# **POWER EQUIPMENT**

# **OPERATOR'S** // ! N / / ! L

Models: SFCII-30-7CV-S SFCII-30-7CV-S-CA

Congratulations on owning a Scag mower! This manual contains the operating instructions and safety information for your Scag mower. Reading this manual can provide you with assistance in maintenance and adjustment procedures to keep your mower performing to maximum efficiency. The specific models that this book covers are listed on the inside cover. Before operating your machine, please read all the information enclosed.

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#### FAILURE TO FOLLOW SAFE OPERATING PRACTICES MAY RESULT IN SERIOUS INJURY OR DEATH.

- Read this manual completely as well as other manuals that came with your mower.
- ALWAYS follow all safety instructions on this product and in the manual to avoid personal injury or death.
- ALWAYS FOLLOW OSHA APPROVED OPERATION.
- This product is capable of amputating hands and feet and throwing objects.
- Keep hands, feet and clothing away from power-driven parts.
- DO NOT operate on steep slopes.
- Always travel across slopes.
- DO NOT mow on wet grass. Wet grass reduces traction and steering control.
- Keep all shields in place, especially the grass discharge chute.
- Before performing any maintenance or service, stop the machine and remove the spark plug wire.
- If a mechanism becomes clogged, stop the engine before cleaning.
- Keep others away from the mower.

#### **REMEMBER - YOUR MOWER IS ONLY AS SAFE AS THE OPERATOR!**

#### HAZARD CONTROL AND ACCIDENT PREVENTION ARE DEPENDENT UPON THE AWARENESS, CONCERN, PRUDENCE, AND PROPER TRAINING OF THE PERSONNEL INVOLVED IN THE OPERATION, TRANSPORT, MAINTENANCE, AND STORAGE OF THE EQUIPMENT.

This manual covers the operating instructions and illustrated parts list for:		
SFC30-7CV-S with a serial number of Y3300001 to Y3399999		
SFC30-7CV-S-CA	with a serial number of	Z7000001 to Z7099999
Always use the entire serial number listed on the serial number tag when referring to this product.		

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#### **Section 1**



### **GENERAL INFORMATION**

#### **1.1 INTRODUCTION**

Your mower was built to the highest standards in the industry. However, the prolonged life and maximum efficiency of your mower depends on you following the operating, maintenance and adjustment instructions in this manual.

The mower is designed to bag, mulch or side discharge the grass clippings. During the assembly process at the factory the mower has been set up to bag the grass clippings with grass collection baffles installed. If the mower has been converted to either mulch or side discharge, the grass collection baffles must be reinstalled on the cutter deck prior to bagging the grass clippings. See Figure 1-1 for grass collection baffle location.

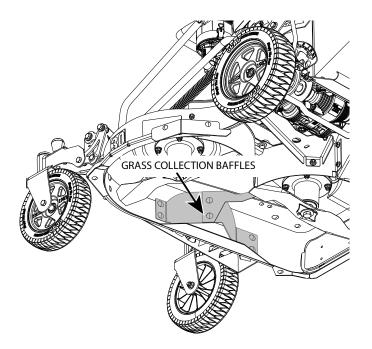


Figure 1-1. Grass Collection Baffle

If additional information or service is needed, contact your Scag Power Equipment Dealer.

We encourage you to contact your dealer for repairs. All Scag dealers are informed of the latest methods to service this equipment and provide prompt and efficient service in the field or at their service shop. They carry a full line of Scag service parts. THE REPLACEMENT OF ANY PART ON THIS PRODUCTBYOTHER THAN THE MANUFACTURER'S AUTHORIZED REPLACEMENT PART MAY ADVERSELY AFFECT THE PERFORMANCE, DURABILITY OR SAFETY OF THIS PRODUCT.

### USE OF OTHER THAN ORIGINAL SCAG REPLACEMENT PARTS WILL VOID THE WARRANTY.

When ordering parts, always give the model and serial number of your mower. The serial number plate is located on the right side on the frame. See Figure 1-2.

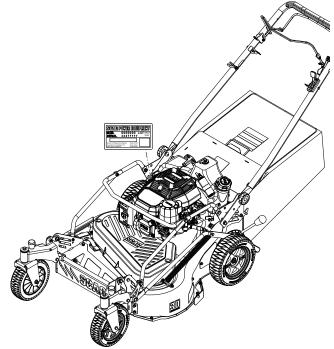


Figure 1-2. Mower Serial Number Plate Location

#### USE ONLY SCAG APPROVED ATTACHMENTS AND ACCESSORIES.

Attachments and accessories manufactured by companies other than Scag Power Equipment are not approved for use on this machine. See Section 8-1. Be aware that using attachments with the mower may affect stability. Be sure to follow the directions found in the operator's manual. See Section 8, Paragraph 8-1.

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### A WARNING

For pictorial clarity, some illustrations and figures in this manual may show shields, guards or plates open or removed. Under no circumstances should your mower be operated without these devices in place.

All information is based upon product information available at the time of approval for printing. Scag Power Equipment reserves the right to make changes at any time without notice and without incurring any obligation.

#### **1.2 DIRECTION REFERENCE**

The "Right" and "Left", "Front" and "Rear" of the machine are referenced from the operator's right and left when in the normal operating position and facing the forward travel direction.

### 1.3 SERVICING THE ENGINE AND DRIVE TRAIN COMPONENTS

The detail servicing and repair of the engine, transmissions and gearboxes are not covered in this manual; only routine maintenance and general service instructions are provided. For service of these components during the limited warranty period, it is important to contact your Scag dealer or find a local authorized servicing agent of the component manufacturer. <u>Any unauthorized work done on these</u> <u>components during the warranty period may void your</u> <u>warranty</u>.

#### **1.4 ASSEMBLY INSTRUCTIONS**

- 1. In an open area, remove the grass bag, side discharge chute, hardware bag and mower from the packaging.
- Using a side cutters, cut the four (4) zip ties securing the handle bars to the top of the mower. See Figure 1-3.

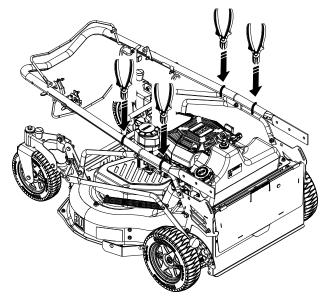


Figure 1-3. Removing from Packaging

 With help from an assistant, raise the handle bar assembly and secure using two (2) carriage bolts and two (2) threaded knobs as shown first. See Figure 1-4.

#### -NOTE-

The parts box includes extra hardware for the handlebar assembly. This kit provides four (4) lock nuts (04003-31), designed to replace part number 481885-08 for commercial or long-term use.

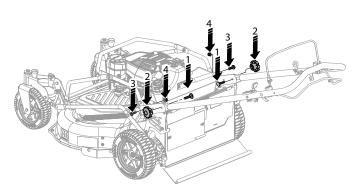


Figure 1-4. Lift and Secure the Handle Bar Assembly



#### 1.5 SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	Choke	Q	Transmission
	Parking Brake	400715	Spinning Blade
	On/Start		Spring Tension on Idler
0	Off/Stop	$\Diamond$	Oil
J. J	Falling Hazard	<u>بر</u>	Thrown Object Hazard
<b>\$</b>	Fast		Slow
	Continuously Variable - Linear		Cutting Element - Basic Symbol
	Pinch Point		Cutting Element - Engage
	Hour meter/Elapsed Operating Hours		Cutting Element - Disengage
<b>■</b> →¶	Keep Bystanders Away		Read Operator's Manual

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### SAFETY INFORMATION

#### 2.1 INTRODUCTION

Your mower is only as safe as the operator. Carelessness or operator error may result in serious bodily injury or death. Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of the personnel involved in the operation, transport, maintenance and storage of the equipment. <u>Make sure</u> every operator is properly trained and thoroughly familiar with all of the controls before operating the mower. The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

This product is capable of amputating hands and feet and throwing objects. Always follow all safety instructions on this product and in the manual to avoid personal injury or death.

#### READ THIS OPERATOR'S MANUAL BEFORE ATTEMPTING TO START YOUR MOWER. MAKE SURE THAT EVERYONE KNOWS WHERE THE MANUAL IS LOCATED AND KEEP A RECORD OF EACH EMPLOYEE THAT HAS READ THE MANUAL.

A replacement manual is available from your authorized Scag Service Dealer or by contacting Scag Power Equipment, Service Department at P.O. Box 152, Mayville, WI 53050 or contact us via the Internet at www.scag.com. The manual for this machine can be downloaded by using the model and serial number or use the contact form to make your request. Please indicate the complete model and serial number of your Scag product when requesting replacement manuals.

#### 2.2 SIGNAL WORDS



This symbol means "Attention! Become Alert! Your Safety is Involved!" The symbol is used with the following signal words to attract your attention to safety messages found on the decals on the machine and throughout this manual. The message that follows the symbol contains important information about safety. To avoid injury and possible death, carefully read the message! Be sure to fully understand the causes of possible injury or death.

#### SIGNAL WORD:

It is a distinctive word found on the safety decals on the machine and throughout this manual that alerts the viewer to the existence and relative degree of the hazard.

### 

The signal word "DANGER" denotes that an extremely hazardous situation exists on or near the machine that could result in high probability of death or irreparable injury if proper precautions are not taken.

### 

The signal word "WARNING" denotes that a hazard exists on or near the machine that can result in injury or death if proper precautions are not taken.

### 

The signal word "CAUTION" is a reminder of safety practices on or near the machine that could result in personal injury if proper precautions are not taken.

Your safety and the safety of others depends significantly upon your knowledge and understanding of all correct operating practices and procedures of this machine.

### 2.3 BEFORE OPERATION CONSIDERATIONS

- 1. NEVER allow children to operate this mower. Do not allow adults to operate this machine without proper instructions.
- Do not mow when children and/or others are present. Keep children out of the mowing area and in the watchful care of a responsible adult other than the operator. Be alert and turn machine off if a child enters the area.
- 3. DO NOT allow children to ride or play on the machine, it is not a toy.
- 4. Clear the area to be mowed of objects that could be picked up and thrown by the cutter blades.



- 5. DO NOT carry passengers.
- 6. DO NOT operate the machine under the influence of alcohol or drugs.
- 7. If the operator(s) or mechanic(s) cannot read English, it is the owner's responsibility to explain this material to them.
- 8. DO NOT wear loose fitting clothing. Loose clothing, jewelry or long hair could get tangled in moving parts. Do not operate the machine wearing shorts; always wear adequate protective clothing including long pants and substantial slip-resistant footwear. Wearing safety glasses, safety shoes and a helmet is advisable and is required by some local ordinances and insurance regulations.

### 

Always wear hearing protection. Operating this machine over prolonged periods of time can cause loss of hearing.

- Keep the machine and attachments in good operating condition. Keep all shields and safety devices in place. If a shield, safety device or decal is defective or damaged, repair or replace it before operating the machine.
- 10. Fuel is flammable; handle it with care. Fill the fuel tank outdoors. Never fill it indoors. Use a funnel or spout to prevent spillage. Clean up any spillage before starting the engine.
- 11. DO NOT add fuel to a running or hot engine. Allow the engine to cool for several minutes before adding fuel. Never fuel indoors or inside enclosed trailers.
- 12. DO NOT start the engine until any spilled fuel has been cleaned up or has evaporated.
- 13. Keep flammable objects (cigarettes, matches, etc.), open flames and sparks away from the fuel tank and fuel container. Use only approved containers.
- 14. See Section 7.3 ENGINE FUEL SYSTEM for fueling procedure.
- 15. Equipment must comply with the latest requirements per SAE J137 and/or ANSI/ASAE S279 when driven on public roads.

- 16. Do not operate without the side discharge chute installed or with the grass catcher or mulch plate completely installed.
- 17. Check the blade mounting bolts at frequent intervals for proper tightness.

#### 2.4 TESTING THE BLADE STOP SYSTEM

The blade stop system should be tested each time before using the machine. Check that the blades stop within 3 seconds of releasing the control bar as described below.

#### -IMPORTANT-

If the blades do not stop within 3 seconds of releasing the control bar, contact your local Authorized Scag Power Equipment Dealer immediately to have the blade stop system repaired.

#### TEST USING THE GRASS BAG

- 1. Remove the rear discharge plug.
- 2. Install the empty grass bag onto the rear of the machine.
- 3. Start the engine. Allow the engine to warm up before engaging the blades.
- 4. Engage the blades.

#### -NOTE-

The bag should begin to inflate, indicating that the blades are rotating.

- 5. Watch the bag and release the control bar.
- 6. Immediately start counting out 3 seconds and watch for the bag to deflate.

#### -NOTE-

If the bag does not deflate within 3 seconds of releasing the control bar, the blade stop system could be deteriorating or out of adjustment. Contact your local Authorized Scag Power Equipment Dealer immediately to have the blade stop system repaired.

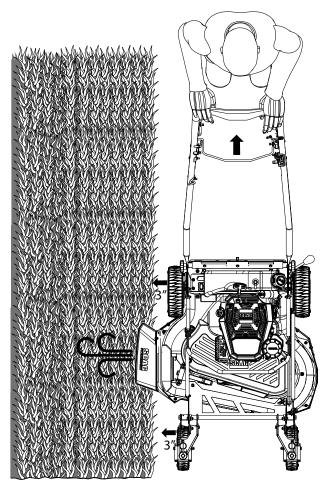
7. Shut the engine off and wait for all moving parts to stop.

#### TEST NOT USING THE GRASS BAG

- 1. Remove the grass bag.
- 2. Install the rear discharge plug.
- 3. Remove the discharge block off plate and install the discharge chute.
- 4. Move the machine onto a paved surface such as a driveway, sidewalk, parking lot or patio next to a section of grass.
- 5. Position the machine so the discharge chute is pointing towards the patch of grass and approximately 3" away. See Figure 2-1.
- 6. Start the engine. Allow the engine to warm up before engaging the blades.
- 7. Engage the blades.

#### -NOTE-

The grass next to the discharge chute should start to move from the air flow, indicating that the blades are rotating.



- 8. Watch the grass and release the control bar.
- 9. Immediately start counting out 3 seconds and watch for the grass to stop moving.

#### -NOTE-

If the grass does not stop moving within 3 seconds of releasing the control bar, the blade stop system could be deteriorating or out of adjustment. Contact your local Authorized Scag Power Equipment Dealer immediately to have the blade stop system repaired.

10. Shut the engine off and wait for all moving parts to stop.

#### 2.5 OPERATION CONSIDERATIONS

1. Know the function of all controls and how to stop quickly.

### WARNING

DO NOT operate on steep slopes. ALWAYS FOLLOW OSHA APPROVED OPERATION.

- Reduce speed and exercise extreme caution on slopes and in sharp turns to prevent tipping or loss of control. Be especially cautious when changing directions on slopes.
- 3. Do not mow or operate on excessively steep slopes. Poor footing could cause a slip and fall accident.
- To prevent tipping or loss of control, start and stop smoothly, avoid unnecessary turns and travel at reduced speed.
- 5. Immediately apply the parking brake if you lose drive control while operating. Inspect the machine and correct the problem before continuing to operate.
- 6. When using any attachment, never direct the discharge of material toward bystanders or allow anyone near the machine while in operation.
- 7. Start the engine when the blade control bar is in the neutral lock position, the drive control bar is disengaged, and the parking brake is engaged.
- 8. If the mower discharge ever plugs, shut off the engine, remove the spark plug wire, and wait for all movement to stop before removing the obstruction.

Figure 2-1. Blade Stop

### A WARNING

DO NOT use your hand to dislodge the clogged discharge chute. Use a stick or other device to remove clogged material after the engine has stopped running and the blades have stopped turning.

- Be alert for holes, rocks, roots and other hidden hazards in the terrain. Use caution when operating near drop-offs. Beware of overhead obstructions (low limbs, etc.), underground obstacles (sprinklers, pipes, tree roots, etc.). Cautiously enter a new area. Be alert for hidden hazards.
- 10. Disengage power to cutter deck before backing up. Do not mow in reverse unless absolutely necessary and then only after observation of the entire area behind the mower. If you must mow in reverse, maintain a constant lookout to the rear of the machine and mow slowly.
- 11. DO NOT turn sharply. Use care when backing up.
- 12. Disengage power to cutter deck before crossing roads, walks or gravel drives.
- 13. Mow only in daylight or good artificial light.
- 14. NEVER raise the deck with the blades engaged.
- 15. Take all possible precautions when leaving the machine unattended, such as disengaging the mower, and stopping the engine.
- 16. Disengage power to the attachments when transporting or when not in use.
- 17. The machine and attachments should be stopped and inspected for damage after striking a foreign object, and damage should be repaired before restarting and operating the machine.

## 

Do not touch the engine or the muffler while the engine is running or immediately after stopping. These areas may be hot enough to cause a burn.

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DO NOT run the engine inside a building or a confined area without proper ventilation. Exhaust fumes are hazardous and contain carbon monoxide which can cause brain injury and death.

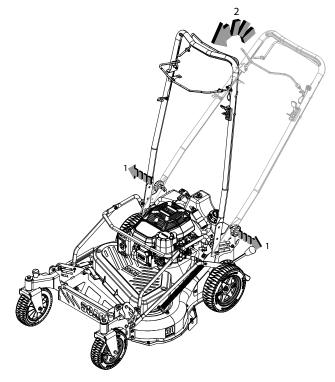
- 18. Keep hands and feet away from cutter blades and moving parts. Contact can injure.
- 19. Transport the mower using a heavy duty trailer or truck. Insure the trailer or truck has all of the necessary lighting and markings as required by laws, codes, and ordinances. Secure a trailer with a safety chain.
- 20. Be cautious when loading and unloading onto trailers or trucks. Use only a full width ramp.
- 21. When transporting the mower, make sure the drive control bar is in neutral, the blade control bar is in the neutral lock position, the engine is off, the parking brake is engaged and the wheels have been blocked.
- 22. Tie the mower down securely using straps, chains, cable, or ropes. Both front and rear straps must be directed down and outward from machine.
- 23. Use care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
- 24. NEVER leave the machine running unattended.

### 2.6 MAINTENANCE CONSIDERATIONS & STORAGE

- 1. Never make adjustments to the machine with the engine running unless specifically instructed to do so. If the engine is running, keep hands, feet, and clothing away from moving parts.
- 2. Place the drive control bar in neutral, engage the parking brake, blade control bar is in the neutral lock position, stop engine and disconnect spark plug wire to prevent accidental starting of the engine when servicing or adjusting the machine. Wait for all movement to stop before adjusting, cleaning or repairing.
- 3. Remove spark plug wire before making any repairs.
- 4. Keep all nuts, bolts and screws tight, to ensure the machine is in safe working condition. Check blade mounting bolts frequently to be sure they are tight.

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5. The handle bars can be moved upward to the storage position when required by removing the carriage bolts and knobs on both sides and rotating the handle bar upward. Secure in the storage position by installing the carraige bolts and knobs. See Figure 2-2.



- Figure 2-2. Handle Bar Storage Position
- Do not change the engine governor settings or overspeed the engine. See the engine operator's manual for information on engine settings.
- 7. To reduce fire hazard, keep the cutting units, drives, muffler and engine free of grass, leaves, excessive grease, oil and dirt.
- 8. Park the machine on level ground.
- 9. NEVER allow untrained personnel to service the machine.
- Use care when checking blades. Use a Blade Buddy, wrap the blade(s) or wear gloves and USE CAUTION when servicing blades. Only replace blades. NEVER straighten or weld blades.
- 11. Keep all parts in good working condition. Replace all worn or damaged decals.
- 12. Use jack stands to support components when required.

- 13. Carefully release pressure from components with stored energy.
- 14. Let the engine cool before storing.
- 15. DO NOT store the machine near an open flame.
- 16. Shut off fuel while storing or transporting.
- 17. DO NOT store fuel near flames or drain indoors.

#### 2.7 USING A SPARK ARRESTOR

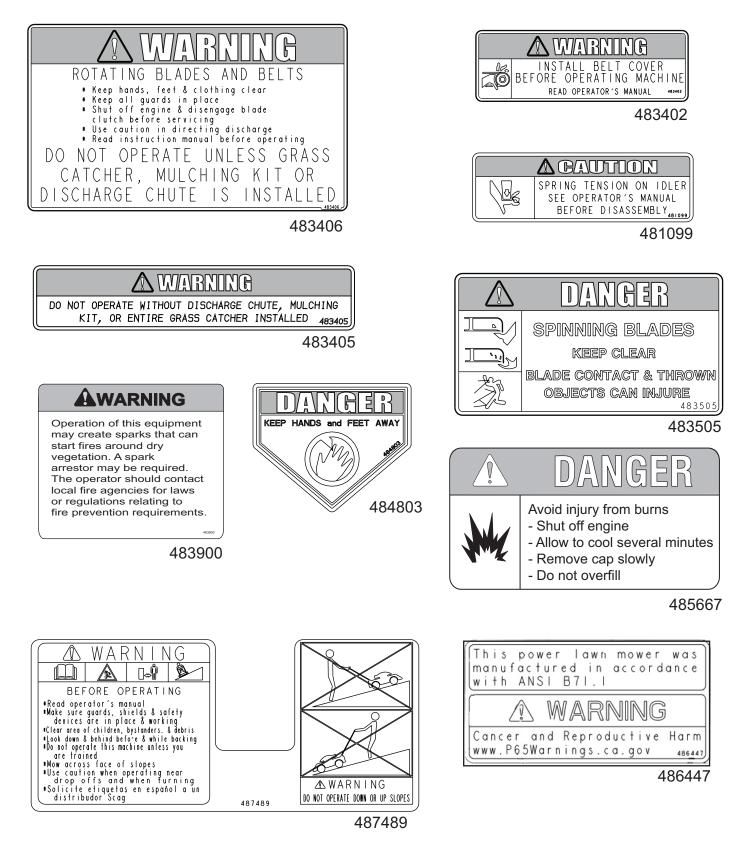
The engine in this machine is not equipped with a spark arrestor muffler. It is in violation of California Public Resource Code Section 4442 to use or operate this engine on or near any forest covered, brush covered or grass covered land unless the exhaust system is equipped with a spark arrestor meeting any applicable local or state laws. Other states or federal areas may have similar laws. Check with your state or local authorities for regulations pertaining to these requirements.

#### 2.8 SPARK IGNITION SYSTEM

This spark ignition system complies with Canadian ICES-002.



#### 2.9 SAFETY AND INSTRUCTIONAL DECALS



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### **SPECIFICATIONS**

#### 3.1 ENGINE

General Type	Heavy Duty Industrial/Commercial Gasoline
Model:	
Scag Model SFCII-30-7CV-S	Kohler Command Pro CV224
Scag Model SFC30-7CV-CA-S	Kohler Command Pro CV224
Туре	4 Cycle Gasoline, OHV, Air-Cooled, Single Cylinder, Vertical Shaft
Displacement:	
Kohler Command Pro CV224	
Cylinder	1 with Cast Iron Sleeve Bore
Governor	Mechanical Type with Variable Speed Control Set At 3600 RPM
Idle Speed:	
Kolher Command Pro	
Air Cleaner	Quad-Clean ™ four stage, cyclonic air filter
Exhaust	Side discharge muffler with guard
	Steel oil; pump; Full pressure lubrication with spin-on oil filter
Starter	Easy Pull™ Recoil Starter

#### **3.2 ENGINE DECK**

Fuel Tank			
Wheels/Tires:			
Drive			
Front			
Handle Bars	1.25" diameter, thick wall tubing,		
	4 operating positions for comfort, plus an additional storage position		

#### **3.3 DRIVE SYSTEM**

	Transmission GT MV 702 transmission
	Drive control handle bar controlled transmission.
	Squeeze the control bar to move forward
Brakes	Lever actuated linkage to brakes on transmission output shaft
Transmission Output Shaft:	0.59" diameter
Safety Group	Handle actuated operator presence system
Forward Speed	

#### -NOTE-

The machine will travel up to 3.5 mph for transport purposes. For best cutting performance the forward travel speed should be adjusted depending upon the cutting conditions.

#### **3.4 CUTTER DECK**

	Adjustable, anti-scalping, hybrid design
Construction	14 gauge steel deck shell w/14 gauge spindle reinforcement plate. Deep draw stamped.
Mounting	Solid mount to engine deck for superior mounting strength
True Cutting Width	
Cutting Height Adjustment	
Cutter Blades	Two; 0.135 in. thick, milled edge, wear resistant
Blade Engagement	Blade control bar controlled Blade Brake Clutch (BBC).
	Connected to cutter deck through a belt.
Discharge Opening	Extra wide discharge opening with thick rubber discharge chute



#### 3.4 CUTTER DECK (CONT.)

Spindles	Heavy-duty spindle shaft, cast aluminum housing,
	Sealed ball bearing, maintenance-free
Spindle Pulleys	Split steel pulley design
Cutter Deck Belts	
Clutch Type	

#### **3.5 OPTIONAL ITEMS/ATTACHMENTS**

Fabric Grass Catcher	Included; 2.5 bushels (3.11 cu. ft.)
Mulching Plate	Included

#### **3.6 APPROXIMATE DIMENSIONS**

Length	
Tracking Width	
Width (including side discharge chute)	
Width (with mulch plate)	
Handle Height (low/high)	
Weight (with bagger)	

### **OPERATING INSTRUCTIONS**

### WARNING

Do not attempt to operate this mower unless you have read this manual. Learn the location and purpose of all controls and instruments before you operate this mower.

### 4.1 CONTROLS AND INSTRUMENT IDENTIFICATION

Before operating the mower, familiarize yourself with all mower and engine controls. Knowing the location, function and operation of these controls is important for safe and efficient operation of the mower.

- 1. **Recoil Start (Figure 4-1).** The recoil start is used to start the engine.
- 2. Blade Control Bar (Figure 4-1). Used to engage and disengage the cutter blade drive system. Pulling the control bar will engage the cutter blades. Releasing the control bar will disengage the cutter blades.
- 3. Engine Throttle / Choke Control (Figure 4-1). Used to control the engine speed and choke control. Pushing the lever forward increases engine speed. Pulling the lever back decreases engine speed. Push the lever all the way forward past the detent to engage the choke when starting a cold engine. Full back position is the STOP position. Full forward to detent is the cutting position.

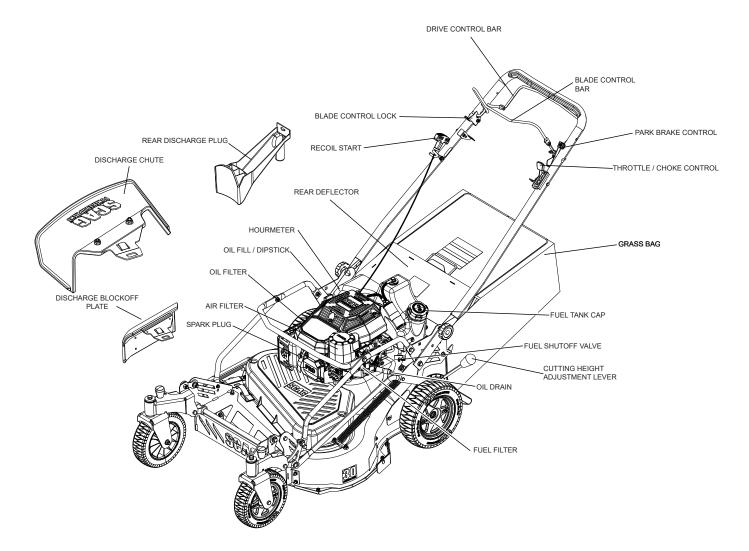


Figure 4-1. Controls and Instruments

#### Section 4



- 4. Hourmeter (Figure 4-1). Indicates the number of hours the engine has been operated. It operates whenever the engine is running.
- 5. Drive Control Bar (Figure 4-1). Used to engage and disengage the mower forward drive system.
- 6. Parking Brake Control (Figure 4-1). Used to engage and disengage the parking brakes. Push the lever forward to engage the parking brake. Pull the lever back to disengage the parking brakes.
- 7. Blade Control Lock (Figure 4-1). Use to lock the blade control bar in the neutral position.
- 8. Grass Bag (Figure 4-1). Use to bag and collect grass clippings while mowing.
- **9.** Fuel Tank Cap (Figure 4-1). Use to fill the fuel tank with fuel.
- **10. Fuel Shutoff Valve (Figure 4-1).** Used to shut off fuel supply to the engine.
- **11. Oil Drain Valve (Figure 4-1).** Used to drain the oil from the engine.
- **12. Cutting Height Adjustment Lever (Figure 4-1).** Used to set the cutter deck at the desired cutting height.
- **13. Fuel Filter (Figure 4-1).** Used to filter the fuel supply to the engine. Refer to engine owner's manual supplied with this unit when servicing.
- **14. Discharge Blockoff Plate (Figure 4-1).** Used to shut off the discharge of grass clippings out of the side discharge opening. Install when mulching or using the grass bag.
- Discharge Chute (Figure 4-1). Used to allow the discharge of grass clippings out of the side discharge opening. Install when side discharging.
- **16. Spark Plug (Figure 4-1).** Used to supply spark to the engine. Refer to engine owner's manual supplied with this unit when servicing.
- **17.** Air Filter (Figure 4-1). Used to filter the air supply to the engine. Refer to engine owner's manual supplied with this unit when servicing.
- **18. Oil Filter (Figure 4-1).** Used to filter the oil supply in the engine. Refer to engine owner's manual supplied with this unit when servicing.
- **19. Oil Fill / Dipstick (Figure 4-1).** Used to add and check the level of oil in the engine. Refer to engine owner's manual supplied with this unit when servicing.

- Rear Discharge Plug (Figure 4-1). Used to shut off the discharge of grass clippings out of the rear discharge opening. Install when mulching or side discharging.
- **21. Rear Deflector (Figure 4-1).** Used to hold the grass bag and rear discharge plug in place during operation.

#### 4.2 TESTING THE BLADE STOP SYSTEM

The blade stop system should be tested each time before using the machine. Check that the blades stop within 3 seconds of releasing the control bar as described below.

### 

If the blades do not stop within 3 seconds of releasing the control bar after making an adjustment to the blade brake cable, the blade stop system may be deteriorating and if ignored could result in an unsafe operating condition. Contact your local Authorized Scag Power Equipment Dealer immediately to have the blade stop system inspected and repaired.

#### **TEST USING THE GRASS BAG**

- 1. Remove the rear discharge plug.
- 2. Install the empty grass bag onto the rear of the machine.
- 3. Start the engine. Allow the engine to warm up before engaging the blades.
- 4. Engage the blades.

#### -NOTE-

The bag should begin to inflate, indicating that the blades are rotating.

- 5. Watch the bag and release the control bar.
- 6. Immediately start counting out 3 seconds and watch for the bag to deflate.



#### -NOTE-

If the bag does not deflate within 3 seconds of releasing the control bar, the blade stop system could be deteriorating or out of adjustment. Contact your local Authorized Scag Power Equipment Dealer immediately to have the blade stop system repaired.

7. Shut the engine off and wait for all moving parts to stop.

#### TEST NOT USING THE GRASS BAG

- 1. Remove the grass bag.
- 2. Install the rear discharge plug.
- 3. Remove the discharge block off plate and install the discharge chute.
- 4. Move the machine onto a paved surface such as a driveway, sidewalk, parking lot or patio next to a section of grass.
- 5. Position the machine so the discharge chute is pointing towards the patch of grass and approximately 3" away. See Figure 4-2.
- 6. Start the engine. Allow the engine to warm up before engaging the blades.
- 7. Engage the blades.

#### -NOTE-

The grass next to the discharge chute should start to move from the air flow, indicating that the blades are rotating.

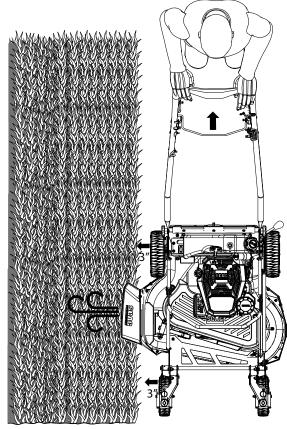


Figure 4-2. Blade Stop Test

- 8. Watch the grass and release the control bar.
- 9. Immediately start counting out 3 seconds and watch for the grass to stop moving.

#### -NOTE-

If the grass does not stop moving within 3 seconds of releasing the control bar, the blade stop system could be deteriorating or out of adjustment. Contact your local Authorized Scag Power Equipment Dealer immediately to have the blade stop system repaired.

10. Shut the engine off and wait for all moving parts to stop.

### WARNING

Never operate the mower with the blade stop system malfunctioning. Do not disengage or bypass any part of the blade stop system; injury to yourself and others or property damage could result.

#### **4.3 INITIAL RUN-IN PROCEDURES**

#### FIRST DAY OF USE OR APPROXIMATELY 8 HOURS

- 1. Check all belts for proper alignment and wear at 2, 4 and 8 hours.
- 2. Change the engine oil only after the first 8 hours of operation. Refer to engine owner's manual supplied with this unit when servicing.
- 3. Test the blade stop system daily before operation. See Section 4.2)
- 4. Inspect the air filter.
- 5. Check for loose hardware. Tighten as needed.
- 6. Inspect the cutter blades and service as necessary.
- 7. Check the parking brake function.
- 8. Check clutch cable function.

#### **4.4 STARTING THE ENGINE**

### 

DO NOT USE STARTING FLUIDS. Use of starting fluids in the air intake system may be potentially explosive or cause a "runaway" engine condition that could result in engine damage and/or personal injury.

- 1. Be sure the fuel shutoff valve, located by the fuel tank, is completely open. (See Section 7.3.)
- 2. Move the engine throttle control to full throttle. If the engine is cold, choke the engine as needed by moving the throttle / choke control lever fully forward past the detent.
- 3. Slowly pull starter handle until just past compression-STOP! Return starter handle firmly pull straight out to avoid excessive rope wear from starter rope guide.
- 4. Gradually return choke control to OFF position after engine starts and warms up. Allow engine to warm before operating the mower.

#### **4.5 GROUND TRAVEL**

#### - IMPORTANT -

If you are not familiar with the operation of a machine with a variable speed transmission, the ground speed operation should be learned and practiced in an open area, away from buildings, fences, or obstructions.

Learn the operation on flat ground before operating on slopes.

Start practicing with a slow engine speed and slow forward travel.

Learn to feather the drive control bar to obtain a smooth operating action.

Practice operating the mower until you are comfortable with the controls before proceeding to mow.

#### FORWARD TRAVEL

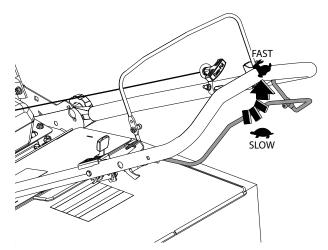


Figure 4-3. Travel Controls

- 1. Release parking brake.
- 2. Pull upward on the drive control bar. See Figure 4-3.
- 3. Forward travel.

To travel forward with the mower, slowly pull upward on the drive control bar. The further the drive control bar is pulled upward the greater the forward speed will be. To decrease the speed, slowly release the drive control bar.

To stop the forward travel, release the drive control bar allowing it to return back to the neutral position.



#### - NOTE -

Smooth operation of the drive control bar will produce smooth mower operation. While learning the operation of the mower, keep the travel speed low.

### 

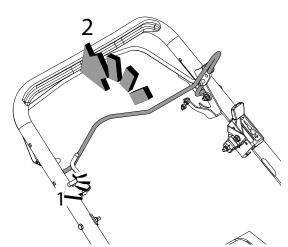
Disengage power to the mower before backing up. Do not mow when backing up unless absolutely necessary and then only after observation of the entire area behind the mower.

### **A** CAUTION

Before backing up, observe the rear for persons and obstructions. Clear the area before backing up. Possible injury or property damage could occur.

#### 4.6 ENGAGING THE CUTTER BLADES

- Set the throttle at about 3/4 speed. Do not attempt to engage the deck drive at high speed as this shortens the belt life — use only moderate engine speed when engaging the cutter blades.
- 2. Push and hold the blade control lock lever forward to release the blade control bar. See Figure 4-4.
- 3. Quickly pull the blade control bar to the handle and release the blade control lock lever. The cutter blades should engage.



#### Figure 4-4. Blade Control Bar Engagement

#### - NOTE -

A squealing noise may be heard when engaging or disengaging the deck drive. It is caused by the belt during engagement and the brake pads contacting the brake drums during disengagement. This is normal. If the noise is excessive, contact your local Authorized Scag Power Equipment Dealer immediately to have the clutch system repaired.

- 4. To disengage the cutter blades, release the blade control bar. The blade control lock lever resets to lock the blade control bar.
- 5. Always operate the engine at full throttle to properly maintain cutting speed. If the engine starts to lug down, reduce the forward speed and allow the engine to operate at maximum RPM.

#### **4.7 SLOPE OPERATION**

### WARNING

DO NOT operate on excessively steep slopes. ALWAYS FOLLOW OSHAAPPROVED OPERATION.

Avoid mowing in wet conditions. Wet grass or leaves can cause serious injury if you slip and contact the blades.

- 1. This mower has been designed for good traction and stability under normal mowing conditions. However, caution must be used when traveling on slopes, especially when the grass is wet.
- To prevent tipping or loss of control, do not start or stop suddenly, avoid unnecessary turns and travel at reduced speed. If tires lose traction, disengage blades and proceed slowly off the slope.
- 3. Avoid sudden starts when mowing on slopes.
- 4. Travel across the slope whenever possible. Never up and down the slope.

#### 4.8 PARKING THE MOWER

- 1. Park the machine on a flat, level surface only. Do not park the machine on an incline.
- 2. Disengage the cutter blades.
- 3. Slow the engine to idle speed.
- 4. Engage the parking brake.
- 5. Pull the throttle / choke control back to the OFF position.

#### **4.9 AFTER OPERATION**

- 1. Always shut the engine off, wait for all moving parts to stop, and allow the mower to cool before adjusting, servicing, storing or cleaning the machine.
- 2. Wash the entire mower after each use. Do not use high pressure spray or direct the spray onto components.

#### - IMPORTANT -

Do not wash a hot or running engine. Cold water will damage the engine. Use compressed air to clean the engine if it is hot.

- 3. Keep the entire mower clean to inhibit serious heat damage to the engine or transmission.
- 4. Check the drive belts for proper alignment and any signs of wear. Correct and adjust if necessary.

### **DANGER**

To avoid injury from burns, allow the mower to cool before removing the fuel tank cap and refueling.

5. Fill the fuel tank with fresh, clean fuel at the beginning of every day of operation. See Engine Owner's Manual for proper octane requirements.

#### 4.10 REMOVING CLOGGED MATERIAL

### A DANGER

#### **ROTATING BLADES**

NEVER PUT YOUR HANDS INTO THE DISCHARGE CHUTE FOR ANY REASON!

Shut off the engine and remove the spark plug wire and only then use a stick or similar object to remove material if clogging has occurred.

- 1. If the discharge becomes clogged, shut off the engine and remove the spark plug wire.
- 2. Using a stick or similar item, dislodge the clogged material. Then resume normal mowing.

### 4.11 MOVING MOWER WITH ENGINE STOPPED

To "free-wheel" or move the mower around without the engine running, disengage the parking brake and move the mower by hand. When the machine is in the desired position, engage the parking brake.

#### 4.12 RECOMMENDATIONS FOR MOWING

1. Do not mow with dull blades. A dull blade will tear grass, resulting in poor lawn appearance and reduced mowing power.

### 

DO NOT operate without Discharge Chute, Mulching Kit, or entire Grass Catcher properly installed.

- 2. When side discharging, the discharge chute must not be removed. The discharge chute must be installed to deflect grass clippings and thrown objects downward. Direct the side discharge away from sidewalks or streets to minimize cleanup of clippings. When mowing close to obstacles, direct the discharge away from the obstacles to reduce the chance of property damage by thrown objects.
- 3. When mulching, the side discharge block off plate and rear discharge plug must be completely installed.
- 4. When bagging grass, the side discharge block off plate must be installed and rear discharge plug must be removed.
- 5. Cut grass when it is dry and not too tall. Do not cut grass too short (cut off 1/3 or less of existing grass for best appearance). Mow frequently.
- 6. Keep mower and discharge chute clean.
- 7. When mowing wet or tall grass, mow the grass twice. Raise the mower to the highest setting for the first pass and then make a second pass to the desired height.
- 8. Use a slow travel speed for trimming purposes.
- 9. Operate the engine at full throttle for best cutting. Mowing with a lower RPM causes the mower to tear the grass. The engine is designed to be operated at full speed.
- 10. Use the alternate stripe pattern for best lawn appearance. Vary the direction of the stripe each time the grass is mowed to avoid wear patterns in the grass.

#### 4.13 ADJUSTING CUTTING HEIGHT

The mower deck can be adjusted from a height of 1-1/2 inches to 5 inches at 1/2-inch intervals. To adjust the cutting height:

### 

DO NOT adjust the cutting height with the mower blades rotating. Disengage the power to the cutter blades and then adjust cutting height.

- 1. Disengage the power to the cutter blades.
- 2. Apply the park brake.
- 3. Slowly pull the cut height adjustment lever out to adjust the blades to the desired cutting height. The cut height adjustment pin is spring loaded and when it aligns with a cut height hole it will snap back into place. See Figure 4-5.

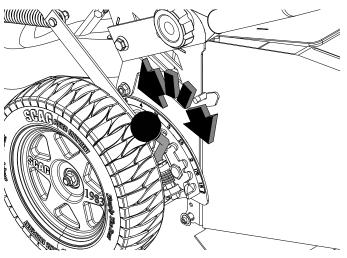


Figure 4-5. Adjusting Cutting Height

#### 4.14 FRONT CASTER LOCK (IF EQUIPPED)

The front caster swivel yokes can be either locked straight or allowed to swivel by moving the pin to one of two locations. See Figure 4-6.

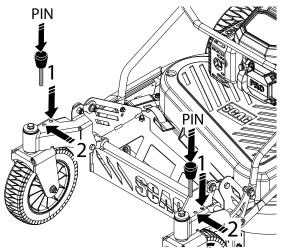


Figure 4-6. Caster Wheel Swivel / Lock

- 1. Swivel Location.
- 2. Lock Location.



### **TROUBLESHOOTING CUTTING CONDITIONS**

CONDITION	CAUSE	CURE
STRINGERS - OCCASIONAL BLADES OF UNCUT GRASS	Low engine RPM	Run engine at full RPM
NAMAN MANANANANANANANANANANANANANANANANA	Ground speed too fast	Slow speed to adjust for conditions
	Wet grass	Cut grass after it has dried out
$\langle \rangle$	Dull blades, incorrect sharpening	Sharpen blades
	Deck plugged, grass accumulation	Clean underside of deck
$ \underbrace{\overset{\circ}{\vdash}}_{\overset{\circ}{\circ}} \overset{\circ}{\overset{\circ}{\circ}} \overset{\circ}{\overset{\circ}{\circ}} \overset{\circ}{\overset{\circ}{$	Belts slipping	Adjust belt tension
STREAKING - STRIPS OF UNCUT GRASS IN CUTTING	Dull, worn blades	Sharpen blades
PATH	Incorrect blade sharpening	Sharpen blades
ounoustannooustannon	Low engine RPM	Run engine at full RPM
	Belt slipping	Adjust belt tension
	Deck plugged, grass accumulation	Clean underside of deck
→ Width of Deck →	Ground speed too fast	Slow speed to adjust for conditions
°°°°°°°° sgeo18	Wet grass	Cut grass after it has dried out
	Bent blades	Replace blades
STREAKING - STRIPS OF UNCUT GRASS BETWEEN CUTTING PATHS	Not enough overlapping between rows	Increase the overlap of each pass

#### **TROUBLESHOOTING CUTTING CONDITIONS (CONT'D)**

CONDITION	CAUSE	CURE	
UNEVEN CUT ON FLAT GROUND - WAVY HIGH-LOW	Lift worn from blade	Replace blade	
APPEARANCE, SCALLOPED CUT, OR ROUGH CONTOUR	Blade upside down	Mount with cutting edge toward ground	
Manganana Angananana Anga	Deck plugged, grass accumulation	Clean underside of deck	
	Too much blade angle (deck pitch)	See your authorized SCAG dealer	
	Deck mounted improperly	See your authorized SCAG dealer	
$\stackrel{\circ}{\vdash} \text{Width of Deck} \stackrel{\circ}{-\!$	Bent spindle area	See your authorized SCAG dealer	
	Dull blade	Sharpen blade	
UNEVEN GROUND - WAVY APPEARANCE, HIGH-LOW SCALLOPED CUT, OR ROUGH CONTOUR	Uneven ground	May need to reduce ground speed, raise cutting height, and/or change direction of cut	
SLOPING RIDGE ACROSS WIDTH OF CUTTING PATH	Wheels uneven	See your authorized SCAG dealer	
Manananananananan	Deck mounted incorrectly	See your authorized SCAG dealer	
	Deck not level side-to side	See your authorized SCAG dealer	
$\downarrow^{\circ}_{\circ} Width of Deck \xrightarrow{\circ}_{\circ} \downarrow^{\circ}_{\circ} \downarrow^{\circ}_{\circ}$			

#### TROUBLESHOOTING CUTTING CONDITIONS (CONT'D)

CONDITION	CAUSE	CURE		
SCALPING-BLADESHITTING DIRT OR CUTTING VERY	Bent spindle mounting area	See your authorized SCAG dealer		
CLOSE TO THE GROUND	Ground speed too fast	Slow speed to adjust for conditions		
	Cutting too low	May need to reduce ground speed, raise cutting height, change direction of cut, and/or change pitch and level		
	Rough terrain	May need to reduce ground speed, raise cutting height, and/or change direction of cut		
$ \underbrace{\overset{\circ}{\vdash}}_{\overset{\circ}{\circ}} Width of Deck \underbrace{\overset{\circ}{\vdash}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow}}_{\overset{\circ}{\circ}} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow}} \underbrace{\overset{\circ}{\leftarrow} \overset{\leftarrow}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow} \underbrace{\overset{\circ}{\leftarrow} \overset$	Wet grass	Cut grass after it has dried out		
STEP CUT - RIDGE IN CENTER OF CUTTING PATH	Blades not mounted evenly	See your authorized SCAG dealer		
AND	Bent blade	Replace blade		
	Internal spindle failure	See your authorized SCAG dealer		
$\stackrel{\circ}{\vdash} \stackrel{\circ}{\longrightarrow} Width of Deck \stackrel{\circ}{\dashv} \stackrel{\circ}{\bullet} \stackrel{\circ}{\bullet$	Mounting of spindle incorrect	See your authorized SCAG dealer		
SLOPE CUT - SLOPING RIDGES ACROSS WIDTH OF	Bent spindle mounting area	See your authorized SCAG dealer		
CUTTING PATH	Internal spindle failure	See your authorized SCAG dealer		
$\downarrow^{\circ}_{\circ}^{\circ$	Bent deck housing	See your authorized SCAG dealer		

### **ADJUSTMENTS**

#### **6.1 PARKING BRAKE ADJUSTMENT**

### 🔒 WARNING

Do not operate the mower if the parking brake is not operable. Possible severe injury could result.

The parking brake should be adjusted whenever the parking brake lever is placed in the "ENGAGE" position and the parking brake will not prevent the mower from moving. If the following procedures do not allow you to engage the parking brake properly, contact your Scag dealer for further brake adjustments.

- 1. Park the machine on a flat surface. Shut the engine off and wait for all moving parts to stop.
- 2. Apply the parking brake and disconnect the spark plug wire from the spark plug.
- With the brake disengaged, adjust the cable to increase tension until you feel slight rolling resistance in the left rear wheel. See Figure 6-1.
- 4. Decrease tension slightly until the wheels roll freely.
- 5. Engage the park brake lever and confirm that the rear wheel does not roll.
- 6. Adjust cable slightly if needed for proper brake function.
- Test the park brake engagement. The machine should not move when the park brake is applied. (Only the left wheel stops entirely. Right wheel may turn.)

#### - NOTE -

*If this procedure does not achieve proper brake adjustment, please contact your authorized Scag dealer.* 

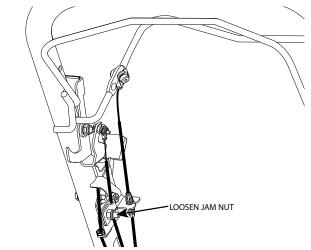


Figure 6-1. Parking Brake Cable Adjustment

#### 6.2 BLADE BRAKE CABLE ADJUSTMENT

## 

Stop the engine and remove the spark plug wire before making any adjustments. Wait for all moving parts to come to a complete stop before beginning work.

## 

The engine and drive unit can get hot during operation causing burn injuries. Allow engine and drive components to cool before making any adjustments.

An adjustment to the blade brake cable should be made whenever a new cable or belt is installed.

- 1. Shut the engine off and wait for all moving parts to stop.
- 2. Disconnect the spark plug wire from the spark plug.
- 3. Remove the belt cover and remove any debris that has collected on the mower.

4. With the blade control bar in the disengaged position, adjust the cable by loosening the locking nut on the turnbuckle, then turn the adjusting wheel to either shorten or lengthen the cable as needed; once the desired tension is achieved, tighten the locking nut to secure the adjustment. To achieve desired tension tighten until the cable has slight tension, then loosen just enough to introduce a very small amount of slack when the cable is disengaged. See Figure 6-2.

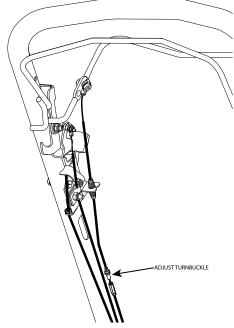


Figure 6-2. Blade Brake Cable Adjustment

5. Test the blade engagement.

#### -NOTE-

If a noticeable odor persists beyond the first hour of use, an adjustment is required.

#### - NOTE -

If making the adjustment as outlined does not allow for proper blade engagement or blade stop, contact your local Authorized Scag Power Equipment Dealer.

#### 6.3 SELF-PROPEL DRIVE ADJUSTMENT

An adjustment to the self-propel drive cable should be made whenever a new cable or belt is installed.

1. Shut the engine off and wait for all moving parts to stop.

- 2. Disconnect the spark plug wire from the spark plug.
- 3. If the grass catcher bag is installed, remove it from the mower.
- 4. With the drive bar in the disengaged position, adjust the drive cable by loosening the locking nut on the turnbuckle, then turn the adjusting wheel to either shorten or lengthen the drive cable as needed; once the desired tension is achieved, tighten the locking nut to secure the adjustment. See Figure 6-3.

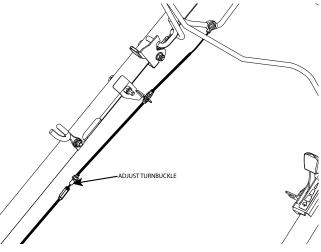


Figure 6-3. Drive Adjustment

5. Test the drive engagement. The machine should not move when the drive control bar is released.

#### - NOTE -

*If making the adjustment as outlined does not allow for proper self-propel operation, contact your local Authorized Scag Power Equipment Dealer.* 

### 6.4 THROTTLE CONTROL AND CHOKE ADJUSTMENTS

These adjustments must be performed by your Authorized Scag Power Equipment Dealer to ensure proper and efficient running of the engine. Should either need adjustment, contact your authorized Scag service center.

#### 6.5 TRANSMISSION DRIVE BELT

### 

Before removing any guards, shut the engine off and remove the spark plug wire from the spark plug.

The transmission drive belt is spring loaded after the first 2, 4, 8 and 10 hours of operation, the belt should be checked for proper alignment and wear. Thereafter, check the belts after every 40 hours of operation or weekly, whichever occurs first.

#### 6.6 CUTTER DECK BELT ADJUSTMENT

### 

Before removing any guards, shut the engine off and remove the spark plug wire from the spark plug. Wait for all moving parts to come to a complete stop before beginning work.

- 1. Remove the belt cover.
- 2. Loosen jam nut on tension rod.
- Adjust the tension by turning the tension rod clockwise or counter clockwise until the spring measures between 2.5" and 2.375". See Figure 6-4.

#### -NOTE-

Due to initial belt stretch and to prevent the belt from slipping, check this adjustment after the first 2 hours, 4 hours and 8 hours of operation.

4. Reinstall the belt cover after the adjustments have been made.

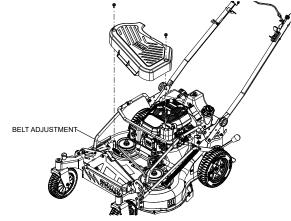


Figure 6-4. Deck Belt Adjustment

#### 6.7 BELT ALIGNMENT

Belt alignment is important for proper performance of your Scag mower. If you experience frequent belt wear or breakage, see your authorized Scag service center for belt adjustment.

#### **6.8 CUTTER DECK ADJUSTMENTS**

The mower is designed to bag, mulch or side discharge the grass clippings. During the assembly process at the factory the mower has been set up to bag the grass clippings with grass collection baffles installed. If the mower has been converted to either mulch or side discharge, the grass collection baffles must be reinstalled on the cutter deck prior to bagging the grass clippings. See Figure 6-4 for grass collection baffle location.

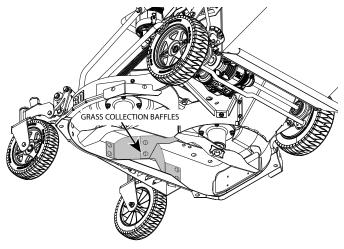


Figure 6-5. Grass Collection Baffle

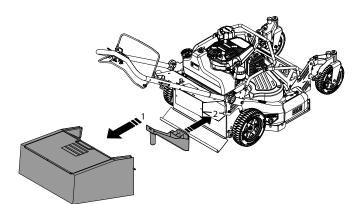
If additional information or service is needed, contact your Scag Power Equipment Dealer.



#### **MULCHING THE CLIPPINGS**

To convert from bagging grass and prepare the mower to mulch the grass clippings:

1. Lift the rear cover and remove the grass collection bag from the mower. See Figure 6-5.



#### Figure 6-6. Mulch Conversion

2. Insert the rear discharge plug into the cutter deck. See Figure 6-5.

#### -NOTE-

For the best mulching performance, remove grass collection baffles from the cutter deck.

#### SIDE DISCHARGE THE CLIPPINGS

To convert from bagging grass and prepare the mower to side discharge the grass clippings:

- 1. Lift the rear cover and remove the grass collection bag from the mower. See Figure 6-5.
- 2. Insert the rear discharge plug into the cutter deck. See Figure 6-5.
- 3. Release the latch and remove the discharge block off plate. See Figure 6-6.

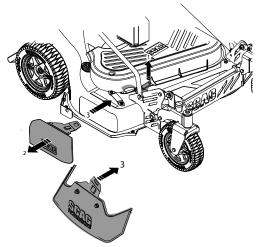


Figure 6-7. Side Discharge Conversion

4. Install the side discharge chute and secure with the latch. See Figure 6-6.

#### -NOTE-

For the best side discharge performance, remove grass collection baffles from the cutter deck.

#### **BAG THE CLIPPINGS**

To convert and prepare the mower back to bagging the grass clippings:

- 1. Lift the rear cover and remove the rear discharge plug from the cutter deck. See Figure 6-7.
- 2. Reinstall the grass collection bag onto the mower. See Figure 6-7.

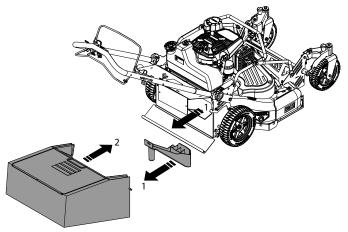


Figure 6-8. Bagging Grass

- 3. The discharge block off plate will need to be installed. See Figure 6-7.
- 4. Install the discharge block off plate all the way forward in the opening and secure with the latch.



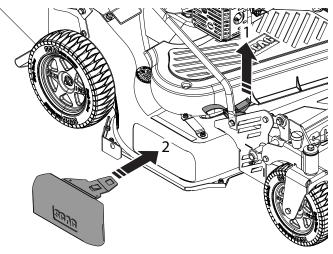


Figure 6-9. Discharge Block Off Plate

5. Reinstall the grass collection baffles from the cutter deck. See Figure 6-9.

#### -IMPORTANT-

If the mower has been converted to either mulch or side discharge, the grass collection baffles must be reinstalled on the cutter deck prior to bagging the grass clippings.

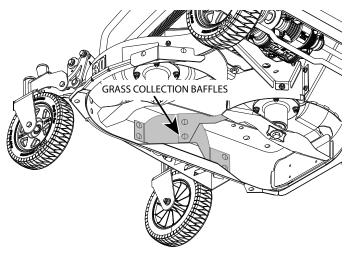


Figure 6-10. Grass Collection Baffle

6. Secure the grass collection baffles using 5/16-18 x 3/4" carriage bolts and 5/16-18 elastic stop nuts.

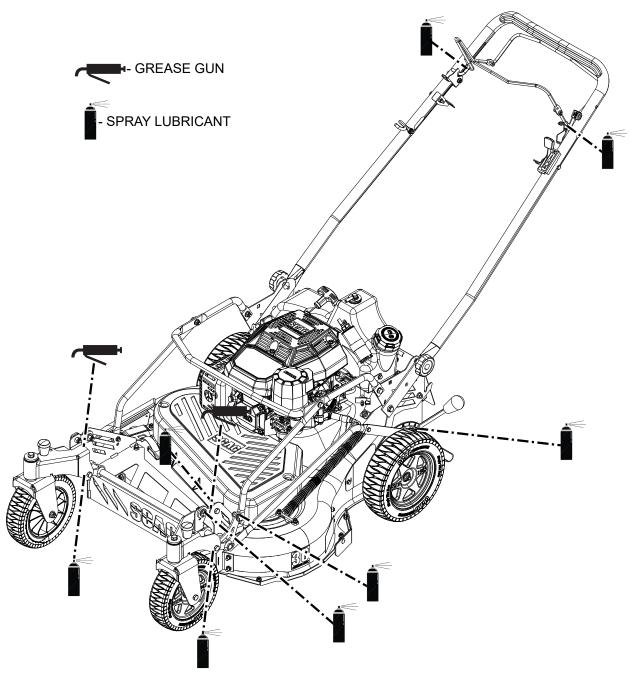
#### 7.1 MAINTENANCE CHART - RECOMMENDED SERVICE INTERVALS

HOURS									
BREAK-IN (FIRST 10)	8	40	50	100	150	200	400	PROCEDURE	COMMENTS
Х								Check all hardware for tightness	
Х								Check all belts for proper alignment	See section 7.7
	х							Change engine oil	See section 7.3
	Х							*Clean mower	See section 7.10
	Х							Check condition of blades	See section 7.8
	Х							Check blade stop system	See section 4.2
	х							Check the blade brake cable tension. Adjust as needed.	See section 6.2, 6.3 & 6.4
		х						Inspect transmission drive belt. Replace every 400 hours or 2 years, whichever occurs first.	See section 6.5 & 7.7
		х						Check belts for proper alignment	See section 7.7
		x						Clean and lubricate the rear drive wheels	See section 7.9
			х					Change engine oil - Perform after every 50 hours of operation	See section 7.3
				х				Check condition of fuel lines	
				х				Change engine oil and filter - Perform after every 100 hours of operation	See section 7.3
				х				*Clean air cleaner element	See section 7.6
					Х			Change engine oil - Perform after every 50 hours of operation	See section 7.2
						Х		Check all hardware for tightness	
						Х		Change engine oil and filter - Perform after every 100 hours of operation	See section 7.2
							Х	Replace transmission drive belt	See section 7.7

\* Perform these maintenance procedures more frequently under extreme dusty or dirty conditions



#### 7.2 GREASE FITTING LOCATION CHART



\* Compatible Greases: Scag Premium Chassis Grease p/n 486257

\* PROCEDURE: Apply grease to the fitting until new grease appears at the side pivots.



#### 7.3 ENGINE OIL

#### A. CHECKING ENGINE CRANKCASE OIL LEVEL

The engine oil level should be checked after every 8 hours of operation or daily as instructed in the Engine Operator's Manual furnished with this mower.

#### **B. CHANGING ENGINE CRANKCASE OIL**

After the first 8 hours of operation, change the engine crankcase oil. Thereafter, change the engine crankcase oil after every 50 hours of operation or yearly, whichever occurs first. Refer to the Engine Operator's Manual furnished with this mower for instructions.

#### C. CHANGING ENGINE OIL FILTER

Replace the oil filter after every 100 hours of operation. Refer to Engine Operator's Manual for instructions.

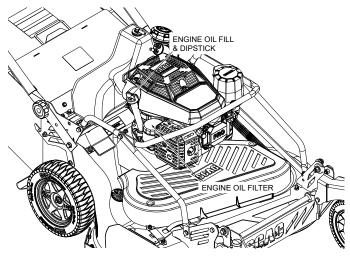


Figure 7-1. Oil Fill / Dipstick, Oil Filter

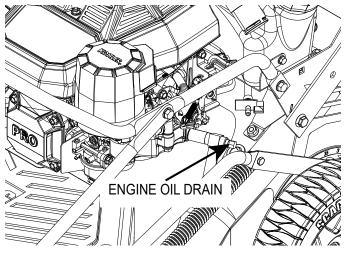


Figure 7-2. Oil Fill / Dipstick, Oil Filter, Oil Drain

#### 7.4 ENGINE FUEL SYSTEM

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To avoid injury from burns, allow the mower to cool before removing the fuel tank cap and refueling.

### 7.5 A. FILLING THE FUEL TANK - EXCLUDING CA MODELS

Use clean, fresh unleaded gasoline with a minimum octane rating of 87 and a maximum of 10% Ethanol.

Fill to the bottom of the filler neck (approximately 1 gallon) at the beginning of each operating day. See Figure 7-3.

DO NOT over fill. The empty space in the fuel tank allows the fuel to expand. Overfilling the fuel tank may result in fuel leakage, damage to the engine and/or damage to the machine's emissions system.

DO NOT use E85 Fuel. Using E85 Fuel will cause severe damage to the engine.

To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.

Extinguish all cigarettes, cigars, pipes and other sources of ignition.



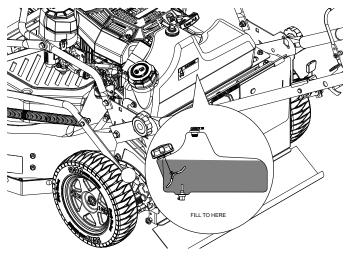


Figure 7-3. Fuel Tank Fill Level

- 1. Use only an approved gasoline container.
- 2. NEVER remove the gas cap or add fuel with the engine running. Allow the engine to completely cool before fueling.
- 3. NEVER fuel the machine indoors or in an enclosed trailer.
- 4. DO NOT start the engine until any spilled fuel has been cleaned up or has evaporated.
- 5. NEVER store the machine or fuel container where there is an open flame, spark or pilot light such as on a water heater or other appliances.
- 6. NEVER fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- 7. Remove the machine from the truck or trailer and fuel on level ground. If this is not possible, then refuel the machine with a portable container, rather than from a gasoline dispenser nozzle.
- 8. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
- 9. If fuel is spilled on clothing, change clothing immediately and wash affected skin.
- 10. NEVER over fill the fuel tank. Replace gas cap and tighten the fuel cap until it ratchets.

#### **B. REPLACING IN-LINE FUEL FILTER ELEMENTS**

The engine fuel filter should be replaced as recommended by the engine manufacturer. Refer to Engine Operator's Manual.

- 1. Close the shut-off valve. See Figure 7-4
- 2. Remove and replace the engine fuel filter. Open the fuel shut-off valve.

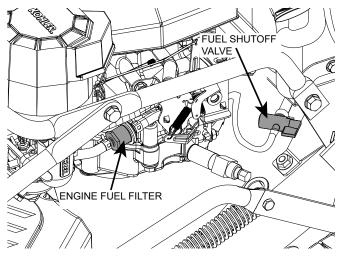


Figure 7-4. Fuel Filter

#### 7.6 ENGINE AIR CLEANER

#### CLEANING AND/OR REPLACING AIR CLEANER ELEMENT

For any air cleaner, the operating environment dictates the air cleaner service periods. Service and clean the air filter pre-cleaner after every 50 hours of operation. Replace the air cleaner element and pre-cleaner after every 300 hours or yearly, whichever comes first. Refer to Engine Operator's Manual.

#### - NOTE -

*In extremely dusty conditions it may be necessary to check the element once or twice daily to prevent engine damage.* 

- 1. Lift up on the latch securing the air cleaner cover to the air cleaner assembly. See Figure 7-5.
- 2. Remove and inspect the air filter. Replace as recommended by the engine manufacturer. Refer to Engine Operator's Manual.
- 3. Replace the air cleaner cover and secure.



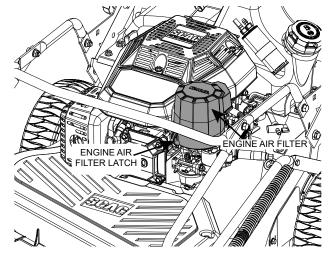


Figure 7-5. Engine Air Filter

#### 7.7 DRIVE BELTS

All drive belts are spring-loaded and self-tensioning, however after the first 2, 4, 8 and 10 hours of operation, the belts should be checked for proper alignment and wear. Thereafter, check the belts after every 40 hours of operation or weekly, whichever occurs first.

#### - NOTE -

If you experience frequent belt wear or breakage, see your authorized Scag service center for belt adjustment.

#### 7.8 CUTTER BLADES

#### A. BLADE INSPECTION

- 1. Remove the spark plug wire before servicing the blades.
- 2. Raise the mower deck to the highest position.

### A WARNING

Mower blades are sharp. Always wrap blades, wear proper hand and eye protection when working with cutter blades.

- 3. Check the cutter blades for straightness. If the cutter blades appear bent, they will need to be replaced.
- 4. Check the cutter blades for wear. If any part of the cutter blade is worn to 1/2 its original thickness, replace the cutter blade.

### A WARNING

Do not attempt to straighten a bent blade, and never weld a broken or cracked blade. Always replace it with a new blade to assure safety.

 If a blade cutting edge is dull or nicked, it should be sharpened. Remove the blades for sharpening. See "Blade Replacement."

#### - NOTE -

Keep the blades sharp. Cutting with dull blades not only yields a poor mowing job, but slows the cutting speed of the mower and causes extra wear on the engine and the blade drive by pulling hard.

#### **B. BLADE SHARPENING**

#### - NOTE -

If possible, use a file to sharpen the blade. Using a wheel grinder may burn the blade.

#### - NOTE -

DO NOT sharpen the blades beyond 1/3 of the width of the blade. See Figure 7-6.

1. Sharpen the cutting edge at the same bevel as the original. See Figure 7-6. Sharpen only the top of the cutting edge to maintain sharpness.

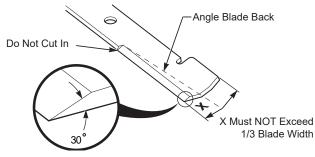


Figure 7-6. Blade Sharpening

 Check the balance of the blade. If the blades are out of balance, vibration and premature wear can occur. The cutter blades should be balanced to 1-1/2 oz-in. See your authorized Scag dealer for blade balancing or special tools, if you choose to balance your own blades.

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#### C. BLADE REPLACEMENT

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Mowers blades are sharp. Always wrap blades, wear proper hand and eye protection when working with cutter blades.

- 1. Shut the engine off and wait for all moving parts to stop.
- 2. Disconnect the spark plug wire from the spark plug.
- 3. Raise the mower deck to the highest position.
- 4. Secure the cutter blades to prevent them from rotating, remove the blade attaching bolt. Remove the cutter blade, bolt and flatwasher from the spindle shaft. See Figure 7-7.

### 

Inspect the cutter blade washer for wear and/or cupping. Replace the worn parts. Worn washer will not allow proper tightening of the cutter blade and can lead to cutter blade failure, personal injury or property damage.

5. To install the new cutter blade, put the flatwasher onto the blade bolt and install the bolt into the hole in the cutter blade.

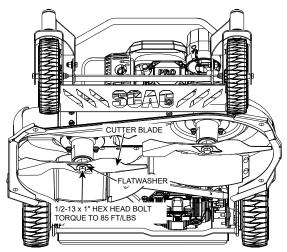


Figure 7-7. Blade Replacement

#### - NOTE -

Be sure that the blade is installed with the lift wing toward the top.

 Install the cutter blade onto the cutter spindle shaft. Secure the blades from rotating and torque to 85 ft/ lbs. See Figure 7-7.

#### 7.9 WHEELS

The rear drive wheels should be removed and any debris cleaned from the wheel gear area after every 40 hours of operation or weekly, whichever comes first.

#### - NOTE -

In extremely dusty conditions it may be necessary to clean the wheels more frequently than recommended to prevent wheel damage and increase gear life.

To prevent damage to the wheel bearings, do not use high-pressure water to clean the wheels.

- 1. Remove the rear wheels and clean any debris from the wheel area.
- 2. After cleaning the wheels, apply a small amount of anti-seize lubricant to the gears.

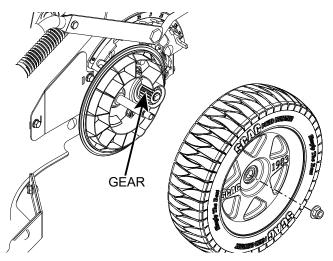


Figure 7-8. Rear Wheels



#### 7.10 BODY AND DECK

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Do not wash any portion of the equipment while it is hot. Do not wash the engine; use compressed air.

- 1. After each use, wash the mower and cutter deck. Use cold water and automotive cleaners. Do not use pressure cleaners.
- 2. Do not spray electrical components.
- 3. Repair damaged metal surfaces using Scag touchup paint available from your authorized Scag dealer. Wax the mower for maximum paint protection.





# **ILLUSTRATED PARTS LIST**

#### 8.1 SCAG APPROVED ATTACHMENTS AND ACCESSORIES

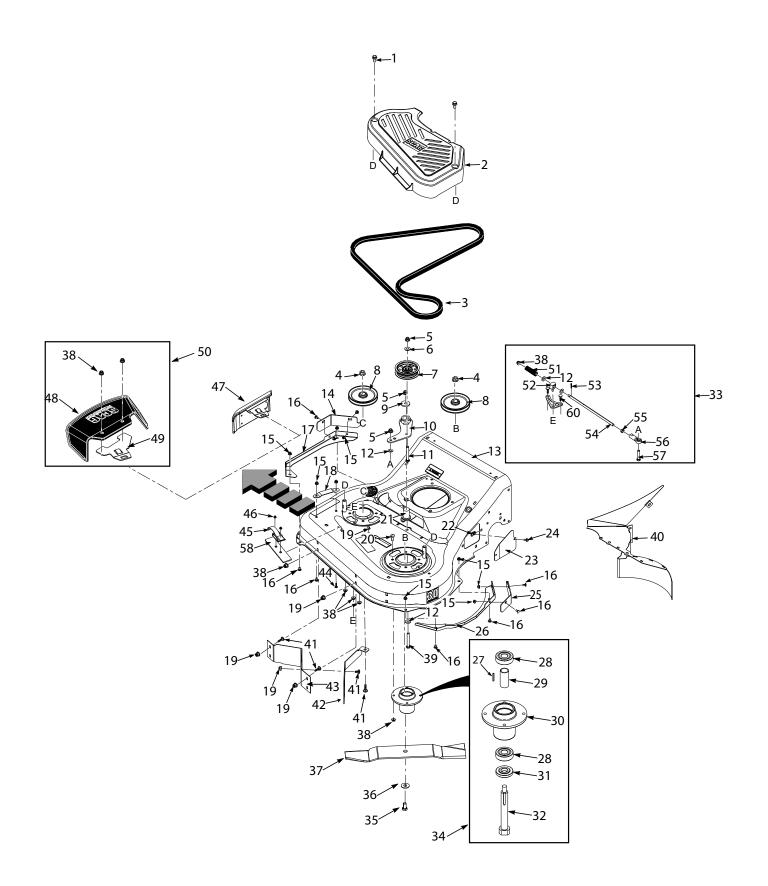
Attachments and accessories manufactured by companies other than Scag Power Equipment are not approved for use on this machine.

Scag approved attachments and accessories:

<u>Accessories</u>	<u>P/N</u>
Grass Catcher	Included
Mulching Baffle & Block-Off Plate	Included



# **CUTTER DECK**

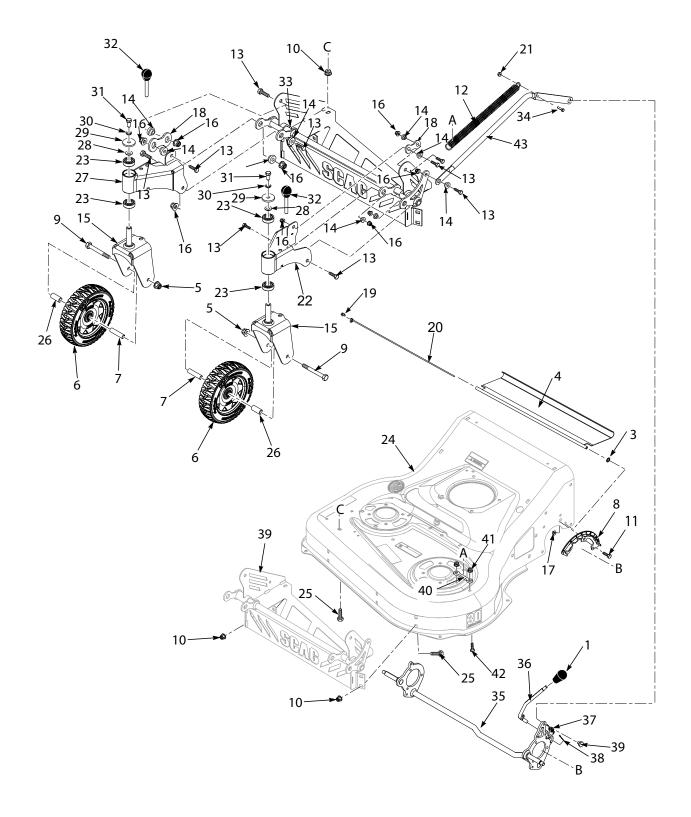




# CUTTER DECK

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	04013-05	Capscrew, Flange Hexhead 3/8-16 x .750 LG	50	463634	Discharge Chute Assembly
2	487693	Belt Cover	51	484535	Spring, Brake
3	487918	Belt, Cutter Deck SFC30	52	488216	Swivel, Brake
4	04112-05	Locknut, Spiralock 1/2 - 13	53	04061-02	Cotter Pin, 3/32 X .75
5	04117-02	Locknut w/Flange Elastic Stop 3/8-16	54	04004-64	Stud - Tabulated,
6	04043-04	Washer, Flat - Hardened	55	04020-25	Hex Nut, 3/8-24 LH
7	486869	Pulley, 3.5" Idler	56	482330	Rod End, 3/8-24 RH Female THD
8 9	487849 04041-11	Pulley, Deck Washer, Flat - 3/8	57 58	04001-32 4200807	Capscrew, Hexhead 3/8-16 UNC X 1.25 Plate, Latch Spacer
9 10	463612	Idler Arm Assembly	58 59	4200607	Idler Spring Rod MTG
10	04001-21	Capscrew, Hexhead 3/8-16 UNC X 1.75	60	04003-37	Carriage Bolt, 3/8-16 X 4.75 LG
12	04040-05	Washer, Ansi Plain Type A 3/8	00	04000-07	Carriage Doit, 3/0-10 X 4.73 EC
13	463623	Cutter Deck w/Decals			
14	429669	Guard, RH			
15	04117-03	Locknut w/Flange Elastic Stop 1/4 - 20			
16	04003-07	Carriage Bolts, 1/4-20 X .50 LG			
17	429519	Deck Guard, RH			
18	429845	Mounting Bracket, Side Discharge			
19	04019-03	Nut, Serrated Flange Hexhead, 5/16-18			
20	04003-04	Carriage Bolts, 5/16-18 X 1.00 LG			
21	431260	Pivot, Idler			
22	04110-01	U-Nut			
23	429731	Door, Side Access			
24	04017-04	Capscrew, Serrated Flange Hexhead 1/4-20 X.50 LG			
25	429668	Guard, LH			
26	429534	Guard, LH			
27	04063-05	Key, 3/16 X 3/16 X 1.50			
28 29	486710 431115	Bearing, Ball - 20MM Spacer, Bearing			
30	431112	Spindle Housing			
31	04001-136	Capscrew, Hexhead 3/8-16 UNC X 1.5			
32	431113	Shaft, Spindle			
33	488214	Linkage Assembly, Idler Spring			
34	463271	Spindle Assembly			
35	04001-57	Capscrew, Hexhead 1/2-13 UNC X 1.00			
36	04043-08	Washer, Flat - Hardened 1/2			
37	486882	Cutter Blade			
38	04117-01	Locknut w/Flange Elastic Stop 5/16-18			
39	04001-22	Capscrew, Hexhead 3/8-16 UNC X 2.75			
40	453466	Rear Baffle WImt			
41	04003-14	Carriage Bolts, 5/16-18 X .50 LG			
42	429573	Baffle, Rear Discharge			
43	429574	Baffle, Rear Discharge			
44 45	04003-43 481309	Carriage Bolts, #10-24 X .50 LG Latch Hood			
45 46	04021-26	Hex Lock Nut #10-24			
40	487886	Blockoff Plate, Side Discharge			
48	486888	Discharge Chute, 30			
49	453575	WLMT, Chute MTG			
		,			
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#### **CUTTER DECK LIFT SYSTEM - SWIVEL WHEEL**

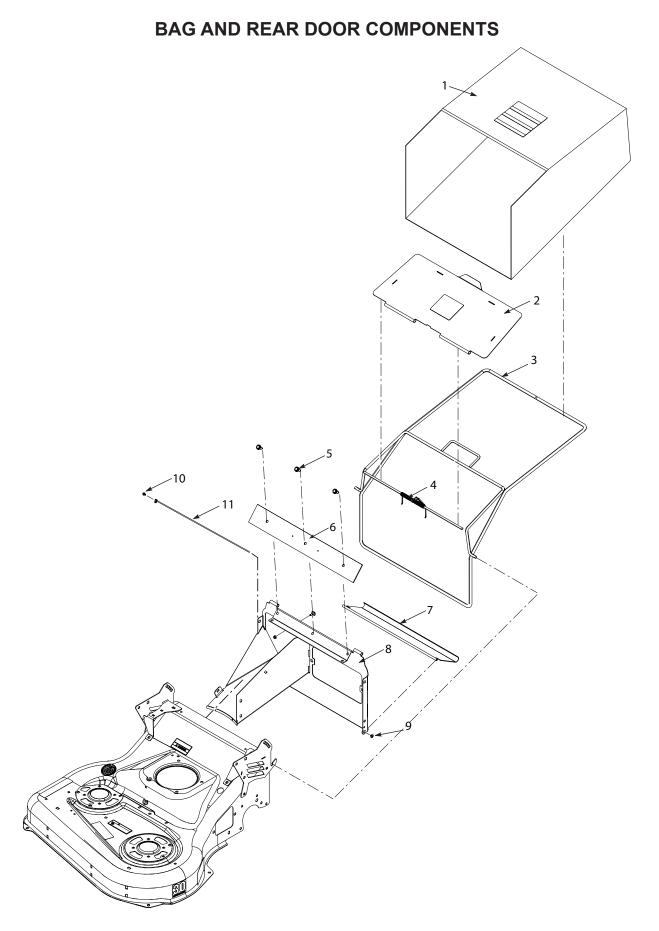




### **CUTTER DECK LIFT SYSTEM - SWIVEL WHEEL**

Ref. No.	Part No.	Description
1	484093	Knob, Soft Touch
2	04001-18	Bolt, Hex Head 3/8-16 x 3/4"
3	04024-03	Push Nut
4	463411	Trail Shield
5	04117-02	Nut, 3/8-16 Flange Elastic Stop
6	486702	Wheel Assembly, Front
	486765	Bearing (x2)
7	431123	Spacer, Front Wheel
8	04017-17	Bolt, Hex Head 5/16-18 x 1"
9	04001-30	Bolt, Hex Head 3/8-16 x 4"
10	04117-01	Nut, 5/16-18 Flange Elastic Stop
11	04003-04	Bolt, Carriage 5/16-18 X 1.00 LG
12	488139	Spring, Deck Lift Assist
13	04001-19	Capscrew, Hexhead, 3/8-16 UNC X 1.00
14	431272	Pivot, Deck Lift Link
15	453285	Yoke Weldment
16	04021-09	Hex Lock Nut, 3/8-16
17	04019-03	Nut, Serrated Flange Hexhead 5/16 - 18
18	429644	Bracket Link
19	04011-29	Screw, Self Tapping 1/4-20
20	44246	Rod
21	04021-08	Hex Lock Nut, 1/4 - 20
22	453286	Yoke Support Weldment, LH
23	463623	Cutter Deck W/Decals
24	48224	Bearing
25	04003-12	Carriage Bolt, 5/16-18 X .75 LG
26	431047	Spacer
27	453287	Yoke Support Weldment, RH
28	04040-05	Flatwasher, 3/8406 x .812 x .065
29	04041-11	Flatwasher, 3/8406 x 1.50 x 7 Ga.
30	04030-04	Lockwasher, 3/8"
31	04001-16	Capscrew, Hexhead 5/16-24 UNF X 1.25
32	487102	Pin Assembly, Swivel Lock
33	48114-04	Grease Fitting
34	04001-14	Capscrew, Hexhead 1/4 - 20 UNC X 1.25
35	453510	Lever WLMT, Deck Lift
36	487865	Sprin, Deck Lift Lever Return
37	04061-01	Cotter Pin 3/32 x 1.00
38	431262	MTG, Deck Lift Link
39	453452	Caster Lift Support WLMT
40	4200278	Anchor, Deck Lift Spring
41	04117-03	Locknut w/Flange Elastic Stop 1/4-20
42	04003-02	Carriage Bolt, 1/4-20 X .75 LG
43	429683	Link, Decklift



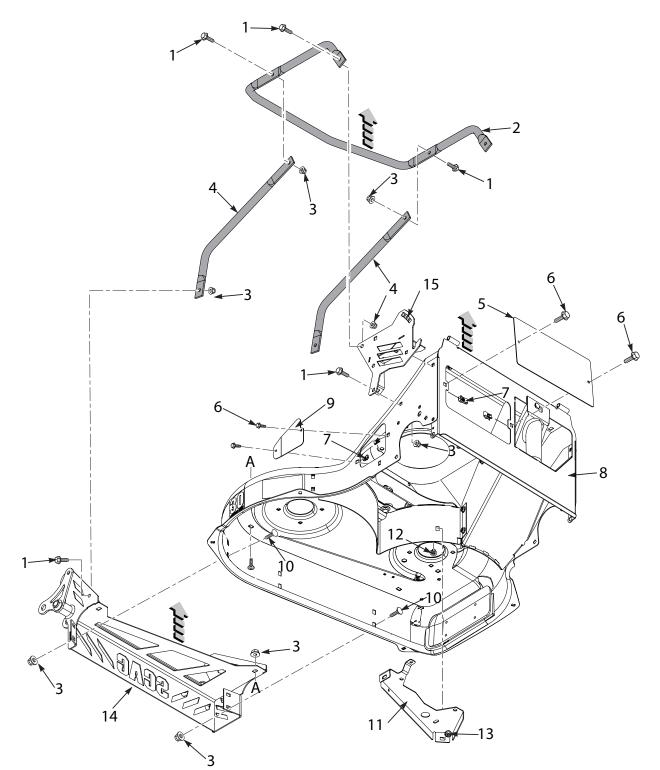




#### **BAG AND REAR DOOR COMPONENTS**

Ref. No.	Part No.	Description
1	463731	Assembly, GC Bag (incl. #3)
	488435	GC Bag Only
2	429469	Rear Cover Weldment
3	453245	Weldment, Bag Support
4	487414	Spring, Rear Cover
5	04136-02	Nut, 1/4-20 Flange Elastic Stop
6	488143	Sheild, Rubber
7	463411	Trail Shield Assembly (Includes 10, 11)
	487091	Trail Sheild
8	453464	Rear Cover Weldment
9	04024-03	Nut, Push-On 5/16
10	04011-29	Screw, Self Tapping
11	44246	Rod, Support - Spring

#### **CHASSIS COMPONENTS**



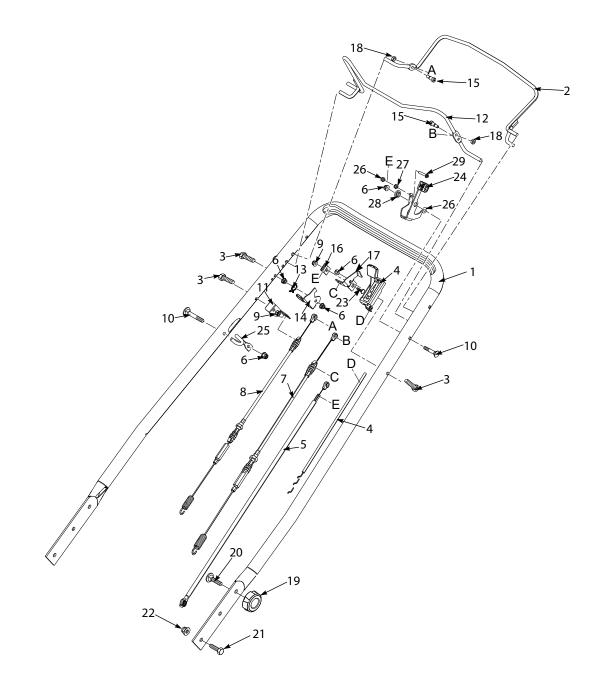


#### CHASSIS COMPONENTS

Ref. No.	Part No.	Description
Ref. No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Part No. 04017-16 428545 04117-01 428546 428514 04017-04 04110-01 463623 429731 04003-12 429531 04003-14 04019-03 453452 453484 453485	Description         Bolt, Hex Head Serrated Flange 5/16-18 x 3/4"         Guard, Engine         Nut, 5/16-18 Flange Elastic Stop         Guard Bracket, Side         Cover, Transmission Access         Bolt, Hex Head Serrated Flange 1/4-20 x 1/2"         U-Nut, 1/4-20         Frame Weldment w/Decals         Door, Side Access         Bolt, Carriage 5/16-18 x 3/4"         Mounting Bracket, Transmission         Bolt, Carriage 5/16-18 x 1.50 LG         Nut, Serrated Flange HH 5//16 - 18         Caster Lift Support WLMT         Handle Support WLMT, LH         Handle Support WLMT, RH
	453485	Handle Support WLMT, RH

#### HANDLE BAR COMPONENTS

**SCAG** 



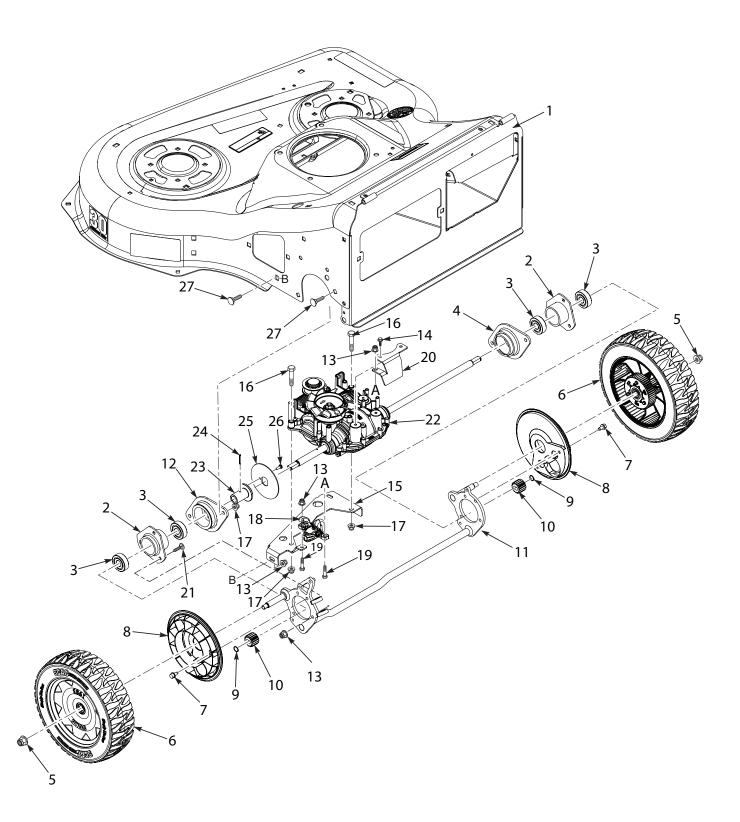


#### HANDLE BAR COMPONENTS

1       488179       Tube, Handle         2       488394       Bottom Bail, Dipped         3       04001-03       Capscrew Hexhead 1/4-20 UNC X 2"         4       463734       Throttle Cable w/Decal         5       488162       Cable, Brake         6       04117-03       Nut, 1/4-20 Flange Elastic Stop         7       488161       Cable, Clutch         8       488160       Cable, Drive         9       04021-08       Hex Lock Nut 1/4-20         10       04003-51       Carriage Bolt 1/4-20 x 2"         11       429657       Drive Cable Mount         12       453451       Top Bail WLMT         13       487486       Spring, PTO Latch         14       463733       PTO Latch w/Grip	
3         04001-03         Capscrew Hexhead 1/4-20 UNC X 2"           4         463734         Throttle Cable w/Decal           5         488162         Cable, Brake           6         04117-03         Nut, 1/4-20 Flange Elastic Stop           7         488161         Cable, Clutch           8         488160         Cable, Drive           9         04021-08         Hex Lock Nut 1/4-20           10         04003-51         Carriage Bolt 1/4-20 x 2"           11         429657         Drive Cable Mount           12         453451         Top Bail WLMT           13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
4       463734       Throttle Cable w/Decal         5       488162       Cable, Brake         6       04117-03       Nut, 1/4-20 Flange Elastic Stop         7       488161       Cable, Clutch         8       488160       Cable, Drive         9       04021-08       Hex Lock Nut 1/4-20         10       04003-51       Carriage Bolt 1/4-20 x 2"         11       429657       Drive Cable Mount         12       453451       Top Bail WLMT         13       487486       Spring, PTO Latch         14       463733       PTO Latch w/Grip	
5         488162         Cable, Brake           6         04117-03         Nut, 1/4-20 Flange Elastic Stop           7         488161         Cable, Clutch           8         488160         Cable, Drive           9         04021-08         Hex Lock Nut 1/4-20           10         04003-51         Carriage Bolt 1/4-20 x 2"           11         429657         Drive Cable Mount           12         453451         Top Bail WLMT           13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
6         04117-03         Nut, 1/4-20 Flange Elastic Stop           7         488161         Cable, Clutch           8         488160         Cable, Drive           9         04021-08         Hex Lock Nut 1/4-20           10         04003-51         Carriage Bolt 1/4-20 x 2"           11         429657         Drive Cable Mount           12         453451         Top Bail WLMT           13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
6         04117-03         Nut, 1/4-20 Flange Elastic Stop           7         488161         Cable, Clutch           8         488160         Cable, Drive           9         04021-08         Hex Lock Nut 1/4-20           10         04003-51         Carriage Bolt 1/4-20 x 2"           11         429657         Drive Cable Mount           12         453451         Top Bail WLMT           13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
8         488160         Cable, Drive           9         04021-08         Hex Lock Nut 1/4-20           10         04003-51         Carriage Bolt 1/4-20 x 2"           11         429657         Drive Cable Mount           12         453451         Top Bail WLMT           13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
9         04021-08         Hex Lock Nut 1/4-20           10         04003-51         Carriage Bolt 1/4-20 x 2"           11         429657         Drive Cable Mount           12         453451         Top Bail WLMT           13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
10         04003-51         Carriage Bolt 1/4-20 x 2"           11         429657         Drive Cable Mount           12         453451         Top Bail WLMT           13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
11         429657         Drive Cable Mount           12         453451         Top Bail WLMT           13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
12         453451         Top Bail WLMT           13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
13         487486         Spring, PTO Latch           14         463733         PTO Latch w/Grip	
14 463733 PTO Latch w/Grip	
487155 Grip	
15 04009-12 Bolt, Shoulder 5/16"	
16 429122 Clamp, Cable	
17 4200296 Bracket, Cable Mount	
18 04021-02 Hex Lock Nut 1/4-20	
19 481885-08 Knob, 3/8-16 x 2.48 OD (Use 04117-02 Nut for commercial or long te	erm use)
20 04003-31 Carriage Bolt 3/8-16 x 3/4"	
21 04013-05 Bolt, Flange 3/8-16 x 3/4"	
22 04117-02 Nut, 3/8-16 Flange Elastic Stop	
23 04003-02 Carriage Bolt 1/4-20 X 3/4"	
24 463632 Handle Assembly, Brake	
488165 Grip, Brake Lever	
25 44201 Guide, Pull Rope	
26 04021-14 Washer	
27 04021-26 Hex Lock Nut #10-24	
28 431293 Pivot, Brake Lever	
29 04010-47 Machine Screw 1/4-20 X 1 1/2"	



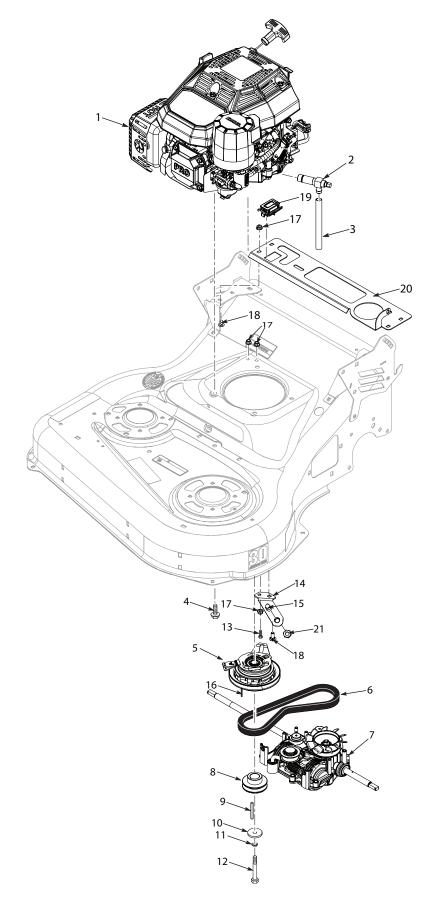
# **REAR DRIVE SYSTEM COMPONENTS**



#### **REAR DRIVE SYSTEM COMPONENTS**

Ref. No.	Part No.	Description
1	463488	Frame Weldment w/Decals
2	463320	Axle Bearing Assembly (incl. #3)
3	486709	Bearing
4	463439	Assembly, Axle Pivot - RH
	483453-30	Bearing
5	04117-02	Nut, 3/8-16 Flange Elastic Stop
6	486978	Wheel Assembly, Rear (incl. gear and bearings) 10-1/2" Dia.
	486765	Bearing (x2)
	486907	Gear
7	04011-29	Screw, 1/4-20 x 3/8"
8	486923	Cover, Rear Wheel
9	04050-20	Retaining Ring, 1/2" Ext. HD
10	486719	Gear, Pinion
11	453479	Weldment, Rear Axle
12	463438	Assembly, Axel Pivot - LH
	483453-30	Bearing
13	04117-03	Nut, 1/4-20 Flange Elastic Stop
14	04011-35	Screw, 1/4-20 x 3/4" Taptite
15	428398	Mounting Bracket, Transmission
16	04001-11	Bolt, Hex Head 5/16-18 x 1-1/2"
17	04117-01	Nut, 5/16-18 Flange Elastic Stop
18	486924	Caliper, Brake
19	04001-14	Bolt, Hex Head 1/4-20 x 1"
20	428829	Bracket, Brake Caliper
21	04003-02	Bolt, Carriage 1/4-20 x 3/4"
22	486697	Transmissiion MV702
23	463364	Rotor Assembly, Brake (incl.#25, #26)
24	04135-01	Pin, 3mm x 26mm Slotted
25	428643	Disk, Brake
26	04011-16	Screw, #10-32 x 1/2"
27	04003-12	Bolt, Carriage 5/16-18 x 3/4"

### **ENGINE AND ATTACHING PARTS**



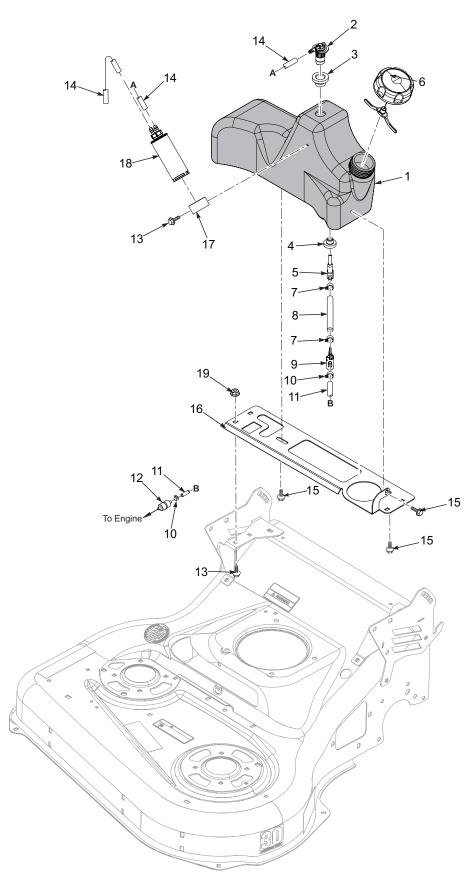


# **ENGINE AND ATTACHING PARTS**

Ref. No.	Part No.	Description
1	*	Engine, Kohler PH-CV224-3015
	*CA Only	Engine, Kohler PA-CV224-3025
2	482510	Oil Drain
3	483280	Tubing, Oll Drain (order by inch)
4	04011-07	Bolt, Hex Head 3/8-16 x 1-1/4" Self Tap
5	463679	Clutch
6	487917	Belt, Transmission
7	486697	Transmission, MV702
8	487848	Pulley, Transmission
9	04063-39	Key, WDRF # 505 FLAT BOTTOM
10	04041-11	Flatwasher, 3/8406 x 1.50 x 7 Ga.
11	04030-04	Lockwasher, 3/8" Spring
12	04102-15	Bolt, Hex Head 3/8-24 x 2" w/ Patch Lock
13	04001-04	Bolt, Carriage 5/16-18 x 3/4"
14	463616	Anti Rotation
15	431194	Pin, Anti Rotation
16	04063-17	Key, , 3/16 X 3/16 X 1"
17	04019-02	Nut, Serrated Flange Hexhead, 1/4 - 20
18	04003-07	Carriage Bolt, 1/4-20 X .50 LG
19	486912	Hour Meter
20	429584	Fuel Tank Bracket
	4200880*	*CA Models Only
21	04020-41	Hex Nut, 7/16 - 14

\* Available through individual engine manufacturer.

# FUEL SYSTEM (EXCLUDES CA MODELS)





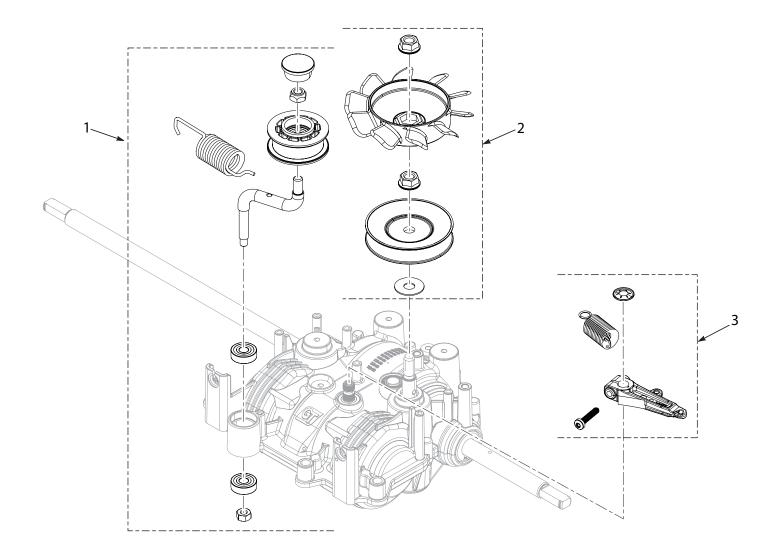
# FUEL SYSTEM (EXCLUDES CA MODELS)

Ref. No.	Part No.	Description
1	463366	Fuel Tank Assembly w/Decal (incl. #2, #3, #4, #5)
2	486939	Valve
3	486940	Grommet, Valve
4	482571	Bushing, .56 Viton
5	483748	Elbow w/Screen, 90 Degree
6	486967	Cap, Fuel Tank
7	48059-01	Clamp, Fuel Hose 1/4" ID
8	483617	Fuel Hose, Non-Perm 1/4" (order by inch)
9	486938	Valve, Fuel Shutoff
10	*	Clamp
11	*	Fuel Hose
12	*	Fuel Filter
13	04017-04	Cap Screw Serrated Flange HH, 1/4 - 20 X .50
14	484345	Hose, Vapor 3/16 (order by inch)
15	04017-04	Bolt, Hex Head 1/4-20 x 1/2"
16	429584	Bracket, Fuel Tank
	4200880	CA Models Only
17	48030-26	Clamp, 1-1/2" Cable
18	486925	Canister, Carbon 1.28 Gal.

\* Available through individual engine manufacturer.



# **MV702 TRANSMISSION**



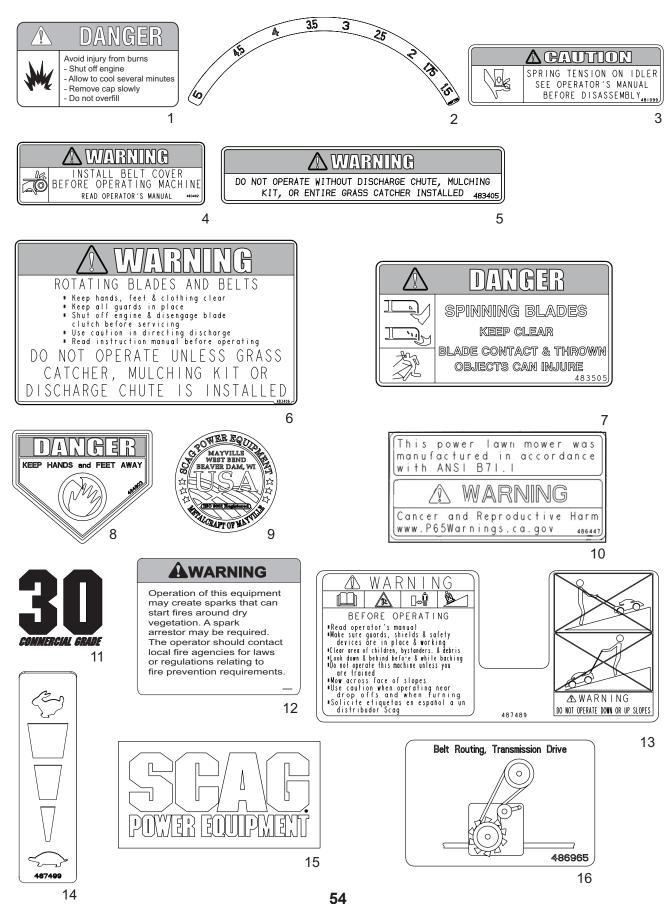


# **MV702 TRANSMISSION**

Ref. No.	Part No.	Description
1	463371	Transmission Service Kit, Idler Assembly
2	463370	Transmission Service Kit, Pulley & Fan Assembly
3	463372	Transmission Service Kit, Clutch Lever Assembly



#### **REPLACEMENT DECALS AND INFORMATION PLATES**



#### **REPLACEMENT DECALS AND INFORMATION PLATES**

Ref. No.	Part No.	Description
1	485667	Decal, Fuel Tank
2	487733	Decal, Deck Height
3	481099	Decal, Spring Loaded Idler
4	483402	Decal, Belt Cover
5	483405	Decal, Warning
6	483406	Decal, Knives
7	483505	Decal, Spinning Blades
8	484803	Decal, Danger Cut Finger
9	485403	Decal, USA
10	486447	Decal, ANSI Compliance
11	486945	Decal, 30 Commercial Grade
12	483900	Decal, Warning Spark Arrestor
13	487489	Decal, Warning SFC 21
14	487499	Decal, Speed Select
15	486968	Decal, Scag
16	486965	Decal, Belt Routing

# **LIMITED WARRANTY - SFCII Commercial 30**

Any part of the Scag commercial mower manufactured by Scag Power Equipment and found, in the reasonable judgment of Scag, to be defective in materials or workmanship, will be repaired or replaced by an Authorized Scag Service Dealer without charge for parts and labor during the periods specified below. This warranty is limited to the original purchaser provided the product was purchased from an Authorized Scag Power Equipment Dealer and is <u>not transferable</u>. Proof of purchase will be required by the dealer to substantiate any warranty claims. All warranty work must be performed by an Authorized Scag Service Dealer. The replacement of any part on this product by other than the manufacturer's authorized replacement part may adversely affect the performance, durability or safety of this product. Use of other than original Scag replacement parts will void the warranty.

This warranty is limited to the following specified periods from the date of the original retail purchase for defects in materials or workmanship:

• Wear items including drive belts, grass bag, blades, and wheels are warranted for ninety (90) days.

• Frame and structural components are warranted for one (1) year (parts and labor) for commercial use or three (3) years / 500 hours (whichever comes first) (parts and labor) for non-commercial use.

• Cutter deck is warranted for a period of one (1) years. (parts and labor) for commercial use or three (3) years / 500 hours (whichever comes first) (parts and labor) for non-commercial use The repair or replacement of the cutter deck will be at the option of Scag Power Equipment. We reserve the right to request components for evaluation. This warranty does not cover any mower that has been subject to misuse, neglect, negligence, modification or accident, or that has been operated in any way contrary to the operating instructions as specified in the Operator's Manual.

Engines are covered by the engine manufacturer's warranty period. Refer to the engine owner's manual supplied with this product.

• Major drive system components are warranted for one (1) year (parts and labor) for commercial use or three (3) year / 500 hour (whichever comes first) (parts and labor) for non-commercial use by Scag Power Equipment. (commercial and non-commercial warranty excludes fittings, hoses, drive belts). The repair or replacement of the transmission will be at the option of Scag Power Equipment. This warranty does not cover any mower that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Operator's Manual.

• Blade clutch has a Limited Warranty for one (1) year (parts and labor) for commercial use or three (3) year / 500 hours (whichever comes first) (parts and labor) for non-commercial use.

• Spindle assemblies have a Limited Warranty for one (1) year (parts and labor) for commercial use or three (3) year / 500 hours (whichever comes first) (parts and labor) for non-commercial use..

Any Scag product used for rental purposes is covered by a 90 day warranty.

The Scag mower, including any defective part must be returned to an Authorized Scag Service Dealer within the warranty period. The expense of delivering the mower to the dealer for warranty work and the expense of returning it to the owner after repair will be paid for by the owner. Scag's responsibility is limited to making the required repairs and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Scag mower. "Non-Commercial" use is defined as a single property owner, where the single property is the residence of the owner of the mower. If the mower is cutting more than the owner's single property, it is deemed commercial use and the "non-commercial" warranty does not apply. Scag Power Equipment reserves the right to deny and / or void the non-commercial warranty if it believes it to be in commercial use.

This warranty does not cover any mower that has been subject to misuse, neglect, modification, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Operator's Manual. The warranty does not apply to any damage to the mower that is the result of improper maintenance, or to any mower or parts that have not been assembled or installed as specified in the Operator's Manual and Assembly Manual. The warranty does not cover any mower that has been altered or modified, changing performance or durability. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories which, in the reasonable judgment of Scag, are either incompatible with the Scag mower or adversely affect its operation, performance or durability.

# Scag Power Equipment reserves the right to change or improve the design of any mower without assuming any obligation to modify any mower previously manufactured. All other implied warranties are limited in duration to the one (1) year for commercial use, three (3) years / 500 hour for non-commercial use or ninety (90) days for mowers used for rental purpose. Accordingly, any such implied warranties including merchantability, fitness for a particular purpose, or otherwise, are disclaimed in their entirety after the expiration of the appropriate one year, three year / 500 hour or ninety day warranty period. Scag's obligation under this warranty is strictly and exclusively limited to the repair or replacement of defective parts and Scag does not assume or authorize anyone to assume for them any other obligation. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Scag assumes no responsibility for incidental, consequential or other damages including, but not limited to, expense for gasoline, expense of delivering the mower to an Authorized Scag Service Dealer and expense of returning it to the owner, mechanic's travel time, telephone or telegram charges, rental of a like product during the time warranty repairs are being performed, travel, loss or damage to personal property, loss of revenue, loss of use of the mower, loss of time or inconvenience. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For additional questions regarding the warranty terms and conditions contact Scag Power Equipment online at:

https://www.scag.com/company/contact-us/

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