SERVICE/PARTS MANUAL

MODELS: SB1600



Mud Buggy™

A 100% employee-owned American manufacturer

REVISION: C 07/2002 PN 56487

Table of Contents

Mud Buggy

FOREWORD **5**
LIMITED WARRANTY **6**

TECHNICAL DATA **7-12**
- Machine Specifications 7
- Engine Specifications 8
- Lubrication Specifications 8
- Machine Sound Level Test 9
- Imperial Torque Chart 10
- Metric Torque Chart 11
- Hardware Chart 12

HEALTH & SAFETY **13-17**

MAINTENANCE **18-28**
- Tasks 18
- Know Your Buggy 19
- Engine 19
- Engine /Battery Policy 20
- Power Train/Transmission 21
- Chassis Lube 22
- Brake Adjustment 22
- Tires/Lugnuts and Hardware 23
- Changing Dual Wheel to Single Wheel 23
- Quick Release Wheel Option 23
- Hardware Guidelines 23
- Fuel Tank 24
- Cold Weather Starting 24
- Cleaning Machine 24
- Parking/Transporting Buggy 24-25
- Lifting Points 25
- Storage 25-26
- Spring Start-Up 26
- Troubleshooting 27
- Service Record 28

Table of Contents

Mud Buggy

EXPLODED DIAGRAM AND PARTS LIST 29-57

Frame Assembly/Cowl, Hopper, Splash Guard 30-31
Engine and Pump Assembly 32-35
Wheelmotors and Brake Assembly 36-37
Brake Rods and Platform Lock Assembly 38-39
Steering Assembly and Dump Platform Assembly 40-41
Steering, Hydraulic Tank, Battery Assemblies 42-43
Parking Brake, Hydraulic Valves and Filter Assembly 44-45
Captivators, Heat Shield and Cylinder Assembly 46-47
Pneumatic Tire with Standard Hubs Assembly 48-49
Foam Tires and Quick Change Hubs Assembly 50-51
Dump Pedal Assembly 52-53
Option Steel Bucket Assembly 54-55
Hydraulic Diagram 56-57
Hydraulic System Schematic 58-59
Wiring Schematic Recoil Start 60
Wiring Schematic Electric Start 61
Decal Identification 62-63

CALIFORNIA PROPOSITION 65 WARNING ..... IBC

User Information

These instructions include:

Safety regulations
Operating instructions
Maintenance instructions

These instructions have been prepared for operation on the construction site and for the maintenance engineer.

These instructions are intended to simplify operation of the machine and to avoid malfunctions through improper operation.

Observing the maintenance instructions will increase the reliability and service life of the machine when used on the construction site and reduce repair costs and downtimes.

Always keep these instructions at the place of use of the machine.

Only operate the machine as instructed and follow these instructions.

Observe the safety regulations as well as the guidelines of the civil engineering trade association. Observe the safety rules for operation and the pertinent regulations for the prevention of accidents.

Stone Construction Equipment, Inc. is not liable for the function of the machine when used in an improper manner or for other than the intended purpose.

Operating errors, improper maintenance and the use of incorrect operating materials are not covered by the warranty.

The above information does not extend the warranty and liability conditions of business of Stone Construction Equipment, Inc.

1. Machine Type: _____

   Machine S/N: _____

2. Engine Type: _____

   Engine S/N: _____

3. VIN: _____

4. Purchase Date: _____

5. Dealer/Distributor Information:

   Name: _____

   Address: _____

   _____

   Phone #: _____

   Fax #: _____

6. Battery
   Manufacturer: _____

   Battery Type: _____

   Battery S/N: _____

Location of above information:

1. Information on S/N tag.
2. Information on engine tag.
3. Information on S/N tag - if applicable.
4. Date you purchased machine.
5. Dealer machine was purchased from.
6. Information on battery and battery warranty card.

Stone Construction Equipment, Inc.
P.O. Box 150, Honeoye, New York 14471
Phone: (800) 888-9926
Fax: (585) 229-2363

Limited Warranty

The Manufacturer warrants that products manufactured shall be free from defects in material and workmanship that develop under normal use for a period of 90 days for concrete vibrators and electric pumps, one year for Rhino®, Bulldog®, WolfPac Rollers™, trowels, Stompers®, saws, forward plates, engine powered pumps, Lift Jockey™, Mortar Buggy™ and 6 months for all other products from the date of shipment. The foregoing shall be the exclusive remedy of the buyer and the exclusive liability of the Manufacturer. Our warranty excludes normal replaceable wear items, i.e. gaskets, wear plates, seals, O-rings, V-belts, drive chains, clutches, etc. Any equipment, part or product which is furnished by the Manufacturer but manufactured by another, bears only the warranty given by such other manufacturer. (The Manufacturer extends the warranty period to "Lifetime" for the drum bearings and seals for the mortar mixers, and agrees to furnish, free of charge, the bearings and seals only upon receipt of the defective parts. The warranty is two years for eccentric bearings on the forward plate compactors, mortar and plaster mixer drums, trowel gearboxes and five years on the Bulldog trench roller eccentric bearings.) A Warranty Evaluation Form must accompany all defective parts. Warranty is voided by product abuse, alterations, and use of equipment in applications for which it was not intended, use of non-manufacturer parts, or failure to follow documented service instructions. The foregoing warranty is exclusive of all other warranties whether written or oral, expressed or implied. No warranty of merchantability or fitness for a particular purpose shall apply. The agents, dealer and employees of Manufacturer are not authorized to make modification to this warranty, or additional warranties binding on Manufacturer. Therefore, additional statements, whether oral or written, do not constitute warranty and should not be relied upon.

The Manufacturer's sole responsibility for any breach of the foregoing provision of this contract, with respect to any product or part not conforming to the Warranty or the description herein contained, is at its option (a) to repair, replace or refund such product or parts upon the prepaid return thereof to location designated specifically by the Manufacturer. Product returns not shipped prepaid or on an economical transportation basis will be refused (b) as an alternative to the foregoing modes of settlement - the Manufacturer's dealer to repair defective units with reimbursement for expenses, except labor, and be reviewed with the Manufacturer prior to repair. A Warranty Evaluation Form must accompany all warranty claims.

Except as set forth hereinabove and without limitation of the above, there are no warranties or other affirmations which extends beyond the description of the products and the fact hereof, or as to operational efficiency, product reliability or maintainability or compatibility with products furnished by others. In no event whether as a result of breach of contract or warranty or alleged negligence, shall the Manufacturer be liable for special or consequential damages including but not limited to: Loss of profits or revenues, loss of use of the product or any associated product, cost of capital, cost of substitute products, facilities or services or claims of customers.

No claim will be allowed for products lost or damaged in transit. Such claims should be filed with the carrier within fifteen days.

Effective September 2001.

Stone Construction Equipment, Inc. **Phone: 1-800-888-9926 • 1-585-229-5141**
8662 Main Street, P. O. Box 150 **Fax: 1-585-229-2363**
Honeoye, NY 14471-0150 www.stone-equip.com • e-mail: sceny@mcimail.com

TECHNICAL DATA

Specifications

Stone Mud Buggy – Specifications

Model	SB1600
Capacity (m3)	16 Cu. Ft. (.45)
Weight (kg)	1440 (655)
Length (cm)	105.5 (268)
Width (single wheel) (cm)	33.75 (86)
Width (Double wheel) (cm)	46 (117)
Height (cm)	45 (114,3)
Wheelbase (cm)	42 (107)
Max. Load (kg)	2500 (1136)
Tub	Polyethylene
Engine (kW)	13 hp. Honda (9,7)
Speed (km/h)	6.8 mph (11)
Fuel Tank (l)	7 gal. (26,5)
Discharge Height (cm)	6.5 in (16.5)
Options	Quick-Release Removable Tires Foam-filled Tires Steel Drum Electric Start

TECHNICAL DATA Engine & Lubrication Specs

ENGINE SPECIFICATIONS

Engine Type	13hp 4-cycle Overhead Valve (9.7 kW)
Engine Make	Honda
Engine Model	GX390
Power @ 2500 RPM	19.5 ft.lb. (26.5 Nm)
Operating RPM	3900
Battery	165 amp
Fuel Type	Unleaded Gas
Fuel Tank Capacity	7 gal (26.5 liter)
Fuel Consumption	1.14 gph (4.2 liter)

LUBRICATION SPECIFICATIONS

	Type	Quantity
Engine Crankcase	See Engine Manual	1.6 quarts/1.1 liter
Hydraulic System	Mobilfluid 424 Hydraulic Oil	30 quarts/28.39 liter

TECHNICAL DATA

Sound Level Specs

Machine Type:	Mud Buggy Material Handler
Sound Level Meter Calibration Date:	February 15, 2000
Meter Type:	Simpson Model 886-2 Type 2
Test Date:	September 20, 2001
Test Conditions	
Temperature:	31 degrees Fahrenheit / 1 degree Celsius
Ambient Sound:	dba fast mode
Moisture Limit:	Approximately equal to 50%
Engine speed:	3600 rpm / 60 Hz
Test Site;	Honeoye, New York USA
Sound Level at Operator Position:	73 dba

TECHNICAL DATA

Imperial Torque Chart

SAE GRADE 5 Coarse Thread, Zinc-Plated		
SIZE	**TORQUE**	
	ft. lbs.	**Nm**
1/4 - 20 (.250)	6	8
5/16 - 18 (.3125)	13	18
3/8 - 16 (.375)	23	31
7/16 - 14 (.4375)	37	50
1/2 - 13 (.500)	57	77
9/16 - 12 (.5625)	82	111
5/8 - 11 (.625)	112	152
3/4 - 10 (.750)	200	271
7/8 - 9 (.875)	322	436.5
1 - 8 (1.000)	483	655

SAE GRADE 8 Coarse Thread, Zinc-Plated		
SIZE	**TORQUE**	
	ft. lbs.	**Nm**
1/4 - 20 (.250)	9	12
5/16 - 18 (.3125)	18	24
3/8 - 16 (.375)	33	45
7/16 - 14 (.4375)	52	70
1/2 - 13 (.500)	80	108
9/16 - 12 (.5625)	115	156
5/8 - 11 (.625)	159	215
3/4 - 10 (.750)	282	382
7/8 - 9 (.875)	454	615
1 - 8 (1.000)	682	925

SAE GRADE 5 Fine Thread, Zinc-Plated		
SIZE	**TORQUE**	
	ft. lbs.	**Nm**
1/4 - 28 (.250)	7	10
5/16 - 24 (.3125)	14	19
3/8 - 24 (.375)	26	35
7/16 - 20 (.4375)	41	56
1/2 - 20 (.500)	64	87
9/16 - 18 (.5625)	91	123
5/8 - 18 (.625)	128	173
3/4 - 16 (.750)	223	302
7/8 - 14 (.875)	355	481
1 - 12 (1.000)	529	717
1 -14 (1.000)	541	733

SAE GRADE 8 Fine Thread, Zinc-Plated		
SIZE	**TORQUE**	
	ft. lbs.	**Nm**
1/4 - 28 (.250)	10	14
5/16 - 24 (.3125)	20	27
3/8 - 24 (.375)	37	50
7/16 - 20 (.4375)	58	79
1/2 - 20 (.500)	90	122
9/16 - 18 (.5625)	129	175
5/8 - 18 (.625)	180	244
3/4 - 16 (.750)	315	427
7/8 - 9 (.875)	501	679
1 - 12 (1.000)	746	1011
1 -14 (1.000)	764	1036

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TECHNICAL DATA

Metric Torque Chart

Property Class 8.8

ZINC-PLATED

SIZE	Coarse Thread		Fine Thread	
	Nm	ft. lbs.	Nm	ft. lbs.
M6	9.9	7	NA	NA
M8	24	18	25	18
M10	48	35	49	36
M12	83	61	88	65
M14	132	97	140	103
M16	200	148	210	155
M20	390	288	425	313
M24	675	498	720	531

Property Class 10.9

ZINC-PLATED

SIZE	Coarse Thread		Fine Thread	
	Nm	ft. lbs.	Nm	ft. lbs.
M6	14	10	NA	NA
M8	34	25	35	26
M10	67	49	68	50
M12	117	86	125	92
M14	185	136	192	142
M16	285	210	295	218
M20	550	406	600	443
M24	950	701	1000	738

Property Class 12.9

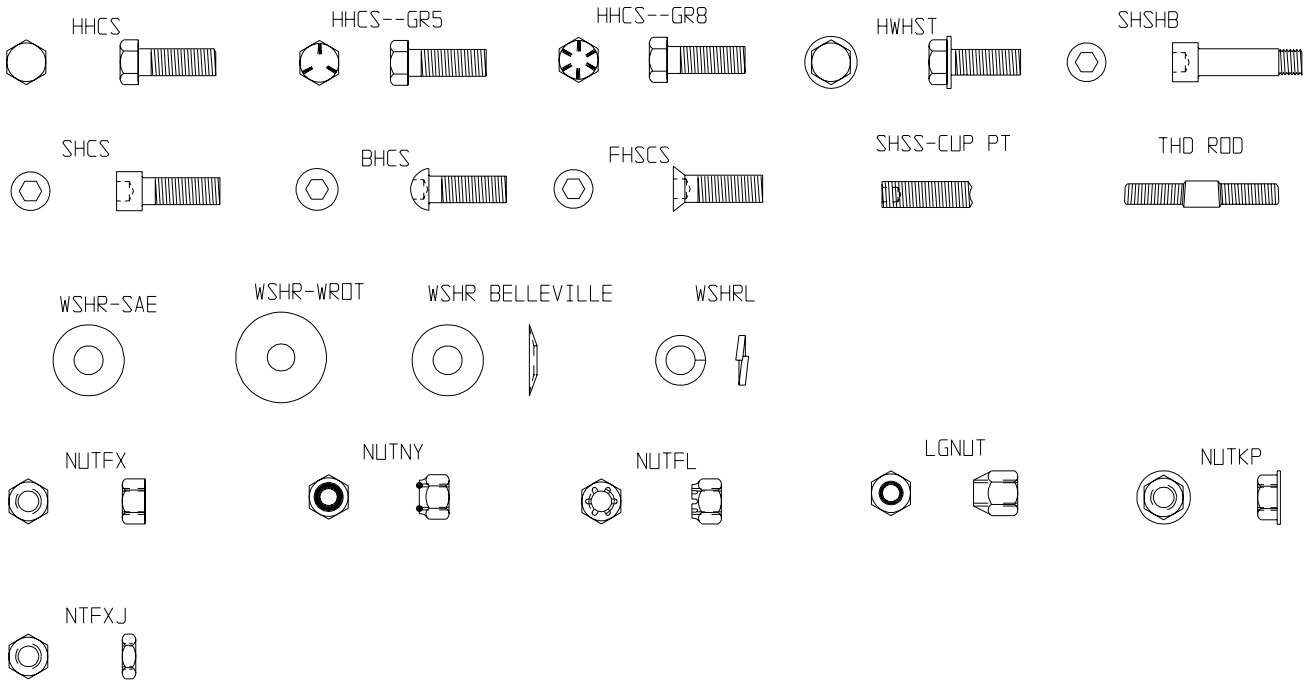
ZINC-PLATED

SIZE	Coarse Thread		Fine Thread	
	Nm	ft. lbs.	Nm	ft. lbs.
M6	16.5	12	NA	NA
M8	40	30	42	31
M10	81	60	82	60
M12	140	103	150	111
M14	220	162	235	173
M16	340	251	350	258
M20	660	487	720	531
M24	1140	841	1200	885

Conversion Factor: 1 ft. lb. = 1.3558 Nm

TECHNICAL DATA

Hardware



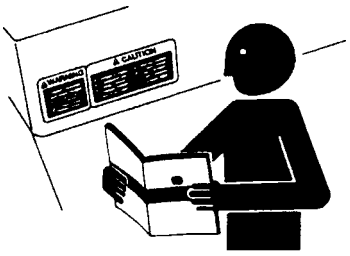
HEALTH & SAFETY

Safety Precautions

Before using this equipment, study this entire manual to become familiar with its operation. Do not allow untrained or unauthorized personnel, especially children, to operate this equipment. Use only factory authorized parts for service.

When warning decals are destroyed or missing, contact the Manufacturer immediately at 1-800-888-9926 for replacement. For the safety of yourself and others, it is imperative that the following rules are observed. Failure to do so may result in serious injury or death.

FOLLOW SAFETY INSTRUCTIONS



Carefully read all safety messages and decals in this manual and on your machine safety signs. Keep decals in good condition. Replace missing or damaged decals. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs and decals are available through your dealer.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your dealer.



This notation appears before warnings in the text. It means that the step which follows must be carried out to avoid the possibility of personal injury or death. These warnings are intended to help the technician avoid any potential hazards encountered in the normal service procedures. We strongly recommend that the reader takes advantage of the information provided to prevent personal injury or injury to others.

⚠ DANGER

⚠ WARNING

⚠ CAUTION

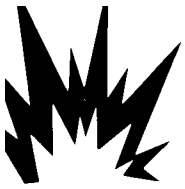
UNDERSTAND SIGNAL WORDS

A signal word – DANGER, WARNING, or CAUTION – is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

HEALTH & SAFETY

Safety Precautions

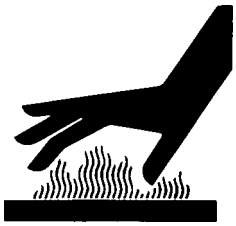


USE COMMON SENSE WHEN HANDLING FUELS

- Transport and handle fuel only when contained in approved safety container.
- Do not smoke when refueling or during any other fuel handling operation.
- Do not refuel while the engine is running or while it is still hot.
- If fuel is spilled during refueling, wipe it off from the engine immediately and discard the rag in a safe place.
- Do not operate the equipment if fuel or oil leaks exist - repair immediately.
- Never operate this equipment in an explosive atmosphere.



- Always use the proper size grounded extension cord, conforming to the National Electric Code and Local Ordinances.
- Inspect all extensions and electrical cords for cuts, frayed wire and broken connectors before use. Do not use cords if not in good condition.
- Do not route extension cords through standing water.
- Do not operate the equipment in standing water.
- When cleaning the equipment, never spray water on the electric motor.



HOT SURFACES

- Avoid contact with hot exhaust systems and engines.
- Allow all components in the engine compartment to cool before performing any service work.

⚠WARNING

- Never leave equipment unattended while running.
- Be certain you can control both speed and direction before moving.
- This is a one-person buggy. Never permit riders.
- Avoid sharp turns at high speed.

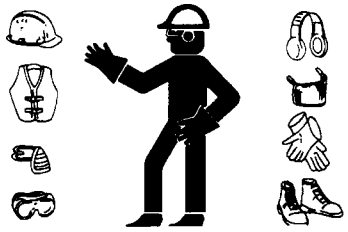
HEALTH & SAFETY

Safety Precautions



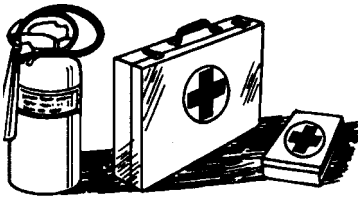
- Never perform any work on the equipment while it is running.
- Before working on the equipment, stop the engine and disconnect the spark plug wire(s) to prevent accidental starting. On electric models, disconnect the electric cord at the equipment.
- Keep cowl closed and latched during the operation, close and latch cowl immediately after starting.
- Keep hands, clothing and jewelry away from all moving parts.
- Keep all guards in place.

WEAR PROTECTIVE CLOTHING

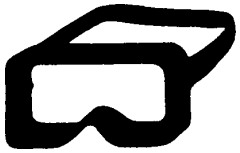


- Wear close fitting clothing and safety equipment appropriate to the job.
- Prolonged exposure to loud noise can cause impairment or loss of hearing.
- Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.
- Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

PREPARE FOR EMERGENCIES



- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



Warning-Eye Protection

- Always wear splash goggles when operating equipment.



- Starting fluid (ether) is highly flammable, do not use or an explosion or fire may result.



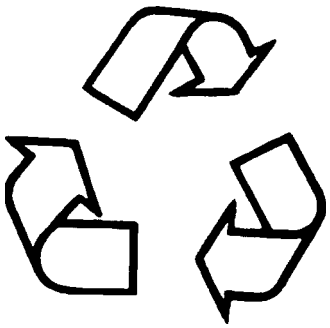
- Never operate unit in a poorly ventilated or enclosed area.
- Avoid prolonged breathing of exhaust gases.
- Engine exhaust fumes can cause sickness or death.

PRACTICE SAFE MAINTENANCE



- Understand service procedure before doing work. Keep area clean and dry.
- Never lubricate, service or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.
- Securely support any machine elements that must be raised for service work.
- Keep all parts in good condition and properly installed. Repair damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.
- Disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

DISPOSE OF WASTE PROPERLY



- Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.
- Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.
- Do not pour waste onto the ground, down a drain, or into any water source.
- Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.
- Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center.

DECALS - FOR THE SAFETY OF YOURSELF AND OTHERS REPLACE ANY DAMAGED OR MISSING SAFETY DECALS. SEE DECAL IDENTIFICATION SECTION.



IMPORTANT

The person attempting *any* of the following maintenance tasks must be authorized to do so and have read *and* understood *all* sections within this manual.

MAINTENANCE

Know Your Buggy/Engine

Know Your Buggy

Read and understand the owner's manual before starting the unit. Make sure you understand the purpose of every control. When operating the unit, remember the capacity it can carry and adjust speed and load for changing conditions.

Inspect Machinery--A daily inspection of the unit is recommended to insure all systems are in proper working orders.

Check Travel Path--Inspect the surface on which the unit is going to travel. Avoid soft soil, slippery spots, and water spots. Look for anything that will make you lose control.

Machine Cleanliness--Keep unit clean of all debris. Make sure foot stand stays clean to prevent accidents.

ENGINE

Refer to engine manual for specific engine information.

Oil Fill Location--checking and filling oil is accomplished through the opening on side of engine. Fill oil until level with filler opening.

Oil Grade and Capacity--Engine requires 1.16 quarts/1.1 liter.

- Over 40 Degrees Fahrenheit/13 Degrees Celsius SAE 30
- Below 40 Degrees Fahrenheit/13 Degrees Celsius SAE 20

Air Filter--Check air filter before each use and clean after every 50 hours of service.

Clean primary (outer) element at 40 hours (after break-in period) then every 500 hours or 12 months.

Service air cleaner more frequently in dusty conditions.

IMPORTANT: DO NOT operate engine without the filter cover.

1. Remove air cleaner cover.
2. Remove primary (outer) element only.
3. Thoroughly clean all dirt from inside filter housing. Insert the cleaning gun into element, hold air nozzle about 1" (25.4 mm) from perforated metal retainer. Force air through filter from inside to outside and move air gun up and down pleats to remove as much dirt as possible.

IMPORTANT: Only a special air cleaning gun should be used. Concentrated air pressure from an ordinary nozzle may severely damage filter element. DO NOT exceed 30 PSI (2.1 bar) when cleaning filter element.

4. Inspect filter to determine if it is practical to clean or for damage after cleaning filter. If necessary, repeat step one to remove additional dirt.
    a. Hold a bright light inside element and check carefully for holes. Discard any element that shows the smallest hole or rupture.
    b. Be sure outer screen is not dented. Vibration would quickly wear a hole in filter.
    c. Be sure filter gasket is in good condition. If gasket is damaged or missing, replace element.
5. Gently pat sides of element with palm of hand to loosen dirt. DO NOT tap element against a hard surface.

Electric Start Option--Inspect battery connections daily for cleanliness and tightness. Replace worn or frayed wires.

MAINTENANCE

Engine/Battery Policy

Battery--Battery replacement is a Crown U1-12 or equal 165 CCA battery. See Engine Specifications Section for battery requirements.

Battery vapors can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level. Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer. Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

- Filling batteries in a well-ventilated area.
- Wearing eye protection and rubber gloves.
- Avoid breathing fumes when electrolyte is added.
- Avoid spilling or dripping electrolyte.
- Use proper jump start procedures.

If you spill acid on yourself:

- Flush your skin with water.
- Apply baking soda or lime to help neutralize the acid.
- Flush your eyes with water for 10 - 15 minutes. Get medical attention immediately.

If acid is swallowed:

- Drink large amounts of water or milk.
- Then drink milk of magnesia, beaten eggs, or vegetable oil.
- Get medical attention immediately.

- Once a month check the battery condition. With engine off, check the battery for 12.5 volts with a voltmeter or check the specific gravity of the electrolyte fluid in each cell.

- Check for proper electrolyte fluid level. Use distilled water when adding and run 30 minutes to mix. Clean battery, posts, and terminals. Disconnect battery cables before charging to avoid damage to the electrical system.

- Once a month, check the charging system with the engine running at full speed for 13 - 14 volts with a voltmeter to ensure engine voltmeter readings are correct.

- Keep batteries clean by wiping them with a damp cloth. Keep all connections clean and tight. Remove any corrosion and wash terminals with a solution of 1 part baking soda and 4 parts water. Tighten all connections and check that the battery is securely fastened with properly installed hold downs.

NOTE: Coat battery terminals and connectors with a mixture of petroleum jelly and baking soda to retard corrosion.

- Keep battery fully charged, especially during cold weather. If a battery charger is used, turn charger off before connecting charger to battery. Attach POSITIVE (+) battery charger lead to POSITIVE (+) battery post. Then attach NEGATIVE (-) battery charger lead to a good ground.

Battery Policy

Battery warranty begins when equipment is sold from Stone Construction Equipment, Inc. or a Stone dealer to a customer.

Battery warranty claims must include the unit's purchase receipt with date. Claims without purchase receipt will be based on the battery identification numbers.

Battery returns and/or adjustments are made through battery distributors.

For nearest Crown distributor call: 1-800-237-6126.

MAINTENANCE

Power Train/Transmission

Power Train

See Lubrication Specifications Section. Check hydraulic oil level daily using the sight gauge located on the hydraulic tank. A 1/2- 3/4" air bubble will be seen at the top of the gauge. Keep filled to proper level with Mobil 424 Hydraulic oil or equivalent. Your local oil vendor can determine compatible oils. Mobil 424 Hydraulic Oil or equivalent should be changed every 200 hours. The Hydraulic Oil Filter needs to be changed every time the Hydraulic Oil is changed. For temperatures below 35 degrees, oil should be switched to thinner 15 weight hydraulic fluid.

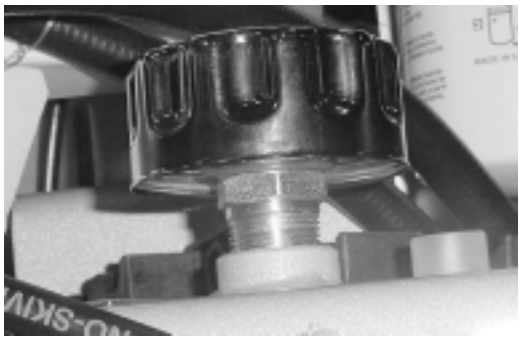
For satisfactory operation, the following oil conditions apply:

- Accurate level readings can be checked only when the fluid is cold and machine is on level ground.
- If the natural color of the fluid has become black or milky, it is possible that an overheating or water contaminant problem exists.
- DO NOT mix hydraulic fluids. See Lubrications Specifications Section for hydraulic system recommendations.
- Add hydraulic oil through breather tube. Pour hydraulic oil through strainer basket into hydraulic tank.

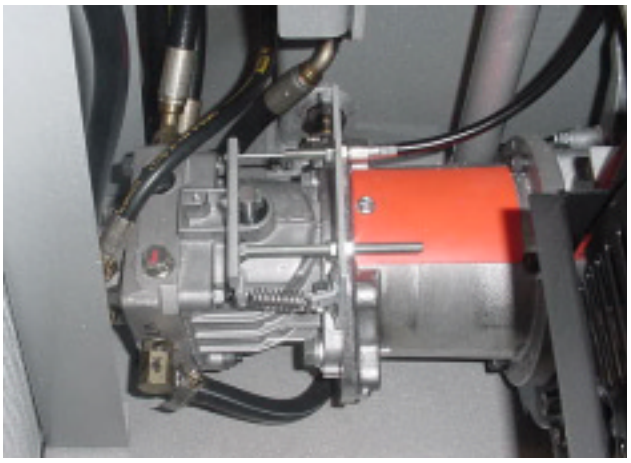
The hydraulic drive motors are extremely reliable and will ordinarily not need maintenance or repair. If a vibration is experienced with engine running, check the coupler between the engine and the hydraulic pump. Do not make this inspection while engine is running. It will be necessary to remove the inspection cover. After adjusting and tightening the coupler, replace the inspection cover and then start engine to see if the problem has been corrected. Do not run the engine or operate the buggy with the cover removed or not firmly attached.

CAUTION: This breather is designed to pressurize the reservoir to 5 PSI. Loosen cap slowly to avoid injury whenever adding oil or working on the hydraulic system. Use a wrench on the hex directly under the cap.

Transmission



The hydrostatic transmission is properly adjusted when no movement of the unit is visible.



MAINTENANCE

Chassis Lube/Brake Adjust

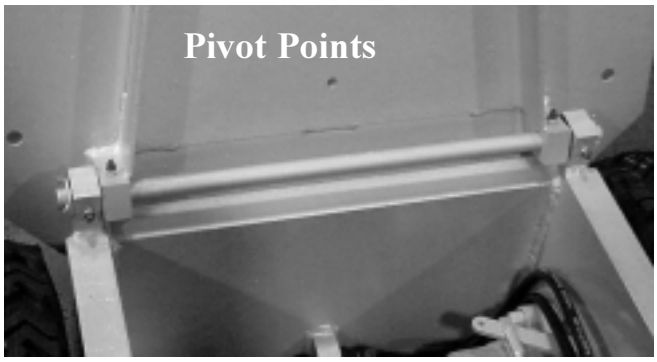

Cylinder Points

Adjustment--To adjust transmission, loose jam nut on swash plate control arm. Turn adjustment bolt in until unit stops creeping. Tighten jam nut.

Chassis Grease/Lube Points

See Lubrication Specifications for requirements.

- **Pivot Points (2 fitting)**
- **Cylinder Pivots (2 fittings)**
- **Tub Pivots (2 fittings)**
- **Steering Pivots (1 fitting--located on steering housing)**
- **Wheel Bearings--repack bearings yearly**


Pivot Points

Grease weekly using a grease gun. Remove the blue protection caps before greasing and replace when finished.

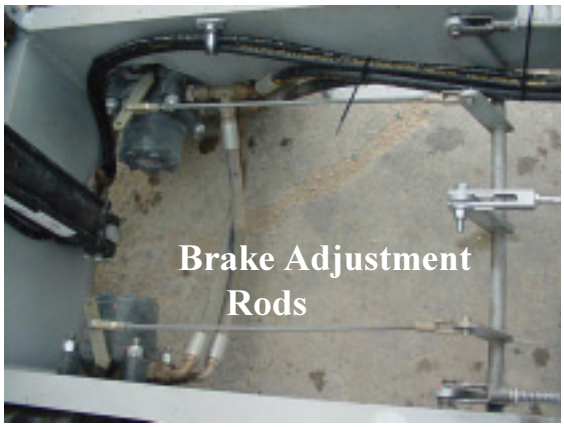
Moving Joints, Hinges, Throttle, Controls, Cables--Lubricate with oil every 500 hours.

Brake Adjustments

Brakes are adjusted at factory and will need to be adjusted as brake shoes wear. Check operation daily. Adjust at 25 hours then as needed.

Service Brake Adjustment--Brake adjustment rods need adjusting in equal amounts. Jack machine up so that front tire is off ground. Remove clevis pin from yoke. While screwing yoke, keep count of number of turns for repeating the same procedure on other side until brake is adjusted.

Parking Brake Adjustment--Turning the knob on the parking brake handle clockwise can make fine-tuning to the parking brakes.


Brake Adjustment Rods

MAINTENANCE

Tires, Lugnuts and Hardware/Changing Dual Wheel

Tires, Lugnuts and Hardware

DO NOT exceed rated pressure. To ensure long tire life and safe handling check tire pressure daily. Proper inflation pressure on pneumatic filled tire is 50 lbs/(3.5 Bar).

1. Check the pressure in tires weekly using a pressure gauge. See Machine Specifications Section for tire pressure.

2. Check that all lugnuts are tight weekly using a torque of 90 in. lbs. (122 Nm). This is important on new machines or newly replaced wheels.



Figure 7

3. Inspect all hardware is tight weekly (see Torque Charts Section).

NOTE: When installing or replacing hardware, loctite 262 threadlocker is required to prevent loosening.

Proper Care--Inspect tires for cuts, slashes, or bulges. Tires with defects need to be replaced or repaired for proper handling and safety.

Changing Dual Wheel to Single Wheel

Standard Machine

1. Jack machine. Apply parking brake.

2. Remove five (5) lug bolts.

3. Remove outer wheel.

4. Remove five (5) lug nuts from inner dual wheel adapter then remove adapter.

5. Replace five (5) lug nuts on inner wheel and torque to 32 ft. lbs.

6. Repeat above steps on opposite side of machine.

Note: Maximum payload reduced by 25% when operating machine without dual wheels.

Quick Release Wheel Option

1. Position machine inner wheel over 2x4 and apply parking brake.

2. Remove large tee bolt in center of wheel with crow bar (figure 7).

3. Remove outside wheel with quick-change hub attached.

4. Repeat above steps on opposite side of machine.

Hardware Guidelines

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

MAINTENANCE

Fuel Tank/Cold Weather Starting/ Parking & Transporting Buggy

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Fuel Tank

Gasoline ONLY (see Engine Specifications Section for requirements).

Fill fuel tank at the end of each day's operation to prevent condensation in the tank.

Drain and flush fuel tank every 1,000 hours or 12 months.

Avoid storing fuel over long periods of time. If fuel is stored for more than a month prior to use or there is a slow turnover in fuel tank or supply tank, add a fuel conditioner to stabilize the fuel and prevent water condensation. Fuel conditioner also reduces fuel gelling and controls wax separation during cold weather.

Proper fuel storage is critically important. Use clean storage and transfer tanks. Periodically drain water and sediment from the bottom of the tank. Store fuel in a convenient place away from buildings.

Cold Weather Starting

Hard starting may occur in temperatures below 35 degrees Fahrenheit. Using a lighter grade of oil in both the engine and hydraulic tank is recommended. Return oil to the proper grade when temperatures are above 35 degrees Fahrenheit.

Hoses, Fittings and Leakage--Check weekly for loose hose fittings, damage, and leakage--it is important to check entire machine periodically.



Cleaning Machine--Wash daily with warm, soapy water. Rinse off mud and dirt. Use pressurized air (30 PSI max) to blow debris. Dirt and mud build up will decrease machine performance and/or cause failures. Avoid spraying water directly on electrical components or electrical damage may occur.

PARKING/TRANSPORTING BUGGY

Parking on a Grade--Parking the unit on a grade should be avoided if possible. If unit has to be parked on a grade, park it at right angles to the slope and apply the parking brake and block the wheels if necessary.

Long Term Parking--When unit is not in use for long period of time, tilt tub up so water, snow, and debris will not collect inside. Apply parking brake and park unit out of main traffic areas.

If buggy will be exposed to wet freezing weather for any length of time, place tub in the dump position to prevent any possibility of freezing water damaging the tub.

Moving Machine Without Engine Power--The unit can be moved, if the engine won't run, short distances by moving the f/r control lever to the

middle position. The transmission is also provided with a bypass valve.

Transporting Machine--When transporting unit, observe overall height for proper clearance of obstacles overhead. Make sure bucket is lowered and latched down. Secure unit with the proper devices and in the proper locations.





Proper Lifting Points--There are two ways of lifting the unit, from the side or from the front. Lifting the standing platform will allow access to the lifting tubes. Accessing the side lifting tubes is straightforward.

Proper Tie Down Practices--Tie unit down with proper devices. Make sure all blocking is secure.

Proper Transportation Practices--Always know overall height to allow proper clearance for overhead obstructions such as power lines, overhangs, and doorways when transporting unit on a high vehicle.

Mounting/Dismounting Buggy--Always use 'three point contact' when mounting the buggy. Three points refers to three out of four arms/legs are in contact with buggy during mounting and dismounting. Always face the buggy whether mounting or dismounting.

Starting Instructions--Before starting engine, refer to engine owners' manual before you begin.

Shut-Off--Come to complete stop before setting parking brake. Idle engine for gradual cooling before shutting the engine off. Cycle hydraulic controls to eliminate residual pressure. Lever needs to be left in forward/reverse position. Remove ignition key on electric start models. Block wheels if on a slope or incline.

Capacity--Know the load capacities of your buggy and never exceed them. Buggies normally operate on uneven, unpaved, bumpy and/or inclined surfaces--adjust load accordingly.

Storage

If equipment is taken out of operation for the Winter season or a prolonged period, follow below procedures to prevent machine or engine damage.

1. Completely clean the outside of the engine.

2. Drain the fuel system and fill it with the preservative fuel. If preservative fuel is not used, the system can be kept full with normal fuel but the fuel must be drained and discarded at the end of the storage period together with the fuel filter element(s).

3. Operate the engine until it is warm. Stop the engine and drain the lubricating oil from the oil pan.

4. Preservative fluid must be drained and the lubricating oil pan must be filled to the correct level with normal lubricating oil at the end of the storage period.

Storage (cont'd)

5. Operate the engine for a short period in order to circulate the lubricating oil.

6. Disconnect the battery. Then put the battery into safe storage in a fully charged condition. Before the battery is put into storage, protect its terminals against corrosion. Grease may be used on the terminals.

7. Remove the air filter. Seal the vent pipe of the fuel tank or the fuel filler cap with waterproof tape.

Spring Start-Up

1. Drain engine preservative oil and fill with normal engine oil. Check engine oil level.

2. *If fuel preservative was not used,* drain and replace fuel and fuel filter.

3. Charge battery and install.

4. Check air filter.

5. Check hydraulic oil level.

6. Check hardware for looseness. If loose, tighten according to torque chart.

7. Check hoses for looseness or leaking.

8. Reacquaint yourself with Operations and Owner's Manuals.

Troubleshooting Your Buggy		
Engine Lacks Power	Fuel line plugged	Clean or replace
	Dirty fuel filter	Clean or replace
	Air filter dirty	Clean or replace
	Worn cylinder and piston rings	Replace
	Too much oil in crankcase	Drain to proper level
Oil Consumption	Worn valve guides	Replace
	Worn cylinder and piston rings	Replace
	Too much oil in crankcase	Drain to proper level
	Loose bolts on engine crankcase	Tighten
Blue Smoke	Worn valves/valve guides	Replace
	Worn cylinder and piston rings	Replace
	Too much oil in crankcase	Drain to proper level
	Oil seal at intake valve defective	Replace
Does Not Start	Empty fuel tank	Fill tank
	Weak or dead battery	Charge or replace
	Stop lever is engaged	Disengage
	Poor ground connection	Tighten and/or clean terminals
	Loose wire connection in wire harness	Tighten
	Run/off switch is in OFF position	Move switch to proper position

MAINTENANCE

Service Record

Model No.	Machine S/N:	Engine S/N:

Record Hours and Dates of Maintenance Below			
Engine Oil & Filter			
Hydraulic Oil, Filter & Breather			
Air Cleaner			
Grease Fittings			
Battery			
Brakes			
Valve Clearance			
Engine RPMs			
Fuel Tank			
Fuel Lines			
Hydraulic Hoses/Connections			
Forward/Reverse			
Control Cables			
Charge System			
Hardware, Lugnuts			

PARTS LIST

Exploded Views with Parts

EXPLODED DIAGRAM AND PARTS LIST 29-57

Frame Assembly/Cowl, Hopper, Splash Guard 30-31

Engine and Pump Assembly 32-35

Wheelmotors and Brake Assembly 36-37

Brake Rods and Platform Lock Assembly 38-39

Steering Assembly and Dump Platform Assembly 40-41

Steering, Hydraulic Tank, Battery Assemblies 42-43

Parking Brake, Hydraulic Valves and Filter Assembly 44-45

Captivators, Heat Shield and Cylinder Assembly 46-47

Pneumatic Tire with Standard Hubs Assembly 48-49

Foam Tires and Quick Change Hubs Assembly 50-51

Dump Pedal Assembly 52-53

Option Steel Bucket Assembly 54-55

Hydraulic Diagram 56-57

Hydraulic System Schematic 58-59

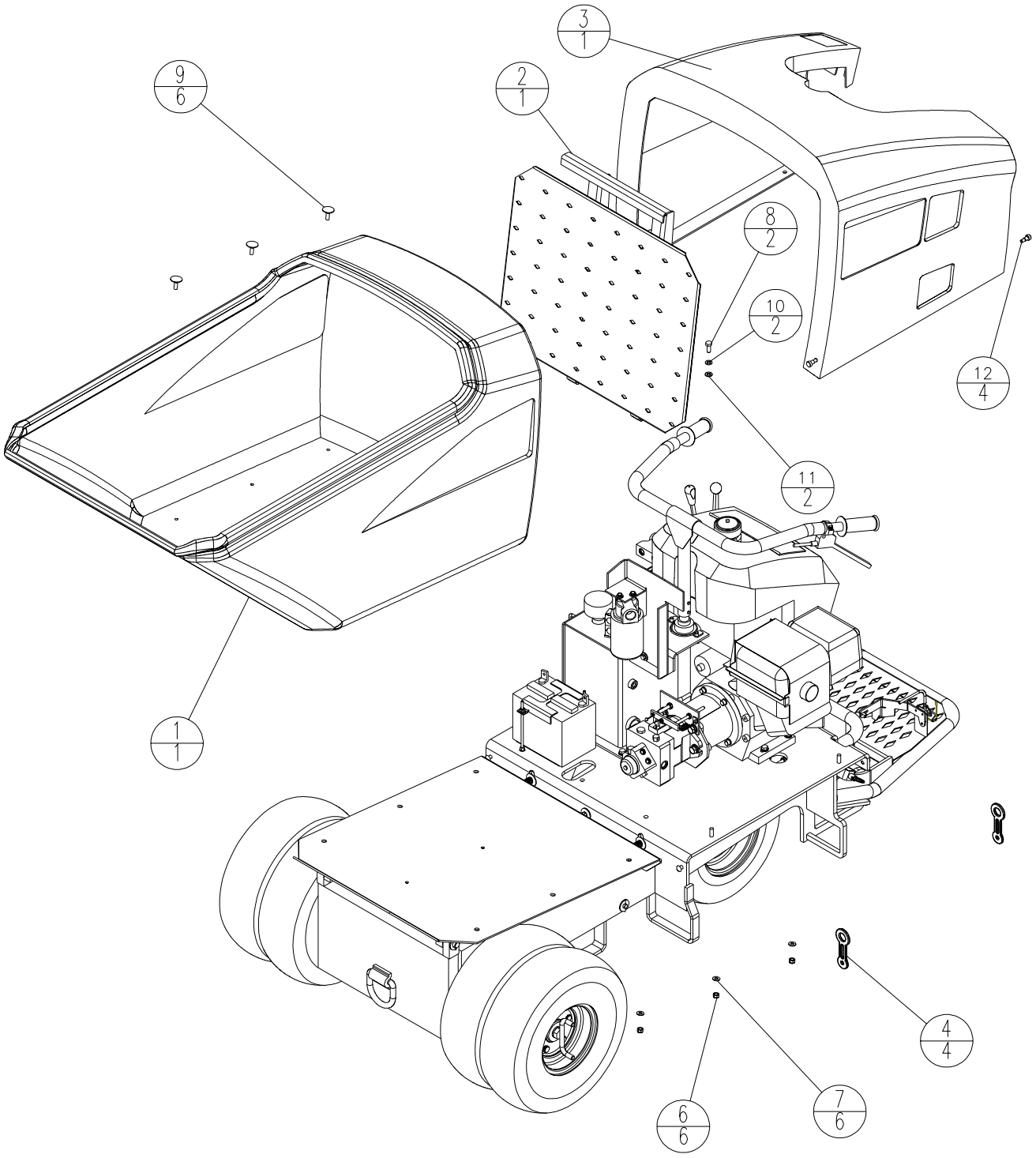
Wiring Schematic Recoil Start 60

Wiring Schematic Electric Start 61

Decal Identification 62-63

PARTS LIST

Frame Assembly
Cowl, Hopper, Splash Guard



PARTS LIST

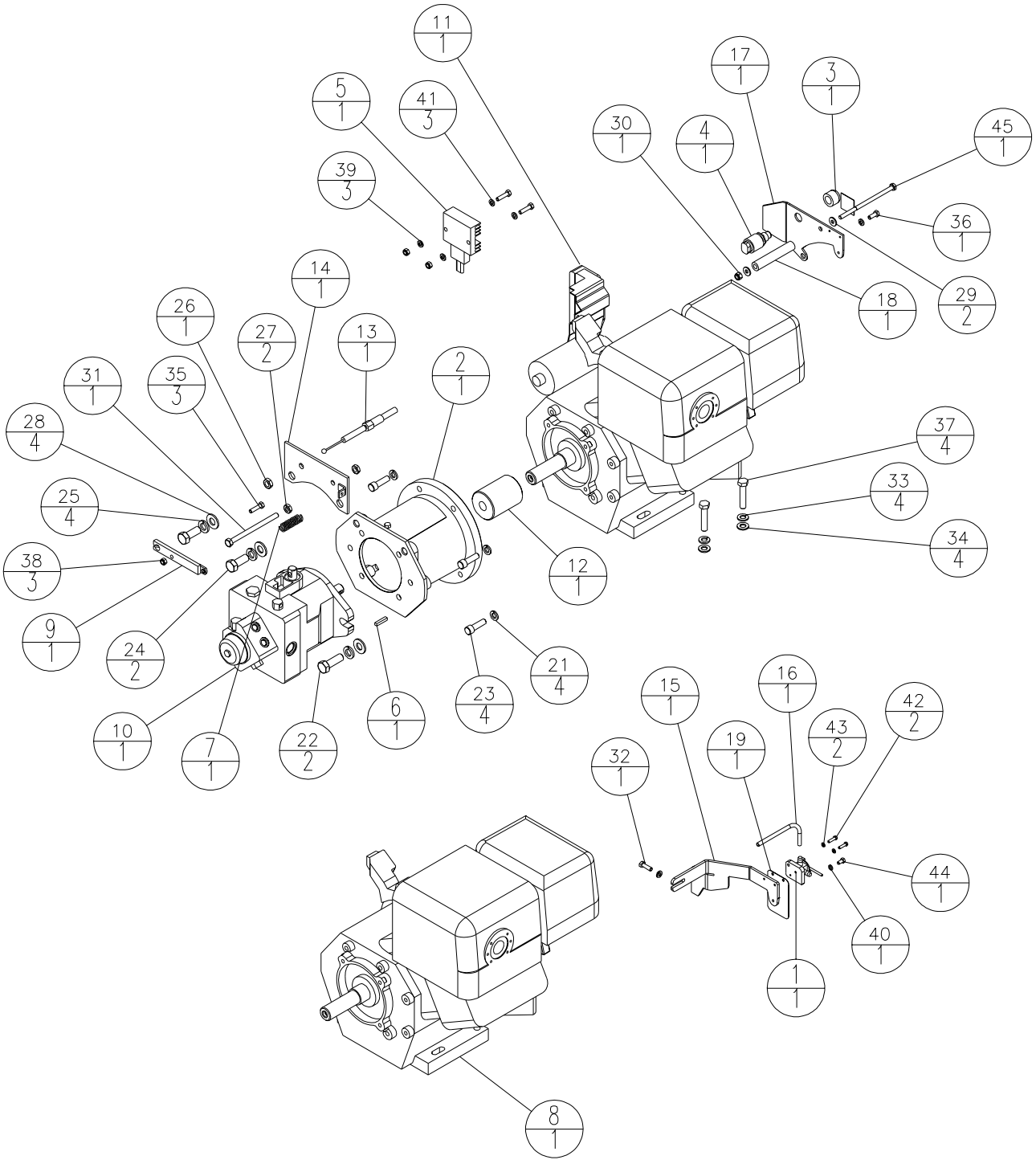
Frame Assembly
Cowl, Hopper, Splash Guard

ITEM	PART NO.	DESCRIPTION	QTY
1	45165	HOPPER MORTAR	1
2	45240-2	WELDMENT-SPLASH, GUARD	1
3	45925	COWL ENGINE	1
4	47182	LATCH COWL	4
5	47294	TRIM STRIP	1
6	80056	NUTNY 3/8-16 ZN	6
7	80342	WSHR SAE 3/8 ZN	6
8	80618	HHCS M10 -1.25 X 25 8.8 ZN	2
9	80740	BOLT-ELEVATOR, .375-16	6
10	80804	WSHRL M10 SPLIT ZN	2
11	80806	WSHR FLAT M10 X 20 ZN	2
12	81130	SHSHB 10MM DIA X M8 THD X 12MM ZN	4

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AS REQUIRED

PARTS LIST

Engine and Pump Assembly



PARTS LIST

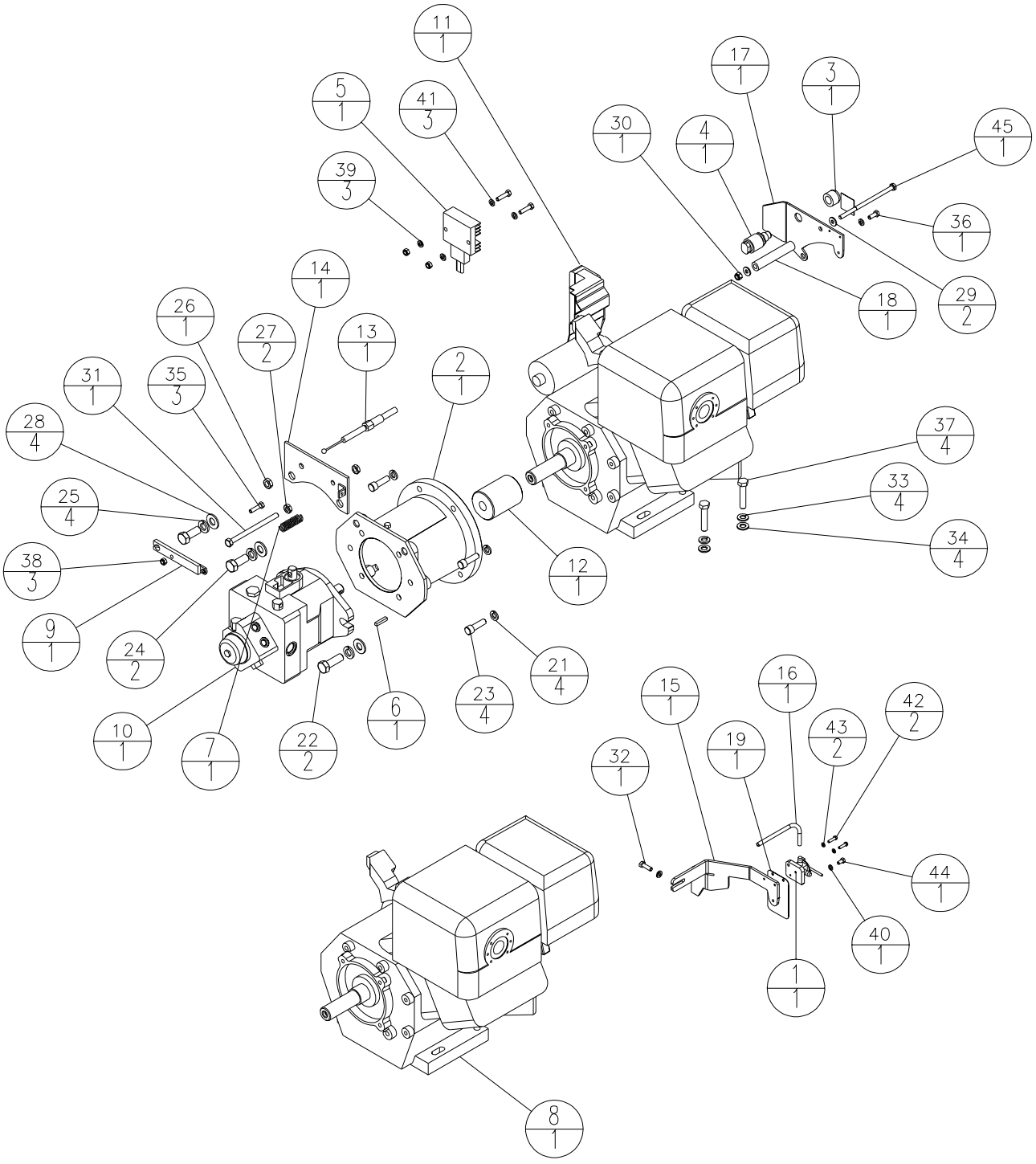
Engine and Pump Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1	23130	VALVE ASS'Y FUEL STOP SWITCH	1
2	32432	ADAPTOR PUMP/MOTOR	1
3	37079	BUTTON SWITCH MOMENTARY	1
4	39612	SWITCH MOMENTARY PUSH	1
5	45069	RECTIFIER—ENGINE, HONDA	1
6	45093	KEYSQ 5MM x 1.00'' LONG	1
7	45102	SPRING COMP.	1
8	45131	ENGINE HONDA 13HP RECOIL. START	1
9	45132-2	WELDMENT—BAR, ACTUATOR	1
10	45147	PUMP—PISTON, 1.28CIR, 2500PSI	1
11	45153	ENGINE_HONDA_13HP_ELEC._START	1
12**	45154	COUPLING	1
13	45198	CABLE THROTTLE	1
14	45225	WELDMENT— PLATE, MTG.	1
15	45910-2	BRACKET SWITCH STOP FUEL	1
16	45912	HOSE FUEL	1
17	45913-2	BRACKET SWITCH STOP FUEL	1
18	45920-2	SPACER BRACKET	1
19	55485	TAG SWITCH ENGINE	1
20	55487	DECAL START	1
21	80058	WSHRL 3/8 MED SPLIT ZN	4
22**	80075	HHCS 1/2—13 X 1—1/2 GR5 ZN	2
23**	80101	SHCS 3/8—16 X 1—1/4 BLK	4
24**	80104	HHCS 1/2—13 X 1—1/4 GR5 ZN	2
25	80117	WSHRL 1/2 MED SPLIT ZN	4
26	80243	NTFXJ 3/8—24 ZN	1
27	80244	NUTFXJ 5/16—18 ZN	2
28	80343	WSHR SAE 1/2 ZN	4
29	80571	WSHR 1/4 SAE ZN	2
30	80676	NUTNY 1/4—20 ZN	1
31	80743	HHTB 5/16—18 x4 1/2 LG GR2 ZN	1
32*	80758	HHCS M6—1 X 20 8.8 ZN	1

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* LOCTITE 242
** LOCTITE 262
# AS REQUIRED

PARTS LIST

Engine and Pump Assembly



PARTS LIST

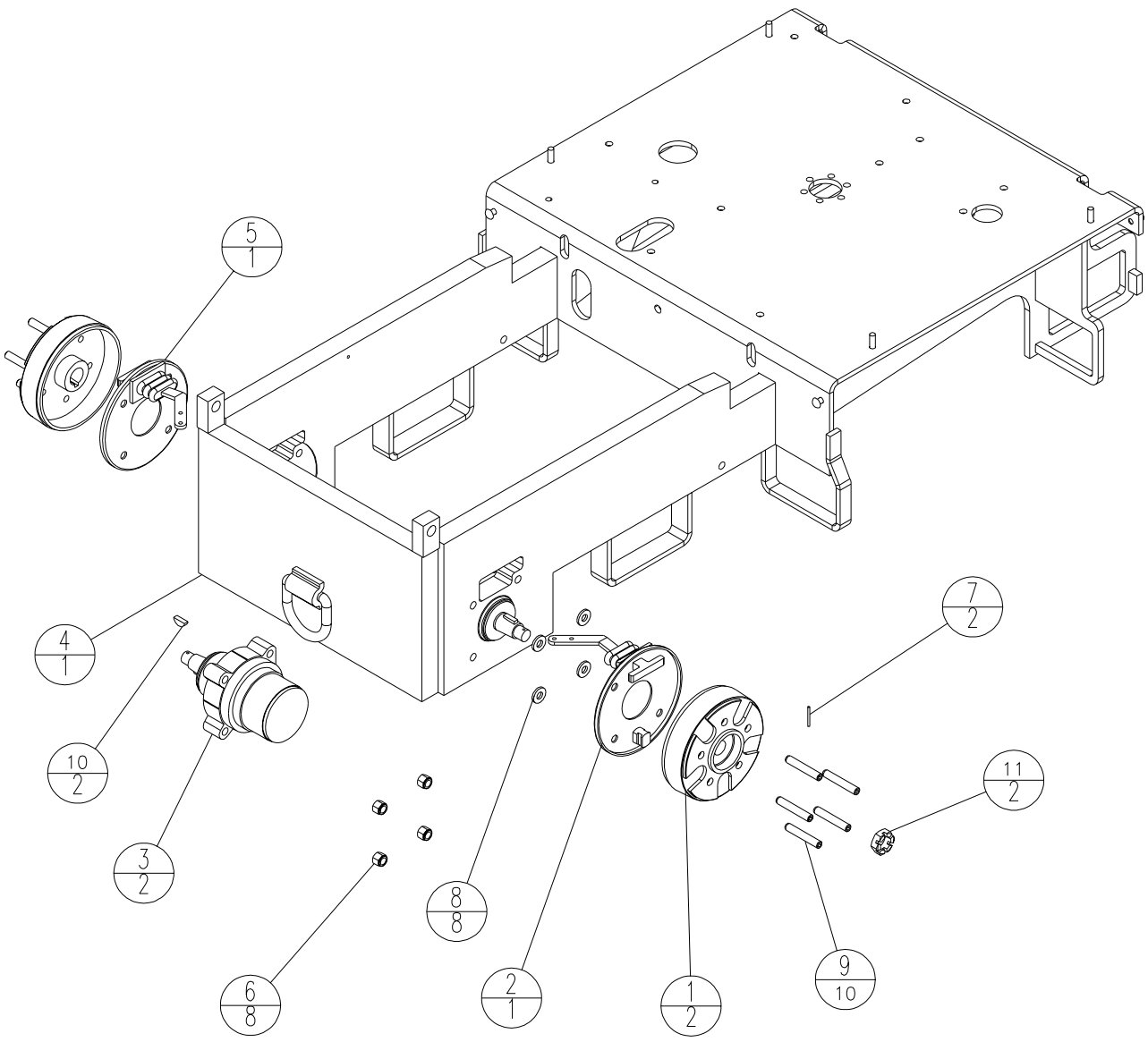
Engine and Pump Assembly

33	80804	WSHRL M10 SPLIT ZN	4
34	80806	WSHR FLAT M10 X 20 ZN	4
35**	80811	HHCS M6-1 X 25 8.8 ZN	3
36**	80836	HHCS M6-1 X 16 8.8 ZN	1
37**	80838	HHCS M10-1.5 X 50 8.8 ZN	4
38	80851	NUTNY M6-1 ZN	3
39	80856	WSHR FLAT M6 X 12 ZN	3
40	80859	WSHRL M5 SPLIT ZN	1
41	80860	WSHRL M6 SPLIT ZN	3
42**	80926	MSCS M4-.7 X 16 4.8 ZN	2
43	80929	WSHRL M4 SPLIT ZN	2
44**	81016	HHCS M5-.8 X 10 8.8 ZN	1
45**	81133	HHCS 1/4-20 X 5 GR5 ZN	1

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* LOCTITE 242
** LOCTITE 262
# AS REQUIRED

PARTS LIST

Wheelmotors and Brake Assembly



PARTS LIST

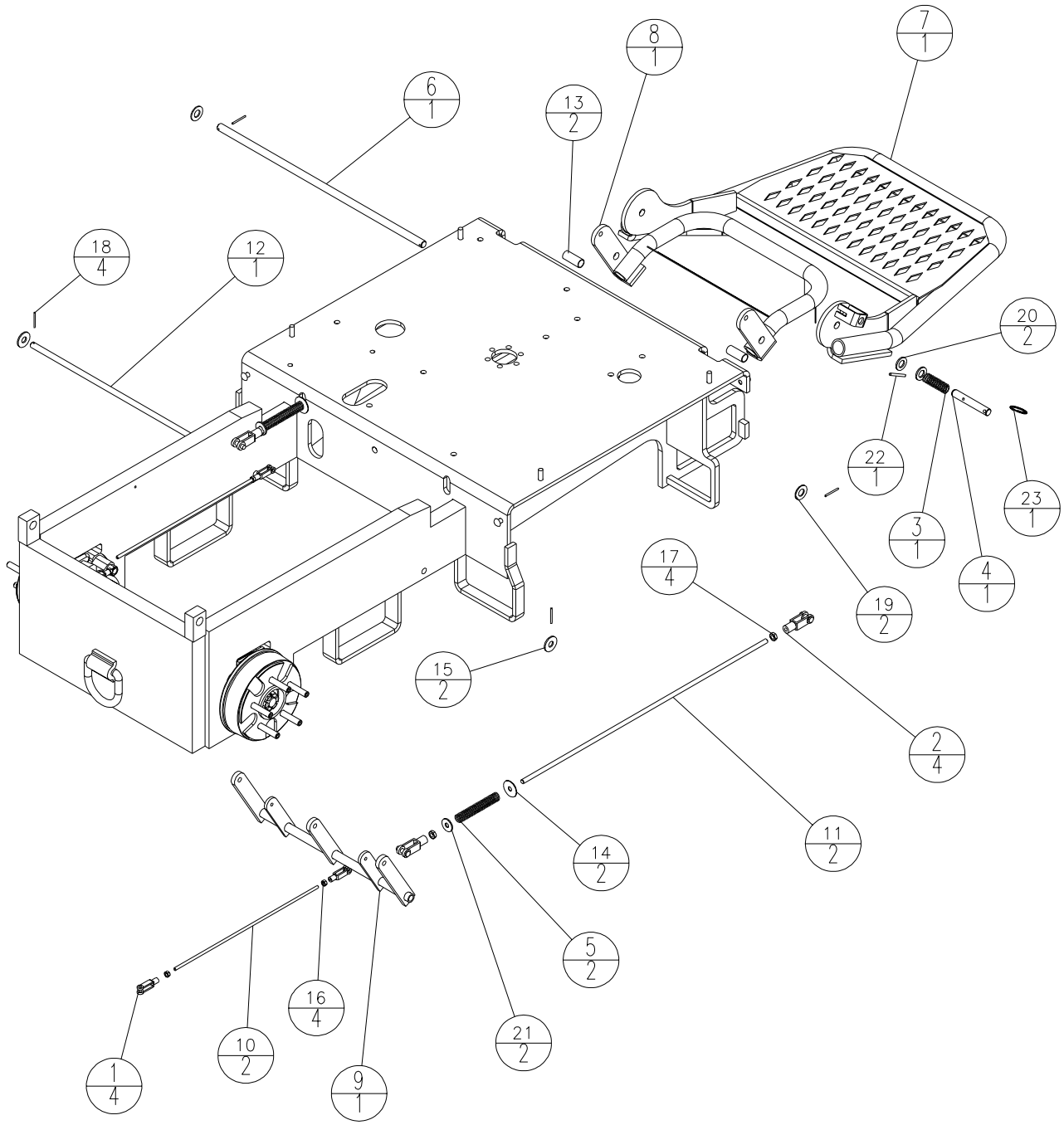
Wheelmotors and Brake Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1	45144	BRAKE DRUM	2
2	45145	BRAKE ACTUATOR LEFT HAND	1
3	45148	MOTOR-GEAR ROTOR,15.9 CIR	2
4	45201-2	WELDMENT-FRAME	1
5	45247	BRAKE ACTUATOR RIGHT HAND	1
6*	80051	NUTNY 1/2-13 ZN	8
7	80316	PINCT 1/8 X 1-1/2 ZN	2
8	80891	WSHR FLAT M12 X 28 ZN	8
9**	81113	SCREW SHSS .500-20 CUP PT BLK	10
10	81125	KEY-WOODRUFF	2
11	81126	CASTLE NUT 1-20UNEF	2

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* LOCTITE 262
** LOCTITE 680
# AS REQUIRED

PARTS LIST

Brake Rods and Platform Lock Assembly



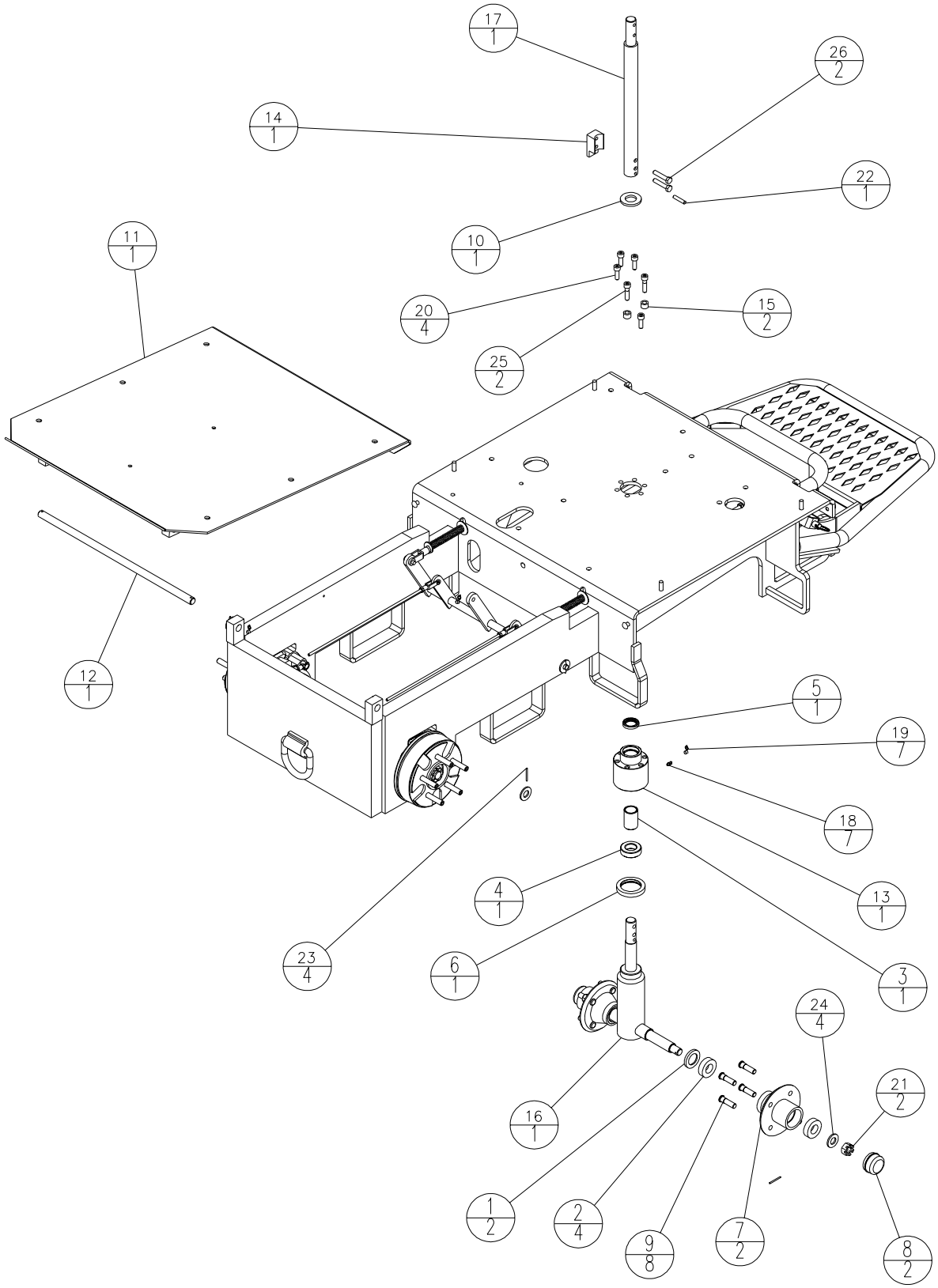
PARTS LIST

Brake Rods and Platform Lock Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1	38561	CLEVIS 1/4 DIA X 1/4-28	4
2	39255	YOKE END 3/8-24	4
3	45055	SPRING COMP.	1
4	45056	PIN-LOCKOUT, STEP	1
5	45105	SPRING COMP.	2
6	45113-2	SHAFT_PIVOT_STEP	1
7	45211-2	WELDMENT-PLATFORM, STEP	1
8	45216-2	WELDMENT-PEDAL, BRAKE	1
9	45219-2	WELDMENT-LEVER, BRAKE	1
10	45221-2	ROD-BRAKE	2
11	45222-2	ROD-BRAKE, SERVICE	2
12	45231-2	SHAFT-PIVOT-LEVER, BRAKE	1
13	45249-2	SPACER-BRAKE	2
14	46045	WSHR FENDER .4 X 1.5 X .062 ZN	2
15	80118	WSHR WROT 1/2 ZN	2
16	80237	NUTFX 1/4-28 ZN	4
17	80243	NTFXJ 3/8-24 ZN	4
18	80316	PINCT 1/8 X 1-1/2 ZN	4
19	80355	WSHR SAE 5/8 ZN	2
20	80858	WSHR FLAT M16 X 30 ZN	2
21	81042	WSHR FLAT M10 X 30 ZN	2
22	81122	PINSP 3/16 X 2.00 ZN	1
23	81124	RING-SPLIT	1

PARTS LIST

Steering Assembly
Dump Platform Assembly



PARTS LIST

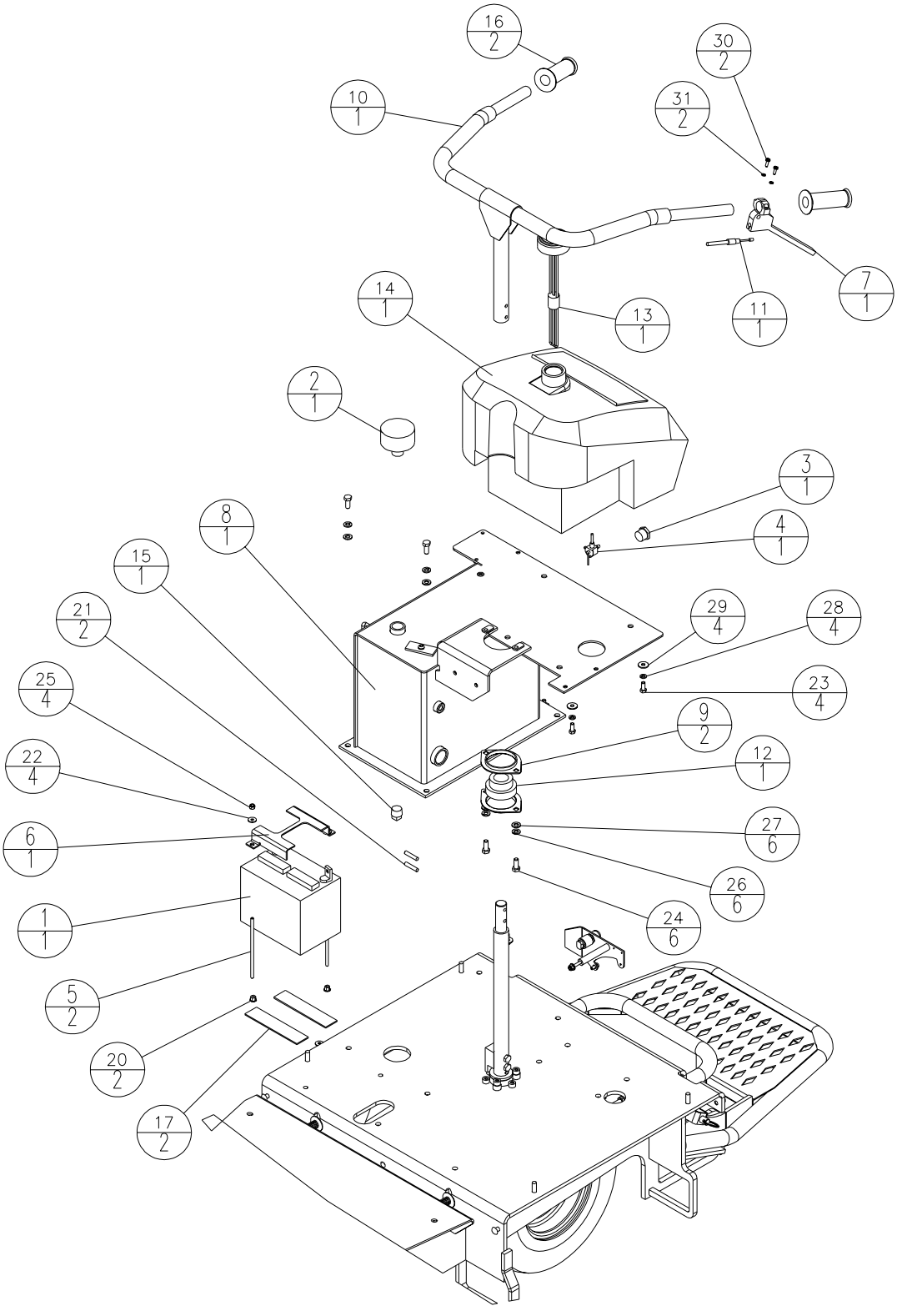
Steering Assembly
Dump Platform Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1+	32052	SEAL WHEEL HUB	2
2+	32233	BEARING RLR TAPER 1.000	4
3	32333	BEARING–PLAIN	1
4	32335	BEARING–THRUST, BALL	1
5	32336	SEAL–LIP	1
6	32337	SEAL–LIP	1
7	34501	KIT HUB 4 BOLT	2
8+	34573	DUST CAP	2
9+	39190	LUG STUD 1/2–20 x 1 7/32 LG	8
10	45054	WASHER– FLAT, ALTER.	1
11	45073–2	WELDMENT–SUBBASE–BIN	1
12	45096–2	SHAFT–PIVOT–BIN	1
13	45100–2	HOUSING–BEARING	1
14	45229–2	STOP–STEERING	1
15	45230–2	BUMPER–STOP, STEERING	2
16	45248–2	WELDMENT–AXLE, STEERING	1
17	45259–2	WELDMENT–SHAFT, STEERING	1
18	46042	FITTING GREASE 1/4–28 ZN	7
19	47001	CAP GREASE FITTING	7
20*	60873	SHCS M10–1.5 X 30 12.9 BLK	4
21	80054	NUT 3/4–16 ZN	2
22	80309	PINSP 5/16 X 1–1/2	1
23	80316	PINCT 1/8 X 1–1/2 ZN	4
24	80344	WSHR SAE 3/4 ZN	4
25*	80800	SHCS M10–1.5 X 40 12.9 BLK	2
26*	80838	HHCS M10–1.5 X 50 8.8 ZN	2

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* LOCTITE
# AS REQUIRED
+ INCLUDED WITH KIT 34501

PARTS LIST

Steering, Hydraulic Tank, Battery Assemblies



PARTS LIST

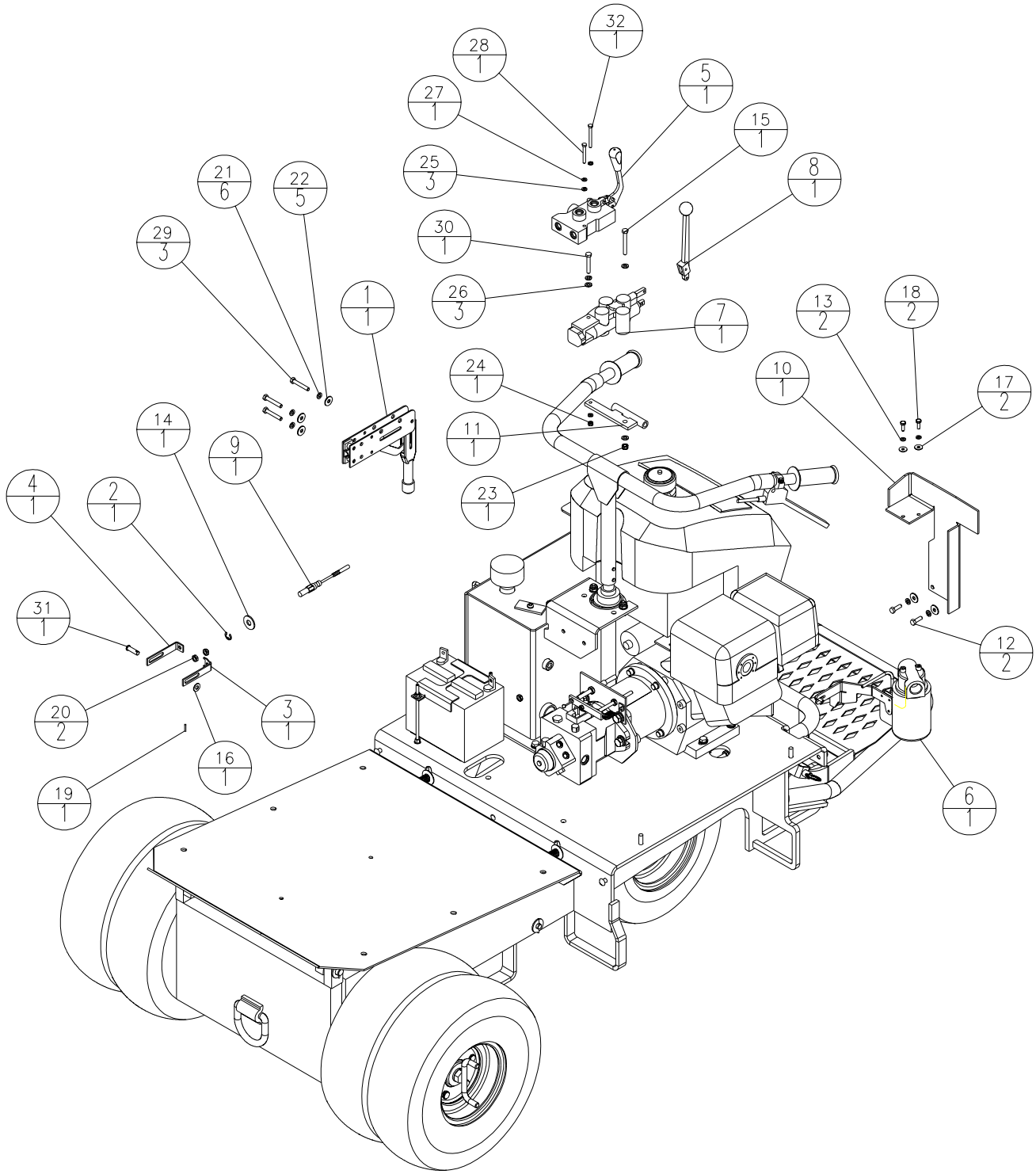
Steering, Hydraulic Tank, Battery Assemblies

ITEM	PART NO.	DESCRIPTION	QTY
1	35321	BATTERY 12 MONTH 165 CCA	1
2	38521	BREATHER/FILLER HYD	1
3	38534	SIGHT GLASS 3/4 NPT	1
4	39056	VALVE STRAINER	1
5	45084	ROD–HOLDDOWN, BATTERY	2
6	45091–2	BRACKET HOLD DOWN BATTERY	1
7	45104	CLUTCH LEVER ASSEMBLY	1
8	45114–2	WELDMENT–TANK–HYDRAULIC	1
9	45123	FLANGE 2–BOLT	2
10	45134–2	WELDMENT–HANDLE, STEERING	1
11	45198	CABLE, THROTTLE	1
12	45226	BEARING AND COLLAR	1
13	45263	GAUGE FUEL 12" DEEP	1
14	45924	TANK FUEL	1
15	46774	PLUG 3/4 NPT MAGNETIC SQ HD	1
16	47125	HANDLE_GRIP	2
17	47244	RBR 60 DURO 1.5 X 6.75	2
18 ^	48284	CABLE BATTERY NEGATIVE 25 INCH	1
19 ^	48359	CABLE BATTERY POSITIVE 25 INCH	1
20	80236	NUTKP 1/4–20 ZN	2
21	80309	PINSP 5/16 X 1–1/2	2
22	80347	WSHR WROT 1/4 ZN	4
23	80406	HHCS M8–1.25 X 20 8.8 ZN	4
24 *	80618	HHCS M10 –1.25 X 25 8.8 ZN	4
25	80676	NUTNY 1/4–20 ZN	4
26	80804	WSHRL M10 SPLIT ZN	4
27	80806	WSHR FLAT M10 X 20 ZN	8
28	80812	WSHRL M8 SPLIT ZN	4
29	80813	WSHR FLAT M8 X 24 ZN	4
30 *	80815	HHCS M10–1.5 X 30 8.8 ZN	2
31	80833	NUTNY M10–1.5 ZN	2
32	81127	PHSMS M5–0.8 X 16 304 SST	2
33	81128	WSHRL M5 SPLIT SST	2

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* LOCTITE 262
# AS REQUIRED

PARTS LIST

Parking Brake, Hydraulic Valves and Filter Assembly



PARTS LIST

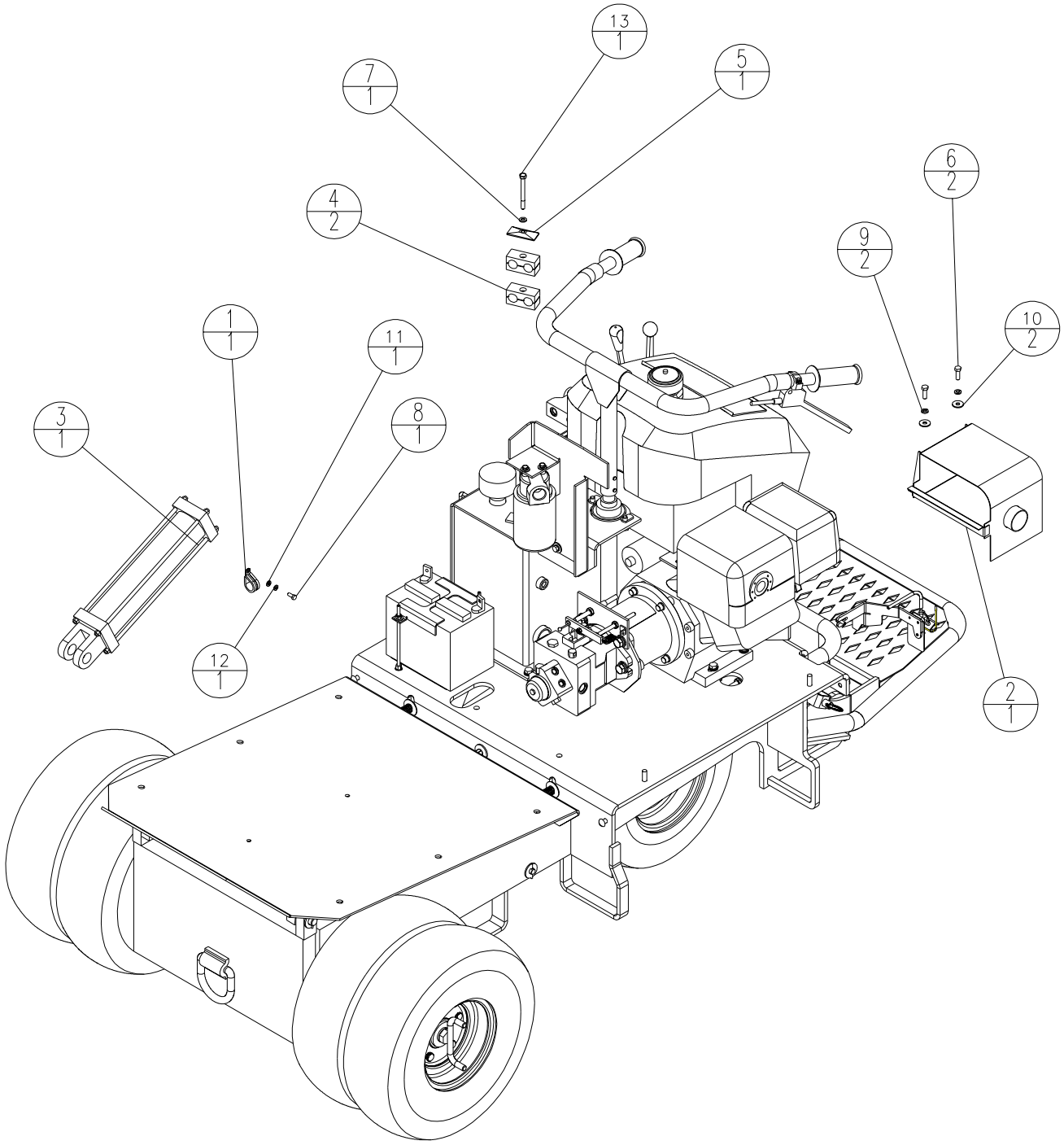
Parking Brake, Hydraulic Valves and Filter Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1	38095	BRAKE_PARKING	1
2	45120	E CLIP	1
3	45128-2	CLEVIS-HALF, NOTCHED	1
4	45129-2	CLEVIS-HALF, PLAIN	1
5	45149	VALVE DIRECTIONAL	1
6 #	45150	FILTER-RETURN, 10-GPM, 10 MICRON	1
7	45160	VALVE DIRECTIONAL	1
8	45194	KIT HANDLE	1
9	45199	CABLE, BRAKE	1
10	45299-2	BRACKET-FILTER, OIL	1
11	45960-2	WELD GUIDE SHAFT	1
12	80087	HHCS M8-1.25 X 25 8.8 ZN	2
13	80116	WSHRL 1/4 MED SPLIT ZN	2
14	80118	WSHR WROT 1/2 ZN	1
15 *	80148	HHCS M8-1.25 X 65 8.8 ZN	1
16	80342	WSHR SAE 3/8 ZN	1
17	80347	WSHR WROT 1/4 ZN	2
18**	80353	HHCS 1/4-20 X 3/4 GR5 ZN	2
19	80424	PINCT 1/8 X 3/4 ZN	1
20	80501	NUT JAM 5/16-24 ZN	2
21	80812	WSHRL M8 SPLIT ZN	6
22	80813	WSHR FLAT M8 X 24 ZN	5
23	80817	NUTNY M8-1.25 ZN	1
24	80851	NUTNY M6-1 ZN	1
25	80856	WSHR FLAT M6 X 12 ZN	3
26	80857	WSHR FLAT M8 X 16 ZN	3
27	80860	WSHRL M6 SPLIT ZN	1
28 *	80881	HHCS M6-1 X 50 8.8 ZN	1
29 *	80883	HHCS M8-1.25 X 50 8.8 ZN	3
30 *	80944	HHCS M8-1.25 X60 8.8 ZN	1
31	81110	CLEVIS PIN .375 X 1.25 LG SS	1
32	81111	HHCS M6-1 X 60 8.8 ZN	1

* LOCTITE 262
** LOCTITE 242
# INCLUDES HEAD AND ELEMENT.
FOR ELEMENT ONLY USE P/N 47579

PARTS LIST

Captivators, Heat Shield and Cylinder Assembly



PARTS LIST

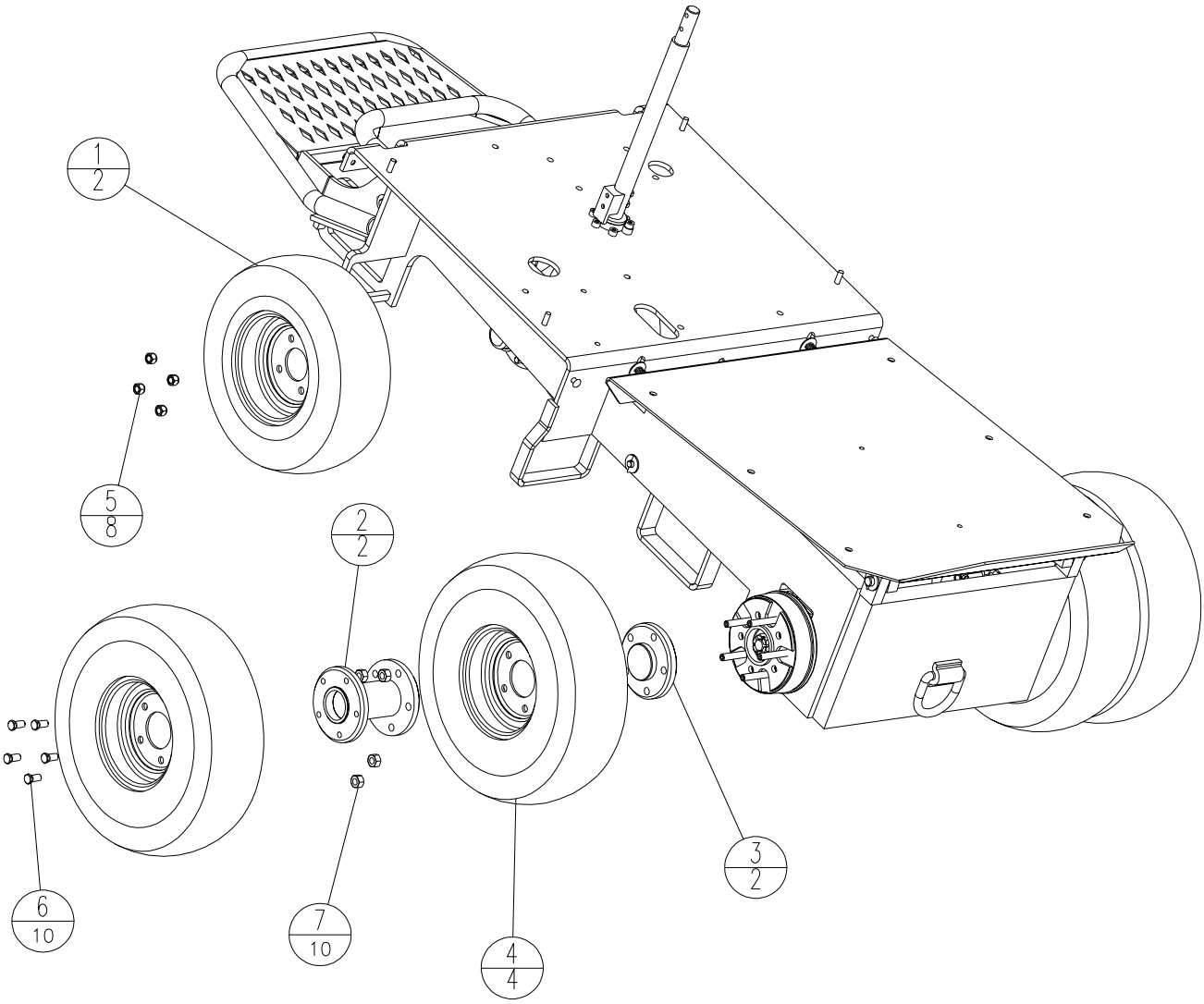
Captivators, Heat Shield and Cylinder Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1	36617	CLAMP 1'' RUBBER LOOP	1
2	45254-2	WELDMENT- SHIELD, HEAT	1
3	46362	CYLINDER	1
4	47455	CLAMP SPLIT,DUAL HOSE 21.3-21.3	2
5	47456	COVER PLATE, DUAL HOSE	1
6*	80087	HHCS M8-1.25 X 25 8.8 ZN	2
7	80348	WSHR WROT 5/16 ZN	1
8*	80617	HHCS M6-1 X 16 8.8 ZN	1
9	80812	WSHRL M8 SPLIT ZN	2
10	80813	WSHR FLAT M8 X 24 ZN	2
11	80856	WSHR FLAT M6 X 12 ZN	1
12	80860	WSHRL M6 SPLIT ZN	1
13*	81056	HHCS 5/16-18 X 3 1/4 GR5 ZN	1

~ NOT SHOWN
* LOCTITE 262
# AS REQUIRED

PARTS LIST

Pneumatic Tire with Standard Hubs Assembly



PARTS LIST

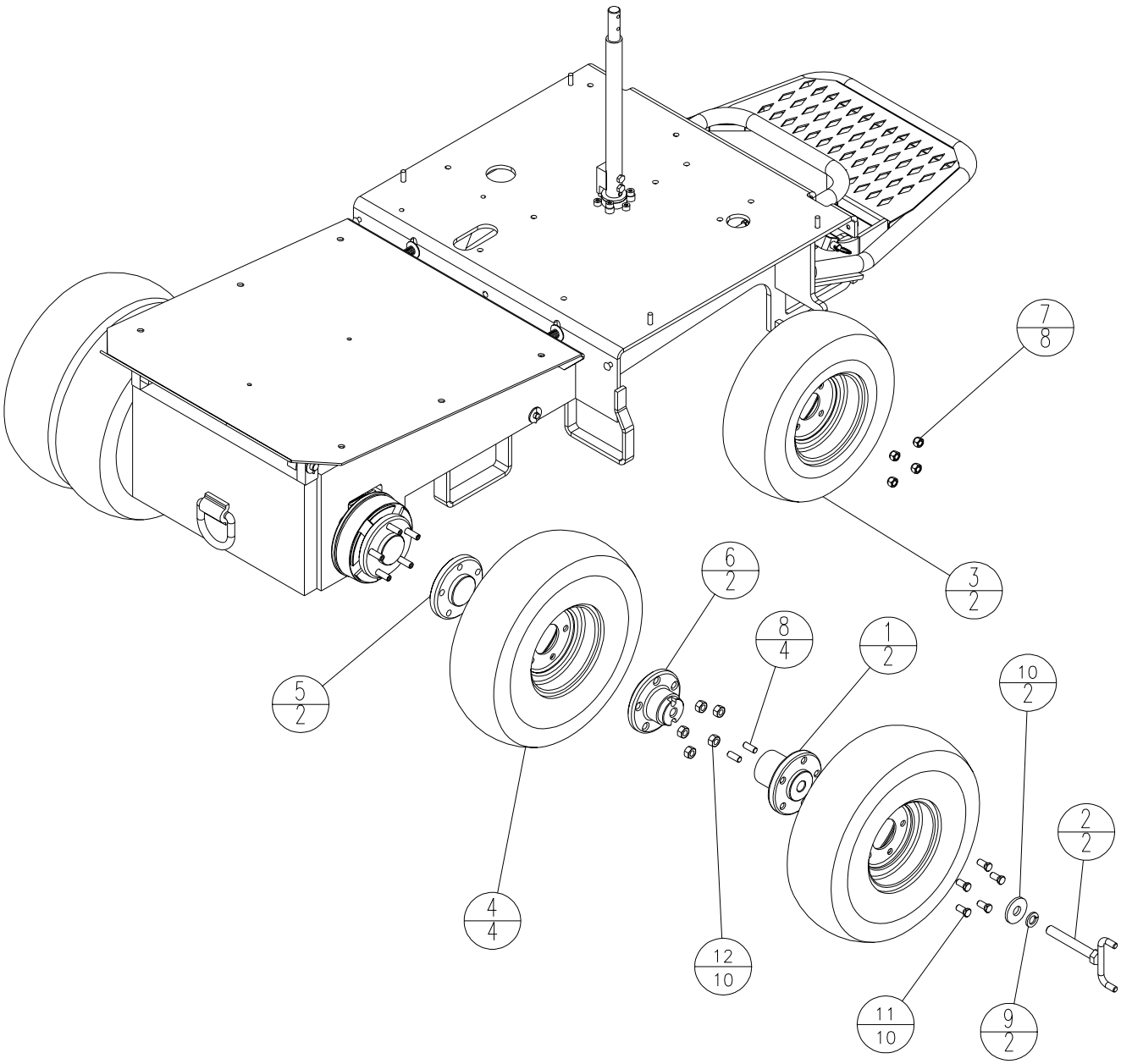
Pneumatic Tire with Standard Hubs Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1	34605	WHEEL ASSEMBLY 480-8 PNEUMATIC	2
2	45089-2	HUB-WHEEL	2
3	45241-2	SPACER-WHEEL, 5 BOLT	2
4	45261	WHEEL ASSEMBLY 570-8 PNEUMATIC	4
5	80045	LUGNT 1/2-20 ZN	8
6	81114	BOLT-LUG	10
7	81115	NUTFX 1/2-20 ZN	10

^ NOT SHOWN
* LOCTITE
# AS REQUIRED

PARTS LIST

Foam Tires & Quick Change Hubs Assembly



PARTS LIST

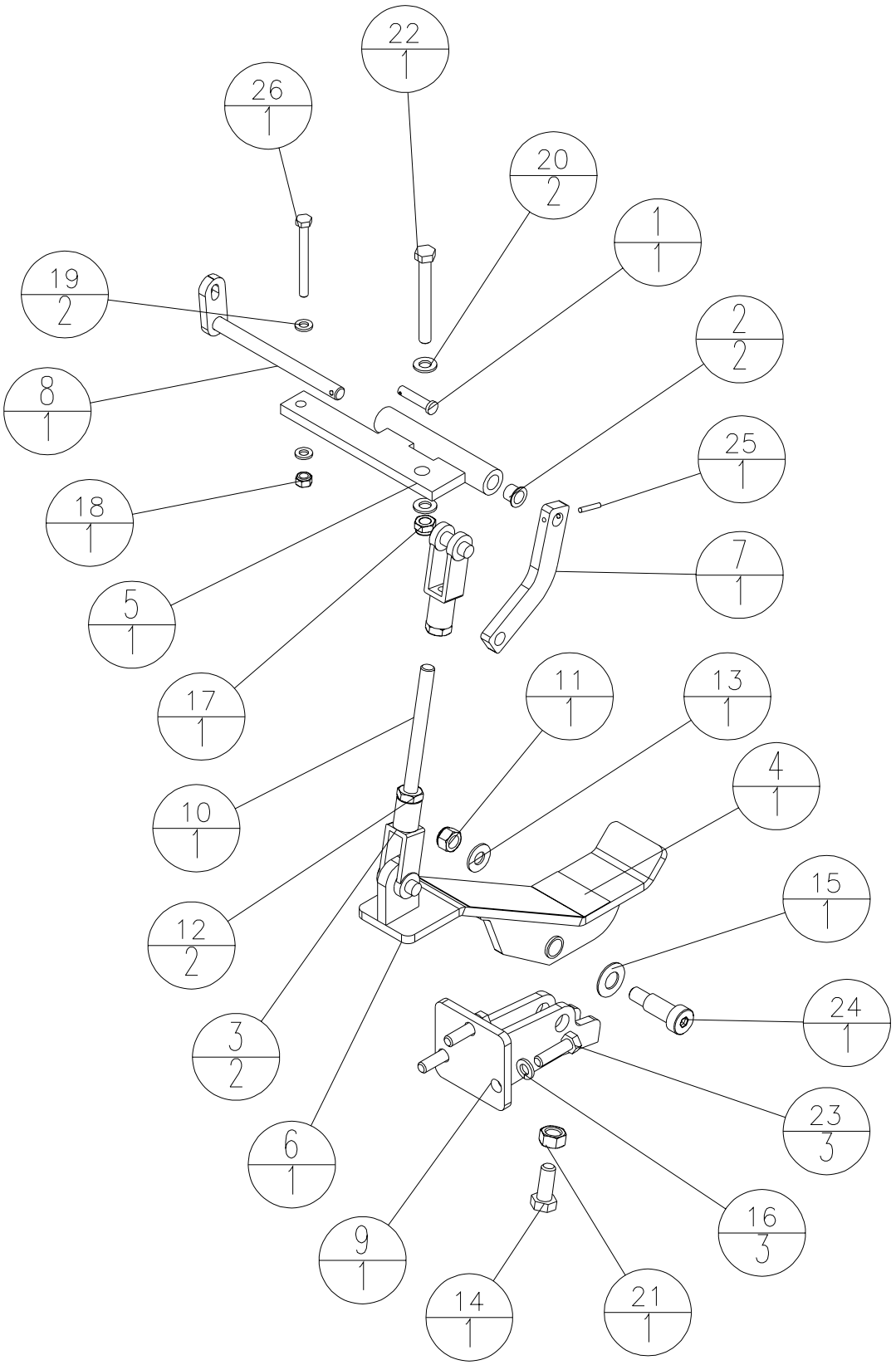
Foam Tires & Quick Change Hubs Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1	45080-2	SPACER-WHEEL-MACHINE	2
2	45106-2	WELDMENT-RELEASE-QUICK	2
3	45176	WHEEL ASSEMBLY 480-8 W/FOAM	2
4	45197	WHEEL ASSEMBLY 570-8 W/FOAM	4
5	45241-2	SPACER-WHEEL, 5 BOLT	2
6	45242-2	HUB-WHEEL-MACHINE	2
7	80045	LUGNT 1/2-20 ZN	8
8	80423	PINDL 1/2 x 1 1/4 LG	4
9	80871	WSHRL M20 SPLIT ZN	2
10	81014	WSHR FLAT M20 X 60 ZN	2
11	81114	BOLT-LUG	10
12	81115	NUTFX 1/2-20 ZN	10

^ NOT SHOWN
* LOCTITE
# AS REQUIRED

PARTS LIST

Dump Pedal Assembly



PARTS LIST

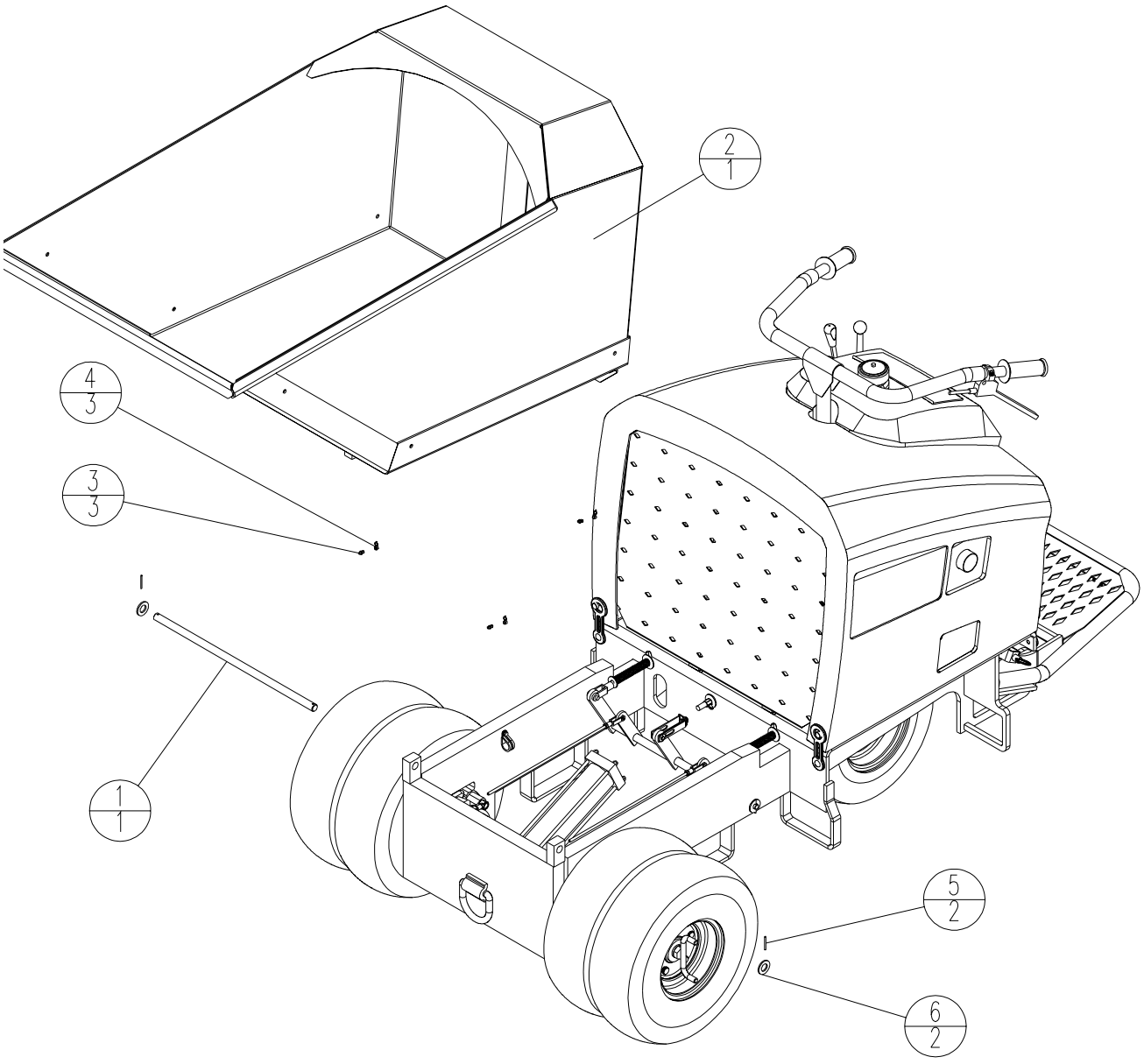
Dump Pedal Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1	32465	PIN CLEVIS 1/4 X 1 SST	1
2	32466	BEARING NYLINER 3/8 ID	2
3	39255	YOKE END 3/8-24	2
4	45959	TREAD SKID	1
5	45960-2	WELD GUIDE SHAFT	1
6	45963-2	WELD PEDAL DUMP	1
7	45968-2	ARM ACTUATOR	1
8	45971-2	WELD SHAFT	1
9	45973-2	WELD MOUNT PEDAL	1
10	45974	ROD DUMP	1
11	80056	NUTNY 3/8-16 ZN	1
12	80243	NTFXJ 3/8-24 ZN	2
13	80342	WSHR SAE 3/8 ZN	1
14*	80618	HHCS M10 -1.25 X 25 8.8 ZN	1
15	80639	WSHRSP 1/2 ID BLK BELLEVIL	1
16	80812	WSHRL M8 SPLIT ZN	3
17	80817	NUTNY M8-1.25 ZN	1
18	80851	NUTNY M6-1 ZN	1
19	80856	WSHR FLAT M6 X 12 ZN	2
20	80857	WSHR FLAT M8 X 16 ZN	2
21	80866	NUTFX M10-1.5 ZN	1
22*	80867	HHCS M8-1.25 X 70 8.8 ZN	1
23*	80931	HHCS M8-1.25 X 30 8.8 ZN	3
24*	80957	SHSHB 1/2 X 1 BLK	1
25	81076	PINSP 1/8 X 3/4 SS	1
26*	81111	HHCS M6-1 X 60 8.8 ZN	1

* LOCTITE 262

PARTS LIST

Option Steel Bucket Assembly



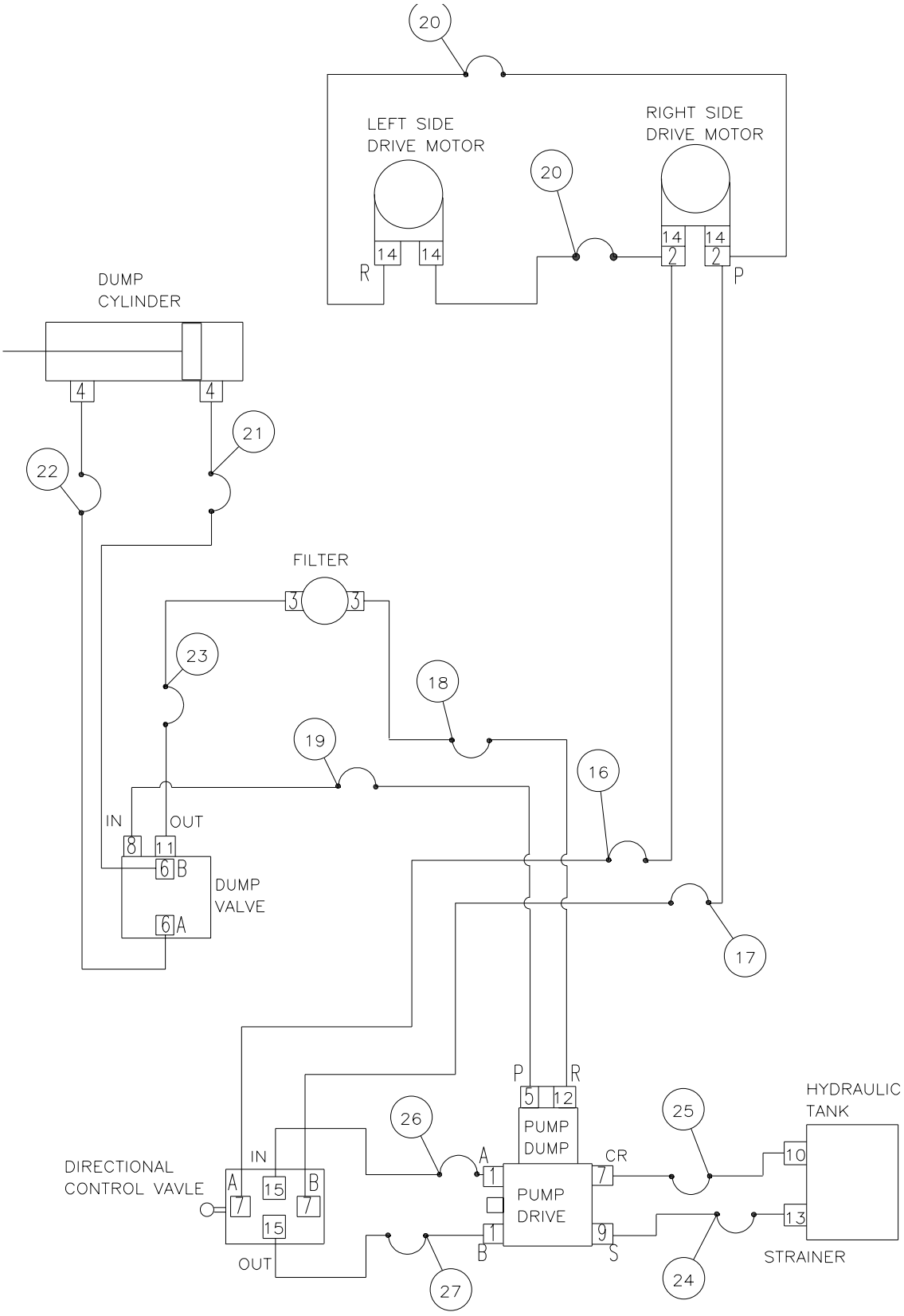
PARTS LIST

Option Steel Bucket Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1	45096-2	SHAFT-PIVOT-BIN	1
2	45108-2	WELDMENT HOPPER STEEL	1
3	46042	FITTING GREASE 1/4-28 ZN	3
4	47001	CAP GREASE FITTING	3
5	80316	PINCT 1/8 X 1-1/2 ZN	2
6	80344	WSHR SAE 3/4 ZN	2

PARTS LIST

Hydraulic Diagram



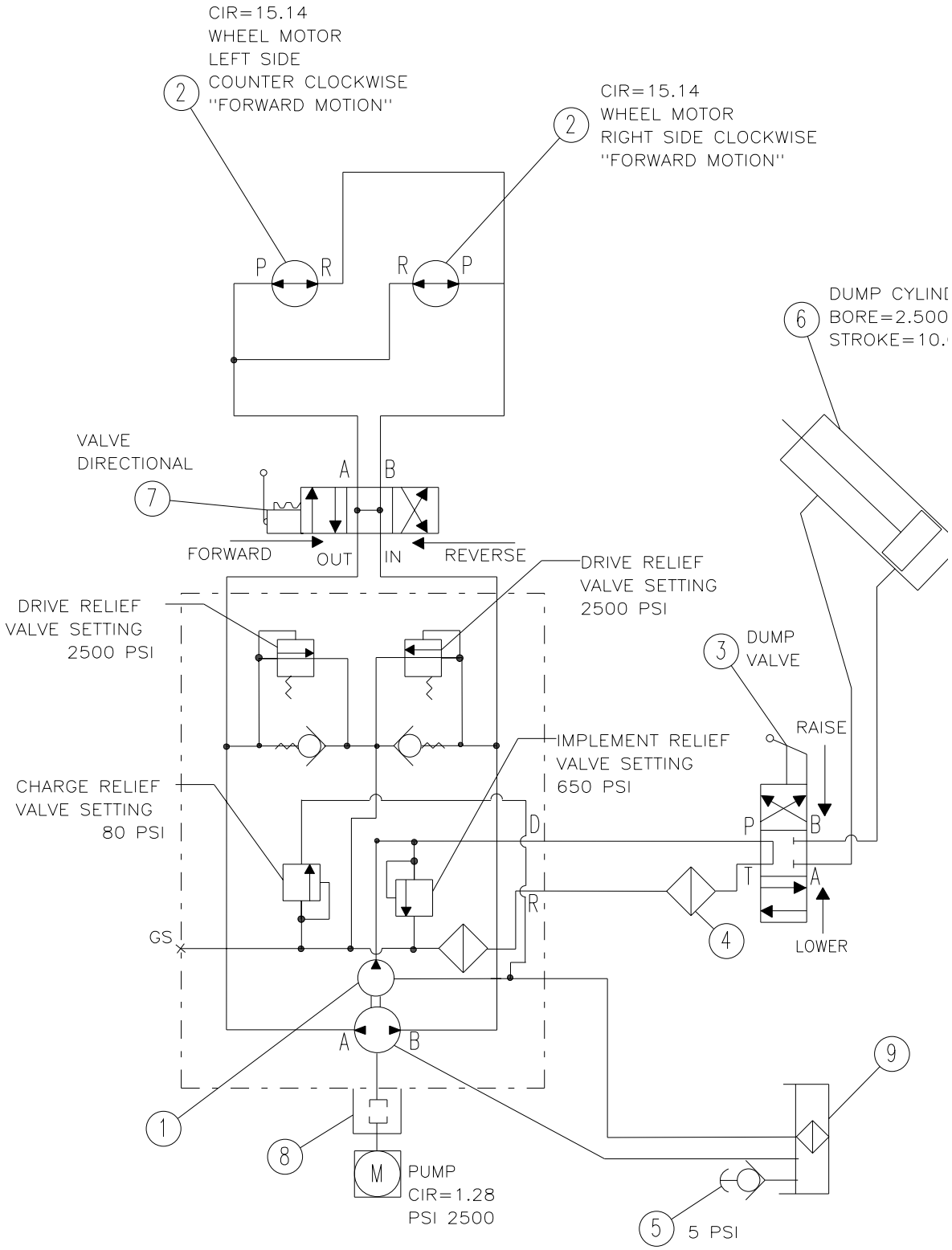
PARTS LIST

Hydraulic Diagram

ITEM	PART NO.	DESCRIPTION	QTY
1	46579	FITTING HYD SEALOCK	2
2	46980	TEE RUN 1/2 THREAD STRAIGHT	2
3	46673	1/2 O-RING FITTING	2
4	46587	FTG HYD SEALOCK	2
5	46631	FTG HYD SEALOCK	1
6	45172	FTG HYD OFS 90 4 6	2
7	46581	FTG HYD SEALOCK	3
8	46686	1/4 HYD O-RING FITTING	1
9	45905	FTG HYD HB 90 8 8	1
10	45171	FTG HYD OFS ST 8 6	1
11	46679	FT ST 9/16-18 11/16 ORF	1
12	45008	CONNECTOR 3/8 THREAD	1
13	45087	HOSE BARB 1/2 NPT STRAIGHT	1
14	46585	FTG HYD SEALOCK	4
15	46582	FTG HYD SEALOCK	2
16	45142	HOSE HYD 8 90 8 45 8 66.25'' 235°	1
17	45143	HOSE HYD 8 ST 8 45 8 60.00''	1
18	45141	HOSE HYD 6 ST 8 45 8 20.00''	1
19	45140	HOSE HYD 4 ST 4 90 4 38.00''	1
20	45139	HOSE HYD 8 ST 8 90 8 17.38''	2
21	45138	HOSE HYD 4 ST 4 90 4 81.60''	1
22	45078	HOSE HYD 4 ST 4 90 4 101.00''	1
23	45157	HOSE HYD 8 ST 6 ST 6 20.00''	1
24	45158	HOSE HYD 8 16.00''	1
25	45159	HOSE HYD 8 ST 8 90 8 12.00''	1
26	45167	HOSE HYD 8 ST 8 45 8 30.50''	1
27	45169	HOSE HYD 8 ST 8 45 8 29.75''	1

PARTS LIST

Hydraulic System Schematic



PARTS LIST

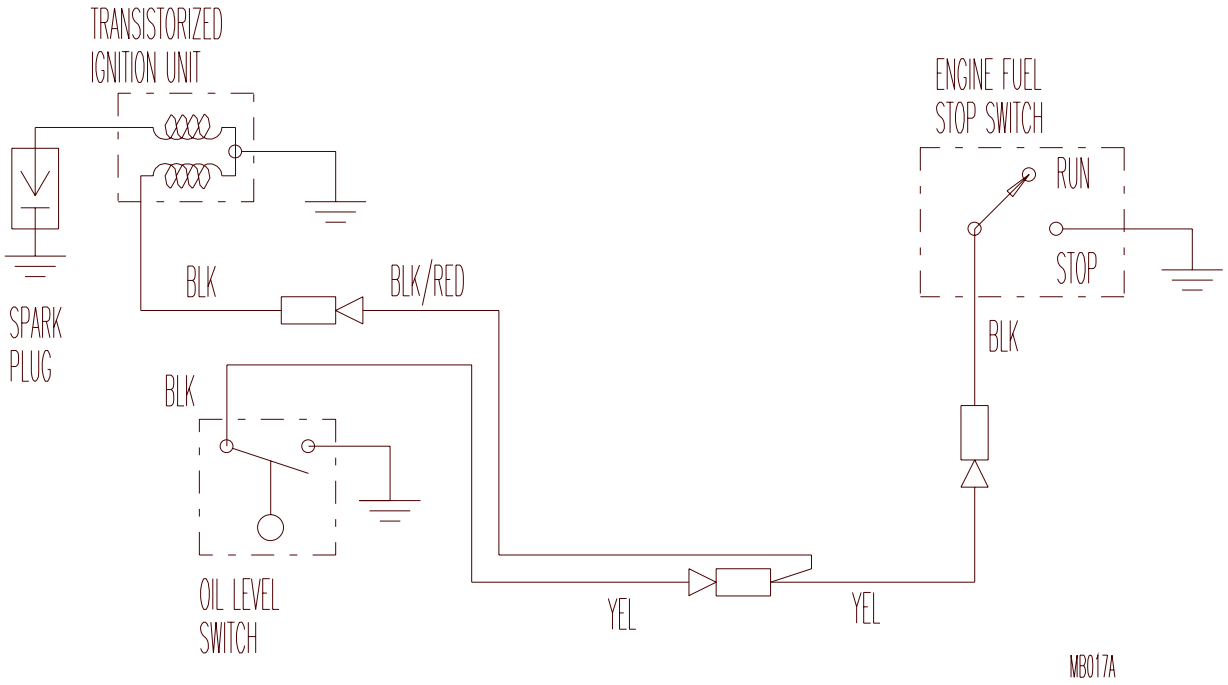
Hydraulic System Schematic

ITEM	PART NO.	DESCRIPTION	QTY
1	45147	PUMP PISTON 1.25 CIR 2500 PSI	1
2	45148	MOTOR HYD GEAR ROTOR 15.14	2
3	45149	VALVE DIRECTIONAL MANUAL	1
4 +	45150	FILTER ASB.	1
5	38521	BREATHER	1
6	46362	CYLINDER	1
7	45160	VALVE DIRECTIONAL MANUAL	1
8	45154	COUPLING WITH INSERT	1
9	39087	STRAINER 1'' NPT	1

+ INCLUDES HEAD AND ELEMENT.
FOR ELEMENT ONLY, USE PART NO. 47579

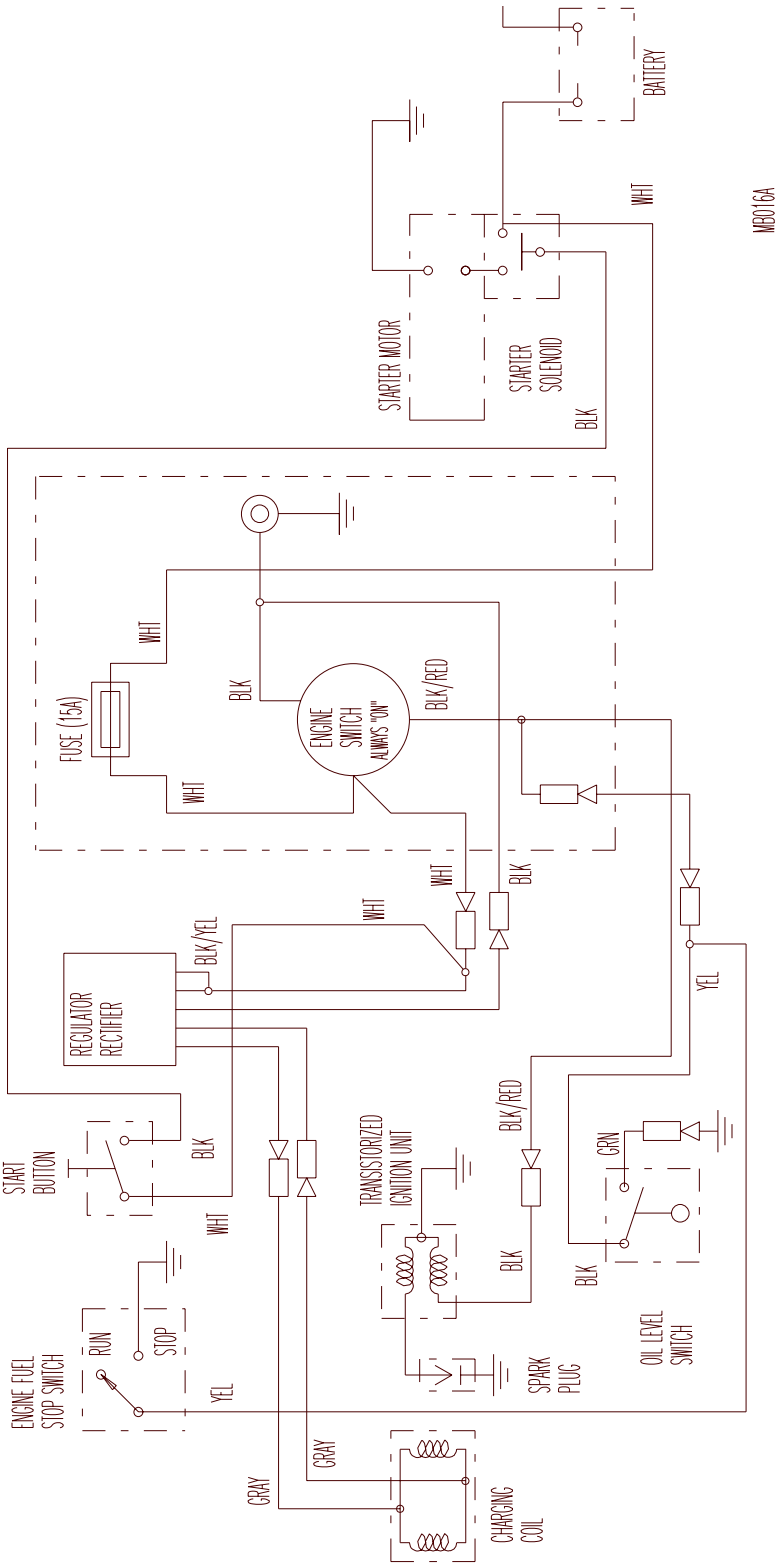
PARTS LIST

Wiring Schematic Recoil Start



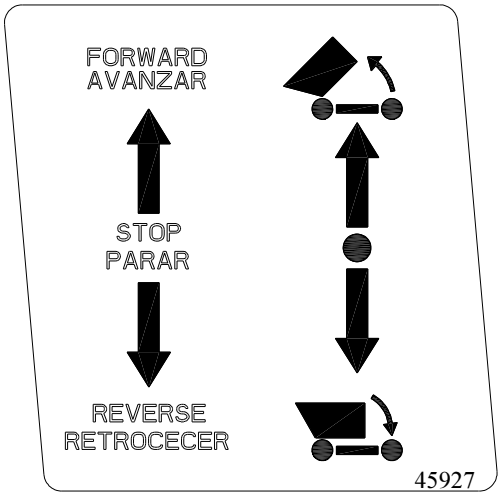
PARTS LIST

Wiring Schematic Electric Start

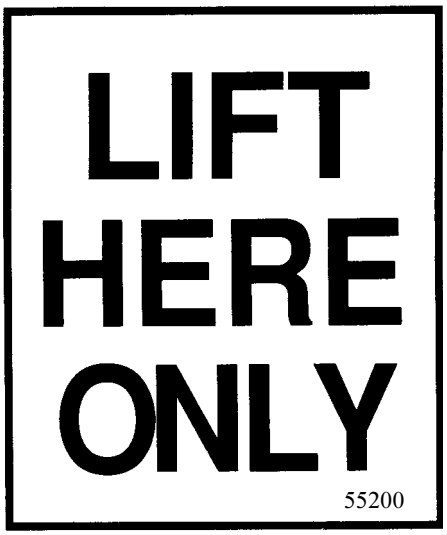


PARTS LIST

Decal Identification



45927



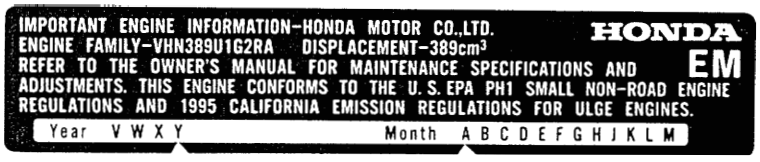
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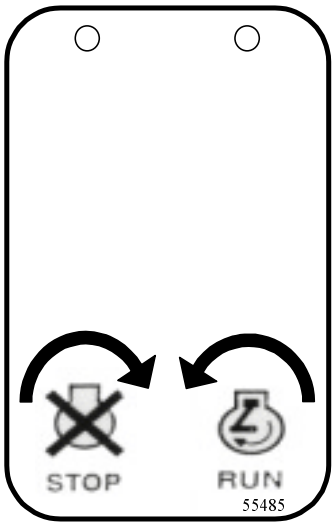
55398





55485





Decal Identification

1	45927	Decal Control Fwd/Rev Tilt	1
2	55200	Decal Lift Here	4
3	55215	Decal Warning Pinch Point	2
4	55398	Decal Warning Hot Surfaces	1
5	55422	Decal Hydraulic Fluid Mobil 424	1
6	55482	Decal Emissions Honda	1
7	55486	Decal Push Start	1
8	55485	Tag Switch Stop Fuel	

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