

12 MONTH LIMITED WARRANTY

Canadian Agri Technologies Inc. warrants to the original retail purchaser that should this product or any part there of, 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., 47 Halparin Drive, Winnipeg, MB. Canada R3X 1Z9, 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: _____



Operator's Manual

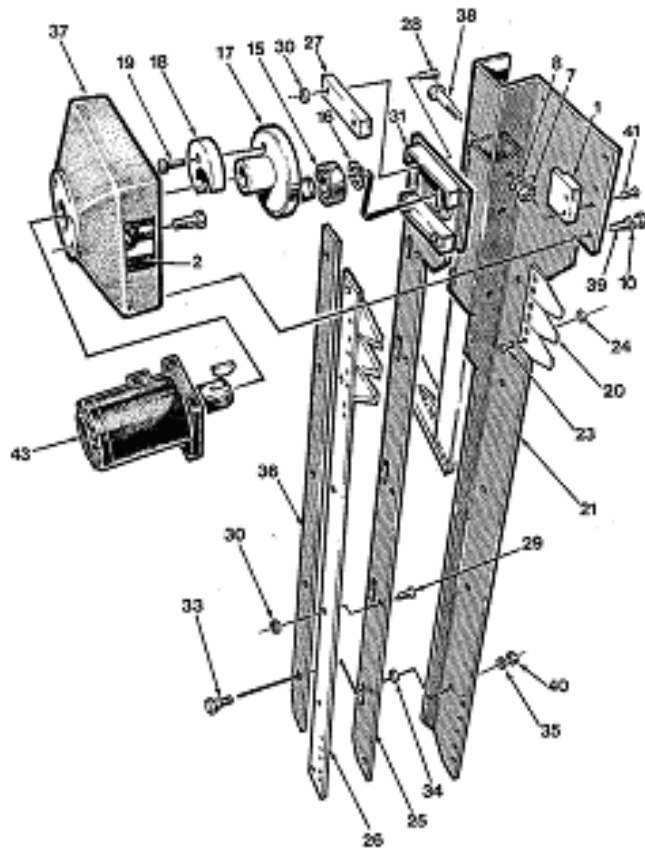


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TOLL FREE PARTS LINE
1 866 792-8437

Item	Number	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

Parts List & Assembly



Specifications subject to change without notice. Right Hand Version Illustrated

CONTENTS OF SHIPPING BOX

- one Samurai Hedge Trimmer
- one Universal Mounting Bracket
- two ½ NC x 3" bolts
- two ½ nuts
- two ½ lock washer
- one Danger Safety Decal
- one Operators Manual

SAFETY

Review the safety precautions and operating instructions in this manual with all operators before they use this machine. Make certain that all operators know and follow the information on safety decals.



NOTE:

There is an extra Safety Decal supplied with the unit. Affix the decal to your equipment in a prominent position.

SAFETY DECAL

Make sure that all moving parts are free of debris before operating. Check that the *Samurai* is securely mounted before operating.

Keep yourself and others well clear of the *Samurai* while it is running.

MAINTENANCE SAFETY

Do not oil or adjust the cutterbar while it is running.

Do not wear loose clothing around moving parts.

Disconnect hydraulic lines from the motor before starting any maintenance. Use heavy gloves when handling the cutterbar. Remember that the sickle sections are sharp and can cause injury even if the machine is not running.

HYDRAULIC SAFETY



Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing a possible toxic reaction. Relieve all pressure before disconnecting the hydraulic lines.

Hydraulic fluid escaping from a small hole can be almost invisible. Use a piece of cardboard or wood to search for suspected leaks. Wear protective gloves and safety glasses when looking for leaks.

If injured by escaping hydraulic fluid, see a doctor at once. Serious infection can result if medical treatment is not administered immediately.

Before applying pressure to the system, be sure that all connections are tight and that no hoses are damaged. Do not attempt to fix leaks with tape, cements or epoxy compounds. Under operating pressures such repairs can burst suddenly.

TORQUE CHART

BOLT TORQUES (Coarse and Fine Threads)				
Imperial Sizes				
 Grade 5 (3 marks)		 Grade 8 (6 marks)		
Bolt Diameter (in.)	N - m	lb - ft	N - m	lb - ft
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

Before operating your new *Samurai*, check the tightness of all fasteners. Tighten according to the torque specifications. Check all bolts for tightness after the first hour of operation. Torque again when necessary.

HYDRAULIC MOTOR

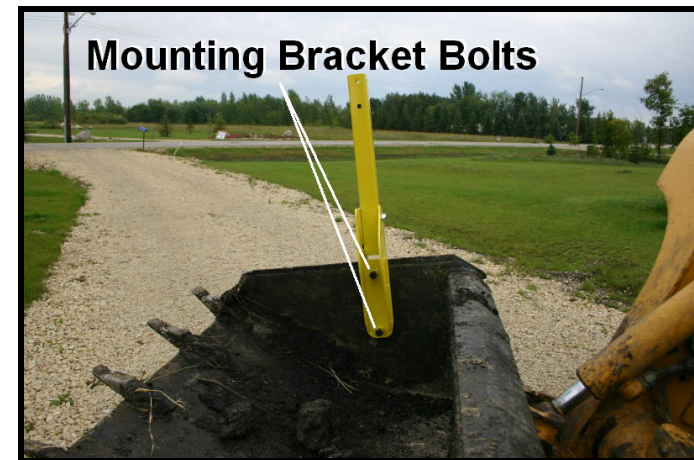
- High torque
- Displacement - 3.0 cubic inches/revolution
- RPM - 885 @ Maximum flow and continuous PSI
- Hydraulic Pump requirements - minimum flow of 10 GPM @ 500 psi
- Motors can be mounted singly or connected in series for multiple motor applications

CUTTERBAR

Knives - one stationary, one sliding, 38 replaceable sickle sections

Universal Mounting Bracket Installation

The Samurai is easily mounted within minutes to just about any bucket with the use of the *Universal Mounting Bracket*.



Universal Mounting Bracket

Place the bracket over the desired end of the bucket and securely clamp the bracket to the bucket using both mounting bracket bolts. Ensure bolts are properly tightened before each use. Refer to **Torque Chart** for specifications.



Hedge Trimmer Mounted on Bracket

Place the hedge trimmer on to the mounting bracket with the hydraulic motor housing facing the inside of the bucket. Once in position insert supplied mounting hardware as shown and securely fasten as per **Torque Chart**.

Note: The universal mounting bracket is designed with mounting holes on all sides of the square tubing enabling the hedge trimmer to be rotated so it can be positioned for all applications.

PREPARATION FOR STORAGE

The *Samurai* should be removed from your equipment and stored in a sheltered area.

1. Thoroughly clean the *Samurai* of debris, branches and cuttings.
2. Touch up all damaged painted surfaces.
3. Oil all exposed unpainted or machined surfaces - including bolt threads.

IMPORTANT:

If the *Samurai* is being stored - do NOT drain the hydraulic fluid from the motor.

REMOVAL FROM STORAGE

1. Install the *Samurai* and mounting bracket on your equipment.
2. Oil the cutterbar.
3. Hook up hydraulic lines.
4. Follow the procedure in the **Operation Section**.

CUTTERBAR



CAUTION!

Stop the traction unit engine, set the park brake, and disconnect the hydraulics from the cutterbar motor before working on the *Samurai*. The sickle sections are sharp - wear heavy gloves when handling the cutterbar.

To remove rust buildup from the sickle sections, apply penetrating oil to the rusted areas and run the cutterbar.

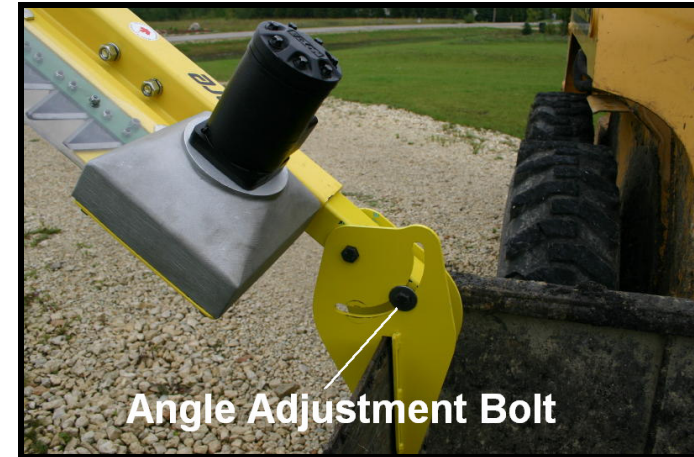
To obtain the best results, the sickle sections should be replaced if worn or broken.

In areas where the soil is sandy or gritty, the cutterbar should not be oiled. In normal soil conditions, use SAE 30 oil on the cutterbar daily. When in use, the cutterbar should be inspected daily for knife damage or loose fasteners.

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NOTE:

When replacing knives, use only correct fasteners. See Parts List.



Mounting Bracket Angle Adjustment

The universal mounting bracket allows the hedge trimmer to be positioned within a 110° range by simply loosening the angle adjustment bolt and positioning the cutter at the desired angle. Ensure angle adjustment bolt is tightened after making any adjustments.

Various Mounting Positions



Vertical



Horizontal



Inverted

DAILY INSPECTION

The following check list should be carried out daily or every ten hours, whichever comes first.

1. Clear all debris and dirt buildup from the *Samurai*, especially around the cutterbar.
2. Check the cutterbar for worn or broken parts. Replace any unserviceable parts.

IMPORTANT:

Spacer - Knife Guide (part #087) running on Screw Bearing (part #086) must be checked frequently and replaced immediately if worn or missing to avoid damage to Plate - Mounting Sliding Cutterbar (part #188).

3. Check all moving parts for wear.
4. Check all mounting hardware for tightness, especially the drive motor mounting bolts.
5. Check the hydraulic lines and connections for leaks.

IMPORTANT:

When tightening hydraulic connections, always use two wrenches to prevent damage to hoses and fittings. Tighten fittings only enough to eliminate leaks. Do NOT over tighten.

NOTE:

To function correctly, the *Samurai* requires 0.4 to 1.0 hp (0.3 to 0.8 kW). The hydraulic oil flow required at an operating speed of 250 rpm is 3.3 gal/min (0.21 L/s). Hydraulic pressure during normal operation is less than 500 psi (3 450 kPa). A hydraulic pump supplying at least 5 gal/min (0.3 L/s) should have adequate flow to operate the *Samurai*. Most tractor and equipment hydraulic systems can easily supply this oil flow without affecting the performance of other hydraulically driven components.

Maximum RPM must not exceed 400!

A good rule of thumb to gauge the RPM is to limit the speed of the sections moving back and forth to a rate where you can see them moving with your eye. If the sections are moving so fast that they are just a blur, and you can't see them; you are exceeding 400 RPM.

When first operating the *Samurai*, be prepared to shut down quickly. Usually if something is going to happen it will happen in the first few minutes.

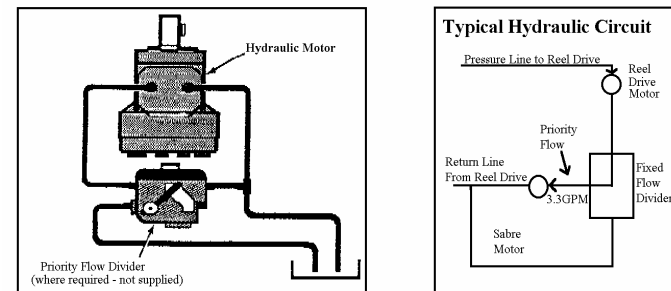
Before operating, make sure that all hydraulic connections to the *Samurai* are properly connected. Lubricate the sickle sections with oil to ease the initial run-in (except in areas where the soil is sandy or abrasive).

HOSE REQUIREMENTS

100 RI ½ diameter ½ NPT to 7/8 – 14 JIC 37, 3.4 m long
100 RI ½ diameter ½ NPT to 7/8 – 14 JIC SW10 female, 3.0 m long

FLOW DIVIDER

Typical installations should not require the use of a flow divider. If your dealer or hydraulics specialist has determined that a flow divider should be used, mount it in a place where it is convenient for the operator, preferably in the tractor cab. Install as illustrated using 1/2" hydraulic fittings.

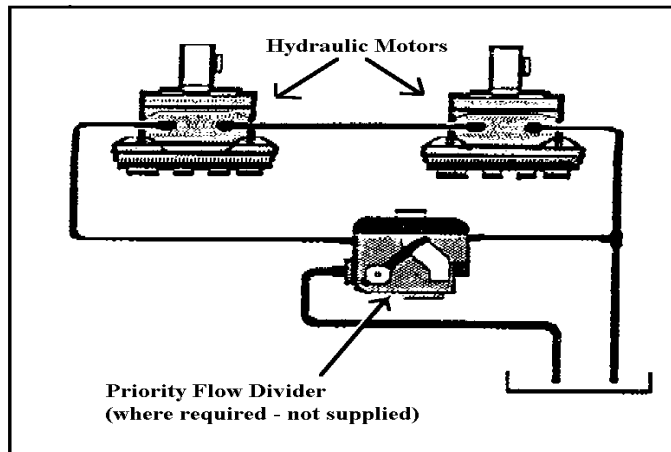


FLOW DIVIDER - TYPICAL INSTALLATION

Ensure that hydraulic hoses are securely mounted and kept well clear of moving parts.

DUAL MOUNTED CONFIGURATION

In some applications you may want to use more than one *Samurai*. If so, the hydraulic motors should be connected in series as illustrated.



MULTIPLE MOTOR CONNECTIONS

PRE-START INSPECTION



CAUTION!

Shut off traction unit and set park brake before doing any pre-start inspections. Relieve pressure and disconnect hoses from hydraulic motor before pre-start or daily inspections.

1. Remove any debris build-up. Clean and check sickle sections for breakage. Remove and replace any broken or badly worn sickle sections.
2. Check all nuts and bolts for looseness or damage before operating the trimmer. Retorque all bolts after the first hour of operation and check daily.
3. Check hydraulic hoses and fittings for leaks and wear on a regular basis. Ensure that hoses are kept well clear of moving parts.