

Series 10" Brushcutter

OWNER'S MANUAL

& ILLUSTRATED PARTS LIST

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DO!

WARNINGS AND PRECAUTIONS

Be Safe!

Start your Brushcutter without help.

Start the engine while on a firm, level surface.

Always be sure of your footing. Avoid cutting in any awkward or unnatural position.

Watch out for falling debris.

Always use the blade guard to maintain control of the unit.

When two or more persons are working as a team, keep well away from one another to avoid accidents.

Keep the blades sharp, the screws and nuts tight, and the moving parts well lubricated.

Survey the area to be cut and the surrounding areas for dangerous obstacles, metal objects, or loose rocks.

Read the power unit Owner's Manual for correct engine operation.

Always shut off the engine before sharpening the blades.

Guard against fire hazards. Refuel in a safe place.

Use caution when refueling a hot engine. Allow it to cool for a few minutes.

Obey all rules and regulations in the cutting area.

Wear close-fitting protective clothing.

DON'T!

Be sorry!

Fail to follow all instructions in the Owner's Manual.

Allow any person or animal close to a running Brushcutter.

Smoke while operating the unit.

Spill fuel or start the engine where you refueled it.

Use any fuel other than that recommended in the power unit Owner's Manual.

Run the engine without a muffler.

Forget the rules of fire prevention.

SECTION ONE - ASSEMBLY INSTRUCTIONS

MOUNTING THE CUTTING ATTACHMENT

The McCulloch Series 10 Brushcutter is designed for use on McCulloch MAC 10 Series chain saw power units with left-hand starters. If automatic-oiler power units are used, be sure the chain oil tank is empty! To mount the cutting attachment on the power unit, proceed as follows:

1. Remove the clutch guard, bar plates, and the bar & chain. Remove the fan housing.
2. Lock the flywheel by bracing a screwdriver against the raised boss on the flywheel and against the flywheel nut. Do not brace the screwdriver against the flywheel fins.

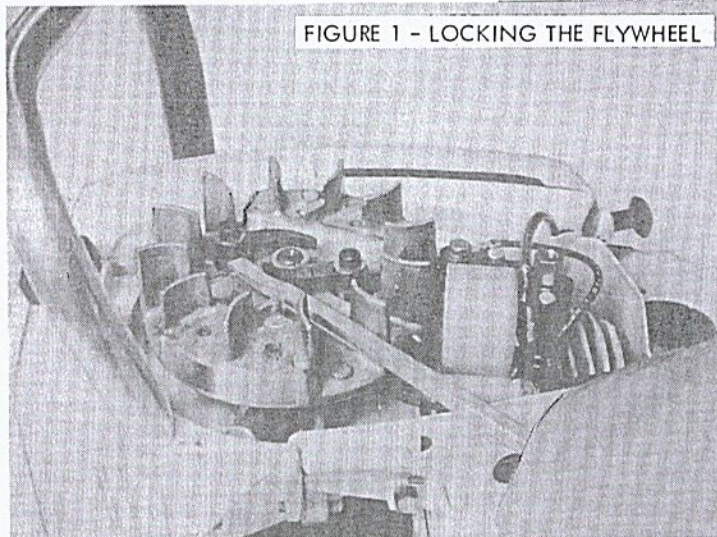


FIGURE 1 - LOCKING THE FLYWHEEL

3. Turn the clutch nut clockwise to remove it from the crankshaft. Gently tap the clutch shoes alternately with a soft-faced hammer until it comes loose from the crankshaft. Remove the clutch drum, sprocket bearing and washer.
4. Replace the fan housing and tighten the five screws. Pull the starter rope to verify proper starter engagement.

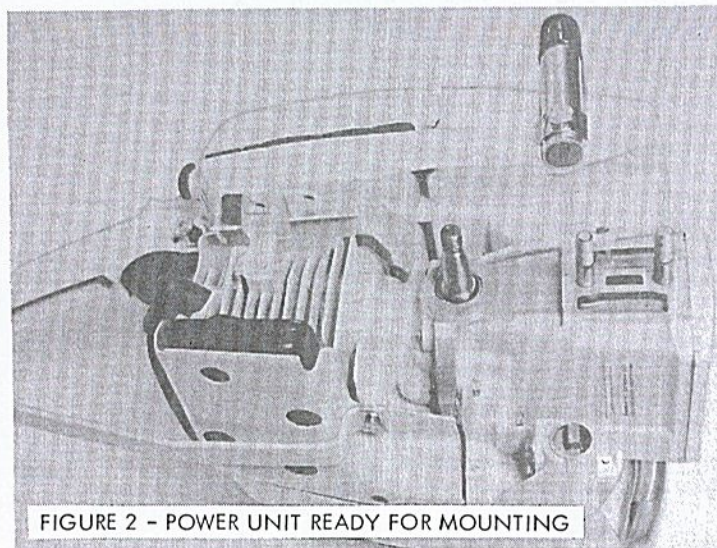
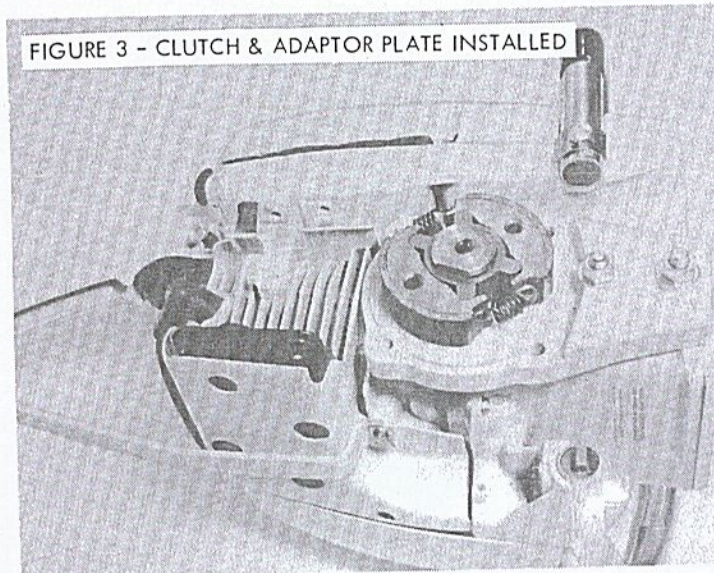
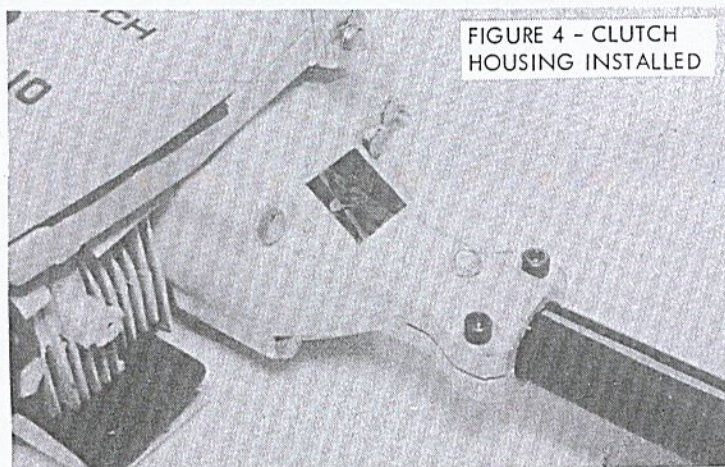


FIGURE 2 - POWER UNIT READY FOR MOUNTING

5. Remove the cutting attachment from the carton. Remove the adaptor plate from the clutch housing by removing the four hex head screws. NOTE: Clutch assembly is packaged in the clutch housing.
6. Mount the adaptor plate onto the engine, securing it with the two locknuts and washers.
7. Place the clutch assembly onto the crankshaft, making sure the clutch taper coincides with the crankshaft taper. Tighten the clutch snugly. CAUTION: Never run the engine without the clutch housing and clutch drum installed!



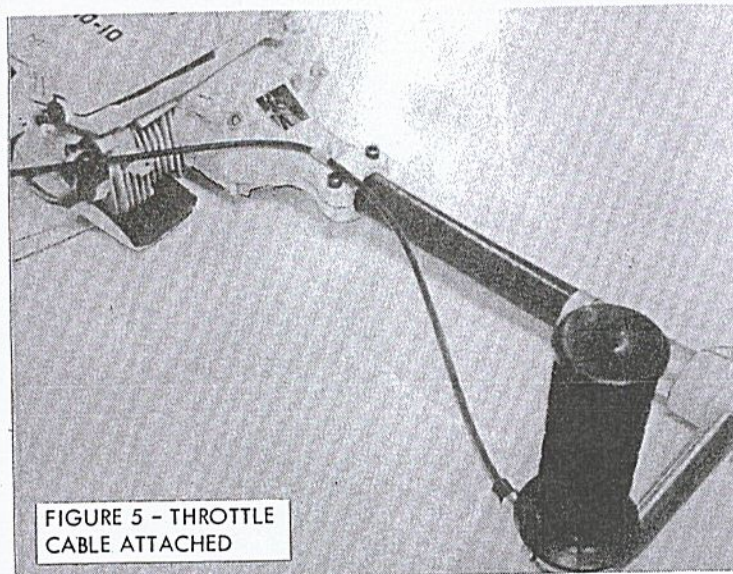
8. Mount the assembled driveshaft housing/clutch housing onto the adaptor plate, cap screw on top, and secure it with the four hex head screws. Make sure the inner edge of the clutch housing is fitted evenly on the adaptor plate flange.



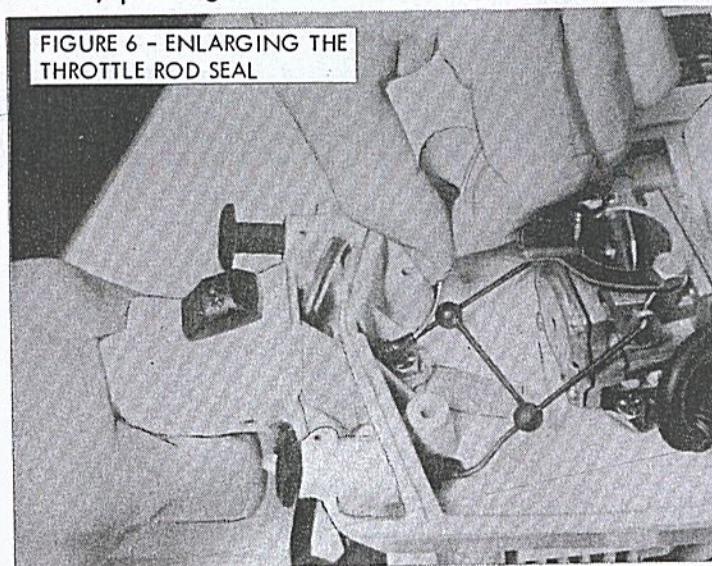
ASSEMBLING THE CUTTING ATTACHMENT

1. With an allen wrench, loosen the two socket head screws on the handle bar clamp. Install the two handle bars; the short bar with the twist grip on the right, the longer handle bar on the left. NOTE: It may be necessary to use a screwdriver to open the clamp to insert the tubular handles.

2. Position the handles in an upright 90° angle to the shaft and tighten the two screws.
3. Mount the throttle cable clip (installed on the cable) onto the clutch housing, under the cap screw.



4. Twist the throttle handle clockwise until the control wire is completely extended from the cable.
5. Remove the air cleaner cover and air filter from the power unit. Depress the throttle trigger.
6. While holding the throttle open, insert a small diameter tool such as a large straightened paper clip from the inside of the airbox along the throttle rod, through the throttle rod seal. Enlarge the seal, pushing the tool to the outside of the airbox.



7. Wrap the end of the throttle control wire with tape and form the tape into a point. Insert the throttle control wire into the enlarged seal from the outside of the airbox, along the throttle rod to the inside of the airbox as the tool is withdrawn. Remove the tape.

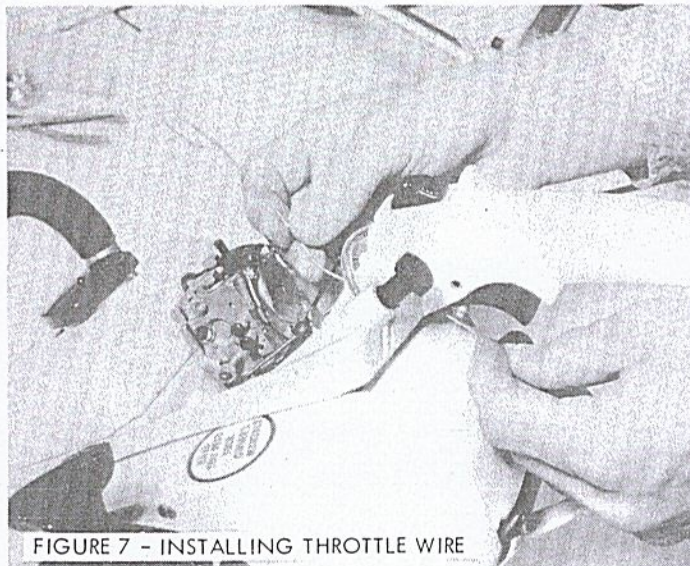


FIGURE 7 - INSTALLING THROTTLE WIRE

8. Place the throttle control wire and the throttle limiter rod along side the throttle rod and install the wire clamp finger tight.
9. The throttle limiter rod should be directly above the throttle rod and the free end should be $\frac{3}{16}$ " to $\frac{1}{4}$ " from the back of the airbox when the throttle butterfly is closed. This should limit the power unit to $\frac{3}{4}$ throttle maximum.

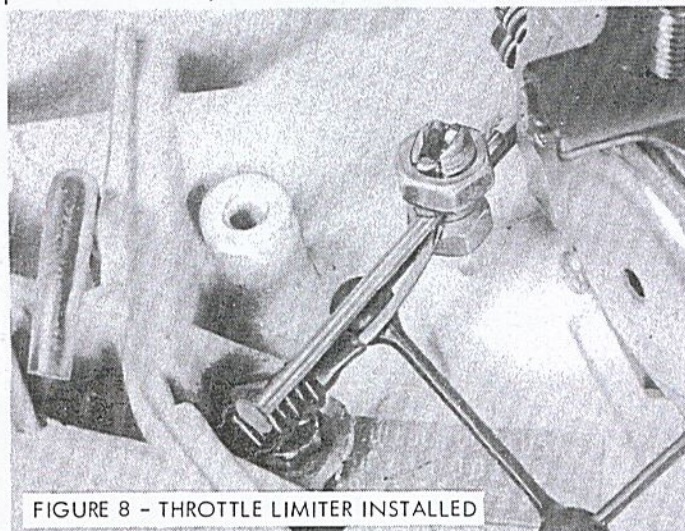


FIGURE 8 - THROTTLE LIMITER INSTALLED

10. Replace the air filter and air cleaner cover. Start the engine and run it at full power ($\frac{3}{4}$ throttle) with no load. If the speed of the engine reaches a point of high vibration, stop the engine. Remove the air cleaner cover and air filter, loosen the throttle wire clamp, and move the throttle limiter closer to the back of the airbox.
11. Place the cutting head onto the driveshaft housing, engaging the driveshaft. Tighten the two socket head screws and the cap screw.

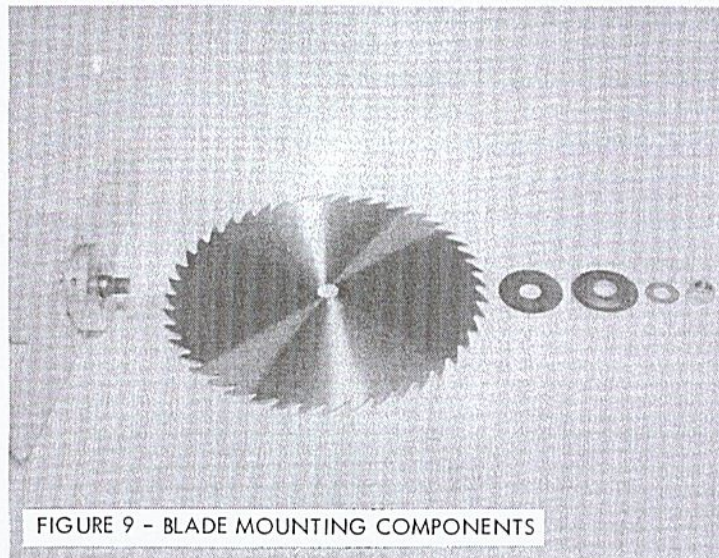


FIGURE 9 - BLADE MOUNTING COMPONENTS

12. Mount the 10-inch brush saw blade or the 11-inch weed blade onto the 5/8" diameter section of the arbor shaft. Note that blade rotation is clockwise as seen by the operator. Install the fibre washer and the arbor washer onto the 5/8" shaft.

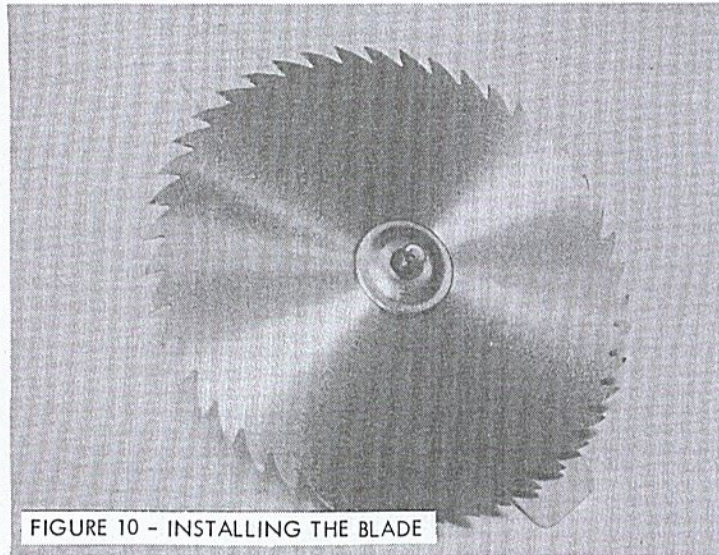


FIGURE 10 - INSTALLING THE BLADE

13. Secure them with the locknut and washer. To tighten the nut, lock the blade driver with the allen wrench placed in one of the two holes in the blade driver.

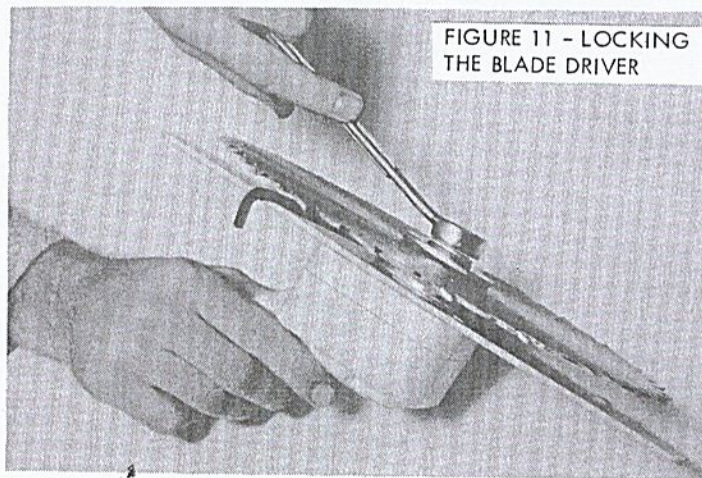
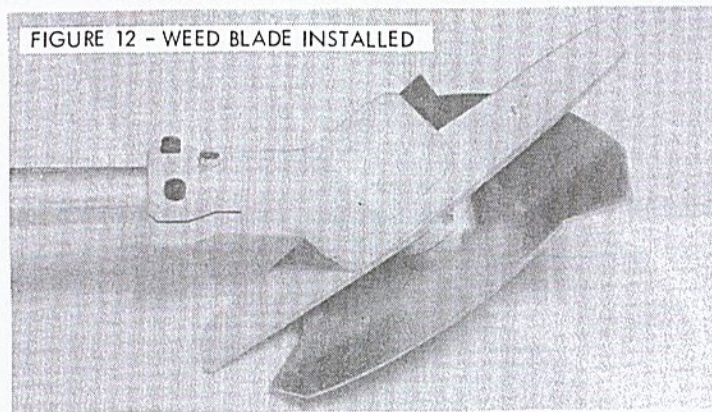


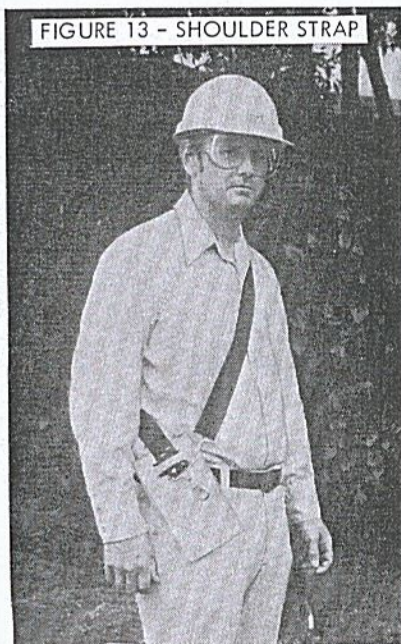
FIGURE 11 - LOCKING THE BLADE DRIVER

NOTE: If the blade turns on the blade driver after tightening the locknut, check to see if the arbor washer is on the 5/8" diameter section of the shaft, not on the 1/2" diameter threaded section.



ADJUSTING THE SHOULDER STRAP

The shoulder strap should be put on before being attached to the unit, and should be worn over the operator's left shoulder with the hook hanging at the right side, even with the right wrist. Supported from the swiveled ring located on the driveshaft housing the Brush-cutter should be balanced so that the cutting head is suspended just above the ground.



A few practice swings should be made to determine correct balance of the cutting attachment under actual operating conditions. The handle bars and shoulder strap may be adjusted to the individual operator. Each handle bar can be separately adjusted to the most convenient and efficient position. Most operators prefer the right handle bar set at 90° to the driveshaft housing and the left handle bar tilted out of vertical 5° to 10° toward the operator.

If the cutting head tends to rise, the handle bar clamp should be moved downward for better balance. If the cutting head drags, move the handle bar clamp closer to the power unit. Recheck the shoulder strap length to assure maximum control and comfort.

SECTION TWO - OPERATING INSTRUCTIONS

STARTING THE ENGINE

Before starting the Series 10 Brushcutter, be sure you read the instructions in the power unit Owner's Manual. CAUTION: Never start the engine without the clutch drum installed! To start the engine:

1. Place the shoulder strap over your left shoulder with the hook hanging at your right wrist. Do not attach the Brushcutter to the shoulder strap.
2. Start the engine on the ground. For engine starting procedure, refer to page 12 of the power unit Owner's Manual, P/N 85726.
3. With the engine at idle, attach the shoulder strap to the swivel on the driveshaft housing.

BRUSH SAW BLADE and WEED BLADE

For cutting weeds, grass, and light brush, the weed blade is recommended. The weed blade can be used on brush up to 1-1/2 inches in diameter. For larger diameter brush and trees up to six inches in diameter, it is suggested that the 10-inch circular saw blade with special wide kerf settings be used.

CUTTING WITH YOUR NEW BRUSHCUTTER

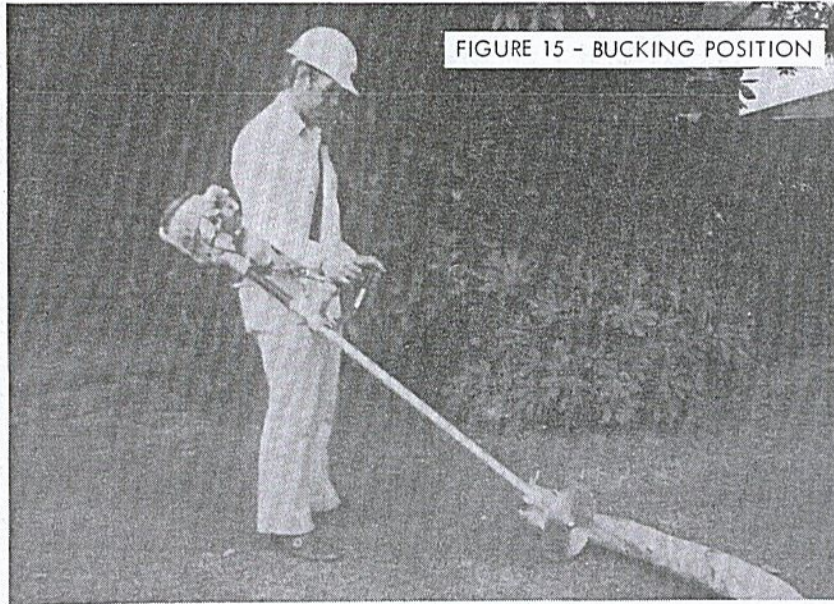
In clearing large areas, the Brushcutter should be used as a scythe, moving the tool in large semi-circular swings of 6-8 feet, moving forward about 5 inches per swing. Control of the swing should be through the hip rather than the arms and hands. CAUTION: During each swing, make sure both feet are firmly placed to maintain proper balance! AVOID CUTTING IN ANY AWKWARD OR UNNATURAL POSITION!

In cutting some types of grass, occasionally material will wrap between the blade and the blade guard, stalling the blade and causing the clutch to slip. To avoid this occurrence, the Brushcutter should be operated at high engine RPM when swinging the blade into material to be cut. Avoid previously cut, fallen material on the return swing.

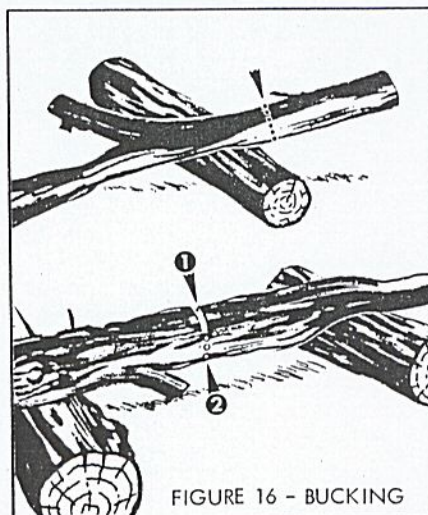
Before felling small trees (6" in diameter or less) with the brush saw blade, note the direction of fall. Always cut on the opposite side of the intended fall direction.

When Bucking (cutting felled trees into smaller lengths), the blade should be turned to a vertical position, as follows:

1. Loosen the handle bar clamp bolt and rear shaft housing clamp screws.
2. Rotate the shaft housing until the saw blade is vertical to the engine position.
3. Tighten the handle bar clamp bolt and rear shaft housing clamp screws.
4. Adjust the position of the handle bars for most efficient operation.



If possible, elevate the log to avoid running the blade into the ground. If the log is supported at both ends and you must cut in the middle, make a downward cut halfway through the log, then undercut (cut from underneath the log). This will prevent the log from pinching the blade. CAUTION: Use the blade guard to maintain control of the unit at all times!



SECTION THREE - MAINTENANCE

CHANGING THE BLADE

1. Remove the blade by inserting the allen wrench into one of the two holes in the blade driver to lock the shaft in place, and remove the nut with a 3/4 in. wrench. NOTE: This is a right-hand thread. Turn the nut clockwise to tighten and counterclockwise to loosen.
2. Replace the blade on the shaft with the teeth pointing clockwise as seen from the operator's position. Reinstall the fibre washer, arbor washer, plain washer and locknut.

BLADE MAINTENANCE

Saw Blade: A sharp, clean saw blade is an important factor in correct, efficient operation of your Brushcutter. Always keep the blade clean and free of pitch. Use kerosene or gasoline to clean the pitch and sawdust from the blade. A blade can cut poorly and appear to be dull when it only needs cleaning. We recommend the blades be sharpened by a servicing McCulloch dealer or a qualified sharpening shop. Do not attempt to sharpen the blade unless you are equipped to do so.

Weed Blade: The weed blade should be kept sharp at all times. A good flat file should be kept handy for sharpening the blade. A few strokes now and then will keep the blade sharp and cutting properly. Always shut off the engine before sharpening the blade!

LUBRICATING THE LOWER GEARS

The lower head and bevel gear assembly should be inspected and the gears repacked with grease approximately every 50 hours of operation. Before disassembly, remove the drive nut, saw blade and blade driver. Remove the four screws and the blade guard. Pull the lower bearing housing assembly straight off the lower head. It is not necessary to disassemble further for greasing.

Remove as much of the old grease as possible from the shaft and gear cavity. Inspect the gears and shafts for excessive wear or play. Repack the cavity with wheel bearing grease and reassemble the housing.

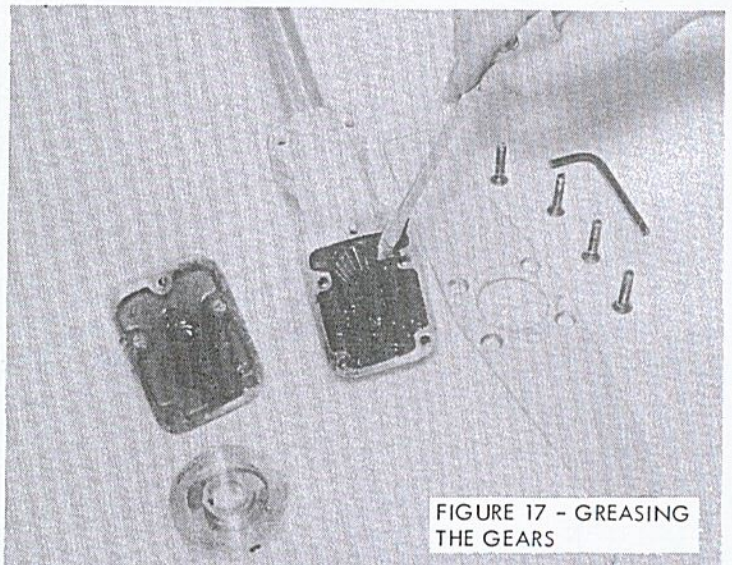


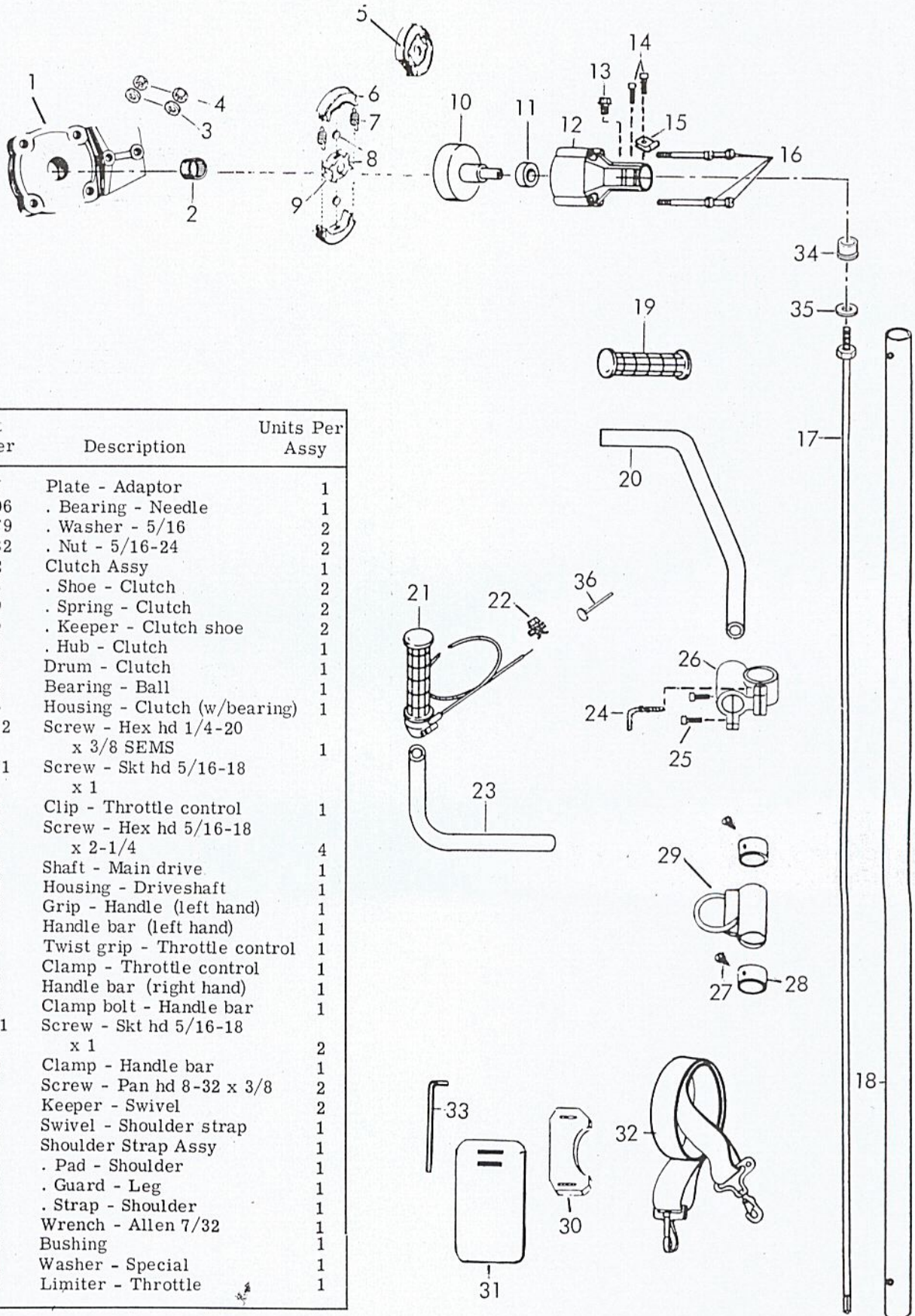
FIGURE 17 - GREASING THE GEARS

The ball bearings in the lower head and gear housing are the sealed self-lubricating type requiring no external lubrication. If these bearings are turning or have developed excessive play, they should be replaced by a qualified McCulloch serviceman, because special equipment and training are required for proper alignment. NOTE: Do not clean the bearings with solvent, as this will dilute the lubricant in the bearings.

SECTION FOUR - ILLUSTRATED PARTS LIST

Always specify Genuine McCulloch Replacement Parts!

FIGURE 1. GENERAL



Item No.	Part Number	Description	Units Per Assy
1	90297	Plate - Adaptor	1
2	101206	. Bearing - Needle	1
3	110879	. Washer - 5/16	2
4	100682	. Nut - 5/16-24	2
5	90302	Clutch Assy	1
6	90298	. Shoe - Clutch	2
7	90299	. Spring - Clutch	2
8	90300	. Keeper - Clutch shoe	2
9	90301	. Hub - Clutch	1
10	90304	Drum - Clutch	1
11	90332	Bearing - Ball	1
12	90306	Housing - Clutch (w/bearing)	1
13	106012	Screw - Hex hd 1/4-20 x 3/8 SEMS	1
14	105911	Screw - Skt hd 5/16-18 x 1	1
15	90307	Clip - Throttle control	1
16	90308	Screw - Hex hd 5/16-18 x 2-1/4	4
17	90309	Shaft - Main drive	1
18	90310	Housing - Driveshaft	1
19	90325	Grip - Handle (left hand)	1
20	90324	Handle bar (left hand)	1
21	90319	Twist grip - Throttle control	1
22	90321	Clamp - Throttle control	1
23	90320	Handle bar (right hand)	1
24	90322	Clamp bolt - Handle bar	1
25	105911	Screw - Skt hd 5/16-18 x 1	2
26	90323	Clamp - Handle bar	1
27	90317	Screw - Pan hd 8-32 x 3/8	2
28	90318	Keeper - Swivel	2
29	90316	Swivel - Shoulder strap	1
30	90315	Shoulder Strap Assy	1
31	90313	. Pad - Shoulder	1
32	90312	. Guard - Leg	1
33	90314	. Strap - Shoulder	1
34	90311	Wrench - Allen 7/32	1
35	90742	Bushing	1
36	90743	Washer - Special	1
		Limiters - Throttle	1

FIGURE 2. LOWER HEAD

Item No.	Part Number	Description	Units Per Assy
1	101492	Nut - Hex hd 1/2-20	1
2	101320	Washer - 1/2	1
3	90337	Washer - Lower arbor	1
4	90340	Washer - Friction arbor	1
5	90338	Blade - 10 in. Saw	
6	90339	Blade - Weed	
7	90335	Driver - Blade	1
8	100256	Key - Woodruff	1
9	90336	Screw - Skt hd Cap 1/4-20 x 1-1/4	4
10	90334	Guard - Blade	1
11	90333	Housing - Lower gear	1
12	103653	Pin - Groove	1
13	90332	Bearing - Ball	
14	90331	Shaft Assy - Lower	1
15	90329	Gear - Bevel	2
16	90328	Bearing - Ball	3
17	90330	Ring - Retainer	1
18	90341	Washer - Special	2
19	90326	Shaft Assy - Pinion	1
20	105911	Screw - Skt hd 5/16-18 x 1	2
21	101496	Pin - Cotter	1
22	106012	Screw - Hex hd 1/4-20 x 3/8	1
23	90327	Housing - Upper Gear	1

