OPERATOR'S MANUAL

HAYLINER®
268

42026810

NEW HOLLAND

Reprinted

A NOTE TO YOU, MR. BALER OWNER

In buying a New Holland baler, you have chosen wisely. Into it have gone years of thought, research, and improvement both at the factory and under actual field conditions. Thousands of users all over the world are pleased with the results obtained with their New Holland equipment. We are confident that with proper adjustment and reasonable care, your machine will give you the superior and economical performance for which it was designed.

This manual contains information concerning the adjustment, operation, and maintenance of your baler. Please read it carefully in order to become familiar with your machine and its adjustments.

KEEP THIS BOOK AVAILABLE FOR READY REFERENCE

Your New Holland dealer is interested in your obtaining the most from your investment. He will be glad to answer any questions that you may have about your baler and his staff of factory trained mechanics is always ready to serve you.

Rely on your authorized New Holland dealer to supply you with the highest quality baler twine and genuine New Holland service parts.

Record the serial number of your baler here .....

Specify the model of your baler and its serial number when writing for information or ordering service parts.

ABOUT IMPROVEMENTS

New Holland is continually striving to improve its products, and therefore, reserves the right to make improvements or changes, when it becomes practical and possible to do so, without incurring any obligations to make changes, or additions, to the equipment sold previously.

SPECIFICATIONS

GENERAL

Over-all width		8' 3½"
Over-all height		4' 1½"
Over-all length	bale chute up	15'
	bale chute down	17' 9"
Wheel tread		7' 7½"
Weight		Approximately 2474 lbs.
Wheel bearing		Tapered roller
Tongue offset		19"

Tire Sizes

Right	5.00 x 15, 4 ply - 28# pressure
Left	6.40 x 15, 6 ply - 44# pressure
Pick-up (optional)	3.00 x 12 - semi-pneumatic
Left hand dual (optional)	Recommended 5.00 x 15
Right hand dual (optional)	Recommended 5.00 x 15

Bale Chamber

Size	14" x 18"
Bale length	Adjustable 12" to 52"

Feeding System

Drive	Telescoping linkage to plunger
Protection	Spring loaded
Tines	6 spring loaded aluminum fingers
Feed opening	266 square inches
Drive bearings	Sealed ball and tapered roller

Knotter

Protection	Shear bolt
Tying	Twine

Plunger

Speed	65 to 75 strokes per minute
Stroke	30"
Rollers	7 sealed ball bearings (5 vertical, 2 horizontal
Safety latch	Contacts crank arm
Crank pin	Sealed ball bearing
Plunger pin	Sleeve bearing with seals

Main Drive

Flywheel diameter	22"
Power	2 - 3 plow tractor
P.T.O.	2 joint A.S.A.E. standard
Protection	Shear bolt, overrunning and slip clutch
Gearbox	Alloy steel gears running in oil

Pick-up

Width (including 5½" flare)	61½"	
Pick-up drive	V-belt	
Protection	Belt acts as clutch on driven sheave	
Reel diameter	12"	
Drive and driven bearings	Sealed ball	
	Standard	Supersweep
Number of tooth bars	4	6
Number of teeth	48	120
Tooth spacing	4⅜"	2⅝"
Tooth bar bearings	Self-lubricating	Sealed ball

OPTIONAL EQUIPMENT

Bale Counter
Jack
Left Hand Dual Wheel
Super Sweep Pick-up
Model 53 P.T.O. Bale Thrower
Pick-up Guide Wheel
Hydraformatic Bale Tension Control
Wagon Hitch & Loading Chute
Right Hand Dual Wheel
Model 226 Pickup Attachment

GOOD BALING
REQUIRES GOOD TWINE

CONTENTS

BEFORE USING YOUR BALER

1. Read the operating instructions carefully.
2. Check all bolts and nuts to be sure they are tight.
3. Check all belts and chains to be sure they are properly aligned and adjusted.
4. Check tire pressures.
5. Lubricate the baler carefully. In general, lubrication every 1,000 bales should be sufficient.

SAFETY PRECAUTIONS

MOST FARM IMPLEMENT ACCIDENTS CAN BE AVOIDED BY THE OBSERVANCE OF A FEW SIMPLE SAFETY PRECAUTIONS.

1. **DON'T CLEAN, LUBRICATE, OR MAKE ANY ADJUSTMENTS ON THE BALER WHILE IT IS IN MOTION.**
2. **DON'T ENGAGE THE CLUTCH UNTIL YOU ARE CERTAIN THAT EVERYONE IS CLEAR OF THE MACHINE AND HAVE MADE SURE THAT NO TOOLS ARE LYING ON THE MACHINE.**
3. **DON'T WORK AROUND THE BALER IN LOOSE CLOTHING THAT MIGHT CATCH IN ANY OF THE MOVING PARTS.**
4. **DON'T ATTEMPT TO PULL LOOSE HAY FROM ANY PART OF THE BALER WHILE IT IS IN OPERATION.**

SAFETY FEATURES ADJUSTMENT AND MAINTENANCE

P.T.O. DRIVE SLIP CLUTCH

The P.T.O. drive slip clutch, Figure 1, acts in conjunction with the flywheel shear bolt to protect the main drive parts of the baler and cushions against shock from engaging the tractor P.T.O. suddenly. To check clutch action, place a wrench on the baler P.T.O. shaft and lock the flywheel or the plunger. If the clutch is operating properly, a force of 100 lbs. applied on the handle of the wrench at point 24" from the center of the P.T.O. shaft should cause the clutch to slip.

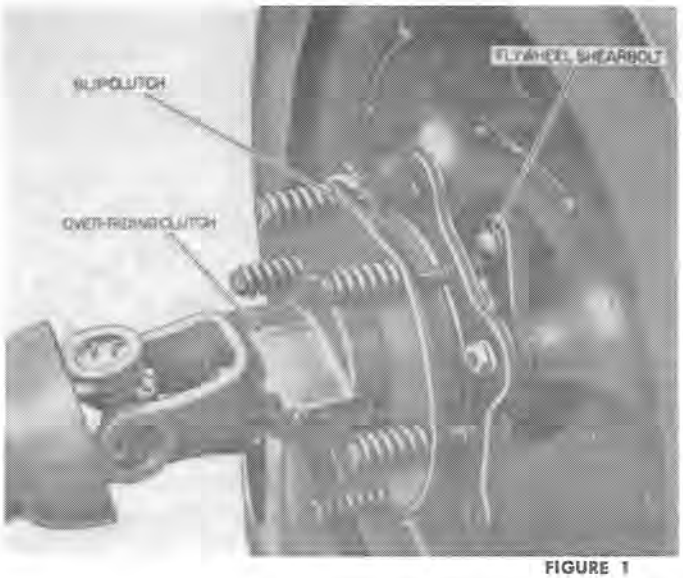


FIGURE 1

When the clutch requires re-adjustment, tighten each tension bolt a fraction of a turn to increase the pressure on the discs.

CAUTION: NEVER ADJUST THE TENSION BOLTS SO THAT THE SPRINGS ARE FULLY COMPRESSED AND BOTTOM OUT. KEEP THE CLUTCH DISCS FREE FROM GREASE AND OIL.

FLYWHEEL SHEAR BOLT

The flywheel shear bolt, see Figure 1, protects the gear box, plunger and related parts from damage. It is a special 5/16" x 2" bolt supplied with the machine. CAUTION: DO NOT USE ANY OTHER BOLT AS A FLYWHEEL SHEAR BOLT. The use of any bolt other than that specified may result in damage to the baler. Additional bolts are available from any authorized New Holland dealer.

Keep shear bolt tight at all times.

NEEDLE SAFETY LATCH

The needles are protected against breakage by a needle safety latch which moves in front of the crank arm when the needles enter the bale chamber, see Figure 2.

If, for any reason, the needles should remain in the bale chamber when the plunger returns with a new charge of hay, the plunger is stopped by the safety latch and the flywheel shear bolt is sheared.

NOTE: If the needle safety latch is in the "in" position and interferes with the plunger, remove it by pulling the needle yoke to the rearmost position, **not** by pulling the latch out itself.

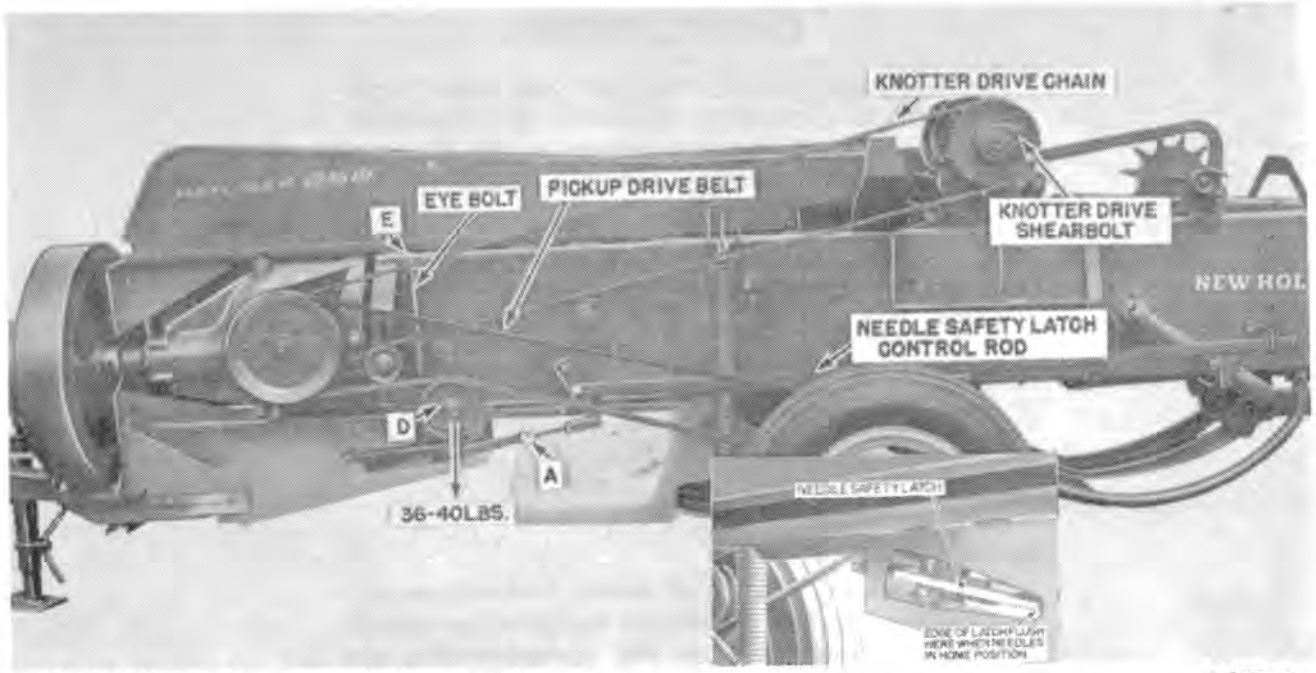


FIGURE 2

CAUTION — **Always pull the needle safety latch out by pulling the needle yoke back to its home position.** Failure to remove the latch in this manner may result in needle breakage.

It is important that the needle safety latch linkage be adjusted to insure that the safety functions properly. When making this adjustment be sure that the needles are in the home position. The latch may then be adjusted by means of nuts A Figure 2 to lengthen or shorten the link so that the end of the latch is flush with the edge of the opening as shown in the inset Figure 2.

After this adjustment is made, trip the knotters and turn the baler through a tying cycle.

As the needles and needle yoke return to their home position, make certain that the needle safety latch is pulled out before the crank strikes it. At this time, the plunger would be moving toward the rear of the machine with a charge of material when actually baling.

DO NOT ATTEMPT TO REMOVE MATERIAL FROM, OR FEED MATERIAL INTO, THE PICK-UP OR FEEDER AREA WHILE THE MACHINE IS RUNNING

PICKUP DRIVE

The pickup drive belt, shown in Figure 2, is designed to act as a slip clutch to protect the pickup and related parts from damage.

For best performance the spring-loaded pickup drive belt idler should be adjusted so that a downward pull of 36 to 40 pounds at D, Figure 2 will move it.

Obtain the proper tension by adjusting nuts E, Figure 2.

KNOTTER DRIVE SHEAR BOLT

The knotter drive shear bolt, Figure 2, protects the knotters, needle yoke and related parts from damage. It is a specially hardened bolt, supplied by your New Holland dealer. **CAUTION — DO NOT ATTEMPT TO USE ANY OTHER BOLT IN THIS LOCATION.**

When and if this bolt shears, determine the cause for shearing, remove it, rotate the flywheel or sprocket until the bolt holes align and install a new shear bolt.

LUBRICATION

The New Holland Hayliner 268 Baler is designed to require a minimum of lubrication. However, regular lubrication is the best insurance against delays and repairs, and greatly increases the life of the machine.

Under normal conditions, the baler should be lubricated after every 1000 bales of operation.

Following is a list of points that require lubrication, with a reference number that identifies each location on the corresponding pictures.

All points except those with special notations should be lubricated until grease is forced out around bearings and then excess grease should be wiped off.

1 & 2. Figure 3. Front and rear universal. Lubricate the universal joints of the P.T.O. drive carefully with one or two pumps of a hand gun twice a week. **Caution, excessive lubrication may damage the grease seals.**

3. Figure 3. Telescoping shaft, — two zerks located 180° apart.

4 & 5. Figure 3 — Overrunning clutch pins. Oil sparingly with light oil.

6. Figure 3. Jack (optional).

FIGURE 3

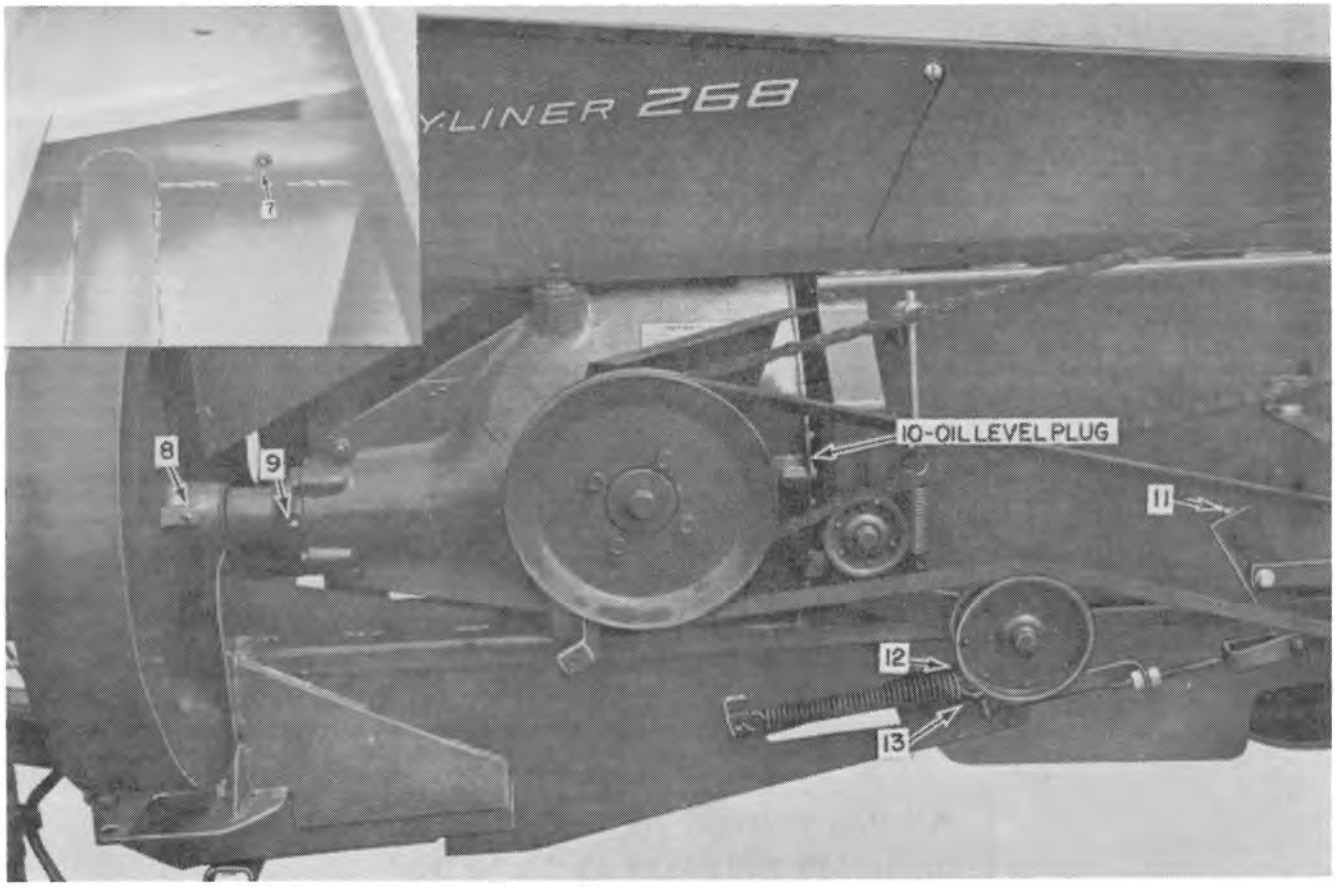


FIGURE 4

7. Figure 4 — Rear connecting rod.

8. Figure 4 — Flywheel

9. Figure 4 — Flywheel shaft. Do not force, grease only until slight pressure can be detected.

10. Figure 4 — Gearbox. Check oil level every 5000 bales. Fill to level plug with a good grade hypoid lubricant, SAE No. 90.

11. Figure 4 — Needle safety latch linkage.

12 & 13. Figure 4 — Needle safety latch.

14. Figure 6 — Pickup pivot arm.
15. Figure 6 — Knotter clutch gear.
16. Figure 6 — Left needle yoke pivot.
17 to 31. Figure 7 — Knotter assembly.

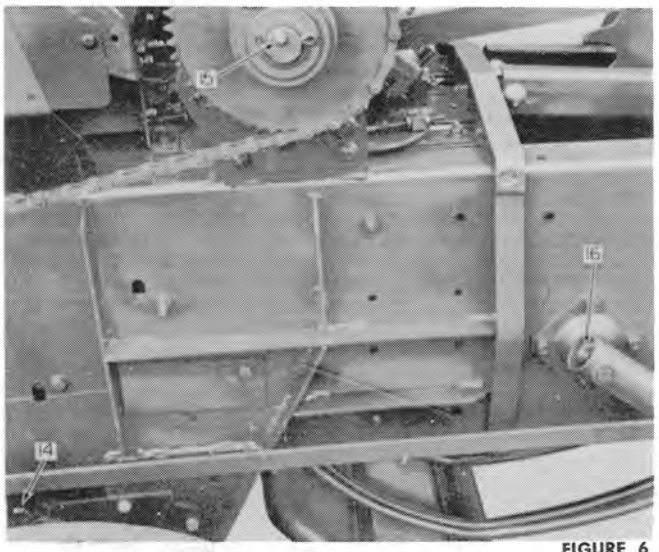
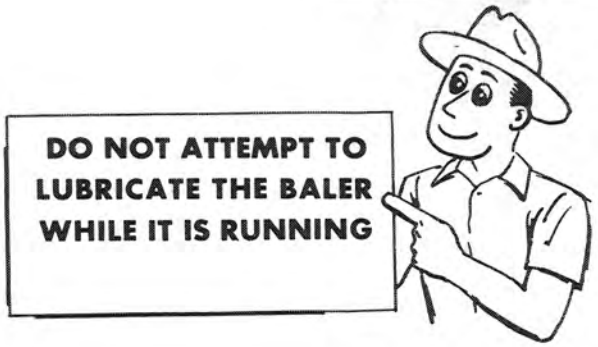


FIGURE 6



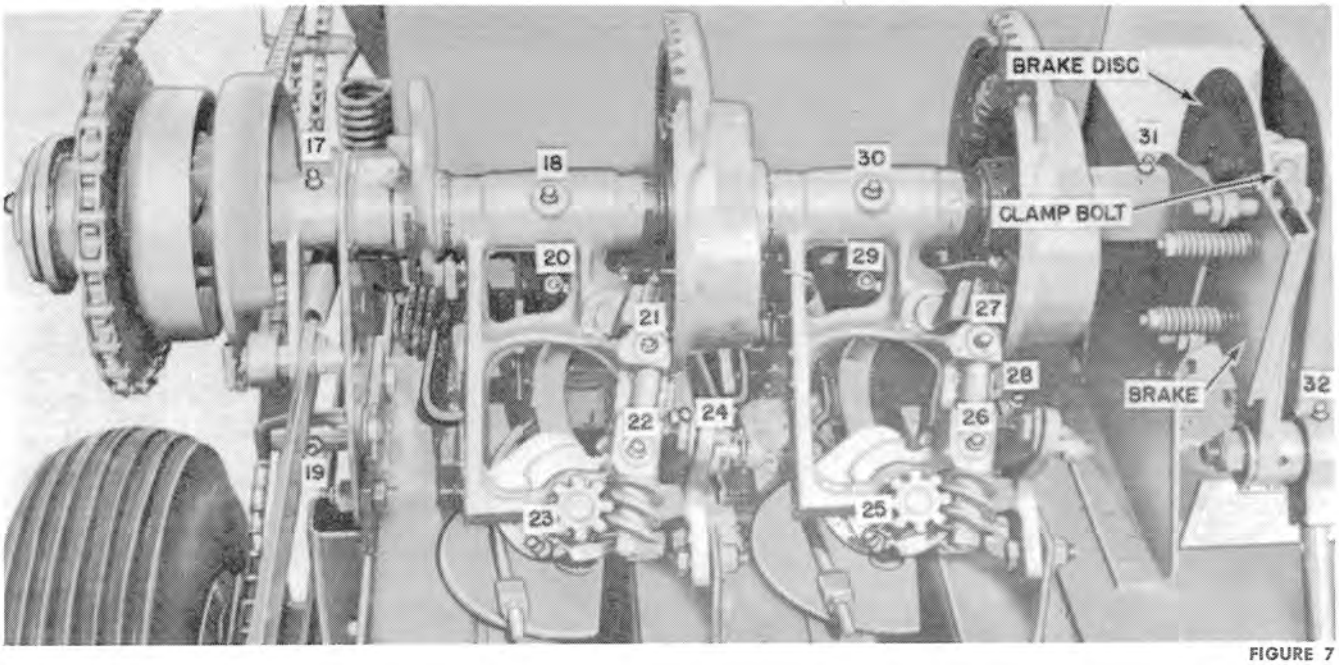


FIGURE 7

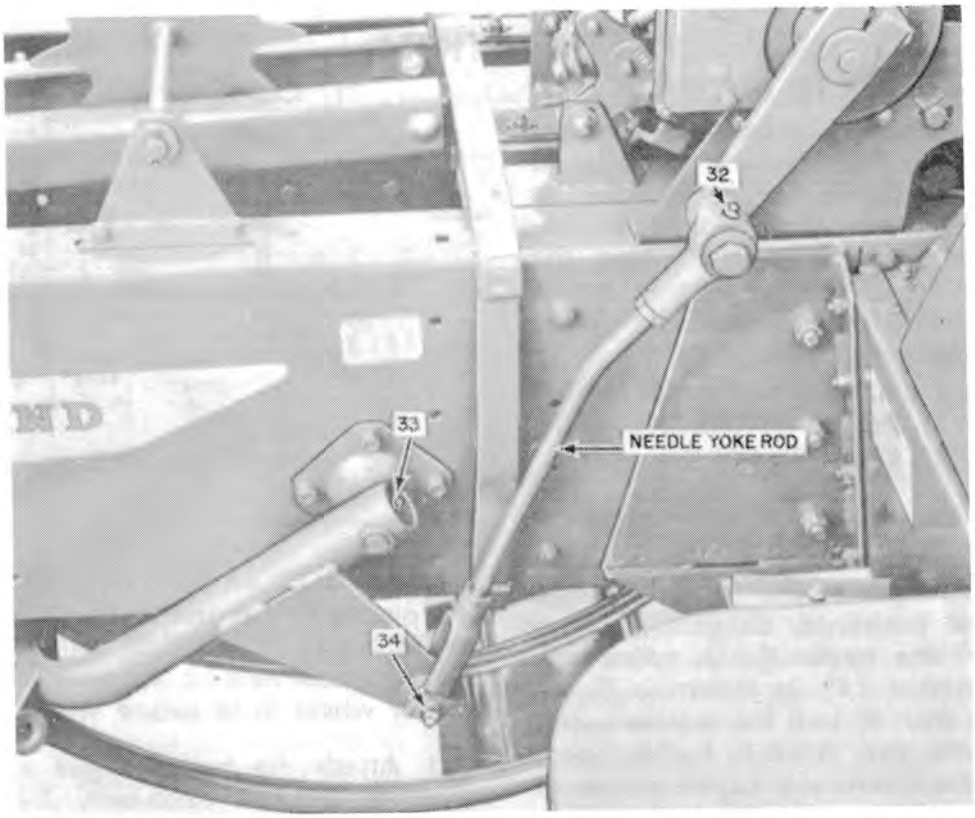


FIGURE 8

32. Figure 8 — Knotter arm.

33. Figure 8 — Right needle yoke pivot.

34. Figure 8 — Drag link pivot pin.

35 to 40. Figure 9 — Feeder tine supports.

41. Figure 10 — Pickup wheel (optional).

42 & 43. Right and left ground wheels. Pack once each season.

Keep the knotter brake disc and brake lining free of grease and oil at all times.

Oil roller chains with light oil or a 50% motor oil and 50% kerosene. In extremely abrasive conditions it may be advisable to run roller chains without oil.

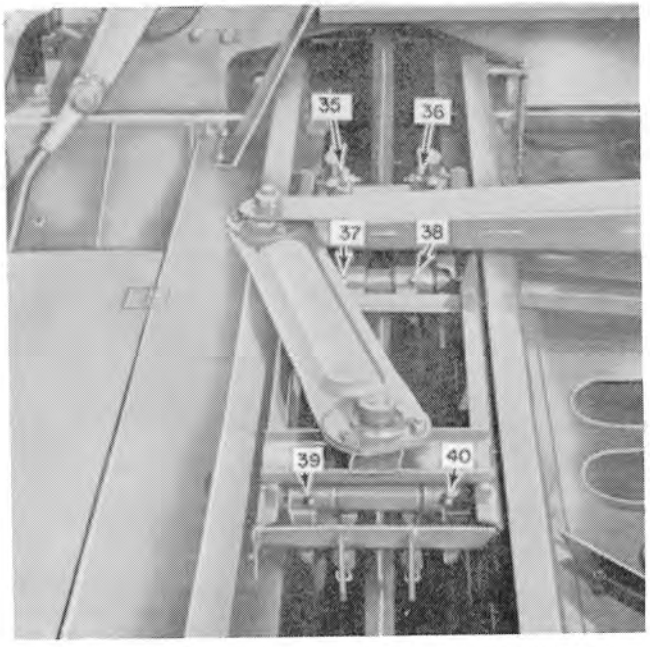


FIGURE 9

FIGURE 10

OPERATION

ATTACHING THE BALER TO THE TRACTOR

The Hayliner 268 P.T.O. baler is designed for use with an A.S.A.E. standard tractor hitch. It is very important that the hitch point be located exactly as specified because an improperly located hitch point will subject the universal joints of the P.T.O. drive to undue stresses which may result in inefficient baler operation or damage to these parts.

CAUTION: NEVER ATTACH THIS BALER TO A 1000 R.P.M. P.T.O. EQUIPPED TRACTOR. USE 540 R.P.M. P.T.O. TRACTORS ONLY.

When attaching the baler to a tractor, these steps should be followed:

1. Adjust the length of the tractor drawbar so that the horizontal distance between the end of the tractor P.T.O. spline and the hitch bolt is 14", as shown in Figure 11, and at least 4" past the outside radius of the tractor tire. A.S.A.E. further specifies that the distance from the center of the P.T.O. spline to the top of the drawbar should be from 6" to 12" — 8" is recommended. The top of the rear end of the drawbar should be from 13" to 17" from the ground. On some tractors, a hitch adapter plate must be used to obtain the correct distance while on others, which are not A.S.A.E. standard, it may be necessary to install a P.T.O. conversion kit.

2. Use stop bolts to secure the drawbar in a stationary position directly under the tractor P.T.O. spline. NEVER ALLOW THE DRAW-BAR TO SWING FROM SIDE TO SIDE and be sure it is pinned so that THE HITCH POINT IS DIRECTLY BENEATH THE POWER DRIVE LINE. If the tractor wheel runs on the windrow, move the tractor wheel in to secure windrow clearance.

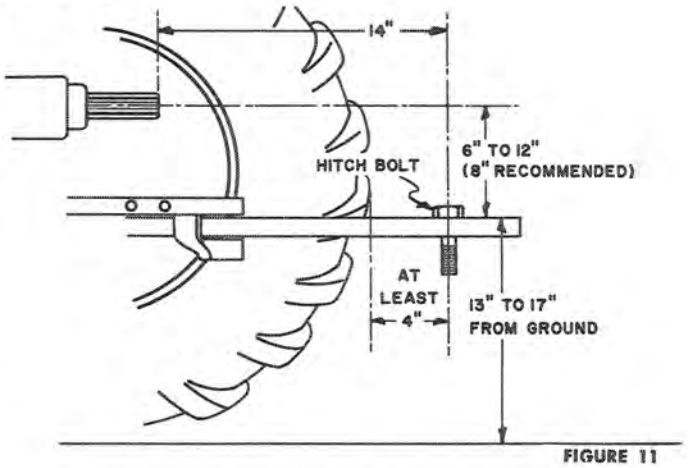


FIGURE 11

3. Attach the baler tongue to the tractor drawbar with a ¾" hitch bolt. INSTALL A JAM NUT OR A COTTER PIN TO PREVENT THE HITCH BOLT FROM BEING LOST.

4. Adjust the baler hitch bracket up or down as required so that the bale chamber is level. See Figure 12.

5. Swing the jack up. Block the front of the right hand ground wheel, pull the tongue latch pin rope, and carefully drive forward until the tongue swings into baling position, as shown in Figure 12.

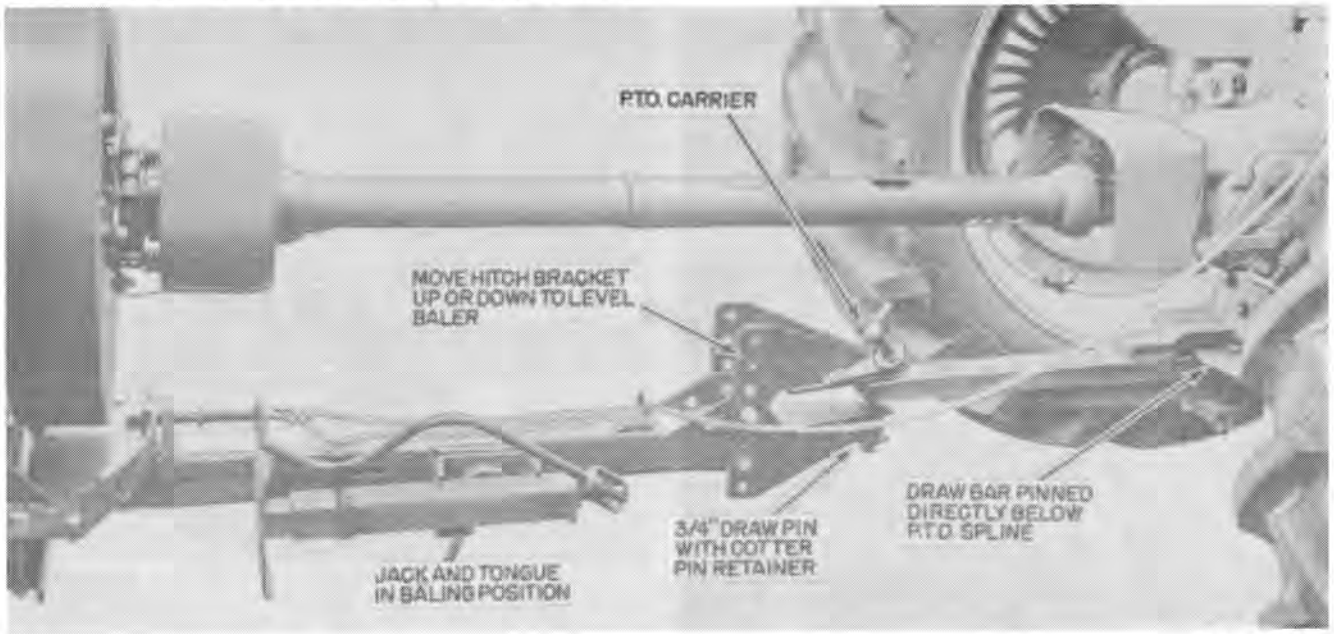


FIGURE 12

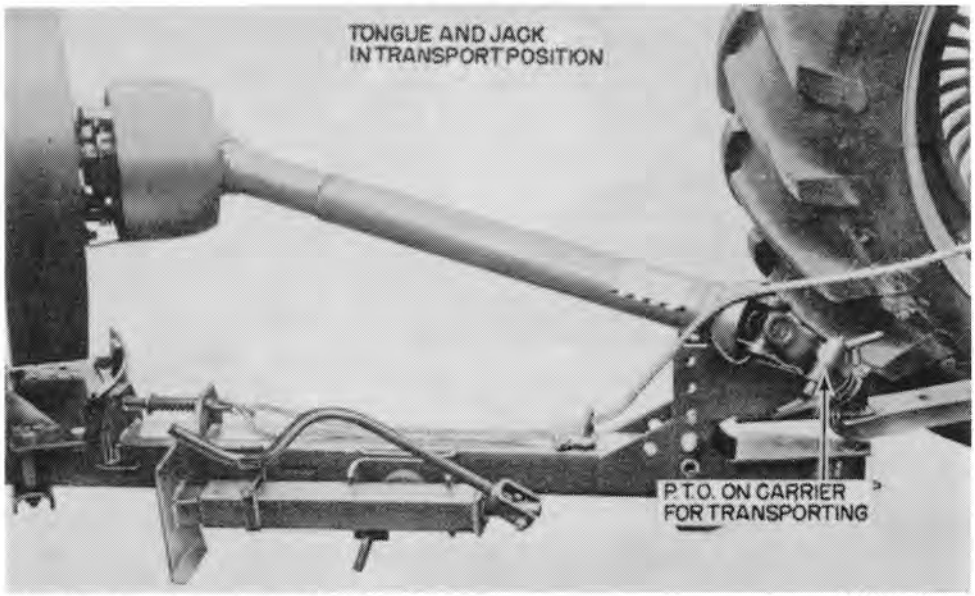


FIGURE 13

6. Remove the front yoke of the P.T.O. shaft from the P.T.O. carrier and attach it to the tractor spline. On any tractor having a spline other than standard 1⅜" it is necessary to use a spline adapter.

Avoid extremely short turns when the baler is operating. Stop the P.T.O. when turning sharply to reduce wear on the universal joints.

TRANSPORTING THE BALER

Remove the front yoke of the P.T.O. shaft from the tractor spline and install it on the P.T.O. carrier. BE SURE IT IS LOCKED SECURELY. See Figure 13.

Block the rear of the right hand ground wheel, pull the tongue latch pin rope and carefully back up until the tongue swings into transport position, as shown in Figure 13.

CAUTION: ALWAYS INSTALL THE FRONT YOKE OF THE P.T.O. SHAFT ON THE P.T.O. CARRIER BEFORE SWINGING THE TONGUE INTO THE TRANSPORT POSITION.

THREADING THE BALER

Place four balls of twine in the twine box. Tie the two left and right hand balls together as shown in Figure 14.

Thread twine from the left center ball through Point A, Figure 14, and from the right center ball through Points B, C, and D on the twine box lid. The twines then go through the eyes of the tension clip E and through the twine guide F on the needle yoke, as shown in Figure 14.

FIGURE 14

FIGURE 15

From the twine guide F, the twine goes under the needle guard and is separated to go through the twine guides G and H, Figure 15. The twines then go through the eyes of the needles and are tied to the chamber brace as shown in Figure 15.

At this point, it is advisable to feed material into the baler until the bale chamber is full and the metering wheel strips the knotters.

When the knotters rotate, the needles will deliver the twine into the knotters and automatically thread them.

Remove the section of twine that was tied fast to the brace.

BALE WEIGHT

The density of the material in the bale, and consequently the bale weight, is determined by the amount of tension applied to the tension rail by the bale tension handle, see Figure 16. Turning the handle clockwise increases the tension and consequently the weight of the bale being formed. Turning the handles counter clockwise decreases the tension and the bale weight. Experience will teach the operator the correct adjustment he needs to provide the desired bale weight in his individual baling conditions. **CAUTION: ATTEMPTING TO BALE TOO TIGHT MAY CAUSE TYING DIFFICULTIES.**

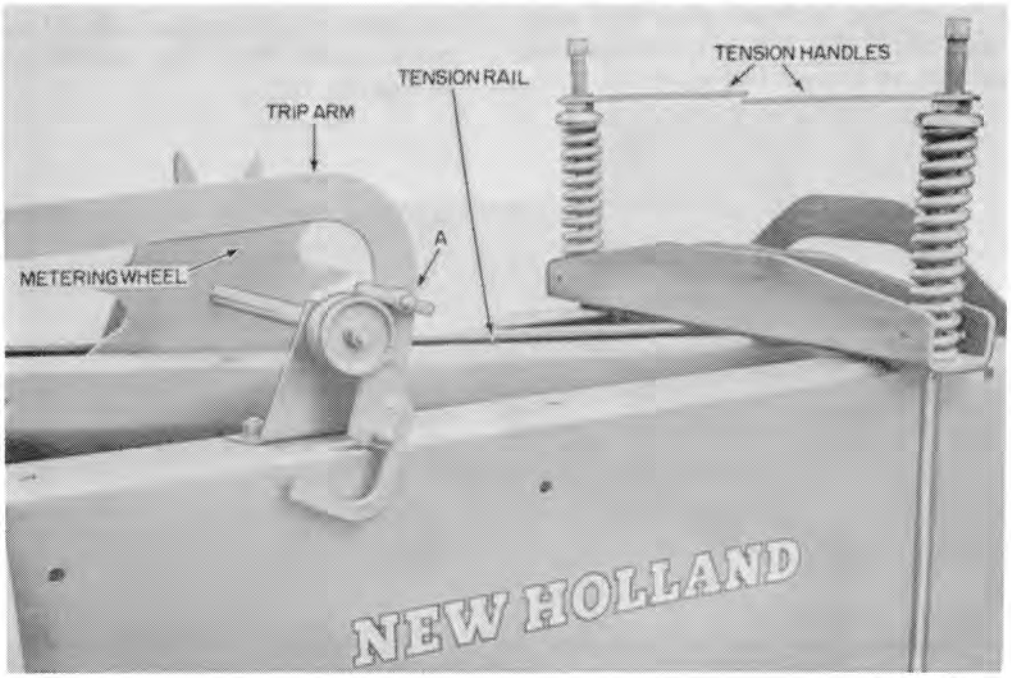


FIGURE 16

When starting to bale with a new baler, release the bale tension for the first few bales until the paint is worn off the inside of the bale chamber.

Additional bale weight may be desirable in extremely dry fluffy materials such as straw. This can be obtained by installing the extra hay wedges supplied with the baler, in the bale chamber. These wedges should be installed in pairs directly opposite each other in the chamber. **THEY MUST BE INSTALLED WITH THE INCLINED PLANE TOWARD THE FRONT OF THE BALER.**

BALE LENGTH

Bale length is regulated by the metering wheel which is mounted on the bale chamber behind the knotter assembly (Figure 16). As compressed hay passes through the bale chamber, the metering wheel is turned, the trip arm is raised and the knotter is automatically tripped.

The length of the bale can be varied from 12" to 52" simply by moving the set collar A, Figure 16 up or down on the trip arm. The higher the set collar is located on the trip arm the longer the bale will be, and the lower the collar is placed, the shorter the bale will be.

WINDROW PREPARATION

A properly prepared windrow is essential to high-capacity baling and the production of uniform shape and length bales. The windrow should be of medium size and as uniform as possible. The size of the windrow should not exceed that which the baler can pick up and handle efficiently.

ALWAYS MOW, RAKE, AND BALE IN THE SAME DIRECTION.

STARTING THE BALER

After the baler is serviced and correctly attached to the tractor, make sure that all persons and tools are clear of the machine and cautiously engage the tractor P.T.O. Operate the baler slowly for a time without load and gradually increase the plunger speed to 70 strokes per minute.

IMPORTANT: THE BALER IS DESIGNED TO OPERATE AT A MAXIMUM SPEED OF 75 PLUNGER STROKES PER MINUTE. THE THROTTLE RANGE OF TRACTORS HAVING EXCESS P.T.O. SPEED SHOULD BE LIMITED TO PREVENT POSSIBLE DAMAGE TO THE MACHINE.

Note: In some conditions the baler can be operated to best advantage at speeds **less** than 70 plunger strokes per minute.

TYING

The knotters are adjusted at the factory and should need little or no further adjustment. If, however, either knotter should miss tying a few bales when first starting to bale do not tamper with it. Allow the knotter a brief "break-in" period so that the action of the twine on the knotter parts will smooth any roughness produced by painting.

Experience has shown that a large percentage of knotter difficulties is the result of baling with excessive bale tension. **Therefore, before making any knotter adjustments be certain that excessive bale tension is not the cause of the knotter difficulty.** It is advisable also to check the adjustment of the needles and the twine fingers before making any knotter adjustments.

Do not attempt to regulate the size or density of the bales with the tension on the twine, or by adjusting the knotter springs.

Should it become apparent that the tying difficulty is not due to paint or rough edges on the knotter or the bale chamber, but rather to maladjustment, study the section on knotter adjustment carefully before attempting to correct the difficulty.

BALER ADJUSTMENTS

WIND GUARD

The wind guard is designed to hold material firmly on the pickup teeth for positive feeding. The spring, Figure 17, controls the pressure the wind guards exert on material being fed into the baler. To increase or decrease the pressure, remove the cotter pin securing the spring holder. Rotate the holder in the desired direction and insert the cotter pin through the slot in the spring holder and wind guard assembly.

The stops, shown in Figure 17, limit the travel of the wind guard fingers. These stops may be moved in the slots when necessary.

PICKUP GUIDE WHEEL (OPTIONAL)

The optional pickup guide wheel is designed to prevent the pickup teeth and guards from striking the ground.

The pickup wheel bracket can be adjusted by moving the bolt shown in Figure 17 to any one of the four positions. For normal conditions it should be adjusted so that the pickup teeth clear the ground by about one inch.

PICKUP LIFT SPRING

The pickup lift spring, Figure 18, carries most of the weight of the pickup and provides a floating action. It should be adjusted by nuts B until there is approximately 20 to 25 pounds weight at A, Figure 17, or on the pickup wheel.

FIGURE 18

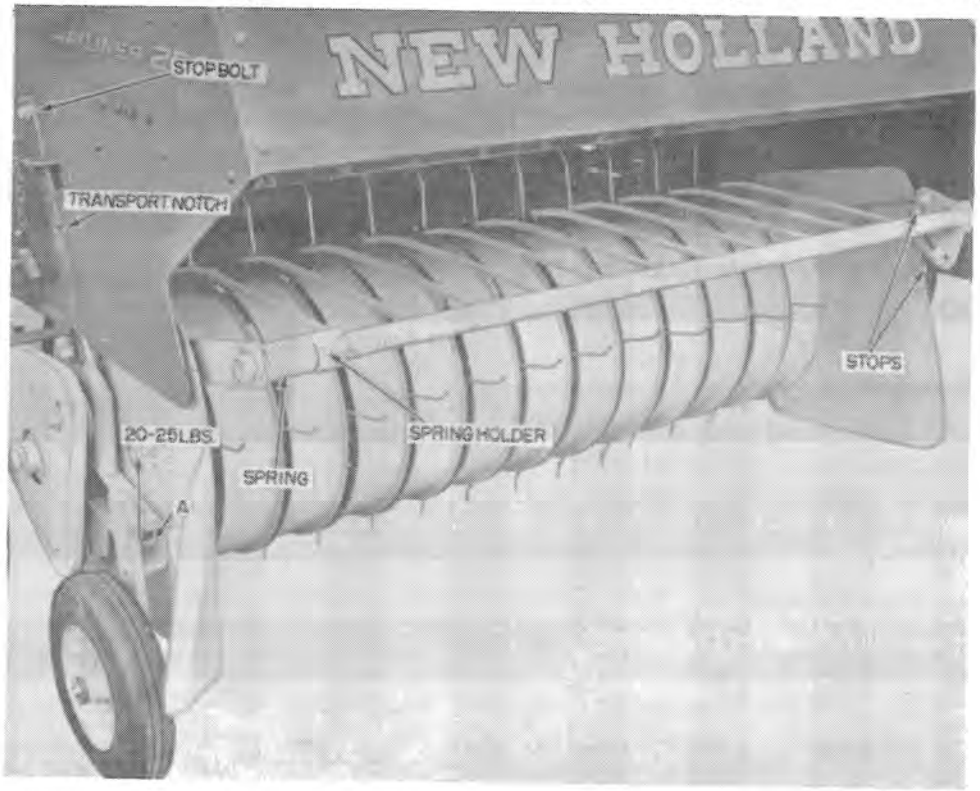


FIGURE 17

The stop bolt in the lift strap, Figure 17, may be located to obtain desired pickup ground clearance, if the optional pickup wheel is not used.

FEEDER CARRIAGE DRIVE

The feeder system is driven directly from the front end of the plunger through a linkage as shown in Figure 19. This positive connection eliminates the need for timing the feeder carriage to the plunger.

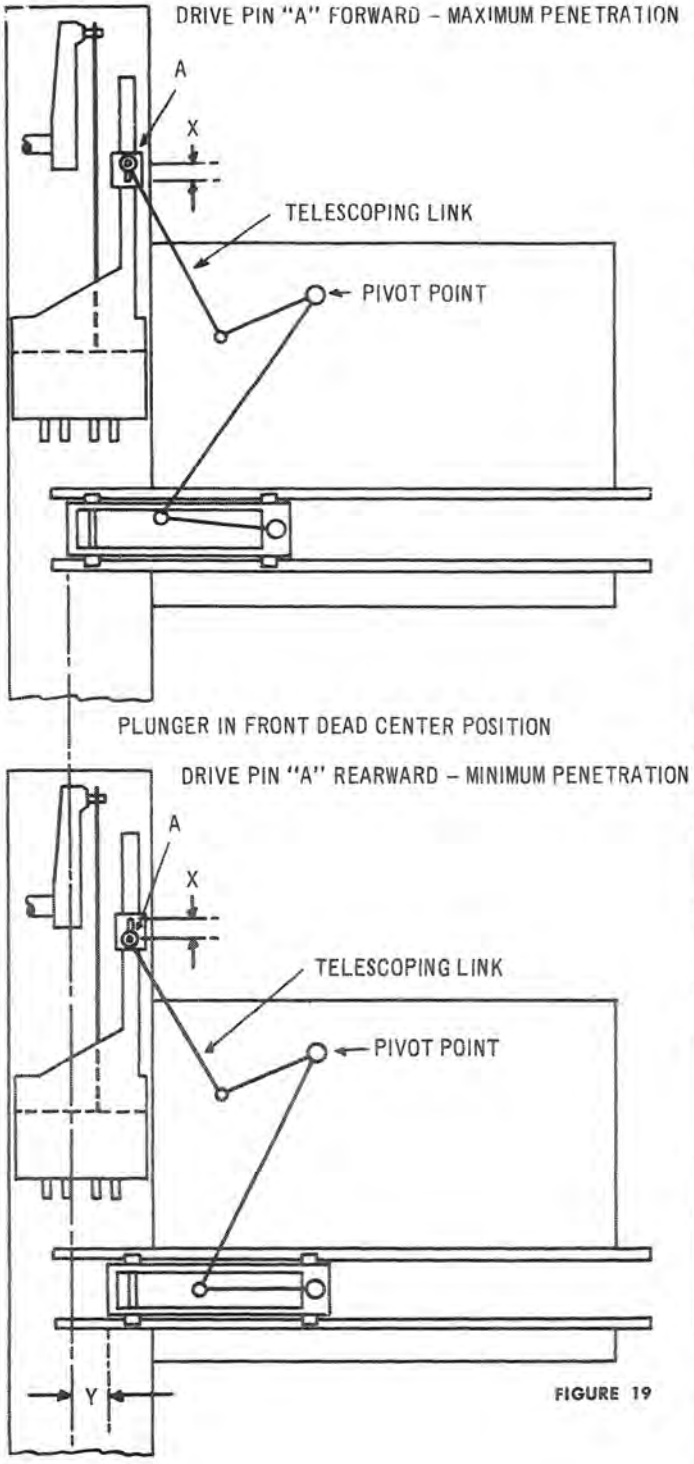


FIGURE 19

In varying crop conditions optimum bale shape may be obtained by loosening nut A, Figure 21, and moving the feeder drive pin forward or rearward (distance X) by means of the adjusting nut B.

The telescoping link provides overload protection and a measuring device. It will protect the feeder system from damage when wads of material are fed into the baler. Continuous overfeeding of the baler will cause this link to telescope, resulting in bales with insufficient material on the left hand side of the bale.

BALE SHAPE — Feeder Carriage Penetration

Adjustment in the feeder system is provided for uniform distribution of each charge of material in front of the plunger face. This adjustment varies the penetration of the feeder carriage into the bale chamber without changing the amount of material picked up in the feeder.

When more material in the left side of the bale is required, move the drive pin forward as required to increase the feeder penetration. See Figure 19.

When less material is required in the left side of the bale, move the drive pin rearward as required to decrease the feeder penetration. See Figure 19.

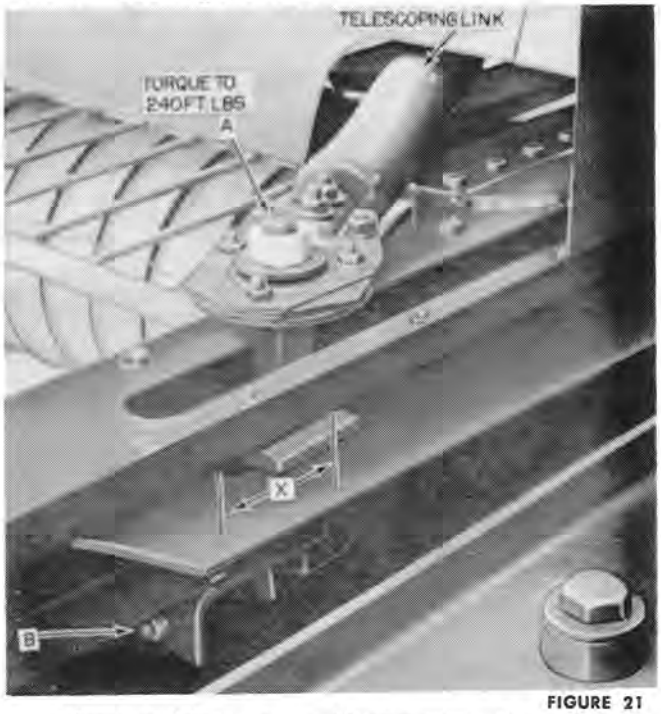


FIGURE 21

After making any adjustments, be sure to tighten NUT A, FIGURE 21, TO 240 FOOT POUNDS TORQUE. Also, the baler should be rotated through one complete cycle to be certain that the tines do not strike at any point.

In some crop conditions, more aggressive feeding action may be desirable. This can be obtained by lowering the left feeder tines in the holders so that the fingers will bite deeper into the material. See Figure 22.

BALE SHAPE — Adjustable Feeder Back

The position of the feeder back is adjustable in relationship to the feeder carriage. To change the position of the feeder back loosen the three bolts A, Figure 21A, at right hand end and the three bolts B at the left hand end and move the feeder back in or out as required.

Under normal baling conditions the baler should be operated with the feeder back all the way out as shown in Figure 21A. When conditions arise where there is insufficient material in the side of the bale and where half slices appear in the bale move the feeder back inward as shown in Figure 21B until the bales straighten out and any half slices disappear.

The feeder back should be moved forward in increments of approximately one inch and the bales should be checked after each adjustment. By following this procedure the baler will not be operated with the feeder adjusted inward any farther than is necessary. Figure 21B shows the feeder moved all the way in. Some of the crops in which it is often necessary to adjust the feeder back inward are coastal bermuda, cane, sudex and oats hay. In general, it is a good practice to attempt to correct bale shape by first adjusting the feeder carriage penetration. If bale shape cannot be corrected by feeder carriage penetration adjustment then the feeder back should be moved in as described above.

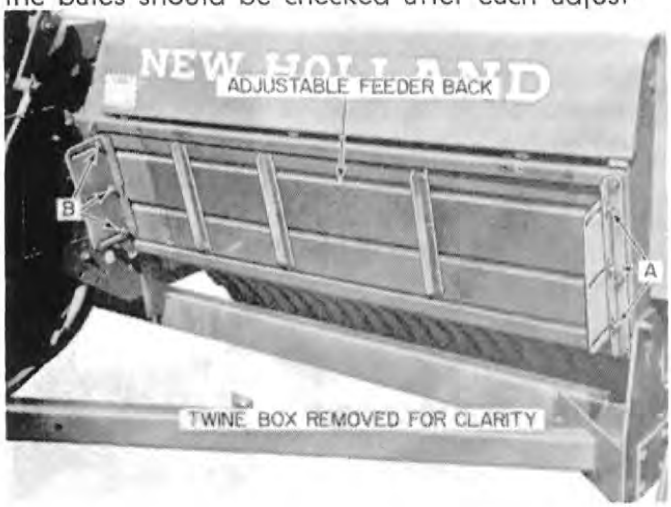


FIGURE 21A

FIGURE 21B

Always adjust the feeder back out when baling crops such as alfalfa, which do not as a rule present a bale shape problem. In crops such as these the capacity of the baler could be restricted if the feeder back is adjusted inward.

FEEDER CARRIAGE ADJUSTMENT

The stop for the feed lever, shown in Figure 22, is adjustable. It should be set so that when the plunger is on rear dead center there is a clearance of from ¼" to ½" between the rubber bumper on the stop and the feed arm as shown in Figure 22.

FIGURE 22

The lower angles on which the feeder carriage rides are adjustable vertically. They should be adjusted so that there is 1/32" clearance between the top of the rollers and the top angle.

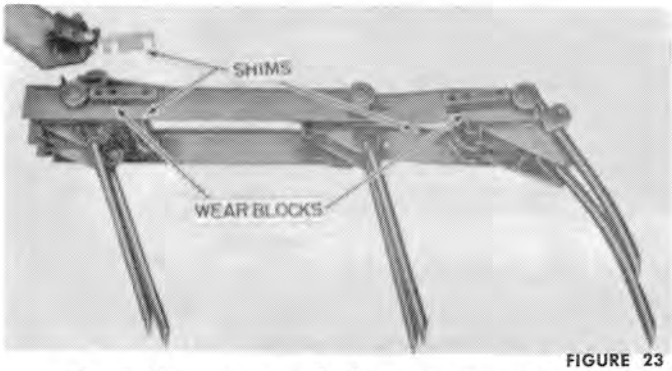


FIGURE 23

Adjust the rear angle by means of bolts A, Figure 22, and the front angle by means of the corresponding bolts.

Side play or clearance between the feeder carriage and the tracks should not exceed ⅛". As wear in the wear block occurs, shims will have to be added between each of the four wear blocks and carriage frame as shown in Figure 23.

PLUNGER BEARING AND KNIFE ADJUSTMENT

Since the plunger on the Hayliner 268 Baler is equipped with sealed antifriction bearings, frequent adjusting of the knives should not be necessary.

When properly adjusted, the distance between the knife mounted on the plunger, as shown in Figure 24, and the stationary knife mounted in the bale chamber, should not be more than 1/32".

Figures 25 and 26 show the plunger removed from the bale chamber.

Bearings 1, 4, and 5, Figure 25 and bearing 6, Figure 26 are not adjustable.

Bearings 2, 3, and 7, Figure 26 are adjustable.

In operation, bearing 6, Figure 26, will roll on top of plunger rail B, Figure 24, and bearing 7 on the right side of plunger rail B, Figure 24.

Both plunger rail B and plunger angle A, Figure 24, are adjustable up and down.

When adjusting the plunger bearings and knives proceed in the following manner. If only knife adjustment needs to be made, this can be done by adjusting bearing 7 as outlined in detail below.

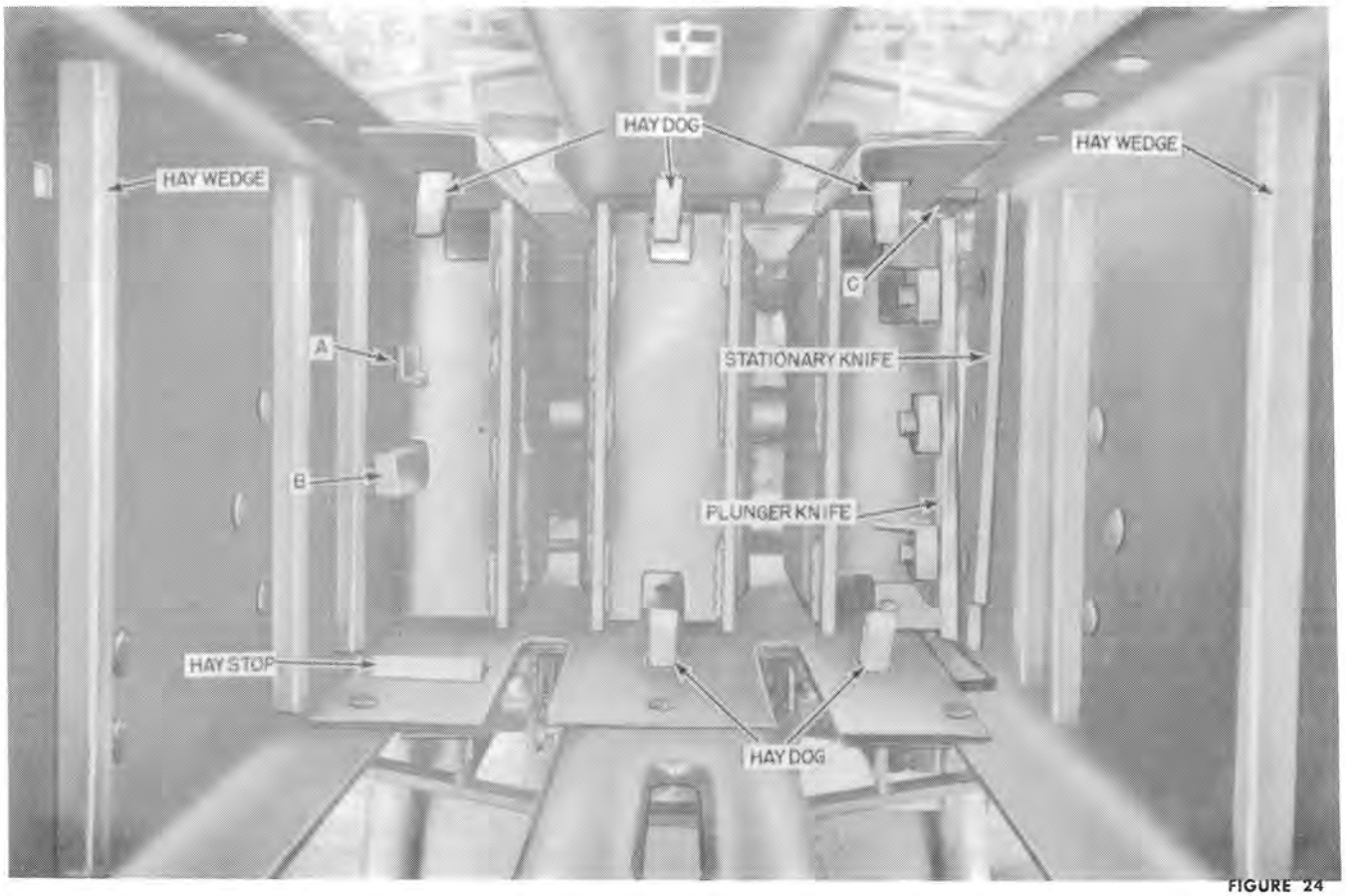


FIGURE 24

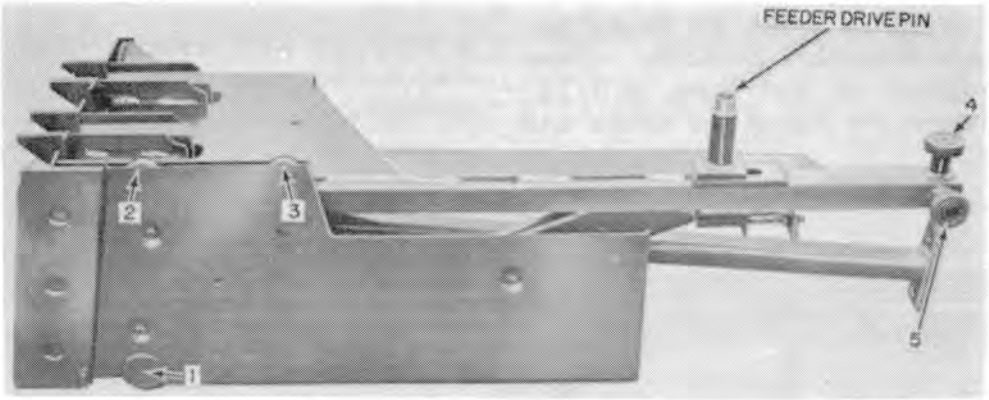


FIGURE 25

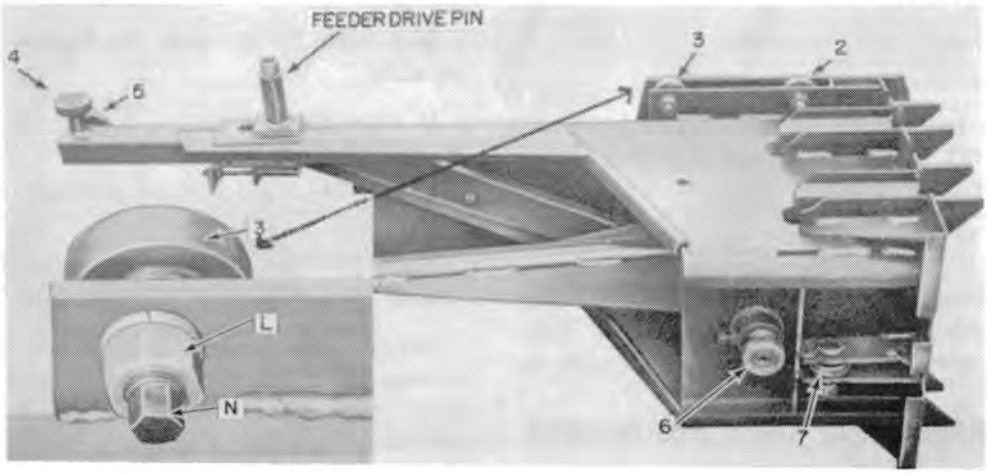


FIGURE 26

While the plunger has been removed from the bale chamber in Figures 25 and 26, the adjustments are made with the plunger installed in the baler.

Turn the flywheel until the plunger knife and stationary knife are directly opposite each other. At this time the knives should be parallel. That is, the distance between the knives should be equal at the top and at the bottom.

If the knives are not parallel, the plunger rail B, Figure 28, should be raised or lowered until they are parallel. This can be accomplished by loosening capscrews B, Figure 27. Slotted holes in the left side of the bale chamber provide for this movement. After the knives are parallel, tighten capscrews B, Figure 27, securely.

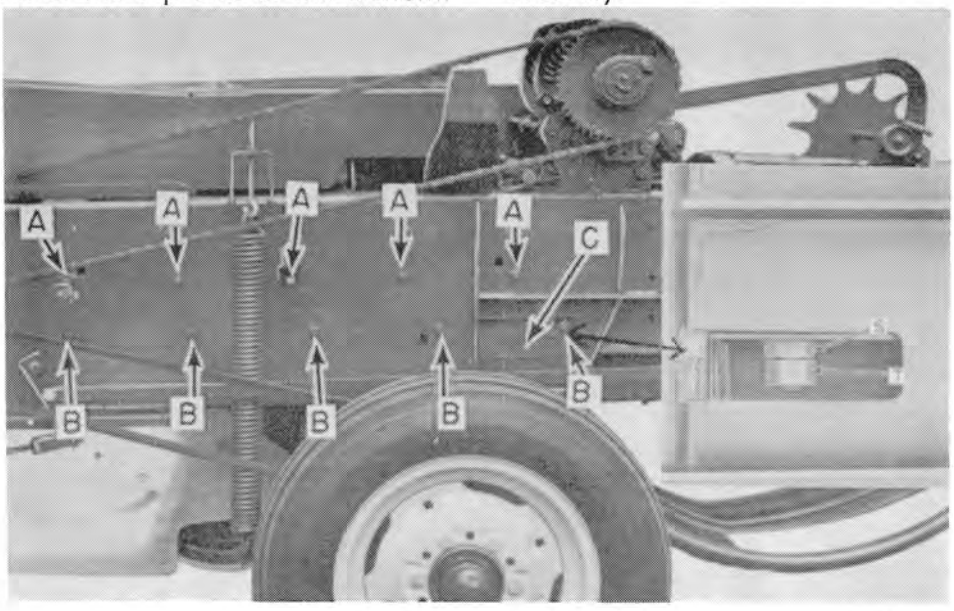


FIGURE 27

Loosen the mounting bolts for plunger angle A, Figure 28, and raise or lower it as required so that there is .020" to .030" clearance between the bottom of the angle and the top of the left hand plunger bearing 6, Figure 26.

Adjust the plunger bearings 2 and 3, Figure 26, until there is .020" to .030" clearance between the top of these bearings and the bottom of plunger slide C, Figure 28.

The knife clearance can now be adjusted using bearing 7, Figure 26. Adjust this bearing so that the clearance between the plunger knife and the stationary knife is not more than 1/32".

The mounting bolt for bearing 7, Figure 21, can be reached through the cover in the bale chamber shown at C, Figure 27.

Plunger bearings 4 and 5, Figure 25, operate in guides D, E, F, and G, Figure 28. Guides D and G are adjustable. They can be moved by loosening bolts D and G respectively, Figure 29. Guides E and F, Figure 28, are not adjustable.

Guide D, Figure 28, should be adjusted so that there is .010" clearance between the guide and the horizontal roller (4, Figure 25) as shown in the inset, Figure 28. After making this adjustment, move the stop at the front end of the guide tight tight against the guide and tighten bolts H, Figure 29, securely.

Adjust guide G, Figure 28, so that there is .010" between guide F, Figure 28, and the top of the vertical roller 5, Figure 25, as shown in the inset, Figure 28.

NOTE: The plunger should be moved through its entire cycle to be sure that the clearances for the plunger bearings are the same throughout the entire cycle of the plunger and that there is no binding at any point.

NEEDLE YOKE ROD

The needle penetration is determined by the clearance at the closest point that the needle yoke comes to the bottom of the bale chamber when the needles are in the bale chamber. Needles have the correct penetration when

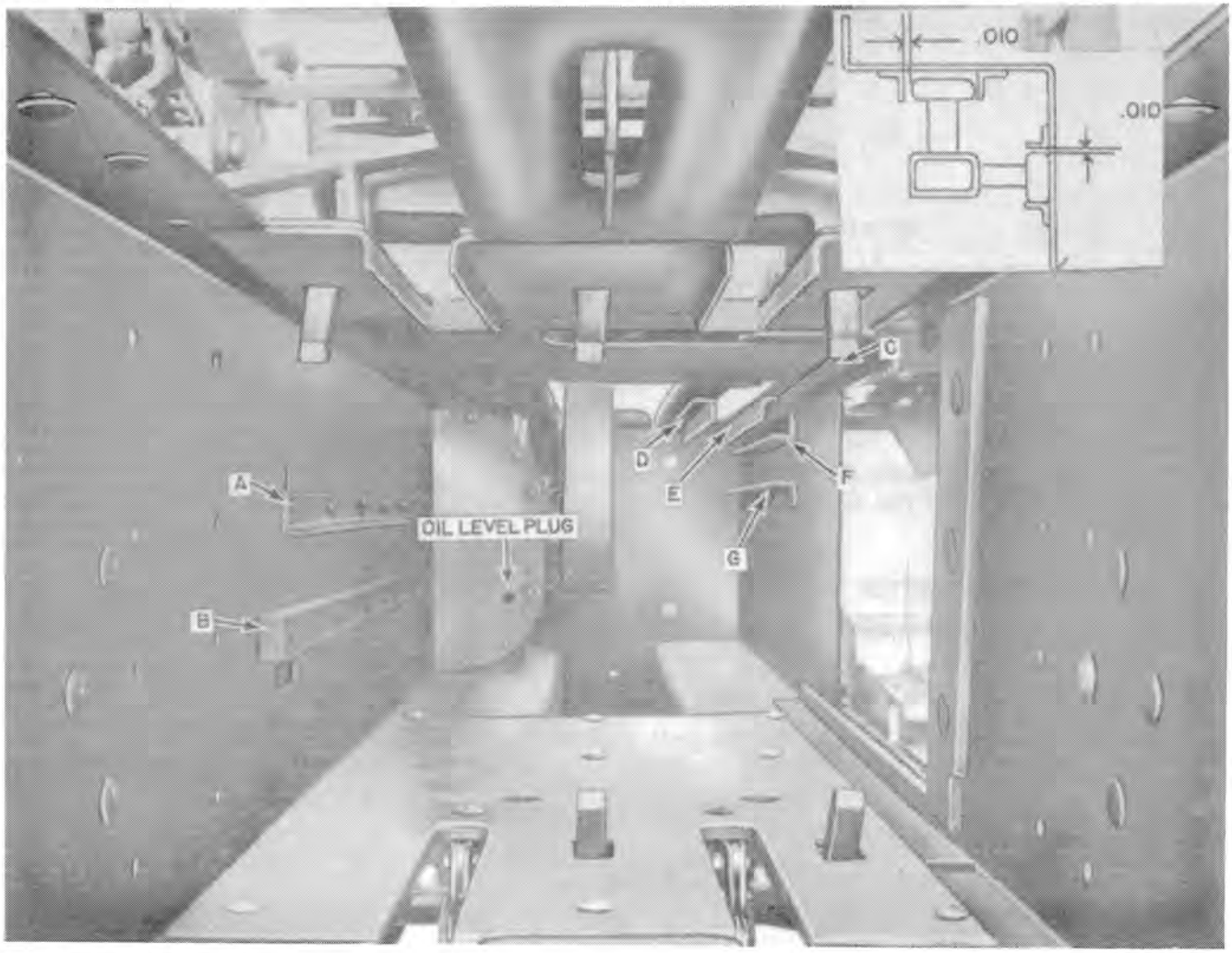


FIGURE 28

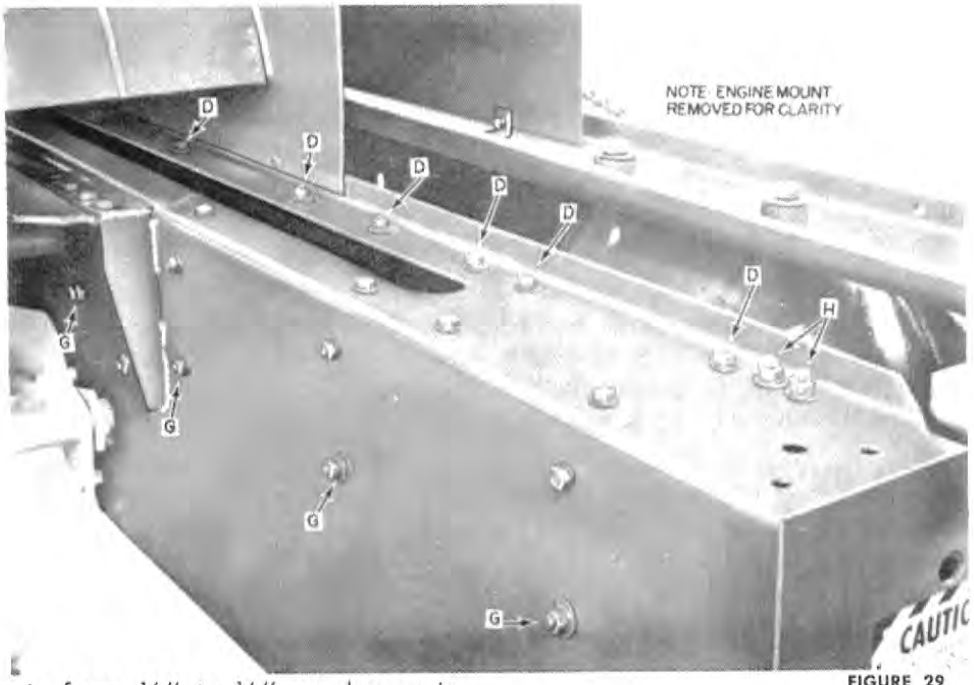


FIGURE 29

this clearance is from ⅛" to ¼" as shown in Figure 29A. Obtain this clearance by adjusting the needle yoke rod, Figure 8.

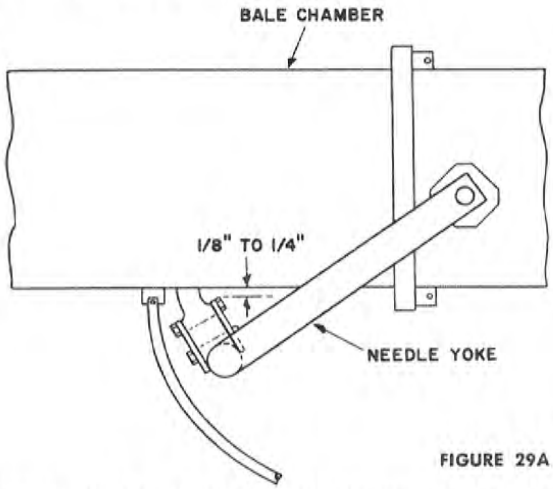


FIGURE 29A

Note: If the needle penetration is changed, the adjustment of the needle safety latch must be checked.

ADJUSTABLE KNOTTER STOP

The adjustable knotter stop should be adjusted as follows:

A. Rotate the knotter assembly until the needle yoke rod is ½" to ¾" past a dead center line as shown in Figure 30A.

B. Place the trip arm in the reset position as shown in Figure 30B.

C. Move the clutch pawl, C Figure 30B, as far forward as possible.

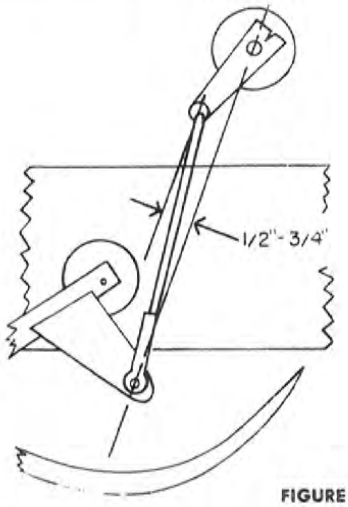


FIGURE 30A

D. Adjust the movable leg of the knotter stop, D Figure 30B, until it is tight against the clutch pawl (horizontally).

E. Place the trip arm in the tripped position as shown in Figure 30C.

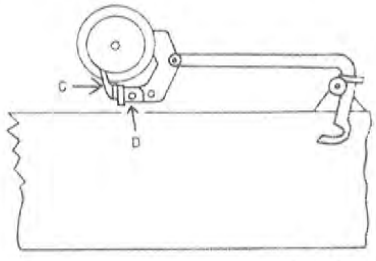


FIGURE 30B

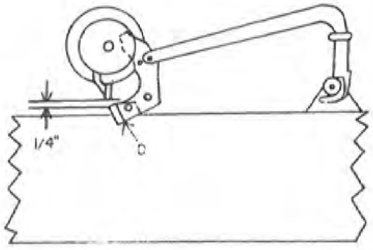


FIGURE 30C

F. Adjust the knotter stop, D Figure 30C, vertically so that there is ¼" clearance between the top of the knotter stop and the bottom edge of the clutch pawl as shown in Figure 30C. Be careful while making this adjustment not to change the horizontal adjustment of the stop.

METERING WHEEL LOCATION

The metering wheel should be located so that when the trip arm is moved to its rearmost position by the cam D on the knotter clutch disc, there is ⅛" clearance between the trip arm and the friction disc, as indicated at point A, Figure 31. This provides clearance so that the trip arm will reset after each knotter cycle and make uniform length bales.

To make this adjustment:

1. Trip the knotter.
2. Rotate the knotter assembly until the trip arm reset cam has moved the trip arm to its rearmost position.
3. Loosen bolts B and C Figure 31.
4. Move the metering wheel bracket to obtain proper clearance at A and retighten.
5. Move the right metering wheel bracket to maintain proper alignment of the metering wheel shaft.

NEEDLE DRIVE TIMING

Needles, when properly "in time" with the plunger, just begin to enter the bale chamber when the tips of the projections on the face of the plunger have passed the points of the needles by ¼" — ¾". See Figure 32.

This can be checked very easily by means of the timing marks provided on the baler. To check, rotate the flywheel until the main crank is in a vertical position between marks A and B as shown in Figure 32A. Be certain that the knotter clutch pawl is tight against the knotter stop, see Figure 33.

At this time the marks at points C and D Figure 33 should align within ¼".

If, for any reason, the needles should require "timing" follow this procedure:

1. Remove the knotter drive chain, Figure 33.

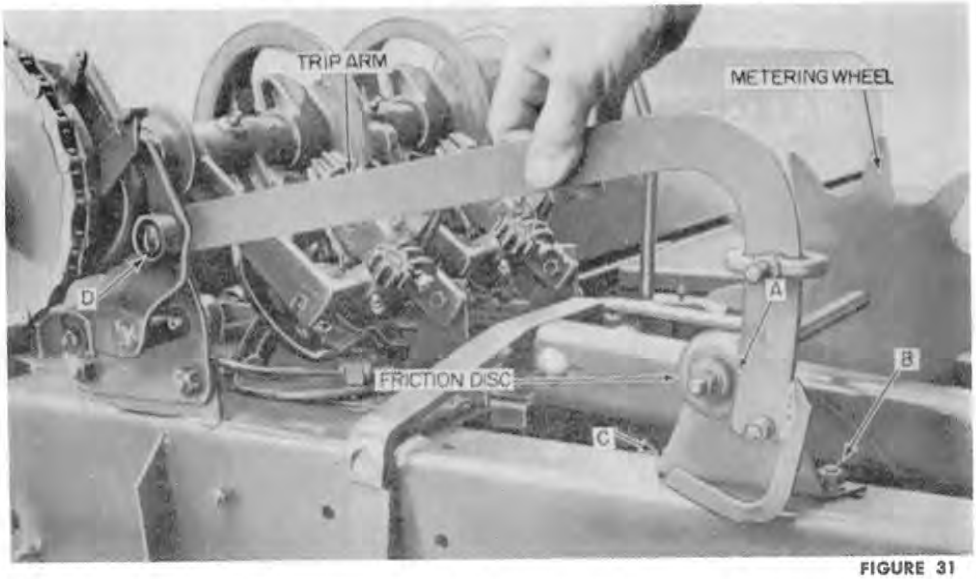


FIGURE 31

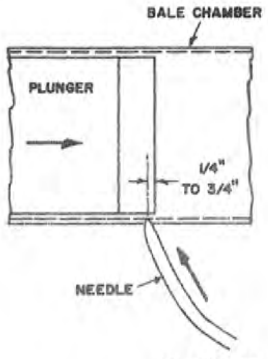


FIGURE 32

FIGURE 32A

2. Turn the flywheel counter-clockwise until the crank is in a vertical position between the timing marks, "A" and "B", Figure 32 on the upper side of the bale chamber.
3. Make certain that the knotter clutch pawl is resting against the knotter stop and remove the backlash in knotter clutch by pulling upward on the needle yoke rod at the point where it is attached to the knotter arm.
4. Turn the knotter clutch gear until the timing marks of the knotter clutch and the knotter clutch disc are directly opposite each other as shown at points C and D, Figure 33.
5. Install the knotter drive chain, position the chain tightener, and tighten the drive chain securely, keeping the timing marks on the knotter clutch gear and the knotter clutch disc directly opposite each other.
6. Trip the knotters and turn them through a complete cycle to make sure that the needles enter the plunger slots at the proper time.

KEEP THE KNOTTER DRIVE CHAIN TIGHT AT ALL TIMES TO MAINTAIN PROPER NEEDLE TIMING.

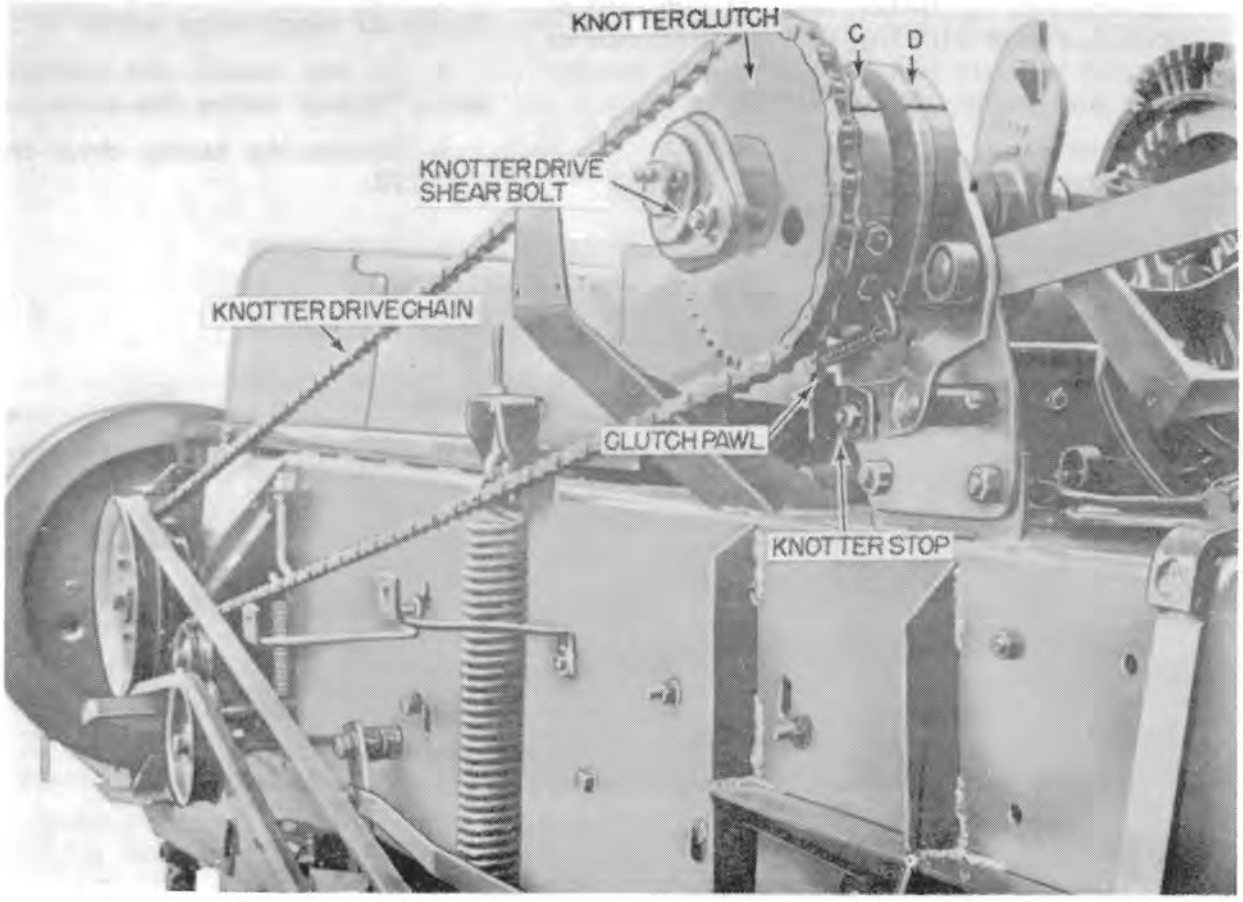


FIGURE 33

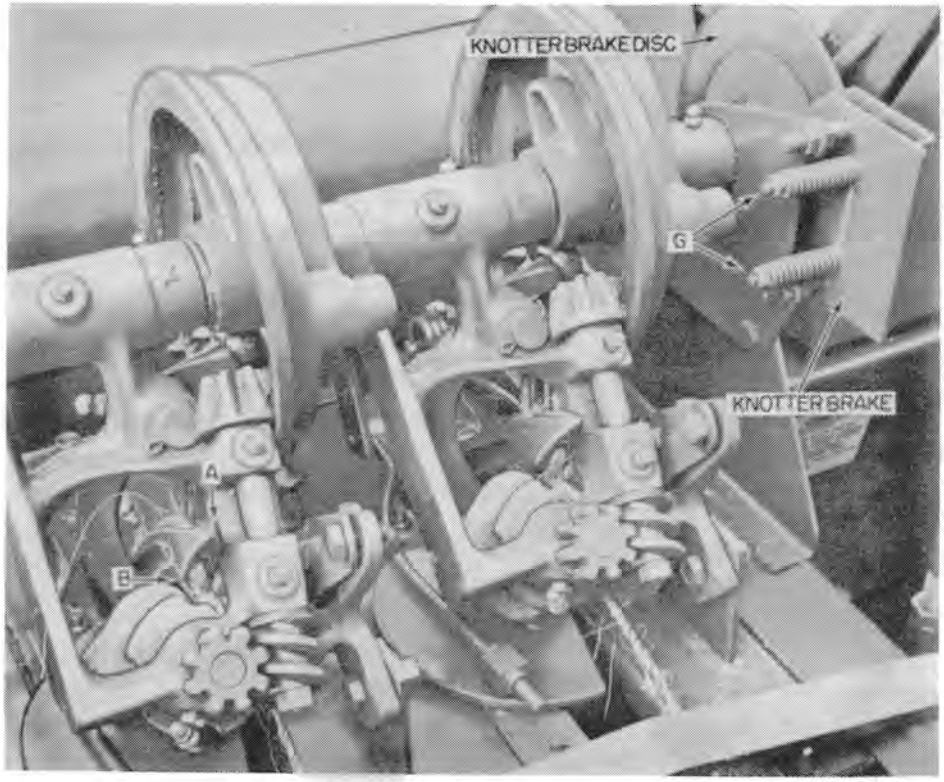


FIGURE 34

KNOTTER BRAKE

The knotter brake, Figure 34, is designed to hold the knotters from drifting out of their home position from the time the knotters are tripped until they are driven by the knotter clutch gear. The spring-loaded brake linings are adjustable at points G, Figure 34. If adjusted too tight, excessive knotter drive shear bolt breakage will result.

CAUTION: NEVER GREASE OR LUBRICATE THIS BRAKE.

If this brake is lubricated or if it becomes too loose, excessive flywheel shear bolt breakage will result due to the knotters rotating slightly and allowing the needle safety latch to enter when it should not.

KNOTTER ADJUSTMENTS

NEEDLES

The needles should be adjusted so that when they deliver the twine to the knotter, they rub lightly against the knotter frame at point A, Figure 34, and clear the twine disc ⅛" at point B, Figure 34.

IMPORTANT: BE SURE THAT THE TWINE DISC CONTAINS TWINE BEFORE ATTEMPTING TO ADJUST THE NEEDLES.

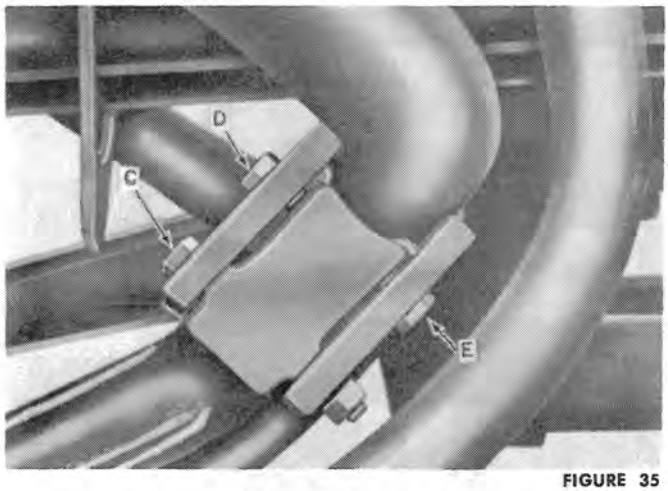


FIGURE 35

Needles are adjusted to rub lightly on the knotter frames by loosening bolt C and cap screws D and E, Figure 35. Move the needle sideways to its proper location and tighten bolts.

Clearance between the needle and twine disc is INCREASED by LOOSENING cap screw E and TIGHTENING cap screw D. This clearance is decreased by loosening cap screw D and tightening cap screw E, Figure 35.

TWINE FINGER

To adjust the twine fingers properly, trip the knotters and rotate until the point of the twine finger is just passing the inner radius of the needle, see Figure 36. At this position, loosen bolts A and B, Figure 36, and move the twine finger forward or back so there is 1/32" clearance at point C, between the tip of the twine finger and the needle.

Rotate the knotters until they are in their home position. Adjust nuts D and E, Figure 37, so that the tip of the twine finger, point C, is even with the edge of the needle slot in the top of the bale chamber.

NOTE: THE NEEDLE AND TWINE FINGER ADJUSTMENTS SHOULD ALWAYS BE MADE IN THE ORDER OUTLINED ABOVE.

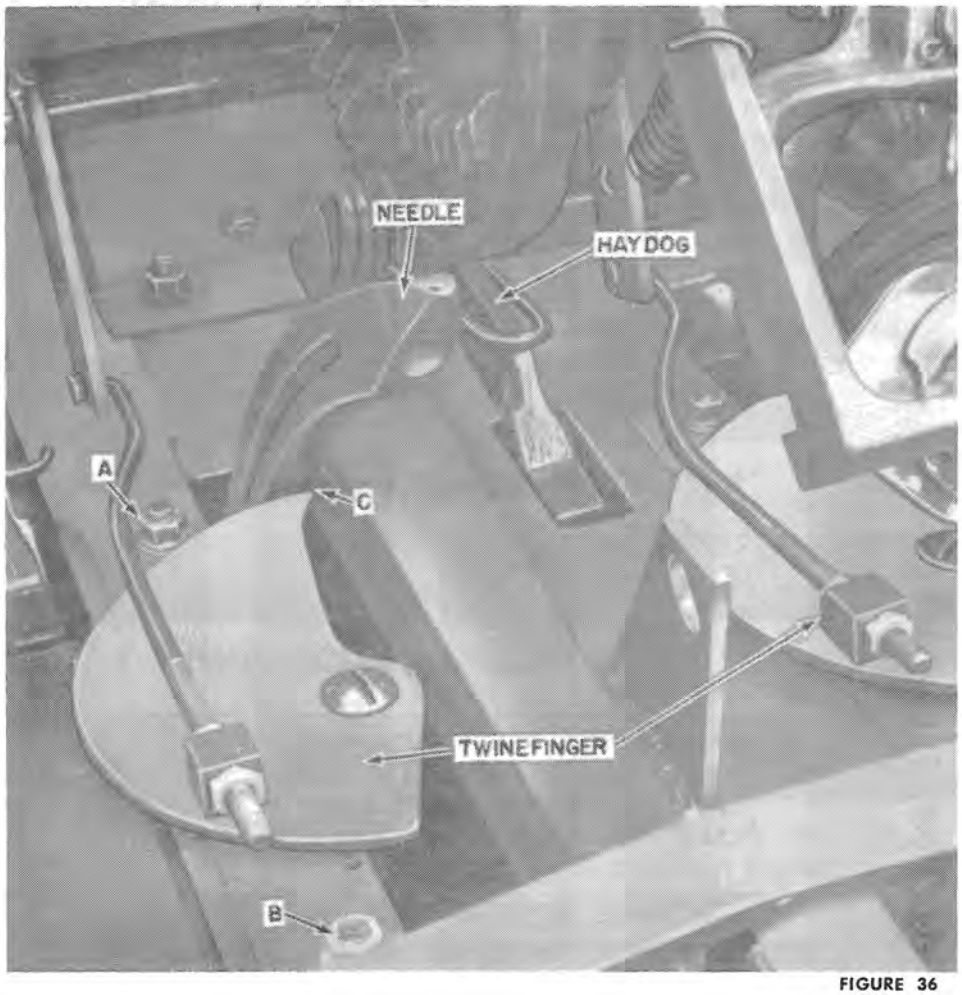


FIGURE 36

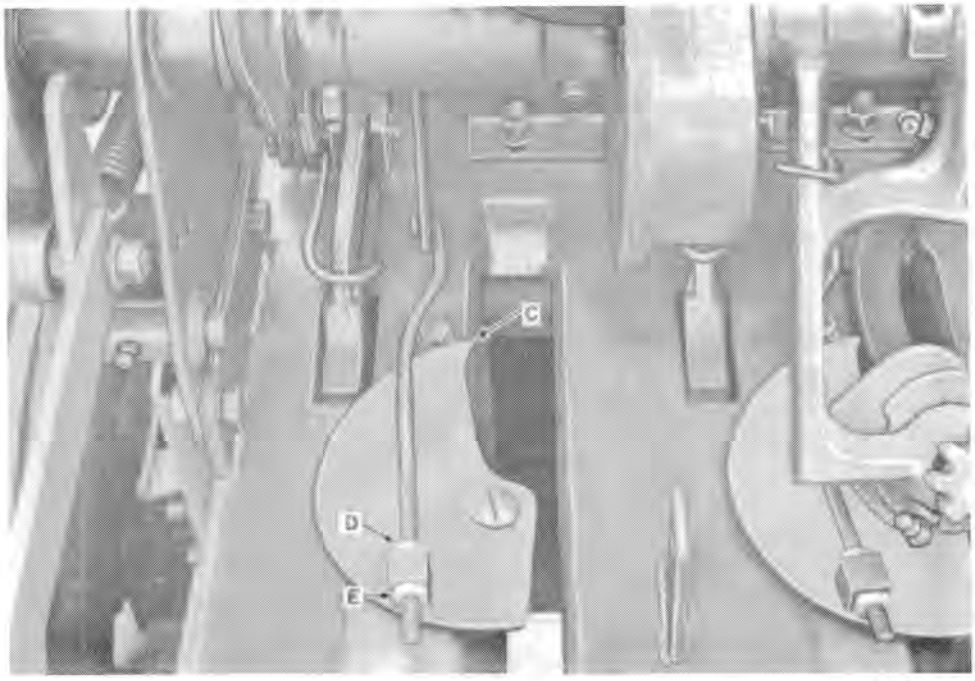


FIGURE 37

KNOTTER STACK

The diagram, Figure 38, is a sketch of the knotter assembly. Should it become necessary to disassemble the knotter, it should be restacked exactly as shown to obtain the dimensions shown.

Be sure to install only one ⅛" washer at points A and B, Figure 38, between the inside surface of the cam gears and the knotter frames. It is important that the two washers A and B do not bind so that the flat surfaces of the cam gears can be adjusted snugly to the knotter frames at point C and D, Figure 38.

FOR SAFETY'S SAKE:

DO NOT ATTEMPT TO MAKE KNOTTER ADJUSTMENTS WHEN THE MACHINE IS RUNNING

REMOVING END PLAY FROM KNOTTER STACK

Excessive end play in the knotter stack will accelerate wear and if not corrected can result in breakage of knotter parts.

When the cam gears can be moved sideways on the knotter shaft, end play should be adjusted. Loosen clamp bolt of knotter arm, see Figure 7, remove cap screw E, Figure 38, from end of knotter shaft and remove the required shims from under cap screw to eliminate any clearance between the cam gears and knotter frames at points C and D, Figure 38.

CAUTION: NEVER TIGHTEN THE KNOTTER STACK TO THE EXTENT THAT BINDING OCCURS WHEN THE KNOTTER IS ROTATED.

KNOTTER MOUNTING BOLTS

The knotter mounting bolts, E and F Figure 39, anchor the knotter frames to the bale chamber. These bolts are fitted with self locking nuts. When installing them, draw them up snug and then loosen them ½ to one full turn. EXCESSIVE TIGHTENING MAY CAUSE BINDING BETWEEN THE CAM GEARS AND KNOTTERS RESULTING IN PREMATURE WEAR.

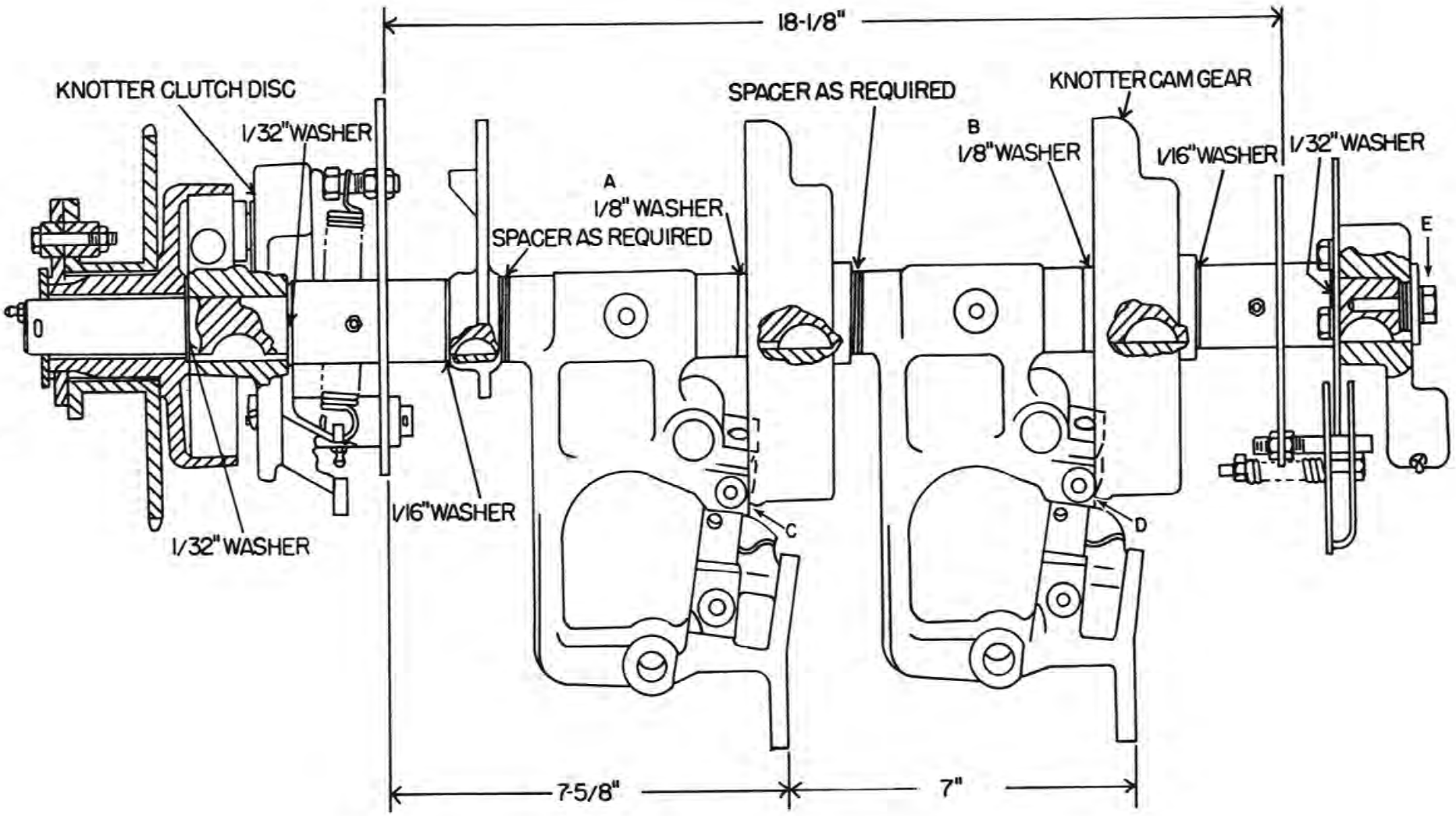

18-1/8"
KNOTTER CLUTCH DISC
1/32" WASHER
SPACER AS REQUIRED
KNOTTER CAM GEAR
B
1/8" WASHER
1/16" WASHER
1/32" WASHER
A
1/8" WASHER
SPACER AS REQUIRED
E
1/16" WASHER
1/32" WASHER
C
D
7-5/8"
7"

FIGURE 38

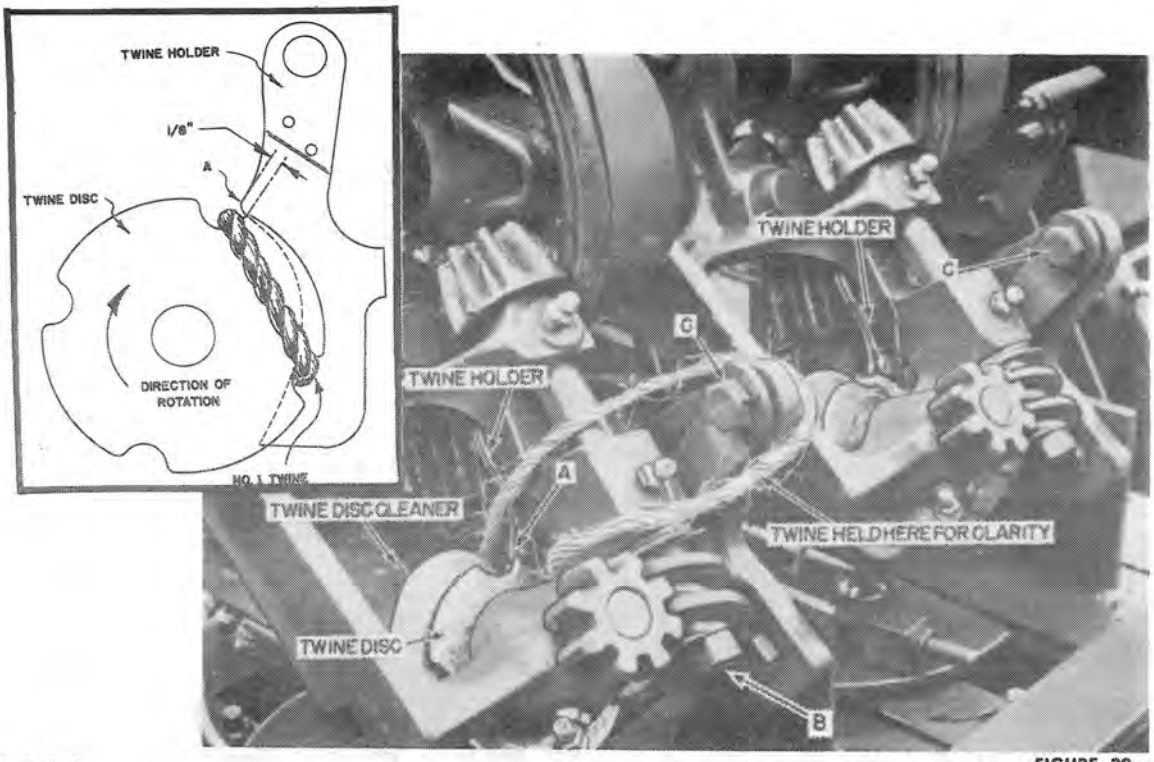


FIGURE 39

TWINE DISC

The twine disc is shown in Figure 39. It must be timed to the twine holder so that the leading edge of the notch is past point A on the twine holder 1/8" when the twine disc contains twine as shown in Figure 39 inset.

In order to adjust the disc to this position, loosen nut B, Figure 39, several turns. Tap the nut end of the shaft and turn the disc to the setting of the notch shown in Figure 39 inset.

After the twine disc is positioned properly, tap the pinion end of the shaft to move it back to its original position. Turn the worm gear so that it will fit against the spacer washers; then turn the lock nut tight.

Turn the baler through a tying cycle and recheck twine disc timing.

TWINE HOLDER

The twine holder, Figure 39, is a double plate which holds the twine in the twine disc. The holder is retained in position by a flat spring with adjustable tension screw "C". The twine holder tension spring exerts pressure against the twine holder, which in turn holds the twine in the disc under pressure.

The tension spring must be adjusted according to the weight and density of the bales that are produced. When the weight of the bale is increased, the adjusting screw on the twine holder tension spring must be adjusted accordingly.

BILL HOOK

Proper adjustment of the bill hook is very important because it is here that knots are formed.

If for any reason the bill hook tongue is bent, there is a possibility that the bill hook may not catch both strands of twine. The back of the tongue should be straight, not curved.

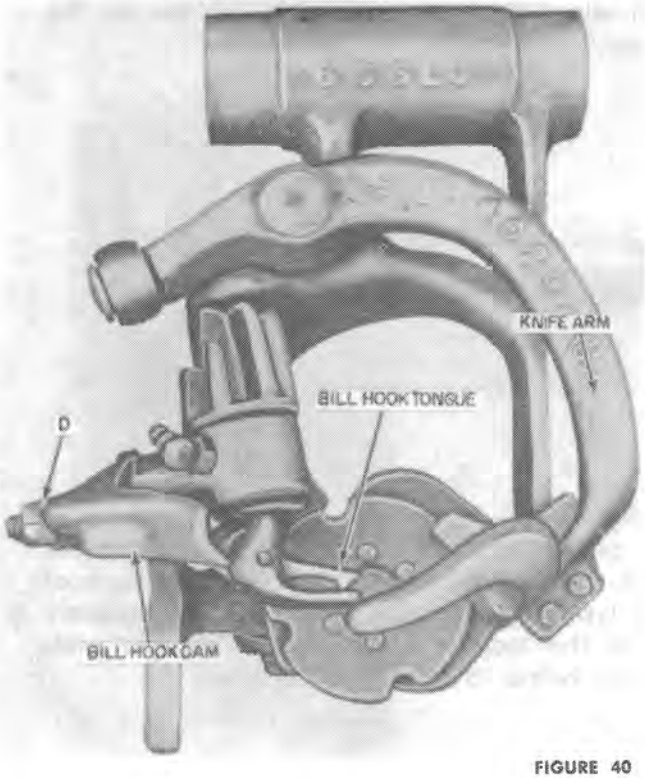


FIGURE 40

Rough edges and fins on any parts of the bill hook will cause the knots to cling to the bill hook. All these rough edges should be removed with a file, then thoroughly smoothed with emery cloth.

Knots may hang on the bill hook because of excessive tension on the bill hook cam. If this occurs, some of the tension should be relieved by loosening slightly the bill hook adjusting screw "D" Figure 40.

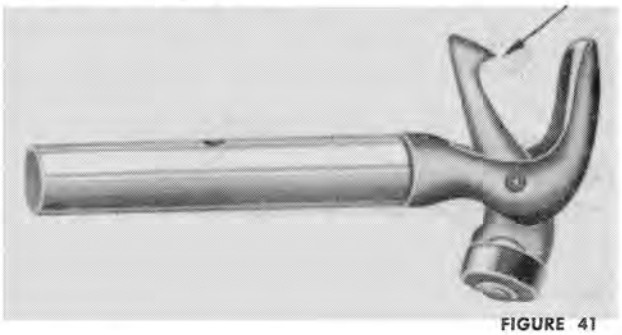


FIGURE 41

If the knot opens after it has been tied or if it is very loose and can be pulled open, it is possible that the bill hook does not close tightly enough to hold the ends of the twine securely between the bill hook tongue and the bill hook jaw until the knife arm stripper flange strips the loops over the ends of the twine. The difficulty is caused by the sharp end of the bill hook tongue, see Figure 41. To correct this, file the sharp end slightly until the tongue is rounded as shown in Figure 42. This will allow the tongue to close tighter on the twine.

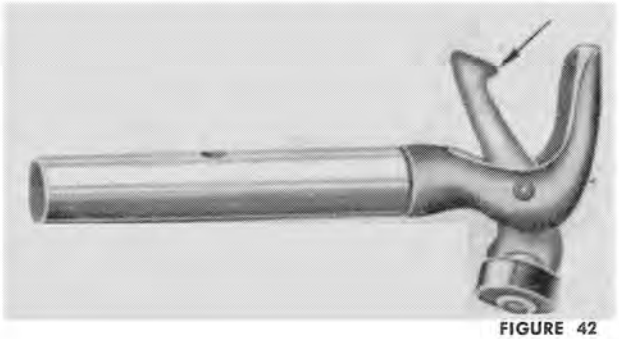


FIGURE 42

Figure 43 shows a closed bill hook with the proper amount of space between the bill hook jaw and bill hook tongue. A bill hook of this type will hold the ends of twine securely while the loop is drawn tight over the ends of the twine to form a good knot.

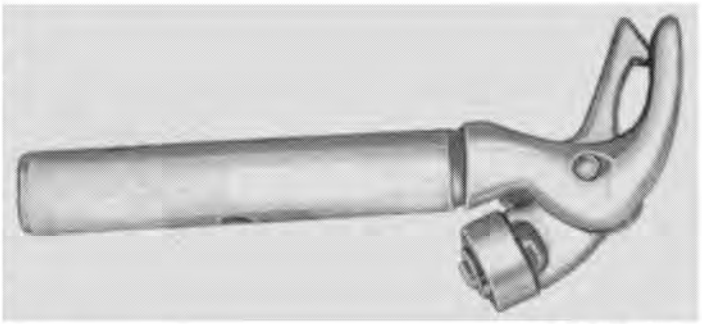


FIGURE 43

KNIFE ARM

The knife arm should be adjusted so that the bill hook will revolve without contacting any surface of the knife arm assembly as shown in Figure 44.

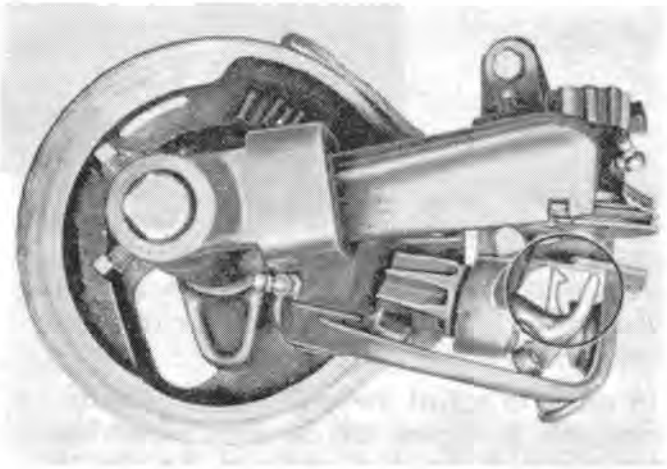


FIGURE 44

The half-moon shaped knife arm stripper flange should rub against the heel of the bill hook when the knife arm operates as illustrated at point "A" Figure 45. When set in this position, this flange will push the knot loop off the bill hook while the bill hook jaw holds the two ends, and a good knot will be formed.

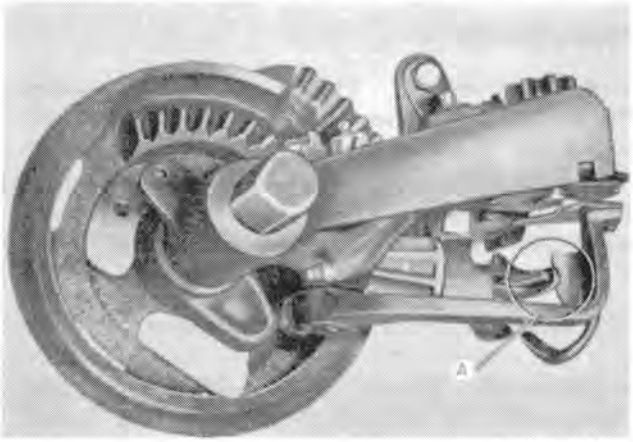


FIGURE 45

When the half-moon shaped stripper flange does not rub against the bill hook heel it will pass by the twine as shown in Figure 46 and, as a result, the knot will not be removed from the bill hook.

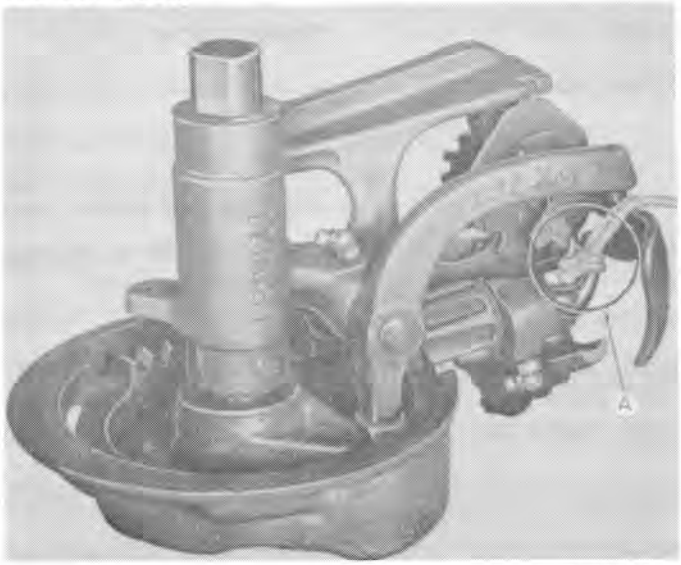


FIGURE 46

Knots may also hang on the bill hook if the knife arm has insufficient lift. When adjusted properly, the stripper flange of the knife arm will clear the end of the bill hook by not less than 3/8" and not more than 1/2" when the knife arm is at its farthest point of movement.

To determine when knife arm adjustment is necessary, trip the knotter mechanism and turn the flywheel manually to run the knotter one complete cycle. By watching the knife arm operation, see if any of the above mentioned knife arm maladjustments can be noted. If maladjustments are noticed, or if there is any reasonable doubt, remove the knotter mounting bolt and swing the knotter assembly up from its regular position. By doing this, a closer inspection can be made of the knife arm setting.

If it appears that a slight knife arm adjustment is necessary, it may be possible to bend the knife arm with a hammer or pry bar without removing any parts of the knotter.

Figure 47 shows the type of knot formed by a properly adjusted knotter.

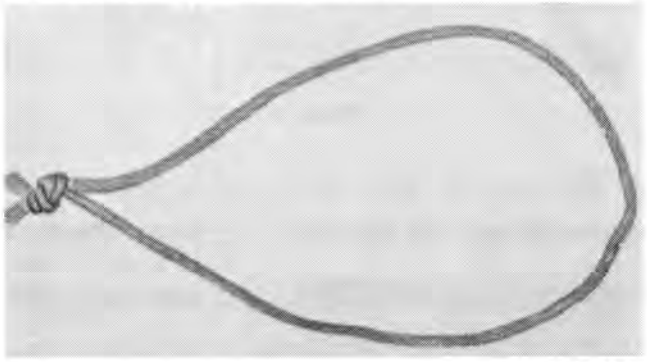
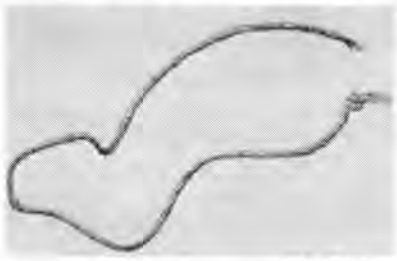


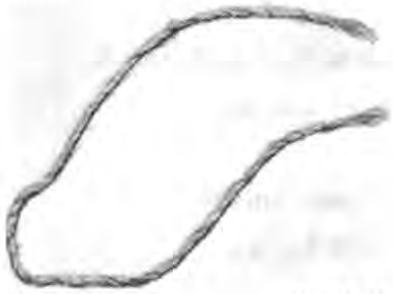
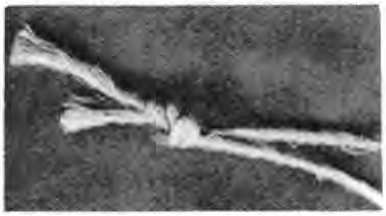
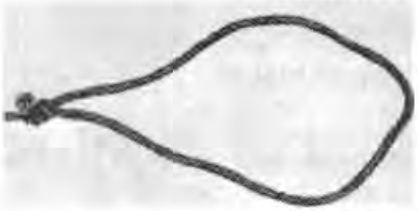
FIGURE 47

KNOTTER SERVICE CHART

SUMMARY OF KNOTTER DIFFICULTIES AND CORRECTIVE MEASURES

Some of the possible knotter difficulties and their corrective measures are summarized in detail in the next several pages.

PROBLEM	POSSIBLE CAUSE	CORRECTION
1. Knots hanging on bill hook.  FIGURE 48	Too much tension on bill hook cam.	Loosen bill hook cam adjusting screw.
	Rough bill hook.	Smooth off all rough edges with fine file and emery cloth.
	Bill hook cam, binding on bill hook adjusting screw.	File edges smooth in elongated hole in bill hook cam.
	Knife arm stripper does not contact back of bill hook. Knife arm does not travel far enough.	Bend knife arm stripper so it touches bill hook lightly. Increase travel of knife arm by bending.
2. No knot on end of twine delivered by the needles.  FIGURE 49	Twine fingers too far back from needle slot. Too much clearance between twine fingers and needles.	Adjust twine fingers. Check the twine finger lever for possible bends or broken welds. Check the mounting bolt to make sure that it is tight.
	Excessive clearance between top of plunger and bale chamber.	Adjust or replace plunger bearings.
	Hay dogs not entering bale chamber.	Clean hay and dirt from hay dog springs and replace if broken.
	Twine disc timing.	Advance or retard timing of disc so that both strands are caught in bill hook.
	Bill hook tongue fails to open wide enough.	Knotter bill hook roller has worn groove in knotter frame.
	Bent bill hook tongue.	Replace frame or rebuild groove with weld.
	Badly worn twine finger cam.	Straighten tongue, or replace bill hook. Replace.
No knot on the end of the twine held by the twine holder.	Not enough tension on twine holder spring.	Increase tension on twine holder spring by tightening adjusting bolt about ¼ turn.
	Baling too tight	Release bale tension accordingly.

PROBLEM	POSSIBLE CAUSE	CORRECTION
3. Twine cut or broken, but no evidence of a knot is present.  FIGURE 50	Tension spring on twine holder does not allow enough twine to slip through holder to form knot. Rough edges on twine holder or disc. Twine tension spring too loose allowing twine to slip out of disc when bill hook turns.	Loosen twine holder tension adjusting screw; clean dust and chaff from under flat twine holder spring. Remove all evidence of sharp edges on twine holder and twine disc. Tighten twine holder, spring tension.
4. One end of twine longer than other or loop in one twine end.  FIGURE 51  FIGURE 52	Dull twine knife. Insufficient tension on twine holder. Insufficient lift on knife arm. Bale weight too light.	Sharpen blade on knife arm. Tighten twine holder tension spring. Increase lift on knife arm. Increase weight by tightening bale tension screws.
5. Twine frayed or broken approximately ½" back of knot  FIGURE 53	Insufficient clearance between back of bill hook and inside face of knife arm.	Bend knife arm so bill hook will revolve freely. However, when the knife arm rises, the stripper arm must touch bill hook.
6. Twine disc does not stay in time.	Twine disc pinion #11840 Driv-Lok pin sheared. Shaft in twine disc turns in hub. Adjustable knotter worm slips on shaft.	Replace Driv-Lok pin. Replace twine disc assembly. Locknut not tight enough.

BALER SERVICE CHART

PROBLEM	POSSIBLE CAUSE	CORRECTION
Shearing flywheel safety bolts	Baling too heavy.	Loosen bale tension.
	Safety bolt nut loose.	Tighten safety bolt nut securely.
	Improper needle timing.	Retime the needle drive.
	Needle safety latch out of adjustment.	Adjust properly.
	Dull knives.	Sharpen knives.
	Excessive clearance between knives.	Adjust knives.
	Worn knotter clutch gear.	Replace.
	Worn or improperly adjusted knotter brake.	Clean and adjust knotter brake, replace worn linings.
Failure to pick up material cleanly.	Pickup too high from ground.	Lower stop bolt in pickup lift strap.
	Too many pickup fingers bent or broken.	Replace broken and bent pickup fingers.
	Ground speed too fast.	Slow down.
Shearing knotter drive bolts.	Dirty knotter.	Clean knotters.
	Improper adjustment of knotter brakes.	Adjust brakes.
	Too much end play in knotter stack.	Remove end play in knotter stack.
	Needle yoke striking bottom of bale chamber.	Adjust needle yoke rod.
Mis-shaped bales.		
1. Too much material in left of bale.	Feeder carriage improperly adjusted.	Adjust as required. (Decrease penetration)
	Feeder back improperly adjusted.	Move feeder back out.
2. Too much material in right side of bale.	Feeder carriage improperly adjusted.	Adjust as required. (Increase penetration). Lower left hand feeder tines.
	Feeder back improperly adjusted.	Move feeder back in.
	Broken feeding tines and tine holders.	Replace.

PROBLEM	POSSIBLE CAUSE	CORRECTION
 **DO NOT ATTEMPT TO REMOVE MATERIAL FROM, OR FEED MATERIAL INTO, THE PICK-UP OR FEEDER AREA WHILE MACHINE IS RUNNING**	Windrows too large or too small. Irregular feeding of heavy slugs. Over-feeding (especially semi-cured material). Pickup teeth missing, and broken.	Rake uniform and medium sized windrows. Feed more uniformly. Feed slower. Replace any broken or missing teeth.
Ragged bales.	Dull knives. Improper knife clearance.	Sharpen knives. Adjust plunger bearings and slides.
Pickup finger striking ground at all times.	Insufficient tension on pick-up spring. Improper adjustment of stop bolt in pickup lift strap.	Tighten pickup spring. Lower stop bolt in pickup lift strap.
Needle breakage.	Solid objects in needle slots. Maladjustment of needle. Worn knotter clutch gear together with maladjustment of needle safety latch. Needles improperly timed and needle safety latch not operating.	Remove the object and clean slots. Re-adjust needles. Replace clutch gear. Re-adjust needle safety latch. Re-time needle drive and free needle safety latch.
Irregular bale length.	Metering wheel improperly adjusted. Irregular feeding. Trip arm badly worn.	Adjust. Feed uniformly. Replace worn parts.
Pickup fingers fail to feed material into feeder area.	Bent and broken teeth.	Replace damaged teeth.

MAIN GEAR BOX

Use SAE #90 hypoid lubricant, and keep the gear box filled to the oil level plug.

Change the oil of the gear box at the beginning of each baling season.

KEEP THE GEAR BOX MOUNTING BOLTS TIGHT.

Should a problem arise concerning the gear box, consult an authorized New Holland dealer.

OPERATORS ARE CAUTIONED NOT TO ATTEMPT TO REPAIR OR ADJUST THE GEAR BOX.

TIRES

Keep the tires properly inflated. Inflate the 6:40 x 15" tire to 44 pounds pressure and the 5:00 x 15" tire to 28 pounds pressure. Check the tire pressure at least once a week when the baler is in use.

P.T.O. DRIVE

Oil the drive pins of the overrunning clutch daily with two or three drops of light machine oil. At the beginning of each baling season, disassemble the slip clutch and the overrun-clutch assemblies and wipe grease on the face of the overrunning clutch and the bushings of both clutch assemblies.

Keep the P.T.O. drive tube well lubricated so that the P.T.O. shaft can telescope freely.

Lubricate the universal joints of the P.T.O. drive carefully with one or two pumps of a hand gun twice a week. **CAUTION: EXCESSIVE LUBRICATION MAY DAMAGE THE GREASE SEALS.**

PICKUP FINGERS

Figure 54 shows the attachment of the pick-up finger to the pickup tooth pipe.

These pickup fingers are individually replaceable in the following steps:

1. Remove the four capscrews holding the pickup guard, and remove the pickup guard as shown in Figure 54.

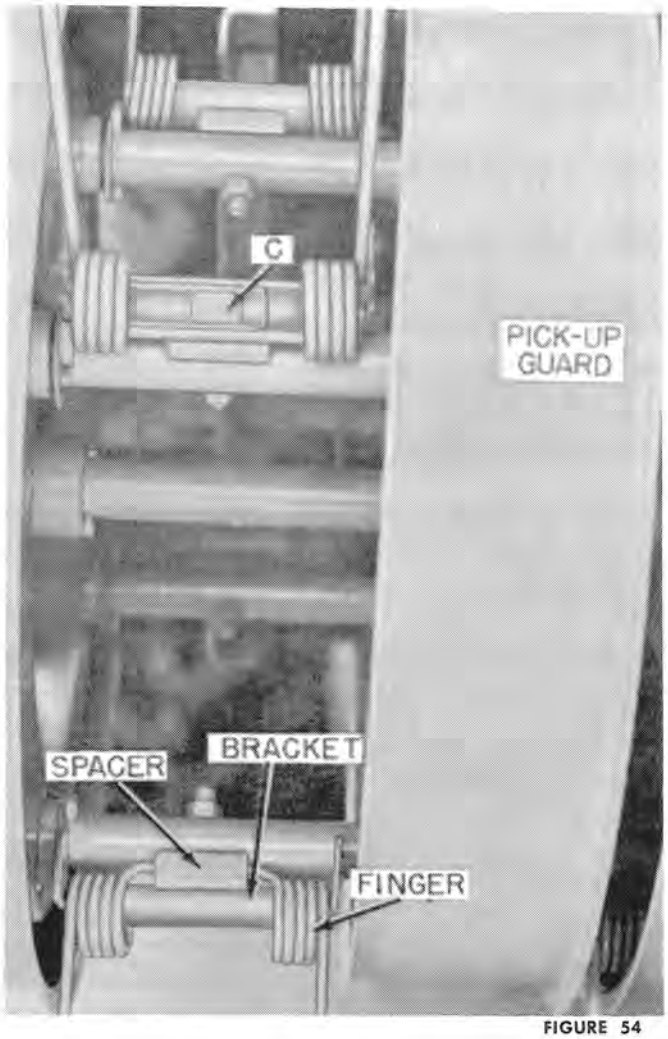


FIGURE 54

2. Remove bolt "C" of the pickup finger involved.
3. Remove the pickup finger, bracket and spacer.
4. Install the bracket and spacer as shown in Figure 54 with the new pickup finger.
5. Install the three parts as a unit with the mounting bolt "C".

PICKUP CAM FOLLOWER

A hole is provided in the right pickup end sheet for easy access to the pickup cam follower.

To replace a pickup cam follower, rotate the pickup until the cam follower is accessible through the opening in the pickup end sheet as shown in Figure 55. The cam follower may easily be removed and replaced through this opening.

CAUTION: WHEN REPLACING PICKUP CAM FOLLOWERS, ALWAYS BE CERTAIN THAT THE CAM FOLLOWER IS TRAILING THE PICKUP TOOTH PIPE IN THE DIRECTION OF ROTATION OF THE PICKUP. IF THE CAM FOLLOWER IS LEADING OR GOING AHEAD OF THE PICKUP TOOTH PIPE, SEVERE DAMAGE MAY RESULT.

PICKUP TOOTH PIPE

The pickup tooth pipe assembly can be removed through a hole provided in the pickup sheet as shown in Figure 55. To replace a pickup tooth pipe assembly, remove all of the pickup teeth from the tooth pipe assembly. Remove the cam follower bearing and align pickup tooth pipe assembly with the slot in the end sheet. Remove the tooth assembly and install the new assembly.

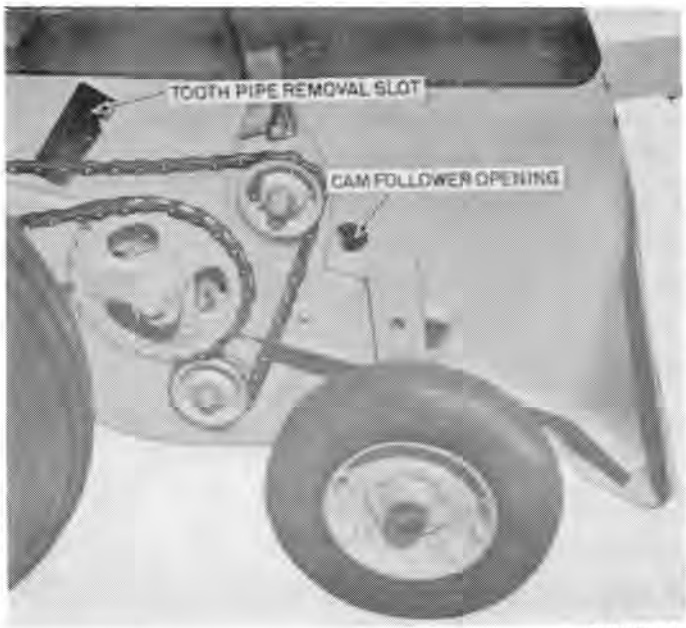


FIGURE 55

"LOCTITE"

"Loctite" is a polyester resin retaining compound which hardens into a solid from a liquid state in the absence of air. It is very effective in preventing the loosening of nuts and bolts, sprockets, gears, bearing races and other parts which fit on a shaft.

After hardening, "loctite" is not affected by oils, greases, fuels, or most acids. The most effective way of breaking the bond is to heat the parts to 450° and remove the parts while they are at this temperature.

"Loctite" is used in the following locations in your baler:

1. Twine finger cam to knotter shaft.
2. Threads on feeder carriage bearings.
3. All studs in hydraformatic pump.

Should it become necessary to disassemble any of the above parts held by "loctite", they can be taken apart readily where the contact area is less than one square inch. The application of heat will make disassembly much easier where the contact area is greater. In these cases and where parts will not be damaged by heat, they can be easily disassembled when heated to a temperature of 450°.

"Loctite" may be purchased through any authorized New Holland dealer under the following part numbers:

NH #92227 10 c.c. Bottle Loctite "Retaining Compound"

NH #92228 6 oz. Spray can Loctite "Primer Grade N"

When reassembling, it is very important that the parts to which "Loctite" is applied are clean. The following steps must be taken:

(a) Remove all paint, rust, and scale.

(b) Remove all oil, dirt, and grease with a suitable solvent such as trichloroethylene zylol, solventol, or similar degreasers. Do not use oil base solvents such as gasoline.

(c) Give all surfaces a final cleaning with Primer N, which has an ingredient in it which makes "Loctite" harden quicker. Small parts or those that are fairly clean to start with may be cleaned with Primer N only.

(d) Wipe with a clean cloth. Respray with Primer N and allow it to evaporate completely which takes 3 to 5 minutes at 72°F before applying "Loctite".

Apply "Loctite" to one of the surfaces only if the clearance between the parts is .001" to .003". Apply "Loctite" to both surfaces on press-fitted parts.

Do not get "Loctite" liquid into the bearings or on synthetic seals.

Tighten bolts and studs to their recommended torque immediately after applying "Loctite". Assemble bearings or other parts and allow the "Loctite" to harden (cure) before putting the machine into operation. Use "Loctite" sparingly as it is expensive. Any that runs off is wasted, but it is very important that the clearance between the parts is completely filled.

Non-plated parts will take a minimum of 2 hours at 72°F to cure when Primer N has been used. Plated parts will require a minimum of 4 hours at 72°F when Primer N has been used.

Curing time can be greatly reduced by the use of heat. Holding the parts at a temperature of 300°F for 2 — 5 minutes or 250°F for 10 minutes will cure the "Loctite". Heat sources can be an acetylene torch, electric heater or oven. Be very careful not to get parts above 300°F.

STORING THE BALER

1. At the close of the baling season remove the material from the bale chamber and coat the bale chamber and the knotters lightly with grease to prevent rusting.
2. Remove the roller chains from the machine and clean thoroughly by soaking them in kerosene. Coat with heavy oil before storing. Reclean the chains and apply a light coating of oil before using again.
3. Remove the "V" belts, wipe clean, and store in a cool dry place for best belt life.
4. To increase the life of the tires, place the baler on blocks to remove the load from the wheels when the machine is stored.
5. Completely clean and thoroughly lubricate the entire machine.
6. Provide adequate protection from the weather.
7. It is good practice to have the baler inspected at the end of each season and the complete machine put in top condition .At this time worn chains, sprockets, bearings, etc., should be replaced and other necessary adjustments made.

NOTE: Your authorized New Holland dealer will be glad to inspect and service your machine for you. A periodic check-up in his shop will help to keep your maintenance at a minimum.

ORDERING PARTS

When preparing the baler for storage, check the baler thoroughly for any parts that may have become worn and need replacing. USE THE CHECK LIST TO ASSIST IN MAKING A LIST OF THE PARTS NEEDED AT THIS TIME.

Service parts should be ordered at once and installed before the next baling season.

When ordering service parts, always be sure to give your New Holland dealer the model and serial number of your baler, as well as the quantity, part number, and an accurate description of each part.

The plate containing the model and serial number of the baler is located on the front end of the baler frame beside the flywheel.

INSIST ON GENUINE NEW HOLLAND SERVICE PARTS. FOR BEST PERFORMANCE HAVE YOUR BALER SERVICED BY AN AUTHORIZED NEW HOLLAND DEALER.

CHECK LIST FOR ORDERING SERVICE PARTS

1. Check the slicing knives (See note A).
2. Examine all belts, chains, and sprockets for wear. (See note B).
3. Inspect the hitch bracket for excessive wear.
4. Check all bearings for wear in the bushings.
5. Inspect the plunger and the connecting rod.
6. Examine the complete knotter assembly and check for excessive wear at any point; especially note the rollers on the assembly, bill hooks, bill hook cams, etc.
7. Note any broken or bent pickup fingers.
8. Make sure the cam rollers of the pickup assembly are in good condition.

Note A — An extra set of slicing knives is a good investment. Dull knives can then be sharpened while the spare set is being used.

Note B — Replace worn sprockets when installing new roller chains.

OPTIONAL EQUIPMENT

JACK — See Figure 56. The jack makes hitching and unhitching easier — Swings up out of the way in field operation or in transport.

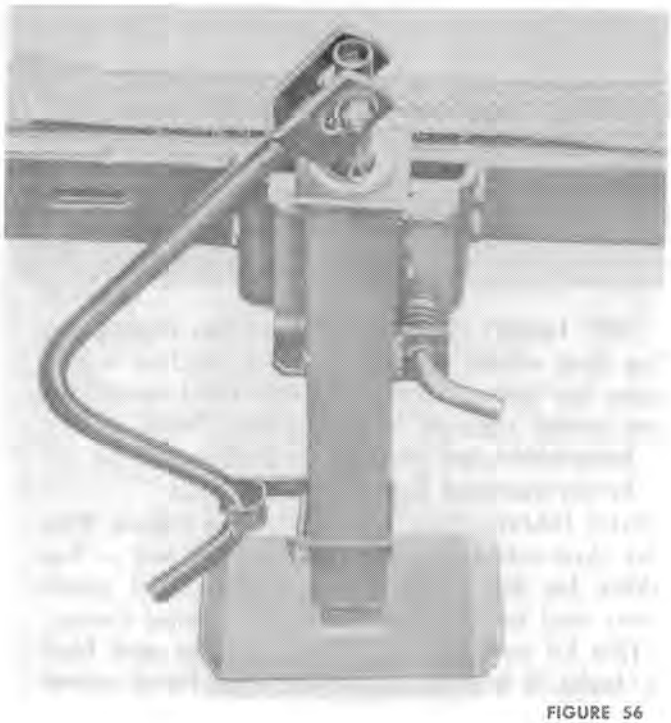


FIGURE 56

PICKUP WHEEL — See Figure 57. The pickup wheel guides the pickup over rough and irregular ground.

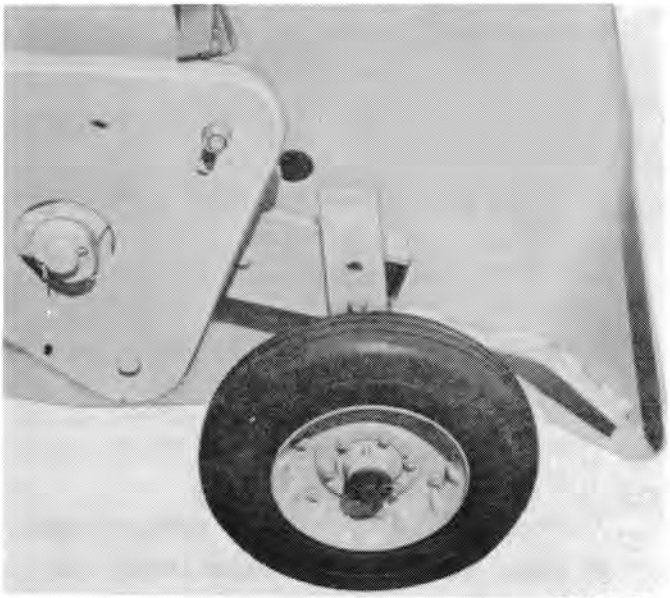


FIGURE 57

BALE COUNTER — See Figure 58. The bale counter keeps an accurate record of the number of bales.

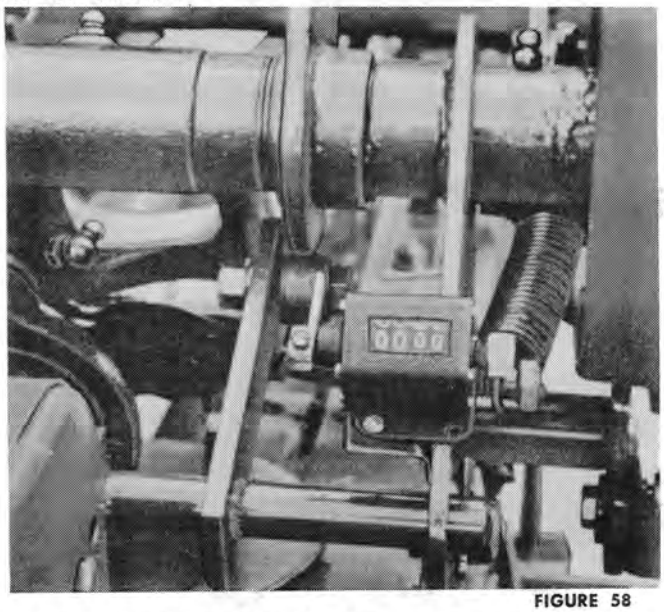


FIGURE 58

LEFT HAND DUAL WHEEL — See Figure 59. The dual wheel is available less the tire — Provides for better flotation in soft field conditions and better support in corrugated fields.

Recommended tire size — 5:00 x 15"

Recommended pressure — 32 p.s.i.

RIGHT HAND DUAL WHEEL — See Figure 59A. The dual wheel is available less the tire — Provides for better flotation in soft field conditions and better support in corrugated fields.

This kit consists of a rim, a spacer and four "J" bolts. It is attached to the right hand wheel

FIGURE 59

as shown in Figure 59A. The "J" bolts are hooked in the slots of the right hand dual wheel.

NOTE: The "J" bolts must be positioned so that they hook into the end of the slot opposite the rotational direction of the wheel. Torque the "J" bolts to 15 ft. lbs. only — overtightening will bend the disc on the inside wheel.

RECOMMENDED TIRE SIZE — 5:00 x 15"

RECOMMENDED PRESSURE — 24 P.S.I.

FIGURE 59A

WAGON HITCH AND LOADING CHUTE — See Figure 60. The loading chute slides the bales up a chute on to a wagon. The telescoping wagon hitch attaches directly to the bale chamber.

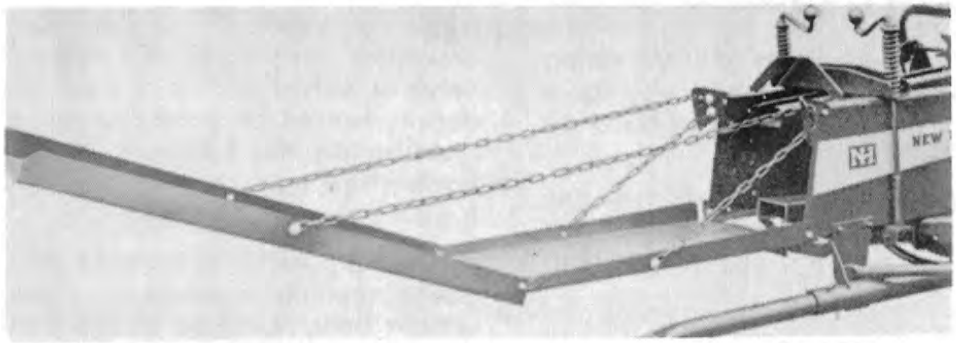


FIGURE 60

SUPER SWEEP PICKUP — See Figure 61. Factory installation only. The super sweep pickup has six bars and 120 pickup teeth spaced 2⅝" apart as compared to four bars and 48 pickup teeth spaced 4⅜" apart on the standard pickup. The super sweep pickup provides cleaner pickup action especially in light stemmy crops.

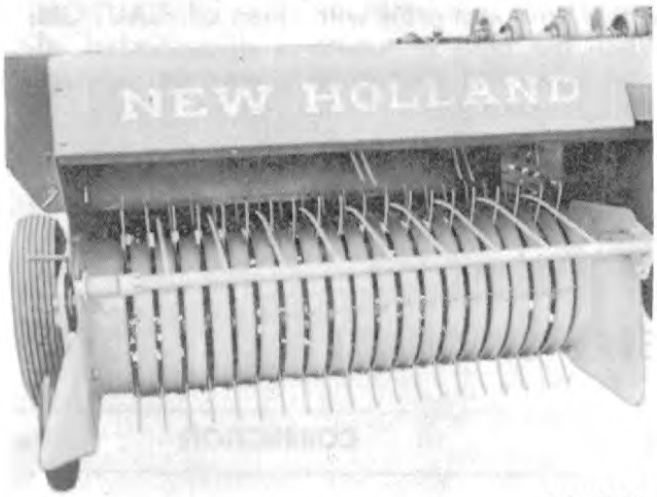


FIGURE 61

Figure 61A shows the attachment of the pickup finger to the pickup tooth pipe.

These pickup fingers are individually replaceable in the following steps:

1. Remove the four capscrews holding the pickup guard, and remove the pickup guard as shown in Figure 61A.
2. Remove bolt "C" of the pickup finger involved.
3. Remove the pickup finger, the two brackets and the spacer.
4. Install the brackets and spacer as shown in Figure 61A with the new pickup finger.
5. Install the three parts as a unit with the mounting bolt "C".

HYDRAFORMATIC BALE TENSION CONTROL — See Figures 62 and 63. The hydraformatic insures uniform bale weight under all conditions.

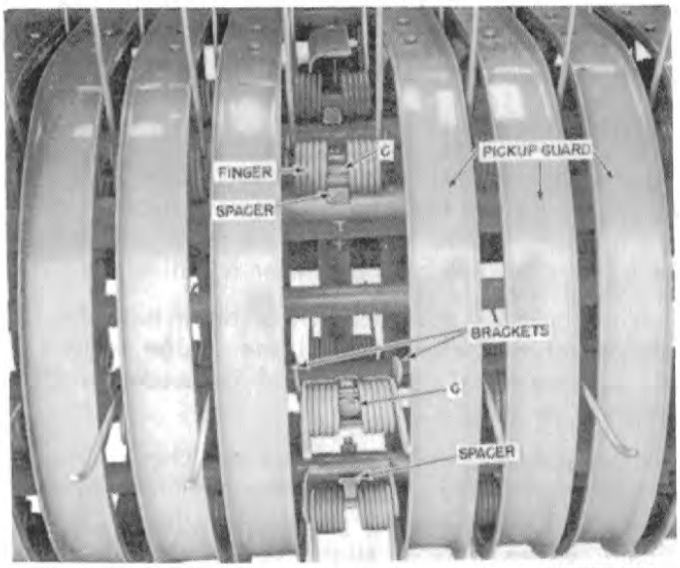


FIGURE 61A

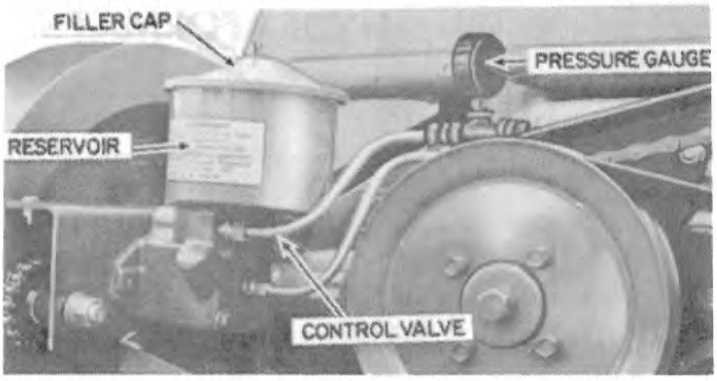


FIGURE 62

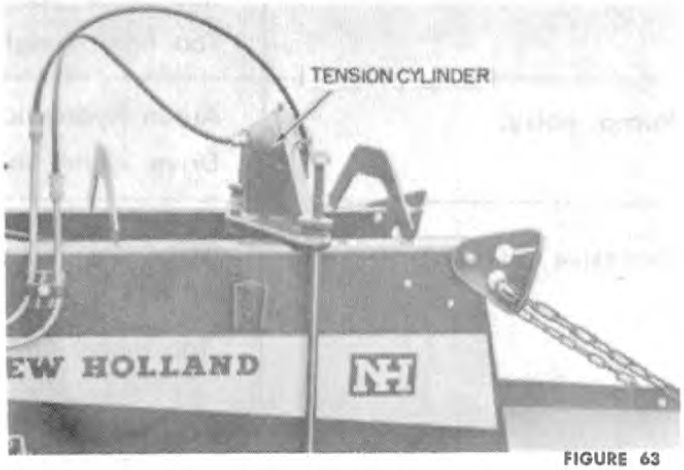


FIGURE 63

HYDRAFORMATIC OPERATION & MAINTENANCE

Fill the pump reservoir with #30MS rating motor oil. Operate the machine slowly for a few minutes until pressure begins to build up in the system.

CARE MUST BE TAKEN TO KEEP THE OIL CLEAN AND FREE OF DUST, WATER SEALING COMPOUNDS, etc. DO NOT USE HYDRAULIC BRAKE FLUID.

When filling the reservoir, pour the oil through a 180 mesh wire screen. Never use a cloth strainer, because all cloth contains lint, which is harmful to the hydraulic system.

STARTING TO BALE

Turn the control valve counterclockwise as far as possible to remove all pressure from the tension rails of the bale chamber and operate the baler until the bale chamber is full of hay.

With the bale chamber full of hay, turn the control valve clockwise until the gauge registers approximately 100 lbs. of pressure, and continue to bale.

After producing several bales, check the weight and density of the bales and re-adjust the control valve on the pump accordingly. As a rule, when only a slight variation in bale weight is desired, ¼ to½ turn of the control valve is sufficient. If a bale of the desired density cannot be produced by regulating the pressure on the hydraulic system, loosen or tighten the nuts on the tension bolts several turns.

It is not possible to state the definite pressure gauge reading required to produce a given weight bale, because of the variation in different types of material and the differences in the moisture content of the same crop at different seasons. Experience will teach the operator the correct pressure requirement for particular conditions.

MAINTENANCE

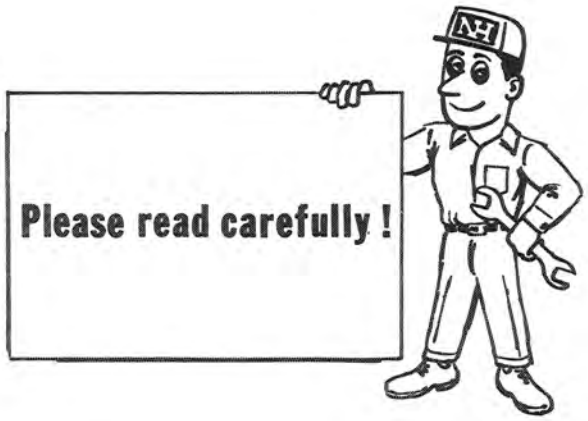
Change oil at least once each season. Drain the oil completely from all parts of the system at this time and refill with clean oil. CAUTION: When the hose or tubing is disconnected, always cover the open ends to keep out dirt and foreign material.

Keep the pump drive chain moderately tight.

Check the oil level in the pump reservoir at least once each week and fill to within one inch of the top.

HYDRAFORMATIC SERVICE CHART

PROBLEM	POSSIBLE CAUSE	CORRECTION
Pump not delivering oil.	Not enough oil in tank.	Add oil as necessary.
Pump not developing sufficient pressure.	Sludge and dirt in unit.	Flush and clean thoroughly.
	Pump surfaces scored by abrasive material.	Replace all worn or scored parts.
	Leak in hydraulic system connections or leaking cylinder.	Eliminate all leaks.
	Too light weight oil.	Change to heavier oil.
Pump noisy.	Air in hydraulic system.	Bleed system at highest point.
	Drive chain too tight.	Check chain tightness.
Excessive oil temperature.	Restriction in hydraulic line causing overloading of pump.	Check system for restrictions.
	Too heavy oil.	Use proper weight oil — thin with kerosene if necessary.



TOWING THE BALER ON PUBLIC HIGHWAYS

New Holland equipment complies with the ASAE standard recommendations for safety when transporting slow moving vehicles on public highways.

The baler is equipped as follows:

1. Reflective tape is provided in the two locations indicated in Figure 64.

2. A socket is located near the rear of the left side of the bale chamber. This socket facilitates the installation of the SMV (Slow Moving Vehicle) emblem shown in Figure 64.

Because of the variation in safety laws of different States, modifications may be necessary. Your Authorized New Holland dealer will assist you in making any changes necessary to comply with the laws of your state.

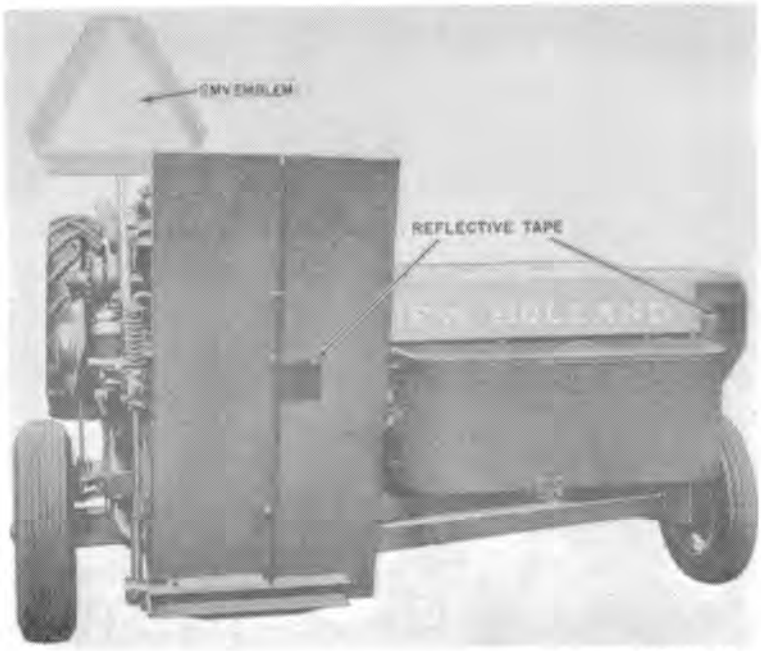


FIGURE 64

NEW HOLLAND

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