

MAN 4175123
Rev. A 05-2017



MODEL:
933331J

36" HYDRO MID-FS541V KAW Z-CTRL
(S/N 0500 TO PRESENT)

934332J

48 HYDRO MID-FS541V KAW Z-CTRL
(S/N 0861 TO PRESENT)



OPERATOR'S / 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 Schiller Grounds Care, Inc. product. You have purchased a world class mowing product, one of the best designed and built anywhere.

This machine comes with an Operation and Safety Manual and a separate Setup, Parts and Maintenance Manual. The useful life and good service you receive from this machine depends to a large extent on how well you read and understand these manuals. Treat your machine properly, lubricate and adjust it as instructed, and it will give you many years of reliable service.

Your safe use of this Schiller Grounds Care, Inc. product is one of our prime design objectives. Many safety features are built in, but we also rely on your good sense and care to achieve accident-free operation. For best protection, study the manuals thoroughly. Learn the proper operation of all controls. Observe all safety precautions. Follow all instructions and warnings completely. Do not remove or defeat any safety features. Make sure those who operate this machine are as well informed and careful in its use as you are.

BOB-CAT dealer for any service or parts needed. Schiller Grounds Care, Inc. service ensures that you continue to receive the best results possible from Schiller Grounds Care, Inc. products. You can trust Schiller Grounds Care, Inc. replacement parts because they are manufactured with the same high precision and quality as the original parts.

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

Schiller Grounds Care, Inc.
One Bob Cat Lane
Johnson Creek, WI 53038-0469

TABLE OF CONTENTS.....	FIGURES	PAGE
SAFETY.....		4-9
LABELS.....		10-12
CONTROLS.....		13, 14
OPERATION.....		15-17
HEIGHT OF CUT.....		18, 19
ADJUSTMENTS.....		20-25
LUBRICATION.....		26, 27
MAINTENANCE		28, 29
BELT REPLACEMENT.....		30
SERVICE CHART.....		31
SERVICE RECORD.....		32
SPECIFICATIONS.....		33,34
PARTS SECTION.....		35
UPPER ENGINE DECK ASSY.....	FIGURE 1.....	36, 37
LOWER ENGINE DECK ASSY/CLUTCH.....	FIGURE 2.....	38, 39
DRIVE WHEELS/CUTTERDECK.....	FIGURE 3.....	40, 41
PARKING BRAKE.....	FIGURE 4.....	42, 43
RECOIL START UPPER HANDLE.....	FIGURE 5.....	44, 45
TRACTION CONTROLS.....	FIGURE 6.....	46, 47
HYDRAULICS.....	FIGURE 7.....	48, 49
DECALS.....	FIGURE 8.....	50, 51
WIRE DIAGRAM-RECOIL START.....	FIGURE 9.....	52, 53
WIRING SCHEMATIC-RECOIL START.....	FIGURE 10.....	54
THIS PAGE LEFT BLANK INTENTIONALLY.....		55
WEIGHTS.....	FIGURE 11.....	56, 57
HYROGEAR PUMP.....	FIGURE 12.....	58, 59
MOUNTING-36" FIXED DECK.....	FIGURE 13.....	60, 61
MOUNTING-48" FIXED DECK.....	FIGURE 14.....	62, 63
BAFFLES.....	FIGURE 15.....	64, 65
CASTER ASY - FIXED DECKS.....	FIGURE 16.....	66, 67

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.'s 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 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 a 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 hazardous situation which, if not avoided, **COULD** 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.

Schiller Grounds Care, Inc.

One Bobcat Lane
Johnson Creek, WI 53038 U.S.A.
Phone: 920-699-2000
Fax: 920-699-3683

MODEL NUMBER

SERIAL NUMBER

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

SERIAL NUMBER: This number appears only on your mower. It contains the model number followed consecutively by the serial number. Use this number when ordering parts or seeking warranty information.

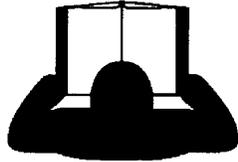
Located at engine deck top left hand side.

PREPARING FOR SAFE OPERATION

Operator preparation and training

Read the Operation & Safety Manual

Read the operator's manual carefully. All rotary grass cutters are potentially dangerous. No person should operate the machine unless they are familiar with the controls and the proper use of the machine.



- If an operator or mechanic cannot read English, it is the owner's responsibility to explain this material to them. If any portion of this material is unclear, contact your factory representative for clarification.
- Become familiar with the safe operation of the equipment, operator controls and safety signs. Know how to stop the engine and attachments quickly in an emergency. Do not operate or allow another person to operate this machine if there are any questions about safety.
- All operators and mechanics should be trained. The owner is responsible for training the users.
- Wear appropriate clothing, including long trousers and safety goggles or safety glasses with side shields when operating mower. Do not operate barefoot or wearing open sandals. Long hair, loose clothing or jewelry may get tangled in moving parts.
- Wear hearing protection.
- Never allow underage children, unskilled or improperly trained people operate this equipment. Local regulations can restrict the age of the operator.
- Data indicates that those operators age 60 years and above are involved in a large percentage of riding mower-related injuries. Those operators should evaluate their ability to operate the riding mower safely enough to protect themselves and others from injury.
- Do not carry passengers, especially small children. They may fall off and be seriously injured.
- Keep warning labels and this operator's manual legible and intact. Replacement labels and manuals are available from the factory.



- Do not operate machine while under the influence of drugs or alcohol.
- The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

Site preparation and circumstances

- Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by the manufacturer.
- Clear the area to be mowed of objects such as rocks, toys, wire or other debris that may be picked up or thrown by the mower.
- Be sure the area is clear of pets and people, especially young children. Never assume they will remain where you last saw them. Stop the machine if any enter the area.
- Mow only in daylight or in good artificial light.
- Do not mow wet grass as tires may lose traction.

Machine preparation

Before using machine for the first time, check engine and hydraulic fluid levels and lubricate all points.

- Check operator presence interlock system and brake operation. Adjust or repair any problems before using.
- Do not tamper with or defeat safety devices. Keep guards, shields and interlock safety devices in place and in proper working condition. They are for your protection.
- Keep all fasteners such as nuts, bolts and pins well secured.
- Visually inspect blades, blade bolts and the cutter assembly for wear or damage. Replace worn or damaged blades and bolts to preserve balance.
- Verify that machine and attachments, if any, are in good operating condition.
- Do not engage blades until ready to mow.

OPERATING SAFELY

In general

- Use extra care when loading or unloading the machine into a trailer or truck.
- Slow down and use caution when making turns and crossing roads and sidewalks. Stop blades if not mowing.
- Do not run the engine in an enclosed area where dangerous carbon monoxide fumes can collect.
- Do not place your foot on the ground while operating the machine.
- Before operating, lower the discharge chute, install the mulcher or put the entire grass catcher in place.
- Keep clear of the discharge opening at all times. Never direct the discharge toward a bystander. Stop operation if someone approaches.
- Keep washout ports and other mower housing service openings closed when mowing.
- Never leave a machine unattended. Always turn off blades, set parking brake, stop engine and remove key before dismounting.

Starting

- Start only according to instructions in this manual or on the machine.
- Before attempting to start the engine, make sure:
 - the parking brake is on;
 - the PTO is disengaged;
 - the traction drive is in NEUTRAL.
- When starting the engine, make sure hands and feet are clear of the blades.
- Do not start the machine while standing in front of the discharge chute or with the chute directed at someone.
- Do not engage PTO at full throttle. Throttle to idle or lowest possible engine speed.
- Do not change engine governor settings or overspeed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.

MANUEVERING SAFELY

In general

- Slow down before turning.
- Use extreme caution when reversing or pulling the mower towards you. Be sure the area behind is clear. Always look behind and down for small children and pets before and during backing.
- Be aware when approaching blind corners, shrubs, trees, tall grass or other objects that may obscure vision.
- If tires lose traction, disengage the blades. If on a slope, head downhill.
- Go slow when using a trailing seat.
- Walk, never run.

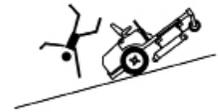
Interrupting operation

- Before leaving the operator's position:
 - Park on level ground.
 - Disengage the PTO.
 - Set the parking brake.
 - Shut off the engine and remove the key.
- Disengage the PTO and wait until the blades quit rotating:
 - before raising cutterdeck;
 - when not mowing;
 - for transport;
 - when crossing surfaces other than grass.
- Stop the engine, disengage the PTO, set parking brake and wait until the blades quit rotating and lower cutting unit:
 - before refueling;
 - before removing grass catcher;
 - before making height adjustment unless the adjustment can be made from the operator's position.
- Stop the engine, disengage the PTO, set parking brake and disconnect the spark plug wire(s) or remove the key:
 - before clearing blockages or unclogging chute;
 - before checking, cleaning or working on the machine;
 - after striking a foreign object. Inspect the machine for damage and make repairs before restarting;
 - if the machine begins to vibrate abnormally: shut off machine immediately. Inspect and make repairs as needed before restarting;
 - except for repairs or adjustments as specifically noted, such as for carburetor adjustment, where the engine must be running. Keep hands and feet clear of moving parts in these circumstances.
- Allow the blades to come to a complete stop when stopping operation to clear blockages, unclog, inspect the machine, do maintenance or repair.
- Reduce the throttle setting during engine shut-down and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of mowing.

Mowing slopes



Slopes are a major factor in loss-of-control and tip over accidents that sometimes lead to severe injury or death. All slopes require extra caution.



- Do not mow on slopes if uneasy or uncertain. Ultimate responsibility for safe operation on slopes rests with the operator.
- Do not mow excessively steep slopes.
- On zero turn machines, mow across slopes, not up and down.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.
- With walk behind machines, mow across slopes, **not** up and down. With ride-on machines, mow up and down slopes, **not** across, except zero turn machines. Zero turn machines should mow across slopes.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction.
- Do not turn on slopes unless necessary, and then turn slowly and downhill when possible.
- Stay away from slopes if the ground is loose or if caught in the rain during mowing.
- Use lower speeds on a slope to avoid stopping or shifting.
- Use extra care with grass catchers or other attachments. These can change the stability of the machine.
- Remove obstacles such as rocks, tree limbs etc.
- Avoid driving over obstacles such as ruts, holes, rocks and roots whenever possible. Be alert to dips and rises. Uneven terrain can overturn a mower or cause it to slide. Tall grasses can hide obstacles.
- Do not mow dropoffs, ditches or embankments. The machine could suddenly turn over if a wheel runs over the edge or an edge caves in.
- Do not mow slopes when grass is wet. Reduced traction could cause sliding.

MAINTENANCE SAFETY

In general

- Maintain machine according to manufacturer's schedule and instructions for maximum safety and best mowing 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 blades have quit rotating.
- Inspect grass catcher components regularly. If worn, damaged or deteriorated, they may expose moving parts or allow objects to be thrown.
- 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, e.g. jackstands for lifted machine or parts if working beneath.
- Do not put hands or feet near or under rotating parts.
- Clean up spilled oil or fuel 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.
- Hydraulic fluid can penetrate skin, use paper to check for leaks. Relieve hydraulic pressure before disconnecting hoses. Make sure connections are tight and hoses are in good condition.

Blades

- Mower blades are sharp and can cut. Use extra caution when handling. Remove obstructions with care. Wrap the blade(s) or wear gloves.
- Be aware that rotating one blade on multiblade mowers can cause other blades to rotate.
- Only replace blades. Never straighten or weld them.
- Keep other persons away from blades.



Fuel

- 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 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.

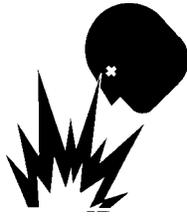
BATTERY

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:

- When working with battery acid, use protective equipment such as, but not limited to, goggles, face shield, rubber gloves and apron.
- 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.

WARNING



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 cutting 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.

HYDRAULIC SYSTEM

The machine's hydraulic system operates under high pressure.

- When checking for leaks, do not use your hands to attempt to find a leak. Instead, use cardboard or paper.
- Escaping hydraulic fluid can be under sufficient pressure to penetrate skin and cause serious injury.
- If hydraulic fluid is injected into the skin, it must be promptly removed by a doctor familiar with this form of injury or gangrene may result.
- Check that all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.

WARNING



	WARNING
	<p>SPARKS OR FLAME CAN START EXPLOSION. DISCONNECT (-)NEGATIVE TERMINAL FIRST. RECONNECT (-)NEGATIVE TERMINAL LAST.</p> <p style="text-align: right;">2000590</p>

	Operator's Manual
	Inflate tires to 14 psi (1.0 kg/cm²)

2000673

IMPORTANT

- Close fuel valve before transporting.
- Flooding can cause hard starting and engine damage.
- See Operators Manual.

2000571

ADVERTENCIA

1. Leer el manual del operador. No permitir que personas no capacitadas para ello usen la máquina.
2. Mantener los protectores en su lugar y sus tornillos debidamente fijados.
3. Antes de limpiar, ajustar o reparar este equipo, apagar todos los mandos, aplicar el freno de estacionamiento y apagar el motor.
4. Mantener las manos, los pies y la ropa alejados de las piezas en movimiento.
5. No conducir como pasajero ni llavar pasajeros en máquinas sin asiento para ello.
6. Mantener a las demás personas alejadas durante el funcionamiento de la máquina.
7. Si no sabe leer inglés, solicitarle a otra persona que le lea y explique el contenido de las etiquetas y del manual de la máquina.

340830

WARNING



TO CHECK OR ADD FUEL:

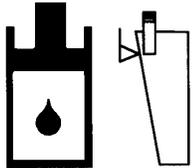
- Do it outdoors.
- Stop engine. Allow to cool.
- Do not smoke.
- Clean up spilled fuel.
- Do not overfill.
- Fill to one inch below bottom of filler neck.

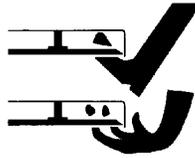
2000570

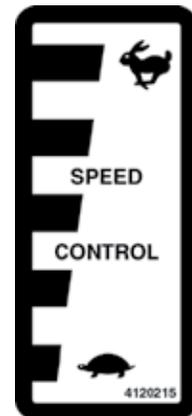
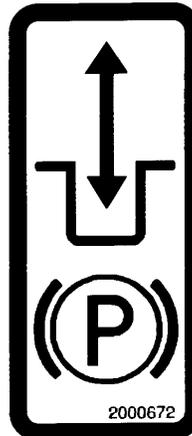
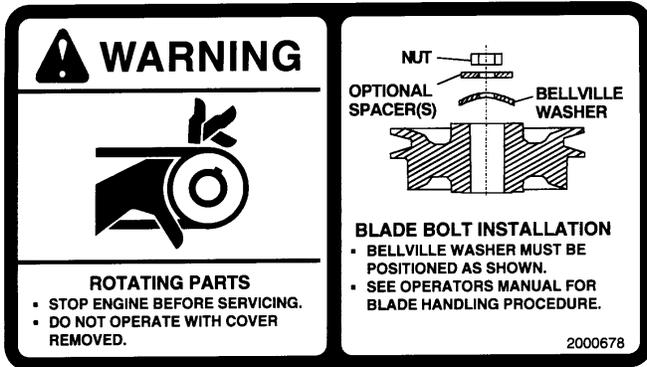
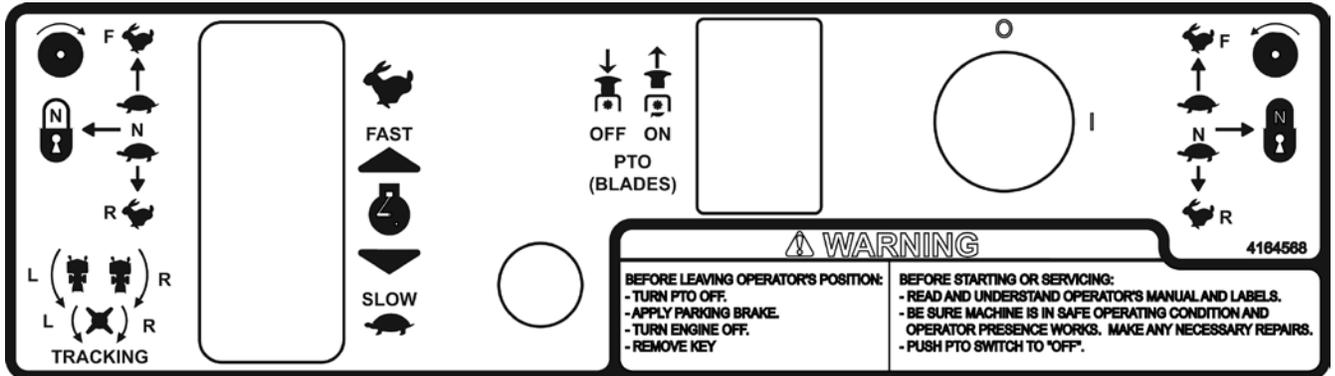
WARNING

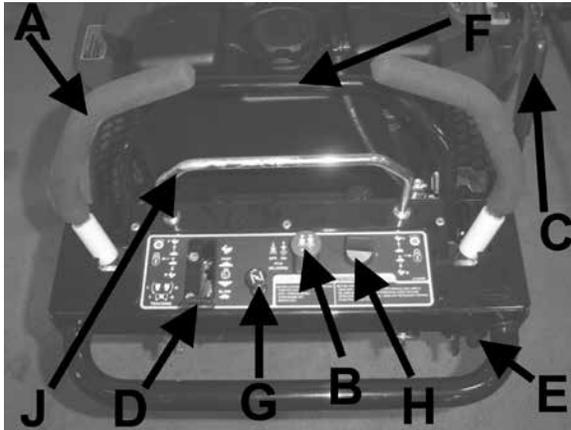
- REMOVE DEBRIS BUILDUP. DEBRIS UNDER BELT COVER OR NEAR MUFFLER CAN CAUSE FIRES.
- BLADES CONTINUE TO ROTATE FOR A FEW SECONDS AFTER BLADES ARE TURNED OFF.
- BLADES MUST BE AT LEAST 1/8" ABOVE BOTTOM OF HOUSING.
- ALL BLADES MUST BE IDENTICAL. CHECK BLADE BOLTS DAILY FOR TIGHTNESS.
- INSPECT FOR DAMAGE AFTER STRIKING A FOREIGN OBJECT. MAKE REPAIRS BEFORE RESTARTING OPERATION.
- FIND AND REPAIR CAUSE OF ANY ABNORMAL VIBRATION.

2000572

 <h2 style="text-align: center;">WARNING</h2> <p>-DO NOT OPERATE WHERE FLYING DEBRIS MAY INJURE PEOPLE OR DAMAGE PROPERTY. KEEP PEOPLE AND PETS AT A SAFE DISTANCE.</p> <p>-DO NOT USE IF THERE ARE ANY DOUBTS ABOUT SAFETY.</p> <p>-KEEP LABELS, GUARDS AND SHIELDS IN PLACE. REPLACE IF LOST OR DAMAGED. REPLACE OPERATORS MANUAL IF LOST OR DAMAGED.</p> <p>-OBEY SAFETY INSTRUCTIONS. FAILURE TO DO SO MAY CAUSE INJURY TO YOURSELF OR OTHERS.</p> <p>-DO NOT DEFEAT INTERLOCKS. CHECK OPERATION DAILY.</p> <p>-DO NOT ALLOW CHILDREN, UNSKILLED OR UNTRAINED PERSONS TO OPERATE MACHINE.</p> <p>-DISCONNECT SPARK PLUG WIRE(S) BEFORE DOING ANY MAINTENANCE.</p>	 <p>HYDRAULIC OIL FILL TO LEVEL INDICATED WITH 10W30 OIL.</p> <hr/>  <h2 style="text-align: center;">WARNING</h2>  <p>HIGH PRESSURE FLUID: -LEAKS CAN PENETRATE SKIN.</p> <p>-SEEK IMMEDIATE MEDICAL ATTENTION FOR OIL PENETRATION INJURY.</p> <p>-SEE OPERATORS MANUAL FOR PROPER METHOD OF LOCATING LEAKS, OR SERVICING HYDRAULIC SYSTEM.</p> <p style="text-align: right;">2000661</p>
---	--

	 <h2 style="text-align: center;">DANGER</h2> <p style="text-align: center;">ROTATING BLADES</p> <ul style="list-style-type: none"> • KEEP HANDS AND FEET AWAY. • STOP ENGINE AND LET BLADES STOP BEFORE REMOVING GRASS COLLECTOR OR UNCLOGGING 		 <h2 style="text-align: center;">WARNING</h2> <p style="text-align: center;">THROWN OBJECTS</p> <ul style="list-style-type: none"> • KEEP AREA CLEAR OF PEOPLE AND PETS. • REMOVE OBJECTS BLADE MAY STRIKE AND THROW. • STOP BLADES TO CROSS GRAVEL AREAS • DO NOT OPERATE WITHOUT CHUTE, MULCHER OR ENTIRE GRASS COLLECTOR IN PLACE. <p style="text-align: right;">2000677</p>
---	--	--	---





CONTROL LEVERS (A)

The control levers must be in the neutral position and the blades must be off for the engine to start. The control levers must be held in for PTO operation. If the PTO switch is on, and the control levers are released, the engine will kill.

The neutral detents in the control panel provide a neutral position when there is no operator input.

To release: pull the control levers inward enough to clear the detents.

The control levers have **six** functions:

1. To provide a neutral position to stop the machine or to start the engine.
2. To engage the drive to wheels: gradually move the control levers to the speed set by the speed control and throttle.
3. To stop: release the levers.
4. To steer the unit: to steer the machine to the left, reduce the drive to the L.H. wheel by pulling back on the L.H. control lever. To steer to the right, reduce the drive to the R.H. wheel by pulling back on the R.H. control lever. Pulling a control lever back past neutral will cause that wheel to back up.
5. To back up: pull the levers back equally past neutral. This may be done any time the engine is running, allowing instant forward/reverse operation and zero turning with one wheel driving forward and one wheel driving backward. Releasing the control lever from reverse automatically returns the machine to neutral.
6. To sense operator presence.

PTO SWITCH (B)

- DO NOT START CUTTING BLADES UNTIL READY TO START MOWING.
- **DO NOT ENGAGE PTO AT FULL THROTTLE. SET ENGINE SPEED MIDWAY BETWEEN HIGH IDLE AND LOW IDLE FOR ENGAGEMENT.**
- Disengage drive to cutting blades whenever you stop or leave the operators position.
- Shut off engine and remove spark plug wire before making adjustments or unplugging mower.
- The drive to the cutters is engaged when the PTO switch is pulled up toward the operator (**ON**) and disengaged by pushing the PTO switch back down (**OFF**).

PARKING BRAKE (C)

Pull lever back to engage parking brake. Push lever forward to disengage parking brake.

THROTTLE CONTROL (D)

By moving the throttle lever forward towards the engine, the engine speed is increased until the maximum governed rpm is obtained. By moving the throttle lever fully back, the engine will Idle down.

CHOKE (G)

Pull to close choke. When cold starting, push to open choke.

SPEED ADJUSTMENT KNOB (E)

The speed adjustment knob on the side of the control panel sets the maximum forward speed. The further the stop bar (**F**) is moved forward, the faster the maximum forward speed. Speed changes can be made on the go.

KEYSWITCH (H)

Recoil models: Turn to right to allow engine to be started. Turn key to left to stop engine.

Electric start models: Turn key to right and hold until machine starts. When machine starts, let go of key and it will return to run position. Turn key to left to stop engine.

REVERSE ASSIST BRACKET (J)

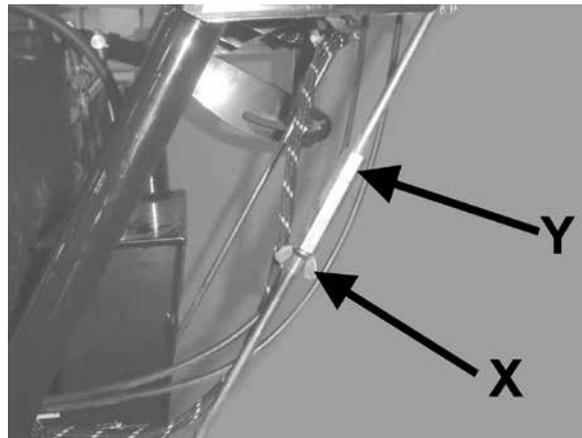
Used to steady hands while backing up.

TRACKING ADJUSTMENT TURNBUCKLE (L)

The tracking adjustment turnbuckle provides tracking control to correct for any hydraulic circuit or linkage differences from one side to the other.

To correct tracking:

1. Loosen wingnut **X**.
2. Rotate the tracking adjustment turnbuckle **Y** to the right to make the machine track to the right.
3. Rotate the tracking adjustment turnbuckle **YX** to the left to make the machine track to the left.
4. Tighten wingnut **X**.



BEFORE STARTING THE ENGINE:

- Disengage cutterdeck drive.
 - Make sure control levers are in neutral.
 - Make sure parking brake is on.
1. Check the engine oil level and add if necessary. Open the fuel valve under the fuel tank. Set the control levers in the neutral position and the blade control lever to the off position.
 2. For cold starts, pull choke knob to choke.
 3. Pull the rope operated recoil starter firmly, or turn the key to operate electric starter (if so equipped) to start the engine. Allow the rope to recoil slowly before releasing the handle.
 4. As soon as the engine starts, gradually push in until the engine will run with no choke at all.

OPERATING THE MACHINE

- Practice at slow engine and speed selector speeds with the blade control disengaged until completely familiar with the controls.
- For normal cutting the throttle should be set at the full open position. By using the stop bar to speed up or slow down the machine during use, maximum control and cutting efficiency can be maintained.
- Using the machine at less than full throttle in heavy conditions will cause the engine to labor and result in excessive wear.
- For maneuvering where the stop bar does not give the required speed, partial throttle may be used.
- Steering is controlled by the operation of the control levers. To steer the machine to the left, reduce the drive to the L.H. wheel by pulling back on the L.H. control lever. To steer to the right, reduce the drive to the R.H. wheel by pulling back on the R.H. control lever. Pulling a control lever back past neutral will cause that wheel to back up.
- To change speeds, loosen the speed adjustment knob, then move speed control bar to desired speed.

FUEL TANK



WARNING GASOLINE IS HIGHLY FLAMMABLE!

- Fill fuel tank with good quality, clean, regular unleaded gasoline.
- Do not use hi-test fuel.
- Do not smoke.
- Do not spill fuel.
- Fill outdoors.
- Do not overfill. Fill to 1" below bottom of filler neck to allow room for expansion.
- USE A FUNNEL TO FILL GAS TANK

DRIVING THE MACHINE IN TRANSPORT

1. With the PTO switch disengaged, and the operator present controls depressed, move the speed selector bar to give the required forward speed.
2. Gradually engage both control levers together.

NOTE: Pushing forward on only one control lever will cause the machine to turn to one side. Pulling back, past neutral, on only one control lever will cause the machine to turn to one side in reverse.

CUTTING WITH THE MACHINE

1. Make sure the discharge chute is in position or a grass collector is correctly fitted before starting to cut.
 2. Move one of the control levers out of the neutral detent position.
 3. Turn blades on with the PTO switch.
 4. Do not start blades at full throttle. Use engine speed midway between high idle and low idle.
 5. Move the speed selector lever to give the required cutting speed. Gradually engage both control levers together.
 6. Operate so that clippings are discharged onto the area that has been cut. This will result in a more even distribution of clippings and more uniform cutting.
- When mowing large areas, start by turning to the right so that clippings will be discharged away from shrubs, fences, driveways, etc. After two or three rounds, mow in the opposite direction, left hand turns, until finished.
 - If grass is extremely tall, it should be mowed twice, the first cut relatively high, the second cut to the desired height.
 - Use the left side of the mower for trimming.

TO STOP THE MACHINE

1. Move control levers to neutral position.
2. Disengage the cutterdeck with PTO switch.
3. Release control levers.
4. Close the throttle to slow the engine, turn engine off with the keyswitch.

NOTE: When the machine is transported by truck or trailer or left to stand unused, the fuel valve (under the fuel tank) should be turned off. This avoids the possibility of flooding should any dirt get under the carburetor float needle. Leaving the fuel valve open can allow severe flooding which may ruin the engine by diluting the oil.

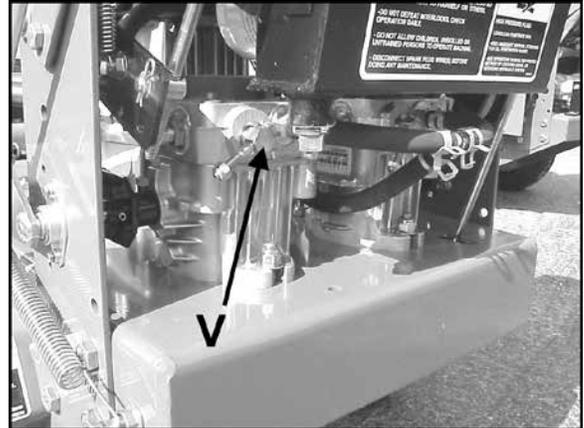
WARNING

PREVENT INJURY OR PROPERTY DAMAGE FROM THROWN OBJECTS OR FROM CONTACT WITH THE BLADE

- Keep body parts away from blades.
- Stop engine and let blades stop before removing grass collector or unclogging.
- Keep area clear of people and pets.
- Remove objects blade may strike and throw.
- Stop blades to cross gravel areas.
- Do not operate without chute, mulcher or entire grass collector in place.

PUSHING THE MACHINE WITH THE ENGINE STOPPED:

Open dump valve **M** on each pump by turning counter clockwise two revolutions. Move the machine and close dump valve **M** by turning clockwise until valve is firmly seated.



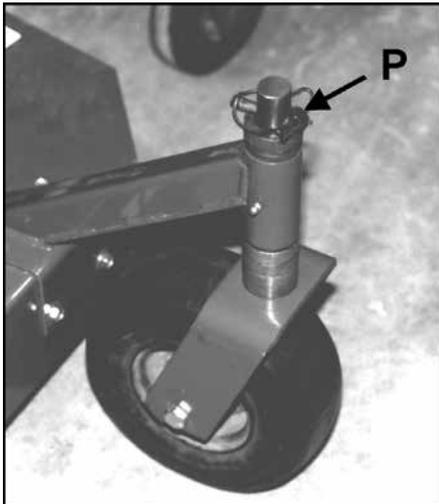
Make all adjustments with the engine shut off, spark plug wire disconnected and mower drive disengaged.

FIXED CUTTERDECK HEIGHT OF CUT

The cutting height is determined by the position of the blades in relation to the wheels. Variation to this height may be made at THREE points. (See Height of Cut Chart below).

1. THE CASTER WHEELS

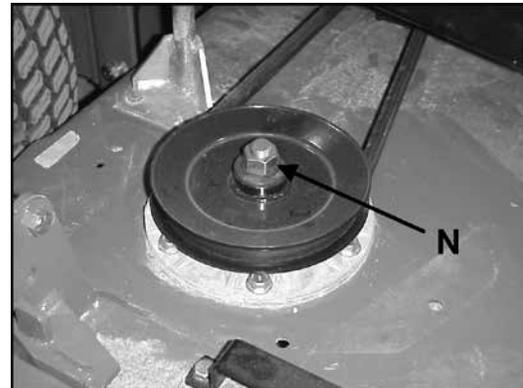
1. Remove the quick pin **P** from the top of the caster wheel pivot spindle.
2. Place required spacers above or below wheel support bracket and replace the quick pin **P**.



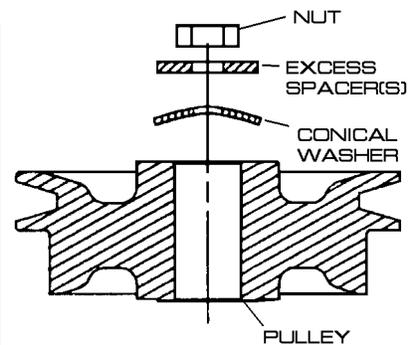
2. CUTTERDECK BLADE SPINDLES

NOTE: See MAINTENANCE section of the Setup, Parts & Maintenance manual for blade removal and replacement procedures.

1. Remove belt cover.
2. Remove nut **N** from the top of the cutter spindle bolt.
3. Withdraw the cutterdeck spindle bolt (from bottom) complete with washer, blade and spacers
4. Place the required number of spacers (no more than 2) on the cutterdeck spindle bolt below the cutterdeck, between blade and spindle shaft.
5. Fit any excess spacers on the cutterdeck spindle bolt above the deck, between the conical washer and the nut. Replace nut and tighten to 70 ft-lbs.

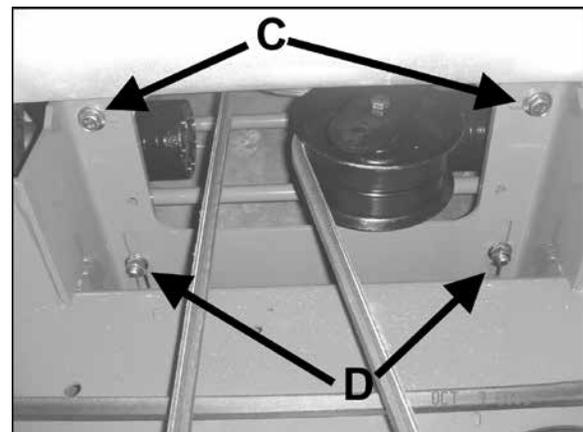
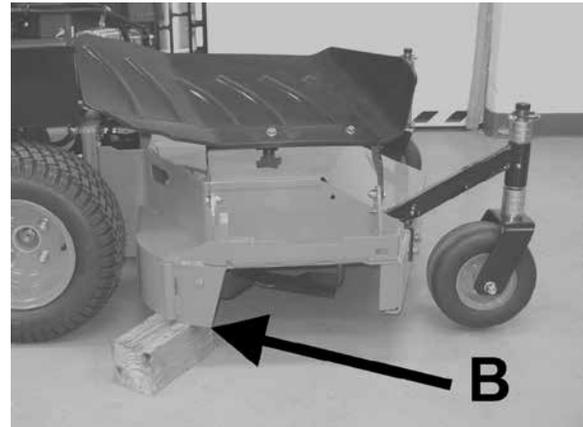


CUTTING HEIGHT		A	B	C	UPPER BOLT POSITION	NUMBER OF SPACERS BETWEEN SPINDLE AND BLADE (1/4" THICK)
IN	MM					
1.375	35	1	1	0	5	2
1.625	41	1	1	0	5	1
1.875	48	1	1	0	5	0
2.125	54	1	0	2	4	2
2.375	60	1	0	2	4	1
2.625	67	1	0	2	4	0
2.875	73	1	1	3	3	2
3.125	79	1	1	3	3	1
3.375	86	1	1	3	3	0
3.625	92	1	0	5	2	2
3.875	98	1	0	5	2	1
4.125	105	1	0	5	2	0
4.375	111	1	1	6	1	2
4.625	118	1	1	6	1	1



SETTING CUTTERDECK HEIGHT CUTTERDECK POSITION

1. Support rear of power unit.
2. Place blocks under both outside edges of cutterdeck at **B**. See Block chart below.
3. Remove (2) upper deck mounting bolts **C**.
4. Loosen (2) lower deck mounting bolts **D** several turns. Loosen enough to allow easy movement of the rear of cutterdeck. Allow deck to set down on blocks or if deck is being raised, allow the front casters to sit on the floor.
5. Reinstall upper deck mounting bolts **C** according to the chart for the cut height desired.
6. Tighten all bolts and reinstall belt cover.
7. Remove rear support and blocks under the deck.
8. Your side discharge mower will give you the best cut if the very tip of the front blade is 1/8" to 1/4" lower than the rear of the rear blade.



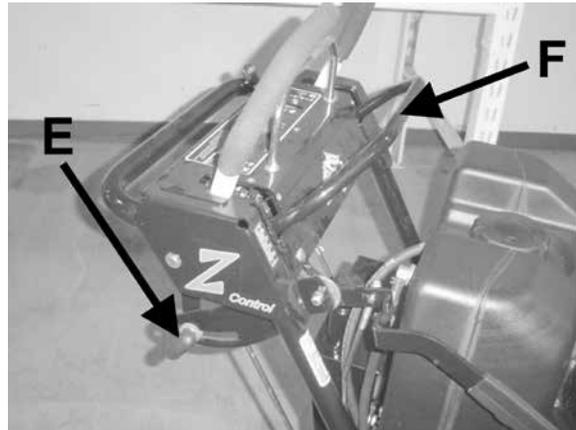
CUTTING HEIGHT	HOLE POSITION ON ENGINE DECK*	BLOCK HEIGHT AT REAR OF DECK (B)
1.375" - 1.625"	5	1.25"
1.875" - 2.375"	4	2.00"
2.625" - 3.125"	3	2.75"
3.375" - 3.875"	2	3.50"
4.125" - 4.625"	1	4.25"

* Position 1 is the highest hole on the engine deck.

NOTE: Make all adjustments with the engine shut off, spark plug wire disconnected and mower drive disengaged.

Speed Control Bar

The speed control bar **F** is held by friction pads. If the setting will not hold, tighten knob **E** to increase friction on speed control bar **F**.



PARKING BRAKE

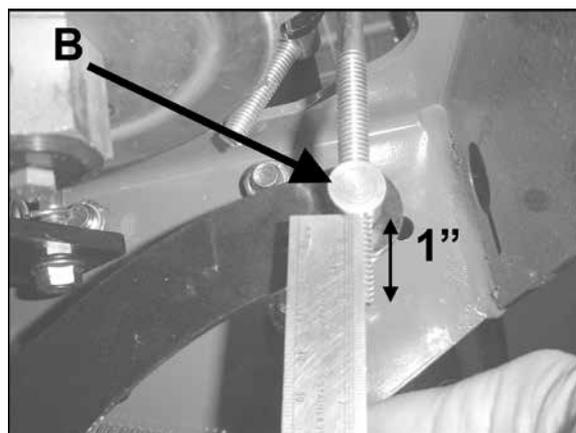
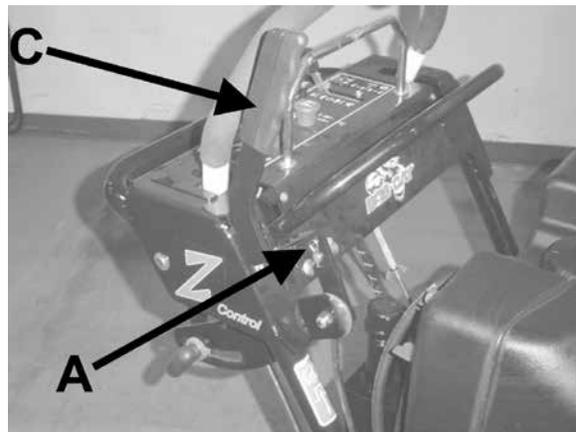
Apply parking brakes and open the bypass valves on the hydraulic pumps. Try to push the machine forward. If wheels rotate, adjust brakes as follows.

TO ADJUST:

1. Remove the hairpin cotter **A** from the brake rod at the brake lever **C** as shown.
2. Slide the brake rod out of the brake lever and turn the rod in or out of the brake swivel **B** as needed. The brake rod should be inserted into the outer most hole of the brake lever.

NOTE: The brake should initially be adjusted so that the brake rod extends through swivel **B** 1-1/4" as shown. If more brake pressure is required adjust as necessary.

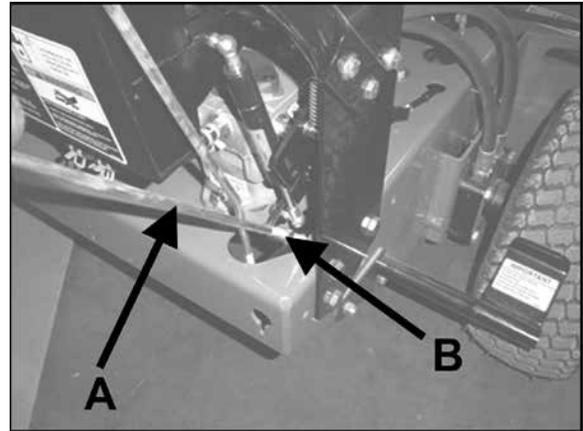
3. Reassemble brake rod to the brake lever using hairpin **A** removed in Step 1.
4. Apply parking brakes and try to push the machine forward. If wheels rotate, readjust brakes.
5. Close bypass valves on the hydraulic pumps.



TRACTION DRIVE HYDROSTAT ADJUSTMENTS: The following adjustments must be done in order.

STEP 1 - Set Neutral

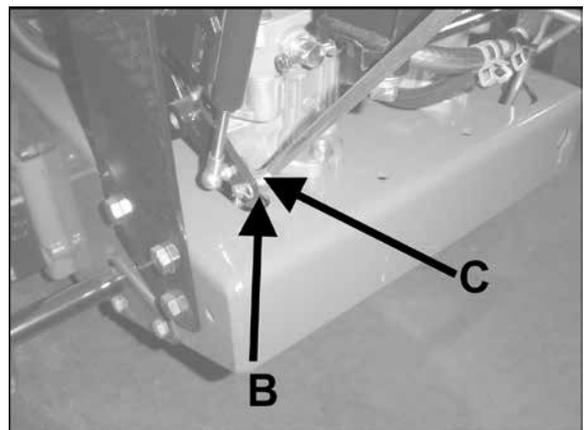
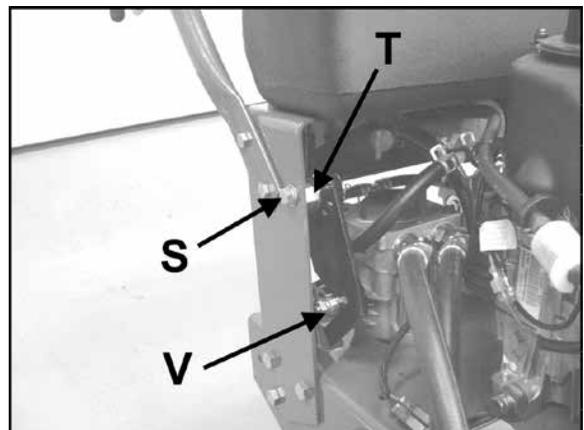
Neutral is set at the factory. If it should require adjustment, raise the wheels off the ground by supporting the machine on jackstands or blocks. Disconnect the control rod **A** at each pump end. Loosen bolt **S** securing the neutral plate eccentric shaft just enough to turn the shaft. Start the engine and run at low speed. Turn eccentric shaft **T** to raise or lower the point at which the follower bearing is held in the center of the "V" until the wheels stop turning. Tighten the eccentric shaft bolt. Increase the throttle setting and check the adjustment. Readjust if necessary. Shut the engine off before proceeding to Step 2.



STEP 2 - Adjust Control Rods

First adjust neutral, as outlined in Step 1. Set control levers to neutral. Adjust swivels **B** on lower ends of control rods **A** so they just go into the holes on the pump arm control plates.

After adjusting swivel **B** on left side, tighten jam nut **C**.

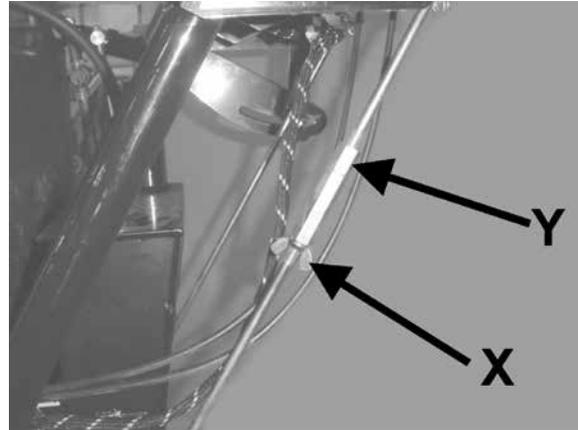


TRACKING ADJUSTMENT TURNBUCKLE

The tracking adjustment turnbuckle provides tracking control to correct for any hydraulic circuit or linkage differences from one side to the other.

To correct tracking:

1. Loosen wingnut **X**.
2. Rotate the tracking adjustment turnbuckle **Y** to the right to make the machine track to the right.
3. Rotate the tracking adjustment turnbuckle **Y** to the left to make the machine track to the left.
4. Tighten wingnut **X**.



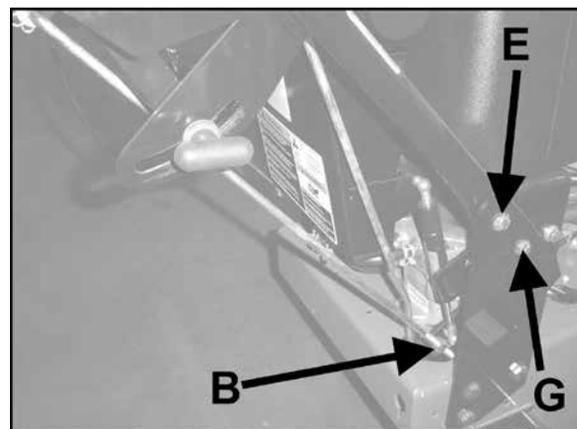
CONTROL LEVERS

The control levers are controlled by spring tension, and require no adjustment.



HANDLE BAR HEIGHT ADJUSTMENT

To adjust handle bar height: Remove swivel **B** at each pump control arm and the parking brake rod. Remove bolts **G** and loosen bolts **E** on each side of handlebars. Raise or lower as required. Reposition upper handle and reinsert bolts at location **G** into appropriate hole in lower handle and tighten. Readjust control rods and swivels and reinstall. Readjust parking brake and rod.



TRACK WIDTH ADJUSTMENT

The track width originally set from the factory can be increased an additional 3-1/4" overall by performing the following steps.

1. Loosen wheel lug nuts on both drive tires.
2. Raise rear of unit so that drive tires are off the ground. Support the unit with jack stands.
3. Remove wheel lug nuts and wheels. Reattach wheels with the tires rotated so the wheel offset is the opposite of when they were previously installed. Install and tighten lugnuts until they are snug
4. Lower machine off of the jack stands and torque wheel lug nuts to 85 ft-lbs.



TIRE PRESSURE ADJUSTMENT

Tire pressures should be maintained at 14 psi (1.0 kg/cm²).



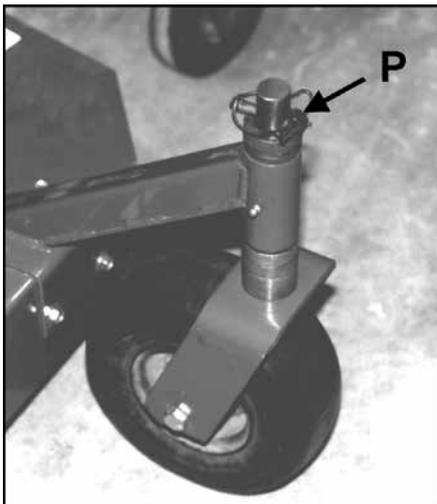
Make all adjustments with the engine shut off, spark plug wire disconnected and mower drive disengaged.

FIXED CUTTERDECK HEIGHT OF CUT

The cutting height is determined by the position of the blades in relation to the wheels. Variation to this height may be made at THREE points. (See Height of Cut Charts below).

1. THE CASTER WHEELS

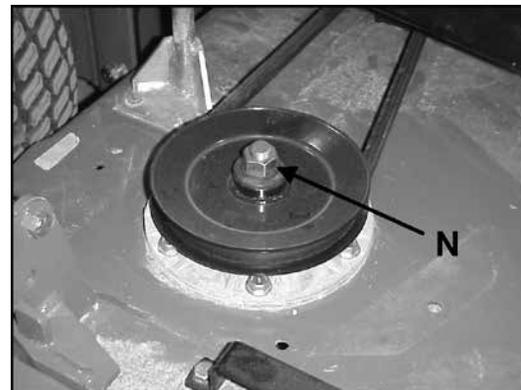
1. Remove the quick pin **P** from the top of the caster wheel pivot spindle.
2. Place required spacers above or below wheel support bracket and replace the quick pin **P**.



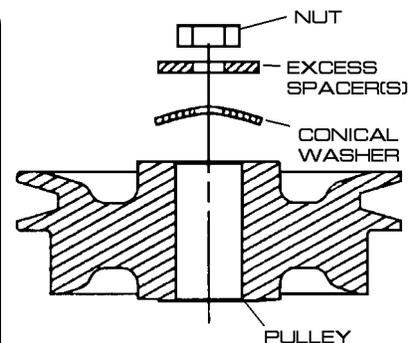
2. CUTTERDECK BLADE SPINDLES

NOTE: See MAINTENANCE section of the Setup, Parts & Maintenance manual for blade removal and replacement procedures.

1. Remove belt cover.
2. Remove nut **N** from the top of the cutter spindle bolt.
3. Withdraw the cutterdeck spindle bolt (from bottom) complete with washer, blade and spacers
4. Place the required number of spacers (no more than 2) on the cutterdeck spindle bolt below the cutterdeck, between blade and spindle shaft.
5. Fit any excess spacers on the cutterdeck spindle bolt above the deck, between the conical washer and the nut. Replace nut and tighten to 70 ft-lbs.



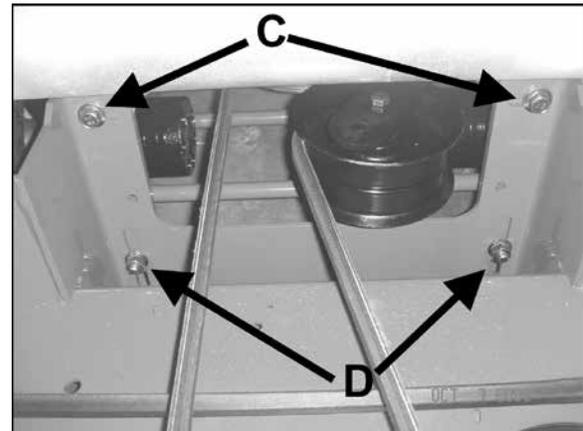
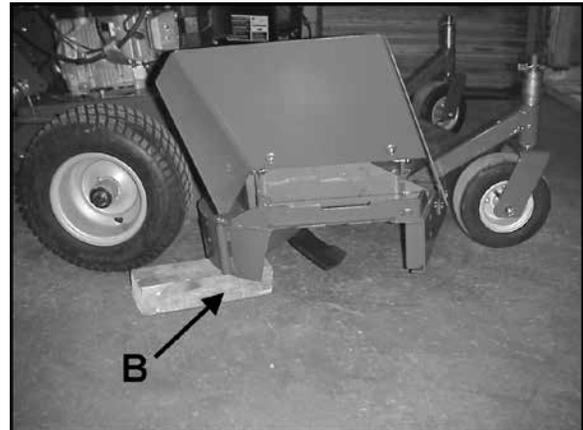
CUTTING HEIGHT		A	B	C	UPPER BOLT POSITION	NUMBER OF SPACERS BETWEEN SPINDLE AND BLADE (1/4" THICK)
IN	MM					
1.375	35	1	1	0	5	2
1.625	41	1	1	0	5	1
1.875	48	1	1	0	5	0
2.125	54	1	0	2	4	2
2.375	60	1	0	2	4	1
2.625	67	1	0	2	4	0
2.875	73	1	1	3	3	2
3.125	79	1	1	3	3	1
3.375	86	1	1	3	3	0
3.625	92	1	0	5	2	2
3.875	98	1	0	5	2	1
4.125	105	1	0	5	2	0
4.375	111	1	1	6	1	2
4.625	118	1	1	6	1	1



SETTING CUTTERDECK HEIGHT CUTTERDECK POSITION

1. Support rear of power unit.
2. Place blocks under both outside edges of cutter-deck at **B**. See Block chart below.

CUTTING HEIGHT	HOLE POSITION ON ENGINE DECK*	BLOCK HEIGHT AT REAR OF DECK (B)
1.375" - 1.625"	5	1.25"
1.875" - 2.375"	4	2.00"
2.625" - 3.125"	3	2.75"
3.375" - 3.875"	2	3.50"
4.125" - 4.625"	1	4.25"
* Position 1 is the highest hole on the engine deck.		



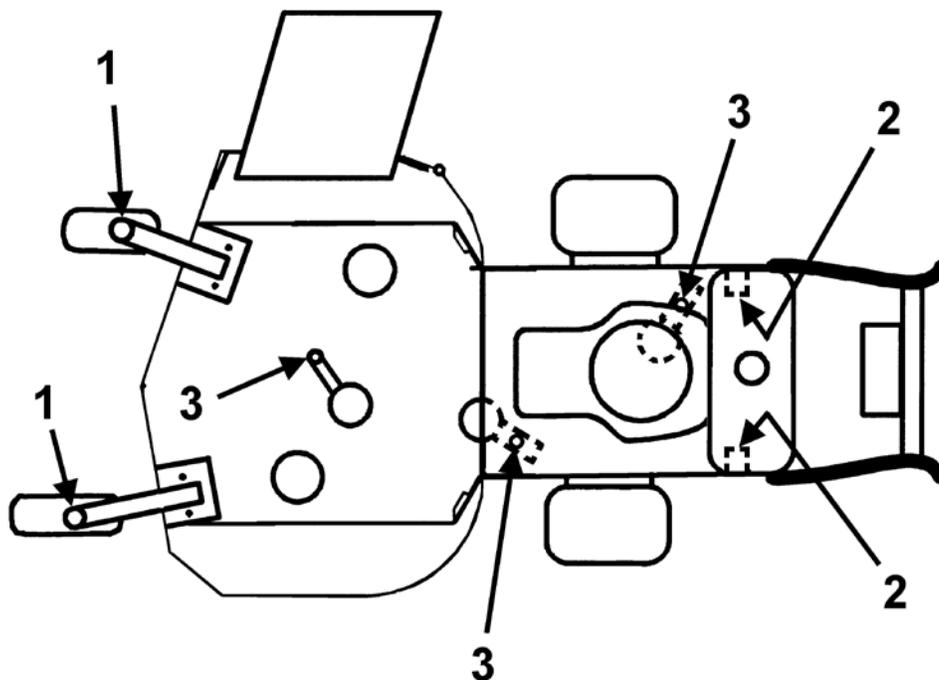
3. Remove (2) upper deck mounting bolts **C**.
4. Loosen (2) lower deck mounting bolts **D** several turns. Loosen enough to allow easy movement of the rear of cutterdeck. Allow deck to set down on blocks or if deck is being raised, allow the front casters to sit on the floor.
5. Reinstall upper deck mounting bolts **C** according to the chart for the cut height desired.
6. Tighten all bolts and reinstall belt cover.
7. Remove rear support and blocks under the deck.
8. Your side discharge mower will give you the best cut if the very tip of the front blade is 1/8" to 1/4" lower than the rear of the rear blade.

MACHINE LUBRICATION

Every 50 Working Hours - Lubricate the following points with grease:

- 1) Caster wheel pivots (2 points)
- 2) Neutral eccentric pin (2 points)
- 3) Idler pivot bearings:
 - a) Engine to cutterdeck belt tensioner
 - b) Cutterdeck belt tensioner
 - c) Hydro drive belt tensioner

NOTE: The spindles used on these machines use a superior sealed bearing which does not require relubrication.



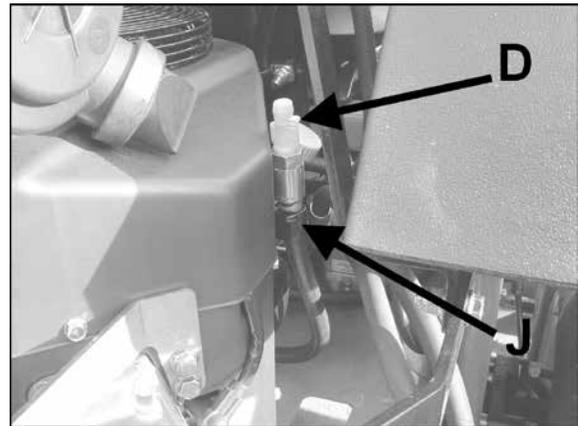
ENGINE OIL

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

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 or through the frame cutout, which ever is most convenient.
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.



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.

DAILY

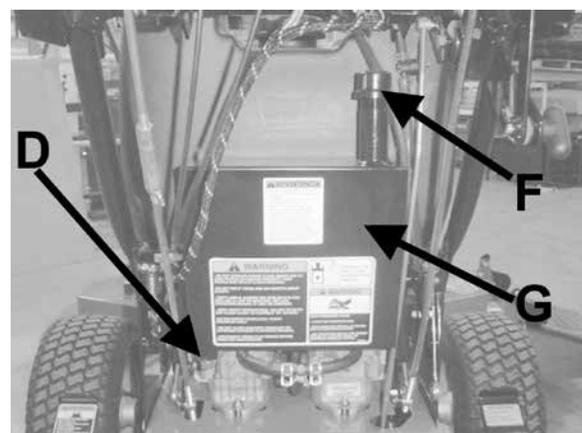
1. Check oil level with the dipstick.
2. If oil is needed, add fresh oil of proper viscosity and grade. See engine manual for oil specifications. Do not overfill.
3. Replace dipstick before starting engine.

HYDRAULIC RESERVOIR CHECK, DRAIN AND FILL

Check level every 100 hours or when a leak has occurred. To check level: Remove reservoir cap. Add 10W30 oil until the oil level reaches the bottom of the filler tube. Do not overfill.

EVERY 500 HOURS:

Change hydraulic oil and filter. Remove plug **D** to drain reservoir. Remove and replace filter. Filter is located on front of tank at **G**. Reinstall plug and fill with 10W30 oil to the bottom of the filler tube **F**.



ENGINE - KAWASAKI

The maintenance schedule detailed is for average operating conditions. Under extreme conditions (dusty, dirty or more than 8 hrs continuous use) maintain more frequently.

Cooling Fins and Air Intake screen (daily)

Ensure that the cooling fins and air intake screen **W** are cleaned daily. Continued operation with a clogged cooling system will cause severe overheating and result in engine damage.

Air Cleaner

Dual element air cleaners have a paper air cleaner element **Z** with an oiled, foam precleaner element **V** on the dirty side of the paper element. Both should be inspected regularly and maintained.

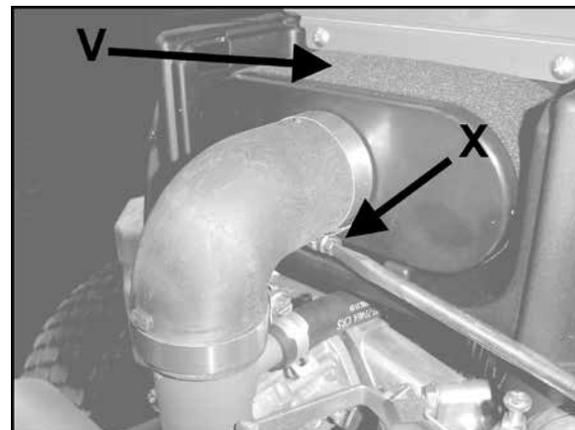
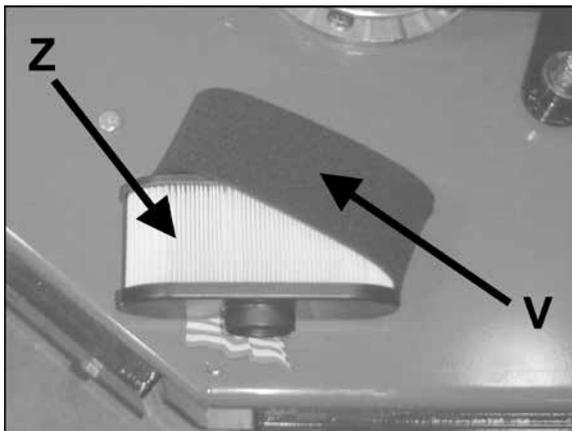
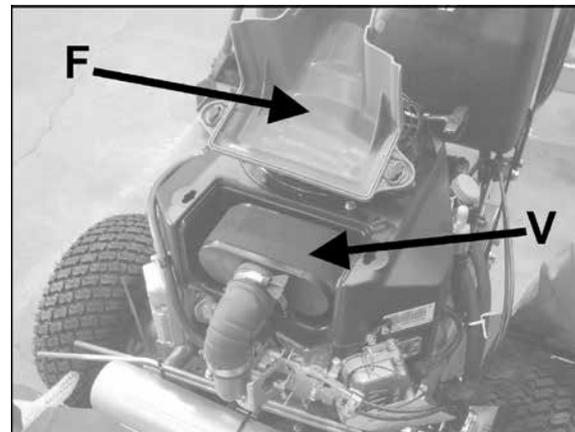
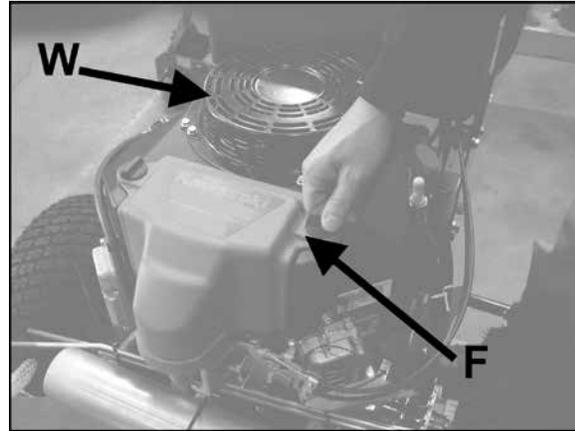
Clean and re-oil precleaner element every 25 hours (more often under dusty conditions).

1. Turn knobs 1/4 turn counter-clockwise to remove air cleaner cover. **F**.
2. Loosen clamp **X** to remove air cleaner assembly.
3. Remove and wash precleaner **V** with kerosene or liquid detergent and water.
4. Wrap precleaner **V** in a cloth and squeeze to remove excess cleaning agent.
5. Saturate precleaner **V** with new engine oil and squeeze to remove excess oil.

Every 100 hours (more often under very dusty or dirty conditions), check the paper cartridge **Z**.

- Clean by tapping gently.
- Do not wash the cartridge or use compressed air
- Replace when cartridge is dirty, bent or damaged.

6. Reinstall precleaner **V** over paper cartridge **Z**, reinstall air cleaner assembly, tighten clamp **X**, and reinstall cover **F**.

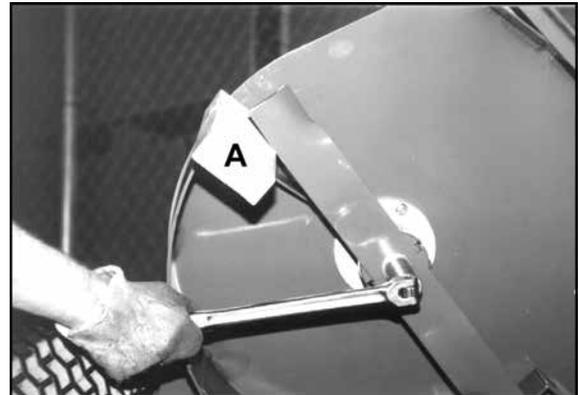


Blade Sharpening

Blades may be sharpened by filing or grinding, but with either method the balance of the blades must be maintained at 5/8 oz/in or less. Failure to maintain balance causes excess vibration, wear and shortened life of not only the blades, but most all components of the machine. To balance a blade after sharpening: attach 1/8 oz of weight 5" from center on the light end. This should make the light end the heavy end. If it does not: File or grind the heavy end until the addition of weight makes the light end the heavy end.

NOTE:

- Do not overheat or weaken the blades.
- Do not straighten bent blades. Replace with new Schiller Grounds Care, Inc. blades.
If lift portion of blade is worn thin replace with a new Schiller Grounds Care, Inc. blade.
- ALWAYS replace with Schiller Grounds Care, Inc. blades—do not use another manufacturer's blades as this could be dangerous.
- Replace cracked or bent blades.



BLADE REMOVAL

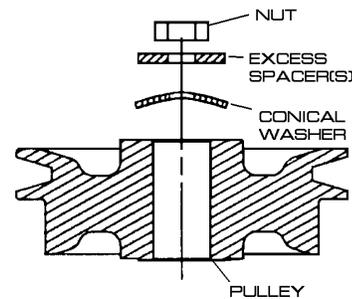
NOTE: Follow these instructions to prevent injury when bolt releases.

1. Use a box wrench or socket with a long breaker bar to remove spindle bolt under cutterdeck.
2. Slip tube over breaker bar or wrench if necessary to gain leverage.
3. Keep hands clear as blades may rotate when bolt releases.
4. When changing blades, wear thickly padded gloves.
5. Block blades from turning by using a piece of wood.

NOTE: To prevent blade from turning, place block of wood at **A**, with grain perpendicular to blade.

BLADE RE-INSTALLATION

1. Place the desired number of spacers (no more than 2) on the spindle bolt below the cutterdeck between the blade and spindle shaft.
2. Insert the cutter spindle bolt (from bottom) complete with washer, blade and spacers.
3. Place remaining spacer(s) on the spindle bolt above the cutterdeck between the conical washer and nut (as shown). Replace nut and tighten to 70 ft-lbs.



Cutterdeck Pulley Assembly

SPARK PLUG

- Remove plug and check condition.
- Good operating conditions are indicated if the plug has a light grey or tan deposit. A white blistered coating may indicate overheating. A black coating usually means an "over rich" fuel mixture caused by a clogged air cleaner or improper carburetor adjustment. Do not sandblast, wire brush or otherwise try to clean a dirty plug. Best results are obtained with a new plug.
- See engine manufacturers manual for proper spark plug gap.

PTO BELT

1. Rotate idler arm using a 3/8" ratchet or breaker bar and remove belt.



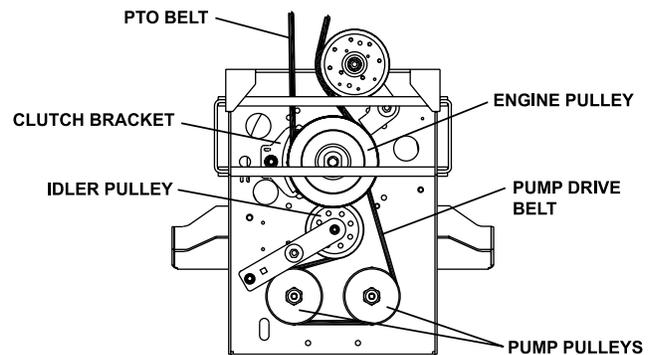
CUTTERDECK BELT

1. Remove PTO belt.
2. Rotate idler arm using a 3/8" ratchet or breaker bar and remove belt.
3. Replace in the reverse order.



PUMP-DRIVE BELT

1. Remove PTO belt from the engine clutch.
2. Disconnect the clutch wire harness.
3. Unbolt clutch bracket from clutch and rotate the clutch to allow enough clearance to remove the clutch bracket.
4. Rotate idler arm using a 3/8" ratchet or breaker bar inserted into the square hole in the idler arm.
5. Remove pump-drive belt.
6. Replace by following steps in reverse order.



View under engine deck

NOTE: CHANGE ENGINE OIL AND FILTER AFTER FIRST 5 HOURS OF OPERATION.

SERVICE OPERATION	FIRST 5 HOURS	DAILY	EVERY 25 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	EVERY 500 HOURS
ENGINE						
Check Oil Level		X				
Check for Oil & Air Leaks		X				
Clean Air Intake		X				
Clean Air Cleaner		X				
Change Oil & Filter*	X	SEE ENGINE MANUFACTURER'S MANUAL*				
Clean Fuel Sediment Bowl				X		
Replace/Adjust Spark Plug	SEE ENGINE MANUFACTURER'S MANUAL					
HYDRAULIC OIL RESERVOIR						
Check Oil Level		X				
Change Hydraulic Oil						X
MACHINE						
Check Tire Pressures		X				
Lubricate All Points				X		

Consult the manufacturer's manual for your engine for further information and instructions.

SERVICE RECORD

Hydro Midsize

GENERAL	DATE	HRS	DATE	HRS	DATE	HRS	DATE	HRS	DATE	HRS	DATE	HRS
	Check Tire Pressures											
Lubricate All points												
Check Nuts & Bolts												
ENGINE												
Check Oil Level												
Change Oil												
Clean Air Cleaner Element												
Clean Cooling Fins												
Replace Air Cleaner Element												
Clean & Gap Spark Plugs												
NOTE: After first 5 hours of operation replace engine oil and filters.												

ENGINES		
MODEL NUMBER	933331J	933332J
MANUFACTURER	KAWASAKI	KAWASAKI
MODEL	FS541BV-AS05R	FS541BV-AS05R
CYLINDERS	2	2
COOLING	Air	Air
FUEL		Gasoline
BORE/STROKE	2.9" X 2.8" (73 X 72mm)	2.9" X 2.8" (73 X 72mm)
DISPLACEMENT	36.8 ci (603 cc)	36.8 ci (603 cc)
COMPRESSION	8.1:1	8.1:1
OUTPUT POWER	See engine manufacturer's specifications and website.	
OUTPUT TORQUE	33.9 ft-lb (46.0 N•m) @1800 rpm	33.9 ft-lb (46.0 N•m) @2200 rpm
OIL CAPACITY	1.8 qt	1.8 qt
LUBRICATION	Full Pressure	Full Pressure
CYLINDER BLOCK	Aluminum with cast iron sleeve	Aluminum with cast iron sleeve
CYLINDER HEAD	Aluminum	Aluminum
GOVERNOR	Mechanical	Mechanical
AIR CLEANER	Ducted Dual Element	Ducted Dual Element
IGNITION SYSTEM	Electronic	Electronic
CHARGING SYSTEM	CLUTCH COIL	CLUTCH COIL
BATTERY	None	None
FUEL CAPACITY	4.2 gal (16.2 l)	4.2 gal (16.2 l)
FUEL TANK	Polyethylene	Polyethylene
FUEL CONSUMPTION @ MAX LOAD/SPEED	1.35 gal/hr (5.11 l/hr)	1.35 gal/hr (5.11 l/hr)

SIDE DISCHARGE DECKS		
MODEL NUMBER	933331J	934332J
WIDTH (CHUTE DOWN)	47" (1194 mm)	58.5" (1486 mm)
WIDTH (CHUTE UP)	36.5" (927 mm)	48" (1219 mm)
WIDTH OF CUT	35.25" (895 mm)	47.25" (1200 mm)
NUMBER OF BLADES	2	3
BLADE LENGTH	18" (457 mm)	16.25" (413 mm)
BLADE TYPE	High Lift (Low Lift option)	High Lift (Low Lift option)
BLADE THICKNESS	0.205" (5.2 mm)	0.205" (5.2 mm)
TIP SPEED	16965 ft/min (5171 m/min)	15315 ft/min (4668 m/min)
DAILY PRODUCTION @ 5 mph (8 km/hr)	14.2 acres/8hrs (5.74 ha/8hrs)	19.0 acres/8hrs (7.4 ha/8 hrs)
SHIPPING WEIGHT	236 lbs (107 kg)	270 lbs (122 kg)

POWER UNITS

CONTROLS:

Throttle, choke, PTO switch, speed adjustment knob, key switch, control levers (1 per wheel), parking brake.

GROUND SPEED:

0-6 mph Forward
0-2 mph Reverse

DRIVE TIRES:

16 x 7.50 Turf Saver

BRAKES:

Hydrostat provides dynamic braking
Parking brake: Mechanical on tire surface

TRANSMISSION DRIVE SYSTEM:

Belt from engine to hydrostat input shafts, hydrostatic drive to wheels.

TURNING RADIUS:

Inside wheel 0".

HYDRAULIC RESERVOIR CAPACITY:

1.2 Gallons

POWER STEERING:

Independently controlled drive wheels.

WEIGHT:

933331J 582.5 lbs. (264.2 kg)
934332J 635.0 lbs. (288.0 kg)

CUTTERDECKS

CONSTRUCTION:

10 and 7 gauge steel deck welded single unit, baffled for high velocity air flow, large discharge opening with chute guard deflector.

SPINDLES:

1" spindle shaft on maintenance free sealed ball bearings in precision machined housing.

CASTERS:

9 x 3.50-4 (fixed decks only)
11 x 4.00-5 (floating decks only)

HEIGHT OF CUT:.

Adjustable from 1-3/8" to 4-5/8" (3.5-11.7 cm)

BLADE DRIVE:

Industrial b section heavy duty v-belt drive (not twisted) from crankshaft to Cutterdeck with 5" steel idlers on sealed ball bearings. PTO switch on control panel controls engagement of blades..

BLADE MATERIAL:

1566 alloy steel, austempered and heat treated.

ACCESSORIES AVAILABLE

Standup Sulky
Jumbo Grasscatcher
Eco-Plate

PARTS SECTION

FIGURE 1

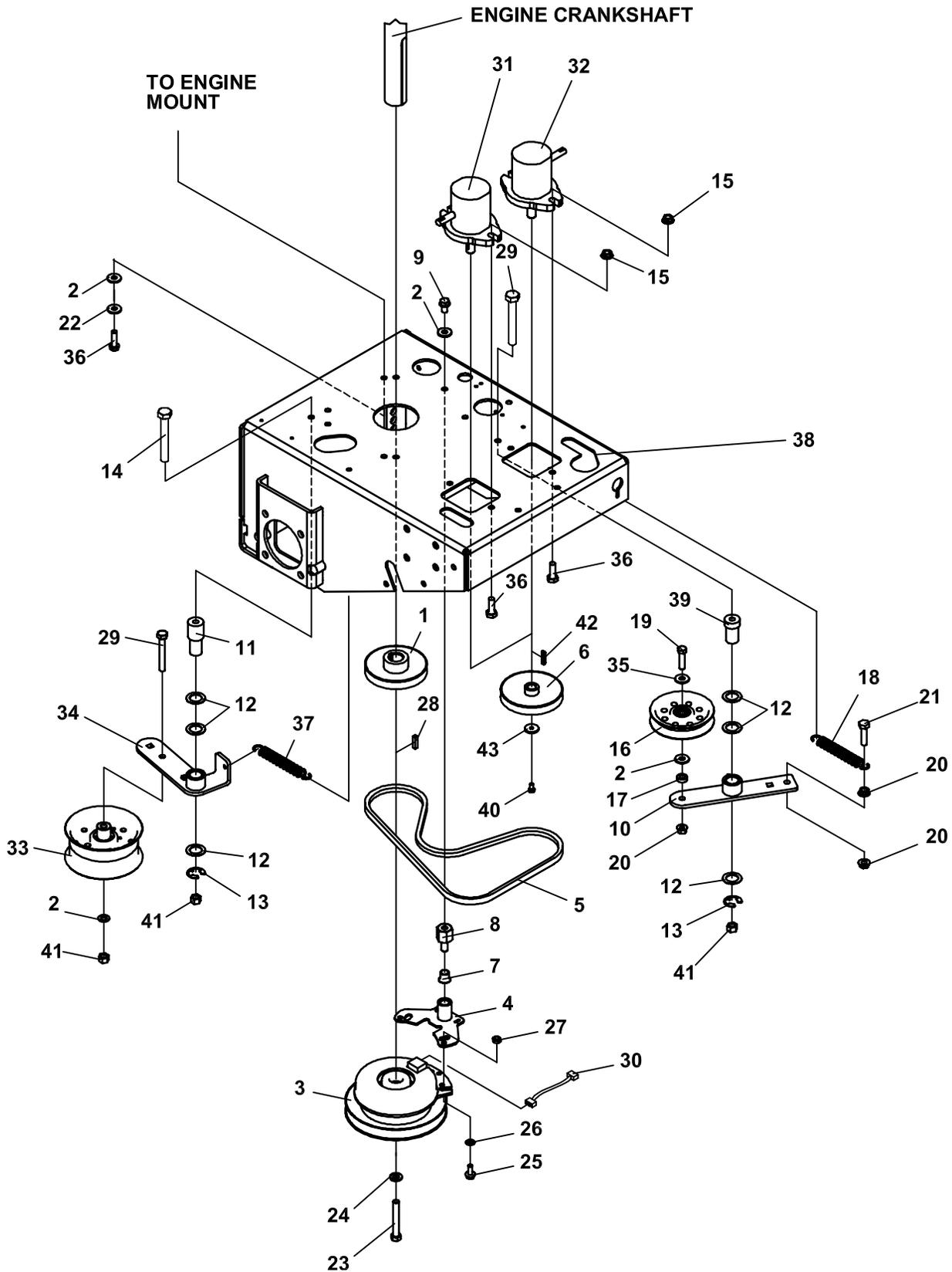
ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4165291	CAP-FUEL GASOLINE 3.5	1	27	69216.7	CAP-RESERVOIR	1
2	4174266	TANK-FUEL	1	28	4164359	MUFFLER-MIDSIZE FS600	1
3	4169746	VALVE-INLINE FUEL	1	29	4163016	VALVE-FUEL	1
4	88042-1	CLAMP-HOSE 3/16	2	30	4162989-001	HOSE-FUEL	1
5	88042N	HOSE CLAMP	6	31	4132325	GROMMET-FUEL TANK	1
6	4162977-001	HOSE,FUEL LINE 56"	1	32	4174343	GROMMET-RLLOVER VNT	1
		6A CUT TO 2"		33	4165763	VENT-FUEL TANK	1
		6B CUT TO 18.5"		34	4165561-2	TUBE-FUEL, PICK UP	1
		6C CUT TO 34.5"		35	64123-16	BLT-HEX 3/8-16X1-1/4	4
7	4168368	FILTER, FUEL	1	36	4172818	METER-HOUR, INDUCTIVE	1
8	4169053.2	DECK-ENGINE HYDRO	1	37	48228-12	CLIP-CABLE, ISULATED	1
9	64123-39	BOLT-HEX 1/2-13X1-1/4	8	38	4172535.7	BRKT-GUARD MNT, HYDR	1
10	64229-05	LOCKNUT, 1/2-13 NYLON	8	39	4172875.7	WLDMT-MUFFLER GUARD	1
11	64123-50	BLT-HEX 3/8-16X1	3	40	64229-03	NUT-NYLON LOCK 3/8-16	2
12	64163-31	WASHER	7	41	4172817.7	BRKT-HOUR METER	1
13	64006-03	LOCKWSHR-HELICAL 3/8	8	42	64266-02	NUT-FL CRWN LCK M8	2
14	69053-03	HOSE-HYDR 3/8X17"	1	43	64263-007	BLT-FLG HD M8-1.25 X 20	4
15	64229-02	LOCKNUT-NYLON 5/16-18	4				
16	2306127	S-HYD RESEVOIR W/LABS	1				
17	64123-15	BLT-HEX 3/8-16X3/4	3				
18	4172311.7	HANDLE-LOWER P-GRIP	1				
19	64018-9	BLT-CRG 5/16-18 X 3/4	4				
20	4164251	VALVE-OIL DRAIN	1				
21	48412	CLIP-J CABLE 5/8X8.74	1				
22	88042-03	CLAMP--HOSE	2				
23	4164362	ENG- KAW FS541V	1				
	4164537	FILTER-OIL KAW 49065-7007					
	4164535	FILTER-AIR ELEMENT					
	4164586	FILTER-PRE ELEMENT					
24	64205-018	BLT MET M8-1.25X15	1				
25	64002-04	LOCKWASHER, EXT. 5/16	1				
26	4164252-001	FITTING-3/8NPT-3/8 BARB	1				

***NOT ILLUSTRATED**

LOWER ENGINE DECK ASSY/CLUTCH

Hydro
Midsize

FIGURE 2



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	2721647	PULLEY-4.50E.O.D.	1				
2	64163-31	WASHER, 25/64 X 1 X 12	7				
3	2721110	CLUTCH-ELECTRIC	1				
		INCLUDES ITEM 30					
4	4173452.7	WLDMT-CLUTCH STOP MID	1				
5	2721642	BELT-HA 49.0	1				
6	4173004	PULLEY- A SECTION 4.50	2				
7	38304-03	BRG-FLANGED PLASTIC	1				
8	4121540	PIN-CLUTCH	1				
9	64123-15	BOLT-3/8-16X3/4 HEX	1				
10	2721641.7	WLDMT-IDLER ARM	1				
11	4116712	PIN-PIVOT	1				
12	64163-65	WASHER 0.890 X 1.375	6				
13	64221-04	E-RING.875	2				
14	64123-138	BLT-HEX 3/8-16X3-3/4	1				
15	64268-03	NUT-FL NYL LOCK 3/8-16	4				
16	2308000	PULLEY-IDLER 4.00 EOD	1				
17	33148-01	SPACER	1				
18	38219	SPRING-TENSION	1				
19	64123-87	BLT-HEX 3/8-16 X 1-3/4	1				
20	64141-4	NUT-WLF 3/8-16	3				
21	64123-70	BOLT-HEX 3/8-16X1-1/2	1				
22	64006-03	WASHER-LOCK	4				
23	64123-155	BLT-HEX 7/16-20 X 3	1				
24	64006-06	LOCKWSHR-HELICAL 7/1	1				
25	64123-54	BOLT, 5/16-18X3/4 HEX	2				
26	64163-55	WASHER .328X.75X14 GA	2				
27	64229-02	LOCKNUT-NYLON 5/16-18	2				
28	64164-12	1/4X1/4X1 SQ END KEY	1				
29	64123-75	BOLT, 3/8-16X3 HEX	2				
30	4131349	ASSY-CLUTCH WIRE	1				
31	4163316	PUMP-HYDRO LH	1				
32	4163317	PUMP-HYDRO RH	1				
33	2721541	PULLEY-IDLER 5 IN	1				
34	2721401.7	WLDMT-IDLER ARM	1				
35	64163-61	WSHR .81X.406X16GA	1				
36	64123-16	BLT-HEX 3/8-16X1-1/4	8				
37	2188131	SPRING-EXTENSION	1				
38	4169053.2	DECK-ENGINE HYDRO	1				
39	4116691	PIN-PIVOT	1				
40	64205-013	BLT-MET M6-1 X 12	2				
41	64229-03	LOCKNUT-NYLON 3/8-16	3				
42	64238-03	KEY-MET 5MM SQ X 28	2				
43	64209-09	WASHER-CONICAL SPRING	2				

DRIVE WHEELS

Hydro Midsize

FIGURE 3

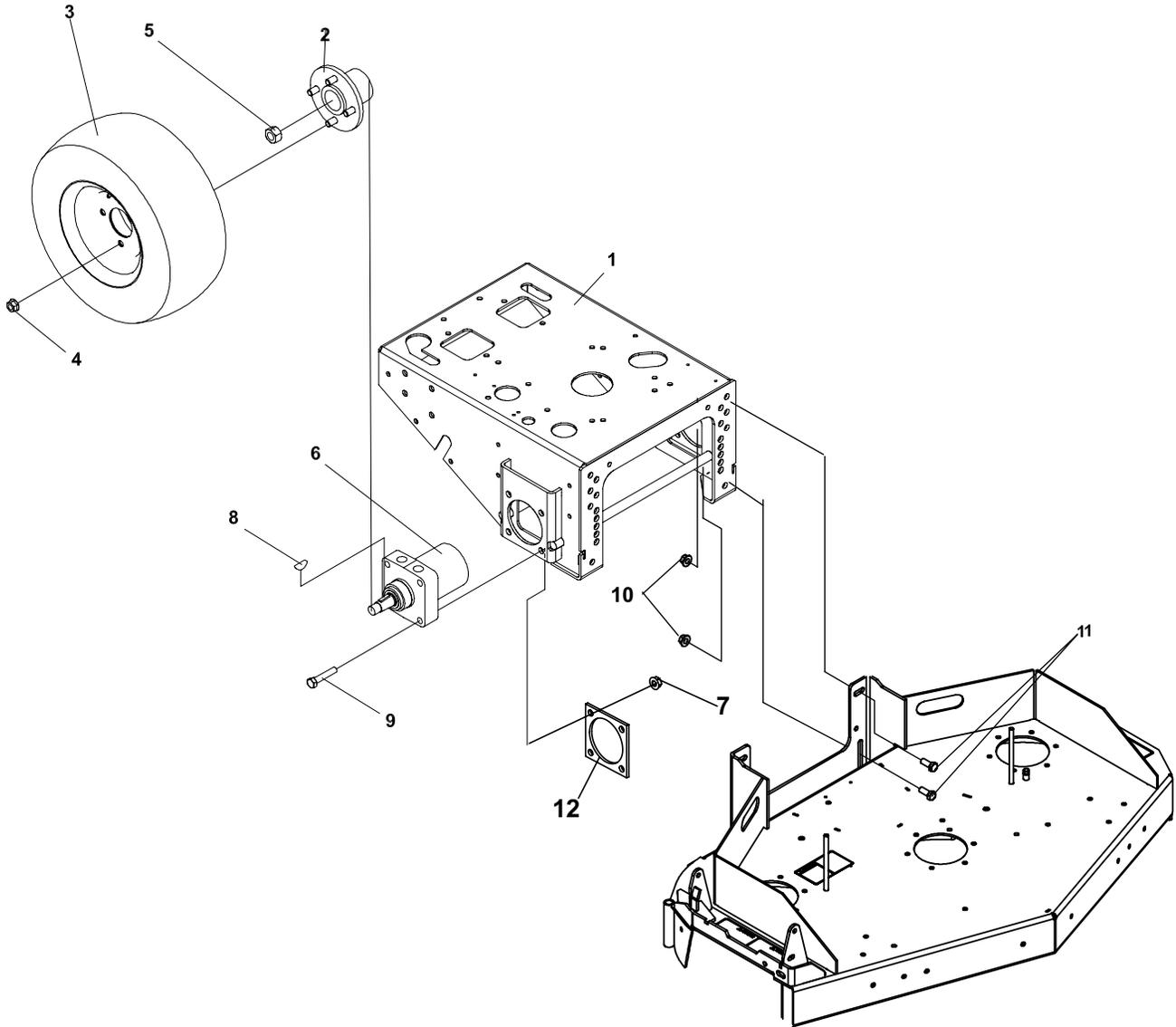


FIGURE 3

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4169053.2	DECK-ENGINE HYDRO	1				
2	2721620	WLDMT-HUB	2				
*	970438	KIT-WHEEL HUB PULLER					
3	4173333	ASSY-WHEEL 16 X 7.50 X 8	2				
	4173333-01	TIRE-16X7.50-8 OTR	1				
	2721956-02	WHEEL W/ DUAL VALVES	1				
	4176305	WHEEL-, 16X7.50-8 BLACK	2				
	4176305-01	RIM-8.00-5.375 BLACK					
4	64267-01	NUT-FL 1/2-20	8				
5	64025-06	NUT-HEX 3/4-16 2A	2				
6	2308051	MOTOR-WHEEL ROSS MF	2				
7	64141-13	NUT WLF 1/2-13	8				
8	64164-28	#808 WOODRUFF KEY	2				
9	64123-72	BLT-HEX 1/2-13X2-1/2	8				
10	64246-04	NUT-WHIZ M12-1.75	4				
11	64263-018	BLT-FLG HD M12-1.75 X 30	4				
12	4169059.7	PLATE-MOTOR CLAMP	2				

***NOT ILLUSTRATED**

PARKING BRAKE

Hydro Midsize

FIGURE 4

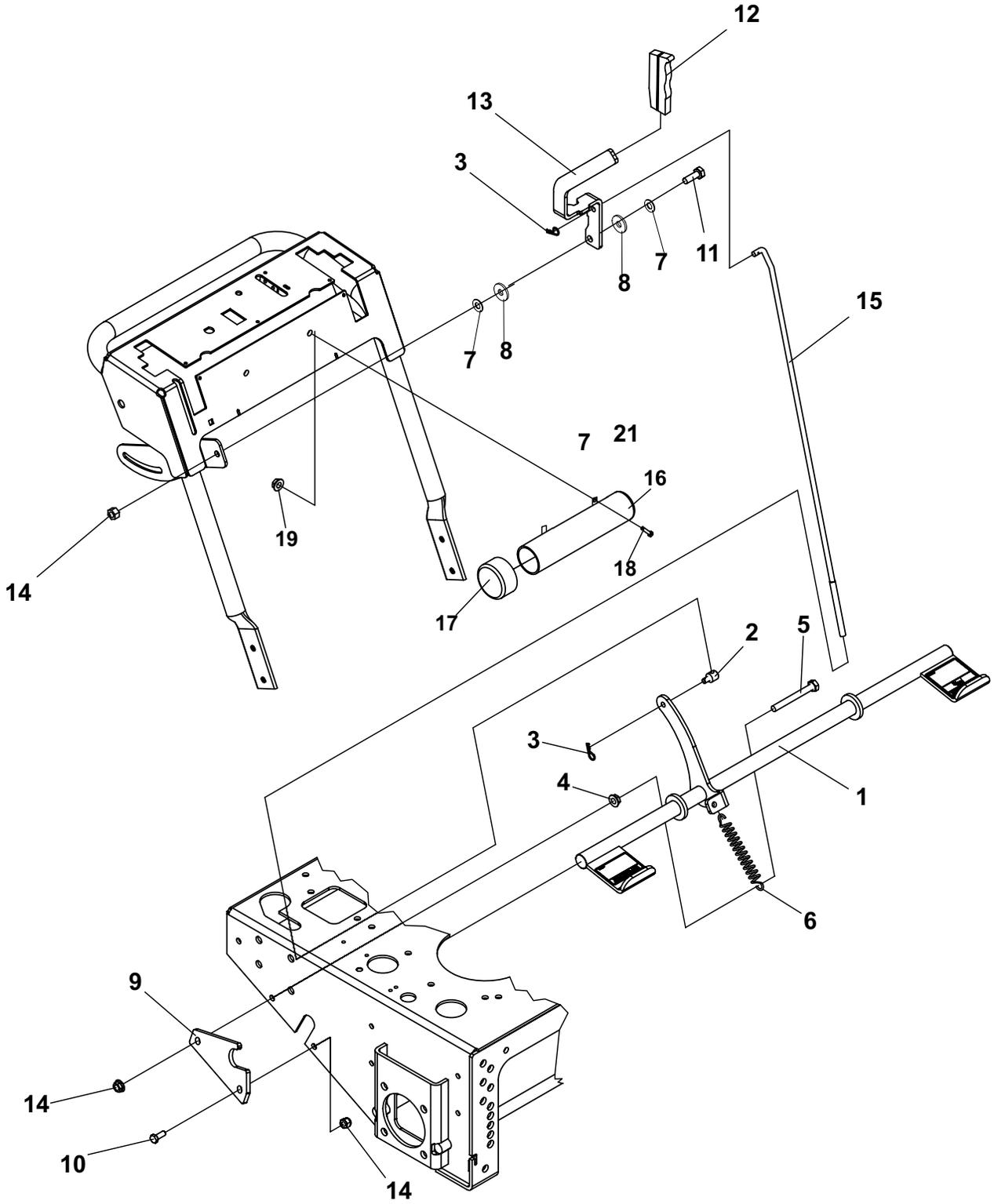


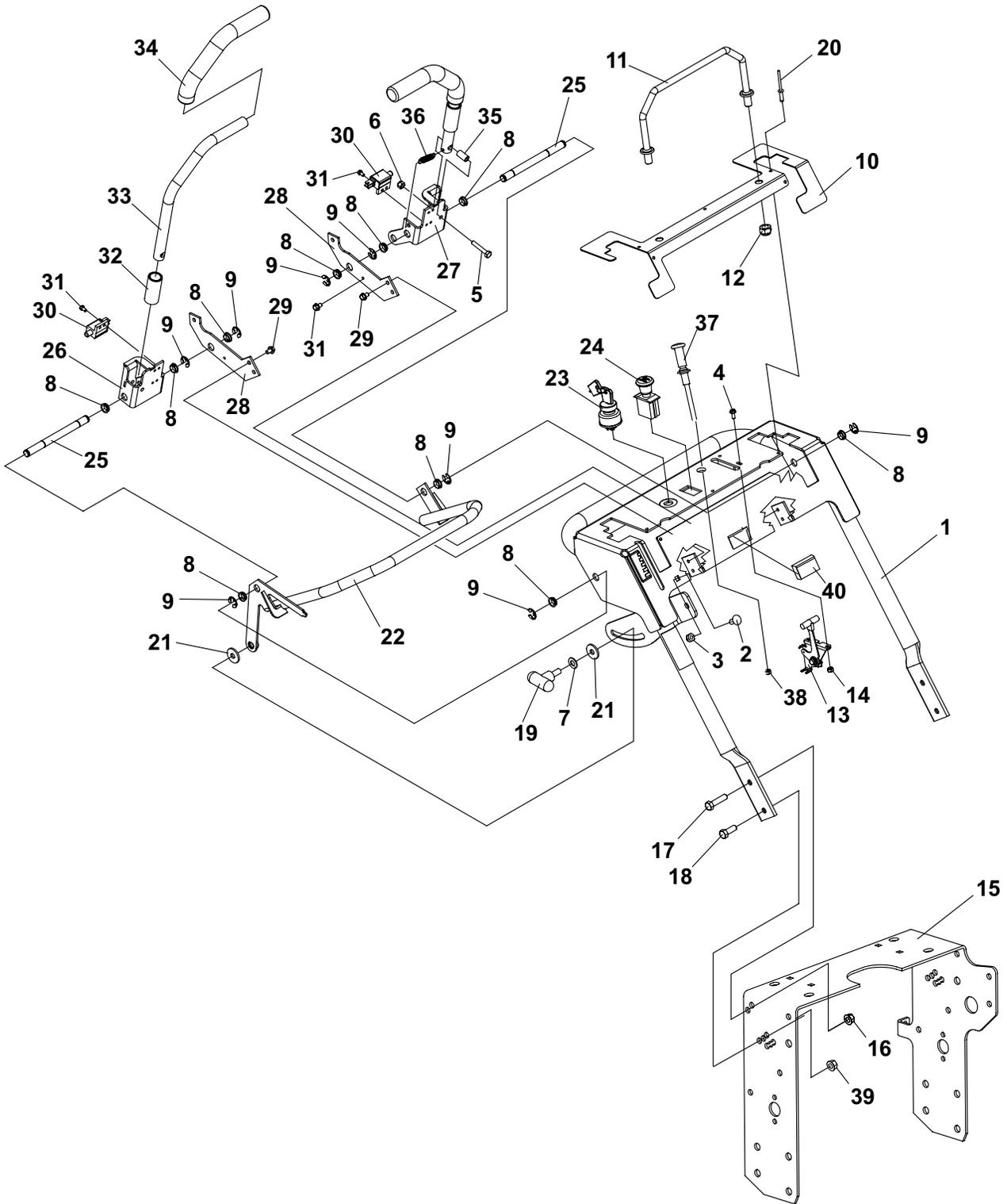
FIGURE 4

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4169401	S-BRAKE SHAFT WLDMT	1				
2	33103	SWIVEL	1				
3	64168-2	COTTER-HAIRPIN.08X1.19	2				
4	64001-6	NUT-HEX JAM 3/8-16	1				
5	64123-138	BLT-HEX 3/8-16X3-3/4	1				
6	2188131	SPRING-EXTENSION	1				
7	64163-31	WSHR 25/64X1X12	2				
8	4169895	WASHER-FRICTION,UHMW	2				
9	4131072.7	PLATE-BRK SHFT RETNR	2				
10	64123-50	BOLT-HEX 3/8-16X1	3				
11	64123-70	BLT-HEX 3/8-16X1-1/2	1				
12	38404-03	GRIP,CONTROL LEVER	1				
13	4172379.7	LEVER-BRAKE ARM	1				
14	64229-03	LOCKNUT-NYLON 3/8-16	5				
15	4172538	ROD-BRAKE	1				
16	4129802	TUBE-DOCUMENT	1				
17	38061A	CAP-DOCUMENT TUBE	1				
18	64262-003	BLT-BLT-FLG HD 1/4-20 X 1	2				
19	64229-01	NUT-NYLON LOCK 1/4-20	2				

RECOIL START UPPER HANDLE

Hydro
Midsize

FIGURE 5



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4166104	S-UP HNDLE W/ LABELS	1				
2	64018-15	BLT-CRG 5/16-18X1	1				
3	64229-02	LOCKNUT-NYLON 5/16-18	1				
4	64152-46	SCREW-SLT HH 10-24X1/2	2				
5	64123-07	BOLT, 1/4-20X1-1/2 HEX	2				
6	64229-01	LOCKNUT-NYLON 1/4-20	2				
7	64163-61	WSHR .81X.406X16GA	1				
8	4116398	BSHG-IGUS, .50 IDX.13 THK	10				
9	64221-05	E-CLIP, .328 ID	8				
10	4118586.7	PANEL-COVER, HYDRO	1				
11	4118392	ROD-REVERSE ASSIST	1				
12	64229-05	LOCKNUT, 1/2-13 NYLON	2				
13	38357-04	CONTROL-THROTTLE	1				
14	64025-15	NUT-HEX #10-24 KEPS	2				
15	4172311.7	HANDLE-LOWER, HYDRO	1				
16	64141-4	NUT-WLF 3/8-16	2				
17	64123-70	BOLT-HEX 3/8-16X1-1/2	2				
18	64123-50	BOLT-HEX 3/8-16X1	2				
19	4114727	KNOB-SPEED CONTROL	1				
20	64215-05	RIVET-POP IFI# 64	5				
21	2308066	WSHR-FRICTION	2				
22	4116405.7	WLDMT-SPEED CONTROL	1				
23	38148	SWITCH-ENGINE STOP	1				
24	2721505	SWITCH-PTO	1				
25	4116374	BAR-HYDRO CONTROL	2				
26	4116404	WLDMT-RH CNTRL, HYDRO	1				
27	4116403	WLDMT-LH CNTRL, HYDRO	1				
28	4116953.7	PLATE-PIVOT SHAFT	2				
29	64152-23	1/4-20X3/8 LG SP SCREW	6				
30	108208	SWITCH-OP PRESENCE	2				
31	64197-032	BLT-TDFM 10-24X1/2 TORX	5				
32	4119625	BHSG-CONTROL LEVER	2				
33	4116376	TUBE-CONTROL	2				
34	4117741	GRIP-MOTION LVR, MIDSZE	2				
35	4116380	SPACER-CONTROL	2				
36	4118378	SPRING-EXTENSION	2				
37	108009-05	CONTROL-CHOKE 55"	1				
38	64025-04	NUT-HEX 3/8-24	1				
39	64268-03	NUT-FL NYLON LK 3/8-16	2				
40	4169919	PLUG-RECT, PLASTIC	1				

TRACTION CONTROLS

Hydro Midsize

FIGURE 6

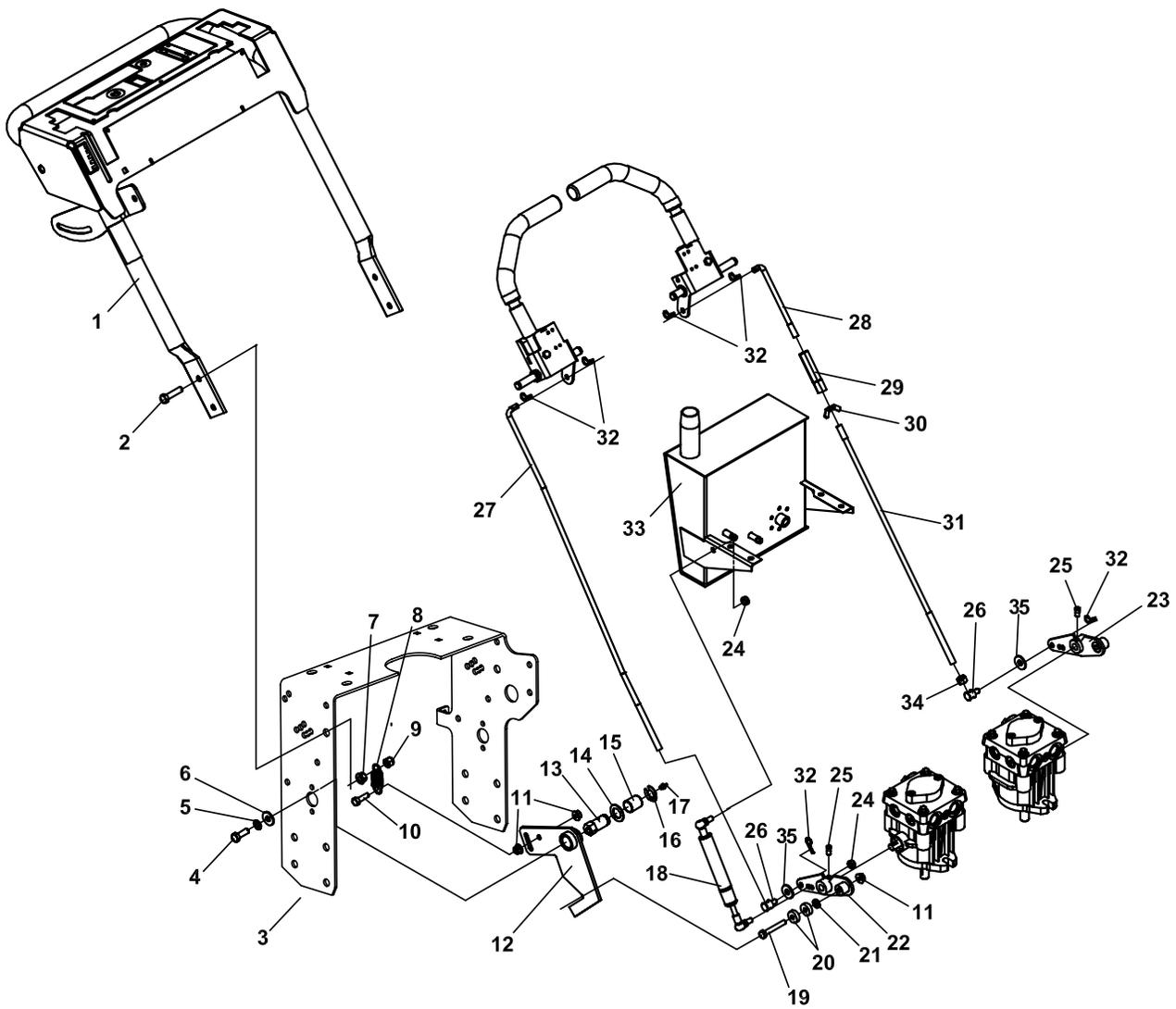


FIGURE 6

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4166104	S-HANDLE UPR RS W/CHK	1				
2	64123-70	BOLT-HEX 3/8-16X1-1/2	2				
3	4172311.7	HANDLE-LOWER, HYDRO	1				
4	64123-02	BLT-HEX 3/8-24X1	2				
5	64006-03	WSHR, 3/8 HELICAL LOCK	2				
6	64163-61	WSHR .81X.406X16GA	2				
7	64141-4	NUT-WLF 3/8-16	2				
8	4119746	SPRING-NEUTRAL RETURN	2				
9	64229-03	LOCKNUT-NYLON 3/8-16	2				
10	64123-68	BOLT-HEX 5/16-18X1	2				
11	64141-6	NUT, 5/16-18	6				
12	2721617.7	WLDMT-SPEED CONTROL	2				
13	2303058	SHAFT-ECCENTRIC (HEX)	2				
14	64163-06	WASHER	2				
15	2308076-02	BEARING-PLASTIC	2				
16	64144-16	RING,CLIP-.75X.062	2				
17	85010N	ZERK, 1/4-28 STR SLFTHRD	2				
18	2228065	DAMPENER	2				
19	64123-56	BLT-HEX 5/16-18X2	2				
20	38372	BEARING-BALL	4				
21	64163-02	WSHR-.321X.593X11GA	2				
22	4114742.7	WLDMT-RH PUMP CNTRL	1				
23	4114745.7	WLDMT-LH PUMP CNTRL	1				
24	64229-02	NUT-NYLON LOCK 5/16-18	4				
25	64192-04	SET SCREW SQ 5/16-18X5/82					
26	33103	SWIVEL	2				
27	4121937	ROD-RH CONTROL	1				
28	4121897	ROD-LH CONTROL, UPPER	1				
29	4121898	TURNBUCKLE-3/8-16	1				
30	64214-02	NUT-WING 3/8-16	1				
31	4121896	ROD-LH CONTROL, LOWER	1				
32	64168-2	COTTER-HAIRPIN.08X1.19	6				
33	2306127	S HYD RESERVOIR W/LABS	1				
34	64001-6	NUT-HEX JAM,3/8-16	1				
35	64163-02	WSHR .321X.593X11GA	2				

FIGURE 7

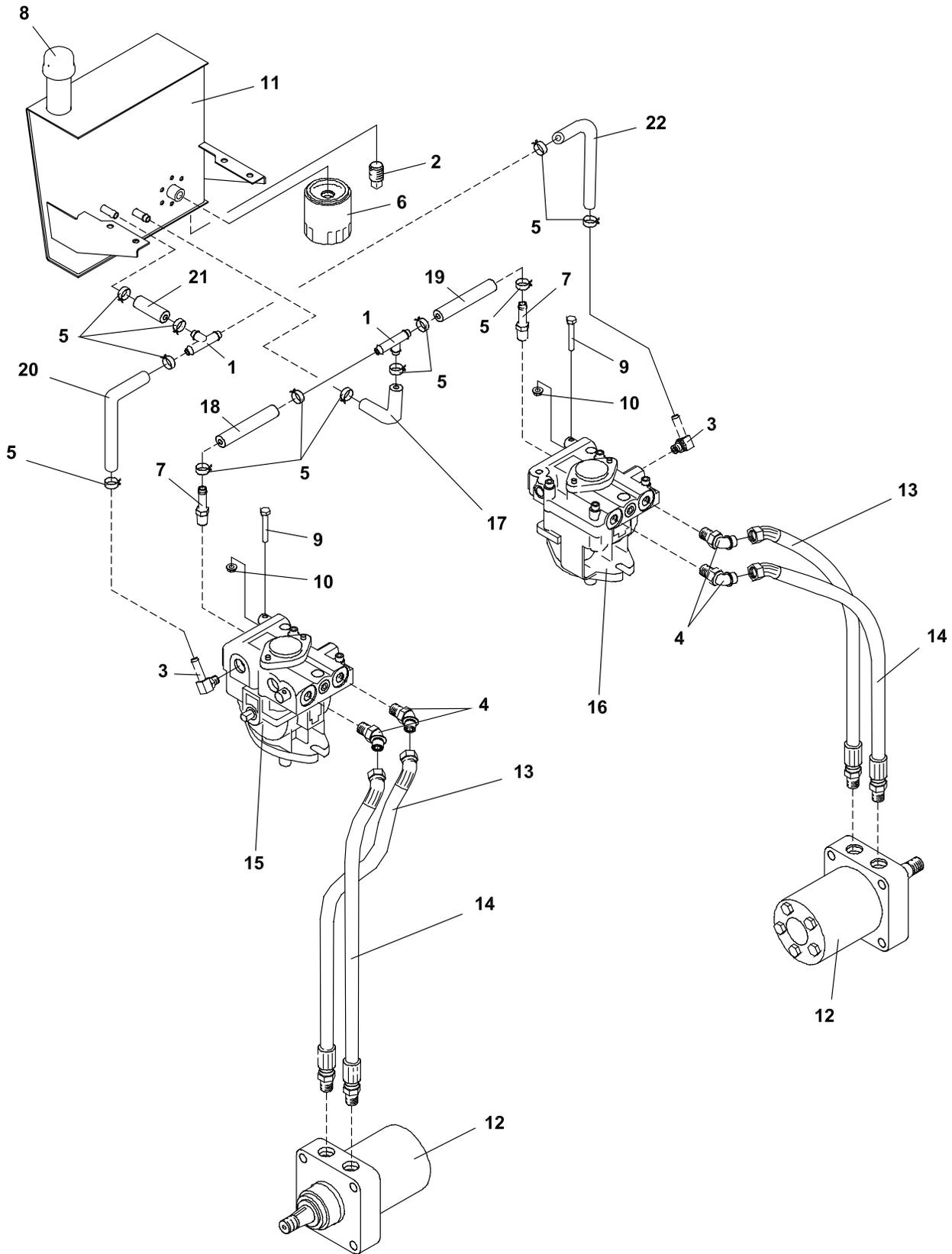


FIGURE 7

ITEM	PART NO.	DESCRIPTION	QTY
1	58026-01	3-WAY CONNECTOR	2
2	108029	PLUG, MAGNETIC	1
3	158058-04	FITTING-90 BARB, ADJ.	2
4	108205-02	ELBW-MALE 45 8X8 37-ORB	4
5	88042-04	CLAMP-HOSE 5/8"	12
6	2720396	FLTR, 25 MCRN SM CAM	1
7	69060-01	FTG-BARB 9/16 X 3/8 ST	2
8	69216.7	CAP-RESERVOIR	1
9	64123-60	BOLT, 1/4-20X2 HEX	2
10	64229-01	LOCKNUT-NYLON 1/4-20	2
11	2306127	S HYD RESER W/LABS	1
12	2308051	MOTOR WHEEL ROSS	2
13	2692300-01	HOSE-1/2 37/ORB X 18.5 LG	2
14	2692300-02	HOSE-1/2 37/ORB X 20.5 LG	2
15	4163317	PUMP-HYDRO RH	1
		SEE FIG 12 FOR PARTS BREAKDOWN	
16	4163316	PUMP-HYDRO LH	1
		SEE FIG 12 FOR PARTS BREAKDOWN	
(69053-05 IS A SERVICEABLE LENGTH OF 55")			
17	69053-05	3/8 HI TEMP HOSE 17.0"	1
18	69053-05	3/8 HI TEMP HOSE 5.0"	1
19	69053-05	3/8 HI TEMP HOSE 5.0"	1
20	69053-05	3/8 HI TEMP HOSE 7.5"	1
21	69053-05	3/8 HI TEMP HOSE 6.8"	1
22	69053-05	3/8 HI TEMP HOSE 12.0"	1

SERVICEABLE HYDRAULIC O-RINGS

SAE PORT 'O' RING		
PART NUMBER	THREAD SIZE	AS-568#
158061-10	9/16-18	-906
158061-11	3/4-16	-908
158061-12	7/8-14	-910
158061-13	1-1/16-12	-912
158061-14	1-5/16-12	-916
158061-16	1-5/8-12	-920
158061-03	1-7/8-12	-924

NOTE:
DO NOT use teflon tape on any hydraulic fittings.
 Use a liquid pipe sealant.

FIGURE 8

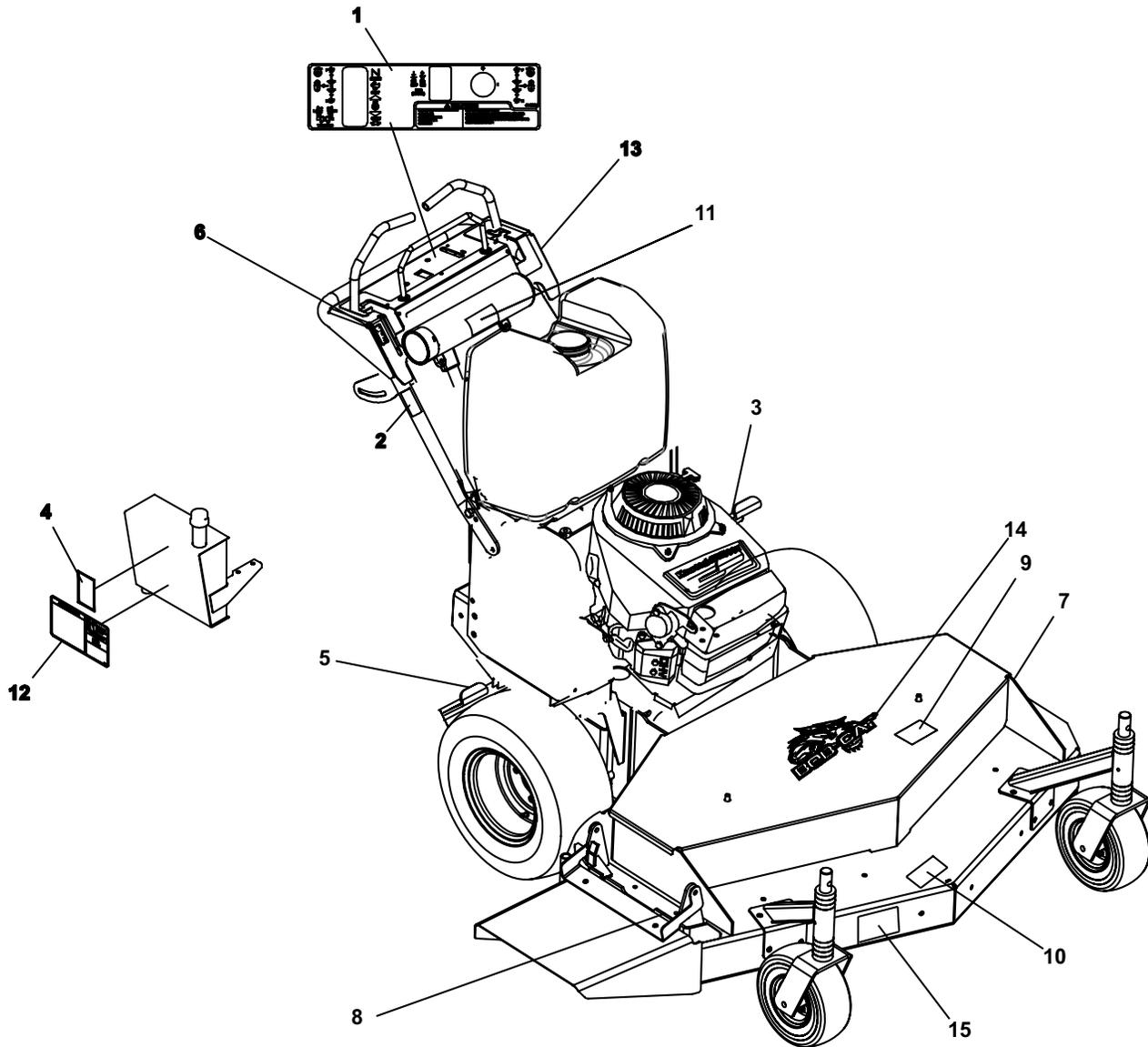


FIGURE 8

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4164568	LABEL-CTRL PNL W/CHOKE	1				
2	2000672	LABEL-PARKING BRAKE	1				
3	2000570	LABEL-WARN FUEL PICT	1				
4	340830	DECAL-CAUTION SPANISH	1				
5	2000571	LABEL-IMPORTANT	1				
6	4120215	LABEL-SPEED CONTROL	1				
7	2000572	LABEL-WARNING BLADES	1				
8	4164269	LABEL-DANGER/WARNING	1				
9	2000678	LABEL-ROT PRTS/B-WSHR	1				
		LOCATED UNDER BELT COVER					
10	4116761	LABEL-USA	1				
11	2000673	DECAL - OP MAN/TIRES	1				
12	2000661	LABEL-HYD TANK WARN	1				
13	4166105	LABEL-Z CONTROL	1				
14	4158401	LABEL-BOBCAT, L	1				
15	4162914	LABEL-DECK SIZE, 48	1				
	4162912	LABEL-DECK SIZE, 36	1				

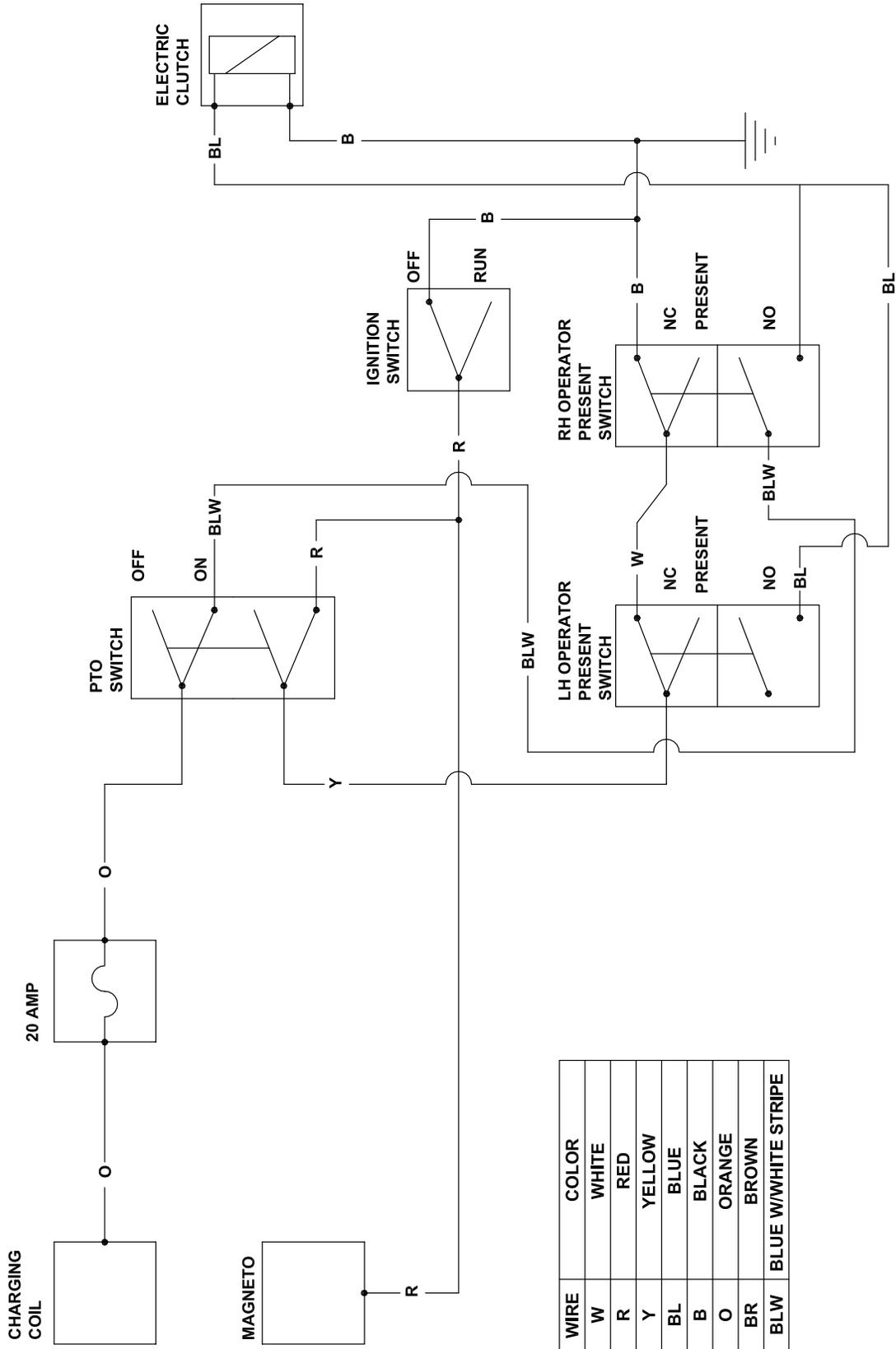
FIGURE 9

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	2721110	CLUTCH-ELECTRIC INCLUDES ITEM 2	1				
2	4131349	ASSY-CLUTCH WIRE	1				
3	2722033	SWITCH-NEUTRAL	1				
4	38148	SWITCH-ENGINE STOP	1				
5	108208	SWITCH DBL POLE NC/NO	1				
6	148082-10	FUSE 10 AMP	1				
7	2721505	SWITCH-PTO	1				
8	4166845	HARNES-MID GEAR DRV INCLUDES ITEM 6 & 9	1				
9	2722325	RELAY-40 AMP SEALED	1				

WIRING SCHEMATIC-RECOIL START

Hydro
Midsize

FIGURE 10



**THIS PAGE LEFT
BLANK INTENTIONALLY**

FIGURE 11

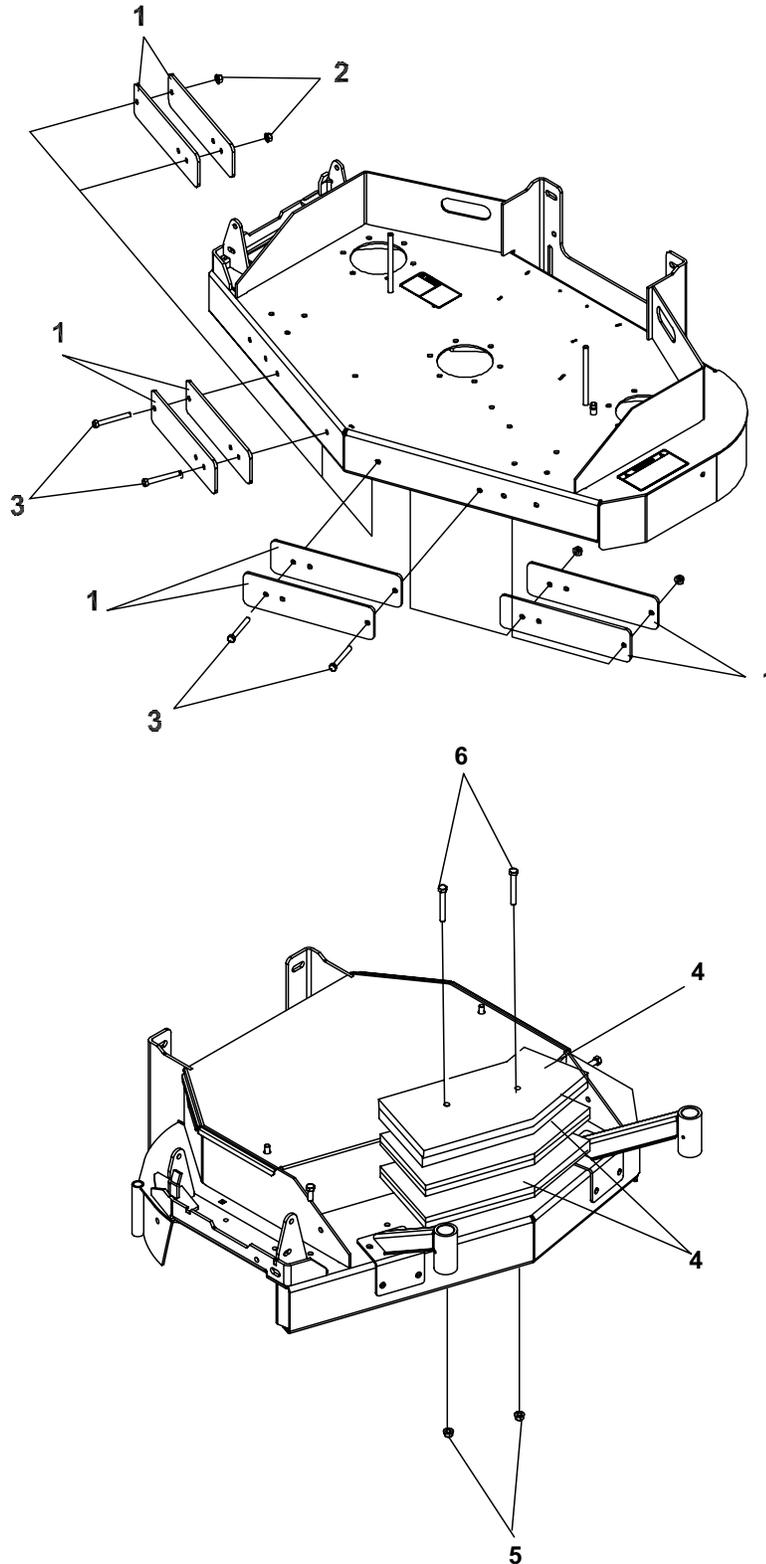
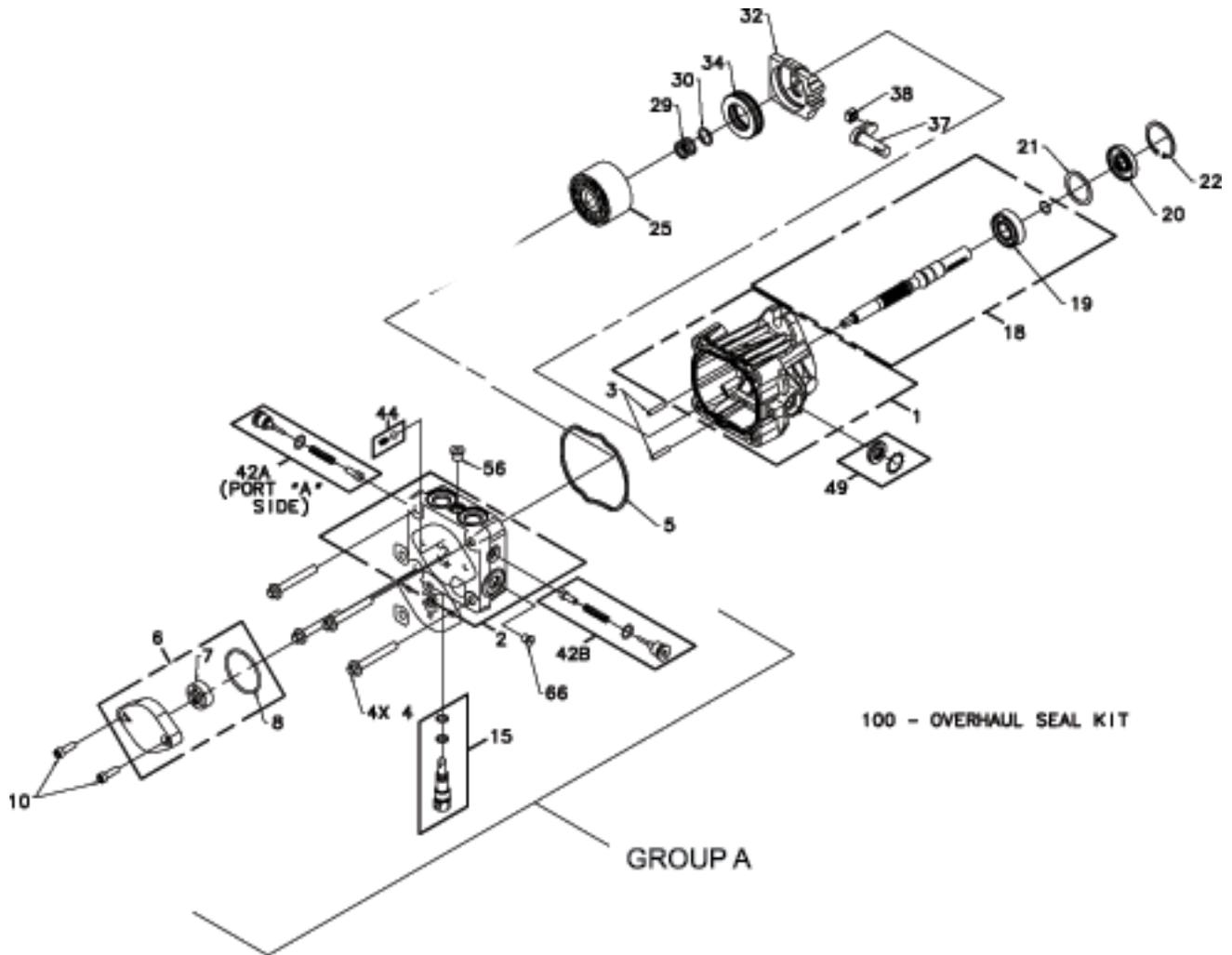


FIGURE 11

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4163349.7	WEIGHT	8				
2	64229-03	NUT-NYLOC 3/8-16	4				
3	64123-82	BOLT, 3/8-16X2 1/2 HEX	4				
		ITEMS 1-3 USED ON 48" ONLY					
4	4163960.7	COVER-36 SD WEIGHT	1				
5	64268-03	NUT-FLG LOCK 3/8-16	2				
6	64123-79	BOLT, 3/8-16X3-1/4 HEX	2				
		ITEMS 4-6 USED ON 36" ONLY					

FIGURE 12



4163317 PUMP-HYDRO RH ILLUSTRATED AS SHOWN

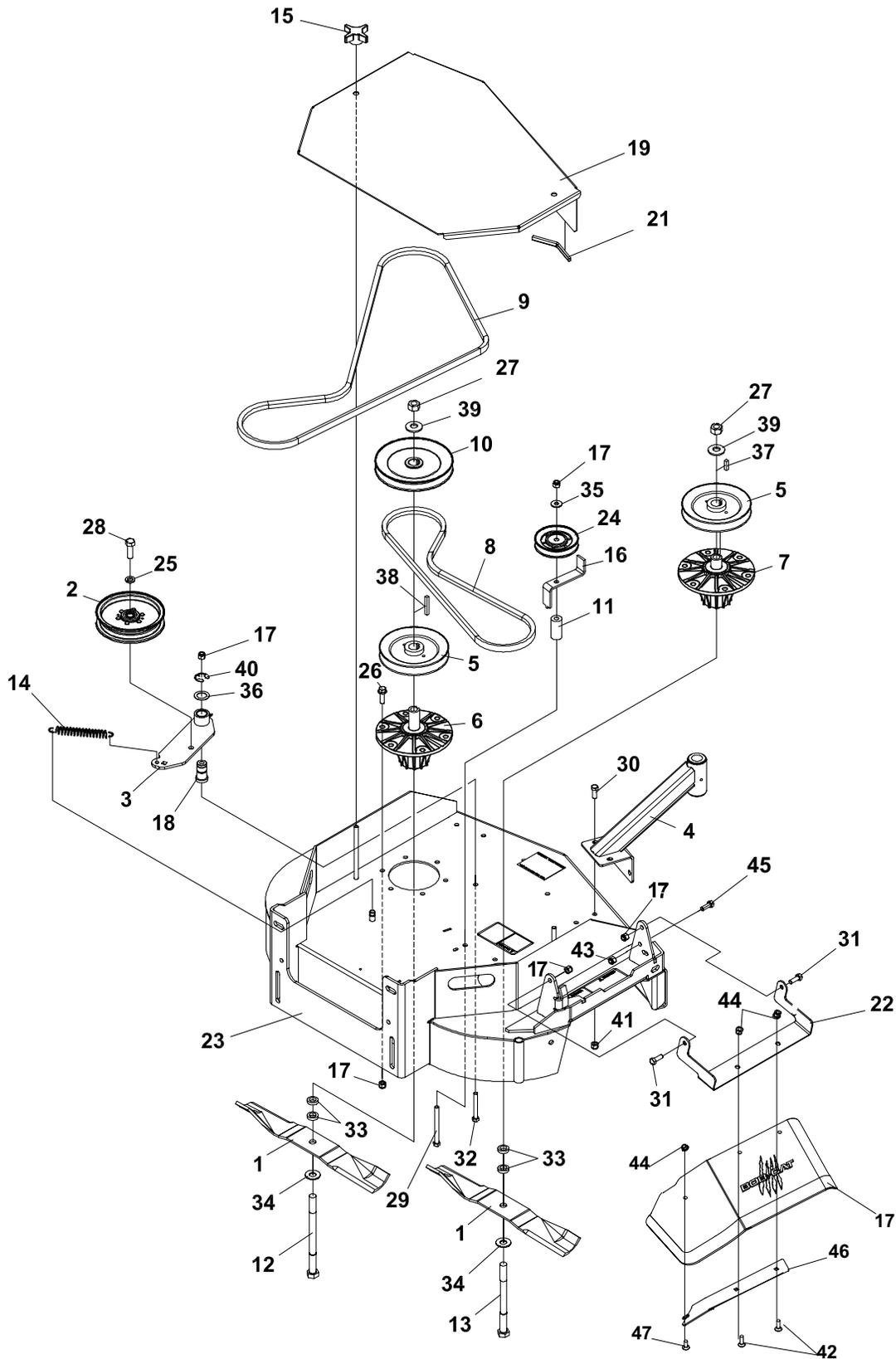
**4163316 PUMP-HYDRO LH ILLUSTRATED AS SHOWN EXCEPT GROUP A IS ROTATED
180° AROUND THE CENTERLINE OF THE PUMP.**

1	70516	----	HOUSING KIT	1
2	71615	----	END CAP KIT	1
3	50641	----	STRAIGHT HEADLESS PIN	2
4	50969	2721615-01	FLANGE BOLT M8-1.25 X 60	4
5	52629	4163316-01	HOUSIGN O-RING	1
6	2513027	2721615-03	CHARGE PUMP KIT (STD)	1
7	50273	2721615-04	STD GEROTOR ASSEMBLY	1
8	9004101-1340	2721615-05	O-RING	1
10	50975	4163316-02	SOCKET HEAD M6-1/0 X 20	2
15	2513030	----	BYPASS VALVE KIT (BLANK)	1
18	70521	2721615-07	PUMP SHAFT KIT	1
19	50315	----	BALL BEARING 17 X 40 X 12	1
20	51161	----	LIP SEAL 17 x 40 x 12	1
21	50951	----	SPACER	1
22	50329	----	RETAINING RING	1
25	70723	4163316-03	CYLINDER BLOCK KIT	1
29	2003014	----	BLOCK SPRING	1
30	2003017	----	BLOCK THRUST WASHER	1
31	51246	2721615-09	VALVE PLATE	1
32	2003087	2721615-10	SWASHPLATE	1
34	50551	2721615-11	BALL THRUST BEARING	1
37	2003005	2721615-12	TRUNNION ARM	1
38	2000015	2721615-13	SLOT GUIDE	1
42A	2510027	2721615-14	CHECK VALVE KIT (.031")	1
42B	2510050	2721615-15	CHECK VALVE KIT (BLANK)	1
44	70402	4163316-04	CHARGE RELIEF VALVE KIT	1
49	2513043	2721615-17	TRUNNION SEAL/RETAINER KIT	1
56	9005110-4400	----	STRAIGHT THREAD PLUG	1
66	9005110-3100	----	5/16 SAE PLUG	1
100	70525	2721615-18	OVERHAUL SEAL KIT	1

MOUNTING-36" FIXED DECK

Hydro
Midsize

FIGURE 13



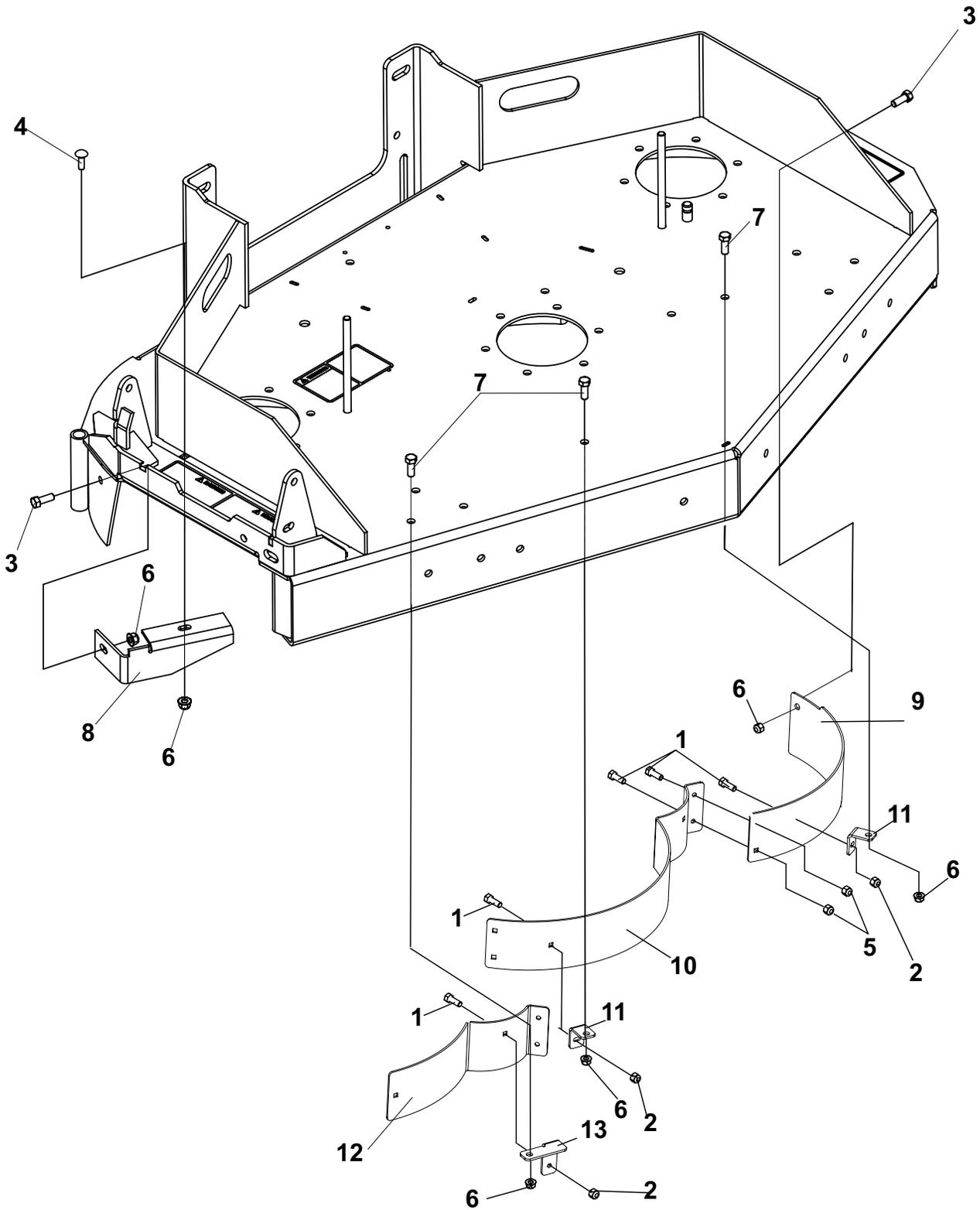
ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	112111-02	BLADE 18.00 OFFST HLFT	2				
	112111-02-LE	BLADE 18.00 LASER EDGE (OPT)					
2	4176836	PULLEY, IDLER 5.50	1				
3	4163871.7	WLDMT-DECK IDLER	1				
4	4124108	S CASTER SUPPORT	2				
5	2308140	PULLEY-ENGINE	2				
6	2721097	S-ASSY SPINDLE 6 LONG	1				
7	4171184	S-ASSY SPINDLE 6 SHORT	1				
8	2721477	BELT-HB 56.75	1				
9	2721478	BELT-HB 85.25	1				
10	2721479	PULLEY-6.75	1				
11	2721485	SPACER-IDLER	1				
12	64123-77	BLT-HEX 5/8-18X8 1/2	1				
13	64123-265	BLT-HEX 5/8-18X7 1/2	1				
14	38219	SPRING-TENSION	1				
15	38524	KNOB-4 PRONG 3/8-16	2				
16	4115420.7	GUIDE-BELT	1				
17	64229-03	LOCKNUT-NYLON 3/8-16	16				
18	4116661	PIN-PIVOT	1				
19	4119064.2	COVER-BELT, 36 FIXED	1				
20	4168131	CHUTE-DISCRG, PLASTIC	1				
21	108074-13	FLEX TRIM 44.38	1				
22	4164932.7	BRKT-CHUTE SUPPORT	1				
23	4121969	S-36SD FIXED DK W/ LABS	1				
24	4135265	PULLEY-V IDLER	1				
25	64006-05	LOCKWSHR-HELICAL 1/2	1				
26	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	12				
27	64025-16	NUT-HEX 5/8-18	2				
28	64123-05	BLT-HEX 1/2-20X1-1/2	1				
29	64123-139	BOLT-3/8-16X4 HEX	1				
30	64262-010	BLT-FLG HD 3/8-16 X 3/4	8				
31	64123-50	BOLT-HEX 3/8-16X1	2				
32	64123-88	BOLT, 3/8-16X2-3/4 HEX	1				
33	64163-12	.635/.640X1.0X.25 WASH	4				
34	64163-16	WSHR-41/64X1-3/8X12GA	2				
35	64163-31	WASHER, 25/64X1X12	1				
36	64163-65	WASHER-.890X1.375X18GA	1				
37	64164-12	KEY-1/4X1/4X1 SQ END	1				
38	64164-13	1/4X1/4X2 SQ KEY	1				
39	64209-03	SPRING WASHER.67 ID	2				
40	64221-04	E-RING.875	1				
41	64141-4	NUT-WLF 3/8-16	10				
42	64018-7	BLT-WLF 3/8-16 X 1 -1/4	2				
43	64141-2	NUT-WLF 1/4-20	1				
44	64268-03	NUT-FL NYLON LOCK 3/8-16	3				
45	64123-89	BLT-HEX 1/4-20X3/4	1				
46	4169946.7	PLATE-CHUTE, SUPPORT	1				
47	64018-3	BLT-CRG 3/8-16X1	1				

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4127488	S 52 SD CUT DECK W/ LABS	1	34	64209-03	SPRING WASHER.67 ID	3
2	112111-02	BLADE 18.00 OFFST HLFT	3	35	64221-04	E-RING.875	1
	112111-02-LE	BLADE 18.00 LASER EDGE (OPT)		36	64229-03	LOCKNUT-NYLON 3/8-16	22
3	128110	BELT-CUTTERDECK 48	1	37	64018-7	BLT-CRG 3/8-16X1-1/4	2
4	4176836	PULLEY, IDLER 5.50	1	38	64141-2	NUT-WLF 1/4-20	1
5	2188131	SPRING-EXTENSION	1	39	64268-03	NUT-FL NYLON LOCK 3/8-16	3
6	4124108	S-CASTER SUPPORT 9 IN.	2	40	2721512	ROLLER-5X2.75 CENTERED	1
7	2308140	PULLEY-ENGINE	3	41	4167554-01	BEARING-SPINDLE SEALED	2
8	4171185	S-ASSY SPINDLE 6 LONG	1	42	33179-02	SPINDLE-SHORT	1
9	4171184	S-ASSY SPINDLE 6 SHORT	2			USED IN ITEM 9	
10	2722160	BELT-HB 73.00	1	43	33179-01	SPINDLE-LONG	1
11	2722161	PULLEY-6.75 EOD	1			USED IN ITEM 8	
12	64123-77	BLT-HEX 5/8-18X8 1/2	1	44	2721096	HOUSING-SPINDLE 6 HOLE	1
13	64123-265	BLT-HEX HD 5/18-18X7 1/2	1	45	4169946.7	PLATE-CHUTE, SUPPORT	1
14	38524	KNOB-4 PRONG 3/8-16	2	46	38315	NUT-SPINDLE	1
15	4110580.7	WLDMT-IDLER	1	47	2720685	SPACER-ROLLER	1
16	4116661	PIN-PIVOT	1	48	64123-173	BLT-HEX 3/8-16X4-1/2	1
17	4168131	CHUTE-DSCHRG, PLASTIC	1	49	64163-02	WSHR .328X.608X11GA	1
18	64123-89	BLT-HEX 1/4-20X3/4	1	50	64018-3	BLT-CRG 3/8-16X1	1
19	4119515.2	WLDMT-COVER BELT 48	1				
20	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	18				
21	4164932.7	BRKT-CHUTE SUPPORT	1				
22	64006-05	LOCKWSHR-HELICAL 1/2	1				
23	64025-16	NUT-HEX 5/8-18	3				
24	64123-05	BLT-HEX 1/2-20X1-1/2	1				
25	64262-010	BLT-FLG HD 3/8-16 X 1	8				
26	64123-50	BOLT-HEX 3/8-16X1	2				
27	64123-88	BOLT, 3/8-16X2-3/4 HEX	1				
28	64163-12	.635/.640X1.0X.25 WASH	6				
29	64163-16	WASHR-41/64X1, 3/8X12GA	3				
30	64141-4	NUT-WLF 3/8-16	10				
31	64163-65	WASHER-.890X1.375X18GA	1				
32	64164-12	KEY-1/4X1/4X1 SQ END	2				
33	64164-13	1/4X1/4X2 SQ KEY	1				

BAFFLES

Hydro Midsize

FIGURE 15

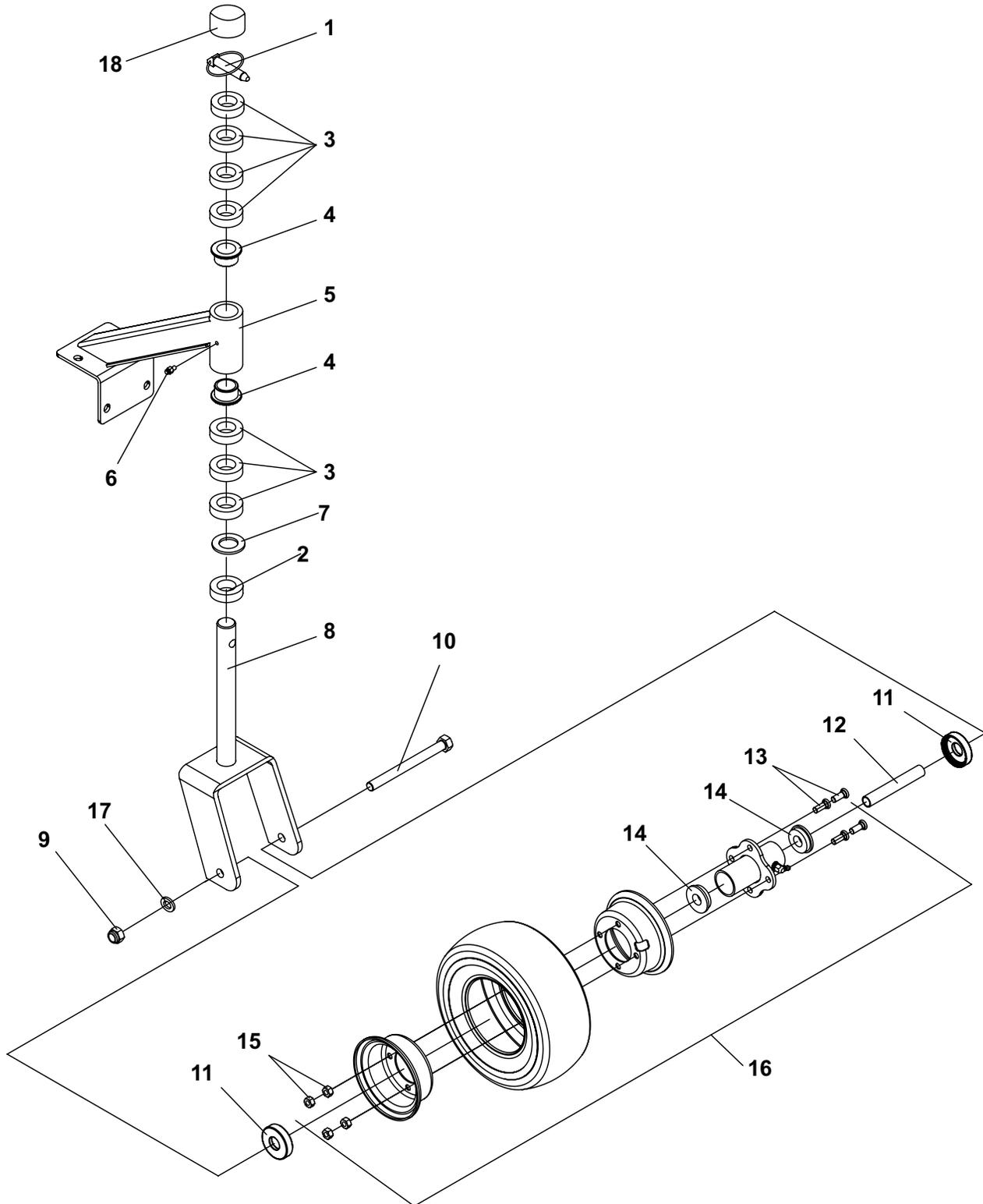


ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	64018-2	BLT-CRG 1/4-20X3/4	7				
2	64268-01	NUT-FL NYLON LCK 1/4-20	3				
3	64123-50	BOLT-HEX 3/8-16X1	2				
4	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	1				
		USED ON 48" DECK					
	64018-3	BLT-CRG 3/8-16 X 1	1				
		USED ON 36" DECK					
5	64229-01	LOCKNUT-1/4-20 NYLON	4				
6	64268-03	NUT-FL NYLON LOCK 3/8-16	6				
7	64123-15	BLT-HEX 3/8-16 x 3/4	3				
8	4120208.7	BAFFLE-DISCHARGE 48	1				
		USED ON 48" DECK					
	4115864.7	BAFFLE DISCHARGE 36	1				
		USED ON 36" DECK					
9	4165971.7	BAFFLE-48 FRONT LH	1				
10	4165972.7	BAFFLE-FRONT CTR	1				
		USED ON 48" DECK					
	4147035.7	BAFFLE-36 FRONT DECK	1				
		USED ON 36" DECK					
11	4168523.7	BRKT-BAFFLE MNTG, LH	2				
12	4168527.7	BAFFLE-FRONT, RH 48IN	1				
		USED ON 48" DECK					
	4134343.7	BAFFLE-RIGHT FRONT 36	1				
		USED ON 36" DECK					
13	4168514.7	BRKT-BAFFLE MNTG	1				

CASTER ASSY-FIXED DECKS

Hydro
Midsize

FIGURE 16



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	64173-04	QUICK PIN	1				
2	64163-07	1-1/32X1-3/4X1/4 WASH	1				
3	64163-22	1-1/32X1-3/4X1/2 WASHR	7				
4	4129801	BUSHING-FLANGED	2				
5	4124108	S CASTER SUPPORT	1				
		INCLUDES ITEMS 4 & 6, QTYS LISTED					
6	85010N	ZERK GREASE FITTING	1				
7	64163-84	WSHR-1.015 X 1.75 X .125	1				
8	2721484.7	WLDMT-CASTER YOKE	1				
9	64229-05	LOCKNUT-NYLON 1/2-13	1				
10	64123-166	BLT-HEX 1/2-13X5-1/2	1				
11	2722591	SPACER-3/4 INCH BRG	2				
12	2722230-04	SPANNER	1				
13	64123-01	BLT-HEX 5/16-24X3/4	4				
14	2722682	BEARING-9" WHEEL	2				
15	64141-1	NUT-WLF 5/16-24	4				
16	4165543	S-WHEEL HUB ASSY	1				
		INCLUDES ITEMS 13-15 AND HUB ASSY					
	4165543-01	S-HUB ASSY					
		INCLUDES ITEMS 13-15 NO WHEEL					
	4165543-02	HUB ASSEMBLY					
	4165543-03	TIRE-SOLID					
	4176306	WHEEL-ASSY 9X3.5-4 BLK	1				
		(INCLUDES ITEMS 13-15 AND HUB ASSY)					
	4165543-03	TIRE-SOLID					
17	64251-005	WSHR-M12	1				
18	4137004	CAP-VINYL	1				

*** NOT ILLUSTRATED**

SCHILLER GROUNDS CARE, INC.
ONE BOB-CAT LANE
P.O. BOX 469
JOHNSON CREEK, WI 53038
920-699-2000
www.schillergc.com

