



**SPARTAN
EQUIPMENT**

ARTICULATING BRUSH CUTTER



Owner's/Operator's Manual

⚠ WARNING

For safe operation, read these rules and instructions carefully to avoid accidents that could result in Death or Serious Injury.

TO THE OWNER/OPERATOR OF THIS IMPLEMENT

Please read this manual "before" unpacking or using this implement for the first time. This manual provides you with the necessary instructions to safely install and use your purchase. Do not let other people use this attachment without first being instructed how to safely use it.

Save this manual for future reference!

Thank You

Our sincere appreciation to you on the purchase of a quality Articulating Brush Cutter offered by Spartan Equipment.

Our record of successful and satisfied customers is evidence of the concern for quality and designed strength that we place into each and every product we build.

As this manual expresses the need for safe operation of your acquisition from Spartan Equipment, it is important that you and all operators of this implement become familiar with the operation, maintenance and safety instructions found in this manual, as well as in the manual that accompanied the skid steer machine that will power this attachment. Add some common sense to the items mentioned in these manuals as the recipe for safe operation.

We invite you to look at more innovative products on our web site www.spartanequipment.com.

Sincerely,
Management & Employees
Spartan Equipment.

Information

Record product information here for future reference.

Model _____

S/N or MFG. Date _____

Dealer Name _____

Dealer Phone _____

Date of Purchase ____/____/____

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Orientation



Serial Number Plate is Located at Top of Mounting Plate

Importance of Safety

Accidents can be very costly to human life and property. As the operator is the #1 safety device on all types of vehicles or equipment, it is important that the operator read, learn and know all safety recommendations for this product. The user is responsible to his family, friends and co-workers to operate in a safe manner. Ensure that everyone who operates or assists in the operation or maintenance of this product read and understand all the elements required to safely operate this piece of equipment.

This attachment has spinning blades that include additional dangers.

Throughout this manual you will find safety notes which are very important to read and understand before operating this piece of equipment. These classifications alert you to situations that could be harmful to you or bystanders. When you see these alerts in the manual, carefully read and follow all instructions and also protect other workers from the same danger.

⚠ DANGER Will result in Death or Serious Injury.

⚠ WARNING Could result in Death or Serious Injury.

⚠ CAUTION Could result in Minor or Serious Injury.

NOTICE Not related to Personal Injury.

Operator Safety Training Tips

It is the responsibility of the operator using this attachment to be acquainted with the safe operation. In addition to reading this manual, it is important that the operator read the skid steer's operation manual and follow its manufacturer's recommendations!

⚠ Before raising, lowering or swinging the cutter, make sure area is clear of bystanders or objects.

⚠ Machinery parts sometimes have sharp edges. Wear work gloves when moving parts. Always use caution around cutter blades as they often are very sharp.

⚠ Never use drugs or alcoholic drinks when operating or servicing this piece of equipment.

⚠ Always wear the proper personal protection equipment when servicing or operating this piece of equipment. Never service or operate this attachment with bare feet, sandals, or other light footwear.

⚠ Always use eye protection during operation. Mount this attachment on a skid steer equipped with thermoplastic

polycarbonate door panel and side panels.

⚠ Speed Kills! Operate this implement at a safe working speed. When transporting the implement, keep a safe speed to avoid losing control of the attachment or prime mover.

⚠ Keep proper clearance between the implement and objects (tree stumps, large rocks, buildings, etc.). Contacting these objects with the implement or prime mover could cause a loss of control or damage to the implement.

⚠ Before each operation of this implement, check all hardware (bolts, nuts, pins, cotter pins, etc.) for their proper location and tightness.

⚠ Stop the engine on the skid steer and set the brake to avoid the implement rolling forward or backwards while you are exiting the prime mover.

⚠ Store this implement in an area not frequented by children.

⚠ Allow no riders on this attachment. Keep all bystanders clear of attachment during operation.

⚠ Always replace worn, torn or missing safety decals before operating.

⚠ Never operate the cutter when bystanders are within 300 feet of the work area.

⚠ Use caution when performing service work on or near the machine's

battery. Do not smoke near the battery as battery vapors could ignite.

Skid Steer Requirements

The Articulating Brush Cutter should only be used on 70+ H P skid steers with a lift capacity of at least 1800 lbs. and with a weight of at least 6500# with the bucket removed. A skid steer equipped with tracks will provide superior stability in this application.

You will install the electrical joystick that accompanies this attachment or your skid steer must be equipped with an auxiliary electrical option with an electrical connector mounted on the machine's loader lift arm from the skid steer manufacturer. In order to complete the connection, the mating connector on the loader arm needs to match the connector from the attachment. Refer to the electrical drawing on page 19 of this manual.

⚠ WARNING A 12 V power source coming directly from the battery or from some other circuit that is energized all the time could result in Death or Serious Injury if the attachment control switch is accidentally bumped when the operator is entering or exiting the skid steer with the engine running.

⚠ WARNING California Proposition 65 Warning! Battery posts, terminals, and related accessories contain lead and lead components, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

⚠ CAUTION Always refer to the polarity symbols printed on the top of the battery. Refer to the

markings on the battery to determine the location of the negative (-) cable. If the battery cables are to be removed from the battery, always remove the negative cable first and reinstall the negative cable last.

⚠ WARNING DO NOT smoke around a battery, or use anything that produces an open flame or spark to avoid an explosion that could result in Death or Serious Injury.

The 12V power source for this attachment should be connected into the skid steer's Operator Presence System that cuts the electrical power to the attachment shift valves if the operator safety restraint bar is raised or the seat switch is disengaged when the operator raises from the seat. Consult with your local skid steer dealer for assistance.

When using the provided joystick, route the electrical harness up to the pivot point of the loader arm and tie it with plastic cable ties to the inside of the loader arm to prevent snagging the harness with branches. After installing harness, check that the harness is free from any tension when raising and lowering the loader arm through its complete cycle.



Route harness to back of loader pivot and on the inside of loader arm

To protect the operator from any flying debris, it is important that the skid steer is equipped with a thermoplastic polycarbonate windshield or similar

material, and similar protection on the right side of the operator's cab.

CAUTION *Make sure your skid steer is in good working condition. Follow the operating instructions found in the manual that accompanied your skid steer. Failure to do so could result in Minor or Serious Injury.*

Unpacking Your Shipment

Your attachment arrives from the factory banded to a wooden pallet, and requires no final assembly.

CAUTION *Careless removal of the shipping bands that secure the implement to the pallet could result in Minor or Serious Injury. Clear the area of all bystanders and stand to the side when cutting the bands with a pair of sheet metal shears.*

Using Your Implement

Connecting Cutter to Skid Steer

DANGER *Never enter the area underneath the coupler or any part of the attachment when it is in the raised position to avoid an accident that will result in Death or Serious Injury.*

Verify that the hydraulic hoses and the wire harness are clear from the front of the attaching plate on the attachment and that the mounting plate is free from dirt and debris. When clear, move the skid steer to proximity of attachment plate. Tilt skid steer coupler forward to align coupling point with the upper part on the

attachment plate and raise the coupler slightly.



Connecting Coupler to Attachment

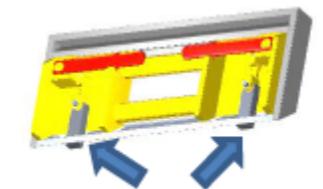
When the top edge of the coupler is seated in the top part of the coupler plate, roll the skid steer tilt function back until the attaching plate is flat against the skid steer coupler. Lock down the coupler levers.

NOTICE *Wipe off any dirt or dust from the male or female hydraulic flat-face couplers with a clean rag before attaching hoses, to keep contaminants from entering the hydraulic system ..*

Connect the cutter hydraulic hoses to the auxiliary circuit connectors on the skid steer. Connect the electrical harness to the appropriate connector on the skid steer.

Check the surrounding area for bystanders and clear them before starting the skid steer or attachment.

Before operating the attachment, always visually inspect and verify that the coupler lock pins are fully engaged through the latch slots on the attachment plate.



Check Coupler Lock Engagement

Cutter Boom Controls

The joystick control can be easily attached to the leg of the operator using the Velcro straps provided.

⚠ WARNING *Always turn the engine "off and remove the joystick controller from your leg before exiting the skid steer cab to avoid unwanted machine or attachment movement that could cause Death or Serious Injury.*

In order to swing or tilt the cutter head, the auxiliary hydraulics to the cutter drive must be turned on.

NOTICE *During operation you may notice that the cutter speed slows down a little while you are activating the swing or cutter deck tilt. When you have completed swinging the boom or tilting the cutter deck, the cutter will resume to its normal rotation speed.*

Engaging Cutter Drive the First Time

NOTICE *If this is your initial startup with this attachment on this machine, check the skid steer's hydraulic oil level and add oil, if necessary, before and after doing steps 1- 6 below.*

After starting skid steer, lift the attachment 36" (915mm) off the ground surface:

1. With the skid steer engine RPMs just above idle, engage the auxiliary hydraulic flow to the cutter head. Use your machine's "Boom Swing" electric switch to rotate cutter boom to the right. Stop when the cutter has rotated 90°.

2. Rotate the cutter head back to the straight-ahead position.
3. Rotate the "Cutter Tilt" using the electric control switch until the cutter hits the stop.
4. Tilt cutter head in the opposite direction until it hits its stop.
5. Return cutter head to the level position and the cutter boom to the straightforward position. Allow the cutter to run for 30 seconds to purge the air from the system. Turn off the cutter drive, allowing it to come to a complete stop.
6. Lower the cutter attachment to the ground and shut off the skid steer's engine and exit the operator's compartment.
7. Check the skid steers hydraulic oil level, and add oil if necessary.
8. Inspect the cutter hydraulic plumbing for any noticeable leaks. Correct these leaks before continuing.
9. Restart the skid steer. With the attachment raised off the ground and the engine throttle set just above idle, engage the cutter drive circuit to start cutter. Allow cutter to come up to speed before increasing engine speed.

Starting the Cutter

⚠ WARNING *Moving or engaging the cutter with bystanders in the area could result in Death or Serious Injury. Before engaging cutter hydraulics, always make sure the area is clear of bystanders.*

Engage the cutter drive hydraulics with the prime mover's engine at a low rpm. Slowly raise the skid steer engine's rpm to the correct and desired cutter speed. Use the skid steers throttle to set the speed; never use a foot throttle when using the cutter.

NOTICE If the cutter creates a vibration when ramping up speed, turn the cutter attachment to the off position and investigate cause. Refer to today Troubleshooting section in this manual.

Stopping the Cutter

When stopping the cutter, raise the cutter slightly and lower the skid steer's engine RPMs to an idle, and allow the cutter to slow down. After the cutter has slowed down you may turn the auxiliary hydraulics to the "off" position.

Getting Familiar with the Attachment

DANGER Never operate the cutter when bystanders are within 300' of your work area. Flying debris could result in Death or Serious Injury.

CAUTION Be cautious when operating on un-level ground surfaces. A machine roll over could result in Minor or Serious Injury. Always wear your seat belt when operating this attachment.

Before starting the skid steer engine with this cutter attached, make sure you are knowledgeable and comfortable with the operation of the brush cutter controls as outlined in the previous and following sections of this manual.

NOTICE Do not over-speed the cutter by allowing more than 20 GPM to the cutter head. This attachment requires 14-20 gallons of flow to cut efficiently.

When operating the cutter, set the skid steer throttle at a speed that will

produce the required flow. Refer to your skid steer manual or call your local skid steer dealer for additional help, if necessary. Your skid steer dealer can measure the flow available on your machine and recommend a throttle setting that is compatible with this attachment.

To begin with, learn what the cutter head looks like in a level cutting position when you are seated in the skid steer. Knowing what a level cutter head looks like will help you avoid damage to the cutting blades by cutting too close to the ground surface.

Rotate the boom 90° to the right and learn what the level position looks like when cutting off to the side of the skid steer. Rollout the skid steer's tilt cylinder and notice how it affects the cutter head.

The correct ground speed for cutting with this attachment can be monitored by sound and feel and depends on the material density. If the skid steer engine is bogging down or if the cutter speed is turning too slow because of too much load, the ground speed should be decreased.

Listen and feel for any strange vibration when working the cutter. A bad vibration felt when cutting could indicate a damaged cutting blade, or material trying to be cut at too fast a pace. Slow down the skid steers ground speed to see if vibration stops. If it does not, stop the cutter, turn off the skid steer engine and investigate cause of vibration. Refer to the Troubleshooting section in this manual for further instructions.

Always be aware of your surroundings. When the cutter is swung 90°, the operator has a much larger path to

keep aware of. While watching the cutter, also pay attention to what obstacles or terrain are in front of the cutter boom and prime mover. Maintain a safe speed while cutting.

CAUTION Cutting brush and tree branches with the cutter in an elevated position could result in Death or Serious Injury if the skid steer becomes unstable. Never raise the cutter more a few feet off the ground when working on slopes or uneven terrain.

Adjusting Cutter Height & Level

Use the skid steer loader lift to adjust the elevation of the cutter. The fore & aft leveling can be accomplished by using a combination of the tool cylinder mounted on the boom and the skid steer's attachment tilt cylinders.

When the cutter is at the 0° position (straight in front of skid steer) the tool cylinder on the boom can be moved to level the deck.

When the cutter is at the 90° position, it can be leveled by using the tool cylinder connected to the attachment, as well as slight variations in the skid steer tilt cylinders.



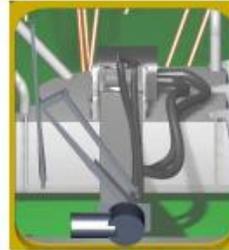
Bank Cutting

Swinging Cutter

DANGER To prevent Serious Injury or Death from pinching,

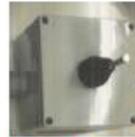
keep all persons and objects away from this attachment while it is operating.

Your Articulating Brush Cutter has the capability of rotating 90° to the right of the skid steers mounting point, or stopping anywhere between 0° and 90°. Before swinging the boom to the right or back to center make sure there are no objects in the way that could hinder the movement of the boom swing.



View through cab door with cutter in straight-ahead position

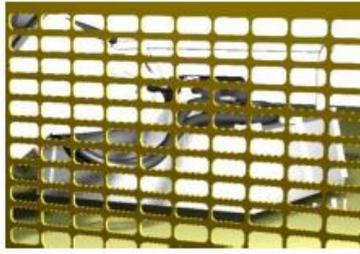
To rotate the cutter boom, push the joystick right or left for the boom swing function. To tilt the cutter, move the joystick forward or back to adjust the deck.



Joystick Controller Supplied with Attachment



Example of skid steer manufacturer supplied auxiliary electric controller



Operator's view with cutter swung 90°

CAUTION With the boom swung at 90°, make sure you are aware of any obstacles directly in front of the skid steer or in front of boom, when moving the skid steer.

CAUTION Use care when operating on uneven terrain or any type of sloped surface. Keep your cutter low to the ground when working in these conditions to avoid a roll over that could result in Minor or Serious Injury.

Determine a safe cutting pattern before swinging the boom and cutter. Stop the forward progress of the skid steer loader until the boom is swung to the desired position until you are fully familiar with the movement of the attachment.

Before Cutting

Inspect the area to be cut and make sure it is free of any utilities, rocks, fence posts, or any other objects that you do not want to cut or that would damage the cutter.

Do not enter into an area to be cut before the cutter rotation come up to the operating speed.

Cutting Tips

CAUTION Never operate this attachment when bystanders are in proximity of the work area that could result in Minor or Serious Injury from flying debris.

1. Always inspect work area before starting the cutter. Locate and mark any utilities, steel posts, rocks or any other objects that could be damaged or would damage the cutter during operation. Never assume the work area is safe and never skip the inspection part before start of operation.
2. Operate at a safe slow-paced speed that will allow you to watch the area ahead of the skid steer and also ahead of the boom and cutter when the cutter is swung away from the straight-ahead position.
3. Make sure you are operating the skid steer's engine at an rpm that will produce the volume of oil flow required for this attachment.
4. If the cutter speed slows down, reduced your travel speed and allow cutter to reach the proper rotating speed. Mowing too fast in thick material could result in balling of material underneath the cutter deck resulting in a loss of cutting efficiency.
5. Never use your cutter to push, pull, lift or move any type of object or vehicle. Do not use this attachment to "push" down trees.
6. Always allow cutter to come up to operating speed before moving attachment into the material you want to cut.
7. If material constantly is balling underneath cutter deck, try tilting the leading edge of the cutter to be about 1" lower than the rear of

the cutter. This should allow a more efficient material flow under the cutter deck.

8. Use the v-notch in the top of the cutter deck to capture small trees (up to 3" (76mm) for cutting.



Using V-Cut in deck for small trees

Vertical Cutting

Your Articulating Brush Cutter has the capability to cut vertically to widen pathways, roadways, or along the edge of a crop field to allow access for tractors and combines.

⚠ WARNING *Vertical cutting can disperse debris over a large area. To avoid an accident that could result in Death or Serious Injury, do not operate the cutter when bystanders are within 300' (91m).*

⚠ CAUTION *To avoid Minor or Serious Injury, never swing the cutter boom past the side tipping capacity of your skid steer when the cutter is in the raised and vertical position. Know the capability of your machine and notice the terrain you are working on.*

Raise the skid steer loader arm and tilt the cutter head to the vertical position. Swing the boom to the right to access the area to be cut. Raise and lower the skid steer's lift to trim back over- hanging branches.



Vertical cutting along access road

Maintaining your Attachment

Blade Removal & Replacement

⚠ CAUTION *Cutter blades can be very sharp and could cause Minor or Serious Injury if mishandled. Always wear protective gloves and footwear.*

Plan your removal of the cutter blades around the vicinity of an overhead hoist. Position the cutter attachment with cutter deck in the vertical position so you can access the blade and holder bracket.



Blades & Holder

Sling the holder from the hoist and remove the 6 x W' bolts from the center of the blade holder. Lower the holder to the floor or to a suitable work surface.

Use a cutting torch to remove the head of the blade mounting bolt, and drive the bolt shaft out of the blade holder end.

Install the new or sharpened blade into position and secure the blade with a new bolt, bushing spacer & nut, and apply red thread lock to the bolt threads. Torque hardware to 3100 lb-ft (4200 Nm) using a torque multiplier. Weld the center of the bolt to the inside diameter of the nut mounted in the hex slot on the back of the holder.



Weld O.D. of bolt shank to I.D of hex nut

Repeat this procedure on the other blade end before installing the holder back on the attachment. Install new hardware to secure the holder to cutter drive. Torque the six (6) blade holder bolts to a minimum of 600 lb-ft (813 Nm).

NOTICE *Always service (sharpen or replace) the blades as a set. Never run cutter with unmatched blades.*

CAUTION *Not maintaining your implement correctly could result in Minor or Serious Injury. Keep your implement in top operating condition.*

Before Every Use

Check that all fasteners (nuts, bolts, pins, keepers) are in their right place and are tight.

Inspect and replace any worn, torn or missing safety decals.

Pump No.2 lithium or molybdenum disulfide grease into all required areas

until you see old grease is being flushed out.

Investigate the location of any oil leaks and repair.

After every use, clean off any dirt residue with a garden hose and repeat grease application.

Every Week

Check the condition of the blades by raising the cutter attachment off the ground and tilt the attachment back to the 90° position. Lower the attachment to the ground.

Inspect the cutter blades and remove and sharpen them if necessary. Sharp cutter blades will cut more efficiently than dull blades.

After Every Season

Inspect the implement for any loose or worn parts that may need to be replaced prior to the next cutting season.

Visually inspect the cutting blades. Sharpen or replace them, if necessary.

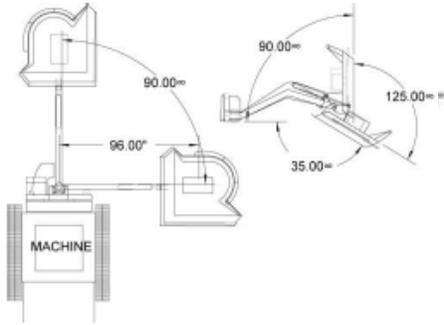
Clean, sand & repaint any area that looks worn or scratched to prevent further rusting. Use an equipment-paint found at your local hardware store or building center.

Lubricate all pivot joints. If located in an area near an ocean or other corrosive conditions, apply a thin layer of grease to any exposed cylinder rod surfaces. Wipe grease from cylinder rods with a clean rag when taking the attachment out of storage.

Store your implement in a shed or cover with a water-proof tarp to

protect it from the weather. Store in an area not frequented by children.

Specifications



Spec.	Measurement
Minimum Skid Steer Weight*	65001bs. (2950 kg)
Minimum Skid Steer Power	70 HP (52 kW)
Cut Width	42" (1067mm)
Boom Swing Range	90°
Cutter Tilt from Level	+90° -35°
Farthest cut from centerline of skid steer	9.75' (2.97m)
Minimum Hydraulic Flow	14GPM (53l/min)
Maximum Hydraulic Flow	20GPM (76l/min)
Hydraulic Relief Setting	3000 PSI (207 bar)
Required Hydraulic Flow	14-20 GPM (53-76 L/m)
Attachment Weight	10251bs. (465 kg)

*A skid steer equipped with tracks will provide superior stability compared to a non-track unit.

Hardware Torque

	Grade 2 lb-ft	Grade 5 lb-ft	Grade 8 lb-ft
1/4"	66*	8	12
5/16"	10	17	20
3/8"	20	30	45
1/2"	45	75	110
3/4"	160	260	380
7/8"	190	400	600
1"	-	580	900
1 1/2"			3100

* = inch pounds

Higher torques require the use of a torque multiplier
All values are "dry" torques

Special Bolt Torques

Torque blade holder bolts (see item 13 on the next page) to a minimum of 600 lb-ft. (813 Nm).

Parts

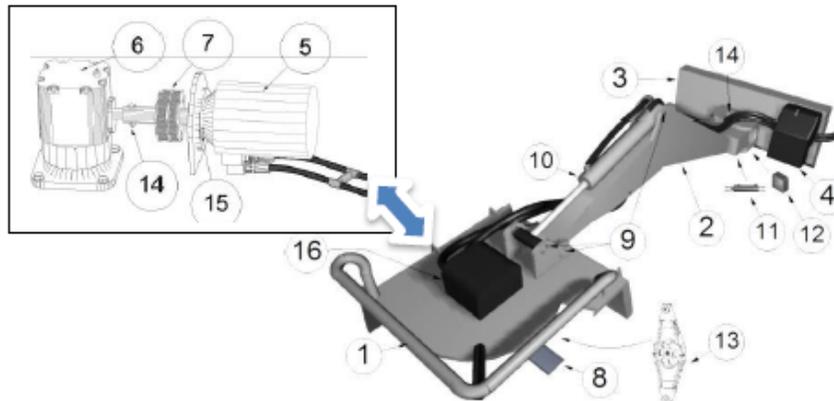
When requiring any parts for your implement, please collect the following information:

- Implement Model Number
- Implement Serial Number
- Parts Manual Date (lower right corner)
- Parts Manual Page
- Part Description
- Quantity Required
- Ship-to Name & Address
- Payment Method

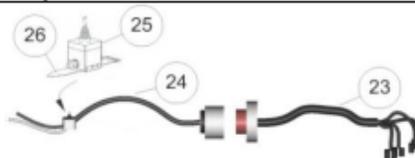
... then call your local dealer for factory fresh parts specifically designed for your attachment.



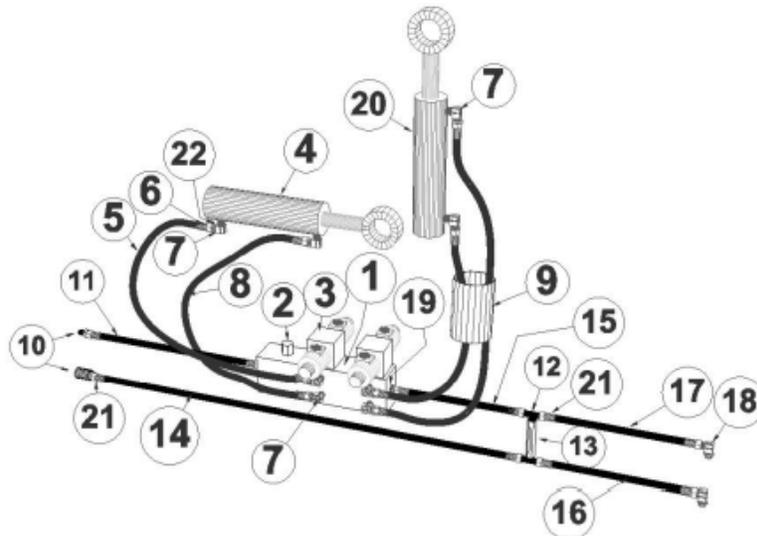
Cutter Parts



Ref.	Description	Qty.
1	Cutter Deck	1
2	Boom	1
3	Mounting Plate	1
4	Cover	1
5	Hydraulic Motor	1
6	Gearbox	1
7	Chain & Sprocket Set	1
8	Cutter Blade Set	1
	Bolt, Blade Mounting 1 ½" – 6 x 3" Gr. 8	2
	Jam Nut, 1 ½" – 6 Hex	2
	Bushing, Special	2
9	Pin	3
10	Tilt Cylinder	1
11	Swing Cylinder (includes pins)	1
12	Bumper, Swing	1
13	Blade Holder	1
	Bolts, Blade Holder Mounting ¾" – 10 x 1.75" Gr.8	6
	Washer, Nordlock ¾" Blade Holder Mounting	6
14	Bolt, Special Shear	1
15	Bolts, Motor Mounting ½" – 20 x 1.5" Gr. 8	2
16	Cover, Cutter Deck	1
23	Wire Harness, (Attachment side)	1
24	Wire Harness, (Machine side)	1
25	Joystick	1
26	Leg Strap	1



Hydraulic Plumbing Parts



Ref.	Description	Qty.
1	Hydraulic Manifold	1
2	Flow Control	1
3	Control Valve	2
4	Swing Cylinder	1
5	3/8" Hose, 21" (533mm) Long	1
6	Hose End 3/8"	8
7	Elbow 3/8"	8
8	3/8" Hose 17" (432mm) Long	1
9	Protective Sleeve 93" (2362mm) Long	1
	Protective Sleeve 75" (1905mm) Long	1
	Protective Sleeve Set 60" (1524mm) Long (1/2" & 3/8")	1
10	Couplers, Flat Face, Set	1
11	1/2" Hose, 72" (1829mm) Long	1
12	Tee	2
13	Check Valve	1
14	1/2" Hose, 189" (4.8m) Long	1
15	1/2" Hose, 110" (2794mm) Long	1
16	1/2" Hose, 8" (203mm) Long	1
17	1/2" Hose, 12" (305mm) Long	1
18	Elbow 1/2" (at hydraulic motor)	2
19	Adapter, Straight, 1/2"	2
20	Tilt Cylinder	1
21	Hose End 1/2"	10
22	Restrictor	1

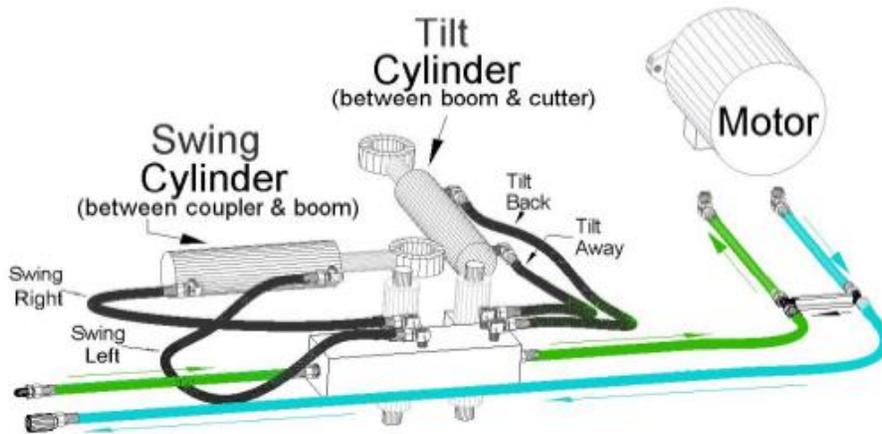
Note: Stated hose length measurements do not include hose ends

Troubleshooting

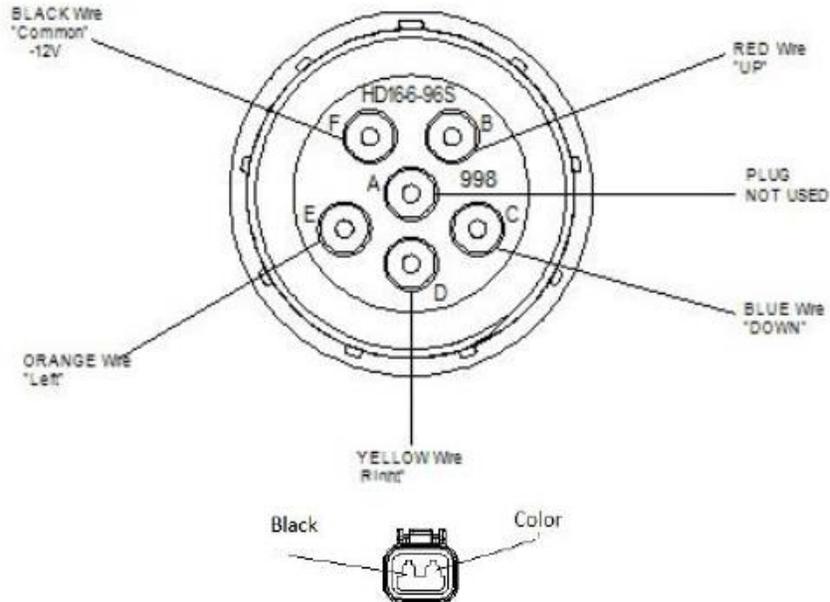
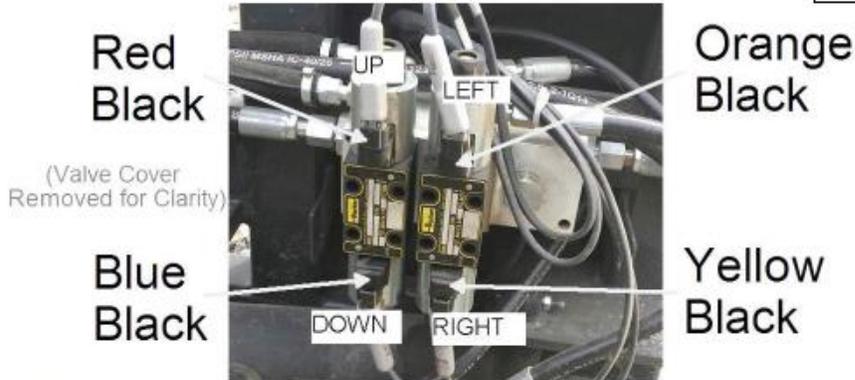
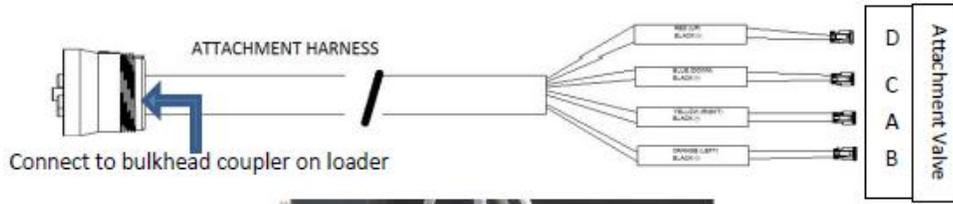
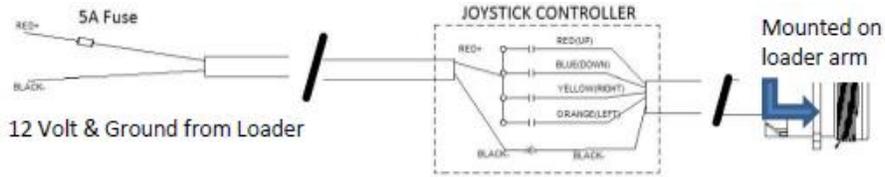
Problem	Cause	Resolution
Cutter bogs down	Deck is not properly leveled & material is balling under deck	Refer to leveling instructions found in this manual.
	Dull blades	Remove and sharpen blades.
	Ground speed too fast	Slow down ground speed.
	Cutter speed too slow	Raise engine RPMs or investigate other low oil flow problem
Vibration felt when running cutter	Missing, loose, damaged or unbalanced cutter blades	Replace blades with new or re-sharpened and equally balanced blades.
	Blade mount damaged	Replace blade mount
	Gearbox loose on deck	Tighten & torque gearbox mounting bolts. Replace bolts if they are damaged.
	Cutting height too low for cutting in sandy or rocky soils	Raise cutter height.
Blades get dull too quickly	Blades have contacted solid objects (rocks, steel pipes, etc.)	Clear cutting area of solid objects before hitting them, or raise the cutter height to clear exposed rock surfaces.
Blades breaking	Excessive shock loads	Avoid hitting solid objects (rock, steel pipes, large tree stumps, etc.).
Hydraulic oil level goes down during operation	Leak at valve, cutter motor or other plumbing	Investigate & repair
	Leaks in skid steer hydraulic system	Investigate & repair
Blades do not spin when flow is activated	Shear bolt between motor and gearbox is sheared	Replace with proper shear bolt specified for this unit.
	Motor or gearbox failed	Disconnect the drive chain between motor & gearbox. If blade holder can be turned by hand, motor failure is suspect. Call the Factory for further instructions.
	Check valve failure	Remove check valve from tees, cap the tees and attempt to run cutter. If cutter spins, replace the check valve.

Blades turn, but cannot tilt or swing cutter	No electrical power to controller or solenoid valves	Check in-line circuit fuse. If blown, investigate cause & replace.
		Check connections at solenoid valves.
		Check that circuit has a good ground.
		Have local skid steer dealer check the Operator Presence System

Hydraulic Flow



Electrical





Owner's Manual **Articulating Brush Cutter**

Website

www.spartanequipment.com

For More Information, Contact

contact@spartanequipment.com

Phone: 1-888-888-1085

Limited Warranty

Spartan Equipment. products are warranted to be free from defects in workmanship or materials for period of (12) months from 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, or improper maintenance. This warranty does not cover damage due to improper application, installation, adjustment or setup. This warranty does not cover improper modifications of product. This warranty is void if any components have been disassembled, i.e. pumps, gear boxes, motors.

Specially modified attachments offered by Spartan Equipment to meet your customer's needs shall not be warranted by Spartan Equipment.

This warranty does not cover replacement parts not supplied by Spartan Equipment.

Warranty Statement

Our obligation under this Limited Warranty shall be solely limited to repairing or replacing any part (see non-covered items) 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 Spartan Equipment with freight or delivery charges to be prepaid. This Limited Warranty shall not be interpreted to render Spartan Equipment liable for any injury or damage to persons, business 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 replacements parts. Spartan Equipment reserves the right to make improvements in design or changes in specifications at any time without incurring any obligations to owners of previously purchased units. No one but Spartan Equipment is allowed to alter, modify or enlarge this warranty nor the exclusions, limitation and reservation at any time.