

SCAG[®]

POWER EQUIPMENT

OPERATOR'S MANUAL



SFW Walk-Behind

Model: SFW36-16BV
SFW48-16BV

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.



WARNING

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 OSHA APPROVED OPERATION.
- 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 and ignition key.
- If a mechanism becomes clogged, stop the engine before cleaning.
- Keep hands, feet and clothing away from power-driven parts.
- Keep others off the mower (only one person at a time)

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:

SFW36-16BV	with a serial number of	E5600001 to E5699999
SFW48-16BV	with a serial number of	E5700001 to E5799999

Always use the entire serial number listed on the serial number tag when referring to this product.

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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.

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.

- IMPORTANT -

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.

When ordering parts, always give the model and serial number of your mower. The serial number plate is located on the frame of the machine between the engine and transmission were shown in Figure 1-1.

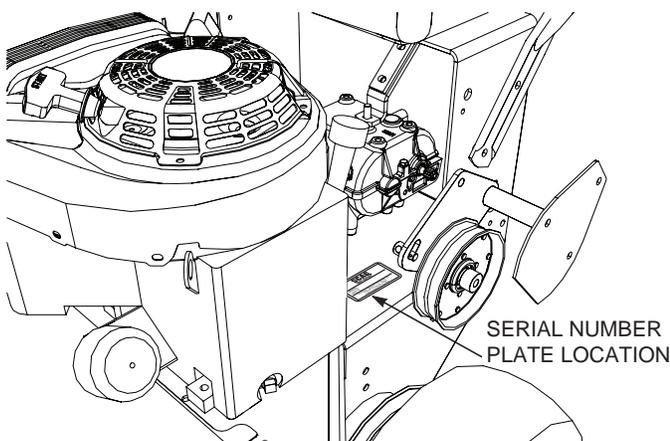


Figure 1-1. Mower Serial Number Plate Location

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.

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.

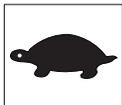
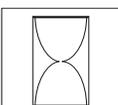
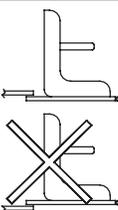
1.2 DIRECTION REFERENCE

The "Right" and "Left", "Front" and "Rear" of the machine are referenced from the operator's right and left when seated 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 and transmission 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. Any unauthorized work done on these components during the warranty period may void your warranty.

1.4 SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	Choke		Transmission
	Parking Brake		Spinning Blade
	On/Start		Spring Tension on Idler
	Off/Stop		Oil
	Falling Hazard		Thrown Object Hazard
	Fast		Slow
	Continuously Variable - Linear		Cutting Element - Basic Symbol
	Pinch Point		Cutting Element - Engage
	Hour meter/Elapsed Operating Hours		Cutting Element - Disengage
	STT MODELS Seat must be installed under the seat hold down bracket during installation. Failure to secure the seat under the hold down bracket could result in serious injury or death in a roll over.		CE Mark
	Thrown Object Hazard Keep Bystanders Away		Read Operator's Manual

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. Make sure 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.

READ THIS OPERATOR'S MANUAL BEFORE ATTEMPTING TO START YOUR MOWER.

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.

DANGER

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.

WARNING

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.

CAUTION

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.
2. 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 or Spanish, it is the owner's responsibility to explain this material to them. Contact your local Authorized Scag Dealer for a Spanish Decal Kit.
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. Wearing safety glasses, safety shoes and a helmet is advisable and is required by some local ordinances and insurance regulations.

WARNING

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

9. 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.

WARNING

This machine is equipped with an interlock system intended to protect the operator and others from injury. This is accomplished by preventing the engine from starting unless the deck drive is disengaged and the transmission is in neutral. The system shuts off the engine if the operator releases the operator presence levers with the deck drive engaged and/or the transmission is not in neutral. Never operate equipment with the interlock system disconnected or malfunctioning.

10. Be sure the interlock switches are functioning correctly.
11. 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.
12. 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.

13. Keep flammable objects (cigarettes, matches, etc.), open flames and sparks away from the fuel tank and fuel container. Use only approved containers.
14. Equipment must comply with the latest requirements per SAE J137 and/or ANSI/SAE S279 when driven on public roads.
15. Do not operate without the side discharge chute installed and in the down position or with an optional grass catcher or mulch plate completely installed.
16. Check the blade mounting bolts at frequent intervals for proper tightness.

2.4 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.

2. 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. To prevent tipping or loss of control, start and stop smoothly, avoid unnecessary turns and travel at reduced speed.
4. When using any attachment, never direct the discharge of material toward bystanders or allow anyone near the machine while in operation.
5. Start the engine when the neutral latches are in the neutral lock position, the cutter blades are disengaged, and the transmission is in neutral.
6. If the mower discharge ever plugs, shut off the engine, remove the ignition key, and wait for all movement to stop before removing the obstruction.

Section 2** 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.

7. Be alert for holes, rocks, roots and other hidden hazards in the terrain. Keep away from any 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.
8. 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.
9. DO NOT turn sharply. Use care when backing up.
10. Disengage power to cutter deck before crossing roads, walks or gravel drives.
11. Mow only in daylight or good artificial light.
12. NEVER raise the deck with the blades engaged.
13. Take all possible precautions when leaving the machine unattended, such as disengaging the mower, stopping the engine, and removing the key.
14. Disengage power to the attachments when transporting or when not in use.
15. 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.

 CAUTION

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.

 DANGER

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.

16. Keep hands and feet away from cutter blades and moving parts. Contact can injure.
17. 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.
18. Be cautious when loading and unloading onto trailers or trucks. Use only a full width ramp.
19. When transporting the mower, make sure the transmission is in neutral, the neutral latches are in the neutral lock position, the engine is off with the key removed, and the wheels have been blocked.
20. Tie the mower down securely using straps, chains, cable, or ropes. Both front and rear straps must be directed down and outward from machine.
21. Use care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
22. NEVER leave the machine running unattended.

2.5 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 transmission in neutral, neutral latches are in the neutral lock position, stop engine and remove key or 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.
5. Do not change the engine governor settings or overspeed the engine. See the engine operator's manual for information on engine settings.
6. To reduce fire hazard, keep the cutting units, drives, muffler and engine free of grass, leaves, excessive grease, oil and dirt.
7. Park the machine on level ground.
8. NEVER allow untrained personnel to service the machine.
9. 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.
10. Keep all parts in good working condition. Replace all worn or damaged decals.
11. Use jack stands to support components when required.
12. Carefully release pressure from components with stored energy.
13. Let the engine cool before storing.
14. DO NOT store the machine near an open flame.
15. Shut off fuel while storing or transporting.
16. DO NOT store fuel near flames or drain indoors.

2.6 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.

Section 2

2.7 SAFETY AND INSTRUCTIONAL DECALS



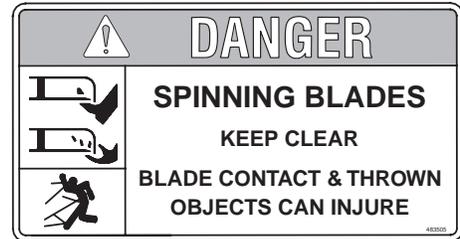
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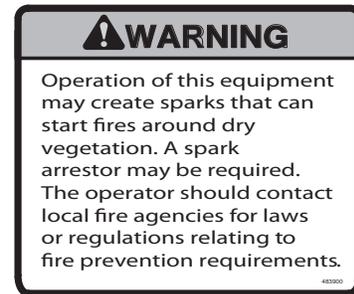
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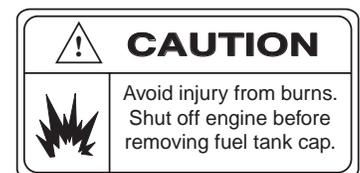


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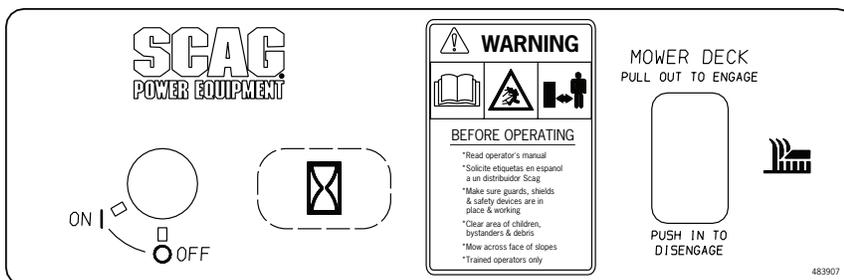
(supplied with California models only)



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Molded in Fuel Tank



483907

2009 SFW Safety Decals

Section 3

Spindle Pulleys	Split Steel
Cutter Deck Belts.....	B-section with Kevlar Cord. Self-Adjusting, Self-Tightening
Electric Clutch Type	Ogura Heavy Duty PTO Clutch Brake

3.5 WEIGHTS AND DIMENSIONS

36

48

Length.....	74"	74"
Tracking Width	35"	35"
Overall Width w/chute down	48"	60.5"
Overall Width w/chute up.....	36.5"	49"
Overall Height.....	43"	43"
Operating Weight.....	440#	485#

3.6 PRODUCTIVITY

36

48

Cutting Width	36"	48"
Acres Per Day.....	9.3	12.4

The preceding data will aid you in determining how many acres your Scag mower will cut per day. This is an estimate based on 8 hours per day cutting time at 4 MPH with a 20% allowance for overlap and turns.

OPERATING INSTRUCTIONS

CAUTION

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.

2. **Mower Deck Switch (Figure 4-1).** Used to engage and disengage the mower drive system. Pulling up on the switch will engage the deck drive. Pushing down on the switch will disengage the deck drive.
3. **Engine Choke Control (Figure 4-1).** Used to start a cold engine.
4. **Engine Throttle Control (Figure 4-1).** Used to control the engine speed. Pushing the lever forward increases engine speed. Pulling the lever back decreases engine speed. Full back position is the IDLE position. Full forward is the cutting position.

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. **Ignition Switch (Figure 4-1).** The ignition switch is used to start the engine. Turn the key to the on position before pulling the recoil starter.

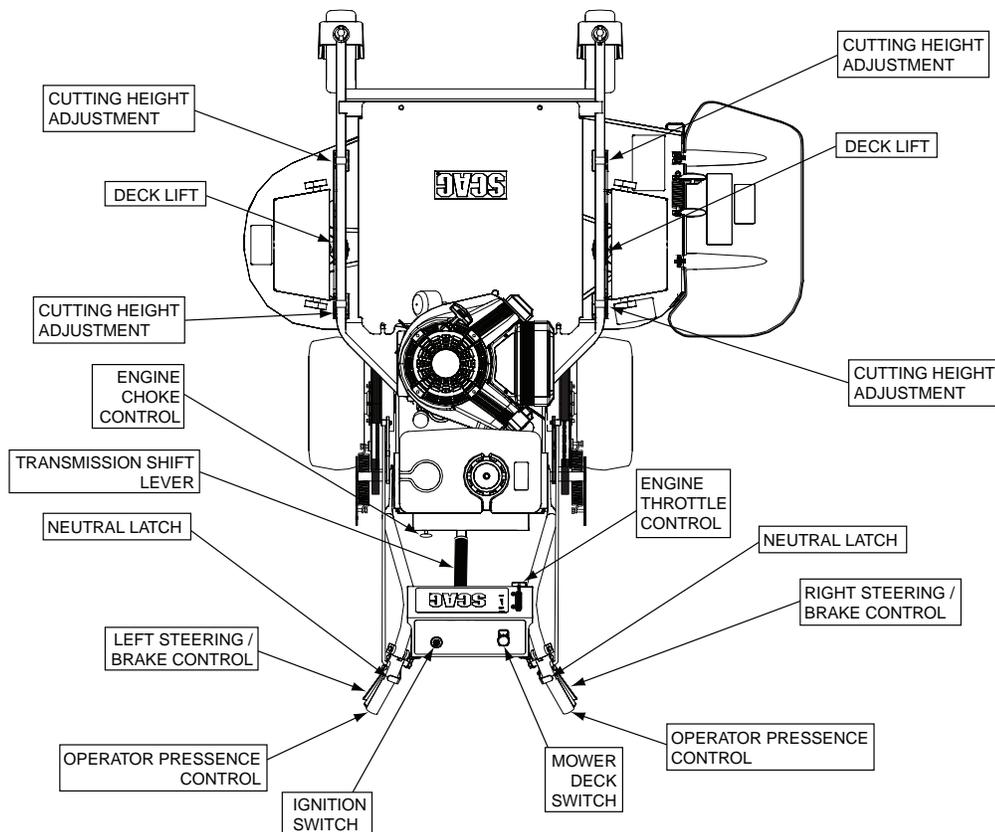


Figure 4-1. Controls and Instruments

Section 4

5. **Left Steering / Brake Control (Figure 4-1).** Used to control the mower's left wheel when traveling forward or reverse. Pull upward to apply brake.
6. **Right Steering / Brake Control (Figure 4-1).** Used to control the mower's right wheel when traveling forward or reverse. Pull upward to apply brake.
7. **Deck Lift (Figure 4-1).** Used to raise and lower the cutter deck.
8. **Cutting Height Adjustment (Figure 4-1).** Used to set the cutter deck at the desired cutting height.
9. **Transmission Shift Lever (Figure 4-1).** Used to select the forward speed or selecting reverse. The machine must be at a complete stop before shifting between gears or shifting between forward and reverse.
10. **Neutral Latch (Figure 4-1).** Used to secure the belt drive system in neutral. Apply neutral latches when parking the machine.
11. **Operator Presence Control (Figure 4-1)**
The operator presence control levers must be depressed before the transmission is shifted out of neutral or engaging the mower deck.

4.2 SAFETY INTERLOCK SYSTEM

The mower is equipped with a safety interlock system that shuts off the engine if the operator releases the operator presence levers with the deck drive engaged and/or the transmission is not in neutral. Never operate equipment with the interlock system disconnected or malfunctioning..

WARNING

Never operate the mower with the interlock system disconnected or malfunctioning. Do not disengage or bypass any switch; injury to yourself and others or property damage could result.

4.3 INITIAL RUN-IN PROCEDURES

FIRST DAY OF USE OR APPROXIMATELY 20 HOURS

1. Check all belts for proper alignment and wear at 2, 4 and 8 hours.
2. Change the engine oil and oil filter after the first 20 hours of operation. (See Section 7.4.)
3. Check for loose hardware. Tighten as needed.
4. Check interlock system for proper operation. (See Section 4.2.)
5. Check tire pressure. Adjust pressure if necessary. (See Section 7.10.)

4.4 STARTING THE ENGINE

CAUTION

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 7.5.)
2. Apply the neutral latch levers
3. Shift the transmission into neutral.
4. Place the PTO switch in the disengaged position.
5. If the engine is cold, choke the engine as needed.
6. Move the engine throttle control to about half engine speed.
7. Turn the ignition key to the ON position.
8. Pull the recoil starter on the engine.
9. Allow engine to warm before operating the mower.

4.5 GROUND TRAVEL AND STEERING

- IMPORTANT -

If you are not familiar with the operation of a walk behind mower with a transmission, the steering and ground speed operations 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 steering controls to obtain a smooth operating action.

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

FORWARD TRAVEL

To travel forward with the mower, select the desired speed using the transmission shift lever, pull steering / brake control levers upward, release the neutral latch for both sides and slowly release both the left and right steering / brake control levers. The higher the gear selected using the transmission shift lever, the faster the machine will travel.

To stop the forward travel, pull upward on the steering / brake control levers, lock the neutral latches and shift the transmission into neutral.

To steer the mower left while traveling forward, pull upward on the left steering / brake control lever. The further the lever is pulled upward, the quicker the mower will turn left.

To steer the mower right while traveling forward, pull upward on the right steering / brake control lever. The further the lever is pulled upward, the quicker the mower will turn right.

- NOTE -

Smooth operation of the steering / brake control levers will produce smooth mower operation. While learning the operation of the steering controls, keep the travel speed low.

REVERSE TRAVEL

CAUTION

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

CAUTION

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

To travel in reverse, select the reverse gear using the transmission shift lever, pull steering / brake control levers upward, release the neutral latch for both sides and slowly release both the left and right steering / brake control levers. Keep the travel speed low while traveling in reverse.

- NOTE -

The mower may not travel straight in reverse.

To steer left while traveling in reverse, pull upward on the left steering / brake control lever. The further the lever is pulled upward, the quicker the mower will turn left.

To steer right while traveling in reverse, pull upward on the right steering / brake control lever. The further the lever is pulled upward, the quicker the mower will turn right.

To stop the reverse travel, pull upward on the steering / brake control levers, lock the neutral latches and shift the transmission into neutral.

Section 4

4.6 ENGAGING THE DECK DRIVE (CUTTER BLADES)

1. Set the throttle at about 3/4 speed. Do not attempt to engage the deck drive at high speed as this shortens the electric clutch life — use only moderate engine speed when engaging the deck drive.
2. Engage the deck drive by pulling out on the yellow switch, located on the instrument panel, to the engage position. See Figure 4-2.

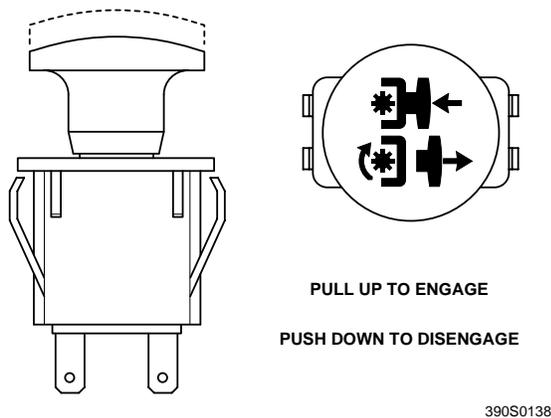


Figure 4-2. Cutter Engage Switch

- NOTE -

A squealing noise may be heard when engaging or disengaging the deck drive. It is caused by the electric clutch plates meshing as the mower comes up to speed. This is normal.

3. To disengage the deck drive, push the switch in to the disengage position.
4. 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 HILLSIDE OPERATION

WARNING

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

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. Wet grass reduces traction and steering control.
2. 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.
5. Keep tires properly inflated.

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. Lock the neutral latches and shift the transmission into the neutral position.
4. Slow the engine to idle speed.
5. Turn the ignition key to the OFF position and remove the key.

4.9 AFTER OPERATION

1. Wash the entire mower after each use. Do not use high pressure spray or direct the spray onto electrical 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.

2. Keep the entire mower clean to inhibit serious heat damage to the engine or hydraulic oil circuit.
3. 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.

4. After the mower has cooled down, fill the fuel tank with fresh, clean fuel at the end of every day of operation. See Engine Owner's Manual for proper octane requirements.
5. Check the tire pressure. Adjust pressure if necessary.

4.10 REMOVING CLOGGED MATERIAL

DANGER

ROTATING BLADES

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

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

1. If the discharge chute becomes clogged, shut off the engine and remove the ignition key. 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, engage the neutral latches, shift the transmission to neutral and move the mower by hand.

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.

WARNING

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

2. The discharge chute must not be removed and must be kept in the lowest position 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. 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.
4. Keep mower and discharge chute clean.
5. 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.
6. Use a slow travel speed for trimming purposes.
7. 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.
8. 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.

Section 4

4.13 ADJUSTING CUTTING HEIGHT

The mower deck can be adjusted from a height of 1-1/2 inches to 4-1/2 inches at 1/4-inch intervals. To adjust the cutting height:

⚠ WARNING

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. Pull upward on the steering / brake control levers, lock the neutral latches and shift the transmission into neutral and wait for all moving parts to come to a complete stop.
3. Lift upward on the deck lift handle and remove the lanyard pins. See Figure 4-3.

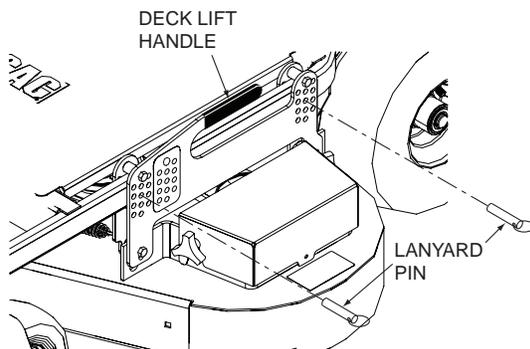


Figure 4-3. Adjusting Cutting Height

4. Insert the lanyard pins into the cutting height index at the desired cutting height and lower the cutter deck. See Figure 4-3. Deck height decals are located on the cutting height indexes as an aid in adjusting the deck to the desired height. See Figure 4-4.

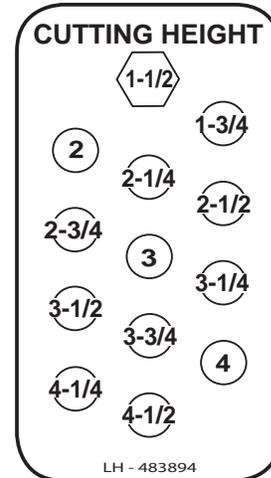
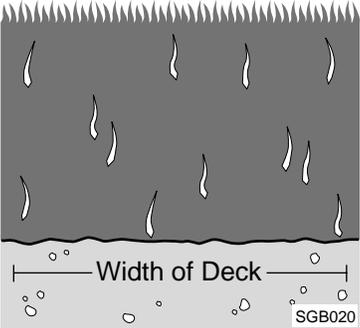
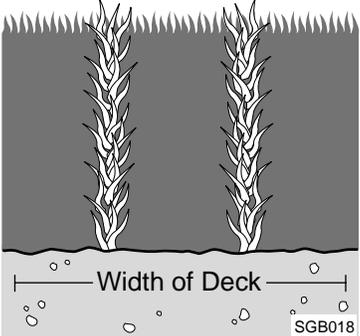
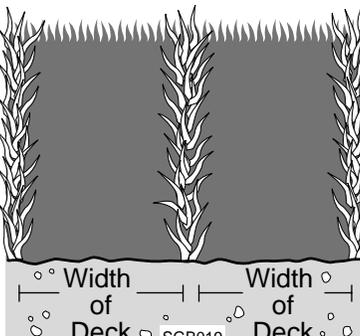
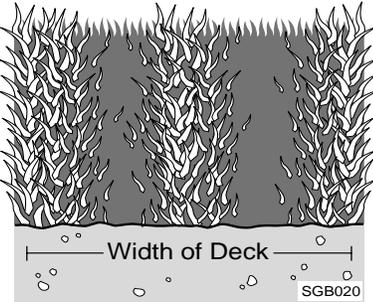
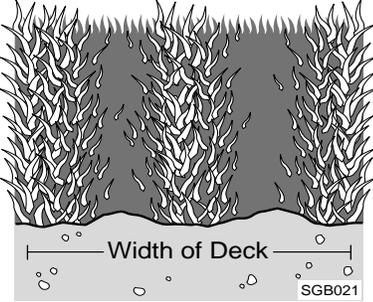
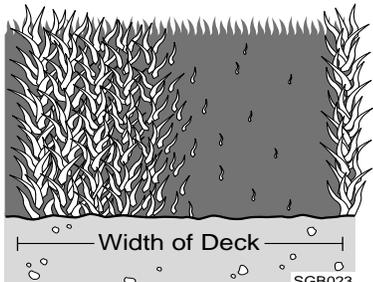


Figure 4-4. Cutting Height Decal

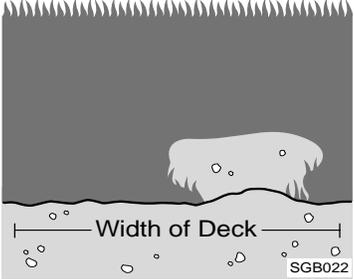
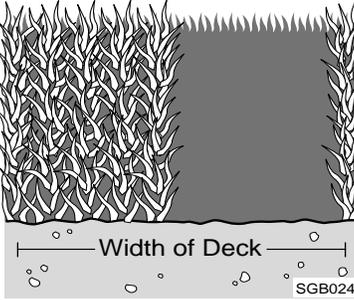
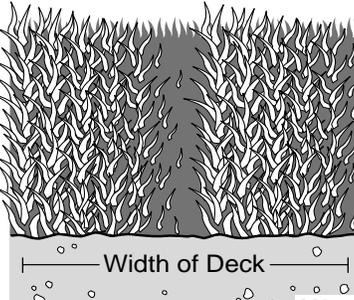
TROUBLESHOOTING CUTTING CONDITIONS

CONDITION	CAUSE	CURE
<p>STRINGERS - OCCASIONAL BLADES OF UNCUT GRASS</p>  <p>Width of Deck</p> <p>SGB020</p>	Low engine RPM	Run engine at full RPM
	Ground speed too fast	Slow speed to adjust for conditions
	Wet grass	Cut grass after it has dried out
	Dull blades, incorrect sharpening	Sharpen blades
	Deck plugged, grass accumulation	Clean underside of deck
	Belts slipping	Adjust belt tension
<p>STREAKING - STRIPS OF UNCUT GRASS IN CUTTING PATH</p>  <p>Width of Deck</p> <p>SGB018</p>	Dull, worn blades	Sharpen blades
	Incorrect blade sharpening	Sharpen blades
	Low engine RPM	Run engine at full RPM
	Belt slipping	Adjust belt tension
	Deck plugged, grass accumulation	Clean underside of deck
	Ground speed too fast	Slow speed to adjust for conditions
	Wet grass	Cut grass after it has dried out
	Bent blades	Replace blades
<p>STREAKING - STRIPS OF UNCUT GRASS BETWEEN CUTTING PATHS</p>  <p>Width of Deck</p> <p>Width of Deck</p> <p>SGB019</p>	Not enough overlapping between rows	Increase the overlap of each pass

TROUBLESHOOTING CUTTING CONDITIONS (CONT'D)

CONDITION	CAUSE	CURE
<p>UNEVEN CUT ON FLAT GROUND - WAVY HIGH-LOW APPEARANCE, SCALLOPED CUT, OR ROUGH CONTOUR</p>  <p style="text-align: right; font-size: small;">SGB020</p>	Lift worn from blade	Replace blade
	Blade upside down	Mount with cutting edge toward ground
	Deck plugged, grass accumulation	Clean underside of deck
	Too much blade angle (deck pitch)	Adjust pitch and level
	Deck mounted improperly	See your authorized SCAG dealer
	Bent spindle area	See your authorized SCAG dealer
	Dull blade	Sharpen blade
<p>UNEVEN CUT ON UNEVEN GROUND-WAVY APPEARANCE, HIGH-LOW SCALLOPED CUT, OR ROUGH CONTOUR</p>  <p style="text-align: right; font-size: small;">SGB021</p>	Uneven ground	May need to reduce ground speed, raise cutting height, and/or change direction of cut
<p>SLOPING RIDGE ACROSS WIDTH OF CUTTING PATH</p>  <p style="text-align: right; font-size: small;">SGB023</p>	Tire pressures not equal	Check and adjust tire pressure
	Wheels uneven	Check and adjust tire pressure
	Deck mounted incorrectly	See your authorized SCAG dealer
	Deck not level side-to-side	Check for level and correct

TROUBLESHOOTING CUTTING CONDITIONS (CONT'D)

CONDITION	CAUSE	CURE
<p>SCALPING - BLADES HITTING DIRT OR CUTTING VERY CLOSE TO THE GROUND</p>  <p>Width of Deck SGB022</p>	Low tire pressures	Check and adjust pressures
	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
	Ground speed too fast	Slow speed to adjust for conditions
	Wet grass	Cut grass after it has dried out
<p>STEP CUT - RIDGE IN CENTER OF CUTTING PATH</p>  <p>Width of Deck SGB024</p>	Blades not mounted evenly	Adjust pitch and level
	Bent blade	Replace blade
	Internal spindle failure	See your authorized SCAG dealer
	Mounting of spindle incorrect	See your authorized SCAG dealer
<p>SLOPE CUT - SLOPING RIDGES ACROSS WIDTH OF CUTTING PATH</p>  <p>Width of Deck SGB025</p>	Bent spindle mounting area	See your authorized SCAG dealer
	Internal spindle failure	See your authorized SCAG dealer
	Bent deck housing	See your authorized SCAG dealer

ADJUSTMENTS

6.1 DRIVE CONTROL ADJUSTMENTS

1. Adjust the steering control rods so that there is approximately 3/4" clearance from the bottom of the rod to the bottom of the neutral latch slot when in the drive position. See Figure 6-1.
2. Adjust the steering brake rods so that the brakes do not apply until the steering levers are pulled tight to the handles. When the steering levers are locked in the neutral position the machine should move freely.

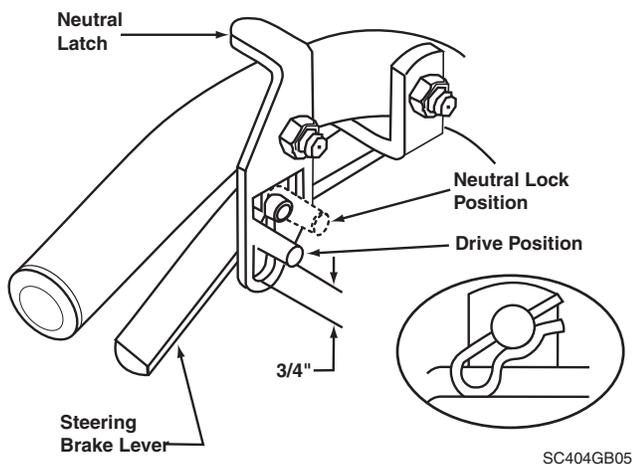


Figure 6-1. Steering Control Rod Adjustment

- NOTE -

Operator presence lever removed for clarity. Never operate equipment with the interlock system disconnected.

6.2 THROTTLE CONTROL AND CHOKE ADJUSTMENTS

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

6.3 BELT ADJUSTMENT

WARNING

Before removing any guards, shut the engine off and remove the ignition key.

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.

6.4 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.

6.5 CUTTER DECK ADJUSTMENTS

Cutter deck level, pitch and height are set at the factory. However, if these adjustments should ever need to be made, the following procedures will aid in obtaining the proper cutter deck adjustment.

- NOTE -

Before proceeding with the cutter deck adjustments, be sure that all tires are properly inflated.

CUTTER DECK LEVEL

The cutter deck should be level from side-to-side for proper cutting performance. To check for level, be sure that the mower is on a flat, level surface, the tires are properly inflated and the cutter deck is set at the most common cutting height that you will use. On the RH side of the machine, check the distance from the top of the cutter deck to the floor. Next check the distance from the top of the cutter deck to the floor on the LH side of the machine. Both measurements should be the same. If the two measurements are different, the cutter deck level must be adjusted as follows:

1. On the front of the cutter deck locate the cutter deck adjustment slots. See Figure 6-2.

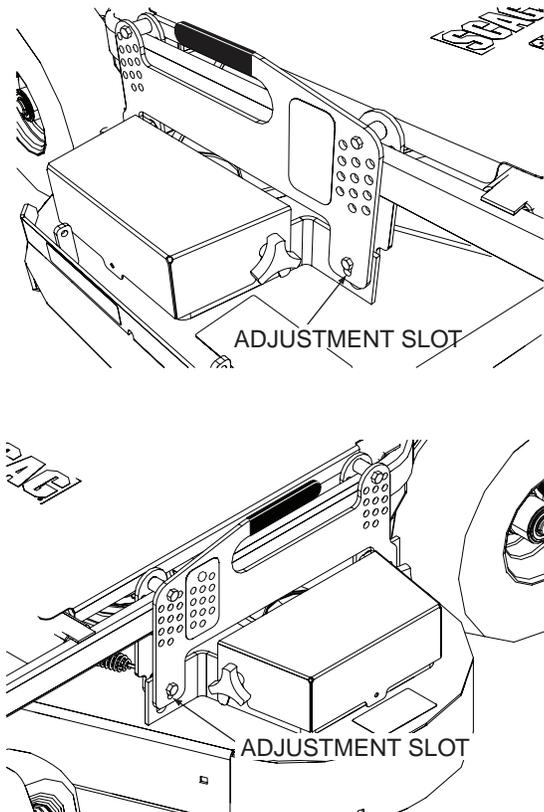


Figure 6-2. Cutter Deck Adjustment Slots

2. Loosen the two (2) elastic stop nuts. Adjust the cutter deck up or down in the adjustment slot to adjust until the distance from the top of the cutter deck to the floor is the same as the measurement on both sides of the machine.
3. Tighten the two (2) elastic stop nuts to secure the cutter deck in the proper position.

CUTTER DECK PITCH

The pitch of the cutter deck should be equal between the front and rear of the cutter deck for proper cutting performance. To check for proper deck pitch, be sure that the mower is on a flat, level surface and the tires are properly inflated.

Check the distance from the top of the cutter deck to the floor at the rear RH side of the cutter deck directly behind the cutter deck height adjustment bracket. Next check the distance from the top of the cutter deck to the floor at the front RH side of the cutter deck directly in front of the cutter deck height adjustment bracket. The measurement at the front of the cutter deck should be the same as the rear of the deck. Make these measurements at the LH side of the cutter deck also. If the measurement at the front of the deck is not the same, the cutter deck pitch must be adjusted as follows:

1. Loosen the two (2) elastic stop nuts. Adjust the cutter deck up or down in the adjustment slot to adjust until the distance from the top of the cutter deck to the floor is the same as the measurement on both sides of the machine.
2. Tighten the two (2) elastic stop nuts to secure the cutter deck in the proper position.

6.6 ELECTRIC CLUTCH ADJUSTMENT

The electric clutch serves two functions in the operation of the mower. In addition to starting and stopping the power flow to the cutter blades, the clutch also acts as a brake to assist in stopping blade rotation when the PTO is switched off or the operator presence circuit is interrupted.

When the clutch is disengaged, the air gap between the armature and rotor must be adjusted to fifteen thousandths of an inch, 0.015, for proper operation. The airgap adjustment is made at three bolts on the clutch. There are three inspection windows, one next to each adjusting bolt. See Figure 6-3.

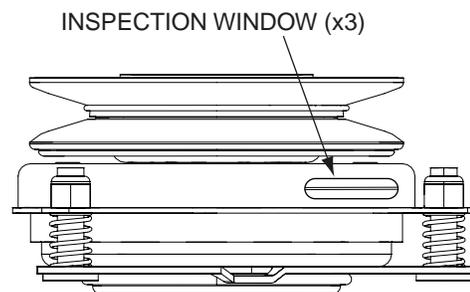
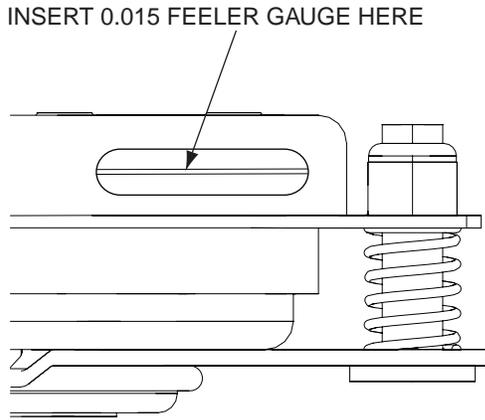


Figure 6-3. Clutch Air Gap Adjustment

1. Locate the inspection windows on the clutch.
2. Place a 0.015 feeler gauge in the slot between the rotor and the armature. See Figure 6-4.



If the air gap is too narrow, the clutch armature may drag when disengaged, resulting in premature failure.

If the air gap is too wide, the clutch may be slow to engage as the magnet must pull the armature in from a greater distance.

Figure 6-4. Clutch Air Gap Adjustment

3. Tighten or loosen the adjusting bolt as needed to achieve the 0.015 inch airgap. See Figure 6-5. Perform this operation at all three inspection windows.

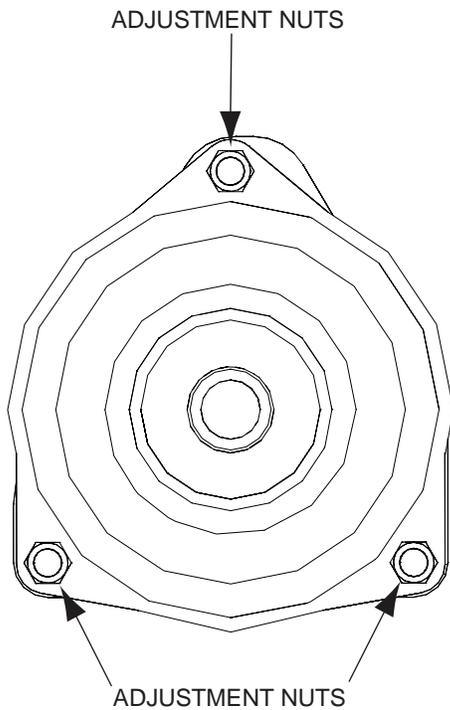


Figure 6-5. Clutch Air Gap Adjustment

This adjustment should be done every 500 hours of operation or annually, whichever comes first. In cases where the machine is heavily used, airgap settings should be checked more often.

MAINTENANCE

7.1 MAINTENANCE CHART - RECOMMENDED SERVICE INTERVALS

BREAK-IN (FIRST 10)	HOURS						PROCEDURE	COMMENTS
	8	20	40	100	200	500		
X							Check all hardware for tightness	
X							Check all belts for proper alignment	See paragraph 7.6
	X						Check engine oil level	See paragraph 7.3
	X						*Clean mower	
	X						*Clean air filter element	See paragraph 7.5
	X						Check condition of blades	See paragraph 7.7
	X						Sharpen cutter blades	See paragraph 7.7
	X						Check tire pressure	See paragraph 7.10
	X						Check the operator interlock system	See paragraph 4.2
		X					Change engine oil and filter	See paragraph 7.3
			X				Check belts for proper alignment	See paragraph 7.6
				X			Grease caster wheel bearings	See paragraph 7.2
				X			Grease transmission couplers	See paragraph 7.2
				X			Check all hardware for tightness	
				X			Change engine oil	See paragraph 7.3
				X			*Clean air cleaner element	See paragraph 7.5

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

MAINTENANCE CHART - RECOMMENDED SERVICE INTERVALS (CONT'D)

HOURS						PROCEDURE	COMMENTS
BREAK-IN (FIRST 10)	8	40	100	200	500		
				X		Check hardware for tightness	
				X		Change engine oil filter	See paragraph 7.3
					X	Replace engine fuel filter	See paragraph 7.3
					X	Adjust electric PTO clutch	See paragraph 6.6

7.2 LUBRICATION

GREASE FITTING LUBRICATION CHART

LOCATION	LUBRICATION INTERVAL	LUBRICANT	NO. OF PLACES
Caster Wheel Bearings	100 Hours/Monthly	Chassis Grease	2
Transmission Couplers	100 Hours/Monthly	Chassis Grease	2

7.3 ENGINE OIL

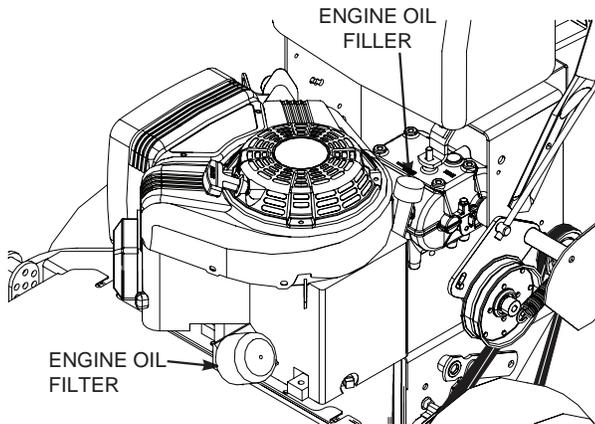


Figure 7-1. Briggs & Stratton Engine Oil Fill/Dipstick, Filter and Drain Locations

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 20 hours of operation, change the engine crankcase oil and replace the oil filter. Thereafter, change the engine crankcase oil after every 100 hours of operation or bi-weekly, whichever occurs first. Refer to the Engine Operator's Manual furnished with this mower for instructions.

C. CHANGING ENGINE OIL FILTER

After the first 20 hours of operation, replace the engine oil filter. Thereafter, replace the oil filter after every 200 hours of operation or every month, whichever occurs first. Refer to Engine Operator's Manual for instructions. See Figure 7-1.

7.4 ENGINE FUEL SYSTEM

DANGER

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

A. FILLING THE FUEL TANK

Fill the fuel tank at the beginning of each operating day to within one (1) inch below the filler neck. Do not overfill. Use clean, fresh unleaded gasoline with a minimum octane rating of 87 and a maximum of 10% Ethanol.

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.

1. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
2. Use only an approved gasoline container.
3. Never remove the gas cap or add fuel with the engine running. Allow the engine to completely cool before fueling.
4. Never fuel the machine indoors or in an enclosed trailer.
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 the 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 fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.

Section 7

9. If fuel is spilled on clothing, change clothing immediately and wash affected skin.
10. Replace gas cap and tighten securely.

B. REPLACING IN-LINE FUEL FILTER ELEMENTS

The engine fuel filter should be replaced after every 500 hours of operation or annually, whichever occurs first. See Figure 7-2.

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

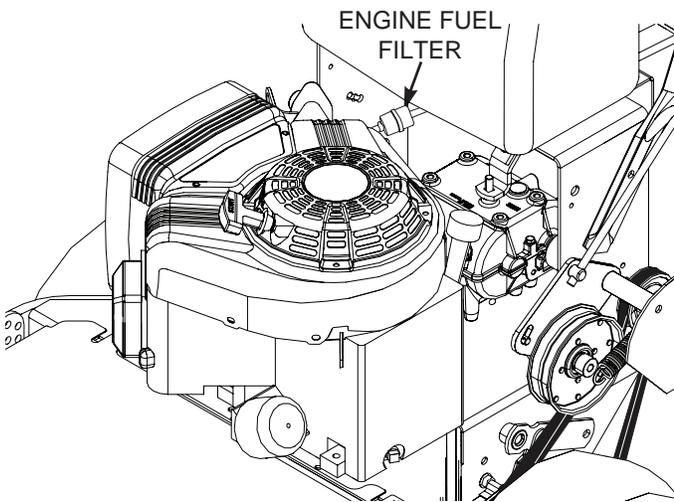


Figure 7-2. Fuel Filter

7.5 ENGINE AIR CLEANER

A. CLEANING AND/OR REPLACING AIR CLEANER ELEMENT

For any air cleaner, the operating environment dictates the air cleaner service periods. Inspect and clean the air cleaner element after every 100 hours of operation or bi-weekly, whichever occurs first and replace the element if required.

- NOTE -

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

1. Release the two latches securing the air cleaner cover to the air cleaner assembly and remove the cover. Set aside.

2. Remove the air cleaner and inspect.
3. Clean or replace the air cleaner and foam pre-cleaner as recommended by the engine manufacturer.
4. Replace the air cleaner cover and be sure to snap the two latches closed.

7.6 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.

7.7 CUTTER BLADES

A. BLADE INSPECTION

1. Remove the ignition key before servicing the blades.
2. Raise the mower deck to the highest position. Place the lanyard pin in the highest cutting height position to prevent the cutter deck from falling.

WARNING

Always 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.

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.

4. 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 7-3.

1. Sharpen the cutting edge at the same bevel as the original. See Figure 7-3. Sharpen only the top of the cutting edge to maintain sharpness.

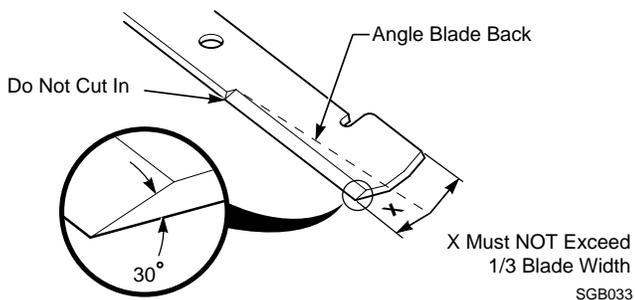


Figure 7-3. Blade Sharpening

2. Check the balance of the blade. If the blades are out of balance, vibration and premature wear can occur. See your authorized Scag dealer for blade balancing or special tools, if you choose to balance your own blades.

C. BLADE REPLACEMENT

WARNING

Always wear proper hand and eye protection when working with cutter blades.

2. Raise the mower deck to the highest position. Place the lanyard pin in the highest cutting height position to prevent the cutter deck from falling.
3. Secure the cutter blades to prevent them from rotating, (use the optional Blade Buddy tool P/N 9212, to assist in securing the cutter blades), remove the blade attaching bolt. Remove the cutter blade, bolt, lockwasher and flatwasher from the spindle shaft. See Figure 7-4.

- NOTE -

Be sure that the blade is installed with the lift wing towards the top of the cutter deck.

4. Install the cutter blade on to the cutter spindle shaft. Secure the blades from rotating and torque to 75 ft/lbs. See Figure 7-4.

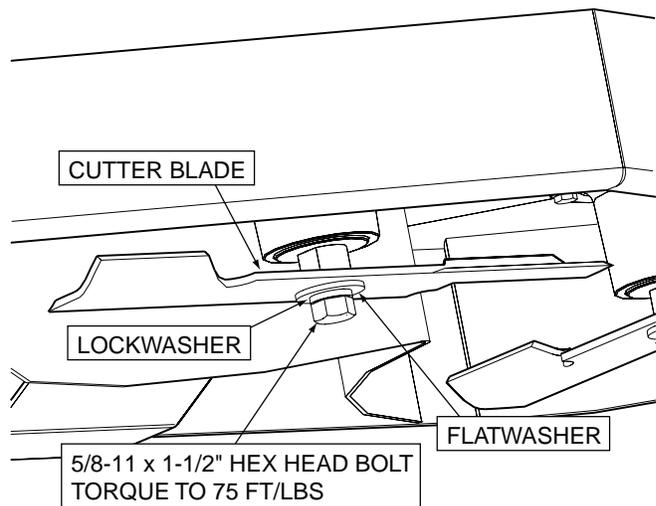


Figure 7-4. Blade Replacement

7.8 TIRES

Check the tire pressures after every 8 hours of operation or daily.

Caster Wheels	25 PSI
Drive Wheels	12 PSI

1. Remove the ignition key before replacing the blades.

ILLUSTRATED PARTS LIST

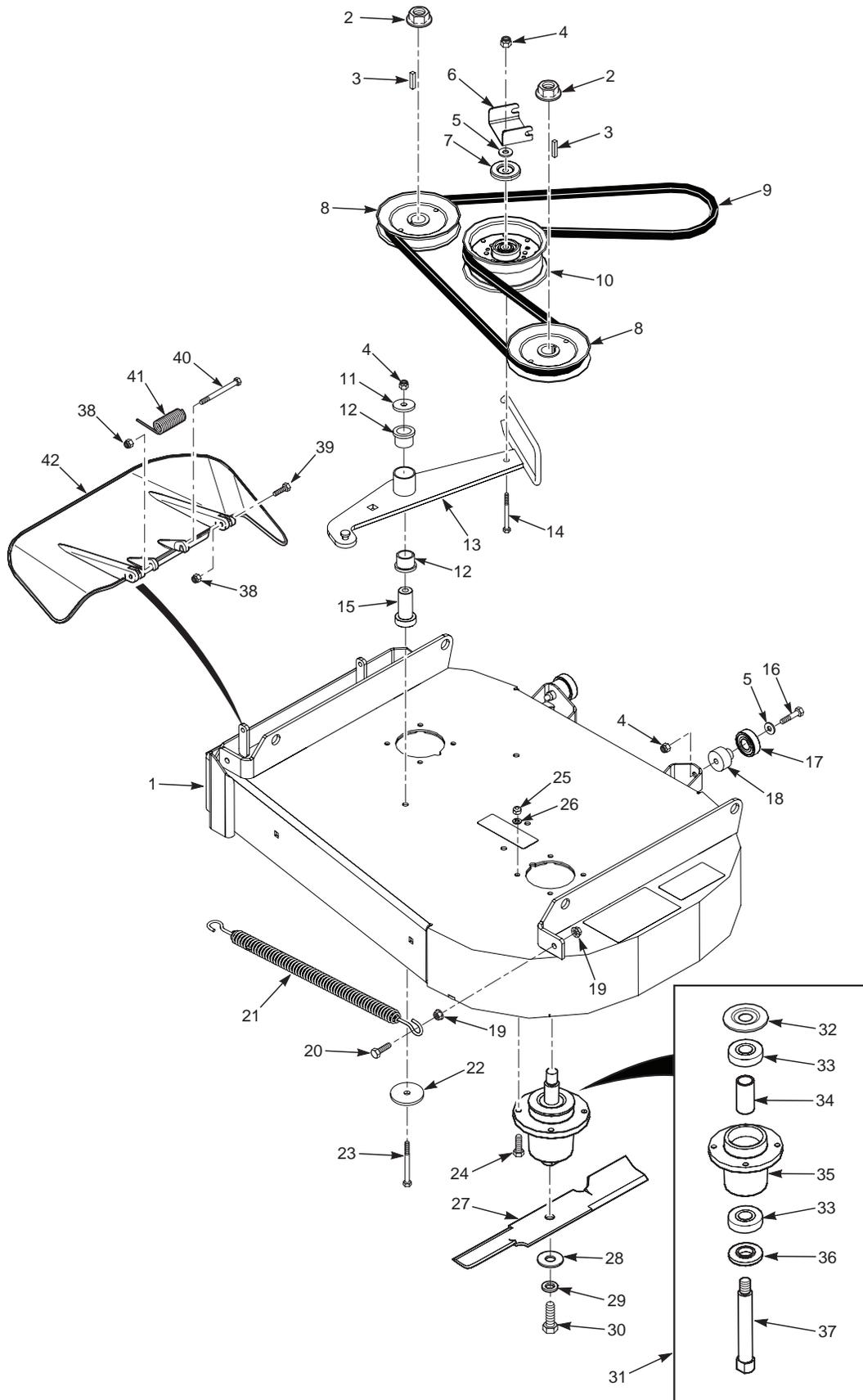
8.1 SCAG APPROVED ATTACHMENTS AND ACCESSORIES.

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

Scag approved attachments and accessories:

- Mulch Plate (p/n 920G, 9298)
- Hurricane Mulch (p/n 920D, 9293)
- GC-4D (p/n 9054)
- GC-F4 (p/n 9055)
- Blade Buddy (p/n 9212)

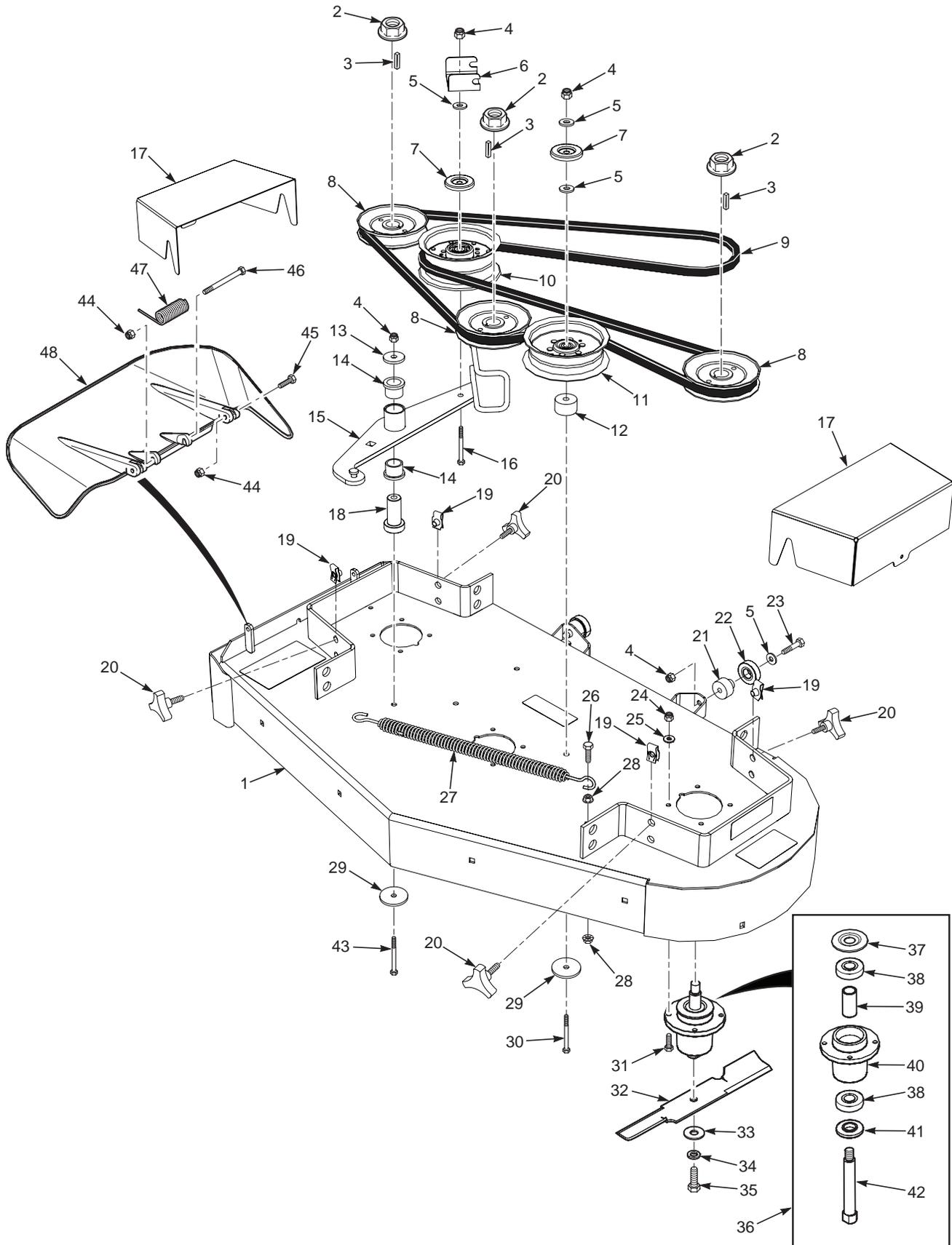
36" CUTTER DECK



36" CUTTER DECK

Ref. No.	Part No.	Description
1	462150	Cutter Deck Weldment w/Decals
2	04112-06	Nut, 3/4-16 Spiral Lock
3	04063-01	Key, 1/4 x 1/4 x 1-1/4"
4	04021-09	Nut, Elastic Stop 3/8-16
5	04043-04	Flatwasher, 3/8-.391 x .938 x .105 HD
6	424615	Bracket, Belt Guide
7	424367	Dust Shield
8	483324	Pulley, 5.73" Dia.
9	481880	Belt, Deck Drive
10	483851	Pulley, 5" Idler
11	04041-11	Flatwasher, 3/8-.406 x 1-1/2"
12	483453-03	Bearing
13	462190	Idler Arm Assembly (incl. #12)
14	04001-62	Bolt, Hex Head 3/8-16 x 3-1/4"
15	43708	Pivot, Idler
16	04001-46	Bolt, Hex Head 3/8-16 x 2-1/4"
17	483379	Bearing
18	43703	Spacer, Bearing
19	04019-04	Nut, Serrated Flange 3/8-16
20	04001-136	Bolt, Hex Head 3/8-16 x 1-1/2" Gr.8
21	483375	Spring, Deck Idler
22	04041-38	Flatwasher, 3/8-.406 x 2-1/4 x .187
23	04001-51	Bolt, Hex Head 3/8-16 x 3-3/4"
24	04001-175	Bolt, Hex Head 5/16-18 x 1-1/2" Gr.8
25	04021-22	Nut, Elastic Stop 5/16-18
26	04030-03	Lockwasher, 5/16" Spring
27	481707	Cutter Blade, 18"
28	04043-06	Flatwasher, 5/8-.688 x 1-3/4 x .134 HD
29	04030-07	Lockwasher, 1/2" Spring
30	04001-121	Bolt, Hex Head 5/8-11 x 1-1/2"
31	461950	Spindle Assembly
32	483304	Debris Shield
33	483303	Bearing
34	43693	Spacer, Bearing
35	462014	Spindle Housing Assembly (incl. #33 & #34)
36	43694	Protector, Bearing
37	43695	Shaft, Spindle
38	04021-10	Nut, Elastic Stop 5/16-18
39	04001-12	Bolt, Hex Head 5/16-18 x 1-3/4"
40	04001-154	Bolt, Hex Head 5/16-18 x 4-3/4"
41	482245	Spring, Discharge Chute
42	462031	Discharge Chute Assembly

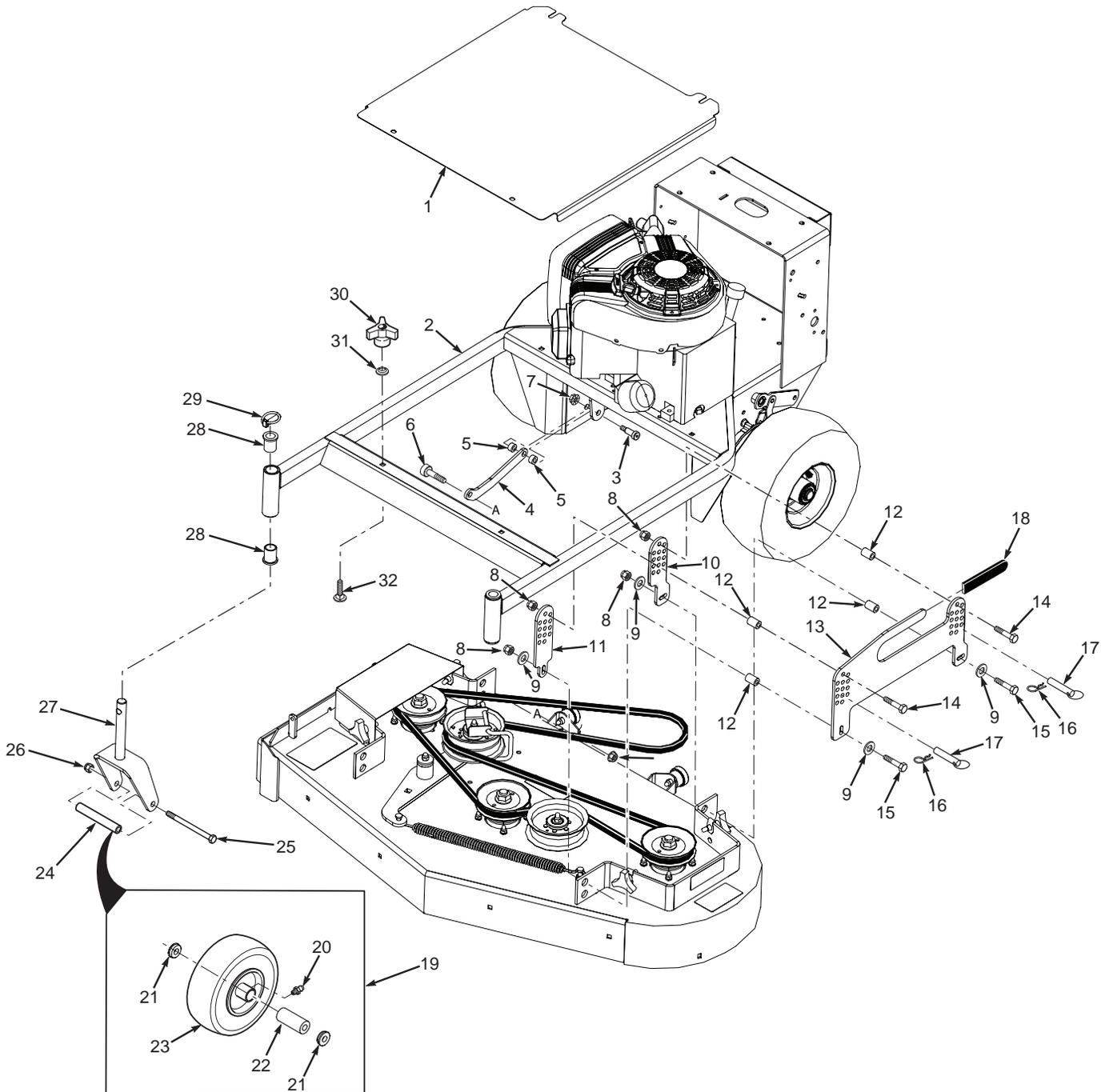
48" CUTTER DECK



48" CUTTER DECK

Ref. No.	Part No.	Description
1	462149	Cutter Deck Weldment w/Decals
2	04112-06	Nut, 3/4-16 Spiral Lock
3	04063-01	Key, 1/4 x 1/4 x 1-1/4"
4	04021-09	Nut, Elastic Stop 3/8-16
5	04043-04	Flatwasher, 3/8-.391 x .938 x .105 HD
6	424615	Bracket, Belt Guide
7	424367	Dust Shield
8	483323	Pulley, 5.13" Dia.
9	483012	Belt, Cutter Deck
10	483851	Pulley, 5" Idler
11	483422	Pulley, 5" Idler
12	43711	Spacer, Idler Pulley
13	04041-11	Flatwasher, 3/8-.406 x 1-1/2"
14	483453-03	Bearing
15	462191	Idler Arm Assembly (incl. #14)
16	04001-62	Bolt, Hex Head 3/8-16 x 3-1/4"
17	425117	Belt Cover, SFW 48
18	43708	Pivot, Idler
19	04110-03	U-Nut, 3/8-16
20	481625-01	Knob, w/Stud
21	43703	Spacer, Bearing
22	483379	Bearing
23	04001-46	Bolt, Hex Head 3/8-16 x 2-1/4"
24	04021-22	Nut, Elastic Stop 5/16-18
25	04030-03	Lockwasher, 5/16" Spring
26	04001-136	Bolt, Hex Head 3/8-16 x 1-1/2" Gr.8
27	483375	Spring, Deck Idler
28	04019-04	Nut, Serrated Flange 3/8-16
29	04041-38	Flatwasher, 3/8-.406 x 2-1/4 x .187
30	04001-77	Bolt, Hex Head 3/8-16 x 3-1/2"
31	04001-175	Bolt, Hex Head 5/16-18 x 1-1/2" Gr.8
32	481706	Cutter Blade, 16-1/2"
33	04043-06	Flatwasher, 5/8-.688 x 1-3/4 x .134 HD
34	04030-07	Lockwasher, 1/2" Spring
35	04001-121	Bolt, Hex Head 5/8-11 x 1-1/2"
36	461950	Spindle Assembly
37	483304	Debris Shield
38	483303	Bearing
39	43693	Spacer, Bearing
40	462014	Spindle Housing Assembly (incl. #38 & #39)
41	43694	Protector, Bearing
42	43695	Shaft, Spindle
43	04001-51	Bolt, Hex Head 3/8-16 x 3-3/4"
44	04021-10	Nut, Elastic Stop 5/16-18
45	04001-12	Bolt, Hex Head 5/16-18 x 1-3/4"
46	04001-154	Bolt, Hex Head 5/16-18 x 4-3/4"
47	482245	Spring, Discharge Chute
48	462031	Discharge Chute Assembly

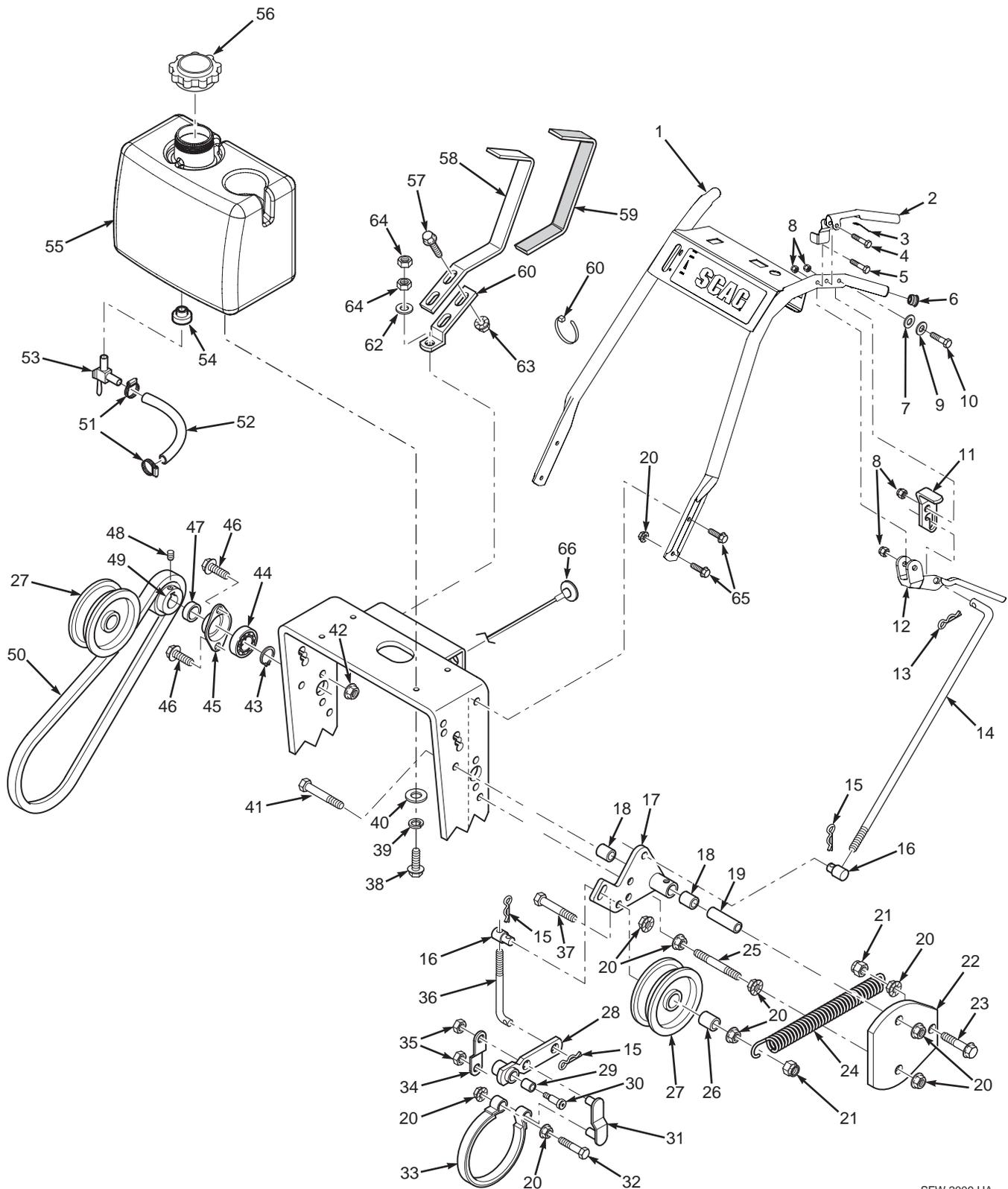
CUTTER DECK CONTROLS



CUTTER DECK CONTROLS

Ref. No.	Part No.	Description
1	462183	Belt Cover, SFW w/Decals
2	462181	Frame Weldment w/Decals
3	04009-13	Bolt, Shoulder 1/2 x 1-1/2"
4	425023	Pusharm
5	43041	Spacer
6	04009-10	Bolt, Shoulder 1/2 x 2-3/4"
7	04019-04	Nut, Serrated Flange 3/8-16
8	04021-09	Nut, Elastic Stop 3/8-16
9	04043-04	Flatwasher, 3/8-.391 x .938 x .105 HD
10	425076	Mounting Bracket, Height Adjustment Rear
11	425077	Mounting Bracket, Height Adjustment Front
12	43572	Spacer
13	462188	Bracket, Deck Lift Height Adjustment - LH w/Decal
	462189	Bracket, Deck Lift Height Adjustment - RH w/Decal
14	04001-46	Bolt, Hex Head 3/8-16 x 2-1/4"
15	04001-31	Bolt, Hex Head 3/8-16 x 2-1/2"
16	04062-01	Hair Pin Cotter, .094 x 1.62"
17	04067-13	Pin, Ring 3/8 x 2-1/2"
18	481428	Grip
19	483922	Caster Wheel Assembly, 9 x 3.5-4
20	48114-03	Grease Fitting, 45 Degree 1/4-28
21	481770	Bearing, Oilite
22	481769	Bearing, Roller
23	483981	Tire Only, Caster Wheel
	483921	Rim Only
24	43022	Sleeve, Caster Wheel
25	04001-37	Bolt, Hex Head 1/2-13 x 5-1/2"
26	04021-07	Nut, Elastic Stop 1/2-13
27	45006	Caster Yoke Weldment
28	483453-07	Bearing
29	04066-01	Quick Pin
30	04029-04	Wing Nut, 3/8" Plastic Small
31	04024-02	Nut, Push-On 3/8"
32	04003-23	Bolt, Carriage 3/8-16 x 1"

HANDLE ASSEMBLY



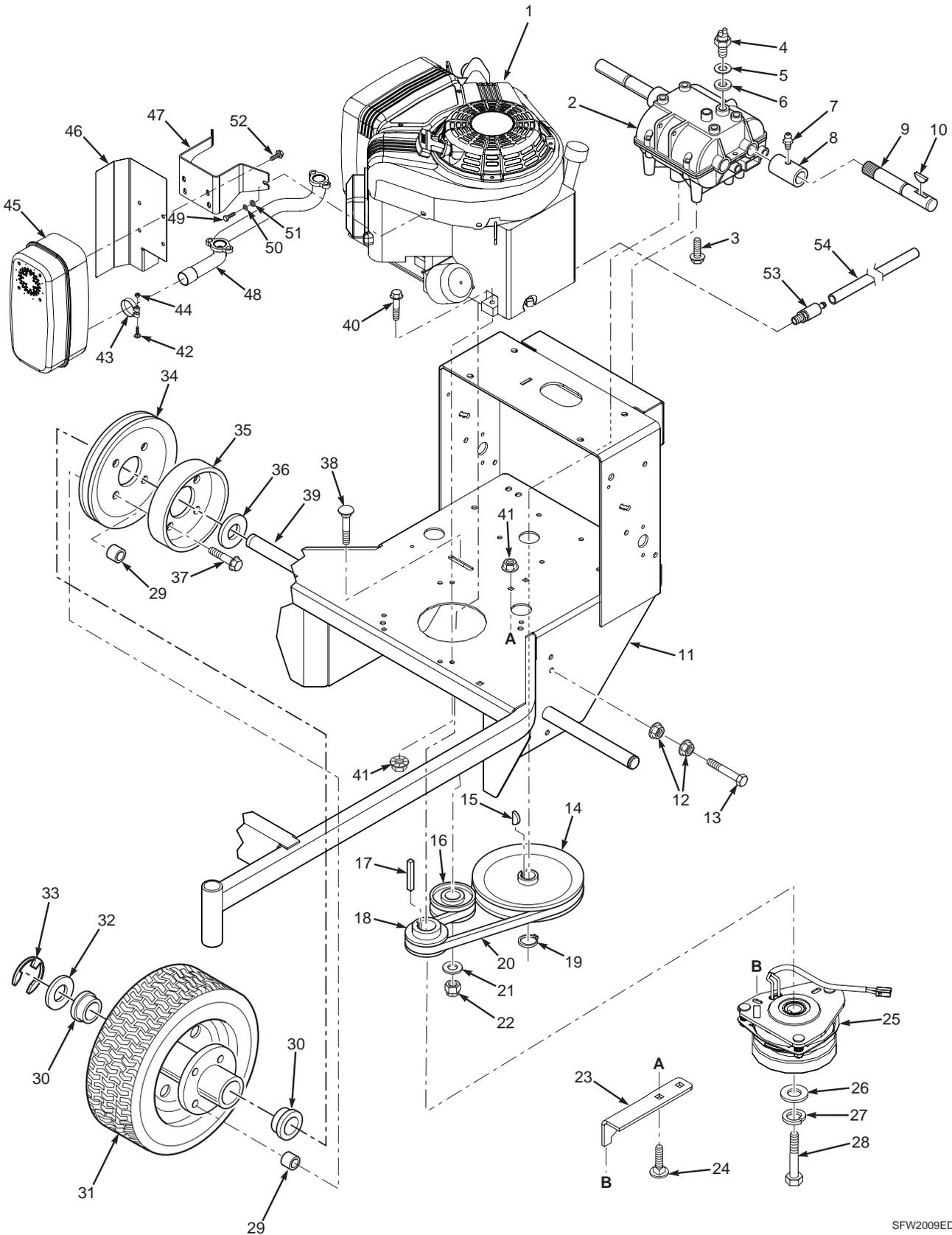
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HANDLE ASSEMBLY

Ref. No.	Part No.	Description
1	462187	Handle Weldment w/Decals
2	452039	Operator Presence Handle, LH
	452040	Operator Presence Handle, RH
3	483941	Spring, Operator Presence
4	04001-13	Bolt, Hex Head 5/16-18 x 2-3/4"
5	04001-53	Bolt, Hex Head 5/16-18 x 2-1/2"
6	483161	Plug, Handle Bar
7	04032-01	Washer, Curved Spring
8	04021-10	Nut, Elastic Stop 5/16-18
9	04040-15	Flatwasher, 5/16-.375 x .875 x .083
10	04001-17	Bolt, Hex Head 5/16-18 x 2"
11	461241	Neutral Latch Assembly, LH
	461242	Neutral Latch Assembly, RH
12	483870	Lever, Steering Brake
13	04062-02	Hair Pin Cotter
14	44140	Rod, Steering Control
15	04062-01	Hair Pin Cotter
16	43032	Swivel Joint
17	462173	Idler Bracket Assembly, RH
	462172	Idler Bracket Assembly, LH
18	483453-18	Bearing
19	43768	Sleeve
20	04019-04	Nut, Serrated Flange 3/8-16
21	04021-09	Nut, Elastic Stop 3/8-16
22	421360	Belt Guard
23	04017-28	Bolt, Serrated Flange 3/8-16 x 1-1/4"
24	48755	Spring
25	04004-17	Stud, 3/8-16 x 5"
26	43282	Spacer
27	483820	Pulley, Idler 5"
28	462171	Lever Weldment, Brake w/Bearing
29	483453-19	Bearing
30	04009-09	Bolt, Shoulder 1/2 x 1"
31	45093	Link Weldment, Brake
32	04001-45	Bolt, Hex Head 3/8-16 x 2"

Ref. No.	Part No.	Description
33	48210	Brake Band Assembly
34	42254	Link, Brake
35	04024-01	Nut, Push-On
36	44177	Rod, Brake
37	04001-62	Bolt, Hex Head 3/8-16 x 3-1/4"
38	04001-09	Bolt, Hex Head 5/16-18 x 1"
39	04030-03	Lockwasher, 5/16" Spring
40	04040-15	Flatwasher, 5/16-.375 x .875 x .083
41	04001-23	Bolt, Hex Head 3/8-16 x 4-1/2"
42	04019-02	Nut, Serrated Flange 1/4-20
43	04050-09	Retaining Ring, 5/8" Ext.
44	48224	Bearing, Jackshaft
45	48223	Flange, Jackshaft Bearing
46	04017-05	Bolt, Serrated Flange 1/4-20 x 3/4"
47	43801	Spacer, Jackshaft
48	04012-04	Set Screw, Hex Socket 5/16-18
49	483821	Pulley, Jackshaft 3.25 OD x .625 Bore
50	483814	Belt, Wheel Drive
51	48059-01	Clamp, 1/4" ID Fuel Hose
52	483617	Fuel Hose, 1/4" ID (order by inch)
53	483747	Valve, Fuel Shutoff w/Screen
54	482571	Bushing, .56 Dia. Viton
55	461729	Fuel Tank Assembly (incl. #53 & #54)
56	483792	Cap, Fuel Tank
57	04017-17	Bolt, Serrated Flange 5/16-18 x 1"
58	461163	Shift Lever Extension w/Grip
59	481839	Grip, Shift Handle
60	48028-05	Cable Tie
61	422279	Shift Lever
62	04041-07	Flatwasher, 3/8-.391 x .938 x .105
63	04019-03	Nut, Serrated Flange 5/16-18
64	04020-14	Nut, 3/8-24 UNF
65	04017-27	Bolt, Serrated Flange 3/8-16 x 1"
66	483646	Choke Control

ENGINE DECK

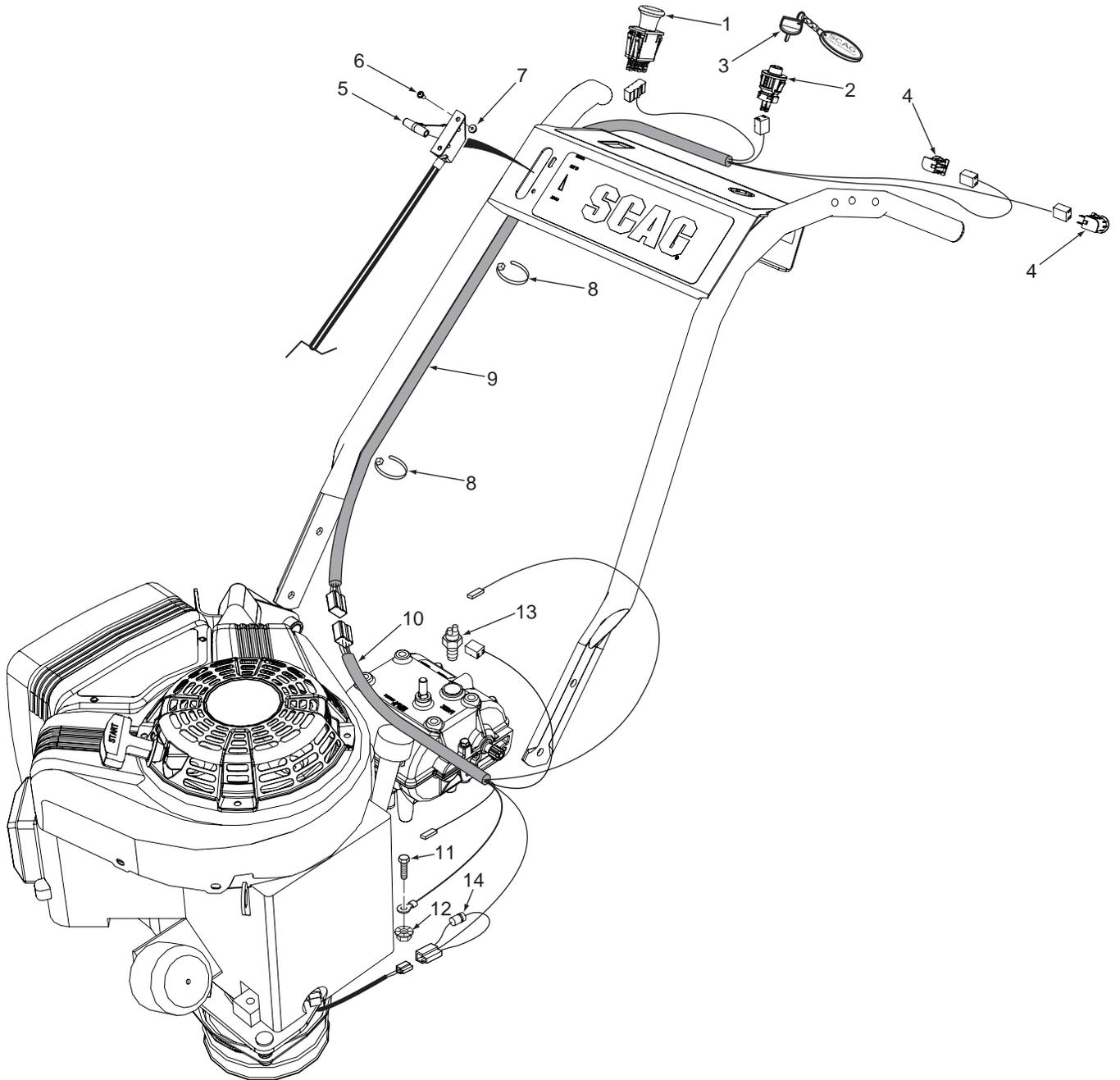


Section 8

ENGINE DECK

Ref. No.	Part No.	Description
1	483796	Engine, 16HP Briggs & Stratton
2	483822	Transmission, 4-Speed
3	04017-16	Bolt, Serrated Flange 5/16-18 x 3/4"
4	48231	Switch, Neutral Interlock
5	48122-01	Fiber Washer, Thin
6	48122-02	Fiber Washer, Thick
7	48114-05	Grease Fitting, Straight 1/4-28
8	481581	Coupler, Jackshaft
9	481582	Jackshaft
10	04063-09	Key, Hi-Pro #9
11	462181	Frame Weldment w/Decals
12	04019-04	Nut, Serrated Flange 3/8-16
13	04001-45	Bolt, Hex Head 3/8-16 x 1"
14	48197	Pulley, Transmission Input
15	04063-07	Key, Woodruff #9
16	483638	Pulley, Idler 3-1/2"
17	04063-19	Key, 1/4 x 1/4 x 3/4"
18	483823	Pulley, 2-3/4 OD x 1" Bore
19	04050-09	Retaining Ring, .625 Ext.
20	483816	Belt, Transmission
21	04043-04	Flatwasher, 3/8-.391 x .935 x .105 HD
22	04021-09	Nut, Elastic Stop 3/8-16
23	425051	Bracket, Anti-Rotation
24	04003-12	Bolt, Carriage 5/16-18 x 3/4"
25	462192	Clutch, Ogura GT1A
26	04041-28	Flatwasher, 7/16-.469 x 1-3/4 x .25
27	04043-05	Lockwasher, 7/16" Spring
28	04102-05	Bolt, Hex Head 7/16-20 x 2-3/4" w/ Patch
29	43796	Spacer, Wheel Assembly
30	483916	Bearing
31	483881	Wheel Assembly
	481842	Tire Only 15 x 6.0-6
	483880	Rim Assembly Only
32	04041-14	Flatwasher, 1-1.062 x 1-1/2 x .0478
33	04050-08	Retaining Ring, 1" Ext. "E"
34	483712	Pulley, Wheel
35	48209	Brake Drum
36	04041-39	Flatwasher, 1-1.063 x 1-1/2 x .105
37	04017-19	Bolt, Hex Head 5/16-18 x 1-1/2" SF
38	04003-03	Bolt, Carriage 3/8-16 x 2"
39	43085	Wheel Axle
40	04017-19	Bolt, Serrated Flange 5/16-18 x 1-1/2"
41	04019-19	Nut, Serrated Flange 5/16-18
42	04003-37	Bolt, Carriage 5/16-18 x 1-1/4"
43	483956	Muffler Clamp
44	04020-03	Nut, 5/16-18 UNC
45	483952	Muffler, 16HP Briggs & Stratton
46	483954	Heatshield, 16HP Briggs & Stratton
47	483955	Mounting Bracket, Muffler 16HP Briggs & Stratton
48	483953	Exhaust Manifold, 16HP Briggs & Stratton
49	04002-21	Bolt, M6-1 x 16mm
50	04030-02	Lockwasher, 1/4" Spring
51	04040-14	Flatwasher, 1/4-.312 x .750 x .065
52	04011-13	Capscrew, 1/4-20 x 3/4" Shakeproof
53	483940	Oil Drain, SFW
54	483280-02	Tubing, Oil Drain 1/2 x 14"

ELECTRICAL SYSTEM AND THROTTLE CONTROL



ELECTRICAL SYSTEM AND THROTTLE CONTROL

Ref. No.	Part No.	Description
1	483957	Switch, PTO 10 Amp
2	48609	Keyswitch
3	462069	Key Chain w/Keys
	483609	Key w/Shroud
4	48717	Switch
5	483904	Throttle Cable
6	04010-01	Screw, #10-32 x 1/2"
7	04019-01	Nut, #10-32
8	48028-05	Cable Tie
9	483872	Wire Harness, Handle Bar
10	483960	Wire Harness, Engine Deck
11	04017-19	Bolt, Serrated Flange 5/16-18 x 1-1/2"
12	04019-03	Nut, Serrated Flange 5/16-18

REPLACEMENT DECALS AND INFORMATION PLATES

! WARNING

**INSTALL BELT COVER
BEFORE OPERATING MACHINE**

READ OPERATOR'S MANUAL

483402

1

! WARNING

**DO NOT OPERATE WITHOUT DISCHARGE CHUTE, MULCHING
KIT, OR ENTIRE GRASS CATCHER INSTALLED**

483405

2

! WARNING

ROTATING BLADES AND BELTS

- * Keep hands, feet & clothing clear
- * Keep all guards in place
- * Shut off engine & disengage blade clutch before servicing
- * Use caution in directing discharge
- * Read instruction manual before operating

**DO NOT OPERATE UNLESS GRASS
CATCHER, MULCHING KIT OR
DISCHARGE CHUTE IS INSTALLED**

483406

4

! DANGER

SPINNING BLADES

KEEP CLEAR

**BLADE CONTACT & THROWN
OBJECTS CAN INJURE**

3

! DANGER

SPINNING BLADES

KEEP CLEAR

**BLADE CONTACT & THROWN
OBJECTS CAN INJURE**

6

MOUNT RIDING
ATTACHMENT
HERE

! WARNING

FALLING HAZARD

**USE ONLY SCAG APPROVED
RIDING ATTACHMENTS**

SEE OPERATOR'S MANUAL

483404

5

CUTTING HEIGHT

1-1/2

1-3/4

2

2-1/4

2-1/2

2-3/4

3

3-1/4

3-1/2

3-3/4

4

4-1/4

4-1/2

LH - 483894

7



8

MANUFACTURED UNDER ONE OR MORE			
OF THE FOLLOWING PATENTS:			
4,487,006	4,885,903	4,920,733	4,967,543
4,991,382	4,998,948	5,042,239	5,117,617
5,133,176	5,826,416	5,832,708	5,865,018
6,192,666	6,766,633	6,892,519	6,996,962
7,065,946	7,197,863	7,237,374	7,373,768
PATENTS PENDING			

16

**Heavy-Duty
Commercial**

481971

9

! WARNING

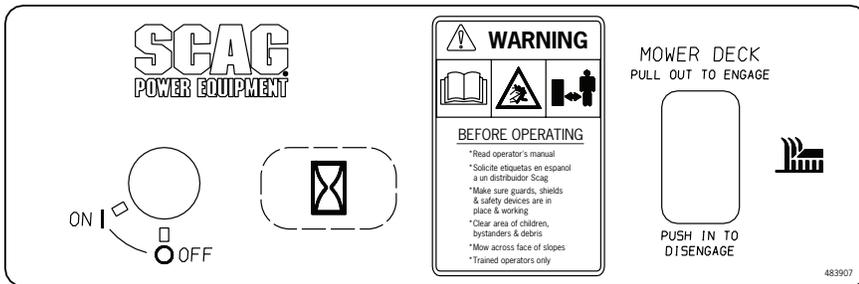
Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrestor may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

483900

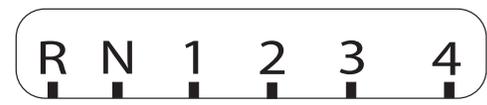
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REPLACEMENT DECALS AND INFORMATION PLATES

Ref. No.	Part No.	Description
1	483402	Decal, Belt Cover
2	483405	Decal, Discharge Chute
3	483505	Decal, Spinning Blades
4	483406	Decal, Warning-Rotating Blades
5	483404	Decal, Sulky Attachment
6	483407	Decal, Danger-Spinning Blades
7	483894	Decal, Cutting Height LH
	483895	Decal, Cutting Height RH
8	48404	Decal, Metalcraft - Made in USA
9	481971	Decal, Heavy Duty Commercial
10	483900	Decal, Warning Spark Arrestor
11	483907	Decal, Instrument Panel Rear
12	483908	Decal, Shift Index SFW
13	483494	Decal, 48 Commercial
	483710	Decal, 36 Commercial
14	481483	Decal, Instrument Panel Front
15	48314	Decal, Scag Logo
16	483044	Decal, Patents



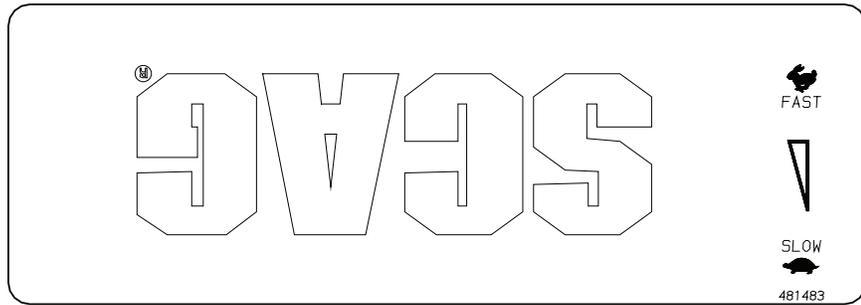
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12



13

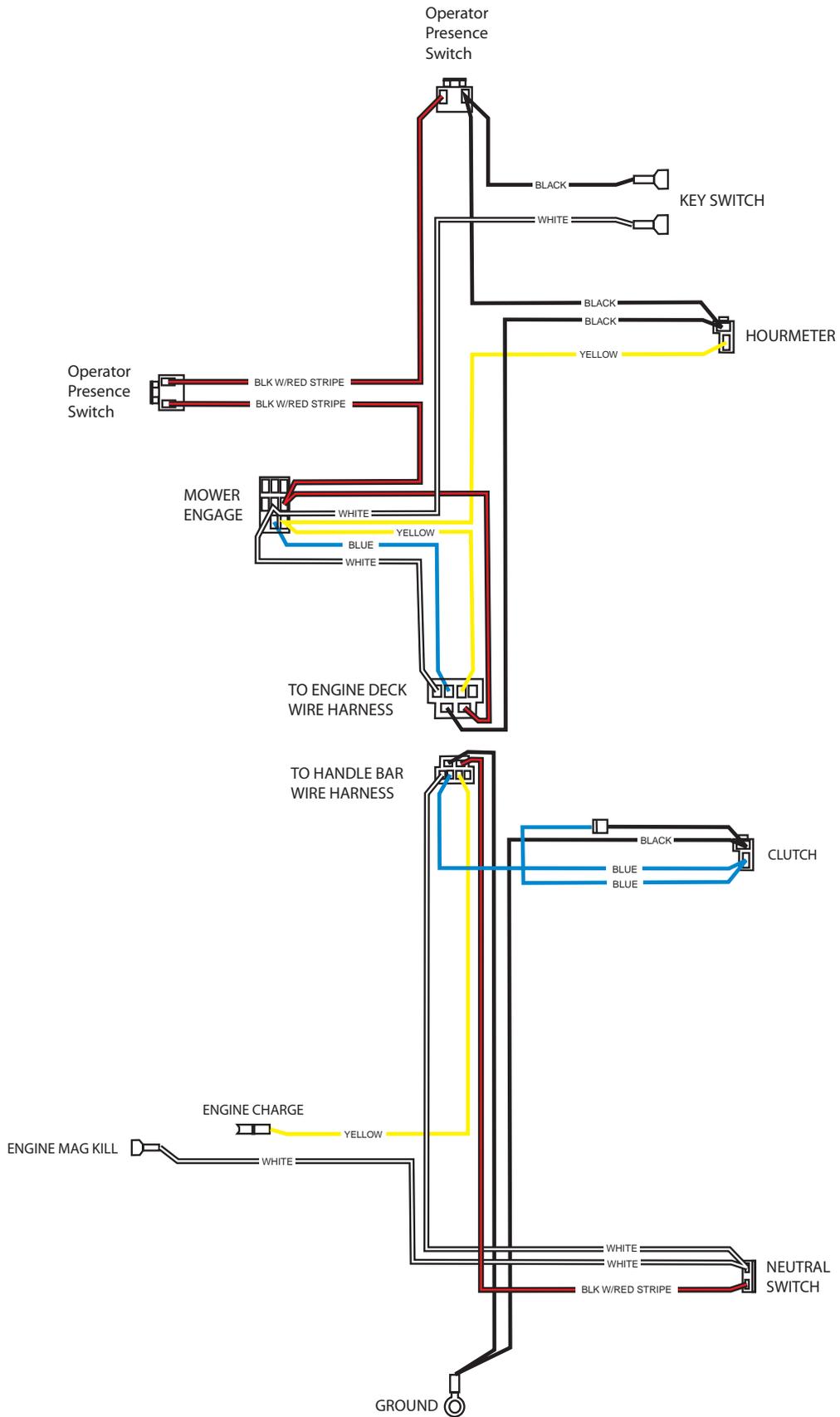


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15

SFW ELECTRICAL SCHEMATIC



LIMITED WARRANTY - SFW

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 and is not transferable. 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.

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, blades and tires are warranted for ninety (90) days.
- Frame and structural components are warranted for 2 years (Parts and labor).
- Cutter decks are warranted against cracking for a period of two (2) years (Parts and labor) 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, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Operator's Manual.
- Engines and electric starters are covered by the engine manufacturer's warranty period.
- Major drive system components are warranted for two (2) years by Scag Power Equipment. (Parts and labor) (Two year warranty exclude fittings, 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, accident, or that has been operated in any way contrary to the operating instructions as specified in the Operator's Manual.
- Electric clutches have a Limited Warranty for 2 year (Parts and labor).
- Spindle assemblies have a Limited Warranty for two (2) years (Parts and labor).
- 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.

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.

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 two (2) year warranty period 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 two year 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.

