



600CM

600CM-PL



WS500
3-2017/Rev.D

Steel Drum Concrete Mixer

Includes Model Number 600CM & 600CM-PL

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INTRODUCTION

This owner's manual provides the information needed to operate and maintain MARSHALLTOWN's 600CM & 600CM-PL Mixers. Carefully read and follow all safety and operating instructions in this manual. Also, be sure every operator of this mixer reads this manual before operating the mixer. The replacement of any part on this mixer by parts other than the manufacturer's authorized replacement parts may adversely affect the performance, durability, warranty or safety of the product.

Be sure safety precautions are observed. Read and follow all safety and operating instructions in this operator's manual. The manufacturer reserves the right to make changes on, or add improvements to its product at any time without prior notice or obligation. The manufacturer reserves the right to decide, upon its sole discretion and at any time, to discontinue a product.

Information regarding operation and maintenance of the engine can be found in a separate engine manual supplied with this mixer if the mixer is supplied with an engine. The engine manual provides all the information required regarding engine adjustments, operation and maintenance. Should any questions arise concerning engine operation or service, contact the nearest engine repair facility or the engine manufacturer.

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SAFETY PRECAUTIONS

This is the industry's safety alert symbol. This symbol calls attention to items or operations that could be dangerous. This symbol can be found throughout this manual and on safety decals on the mixer. Read these messages carefully.



CAUTION!

THE FOLLOWING PRECAUTIONS ARE SUGGESTED TO HELP PREVENT ACCIDENTS. A CAREFUL OPERATOR IS THE BEST OPERATOR. MOST ACCIDENTS CAN BE AVOIDED BY OBSERVING CERTAIN PRECAUTIONS. READ AND TAKE THE FOLLOWING PRECAUTIONS BEFORE OPERATING THIS EQUIPMENT TO HELP PREVENT ACCIDENTS. EQUIPMENT SHOULD BE OPERATED ONLY BY THOSE WHO ARE RESPONSIBLE AND INSTRUCTED TO DO SO.

1. Read all operating and maintenance instructions before operating or servicing mixer. Test run empty prior to actual use.
2. A mixer is only as safe as its operator. Give complete and undivided attention to the operation of the mixer.
3. Know how to stop the mixer and the engine instantly.
4. Always have all guards and safety devices attached and in place before operating mixer. Close engine housing during operation.
5. Keep inexperienced and unauthorized people away from the mixer at all times.
6. Never leave the mixer unattended while it is running.
7. Shut off engine or disconnect the electric motor before making any adjustments or putting hands or tools in the drum.

SAFETY PRECAUTIONS CONTINUED



Never reach into the drum or place tools into the drum while the mixer is running

8. Do not overfill the drum. Do not exceed the mixer's rated capacity.
9. Do not smoke while refueling the engine. Shut off the engine and allow it to cool before refueling. Do not spill fuel.
10. Block/chock mixer wheels when mixing.
11. Use safety chains while towing mixer.
12. Keep the mixer in good operating condition. Loose or damaged parts are dangerous.
13. Avoid loose clothing that could get caught in moving parts or on control levers.



Keep hands and feet away from moving parts

14. Do not add material to the drum while stopped. Start the drum before adding material.
15. Keep all warning, caution and safety instruction labels in good condition. Replace missing, damaged or illegible labels.

TOWING & SAFETY CHAINS

For transporting the mixer, slide the tow pole out as far as possible and insert the locking pin. Make sure drum is locked in position and engine housing is closed and secured; cross the safety chains under the tow pole and fasten them to the tow vehicle. (fig.1) When operating the mixer, slide the tow pole in and lock it in place.

NOTE! Safety chain length may need to be altered for proper connection to tow vehicle. Reposition the hooks, DO NOT cut chain.

Allow enough slack to permit proper vehicle turning while keeping chains snug enough to prevent tow pole from contacting the ground in case the hitch uncouples.

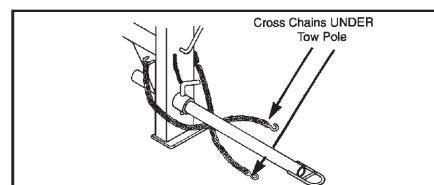


FIGURE 1

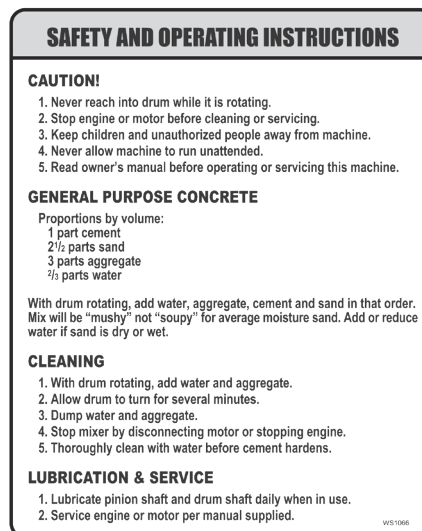
SAFETY DECALS (if applicable)

If your safety and operating decals are damaged, they can be replaced by contacting Customer Service

WS1065



WS1066



MIXERS ONE-YEAR WARRANTY

This product is warranted to the original purchaser only, to be free of defects in material and workmanship under normal use, for one year from purchase date. Marshalltown Company shall without charge for parts and labor, repair or replace such parts which are found to be defective. All transportation charges for replacement parts must be borne by the purchaser.

For warranty service, the product must be delivered, with proof of purchase date, to the dealer of original purchase, or any factory authorized service dealer.

If difficulty is encountered in having warranty work performed, contact the factory Service Department.

All implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one year from date of purchase by the original retail customer and to the extent permitted by law and all implied warranties are excluded and disclaimed after the expiration of such period.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitations of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Exclusion from this warranty:

1. The following items are not covered under the Marshalltown Company one year warranty and are warranted by their respective manufacturer.
 - a) Engines, including starters, generators, alternators and gear reducers
 - b) Hydraulic components, including pumps, motors and valves
2. All consequential damages, including pickup and delivery of the unit, communication, mileage charges and/or rental of a replacement unit during repairs are not covered under this warranty, nor are any loss of income and/or other loss resulting from the failure of the product to function due to a warranty defect.
3. This warranty will not apply when the product becomes inoperative due to misuse, normal wear, neglect, improper maintenance, accident or freight damage, has not been operated and maintained in accordance with the instructions furnished in the Operator's Manual, or has been altered or modified without approval from the factory Service Department.
4. No parts or products are to be returned to the factory without prior written approval from the factory.

NOTICE: Record the model and serial numbers in the spaces provided.

Product Model Number: _____

Product Serial Number: _____

Engine/Motor Model Number: _____

Engine/Motor Code Number: _____

Purchase Date: _____

Dealer Purchased From: _____

Dealer Address: _____

Dealer Phone Number: _____

PRIOR TO START UP

1. Examine the mixer carefully to make sure there was no damage during shipment or since the last use. Report any damage immediately to the transportation company. Repair any damage before using the mixer.
2. Check the engine oil. Fill as required. Refer to the engine manual for oil specifications.
3. Fill the fuel tank with fresh, clean fuel. Refer to the engine manual for fuel specifications.
4. Grease all fittings as called out in the lubrication specifications.
5. Check for free rotation of the mixer drum yoke by rotating the drum through one complete dump-charge-dump cycle. Make sure no foreign objects or tools are in the drum before starting the motor.
6. Start the motor and check for smooth operation of the drum, ring gear, and pinion.

Note: After initial 10 hours of operations, check chain/belts for proper tension and sprockets/pulleys for alignment. Check these items monthly to prevent premature wear/failure.

LUBRICATION

Use lithium based grade 2 multi-purpose grease.

Drum Shaft Tube:

Drum shaft lubrication can be performed by removing the 1/8" pipe plug and installing the appropriate grease fitting. Greasing should be done yearly.

Yoke Bearing Hangers:

Yoke bearing hangers are located on the yoke ends and are equipped with grease fittings. These bearings should be greased weekly.

Wheel Bearings:

Grease wheel bearings once per year. Thoroughly remove old grease from bearings and spindle before repacking. Pack bearings $\frac{1}{2}$ to $\frac{2}{3}$ full to prevent overheating.

Drum Tilt Brake Bearing:

The brake bearing casting is located near the front of the mixer and should be greased weekly.

Handwheel Bearing:

The handwheel hub bearing is located on the front of the mixer, behind the handwheel. This bearing should be greased weekly.

WARNING: DO NOT GREASE BRAKE BAND OR OUTER BRAKING SURFACE OF TILT GEAR.

Jack Shaft Bearings:

Pillow block style bearings are used on the drive train counter shaft. These bearings should be greased weekly.

Drive Chain:

The drive chain should be lubricated monthly with SAE #20 or SAE #30 oil. Apply the oil between the side plates.

Engine/Motor:

Refer to the manufacturer's engine or motor operating instructions for all maintenance and lubrication requirements and instructions.

LUBRICATION FREQUENCY CHART

ITEM	FREQUENCY	LUBRICANT	PLACES
Drum Shaft Tube	yearly	grease	1
Yoke Bearing Casting	weekly	grease	2
Wheel Bearings	yearly	grease	2
Drum Tilt Brake Bearing Casting	weekly	grease	1
Handwheel Hub	weekly	grease	1
Drive Shaft	weekly	grease	1
Jackshaft (Electric motor only)	weekly	grease	2
Drive Chain	monthly	oil	1

STORAGE

For short term storage, clean the mixer and store in a dry place. If the mixer is not to be used for an extended period of time, service mixer completely and store it in a dry place.

1. Refer to motor/engine instructions for storage instructions.
2. Cover exposed metal surfaces with a thin coat of SAE 30 engine oil.
3. Lubricate per instructions under LUBRICATION section.

GETTING READY FOR MIXING

Lay out forms for your concrete floor, patio, driveway, sidewalk, etc. The quality of concrete is directly related to the quality of the cement paste. Calculate the proportions of your mix components (cement, sand and coarse aggregate) according to the job specifications.

LOADING THE MIXER

Start the mixer. Refer to motor/engine instructions. After drum has started rotating, pour about half of the water in the drum.

NOTE: The drum may leak slightly when first used. This will stop after a few batches. Add aggregate (gravel) first then cement second and sand last. Then add remaining water as needed.

MIXING INSTRUCTIONS

1. Start the drum rotating.
2. Add $\frac{1}{2}$ water.
3. Add cement and one shovelful of coarse aggregate. The coarse aggregate will break up any lumps in the cement.
4. Add remaining aggregate: crushed stone, pit-run gravel or sand.
5. Add remaining water as needed.
6. Mix batch for approximately one minute. Drum speed should be about 25 r.p.m. (NOTE: Mixing times may change.)

UNLOADING THE MIXER

Allow the entire mixture to mix for one full minute. Do not stop mixer from rotating.

Hold the tilt handle and unlock the stop lever. Dump concrete to either side by tilting the tilt handle in the direction required. (NOTE: Mixing times may change.)

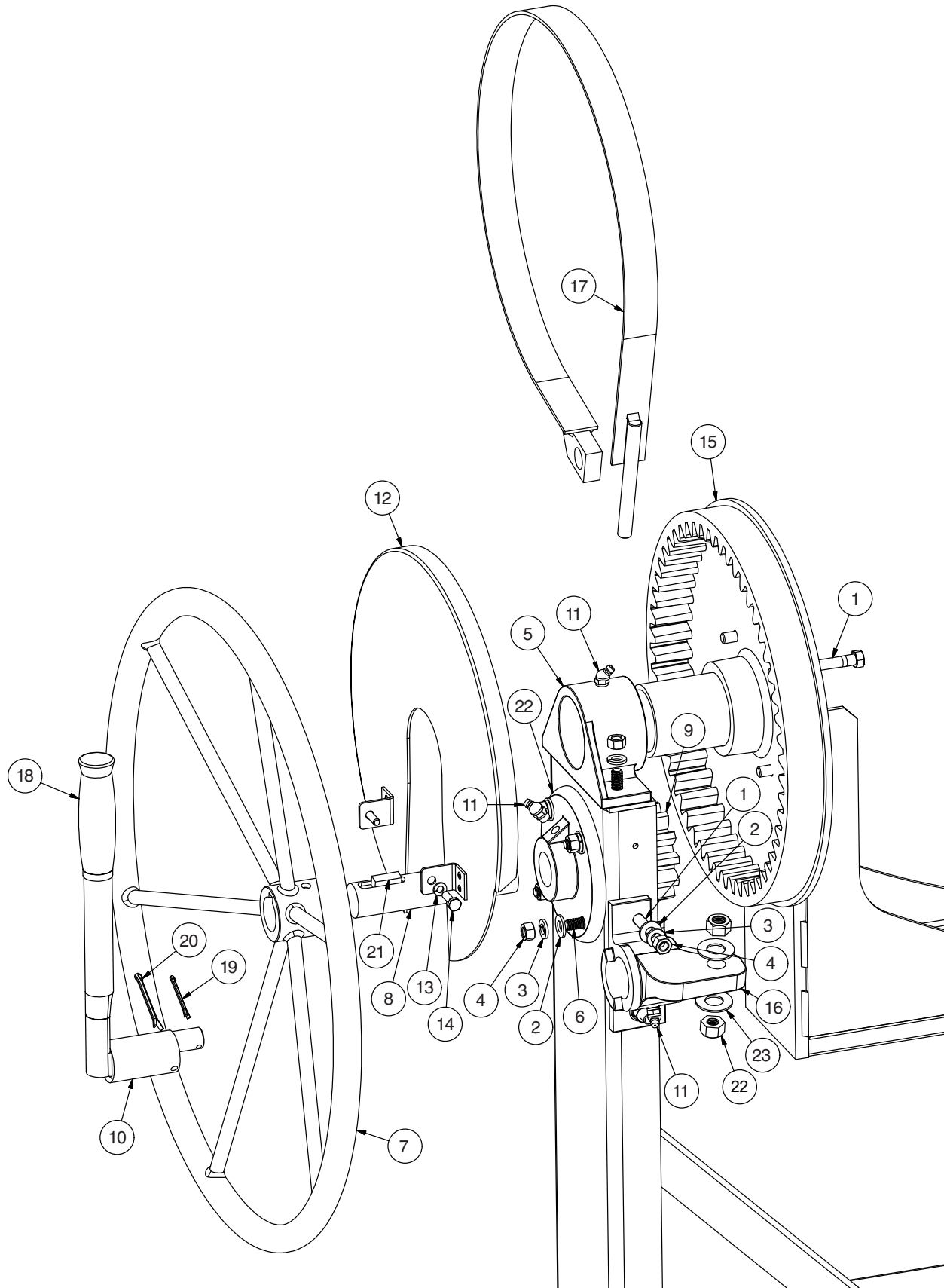
EXTENSION CORDS-ELECTRIC MOTOR

The following size extension cords should be used for this mixer: length of cord, up to 100 ft-14 gauge wire; up to 200 ft-12 gauge wire; up to 300 ft – 10 gauge wire; up to 400 ft – 8 gauge wire.

CARE OF MIXER

It is important to keep the inside of the mixing drum free of hardened concrete. After discharging the last batch of concrete each day, add a pailful of water and two shovelfuls of gravel to the drum. This will scour the inside of the drum. Mix for about two minutes, discharge and rinse the drum with water. Never permit concrete to harden on either the inside or outside of drum.

TILT / LOCK MECHANISM



TILT / LOCK MECHANISM PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	HCS 3/8"-16NC X 1.5 ZINC	*	6
2	FLAT WASHER, 3/8"	*	10
3	LOCK WASHER, 3/8 ZINC PLATED	*	18
4	HEX NUT, 3/8-16- 00123	*	20
5	YOKE BEARING, 600CM-PC-BLACK	21222	2
6	CB 3/8-16- 00122	*	8
7	HANDWHEEL ASSM, 600CM-PC-BLACK	21208	1
8	TILT PINION SHAFT, 600CM	21228	1
9	TILT PINION-600CM	21230	1
10	LEVER, BRAKE ASSM, 600CM-PC-BLACK	21229	1
11	GREASE FITTING	*	6
12	TILT GEAR COVER-600CM	22211	1
13	LOCKWASHER 1/4 MED SP. REG HELICAL	*	2
14	HEX HEAD BOLT 1/4-20 UNC 3/4 ZINC PLATED	*	2
15	GEAR, INTERNAL TILT, 600CM-PC-BLACK	21231	1
16	CSTG, BRAKE BEARING-600CM 600CM-PL-PC-BLACK	21225	1
17	BRAKE BAND ASSY-PC-BLACK	21233	1
18	GRIP	*	1
19	COTTER PIN 1_8 X 1 1_2	*	1
20	Clevis Pins and Cotter Pins - Extended Prong Square Cut Type (Inch) - Cotter Pin	*	2
21	KEY STOCK 3/8 SQ X 1" LONG	*	2
22	CSTG, HANDWHEEL BRG 600CM-PC-BLACK	21224	1

* Common hardware, can be purchased locally.

TILT / LOCK MECHANISM REPLACEMENT KITS ON NEXT PAGE...

TILT / LOCK MECHANISM REPLACEMENT KITS

600CM 600CM-PL TILT/LOCK GEAR COVER EDI# 27789 INCLUDES:

REF #	NAME	QTY
12	TILT GEAR COVER - 600CM	1
13	LOCKWASHER 1/4 MED SP. REG HELICAL	2
14	HEX HEAD BOLT 1/4-20 UNC 3/4 ZINC PLATED	2

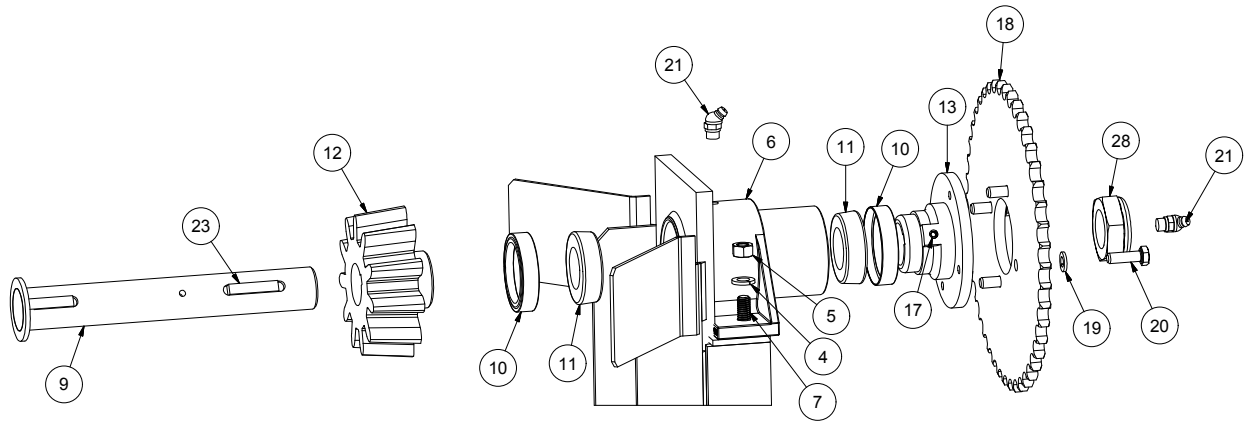
600CM 600CM-PL TILT/LOCK LOCK MECHANISM EDI# 27790 INCLUDES:

REF #	NAME	QTY
18	HANDLEBAR GRIP	1
10	LEVER, BRAKE ASSM, 600CM-PC-BLACK	1
19	COTTER PIN 1/8 X 1-1/2 Z	1
20	COTTER PIN	1
11	ZERK 1/8 PIPE STR	1
16	CSTG, BRAKE BEARING-600CM 600CM-PL-PC-BLACK	1
1	HCS 3/8"-16NC X 1.5 ZINC	1
2	FLAT WASHER, 3/8"	1
3	LOCK WASHER, 3/8 ZINC PLATED	1
4	HEX NUT, 3/8-16-00123	1
17	BRAKE BAND ASSY-PC-BLACK	1
22	HEX NUT, 1/2-13NC	2
23	WASHER-1/2" ZINC PLATED	2

600CM 600CM-PL TILT/LOCK GEARS SHAFT PILLOW BLOCK EDI# 27791 INCLUDES:

REF #	NAME	QTY
15	GEAR, INTERNAL TILT, 600CM-PC-BLACK	1
9	TILT PINION - 600CM	1
1	HCS 3/8"-16NC X 1.5 ZINC	4
21	KEY STOCK 3/8" SQ X 1" LONG	2
8	TILT PINION SHAFT, 600CM	1
6	CARRIAGE BOLT 3/8-16X1-1/4 - 00122	6
2	FLAT WASHER, 3/8"	6
3	LOCKWASHER, 3/8 ZINC PLATED	4
4	HEX NUT, 3/8-16- 00123	6
11	ZERK 1/8 PIPE STR	2
5	YOKE BEARING, 600CM-PC-BLACK	1
7	CSTG, HANDWHEEL BRG 600CM-PC-BLACK	1

DRIVE SPROCKET ASSEMBLY



DRIVE SPROCKET ASSEMBLY PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	LOCK WASHER, 3/8 ZINC PLATED	*	18
2	HEX NUT, 3/8-16- 00123	*	20
3	YOKE BEARING, 600CM-PC-BLACK	*	2
4	CB 3/8-16- 00122	*	8
5	SHAFT ASSM, DRIVE, 600CM	21227	1
6	SEAL, GREASE DRUM RING	23395	2
7	CONE BEARING-TIMKEN LM67048 400CM 400CM-PL 400UT-PL	23392	2
8	DRIVE PINION - 600CM	21230	1
9	HUB, SPROCKET, 600CM	21202	1
10	SOCKET SET SCREW 5/16-18 X 5/16	*	2
11	SPROCKET	21234	1
12	Regular Helical Spring Lock Washers(Inch Series)	*	6
13	SCREW HEX HD 5_16-18X1	*	4
14	GREASE FITTING	*	6
15	KEY STOCK 5/16 X 1/4 X 1-1/4	*	2
16	1-1/4-12 UNF JAM LOCK NUT	27792	1

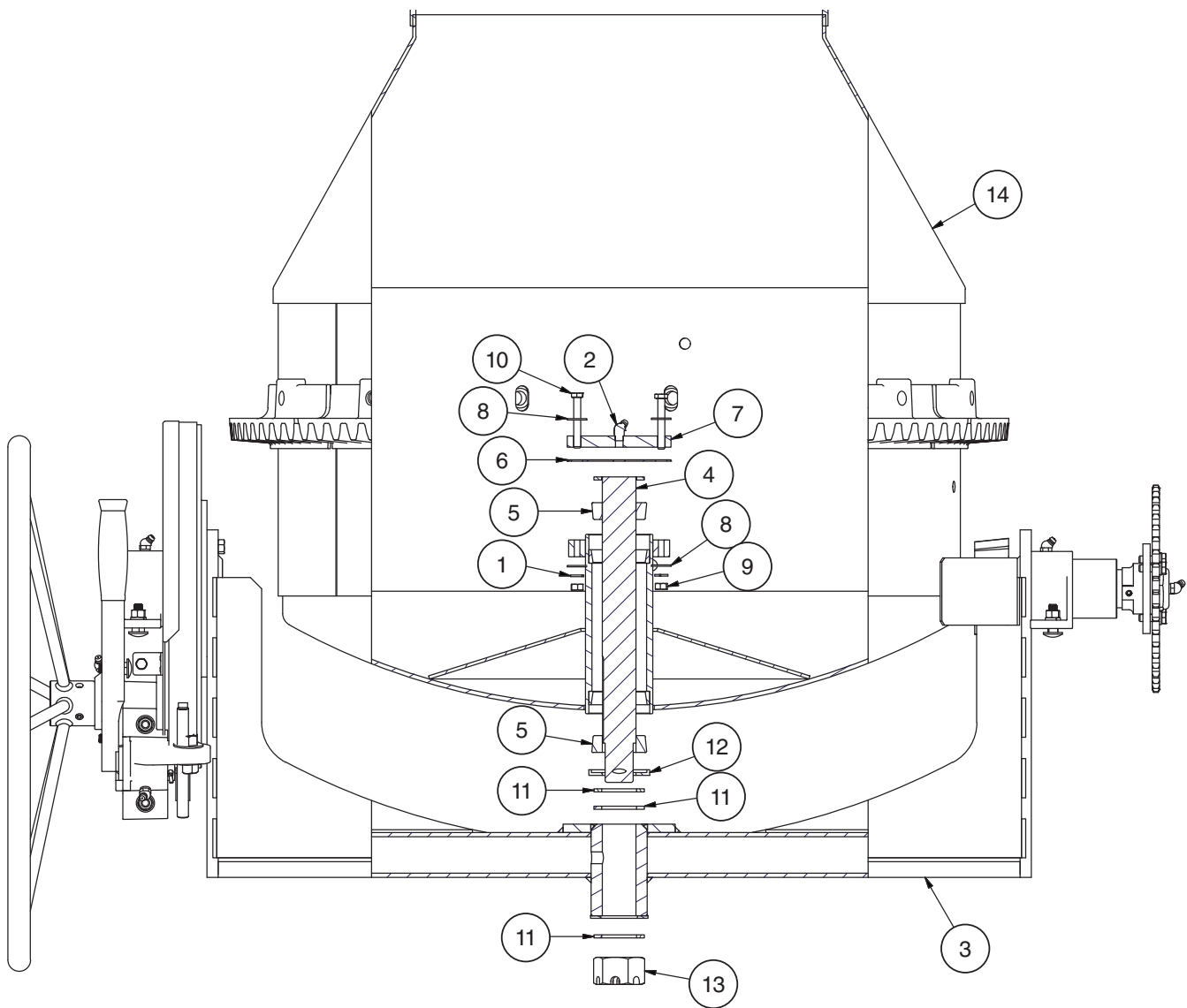
* Common hardware, can be purchased locally.

DRIVE SPROCKET ASSEMBLY REPLACEMENT KIT

600CM 600CM-PL DRIVE SPROCKET ASSY EDI# 27796 INCLUDES:

REF #	NAME	QTY
5	SHAFT ASSM, DRIVE, 600CM	1
15	KEY STOCK 5/16 X 1/4 X 1-1/4	2
8	DRIVE PINION - 600CM	1
6	DRUM RING GREASE SEAL 600CM 600CM-PL 600UT-PL	2
7	CONE BEARING - TIMKEN LM67048-600CM 600CM-PL	2
14	ZERK 1/8 PIPE STR	2
1	LOCKWASHER, 3/8 ZINC PLATED	2
2	HEX NUT, 3/8-16- 00123	2
4	CARRIAGE BOLT 3/8-16X1-1/4 - 00122	2
3	YOKE BEARING, 600CM-PC-BLACK	1
9	HUB, SPROCKET, 600CM	1
10	SOCKET SET SCREW 5/16-18 X 5/16	1
11	SPROCKET	1
12	LOCKWASHER 5/16 SPLIT, ZINC PLATED	4
13	HCS 5/16-18 X 1 Z5	4
16	1-1/4-12 UNF JAM LOCK NUT	1

DRUM SPINDLE INSTALLATION



DRUM SPINDLE INSTALLATION PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	LOCKWASHER 5/16 SPLIT, ZINC PLATED	*	6
2	1/8 ZERK FITTING	*	6
3	YOKE ASSM, 600CM-POWDERCOATED	*	1
4	SHAFT ASSM, DRUM, 600CM	21226	1
5	CONE, BRG TIMKEN #13686 DRUM SH	21242	2
6	GASKET, DRUM HUB COVER 600CM	21628	1
7	COVER, DRUM HUB 600CM W/POLY-PC-BLUE	*	1
8	WASHER FLAT 5/16	*	4
9	NUT HEX 5_16 - 18	*	2
10	SCREW HEX HD 5_16-18X2 1_4	*	2
11	WASHER, 2.25 OD X 1-17/32 ID	*	3
12	SEAL, 20952 CR	21243	1
13	SLOTTED HEX NUT 1-1/4 X 12	27793	1
14	DRUM ASSM, 600CM-PC-BLUE	21239	1

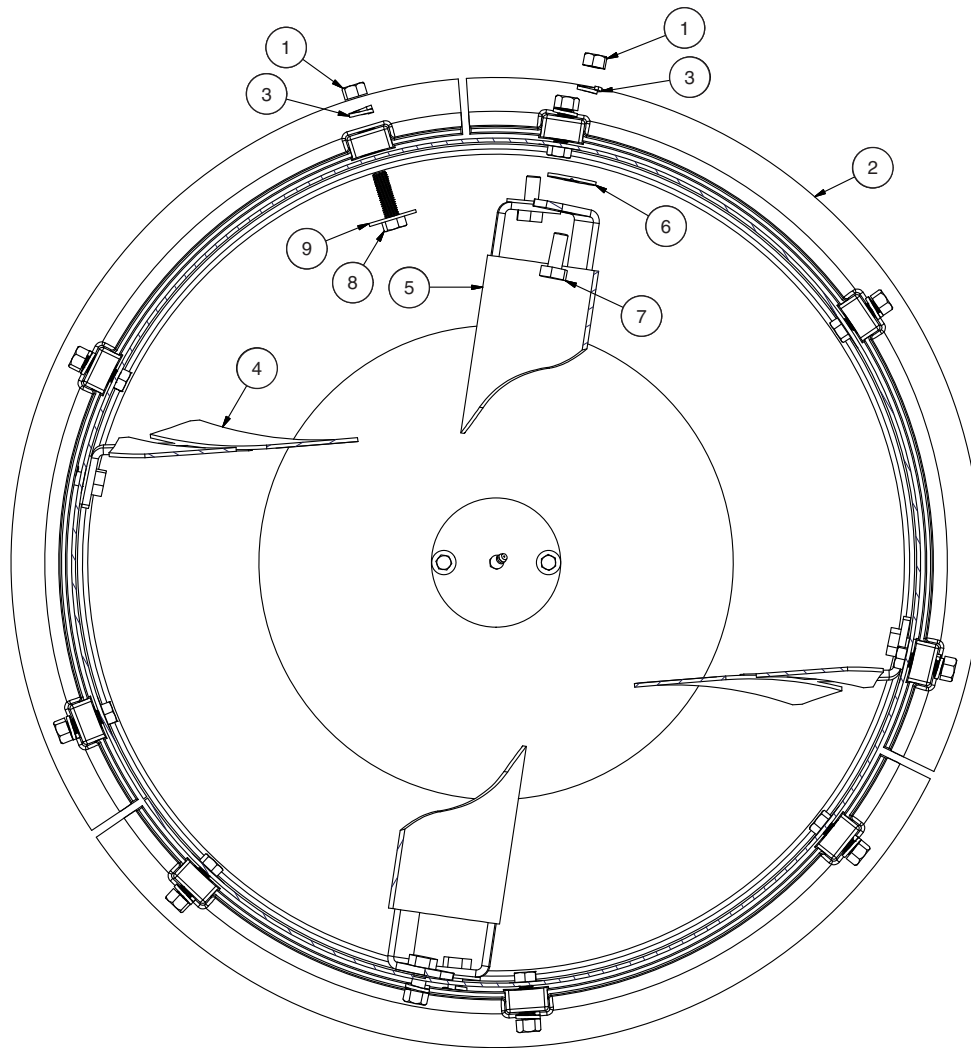
* Common hardware, can be purchased locally.

DRUM ASSEMBLY REPLACEMENT KIT

600CM 600CM-PL DRUM SPINDLE INSTALL W/O DRUM EDI# 27797 INCLUDES:

REF #	NAME	QTY
1	LOCKWASHER 5/16 SPLIT, ZINC PLATED	2
2	1/8 ZERK FITTING	1
4	SHAFT ASSM, DRUM, 600CM	1
5	CONE, BRG TIMKEN #13686 DRUM SH	2
7	COVER, DRUM HUB 600CM W/POLY-PC-BLUE	1
10	HCS 5/16-18 X 2-1/4	2
8	WASHER FLAT 5/16	2
6	GASKET, DRUM HUB COVER 600CM	1
9	HEX NUT, 5/16-18	2
11	WASHER, 2.25 OD X 1-17/32 ID	3
12	SEAL, 20952 CR	1
13	SLOTTED HEX NUT 1-14 X 12	1

DRUM PADDLE INSTALLATION



DRUM PADDLE INSTALLATION PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	HEX NUT 1/2-13NC	*	23
2	SEGMENT, RING GEAR CLASS 30 - POWDERCOATED	21569	3
3	LOCKWASHER, 1/2" ZINC PLATED SPLIT	*	21
4	BLADE ASSM, 600CM TOP-PC-BLUE	21182	2
5	BLADE ASSM, 600CM BOTTOM-PC-BLUE	21181	2
6	FENDER WASHER, 1-3/4 OD X 17/32 ID, ZN PL	*	8
7	HEX HD CP SCR 1/2-13 X 1 1/4	*	8
8	SCRW7-.500-13NC1.75 HHCS-PLN	*	9

* Common hardware, can be purchased locally.

DRUM PADDLE INSTALLATION REPLACEMENT KITS

KIT, BOTTOM BLADE INSTALLATION EDI# 27824 INCLUDES:

REF #	NAME	QTY
1	HEX NUT 1/2-13NC	2
3	LOCKWASHER, 1/2" ZINC PLATED SPLIT	2
6	FENDER WASHER, 1-3/4 OD X 17/32 ID, ZN PL	2
7	HEX HD CP SCR 1/2-13 X 1 1/4	2
5	BLADE ASSM, 600CM BOTTOM-PC-BLUE	1

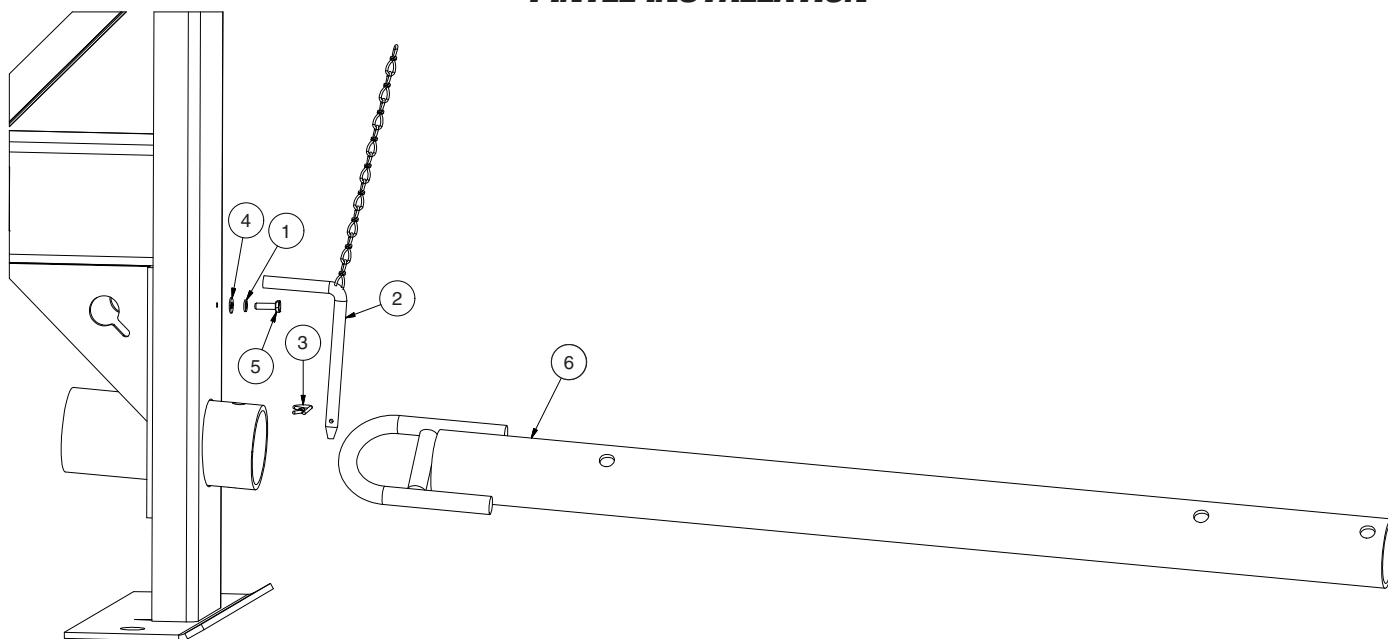
KIT, TOP BLADE INSTALLATION EDI# 27826 INCLUDES:

REF #	NAME	QTY
1	HEX NUT 1/2-13NC	2
3	LOCKWASHER, 1/2" ZINC PLATED SPLIT	2
6	FENDER WASHER, 1-3/4 OD X 17/32 ID, ZN PL	2
7	HEX HD CP SCR 1/2-13 X 1 1/4	2
4	BLADE ASSM, 600CM TOP-PC-BLUE	1

KIT, RING GEAR SEGMENT 600CM 600CM-PL EDI# 27794 INCLUDES:

REF #	NAME	QTY
8	SCRW7-.500-13NC 1.75 HHCS-PLN	3
3	LOCKWASHER, 1/2" ZINC PLATED SPLIT	3
1	HEX NUT 1/2-13 NC	3
2	SEGMENT, RING GEAR CLASS 30	1
9	FENDER WASHER, 1-3/4" OD X 17/32 ID, ZN PL	3

PINTLE INSTALLATION



PINTLE INSTALLATION PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	LOCKWASHER 1/4 MED SP. REG HELICAL	*	9
2	CHAIN & PIN ASSM, TOW POLE	22479	1
3	SPRING CLIP FOR LOCKING PIN	*	1
4	WASHER-.250 FLAT, GR 2, ZINC	*	3
5	HEX HEAD BOLT 1/4-20 UNC 3/4 ZINC PLATED	*	1
6	TOW POLE ASSM, 1200-POWDERCOATED BLACK	22523	1

* Common hardware, can be purchased locally.

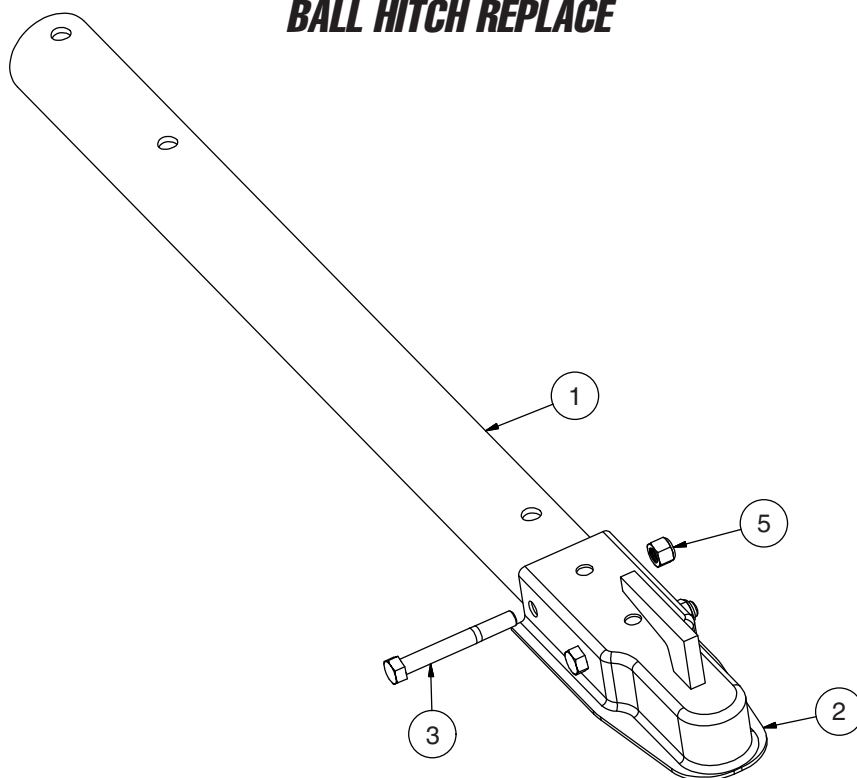
PINTLE INSTALLATION REPLACEMENT KIT

KIT, PINTLE INSTALLATION EDI# 27808 INCLUDES:

REF #	NAME	QTY
1	LOCKWASHER 1/4 MED SP. REG HELICAL	1
2	CHAIN & PIN ASSM, TOW POLE	1
3	SPRING CLIP FOR LOCKING PIN	1
4	WASHER-.250 FLAT, GR 2, ZINC	1
5	HEX HEAD BOLT 1/4-20 UNC 3/4 ZINC PLATED	1
6	TOW POLE ASSM, 1200-POWDERCOATED BLACK	1
*	HCS 1/2-13 X 4"	3
*	HEX NUT 1/2-13NC	1
*	LOCKWASHER, 1/2" ZINC PLATED SPLIT	1
*	CHAIN, 1/4" X 58"L W/7/16" HOOK	2

* Not shown in illustration

BALL HITCH REPLACE



BALL HITCH PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	TOW POLE FOR BALL HITCH, 600-1620-POWDERCOATED	*	1
2	BALL COUPLER RAM22-300	*	1
3	1/2-13 X 3-1/2 HCS	*	2
5	LOCKING NYLON NUT, 1/2-13	*	3

* Common hardware, can be purchased locally.

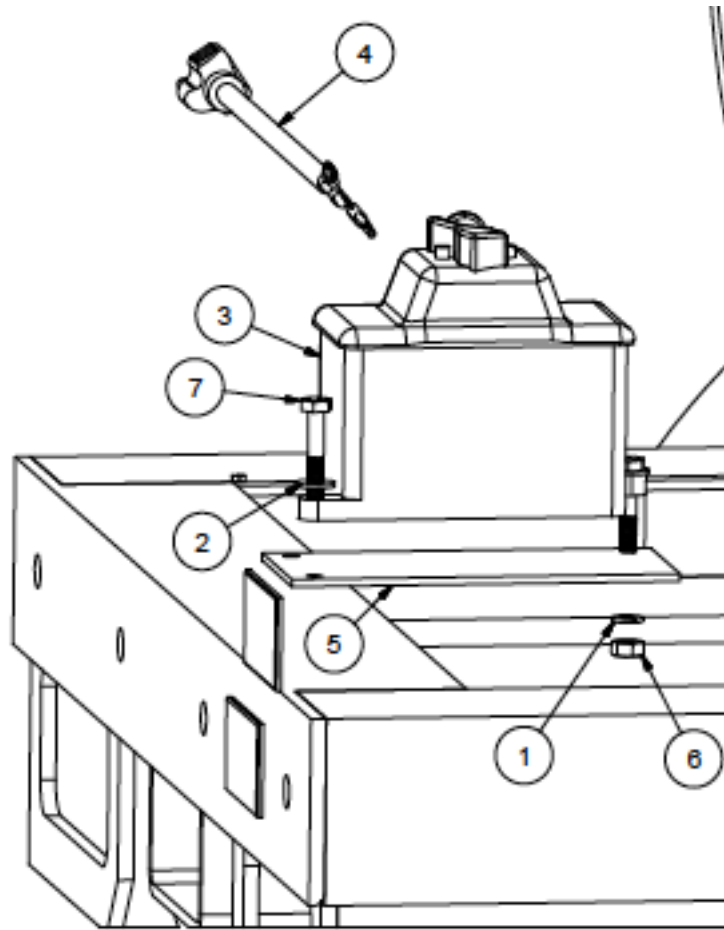
BALL HITCH REPLACEMENT KIT

TOW POLE BALL HITCH ASSY EDI# 27818 INCLUDES:

REF #	NAME	QTY
1	TOW POLE FOR BALL HITCH, 600-1620-PC-BLACK	1
2	BALL COUPLER	1
3	HCS 1/2-13 X 4"	3
5	LOCKING NYLON NUT, 1/2-13	3
*	HEX NUT 1/2-13NC	1
*	LOCKWASHER, 1/2" ZINC PLATED SPLIT	1
*	CHAIN, 1/4" X 58"L W/7/16" HOOK	2

* Not shown in illustration

ELECTRIC MOTOR SWITCH INSTALLATION



ELECTRIC MOTOR SWITCH INSTALLATION PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	LOCKWASHER 1/4 MED SP. REG HELICAL	*	9
2	WASHER-.250 FLAT, GR 2, ZINC	*	3
3	3PH ON/OFF SWITCH, HUBBELL #HBL13R23D	27804	1
4	POWER CORD HARNESS, F/ELECTRIC	27803	1
5	MOUNTING BRACKET, SWITCH-PC	*	1
6	HEX NUT, 1/4-20	*	2
7	CAP SCREW, 1/4-20 X 1-1/2" GRADE 5 ZINC PLATED HEX HEAD	*	2

* Common hardware, can be purchased locally.

ELECTRIC MOTOR SWITCH INSTALLATION REPLACEMENT KITS

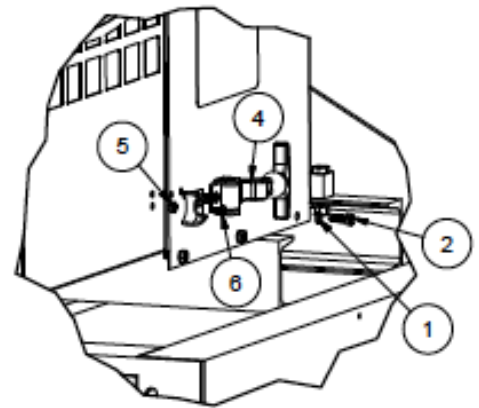
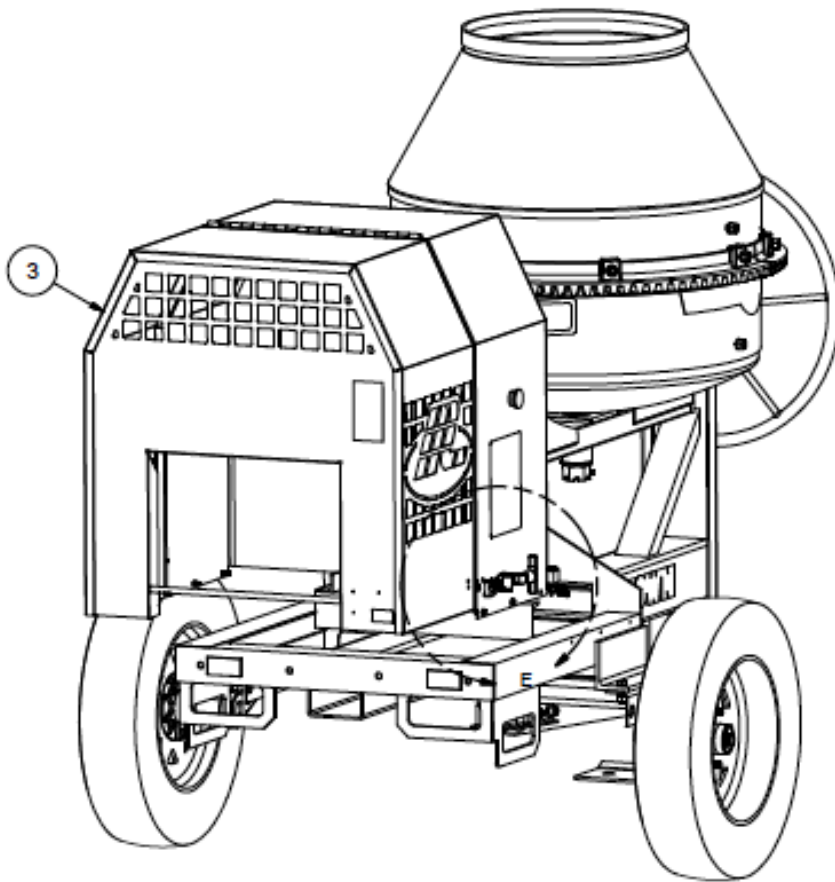
KIT, SWITCH-MIXER ON/OFF SWITCH INSTALL EDI# 27806 INCLUDES:

REF #	NAME	QTY
3	SWITCH-MIXER ON/OFF	1
4	POWER CORD HARNESS, F/ELECTRIC	1
1	LOCKWASHER 1/4 MED SP. REG HELICAL	2
6	HEX NUT, 1/4-20	2
2	WASHER - .250 FLAT, GR 2, ZINC	2
7	CAP SCREW, 1/4-20 X 1-1/2" GRADE 5 ZINC PLATED HEX HEAD	2
5	MOUNTING BRACKET, SWITCH - PC	1

SWITCH-MIXER ON/OFF REPL EDI# 27804 INCLUDES:

REF #	NAME	QTY
3	SWITCH-MIXER ON/OFF	1

ENGINE HOUSE INSTALLATION



DETAIL E
SCALE 0.18 : 1

ENGINE HOUSE INSTALLATION PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	LOCKWASHER 1/4 MED SP. REG HELICAL	*	7
2	HCS 1/4-20 X 3/4" Z5	*	6
3	ENGINE HOUSE, 600CM-PC-BLUE	21555	1
4	ENGINE HOUSE LATCH, 1685A26	27846	2
5	KEPS NUT, 10-24	*	8
6	PPH MACHINE SCREW, 10-24 X 1/2" Z	*	8

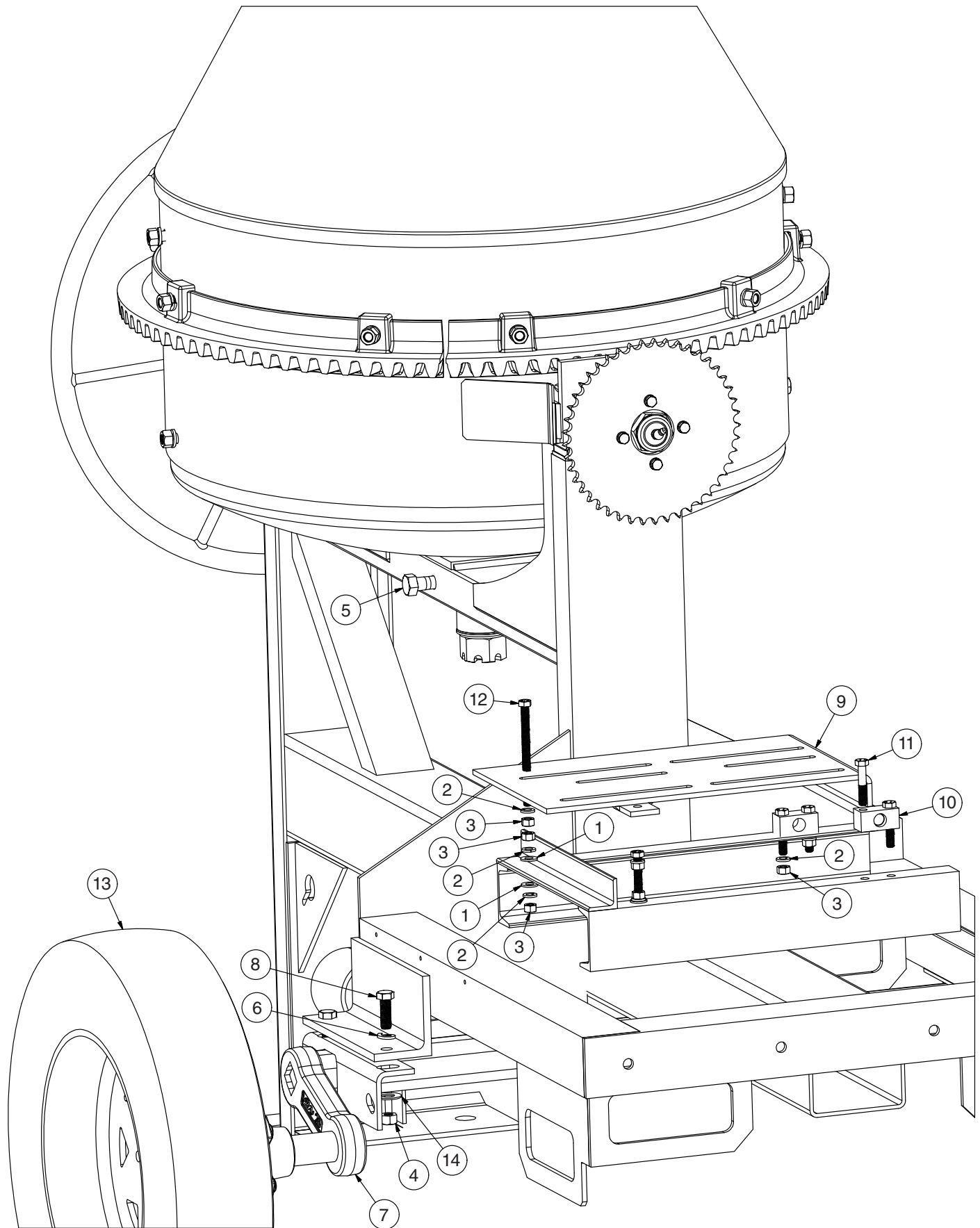
* Common hardware, can be purchased locally.

ENGINE HOUSE INSTALLATION REPLACEMENT KIT

ENGINE HOUSE INSTALL, HDW ONLY EDI# 27817 INCLUDES:

REF #	NAME	QTY
1	LOCKWASHER 1/4 MED SP. REG HELICAL	7
2	PPH MACHINE SCREW, 10-24 X 1/2" Z	8
4	ENGINE HOUSE LATCH, 1685A26	2
5	KEPS NUT 10-24	8
6	HCS 1/4-20 X 3/4" Z5	6

AXLE, ENGINE TABLE, YOKE SET SCREW



AXLE, ENGINE TABLE, YOKE SET SCREW PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	FLAT WASHER, 3/8"	*	10
2	LOCK WASHER, 3/8 ZINC PLATED	*	18
3	HEX NUT, 3/8-16- 00123	*	20
4	HEX NUT 1/2-13NC	*	23
5	SQST CP 5/8-11 X 2-1/2	*	1
6	LOCKWASHER, 1/2" ZINC PLATED SPLIT	*	21
7	TORSION AXLE ASSEMBLY, 2200#	27905	1
8	HCS 1/2-13 X 1-1/2 Z5	*	4
9	BASE, MOTOR, 600CM, 600CM-PL, 1200-PC-BLACK	*	1
10	MOUNT, PIVOT-POWDERCOATED		2
11	HEX CAP SCREW, 3/8" - 16 2" GRADE 5 ZINC PLATED	*	4
12	3/8-16 FULLY THREADED TAP BOLT GRADE 8	*	2
13	WHEEL & TIRE, 1300# CAP, ST175/80-13 ON 545	27906	2
14	WASHER-1/2" ZINC PLATED	*	4

* Common hardware, can be purchased locally.

ENGINE HOUSE INSTALLATION REPLACEMENT KITS

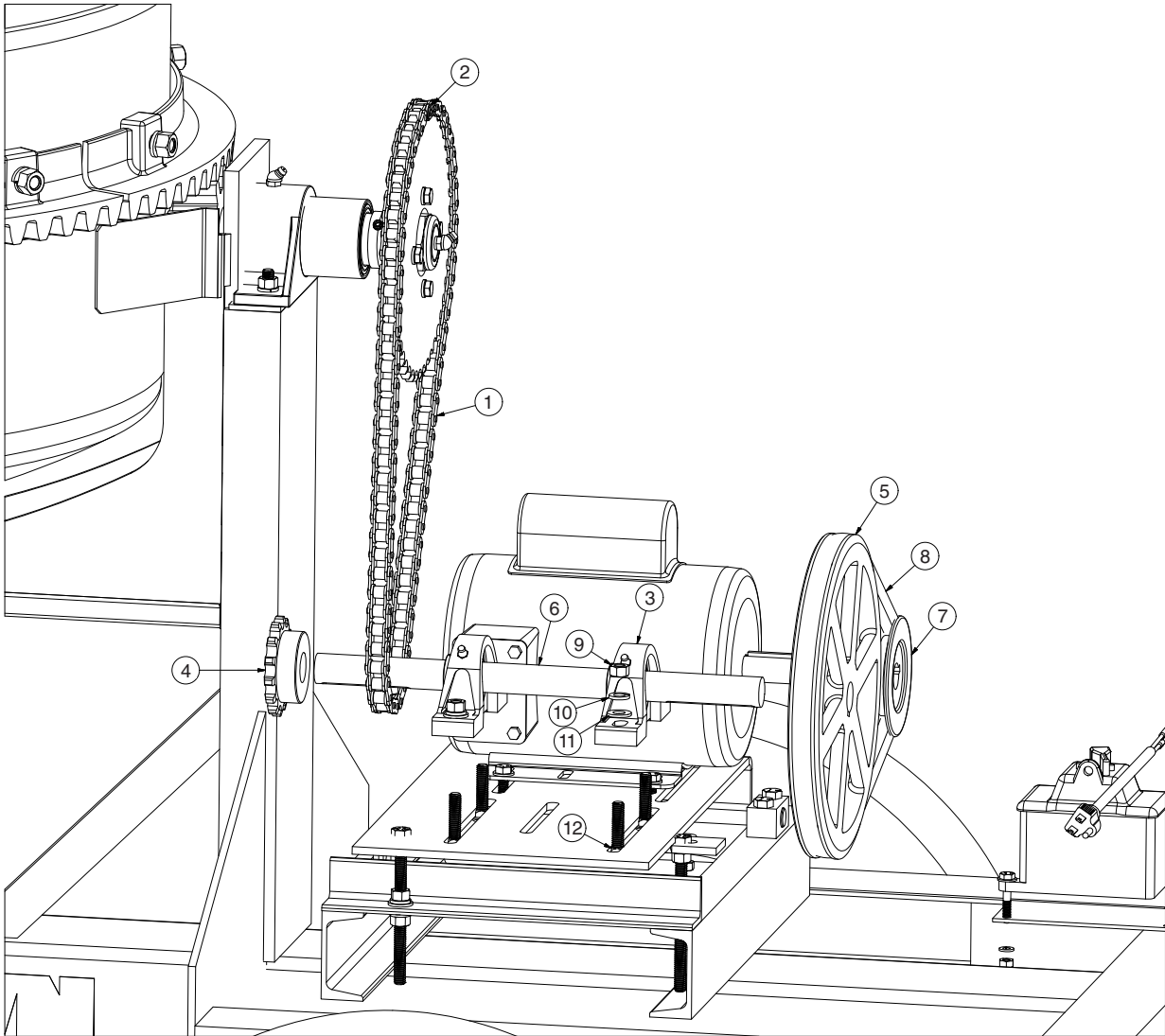
KIT, AXLE INSTALLATION HDW W/O AXLE EDI# 27798 INCLUDES:

REF #	NAME	QTY
4	HEX NUT 1/2-13NC	4
14	WASHER-1/2" ZINC PLATED	4
6	LOCKWASHER, 1/2" ZINC PLATED SPLIT	4
8	HCS 1/2-13 X 1-1/2 Z5	4

KIT, ENGINE/MOTOR TABLE INSTALL 600CM 600CM-PL EDI# 27799 INCLUDES:

REF #	NAME	QTY
2	LOCK WASHER, 3/8 ZINC PLATED	10
3	HEX NUT, 3/8-16- 00123	10
10	MOUNT, PIVOT-POWDERCOATED	2
1	FLAT WASHER, 3/8"	4
12	W/8-16 FULLY THREADED TAP BOLT GRADE 8	2
11	HEX CAP SCREW, 3/8" - 16 2" GRADE 5 ZINC PLATED	4

DRIVE SHAFT - PULLEY - SPROCKET



DRIVE SHAFT - PULLEY - SPROCKET PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	CHAIN, #50-1 ROLLER RVTD TYP	21251	1
2	LINK, CONNECTING, #50	21254	1
3	BEARING, PILLOW BLOCK, VPS116M	22140	2
4	SPROCKET, 50B15, 15-TTH, 1/4" KEY	21786	1
5	PULLEY, BK110 X 1" BORE	21782	1
6	SHAFT, DRIVE, 600CM "ELEC"	21601	1
7	PULLEY, BK40-7/8	21549	1
8	V-BELT, 5L420	21781	1
9	HEX NUT, 3/8-16- 00123	*	4
10	FLAT WASHER, 3/8"	*	8
11	LOCK WASHER, 3/8 ZINC PLATED	*	4

* Common hardware, can be purchased locally.

DRIVE SHAFT - PULLEY - SPROCKET REPLACEMENT KITS

KIT, CHAIN DRIVE 600CM 600CM-PL ELECT EDI# 27800 INCLUDES:

REF #	NAME	QTY
2	LINK, CONNECTING, #50	1
1	CHAIN, #50-1 ROLLER RVTD TYP	1
4	SPROCKET, 50B15, 15-TTH, 1/4" KEY	1

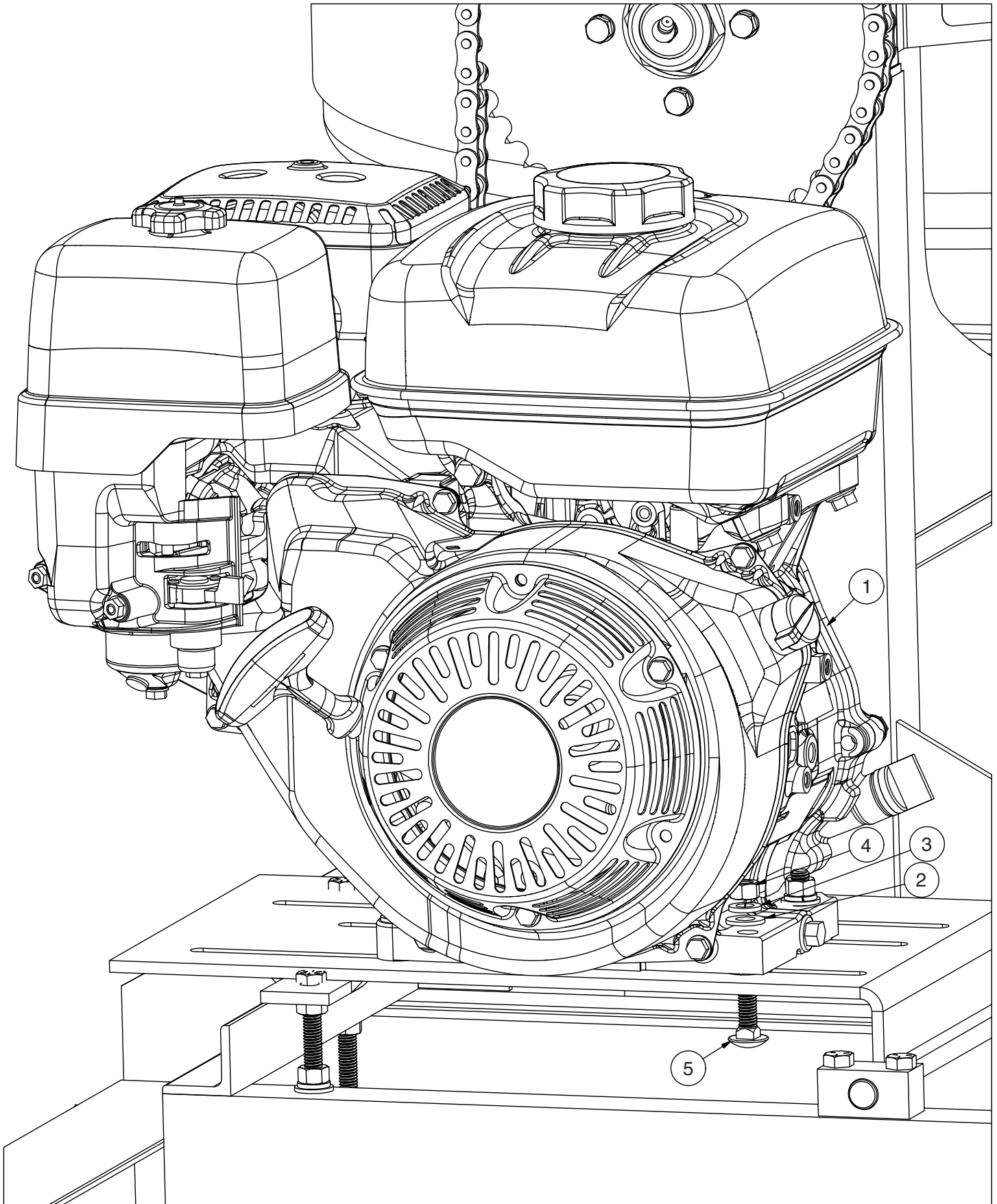
KIT, CHAIN DRIVE 600CM 600CM-PL GAS EDI# 27801 INCLUDES:

REF #	NAME	QTY
2	LINK, CONNECTING, #50	1
1	CHAIN, #50-1 ROLLER RVTD TYP	1

KIT, DRIVETRAIN 600CM 600CM-PL ELECT EDI# 27802 INCLUDES:

REF #	NAME	QTY
1	CHAIN, #50-1 ROLLER RVTD TYP	1
2	LINK, CONNECTING, #50	1
3	BEARING, PILLOW BLOCK, VPS116M	2
4	SPROCKET, 50B15, 15-TTH, 1/4" KEY	1
5	PULLEY, BK110 X 1" BORE	1
6	SHAFT, DRIVE, 600CM "ELEC"	1
7	PULLEY, BK40-7/8	1
8	V-BELT, 5L420	1
9	HEX NUT, 3/8-16- 00123	4
10	FLAT WASHER, 3/8"	8
11	LOCK WASHER, 3/8 ZINC PLATED	4
12	CARRIAGE BOLT 3/8-16 X 1-3/4	4

ENGINE INSTALLATION - 8HP



ENGINE INSTALLATION - 8HP PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	ENGINE, 8HP #GX240K1HA W/6:1 R	Available through manufacturer	1
2	FLAT WASHER, 3/8"	*	8
3	LOCK WASHER, 3/8 ZINC PLATED	*	4
4	HEX NUT, 3/8-16- 00123	*	4
5	HCS 3/8-16 X 1-3/4 Z5	*	4

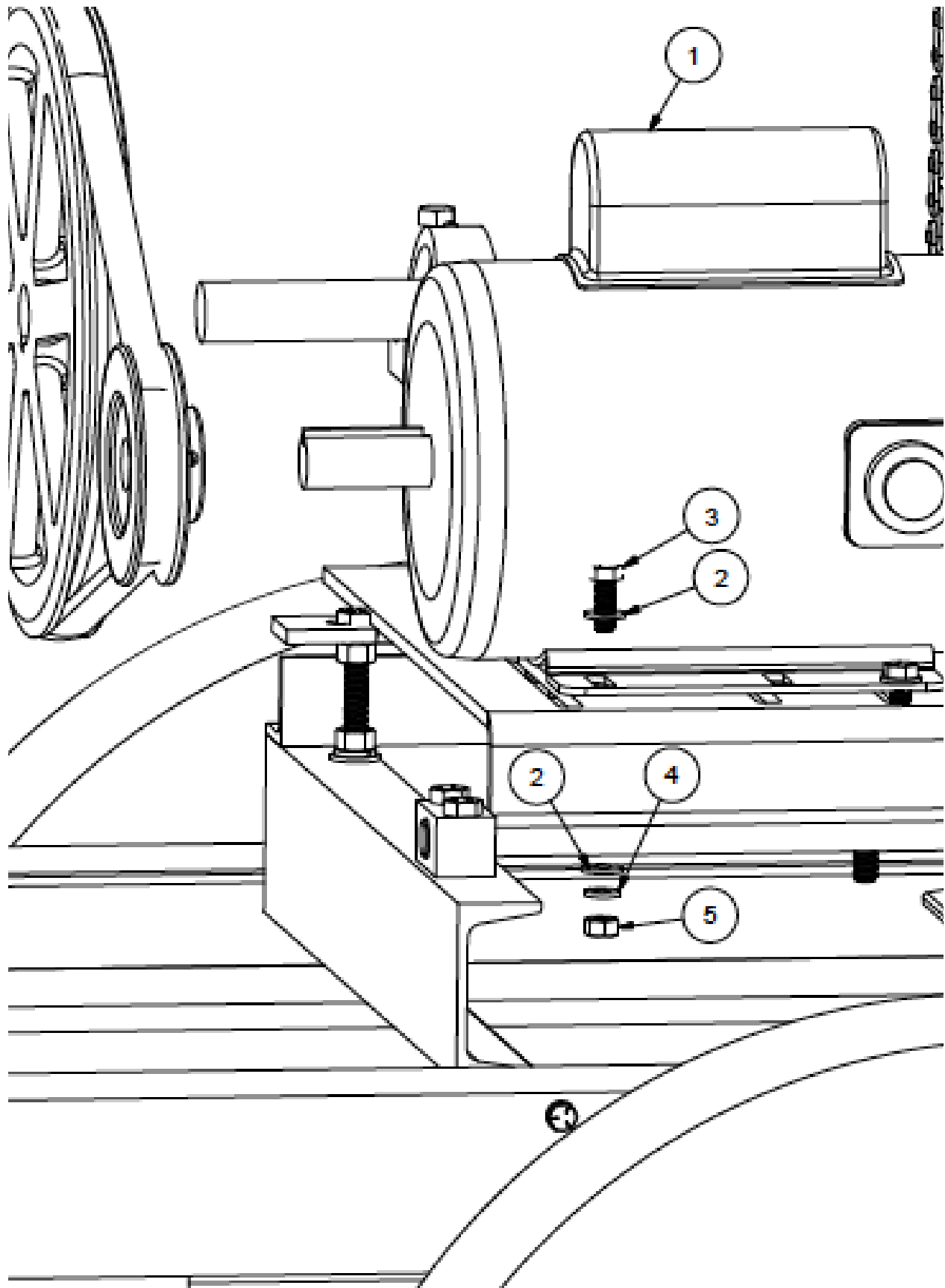
* Common hardware, can be purchased locally.

ENGINE INSTALLATION - 8HP REPLACEMENT KIT

KIT, GAS ENGINE INSTALL 600CM 600CM-PL HDW ONLY EDI# 27816 INCLUDES:

REF #	NAME	QTY
2	FLAT WASHER, 3/8"	8
3	LOCK WASHER, 3/8 ZINC PLATED	4
4	HEX NUT, 3/8-16- 00123	4
5	CARRIAGE BOLT 3/8-16 X 1-3/4	4

MOTOR SWITCH INSTALLATION



MOTOR SWITCH INSTALLATION PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	MOTOR, 1-1/2HP 1PH 1740	22448	1
2	WASHER, FLAT, 5/16 ID	*	8
3	HCS 5/16-18 X 7/8 Z5	*	4
4	Regular Helical Spring Lock Washers(Inch Series)	*	4
5	NUT HEX 5_16 - 18	*	4

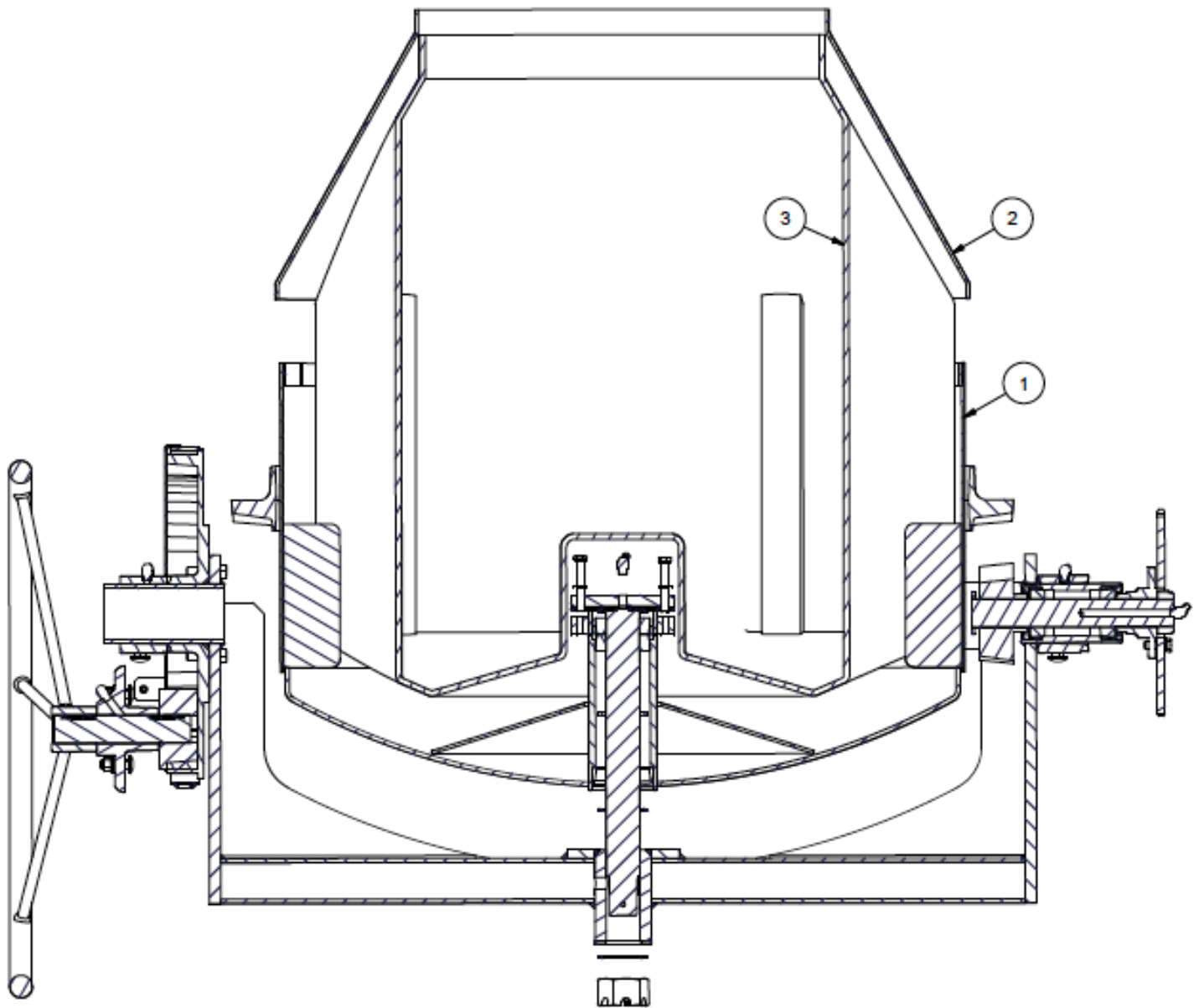
* Common hardware, can be purchased locally.

MOTOR SWITCH INSTALLATION REPLACEMENT KIT

KIT, ELEC MOTOR INSTALL 600CM 600CM-PL HDW ONLY EDI# 27810 INCLUDES:

REF #	NAME	QTY
2	WASHER, FLAT, 5/16 ID	8
3	HCS 5/16-18 X 7/8 Z5	4
4	LOCKWASHER 5/16 SPLIT, ZINC PLATED	4
5	HEX NUT, 5/16-18	4

600CM-PL DRUM



600CM-PL DRUM PARTS BREAKDOWN

REF #	NAME	EDI #	QTY
1	DRUM ASSM, 600CM FOR POLYLINER - POWDERCOATED	21578	1
2	DRUM CONE ASSM, 600CM-PL-PC-BLUE	21577	1
3	LINER, DRUM, 600CM POLY	21576	1

* Common hardware, can be purchased locally.



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