default	1

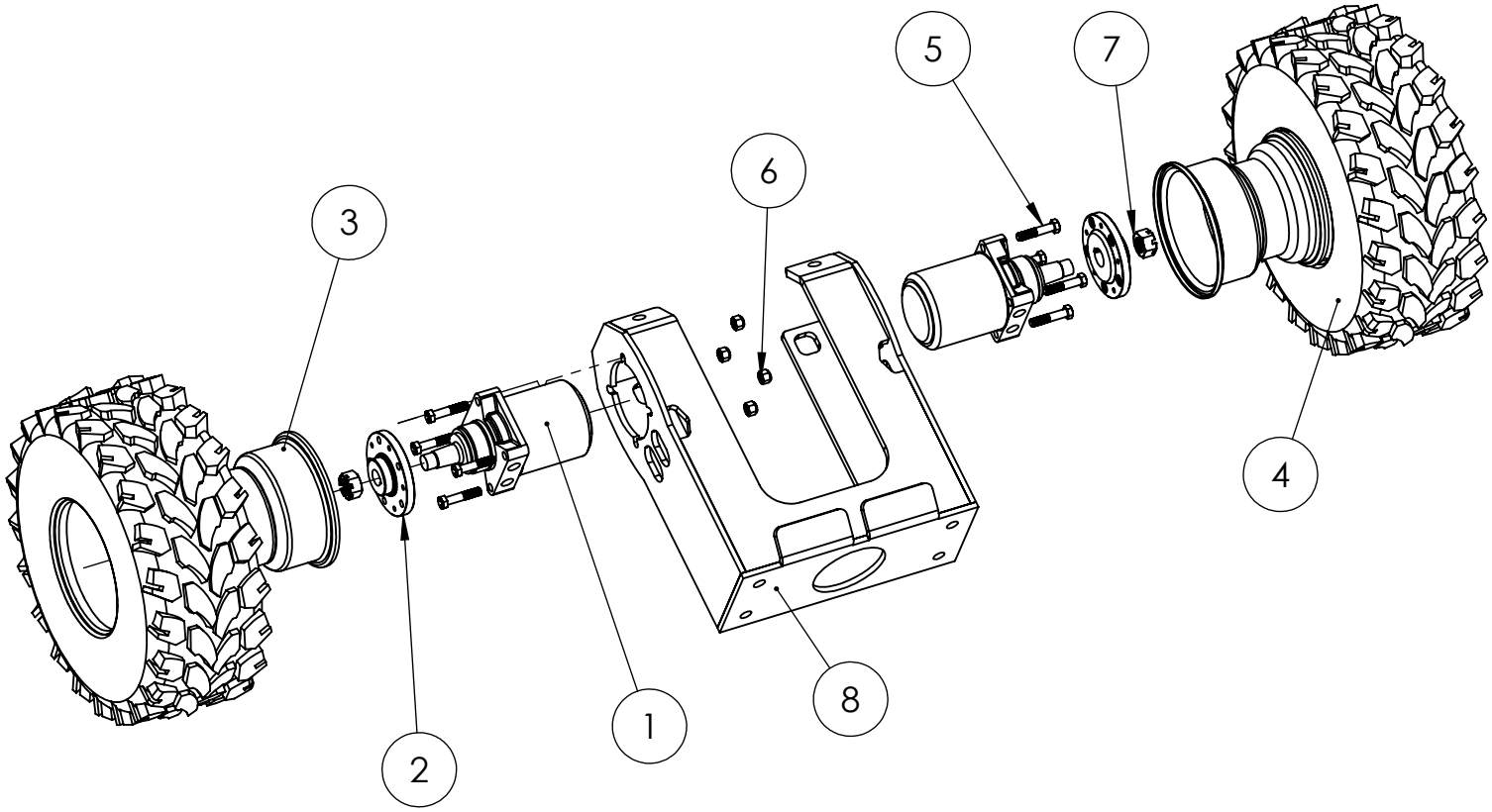


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	760-BMH-500-4-G-S-HPS	BMH-500-4-G-S-HPS Hyd Motor	1
2	760-60BS15 15 Tooth Sprocket	Default	1
3	860-Step Assembly		1
4	860-Door and Slide Assembly		1
5	860-Chain Guard Rev 2		1
6	90 Degree ORS		2
7	760-WWSB1004-S	1" bore x 4" stroke Prince Swivel Eye hydraulic cylinder	1
8	Chain Guard Rev 2		1
9	860-Bare Tub Assembly		1
10	050-.375-16X1.5 ZCB		1
11	860- Mixer Bar - Sprocket - Bearings - Seals Assy		1

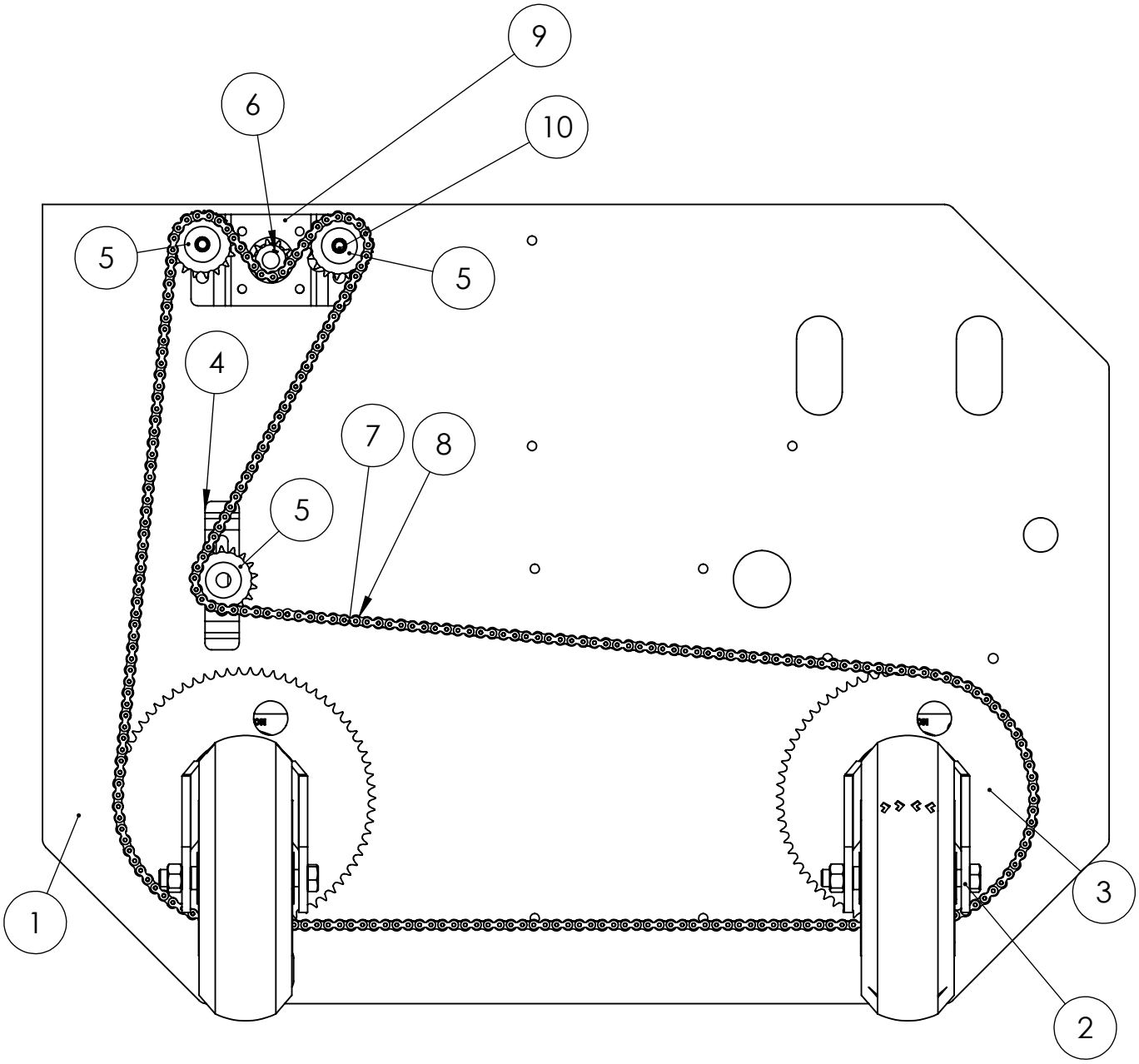


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	760-tg0335us080aaab	Parker TG Series Hydraulic Motor	2
2	861-Wheel Hub	Wheel Hub 5 Bolt 1-1/4" Tapered	2
3	760-8 x 7-5 4.5 Rim	Steel Trailer Wheel - 8" x 7" Rim - 5 on 4-1/2 - White 1040 lbs load	2
4	760-20 x 10-8 4pr Tire	SunF 20x10-8, 6 PR, Foam Filled	2
5	.500-13 x 2.5 Grade 5 Zinc Plated (1)	1/2 - 13 x 2.5" Hex Bolt Zinc	8
6	.500-13 Nylock	1/2 - 13 Steel Nylon Locknut	8
7	1-20 NEF Grade 8 Lock Nut	1-20 NEF Slotted Hex Nut Gr 8	2
8	860-Bare Front Chassis ASM	MTC Manufactured Part	1

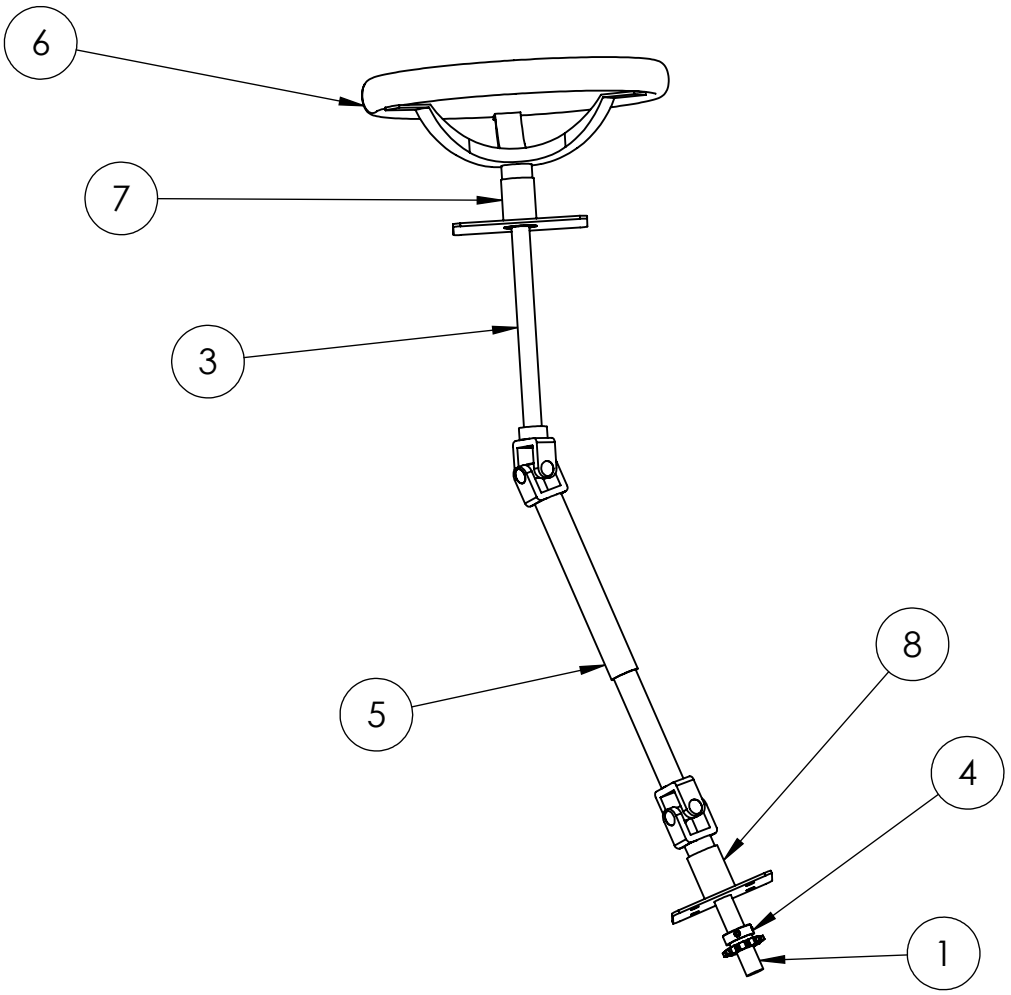




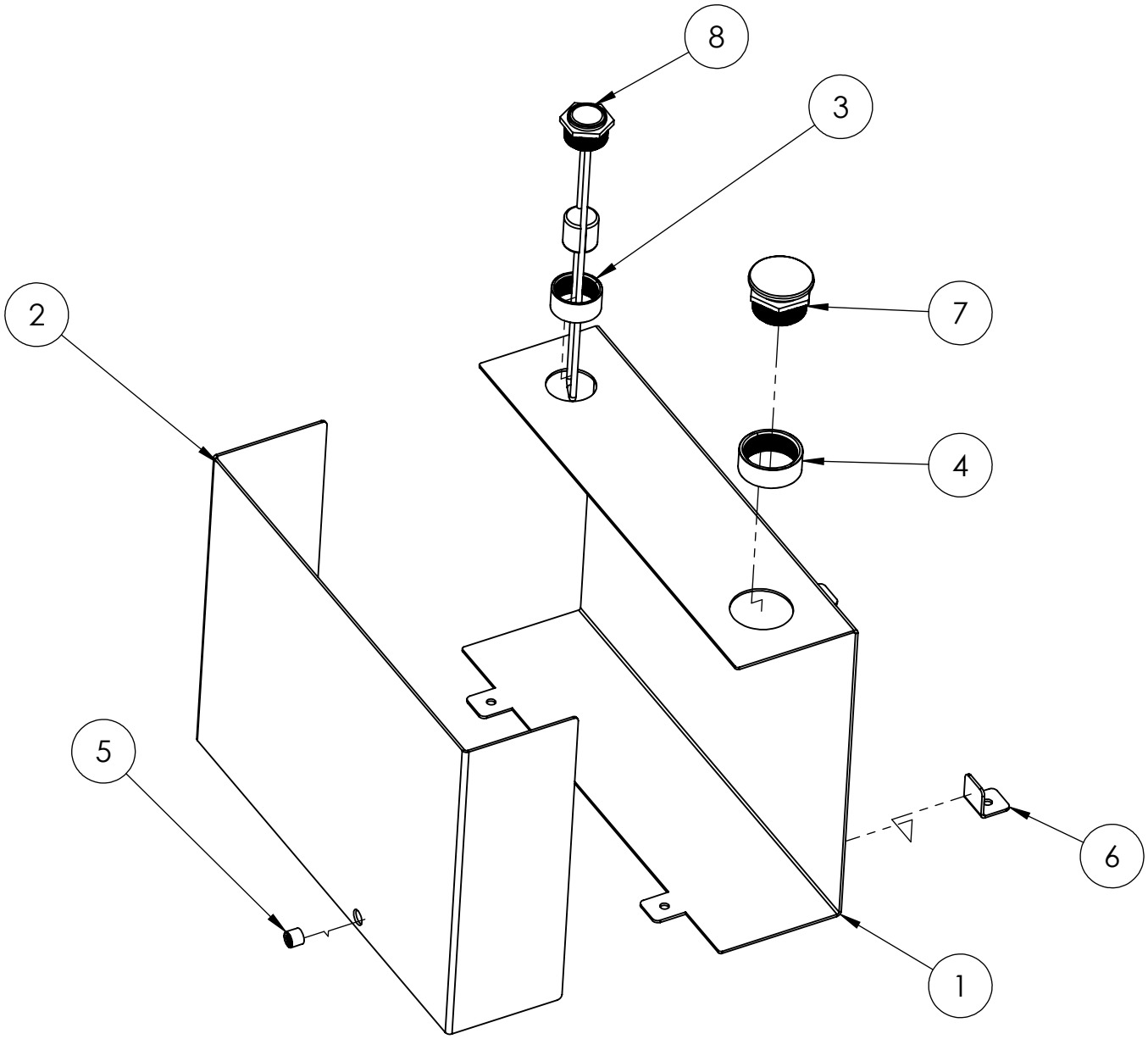
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	861-1 x .250 Back Chassis Top Rev 5		1
2	760-Caster-S-70124-PR	Hamilton S-7012 Castor filled tires	2
3	861-2 x.250 Hardox 70 Tooth Sprocket	MTC	2
4	861-1 x .250 Chain Idler Plate 2 Rev 1		1
5	17 tooth idler 6663K43_ANSI Roller Chain Idler Sprocket		3
6	760- 10 Tooth .750 Bore 40 Sprocket	Roller Chain Sprocket for ANSI 40 Chain, 10 Teeth, for 3/4" Shaft Diameter	1
7	ANSI 40 Outer Link		140
8	ANSI 40 Inner Link		140
9	861-1 x .250 Chain Idler Plate		1
10	.500-13 1.75 Gr 5 Zinc Carriage Bolt		2



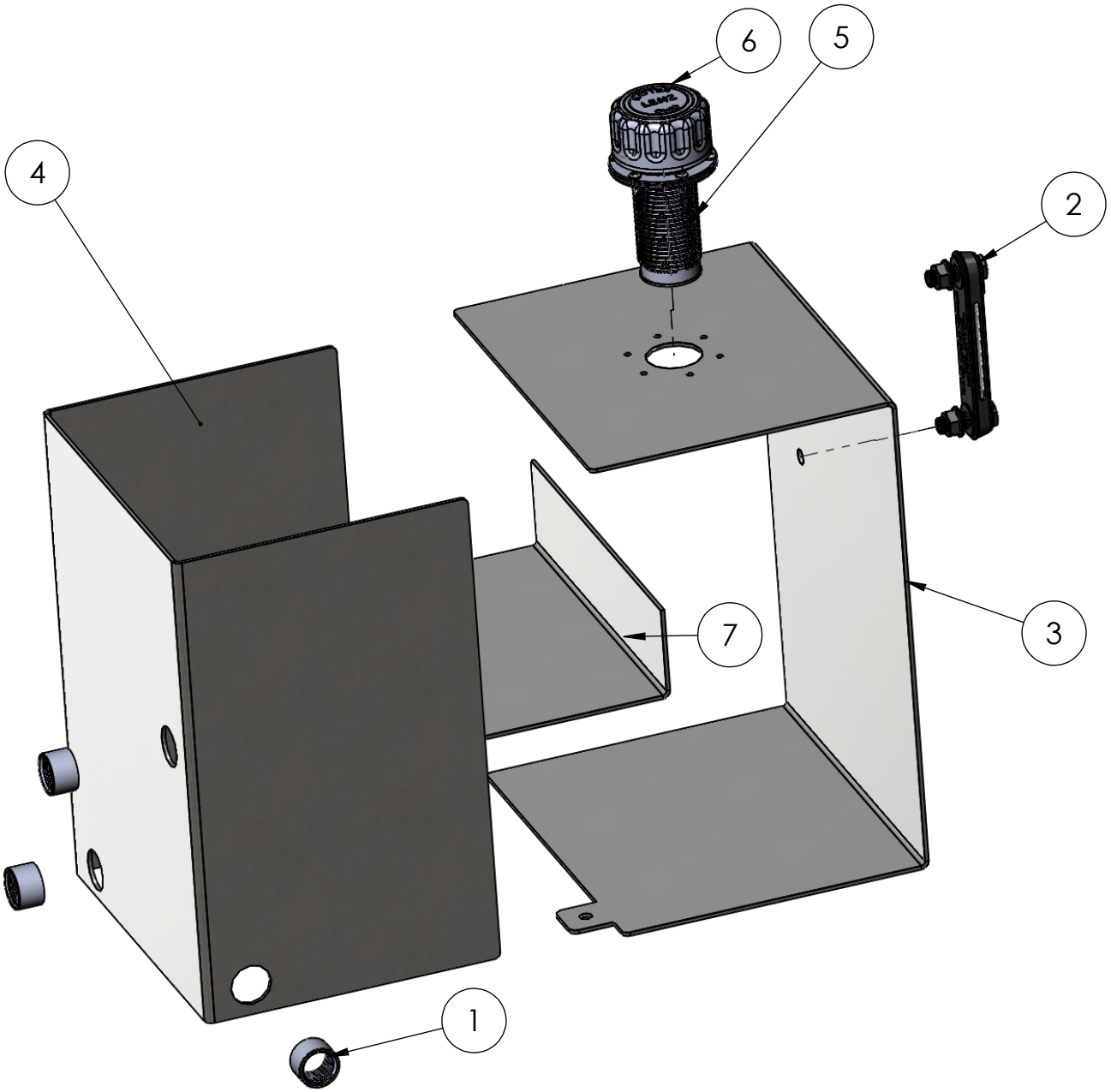
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Lower Sprocket Shaft	MTC Part	1
3	Upper Steering Wheel Shaft	MTC Part	1
4	760- 10 Tooth .750 Bore 40 Sprocket	Roller Chain Sprocket for ANSI 40 Chain, 10 Teeth, for 3/4" Shaft Diameter	1
5	760-TUCAREST 425-361 Steering Shaft Assy	TUCAREST Steering Shaft Assy	1
6	760-3-Spoke 13.5 In Steering Wheel	DasMarine 316 Stainless Steel Boat Steering Wheel 3-Spoke 13-1/2" Dia, with 5/8" -18 Nut and Turning Knob	1
7	860-Upper Steering Column Lid withBushing	MTC Part	1
8	860-Lower Steering Bushing Assembly	MTC Part	1

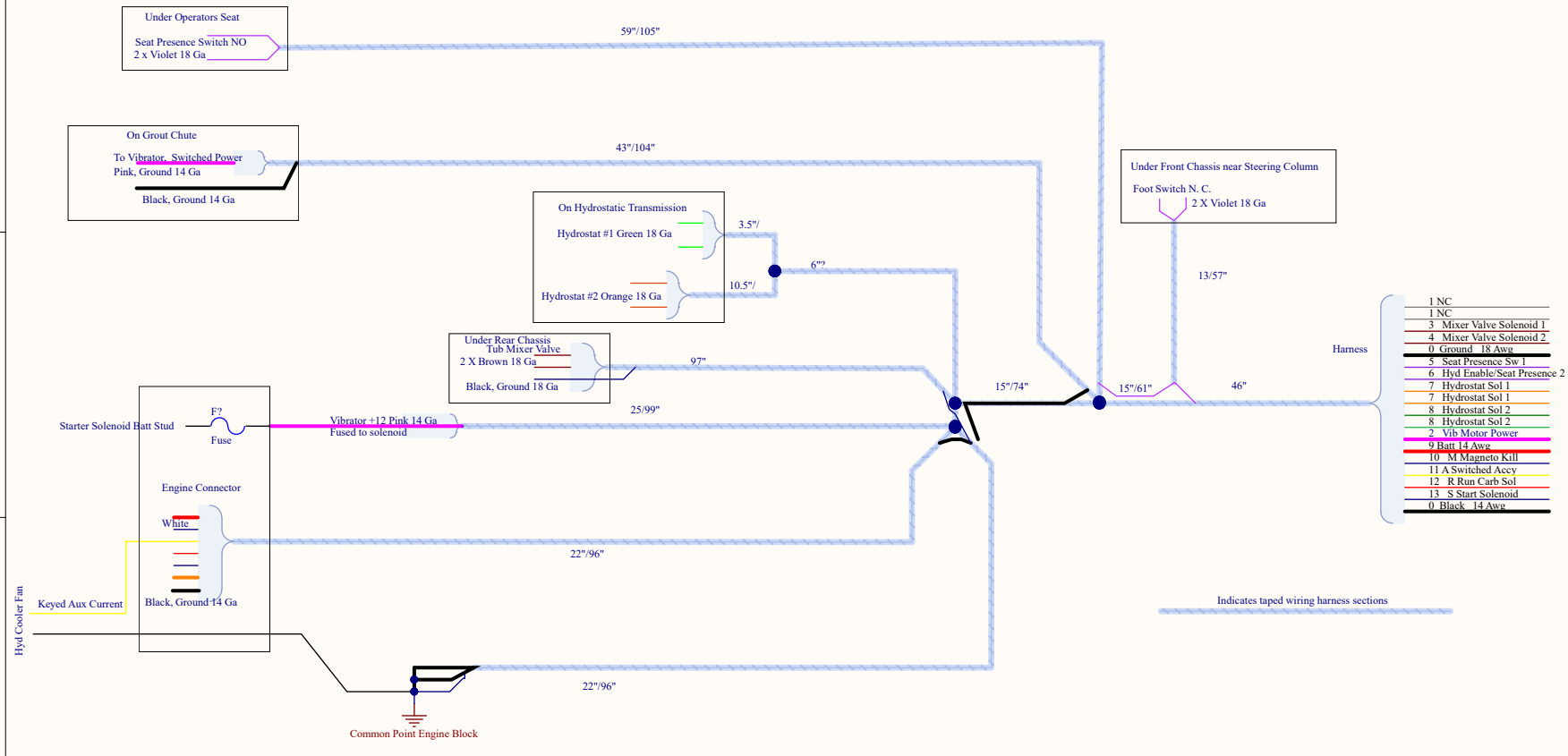


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	861-11 ga Gas Tank 1 of 2 Rev 3	MTC Sheet Metal	1
2	861-11 ga Gas Tank 2 of 2 Rev 3	MTC Sheet Metal	1
3	760-1-1.5 cut half NPSC Female Coupling	760-1.5 Inch Cut Coupling	1
4	760-2 cut half NPSC Female Coupling	760-2 Inch Cut Coupling	1
5	760-.250 cut half NPSC Female Coupling	.250 Inch Cut Coupling	1
6	861-4 x 11 ga Hold Down Tabs	MTC Sheet Metal	2
7	760-Cim-Tek 60001 Gas Cap Assy	Cim-Tek 60001 Cap	1
8	760-Rochester Gauge Assembly	Rochester 8680 15 Inch Gauge	1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	760-.750 cut half NPSC Female Coupling	3/4 NPT Half Pipe Coupling	3
2	760-STEP Fluid Level Gauge T-LLG-5	LENZ type level and temp gauge	1
3	861-.125 Hyd Tank 1 Rev 3	MTC Sheet Metal	1
4	861-.125 Hyd Tank 2 Rev 3	MTC Sheet Metal	1
5	Filler Breather Bolt-On 57XL-40	Lenz 57XL-40 Filler Breather Assembly	1
6	Filler Breather Cap 57XL-40	Lenz 57XL-40 Filler Breather Assembly	1
7	861-1 x .125 Baffle	MTC Sheet Metal	1





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Date: 3/6/2023		Sheet of
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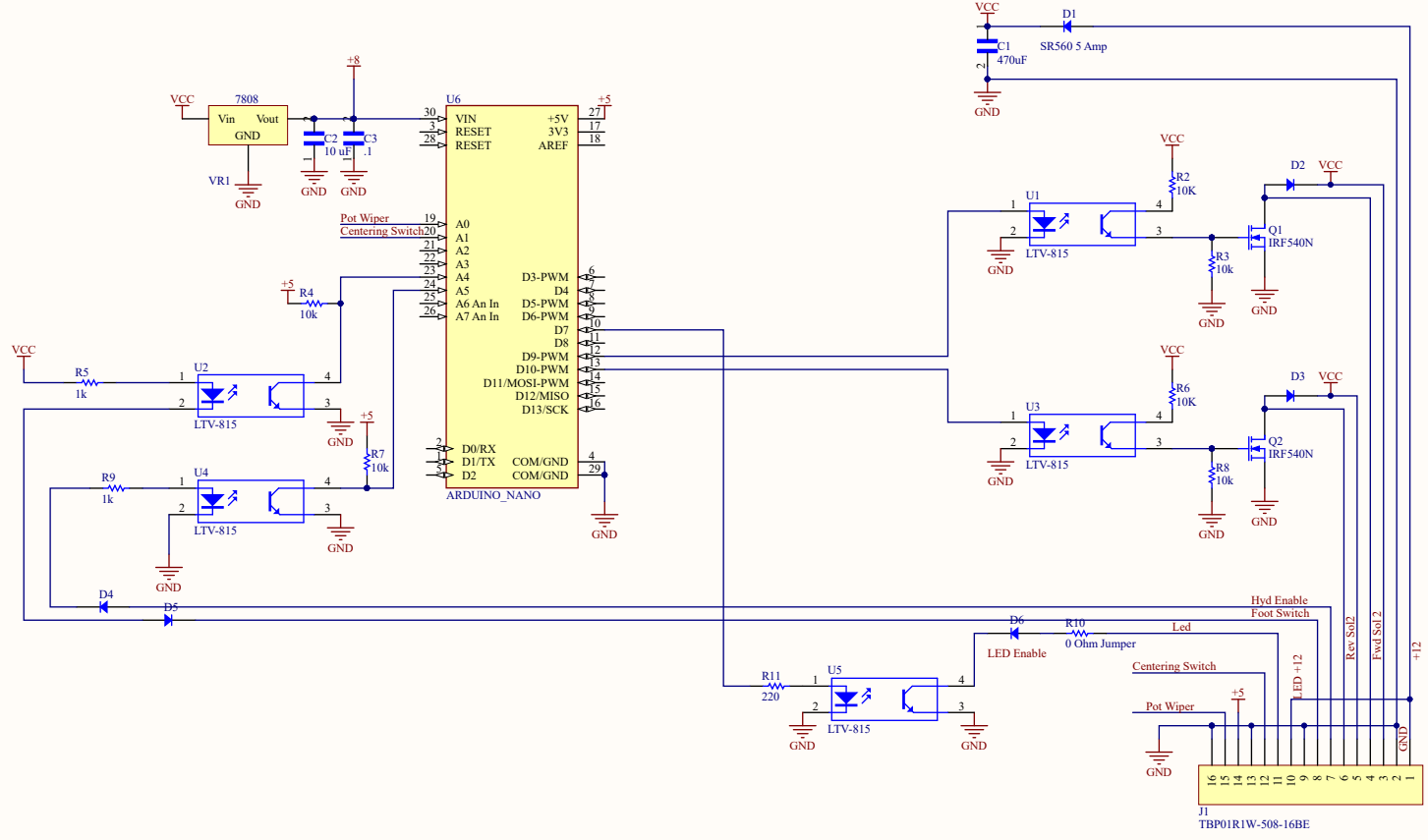

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