



UtiliTough.com
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**OPERATORS MANUAL
MINI EXCAVATOR
HYDRAULIC BRUSH CUTTER**

UTILITOUGH

Mini Excavator Brush Cutter

Unit Specifications

DATE PURCHASED _____ SERIAL # _____

MOTOR TYPE: EATON

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"THE MINI EXCAVATOR BRUSH CUTTER "

Dear Customer,

Thank you and congratulations on the purchase of your new Brush Cutter! We strive to manufacture the best hydraulic brush cutter for mini excavators on the market today. No matter which unit that you purchased, you can rest assured that it was manufactured to rigid quality standards, utilizing the highest technology in hydraulic system components that are available. All of our units feature breakaway blades, the ability to cut bi-directional and built-in cushion valves for smooth shut-down and reduced wear on the hydraulic motor. Our cutters were designed and manufactured to cut nearly all types of brush, shrubs and small trees over a wide variety of terrains.

Please take the time to thoroughly read this informative owner's manual. Be sure to pay particularly close attention to the safety portion of this manual. Remember, the safety guidelines that are mentioned in this manual are not only for your safety, but also for the safety of others. Only with a complete understanding of your cutter will you be able to operate it to its full potential.

Thanks again for your purchase. As always, if you have any questions about your Brush Cutter, or would like to give us feedback, feel free to contact us. We will be happy to help you in any way that we can.

Sincerely,

UtiliTough, Inc.

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WARRANTY INFORMATION

LIMITED WARRANTY

We warrant each new brush cutter unit to be free from defects in materials and workmanship for a period of ONE-YEAR from the date of purchase if the unit has been properly maintained and lubricated as directed according to the operation and maintenance instructions listed in this manual. We will replace, free of charge, any component that is defective due to quality of material or workmanship for the ONE-YEAR period.

NON-COVERED ITEMS

The above limited warranty does not include nor cover blades, blade bolts or hoses. Wear of these items is a direct result from normal and recommended use.

EXCLUSIONS TO THE LIMITED WARRANTY

Repairs to any component of this machine performed by any firm or individual other than the original manufacturer will void all warranties. Replacement parts not supplied by the original manufacturer will void all warranties. Damage due to repairs, accidents, or operator abuse and neglect, and failure to maintain this machine according to the maintenance and operation instruction listed in this manual, will void all warranties. Disassembly of the motor will void motor warranty.

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WARRANTY STATEMENT

Our obligation under this Limited Warranty shall be solely limited to repairing or replacing any part (excluding blades, blade bolts and hoses) free of charge that, according to our judgment, shows evidence of a defect in quality of material or workmanship for the stated ONE-YEAR warranty period. This Limited Warranty shall not be interpreted to render the manufacturer 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. Repaired or replaced parts are subject to the supply conditions at the time of repair or replacement, which may directly affect our ability to obtain materials and/or replacement parts. We reserve the right to make improvements in design or changes in specifications at any time, without incurring any obligations to owners of previously purchased units.

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IMPORTANT SAFETY PRECAUTIONS

Look for the  symbol throughout this manual to point out important safety precautions. Remember, the safety of both yourself and others is involved in the operation of this equipment.

GENERAL WARNINGS

- NEVER operate this or any other equipment under the influence of drugs or alcohol.
- NEVER carry passengers on the Brush Cutter.
- NEVER leave the Brush Cutter unattended in a raised position.
- ALWAYS stop and inspect both the mini excavator and cutter for damage after striking a foreign object. Any damage should be repaired prior to restarting the host machine engine and resuming cutting.
- Cut only in daylight or well-lit artificial light.
- Keep all nuts, bolts and screws tight and be sure the equipment is in safe operating condition and check the blade mounting bolts for proper tightness at frequent intervals.
- When working under the deck of the Brush Cutter, always securely block it up to reduce the risk of falling.
- Stay alert for holes or drop-offs on all terrains.
- KEEP CHILDREN AWAY FROM THE CUTTING AREA AT ALL TIMES.

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DEBRIS DISCHARGE WARNINGS

Your mini excavator brush cutter discharges debris out the sides of the machine. When cutting with the Brush Cutter, NEVER discharge material toward bystanders. All bystanders must be AT LEAST 75 feet away when operating the cutter. NEVER allow bystanders near the machine while it is in operation. ALWAYS clear the cutting area of objects (bottles, rocks, fencing, wire, etc.) that may be picked up and thrown.

- ALWAYS use a shatterproof cab door. The door is used not only to protect the operator from flying debris, but also from overhanging or protruding objects (tree limbs, rebar, vines, etc.) from entering the cab and causing operator injury.

ROTATING PARTS WARNINGS

ALWAYS disengage power to the Brush Cutter and shut the host machine's engine off prior to leaving the operator's cab or performing any inspection or maintenance to either the brush cutter or the machine.

- NEVER place hands or feet under the Brush Cutter deck or near the blade system while the unit is in operation.
- NEVER articulate (roll) the deck downward to a degree that exposes the operator to the blade system.

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OPERATING INSTRUCTIONS

OPERATING WARNING

Before operating and after 8 hours of use, check torque on all bolts and nuts.

ATTACHMENT OF MACHINE

The installation of your Brush Cutter is the same for any other powered attachment for your mini excavator:

- Pull up to the brush cutter and connect it to your mini excavator.
- Secure the coupler or stick to the Brush Cutter with normal mounting procedures (pins, locking collars, etc.).
- Connect the hydraulic hoses from the brush cutter to your machine. The hoses provided are equipped with quick-disconnect fittings (both male and female) for ease of use.

CUTTING OPERATION

The brush cutter is capable of, and in fact intended to be utilized for, mulching trees and other vegetation of varying heights and diameters of up to 6". As a safety feature, when cutting large diameter vegetation, the Brush Cutter is equipped with a hydraulic motor cushion valve for shut down of the blade system. This feature lessens the chance of damaging the cutter's hydraulic system or blade system when cutting larger diameter vegetation. Directions for use are as follows:

CUTTING GROUND LEVEL VEGETATION

Raise the rear of the brush cutter approximately 4"-5" above ground level. The deck of the brush cutter should be sloping downward and away from the operator. This is the optimum position for cutting materials that are close to the ground. Please note: If the operator can see the blade system in operation, the back of the brush cutter is raised TOO HIGH.

CUTTING ABOVE GROUND LEVEL VEGETATION

Raise the front deck of the brush cutter up approximately 1'-2' above ground level. Do not lift the rear portion of the deck exposing blades to operator. Keep it approximately 4"-5" above ground level. Slowly drive into the vegetation and use the hydraulic tilt (roll) the bend or push the vegetation over. As you bend the vegetation over and drive into it, the blades will cut it into. The vegetation can now be mulched by rotating the front of the brush cutter and driving forward several feet. Then roll the back of the cutter down and back-drag atop the vegetation.



NOTICE: This unit is equipped with a valve that stops the rotation of the blades for safety within 3 SECONDS of shutting it down. This causes a noise during the SHUT DOWN operation that is NORMAL.

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BOLT TORQUE SPECIFICATIONS

GENERAL TORQUE SPECIFICATION TABLES

Use the following charts when determining bolt torque specifications when special torques are not given. Always use grade 5 or better when replacing bolts.




SAE BOLT TORQUE SPECIFICATIONS

NOTE: The following torque values are for use with extreme pressure lubricants, plating or hard washer applications. Increase torque 15% when using hardware that is un-plated and either dry or lubricated with engine oil.

Bolt Size		SAE GRADE 5 TORQUE				SAE GRADE 8 TORQUE				Bolt head Identification marks as per grade. NOTE: Manufacturing Marks Will Vary
		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters		
Inches	Millimeters	UNC	UNF	UNC	UNF	UNC	UNF	UNC	UNF	
1/4	6.35	8	9	11	12	10	13	14	18	<p>GRADE 2</p>  <p>GRADE 5</p>  <p>GRADE 8</p> 
5/16	7.94	14	17	19	23	20	25	27	34	
3/8	9.53	30	36	41	49	38	46	52	62	
7/16	11.11	46	54	62	73	60	71	81	96	
1/2	12.70	68	82	92	111	94	112	127	152	
9/16	14.29	94	112	127	152	136	163	184	221	
5/8	15.88	128	153	174	207	187	224	254	304	
3/4	19.05	230	275	312	373	323	395	438	536	
7/8	22.23	340	408	461	553	510	612	691	830	
1	25.40	493	592	668	803	765	918	1037	1245	
1-1/8	25.58	680	748	922	1014	1088	1224	1475	1660	
1-1/4	31.75	952	1054	1291	1429	1547	1700	2097	2305	
1-3/8	34.93	1241	1428	1683	1936	2023	2312	2743	3135	
1-1/2	38.10	1649	1870	2236	2535	2686	3026	3642	4103	

METRIC BOLT TORQUE SPECIFICATIONS

NOTE: The following torque values are for use with metric hardware that is unplated and either dry or lubricated with engine oil. Reduce torque 15% when using hardware that has extreme pressure lubricants, plating or hard washer applications.

Bolt head Identification marks as per grade.		
		

Size of Bolt	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
M6	5.6	1.0	3.6-5.8	4.9-7.9	-	-	-
	8.8		5.8-4	7.9-12.7		-	-
	10.9		7.2-10	9.8-13.6		-	-
M8	5.6	1.25	7.2-14	9.8-19	1.0	12-17	16.3-23
	8.8		17-22	23-29.8		19-27	25.7-36.6
	10.9		20-26	27.1-35.2		22-31	29.8-42
M10	5.6	1.5	20-25	27.1-33.9	1.25	20-29	27.1-39.3
	8.8		34-40	46.1-54.2		35-47	47.4-63.7
	10.9		38-46	51.5-62.3		40-52	54.2-70.5
M12	5.6	1.75	28-34	37.9-46.1	1.25	31-41	42-55.6
	8.8		51-59	69.1-79.9		56-68	75.9-92.1
	10.9		57-66	77.2-89.4		62-75	84-101.6
M14	5.6	2.0	49-56	66.4-75.9	1.5	52-64	70.5-86.7
	8.8		81-93	109.8-126		90-106	122-143.6
	10.9		96-109	130.1-147.7		107-124	145-168
M16	5.6	2.0	67-77	90.8-104.3	1.5	69-83	93.5-112.5
	8.8		116-130	157.2-176.2		120-138	162.6-187
	10.9		129-145	174.8-196.5		140-158	189.7-214.1
M18	5.6	2.0	88-100	119.2-136	1.5	100-117	136-158.5
	8.8		150-168	203.3-227.6		177-199	239.8-269.6
	10.9		175-194	237.1-262.9		202-231	273.7-313
M20	5.6	2.5	108-130	146.3-176.2	1.5	132-150	178.9-203.3
	8.8		186-205	252-277.8		206-242	279.1-327.9
	10.9		213-249	288.6-337.4		246-289	333.3-391.6

UTILITOUGH

Rugged, durable land clearing machines with extraordinary efficiency clearing debris

Hydraulic Rotary Excavator Brush Cutters for Mini Excavators



Powered by **EATON**
Direct Drive Hydraulic Motor

The UtiliTough Hydraulic Rotary Excavator Brush Cutter for excavators up to 20k lbs. features:

- ✓ Available in 42" and 48"
- ✓ Available in low flow, standard flow, and mid flow
- ✓ Dimensions:
 - ✓ 42" cutter: 47" (W) x 47" (D) x 24" (H)
 - ✓ 48" cutter: 53" (W) x 53" (D) x 24" (H)
- ✓ 1/4" A36 reinforced steel deck
- ✓ Reversible, replaceable, bi-directional AR 500 hardened steel blades
- ✓ 1/2" blade carrier plate
- ✓ Durable powder coated finish
- ✓ Includes hydraulic hoses and fittings
- ✓ Warranty does not cover blades or hoses
- ✓ Replacement blade kit for 42" cutter includes: 2 blades, bolts and nuts; must be welded (must buy entire kit for safety purposes)
- ✓ Replacement blade kit for 48" cutter includes: 3 blades, bolts, and nuts; must be welded (must buy entire kit for safety purposes)



**Specify make and model of host machine, quick attach or pin-on mounting bracket when placing order*

UtiliTough Brush Cutters are Made in the USA from American made steel



Model #	Description	# of Blades	Cutting Capacity Diameter	# of Mulching Teeth	Hose Size	Motor	Oil Flow Required	Tip Speed	Warranty
1BCEXL42T	42" Excavator Low Flow Open Front Brush Cutter w/ Teeth	3	4"	9	.63' x 117"	2K-80cc	14-20 GPM	8,500-10,000	1 Year
1BCEXL48T	48" Excavator Low Flow Open Front Brush Cutter w/ Teeth	3							
1BCEXS42T	42" Excavator Standard Flow Open Front Brush Cutter w/ Teeth	3							
1BCEXS48T	48" Excavator Standard Flow Open Front Brush Cutter w/ Teeth	3							
1BCEXMF48T	48" Excavator Mid Flow Open Front Brush Cutter w/ Teeth	3				4K-160cc	22-30 GPM		

This machine is not a stump grinder, nor a forestry mulching head; does not produce fine mulch

Specifications subject to change without notice