

# SCHULTE®

## FM-115

FRONT MOUNT 3PT HITCH

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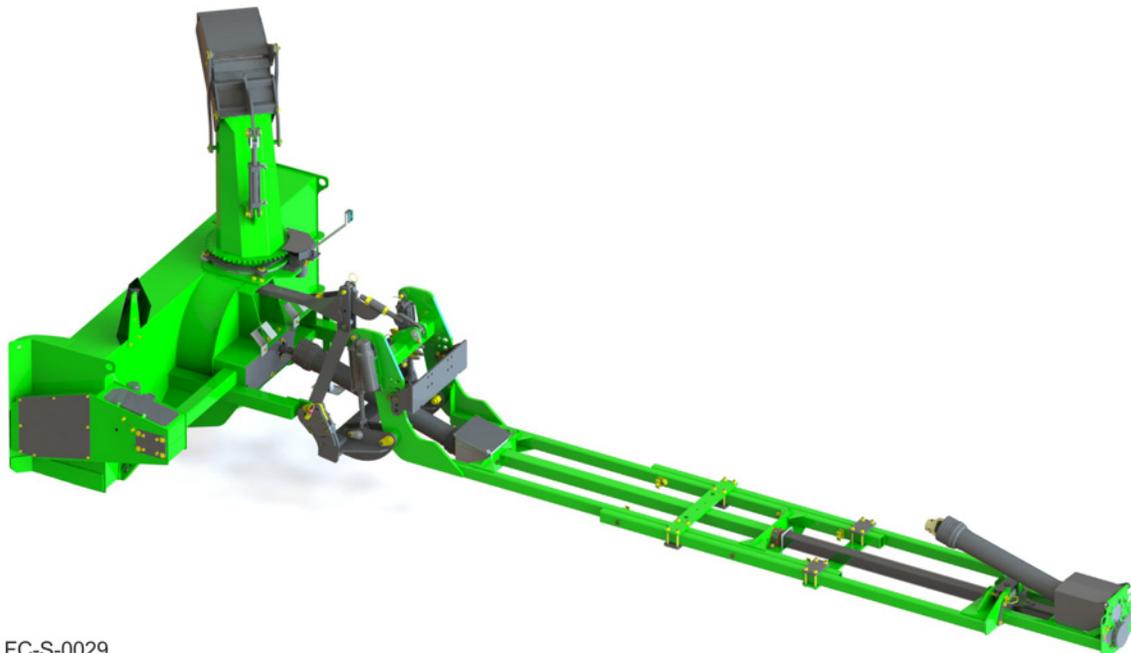
S/N F11510002512-F11510037712 Inclusive

Part No. F115-010C

## 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*



FC-S-0029

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ISO 9001



# 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!

 <h1 style="margin: 0;">DANGER</h1>			
<p><b>FAILING TO FOLLOW SAFETY MESSAGES AND OPERATING INSTRUCTIONS CAN CAUSE SERIOUS BODILY INJURY OR EVEN DEATH TO OPERATOR AND OTHERS IN THE AREA.</b></p>			
<p>1.</p> 	<p>2. NO RIDERS, NO CHILDREN OPERATORS</p> 	<p>3. USE SEATBELT, ROPS AND PPE</p> 	<p>4. BLOCK UP SECURELY BEFORE WORKING UNDER.</p> 
<p>1. Study and understand Operator's Manuals, Safety Signs, and Instructional Decals for tractor &amp; implement to prevent misuse, abuse, &amp; accidents. Learn how to stop engine suddenly in an emergency. Be alert for Passersby and Especially children.</p> <p>2. Allow no children on or near implement or tractor. Allow no riders on tractor or implement. Falling off can cause serious injury or death from being run over by tractor or implement or contact with rotating components.</p> <p>3. Operate only with tractor having Roll-Over Protective Structure (ROPS) and with seatbelt fastened securely and snugly to prevent injury and possible death from falling off or tractor overturn. Personal Protective Equipment such as Hard Hat, Safety Glasses, Safety Shoes, and Ear Plugs are recommended.</p> <p>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 crushing injury or even death from sudden inadvertent Dropping. Make certain that area is clear before lowering.</p> <p>5. Before transporting, put Lift Lever in Lift (Detent) position and follow traffic codes. Slow down at night, in turns and on hillsides.</p> <p>6. Make certain that SMV sign, Warning Lights, and Reflectors are clearly visible.</p> <p>7. Never operate with implement raised off ground to reduce possibility of injury from objects thrown under Implement structure.</p> <p>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 can use injury or death</p>			
<p>5. TRANSPORT SAFELY,</p> 	<p>6. USE SMV, LIGHTS, &amp; REFLECTORS.</p> 	<p>7. DO NOT OPERATE WITH UNIT RAISED</p> 	<p>8. DO NOT MOUNT OR DISMOUNT WHILE MOVING.</p> 

## 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 SCHULTE FM-115 FRONT MOUNT 3PT HITCH FRAME**

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

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- 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 gearboxes have been filled with oil.
  - Check that all grease fittings have been lubricated.
- 

# **DEALER'S DELIVERY GUIDE**

## **for SCHULTE FM-115 FRONT MOUNT 3PT HITCH FRAME**

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- Mounting and removal from tractor
  - 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)

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death 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)



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



# SAFETY



Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. (SG-30)



Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. (SG-31)

## OPERATOR SAFETY INSTRUCTIONS AND PRACTICES



The rotating parts of this machine continue to rotate even after the PTO has been turned off. The operator should remain in the operator's seat for 60 seconds after the brake has been set, the PTO disengaged, the tractor turned off, and all evidence of rotation has ceased. (S3PT-10)

**“Wait a minute...Save a life!”**



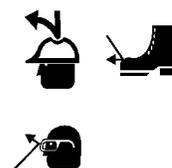
Never crawl under a raised Implement supported solely by the Tractor 3-Point hitch. Release of the control lever or mechanical failure will result in the Implement falling and possible injury or death. Always securely block up the Implement before crawling underneath to perform repairs and service. (S3PT-19)



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)



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)



**SAFETY**

# SAFETY

**CAUTION**

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)



**WARNING**

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



**DANGER**

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



**DANGER**

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

**DANGER**

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)



**WARNING**

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)

# SAFETY



**WARNING**

Use extreme caution when getting onto the Implement to perform repairs, maintenance and when removing accumulated material. Only stand on solid flat surfaces to ensure good footing. Use a ladder or raised stand to access high spots which cannot be reached from ground level. Slipping and falling can cause serious injury or death. (SG-33)



**DANGER**

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)



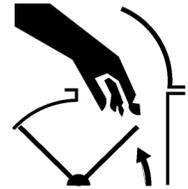
**DANGER**

Do Not put hands or feet near the rotating auger. Auger contact can result in serious injury or even death. Stay away until all motion has stopped and the snow blower is securely blocked up before removing material, performing service, and making repairs. (SSB-5)



**DANGER**

Do not put hands or feet near the rotating fan. Fan contact can result in serious injury or even death. Stay away until all motion has stopped and the snow blower is securely blocked up before removing material, performing service, and making repairs. (SSB-6)



**DANGER**

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)

## EQUIPMENT OPERATION SAFETY INSTRUCTIONS AND PRACTICES



**DANGER**

This Implement may be wider than the Tractor. 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 Tractor to pivot violently resulting in equipment damage, loss of steering control, serious injury, or even death. Never allow the Implement to contact obstacles.



**WARNING**

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

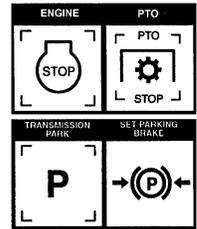


**SAFETY**

# 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)



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



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)



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. (SG-12)



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



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)



# 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)



Do not exceed the rated PTO speed for the Implement. Excessive PTO speeds can cause Implement driveline or blade failures resulting in serious injury or death. (SG-26)



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



In case of mechanical difficulty during operation, place the transmission in the park position, set the parking brake, shut down all power, including the PTO and the engine and remove the key. Wait until all rotating motion has stopped before dismounting. (SG-39)



Never leave the Implement and Power Unit unattended while the Implement is in the raised position. Accidental operation of a lifting lever or a hydraulic failure may cause the implement to suddenly fall causing serious injury or possible death to anyone who might inadvertently be under the Implement. Lower the implement carefully to the ground. Do not put hands or feet under lifted components. (SPU-3)



Only operate the snow blower or plow in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never blow snow or plow and in darkness or in conditions where you cannot clearly see at least 100 yards in front and to the sides of the Tractor and Snow Blower. 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 snow blowing or plowing.



Extreme care should be taken when operating near loose objects such as gravel, rocks, wire and other debris. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any object that cannot be removed must be clearly marked and carefully avoided by the operator. Stop moving immediately if the Implement strikes a foreign object. Repair all damage before resuming snow blowing.



Many varied objects, such as wire, cable, rope, or chains can become entangled in the operating parts of the Snow Blower. These items could then swing outside the housing at high speeds. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the work area for such objects before snow blowing. Remove any like object from the site. Never allow the auger to contact such items. (SSB-3)

# SAFETY

## ⚠️ WARNING

Move snow at the speed that you can safely operate and control the Tractor and Implement. Safe speed depends on terrain and snow conditions. **Normal ground speed range is from 0.5 to 1.5 mph. When plowing snow, do not exceed 15 mph.** Equipment damage, loss of control, injury or even death may occur. Use slow speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided.

## ⚠️ DANGER

Snow Blowers are capable under adverse conditions of throwing objects for great distances (200 feet or more). Do not allow the snow stream to fall on passersby. Ice, debris and heavy snow thrown from the snow blower can cause serious injury or death. (SSB-7)



**STOP SNOW BLOWING IF PASSERSBY ARE WITHIN 200 FEET.**

## ⚠️ WARNING

When blowing snow with two machines in the same area be sure that windows are closed. (SSB-10)

## ⚠️ DANGER

There are obvious and hidden potential hazards in the operation of this Snow Blower. REMEMBER! This machine is often operated in deep snow where vision is reduced. The fan blades of this Snow Blower can throw objects for great distances. Serious injury or even death may occur unless care is taken to insure the safety of the operator, bystanders, or passersby in the area. Do not operate this machine with anyone in the immediate area. Stop Snow Blowing if anyone is within 200 feet of Snow Blower. (SSB-11)

## ⚠️ WARNING

Do not operate Snow Blower if excessive vibration exists. Shut down PTO and the Tractor engine. Inspect the Snow Blower to determine the source of the vibration. If blades are missing or damaged replace them immediately. Do not operate the Snow Blower until the blades have been replaced and the Blower operates smoothly. Operating the Snow Blower with excessive vibration can result in component failure and 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 Snow Blower to be operated with blades missing. (SSB-12)

## ⚠️ DANGER

The rotating parts of this machine have been designed and tested for rugged use. However, the blades and rotating members 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 rotating blades to contact such obstacles. (SSB-13)

## ⚠️ DANGER

Always keep a careful lookout and use extreme care when working around utility lines. Heavy snow or ice storms can cause utility lines to sag or drop to the ground. Never allow the Snow Bower within 10 feet of any Utility power or gas line. When working close to Utility lines consult your electric or gas company for a safe code of operation. (SSB-15)

# SAFETY



Before dismounting to clear a clogged machine, place the transmission in the park position, set the parking brake, shut down all power, including the PTO and the engine and remove the key. Wait until all rotating motion has stop before dismounting. (SSB-16)



Snow can cover and hide solid objects such as guard rails, curbs, concrete structures, large rocks, utility boxes, fire hydrants, etc. DO NOT allow the rotating parts of the Snow Blower to contact such items. Inspect the area before operating the Snow Blower. Mark all solid items clearly with a pole or flag. To reduce the possibility of property damage, serious injury, or even death, never allow the rotating blades to contact such obstacles. (SSB-20)



The Implement can block the operators vision directly in front of the Implement. Inspect the area before operating the Implement and make sure that there are no obstacles, passersby, or coworkers in the path of the Implement. (SSB-22)

SAFETY

## CONNECTING OR DISCONNECTING IMPLEMENT SAFETY INSTRUCTIONS AND PRACTICES



**DO NOT** use a PTO adapter to attach a non-matching Implement driveline to a Tractor PTO. Use of an adapter can double the operating speed of the Implement resulting in excessive vibration, thrown objects, and blade and implement failure. Adapter use will also change the working length of the driveline exposing unshielded driveline areas. Serious bodily injury and/or equipment failure can result from using a PTO adapter. Consult an authorized dealer for assistance if the Implement driveline does not match the Tractor PTO. (S3PT-14)



Always shut the Tractor 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 Tractor hitches. (S3PT-15)



When attaching the Implement input driveline to the Tractor PTO, it is important that the connecting yoke spring activated locking collar slides freely and the locking balls are seated securely in the groove on the Tractor PTO shaft. Push and pull the driveline back and forth several times to ensure it is securely attached. A driveline not attached correctly to the Tractor PTO shaft could come loose and result in personal injury and damage to the Implement. (S3PT-17)

# SAFETY

**WARNING**

Before operating the Implement, check that the front and rear drive shafts are installed within their correct working ranges and will not bottom out or become disengaged. Raise and lower the snow blower or plow and check the collapsed and extended length of the front drive shaft. Measuring between the drive shaft's cross and bearing kits, the length must be a minimum of 36 and maximum of 49". Measurements outside this range indicate that an incorrect drive shaft has been installed or that a non-standard snow blower has been attached to the front mount frame. Contact your Schulte dealer.

The rear tractor drive shaft remains at a fixed length during operation. The installed length of the tractor drive shaft should be between 29" and 33" as measured between the cross and bearing kits. Measurements outside of these ranges may result in damage to the implement or tractor. A broken driveline can cause personal injury.

## TRANSPORTING SAFETY INSTRUCTIONS AND PRACTICES

**WARNING**

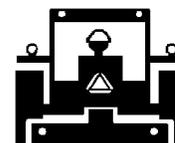
Be particularly careful when transporting the Implement with the Tractor. Turn curves or go up hills only at a low speed and using a gradual steering angle. Front mounted implements move the center of gravity to the front and remove weight from the rear wheels. Make certain, by adding ballast, that at least 20% of the tractor's weight is on the rear wheels to prevent tipping, loss of steering control or Tractor tip-over. Slow down on rough or uneven surfaces to prevent loss of steering control which could result in property damage or possible injury. Do not transport unless 3-Point lift lever is fully raised and in the latched transport position. Dropping implement in transport can cause serious damage to the tractor and/or Implement and possibly cause the operator or others to be injured or killed.

**WARNING**

Allow sufficient clearance for the Implement to swing outward while turning. Implements carried behind the Tractor will swing outside the tire path when making turns. Contacting a solid object while turning will cause equipment damage and possible injury. (S3PT-20)

**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 Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



# 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)



**SAFETY**

# SAFETY

## **WARNING**

Transport only at safe speeds. Serious accidents and injuries can result from operating this equipment at unsafe speeds. Understand the Power Unit and Implement and how it handles before transporting on streets and highways. Make sure the Power Unit steering and brakes are in good condition and operate properly.



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

- Test the Power Unit at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Power Unit and Implement. As you increase the speed of the Power Unit the stopping distance increases. Determine the maximum safe transport speed for you and this Equipment.
- Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that it is safe to operate 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 safe turning speed for you and this equipment before operating on roads or uneven ground.
- Only transport the Power Unit and Implement at the speeds that you have determined are safe and which allow you to properly control the equipment.

Be aware of the operating conditions. Do not operate the Power Unit with weak or faulty brakes. 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 Power Unit's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SPU-21)



## **WARNING**

Before transporting the Snow Blower, position the snow discharge shoot in the center position to reduce the possibility of blocking the operators vision. (SSB-21)

## **WARNING**

Your driving vision may be reduced or impaired by the tractor, cab, or implement. Before driving on public roadways identify any limited vision areas, and make adjustments to your operating position, mirrors, and the implement transport position so that you can clearly see the area where you will be traveling, and any traffic that may approach you. Failure to maintain adequate vision of the public roadway and traffic can result in serious injury or even death. (STI-10)

## **MAINTENANCE AND SERVICE SAFETY INSTRUCTIONS AND PRACTICES**

## **DANGER**

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)



# SAFETY



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)



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)



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)



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 serious injury or even death. (SG-14)



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



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)



Do Not fill fuel tank while engine is running. Refuel only after engine has cooled down. If fuel is spilled, move machine away from the area of the spill and avoid creating any source of ignition until the spill has been cleaned up. (SG-28)

# SAFETY

## WARNING

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)

## 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)

## SEE YOUR SCHULTE DEALER

## DANGER

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)

## DANGER

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 such as blades could turn without warning and cause immediate entanglement, injury or death. (SPU-31)

## DANGER

Never crawl under a raised Implement supported solely by the Power Unit boom. 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. (SPU-33)

## WARNING

Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Mower Head on the ground or securely supported on blocks or stands, disengage the auxiliary hydraulics, and turn off the engine. Push and pull the Control Levers several times to relieve pressure prior to starting any maintenance or repair work. (SPU-34)

## DANGER

Always disconnect the main PTO Driveline from the Tractor before performing service on the Snow Blower. Never work on the Snow Blower with the Tractor PTO driveline connected and running. The Fan, Auger or Drivelines could turn without warning and cause immediate entanglement, injury or death. (SSB-8)

# SAFETY



**WARNING**

All Safety Shields, Guards and Safety devices including (but not limited to) - the Chain Shield, Cross Shaft Shield, Gearbox Shields, and PTO integral 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 entanglement. (SSB-9)



**WARNING**

DO NOT weld or repair rotating Blower components. Welds and other repairs may cause severe vibration and/or component failure resulting in parts being thrown from the blower causing serious bodily injury. See your Authorized Dealer for proper repairs. (SSB-14)



**WARNING**

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)



**WARNING**

Use only OEM specified shear pins as replacement pins. The use of incorrect shear pins can cause failures in the Snow Blower rotating components resulting in property damage and/or serious bodily injuries. (SSB-19)



**DANGER**

All Safety Shields, Guards and other Protective Safety devices should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. **NEVER REMOVE PROTECTIVE SHIELDS AND GUARDS! NEVER MODIFY OR CUT PROTECTIVE SHIELDS OR GUARDS!** When shields or guards are removed to access areas for maintenance, they must be replaced and be in good condition before operating. Missing, broken, or worn shields, guards, and other protective devices must be replaced at once and prior to operation to reduce the possibility of injury or death from thrown objects, entanglement, or contact. (SWS-2)

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)

Operator's & Parts Manuals

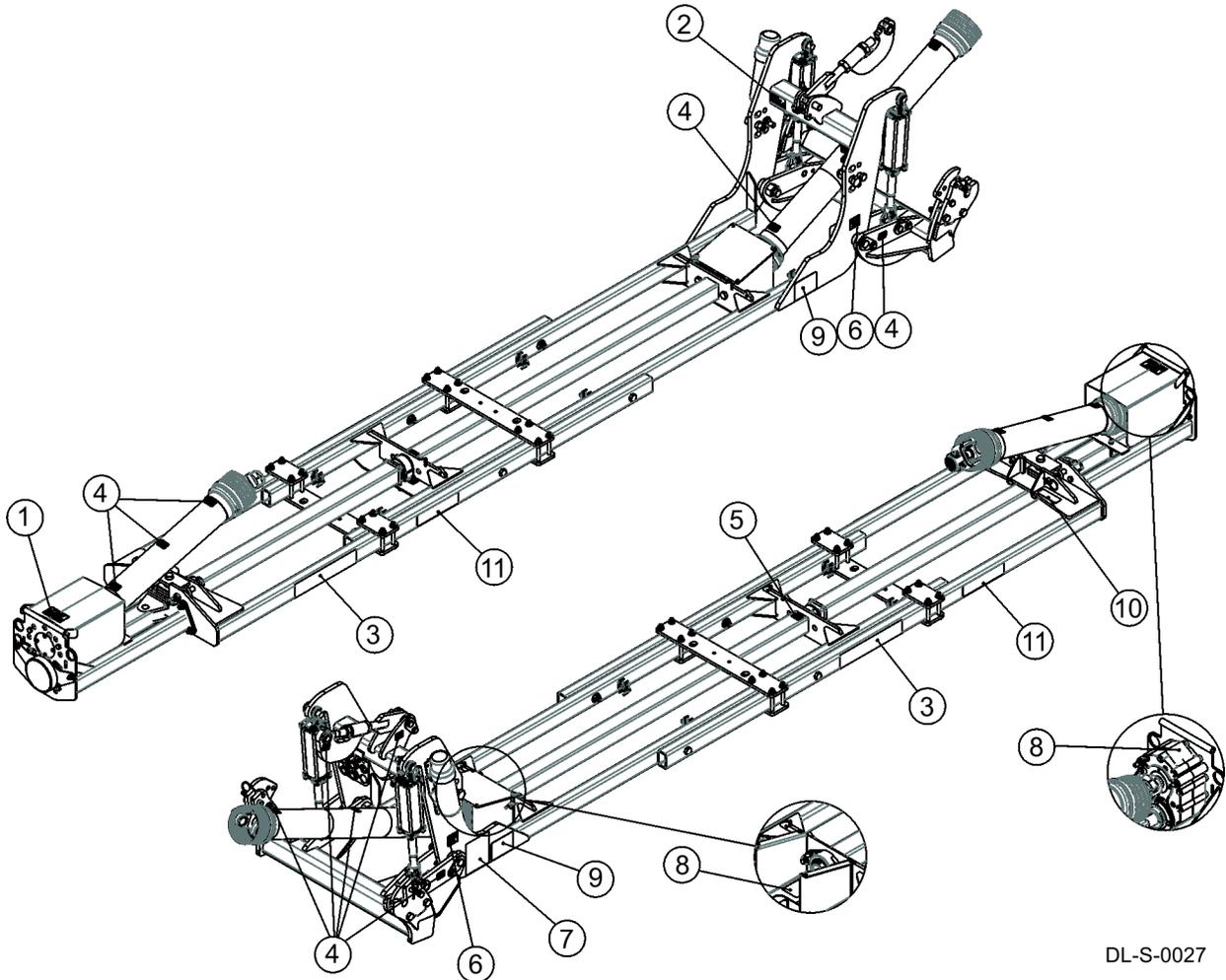


[www.algqr.com/spm](http://www.algqr.com/spm)

# SAFETY

SAFETY

## DECAL LOCATION



DL-S-0027

ITEM	PART NO.	QTY.	TYPE	DESCRIPTION
1.	226-081	1	INSTRUCT	Check Oil Level
2.	226-100	1	SERIAL PLT	Serial Number Plate
3.	226-116	2	LOGO	Schulte Logo (Small Profile)
4.	226-181	10	INSTRUCT	8 Hour Greasing
5.	226-182*	1	INSTRUCT	50 Hour Greasing
6.	226-335	2	WARNING	Pinch Points
7.	226-440*	1	DANGER	Driveline Hazard/540RPM
8.	226-442*	2	DANGER	Guard Missing
9.	226-514	2	CAUTION	Cross Bolt Installation
10.	226-515	1	CAUTION	Drawbar Pin Bushing Installation
11.	226-517	2	LOGO	FM-115 Logo

**NOTE:** \* Decals are only applicable with the Drive Package:

**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.

# SAFETY

SAFETY

## DECAL DESCRIPTION

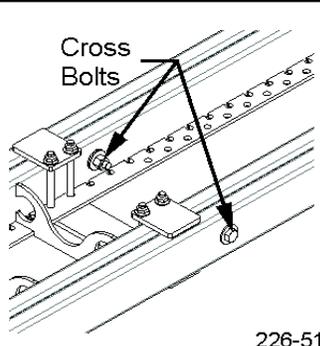
**⚠ CAUTION**

Failure to use the proper drawbar pin bushing could cause machine failure or machine damage which may result in injury.

226-515

**⚠ CAUTION**

Failure to install cross bolts could cause machine failure or damage. Which may result in injury.



Cross Bolts

226-514

**⚠ DANGER**

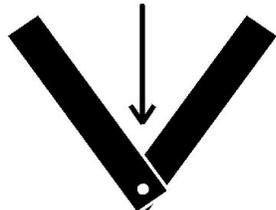
226-442



**GUARD MISSING  
DO NOT OPERATE**

**⚠ WARNING**

**PINCH POINTS**



226-335

# SAFETY

SAFETY

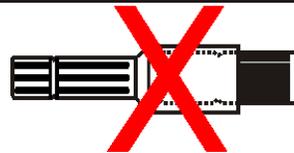
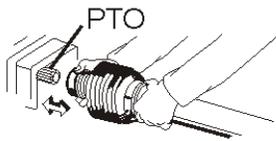
## **! DANGER**



**TO AVOID SERIOUS INJURY OR DEATH FROM DRIVELINE CONTACT, DRIVELINE SEPARATION OR PTO STUB SHAFT FAILURE:**

- STOP, LOOK and LISTEN for rotating motion before approaching implement.
- STAY AWAY and KEEP hands, feet and body AWAY from rotating parts until all moving elements have stopped.
- ALWAYS shut off PTO before dismounting.
- DO NOT operate if PTO shields are damaged or missing.
- PUSH AND PULL on yoke until collar clicks and locks yoke in place.
- CHECK driveline guards for free rotation and sufficient overlap to avoid unshielded areas.
- DO NOT USE PTO ADAPTER

226-440\_1



## **! WARNING**

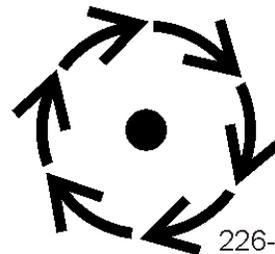
OPERATE THIS MACHINE AT

**540 RPM**

TRACTOR PTO SPEED ONLY.

Overspeeding PTO may cause component failure resulting in bodily injury.

TRACTOR PTO ROTATION: CLOCKWISE



226-440

# SAFETY

## Federal Laws and Regulations

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

### Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

#### This Act Seeks:

“...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources...”

#### DUTIES

Sec. 5 (a) Each employer-

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.
- (b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

### OSHA Training Requirements

**Title 29, Code of Federal Regulations Part 1928.57(a)(6).** [www.osha.gov](http://www.osha.gov)

Operator instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee who operates an agricultural tractor and implements in the safe operating practices and servicing of equipment with which they are or will be involved, and of any other practices dictated by the work environment.

Keep all guards in place when the machine is in operation;

Permit no riders on equipment

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain the equipment.

Make sure everyone is clear of machinery before starting the engine, engaging power, or operating the machine.

### Employer Responsibilities:

To ensure employee safety during Tractor and Implement operation, it is the employer's responsibility to:

1. Train the employee in the proper and safe operation of the Tractor and Implement.
2. Require that the employee read and fully understand the Tractor and Implement Operator's manual.
3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
8. Require that the employee operator stop operation if bystanders or passersby come within 300 feet.

### Child Labor Under 16 Years of Age

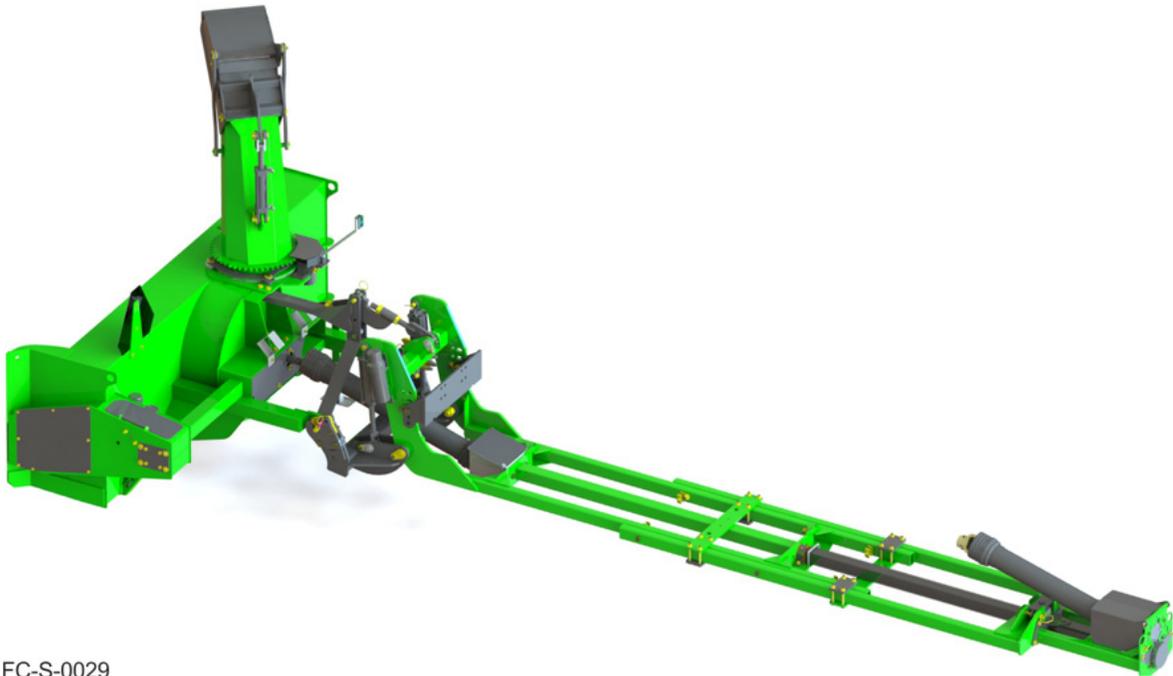
Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)



# INTRODUCTION SECTION

Introduction Section 2-1

# INTRODUCTION



FC-S-0029

The FM-115 allows you to mount your 3PT hitch snow blower to the front of your tractor resulting in improved visibility and ergonomics. The Schulte FM-115 is designed for simple and quick tractor mounting and removal. Once mounted to the tractor all pushing force is transmitted to the snow blower through the tractor drawbar. The slot and pin mounting system at the front end ensures that the tractor only sees vertical load at the frame mounting points. The FM-115 is available with or without a drive package. Ordering without drives allows an operator to utilize the Schulte SV Plow in front of the tractor while keeping the rear 3-Point open for a Schulte snow blower. The FM-115 with drives is a perfect match for Schulte model SDX or RDX snow blowers. The drive line is capable of transferring 115 HP to the snow blower. The optional drive package efficiently transfers the 540 RPM power to the front of the tractor. The drive line is fully shielded to meet the latest safety standards.

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

As used in this manual, the following definitions apply:

'LEFT' means the side that is to the left when the operator is facing in the normal forward direction of the tractor.

'RIGHT' means the side that is to the right when the operator is facing in the normal forward direction of the tractor.

# INTRODUCTION

## STANDARD EQUIPMENT & SPECIFICATIONS

### FM-115 FRONT MOUNT 3PT HITCH FRAME

Tractor Horsepower, Maximum	115 HP (86 kW)
Tractor Horsepower, Minimum	55 HP (41 kW) for SDX-840, 85 HP (63 kW) for SDX-102, RDX-102
Tractor Hydraulic Requirement	3 remote circuits with a minimum total hydraulic output of 10 GPM at 1200 PSI. An additional circuit is required if the snow blower has a rotating drum.
Tractor PTO	540 RPM
Lift Capacity, Maximum	5000 lbs (1162 KG)
Adjust-ability	Fits tractors between 111-1/2" and 164-1/2" measured the front mount plate to the drawbar pin (Dimension 'A' on Page 3-2)
Nominal Ground Clearance	10" depending on tractor installation
Normal Lift Range	18"
Approximate Weight	1400 lbs (636 KG)

Note that front end weights are not necessary with this implement since the snow blower is carried on the front end of the tractor. Rear wheel weights may be necessary to increase traction on smaller tractors.

# 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 correctly operate both the tractor and implement.
2. Fill out the Warranty Card in full. Be sure to answer all questions. Make sure to record the Serial Number of the implement. Mail within 30 days of the delivery date of this implement.

NOTE: Warranties are honored only if completed "Owner Registration and Warranty" forms are mailed to Schulte Industries Ltd. within thirty days of delivery of the implement.

3. Record the FM-115 Front Mount Frame's model number and serial number on the warranty page at the front of the this Operator's Manual. Keep this information as part of the permanent maintenance file for the implement.

The FM-115 Front Mount Frame employs shear bolt to protect the driveline (340-924)

The proper shear bolt for this 1-3/8 Z6 Driveline is **M10 x 50 Grade 8.8**

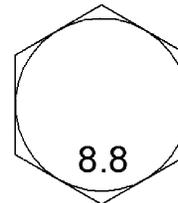
**NOTE:** Both length and grade are important in this specification. For example: M10 X 50 Grade 8.8 indicates a metric bolt 10mm in diameter, 50 mm long of grade 8.8.

**IMPORTANT:** Replacement of a shear bolt with one of a grade, length or diameter other than the specified shear bolt will be considered unauthorized modification and warranty will be void.

Refer to the "Maintenance" section of this Operator's Manual for help in properly identifying these grades of bolts.

Refer to your Snow Blower operator's manuals for shear bolts used to protect the snow blower cross auger.

GRADE 8.8  
BOLT HEAD



Mnt-SB-0025

# **ASSEMBLY SECTION**

Assembly Section 3-1

# ASSEMBLY

## Attachment to the Tractor

### Bolting the Frame Mounting Bracket to your Tractor

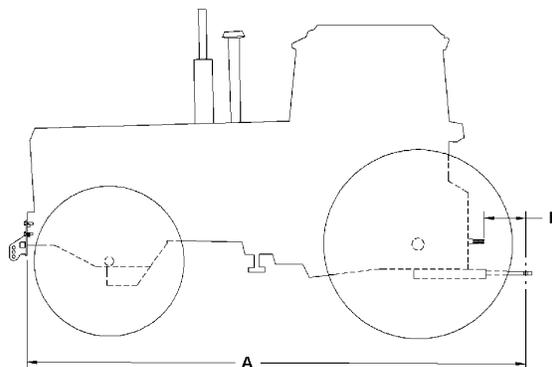
Bolt the frame mounting bracket to your tractor frame using the bolts supplied. Any special instructions will be included with your, tractor specific, mounting frame.

### Measuring your Tractor and Setting the Frame Length

Set the tractor drawbar length. Set dimension 'B' to 14".

#### Measure the length of your tractor.

Measure dimension 'A', from the frame mounting plate where it contacts the tractor to the center of the hitch pin. Record this dimension.



Asm-S-0025

Loosen bolts that clamp the inner and outer frames, but **DO NOT REMOVE THEM**, so that the frames can slide in and out.

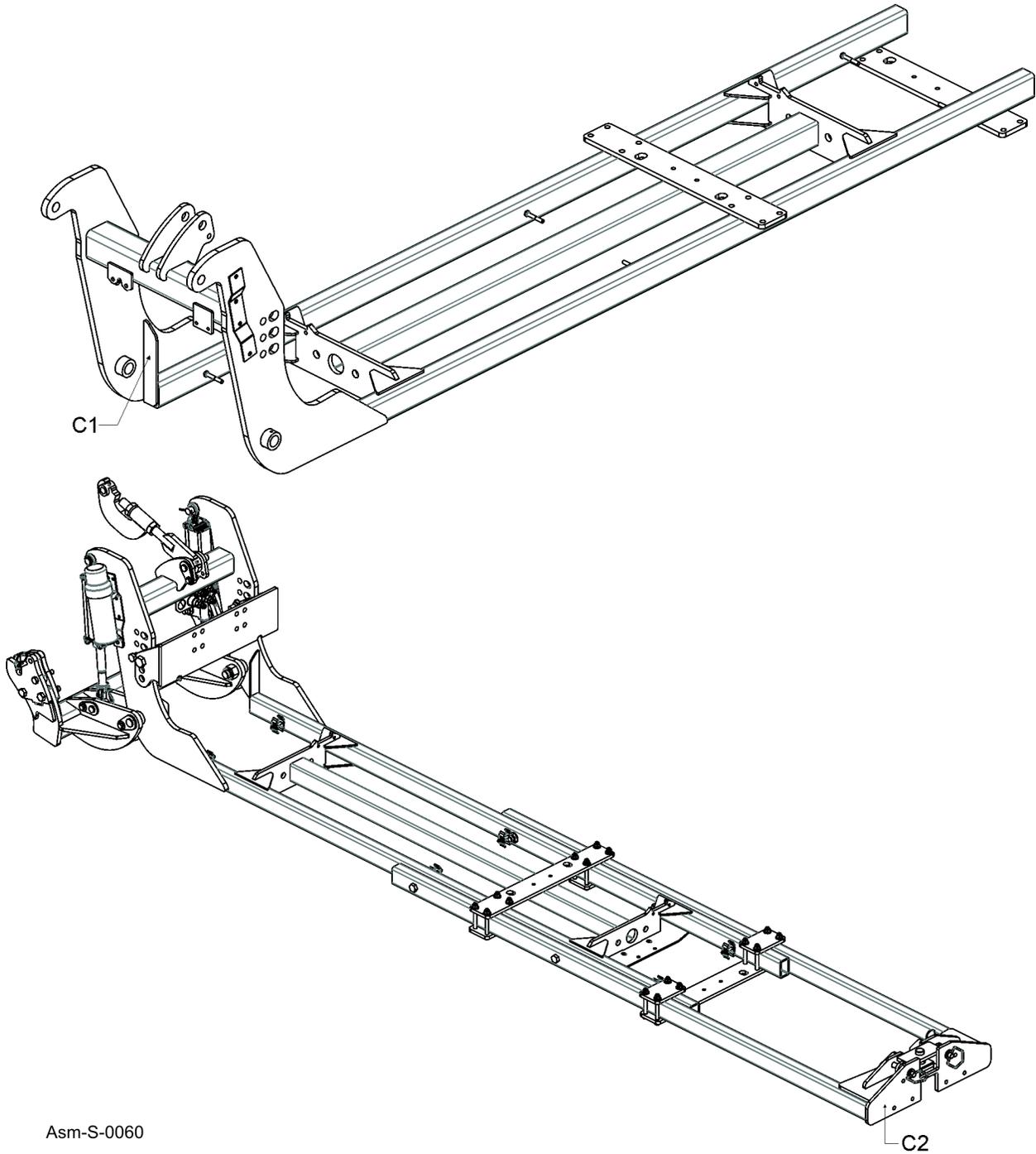
Set the frame length Dimension 'C' to the previously recorded 'A' plus 4-1/2".



AsmP-S-0015

# ASSEMBLY

Dimension 'C' is measured from the front cap on the forward frame tubes C-1, to the back of the rear frame bolt plates C-2.



Asm-S-0060

# ASSEMBLY

ASSEMBLY

**Important:** The FM-115 frame will accommodate tractors with lengths of 111-1/2" to 164-1/2" measured from the front attachment point to the hitch pin, dimension 'A'. Tractors that are shorter than this length can shorten the frame to accommodate the tractor. Consult Schulte's service department if it appears necessary to shorten this frame.

## Driving the Tractor over the Front Mount Frame

Carefully drive the tractor over the front mount frame until the frame mounting holes on the tractor mounting bracket are positioned over the mounting hole cluster (3 vertical holes) on the frame. A block may need to be positioned under one tractor wheel in order for the tractor to clear the frame.



## Bolting the Frame to the Tractor Mounting Bracket

Lift the frame until the distance between the forward lift pivot point and the ground, dimension 'E' is between 17 and 22". This height will be dependent on available clearance between the tractor and the frame. Allow room for the tractor's front axle to pivot. When the back end of the frame is raised to connect to the drawbar, clearance to tractor components may be reduced. Distances for dimension 'E' greater than 22" may exceed the range of the hydraulic cylinders to follow uneven terrain.

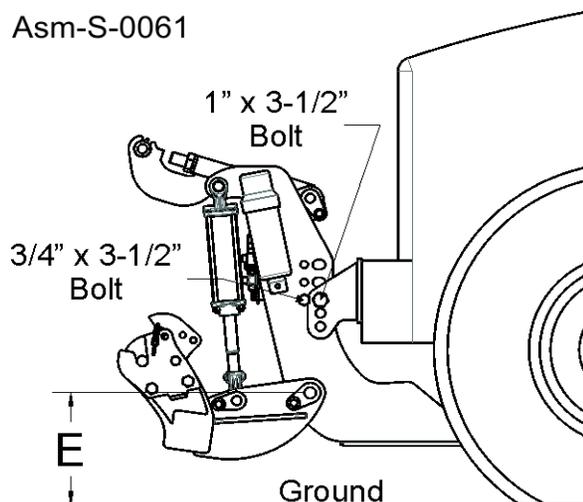
Insert the two 3/4" x 3-1/2" bolts into the holes that line up with the correct mounting slots. These bolts ensure that the frame is mounted in the proper position to transfer the pushing forces back to the drawbar.



**WARNING** FAILURE TO USE THESE SPACER BOLTS IN INSTALLATION WILL RESULT IN THE FRONT OF THE TRACTOR TAKING ALL THE PUSHING FORCE. THIS MAY CAUSE CATASTROPHIC FAILURE, INJURY, OR EVEN DEATH.

With the 3/4" spacer bolts in place, bolt the frame to the Tractor Mounting Bracket using the two 1" x 3-1/2" bolts and locknuts. DO NOT TIGHTEN AT THIS TIME.

Asm-S-0061



# ASSEMBLY

## Installing the Hitch Plate

With the front of the frame secured to the mounting bracket, lift the center of the frame under the steady bearing using a floor jack



Slide the rear frame in or out until the drawbar hole lines up with the hole in the rear plate.



Insert the correct bushing into the drawbar hole to match the category of drawbar and install the Hitch Plate.



## ASSEMBLY

Secure the Hitch Plate using the two 3/4" x 4-1/4" UL pins provided.

Ensure the slot spacer bolts are in place at the front of the machine.



Tighten the 16 pieces of 1/2" x 4-3/4" bolts to clamp the front and rear frames together

Remove the frame from the machine and back the tractor off.



# ASSEMBLY

## Installing the Cross Bolts

The FM-350 is equipped with two 3/4 x 5" cross bolts to add additional support through the frame. When the frame is set in it's final length, use the holes from the rear frame to locate and drill holes through the front frame. Drill these holes with a 25/32" drill bit. Install the 3/4" x 5" cross bolts as shown using a 3/4" locking flange nut.

**NOTE:** If the pilot holes are obstructed or the through hole interferes with a support or hydraulic hose clamp, drill a new hole through both tubes as close as will not interfere.



When drilling near hydraulic hoses, be sure to protect the hose by sliding a piece of metal between the hose and tube. If a hose is damaged in this process, contact Schulte Service Department for assistance and replacement parts.

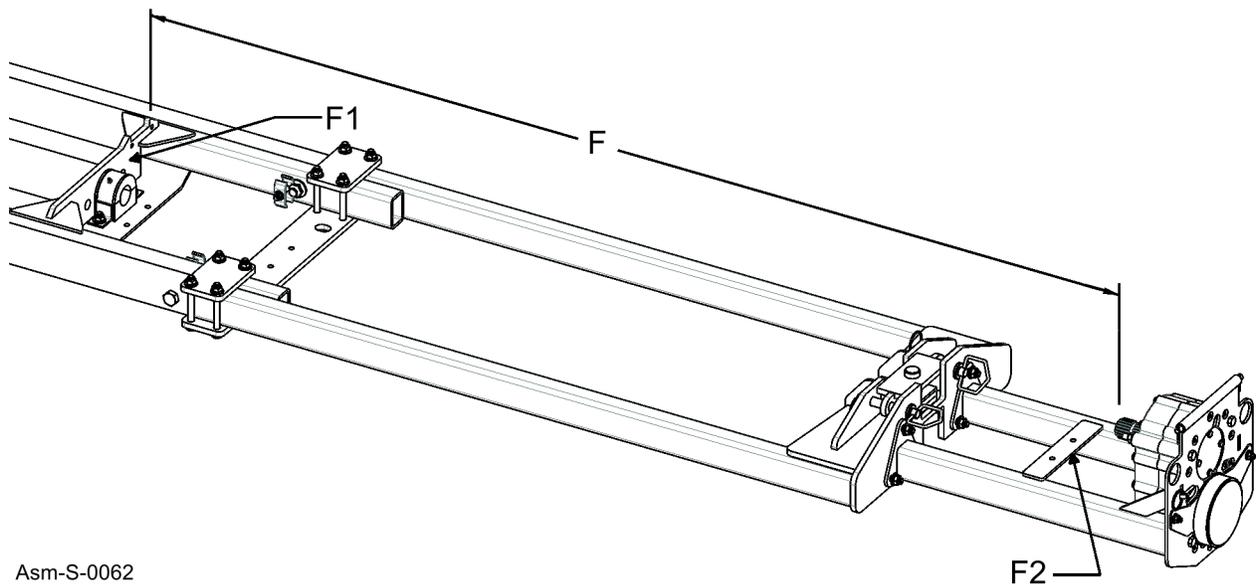
## Drive Package Installation

### Guard Tube Installation

With the frame length set, measure the distance from the back of the cross plate (next to the steady block) - F1 - to the rear edge of the Tube Mount Strap - F2.

Cut the supplied 3" x 3" tube (Part F115-122) to length 'F'.

Install the cut tube using the two 3/8" x 3" x 4" U-bolts and locknuts. BE SURE TO INSTALL WITH THE INSIDE WELD SEAM ON THE BOTTOM.



Asm-S-0062

FM-115 07/15

Assembly Section 3-7

# ASSEMBLY

Position the tube 1/4" away from the steady block and tighten the U-Bolts.



## Drive Shaft Installation

1. Remove the retaining bracket and the top half of the steady block. Leave the bottom half in place.
2. From the front of the machine, insert the keyed end of the long shaft through the front bearing, (ensure the set screw in the bearing collar has been loosened so it doesn't interfere with the shaft.)
3. Slide the shaft through the machine and into the gearbox, ensuring that it rests on the bottom half of the steady block. (Make sure the key slots line up in the gearbox for easier key installation.)
4. Ensure the shaft protrudes at least 3/4" from the back of the gearbox, and 4" of the spine end of the shaft is left protruding from the bearing.
5. Mark the shaft one inch from the back of the gearbox, and cut off the excess shaft.
6. Install the key into the shaft and gearbox.
7. Install the split retaining rings on both sides of the gearbox and shaft to keep the key inside the gearbox.
8. At the front of the machine use Loctite 242® and tighten the bearing set screw to the shaft.
9. Reinstall the top of the steady block and grease the joint.
10. Replace and secure all shields.

## Front Drive Shaft Installation

Separate the two drive shaft halves and apply multipurpose grease to all sides of the sliding members. Ensure that the drive shaft yokes and the front shaft spline are free of dirt. Apply grease to the spline shaft. The implement yoke on this drive shaft uses a tapered lock pin to lock the yoke to the spline shaft. Slide the yoke onto the shaft, align the tapered pin to the groove on the spline shaft and tighten the nut on the tapered pin.

**Important**

The tapered pin must align with the groove in the spline shaft in order to get a secure connection.

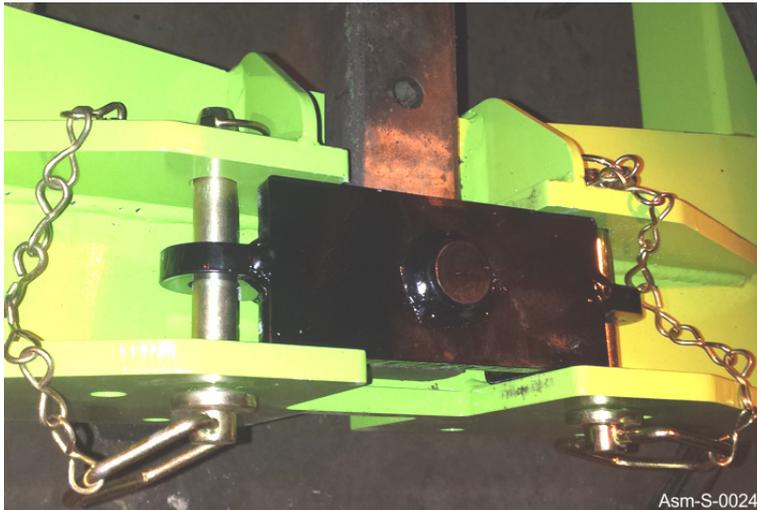
Replace and secure all shields.

## Assembling Completed Frame to Tractor

1. Drive the tractor back over the frame and reattach the front end to the tractor mount. USE THE 3/4" SPACER BOLTS TO ENSURE PROPER PLACEMENT
2. Install the 1" x 3-1/2" bolts and locknuts to secure the frame to the tractor mount.
3. Raise the back end of the frame and install the Hitch Plate. BE SURE TO USE THE PROPER BUSHING FOR THE TYPE OF DRAWBAR ON YOUR TRACTOR. Use the provided spacer plates to take up any extra space above or below the drawbar.

# ASSEMBLY

- Secure the Hitch Plate using the two 3/4" x 4-1/4" pins with lynch pins.



- Tighten the front bolts and remove the 3/4" spacer bolts.



The 3/4" Spacer Bolts must be removed before use. Failing to do so will transfer force into the front of the tractor and could cause catastrophic failure, injury or death.

## Installing the Rear Tractor Drive Shaft

Separate the two drive shaft halves and apply multipurpose grease to all sides of the sliding members. Ensure that drive shaft yokes, and rear gearbox input shafts are dirt free. Apply grease to the rear gearbox input shaft. The implement yoke on this drive shaft uses a tapered pin to lock the yoke to the gearbox input shaft. Slide the yoke onto rear gearbox input shaft, align the tapered pin to the groove on the gearbox shaft and tighten the nut on the tapered pin.

**IMPORTANT:** The tapered pin must align with the groove in the gearbox shaft in order to get a secure connection.

Connect the quick disconnect yoke to the tractor PTO shaft. The driveline yoke and tractor PTO shaft must be dirt free and greased for attachment. The quick disconnect yoke will either use a collar or push pin to release the yoke detents. To connect the quick disconnect yoke to the tractor PTO shaft, pull back on the collar or depress the push pin and align the grooves and splines of the yoke with those of the PTO shaft. Push the drive shaft yoke onto the PTO shaft, release the locking collar or push pin, and position the yoke so that the locking balls are seated in the PTO shaft's locking groove. Push and pull the drive shaft several times to check that the yoke is securely locked onto the PTO shaft.

The rear tractor drive shaft remains at a fixed length during operation. The installed length of the tractor drive shaft should be between 29" and 33" as measured between the cross and bearing kits. Measurements outside of these ranges may result in damage to the implement or tractor.



When attaching the quick disconnect yoke to the tractor PTO shaft, it is important that the spring activated locking collar slides freely and the locking balls are seated securely in the groove of the PTO shaft. A drive shaft not attached correctly to the tractor PTO shaft could slip off and result in personal injury and damage to the implement.

# ASSEMBLY

ASSEMBLY

## Connecting the Hydraulics and Checking Clearances

Organize any extra length of hydraulic lines so that they do not contact the rear power shaft. Connect the hydraulic lines to the tractor breakaways. The FM-115 includes one hydraulic circuit for raising and lowering the snow blower and two circuits for operation of the snow blower or plow. One of the snow blower circuits operates the chute rotator and one operates the chute deflector. For operating a V-Plow, there is one circuit for each side. An optional 4th circuit is available for operation of snow blower with rotating drum such as the Schulte RDX series.

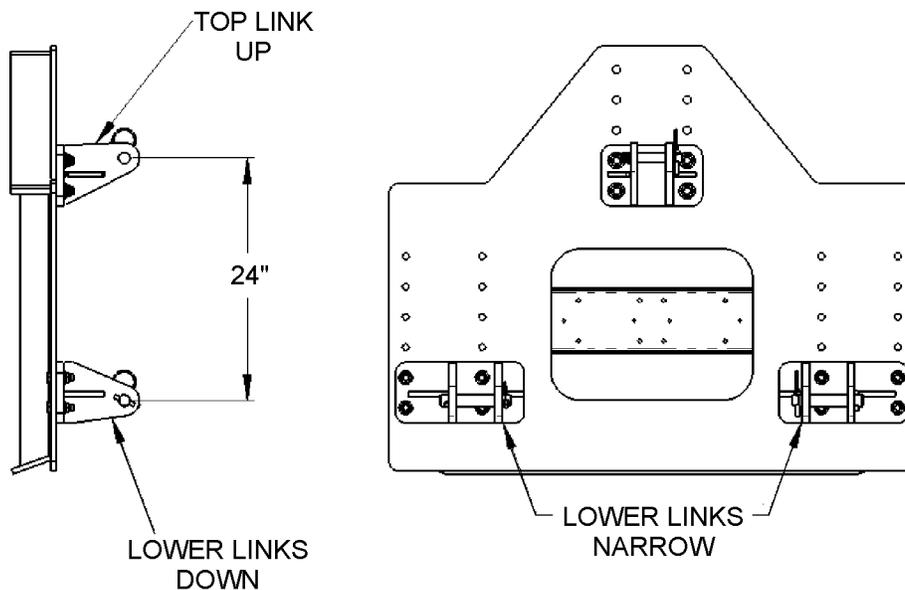
## Initial Set-up for Schulte SDX-102 and RDX-102 Snow Blowers

On the SDX-102 and RDX-102 snow blowers, position the lower 3PT hitch arms so that the lower pins are as close as possible to the snow blower housing. When attaching the front mount frame's top link use 24" upper hole position.

## Initial Set-up for Schulte SV Plows

For the highest lift possible, install the three hitch ears in the lowest set of holes on the V-Plow as shown. Be aware of dimension 'E' from page 3-4 that the cylinders are not extended so far to limit downward travel in uneven terrain. If needed, move all three hitch ears up to gain range of motion - always maintain the 24" spacing to the top link.

With the machine parked on level ground, adjust the top link of the FM-115 to level the blades to the ground (on level ground, this should make the main pin on the V-Plow vertical).



Asm-S-0042

# ASSEMBLY

## Attaching the Snow Blower or Plow and Check Clearances

Remove the front drive shaft if it is connected to the frame's drive line. Before attaching the snow blower, check for any interference between the tractor tires or frame and the front mount frame and its forward lifting frame. Drive one of the tractor front wheels over a raised mound or blocking so that the front tractor angle is at the limits of its angular motion. Slowly and carefully lift and lower the forward lifting frame and check for interference between the tractor or tractor tires and the front mount frame. If there is interference the front mount frame can be lowered one set of holes, on the tractor mount. If this does still does not eliminate the interference, consult Schulte's service department. If there is no interference, attach the snow blower.

Lower and pin the snow blower's drop leg so that the snow blower is level. Remove the 'pin lock' pins and rotate the 'pin lock' plates out of the way. Lower the lifting frame and bring it up and under the snow blower's lower 3PT hitch pins. Rotate the 'pin lock' plates forward in and insert the 'pin lock' pins in order to secure the lower 3PT hitch pins. Initially check that the top link has been set to 19-1/4". Pin the top link to the snow blower's 3PT mast. Make sure that the distance between the 3PT lower pins and the upper pin point is 24".

If using a snowblower, adjust the top link so that the snow blower is leaning slightly forward. This provides the best cutting angle for the blade and reduces wear on the blade mounting bolts.

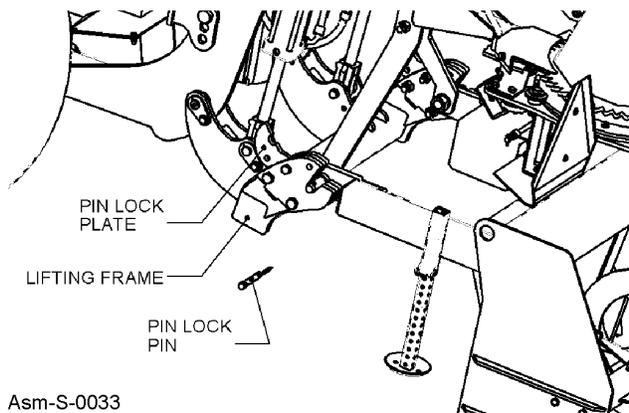
If using a V-Plow, adjust the top link to level the blades to the ground. This should be done on level ground and should be checked frequently to ensure even wear on the blades.

### Important

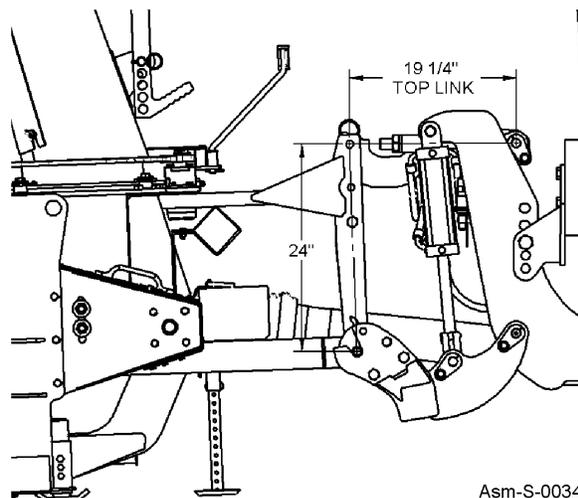
The plow **MUST** be level during normal use to avoid uneven blade wear. Uneven wear will reduce blade life and potentially damage the machine.

Connect the front mount frames hydraulic lines to the snow blower or plow. A panel with two hydraulic banks is located at the front of the frame. Connect the snow blower's chute rotation circuit to one of the banks and the chute deflector to the other. If the snow blower has a rotating drum an optional 4th hydraulic bank can be installed.

Raise the drop leg. Slowly raise and lower the snow blower or plow to check clearances between the top link and the tractor. Check that hydraulic lines and fittings are not pinched when the machine is raised and lowered. If using a V-Plow, clearances should be checked in 'V' Mode with the blades fully back.



Asm-S-0033



Asm-S-0034

ASSEMBLY

# ASSEMBLY

## Installing the Front Drive Shaft

Separate the two drive shaft halves and apply multipurpose grease to all sides of the sliding members. Ensure that drive shaft yokes, and splined shafts are dirt free. Apply grease to the snow blower and frame's splined shafts. The drive shaft yokes use tapered pins to lock the yoke to the splined shafts. Slide the yoke onto frame's forward splined shaft, align the tapered pin to the groove on the shaft and tighten the nut on the tapered pin. Repeat for the snow blower gearbox's input shaft.

**IMPORTANT:** The tapered pin must align with the groove in the gearbox shaft in order to get a secure connection.

The front drive shaft has a working range of 36" to 48" measured between the center of the cross and bearing kits. The drive shaft is made to work properly with Schulte snow blowers if they are properly set-up. As a precaution, carefully raise and lower the snow blower and take measurements in the raised and lowered positions to ensure that the drive shaft remains within its working range.

Raise and lower the snow blower and check that hydraulic lines do not contact the drive shaft.

## Pre-operation Check List

- Check that all safety decals are in good condition
- **IMPORTANT:** Check oil level in all snow blower and front mount frame gearboxes. Refer to the maintenance section of your snow blower manual for instructions. Refer to the maintenance section of this manual for instructions regarding the front mount frame's rear gearbox.
- Lubricate the telescoping section of any drive shafts
- Lubricate all grease fittings
- Install tractor wheel weights if necessary
- **IMPORTANT:** Before operation of the snow blower or plow, carefully read the 'Safety' and 'Operation' sections of that machine's Operator's Manual and the 'Safety' and 'Operation' sections of this manual.

# OPERATION SECTION

Operation Section 4-1

# OPERATION

## SCHULTE FM-115 FRONT MOUNT 3-POINT HITCH OPERATION INSTRUCTIONS

The Schulte FM-115 FRONT MOUNT 3PT HITCH FRAME is manufactured with quality material by skilled workers. When combined with a Schulte snow blower or plow, this implement is designed to efficiently remove accumulations of snow from driveways, barnyards, roadways, and parking lots.

It is the operator's responsibility to be familiarize himself with all potential operating hazards for example the possibility of thrown objects and to take every reasonable precaution to ensure that the operator, bystanders, animals are not injured and property is not damaged.



Snow Blowers are capable in some conditions of throwing objects for great distances, 200 feet or more. Do not allow the snow stream to fall on passersby, animals or damageable property. Ice, debris and heavy snow thrown from the snow blower can cause serious injury or death.

**STOP SNOW BLOWING IF PASSERSBY ARE WITHIN 200 FEET**

This section of the Operator's Manual is designed to familiarize, instruct, and educate the operator on safe implement use. Pictures contained in this section are intended to be used as a visual aid to assist in explaining the operation of the FM-115 and do not necessarily illustrate the FM-115. Some pictures may show shields removed for clarity.

**NEVER OPERATE** the implement without all shields and guards in place and in good operational condition. The operator must be familiar with FM-115 and tractor operation and all associated safety practices beginning operation. Operation of the FM-115, 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- 0001*

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death 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)



# OPERATION

## 1. OPERATOR REQUIREMENTS

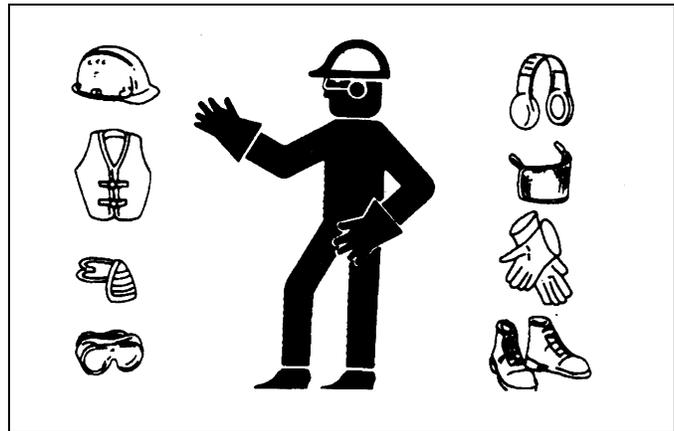
Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and tractor Operator's Manuals and is experienced in implement and tractor operation and all associated safety practices. In addition to the safety messages contained in this manual, safety signs are affixed to the implement and tractor. 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:

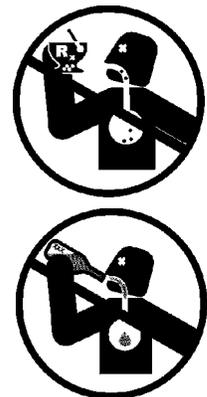
### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

- 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*



### **⚠ DANGER**

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)



# OPERATION

## **2. TRACTOR REQUIREMENTS**

Operating the implement with a tractor that does not meet the following requirements may cause tractor or implement damage and potentially be a danger to the operator and passersby.

### **Tractor Requirements and Capabilities**

- Certified approved Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt.
- Tractor Safety Devices ..... Slow Moving Vehicle (SMV) emblem, lighting, PTO master shield
- Tire Spacing ..... Set tires minimum width of 60" inside to inside of tires
- Tractor Horsepower, Maximum ..... 115 HP (86 kW)
- Tractor Horsepower, Minimum ..... 55 HP (41 kW) for SDX-840, 85 HP (63 kW) for SDX-102 & RDX-102
- Tractor Hydraulic Requirement ..... 3 remote circuits with a minimum total hydraulic output of 10 GPM at 1200 PSI. An additional circuit is required if the snow blower has a rotating drum.
- Tractor PTO..... 540 RPM

### **2.1 ROPS and Seat Belt**

The tractor must be equipped with a Roll-Over-Protective-Structure (ROPS) (tractor cab or roll-bar) and seat belt to protect the operator from falling off the tractor, especially during a roll over where the driver could be crushed and killed. Only operate the tractor with the ROPS in the raised position and seat belt fastened. Tractor models not equipped with a ROPS and seat belt should have these life saving features installed by an authorized dealer. *OPS-U- 0003*



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



### **2.2 Tractor Safety Devices**

If transporting or operating the tractor and implement near a public roadway, the tractor must be equipped with proper warning lighting and a Slow Moving Vehicle (SMV) emblem which are clearly visible from the rear of the unit. Lights and a SMV emblem must be equipped directly on implements if the visibility of the tractor warning signals are obscured.

Maintain all manufacturer equipped safety shields and guards. Always replace shields and guards that were removed for access to connect, service, or repair the tractor or implement. Never operate the tractor PTO with the PTO master shield missing or in the raised position. *OPS-U- 0004*

# OPERATION

## 2.3 Wheel Weights

On smaller tractors it may be necessary to add wheel weights in order to improve traction.

## 2.4 Tire Spacing

Tractor tires should be set a minimum of 60" (1.5 m) apart measured from inside of tire to inside of tire. Refer to the tractor Operator's Manual or consult an authorized dealer for instructions to change tractor tire spacing. *OPS-R- 0062*



## 3. GETTING ON AND OFF THE TRACTOR

Before getting onto the tractor, the operator must read and completely understand the implement and tractor operator manuals. If any part of either manual is not completely understood, consult an authorized dealer for a complete explanation. *OPS-U- 0007*



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. (SG-12)



### 3.1 Boarding the Tractor

Use both hands and equipped handrails and steps for support when boarding the tractor. Never use control levers for support when mounting the tractor. Seat yourself in the operator's seat and secure the seat belt around you.

Never allow passengers to ride on the tractor or attached equipment. Riders can easily fall off and be seriously injured or killed from falling off and being ran over. It is the operator's responsibility to forbid all extra riders at all times. *OPS-U- 0008*



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)



# OPERATION



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



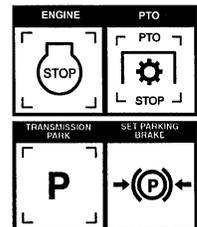
## 3.2 Dismounting the Tractor

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

Use hand rails and steps when exiting the tractor. 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 tractor. OPS-U- 0009



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)



# OPERATION

## 4. STARTING THE TRACTOR

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

### **Essential Tractor Controls:**

- Locate the light control switch.
- Locate the engine shut off control.
- Locate the brake pedals and the clutch.
- Locate the PTO control.
- Locate the 3-point hitch control lever.
- Locate the hydraulic remote control levers.

### **Before starting the tractor ensure the following:**

- Conduct all pre-start operation inspection and service according to the tractor operator's manual.
- Make sure all guards, shields, and other safety devices are securely in place.
- The parking brake is on.
- The PTO control lever is disengaged.
- The 3-point hitch control lever is in the lowered position.
- The hydraulic remote control levers are in the neutral position.
- The tractor transmission levers are in park or neutral.

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

After the tractor engine is running, avoid accidental contact with the tractor transmission to prevent sudden and unexpected tractor movement. *OPS-U-0028*



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



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



# OPERATION

## **5. DRIVELINE ATTACHMENT**

### **5.1 Attaching the Rear Tractor Drive Shaft**

Separate the two drive shaft halves and apply multipurpose grease to all sides of the sliding members. Ensure that drive shaft yokes, and rear gearbox input shafts are dirt free. Apply grease to the rear gearbox input shaft. The implement yoke on this drive shaft uses a tapered pin to lock the yoke to the gearbox input shaft. Slide the yoke onto rear gearbox input shaft, align the tapered pin to the groove on the gearbox shaft and tighten the nut on the tapered pin.

**IMPORTANT:** The tapered pin must align with the groove in the gearbox shaft in order to get a secure connection.

Connect the quick disconnect yoke to the tractor PTO shaft. The driveline yoke and tractor PTO shaft must be dirt free and greased for attachment. The quick disconnect yoke will either use a collar or push pin to release the yoke detents. To connect the quick disconnect yoke to the tractor PTO shaft, pull back on the collar or depress the push pin and align the grooves and splines of the yoke with those of the PTO shaft. Push the drive shaft yoke onto the PTO shaft, release the locking collar or push pin, and position the yoke so that the locking balls are seated in the PTO shaft's locking groove. Push and pull the drive shaft several times to check that the yoke is securely locked onto the PTO shaft.



When attaching the quick disconnect yoke to the tractor PTO shaft, it is important that the spring activated locking collar slides freely and the locking balls are seated securely in the groove of the PTO shaft. A drive shaft not attached correctly to the tractor PTO shaft could slip off and result in personal injury and damage to the implement.

### **5.2 Attaching the Front Drive Shaft**

Separate the two drive shaft halves and apply multipurpose grease to all sides of the sliding members. Ensure that drive shaft yokes, and splined shafts are dirt free. Apply grease to the snow blower and frame's splined shafts. The drive shaft yokes use tapered pins to lock the yoke to the splined shafts. Slide the yoke onto frame's forward splined shaft, align the tapered pin to the groove on the shaft and tighten the nut on the tapered pin. Repeat for the snow blower gearbox's input shaft.

**IMPORTANT:** The tapered pin must align with the groove in the gearbox shaft in order to get a secure connection.



When attaching the Implement input driveline to the Tractor PTO, it is important that the connecting yoke spring activated locking collar slides freely and the locking balls are seated securely in the groove on the Tractor PTO shaft. Push and pull the driveline back and forth several times to ensure it is securely attached. A driveline not attached correctly to the Tractor PTO shaft could come loose and result in personal injury and damage to the Implement. (S3PT-17)



Before operating the Implement, check to make sure the Implement input driveline will not bottom out or become disengaged. Bottoming out occurs when the inner shaft penetrates the outer housing until the assembly becomes solid-it can shorten no more. Bottoming out can cause serious damage to the Tractor PTO by pushing the PTO into the Tractor and through the support bearings or downward onto the PTO shaft, breaking it off. A broken driveline can cause personal injury. (S3PT-18)

# OPERATION

## **6. CONNECTING HYDRAULIC LINES TO THE TRACTOR**

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



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)



### **6.1 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.

## **7. PRE-OPERATION INSPECTION AND SERVICE**

Before each use, a pre-operation inspection and service of the snow blower and tractor 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 snow blower and tractor 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 serious injury or even death. (SG-14)



Always disconnect the main PTO Driveline from the Tractor before performing service on the Implement. Never work on the Implement with the tractor PTO driveline connected and running. Rotating Parts, Blades or Drivelines could turn without warning and cause immediate entanglement, injury or death. (S3PT-11)

# OPERATION

## 7.1 Tractor Pre-Operation Inspection/Service

Refer to the tractor operator's manual to ensure a complete pre-operation inspection and scheduled service is performed according to the manufacturers recommendations. The following are some of the items that require daily service and inspection:

- Tire condition/air pressure
- Wheel lug bolts
- Steering linkage
- PTO shield
- SMV sign is clean and visible
- Tractor's lights are clean and functional
- Tractor Seat belt is in good condition
- Tractor ROPS is in good condition
- ROPS is in the raised position
- No tractor 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 *OPS-U-0030*



# OPERATION

## Front Mount 3-Point Hitch PRE-OPERATION Inspection



Snow Blower ID# \_\_\_\_\_ Front Mount Frame ID# \_\_\_\_\_

Date: \_\_\_\_\_ Shift \_\_\_\_\_



**Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor 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.**

Item	Condition at Start of Shift	Specific Comments if
Operator's manual for the Implement and the front mount frame are in the Implement's manual canister		
All safety decals are in place and legible		
The SMV sign is in place and is clean and visible		
There are no cracks or damage to the tractor mounting frame or to hitch components		
The hydraulic quick disconnects are securely attached		
There are no leaking or damaged hoses		
The snow blower discharge shoot is clear of ice/debris		
Driveline shields are in place and in good condition		
Driveline telescoping members & universal-joints are lubricated		
Driveline yokes are securely attached to the tractor PTO shaft and to the snow blower		
Driveline clutches are in good condition, not frozen.		
Implement and front mount frame, gearbox mounting bolts are tight		
Oil in all snow blower and front mount frame gearboxes are at the proper level.		

Operator's Signature: \_\_\_\_\_

**DO NOT OPERATE an UNSAFE TRACTOR or IMPLEMENT**

**OPERATION**

# OPERATION

## Tractor PRE-OPERATION Inspection



Tractor ID# \_\_\_\_\_ Make \_\_\_\_\_

Date: \_\_\_\_\_ Shift \_\_\_\_\_



**Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor 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 O.K.
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 tractor 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 3-point hitch is in good condition		
The drawbar pins are securely in place		
The PTO master shield is in place		
The engine oil level is full		
The brake fluid level is full		
The power steering fluid level is full		
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		

Operator's Signature: \_\_\_\_\_

**DO NOT OPERATE an UNSAFE TRACTOR or IMPLEMENT**

# OPERATION

## 8. DRIVING THE TRACTOR AND SNOW BLOWER OR PLOW

Safe tractor transport requires the operator possess a thorough knowledge of the model being operated and precautions to take while driving with an attached implement. Ensure the tractor has the capacity to handle the weight of the implement and the tractor operating controls are set for safe transport. To ensure safety while driving the tractor with an attached implement, review the following.



**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)



**DANGER** This Implement may be wider than the Tractor. 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 Tractor to pivot violently resulting in loss of steering control, serious injury, or even death. Never allow the Implement to contact obstacles. (S3PT-12)



**Important** When operating a Schulte SV-Plow that is attached to a Schulte FM-115, keep the lift cylinder hydraulic in 'FLOAT' mode. This will prevent excessive down-pressure which could cause machine failure, machinery and tractor damage, injury or even death.

# OPERATION

## 8.1 Starting the Tractor

The procedure to start the tractor is model specific. Refer to the tractor operator's manual for starting procedures for your particular tractor. Consult an authorized dealer if the starting procedure is unclear. Ensure the 3-point control lever is in the lowered position and the PTO is disengaged before starting the tractor.



## 8.2 Engaging the Power Take Off (PTO)

Before engaging the PTO, make certain that the area is clear of bystanders and passersby. Set the tractor engine speed at approximately 1,000 RPM before engaging the PTO. Shift the PTO control to the ON position, and slowly increase the engine speed until the PTO is operating at the rated speed. If you here unusual noises or feel abnormal vibrations, disengage the PTO immediately. Inspect the snow blower to determine the cause of the noise or vibration and repair the abnormality. OPS-SB-0017



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)



## 9. OPERATING THE TRACTOR AND SNOW BLOWER OR PLOW

THE OPERATOR MUST COMPLETELY UNDERSTAND HOW TO OPERATE THE TRACTOR AND FRONT MOUNT SNOW BLOWER OR PLOW AND ALL CONTROLS BEFORE ATTEMPTING TO OPERATE. The operator must read and understand the Safety and Operation Sections of the snow blower, plow, front mount frame and tractor operator's manuals. These manuals must be read and explained to any operator who cannot read. Never allow anyone to operate the front mount snow blower, plow and tractor without complete operating instructions.

To ensure the safety of the operator, bystanders and equipment, the operator must become familiar with any obstacles or hazards that are in the work area. Special attention should be paid to foreign debris, rough terrain, steep slopes, passersby and animals in the area.



Only operate the snow blower or plow in conditions where you have clear visibility in daylight or with adequate artificial lighting. Never snow blow in darkness or in 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 snow removal.

# OPERATION

## Important

When operating a Schulte SV-Plow that is attached to a Schulte FM-115, keep the lift cylinder hydraulic in 'FLOAT' mode. This will prevent excessive down-pressure which could cause machine failure, machinery and tractor damage, injury or even death.

## WARNING

Extreme care should be taken when operating near loose objects such as gravel, rocks, wire and other debris. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any object that cannot be removed must be clearly marked and carefully avoided by the operator. Stop snow blowing immediately if the auger or fan strikes a foreign object. Repair all damage before resuming snow blowing. (SSB-2)



## WARNING

Many varied objects, such as wire, cable, rope, or chains can become entangled in the operating parts of the Snow Blower. These items could then swing outside the housing at high speeds. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the work area for such objects before snow blowing. Remove any like object from the site. Never allow the auger to contact such items. (SSB-3)

## WARNING

Move snow at the speed that you can safely operate and control the Tractor and Implement. Safe speed depends on terrain and snow conditions. **Normal ground speed range is from 0.5 to 1.5 mph. When plowing snow, do not exceed 15 mph.** Equipment damage, loss of control, injury or even death may occur. Use slow speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided.

## DANGER

Snow Blowers are capable under adverse conditions of throwing objects for great distances (200 feet or more). Do not allow the snow stream to fall on passersby. Ice, debris and heavy snow thrown from the snow blower can cause serious injury or death. (SSB-7)



**STOP SNOW BLOWING IF PASSERSBY ARE WITHIN 200 FEET.**

## 9.1 PTO RPM Ground Speed

Recommended ground speed for efficient snow blower performance is 1.5 mph. However, the optimum ground speed will be dependent on terrain and snow conditions. Reduce ground speed when operating in heavy or wet snow conditions. Operate the implement at full rated PTO speed for best performance. Refer to the tractor operator's manual or the tractor instrument panel for the engine speed and gear to provide the required PTO and desired ground speed. The operator may need to experiment to determine the best ground speed for efficient performance.

## WARNING

Move snow at the speed that you can safely operate and control the Tractor and Implement. Safe speed depends on terrain and snow conditions. **Normal ground speed range is from 0.5 to 1.5 mph. When plowing snow, do not exceed 15 mph.** Equipment damage, loss of control, injury or even death may occur. Use slow speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided.

# OPERATION

## 9.2 Transporting the Tractor and Front Mounted Snow Blower

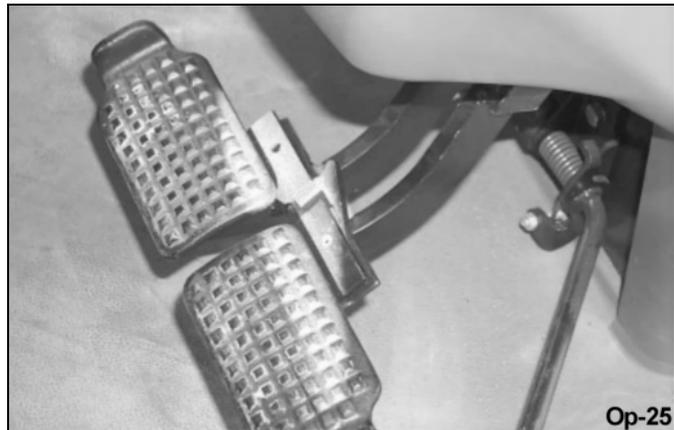
Danger and the possibility of accidents are not left behind when you finish blowing snow. The operator must use good judgment and safe operating practices when transporting the tractor and implement between locations, in order to minimize the possibility of accidents.



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



Before transporting the tractor on a public roadway or boarding a trailer for transport, the tractor brake pedals should be locked together. Locking the pedals ensures that both wheels brake simultaneously while stopping, especially when making an emergency stop.



Use extreme caution and avoid hard applications of the tractor brakes when towing heavy loads at road speeds. Never tow the implement at speeds greater than 20 MPH (32 kph). OPS-U- 0018



In conditions where snow has accumulated on the implement, remove it before traveling on public roads.



Take care when backing up the front mount snow blower and tractor. Pay special attention to the part of the frame that extends rearward of the tractor tires. Make sure no one is behind you when backing up.

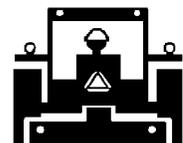
## 9.3 Transporting on Public Roadways



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



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)



# OPERATION

Extreme caution should be used when transporting the tractor and implement on public roadways. The tractor must be equipped with all required safety warning features including a SMV emblem and flashing warning lights to alert drivers of the tractor'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 tractor's slower speed. Be extremely cautious when the piece of equipment that you are towing is wider than the tractor tire width and/or extends beyond your lane of the road.



The SMV (Slow-Moving Vehicle) emblem is universal symbol used to alert drivers of the presence of equipment traveling on roadways at a slow speed. SMV signs are a triangular bright orange with reflective red trim for both easy day and night visibility. Make sure the SMV sign is clean and visible from the rear of the unit before transporting the tractor and implement on a public roadway. Replace the SMV emblem if faded, damaged, or no longer reflective.

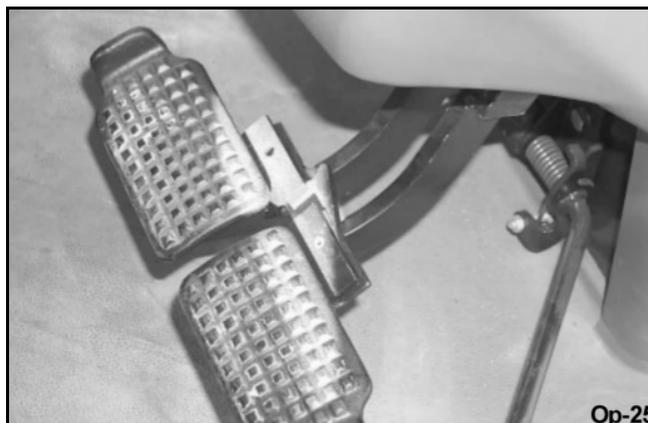


Make sure that all tractor flashing warning lights, headlights, and brake/taillights are functioning properly before proceeding onto public roads. While newer model tractors have plenty of lighting to provide warning signals and operating lighting, most older models were only equipped with operating lights. Consult an authorized tractor dealer for lighting kits and modifications available to upgrade the lighting on older tractor models.

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 tractors. Always stay alert when transporting the tractor and implement on public roads. Use caution and reduce speed if other vehicles or pedestrians are in the area.

# OPERATION

Reduce speed before turning or applying the brakes. Ensure that both brake pedals are locked together when operating on public roads.



OPERATION

## **▲ DANGER**

This Implement may be wider than the Tractor. 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 Tractor to pivot violently resulting in loss of steering control, serious injury, or even death. Never allow the Implement to contact obstacles. (S3PT-12)

## **▲ WARNING**

Allow sufficient clearance for the Implement to swing outward while turning. Implements carried behind the Tractor will swing outside the tire path when making turns. Contacting a solid object while turning will cause equipment damage and possible injury. (S3PT-20)

## **▲ 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 rear wheels to maintain safe steerage. Slow down on rough or uneven surfaces.

# OPERATION



**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)



## **9.4 Hauling the Tractor and Implement**

Before transporting a loaded tractor and implement, 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. OPS-U- 0024



# OPERATION

## OPERATION

Use adequately sized and rated trailers and equipment to transport the tractor and implement. 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 tractor utilizing the proper tie down locations as specified by the tractor manufacturer. *OPS-U- 0025*



Arrange the chains so that when tightened, the chains are pulling downward and against themselves. Carefully tighten the securing chains or other fasteners 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 tractor and implement, make occasional stops to check that the tractor and implement 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. *OPS-U- 0026*



# **MAINTENANCE SECTION**

Maintenance Section 5-1

# MAINTENANCE

**MAINTENANCE**

## GENERAL MAINTENANCE

### Nuts And Bolts

Check all nuts and bolts for tightness after the first 5 hours of operation then yearly.

**IMPORTANT:** Certain bolts should not be over tightened, these include all shear bolts.

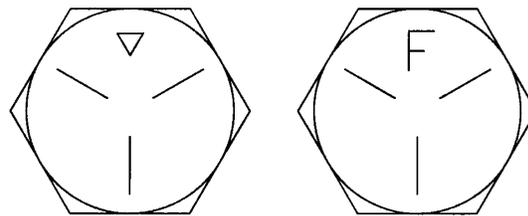
### Bolt Grades and Torque

When replacing damaged bolts use only plated Grade 5 bolts unless otherwise specified. Use only bolts of the correct length [Refer to the AParts@ 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			Length of Bolts					
Inches	Inches	Millimeters	Inches	Inches	Millimeters	Inches	Inches	Millimeters
0.25	1/4	6	0.5	1/2	12	5.25	5-1/4	130
0.3125	5/16	8	0.625	5/8	16	5.5	5-1/2	140
0.375	3/8	10	.075	3/4	20	5.75	5-3/4	150
.05	1/2	12	1	1	25	6	6	150
0.625	5/8	16	1.25	1-1/4	35	6.25	6-1/4	160
0.75	3/4	20	1.5	1-1/2	40	6.5	6-1/2	170
1	1	24	1.75	1-3/4	45	6.75	6-3/4	170
1.25	1-1/4	30	2	2	50	7	7	180
1.5	1-1/2	36	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.*

Mnt-SB-0026

# MAINTENANCE

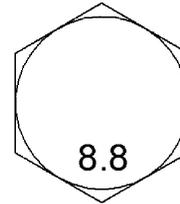
## Shear Bolt

**NOTE:** Both length and grade are important in this specification. For example M10 X 50 Grade 8.8 indicates a metric bolt 10mm in diameter, 50 mm long of grade 8.8.

**IMPORTANT:** Tighten nut only enough to draw the shear plates together. Do not over tighten nut. Occasionally apply grease to the shear plates.

**IMPORTANT:** Replacement of the shear bolt with one of any other grade or size will be considered an unauthorized modification and the warranty will be void.

## GRADE 8.8 BOLT HEAD



Mnt-SB-0025

Refer to your Snow Blower operator's manual for shear bolts used to protect the snow blower cross auger.

## HYDRAULICS

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.



### **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)



# MAINTENANCE

## LUBRICATION

### Gearboxes

**IMPORTANT:** Remember to check oil level in all gearboxes

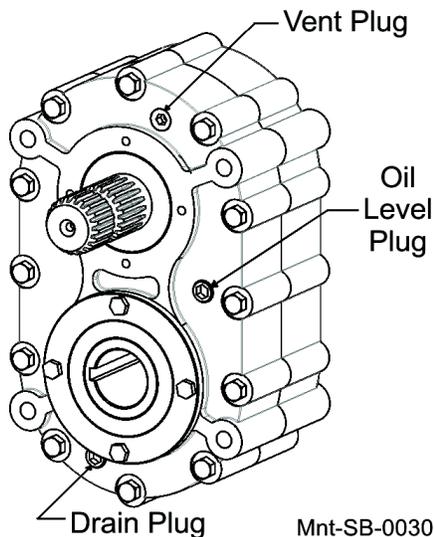
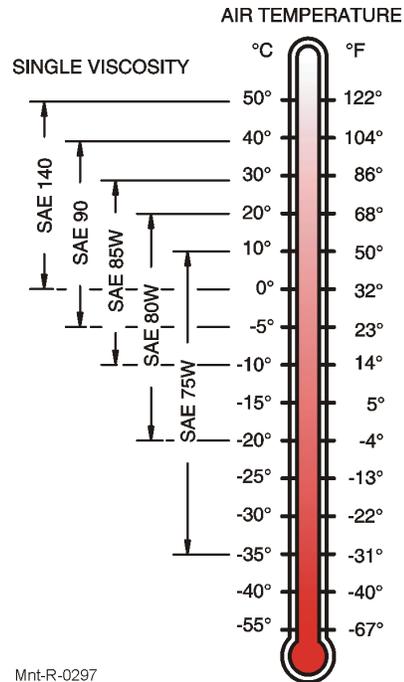
Replace oil in gearboxes after the first 50 hours of operation then yearly. Check gearbox oil level frequently. Steady loss of oil will indicate damaged seals, which should be replaced immediately to prevent ruining the gearbox.

Procedure for refilling the rear parallel shaft gearbox:

- Park unit on level surface
- Remove the drain plug and drain out oil.
- Reinstall drain plug
- Remove the vent plug and the level plug.
- Refill the gearbox until oil runs out the level plug hole.
- Reinstall the vent plug and level plug.
- Dispose of old oil in accordance with local regulations.

Use of an oil/grease pump to suck oil out of the bottom of the gearbox case is recommended to minimize spilled oil and to provide for more complete removal of old oil.

The vent, drain and level plugs will be located as illustrated below.



Gear case oil should meet the following specifications:

API Service Classifications GL 5

Military Specification MIL L 2105C

FM-115 07/15

Maintenance Section 5-4

# MAINTENANCE

## Drive Shafts

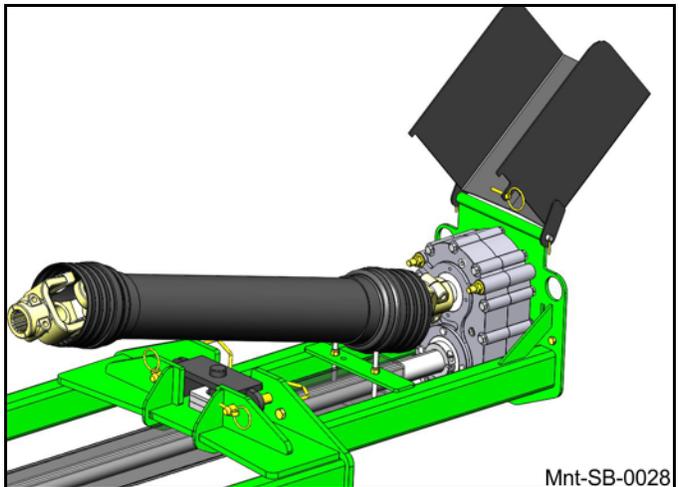
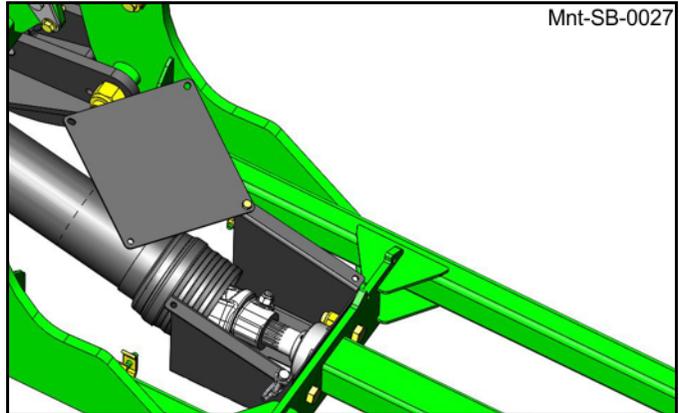
**Type of Grease** - A good quality NLGI #2 EP grease, lithium soap base should be used to grease the needle bearings in cross journals, shield bearings, telescoping members and CV centering mechanism. For heavy duty applications a compatible grease with 3 to 5% molybdenum disulfide additive may be used.

**Cross Journals** - Every 8 hours. Lubricate until grease purges from underneath all four needle bearing caps. To access the cross journals on center drive shafts, remove the shield retaining pin and pivot the shield out of the way.

**Shield Retaining Bearings** - Every 8 hours. The shield bearings are greased by a fitting molded into the shielding bell. Three pumps are required. Check that the drive line shielding is not damaged and rotates freely on the driveline.

**Telescoping Tubes** - Every 8 hours. Apply grease to the collar located at the middle of the shaft. The grease fitting on this collar will come exposed when the snow blower is down on the ground. Occasionally (monthly) pull the drive shaft halves apart and apply grease to all sides of the slip shaft. At least once per year the shielding should be removed and the old grease removed with a solvent. A fresh coat of grease should then be applied to the entire surface of the inner tube.

**IMPORTANT** - If the universal joint sliding members are allowed to dry out to the point where two halves cannot slip freely, damage to the rotary cutter or tractor may occur.



Always wear protective gloves when handling grease.

## Bearings

Grease annually, 2-3 shots

## Steady Block

Grease every 8 hours

# MAINTENANCE

## Frame

NLGI #2 EP molybdenum disulfide fortified grease is preferred for all sliding contact type applications such as frame pins. Grease every 8 hours of operation:

- (2) Lift Frame Pin Bushings
- (2) Top Link Sleeves

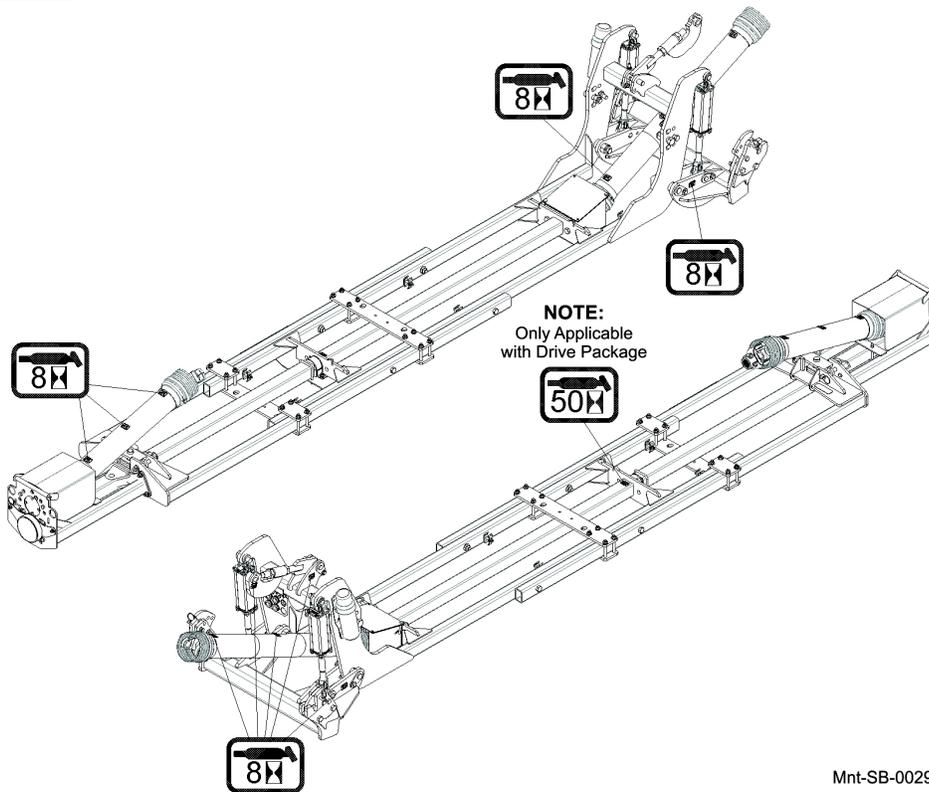
**Note:** Refer to the operator's manual for lubrications instructions related to the snow blower.

## Grease Specification

Grease should meet the following recommendations:

- "SAE Multi-purpose grease
- "SAE Multi-purpose grease containing 3 to 5 per cent molybdenum disulfide
- "Below 0° C (32° F) use SAE (NLGI) #0 or #1
- "Above 0° C (32° F) use SAE (NLGI) #2

## Lubrication Chart



Mnt-SB-0029

## Grease Schedule

Grease should meet the following recommendations:

- SAE Multi purpose grease
- SAE Multi purpose grease containing 3 to 5 per cent molybdenum disulfide
- Below 0° C (32° F) use SAE (NLGI) #0 or #1
- Above 0° C (32° F) use SAE (NLGI) #2





## **SCHULTE INDUSTRIES LIMITED**

### **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.

#### **THIS WARRANTY POLICY APPLIES TO THE FOLLOWING SCHULTE PRODUCT:**

- Rotary Cutters and Flex Arms including XH1500, XH1000, FX1800, FX1200, V1280, FX315, FX520, 5026, FX530, FX742, FLX1510 as well as 326, 327, 3008, 3210 Rotary Cutters.
- Rock Pickers including RS320 Jumbo, 2500 Giant, and High Rise 8000.
- Rock Windrowers including SRW 800, SMR 800 and SRW 1400.
- All Snow Removal Models including all SDX and RDX Series Blowers, FM300, and FM350 Front Mount Frames, as well as SV10, SV12, SV14 Blades and FM115.

#### **WARRANTY COVERAGE**

- Structural Warranty is 12 months on all products. Coverage includes parts and labor on repair.
- Component and Driveline warranty is 12 months on all products except those in rental application. Coverage includes parts and labor on repair.
- For any product in a rental application, component and driveline warranty is for 30 days. The warranty coverage starts on the day the product is purchased. Coverage includes parts and labor on repair.

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.

#### **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 "Manual") supplied for the goods.
- Submitting the Warranty Registration immediately upon sale of the product.
- Submitting the Manufacturer's Warranty Claim within thirty (30) days of the repair.
- 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.

## **EXCLUSIONS**

This warranty does not extend to:

- Damage or deterioration after delivery from the manufacturer not attributable to defective material or workmanship.
- Any goods after they have been altered or repaired other than by the manufacturer's employees or its agents in each case authorized in writing by the manufacturer to affect the specific alteration or repair to those specific goods.
- Any equipment or machinery of any kind furnished by the buyer, or belonging to, or acquired from third parties at the buyer's request, or supplied, or made to the buyer's specifications.
- 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. Examples of foreign objects for rotary cutters include stones, iron, and any material other than grass or brush.
- Normally wearing parts, (e.g. blades, blade bolts, skid shoes, tires, slip clutch linings, picker teeth, sprockets, roller chain, etc.)
- Damage to components of the FLX1510 Flex Arm, when hooked to any non-Schulte product.
- Shop supplies such as the use of tools, oil or grease used in the repair or replacement of a warrantable part or component.

## **EXTENDED COVERAGE FOR NON-COMMERCIAL USE (Applies to Rotary Cutters only)**

For models XH1500, XH1000, FX1800, and FX1200 Cutters.

Extended pro-rated gearbox warranty, extending to sixty (60) months as noted below:

- 1st year - full warranty (parts and labor).
- 2nd year - 75% warranty on replacement gearbox parts only.
- 3rd and 4th year - 50% warranty on replacement gearbox parts only.
- 5th year - 25% warranty on replacement gearbox parts only.

For models FX315, FX520, 5026, FX530, FX742, V1280, 326, 327, 3008, and 3210 Cutters, as well as FLX1510 Flex Arms.

Extended pro-rated gearbox warranty, extending to thirty six (36) months, as noted below:

- 1st year - full warranty (parts and labor).
- 2nd year - 75% warranty on replacement gearbox parts only.
- 3rd year - 50% warranty on replacement gearbox parts only.

**Note:** *Extended gearbox warranty does not apply if damage or deterioration is sustained due to encounters with foreign objects for which the product is not intended, improper or inadequate maintenance, neglect, or abuse.*

## **CORRESPONDENCE**

All correspondence from the dealer/customer to the manufacturer beyond the warranty claim shall be by letter, email or fax addressed to the attention of:

Warranty Committee  
Schulte Industries Limited  
P. O. Box 70  
Englefeld, Saskatchewan  
S0K 1N0, CANADA  
Fax 306-287-3355  
Email: [tsiroski@schulte.ca](mailto:tsiroski@schulte.ca) or [dwillenborg@schulte.ca](mailto:dwillenborg@schulte.ca)

