

SCHULTE®

SMR-600

MULTI-RAKE

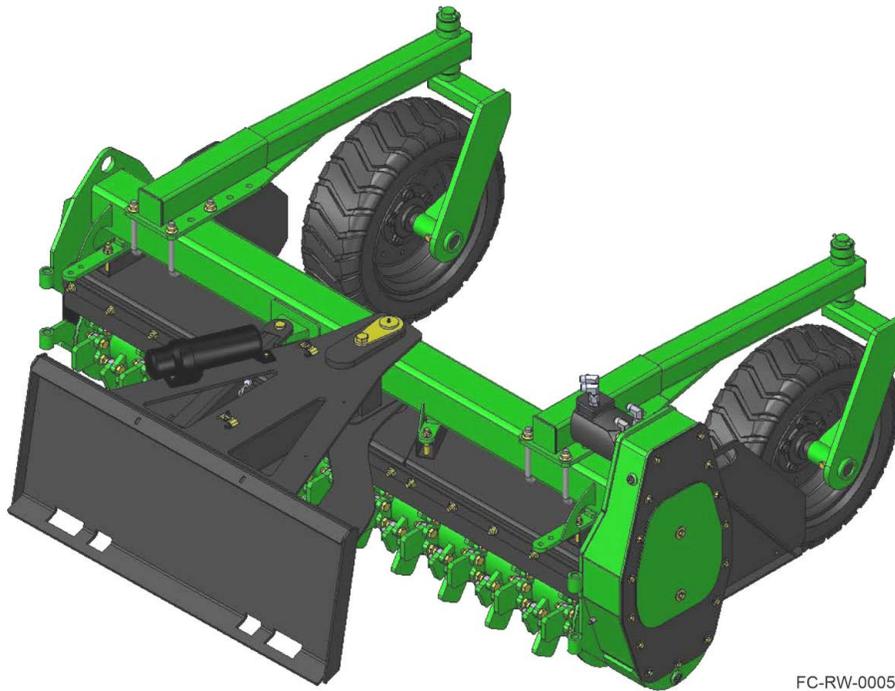
Published 10/22

Part No. R700-010C

OPERATOR'S MANUAL



This Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the unit at all times. **READ, UNDERSTAND,** and **FOLLOW** the Safety and Operation Instructions contained in this manual before operating the equipment. *C01-Cover str*



FC-RW-0005

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PRIME MOVER

To the Owner/Operator/Dealer

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

BEFORE YOU START!! Read the safety messages on the implement and shown in your manual. Observe the rules of safety and common sense!

DANGER			
FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE DEATH OR SERIOUS INJURY TO OPERATOR OR OTHERS IN THE AREA.			
1. READ MANUAL. 	2. NO RIDERS, NO CHILDREN OPERATORS. 	3. USE SEATBELTS, ROPS AND PPE. 	4. BLOCKUP SECURELY BEFORE WORKING UNDER.
<ol style="list-style-type: none"> 1. Study and understand Operator's Manuals, Safety Signs, and Instructional Decals for tractor & implement to prevent misuse, abuse & accidents. Learn how to stop engine suddenly in an emergency. Be alert for passers by and children. 2. Allow no children on or near implement or tractor. Allow no riders on tractor or implement. Falling off can cause death or serious injury from being run over by tractor or implement or contact with rotating components. 3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seatbelt fastened securely and snugly to prevent death or serious injury from falling off tractor or tractor overturn. Personal Protective Equipment such as Hard Hat, Safety Glasses with side shields (marked to comply with ANSI Z87), Safety Shoes, and Ear Plugs are recommended. 4. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted component to prevent death or crushing injury from sudden inadvertent dropping. Make certain that area is clear before lowering. 5. Before transporting, put Lift Lever in Lift (Detent) position and follow traffic codes. Slow down at night, in turns and on hillsides. 6. Make certain that SMV sign, Warning Lights and Reflectors are clearly visible 7. Do not back or operate implement in the reverse direction, possible rocks or debris can fly out and cause death or serious injury. 8. Before dismounting, secure implement in transport position or lower to ground. Stop PTO, put tractor in park or set Brake, stop engine and remove key. Never mount or dismount a moving vehicle. Crushing from run over may cause death or serious injury. 			
5. TRANSPORT SAFELY. 	6. USE SMV, LIGHTS AND REFLECTORS. 	7. DO NOT OPERATE WITH UNIT RAISED 	8. DO NOT MOUNT OR DISMOUNT WHILE MOVING.

226-331

WARRANTY INFORMATION:

Read and understand the complete Warranty Statement found in this Manual. Fill out the Warranty Registration Form in full and return it to within 30 Days. Make certain the Serial Number of the Machine is recorded on the Warranty Card and on the Warranty Form that you retain.

DEALER'S PREDELIVERY SERVICE GUIDE

for the SCHULTE SMR-600

DETAILS OF ITEMS LISTED BELOW ARE COVERED IN THIS OPERATOR'S MANUAL

- Shipping damage corrected
 - Set up machine as outlined in the shipping instructions attached to these instructions.
 - Check that all safety decals are in good condition, replace if necessary.
 - Check that all grease fittings have been lubricated.
-

DEALER'S DELIVERY GUIDE

for the SCHULTE SMR-600

- Mounting and removal from Skid Steer
- Operation
- Adjustments
- Lubrication
- Maintenance
- Operator's safety precautions
- User's responsibility and warranty
- Operator's manual delivered to owner
- Operator instructed on contents of owner's manual

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SAFETY SECTION

Safety Section 1-1

SAFETY

GENERAL SAFETY INSTRUCTIONS AND PRACTICES

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.



The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all--remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.



Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.



Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

NOTE: *Identifies points of particular interest for more efficient and convenient operation or repair.* (SG-1) str

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Death or serious injury may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2) str



Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3) str

¡ LEA EL INSTRUCTIVO!



SAFETY



Operate in daylight or with lights that give at least 100 yards clear visibility. Be able to see and identify passerby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects.



Inspect and keep all safety shields, guards and safety devices in place and in good condition. Replace any missing, broken or worn safety shields, guards and safety devices.

OPERATOR SAFETY INSTRUCTIONS AND PRACTICES



This Implement may be wider than the Power Unit. Be careful when operating or transporting this equipment to prevent the Implement from running into or striking sign posts, guard rails, concrete abutments or other solid objects. Such an impact could cause the Implement and Power Unit to pivot violently resulting in loss of steering control, serious injury, or even death. Never allow the Implement to contact obstacles.



Never crawl under a raised Implement supported solely by the Power Unit Lift Arms. Release of the control lever or mechanical failure will result in the Implement falling and possible injury or death. Always securely block up the Implement before crawling underneath to perform repairs and service.

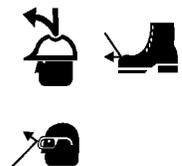


Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the Tractor or Implement without supervision. Make sure the operator has fully read and understood the manuals prior to operation.

(SG-4)str



The operator and all support personnel should wear hard hats, safety shoes, safety glasses, and proper hearing protection at all times for protection from injury including injury from items that may be thrown by the equipment. (SG-16)str



PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without an Implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the Operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the Operator over an extended period of time will cause permanent or total hearing loss.

NOTE: *Hearing loss from loud noise [from tractors, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery.* (SG-17)str



SAFETY



Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. (SG-20)str



Always read carefully and comply fully with the manufacturer's instructions when handling oil, solvents, cleansers, and any other chemical agent. (SG-22)str



KEEP AWAY FROM ROTATING ELEMENTS to prevent entanglement and possible death or serious injury. (SG-24)str



Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be killed or injured. Inadvertent contact with controls can cause the Implement to shift or fall crushing themselves or others. (SG-25) str



DO NOT use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27) str



Prolonged operation may cause operator boredom and fatigue affecting safe operation. Take scheduled work breaks to help prevent these potentially impaired operating conditions. Never operate the Implement and Tractor in a fatigued or bored mental state which impairs proper and safe operation. (SG-32) str



Avoid contact with hot surfaces including hydraulic oil tanks, pumps, motors, valves and hose connections. Relieve hydraulic pressure before performing maintenance or repairs. Use gloves and eye protection when servicing hot components. Contact with a hot surface or fluid can cause serious injury from burns or scalding. (SG-34)str



DO NOT operate this Implement on a Tractor that is not properly maintained. Should a mechanical or Tractor control failure occur while operating, immediately shut down the Tractor and perform repairs before resuming operation. Serious injury and possible death could occur from not maintaining this Implement and Tractor in good operating condition. (SG-36) str

SAFETY



Do not operate the implement while wearing loose fitting clothing. Entanglement of the clothing with the rotating elements can result in serious injury or even death. Stay clear of all rotating elements at all times. (SSP-03)str



Be sure you have adequate knowledge of the property you will be working on. Take time to make yourself aware of any area underwater or underground lines or cables. Contact with buried lines or cable could result in serious injury or death. (STL-1) str



In wet conditions where there is a likelihood of material collecting on the Implement, make certain that this material is removed before traveling on public roadways. (STL-7) str



Do not approach the Implement while in motion. Use extreme care near the drive unit to keep your hands or feet clear of the rotating shaft and drive chain. Contact with the rotating items can result in serious injury or even death. Stay clear until the implement is securely parked and all motion has stopped. (STL-12) str

SAFETY

EQUIPMENT OPERATION SAFETY INSTRUCTIONS AND PRACTICES



Never leave the Power Unit and Implement unattended while the Implement is in the lifted position. Accidental operation of lifting lever or a hydraulic failure may cause sudden drop of unit with injury or death by crushing. To properly park the implement when disconnecting it from the Power Unit, lower the stand and put the retaining pin securely in place, or put a secure support under the A-Frame. Lower the implement carefully to the ground. Do not put hands or feet under lifted components.



There are obvious and hidden potential hazards in the operation of this implement as in all power-driven or pulled equipment. REMEMBER! This machine is often operated in rough terrain conditions that include tall grass, weeds, gullies, holes, slopes, hidden obstructions and the like. Serious injury or even death may occur unless care is taken to assure the safety of the operator and bystanders in the area. Do not operate this machine with anyone in the immediate area. (S3PT-07) str



Make sure the PTO shield, integral driveline shields, and input shields are installed when using PTO-driven equipment. Always replace any shield if it is damaged or missing. (S3PT-8) str



Operate this Implement only in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never operate in darkness or foggy conditions where you cannot clearly see at least 100 yards in front and to the sides of the tractor and implement. Make sure that you can clearly see and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris and foreign objects. If you are unable to clearly see these types of items discontinue operating this equipment. (S3PT-21) str



Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Death or serious injury could result from falling off the tractor, particularly during a turnover when the operator could be pinned under the ROPS. (SG-7) str

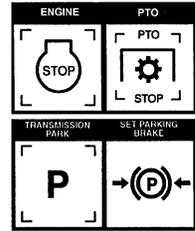


SAFETY



BEFORE leaving the tractor seat lower the implement, set the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only.

(SG-9)str



Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in death or serious injury. (SG-10)str



Never allow children to operate, ride on, or come close to the Tractor or Implement. Usually, 16-17 year-old children who are mature and responsible can operate the implement with adult supervision, if they have read and understand the Operator's Manuals, been trained in proper operation of the tractor and Implement, and are physically large enough to reach and operate the controls easily. (SG-11) str



Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. Dismounting a moving power unit can result in a crushing hazard that can cause death or serious injury. (SG-12) str



Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in death or serious injury. Read the Tractor operators manual for proper starting instructions. (SG-13) str



Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15) str



SAFETY



Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23) str



Do not exceed the rated speed for the Implement. Excessive speeds can cause Implement motor, chain, or drum failures resulting in serious injury or death.



In case of mechanical difficulty during operation, place the transmission in the park position, set the parking brake, shut down all power, including the engine and remove the key. Wait until all rotating motion has stopped before dismantling.



Do Not operate this equipment in areas where insects such as bees may attack you and/or cause you to lose control of the equipment. If you must enter in such areas, use a Power Unit with an enclosed Cab and close the windows to prevent insects from entering. If a cab unit is not available, wear suitable clothing including head, face, and hand protection to shield you from the insects. Attacking insects can cause you to lose control of the Power Unit, which can result in serious injury or death to you or bystanders. Never dismount a moving Power Unit..



Never rake or windrow with two machines in the same area ever.



The rotating parts of this machine have been designed and tested for rugged use. However, the teeth could fail upon impact with heavy, solid objects such as metal guard rails and concrete structures. Such impact could cause the broken objects to be thrown outward at very high velocities. To reduce the possibility of property damage, serious injury, or even death, never allow the teeth to contact such obstacles.



Never leave the Power Unit and Implement unattended while the Implement is in the lifted position. Accidental operation of the lifting lever or a hydraulic failure may cause a sudden drop of the unit with possible injury or death by crushing. Fully lower the Implement to ground level to disconnect the Implement or to perform service. Do not put hands or feet under lifted components. (SPU-30) str



Many varied objects, such as wire, cable, rope, or chains, can become entangled in the rotating parts of the Implement. These objects could then swing outside the housing at great velocity. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the area for such objects before working in the area. Remove any such objects from the site. Never allow the implement to contact such objects. (STL-6) str



Do not operate the Implement when bystanders or animals are near (within 50 feet) the equipment. This Implement is capable of throwing objects for significant distances and causing serious injury. Stop the Tractor and Implement immediately if a bystander or animal comes near the equipment. (STL-13) str



Raise the unit to the transport position and secure with the retaining pins before traveling on public roads and when storing. (STL-16) str

SAFETY



Hopper contents, which may exceed hundred pounds, could fall and crush a person resulting in possible injury or death. Use extrem care when handling or working on or in load hopper bin. (STL-22) str



Use only power units equipped with ROPS Cabs with the windows in good condition when operating this implement. Rocks can be thrown forward or backward by this Rake. Rocks thrown toward the power unit operator can result in possible injury or death.



Do Not attempt to raise or lower the rock bin unless the Implement tongue is securely attached to the Tractor drawbar. The Implement could tip over and cause equipment damage and possible serious injury or death. Raise or Lower the bin only while seated in the Tractor operator's seat with the seat belt securely fastened. (STL-14) str

SAFETY

CONNECTING OR DISCONNECTING IMPLEMENT SAFETY INSTRUCTIONS AND PRACTICES



When connecting implement to power unit hitch, DO NOT ALLOW BYSTANDERS between power unit and implement. Keep bystanders clear of are.



Always shut the Power Unit completely down, place the transmission in park, and set the parking brake before you or anyone else attempts to connect or disconnect the Implement

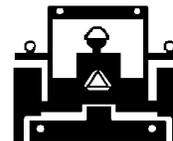
TRANSPORTING SAFETY INSTRUCTIONS AND PRACTICES



Be particularly careful when transporting the Implement with the Power Unit. Turn curves or go up hills only at a low speed and using a gradual steering angle. Front mounted implements move the center of gravity to the front and remove weight from the rear wheels. Make certain, by adding ballast, that at least 20% of the power unit's weight is on the rear wheels to prevent tipping, loss of steering control possible injury. Slow down on rough or uneven surfaces to prevent loss of steering control which could result in property damage or possible injury



Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)str



SAFETY

WARNING

Transport only at speeds where you can maintain control of the equipment. Serious accidents and injuries can result from operating this equipment at high speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.



Before transporting the Tractor and Implement, determine the proper transport speeds for you and the equipment. Make sure you abide by the following rules:

Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that the equipment can be operated at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum turning speed for you and this equipment before operating on roads or uneven ground.

Only transport the Tractor and Implement at the speeds which allow you to properly control the equipment.

Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes or worn tires. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)str



DANGER

Be particularly careful when transporting the Implement using the tractor. Turn curves or go up or down hills only at a low speed and at a gradual steering angle. Make certain that at least 20% of the tractor's weight is on the front wheels to maintain safe steering. Slow down on rough or uneven surfaces. (STI-01) str

WARNING

Only tow the Implement behind a properly sized and equipped Tractor which exceeds the weight of the Implement by at least 20%. DO NOT tow the Implement behind a truck or other type of vehicle. Never tow the Implement and another Implement connected in tandem. Never tow the Implement at speeds over 20 MPH. (STI-06)str



WARNING

Secure the Implement for transport before traveling on public roads. For pull-type Implements, secure the center axle using cylinder stops or transport pin and properly attach a safety chain between the Implement and Power Unit. Secure wings in upright position on folding Implements using wing transport locks.

WARNING

Raise the unit to the transport position and secure with the retaining pins before traveling on public roads and when storing. (STL-15) str

SAFETY

MAINTENANCE AND SERVICE SAFETY INSTRUCTIONS AND PRACTICES



Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Implement on the ground or securely blocked up. Turn off the engine. Push and pull the Remote Cylinder lever in and out several times prior to starting any maintenance or repair work.



Always maintain the safety signs in good readable condition. If the safety signs are missing, damaged, or unreadable, obtain and install replacement safety signs immediately. (SG-5)str



Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function. (SG-8)str



Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause death or serious injury. (SG-14)str



Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)str



Perform service, repairs and lubrication according to the maintenance section. Ensure the unit is properly lubricated as specified in the lubrication schedule and all bolts and nuts are properly torqued. Failure to properly service, repair and maintain this Implement in good operating condition could cause component failure and possible serious injury or even death. (SG-35)str



Always disconnect the auxiliary hydraulic couplers from the Power Unit before performing service on the Implement. Never work on the Implement with the Power Unit auxiliary hydraulics connected. Rotating parts could turn without warning and cause immediate entanglement, injury or death. (SPU-31)str



Ensure any remote starting system is inoperative before servicing or cleaning the machine. Inadvertent engine start up could result in entanglement or runover causing serious injuries or death. (SSB-17)str

SAFETY

WARNING

Use extreme care when climbing onto the Equipment to perform repairs, maintenance, and cleaning. Use proper stands and ladders to access areas that cannot be reached from ground level. Slipping and falling off the Equipment can cause serious injury or death. (SSB-25) str

DANGER

All Safety Shields, Guards and other safety devices including (but not limited to) Deflectors, Steel Guards and Gearbox Shields must be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. Missing, broken, or worn items must be replaced at once to reduce the possibility of injury or death from thrown objects, entanglement, or blade contact. (SSM-07str)

WARNING

Cancer and Reproductive Harm www.P65Warnings.ca.gov

SAFETY

CONCLUDING SAFETY INSTRUCTIONS AND PRACTICES

In addition to the design and configuration of this Implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Tractor and Equipment Manuals. Pay close attention to the Safety Signs affixed to the Tractor and Equipment. (SG-18)str

SAFETY

PARTS INFORMATION

Use of genuine Schulte replacement parts is your guarantee that parts are of the same quality and are manufactured to the same standards as the original equipment. These parts are made and tested to Schulte specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce the performance, void Schulte warranties, and present a safety hazard. Use genuine Schulte parts for economy and safety. (SPSI-2) str

SEE YOUR SCHULTE DEALER

Operator's & Parts Manuals



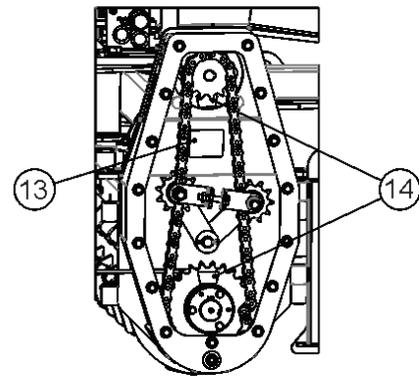
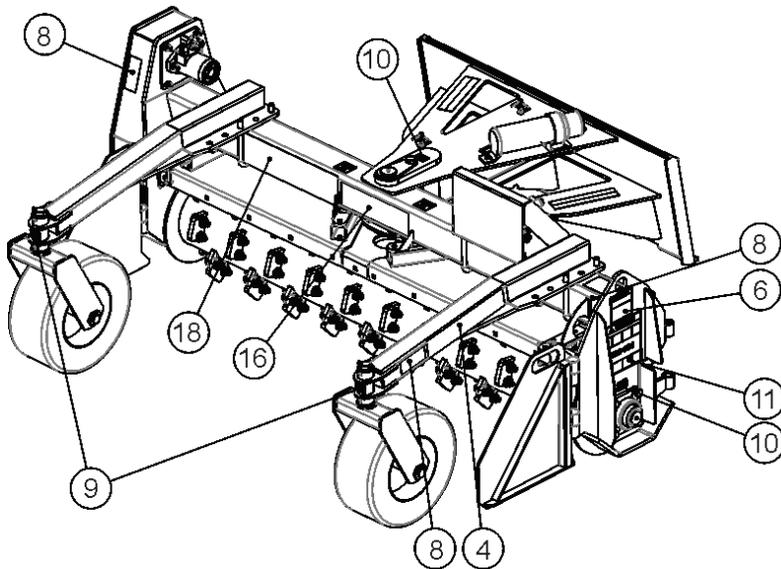
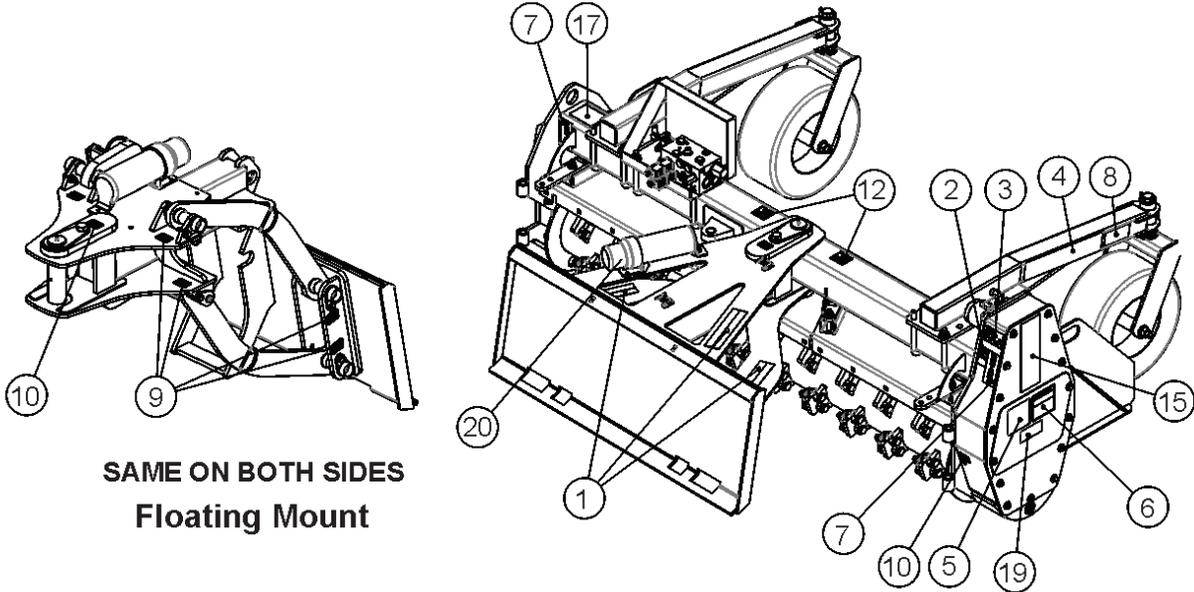
www.algqr.com/spm

SAFETY

SAFETY

DECAL LOCATION

NOTE: Schulte supplies safety decals on this product to promote safe operation. Damage to the decals may occur while in shipping, use, or reconditioning. Schulte cares about the safety of its customers, operators, and bystanders, and will replace the safety decals on this product in the field, free of charge (Some shipping and handling charges may apply). Contact your Schulte dealer to order replacement decals.



DL-RW-0007

SAFETY

SAFETY

SAFETY

ITEM	PART NO.	QTY	TYPE	DESCRIPTION
1.	213-001	6	---	Safety Walk Tape, 9"
2.	226-004	1	LOGO	FEMA Member
3.	226-100	1	SERIAL PLT	Serial Number Plate
4.	226-116	2	LOGO	Schulte Logo, Small Profile
5.	226-144	1	DANGER	Moving Parts Hazard
6.	226-151	2	DANGER	Thrown Rock Hazard
7.	226-1531	2	REFLECT	Red Reflector
8.	226-1541	4	REFLECT	Amber Reflector
9.	226-181	10*	INSTRUCT	8 Hour Greasing
10.	226-182	3	INSTRUCT	50 Hour Greasing
11.	229-331	1	DANGER	Multi-Hazard
12.	226-335	2	WARNING	Pinch Points
13.	226-442	1	DANGER	Guard Missing
14.	226-446	2	DANGER	Guard Missing (Cone)
15.	226-451	1	WARNING	Hydraulic Oil Pressure Hazard
16.	226-508	1	NAME	Multi-Rake
17.	226-513	1	WARNING	Use Genuine Schulte Parts
18.	226-527	1	NAME	SMR-600
19.	226-554	1	INSTRUCT	Check Chain Tension
20.	280-201	2	---	Manual Canister
	R700-010C	1	---	Operator's Manual

** Located on Top of Swing Arm

*226-181 Quantity depends on Mount Option.

SAFETY

DECAL DESCRIPTION



SAFETY



SAFETY

SAFETY

DANGER

FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE DEATH OR SERIOUS INJURY TO OPERATOR OR OTHERS IN THE AREA.

1. READ MANUAL.



2. NO RIDERS, NO CHILDREN OPERATORS.



3. USE SEATBELTS, ROPS AND PPE.



4. BLOCKUP SECURELY BEFORE WORKING UNDER.



1. Study and understand Operator's Manuals, Safety Signs, and Instructional Decals for tractor & implement to prevent misuse, abuse & accidents. Learn how to stop engine suddenly in an emergency. Be alert for passers by and children.
2. Allow no children on or near implement or tractor. Allow no riders on tractor or implement. Falling off can cause death or serious injury from being run over by tractor or implement or contact with rotating components.
3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seatbelt fastened securely and snugly to prevent death or serious injury from falling off tractor or tractor overturn. Personal Protective Equipment such as Hard Hat, Safety Glasses with side shields (marked to comply with ANSI Z87), Safety Shoes, and Ear Plugs are recommended.
4. Block up or support raised machine and all lifted components securely before putting hands or feet under or working underneath any lifted component to prevent death or crushing injury from sudden inadvertent dropping. Make certain that area is clear before lowering.
5. Before transporting, put Lift Lever in Lift (Detent) position and follow traffic codes. Slow down at night, in turns and on hillsides.
6. Make certain that SMV sign, Warning Lights and Reflectors are clearly visible
7. Do not back or operate implement in the reverse direction, possible rocks or debris can fly out and cause death or serious injury.
8. Before dismounting, secure implement in transport position or lower to ground. Stop PTO, put tractor in park or set Brake, stop engine and remove key. Never mount or dismount a moving vehicle. Crushing from run over may cause death or serious injury.

226-331

5. TRANSPORT SAFELY.



6. USE SMV, LIGHTS AND REFLECTORS.



7. DO NOT OPERATE WITH UNIT RAISED



8. DO NOT MOUNT OR DISMOUNT WHILE MOVING.



SAFETY

SAFETY

⚠ WARNING



TO AVOID DEATH OR SERIOUS INJURY FROM HIGH PRESSURE HYDRAULIC OIL LEAKS PENETRATING SKIN:

- DO NOT OPERATE equipment with oil or fuel leaks.
- KEEP all hydraulic hoses, lines and connections in good condition and tight before applying system pressure.
- Relieve hydraulic pressure before disconnecting lines or working on the system.
- REMOVE and replace hose if you suspect it leaks. Have dealer test it for leaks.

HIGH PRESSURE FLUID LEAKS CAN BE INVISIBLE. WHEN CHECKING FOR HYDRAULIC LEAKS AND WORKING AROUND HYDRAULIC SYSTEMS:

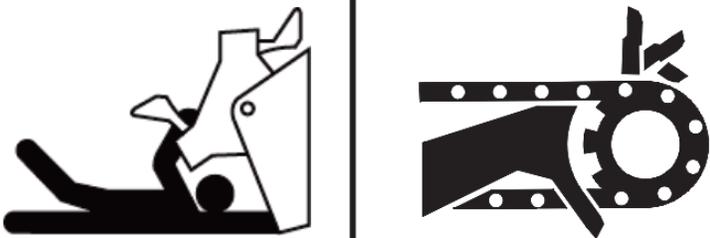
- DO NOT use hands to check for leaks.
- ALWAYS WEAR safety glasses with side shields (marked to comply with ANSI Z87) and impenetrable gloves.
- USE paper or cardboard to search for leaks.
- KEEP hands and body AWAY from pin holes and nozzles ejecting hydraulic fluid.
- Hydraulic fluid may cause gangrene if not surgically removed immediately by a doctor familiar with this form of injury.

226-451

SAFETY

SAFETY

! DANGER



MOVING PART HAZARD

- TO PREVENT DEATH OR SERIOUS INJURY FROM MOVING PARTS.
- KEEP AWAY. MOVING PARTS CAN CRUSH AND DISMEMBER.
- DO NOT OPERATE WITHOUT GUARDS AND SHIELDS IN PLACE.
- DISCONNECT AND LOCKOUT POWER SOURCE BEFORE ADJUSTING AND SERVICING.

226-144

! DANGER

226-442



GUARD MISSING
To Avoid Death Or Serious Injury Do Not Operate

SAFETY

SAFETY

⚠ WARNING

TO AVOID DEATH OR SERIOUS INJURY:

- ONLY use genuine SCHULTE replacement parts, which have been validated and tested to use on Schulte equipment by the manufacturer.
- The equipment manufacturer cannot verify the material or structural integrity of third-party supplied non-genuine replacement parts.
- Using non-genuine parts can result in the part failing, creating hazardous conditions for operator and bystanders.

Contact local dealer or SCHULTE about repair parts at:
PO BOX 70, Englefeld,
Saskatchewan Canada S0K 1N0
Customer Service: 306-287-3715.
Email: info@schulte.ca



www.algqr.com/swe

⚠ WARNING

Cancer and Reproductive Harm

www.P65Warnings.ca.gov 226-513

⚠ DANGER

226-448



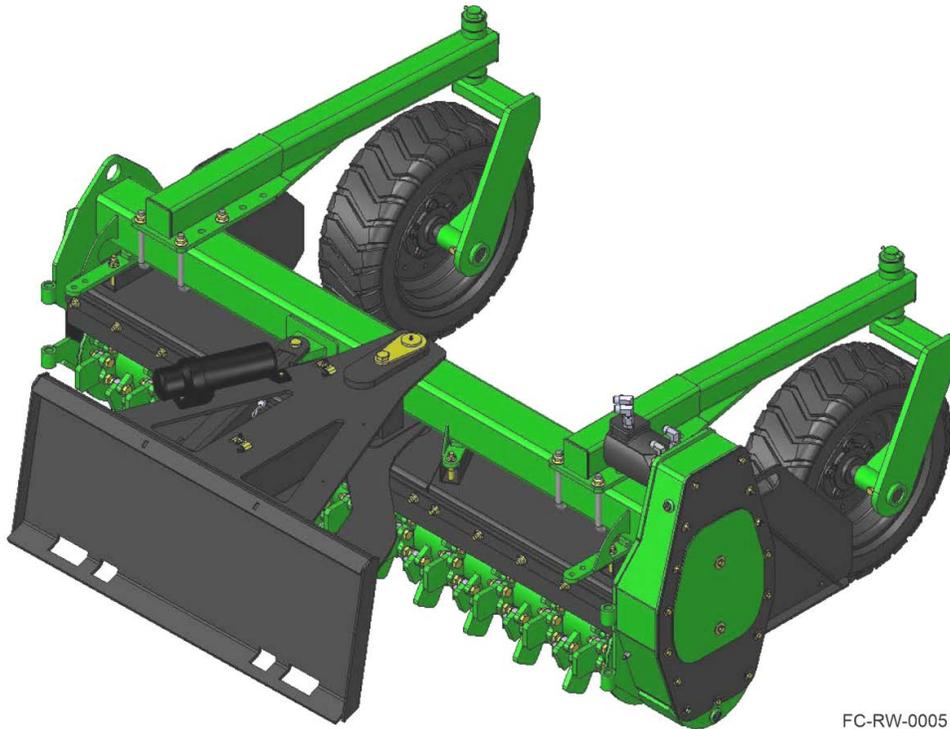
GUARD MISSING
To Avoid Death Or Serious Injury Do Not Operate

INTRODUCTION SECTION

Introduction Section 2-1

INTRODUCTION

INTRODUCTION



FC-RW-0005

The SMR-600 is the perfect tool for your Skid Steer with its ability for Windrowing, Landscaping, Soil Conditioning and Sweeping. The SMR-600 Multi Rake Windrower rototilling action breaks lumps, roots and other debris while reclaiming rocks by forming them in uniform row.

The 4" replaceable teeth give you greater ground penetration and are made of high strength abrasion resistant 450BHN steel.

The SMR-600 is chain driven to keep the hydraulic motor out of harms way.

Option for standard mount or floating mount that can pivot up to 20 degrees left or right, hydraulically using high or low flow hydraulic options.

The gearbox features reversible tensioner and heavy 80 chain which decreases downtime. The gear ratio has a larger bottom sprocket that increases the mechanical advantage, giving deeper ground penetration and fewer stall outs. Side plates are adjustable, removable, and reversible for varying ground applications.

It is required that all operators of this implement read this manual or be instructed of its contents as to safety, proper operation, and maintenance before beginning operation.

When ordering replacement parts be sure to specify the serial number.

To place the warranty into effect, fill out the warranty card in full, giving all the requested information, and mail promptly. Be sure to give the serial number of the SMR-600.

Literature Page



www.algqr.com/sle

INTRODUCTION

EQUIPMENT AND SPECIFICATIONS

	SMR-600
Weight (Approximate)	1625 lbs (739 kg)
Drum Width	6' 1"
Drum Speed	100 - 250 RPM (Based on hydraulic motor)
Tires	23" Forklift (58mm) 16.5 / 6.8 x 8
Transport Width	7' 3"
Hydraulic Flow Range	18 - 35 GPM (68 - 132 LPM)
(Motor options will change based on Skid Steer and desired RPM)	
Options	
Mount Options	Standard Mount or Floating Mount
Rotation Options	Hydraulic Option or Manual Option
Joystick Control	Bobcat, John Deere, Case, New Holland, JCB, Takeuchi, Kubota or Volvo
Wheel Arms	600 Series or 800 Series
Hydraulic Requirements	
Minimum	16 GPM
Recommended	20 GPM

INTRODUCTION

ATTENTION OWNER/OPERATOR

BEFORE OPERATING THIS MACHINE:

1. Carefully read the Operator's Manual, completely understand the Safety Messages and instructions, and know how to operate correctly both the tractor and implement.
2. Fill out the Warranty Card in full. Be sure to answer all questions, including the Serial Number of the Implement. Mail within 30 days of delivery date of this implement.

NOTE: Warranties are honored only if completed "Owner Registration and Warranty" forms are received by Schulte within thirty days of delivery of the implement.

3. Record the Implement Model and Serial Numbers on the Warranty page at the front of the Operator's Manual. Keep this as part of the permanent maintenance file for the implement.

 **WARNING**

TO AVOID DEATH OR SERIOUS INJURY:

- ONLY use genuine SCHULTE replacement parts, which have been validated and tested to use on Schulte equipment by the manufacturer.
- The equipment manufacturer cannot verify the material or structural integrity of third-party supplied non-genuine replacement parts.
- Using non-genuine parts can result in the part failing, creating hazardous conditions for operator and bystanders.

Contact local dealer or SCHULTE about repair parts at:
PO BOX 70, Englefeld,
Saskatchewan Canada S0K 1N0
Customer Service: 306-287-3715.
Email: info@schulte.ca



www.algqr.com/swe

 **WARNING**
Cancer and Reproductive Harm
www.P65Warnings.ca.gov 226-513

INTRODUCTION



SCHULTE INDUSTRIES LIMITED - SMR-600 **GENERAL STATEMENT AFFECTING ALL SCHULTE WARRANTY**

Schulte Industries Ltd. warrants to the original purchaser only, that in the event of any defect in material or workmanship in the product sold by Schulte Industries, the subject of this warranty (“the goods”) during the warranty period mentioned below the manufacturer will provide the coverage specified below.

This warranty is in place of any other warranty or guarantee whether implied or expressed in any conditions of purchase of the buyer, and does not extend to impose any further liability on the manufacturer than set out below.

Any work done to the product without being authorized by Schulte, may not be covered by Schulte.

WARRANTY COVERAGE: All coverage applies to manufacturer’s defects only

For Commercial, Agricultural, and Government Use

- Structural Warranty is 12 months. Coverage includes parts and labor on repair.
- Component is 12 months. Coverage includes parts and labor on repair
- Tires and Rims are covered for 1 year against manufacturer’s defects only. Coverage includes parts and labor.

For Rental Use

- Component and Driveline Warranty is 30 Days from within the first in-service date.
- Structural warranty is 30 days from within the first in-service date.
- Tires and Rims are covered for 1 year against manufacturer’s defects only. Coverage includes replacement parts and labor.

Where legislation allows:

- The dealer is responsible for any labor charges exceeding a reasonable amount as determined by the manufacturer.
- The customer is responsible for the transportation costs of the product or parts to the dealer for repair.
- Ground freight charges for shipping new warrantable replacement parts to the dealer or customer will be covered by Schulte. **Only ground transportation will qualify for reimbursement.**

INTRODUCTION

CONDITIONAL COVERAGE

All warranty is conditional upon:

- Care, Maintenance and Operation in accordance with the manufacturer's specifications and recommendations (as set out, or referred to in the "Operator's Manual") supplied with the product.
- Submission of the Warranty Registration immediately upon sale of the product.
- The Pre-Delivery Inspection sheet must be sent with the Warranty Registration. Failure to comply will result in warranty claims being denied.

EXCLUSIONS

This warranty does not extend to:

- Damage or deterioration after delivery from the manufacturer not attributable to defective material or workmanship.
- A Multi-Rake that has been physically altered without the approval of the manufacturer.
- Any goods which have sustained damage or deterioration due to encounters with foreign objects for which the product is not intended, inadequate or faulty assembly, improper or inadequate maintenance, neglect, or abuse.
- Shop supplies such as the use of tools, oil or grease used in the repair or replacement of a warrantable part or component.
- Normal wearing parts such as, but are not limited to safety chains, belting, clutch linings, blades and tire wear.

THE WARRANTY CLAIM PROCESS:

- A Warranty Claim must be submitted within (30) days of the repair.
- The dealer must allow for the examination of the goods by the manufacturer or one of its agents, when requested by the manufacturer to verify that the goods are defective in material or workmanship.
- The Dealer must keep the failed part until the claim is processed, to allow Schulte Industries the option of further examination of the part.

Further examination may mean that pictures are sent, or that the part be returned to Schulte.

- A Return Goods Authorization (RGA) must be sent with any returned part.
- If a failed part is returned to Schulte for examination, Schulte will pay the freight, **Only ground transportation will qualify for reimbursement. Any other types of freight will not be paid, unless authorized on the RGA.**

NOTE: For warranty service or parts the unit can be taken to any authorized Schulte dealer.

Warranty Contacts:

All warranty questions can be emailed to info@schulte.ca or phone Schulte Industries at 1-800-404-6044.

Schulte reserves the right to change and modify this warranty policy at any time.

ASSEMBLY SECTION

Assembly Section 3-1

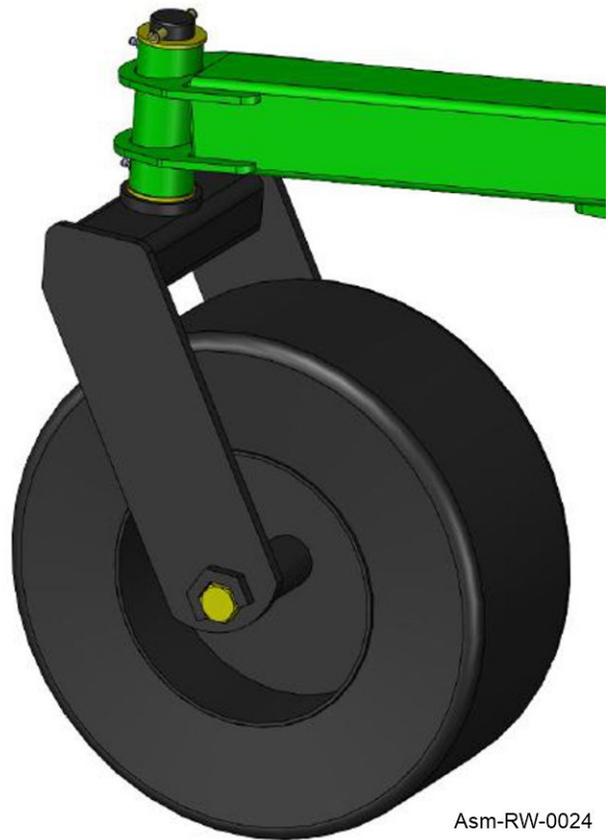
ASSEMBLY

BEFORE OPERATION

- Refer to the 'Maintenance' section of this manual for recommended oil type and viscosity.
- Lubricate all grease fittings. Refer to the grease schedule in this manual.
- Remove the chain case cover and check that the drive chain is properly tensioned and lubricated
- Refer to the 'Maintenance' section of this manual.
- Check that all nuts and bolts are in place and properly tightened. Refer to the 'Maintenance' section of this manual for proper bolt grades and torques.
- Check all drive and hydraulic components are secure and free from damage.

Tire Pressure

Check tire inflation pressure. Tires should be inflated to 45 PSI. Higher pressures may cause excessive bouncing over rough ground.



Asm-RW-0024

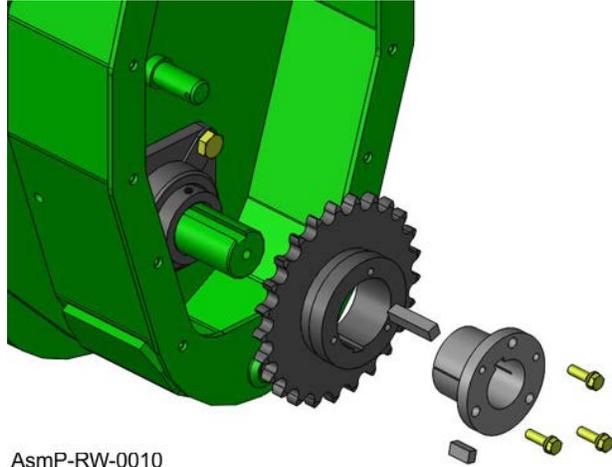
ASSEMBLY

Drum Sprocket

After locking the collars on drum end bearings, slide big sprocket on shaft until it is against lock collar.

Insert hub and keys into sprocket.

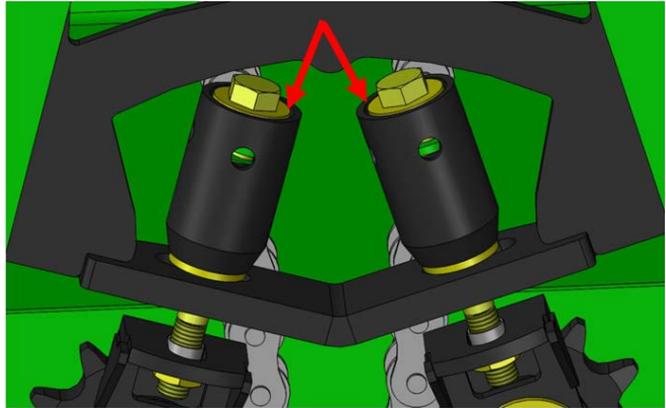
Tighten hub by alternately tightening the three bolts in hub. Tighten the bolts to 29 ft.-lbs (39 Nm). Over tightening will strip out bolts



AsmP-RW-0010

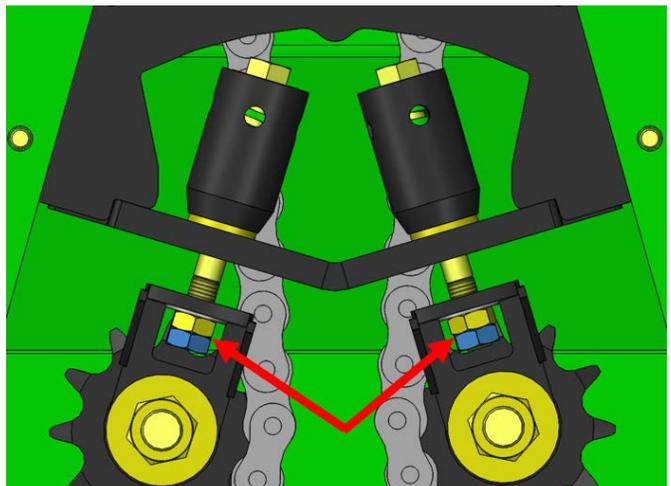
Chain Tightener

- The Chain tightener will come fully assembled.
- Check that the tension is set properly by ensuring the spring washers are flush with the top of the spacers as shown.



Asm-RW-0022

- Ensure the jam nuts are fully locked to prevent backing off.



Asm-RW-0023

ASSEMBLY

SKID STEER MOUNTING

Important

READ THE 'OPERATION' SECTION OF YOUR SKID STEER OPERATOR'S MANUAL BEFORE ATTEMPTING TO OPERATE THE SKID STEER AND SMR-600.

1. Check with your local Schulte dealer or the factory to ensure that you have the correct size hydraulic motor for your make and model of skid steer.
2. Follow the instructions with your skid steer loader to quick attach the SMR-800 to the skid steer loader.

Important

Before operating the multi-rake, carefully read the **Safety and Operation Sections** of this Operator's Manual.

HYDRAULIC BLOCK

Refer to the Mount Section of the **Parts Manual**

1. Insert two #12 M-ORB to #10 M-JIC fittings into the ports on the Hydraulic Block.
2. Insert two #12 M-ORB to #10 M-JIC 90° elbow fittings into the ports on the Hydraulic Block.
3. Insert two #6 M-ORB Plugs into the top two #6 ports.
4. Insert two #6M-ORB to #6 M-JIC fittings into the remaining two ports.
5. Secure the Hydraulic Block to the Mount using three 3/8"x3/4" bolts.
6. Mount this assembly onto the frame using the two U-bolts supplied and four 5/8" Locking Flange Nuts.
7. Connect hoses and route as shown in your Parts Manual.
8. Attach the Solenoid Plugs from the electrical harness to the solenoids.

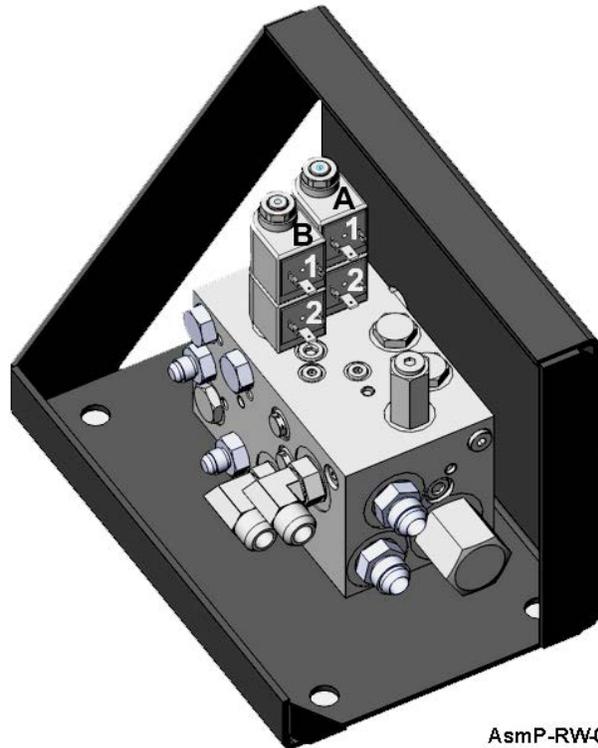


ASSEMBLY

JOYSTICK CONTROL HARNESS (OPTION)

1. Attach the Solenoid Plugs from the Electrical Harness (277-009) to the Solenoids on the Hydraulic Block.
2. Route the harness up along the main hydraulic hoses and secure with zip ties.
3. Connect the brand specific harness adapter to the 6-pin connector and continue to secure it to the hoses.

NOTE: If using a **LOW FLOW** implement on a CAT skid steer, disconnect the bullet connector to disengage the High-Flow signal on the short CAT specific harness 276-340. To access the connector, carefully cut away shrink wrapping.



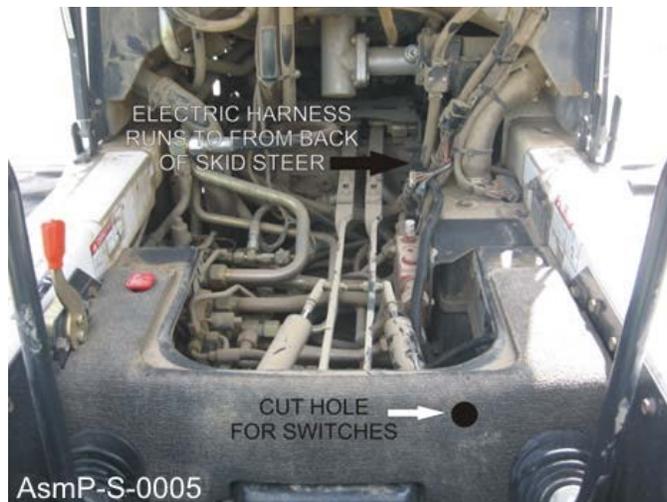
ASSEMBLY

ASSEMBLY

SKID STEER ELECTRIC HARNESS KIT

Refer to the Electrical Components Hydraulic Block section of the **Parts Manual**

1. Attach the positive battery lead of the Skid Steer Electrical Harness (277-008) to the positive battery lead on the skid steer.
2. Attach the ground lead of the Skid Steer Electrical Harness to the skid steer frame.
3. There are now two separate lines of the harness. One line has switches on the end, the other line has a 6-pin weather sealed plug end. The line with the switches should be routed from the battery of the skid steer underneath the cab towards the front.
4. Drill a hole in the cab to allow the switches to be routed up into the cab.
5. Mount the switches inside the cab, using either the Switch Mount Bracket (B620-161) or the Switch Box (276-321).
6. Route the 6-pin plug end up through the tube of the loader arm to the front of the skid steer. The 6-pin plug can be secured in the most convenient location, such as with the hydraulic connections.



ASSEMBLY

ASSEMBLY

ELECTRIC HARNESS KIT

Refer to the Electrical Components Hydraulic Block section of the **Parts Manual**

1. Attach the female solenoid plugs on the Electrical Harness (277-010) to the corresponding solenoids on the Valve Block (127-038).
2. Route the 6-pin plug end of the harness up through the cut-out in the shield. Connect the plug end to the plug end on the skid steer.
3. Secure harness to the main hydraulic hoses with cable ties.



ASSEMBLY

ASSEMBLY

PRE-DELIVERY CUSTOMER CHECKLIST

Important

Lubricate all grease fittings. Refer to the grease schedule in this manual.

Check that all nuts and bolts are in place and properly tightened. Refer to the **Maintenance Section** of this manual for required bolt grades and torques.

Check that all tires are inflated to proper specifications. Refer to the **Maintenance Section** of this manual for required tire pressures.

	Are the Tires clear of the Mainframe, even when turning during axle articulation?
	Are all hoses tight and do not leak?
	Are all decals in place? See manual for decal description and placement.
	Are all bolts tight?
	Have all hoses been properly routed so that hoses do not kink or bind when windrower is articulated through all motions?
	Is machine equipped with proper operator protection?
	Is drum rotation correct?
	Does implement operate smoothly at normal operating speed? Implement should not vibrate excessively
	Is the chain properly tensioned with washers flush with spacers?

OPERATION SECTION

Operation Section 4-1

OPERATION

SCHULTE SMR-600 OPERATION INSTRUCTIONS

SCHULTE SMR-600 windrower is manufactured with quality material by skilled workers. The windrower is designed to break lump, roots and other debris while reclaiming rocks by forming them in uniform rows. The implement is equipped with enough protective gear to reduce objects being thrown from the SMR-600 teeth, however, no shielding is 100% accurate. All shields and guards must be maintained in good operational condition.

It is the operator's responsibility to be knowledgeable of all potential operating hazards and to take every reasonable precaution to ensure oneself, others, animals, and property are not injured or damaged by the SMR-600, power unit, or a thrown object. Do not operate the SMR-600 if passersby, pets, livestock, or property are within 100 feet of the unit.

This section of the Operator's Manual is designed to familiarize, instruct, and educate safe and proper implement use to the operator. Pictures contained in this section are intended to be used as a visual aid to assist in explaining the operation of a SMR-600 windrower and are not necessarily of a SMR-600 windrower. Some pictures may show shields removed for picture clarity. NEVER OPERATE these implements without all shields in place and in good operational condition. The operator must be familiar with the SMR-600 and power unit operation and all associated safety practices before operating the SMR-600 and power unit. Proper operation of the SMR-600 windrower, as detailed in this manual, will help ensure years of safe and satisfactory use.

READ AND UNDERSTAND THE ENTIRE OPERATING INSTRUCTIONS AND SAFETY SECTION OF THIS MANUAL AND THE TRACTOR MANUAL BEFORE ATTEMPTING TO USE THE TRACTOR AND IMPLEMENT. If you do not understand any of the instructions, contact your nearest authorized dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the implement and tractor. *OPS-U- 0001str*

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Death or serious injury may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2str)



Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SG-3str)

**¡ LEA EL
INSTRUCTIVO!**



OPERATION

1. OPERATOR REQUIREMENTS

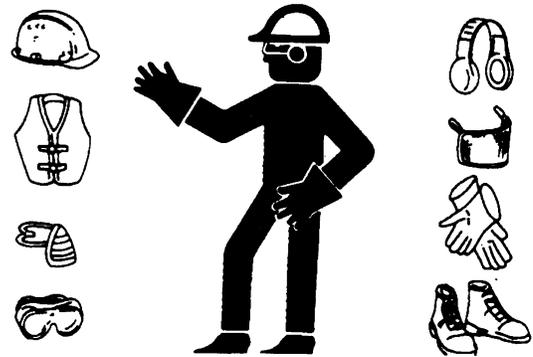
Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and power unit Operator's Manuals and is experienced in implement and power unit operation and all associated safety practices. In addition to the safety messages contained in this manual, safety signs are affixed to the implement and power unit. If any part of the operation and safe use of this equipment is not completely understood, consult an authorized dealer for a complete explanation.

If the operator cannot read the manuals for themselves or does not completely understand the operation of the equipment, it is the responsibility of the supervisor to read and explain the manuals, safety practices, and operating instructions to the operator.

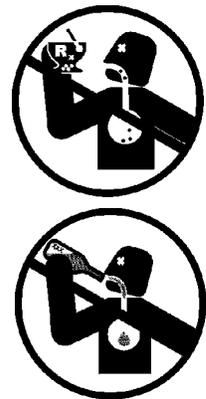
Safe operation of equipment requires that the operator wear approved Personal Protective Equipment (PPE) for the job conditions when attaching, operating, servicing, and repairing the equipment. PPE is designed to provide operator protection and includes the following safety wear:

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Always Wear Safety Glasses
- Hard Hat
- Steel Toe Safety Footwear
- Gloves
- Hearing Protection
- Close Fitting Clothing
- Respirator or Filter Mask (depends on operating conditions) OPS-U- 0002_Astr



DO NOT use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27) str



OPERATION

2. SKID STEER REQUIREMENTS

Skid Steer Requirements and Capabilities

- ASABE approved Roll-Over Operator Protective Structure and Seatbelt.
- Operator Protective Door..... Contact authorized skid steer dealer for equipping unit with operator protective door.
- Skid Steer Warning Equipment..... Slow Moving Vehicle (SMV) emblem, proper lighting.
- Hitch Universal Mount Quick Hitch
- Front Auxillary Hydraulics Implement drive motors must be matched with the hydraulic output capacity of the skid steer
- Implement Drive Motors (minimum) 16 GPM
Recommended..... 20 GPM

2.1 Operator Protective Structure and Seat Belt

A Roll-Over Operator Protective Enclosure and seat belt are essential to protect the operator from falling off the skid steer, especially during a roll over where the driver could be crushed and killed.



Operate this Equipment only with a Power Unit equipped with an approved operator Roll-Over Protective Structure (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the Power Unit--particularly during a turnover when the operator could be pinned under the Operator Protective Structure. (SPU-14) str



2.2 Operator Protective Door

The skid steer must be equipped with an Operator Front Protective Door. Serious injury or death can result from a thrown object hitting an unprotected operator. Contact the skid steer manufacturer or an authorized dealer for this protective feature.



2.3 Skid Steer Warning Equipment

If transporting or operating the skid steer and implement near a public roadway, the skid steer must be equipped with proper warning lighting and a Slow Moving Vehicle (SMV) emblem which are clearly visible from the rear of the unit.

Maintain all manufacturer equipped safety shields and guards. Always replace shields and guards that were removed for access to connect, service, or repair the implement and skid steer

2.4 Mount

This machine is equipped with a generic mounting system that will fit most makes and models of skid steer loaders. When mounting, ensure the locking pins fully engage the bottom holes in the mount in order to prevent accidental disconnection resulting in machine damage, injury, or possible death.

OPERATION

2.5 Motor

Check with your local Schulte dealer or the factory to ensure that you have the correct size hydraulic motor for your make and model of skid steer to hitch the SMR-600.

Refer to the SMR-600 Parts Manual for skid steer motor mount



2.6 Auxiliary Hydraulics

The skid steer must be equipped with Front Auxiliary Hydraulics. The hydraulic output capacity of the skid steer must match the equipped implement drive motor. Reference the skid steer operator's manual to determine the hydraulic output specifications of the skid steer.



WARNING

Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15) str



2.7 Electric Controls

This machine is equipped with an electronically controlled valve block. Check to make sure the electrical harness ordered is the correct one to match your model of skid steer. If the skid steer is not equipped with electronic joystick controls, or is a type that does not have a harness offered, the machine will be controlled with the switch box outlined in the assembly section of this manual.

OPERATION

3. GETTING ON AND OFF THE SKID STEER

Before getting onto the skid steer, the operator must read and completely understand the implement and skid steer operator manuals. If any part of manual is not completely understood, consult an authorized dealer.



Do not mount the Power Unit while the Power Unit is moving. Mount the Power Unit only when the Power Unit and all moving parts are completely stopped. (SPU-18) str



3.1 Boarding the Skid Steer

Use both hands and equipped handrails and steps for support when getting on the skid steer. Never use control levers for support when mounting. Always seat yourself in the operator's seat and fasten the seat belt.

Never allow passengers to ride on the skid steer or implement. Riders can easily fall off and be seriously injured or killed from being ran over. It is the operator's responsibility to forbid additional riders.



Never allow children or other persons to ride on the Power Unit or Implement. Falling off can result in serious injury or death. (SPU-16) str



Do not mount the Power Unit while the Power Unit is moving. Mount the Power Unit only when the Power Unit and all moving parts are completely stopped. (SPU-18) str



3.2 Dismounting the Skid Steer

Before dismounting, park the skid steer and implement on a reasonably level surface, apply the parking brake, idle the engine down, disengage the auxiliary hydraulics, and lower the implement to the ground. Shut down the skid steer engine according to the operator's manual, remove the key, and wait for all motion to completely stop. Never leave the seat until the skid steer, its engine and all moving implement parts are completely stopped.



BEFORE leaving the Power Unit seat, always engage the brake and set the Power Unit transmission in parking gear, disengage the auxiliary hydraulics, stop the engine, remove the key, and wait for all moving parts to stop. Place the Power Unit shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Power Unit that is moving or while the engine is running. Operate the Power Unit controls from the operator seat only. (SPU-15) str

Use hand rails and steps when exiting the skid steer. Be careful of your step and use extra caution when mud, ice, snow or other matter has accumulated on the steps or hand rails. Use all handrails and steps for support and never rush or jump off the skid steer.

OPERATION

4. STARTING THE SKID STEER

The operator must have a complete understanding of the placement, function, and operational use of all skid steer controls before starting the skid steer. Review the skid steer operator's manual and consult an authorized dealer for tractor operation instructions if needed.

Essential Skid Steer Controls:

- Locate the light control lever.
- Locate the engine shut off control.
- Locate the brake pedals and the clutch.
- Identify Skid Steer Joystick movement layout.
- Identify Boom Lift and Tilt Control layout.
- Locate the auxiliary hydraulic control lever.
- Locate the boom height foot controls (if equipped).
- Locate the hitch tilt foot controls (if equipped).

Before starting the skid steer ensure the following:

- Conduct all pre-start operation inspection and service according to the skid steer operator's manual.
- Make sure all guards, shields, and other safety devices are securely in place.
- The parking brake is on.
- The skid steer transmission is in neutral.
- The auxiliary hydraulics are disengaged.
- The boom height/tilt controls are in the neutral position.

Refer to the skid steer owner's manual for procedures to start the skid steer. Only start the skid steer while seated and belted in the operator's seat. Never bypass the ignition switch by short circuiting the starter solenoid.

After the engine is running, avoid accidental contact with the skid steer transmission to prevent sudden and unexpected skid steer movement.



Never run the Power Unit engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SPU-23) str



Start the Power Unit only when properly seated in the Power Unit seat. Starting a Power Unit in gear can result in injury or death. Read the Power Unit Operator's Manual for proper starting instructions. (SPU-19) str



OPERATION

5. CONNECTING THE SMR-600 TO THE SKID STEER

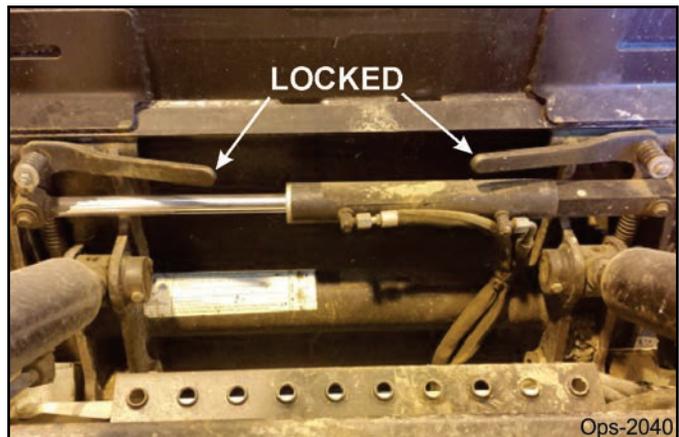
Use extreme caution when connecting the windrower to the skid steer. The windrower should be securely resting at ground level. Keep hands and feet out from under the windrower and clear of pinch points between the power unit and windrower.



Always shut the Power Unit completely down, place the transmission in park, and set the parking brake before you or anyone else attempts to connect or disconnect the Implement to the Skid Steer. (S3PT-15_A) str

5.1 Connecting the SMR-600 to the Skid Steer Mount

1. Follow the instructions with your skid steer loader to quick attach the SMR-600 to the skid steer loader. Push handles down into the locked position and ensure the locking pins have fully engaged the holes in the bottom of the mount



OPERATION

5.2 Connecting the Multi Rake Windrower and Skid Steer Hydraulic Lines

1. Before connecting the windrower hydraulic lines to the skid steer auxiliary hydraulic ports, be sure that the hydraulic output capacity of the skid steer matches the rated capacity of the SMR-600 and that the hydraulic lines and quick couplers are of the same size and type.
2. With the skid steer completely shut down and secured in position and the SMR-600 resting at ground level, relieve auxiliary hydraulic pressure by moving the control levers back and forth several times.
3. When connecting the skid steer hydraulic lines to the windrower, keep hoses, quick couplers, and swivels free of contamination. Clean dirt and other debris from the connections with a clean rag to prevent contamination of the hydraulic oil.
4. The SMR-600 will operate with oil fed in either direction. If the drum turns in the opposite direction than desired, try engaging the auxiliary hydraulic flow in the opposite direction.
5. Once hydraulic lines are properly connected for operation, secure cordura sleeving over couplers to retain possible leaks.



NOTE: If hydraulic lines are removed from the pump or if couplers are removed from hose ends, ensure lines and couplers are replaced in the same configuration as removed to ensure correct oil flow direction is maintained.

5.3 Hydraulic Cylinder Priming

Hydraulic Cylinder must be filled with hydraulic oil before operating. Hydraulic cylinders and lines are filled by holding the valve control levers in the extended position until the cylinder fully retracts and extends. Place control levers in the float position and repeat process several more times to purge all air from the system.

6. PRE-OPERATION INSPECTION AND SERVICE

Before each use, a pre-operation inspection and service of the windrower and power unit must be performed. This includes routine maintenance and scheduled lubrication, inspecting that all safety devices are equipped and functional, and performing needed repairs. Do not operate the windrower and power unit if the pre-operation inspection reveals any condition affecting safe operation. Perform repairs and replacement of damaged and missing parts as soon as noticed. By performing a thorough pre-operation inspection and service, valuable down time and repair cost can be avoided.



Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause death or serious injury. (SG-14)str



OPERATION

WARNING

Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)str



OPERATION

6.1 Skid Steer Pre-Operation Inspection/Service

Refer to the power unit operator's manual to ensure a complete pre-operation inspection and scheduled service is performed according to manufacturer recommendations. The following is a partial list of items requiring inspection:

- Tire condition/air pressure
- Wheel lug bolts
- Steering linkage
- SMV sign is clean and visible
- Power Unit lights are clean and functional
- Power Unit Seat belt is in good condition
- Power Unit cab or ROPS is in good condition
- ROPS is in the raised position
- No power unit oil leaks
- Radiator free of debris
- Engine oil level and condition
- Engine coolant level and condition
- Power brake fluid level
- Power steering fluid level
- Fuel condition and level
- Sufficient lubrication at all lube points
- Air filter condition
- Lift arms and mount are in good condition
- Operator protective door condition and free of damage
- Mounting interface is in good condition and free of damage



6.2 Windrower Pre-Operation Inspection/Service

Before each implement use, a complete inspection and service is required to ensure the implement is in a good and safe working condition. Damaged and/or broken parts should be repaired and/or replaced immediately. To ensure the implement is ready for operation, conduct the following.

- Inspect windrower teeth for excessive wear and damage. The teeth should not be bent or crooked and all welds and fasteners should be intact and secure.
- The teeth are made from high strength abrasion resistant 450BHN steel which provides superior wear resistance. However, under certain operating conditions, some wear is to be expected.
- Hydraulic motor is in good condition and free of damage.
- Hydraulic motor is securely attached to the chain case.

OPERATION

- Drive sprockets are in good condition and free of damage.
- Drum bearings are in good working condition.

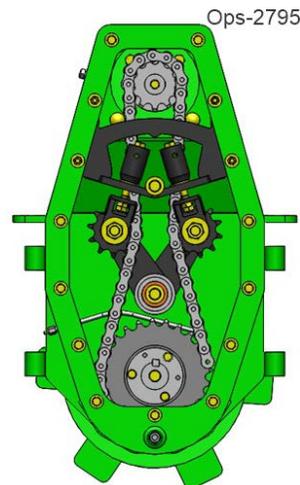
The operator's manual and safety signs affixed on the unit contain important instructions on the safe and proper use of the equipment. Maintain these important safety features on the implement in good condition to ensure the information is available to the operator at all times.

- Ensure the manual canister is secured to the equipment with the operator's manual inside.
- Ensure all safety signs are in place and legible. Replace missing, damaged, and illegible decals. *OPS-U- 0011 str*



- Inspect the condition of the chain belts.
- Ensure the chain case shield is in place and in good repair.
- Ensure the drum shield and belting is in place, and in good condition.
- Ensure the shield gaskets and all seals are in good condition and replace if necessary.

IMPORTANT: Inspect chain tension daily to ensure washers are flush with spacers and nuts are locked together on tension bolts. *OPS-W-0008_D str*



- Ensure hydraulic cylinder is installed and retained correctly. Ensure the proper size pins are used to retain the cylinder in place and are secured with pins.
- Check for hydraulic oil leaks on the cylinder, along the hydraulic lines, and at tractor hydraulic ports.

IMPORTANT: DO NOT use your hands to check for oil leaks. Use a piece of heavy paper or cardboard to check for hydraulic oil leaks. *OPS-W-0010 str*



OPERATION

OPERATION

- Inspect windrower tire condition, wheel bearings, and lug nut torque. *OPS-W-0011_B str*



- Inspect the windrower teeth for excessive wear or damage. The teeth are made from high strength abrasion resistant 450BHN steel which provides superior wear resistance. However under certain working conditions some wear is to be expected.
- If teeth are worn down to 2.5" as shown, they will not be effective and need to be replaced. *OPS-W-0012_B str*



7.ROADSIDE OPERATION

When using the windrower to reclaim roadside gravel, adjustments may need to be made to optimize its performance. Set the drum height 1/2" above the road surface by tilting the implement forward or back. Increase the drum speed by replacing the hydraulic motor option with a smaller motor. Consult your nearest Schulte dealer for further information.

The windrower should never be operated on the center (crown) of the road as this will cause excessive wear of the teeth near the center of the drum.

OPERATION

SKID STEER MOUNTED WINDROWER PRE-OPERATION INSPECTION



Implement ID# _____
 Date: _____
 Make: _____
 Shift: _____

IMPORTANT: Scan this QR Code for an electronic copy of this inspection sheet.

Inspection Sheet



www.algqr.com/twi



Before conducting the inspection, make sure the skid steer engine is off, all rotation has stopped and the skid steer is in park with the parking brake engaged. Make sure the implement is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

OPERATION

Item	Condition at Start of Shift	Specific Comments if not OK
The Operator's Manual is in the canister on the mower		
All safety decals are in place and legible		
The hitch connection is secure with lock pins fully engaged		
The hydraulic cylinders pins are properly retained		
There are no oil leaks or damaged hoses		
The drum and teeth are in good condition		
The roller chain is in good condition		
Chain drive is properly lubricated		
Chain drive is properly tensioned		
Chain drive tensioner nuts are locked together		
Tires are properly inflated and in good condition		
Wheel lug nuts are tight		
Transport locks are in good condition		
All safety guards are installed and in good condition		
Machine is properly greased as per Operator's Manual		

Operator's Signature: _____

DO NOT OPERATE an UNSAFE SKID STEER or IMPLEMENT

OPERATION

SKID STEER PRE-OPERATION INSPECTION



Implement ID# _____ Make: _____
 Date: _____ Shift: _____



Before conducting the inspection, make sure the skid steer engine is off, all rotation has stopped and the skid steer is in park with the parking brake engaged. Make sure the implement is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

OPERATION

Item	Condition at Start of Shift	Specific Comments if not OK
The flashing lights function properly		
The SMV Sign is clean and visible		
The tires are in good condition with proper pressure		
The wheel lug bolts are tight		
The brakes are in good condition		
The steering linkage is in good condition		
There are no visible oil leaks		
The hydraulic controls function properly		
The ROPS or ROPS Cab is in good condition		
The seatbelt is in place and in good condition		
The engine oil level is full		
The hydraulic oil level is adequate		
The fuel level is adequate		
The engine coolant fluid level is full		
The radiator is free of debris		
The air filter is in good condition		
Park brake is in working order		
The brake fluid level is full		
Back-up alarm works if applicable		

Operator's Signature: _____

DO NOT OPERATE an UNSAFE SKID STEER or IMPLEMENT

OPERATION

8. DRIVING THE SKID STEER AND MULTI RAKE WINDROWER

Safe skid steer transport requires the operator possess a thorough knowledge of the model being operated and precautions to take while driving with a front attachment. Ensure the skid steer has the capacity to handle the weight of the implement and the skid steer operating controls are set for safe transport..



Transport only at speeds where you can maintain control of the equipment. Serious accidents and injuries can result from operating this equipment at high speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.



Before transporting the Tractor and Implement, determine the proper transport speeds for you and the equipment. Make sure you abide by the following rules:

Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that the equipment can be operated at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum turning speed for you and this equipment before operating on roads or uneven ground.

Only transport the Tractor and Implement at the speeds which allow you to properly control the equipment.

Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes or worn tires. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)str



OPERATION

8.1 Starting the Skid Steer

Refer to the skid steer operator's manual for proper starting procedures. Consult an authorized dealer if the starting procedure is unclear. Make sure that the skid steer parking brake is set, its transmission is in neutral, the implement is lowered to the ground, and the auxiliary hydraulic remote lever is disengaged before starting the skid steer. Only start the skid steer when properly seated in the operator's seat with the seat belt securely fastened.

To avoid overturns, drive the skid steer with care and at safe speeds, especially when operating over rough ground, crossing ditches or slopes, and turning corners. Use extreme caution when operating on steep slopes. Travel at a slow speed when going downhill. **DO NOT** coast or free-wheel downhill.

When operating the skid steer and windrower across slopes and inclines, through ditches, and other uneven terrain conditions, it is important to maintain sufficient deck to ground clearance.

9. OPERATING THE SKID STEER AND MULTI-RAKE WINDROWER

THE OPERATOR MUST COMPLETELY UNDERSTAND HOW TO OPERATE THE SKID STEER AND WINDROWER AND ALL CONTROLS BEFORE ATTEMPTING TO OPERATE. The operator must read and understand the Safety and Operation Sections of the windrower and skid steer operator's manuals. These manuals must be read and explained to any operator who cannot read. Never allow someone to operate the windrower and skid steer without complete operating instructions

Before starting any operation, the operator must become familiar with the area to be windrowed and any obstacles and hazards contained within to ensure safety to the operator, bystanders, and equipment. Special attention should be paid to foreign debris, rough terrain, steep slopes, and passersby and animals in the area.



WARNING

Many varied objects, such as wire, roots cable, rope, or chains, can become entangled in the rotating parts of the Implement. These objects could then swing outside the housing at great velocities. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the area for such objects before working in the area. Remove any such objects from the site. Never allow the implement to contact such objects. (STL-6_A) str

OPERATION

9.1 Foreign Debris Hazards

Before windrowing, inspect the area to make sure there are no objects larger than 18" to windrow or debris that can get entangled on the drum. Remove all foreign objects and debris. If objects are too big to remove, mark them clearly and be sure to prevent the implement from contacting them.

If you hit a solid object or foreign debris that is larger than 18" stop the implement and tractor at once. Immediately idle the engine speed and disengage the hydraulic flow. Wait for all rotating motion to stop and move the skid steer and implement off the object. Inspect the area and mark the location of the debris. Inspect the condition of the implement and make any needed repairs immediately. Make sure the teeth or drum are not damaged before resuming operation.



Always wear your seat belt securely fastened and only operate the skid steer and windrower with the ROPS in the raised position. If the skid steer or windrower hits a tree stump or bump, a sudden movement could throw you off of the seat and under the skid steer and windrower. The seat belt is your best protection from falling off the skid steer and the ROPS provides protection from being crushed during a tractor roll-over.

OPS-W-0002_A str



Be sure you have adequate knowledge of the property you will be working on. Take time to make yourself aware of any area underwater or underground lines or cables. Contact with buried lines or cable could result in serious injury or death. (STL-1) str



There are obvious and hidden potential hazards in the operation of this Implement as in all power-driven or pulled equipment. REMEMBER! This machine is often operated in rough terrain conditions that include grass, weeds, gullies, holes, slopes, hidden obstructions and the like. Serious injury or even death may occur unless care is taken to assure the safety of the operator and bystanders in the area. Do not operate this machine with anyone in the immediate area. Stop operating if anyone comes within 25 feet of the equipment. (STL-4) str

9.2 Ground Speed

Ground speed for windrower will depend upon the size of the rocks being windrowed. Recommended speed for efficient windrower performance is 5 mph. Refer to the power unit operator's manual or the power unit instrument panel for the engine speed and gear to provide the required and desired ground speed. Make sure that the windrower is operating at its full rated speed before entering the field to be windrowed. If it becomes necessary to temporarily regulate engine speed, increase or decrease the throttle gradually.

Ground speed is achieved in conjunction between engine RPM and forward hydrostatic controls. The operator may be required to experiment with several RPM settings in order to match the optimal drum speed with ground speed for the most ideal performance from the windrower and most efficient power unit operation. As the severity of ground conditions increase, the ground speed should decrease while maintaining drum speed. This will also help to prevent the drum from stalling under heavy workloads.

OPERATION

9.3 Engaging the Windrower from the Skid Steer

Before engaging the windrower, make certain that the area is clear of bystanders and passersby. Refer to the skid steer operator's manual to determine the procedure to engage the front auxiliary hydraulics.

If you hear unusual noises or feel abnormal vibrations, disengage the windrower immediately. Inspect the windrower to determine the cause of the noise or vibration and repair the problem immediately.

Some minor shaking from drum rotation is normal and can be reduced by rotating the windrower to place the wheels on the ground.

Drum Speed

The table below shows optimal drum speeds from factory, based on motor selected, and flow provided from the skid steer. The target RPM for the different applications are as follows:

GPM @2500psi	Motor size (cu. in.)				
	8.0	9.9	12.5	15.0	19.0
18	240	183	147	122	97
20	264	206	167	136	109
22	290	227	182	150	120
25	332	259	208	171	137
27		280	224	184	148
30		310	250	205	164
35				239	205
Landscaping, Leveling, Seedbed Prep - Target RPM from 175-260					
Large debris removal, Rock windrowing - Target RPM from 110-140					
Sweeping - Target RPM 210					

Drum speed can be increased or reduced by changing the engine RPM to increase or reduce hydraulic flow. Applications with larger debris should use slower drum speed, while applications with finer debris should use faster drum speeds.

10. OPERATING THE WINDROWER

When ready for field use, stop the windrower and lower windrower so that the tires are on the ground. Practice with the skid steer lift arm and mount controls to familiarize yourself with the way the windrower reacts to movement.

Avoid windrowing in the reverse direction when possible. In situations where the implement must be backed to access areas to be windrowed make sure there are no persons, posts animals, or foreign debris behind the unit before windrowing in reverse.

OPERATION

For the machine to operate effectively, the drum must rotate opposite of the direction of travel. For example, when traveling forward, the ground engaging teeth must push material forward. When traveling in reverse, the ground engaging teeth must drag material with you.

WARNING

Always use a skid steer with an enclosed cab and an operator protective door that is free of damage. Traveling in reverse can cause material to be thrown towards the cab. The mount will prevent most material from reaching the door, but irregular material can be unpredictable and safety precautions need to be taken.

DANGER

Operate the Skid Steer and/or Implement controls only while properly seated in the Skid Steer seat with the seat belt securely fastened around you. Inadvertent movement of the Skid Steer or Implement may cause serious injury or death. (SG-29W) str

WARNING

Do not windrow with two machines in the same area.

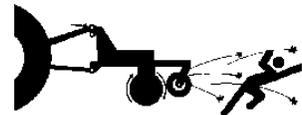
Use extreme care when transporting the windrower on public highways and roads. The combination of windrower and the power unit is longer in length. The implement is also wider than the Skid Steer. Allow ample clearance when transporting the skid steer and implement to insure that they do not contact any bystanders, signs, road structures, or other vehicles.

Never raise the implement entirely while the teeth are turning. If the implement must be raised higher than 12" from ground level, disengage the power unit hydraulic flow and wait for all implement rotation to come to a complete stop before proceeding to raise the implement. If implement is raised too high while the unit is running there is a greater potential for tipping, machine damage, injury or even death.



WARNING

Do not let the drum teeth turn when the implement is raised for any reason, including clearance or for turning. Raising the implement exposes the drum teeth which creates a potentially serious hazard and could cause serious injury or even death from objects thrown from the drum teeth.



OPERATION

Stay alert and watch for trees, powerlines, posts, signs, and all other overhead and ground obstructions while you are windrowing. Use extreme care to avoid hitting these types of obstructions.



OPERATION

OPERATION

10.1 Shutting Down the Implement

Skid Steer & Windrower

To shut down the implement, first bring the skid steer to a complete stop. Then slow down the windrower by reducing the engine speed before disengaging the auxiliary hydraulics.

Park the skid steer on a level surface, place the transmission in park or neutral and apply the parking brake, lower the attached implement to the ground, shut down the engine, remove the key, and wait for all motion to come to a complete stop before exiting the skid steer.



11. DISCONNECTING THE WINDROWER FROM THE SKID STEER



Always shut the Power Unit completely down, place the transmission in park, and set the parking brake before you or anyone else attempts to connect or disconnect the Implement and Power Unit hitches. (SPU-32) str

Before disconnecting the windrower, the auxiliary hydraulics must be disengaged and all rotation at a complete stop. Lower the windrower to the ground. If the windrower is not resting securely on the ground, block the implement up securely before attempting to disconnect it from the skid steer hitch.

1. Completely shut down the windrower and skid steer and secure the skid steer in position by applying the parking brake. Wait for all movement to come to a complete stop before exiting the skid steer. Never extend any part of your body from the operator's area to operate latches or to disconnect hydraulic lines or the height limiting safety chain.
2. Disconnect the windrower electrical control harness and hydraulic hoses from the skid steer. Lay them down on the windrower mount. Do not let the hoses fall into mud or dirt, which can contaminate and shorten the life of the hydraulic hoses.
3. Remove the height limiting safety chain from the front of the skid steer chassis.
4. Pull the latching handles upward to release the latch pins from the windrower hitch tabs.
5. Board the skid steer, fasten your seatbelt, and start the engine. Tilt the mounting plate forward and back away from the windrower at the same time. The windrower should be released from the skid steer at this point.



OPERATION

DANGER

Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause death or serious injury. (SG-14)str



WARNING

Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Implement on the ground or securely blocked up, disengage the PTO, and turn off the tractor engine. Push and pull the Remote Cylinder lever in and out several times prior to starting any maintenance or repair work. (S3PT-09)str

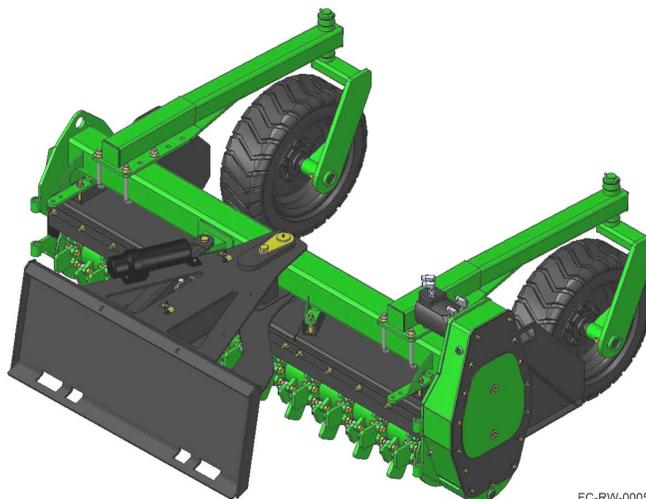


OPERATION

12. WINDROWER STORAGE

Properly preparing and storing the windrower is critical to maintaining its appearance and to help ensure years of dependable service. The following are suggested storage procedures:

1. Thoroughly clean all debris off the implement to prevent damage from standing water.
2. Lubricate all implements points as detailed in the maintenance section.
3. Tighten all bolts and pins to the recommended torque.
4. Check the implement for worn and damaged parts. Perform repairs and make replacements immediately so that the implement will be ready for use at the start of the next season.
5. Store the implement in a clean, dry place with the implement resting securely on blocks or at ground level.
6. Keep the hydraulic hoses from sitting in water, dirt and other contaminants.
7. Use spray touch-up enamel where necessary to prevent rust and maintain the appearance of the implement.



FC-RW-0005

DANGER

Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be killed or injured. Inadvertent contact with controls can cause the Implement to shift or fall crushing themselves or others. (SG-25) str

OPERATION

WARNING

Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)str



13. TRANSPORTING THE SKID STEER AND WINDROWER

Inherent danger of operating the skid steer and windrower and the possibility of accidents are not left behind when you finish windrowing an area. One must also use good judgement and safe operation practices when transporting the skid steer and windrower between locations, By using good judgement and following safe transport procedures, the possibility of accidents while moving between locations can be substantially minimized.

DANGER

Never allow children or other persons to ride on the Power Unit or Implement. Falling off can result in serious injury or death. (SPU-16) str



WARNING

If equipped with a floating mount, ensure the locking pin is securely in place before transporting.

Before transporting the skid steer and windrower, idle the skid steer engine, disengage the auxiliary hydraulics and wait for all implement moving parts to come to a complete stop. When transporting, only raise the implement enough to clear ground obstacles. Never raise the windrower to a height that impairs the operator's vision to the front of the windrower

13.1 Transporting Skid Steer on Public Roadways

DANGER

Never allow children or other persons to ride on the Power Unit or Implement. Falling off can result in serious injury or death. (SPU-16) str



WARNING

Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Power Unit flashing warning lights and follow all local traffic regulations. (SPU-13) str

Check with your local department of transportation to determine if it is legal to drive a skid steer on a public roadway. Extreme caution should be used when transporting the skid steer and windrower on public roadways. The skid steer must be equipped with all required safety warning features including a SMV emblem and

OPERATION

flashing warning lights to alert drivers of the skid steer's presence. Remember that roadways are primarily designed for automotive drivers and most drivers will not be looking out for you, therefore, you must look out for them. Check your side view mirrors frequently and remember that vehicles will approach quickly because of the skid steer's slower speed. Be extremely cautious when the piece of equipment that you are towing is wider than the skid steer tire width and/or extends beyond your lane of the road.

When operating on public roads, have consideration for other road users. Pull to the side of the road occasionally to allow all following traffic to pass. Do not exceed the legal speed limit set in your country for agricultural and industrial type equipment. Always stay alert when transporting the skid steer and mower on public roads. Use caution and reduce speed if other vehicles or pedestrians are in the area.

13.2 Hauling the Skid Steer and Windrower

Before transporting a loaded skid steer and windrower, measure the height and width dimensions and gross weight of the complete loaded unit. Ensure that the load will be in compliance with the legal limits set for the areas that will be traveled through.

Use adequately sized and rated trailers and equipment to transport the skid steer and windrower. Consult an authorized dealer to determine the proper equipment required. Using adequately sized chains, heavy duty straps, cables and/or binders, securely tie down both the front and rear of the skid steer utilizing the proper tie down locations as specified by the skid steer manufacturer.

Arrange the chains so that when tightened, the chains are pulling downward and against themselves. Carefully tighten the securing chains or other fasteners used as much as possible using boomers or binders to apply maximum tension. Use extreme care when attaching and removing the securing devices as the extreme tension involved when released has the potential to inflict serious injury.



While hauling the skid steer and windrower, make occasional stops to check that the skid steer and windrower have not moved or shifted and that the securing chains have maintained tension. If during transport a hard braking, sharp turning, or swerving action was performed, stop at the next safe location to inspect the security of the load.

OPERATION

14.TROUBLESHOOTING GUIDE

Problem	Possible Cause	Remedy
Excessive Vibrations	Damaged chain or sprockets.	Replace chain or sprocket.
	Damaged bearing.	Replace bearing.
	Damaged or missing teeth.	Repair or replace teeth.
	Bent drum shaft.	Repair or replace drum.
Motor Overheating	Excessive flow through motor.	Adjust flow control on tractor.
	Excessive workload causing motor to stall.	Reduce ground penetration or ground speed to reduce drum workload.
Excessive Noise	Damaged chain.	Replace chain.
	Damaged or missing teeth.	Repair or replace teeth.
	Worn bearing or sprocket.	Replace bearing or sprocket.
	Incorrect chain tension.	Check chain tension and adjust as necessary.
<i>NOTE: In some working conditions, using this machine can be very loud and harmful to hearing.</i>		
Drum Won't Rotate	No hydraulic flow.	Check that all hoses are tight with no leaks and that main hoses are fully connected and locked in auxiliary ports
	No hydraulic flow from skid steer.	Check that auxiliary hydraulics are engaged from skid steer. Refer to skid steer operator's manual for engaging auxiliary hydraulics. Ensure sufficient hydraulic fluid in skid steer reservoir.
	Drum is obstructed.	Shut off skid steer engine and remove obstruction.
	Obstruction of sprocket key.	Replace sprocket key.
	Failure of hydraulic motor.	Repair or replace motor.
Angling Cylinder Not Functioning Correctly	Worn cylinder parts.	Repair or replace hydraulic cylinder.
	Obstruction in valve block.	Remove obstruction from hydraulic lines and valve block.
	Auxiliary hydraulics not engaged.	Engage auxiliary hydraulics. Drum must be turning in order to cycle the angling cylinder.
	Electrical failure.	Refer to skid steer operators manual for how to check auxiliary electrical circuits.

MAINTENANCE SECTION

Maintenance Section 5-1

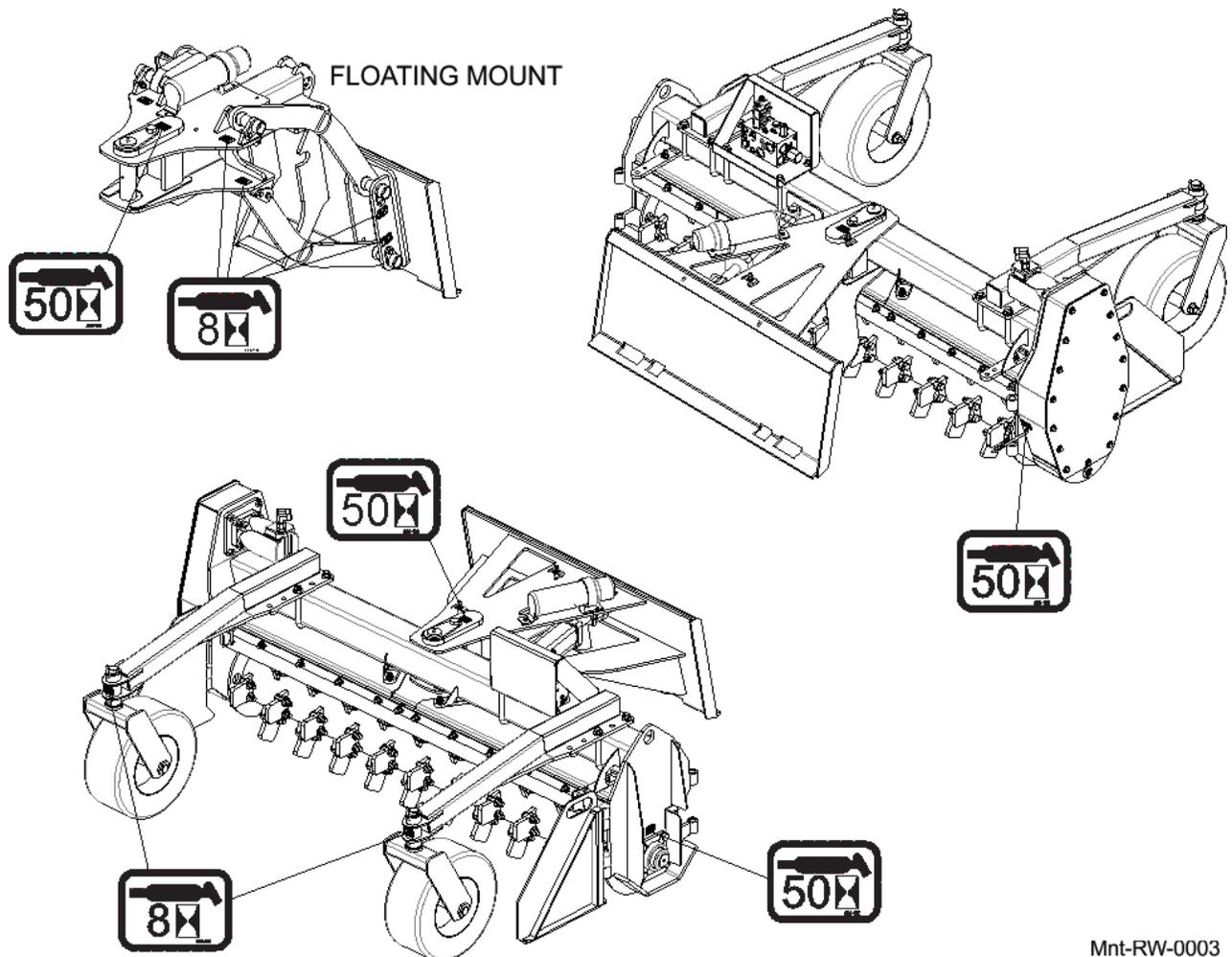
MAINTENANCE

PARTS INFORMATION

Use of genuine Schulte replacement parts is your guarantee that parts are of the same quality and are manufactured to the same standards as the original equipment. These parts are made and tested to Schulte specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce the performance, void Schulte warranties, and present a safety hazard. Use genuine Schulte parts for economy and safety. (SPSI-2) str

MAINTENANCE

SEE YOUR SCHULTE DEALER



Mnt-RW-0003

MAINTENANCE

MAINTENANCE

NUTS AND BOLTS

Check all nuts and bolts for tightness after the first 8 hours of operation then weekly. Check the condition of cotter pins, roll pins and other fasteners weekly and replace if necessary..

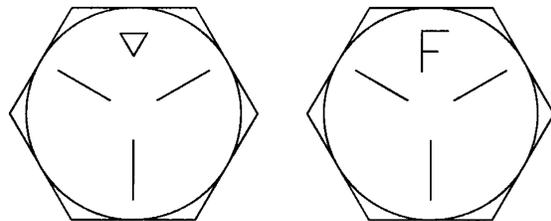
Bolt Grades and Torque

When replacing damaged bolts use only plated Grade 5 bolts unless otherwise specified. Use only bolts of the correct length [Refer to the "Parts" section]. Do not replace lock nuts with nuts and lock washers. Use only original equipment lock nuts.

Recommended Torques in foot pounds for SAE Grade 5 bolts, based on dry assembly:

Bolt Size	UNC		UNF	
	Ft-lbs	Nm	Ft-lbs	Nm
1/4"	8	11	10	14
5/16"	17	23	19	26
3/8"	31	42	35	47
7/16"	49	66	55	75
1/2"	75	102	85	115
5/8"	150	203	170	230
3/4"	269	365	297	403
1"	644	873	704	954
1-1/4"	1255	1700	1380	1870

GRADE (5) Bolt Head



Mnt-R-0285

IMPERIAL TO METRIC CONVERSION TABLE

Diameter of Bolts		
Inches	Inches	Millimeters
0.25	1/4	6
0.3125	5/16	8
0.375	3/8	10
.05	1/2	12
0.625	5/8	16
0.75	3/4	20
1	1	24
1.25	1-1/4	30
1.5	1-1/2	36

Length of Bolts					
Inches	Inches	Millimeters	Inches	Inches	Millimeters
0.5	1/2	12	5.25	5-1/4	130
0.625	5/8	16	5.5	5-1/2	140
.075	3/4	20	5.75	5-3/4	150
1	1	25	6	6	150
1.25	1-1/4	35	6.25	6-1/4	160
1.5	1-1/2	40	6.5	6-1/2	170
1.75	1-3/4	45	6.75	6-3/4	170
2	2	50	7	7	180
2.25	2-1/4	60	7.25	7-1/4	190
2.5	2-1/2	65	7.5	7-1/2	190
2.75	2-3/4	70	7.75	7-3/4	200
3	3	75	8	8	200
3.25	3-1/4	80	8.25	8-1/4	210
3.5	3-1/2	90	8.5	8-1/2	220
3.75	3-3/4	100	8.75	8-3/4	220
4	4	100	9	9	230
4.25	4-1/4	110	9.25	9-1/4	240
4.5	4-1/2	120	9.5	9-1/2	240
4.75	4-3/4	120	9.75	9-3/4	250
5	5	130	10	10	260

Grade / Class			
Imperial		Metric	
	Gr 5	Cl 8.8	
	Gr 8	Cl 10.9	

NOTE: This conversion sheet should only be used when all options to use correct hardware have been exhausted.

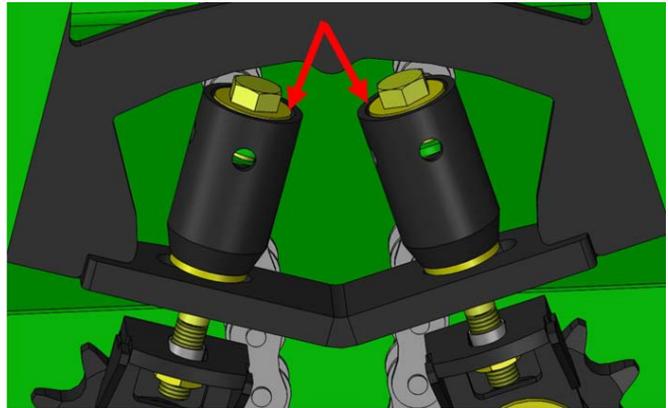
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MAINTENANCE

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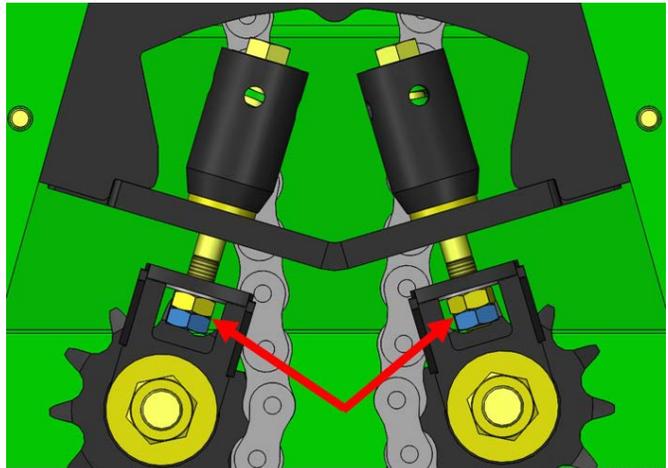
DRIVE CHAIN

- For the longest chain life, all sprockets must be properly aligned, chain properly tensioned and adequately lubricated.
- The drive chain is tensioned by 2 springs acting together. Proper tension is achieved when the top of both washers are flush with the top of the spacers



Asm-RW-0022

When proper tension is achieved, ensure the nuts on the tension bolts are locked together.

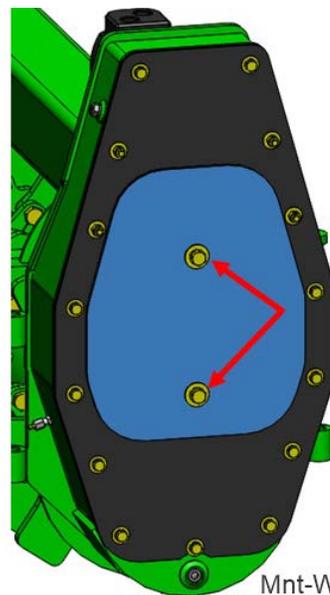


Asm-RW-0023

- Tensioner inspection and adjustment can be done by removing the center access shield with the two 1/2" bolts as shown. Be careful not to damage gaskets or rubber washers when working on the shields. Replace if necessary.

NOTE: When installing the center access shield use Loctite® 242 or 243 and torque bolts to 50 ft-lbs.

- Clean out any dirt accumulated in the chain case and inspect seals. If any damage, or leaks are found repair or replace as needed.
- If chain case contamination has occurred, clean chain case and replace oil with 0.7 liters (1.5 pints) of 80W90 gear oil.



Mnt-W-0004

MAINTENANCE

IMPORTANT: After the first three hours of operation check the tightness of the drive chain and re-tighten if necessary. Afterwards periodically check for proper tightness. When tightening the Split Tapered hub to the drum sprocket, torque the 3/8" bolts to 29 ft.-lbs (39 Nm).

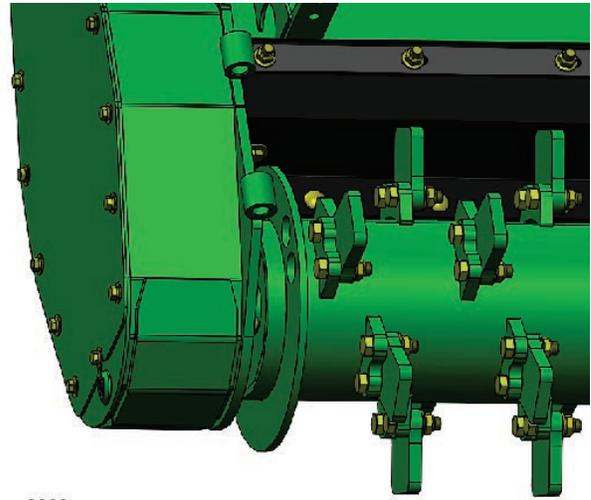
WINDROWER TEETH

Teeth are made from high strength abrasion resistant 450BHN steel, for superior wear resistance. Additional hard surfacing is not necessary. However, if it is desired, CS170 hard surfacing electrodes are recommended.

Windrower Tooth Replacement

When replacing the teeth, be sure to install them away from the drive side of the mount as shown. This will keep the proper spacing between teeth. Locknuts lose grip and damage bolts with each use. Bolts and nuts must be replaced each time. Be sure the shank of the bolt extends past the joint between the mount and tooth for proper shear protection.

IMPORTANT: Use ONLY Genuine Schulte replacement parts



Ops-2203

TIRES

Periodically check tire pressure. Tires should be inflated to 45 PSI. Higher pressures may cause excessive bouncing over rough ground. Lower pressures may cause excessive wear..

To remove tires for repair or replacement, securely block the frame. Relieve hydraulic pressure. Shut off power unit and apply parking brake and disengage PTO.



AVOID PERSONAL INJURY, keep the frame from falling. DO NOT work under picker without support blocks to provide you with support.

HYDRAULICS

With the power unit shut down and secured in position, relieve hydraulic pressure from the power unit by moving the control levers back and forth several times or placing the levers in the float position. Keep unit hydraulic lines, hoses, quick couplers, and swivels free of contamination. Never leave a disconnected hose end open and cap the power unit hydraulic outlet ports when not in use. If the power unit ports or windrower hydraulic hose ends become contaminated, wipe clean with a rag before connecting.

Inspect hydraulic hoses, fittings and cylinders for wear or leaks. Use a piece of cardboard or wood rather than hands to search for suspected leaks. Replace if necessary.

Before applying pressure to the hydraulic system, be sure all connections are tight and that the hoses are not damaged.



MAINTENANCE

⚠ WARNING

Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15) str



MAINTENANCE

LUBRICATION - GREASE SCHEDULE

Windrower Frame

Castor wheel assemblies 8hrs 4 locations
Flange bearings 50 hrs - 2 locations
Frame Pivot 50 hrs - 1 location
Wheel hubs 50 hrs - 2 locations

Wheel Hubs

Wheel Hubs: Yearly. Fill until grease is seen purging at the axle seals.

⚠ CAUTION

Always wear protective gloves when handling grease.

Drive Chain

Apply light grease or oil to the drive chain after every 8 hours of operation. Operating conditions may require that the chain be lubricated more frequently. Do not allow the chain to dry out.

STORAGE

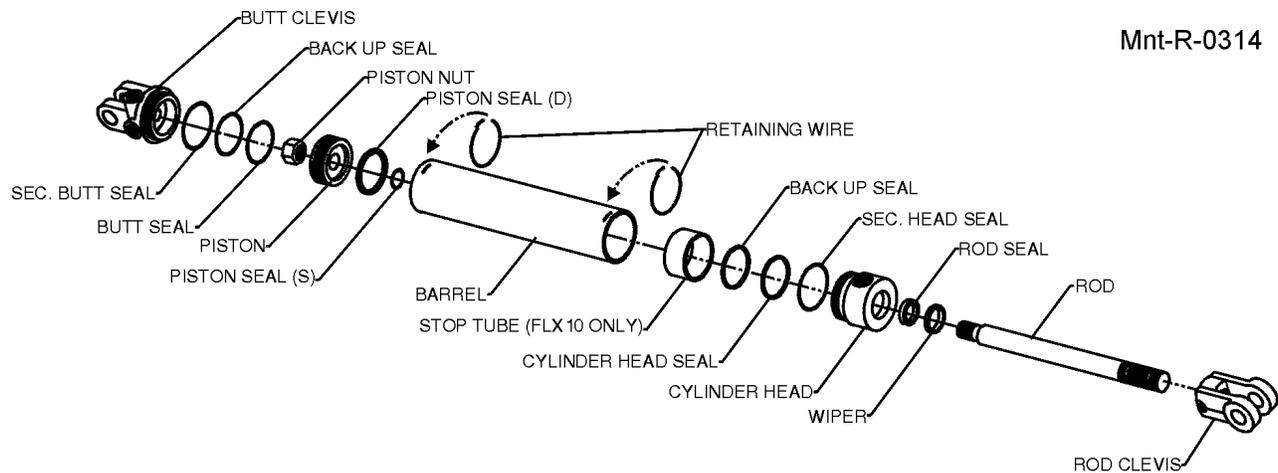
It is recommended that the chain be removed from the machine, cleaned and stored in oil over the winter months.

Pivot drum until the cylinder is retracted. Ensure cylinder is full of oil. If cylinder is not full of oil, hydraulic cylinders and lines are filled by holding the valve control levers in the extended position until the cylinder fully retracts and extends.

MAINTENANCE

RAMLOK DISASSEMBLY PROCEDURE

Mnt-R-0314



MAINTENANCE

1. Replacement cylinder head and butt seals must be available before beginning disassembly as they will be damaged during the procedure. The piston seal may also be subject to damage during disassembly.
2. Secure the cylinder snugly in a vice. Do not over tighten the vice or the barrel will compress.
3. Locate the slots at either end of the barrel. The cylinder head will be removed first.
4. Using a thin blade screwdriver, insert the blade into the end of the slot near the cylinder head and pry the retaining wire up slightly.
5. With the screwdriver under the wire, rotate the cylinder head to thread the wire out. The cylinder head can be turned with a pin wrench in the holes provided, with a pipe wrench, or with a strap wrench.
6. Thread the wire completely out of the barrel. Note which hole in the cylinder head that the wire was inserted in (there are 4 holes in the cylinder head. When reinstalling the cylinder head, the wire must be inserted in the same hole and the wire must be installed in the opposite rotation from removal (i.e. If the cylinder head was turned clockwise to remove the wire, it must be turned counterclockwise for installation). This will ensure correct port orientation.
7. With the cylinder head wire completely removed, disassembly can continue. Ensure that the ports at both ends of the cylinder are open to the atmosphere. Insert a long pin or a bar through the pin hole on the shaft mount. Use this bar to fully extend the shaft. A hard pull should dislodge the cylinder head from the barrel.
8. Continue to pull on the shaft until the o-ring on the cylinder head becomes lodged in the slot in the barrel. Insert a knife in the slot and cut the o-ring and back up seal. These seals can be threaded out through the slot in the barrel.
9. Continue to pull on the shaft. The cylinder head, piston and shaft will pull free from the barrel.
10. If the seal at the butt end of the cylinder needs to be replaced, disassembly is the same as for the cylinder head (see steps #3, 4 and 5). Again, note the rotation used to remove the wire and use the opposite rotation for assembly. There is only one wire hole in the butt.
11. To remove the piston nut, do not clamp the shaft in a vice as it may be damaged. Locate a pin that will fit nicely through the shaft clevis. Insert the pin vertically in a vice and tighten it securely. Insert the shaft clevis over the pin.
12. Remove the piston nut. The piston and cylinder head can now be removed.

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13. Inspect all components for wear and scoring. Closely inspect the bore of the barrel for scoring or wear marks. Check the shaft closely for wear marks, scoring, pitting or rust (discoloration of nitrosteel shafts is normal). Check the bore of the cylinder head for wear marks, scoring and rust. Check the outside diameter of the piston for wear marks or scoring. Check seals for wear, nicks, tearing or other damage.
14. Replace all damaged components. It is recommended that all seals be replaced, even if there is no visible damage.
15. Assembly is the opposite of disassembly. Use a small amount of oil to lubricate all seals prior to assembly. Caution must be used to prevent seal damage.

