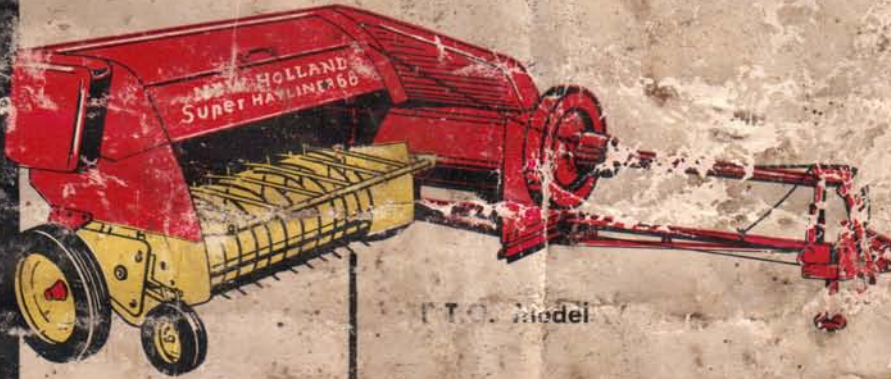
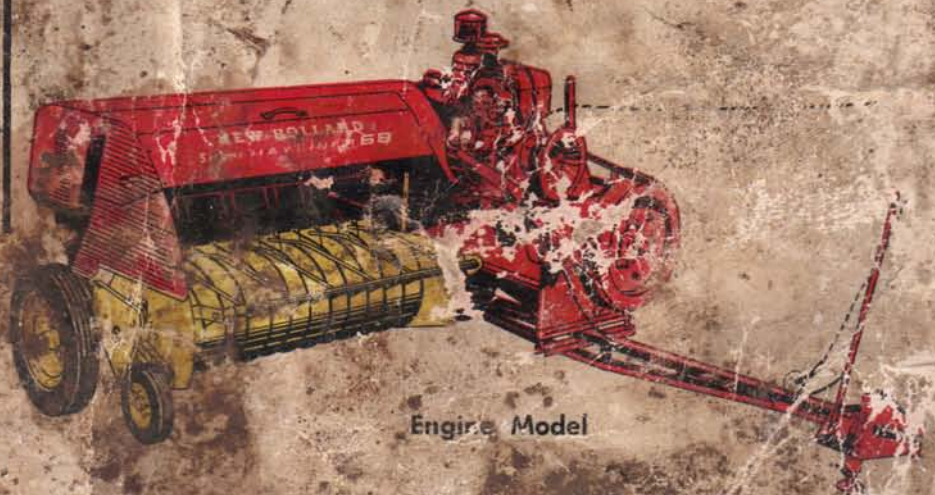


# OWNER'S MANUAL

## SUPER HAYLINER 68 BALER



P.T.O. Model



Engine Model



# NEW HOLLAND

#### A NOTE TO YOU, MR. BALER OWNER:

In buying a New Holland baler, you have chosen wisely. It is the result of many 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 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 the Superhayliner 60 P.T.O. baler and the Superhayliner 68 engine driven 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 highest quality baler twine and genuine New Holland service parts.

NEW HOLLAND MACHINE COMPANY

New Holland, Pennsylvania

#### ABOUT IMPROVEMENTS

The New Holland Machine Company 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 adjustments to the equipment sold previously.

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### Good Baling Requires Good Twine

When you bale with your New Holland Superhayliner 68 you'll appreciate the advantages of New Holland Certified baler twine. It is the only baler twine on the market to carry the U.S. Testing Laboratories Seal of Approval for uniformity, length and strength. Look for the U. S. Testing Seal on every ball—it's your assurance of full length, full strength, full quality.

## SPECIFICATIONS

### MODEL 68 BALER

Length over-all .....	bale chute up .....	15' 9"
Length over-all .....	bale chute down .....	18' 3"
Width over-all .....		8' 2"
Height over-all .....	engine model .....	67"
Height over-all .....	p.t.o. model .....	52"
Pick-up width .....		56"
Flywheel diameter .....		22"
Speed .....	70 strokes per minute	
Length of stroke .....		26"
Weight complete .....	engine model .....	approximately 2675 lbs.
Size of bale chamber .....		14 x 18 inches
Length of bale .....	adjustable .....	12 to 52 inches
Tire size .....	right ground wheel .....	5.00 x 15-4 ply
	left ground wheel .....	6.40 x 15-6 ply
	pick-up .....	3.00 x 12 semi-pneumatic
Tire pressure .....	right ground wheel .....	28 lbs.
	left ground wheel .....	44 lbs.
Wheel bearings .....		tapered roller

### Engine

Wisconsin .....	Model THD
Horsepower .....	17 at 2890 RPM
No. cylinders .....	2
Oil capacity .....	3½ quarts

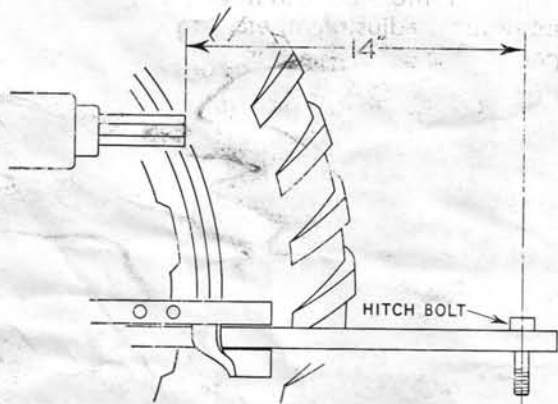
### Optional Equipment

Baler Cover	Jack
Wagon Hitch & Loading Chute	Electric Starting
Hydraformatic Bale Tension Unit	

## SUPERHAYLINER 68 P. T. O. BALER

### Attaching the Baler to the Tractor

The Superhayliner 68 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.



Attach the baler to the tractor draw bar directly in line with the tractor power take-off shaft with a distance of 14" between the end of the power take-off shaft and a vertical line from the center of the baler hitch pin as illustrated in Fig. 1. Install a hitch adapter plate, if necessary, to secure the correct distance between these two points. On some tractors (not-A.S.A.E. standard) it may be necessary to install a P.T.O. conversion kit.

Use a hitch bolt of the proper size ( $\frac{3}{4}$ " ) to eliminate sloppiness at the hitch point; install a jam nut or a cotter pin to prevent the hitch bolt from being lost out. **Never attach the baler to a draw-bar that moves from side to side. Always bolt a swinging drawbar in a stationary position before attaching the baler.**

Adjust the hitch bracket on the baler tongue up or down as required so that the baler frame is approximately level when the baler is attached to the tractor.

Attach the front yoke of the baler P.T.O. to the tractor and see that the tractor P.T.O. shield is installed. Note: It is necessary to install a spline adapter on any tractor power take-off shaft having a diameter less than the standard  $1\frac{3}{8}$ ".

Remove the mounting bolts from the P.T.O. support which is attached to the front end of the baler tongue and move the support up or down to the point at which the power take off shaft is as nearly straight as possible.

Before beginning to bale, swing the baler tongue to the left to operating position. **Never operate the P.T.O. baler with the tongue in road travel position.** The hitch point should be directly beneath the power drive line; if the tractor wheel runs on the windrow, move the tractor wheel in or out to secure windrow clearance.

Avoid extremely short turns when the baler is in operation. Decrease the P.T.O. speed, when turning, to reduce wear on the universal joints.

### Slip Clutch Adjustment (PTO Drive)

Make sure that the discs of the slip clutch are not frozen by paint or rust before beginning to operate the baler.

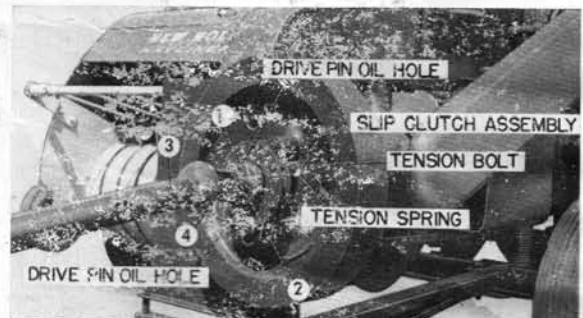


FIGURE 2

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 a point 24" from the center of the P.T.O. shaft should cause the clutch to slip.

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 springs to a compression length less than  $1\frac{1}{4}$ ". Keep the clutch discs free from grease and oil.**

Oil the drive pins of the over-running clutch (Figure 2) with several drops of light machine oil before operating the baler. When the baler is in operation, these pins should be lubricated with two or three drops of oil daily.

## OPERATION

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 70 plunger strokes per minute. The throttle range of tractors having a P.T.O. speed greater than 540 r.p.m. must 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.

For best baling results, windrows should be uniform and of medium size. The size of the windrow should not exceed that which the baler can pick up and handle efficiently when the tractor is operating in its lowest gear at the proper throttle setting.

Further information in this manual concerning lubrication, adjustment etc. applies both to the power take-off and the engine driven balers.



### 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. Service the engine according to the Engine Manual.
6. Lubricate the baler carefully. In general, lubrication every 1,000 bales should be sufficient.

### OBSERVE UTMOST SAFETY PRECAUTIONS

NEVER ATTEMPT TO LUBRICATE OR ADJUST MACHINE WHEN IT IS IN OPERATION.

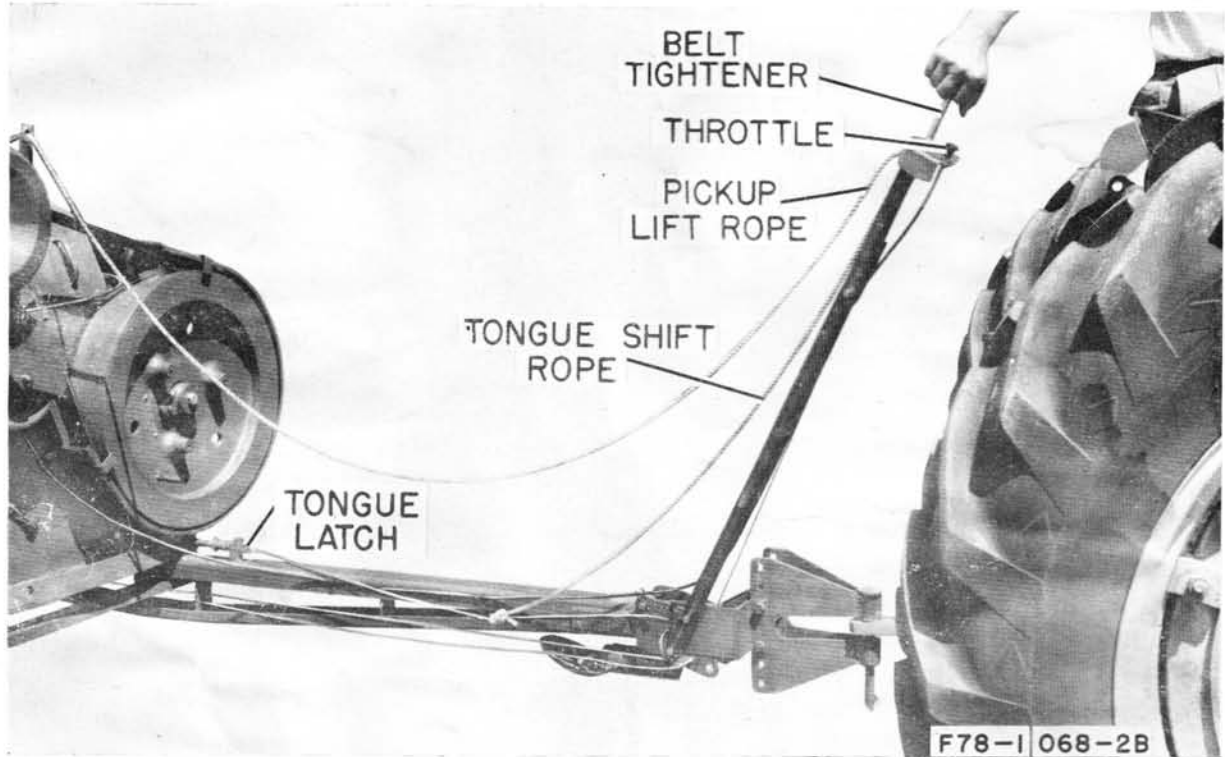


FIGURE 2B

### CONVENIENCE CONTROLS

Convenience controls are provided on the Superhayliner 68 to give the operator more complete control of the machine from the most convenient place — the tractor seat.

The controls supplied are —

1. Automatic pickup lift, rope controlled
2. Rope controlled tongue shift
3. Throttle control (Engine model only)
4. Belt tightener control (Engine model only)

#### PICKUP LIFT

The pickup lifting device consists of a control rope attached to the pickup lift strap, wrapped  $3\frac{1}{2}$  times around the windlass and attached to the tractor or the control post for easy access by the operator. (See Fig. 11)

In operation, the pickup is raised simply by pulling on the rope. A slight pull tightens the rope on the windlass and the machine then supplies the power required to raise the pickup.

When the pickup is the whole way up, releasing the lift rope suddenly will latch the pickup in the raised position. A slight pull on the rope and then gradual releasing will unlatch the lift strap so that the pickup can be lowered.

It is very important that the windlass or drum be kept clean and free from rust at all times. Keep the rope well oiled in the area that contacts the drum.

#### TONGUE SHIFT

The tongue shift rope actuates the tongue

latch, Figure 2B, and the wheel latch at the right wheel, simultaneously. This allows the tongue to be shifted by simply moving the tractor forward or back as desired.

To move the tongue from baling to transport position:

1. Pull the tongue shift rope (this releases the tongue latch and locks the right wheel).
2. Move the tractor backwards until tongue shifts.
3. Release rope.

To move from transport to baling position — pull rope and move tractor forward.

#### BELT TIGHTENER

On engine model balers, the belt tightener provides a quick and easy means of engaging or disengaging the main drive from the tractor seat.

The length of the cable should be adjusted so that the drive belts are tight when the control handle is pulled approximately three fourths of the way out. This adjustment is made by loosening the cable clamps at the point the cable is attached to the belt tightener lever. (See Fig. 18)

#### THROTTLE CONTROL

The throttle control provides a convenient method of controlling the engine and baler speed from the tractor seat.

After proper assembly, no further adjustment should be required.

## LUBRICATION

The New Holland Model 68 Baler is designed to require a minimum of lubrication. However, regular lubrication is the best insurance against delays and repairs, and greatly increase the life of the machine.

Under normal conditions the baler should be lubricated after every 1,000 bales of operation.

A grease gun is provided with your Hayliner 68 to enable you to lubricate your machine quickly and easily.

Following is a list of the 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.

### PTO DRIVE

1. & 2. Figure 2—Over-riding clutch pins. Oil sparingly with light oil.
3. Figure 2—Telescoping shaft
4. Figure 2—Rear Universal Joint
5. Figure 3—Center Universal Joint
6. Figure 3—Front Universal Joint

### ENGINE AND PTO BALERS

7. Figure 3—Jack
8. Figure 4—Rear connecting rod
9. Figure 4—Belt tightener. Oil with motor oil.
10. Figure 5—Flywheel shaft. Do not force, grease only until slight pressure can be detected.
11. Figure 5—Gearbox. Check oil level every 5000 bales, fill to level plug with a good grade hypoid lubricant. SAE 90.
12. Figure 5—Ground wheels. Pack once each season with wheel bearing grease.
13. Figure 5—Needle safety latch.
14. Figure 6—Left pickup reel shaft.
15. Figure 6—Pickup pivot arm.
16. to 32. Figure 7—Knotter assembly
33. Figure 7—Left needle yoke pivot
34. Figure 7—Right needle yoke pivot
35. Figure 8—Support Bearing

36. & 37. Figure 8—Pickup drive over-riding clutch pins. Oil sparingly with light oil.
38. Figure 9—Sprocket
40. Figure 9—Tine bar. Grease sparingly.
41. Figure 10—Right pickup reel shaft
42. Figure 10—Pickup wheel
43. Figure 11—Feeder drive gearbox. Maintain oil level at check level plug. Use SAE #90 oil.

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

Oil roller chains with light oil or a mixture of 50% No. 10 motor oil and 50% kerosene. In extremely abrasive conditions it may be advisable to run roller chains without oil.

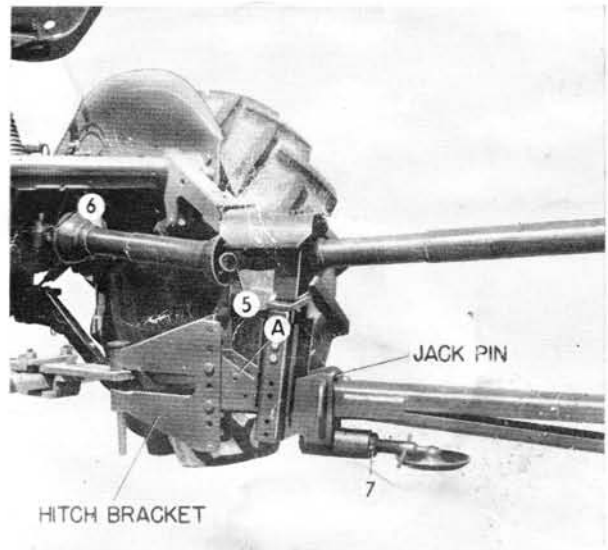


FIGURE 3

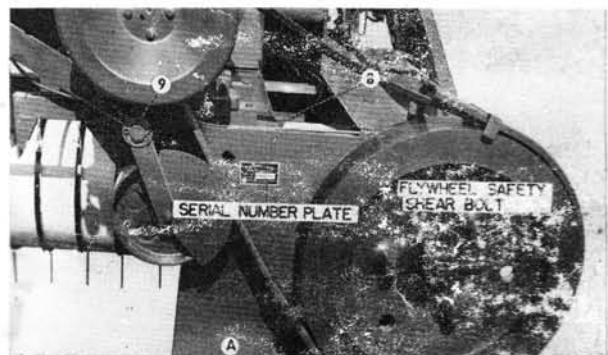


FIGURE 4



# LUBRICATION

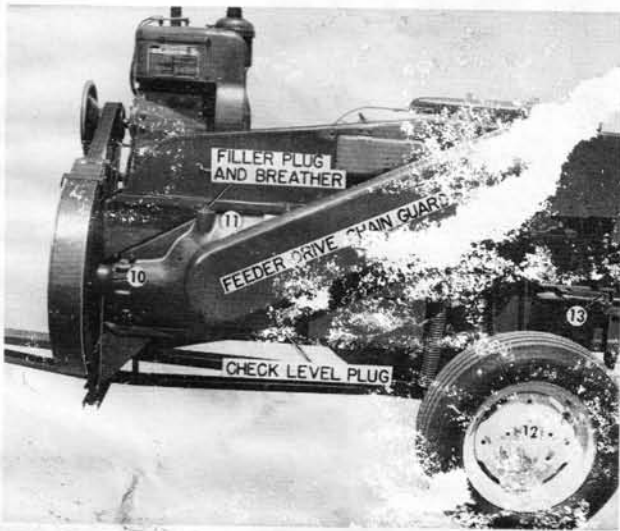


FIGURE 5

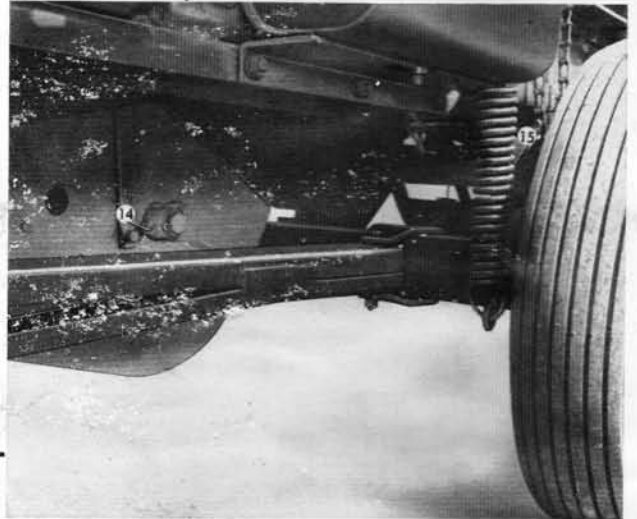


FIGURE 6

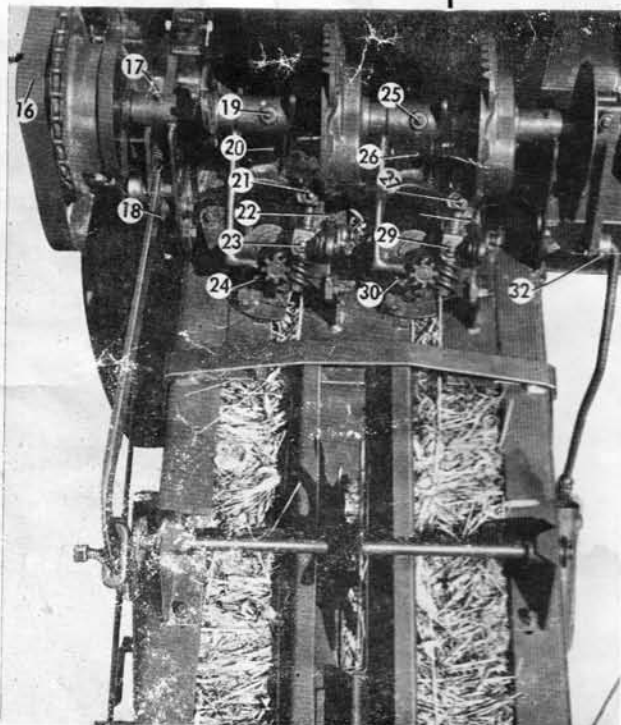


FIGURE 7

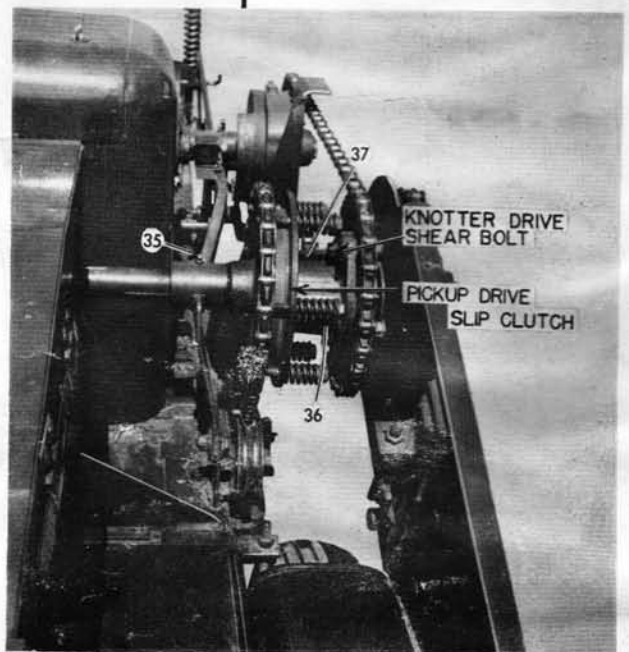


FIGURE 8

## LUBRICATION

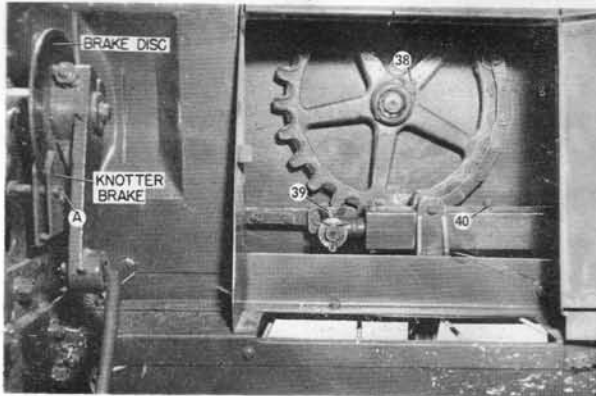


FIGURE 9

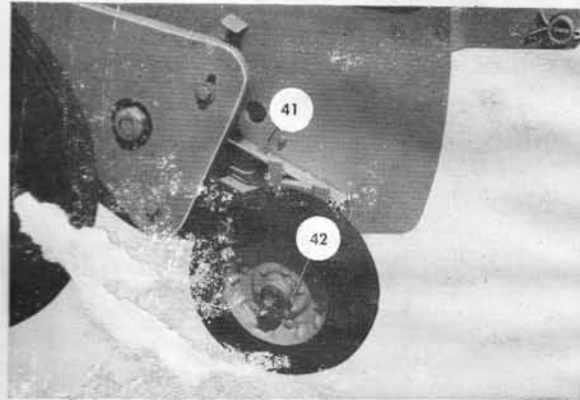


FIGURE 10



FIGURE 11

Numerous parts of the New Holland Superhayliner 68 Baler are identified in Figure 12. Study this picture carefully—it will help you to understand the names of different parts as they are used throughout this manual.

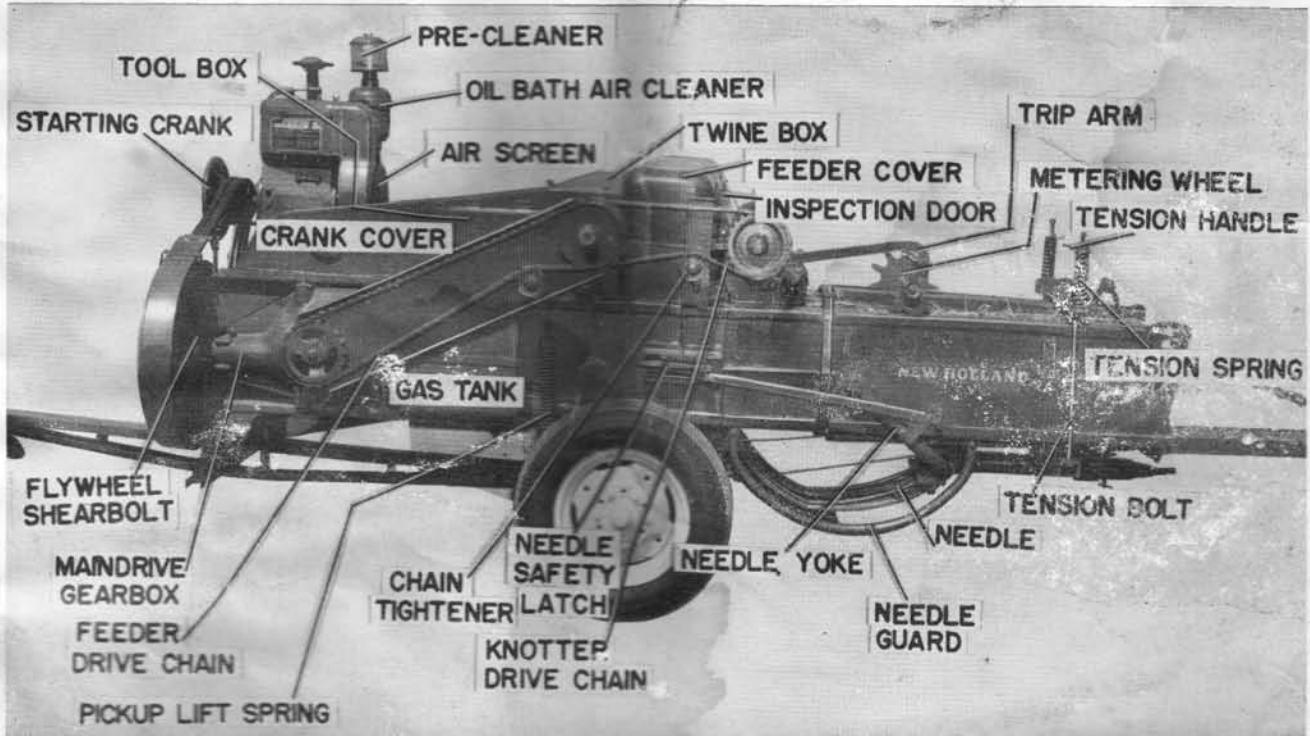


FIGURE 12

## ATTACHING THE BALER TO THE TRACTOR

The hitch bracket, see Figure 3, is adjustable and should be adjusted so that the bale chamber is as-nearly level as possible when tractor and baler are both on a level surface. The hitch bracket can be raised or lowered to accommodate various tractor drawbar heights.

## JACK

Assembling instructions are included with the jack kit. Figure 3 shows the jack in the proper raised or baling position. To place the jack in standing position, remove jack pin, rotate jack into vertical position and install jack pin at point A, Figure 3.

## STARTING THE BALER

After the baler has been properly checked and lubricated, and is attached to the tractor correctly, make sure that all persons and tools are clear of the machine. Begin to drive the flywheel slowly. After the baler has made several revolutions and it is certain that all parts are free moving, operate baler at approximately half speed for a short time.

Operate the baler for ten or fifteen minutes with the engine in the fast idle position, and gradually increase speed until baler is operating at 70 strokes per minute.

Operate the baler for a short time at full speed before starting to bale.

## THREADING THE BALER

Place four balls of twine in the twine box as shown in Figure 13. Tie ball A and B together as shown in Figure 13. Tie ball C and D together in the same manner.

Thread twine from the center of ball B through point E, Figure 13, and from the center of ball C through point F, Figure 13, in twine box.



FIGURE 13

Twines then go through eyes and tension clip at point A, Figure 14, twine guide point B, Figure 14, then one twine goes through the guide under the tip of the right needle and the other through the guide under the tip of the left needle, then up through the eye of the right and left needles respectively, points C and D, Figure 14.

Tie the ends of twine fast at any convenient place as the brace, point E, Figure 14.

Be sure twine passes under the needle guard as shown in Figure 14. If twine is installed incorrectly, it will be torn when baling is attempted.

At this point it is advisable to feed material (hay or straw) into the baler until the bale chamber is full and the metering wheel trips 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, point E, Figure 14.



FIGURE 14

## 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 Fig. 12. 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.**

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.

### BALE LENGTH

Bale length is regulated by the metering wheel which is mounted on the bale chamber behind the knotter assembly (Figure 15). As compressed hay passes through the bale chamber, the metering wheel is turned, the trip arm is forced upward and the knotter is automatically tripped.

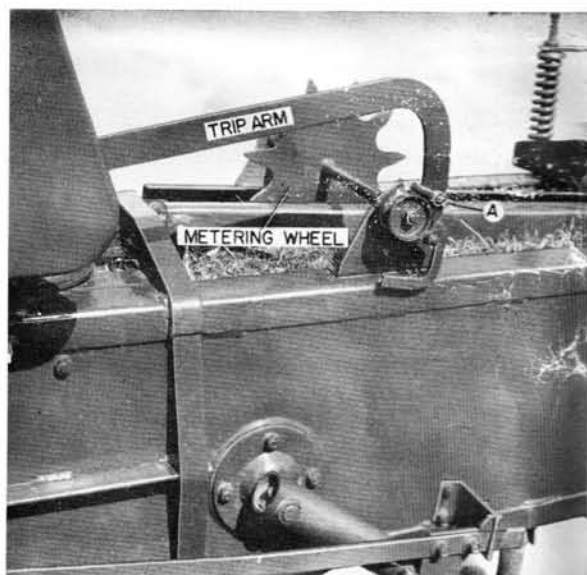


FIGURE 15

The length of the bale can be varied from 12 to 52 inches simply by moving the set collar A, Figure 15 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.

### 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 but allow it to wear a little. The action of the twine upon 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 setting of the needles and the twine fingers and eliminate excess vertical clearance between the top of the plunger and the top of the bale chamber before changing 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 rough edges on the knotter or the bale chamber, but rather to mis-adjustment, study the section on knotter adjustment carefully before attempting to correct the difficulty.

### NEEDLE SAFETY LATCH

The needles are protected against breakage by a needle safety latch which moves in front of the plunger when the needles enter the bale chamber, see Figure 16.

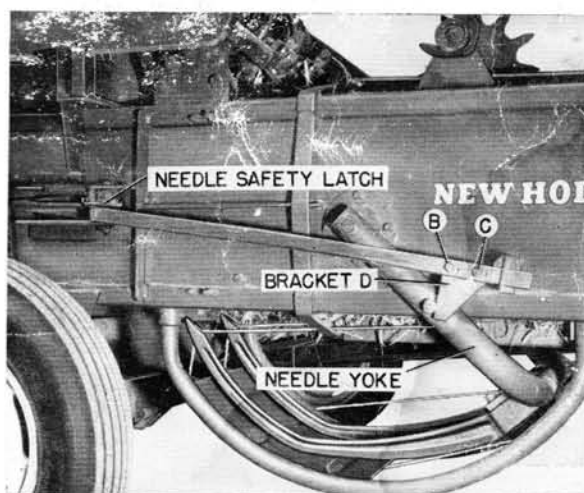


FIGURE 16

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. **Caution** — never pull the needle safety latch out of the bale chamber by hand. Always pull the needle safety latch out of the bale chamber by pulling the needle yoke back to its home position. Failure to remove the latch in this manner may result in needle breakage. Adjust the needle safety latch by loosening the bolts B and C Figure 16, and moving bracket D to such a position that it holds the needle safety latch completely out of the bale chamber when the

## SAFETY FEATURES

### Needle Safety Latch (Cont'd.)

needles and needle yoke are at rest, but allows the latch to enter the chamber when the tips of the needles enter the chamber.

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 of the bale chamber before the plunger strikes it. At this time the plunger would be moving toward the rear of the machine with a charge of material when actually baling.

### OVERHEATING SAFETY SWITCH



FIGURE 17

**Overheating Safety Switch** protects engine from any damage which might result from engine overheating. It should never be tampered with.

### FLYWHEEL SHEAR BOLT

The flywheel shear bolt, see Figure 18, protects the gearbox, plunger and related parts from damage. It is a special 5/16 x 2 inch 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 serious damage to the baler.

Figure 18 identifies the operating controls on the Wisconsin Model TFD air cooled engine—choke, stop switch, oil cap, throttle and hand primer.

14

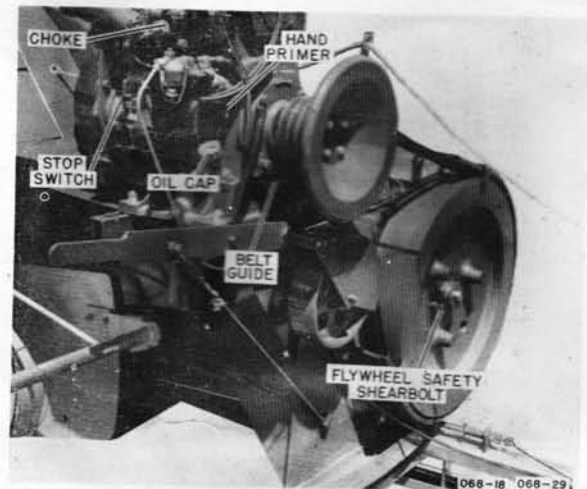


FIGURE 18

### KNOTTER DRIVE SHEAR BOLT

The knotter drive shear bolt protects the knotters, needle yoke and related parts from damage. It is a standard 5/16" x 1 1/4" hardware bolt and can be replaced by any standard hardware bolt purchased from a local hardware store.

When and if this bolt shears, determine the cause for shearing, remove it and if the knotter drive chain has not broken or slipped, rotate the flywheel clockwise until the bolt holes align and install a new shear bolt.

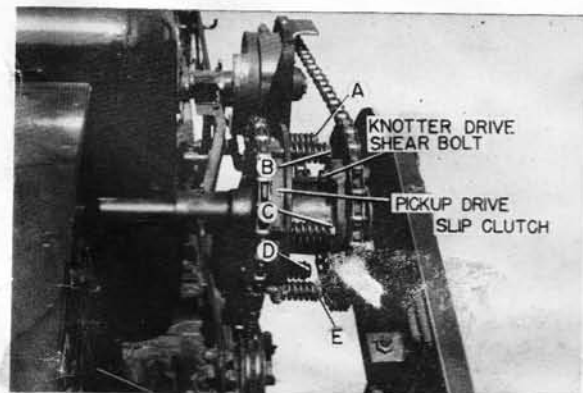


FIGURE 19

No further timing should be necessary unless the knotter drive chain has broken or slipped on the sprockets. If the drive chain or any other parts have broken, refer to the section on needle drive timing and re-time needle drive according to the instructions given.

### PICK-UP DRIVE SLIP CLUTCH

The pick-up drive slip clutch is designed to protect the pick-up and related parts and to deliver a uniform flow of material into the feeding mechanism, see Figure 19. For best performance and maximum capacity it should be adjusted so that a uniform flow of material is carried into the machine and so that it **slips when the machine is over fed** or when an obstruction is encountered by the pickup teeth.

Definite signs of overfeeding are:

1. Continuous telescoping of feeder tine bar.
2. Insufficient material in left side of bale, even though feeder tines have been properly adjusted. See Page 18.
3. Low capacity.

When the slip clutch is too tight, too much material can be forced into the feeder area and these signs of over-feeding result. After the pickup and feeder areas are both overloaded, and the feeder tine bar continuously telescopes, loss of capacity will result.

Note: After the machine has been stored for any length of time, make certain that the slip clutch is freed to operate before using the baler.

To adjust — turn bolts A, B, C, D, and E Figure 19. Turn clockwise to tighten and counter-clockwise to loosen.

### PICK-UP WHEEL

The pick-up wheel bracket is adjustable. See Figure 20. For normal conditions it should be adjusted so that the pick-up teeth clear the ground by about one inch. In extreme conditions, this clearance may be changed.

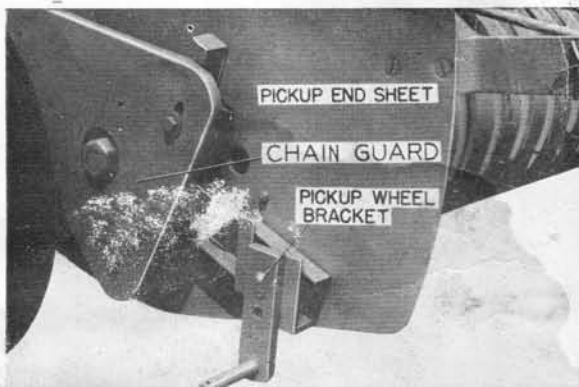


FIGURE 20

The bolt which secures the pick-up wheel bracket is accessible from the inside of the pick-up end sheet.

### WIND GUARD

The wind guard is designed to hold material firmly onto the pick-up teeth to achieve positive

feeding. The spring, Figure 21, controls the pressure the windguards exert on material being fed. To increase or decrease the pressure, remove the cotter key securing the spring holder, rotate the holder in the desired direction and insert the cotter pin through slot in spring holder and wind guard assembly.

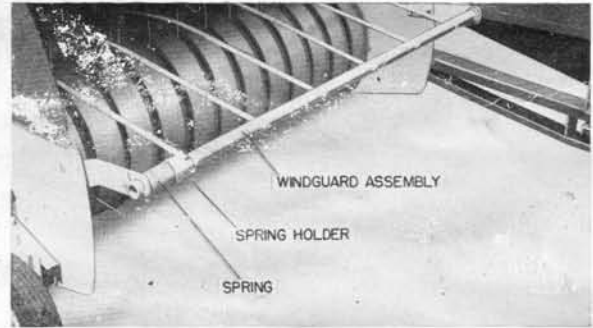


FIGURE 21

### PICK-UP LIFT SPRING

The pick-up lift spring, Figure 22, carries most of the weight of the pick-up—provides a floating action. It should be adjusted at the point indicated on Figure 22, until there is approximately 10 to 15 pounds weight on the pick-up wheel.

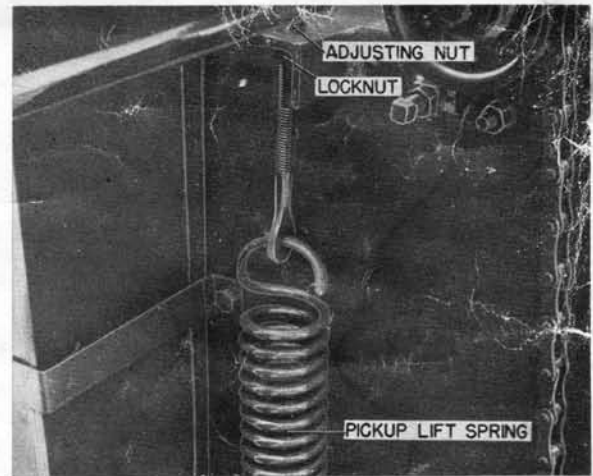


FIGURE 22

### TINE BAR TIMING

The tine bar is timed with respect to the movement of the plunger. This is necessary in order to feed uniformly into the bale chamber and prevent the plunger from striking the feeding tines.

Timing marks on the Model 68 Baler make it very easy to check for proper tine bar timing. Proceed as follows:

Turn the flywheel until the main crank is in a vertical position as shown in Figure 23.

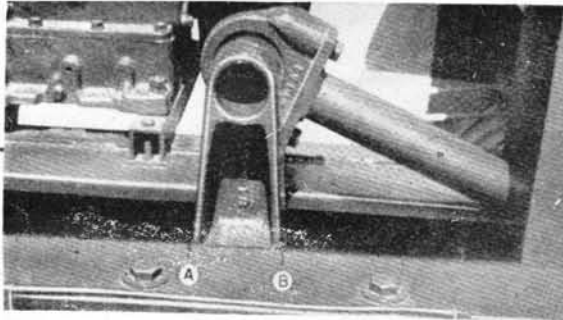


FIGURE 23

This position is marked by two small arrows stamped into the bale chamber at points A and B, Figure 23.

At this time the tine bar drive pivot, point A, Figure 24, should be between the two timing marks at points B and C, on the rear feeder support angle.

If the tine bar drive pivot is not between the timing marks as shown in Figure 24, the tine bar assembly is out of time and must be re-timed.

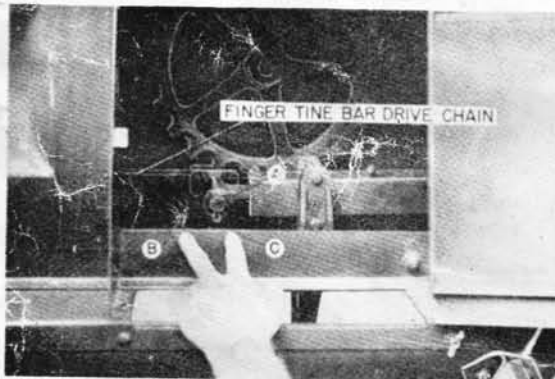


FIGURE 24

To time the tine properly proceed as follows:

1. Remove the feeder drive chain guard. See Figure 5.
2. Remove the feeder drive chain. See Figure 12.
3. Turn the flywheel until the main crank is in a vertical position as shown in Figure 23.
4. Move the tine bar into the position shown in Figure 24.
5. Install the feeder drive chain with the top chain as tight as possible and adjust chain tightener.
6. Turn the flywheel until the main crank has made one complete revolution and then re-check timing.
7. Install chain guard.
8. NOTE: ALWAYS CHECK NEEDLE DRIVE TIMING AFTER ADJUSTING TINE BAR TIMING.

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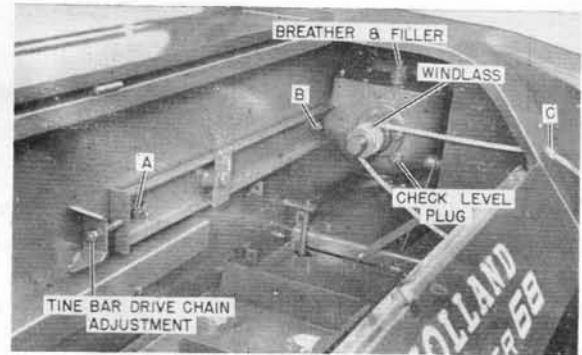


FIGURE 24A

The feeder tine bar drive chain, see Figure 24, should be kept tight at all times. To adjust it, loosen bolts A and B Figure 24A and adjust at indicated "Tine bar drive chain adjustment". When this chain is properly adjusted it can be deflected  $\frac{5}{8}$ " midway between the sprockets using a force of 100 pounds.

#### 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  $\frac{1}{4}$ "— $\frac{3}{4}$ ".

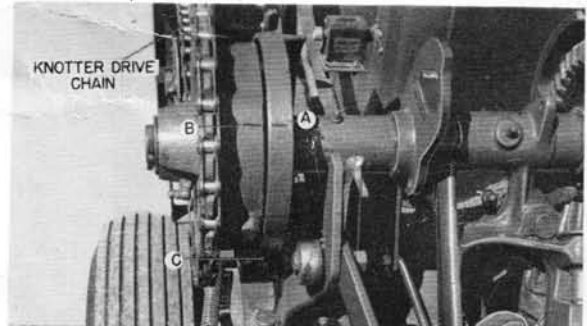


FIGURE 25

This can be checked very easily by means of timing marks provided on the Model 68 Baler. To check—rotate the flywheel until the main crank is in a vertical position as shown in Figure 23. Be certain the knotter clutch pawl is tight against the knotter stop, see C, Figure 25.

At this time the marks at points A and B Figure 25 should align within  $\frac{1}{2}$  inch.

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

1. Remove the knotter drive chain.
2. Turn the flywheel counter-clockwise until the crank is in a vertical position between the timing marks, "A" and "B" (Figure 23) 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 (point A and B, Figure 25).

5. Install the knotter drive chain, position the chain tighteners, 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. Engage the knotter clutch and turn the knotters through a complete cycle to make sure that the needles enter the plunger slots at the proper moment. **Keep the knotter drive chain tight at all times to maintain the proper needle timing.**

#### Knife Adjustment

The knives should be adjusted so that there is approximately 1/32 inch clearance at point A Figure 26 between the knife on the plunger and the shear plate which is bolted to the side of the bale chamber.

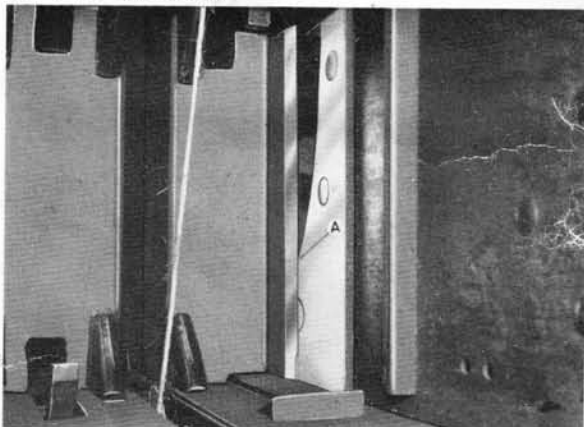


FIGURE 26

On the left side of the bale chamber inside there is an angle iron both top and bottom in which the plunger slides. When the knives are adjusted, the entire plunger, including the knife, is moved toward or away from the shear plate by moving these angle irons—plunger slides.

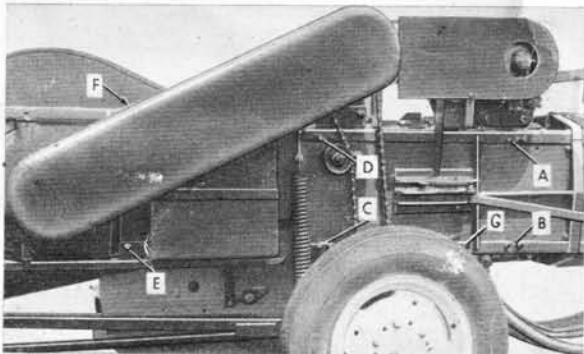


FIGURE 27

This adjustment can easily be made by adjusting six sets of bolts at points A, B, C, D, E and F, and one set screw at point G, Figure 27. One bolt of each set is used to pull the plunger slide away from the plunger, while the other is used to push the slide toward the plunger. By manipulating these two bolts, it is possible to locate the plunger slides properly and hold them securely from moving in either direction.

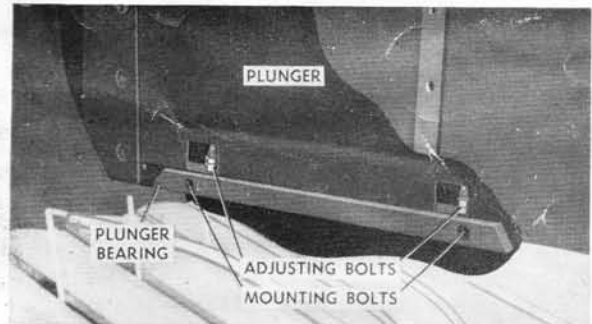


FIGURE 28

#### Plunger Adjustment

It is important that the vertical clearance between the top of the plunger and the top of the bale chamber is kept to a minimum. Excess clearance may result in tying problems caused by material interfering with the twine as it is being placed in the knotters. Remove excess vertical play from the main plunger by loosening the bearing mounting bolts, see Figure 28, and tightening the four plunger bearing adjusting bolts until the vertical clearance on top of the top plunger bearings is approximately 1/16 inch.

The plunger bearing adjusting bolts are easily accessible through slots in the side of the bale chamber.

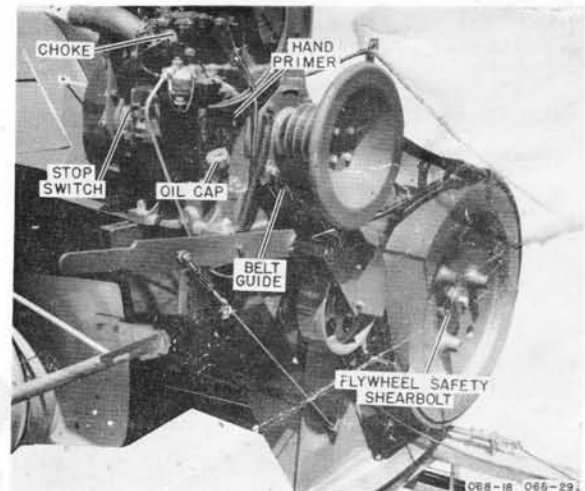


FIGURE 29



### Drive Belts

New "V" belts may tend to drag on the flywheel until they wear slightly. The drive belts will also tend to drag on the flywheel when the belt tightener is released if the belt guide under the drive sheave of the engine is not installed properly. Adjust the belt guide so that the belts just clear the guide about  $\frac{1}{8}$ " when the belt tightener is engaged.

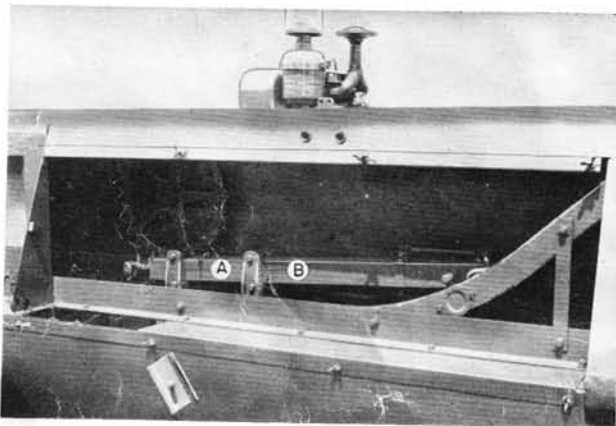


FIGURE 30

### Bale Shape

The tines are located on the tine bar at the factory in a position which will produce uniform bales in most baling conditions. If circumstances are encountered where too much material is being placed in the right side of the bale, this condition may be improved by moving the left tine, see A Figure 30, to the left as far as possible (be sure left tine does not strike end of tine slot in top of the bale chamber) and the center tine, see B Figure 30 to the right slightly. Move the

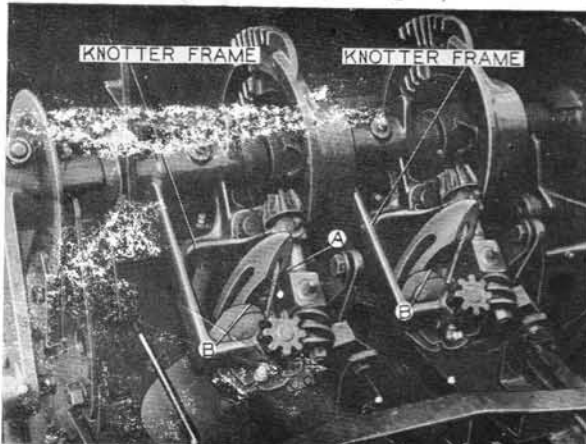


FIGURE 31

center tine, B Figure 30, in intervals of 1" and test the machine after each setting to determine what location produces the most uniform bale in a specific condition and material.

In certain conditions satisfactory results may be obtained by reversing the above procedure. Trial will determine the best position for most uniform bales.

After adjusting feed tines rotate baler through one complete cycle to be certain that the tines do not strike at any point throughout the cycle.

### 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 31, and clear the twine disc  $\frac{1}{8}$  inch at point B, Figure 31.

Needles are adjusted to rub lightly on the knotter frames by loosening bolt A and cap screws B and C, Figure 32, move the needle sideways to its proper location and tighten bolts.

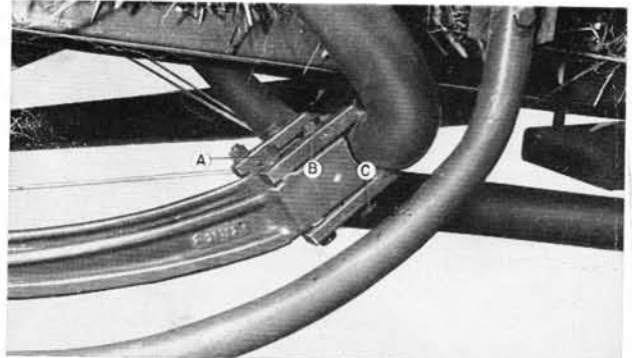


FIGURE 32

Clearance between the needle and twine disc is **increased** by **loosening** cap screw **C** and **tightening** cap screw **B**. This clearance is **decreased** by loosening cap screw B and **tightening** cap screw C, Figure 32.

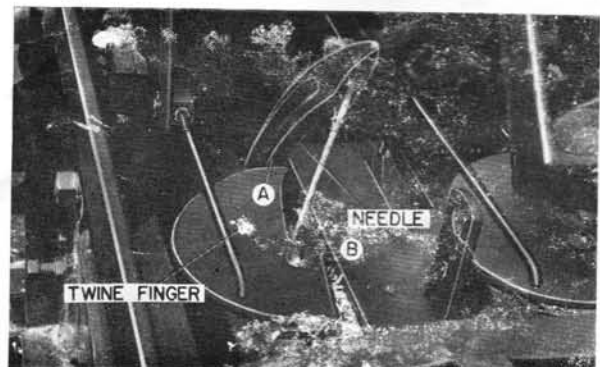


FIGURE 33

### Twine Finger

To adjust the twine fingers properly, 1. Trip the knotters and rotate until the point of the twine finger is just passing the inner radius of the needle. See Figure 33. At this position loosen screw B, Figure 33, and move the twine finger forward or back so there is 1/32 inch clearance at point A, Figure 33, between the tip of the twine finger and the needle.

2. Rotate the knotters until they are in their home position. Adjust nuts A and B, Figure 34, 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.

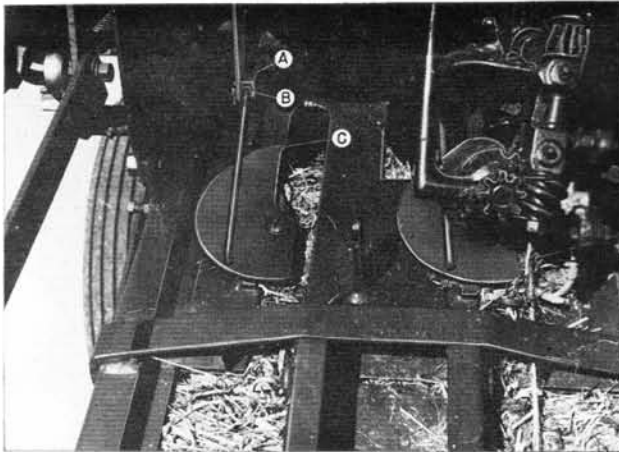


FIGURE 34

**Note: The needle and twine finger adjustments should always be made in the order outlined above.**

### Knotters Brake

The knotters brake, Figure 9, is designed to hold the knotters from drifting out of their home position during the time from which the knotters are tripped until they are driven by the knotters clutch gear. The spring loaded brake linings are adjustable at point A, Figure 9 and should be adjusted to the point that they perform their duties satisfactorily. If adjusted too tight, excessive knotters 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 shearbolt breakage will result due to the knotters rotating slightly and allowing the needle safety latch to enter the bale chamber when it should not.

### Metering Wheel Location

The metering wheel should be located so that when the trip arm is moved to its rearmost position by the cam on the knotters clutch disc, there is 1/8 inch clearance between the trip arm

and the friction disc as indicated by the cut-away view at point A, Figure 35. This provides clearance so that the trip arm will reset after each knotters cycle and make uniform length bales.



FIGURE 35

### PICKUP CAM

The pickup cam, bolted inside the right pickup end plate as indicated by dotted lines in Fig. 35 A is adjustable.

It is shipped from the factory in a position that is satisfactory for most baling conditions. However when a feeding problem is encountered due to the pickup fingers pulling material down between the pickup guards this cam may be rotated.

1. Remove the pickup drive chain guard, see figure 20, chain and idlers.
2. Remove bolts A, B and C Figure 35A (these may be removed easier by also removing the pickup drive sprocket).
3. Rotate the cam clockwise until the additional set of holes in the cam align with mounting holes.
4. Install bolts A, B and C Figure 35A.
5. Install pickup drive chain, idlers and chain guard.

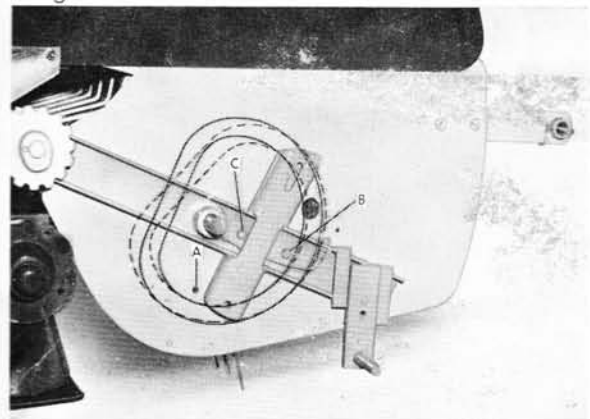


FIGURE 35A

## KNOTTER ADJUSTMENT

### TWINE DISC

The twine disc setting is determined by the positioning of the notch in the disc to the twine holder point A, Fig. 37. The top of the notch should be flush with the bottom of the twine holder **when the disc contains twine**. If the twine disc is advanced too far the twine will not be caught in the twine disc.

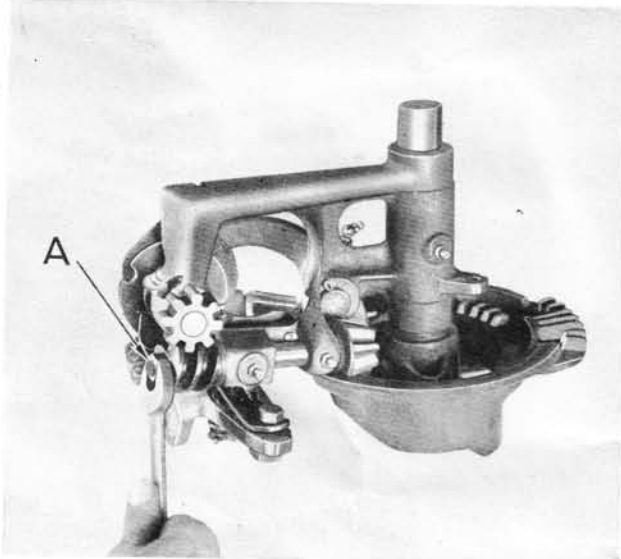


FIGURE 36

In order to adjust the disc to this position, loosen nut "A" several turns as shown in Fig. 36. Tap the nut end of the shaft and turn the disc to the setting of the notch shown in Fig. 37.

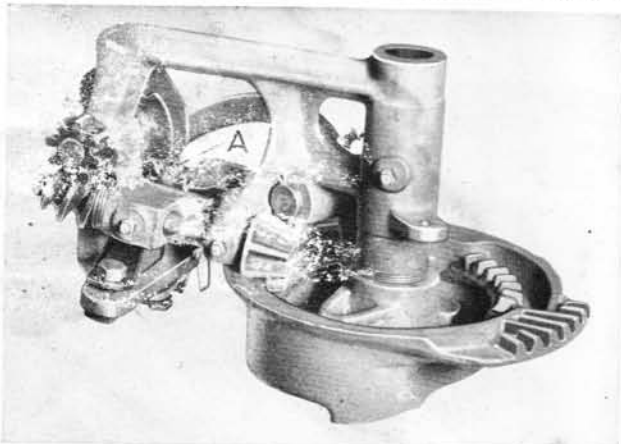


FIGURE 37

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.

### TWINE HOLDER

The twine holder "A" Fig. 38 is a double plate which holds the twine in the twine disc. The holder is retained in position by a flat spring "B" 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.

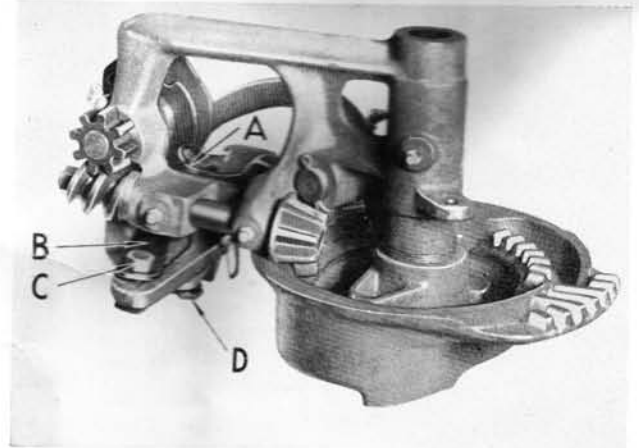


FIGURE 38

### 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. 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 the bill hook adjusting screw "D" Fig. 38, slightly.

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 (Fig. 39). To correct this, file the sharp end slightly until the tongue is rounded as shown in Fig. 40. This will allow the tongue to close tighter on the twine.

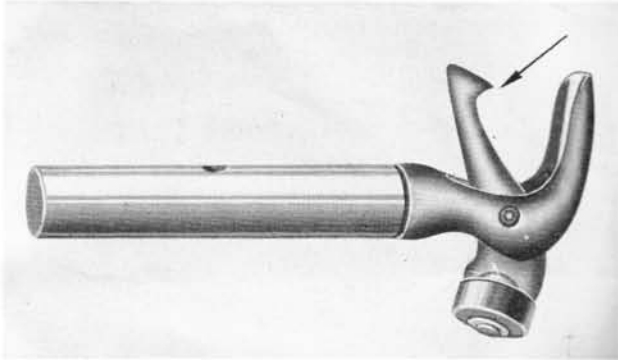


FIGURE 39

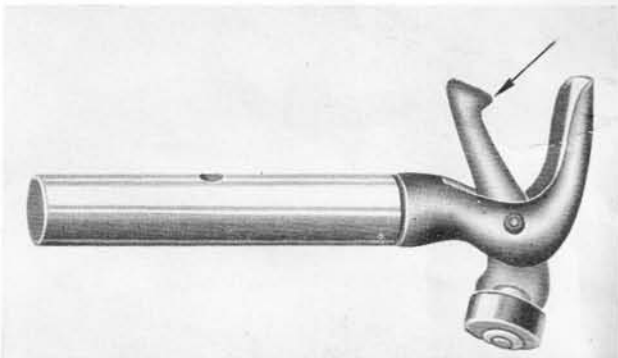


FIGURE 40

Figure 41 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 41

## 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 Fig. 42.

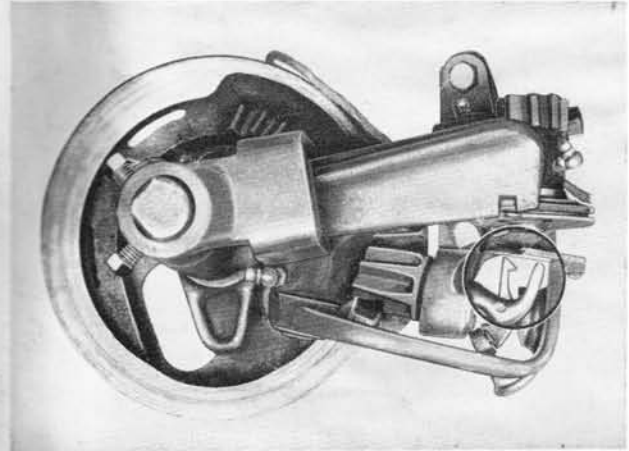


FIGURE 42

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" Fig. 43. 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.

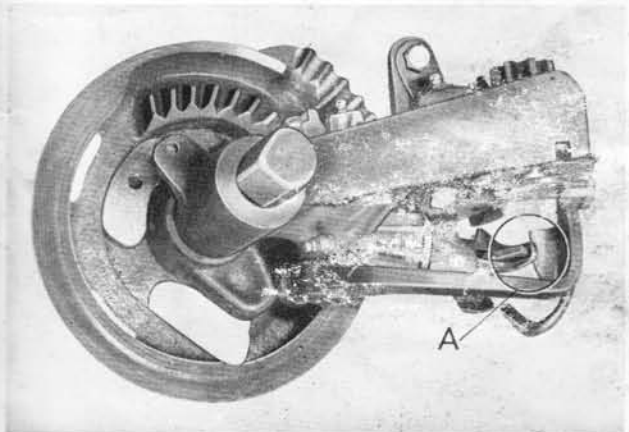


FIGURE 43

When the half-moon shaped stripper flange does not rub against the bill hook heel it will pass by the twine as shown in Fig. 44 and, as a result, the knot will not be removed from the bill hook.

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  $\frac{3}{8}$ " and not more than  $\frac{1}{2}$ " when the knife arm is at its farthest point of movement.

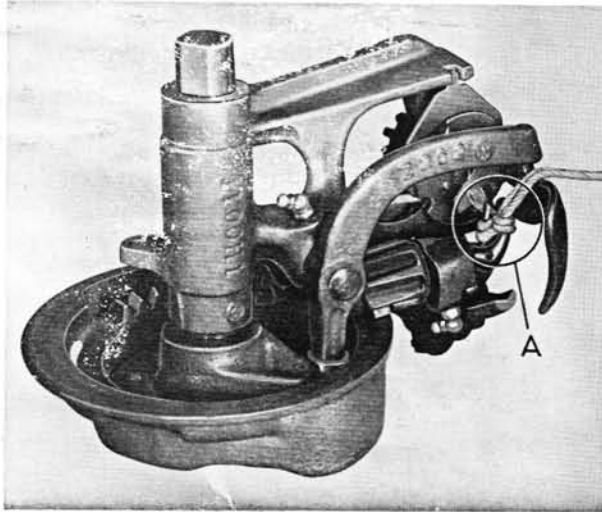


FIGURE 44

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

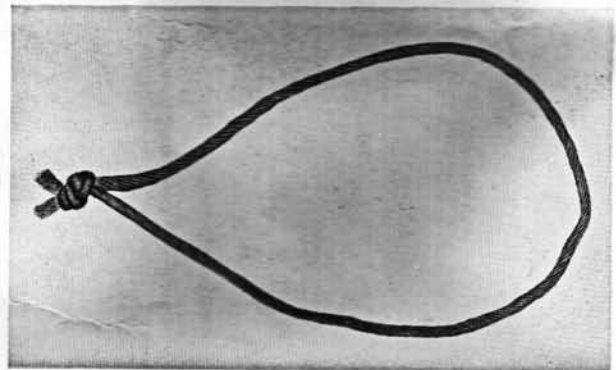
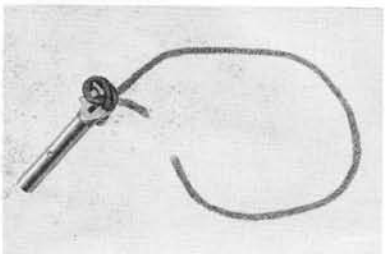
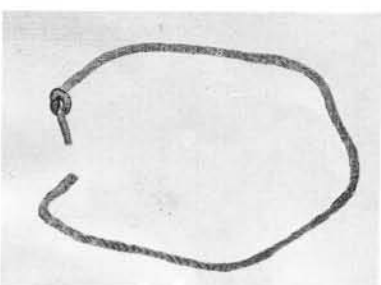



FIGURE 45

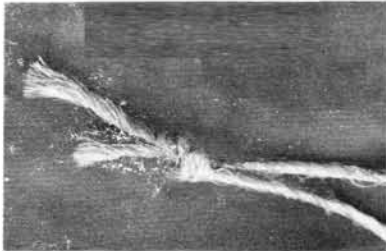
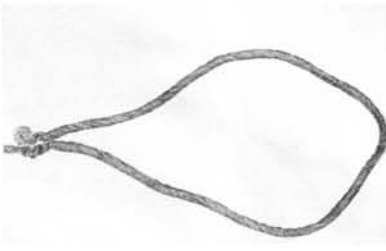

## TROUBLE SHOOTING

### 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
<p>1. Knots hanging on bill hook.</p>  <p style="text-align: right;">FIGURE 46</p>	<p>Too much tension on bill hook cam. Rough bill hook.</p> <p>Bill hook cam, binding on bill hook adjusting screw. Knife arm stripper does not contact back of bill hook. Knife arm does not travel far enough.</p>	<p>Loosen bill hook cam adjusting screw. Smooth off all rough edges with emery cloth and fine file. File edges smooth in elongated hole in bill hook cam. Bend knife arm stripper so it touches bill hook lightly. Increase travel on knife arm by bending.</p>
<p>2. Knot tied only on one end of twine.</p>  <p style="text-align: right;">FIGURE 47</p>	<p>Twine fingers too far back from needle slot. Too much clearance between twine fingers and needles.</p> <p>Excessive clearance between top of plunger and bale chamber. Plunger dogs not entering bale chamber.</p> <p>Twine disc timing.</p> <p>Bill hook tongue fails to open wide enough.</p> <p>Bent bill hook tongue.</p> <p>Badly worn twine finger cam.</p>	<p>Adjust twine fingers (See page 19). Check the twine finger lever for possible bends or broken welds. Check the mounting bolt to make sure that it is tight. Adjust or replace plunger bearings. Clean hay and dirt from between plunger dog springs and replace if broken.</p> <p>Advance or retard timing of disc so that both strands are caught in bill hook. (See page 20). Knotter bill hook roller has worn groove in knotter frame. Replace frame or rebuild groove with weld. Straighten tongue, or replace bill hook. Replace.</p>
<p>3. Twine cut or broken, but no evidence of a knot is present.</p>  <p style="text-align: right;">FIGURE 48</p>	<p>Tension spring on twine holder does not allow enough twine to slip through holder to form knot. Rough edges on twine holder or disc.</p> <p>Twine tension spring too loose allowing twine to slip out of disc when bill hook turns.</p>	<p>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.</p>

## TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTION
<p>4. One end of twine longer than other or loop in one twine end.</p>  <p style="text-align: center;">FIGURE 49</p>  <p style="text-align: center;">FIGURE 50</p>	<p>Dull twine knife.</p> <p>Insufficient tension on twine holder.</p> <p>Insufficient lift on knife arm.</p> <p>Bale weight too light.</p>	<p>Sharpen blade on knife arm.</p> <p>Tighten twine holder tension spring.</p> <p>Increase lift on knife arm. (See page 22).</p> <p>Increase weight by tightening bale tension screws.</p>
<p>5. Twine frayed or broken approximately 1/2" back of knot.</p>  <p style="text-align: center;">FIGURE 51</p>	<p>Insufficient clearance between back of bill hook and inside face of knife arm.</p>	<p>Bend knife arm so bill hook will revolve freely. However, when the knife arm rises, the stripper arm must touch bill hook.</p>
<p>6. Twine disc does not stay in time.</p>	<p>Twine disc pinion 11840 Driv-Lok pin sheared.</p> <p>Shaft in twine disc turns in hub.</p> <p>Adjustable knotter worm slips on shaft.</p>	<p>Replace Driv-Lok pin.</p> <p>Replace twine disc assembly.</p> <p>Locknut not tight enough.</p>

## TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTION
Shearing fly wheel safety bolts.	Baling too heavy. Safety bolt nut loose. Improper needle timing. Needle safety latch out of adjustment. Dull knives. Excessive clearance between knives. Pick-up drive slip clutch not operating. Worn knotter clutch gear. Worn or improperly adjusted knotter brakes.	Loosen bale tension. Tighten safety bolt nut securely. Retime the needle drive. Adjust properly, see page 13. Sharpen knives. Adjust knives. Be sure clutch is not frozen, adjust properly. Replace. Clean and adjust brakes, replace worn linings.
Failure to pick up material clean.	Pick-up too high from ground. Too many pick-up fingers bent or broken. Ground speed too fast. Pickup slip clutch slipping.	Raise auxiliary pick-up wheel.. Replace broken and bent pick-up fingers. Slow down. Adjust, see page 15.
Shearing knotter drive bolts.	Dirty knotter Improper adjustment of knotter brakes. Too much end play in knotter stack.	Clean knotters. Adjust brakes. Remove end play in knotter stack.
Mis-shaped bales 1. Too much material in left of bale. 2. Too much material in right side of bale.	Center feed tine too far toward right end of tine bar. Irregular feeding of heavy slugs. Left feed tine too far toward left end of tine bar. Over-feeding (especially semi-cured material). Broken feeding tines. Windrows too large or too small. Pick-up drive slip clutch too tight. Feeder tines improperly adjusted.	Adjust center tine to left until well shaped bale is secured. Feed more uniformly. Adjust left tine toward right Feed slower, adjust pick-up drive slip clutch. Replace. Rake uniform and medium sized windrows. Adjust properly. Adjust left tine to left and center tine to right.



## TROUBLE SHOOTING

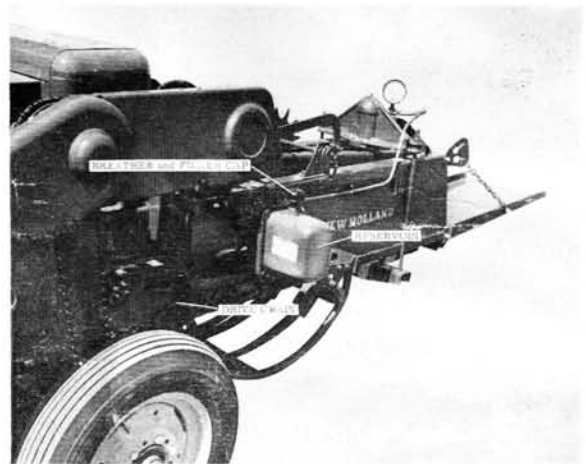
PROBLEM	POSSIBLE CAUSE	CORRECTION
Ragged Bales	Dull Knives. Improper knife clearance.	Sharpen knives. Adjust plunger slide angles.
Pick-up Finger Striking Ground At All Times.	Insufficient tension on pick-up spring. Improper adjustment of pick-up wheel.	Tighten pick-up spring. Move mounting bracket of pick-up wheel lower.
Needle Breakage.	Solid objects in needle slots. Mis-adjustment of needle Worn knotter clutch gear together with mis-adjustment 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. See Fig. 35. Feed uniformly. Replace worn parts.
Pickup fingers fail to feed material into feeder area.	Bent and broken teeth. Teeth not retracting properly.	Replace damaged teeth. Adjust pickup cam, see page 19.

### HYDRAFORMATIC BALE TENSION CONTROL (Optional)

Fill the pump reservoir with a high quality motor oil. Use S. A. E. #30 when operating the baler in temperatures above 70 deg. F. For cooler temperatures, thin the oil with kerosene until it flows freely. An oil mixture containing as much as 50% kerosene may be necessary for temperatures below 0 deg. F.

**Car 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 tank, pour the oil through a 180 mesh wire screen placed in the large end of a funnel. Never use a cloth strainer because all cloth contains lint which is harmful to the hydraulic system.



## HYDRAFORMATIC BALE TENSION CONTROL—(Continued)

### STARTING TO BALE

Turn the control valve counter-clockwise 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,  $\frac{1}{4}$  to  $\frac{1}{2}$  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

The breather-filler cap is a combination air filter and tank breather which prevents foreign material from entering the hydraulic system and allows air to enter or escape to accommodate the rise or fall of the oil level in the tank. **It is absolutely necessary that this cap be kept clean if it is to do its work properly.**

Remove and clean the breather-filler cap at least after every five days of operation. Wash the cap in kerosene or gasoline and dip it in clean oil before replacing it on the pump. Note: In extremely dusty conditions, more frequent cleaning of the breather cap is necessary.

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.

## SERVICE CHART

PROBLEM	POSSIBLE CAUSE	CORRECTION
Pump not delivering oil.	Not enough oil in tank. Suction oil filter clogged.	Add oil as necessary. Remove suction filter and clean thoroughly. Periodic cleaning is recommended.
Pump not developing sufficient pressure.	Sludge and dirt in unit. Valve surfaces scored by abrasive matter. Leak in hydraulic system connections or leaking cylinder.	Flush and clean thoroughly. Replace all worn or scored parts. Eliminate all leaks.
Pump noisy.	Too light weight oil. Partially clogged filter. Breather-filler cap plugged. Air in hydraulic system. Drive chain too tight.	Change to heavier oil. Remove, flush, clean filter thoroughly. Remove breather cap, flush and clean. Bleed system at highest point. Check chain tightness.

## BALER MAINTENANCE

### ENGINE CARE

Use a good grade motor oil in the engine at all times.

Check the oil level after every eight hours of operation.

Change crankcase oil after every fifty hours of operation.

Service the oil bath of the air filter daily.

Fill the oil reservoir of the air filter to the level indicated on the side of the cup with the same type oil as used in the crank case.

**IMPORTANT:** IN NORMAL OPERATING CONDITIONS REMOVE THE ENGINE COVERS WEEKLY AND THOROUGHLY CLEAN THE DIRT AND DUST FROM THE COOLING FINS OF THE ENGINE.

**NOTE:** MORE FREQUENT CLEANING MAY BE NECESSARY IN EXTREMELY DIRTY CONDITIONS. FAILURE TO KEEP THE AIR PASSAGES CLEAN WILL RESULT IN OVERHEATING OF THE ENGINE WITH CONSEQUENT DAMAGE TO THE CYLINDER WALLS.

### MAIN GEARBOX

Use SAE #90 hypoid lubricant. 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 GEARBOX 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.

### DRIVE BELTS

Replace worn drive belts with a complete new set since the sets of these belts are matched for length. The life of all the belts will be greatly shortened if only a single belt is replaced at a time.

A liberal application of talcum powder may be used to prevent a new belt from sticking to the sheave. Do not use belt dressing on "V" belts at anytime. Keep all belts free of grease and oil.

### P.T.O. DRIVE

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

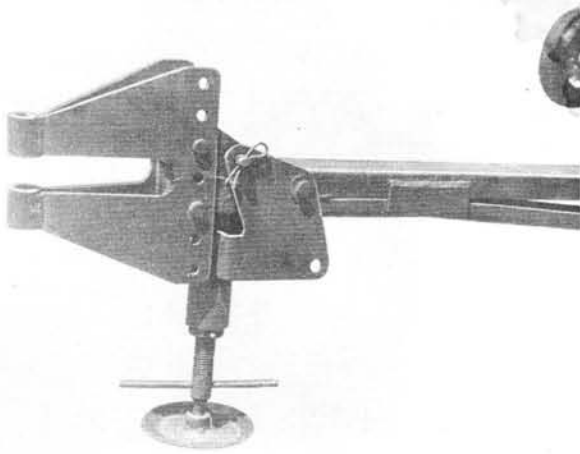
Lubricate the universal joints of the P.T.O. drive carefully with one or two pumps of the hand gun twice a week. Caution: Excessive lubrication may damage the grease seals.

## STORING THE BALER

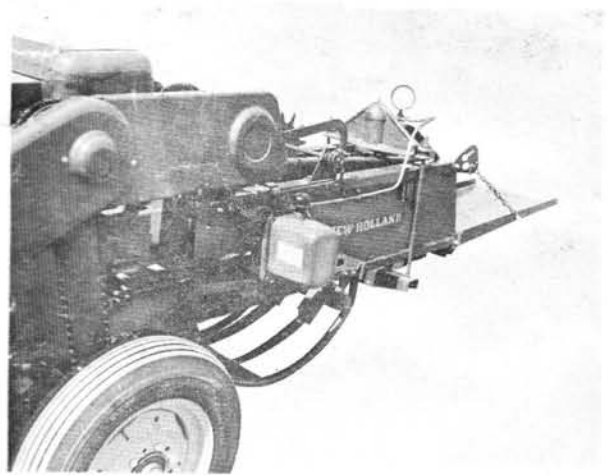
1. At the close of the baling season remove the material from the bale chamber and coat the bale chamber and the knotters lightly with grease to prevent rusting.
2. Remove the roller chains from the machine and clean thoroughly by soaking them in kerosene. Coat with heavy oil before storing. Reclean 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.
4. Place the baler on blocks to remove the load from the wheels when the machine is stored to increase the life of the tires.
5. Service the engine as instructed in the engine manual.
6. Provide adequate protection from the weather.
7. It is a 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, wooden slides, 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.

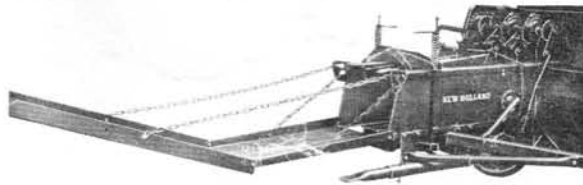
## SPECIAL EQUIPMENT



**Jack** makes hitching and unhitching easier. Swings up out of way in field operation.



**Hydraformatic Bale Tension Control** for uniform bales under all conditions.



**Wagon Loader** slides bales up chute extension on to wagon. Telescoping wagon hitch attaches directly to bale chamber.



**THD Engine with electrical starting equipment.** Cable quickly attaches to tractor for your starting convenience.



**Tailored Cover** form-fitted of heavy weather-proofed duck. Protects your original investment.

## 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.**

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.

### CHECK LIST FOR ORDERING SERVICE PARTS

1. Check the slicing knives (See note A).
2. Examine the wooden slides of the plunger.
3. Examine all belts, chains, and sprockets for wear. (See note B).
4. Inspect the draw bar hook-up clevis for excessive wear.
5. Check all bearings for wear in the bushings.
6. Inspect the plunger and the connecting rod.
7. 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, twine finger cams, etc.
8. Note any broken or bent pick-up fingers.
9. Make sure the cam rollers of the pick-up assembly are in good condition.

Note B — Replace V drive belts in complete sets and replace worn sprockets when installing new roller chains.

## 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 know 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 machinery 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.
5. Don't pour gasoline into the fuel tank while the engine is running.

## **WARRANTY**

New Holland Machine Company machinery is sold by the dealer or distributor with the following standard warranty of the manufacturer, AND NO OTHER:

New Holland warrants that its machinery is free from defects in material and workmanship and agree to replace without charge f. o. b. factory where the equipment has been purchased from an authorized New Holland dealer, such parts which have been acknowledged by the Company, after inspection by it, as defective. The express warranty herein given is in lieu of and excludes all other representatives of warranties, implied or statutory.

The Company makes no warranty whatever with respect to tires, tubes, ignition apparatus, magnetos, carburetors, or other trade accessories not manufactured by it, as they are subject to the warranty of their respective manufacturers. No warranty whatsoever is made on any used, second-hand, altered, or rebuilt machines.

The Company's liability in connection with the manufacture, sale or use of any of its products is expressly limited to the repair or replacement of defective parts as set forth. The Company specifically assumes no other liability for damages of any kind or nature, direct, consequential or contingent.

NEW HOLLAND MACHINE COMPANY

## **IMPORTANT**

**MAKE SURE YOUR WARRANTY CARD IS FILLED OUT  
AND RETURNED PROMPTLY.**