

Bought August 1979

# Operator's Manual

Verle Milton AND

## Assembly Instructions



**MF 41 REAR-MOUNTED  
DYNABALANCE MOWER**



Massey-Ferguson Inc.  
114 BELL AVENUE, DES MOINES, IOWA 50319  
**Massey Ferguson**  
114 BELL AVENUE, DES MOINES, IOWA 50319



# MF

# Massey Ferguson



## TO OUR CUSTOMER:

*Congratulations on your selection of a Massey-Ferguson Product. We believe you have exercised excellent judgment in the purchase of your Massey-Ferguson machine. We are most appreciative of your patronage.*

*Your Dealer has performed every pre-delivery service on your new machine.*

*He will be happy to acquaint you with the operating and maintenance instructions given in this manual, and to instruct you in the proper and varied applications of this machine. Call on him at any time when you have a question, or need equipment related to the use of your machine.*

*We recommend that you carefully read this entire manual before operating the unit. Also, time spent in becoming fully acquainted with its performance features, adjustments and maintenance schedules will be repaid in a long and satisfactory life of the product.*

*This equipment is covered by a written warranty which will be provided to you by your M-F Dealer at time of purchase.*

Massey-Ferguson reserves the right to make changes or add improvements to its products at any time without incurring any obligation to make such changes to products manufactured previously. Massey-Ferguson, or its dealers, accept no responsibility for variations which may be evident in the actual specifications of its products and the statements and descriptions contained in this publication.

**Massey-Ferguson Inc.**

1901 BELL AVENUE, DES MOINES, IOWA 50315

**Massey-Ferguson Industries Limited**

915 KING STREET WEST, TORONTO, CANADA



INTRODUCTION

 **SAFETY PRECAUTIONS** 

**PERSONAL INJURY MAY RESULT IF THESE  
PRECAUTIONS ARE NOT FOLLOWED**

The safety of the operator is one of the main concerns in designing. Designers build in as many safety features as possible. However, every year many accidents occur which should have been avoided by a few seconds of thought and a more careful approach to handling farm machinery and implements. You, the operator, can avoid many accidents by observing the following precautions. To avoid personal injury, study these precautions and insist those working with you and for you follow them.

Safety shields are usually removed for access to assemblies being serviced and sometimes for photographic purposes (clarity of figure). All safety shields must be replaced after servicing.

- Always shut off tractor engine and disengage PTO drive when working on Mower.
- When not in use lower to ground store cutter bar in transport position (vertical) and secure with support rod and screw lock.
- Before disconnecting from tractor:
  - Lower Mower to ground, secure cutter bar in transport position (vertical) with support rod and screw lock.
  - Stop tractor engine and disengage PTO shaft drive.
  - Disconnect PTO telescoping shaft from tractor PTO shaft.
- To prevent personal injury keep hands clear of area between guards and knife sections.
- Keep all shields in place.
- Keep hands, feet and clothing away from power driven parts.
- Match operating speed to terrain. Reduce speed when operating on rough or hilly ground.
- Be alert for people or animals near the machine when starting to operate.
- Do not transport Mower at high speed (25 mph).
- Never allow anyone on Mower and only the operator on tractor when operating.
- When going through fence gates or nearing confined quarters, be especially careful to prevent ends from hooking fixed objects.
- Avoid hitting an obstruction, causing personal injury or excessive strain on Mower and tractor.
- Use care and caution when transporting on rough road or highway.
- When driving tractor and Mower on a road or highway, whether at night or during the day, use accessory lights and SMV Identification Emblem. The use of a flashing amber light is acceptable in most localities. However, some localities prohibit the use of them. Local laws should be checked for all highway lighting and marking requirements.
- REMEMBER — "SAFETY" is only a word — until it is put into practice.



Look for this symbol to point out important safety precautions. It means — ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.

# INTRODUCTION

The information in this Manual describes assembly, operation, maintenance and servicing of MF 41 Mower to help you keep "on-the-go". The money invested will be better spent if you take the time to READ this Manual and get to KNOW it. Every piece of machinery works better and becomes more efficient when you are familiar with it.

**DO NOT** neglect the maintenance that is recommended.

A machine which is properly maintained pays a bigger dividend than one which is neglected. The maintenance and servicing described in this Manual can all be done with tools ordinarily available.

Massey-Ferguson has engineered and tested this Mower under all kinds of conditions to produce a superior machine. They have kept it as simple as possible in design and operation. This Manual will help you, the operator, get the most out of this Mower.

Reference to left-hand and right-hand used throughout Manual refers to position when standing at rear of Mower facing forward.





# INDEX

PAGE

ASSEMBLY INSTRUCTIONS .....	4
<b>OPERATION</b> .....	
Description .....	10
Variable Equipment .....	10
Preparing Tractor .....	10
Preparing Mower .....	10
Attaching Mower to Tractor .....	11
<b>OPERATING ADJUSTMENTS</b> .....	
Operating Height .....	13
Safety Release .....	13
Cutter Bar Flotation .....	14
Lift Arm .....	14
Counterbalance Spring .....	14
Inner and Outer Shoe .....	15
Pull Bar .....	15
Cutter Bar Lead Adjustment .....	16
Belt Tension .....	16
Two-Rod Steel Outer Divider .....	16
Cutter Bar Tilt .....	16
Swinging Frame Eccentric Adjustment .....	16
Variable Sheave .....	17
<b>OPERATING INFORMATION</b> .....	
Opening a Field .....	18
Finishing a Field .....	18
Mowing Speeds .....	18
Mowing Capacity .....	18
Variable Speed Sheave Chart .....	18
Transport Position .....	19
Field Transport .....	19
Detaching Mower .....	19
Mower Storage .....	19
<b>MOWER OPERATING DIFFICULTIES</b> .....	
<b>PERIODIC MAINTENANCE</b> .....	
Lubrication .....	22
<b>SERVICING</b> .....	
Knife Replacement .....	23
Knife Sharpening .....	23
Replacing Knife Sections .....	23
Wear Plates .....	24
Knife Clips .....	24
Guard Alignment .....	24
Drive Belt Replacement .....	24
<b>SPECIFICATIONS</b> .....	

3

## ASSEMBLY INSTRUCTIONS

The MF 41 Rear Mounted Dynabalance Mower is shipped from the factory in the following sub-assemblies:

1. Frame Unit Assembly
2. Drag Bar and Drive Assembly
- \*3. Cutter Bar with Two Knives
- \*4. P.T.O. Drive Shaft
- \*5. Left-Hand Hitch Pin

The assemblies marked with an asterisk (\*) are optional items.

**NOTE:** Assembly of the MF 41 Mower may be completed easier by attaching the frame assembly to the 3-point hitch of tractor, and using the tractor hydraulics to raise and lower unit as required during assembly. The Mower can also be completely assembled before attaching it to the tractor.

To complete the assembly of the MF 41 Mower, proceed as follows:

### FRAME ASSEMBLY

Referring to Fig. 1, which shows frame assembly as received from factory, remove loose parts wired to the assembly as shown at, 1, 2, 3 and 4, Fig. 1.

To attach the lift arm assembly, 4, Fig. 2, to left-hand side of frame upright, 2, proceed as follows:

Position yoke end of lift arm assembly, 4, over attaching holes in frame upright. Insert the threaded end of the left-hand hitch pin, 3, through lift arm yoke and frame.

Refer to, 5, in inset and insert the lift arm bushing, 2, Fig. 1, in the outer mounting hole of lift arm yoke. Secure spacer with a flatwasher and 3/4" UNF nut as shown at, 5, Fig. 2, (inset). Tighten nut.

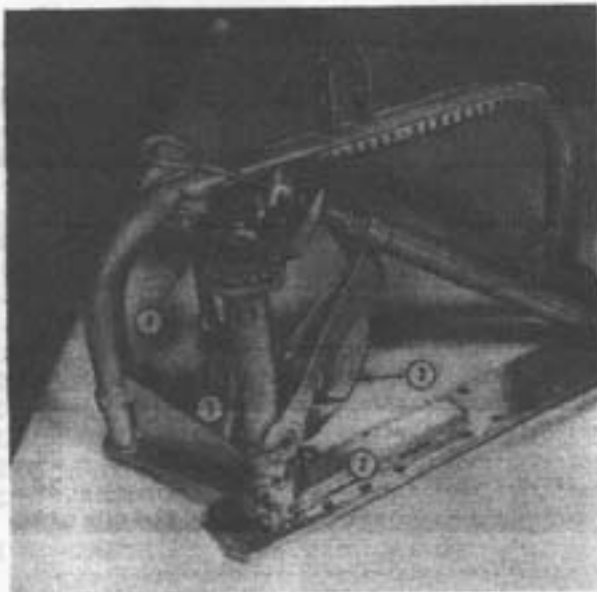


Fig. 1 — Frame Assembly  
(as Received from Factory)

1. 3/4" Jam Nut, 3/4" Diameter Flatwasher
2. Lift Arm Bushing
3. Lift Arm Assembly
4. Connecting Rod Bellcrank

### MOWER HITCH PIN USAGE

The right-hand hitch pin is Category I (7/8" diameter) and is welded to the frame member. It can be converted to a Category II pin (1-1/8" diameter) with a spacer sleeve which is available through repair parts.

The left-hand hitch pin bolts through the frame and can be either a Category I or II pin, to match the tractor lower link ball ends.

Refer to Fig. 3, and attach frame unit assembly to tractor 3-point hitch as shown.

### DRAG BAR AND DRIVE ASSEMBLY

This assembly is shipped from factory crated with loose parts and hardware.

Connect pull bar clevis, 3, Fig. 4, to hinge, 1, with a 3/4" x 2-1/4" clevis pin, flatwashers, and 1/4 x 1-1/2" cotter pin, 2. Adjust pull bar clevis to remove all slack.

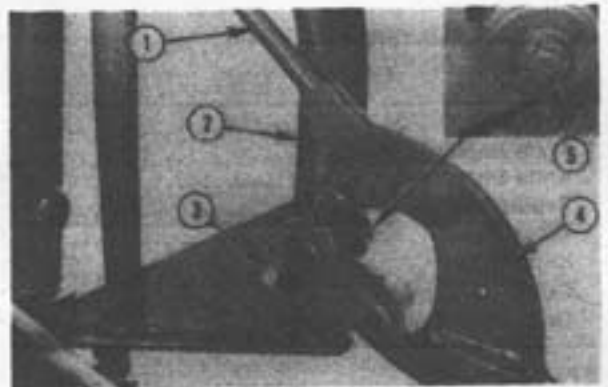
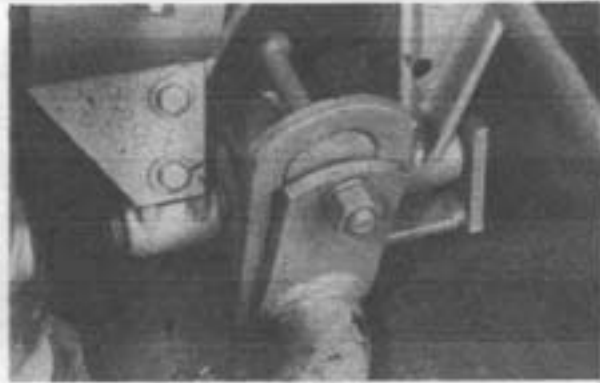


Fig. 2 — Lift Arm Assembly Installation

1. Bellcrank Connecting Rod
2. Left-Hand Side of Frame Upright
3. Left-Hand Hitch Pin
4. Lift Arm Assembly
5. (inset) 3/4" Jam Nut, 3/4" Flatwasher and Lift Arm Bushing (Under washer)



**Fig. 3 — Frame Assembly Attached to Tractor**



**Fig. 5 — Cam Bolt and Lock Nut Installed**

at the intermediate (62-66 inches) or wide (72-76 inches), setting, refer to Fig. 7, for tread width information.

Install nuts, 1, Fig. 6, on the base bolts and tighten to 155-170 ft.-lbs. torque. Refer to Fig. 7, and position lift rod trunnions (guide and nut) to correct position for desired wheel tread settings.

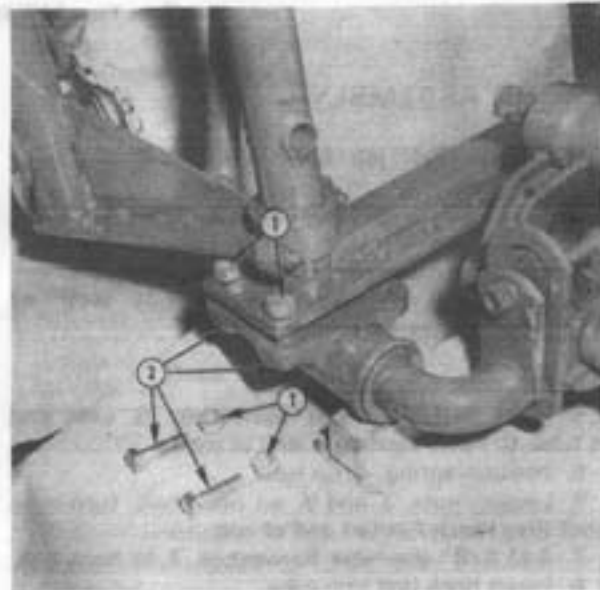
Remove cam bolt and locknut as installed for crating and reinstall as shown in Fig. 5.

Refer to Figs. 6 and 7, and lower the frame assembly onto bolts, 2, Fig. 6. If the Mower is to be used with a tractor having a wheel setting of 52-56 inches, use the same position as shown in Fig. 6. However, if the Mower is to be used on a tractor with wheels



**Fig. 4 — Positioning Drag Bar and Drive Assembly**

1. Hinge
2. Clevis Pin, Flatwashers and Cotter Pin
3. Clevis



**Fig. 6 — Frame Assembly Mounting to Drag Bar and Drive Assembly**

1. Nuts
2. 5/8" UNF x 2-1/4" Hex Head Bolts

5

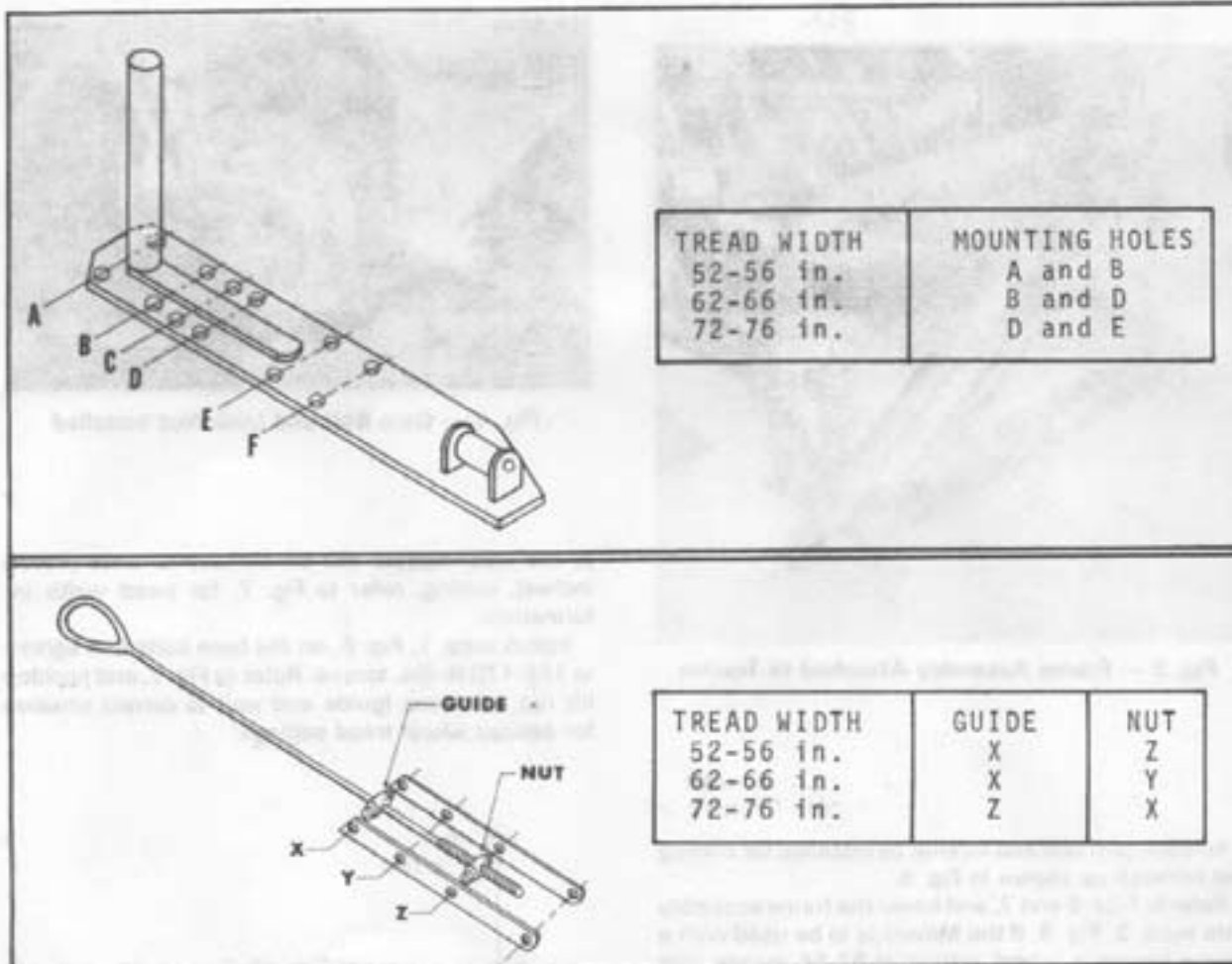


Fig. 7 — Tread Width Adjustment Diagram

### SPRING ASSEMBLY

1. Remove hair pin from belt adjustment hook bolt, 1, Fig. 8.
2. Remove hook bolt from hole in plate.



**CAUTION:** PTO drive assembly will fall forward. Keep hands clear of drive assembly.

3. Pull hook bolt from tube, 6.
4. Place 7/8" diameter flatwasher, 5, over end to tube, 6. Push washer to end of tube.
5. Position spring, 4, on tube.
6. Loosen nuts, 2 and 3, on hook bolt. Turn nuts until they reach hooked end of bolt.
7. Add 5/8" diameter flatwasher, 7, to hook bolt.
8. Insert hook bolt into tube.
9. Place hook bolt end in the appropriate hole in the plate and secure with a hair pin. Hook bolt position will vary depending on belt condition and number of shims in driven pulley. The hook bolt should

be positioned as far to the left as possible to prevent buckling of the assembly when the spring is under tension.

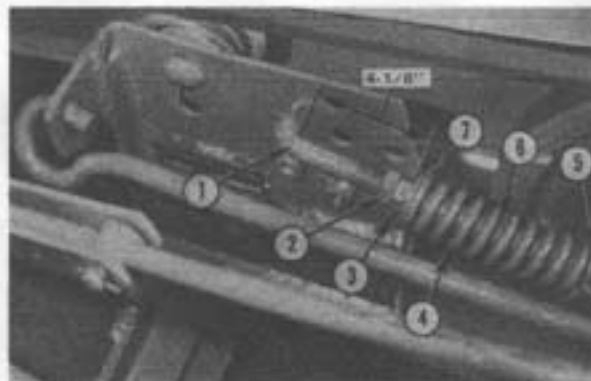


Fig. 8 — Spring Assembly Installed

- |                   |                             |
|-------------------|-----------------------------|
| 1. Hook Bolt      | 4. Spring                   |
| 2. Jam Nut        | 5. 7/8" Diameter Flatwasher |
| 3. Adjustment Nut | 6. Tube                     |
|                   | 7. 5/8" Diameter Flatwasher |





Fig. 9 — "V"-Belt Installed

1. "V"-Belt
2. Idler Pulleys

With the belt tightener slackened off, install the "V"-belt. (See Fig. 9).

### BELT TENSION

Adjust drive belt to have approximately 3/4" to 1" deflection at a point midway between the pulleys when 20 lbs. of pressure is applied. The spring should be compressed to approximately 5". Turn adjusting nut, 3, Fig. 8, to compress spring, 4. Secure in place with locknut, 2.

*NOTE: There should not be more than 4-1/8" of the hook bolt exposed between the shoulder and flatwasher, Fig. 8. If this dimension is exceeded, before proper adjustment is achieved, loosen tension and place hook bolt in next hole and retighten as above. Exceeding the 4-1/8" dimension may cause assembly to buckle.*

Position idler pulleys, 2, Fig. 9, so that "V"-belt, 1, will be deflected approximately 1/8".

Connect PTO shaft Universal splined end to drive pulley shaft housing assembly. Insert clevis pin and secure with cotter pin, Fig. 10.



Fig. 10 — PTO Shaft Installation

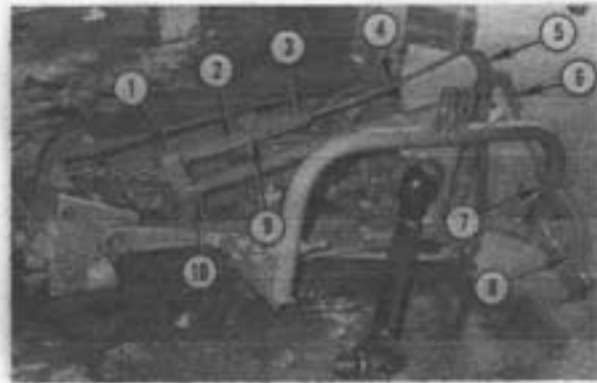


Fig. 11 — Lift Linkage Assembly and Adjustment

1. Lift Clevis
2. Threaded Trunnion (nut)
3. Unthreaded Trunnion (guide)
4. Lift Rod
5. Bellcrank
6. Upper Clevis End of Connecting Rod
7. Lower Clevis End of Connecting Rod
8. Lift Arm Assembly
9. Lift Links
10. Clevis End of Counterbalance Spring

### LIFT LINKAGE ASSEMBLY AND ADJUSTMENT

Attach rear upper clevis end of connecting rod, 6, Fig. 11, to forward lower end of lift rod bellcrank, 5, with 5/8" x 1-1/4" clevis pin and 3/16" x 1" cotter pin. Attach clevis end of connecting rod, 7, to appropriate hole in lift arm assembly, 8, with clevis pin and insert cotter pin.

Clevis pin in lift arm connecting rod, 7, should be checked to see if it is positioned in correct hole. Holes are marked with letters "A", "B" and "C". Refer to chart for their correct usage.

#### LIFT ARM HOLES

Tractor	Hole in Lift Arm
Standard Clearance Models MF 245 and MF 255.	A
Standard and High Clearance Models MF 265/265/275.	B

The lift linkage assembly consists of a lift rod, 4, Fig. 11, connected to links, 9, by means of one unthreaded trunnion, 3, and one threaded trunnion, 2.

Readjust lift linkage to repositioning unthreaded trunnion (guide), 3, and threaded trunnion, (nut), 2, in accordance with tread width information illustrated in Fig. 7.



Fig. 12 — Counterbalance Spring Adjustments

- |                          |                   |
|--------------------------|-------------------|
| 1. Lift Rod Links        | 4. Threaded Plug  |
| 2. Lift Clevis           | 5. Locknut        |
| 3. Counterbalance Spring | 6. Swivel         |
|                          | 7. Adjusting Bolt |

### COUNTERBALANCE SPRING ASSEMBLY

Attach lower clevis end of counterbalance spring, 10, Fig. 11, to bellcrank clevis, 1. Use a 5/8" x 2" clevis pin and secure with a 5/32" x 1" cotter pin.

### COUNTERBALANCE SPRING ADJUSTMENT

The counterbalance spring is the main component governing the flotation of the inner and outer shoes.

It is recommended that the distance between the bottom edge of the swivel, 6, Fig. 12, and the top of the threaded plug, 4, should be adjusted approximately as listed in the chart. Refer to Fig. 13, for adjustment diagram and details.

To make an adjustment, loosen the locknut, 5, Fig. 12, and turn adjusting bolt, 7, until the correct measurement has been obtained. Tighten the locknut.

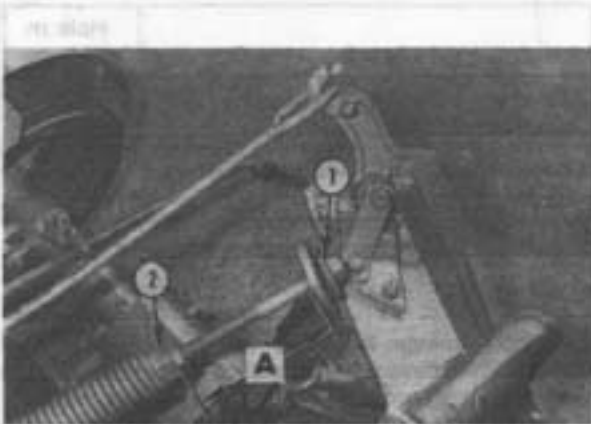


Fig. 13 — Counterbalance Spring Adjustment

- |           |
|-----------|
| 1. Swivel |
| 2. Plug   |

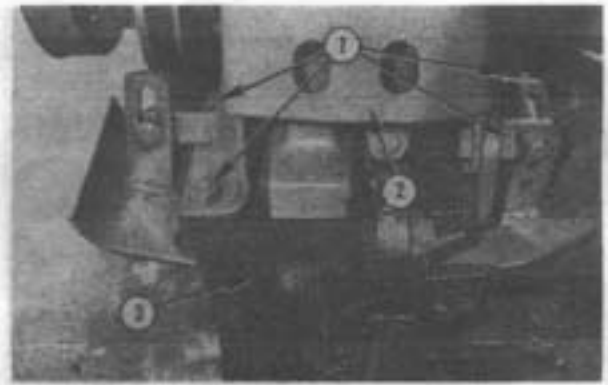


Fig. 14 — Cutter Bar and Drive Unit Assembly

- |   |
|---|
| 1. Hex Head 5/8" UNC x 1-1/2" Bolts and Lock Nuts |
| 2. Drive Unit Assembly                            |
| 3. Cutter Bar                                     |

TREAD SETTING	A DIMENSION
Narrow	5" - 8"
Intermediate	7" - 10"
Wide	9" - 12"

*NOTE: This adjustment may need to be changed when operating in the field to acquire the proper flotation of the inner and outer shoes.*

The lifting weight at the inner and outer shoes should be within the range specified.

Inner shoe	90-120 lbs.
Outer shoe	20-40 lbs.

### CUTTER BAR AND INNER SHOE INSTALLATION

Position cutter bar assembly on blocks and lower Mower drive assembly onto bolts as shown at Fig. 14.

Secure cutter bar, 3, Fig. 14, to drive unit assembly,

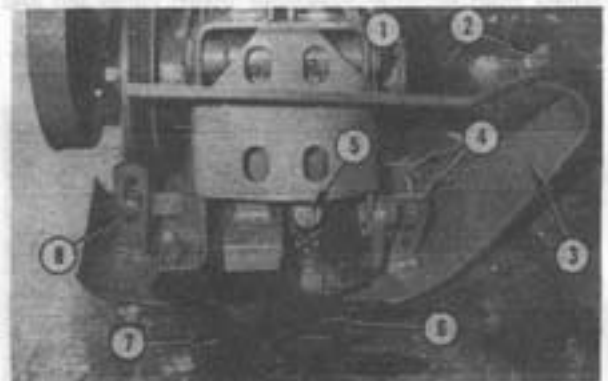


Fig. 15 — Inner Shoe and Knife Installation

- |                             |                                 |
|-----------------------------|---------------------------------|
| 1. Grass Rod                | 5. Hex Head Bolt and Flatwasher |
| 2. Bolt, Lockwasher and Nut | 6. Knife Assembly               |
| 3. Inner Shoe Assembly      | 7. Cutter Bar Assembly          |
| 4. Bracket                  | 8. Bolt, Lockwasher and Nut     |

2, with four hex head 5/8" UNC x 1-1/2" bolts, 1, and hex locknuts as shown. Tighten the nuts to 155-170 ft.-lbs. torque.

Attach the inner shoe assembly, 3, Fig. 15, to cutter bar front bracket, 4, with one hex head 7/16" UNF x 4" bolt. A 3/8" x 2-1/16" pipe spacer is to be installed on the bolt between the cutter bar bracket arms as indicated by, 4, secure bolt with lockwasher and nut. Tighten nut. Secure assembly at, 8, with a roundhead 7/16" UNC x 1-1/2" bolt, flatwasher, lockwasher and nut. Tighten nut.

Install the inner shoe grass rod, 1, using a 1/2" UNC x 1-1/2" bolt, flatwasher and nut at location, 2. Tighten nut.

Install the knife, 6, into cutter bar. Secure knife head to the knife lever of the drive unit using a heavy flatwasher and hex head bolt, 5, tighten bolt. (To provide ease of installation, rotate the belt pulley by hand until the knife lever is at its innermost position.)

Place divider rod, 1, Fig. 16, between retaining clamp, 2, secure with bolt, lockwasher and nut, 5.

Attach divider assembly to outer shoe, 3, with bolt, tension spring, cup washer, castellated nut and cotter pin, 4. Tighten castellated nut until cotter pin can be inserted. Bend over ends of cotter pins.

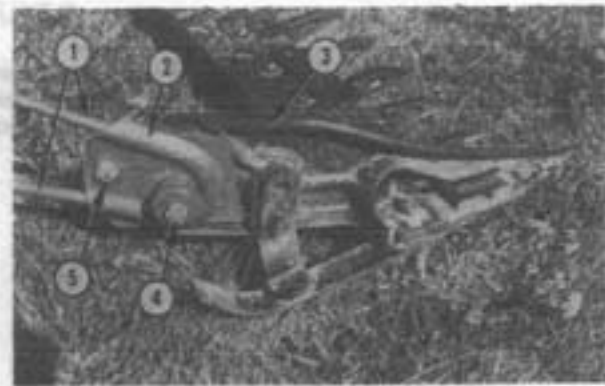


Fig. 16 — Outer Divider Installation

1. Divider Rod
2. Clamp and Plates
3. Outer Shoe
4. Tension Spring, Cup Washer, Castellated Nut and Cotter Pin
5. 7/16" x 1" Round Head Bolt, Lockwasher and Nut

## OPERATION

Periodic preventative maintenance attention given to your MF 41 Rear-Mounted Dynabalance Mower will give you better performance and longer trouble-free use. Follow the suggestions that appear in this Manual. They are your guide for operating and maintaining your Mower.

### DESCRIPTION

The MF 41 Rear-Mounted Mower is designed to attach to the 3-point hitch of MF Tractors and most competitive tractors. The 3-point hitch method of attaching is convenient and easy. One stabilizer bar is used at the right lower link position.

The Mower may be assembled at either narrow, intermediate, or wide tread settings to match the tractor wheel setting from 52" to 76".

A spring-loaded, safety release mechanism protects the cutter bar from damage when an obstruction is encountered. A permanently attached chain limits the backward travel of the cutter bar, thus preventing the separation of the PTO shaft.

Two knives are supplied with the Mower. The knives are available in smooth or underserrated types.

The cutter bar is raised through tractor hydraulics. It can be used quickly to avoid obstructions without "whipping". In the transport position, the cutter bar is carried vertically. When in the field transport position, the maximum lifting height from the inner shoe to ground is 20". The maximum lifting height from the outer shoe to ground is 30".

The counterbalance spring permits the cutter bar to float evenly over uneven terrain without skipping the low spots or "digging in" at the high spots. When the counterbalance spring is properly adjusted for minimum ground pressure, the cutter bar will float over small rocks and stones with the minimum of damage.

The MF 41 Mower can mow at speeds up to 9 mph and has an approximate mowing capacity of six acres per hour. It can be used with all MF Tractors except MF 1100 Series and MF 1105 Series Tractors.

### VARIABLE EQUIPMENT

#### HITCH PINS

A Category II bushing is available to convert the right-hand hitch pin from Category I to Category II.

#### CUTTER BAR ASSEMBLY

##### 6-FT. CUTTER BAR ASSEMBLIES

Six ft. with smooth ledger guards — underserrated knives.

##### 7-FT. CUTTER BAR ASSEMBLIES

Seven ft. with smooth ledger guards — underserrated knives.

Seven ft. with serrated ledger guards — smooth knives.

##### 8-FT. CUTTER BAR ASSEMBLIES

Eight ft. with smooth ledger guards — underserrated knives.

### PREPARING TRACTOR

#### ATTACHING STABILIZER BRACKET

Before the MF 41 Mower can be mounted onto the tractor, it will be necessary to install a right-hand stabilizer bracket and bar.

#### TRACTOR TREAD

The Mower can be attached to the variable tread plate in either the narrow (52" to 56"), intermediate (62" to 66") or wide (72" to 76") position. It is necessary that the tractor tread width (front and rear) be adjusted to the same width setting as the Mower so that the cutter bar will be cutting its full length.

### PREPARING MOWER

#### TREAD WIDTH ADJUSTMENT

The MF 41 Mower can be adjusted to match the tractor tread width of 52" to 56", 62" to 66" or 72" to 76".

1. Detach Mower from tractor with the cutter bar in the operating position.

2. Place two blocks under the four base bolts.

3. Release tension on the counterbalance spring by loosening locknut, 3, and turning adjusting bolt, 1, Fig. 17.

4. Remove retaining rings securing trunnions to lift rod. Remove trunnions (guide and nut, Fig. 7), from their retaining links.

5. Remove four nuts, locknuts and bolts, 2, Fig. 12. Reposition frame to the desired tread width setting. Refer to Fig. 7, for tread width information.

6. Replace bolts. Add locknuts and nuts. Tighten nuts to 125 to 150 ft.-lbs. torque.



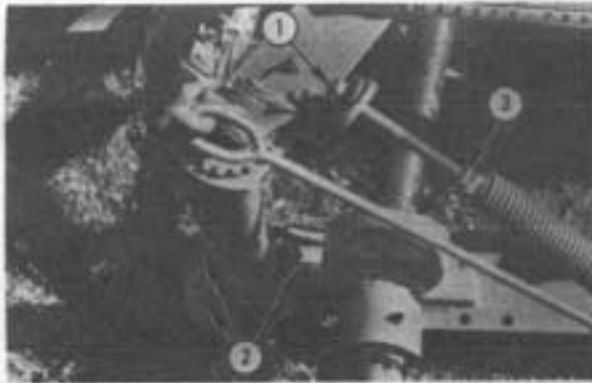


Fig. 17 — Preparing for Width Adjustment

1. Adjusting Nut
2. Attaching Bolts
3. Locknut

7. Refer to Fig. 7 and position the trunnions in their proper locations to comply with the Mower tread width setting.

8. The gag linkage strap assembly, 1, Fig. 18, is positioned in the top hole as shown for six ft. and seven ft. cutter bars. The bottom hole, 2, is used for eight ft. cutter bar.

9. After attaching Mower to tractor, refer to "Operating Adjustments" and adjust Mower accordingly before taking it to the field.

## ATTACHING MOWER TO TRACTOR

The Mower may be attached to the tractor with the cutter bar in either the operating or the vertical position. Blocks can be placed under the Mower for easier attaching.

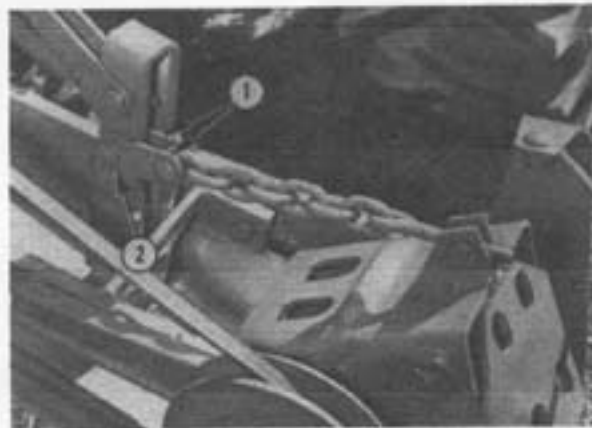


Fig. 18 — Gag Linkage

1. Gag Linkage Strap
2. Bottom Hole

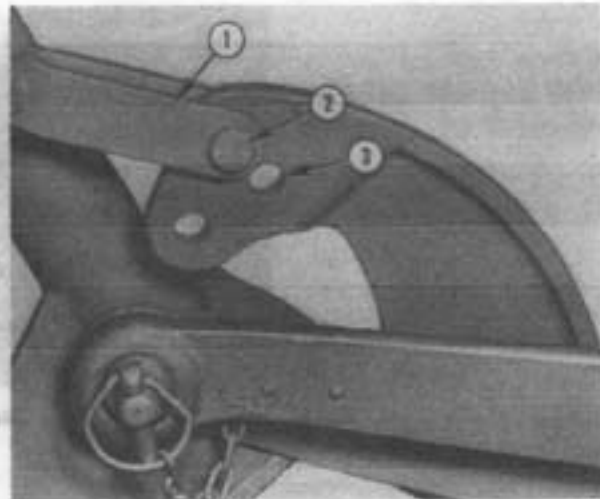


Fig. 19 — Lift Arm Holes

1. Lift Arm Rod
2. Hole "A" for MF 245 and 255 Tractors
3. Hole "B" for MF 255, 265 and 275 Tractors



**CAUTION:** Do not let hands come in contact with cutter bar knives.

## LIFT ARM ROD

The lift arm rod, Fig. 19, should be checked to see if it is positioned in the correct hole. Holes are marked with letters "A", "B" and "C".

1. Slowly back tractor until the lower links are square with the Mower's hitch pins.

2. Lower tractor links with Position Control until left ball socket is approximately the same height as the left hitch pin. *Turn off tractor engine.*

3. Attach tractor left lower link to Mower's hitch pin. Secure in place with linch pin.

*NOTE: If the tractor is equipped with "wrist action" connections on the lower links, they can be used to help align the ball sockets with the hitch pins.*

4. Attach right lower link to hitch pin. Secure in place with linch pin.

5. Attach stabilizer bar to right lower link. It may be necessary to adjust the length of the stabilizer bar so that the Mower is square with tractor and trails properly.

6. Position the PTO shift lever in "Neutral". Remove protective cap from PTO stub shaft. Slide the PTO shaft coupler onto the shaft. Make certain the safety button engages in the groove on the stub shaft.

7. Attach top link and secure in place. Refer to "Operating Adjustments" section for proper top link adjustment. Fig. 20 shows Mower attached to tractor.



Fig. 20 — MF 41 Mower Attached to Tractor

... ..  
 ... ..  
 ... ..

CAUTION: Do not let hands come in contact with moving parts.



ATTENTION

... ..  
 ... ..  
 ... ..  
 ... ..  
 ... ..

... ..  
 ... ..  
 ... ..

... ..  
 ... ..

... ..  
 ... ..  
 ... ..

... ..  
 ... ..  
 ... ..

... ..  
 ... ..  
 ... ..

... ..  
 ... ..  
 ... ..  
 ... ..  
 ... ..

ATTACHING MOWER TO TRACTOR

... ..  
 ... ..  
 ... ..



Fig. 18 — PTO Input

... ..  
 ... ..

## OPERATING ADJUSTMENTS

The MF 41 Mower should be checked to see if it has been properly adjusted for field use. Also, it will be necessary to make some adjustments during the mowing operation to compensate for different field conditions and Mower wear.

### OPERATING HEIGHT

Before going to the field, the Mower operating height must be checked to make certain it is adjusted properly.

When adjusting the Mower for the proper cutting height, the cutter bar must be in the operating position.

1. Raise the Mower with the Position Control lever until the left-hand hitch pin is from 19-1/2 to 20 inches off of the ground surface. Refer to Fig. 21. Keep the tractor engine running until the Mower operating height has been set.



**CAUTION:** Have PTO drive in "Neutral". Do not work close to the cutter bar.

2. Measure the distance from right-hand hitch pin to ground surface, it should be from 19-1/2 to 20 inches. If necessary, use the hand crank to adjust the height of the lower link to get the recommended height measurement.

3. Set the adjustable stop next to the Position Control lever and tighten. The adjustable stop will ensure that the Mower will return to the same operating height after it has been raised. Turn off engine.

### ADJUSTING TOP LINK

Adjust the top link so that the Mower main frame arch is vertical when the Mower is in the operating position.



Fig. 21 — Checking Mower Operating Height

### SAFETY RELEASE

The MF 41 Mower is equipped with a spring-loaded safety release latch that releases the swing frame/cutter bar assembly to prevent damage when the cutter bar hits an obstruction.

For normal mowing conditions, the threaded area of the bolt should be approximately one inch above the adjusting nut. However, if the cutter bar is breaking back too easily, the operator should gradually turn the adjusting nut, 1, Fig. 22, until the cutter bar will break back only when striking a heavy or stationary object.

*NOTE:* After Mower is taken from storage, operate the break-back mechanism to see if it is operating properly.

### RE-ENGAGING SAFETY RELEASE

When the cutter bar "breaks back", disengage the PTO drive and back the tractor. The cutter bar will pivot forward and will automatically reset into operating position. Raise the cutter bar from the ground and turn off tractor engine. Inspect the knife and cutter bar for possible damage. Remove the obstruction that caused the cutter bar to "break back". Make certain that the swing frame is secured by the safety release latch before continuing the mowing operation.

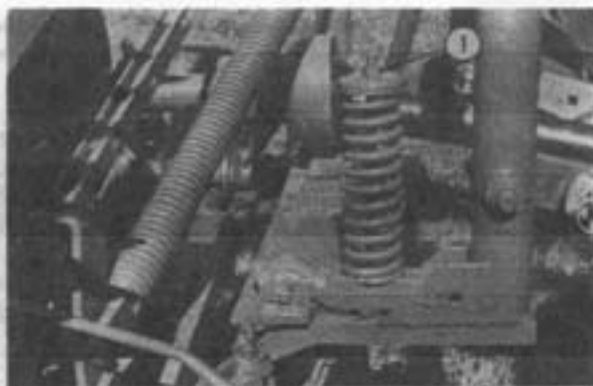


Fig. 22 — Adjusting Spring-Loaded Safety Release

1. Adjusting Nut



Fig. 23 — Gag Linkage Adjustment

1. Clevis Pin
2. Eyebolt

If safety release became disengaged without hitting an obstruction, refer to "OPERATING DIFFICULTIES" Section in this Manual for possible cause.



**CAUTION:** Do not touch knife, it may have become heated during mowing operation.

## CUTTER BAR FLOTATION

### GAG LINKAGE

The gag linkage, Fig. 23, helps control the inner and outer shoe flotation.

*NOTE: Make this adjustment prior to checking or adjusting the lift arm setting.*

1. Set the Mower at the operating height. Leave tractor engine running to prevent the Mower from "leaking down".



**CAUTION:** Set the PTO drive in "Neutral". Keep hands free of the cutter bar.

2. The gag chain should have an approximate 13-1/4" measurement between pins. Refer to Fig. 23. There should be 3/8" clearance as shown.

3. If an adjustment is necessary, remove clevis pin, 1, securing chain and turn eyebolt, 2.

4. Refer to tread width adjustment section for correct position of gag linkage strap for different cutter bar lengths.

### LIFT ARM

With the Mower in operating position, the measurement between the lug on the lift arm and the bottom



Fig. 24 — Correct Lift Arm Clearance

of the left lower link should be approximately 1-1/2" — 2". Refer to Fig. 24.

*NOTE: When taking this measurement or when making an adjustment, the tractor engine should be running to maintain the correct operating height of the Mower.*



**CAUTION:** The PTO Drive must be in "Neutral". Do not work around the cutter bar!

If there is not sufficient clearance between the lift arm lug and tractor lower link, an adjustment must be made.

1. Remove clevis pin and cotter pin securing lift rod links, 1, Fig. 25, to bellcrank, 2.

2. Turn lift rod links (in or out) until the correct clearance between lift arm lug and tractor lower link has been made. Secure lift rod links to bellcrank with clevis pin and cotter pin.

### COUNTERBALANCE SPRING

The counterbalance spring, 3, Fig. 25, is the main component governing the flotation of the inner and outer



Fig. 25 — Lift Arm and Counterbalance

- |                          |                  |
|--------------------------|------------------|
| 1. Lift Rod Links        | 4. Threaded Plug |
| 2. Bellcrank             | 5. Locknut       |
| 3. Counterbalance Spring | 6. Swivel        |
| 7. Adjusting Nut         |                  |





Fig. 26 — Adjusting Inner Shoe Height

1. Nut

shoes. Generally, there is no need to make any separate flotation adjustments to the shoes, providing that the counterbalance spring is properly adjusted.

TREAD SETTING	DIMENSION
Narrow	5" - 8"
Intermediate	7" - 10"
Wide	9" - 12"

To make an adjustment, loosen locknut, 5, and turn adjusting bolt, 7, until the correct measurement has been made. Tighten locknut after proper adjustment has been made.

*NOTE: When operating Mower in extremely rocky or stony conditions, it will be okay to reduce recommended dimensions by one-inch to reduce the weight on the cutter bar and increase the guard life. The lifting weight at the inner and outer shoe should be within the range specified:*

*INNER — 90-120 lbs.*

*OUTER — 20-40 lbs.*

## INNER AND OUTER SHOE

Both shoes can be adjusted. When working in fields where the ground condition is good and trash is at a minimum, the shoes can be raised to lower the cutter bar. In trashy and rocky conditions, the shoes should be positioned in their lowest setting to raise the cutter bar higher from the ground so that it will not come in contact with obstructions. The inner and outer shoes should be set at equal operating heights.

To adjust the inner shoe, loosen nuts, 1, Fig. 26. Remove bolts. The inner shoe can be positioned to the desired position. Replace bolts and add nuts. Tighten nuts.



Fig. 27 — Adjusting Outer Shoe Height

1. Nut
2. Spring Tension Adjusting Nut

To adjust the outer shoe, remove the nut, 1, Fig. 27, and reposition the outer shoe. Replace bolt and nut. Tighten nut.

## PULL BAR

The drag bar must be in parallel alignment with the swing frame. If an adjustment becomes necessary, the length of the pull bar can be changed to align both parts of the Mower.

1. Loosen locknut, 1, Fig. 28, until clevis pin, 3, can be removed. (Remove cotter pin.)
2. Turn clevis, 2, until the drag bar and swing frame are in parallel alignment.
3. Insert clevis pin, 3, through clevis and hinge.
4. Secure clevis pin with cotter pin, 4.
4. Screw locknut against clevis and tighten.

## KNIFE REGISTER

There is no knife register adjustment on the MF 41 Mower.

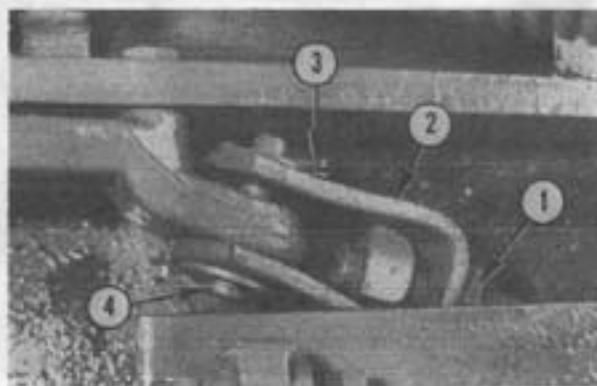


Fig. 28 — Aligning Pull Bar with Swing Frame

1. Locknut
2. Clevis
3. Cotter Pin
4. Clevis Pin



Fig. 29 — Cutter Bar Lead Adjustment

1. Clevis Pin

## CUTTER BAR LEAD ADJUSTMENT

When the MF 41 Mower leaves the factory, the lead adjustment has been pre-set. However, after the Mower has been operated in the field for a season or more, a certain amount of wear and loosening of parts may have taken place. This could cause the cutter bar to "lag" a little and reduce cutter bar lead.

An easy method of adjustment is provided to correct cutter bar "lag". Remove clevis pin, 1, Fig. 29, from present position. Align the bracket forward hole with latch assembly hole and insert pin and add cotter pin.

## BELT TENSION

Adjust drive belt to have approximately 3/4" to 1" deflection at a point midway between the pulleys when 20 lbs. of pressure is applied. The spring, 5, Fig. 30, should be compressed to approximately 5". Turn adjusting nut, 4, to compress spring. Secure in place with locknut, 3.

*NOTE: There should not be more than 4-1/8 inches of the hook bolt exposed between the*

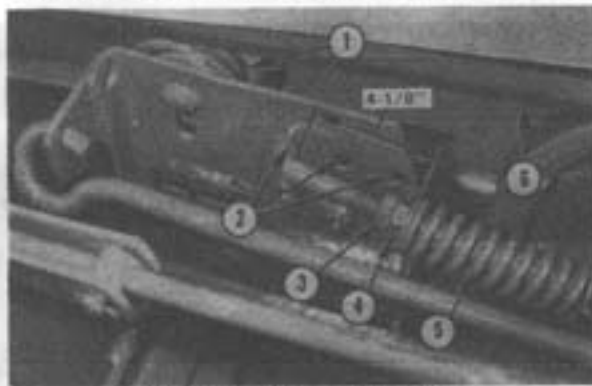


Fig. 30 — Belt Adjustment

- |                     |                   |
|---------------------|-------------------|
| 1. Idler Pulleys    | 4. Adjustment Nut |
| 2. Adjustment Holes | 5. Spring         |
| 3. Locknuts         | 6. "V"-Belt       |

shoulder and flatwasher. If this dimension is exceeded, before proper adjustment achieved, loosen the tension and place hook bolt in the next hole and retighten as above. Exceeding the 4-1/8" dimension may cause the assembly to buckle.

Position idler pulleys, 1, so that the "V"-belt will be deflected approximately 1/8".

*NOTE: If too much tension is placed on the belt or idler pulleys, premature bearing wear and shorter belt life could result. However, too little tension can cause belt whip and reduce belt life.*

In addition to the basic belt adjustment, there are three adjustment holes, 2, in the idler pulley mounting bracket for repositioning the hook end of the hook bolt.



**CAUTION:** Never attempt to check belt tension when the Mower is running.

## TWO-ROD STEEL OUTER DIVIDER

The two-rod outer divider, is spring-loaded and will "give" when striking an obstacle and then return to its original position.

The outer divider assembly can be positioned in the "up" or "down" position. The divider assembly should be positioned high for tall standing crops and low for short crops. Tension on the spring should be set so that the divider will deflect easily upon coming in contact with an obstruction. The adjusting nut, 2, Fig. 27, is used to adjust the spring tension on the outer divider.

## CUTTER BAR TILT ADJUSTMENT

The tilt setting of the cutter bar can be changed by turning the cam bolt head, 1, Fig. 31.

To make an adjustment, loosen locknut, 2, and turn bolt head, 1, which is attached to the cam. When turning the cam, the forward edge of the cutter bar will tilt up or down. After an adjustment is made tighten locknut, 2.

In normal mowing conditions, the cutter bar should be approximately horizontal. When operating in "down" crops, the cutter bar should be tilted downward. If rough or stony conditions exist, tilt cutter bar upward. The cutter bar has a total range of 14°, 7° above, and 7° below horizontal.

## SWINGING FRAME ECCENTRIC ADJUSTMENT

When the Mower is shipped from the factory,



Fig. 31 — Tilt Adjustment

1. Cam Bolt Head      2. Locknut

this adjustment has already been set and probably will not need to be adjusted again in the lifetime of the Mower.

Movement of the eccentric is accomplished by turning the slotted shoulder bushing with a "C" type spanner, as shown in Fig. 32. This slotted bushing is locked in position by a lock screw which must be replaced after adjustment.

The eccentric adjustment should only be moved if the operator experiences difficulty in resetting the swing frame back into the operating position, after the safety release has operated. If resetting difficulty occurs, the recommended procedure should be adopted:

1. Raise the Mower to field transport position.
2. Disengage PTO shaft. Stop tractor engine.
3. With the cutter bar in the "break-back" position, move the cutter bar and frame as if to re-engage in the safety release catch.
4. The flat underside member of the swing frame, 1, Fig. 33, can be 1/16" above to 1/16" below the top surface of the safety release support, 2.
5. If the above measurement is exceeded, remove the locking screw from the eccentric bushing, slowly rotate the cap with a "C" spanner.
6. As the bushing is rotated (in either direction) the measurement point on the swing frame will move up and down. When the correct measurement is reached, move the nearest slot in the eccentric



Fig. 32 — Eccentric Adjustment

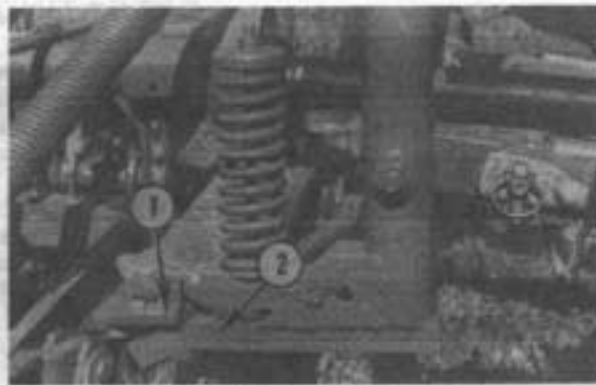


Fig. 33 — Aligning Swing Frame and Safety Release

bushing to line up with the lock screw hole. Replace the lock screw.

7. The swing frame should now reset easily in the operating position. The Mower may now be lowered and the mowing operation continued.

## VARIABLE SHEAVE

The two sections of the sheave must be separated to add or remove shims to change its operating speed.

Lower belt shield, remove three capscrews, Fig. 34, securing the two sections together. Separate the halves of the sheave and refer to the Chart in "Operating Information" Section to determine how many shims are needed in between the halves to acquire the desired crankshaft speed. Position the shims between the sheave halves and insert the capscrews and tighten.

If shims are removed, place them on the outside of the sheave before inserting capscrews. The shims that are placed on the outside of the sheave will take up the surplus length of the capscrews and will retain the shims for future use.

*NOTE: If the outer section of the sheave cannot be removed after removing the three capscrews, insert two of the capscrews in the outer section and use them as a puller.*

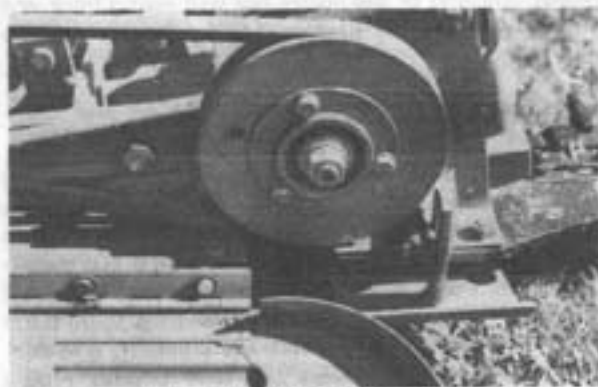


Fig. 34 — Variable Sheave

## OPERATING INFORMATION

When entering the field, operate the knife and lower the cutter bar to the mowing position, but do not come in contact with the standing crop. This procedure will give the knife time to pick-up speed and help eliminate the possibility of plugging when the mowing operation begins.

Form the habit of looking out over the right front tractor wheel and watching for obstructions that could cause damage to the cutter bar.

When an obstruction is seen and it is near the cutter bar, depress the clutch, reduce engine speed and lift the cutter bar. Stop the tractor and remove the obstruction from the path of the cutter bar.

In the event that the cutter bar does come in contact with an obstruction, the safety release mechanism will allow the cutter bar to "break-back". Refer to "RE-ENGAGING SAFETY RELEASE" Section for additional information.

### OPENING A FIELD

When opening a field, it is the best procedure to drive the tractor next to the fence, or field border, with the cutter bar extending in toward the center of the field. Drive the tractor on uncut crop. This will leave a strip of uncut crop about the width of the cutter bar. On this round, watch the ground in front of the tractor for stones or other obstructions which could cause damage to the Mower. After a complete pass around the field, as described, reverse direction and cut the unmowed strip.

The tractor should be driven so that the inner shoe is just as close as possible to the unmowed crop without leaving an uncut strip. If the inner end of the cutter bar is allowed to run through hay which has previously been cut, it may become plugged. The best means of guiding the tractor in the field is to have the front wheels set at the same tread width as the rear wheels. The operator then can run the right front wheel alongside the edge of the unmowed crop and the Mower will be in the correct cutting position.

Square corners may be turned without stopping, backing or circling. When approaching the corner, slow down and drive straight out until the edge of the standing crop is even with the forward edge of the rear wheel. At this moment, step on the right wheel brake and turn the front wheels to the right. The tractor will pivot on the right rear wheel, the end of the cutter bar will swing back and be in position to start straight down the second side of the field.

### FINISHING A FIELD

The cutter bar can be raised by the Position Control lever so that it rides at any set distance above the ground. This feature is particularly useful when finishing a field and the last swath to be cut is narrower than the full width of the cutter bar. If an attempt is made to cut this narrow strip with the cutter bar riding on the ground, the adjoining swath, which has been previously cut, will usually plug the knife. With the lever, raise the cutter bar to

the desired height. Drive cautiously when the Mower is in this position to avoid excessive whipping of the knife.

### MOWING SPEEDS

Proper mowing speeds depend on the roughness of the ground, type and density of the crop to be mowed. Proper mowing speed selection is through the use of the forward gear speeds and PTO speeds. As a general rule, use the higher gear speeds for extremely light, easy cutting and the lower gear speeds for heavy, tough cutting. Increasing the tractor engine speed increases the ground speed and knife speed. Therefore, when cutting heavy material, it is necessary to increase the knife speed in relation to the ground speed by changing to a lower speed gear. The Mower should always be operated in "engine speed" PTO. The tractor may be operated at speeds up to 9 mph.

### MOWING CAPACITY

A quick "rule of thumb" of determining the mowing capacity can be made by using this formula —  
 $\text{WIDTH OF CUT IN FEET} \times \text{SPEED OF TRACTOR IN MPH} = \text{ACRES MOWED PER 10-HOUR DAY}$ .

The width of cut will be either 6, 7, or 8 ft.

Assuming that a 7 ft. cutter bar is being used and the tractor is being operated at 4.5 mph, the acres being mowed per day is 31.5. This is only an approximation. The actual number of acres mowed will depend on terrain condition, type of crop, crop density, operator experience, etc.

### VARIABLE SPEED SHEAVE

The variable speed sheave provides the optimum knife speed for the crop that is being mowed and provides more variation in tractor PTO speed. If a lower engine speed is going to be used, the sheave can be adjusted to its smallest effective diameter.

If an increased ground speed is desired, the sheave can be adjusted to its largest effective diameter



and still maintain the knife speed within the safe operating limit.

Under normal mowing conditions, a lower PTO speed can and should be used.

PTO speed and the number of shims between the drive sheave flanges determine the cutting speed.

*NOTE: Crankshaft speed should not exceed 1170 rpm.*

The chart shows recommended engine and PTO speeds for average conditions. Also, it gives the engine and PTO speeds which give maximum crankshaft speeds.

No. Shims Drive Sheave	Recommended RPM			Max. RPM		
	Eng.	PTO	C'Shaft	Eng.	PTO	C'Shaft
5	1430	455	970	1700	540	1170
4	1530	485	970	1810	575	1170
3	1620	515	970	1920	610	1170
2	1730	550	980	2050	650	1170
1	1830	580	980	2160	685	1170
0	1980	630	1010	2200	700	1120

## TRANSPORT POSITION

### ROAD TRANSPORT — FIG. 35

1. Raise the Mower with the Position Control lever.
2. Place PTO Drive in Neutral and turn off engine.
3. Raise cutter bar, by hand, to the vertical position. Position end of support rod through hole in cutter bar and secure in place with rod screw lock.



**CAUTION:** Do not hold the cutter bar at the knife guards when raising or lowering manually. The drive unit pulley may rotate, moving the knife, and serious injury to the fingers may result. Always lift or lower the cutter bar by holding the rear edge of the bar.



Fig. 35 — Road Transport Position



Fig. 36 — Field Transport Position

### FIELD TRANSPORT — FIG. 36

This position is used when moving from one field to another.

## DETACHING MOWER

The Mower can be detached from the tractor with the cutter bar in the operating or vertical position.

Drive the tractor to a clear area. Place supporting blocks under the Mower in a manner so that it will be balanced and remain square when detached from the tractor.

1. Place PTO lever in neutral. Shut off tractor engine.
2. Disconnect the PTO shaft by depressing the locking button and pulling on shaft.
3. Disconnect top link at Mower position.
4. Remove linch pin and disconnect left lower link.
5. Remove linch pin and disconnect right lower link. It may be necessary to use right tractor crank for easier removal. (Remove stabilizer bar.)

## MOWER STORAGE

The Mower should be removed from the tractor and blocked up in a suitable place where it is neither exposed to weather nor livestock. The cutter bar will be easier to protect and the machine will take up less space if the cutter bar is in the vertical position. Place blocks under Mower, as described in the "DETACHING" Section.

In order for the Mower to be in good operating condition when the next mowing season comes around, it is advised that these procedures be adopted:

1. Replace all worn and broken parts, or order them from your local Massey-Ferguson Dealer, so that they may be replaced in time for next season's operations.

2. Remove all foreign material from the cutter bar, etc.
3. Remove the knife and clean thoroughly.
4. Remove rust from knife and other bare surfaces with a wire brush or sandpaper.
5. Cover knife, cutter bar and shoes and other bare metal surfaces with a coating of heavy oil or grease.
6. Remove all other rust spots and repaint with a good grade enamel paint.

**NOTE:** The correct enamel paint, in the desired color, is available in handy spray packs from your local Massey-Ferguson Dealer.

7. Slacken off drive belts.
8. Lubricate entire machine, as outlined under "LUBRICATION" Section.

... ..  
 ... ..  
 ... ..

LUBRICANT		GRADE		QUANTITY		FREQUENCY	
POINT	GRADE	QUANTITY	GRADE	QUANTITY	GRADE	QUANTITY	GRADE
Engine	SAE 30	10.0	SAE 30	10.0	SAE 30	10.0	SAE 30
Hydraulic	SAE 46	10.0	SAE 46	10.0	SAE 46	10.0	SAE 46
Grease	SAE 2	10.0	SAE 2	10.0	SAE 2	10.0	SAE 2

**TRANSPORT POSITION**

... ..  
 ... ..  
 ... ..



... ..  
 ... ..  
 ... ..

**MOWER STORAGE**

... ..  
 ... ..  
 ... ..



## MOWER OPERATING DIFFICULTIES

This section lists the most common difficulties that are experienced while mowing. Generally, most of the mowing problems that occur in the field happen as a result of improper adjustments that were made prior to going to the field with the Mower.

### A. EXCESSIVE SIDE DRAFT

This is a good indication of misalignment and wear. These areas should be checked:

1. Dull or improperly sharpened knife.
2. Worn knife clips and wear plates.
3. Bent guards.
4. Improper adjustment of knife guides.
5. Improper lubrication.
6. Insufficient amount of lead in cutter bar.
7. Bent knife.

### B. KNIFE BREAKING

Usually caused by loose or worn parts. Check these areas:

1. Worn knife clips.
2. Worn guides.
3. Guards out of line.
4. Loose sections.
5. Worn knife head.
6. Misalignment of cutter bar.

### C. RAGGED CUTTING

1. Damaged or dull knife.
2. Guards out of line.
3. Loose sections.
4. Uneven shoe adjustment.



## PERIODIC MAINTENANCE

Premature wear of Mower parts can be avoided if regular maintenance, periodic inspection and lubrication are performed at regular intervals.

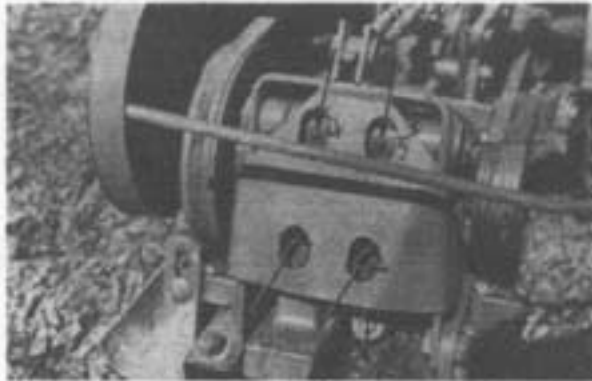


Fig. 37 — Dynabalance Lubrication Fittings



Fig. 39 — Frame Fittings

### LUBRICATION

Wipe all grease fittings clean before starting to grease. Pump a small amount of grease into fittings until a small amount of grease appears to the outside of the bearing area. This method flushes out dirt and grime from bearing area.

Lubricate the following fittings with a good grade of lithium base pressure-gun grease at recommended intervals.

There are 13 pressure grease fittings on the MF 41 Mower including the two fittings on the PTO shaft.

#### PRESSURE GREASE FITTINGS — 8 HOURS

Lubricate fittings after each 8-hour operating period. Refer to Figs. 37, 38, 39, and 40.

#### PTO SHAFT — 3 TIMES PER SEASON

Separate shaft and lubricate with light grease.

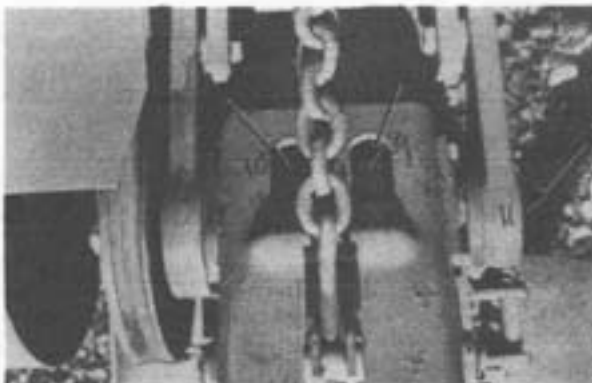


Fig. 38 — Dynabalance Lubrication Fittings

#### LIFT LINKAGE PIVOT PINS — SEASONAL

At the beginning of the season, the lift linkage pivot pins should be lightly oiled.

Also after the Mower has been out in the rain for a prolonged period.

#### CUTTER BAR — NEW

Oil knife liberally at the knife clips and wear plates prior to using in the field.

*NOTE: Do not lubricate clips, knife or cutter bar during field operation. The oil will collect dirt and grit. These particles will act as an abrasive compound and cause premature wear.*

#### CUTTER BAR ASSEMBLY — SEASONAL

At the beginning of the season, the cutter bar, knife and shoes should be coated with grease or heavy oil as recommended for "Mower Storage".



Fig. 40 — PTO Fittings



## SERVICING

This Section has been prepared for assistance when servicing becomes necessary. We suggest a policy of checking the MF 41 Mower daily for broken or worn parts.

### KNIFE REPLACEMENT



**CAUTION:** To prevent personal injury do not operate Mower during knife removal. Do not let hands come in contact with knife sections.

To remove a knife, either for replacement or repair, the cutter bar may either be flat on the ground or blocks. Raising the cutter bar off the ground will give easier access to the knife. Block both ends of the cutter bar up so that it is supported evenly and the knife is not bowed.

*NOTE: If the knife is well oiled and run for a few minutes before removal, the job will be considerably easier. Under certain conditions of plant sap or insect build up, it is sometimes advisable to soak the cutter bar with light oil to facilitate knife removal.*

1. If the cutter bar is to be placed on blocks, raise the bar slightly higher than the blocks and lower it gently on them. The knife can also be removed when the cutter bar is resting on the ground.
2. Place the PTO drive in "Neutral" and shut off tractor engine.
3. Loosen bolt which secures the knife head to the center lever of drive unit. Before removing bolt, lightly tap the knife head with a hammer to unseat the tapered plug.
4. Rotate the pulley, by hand, until the center lever is at its "inmost" position. The knife is now free to slide out of the cutter bar inside end. If it is sticking, lightly tap at outer end until it is free to slide out of the cutter bar.
5. The replacement knife can now be slipped into the end of the cutter bar. When the tapered plug is in place, screw in the retaining bolt and tighten.
6. Remove the blocks from under the cutter bar.

### KNIFE SHARPENING



**CAUTION:** To prevent personal injury keep hands clear of area between guards and knife sections.

The knife should be straight and sharp with the sections firmly riveted. Care should be taken in sharpening the sections to maintain the original shape and bevel. Replace all worn and broken sections. Fig. 41 shows knife sections properly and improperly sharpened.

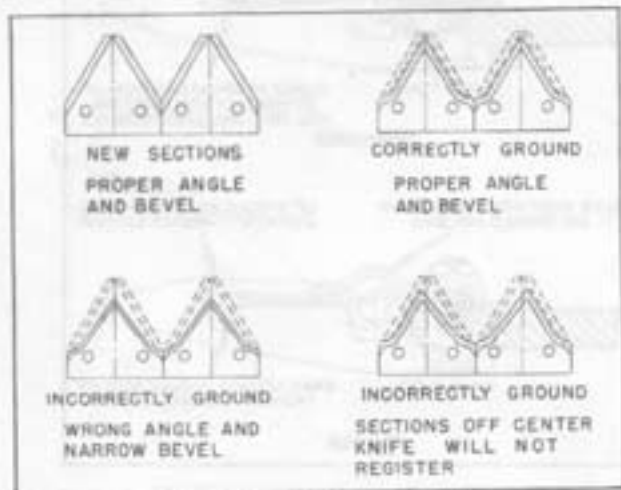


Fig. 41 — Knife Sharpening

### REPLACING KNIFE SECTIONS



**CAUTION:** To prevent personal injury keep hands clear of area between guards and knife sections.

There are various riveting tools available that make it easy to replace knife sections without removing knife assembly (Fig. 42).

*NOTE: Sections to be replaced must be centered between guards so rivets can be driven out.*

When replacing sections, raise cutter bar (10"-12") and support with wood blocks. Shut off tractor engine and disengage PTO drive.



Fig. 42 — Replacing Knife Sections

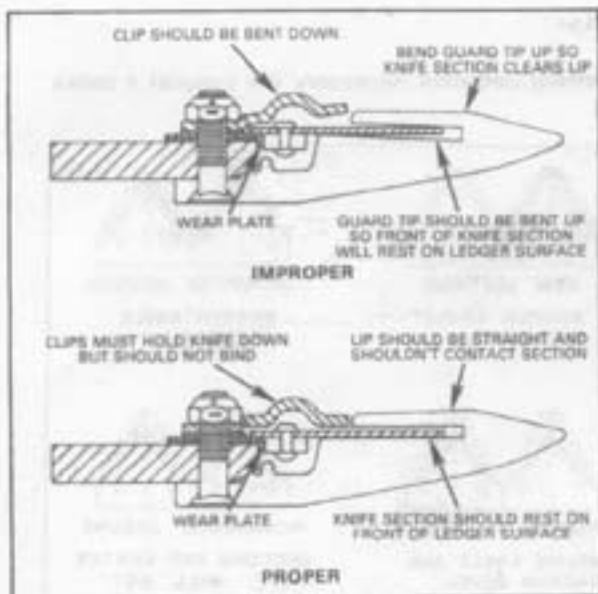


Fig. 43 — Cross Section of Knife and Cutter Bar

## WEAR PLATES

The wear plates, Fig. 43, should be adjusted flush against cutter bar edgeback.

## KNIFE CLIPS



**CAUTION:** To prevent personal injury keep hands clear of area between guards and knife sections.

Knife clips should not be set until after guards are aligned. Knife clips hold knife sections down against guards, but they must permit knife to operate without binding. Adjust clips to allow approximately 0.010" clearance between knife section and clips. Care must be taken when this adjustment is made to be sure that flat part of the clip holds section down. (See Fig. 43.) After setting clips, move knife in cutter bar. Knife should be free to move.

## GUARD ALIGNMENT



**CAUTION:** To prevent personal injury keep hands clear of area between guards and knife sections.

To check guard alignment, first, be sure the cutter bar is properly seated in the inner shoe or drive unit and that the attaching bolts are securely tightened. Line up the first guard with the inner shoe or drive unit ledger plate. This can best be checked with a small straightedge. Then line up the outer guard



Fig. 44 — Position Stop Kit

with the outer shoe ledger plate. After getting the two end guards properly aligned, sight down the cutter bar and line up the remaining guards.

The guards can be lined up by bending them with a heavy (4 to 8 lb.) hammer. To bend the guards, strike them with a sharp blow at the heavy section just ahead of the ledger plate. Use a short swing with the hammer to maintain accuracy. Be careful not to bend the guard lips down. Bent lips will cause binding and choking. The guard bolts should be tightened before and after checking and aligning the guard. (See Fig. 43.)

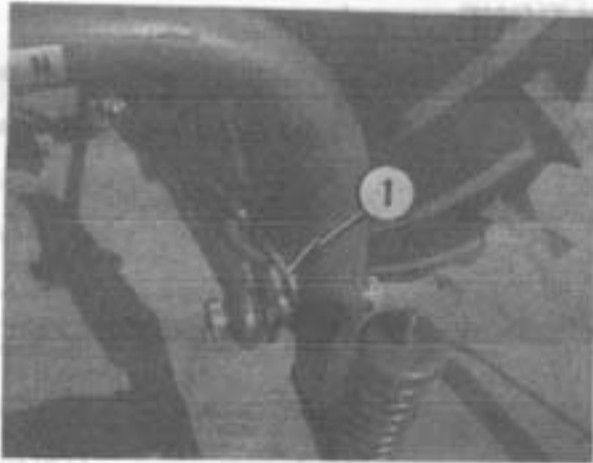
## DRIVE BELT REPLACEMENT

To replace belt, relieve tension on belt by turning turnbuckle. This will give sufficient slack to remove belt. When replacing belt refer to "Belt Tension Adjustment" Section.

## POSITION STOP KIT (ACCESSORY CODE 238726)

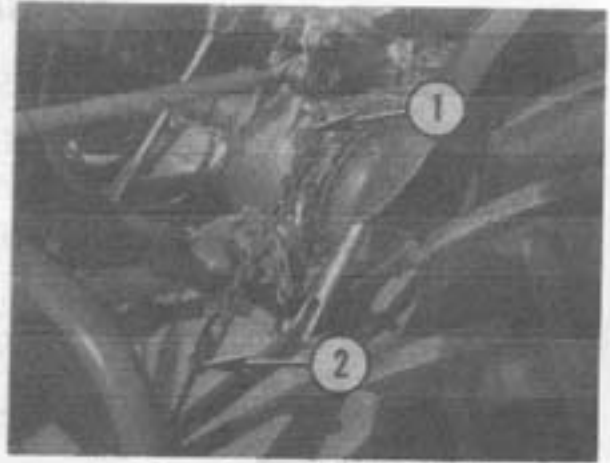
The position stop kit must be used with tractors without Position Control. To install stop kit, assemble it as shown in Fig. 44. Place the stop kit bracket, 1, Fig. 45, on right-hand hitch pin. The bracket attached to the eyebolt is installed between the boss of the hitch pin and the mower frame. After the bracket is installed, tighten the nut securing the hitch pin to the mower frame. Then install the anchor assembly as shown in Fig. 46. The pin goes through the center and right-hand boss holes only.

To adjust the stop kit to the correct operating length, pull the chain through the anchor assembly until the hitch pin is approximately 19-1/2 to 20" above the ground as shown in Fig. 21. Lock the chain in the notch in the anchor assembly, and make final adjustment with the eyebolt in Fig. 46. After final adjustment is obtained, tighten nut on eyebolt.



**Fig. 45 — Stop Kit Installed on Right-Hand Hitch Pin**

**1. Bracket**



**Fig. 46 — Anchor Assembly Installed**

**1. Anchor  
2. Eyebolt and Yoke**

## SPECIFICATIONS

Type of Drive .....	Dynabalance
Weight Approximately .....	540 lbs.
Cutter Bar Length .....	6, 7 or 8 ft.
Cutter Bar Operating Angle .....	Not limited
Tilt Range .....	7° above level to 7° below
Knife Stroke .....	3 inches
Maximum Ground Speed .....	9 mph
Maximum Crankshaft Speed .....	1170 rpm
Mowing Capacity, Approximately .....	6 acres per hour
Lift Height, Inner Shoe .....	20 inches
Lift Height, Outer Shoe .....	30 inches
Type Lift .....	Mechanical (through tractor hyd.)
Storage Space:	
Narrow Tread .....	3 x 5 ft.
Wide Tread .....	3 x 6 ft.
Cutter Bar Position for Transport or Storage .....	Vertical