IRONCRAFT™

SWING BOOM
CUTTER

USE AND MAINTENANCE GUIDE

14-20 GPM	17-30 GPM
SBC	SBCNS

Scan QR code for a digital version of this manual
Read and understand the manual. This manual provides information and procedures to safely operate and maintain the Swing Boom Cutter.

September 2023

WWW.IRONCRAFTUSA.COM

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CONTENTS

REGISTER THIS PRODUCT

WWW.IRONCRAFTUSA.COM/WARRANTY/REGISTER-WARRANTY/

PURCHASE DATE

DEALER NAME

ADDRESS

PHONE NUMBER

MODEL

SERIAL

"WHY WOULD I WANT TO REGISTER MY MACHINE?"

HERE'S THE LOWDOWN. YOU NEED TO REGISTER YOUR NEW PRODUCT WITHIN 30 DAYS OF DELIVERY. WITHOUT REGISTRATION, YOUR WARRANTY CLAIMS WILL NOT BE HONORED.

Registering your machine means you get the full benefits of the warranty terms we offer.

Scan this QR code to our warranty page and select the "REGISTER" tab for an easy-peasy process.
You'll be glad you did.

THANK YOU

Dear Owner:

We appreciate your business and thank you for choosing Ironcraft as your provider of quality skid steer attachments. We are committed to providing you with a heavy duty product that will provide years of satisfaction and safe operation.

This manual will provide instructions on how to safely operate and maintain the Swing Boom Cutter. All users must read and understand this manual before operating this machine. Upon reading this manual, all users should sign the “Safety Acknowledgement Form” at the end of this manual. Store this manual in the document canister attached to this machine.

Please record your model and dealer information on the inside front cover. You will be asked to provide this information when ordering parts or requesting service. If you need more information on this product, contact your local dealer or visit www.ironcraftusa.com.

Sincerely,

IRONCRAFT™

The Ironcraft Team

MODEL COMPARISON

SWING BOOM CUTTER		
	14-20 GPM	18-27 (30) GPM
MODEL	SBC	SBCNS
DESCRIPTION	Swing Boom Cutter	Piston Motor Swing boom cutter
PSI	4,000 PSI	
MOTOR	High Torque Motor w/ built in relief	Direct Drive Piston Motor
WORKING WIDTH	44"	
CYLINDER SIZE	3" x 16" tilt	
CASE DRAIN	Not Required	Yes
# OF BLADES	2	
HORIZONTAL REACH	8'	
VERTICAL REACH	16'	
CUT CAPACITY	3"	4"
BLADES	5/8" AR400	
OPTIONAL	Optional universal, 8 pin or 14 pin wiring harness	

STORE THIS MANUAL IN THE DOCUMENT CANISTER ATTACHED TO THIS MACHINE.

SAFETY INFORMATION

1.1 INTRODUCTION

The following terms are used interchangeably throughout this manual.

SWING BOOM BRUSH CUTTER	SKID STEER	OPERATOR
implement, attachment, product, machine, brush cutter, cutter	skid steer loader, skid steer tractor, loader, prime mover	user, personnel

The Swing Boom Brush Cutter is designed and manufactured with safety in mind. However, improper use and operator error can result in death or serious injury. It is important that you read and fully understand the safety instructions and operating procedures in this manual before operating this brush cutter. Accident prevention is a combination of good judgement, common sense, awareness and proper training!

BEFORE YOU OPERATE THIS BRUSH CUTTER:

KNOW

how to safely operate your skid steer loader.

READ AND UNDERSTAND

the safety instructions and operating procedures contained in this manual.

ACKNOWLEDGE

your understanding of all safey instructions presented in this manual by signing the “Safety Acknowledgement Form” at the end of this manual.

Although every effort has been made to ensure a safe product, every possible circumstance that could pose a potential hazard cannot be anticipated. The safety warnings in this manual and on this product, are therefore not all-inclusive.

In addition to the safety messages presented in this section, you must also read and understand the safety messages presented in the other sections of this manual.

1.2 SAFETY SYMBOLS

This manual and decals on this machine use safety symbols, pictograms and color coded signal words to alert you to potential hazards that may cause death or severe injury if a safety instruction is ignored. Become familiar with the following symbols.

SAFETY ALERT SYMBOL

This symbol is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

HAZARD CLASSIFICATIONS

Hazards are identified by the “Safety Alert Symbol” and followed by the signal word “DANGER”, “WARNING”, or “CAUTION”.

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury \This signal word is limited to the most extreme situations.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which,if not avoided, may result in minor or moderate injury.

NOTICE

Indicates a situation which may cause damage to equipment or property. Messages are not related to personal injury.

SAFETY INSTRUCTIONS

Indicates specific safety-related instructions or procedures.

SAFETY PICTOGRAMS

Pictograms are graphic symbols meant to alert you of a potential hazard. Read and understand the hazard description for each of these symbols.

PINCH HAZARD

Keep clear of skid steer and brush cutter machine to prevent death or serious injury from pinching of moving parts.

FLYING DEBRIS HAZARD:

ONLY operate this machine using a skid steer that has a shatter proof cab to prevent death or serious injury from objects being thrown.

OPERATING MANUAL:

Operators must read and understand the safety instructions in the operating manual to prevent death or serious injury.

EYE PROTECTION & CARDBOARD:

Operators and Maintenance personnel must wear proper eye protection and use cardboard or wood to investigate hydraulic leaks to prevent death or serious injury from being injected with high pressure hydraulic fluid.

HIGH PRESSURE FLUID INJECTION HAZARD:

Operators and Maintenance personnel must not place fingers or hands directly over a hydraulic leak to prevent death or serious injury from being injected with high pressure hydraulic fluid.

NO BYSTANDERS:

DO NOT operate this machine near bystanders. Bystanders must stay back at least 300 feet from the machine to prevent death or injury from objects being thrown.

CRUSH HAZARD:

DO NOT place any part of the body under the machine or skid steer arms to prevent death or serious injury from being crushed.

1.3 SAFETY DECALS

The safety decals affixed to this machine are in place to keep you safe. DO NOT ignore these decals. Read and understand each decal's safety message. The following safety decals are affixed to this machine:

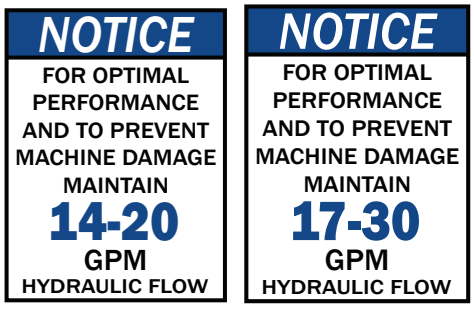
1.

SCAN TO VIEW OWNER'S MANUAL

2.

MUST READ
OPERATOR MANUAL

3.

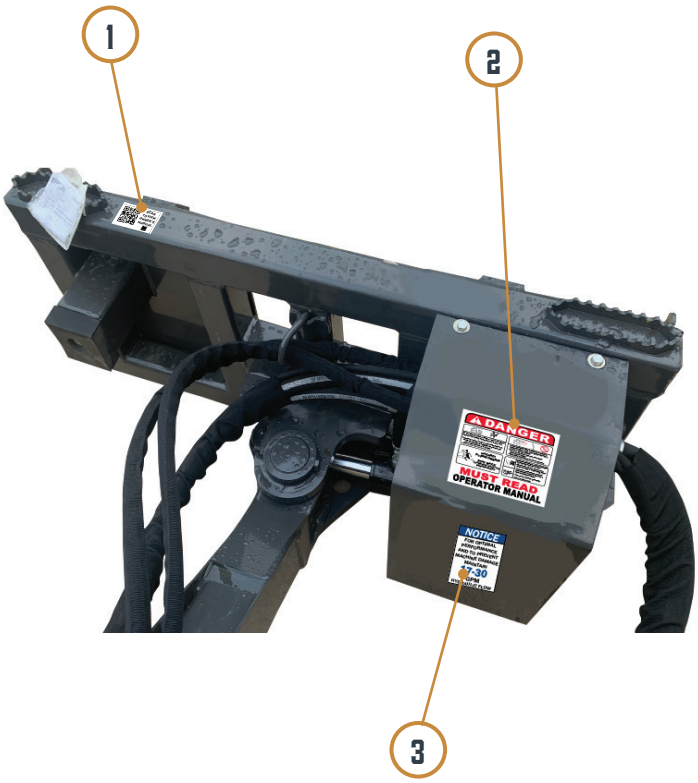


4.

SAFETY INSTRUCTIONS

- Decals must be kept clean and legible at all times.
- Operators must inspect the machine for safety decals.
- Replace missing, worn or damaged decals immediately.
- Use care when cleaning the machine. When using a hot pressure washer make sure water jet is not too close to the decal as this may cause the decal to peel.
- When replacing parts, be sure safety decals are in place prior to using the machine.
- Make sure metal surface is dry and free of dirt and grease before applying a new decal to this machine.
- Contact your local dealer to order replacement decals.

SAFETY DECAL LOCATIONS



REF	DESCRIPTION	QTY.
1	Scan to view owner's manual Qrs code Sticker	1
2	Combo Danger warning label pinch hazard, high pressure fluid hazard, flying debris hazard, * Replaces older 4 sticker labels	1
3	Warning Do not exceed Gpm Label **When ordering choose the proper decal for your model	1
4	Danger stay back Label ** There are two decals left side front and right side front of swing boom	2

1.4 SKID STEER LOADER REQUIREMENTS

CAUTION

Ensure your skid steer loader is in good operating condition. Follow the operating instructions found in your skid steer operator's manual. Failure to do so could result in minor or serious injury.

WARNING

The Swing Boom Brush Cutter should only be used on Skid Steer Loader's that meet the following requirements:

REQUIREMENTS	
Minimum Lift Capacity	1,800 lb
Minimum Weight w/ Bucket Removed	6,500 lb
Impact Resistant Windshield and Cab Side Windows	
High Flow Auxiliary System	
Engine Horsepower Rating	65 HP
12V Auxiliary Electrical Connector (not required if using optional controller)	

NOTICE

A skid steer equipped with tracks (COMPACT TRACK LOADER) will provide superior stability in this application.

1.5 GENERAL SAFETY INSTRUCTIONS

Below are general safety instructions that relate to the overall operation and maintenance of this machine. It is important that you read and understand each message to prevent serious injury or death.

ALWAYS
watch for overhead power lines.

DO NOT
place hands or feet under mower deck while blades are spinning.

NEVER
operate this brush cutter when bystanders are within 300 feet of your work area. Flying debris could cause serious injury or death.

NEVER
position your body or limbs under an unsupported cutter deck.

DO NOT
allow this machine to contact buildings, utilities, large rocks or tree stumps or you may loose control of the skid steer loader.

DO NOT
allow riders on the skid steer loader or on this attachment.

NEVER
use drugs or alcoholic beverages while operating or servicing this machine.

ALWAYS
operate this attachment during daylight or well-lit areas.

INSTALL
this brush cutter on a skid steer loader equipped with a thermoplastic polycarbonate door panel and side panels only.

PREVENT
the skid steer loader and implement from rolling forward, stop the engine and set the parking brake when exiting the skid steer loader.

INSPECT
implement for missing hardware prior to using this machine.

DO NOT
allow children to play on or around this equipment at any time. Store this implement in an area not frequented by children.

ALWAYS
wear the proper personal protection equipment while operating or servicing this machine. NEVER operate or service this machine with bare feet, sandals, or other light footwear.

ALWAYS
use eye protection while operating or servicing this machine.

ALWAYS
wear work gloves when handling cutter blades as they are often very sharp.

DO NOT
speed! Keep your driving speed between 2 and 5 mph.

DO NOT
operate this machine during lighting or severe weather conditions.

OPERATING PROCEDURES

2.1 UNPACKING YOUR BRUSH CUTTER

Your attachment arrives from the factory strapped to a wood pallet, and requires no final assembly. Use a pair of tin snips to remove the steel strapping.

CAUTION

Shipping straps are under great tension, and could lash out uncontrollably when cut causing injuries to your body. Keep bystanders away and wear safety glasses and gloves while removing the straps.

2.2 PRE-OPERATING CHECKLIST

TASK	PRE-OPERATING CHECKLIST
✔	Swing Boom Cutter is securely attached to the skid steer loader.
✔	Hydraulic hoses are connected and locked to the skid steer hydraulic couplers with no signs of hydraulic oil leaks present.
✔	Blades are in working condition and securely attached to the blade holder and all bolts and nuts are tight.
✔	Safety labels are present and legible.
✔	No material, ropes, wire, etc. is obstructing the blades and blade holder assembly.
✔	The area of operation is clear of bystanders and any obstacles that could damage the equipment or cause injury to the operaor.
✔	The operator is of good health and not under the influence of any mind altering substances or alcohol.

2.3 HOW TO CONNECT BRUSH CUTTER ATTACHMENT

Consult your skid steer operator's manual for specific instructions on how to connect your brush cutter to your skid steer loader.

GENERAL ATTACHMENT METHOD

1. Make sure the hydraulic lines are clear from the front side of the brush cutter's attachment plate and that the locking pins on the skid steer mounting plate are retracted.
2. Drive forward and place top of skid steer mounting plate under the attachment mounting flange. See Figure 2.3 below.
3. Slowly raise and tilt back the skid steer mounting plate until the brush cutter attachment plate rests flat against the skid steer mounting plate.
4. Activate your skid steer's lever lock switch to engage and lock the pins into the flange slots of the brush cutter's attachment plate. If your skid steer does not have this switch, push the latch handles down until you can see the lock pins extend into the attachment flange.

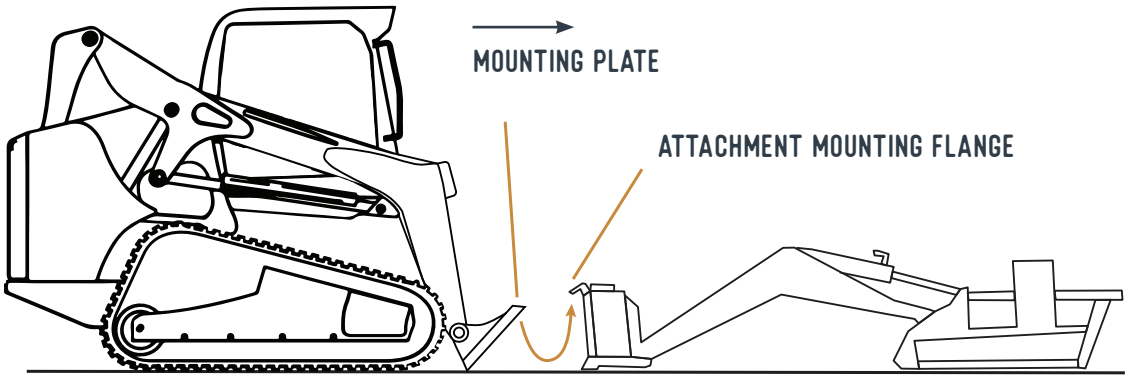


FIGURE 2.3 QUICK ATTACH MECHANISM LOCKED TO ATTACHMENT

FIGURE 2.3 SKID STEER MOUNTING PLATE TO ATTACHMENT MOUNTING FLANGE

NOTICE

To keep contaminants from entering the hydraulic system; wipe off any dirt or dust from the male or female hydraulic flat face couplers with a clean rag before attaching hoses.

5. Connect the attachment hydraulic hoses and the case drain hose (SBCNS model only) to the auxiliary supply couplers located on your skid steer loader lift arm.

NOTICE

Check that the hydraulic hoses are locked into the skid steer couplers before starting the cutter.

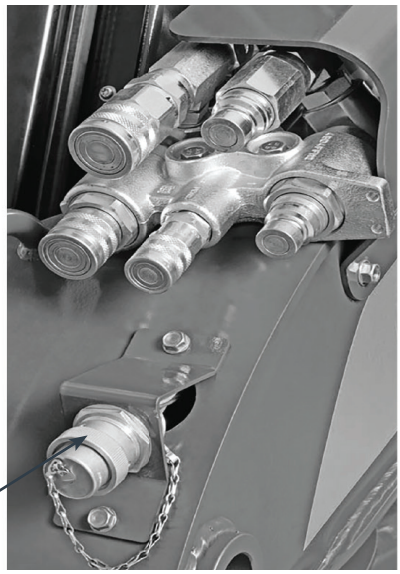
WARNING

DO NOT operate this machine if you can see the cutter blade while seated in the operator's seat. If you can see the cutter blade, the back of the cutter is raised TOO HIGH. Lower the cutter deck to avoid from being struck by flying debris.

2.4 CONNECTING ELECTRICAL HARNESS

Connect the electrical attachment harness from the swing boom cutter to the electrical bulkhead connector mounted on the skid steer loader arm. A universal, 7, 8, or 14 pin pigtail harness adapter is available to make this connection. See Electrical Drawings, on page for more information.

ATTACHMENT HARNESS



BULKHEAD COUPLER

2.5 PADDLE CONTROLLER INSTALLATION

If your skid steer does not have an auxiliary electrical connector, you will use the paddle controller to control the tilt and swing functions of the swing boom cutter.

NOTICE

To prevent possible equipment damage, it is recommended the paddle controller be installed by a qualified technician who is familiar with your skid steer's electrical system.

TO INSTALL PADDLE CONTROLLER:

1. Place the paddle controller on the seat inside the skid steer cab and route the power source cable that extends from the left side of the paddle controller to a point where the red wire with fuse can be connected to the skid steer's operator presence system, and the black wire connected to the skid steer's grounding system.

WARNING

The paddle controller must connect to the skid steer's operator presence system to avoid serious injury or death. This system will disconnect power to the attachment when the operator restraint bar is raised or when the operator rises from the seat.

WARNING

Do not connect the controller directly to the skid steer's battery or other source that is energized all the time. You could be killed or severely injured if a control switch is accidently bumped while exiting the skid steer cab.

2. Route the control cable that extends from the right side of the controller box through the cab and up to the back of the loader pivot arm, then down the arm to a point near the hydraulic couplers. Note: Secure this cable using plastic cable ties along the inside of the loader arm to prevent cable from being snagged by tree branches or other debris.

3. Check that the cable is free of tension when raising and lowering the skid steer arms.

4. Route the Velcro lap strap through the metal brackets at the bottom of the paddle controller, then secure paddle controller to your leg.

WARNING

To avoid unwanted attachment movement that may result in serious injury, remove paddle controller from lap when exiting the skid steer loader.

2.6 SWING BOOM CUTTER CONTROLS

To operate the swing boom controls the skid steer's auxiliary hydraulic system must be activated. To swing or tilt the cutter head you will use your skid steer's auxiliary controller or the paddle controller attached to your leg.

TYPICAL SKID STEER AUXILIARY ELECTRIC CONTROLLER

PADDLE CONTROLLER

NOTICE

When using the controls to swing the boom or tilt the cutter head, the cutter speed will slow down. The cutter will resume its normal operating speed once the swing or tilt action has stopped.

SWING FUNCTION

The Swing Boom Cutter rotates 90° to the right of the skid steer's mounting point. Use the LEFT or RIGHT buttons on the controllers to stop the boom anywhere between 0° and 90°.

DANGER

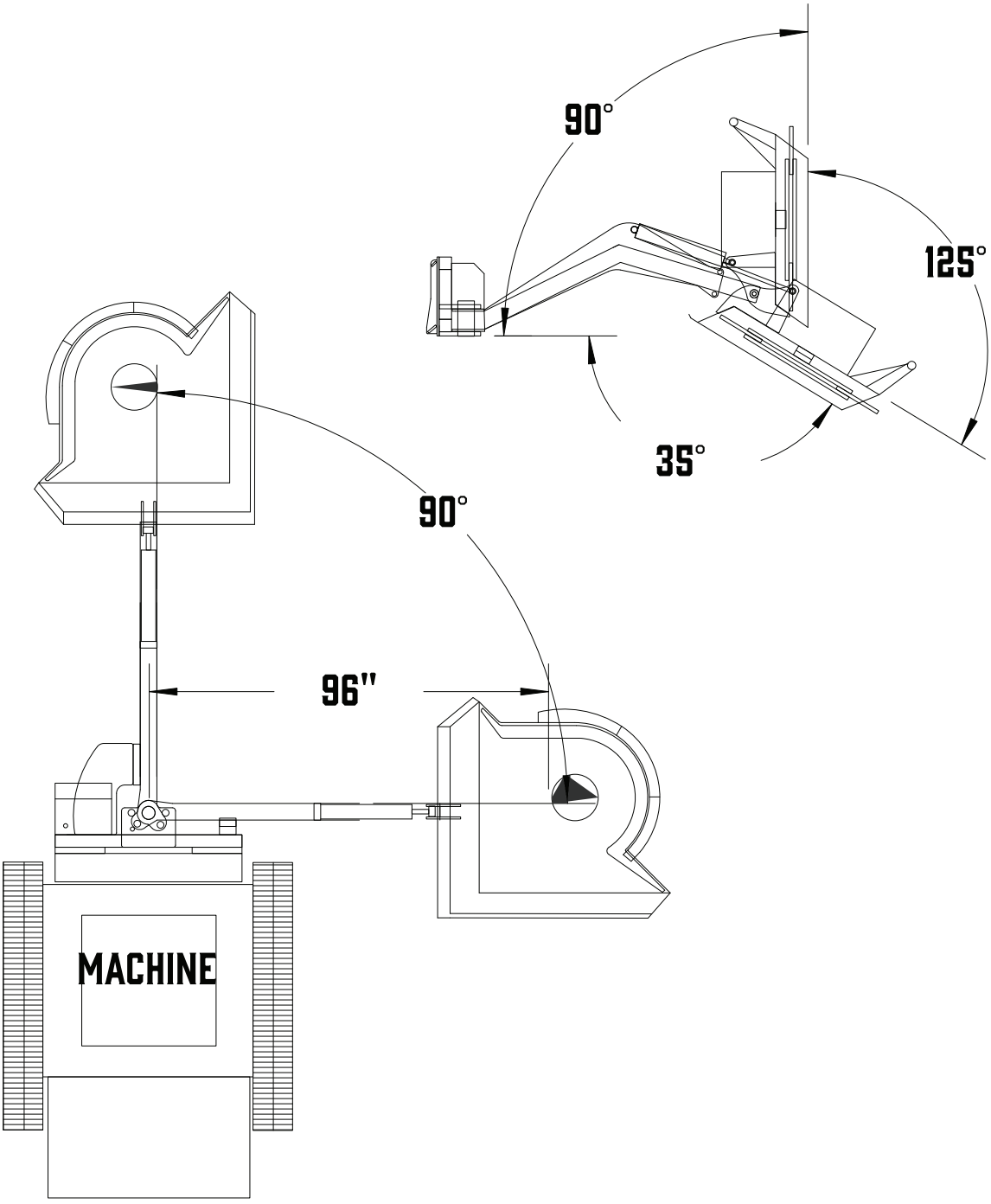
To prevent Serious injury or death from pinching, keep all persons and objects away from the boom while it is operating.

CAUTION

With the boom swung at 90°, you must be aware of any obstacles and terrain in front of the cutter head and in front of your skid steer. Lack of awareness may cause the skid steer loader or swing boom cutter to strike obstacles that may result in serious injury or damage to equipment.

TILT FUNCTION

The Swing Boom Cutter deck can tilt up 90° from the horizontal position and tilt down 35° from the horizontal position. Use the UP and DOWN buttons on your skid steer's auxiliary electric controller, or paddle controller to tilt the cutter head. The tilt function is used for cutting on sloped terrain surfaces.



2.7 FIRST TIME USE PROCEDURE

START HERE

01

SKID STEER CHECK

Before operating the brush cutter, check the skid steer's hydraulic oil level and add oil if necessary.

PISTON MOTOR SWING BOOM CUTTER (SBCNS)

02

If you are operating the Piston Motor Swing Boom Cutter (SBCNS) ensure the case drain hose is properly attached to the prime mover's case drain connection. DO NOT operate this attachment WITHOUT the case drain hose attached. Excessive hydraulic pressure will blow out the seals.

03

HYDRAULIC HOSES

Ensure that hydraulic hoses are securely locked to the skid steer hydraulic couplers before starting the brush cutter.

SKID STEER

04

After starting skid steer, lift attachment 36 inches off the ground surface.

05

AUXILIARY HYDRAULIC SYSTEM

With the skid steer engine RPMs just above idle, activate the skid steer's auxiliary hydraulic system.

SWING THE BOOM TO THE RIGHT

06

Swing the boom to the right using the skid steer's auxiliary electrical controller, or by holding down the RT button on the paddle controller.

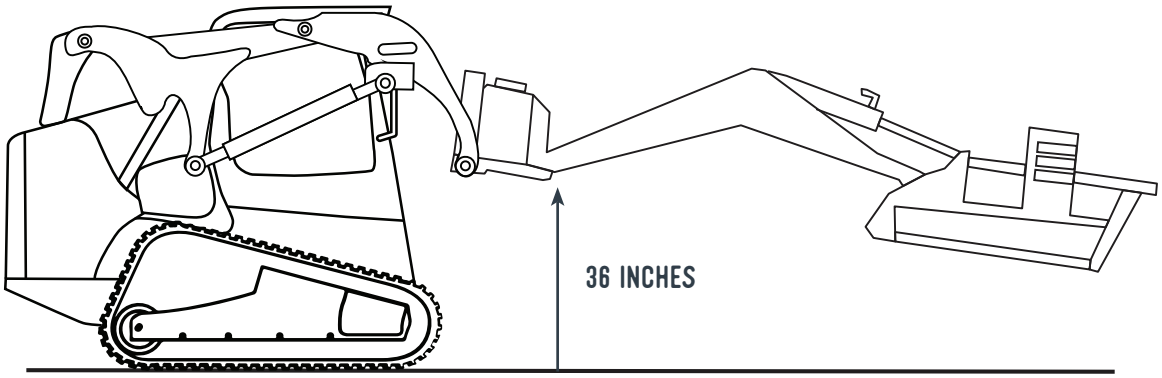


FIGURE 2.7: AFTER STARTING SKID STEER, LIFT ATTACHMENT 36 INCHES OFF THE GROUND SURFACE:

07

SKID STEER

Tilt the cutter up by holding down the UP button on the paddle controller. Then tilt in the opposite direction by holding down the DOWN button.

BRUSH CUTTER

08

Swing the boom to the straightforward position and tilt the cutter to the level position using the buttons on the paddle controller.

09

SKID STEER

Allow the cutter to run for 30 seconds to purge air from the system, then turn off hydraulic flow to the brush cutter and allow it to come to a complete stop.

BRUSH CUTTER

10

Lower the brush cutter to the ground, set parking brake, shut off the skid steer's engine and exit the operator's compartment.

11

BRUSH CUTTER

Check the skid steer's hydraulic oil level, add oil if necessary.

2.8 CUTTING OPERATIONS

GENERAL OPERATING TIPS

LEARN

what the cutter head looks like in a level position when you are seated in the skid steer. Knowing what a level cutter head looks like will prevent you from damaging the cutter blades if you cut too close to the ground.

SLOW

down the skid steer if the engine “bogs” down or if the cutter speed is too slow because of too much load.

LISTEN AND FEEL

for any strange vibrations or noises. If you feel a bad vibration when cutting, slow the skid steer down and see if the vibration stops. If not, stop the brush cutter and investigate the cause. Refer to the “Troubleshooting Chart” on page 39 of this manual.

ALWAYS

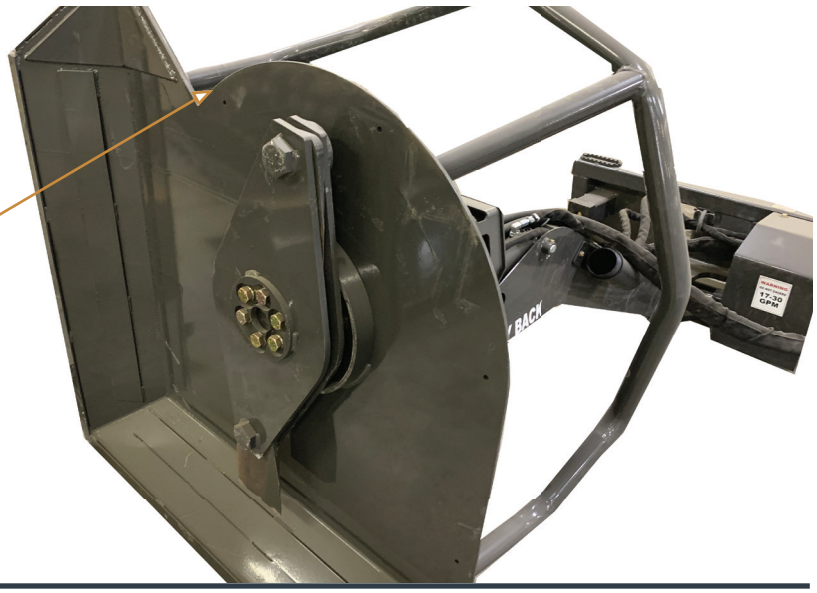
be aware of your surroundings and pay attention to what obstacles and terrain are in front of you. When the cutter is swung 90° you have a much larger path to be aware of.

NEVER

use the cutter to push, pull, lift or move any type of vehicle or object.

DO NOT

use the cutter to “push” down trees. The swing boom cutter can cut down small trees up to 3 inches in diameter. To cut down small trees place the tree trunk inside the “V-NOTCH” at the front of the cutter deck.



VERTICAL CUTTING

Your Swing Boom Cutter is designed to cut vegetation with the cutter head in the vertical position. Vertical cuts are great for widening pathways, roadways and other access areas.

WARNING

Vertical cutting can disperse flying debris over a large area and could cause death or serious injury to bystanders. Do not operate the cutter when bystanders are within 300’ of this machine.

WARNING

Use care when operating on uneven terrain or any type of sloped surface. Keep the cutter low to the ground to avoid a roll over accident that could result in serious injury or death.

DANGER

To prevent from being electrocuted and killed, watch out for overhead electrical lines when operating the cutter boom.

TO CUT VERTICALLY:

1. Raise the skid steer loader arms.
2. Tilt the cutter head to the vertical position.
3. Swing the boom to the right to the desired cutting position.
4. Raise and lower the skid steer loader arms to trim around branches.

MAINTENANCE PROCEDURES

3.1 MAINTENANCE OVERVIEW

The maintenance procedures described in this manual should only be carried out by qualified mechanics who have been trained to repair this machine.

Some procedures require special tools and skills to complete. DO NOT attempt to repair or perform service work on this machine unless you have the skills and tools to do so. Contact your local dealer for maintenance and repair services.

NOTICE

Improper maintenance or modifications to the design or performance of this machine will void the warranty. ONLY use genuine Ironcraft replacement parts on this machine.

SAFETY INSTRUCTIONS

Obey the following safety instructions when servicing or repairing this machine.

WEAR

proper Personal Protective Equipment (PPE) while working on this machine, which may include safety glasses, hard hats, steel toe boots, gloves, etc.

WEAR

a welding helmet when welding to protect your eyes, face and neck from flash burn, ultra-violet radiation and heat.

ENSURE

all jack stands, lifts and hoists are in good working condtion and have the rated load capacity to support the load.

SERVICE

If servicing is performed while the brush cutter is attached to the skid steer, turn engine off, set parking brake and chock wheels to prevent skid steer from moving.

ONLY

perform service work in a well-lit area.

ALLOW

the machine to cool down before servicing this machine. Hot oils can burn your skin.

NEVER

work under an unsupported cutter deck.

3.2 MAINTENANCE SCHEDULE

This brush cutter attachment will provide years of dependable service if routine maintenance procedures are performed. The maintenance tasks listed below are based on normal operating conditions. More frequent maintenance may be necessary with intense use or when operating in adverse environmental conditions.

MAINTENANCE TASK	BEFORE EACH USE	WEEKLY	YEARLY
Check skid steer loader hydraulic fluid level. Add fluid as necessary.	✔		
Check that all fasteners (nuts, bolts,, washers, pins, keepers) are in place. Tighten as necessary. (See Bolt Torque Table on page 37)	✔		
Inspect and replace any worn, torn, or missing safety decals.	✔		
Inspect hydraulic plumbing (hoses and connectors) for damage or leakage. Repair or replace hydraulic items as necessary.	✔		
Check condition of cutter blades. Sharpen or replace as necessary.	✔	✔	✔
Check oil level in gear box motor. Add fluid as necessary.		✔	
Change oil in bearing housing. *Change oil after 50 hours of first time use, then every 1000 hrs or yearly.			✔
Wash Brush Cutter		✔	
Check brush cutter for major scratches and dings.Sand and repaint these areas to prevent rust damage. *Use a paint formulated for farm equipment which can be found at your local hardware store.			✔
Lubricate all pivot joints.			✔

MAINTENANCE LOG

Document all maintenance and service activities performed on this brush cutter using the maintenance log included at the end of this manual.

3.3 STORAGE

STORAGE TIPS

To get years of quality use out of your brush cutter, follow these tips when storing your brush cutter:

WASH

Ensure brush cutter is free of debris, dirt, grime and grease.

STORE

your brush cutter in a dry area such as in a shed or garage.

COVER

your brush cutter with a waterproof tarp if storing outside.

3.4 BLADE HOLDER REMOVAL

WARNING

To avoid an accident that could result in death or serious injury, NEVER place your body under an unsupported cutter deck when servicing this brush cutter.

ONLY service the brush cutter on stable, even terrain. NEVER park on sloped terrain to avoid being struck and killed or seriously injured by the unexpected rolling or movement of the skid steer.

NOTICE

ALWAYS release the hydraulic system pressure from the auxiliary hydraulic circuit prior to removing the blade holder.

CAUTION

When performing this procedure alone, rig a pair of choker slings through the blade holder and connect to an overhead hoist. This will prevent the blade holder from falling on to you causing injury to your body.

REMOVAL PROCEDURE

1. Place the swing boom attachment below an overhead hoist if available.
2. Position the cutter deck in a vertical position to gain access to the blade holder (see figure 3.4a below).
3. If swing boom cutter is attached to skid steer, stop the hydraulic flow circuit, turn off skid steer engine, set parking brake, and chock skid steer wheels.
4. Rig a pair of choker slings through the blade holder and connect to an overhead hoist. Keep tension on the slings to prevent the blade holder from falling once the bolts are removed.
5. Remove the six 3/4 inch bolts that secure the holder to the gearbox shaft. If the blade holder fails to seperate, use a wedge breaker tool to help seperate the blade holder from the gearbox flange.
6. Use the hoist to place the blade holder on a suitable work surface.

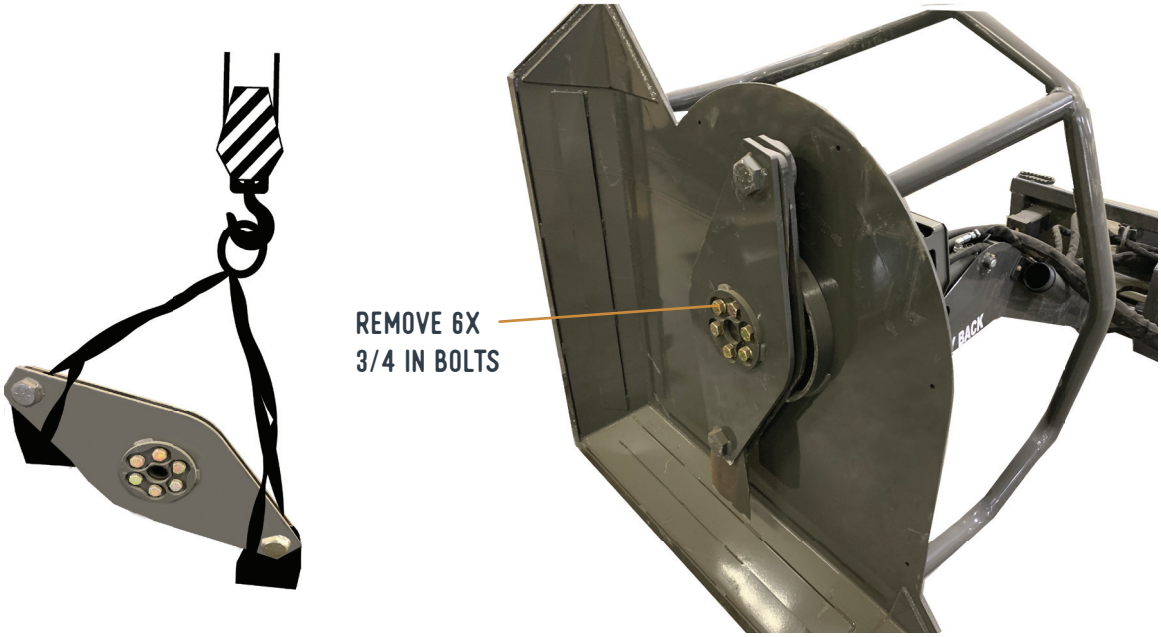


FIGURE 3.4A BLADE HOLDER AND SLING SYSTEM

3.5 BLADE HOLDER INSTALLATION

NOTICE

Use a hoist, lift table or forklift to support the blade holder during installation.

INSTALLATION PROCEDURE

1. Align the hole in the blade holder to the gearbox shaft and fully seat the holder onto the shaft.
2. Tap the blade holder with a rubber hammer to ensure full engagement. The blade holder must be properly aligned and seated on the gearbox shaft splines before proceeding to the next step.
3. Install the six 3/4 inch bolts and torque to the value shown in the Torque Table on page 33.

3.6 BLADE REMOVAL

NOTICE

This procedure requires special tools and skills. DO NOT attempt to remove or sharpen blades if you do not have the tools or skills. Take your brush cutter to your local dealer for blade services.

CAUTION

Cutter blades are sharp and could cut you if mishandled. ALWAYS wear protective gloves, footwear and safety glasses when handling cutter blades.

BLADE REMOVAL PROCEDURE

1. Remove the blade holder as described in Section 3.4 of this manual.
2. Use a cutting torch or a grinder with a cut off wheel to remove the weld bead around the bolt head. (see Figure 3.6a on next page).

CAUTION

Wear proper protective equipment while using a cutting torch and grinder tool to prevent injuries from flying hot metal pieces. DO NOT use a cutting torch during windy conditions nor near dry vegetation to prevent a catastrophic brush fire.

3. Drive the bolt shank from the blade and blade holder, being careful not to let the blade fall onto your feet (repeat steps 2 and 3 for the second bolt).

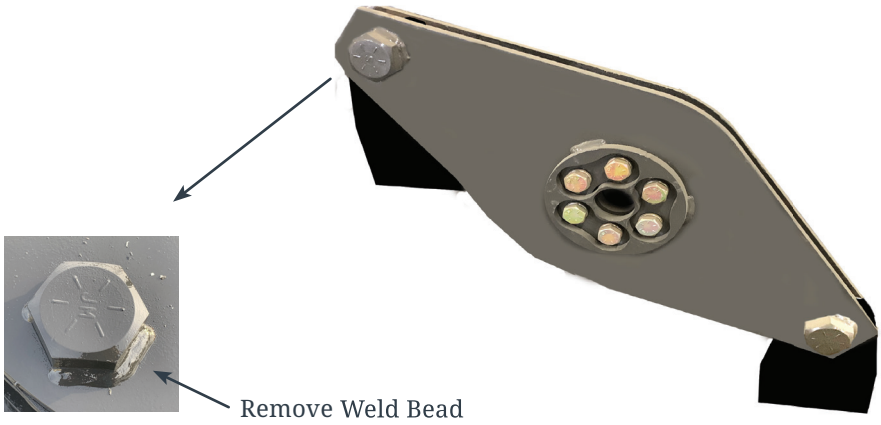


FIGURE 3.6A – BLADE HOLDER BOLT WELD BEAD REMOVAL

BLADE SHARPENING NOTES

1. Sharpen cutter blades with the appropriate tool.
2. Be careful not to overheat the blade steel causing the blade material to become brittle and prone to early failure.
3. Grind each blade to the similar shape and size so as to not create a set of mismatched blades.
4. ALWAYS sharpen or replace cutter blades as set.
5. NEVER mix and match used blades with new blades as they will cause the brush cutter to be unbalanced and result in a vibration that may cause damage to other brush cutter parts.

3.7 BLADE INSTALLATION

1. Remove the old weld bead to ensure a flat smooth surface for new bolt head to mate to.

2. Place nut in the recessed hole on top of blade holder.

3. Insert new blade bolt up through the hole in the blade holder and tighten into the nut.

NOTICE

The blade bolt threads must extend beyond the nut, with the nut seated flush in the recessed hole.

4. Torque the blade bolt to the value shown in the torque table on page 34 of this manual.

5. Weld the outside of the bolt head as shown in Figure 3.7a left below.

NOTICE

DO NOT weld bolt head unless the nut is firmly seated into the recessed hole (see Figure 3.7b right below).

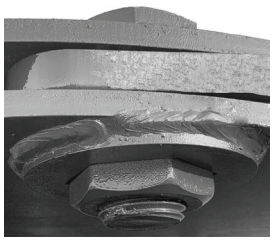


FIGURE 3.7A BOLT HEAD BEAD WELD & ASSEMBLY

FIGURE 3.7B BOLT THRU NUT

3.8 BEARING HOUSING & GEARBOX MAINTENANCE

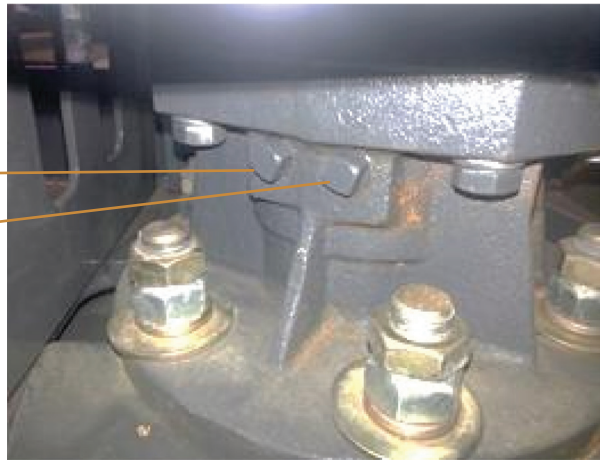
NOTICE

Maintenance procedures for the drive bearing housing and gear box motors require special tools and skills. DO NOT attempt to service the drive bearing housing or gear box motor unless you have the tools and skills to do so. Take your brush cutter to your local dealer to have these items serviced.

SWING BOOM CUTTER 17–30 GPM (SBCNS MODELS)

The SBCNS model has a bearing housing unit attached to a direct drive piston motor. Check the bearing housing oil level by:

1. The oil level in the drive bearing housing must be checked weekly. Refill with 85W-140 5EP grade gear oil only.
2. CHECK the oil level by removing the oil filler plug and oil breather plug. The oil level should be at the bottom of the breather plug.

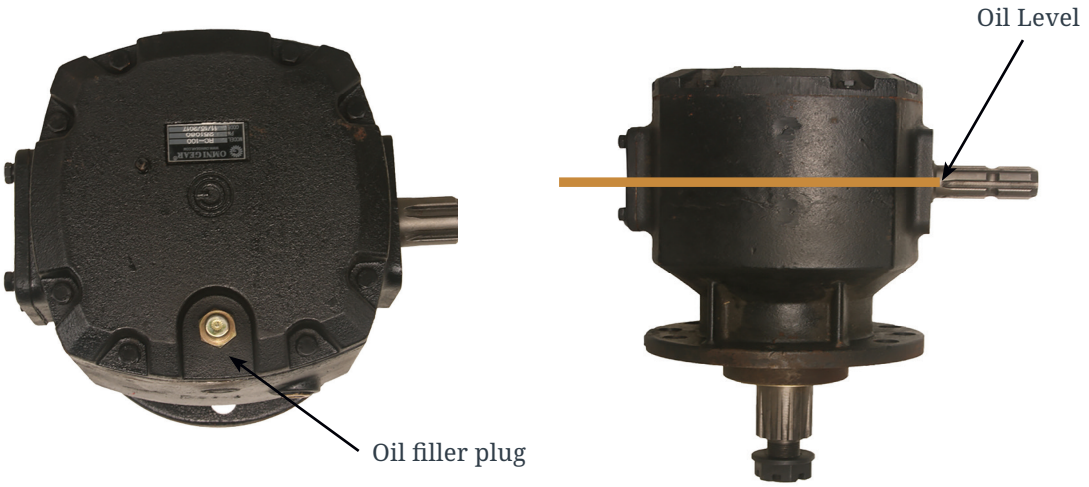


SWING BOOM CUTTER 14–20 GPM (SBC MODELS)

The SBC model has a right-angle gearbox coupled to a hydraulic motor. Check the oil

1. CHECK the oil level by removing the oil filler plug. The oil level should be at mid height of the input spline.

2. If low, add 85W-140 5EP grade gear oil. Check the oil level every week.



NOTICE

The initial oil should be changed after 50 hours of operation under load. Subsequent oil changes should take place after every 1000 hours of operation.

GEAR BOX OIL CHANGE PROCEDURE

1. Remove oil filler plugs.

2. Insert one end of a discharge hose into the gearbox (SBC model) or bearing housing (SBCNS model) oil filler ports. Then place the other end into an approved waste oil container.

3. Pump out the used oil from the bearing housing or gearbox motor.

4. Refill the bearing housing and gear box with 85W-140 5EP grade gear oil. Remove breather plug on bearing housing and check if oil level is at bottom of hole. The gear box oil level should be at mid height of the input spline.

3.9 SHEAR BOLT REPLACEMENT

THE SBC MODEL (14–20 GPM) REQUIRES A SHEAR BOLT TO PROTECT THE GEARBOX MOTOR.

1. Remove the motor cover.

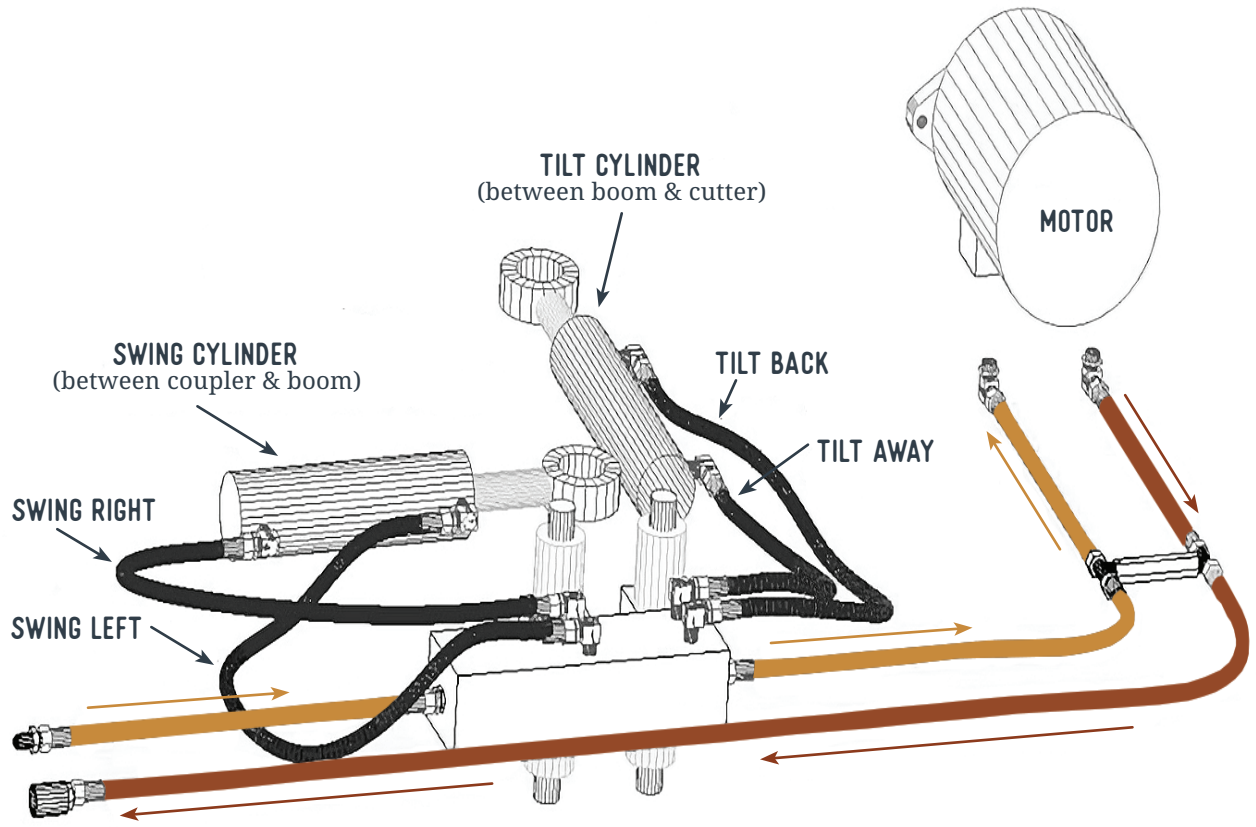
2. Remove the damaged shear bolt from the gearbox input spline.

3. Align the holes in the input spline with the motor coupler and insert new shear bolt.

4. Install shear bolt nut, and tighten.

FIGURE 3.8A – TYPICAL SHEAR BOLT AND NUT

3.10 HYDRAULIC FLOW DIAGRAM



3.11 TORQUE SPECIFICATION TABLE

TORQUE VALUES SAE GRADE 8

	DRY LB-FT	LUBRICATED LT-FT
1/4”	12	9
5/16”	24	18
3/8”	45	35
1/2”	110	80
3/4”	380	280
7/8”	600	450
1”	910	680

TROUBLESHOOTING

4.1 TROUBLESHOOTING CHART

PROBLEM	CAUSE	RESOLUTION
Cutter “bogs” down	Cutter deck is not level causing material to “ball” under deck.	Refer to leveling instructions found in this manual.
	Dull blades	Remove and sharpen blades.
	Ground speed too fast	Reduce your speed.
	Cutter speed too slow	Increase engine RPMs.
Vibration felt when running cutter.	Cutter blades are unbalanced, missing or loose.	Replace cutter blades with a properly balanced set.
	Blade holder is damaged.	Replace blade holder.
	Gearbox loose on cutter deck.	Tighten & torque gearbox mounting bolts.
	Cutting height is set too low.	Raise cutter height.
Cutter blades break or dull too quickly.	Excessive shock loading to the blades when they contact solid objects.	Avoid hitting solid objects (rock, steel pipes, large tree stumps, etc.)
		Raise cutter deck to clear rocky surfaces.
Hydraulic oil level goes down during operation.	Broken hydraulic hose line on brush cutter.	Investigate & repair leak. See Caution below
	Leak in the prime mover’s hydraulic system.	

CAUTION

When Investigating & repairing leak. Wear eye protection and use a piece of cardboard when checking leaks to prevent severe injury to your skin caused by high pressure fluid injection.

PROBLEM	CAUSE	RESOLUTION
Blades do not spin when flow is activated.	No oil flow.	Check skid steer hydraulic circuitry.
	Check valve failure.	Replace check valve.
	Hydraulic motor failure.	Disconnect the drive chain between gearbox and motor then turn blade holder by hand. Motor failure is suspect if blade holder can be turned. Contact dealer for further instruction.
	Gearbox failure.	
	Shearbolt failure.	
Blades turn, but cannot tilt or swing the cutter.	No electrical power to controller or solenoid valves.	Check in-line circuit fuse & replace if necessary.
		Check connections at solenoid valves.

SPECIFICATIONS

SWING BOOM CUTTER		
	14-20 GPM	17-30 GPM
MODEL	SBC	SBCNS
WEIGHT (LB)	1,400	
MSS/ CTL LIFT WEIGHT (LB)	6,500	
MSS/CTL LIFT CAPACITY (LB)	1,800	
MSS/CTL POWER	65 HP	
GEAR OIL	85W-140 5EP	
CUTTING CAPACITY	3"	4"
VERTICAL REACH	16 ft	
HORIZONTAL REACH	8 ft	
CUT WIDTH	44"	

PARTS INFORMATION

Factory fresh parts specifically designed for your implement are readily available.

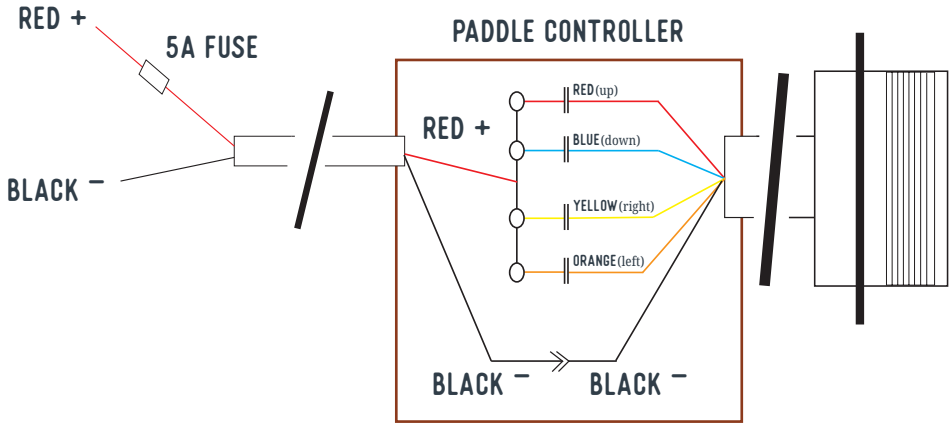
For hassle free service and to ensure you receive the correct parts for your implement, please provide your dealer with the following information:

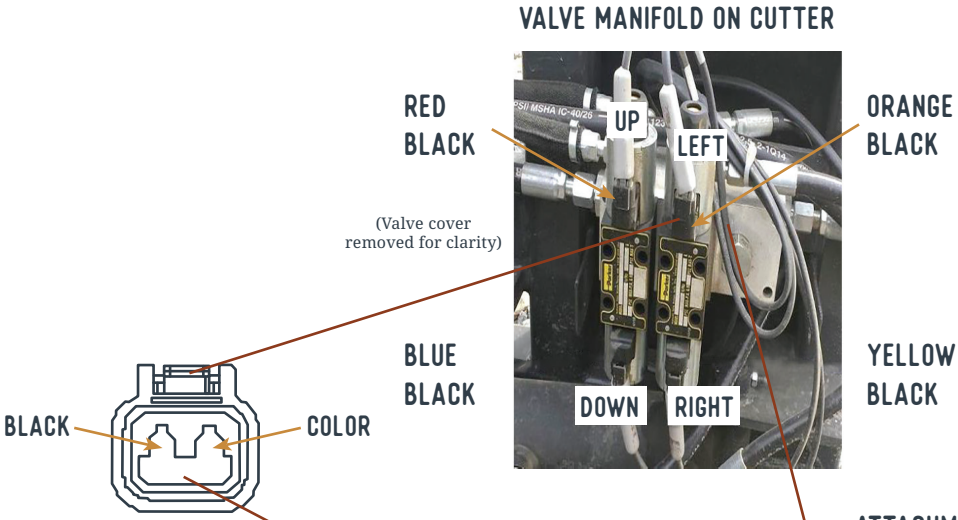
MODEL	
SERIAL NUMBER	
GPM REQUIREMENTS	
DATE OF OWNERS MANUAL (On cover Page)	
PARTS DIAGRAM PAGE NUMBER	
PART DESCRIPTION	
REFERENCE NUMBER	
QUANTITY DESIRED	
SHIP TO INFORMATION	
BILL TO / PAYMENT INFORMATION	

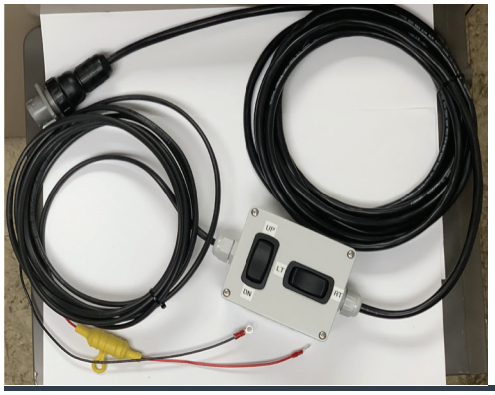
Use Genuine Parts from Construction Implements Depot, Inc.

6.1 PARTS ASSEMBLY DIAGRAMS

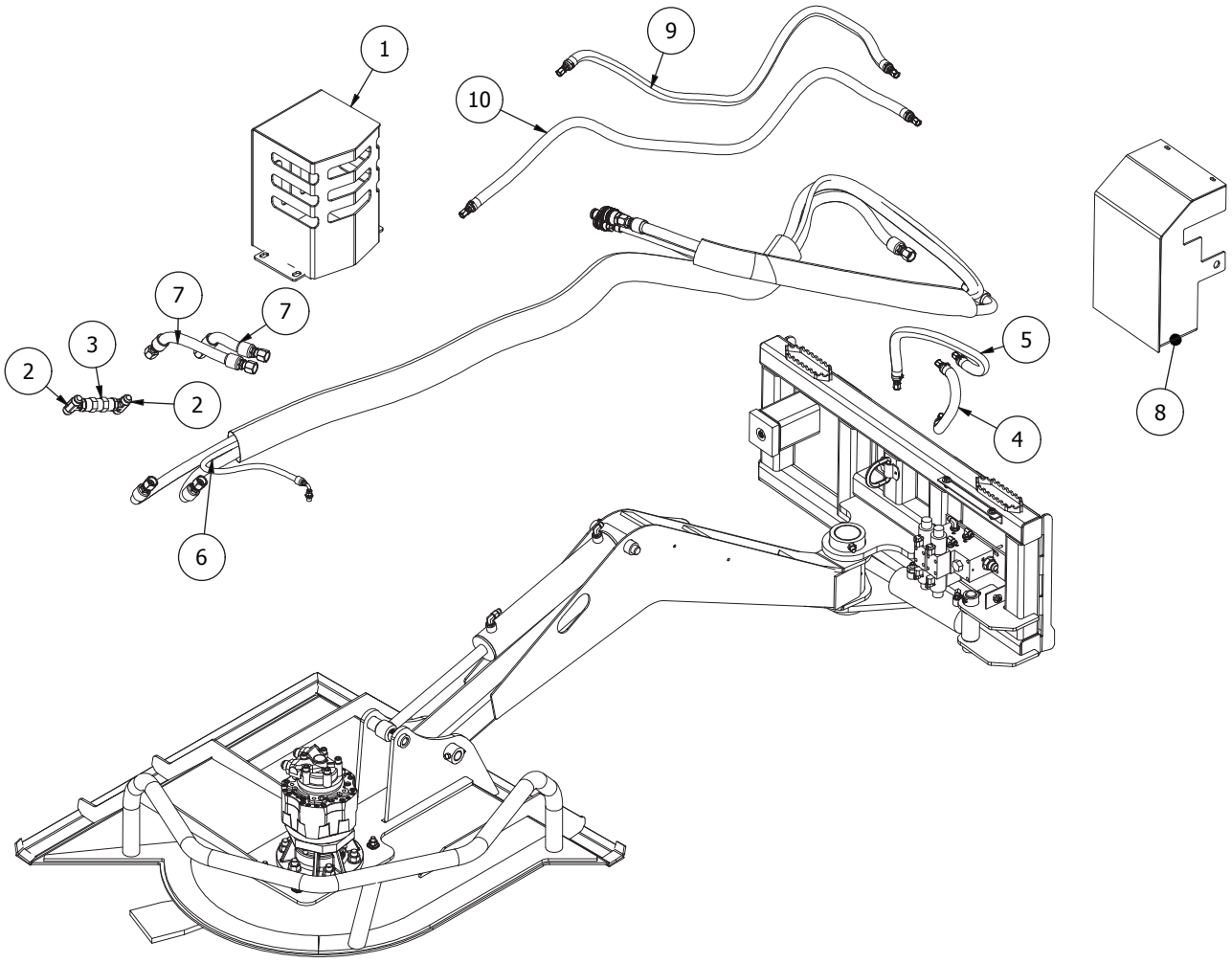
ELECTRICAL DIAGRAMS



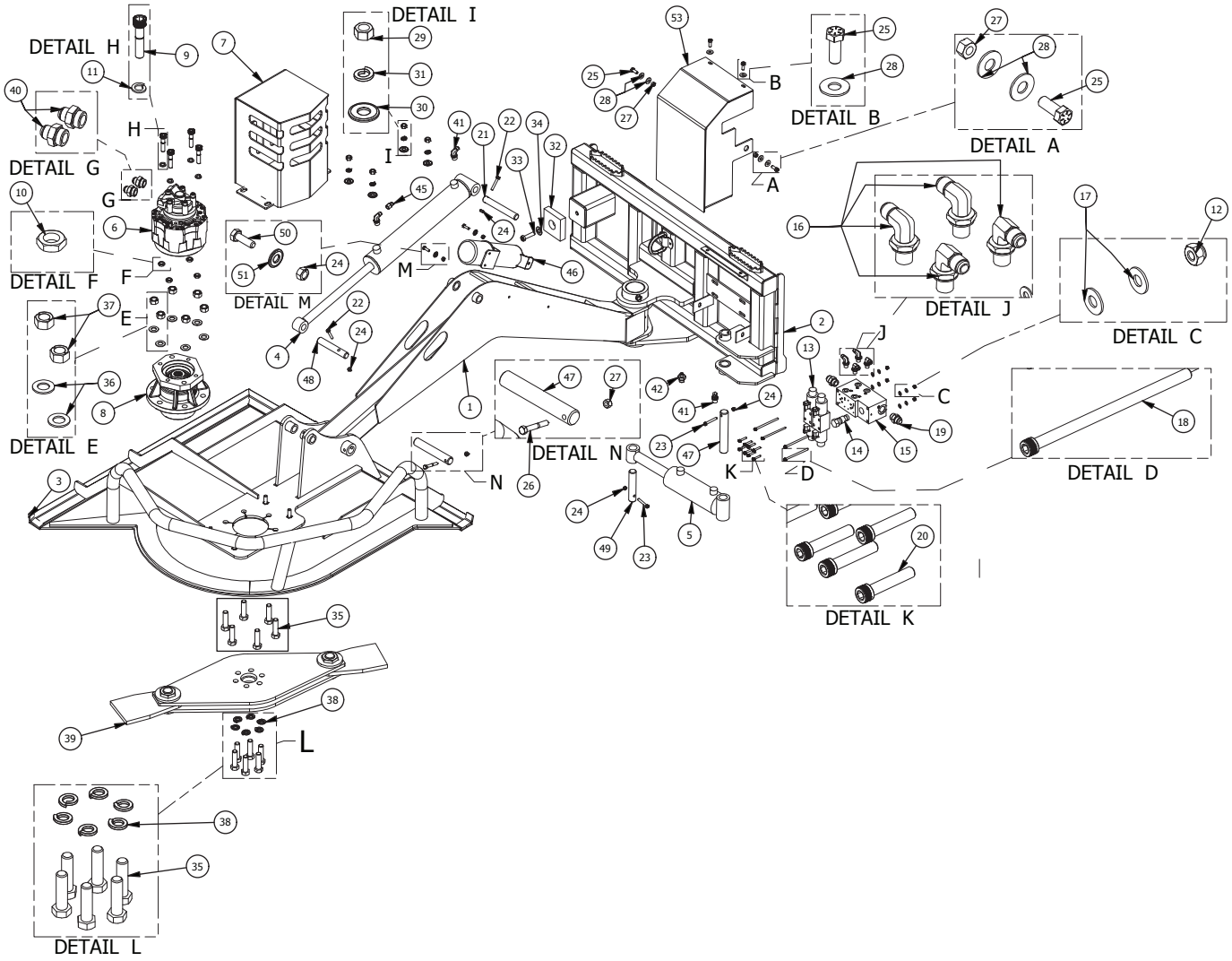




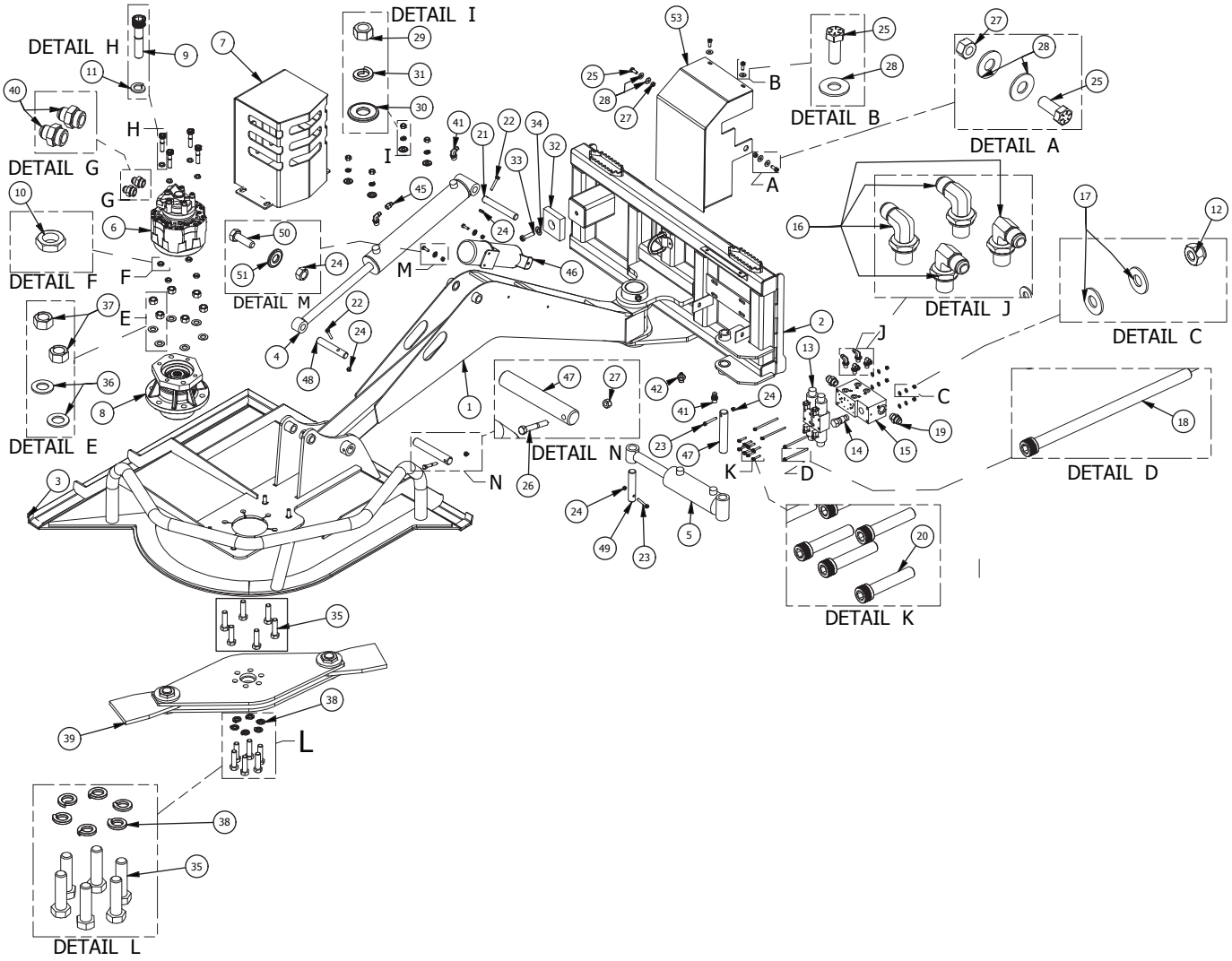
TO BULKHEAD COUPLER
ON SKID STEER ARM OR
PADDLE CONTROL CABLE



REF	PART #	DESCRIPTION	QTY.
1	80400026	Motor Cover	1
2	41000086	Fitting	2
3	40600046	Valve	1
4	51700016	3/8" D x 12" L Hose Kit	1
5	51700026	3/8" D x 24" L Hose Kit	1
6	53300016	Machine Hose	1
7	52100036	3/4" D x 12" L Hose Kit	2
8	80400016	Valve Cover	1
9	51700036	3/8" D x 66" L Hose Kit	1
10	51700046	3/8" D x 83" L Hose Kit	1


DETAIL A
DETAIL B
DETAIL C
DETAIL D
DETAIL E
DETAIL F
DETAIL G
DETAIL H
DETAIL I
DETAIL J
DETAIL K
DETAIL L
DETAIL M
DETAIL N

REF	PART #	DESCRIPTION	QTY.
1	81400016	Arm Weldment	1
2	81400026	Back Frame Weldment	1
3	81400036	Deck Weldment	1
4	40000026	Cylinder	1
5	40000016	Cylinder	1
6	40100016	17-27 GPM Motor	1
7	80400026	Motor Cover	1
8	40200016	Gearbox	1
9	11200016	M14-2 x 65 mm Socket Bolt 12.9 DIN 912	4
10	11200026	M14-2 Jam Nut DIN 439B	4
11	11200036	M14 Lock Washer DIN 127B	4
12	11200076	1/4"-20 Lock Nut GR C	4
13	40600026	Valve	2
14	40600016	Valve	1
15	40600036	Manifold	1
16	41000016	Fitting	4
17	11200066	1/4" SAE Lock Washer GR 8	8
18	11200056	1/4"-20 x 4 1/2" Socket Bolt	4
19	41000046	Fitting	2
20	11200046	1/4"-20 x 1 1/4" Socket Bolt	8
21	20200046	1" D x 7" L Pin	1
22	11200086	5/16"-18 x 2 Hex Bolt GR 8	2
23	11200096	5/16"-18 x 2 1/4 Hex Bolt GR 8	2
24	11200106	5/16"-18 Lock Nut GR C	6
25	11200116	3/8"-16 x 1" Hex Bolt GR 8	4
26	11200126	3/8"-16 x 2 1/2" Hex Bolt GR 8	1
27	11200136	3/8"-16 Lock Nut GR C	3
28	11200146	3/8 USS Flat Washer GR 8	6
29	11200166	1/2"-13 x Hex FIN Nut	4
30	11200186	1/2" USS Flat Washer	4
31	11200176	1/2" Split Lock Washer GR 8	4
32	50000016	Stop	1
33	11200156	1/2"-13 x 2" Hex Bolt GR 8	1
34	11200196	5/8 SAE Flat Washer GR 8	1
35	11200206	3/4"-10 x 2 3/4" Hex Bolt GR 8	12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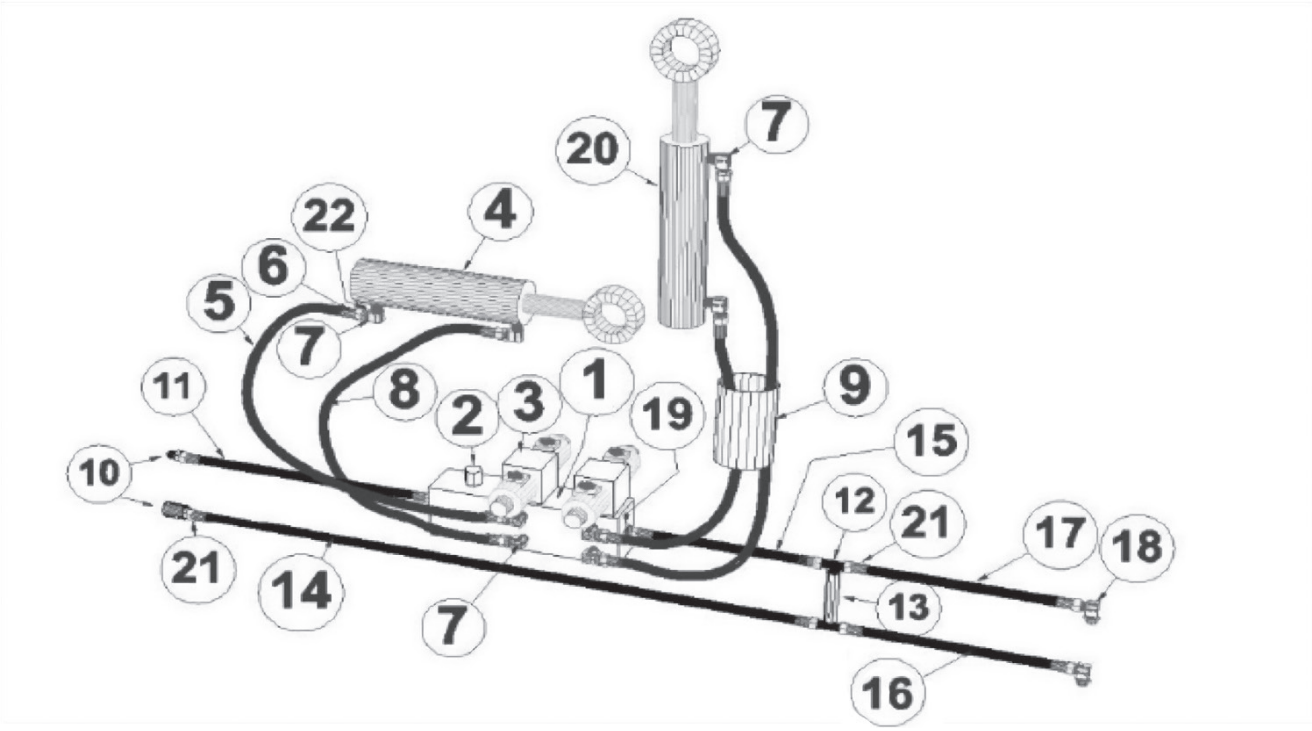
DETAIL N

REF	PART #	DESCRIPTION	QTY.
36	11200236	3/4" SAE Flat Washer GR 8	12
37	11200216	3/4"-10 Lock Nut GR C	6
38	11200226	3/4" Split Lock Washer GR 8	6
39	50100016	Blade Holder	1
40	41000026	Fitting	2
41	41000036	Fitting	3
42	41000066	Fitting	1
43	41000086	Fitting	2
44	40600046	Valve	1
45	41000056	Fitting	1
46	41100016	Manual	1
47	20200036	1.25" D x 7.5" L Pin	2
48	20200026	1" D X 6" L Pin	1
49	20200016	1.25" D X 5.5" L Pin	1
50	11200246	5/16"-18 X 1" Hex Bolt GR 5	2
51	11200256	5/16"-18 USS Flat Washer GR 5	2
52	40700016	Wiring	1
53	80400016	Valve Cover	1

HYDRAULIC COMPONENTS



REF	DESCRIPTION	QTY.
1	Hydraulic Manifold	1
2	Flow Control	1
3	Control Valve	2
4	Swing Cylinder	1
5	3/8” Hose, 21” Long	1
6	Hose End 3/8”	8
7	Elbow 3/8”	8
8	3/8” Hose, 17” Long	1
9	Protective Sleeve Set : 93”, 75”, 60” Long (1/2”, 3/8”)	1
10	Flat Face Couplers	1
11	1/2” Hose, 72” Long	1
12	Tee	2
13	H-Valve	1
14	1/2” x 189” Hose	1
15	1/2” x 110” Hose	1
16	1/2” x 8” Hose	1
17	1/2” x 12” Hose	1
18	Elbow 1/2” (at hydraulic motor)	2
19	Straight Adapter 1/2”	2
20	Tilt Cylinder	1
21	1/2” Hose End	10
22	Restrictor	1

WARRANTY INFORMATION

7.1 WARRANTY INFORMATION

LIMITED WARRANTY

Ironcraft products are warranted to be free from defects in workmanship or materials for a period of 12 months from the initial sale, lease or rental date.

WARRANTY EXCLUSIONS

This warranty does not cover normal wear items, including but not limited to: bearings, hoses, ground engaging parts such as teeth, blades, cutting edges, pilot bits, auger teeth and broom bristles. This warranty does not cover maintenance, service or adjustments. This warranty does not cover damage due to misuse, negligence, accidents, improper maintenance or modifications of this product. This warranty is void if any components have been disassembled, i.e., pumps, gear boxes or motors. Specially modified attachments built by Ironcraft X-treme Attachments to meet your customers' needs shall not be warranted by Construction Implement Depot, Inc. This warranty does not cover replacement parts not supplied by Ironcraft, Inc.

WARRANTY STATEMENT

Our obligation under this Limited Warranty shall be solely limited to repairing or replacing any part (see non-covered items above) free of charge that, according to our judgment, show evidence of a defect in quality of workmanship or materials for the stated 12 month warranty period. All defective parts must be routed directly to Ironcraft with freight or delivery charges to be prepaid. This limited warranty shall not be interpreted to render Ironcraft liable for any injury or damage to persons, businesses or property of any kind nor expenses or losses incurred for labor, supplies, substitute machinery rental or for any other reason. Repair or replacement parts are subject to the supply conditions at the time of repair or replacements, which may directly affect our ability to obtain material and/or replacement parts. Ironcraft reserves the right to make improvements in design or changes in specifications at any time without incurring any obligations to owners of previously purchased products. No one but Ironcraft is allowed to alter, modify or enlarge this warranty nor the exclusions, limitations and reservation at any time.

7.2 WARRANTY SERVICE

WARRANTY SERVICE PROCEDURE

RGA (Returning Goods Authorization) Policy:

If repairs are required, Ironcraft must obtain an RGA number from the manufacturer of the defective part and proof of purchase. RGA and services are rendered by Ironcraft only. Any responsibility of shipping costs on any item returned for repair is at the discretion of Ironcraft.

All returned parts must have:

1. A legible RGA number written on the outside of the package.

2. A Service Request Form.

3. The defective part.

RGA numbers are only valid for 30 days from the date of issue. All shipped replacement parts will require a PO number from the original Ironcraft Customer. If the defective part is rendered non-warranty, the PO number will be invoiced for the replacement. Should you have any problems with your attachment, please follow the following procedures to obtain service.

Call the Warranty Department at (336) 859-2002 ext 215. You will need to provide the model and serial number of the defective item(s), a description of the problem and have photographs available.

Upon a warranted issue, visit www.ironcraftusa.com, click on the warranty tab, and fill in the warranty information. Ironcraft will retain an RGA number from the manufacturer of the defective part. If all the information above is fulfilled the manufacturer will issue an RGA number.

Obtain a PO number from the original Ironcraft customer. PO numbers will be invoiced in the event the defective part(s) is un-warranted

Ironcraft will ship a replacement part with a Service Request Form and RGA #. There will be a call tag with the Manufacturer's address and instructions for returning the defective part.

Once the defective part is warranted by the manufacturer, Ironcraft will be issued a credit and the PO number will be void.

In the event the manufacturer renders that the attachment be returned to Ironcraft for repair, Ironcraft will make arrangements for pickup and return. Repairs will be performed by Ironcraft qualified technicians. Non-warranted issues will be discussed and repairs will be performed upon agreement of the owner, and payment for parts and labor will be issued.

SAFETY ACKNOWLEDGEMENT FORM

ATTN ALL OPERATORS: Print your name, sign and date in the boxes below to acknowledge that you have read and fully understand the safety instructions presented in this manual, and have been trained on how to safely operate this attachment.

OPERATOR NAME	SIGNATURE	DATE

OPERATOR NAME	SIGNATURE	DATE

MAINTENANCE LOG

Use this log sheet to document all routine maintenance and repair services performed on this machine.

DESCRIPTION OF MAINTENANCE	SERVICED BY	DATE

DESCRIPTION OF MAINTENANCE	SERVICED BY	DATE

DESCRIPTION OF MAINTENANCE	SERVICED BY	DATE

DESCRIPTION OF MAINTENANCE	SERVICED BY	DATE

IRONCRAFT

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FEMA FARM EQUIPMENT MANUFACTURERS ASSOCIATION

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