



**STAND ON AERATOR
MODELS:**

PRO Stand-Aer®

SA-30A

(S/N 0448 to 506)

PRO Stand-Aer®

SA-30ACA

(S/N 0101)



SCHILLER

GROUNDS
CARE

MAN 4174370
Rev. C 09-2018

OPERATOR'S MANUAL 4174369

www.classenturf.com

PARTS MANUAL

CALIFORNIA PROPOSITION 65



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.



ADVERTENCIA: Cáncer y Daño Reproductivo - www.65Warnings.ca.gov.

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

⚠ ADVERTENCIA

El estado de California hace saber que los gases de escape de este producto contienen productos químicos que producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

IMPORTANT!

It is a violation of California Public Resource Code Section 4442 or 4443 to use or operate the engine on any forest-covered, brush-covered or grass-covered land unless the engine is equipped with a spark arrestor, as defined in Section 4442, maintained in effective working order or the engine is constructed, equipped, and maintained for the prevention of fire.

To acquire a spark arrestor for your unit, see your Engine Service Dealer.

Please refer to the engine manufacturer's information included with the machine.

Labeled power ratings are supplied by the engine manufacturer in accordance with SAE testing and gross/net power rating standards (J1940, J1995, J1349).

IMPORTANT MESSAGE

Thank you for purchasing this Classen product. You have purchased a world class product, one of the best designed and built anywhere.

This product comes with Parts and Operator's Manuals. The useful life and good service you receive from this product depends to a large extent on how well you read and understand this manual. Treat this product properly and adjust it as instructed, and it will give you many years of reliable service.

See a Classen dealer for any service or parts needed. Classen service ensures that you continue to receive the best results possible from Classen products. You can trust Classen replacement parts because they are manufactured with the same high precision and quality as the original parts.

Classen designs and builds its equipment to serve many years in a safe and productive manner. For longest life, use this product only as directed in the manual, keep it in good repair and follow safety warnings and instructions. You'll always be glad you did.

CLASSEN®
SCHILLER GROUNDS CARE, INC.
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SOUTHAMPTON, PA 18966
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NOTICE !!!

Unauthorized modifications may present **extreme** safety hazards to operators and bystanders and could also result in product damage.

Schiller Grounds Care, Inc. strongly warns against, rejects and disclaims any modifications, add-on accessories or product alterations that are not designed, developed, tested and approved by Schiller Grounds Care, Inc. Engineering Department. Any Schiller Grounds Care, Inc. product that is altered, modified or changed in any manner not specifically authorized after original manufacture-including the addition of "after-market" accessories or component parts not specifically approved by Schiller Grounds Care, Inc.-will result in the Schiller Grounds Care, Inc. Warranty being voided.

Any and all liability for personal injury and/or property damage caused by any unauthorized modifications, add-on accessories or products not approved by Schiller Grounds Care, Inc. will be considered the responsibility of the individual(s) or company designing and/or making such changes. Schiller Grounds Care, Inc. will vigorously pursue full indemnification and costs from any party responsible for such unauthorized post-manufacture modifications and/or accessories should personal injury and/or property damage result.



This Operator's Manual should be regarded as part of the machine. Suppliers of both new and second-hand machines must make sure that this manual is provided with the machine.

**¡LEA EL INSTRUCTIVO!**

Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.



SCHILLER GROUNDS CARE

Model

XXXXXXX

Serial Number

XXXXXXXXXXXX

Schiller Grounds Care, Inc.
One Bob Cat Lane
Johnson Creek, WI 53038



This symbol means:
ATTENTION!
BECOME ALERT!

Your safety and the safety of others is involved.

Signal word definitions:

The signal words below are used to identify levels of hazard seriousness. These words appear in this manual and on the safety labels attached to Schiller Grounds Care, Inc. machines. For your safety and the safety of others, read and follow the information given with these signal words and/or the symbol shown above.

⚠ DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices or property damage.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **MAY** result in property damage

MODEL NUMBER: This number appears on sales literature, technical manuals and price lists.

SERIAL NUMBER: This number appears only on your unit. It contains the model number followed consecutively by the serial number. Use this number when ordering parts or seeking warranty information. Located behind rider pad on frame of unit.

**MAINTENANCE SAFETY
IN GENERAL**

- Maintain machine according to manufacturer's schedule and instructions for maximum safety and best results.
- Park machine on level ground.
- Never allow untrained personnel to service machine.
- Adjust or repair only after the engine has been stopped and the tines have stopped rotating.
- Guards should only be removed by a qualified technician for maintenance or service. Replace when work is complete.
- Replace parts if worn, damaged or faulty. For best results, always replace with parts recommended by the manufacturer.
- Disconnect battery or remove spark plug wire(s) before making any repairs. Disconnect the negative terminal first and the positive last. Reconnect positive first and negative last.
- Do not dismantle the machine without releasing or restraining forces which may cause parts to move suddenly.
- Provide adequate support for lifted machine or parts if working beneath.
- Do not put hands or feet near or under rotating parts.
- Clean up oil or fuel spillage thoroughly.
- Replace faulty mufflers.
- To reduce fire hazards, keep the engine, muffler, battery compartment and fuel storage area free of grass, leaves, debris buildup or grease.

Tines

- Tines are sharp and can cut. Use extra caution when handling. Wear appropriate personal protective equipment.

**FUEL**

A black and white warning icon. It features a stylized flame with three tongues of fire. To the right of the icon, the word "WARNING" is written in bold, uppercase letters.

- Gasoline and diesel fuels are flammable; gasoline vapors are explosive. Use extra care when handling.
- Store only in containers specifically designed for fuel.
- When refueling or checking fuel level:
 - Stop the engine and allow to cool;
 - Do not smoke;
 - Refuel outdoors only;
 - Use a funnel;
 - Do not overfill;
 - If fuel is spilled, do not attempt to start the engine until the spill is cleaned up and vapors have cleared.

Sparks from static electricity can start fires or cause explosions. Flowing fuel can generate static electricity. To prevent static electricity sparks:

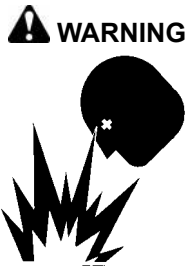
- Keep fuel containers electrically grounded.
- Do not fill containers in a vehicle or on a truck or trailer bed with a plastic liner. Fill containers on the ground away from the vehicle.
- When practical, remove gas powered equipment from the truck or trailer and refuel it on the ground. If equipment must be refueled on the truck or trailer, refuel from a portable container rather than a dispenser nozzle.
- Keep the dispenser nozzle in contact with the rim of the fuel tank or container opening until fueling is complete. Do not use a nozzle lock-open device
- Replace caps on fuel cans and tanks securely.

BATTERY

Battery acid is caustic and fumes are explosive and can cause serious injury or death.

To reduce the risk of personal injury when working near a battery:

- Use protective equipment such as, but not limited to, goggles, face shield, rubber gloves and apron when working with battery acid.
- Avoid leaning over a battery.
- Do not expose a battery to open flames or sparks.
- Be sure batteries with filler caps are properly filled with fluid.
- Do not allow battery acid to contact eyes or skin. Flush any contacted area with water immediately and get medical help.
- Charge batteries in an open, well ventilated area, away from sparks and flames. Unplug charger before connecting or disconnecting from battery.
- Your unit is factory equipped with an AGM type battery. An AGM type battery charger should be used on these when charging.

**STORAGE SAFETY**

- Stop the engine and allow to cool before storing.
- Drain the fuel tank outdoors only.
- Store fuel in an approved container in a cool, dry place.
- Keep the machine and fuel containers in a locked storage place to prevent tampering and to keep children from playing with them.
- Do not store the machine or fuel container near heating appliances with an open flame such as a water heater or an appliance with a pilot light.
- Keep gasoline storage area free of grass, leaves and excessive grease to reduce fire hazard.
- Clean grass and debris from aerating units, drives, mufflers and engine to help prevent fires.

JUMP STARTING

1. Be sure the jumper cables are in good condition. Turn off the ignition and all electrical accessories on both machines.
2. Position the machine with a good (charged) battery next to but not touching the machine with the dead battery so jumper cables will reach.
3. When making cable connections:
 - make sure the clamps do not touch anywhere except to intended metal parts,
 - Never connect a positive ("+" or red) terminal to a negative ("-" or black) terminal.
 - Make sure the cables won't get caught in any parts after the engines are started.
4. Connect one end of the first jumper cable to the **positive** terminal on one battery. Connect the other end to the **positive** terminal on the other battery.
5. Connect one end of the other cable to the **negative** terminal of the machine with a good (charged) battery. Make the final connection on the engine of the machine to be started, away from the battery.
6. Start the vehicle with the good battery, then the machine with the discharged battery.
7. Remove the cables in the exact reverse order of installation. When removing each clamp, take care it does not touch any other metal parts while the other end remains attached.

ASSEMBLY / SET UP INSTRUCTIONS

1. READ THE OPERATOR'S MANUAL BEFORE ASSEMBLY.
2. Remove the brackets securing the machine to the pallet. Reinstall the caster axle nuts. Tighten the nuts. Fill tires at pressure at 15 psi on the rear tires and 25 psi on the front tires.
3. Lower the operator platform.
4. Open the rear panel and connect the ground wire to the battery.
5. Check the oil level in both the engine and the hydraulic tank, top off if necessary.
Use 10w30 oil for the engine.
Use 15w50 or 20w50 motor oil for the hydraulic tank.
6. Fill the fuel tank with fresh clean regular grade gasoline. Open the fuel valve.
7. Start the machine and drive it off the pallet.

| MAINTENANCE OPERATION | Maintenance is an ongoing job. These intervals are maximum times between maintenance operations. Perform more often under severe conditions. | | | | | | |
|---|--|----------------------------------|----------------|----------------|-----------------|-----------------|--------|
| | FIRST 5 HOURS | BEFORE EACH USE | EVERY 25 HOURS | EVERY 40 HOURS | EVERY 100 HOURS | EVERY 200 HOURS | YEARLY |
| ENGINE | | | | | | | |
| Consult the engine manual for additional information and instructions | | | | | | | |
| Check/Top Up Oil Level | | X | | | | | |
| Check For Leaks | | X | | | | | |
| Clean Air Intake Screen | | X | | | | | |
| Clean Air Cleaner Precleaner | | | X | | | | |
| Clean Air Cleaner Element | | | X | | | | |
| Clean Cooling Fins | | | | | X | | |
| Change Oil And Filter | X | See engine manufacturer's manual | | | | | |
| Check/Replace Spark Plugs | | | | | | X | |
| TRANSAXLE* | | | | | | | |
| Check Oil Level | X | X | | | | | |
| Check For Leaks | X | X | | | | | |
| Change Oil And Filter | * | | | | | X | |
| MACHINE | | | | | | | |
| Check Interlock Operation | | X | | | | | |
| Check Tire Pressures | | X | | | | | |
| Check/Top Up Battery | | | | | | | X |
| Lubricate chains | | | X | | | | |
| Check chain tension | | | X | | | | |
| Lubricate All Points | | | | | | | X |

*CHANGE TRANSAXLE OIL AFTER INITIAL 75-100 HOURS.



CHECK DAILY

Operator Presence Interlock System - Start Operation

For the engine to crank, the parking brake must be ON, and the operator present control lever must be released in the neutral position. Stand on the operator platform and check, one by one, if the engine will crank with the parking brake OFF or the operator control lever held down.

Operator Presence Interlock System - Run Operation

In order for the engine to run, the operator must either be standing on the platform, or walking behind the unit with the platform up, the parking brake in the OFF position and the LH control handle held down out of the neutral position.

The engine may also run if the parking brake is in the ON position, the LH control handle is rotated up into the NEUTRAL position.

To check:

- 1. Start the engine and run at 1/2 throttle.
- 2. With the LH control handle in the NEUTRAL position rotated up, move the parking brake lever to ON move the LH control lever down. The engine should kill.

Repair machine before using if the Operator Presence Interlock System does not operate correctly in start or run. Contact your authorized dealer.

Hardware

Tighten any nuts and bolts found loose. Replace any broken or missing cotter pins. Repair any other problems before operating.


Tire pressure

Rear Tires should be kept inflated at 15 lbs/in² (1.05kg/cm²). Improper tire inflation can cause rapid tire wear and poor traction. Uneven inflation can cause uneven aerating. Front tires should be 25 lbs/in² (1.75 kg/cm²).

Engine Maintenance

- Air Filter: Maintain the air filter according to the manufacturer's engine owners manual.
- Engine Oil: Check engine oil level daily. Top off if necessary. See engine owners manual.

BATTERY-AGM TYPE BATTERY SUPPLIED

 **WARNING** Battery acid is caustic and fumes are explosive and can cause serious injury or death. Use insulated tools, wear protective glasses or goggles and protective clothing when working with batteries. Read and obey the battery manufacturer's instructions.

Be certain the ignition switch is OFF and the key has been removed before servicing the battery.

- 1. Verify battery polarity before connecting or disconnecting the battery cables.
- 2. When installing the battery, always assemble the RED, positive (+) cable first. and the ground, BLACK, negative (-) cable last.

- 3. When removing the battery, always remove the ground, BLACK, negative (-) cable first and the RED, positive (+) cable last.
- 4. AGM type battery. Use AGM charger when **charging. P/N 4171973**
- 5. Clean the cable ends and battery posts with steel wool. Use a solution of baking soda and water to clean the battery. Do not allow the solution to enter into the battery cells.
- 6. Tighten cables securely to battery terminals and apply a light coat of silicone dielectric grease to the terminals and cable ends to prevent corrosion. Keep terminal covers in place.

TRANSAXLE & HYDRAULIC OIL

Do not perform engine maintenance without the engine off and spark plug wires disconnected.

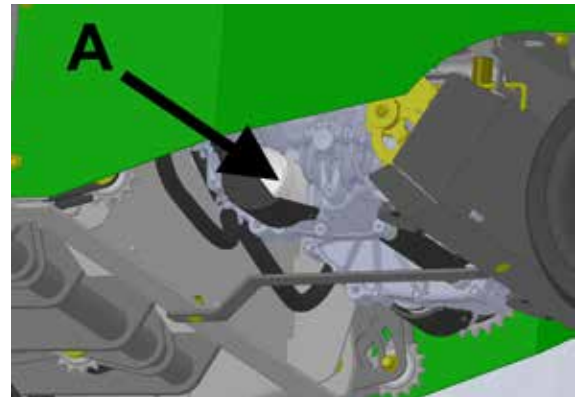
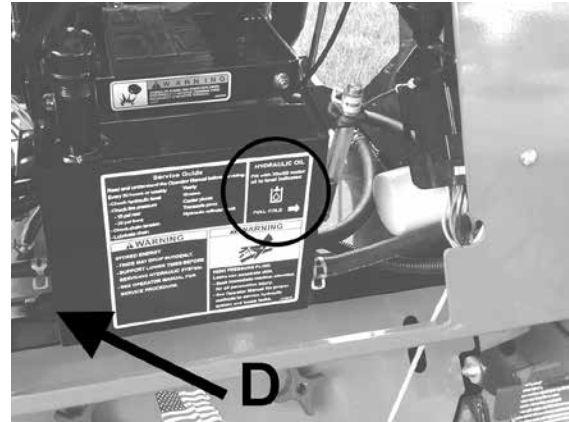
CAUTION

- Check cold.
- Add 20w50 oil if necessary to the indicated level.
- Do not overfill. When the oil warms up it expands. If overfilled cold, the oil may overflow at operating temperature.

Change the transaxle / hydraulic lift circuit oil after the first 75-100 hours, then every 200 hours or yearly.

It is essential that the exterior of the transaxle be free of debris, prior to fluid maintenance.

1. Raise the machine on the built in jack stands. Remove the protective filter cover over the hydraulic oil filter on each transaxle. Put an oil drain pan under the transaxle hydraulic oil filters. Remove the filters **A**. This will drain the oil from the transaxles. With another drain pan, drain the oil from the reservoir through the drain **D** on the lower left side of the reservoir. Remove the lift circuit filter. Dispose of the used oil and filters properly.
2. Apply pipe compound to the reservoir drain plug and reinstall in the reservoir. Oil the gaskets of the new transaxle hydraulic oil filters and install on the transaxles. Tighten 3/4 to 1 turn past the point where the gasket contacts the mounting surface. Reinstall the filter covers. Oil the gasket on a new lift circuit filter and install on the filter head. Tighten 3/4 to 1 turn past the point where the gasket contacts the filter head. NOTE: The transaxle filters are smaller than the lift circuit filter.
3. Fill the reservoir with 20w50 (15w50 is acceptable) motor oil to the top. (Approximately 4 qts.).
4. Have more oil ready. Open the transaxle bypass valves. Keep the machine transaxle controls in neutral. Crack the lift pump outlet fitting, start the machine. Place some rags under the fitting. When oil appears, tighten the fitting. The lift circuit pump will fill the transaxles. Add oil as the level drops below the "FULL COLD" mark. Run the machine and keep adding oil until the oil level stabilizes. If the controls were not moved out of neutral, purging should not be required. Drive the machine and check oil level. Top off as necessary.



5. If the transaxles are noisy or jerky, purge the transaxles, following the purging procedures. See **Purging Transaxles Page 9.**

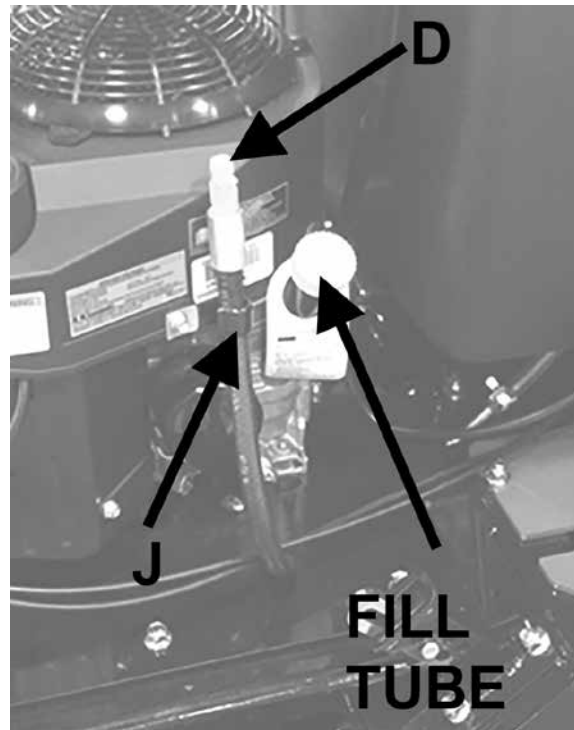
ENGINE OIL

Do not perform engine maintenance without the engine off and spark plug wires disconnected.

AFTER FIRST FIVE (5) HOURS

While the engine is warm:

1. Release the oil drain hose assembly from the engine clip **J**. Lay hose assembly over the frame edge.
2. Remove the rubber cap **D** from the tip of the hose assembly and turn the drain valve to allow oil to drain from the engine. Dispose of used oil in accordance with local requirements.
3. Clean drain valve and tighten the plastic portion of the drain valve back into the metal portion of the valve. Replace rubber cap over the tip of the valve. Replace hose assembly back into engine clip.
4. Change oil filter.
5. Fill the crankcase with fresh oil to the full mark. Do not overfill. See engine manual for oil specifications.



DAILY

1. Check oil level with the dipstick.
2. If oil is needed, add fresh oil of proper viscosity and grade. See engine manual for oil specifications. Do not overfill.
3. Replace dipstick before starting engine.

PERIODIC OIL CHANGES

1. See engine manual for oil and filter change intervals after the break-in period.
2. Follow instructions for first oil change, above.

SPARK PLUGS

Remove each plug and check condition.

- Good operating conditions are indicated if the plug has a light coating of grey or tan deposit.
- A white blistered coating indicates overheating. A black coating indicates an “over rich” fuel mixture. Both may be caused by a clogged air cleaner or improper carburetor adjustment.
- Do not sandblast, wire brush or otherwise attempt to repair a plug in poor condition. Best results are obtained with a new plug.
- Set plug gap as specified in engine manual.

FUEL FILTER

An in line fuel filter is located in the fuel supply line. Inspect at every oil change to make sure it is clean and unobstructed. Replace if dirty.

PURGING TRANSAXLES

Due to the effects air has on efficiency in hydrostatic drive applications, it is critical that it be purged from the system.

These purge procedures should be implemented any time a hydrostatic system has been opened to facilitate maintenance or any additional fluid has been added to the system.

Purging may be required if the unit shows any of the following symptoms:

- Noisy operation.
- Lack of power or drive after short term use.
- High operation temperature, excessive oil expansion.

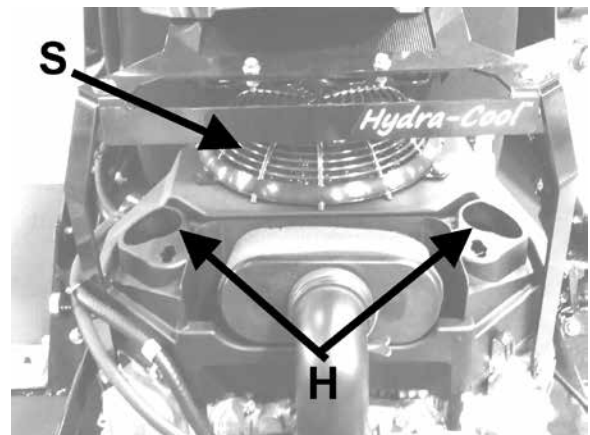
1. Check the transaxle fluid, fill to proper level, if required.

2. Raise the drive wheels off the ground. Support unit with jack stands or other suitable means.
3. With the bypass valve open, and the engine running, slowly move the control levers in both forward and reverse directions 5 to 6 times. As air is purged from the unit, the oil level will drop.
4. With the bypass valve closed, and the engine running, slowly move the control levers in both forward and reverse directions 5 to 6 times.
5. Stop engine. Check the transaxle fluid level, add fluid as required.
6. It may be necessary to repeat steps 3-5 until all the air is completely purged from the system. When the transaxle moves forward and reverse at normal speed, purging is complete.
7. Lower the machine from the jack stands, Stop the engine and pin the jackstands in the operating position.

ENGINE COOLING

Continued operation with a clogged cooling system will cause severe overheating and can result in engine damage.

- **Daily:** Clean air intake screen **S** on air cooled engines.
- **Every 100 hours:** Clean cooling fins beneath blower housing **H** with reference to information in the engine manufacturer's manual.



TINES

Tines can be sharp. Wear gloves when working around tines to help prevent inadvertent injuries.

Tines:

- Replace damaged or broken tines.
- Do not weld or straighten tines.
- Clean tines after use, inside and out.
- Apply a light coat of oil to tines to prevent rusting.

WARNING



SPECIFIC TORQUES

| | |
|------------------------------------|--------------------------------------|
| TINE BOLTS | 15-20 FT-LBS (20-27 Nm) |
| WHEEL LUG NUTS | 75-100 FT-LBS (102-135.5 Nm) |
| ENGINE PULLEY MOUNTING BOLT | 50-60 FT-LBS (68 Nm-81Nm) |
| WHEEL HUB NUT | 120-140 FT-LBS (162.5-190 Nm) |

CLEANING MACHINE

Clean the machine after use. Compressed air is recommended. Do not use a pressure washer. The machine will run cooler and last longer if kept free of clippings and other debris. A clean machine also reduces the risk of fire due to accumulation of combustible debris and chaff.

Brush or blow clippings and debris off the machine. DO NOT use a pressure washer.

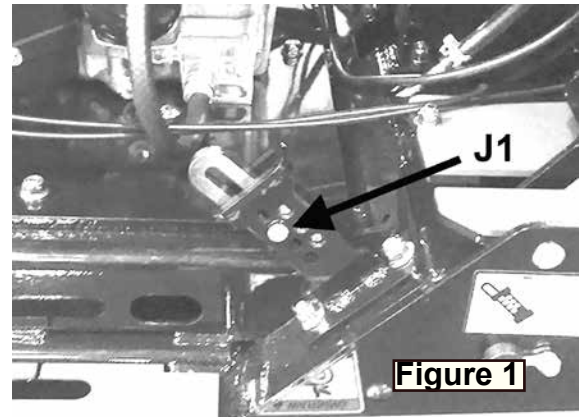
WASHING MACHINE

CAUTION: Improperly washing a machine can cause water to enter bearings and other components. This can greatly reduce component life.

- DO NOT use a pressure washer. Do not direct water at bearings or seals. High pressure water can blow past seals and enter sealed bearings.
- Allow the machine to cool down before washing. Water on a warm machine can be sucked into sealed bearings as they cool.
- Avoid getting electrical connections wet. Water can cause electrical faults and corrosion of electrical components.

MAXIMUM AERATION DEPTH

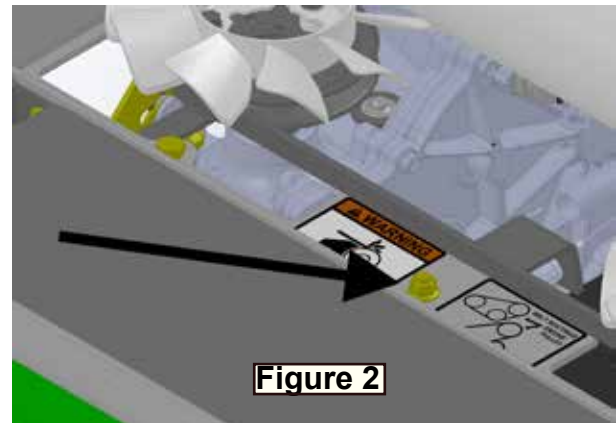
Depth stops set the maximum aeration depth. Maximum aeration depth may be adjusted by changing the hole the depth stop pin is in. Typical aeration depth is 2 1/2 - 3" (60-75 mm). Pins **J1** on both sides of the machine need to be in the same hole so the tine frame is not twisted during operation. **Figure 1**



PARKING BRAKE CABLE

The parking brake cable is adjusted on the transaxle end of the cable. **Figure 2**

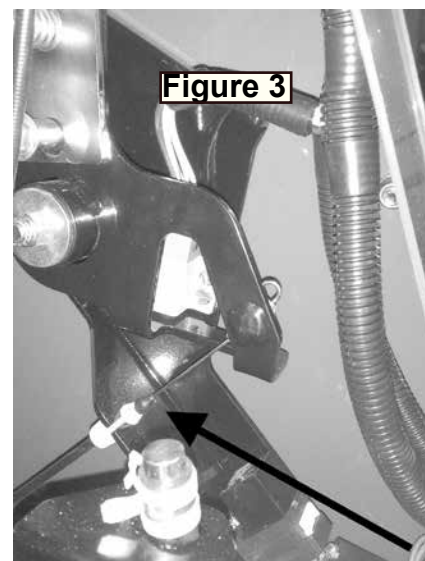
1. Move the parking brake lever to the "ON" position.
2. Center the threaded conduit fitting on the mounting bracket. Secure by tightening the jam nuts against the bracket. Install the bracket loosely to the frame. Pull the cable conduit until the barrel fitting just touches the bracket on the brake lever.



PARKING BRAKE SWITCH

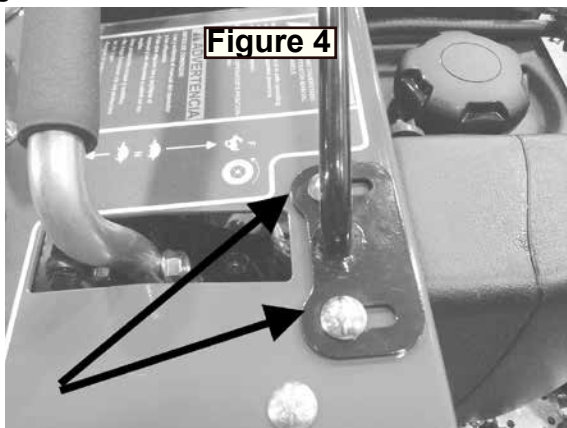
The parking brake switch needs to be adjusted so the plunger is depressed when the parking brake is "OFF". **Figure 3**

1. Move the parking brake to the "OFF" position.
2. Loosen the parking brake switch mounting screws and move the switch until the plunger is depressed almost even with the body. Tighten the screws



FRONT CONTROL REFERENCE BAR

The front control reference bar is mounted to the control panel with slots. Moving the bar forward in the slots allows greater forward speed may be obtained. Moving it back reduces the maximum forward speed. **Figure 4**



TRACTION CONTROL LINKAGE

The transaxles on this machine are spring loaded to the neutral position. The traction control levers need to be adjusted so the LH lever is in the neutral slot when the tractions are released. The right hand lever is adjusted to line up with the left hand lever.

To Adjust:

1. Loosen the jam nuts on either end of the control rod. Note: the end nearest the flats on the rod has left hand threads. Adjust the left rod by turning it to locate the left hand traction lever as desired.
2. Tighten the jam nuts against the rod ends to lock the adjustment.
3. Complete the adjustment by turning the right rod to line up the right traction lever with the left one.

Moving the location of the traction lever in the slot by way of adjustment can be used to affect top forward speed and reverse speed of the unit within the limits of the transaxles control stroke. Adjusting the LH control to the rear of the neutral slot will increase forward speed by reducing the available stroke for reverse and lowering maximum reverse speed. Do not adjust beyond the point where the end of the hydrostat stroke is reached before the control lever hits the front reference bar with the reference bar moved all the way forward.

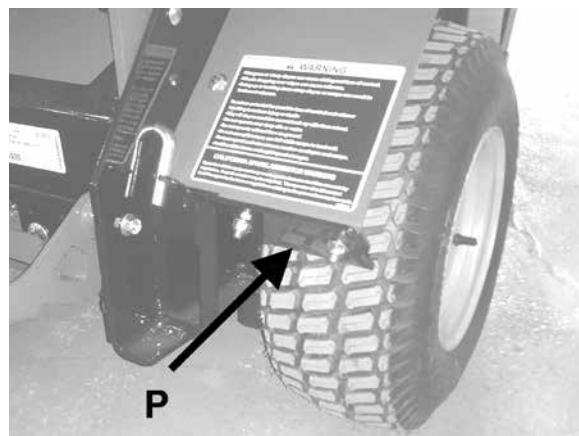


TIRE SCRAPERS

Rear tire scrapers **P** are provided to prevent mud build up on the drive tires during operation in muddy conditions. The tire scrapers should be positioned so there is about 1/8" (3mm) clearance between the wheel and the scraper.

To Adjust:

1. Loosen the bolts securing the tire scrapers.
2. Position the tire scraper 1/8" (3mm) from the nearest tire surface.
3. Tighten bolts.



CHAINS

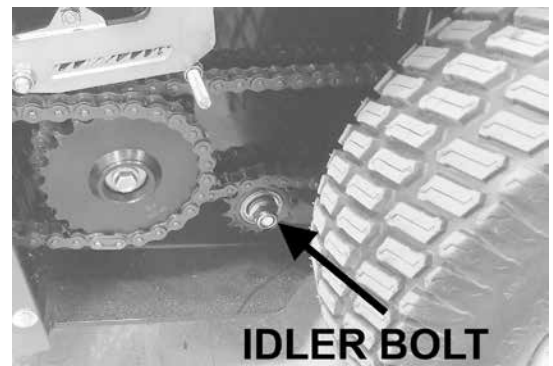
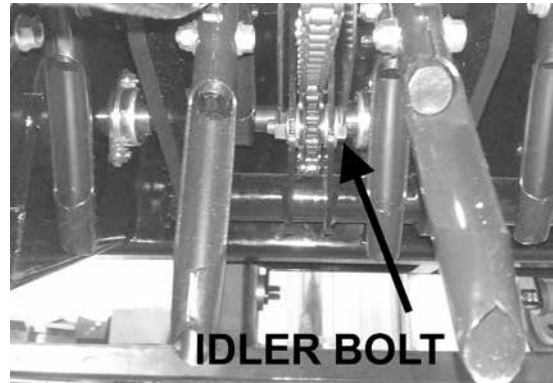
Tines may drop suddenly. Support the tines when working underneath them. NOTE: It is normal for there to be some play in the chain.

WHEEL AND TINE DRIVE CHAIN ADJUSTMENTS

1. Raise the machine and support it on the built in jack stands. See jack stands section page 19. Turn off the engine. This will allow one of the sprockets to turn freely so the idler can take up the slack.
2. Remove the side chain covers.
3. Tension by loosening the idler bolts and sliding the idler in the adjusting slot to remove slack from the drive. Tighten the idler bolts. Replace chain covers.

NOTE: If there is no more adjustment, the chain needs to be replaced. See Belt / Chain Replacement Section

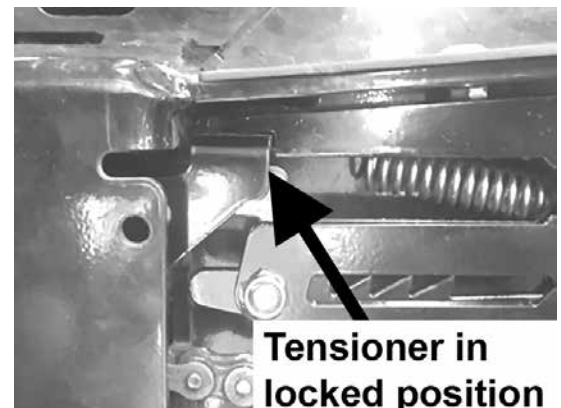
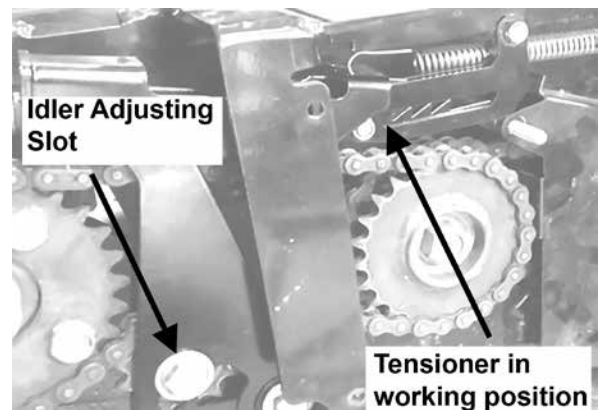
4. Start the engine and lower the machine. Stop the engine and pin the jack stands in the operating position.



MAIN DRIVE CHAIN ADJUSTMENT

The main drive chain has an automatic tensioning system that normally does not require adjustment. As the chain wears, the tensioner advances and locks the idler in the new position. If the automatic tension has advanced all the way, it may be reset.

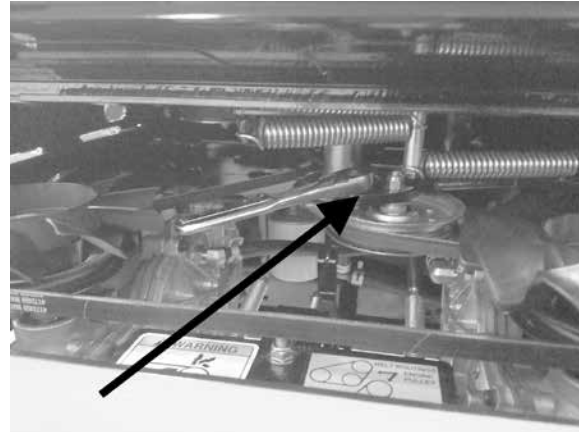
1. Raise the machine and support it on the built in jack stands. Turn off the engine.
2. Remove the front and side chain covers. Pull the tensioner forward while lifting on the end opposite of the spring to lock it in place.
3. Rotate the tire to get all the slack out of the top span of the chain.
4. Loosen the idler bolts and move the idler in the adjusting slot to remove the slack in the chain. Tighten the idler bolts.
5. Move the tensioner off the locking notch to engage the locking teeth.
6. Reinstall the chain covers. Start the engine and lower the machine. Stop the engine and pin the jack stands in the operating position.



NOTE: Use replacement belts from Schiller Grounds care, Inc. not general purpose belts. Schiller Grounds Care, Inc. belts are specifically designed for the loads of this machine and will normally provide longer service life.

ENGINE-TRANSAXLE BELT

1. Remove the front cover. (The two knobs which secure it are located on the underside of the machine.)
2. Rotate the engine-transaxle idler arm in a counter-clockwise direction with a 3/8" ratchet handle to allow removal of the belt. Remove the belt from the idler pulley and then from the remaining pulleys.
3. Loop a new belt around the transaxle and engine pulleys. Rotate the idler arm in a counter-clockwise direction to enable the new belt to be installed in the idler pulley.
4. Reinstall the engine-transaxle belt.
5. Reinstall the front cover.



ENGINE-HYDRAULIC PUMP BELT

1. Remove the front cover. (The two knobs which secure it are located on the underside of the machine.)
2. Remove the engine-transaxle belt.
3. Rotate the engine -hydraulic pump idler in a clockwise direction to allow removal of the belt.
4. Loop a new belt around the pump and engine pulleys. Rotate the engine-hydraulic pump idler in a clockwise direction to enable the new belt to be installed in the idler pulley.
5. Reinstall the engine-transaxle belt.
6. Reinstall the front cover.

NOTE: It is recommended replacement chains from Schiller Grounds care, Inc. be used. Schiller Grounds Care, Inc. supplies a premium quality chain cut to the correct length. Replace all chains together for best results under normal circumstances.

Tension on new chains will need to be adjusted after the first several hours of operation after the chains run in. See Chain Adjustment Section.

MAIN DRIVE CHAIN

1. Start the engine and raise the machine on the jack stands. See jack stands section page 19. Stop the engine. Open the transaxle by pass valves so you can rotate the tines and axles manually.
2. Remove the front, side and tine chain covers.
3. Pull the tensioner forward while lifting on the end opposite of the spring to lock it in place.

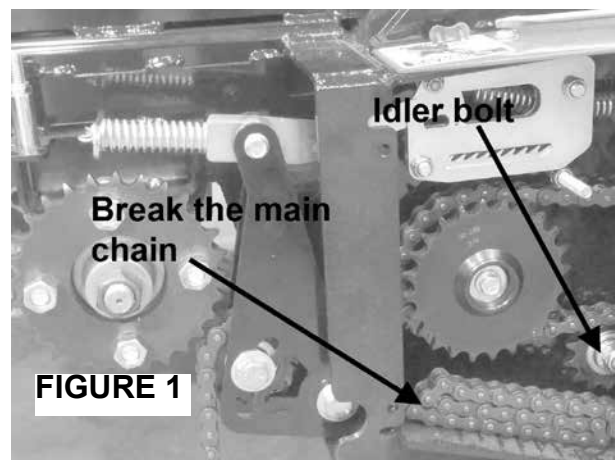
NOTE: If replacing all chains, leave main chain broken and lying in place while the wheel and tine chains are replaced. It is easier to replace those chains with the main chain broken because the wheel and tine sprockets turn freely with the main chain disconnected.

4. Break the chain by removing the connector link. Inspect the sprockets. If any sprockets are worn, remove the chain and replace sprockets before installing the new chain. If the sprockets are still in good condition, connect the new chain to the old chain and use the old chain to pull the new chain around the sprockets. Remove the old chain and connect the ends of the new chain with a new connector link. **NOTE:** Install all connector links so the closed end is in the direction of forward travel.
5. Push the idler up to take all the slack out of the new chain and tighten the idler bolt. Make sure the slack is out of the top span of the chain. Move the tensioner off the locking notch to engage the locking teeth.
6. Reinstall the chain covers. Start the engine and lower the machine. Stop the engine and pin the jack stands in the operating position.

TINE CHAIN

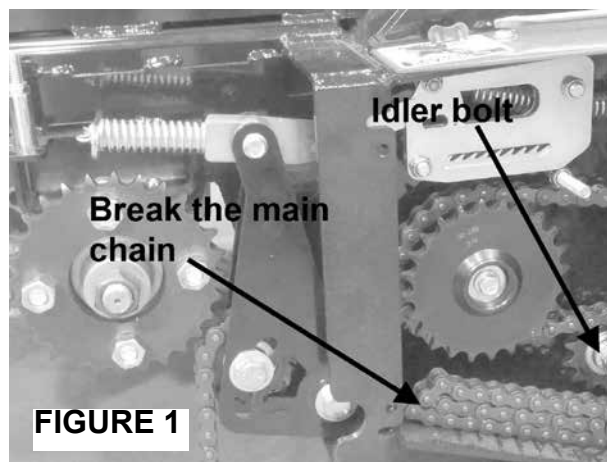
Tines may drop suddenly. Support tines when working underneath them.

1. Start the engine and raise the machine on the jack stands. Stop the engine. Open the transaxle by pass valves so you can rotate the tines and axles manually.
2. Remove the front, side and tine chain covers.
3. Break the main chain and leave it lying on the machine. **Figure 1**
4. Loosen the idler mounting bolt and back off the idler.
5. Break the chain by removing the connector link. Inspect the sprockets. If any sprockets are worn, remove the chain and replace sprockets. If the sprockets are still in good condition, connect the new chain to the old chain and use the old chain to pull the new chain around the sprockets. Remove the old chain and connect the ends of the new chain with a new connector link. **NOTE:** Install all connector links so the closed end is in the direction of forward travel.
6. Take the slack out of the chain by moving the idler in the adjusting slots. Tighten the idler mounting bolt. Reinstall main chain.
7. Reinstall the chain covers. Start the engine and lower the machine. Stop the engine and pin the jack stands in the operating position.



WHEEL CHAIN

1. Start the engine and raise the machine on the jack stands. See jack stands section page 19. Stop the engine. Open the transaxle by pass valves so you can rotate the tines and axles manually.
2. Remove the front, side and tine chain covers.
3. Break the main chain and leave it lying on the machine. **Figure 1** Loosen the idler bolt and back the idler off.
4. Remove the wheel.
5. Remove the axle assembly from the machine. take the wheel chain off the axle sprocket.
Figure 2
6. Break the chain by removing the connector link. Inspect the sprockets. If any sprockets are worn, remove the chain and replace sprockets. If the sprockets are still in good condition, connect the new chain to the old chain and use the old chain to pull the new chain around the sprockets. Remove the old chain and connect the ends of the new chain with a new connector link. **NOTE:** Install all connector links so the closed end is in the direction of forward travel.
7. Set the axle sprocket inside the chain loop and reinstall the axle assembly to the frame. Install the wheel assembly.
8. Take the slack out of the chain by moving the idler in the adjusting slots. Tighten the idler mounting bolt. Reinstall main chain.
6. Reinstall the chain covers. Start the engine and lower the machine. Stop the engine and pin the jack stands in the operating position.



SPECIFICATIONS

ENGINES:

Construction: Aluminum block with cast-in cast iron sleeves. Aluminum head.

Configuration: 4-stroke, vertical shaft, V-twin cylinder, overhead valve, air-cooled.

DRIVE SYSTEM:

Transaxles: Dual HydroGear ZT3200 Commercial Duty Hydrostatic transaxles (10cc Pumps)

Turn Radius: True Zero

CONTROLS:

Throttle, choke, PTO switch, key switch, operator present, traction levers (1 per wheel), parking brake, tine raise/lower, tine down pressure.

GROUND SPEED:

Forward 0-7.4 mph (0-11.9 kph)

Reverse 0-3.5 mph (0-5.6 kph)

BRAKES:

Hydrostat provides dynamic braking

Parking brake: Mechanical pawl type in transaxle

TRANSMISSION DRIVE SYSTEM:

Belt from engine to hydrostat input shafts, hydrostatic drive to wheels and tines via #50 chain.

TURNING RADIUS:

True zero tines up.

Approximately 48" radius tines down.

HYDRAULIC RESERVOIR CAPACITY:

Reservoir 2.75 quarts

Transaxles 2 quarts

Total Capacity 6.75 quarts

POWER STEERING:

Independently controlled drive wheels.

WEIGHT:

554930....Dry : Approximately 1210 lbs.

Wet: Approximately 1245 lbs.

DRIVE TIRES:

18 X 6.50-8

Pressure: 15 p.s.i. (1.05 kg/cm²)

CASTERS:

13 X 5.00-6

Pressure: 25 p.s.i. (1.75 kg/cm²)

AERATION:**TINES:**

3/4" (19mm) formed from .08 in hardened chrome molybdenum alloy steel. 48 per unit.

PENETRATION DEPTH:

2-5" (50-250 mm) maximum

Adjustable depth set for consistent depth.

AERATION WIDTH:

30" (762mm)

HOLE PATTERN:

3-3/4" X 7" (95mm X 178mm) on center

PRODUCTION:

Up to 92,400 sq. ft./hour

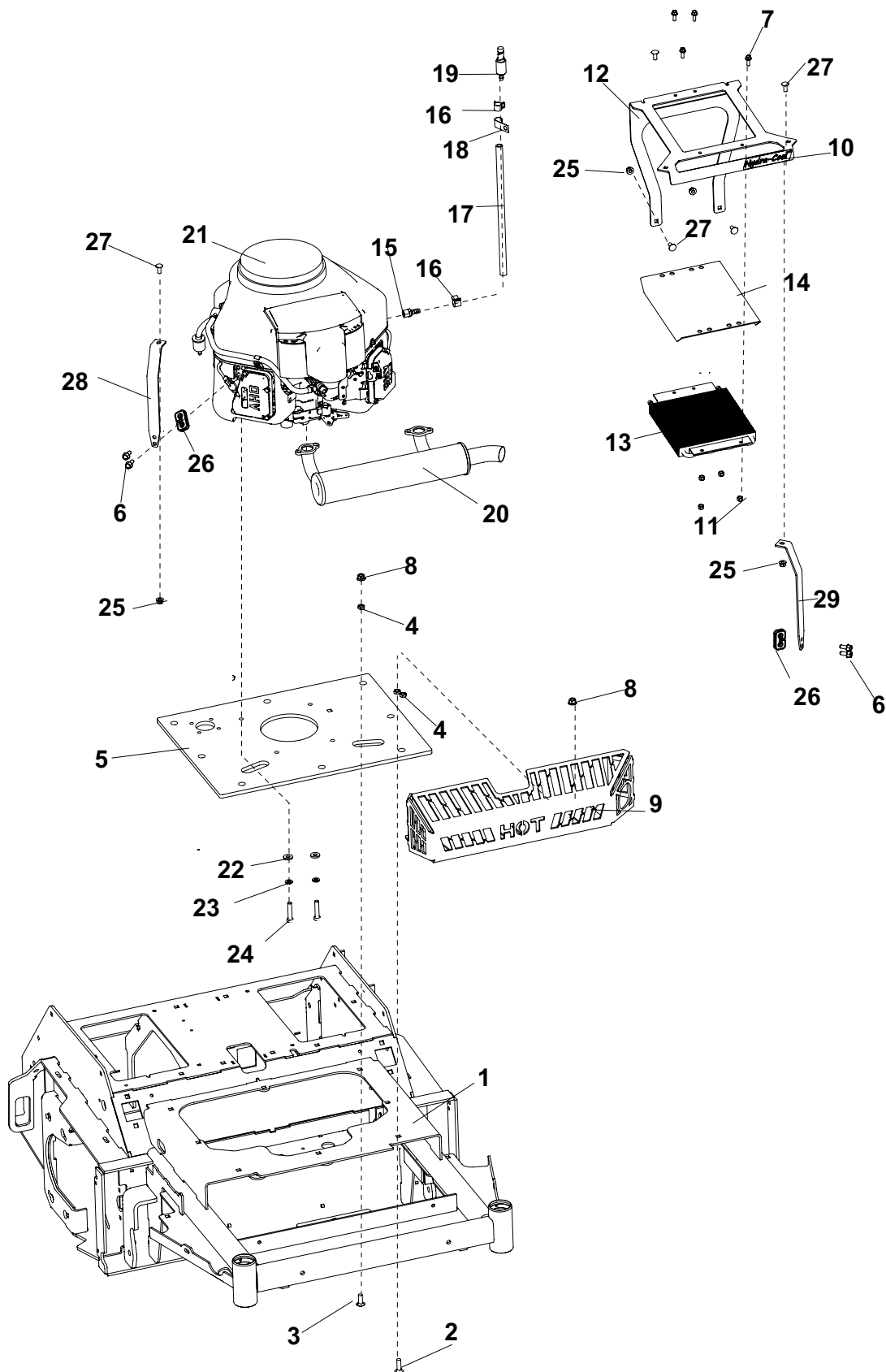
| ENGINE | |
|---------------------------------------|---|
| MODEL NUMBER | SA-30 |
| MANUFACTURER | KAWASAKI |
| MODEL | FS541V |
| CYLINDERS | 2 |
| COOLING | Air |
| FUEL | Gasoline |
| BORE/STROKE | 2.9" x 2.8" (73 x 72 mm) |
| DISPLACEMENT | 36.8 ci (603 cc) |
| COMPRESSION | 8.1:1 |
| OUTPUT POWER | Refer to engine manufacturer's speci- fications and website |
| OUTPUT TORQUE | 31.0 ft-lb (42.1 Nm) @2200 rpm |
| OIL CAPACITY | 1.8 qt (1.7L) |
| LUBRICATION | Full Pressure |
| CYLINDER BLOCK | Aluminum with cast iron sleeve |
| CYLINDER HEAD | Aluminum |
| GOVERNOR | Mechanical |
| AIR CLEANER | Dual Element |
| IGNITION SYSTEM | Electronic |
| CHARGING SYSTEM | 12V-15AMP |
| BATTERY | 12V |
| FUEL CAPACITY | 5.0 GAL (18.9 L) |
| FUEL TANK | Polyethylene |
| FUEL CONSUMPTION @ MAX LOAD/ SPEED | 1.35 gal/hr (5.11 L/hr) |

PARTS SECTION

UPPER ENGINE ASSEMBLY

SA-30

FIGURE 1



SA-30

UPPER ENGINE ASSEMBLY

FIGURE 1

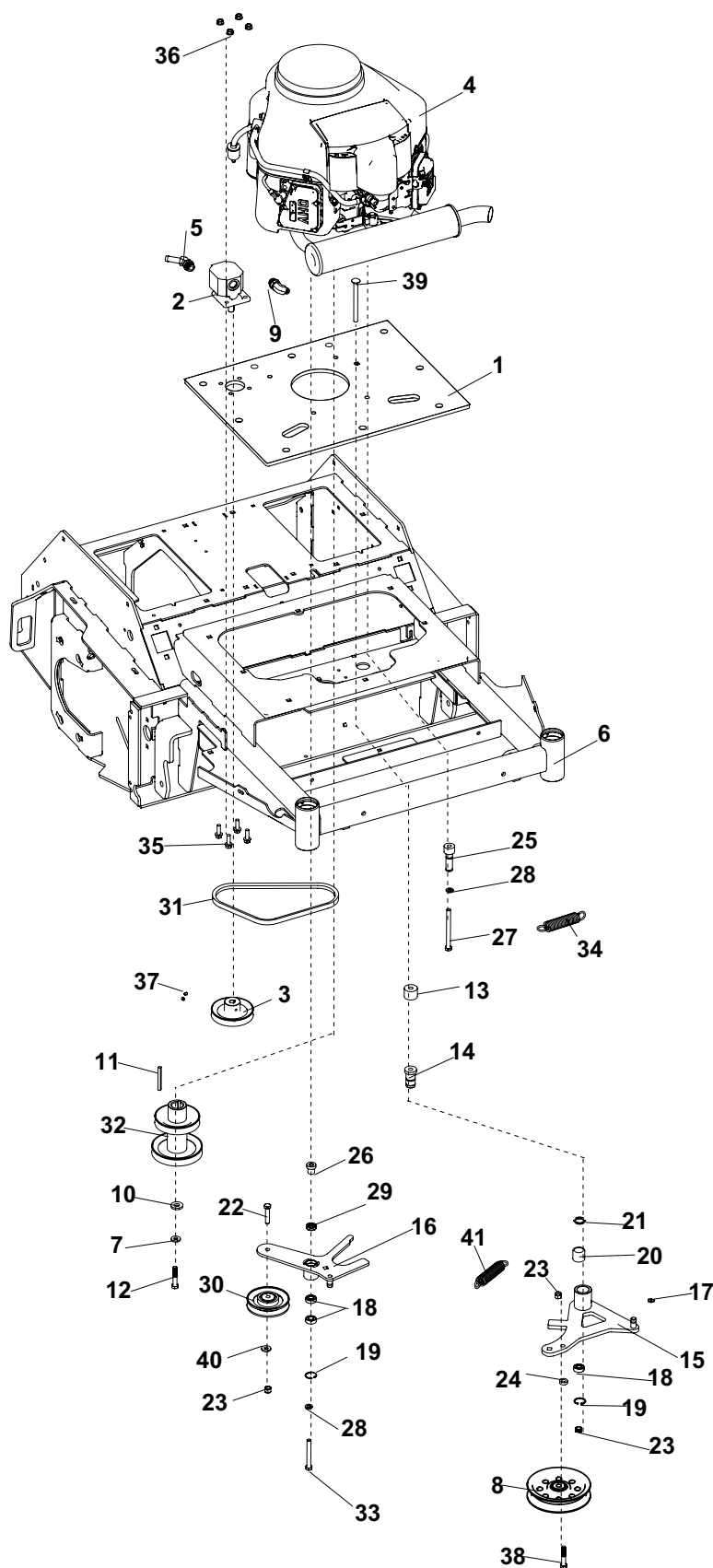
| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|-------------|----------------------------|-----|------|----------|-------------|-----|
| 1 | 4173494 | S-MAIN FRAME | 1 | | | | |
| 2 | 64018-7 | BLT-CRG 3/8-16X1-1/4 | 2 | | | | |
| 3 | 64018-44 | BLT-CRG 3/8-16X1 SN | 6 | | | | |
| 4 | 64001-6 | NUT-HEX JAM 3/8-16 | 8 | | | | |
| 5 | 4171512.7 | PLT-ENGINE MOUNTING | 1 | | | | |
| 6 | 64263-007 | BLT-FLG HD M8-1.25 X 20 | 4 | | | | |
| 7 | 64262-002 | BLT-FLG HD 1/4-20 X 3/4 | 4 | | | | |
| 8 | 64268-03 | NUT-FL NYLON LOCK 3/8-16 | 8 | | | | |
| 9 | 4172292.7 | GUARD-MUFFLER | 1 | | | | |
| 10 | 4172912.7 | LABEL-HYDRA-COOL | 1 | | | | |
| 11 | 64229-01 | NUT-NYLON LOCK 1/4-20 | 4 | | | | |
| 12 | 4172735.7 | BRKT-OIL COOLER | 1 | | | | |
| 13 | 2188173 | COOLER-OIL | 1 | | | | |
| 14 | 2720891.7 | SCREEN-OIL COOLER | 1 | | | | |
| 15 | 4164252-001 | FITTING-3/8NPT TO 3/8 BARB | 1 | | | | |
| 16 | 88042-03 | CLAMP, HOSE 5/8 | 2 | | | | |
| 17 | 69053-13 | HOSE, HYDRAULIC 14" | 1 | | | | |
| 18 | 48412-01 | CLIP-CABLE 3/4 J X 10.32 | 1 | | | | |
| 19 | 4164251 | DRAIN VALVE | 1 | | | | |
| 20 | 4164359 | MUFFLER-FS600 KAW | 1 | | | | |
| 21 | 4164382 | ENG-18HP KAW FS541V ES | 1 | | | | |
| 22 | 64163-69 | WSHR .391X.88X10 GA | 2 | | | | |
| 23 | 64006-03 | LOCKWSHR-3/8 HELICAL | 2 | | | | |
| 24 | 64123-87 | BLT-HEX 3/8-16 X 1-3/4 | 2 | | | | |
| 25 | 64268-02 | NUT-FL NYLON LOCK 5/16-18 | 4 | | | | |
| 26 | 4173654 | SPACER-COOLER BRKT | 4 | | | | |
| 27 | 64018-51 | BLT-CRG 5/16-18 X 3/4 SN | 4 | | | | |
| 28 | 4172746.7 | BRKT-COOLER, SPRT RH | 1 | | | | |
| 29 | 4172876.7 | BRKT-COOLER, SPRT LH | 1 | | | | |

* NOT ILLUSTRATED

LOWER ENGINE ASSEMBLY

SA-30

FIGURE 2



SA-30

LOWER ENGINE ASSEMBLY

FIGURE 2

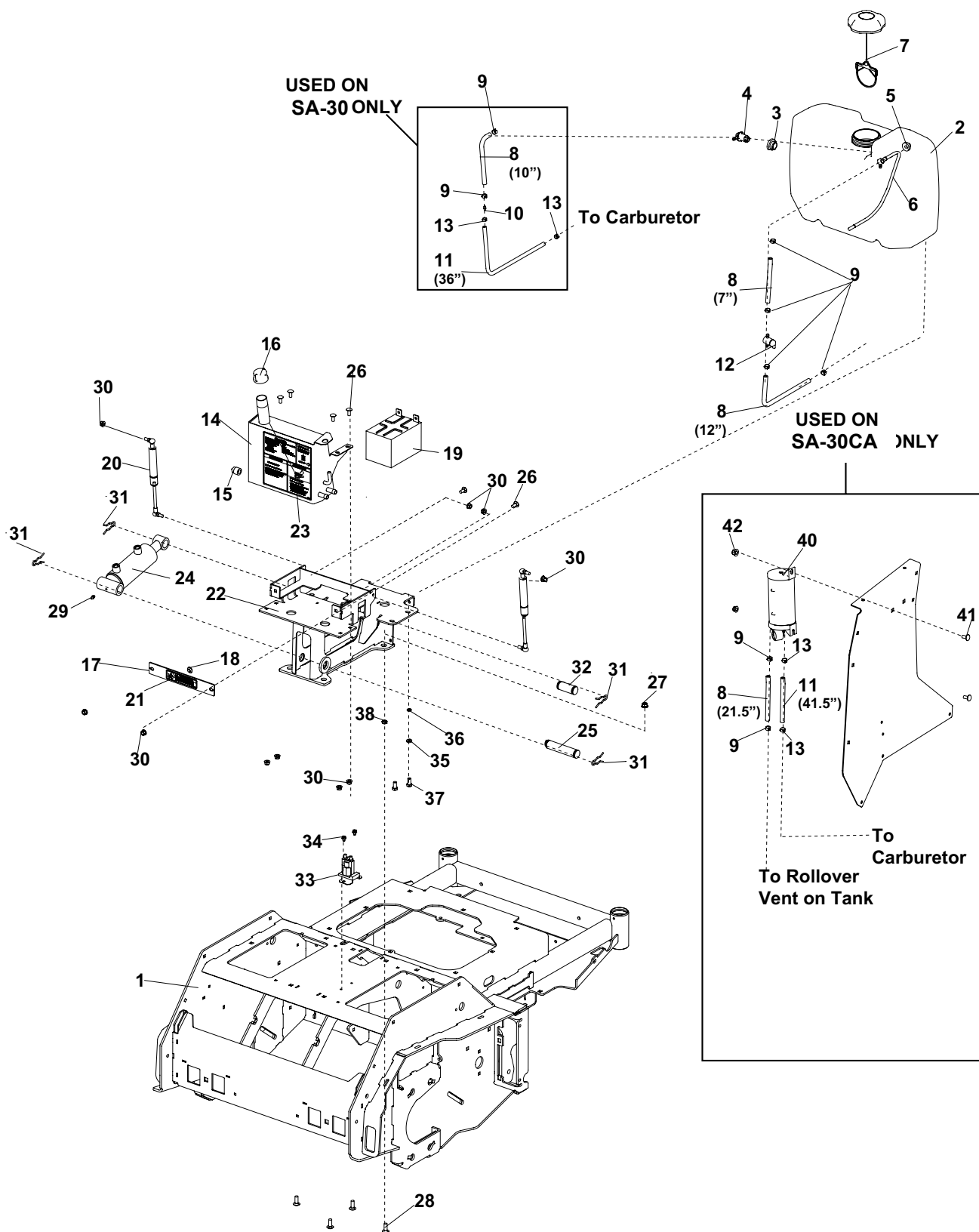
| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|-------------|--|-----|------|----------|-------------|-----|
| 1 | 4171512.7 | PLT-ENGINE MOUNTING | 1 | | | | |
| 2 | 4173822 | PUMP-GEAR 2.1XCC | 1 | | | | |
| 3 | 4171447 | PULLEY-4 IN | 1 | | | | |
| 4 | 4164382 | ENGINE-KAW FS541V ES | 1 | | | | |
| 5 | 2690030-03 | FTG-3/4-16 ORB X 1/2 BARB | 1 | | | | |
| 6 | 4173494 | S-MAIN FRAME | 1 | | | | |
| 7 | 64006-06 | LOCKWSHR-7/16 HELICAL | 1 | | | | |
| 8 | 2308000 | PULLEY-IDLER 4.00 EOD | 1 | | | | |
| 9 | 25-2503-8-6 | FITTING 90 -8 MORB X -6 MJIC | 1 | | | | |
| 10 | 64163-51 | WSHR.453X1.38X7GA | 1 | | | | |
| 11 | 64164-38 | KEY 1/4 X 3-1/2 SQ | 1 | | | | |
| 12 | 64123-155 | BLT-HEX 7/16-20X3 | 1 | | | | |
| 13 | 4172467 | SPACER-IDLER ARM | 1 | | | | |
| 14 | 4116661 | PIN-PIVOT | 1 | | | | |
| 15 | 4171402 | S-IDLER ARM, TRANS (INCLUDES ITEMS 17-21) | 1 | | | | |
| 16 | 4171398 | S-IDLER ARM, PUMP (INCLUDES 18, 19, 29) | 1 | | | | |
| 17 | 85010N | ZERK 1/4-28 STR SELF THRD | 1 | | | | |
| 18 | 4128004 | BEARING-BALL 10 X 26 X 8 | 3 | | | | |
| 19 | 64144-40 | SNAP RING-26MM INTERNAL | 2 | | | | |
| 20 | 548138 | BRG NDL.88 1.12 1.00 | 1 | | | | |
| 21 | 521438 | GREASE SEAL | 1 | | | | |
| 22 | 64123-87 | BLT-HEX 3/8-16 X 1-3/4 | 1 | | | | |
| 23 | 64229-03 | NUT-NYLON LOCK 3/8-16 | 3 | | | | |
| 24 | 33148-01 | SPACER-0.379X0.750X0.25 | 1 | | | | |
| 25 | 4171403 | PIN - SPRING | 1 | | | | |
| 26 | 4171399 | PIN - MNTING, PUMP IDLER | 1 | | | | |
| 27 | 64123-217 | BLT-HEX 3/8-16X4-1/4 | 1 | | | | |
| 28 | 64006-03 | LOCKWSHR-3/8 HELICAL | 2 | | | | |
| 29 | 4127999 | SEAL-16 X 24 X 7 | 1 | | | | |
| 30 | 48393 | PULLEY-V IDLER | 1 | | | | |
| 31 | 4171469 | BELT-HA 30 ED | 1 | | | | |
| 32 | 4171450 | PULLEY-4 IN 'A' | 1 | | | | |
| 33 | 64123-75 | BLT-HEX 3/8-16 X 3 | 1 | | | | |
| 34 | 4163586 | SPRING-EXTENSION | 1 | | | | |
| 35 | 64262-007 | BLT-FLG HD 5/16-18 X 1 | 4 | | | | |
| 36 | 64141-6 | NUT-WLF 5/16-18 | 4 | | | | |
| 37 | 64044-1 | SCREW-SET 1/4-20X1/4 | 2 | | | | |
| 38 | 64123-67 | BLT-HEX 3/8-16 X 2 | 1 | | | | |
| 39 | 64018-30 | BLT-CRG 3/8-16 X 4-1/2 | 1 | | | | |
| 40 | 64163-69 | WSHR .391X.88X10 GA | 1 | | | | |
| 41 | 4173770 | SPRING-EXT 1 OD X 4.5LG .105` | 1 | | | | |

*NOT ILLUSTRATED

FUEL TANK, BATTERY, RESERVOIR

SA-30

FIGURE 3



SA-30

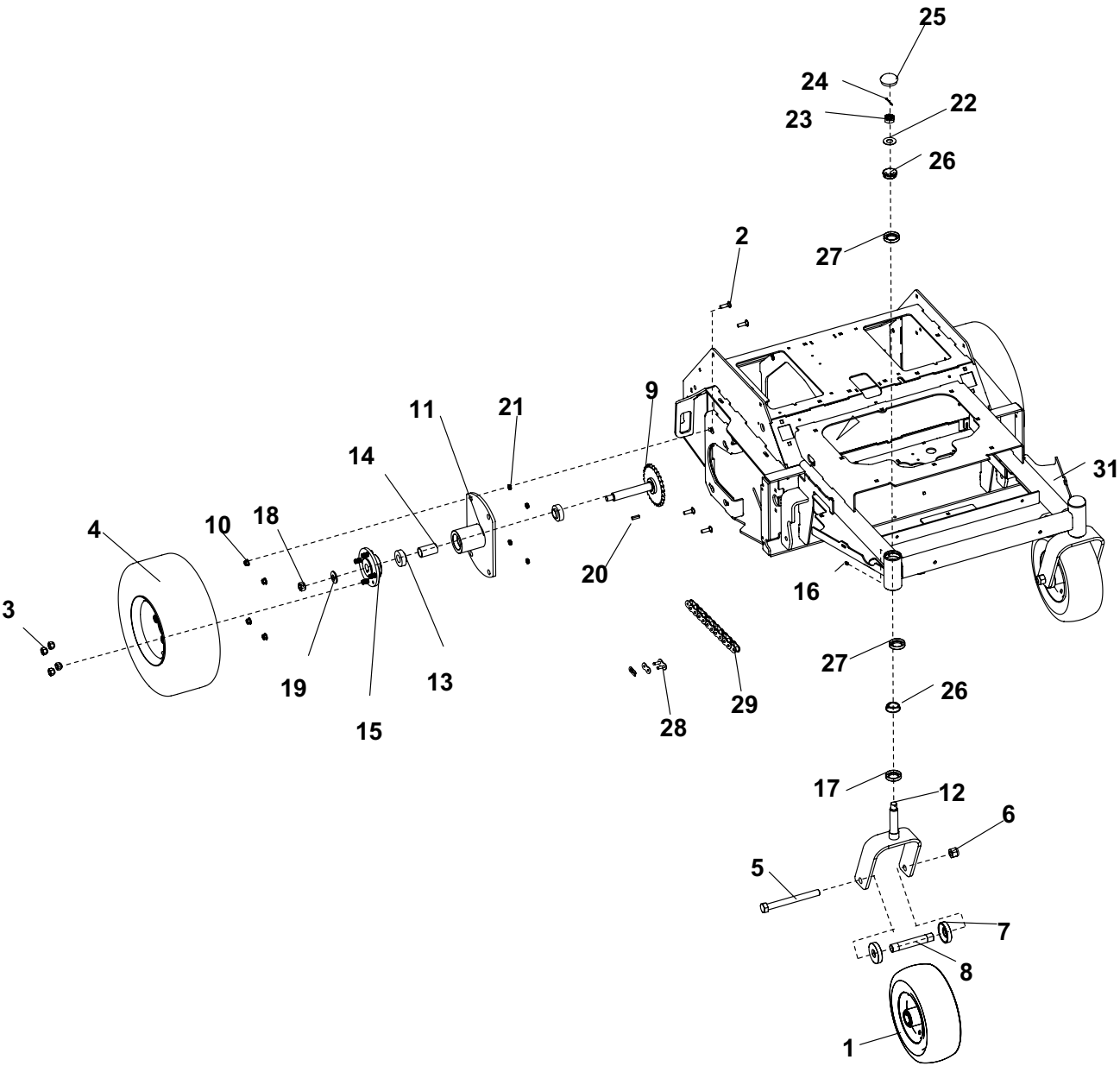
FUEL TANK, BATTERY, RESERVOIR

FIGURE 3

| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|--|-------------|---|-----|------|----------|-------------|-----|
| 1 | 4173494 | S-MAIN FRAME | 1 | | | | |
| 2 | 4174266-1 | TANK-FUEL, MIDSIZE (INCLUDES ITEMS 3-7) | 1 | | | | |
| 3 | 4174343 | GROMMET, ROLL-OVER | 1 | | | | |
| 4 | 4165763 | TANK VENT | 1 | | | | |
| 5 | 4132325 | GROMMET-SEALING | 1 | | | | |
| 6 | 4165561-2 | TUBE-FUEL, PICK-UP | 1 | | | | |
| 7 | 4165291 | CAP-FUEL, 3.5IN EPA | 1 | | | | |
| 8 | 4162977-001 | HOSE-FUEL 1/4 INCH | 3 | | | | |
| 9 | 88042N | CLAMP-HOSE | 6 | | | | |
| 10 | 4165864 | FITTING, 1/4 TO 3/16 | 1 | | | | |
| 11 | 4162989 | HOSE-FUEL 3/16 INCH | 1 | | | | |
| 12 | 4163016 | VALVE- IN-LINE FUEL | 1 | | | | |
| 13 | 88042-01 | CLAMP-HOSE 3/16 | 2 | | | | |
| 14 | 4174463 | S-RESERVOIR (INCLUDES ITEMS 15,16, & 23) | 1 | | | | |
| 15 | 108029 | PLUG MAGNETIC | 1 | | | | |
| 16 | 4171557-3 | CAP-1" NPT W/VENT HOLES | 1 | | | | |
| 17 | 4173496 | S-PLATE BATTERY, CLAMP | 1 | | | | |
| 18 | 4171586 | BUMPER-RUBBER | 1 | | | | |
| 19 | 4171099 | BATTERY-190CCA | 1 | | | | |
| 20 | 2228065 | DAMPER-NON-CAVITATING | 2 | | | | |
| 21 | 2000590 | LABEL-WARN BATTERY | 1 | | | | |
| 22 | 4172659.7 | WLDMT-BATTERY SUPPORT | 1 | | | | |
| 23 | 4172910 | LABEL-RESERVOIR | 1 | | | | |
| 24 | 4171281 | CYLINDER-2.25 X 3.0 | 1 | | | | |
| 25 | 4171592 | PIN-CYLINDER | 1 | | | | |
| 26 | 64018-51 | BLT-CRG 5/16-18 X 3/4 SN | 6 | | | | |
| 27 | 64268-03 | NUT-FL NYLON LOCK 3/8-16 | 8 | | | | |
| 28 | 64018-44 | BLT-CRG 3/8-16X1 SN | 4 | | | | |
| 29 | 85010N | ZERK 1/4-28 STR STH | 1 | | | | |
| 30 | 64268-02 | NUT-FL NYLON LOCK 5/16-18 | 10 | | | | |
| 31 | 548602 | PIN-HAIR | 4 | | | | |
| 32 | 548603 | PIN-CLEVIS | 1 | | | | |
| 33 | 38665 | SOLENOID | 1 | | | | |
| 34 | 64152-23 | SCREW-SP 1/4-20X3/8 | 2 | | | | |
| 35 | 64123-15 | BLT-HEX 3/8-16X3/4 | 4 | | | | |
| 36 | 64006-03 | LOCKWSHR-3/8 HELICAL | 4 | | | | |
| 37 | 64163-31 | WSHR 25/64X1X12 | 4 | | | | |
| 38 | 64001-6 | NUT-HEX JAM 3/8-16 | 4 | | | | |
| 39 | 64262-025 | BLT-FLG HD 3/8-16 X 2-1/2 LG | 4 | | | | |
| ITEMS 40-42 USED ON SA-30CA MODEL ONLY | | | | | | | |
| 40 | 4171023 | CANISTER-CARBON 6 GAL | 1 | | | | |
| 41 | 64018-9 | BLT-CAR 5/16-18 X 3/4 | 2 | | | | |
| 42 | 64269-03 | NUT-FL NYLON LOCK 5/16-18 | 2 | | | | |

*NOT ILLUSTRATED

FIGURE 4



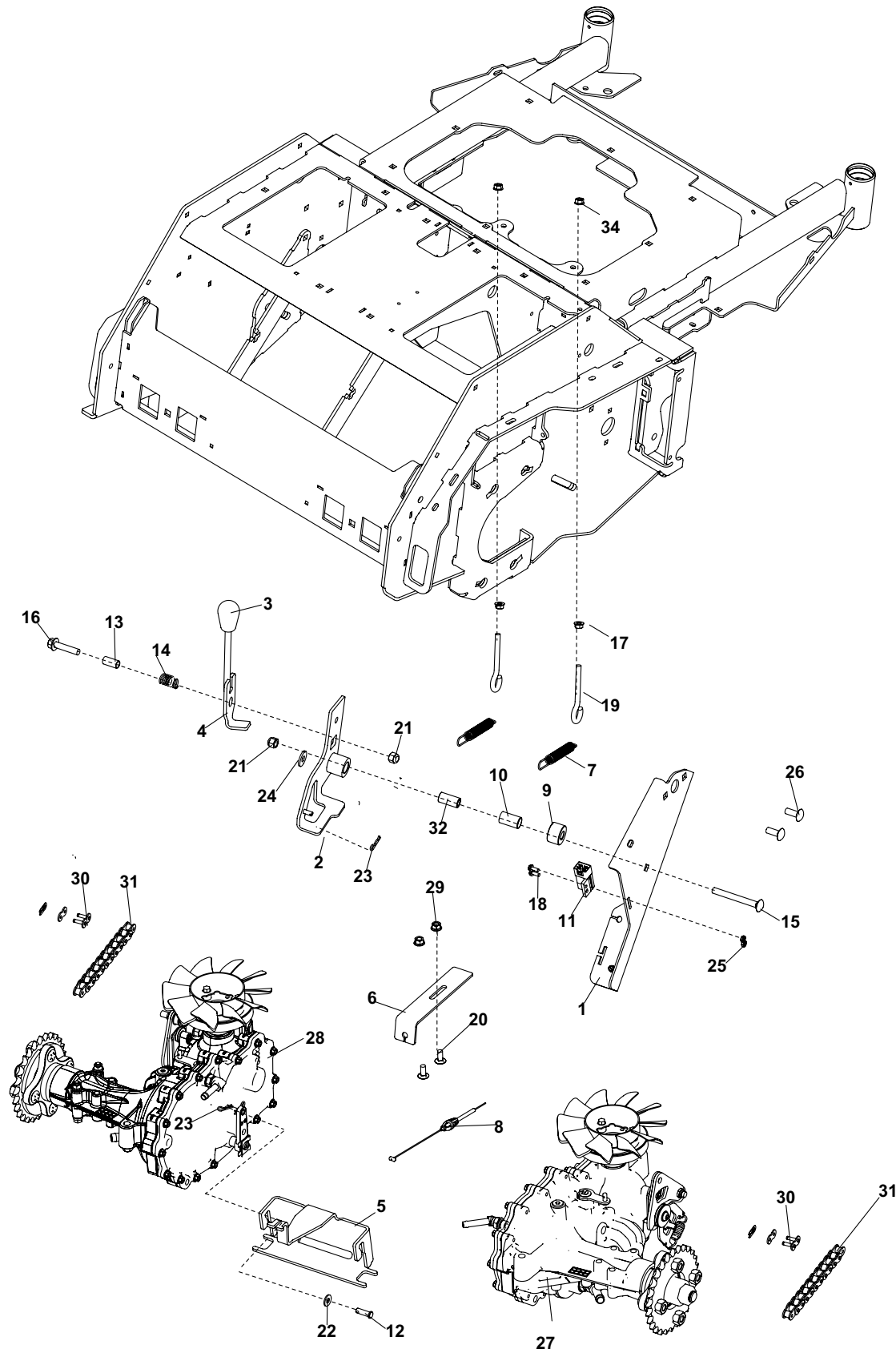
| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|--|------------|--------------------------|-----|------|----------|-------------|-----|
| 1 | 4172857 | ASSY-WHEEL 13X5.00-6 | 2 | | | | |
| 2 | 64018-7 | BLT-CRG 3/8-16X1-1/4 | 8 | | | | |
| 3 | 64187-03 | NUT-WHEEL 1/2-20 | 8 | | | | |
| 4 | 4171862 | ASSY-WHEEL 18X6.50-8 | 2 | | | | |
| 5 | 64123-215 | BLT-HEX 3/4-10X7-1/2 | 2 | | | | |
| 6 | 64229-07 | NUT-NYLON LOCK 3/4-10 | 2 | | | | |
| 7 | 2722231 | SPACER-END | 4 | | | | |
| 8 | 2722230-02 | SPANNER | 2 | | | | |
| 9 | 4173176 | WLDMT-AXLE SHAFT | 2 | | | | |
| 10 | 64268-03 | NUT-FL NYLON LOCK 3/8-16 | 8 | | | | |
| 11 | 4171458.7 | WLDMT-WHEEL SPINDLE HOUS | 2 | | | | |
| 12 | 2721306.7 | CASTER YOKE | 2 | | | | |
| 13 | 4167554-01 | BEARING-SPINDLE SEALED | 4 | | | | |
| 14 | 4172715 | SPACER-SPINDLE | 2 | | | | |
| 15 | 4171467.7 | WLDMT-WHEEL HUB | 2 | | | | |
| 16 | 85010N | ZERK 1/4-28 STR SLF THRD | 2 | | | | |
| 17 | 48480 | SEAL CR 12411 | 2 | | | | |
| 18 | 64284-16 | NUT-FL CRLK 5/8-18 | 2 | | | | |
| 19 | 64209-03 | SPRING WASHER.67 ID | 2 | | | | |
| 20 | 64164-12 | KEY-1/4X1 SQ | 2 | | | | |
| 21 | 64001-6 | NUT-HEX JAM 3/8-16 | 8 | | | | |
| 22 | 64163-26 | WSHR .766 ID X 1.625 | 2 | | | | |
| 23 | 64025-20 | NUT-HEX 3/4-16 SLOT U | 2 | | | | |
| 24 | 64140-9 | COTTER PIN-1/4-2 | 2 | | | | |
| 25 | 4162986 | CAP-END | 2 | | | | |
| 26 | 48043-04C | CONE-OUTER BEARING | 4 | | | | |
| 27 | 48043-03C | CUP-OUTER BEARING | 4 | | | | |
| 28 | 4172865 | LINK-CONNECTOR #50 | 2 | | | | |
| 29 | 4172864-03 | CHAIN-50 ROLLER 67 PITCH | 2 | | | | |
| 30* | 4173503 | KIT-CHAINS REPLACEMENT | 1 | | | | |
| (INCLUDES ALL 6 CHAINS FOR UNIT AND LINKS) | | | | | | | |
| 31 | 4173494 | S-FRAME, MAIN | 1 | | | | |
| (INCLUDES ITEM 27) | | | | | | | |

***NOT ILLUSTRATED**

PARKING BRAKE ASSY

SA-30

FIGURE 5



| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|--|------------|---|-----|------|----------|-------------|-----|
| 1 | 4171573.7 | BRKT-BRAKE MOUNT | 1 | | | | |
| 2 | 4174464 | S-BRAKE ARM BRAKT (INCLUDES ITEM 10) | 1 | | | | |
| 3 | 4176120 | KNOB-THREADED | 1 | | | | |
| 4 | 4176129 | WLDMT-BRAKE HANDLE | 1 | | | | |
| 5 | 4173527.7 | BRKT-BRAKE, PARKING | 1 | | | | |
| 6 | 4173896.7 | BRKT-CABLE | 1 | | | | |
| 7 | 4117212 | SPRING-EXTENSION | 2 | | | | |
| 8 | 4173898 | CABLE-BRAKE, PARKING | 1 | | | | |
| 9 | 4174337 | HUB-BRAKE PIVOT | 1 | | | | |
| 10 | 4166324-04 | BEARING-PLASTIC 1.000 ID | 1 | | | | |
| 11 | 2308094 | SWITCH-NCNC DBL POLE | 1 | | | | |
| 12 | 64188-02 | PIN-CLEVIS 5/16 X 1 | 2 | | | | |
| 13 | 516544 | BUSHING (PLATING) | 1 | | | | |
| 14 | 41-053 | SPRING COMP .681 X 1.125 | 1 | | | | |
| 15 | 64018-47 | BLT-CRG 3/8-16X2-3/4 | 1 | | | | |
| 16 | 64262-018 | BLT-FLG HD 3/8-16 X 1-3/4 | 1 | | | | |
| 17 | 64141-4 | NUT-WLF 3/8-16 | 4 | | | | |
| 18 | 64152-46 | SCREW-SLT HH 10-24X1/2 | 2 | | | | |
| 19 | 4113682 | ROD-SPRING MOUNT | 2 | | | | |
| 20 | 64018-51 | BLT-CRG 5/16-18 X 3/4 SN | 1 | | | | |
| 21 | 64229-03 | NUT-NYLON LOCK 3/8-16 | 2 | | | | |
| 22 | 64163-55 | WSHR .328X.75X14 GA | 2 | | | | |
| 23 | 64168-2 | COTTER-HAIRPIN .08 X 1.19 | 3 | | | | |
| 24 | 64163-31 | WSHR 25/64X1X12 | 1 | | | | |
| 25 | 64025-15 | NUT-HEX #10-24 KEPS | 2 | | | | |
| 26 | 64018-7 | BLT-CRG 3/8-16X1-1/4 | 2 | | | | |
| 27 | 4171283 | TRANSAXLE, HYDROSTATIC RH | 1 | | | | |
| | 4142045-06 | FILTER-TRANSAXLE | 1 | | | | |
| 28 | 4171282 | TRANSAXLE, HYDROSTATIC LH | 1 | | | | |
| 29 | 64268-02 | NUT-FL NYLON LOCK 5/16-18 | 12 | | | | |
| 30 | 4172865 | LINK-CONNECTOR #50 | 2 | | | | |
| 31 | 4172864-01 | CHAIN 50 ROLLER 57 PITCH | 2 | | | | |
| 32 | 4171409 | SPACER-.625X.391X1.255 | 1 | | | | |
| 33* | 4173503 | KIT-CHAINS REPLACEMENT | 1 | | | | |
| (INCLUDES ALL 6 CHAINS FOR UNIT AND LINKS) | | | | | | | |

*NOT ILLUSTRATED

FIGURE 6

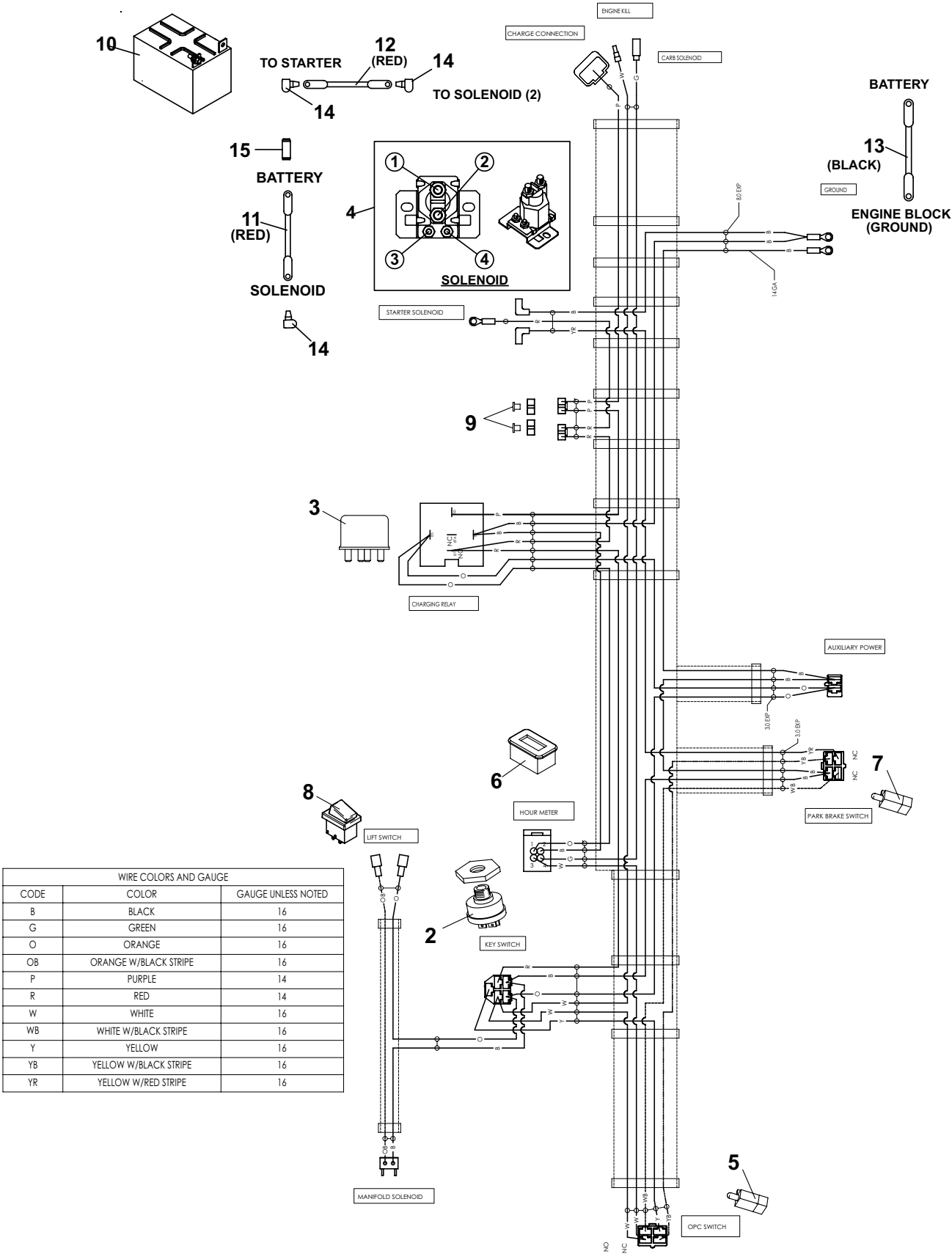


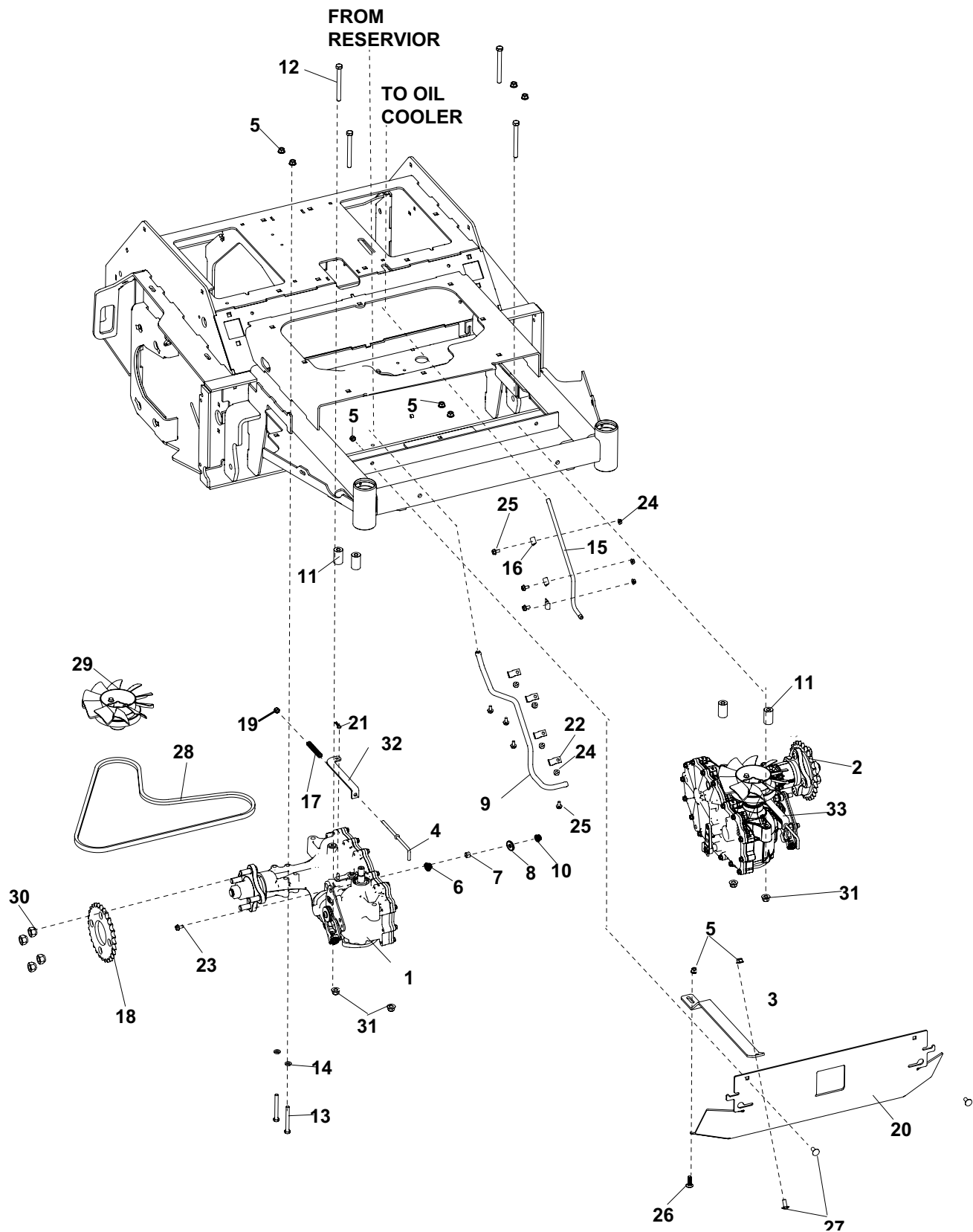
FIGURE 6

| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|------|----------|-------------|-----|
| 1 | 4172161 | HARNESS-WIRING MAIN (INCLUDES ITEM 9) | 1 | | | | |
| 2 | 128010 | KEY-SWITCH | 1 | | | | |
| 3 | 2722325 | RELAY-40AMP SEALED | 1 | | | | |
| 4 | 38665 | SOLENOID | 1 | | | | |
| 5 | 108208 | SWITCH-DBL POLE | 1 | | | | |
| 6 | 4171992 | METER-HOUR | 1 | | | | |
| 7 | 2308094 | SWITCH NCNC | 1 | | | | |
| 8 | 4171893 | SWITCH-ROCKER | 1 | | | | |
| 9 | 148082-20 | FUSE-20 AMP | 2 | | | | |
| 10 | 4171099 | BATTERY-AGM TYPE | 1 | | | | |
| | 4171973 | CHARGER-AGM | | | | | |
| 11 | 2722227-05 | CABLE-BATTERY 18" COND (INCLUDES ITEM 14 & 15) | 1 | | | | |
| 12 | 108061-17 | CABLE-BATTERY 16 RED | 1 | | | | |
| 13 | 108061-16 | CABLE-BATTERY 31.5 BLK | 1 | | | | |
| 14 | 2308095 | COVER - TERMINAL | 3 | | | | |
| 15 | 112386 | BOOT BAT TERM POS | 1 | | | | |

TRANSAXLE ASSEMBLY

SA-30

FIGURE 7



SA-30

TRANSAXLE ASSEMBLY

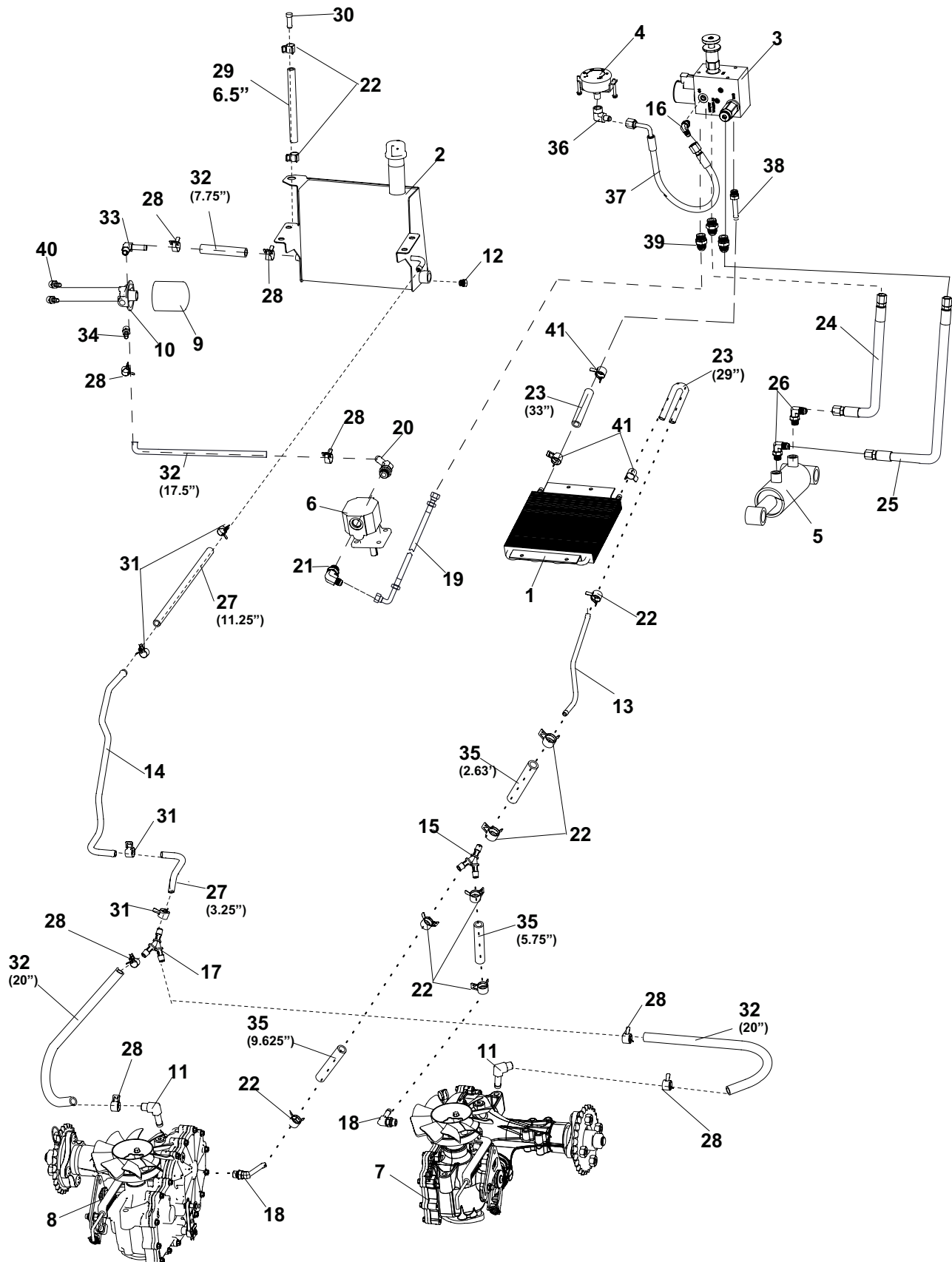
FIGURE 7

| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|-------------------------------|-----|------|----------|-------------|-----|
| 1 | 4171283 | TRANSAXLE, HYDROSTATIC RH | 1 | | | | |
| | 4142045-06 | FILTER-TRANSAXLE | 1 | | | | |
| 2 | 4171282 | TRANSAXLE, HYDROSTATIC LH | 1 | | | | |
| 3 | 4172890.7 | BRKT-SHIELD SUPPORT | 1 | | | | |
| 4 | 4148697 | ROD-PULL FREEWHEEL | 2 | | | | |
| 5 | 64268-02 | NUT-FL NYLON LOCK 5/16-18 | 8 | | | | |
| 6 | 4173645 | SPACER-BUSHING | 2 | | | | |
| 7 | 4169194 | BUSHING - .522 X .688 X .289 | 2 | | | | |
| 8 | 64163-29 | WSHR-21/64 X 1 X 11GA | 2 | | | | |
| 9 | 4174382 | TUBE RESERVOIR-FILTER | 1 | | | | |
| 10 | 64229-02 | NUT-FL NYLON LOCK 5/16-18 | 4 | | | | |
| 11 | 33030-4A | IDLER BUSHING | 4 | | | | |
| 12 | 64123-138 | BLT-HEX 3/8-16 X 3-3/4 | 4 | | | | |
| 13 | 64123-104 | BLT-HEX 5/16-18X2-3/4 | 4 | | | | |
| 14 | 64163-02 | WSHR .321/.328X.593/.608X11GA | 4 | | | | |
| 15 | 4174270 | TUBE-MANIFOLD-TRANS | 1 | | | | |
| 16 | G8062 | CLAMP HALF 3/8 INSULATED | 3 | | | | |
| 17 | 2720977 | SPRING-COMPRESSION | 2 | | | | |
| 18 | 4173649 | SPROCKET W/ SPACER 28T | 2 | | | | |
| 19 | 64229-01 | NUT-NYLON LOCK 1/4-20 | 2 | | | | |
| 20 | 4171666.7 | PLT-DUMP VALVE | 1 | | | | |
| 21 | 64168-2 | COTTER-HAIRPIN .08 X 1.19 | 2 | | | | |
| 22 | 4171606 | CLAMP-HALF, 5/8 HOSE | 4 | | | | |
| 23 | 64262-008 | BLT-FLG HD 5/16-18 X 1 | 2 | | | | |
| 24 | 64141-2 | NUT-WLF 1/4-20 | 7 | | | | |
| 25 | 64139-04 | BLT-WLF 1/4-20X3/4 | 7 | | | | |
| 26 | 64018-15 | BLT-CRG 5/16-18X1 SN | 1 | | | | |
| 27 | 64018-51 | BLT-CRG 5/16-18 X 3/4 SN | 5 | | | | |
| 28 | 4176256 | BELT-HA 59.4 | 1 | | | | |
| 29 | 4164048 | KIT-TRANSAXLE, FAN & PULLEY | 2 | | | | |
| 30 | 64187-03 | NUT-WHEEL 1/2-20 | 8 | | | | |
| 31 | 64268-03 | NUT-FL NYLON LOCK 3/8-16 | 4 | | | | |
| 32 | 4171665.7 | LINK-DUMP VALVE, RH | 1 | | | | |
| 33 | 4171664.7 | LINK-DUMP VALVE, LH | 1 | | | | |

OIL COOLING SYSTEM

SA-30

FIGURE 8



SA-30

OIL COOLING SYSTEM

FIGURE 8

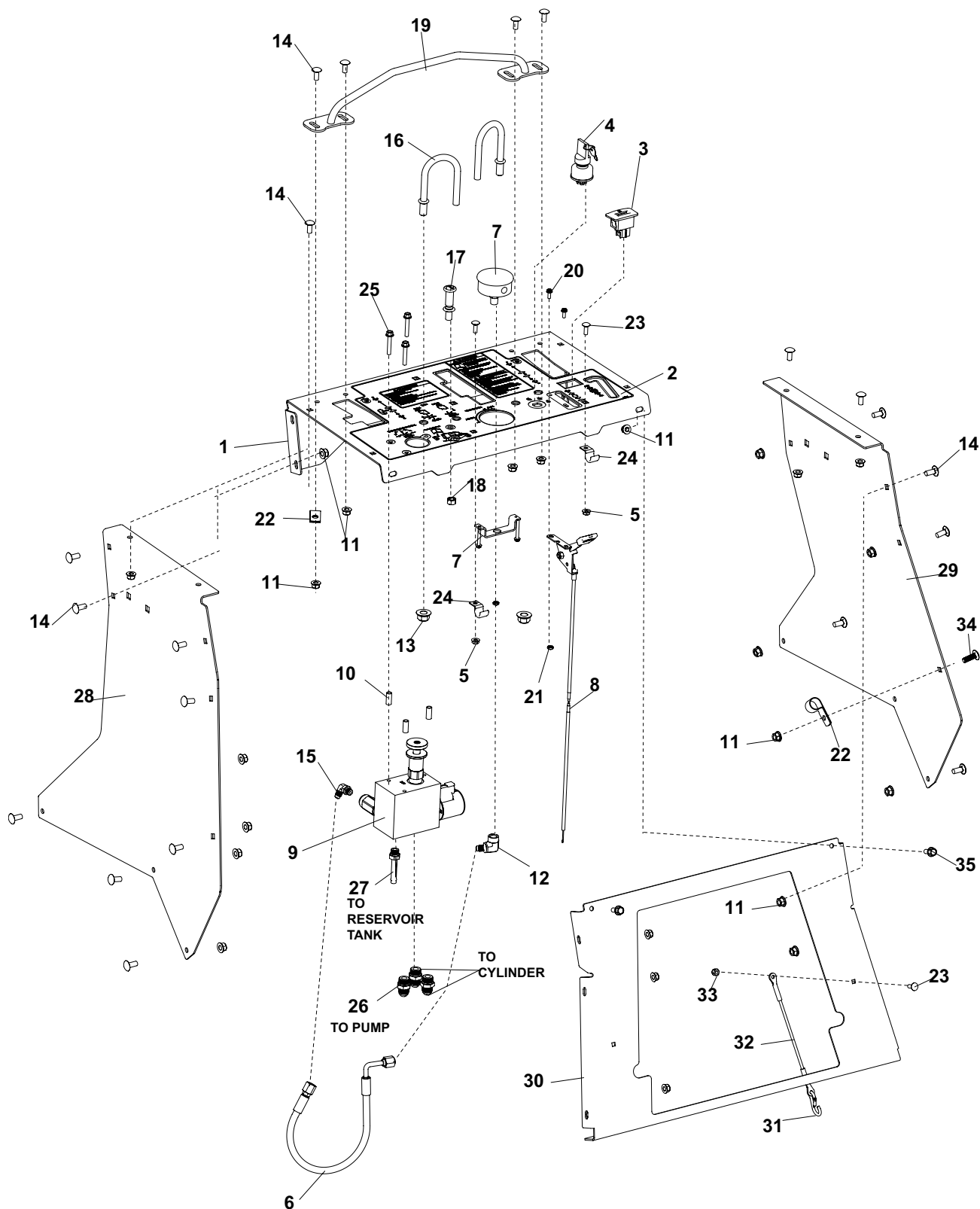
| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|-------------|------------------------------|-----|------|----------|-------------|-----|
| 1 | 2188173 | COOLER-OIL | 1 | | | | |
| 2 | 4174463 | S-RESERVOIR | 1 | | | | |
| 3 | 4171280 | MANIFOLD-AERATOR | 1 | | | | |
| 4 | 4171284 | GAUGE-HYDRAULIC 0-1000 PSI | 1 | | | | |
| 5 | 4171281 | CYLINDER-2.25 X 3.0 | 1 | | | | |
| 6 | 4173822 | PUMP-GEAR 2.11CC | 1 | | | | |
| 7 | 4171282 | TRANSAXLE, HYDROSTATIC LH | 1 | | | | |
| 8 | 4171283 | TRANSAXLE, HYDROSTATIC RH | 1 | | | | |
| | 4142045-06 | FILTER-TRANSAXLE | 1 | | | | |
| 9 | 2720396 | FILTER-25 MICRON SMALL CAN | 1 | | | | |
| 10 | 138059 | FILTER HEAD | 1 | | | | |
| 11 | 158058-06 | FTG -06 MORB X 1/2 HOSE | 2 | | | | |
| 12 | 108029 | PLUG-MAGNETIC | 1 | | | | |
| 13 | 4174270 | TUBE-TRANS - COOLER | 1 | | | | |
| 14 | 4174382 | TUBE RESERVOIR-TRANS | 1 | | | | |
| 15 | 4172860 | FTG-3/8 Y CONNECTOR | 1 | | | | |
| 16 | 25-2503-4-4 | FTG-90 -4MORB X- 4MJIC | 1 | | | | |
| 17 | 4172860-2 | FTG-1/2X5/8 Y HOSE CONN | 1 | | | | |
| 18 | 2690030-01 | FITTING-9/16-18 ORB X 3/8 | 2 | | | | |
| 19 | 4166840-03 | HOSE-#6 JIC/90 JIC X 39.75 | 1 | | | | |
| 20 | 2690030-03 | FTG-3/4-16 ORB X 1/2 BARB | 1 | | | | |
| 21 | 25-2503-8-6 | FITTING-90 -9 MORB X -6 MJIC | 1 | | | | |
| 22 | 88042-04 | CLAMP, HOSE | 9 | | | | |
| 23 | 27-017-01 | HOSE-HYD (42" L) | 2 | | | | |
| 24 | 4166839-03 | HOSE-#6 JIC/JIC 19.5 | 1 | | | | |
| 25 | 4166839-02 | HOSE-#6 JIC/JIC 18.5 | 1 | | | | |
| 26 | 25-2503-6-6 | FITTING 90 -6 MORB X -6 MJIC | 2 | | | | |
| 27 | 108044-01 | HOSE HYDRAULIC 11.25" | 2 | | | | |
| 28 | 88042-05 | CLAMP-HOSE 13/16 | 8 | | | | |
| 29 | 4172859-03 | HOSE- 3/8 ID X 5/8 OD CLEAR | 1 | | | | |
| 30 | 4173002 | VENT-BREATHER | 1 | | | | |
| 31 | 88042-07 | CLAMP-HOSE 15/16 | 4 | | | | |
| 32 | 138058-09 | HOSE-BULK.50IDX.84OD | 4 | | | | |
| 33 | 108086-03 | FTG-BARB 90-1/2 X 3/8 MNPT | 1 | | | | |
| 34 | 4164252-002 | FITTING-3/8MNPT X 1/2M BARB | 1 | | | | |
| 35 | 69053-05 | HOSE-HYDRO | 3 | | | | |
| 36 | 25-2502-4-4 | FTG 90 -4 MJIC X -4 FPT | 1 | | | | |
| 37 | 4172326-01 | HOSE-#4JIC/JIC 90 LG 17.38 | 1 | | | | |
| 38 | 69060-01 | FITTING-ORB X 45 BARB | 1 | | | | |
| 39 | 25-0503-6-6 | FITTING STR -6 M ORB/-6 MJIC | 3 | | | | |
| 40 | 64139-02 | BLT-WLF 1/4-20 X 1/2 | 2 | | | | |
| 41 | 11-017 | CLAMP-HOSE | 3 | | | | |

*NOT ILLUSTRATED

CONTROL PANEL & TOWER ASSY

SA-30

FIGURE 9



SA-30

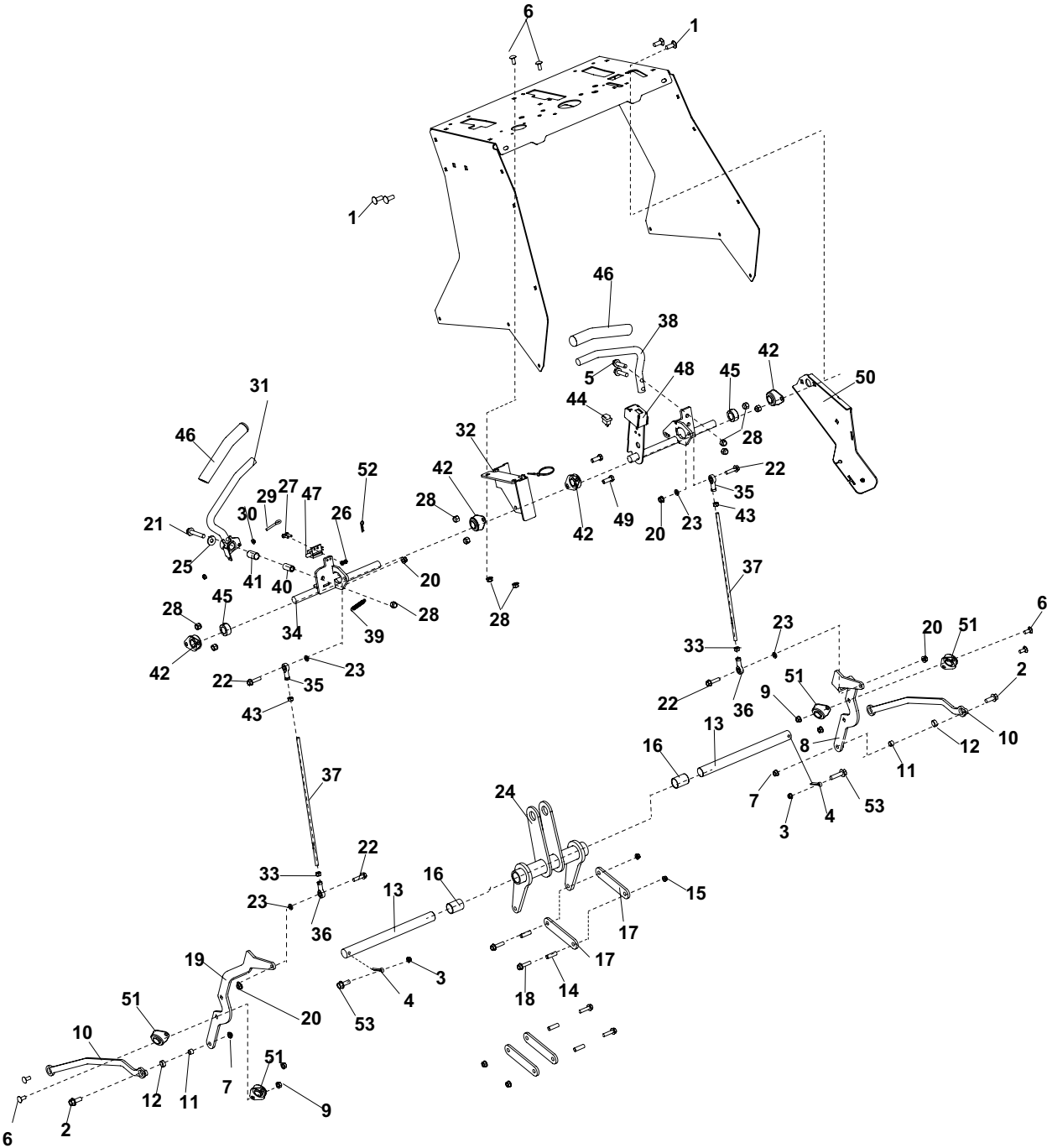
CONTROL PANEL & TOWER ASSY

FIGURE 9

| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|-------------|------------------------------------|-----|------|----------|-------------|-----|
| 1 | 4173504 | S-CONTROL PANEL INCLUDES ITEM 2 | 1 | | | | |
| 2 | 4176220 | LABEL-CONTROL PANEL | 1 | | | | |
| 3 | 4171992 | HOUR METER-MAG SENSE | 1 | | | | |
| 4 | 128010 | SWITCH KEY | 1 | | | | |
| 5 | 64141-2 | NUT-WLF 1/4-20 | 2 | | | | |
| 6 | 4172326-01 | HOSE-#4JIC/JIC 90 LG 17.38 | 1 | | | | |
| 7 | 4171284 | GAUGE-HYDRAULIC 0-1000 PSI | 1 | | | | |
| 8 | 118020-22 | CONTROL-THROTTLE, 57.5IN | 1 | | | | |
| 9 | 4171280 | MANIFOLD-AERATOR | 1 | | | | |
| 10 | 820529 | SPACER | 3 | | | | |
| 11 | 64268-02 | NUT-FL NYLON LOCK 5/16-18 | 21 | | | | |
| 12 | 25-2502-4-4 | FTG 90 -4 MJIC X -4 FPT | 1 | | | | |
| 13 | 64268-05 | NUT-FL NYLON LOCK 1/2-13 | 2 | | | | |
| 14 | 64018-51 | BLT-CRG 5/16-18 X 3/4 SN | 17 | | | | |
| 15 | 25-2503-4-4 | FITTING-90 MORB X 4 MJIC | 1 | | | | |
| 16 | 4171511 | BAR-REFERENCE REVERSE | 2 | | | | |
| 17 | 108009-03 | CONTROL-CHOKE 51 | 1 | | | | |
| 18 | 64025-04 | NUT-3/8-24 HEX | 1 | | | | |
| 19 | 4170593.7 | WLDMT-FRONT POINT | 1 | | | | |
| 20 | 64152-46 | SCREW-SLT HH 10-24X1/2 | 2 | | | | |
| 21 | 64025-15 | NUT-HEX #10-24 KEPS | 2 | | | | |
| 22 | 48228-2A | CLAMP-3/4 CLIP | 2 | | | | |
| 23 | 64018-2 | BLT-CRG 1/4-20X3/4 | 3 | | | | |
| 24 | 4171606-1 | CLAMP-HALF, 5/8 HOSE | 2 | | | | |
| 25 | 64262-005 | BLT-FLG 1/4-20 X 1-1/2 | 3 | | | | |
| 26 | 25-0503-6-6 | FITTING STR -6 M ORB/-6 MJIC | 3 | | | | |
| 27 | 69060-01 | FITTING-ORB X 45 BARB | 1 | | | | |
| 28 | 4173505 | S-PANEL,TOWER LH | 1 | | | | |
| 29 | 4173506 | S-PANEL,TOWER RH | 1 | | | | |
| 30 | 4171495.17 | PANEL-BACK | 1 | | | | |
| 31 | 4172866 | SNAP-SPRING 3/16 | 1 | | | | |
| 32 | 4171100 | TETHER-WIRE, COATED | 1 | | | | |
| 33 | 64229-01 | NUT-NYLON LOCK 1/4-20 | 1 | | | | |
| 34 | 64018-15 | BLT-CRG 5/16-18X1 SN | 1 | | | | |
| 35 | 64262-006 | BLT-FLG HD 5/16-18 X 3/4 | 2 | | | | |
| 36* | 4176457 | LABEL-TEXT FOR VIDEO, SA-30 | 1 | | | | |

*NOT ILLUSTRATED

FIGURE 10

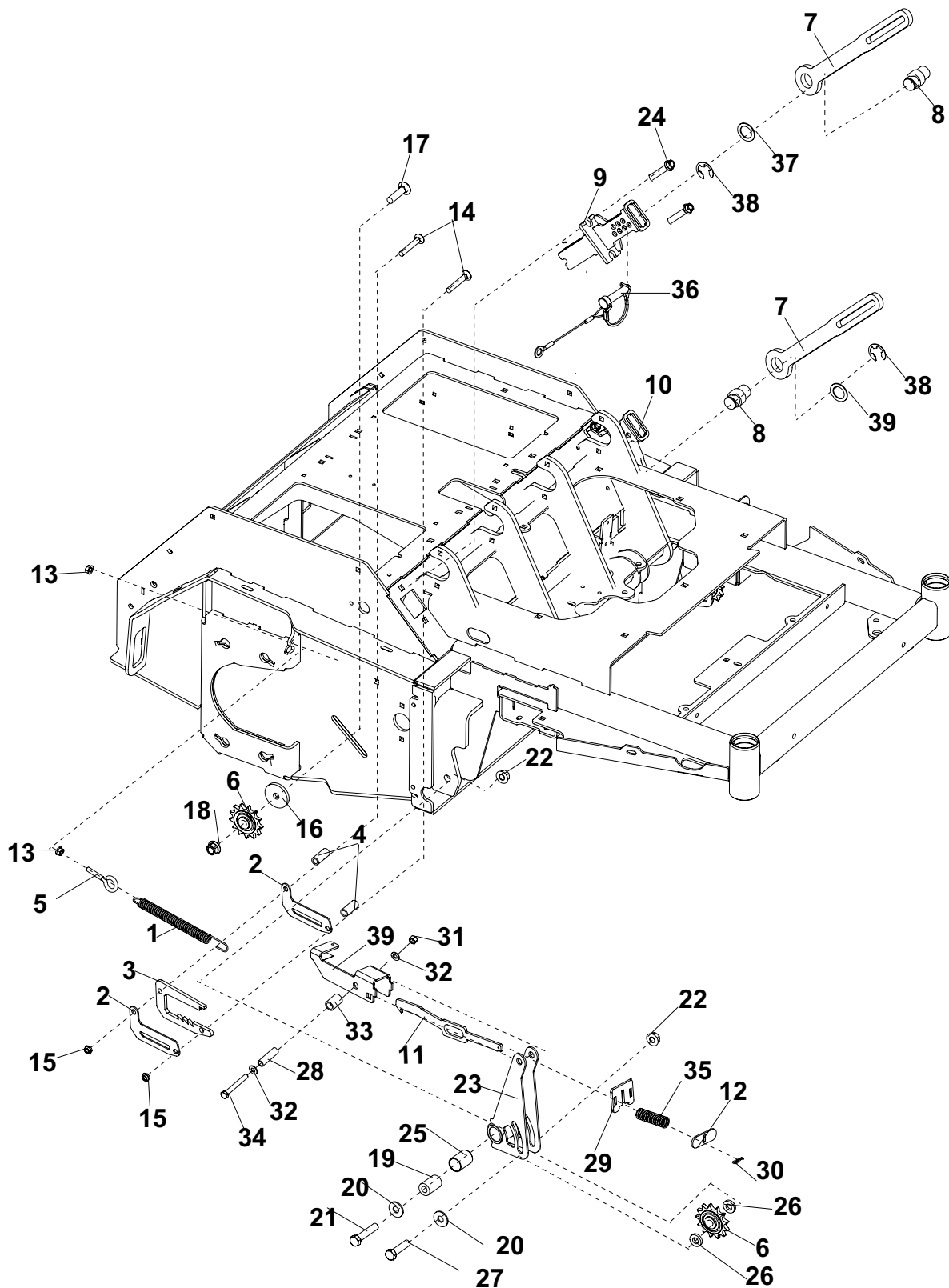


| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|-------------|-------------------------------|-----|------|----------|-------------|-----|
| 1 | 64018-44 | BLT-CRG 3/8-16X1 SN | 4 | | | | |
| 2 | 64262-012 | BLT-FLG HD 3/8-16 X 1-1/4 | 2 | | | | |
| 3 | 64268-01 | NUT-FL NYLON LOCK 1/4-20 | 2 | | | | |
| 4 | 64140-18 | COTTER PIN-1/4-2 | 2 | | | | |
| 5 | 64262-013 | BLT-FLG HD 3/8-16 X 1-1/2 | 2 | | | | |
| 6 | 64018-51 | BLT-CRG 5/16-18 X 3/4 SN | 6 | | | | |
| 7 | 64229-03 | NUT-NYLON LOCK, 3/8-16 | 2 | | | | |
| 8 | 4171478.7 | ARM-LINK, RH | 1 | | | | |
| 9 | 64141-6 | NUT-WLF 5/16-18 | 4 | | | | |
| 10 | 4171476.7 | LINK-TRANSAXLE | 2 | | | | |
| 11 | 518438 | BUSHING | 2 | | | | |
| 12 | 4169194 | BUSHING - .522 X .688 X .289 | 2 | | | | |
| 13 | 4171388 | SHAFT-LIFT PIVOT | 2 | | | | |
| 14 | 4176092 | SPACER -TUBE | 4 | | | | |
| 15 | 64268-01 | NUT-FL NYLON LOCK 1/4-20 | 4 | | | | |
| 16 | 4166324-03 | BEARING-PLASTIC 1.000 ID | 2 | | | | |
| 17 | 4171416.7 | LINK-LIFT | 4 | | | | |
| 18 | 64262-005 | BOLT-FLG HD 1/4-20 X 1-1/2 | 4 | | | | |
| 19 | 4171479.7 | ARM-LINK, RH | 1 | | | | |
| 20 | 64268-02 | NUT-FL NYLON LOCK 5/16-18 | 8 | | | | |
| 21 | 64262-027 | BLT-FLG HD 3/8-16 X 2-1/4 GR8 | 1 | | | | |
| 22 | 64262-008 | BLT-FLG HD 5/16-18 X 1-1/4 | 4 | | | | |
| 23 | 64163-02 | WSHR .328X608X11GA | 4 | | | | |
| 24 | 4171433.7 | WLDMT-LIFT PIVOT | 1 | | | | |
| 25 | 64163-31 | WSHR 25/64X1X12 | 1 | | | | |
| 26 | 64025-15 | NUT-HEX #10-24 KEPS | 2 | | | | |
| 27 | 64152-49 | SCREW-SLT HH 10-24X1.25 | 2 | | | | |
| 28 | 64229-03 | NUT-NYLON LOCK 3/8-16 | 11 | | | | |
| 29 | 64158-01 | EYE BOLT-10-24 X 1.25 THD LG | 1 | | | | |
| 30 | 64141-15 | NUT-WLF 10-24 | 2 | | | | |
| 31 | 4171442 | HANDLE-CNTRL OP PRESENCE | 1 | | | | |
| 32 | 4171515.7 | BRKT-CONTROL LEVER | 1 | | | | |
| 33 | 64025-03 | NUT-HEX 5/16-24 | 2 | | | | |
| 34 | 4171520.7 | BAR-CONTROL | 1 | | | | |
| 35 | 4143595-02 | ROD END-FEMALE 5/16-24 LH | 2 | | | | |
| 36 | 414359+5-01 | ROD END-FEMALE | 2 | | | | |
| 37 | 4171475 | ROD-CONTROL | 2 | | | | |
| 38 | 4171171 | HANDLE-CONTROL,STATIONARY | 1 | | | | |
| 39 | 4171461 | SPRING-EXTENSION | 1 | | | | |
| 40 | 4171409 | SPACER-.625 X.386X1.260 | 1 | | | | |
| 41 | 4166324-04 | BEARING-PLASTIC .625 X1.25LG | 1 | | | | |
| 42 | 2188145 | BEARING-.75ID BRZ SELF ALIGN | 4 | | | | |
| 43 | 64025-33 | NUT-HEX 5/16-24 LH | 2 | | | | |
| 44 | 4171893 | SWITCH-MINIATURE ROCKER | 1 | | | | |
| 45 | 85-SC12 | SET COLLAR 3/4" | 2 | | | | |
| 46 | 4172963 | GRIP-CONTROL | 2 | | | | |
| 47 | 108208 | SWITCH DBL POLE | 1 | | | | |
| 48 | 4171523.7 | ARM-SWITCH | 1 | | | | |
| 49 | 64123-50 | BLT-HEX 3/8-16X1 | 2 | | | | |
| 50 | 4171573.7 | BRKT-BRAKE MOUNT | 1 | | | | |
| 51 | 4168069 | BEARING-FLUSHMNT,1.0 SHAFT | 4 | | | | |
| 52 | 64168-2 | COTTER-HAIRPIN.08X1.19 | 1 | | | | |
| 53 | 64262-003 | BLT-FLG HD 1/4-20 X 1 | 2 | | | | |

DEPTH STOP & HOC ASSEMBLY

SA-30

FIGURE 11



SA-30

DEPTH STOP & HOC ASSEMBLY

FIGURE 11

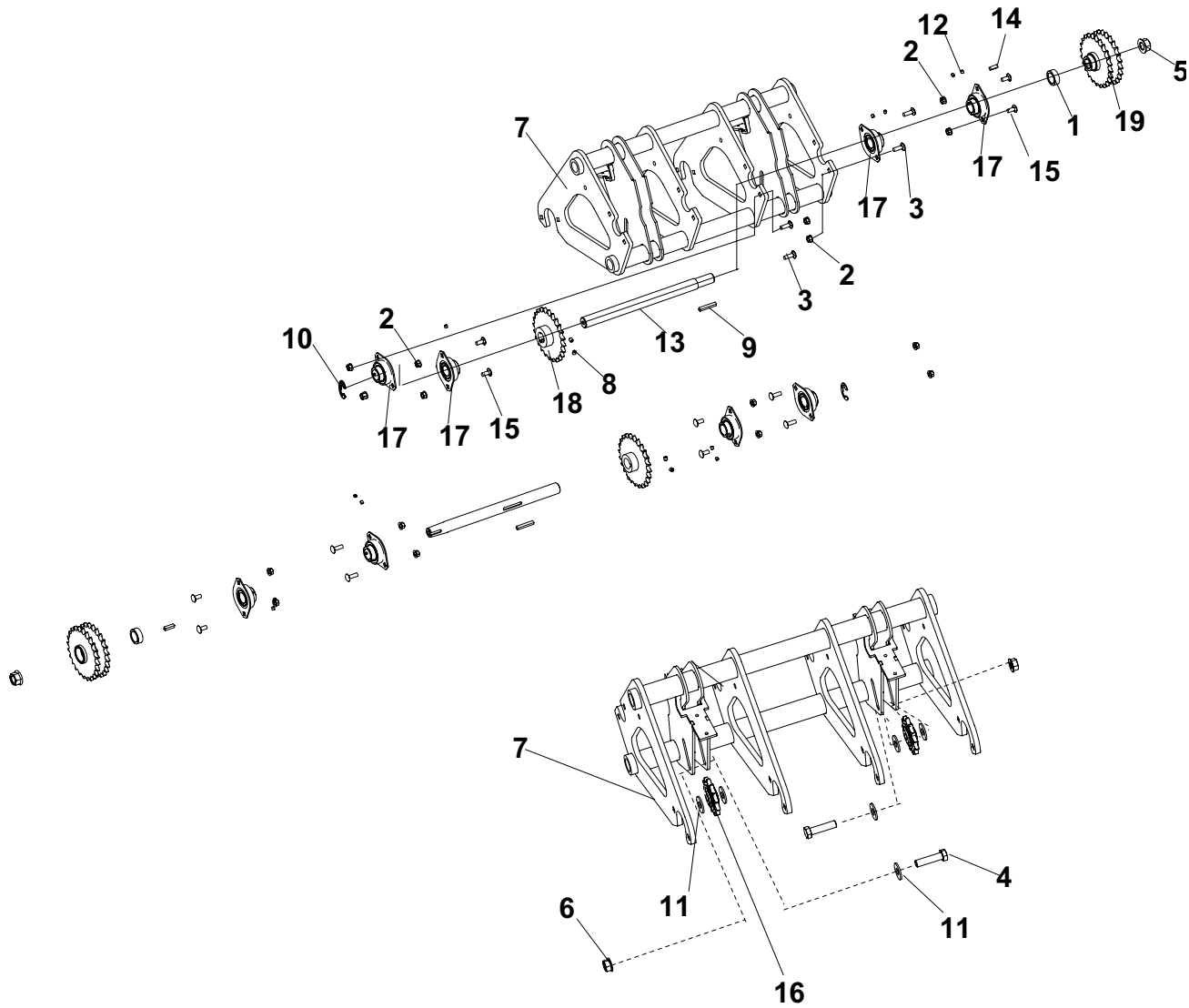
| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|----------------------------|-----|------|----------|-------------|-----|
| 1 | 4117212 | SPRING-EXTENSION | 2 | | | | |
| 2 | 4176366.7 | PLATE-GUIDE | 4 | | | | |
| 3 | 4176416.7 | PLATE-RATCHET | 2 | | | | |
| 4 | 2183071-04 | SPACER | 4 | | | | |
| 5 | 4169597 | EYE BOLT 5/16-18 X 1.5 | 2 | | | | |
| 6 | 83-5013E08 | SPROCKET-WHEEL,FRONT | 4 | | | | |
| 7 | 4172671 | ARM-DEPTH | 2 | | | | |
| 8 | 4172672 | HUB-DEPTH ARM | 2 | | | | |
| 9 | 4174327.7 | WLDMT-DEPTH SET RH | 1 | | | | |
| 10 | 4174326.7 | WLDMT-DEPTH SET LH | 1 | | | | |
| 11 | 4176365.7 | ARM-IDLER LOCK | 2 | | | | |
| 12 | 4172784.7 | PLT-SPRING STOP | 2 | | | | |
| 13 | 64141-6 | NUT-WLF 5/16-18 | 4 | | | | |
| 14 | 64018-31 | BLT-CRG 3/8-16 X 2-1/2 | 4 | | | | |
| 15 | 64141-4 | NUT-WLF, 3/8-16 | 4 | | | | |
| 16 | 64163-74 | WASHER: .516 X 2.00 X .250 | 2 | | | | |
| 17 | 64018-13 | BLT-CRG 1/2-13X2 GR5 | 2 | | | | |
| 18 | 64268-05 | NUT-FL NYLON LOCK 1/2-13 | 2 | | | | |
| 19 | 4168176 | TUBE-PIVOT, IDLER INNER | 2 | | | | |
| 20 | 64163-19 | WSHR 33/64X1-1/4X12GA | 4 | | | | |
| 21 | 64123-72 | BLT-HEX 1/2-13X2-1/2 | 2 | | | | |
| 22 | 64141-13 | NUT-WLF 1/2-13 | 4 | | | | |
| 23 | 4176686.7 | WLDMT-IDLER ARM | 2 | | | | |
| 24 | 64197-022 | BLT-TDFM 3/8-16X3/4 | 4 | | | | |
| 25 | 4166324-03 | BEARING-PLASTIC 1.000 ID | 2 | | | | |
| 26 | 64163-36 | WSHR 1X33/64X.187 | 4 | | | | |
| 27 | 64123-24 | BLT-HEX 1/2-13X2 | 2 | | | | |
| 28 | 4176364 | SPACER-BUSHING | 2 | | | | |
| 29 | 4176683.7 | PLATE-SPRING STOP | 2 | | | | |
| 30 | 64168-2 | COTTER-HAIRPIN .08 X 1.19 | 2 | | | | |
| 31 | 64229-02 | NUT-NYLON LOCK 5/16/18 | 2 | | | | |
| 32 | 64163-95 | WSHR.344X.688X.065 | 4 | | | | |
| 33 | 4176684 | SPAACER-ROLLER | 2 | | | | |
| 34 | 64123-12 | BLT-5/16-18 X 2-1/2 | 2 | | | | |
| 35 | 4166927 | SPRING COMPRESSION | 2 | | | | |
| 36 | 4176417 | PIN-DEPTH STOP W/TETHER | 2 | | | | |
| 37 | 64163-64 | WSHR 1.015X1.500X14GA | 2 | | | | |
| 38 | 64221-1 | E-RING, 1" | 2 | | | | |
| 39 | 4176772 | S-TENSNR SPRING BRKT LH | 1 | | | | |
| * | 4176773 | S-TENSNR SPRING BRKT RH | 1 | | | | |

* NOT ILLUSTRATED

JACKSHAFT ASSEMBLY

FIGURE 12

SA-30



SA-30

JACKSHAFT ASSEMBLY

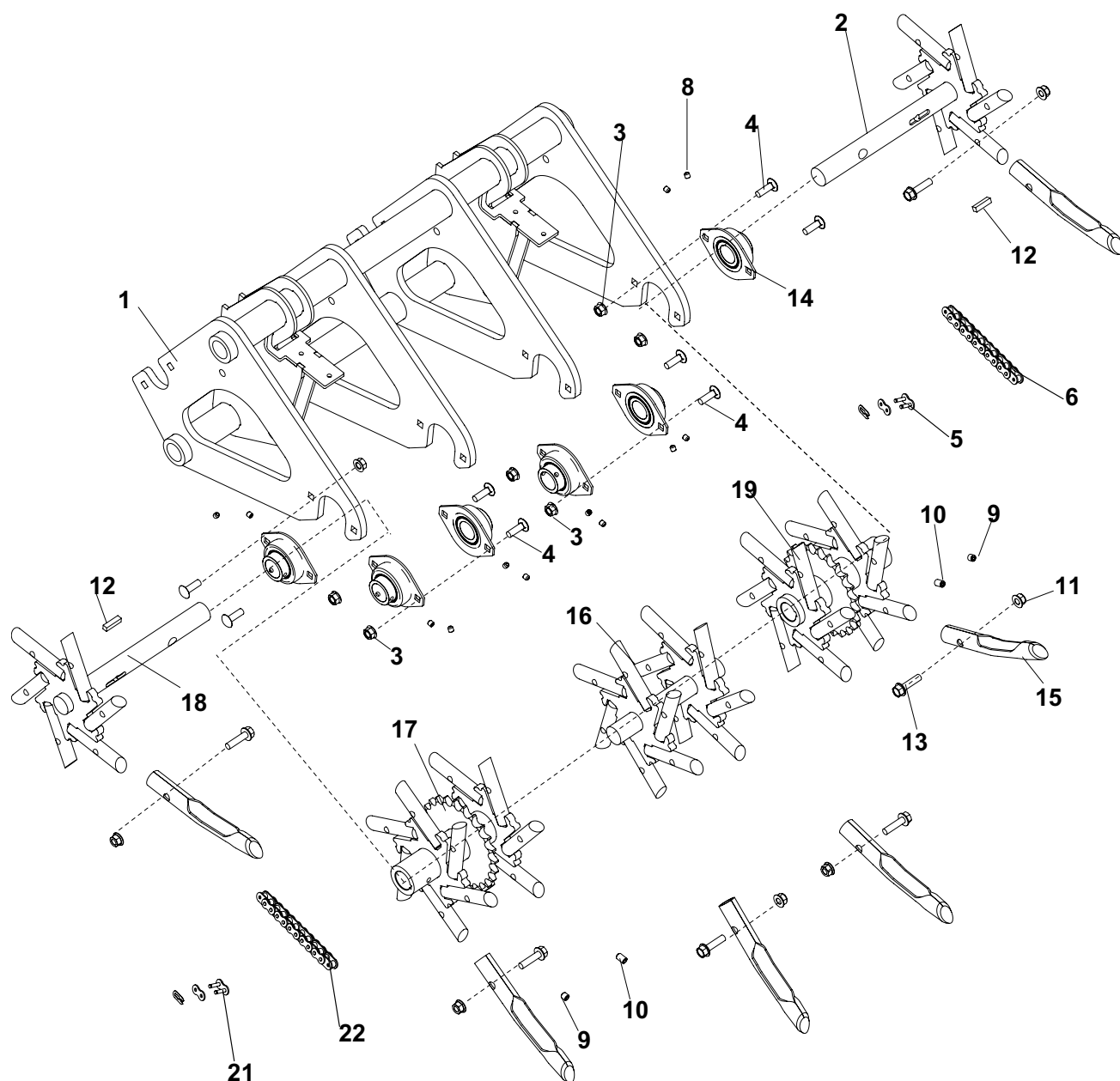
FIGURE 12

| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|------|----------|-------------|-----|
| 1 | 4174137 | SPACER | 2 | | | | |
| 2 | 64141-6 | NUT-WLF 5/16-18 | 16 | | | | |
| 3 | 64018-15 | BLT-CRG 5/16-18X1 SN | 8 | | | | |
| 4 | 64123-24 | BLT-HEX 1/2-13X2 | 2 | | | | |
| 5 | 64284-16 | NUT-FL CRLK 5/8-18 | 2 | | | | |
| 6 | 64141-13 | NUT-WLF 1/2-13 | 2 | | | | |
| 7 | 4171394.7 | WLDMT-TINE ASSY | 1 | | | | |
| 8 | 64044-18 | SCREW-SET 5/16-18 x 5/16 | 4 | | | | |
| 9 | 64164-28 | KEY-1/4 X 1 #15 WOODRUFF | 2 | | | | |
| 10 | 64221-1 | E-RING 25MM/1.00 | 2 | | | | |
| 11 | 64163-124 | WSHR-.531 X 1.50X 1.25 | 6 | | | | |
| 12 | 64044-13 | SCREW-SET 1/4-28X1/4 | 16 | | | | |
| 13 | 4174131 | SHAFT-HALF TINE DRIVE | 2 | | | | |
| 14 | 64164-12 | KEY-1/4X1 SQ | 2 | | | | |
| 15 | 64018-51 | BLT-CRG 5/16-18 X 3/4 SN | 8 | | | | |
| 16 | 83-5013E08 | SPROCKET-WHEEL,FRONT | 2 | | | | |
| 17 | 4168069 | BEARING-1" FLUSHMOUNT (INCLUDES ITEM 12) | 8 | | | | |
| 18 | 4171445 | SPROCKET | 2 | | | | |
| 19 | 4174140 | SPROCKET-DBL 24T TAPER | 2 | | | | |

TINE ASSEMBLY

SA-30

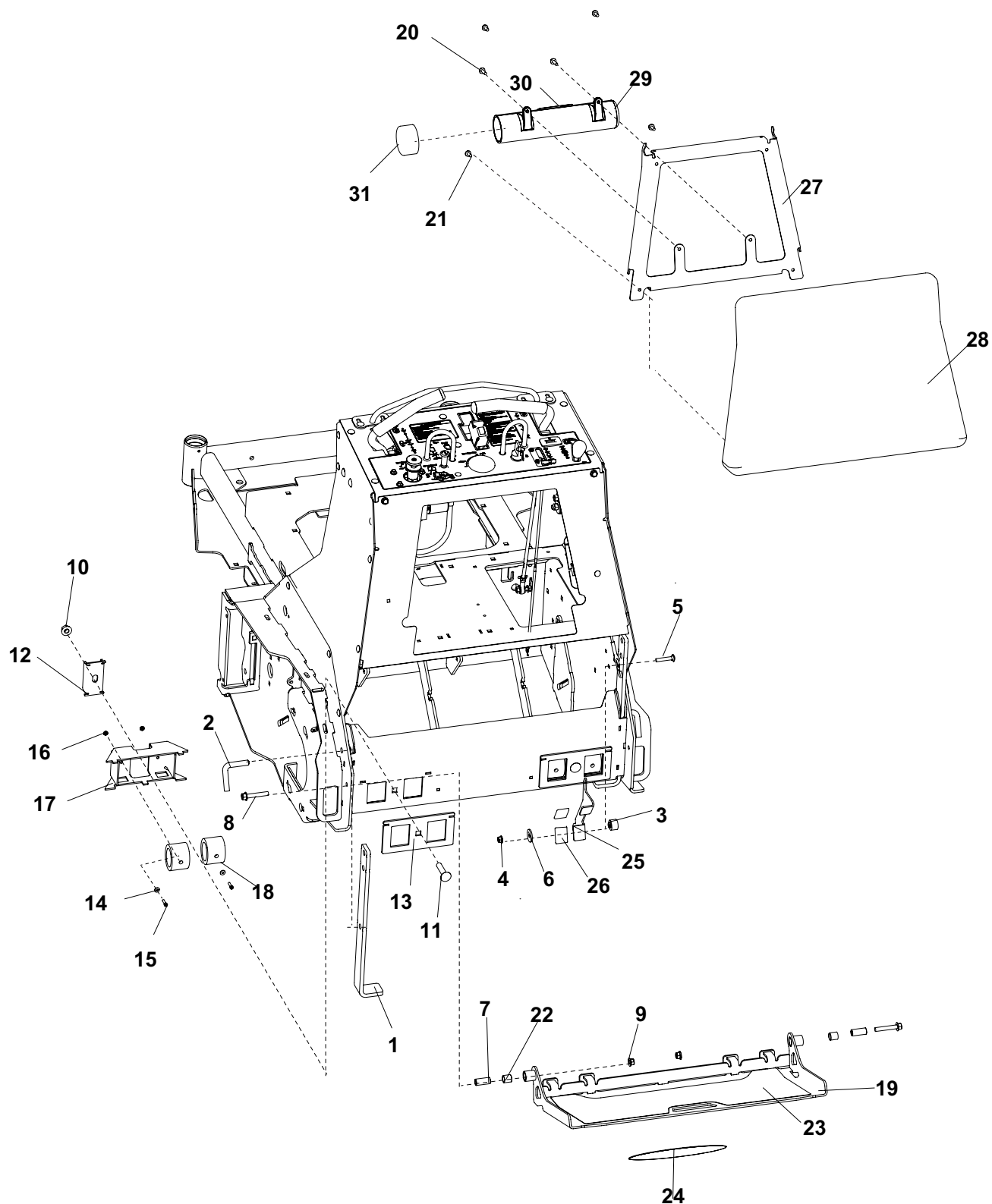
FIGURE 13



| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|--|------------|----------------------------|-----|------|----------|-------------|-----|
| 1 | 4171394.7 | WLDMT-TINE ASSY | 1 | | | | |
| 2 | 4171322.7 | WLDMT-TINE BANK RH | 1 | | | | |
| 3 | 64141-6 | NUT-WLF 5/16-18 | 8 | | | | |
| 4 | 64018-15 | BLT-CRG 5/16-18X1 SN | 8 | | | | |
| 5 | 4172865 | LINK-CONNECTOR | 2 | | | | |
| 6 | 4172864-02 | CHAIN-50 ROLLER 63 PITCH | 2 | | | | |
| 7* | 4173503 | KIT-CHAIN | 1 | | | | |
| (INCLUDES ALL 6 CHAINS FOR UNIT AND LINKS) | | | | | | | |
| 8 | 64044-13 | SCREW-SET 1/4-28X1/4 | 12 | | | | |
| 9 | 64044-18 | SCREW-SET 5/16-18 x 5/16 | 2 | | | | |
| 10 | 64044-25 | SCREW-SET 5/16-18X1/2 | 2 | | | | |
| 11 | 64268-02 | NUT-FL NYLON LOCK 5/16-18 | 48 | | | | |
| 12 | 64164-12 | KEY-1/4X1 SQ | 2 | | | | |
| 13 | 64262-008 | BLT-FLG HD 5/16-18 X 1-1/4 | 48 | | | | |
| 14 | 4168069 | BEARING-1" FLUSHMOUNT | 6 | | | | |
| (INCLUDES ITEM 8) | | | | | | | |
| 15 | C100032 | TINE, PLUGGING | 48 | | | | |
| | 4173511 | KIT-TINE, 48 COUNT | | | | | |
| 16 | 4171338.7 | WLDMT-CENTER TINE SHAFT | 1 | | | | |
| 17 | 4171329.7 | WLDMT-TINE SPROCKET LH | 1 | | | | |
| 18 | 4171321.7 | WLDMT-TINE BANK LH | 1 | | | | |
| 19 | 4171334.7 | WLDMT-TINE SPROCKET RH | 1 | | | | |

*NOT ILLUSTRATED

FIGURE 14



SA-30

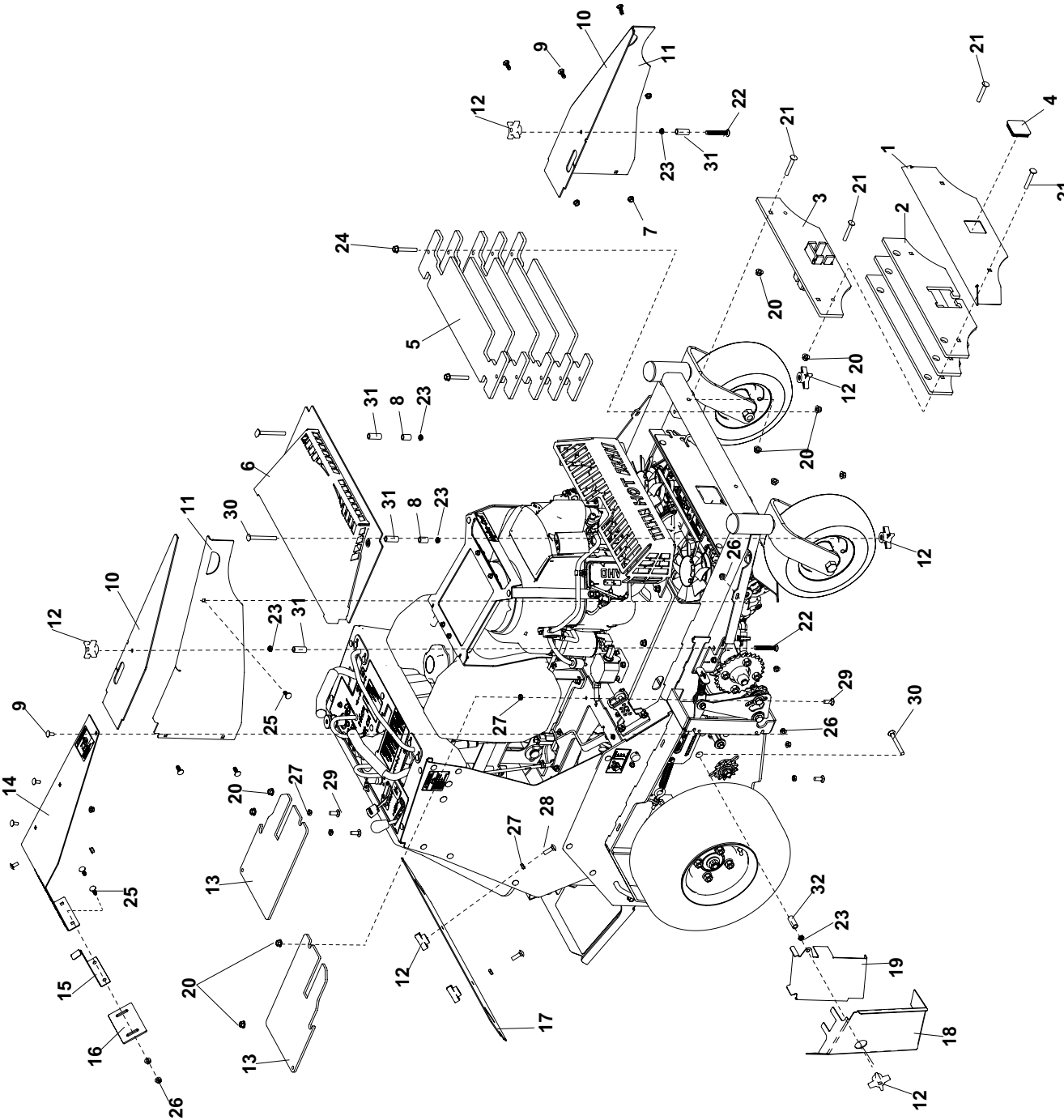
PLATFORM, PAD & JACKSTANDS

FIGURE 14

| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|--------------------------|-------------------------------|-----|------|----------|-------------|-----|
| 1 | 4172224.17 | PLT-JACK | 2 | | | | |
| 2 | 4172688 | PIN-JACK | 2 | | | | |
| 3 | 4173046 | BUSHING-LATCH ARM | 1 | | | | |
| 4 | 64268-02 | NUT-FL NYLON LOCK 5/16-18 | 1 | | | | |
| 5 | 64018-58 | BLT-CRG 5/16-18X1-3/4 | 1 | | | | |
| 6 | 64163-108 | WSHR-.334 X 1.25 X .125 | 1 | | | | |
| 7 | 4171391 | BUSHING-SPACER | 2 | | | | |
| 8 | 64262-027 | BLT-FLG HD 3/8-16 X 2-1/4 GR8 | 2 | | | | |
| 9 | 64268-03 | NUT-FL NYLON LOCK 3/8-16 | 2 | | | | |
| 10 | 64141-13 | NUT-WLF 1/2-13 | 2 | | | | |
| 11 | 64018-45 | BLT-CRG 1/2-13 X 2-1/4 | 2 | | | | |
| 12 | 4172316.7 | PLT-PLATFORM BRKT | 2 | | | | |
| 13 | 4172318.7 | BRKT-BUMPER SUPPORT | 2 | | | | |
| 14 | 64163-86 | WSHR-.265 X .625 X .125 | 4 | | | | |
| 15 | 64189-16 | BLT-HEX SOC 1/4-20 X 1 | 4 | | | | |
| 16 | 64229--01 | NUT-NYLON LOCK 1/4-20 | 4 | | | | |
| 17 | 4172315.7 | BRKT-PLATFORM DAMPER | 2 | | | | |
| 18 | 4170585 | BUMPER-RADIAL | 4 | | | | |
| 19 | 4173515 | S- PLATFORM | 1 | | | | |
| | (INCLUDES ITEMS 22 & 23) | | | | | | |
| 20 | 64262-003 | BLT-FLG 1/4-20 X 1 | 2 | | | | |
| 21 | 64262-002 | BLT-FLG HD 1/4-20 X 3/4 | 4 | | | | |
| 22 | 4166324-06 | BEARING-SLEEVE | 2 | | | | |
| 23 | 4170670 | MAT-FOOTPLATE | 1 | | | | |
| 24 | 4172913-1 | LABEL-STAND-AER SA30 | 1 | | | | |
| 25 | 4173037.7 | LATCH-PLATFORM | 1 | | | | |
| 26 | 4171365 | CAP-FOOTPLATE LATCH | 2 | | | | |
| 27 | 4172682.7 | BRKT-PAD, SUPPORT | 1 | | | | |
| 28 | 4171885 | PAD-AERATOR STAND ON GRAY | 1 | | | | |
| 29 | 4160281 | S-TUBE,DOCUMENT | 1 | | | | |
| | (INCLUDES ITEMS 30 & 31) | | | | | | |
| 30 | 2000735 | LABEL-OPER MAN | 1 | | | | |
| 31 | 38061A | CAPS VINYL | 1 | | | | |

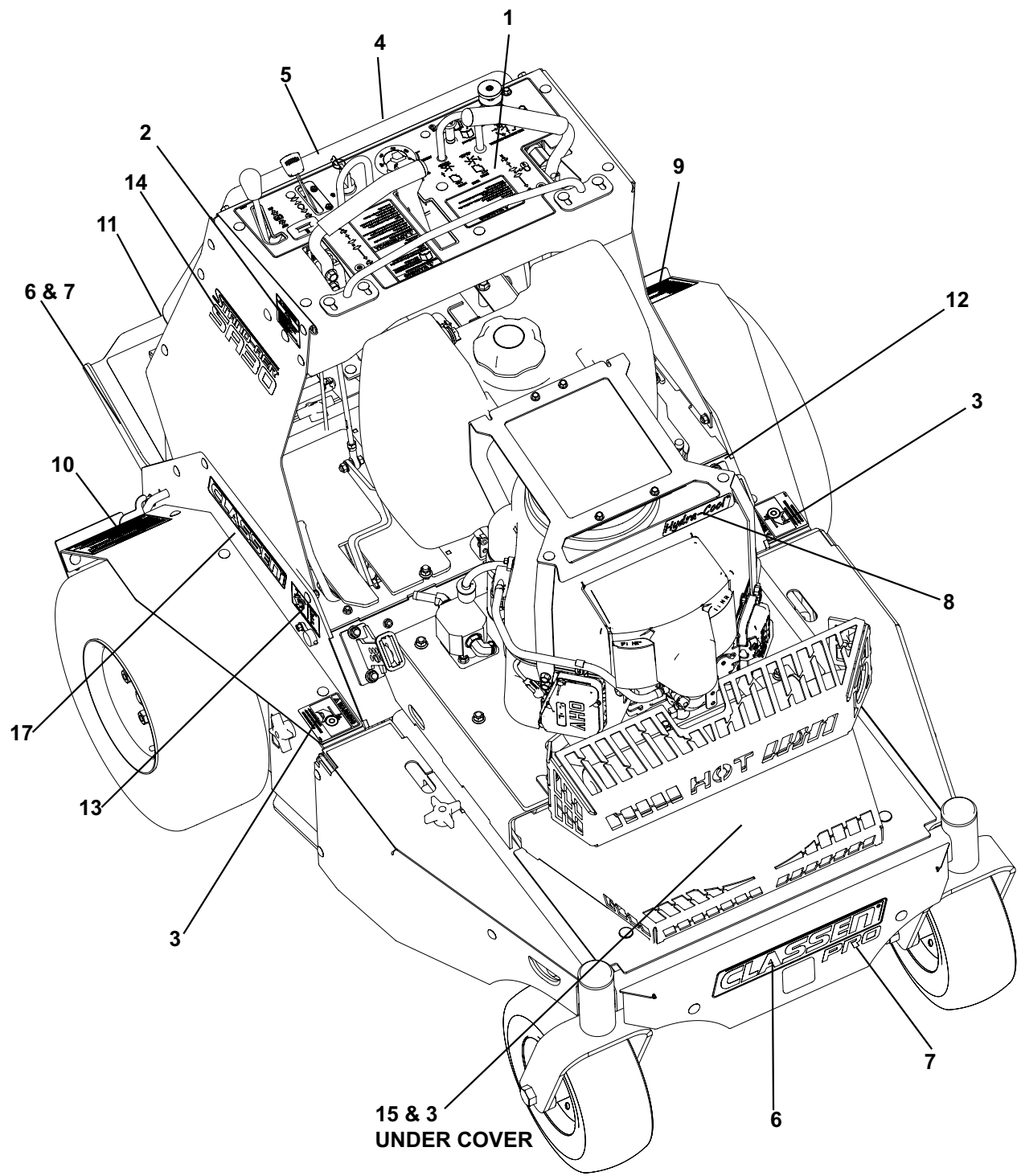
***NOT ILLUSTRATED**

FIGURE 15



| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|------------------------------|-----|------|----------|-------------|-----|
| 1 | 4172177.17 | COVER-WEIGHT | 1 | | | | |
| 2 | 4171538.17 | PLT-WEIGHT | 3 | | | | |
| 3 | 4172194.17 | WLDMT-HITCH | 1 | | | | |
| 4 | 4172869 | PLUG-HITCH TUBE | 1 | | | | |
| 5 | 4172703.7 | PLT-WEIGHT,CENTER | 5 | | | | |
| 6 | 4172853.17 | WLDMT-COVER FRONT | 1 | | | | |
| 7 | 64141-6 | NUT-WLF 5/16-18 | 6 | | | | |
| 8 | 2183071-03 | SPACER-15.88X10.32X24 | 4 | | | | |
| 9 | 64018-51 | BLT-CRG 5/16-18 X 3/4 SN | 14 | | | | |
| 10 | 4171535.17 | COVER-TOP FRONT | 2 | | | | |
| 11 | 4171537.17 | COVER-FRONT, RH | 1 | | | | |
| | 4171536.17 | COVER-FRONT, LH | 1 | | | | |
| 12 | 38524 | KNOB-4 PRONG 3/8-16 | 8 | | | | |
| 13 | 4171521.17 | PLT-TINE COVER, TOP | 2 | | | | |
| 14 | 4173507 | S-FENDER, RIGHT | 1 | | | | |
| | 4173510 | S-FENDER, LEFT | 1 | | | | |
| 15 | 4176083.7 | PLT-PIN LOCK, RIGHT | 1 | | | | |
| * | 4176139.7 | PLT-PIN LOCK, LEFT | 1 | | | | |
| 16 | 4171489.7 | PLT-TIRE SCRAPER | 2 | | | | |
| 17 | 4172852.17 | PLT-TINE COVER, REAR | 1 | | | | |
| 18 | 4176578.7 | COVER-CHAIN, RH | 1 | | | | |
| | 4176577.7 | COVER-CHAIN, LH | 1 | | | | |
| 19 | 4172229.7 | COVER-CHAIN, RH REAR | 1 | | | | |
| | 4172228.7 | COVER-CHAIN, LH REAR | 1 | | | | |
| 20 | 64268-03 | NUT-FL NYLON LOCK 3/8-16 | 10 | | | | |
| 21 | 64018-31 | BLT-CRG 3/8-16 X 2-1/2 | 4 | | | | |
| 22 | 64018-47 | BLT-CRG 3/8-16X2-3/4 | 2 | | | | |
| 23 | 64229-03 | NUT-NYLON LOCK, 3/8-16 | 6 | | | | |
| 24 | 64262-025 | BLT-FLG HD 3/8-16 X 2-1/2 LG | 2 | | | | |
| 25 | 64018-15 | BLT-CRG 5/16-18X1 SN | 4 | | | | |
| 26 | 64268-02 | NUT-FL NYLON LOCK 5/16-18 | 12 | | | | |
| 27 | 64001-6 | NUT-HEX JAM 3/8-16 | 6 | | | | |
| 28 | 64018-7 | BLT-CRG 3/8-16X1-1/4 | 2 | | | | |
| 29 | 64018-44 | BLT-CRG 3/8-16X1 SN | 4 | | | | |
| 30 | 64018-55 | BLT-CRG 3/8-16X3-1/2 | 4 | | | | |
| 31 | 2183071-02 | SPACER-15.88X10.32X32 | 4 | | | | |
| 32 | 2183071-04 | SPACER-15.88X10.32X38 | 2 | | | | |

FIGURE 16



SA-30

DECALS

FIGURE 16

| ITEM | PART NO. | DESCRIPTION | QTY | ITEM | PART NO. | DESCRIPTION | QTY |
|------|-----------|--|-----|------|----------|-------------|-----|
| 1 | 4176220 | LABEL- CONTROL PANEL | 1 | | | | |
| 2 | 2000570 | LABEL-WARN FUEL PICT. | 2 | | | | |
| 3 | 2000577 | LABEL WARNING | 3 | | | | |
| 4 | 2000590 | LABEL WARN BATTERY | 1 | | | | |
| 5 | 4172910 | LABEL-RESERVOIR | 1 | | | | |
| 6 | 4171963 | LABELCLASSEN BLACK | 2 | | | | |
| 7 | 4171825 | LABEL-PRO | 2 | | | | |
| 8 | 4172912 | LABEL-HYDRA-COOL | 1 | | | | |
| 9 | 4172915 | LABEL-JACKSTAND | 1 | | | | |
| 10 | 4172911 | LABEL-SLOPES, CA SPARK | 1 | | | | |
| 11 | 4172914 | LABEL-TINES | 1 | | | | |
| 12 | 4172886 | LABEL-DEPTH CONTROL LH | 1 | | | | |
| 13 | 4172887 | LABEL-DEPTH CONTROL RH | 1 | | | | |
| 14 | 4172913-1 | LABEL-STAND-AER SA30 | 2 | | | | |
| 15 | 4172916 | LABEL-BELT ROUTING | 1 | | | | |
| 16* | 2000735 | LABEL- OP MANUAL LOCATED ON DOCUMENT TUBE | 1 | | | | |
| 17 | 4173007 | DECAL-SMALL CLASSEN PRO | 2 | | | | |
| 18* | 4176457 | LABEL-TEXT FOR VIDEO, SA-30 | 1 | | | | |

*NOT ILLUSTRATED



2 YEAR LIMITED SERVICE AND WARRANTY POLICY

Schiller Grounds Care, Inc.
1028 Street Road • Southampton, PA 18966
Telephone: 1-800-366-6268

TWO YEAR LIMITED WARRANTY

Effective March 1, 2016

For the period of two years from the date of purchase, CLASSEN will repair or replace for the original purchaser free of charge, any part or parts found upon the examination of our factory authorized service station, or by the factory in Southampton, PA to be defective in material or workmanship. All transportation charges on parts submitted for repair or replacement under this warranty shall be borne by the purchaser.

This warranty does not include engines or engine parts, tires, batteries, or gearboxes that are covered under separate warranties furnished by their manufacturer or supplier, nor does it include normal maintenance parts, including but not limited to, spark plugs, points, filters, blades, and lubricants.

All service under this warranty will be furnished or performed by our factory authorized service stations.

There is no other expressed warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to two years from the date of purchase and to the extent permitted by law, any and all implied warranties are excluded. The above remedy of repair and replacement of defective parts is the purchaser's exclusive remedy for any defect, malfunction or breach of warranty. Liability for incidental or consequential damages under any and all warranties is excluded to the extent permitted by law.

NORMAL RESPONSIBILITIES OF THE SELLER AND THE USER

1. The Distributor or Dealer is responsible for the proper assembly and preparation of the product for delivery to the end user.
2. The User is responsible for reading the Manual and Instructions.
3. The User is responsible for proper operation and maintenance as described in the manual.
4. The User is responsible for the replacement of wear items such as blades, belts, tires, batteries, etc.
5. The User is responsible for damage due to improper operation and maintenance, as well as abuse.
6. The User is responsible for any corrosion due to spreading, carrying or applying corrosive materials such as fertilizers.

All claims must be received by the factory 30 days after the end of the warranty period to receive warranty consideration.

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SCHILLER GROUNDS CARE, INC.
1028 STREET ROAD, P.O. BOX 38
SOUTHAMPTON, PA 18966
PHONE 877-596-6337 • FAX 215-357-8045