



**LIFT
TYPE**

DEARBORN
**REAR ATTACHED
MOWER**



MODELS 14-15 AND 14-16



ASSEMBLY and OPERATING

Instructions

DEARBORN MOTORS CORPORATION — DETROIT 3, MICHIGAN

DESCRIPTION

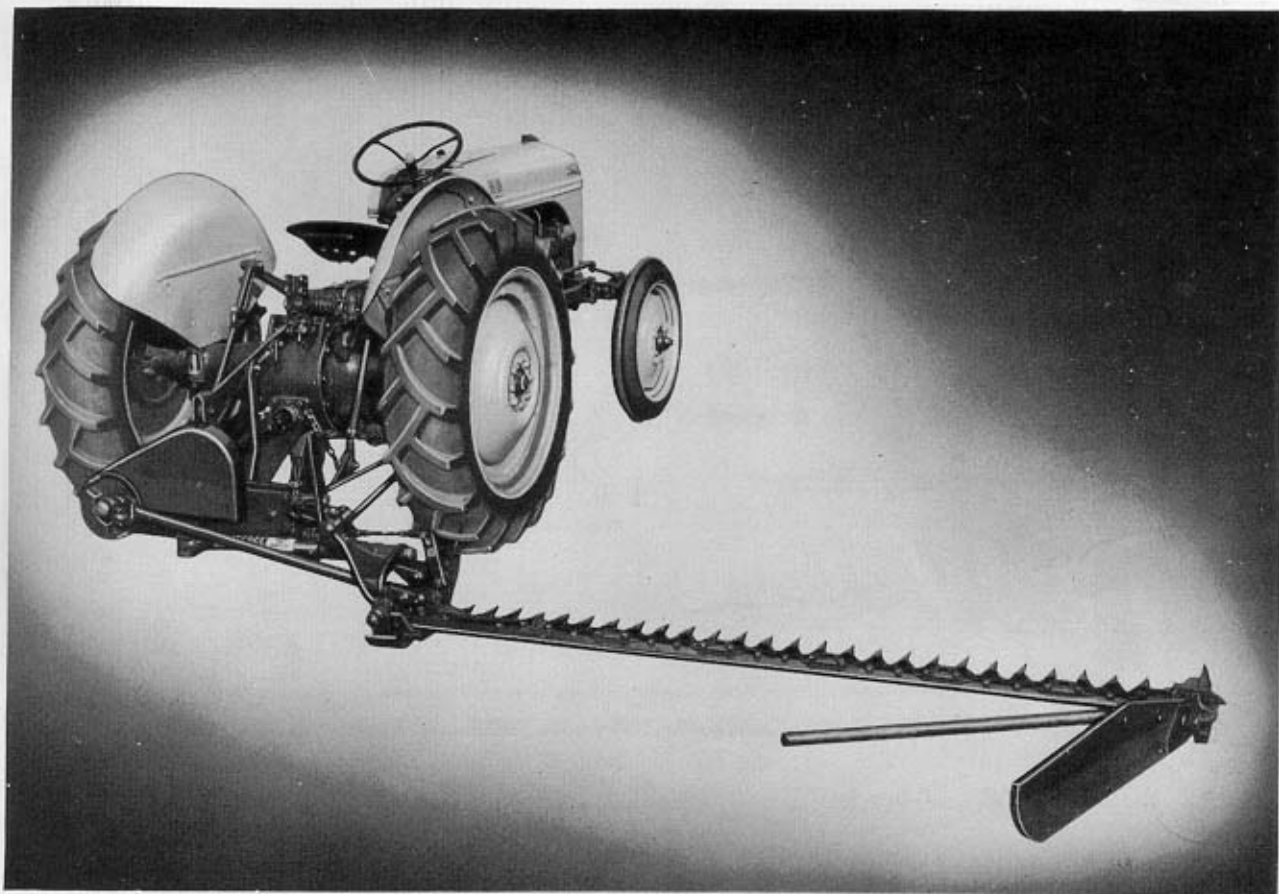


Figure 1

The Dearborn Rear Attached Mower

The Dearborn Rear Attached Mower pictured above is manufactured to the high quality standards required of all Dearborn Farm Equipment.

This sturdily constructed mower is designed for safe and efficient operation. The automatic safety release helps to protect the mower and the tractor from damage that might be caused by the cutter bar striking an obstruction. The floating type cutter bar suspension helps to assure clean cutting by permitting the cutter bar to follow

the contour of the ground closely. The mower is equipped with seventeen easily accessible lubrication fittings to enable the operator to quickly and thoroughly lubricate the implement. The mower is available in two models: Model 14-15 has a six-foot cutter bar; Model 14-16 has a seven-foot cutter bar.

The Dearborn Rear Attached Mower can be quickly and easily attached to, or detached from, the Ford Tractor.

ASSEMBLY

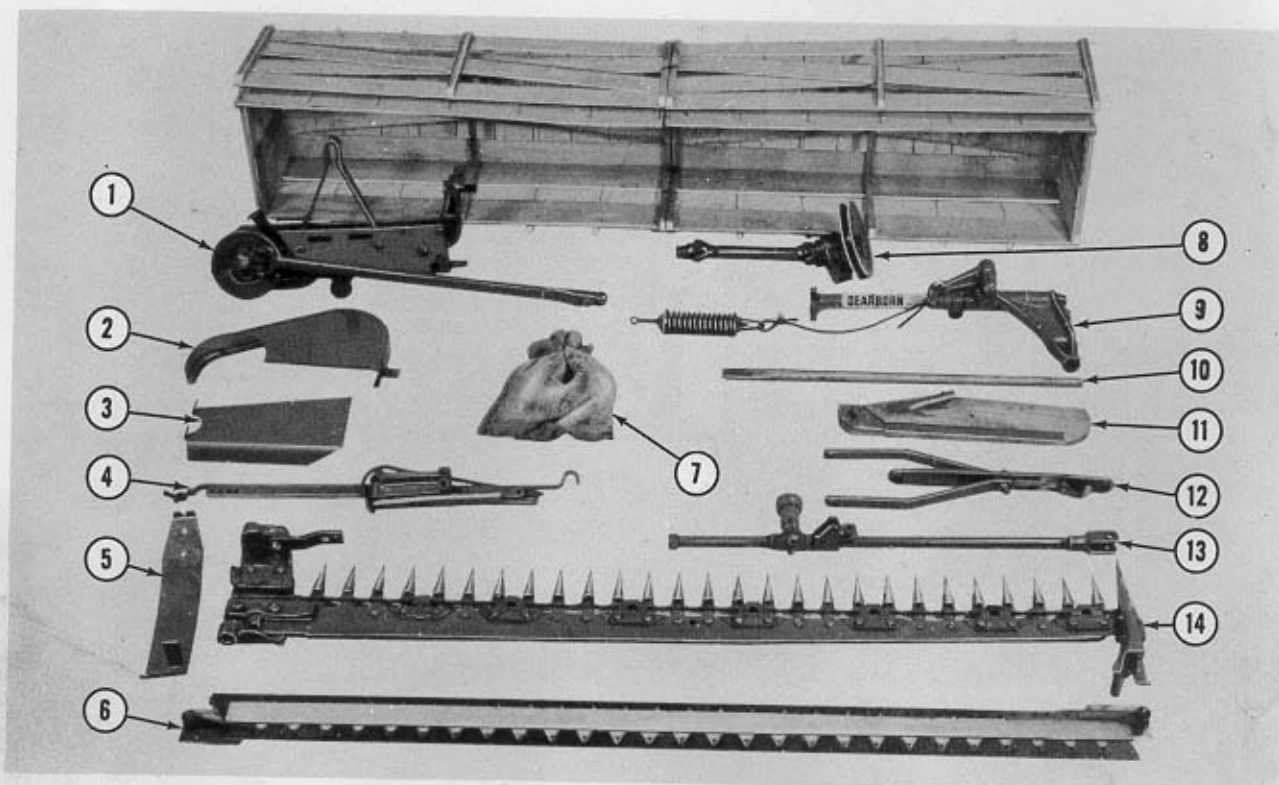


Figure 2

Implement Breakdown for Shipment

NOTE: *Assembly of the Dearborn Rear Attached Mower is the responsibility of the Ford Tractor and Dearborn Farm Equipment dealer. The Mower should be delivered completely assembled. The following instructions are provided in case of need.*

BUNDLE INFORMATION

The Dearborn Rear Attached Mower is shipped complete in a wooden crate which contains the parts listed below. Check the shipment against this list and Figure 2 to be sure all parts are received.

Key No.	Description
1.	Main frame and pitman assembly
2.	Belt guard
3.	Drive shaft guard
4.	Two extension arms, one stabilizer bar, one tilt link, one tilt lever, one grass rod and one transport rod assembly wired together
5.	Inner shoe sole
6.	Two knife assemblies
7.	Bag of parts containing one pull bar bracket,

one stabilizer bracket, two linch pins, one top link bracket, one assembly and operating manual, one V-belt, one cable sheave, two hinge pins, two lubrication fittings, one tilt lever clevis, one drag bar socket cap, one rubber socket cup, one 3" pin, one 9" pin, one 5½" top link pin, two tie rod fender clips, nuts, bolts, flat washers, lock washers, spacers and cotter pins	
8.	Drive shaft and sheave assembly
9.	Drag bar, hinge and balance spring assembly
10 and 11.	One grass stick and one swathboard assembly wired together
12.	Top link and anchor strap assembly
13.	Pull bar assembly
14.	Cutter bar, outer shoe and inner shoe assembly

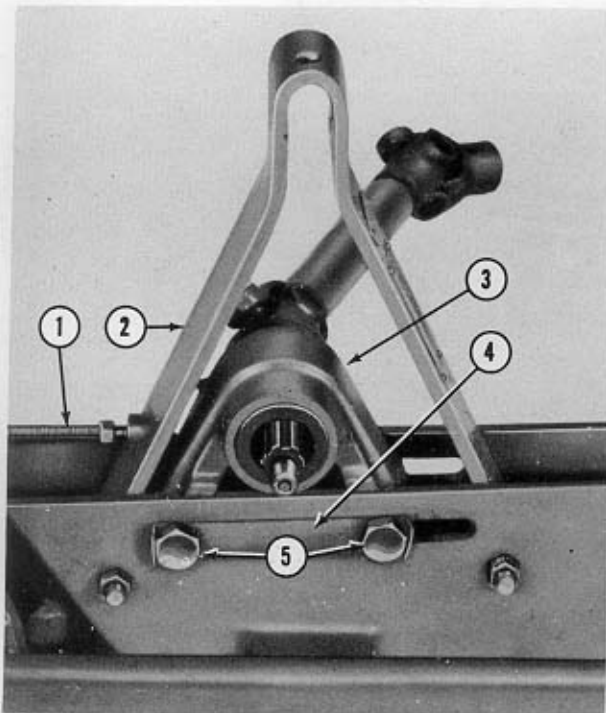


Figure 3

Drive Shaft Attached to Main Frame

ASSEMBLY PROCEDURE

1. Remove the wires, open the bundles and lay-out the mower parts for proper identification. Clean the paint from all bearing and threaded surfaces.
2. Remove the drive pulley (3), Figure 4, from the drive shaft and loosen the belt adjusting bolt (1), Figure 3.
 - a. Position the drive shaft bearing housing (3), Figure 3, in the main frame close to the left side of the A-frame (2) as shown.
 - b. Attach the bearing housing to the main frame with the lock plate (4), Figure 3, and the two $\frac{5}{8}$ "x 4" bolts (5), flat washers, lock washers and nuts provided. Do not secure at this time.
 - c. Reattach the drive pulley (3), Figure 4, to the splined end of the drive shaft and

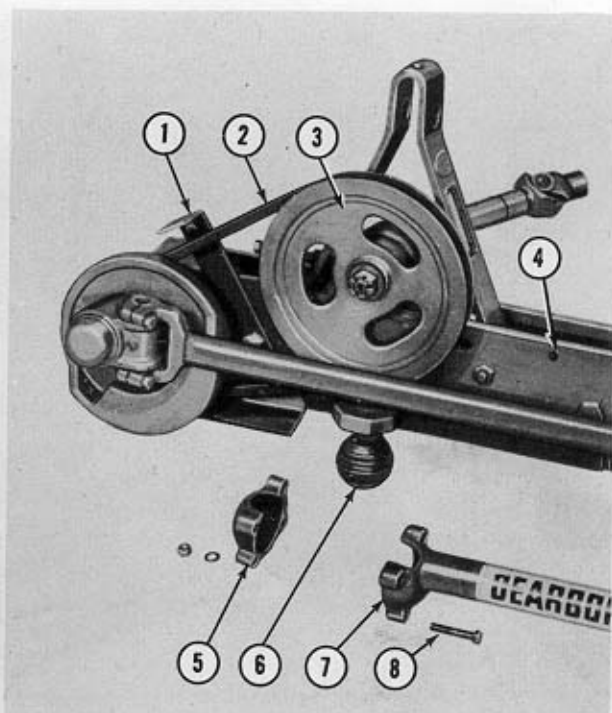


Figure 4

V-Belt and Drive Pulley Attached

secure with the cork seal, flat washer and nut. Back the nut off $\frac{1}{6}$ turn and secure with the cotter pin provided.

3. Slide the V-belt (2), Figure 4, over the pitman arm onto the pitman drive pulley and the drive shaft pulley (3) as shown. Turn the belt adjusting bolt (1), Figure 3, against the bearing housing (3) until there is $\frac{1}{4}$ " slack in the V-belt midway between the pulleys. Tighten the nuts on the bolts (5), Figure 3, securely.
4. Place the rubber cup (6), Figure 4, over the steel ball on the mower frame as shown. The rubber cup is provided in the bag of parts. Tilt the main frame assembly forward on the drive shaft and secure the drag bar (7), Figure 4, to the ball (6) with the drag bar outer cup (5) and four $\frac{3}{8}$ "x 2" bolts (8). Secure with the lock washers and nuts provided.

ASSEMBLY

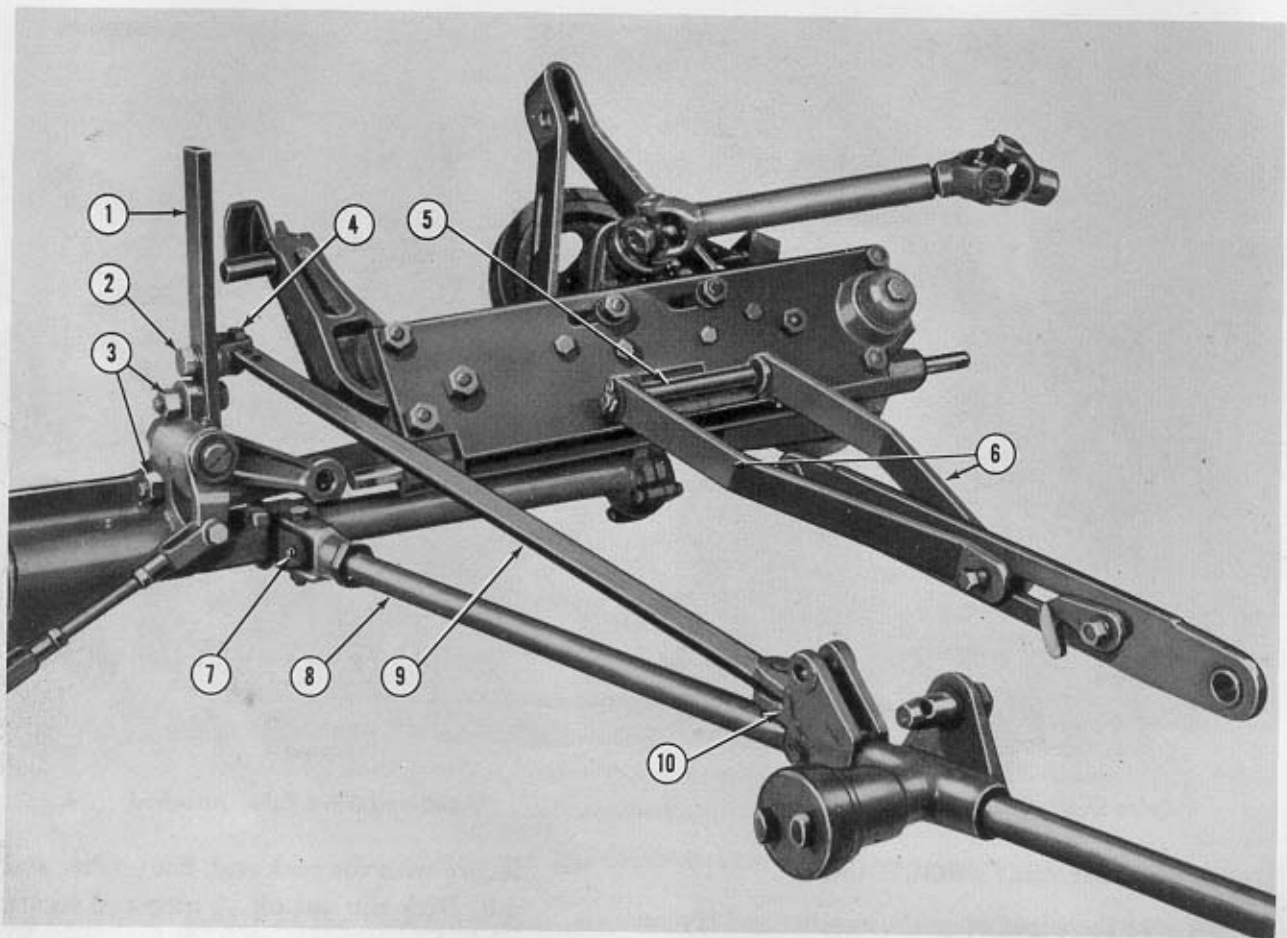


Figure 5

Pull Bar Assembly and Top Link Attached

5. Tilt the mower main frame to the rear as shown in Figure 5 and attach the top link anchor straps (6) to the bracket on the front of the main frame. Secure with the $\frac{3}{4}$ "x $8\frac{7}{8}$ " pin (5), flat washers and cotter pins as shown.

NOTE: Bend the cotter pins well around the pin (5) to prevent grass or hay from catching on them.

6. Attach the tilt lever (1), Figure 5, to the hinge casting with the two bolts (3) and secure with the lock washers and nuts provided. Attach the tilt link yoke (4), Figure 5, to the left side of the tilt lever with a

spacer, flat washer, lock washer and $\frac{5}{8}$ " x $1\frac{1}{8}$ " bolt (2), as shown.

7. Attach the yoke end of the pull bar (8), Figure 5, to the eye (7) on the drag bar with the $\frac{1}{2}$ " x $2\frac{1}{2}$ " spacer, $\frac{1}{2}$ " x $2\frac{11}{16}$ " bolt, lock washer and nut provided.

a. Attach the forward end of the tilt link (9) (forward end has only one hole) to the bracket (10), as shown in Figure 5, and secure with a $\frac{1}{2}$ " x $1\frac{7}{16}$ " pin and cotter pin.

b. Attach the rear end of the tilt link (9) to the yoke (4), Figure 5, with a $\frac{3}{8}$ " x $1\frac{3}{8}$ " bolt, lock washer and nut.

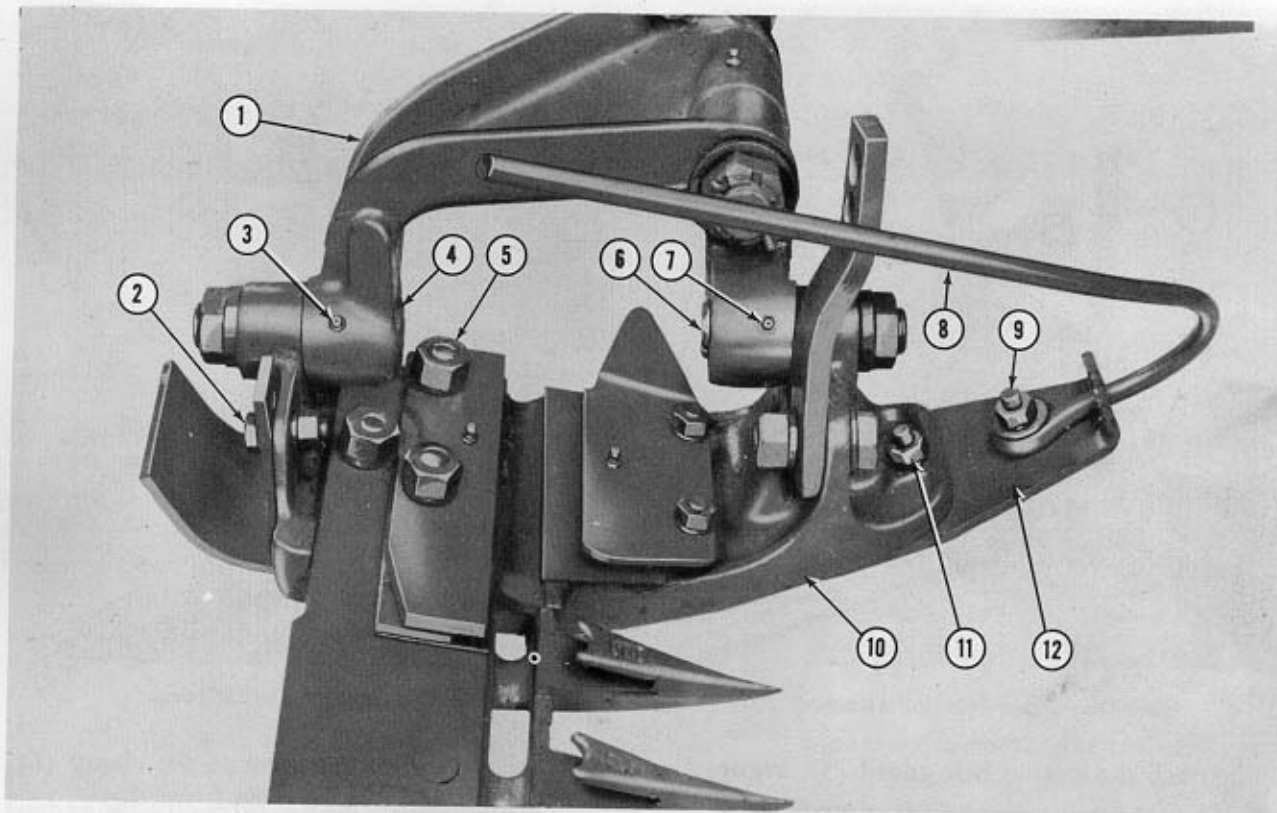


Figure 6

Drag Bar and Hinge Attached to Inner Shoe

8. Attach the cutter bar inner shoe (10), Figure 6, to the drag bar hinge (1) as follows:

- a. Remove the nut (5) from the knife guide plate bolt and position the hinge between the holes on the inner shoe as shown.
- b. Coat the hinge pins with grease, align the holes and insert the hinge pins (4) and (6), Figure 6, from the inside out.
- c. Replace and tighten the nut (5), Figure 6, and secure the hinge pins with lock washers and nuts provided in the bag of parts.
- d. Insert the fittings (3) and (7), Figure 6,

provided in the bag of parts and lubricate the fittings thoroughly.

9. Attach the inner shoe sole (12), Figure 6, to the inner shoe (10) with a $\frac{7}{16}$ " x $1\frac{1}{2}$ " carriage bolt (11) lock washer and nut. Attach the rear of the sole to the shoe in the desired hole with a $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolt (2), lock washer and nut.
10. Attach the grass rod (8), Figure 6, to the forward end of the sole (12) with a $\frac{7}{16}$ " x $1\frac{1}{2}$ " carriage bolt (9), flat washer, lock washer and nut as shown.

ASSEMBLY

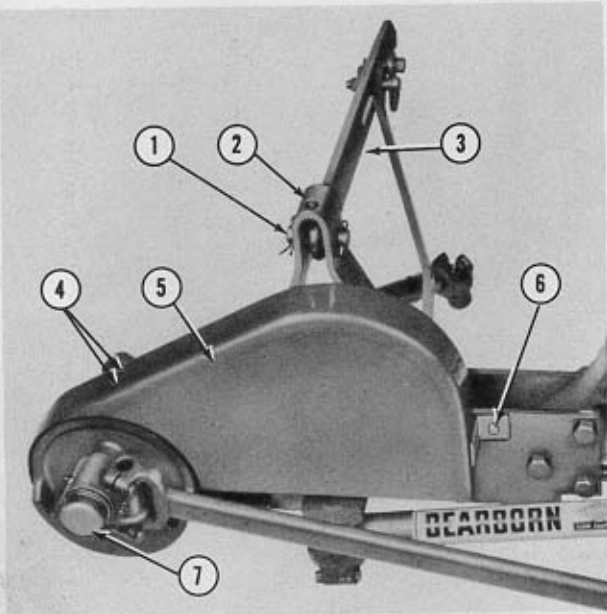


Figure 7

Belt Guard and Top Link Attached

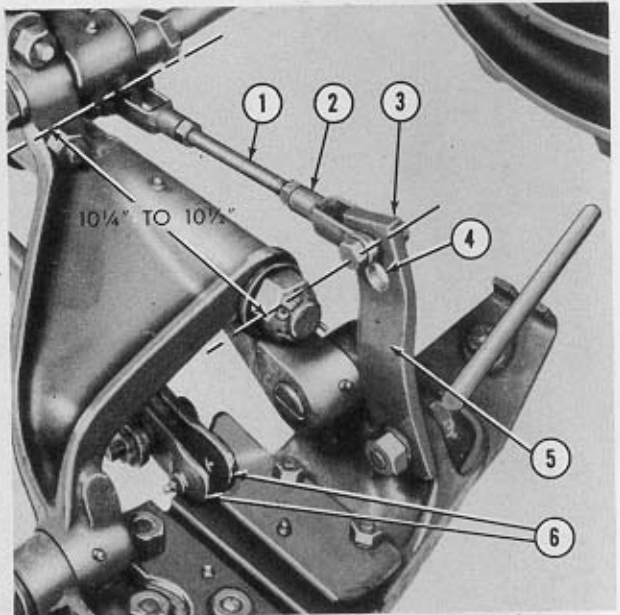


Figure 8

Lift Link Attached to Lift Lever

11. Attach the mower belt guard (5), Figure 7, to the mower main frame as follows:

- Position the belt guard over the flywheel pulley and the drive pulley (3), Figure 4, and align the holes in the guard with the holes in the bracket (1) and the hole (4) in the main frame.
- Secure the guard to the bracket with the two machine screws (4), Figure 7.
- Attach the guard to the threaded hole in the main frame with a 1" cap screw (6), Figure 7.

12. Attach the mower top link (3), Figure 7, to the top of the A-frame (2) with a 3" pin (1) and secure each end with the cotter pins provided.

13. Raise the outer end of the cutter bar and

position the pitman arm so the clamp (6), Figure 8, is centered between the hinge pins and lower the cutter bar to the ground.

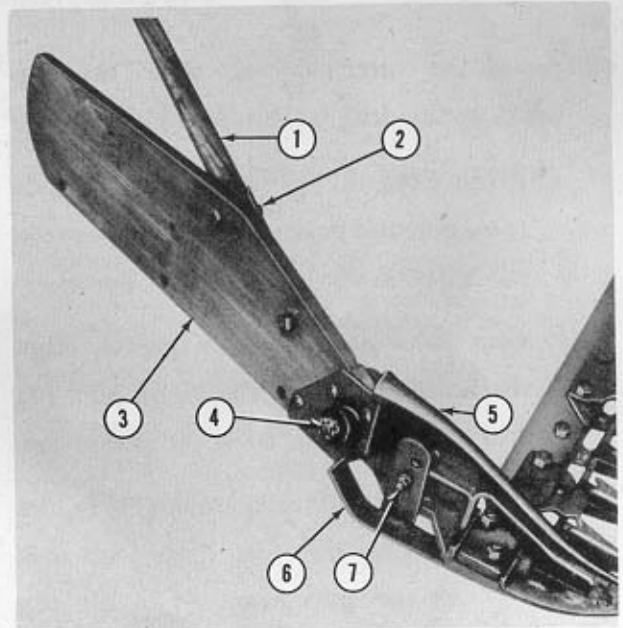


Figure 9

Swathboard Attached to Outer Shoe



Figure 10

Left Hand Anchor Bracket Attached

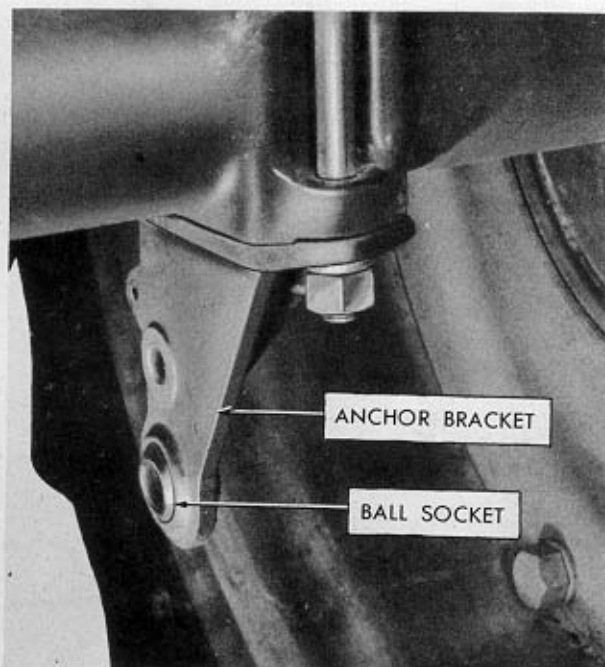


Figure 11

Right Hand Anchor Bracket Attached

14. Turn the yoke (2), Figure 8, on or off the lift link (1) until the distance between the lift link yoke pins is between 10 $\frac{1}{4}$ " and 10 $\frac{1}{2}$ ". Attach the yoke (2) to the desired hole on the lift lever (5) with the spacer, $\frac{3}{8}$ " x 1 $\frac{3}{8}$ " bolt, lock washer and nut provided.

NOTE: The lift link yoke (2), Figure 8, should be attached in the lower hole (4) of the lift lever when a six-foot cutter bar is used. When a seven-foot cutter bar is used attach the lift link yoke in the top hole of the lift lever as shown in Figure 8.

15. Attach the swathboard assembly to the outer shoe as follows:

- a. Position the swathboard (3), Figure 9, on the right side of the outer shoe (5) and insert a $\frac{1}{2}$ " x 2 $\frac{3}{4}$ " bolt (4) from the left through the swathboard.

- b. Place a flat washer, the spring, and then another flat washer on the bolt (4) and secure with the castellated nut and cotter pin provided.
- c. Insert the tapered end of the wooden grass stick (1), Figure 9, into the grass stick clamp as shown and secure with the bolt (2), flat washer, lock washer and nut provided.

16. Set the rear tractor wheels to the 52 inch spacing. The front wheels should be set to 48 inch spacing. Refer to the tractor manual for wheel spacing procedure.
17. Attach the left hand anchor bracket to the tractor rear axle housing with fender bolts as shown in Figure 10.
18. Attach the right hand anchor bracket to the tractor rear axle housing with the fender bolts as shown in Figure 11.

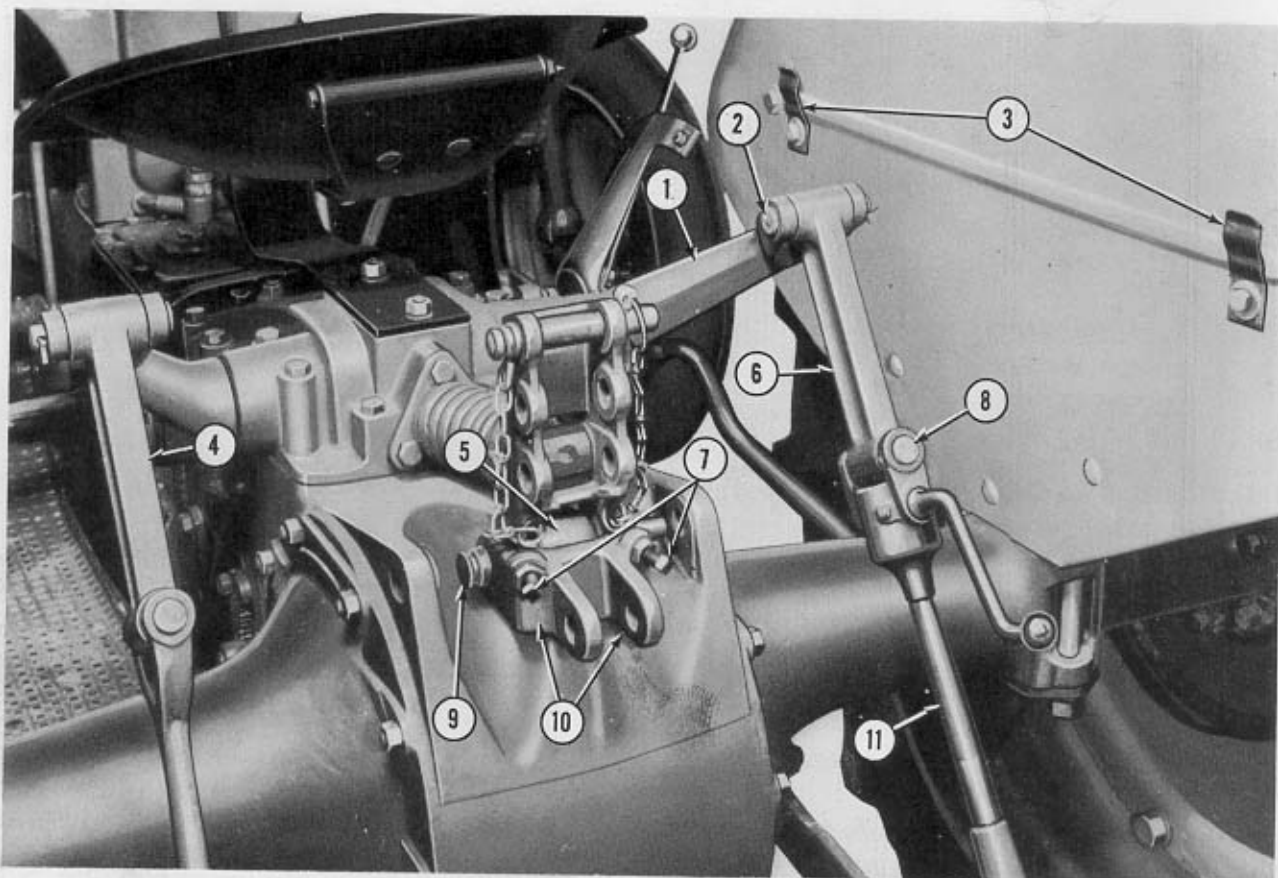


Figure 12

Top Link Bracket, Extension Arms and Transport Rod Clips Attached

19. Attach the extension arms (4) and (6), Figure 12, to the tractor leveling rods as follows:
 - a. Remove the knuckle from between the tractor lift arm (1), Figure 12, and the leveling rod (11).
 - b. Replace the knuckle with an extension arm (6) as shown in Figure 12.
 - c. Attach the extension arm with the pins (2) and (8) which are provided with the tractor, and secure with cotter pins.
 - d. Attach the extension arm (4), Figure 12, to the other lift arm in the same manner.
20. Attach the mower top link bracket (10), Figure 12, to the lug (5) on the tractor center housing as follows:
 - a. Position the top link bracket (10) on the lug (5) as shown in Figure 12 and secure with the 5½" pin (9) and ¼" cotter pin provided.
 - b. Tighten the two set screws (7) against the rocker assembly and secure with jam nuts.
21. Attach the transport rod clips (3) to the tractor fender with the lower two fender bolts as shown in Figure 12.

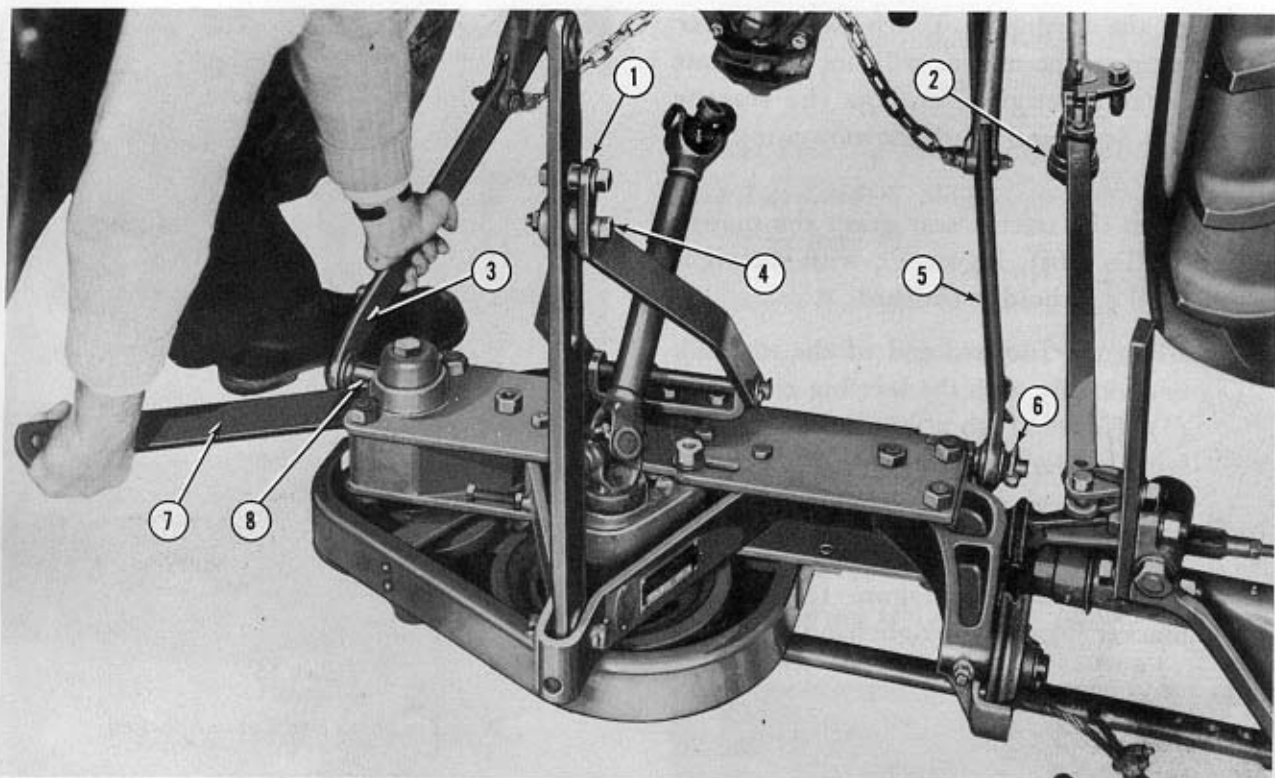


Figure 13

Attaching Tractor Lower Links to Mower Main Frame

22. Attach the tractor lower links to the mower main frame as follows:

- a. Position the mower in a cleared area with the safety release housing (2), Figure 13, turned down and the mower main frame tilted back as shown. Lock the anchor strap pin (4) with the transport lock (1).
- b. Back the tractor up to the mower and align the right lower link (5) with the pin (6) by turning the tractor leveling crank. Attach the link and secure with the linch pin provided.
- c. Pry the pin (8), Figure 13, into alignment with the left tractor link (3) using the stabilizer bar (7) as shown, and slip the left tractor link on the pin.
- d. Attach the forward end of the stabilizer bar (7), Figure 13, to the left hand anchor bracket as shown in Figure 10 and secure with the linch pin.
- e. Level the mower main frame with the tractor leveling crank and attach the rear end of the stabilizer bar (7) to the pin (8), Figure 13. Secure with the linch pin provided.

23. With the Hydraulic Touch Control lever forward so the mower will not raise, start the tractor engine, engage the tractor P.T. O. lever and attach the mower top link as follows:

- a. From the tractor seat grasp the mower top link (4), Figure 17, with the right hand and hold it forward.
- b. Align the forward end of the top link horizontally with the leveling rod crank (5), Figure 17, so it will fit between the lugs on the bracket (3).
- c. Raise the mower SLOWLY with the Hydraulic Touch Control lever and guide the top link (4), Figure 17, into the bracket (3) with the right hand. Insert the

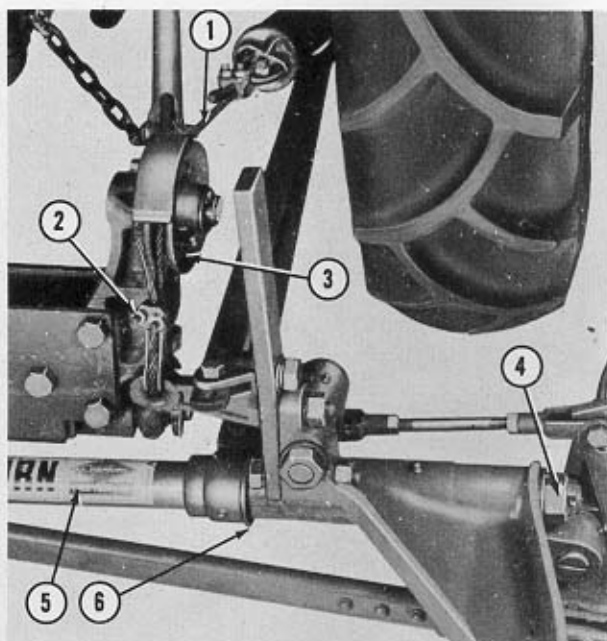


Figure 15

Drag Bar Shims and Cable Attached

pin (7) when the holes are aligned and secure with the linch pin provided on the tractor.

- d. Release the lock (6), Figure 17, from the top link anchor strap pin, lower the mower and shut off the tractor engine.

24. Turn the breakback housing (8), Figure 14, horizontal as shown and attach the pull bar pin (5) to the anchor bracket (4). Secure with the linch pin provided.

25. Turn the adjusting bolt (3), Figure 14, out of the balance spring (6) until it is flush with the spring cap (2) and attach the bolt (3) to the pull bar bracket with the pin (7) and cotter pin.

NOTE: The adjusting bolt (3), Figure 14, is manufactured with a bend in it so that when properly attached the balance spring (6) will be on the left side of the pull bar (9).

26. Complete the balance spring cable assembly and adjustment as follows:

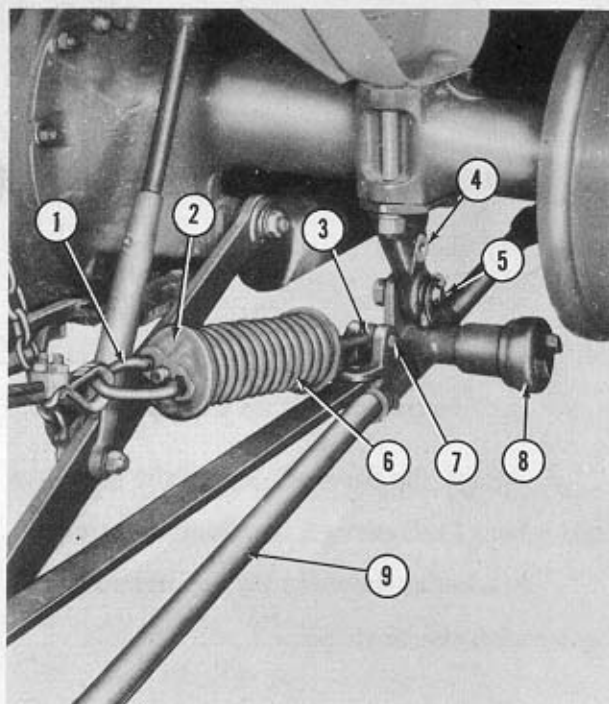


Figure 14

Pull Bar and Balance Spring Attached

NOTE: Tractor wheel removed for purpose of illustration only. Do not remove in actual assembly of the mower.

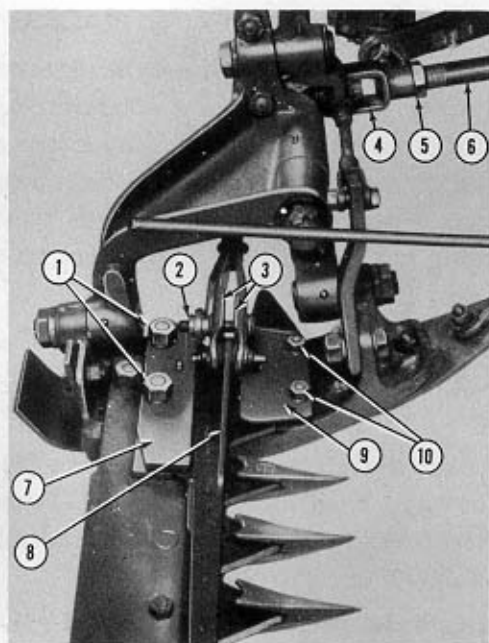


Figure 16

Knife and Pitman Arm Attached

- a. Lower the right side of the mower main frame about one inch with the tractor leveling crank (5), Figure 17.
- b. Place the cable (1), Figure 15, over the cable sheave (3) and secure the sheave to the bracket shaft with flat washer and cotter pin as shown.
- c. Release the cable clamp (2), Figure 15, pull on the loose end of the cable until all slack is removed and tighten the cable clamp (2), securely as close to the thimble as possible.
- d. Raise the right side of the mower main frame with the tractor leveling crank until the U-bolt (1), Figure 14, starts to pull out from the spring cap (2). As the mower is broken in it is probable that this adjustment will have to be repeated until

all of the initial "stretch" is worked out of the new cable.

NOTE: Prior to inserting the knife check the guard and ledger plate alignment. See Adjustments on page 18.

27. Insert the knife and secure the pitman arm to the knife head as follows:
 - a. Insert the knife (8), Figure 16, under the guide plates (7) and (9) with the cutting edge forward as shown.
 - b. Back the lock nut (2) off of the bolt sufficiently and snap the pitman clamp (3) over the knife head as shown.
 - c. Tighten the lock nut (2) up snug and back it off two notches.

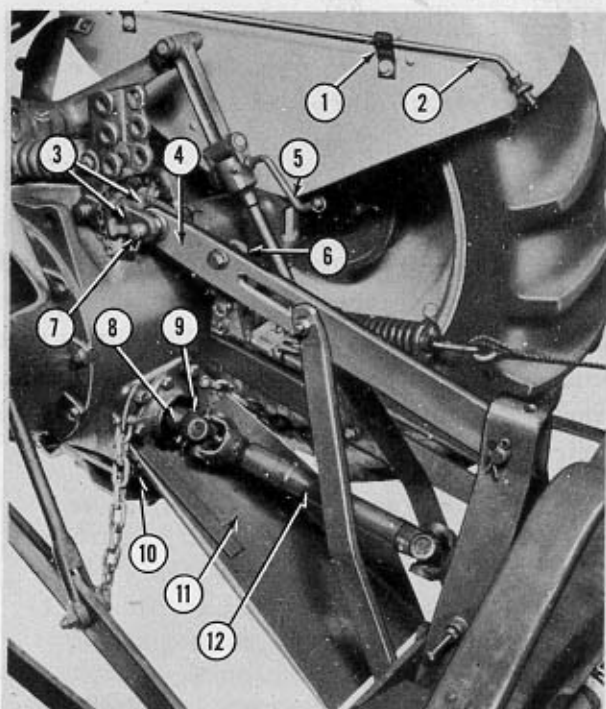


Figure 17

Drive Shaft and Guard Attached

ATTACHING AND DETACHING

28. Loosen the bolt (10), Figure 17, on each side of the tractor center housing. Raise the drive shaft assembly (12), and position the guard (11) with the slotted straps over the two bolts as shown. Tighten the bolts (10), Figure 17, and lock washers against the guard straps.
29. Start the tractor engine, engage the P.T.O. lever, raise the mower and lock it in transport position with the lock (6), Figure 17.
30. Lower the Mower, disengage the P.T.O. lever and shut off the tractor engine.
31. Remove the tractor P.T.O. cap and attach the splined end of the mower drive shaft (8), Figure 17, to the tractor P.T.O. shaft and secure with the pin (9) and cotter pin. Be sure both splines are free from burrs and dirt.
32. Place the transport rod (2), Figure 17, in the clips (1) as shown.

NOTE: Before going into the field always make certain to perform the "Final Check Before Field Operation" described on page 17 of this manual.

INSTALLING THE KNIFE

The mower knife assembly will be installed and removed many times during the life of the mower. When this is done, it is important that the mower be lowered to operating position, the tractor P.T.O. lever disengaged and the tractor engine turned off.

ATTACHING MOWER TO TRACTOR

After the mowing season, it may be necessary to remove the mower so that the tractor can be used for other work. The following instructions are for guidance in reattaching the mower to the tractor providing the mower was removed according to the detaching instructions on page 14 of this manual.

1. Adjust the rear tractor wheels to 52" spacing. Refer to the tractor manual for wheel spacing procedure.
2. Attach the left hand anchor bracket (7) and the right hand anchor bracket (11) to the tractor rear axle housing with fender bolts as shown in Figure 18.
3. Attach the extension arms (1) and (3), Figure 18, between the tractor lift arms and the tractor leveling rods as shown.
4. Attach the mower top link bracket (5), Figure 18, to the lug on the tractor center housing with the pin and cotter pin provided. Tighten the two set screws (2) against the rocker assembly and secure with jam nuts.
5. Back the tractor up to the mower with the tractor lower links aligned with the pins (16) and (19), Figure 18. Stop the tractor about one foot from the mower to avoid knocking the mower off the block and shut off the tractor engine.
6. Roll the tractor back slowly guiding the upper link (8), Figure 18, up to the bracket (5). Align the right lower link (13) with the pin (19) by turning the leveling crank (6). Attach the link to the pin and secure with linch pin.
7. Attach the pull bar bracket pin (14) to the right hand anchor bracket (11). Secure with linch pin.
8. Align the left lower link (12), Figure 18, with the pin (16) by turning the leveling crank (6) and place the link on the pin.

ATTACHING AND DETACHING

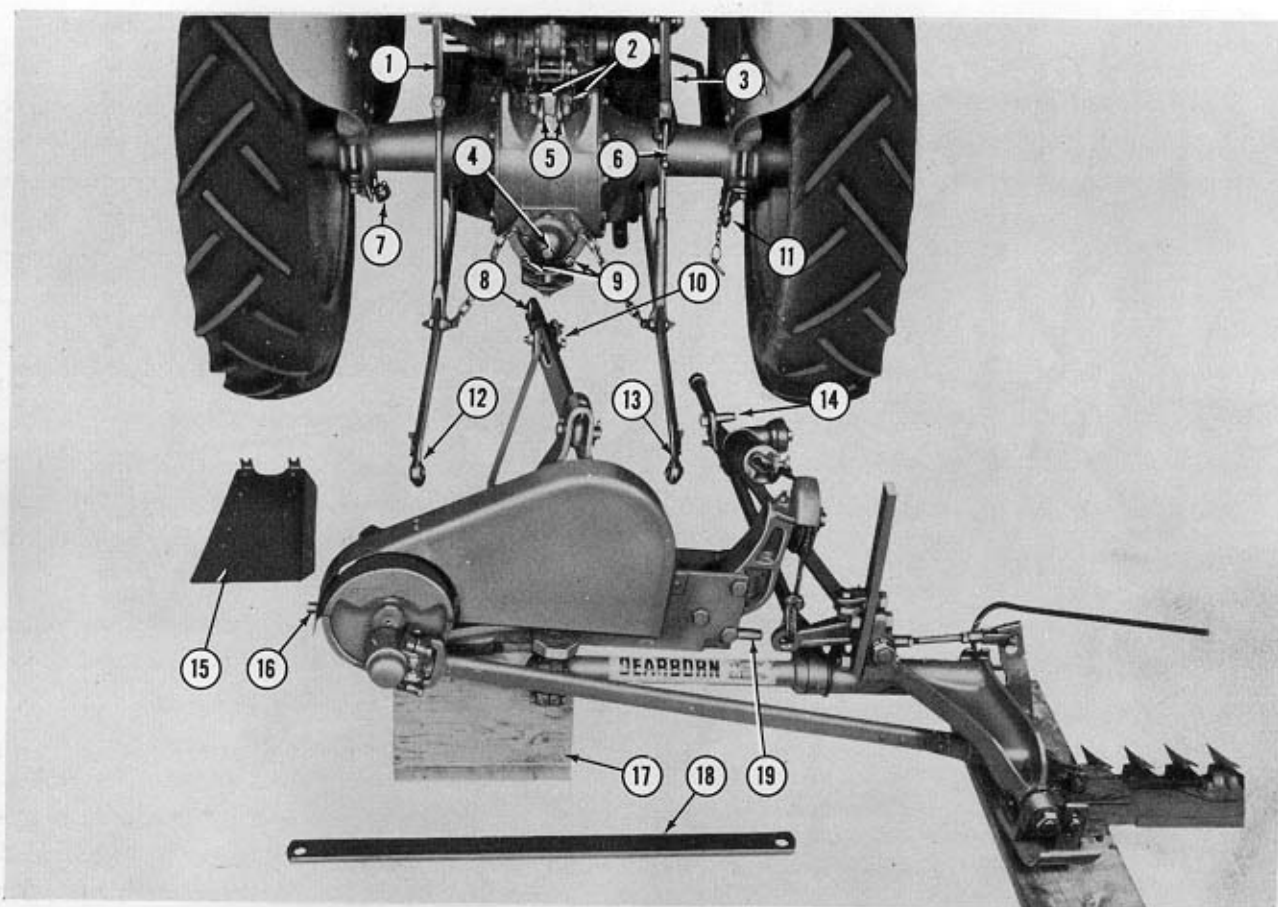


Figure 18

Mower on Blocks for Attaching

9. Attach the forward end of the stabilizer bar (18), Figure 18, to the left hand anchor bracket pin (7) and secure with linch pin. Level the mower main frame with the tractor leveling crank. Attach the rear end of the stabilizer bar to the pin (16) and secure with linch pin.
10. Attach the mower upper link (8), Figure 18, to the bracket (5) with the pin and linch pin provided.
11. Raise the mower with the Ford Tractor Hydraulic Touch Control lever. Lock the mower upper link anchor straps with the lock (10), Figure 18, and shut off the tractor engine.
12. Remove the block (17), Figure 18, from under the mower, disengage the P.T.O. lever, and remove the P.T.O. cap (4) from the tractor.
13. Attach the splined end of the mower drive shaft (8), Figure 17, to the tractor P.T.O. shaft and secure with the pin (9) and cotter pin provided. Be sure both splines are free from burrs and dirt.
14. Bolt the mower drive shaft guard (15), Figure 18, to the tractor with the two bolts (9). Engage the tractor P.T.O. lever and lower the mower to the ground.
15. Adjust the balance spring with the tractor leveling crank as explained under Balance Spring Adjustment on page 19 of this manual.

NOTE: Before going into the field always make certain to perform the "Final Check Before Field Operation" described on page 17 of this manual.

ATTACHING AND DETACHING

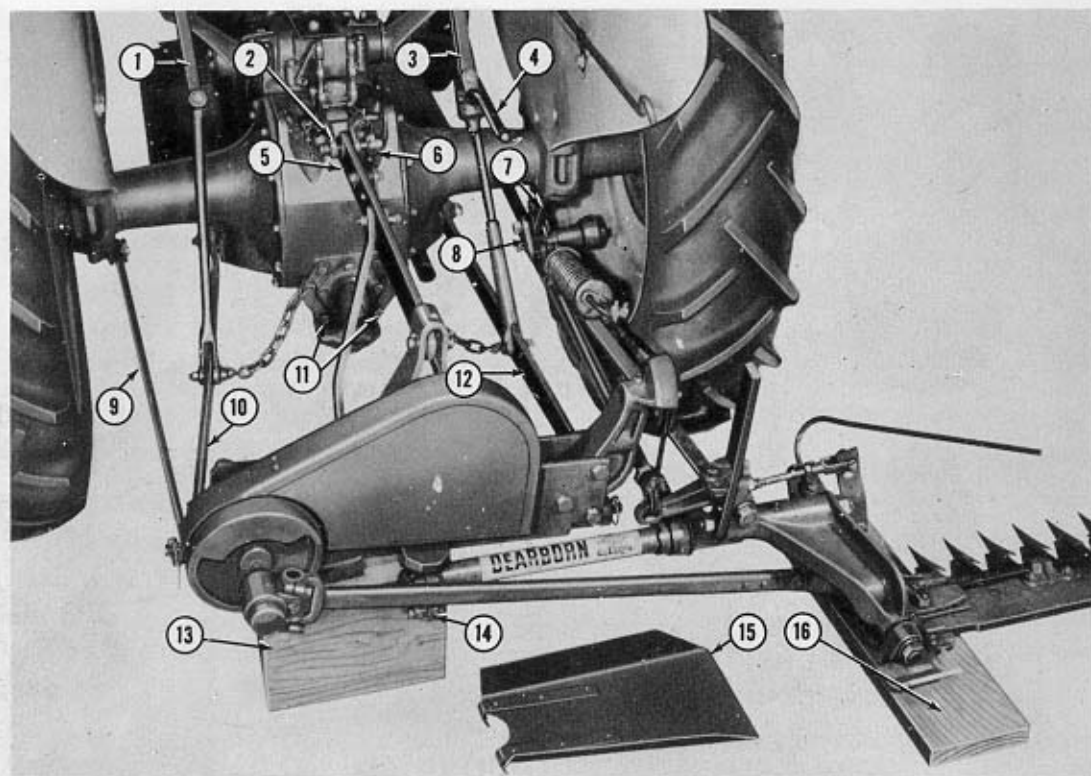


Figure 19

Mower Attached to Tractor from Position on Blocks

DETACHING MOWER FROM TRACTOR

1. Remove the mower drive shaft shield (15), Figure 19, from the tractor and tighten the two bolts (11) in the tractor center housing.
2. Start the tractor engine, raise the mower and lock the anchor straps to the upper link with the lock (6), Figure 19. Disengage the tractor P.T.O. lever and shut off the engine.
3. Detach the splined end of the drive shaft (8), Figure 17, from the tractor P.T.O. shaft. Replace the pin and cotter pin in the mower drive shaft and attach the P.T.O. cap to the tractor.
4. Place a block (13), Figure 19, that is 8" wide, 11" high and 12" long under the LEFT side of the mower main frame as shown. Be sure the block is far enough forward so it will not be under the drag bar socket cup (14), Figure 19. Place a board (16) under the cutter bar inner and outer shoe.
5. Release the upper link transport lock (6), Figure 19, and SLOWLY lower the mower main frame on the block (13) with the hydraulic touch control lever.
6. Relieve the tension on the balance spring by turning the leveling crank (4), Figure 19.
7. Remove the stabilizer bar (9), Figure 19, and detach the tractor left lower link (10) from the mower main frame. Detach the right lower link (12) from the mower main frame and replace the linch pins in their holders.
8. Detach the mower pull bar (8), Figure 19, from the right hand anchor bracket (7) and replace the linch pin.
9. Detach the mower upper link (5) from the upper link bracket (2) and replace the pin and linch pin in the bracket.
10. SLOWLY roll the tractor clear of the mower
11. Remove the lift link extension arms (1) and (3), Figure 19, from the tractor and replace the knuckles provided between the lift arms and the leveling rods.

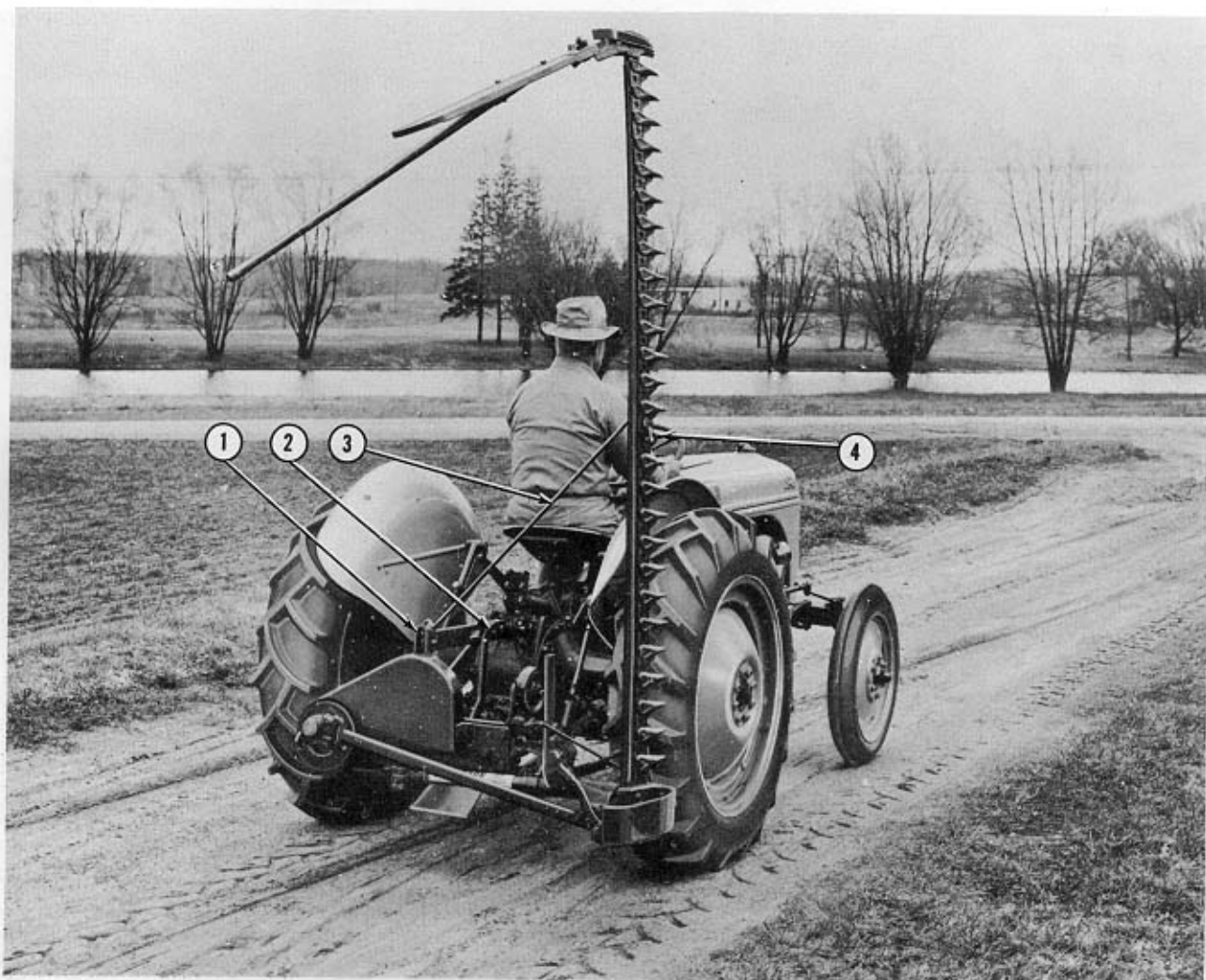


Figure 20

The Dearborn Rear Attached Mower in Transport

NOTE: It may be necessary to remove the left hand anchor bracket (7), Figure 18, the right hand anchor bracket (11) and the top link bracket (5) from the tractor. However these items are normally left on the tractor.

When storing the mower see Maintenance Suggestion No. 6 on page 21 of this manual.

TRANSPORTING THE MOWER

To fix the mower in the transport position, raise the cutter bar with the Ford Tractor Hydraulic Touch Control lever and lock the anchor straps

to the top link with the lock (2), Figure 20. Disengage the power take-off and raise the cutter bar by hand to the vertical position shown.

CAUTION: Do not place your fingers between the guards. Grasp the rear edge of the cutter bar to raise or lower by hand.

With the hook end of the transport rod (3), Figure 20, hooked in the hole (1) on the mower A-frame, insert the threaded end of the rod through the hole in the cutter bar and secure by screwing the handle (4) on the transport rod against the cutter bar as shown in Figure 20.

OPERATION



Figure 21

The Dearborn Rear Attached Mower at Work

The Dearborn Rear Attached Mower is easy to operate. With a little practice and by applying the information in this manual, the operator will be able to make the implement perform with desired efficiency.

Proper lubrication is a very important part of mower operation. Follow the instructions concerning lubrication as given on page 17. Before taking the mower into the field, it is recommended that it be given the overall check indicated on page 17.

The Dearborn Rear Attached Mower is designed to operate at a maximum P. T. O. speed of 655 R.P.M. working under load in the field. Once the throttle is set to give this R.P.M., the tractor ground speed should be adjusted to suit field conditions with the tractor gear shift lever.

When very heavy cutting is encountered it may be necessary to operate the mower in first gear; however, the use of second or third gear will cover operation in most all instances.

NOTE: For best results do not operate the mower above third gear with a P.T.O. speed of 655 R.P.M.

The cutter bar is raised easily and quickly with the Ford Tractor Hydraulic Touch Control to facilitate backing into corners and up to fence rows, as well as for clearing small obstructions and irrigation checks. To maintain the maximum cutter bar clearance in transport, keep both rear tractor tires inflated to 12 pounds pressure. The hydraulic mechanism of the tractor should be operated in Constant Draft when this mower is attached.

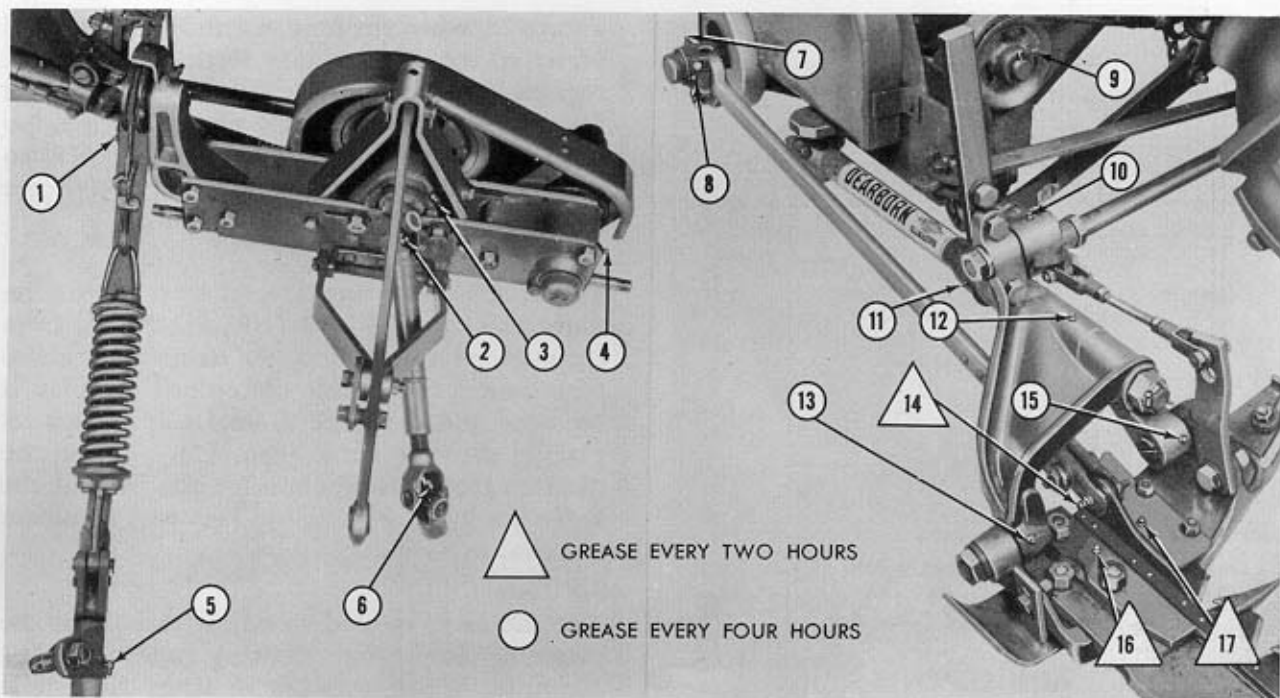


Figure 22

Lubrication Fittings on the Rear Attached Mower

CAUTION: Do not attempt to attach the mower without using the leveling rod extensions (4) and (6), Figure 12.

To obtain the longest service and the most efficient operation, adhere closely to the following information on lubrication and adjustment.

LUBRICATION

There are seventeen grease fittings on the Dearborn Rear Attached Mower as shown in Figure 22. The knife head and pitman clamp fitting (14) and the knife head guide plate fittings (16) and (17), Figure 22, should be greased after every two hour's operation. All other fittings should be greased after every four hours of operation. Lubricate the wearing surface of the knife clips every two hours with No. 30 grade machine oil.

CAUTION: Do not oil the hold down clips where the soil is excessively abrasive.

NOTE: The bearing and journal assembly with fittings (2) and (6), Figure 22, are prepacked on some mowers. In this case these bearings should be repacked with grease at the end of each season.

FINAL CHECK BEFORE FIELD OPERATION

After the mower is properly lubricated and assembled on the tractor with which it is to be used...

1. Set the tractor P. T. O. speed at 655 R. P. M. with a speed counter and mark the throttle position with a metal punch.
2. Operate the tractor in constant draft and keep both rear tractor tires inflated to 12 pounds pressure.
3. The cutter bar lead should be $\frac{1}{2}$ " per foot of cutter bar. Check and adjust if necessary (see Lead Adjustment on page 19).
4. Check and adjust the knife for register and shear (see Register, Knife Clip and Knife Guard Adjustments on page 18).
5. The distance between the lift link yoke pins should be between $10\frac{1}{4}$ " and $10\frac{1}{2}$ " and the cable adjusted as directed under the Balance Spring Adjustment on page 19.
6. Adjust the ground speed to suit field conditions with the tractor gear shift lever, not the throttle.

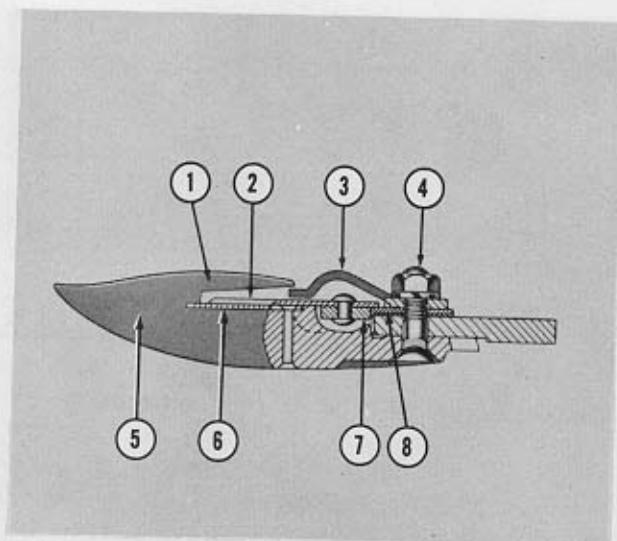


Figure 23

Cross Section of Cutter Bar

ADJUSTMENTS

Knife Guards:

Align the guards (5), Figure 23, by striking the forward end up or down with a hammer until the ledger plates (6) are flush with the knife sections (2). The knife guard lip (1) should be above the knife clips (3) and kept straight as shown in Figure 23.

NOTE: Align the guards before attempting to adjust the knife clips.

Knife Clips:

The knife clips (3), Figure 23, should hold the knife sections down on the ledger plates (6) without binding the knife sections. Adjust by removing the knife and striking the forward end of the clip up or down.

Wear Plates:

The wear plates (8), Figure 23, located under each knife clip (3), must fit snugly against the knife back (7) as shown. To adjust the wear plates, loosen the nuts on the two bolts (4), Figure 23. Tap the wear plates forward against the knife back and tighten the nuts securely.

Register Adjustment:

Proper knife register is an important factor in efficient mower operation. When properly adjusted, the knife stroke should be equalized between the knife guards as shown in diagram A,

Figure 24, when the pitman arm is at either end of its stroke. If the knife sections are out of register, see diagram B, Figure 24, adjust as follows. Remove the cotter pin and loosen the nut (4), Figure 15, add or remove shims (6) to the drag bar (5) and tighten the nut (4). Secure the nut with the cotter pin provided.

Guide Plates:

To avoid slap or vertical play in the knife, remove the nuts (1) and (10), Figure 16, from the guide plates (7) and (9). Remove the shims from under each guide plate until the play is removed and the knife slides freely. When replacing the rear guide plate (7), position the plate so that it almost touches the back of the knife head (8), Figure 16. This will eliminate side play in the knife.

Tilt Lever:

The tilt lever is used to adjust the tilt of the cutter bar for various mowing conditions. For example: When mowing in stony fields the points of the guards may be raised by moving the tilt lever (1), Figure 5, to the rear position on the tilt link (9). Secure the tilt link to the yoke (4) on the tilt lever with the bolt, lock washer and nut provided. When it is desirable to have the points close to the ground, the tilt lever is moved to the forward position. Under normal operating conditions the tilt lever should be adjusted so that the guards run level.

Height of Cut:

The height of cut is controlled by the position of the inner and outer shoes. Adjust the inner and outer shoe by raising or lowering as desired. For uniform cutting, adjust both shoes alike.

To adjust the cutter bar at the outer shoe (5), Figure 9, remove the bolt (7), raise or lower the shoe to the desired position on the shoe sole (6) and secure with lock washer and nut.

To adjust the cutter bar at the inner shoe, remove the bolt (2), Figure 6, raise or lower the shoe to the desired position on the shoe sole rack and secure with the lock washer and nut. For best results be sure the cutter bar is set to a uniform height at both the inner and outer shoes.

Wrist Pin:

Excessive vibration and side play due to a worn pitman arm wrist pin should be corrected by installing a new wrist pin and wrist pin bushing.

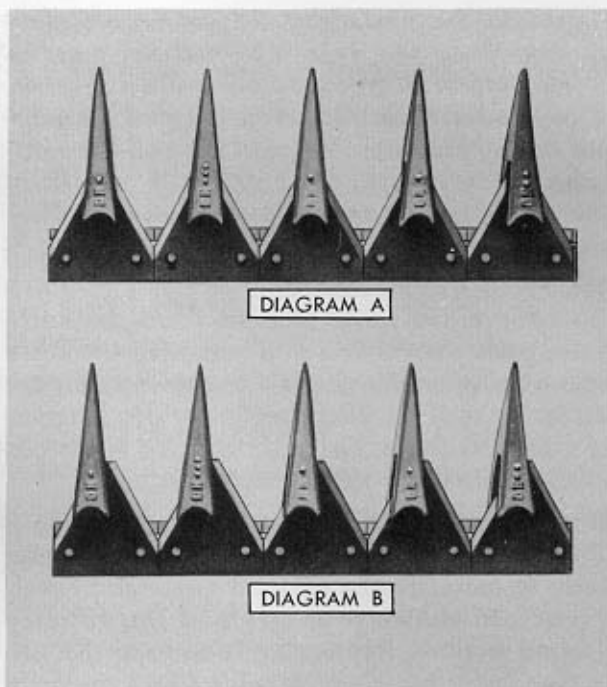


Figure 24
Knife Register

Pitman Box Bearing:

End play in the pitman box will produce hammering and excessive vibration in the operation of the cutter bar. To adjust, remove the bearing cap (7), Figure 7, tighten the castellated nut on the pitman pin, back off ($\frac{1}{6}$ turn), and secure with the cotter pin. Replace the bearing cap.

Belt Tension:

To adjust the tension on the V-belt (2), Figure 4, turn the adjusting bolt (1), Figure 3, until there is approximately $\frac{1}{4}$ " free play in the belt midway between the drive and the driven pulley. Secure the adjusting bolt with the lock nut provided.

Cutter Bar Lead:

The recommended lead for average cutting is $\frac{1}{2}$ inch per foot of cutter bar. To increase the lead in the cutter bar disconnect the yoke end of the pull bar (6), Figure 16, from the drag bar. Loosen the lock nut (5) and thread the yoke (4) further on the pull bar. Reattach the pull bar yoke (4) to the drag bar and tighten the lock nut (5) securely against the yoke.

Lift Link:

To obtain the proper cutter bar ground pressure turn the yoke (2), Figure 8, on the lift link (1) until the distance between the lift link yoke holes is between $10\frac{1}{4}$ " and $10\frac{1}{2}$ ". This setting should be maintained and the ground pressure adjustment made with the balance spring and cable setting.

Balance Spring:

To properly adjust the cutter bar ground pressure adjust the lift link and lower the right side of the mower main frame one inch with the tractor leveling crank. Turn the adjusting bolt (3), Figure 14, out of the balance spring (6) until it is flush with the spring cap (2). Re-attach the adjusting bolt (3) to the pull bar bracket with the pin (7) and cotter pin provided. Loosen the cable clamp (2), Figure 15, on the cable (1) and pull on the loose end of the cable until all slack is removed. Tighten the cable clamp (2) securely, as close to the thimble as possible. Raise the right side of the mower main frame with the tractor leveling crank until the U-bolt (1), Figure 14, starts to pull out from the spring cap (2). The cutter bar should be kept "floating" and still maintain contact with the ground. As the mower is broken in, the spring adjustment may be maintained with the leveling crank until the mower drawbar is one inch above horizontal. At this time lower the drawbar with the leveling crank, disconnect the balance spring adjusting bolt (3), Figure 14, from the pull bar bracket and turn it into the spring about $\frac{1}{2}$ ". Re-attach the adjusting bolt to the pull bar and adjust the balance spring with the leveling crank as described above.

Safety Release:

The automatic safety release is a feature that helps prevent damage to the mower and tractor which might be caused by the cutter bar striking an obstruction. When properly adjusted it permits the cutter bar to swing to the rear. To check the break back spring, lower the cutter bar to cutting position and give the outer end a quick hard pull rearward. If the pull bar does not release, loosen the break back adjusting cap (8), Figure 14, until a quick hard pull does release it. If it releases too easily, tighten the adjusting cap.

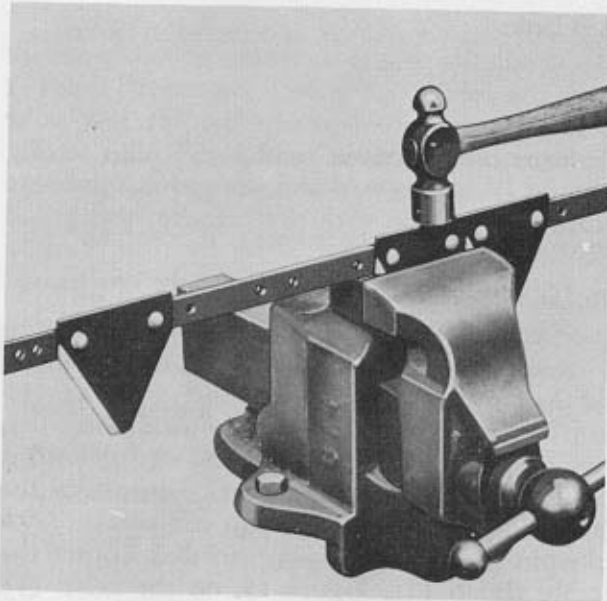


Figure 25

Removing Knife Sections

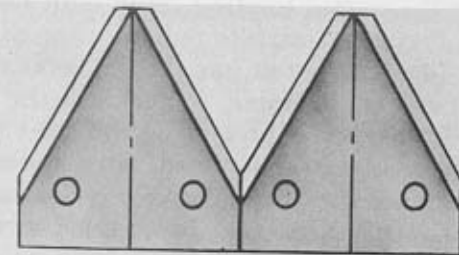
CAUTION: Do not adjust the automatic safety spring release too tight. The pull bar must be able to release in order to insure safe operation. When an obstruction is hit, back the tractor without raising the cutter bar until the pull bar automatically re-engages the break back pin. Raise the cutter bar to clear the obstruction and resume mowing.

Removing Knife Sections:

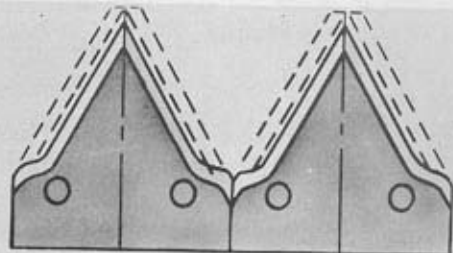
To remove the knife sections from the knife back, place the section in a vise with the knife back resting on the vise jaw as shown in Figure 25. Strike the back of the section with a hammer to shear the rivets. Drive the sheared rivets out of the knife back with a metal punch.

Sharpening the Knife:

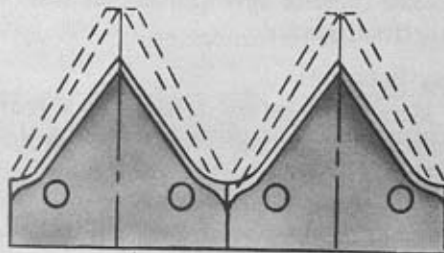
The knife sections should be sharpened carefully to maintain the original angle and bevel. Figure 26 shows properly and improperly ground sections. Replace knife sections that are broken, badly worn, or irregular. Check the knife for loose rivets and replace when necessary.



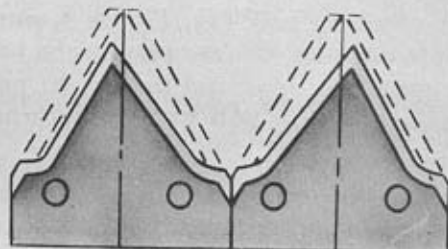
New Sections
Proper Angle and Bevel



Sections Ground
at Proper Angle and
Bevel



INCORRECT
Sections Ground at
Wrong Angles—Bevel
Too Narrow



INCORRECT
Sections Ground Off
Center—Knife Will Not
Register

Figure 26

Knife Sections Properly and Improperly Ground

MAINTENANCE SUGGESTIONS

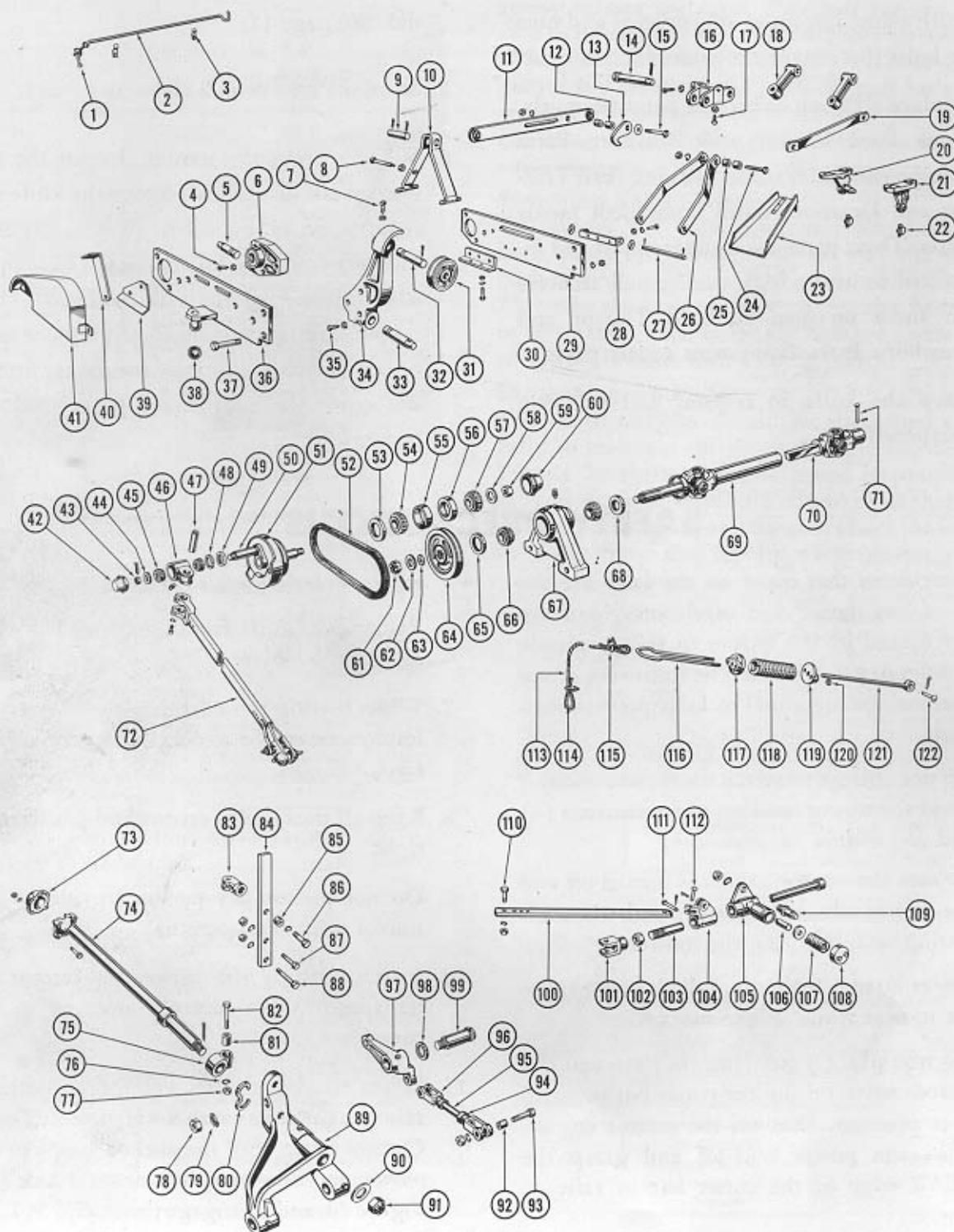
1. Make a periodic check of the mower for worn parts, improper adjustments and nuts or bolts that may have worked loose.
2. Replace all worn or broken parts promptly. Your Ford Tractor and Dearborn Farm Equipment dealer stocks genuine Ford Tractor and Dearborn Farm Equipment repair parts. These parts are manufactured and inspected to assure high quality and accurate fit. Insist on genuine Ford Tractor and Dearborn Farm Equipment repair parts.
3. Keep the knife in register and properly sharpened.
4. Lubricate the mower as directed in this manual. See page 17.
5. Store the mower in a clean, dry place.
6. When storing the mower, loosen the tension on the drive belt, remove the knife and cover it with a good rust preventive. Place the mower in a safe location to avoid possible injury to persons and animals. Thoroughly clean the entire mower, replace worn or broken parts, lubricate the grease fittings and cover the unprotected parts with rust preventive.

SAFETY PRECAUTIONS

Most accidents that occur on the farm are the result of negligence and carelessness and are usually caused by the failure to follow simple safety rules or precautions. The following safety precautions are suggested to help prevent such accidents.

1. Do not attempt to attach the mower without using the tractor leveling rod extensions (4) and (6), Figure 12.
2. Be sure the tractor engine is turned off and the power take-off is disengaged when adjusting or lubricating the mower.
3. Never attempt to clean, adjust or lubricate the mower while it is in motion.
4. Do not place your fingers between the guards when raising the cutter bar to transport position. Shut off the tractor engine, disengage power take-off and grasp the REAR edge of the cutter bar to raise or lower.
5. Do not adjust the automatic safety release too tight. The pull bar must be able to release to insure safe operation.
6. Remove the knife from the cutter bar when storing the mower.
7. When leaving the tractor, always lower the implement to the ground and turn off the tractor engine.
8. Keep all nuts, bolts, screws and connections tight.
9. Do not permit any person to ride on the tractor with the operator.
10. In transporting the mower, be certain the transport rod is securely attached to the cutter bar.
11. When moving the mower short distances, raise the cutter bar with the Hydraulic Touch Control lever, lock the anchor straps to the mower top link with the transport lock (2), Figure 20, and disengage the tractor P. T. O.
12. Keep the tractor keys where they are not available to children.

SERVICE PARTS



SERVICE PARTS

SERVICE PARTS LIST—FIGURE 27

The following parts list, while not complete, identifies the parts most frequently used. For more complete parts information, consult your local dealer.

KEY NO.	PART NUMBER	DESCRIPTION	NO. REQ'D MODELS		KEY NO.	PART NUMBER	DESCRIPTION	NO. REQ'D MODELS	
			14-15	14-16				14-15	14-16
1	141653	HANDLE—Transport Rod.....	1	1	60	142619	CAP—Housing.....	1	1
2	142694	ROD—Transport.....	1	1	61	33860	NUT—Slotted—Hex 3/8—18.....	1	1
3	142695	CLIP—Transport Rod.....	2	2	62	141235	WASHER—Flat.....	1	1
4	142602	SET SCREW—Special.....	1	1	63	142685	Gasket—Cork.....	1	1
5	142601	PIN—Long—Drawbar.....	1	1	64	142684	DRIVE SHEAVE.....	1	1
6	142770	FLYWHEEL BEARING HOUSING & CUP ASSY.....	1	1	65	141230	SEAL—Oil—Drive Sheave.....	1	1
7	142607	SET SCREW—Special.....	1	1	66	141229	CONE—Bearing—Drive Sheave.....	2	2
8	142610	SCREW SPECIAL—Belt Adjusting.....	1	1	67	142771	HOUSING AND BEARING CUP ASSY.....	1	1
9	142710	PIN—Upper Link—Short.....	1	1	68	141230	SEAL—Oil—Drive Sheave.....	1	1
10	142594	ARM ASSEMBLY.....	1	1	69	142680	DRIVE SHAFT—Sub Assy.....	1	1
11	142703	UPPER LINK ASSY.....	1	1	70	142681	DRIVE SHAFT—Sub Assy.....	1	1
12	142709	SPACER—Upper Link.....	2	2	71	74027	PIN—Clevis—Drive Shaft to P.T.O.....	1	1
13	142708	HOOK—Upper Link.....	1	1	72	142623	PITMAN ASSY.....	1	1
14	142711	PIN—Upper Link—Long.....	1	1	73	142699	CUP—Outer—Drag Bar.....	1	1
15	24539	BOLT—Hex—1/2—20 x 2 1/4.....	1	1	74	142654	DRAG BAR ASSY.....	1	1
16	141242	BRACKET—Upper—Link.....	1	1	75	142658	PULL BAR EYE ASSY.....	1	1
17	91474-S	SET SCREW—3/8—16—1 1/2.....	2	2	76	34809	LOCKWASHER 1/2".....	1	1
18	142712	BRACKET EXTENSION.....	2	2	77	33846	NUT—Hex—1/2"—20.....	1	1
19	230042	LINK STABILIZER.....	1	1	78	141159	NUT—Hex 1"—14.....	1	1
20	141561	ANCHOR BRACKET ASSY.—L.H.....	1	1	79	34815	LOCKWASHER 1".....	1	1
21	141186	ANCHOR BRACKET & BALL ASSY.—R.H.....	1	1	80	142667	WASHER—Drag Bar Adjusting.....	2	2
22	2N574	PIN LINC (RING 2N575).....	2	2	81	142677	SPACER—Yoke to Pull Bar Eye.....	1	1
23	142696	SHIELD—Universal Joint.....	1	1	82	300013	BOLT—Hex—Special—1/2—20 x 2 1/4.....	1	1
24	24554-57-8	BOLT—Hex—1/2—20 x 2 3/4.....	1	1	83	141659	YOKE—Tilt Lever.....	1	1
25	142666	BUSHING.....	2	2	84	142691	LEVER—Tilt.....	1	1
26	142622	STRAP ANCHOR.....	2	2	85	141660	SPACER—Tilt Lever Yoke.....	1	1
27	142585	SHAFT.....	1	1	86	300009	BOLT—Hex—3/8—11 x 1 1/4.....	1	1
28	142622	STRAP ANCHOR.....	2	2	87	300019	BOLT—Hex—3/8 x 18 x 2 1/2.....	1	1
29	142584	U-BRACKET.....	1	1	88	300020	BOLT—Hex—3/8—18 x 3 1/2.....	1	1
30	142592	BRACKET—Angle.....	1	1	89	141151	HINGE ASSY.....	1	1
31	142611	CABLE SHEAVE ASSY.....	1	1	90	141426	WASHER.....	1	1
32	142606	PIN—Cable Sheave.....	1	1	91	33955	NUT—Jam 1 1/8—12.....	1	1
33	142605	PIN—Drawbar—Short.....	1	1	92	142666	BUSHING—Lift Link.....	2	2
34	142604	BRACKET.....	1	1	93	300010	BOLT—1/2—20 x 1 3/8.....	2	2
35	142602	SET SCREW—Special.....	1	1	94	33846	NUT—Hex 1/2—20.....	2	2
36	142587	REAR SIDE RAIL & PLATE ASSY.....	1	1	95	141408	LINK LIFT.....	1	1
37	142609	BOLT—3/8—18 x 4" Hex Head.....	6	6	96	141409	YOKE—Lift Link.....	2	2
38	142620	CUP—Rubber (Drag Bar Ball).....	1	1	97	142662	LIFT LEVER ASSY. (HINGE).....	1	1
39	142603	GUARD—Grass.....	1	1	98	141199	WASHER—Flat 1 3/8.....	1	1
40	142725	BRACKET—Guard—Long.....	1	1	99	141178	SHAFT—Assy.—Lift Link.....	1	1
41	142716	BELT GUARD ASSY. (Welded).....	1	1	100	142692	LINK—Tilt.....	1	1
42	142618	CAP—Pitman.....	1	1	101	141615	YOKE ASSY.—Pull Bar.....	1	1
43	33987	NUT—Slotted Hex. 3/8—18.....	1	1	102	33955-5	NUT—Jam 1 1/8—12.....	1	1
44	351505	WASHER—Flat .65 x 1.25 x .15.....	1	1	103	142675	PULL BAR ASSY.....	1	1
45	8M1216	CONE—Bearing.....	2	2	104	141612	BRACKET—Pull Bar.....	1	1
46	142615	PITMAN BOX & BUSHING ASSY.....	1	1	105	141240	BREAK BACK HOUSING ASSY.....	1	1
		NOTE: Bearing Cups No. 8M1217 (not shown).....	2	2	106	141183	PLUNGER—Break Back.....	1	1
47	142630	PIN—Pitman—Wrist.....	1	1	107	141182	SPRING—Break Back.....	1	1
48	141323	LOCK RING—Pitman Box.....	1	1	108	141184	CAP—Adjustable Break Back.....	1	1
49	141322	SEAL—Oil.....	1	1	109	141185	PIN—Shoulder.....	1	1
50	141315	PIN—Pitman.....	1	1	110	34473	BOLT—Hex Hd.—1/2—20 x 1 1/2.....	1	1
51	142720	FLYWHEEL & PITMAN ASSY.....	1	1	111	74016	PIN—Clevis—Pull Bar Bracket.....	1	1
52	142689	V-BELT (Drive).....	1	1	112	141427	PIN—Clevis—Tilt Link.....	1	1
53	9N750	SEAL—Oil.....	1	1	113	142727	CABLE—3/8 Dia. x 38.....	1	1
54	141305	CONE.....	1	1	114	140214	THIMBLE—Cable.....	1	1
55	7W4616	CUP—Bearing (Large).....	1	1	115	140116	CLAMP—Cable.....	2	2
56	81202	CUP—Bearing (Small).....	1	1	116	141627	U-BOLT 3/8—16.....	1	1
57	142326	CONE.....	1	1	117	141629	CAP—Threaded.....	1	1
58	141327	WASHER—Flat.....	1	1	118	141630	SPRING.....	1	1
59	33860	NUT—Slotted Hex 3/8—18.....	1	1	119	141628	CAP—Plain.....	1	1
					120	33799-57	NUT—Hex—3/8—16.....	2	2
					121	141631	ROD—End.....	1	1
					122	141619	PIN—Clevis.....	1	1

SERVICE PARTS

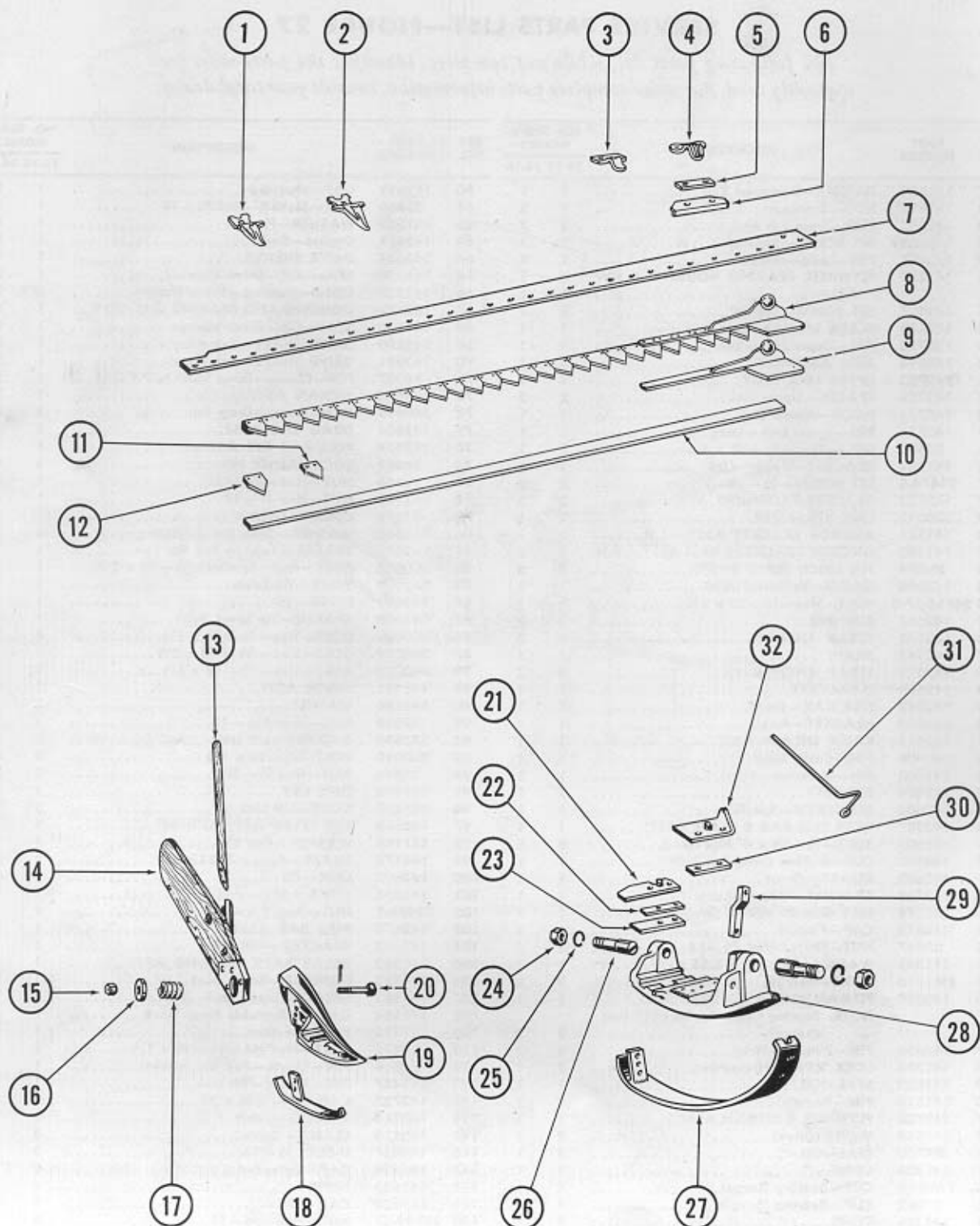


Figure 28

SERVICE PARTS

SERVICE PARTS LIST—FIGURE 28

The following parts list, while not complete, identifies the parts most frequently used. For more complete parts information, consult your local dealer.

KEY NO.	PART NUMBER	DESCRIPTION	NO. REQ'D MODELS		KEY NO.	PART NUMBER	DESCRIPTION	NO. REQ'D MODELS	
			14-15	14-16				14-15	14-16
1	140472	GUARD ASSY.—Modified—Plain.....	1	1	15	33982	NUT—Slotted Hex— $\frac{1}{2}$ —13.....	1	1
2	140470	GUARD ASSY.—Plain.....	22	26	16	141327	WASHER—Flat— $\frac{3}{16}$	1	1
2	141009	GUARD ASSY.—Rock.....	22	26	17	140443	SPRING.....	1	1
3	141007	CLIP—Knife—Plain.....	5	6	18	141022	OUTER SHOE SOLE ASSY.....	1	1
4	141008	CLIP—Knife—Inner.....	1	1	19	141016	OUTER SHOE ASSY.....	1	1
5	141015	SHIM—.050".....	6	7	20	142650	BOLT—Sq. Hd. $\frac{1}{2}$ —13 x $2\frac{3}{4}$	1	1
6	141021	PLATE—Wear.....	6	7	21	142640	REAR KNIFE GUIDE ASSY.....	1	1
7	141005	CUTTER BAR 6'.....	1		22	141038	SHIM—Knife Guide Rear.....	4	4
7	141006	CUTTER BAR 7'.....		1	23	142642	PLATE—Wear—Inner Shoe.....	1	1
8	142668	KNIFE ASSY.—6'—Underserrated Sections.....		1	24	141159	NUT—Hex—1"—14.....	2	2
8	142669	KNIFE ASSY.—7'—Underserrated Sections.....		1	25	34815	LOCKWASHER 1".....	2	2
9	142670	KNIFE HEAD ASSY.—Welded.....	1	1	26	141158	PIN—Hinge.....	2	2
10	141111	BACK—Knife—6'.....	1		27	141675	INNER SHOE SOLE ASSY.....	1	1
10	141112	BACK—Knife—7'.....		1	28	141156	INNER SHOE ASSY.....	1	1
11	141113	KNIFE SECTION—Underserrated.....	24	28	29	142639	LEVER—Inner Shoe—Lift.....	1	1
12	141682	KNIFE SECTION—Plain.....	24	28	30	141031	SHIM—Front Knife Guide.....	as req.	as req.
13	142651	GRASS STICK.....	1	1	31	141655	ROD—Grass.....	1	1
14	142644	SWATHBOARD & FITTINGS ASSY.....	1	1	32	141029	FRONT KNIFE GUIDE ASSY.....	1	1

SEE YOUR LOCAL FORD TRACTOR DEALER

Here are some of the implements in the Dearborn Farm Equipment Line:

MOLDBOARD PLOWS	SPRING SHANK CULTIVATORS	COMBINES
DISC PLOWS	RIGID SHANK CULTIVATORS	MOWERS
TWO-WAY PLOWS	FIELD CULTIVATORS	SWEEP RAKES
MIDDLEBUSTERS	FOUR ROW WEEDERS	SCOOPS
SINGLE DISC HARROWS	ROTARY HOES	BLADES
TANDEM DISC HARROWS	LISTER PLANTERS	SCRAPERS
SPRING TOOTH HARROWS	BUSTER PLANTERS	WAGONS
SOIL PULVERIZERS	CORN PICKERS	POST HOLE DIGGERS
SUBSOILERS	CORN SNAPPERS	DISC RIDGERS
LISTED CROP CULTIVATORS	MANURE & MATERIAL LOADERS	SNOW PLOWS

Your dealer will be glad to come to your farm and, without obligation, demonstrate any equipment that interests you. Other equipment is constantly being developed and added to the Dearborn line.

Ask for a Demonstration

www.ntractorclub.com