

10¢

# Operating/Service Instructions

## POWER SHREDDER

Model No.

243-650



### WARRANTY

For one year from date of purchase, MTD Products Inc will replace for the original purchaser, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. All transportation charges on parts submitted for replacement under this warranty must be paid by the purchaser. This warranty does not include replacement of parts which become inoperative through misuse, excessive use, accident, neglect, improper maintenance or alterations by unauthorized persons. This warranty does not include the engine, motor, battery, battery charger or any component parts thereof. For service on these units refer to the applicable manufacturer's warranty.

The above warranty will apply only to the original owner and will be effective only if the warranty card has been properly processed. It will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. **UNDER NO CIRCUMSTANCES WILL THE RETURN OF A COMPLETE UNIT BE ACCEPTED BY THE FACTORY UNLESS PRIOR WRITTEN PERMISSION HAS BEEN EXTENDED.**

**MTD PRODUCTS INC** • 5389 WEST 130th STREET • P. O. BOX 2741 CLEVELAND OHIO 44111

# IMPORTANT

## SAFE OPERATION PRACTICES

1. Read the Operating and Service Instruction Manual carefully. Be thoroughly familiar with the controls and proper use of equipment.
2. Never allow children to operate a power shredder.
3. Keep the area of operation clear of all persons, particularly small children and pets.
4. Check fuel before starting engine. Do not fill gasoline tank indoors, when engine is running, or while engine is still hot. Wipe off any spilled gasoline before starting engine.
5. Do not change engine governor settings or over-speed engine.
6. Do not put hands near rotating parts. Keep clear of discharge opening at all times.
7. If the equipment should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause. Vibration is generally a warning of trouble.
8. When cleaning, repairing or inspecting, make certain blade and all moving parts have stopped. Disconnect spark plug wire and keep wire away from plug to prevent accidental starting.
9. Shut engine (motor) off and wait until blade comes to a complete stop before unlogging chute.
10. Check blade and engine mounting bolts at frequent intervals for proper tightness.
11. Keep all nuts, bolts, and screws tight to be sure equipment is in safe working condition.
12. Never store equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
13. To reduce fire hazard keep free of grass, leaves or excessive grease.

### OPERATION

1. Service engine with gas and oil. See engine manual packed with shredder for complete instructions for the care and maintenance of engine. **READ DIRECTIONS CAREFULLY.**
2. When ready to start engine, place throttle control lever in **START** position and start engine in accordance with instructions in engine manual. After engine starts, move throttle control lever to desired engine speed. The engine is stopped by placing control lever in the **STOP** position.

### CAUTION:

The manufacturer recommends that the operator wear safety glasses or some other suitable eye protection as it is possible for chips to be ejected out of the inlet openings while feeding material.

### USING YOUR SHREDDER

Your shredder is designed for safe, efficient, operation. CARE, OF COURSE, MUST BE EXERCISED THAT HANDS ARE KEPT AWAY FROM ALL OPENINGS.

Your shredder guide extension is adjustable. It may be adjusted to desired height by loosening the hand knob as shown in figure 1.

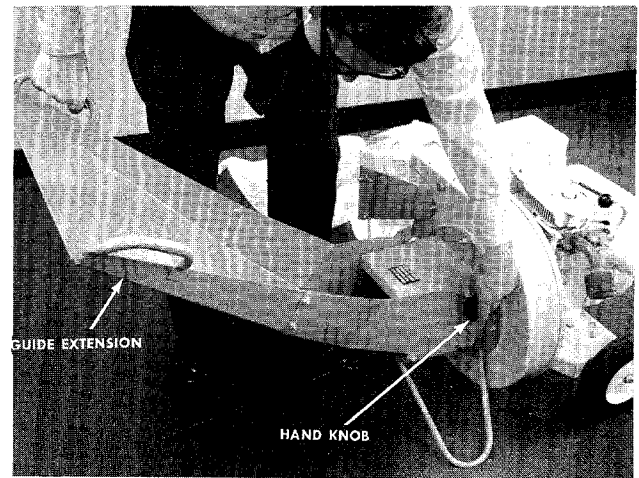


FIGURE 1. GUIDE EXTENSION ADJUSTMENT

Feed the material so that it slides down the guide extension. See figure 2.

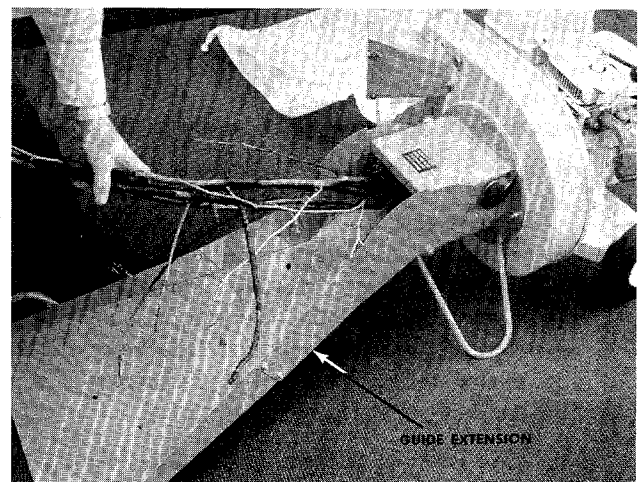


FIGURE 2. FEEDING MATERIAL INTO GUIDE

### EXTENSION

A steady flow of material provides the best results. Bulky material, such as stalks or heavy branches, should be fed into the upper guide extension. See figure 3.

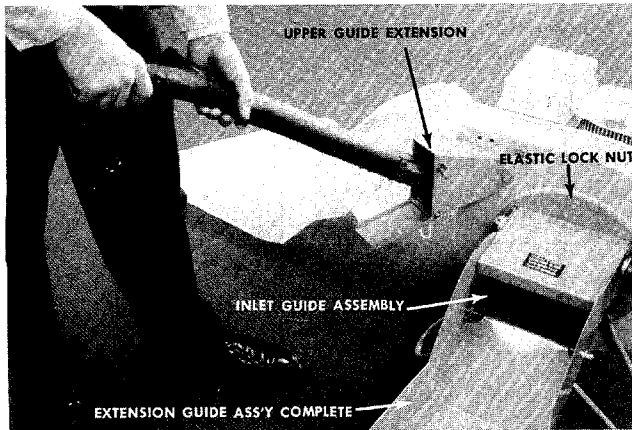


FIGURE 3. FEEDING MATERIAL INTO UPPER GUIDE

### EXTENSION

It is possible to feed too fast and you will find it will take some experimenting with feeding rates to get the most out of your shredder without stalling the engine.

Under certain conditions, it may be necessary to push the materials into the inlet guide assembly. When this becomes necessary, use a small diameter stick—NOT YOUR HANDS. The stick should be of a size that will be ground up if it gets into the impeller assembly.

The discharge chute will direct the shredded material into a pile or a container. NOTE: Your shredder is equipped with a nylon bag with drawstring lock. This will accommodate a perforated disposable plastic bag. CAUTION: Keep clear of the chute area since the shredded material comes out with considerable velocity. Always stop engine and disconnect spark plug wire when changing bags.

### MAINTENANCE

**CAUTION:** Always stop engine and disconnect spark plug wire before doing any maintenance.

**Cutting Blade**—The blade may easily be removed for grinding or replacement as follows:

1. Remove guide extension assembly by removing four elastic locknuts. See figure 3.
2. Remove bolt (Ref. No. 54), lockwasher (Ref. No. 55) and flat washer (Ref. No. 20) holding blade (Ref No. 56) to engine crankshaft. See figure 4.
3. NOTE: Blade is reversible and can be assembled to crankshaft with either side showing.

When sharpening blade, follow the original angle of grind as a guide. It is extremely important that each cutting edge receives an equal amount of grinding to prevent an unbalanced blade. An unbalanced blade will cause excessive vibration when rotating at high speeds and may cause damage to the unit. Upon reassembly, make certain all parts are assembled properly and tightened securely.

### LUBRICATION

**WHEELS**—Wheel bearings are of lifetime Fortiflex. They require no lubrication.

**ENGINE**—Follow engine manual for lubrication instructions.

#### **CAUTION**

Do Not deposit material larger than ½" diameter in hopper. This may cause damage to the shredding mechanism.

### BEFORE STARTING

#### NOTE

Do not mix oil with gasoline.

1. Fill fuel tank with fresh regular gasoline. (See figure 4.)
2. Fill crankcase with oil. (See figure 4.)

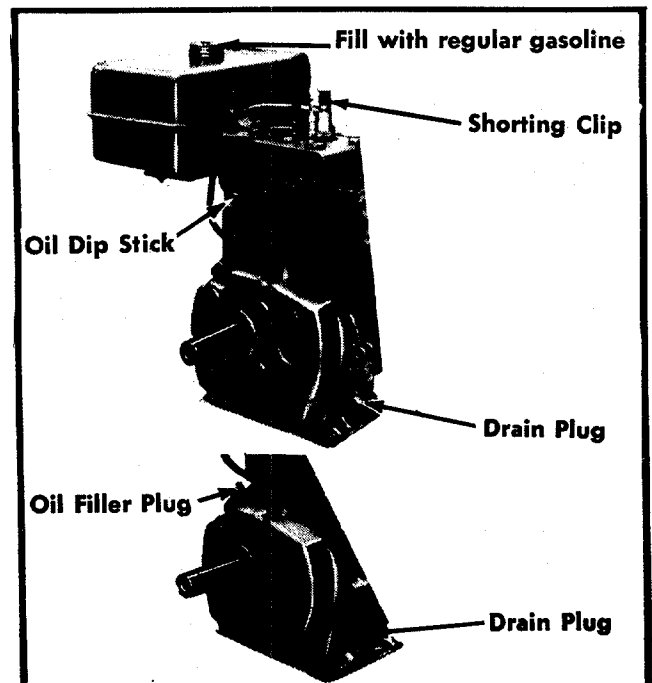


FIGURE 4.

Position equipment so that engine is setting level. Remove dip stick or oil filler plug (Figure 1). Pour oil into oil filler tube from which dip stick was removed and fill to FULL mark on dip stick. Do not overfill. After initial filling follow instructions on dip stick. Be sure dip stick is screwed into filler opening as far as it will go when measuring oil level.

During initial break-in period, oil level should be watched closely See ENGINE MAINTENANCE.

Use MS classification oil. Do not use oils marked only MM or ML or unmarked.

Above 32° use SAE 30; below 32° use SAE 10W These recommendations must be followed for best performance and long life.

Change oil first two (2) hours of operation and check oil level every five (5) operating hours or each time equipment is used.

Change oil every twenty-five (25) operating hours or sooner if equipment is operated in extremely dusty or dirty conditions.

NOTE: Carburetors are preset at the factory. DO NOT attempt to make adjustments at this time. See carburetor instructions outlined under CARBURETOR ADJUSTMENT.

NOTE: If engine is equipped with 6:1 gear reduction use the following recommended oil weights in the gear box.

Above 32°F use EP 90 in gear box; below 32°F use SAE 10W in gear box.

## TO START ENGINE

### CAUTION

If engine is used on lawnmower, be sure to keep clear of mower blade at all times.

1. Be sure shorting clip (figure 4) is away from spark plug if engine is so equipped.
2. Be sure that fuel valve, if present, under fuel tank is turned on or opened and that the spark plug wire is properly attached.
3. If equipment is equipped with remote engine and speed controls, set control in CHOKE or START position.

Some equipment may have the controls on the engine. Set control on CHOKE or START.

4. Rewind starters—Use quick full arm stroke. Keep firm grip on handle and return rope slowly.

Be sure equipment controls are in NEUTRAL and that engine controls are set for starting. Stand clear of mower and move release lever to START position.

After engine has started, move carburetor control off CHOKE or STARTING position and on to RUN position.

## TO STOP ENGINE

1. Press shorting clip against end of spark plug (figure 4) and hold until engine stops running. If shorting clip is not present move carburetor control to STOP position. If key starting is used, turn key to OFF position.
2. Turn off gasoline shutoff valve at underside of tank, if engine is so equipped. Some engines may have two valves, one at each end of tank.
3. Remove high tension wire from spark plug to prevent accidental starting by children while equipment is unattended.

## ENGINE MAINTENANCE

To obtain long life and trouble-free service from your engine, certain normal maintenance must be performed as outlined below:

1. Change oil in crankcase after first two (2) hours of operation. Then, follow instructions outlined at left.

### CAUTION

Disconnect high tension wire at spark plug to prevent accidental starting of engine. Unscrew oil drain plug located on side at bottom of engine (figure 4).

NOTE: Always tip engine toward oil drain hole. Be sure oil drains completely. Replace oil drain plug and refill with oil as directed on page 5 or engine nameplate.

2. Check oil every five (5) operating hours or each time equipment is used.

If engine has dip stick, keep oil level at mark indicated by adding if necessary.

3. Cleaning engine—This is an aircooled engine which operates most efficiently when the cooling fins are clean.

Clean cylinder fins and underside of tank or housing thoroughly of all accumulated grass and debris.

### 4. Air Cleaners

a. Paper Type Element. Remove every 10 hours or oftener if under dusty conditions. Tap to remove loose dirt and/or blow from inside out with low pressure air. Replace if torn or perforated or when plugged to maintain proper carburetor setting (50 hours). DO NOT WASH IN ANY LIQUID AND DO NOT OIL.

b. Oil Bath. Remove element. Clean element and bowl. Using same oil used for engine, fill bowl to line. Replace element.

CAUTION: Do not pour oil down center of bowl (figure 6).

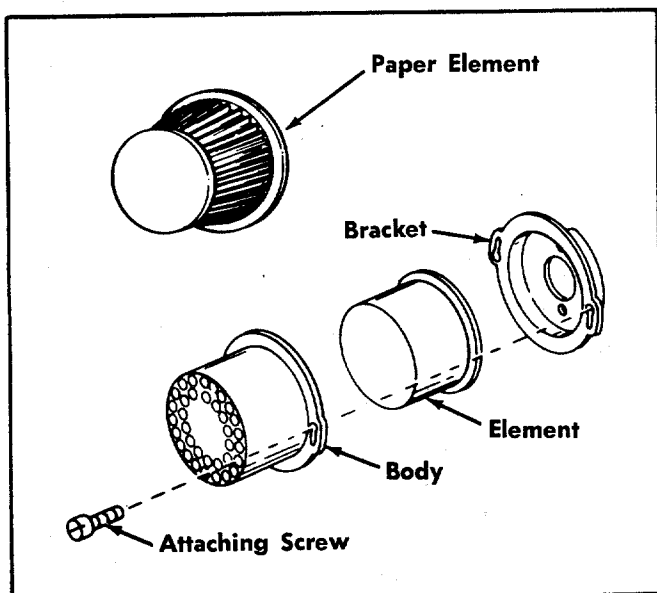


FIGURE 5.

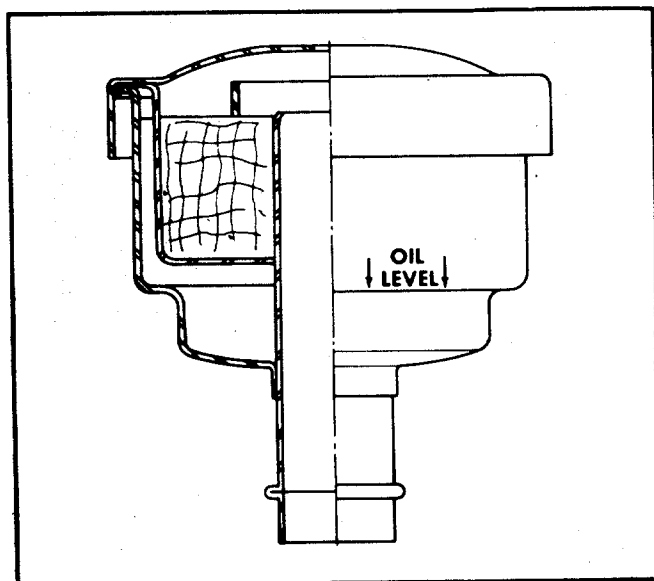


FIGURE 6

### CARBURETOR ADJUSTMENTS

Do not make unnecessary adjustments. Factory settings are correct for most application. If adjustments are needed, proceed as follows:

1. Close power adjusting needle (figure 7) by turning to right (clockwise). Close finger tight only. Forcing will cause damage.
2. Open one turn (counterclockwise).
3. Close idle adjusting needle (figure 7) by turning to right (clockwise). Close finger tight only. Forcing will cause damage.

4. Open one and one-half  $1\frac{1}{2}$  turns (counter-clockwise).
5. Start engine. Follow starting instructions page 5.
6. With throttle open (carburetor control at RUN or FAST position) adjust power adjusting needle one-eighth ( $\frac{1}{8}$ ) turn at a time forward or backward until engine runs smoothly. If engine tends to stall under load enrich mixture slightly (counterclockwise).
7. Hold throttle lever closed or move carburetor control to IDLE or SLOW position and adjust idle adjusting needle until engine runs smoothly proceeding as in step six (6) above.
8. Allow several seconds between each adjustment when performing either step six (6) or seven (7) to allow engine to react to new setting.

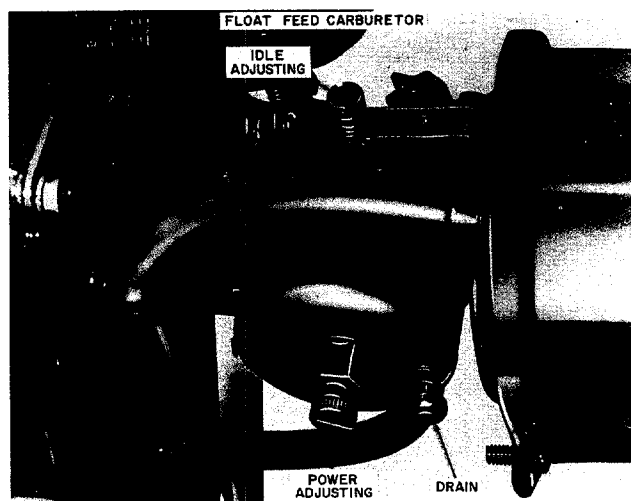


FIGURE 7.

### STORAGE INSTRUCTIONS

In event engine is to be stored for any length of time (30 days or more) or at the end of mowing season, prepare as follows:

1. Drain gasoline by tipping or by syphon hose, then run engine until remainder is used and tank and carburetor are empty.

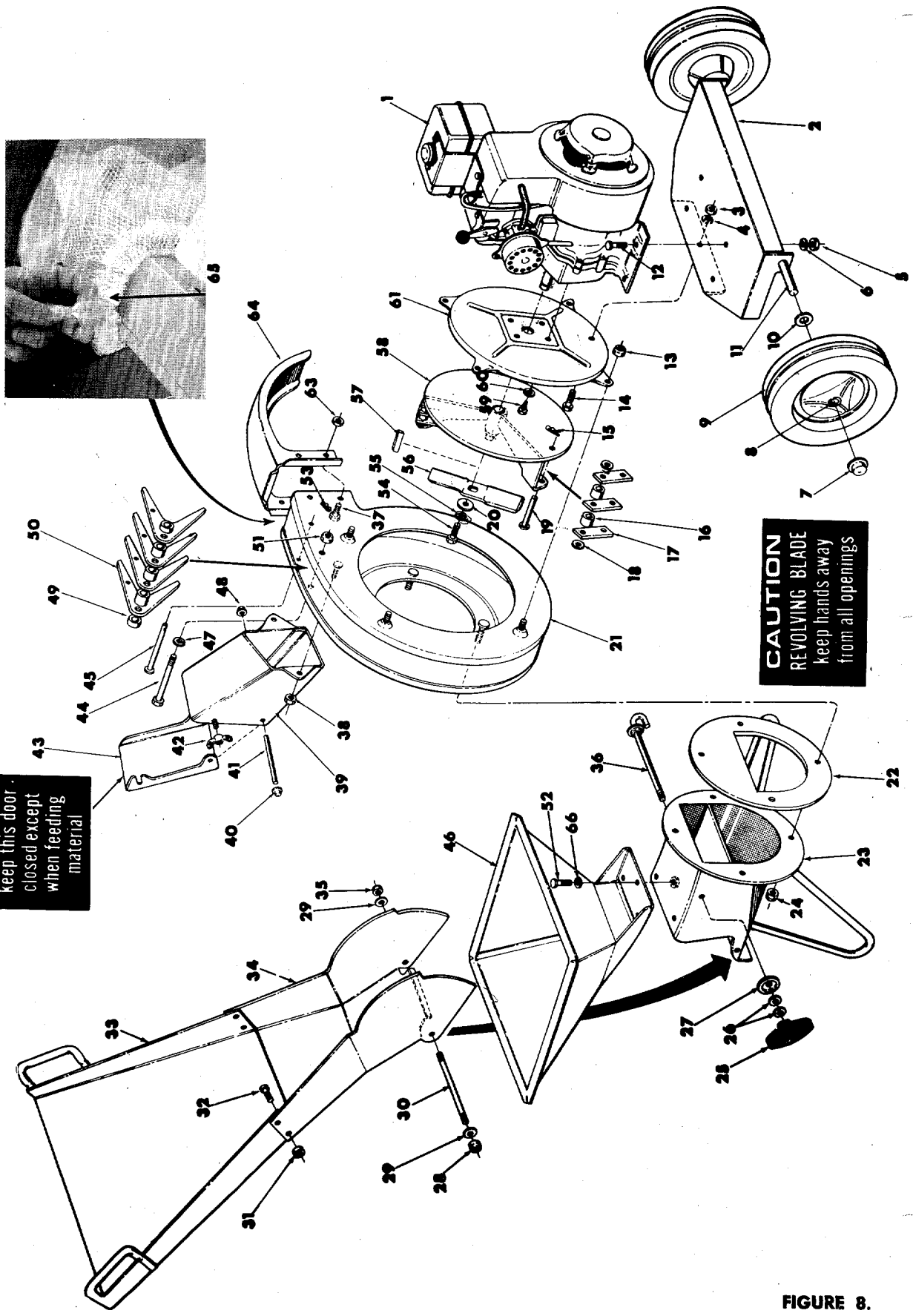
**CAUTION:** Drain into container outdoors away from fire or flame.

2. Drain carburetor by pressing upward on bowl drain (figure 7).
3. Inside protection of engine for storage is performed by removing spark plug and pouring one ounce of SAE 30 oil through spark plug hole into cylinder. Crank engine, without starting, several times to spread oil over cylinder walls.

WRITE TO US ABOUT THIS ARTICLE OR  
IF YOU ORDER REPLACEMENT PARTS ALWAYS  
MENTION THIS STOCK AND MODEL NUMBER

STOCK No. MODEL No.

keep this door  
closed except  
when feeding  
material



**CAUTION**  
REVOLVING BLADE  
keep hands away  
from all openings

FIGURE 8.

**PARTS LIST FOR MODEL 243-650 POWER SHREDDER**

REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART	REF. NO.	PART NO.	COLOR CODE	DESCRIPTION	NEW PART
1	—		Engine		36	11479	—463	Clamp Rod Ass'y.	
2	11464	—463	Engine Mounting Plate		37	710-289		Hex Hd. Cap Scr. 1/4-20 x 1/2" Lg.*	
3	712-123		Hex Nut 5/16-24 Thd.*		38	712-107		Lock Nut 1/4-20 Thd.	
4	736-119		Spring Lockwasher 5/16" Scr.*		39	11477	—463	Upper Guide Extension Ass'y.	
5	712-123		Hex Nut 5/16-24 Thd.*		40	726-111		Palnut 3/16" Dia.	
6	736-119		Spring Lockwasher 5/16" Scr.*		41	11478		Hinge Pin	
7	726-221		Push Cap		42	712-109		Wing Nut Elastic 1/4-20 Thd.	
8	7006		Fortiflex Bearing		43	11476	—463	Door—Upper Guide Extension	
9	8306	—522	Wheel Ass'y. Complete		44	710-465		Hex Hd. Cap Scr. 1/2-20 x 4 1/2" Lg.	
10	736-100		Flat Washer 1/2" I.D.		45	711-580		Clevis Pin	
11	11475	—463	Axle		46	11481	—463	Hopper Ass'y.	
12	710-237		Hex Hd. Cap Scr. 5/16-24 x 5/8" Lg.*		47	736-921		Lockwasher 1/2" Screw	
13	712-429		Elastic Stop Nut 5/16-18 Thd.		48	726-111		Palnut 3/16" Dia.	
14	710-237		Hex Hd. Cap Scr. 5/16-24 x 5/8" Lg.*		49	711-579		Flail Spacer 7/32" Lg.	
15	714-115		Cotter Pin 1/8" Dia. x 1" Lg.		50	11455	—463	Cutting Finger	
16	711-564		Flail Spacer 23/32" Lg.		51	712-922		Hex Jam Nut 1/2-20 Thd.	
17	11459	—463	Flail <del>2.33</del> "		52	710-621		Hex Hd. Cap Scr. 5/16-18 x 1/2" Lg.*	
18	736-192		Flat Washer 17/32 I.D. x 15/16 O.D. x .09 Thk.		53	714-507		Cotter Pin 3/32" Dia. x 3/4" Lg.	
19	711-578		Clevis Pin 1/2" Dia. x 3" Lg.		54	710-331		Hex Hd. Cap Scr. 3/8-24 x 2 1/4" Lg. Heat Treated	
20	736-247		Flat Washer .406 I.D. x 1 1/4" O.D. (Hardened)	N	55	736-217		Spring Lockwasher 3/8" Heavy Duty	
21	11474	—463	Flail Housing Ass'y.—Comp.		56	11458	—463	Blade <del>7.44</del> "	
22	11454	—463	Back-up Plate		57	714-114		Square Key 1/4" x 1/4" x 2" Lg.	
23	11467	—463	Inlet Guide Ass'y.		58	11473	—463	Impeller Ass'y.	
24	712-429		Elastic Stop Nut 5/16-18 Thd.		59	710-237		Hex Hd. Cap Scr. 5/16-24 x 5/8" Lg.*	
25	9966		Knob Ass'y.		60	736-119		Spring Lockwasher 5/16" Scr.*	
26	736-264		Flat Washers 1/2" Dia.		61	11452	—463	Hopper to Engine Mtg. Plate	
27	11480		Stop Washer		63	712-107		Locknut 1/4-20 Thd.	
28	712-429		Elastic Stop Nut 5/16-18 Thd.		64	11465	—463	Chute Deflector	
29	736-264		Flat Washer—5/16" Scr.*		65	764-126		Nylon BAG w/DRAW String and Lock	
30	711-566		Chute Pivot Rod		66	736-119		Spring Lockwasher 5/16" Scr.*	
31	712-107		Lock Nut 1/4-20 Thd.						
32	710-289		Hex Hd. Cap Scr. 1/4-20 x 1/2" Lg.*						
33	11460	—463	Guide Extension Ass'y.						
34	11472	—463	Guide Extension						
35	712-429		Elastic Stop Nut 5/16-18 Thd.						

(463—Top Flite Red)

\*For faster service obtain standard nuts and bolts locally. If these items cannot be obtained locally, order by part number and size as shown on the parts list.

When ordering parts, if color or finish is important use the appropriate color code shown above (e.g. Top Flite Red—11464 (463).)

**NOTE:** This instruction manual covers various models and all accessories shown do not necessarily apply to your model mower.

The engine is not under warranty by the mower manufacturer. If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines — Gasoline."

Find us fast in the



# PARTS INFORMATION

**DEFECTIVE OR MISSING PARTS** must be reported to the factory immediately. Such claims must include your model number and date of purchase.

## **MOWER, TILLER, SNOW THROWER, TRACTOR, TRAIL BIKE AND MUD BUG PARTS**

Mower, tiller, snow thrower, tractor, trail bike and mud bug parts are available through the authorized service firms listed below. All orders should specify the model number of your unit, parts numbers, de-

scription of parts and the quantity of each part required.

## **BRIGGS & STRATTON, TECUMSEH AND PEERLESS PARTS AND SERVICE**

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing *Engines—Gasoline*, Briggs & Stratton or Tecumseh-Lauson—Power Products.

### **A 1 Engine & Mower Co.**

327 East 9th Street  
Salt Lake City, Utah 84102

### **American Electric Ignition Co.**

124 N. W. 8th Street  
Oklahoma City, Oklahoma 73102

### **Auto Electric & Carburetor Co.**

2625 4th Avenue, S.  
P. O. Box 1948  
Birmingham, Alabama 35233

### **Automotive Equipment Service Co.**

3117 Holmes Street  
Kansas City, Missouri 64109

### **Bailey's Rebuild Inc.**

1325 E. Madison Street  
Seattle, Washington 98102

### **Brown Equipment Distributor Inc.**

110 Beech Street  
Corydon, Indiana 47112

### **Bullard Supply**

2409 Commerce Street  
Houston, Texas 77003

### **Catto & Putty, Inc.**

P. O. Box 2408  
510 Soledad Street  
San Antonio, Texas 78205

### **Center Supply Company**

6867 New Hampshire Avenue  
Takoma Park, Maryland 20012

### **Charles B. Wright Co.**

309 4th Avenue, South  
Nashville, Tennessee 37201

### **W. B. Clements**

400 Salem Avenue  
Roanoke, Virginia 24016

### **Morton B. Collins Co.**

300 Birnie Avenue  
Springfield, Massachusetts 01107

### **Dixie Sales Company**

P. O. Box 1408  
327 Battleground Avenue  
Greensboro, North Carolina 27402

### **East Point Cycle & Key Shop**

1617 Whiteway  
East Point, Georgia 30044

### **Gamble Distributors**

West End Avenue  
Carthage, New York 13619

### **Garden Equipment Co., Inc.**

6600 Cherry Avenue  
Long Beach, California 90805

### **Henzler, Inc.**

2015 Lemay Ferry Road  
St. Louis, Missouri 63125

### **Frank E. Ives & Son**

1101 Lincoln Avenue  
Prospect Park, Pennsylvania 19076

### **J. W. Jewett Co.**

981 Folsom Street  
San Francisco, California 94107

### **Kenton Supply**

8216 North Denver Avenue  
Portland, Oregon 97217

### **Kimber's Inc.**

115 W. Geddes St.  
Syracuse, New York 13204

### **The Lawnmower Shop**

1340 El Camino Real  
San Carlos, California 94070

### **Marr Brothers**

423 E. Jefferson  
Dallas, Texas 75203

### **Mathews Auto Electric Co.**

420 East 2nd Street  
Tulsa Oklahoma 74120

### **McClure Lawn & Garden Supply**

1114 Lexington Avenue  
Mansfield, Ohio 44907

### **Memphis Cycle & Supply Co.**

421 Monro Avenue  
Memphis Tennessee 38103

### **Moz-All of Florida, Inc.**

365 Greco Avenue  
Coral Gables, Florida 33146

### **National Central, Div. of**

Joe Sterling, Inc.  
Drawer "D" 687 Seville Rd.  
Wadsworth, Ohio 44281

### **Power Equipment Distributor**

36463 So. Gratiot Avenue  
Mt. Clemons, Michigan 48043

### **Parts & Sales Inc.**

2101 Industrial Pkwy.  
Elkhart, Indiana 46514

### **Parts & Sales Inc.**

335 West St. Charles Road  
Villa Park, Illinois 60181

### **Power Lawn & Garden Equip. Co.**

2551-2571 J. F. Kennedy Road  
Dubuque, Iowa 52001

### **Raub Supply Company**

James & Mulberry Sts.  
Lancaster, Pennsylvania 17604

### **Radco Distributors**

2403 Market Street  
P. O. Box 3216  
Jacksonville, Florida 32206

### **Richmond Battery & Ignition**

P. O. Box 25369 — 957 Myers St.  
Richmond, Virginia 23260

### **Smith Hardware Company**

515 N. George Street  
Goldsboro, North Carolina 27530

### **South Denver Lawn Equip. Co.**

527 West Evans  
Denver, Colorado 80223

### **Suhren Engine**

8330 Earhart Blvd.  
New Orleans, Louisiana 70118

### **Sutton's Lawn Mower Shop**

Route 4, Box 343  
North Little Rock, Arkansas 72117

### **Warner Equipment**

7520 Lyndale Avenue, So.  
Minneapolis, Minnesota 55423

## **WARRANTY PARTS AND SERVICE POLICY**

The purpose of warranty is to protect the customer from defects in material and workmanship, defects which are not detected at the time of manufacture.

Our aim is to build into our product quality and reliability. Considerable emphasis is placed on quality control in order to assure our customer of satisfactory product performance. To achieve this goal, it is necessary to gain the cooperation of all concerned, MTD, our sales force and our customers.

MTD's responsibility is to build a quality product and to back up that product. MTD must build this quality product at a competitive price. This cannot be achieved without production in quantity. Quantity production is mass production. In mass production it is always possible for undetected defects to be present when the product reaches the customer. Our warranty is extended to assure the customer that any such defects will be corrected.

Use and maintenance are the responsibility of the customer. MTD cannot assume responsibility for conditions over which it has no control. MTD's responsibility does not cover misuse, excessive use, accident neglect, improper maintenance or alterations by unauthorized persons. Satisfactory product performance can only result when a manufacturer provides and backs up a quality product and the customer follows through with proper use and proper maintenance of that product. When both the manufacturer and the customer recognizes and assumes his responsibility, satisfactory product performance and customer satisfaction are assured.



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