

John Deere Automatic Bale Ejector



JOHN DEERE

OPERATORS MANUAL John Deere Automatic Bale Ejector

OME27457 (01JAN50) English

OME27457 (01JAN50)

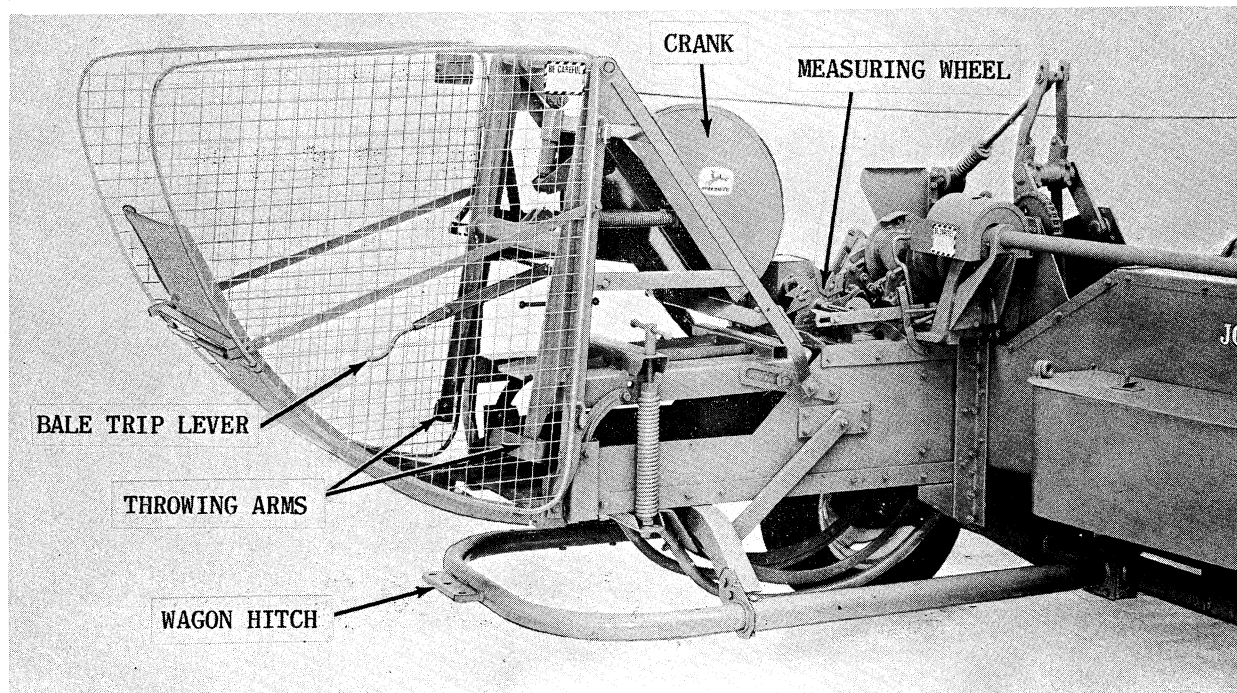
LITHO IN U.S.A.
ENGLISH



Y
C
D



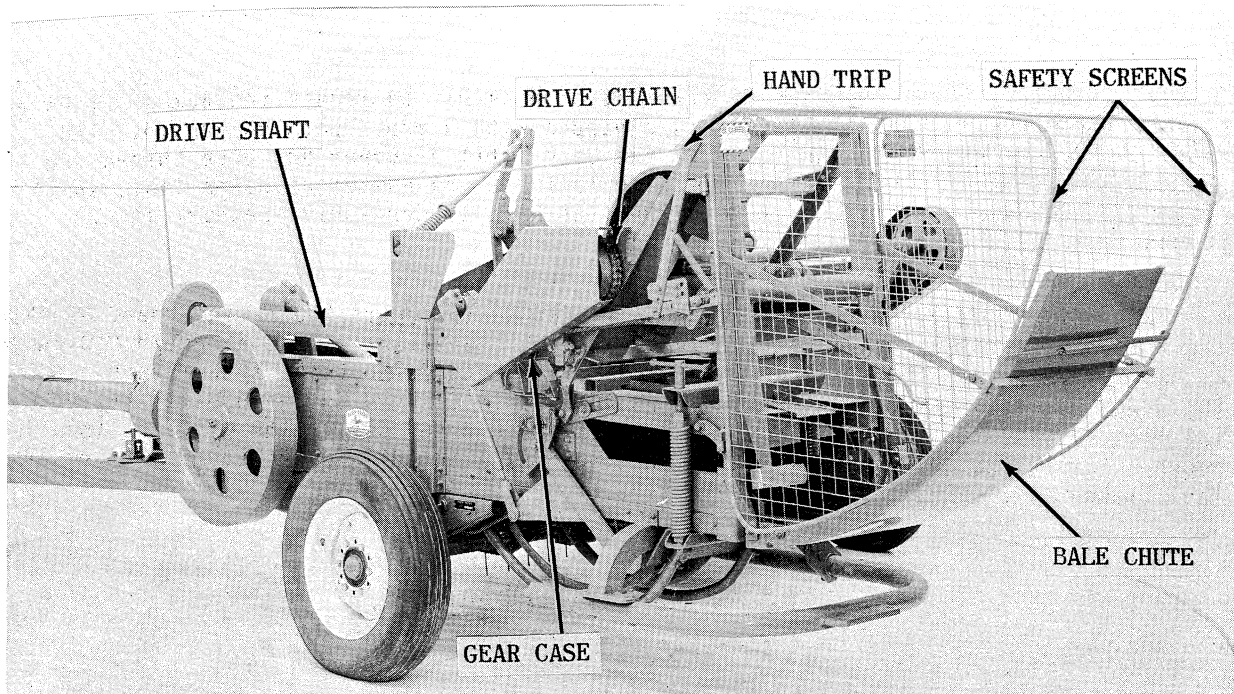
OME27457 01JAN50



John Deere Automatic Bale Ejector

TABLE OF CONTENTS

1	OPERATION AND ADJUSTMENT
6	LUBRICATION
6	SAFETY SUGGESTIONS
7	ASSEMBLY
16	PARTS LIST



OPERATION AND ADJUSTMENTS

GENERAL OPERATION

The job of riding the wagon and loading bales behind a baler can now be eliminated. Field baling and loading can be made a one man operation just the same as chopping hay or picking corn.

The Automatic Bale Ejector bolts on the bale case at the rear of the baler and automatically throws the bales up and into the trailing wagon. The Ejector does not interfere with the normal operation of the baler, and can be disconnected for baling normal, full length bales.

A high sided wagon is needed to keep the bales from falling off the load, and to provide a good "target" for the Bale Ejector. No effort is made to arrange or stack the bales in the wagon. About $1\frac{1}{2}$ tons of average quality hay can be loaded on a 7' x 14 hayrack with 7' sides. The number of bales that will miss the wagon or roll off depends on the skill of the operator, the number of sharp corners in the windrows, and the contour of the land. Sharp corners or steep side hills may cause an occasional bale to be thrown over or past the wagon.

Shorter bales are used with the Bale Ejector to prevent buckling or breakage of the bales in the wagon and to make unloading the random load easier. Mechanical unloading forage wagons can be used for unloading these bales. However, the wagons should have high sides, and should be 7 x 12 or larger at the top. Wagons that are too small will be hard to "hit" with the Bale Ejector, and will require extra trips to the barn because of the smaller loads.

Many farmers who load the bales on wagons trailing the baler have learned to rake the hay into big windrows. This allows the baler to travel more slowly and give the man on the wagon a smoother ride. The disadvantage is the extra time required for raking, and the longer drying time if the heavy windrow is damp. Large windrows are not necessary when a Bale Ejector is used to load the wagon since there is no one riding the wagon.

The windrows should be kept as straight as possible to reduce the number of bales missing the wagon. The Bale Ejector is equipped with a rope operated control with which the driver can delay the throw of the bale until a corner has been turned and the wagon is in line. Side hills will also increase the number of bales lost, so raking up and down hills rather than around the hill is desirable whenever it can be done conveniently.

The height and distance that the bale is thrown is controlled by the speed at which the baler is operated. Operate the tractor at full throttle, at the standard PTO speed of 540 rpm. At full throttle the bale should fall toward the back of the wagon. As the wagon is filled the bales will pile up and tumble forward for even distribution. The last 30 or 40 bales put on the wagon should be dropped nearer the front of the wagon. Throttling down slightly will cause the bales to fall in the front part of the load without affecting the baler operation.

WAGONS AND ELEVATOR EQUIPMENT

The simplest way to obtain wagons for bale handling with a Bale Ejector is to build basket racks on the flat bed hay racks commonly used for hauling bales. A hay rack 7 or 8 feet wide and 14 or 16 feet long is best suited for this use. The sides and rear endgate should be about 7' high, and the front endgate $3\frac{1}{2}'$ to $4\frac{1}{2}'$ high. The endgate that should be opened, and the way in which it should open, depends on the system used for unloading the wagons.

Since it is not practical to unload these bales with a grapple fork or sling, some type of elevator must be used. There is an Eight Foot All-Purpose Hopper available for John Deere Portable Elevators. The bales can be dropped from the wagon into this hopper.

If the elevator to be used is not equipped with the all-purpose hopper, it may be convenient to use a bale chute on which the bales slide by gravity into the elevator. A removable or hinged front endgate might be the handiest for use with a bale chute. If the front endgate is hinged at the bottom and can be lowered to a flat position on support legs, it will provide a platform to stand on while sliding bales down the chute.

Mechanical unloading forage wagons with conveyor or canvas bottoms will save labor when unloading bales. However, the box must be at least 7' x 12' at the top and should be approximately 7' high. Chopped hay or silage hooks (bent forks) can be used to pull down the load as it is unloaded.

Elevating bales at angles steeper than 30 degrees above the ground may result in tumbling of the bales. For this reason a Short Bale Guide Attachment has been made available for the John Deere Portable Elevator. Reducing the speed of the elevator also helps to stop the tumbling of shorter bales in the elevator.

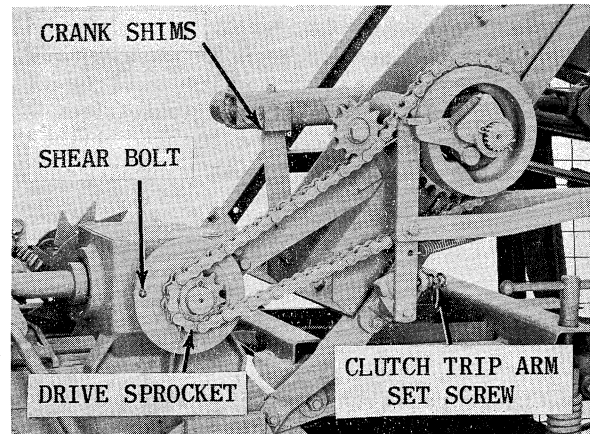
To further decrease the cost of handling baled hay, a Bale Conveyor has been developed to receive bales from the elevator and distribute them the full length of the barn to either side at ten foot intervals. No stacking is required with short bales.

CRANK SHIMS

With the crank in home position and the trip dog not tripped there should be 1/16 to 1/8-inch looseness between the crank and the crank latch spring. Check adjustment by raising crank by hand and adding or removing shims under crank to obtain correct clearance.

DRIVE SPROCKET

The correct drive sprocket to obtain the proper throwing distance is important to insure bales loading evenly in the wagon. When using a 12 foot wagon best results are obtained by using a 12 tooth drive sprocket. When pulling a 14 to 16 foot wagon a 13 tooth drive sprocket should be used.



DRIVE SPROCKET SHEAR BOLT

The shear bolt in the drive sprocket will shear if the throwing arms become lodged during operation. When the cause has been determined and corrected, replace with new shear bolt. Grease sprocket hub when replacing shear bolt.

CLUTCH TRIP ARM

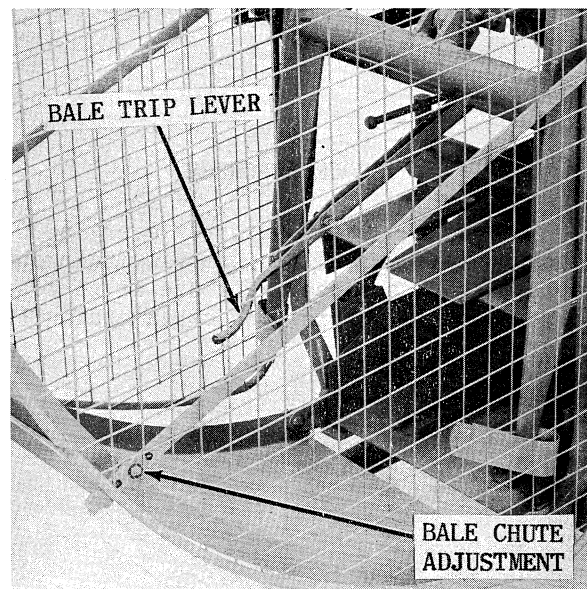
Adjust the set screw in trip adjusting arm so there is 1/16-inch clearance between the side of the arm and the clutch ring as the clutch ring rotates. Tighten lock nut on set screw after making adjustment.

BALE TRIP LEVER

Adjust the bale trip lever to clear the bale chute by 8 inches with the lever in the lowest position. Loosen the arm clamp bolt and slide rod in or out of the arm and retighten bolt to get correct length.

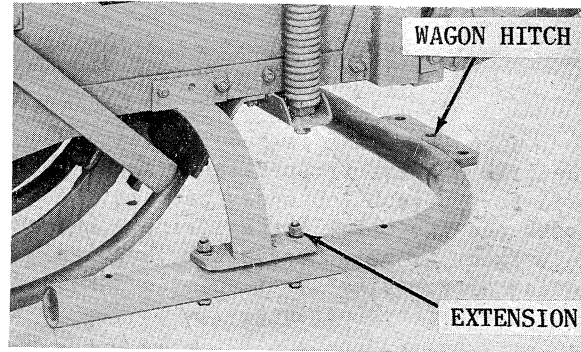
BALE CHUTE

Three positions are provided in the chute straps. Use rear holes for throwing bales farther to the rear. Use front holes when using shorter wagons or wagons with short tongues.



WAGON HITCH

The tongue of the wagon should be located in the center hole in most cases, however, when baling on a side hill or if bales are filling one side of the wagon too fast the tongue can be located 4 inches to one side or the other for more even loading.

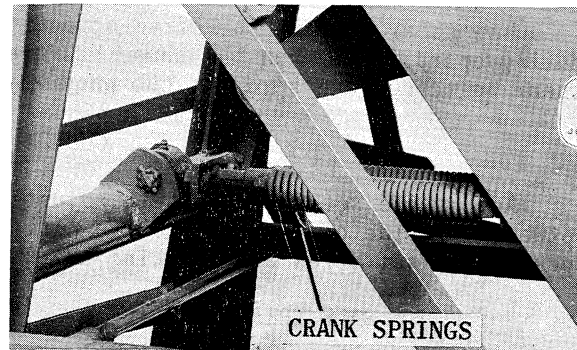


WAGON HITCH EXTENSION

Three positions for 12 inches of adjustment are provided to accommodate wagon tongues of different lengths. For wagons with long tongues use the rear set of holes. For short tongues the hitch can be located in the front set of holes. Use center set of holes for standard length wagon tongues. Two bolts secure the left end of the wagon hitch. A drilled pin secures the right end of the hitch.

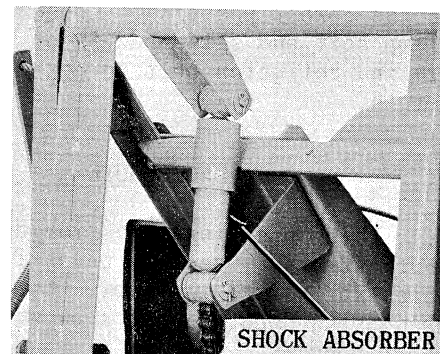
CRANK SPRINGS

The crank springs are set at the factory to cushion the return of throwing arms. With the crank in the home position the springs should be adjusted snug or stretched out $1/16$ to $1/8$ beyond its free length.



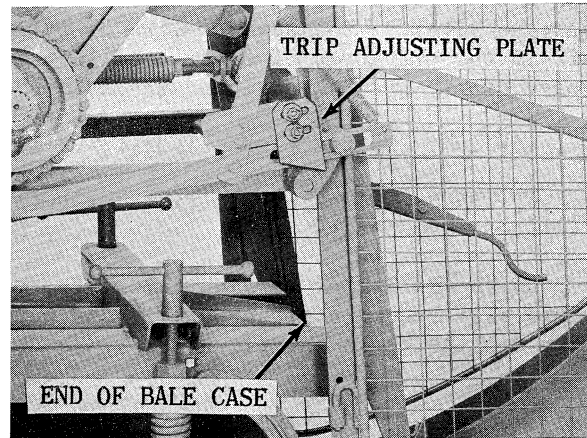
SHOCK ABSORBER

Remove the shock absorber every 5000 bales and check to make sure it is functioning properly. Replace shock absorber if there is no resistance to movement in compressing or extending the shock absorber.



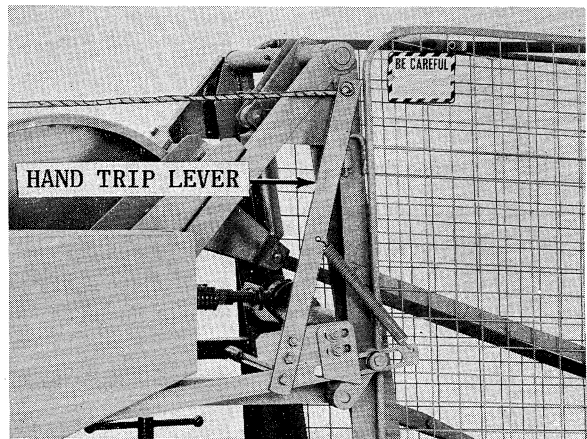
BALE TRIP ADJUSTMENT

Start the baler in low gear. Observe the position of the bale leaving the bale case. Set the trip adjusting plate to release the clutch dog when the end of the bale has cleared the end of the bale case by 2 inches or less. Loosen the plate and slide the plate toward the front of the baler to delay the tripping action. If the bale is out of the case more than 2 inches when it trips, adjust the plate to the rear to trip sooner. Adjusting the plate an 1/8 of an inch at a time should make a big difference. Check trip adjustment when changing the length of bales.



HAND TRIP LEVER

The hand trip lever is a combination delay and trip lever operated by rope from the tractor seat and is used when turning corners to prevent bales from overshooting the sides of the wagon. When turning corners pull the rope to the first or delay position to inactivate the trip mechanism and prevent the trip dog from releasing the throwing arms. After the baler and wagon are around the corners on the straight away continue to pull the rope to the second or trip position to discharge bales from the chute. NOTE: After the delaying operation, the trip operation must be completed before the Ejector will automatically trip the following bales.



BALER SPEED

Operate the baler at its normal operating speed of 65 strokes per minute under load to get the best results from the Ejector.

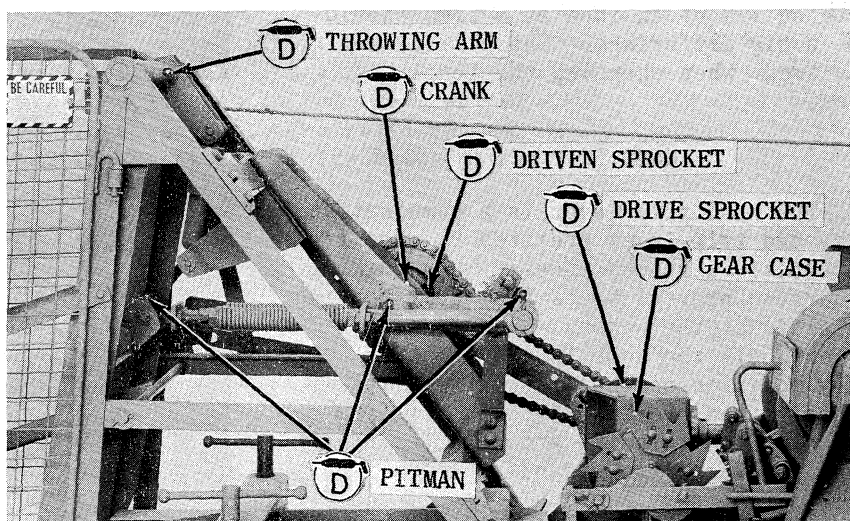
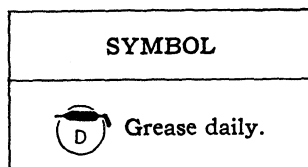
LUBRICATION

The economical and efficient operation of any machine is dependent upon regular and proper lubrication of all moving parts with a quality lubricant. Greasing is just as vital to the service life of farm machinery as is the use of proper lubricating oil in the crankcase of an automobile or tractor. Neglect leads to reduce efficiency, heavy draft, wear, breakdown, and needless replacement of parts.

CAUTION: Do not clean, lubricate, or adjust your machine while it is in motion.

FITTINGS: Clean grease fittings before using grease gun. Replace any lost fittings immediately.

DRIVE CHAIN: At varying intervals, depending on weather and field conditions, chain will become stiff or gummy. As necessary, remove chain and wash it in solvent. Then dip the chain in oil, allow it to drain and replace on the machine.



SAFETY SUGGESTIONS



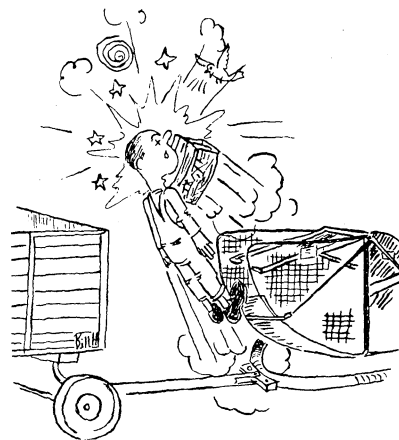
The safety of the operator is one of the prime considerations in the minds of John Deere engineers when designing equipment. Safety shields and other safety features are used wherever possible.

Do not stand behind chute when baler is operating.

Do not attempt to adjust or service Ejector when baler is operating. Wait until flywheel has completely stopped.

When driving at night, use warning lamps to prevent accidents.

All machinery should be operated only by those who are responsible and delegated to do so.



ASSEMBLY INSTRUCTIONS

The shipping bundles of the Bale Ejector are listed below.

Bundle No.	Description
6002 E	Bale Ejector--Basic Unit

OPTIONAL EQUIPMENT

6003 E	Left-Hand Axle Extension--For 14T Power Take-Off Balers Serial No. 47830 and below
6004 E	Wagon Hitch adapting parts for 14T Balers not equipped with 2974 E Wagon Hitch
6012 E	Left-Hand Axle Extension--For 14T Power Take-Off Balers Serial No. 47831 and above
AM 3146 E	Center-Mounted Measuring Wheel--For 14T Balers Serial No. 20385 and below
AM 3371 E	12-Tooth Drive Sprocket

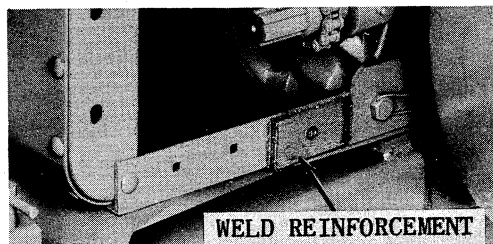
The Bale Ejector is assembled as illustrated in the following pages. The illustrations show the parts to be assembled and attached in their proper order.

Some assembly instructions of optional equipment may not pertain to your machine. For example, if you have an engine-mounted baler, disregard any instructions pertaining to assembly of the left-hand axle extensions, etc.

After unpacking and placing all parts where they will be handy, follow all the instructions carefully. Practically all trouble with new machines is due to improper assembly and lack of lubrication.

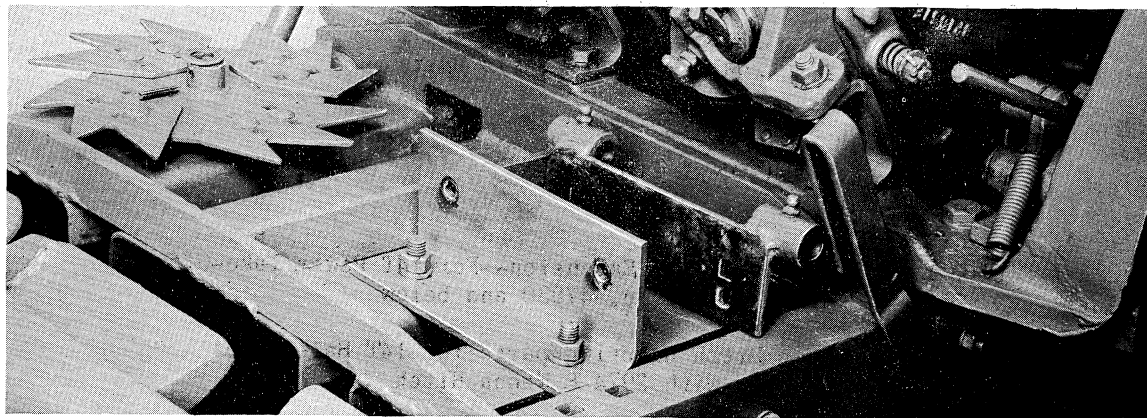
ANGLE REINFORCEMENT

All power take-off balers below Serial No. 26425 must have reinforcement welded to lower left-hand bale case angle and support. Locate beveled end of reinforcement against support and weld around reinforcement.



BALE MEASURING WHEEL

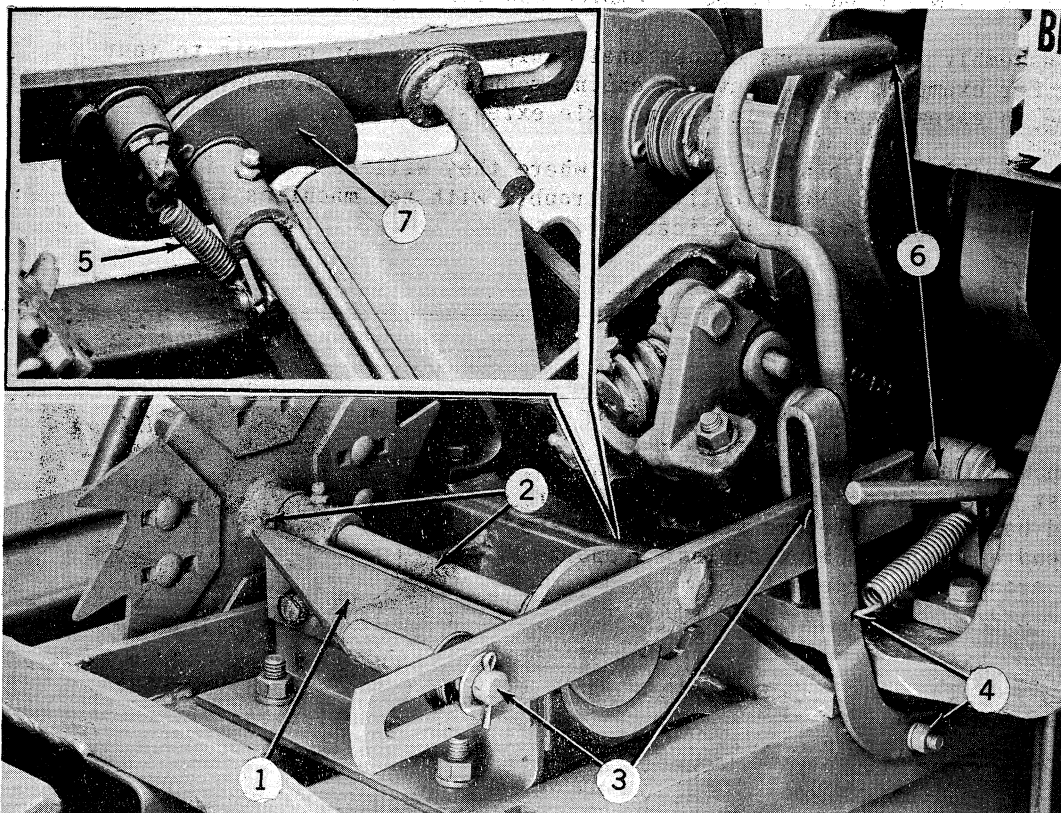
NOTE: If your baler is already equipped with Short Bale Attachment (2995E) disregard steps 1 through 6.



Remove old measuring wheel and brackets as shown above. New measuring wheel can now be installed as follows:

1. Bolt pivot pin bracket to measuring wheel mounting and adjusting brackets with two bolts. Drilled bolt must be on the right pointing toward front of baler.

2. Install trip lever shaft through adjusting bracket and install measuring wheel using washers to center measuring wheel in bale case slot. Secure measuring wheel with rollpin.



3. Locate trip lever through guide and over pivot pin. Align lever on pin with washers and secure with cotter pin.

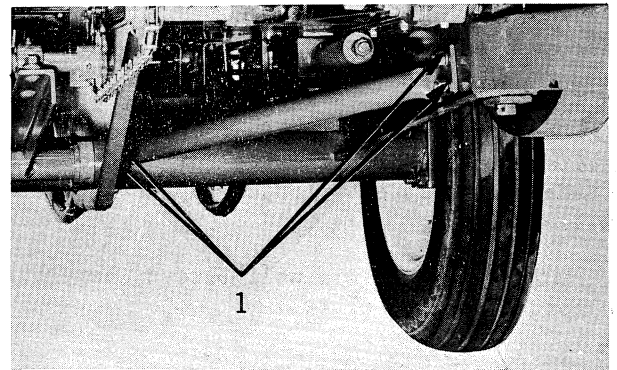
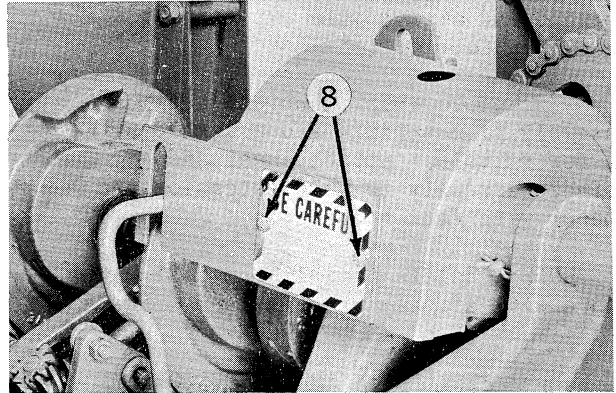
4. Tighten trip lever guide and attach spring to guide.

5. Attach spring with cotter pins to trip lever roller shaft and end of drilled bolt in measuring wheel support.

6. Rotate measuring wheel until trip lever contacts release roller. At this point the trip lever must be vertically and horizontally against the roller and trip arm must ride fully on the knotter gear. Trip lever may require some modeling to align properly.

7. To get full length bales when not operating Bale Ejector, rotate inside cam 180 degrees to align with outside cam.

8. Attach trip lever guide to bevel gear shield. Center slot over trip lever with lever aligned on knotter gear.



WAGON HITCH

NOTE: If your baler is already equipped with Wagon Hitch (2974E) disregard steps 1 and 3.

1. Attach reinforcing brace to the main frame with four bolts.

2. Bolt hitch support to bale case bottom with three plow bolts.

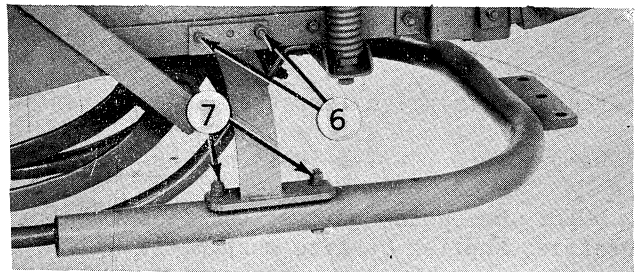
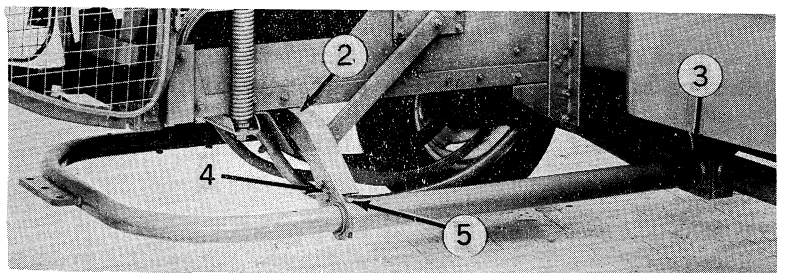
3. Bolt hitch to axle with four bolts.

4. Bolt hitch to hitch support with two bolts.

5. Insert wagon hitch extension into the hitch and secure with drilled pin and cotter pin.

6. Bolt left side of hitch support to bale case side with two bolts.

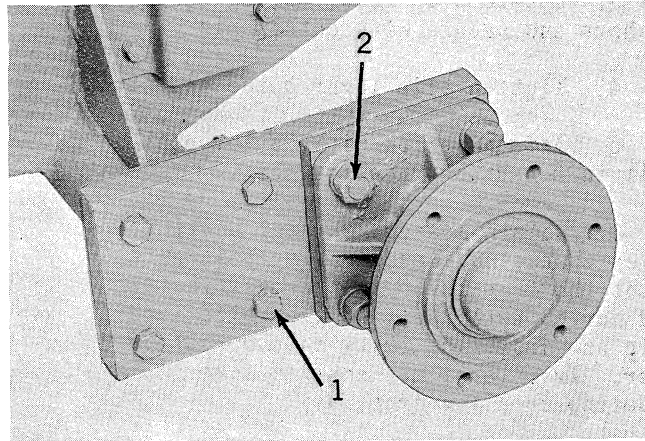
7. Bolt left end of hitch to hitch support with two bolts.



POWER TAKE-OFF AXLE EXTENSION

NOTE: For Engine-Mounted balers disregard assembly instructions of Axle Extension.

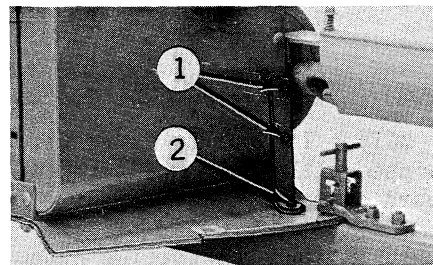
1. Remove left-hand wheel and spindle and attach axle extension to axle with four bolts.
2. Remove wheel, hub and bearing assembly from spindle and assemble to new spindle. Attach wheel and spindle assembly to axle extension and spacer with four bolts.



NOTE: Balers Serial No. 47831 and above will already have the new spindle installed.

INSTALLING TONGUE SUPPORT PLATE BRACE

1. Remove two bolts from left front corner of bale case end cap. Attach plate brace with two bolts.
2. Drill hole in tongue support plate to line up with hole in bottom leg of brace. Square hole and counter sink underneath side for 3/8" plow bolt. Attach plate brace to tongue support plate with plow bolt.



NOTE: Some balers will already have this hole in tongue support plate.

REMOVING FEEDER DRIVE SHAFT

Remove main drive chain shield and main drive chain.

Remove feeder drive shaft shield.

Remove feeder drive chain.

Remove cotter pins from main driven sprocket, from behind front support bracket in feeder drive shaft and from feeder drive sprocket.

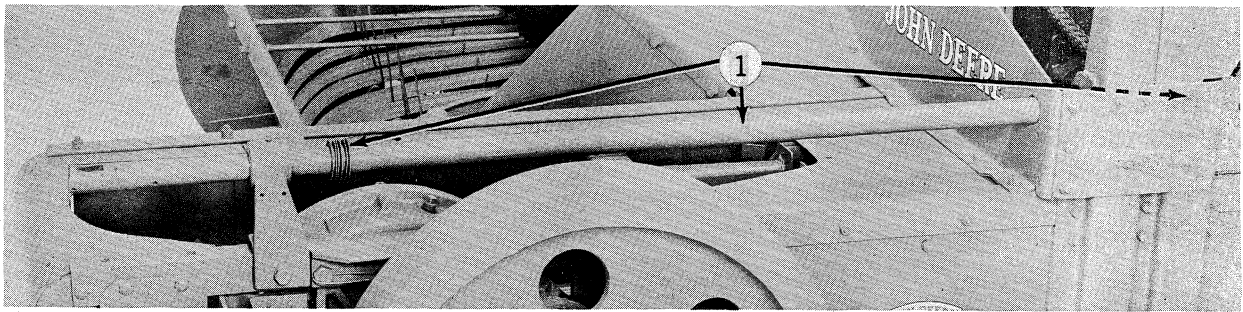
Slide shaft forward and remove woodruff key from feeder drive sprocket.

Remove main driven sprocket and woodruff key from front end of shaft.

Remove feeder drive shaft noting placement of washers for re-assembly of new shaft.

NOTE: On engine balers, the feeder drive shaft must be removed from the rear therefore, knottter casting must first be cut away as described in step 2 of following page.

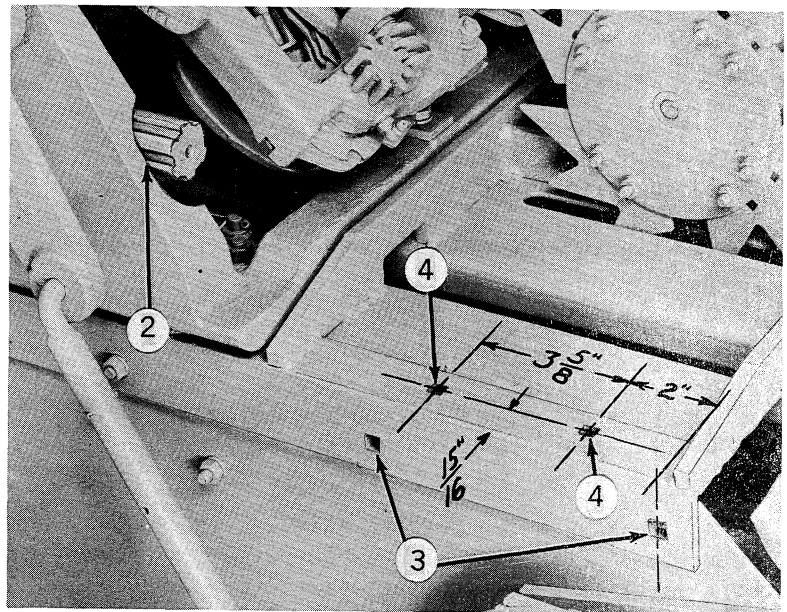
INSTALLING NEW FEEDER DRIVE SHAFT AND EJECTOR GEAR CASE



1. Insert new feeder drive shaft with washers and feeder drive sprocket in their respective places.

2. Cut away knottter mounting casting as necessary to allow feeder drive shaft to pass through and to have adequate clearance. NOTE: Some balers will have new casting which will make this step unnecessary.

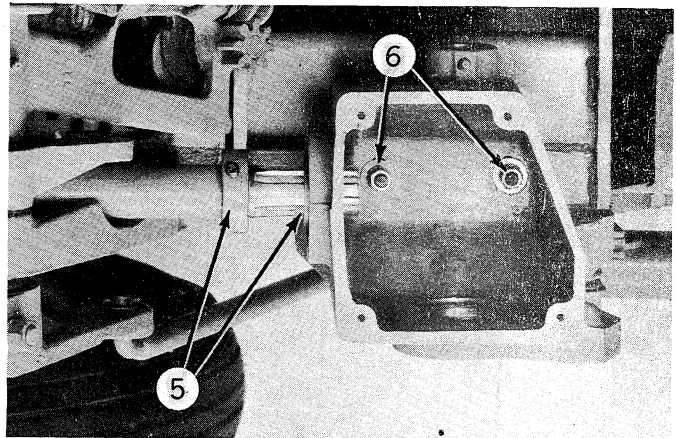
3. Remove two bolts from extreme rear upper left hand corner of the bale case side angle. Enlarge these holes to accommodate 3/8-inch carriage bolts.



4. Measure forward from the center line of the rear hole 2-inches and further forward 3-5/8-inches. Mark a line across the top of the angle at these points. Measure in from the corner of the angle 15/16-inch and mark. With the intersections of these lines as centers, drill two 13/32-inch holes and square for 3/8-inch carriage bolts.

5. Remove drive shaft and gears from gear case. Locate gear case on corner of bale case. Slip locking collar onto feeder drive shaft and slide shaft into hole in gear case. Align gear case with shaft by placing shims between gear case and bale case top. Gear case should be square with bale case.

6. Attach gear case with two bolts and washers through the gear case bottom.



7. Bolt side of gear case to bale case with two bolts using shims to take up space. Feeder drive shaft should turn freely when bolts are tight.

8. Assemble Ejector drive shaft, locking collar and bevel gears in gear case using washers as necessary to get correct heel alignment, (flush to 1/32-inch) and backlash (.005-inch). Insert cotter pin into Ejector drive shaft.

9. Replace woodruff key in feeder drive shaft and position feeder drive sprocket on key and insert cotter pin. Replace feeder drive chain.

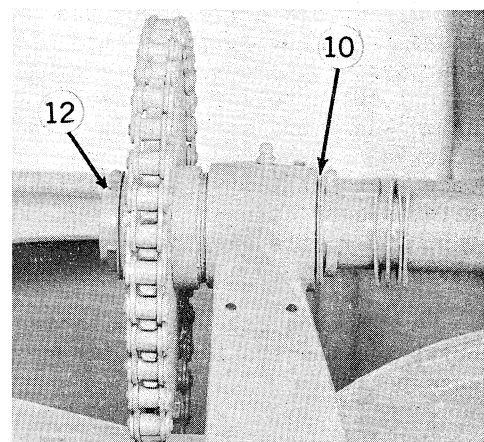
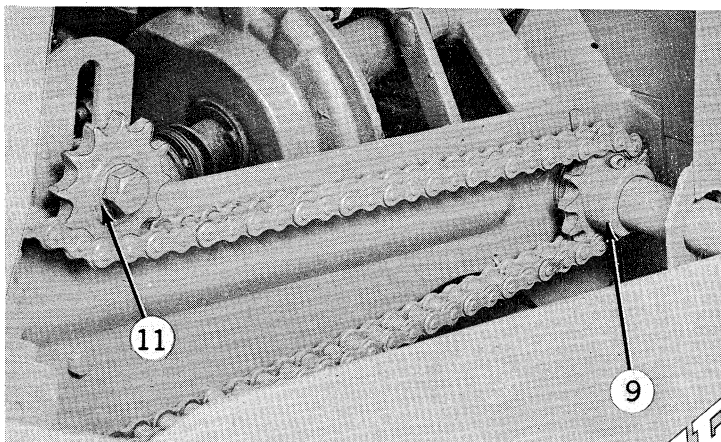
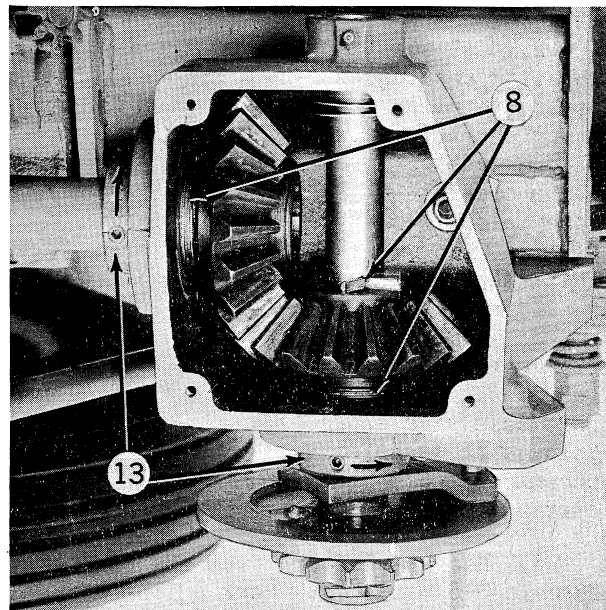
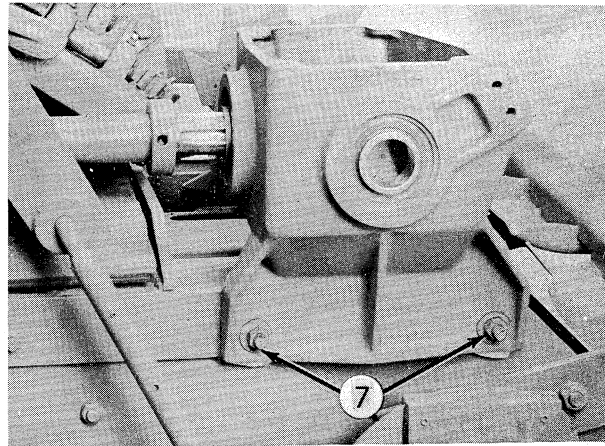
10. Align the feeder drive sprocket by placing washers between the front support bracket and cotter pin through the shaft. When in proper alignment, spread cotter pin.

11. Tighten feeder drive chain idler.

12. Replace woodruff key in front end of feeder drive shaft. Position main driven sprocket in alignment with the main drive sprocket and idler using washers as necessary. Take up remaining space with washers and replace cotter pin in end of shaft.

13. Lock both the locking collars by turning in the direction of normal shaft rotation. Tighten set screws in collars. Replace gear case cover.

NOTE: Time the baler. (See the 14T Baler Operator's Manual) After timing has been completed, replace the shields on the drive shaft and main drive chain.



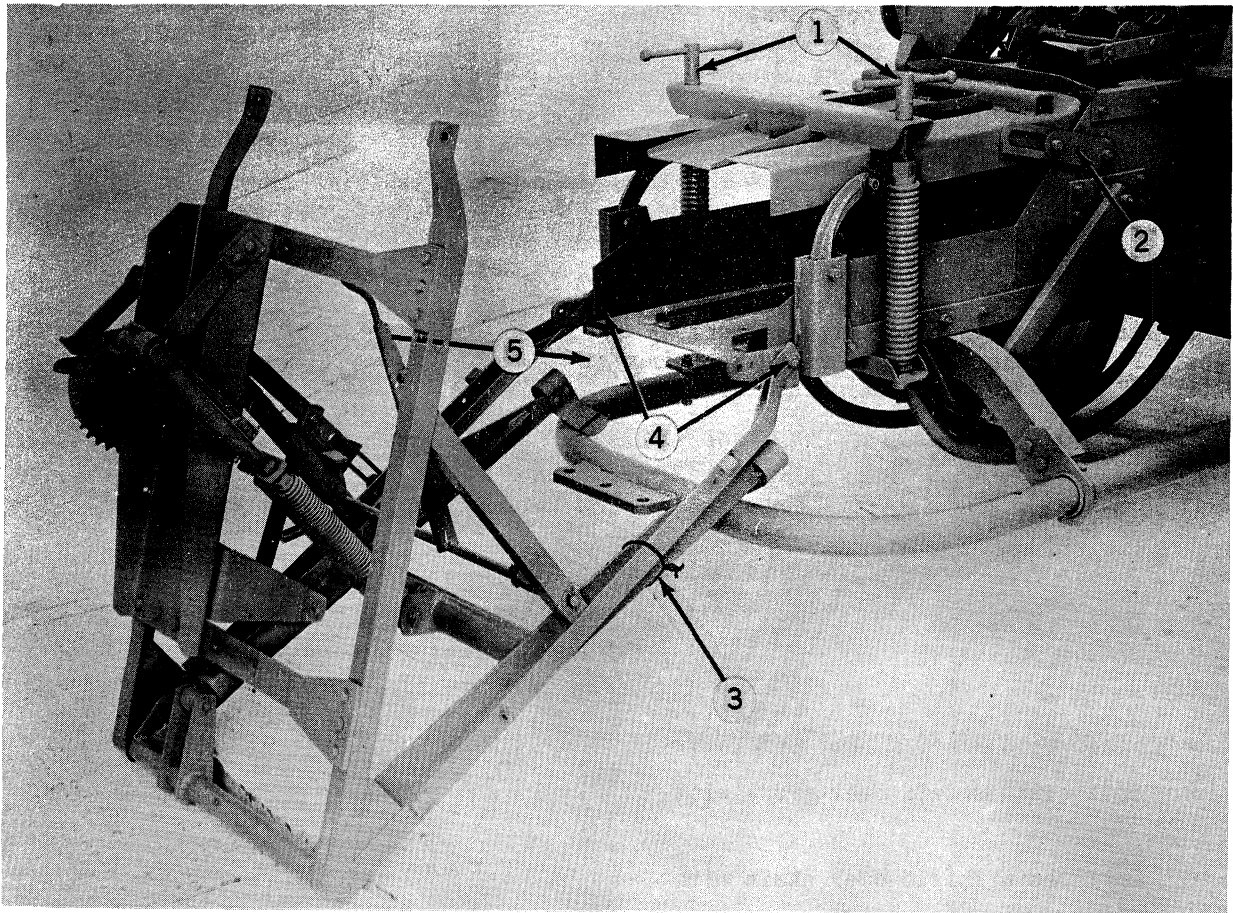
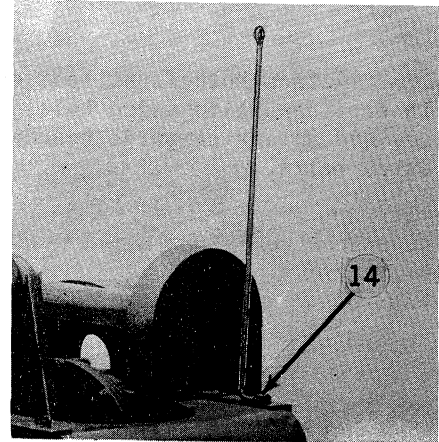
14. Remove carriage bolt from L.H. front, top end of bale case. Secure rope guide with bolt provided.

MOUNTING AUTOMATIC BALE EJECTOR

1. Remove tension cranks. Install new slip-type handle tension cranks.

2. Remove the rear bolt through bale case side and extension guide bracket on each side.

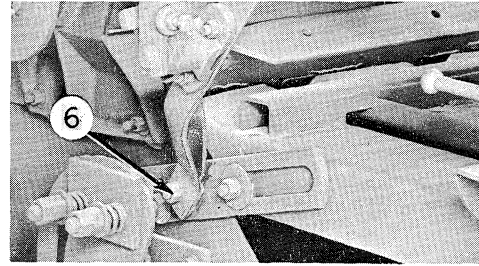
3. Wire throwing arms to rear leg of main frame to keep moving parts from swinging free when mounting Ejector.



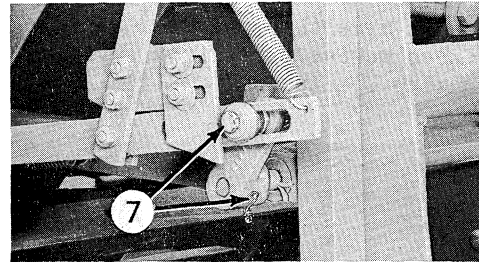
4. Remove the bale chute. Remove chute extension brackets from new chute. Attach rear legs of main frame and chute extension brackets with long plow bolts provided using the holes from which the bale chute was removed. Do not tighten bolts.

5. Pivot the bale trip lever forward and raise the Ejector up and forward.

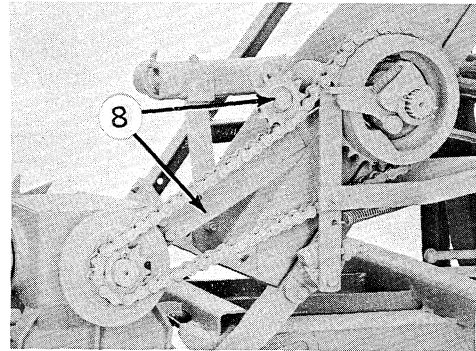
6. Attach both front legs of the main frame with carriage bolts using holes through bale case sides and extension guide brackets. Do not tighten bolts.



7. Attach bale trip arm to trip rod and secure with rollpin and wire. Attach clutch release link to trip arm with bolt and lock nuts.

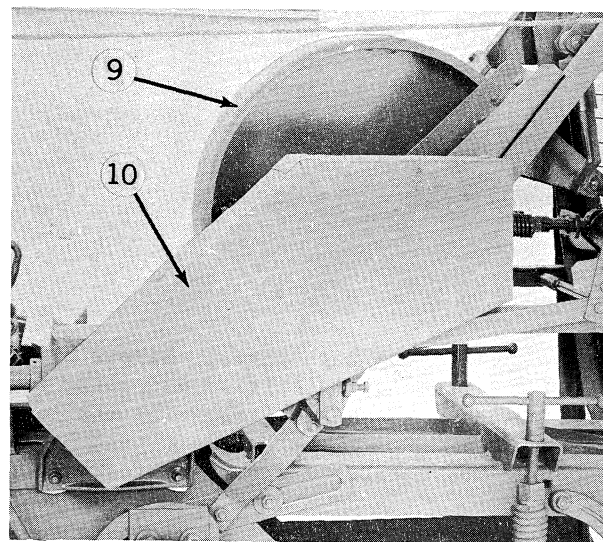


8. Install chain brace with cap screws and bolts. Tighten the four main frame mounting bolts. Assemble chain and tighten idler with thumb pressure.



9. Bolt crank shield over crank with four bolts.

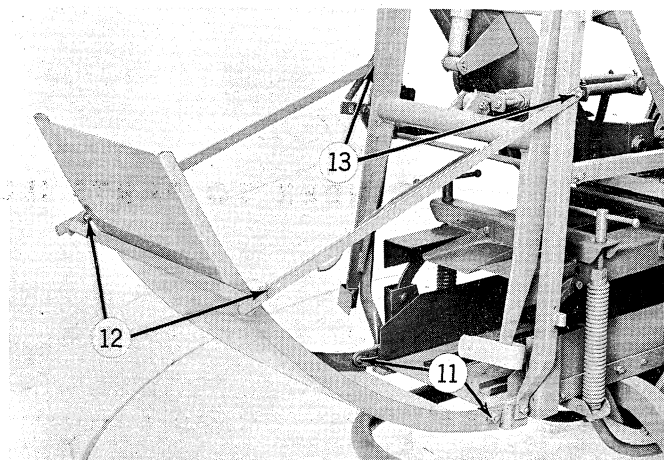
10. Bolt chain shield over chain with three bolts.



11. Attach bale chute to chute extension brackets with bolts, washers, and spacers removed with regular bale chute.

12. Bolt bale chute straps to support on bale chute with two bolts.

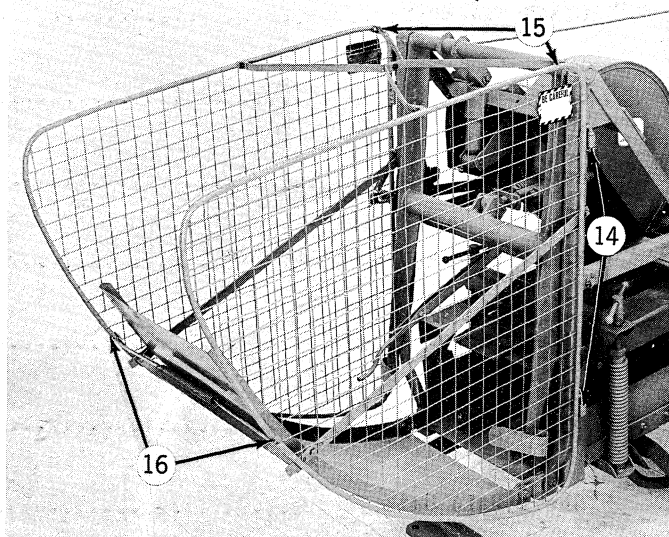
13. Raise bale chute and hook bale chute straps over pins provided in rear legs of main frame. Tighten strap attaching bolts.



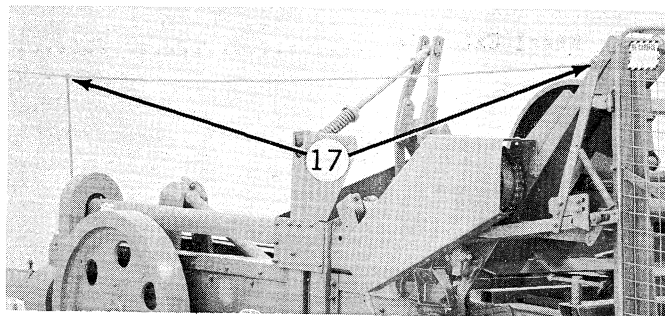
14. Hang screen shields in hanger brackets on rear legs of main frame.

15. Attach screen support brackets to screen shields with four bolts.

16. Attach rear shield fastener by hooking over frame of both screen shields above bale chute straps.

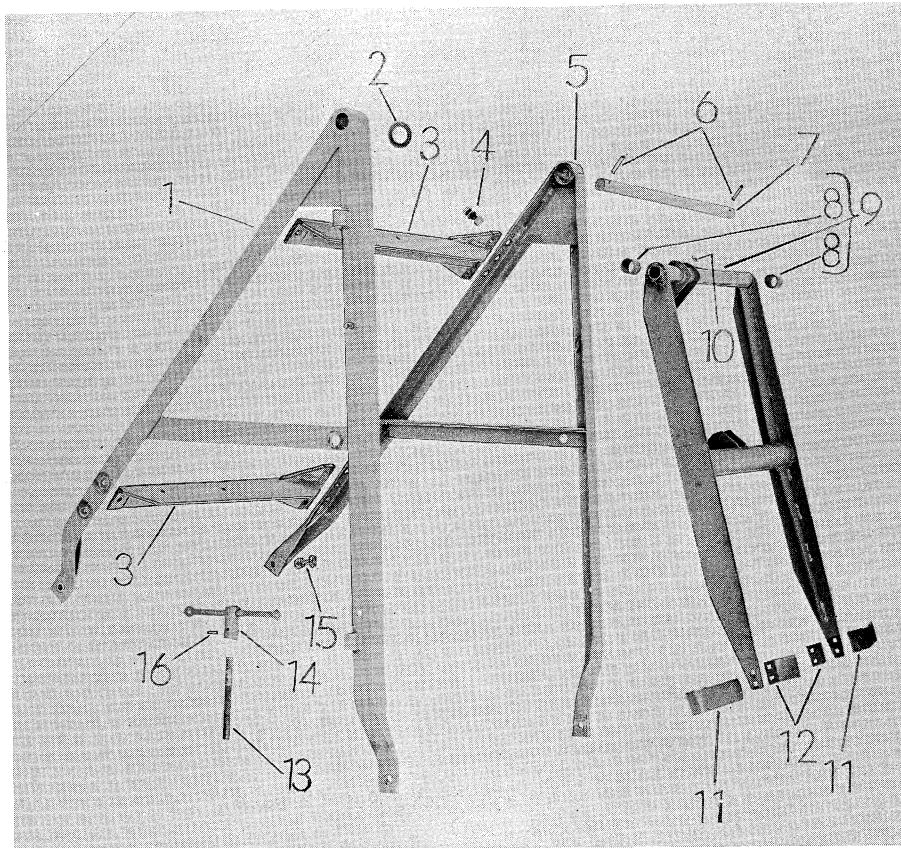


17. Tie one end of rope to top hole in hand trip lever and thread through rope guide on front of bale case.



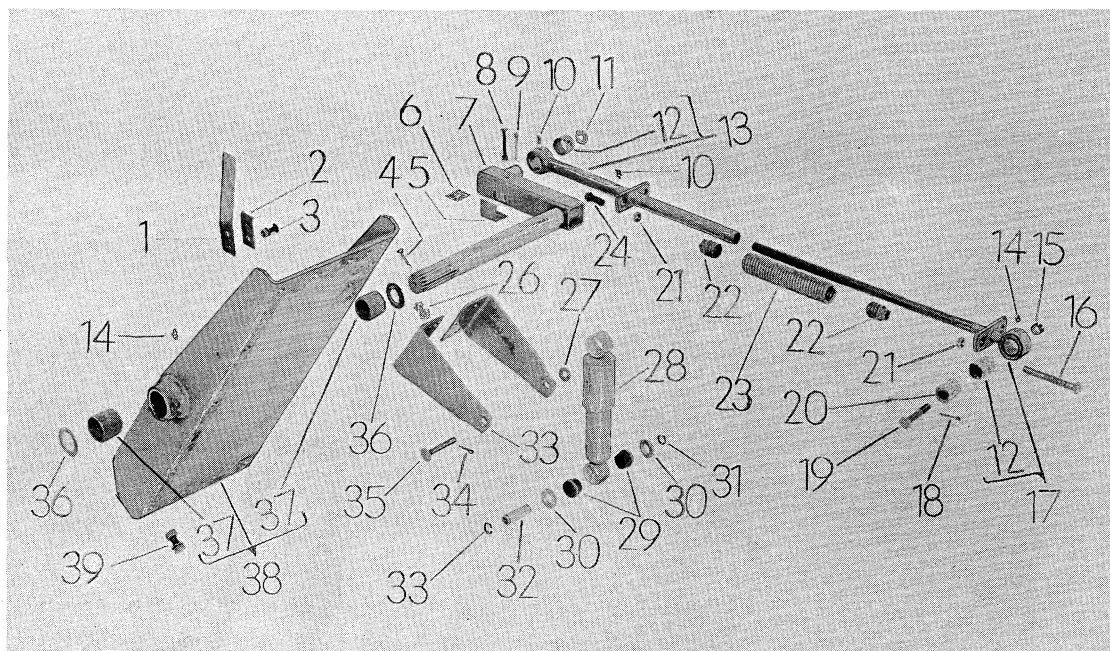
INDEX TO PARTS ILLUSTRATIONS

	Page
Bale Chute.....	23
Bale Trip Lever.....	26
Clutch and Trip Arm Assembly.....	21
Crank Assembly.....	18-19
Gear Case.....	20
Hand Trip Lever.....	22
Main Frame and Throwing Arm.....	17
Safety Screens.....	25
Safety Shields.....	26
Short Bale Unit.....	27
Wagon Hitch.....	28
Wheel Extension.....	19



Key	Part No.	Description
1	AM 3369 E	Frame, Main, L.H.
2	24H 1089 E	Washer, 1-1/32" x 1-9/16" x .060" (Use Quantity Required)
3	AM 3354 E	Angle, Cross, Main Frame (2 used)
4	7H 570 M	Bolt, Mach., Hex. Hd., 7/16" x 1-1/4", with Hex. Nut (8 used)
	12H 12 R	Washer, Lock, 7/16" (8 used)
5	AM 3368 E	Frame, Main, R.H.
6	25H 575 E	Pin, Groove, Type 3, 5/16" x 1-3/4" (2 used)
7	BP 14423 E	Shaft, Pivot, Throwing Arm
8	BP 8618 E	Bushing (2 used)
9	AM 3350 E	Arm with Bushing, Throwing
10	JD 7797	Fitting, Grease, Straight, 1/4"
11	BP 14407 E	Spring, Bale Gripper (2 used)
12	BP 14398 E	Backstop, Bale Gripper
13	BP 14415 E	Screw, Bale Tension (2 used)
14	AM 3355 E	Handle, Bale Tension (2 used)
15	2H 510 H	Bolt, Cge., 7/16" x 1-3/4", with Hex. Nut (2 used)
	12H 12 R	Washer, Lock, 7/16" (2 used)
16	25H 773 E	Pin, Groove, Type 5, 1/4" x 1-1/4"

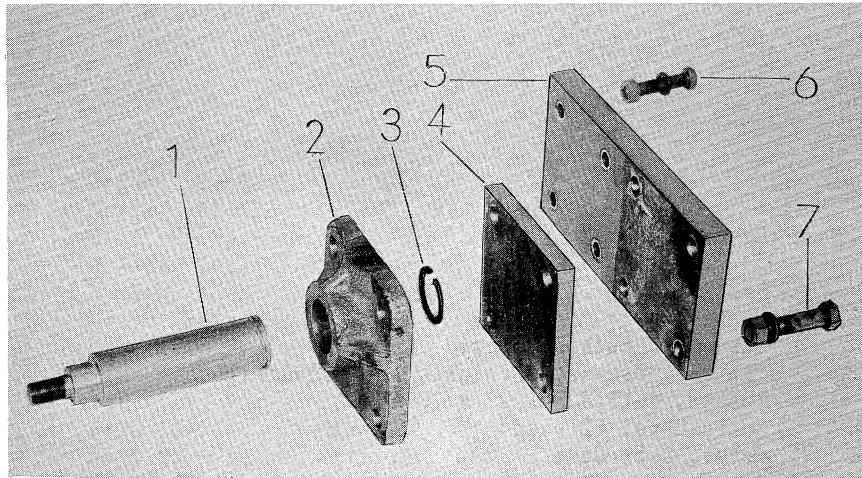
CRANK ASSEMBLY



Key	Part No.	Description
1	BP 14413 E	Spring, Crank Latch
2	BP 14394 E	Plate, Backing, Spring
3	2H 306 R	Bolt, Cge., 3/8" x 1" with Hex. Nut (2 used)
	12H 11 R	Washer, Lock, 3/8" (2 used)
4	11H 117 R	Pin, Cotter, 1/4" x 2"
5	BP 14409 E	Guide, Spring, Latch
6	BP 14391 E	Spacer, Guide, Latch Spring
7	AM 3364 E	Crank
8	7H 1257 H	Bolt, Mach., Hex. Hd., 5/16" x 2-3/4", with Hex. Nut
	12H 10 R	Washer, Lock, 5/16"
9	11H 86 B	Pin, Cotter, 3/16" x 1-3/4"
10	JD 7788	Fitting, Grease, 45°, 1/4" (2 used)
11	24H 297 R	Washer, 1-9/32" x 2" x .060" (6 used)
12	BP 14451 E	Bushing, Connecting Rod (2 used)
13	AM 3360 E	Rod with Bushing, Connecting
14	JD 7797 E	Fitting, Grease, Straight, 1/4" (2 used)
15	14H 521 M	Nut, Hex., Slotted, 1/2"
16	7H 1428 E	Bolt, Mach., Hex. Hd., Full Thread, 1/2" x 4", less Nut (2 used)
17	AM 3357 E	Tube with Bushing, Connecting Rod
18	11H 62 R	Pin, Cotter, 5/32" x 1-1/4"
19	BP 14400 E	Bolt, Connecting Rod
20	BP 14403 E	Spacer, Connecting Rod
21	14H 346 A	Nut, Hex. Jam, 1/2" (4 used)
22	BP 1640 E	End, Spring (4 used)
23	174S E	Spring, Connecting Rod (2 used)
24	7H 1454 E	Bolt, Mach., Hex. Hd., Full Thread, 1/2" x 1-1/4", less Nut
25	BP 14416 E	Support, Shock Absorber, R.H.
26	7H 345 H	Bolt, Mach., Hex. Hd., 3/8" x 1-1/4", with Hex. Nut (3 used)
	12H 11 R	Washer, Lock, 3/8" (3 used)

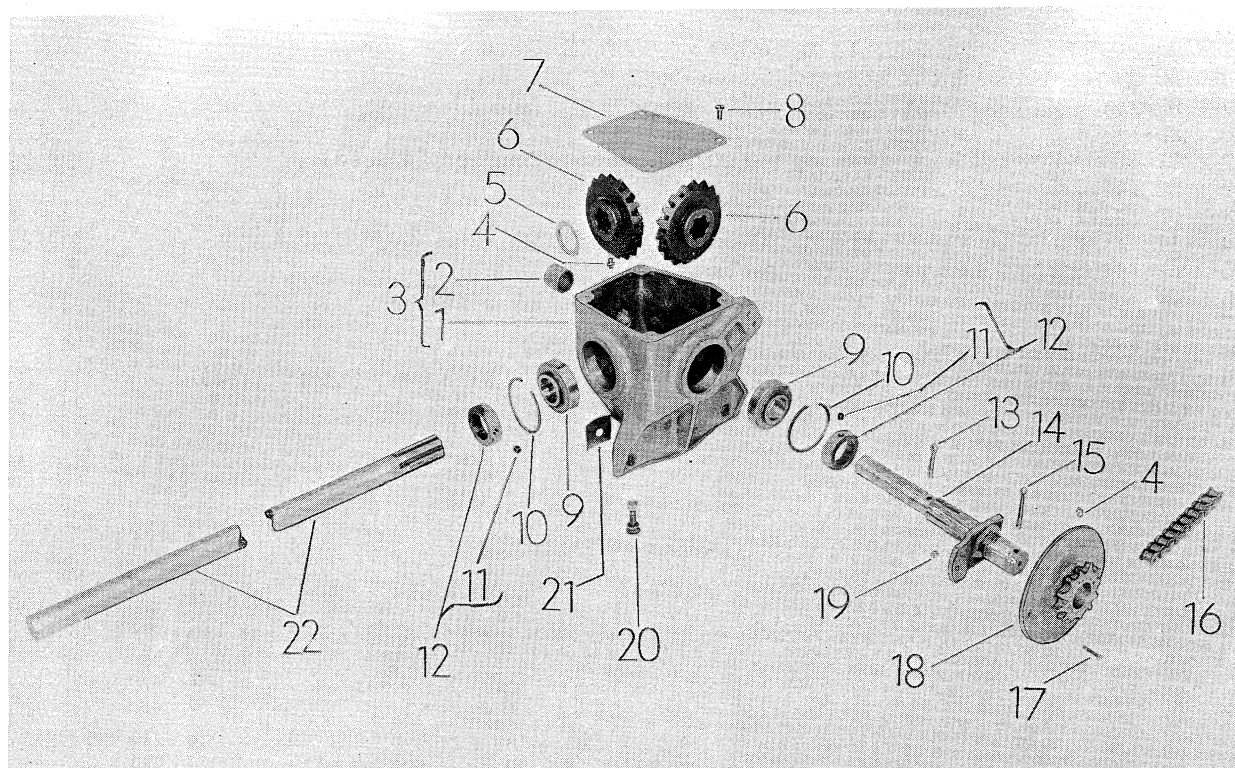
27	24H 157 H	Washer, 1" x 13/32" x .060" (2 used)
28	AM 3376 E	Shock Absorber Assembly
29	BP 14489 E	Mounting, Rubber (4 used)
30	BP 14388 E	Washer, Bushing, Shock Absorber (4 used)
31	BP 14387 E	Ring, Bushing Retaining, Shock Absorber (4 used)
32	BP 14414 E	Bushing, Shock Absorber (4 used)
33	BP 14417 E	Support, Shock Absorber, L.H.
34	11H 41 R	Pin, Cotter, 1/8" x 1" (2 used)
35	BP 14408 E	Pivot, Shock Absorber
36	24H 327 D	Washer, 2-1/4" x 1-17/32" .060" (8 used)
37	G 6134 E	Bushing (2 used)
38	AM 3366 E	Sleeve with Bushings, Crank Drive
39	7H 1158 N	Bolt, Mach., Hex. Hd., 7/16" x 1", with Hex. Nut (9 used)
	12H 12 R	Washer, Lock, 7/16" (9 used)

WHEEL EXTENSION

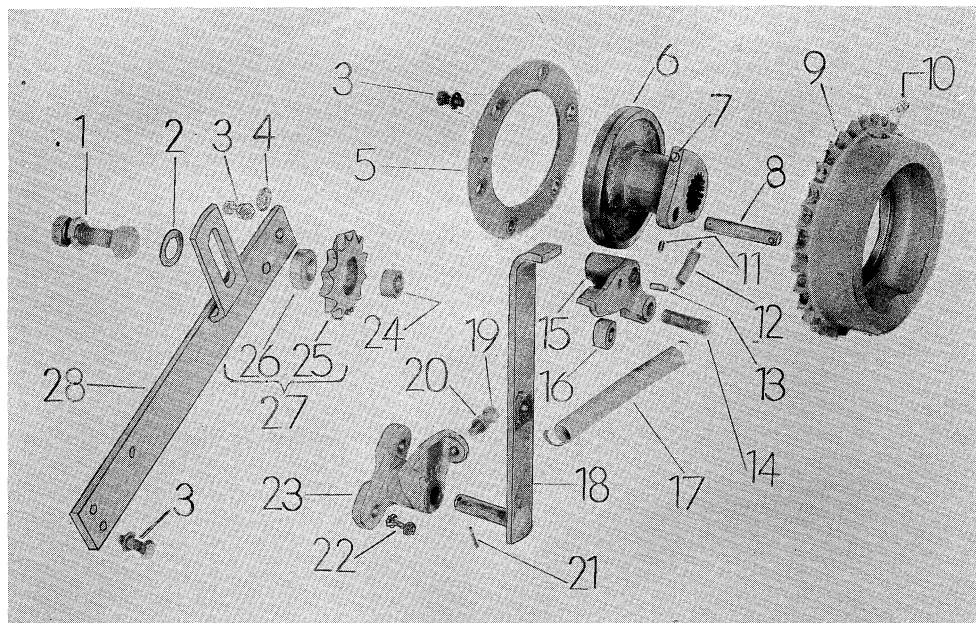


Key	Part No.	Description
1	BP 14227 E	Spindle, Wheel
2	BP 1686 E	Plate, Wheel Spindle
3	C 3938 E	Ring, Snap
4	BP 14515 E	Spacer, Wheel Extension
5	BP 13513 E	Extension, Wheel (For Balers Below Serial No. 47831)
	BP 13514 E	Extension, Wheel (For Balers Above Serial No. 47830)
6	19H 498 N	Screw, Cap, Hex. Hd., 1/2" x 2-1/2" with Hex. Nut (4 used) (Use With BP13513E Only)
	14H 259 R	Nut, Hex. 1/2" (4 used) (Use With BP13513E Only)
	12H 13 R	Washer, Lock, 1/2" (4 used) (Use With BP13513E Only)
	19H 1424	Screw, Cap, Hex. Hd., 5/8" x 2-3/4", with Hex. Nut (4 used) (Use With BP13514E Only)
	14H 263 R	Nut, Hex. 5/8" (4 used) (Use With BP13514E Only)
	12H 15 R	Washer, Lock, 5/8" (4 used) (Use With BP13514E Only)
7	8H 1031 N	Bolt, Mach., Hex., Hd. 5/8" x 3", with Hex. Nut (4 used)
	12H 15 R	Washer, Lock, 5/8" (4 used)

GEAR CASE

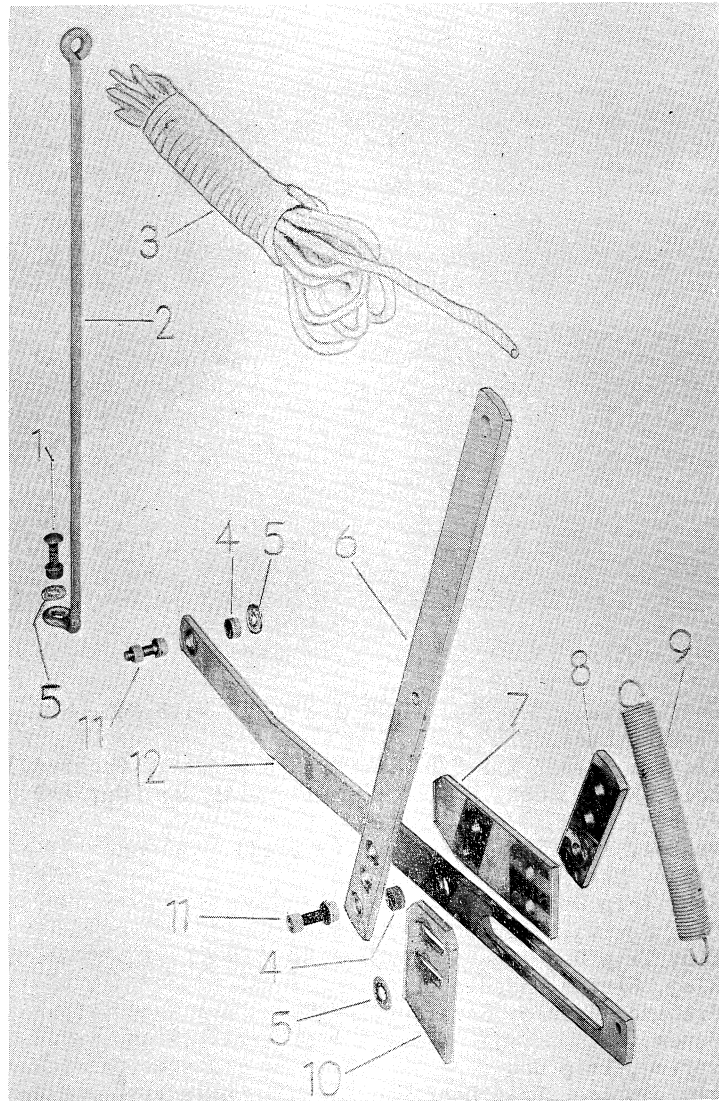


Key	Part No.	Description
1	BP 1760 E	Sub. AM3361E
2	BP 12123 E	Bushing
3	AM 3361 E	Case with Bushing, Gear
4	JD 7797	Fitting, Grease, Straight, 1/4" (2 used)
5	24H 885 H	Washer, 1-13/32" x 2" x .060"
6	BP 11659 E	Gear, Bevel (2 used)
7	BP 14418 E	Cover, Gear Case
8	21H 1013 E	Screw, Mach. Truss Head Plated, 3/16" x 3/8" (4 used)
9	JD 8575 E	Bearing, Adapter (2 used)
10	BP 14118 E	Ring, Retaining
11	22H 588 C	Screw, Set, Hollow Socket, 3/8" x 1/2" (2 used)
12	JD 8576 E	Collar, with Set Screw, Locking
13	11H 115 B	Pin, Cotter, 1/4" x 1-3/4"
14	AM 3370 E	Shaft, Bevel Gear
15	11H 117 R	Pin, Cotter, 1/4" x 2"
16	AM 3375 E	Chain, Roller (70 Links RC 60, 3/4 Pitch) (Assemble from: 69 Riveted Links From 10-Foot Roll AP22460H and one Press-Fit Connecting Link BP13187E)
17	BP 13802 E	Bolt, Shear
18	AM 3371 E	Sprocket and Hub, Drive, 12-Tooth
	AM 3372 E	Sprocket and Hub, Drive, 13-Tooth
19	BP 13806 E	Nut, Elastic Stop
20	2H 348 H	Bolt, Cge. 3/8" x 1-3/4", with Hex. Nut (4 used)
	12H 11 R	Washer, Lock, 3/8" (4 used)
21	BP 14410 E	Shim, Gear Case, .008-.012 (Use Quantity Required)
	BP 14411 E	Shim, Gear Case, .060 (Use Quantity Required)
	BP 14412 E	Shim, Gear Case, .036 (Use Quantity Required)
22	BP 14421 E	Shaft, Feeder Drive



Key	Part No.	Description
1	{ 8H 995 N 12H 15 R	Bolt, Mach., Hex. Hd., 5/8" x 2-1/2", with Hex. Nut Washer, Lock, 5/8"
2	24H 207 H	Washer, 21/32" x 1-3/8" .060" (Use Quantity Required)
3	{ 7H 1026 H 12H 11 R	Bolt, Mach., Hex. Hd., 3/8" x 1", with Hex. Nut (10 used) Washer, Lock, 3/8" (10 used)
4	24H 157 A	Washer, 13/32" x 1" x .060" (2 used)
5	BP 14072 E	Plate, Retaining, Clutch Ring
6	BP 1759 E	Hub, Trip Dog
7	BP 11530 E	Pin, Spring, Trip Dog, Long
8	BP 14079 E	Pin, Trip Dog
9	BP 1756 E	Ring, Clutch, Needle Lift
10	JD 7797	Fitting, Grease, Straight, 1/4"
11	BP 12299 E	Screw, Set
12	279S E	Spring, Trip Dog
13	BP 11531 E	Pin, Spring, Trip Dog, Short
14	BP 14143 E	Pin, Trip Dog Roller
15	BP 1758 E	Pawl, Trip
16	BP 13171 E	Roller, Trip Dog
17	229S E	Spring, Arm, Clutch Trip
18	AM 3363 E	Arm, Clutch Trip
19	7H 324 H	Bolt, Mach., Hex., Hd., 3/8" x 1", less Nut
20	14H 342 A	Nut, Hex. Jam, 3/8"
21	34H 60 N	Pin, Roll, 5/32" x 1"
22	{ 7H 345 H 12H 11 R	Bolt, Mach., Hex. Hd., 3/8" x 1-1/4", with Hex. Nut (2 used) Washer, Lock, 3/8" (2 used)
23	BP 1755 E	Hub, Trip Arm
24	BP 14399 E	Spacer, Idler, Main Drive
25	BP 1679 E	Sprocket, Idler
26	JD 8570 E	Bearing, Idler Sprocket
27	AM 3189 E	Sprocket with Bearing, Idler
28	AM 3367 E	Brace, Chain

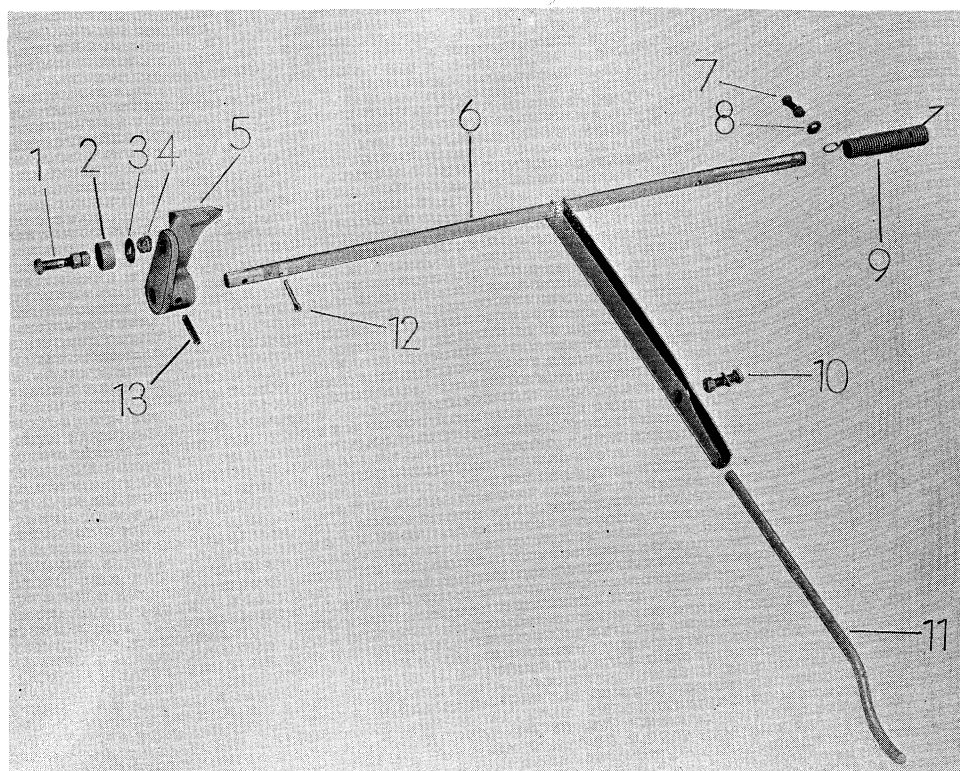
HAND TRIP LEVER



Key Part No.

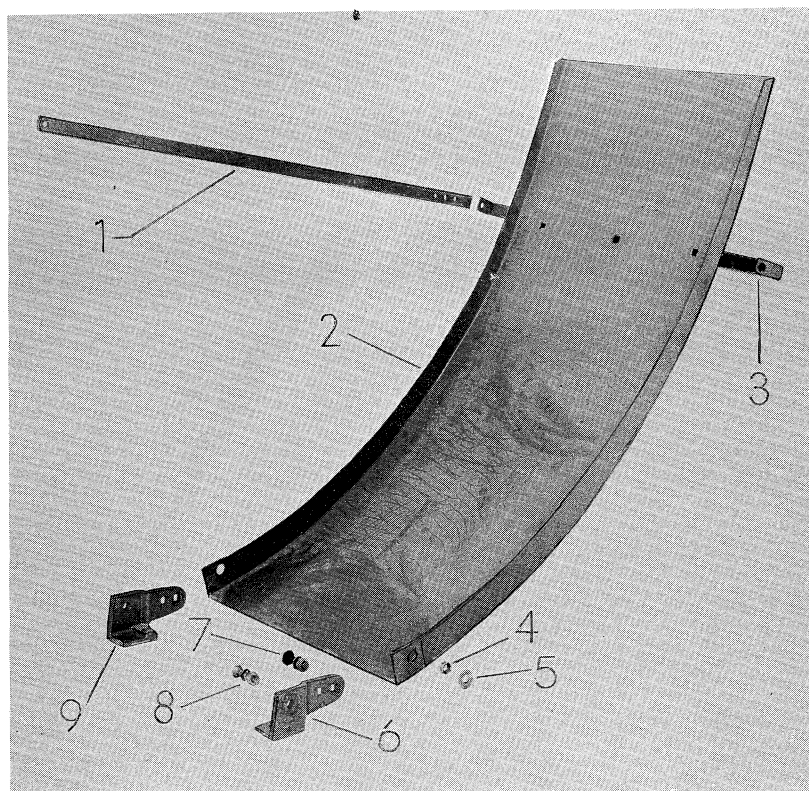
Description

1	7H 363 H 12H 11 R	Bolt, Mach., Hex. Hd., 3/8" x 1-1/2", with Hex. Nut Washer, Lock, 3/8"
2	BP 14395 E	Guide, Trip Rope
3	BP 14490 E	Rope, Trip
4	BP 14392 E	Spacer, Manual Trip (2 used)
5	24H 157 H	Washer, 1" x 13/32" x .060" (3 used)
6	BP 14420 E	Lever, Manual Trip
7	BP 14396 E	Stop, Manual Trip
8	BP 14402 E	Strap, Side, Manual Trip
9	229S E	Spring, Arm, Manual Trip
10	BP 14405 E	Trip, Roller
11	7H 345 H 12H 11 R	Bolt, Mach., Hex. Hd., 3/8" x 1-1/4", with Hex. Nut (6 used) Washer, Lock, 3/8" (6 used)
12	BP 14426 E	Link, Clutch Release

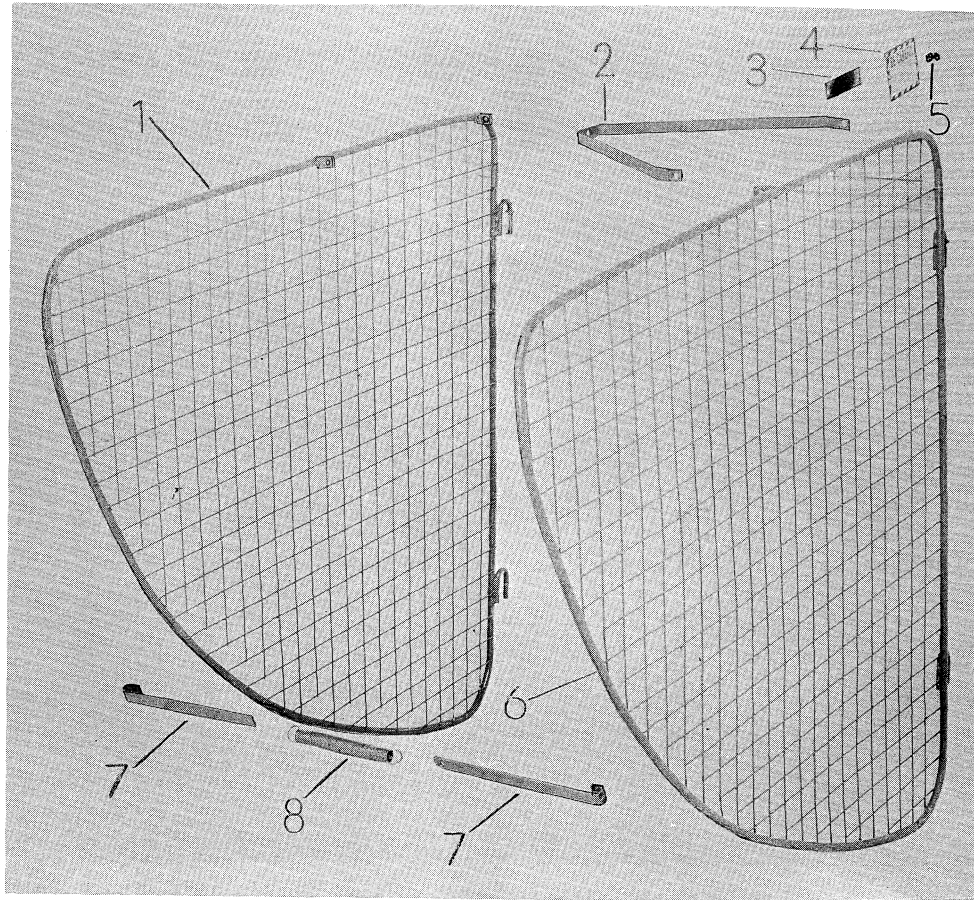


Key	Part No.	Description
1	19H 255 N	Screw, Cap, Hex. Hd., 3/8" x 2"
	14H 255 R	Nut, Hex., 3/8" (2 used)
2	BP 14397 E	Roller, Manual Trip
3	24H 157 H	Washer, 1" x 13/32" x .060" (3 used)
4	BP 14390 E	Roller, Link, Clutch Release
5	BP 1754 E	Arm, Trip Adjustment
6	AM 3362 E	Lever, Bale Trip
7	7H 1127 N	Bolt, Mach., Hex. Hd., 5/16" x 1-1/4", with Hex. Nut
	12H 10 R	Washer, Lock, 5/16"
8	24H 1050 N	Washer, 3/4" x 11/32" x .060"
9	295S E	Spring, Bale Trip Lever
10	7H 345 H	Bolt, Mach., Hex. Hd., 3/8" x 1-1/4", with Hex. Nut
	12H 11 R	Washer, Lock, 3/8"
11	BP 14393 E	Lever, Trip Adjusting
12	11H 82 R	Pin, Cotter, 3/16" x 1-1/4" (2 used)
13	34H 105 H	Pin, Roll, 1/4" x 1-1/2"

BALE CHUTE

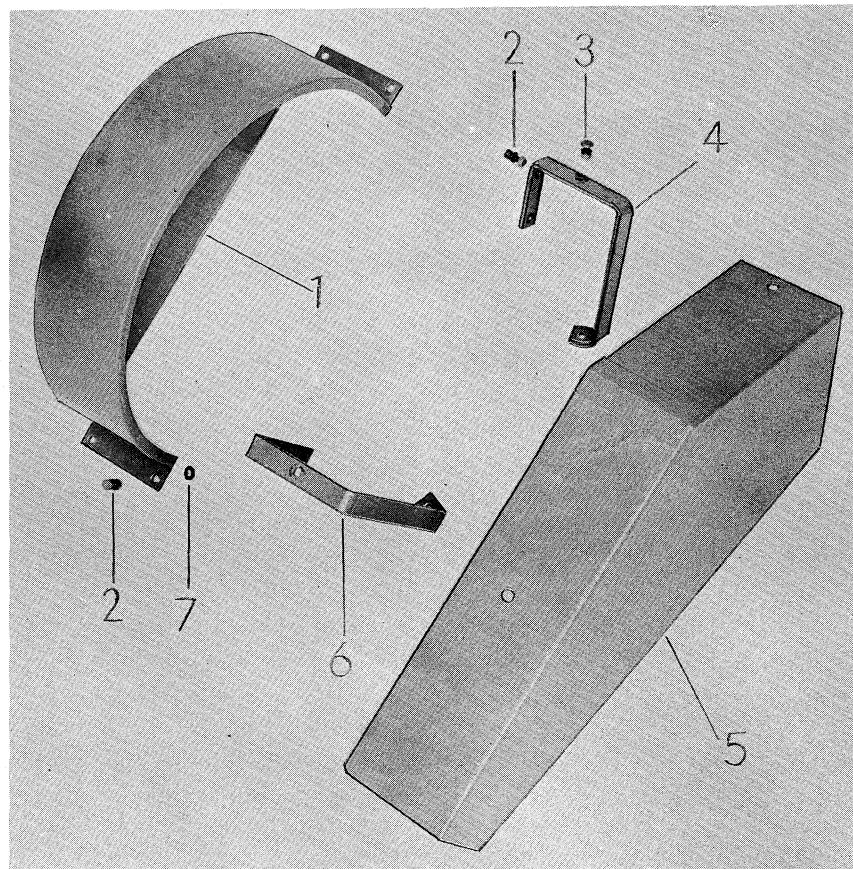


Key	Part No.	Description
1	BP 14406 E	Strap, Chute
2	AM 3356 E	Chute, Bale Thrower
3	AM 3353 E	Brace, Chute
4	BP 12915 E	Spacer (2 used)
5	24H 1076 E	Washer, 15/32" x 1-1/8" .060"
6	BP 1753 E	Bracket, Chute Attaching, L.H.
7	2H 482 H	Bolt, Cge., 7/16" x 1-1/4", with Hex. Nut (2 used)
	12H 12 R	Washer, Lock, 7/16"
8	9H 458	Bolt, Plow, No. 3, 7/16" x 1-3/4", with Hex. Nut (2 used)
	12H 12 R	Washer, Lock, 7/16" (2 used)
9	BP 1752 E	Bracket, Chute Attaching, R.H.

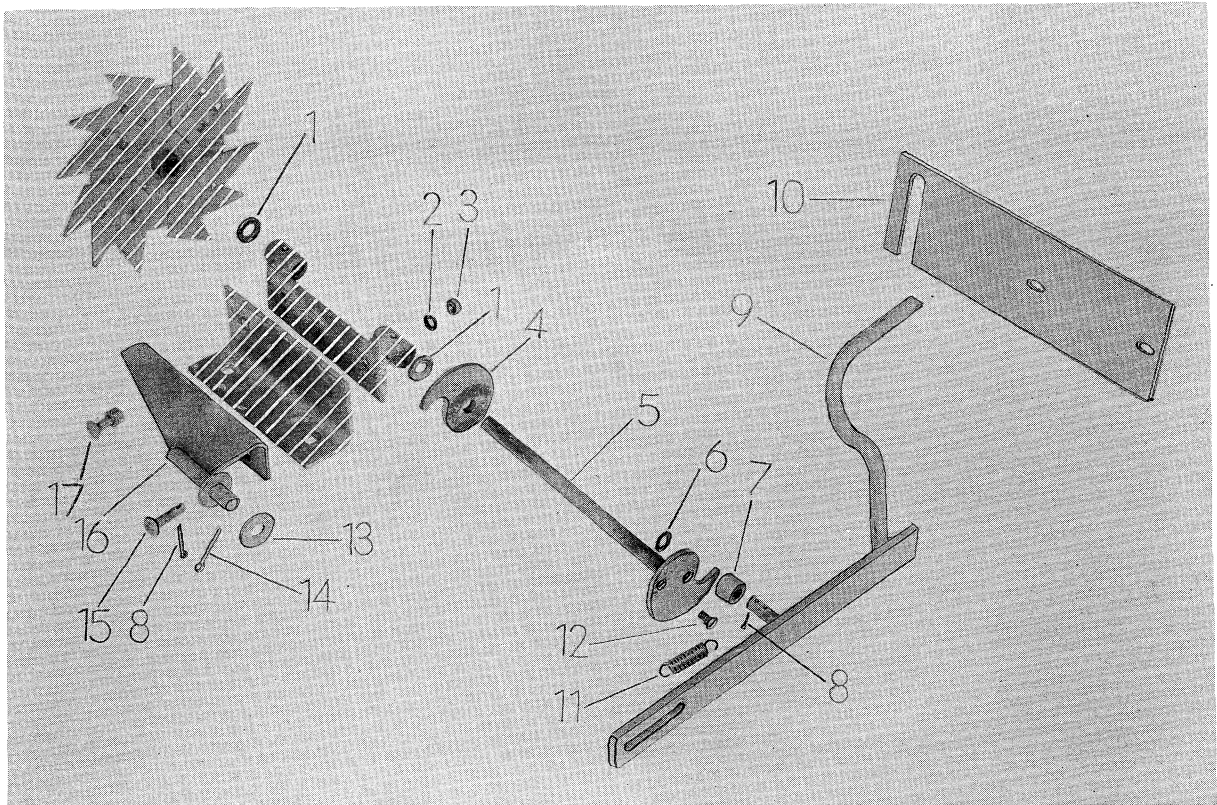


Key	Part No.	Description
1	AM 3347 E	Shield, Throwing Arm, L.H.
2	BP 14419 E	Brace, Shield (2 used)
3	BP 14493 E	Plate, Attaching, Safety Sign
4	JD 130 E	"BE CAREFUL" (Safety Sign) (2 used)
5	21H 1012 E	Screw, Mach., Truss Head Plated, 3/16" x 3/8" (4 used)
	BP 14494 E	U-Nut (4 used)
6	AM 3346 E	Shield, Throwing Arm, R.H.
7	BP 14424 E	Fastener, Shield, Rear
8	229S E	Spring, Brace, Shield

SAFETY SHIELDS

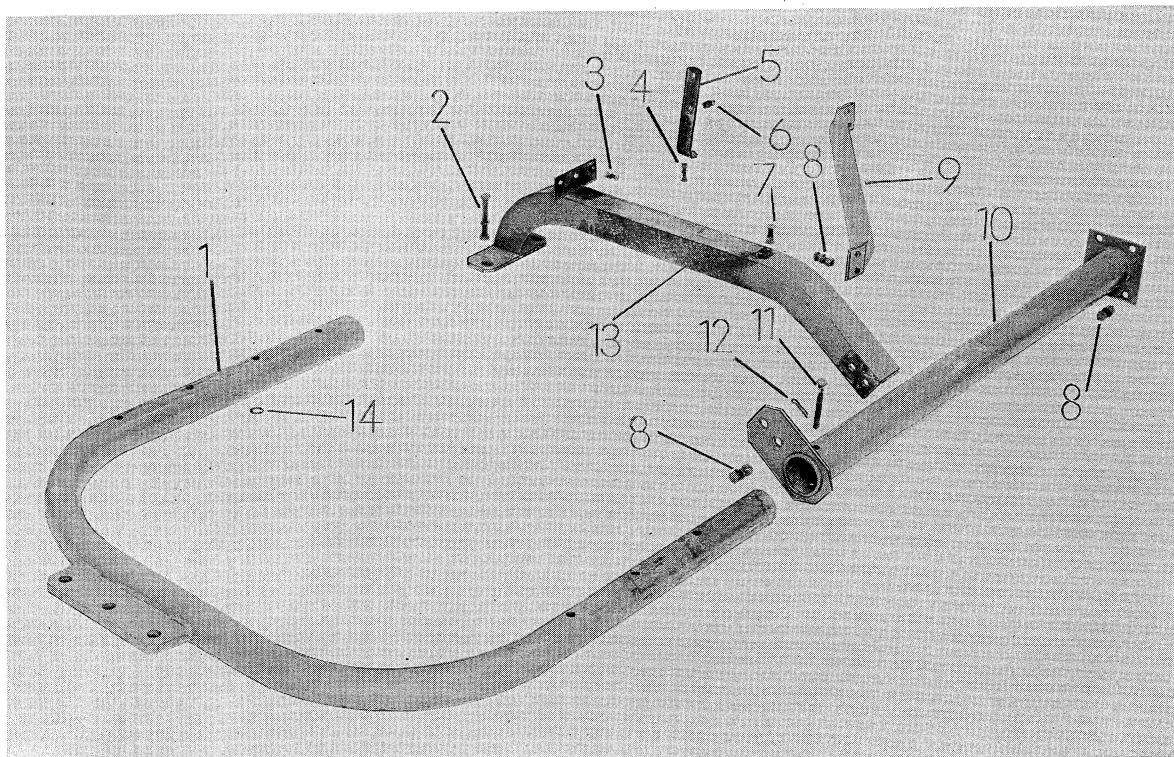


Key	Part No.	Description
1	AM 3374 E	Shield, Crank
2	7H 174 H	Bolt, Mach., Hex. Hd., 5/16" x 1", with Hex. Nut (7 used)
	12H 11 R	Washer, Lock, 5/16" (7 used)
3	2H 156 H	Bolt, Cge., 5/16" x 3/4", with Hex. Nut (4 used)
	12H 11 R	Washer, Lock, 5/16" (4 used)
4	BP 14425 E	Support, Main Drive Shield, Rear
5	AM 3373 E	Shield, Main Drive
6	BP 14422 E	Support, Main Drive Shield, Front
7	24H 1050 N	Washer, 3/4" x 11/32" x .060"



Key	Part No.	Description
1	24H 185 E	Washer, 17/32" x 1" x .060" (Use Quantity Required)
2	12H 10 R	Washer, Lock, 5/16"
3	14H 253 R	Nut, Hex., 5/16"
4	BP 13977 E	Cam, Trip Lever, L.H.
5	AM 3163 E	Cam, Trip Lever Drive
6	24H 156 R	Washer, 13/32" x 11/16" x .060" (2 used)
7	BP 13368 E	Roller, Cam Follower
8	11H 39 R	Pin, Cotter, 1/8" x 3/4" (3 used)
9	AM 3164 E	Lever, Trip
10	BP 14228 E	Guide, Trip Lever
11	124S E	Spring, Trip Lever
12	21H 1021 E	Screw, Mach., Flat Head, Plated, 1/4" x 1/2" (2 used)
13	24H 187 E	Washer, 17/32" x 1-1/4" x .060" (Use Quantity Required)
14	11H 41 R	Pin, Cotter, 1/8" x 1"
15	BP 13983 E	Bolt, Trip Lever Anchor
16	AM 3166 E	Bracket, Pivot Pin, Trip Lever
17	2H 172 D	Bolt, Cge., 5/16" x 1", with Hex. Nut
	12H 10 R	Washer, Lock, 5/16"

WAGON HITCH



Key	Part No.	Description
1	AM 3349 E	Hitch, Wagon
2	7H 1054 H	Bolt, Mach. Hex. Hd., 1/2" x 2-3/4", with Hex. Nut (2 used)
	12H 13 R	Washer, Lock, 1/2" (2 used)
3	9H 1348 H	Bolt, Plow, No. 3, 5/16" x 1", with Hex. Nut
	12H 10 R	Washer, Lock, 5/16"
4	9H 160 H	Bolt, Plow, No. 3, 3/8" x 1-1/4", with Hex. Nut
	12H 11 R	Washer, Lock, 3/8"
5	BP 14401 E	Bracket, Tongue Plate
6	7H 345 H	Bolt, Mach., Hex. Hd., 3/8" x 1-1/4", with Hex. Nut (2 used)
	12H 11 R	Washer, Lock, 3/8" (2 used)
7	9H 412 H	Bolt, Plow, No. 3, 7/16" x 1-1/4", with Hex. Nut (3 used)
	12H 12 R	Washer, Lock, 7/16" (3 used)
8	7H 733 H	Bolt, Mach., Hex. Hd., 1/2" x 1-1/4", with Hex. Nut (10 used)
	12H 13 R	Washer, Lock, 1/2" (10 used)
9	BP 13298 E	Reinforcement, Wagon Hitch, Front
10	AM 2759 E	Hitch, Wagon
11	BP 11571 E	Rivet, Drilled
12	11H 80 R	Pin, Cotter, 3/16" x 1"
13	AM 3348 E	Angle, Support, Hitch
14	24H 185 E	Washer, 17/32" x 1" x .060" (2 used)