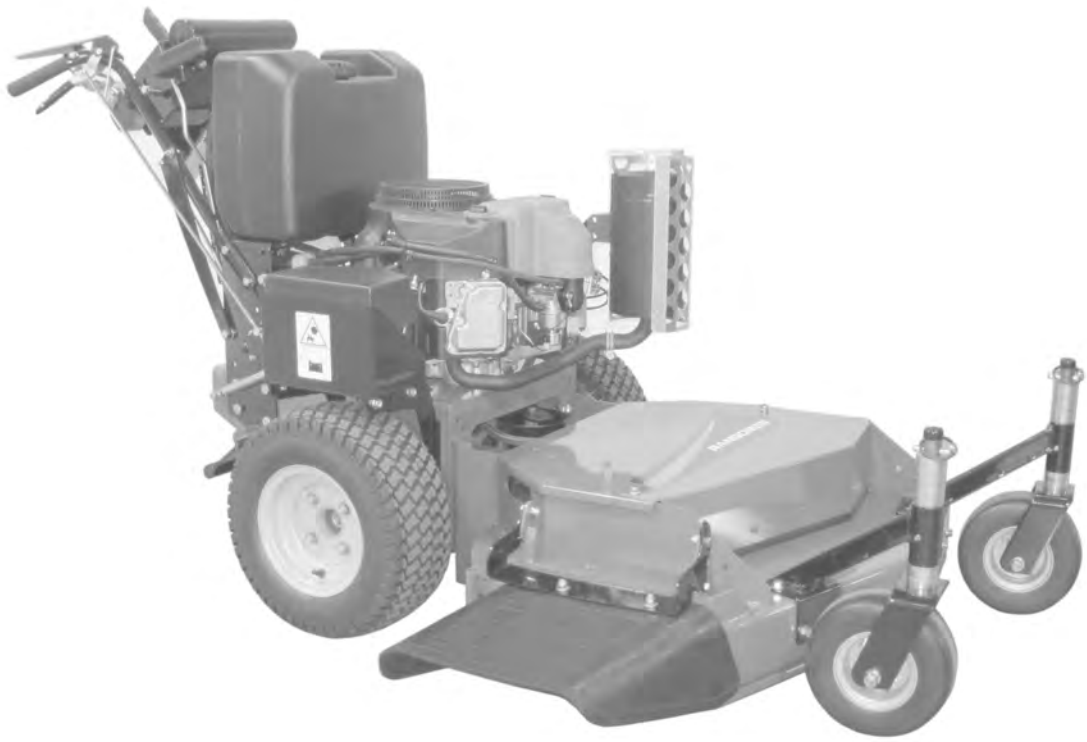
RANSOMES
A Textron Company

SELF PROPELLED WALK BEHIND LAWN MOWER



933304J
36” SIDE DISCHARGE HYDRO MIDSIZE
FS541V KAW ES EU
(S/N 0482 AND ABOVE)

PARTS MANUAL

MAN 4173285
Rev. B 12-2017

OPERATOR’S MANUAL 4173286

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

⚠ WARNING

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

Californie Proposition 65 Avertissement

Les échappements des moteurs diesel et certains de leurs composés sont reconnus par l'Etat de Californie pour être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

California Advertencia

⚠ AVERTISSEMENT

L'émission du moteur de ce matériel contient des produits chimiques que l'Etat de Californie considère être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

de la Proposicion 65

El estado de California hace saber que los gases de escape de los motores diesel y algunos de sus componentes producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

⚠ 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.

CALIFORNIA

Proposition 65 Warning

Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **WASH HANDS AFTER HANDLING.**

IMPORTANT MESSAGE

Thank you for purchasing this Ransomes 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 Ransomes 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. Ransomes service ensures that you continue to receive the best results possible from Ransomes products. You can trust Ransomes replacement parts because they are manufactured with the same high precision and quality as the original parts.

Ransomes 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.

Textron Golf, Turf & Specialty Products
Ransomes Way
Ipswich, England, IP3 9QG

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NOTICE !!!

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

Ransomes strongly warns against, rejects and disclaims any modifications, add-on accessories or product alterations that are not designed, developed, tested and approved by Ransomes 's Engineering Department. Any Ransomes 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 Ransomes –will result in the Ransomes 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 Ransomes will be considered the responsibility of the individual(s) or company designing and/or making such changes. Ransomes 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 Ransomes 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.

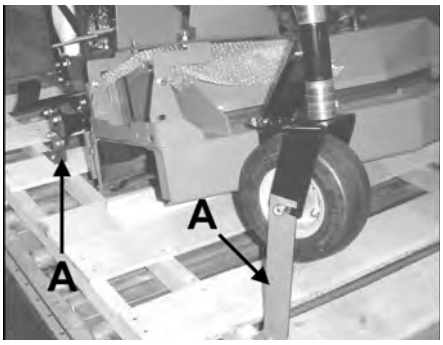
MODEL NUMBER: This number appears on sales literature, technical manuals and price lists.

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

GENERAL NOTE: FRONT, REAR, RIGHT HAND AND LEFT HAND REFERENCES BELOW ARE WITH RESPECT TO AN OPERATOR AT THE CONTROLS.

1. UNCRATE - Place shipping crate on a level surface and remove sides and top.

2. Remove screws securing shipping brackets **A** to pallet. Remove two front shipping brackets and tighten front axle bolts.



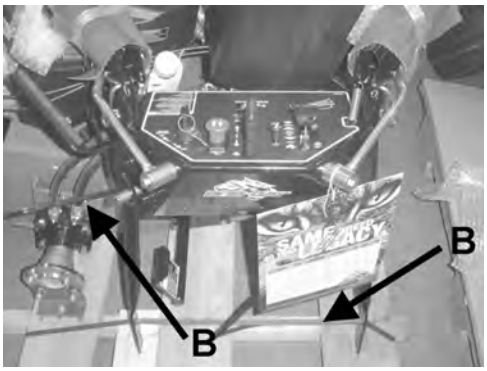
3. Remove wire ties **B** securing tires, upper handle, parking brake rod, rods, and parts bag.

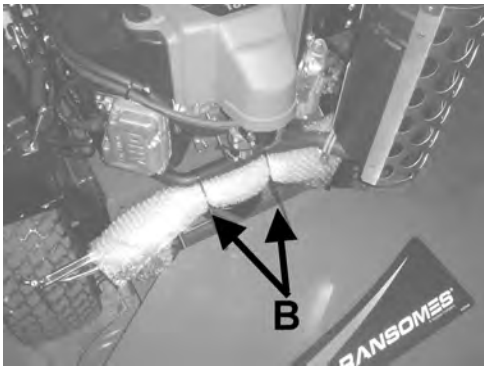
   Support rear of machine at Location **C**, remove the shipping brackets and keep the nuts. Install drive wheels using the nuts removed from the shipping brackets.

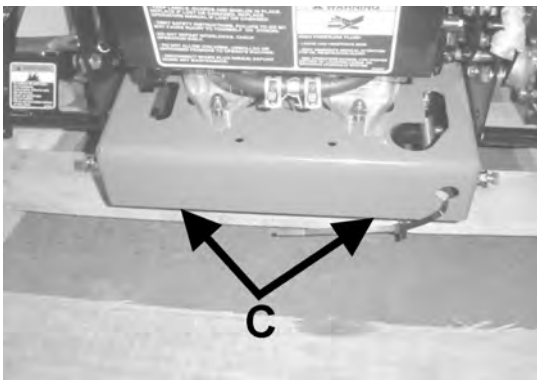
   NOTE: One side of the wheel is dished deeper than the other.

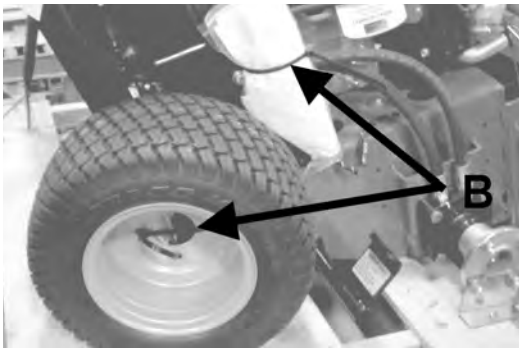
   On 36" units install with the deep dish to the inside.

   Tighten wheel nuts securely. Torque to 85ft./lbs.

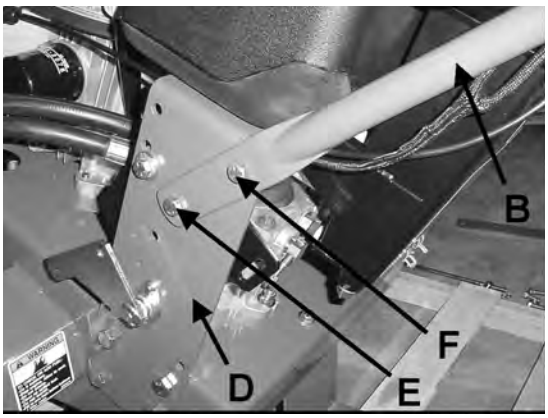








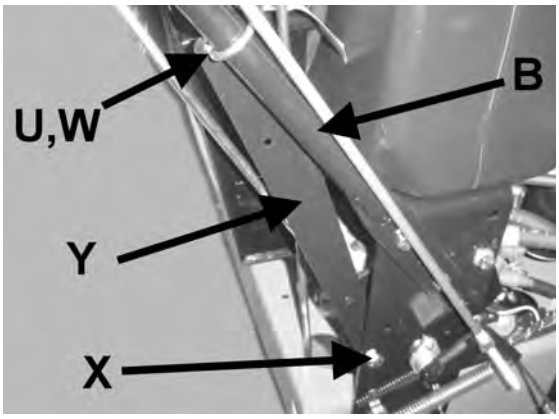
4. Install upper handle **B** to lower handle **D** using (2) 3/8-16 X 1-1/2" bolts and (2) 3/8-16 serrated flange nuts through upper holes **F.** Install (2) 3/8-16 X 1 bolts and (2) 3/8-16 locknuts through hole **E** and one of the three holes on **D** to give desired handle height.



5. Loosen bolt **X** connecting the brace **Y** to lower handles. Align top of brace so the upper handle **B** is between the slot and hole.

6. Install U bolt **U** around upper handle and through hole and lot in the brace.

7. Install nylock nuts **W** on both ends of U-bolt and tighten. Repeat on other side.

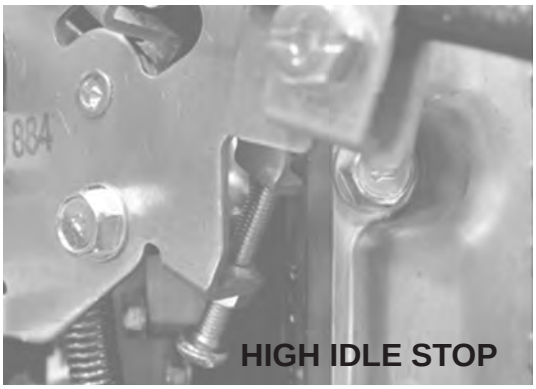


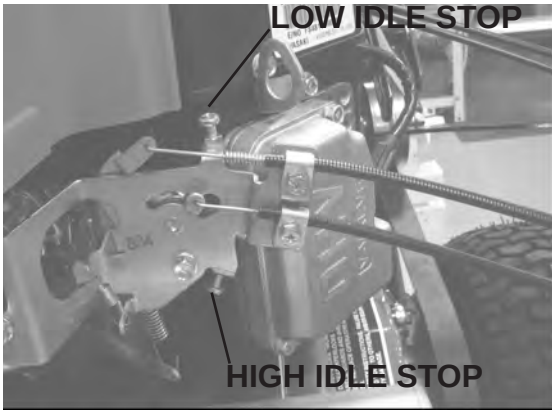
8. After installing handles, make sure to check the throttle and choke setting are correct.

   Check the throttle at idle and full throttle. The lever should contact the upper stop at idle and thelower stop at full throttle.

   Make sure the choke is fully open with the choke cable pused all of the way in, and fully choked with the cable pulled all of the ay out.

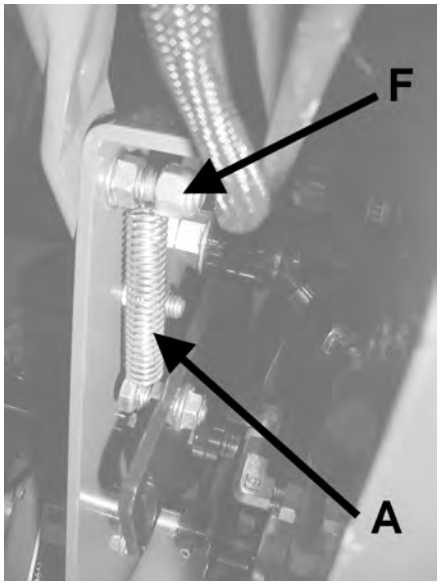
WITH THE CHOKE CABLE PUSHED IN, THE TWO LEVERS SHOULD ALMOST TOUCH.



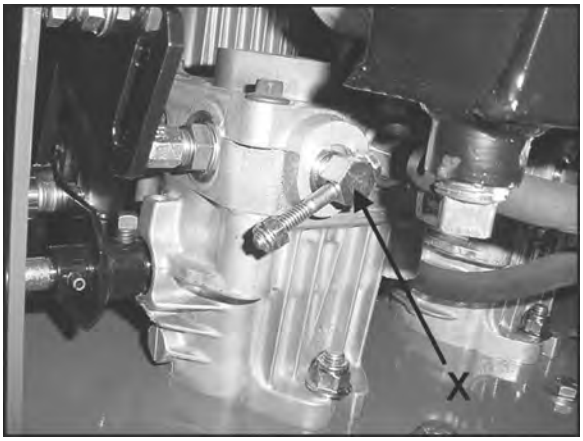


9. Install spring on bolt **A**. Repeat for other side.

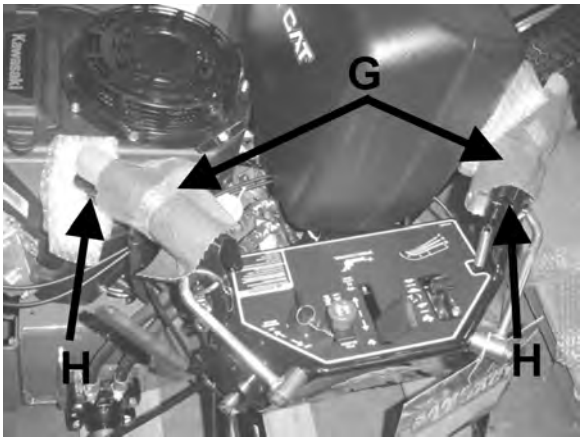
10. Install 3/8-16 nylon locknut **F** to end of bolt on both sides as shown.



11. Open the bypass valves **X** on each pump by rotating handle counter-clockwise two turns.

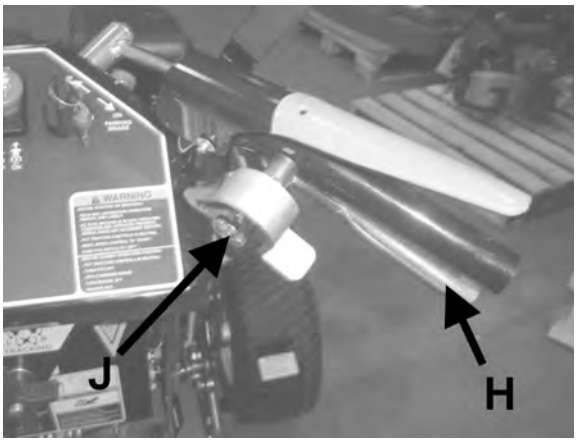


12. Cut and remove tie wrap and foam **G** from the traction control lever **H**.



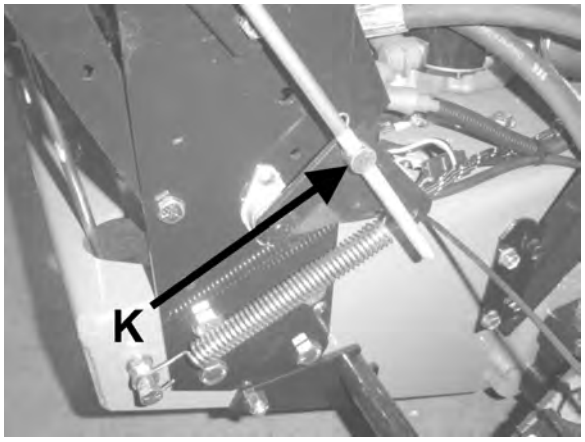
13. Locate the two longest rods with the single bend removed in Step 3. Install the two traction control rods through the traction control lever **H**, flatwasher and traction lock **J** and secure with hairpins. Repeat on other side of upper handle.

NOTE: The flat washer in the inside of the traction control lever.

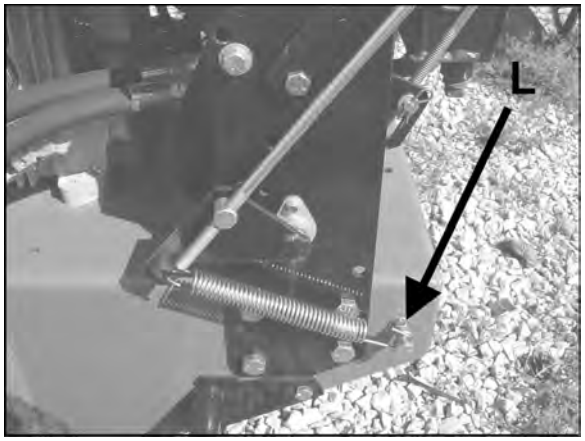


14. With the traction locks **J** in the neutral position, apply tension to the traction control rod to remove any slack and align swivel on traction control rod with the hole in pump arm **K** and install washer and hairpin clip. Repeat for other side.

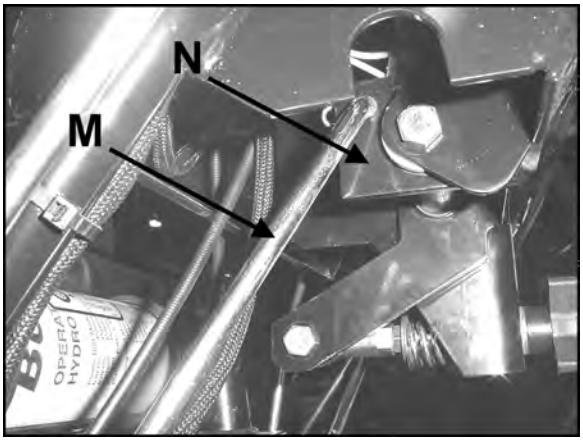
NOTE: The pump arm has some rotational play. Adjust the swivel on the traction control rod to the center of this play and secure to the pump arm with a flatwasher and hairpin as shown.



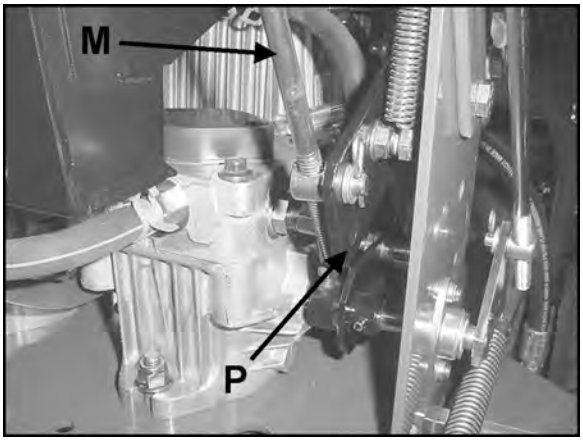
15. Attach spring to pump arm and then to bolt **L**. Repeat for other side.



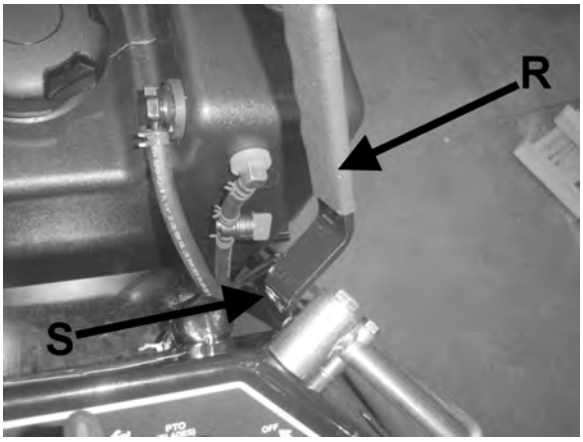
16. Connect speed control rod **M** to the speed control lever **N** and secure with hairpin. Repeat for other side. Install swivel to lower end of rods.

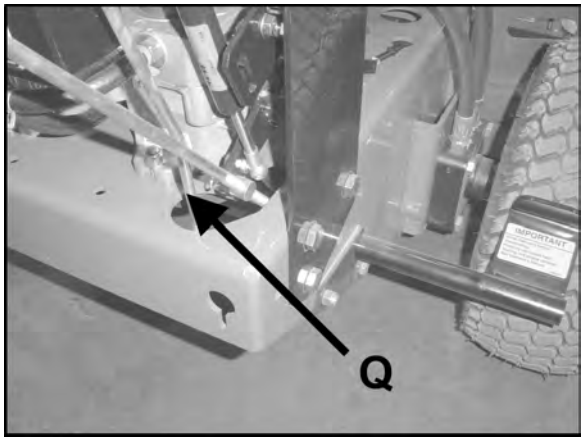


17. Set the speed control levers to neutral and adjust the swivel on the lower end of the speed control rod **M** so they engage the very top of the slot on the neutral plates **P** and secure with flatwasher and hairpin as shown. Repeat for other side.

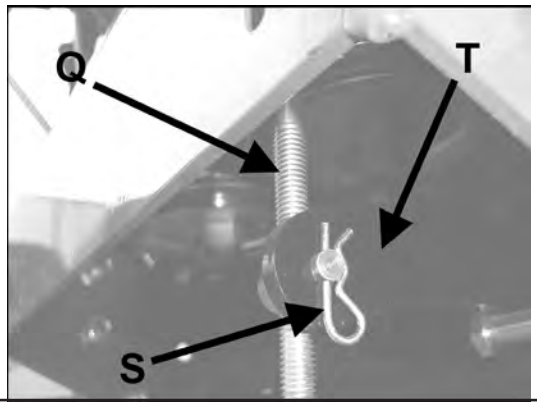


18. Insert threaded end of brake rod **Q** through the slot on the engine deck and attach the other end to the brake control arm **R** and secure in place with hairpin **S** as shown.

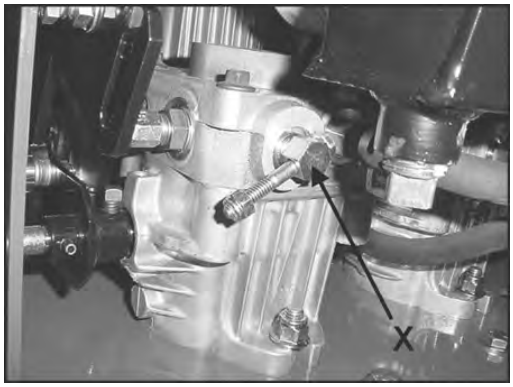




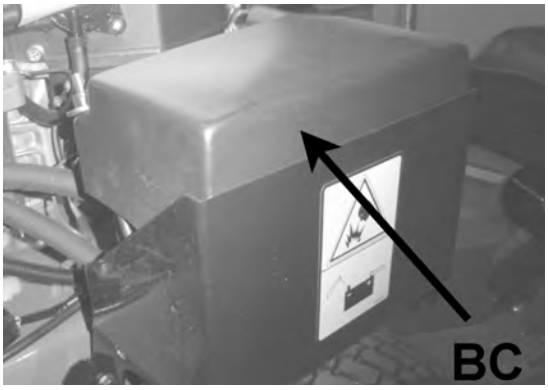
19. Connect swivel on threaded end of brake rod **Q** to the brake arm **T** and secure in place with hairpin **S** as shown. Adjust swivel to provide adequate braking when the brake control arm is engaged. See adjustment section of this manual.



20. Close bypass valve **X** by rotating clockwise until firmly seated.



21. **On Electric Start Models**
Obtain battery locally.
Batteries come with acid. Check level and charge before startup.
If necessary, fill the battery to the bottom of the vent wells with electrolyte and trickle charge for several hours. Place the battery in the machine and make the connections, red to positive first, then black (ground) to negative. Install battery cover **BC** and secure with battery rod and attached hardware.



Batteries Produce Explosive Gases
- Keep sparks and flame away.
- Disconnect negative terminal first.
- Reconnect negative terminal last.

22. Fill engine with oil. (See engine manual for specifications.)

23. Fill fuel tank with clean, fresh unleaded fuel.

⚠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

24. Check oil level in hydraulic oil reservoir and adjust as necessary.

25. Adjust tire pressure in drive wheels to 14 psi (1 kg/cm^2). Casters are solid.

26. Before attempting to start the mower, read and understand all sections of the Operation & Safety manual.

27. Inspect safety circuit so that works properly.

NOTICE: Special setup instructions.

- Before engaging the cutterdeck, run the engine for five minutes at full RPM. This is recommended for new engine installation to permit complete engine lubrication prior to load.

- Do not engage the cutterdeck at full throttle. Set the throttle half way between the highest and lowest engine speed, engage the PTO switch and increase the engine speed to full before cutting.

- **⚠WARNING**

  Do not use this machine without an approved grasscatcher, grass discharge chute or mulching plate(s) correctly fitted.

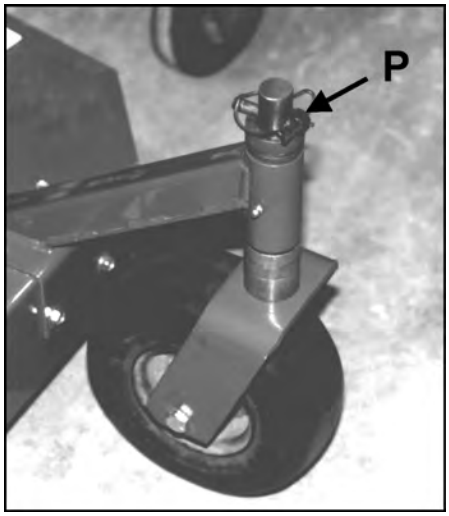
Make all adjustments with the engine shut off, spark plug wire disconnected and mower drive disengaged.

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

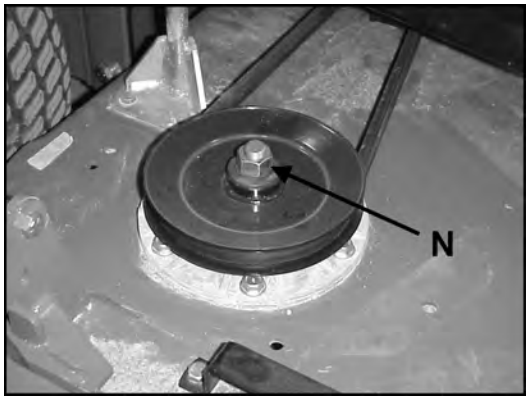
1. Remove the quick pin **P** from the top of the caster wheel pivot spindle.
2. Place required spacers above or below wheel support bracket and replace the quick pin **P**.

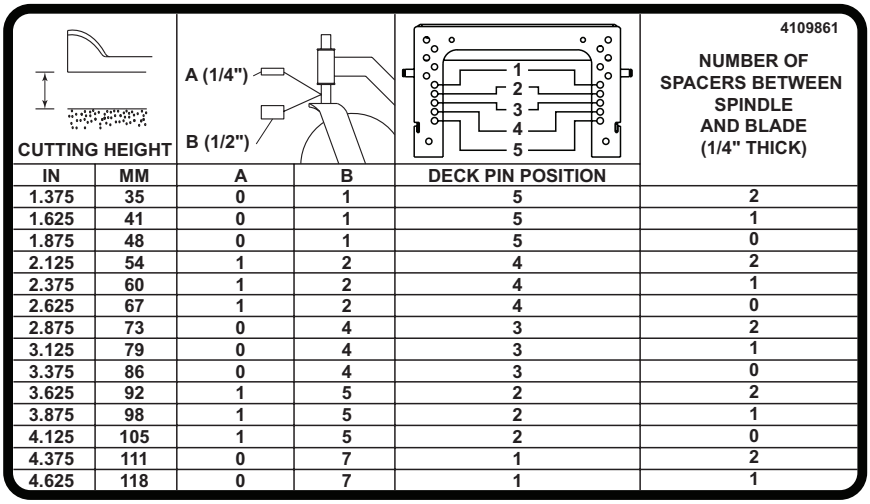


2. CUTTERDECK BLADE SPINDLES

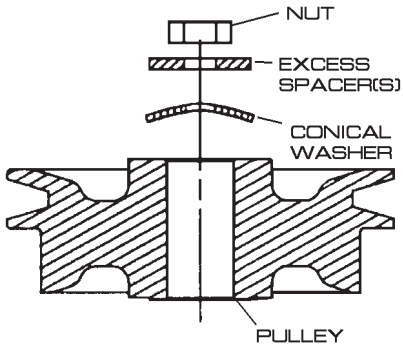
NOTE: See MAINTENANCE section of the Setup, Parts & Maintenance manual for blade removal and replacement procedures.

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					
IN	MM	A	B	DECK PIN POSITION	
1.375	35	0	1	5	2
1.625	41	0	1	5	1
1.875	48	0	1	5	0
2.125	54	1	2	4	2
2.375	60	1	2	4	1
2.625	67	1	2	4	0
2.875	73	0	4	3	2
3.125	79	0	4	3	1
3.375	86	0	4	3	0
3.625	92	1	5	2	2
3.875	98	1	5	2	1
4.125	105	1	5	2	0
4.375	111	0	7	1	2
4.625	118	0	7	1	1



SETTING CUTTERDECK HEIGHT
CUTTERDECK POSITION

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1. Support rear of power unit.

2. Place blocks under both outside edges of cutterdeck 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**.

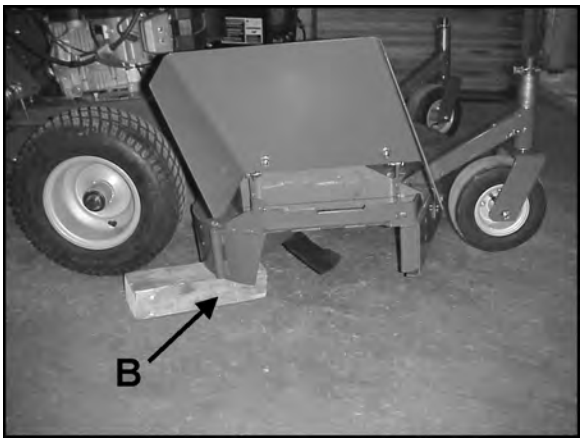
4. Loosen (2) lower deck mounting bolts **D** several turns. Loosen enough to allow easy movement of the rear of cutterdeck. Allow deck to set down on blocks or if deck is being raised, allow the front casters to sit on the floor.

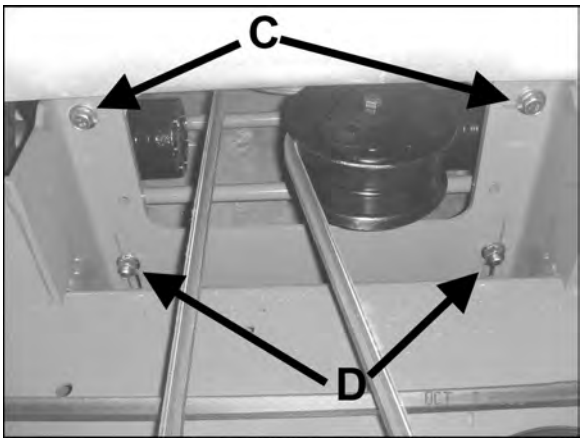
5. Reinstall upper deck mounting bolts **C** according to the chart for the cut height desired.

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 then the rear of the rear blade.



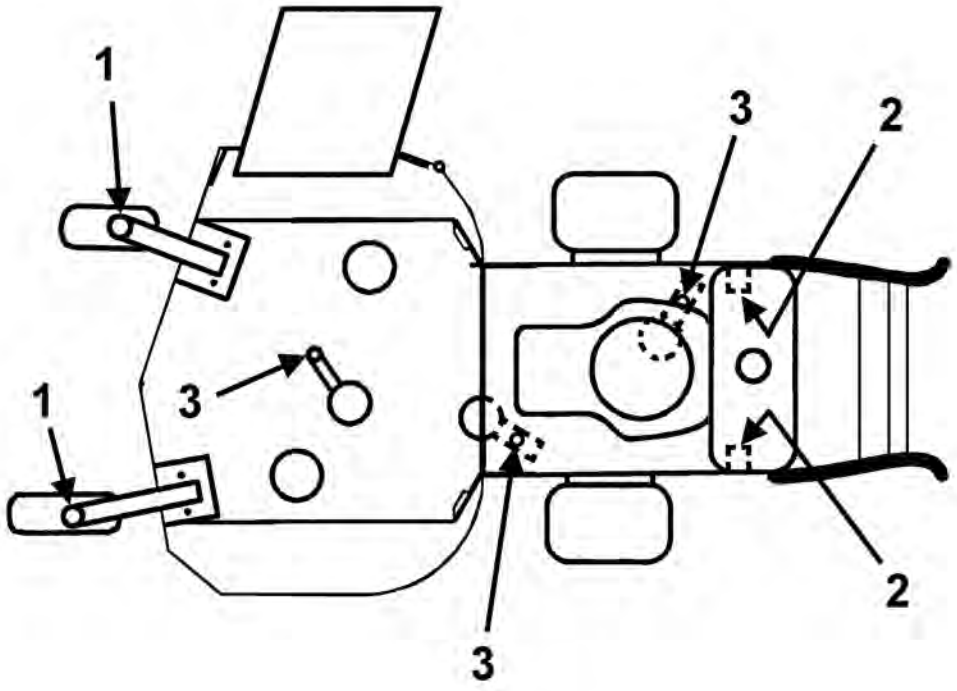


MACHINE LUBRICATION

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

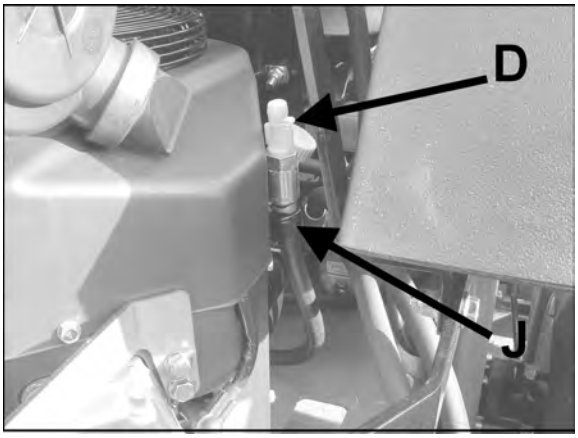
1) Caster wheel pivots (2 points)
2) Neutral eccentric pin (2 points)
3) Idler pivot bearings:
   a) Engine to cutterdeck belt tensioner
   b) Cutterdeck belt tensioner
   c) Hydro drive belt tensioner

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.

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.

CLEANING MACHINE

Clean the machine after use. 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 cutterdeck and engine deck.

WASHING MACHINE

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

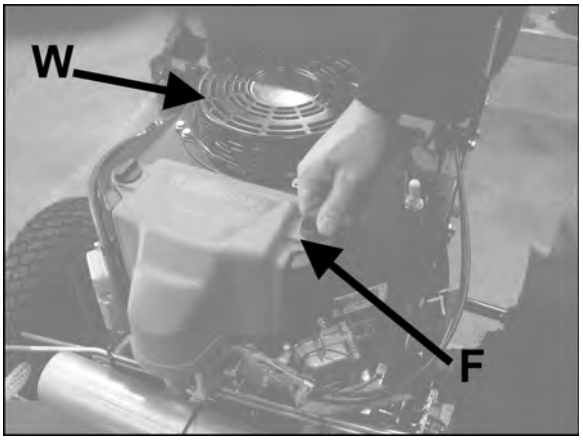
– Do not use a pressure washer. Do not direct water at bearings or seals. High pressure water can blow past seals and enter seal bearings.
– Allow the machine to cool down before washing. Water on a warm machine can be sucked into sealed bearings as they cool.
– Avoid getting electrical connections wet.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

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. You can use compressed air to clean.

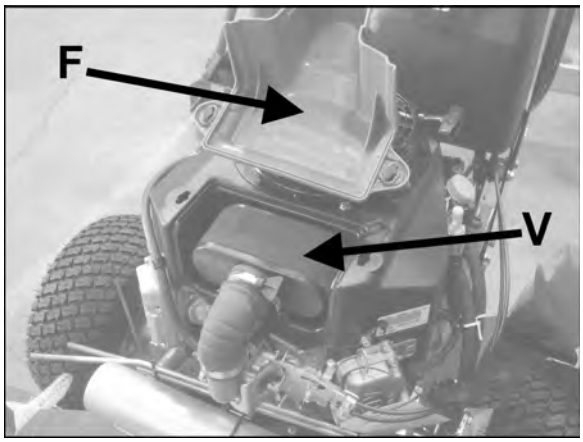


Air Cleaner

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

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

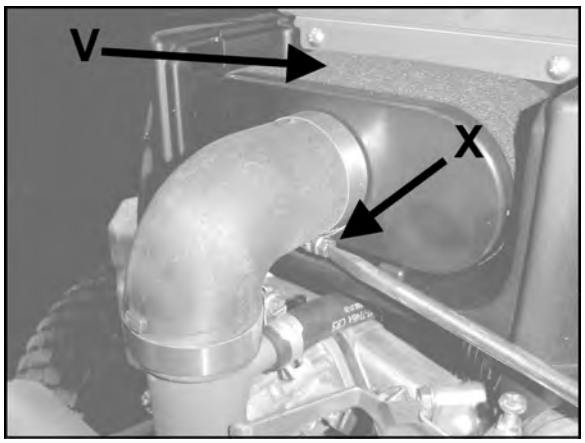
1. Turn knobs 1/4 turn counter-clockwise to remove air cleaner cover **F**.
2. Loosen clamp **X** to remove air cleaner assembly.
3. Remove and wash pre-cleaner **V** with kerosene or
   liquid detergent and water.
4. Wrap pre-cleaner **V** in a cloth and squeeze to remove excess cleaning agent.
5. Saturate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

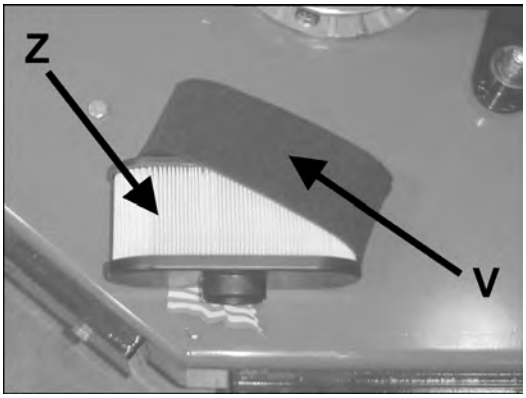


Every 100 hours (more often under very dusty or dirty conditions), check the paper cartridge **Z**.

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

6. Reinstall pre-cleaner **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.

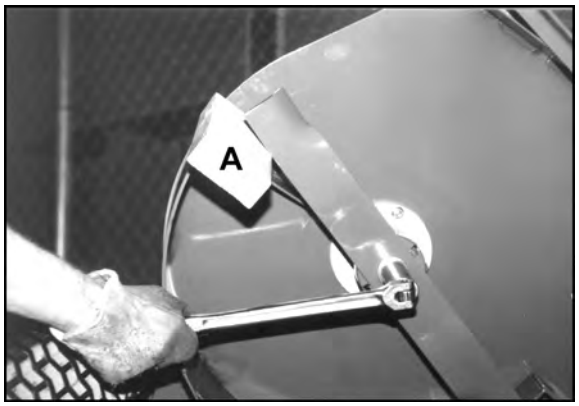
NOTE:

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

BLADE REMOVAL

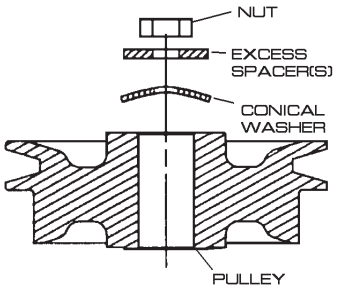
1. Use a box wrench or socket with a long breaker bar to remove spindle bolt under cutterdeck.
2. Slip tube over breaker bar or wrench if necessary to gain leverage.
3. Keep hands clear as blades may rotate when bolt releases.
4. When changing blades, wear thickly padded gloves.
5. Block blades from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

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

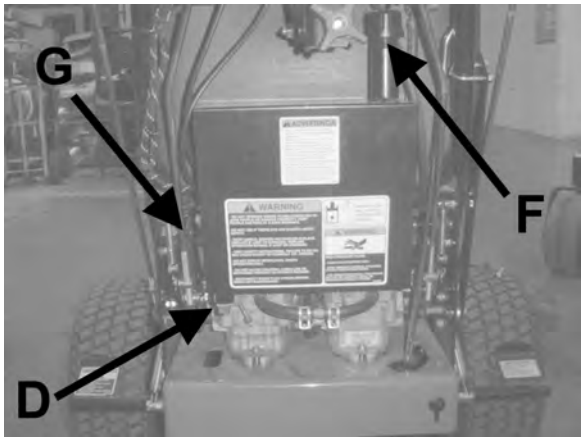
SPARK PLUG

- 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.

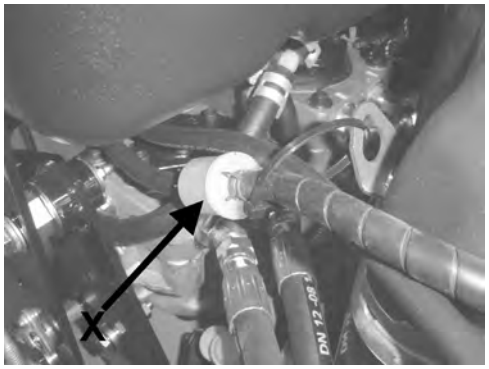
HYDRAULIC RESERVOIR
CHECK, DRAIN AND FILL

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**.



In-Line Fuel Filter
When required, the fuel filter **X** may be replaced. See the Setup, Parts & Maintenance manual for service part numbers.



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.

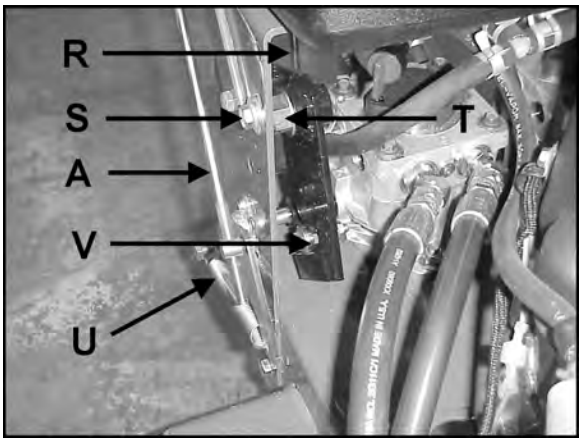
NOTES

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.												

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

STEP 1 - Set Neutral

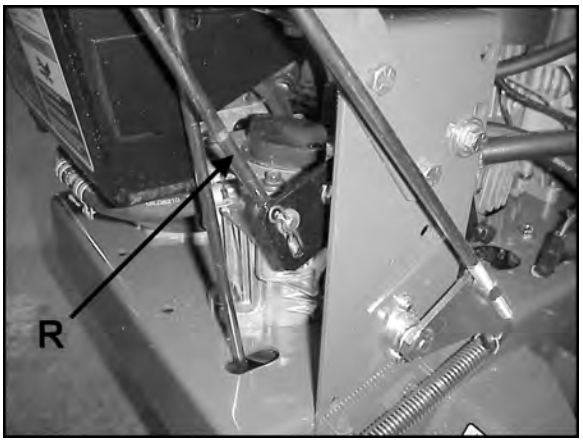
Neutral is set at the factory. If it should require adjustment, raise the wheels off the ground by setting the machine on jackstands or blocks. Disconnect the traction control rod **A** and speed control rod **R** at each pump end. Disconnect pump arm spring **U** from bolt on engine deck. Loosen bolt **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 steps 2 and 3.



STEP 2 - Adjust Speed Control Rods

First adjust neutral, as outlined in Step 1. Set speed control levers to neutral. Adjust swivels on lower ends of speed control rods **R** so they just go into the top of the slots on the neutral plates.

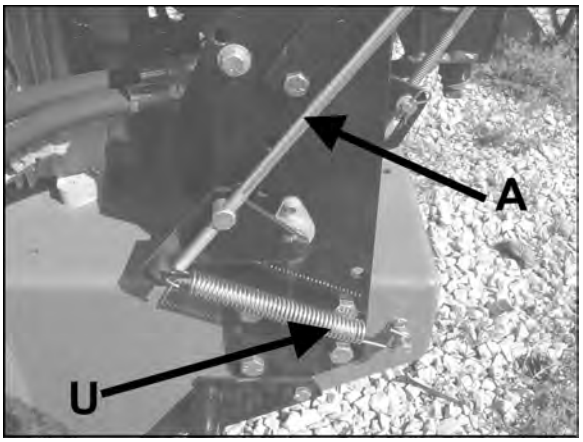
NOTE: If the speed control levers do not have adequate tracking adjustment, the swivel on one of the rods needs to be turned 1 turn.



STEP 3 - Adjust Traction Levers

Set neutral and adjust speed control rods as outlined in Steps 1 and 2. Set traction locks in the neutral position. Grasp traction rod **A** and pull down on it to take out any slack. The pump control arm has some back and forth play. Adjust the swivel to the center of the control arm play. Connect the swivel to the control arm. Reattach pump arm spring **U** to bolt on engine deck.

NOTE: More reverse speed may be gained by adjusting the swivel to the rear of the control arm play. A minimum of 1/16" play is required so the traction controls can be put in neutral without the machine backing up.

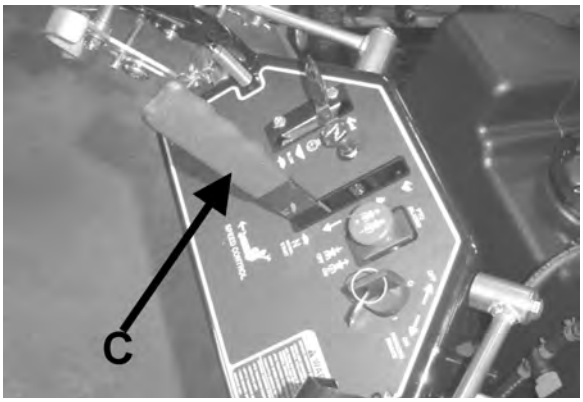


Make all adjustments with the engine shut off, spark plug wire disconnected and mower drive disengaged.

NEUTRAL SWITCH ADJUSTMENT
The neutral switch **N** should be adjusted so that it is engaged by the speed control lever **C** when in the neutral position, and disengaged just before the wheels being to move by adjusting the speed control lever **C** from the neutral position to the forward position.

TO ADJUST:

1. Complete the traction drive adjustments.
2. Place the machine on jack stands or blocks such that the drive wheels are off the ground and the machine is stable.
3. Adjust the speed control lever **C** to the neutral position.
4. Adjust the neutral switch **N** to a position where it will disengage just before the wheels move by adjusting the speed control lever **C** from the neutral position to the forward position.



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 as shown.

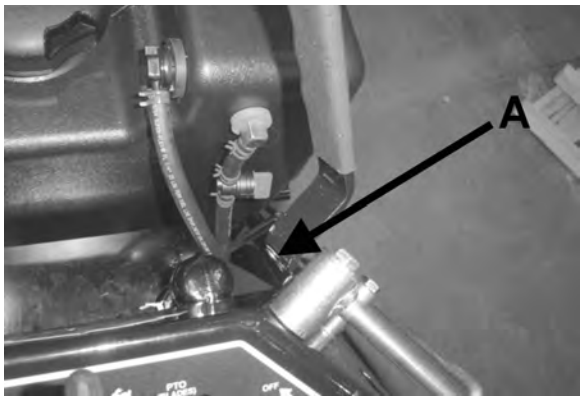
2. Slide the brake rod out of the brake lever and turn the rod in or out of the brake swivel **B** as needed. The brake rod should be inserted into the outer-most hole of the brake lever.

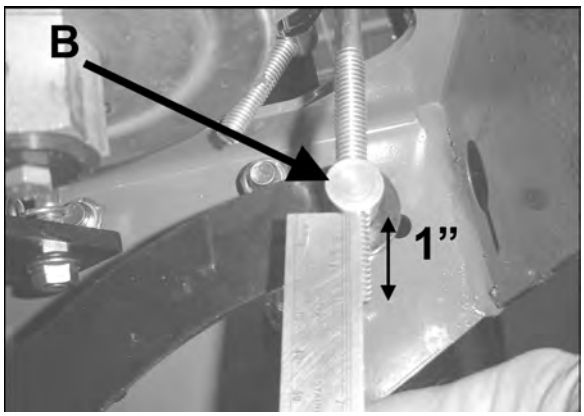
   NOTE: The brake should initially be adjusted so that the brake rod extends through swivel **B** 1" as shown. If more brake pressure is required adjust as necessary.

3. Reassemble brake rod to the brake lever using hairpin **A**.

4. Apply parking brakes and try to push the machine forward. If wheels rotate, readjust brakes.

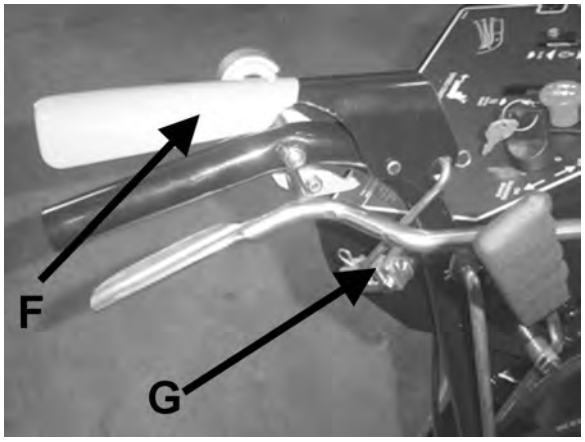
5. Close bypass valves on the hydraulic pumps.





OPERATOR PRESENT CONTROLS

The operator present (OP) controls should be adjusted to control the operation of the plunger of the operator present switch (located under the right side of the control panel). Depressing OP levers **F** should depress the plunger; releasing the levers should extend it.



TO ADJUST:

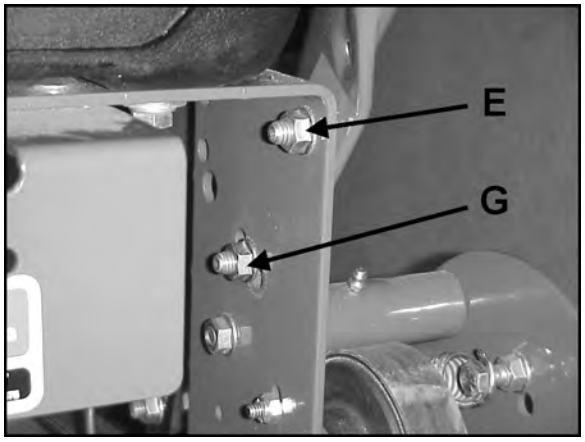
1. Loosen clamp bolts **G** on both ends, so clamps can rotate on shaft.

2. Rotate actuator lever to depress switch plunger. Keep OP levers against handles and tighten bolts **G**.

3. When released, the OP levers should rise and the actuator lever should rotate away from the switch, allowing the switch plunger to extend completely.

HANDLE BAR HEIGHT ADJUSTMENT

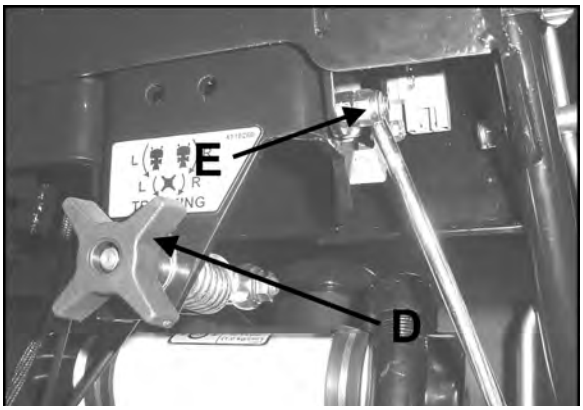
To adjust handle bar height: Remove bolts **G** and loosen bolts **E** on each side of handlebars. Raise or lower as required. Reposition upper handle and reinsert bolts **G** into appropriate hole in lower handle and tighten. Readjust traction control rods, parking brakes and speed control rods.



Speed Control Lever Friction

The speed control lever is held where set by friction pads. If the setting will not hold, tighten nuts **E** to increase friction on the speed control lever.

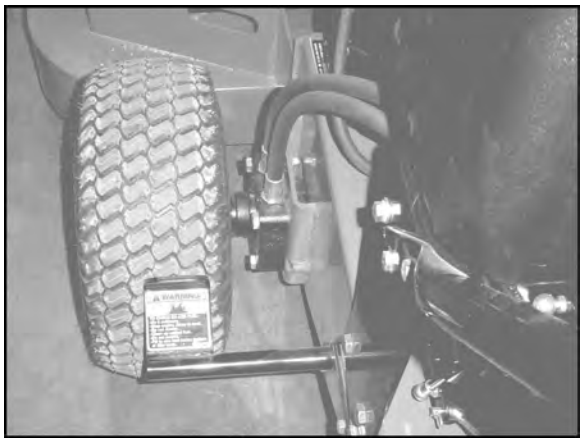
Adjust Knob **D** to get machine to track in a straight line.



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. Reinstall and tighten lug nuts 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/cm^2).

PTO BELT

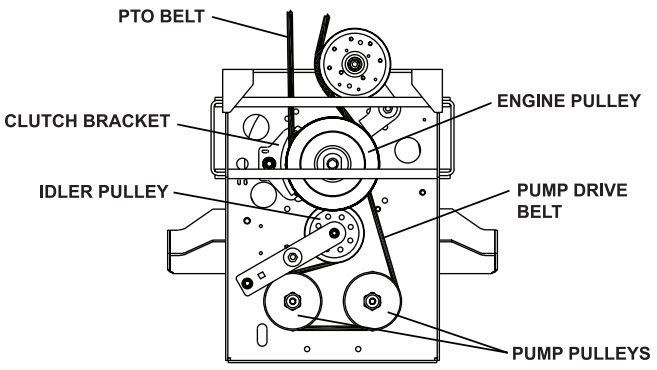
1. Rotate idler arm using a 3/8" ratchet or breaker bar and remove belt.

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

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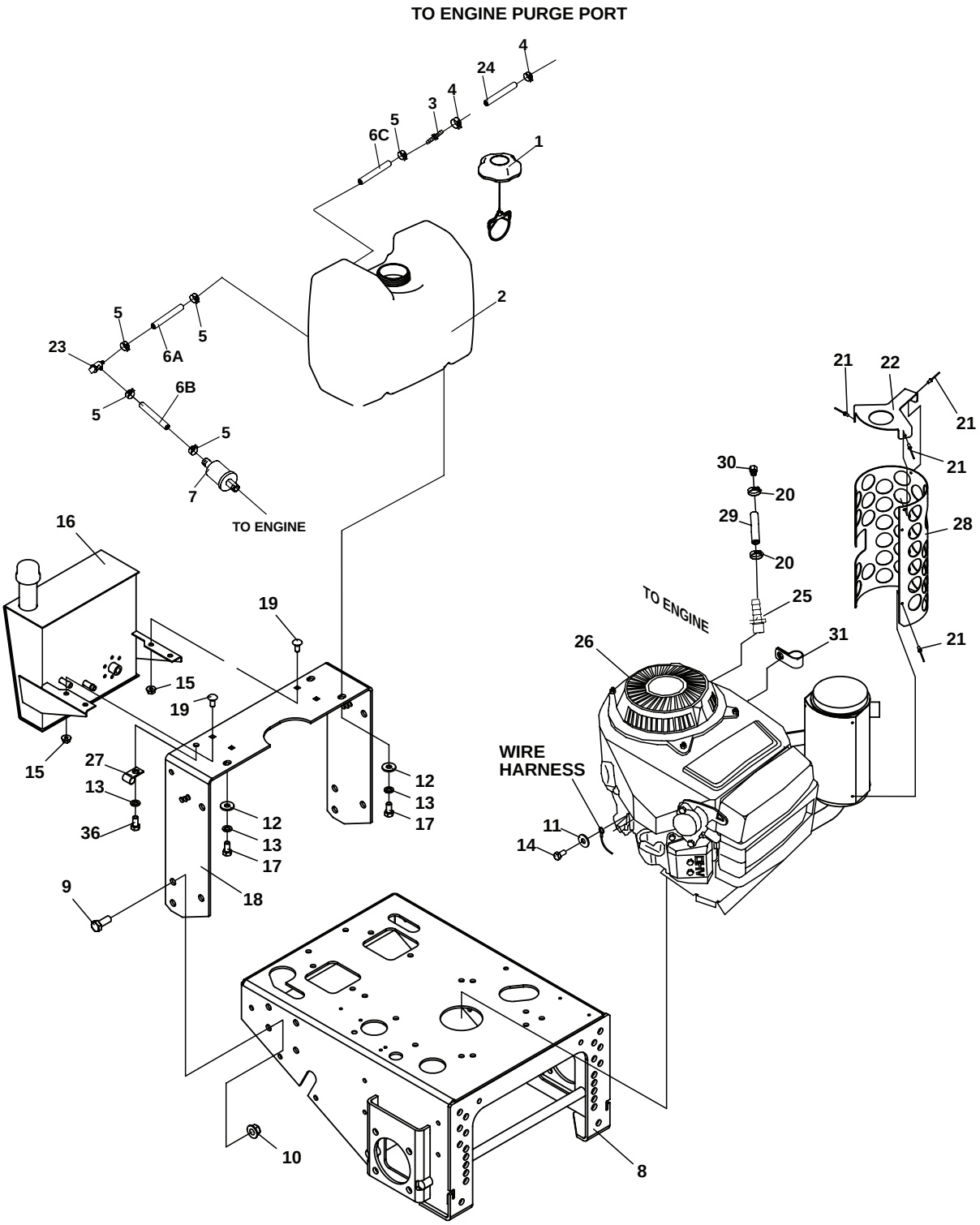
PARTS SECTION

UPPER ENGINE DECK ASSY

FIGURE 1



UPPER ENGINE DECK ASSY

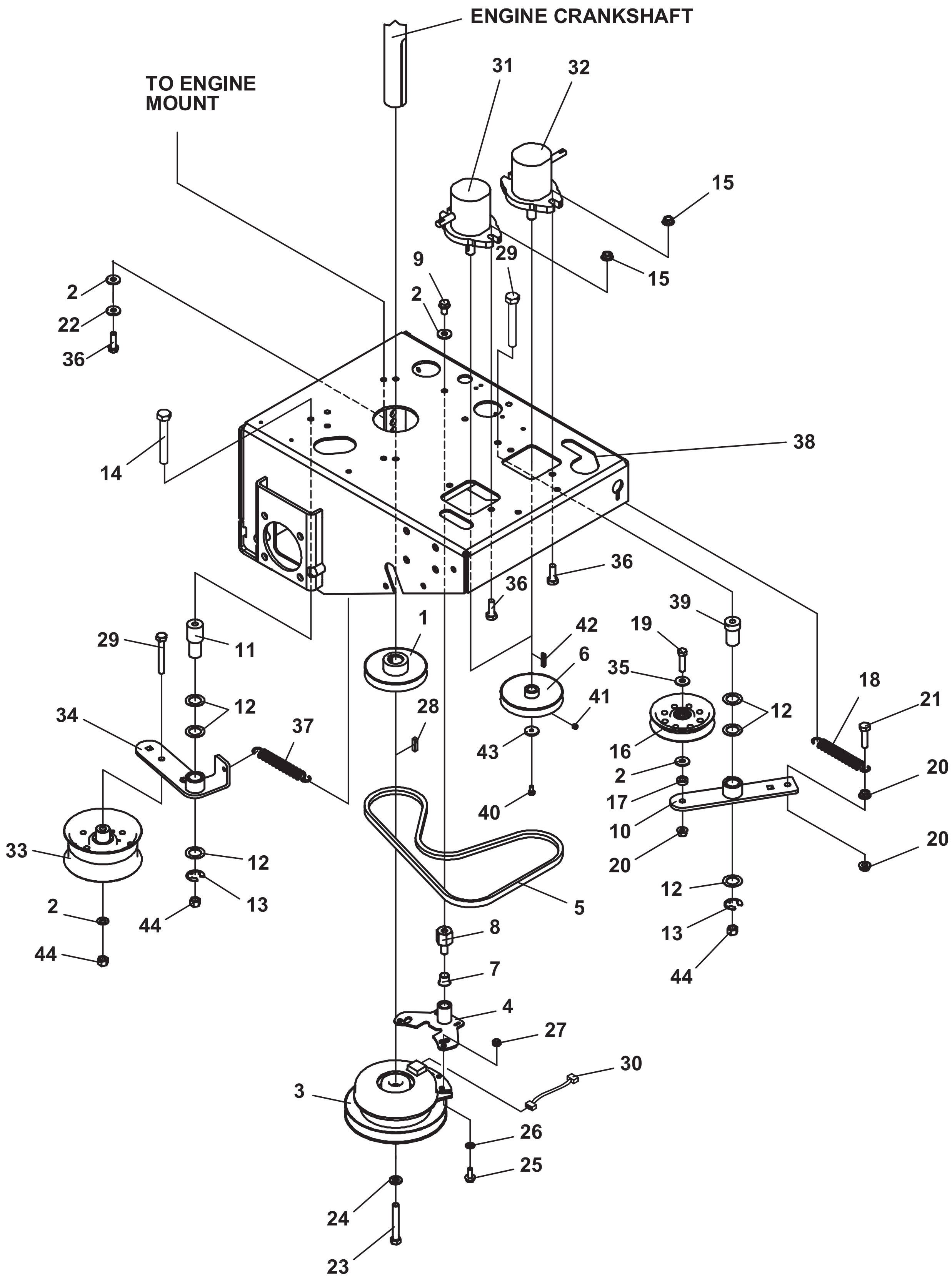
FIGURE 1

ITEM	PART NO.	DESCRIPTION	QTY
1	4165291	CAP-FUEL GASOLINE 3.5	1
2	4174266-1	TANK-FUEL (INCLUDES ITEMS 1, 32-35)	1
3	4169746	VENT-FUEL, IN-LINE	1
4	88042-1	CLAMP-HOSE 3/16	2
5	88042N	HOSE CLAMP	A/R
6	4162977-001	HOSE,FUEL LINE	1
	6A CUT TO 2" LONG		
	6B CUT TO 18.5"		
	6C CUT TO 36.5"		
7	4168368	FILTER, FUEL	1
8	4169053.2	WLDMT-DECK ENG HYDRO	1
9	64123-39	BOLT-HEX 1/2-13X1-1/4	7
10	64229-05	LOCKNUT, 1/2-13 NYLON	7
11	64002-04	LOCKWASHER, EXT. 5/16	1
12	64163-31	WASHER, 25/64X1X12	3
13	64006-03	LOCKWSHR-HELICAL 3/8	4
14	64205-018	BLT MET M8-1.25 X 15	1
15	64229-02	LOCKNUT-NYLON 5/16-18	4
16	2306138	S HYD RESERVOIR W/LABS	1
17	64123-15	BLT-HEX 3/8-16X3/4	3
18	4172311.7	HANDLE-LOWER, Z-CNTRL	1
19	64018-9	BLT-CRG 5/16-18 X 3/4	4
20	88042-03	CLAMP-HOSE 5/8	2
21	64215-04	RIVET-POP IFI#42	7
22	4166788	COVER-MUFFLER, TOP	1
23	4163016	VALVE-FUEL	1
24	4162989-01	HOSE-FUEL	1
25	4164252-001	FTG-3/8 NPT-3/8 BARB	1
26	4166463	ENGINE-FS541V KAW EU	1
	2722214	FILTER-OIL	
	4164535	FILTER-AIR	
	4164536	FILTER-PRE	
	4166758	MUFFLER-KAW EU	
27	48228-12	CLAMP-HOSE	1
28	4166787	MUFFLER-GUARD	1
29	69053-03	HOSE-HYDR 3/8X17"	1
30	4164251	VALVE-OIL DRAIN	1
31	48412	CLIP-J, CABLE	1
32*	4132325	GROMMET-FUEL TANK	1
33*	4174343	GROMMET-RLLVR VENT	1
34*	4165763	VENT-TANK	1
35*	4165561-2	TUBE-FUEL, PICK UP	1
36	64123-50	BLT-HEX 3/8-16X1	1

***NOT ILLUSTRATED**

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 2


ENGINE CRANKSHAFT
TO ENGINE MOUNT
31
32
15
9
29
15
2
2
22
36
38
14
36
36
39
1
42
19
29
11
6
35
18
12
41
21
34
28
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43
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20
5
12
13
2
44
8
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44
44
7
4
27
30
3
26
25
24
23

LOWER ENGINE DECK ASSY/CLUTCH

FIGURE 2

ITEM	PART NO.	DESCRIPTION	QTY
1	2721647	PULLEY-4.50E.O.D.	1
2	64163-31	WASHER, 25/64 X 1 X 12	9
3	2721110	CLUTCH-ELECTRIC	1
	(INCLUDES ITEM 30)		
4	4173452.7	WLDMT-CLUTCH STOP MID	1
5	2721642	BELT-HA 49.0	1
6	2722244	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	4
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	2720949	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	64044-6	SCREW-SET 5/16-18X1/4	4
42	64238-03	KEY-MET 5MM SQ X 28	2
43	64209-09	WASHER-CONICAL SPRING	2
44	64229-03	LOCKNUT-NYLON 3/8-16	3

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 3

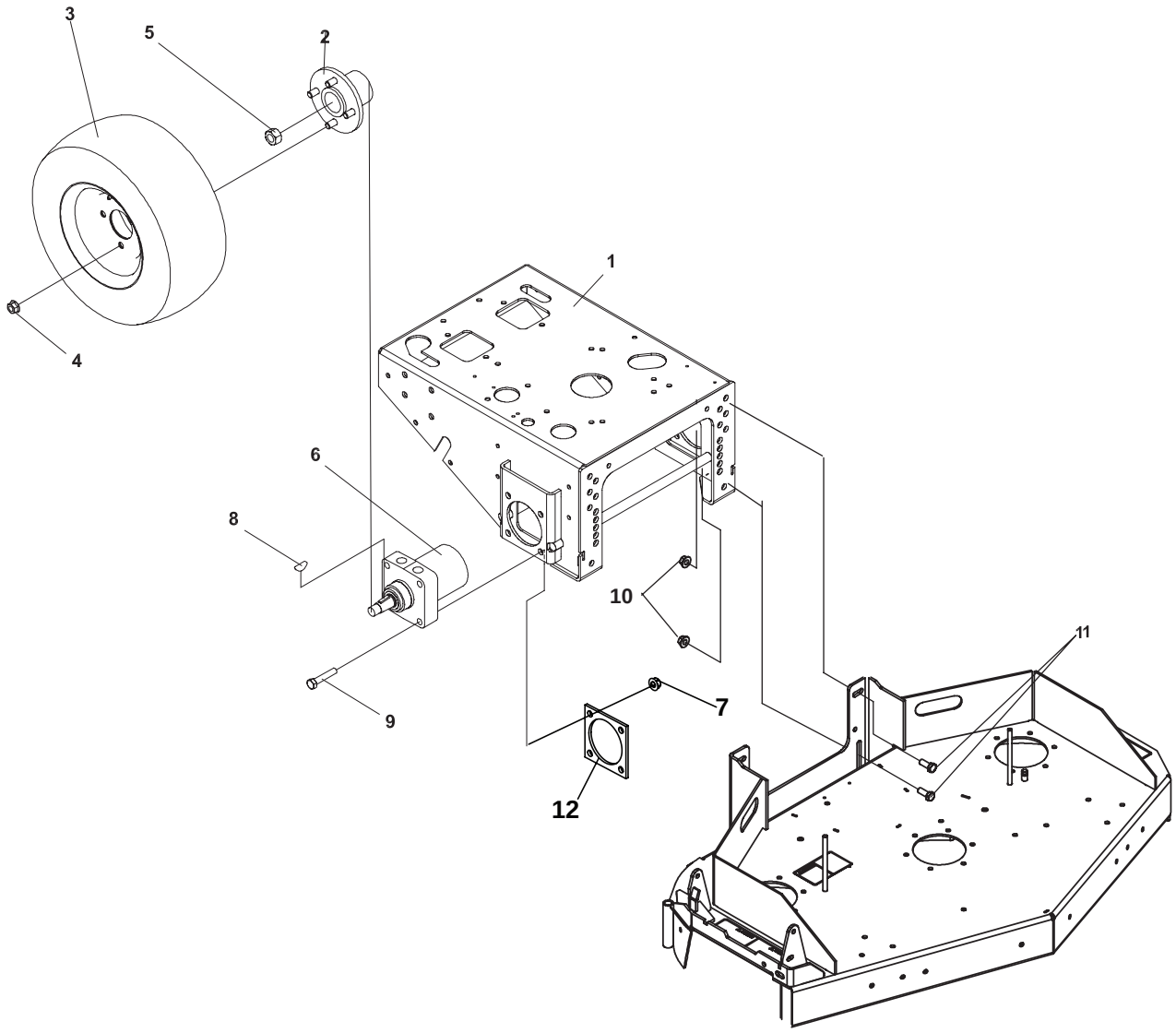


FIGURE 3

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
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	64263-018	BLT-FLG HD M12-1.75 X 30	4
11	64246-04	NUT-WHIZ M12-1.75	4
12	4169059.7	PLATE-MOTOR CLAMP	2

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 4

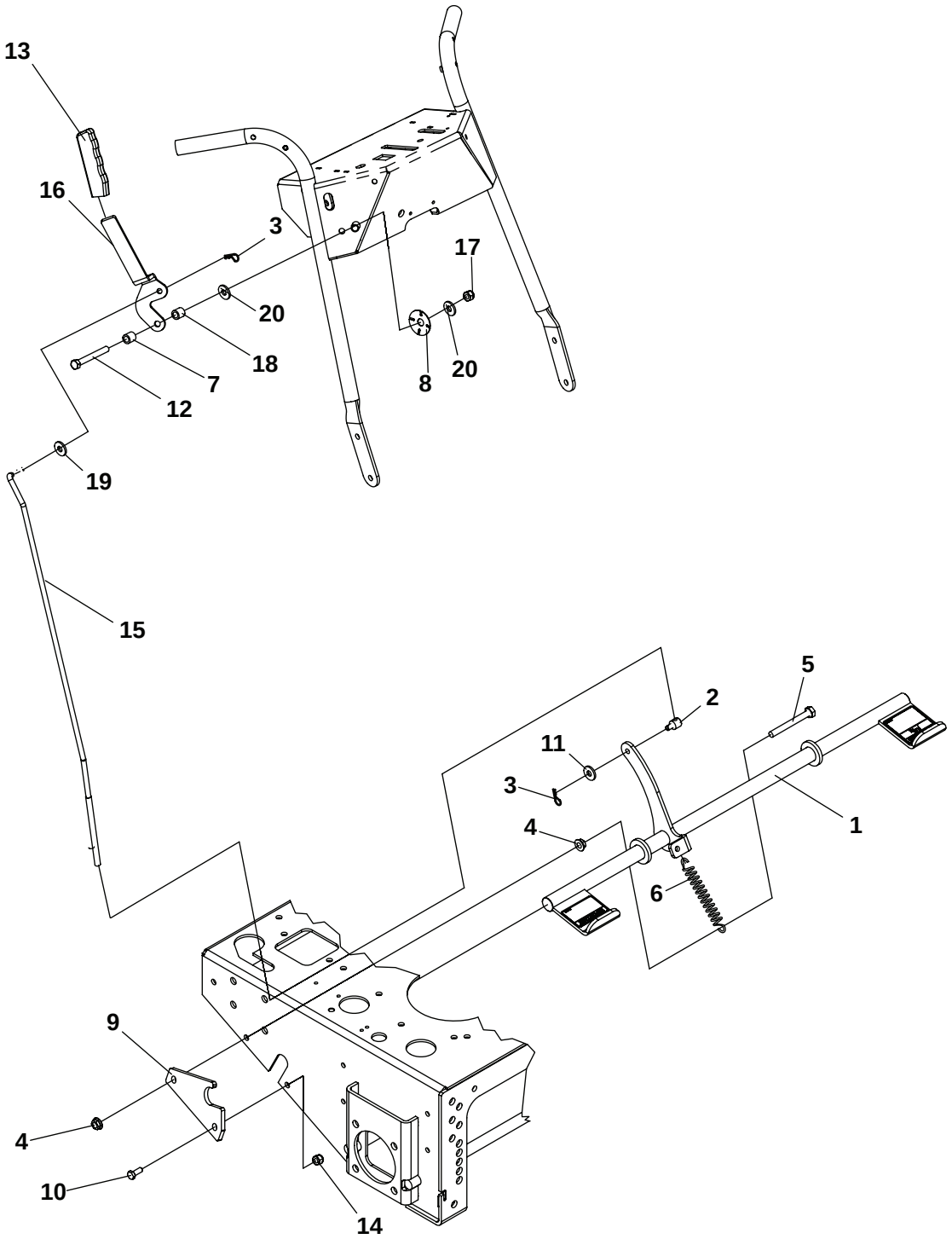
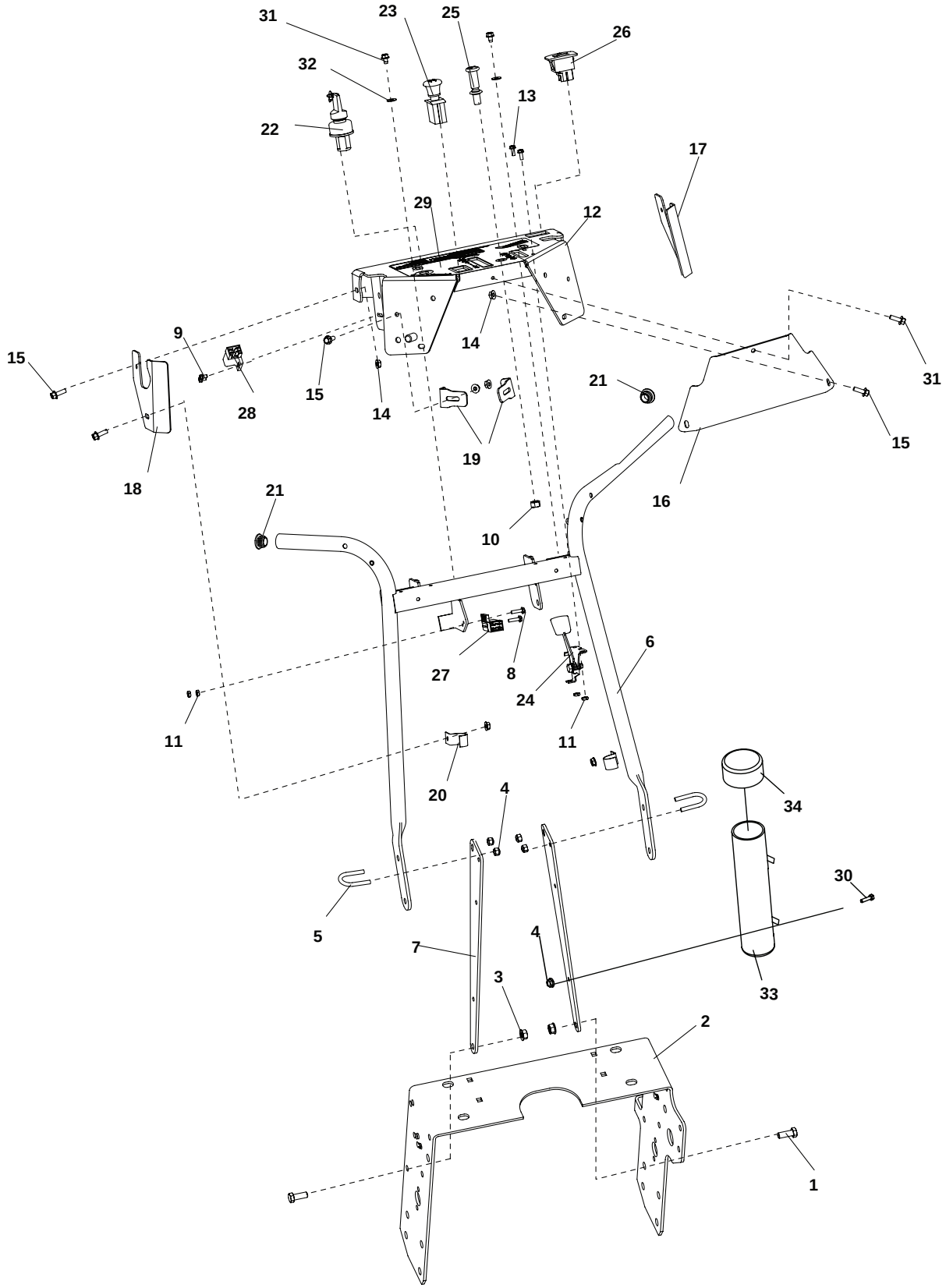


FIGURE 4

ITEM	PART NO.	DESCRIPTION	QTY
1	4169401	BRAKE SHAFT W/LABS	1
2	33103	SWIVEL	1
3	64168-2	COTTER-HAIRPIN.08X1.19	2
4	64001-6	NUT-HEX JAM,3/8-16	2
5	64262-025	BLT-FLG HD 3/8-16 X 2-1/2	1
6	2188131	SPRING-EXTENSION	1
7	2183071-01	SPACER-15.88X10.32X16	2
8	64171-2	WAVE WASHER	1
9	4131072.7	PLATE-BRK SHFT RETNR	2
10	64123-50	BOLT-HEX 3/8-16X1	3
11	64163-02	WSHR-.325 X .596 X 11GA	1
12	64123-82	BOLT-HEX 3/8-16X2-1/2	1
13	38404-03	GRIP-CONTROL LEVER	1
14	64229-03	LOCKNUT-NYLON 3/8-16	4
15	4169140	ROD-PARK BRAKE	1
16	4169216.7	LEVER-BRAKE	1
17	64268-03	NUT-FL NYLON LOCK 3/8-16	1
18	33030-07	BUSHING IDLER	1
19	64163-46	WSHR.383/.393X.88X7GA	1
20	4169895	WASHER-FRICTION,UHMW	2

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 5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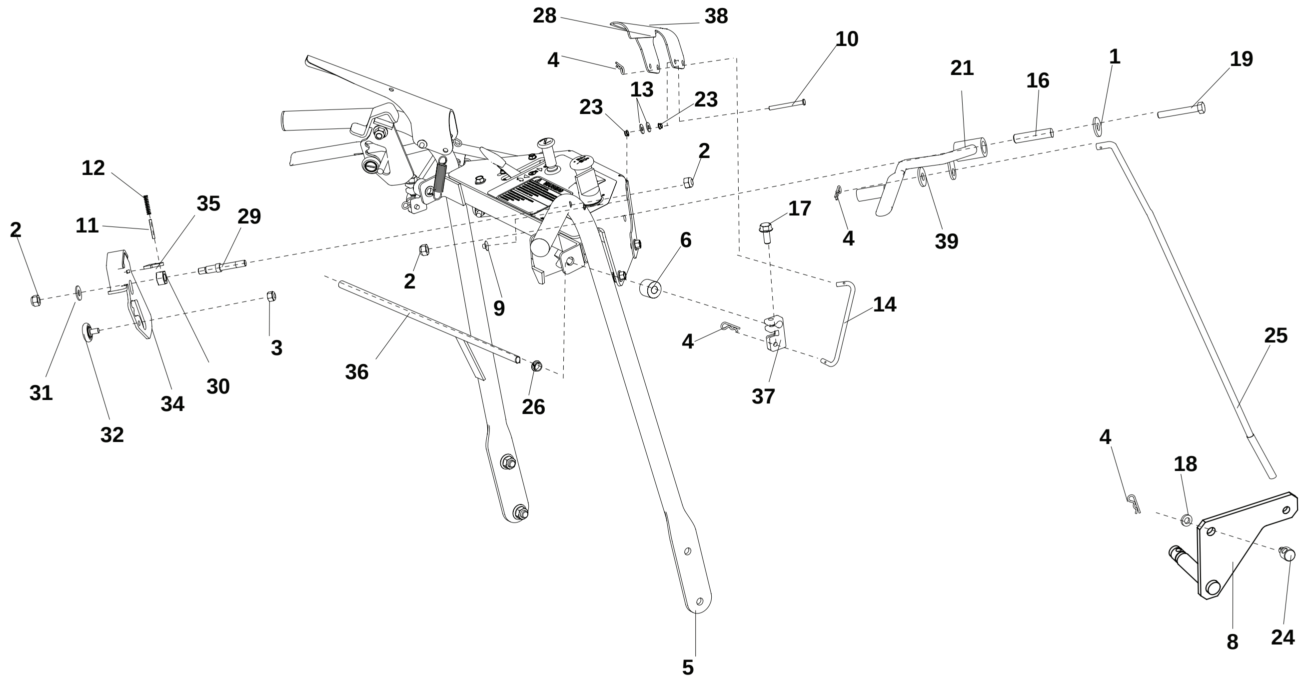
UPPER HANDLE/CONTROL PANEL

FIGURE 5

ITEM	PART NO.	DESCRIPTION	QTY
1	64123-50	BLT-HEX 3/8-16X1	2
2	4172311.7	HANDLE-LOWER, HYDRO	1
3	64141-4	NUT-WLF 3/8-16	2
4	64229-01	NUT-NYLON LOCK 1/4-20	6
5	64225-03	U-BOLT	2
6	2721495.7	TUBE-HANDLE MID RH	1
7	4169353.7	BRACE-HANDLE	2
8	64197-015	BLT-TDFM 10-32X1/2 TORX\	2
9	64152-46	SCREW-SLT HH 10-24X3/4	2
10	64025-04	NUT-3/8-24 HEX	1
11	64025-15	NUT-HEX #10-24 KEPS	4
12	4173337	S-CONTROL PANEL ,HYDRO	1
13	64152-46	SCREW-SLT HH 10-24X1/2	2
14	64141-2	NUT-WLF 1/4-20	8
15	64262-002	BLT-FLG HD 1/4-20 X 3/4	8
16	4172329.7	COVER-CONTROL PANEL	1
17	4172330.7	BRKT-CNTRL PNL SIDE,LH	1
18	4172331.7	BRKT-CNTRL PNL SIDE,RH	1
19	4172332.7	BRKT-CONTROL PANEL	2
20	4171606-2	CLAMP-HALF,1.0IN	2
21	4169945	PLUG-PLASTIC	2
22	128010	SWITCH KEY 5 TERM MAG	1
23	2721505	SWITCH-PTO	1
24	38357-09	CONTROL-THROTTLE	1
25	108009-03	CONTROL-CHOKE 51	1
26	4171992	HOUR METER-MAG SENSE	1
27	2308094	SWITCH-NCNC DBL POLE	1
28	108208	SWITCH DBL POLE NC/NO	1
29	4172569	LABEL-CONTROL PANEL	1
30	64262-003	BLT-FLG HD 1/4-20 X 1	2
31	64197-002	BLT-TDFM 1/4-20X3/4	3
32	64163-03	WSHR .256 X.62X18 GA.	2
33	4129802	TUBE-DOCUMENT	1
34	38061A	CAP-DOCUMENT TUBE	1

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 6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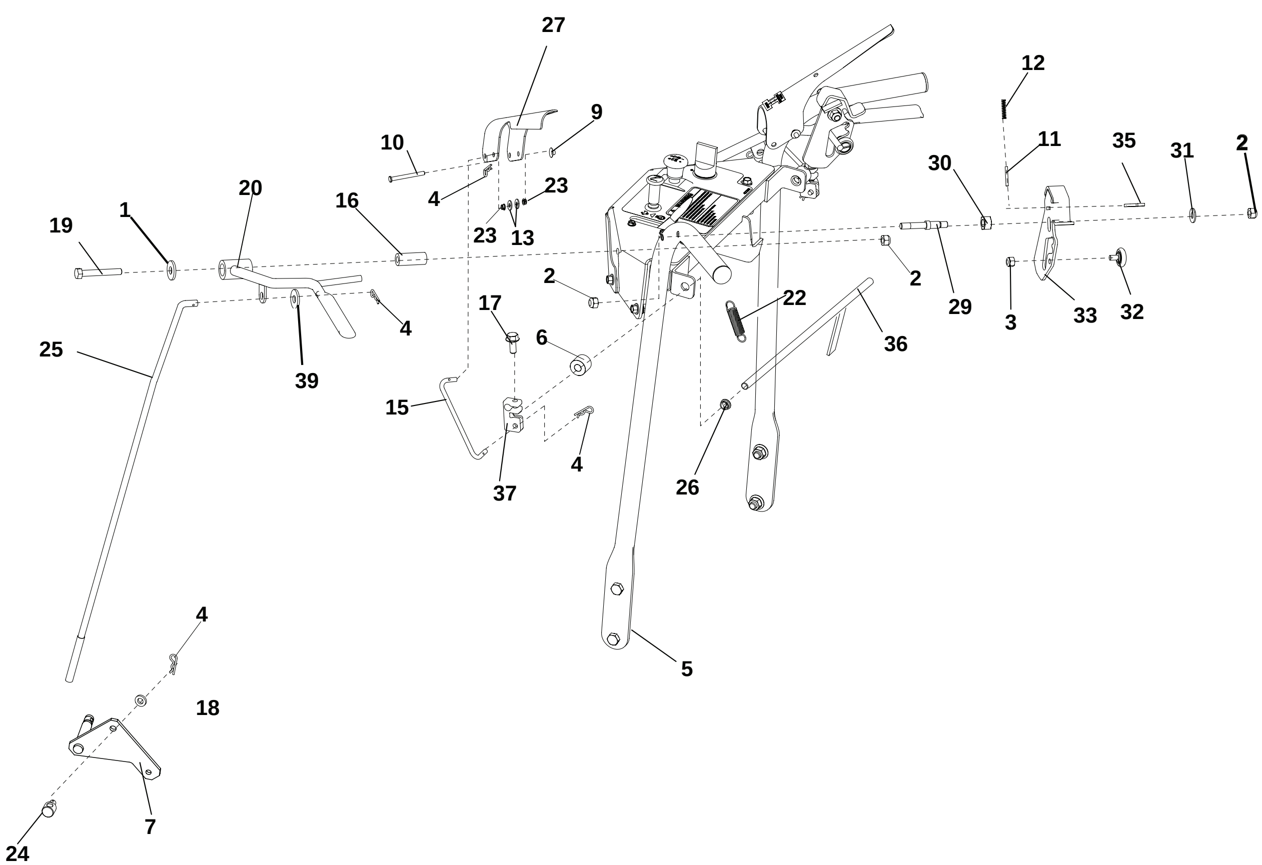
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CONTROLS ASSEMBLY

FIGURE 6

ITEM	PART NO.	DESCRIPTION	QTY
1	64163-31	WSHR 25/64X1X12	2
2	64229-02	NUT-NYLON LOCK 5/16-18	6
3	64229-01	NUT-NYLON LOCK 1/4-20	2
4	64168-2	COTTER-HAIRPIN .08 X 1.19	8
5	2721495	WLDMT-UPPER HANDLES	1
6	33030-09	IDLER BUSHING	2
7	2721622.7	WLDMT-BELLCRANK LH	1
8	2721660.7	WLDMT-BELLCRANK RH	1
9	64175-01	PUSHNUT	2
10	64188-05	PIN-CLEVIS .19 X 1.88	2
11	64061-37	ROLLPIN-1/8 X 1	2
12	38189	SPRING-COMPRESSION	2
13	64163-60	WSHR.50X.203X18GA	4
14	4122107	ROD-HANDLE LINK RH	1
15	4122104	ROD-HANDLE LINK LH	1
16	4169218	TUBE-PIVOT	2
17	64197-002	BLT-TDFM 1/4-20X3/4	2
18	64163-02	WSHR .321X.593X11GA	2
19	64123-64	BLT-HEX 5/16-18X2-1/4	2
20	4169223	HANDLE-LH	1
21	4169224	HANDLE-RH	1
22	2308065	SPRING-EXTENSION	1
23	38371-03	BRG-NYLINER 3/16	4
24	33103	SWIVEL	2
25	4168050	ROD-TRACTION CONTROL GD	2
26	38371-01	BRG-NYLINER 3/8	2
27	4169315.7	HANDLE-OP PRESENT, LH	1
28	4169316.7	HANDLE-OP PRESENT, RH	1
29	33288	STUD-DOUBLE ENDED	2
30	33243	SPACER	2
31	62464-5A	WASHER THRUST 5/16X3/4	2
32	2308002	BRG-RADIAL W/THD STUD.75	2
33	4172437	LATCH-ROLLER LH GD	1
34	4172438	LATCH-ROLLER RH GD	1
35	4172275	LATCH-ROLLER,GUIDE	2
36	2306097	WLDMT-ACTUATOR	1
37	2303023	CONNECTOR-OP	2
38	4172528	LABEL-PARK, NEUTRAL, DRIVE	2
39	64163-04	WSHR-25/61 X 5/8 X 16	2

***NOT ILLUSTRATED**

FIGURE 7

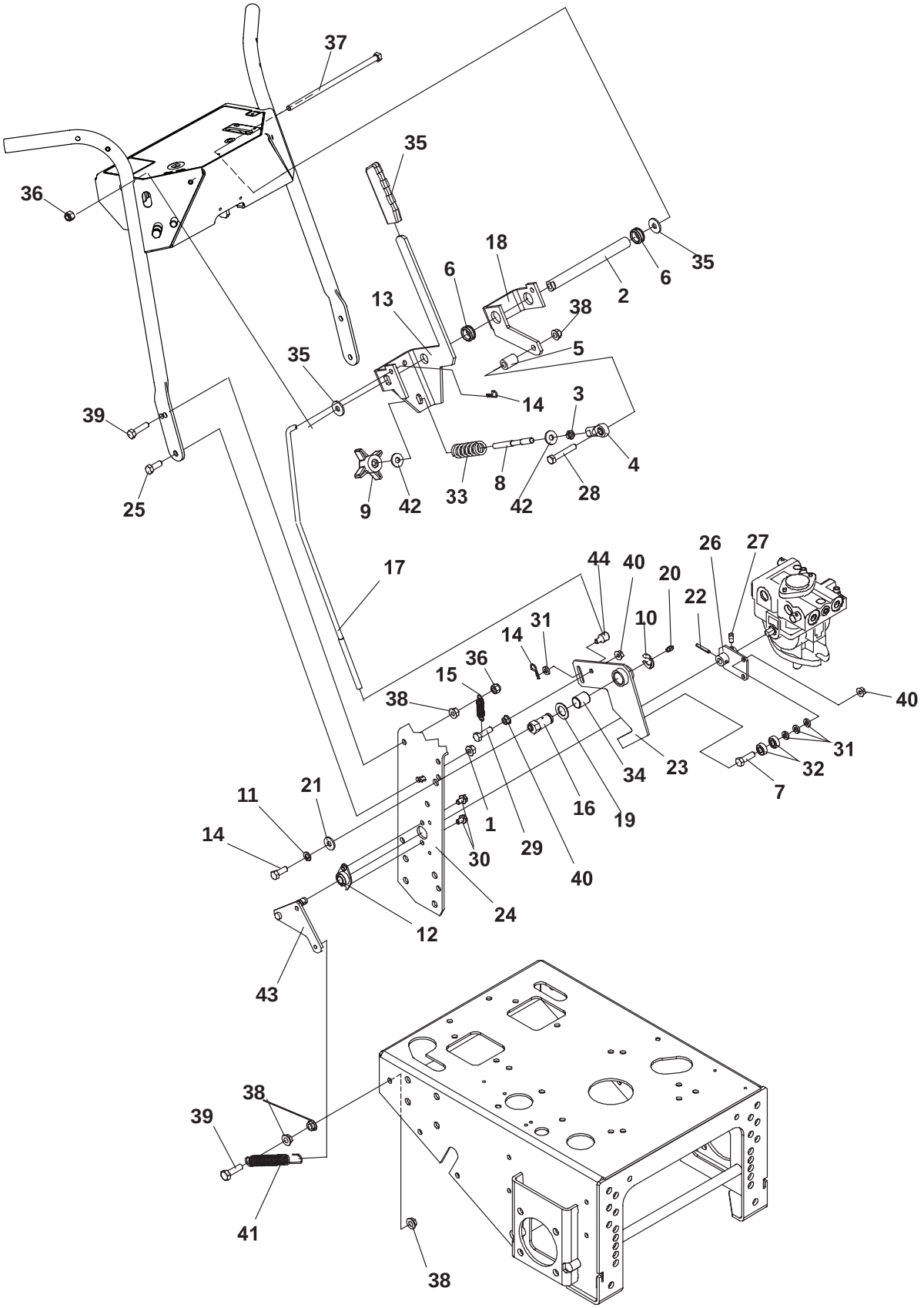
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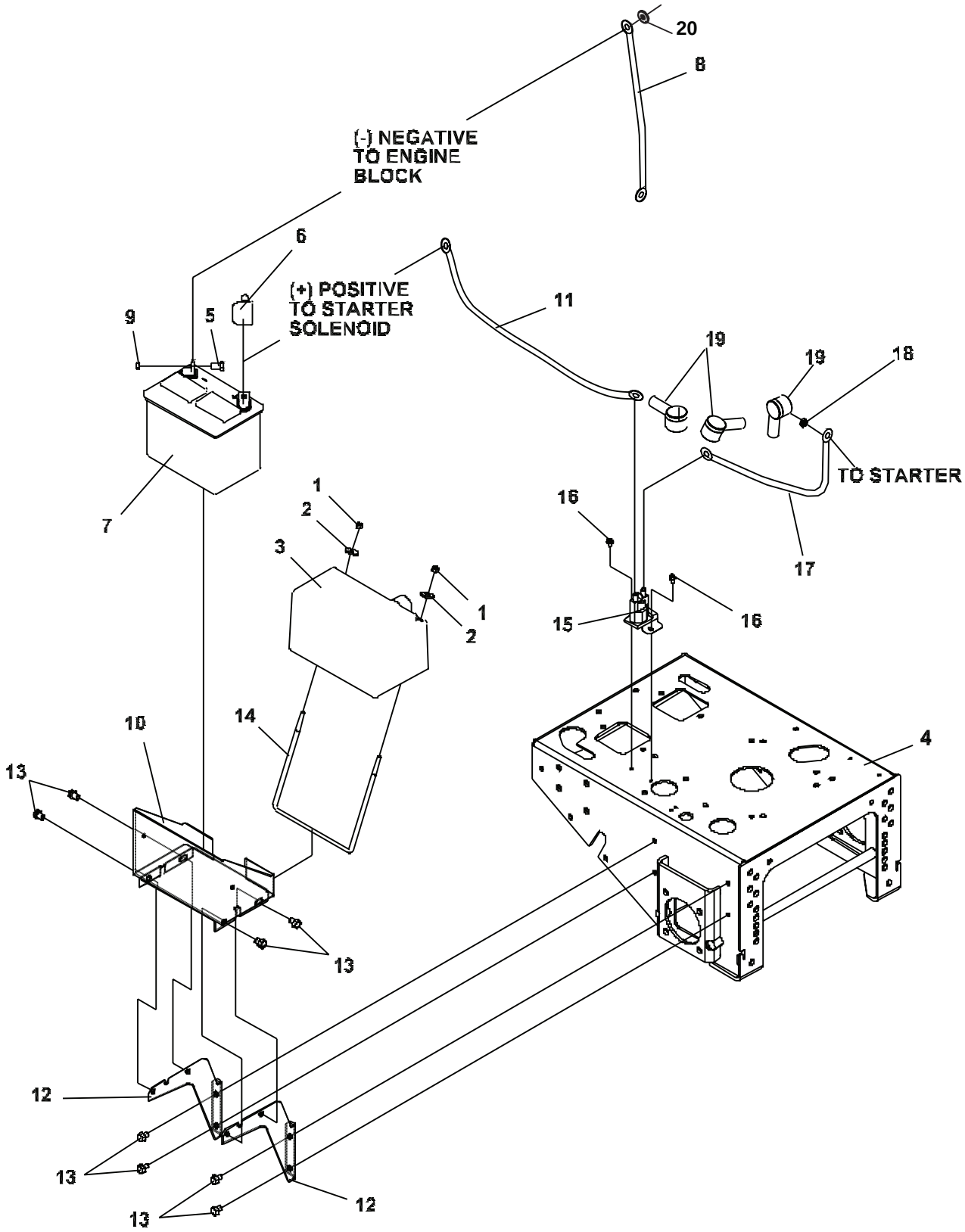
FIGURE 7

ITEM	PART NO.	DESCRIPTION	QTY
1	64268-03	NUT-FLG LYLOCK 3/8-16	2
2	2721844	BUSHING-SPEED CONTROL	1
3	64001-2	NUT 3/8-16	1
4	138011	BALL JOINT	1
5	33030-08	BUSHING-IDLER7/8X3/8X1	1
6	118047-09	BUSHING-FLIP LOK.75ID	2
7	64123-69	BOLT-5/16-18X1-1/2 HEX	2
8	2721854	STUD-3/8-16X 3/8-24 4.5LG	1
9	38524	KNOB-4 PRONG 3/8-16	1
10	64144-16	RING,CLIP-.75X.062	2
11	64006-03	WASHER, 3/8 HELICL LCK	2
12	2308080	BEARING SELF ALIGNED	2
13	2721843.7	ARM-RH SPEED CONTROL	1
14	64123-02	BLT HEX 3/8-24 X 1	2
15	2308065	SPRING EXTENSION	2
16	2303058	ECCENTRIC SHAFT W/ZRK	2
17	2722305	ROD-SPEED CONTROL	2
18	2721842.7	ARM-LH SPEED CONTROL	1
19	64163-06	WSHR.768/.756X1.25X14GA	2
20	85010N	ZERK, 1/4-28 STR	2
21	64163-61	WSHR .81X.406X16GA	2
22	64061-28	ROLL PIN 3/16 X 1 1/4	2
23	2721617.7	WLDMT-SPEED CONTROL	2
24	4172311.7	HANDLE-LOWER P-GRIP	1
25	64123-50	BOLT, 3/8-16X1 HEX	2
26	2306081.7	WLDMT PUMP ARM	2
27	64192-04	SET SCREW 5/16-18X5/8	2
28	64123-100	BOLT-3/8-16X2-1/4 HEX	1
29	64123-68	BLT-HEX 5/16-18 X 1	2
30	64139-13	BLT-WLF 5/16-18X1/2	6
31	64163-02	WSHR 21/64X19/32X11 GA	11
32	38372	BEARING BALL	4
33	2720312	SPRING-COMP IDLER PLT	1
34	2308076-02	BEARING-PLASTIC	2
35	38404-03	GRIP,CONTROL LEVER	1
36	64229-03	NUT-NYLOCK 3/8-16	3
37	64123-202	BLT-HEX 3/8-16 X 9	1
38	64141-4	NUT-WLF 3/8-16	11
39	64123-70	BOLT-HEX 3/8-16X1-1/2	4
40	64141-6	NUT-WLF 5/16-18	6
41	4117212	SPRING EXTENSION	2
42	64163-31	WSHR 25/64X1X12	2
43	2721660.7	WLDMT-PUMP ARM RH	1
*	2721622.7	WLDMT-PUMP ARM LH	1
44	33103	SWIVEL	2

*** NOT ILLUSTRATED**

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 8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ELECTRIC START BATTERY

FIGURE 8

ITEM	PART NO.	DESCRIPTION	QTY
1	64229-02	LOCKNUT-NYLON 5/16-18	2
2	64163-29	WASHER	2
3	128035	COVER-BATTERY	1
4	4169053.2	DECK-ENGINE HYDRO	1
5	64262-002	BLT-FLG HD 1/4-20 X 3/4	2
6	112386	BOOT-BATTERY TERM POS	1
7		BATTERY	1
	(OBTAIN LOCALLY)		
8	108061-16	CABLE-BTTRY 31.5 BLACK	1
9	64025-01	NUT-HEX 1/4-20	2
10	4115331	S-TRAY, BATT W/LAB EC	1
11	2722227-03	CABLE-BTTRY W/CONDUIT	1
12	2722202.7	SUPPORT-BATT TRAY	2
13	64197-016	BLT-TDFM 3/8-16X1/2	8
14	4168907	ROD-BATTERY HLD DWN	1
15	38665	SOLENOID	1
16	64152-23	1/4-20X3/8 LG SP SCREW	2
17	108061-15	CABLE-BATTERY 6.5 RED	1
18	64141-2	NUT-WLF 1/4-20	1
19	2308095	COVER, TERMINAL	3
20	64163-03	WSHR-.256X.62X18GA	2

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 9

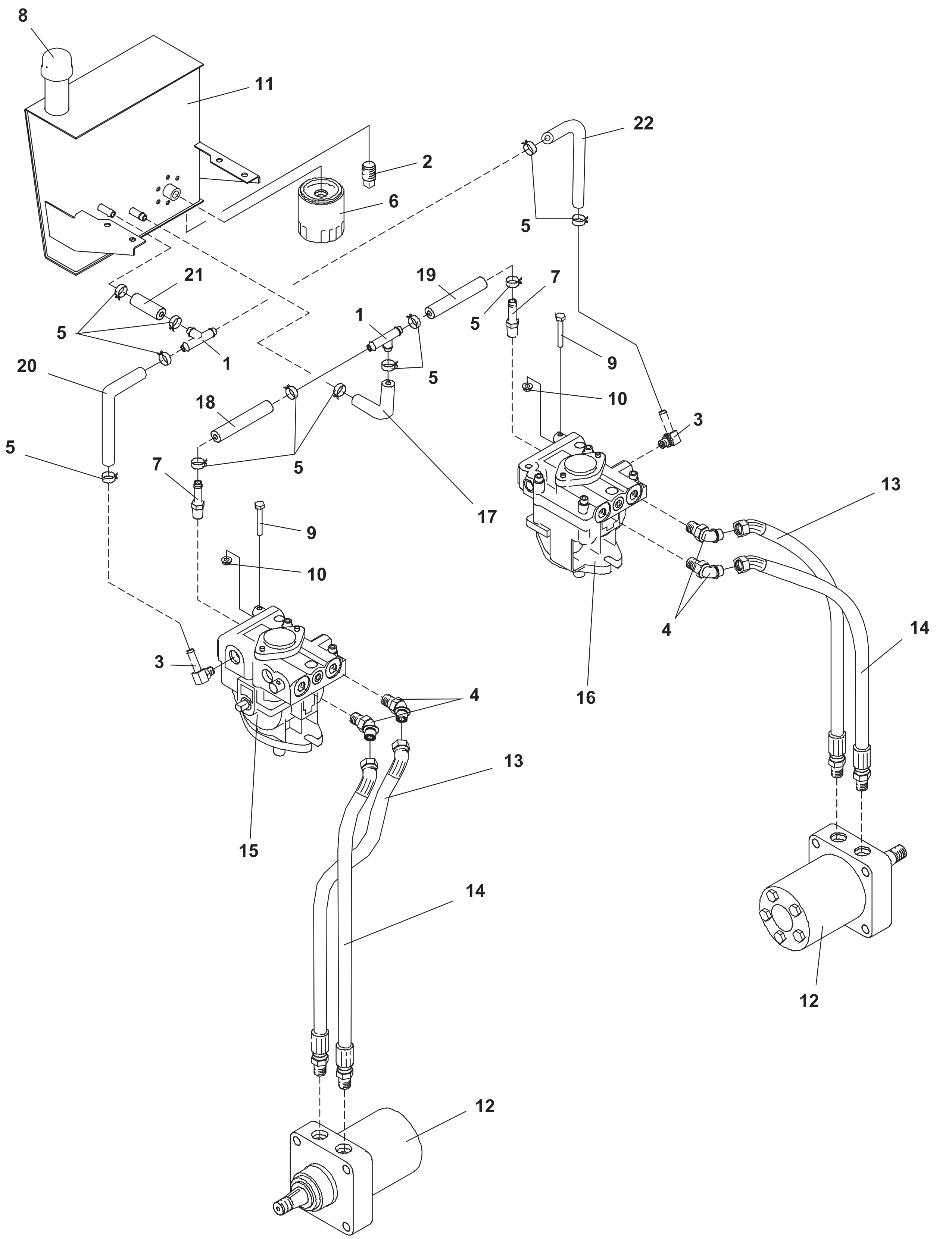
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FIGURE 9

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	2306138	S HYD RESERVOIR 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 16 FOR PARTS BREAKDOWN)		
16	4163316	PUMP-HYDRO LH	1
	(SEE FIG 16 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

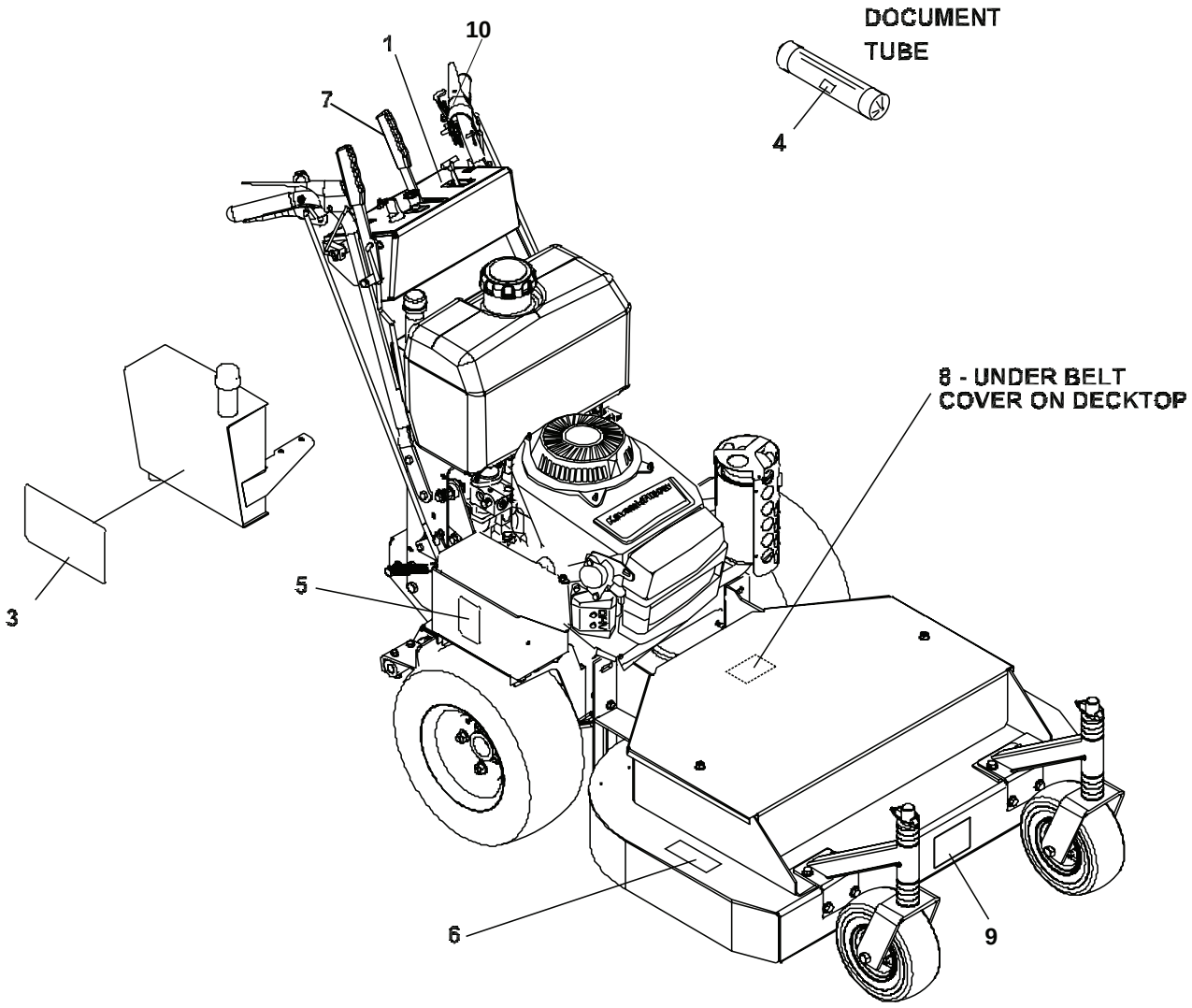
ITEM	PART NO.	DESCRIPTION	QTY

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:
<u>DO NOT</u> use teflon tape on any hydraulic fittings.
Use a liquid pipe sealant.

FIGURE 10



POWER UNIT DECALS

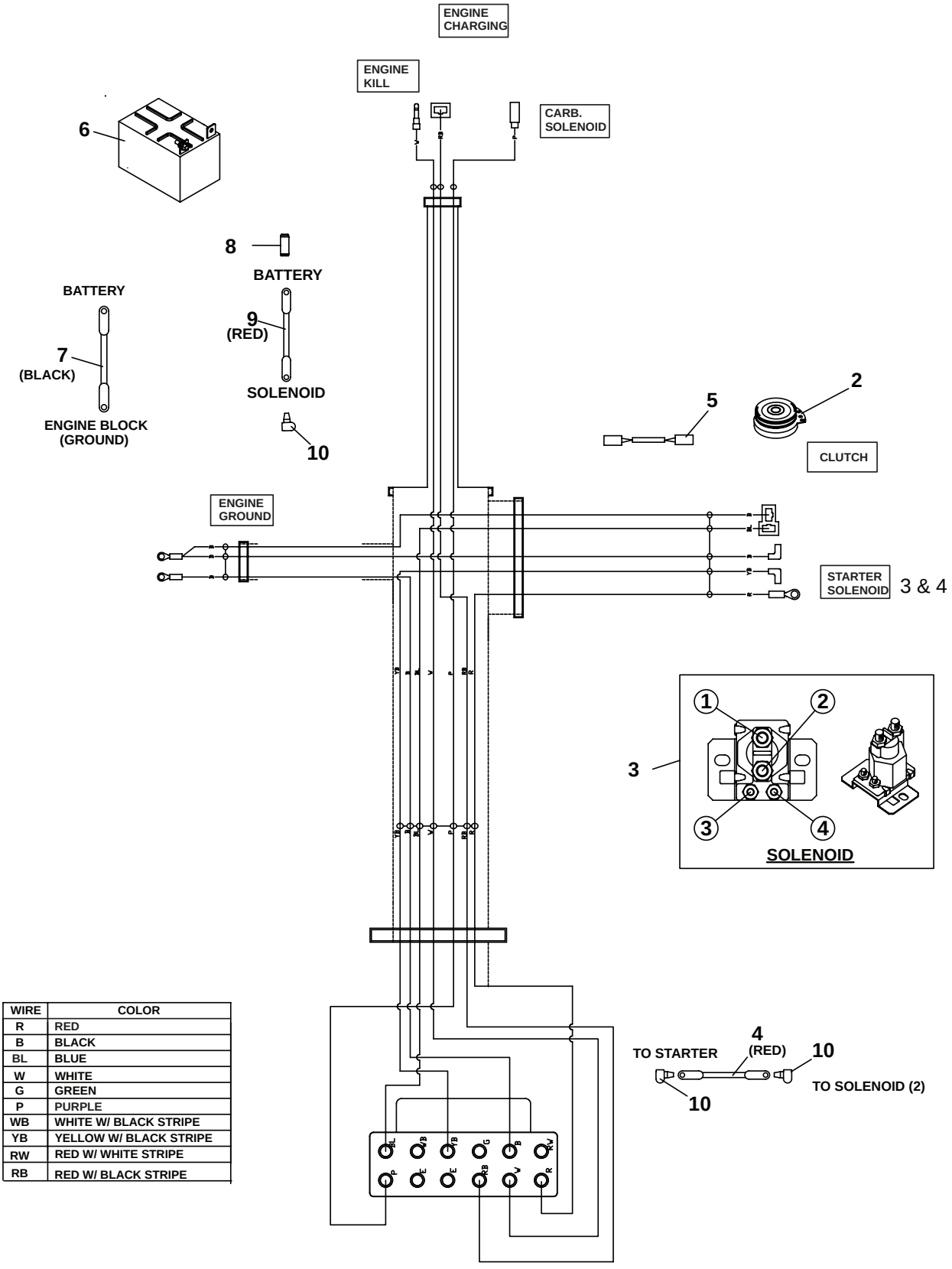
FIGURE 10

ITEM	PART NO.	DESCRIPTION	QTY
1	4172569	LABEL-CNTRL PNL EC HYD	1
2*	4127946	LABEL-DECK,RANSOMES	1
3	2000664	LABEL-HYDRAULIC MS EEC	1
4	2000655	LABEL-READ OPRTRS EEC	1
5	2000650	LABEL-BATTERY EEC	1
6	2000760	LABEL-HANDS/ROCKS EC	1
7	4110260	LABEL-TRACKING CONTROL	1
8	2000638	LABEL-CON WASHER EEC	1
9	4162912	LABEL-DECK SIZE, 36	1
10	4172528	LABEL-PARK NEUTRAL DRIVE	2

*NOT ILLUSTRATED

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 11



WIRE	COLOR
R	RED
B	BLACK
BL	BLUE
W	WHITE
G	GREEN
P	PURPLE
WB	WHITE W/ BLACK STRIPE
YB	YELLOW W/ BLACK STRIPE
RW	RED W/ WHITE STRIPE
RB	RED W/ BLACK STRIPE

LOWER WIRE DIAGRAM-ELECTRIC START

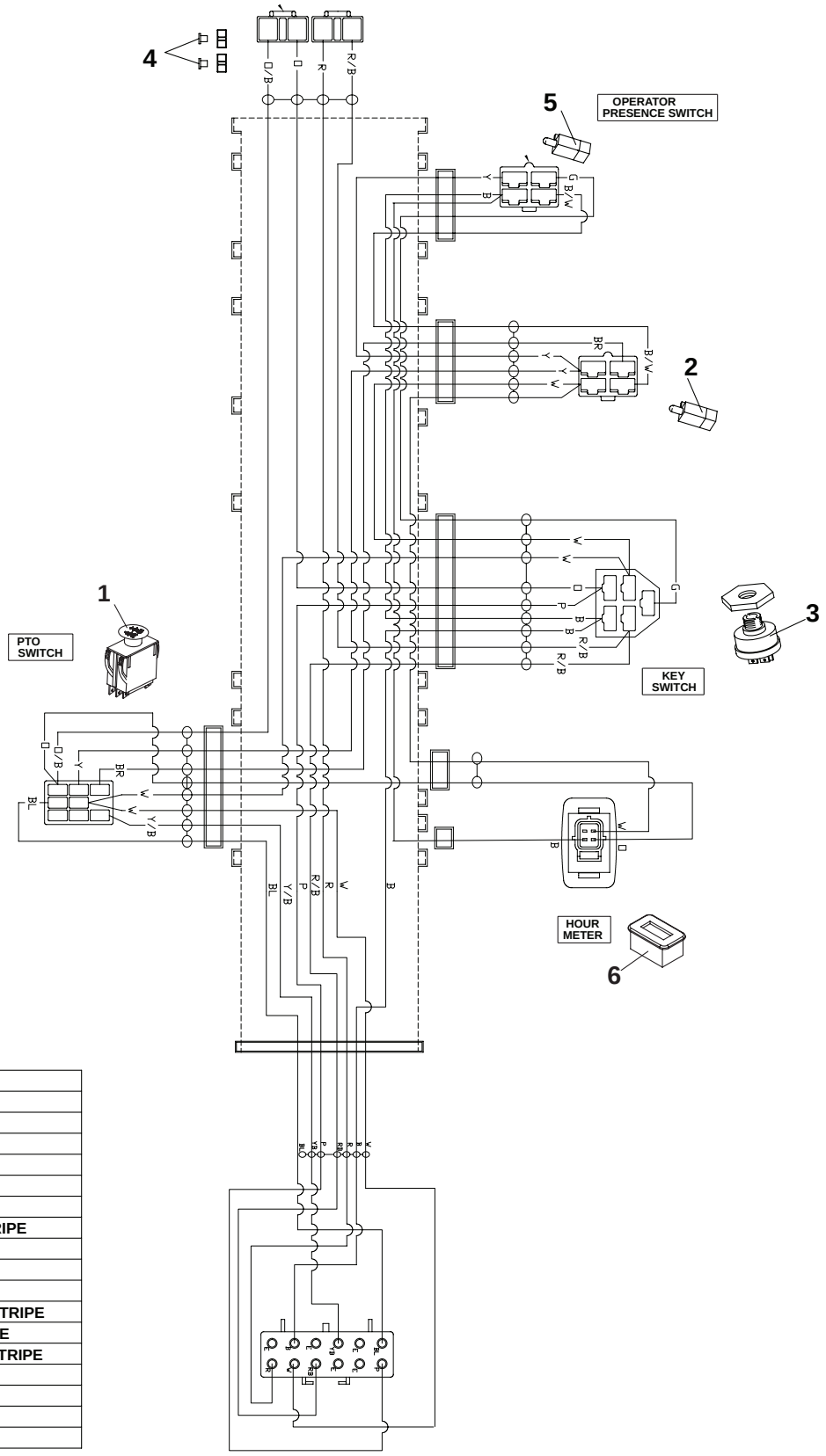
FIGURE 11

ITEM	PART NO.	DESCRIPTION	QTY
1	4172450	HARNESS-WIRING, LOWER	1
2	2721110	CLUTCH-ELECTRICAL (INCLUDES ITEM 5)	1
3	38665	SOLENOID	1
4	108061-15	CABLE-BATTERY 20 RED	1
5	2720949	ASSY-CLUTCH WIRE	1
6		BATTERY-190CCA	OL
7	108061-16	CABLE-BATTERY BLACK 29	1
8	112386	BOOT-BATTERY TERM POS	1
9	2722227-03	CABLE-BATTERY W/CONDUIT	1
10	2308095	COVER-TERMINAL	3

OL= OBTAIN LOCALLY

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 12



WIRE COLORS	
W	WHITE
BR	BROWN
P	PURPLE
O	ORANGE
BL	BLUE
Y	YELLOW
BW	BLACK W/ WHITE STRIPE
B	BLACK
G	GREEN
R	RED
OB	ORANGE W/ BLACK STRIPE
RB	RED W/ BLACK STRIPE
YB	YELLOW W/ BLACK STRIPE

UPPER WIRE DIAGRAM-ELECTRIC START

FIGURE 12

ITEM	PART NO.	DESCRIPTION	QTY
1	2721505	SWITCH-PTO	1
2	108208	SWITCH DBL POLE	1
3	128010	KEY SWITCH	1
4	148082-20	FUSE 20 AMP	2
5	2308094	SWITCH-NCNC DBL POLE	1
6	4171992	HOURMETER	1
7	4172447	HARNESS-HYDRO MAIN	1

ITEM	PART NO.	DESCRIPTION	QTY

*** NOT ILLUSTRATED**

WIRING SCHEMATIC-ELECTRIC START

FIGURE 13

REF. 4115550

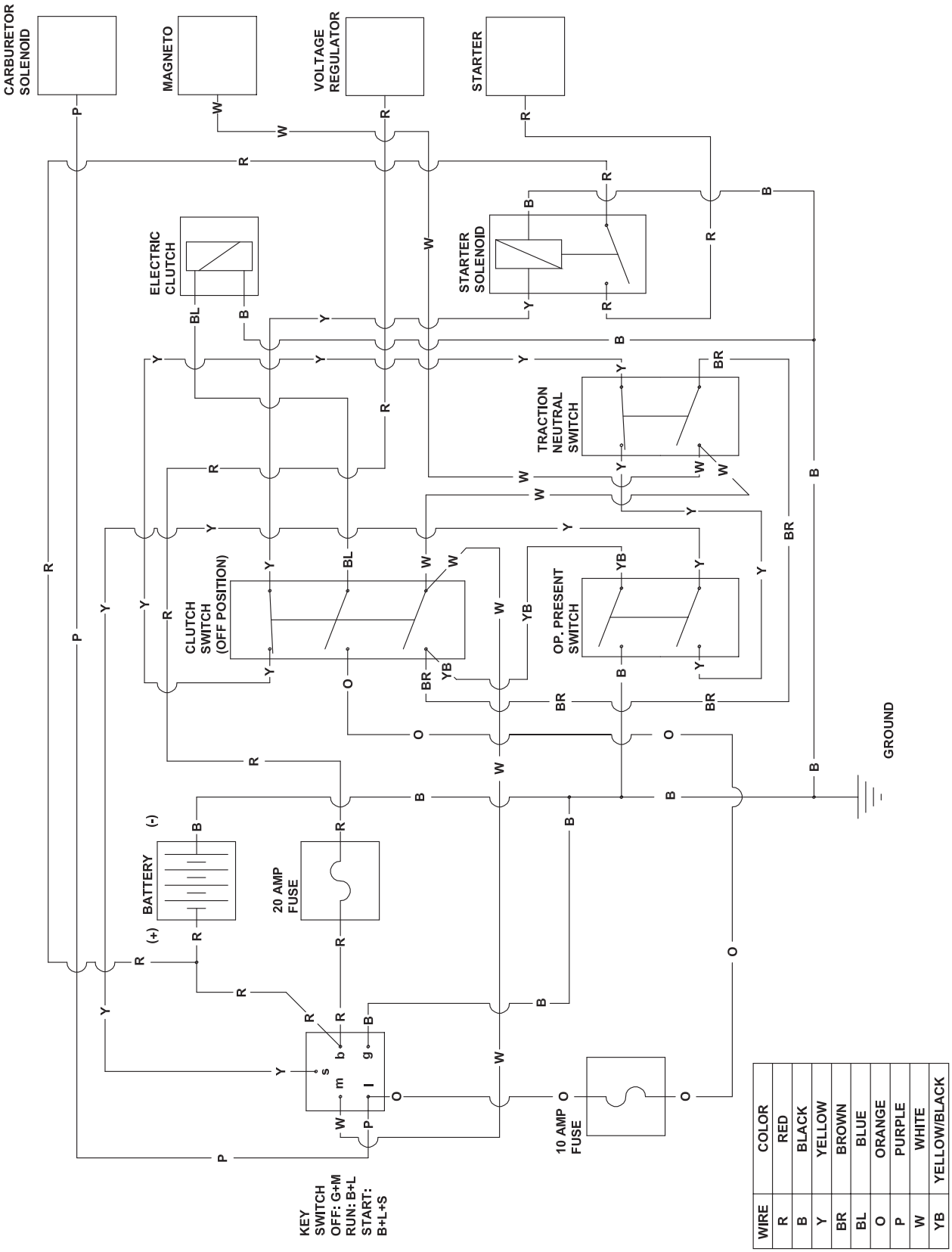
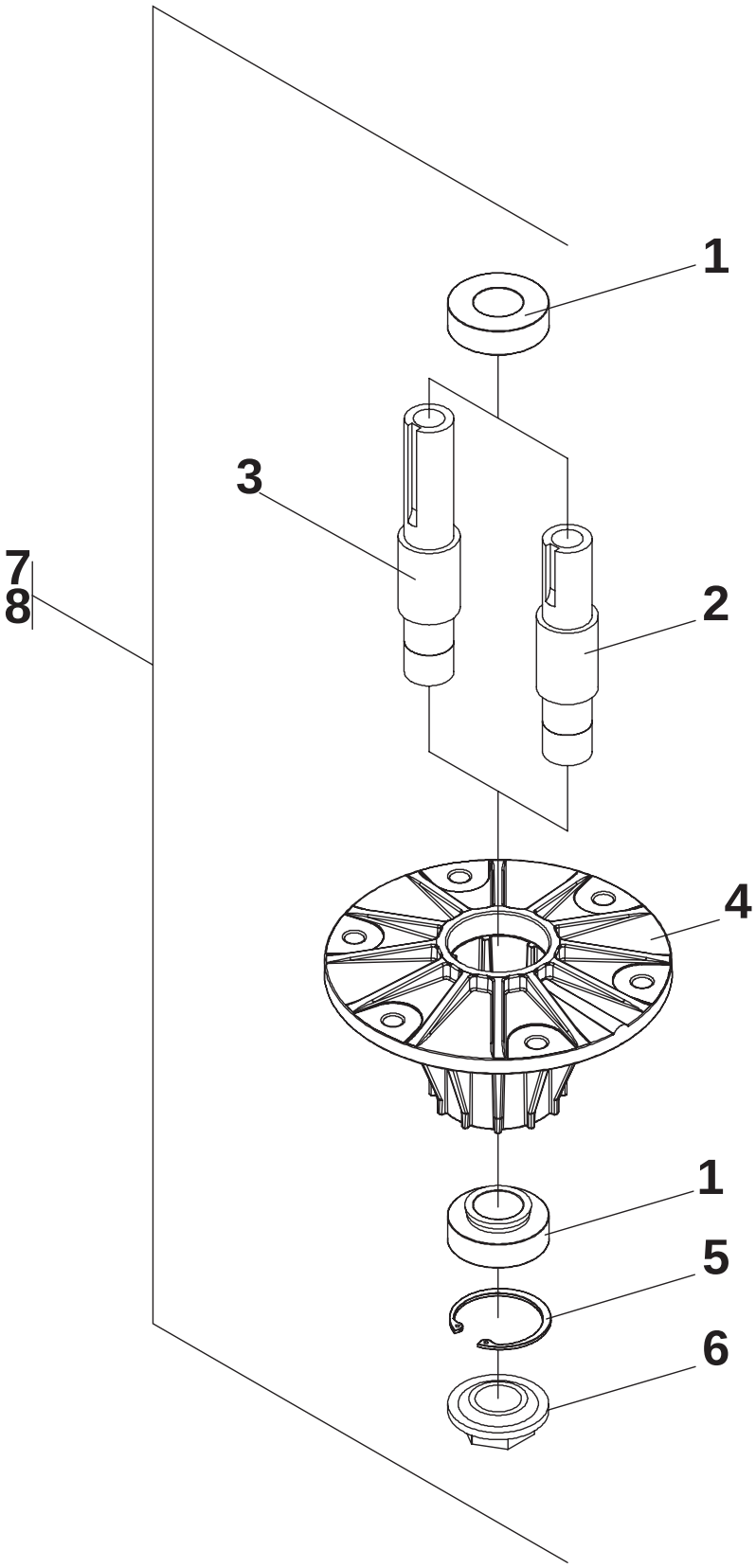


FIGURE 14



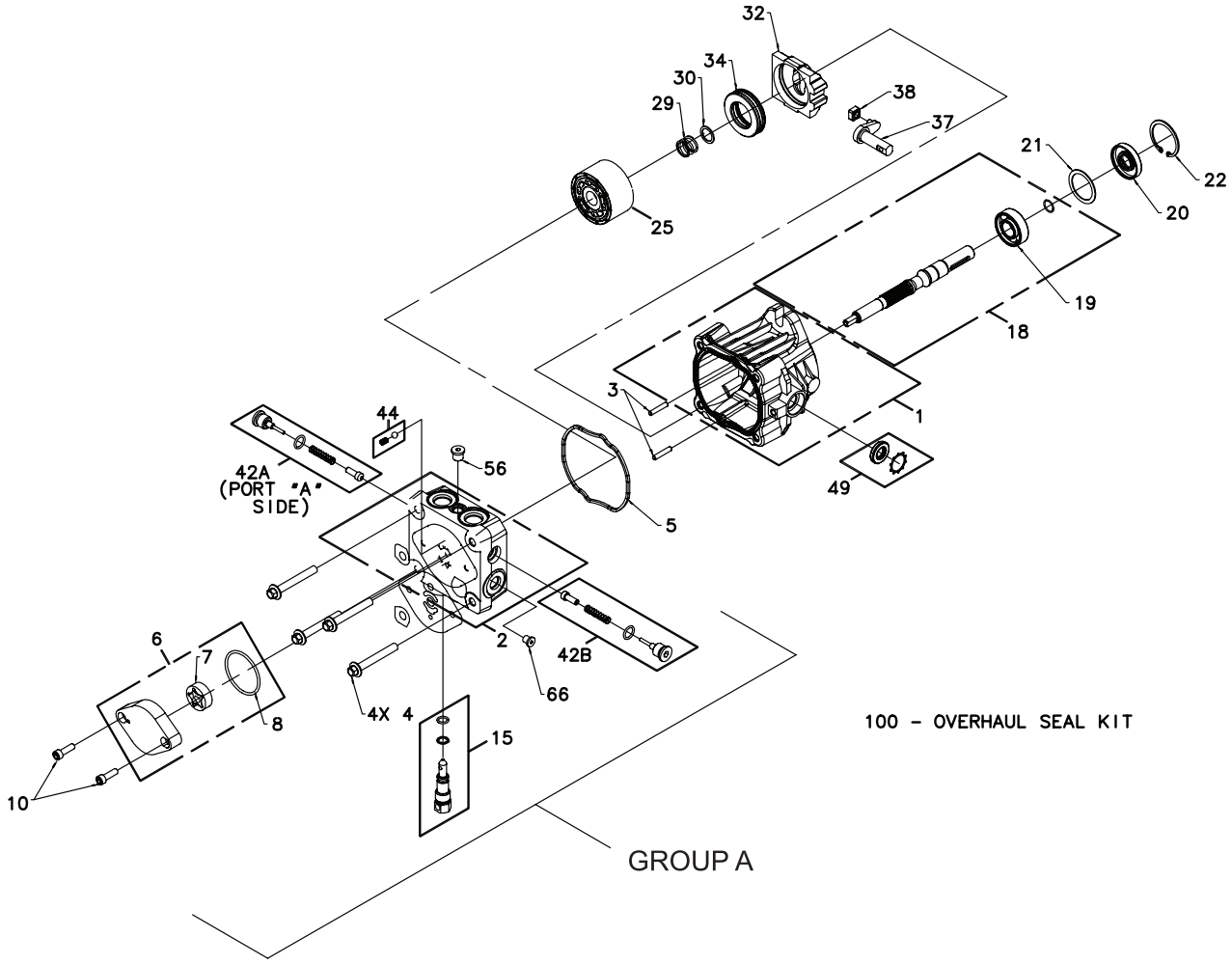
SPINDLE ASSEMBLY

FIGURE 14

ITEM	PART NO.	DESCRIPTION	QTY
1	4167554-01	BEARING-SPINDLE SEALED	2
2	33179-02	SPINDLE-SHORT	1
	(USED IN ITEM 8)		
3	33179-01	SPINDLE-LONG	1
	(USED IN ITEM 7)		
4	2721096	HOUSING-SPINDLE 6 HOLE	1
5	64144-38	SNAP-RING	1
6	38315	NUT-SPINDLE	1
7	4171185	ASSY-SPINDLE LONG	1
	(INCLUDES ITEMS 1, 3, 4-6)		
8	4171184	ASSY-SPINDLE SHORT	1
	(INCLUDES ITEMS 1, 2, 4-6)		

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 15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100 - OVERHAUL SEAL KIT
GROUP A

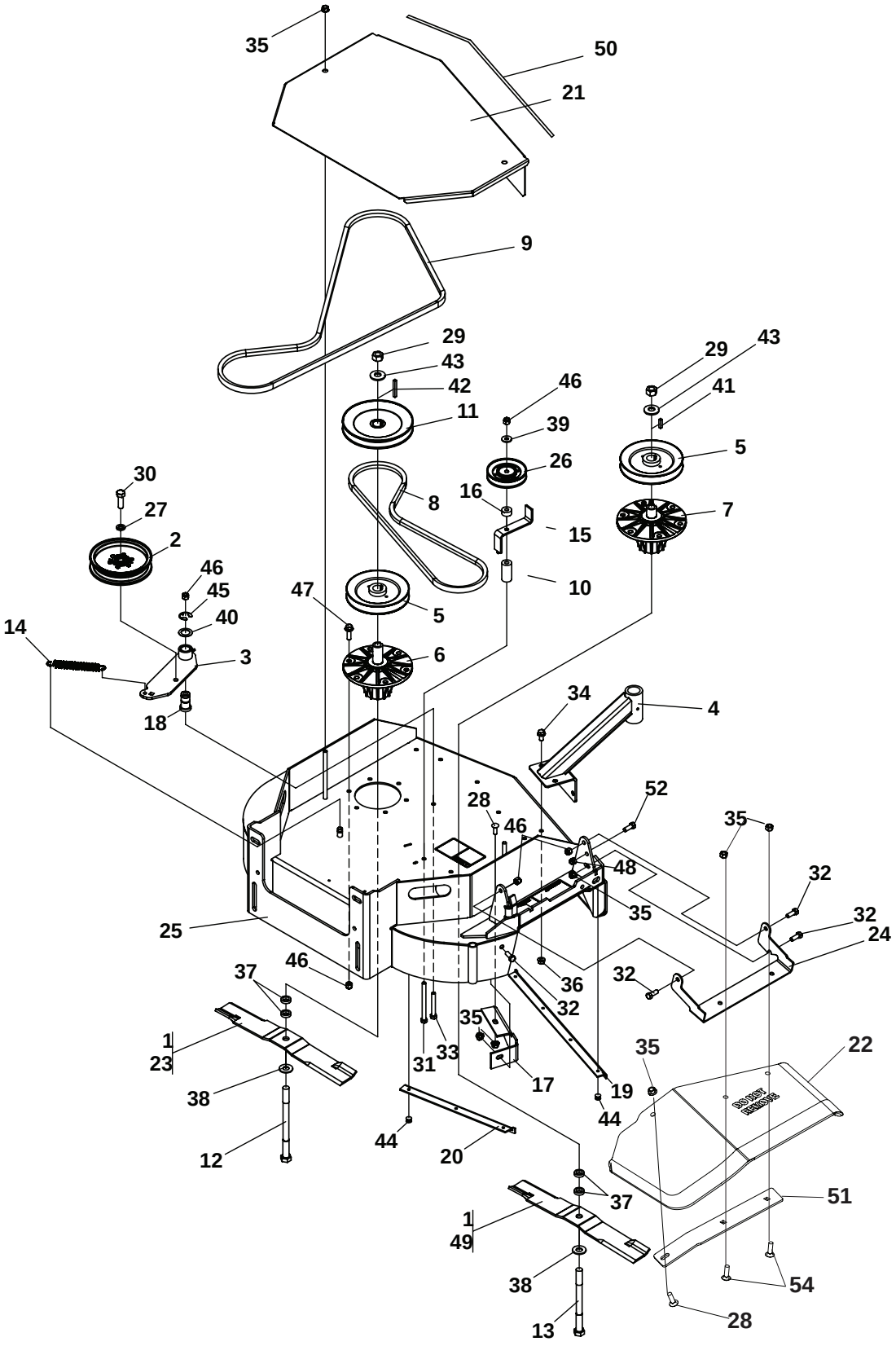
FIGURE 15

4112782 & 4163317 PUMP-HYDRO RH ILLUSTRATED AS SHOWN
2721615 & 4163316 PUMP-HYDRO LH ILLUSTRATED AS SHOWN EXCEPT GROUP A IS ROTATED 180° AROUND THE CENTERLINE OF THE PUMP.

ITEM	HYDROGEAR PART NO.	PART NO.	DESCRIPTION	QTY
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" EU SIDE DISCHARGE DECK

FIGURE 16

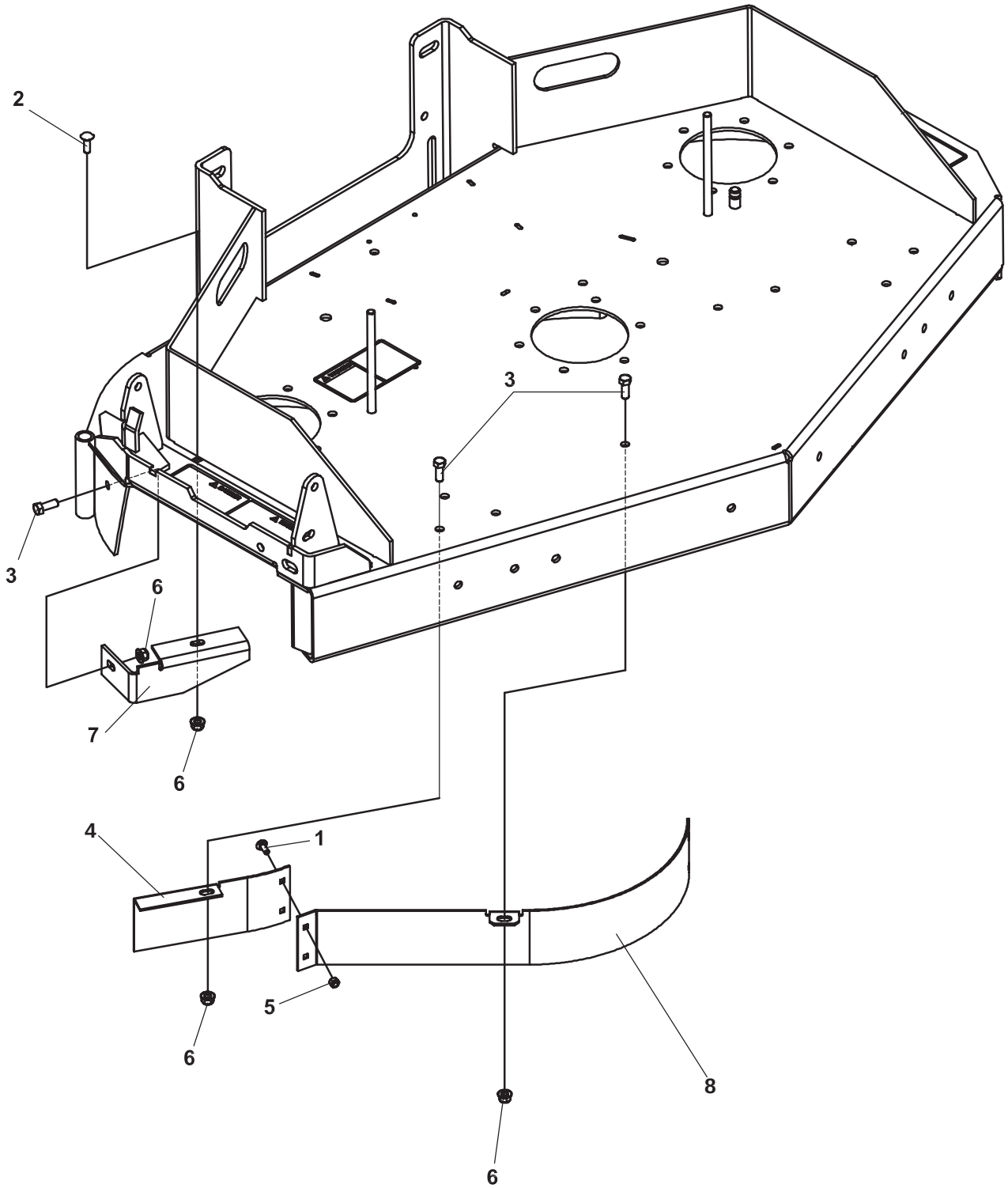


MOUNTING-36" EU SIDE DISCHARGE DECK

FIGURE 16

ITEM	PART NO.	DESCRIPTION	QTY
1	112243-02	BLADE 18.00 OFFST	2
2	128169	PULLEY, IDLER 5.50	1
3	4163871.7	WLDMT-DECK IDLER	1
4	2306029	S CASTER SUPPORT	2
5	2308140	PULLEY-ENGINE	2
6	4171185	S-ASSY SPNDL 6 LNG	1
7	4171184	S-ASSY SPNDL 6 SHRT	1
8	2721477	BELT-HB 56.75	1
9	2721478	BELT-HB 85.25	1
10	2721485	SPACER-IDLER	1
11	2722161	PULLEY-6.75 EOD	1
12	64123-77	BLT-HEX 5/8-18X8 1/2	1
13	64123-265	BLT-HEX HD 5/18-18X7 1/2	1
14	38219	SPRING-TENSION	1
15	4115420.7	GUIDE-BELT	1
16	4115424	SPCR-10.31 X 25.4 X 12.0	1
17	4115864.7	BAFFLE-DISCHARGE	1
18	4116661	PIN-PIVOT	1
19	4119062.2	BRKT-EC FRONT DECK, RH	1
20	4119063.2	BRKT-EC FRONT DECK, LH	1
21	4119064.2	COVER-BELT, 36 FIXED	1
22	4172327	CHUTE-DECK, SD	1
23	2722543-02	BLADE-18.00 ELIMINATOR	2
24	4165130.7	BRKT-CHUTE SUPPORT EC	1
25	4127209	S-36 DECK SD W/LABS EC	1
26	4135265	PULLEY-V IDLER	1
27	64006-05	LOCKWSHR-HELICAL 1/2	1
28	64018-3	BOLT-3/8-16X1 CARRIAGE	2
29	64025-16	NUT-HEX 5/8-18	2
30	64123-05	BLT-HEX 1/2-20X1-1/2	1
31	64123-173	BLT-HEX 3/8-16X4-1/2	1
32	64123-50	BOLT-HEX 3/8-16X1	5
33	64123-88	BOLT, 3/8-16X2-3/4 HEX	1
34	64262-010	BLT-FLG HD 3/8-16 X 3/4	8
35	64268-03	NUT-FL NYLON LOCK 3/8-16	6
36	64141-4	NUT-WLF 3/8-16	8
37	64163-12	.635/.640X1.0X.25 WASH	4
38	64163-16	WASHER-41/64 X 1, 3/8 X 12	2
39	64163-31	WASHER, 25/64X1X12	1
40	64163-65	WASHER-.890X1.375X18	1
41	64164-12	KEY-1/4X1/4X1 SQ END	1
42	64164-13	1/4X1/4X2 SQ KEY	1
43	64209-03	SPRING WASHER.67 ID	2
44	64215-12	RIVET-POP IFI #86	7
45	64221-04	E-RING.875	1
46	64229-03	LOCKNUT-NYLON 3/8-16	16
47	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	12
48	64268-03	NUT-FL NYLON LOCK 3/8-16	3
49	2722543-02	BLADE-18.00 ELIMINATOR (OPTIONAL)	2
50	108074-17	S-CHANNEL FLEX TRIM 26"	1
51	4169946.7	PLATE-CHUTE	1
52	64123-89	BLT-HEX 1/4-20X3/4	1
53	64141-2	NUT-WLF 1/4-20	1
54	64018-7	BLT-CRG 3/8-16X1-1/4	2

FIGURE 17



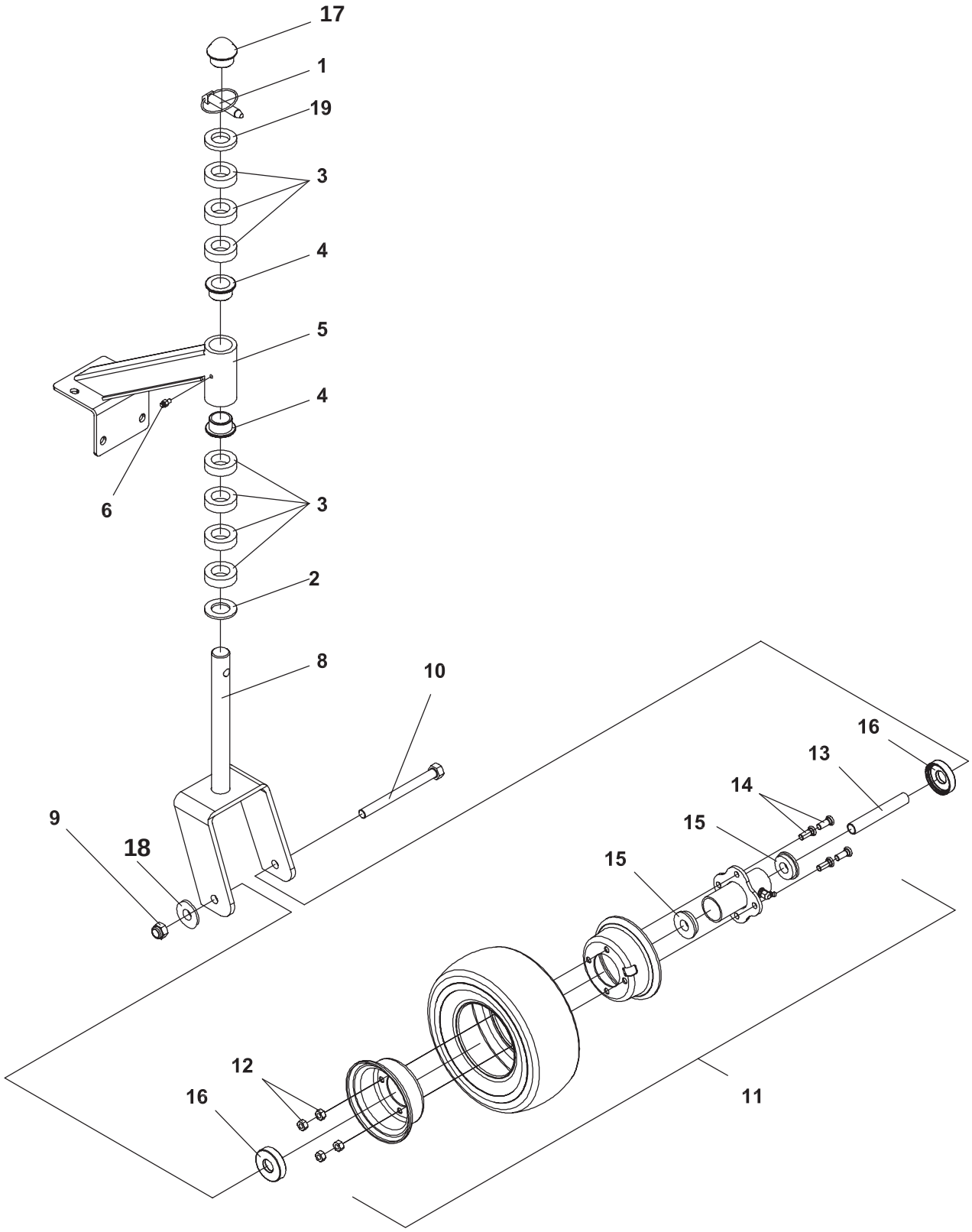
BAFFLES-SIDE DISCHARGE

FIGURE 17

ITEM	PART NO.	DESCRIPTION	QTY
1	64018-2	BLT-CRG 1/4-20X3/4	2
2	64018-3	BLT-CRG 3/8-16X1	1
3	64123-50	BOLT-HEX 3/8-16X1	5
4	4134343.7	BAFFLE-RIGHT FRONT	1
5	64229-01	LOCKNUT-1/4-20 NYLON	2
6	64268-03	NUT-FL NYLON LOCK 3/8-16	6
7	4115864.7	BAFFLE-DISCHARGE	1
8	4147035.7	BAFFLE-FRONT DECK	1

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 18



CASTER ASSY-FIXED DECKS

FIGURE 18

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	2306029	S CASTER SUPPORT	1
	(INCLUDES ITEMS 4 & 6, QTYs LISTED)		
6	85010N	ZERK GREASE FITTING	1
7	4165543-01	S-ASSY WHEEL HUB	11
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	4165543	WHEEL-ASSY,9X3.5-4 NO FLAT	1
	(INCLUDES ITEM 15 &19)		
12	64141-1	NUT-WLF 5/16-24	4
13	2722230-04	SPANNER	1
14	64123-01	BLT-HEX 5/16-24X3/4	4
15	2722682	BEARING-9" WHEEL	2
16	2722591	SPACER-3/4 INCH BRG	2
17	4137004	END-CAP	1
18	64251-005	WSHR-M12	2
19	64163-84	WSHR-1.015 X 1.75 X.125	1

*** NOT ILLUSTRATED**

ITEM	PART NO.	DESCRIPTION	QTY

Textron Golf, Turf & Specialty Products
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