



Operator Manual



Samurai Hydraulic Sickle Bar Cutter



Samuraihydrauliccutter

Please read and understand all the instructions before operating this tool.
Retain this manual for future reference.



Hydraulic Cutter

SPECIFICATIONS

Hydraulic motor	50cc 3.0cu/in bi-directional motor
Hydraulic oil flow	Minimum 3.5 to Maximum 5 GPM
Hydraulic pressure	2000 - 2500 PSI while operating
Hose & fitting requirements (not included)	<ul style="list-style-type: none"> • 3/8"-1/2" Size Hoses • #10 ORB Fittings
Overall length	48 in.
Overall width	10-3/8 in.
Overall height	9-13/16 in.
Cutter weight	50 lbs
Bracket weight	35 lbs
Cutting length	38 in.

INTRODUCTION

The Samurai is a hydraulic powered cutter with a universal mounting bracket that easily attaches within minutes to the loader bucket. The Samurai offers the versatility to be positioned vertically, horizontally, or at any angle in between. Use your Samurai tree and brush cutter to cut under fence lines or along roadways, ditches, trees, and hedges.

IMPORTANT SAFETY PRECAUTIONS

GENERAL SAFETY

1. Read and understand all the instructions before operating this tool.
2. Follow all precautions to reduce the risk of personal injury and equipment damage.
3. Ensure all operators are familiar with the operating and safety instructions before using the tool.
4. Keep this manual with the machine at all times and affix all safety decals supplied with the equipment.

MAINTENANCE SAFETY

1. Ensure all moving parts have stopped before attempting to service the machine.
2. Relieve hydraulic pressure before servicing or disconnecting the tool.
4. Lay the Samurai horizontally on a flat surface when removing any parts.



WARNING: To avoid serious injury: beware that if the knife is in vertical position the blades can slide down.

HYDRAULIC SAFETY

1. Do NOT attempt makeshift repairs to the hydraulic system. The hydraulic system operates under extremely high pressure, and makeshift repairs could fail suddenly creating hazardous and unsafe conditions.
2. Keep all hydraulic components clean and in proper working order. Immediately replace any damaged or worn parts.
3. Wear proper hand and eye protection when searching for high-pressure hydraulic leaks. Use a piece of wood or cardboard as a backstop instead of hands.

4. Seek immediate medical attention if hydraulic fluid penetrates the skin. Serious infection or toxic reaction can develop.
5. Ensure all components are tight and in good condition before applying pressure to the hydraulic system.

PERSONAL SAFETY

1. Wear protective clothing and equipment when assembling, using, and servicing the tool. Protect yourself with heavy gloves, suitable hearing protection, protective glasses or goggles, steel-toed footwear with non-skid soles, and an approved respirator or filter mask.
2. Wear close fitting clothing and keep hands, feet, hair, jewellery, etc., away from moving parts while the engine is running.
3. Keep young children away from the machine at all times.
4. Keep a properly maintained fire extinguisher on the tractor and understand its correct use.
5. Ensure a fully stocked first aid kit is available in case of emergencies.
6. Keep all shields in place and do NOT modify the equipment.
7. Always stop the engine and remove the key from the ignition before leaving the operator's seat for any reason.

SAFETY DECAL

1. Apply the safety decal (see Fig. 1) supplied with the unit. Affix the decal in a prominent location on the tool and keep the decal clean and well maintained.



Figure 1: Safety Decal

TOOL USE AND CARE

1. Use this tool only as intended. Do not attempt to force the cutter to perform work that requires a larger machine.
2. Do not modify or alter the tool, and use only manufacturer approved replacement parts.
3. Lubricate the cutterbar as needed using standard grease or SAE oil.
4. Apply a thin coat of lubricant to steel parts including bolt threads to prevent rust when storing for extended periods.

IMPORTANT: Do NOT drain the hydraulic fluid from the motor when storing the tool.

5. Clean all dirt and debris from the tool before storage.
6. Apply touch up paint to all worn or damaged painted surfaces.

UNPACKING

1. Remove the tool from the package with care. Retain all the packing material until you've inspected, installed, and operated the tool.
2. Ensure all the items described in the parts list are included with the shipment.
3. Inspect all components thoroughly to ensure the tool was not damaged during shipping.



WARNING: Do NOT operate the tool if any parts are missing. Replace all missing parts or serious injury could result.

ASSEMBLY

INSTALLING YOUR SAMURAI



WARNING: To avoid serious injury, stand clear of knife during operation.



CAUTION: Wear heavy gloves to prevent injury to hands and fingers when working around or handling knives.

1. Position the universal mounting bracket flush with the flat bottom of the bucket and secure it tightly in place by tightening the two set screws supplied (see Fig. 2).



Figure 2: Universal Mounting Bracket on Bucket

IMPORTANT: Retorque both bolts prior to each use. Refer to [Torque Specifications](#).

2. Position the Samurai onto the universal mounting bracket ensuring the hydraulic motor housing faces the inside of the bucket (see Fig. 3).
3. Secure the Samurai to the universal mounting bracket using the two nuts, washers, and bolts supplied (see Fig. 3). Torque hardware according to specifications, refer to [Torque Specifications](#).



Figure 3: Samurai & Universal Mounting Bracket

NOTE: The universal mounting bracket is designed with mounting holes on all sides of the square tubing to enable rotation and positioning for all applications.

4. Loosen the angle adjustment bolt (A) while supporting the knife to prevent it from falling, set the desired angle and securely tighten the adjustment bolts.

NOTE: The universal mounting bracket enables the Samurai to be positioned within a 110° angle (see Fig. 5).



Figure 4: Universal Mounting Bracket Adjustment Bolt



Figure 5: Knife Positions

INSTALLING HYDRAULICS



WARNING: To avoid serious injury, stand clear of knife during operation.



CAUTION: Wear heavy gloves to prevent injury to hands and fingers when working around or handling knives.

1. Ensure all components are clean before connecting hydraulic hoses and fittings.
2. Do not remove caps and plugs from hoses and ports until immediately before making connections.
3. Leave hydraulic hoses loose until hose routing is complete.

4. Install two of the following fittings onto the hydraulic motor

- #10 ORB, 7/8-14 UNF
(unified national fine)

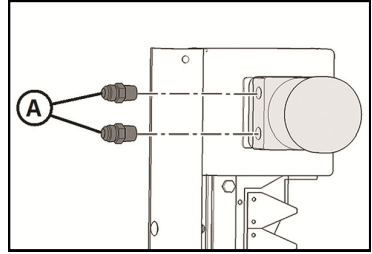


Figure 6: Hydraulic Fittings

5. Connect the following two hydraulic hoses to the hydraulic motor fittings:

- 3/8"-1/2" hydraulic hoses
- For **Subcompact & Compact** tractors use **3/8"** hoses.
- For larger equipment like a **skid steer** use **1/2"** hoses.
- Either hose can be the pressure line or return line.

6. Route the supply and return hoses to the tractor couplers.

NOTE: Most installations do not require a flow control. If a flow control is required, install it in an easily accessible location using 3/8 - 1/2 in. hydraulic fittings (see. Fig 8) .

7. Connect the hydraulic hoses to the tractor.

IMPORTANT: Ensure hydraulic hoses are protected from moving parts before tightening.

8. Secure the hoses using cable ties and tighten all hydraulic fittings and hoses.

IMPORTANT: Use two wrenches when tightening hydraulic connections to prevent damaging hoses and fittings. Tighten fittings just enough to eliminate leaks, do NOT over tighten.

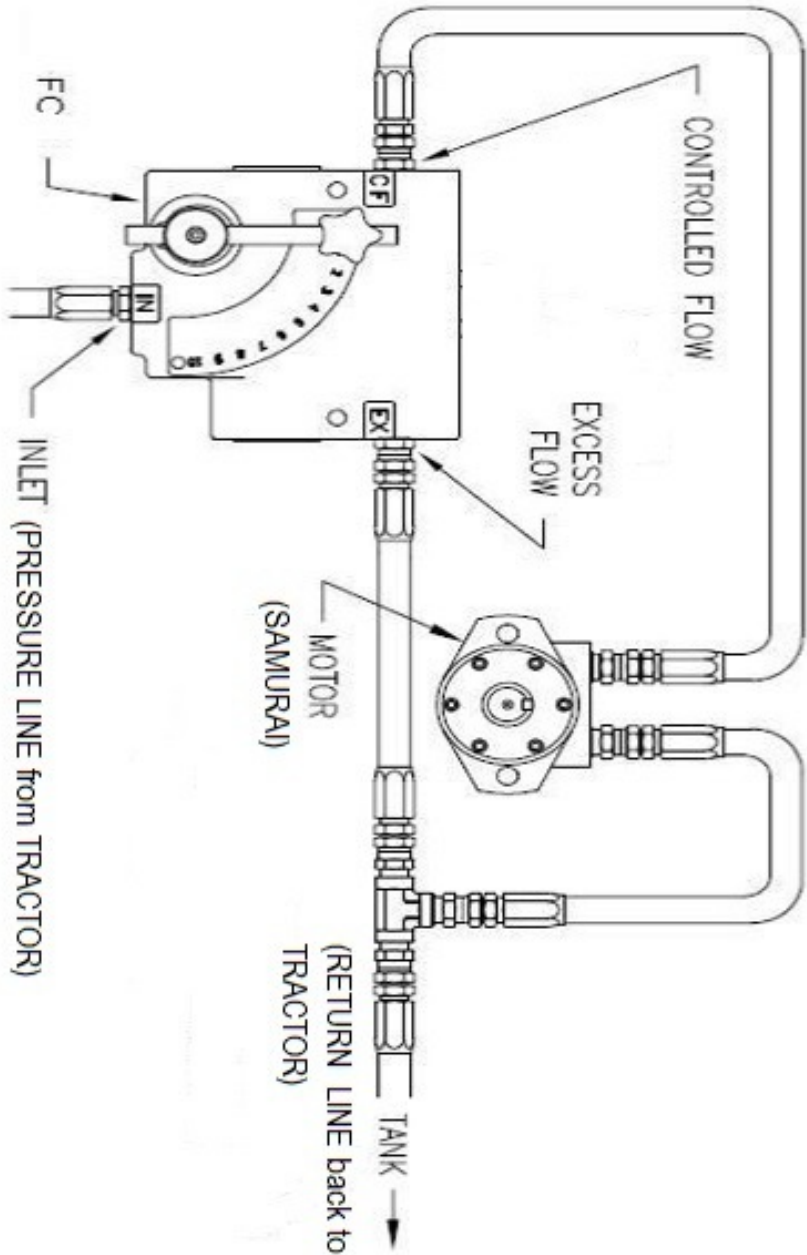
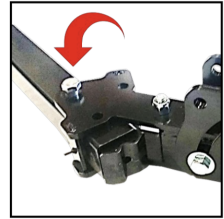


Figure 8: Hydraulic Flow Control Diagram

DELUXE BRACKET ASSEMBLY INSTRUCTIONS

- Note: Instruction Videos are available on our website at cutthat.com. Go to **Products>Sabre Samurai Cutter>Installation**

Remove the bolt and nut from the 2x2 square bar. Insert the 2x2 square bar up in between the **Break Away Lock** portion of the main bracket so the hole and sleeve of the **Tension Break Away** lines up with the middle hole of the **Break Away Lock**. Insert the bolt and attach the nut. Tighten with a 3/4" wrench.

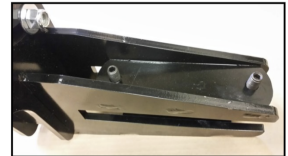


The **Break Away Force** can be adjusted by increasing or decreasing the tension. To **increase** the break away force use a 5/16" **Allen Key** to turn the tensioner nut clockwise. To **decrease** the break away force to allow the Samurai to break away easier, turn the tensioner nut **counter clockwise**.

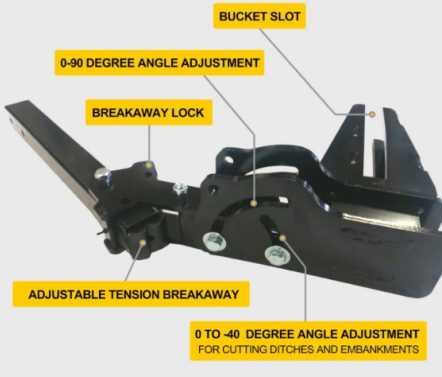


To secure the **Deluxe Bracket** to the bucket of the operating equipment, tighten the two 1/4" **Allen Key** bolts until they securely clamp the bracket to the bucket.

Caution: The Deluxe Bracket should be checked frequently to ensure it is securely fastened to the operating bucket.



DELUXE BRACKET FEATURES



To position the **Samurai** from 0 to 90 degrees loosen the **angle adjustment bolt** and position the knife by hand. Once in position, securely tighten the **angle adjustment bolt** using a 3/4" inch wrench.

To position the **Samurai** to cut below grade, loosen the 0 to -40 degree **angle adjustment bolt** and position the knife at the desired angle. Once in position, securely tighten the angle adjustment bolt using a 3/4 inch" wrench.

Caution: The Angle Adjustment bolts should be checked frequently to ensure they hold the knife at the desired angle securely .

PRESTART INSPECTION



WARNING: Stop the engine, remove the key from the ignition, and set the park brake before leaving the operator's seat for any reason.



CAUTION: Relieve the hydraulic pressure and disconnect the hydraulic hoses before performing prestart inspections.

1. Remove all debris and build-up. Clean and inspect sickle sections for breakage. Remove and replace any broken or severely worn sickle sections.
2. Ensure all nuts and bolts are tight and undamaged before operating the Samurai.

IMPORTANT: Retorque all nuts after operation.

Torque Specifications.

3. Inspect hydraulic hoses and fittings for signs of leaking and wear. Ensure hoses are clear of all moving parts.

DAILY INSPECTION

Perform the following inspections daily or every ten hours—whichever comes first:

1. Remove all debris and build-up from the Samurai—especially around the cutterbar.
2. Check the cutterbar for worn or broken parts, and immediately replace any damaged parts.
3. Check all moving parts for signs of wear.
4. Ensure all mounting hardware is tight especially the drive motor mounting bolts.

OPERATION



WARNING: To avoid serious injury, stand clear of knife during operation.



CAUTION: Wear heavy gloves to prevent injury to hands and fingers when working around or handling knives.

1. Be prepared to quickly shut down the Samurai in the case there is a malfunction during the first use.
2. Check all the hydraulic connections before operating the Samurai

5. Inspect the hydraulic hoses and connections and check for leaks.

IMPORTANT: Use two wrenches when tightening hydraulic connections to prevent damaging hoses and fittings. Tighten fittings just enough to eliminate leaks, do NOT over tighten.

MAINTENANCE



WARNING: Stop the engine, remove the key from the ignition, and set the park brake before leaving the operator's seat for any reason.



CAUTION: Relieve the hydraulic pressure and disconnect the hydraulic hoses before servicing or storing the tool.



CAUTION: Wear heavy gloves to prevent injury to hands and fingers when working around or handling knives.

1. Perform a daily inspection of your Samurai and check for knife damage and loose fasteners.
2. Lubricate the sickle sections daily with SAE 30 oil (except in areas with sandy or abrasive soil).
3. Apply penetrating oil to remove rust buildup from the sickle sections, and run the cutterbar.
4. Replace severely worn or broken sickle sections.

IMPORTANT: Use only manufacturer recommended fasteners when replacing knives. See [Parts List](#).

TORQUE SPECIFICATIONS

1. Check the tightness of all fasteners before operating the machine.
2. Ensure all fasteners are torqued according to the specifications in Table 1: Torque Specifications.
3. Recheck all fasteners for tightness after the first hour of operation and retorque if necessary.



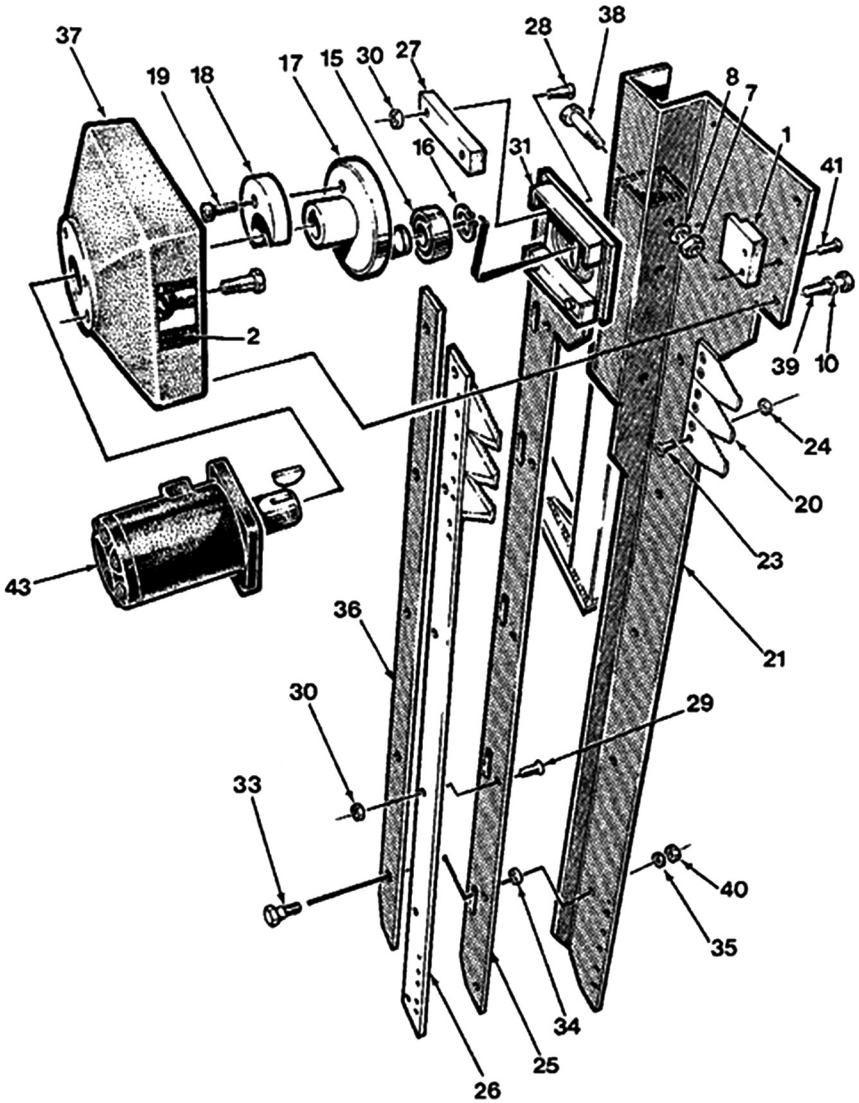
Bolt Torques (Coarse & Fine Threads)				
Imperial Sizes				
Grade 5 (3 marks) 			Grade 8 (6 marks) 	
Bolt Diameter in.	N·m	ft·lbf	N·m	ft·lbf
1/4	14	10	19	15
5/16	28	20	40	30
3/8	50	35	70	55
7/16	80	60	110	85
1/2	120	90	170	130
9/16	180	130	250	190
5/8	250	180	340	250
3/4	430	320	610	450
7/8	700	520	980	730
1	1050	770	1480	1090

Table 1: Torque Specifications

PARTS LIST



Tree & Brush Cutter

Item	No.	Description	Qty
1	088	BLOCK - Hold Down, Siding Cutterbar, Plastic	1
2	134	DECAL - Danger, Stay Clear of Moving Knives	1
3	067	DECAL - FUMA Sabre	1
7	128	NUT - Hex Head, 1/2"	4
8	101	LOCKWASHER - 1/2" Standard	4
10	116	LOCKWASHER - 3/8" Standard	13
15	206	BEARING	1
16	208	SNAP RING	1
17	073	CAM - Knife Drive, Casting	1
18	074	COUNTER WEIGHT - Cam	1
19	125	SCREW - Hex Socket, 5/16 - 18 NC x 5/8	1
20	072	SICKLE SECTION	38
21	082	PLATE - Mounting, Stationary Cutterbar, R.H.	1
21	200	PLATE - Mounting, Stationary Cutterbar, L.H.	-
23	122	SCREW - F. H. Hex Socket, #10 - 24 NC x 5/8	76
24	124	NUT - Self locking, #10 - 24 NC	76
25	188	PLATE - Mounting, Sliding Cutterbar, R.H.	1
25	212	PLATE - Mounting, Sliding Cutterbar, L.H.	-
26	094	BAR - Knife, Sliding Cutterbar	1
27	092	GUIDE - Cam Housing, Plastic	2
28	141	SCREW - F. H. Hex Socket, 1/4 NC x 1 1/4	4
29	142	SCREW - F. H. Hex Socket, 1/4 NC x 3/4	6
30	113	LOCKNUT - Hex Head, 1/4 NC	10
31	Ref	CHANNEL - Guide, Cam	-
33	086	SCREW BEARING - Hex Head, 5/16 NC	5
34	087	SPACER - Knife Guide, Plastic	5
35	121	WASHER - Flat, 5/16" Standard	5
36	093	PLATE - Hold Down, Knife Guide	1
37	099	HOUSING - Knife Drive, R.H.	1
37	201	HOUSING - Knife Drive, L.H.	-
38	100	SCREW - Hex Head Cap, 1/2 NC x 3	2
39	144	SCREW - Hex Head Cap, 3/8 NC x 1 Full Threaded	8
40	131	LOCKNUT - Hex Head, 5/16 NC	5
41	137	SCREW - Hex Head Cap, 1/4 NC x 1 Full Threaded	2
43	056	Motor - Hydraulic c/w Woodruff Key, (FUMA 7191)	1
45	204	MOUNTING BRACKET - S-Shaped	1
		END OF MOTOR - F.H. Hex Socket, 1/4 - 20 NC x 3/4	1
		UNIVERSAL MOUNTING BRACKET (not shown)	1

WARRANTY

12 MONTH LIMITED WARRANTY

Canadian Agri Technologies Inc. warrants to the original retail purchaser that should this product or any part thereof, under normal use and conditions, be proven defective in material or workmanship within 12 months from the date of original purchase, such defect(s) will be replaced.

To obtain the replacement within the terms of this warranty, return the item (shipping prepaid) to Canadian Agri Technologies Inc., Canadian or United States of America warehouse together with proof of warranty coverage (e.g. dated bill of sale) and a new part(s) will be shipped to you. Canadian Agri Technologies Inc. will pay the packaging, shipping and handling costs to ship the replacement part(s) to you.

This warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse (exceeding RPM), neglect or accident. THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY THE PURCHASER OF THE PRODUCT.

This warranty is in lieu of all other expressed warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANT ABILITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY, ANY ABILITY FOR BREACH OF ANY WARRANTY HEREUNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANT ABILITY MUST BE BROUGHT WITHIN A PERIOD OF 12 MONTHS FROM THE DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGE FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER.

Serial #: _____ Date of Purchase: _____



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