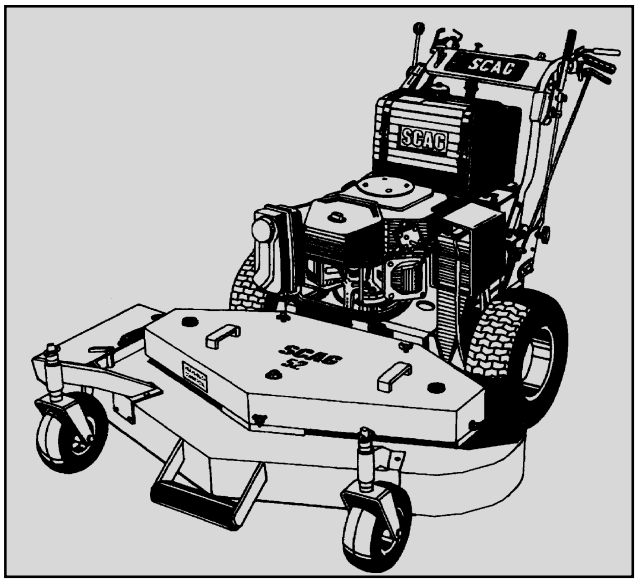
SCAG®
POWER EQUIPMENT

OPERATOR'S MANUAL

MODEL SWZ



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 CONTAINED ON THE INSIDE COVER. BEFORE OPERATING YOUR MACHINE, PLEASE READ ALL THE INFORMATION ENCLOSED.

PART NUMBER 03086

WARNING:

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

* 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.
* Read this manual completely as well as other manuals that came with your mower.
* Keep others off the tractor (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:

SWZ36A-14KA	**with a serial number of 6230001 to 6239999**
SWZ36A-15KA	**with a serial number of 7190001 to 7199999**
SWZ48A-17KA	**with a serial number of 6260001 to 6269999**
SWZ52A-17KA	**with a serial number of 6280001 to 6289999**
SWZ-17KA	**with a serial number of 6290001 to 6299999**
SWZ-21KAE	**with a serial number of 6300001 to 6309999**
SWM-52A	**with a serial number of 6320001 to 6329999**
SWM-72/E	**with a serial number of 5240001 to 5249999**

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

SCAG®
POWER EQUIPMENT

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MEMBER

EETC © *Equipment & Engine Training Council*

Outdoor Power Equipment OPE CERTIFIED Technician
WE SUPPORT OPE TECHNICIAN CERTIFICATION

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SUBJECT **PAGE**

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.

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.

A replacement Operator's Manual is available from your Scag Servicing Dealer or by contacting Scag Power Equipment, Service Department, at P.O. Box 152, Mayville, WI 53050. Please indicate the complete model and serial number of your Scag product.

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

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

GENERAL SAFETY INSTRUCTIONS

READ THIS OPERATOR'S MANUAL and instructions furnished with attachments.

Perform only those maintenance procedures described in this manual. If major repairs are ever needed or assistance is desired, contact an Authorized Scag Dealer. To ensure optimum performance and safety, always purchase genuine SCAG replacement parts and accessories.

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

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 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 on safety decals 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:

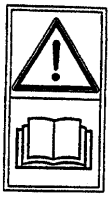
The signal word "WARNING" denotes that a hazard exists on or near the machine that can result in injury or death if proper precautions are not taken.

⚠ 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.

ISO Symbols	CE Mark

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	Choke		Transmission
	Parking Brake		Spinning Blade
	On/Start		Spring Tension on Idler
	Off/Stop		Oil
	Falling Hazard		

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	Fast		Slow
	Continuously variable - Linear		Cutting element - Basic symbol
	Pinch Point		Cutting element - Engage
	Hourmeter/elapsed operating hours		Cutting element - Disengage
	Keep bystanders away		Read operator's manual

BEFORE OPERATING

1. Know the controls and how to stop quickly.

2. Do not allow children to operate the machine. Do not allow adults to operate the machine without proper instruction.

3. Remove all debris or other objects that might be picked up and thrown by the cutter blades. Keep all bystanders away from the mowing area.

4. Keep all shields, safety devices, and decals in place. If a shield, safety device or decal is defective or damaged, repair or replace it before operating. Also, check all nuts, bolts and screws for proper tightness, to assure the machine is in safe operating condition.

5. Do not operate the machine while wearing sandals, tennis shoes, sneakers or shorts. Also, do not wear loose fitting clothing which could get caught in moving parts. Always wear long pants and substantial shoes. Wearing safety glasses and safety shoes is advisable and required by some local ordinances and insurance regulations.

6. Fill the fuel tank with clean, fresh gasoline, with a minimum octane rating of 87. Avoid spilling gasoline. Gasoline is highly flammable, handle it carefully.
   A. Use an approved gasoline container.
   B. Do not fill the tank while the engine is hot or running.
   C. Do not smoke while handling gasoline.
   D. Fill the fuel tank outdoors and up to approximately 1" (25 mm) below the bottom of the filler neck.
   E. Wipe up any spilled gasoline.

7. Before attempting to start the engine, move the speed adjustment lever into the neutral position, move the blade engagement switch to the OFF position, apply the parking brake, and move the neutral latches to neutral.

WHILE OPERATING

1. Start the engine when the neutral latches are in the neutral lock position, the cutter blades are disengaged, the parking brake is on and the speed adjustment lever is in the neutral position.

2. Do not run the engine in a confined area without adequate ventilation. Exhaust fumes are hazardous and could possibly be deadly.

3. Using the machine demands attention. To prevent loss of control:
   A. Mow only in daylight or when there is good artificial light.
   B. Watch for holes or other hidden hazards.
   C. Do not drive close to a drop-off, ditch, creek bank, or other hazard.
   D. Reduce speed when making sharp turns and when turning on hillsides.
   E. Always be sure of your footing. Keep a firm hold on the handles and walk---never run.
   F. Do not operate where conditions are slippery.

4. The discharge chute must always be installed and in the down position on the side discharge cutter deck except when the Scag optional grass catcher or mulching plate are properly installed. If the discharge area should plug, shut the engine off and wait for all movement to stop before removing the obstruction.

5. Disengage the blades and wait for them to stop before crossing gravel drives, walks or roads.

6. Shut the engine off and wait until the blades come to a complete stop before removing the grass catcher container.

7. Never raise the cutter deck while the blades are rotating.

8. Always park the mower and/or start the engine on a level surface. Apply the parking brake to prevent the mower from moving when you are not in the operator's position.

9. If the cutting blades should strike a solid object or the equipment should start to vibrate abnormally, stop the engine, disconnect the spark plug wire, and check immediately for the cause. Vibration is generally a warning of trouble. Check the machine for damaged or defective parts. Repair any damage before starting the engine or operating the cutter deck. Be sure the blades are in good condition and the blade bolts are tight.

10. 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.

⚠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. ALWAYS FOLLOW OSHA APPROVED OPERATION.

11. Do not touch the engine or muffler while the engine is running or soon after it is stopped. These areas could be hot enough to cause a burn.

12. Before leaving the operator's position or leaving the mower unattended, move the speed adjustment lever into the neutral position, place the neutral latches in the neutral lock position, apply the parking brake, and move the blade engagement switch to OFF. Shut the engine OFF and remove the key.

13. Do not pass or stand on the grass discharge side of any mower with the engine running. Stop operation when another person approaches.

14. Use only Scag approved riding attachments.

    Scag Approved Riding Attachments:
    RS-ZT
    Using unapproved attachments, (especially "stand-up" riding attachments) may be hazardous.

MAINTENANCE AND STORAGE

1. Disconnect the spark plug wire from the spark plug to prevent accidental starting of the engine when servicing, adjusting or storing the machine.

2. 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.

3. To reduce potential fire hazard, keep the engine free of excessive grease, grass, leaves and accumulations of dirt.

4. Be sure the machine is in safe operating condition by keeping nuts, bolts, and screws tight. Check the blade mounting bolts and nuts frequently to be sure they are tightened.

5. If the engine must be running to perform a maintenance adjustment, keep hands, feet, clothing and other parts of the body away from the cutter deck blades and other moving parts.

6. Do not overspeed the engine by changing governor settings. To be sure of safety and accuracy, have an authorized dealer check maximum engine speed with a tachometer.

7. The engine must be shut off before checking the oil or adding oil to the crankcase.

8. Allow the engine to cool before storing the mower in any enclosure such as a garage or storage shed. Make sure the fuel tank is empty if the machine is to be stored in excess of 30 days. Do not store the mower near any open flame or where gasoline fumes may be ignited by a spark.

9. Always store gasoline in a safety-approved, red container.

10. Be careful when servicing the battery as it contains acid, which is corrosive and could cause burns to skin and clothing.

11. Batteries release explosive gases when being charged or discharged. Keep batteries away from any source of sparks and/or flame.

12. Make sure all hydraulic connections are tight and all hydraulic hoses and lines are in good condition before starting the machine.

13. Hydraulic fluid is under high pressure. If you need service on your hydraulic system, please see your authorized Scag dealer.

INITIAL RUN-IN PROCEDURES (FIRST DAY OF USE OR APPROXIMATELY 10 HOURS)

1. Check the belts for proper tension at 2, 4 and 8 hours. Adjust as needed.

2. Check the steering control rods and the speed control for neutral adjustment. (See Adjustments, page 6-8)

3. Check the tires for proper pressure.
   Caster Wheels 25 psi.
   Drive Wheels 15 psi.

4. Check for loose hardware. Tighten as needed.

5. Check the safety switches for proper adjustment:

   * The engine should crank and start if the machine is in neutral, the PTO engagement switch is OFF and the parking brake is ON.

6. Apply lubricant to all the grease fittings. Lubricant was applied at the factory. This is just a precautionary check to make sure that all the fittings have been lubricated.

MOWER OPERATION

1. Read and understand the safety instructions before attempting to operate this machine.

2. Before starting the engine:

   * Check the oil level in the engine and the hydraulic reservoir.
   * Fill the fuel tank with clean, fresh, lead-free gasoline.
   * Open the fuel valve on the bottom of the fuel tank.

-NOTE-

Use gasoline with an octane rating no less than 87.

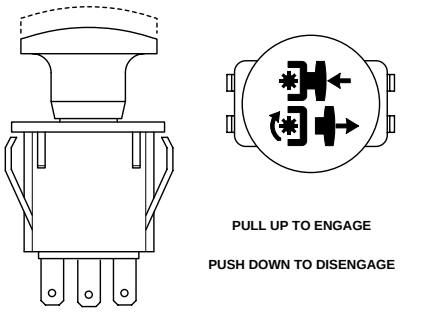
   * The speed adjustment lever must be in NEUTRAL.
   * The blade clutch switch must be in the OFF position.
   * The neutral latches must be in the neutral lock position.
   * The key switch must be on.
   * The parking brake must be on.

3. Start the engine:

   * Choke as required. If the engine is cold, pull the choke knob out. When the engine starts, slowly push the choke in. If the engine stalls, repeat the above operation. When the engine is warm, choking may not be necessary.

   * Cold starting. In the spring and fall when the morning temperatures are cool it may be difficult to start the machine due to the parastatic load from the hydraulic drive. To relieve this load, pull out and up on the de-clutch chain located on the right side of the machine behind the tire. This will allow you to start the engine easilly. When the engine is warmed up, slowly release the de-clutch chain to engage the hydraulic system.

4. Engage the cutter blades by pulling the blade clutch switch into the ON position. Push the switch to the OFF position to disengage the cutter blades.



-NOTE-

When PTO is engaged or (possibly) disengaged, a squealing sound from the underside of the machine is normal. It is caused by the electric clutch plates meshing as the mower comes up to speed. For best equipment life, engage the clutch with the engine at 1/2 throttle, not under full load.

⚠ WARNING:

If you are not familiar with the operation of the hydrostatic drive and zero turn feature, practice turning and maneuvering with the hand controls before engaging the blades.

5. Release the parking brake. Move the speed adjustment lever to the desired mowing speed.

-NOTE-

Top speed is suggested only for transport!

6. While squeezing the steering brake levers with both hands, release both neutral latches.

7. When the steering brake levers are released, the machine will travel straight. To make a right turn, squeeze the RH lever. To turn left, squeeze the LH lever.

8. TO STOP, squeeze both levers, lock the neutral latches, and move the speed adjustment lever to neutral.

9. To move the machine in reverse, squeeze up on both steering control levers.

10. To "freewheel" or move the machine around without the engine running, turn the dump valve levers located at the back of the pumps to the "freewheel" positions (see Figure 1). To operate the machine, the dump valve levers must be returned to the closed positions.

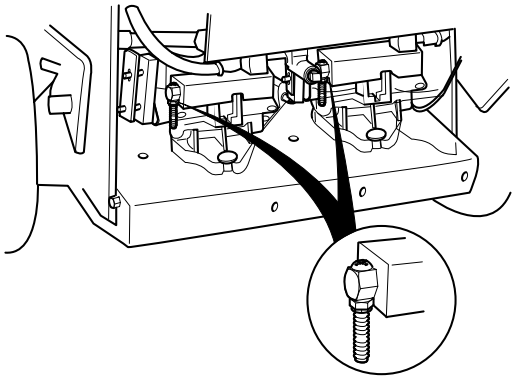


Figure 1. Dump Valves

CUTTER DECK BELT ADJUSTMENTS

-NOTE-

The hydro drive belt is spring loaded and does not require adjustment.

1. Remove the belt cover.

2. Adjust the cutter deck drive belt using a belt tension gauge. Adjust the belt so that the belt moves 1/2" with 10 pounds of pressure. Adjust the tension by tightening or loosening the J-bolt nut. (See figure 2)

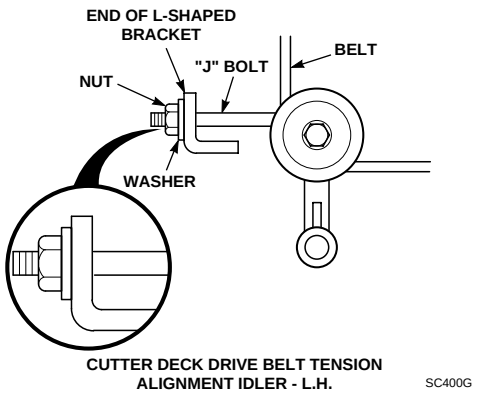


Figure 2. Deck Drive Belt Adjustment

-NOTE-

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

3. Adjust the RH blade drive belt using a belt tension gauge. Adjust the belt so that the belt moves 1/2" with 10 pounds of pressure. Adjust the tension by tightening or loosening the J-bolt nut. (See figure 3)

4. Replace the belt cover.

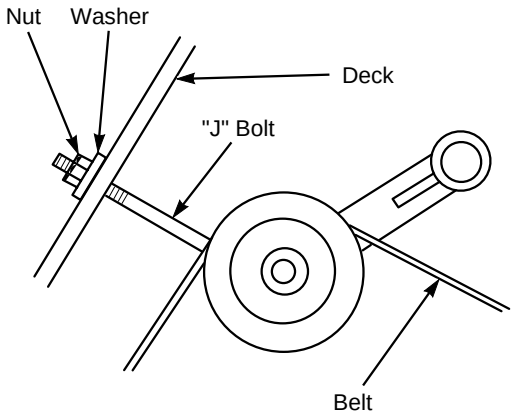


Figure 3. Cutter Deck Belt Adjustment R.H.

CUTTER DECK ADJUSTMENTS

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

PITCH is the angle of the blades (comparing front to rear). A 1/4" downward pitch (front of deck down) is recommended for best cutting performance.

HEIGHT is the nominal distance the blade is off of the ground. This measurement is made with the blades pointed side to side and distance is measured between cutting tip and ground. (Also see Blade Height Adjustment)

Changes to the cutting height can be achieved by repositioning the cutter deck. (This adjustment will also effect the pitch of the deck). There are three available positions (see figure 4).

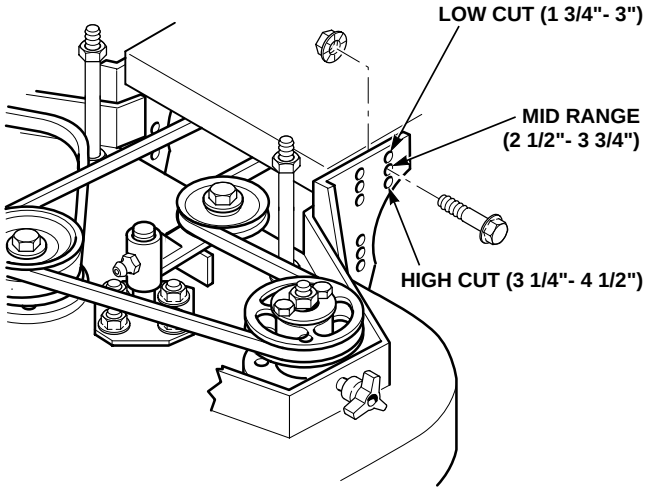


Figure 4. Cutting Height Adjustment

Caster spacers also can be repositioned to change cutting heights and to change the pitch of the deck. (See figure 5)

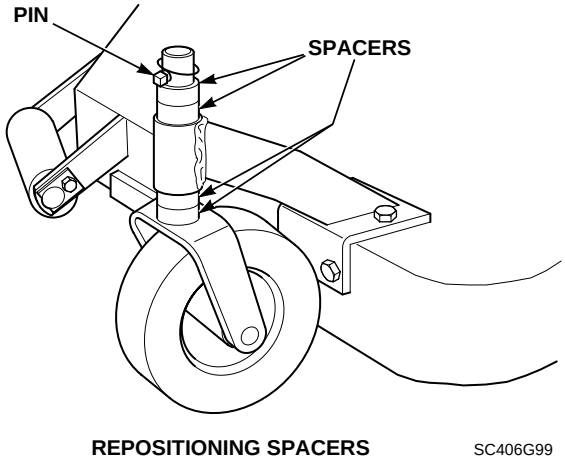


Figure 5. Caster Wheel Spacers

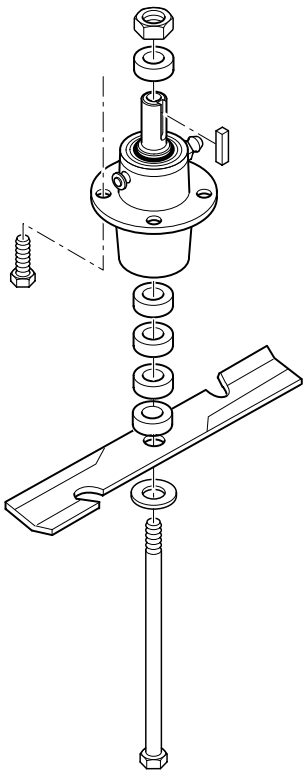
BLADE HEIGHT ADJUSTMENT

Adjusting the blade height can be done by moving any number of the five smaller 1/4" spacers on the blade mounting bolts to the top of the spindle shaft or below the spindle shaft.

-NOTE-

All blades should be positioned equally.

For best cut and discharge, a minimum of three spacers should be installed between the blade and the spindle (See figure 6).



SC407G

Figure 6. Blade Spacers

CUTTER BLADES

Do not sharpen beyond 1/3 of the width of the blade. (See figure 7)

-NOTE-

Dress the blade with a file. Using a wheel grinder may burn the blade. Check the balance of the blade. If blades are out of balance, vibration and premature wear of spindle assembly can occur. See your authorized Scag dealer for blade balancing or special tools, if you choose to balance your own blades.

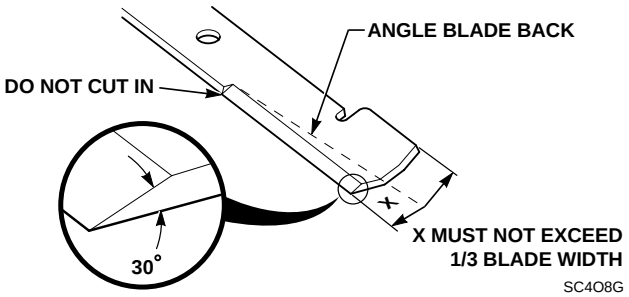


Figure 7. Blade Sharpening

NEUTRAL ADJUSTMENT

-NOTE-

Neutral has been set by your Scag dealer at the time of setup and normally does not need to be adjusted. If, however, you find that the neutral has come out of adjustment follow the procedure below.

1. Raise the drive wheels off the ground and block the caster wheels.

2. Make sure the speed control lever is in neutral, the steering control levers are in the neutral latch position, and the parking brake is on. Start the engine.

3. Release the parking brake and note if the tires are rotating.

4. Starting on the left side of the machine, rotate the tracking adjustment knob counter clockwise just until the LH wheel starts to creep forward. Make a note of the position of the adjusting knob. (See figure 8)

5. Turn the adjusting knob clockwise just until the wheel turns rearward. Make a note of the position of the adjusting knob. To adjust neutral, split the difference between the two noted positions of the adjusting knob.

6. Turn the engine off.

Figure 8. Neutral Adjustment

STEERING CONTROL ROD ADJUSTMENT

-NOTE-

This adjustment is made to allow the steering control levers to be moved out of the neutral latch without engaging reverse.

Before making this adjustment be sure that the speed control bearing is just touching the speed control cam and that the bellcrank bearing is resting in the center groove of the neutral cam.

1. Remove the speed control spring. Remove the steering control rod swivel hair pin. Check the location of the swivel in the slotted hole in the bell crank .

2. Turn the swivel joint on the steering control rods until the swivel joint is centered in the slot in the bellcrank.

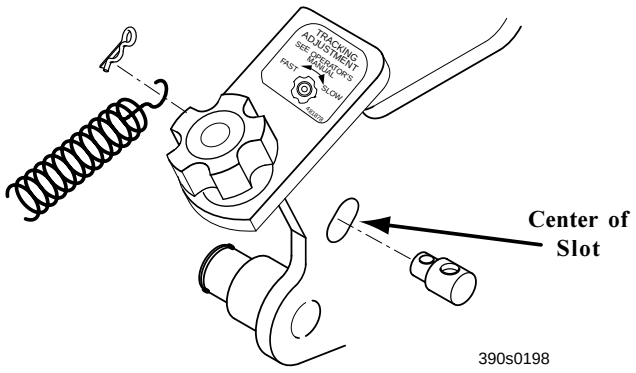


Figure 5. Control Rod Adjustment

3. Reinstall the speed control spring onto the swivel. Install the hair pin onto the swivel.

TRACKING ADJUSTMENT

-NOTE-

Before proceeding with this adjustment, be sure that the tire pressures are correct. (see page 4) and that the neutral adjustment and the steering control rod adjustment have been completed.

1. With the machine on a flat level surface, start the engine and place the speed adjustment lever into the speed that will most often be used.

2. Squeeze the steering control levers and release the neutral latch. Slowly release the steering control levers, allowing the machine to move forward.

3. If the machine pulls to one side, turn the tracking adjustment knob on the slower side counter clockwise until the machine tracks straight (see Figure 6).

4. Bring the steering control levers back to the neutral lock position and check to see that the machine does not creep forward on the adjusted wheel.

5. If the machine creeps in neutral you have moved out of the neutral band and will have to turn the tracking adjustment knob clockwise until the machine does not creep.

6. Repeat steps 1 and 2. If the machine pulls to one side, turn the tracking adjustment knob on the faster side clockwise until the machine tracks straight.

8. If tracking cannot be achieved, contact your Scag servicing dealer.

Figure 6. Tracking Adjustment

PARKING BRAKE

1. Adjust the parking brake so that when the brake hand lever is against the stop on the handle bar, the brake levers on the brake shaft weldment are against the stops on the engine deck.

⚠ CAUTION:

Adjust the brake only enough to hold the machine. Excessive force may cause damage to the machine or brake components.

2. Adjust the brake actuator rod on either side of the machine to obtain proper brake adjustment.

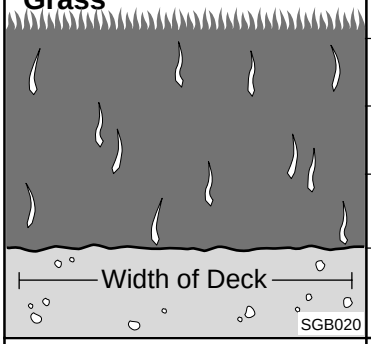
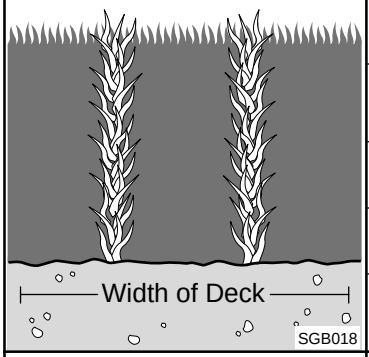
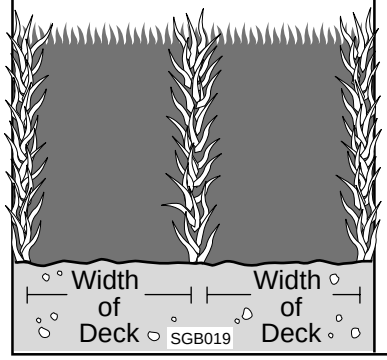
LUBRICATION & MAINTENANCE

+ Grease spindle until grease comes out the relief valve

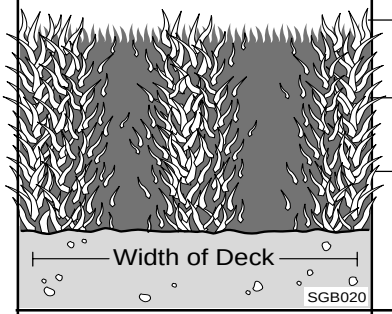
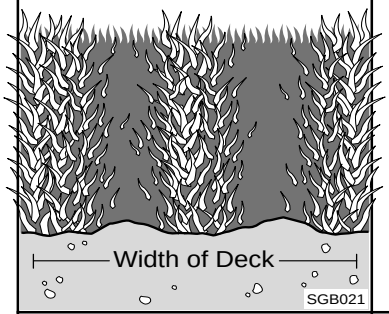
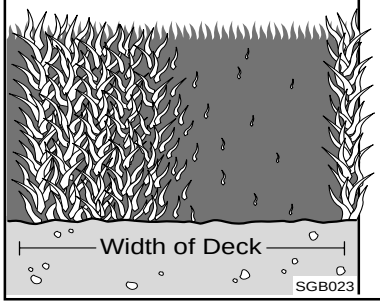
Compatible Greases:
- Lidok EP #2 (found at industrial shops)
- Ronex MP (Exxon service stations)
- Shell Alvania (Shell service stations)
- Mobilux #2 (Mobil service stations)
- Super Lub M EP #2 (Conoco service stations)

BREAK-IN	8 HOURS (DAILY)	40 HOURS (WEEKLY)	100 HOURS (BIWEEKLY)	500 HRS OR ANNUALLY	PROCEDURE	COMMENTS
X					Check all hardware for proper tightness	
X					Change engine oil and filter at 5 hours	
	X				Check engine oil	Do not over fill
	X				Remove debris from under belt cover	More often if needed
	X				Sharpen cutter blades	More often if needed
	X				Grease spindle bearings	+ US Lithium MP White Grease 2125
	X				Clean air filter	More often if needed
	X				Check belt tension	Adjust as needed
	X				Check tire pressure	Add or adjust as required
		X			Check battery level	Adjust as needed
		X			Replace air filter	More often if needed
		X			Grease caster wheel bearings	Chassis grease
		X			Grease caster wheel pivot shafts	Chassis grease
		X			Grease idler pulley bracket on cutter deck	Chassis grease
		X			Change hydrostatic oil filter	Clean area before removing the filter
		X			Change engine oil and filter	See engine manufacturer information
		X			Grease idler arm pivots	Chassis grease
		X			Grease brake hand lever	Chassis grease
		X			Grease brake actuator levers	Chassis grease
			X		Check all hardware for proper tightness	
			X		Adjust air gap on electric clutch	Contact your Scag dealer for information about making this adjustment.
			X		Drain hydraulic system and replace oil	

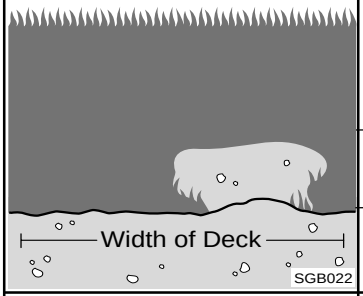
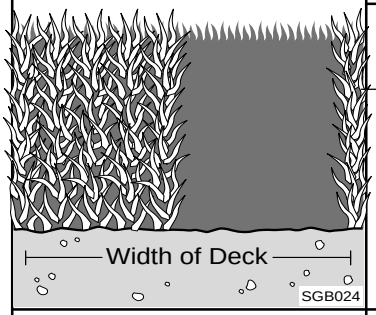
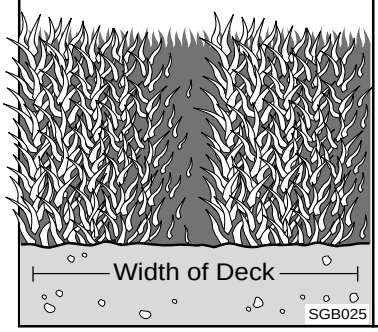
TROUBLESHOOTING CUTTING CONDITIONS

CONDITION	CAUSE	CURE
Stringers - Occasional Blades of Uncut Grass 	Low engine RPM	Run engine at full 3600 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
	Belt 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 3600 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

CONDITION	CAUSE	CURE
Uneven Cut on Flat Ground - Wavy High-Low Appearance, Scalloped Cut, or Rough Contour  SGB020	Lift worn off of 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  SGB021	Uneven ground	May need to reduce ground speed, raise cutting height, and/or change direction of cut
Sloping Ridge Across Width of Cutting Path  SGB023	Tire pressures not equal	Check and adjust tire pressure
	Wheels uneven	Check and adjust tire pressure
	Deck mounted incorrectly	See your authorized SCAG dealer

TROUBLESHOOTING

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

TECHNICAL SPECIFICATIONS

ENGINES

General Type:	Heavy duty industrial/commercial
Brand:	Kohler, Kawasaki,
Models:	Kohler CV15T, Kaw. FC420V (14HP),FH451V (15HP), FH500V (17HP)
Horsepower:	Kohler 15HP; Kaw. 14HP; Kaw. 15HP; Kaw. 17HP
Type:	4 cycle gas, vertical shaft engines
Displacement:	Kohler: 15HP = 426cc Kawasaki: 14HP = 423cc, 17HP = 494cc
Cylinders:	Varied - see manufacturer's specifications
Governor:	Mechanical type governor with variable speed control set at 3600 rpm (±75 rpm), idle set at 1200 rpm (±75 rpm)
Exhaust Group:	Single exhaust canister muffler
Fuel Pump Group:	Varied - See manufacturer's specifications
Oil Pump Group:	Varied - See manufacturer's specifications
Valve Group:	Varied - See manufacturer's specifications
Starter/Electrical:	Electronic Ignition with recoil starter or 12 volt battery with alternator, solid state ignition with key start
Charging System:	15 amp

ENGINE DECK

Thickness:	7 gauge steel
Fuel Tank:	5 gallon (19.0 litres) seamless polyethylene
Drive Wheels/Tires:	16x6.50-8 four-ply pneumatic tubeless, radius edge
Brakes:	Dynamic braking through hydro drive system
Axles:	1" tapered
Handle Bars:	1-1/4" diameter

DRIVE SYSTEM

Type:	Hydro drive with two variable displacement pumps and two cast-iron high torque motors
Hydro Pumps:	Two Hydro-Gear Model BDP 10L pumps with dump valves for movement without running the engine
Drive Wheel Motors:	Two 12 cu. inch cast-iron high torque motors
Hydro Fluid Cooling Group:	4qt. capacity cooling radiator, uses, SAE 20W50 fluid and 10 micron filter
Steering / Travel Control::	Independent handle controls for each wheel, squeeze to move from forward to neutral to reverse, neutral lock lever, speed range controlled with single lever (patented design), in-field tracking adjustment with no tools necessary
Parking Brakes:	7.5" drum, band brake, one on each wheel
Dump Valves:	Allows for movement without engine running
Axles:	1" tapered motor shafts
Wire Harness:	14 gauge wire
Safety Group:	Handle actuated operator presence system (patented design), blade / clutch and transmission interlock to engine kill
Forward Speed Range:	0 to 7.4 mph
Reverse Speed Range:	0 to 3.0 mph

SCAG

TECHNICAL SPECIFICATIONS (CON'T)

CUTTER DECKS

SWM 36 Advantage, SWM 48 Advantage, SWM 52 Advantage, SWM 72

Type:	Out-front design with anti-scalp rollers
Construction:	SWM36A, 48A: 7-gauge steel with 7-gauge (3/16") steel skirt SWM52A, 61A:10-gauge steel with 7-gauge (3/16") steel skirt
Cutting Width:	35.5" (90.2 cm), 48.0 (122.0 cm), 52.0 " (132.0 cm), 61.0 " (155.0 cm), 71.5" (181.6 cm)
Cutting Height Adjustment:	Adjustable from 1-3/4" to 4-1/4" in 1/4" increments
Cutter Blades:	Marbain®, .197 thickness SWM 36: Two (2) 18"; SWM 48: Three (3) 16.5" SWM 52: Three (3) 18"; SWM 61: Three (3) 21" SM72: Three (3) 24" blades
Blade Engagement:	Electric blade brake clutch with instrument panel switch
Discharge Opening:	Extra wide 11.5", 13.75 " discharge opening with hinged chute
Caster Wheels:	9.4 x 3.5 smooth tread flotation, inner tubes, split rims, roller bearings, with quick pin removal
Spindles:	Cast housing, taper roller bearing, low maintenance with top access grease fitting and grease overfill relief poppet
Spindle Pulleys:	Cast-iron with easily removed taper hubs
Idler Pulley:	5" diameter pulley, welded and riveted construction, 1-3/8" O.D. Bearing
Idler Arm:	Heavy duty idler arm of 1/4" channel steel
Cutter Deck Belts:	B-section with Kevlar cord

ADDITIONAL SPECIFICATIONS

OPTIONAL ITEMS/ATTACHMENTS

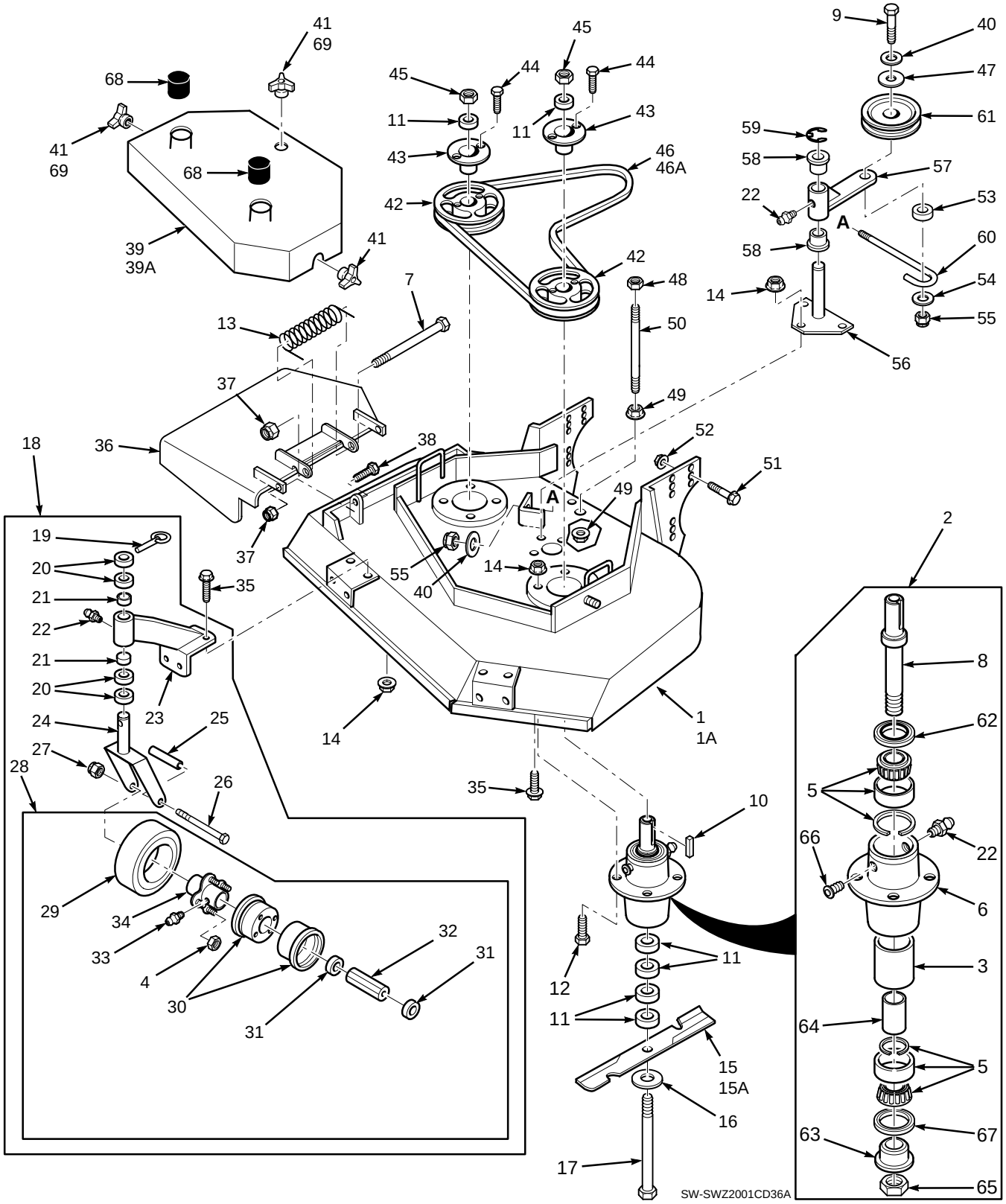
Fabric Grass Catcher:	GC-F4 Grass Catcher with 4 cubic ft. capacity
Metal Grass Catcher:	GC-4D Grass Catcher with 4 cubic ft. capacity and rope pull dump or pick-up and dump
Steerable Sulky:	RS-ZT Steerable Sulky with padded seat and full articulation for zero-radius turning
Mulch Master:	Steel plate fits over discharge opening and steel baffles between each balde with Eliminator Blades. Installs and removes in the field.

APPROXIMATE DIMENSIONS	SWM36A	SWM48A	SWM52A	SWM61A
Length:	74.0"	76"	78"	76.0"
Length with Grass Catcher:	74.0"	76"	78"	76.0"
Tracking Width:	37.0"	42.0"	42.0"	42.0"
Width:	54.5"	59.0"	62"	70.0"
Width (with discharge chute up):	37.5"	49.0"	52"	63.0"
With with grass catcher:	55.0"	65.0"	78"	80.0"
Height:	43"	43"	43"	43"
Height with grass catcher:	43"	43"	43"	43"
Weight	515 lbs.	560 lbs.	610 lbs.	625 lbs.
Weight with grass catcher:	555 lbs.	600 lbs.	650 lbs.	665lbs.
Turning Radius:	Zero	Zero	Zero	Zero

Date of Issue: February ,2001
Specifications Subject To Change Without Notice

NOTES

36A" CUTTER DECKS

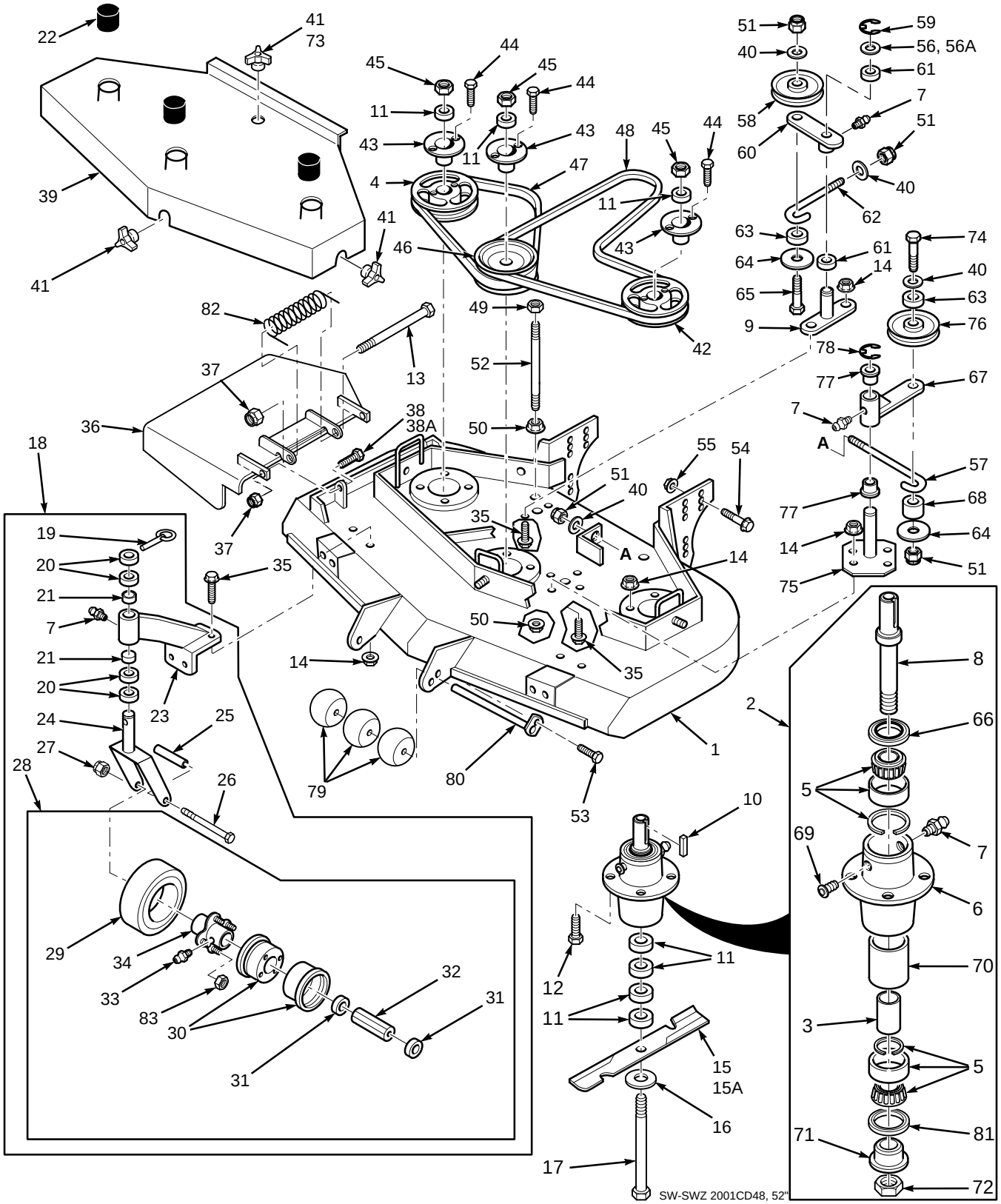


36A" CUTTER DECKS

Ref. No.	Part Number	Description
1	461362	Cutter Deck (Includes Decals)
1A	461412	Cutter Deck for SWZ36A-15KA (Includes Decals)
2	46631	Cutter Spindle Assy.
3	43312	Spacer, Outside
4	48307-08	Tapered Nut, 5/16-24
5	481022	Tapered Bearing (Two)
6	43294	Spindle Housing
7	04001-108	Bolt, 5/16-18 x 4-1/4" Hex Head
8	43298	Spindle Shaft
9	04001-77	Bolt, 3/8-16 x 3-1/2" Hex Head
10	04063-08	Key, 1/4 x 1/4 x 2"
11	43278	Spacer, Cutter Blade - Small
12	04001-10	Bolt,5/16-18 x 1-1/4" Hex Head
13	482245	Spring, Chutte Return
14	04019-03	Nut 5/16-18 Serrated Flange
15	481707	Cutter Blade, 18"
15A	481711	Cutter Blade, 18 Hi Lift
16	04040-10	Flatwasher, 5/8 W
17	04001-41	Hex Hd. Bolt, 5/8-11 x 9-1/2"
18	46079	Caster Assembly (Inc.19-28)
19	04066-01	Quick Pin
20	43037-01	Spacer, Caster Yoke, 1/2" long
21	48100-01	Bronze Bearing
22	48114-04	Grease Fitting
23	46082	Support Assembly (Inc. 21-23)
24	45006	Caster Yoke
25	43022	Sleeve, Caster Wheel Bearing
26	04001-37	Hex Hd. Bolt, 1/2-13 x 5-1/2"
27	04021-07	Elastic Stop Nut, 1/2-13
28	48307	Wheel Assy. (Inc.4, 29-34)
29	48307-02	Tire only, Caster Wheel
NS	48006-03	Inner Tube only
30	48307-04	Rim Pair, Caster Wheel
31	48006-07	Retainer, Bearing, Caster Wheel
32	48006-06	Roller Bearing, Caster Wheel
33	48114-03	Grease Fitting, 45 degree 1/4-28
34	48006-05	Hub Assembly
35	04017-16	Cpscrw,5/16-18 x 3/4" Ser.Flg. Hex Head
36	461295	Discharge Chute
37	04021-10	Hex Nut, 5/16-18 Elastic Stop
38	04001-09	Hex Hd Bolt, 5/16-18 x 1"
39	46797	Belt Cover Assy (Includes Decal)
39A	461413	Belt Cover Assembly w/decals (SWZ36A-15KA)
40	04041-07	Flat Washer, 3/8" Special
41	04029-03	Wing Nut, 3/8-16
42	48924	Pulley
43	48926	Tapered Hub
44	04001-01	Hex Hd. Bolt, 1/4-20 x 3/4"
45	04020-09	Hex Nut, 5/8-11
46	48204	Belt, Blade Drive
47	43077	Spacer
48	04021-05	Hex Nut, 3/8-16 Center Locknut
49	04019-04	Nut, 3/8-16 Serrated Flange
50	04004-02	Support, Belt Cover
51	04017-42	Cpscrw, 7/16-14 x 1"Ser.Flg. HH
52	04019-05	Nut, 7/16-14 Serrated Flange
53	43277	Spacer, J-Hook
54	04041-12	Washer, 3/8 x 1-1/2 x 16 GA
55	04021-09	Elastic Stop Nut, 3/8-16
56	45423	Idler Pivot
57	46748	Idler Arm Assy. (Inc. 22 & 58)
58	48100-02	Bronze Bearing
59	04050-05	Retaining Ring, 1-1/8" Ext. "E"
60	44078	J-Hook
61	48269	Idler Pulley, Belt Clutch
62	481024	Seal, Cutter Spindle
63	43297	Spindle Bushing
64	43296	Spacer, Inside
65	481035	Nut, 1-1/16 - 18 Thread
66	48677	Relief Fitting, Cutter Spindle
67	481025	Seal, Cutter Spindle
68	48098	Spindle Shield
69	04029-04	Wing Nut, 3/8-16 (Small) Top Side
69	04029-04	Wing Nut, 3/8-16 (Small) RH Side

* Common hardware which should be purchased locally. All bolts are Grade 5 plated, all other fasteners zinc plated.

48A, 52A, 61A, & 72" CUTTER DECKS



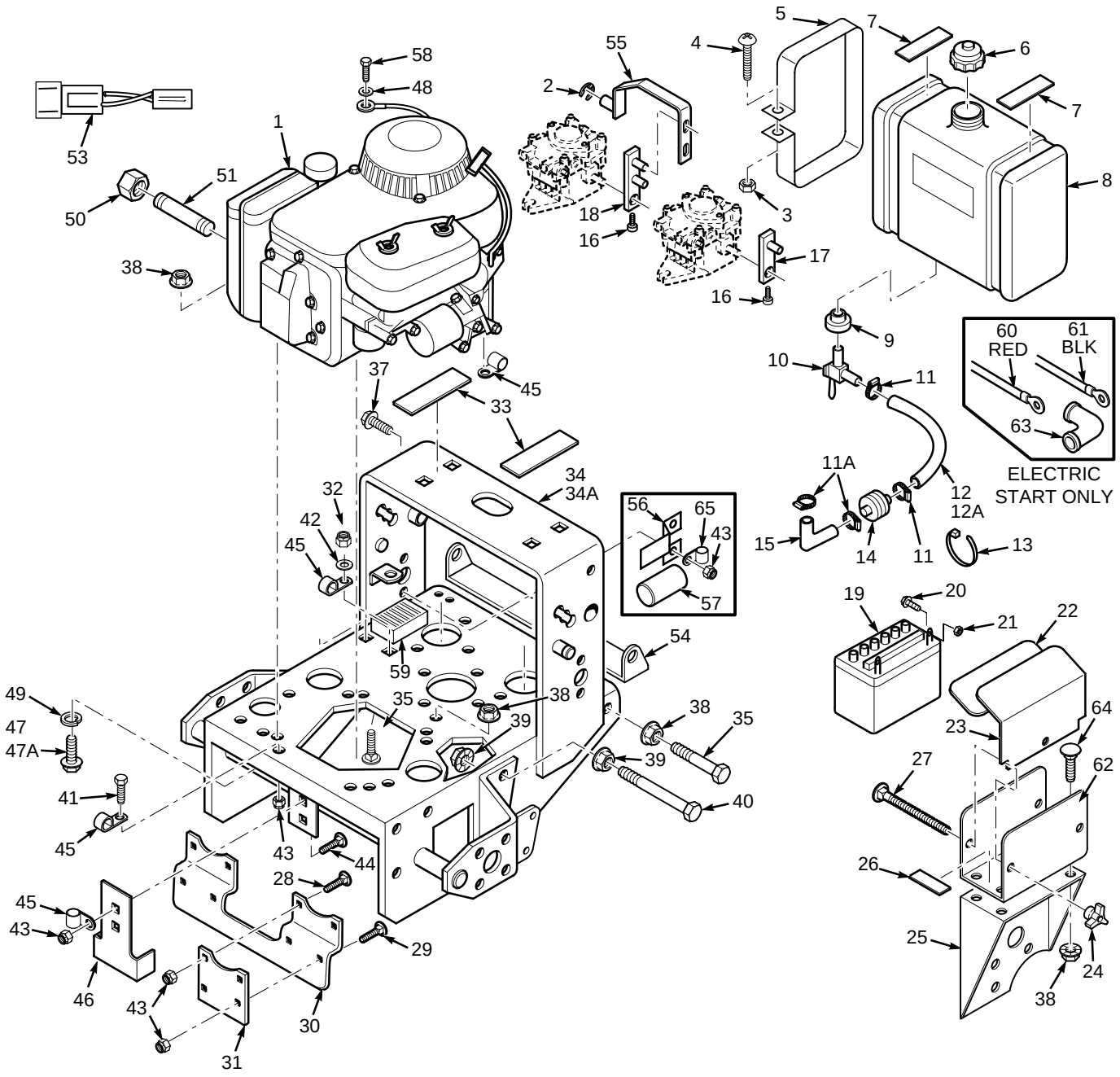
48A, 52A, 61A, & 72" CUTTER DECKS

Ref. No.	Part No.	Description	48	52	61	72
1	461367	Cutter Deck Adv. (Inc. decals)	x			
*1	461372	Cutter Deck Adv. (Inc. decals)		x		
*1	461374	Cutter Deck Adv. (Inc. Decals)		x		
1	461379	Cutter Deck Adv. (Includes decals)			x	
1	461142	Cutter Deck (Includes decals)				x
2	46631	Spindle Assembly	x	x	x	x
3	43296	Spacer, Inside	x	x	x	x
4	48924	Pulley	x	x	x	x
5	481022	Tapered Bearing (Two)	x	x	x	x
6	43294	Spindle Housing	x	x	x	x
7	48114-04	Grease Fitting Str. 5/16	x	x	x	x
8	43298	Spindle Shaft, Tapered Brng	x	x	x	x
9	45037	Idler Pivot	x	x	x	x
10	04063-08	Key, 1/4 x 1/4 x 2"	x	x	x	x
11	43278	Spacer, Cutter Blade - Small	x	x	x	x
12	04001-10	Bolt, 5/16-18 x 1-1/4" Hex Head	x	x	x	x
13	04001-108	Bolt, 5/16-18 x 4-1/4" Hex Head	x	x	x	x
14	04019-03	Serrated Flange Nut, 5/16-18	x	x	x	x
15	481706	Cutter Blade 16-1/2"	x			
15	481707	Cutter Blade 18"		x		
15	481708	Cutter Blade 21"			x	
15	481709	Cutter Blade 24"				x
15A	481710	Cutter Blade 16-1/2 Hi Lift	x			
15A	481711	Cutter Blade 18 Hi Lift		x		
15A	481712	Cutter Blade 21 Hi Lift			x	
16	04040-10	Flatwasher,5/8" (.688 x 1.75 x .134)	x	x	x	x
17	04001-41	Hex Head Bolt, 5/8-11 x 9-1/2"	x	x	x	x
18	46079	Caster Assembly, (incl.19-28 & 7)	x	x	x	x
19	04066-01	Quick Pin	x	x	x	x
20	43037-01	Spacer, Caster Yoke, 1/2" thick	x	x	x	x
21	48100-01	Bronze Bearing	x	x	x	x
22	48098	Spindle Shield	x	x	x	x
23	46082	Support Assembly, (incl. 21-23)	x	x	x	x
24	45006	Caster Yoke	x	x	x	x
25	43022	Sleeve, Caster Wheel Bearing	x	x	x	x
26	04001-37	Hex Hd Bolt, 1/2-13 x 5-1/2"	x	x	x	x
27	04021-07	Elastic Stop Nut, 1/2-13	x	x	x	x
28	48307	Wheel Assy. (incl. 29-34,81)	x	x	x	x
29	481774	Tire only, Caster Wheel	x	x	x	x
NS	481773	Inner Tube only, Caster Wheel	x	x	x	x
30	481772	Rim Pair, Caster Wheel	x	x	x	x
31	481770	Bearing Retainer, Caster Wheel	x	x	x	x
32	481769	Roller Bearing, Caster Wheel	x	x	x	x
33	48114-03	Grease Fitting 45 deg., 1/4-28	x	x	x	x
34	481768	Hub Assembly, (incl. bolts)	x	x	x	x
35	04017-16	Capscrew, 5/16-18 x 3/4"	x	x	x	x
36	461292	Discharge Chute			x	x
36A	461295	Discharge Chute	x	x		
37	04021-04	Nut, 5/16-18 Elastic Elastic Stop	x	x	x	x
38	04001-09	Bolt, 5/16-18 x 1" Hex Head	x	x	x	x
39	46798	Belt Cover (Includes decals)	x			
39	461095	Belt Cover (Includes decals) 17KA	x			
39	46804	Belt Cover (Includes decals)		x		
39	46805	Belt Cover (Includes decals)			x	
39	46848	Belt Cover (Includes decals)				x
40	04041-07	Flat Washer, 3/8" Special	x	x	x	x
41	04029-03	Wing Nut, 3/8-16 (Large)	x	x	x	x
42	48924	Pulley	x	x		
42A	48753	Pulley			x	
42B	48967	Pulley				x

Ref. No.	Part No.	Description	48	52	61	72
43	48926	Tapered Hub	x	x	x	x
44	04001-01	Bolt, 1/4-20 x 3/4" Hex Head	x	x	x	x
45	04020-09	Nut, 5/8-11 Hex	x	x	x	x
46	48923	Pulley, Double	x	x		
46A	48940	Pulley, Double			x	
46B	48966	Pulley, Double				x
47	48087	Belt, RH Blade Drive	x			
47	48285	Belt, RH Blade Drive		x		
47	48265	Belt, RH Blade Drive			x	
47	48295	Belt, RH Blade Drive				x
48	48089	Belt, Blade Drive	x			
48	48286	Belt, Blade Drive		x		
48	48088	Belt, Blade Drive			x	
48	48296	Belt, Blade Drive				x
49	04021-05	Nut, 3/8-16, Nut Centerlock	x	x	x	x
50	04019-04	Nut, 3/8-16, Serrated Flange	x	x	x	x
51	04021-09	Nut, 3/8-16 Elastic Stop	x	x	x	x
52	04004-02	Support, Belt Cover	x	x	x	x
53	04001-08	Bolt, 5/16-18 x 1/2" Hex Head	x	x	x	x
54	04017-42	Cpscrw,7/16-14 x 1"Ser Flng H Hd	x	x	x	x
55	04019-05	Nut, 7/16-14 Serrated Flange	x	x	x	x
56	04041-08	Flat Washer 3/4" Special	x	x	x	x
56A	04041-08S	Flat Washer 3/4" Special	x	x	x	x
57	44078	J-Hook	x	x	x	x
58	48181	Idler Pulley, "V" Groove	x	x	x	x
59	04050-02	Retaining Ring, 3/4" Ext."E"	x	x	x	x
60	46081	Idler Arm Assy. (Incl. 7 & 61)	x	x	x	x
61	48100-05	Bronze Bearing	x	x	x	x
62	43028	J-Rod, Idler Pulley	x	x	x	
62A	44078	J-Rod, Idler Pulley				x
63	43077	Spacer, J-Rod	x	x	x	x
64	04041-12	Washer, 3/8 x 1-1/2 x 16 ga.	x	x	x	x
65	04001-46	Bolt, 3/8-16 x 2-1/4" Hex Head	x	x	x	x
66	481024	Seal, Cutter Spindle	x	x	x	x
67	46748	Idler Arm Assy (Includes 22&77)	x	x	x	x
68	43277	Spacer, J-Rod	x	x	x	x
69	48677	Reiief Fitting, Cutter Spindle	x	x	x	x
70	43312	Spacer, Outside, Cutter Spindle	x	x	x	x
71	43297	Spindle Bushing	x	x	x	x
72	481035	Nut, Cutter Spindle	x	x	x	x
73	04029-04	Wing Nut, 3/8-16 (Small) Top Side	x	x	x	x
74	04001-77	Bolt, 3/8-16 x 3-1/2" Hex Head	x	x	x	x
75	45329	Idler Pivot	x	x	x	x
76	48269	Idler Pulley, Belt Clutch	x	x	x	x
77	48100-02	Bronze Bearing	x	x	x	x
78	04050-05	Retaining Ring	x	x	x	x
79	482295	Guide Roller	x	x	x	x
80	45944	Roller Shaft	x	x	x	x
81	481025	Seal, Cutter Spindle	x	x	x	x
82	482245	Spring, Chute Return	x	x	x	x
83	48307-08	Nut, 3/8-24 Tapered	x	x	x	x

***** Measure the engine deck to determine frame size. 461372 is for small frame (16") & 461374 is for large frame (20")

ENGINE DECK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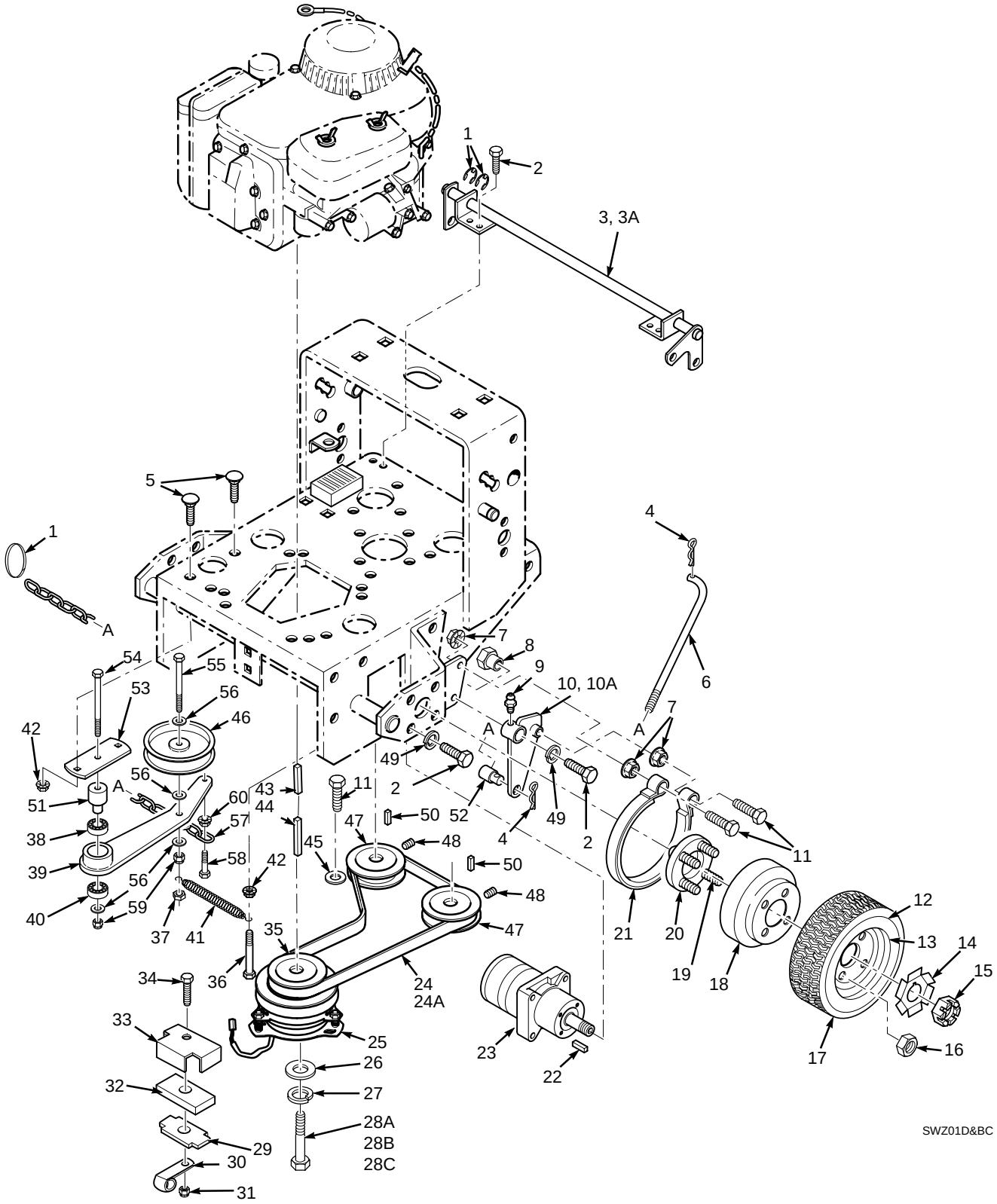
ELECTRIC START ONLY
030441698

ENGINE DECK

Ref. No.	Part No.	Description	14KA	15KA	17KA	21KAE
1	48842	Engine 14KA Kawasaki	x			
1	482144	Engine 15KA Kawasaki		x		
1	481563	Engine 17KA Kawasaki			x	
1	48971	Engine 21KAE Kawasaki				x
2	04050-10	Retaining Ring, 1/2" Ext. "E"	x	x	x	x
3	04020-02	Hex Nut, 1/4-20	x	x	x	x
4	04010-10	Screw, 1/4-20 x 2" Rnd. Hd. Phil.	x	x	x	x
5	421239	Strap, Fuel Tank	x	x	x	x
6	481603	Cap, Fuel Tank	x	x	x	x
7	48292	Pad, Rubber-Fuel Tank - Upper	x	x	x	x
8	46846	Fuel Tank Assy. (incl. 9, 10)	x	x	x	x
9	48309	Bushing	x	x	x	x
10	48308	Valve, Fuel Shut-off	x	x	x	x
11	48059-01	Clamp, Fuel Hose				x
11A	48059-02	Clamp, Fuel Hose, (KA Only)	x			x
12	48058	Fuel Hose, 1/4 ID x 20" KA	x			x
12A	48058	Fuel Hose, 1/4 ID x 23"				x
13	48028-05	Cable Tie	x		x	x
14	48057-02	Fuel Filter	x			
15	48179	Fuel Hose, 7/32 ID x 3-1/2"	x			
16	04015-06	Capscrew, #10-32 x 1 Soc. Hd.	x	x	x	
17	46323	Lever Assy., Pump Control -LH	x	x	x	x
18	46324	Lever Assy., Pump Control -RH	x	x	x	x
19	48015	Battery				x
20	04001-44	Bolt, 1/4-20 x .50"				x
21	04020-02	Nut, 1/4-20				x
22	48099	Pad				x
23	42392	Battery Cover				x
24	04029-01	Wing Nut, 1/4-20				x
25	423356	Battery Support				x
26	48661	Pad, Rubber				x
27	04003-01	Bolt, 1/4-20 x 6" Carriage				x
28	04003-28	Carriage Bolt, 5/16-18 x 2"			x	x
29	04003-04	Carriage Bolt, 5/16-18 x 1"			x	x
30	422553	Stiffener			x	x
31	422552	Plate, Backing			x	x
32	04021-08	Nut, 1/4-20 Elastic Stop	x	x	x	x
33	48205	Pad, Rubber-Fuel Tank, Lower	x	x	x	x
34	461358	Engine Deck, 16" Wide, W/Decls.	x	x	x	
34A	461359	Engine Deck, 20" Wide, W/Decls.			x	x
35	04003-09	Bolt,1/4-20 x 1-1/4" Hex Head	x	x	x	x
36	04019-02	Nut, 1/4-20 Serrated Flange			x	x
37	04017-18	Capscr., 5/16-18 x 1.25 Sr. Flg.	x	x	x	x
38	04019-03	Nut, 5/16-18 Serr. Flange	x	x	x	x
39	04019-04	Nut, 3/8-16 Serr. Flange	x	x	x	x
40	04001-22	Bolt, 3/8-16 x 2-3/4" Hex Head	x	x	x	x
41	04001-08	Hex Head Bolt, 5/16-18 x .75"	x	x	x	x
42	04040-14	Flat Washer 1/4"	x	x	x	x
43	04021-10	Nut, 5/16-18 Elastic Stop	x	x	x	x
44	04003-04	Carrage Bolt, 5/16-18 x 1"	x	x	x	x
45	48030-09	Clamp	x	x	x	x
46	421370	Clutch Bracket	x	x	x	x
47	04017-19	Capscr, 5/16-18 x 1.50" Sr. Flg.				x
47A	04002-01	Metric HH Bolt, M8-1.25 x M30	x	x	x	
48	04031-09	Lock Washer, 5/16 Int. Tooth	x	x	x	x
49	04030-03	Lock Washer, 5/16	x	x		
50	48257	Pipe Cap				x
51	48402-04	Pipe, 4.75" Nipple				x
52	04003-09	Carrage Bolt, 1/4-20 x 1-1/4"	x	x		
53	481717	Wire Hrns. Adapter, 17KA			x	
54	45418	Pulley Guard, 16" Frame	x	x		
54	45419	Pulley Guard, 20" Frame			x	x
55	45283	Shaft Weldment, RH Pump Cntl.	x	x	x	x
56	422930	Bracket, Capacitor	x	x		
57	21013-2064	Condenser (order from Kaw.)				x
58	04002-07	Metric H H Bolt, 8-1.25 x 10	x	x	x	
59	21066-2071	Regulator, (order from Kaw.)				x
60	48029-02	Battery Cable, 31.5" Red				x
61	48029-14	Battery Cable, 31.5 Black				x
62	421703	Battery Box				x
63	48126	Rubber Boot				x
64	04003-12	Carrage Bolt, 5/16-18 x .75				x
65	48030-10	Cable Clamp, .75 ID	x	x	x	

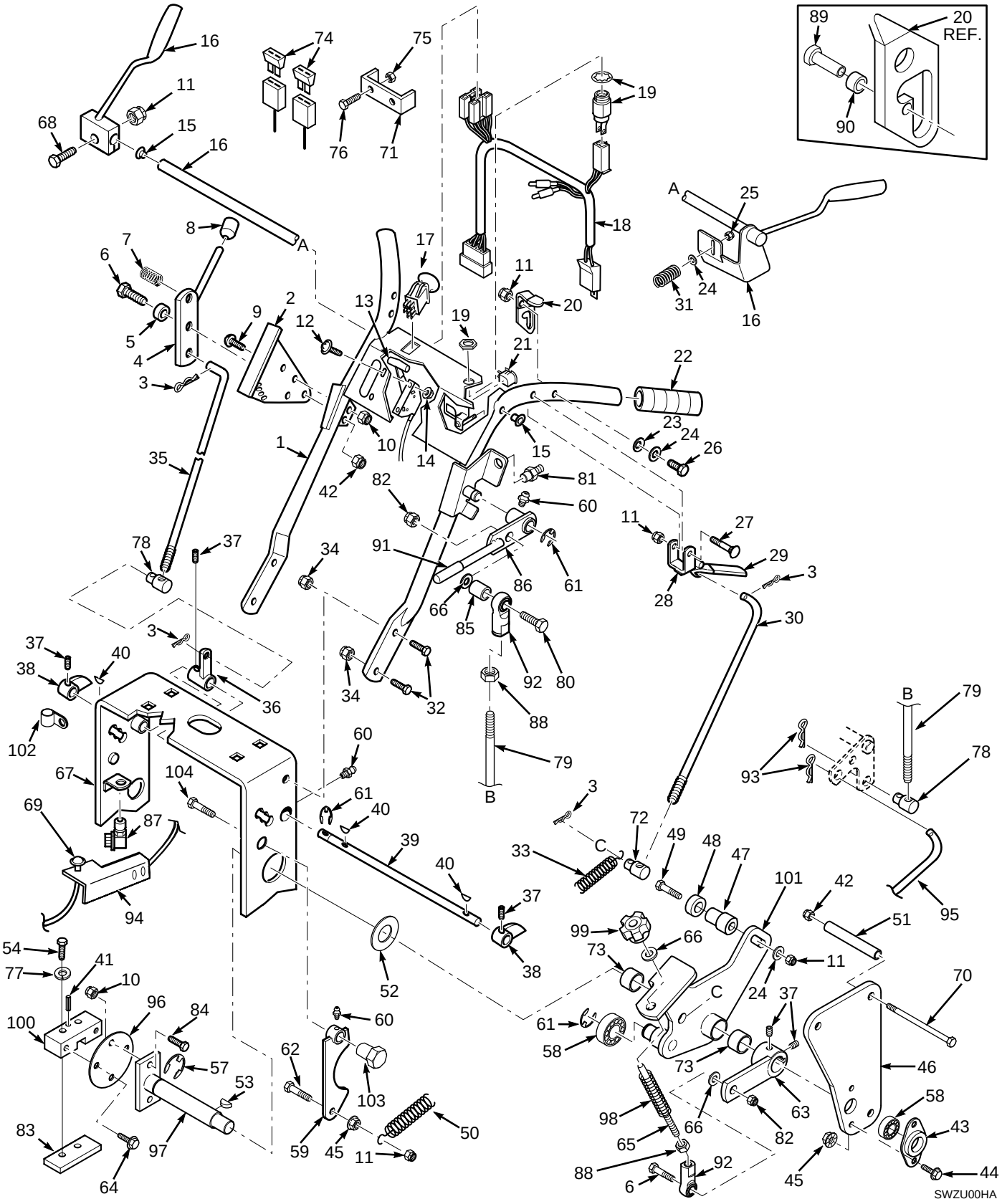
DRIVE AND BRAKE COMPONENTS



DRIVE AND BRAKE COMPONENTS

Ref. No.	Part No.	Description	14KA	15KA	17KA	21KAE
1	481876	Ring, Split	x	x	x	x
2	04001-19	Bolt, 3/8-16 x 1" Hex Head	x	x	x	x
3	45842	Brake Shaft Assy. Wlmt.Small	x	x	x	
3A	45854	Brake Shaft Assy. Wlmt.Large			x	x
4	04062-01	Hair Pin Cotter, .094 x 1.62	x	x	x	x
5	04003-12	Carrage Bolt, 5/16-18 x .75"	x	x	x	x
6	44126	Rod, Brake Lower	x	x	x	x
7	04019-04	Nut, 3/8-16 Serr. Flange	x	x	x	x
8	43415	Bushing, Brake	x	x	x	x
9	48114-05	Grease Fitting	x	x	x	x
10	45860	Brake Actuator Wlmt., LH	x	x	x	x
10A	45861	Brake Actuator Wlmt., RH	x	x	x	x
11	04001-46	Bolt, 3/8-16 x 2-1/4"	x	x	x	x
12	481618	Tire, 16 x 6.50, 4 ply	x	x	x	x
13	48004-04	Rim Assy	x	x	x	x
14	422214	Lock Washer, Wheel Motor	x	x	x	x
15	48679	Hex Castle Nut, 3/4-28 UNEF	x	x	x	x
16	04028-01	Nut, Lug	x	x	x	x
17	481502	Wheel Assy., (incl. 31,32)	x	x	x	x
18	422215	Brake Drum	x	x	x	x
19	04008-01	1/2-20 Serrated Bolt	x	x	x	x
20	46928	Hub, Wheel	x	x	x	x
21	481470	Brake Band, 7.5"	x	x	x	x
22	04063-07	Key, 3/16 X .75 Woodruff	x	x	x	x
23	481416	Wheel Motor	x	x	x	x
24	48553	Belt, Pump Drive (Sm Frame)	x	x	x	
24A	48587	Belt, Pump Drive (Lg Frame)			x	x
25	461397	Electric Clutch	x	x	x	x
26	04041-28	Flat Washer .469 x 1.75 x .25	x	x	x	x
27	04030-05	Lock Washer, 7/16	x	x	x	x
28A	04002-05	Hex Head Bolt, M10-1.5 x 65	x	x		
28B	04001-149	Hex Head Bolt, 7/16-20 x 2.00"			x	x
29	422534	Plate, Backing	x	x	x	x
30	48030-09	Clamp	x	x	x	x
31	04021-10	Nut, 5/16-18 Elastic Stop	x	x	x	x
32	481716	Rubber Pad, Clutch Stop	x	x	x	x
33	422533	Retainer, Clutch Stop	x	x	x	x
34	04001-12	Hex Head Bolt, 5/16-18 x 1.75"	x	x	x	x
35	481665	Pulley, Pump Drive Engine	x	x	x	x
36	04001-13	Hex Head Bolt, 5/16-18 x 2.75"	x	x	x	x
37	04021-05	Nut, 3/8-16 Center Lock	x	x	x	x
38	48224	Ball Bearings	x	x	x	x
39	451109	Idler Arm Weldment, Pump	x	x	x	x
40	48224	Ball Bearings	x	x	x	x
41	481835	Spring, Pump Belt Idler	x	x	x	x
42	04019-03	Nut, 5/16-18 Serr. Flange	x	x	x	x
43	04063-24	Key, 1/4x1/4x2.75" Clutch Mtg.	x	x	x	x
44	04063-01	Key, 1/4x1/4x1.25" Pulley Mtg.	x	x	x	x
45	04041-07	Flat Washer, 3/8	x	x	x	x
46	48473	Pulley, Idler 4.5"	x	x	x	x
47	48586	Pulley, Pump Shaft	x	x	x	x
48	04012-04	Setscrew, 5/16-18 x 3/8"	x	x	x	x
49	04030-04	Lockwasher, 3/8	x	x	x	x
50	04063-14	Key, 5.0 x 5.0 x 25mm	x	x	x	x
51	43504	Pivot, Idler (Long)	x	x	x	x
52	43032	Swivel Joint	x	x	x	x
53	422713	Base, Idler Pivot	x	x	x	x
54	04001-54	Bolt, Hex Head 3/8-16 x 3"	x	x	x	x
55	04001-22	Bolt, Hex Head 3/8-16 x 2.75"	x	x	x	x
56	04043-04	Flatwasher 3/8"	x	x	x	x
57	481873	Chain	x	x	x	x
58	04001-59	Bolt, Hex Head 1/4-20 x 1.25"	x	x	x	x
59	04021-09	Nut, Hex Elastic Stop 3/8-16	x	x	x	x
60	04019-02	Nut, Serrated Flange 1/4-20	x	x	x	x

HANDLE ASSEMBLY

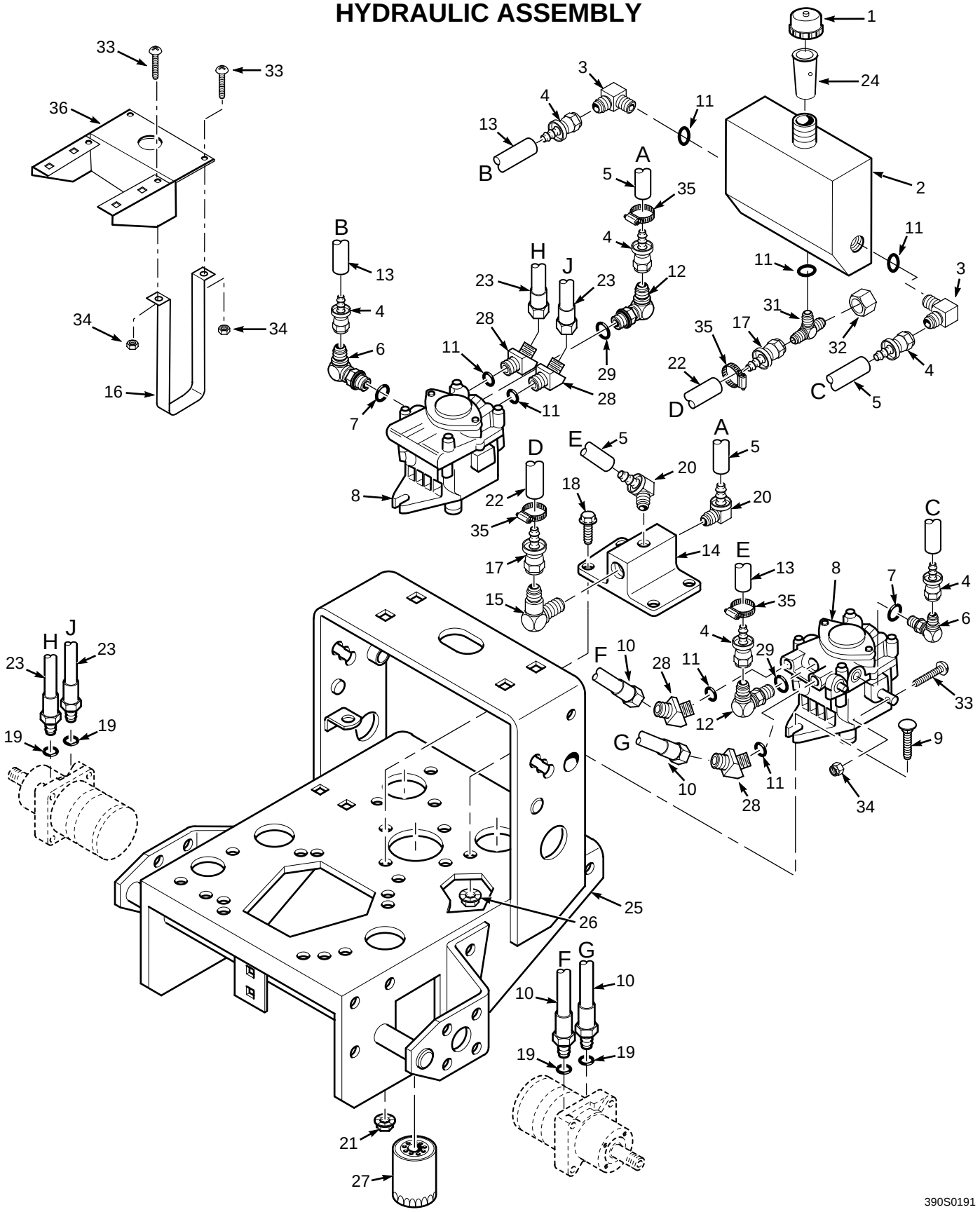


HANDLE ASSEMBLY

Ref. No.	Part No.	Description	14KA	15KA	17KA	21KAE
1	461128	Upper Handle Wlmt. W/Decals	x	x		
1	461129	Upper Handle Wlmt. W/Decals			x	x
2	42675	Quadrant, Speed Control	x	x	x	x
3	04062-02	Hairpin, .094 x 1.19	x	x	x	x
4	45282	Lever, Speed Adjustment	x	x	x	x
5	43086	Bushing, Speed Adjustment Lever	x	x	x	x
6	04001-20	Hex Head Bolt, 3/8-16 x 1-1/2"	x	x	x	x
7	48493-01	Ball Plunger	x	x	x	x
8	48092	Knob, Speed Adjustment	x	x	x	x
9	04014-01	Capscrew, 1/4-20 x 3/4" FHHS	x	x	x	x
10	04021-08	Nut, 1/4-20 Elastic Stop	x	x	x	x
11	04021-10	Nut, 5/16-18 Elastic Stop	x	x	x	x
12	04010-01	Screw, #10-32 x 1/2" PW HD	x	x	x	x
13	481071	Throttle Control	x	x		
13A	48946	Throttle Control			x	x
14	04019-01	Nut, #10-32 Serr. Flange	x	x	x	x
15	48312	Bushing	x	x	x	x
16	45572	Handle, Oper. Presence-RH	x	x	x	x
16A	45571	Handle, Oper. Presence-LH (20")	x	x	x	x
16A	45573	Handle, Oper. Presence-LH (16")	x	x		
17	481687	Switch,Elec.Clutch Eng. (incl.Nut)	x	x	x	x
18	481680	Wire Harness, Manual Start	x	x	x	
18A	481681	Wire Harness, Electric Start				x
19	48609	Key Switch,Manual Srt.(incl. Hdw)	x	x	x	
19A	48798	Key Switch,Elec. Start (incl. Hdw.)				x
20	461242	Neutral Latch-RH	x	x	x	x
20A	461241	Neutral Latch-LH	x	x	x	x
21	48717	Switch, Neutral Interlock	x	x	x	x
22	48159	Grip	x	x	x	x
23	04032-01	Washer, Curved Spring	x	x	x	x
24	04040-15	Flat Washer	x	x	x	x
25	04031-08	Lock Washer,1/4" Int. Tooth	x	x	x	x
26	04001-17	Hex Head Bolt, 5/16-18 x 2"	x	x	x	x
27	04001-53	Hex Hd. Bolt, 5/16-18 x 2-1/2"	x	x	x	x
28	46744	Lever, Steering Control (incl. 29)	x	x	x	x
29	48492	Grip, Steering Control	x	x	x	x
30	44134	Rod, Steering Control	x	x	x	x
31	48951	Spring, Handle Return	x	x	x	x
32	04017-27	Capscr., 3/8-16 x 1" Ser. Flange	x	x	x	x
33	482348	Spring, Traction Control	x	x	x	x
34	04019-04	Nut, 3/8-16 Serr. Flange	x	x	x	x
35	44051	Rod Speed Control	x	x	x	x
36	45279	Bellcrank, Speed Control	x	x	x	x
37	04012-02	Setscrew, 1/4-28 x 1/4"	x	x	x	x
38	46335	Cam, Speed Control (incl. SS)	x	x	x	x
39	43166	Jackshaft, Speed Control	x	x		
39A	43155	Jackshaft, Speed Control	x	x	x	x
40	04063-13	Key, 1/8 x 1/2" Woodruff	x	x	x	x
41	04021-10	Nut, 3/8-16 Elastic Stop	x	x	x	x
42	46336	Pivot, Pump Ctrl. (incl.Bshg & Zrk)	x	x	x	x
43	48100-04	Bushing, 1/2" ID	x	x	x	x
44	04017-17	Capscrew, 5/16-18 x 1" Serr. Flg.	x	x	x	x
45	04019-03	Nut, 5/16-18 Serrated Flange	x	x	x	x
46	42730	Bar, Speed Control	x	x	x	x
47	43161	Spacer, Speed Ctrl. Bearing	x	x	x	x
48	48409	Bearing, Speed Ctrl. Bellcrank	x	x	x	x
49	04001-69	Hex Head Bolt, 5/16-18 x 1-3/4"	x	x	x	x
50	48494-02	Spring, Return	x	x	x	x
51	481517-02	Knob, 5/16-18	x	x	x	x
52	43308	Bushing	x	x	x	x
53	45292	Handle, Neutral Adj	x	x	x	x
54	04065-05	Drive Pin, 5/32 x 7/8 Type U	x	x	x	x
55	04001-08	HH Bolt,5/16-18 x 3/4"	x	x	x	x
56	04030-03	Lock Washer, 5/16	x	x	x	x
57	04019-03	Nut, 5/16-18 Serr. Flange	x	x	x	x
58	48224	Bearing, Ball Neutral Return	x	x	x	x
59	46747	Cam, Neutral (incl. grease ftng.)	x	x	x	x
60	48114-05	Grease Fitting, 1/4-28 UNF	x	x	x	x
61	04050-01	Retaining Ring, 5/8 Ext. "E"	x	x	x	x
62	04001-09	Hex Head Bolt, 5/16-18 x 1"	x	x	x	x
63	482146	Lever, Speed Control	x	x	x	x
64	45642	Bellcrank, Pump Control-LH	x	x	x	x
64A	45643	Bellcrank, Pump Control-RH	x	x	x	x
65	04050-10	Retaining Ring, 1/2 Ext. "E"	x	x	x	x
66	04041-07	Flat Washer,15/16x25/64x12ga	x	x	x	x
67	By Ref.	Deck, Engine	x	x	x	x
68	04001-10	Hex Head Bolt, 5/16-18 x 1-1/4"	x	x	x	x
69	481278	Choke Control	x	x		
69A	482314	Choke Control			x	x
70	481057	Spring, Return	x	x	x	x
71	42413	Fuse Holder	x	x	x	x
72	43306	Swivel Joint, Steering Rod	x	x	x	x
73	04040-04	Flat Washer(.344 x .688 x .065)	x	x	x	x
74	48298	Blade Fuse, 20A	x	x	x	x
75	04021-01	Nut, #10-32 Elastic Stop	x	x	x	x
76	04010-03	Screw, #10-32 x 1-1/2" Phillips	x	x	x	x
77	43305	Pin, Neutral Lock	x	x	x	x
78	43032	Swivel Joint	x	x	x	x
79	44125	Rod, Brake Lever	x	x	x	x
80	04001-21	Hex Hd. Bolt, 3/8-16 x 1 3/4	x	x	x	x
81	04015-13	Soc. Hd. Capscrew,#8-32 x 1/2	x	x	x	x
82	04021-09	Nut, 3/8-16 Elastic Stop	x	x	x	x
83	04041-23	Washer #8-.170 x .375 x .032	x	x	x	x
84	04050-01	Retaining Ring, 5/8 Ext, "E"	x	x	x	x
85	43212	Spacer	x	x	x	x
86	46954	Parking Brake Lever with Grip	x	x	x	x
87	481476	Switch, Parking Brake	x	x	x	x
88	04020-14	Nut, 3/8-24	x	x	x	x
89	481411	Bushing, bearing Retainer	x	x	x	x
90	481420	Bearing, Neutral Lock	x	x	x	x
91	48342	Grip, Parking Brake	x	x	x	x
92	48464	Ball Joint, RH Thread	x	x	x	x
93	04062-01	Hairpin, .094 x 1.62	x	x	x	x
94	421622	Bracket, Choke Mtg. (16" Only)	x	x		
95	44126	Rod, Lower Brake	x	x	x	x
96	422273	Plate, Coupler	x	x	x	x
97	451113	Shaft, Pump Control	x	x	x	x
98	481879	Spring	x	x	x	x
99	481885-03	Knob, Tracking Adjustment	x	x	x	x
100	48829	Block, Pump Control	x	x	x	x
101	49236	Control, LH (inc. bush. & decal)	x	x	x	x
	49237	Control, RH (inc. bush. & decal)	x	x	x	x
102	48030-15	Wire Loom	x	x	x	x
103	43415	Bushing	x	x	x	x
104	04001-20	Bolt, Hex Head 3/8-16 x 1-1/2"	x	x	x	x

* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plated.

HYDRAULIC ASSEMBLY



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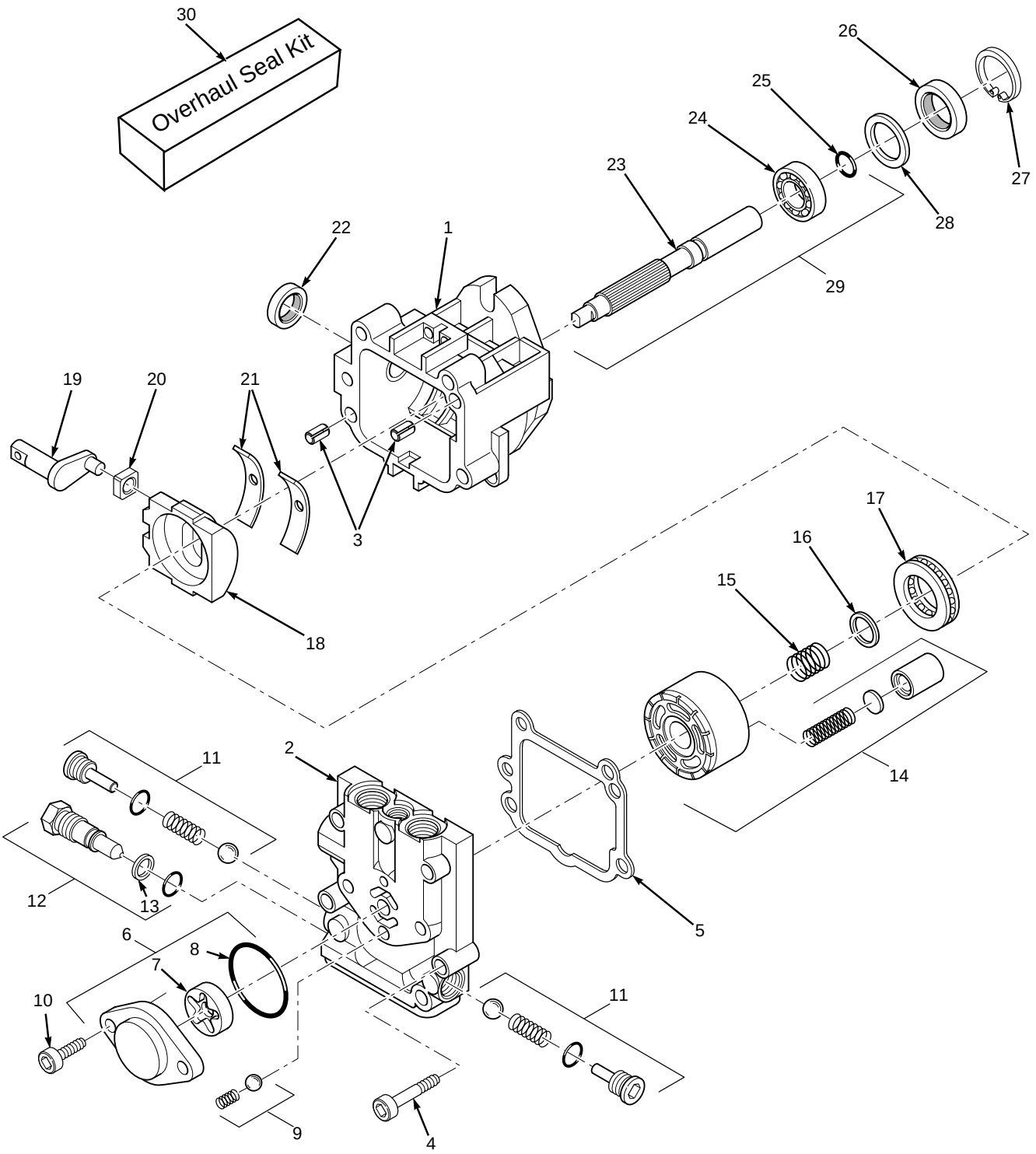
HYDRAULIC ASSEMBLY

Ref. No.	Part Number	Description
1	481164	Cap, Oil Reservoir
2	461188	Oil Reservoir (With Fittings)
3	48350-04	Elbow, 90 deg. 7/16-20 x 9/16-18
4	48353-02	Coupling, 7/16-20 SAE Flare Swivel to 1/4" Hose Push On
5	48482	Hose, 1/4" ID - 7" Long (Order By The Inch)
6	48350-04	Elbow, 90 deg. 7/16-20 JIC to 9/16-18 "O" Ring
7	48603-06	O-Ring
8	48551	Pump, Hydro-Gear BDP-10L117
9	04003-11	Bolt, Carriage, 3/8-16 x 1.25"
10	481265	Hose, Pump to Wheel Motor
11	48603-02	O-Ring
12	48350-03	Elbow, 90 deg., 1/2 NPT
13	48482	Hose, 1/4" ID - 5" Long (Order By The Inch)
14	48471-02	Oil Filter Base
15	48486-03	Elbow, 90 deg. 1/2" NPT
16	422794	Strap, Hydraulic Tank
17	48936-03	Coupling, 3/4-16 SAE to 1/2" Hose Push On
18	04017-16	Capscrew, 5/16-18 x .75" Serr. Flange
19	48603-04	O-Ring
20	48486-01	Elbow, 90 deg. Male 1/4 NPT to 1/4 Hose Push On
21	04019-03	Nut, 5/16-18 Serr. Flange
22	481875	Hose, Formed 1/2" ID
23	481849	Hose, Pump to Wheel Motor
24	481507	Tube, Filler Neck
25	461358	Engine Deck (16" Wide) W/Decals - Small Frame
	461359	Engine Deck (20" Wide) W/Decals - Large Frame
26	04019-04	Nut, 3/8-16 Serr. Flange
27	48758	Oil Filter
28	48485-01	Elbow, 45 Deg.-3/4-16 JIC Male x Male 3/4-16 O-Ring
29	48603-03	O-Ring
30	481537-02	Coupling, 3/8 Pipe to 1/2 Push-on
31	48810-01	T-Fitting, 1/2 (3/4-16)
32	48571-02	Cap, 3/4-16
33	04010-10	Screw, 1/4-20 x 2.0" Round Head Phillips
34	04021-08	Nut, 1/4-20
35	48136-05	Clamp, .87 max dia.
36	422793	Bracket, Hydraulic Tank

* Common hardware which should be purchased locally. All bolts are Grade 5 plated, all other fasteners zinc plated.

HYDRAULIC PUMP ASSEMBLY



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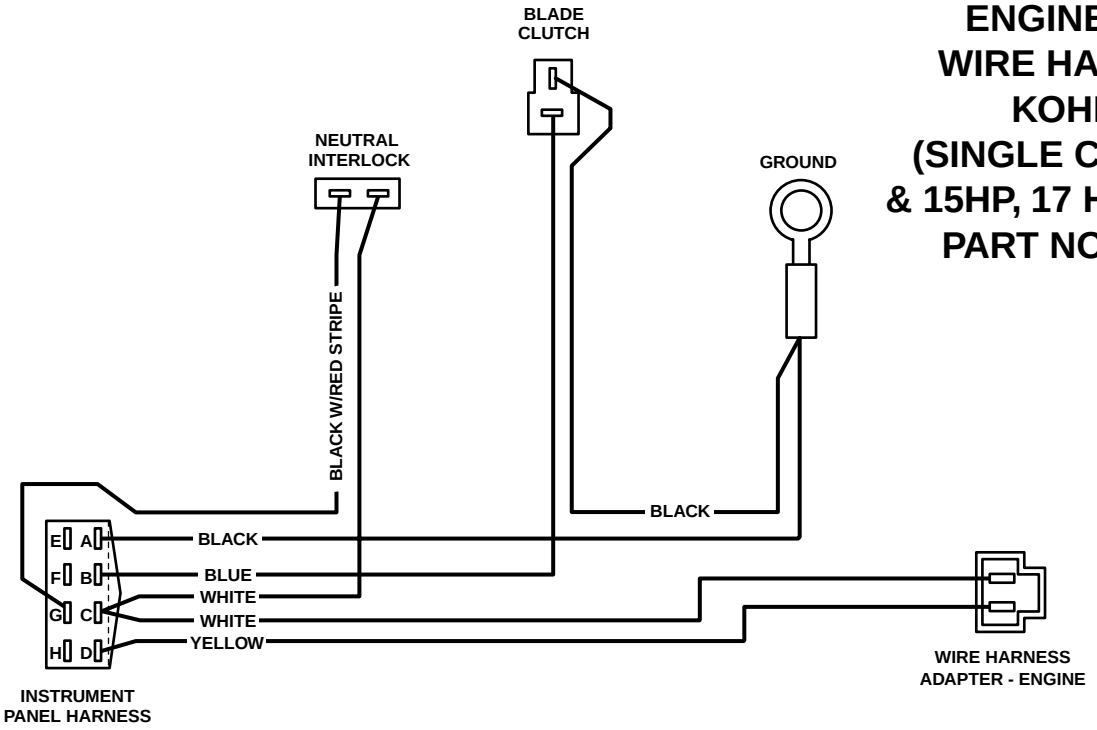
HYDRAULIC PUMP ASSEMBLY

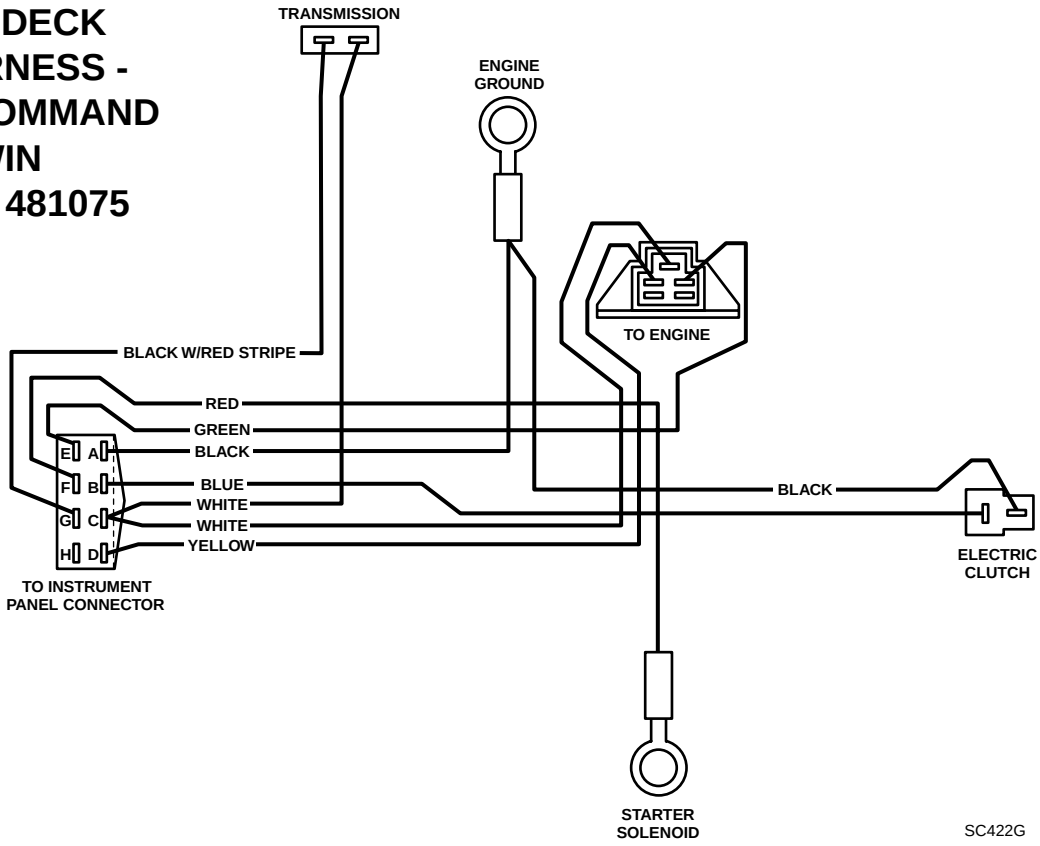
Ref. No.	Part Number	Description
1	HG 2513017	Housing Kit (Incl. Housing, Journal Bearing)
2	HG 2513016	End Cap
3	HG 9004800-2506	Straight Headless Pin
4	HG 9007314-0810	Socket Head Screw
5	HG 2003067	End Cap Gasket
6	HG 2513027	Charge Pump Kit (Incl. Charge Cover, Gerotor Assy., O-Ring)
7	HG 50273	Gerotor Assembly
8	HG 9004101-1340	O-Ring
9	HG 2510064	Charge Relief Valve Kit
10	HG 50095	Socket Head Screw
11	HG 2510027	Check Valve Kit (Incl. Check Plug, Spring, O-Ring, Orifice Check Valve)
12	HG 2513030	Bypass Valve Kit (Incl. Bypass Valve, O-Ring, Back-up Ring)
13	HG 9006110-0120	Backup Ring
14	HG 70079	Cylinder Block Kit
15	HG 2003014	Block Spring
16	HG 2003017	Block Thrust Washer
17	HG 2003044	Roller Thrust Bearing
18	HG 2003087	Swash Plate
19	HG 2003005	Trunnion Arm
20	HG 2000015	Guide Slot
21	HG 2003023	Cradle Bearing
22	HG 9008000-0126	Lip Seal
23	HG 2003020	Pump Shaft
24	HG 2003043	Ball Bearing
25	HG 2003016	Retaining Ring
26	HG 9008000-0128	Lip Seal
27	HG 2003052	Retaining Ring
28	HG 2003018	Spacer
29	HG 2513038	Shaft Kit (Incl. Pump Shaft, Ball Bearing, Retaining Ring)
30	HG 2513018	Overhaul Seal Kit (Incl. Gasket, Trunnion Seal, Input Shaft Seal, Charge Pump O-Ring)

* Common hardware which should be purchased locally. All bolts Grade 5 plated, all other fasteners zinc plated.

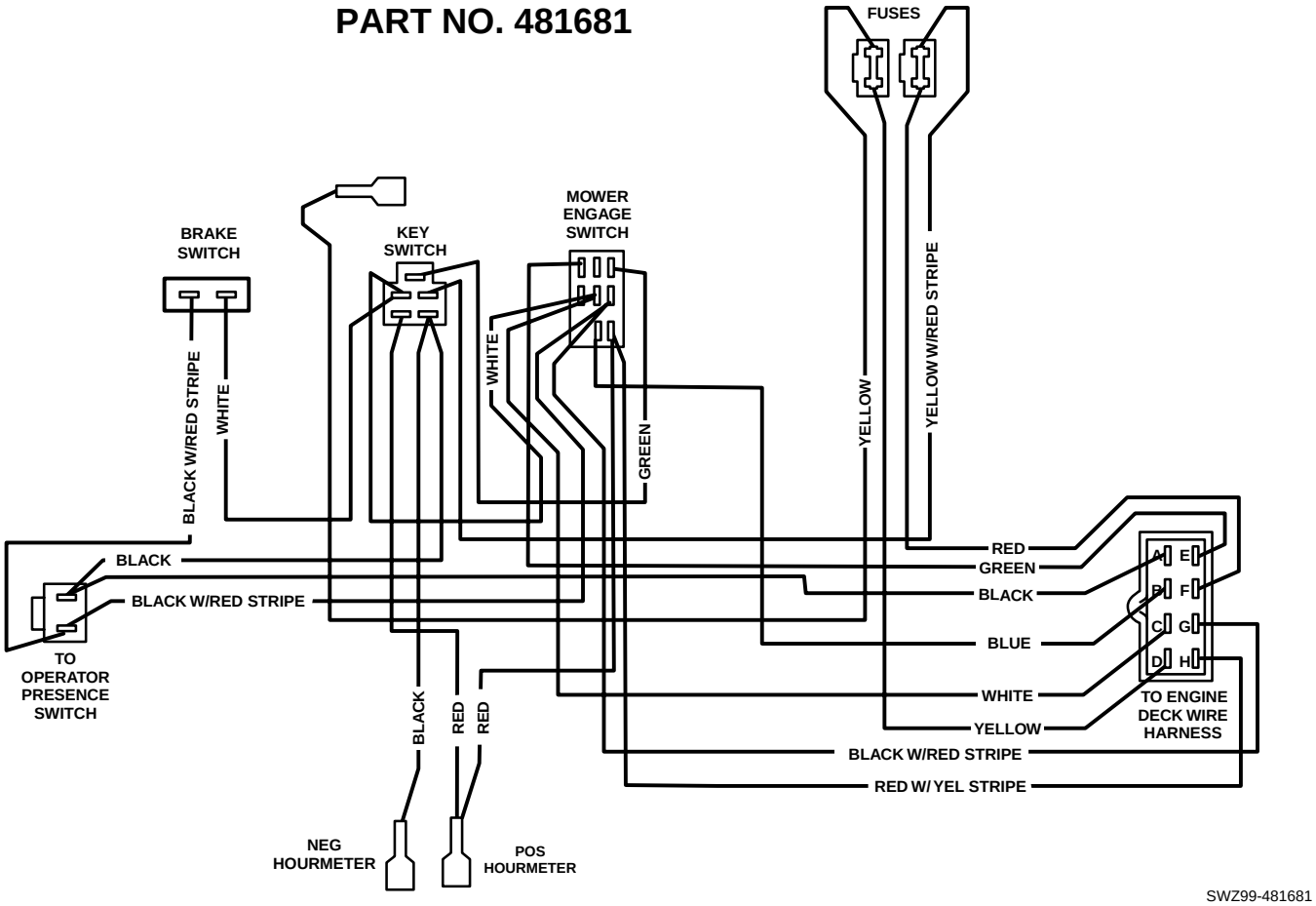
ENGINE DECK WIRE HARNESS - KOHLER, (SINGLE CYLINDER) & 15HP, 17 HP Kawasaki PART NO. 481073



ENGINE DECK WIRE HARNESS - KOHLER COMMAND V-TWIN PART NO. 481075



HANDLE WIRE HARNESS - ELECTRIC START
PART NO. 481681



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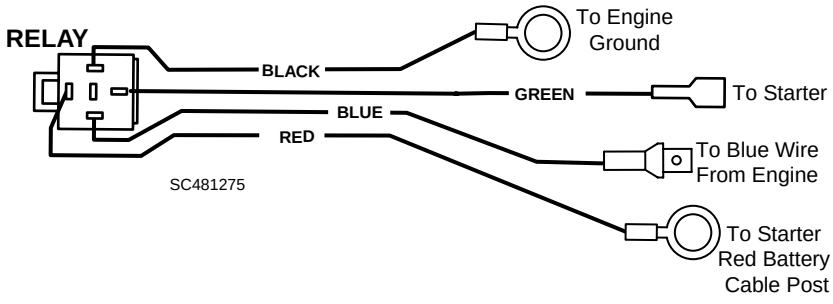
WIRE HARNESS WITH RELAY
PART NO. 481275



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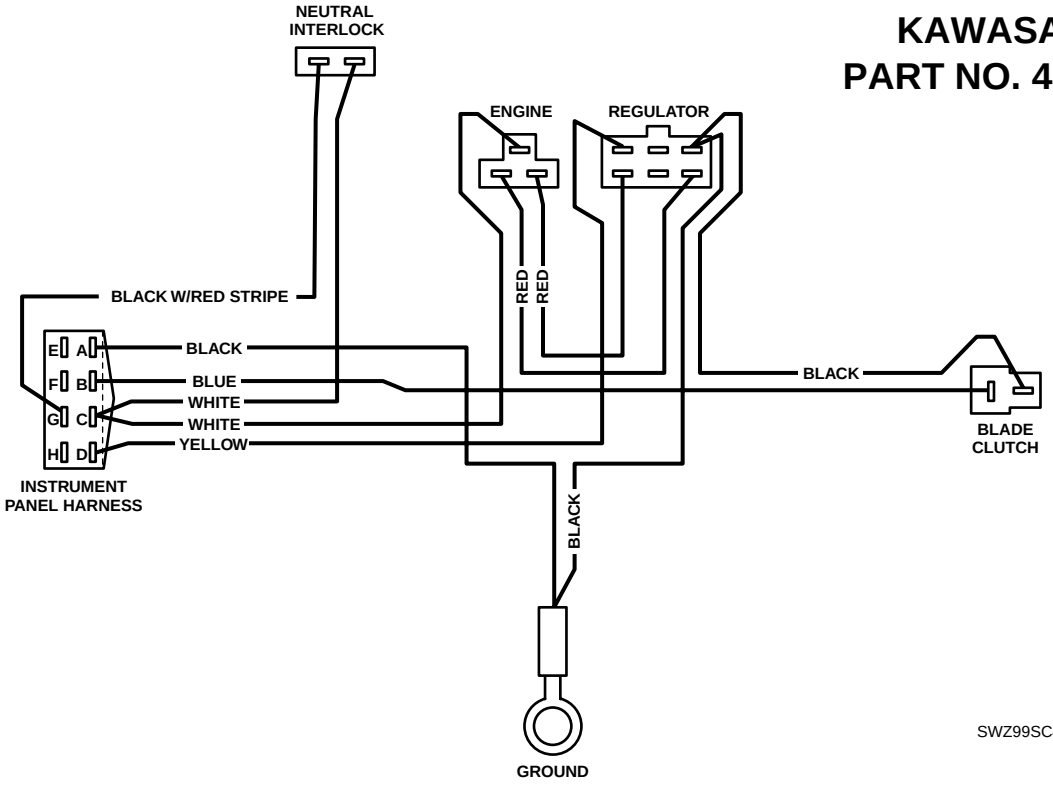
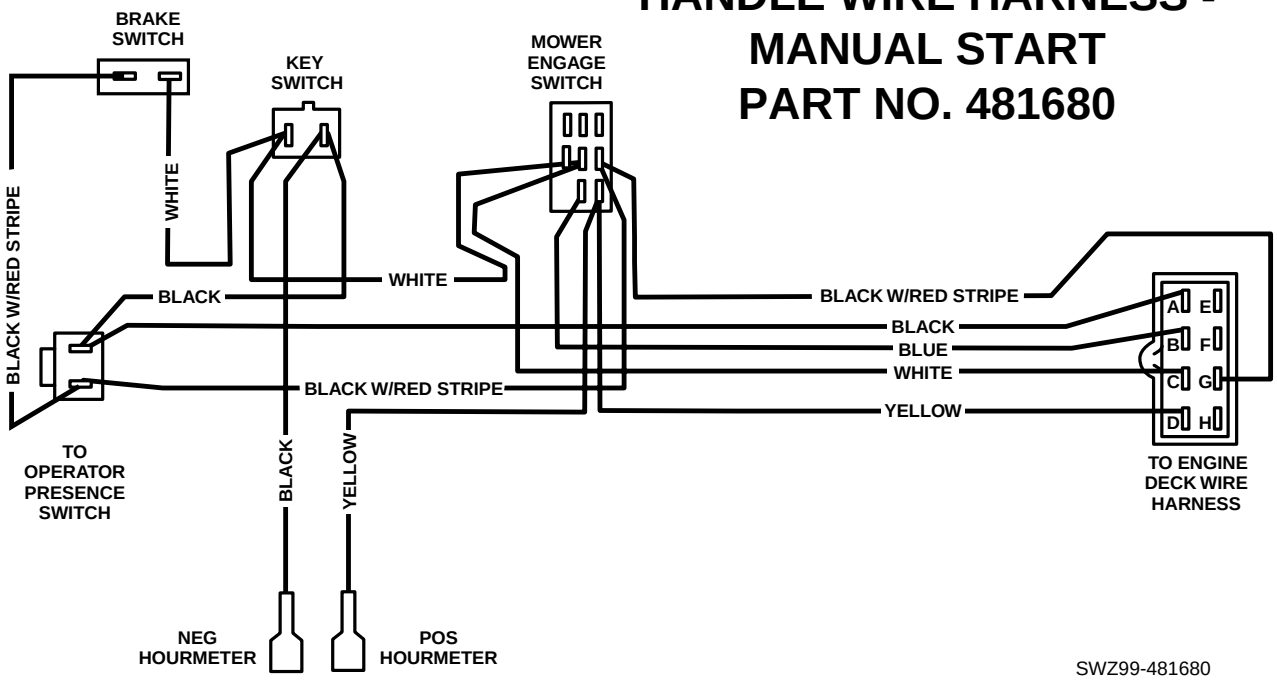
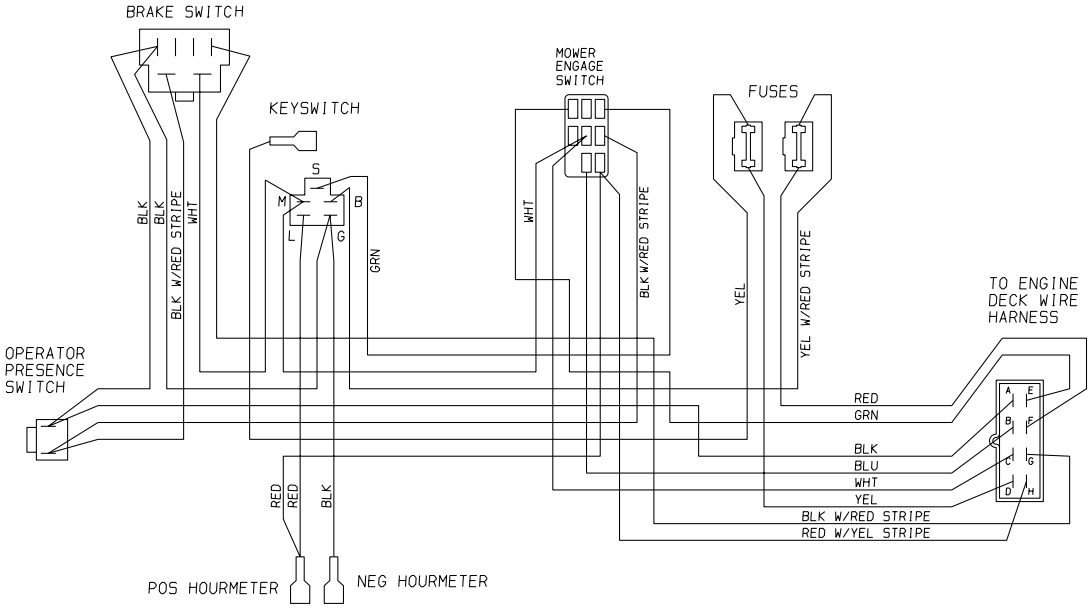
ENGINE DECK WIRE HARNESS - KAWASAKI PART NO. 481074

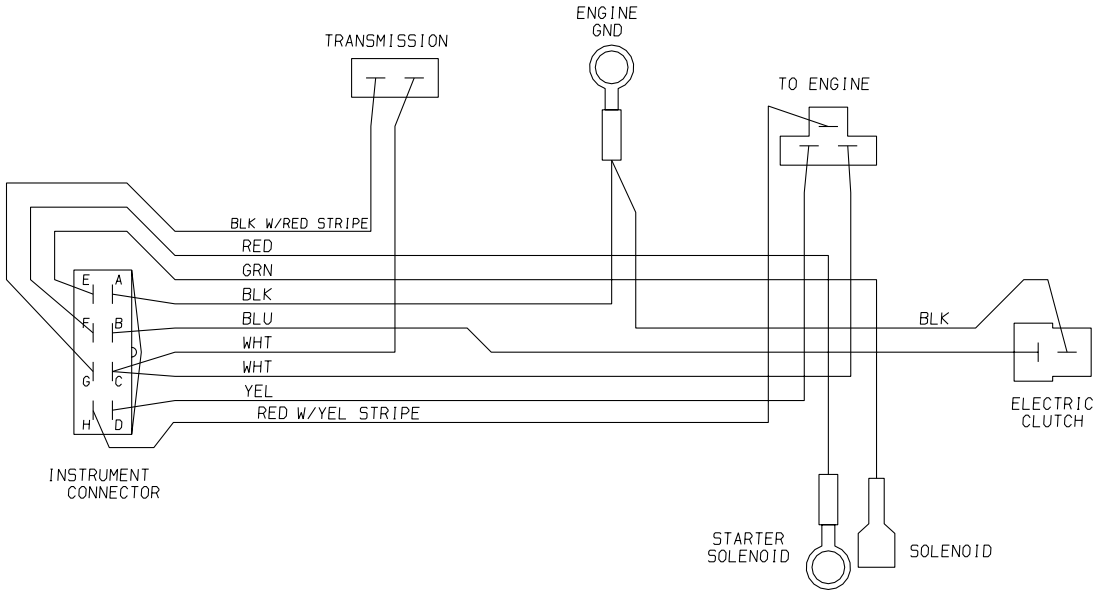


HANDLE WIRE HARNESS - MANUAL START PART NO. 481680



HANDLE WIRING HARNESS
KAWASAKI ELECTRIC START
PART NUMBER:482026





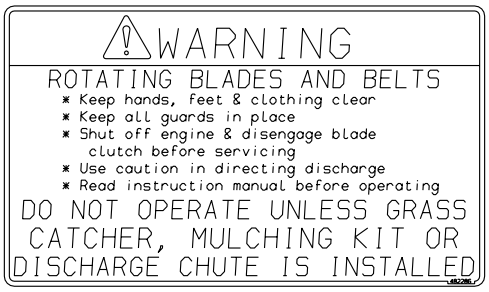
ENGINE DECK
WIRING HARNESS
KAWASAKI ELECTRIC START
PART NUMBER: 482008

REPLACEMENT DECALS & INFORMATION

481971

48314

482285



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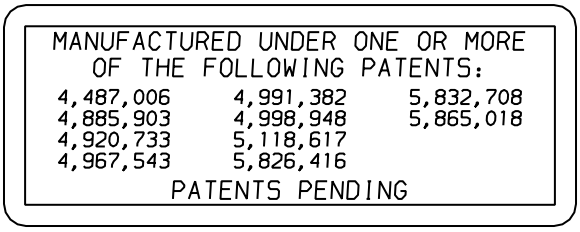

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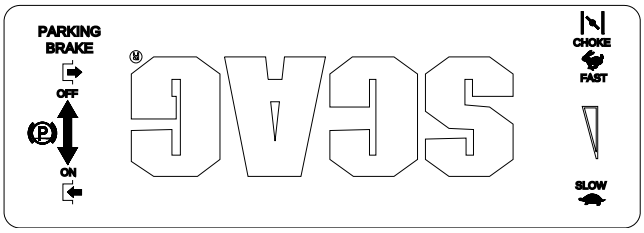
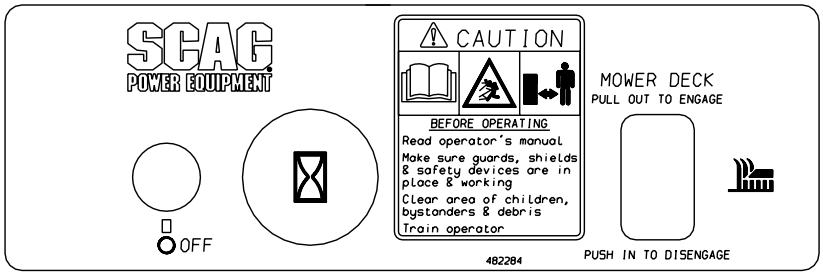


481414



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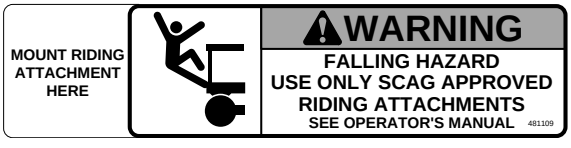
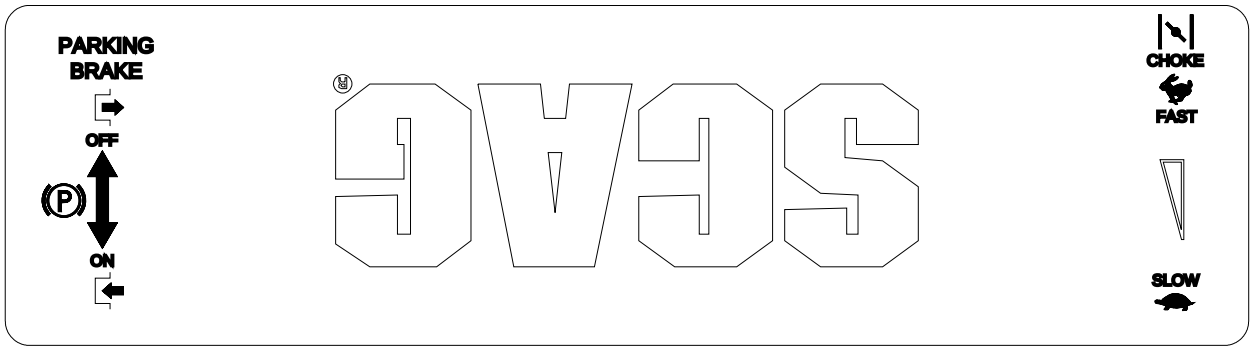


481109

481039

REPLACEMENT DECALS & INFORMATION



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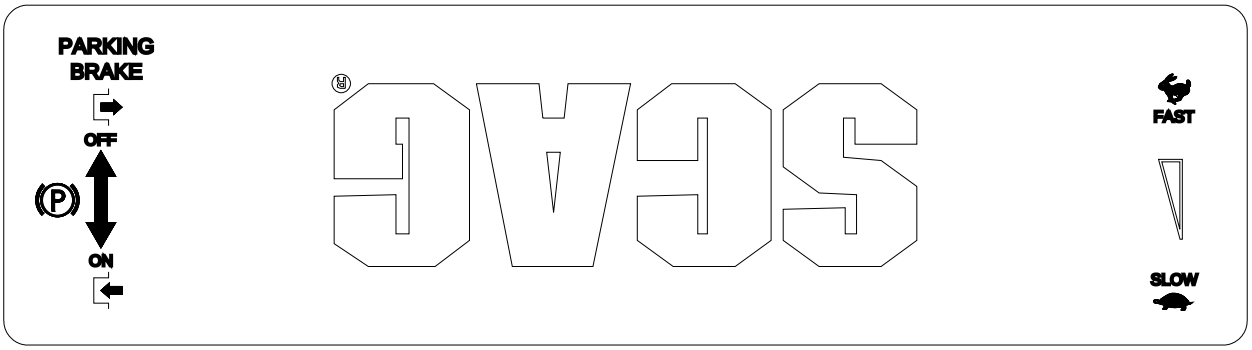

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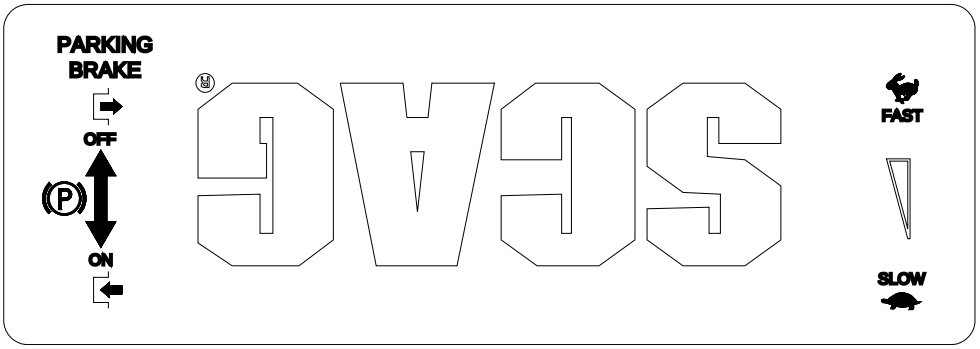
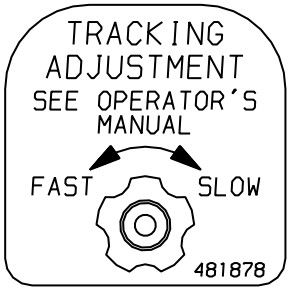


481438

36" - 482297
48" - 481953
52" - 481954
61" - 481955
72" - 481956



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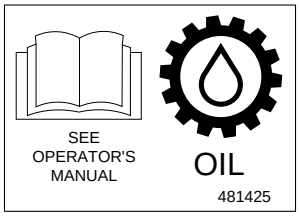

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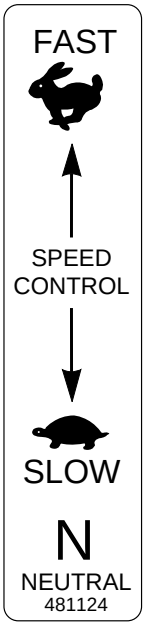

481124

481942

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. 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, fittings, and oil coolers are warranted for 1 year.
* Cutter decks are warranted against cracking for a period of three (3) years. (Parts and labor 1st year; Parts only 2nd and 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 (hydraulic pumps and hydraulic motors only) are warranted for two (2) years by Scag Power Equipment. (Parts and labor 1st year; Parts only 2nd year) (Two year warranty excludes fittings, hoses, cooling system, oil reservoir, drive belts, transaxles). 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 1st year; Parts only 2nd year).
* Cutter Spindle Assemblies 46631 have a Limited Warranty for three years (Parts and labor 1st year; Parts only 2nd and 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 one (1) 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 one 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.

PART NO. 03086
PRINTED 2/01
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