



X-treme Duty Single & Dual Motor Tillers



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.



Construction Implements Depot, Inc.

1248 N. Main Street

Denton, NC 27239

(336) 859-2002

Save this manual for future reference!

Thank You

Our sincere appreciation to you on the purchase of a quality Tiller designed and manufactured in the USA by Construction Implements Depot, Incorporated. Product experience of a combined 30 years is the cornerstone of our company, and our goal is to provide you with a heavy duty product that will give you years of satisfaction and operation.

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 Construction Implements Depot, Inc., 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: <http://www.cidattachments.com> or if in the area stop and visit our modern manufacturing facilities located in Denton, NC.

Sincerely,
Management & Employees
Construction Implements Depot, Inc.

Information

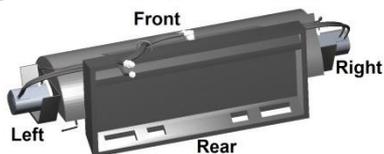
Record product information here for future reference.

Model (✓)	
<u>Low Flow (14-20 GPM)</u>	<u>High Flow (20-40 GPM)</u>
72" _____	72" _____ 84" _____
S/N & MFG. Date _____	
Dealer Name _____	
Dealer Phone ____-____-____	
Date of Purchase __/__/____	

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Orientation



*Serial Number Plate is Located on 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 tines 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 moving, lifting or lowering the tiller, make sure the area is clear of bystanders or objects.

 Machinery parts sometimes have sharp edges. Wear work gloves when moving parts. Always use caution around tiller 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 (utilities, 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 or property.

 Before each operation of this implement, check all hardware (bolts, nuts, 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 tiller when bystanders are within 25 feet (7 m) of the work area.

 Till only during daylight or well-lit artificial light.

Skid Steer Requirements

Your tiller should only be used on a skid steer 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.

The availability and capability of a high-flow system on your skid steer loader may determine which model of tiller will work best for you.

To protect the operator from any flying debris, it is important that the skid steer should be equipped with a thermoplastic polycarbonate windshield or similar material, and similar protection on the sides 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 before use.

⚠ 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.*

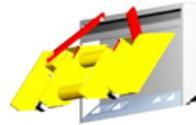
Using Your Implement

Connecting Tiller 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 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. **Note:** If your skid steer is equipped with a hydraulically operated coupler, activate the coupler lock at this time.

○
PLEASE NOTE:
Attachment and Machine-
side Couplings must be
FREE OF DEBRIS
BEFORE INSTALLING.
Failure to comply will void
warranty.

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.*

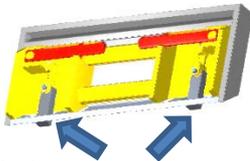
NOTICE *(High Flow Tiller) Never operate this tiller without the*

case drain hose connected to the case drain circuit on the prime mover.

Connect the attachment hydraulic hoses to the auxiliary supply couplers located on your skid steer loader lift arm.

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

Pre-Operation Walk-around Inspection

Before every use, it is important to perform a short inspection and certain maintenance on your tiller.

	Item
✓	Check that all shields and guards are in place.
✓	Look for loose bolts and tighten them if necessary.
✓	Check that all safety decals are in place and can be read. Replace them if necessary.
✓	Check that tines are in good condition. Replace any, if necessary.
✓	Take care of our environment. Repair any hydraulic leaks.

Tiller Controls

Your tiller is designed to run off the skid steer loaders auxiliary hydraulic system, and is activated and deactivated by a control in the operator’s cab. Consult your skid steer operator’s manual for precise instructions on how to activate and deactivate the hydraulic auxiliary circuit.

Height and tilt functions of the tiller are operated with the control handles or pedals in the cab. Consult your skid steers operator’s manual for precise instructions regarding these functions.

Engaging Tiller 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- 3 below.*

NOTICE *(High Flow)Make sure 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.*

After starting skid steer, lift the attachment 6” (152mm) off the ground surface:

1. With the skid steer engine RPMs just above idle, slowly engage the auxiliary hydraulic flow to the tiller head. Use your machine’s auxiliary hydraulic flow lever or switch, activate the auxiliary flow to the tiller.
2. Allow the tiller to run for 30 seconds to purge the air from the system. Turn off the tiller drive,

allowing it to come to a complete stop.

3. Lower the tiller attachment to the ground and shut off the skid steer's engine and exit the operator's compartment.
4. Check the skid steers hydraulic oil level, and add oil if necessary.
5. Inspect the tiller hydraulic plumbing for any noticeable leaks. Correct these leaks before continuing.
6. Restart the skid steer. With the attachment raised off the ground and the engine throttle set just above idle, engage the tiller drive circuit to start tiller. Allow tiller to come up to speed before increasing engine speed.

Starting the Tiller

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

Engage the tiller 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 tiller speed. Use the skid steer's hand throttle to set the speed; never use a foot throttle when using the tiller.

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

Stopping the Tiller

When stopping the tiller, raise the tiller slightly and lower the skid steer's engine RPMs to an idle, and allow the tiller to slow down. After the tiller has slowed down you may turn the

auxiliary hydraulics to the "off" position.

Getting Familiar with the Attachment

⚠️ DANGER *Never operate the tiller when bystanders are within 25' (7m) 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 type of machinery.*

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

When operating the tiller, 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 tiller head looks like in a level tilling position when you are seated in the skid steer. Knowing what a level tiller head looks like will help you maintain a constant depth of cultivation.

The correct ground speed for tilling 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 tiller 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 tiller. A bad vibration felt when cutting could indicate a damaged tilling knife, 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 tiller, 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. While watching the tiller, also pay attention to what obstacles or terrain are in front of the tiller and prime mover's wheels. Maintain a safe speed while tilling.

NOTICE *Cutting tree roots with the tiller could result in damage to the tiller attachment. If the presence of a root becomes apparent, raise the tiller attachment to a point above the obstruction.*

Adjusting Tiller Depth & Level

Use the skid steer loader lift to adjust the depth of the tiller. The fore & aft leveling can be accomplished by using the skid steer's attachment tilt cylinders.

NOTICE *When tilling dense, heavy or hard soil, you may want to make multiple shallow passes with the tiller until the desired depth is achieved.*

CAUTION *Use care when operating on uneven terrain or any type of sloped surface. Keep your tiller*

low to the ground when working in these conditions to avoid a roll over that could result in Minor or Serious Injury.

Before Tilling

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

Determine a tilling pattern before the start of the job

Do not lower the attachment into the ground before the tiller rotation come up to the operating speed.

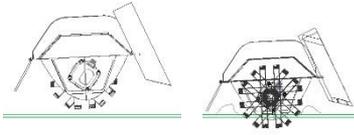
Tilling Tips

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 tiller. Locate and mark any utilities, steel posts, rocks or any other objects that could be damaged or would damage the tiller 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 tiller & behind the loader.
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.

First Pass

4. Raise the rear of the tiller approximately 4" (102 mm) above ground level. The tiller should be fairly level with the ground surface.



Before and after entering into soil

5. Lower the attachment so the tines are at your desired depth. Your tiller can be then be driven in the forward or reverse direction when tilling.
6. **Note:** During the final pass of ground preparation, tilling in the reverse direction will cover up the skid steer's tire tracks resulting in a cleaner final surface when completed.

Tine Rotation

7. The general rule of tilling is to rotate the tines in the same direction as the skid steer tires/tracks are rotating, although, reversing the tine rotation sometimes will better bury the vegetation, if that is the operator's intention.

⚠ CAUTION *Do not operate the tiller if you (the operator) can see the tiller tines. If the operator can see the tiller tines, the back of the tiller is raised TOO HIGH and should be lowered to avoid debris being thrown back at the operator and causing Minor or Serious Injury.*

8. If the tiller speed slows down, reduced your travel speed and allow tiller to reach the proper rotating speed. Tilling too fast in

thick material could result in balling of material underneath the tiller frame resulting in a loss of efficiency, especially in wet conditions.

9. Never use your tiller to push, pull, lift or till any type of object or vehicle. Do not use this attachment to "push" down brush or significant plant life.
10. Always allow the tiller to come up to operating speed before moving the attachment into the material you want to till.

Maintaining your Attachment

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.

Investigate the location of any oil leaks and repair.

Check the hydraulic oil level in the skid steer. Add the recommended oil, if necessary.

Every Week

Check the condition of the tines by raising the tiller attachment off the ground and tilt the attachment forward to the 90° position. Lower the attachment to the ground.

Inspect the tiller tines and replace any worn, broken or bent, if necessary. New tiller blades will cut more efficiently than worn or bent tiller 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 tilling tines. Replace any worn, bent or missing tines, 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.

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.

Tine Removal & Installation

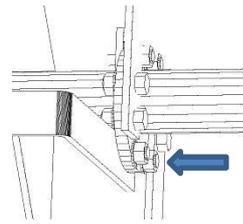
⚠ CAUTION *Tiller blades can become very sharp and could cause Minor or Serious Injury if mishandled. Always wear protective gloves and footwear.*

Removal:

Tilt the skid steer's tool cylinder all the way forward to place the attachment in a near vertical position. Secure the rear of the tiller with an overhead hoist.

⚠ DANGER *To avoid an accident that could result in Death or Serious Injury, never place yourself or any body part under an unsupported attachment or raised skid steer loader arm.*

Identify the worn or broken tine that needs to be replaced. Remove the two sets of hardware securing the tine to the rotator shaft.



Tine Hardware

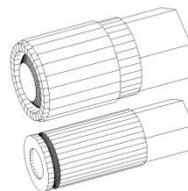
Inspect the hardware. If the bolt had become loose in the rotator shaft collar and shows wear, replace the old hardware with new using the identical bolt diameter and length.

Hydraulic System

⚠ WARNING *A small stream of oil from a pinhole leak could penetrate your skin if contacted. To avoid an accident that could result in Death or Serious Injury, never use your hand or other body parts in an attempt to locate a hydraulic leak.*

NOTICE *Always release the hydraulic system pressure from the tiller circuit prior to removing the attachment or any hydraulic system service work.*

NOTICE *(High Flow models) Make sure 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 and connected to the skid steer case drain circuit.*



Main

Hardware Torque

	Grade 2 lb-ft	Grade 5 lb-ft	Grade 8 lb-ft
			
¼"	66*	8	12
5/16"	10	17	20
3/8"	20	30	45
½"	45	75	110
¾"	160	260	380
7/8"	190	400	600
1"	-	580	900

* = inch pounds

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

Parts

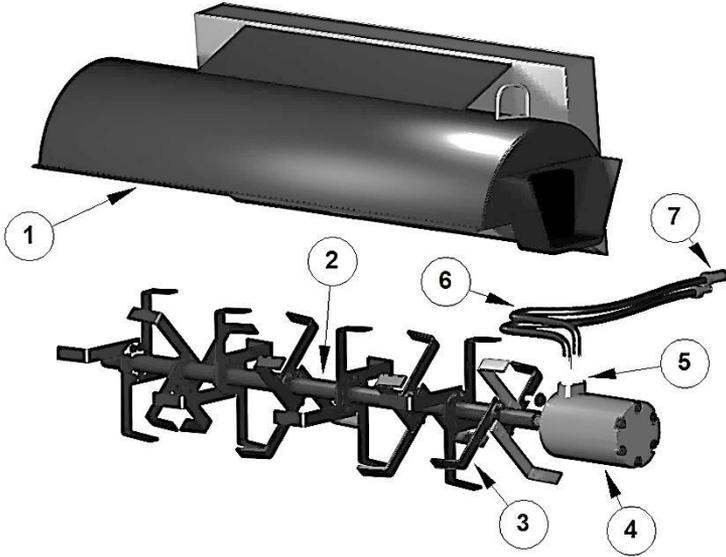
When requiring any parts for your implement, please collect the following information:

Implement Model Number
Implement Serial Number
Cut Width
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.

**Use Genuine Parts from
Construction Implements Depot INC.**

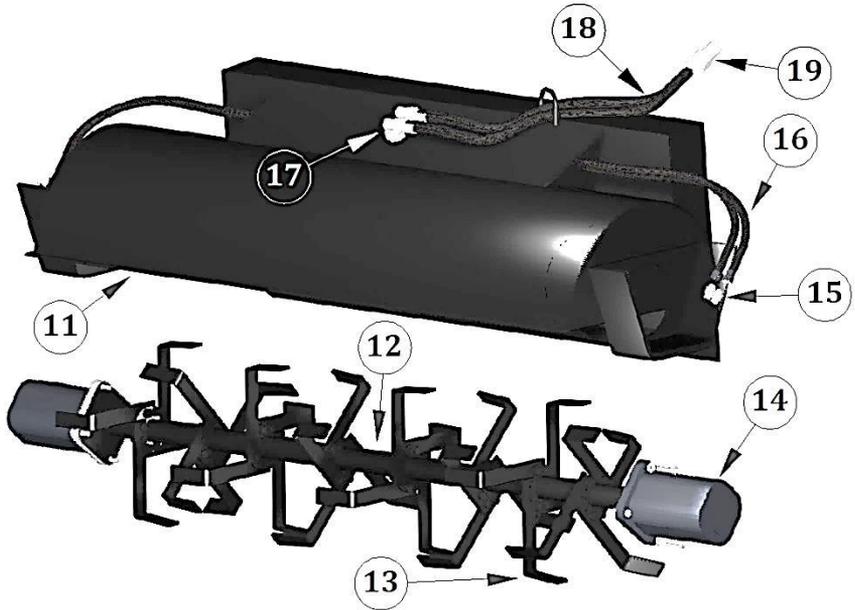
14-20 GPM Tiller Parts



Ref.	Description	Qty.
1	Tiller Deck Weldment	1
2	Driven Shaft Assembly	1
3	Tine	36
	Bolt – Tine to Driven Shaft	
	Nut – Tine to Driven Shaft	
4	Motor	1
5	Adaptor – Motor to Hose	2
6	Hose – Motor to Quick Disconnects	2
7	Quick Disconnect – Set	1

Specify Width, GPM requirements when ordering parts

20-40 GPM Tiller Parts



Ref.	Description	Quantity	
		72"	84"
11	Tiller Weldment 72" (1829mm)	1	
	Tiller Weldment 84" (2134mm)		1
12	Driven Shaft 72" (1829mm)	1	
	Driven Shaft 84" (2134mm)		1
13	Tine	36	44
	Bolt		
	Nut		
14	Motor	2	2
15	Adaptor – Motor to Hose	4	4
16	Hose – Motor Adaptor to Tee	4	4
17	Tee - Between Motor Hose and Input/Output Hoses	2	2
18	Hose – Tee to Quick Disconnect	2	2
19	Quick Disconnect Set (Male & Female)	1	1

Specify Width & GPM model when ordering parts

Decals



or



6



Ref.	Description	Qty.
1*	Decal, (CID)	1
2*	Decal, (Danger Pinch Points)	1
3*	Decal, (Warning, High Pressure Fluid Hazard)	1
4*	Decal, (Warning, Do Not Exceed 20 GPM) (Note: Select proper decal for your model)	1
	Decal, (Warning, Do Not Exceed 20 - 40 GPM) (Note: Select proper decal for your model)	1
5	Decal, Warranty Instruction	1
6	Decal, Made in the USA	1

*** WARNING** Replace any worn, torn or missing safety decals before operating!

Troubleshooting

Problem	Cause	Resolution
Tiller bogs down	Frame is not properly leveled & material is balling under deck	Refer to leveling instructions found in this manual.
	Broken or bent tines	Remove and replace broken or bent tines.
	Ground speed too fast	Slow down ground speed.
	Tiller speed too slow	Raise engine RPMs or investigate other low oil flow problem
Vibration felt when running tiller	Missing, loose, damaged tiller tines	Replace missing or damaged tines with new.
	Tine mount damaged	Replace driven shaft
	Motor loose on weldment	Tighten & torque motor mounting bolts. Replace bolts if they are damaged.
Tines get dull too quickly	Tines have contacted solid objects (rocks, steel pipes, etc.)	Clear cutting area of solid objects before hitting them, or raise the tiller height to clear exposed rock surfaces.
Tines breaking	Excessive shock loads	Avoid hitting solid objects (rock, steel pipes, large tree stumps, etc.).
Hydraulic oil level goes down during operation	Leak at tiller motor or other plumbing	Investigate & repair
	Leaks in skid steer hydraulic system	Investigate & repair
	Motor seal leak	Service motor
Tines do not spin when flow is activated	No oil flow	Confirm that quick disconnects are fully seated in their mating connector. Check that skid steer auxiliary circuit is activating.
	Dual motor models – hoses at one or the other motors incorrectly connected	Switch motor hoses on one motor.
	Motor output shafts failed	Call your dealer for further recommendations.

Specifications

	72" LF	72" HF	84" HF
Till Width	72" (1829mm)	72" (1829mm)	84" (2134mm)
Overall Width	87" (2010mm)	93" (2362mm)	105" (2667mm)
Overall Height	27" (686mm)		
Overall Length	30" (762mm)		
Till Depth Max.	6" (152mm)		
No. of Tines	36	36	44
Hyd. Flow Requirements	14-20 GPM (53 - 76 L/m)	20-40 GPM (76 – 151 L/m)	
Max. Pressure	3000 PSI (206 Bar) Relief		
Attachment Weight	750 lbs. (340kg)	801 lbs. (363kg)	

***Think Safety
Every Day!***



Owner's Manual **Low/High Flow** **Tiller**

Website

www.cidattachments.com

For More Information, Contact

sales@cidattachments.com

Phone: (336)859-2002

1248 N. Main
PO Box 397
Denton, NC 27239

Limited Warranty

Construction Implements Depot, Inc. 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, contamination, 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 built by CID X-treme Attachments to meet your customer's needs shall not be warranted by Construction Implements Depot, Inc. This warranty does not cover replacement parts not supplied by CID, Inc.

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 CID, Inc. with freight or delivery charges to be prepaid. This Limited Warranty shall not be interpreted to render CID, Inc. 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. CID, Inc. 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 CID, Inc. is allowed to alter, modify or enlarge this warranty nor the exclusions, limitation and reservation at any time.