



OPERATOR'S MANUAL

STHM

Model: STHM-23CV



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.
- DO NOT operate on steep slopes. To check a slope, attempt to back up it (with the cutter deck down). If the machine can back up the slope without the wheels slipping, reduce speed and use extreme caution.
- Under no circumstances should the machine be operated on slopes greater than 15 degrees. ALWAYS FOLLOW OSHA APPROVED OPERATION.
- 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:

STHM-23CV

with a serial number of

D6300001 to D6399999

SM-61V

with a serial number of

D8900001 to D8999999

SM-72A

with a serial number of

D9000001 to D9099999

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

TABLE OF CONTENTS

SECTION 1 - GENERAL INFORMATION.....	1
1.1 INTRODUCTION.....	1
1.2 DIRECTION REFERENCE	1
1.3 SERVICING THE ENGINE AND DRIVE TRAIN COMPONENTS.....	1
1.4 SYMBOLS	2
SECTION 2 - SAFETY INFORMATION	3
2.1 INTRODUCTION.....	3
2.2 SIGNAL WORDS	3
2.3 BEFORE OPERATION CONSIDERATIONS.....	3
2.4 OPERATION CONSIDERATIONS.....	4
2.5 MAINTENANCE CONSIDERATIONS & STORAGE	6
2.6 SAFETY AND INSTRUCTIONAL DECALS	7
SECTION 3 - SPECIFICATIONS	8
3.1 ENGINE	8
3.2 ELECTRICAL	8
3.3 POWER HEAD	8
3.4 CUTTER DECK	9
3.5 HYDRAULIC SYSTEM	9
3.6 WEIGHTS AND DIMENSIONS.....	9
3.7 PRODUCTIVITY	9
SECTION 4 - OPERATING INSTRUCTIONS	10
4.1 CONTROLS AND INSTRUMENT IDENTIFICATION	10
4.2 SAFETY INTERLOCK SYSTEM	11
4.3 INITIAL RUN-IN PROCEDURES.....	11
4.4 STARTING THE ENGINE	11
4.5 GROUND TRAVEL	12
4.6 ENGAGING THE DECK DRIVE (CUTTER BLADES).....	13
4.7 HILLSIDE OPERATION.....	13
4.8 PARKING THE MOWER	14
4.9 AFTER OPERATION	14
4.10 REMOVING CLOGGED MATERIAL	14
4.11 MOVING MOWER WITH ENGINE STOPPED.....	14
4.12 RECOMMENDATIONS FOR MOWING.....	15
4.13 TOWING (OPTIONAL HITCH ACCESSORY).....	15
SECTION 5 - TROUBLESHOOTING CUTTING CONDITIONS	16

SECTION 6 - ADJUSTMENTS	19
6.1 PARKING BRAKE ADJUSTMENT	19
6.2 NEUTRAL ADJUSTMENT	19
6.3 THROTTLE CONTROL AND CHOKE ADJUSTMENTS	20
6.4 BELT ADJUSTMENT	20
6.5 BELT ALIGNMENT.....	21
6.6 CUTTER DECK ADJUSTMENTS	21
6.7 CUSTOM-CUT BAFFLE ADJUSTMENT	23
SECTION 7 - MAINTENANCE.....	25
7.1 MAINTENANCE CHART - RECOMMENDED SERVICE INTERVALS	25
7.2 LUBRICATION.....	26
7.3 HYDRAULIC SYSTEM	27
7.4 ENGINE OIL	28
7.5 ENGINE FUEL SYSTEM	28
7.6 ENGINE AIR CLEANER.....	29
7.7 DRIVE BELT	29
7.8 BATTERY	30
7.9 CUTTER BLADES.....	31
7.10 TIRES.....	32
7.11 BODY, DECK, AND UPHOLSTERY	32
SECTION 8 - ILLUSTRATED PARTS LIST	33
8.1 SCAG APPROVED ATTACHMENTS AND ACCESSORIES.....	33
SM-61V & SM-72A CUTTER DECK.....	34
ENGINE DECK	36
UPPER HYDRAULICS	38
LOWER HYDRAULICS	40
CONTROL LINKAGE	42
INSTRUMENT PANEL AND ELECTRICAL COMPONENTS	44
RIDER FRAME ASSEMBLY.....	46
BRAKE LINKAGE	48
WINCH LIFT SYSTEM	50
REPLACEMENT DECALS AND INFORMATION PLATES	52
ELECTRICAL WIRING HARNESS.....	54
LIMITED WARRANTY - COMMERCIAL EQUIPMENT	Inside Back Cover

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 top of the engine deck to the right side of the control pedestal.

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.












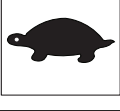




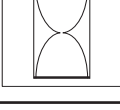

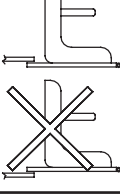



1.2 DIRECTION REFERENCE

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, hydraulic pumps 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. 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 riding 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.
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, the parking brake is on, the steering control levers are in the neutral position and the operator is in the seat. The system shuts off the engine if the operator leaves the seat with the deck drive engaged and/or the steering control levers are not in the neutral position and the parking brake is not engaged. 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/ASAE S279 when driven on public roads.

- NOTE -

If the mower is driven on public roads, it must comply with state and local ordinances as well as SAE J137 and/or ANSI/ASAE S279 requirements. Contact your local authorities for regulations and equipment requirements.

15. Do not operate without the side discharge chute installed and in the down position or without an optional grass catcher or mulch plate completely installed.
16. Check the blade mounting bolts at frequent intervals for proper tightness.
17. Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before starting the machine.

2.4 OPERATION CONSIDERATIONS

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



WARNING

DO NOT operate on steep slopes. To check a slope, attempt to back up it (with the cutter deck down). If the machine can back up the slope without the wheels slipping, reduce speed and use extreme caution. Under no circumstances should the machine be operated on slopes greater than 15 degrees. 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. Before attempting to start the engine, with the operator in the seat, disengage power to the cutter deck, place the right foot pedal in the neutral position and engage the parking brake.
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.

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.

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.

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.

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, lowering the attachments, setting the parking brake, stopping the engine, and removing the key.
14. Disengage power to the attachments when transporting or when not in use.
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. Ramp angle should be no more than 15 degrees. Back up the ramp and drive down forward.
19. When transporting the mower, make sure the park brake is engaged, the steering control levers are in the neutral 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. Disengage drives, lower implement, set parking brake, 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. Disconnect battery or remove spark plug wire before making any repairs. Disconnect the negative terminal first and the positive last. Reconnect the positive first and the negative last.
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 and engage the parking brake.
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. If the mower must be tipped to perform maintenance or adjustment, remove the battery, drain the gasoline from the fuel tank and the oil from the crankcase.
13. Carefully release pressure from components with stored energy.

WARNING

Hydraulic fluid is under high pressure. Keep body and hands away from pinholes or nozzles that eject hydraulic fluid under high pressure. If you need service on your hydraulic system, please see your authorized Scag dealer. If hydraulic fluid is injected into the skin, it must be surgically removed within a few hours by a doctor or gangrene may result.

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.
18. Charge batteries in an open, well ventilated area, away from spark and flames. Unplug charger before connecting or disconnecting from battery. Wear protective clothing and use insulated tools.

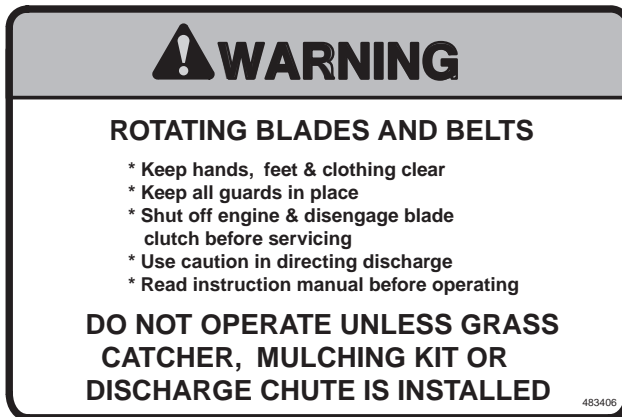
2.6 SAFETY AND INSTRUCTIONAL DECALS



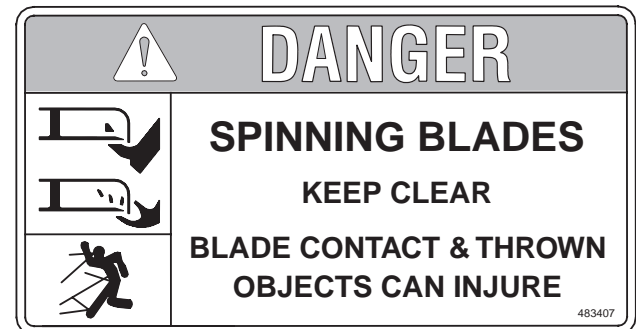
483405



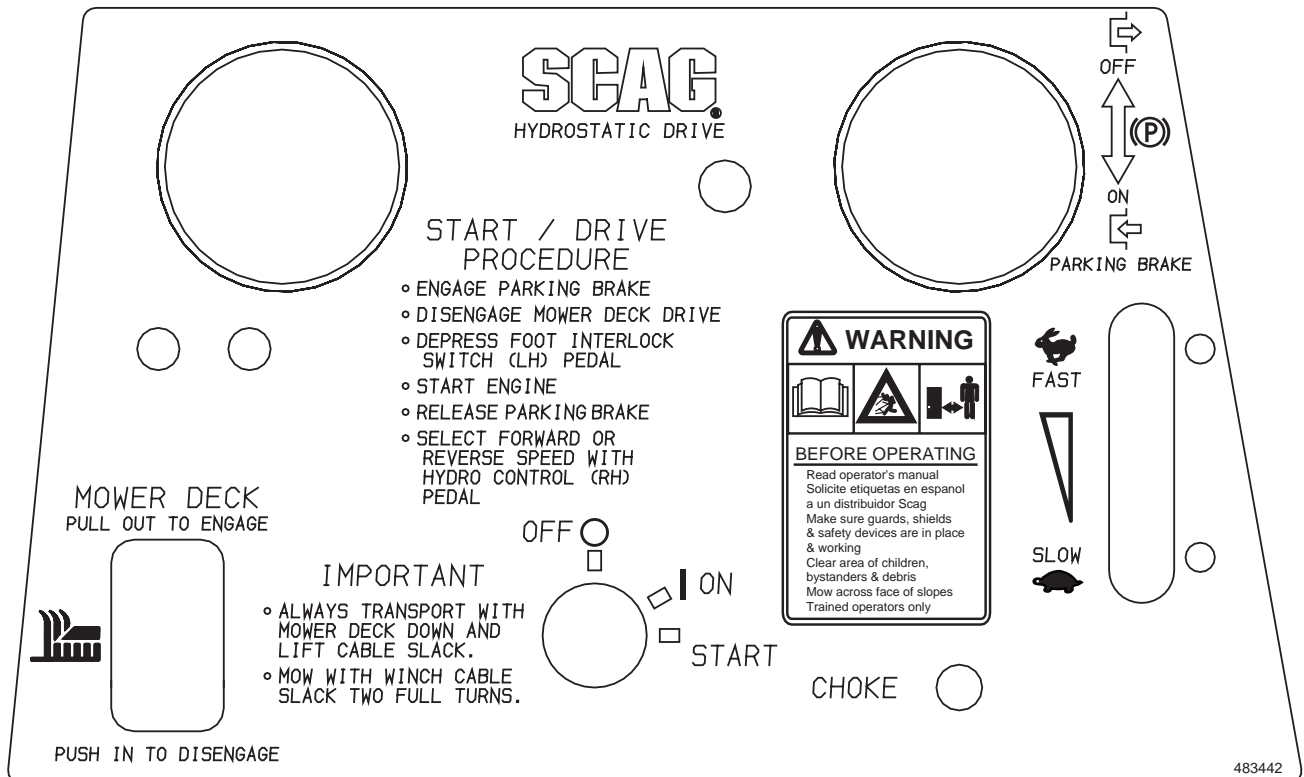
483402



483406



483407



483442

SPECIFICATIONS

3.1 ENGINE

General Type	Heavy Duty Industrial/Commercial Gasoline
Brand	Kohler 23 Hp Pro Series (Spec PS-75523)
Horsepower	23hp @ 3600 Rpm
Type	4 Cycle Gasoline, Twin Cylinder, Vertical Shaft
Cylinders.....	2 with Cast Iron Sleeves
Displacement.....	674 cc
Valve.....	Hydraulic Valve Lifters Standard
Governor.....	Mechanical Type with Variable Speed Control Set At 3600 rpm
Idle Speed	1400 rpm
Fuel Pump	Mechanical Fuel Pump with Inline Fuel Filter
Carburation.....	Fixed Jet Carburetor with Smart-Choke™ and Fuel Shutdown Solenoid
Fuel.....	Non-Leaded Gasoline with A Minimum Octane Rating Of 87
Air Intake Group	Large Capacity Dual Element, Chopper-Type Grass Screen
Exhaust Group.....	Single Exhaust Canister Muffler
Oil Pump.....	Positive Displacement Gerotor™
Oil Capacity	2.0 U.S. Quarts with Filter
Ignition	Solid State Ignition with Smart-Spark™ Automatic Spark Advance System
Starter.....	Electric Starting with Solenoid Shift Starter

3.2 ELECTRICAL

Battery	12 Volt "Maintenance Free" Sealed Battery (300 cca)
Charging System	Alternator
Charging Output	12 Volt, 15 Amp
System Polarity.....	Negative Ground
Starter.....	12 Volt Electric Ring Gear Type, Key and Solenoid Operated
Interlock Switches.....	Foot Actuated Engine Kill, Brake Interlock, Blade/Clutch Interlock Switch
Instrument Panel	Ammeter, Hour Meter, Key Switch, Throttle, Fuses, Manual Choke, Blade Brake Clutch Switch
Wire Harness.....	14 Gauge Wire
Fuses.....	Two (2) 20 Amp

3.3 POWER HEAD

Frame	Hybrid Tractor Trailer Frame with Stabilized Pivot
Engine Deck	7 Gauge Steel
Drive System	Hydraulic Drive with One Variable Displacement Pump and Two Cast-Iron High Torque Motors
Hydrostatic Pump	#15 Cast-Iron Variable Displacement Pump with Remote Dump Valve
Dump Valve	Single Lever Allows For Movement without Engine Running
Drive Wheel Motors	12 Cu. Inch Cast-Iron High Torque Motors 1-1/4" Tapered Motor Shafts
Drive Belts	Kevlar Cord. Self-Adjusting, Self-Tightening
Steering	Aircraft-Type Yoke Steering Handle with Stainless Steel Cable
Travel Control.....	Hydro Drive with Single Foot Pedal For Forward and Reverse, Infinitely Variable Speeds
Brakes	Integral Braking with Drive System
Parking Brake	Drum-Type
Drive Wheels/Tires	20 X 10.0 - 10 Four-Ply Pneumatic Tubeless, Radius Edge
Steering Wheel/Tire.....	16 X 6.5 - 8 Four-Ply Pneumatic Tubeless Turf Tread, Split Rims, Roller Bearings
Tire Pressure:	
Steering Tire	15 - 28 psi, 20 psi Nominal
Drive Tires	12 psi
Fuel Tank	5 Gallon (19.0 Liters) Seamless Polyethylene Tank with Fuel Gauge Gas Cap
Seat	Foam Padded, Lever Adjustment Forward and Back, with Padded Arm Rests

Section 3

Travel Speed:

Forward	0-6.8 mph
Reverse	0-5.4 mph

-Note- The machine will travel at 6.8 mph for transport purposes. For best cutting performance the forward travel speed should be adjusted depending upon the cutting conditions.

3.4 CUTTER DECK

Type	Out-Front Design with Anti-Scalp Roller and Pneumatic Shock Absorber For Deck Flotation
Construction	10-Gauge Steel with 7-Gauge (3/16") Steel Skirt. Trim-Side Wear Pad
Cutting Width:	
SM61V	61.0 Inches (155.0 cm)
SM72A	71.5 Inches (181.6 cm)
Cutter Deck Baffles.....	Custom Cut Baffle Allows Adjustment To Individual Cutting Conditions (up to 7 Positions)
Cutting Height Adjustment.....	Adjustable From 1-3/4" To 4-1/2" In 1/4" Increments
Cutter Blades.....	0.197 In. Thick, Milled Edge, Wear Resistant High Strength Marbain™ Cutter Blades
SM61V	Three (3) 21"
SM72A	Three (3) 24"
Blade Engagement	Electric Blade Brake Clutch with Instrument Panel Switch
Clutch Type	Ogura Heavy Duty PTO Clutch Brake
Lift System.....	Patented Manual Winch with Automatic Brake/Clutch, Stainless Steel Cable
Discharge Opening.....	Extra Wide with Spring-Loaded Polypropylene Discharge Chute
SM61V	18.5" Discharge Opening
SM72A	14.75" Discharge Opening
Spindles.....	Heavy-Duty 1-1/8" Top Dimension Spindle Shaft, Cast Housing, Taper Roller Bearing, Low Maintenance with Top Access Grease Fitting and Grease Overfill Relief Poppet
Spindle Pulleys	Split Steel Design with Easily Removed Taper Hubs
Idler Arm	Heavy-Duty Idler Arm Of 1/4" Channel Steel
Cutter Deck Belts.....	B-Section with Kevlar Cord
Caster Wheels	9 X 3.5 Smooth Tread Flotation, Split Rims, Roller Bearings, with Quick Pin Removal
Flat-Free Caster Tires.....	Semi-Pneumatic Caster Tires Minimize Downtime Resulting From Flats

3.5 HYDRAULIC SYSTEM

Hydro Fluid Cooling	Heavy-Duty Cooling Radiator
Hydraulic Oil Filter	10 Micron Spin-On Element Type
Hydraulic Reservoir	Nylon Cooling Reservoir, 13 Qt. Capacity SAE 10W30 Fluid

3.6 WEIGHTS AND DIMENSIONS

	SM61V	SM72A
Length.....	110.0"	115.0"
Length with Grass Catcher	137.0"	142.0"
Tracking Width	50.0"	50.0"
Width	72.0"	83.0"
Width (with Discharge Chute Up)	62.0"	73.0"
Height	43.0"	43.0"
Weight	950#	1000#

3.7 PRODUCTIVITY

	SM61V	SM72A
Cutting Width	61"	71.5"
Acres Per Day.....	23.7	28

The preceding chart will aid you in determining how many acres your Scag mower will cut per day. The chart is an estimate based on 8 hours per day cutting time at 6 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.

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 and has three positions; OFF, ON, and START.
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. **Fuse Holders (Figure 4-1).** Two 20-amp fuses protect the mower's electrical system. To replace fuses, pull fuse out of the socket and install a new fuse.
4. **Hourmeter (Figure 4-1).** Indicates the number of hours the engine has been operated. It operates whenever the ignition key switch is in the ON position. Has preset maintenance reminders for engine and hydraulic system oil changes. Will start flashing scheduled maintenance 2 hours before preset time and continue flashing until 2 hours after. Automatically resets.
5. **Ammeter (Figure 4-1).** Indicates the current flow of the charging system.
6. **Parking Brake Control (Figure 4-1).** Used to engage and disengage the parking brakes. Pull the lever back to engage the parking brakes. Push the lever forward to disengage the parking brakes.
7. **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.

8. **Engine Choke Control (Figure 4-1).** Used to start a cold engine.
9. **Fuel Shutoff Valve (Figure 4-1).** Located on the bottom of the fuel tank. Used to shut off fuel supply to the engine. Rotate the valve clockwise to supply fuel from the tank.
10. **Lift Winch (Figure 4-1).** Used to raise and lower the cutter deck.
11. **Dump Valve Control Levers (Figure 4-1).** Located on the control panel pedestal, used to "free-wheel" the mower. Rotating the lever clockwise until it stops (closed) allows the unit to move under hydraulic power. The levers must be in this position and torqued to 10 lb-ft during operation of the mower. Rotating the lever counter-clockwise (open) allows the mower to be moved by hand (free-wheeling).

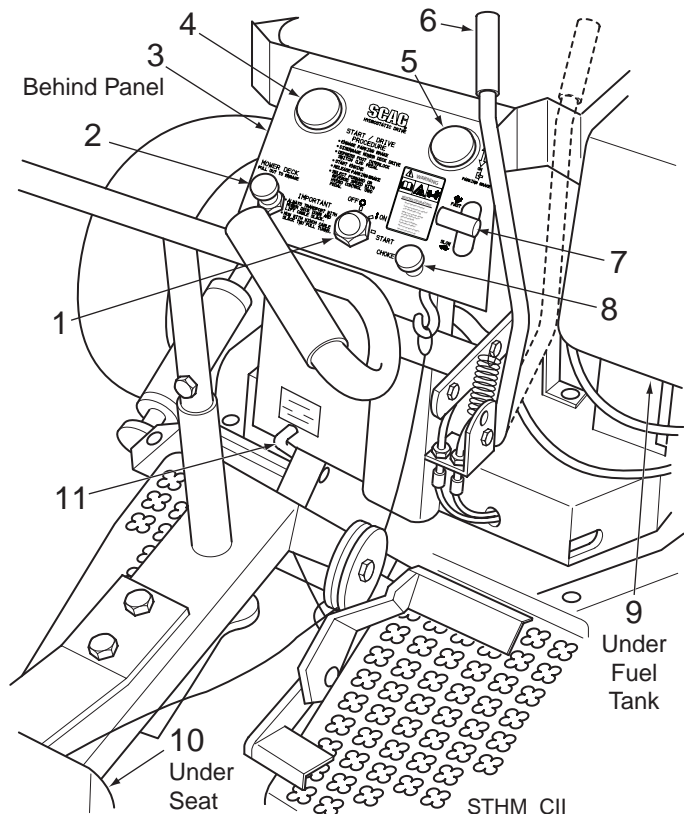


Figure 4-1. Control and Instrument Location

4.2 SAFETY INTERLOCK SYSTEM

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.

The mower is equipped with a safety interlock system that prevents the engine from starting unless the deck drive is disengaged, the parking brake is engaged, the drive pedal is in the neutral position, and the operator presents pedal is pressed. The interlock system shuts off the engine if the operator leaves the seat with the drive pedal not in the neutral position and/or the cutter blades engaged and the parking brake not engaged.

4.3 INITIAL RUN-IN PROCEDURES

FIRST DAY OF USE OR APPROXIMATELY 10 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 hydraulic oil level in reservoir. (See Section 7.3.)
4. Check for loose hardware. Tighten as needed.
5. Check interlock system for proper operation. (See Section 4.2.).
6. Check the neutral adjustment. (See Adjustments, page 9)
7. 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 under the fuel tank, is completely open.
2. Sit in the operator's seat, depress the left foot (operator presents) pedal, and place the right foot (drive) pedal in the neutral position.
3. Engage the parking brake.
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 START position and release the key as soon as the engine starts. Do not hold the key in the START position for more than 15 seconds at a time. Allow at least 60 seconds between each cranking attempt to prevent overheating of the starter motor. Prolonged cranking can damage the starter motor and shorten battery life.
8. Allow engine to warm before operating the mower.

4.5 GROUND TRAVEL

- IMPORTANT -

If you are not familiar with the operation of this machine, 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 foot control and the steering control to obtain a smooth operating action.

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

FORWARD TRAVEL

- NOTE -

The left side operator presence pedal must be depressed for operation.

To travel forward with the mower, disengage the parking brake, slowly depress the toe end of the drive pedal (right). The further the drive pedal is depressed the greater the forward speed will be. To increase the speed, depress the drive pedal further forward and to decrease the speed, allow the drive pedal to return toward the neutral position.

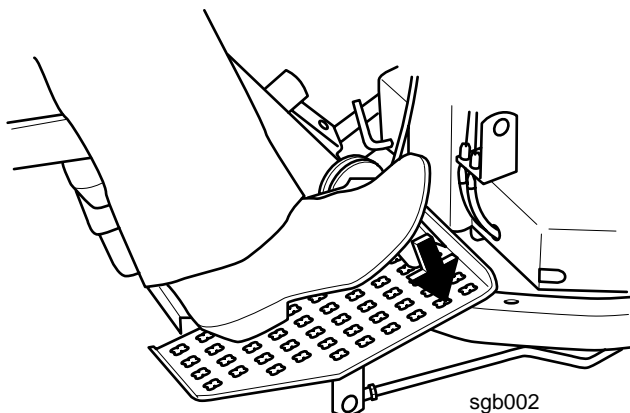


Figure 4-2. Forward Operation
Depress Toe End of Pedal

To stop the forward travel, release the drive pedal to the neutral position.

- IMPORTANT -

When driving over curbs, disengage the cutter blades and raise the cutter deck to clear the curb. Drive forward over the curb. After the curb is clear, lower the cutter deck back to normal operating position. Be sure to leave slack in the cable after lowering the cutter deck.

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.

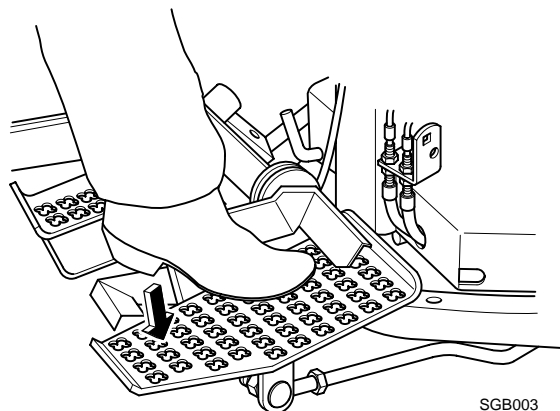
! CAUTION

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

- NOTE -

The left side operator presence pedal must be depressed for operation.

To travel in reverse with the mower, disengage the parking brake, slowly depress the heel end of the drive pedal (right). The further the drive pedal is depressed the greater the reverse speed will be. To increase the speed, depress the drive pedal further rearward and to decrease the speed, allow the drive pedal to return toward the neutral position.



SGB003

Figure 4-3. Reverse Operation
Depress Heel End of Pedal

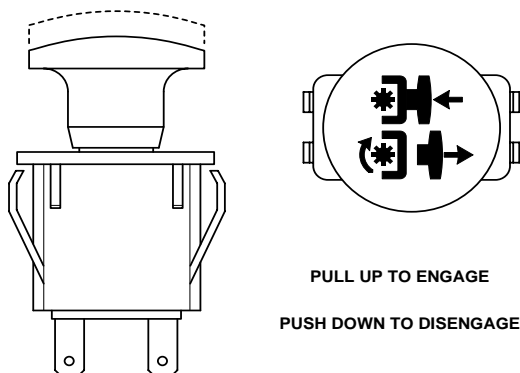
To stop the reverse travel, release the drive pedal to the neutral position.

- NOTE -

The mower may not travel straight in reverse. Slight adjustments may need to be made using the steering control.

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 up on the yellow switch, located on the instrument panel, to the engage position. See Figure 4-4.



390S01:

Figure 4-4. 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. To check a slope, attempt to back up it (with the cutter deck down). If the machine can back up the slope without the wheels slipping, reduce speed and use extreme caution. Under no circumstances should the machine be operated on slopes greater than 15 degrees. **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. Loss of traction may occur when traveling on a hill or slope. Weight transfer on the machine may cause the drive wheels to slip causing loss of braking or steering.
4. 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. Place the drive pedal in the neutral position.
3. Disengage the cutter blades.
4. Slow the engine to idle speed.
5. Engage the parking brake.
6. 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. See Section 7.10 Tires.

4.10 REMOVING CLOGGED MATERIAL

DANGER

ROTATING BLADES

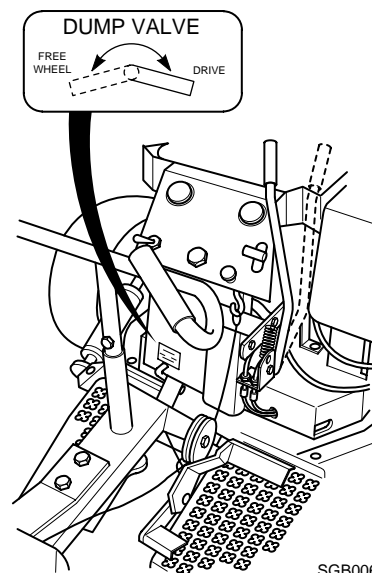
NEVER PUT YOUR HANDS INTO THE DISCHARGE CHUTE FOR ANY REASON!

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 "freewheel" or move the machine around without the engine running, rotate the dump valve lever located on the left rear of the engine deck to the freewheel position. See Figure 4-5. Disengage the parking brake and move the mower by hand. When the machine is in the desired position, engage the parking brake and rotate the lever to the drive position. The dump valve lever must be returned to the DRIVE position to drive the mower.



SGB006

Figure 4-5. Dump Valve Location

- NOTE -

To prevent damage to the hydraulic system, do not exceed 1MPH when moving the machine in the freewheel position.

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

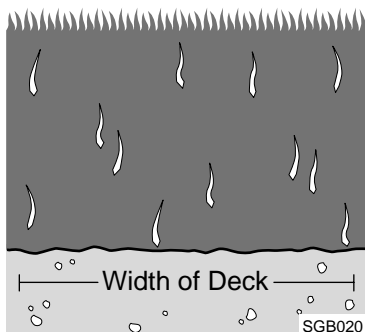
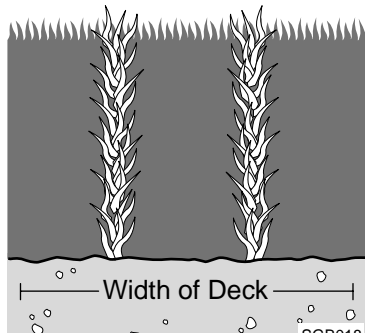
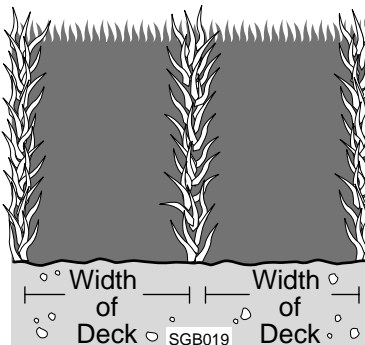
DO NOT operate without Discharge Chute, Mulching Kit, or entire Grass Catcher properly installed.

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.

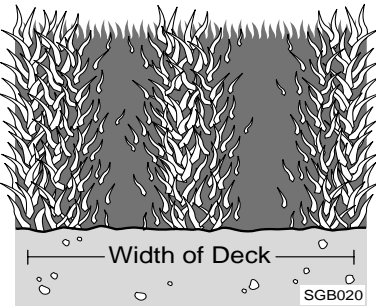
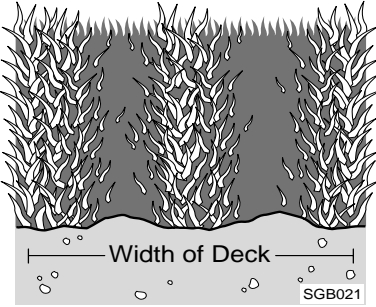
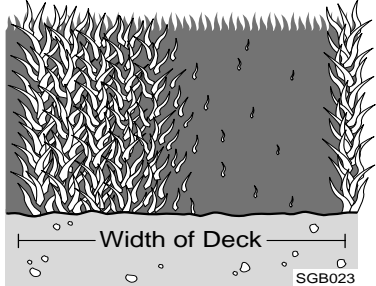
4.13 TOWING (OPTIONAL HITCH ACCESSORY)

1. NEVER allow children or others in or on towed equipment.
2. Tow only with a machine that has a hitch designed for towing. Do not attach towed equipment except at the hitch point.
3. Follow manufacturer's recommendations for weight limit for towed equipment. 250 lbs. maximum towing weight.
4. NEVER tow on slopes. The weight of the towed equipment may cause loss of traction and loss of control.
5. Travel slowly and allow extra distance to stop.
6. Sharp turns with a trailer attached could cause damage to the trailer or mower.

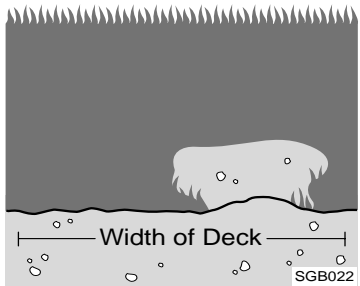
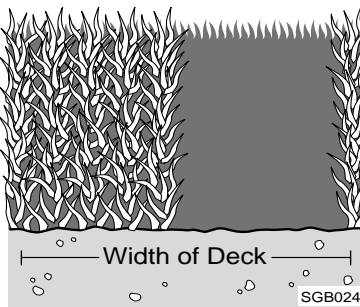
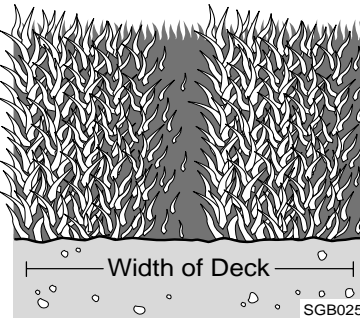
TROUBLESHOOTING CUTTING CONDITIONS

CONDITION	CAUSE	CURE
STRINGERS - OCCASIONAL BLADES OF UNCUT GRASS 	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
STREAKING - STRIPS OF UNCUT GRASS IN CUTTING PATH 	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
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 APPEARANCE, SCALLOPED CUT, OR ROUGH CONTOUR 	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
UNEVEN CUT ON 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 	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
SCALPING - BLADES HITTING DIRT OR CUTTING VERY CLOSE TO THE GROUND 	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
STEP CUT - RIDGE IN CENTER OF CUTTING PATH 	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
SLOPE CUT - SLOPING RIDGES ACROSS WIDTH OF CUTTING PATH 	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 PARKING BRAKE ADJUSTMENT

WARNING

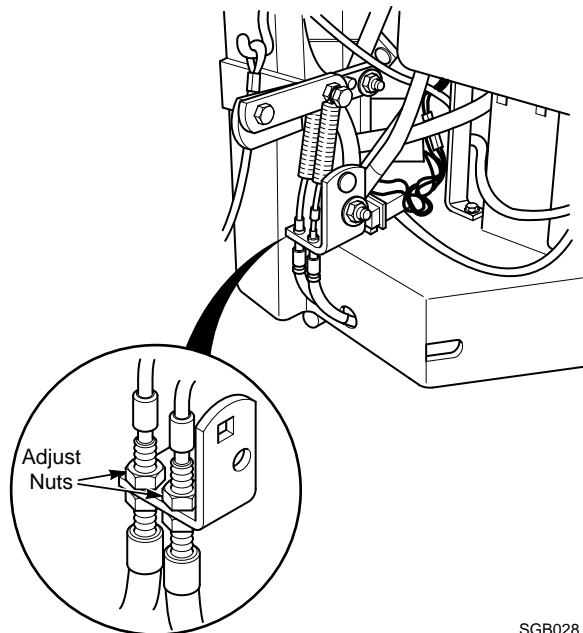
Do not operate the mower if the parking brake is not operable. Possible severe injury could result.

Minor brake adjustments can be made by loosening the top nut on both brake cables. The parking brake cable should be adjusted whenever the parking brake lever is placed in the "ENGAGE" position and the parking brake will allow the mower to move.

- NOTE -

This is a minor brake adjustment. If the brakes do not function properly after this adjustment, see your Scag Service Dealer before operating your mower.

1. Loosen the top nut on both brake cables approximately 1/4". See Figure 6-1.



SGB028

Figure 6-1. Parking Brake Adjustment

2. While pulling one cable downward, tighten the bottom nut on the cable until it touches the bottom of the brake cable mount.

3. Tighten both the top and bottom nuts to lock the cable in place.
4. Repeat the above steps for the second brake cable. Make sure that both cables are adjusted evenly so that the brakes do not cause the mower to pull to the left or right.

6.2 NEUTRAL ADJUSTMENT

1. Set the engine deck up on jack stands so the wheels are free to rotate.
2. Block the caster wheels to prevent an accident should the machine fall off the jack stands.
3. Start the engine and determine if the drive wheels rotate.

A. If the drive wheels consistently rotate when foot pedal control is in neutral, go to step 4.

B. If the drive wheels inconsistently rotate, i.e. drive wheels sometimes rotate and sometimes do not when foot pedal is not depressed, then check neutral adjustment bolt for "zero free play" in neutral control spring.

- NOTE -

If there is free play in the foot pedal have your SCAG servicing dealer inspect the machine and repair it as needed.

4. If the drive wheels rotate in the forward travel direction, turn the adjustment bolt clockwise until the tire rotation stops. If the drive wheels rotate in the backward travel direction, turn the adjustment bolt counter-clockwise until the tire rotation stops. See Figure 6-2.

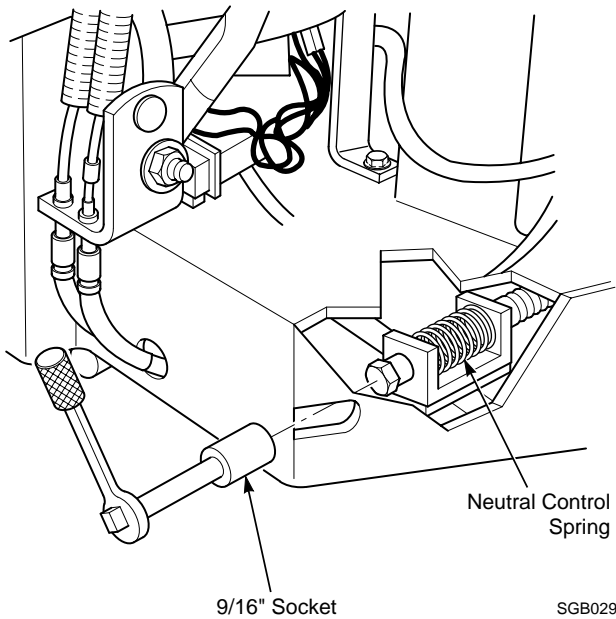


Figure 6-2. Neutral Adjustment

5. Check the adjustment of the right foot control pedal for full forward speed. The pedal should rest on the foot plate when the pump is stroked in the full forward position. To make an adjustment, disconnect the ball joint from the pedal arm and loosen the jam nut. See Figure 6-3. Place the foot control pedal forward against the foot rest and adjust the ball joint on the rod until the stud aligns with the hole in the arm. Bolt the ball joint to the arm and tighten the jam nut.

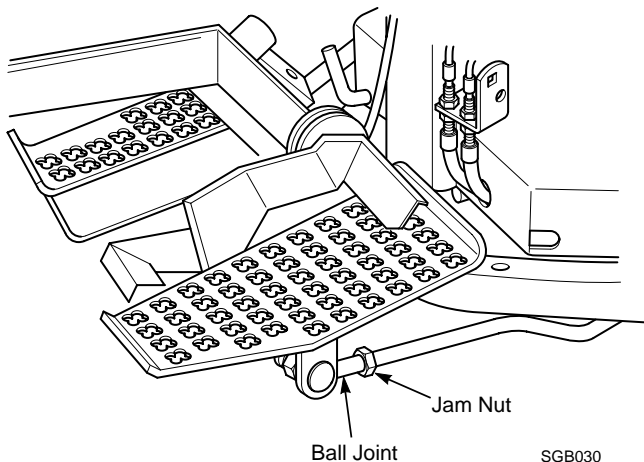


Figure 6-3. Foot Control Pedal Adjustment

6. Start the engine. The wheels should rotate only when the foot control pedal is depressed.

6.3 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.

6.4 BELT ADJUSTMENT

⚠ WARNING

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

- NOTE -

The Hydro Drive Belt is spring-loaded and does not require adjustment.

To adjust cutter deck drive and blade belts:

1. Remove belt cover.
2. To adjust cutter deck drive belt:
 - A. Adjust the nut so that the belt moves 1/2" with 10 pounds of pressure. See Figure 6-4.

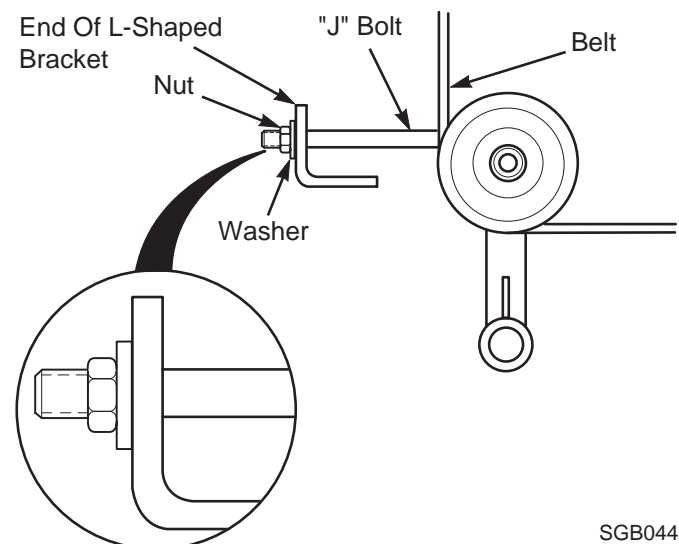


Figure 6-4. Cutter Deck Drive Belt Tension

3. To adjust blade drive belt:

- A. Using a belt tension gauge, check the belt tension so that the belt moves 1/2" with 10 pounds of pressure. See Figure 6-5.

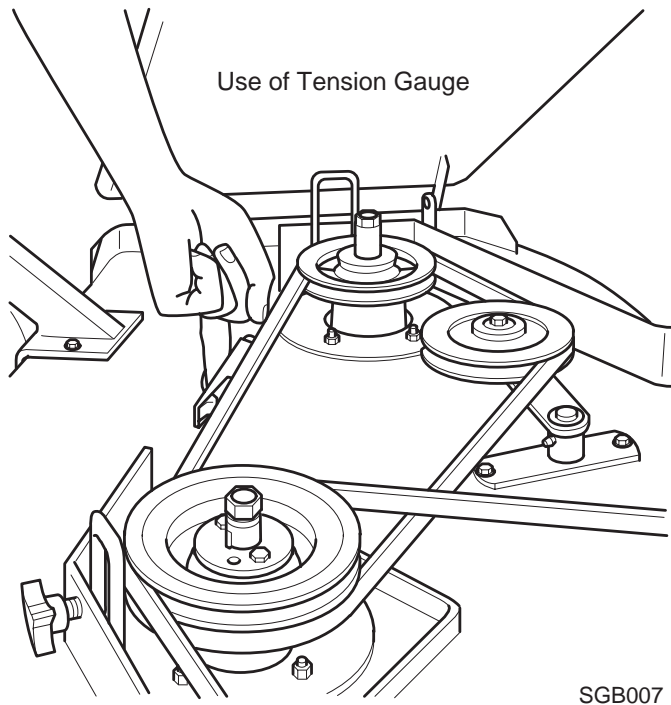


Figure 6-5. Blade Drive Belt Tension Check

- B. Adjust the tension by tightening or loosening the nut on the J-bolt. See Figure 6-6.

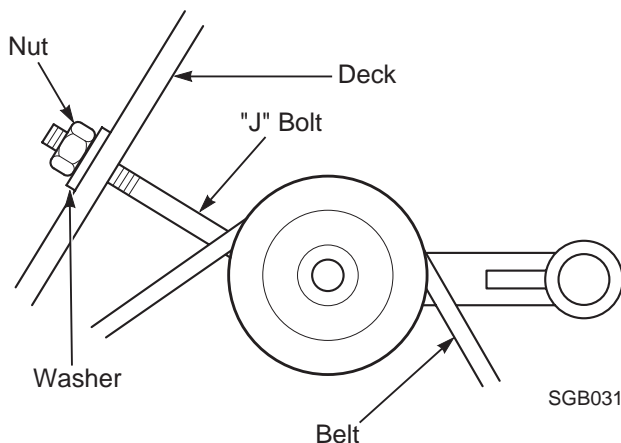


Figure 6-6. Blade Belt Tension Adjustment

4. Replace the belt covers.

6.5 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.

6.6 CUTTER DECK ADJUSTMENTS

! WARNING

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

Due to the many conditions that exist, it is difficult to suggest a setting that will work for every lawn. There are, however, two adjustments that should be made on the cutter deck: pitch and height.

PITCH is the angle of the blades (comparing front to rear).

HEIGHT is the nominal distance that the blade is off the ground. This measurement is made with the blades pointed side to side and distance is measured between cutting tip and ground.

Adjusting the blade height can be done by moving any number of the five smaller spacers on the blade mounting bolts to the top or to the bottom of the spindle shaft. All blades should be positioned equally. The unit is shipped with one spacer on top of spindle and four underneath. See Figure 6-7.

This adjustment does not affect blade pitch.

- NOTE -

For best results, keep the cutter deck high in relation to the engine deck and the blades low in the cutter deck; i.e. 4 or 5 spacers below the spindle shaft.

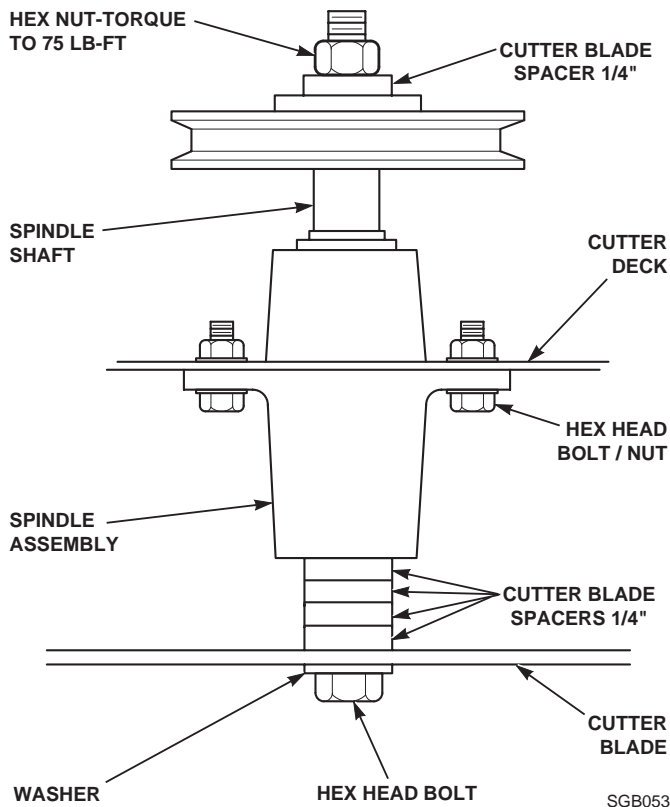


Figure 6-7. Cutter Blade Adjustment

Additional range to the cutting height can be achieved by repositioning the cutter deck in relationship to the engine deck. This adjustment also affects the pitch of the deck.

There are three positions for mounting the cutter deck. See Figure 6-8.

- For cutting in the lowest position, mount the cutter deck in the top hole (A).
- For cutting in the mid-range position, mount the cutter deck in the middle hole (B).
- For cutting in the highest position, mount the deck in the lowest hole (C).

Setting the cutter deck height will be determined by the type of cutting conditions.

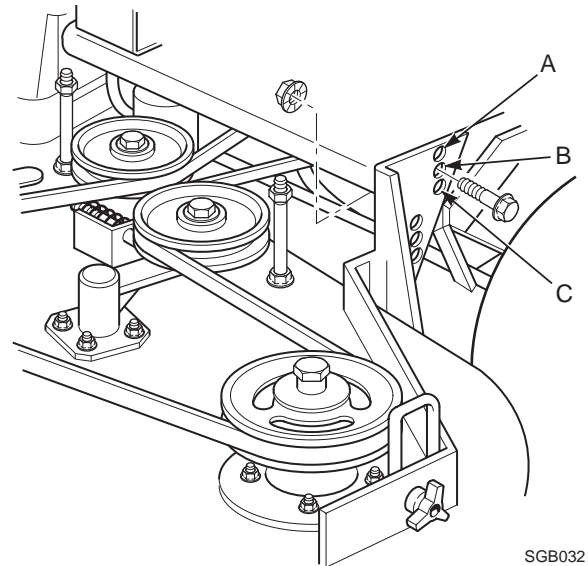


Figure 6-8. Cutter Deck Height Adjustment

Caster spacers also can be repositioned to change the cutting heights and to change the pitch of the deck. See Figure 6-9.

To adjust the caster spacers, raise the deck and remove the pin and caster wheel. Reposition the caster spacers as needed, then replace the caster, top spacers and pin. Make the same adjustments on the other caster wheel.

To adjust the blade height, move any number of the five 1/4" thick spacers on the blade mounting bolts to the top of the spindle shaft or below the spindle shaft.

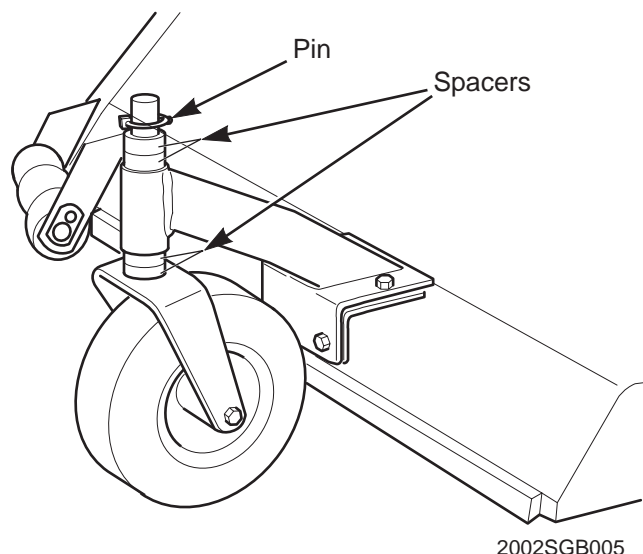


Figure 6-9. Repositioning Spacers

6.7 CUSTOM-CUT BAFFLE ADJUSTMENT

The Custom-Cut Baffle is designed to deliver optimum airflow and superior cutting performance in any type of grass. The Custom-Cut Baffle can be raised or lowered to precisely tailor the deck's performance for the type of grass being cut. The baffle can be set in three (3) (early models), or seven (7) (current production) different positions for optimum performance.

3-POSITION CUSTOM-CUT BAFFLE ADJUSTMENT

A. 3" Position - (See Figure 6-10). Baffle is installed using the top set of holes on the front baffle welded inside the cutter deck. In this position the Velocity-Plus cutter deck will deliver the best quality-of-cut in very tall, wiry, tough to cut grass.

B. 3-1/2" Position - (See Figure 6-10). Baffle is installed using the middle set of holes on the front baffle welded inside the cutter deck. Can be used for general purpose cutting. Placing the Custom-Cut Baffle in the 3-1/2" position gives a good mix of cutting performance in all types of grass.

C. 4" Position (factory setting) - (See Figure 6-10). Baffle is installed using the bottom set of holes on the front baffle welded inside the cutter deck. Placing the baffle in the 4" setting will enhance fall cutting (leaf pickup) and reduce cutter deck "blowout".

To adjust the Custom-Cut Baffle height:

1. Place the cutter deck in the transport position.
2. Remove the hardware securing the Custom-Cut Baffle to the cutter deck. See Figure 6-10.

- NOTE -

Hardware location used in the illustrations are for reference only. Location of hardware may vary depending on cutter deck size.

3. Move the Custom-Cut Baffle to desired position. See Figure 6-10.
4. Reinstall the mounting hardware as shown. Torque hardware to 39 lb-ft.

7-POSITION CUSTOM-CUT BAFFLE ADJUSTMENT

A. 3-1/2" or 3-3/4" Position - (See Figure 6-11). For very tall, wiry or tough-to-cut grass.

B. 4" (factory setting), 4-1/4" or 4-1/2" Position - (See Figure 6-11). For general purpose cutting. This gives the best mix of cutting performance in all types of grass.

C. 4-3/4" or 5-1/4" Position - (See Figure 6-11). Placing the baffle in either the 4-3/4" or 5-1/4" setting will enhance fall cutting (leaf pickup) and reduce cutter deck "blowout".

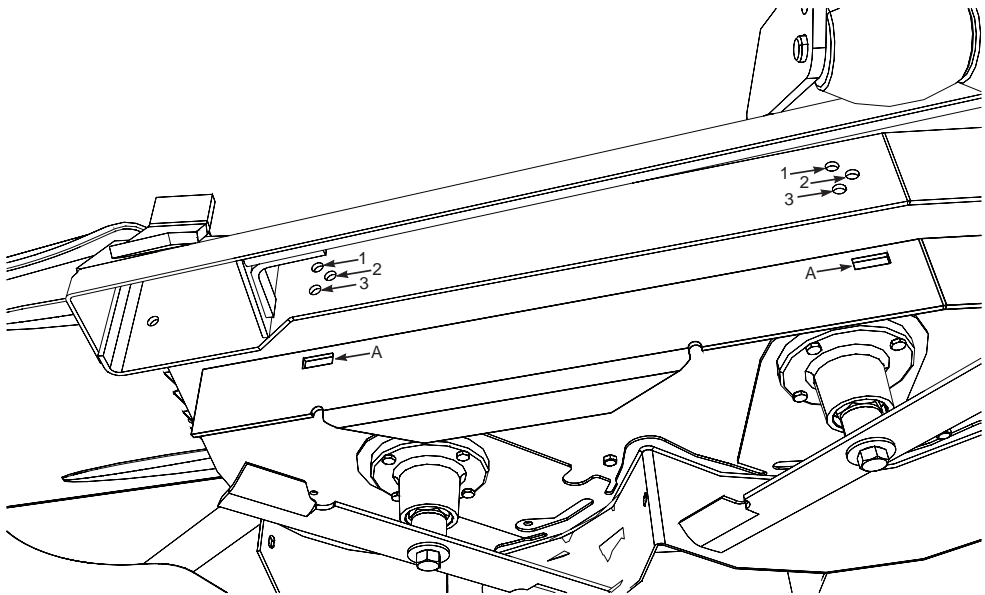
To adjust the Custom-Cut Baffle height:

1. Place the cutter deck in the transport position.
2. Remove the hardware securing the Custom-Cut Baffle to the cutter deck.

- NOTE -

Hardware location used in the illustrations are for reference only. Location of hardware may vary depending on cutter deck size.

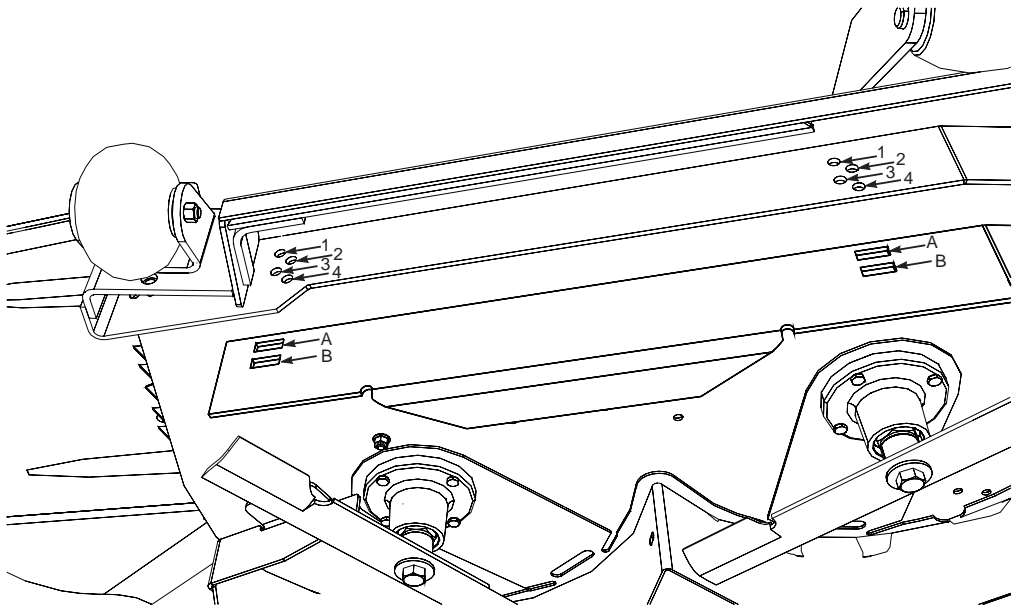
3. Move the Custom-Cut Baffle to desired position. See Figures 6-11.
4. Reinstall the mounting hardware. Torque hardware to 39 lb-ft.



Custom-Cut Baffle Adjustment

Mounting Slot	Mounting Hardware Location		
Slot "A"	Hole 1	Hole 2	Hole 3
Height (inches)	3"	3-1/2"	4"

Figure 6-10. 3-Position Custom-Cut Baffle Adjustment



Custom-Cut Baffle Adjustment

Mounting Slot Selected	Mounting Hardware Location			
Slot "A"	Hole 1	Hole 2	Hole 3	Hole 4
Height (inches)	3-3/4"	4-1/4"	4-3/4"	5-1/4"
Slot "B"		Hole 2	Hole 3	Hole 4
Height (inches)		3-1/2"	4"	4-1/2"

Figure 6-11. 7-Position Custom-Cut Baffle Adjustment

MAINTENANCE

7.1 MAINTENANCE CHART - RECOMMENDED SERVICE INTERVALS

HOURS						PROCEDURE	COMMENTS
BREAK-IN (FIRST 10)	8	40	100	200	500		
X						Check all hardware for tightness	
X						Check hydraulic oil level	See paragraph 7.3
X						Check all belts for proper alignment	See paragraph 7.7
X						Change engine oil and filter	See paragraph 7.4
X						Check hydraulic hoses for leaks	Use extreme caution when checking the hydraulic hoses. See paragraph 2.5
	X					Check engine oil level	See paragraph 7.4
	X					*Clean mower	See paragraph 7.11
	X					Check condition of blades	See paragraph 7.9
	X					Apply grease to fittings	See paragraph 7.2
	X					Check tire pressure	See paragraph 7.10
	X					*Clean air filter/check for damage or loose part	See paragraph 7.6
	X					*Check/clean air intake and cooling areas	See paragraph 7.11
	X					Check the operator interlock system	See paragraph 4.2
		X				Check battery electrolyte level clean battery posts and cables	See paragraph 7.8
		X				Check belts for proper alignment	See paragraph 7.7
			X			Apply grease to fittings	See paragraph 7.2
			X			Change engine oil	See paragraph 7.4
			X			*Clean air cleaner element	See paragraph 7.6
			X			Check spark plug condition and gap	See engine mfg. information
			X			Check and clean engine cooling areas	See paragraph 7.11

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

MAINTENANCE CHART - RECOMMENDED SERVICE INTERVALS (CONT'D)

BREAK-IN (FIRST 10)	HOURS					PROCEDURE	COMMENTS
	8	40	100	200	500		
				X		Apply grease to fittings	See paragraph 7.2
				X		Check hardware for tightness	
				X		Change engine oil filter	See paragraph 7.4
				X		Check hydraulic oil level	See paragraph 7.3
					X	Replace engine fuel filter	See paragraph 7.5
					X	Drain hydraulic system and replace hydraulic oil	Use SAE 10W30 Motor Oil. See paragraph 7.3
					X	Replace hydraulic oil filter	See paragraph 7.3

7.2 LUBRICATION

GREASE FITTING LUBRICATION CHART

LOCATION	LUBRICATION INTERVAL	LUBRICANT	NO. OF PLACES
Cutter Deck Spindle	40 Hours/Weekly	Lithium MP White Grease 2125	3
Caster Wheel Bearings	100 Hours/Monthly	Chassis Grease	2
Idler Arm Pivots	100 Hours/Bi-Weekly	Chassis Grease	4
Rider Frame Pivot	200 Hours/Monthly	Chassis Grease	2
Control Bell Cranks	200 Hours/Monthly	Chassis Grease	2
Steering Handle Bearing	200 Hours/Monthly	Chassis Grease	1
Grease foot pedal bearings	200 Hours/Monthly	Chassis Grease	2
Rear Wheel Pivot (vertical)	200 Hours/Monthly	Chassis Grease	1
Rear Wheel Bearing	200 Hours/Monthly	Lithium MP White Grease 2125	1

+ Compatible Greases:

- Mobilix #2 found at Mobil Service Stations
- Ronex MP found at Exxon Service Stations
- Super Lube MEP #2 & Super Stay-M #2 found at Conoco Stations
- Shell Alvania #2 found at Shell Service Stations
- Lidok EP #2 found at industrial shops

* Remove plug and insert grease zerk. Before filling with grease, remove dust cap from the top of the pivot.

7.3 HYDRAULIC SYSTEM

A. CHECKING HYDRAULIC OIL LEVEL

The hydraulic oil level should be checked after the first 10 hours of operation. Thereafter, check the oil after every 200 hours of machine operation or monthly, whichever occurs first.

- IMPORTANT -

If the oil level is consistently low, check for leaks and correct immediately.

1. Wipe dirt and contaminants from around the reservoir cap. Remove the cap from the hydraulic oil reservoir.
2. Visually check the level of hydraulic oil. Hydraulic oil must be at least 3" inches from top of the filler neck. If the level cannot be determined visually, use a clean tape measure to check the level. If the fluid is low, add 20W50 motor oil. DO NOT overfill; (overfilling the oil reservoir may cause oil seepage around the cap area).
3. Clean the fill cap and install it onto the reservoir.

B. CHANGING HYDRAULIC OIL

The hydraulic oil should be changed after every 500 hours or annually, whichever occurs first. The oil should also be changed if the color of the fluid has become black or milky. A black color and/or a rancid odor usually indicates possible overheating of the oil, and a milky color usually indicates water in the hydraulic oil.

- IMPORTANT -

The hydraulic oil should be changed if you notice the presence of water or a rancid odor to the hydraulic oil.

1. Park the mower on a level surface and stop the engine.
2. Place a suitable container under the hydraulic oil filter.
3. Remove the fill cap from the reservoir and the drain plug from the bottom of the drain tee fitting on the front side of the filter base. See Figure 7-1.
4. Allow the fluid to drain into the container and properly discard it.

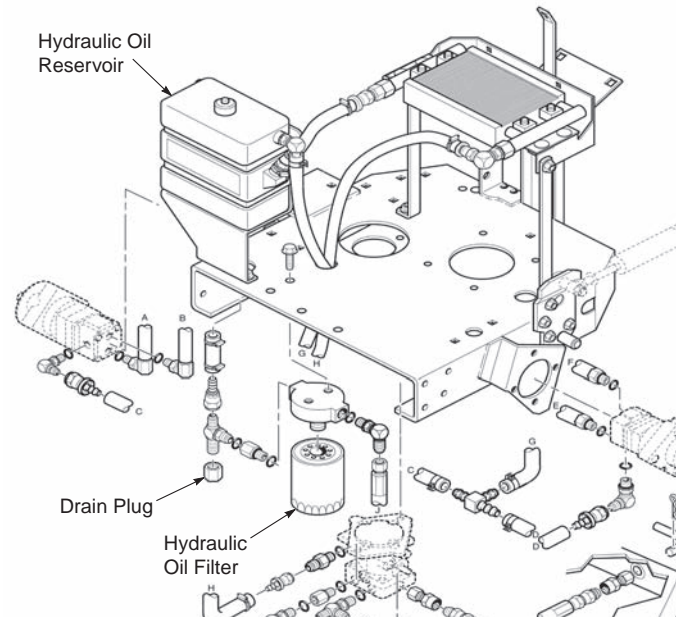


Figure 7-1. Hydraulic Oil Filter and Drain Plug

5. Re-install the drain plug into the tee fitting and be sure it is tight.

- NOTE -

Before refilling the hydraulic oil reservoir the hydraulic oil filter should be changed as outlined in Procedure C "Changing Hydraulic Oil Filter Element" on the next page.

6. Fill the reservoir to 3-1/4" inches from the top of the filler neck with 20W50 motor oil.
7. Replace the reservoir fill cap. Start the engine and drive forward and backward for two minutes. Check the oil level in the reservoir. If necessary, add oil to the reservoir.

C. CHANGING HYDRAULIC OIL FILTER ELEMENT

The hydraulic oil filter should be changed after every 500 hours of operation or annually, whichever occurs first.

1. Remove the oil filter element and properly discard it. Fill the new filter with clean oil and install the filter. Hand tighten only. See Figure 7-1.
2. Run the engine at idle speed with the speed control lever in neutral for five minutes.
3. Check the oil level in the hydraulic tank. It must be 3-1/4" inches from the top of the filler neck. If necessary, add SAE 20W50 motor oil.

7.4 ENGINE OIL

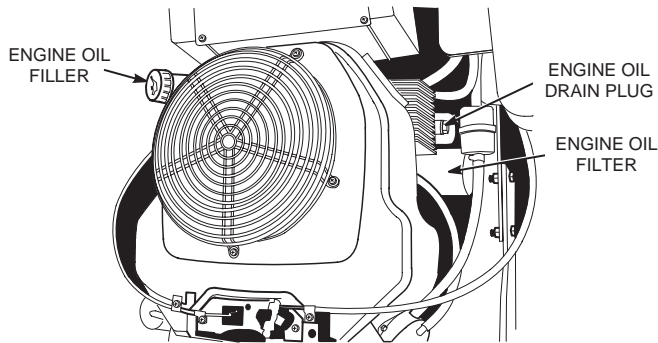


Figure 7-2. Kohler Engine Oil Fill/Dipstick, Filter and Drain Locations

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 7-2.

7.5 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 an open flame, spark or pilot light is present, 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.
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 7-3.

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

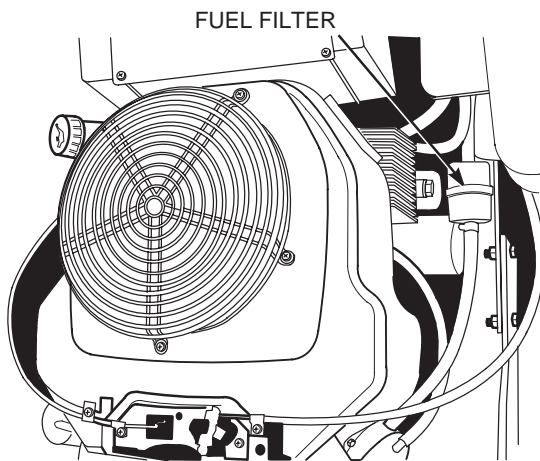


Figure 7-3. Fuel Filter

7.6 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.

7.7 DRIVE BELT

The drive belt is spring loaded and self-tensioning, however after the first 2, 4, 8 and 10 hours of operation, the belt should be checked for proper alignment and wear. Thereafter, check the belt 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 BATTERY

WARNING

Lead-acid batteries produce flammable and explosive gases. To avoid personal injury when checking, testing or charging batteries, **DO NOT** use smoking materials near batteries. Keep arcs, sparks and flames away from batteries. Provide proper ventilation and wear safety glasses.

WARNING

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to cause cancer and reproductive harm. Wash hands after handling.

WARNING

Electric storage battery fluid contains sulfuric acid which is **POISON** and can cause **SEVERE CHEMICAL BURNS**. Avoid contact of fluid with eyes, skin, or clothing. Use proper protective gear when handling batteries. **DO NOT** tip any battery beyond 45° angle in any direction. If fluid contact does occur, follow first aid suggestions below.

BATTERY ELECTROLYTE FIRST AID

External Contact — Flush with water.

Eyes — Flush with water for at least 15 minutes and get medical attention immediately.

Internal — Drink large quantities of water. Follow with Milk Of Magnesia, beaten egg, or vegetable oil. Get medical attention immediately. In case of internal contact, DO NOT give fluids that would induce vomiting.

B. CHARGING THE BATTERY

Refer to the battery charger's manual for specific instructions.

Under normal conditions the engine's alternator will have no problem keeping a charge on the battery. If the battery has been completely discharged for a long period of time, the alternator may not be able to recharge the battery, and a battery charger will be required.

DO NOT charge a frozen battery. It may explode and cause injury. Let the battery warm before attaching a charger.

Whenever possible, remove the battery from the mower before charging and make sure the electrolyte covers the plates in all cells.

WARNING

BATTERIES PRODUCE EXPLOSIVE GASES. Charge the battery in a well ventilated space so gases produced while charging can dissipate.

Charging rates between 3 and 50 amperes are satisfactory if excessive gassing or spewing of electrolyte does not occur or the battery does not feel excessively hot (over 125°F). If spewing or gassing occurs or the temperature exceeds 125°F, the charging rate must be reduced or temporarily stopped to permit cooling.

C. JUMP STARTING

1. The booster battery must be a 12 volt type. If a vehicle is used for jump starting, it must have a negative ground system.
2. When connecting the jumper cables, connect the positive cable to the positive battery post, then connect the negative cable to the negative battery post.

7.9 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 7-4.

1. Sharpen the cutting edge at the same bevel as the original. See Figure 7-4. Sharpen only the top of the cutting edge to maintain sharpness.

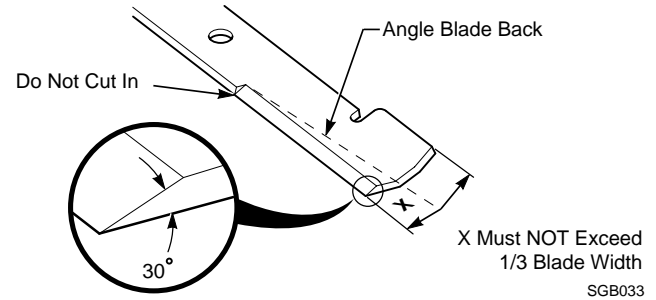


Figure 7-4. Blade Sharpening

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.

1. Remove the ignition key before replacing 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.
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 nut from the blade attaching bolt. Remove the cutter blade, bolt and spacer from the spindle shaft. See Figure 7-5.

- NOTE -

The front of the machine will have to be raised slightly to remove the blade bolt from the cutter spindle.

4. To install the new cutter blade, put the flat washer onto the blade bolt and slide the bolt into the hole in the cutter blade.

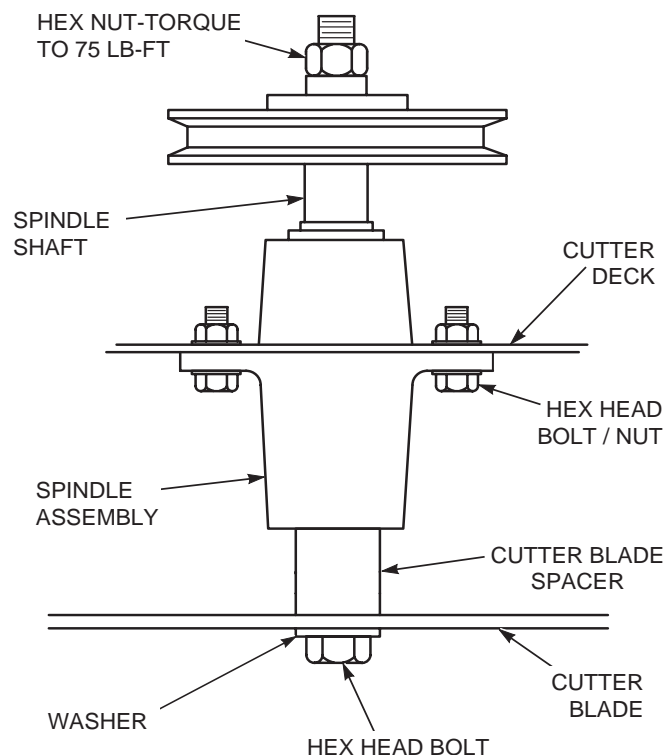


Figure 7-5. Blade Replacement

- NOTE -

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

5. Install the spacer onto the blade bolt and insert the bolt into the cutter spindle shaft.
6. Install the hex nut to the blade bolt at the top of the cutter spindle. Secure the blades from rotating and torque to 75 lb-ft. See Figure 7-5.

7.10 TIRES

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

Caster Wheels	Flat Free
Drive Wheels	12 PSI
Rear Steering	15 PSI

7.11 BODY, DECK, AND UPHOLSTERY

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

CAUTION

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. Use a mild soap solution or a vinyl/rubber cleaner to clean the seat.
4. Repair damaged metal surfaces using Scag touch-up paint available from your authorized Scag dealer. Wax the mower for maximum paint protection.

ILLUSTRATED PARTS LIST

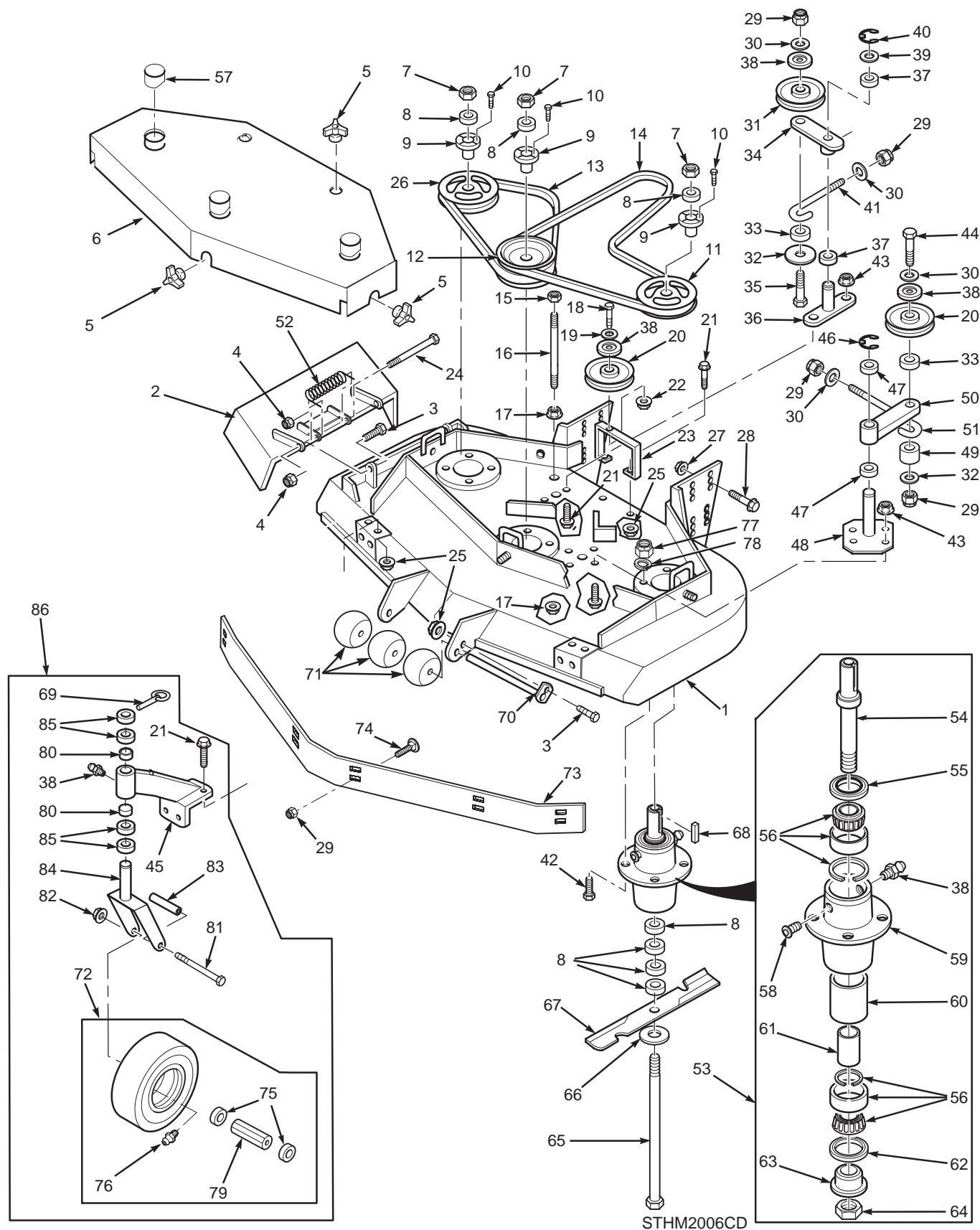
8.1 SCAG APPROVED ATTACHMENTS AND ACCESSORIES

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

Scag approved attachments and accessories:

- Mulch Plate (p/n 9288, 9262)
- Hurricane Mulch (p/n 9285, 9267)
- Cup Holder (p/n 9240)

SM-61V & SM-72A CUTTER DECK



STHM2006CD

SM-61V & SM-72A CUTTER DECK

Ref. No.	Part No.	Description	61	72	Ref. No.	Part No.	Description	61	72
1	461861	Cutter Deck, Velocity w/Decals	X		41	43028	J-Rod Idler Pulley	X	
	461864	Cutter Deck, Advantage w/Decals		X		44078	J-Rod Idler Pulley		X
2	461846	Discharge Chute, Velocity Plus	X		42	04001-175	Bolt, Hex Hd. 5/16-18 x 1-1/2" Grd 8	X	X
	461296	Discharge Chute, Advantage		X	43	04019-03	Nut, 5/16-18 Serr. Flng.	X	X
3	04001-09	Bolt, 5/16-18 x 1" Hex Hd.	X	X	44	04001-77	Bolt, 3/8-16 x 3-1/2" Hex Hd.	X	X
4	04021-10	Nut, 5/16-18 Elastic Stop	X	X	45	46082	Support Assembly	X	X
5	04029-03	Wing Nut, 3/8-16	X	X	46	04050-05	Retaining Ring, 1-1/8" EXT 'E'	X	X
6	461583	Belt Cover w/Decals	X		47	48224	Bearing	X	X
	46848	Belt Cover w/Decals		X	48	45329	Idler Pivot Support	X	X
7	04020-09	Nut, 5/8-11 Hex Hd.	X	X	49	43277	Spacer	X	X
8	43592	Spacer, Cutter Blade	X	X	50	461841	Idler Arm (Incl. 47)	X	X
9	48926	Tapered Hub, 1.125" Bore	X	X	51	44078	J-Rod, Drive Idler	X	X
10	04001-172	Bolt, 1/4-20 x 1" Hex Hd. Grd 8	X	X	52	482245	Spring, Chute Return	X	X
11	482745	Pulley, 6.35" O.D.	X		53	461663	Spindle Assembly	X	X
	482747	Pulley, 6.95" O.D.		X	54	43589	Shaft, Cutter Spindle	X	X
12	48940	Pulley, Double Groove, 6.35/5.75" O.D.	X		55	481024	Seal, 2.00" O.D. x 1.50" Bore	X	X
	48966	Pulley, Double Groove, 6.95/5.75" O.D.		X	56	481022	Bearing Assembly	X	X
13	48265	Belt, RH Blade Drive	X		57	48098	Shield, Spindle	X	X
	48295	Belt, RH Blade Drive		X	58	48677	Relief Fitting, Cutter Spindle	X	X
14	48912	Belt, Deck Drive	X		59	43664	Spindle Housing	X	X
	481001	Belt, Deck Drive		X	60	43312	Spacer, Outside	X	X
15	04021-05	Locknut, 3/8-16 Hex Hd.	X	X	61	43296	Spacer, Inside	X	X
16	04004-14	Stud, 3/8-16 x 6-3/4"	X	X	62	481025	Seal, 2.00" O.D. x 1.625" Bore	X	X
17	04019-04	Nut, 3/8-16 Serr. Flng.	X	X	63	43297	Spindle Bushing Bottom	X	X
18	04001-46	Bolt, 3/8-16 x 2-1/4"	X	X	64	481035	Nut, 1-1/16-18 UNEF-2B	X	X
19	04041-07	Flatwasher, 3/8 (.391 x .938 x .105")	X	X	65	04001-41	Bolt, 5/8-11 x 9-1/2"	X	X
20	483215	Pulley, Idler	X	X	66	04040-10	Flatwasher, 5/8 (.688 x 1.75 x .134")	X	X
21	04017-16	Capscrew, 5/16-18 x 3/4" Serr. Flng. Hex Hd.	X	X	67	482879	Cutter Blade, 21" Standard	X	
22	04021-09	Nut, 3/8-16 Elastic Stop	X	X		482880	Cutter Blade, 24" Standard		X
23	421355	Idler Pulley Support	X	X	68	04063-08	Key, 1/4 x 1/4 x 2"	X	X
24	04001-108	Bolt, Hex Hd. 5/16-18 x 4-1/4"	X	X	69	04066-01	Quick Pin	X	X
25	04019-03	Nut, 5/16-18 Serr. Flng. Hex Hd.	X	X	70	45944	Shaft, Roller	X	X
26	482744	Pulley, 5.75"	X	X	71	482295	Guide, Roller	X	X
27	04019-06	Nut, 1/2-13 Serr. Flng. Hex Hd.	X	X	72	9275	Wheel Assy., Caster	X	X
28	04017-37	Capscrew, 1/2-13 x 1-1/4" Serr. Flng.	X	X	73	424841	Baffle, Custom-Cut 61V	X	
29	04021-09	Nut, 3/8-16 Elastic Stop	X	X		423795	Baffle, Custom-Cut 72A		X
30	04041-07	Flatwasher, 3/8 (.391 x .938 x .105")	X	X	74	04003-23	Bolt, Carriage 3/8-16 x 1"	X	X
31	48181	Pulley	X	X	75	481770	Retainer, Caster Wheel	X	X
32	04041-12	Flatwasher, 3/8 (.375 x 1.50 x .060")	X	X	76	48114-03	Grease Fitting, 45 Deg. 1/4-28	X	X
33	43077	Spacer	X	X	77	04021-22	Nut, Elastic Stop 5/16-18 Grd 8	X	X
34	461091	Idler Arm (Incl. 37)	X	X	78	04030-03	Lockwasher, 5/16"	X	X
35	04001-46	Bolt, 3/8-16 x 2-1/4"	X	X	79	481769	Roller Bearing, Caster Wheel	X	X
36	45037	Idler Pivot	X	X	80	48100-01	Bushing, 7/8 x 1" Flanged	X	X
37	48224	Bearing	X	X	81	04001-37	Bolt, 1/2-13 x 5-1/2" Hex Hd.	X	X
38	424367	Dust Shield	X	X	82	04021-07	Nut, 1/2-13 Elastic Stop	X	X
39	04041-08	Flatwasher, 3/4 (.776 x 1.25 x .059")	X	X	83	43022	Sleeve, Caster Wheel Bearing	X	X
	04041-08S	Flatwasher, 3/4 (.776 x 1.25 x .035")	X	X	84	45006	Caster Yoke	X	X
40	04050-02	Retaining Ring, .75" EXT 'E'	X	X	85	43037-01	Spacer, Caster Yoke 1/2"	X	X
					86	46079	Caster Wheel and Support Assy.	X	X

This is a detailed exploded view diagram of a mechanical assembly, likely a small engine or pump. The diagram shows the relationship between various components, which are numbered 1 through 103. The main components include:

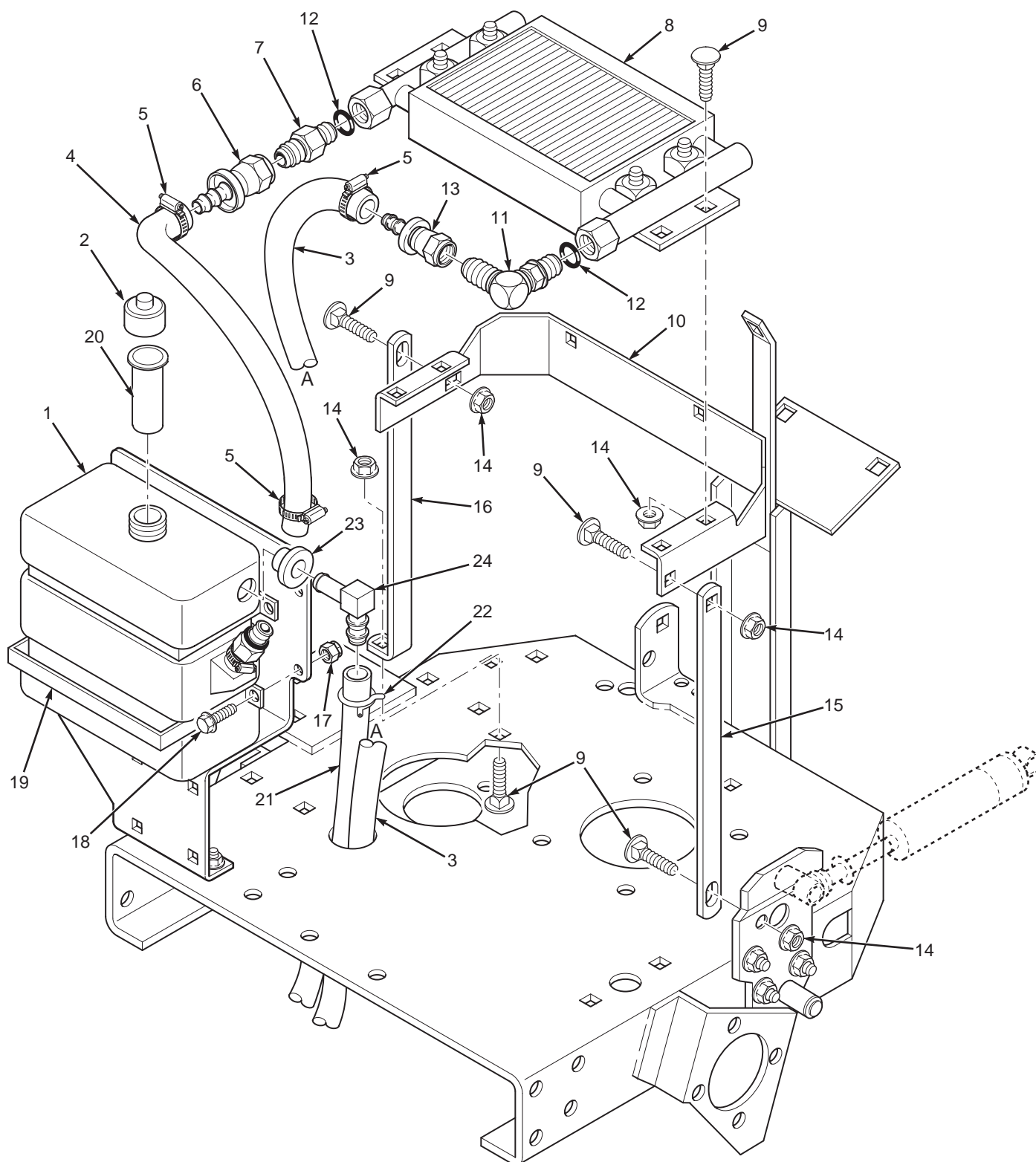
- Engine/Pump Unit (Top Right):** Consists of a main housing (21), a flywheel (20), a pulley (23), and a mounting bracket (64).
- Mounting Frame (Center):** A large central plate (18) with various mounting points and slots.
- Drive Mechanism (Bottom Left):** Includes a motor or actuator (89) connected to a pulley system (67, 70, 71, 72) and a drive shaft (30) with a coupling (31).
- Accessories (Bottom Right):** Includes a tire (48) mounted on a wheel (47) with a hub (46) and a mounting bracket (45).
- Fasteners and Small Parts:** Numerous screws (e.g., 16, 19, 22, 25, 26, 28, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 65, 66, 68, 69, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 85, 86, 87, 88, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103), washers (e.g., 10, 11, 12, 13, 14, 15, 17, 19, 27, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 65, 66, 68, 69, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 85, 86, 87, 88, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103), and other small components like a spring (82) and a pin (84).

The diagram uses dashed lines to indicate the assembly path and alignment of the parts.

ENGINE DECK

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	04003-01	Carriage Bolt, 1/4-20 x 6"	56	48792	Pulley, Engine Pump Drive (Incl. 55)
2	423308	Battery Box	57	461397	Clutch, Electric (Ogura)
3	04029-01	Nut, Wing 1/4-20	58	04041-28	Flatwasher, 7/16 (.469 x 1.75 x .25")
4	483665	Battery, 300 CCA (Not sold through Scag)	59	04030-05	Lockwasher, 7/16"
5	42392	Battery Cover	60	04102-05	Bolt, Hex Hd. 7/16-20 x 2.75"
6	48099	Insulation, Battery Cover	61	04021-10	Hex Locknut, Elastic Stop 5/16-18
7	48292	Pad, Fuel Tank Strap	62	422533	Backing Plate, Clutch Stop
8	481556	Cap, Fuel Tank	63	481716	Rubber Pad, Clutch Stop
9	46846	Fuel Tank Assy. (Includes items 10 - 11)	64	481641	Heatshield, Muffler
10	48309	Bushing, Fuel Tank Valve	65	04001-12	Bolt, Hex Hd. 5/16-18 x 1-3/4"
11	483747	Fuel Shut Off Valve	66	04063-12	Key, Woodruff 3/16 x 5/8"
12	421239	Strap, Fuel Tank	67	48581	Pulley, Pump Input
13	04010-10	Phil Rd. Hd. Machine Screw 1/4-20 x 2"	68	43117	Sleeve, Idler
14	04020-02	Hex Nut, 1/4-20	69	04050-06	Ring, Retaining, 1-9/16" Internal
15	48205	Pad, Fuel Tank Support	70	48854	Belt, Pump Drive
16	04003-12	Carriage Bolt, 5/16-18 x 3/4"	71	46370	Pulley, Idler-Traction Drive (Incl. 68,69,72)
17	42377	Support, Fuel Tank	72	48102	Bearing, Idler Pulley
18	421522	Bracket, Fuel Tank Support	73	43063	Spacer, Idler
19	04019-03	Serr. Flng. Hex Nut 5/16-18	74	46327	Pump Idler Arm (Includes items 76, 79)
20	04031-09	Lockwasher, 5/16" Int. Tooth	75	45037	Idler Pivot Base
21	481776	Engine, 23 HP Kohler CV, (Spec PS-75523)	76	48100-05	Bushing, Oilite®
22	04001-12	Hex Hd. Capscrew, 5/16-18 x 1-3/4"	77	04041-08S	Flatwasher, 3/4"
23	482352	Oil Drain Extension	78	04050-02	Ring, Retaining, 3/4" Ext. "E"
24	422534	Plate, Backing	79	48114-04	Grease Fitting
25	45586	Engine Deck	80	04020-12	Hex Nut, Jam 3/8-16
26	48030-09	Wire Loom, .50" I.D.	81	04001-62	Bolt, Hex Hd. 3/8-16 x 3-1/4"
27	04040-14	Washer, 1/4 (.312 x .750 x .065")	82	48929	Spring, Pump Drive Idler
28	04001-72	Bolt, Hex Hd. 1/2-13 x 2"	83	04019-04	Serr. Flng. Hex Nut, 3/8-16
29	43041	Sleeve, Shock Absorber Mount	84	04061-04	Cotter Pin, 5/32 x 1-1/2"
30	48516	Shock Absorber	85	04001-47	Bolt, Hex Hd. 3/8-16 x 5"
31	04021-07	Hex Locknut, Elastic Stop 1/2-13	86	04015-03	Socket Head Capscrew, 1/2-13 x 1-1/4"
32	04017-42	Serr. Flng. Hex Hd. Capscrew, 7/16-14 x 1"	87	04030-06	Lockwasher, 1/2"
33	04019-05	Serr. Flng. Hex Nut, 7/16-14	88	04041-04	Flatwasher, 1/2" (.516 x .938 x .105")
34	48769	Motor - White (Includes item 52)	89	481100	Pump, Sundstrand
35	04030-06	Lockwasher, 1/2"	90	421520	Bracket, Oil Tank Support
35A	04020-07	Nut, 1/2-13	91	04001-21	Bolt, Hex Hd. 3/8-16 x 1-3/4"
36	421289	Anchor, Brake	92	04041-10	Washer 2" OD, 3/8" ID, 16 Ga.
37	04001-59	Bolt, Hex Hd. 1/4-20 x 1-1/4"	93	04003-02	Carriage Bolt, 1/4-20 x 3/4"
38	04019-02	Serr. Flng. Hex Nut, 1/4-20	94	421523	Guard, Pulley
39	04017-16	Serr. Flng. Hex Hd. Capscrew, 5/16-18 x .75"	95	421521	Gusset, Battery Box
40	48461	Parking Brake Assembly (Incl. 41-44)	96	421705	Support, Battery Box
41	48461-02	Brake Pads- Pair	97	04003-04	Carriage Bolt, 5/16-18 x 1"
42	48461-03	Springs - Pair	98	48030-10	Wire Loom, .75" I.D.
43	48461-04	Actuating Arm, (Incl. Pin & Clip)	99	48661	Rubber Pad
44	48461-05	Clip	100	483617	Fuel Hose, 1/4" ID Non-Perm.
45	46929	Hub Assembly (Includes item 50)	101	48059-01	Clamp, Fuel Hose
46	48513	Brake Drum	102	04001-52	Bolt, 1/2-13 x 2.50"
47	48933	Rim and Tire Assembly (Incl. 48 - 49)	103	04021-08	Nut, 1/4-20 Elastic Stop
48	48933-02	Tire 20 x 10 x 10, 4 Ply			
49	48416-04	Rim Only			
50	04008-03	Bolt, Hub			
51	04028-01	Wheel Nut			
52	48680	Castle Nut, 1.0-20 UNEF			
53	43261	Spacer, Clutch			
54	04063-08	Key, 1/4 x 1/4 x 2"			
55	04012-04	Hex Socket Set Screw, 5/16-18 x 3/8"			

UPPER HYDRAULICS

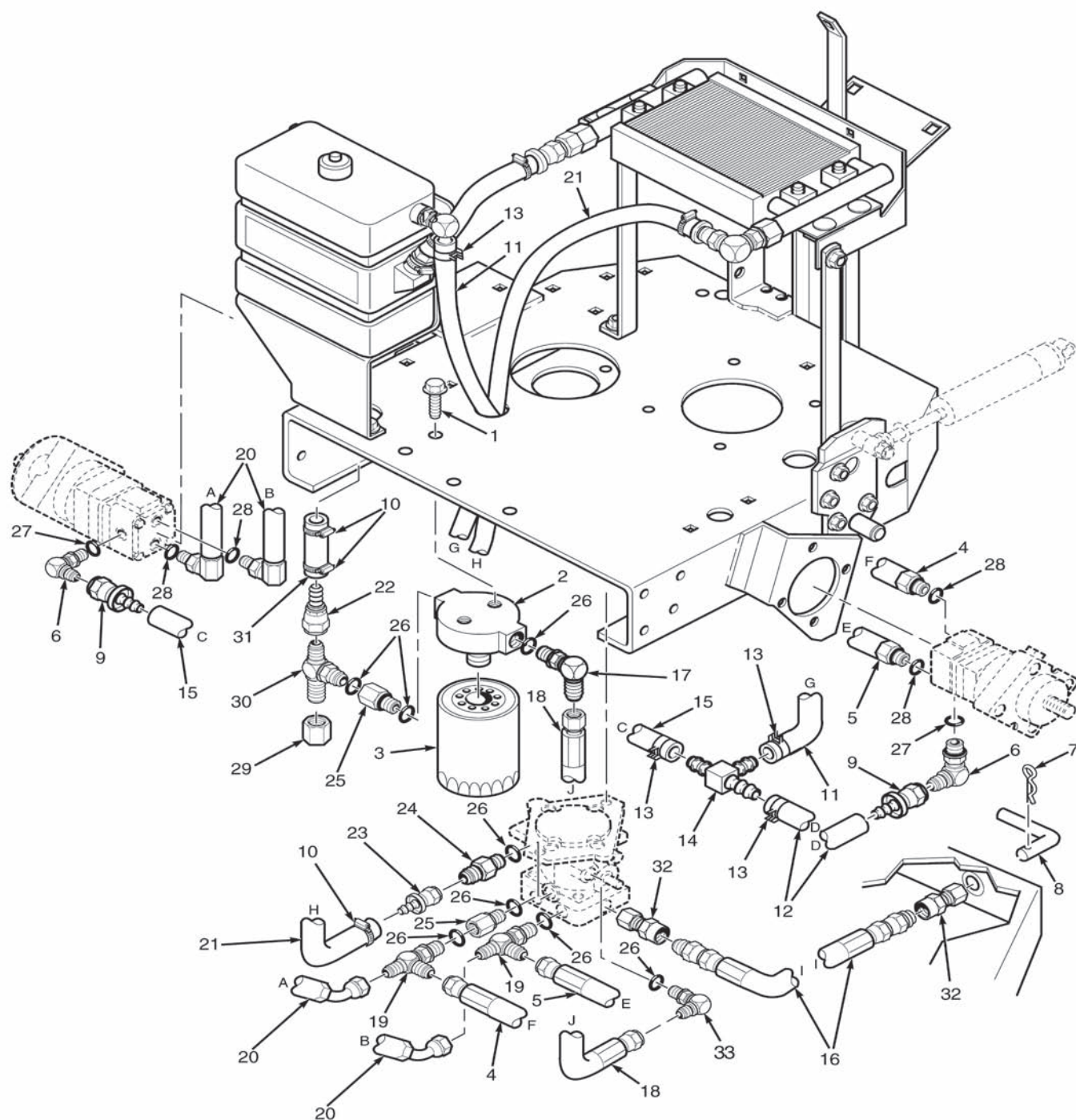


SGB027

UPPER HYDRAULICS

Ref. No.	Part No.	Description
1	48711	Tank, Hydraulic
2	481164	Cap, Hydraulic Tank
3	48634	Hose, Pump to Oil Cooler
4	48942	Hose, Oil Cooler to Tank
5	48136-04	Clamp, Hose
6	48936-01	Coupling, Flare Swivel
7	48572-05	Tube, Union
8	48645	Oil Cooler Assembly
9	04003-12	Carriage Bolt, 5/16-18 x 3/4"
10	421279	Bracket, Oil Cooler
11	48350-05	Elbow, 90 Degrees
12	48603-02	O-Ring
13	48936-02	Coupling Flare Swivel
14	04019-03	Serr. Flng. Hex Hd. Nut, 5/16-18
15	421280	Brace, LH Cooler Support
16	421281	Brace, RH Cooler Support
17	04021-08	Elastic Stop Nut, 1/4-20
18	04017-05	Serr. Flng. Hex Hd. Capscrew, 1/4-20 x 3/4"
19	421288	Strap, Oil Tank
20	481507	Filler Neck Insert
21	48482	Hose, 1/4" Pushlock, Order by the inch
22	48059-01	Clamp
23	48309	Bushing
24	48939	90 Degree Elbow

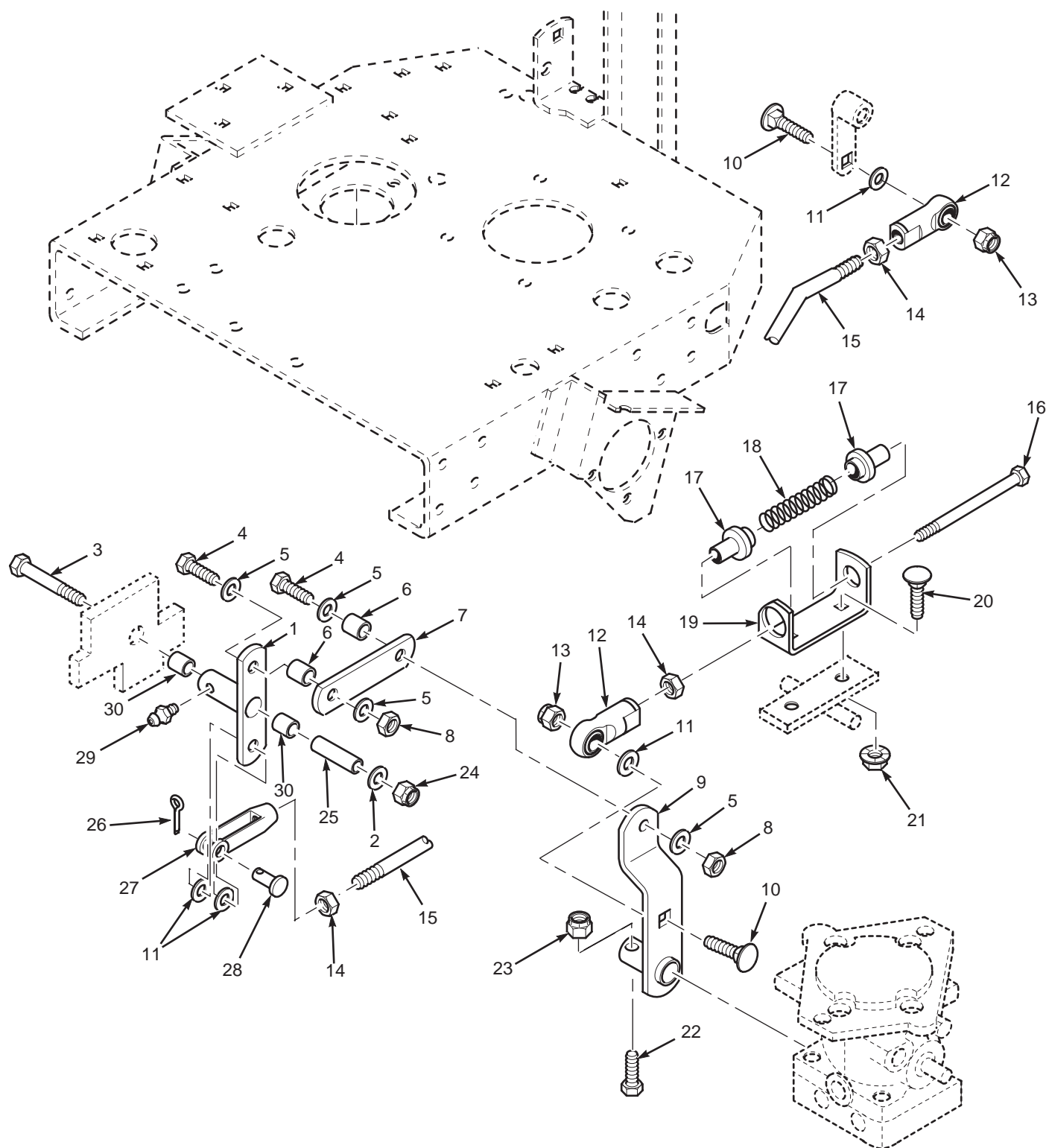
LOWER HYDRAULICS



LOWER HYDRAULICS

Ref. No.	Part No.	Description
1	04017-04	Serr. Flng. Hex Hd. Capscrew, 1/4-20 x 1/2"
2	48462-02	Filter Head
3	48758	Filter, Spin-On Lube
4	48991	Hose Assembly
5	48688	Hose Assembly
6	48350-03	Elbow, 90 Degrees
7	04062-01	Hairpin Cotter
8	44088	Lever, Dump Valve
9	48353-02	Connector, Flare Swivel with Hose Barb
10	48136-04	Hose Clamp
11	48482	Hose, 1/4" Pushlock, Order by the inch
12	48482	Hose, 1/4" Pushlock, Order by the inch
13	48059-01	Hose Clamp
14	48935-01	Tee Union, Pushlock Hose
15	48482	Hose, 1/4" Pushlock, Order by the inch
16	48853	Hose, Dump Valve
17	48350-05	Elbow, 90 Deg.
18	48856	Inlet Hose, 3/4" ID
19	48937-01	Tee, 1/2" Run
20	48905	Motor Hose
21	48634	Hose, Pump To Oil Cooler
22	48936-01	Coupling, Flare Swivel
23	48936-02	Coupling, Flare Swivel With Barb
24	48572-06	Tube Union
25	48938-01	O-Ring Bushing
26	48603-02	O-Ring
27	48603-03	O-Ring
28	48603-04	O-Ring
29	48571-03	Cap
30	48810-02	Tee, JIC to O-Ring
31	48602	Hose, Order by the inch
32	48911-01	Compression Fitting
33	48350-12	Elbow, 90 Deg.

CONTROL LINKAGE

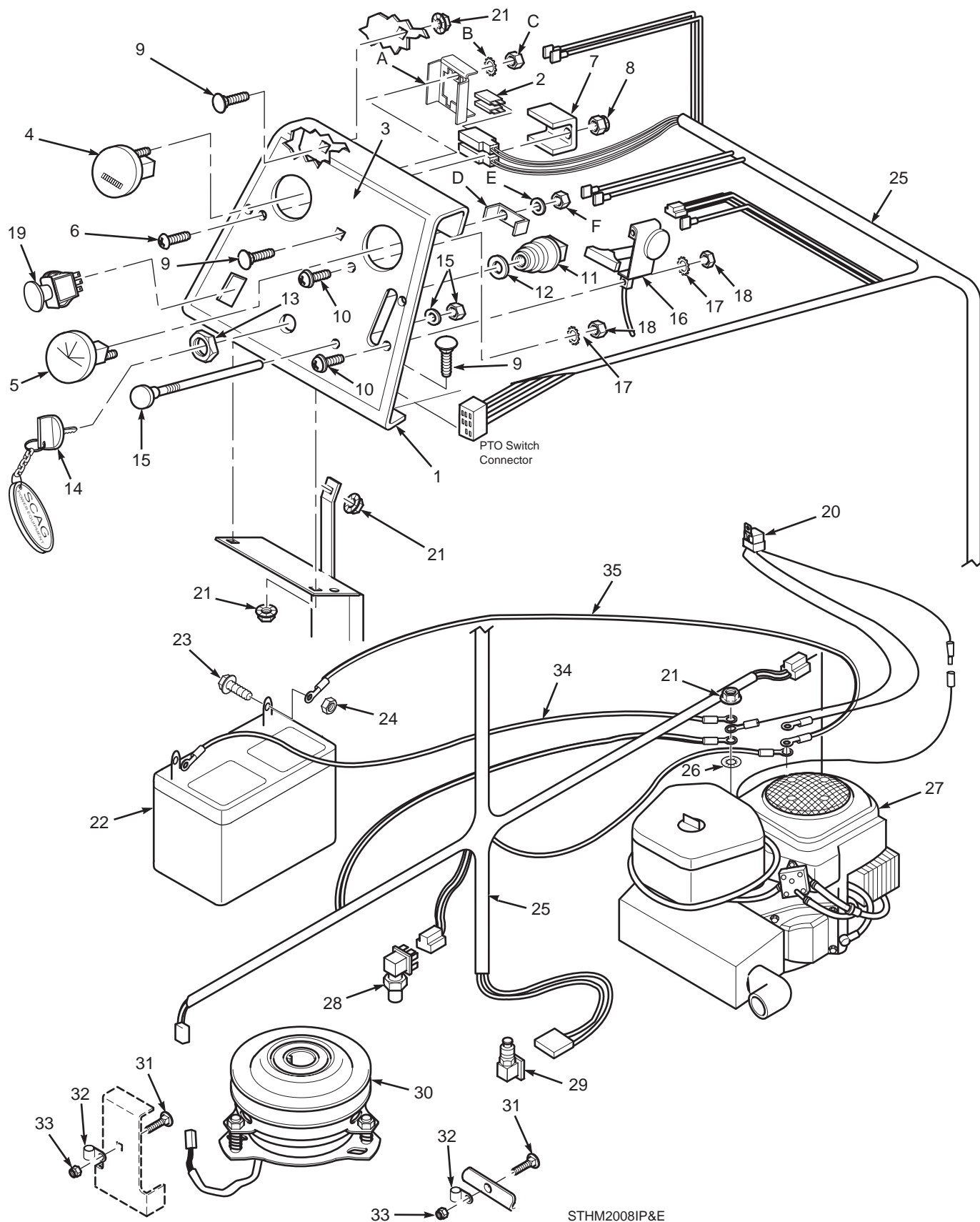


sgb011

CONTROL LINKAGE

Ref. No.	Part No.	Description
1	46328	Control Linkage, Bellcrank (Includes 30, 31)
2	04040-15	Flatwasher, 5/16 (.375 x .875 x .083")
3	04001-13	Bolt, Hex Hd. 5/16-18 x 2-3/4"
4	04001-19	Bolt, Hex Hd. 3/8-16 x 1"
5	04040-05	Flatwasher, 3/8 (.406 x .812 x .065")
6	43212	Sleeve, Pump Control Link
7	42658	Link, Speed Control
8	04021-05	Hex Locknut, 3/8-16
9	45485	Control Arm, Pump
10	04003-05	Carriage Bolt, 3/8-16 x 1-1/2"
11	04041-07	Flatwasher, 3/8 (.391 x .938 x .105")
12	48464	Rod End, RH Female Thrd. 3/8-24
13	04021-09	Hex Locknut, Elastic Stop 3/8-16
14	04020-14	Hex Nut, 3/8-24
15	44044	Control Rod
16	48512	Bolt Hex Hd., 3/8-24 x 6-3/4"
17	43257	Bushing, Spring Keeper
18	48463	Spring, Neutral Return
19	421148	Retainer, Neutral Spring
20	04003-04	Carriage Bolt, 5/16-18 x 1"
21	04019-03	Serr. Flng. Hex Nut 5/16-18
22	04001-59	Bolt, Hex Hd. 1/4-20 x 1-1/4"
23	04021-08	Hex Locknut, Elastic Stop 1/4-20
24	04021-10	Hex Locknut, Elastic Stop 5/16-18
25	43110	Sleeve, Control Arm
26	04061-02	Cotter Pin, 3/32" x .75"
27	48343-04	Clevis, Pump Control
28	04064-02	Pin, Clevis 3/8"
29	48114-05	Grease Fitting, 1/4-28 Self Tap
30	48100-04	Bushing, Bronze

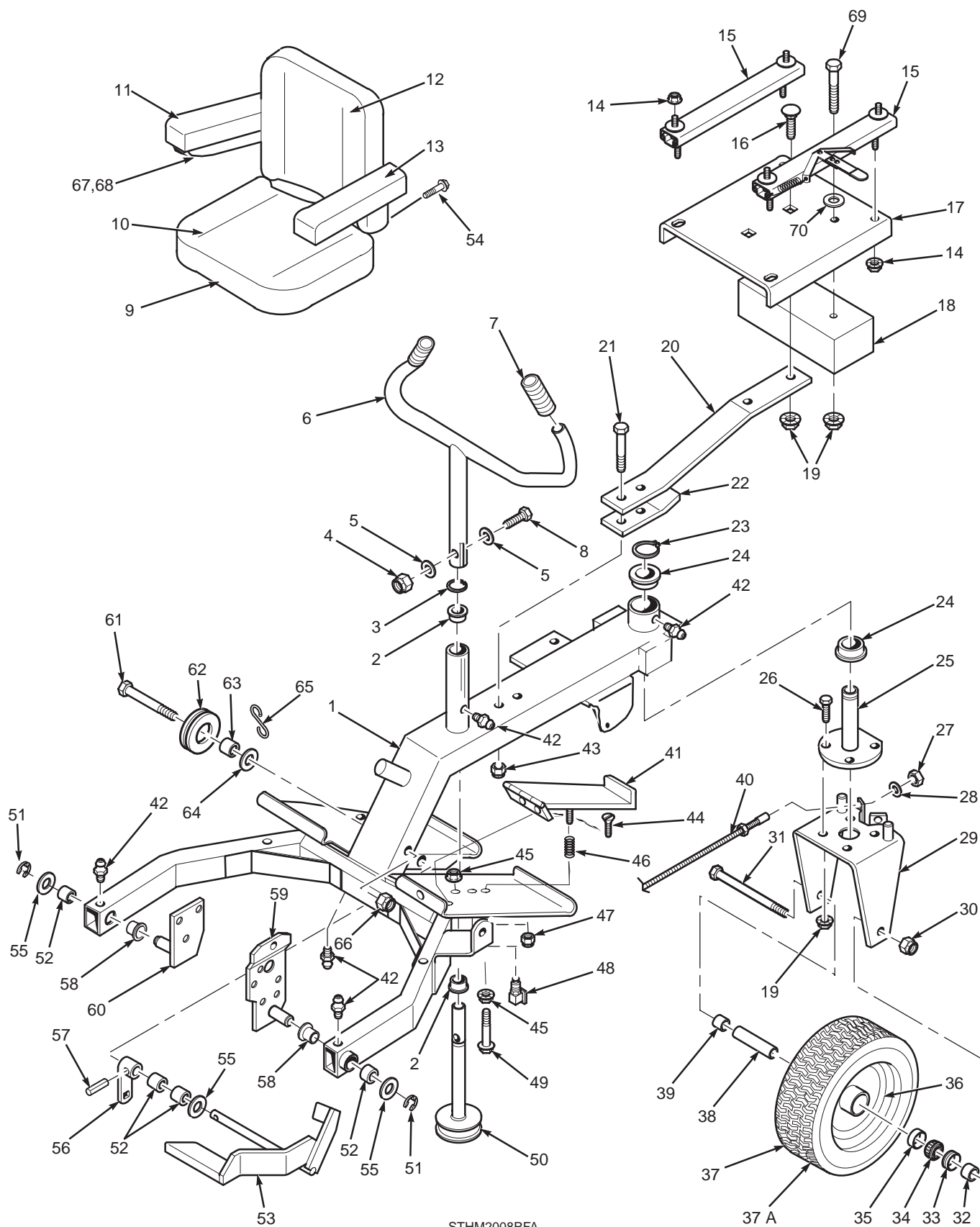
INSTRUMENT PANEL AND ELECTRICAL COMPONENTS



INSTRUMENT PANEL AND ELECTRICAL COMPONENTS

Ref. No.	Part No.	Description
1	461360	Instrument Panel w/Decal
2	48298	Blade Fuse, 20 amp.
3	482289	Decal, Instrument Panel
4	48023	Hour Meter (Includes Bracket and Hardware A, B, C)
A	*	Hour Meter Bracket
B	*	Lockwasher, #10 Ext. Tooth
C	*	Hex Nut, 10-24
5	481755	Ammeter (Includes Bracket and Hardware D, E, F)
D	*	Ammeter Bracket
E	*	Lockwasher, #10 Int. Tooth
F	*	Hex Nut, #10-32
6	04010-11	Phillips Rd. Hd. Screw, #10-32 x 1-1/2"
7	42413	Bracket, Fuse Holder
8	04021-01	Elastic Stop Nut, #10-32
9	04003-12	Carriage Bolt, 5/16-18 x 3/4"
10	04010-01	Phillips Washer Head Screw, #10-32 x .50"
11	48798	Key Switch
12	*	Lockwasher, 5/8 Int. Tooth
13	*	Nut, Special 5/8-32
14	462069	Key Chain with Keys
	483609	Key with Shroud
15	482315	Choke Control
16	48879	Throttle Control
17	04031-01	Lockwasher, #10 Ext. Tooth
18	04020-01	Hex Nut, #10-32
19	483162	Switch, PTO
20	481275	Wire Harness With Relay
21	04019-03	Serr. Flng. Hex Hd. Nut, 5/16-18
22	483665	Battery, 300 CCA (Not sold through Scag)
23	04001-44	Bolt, Hex Hd. 1/4-20 x 1/2"
24	04020-02	Hex Nut 1/4-20
25	481683	Wire Harness, STHM
26	04031-09	Lockwasher 5/16 Int. Tooth
27	481776	Engine, 23 HP Kohler CV (Spec PS-75523)
28	481474	Switch, Parking Brake
29	481476	Switch, Foot Safety
30	461397	Clutch, Electric
31	04003-12	Carriage Bolt, 5/16-18 x 3/4"
32	48030-09	Wire loom
33	04021-10	Locknut, Elastic Stop 5/16-18
34	48029-15	Battery Cable, 36" Black
35	48029-13	Battery Cable, 25" Red

RIDER FRAME ASSEMBLY

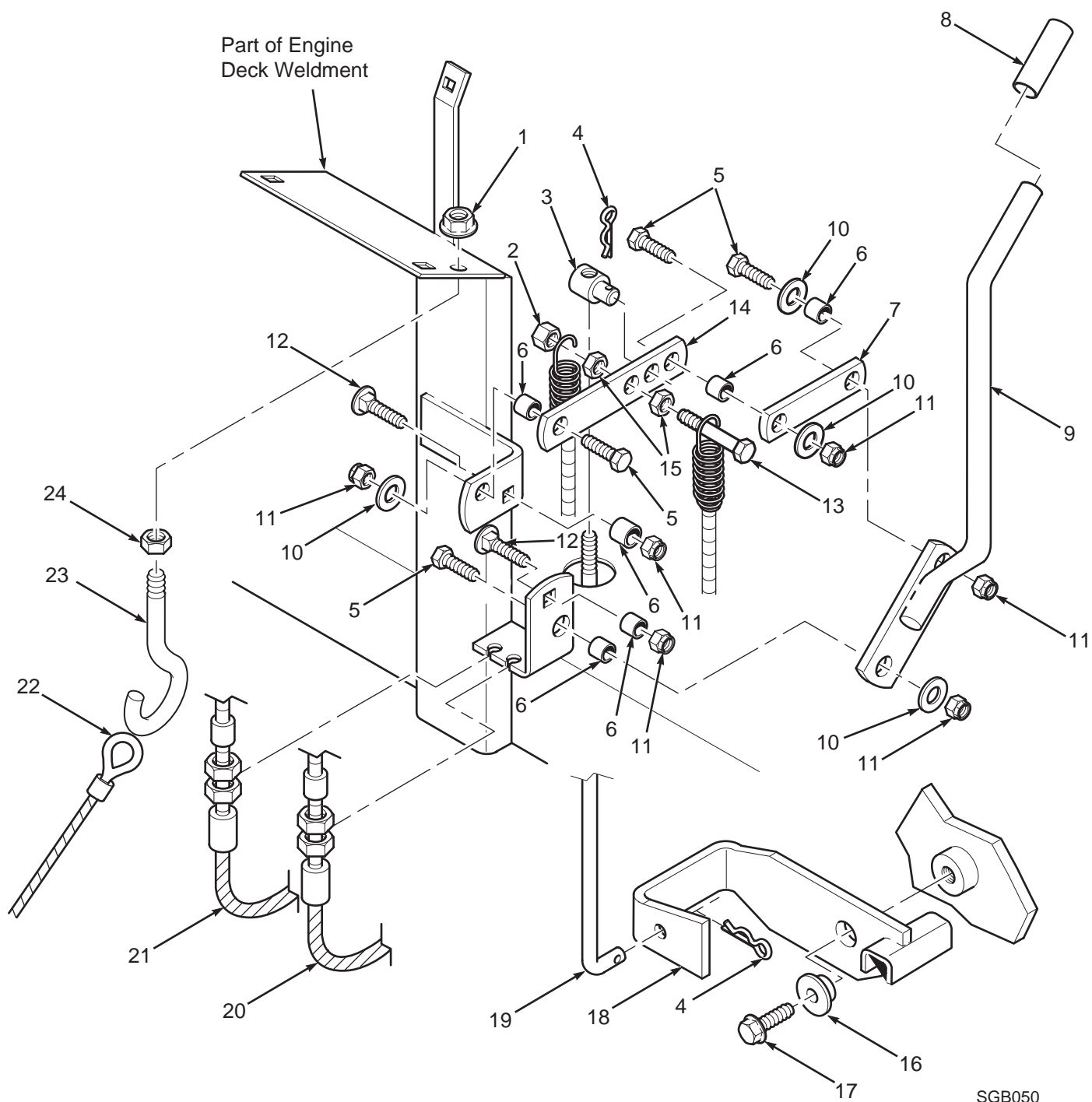


STHM2008RFA

RIDER FRAME ASSEMBLY

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	46715	Steering Frame (Incl. Bushgs and Fittings)	36	481894	Rim Only
2	48100-01	Bronze Bushing, 7/8" ID x 1.0" Flanged	37	48005	Rear Wheel Assy. (Incl. items 33-36, 37A)
3	04050-03	Retaining Ring, 7/8" External	37A	481893	Tire Only
4	04021-10	Hex Nut, Elastic Stop 5/16-18	38	43021	Sleeve, Rear Wheel
5	04040-15	Flatwasher, 5/16" (3/8" x 7/8" x 13 ga.)	39	43020-02	Spacer, Rear Wheel
6	46029	Steering Handle (Includes item 7)	40	48828	Cable, Steering (Includes Hardware)
7	48159	Grip	41	45606	Pedal, Foot Safety Switch
8	04001-12	Bolt, Hex Hd., 5/16-18 x 1-3/4"	42	48114-04	Grease Fitting
9	482119	Seat Assy. (Includes items 10 thru 13,54)	43	04021-11	Hex Elastic Stop Nut, 7/16-14
10	482111	Cushion Assembly	44	04010-17	Screw, Phillips Flathead #10-32 x 3/4"
11	482108	Arm Pad - RH	45	04019-02	Serr. Flng. Hex Nut, 1/4-20
12	482105	Seat Back Cushion	46	481056	Spring, Foot Safety Switch
13	482107	Arm Pad - LH	47	04021-08	Hex Nut, Elastic Stop Lock, 1/4-20
14	04019-03	Serr. Flng. Hex Hd. Nut, 5/16-18	48	481476	Switch, Foot Safety
15	46570	Seat Adjuster Track	49	04001-02	Bolt, Hex Hd., 1/4-20 x 1-3/4"
16	04003-05	Bolt, Rd. Hd. Carr. 3/8-16 x 1-1/2" (52" & 61")	50	45009	Steering Shaft
	04003-03	Bolt, Rd. Hd. Carr. 3/8-16 x 2.0" (72")	51	04050-02	Retaining Ring 3/4" Ext. "E"
17	424801	Seat Plate	52	48100-06	Bushing, Oilite® - 3/4" ID x 1.0"
18	424800	Ballast, Seat Mount	53	45502	Foot Pedal
19	04019-04	Serr Flng. Hex Nut, 3/8-16	54	04010-22	Screw w/washer, 1/4-20 x .75"
20	42026	Seat Spring	55	04041-08	Flatwasher, 3/4" x 1-1/4" x 16 Ga.
21	04001-83	Bolt, Hex Hd., 7-16-14 x 3-1/2"	56	45506	Foot Pedal Arm
22	42366	Reinforcement, Seat Spring	57	04065-01	Pin, Drive Lock 3/16 x 1-1/4"
23	04050-05	Retaining Ring, 1-1/8" external	58	48100-03	Bushing, Oilite® - 3/4" x 1/2" Flanged
24	48100-02	Bushing, Oilite® - 1-1/8" ID x 1.0" Flanged	59	45488	Sulky Mtg. Brkt. LH
25	45008	Rear Wheel Pivot	60	45256	Sulky Mtg. Brkt. RH
26	04001-32	Bolt, Hex Hd., 3/8-16 x 1-1/4"	61	04001-37	Bolt, Hex Hd., 1/2-13 x 5-1/2"
27	*	Hex Jam Nut, 3/8-24	62	48208	Pulley, Winch Cable
28	*	Lockwasher, 3/8 Internal Tooth	63	48100-04	Bushing, Oilite® - 1/2" ID x .56"
29	45035	Rear Wheel Yoke	64	04040-13	Flatwasher, 1/2" (.562 x 1.375 x .109")
30	04021-13	Hex Elastic Stop Nut, 5/8-11	65	44028	Retainer, Winch Cable
31	04001-40	Bolt, Hex Hd. 5/8-11 x 9"	66	04021-07	Hex Elastic Stop Nut, 1/2-13
32	43020-01	Spacer, Rear Wheel, short	67	482109	Armrest Bracket, LH
33	481897	Seal, Grease	68	482110	Armrest Bracket, RH
34	481896	Bearing Cone	69	04001-30	Bolt, Hex Hd., 3/8-16 x 4"
35	481895	Bearing Cup	70	04041-07	Flatwasher, 3/8" (.391 x .938 x .104")

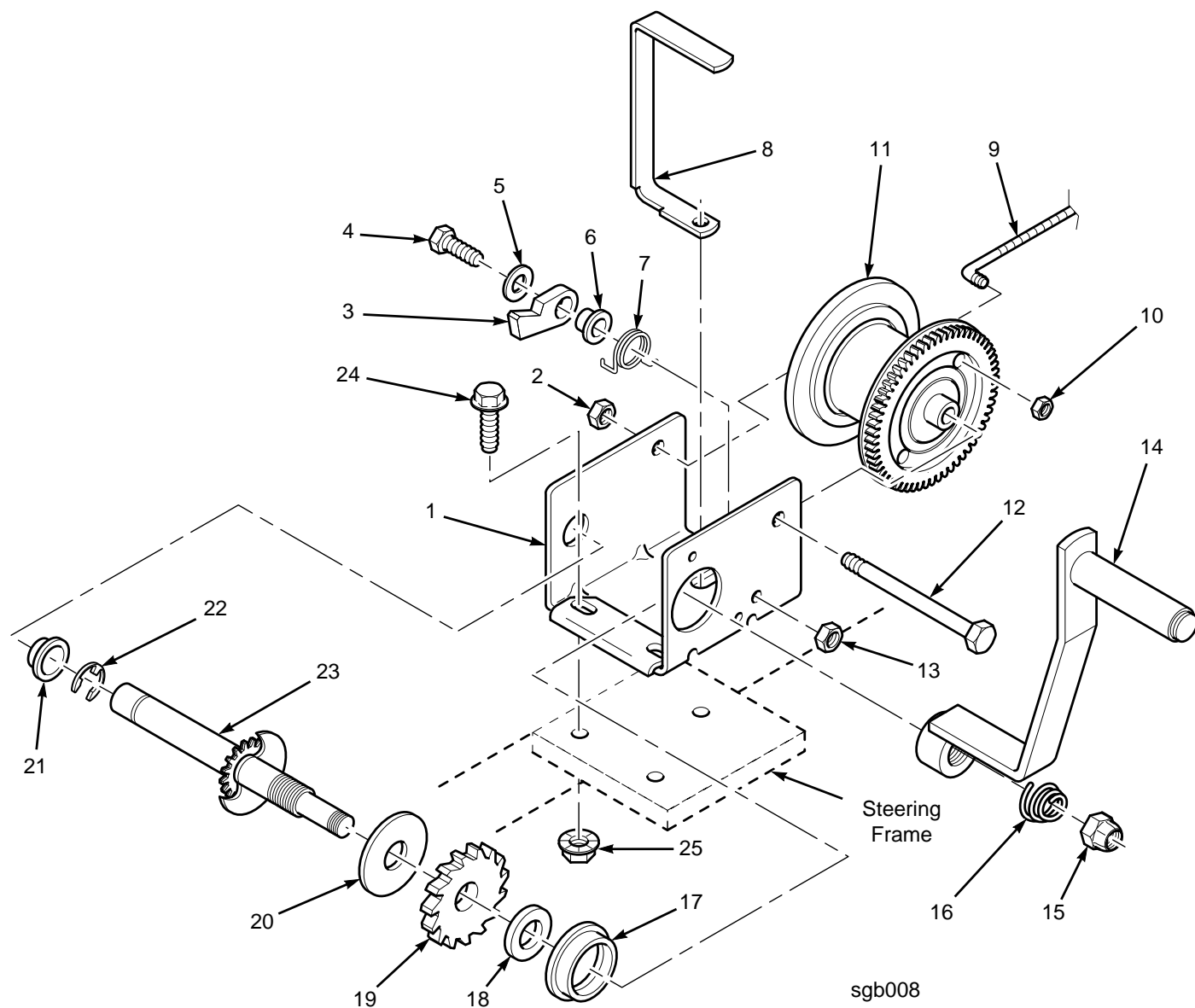
BRAKE LINKAGE



BRAKE LINKAGE

Ref. No.	Part No.	Description
1	04019-04	Serr. Flng. Hex Hd. Nut, 3/8-16
2	04021-05	Hex Locknut, 3/8-16
3	43032	Swivel
4	04062-01	Hairpin Cotter (.094" x 1.62")
5	04001-32	Hex Hd. Bolt, 3/8-16 x 1-1/4"
6	43212	Sleeve, Hydro Linkage
7	421338	Link, Cam
8	48342	Grip, Parking Brake
9	45504	Handle, Parking Brake
10	04041-07	Flatwasher, 3/8 (.391 x .938 x .105")
11	04021-09	Hex Nut, Elastic Stop 3/8-16
12	04003-11	Carriage Bolt, 3/8-16 x 1-1/4"
13	04001-21	Hex Hd. Bolt, 3/8-16 x 1-3/4"
14	421339	Lever, Brake
15	04020-12	Hex Jam Nut, 3/8-16
16	43260	Washer, Neutral Lock
17	04017-27	Serr. Flng. Hex Hd. Capscrew, 3/8-16 x 1"
18	45647	Bracket, Neutral Lock
19	44085	Rod, Neutral Lock
20	48881	Cable Assembly, Parking Brake RH
21	48880	Cable Assembly, Parking Brake LH
22	48045	Cable Winch
23	04070-03	Eye Bolt, 3/8-16 RH
24	04020-04	Hex Nut, 3/8-16

WINCH LIFT SYSTEM



WINCH LIFT SYSTEM

Ref. No.	Part No.	Description
1	48043	Winch Assembly (Incl. 1-7, 11-13, 15-23)
2	204803	Locknut, 7/16-14
3	404409	Ratchet Pawl
4	205167	Ratchet Bolt
5	205055	Flatwasher
6	404166	Ratchet Spacer
7	204363	Ratchet Spring
8	42127	Cable Guide
9	48045	Winch Cable Assembly
10	04021-03	Hex Locknut, 1/4-28
11	304753	Winch Reel
12	203161	Reel Shaft
13	204803	Hex Locknut, 3/8-16
14	48044	Winch Handle
15	205015	Handle Nut
16	204364	Handle Spring
17	208328	Shaft Bushing
18	404163	Pressure Washer
19	404164	Ratchet Wheel
20	204362	Pressure Plate
21	204012	Shaft Bushing
22	205116	E-Ring
23	304758	Drive Shaft
24	04017-27	Serr. Flng. Hex Hd. Capscrew, 3/8-16 x 1"
25	04019-04	Serr. Flng. Hex Hd. Nut, 3/8-16

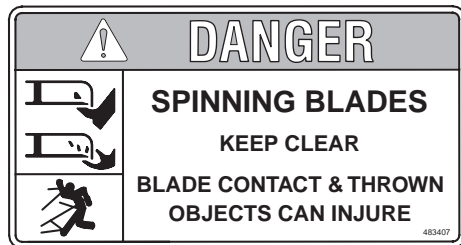
REPLACEMENT DECALS AND INFORMATION PLATES



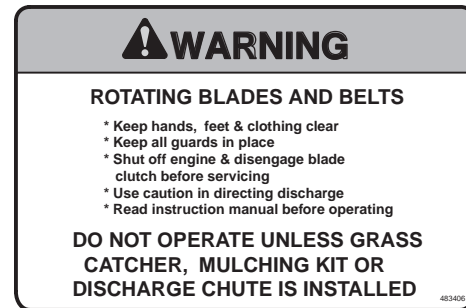
1



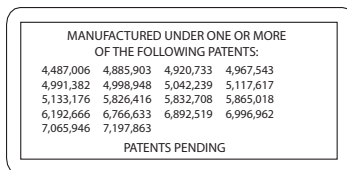
2, 2a, 2b



3



4



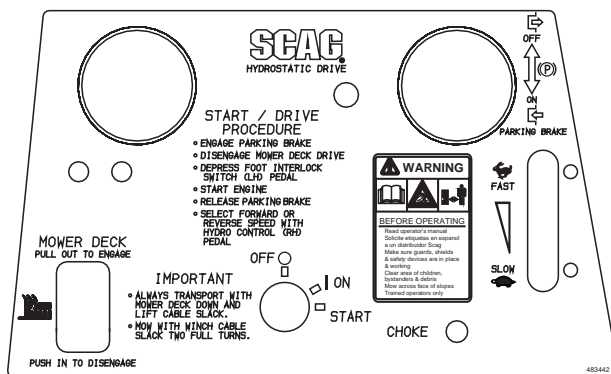
5



6



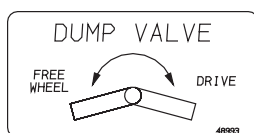
7



8



9



10



11, 12

482817 CUTTING HEIGHT ADJUSTMENT

DECK MOUNTING HOLE POSITION

NUMBER OF CASTER SPACERS (BELOW SUPPORT)

	NUMBER OF SPACERS ABOVE CUTTER BLADES					
	0	1	2	3	4	5
TOP	2	-	-	-	-	1-5/8
TOP	3	3-1/4	3	2-3/4	2-1/2	2
MIDDLE	4	-	3-3/4	3-1/2	3-1/4	2-3/4
MIDDLE	2	-	3-3/4	-	-	-
BOTTOM	3	-	4-1/8	3-7/8	-	-
BOTTOM	4	-	4-3/8	4-1/8	3-7/8	3-5/8
BOTTOM						3-3/8

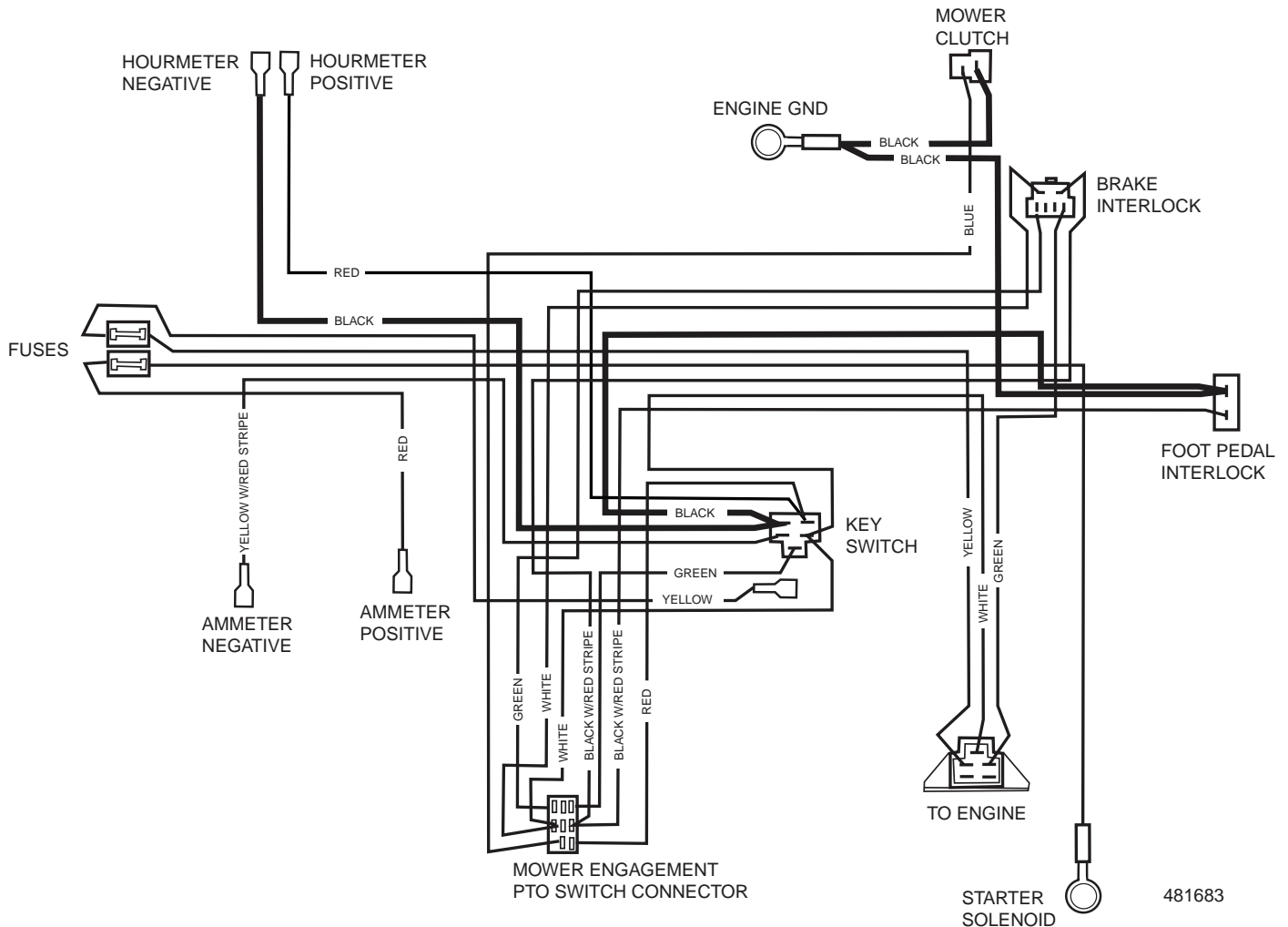
13

REPLACEMENT DECALS AND INFORMATION PLATES

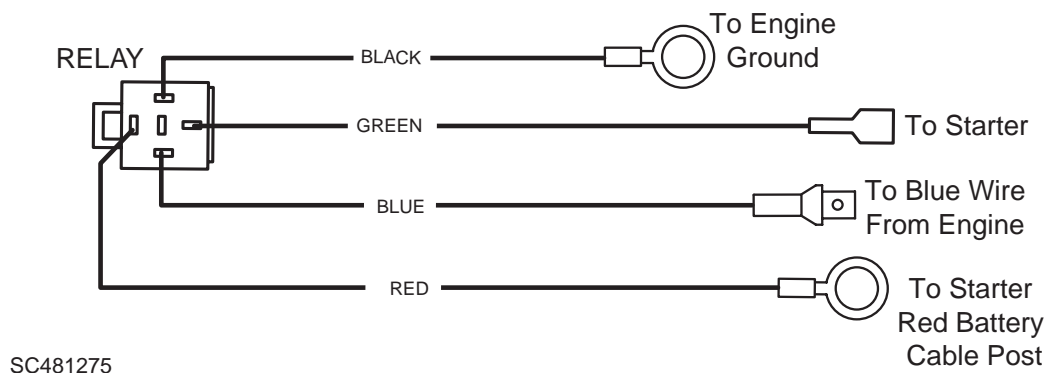
Ref. No.	Part No.	Description
1	481971	Decal, Heavy Duty Commercial
2	48314	Decal, Scag Logo (Cutter Deck)
2A	48968	Decal, Scag Logo (Battery Box Front)
2B	48825	Decal, Scag Logo Seat Back
3	483407	Decal, Danger-Spinning Blades
4	483406	Decal, Warning-Rotating Blades
5	483044	Decal, Patent
6	48404	Decal, Metalcraft-Made In USA
7	483402	Decal, Warning-Belt Cover
8	483442	Decal, Instrument Panel
9	483405	Decal, Warning-Discharge
10	48993	Decal, Dump Valve
11	483201	Decal, 61 Velocity Plus
12	481956	Decal, 72 Advantage
13	482817	Decal, Height of Cut
**	461985	Spanish Decal Kit, STHM (Not Shown)

ELECTRICAL WIRING HARNESS

ELECTRICAL WIRING HARNESS 481683



WIRE HARNESS WITH RELAY
PART NO. 481275



LIMITED WARRANTY - COMMERCIAL EQUIPMENT

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, hydraulic hoses and tires are warranted for ninety (90) days.
- Batteries are covered for ninety (90) days.
- Frame and structural components including oil reservoir and oil coolers are warranted for 2 years (Parts and labor).
- Cutter decks are warranted against cracking for a period of three (3) years. (Parts and labor 1st and 2nd year; Parts only 3rd year.) 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, hoses, drive belts). The repair or replacement of the hydraulic pump or hydraulic motor 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.
- Electric clutches have a Limited Warranty for 2 year (Parts and labor).
- Spindle assemblies have a Limited Warranty for three years (Parts and labor 1st year and 2nd; Parts only 3rd year).
- 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.

