

# INTRODUCTION

Throughout this manual when a twine baler is mentioned, it refers to an All Twine baler and when a wire baler is mentioned it refers to a Lok Twist baler.

The contents of this manual are instructions for use with balers having serial numbers as indicated below:

430 All Twine Baler Serial No. U005756 and up

430 Lok Twist Baler Serial No. U001195 and up

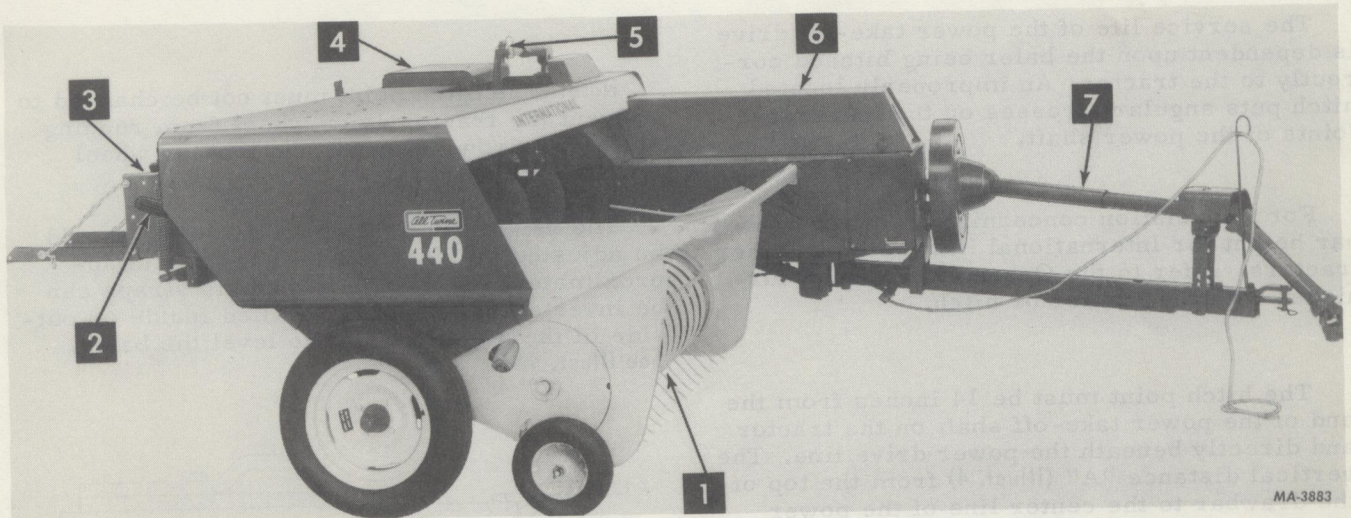
440 All Twine Baler Serial No. U002160 and up

440 Lok Twist Baler Serial No. U001304 and up

In order to provide a baler equipped as nearly as possible to suit each customer's needs, a variety of extra equipment is available. The function and operation of this equipment is described in this manual.

Illustrations are numbered to correspond with the page number on which they are located; for example, **Illusts. 4 and 4A** are on page 4.

Wherever the terms "right" and "left" are used, it should be understood to mean from a position behind and facing the machine.



- 1 - Pickup
- 2 - Pickup height control
- 3 - Bale chamber
- 4 - Knotter

- 5 - Packer fingers
- 6 - Plunger
- 7 - Power take-off drive

**Illust. 3**  
440 All-twine baler.

# PREPARING YOUR BALER FOR WORK

## GENERAL

Your new baler has been checked carefully by your International Harvester dealer. He has gone over the entire machine and has made sure that it is in good working order and ready to give you dependable service. There are, however, a few things which you must do before you put your new baler to work in the field.

### Lubricate Completely

Be sure the baler has been completely lubricated. Use the handy lubrication chart on pages 58 to 61 as a check list.


### HITCHING BALER TO TRACTOR

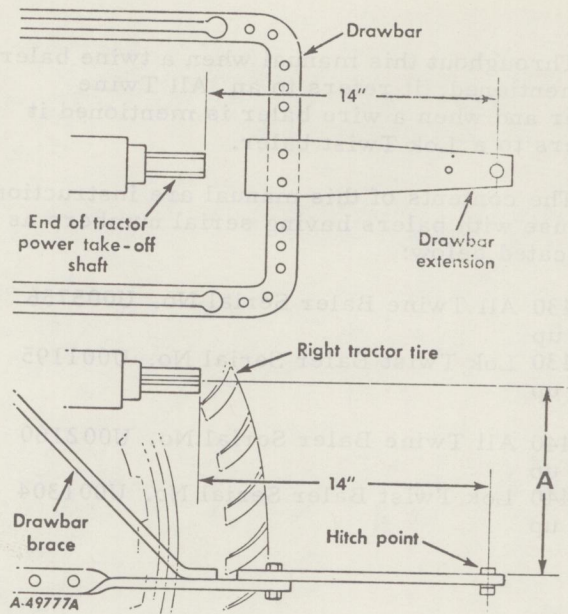
Your baler can be attached to any tractor having a drawbar and power take-off that conforms to ASAE-SAE standards and having a power take-off speed (540 r.p.m.) to match the power shaft speed of your baler.

The service life of the power take-off drive is dependent upon the baler being hitched correctly to the tractor. An improperly located hitch puts angular stresses on the universal joints of the power shaft.

For information concerning standard drawbar height for International Harvester and other tractors, refer to the Operator's Manual furnished with the tractor or hitch.

The hitch point must be 14 inches from the end of the power take-off shaft on the tractor and directly beneath the power drive line. The vertical distance "A" (Illust. 4) from the top of the drawbar to the center line of the power take-off shaft must be 6 to 15 inches, 8 inches being recommended. The length of the hitch on the baler is designed to meet these requirements when hitched to any tractor with a standardized hitch. On most tractors, the hitch is standardized by a hitch plate attached to the drawbar.

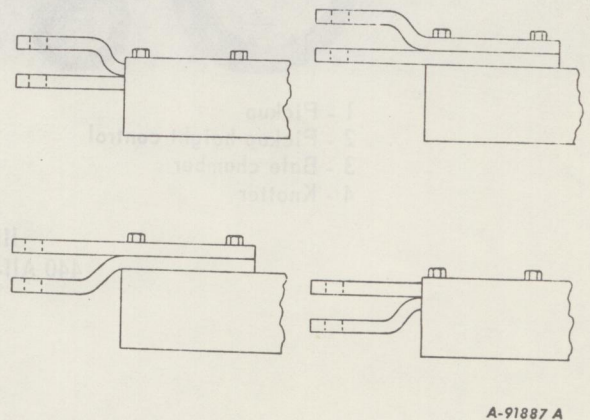
 **Caution!** When attaching the yoke of the universal to the power take-off shaft on the tractor, it is important that the yoke is secured to the power take-off shaft with the spring actuated locking pin. **Note:** Be sure that this pin slides freely and is seated in the groove on the tractor power take-off shaft.



Illust. 4  
Standardized location of hitch point.

**Note:** The hitch point must not be changed to prevent the tractor drive wheel from running on the windrow. Instead, the tractor wheel must be moved in.

The height of the hitch on the baler should be adjusted so that the bale chamber is approximately level. The two clevis straps can be inverted and may be installed inside or outside of the hitch in order to level the baler. See Illust. 4A.



Illust. 4A  
Clevis positions for leveling adjustment.



**Blue  
Ribbon  
Service**

# Service

# Manual



**INTERNATIONAL HARVESTER**

**NORTH AMERICA OPERATIONS**

**AGRICULTURAL EQUIPMENT GROUP**

401 NORTH MICHIGAN AVENUE • CHICAGO, ILLINOIS, 60611, U.S.A.

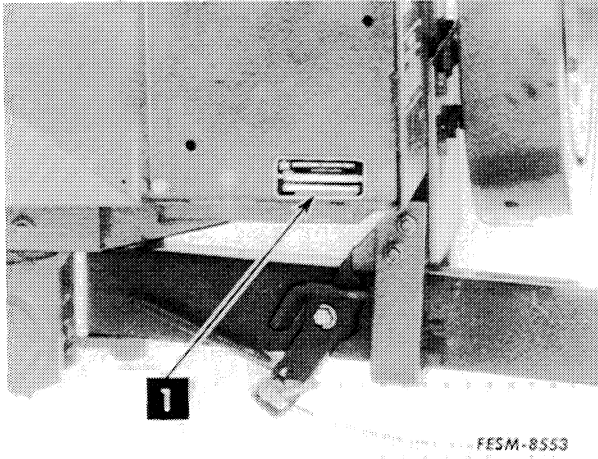
# General Contents

Safe Work Rules .....	IV
Standard Torque Data for Nuts and Bolts .....	VI
Metric Conversion Tables .....	VIII
Special Service Tools Required .....	X

## Section

<b>1</b>	<b>GENERAL</b>
<b>2</b>	<b>HITCH &amp; PTO DRIVE TRAIN</b>
<b>3</b>	<b>MAIN DRIVE GEAR BOX</b>
<b>4</b>	<b>PICK UP &amp; FEED MECHANISM</b>
<b>5</b>	<b>PLUNGER, BALE CHAMBER &amp; THROWER</b>
<b>6</b>	<b>MAIN FRAME &amp; WHEELS</b>
<b>7</b>	<b>TWINE TYING MECHANISM</b>
<b>8</b>	<b>WIRE TWISTING MECHANISM</b>
<b>9</b>	<b>ADJUSTMENTS</b>

# GENERAL INFORMATION



1. Serial number

This manual covers models 420, 425, 430, 435, 440 and 445 All Twine and Lok-Twist balers. Listed below are the effective serial numbers of these models.

All Twine	Lok-Twist
420T - U002663 thru U004388	-----
425 - All	-----
430T - U005756 thru U017105	430W - U001195 thru U002053
435T - U000501 and up	-----
440T - U002160 thru U006393	440W - U001304 thru U003432
440 Standard T - U006394 and up	440 Custom W - U000501 and up
440 Custom T - U00501 and up	445W - U000501 and up
445T - U000501 and up	-----

It is also possible that All Twine conversion packages were installed on balers prior to those listed above.

The tying mechanism for balers prior to these models are covered in separate manuals (GSS-1378 and GSS-1348).

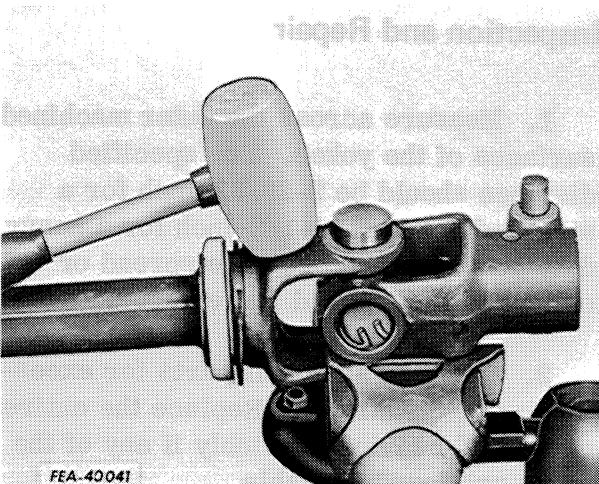
1. To disassemble the knuckles, first remove the four snap rings.



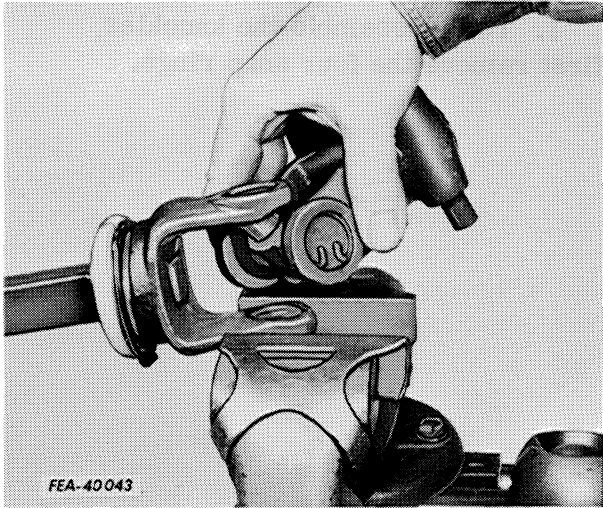
2. A slight tap on the end of the bearing with a soft punch will remove pressure against the snap ring.



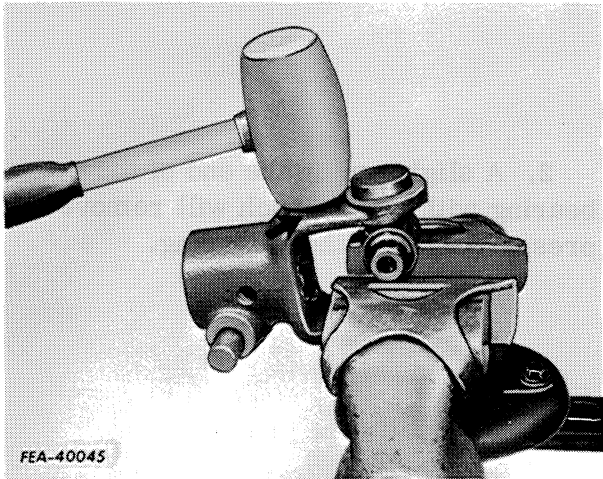
3. With the snap rings removed, place the knuckle between the jaws of a vise, with the ears of the yoke supported. Strike the ear of the unsupported yoke with a hammer as indicated. This will drive the top bearing out so that it can be fastened into the vise.



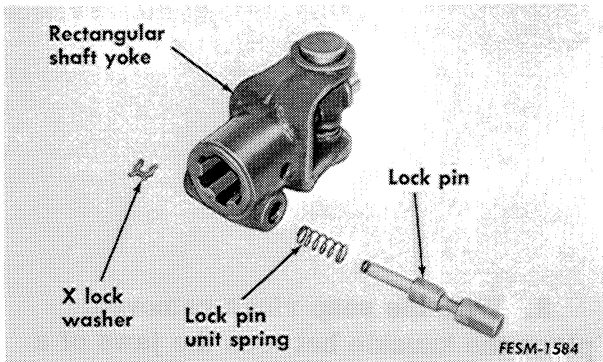
4. Drive the yoke off the bearing. Use the same procedure to remove the opposite bearing.



5. Remove the yoke.

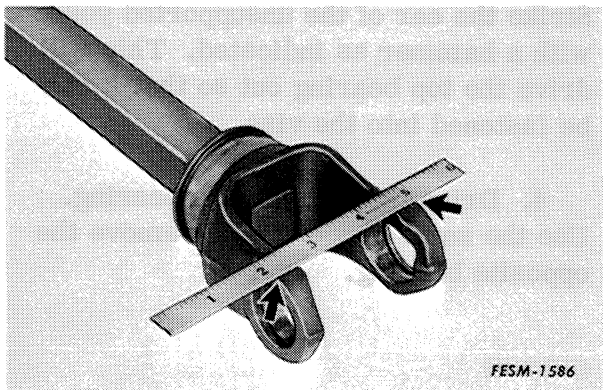


6. To remove the two bearings from the remaining yoke, support the cross-piece, or center cross, making sure the vise jaws are covered with a soft metal protection. Strike the yoke as indicated by the arrow in the illustration to remove the bearings.



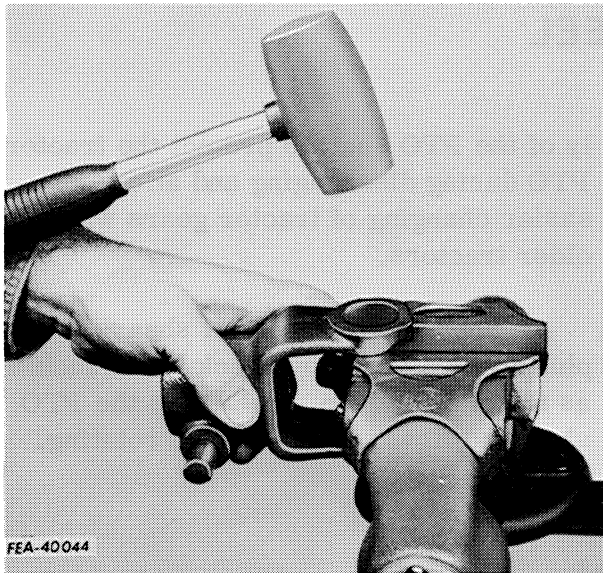
7. If it is necessary to remove the lock pin assembly from the rectangular shaft yoke, spread and remove the "X" lock washer from the lock pin. Remove the lock pin and lock pin unit spring.

## Inspection and Repair



1. Measure across the outer machined surfaces of the yokes. The specified distance should be 2-29/32-inch for a standard yoke and 3-1/2-inch for a heavy duty yoke. If the yokes are spread or collapsed they should be replaced.

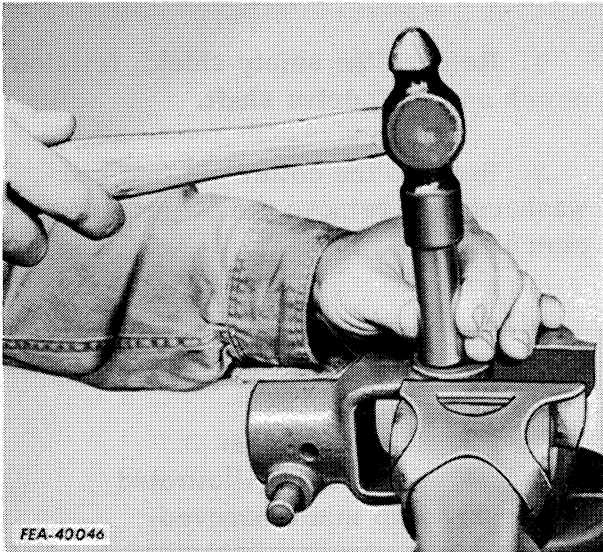
2. Examine all small parts for excessive wear or damage. Replace the entire cross and bearing assembly if any of the parts are found unusable.



## Reassembly

1. Start one bearing in the hole of the yoke ear. Then place the center cross in position. Drive the bearing down flush with the outside surface of the ear. Support the underside of the ear so that the hammering will not spring the yoke out of shape.

2. Install the second bearing in the same manner.



3. Use a punch slightly smaller than the bearings to drive them down below the snap ring groove. Be sure you support the yoke ear -- or clamp it in a vise as shown so that it will not be "sprung". Install the snap ring.

4. Assemble the second yoke over the center cross, and position the two remaining bearings. Put the snap rings in place.

5. A sharp hammer blow on the forged surface of the ears will seat all parts tightly against the snap rings. The hammer blow will also assure a free-flexing knuckle.

6. Test the knuckle for free-flexing, and lubricate it with a good grade of lubricant.

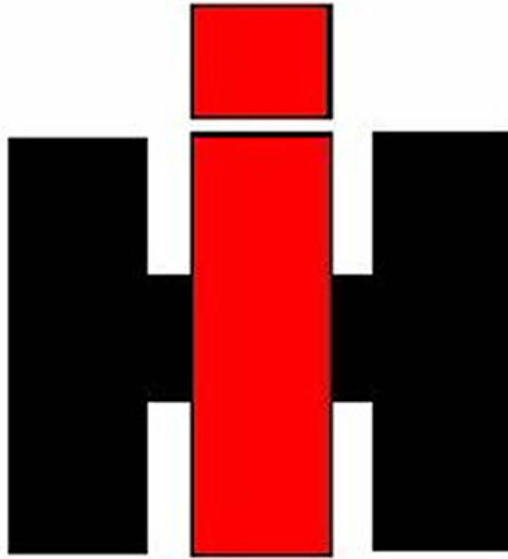
7. Reassemble the shafts.



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# **Twine Knotters**

**McCormick and  
International Balers**

**Service Manual**

**GSS-1335-B**

## CONTENTS

<b>Knotter Operation</b> .....	5
--------------------------------	---

### **Knotter Position**

Gauge Surface to Breast Plate .....	8, 9
Hook to Stripping Slot Radius .....	10

### **Needle Timing and Adjustment**

Needle to Plunger Timing .....	11, 12
Needle Adjustment	
Clearance over disk .....	13
Position to gauge surface of knotter frame	14
Height .....	15

### **Knotter Adjustment**

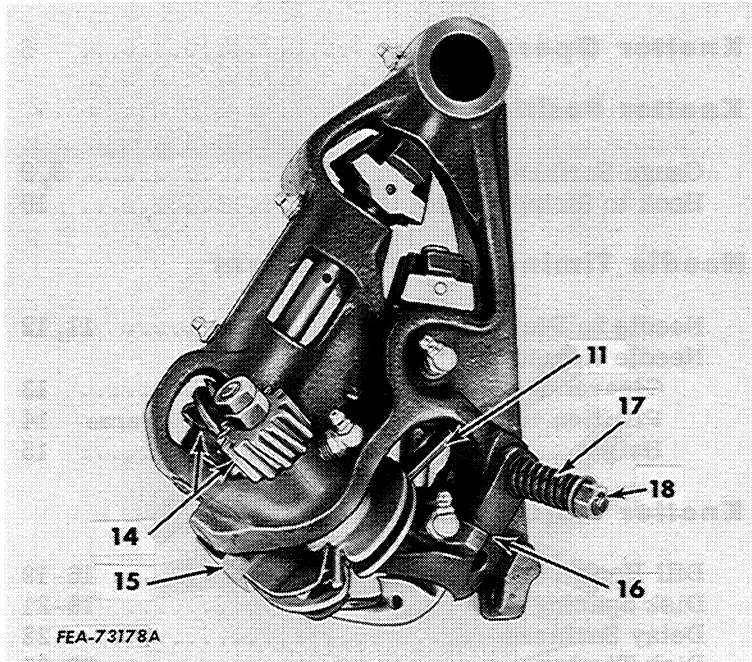
Bill Hook .....	16-19
Disk Spacing .....	19-21
Delay Surfaces .....	22
Disk Timing .....	23-25
Disk Cleaner .....	26
Knife Setting	
Timing .....	27
Height .....	28, 29
Distance from disk .....	30
Twine End Retainer Spring .....	31
Twine Can Tension .....	32, 33

### **Custom Long Wear Knotter**

Knotter Adjustment	
Knife setting	
Twine knife .....	34
Knotter position	
Breast plate finger .....	35
Breast plate insert .....	36

<b>Trouble Shooting Chart</b> .....	37-42
-------------------------------------	-------

## KNOTTER NOMENCLATURE



1. Knotter frame
2. Twine disk pinion
3. Bill hook pinion
4. Knotter frame gauging surface
5. Keeper blade
6. Twine knife
7. Twine disk assembly
8. Bill hook
9. Bill hook jaw
10. Rear disk
11. Disk cleaner
12. Spacing shims
13. Front disk
14. Disk helical pinions
15. Twine end retainer spring
16. Bill hook closing cam
17. Bill hook closing cam spring
18. Closing cam spring bolt
19. Bill hook opening cam



**BALER**

**Timing & Tying**

**Models B-47, B-46, B-45, B-55**

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**International Harvester Company of Great Britain Limited**  
**259 City Road, London EC1**

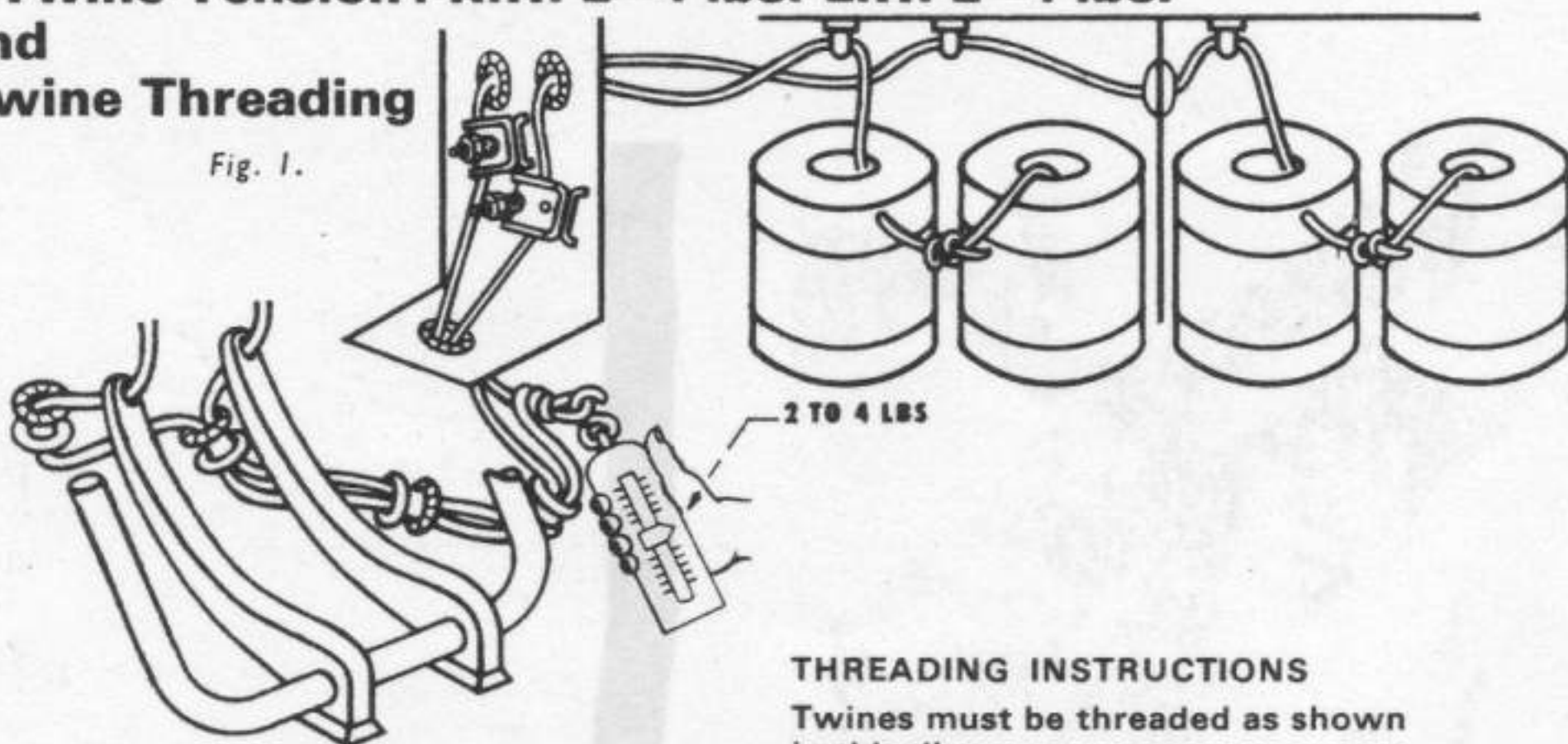
## B-47 BALER Procedure for checking tying mechanism

The following are details of a systematic check which we would suggest is carried out should mistying be experienced on a B-47 Baler. Using Sisal Twine.

If after checking these points mistying continues, then the type of mistie should be identified and rectified as per the fault finding chart in the Service Manual.

### 1 Twine Tension : R.H. 2-4 lbs. L.H. 2-4 lbs. and Twine Threading

Fig. 1.



Bale chamber adjustment must be set to give a compact well formed bale but do not make bales to exceed the weight as recommended for the machine.

**See your Operator's Manual.**

Remember that in hay it is rarely necessary to use the bale chamber hay wedges.

#### THREADING INSTRUCTIONS

Twines must be threaded as shown in this diagram.

To load twine in knotter hold or tie twine to rear of machine. Trip knotter mechanism turn machine over by hand and needles will place twine in cord holder disc. Twine which was held must be pulled off hooks after tying cycle is completed.

## 2 Bill Hook Spring Tension

Bill Hook Spring Tension to be adjusted so that the spring length 'A' Fig. 2, is  $1\frac{1}{4}$ "- $1\frac{3}{8}$ "

## 3 Twine End Retainer Spring 667 408 R1

This spring gives positive retention of top twine to cord holder rear disc. It is installed at the twine knife mounting holes under the knife and contacts the cord holder and hub.

Twine knife part no. 3100 717 R1, which allows for the inclusion of the spring and has a reduced cutting edge height **MUST** be used.

### INSTRUCTIONS FOR FITTING

- 1 Place twine end retainer spring in position as shown in diagram.
- 2 Hook Tab of spring between disc hub and counterbore of frame.
- 3 Pull the leg of the spring over knife mounting pad of frame.
- 4 Place twine knife Part No. 3100 717 R1. in position and with washers set to correct timing.
- 5 Use a  $\frac{3}{16}$ " punch in the offset hole of the spring leg to pry the spring in position to insert knife mounting bolts.

Fig. 2.

