

942536J

PROCAT SE EFI KOHLER ECV730 W/52 SIDE DISCHARGE

942537J

PROCAT SE EFI KOHLER ECV749 W/61 SIDE DISCHARGE



#### **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.

# **A** 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.

# **A** 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.

# California Advertencia 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.

# **A** 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.

## PROCAT SE

#### **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.

See a Schiller Grounds Care, Inc. 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

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09-2014

#### NOTICE !!!

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

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

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



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



#### **ILEA EL INSTRUCTIVO!**

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



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.

## **A** DANGER

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

## **AWARNING**

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

## **A**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

# Schiller Grounds Care, Inc.

Dne Bobcat LaneJohnson Creek, WI 53038 U.S.APhone: 920-699-2000Fax: 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 under seat plate on Frame of unit.

#### **TOOLS REQUIRED FOR ASSEMBLY**

Wrecking bar

Claw hammer

- Ratchets: 3/8",e

- Sockets: 9/16", 3/4"

- Wrenches: 3/8", 9/16", 3/4"

- Straight edge

- Tire pressure gauge

- Blocks (for deck leveling)

**NOTE:** All references below to the "right" or "left" are with respect to an operator at the controls.

#### 1. UNCRATE UNIT

Discard packing materials. Remove and discard shipping brackets. Tighten caster wheel axle bolts against caster axle spanner bushings.

- 2. **72" in. deck models:** Tires need to be installed using eight 64187-03 wheel nuts included in hardware bag. Torque nut to 75 110 ft./lbs.
- 3. Set rear tire pressures to 12 lbs/in² (0.8 kg/cm²). Tires are overinflated for shipping. Front tires should be set to 15 lbs/in² (1.05 kg/cm²).

#### 4. DECK LEVELING

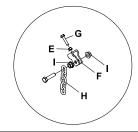
- a) Park the machine on a smooth, level surface. Raise the deck to the transport position.
- b) SIDE DISCHARGE: Lower the deck onto a pair of equal height blocks A under the rear corners of the deck. Place another pair of adjustable blocks B under the front of the deck so that the deck top is pitched forward 1/8".

REAR DISCHARGE: Lower the deck onto a pair of equal height blocks **A** under the rear corners of the deck. Place another pair of adjustable blocks **B** under the front of the deck so that the deck has a reverse pitch of 1/8".

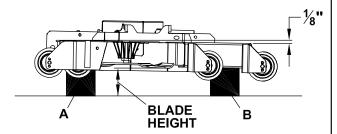
**NOTE:** The front and rear of the deck are at different heights.

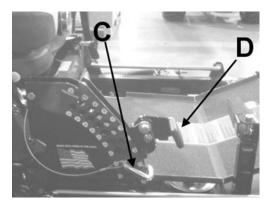
- c) Measure the height of the blade cutting edge above the ground. Remove pin C and set the height of cut lever D to that height.
- d) Loosen nuts I at all four corners of the deck.

NOTE: This will relieve tension on chains H.



e) Loosen the jam nuts E on the height of cut clips F and adjusting screws G. Turn the adjusting screws G until the play is taken out of the chains H at all four corners. Tighten the jam nuts E against the clips F and at the adjusting screws G. Retighten nuts I at this time.



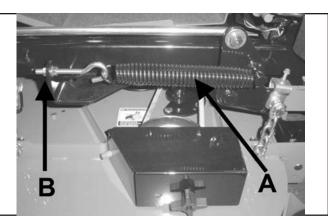


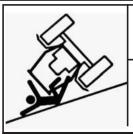
#### 5. COUNTERBALANCE SPRINGS

- a) Raise the cutterdeck all the way.
- b) Adjust the spring A with nut B:

Approximately 1" of threads should be extending past the spring mounting bracket at nut **B**.

The springs may be tightened or loosened from this point according to personal preference.





#### **AWARNING**

SERIOUS INJURY OR DEATH MAY RESULT FROM MACHINE ROLLOVER

- DO NOT OPERATE MACHINE ON STEE SLOPES OR NEAR DROP OFFS
- ALWAYS USE SEAT BELTS WITH ROPS IN
- RAISED POSITION
- AVOID SHARP AND/OR QUICK TURNS
   DO NOT EXCEED THE MACHINE WEIGHT
- RATING OF THE RO

#### **AWARNING**

ROLLOVER MAY CAUSE PERMANENT INJURY OR DEATH.

- ROPS RAISES THE CENTER OF GRAVITY AND REDUCES STABILITY ON SLOPES.
- SUDDEN STARTS OR TURNS ON RAMPS OR SLOPES CAN CAUSE OVERTURN.
- USE GREATER CARE ON RAMPS AND AS THE SLOPE INCREASES.



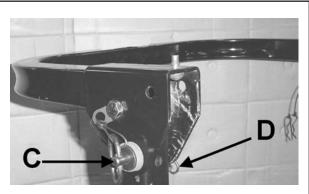
The ROPS reduces the risk of serious or fatal injury in the unlikely event of a tip over, although the system cannot protect the operator from all possible injuries. It is not designed, made, or intended to provide protection for a machine that is driven off an embankment, retaining wall or similar situation. A ROPS does not replace the need to exercise care when operating on slopes. DO NOT USE SEATBELT WHEN ROPS IS IN THE LOWERED POSITON.

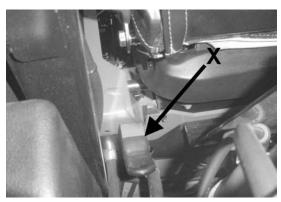
#### **IMPORTANT:**

- a) Do not cut, drill, modify or repair a ROPS structure in any manner..b) Always replace a damaged ROPS.
- Inspect roll bar and seat belts for damage or loose hardware before use. Tighten/replace any loose/damaged hardware. Replace worn or damaged seat belts.

**SET UP:** Remove cotter pin **D** from hitch pin **C**. Pull out hitch pin **C**, rotate upper hoop to the upright position. Reinstall hitch pin **C**. Reinstall cotter Pin **D** through hitch pin **C**.

Ensure that seat plate is secured using spring-loaded latch. To flip seat forward, push down on handle **X**.





## **A**WARNING

This ROPS is certified for use on machines with a maximum gross vehicle weight (GVW) of 2000 LB. The GVW includes the weight of the base machine, operator, fuel, ROPS and any other attachments and payloads. When attachments are added, causing the GVW of the machine to be more than 2000 LB., the ROPS may not provide adequate protection resulting in serious injury or death. Use caution when installing attachments and **DO NOT EXCEED** the GVW rating of the ROPS.

#### 7. FINAL PREPARATIONS

- Check the engine and hydraulic oil levels. Top up with the correct oil if necessary. Use SAE 10W30 motor oil for the engine. Use fresh, clean SAE 15W40 or SAE 20W50 motor oil or SAE 15W50 synthetic motor oil for the hydraulic system. After running for one hour, let hydraulic system oil cool. When cold check levels.
- Remove the battery from the machine. Fill the battery to the bottom of the vent wells with acid and trickle charge for several hours.

## **A** WARNING

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

Use insulated tools, wear protective glasses or goggles and protective clothing when working with batteries. Read and obey the battery manufacturer's instructions.

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

- a) Verify battery polarity before connecting or disconnecting the battery cables.
- b) When installing the battery, always assemble the RED, positive (+) battery cable first and the ground, BLACK, negative (-) cable last.
- c) Tighten cables securely to battery terminals and apply a light coat of silicone dielectric grease to terminals and cable ends to prevent corrosion. Keep terminal covers in place.
- Read Operation and Safety Manual before starting.
- Deck can be adjusted to allow for the best horsepower, best quality of cut, or best priping. See deck leveling procedure in the Adjustments Section in this manual to set as desired.
- Run engine at full RPM for 5 minutes before engaging blades to allow the engine to be fully lubricated before load is applied.
- Check the hydrostat neutral adjustment. Neutral is set at the factory but may require readjustment if air trapped during the initial oil fill has worked out of the system. See adjustments section later in this manual.
- Do not use the machine without an approved grass collector, the grass discharge chute or mulching plates correctly fitted.

MAINTENANCE			ngoing job. <sup>·</sup> rations. Perf									
OPERATION	FIRST 5 HOURS	DAILY	EVERY 25 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	EVERY 200 HOURS	EVERY 500 HOURS					
ENGINE  Consult the engine manual for additional information and instructions												
Check/Top Off Engine Coolant Level (Where Applicable)		x										
Check/Top Off Oil Level		х										
Check For Leaks		х										
Clean Air Intake Screen		х										
Clean Air Cleaner Precleaner			X*									
Clean Air Cleaner Element					X	X**						
Clean Cooling Fins					X							
Change Oil And Filter	X		See e	ngine manu	facturer's n	nanual						
Check/Replace Spark Plugs						Х						
			EAVY DUTY AVY DUTY (									
			YDRAULIC									
Check For Leaks	Х	Х										
Check/Top Off Oil Level	х				Х							
Change Oil And Filter	X						Х					
			MACHINE									
Check Interlock Operation		Х										
Check Tire Pressures		Х										
Check/Top Off Battery					Х							
Lubricate All Points						Х	Х					

NOTES									

GENERAL	DATE	HRS										
Check Tire Pressures												
Lubricate All Points												
Check Nuts & Bolts												
ENGINE												
Check Engine Coolant Level (Where Applicable)												
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, hydraulic oil and both filters.												

#### **CHECK DAILY**

#### **Operator Presence Interlock System - Start Operation**

For the engine to crank, the parking brake must be on, the PTO (blades) off and traction levers in the neutral lock position. Sit in the seat and check, one by one, if the engine will crank with the parking brake off, the blades on, and either traction lever out of neutral lock. Also, make sure engine coolant temperature gauge light flashes upon turning key to the **ON** position.

#### **Operator Presence Interlock System - Run Operation**

The operator must be in the seat for the engine to run with the parking brake off, the traction levers moved out of the neutral lock position, or the blades on. To check:

- 1. Start the engine and run at 1/2 throttle with the operator on the machine but raised off the seat.
- 2. One by one: move the parking brake to the OFF position, traction levers out of the neutral lock position (check each independently), and turn the blades on. Each check should kill the engine after 1/2 second. (A 1/2 second delay is built into the system to prevent engine cutout when traversing rough terrain.)

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

#### **Hardware**

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

#### Tire pressure

Rear tires should be kept inflated at 12 lbs/in² (.8 kg/cm²). Improper tire inflation can cause rapid tire wear and poor traction. Uneven inflation can cause uneven cutting. Front tires should be set to 15 lbs/in² (1.05 kg/cm²).

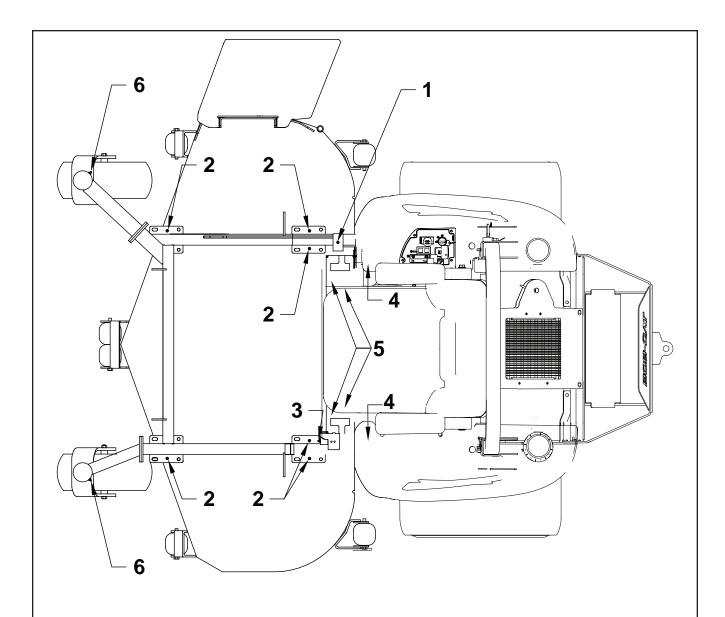
#### **BATTERY-AGM TYPE BATTERY SUPPLIED**

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

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

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

- 4. AGM type battery. **Use AGM charger when charging. P/N 4171973**
- 5. Clean the cable ends and battery posts with steel wool. Use a solution of baking soda and water to clean the battery. Do not allow the solution to enter into the battery cells.
- 6. Tighten cables securely to battery terminals and apply a light coat of silicone dielectric grease to terminals and cable ends to prevent corrosion. Keep terminal covers in place.



#### LUBRICATION

Every 50 hours of operation, lubricate the following points (1-4) with grease:

- 1. Deck lift rockshaft (1 point)
- 2. Deck lift pivots (6 points)
- 3. Brake lever pivot (1 point)
- 4. Push arms (2 points located at rear of cutterdeck under each fuel tank)
- 5. Isolation mounts (4 points located under seat at front of machine.
- 6. Caster wheel pivots (2 points) (Lubricate every 500 hours or once a year)

**NOTE ON BLADE SPINDLES** - The blade spindles on these machines use a superior sealed bearing that does not require relubrication.

#### **HYDRAULIC SYSTEM**

Fluid level in the hydraulic system should be checked after the first 5 hours of operation, and every 100 hours thereafter, or when a leak has occurred. If the fluid is low, check all components for leaks.

To check, remove reservoir cap **M**. The fluid level should be at the bottom of the filler tube. If low, top up (do not overfill). Use one of the oils listed below:

- SAE 15W40 motor oil
- SAE 20W50 motor oil
- 15W50 synthetic motor oil

#### **AFTER FIRST FIVE (5) HOURS**

- Remove plug N to drain hydraulic reservoir. Dispose of used oil in accordance with local requirements.
- 2. Clean and replace the plug.
- 3. Change hydraulic oil filter G.
- 4. Fill the reservoir with fresh oil to the bottom of the reservoir filler tube, using an oil from the list above. Do not overfill.

#### PERIODIC OIL CHANGES

Change the hydraulic fluid and hydraulic filter after each 500 hours of operation using the same procedure given above.

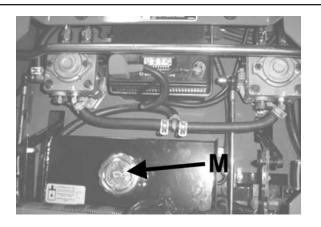
#### **NOTES:**

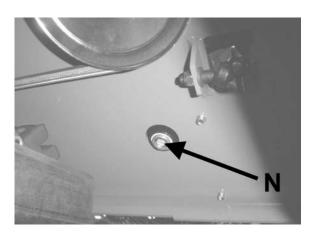
Before servicing the hydraulic system, stop the engine, disconnect spark plug wires and disengage the PTO.

- After any hydraulic line is opened, plug or cap it promptly to reduce the risk of contamination.
- Do not use sealant tape on hydraulic pipe fittings.
   Use a liquid sealant that will dissolve into the system.
- Make sure all hydraulic connections are tight and hydraulic hoses and lines are in good condition before applying pressure to system.

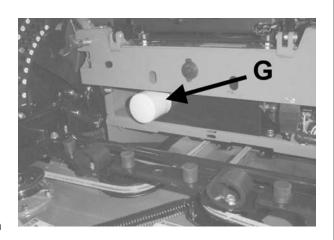
## **AWARNING**

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.





View from below machine



#### **ENGINE OIL**

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

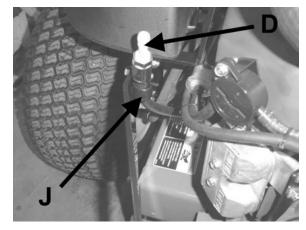
#### **AFTER FIRST FIVE (5) HOURS**

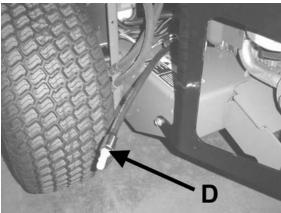
While the engine is warm:

- Release the oil drain hose assembly from the engine clip J. Lay hose assembly over the frame edge.
- 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.
- 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.
- Fill the crankcase with fresh oil to the full mark. Do not overfill. See engine manual for oil specifications.

#### **DAILY**

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





#### PERIODIC OIL CHANGES

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

#### **SPARK PLUGS**

Remove each plug and check condition.

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

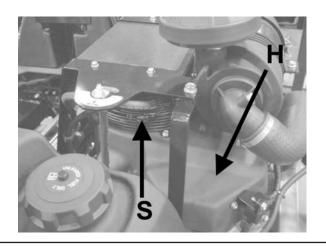
#### **FUEL FILTER**

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

#### **ENGINE COOLING**

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

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

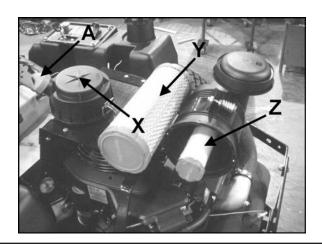


#### **HEAVY DUTY CYCLONIC AIR CLEANER**

Clean and replace the air cleaner element as specified in the service chart. Uneven running, lack of power or black exhaust fumes may indicate a dirty air cleaner.

#### To replace air cleaner elements:

- Unclamp end cover X and remove existing cleaner elements.
- Insert new elements Y and Z and replace cover.
   Ensure the breathing port A is pointing down and towards the front of the tractor.



#### **CLEANING MACHINE**

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

Brush or blow clippings and debris off the cutterdeck and engine deck. DO NOT use a pressure washer.

#### **WASHING MACHINE**

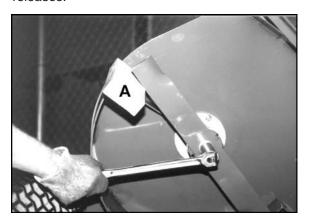
CAUTION: Improperly washing a machine can cause water to enter bearings and other components. This can greatly reduce component life.

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

#### **BLADE REMOVAL**

Follow these instructions to prevent injury during blade removal:

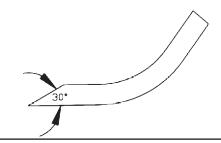
- Loosen with a box wrench or a socket and long breaker bar. To gain additional leverage, slip a long pipe or thick-walled tube over breaker bar or wrench.
- 2. Insert wood block **A** as shown, with grain perpendicular to blade, to prevent blade from turning when loosening.
- 3. Wear thickly padded gloves. Keep hands clear of blade path. Blades may rotate when bolt releases.



#### **SHARPENING**

Blades may be sharpened by filing or grinding.

- Inspect blades before sharpening.
- Replace bent or cracked blades.
- Replace blades when the lift portion has worn thin.
- Maintain cut angle at 30°.
- Do not overheat blades when sharpening.
- Always use BOB-CAT blades. Use of another manufacturer's blades may be dangerous.



#### **BLADE BALANCE**

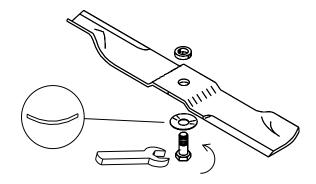
Blade balance must be maintained at 5/8 oz-in (19.4 g-cm) or less. Failure to keep blades balanced causes excess vibration, wear, and shortened life of most components of the machine.

#### To balance a blade:

- 1. Sharpen blade first.
- 2. Balance the blade at the center.
- 3. Attach a 1/8 oz (3.9 g) weight at a distance 5" (127 mm) from center on the light end. This should make the light end the heavy end:
  - If it does, the blade is balanced.
  - If does not, file or grind the heavy end until the addition of the weight makes the light end the heavy end.

#### **BLADE INSTALLATION**

- 1. Wear thickly padded gloves to prevent cuts from the sharp blade.
- 2. Insert the blade bolt, in order, through the conical washer (cup side toward the blade, as shown), the blade, and the blade spacer.
- 3. Install assembly on the blade spindle.
- 4. Torque the blade bolt to 70 ft-lbs.



#### **BELTS**

All belts are tensioned by spring loaded idlers. No adjustment is required.

#### **DECK LEVELING**

- a) Park the machine on a smooth, level surface. Raise the deck to the transport position.
- b) Lower the deck onto a pair of equal height blocks A under the rear corners of the deck. Place another pair of adjustable blocks B under the front of the deck so that the deck top is pitched forward 1/8".

A 1/8" forward pitched deck provides the best horsepower.

A level deck provides the best quality of cut. A 1/8" rearward pitched deck provides the best striping.

Certain grass types and conditions may vary.

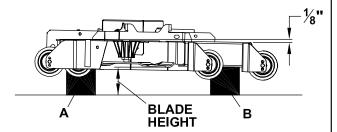
**NOTE:** The front and rear of the deck are at different heights.

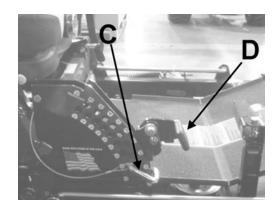
- c) Measure the height of the blade cutting edge above the ground. Remove pin C and set the height of cut lever D to that height.
- d) Loosen nuts I at all four corners of the deck.

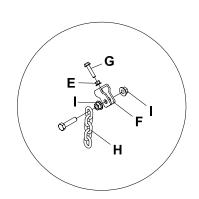
NOTE: This will relieve tension on chains H.

e) Loosen the jam nuts E on the height of cut clips F and adjusting screws G. Turn the adjusting screws G until the play is taken out of the chains H at all four corners. Tighten the jam nuts E against the clips F and at the adjusting screws G. Retighten nuts I at this time.

#### FORWARD PITCH SHOWN







#### **HEIGHT OF CUT**

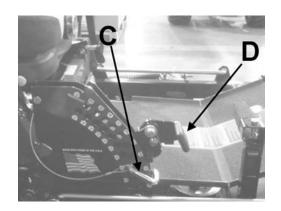
The height of cut is set by moving height of cut pin **C** to the hole designated for the height of cut desired.

To change the height of cut:

- 1. Lift the deck lever **D** to the highest position.
- 2. Move pin **C** to the selected hole.
- 3. Lower the deck until the lift lever is stopped by the pin.

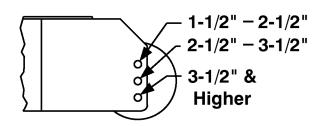
#### NOTES:

- Height of cut may vary due to the amount of tread on the tires, tire diameter or inflation pressure.
- For best results, adjust the rear deck rollers for the height of cut to be used (see below).



#### **REAR DECK ROLLERS**

The rear outside deck rollers are adjustable up and down to provide improved deck flotation and scalping protection at various heights of cut. They are not intended to ride continuously on the ground. Adjust no closer than 3/8" (10mm) to the ground.

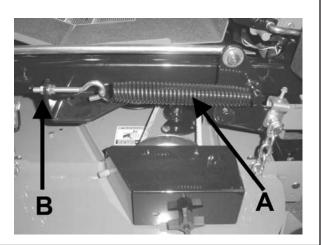


Height of cut ranges for roller adjustment

#### **COUNTERBALANCE SPRINGS**

- 1. Raise the cutterdeck all the way.
- 2. Adjust the spring **A** with nut **B**: The spring length should be set at approximately 8-3/4", inside loop to inside loop, when in transport position.

The springs may be tightened or loosened from this point according to personal preference.



#### CONTROL LEVERS

There are two mounting positions for the control levers, upper and lower. The lower position works well for most people. Taller operators may need the upper position.

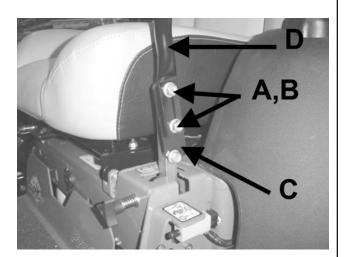
To adjust the height of the control levers:

- Remove bolts A and nuts B.
- Align holes in control lever **D** with appropriate holes in traction lever bracket **C**.
- Install bolts A and nuts B.

The upper mounting hole for the control levers is slotted to allow fore-aft adjustment and to allow alignment of the levers.

To adjust or align the control levers:

- Loosen nuts B.
- Adjust control lever position.
- Tighten nuts B.



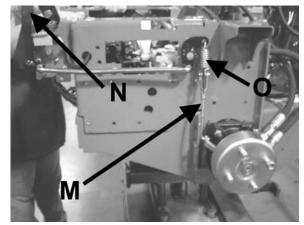
#### PARKING BRAKE

Park machine on a smooth level surface.

Support the machine with the rear wheels off the ground, using jack stands or equivalent. DO NOT rely on mechanical or hydraulic jacks.

- 1. Remove rear wheels.
- 2. Measure spring length **O** with parking brake **N** in the OFF position.
- 3. Move parking brake **N** to the ON position and measure length of spring **O** again. When spring deflects 3/8" it is properly adjusted.
- If adjustment is required, return parking brake N to the OFF position.
- 5. Disconnect one end of rod **M** at the brake and loosen jam nut.
- 6. Adjust rod **M** in or out as required until 3/8" deflection in brake spring **O** is achieved with parking brake **N** in the ON position.
- 7. Reconnect rod M and retighten jam nut.
- 8. Repeat steps 2-7 on opposite side of machine.
- 9. Replace wheels and tighten wheel nuts.

**NOTE:** Parking brake must be in the OFF position to properly seat brake drums.



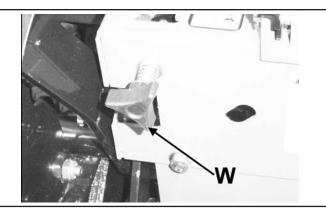
Parking brake assembly (tire and deck not shown for clarity - brake in ON position).

This adjustment will cause the brake springs to stretch 3/8" when the parking brake is in the ON position, providing the correct parking brake force without overloading the brake arm.

#### TRACKING HANDLES

An adjustment is provided to allow the operator to adjust machine tracking during operation.

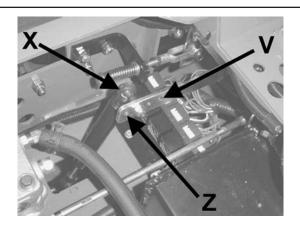
- Turn knob W clockwise to shorten control lever travel.
- 2. Turn knob **W** counter-clockwise to increase control lever travel.



#### **DAMPERS**

Different damper mounting holes have been provided for various operator preferences with control lever motion.

- For a stronger resistance feel, mount the dampers X in the outer most hole Z of the motion control weldment.
- For a lighter resistance feel, mount the dampers X in the inner most hole V of the motion control weldment.

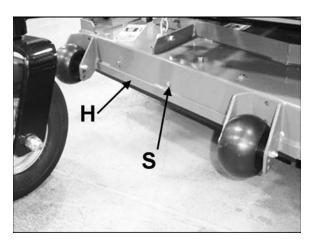


#### FRONT DECK LIP

Adjustable front deck lips have been provided on 48in., 52 in. and 61 in. cutterdecks for various cutting conditions.

To revise per conditions:

- 1. Loosen the front bolts S.
- 2. Adjust height of **H**.
- 3. Retighten S once you have desired height.



#### **HYDROSTAT ADJUSTMENTS**

A turnbuckle-style hydrostat neutral adjustment is provided.

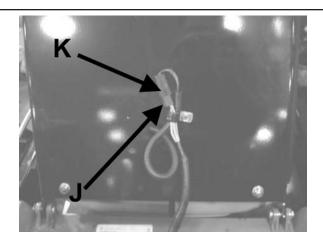
#### Neutral:

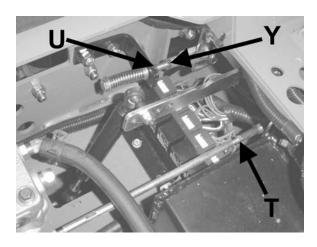
- Support the machine with the rear wheels off the ground. Use jackstands or equivalent support. Do not rely only on mechanical or hydraulic jacks.
- 2. Move the traction levers out into the neutral lock position and raise the seat.
- 3. Disconnect the seat switch wire **K** and temporarily connect the two terminals with jumper wire **J** as shown.
- 4. Start the engine and run at low speed.
- 5. Loosen jam nuts **T** at both ends of the control rod.
- Rotate the control rod until the corresponding wheel stops turning. Lock the jam nuts. Run the engine up to high idle to check the adjustment. Readjust if necessary.
- 7. Repeat steps 5 and 6 for the opposite side.
- 8. Remove the jumper wire **J** and reconnect the seat switch.

#### Reverse Return:

- 1. Move traction levers out to the neutral lock position and raise the seat.
- 2. Locknut **U** should be run on the bolt as far as it will go.
- 3. Loosen jam nut **Y**. Adjust the clevis yoke by turning the head of the bolt until the clevis pin just makes contact with the rear of the slot in the lever it connects with. Tighten jam nut **Y**.
- 4. Repeat steps 2 and 3 for the opposite side.

**NOTE:** A slight creep in reverse is acceptable provided the wheel does not turn and the hydrostat pump does not whine when the parking brake is on.





Right side adjustments

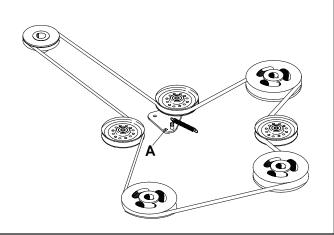
**Note:** Always use Schiller Grounds Care, Inc.replacement belts, not general purpose belts. Schiller Grounds Care, Inc.belts are specially designed for use on commercial mowers and will normally last longer.

#### **CUTTERDECK BELT**

- 1. Tilt floorplate all the way forward.
- Set the cutterdeck in a middle height-of-cut position.
- 3. Use a 3/8" ratchet and extension to back tensioning idler off to remove belt from idler. Remove belt from cutterdeck pulleys.

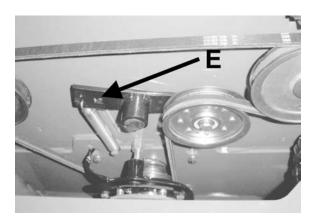
**NOTE:** Use the 3/8" ratchet in the square hole **A** on the idler.

- 4. Remove belt from clutch pulley.
- 5. Install the new belt by performing these steps in reverse order.



#### **PUMP-DRIVE BELT**

- 1. Remove engine-cutterdeck belt (see engine-cutterdeck belt replacement).
- 2. Attach an extension to a 3/8" drive ratchet. Insert the ratchet extension in the square hole of the pump drive idler arm. Use the ratchet handle to rotate it enough to remove the pump drive belt.
- 3. Install a new pump drive belt in the same manner as it was removed.
- 4. Re-install engine-cutterdeck belt (see engine-cutterdeck belt replacement).



#### **POWER UNITS**

#### **ENGINES:**

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

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

#### **DRIVE SYSTEM:**

Full hydrostatic pump and wheel motor combination for independently controlled drive wheels.

**Pump:** Hydrogear 12cc variable displacement piston pump.

**Motors:** Parker displacement MB series. Direct drive 1-1/4" (31.8mm) diameter output shaft.

Turn Radius: True Zero

# OPERATOR PRESENCE INTERLOCK SYSTEM:

**Start:** The PTO (blades) must be off, traction levers in neutral lock, and parking brake on for engine to crank.

**Run:** Operator must be in seat to take parking brake off, to move traction levers out of the neutral lock position, or to turn the PTO (blades) on or the engine will kill. The parking brake must be off for the traction levers to move out of the neutral lock position.

The operator may leave the seat with the engine running if the parking brake is on, the PTO (blades) is off, and the traction levers are in the neutral lock position. A time delay eliminates annoying engine cutout from operation over rough terrain.

#### **WEIGHT:**

1256 lbs (570 kg) w/52" deck 1293 lbs (587 kg) w/61" deck

#### **CONTROLS:**

Throttle; power takeoff (PTO) clutch switch; traction levers; parking brake lever; lift lever.

#### **FUEL SYSTEM:**

One tank on each side of operator, each with a shutoff (1/4 turn). Total capacity 14 gallons (52.9 liters). Fuel selector/shutoff switch on rear cooler mounting bracket(1/4 turn). Replaceable fuel filter.

#### **MAXIMUM GROUND SPEEDS:**

**Forward:** 11.5 mph (18.5 km/h) **Reverse:** 4 mph (6.4 km/h)

#### WHEELS & TIRES:

Drive wheels:

942536J: 23 X 10.5-12 4-Ply Turf

**Tread Tires** 

942537J: 24 X 12.00-12 4-Ply Turf

**Tread Tires** 

Casters:

**52", 61":** 13 X 6.5-6 tires

Rear Tire Pressure: 12 p.s.i. (0.84 kg/cm²) Front Tire Pressure: 15 p.s.i. (1.05 kg/cm²)

#### **BRAKING:**

Parker brakes. Spring applied for overload protection.

#### SEAT:

High back, foam padded seat with standard armrests. Fore and aft adjusters, hinged for easy tilt-up access to pumps and battery. Internally mounted seat switch.

	ENGINES			
MODEL NUMBERS	942536J	942537J		
MANUFACTURER	Kohler	Kohler		
MODEL	ECV730	ECV749		
CYLINDERS	2	2		
COOLING	Air	Air		
BORE / STROKE	3.3 X 2.7" (83 X 69mm)	3.3 X 2.7" (83 X 69mm)		
DISPLACEMENT	45 cu. in. (747cc)	45 cu. in. (747cc)		
COMPRESSION	9.1:1	9.1:1		
OUTPUT POWER	Refer to manufacturer's s	pecifications/website.		
OUTPUT TORQUE	40.4 ft-lb (54.8J) @ 2600 rpm	44.2 ft-lb (59.9J) @ 2600 rpm		
LUBRICATION	FULL PRESSURE	FULL PRESSURE		
GOVERNOR	Mechanical	Mechanical		
AIR CLEANER	Heavy Duty Cyclone	Heavy Duty Cyclone		
IGNITION SYSTEM	Electronic	Electronic		
<b>CHARGING BATTERY</b>	15 amp, regulated	15 amp, regulated		
BATTERY	BCI group U1	BCI group U1		
FUSES	Two, 20 amp blade	Two, 20 amp blade		

GENERAL	DATE	HRS										
Check Tire Pressures												
Lubricate All Points												
Check Nuts & Bolts												
ENGINE												
Check Engine Coolant Level (Where Applicable)												
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, hydraulic oil and both filters.												

CUTTERDECKS									
MODEL NUM- BER	942536J	942537J							
TYPE	Side Discharge	Side Discharge							
<b>CUTTING WIDTH</b>	52.5" (133cm)	61" (155cm)							
WIDTH (CHUTE UP)	56.25" (143cm)	62" (157cm)							
WITDH (CHUTE DOWN)	64.5" (164cm)	73" (18cm)							
BLADE	high lift (low lift optional)	high lift (low lift optional)							
NUMBER OF BLADES	3	3							
BLADE LENGTH	18" (46cm)	21" (53cm)							
BLADE THICK- NESS	.205" (5.2mm)	.25" (6.35mm)							
TIP SPEED	18585 ft/min 5665 m/min @3600 Engine RPM	18850 ft/min 5745 m/min @3600 Engine RPM							
DAILY PRODUCTION	Up to 25.5 acres (10.3 ha)	Up to 29.5 acres (11.9 ha)							

#### **CONSTRUCTION:**

Fabricated and welded 10-gauge, double-layer steel top with 7-gauge side skirts. Full floating design.

#### **CUTTERDECK DRIVE SYSTEM:**

Electric clutch/brake drives belt directly from engine to cutterdeck. No twists in drive belt.

#### SPINDLES:

Top mounted and maintenance free, with 1" shaft in precision machined, aluminum housing

#### **SPECIFIC TORQUES**

BLADE BOLT TORQUE: 70 FT-LBS (95 Nm) WHEEL HUB NUTS: 225 FT-LBS (237 Nm) ENGINE CRANKSHAFT BOLT: 50 FT-LBS (68 Nm) LUG NUTS: 75-100 FT-LBS

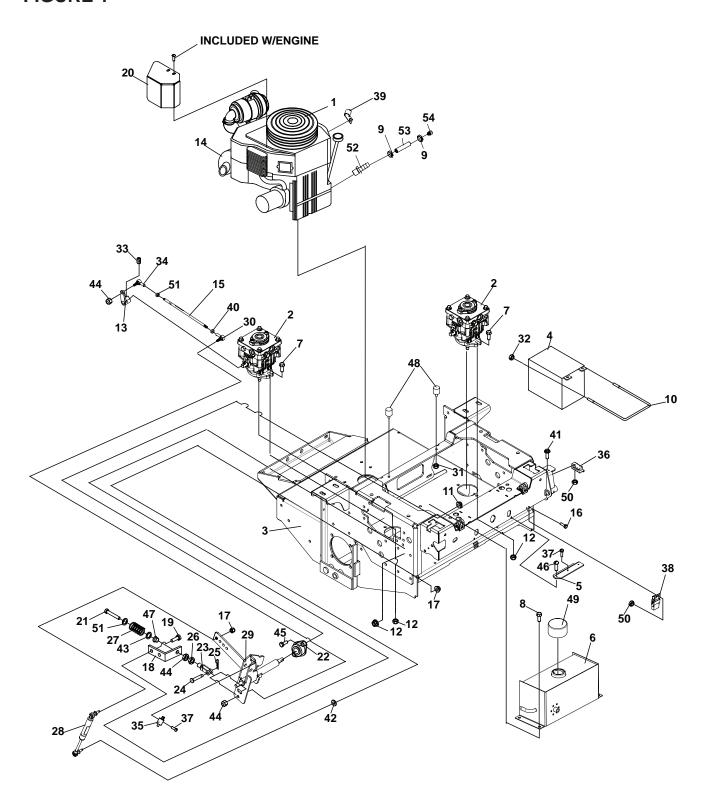
#### **ANTI-SCALP ROLLERS:**

52" SD Cutterdecks - 6 Rollers 61" SD Cutterdecks - 7 Rollers

#### **CUTTING HEIGHT & PRODUCTION:**

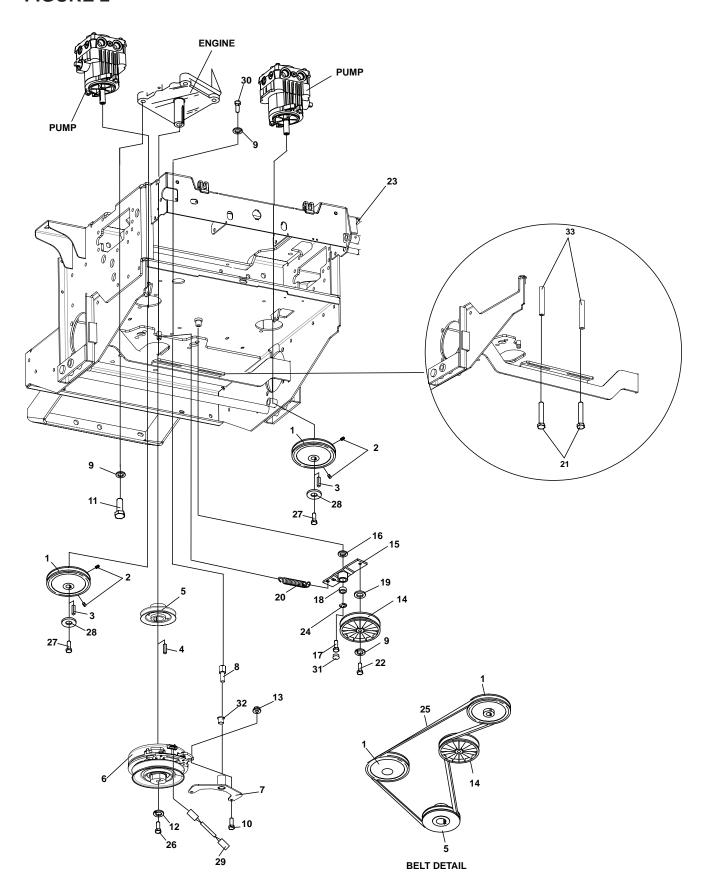
**Height:** Spring assisted lift lever allows easy setting of cut heights from 1" to 5 1/2" in 1/4" increments. "Set and forget" feature allows height of cut to be set and returned to without searching from operator position.

# PARTS SECTION



# PROCAT SE

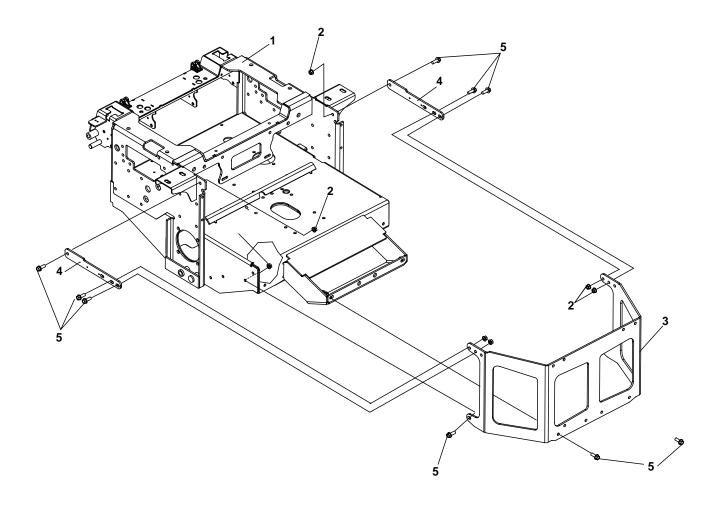
<sup>\*</sup> NOT ILLUSTRATED



# **LOWER ENGINE DECK ASSY/CLUTCH**

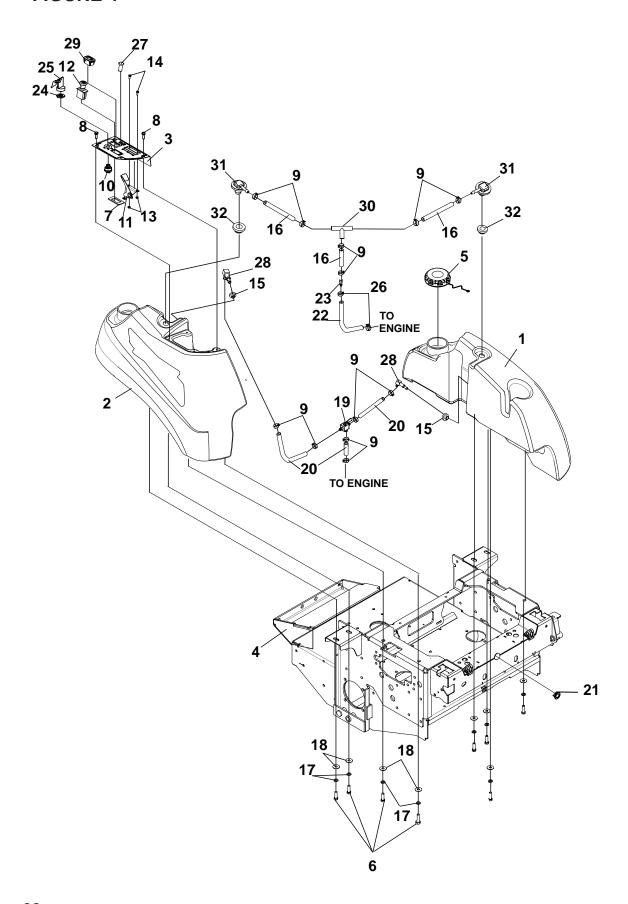
# PROCAT SE

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4158360	PULLEY-PUMP	2				
2	64044-18	SCREW-SET 1/4-20 X 5/16	4				
3	64238-03	KEY-MET 5MM SQX28MM	2				
4	64164-12	KEY	1				
5	4165509	PULLEY- 5.25 OD X 1.126	1				
6	4165689	CLUTCH-ELECTRIC, 225	1				
7	4165570.7	WLDMT-CLUTCH STOP	1				
8	4121540	PIN-CLUTCH	1				
9	64006-03	LOCKWSHR-3/8 HELICAL	6				
10	64123-54	BLT-HEX 5/16-18X3/4	2				
11	64123-70	BLT-HEX 3/8-16X1-1/2	4				
12	64006-06	LCKWSHER-HELICAL 7/16	1				
13	64268-02	NUT-FL NYLON LCK 5/16-1	8 2				
14	2308000	PULLEY-IDLER 4.00 EOD	1				
15	4128923	S-ASSY-IDLER ARM PUMP	1				
	(INCLUDES	S ITEMS 16, 18 & 24)					
16	4127999	SEAL	1				
17	64270-01	BOLT-MET HEX M10-1.5X3	0 1				
18	4128004	BEARING	1				
19	33148-01	SPACER-0.379X0.750X0.25	5 1				
20	2188131	SPRING-EXTENSION	1				
21	64262-006	BLT-5/16-18X1	2				
22	64123-21	BLT-HEX 3/8-24X1-1/4	1				
23	4167906	S-ENGINE DECK W/LABS	1				
	(INCLUDES	S ITEMS 21 & 33)					
24	64144-40	SNAP RING	1				
25	4157920	BELT PUMP DRIVE	1				
26	64123-216	BLT-HEX 7/16-20X2-1/4	1				
27	64205-013	BLT-MET M6-1X12	2				
28	64209-09	WASHER-CONICAL SPRIN	G 2				
29	2720949	ASSY-CLUTCH WIRE	1				
30	64123-15	BLT-HEX 3/8-16X3/4	1				
31	4128002	END CAP	1				
32	38304-03	BEARING-FLNGD PLASTIC	1				
33	4166355	PIN-BELT GUIDE	2				



# PROCAT SE

					FIC	SURE 3	
ITEM	PART NO	. DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
2 6 3 4 4	1167906 54268-03 1165490.7 1165492.7 54262-012	S-ENG DECK W/LABS NUT-FL NYLON LOCK 3/8-1 WRAPPER-BUMPER STRAP-BUMPER BLT-FLG HD 3/8-16 X 1-1/4	1 2				

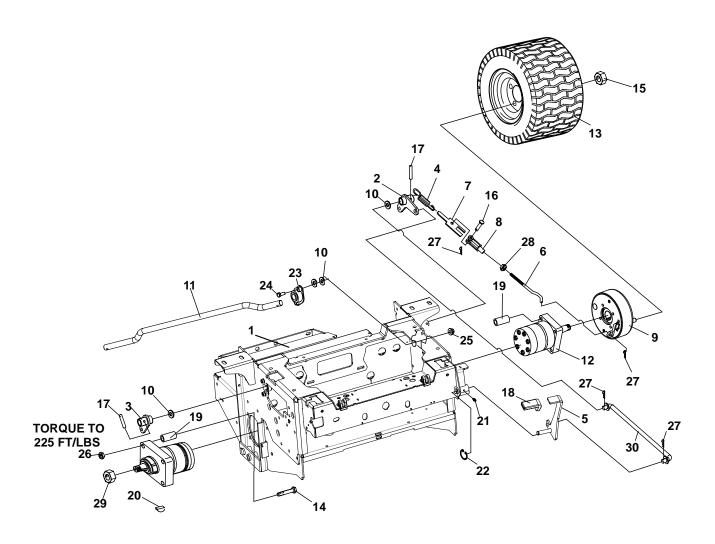


# PROCAT SE

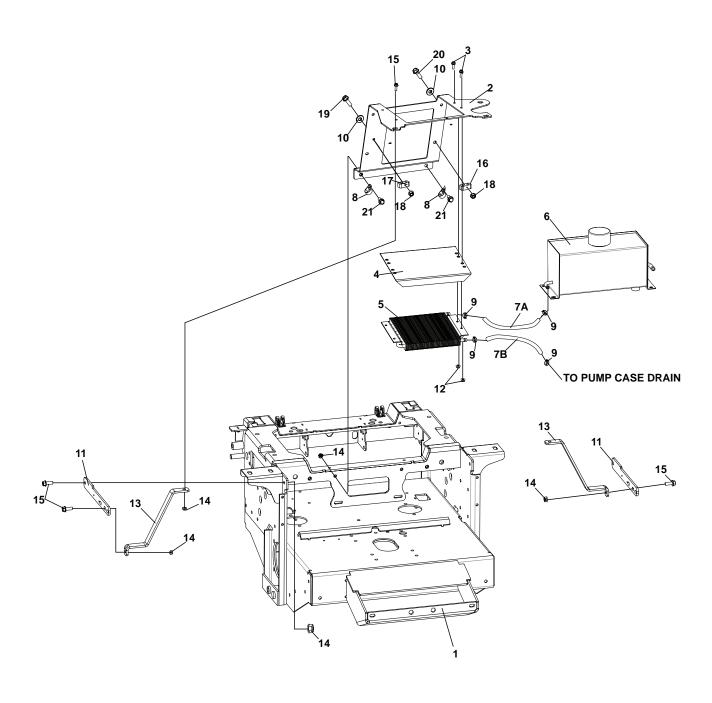
### FIGURE 4

ITEN	/ PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4165428 (INCLUDES I	TANK-FUEL LH TEMS 15, 31-33, 35, 36, 37)	1				
2	4165429 (INCLUDES I	TANK-FUEL RH TEMS 15, 31-33, 35, 36, 37)	1				
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	4169448 4167906 4165291 64123-50 2188178 64262-001 88042N 128010 118020-16 2721505 64025-15 64152-46 4132325 4162977-020 64006-03 64163-31 2188161 4162977-001 4142266 4162989-001 4165864	S-CONTROL PANEL S ENG DECK W/LABS CAP-FUEL, RATCHET TYPE BLT-HEX 3/8-16X1 SWITCH-RETAINER BLT-FLG HD 1/4-20 X 1/2 HOSE CLAMP KEY-SWITCH CONTROL-THROTTLE 48.0 SWITCH-PTO NUT-HEX #10-24 KEPS SCRSLT HH #10-24X1/2 GROMMET-FUEL TANK HOSE, 25IDX.50OD LOCKWSHR-3/8 HELICAL WSHR 25/64X1X12 VALVE-TANK SELECTOR HOSE, 25IDX.50OD X CONNECTOR, 12V RECEPTHOSE, FUELLINE FTTNG-HOSE 1/4" TO 3/16"	8 1 4 12 1 1 1 2 2 2 3 8 8 1 2 1 1				
24 25 26 27 28 29 30 31 32 33*	128010-01 128010-03 88042-01 4169447 4165429-03 4165120 4165863 4165763 4165387 970391	S-KEY SWITCH NYLON NUT S-COVERED KEY CLAMP LIGHT-RED, ENGINE TUBE-FUEL PICK UP METER-HOUR TEE-FITING 1/4" HOSE ROLL-OVER VENT GROMMET-ROLL OVER KIT-LIGHT ACCESSORY	T 1 1 2 1 2 1 1 2 1 2 1 1 2 1				

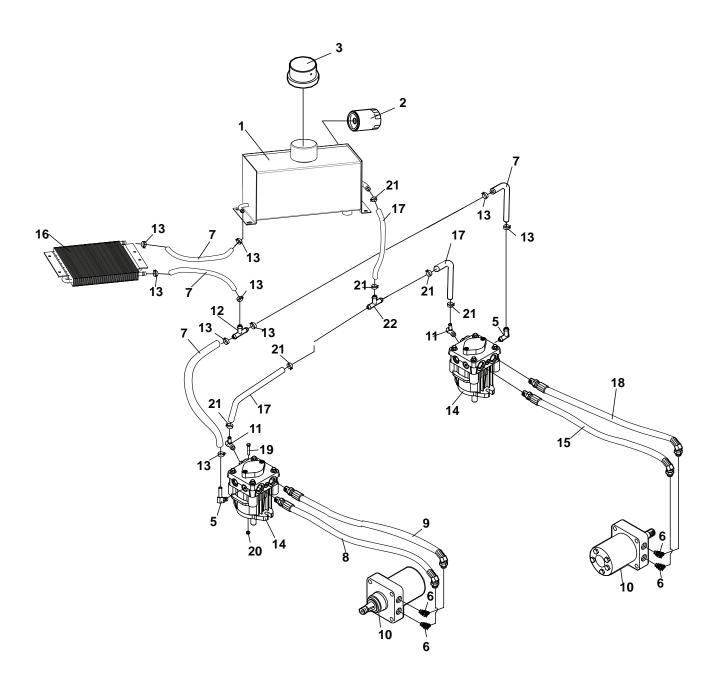
#### \*NOT ILLUSTRATED



ITEM	PART NO.	DESCRIPTION	QTY	ITEN	I PART NO.	DESCRIPTION	QTY
1 2 3 4 5 6	4165700.7 128102 4165449.7 4159701	WLDMT-BRAKE ARM LH WLDMT-BRAKE ARM RH SPRING,EXTENSION WLDMT-BRAKE LEVER ROD-BRAKE CONTROL 52" & 61" DECKS) ROD-BRAKE CONTROL	1 1 1 2 1 2	21 22 23 24 25 26 27 28 29 30	85010N 64144-34 2188145 64123-15 64141-4 64229-05 64168-2 64025-03 64025-31 4159242	ZERK, 1/4-28 STR SLFTH SNAP RING.50 BEARING75ID SELF ALI BOLT-3/8-16X3/4 HEX NUT-WLF 3/8-16 NUT-NYLON LOCK 1/2-13 COTTER-HAIRPIN.08X1.1 NUT-HEX 5/16-24 NUT 1-20 UNSLOTTED TI WLDMT-PRK BRAKE ROI	1 GN 2 4 4 8 8 9 4 2 RW 2
7 8 9 9A* 9B* 9C*		GUIDE-SPRING CLEVIS YOKE, 5/16 PLATE BRAKE-PARKER BRAKE-BACK PLATE BRAKE-DRUM BRAKE-SCREW	2 2 2 1 1 4		*NOT ILLU		
10 11 12	64163-06 4159000 4159280 (INCLUDES I	WSHR,.768/.756X1.25X14 BAR-PARKING BRAKE MOTOR-PARKER TEMS 20 & 29)	A/R 1 2				
*	970438	KIT-WHEEL HUB PULLER					
13	4171868-02 4171869-01	WHEEL-ASSY, 24X12.00-12 RIM12X8.50 TIRE-24X12.00-12 ECKS ONLY)	2 2				
		WHEEL-ASSY, 23X10.5-12 RIM12X8.50 TIRE-23X10.50-12 ONLY)	2				
14	64189-22	BLT-HEX SOC 1/2-13X4 1/2 2" & 61" DECKS ONLY) BLT-HEX SOC 1/2-13 X 6 2" DECKS ONLY)	8				
15 16 17 18 19	(USED ON 52 2183063-05	WHEEL NUT-1/2-20 PIN, CLEVIS 5/16X1 ROLL PIN-1/4X1-1/4 GRIP, 1/4X1X4-1/2 SPACER, 32MM LONG 2" & 61" DECKS ONLY) SPACER, 19-05X12.97X4 2" DECKS ONLY)	8 2 2 1 8				
20	64164-08	S-KEY FOR WHEEL MOTO	R 2				



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4167906	S ENGINE DECK W/LABS	1				
2		BRKT-COOLER FRONT	1				
3		BLT-FLG HD 1/4-20 X 3/4	4				
4		SCREEN-OIL COOLER	1				
5		COOLER-OIL	1				
6		S HYD RSRVR W/LABS	1				
(690	53-05 IS A SI	ERVICEABLE LENGTH OF 5	55")				
7A	69053-05	3/8 HIGH TEMP HOSE	1				
7B	69053-05	3/8 HIGH TEMP HOSE	1				
8	48412-01	CABLE-CLIP N	2				
9	88042-04	CLAMP-3/4 CLIP	4				
10	64163-03	WSHR .256X.62X18GA	2				
11	4165492.7	ARM-BUMPER	2				
12	64229-01	NUT-NYLON LOCK 1/4-20	4				
13	4169246.7	BRKT-COOLER REAR	2				
14	64268-03	NUT-FL NYLON LOCK 3/8-	168				
15	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	6				
16	4165752	CLAMP-HOSE, 5/8IN	1				
17	4165751	CLAMP-HOSE, 1/2IN	1				
18	64229-01	NUT-NYLON LOCK 1/4-20	2				
19	64123-07	BLT-HEX 1/4-20X1-1/2	1				
20	64123-60	BLT-HEX 1/4-20X2	1				
21	64262-011	BLT-FLG HD 3/8-16X1	2				

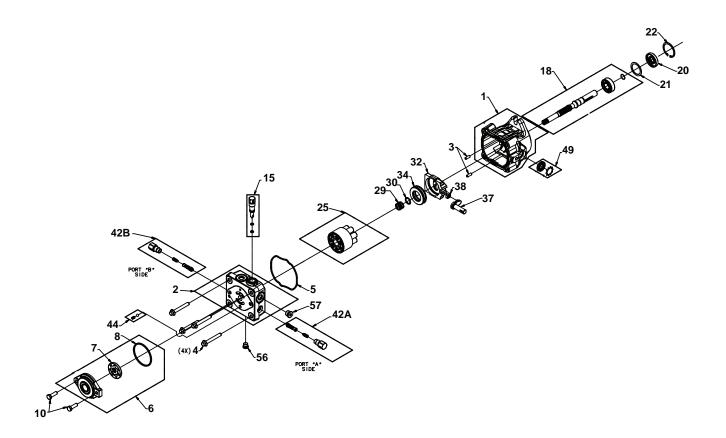


### FIGURE 7

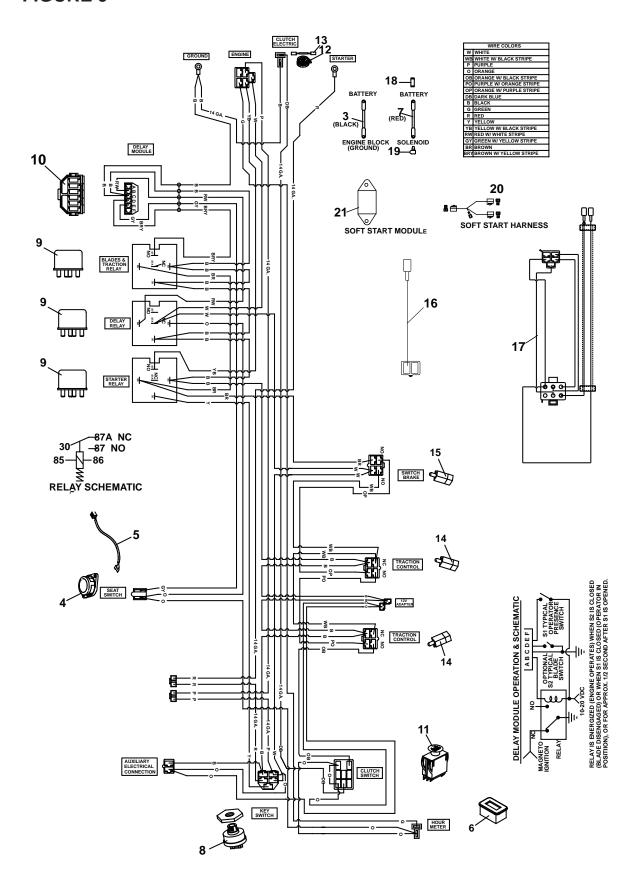
#### ITEM PART NO. DESCRIPTION QTY

5 6 7	69053-05	ELBOW-MALE 45 37-ORB	1 1 1 2 4 4 5")
8		LH PUMP PORT B-HOSE	1
9	2188157-01	LH PUMP PORT A-HOSE	1
10 11 12 13 14 15 16 17 18		3 WAY CONNECTOR 3/8 CLAMP-HOSE 5/8 PUMP-HYDRO 12cc RH PUMP PORT B-HOSE OIL COOLER	2 2 14 2 1 1 2 1 2
20	64229-01	LOCKNUT-NYL 1/4-20	2
21	88042-05	CLAMP-HOSE 13/16	6
22	58026-04	3 WAY CONNECTOR 3/16	1

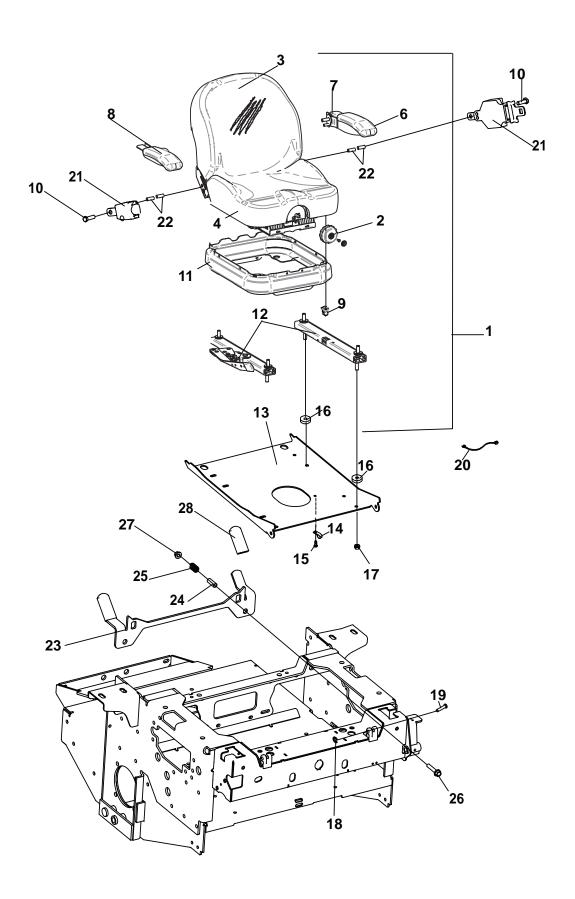
SAE PORT 'O' RING								
PART NUMBER	THREAD SIZE	AS-568#						
158061-10	9/16-18	-906						
158061-11	3/4-16	-908						
158061-12	7/8-14	-910						
158061-13	1-1/16-12	-912						
158061-14	1-5/16-12	-916						
158061-16	1-5/8-12	-920						
158061-03	1-7/8-12	-924						



ITEM	HYDROGEAR PART NO.	SCHILLER PART NO.	DESCRIPTION	QTY
1	70516		HOUSING KIT	1
2	72011	4164841-001	END CAP KIT	1
3	50641		STRAIGHT HEADLESS PIN	2
4	50969	2721615-01	FLANGE BOLT M8-1.25 X 60	4
5	52629	4164841-002	HOUSING O-RING	1
6	71246	4137278-01	CHARGE PUMP KIT	1
7	50273	38345-07	STD GEROTOR ASSEMBLY	1
8	9004101-1340	38345-08	O-RING	1
10	9007200-3116	64123-68	SOCKET SCREW M6-1.0 x 20	2
15	2513030	4157242-019	BYPASS VALVE KIT (BLANK)	1
18	70522	4137278-05	PUMP SHAFT KIT	1
20	51161		LIP SEAL 17 x 40 x 12	1
21	50951		SPACER	1
22	50329		RETAINING RING	1
25	71971	4164841-003	CYLINDER BLOCK KIT	1
29	2003014		BLOCK SPRING	1
30	2003017		BLOCK THRUST WASHER	1
32	2003087	188059-11	SWASH PLATE	1
34	53502	4164841-004	BALL THRUST BEARING	1
37	2003005	188059-15	ARM-TRUNION	1
38	2000015	2721615-13	SLOT GUIDE	1
42A	70743	4121354	SHOCK VALVE KIT (.031")	1
42B	70741	4121355	SHOCK VALVE KIT (BLANK)	1
44	70402	4137278-07	CHARGE RELIEF VÄLVE KÍT	1
49	2513043	2721615-17	TRUNNION SEAL/RETAIN KIT	1
56	9005110-4400		STRAIGHT THREAD PLUG	1
57	9005110-5600	4157242-025	PLUG-9/16-20 STEEL	1
100	70525	2721615-18	OVERHAUL SEAL KIT	1



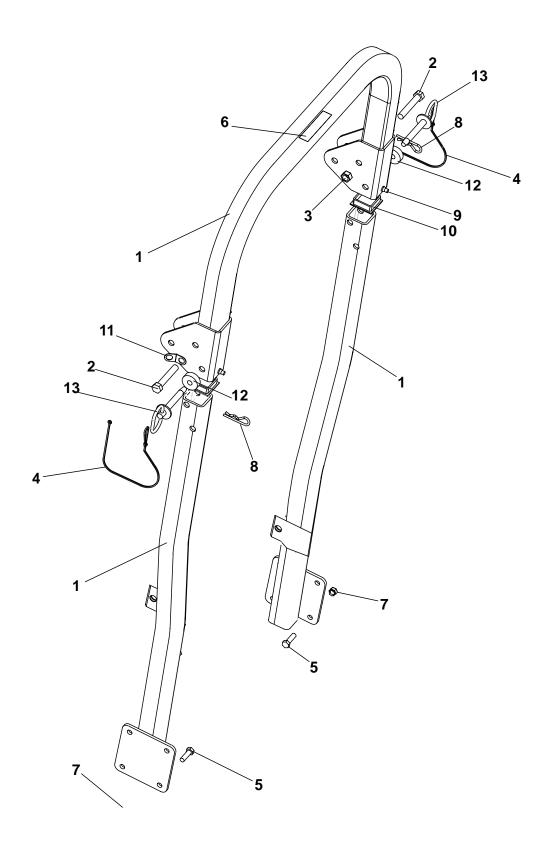
ITE	M PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4165575	HARNESS-WIRING MAIN	1				
2	148082-20	FUSE-20 AMP	2				
3	108061-13	CABLE-BATTERY 36 BLAC	CK 1				
4	4124009	SWITCH-SEAT, NO	1				
5	4143068	JUMPER-SEAT SWITCH	1				
6	4165120	METER-HOUR	1				
7	2722227-02	CABLE-BATT W/CONDUIT	1				
	(INCLUDES IT	EMS 19 & 20)					
8	128010	KEY-SWITCH	1				
9	2722325	RELAY-40AMP SEALED	3				
10	2188154	MODULE-DELAY	1				
11	2721505	SWITCH-PTO	1				
12	4165689	CLUTCH-ELECTRIC	1				
	(INCLUDES IT	EM 13)					
13	2720949	ASSY-CLUTCH WIRE	1				
14	108208	SWITCH-DBL POLE	2				
15	2188156	SWITCH-NONO DBL POLE	∃ 1				
16	4168099	HARNESS-LIGHT JUMPER	R 1				
17	4168183	HARNESS-JUMPER EFI	1				
18	2308095	COVER-TERMINAL	3				
19	112386	BOOT-BAT TERM POS	1				
20	4165923	HARNESS-SOFT START	1				
21	4169459	CONTROL-SOFT START	1				



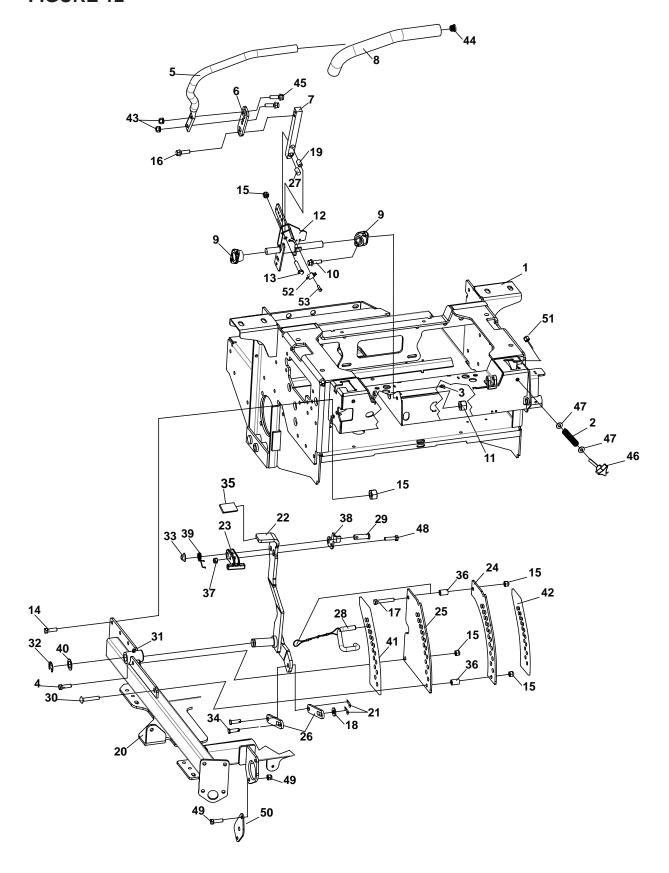
#### FIGURE 10

ITEN	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4169768 (INCLUDES I	SEAT ASSY TEMS 2-8, 11-12)	1				
2 3 4 5*	4169768-01 4169768-06	KNOB-WGHT ADJUST COVER- BACK VINYL COVER-CUSHION KIT-ARM RH & LH TEMS 7&8)	1 1 1				
11	4169768-02 4169768-07 4143068 64123-216 4169768-03 4169768-04 4169779.7 48228A 64152-23 2720975-07 64141-6 64144-30 33138-09 4143068 4169768-09	BELLOWS W/HRDWR TRACK SET-SEAT PLATE-SEAT CABLE CLIP-INSULATED SCREW 1/4-20X3/8 SPACER NUT-WLF 5/16-18 SNAP RING	2 1 1 2 1 1 2 2 4 4 2 2 1 2				
22 23 24 25 26 27 28	4167820-02 4169777.2 4169778 41-053 64262-014 64268-03 4135868	SPACER BRKT-LATCH,SEAT SPACER-LATCH,SEAT SPRING COMP .681X1.129 BLT-FLANGE HD 3/8-16 X NUT-FL NYLON LOCK 3/8- COVER-HANDLE	2 2				

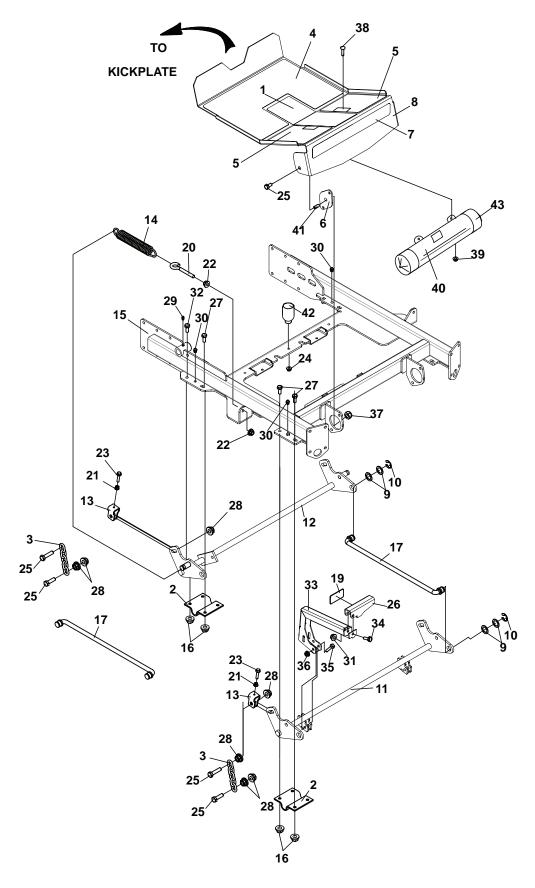
#### \* NOT ILLUSTRATED



ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4168257 (INCLUDE:	S-ROPS W/ LABELS S ITEMS 2-13)	1				
2	64123-31	BOLT-1/2-13 X 3	2				
3	64151-7	LOCKNUT- 1/2-13	2				
4	4162880	LANYARD-NYLON	2				
5	64262-011	BLT-FLG HD 3/8-16X1	8				
6	4160347	LABEL-WARNING ROPS	1				
7	64268-03	NUT-FL NYLN LOCK 3/8-16	8 6				
8	64168-1	PIN-COTTER	2				
9	4160343	BUMPER RUBBER	2				
10	4160344	PLUG	2				
11	4160348	WASHER-FORMED	2				
12	4162878	WASHER-RUBBER	2				
13	4162879	PIN-HITCH 1/2	2				



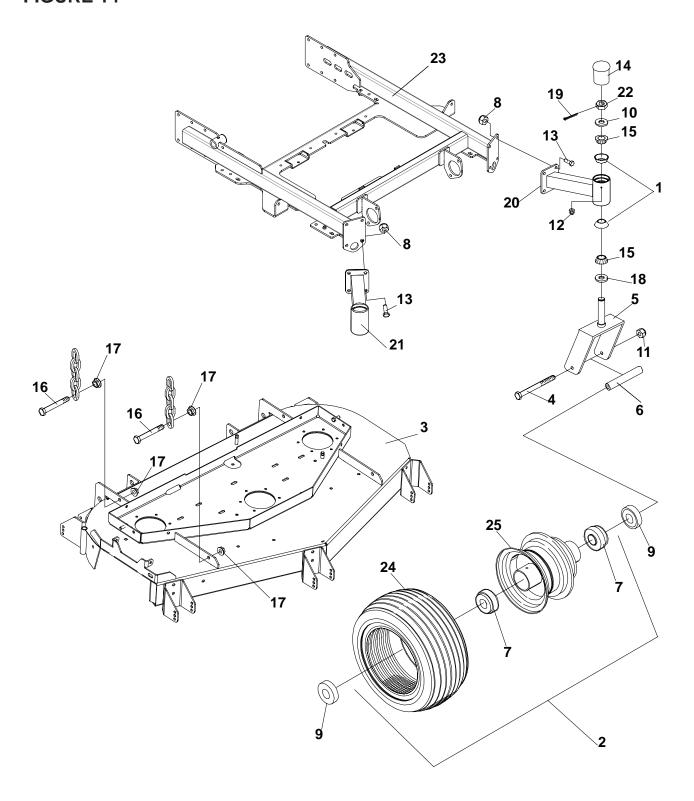
ITEN	/ PART NO.	DESCRIPTION	QTY	ITEN	I PART NO.	DESCRIPTION	QTY
1	4167906	S ENGINE DECK W/LABS	1	31	85010N	ZERK, 1/4-28 STR SELF TH	11
2	4163746	SPRING	2	32	64221-04	E-RING .875	1
3	4165962	ZERK-90 DEGREE	2	33	64175-05	NUT-PUSH 1/2	1
4	64123-50	BLT-HEX 3/8-16X1	1	34	64188-36	PIN, CLEVIS 7/16X1-1/4	2
5	4165426.7	LEVER-TRACTION CNTRL	2	35	4167151	GRIP	1
6	4166920.7	BRKT-TRACTION LEVER	2	36	2183071-03	SPACER-15.88X10.32X24	2
7	4169529	BAR-TRACTION CONTROL		37	64268-02	NUT-FL NY LOCK 5/16-18	1
8	4165432	GRIP-HANDLE	2	38	4167159.7	ARM-LATCH	1
9	2188145	BEARINGSELF ALIGN	4	39	4167138	SPRING-TORSION	1
10	64123-15	BOLT-3/8-16X3/4 HEX	8	40	64163-65	WSHR .890X1.375X18GA	6
11	64141-4	NUT-WLF 3/8-16	8	41	4165654	LBL-ZT200 HT CUT OUTER	1
12	4167143	WLDMT-MTN CONTRL LH	1	42	4165655	LBL-ZT200 HT CUT INNER	1
*	4167144	WLDMT-MTN CONTRL RH	1	43	64268-03	NUT-FL NYLON LOCK 3/8-16	
				44	4163692	CAP-END	2
13	64123-87	BLT-HEX 3/8-16X1-3/4	2	45	64018-7	BLT-CRG 3/8-16X1-1/4	4
14	64123-16	BLT-HEX 3/8-16X1-1/4	12	46	4163446	KNOB	2
15	64229-03	NUT-NYLON LOCK 3/8-16	20	47	64163-55	WSHR .328X.75X14 GA	4
16	64262-011	BLT-FLG HD 3/8-16 X 1	8	48	64123-47	BLT-HEX 5/16-18X1-1/4	2
17	64123-67	BLT-HEX 3/8-16X2	1	49	64229-03	NUT-NYLON LOCK 3/8-16	4
18	64163-43	WSHR.443/.454X1X11GA	1	50	4167139.7	PLATE-FOOT PLATE MNTNO	32
19	4165474	SPACER	2	51	64229-02	NUT-NYLON LOCK 5/16-18	2
20	4165390.7	WLDMT-CRADLE	1	52	108208	SWITCH DBL POLE NC/NO	2
21	64168-2	COTTER-HAIRPIN.08X1.19		53	64197-015	BLT-TDFM 10-32X1/2 TORX	4
22	4167153.7	WLDMT-DECK LIFT LEVER	. 1				
23	4162904.7	WLDMT-LVR STOP LATCH	1				
24	4165384.7	BRKT-INNER DECK LIFT	1				
25	4165385.7	BRKT-OUTER DECK LIFT	1				
26	4165389.7	BRACKET-LIFT LINK	2		*N	OT ILLUSTRATED	
27	4162999	SPACER	2				
28	4165656	ASSY, PIN & LANYARD	1				
29	64188-76	PIN-CLEVIS 1/2X1-3/8	1				
30	64018-38	BOLT-CRG 3/8-16 X 2-1/4	1				



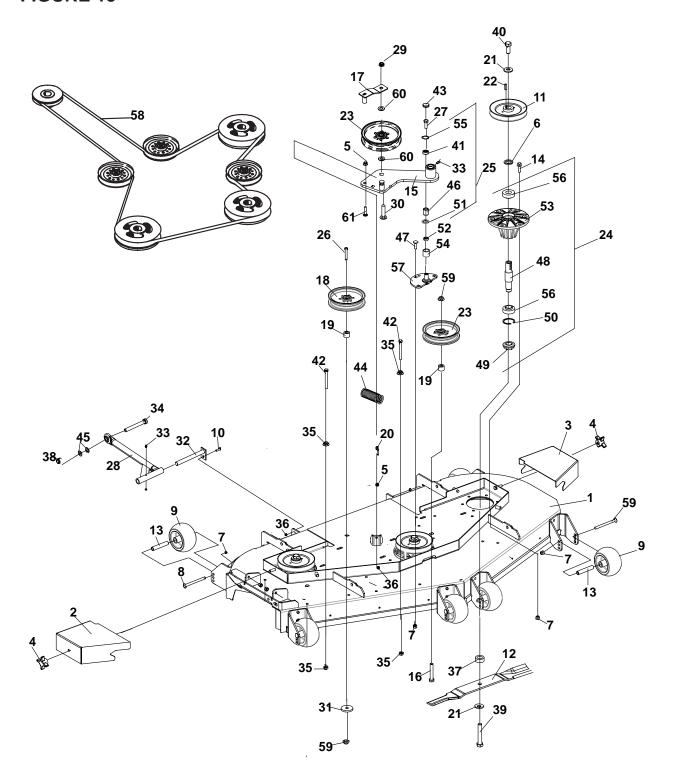
### FIGURE 13

ITEM	PART NO	. DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4165610	LABEL-WARNING	1				
2	2182356.7	BRACKET-SHAFT HANGER	4				
3	2188127	CHAIN-6.35 (.250) 5 LINKS	4				
4	4165647	MAT-FOOT PLATE LOWER	1				
5	4166266	MAT-FOOT PLATE UPPER	2				
6	4167139.7	PLATE-FOOTPLATE MNTG	2				
7	4165657	LABEL-PROCAT	1				
8	4166267	S-FOOT PLATE (BOBCAT)	1				
	(INCLUDES	ITEMS 4-7)					
9	64163-65	WASHER890X1.375X18GA	8				
10	64221-04	E-RING.875	4				
11	4165379.7	·	1				
12	4165427.7	WLDMT-DECK LIFT, REAR	1				
13	2722630	CLIP-DECK HEIGHT ADJ	4				
14	4165675	SPRING-DECK LIFT	2				
15	4165390.7		1				
16	64268-03	NUT-FL NYLN LCK 3/8-16	15				
17	4167826	ROD-DECK LIFT	2				
	4111842.7	BRKT-SPRING ANCHOR LH	1				
19	4165556	MAT-FOOT LIFT	1				
20	4113682	ROD-SPRING MOUNT	2				
21	64141-2	NUT-WLF 1/4-20	4				
22	64141-4	NUT-WLF 3/8-16	4				
23	64197-020	BLT-TDFM 1/4-20X1-1/2	4				
24	64268-02	NUT-FL NYLON LOCK 5/16-18					
25	64123-281	BLT-HEX 1/2-13X2 FL THRD	10				
26	4165596.7	BRKT-FOOT, LIFT LEVER	1 15				
27 28	64262-011 64141-13	BLT-FLG HD 3/8-16 X 1 NUT WLF 1/2-13	15 16				
29	85010N	ZERK, 1/4-28 STR SLFTHRD	1				
30	85051	ZERK-1/8 PIPE	6				
31	64229-03	NUT-NYLON LOCK 3/8-16	1				
32	64018-3	BLT-CRG 3/8-16X1	2				
33	4165593.7	WLDMT-FOOT PEDAL	1				
34	64123-100	BLT-HEX 3/8-16X2-1/4	1				
35	64123-67	BLT-HEX 3/8-16X2	2				
36	64001-6	NUT-HEX JAM 3/8-16	2				
37	64229-05	NUT-NYLON LOCK 3/8	2				
38	64018-2	BLT-CRG 1/4-20X3/4	2				
39	64268-01	NUT-FL NYLON LOCK 1/4-20	2				
40	4160281	DOCUMENT TUBE	1				
41	4163802-01	SPACER-1.0 X .516 X .75	2				
42	4164210	BUMPER-RUBBER	3				
43	38061A	CAP-DOCUMENT TUBE	1				

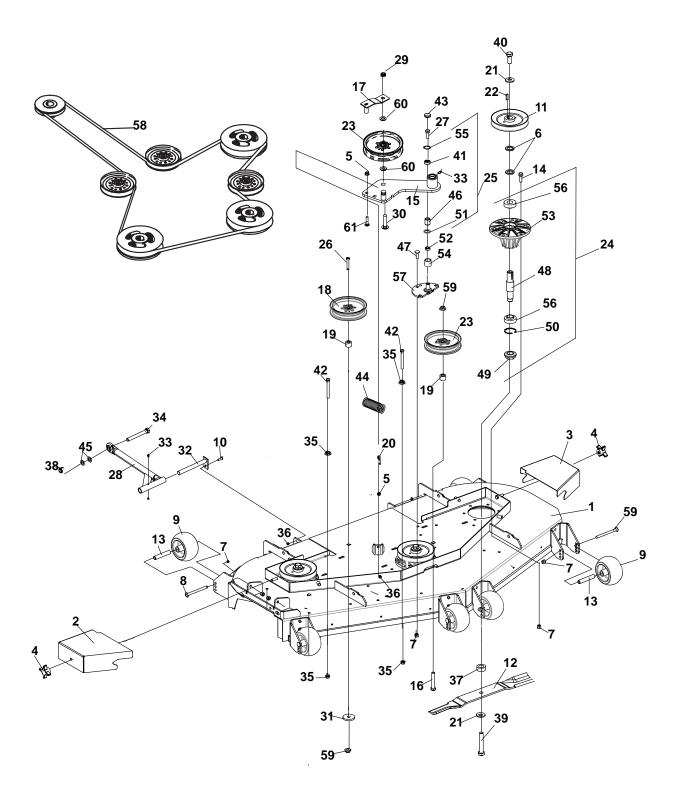
\*NOT ILLUSTRATED



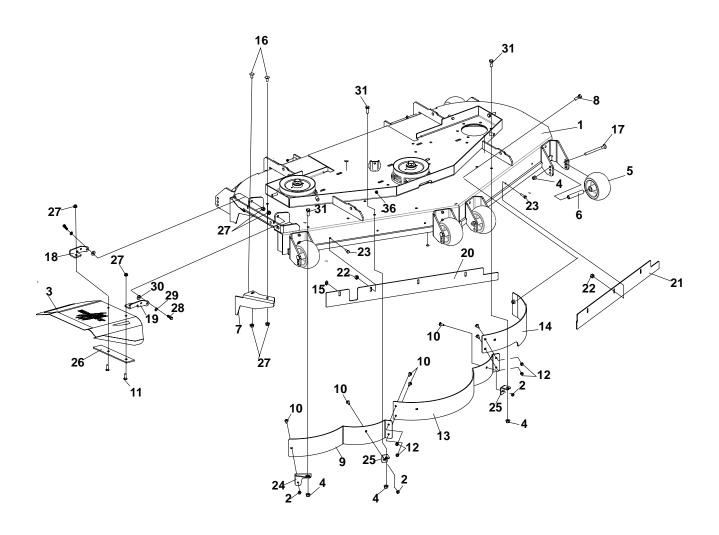
ITE	M PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	48043-03C	CUP, OUTER BEARING	4				
2	2722326	ASSY-WHL 13X6.5-6	2				
	(INCL	UDES ITEMS 7, 24, & 25)					
3		DECK/W LABS					
4	64123-223	BOLT-3/4-10 X 10	2				
5	4171883.7	WLDMT-CASTER YOKE	2				
6	2722230-03	SPANNER	2				
7	2722228-03	BEARING	2				
8	64229-03	NUT-NYLON LOCK 3/8-16	8				
9	2722231	SPACER-END	4				
10	64163-26	WASHER	2				
11	64229-07	LOCKNUT-NYLON 3/4-10	2				
12	85010N	ZERK, 1/4-28 STR SLF THE					
13	64262-011	BLT-HEX 3/8-16X1	8				
	4162986	DUST COVER	2				
	48043-04C	CONE, OUTER BEARING	4				
	64123-281	BLT-HEX 1/2-13X2 FLLTHD					
	64141-13	NUT WLF 1/2-13	16				
	48480	SEAL CR 12411	2				
		COTTER PIN	2				
20		WLDMT-CSTR ARM 52 LH	1				
	(USED WITH						
	4165327.7	WLDMT-CSTR ARM 61 LH					
	(USED WITH	61" DECKS)					
21	4171073.7	WLDMT-CSTR ARM 52 RH	1				
	(USED WITH		•				
	4169832.7	WLDMT-CSTER ARM 61 RI	4				
	(USED WITH						
	(22==						
22	64025-20	NUT-HEX 3/4-16 SLOT U	2				
23	4165390.7	WLDMT-CRADLE	1				
24	2722326-01	TIRE-13X6.50-6 SMTH TRE	2				
25	2722326-02	RIM ASM-W/VALVE	2				



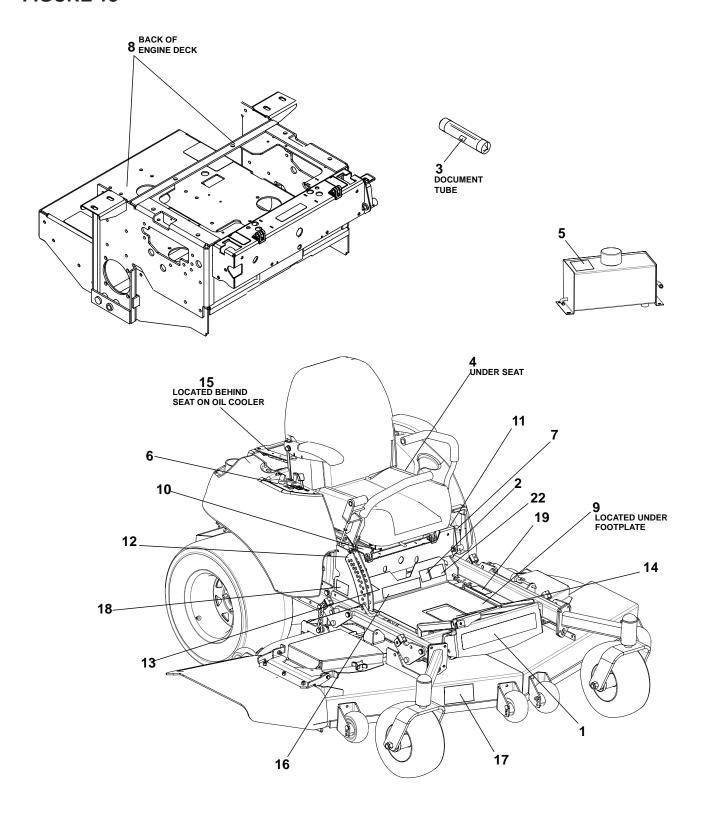
ITE	M PART NO	DESCRIPTION	QTY	ITEN	M PART NO	. DESCRIPTION	QTY
1	4170629	S-DECK W/ LABELS 52" ZT2		1	64163-93	WSHR635 X 1.12 X.062	4
2	4165608.7	COVER-BELT RH	1		548138	BRG NDL .88 1.21	1
3	4165609.7	COVER-BELT LH	1	47	64018-7	BOLT-CRG 3/8-16 C 1-1/4	3
4	38524	KNOB-4 PRONG 3/8-16	2	1		SHAFT-SPINDLE	3
5	64141-6	NUT-WLF 5/16-18	2	49	38315	NUT-SPINDLE	3
6	64163-64	WSHR 1.015X1.500X14GA	3	1	64144-38	RING-SNAP	3
7	64229-03	NUT-NYLON LOCK 3/8-16	27	51	521438	GREASE SEAL	1
8	64123-173	BLT-HEX 3/8-16X4-1/2	3	1	4163014	SPACER	1
9	2721512	ROLLER-5X2.75 CENTERED		1	4164948	HOUSING-SPINDLE 6 HOLE	3
	64123-68	BLT-HEX 5/16-18X1	2	1	4163155	INNER RING	1
11	4165646	PULLEY-5.25 DEEP GRVE	3	1	64144-40	SNAP RING-2NTERNL	1
	112111-02	BLADE 18.00 OFFST HLFT	3	1		BEARING-SPINDLE SEALED	6 (
13	2720685	SPACER-ROLLER	6	57	4170021.7	WLDMT-IDLER PIN	1
	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	18	58	4169640	BELT-CUTTERDECK 52"	1
	4168888.7	WLDMT-IDLER ARM	1		64268-05	NUT-FL NYLON LOCK 1/2-13	3 2
16	64018-46	BLT-CRG 1/2-13X3-1/2	3	60	64163-67	WSHR-5/16 X 1X 12 GA	2
17	4168884.7	GUIDE, BELT	1	61	64018-34	BLT-CRG 5/16-18 x 1-1/2	1
18	4165953	PULLEY-IDLER, 6.0	1				
19	4152578-02	SPACER-2.0 X .515 X1.07	2				
20	4169597	EYE BOLT-5/16-18 X 1-1/2	1				
21	64209-03	SPRING WASHER.67 ID	6				
22	64164-12	KEY-1/4X1 SQ	3				
23	128169	PULLEY IDLER 5.50	2				
24	4171231	ASSY-CTTERDECK SPNDL	3		* 1	NOT ILLUSTRATED	
	(INCLUDES	ITEMS 48-50, 53, & 56)					
25	4168886 (INCLUDES	ASSY-IDLER ARM 48-52 ITEMS 15, 33, 41, 46, 51, & 55	1 5)				
00	00.000	0/D DOLT 4/0 403/0 4/0 NO					
	90-0828	S/B BOLT 1/2-13X3 1/2 NC	1				
27	64270-02	BLT-HEX M10-1.5x30 ISO	1				
	4133155.7	WLDMT-PUSH ARM ZT2	2				
29	64151-37	NUT-HEX,1/2-13NYLON JAM					
30	64018-45	BLT-CRG, 1/2-13 X 2-1/4	1				
31	64163-74	WSHR516X2.00X.25 PLT	1				
32	2186125	WLDMT-LOCK PUSHBAR	2				
	85010N	ZERK 1/4-28 STR SLF THRD					
34	64123-152	BLT-HEX 5/8-11X5	2				
35	64141-4	NUT-WLF 3/8-16	4				
	64229-02	NUT-NYLON LOCK 5/16-18	3				
37	4118314	SPACER-BLADE 16MM NUT-NYLON LOCK 5/8-11	3 2				
38	64229-06		3				
	64123-187	BLT-HEX 5/8-18 X 3 3/4					
40 41	64123-208	BLT-HEX 5/8-18X1-1/2 BEARING-BALL 10 X 26 X 8	3				
41	4128004		1				
42	64123-171	BLT-HEX 3/8-16X3-1/2	2				
43	4128002	CAP-26 X 7 END	1				
44	4168493	SPRING-EXTENSION	1				



ITEI	M PART NO	DESCRIPTION	QTY	ITE	M PART NO	. DESCRIPTION	QTY
1	4170630	S-DECK W/ LABELS 61"	1	46	548138	BRG NDL .88 1.21	1
2	4165456.7	BELT COVER-RH	1	47	64018-7	BOLT-CRG 3/8-16 C 1-1/4	3
3	4165455.7	BELT COVER-LH	1	48	2183070-02	SHAFT-SPINDLE	3
4	38524	KNOB-4 PRONG 3/8-16	2	49	38315	NUT-SPINDLE	3
5	64141-6	NUT-WLF 5/16-18	2	50	64144-38	RING-SNAP	3
6	64163-68	WSHR-1.015X1.5X9GA	6	51	521438	GREASE SEAL	1
7	64229-03	NUT-NYLON LOCK 3/8-16	27	52	4163014	SPACER	1
8	64123-173	BLT-HEX 3/8-16X4-1/2	3	53	4164948	HOUSING-SPINDLE 6 HOLE	Ξ 3
9	2721512	ROLLER-5X2.75 CENTEREI		54	4163155	INNER RING	1
10	64123-68	BLT-HEX 5/16-18X1	2	55	64144-40	SNAP RING-2NTERNL	1
11	2308140	PULLEY-ENGINE	3	56		BEARING-SPINDLE SEALE	
12	112111-03	BLADE 21.00 OFFST HLFT	3	57	4170021.7	WLDMT-IDLER PIN	1
13	2720685	SPACER-ROLLER	6	58	4169463	BELT-CUTTERDECK 61"	•
	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	18	59	64268-05	NUT-FL NYLON LOCK 1/2-1	3 2
15	4168888.7	WLDMT-IDLER ARM	1	60	64163-67	WSHR-5/16 X 1X 12 GA	2
	64018-46	BLT-CRG 1/2-13X3-1/2	3	61	64018-34	BLT-CRG 5/16-18 x 1-1/2	1
17	4168884.7	GUIDE, BELT	1	01	04010-34	DE1-01(0 3/10-10 x 1-1/2	'
18	4165953	PULLEY-IDLER, 6.0	1				
19		SPACER-2.0 X .515 X1.07	2				
20	4169597	EYE BOLT-5/16-18 X 1-1/2	1				
21	64209-03		6				
		KEY-1/4X1 SQ	3				
22			3 2		* 1	NOT ILLUSTRATED	
23	128169	PULLEY IDLER 5.50			. r	NOTILLUSTRATED	
24	4171231 (INCLUDES	ASSY-CTTERDECK SPNDL ITEMS 48, 50, 53, & 56)	3				
	(114020020	11 EWO 40, 00, 00, a 00)					
25	4168886	ASSY-IDLER ARM 48-52	_ 1				
	(INCLUDES	ITEMS 15, 33, 41, 46, 51, & 5	o)				
26	90-0828	S/B BOLT 1/2-13X3 1/2 NC	1				
27	64270-02	BLT-HEX M10-1.5x30 ISO	1				
28	4133155.7	WLDMT-PUSH ARM ZT2	2				
29	64151-37	NUT-HEX,1/2-13NYLON JAN	<i>1</i> 1				
30	64018-45	BLT-CRG, 1/2-13 X 2-1/4	1				
31	64163-74	WSHR516X2.00X.25 PLT	1				
32	2186125	WLDMT-LOCK PUSHBAR	2				
33	85010N	ZERK 1/4-28 STR SLF THRE	5				
	64123-152	BLT-HEX 5/8-11X5	2				
	64141-4	NUT-WLF 3/8-16	4				
	64229-02	NUT-NYLON LOCK 5/16-18	3				
37	4118314	SPACER-BLADE 16MM	3				
38		NUT-NYLON LOCK 5/8-11	2				
39	64123-187	BLT-HEX 5/8-18 X 3 3/4	3				
	64123-208	BLT-HEX 5/8-18X1-1/2	3				
41	4128004	BEARING-BALL 10 X 26 X 8	_				
42		BLT-HEX 3/8-16X3-1/2	2				
43	4128002	CAP-26 X 7 END	1				
44	4168493	SPRING-EXTENSION	1				
45	64163-93	WSHR635 X 1.12 X.062	4				
.0	330 00		•				



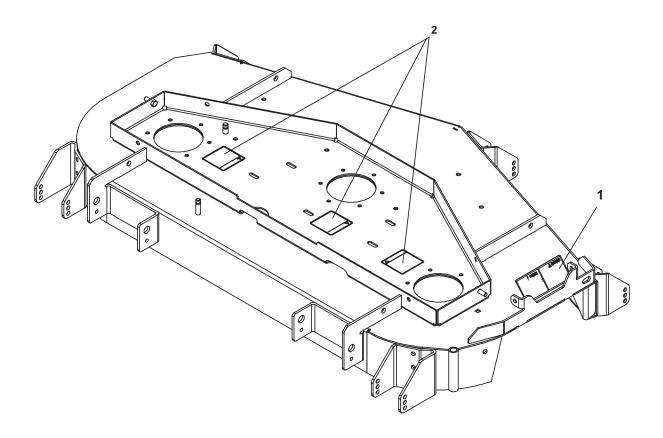
ITE	M PART NO	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1 2 3 4 5 6 7	4170630 64268-01 4168131 64229-03 2721512 2720685 4168085.2 4171432.2	S-DECK W/ LABELS 61" NUT-FL NYLON LOCK 1/4-20 CHUTE-RUBBER ASSY NUT-NYLON LOCK 3/8-16 ROLLER-5X2.75 CENTERED SPACER-ROLLER BAFFLE-DISCHARGE 52" BAFFLE-DISCHARGE 61"	1 7				
8 9	64123-50 4171792.7 4168516.7	BLT-HEX 3/8-16X1 BAFFLE-FRONT,RH 61IN BAFFLE-FRONT,RH 52IN	7 1 1				
11 12 13 14 15 16 17 18	64018-2 64018-7 64229-01 4168642.7 4165966.7 4165965.7 64163-55 64018-23 64018-30 4169849.7 4169850.7 4166480.2 4166478.2	BLT-CRG 1/4-20X3/4 BLT-CRG 3/8-16X1-1/4 NUT-NYLON LOCK 1/4-20 BAFFLE-FRONT,CNTR 61IN BAFFLE-FRONT,LH 61IN BAFFLE-FRONT,LH 61IN BAFFLE-FRONT,LH52IN WSHR .328X.75X14 GA BLT-CRG 3/8-16X3/4 BLT-CRG 3/8-16 X 4-1/2 BRKT-CHUTE, REAR BRKT-CHUTE, FRONT EXTENSION-61"RH EXTENSION-52"RH	1 1 1 1 2 4 1 1 1				
22	4166479.2 64141-2	EXTENSION-52"LH NUT-WLF 1/4-20	1 1 7				
23 24	64123-114 4168487.2 4168515.2	BLT-HEX 1/4-20X1 BRKT-BAFFLE MNTG 61" BRKT-BAFFLE MNTG 52"	7 1 1				
25	4168523.2 4168514.2	BRKT-BAFFLE MNTG 61" BRKT-BAFFLE MNTG 52"	2				
26 27 28 29 30 31	4169851.7 64268-03 64123-16 4169871 4169895 64123-15	PLATE-CHUTE NUT-FL NYLON LOCK 3/8-16 BLT-HEX 3/8-16 X 1-1/4 WSHR-BELLVILLE .382 UD WSHR-FRICTION, UHMW BLT-HEX 3/8-16X3/4	1 5 6 2 2 2 2 3				



#### FIGURE 18

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	4165657	LABEL-PROCAT	1				
2	4167209	LABEL-SE	1				
3	2000735	LABEL-OPER MAN	1				
4	2000590	LABEL, WARN BATTERY	1				
5	4165722	LABEL - HYDR OIL FILL	1				
6	4168693	LABEL-CONTROL PANEL	1				
7	2000693	LABEL - PARK BRAKE	1				
8	2000698	LABEL(DBL) - FUEL/LEAKS	3 2				
9	4171486	LABEL-ZT INFORMATION	1				
10	4165615	LABEL - RH TRACTION	1				
11	4165616	LABEL - LH TRACTION	1				
12	4165654	LABEL-HT CUT OUTER	1				
13	4165655	LABEL-HT CUT INNER	1				
14	4165610	LABEL-WARNING	1				
15	4147617	LABEL-FUEL	1				
16	4165865	LABEL-PROCAT	1				
17	4162915	LABEL-DECK SIZE, 52"	1				
	4162916	LABEL-DECK SIZE, 61"					
18	4116761	LABEL-MADE IN USA	1				
19	4165730	LABEL-MANUAL LOCATION	N 1				
20*	4165932	LABEL-EPA	1				
21*	4169712	DECAL-SPRING LENGTH	1				
22	4168560	LABEL-EFI	1				
23*	4168522	MAT-CLAW MARKS	1				
24*	4164946	DECAL-BOB-CAT	1				

\*NOT ILLUSTRATED



						FIGU	JRE 19
ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1 2		LABEL-WARNING BLADES LABEL-WARNING	3				
_	2000011		Ü				

