



# OPERATOR'S MANUAL

SETTING UP INSTRUCTIONS  
PARTS LIST

## Rotary Mower (38-inch)

for

INTERNATIONAL<sup>®</sup>

CUB<sup>®</sup> CADET

Tractor

INTERNATIONAL HARVESTER COMPANY

180 North Michigan Ave.

Chicago 1, Illinois, U.S.A.

## TO THE OWNER

The purpose of this manual is to assist you in realizing the benefits you anticipated when you purchased this International Harvester product. Many people have contributed to the design and production of this product and its delivery to you. They have an interest in its successful performance and have provided this manual to give you the benefit of the experience they have gained through years of field testing and normal usage of this and similar products.

The way you operate and the care you give this product will have much to do with its successful performance. This manual has been carefully prepared and the information arranged and illustrated to make it as easy as possible for you to find the information you wish. It will pay you to read the entire manual carefully before operating and keep it handy for future reference. Your International Harvester Dealer will be glad to answer any further questions you may have on the operation or care of this product.

---

It is the policy of International Harvester Company to improve its products whenever it is possible and practical to do so. We reserve the right to make changes or add improvements at any time without incurring any obligation to make such changes on products sold previously.

---

**All illustrations and descriptive matter in this publication apply to International Harvester products sold under the International, McCormick, or McCormick-International trade name.**

---

As a member of the National Safety Council, we are privileged to use the Green Cross for Safety to designate not only our interest in Safety, but to point out more clearly the safety precautions in this manual.

## INTRODUCTION

The center-mounted 38" rotary mower is designed for use on the International® Cub® Cadet Tractor.

It is sturdily built throughout, having a housing fabricated from heavy sheet steel. The top of the housing is of flat design to give maximum protection from objects emitting from the blades. It extends beyond the tractor wheels to permit cutting close to shrubbery, trees, fences, buildings, drive and walkway edges, etc.

Skid shoes are part of the main frame and aid in preventing the blades from scalping on uneven terrain.

This mower is equipped with a leaf mulcher as regular equipment.

A discharge safety guard which prevents injury to the operator at the discharge opening is provided with the mower.

Raising and lowering of the mower is done by means of the tractor lift lever.

The mower is driven by a belt from the tractor engine main drive shaft. Two cutting blades are securely attached to their spindle drive blocks and are synchronized by a specially constructed cog belt.

The cutting height is adjustable from 1" to 4". Throughout this range and regardless of uneven terrain, mower level is maintained by a unique system of parallel linkage.

Gauge wheels are available on special order.

Illustrations are numbered to correspond with the page number on which they are located. Therefore, if reference is made to **Illust. 7B**, for example, you know the illustration appears on page 7. The letter "B" indicates that it is the second illustration on that particular page.



## SAFETY RULES

No minor should be allowed to operate the mower unless properly supervised.

Never place hands or feet under the mower, in the discharge chute, or near any moving parts while the tractor engine is running. Do not work on the mower with the engine running.

Never leave the tractor engine running unattended or permit it to be operated by persons not acquainted with its use and the rules for safe operation.

Be sure all stones, branches, or other objects that might be picked up and thrown by the mower blades are removed before starting to mow.

Do not allow anyone in the area opposite the discharge chute while mowing. Although the area has been supposedly cleared of foreign objects, small objects may have been overlooked and may be discharged by the mower.

Disengage the mower drive before starting the tractor.

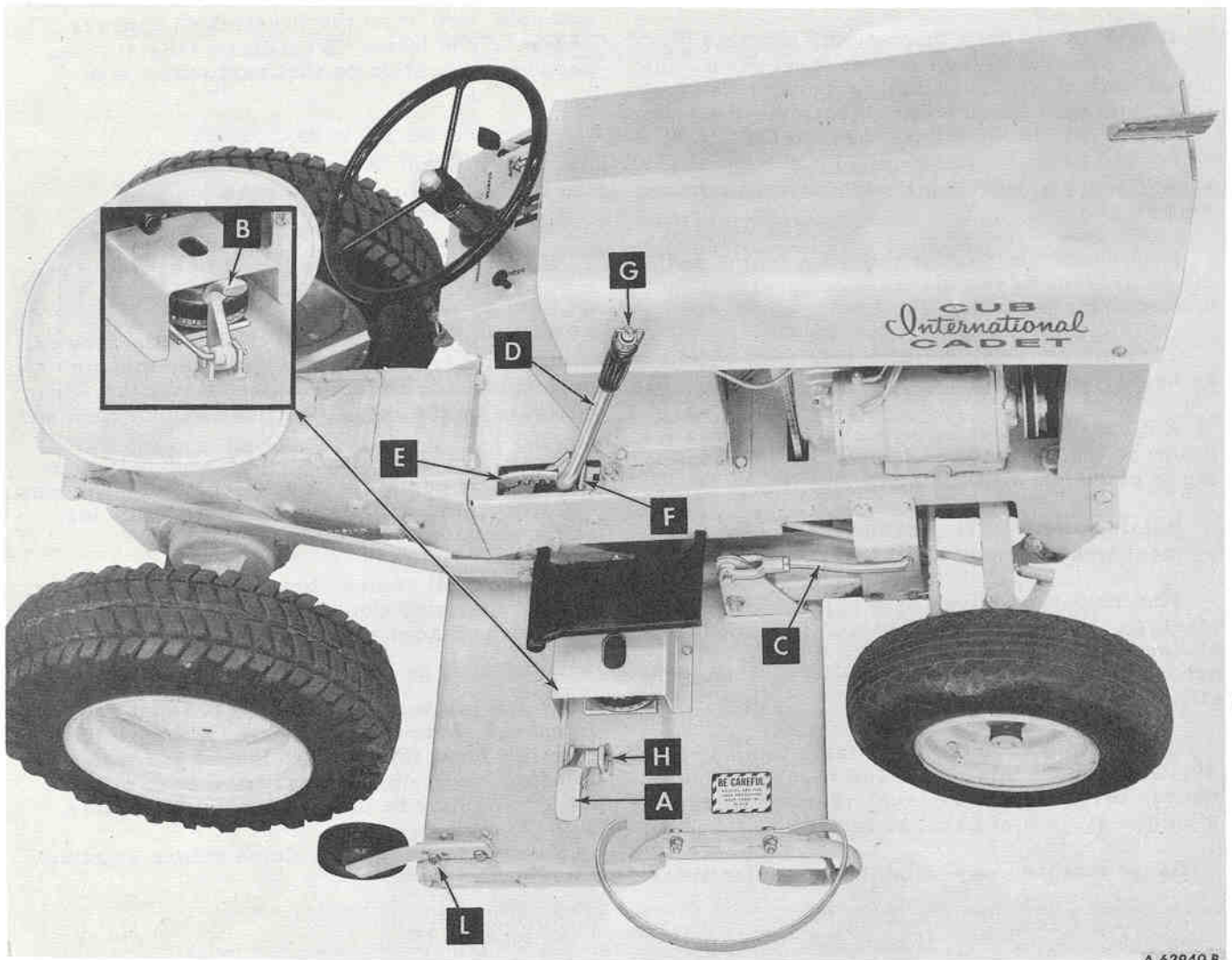
*A Careful Operator*

IS THE BEST INSURANCE

AGAINST AN ACCIDENT

—National Safety Council.

# INSTRUCTIONS FOR ADJUSTING AND OPERATING



A-62940 B

Illust. 4A

## GENERAL

After 8 to 10 hours of operation check and retighten, if necessary, all nuts and bolts on the machine paying particular attention to the cap screws attaching the blades to the spindle, the spindle nuts and the bolts holding the spindle bearing housings to the mower. These bolts and nuts should be tightened securely. All nuts and bolts should be rechecked and re-tightened, if necessary, at least once a year thereafter.

## STARTING AND STOPPING THE MOWER

To start the mower, depress the mower clutch pedal to the right as shown at "A" in Illust. 4A. To stop the mower, raise the clutch pedal as far as possible to the left as shown at "B".

## LEVEL ADJUSTMENT

Proper cutting action is obtained when the rear end of the skid shoe on each side of the mower is 1/4" higher than the front end.

To adjust the mower, place the tractor on a level surface, preferably a hard surface area such as a garage floor or sidewalk and lower the mower almost to the ground. Remove the upper link rod "C" (Illust. 4A) from the support and lengthen or shorten it, whichever is required, by turning it in the clevis until the correct adjustment is obtained. Be sure the upper link rods are equally adjusted so the mower is parallel to the ground from one side to the other.

**NOTE:** When gauge wheels are used, a slightly different procedure for level adjustment is required. In this case lower the mower to the ground with the gauge wheels adjusted to the desired cutting height. With the tractor lift lever all the way forward, follow the above procedure for adjusting the upper link rods until the rear end of the mower is approximately 1/4" higher than the front.

Tighten the jam nut against the clevis when the proper adjustment is obtained.

## HEIGHT OF CUT

When gauge wheels are not used, the cutting height is controlled by the lift lever "D" (Illust. 4A) on the tractor.

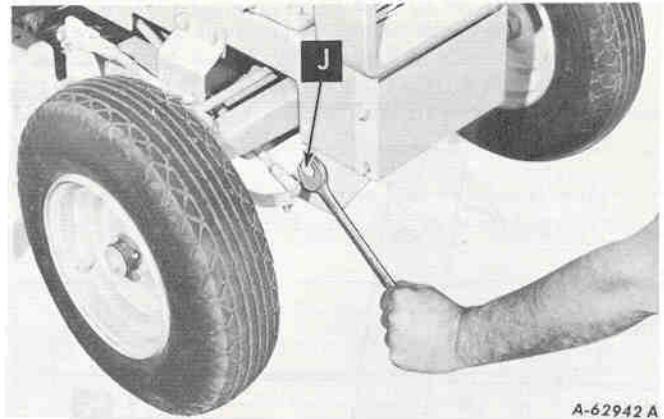
The cutting height can be adjusted from 1" to 4" easily and quickly and is maintained at a set level by securing the lift lever in a notch in the quadrant "E", (Illust. 4A).

A lift arm stop "F" (Illust. 4A) is provided with the tractor. The stop is used so the mower can be raised, as for an obstacle, and then lowered after the obstacle is crossed, thereby, maintaining the preset cutting height. Also, by means of the stop, an infinite number of cutting heights are available within the 1" to 4" range.

When using the lift arm stop, lock the push button "G" on the lift lever in the inoperative position to prevent the lever from accidentally becoming latched in a position other than the one desired.

Raise the mower to the desired cutting height; then adjust the stop so it contacts the lift lever. Tighten the bolt securely.

## V-BELT TIGHTENER



Illust. 5A

**Mower V-Belt:** To tighten the mower drive short V-belt, remove the clutch pedal pivot pin "H" (Illust. 4A), and the pedal from the mower and turn the rod into the clevis to shorten. Replace the pedal.

**Main Drive V-Belt:** To tighten the main drive V-belt, loosen the bolt "J", (Illust. 5A); then adjust the pulley assembly downward, to remove belt slack. Be sure the pulleys are level with the tractor and tighten the bolt securely.

**NOTE:** It is important that the V-belts be kept properly tightened, especially under tough mowing conditions, to prevent premature belt, pulley, and bearing failure.

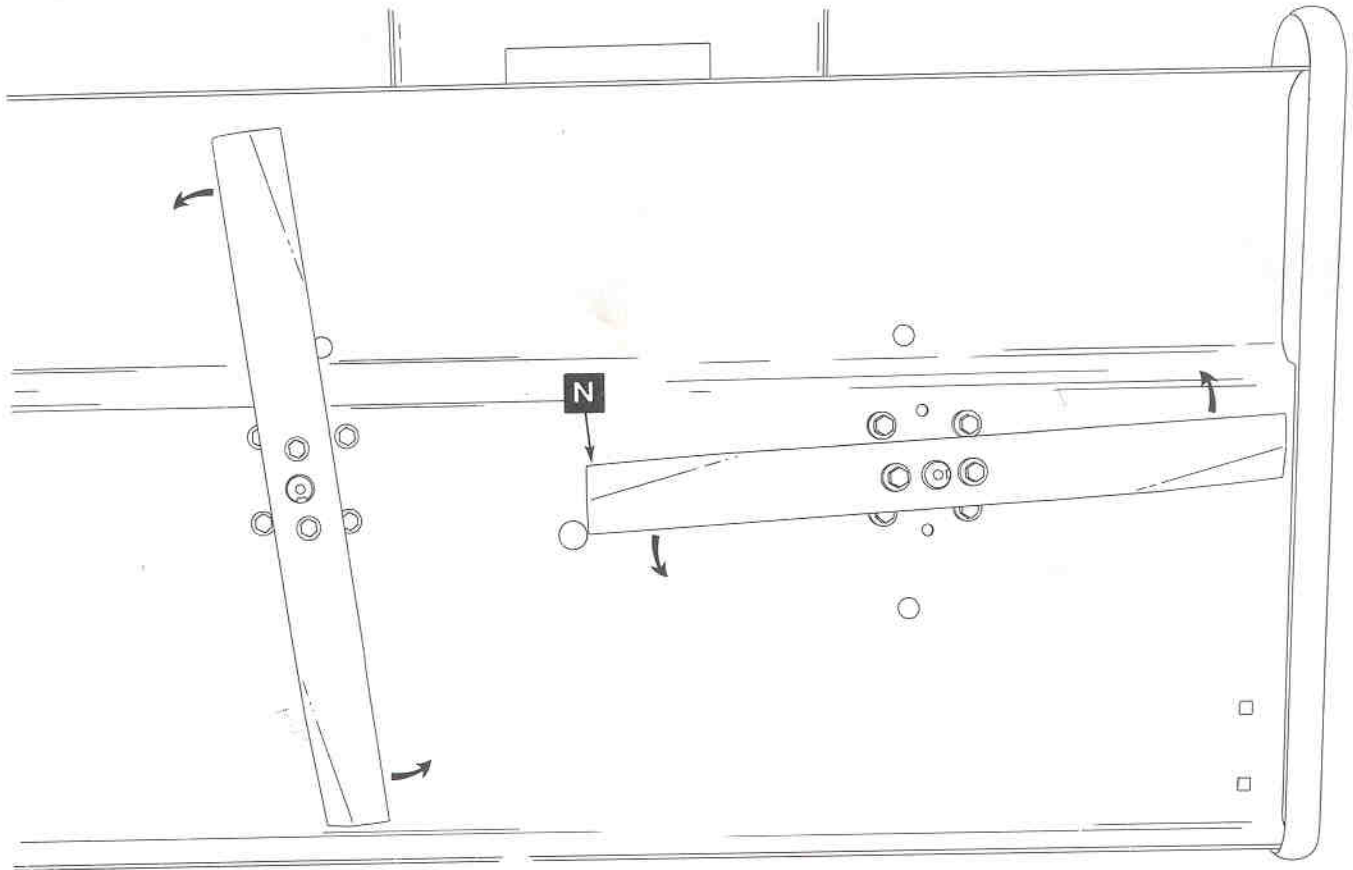
## COG BELT TIGHTENER

The distance between the spindles has been factory set so that the cog belt should be properly tensioned when installed. The cog belt is made of special stretch resistant material that should not require tightening under normal operation.

If for any reason the cog belt requires adjustment, remove the four cap screws holding the left spindle bearing housing and rotate the housing clockwise (to tighten) and reinstall the bolts. This should be done in one-eighth turn increments to avoid overtightening the belt. If the adjustment obtainable with the left spindle bearing housing is insufficient, additional adjustment is obtainable by rotating the right spindle bearing housing counterclockwise. This housing must be turned in one-quarter turn increments.

If the cog belt rides to the top of the cog pulleys and rubs on the top flange of the left pulley, it indicates that the belt is too tight. Reverse the above instructions to loosen the belt.

## CUTTER BLADES



A-62944

Illust. 6A

The installation of the cog belt is proper when the cutter blades are at an angle of 90-degrees to each other as shown in illust. 6A.

If the blades are not at an angle of 90-degrees to each other, remove the pulley shields and cog belt and reinstall as follows: Align the keyways in the shafts for the cog belt pulleys "A" and "B" (Illust. 8A) with the arrows on the mower housing. While maintaining this relationship, place the cog belt on the flanged pulley "A"; then by placing a belt cog between two cogs on the right pulley at "B"; turn the belt pulley until the belt rides in place. This procedure will place the cutter blades in the proper position at right angles to each other. Replace the pulley shields.

**NOTE:** Inspect the cog belt for sheared teeth and other damage before reinstalling.

Check the blades periodically for proper setting, particularly after an obstruction has been hit. This can be done, without removing the pulley shields, by aligning the keyways in the spindle shafts (which can be seen through the holes in the shields) with the arrows on top of the mower housing. If these will not align simultaneously, the blades are out of adjustment. In this case remove the pulley shields and cog belt and reinstall according to the above instructions.



**CAUTION!** Never look into the discharge opening while the blades are in motion.

## BLADE CARE

The cutting blades must be kept sharp at all times. The blades can be sharpened on the mower with a few strokes of a file or they can be removed from the mower and sharpened on a grinding wheel. **NOTE:** Always remove approximately the same amount of material from each cutting edge of the blade so excessive blade imbalance does not develop. However, if the cutting edge of the blade is within  $3/8$ " of the wind wing "N" (Illustr. 6A), it is recommended that new blades be installed. New blades are available at your IH dealer.

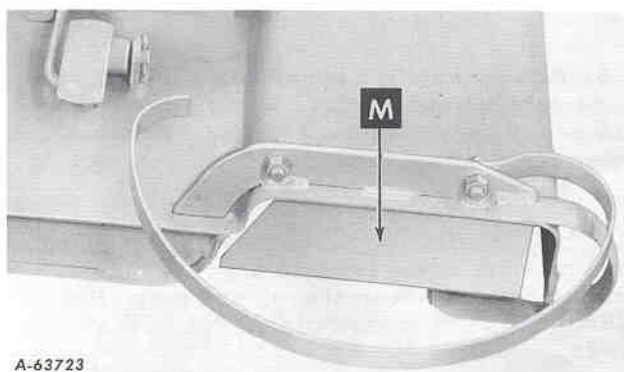
When replacing the blades, be sure they are assembled on the drive blocks so the cutting edges are in the direction of rotation with the wind wings pointed upward and the cap screws tightened securely.

If it is necessary to replace the keys in the blade drive blocks, be sure the keys do not protrude beyond the blade block. The key should be  $15/32$ " minimum to  $1/2$ " maximum long.

**NOTE:** If the drive pulley spindles are removed for any reason, they should be tightened to 100 foot-pounds torque when replaced.

## LEAF MULCHER

A leaf mulcher plate "M" (Illustr. 7A) is furnished with the mower. It is bolted to the mower at the discharge opening. The mower is set as low as possible and still allow the leaves to feed under the front of the mower. **DO NOT USE THIS PLATE WHEN MOWING GRASS.** No special cutting blades are required for mulching. The regular blades are used.



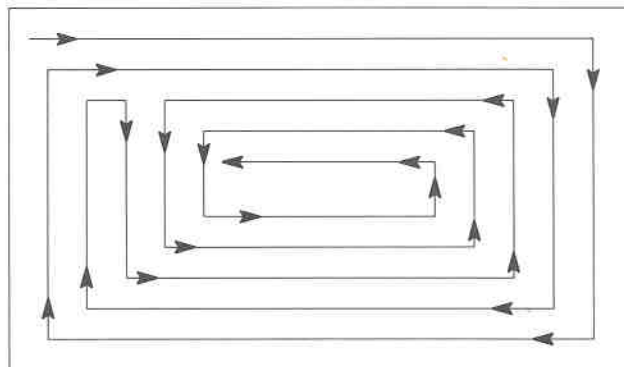
A-63723

Illustr. 7A

## MOWING

For best results it is recommended that the first two laps should be cut with the discharge being thrown towards the center. After the first two laps, reverse the direction to throw the discharge to the outside for the balance of cutting. This will give a better appearance to the lawn.

Do not cut the grass too short, as it will give a scalping effect and invite weed growth.



A-62943

Illustr. 7B

## GAUGE WHEEL ATTACHMENT (Special)

Gauge wheels are available on special order. They are attached to the rear of the mower on top of the housing at the outer ends. The gauge wheels are used for setting of the cutting height to allow the mower to follow the contour of the ground and aid in preventing scalping of the ground.

The gauge wheels can be adjusted by means of the three holes in the wheel arms. Place bolt "L" (Illustr. 4A) in the hole desired. When using the gauge wheels to control the cutting height, lock the push button "G" (Illustr. 4A) on the lift lever to the inoperative position so the mower is free to float up and down.

## CLEANING

Clean the underside of the mower at the end of the mowing season and when the build-up of cut material on the underside is noticed.



**CAUTION!** Stop the tractor motor before attempting to clean or work on the mower.

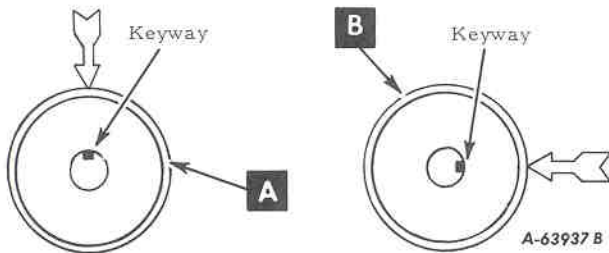
## INSTRUCTIONS FOR SETTING UP

Remove all parts from the shipping carton and arrange the parts conveniently.

Bolts must be used in the holes in which they are found, or in the parts to which they are attached, unless otherwise shown.

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

### ASSEMBLY

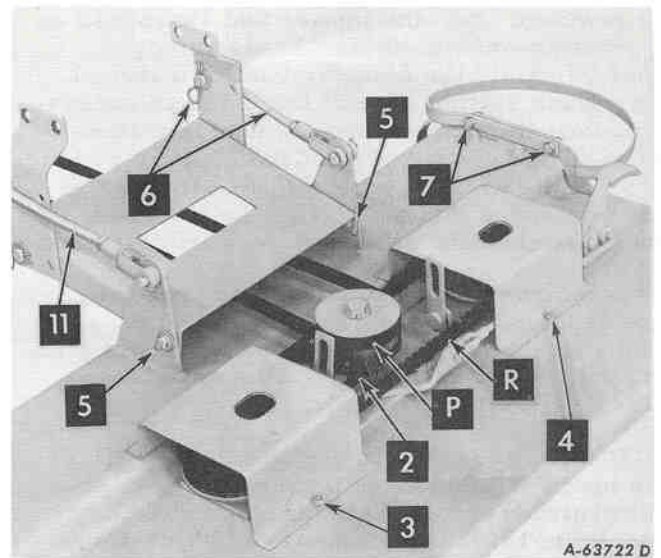


Illustr. 8A

1. Align the keyways in the shafts for the cog belt pulleys "A" and "B" (Illustr. 8A) with the arrows on the mower housing. While maintaining this relationship, place the cog belt "R" (Illustr. 8B) on the flanged pulley "A"; then by placing a belt cog between two cogs on the right pulley at "B", turn the belt pulley until the belt rides in place. This procedure will place the cutter blades in the proper position, at right angles to each other.

2. Place the short V-belt on the mower drive pulley and the left cog belt pulley. See Illustr. 8B.

3. Bolt the left shield (with V-belt guide) to the mower, using two 1/4 x 1/2" carriage bolts, lock washers, and nuts.



Illustr. 8B

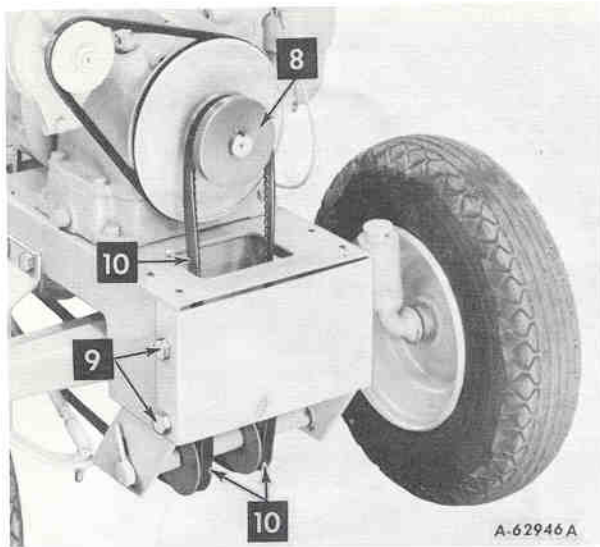
4. Bolt the right shield to the mower, using two 1/4 x 1/2" carriage bolts, lock washers, and nuts.

5. Bolt the lower parallel link with the supports and the pivot rod to the mower, using two 3/8 x 1" carriage bolts, spacers, 13/32 x 13/16" x 16 ga. plain washers, lock washers, and nuts.

6. Attach the right upper parallel link rod to the support and secure, using a 17/32 x 1" x 16 ga. plain washer and quick-attachable cotter pin.

7. Bolt the discharge opening safety guard to the mower, using two 3/8 x 1" hex-hd. machine bolts, lock washers, and nuts. Bolt heads must point toward the center of the mower.





Illust. 9A

8. With the wide flange of the drive pulley to the front, assemble it on the engine crankshaft, using two 1/4 x 1/4" cup point hex. socket set screws. Secure the cup point set screws with 1/4 x 1/4" flat point hex. socket screws. Tractors without electric starter; the 1/4 x 1/4 x 1" key must be used.

**Tractors with Electric Starter:** Assemble the drive pulley flush against the starter-generator engine pulley as shown in Illust. 9A.

**Tractors without Electric Starter:** Assemble the drive pulley so the wide flange face of the pulley is 5/16" from the front end of the engine crankshaft.

**NOTE:** For convenience of assembling the main drive pulley, the hood and grille can be removed.

9. Bolt the belt tightener pulley assembly and the shield to the tractor frame, using four 1/2 x 1" hex-hd. machine bolts and lock washers.



Loose or "floppy" clothing should not be worn by the operator because of the danger of it wrapping on or getting into the moving parts.

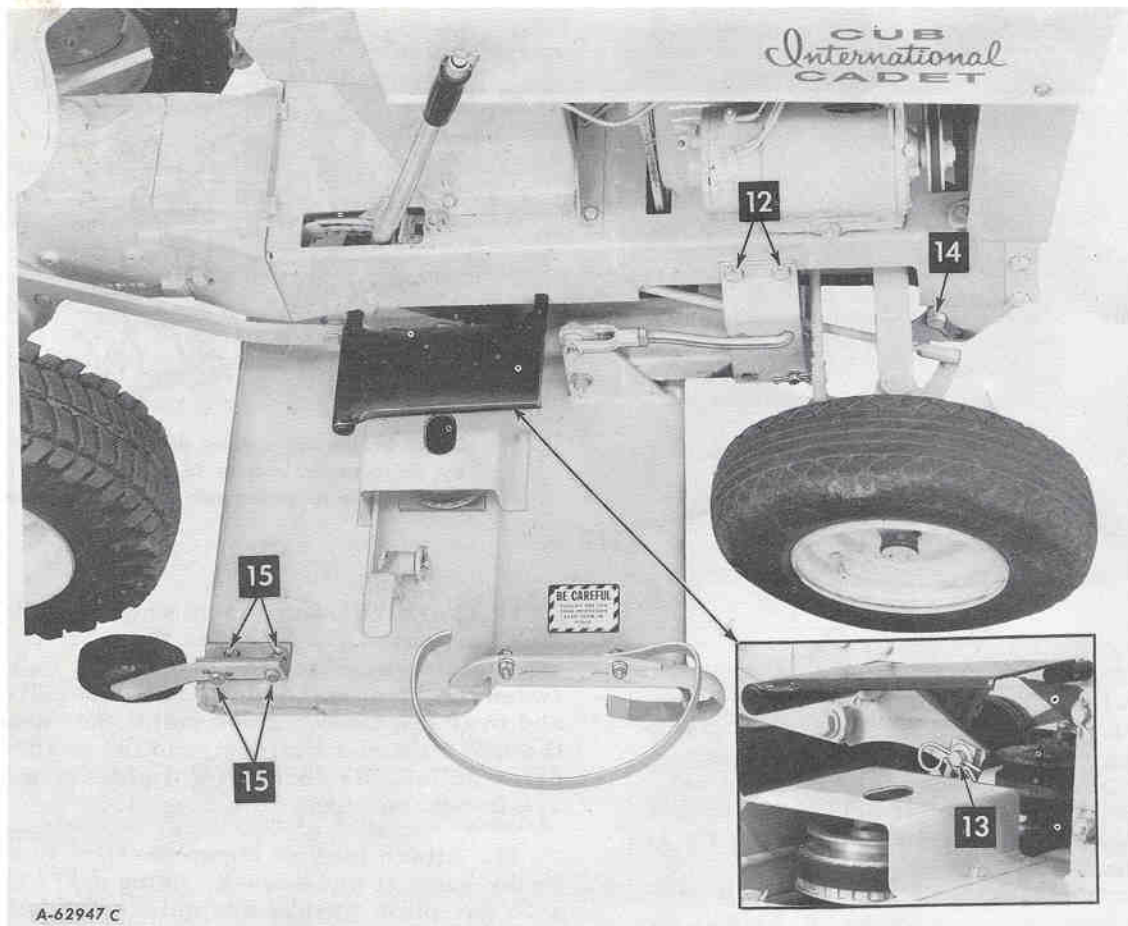
10. Turn the tractor front wheels to the left and position the mower under the tractor from the right side. Place the main drive belt between the pivot rod and the lower parallel link and over the mower drive pulley "P" (Illust. 8B), the belt tightener pulleys, and the engine main drive pulley. Be certain the tightener pulleys are in the top of the adjusting slot.

11. Attach the left upper parallel link rod to the support and secure, using a 17/32 x 1" x 16 ga. plain washer and quick-attachable cotter pin. See Illust. 8B.

Continued on next page.



Be extra careful when working on hillsides. Watch out for holes or ditches into which a wheel might drop and overturn the tractor.



Illust. 10A

12. Bolt the parallel link supports to the tractor frame, using four  $1/2 \times 1$ " hex-hd. machine bolts, lock washers, and nuts.

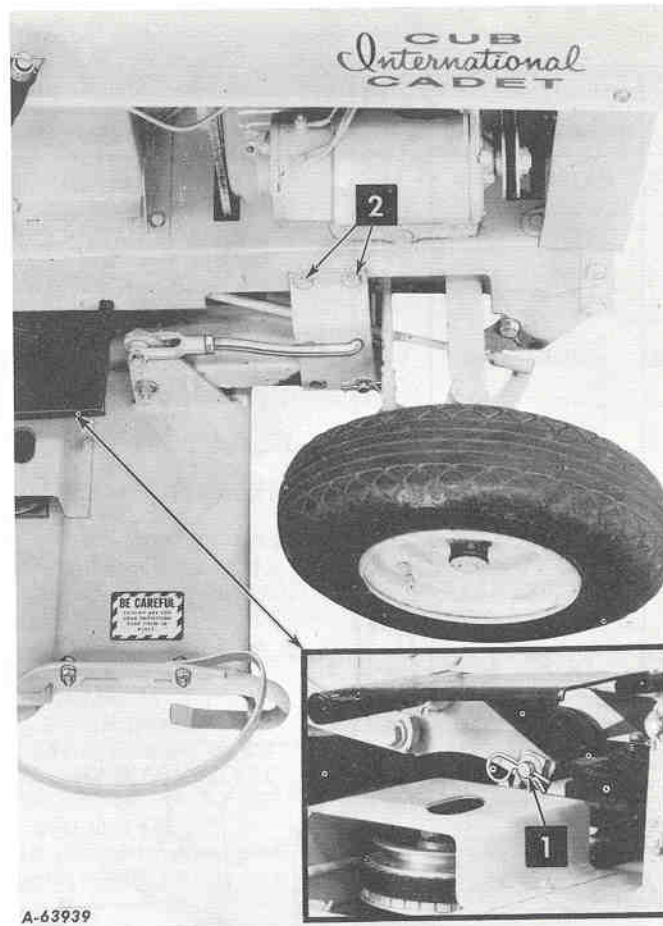
13. Attach the mower to the lift arms and secure, using two  $17/32 \times 1$ " x 11 ga. plain washers and quick-attachable cotter pins.

14. Tighten the main drive belt. Also refer to "V-Belt Tightener" on page 5.

Adjust the mower upper link rods as described in "Level Adjustment" on page 5.

15. **Mower with Gauge Wheel:** Bolt the angle brackets to the mower, using  $3/8 \times 3/4$ " carriage bolts, lock washers, and jam nuts. Place a  $17/32 \times 1$ " x 16 ga. plain washer on each gauge wheel arm axle, attach the gauge wheels to the axles with the nylon bearing hub toward gauge wheel arm, and secure, using  $17/32 \times 1$ " x 16 ga. plain washers and cotter pins. Then, using the hole in the arm which gives the desired height, bolt the assemblies to the angles on the mower, using  $3/8 \times 1$ " cap screws, lock washers, and jam nuts. See Illust. 10A.

## ATTACHING AND DETACHING THE MOWER



Illust. 11A

To facilitate the changing of blades, sharpening of blades, cleaning, etc., the mower may be detached from the tractor in the following manner.

1. Remove the quick-attachable cotter pins and washers from the pins on the lift arms and detach mower lift links.

2. Remove the bolts from the right and left supports and detach the supports from the tractor frame.

3. Remove the quick-attachable cotter pin and plain washer from the hooked end of the left parallel link rod and detach the rod from the left support.

4. **Mower with Gauge Wheels:** Loosen the front bolt on the left gauge wheel arm; then remove the rear bolt and fold the gauge wheel over to rest on top of the mower housing.

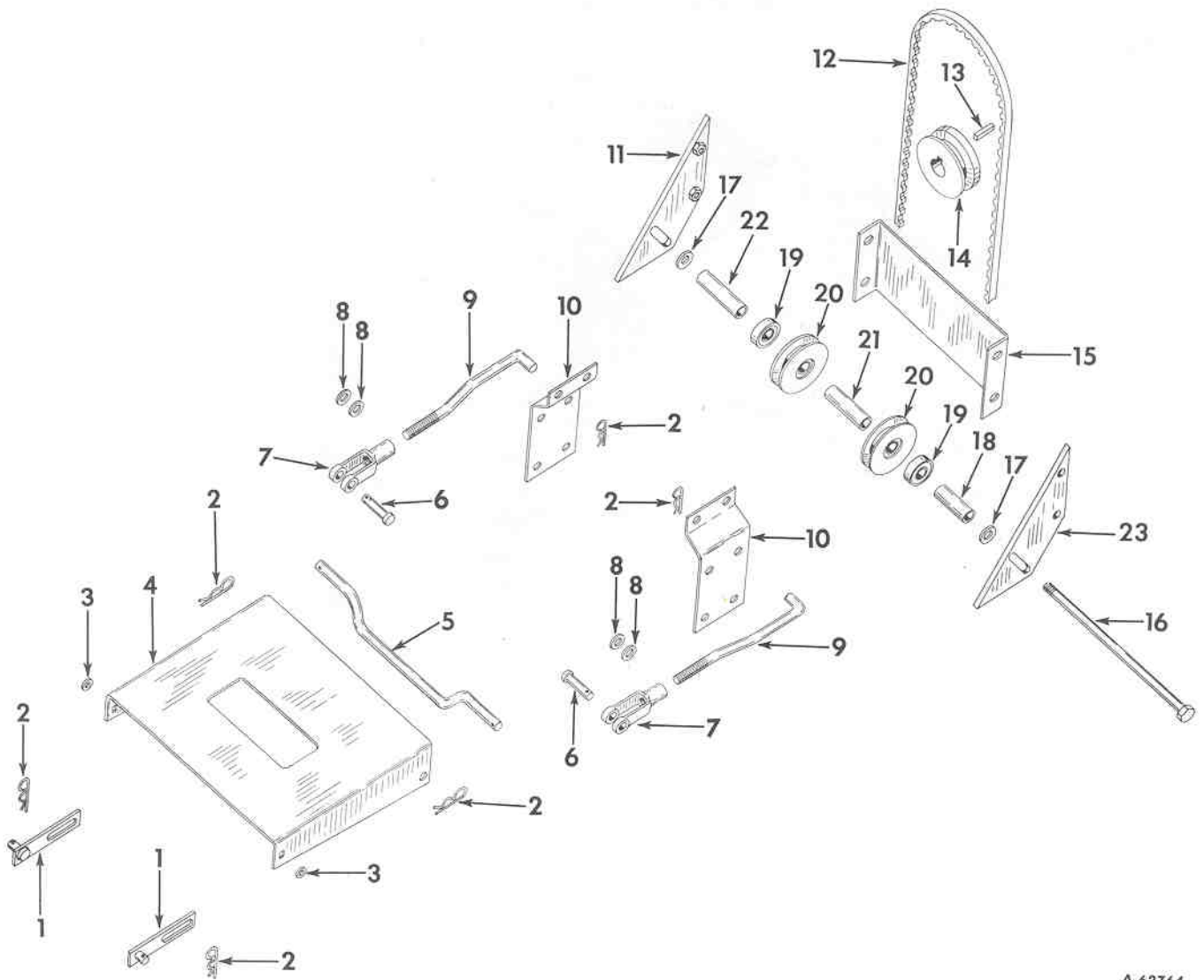
5. Turn the tractor front wheels to the left. Move the mower slightly forward to release the tension on the long drive belt. Remove the belt.

6. Slide the mower from under the tractor on the right side.

To attach the mower to the tractor, reverse the above described procedure.

PARTS LIST

HITCH AND DRIVE UNIT



A-62764

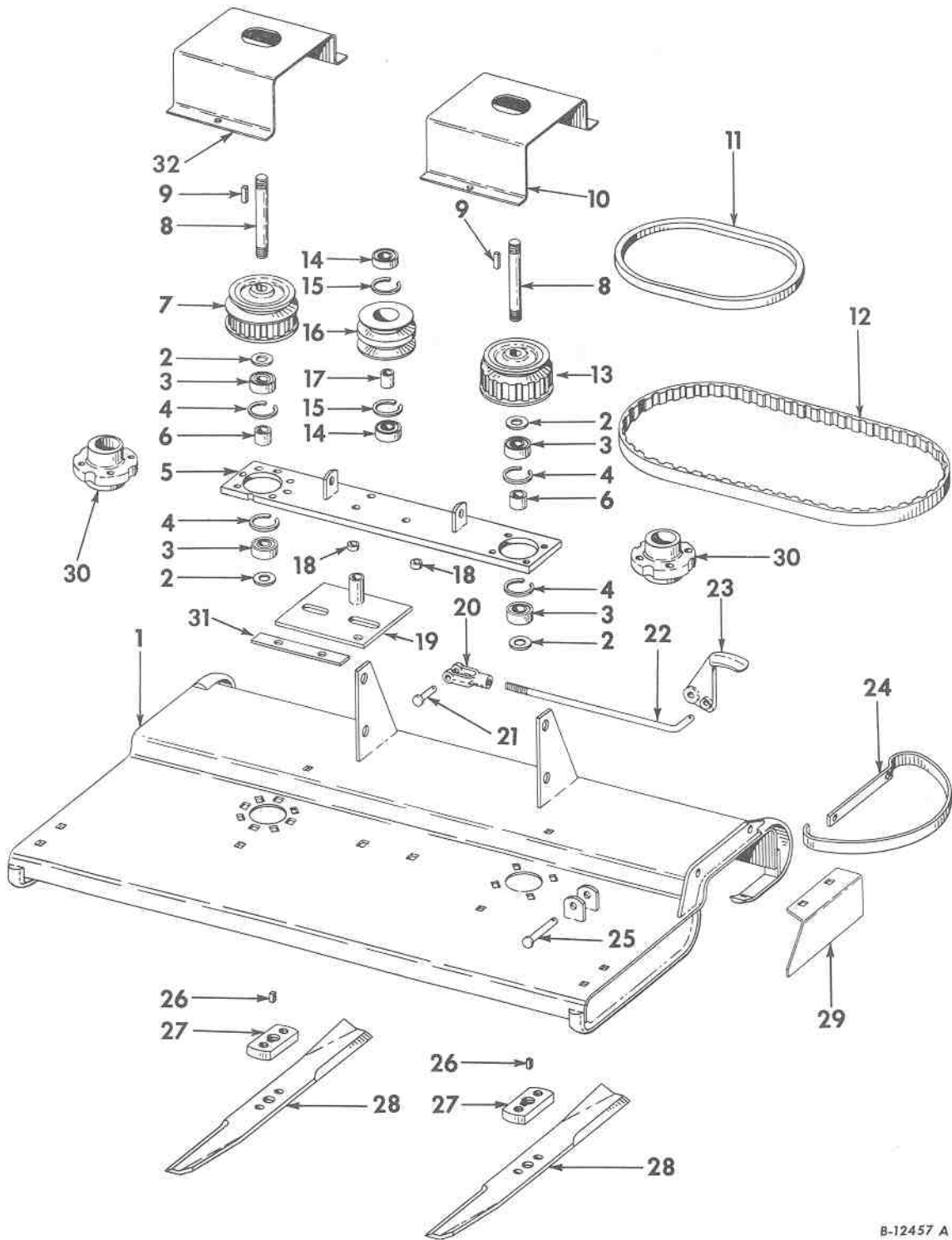
## PARTS LIST

## HITCH AND DRIVE UNIT - Continued

Ref. No.	Part Number	Description	Ref. No.	Part Number	Description
1	464 513 R91 178 373 R1	LINK, lift (2) 3/32 x 1" cd or zn-pltd cotter PIN (2) 17/32 x 1" x 16 ga cd or zn-pltd WASHER (2)	11	465 057 R91	SUPPORT, LH tightener 1/2 x 1" cd or zn-pltd hex-hd BOLT (2) 1/2" cd or zn-pltd lock WASHER (2)
2	610 784 R1	PIN, quick-attachable (6)	12	464 362 R1	BELT, drive
3	464 510 R1	SPACER (2)	13	Q 53	KEY, 1/4 x 1/4 x 1" sq- parallel
4	464 507 R91	LINK ASSEMBLY, lower parallel 3/8 x 1" cd or zn-pltd crg BOLT w/NUT (2) 3/8" cd or zn-pltd lock WASHER (2) 13/32 x 13/16" x 16 ga cd or zn-pltd WASHER (2)	14	464 358 R1 102 569 222 386	PULLEY, engine 1/4 x 1/4" cup-pt hex- soc-hd SCREW (2) 1/4 x 1/4" f-pt hex-soc- hd SCREW (2)
5	464 511 R1	ROD, lower link pivot 17/32 x 1" x 16 ga cd or zn-pltd WASHER (2)	15	464 364 R1	SHIELD, front pulley
6	114 787	PIN, rod end (2) 1/8 x 1" cd or zn-pltd cotter PIN (2)	16	18 030 R11	BOLT w/NUT 5/8 x 10" cd or zn-pltd hex-hd mach 5/8" cd or zn-pltd lock WASHER
7	104 039	CLEVIS, rod end (2)	17	12 285 R1	WASHER, 21/32 x 1-1/4" x 11 ga (2)
8	27 927 DA	17/32 x 7/8" x 8 ga WASHER (4)	18	464 360 R1	SPACER, right idler
9	464 512 R1 124 934	ROD, upper link (2) 1/2" UNF cd or zn-pltd jam NUT (2) 17/32 x 1" x 16 ga WASHER (2)	19	582 010 R91	BEARING (2)
			20	464 352 R91	PULLEY w/BEARINGS (2)
			21	464 363 R1	SPACER, center idler
			22	464 361 R1	SPACER, left idler
10	464 509 R1	SUPPORT, upper parallel link (2) 1/2 x 1" cd or zn-pltd hex-hd mach BOLT (4) 1/2" cd or zn-pltd lock WASHER (4)	23	465 058 R91	SUPPORT RH, tightener 1/2 x 1" cd or zn-pltd hex-hd BOLT (2) 1/2" cd or zn-pltd lock WASHER (2)

# PARTS LIST

## MAIN FRAME AND KNIFE UNIT



B-12457 A

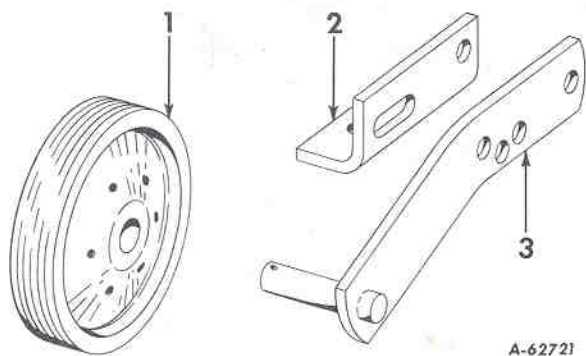
## PARTS LIST

## MAIN FRAME AND KNIFE UNIT - Continued

Ref. No.	Part Number	Description	Ref. No.	Part Number	Description
1	465 862 R91	HOUSING, rotor 1/4 x 1/2" cd or zn-pltd crg BOLT w/NUT (4) 1/4" lock WASHER (4)	19	465 864 R91	SUPPORT, pulley 3/8 x 1" cd or zn-pltd crg BOLT w/NUT (2) 3/8" cd or zn-pltd lock WASHER (2)
2	16 066 R1	WASHER, 25/32 x 1-1/2" x 16 ga (4)			
3	465 003 R91	BEARING (4)	20	114 242	CLEVIS, rod end
4	464 346 R1	SNAP RING (4)	21	114 784	PIN, clevis rod end 3/32 x 3/4" cd or zn-pltd cotter PIN
5	464 340 R92	HOUSING, bearing 3/8 x 7/8" hex-hd cap SCREW (8) 3/8" internal tooth lock WASHER (8)	22	464 530 R1	ROD, clutch
6	464 533 R1	SPACER (2)	23	464 529 R1	HANDLE, clutch
7	467 319 R11	PULLEY ASSEMBLY, spindle drive LH	24	464 506 R1	SHIELD, discharge opening 3/8 x 1" cd or zn-pltd mach. BOLT w/NUT (2) 3/8" lock WASHER (2)
8	464 534 R1 17 296 R1	SHAFT, spindle (2) 3/4" UNF cd or zn-pltd esna stop NUT (2)	25	465 867 R91	PIN, 1/2 x 2-1/8" dld-std- hd 3/16 x 1" cotter PIN
9	Q 53	KEY, 1/4 x 1/4 x 1" sq- parallel (2)	26	235	KEY, 1/4 x 1/4 x 1/2" sq- parallel (2)
10	467 323 R1	SHIELD, pulley R. H. 3/8 x 1" cd or zn-pltd hex-hd BOLT (2) 3/8" cd or zn-pltd NUT (2) 3/8" lock WASHER (2)	27	464 349 R1	BLOCK, blade drive (2)
11	464 351 R1	BELT, spindle drive	28	464 350 R1	BLADE, rotor (2) 1/2 x 3/4" hex-hd cap SCREW (4) 1/2" internal tooth lock WASHER (4)
12	464 860 R1	BELT, cog	29	464 859 R1	MULCHER, leaf 3/8 x 3/4" cd or zn-pltd crg BOLT w/NUT (2) 3/8" cd or zn-pltd lock WASHER (2)
13	467 322 R1	PULLEY, spindle drive RH			
14	582 010 R91	BEARING (2)	30	464 341 R1	HOUSING, bearing (2)
15	464 356 R1	SNAP RING (2)	31	465 866 R1	RETAINER
16	464 355 R1	PULLEY, double vee 5/8" UNF x 3" cd or zn- pltd hex-hd cap SCREW 5/8" cd or zn-pltd lock WASHER	32	467 323 R11	SHIELD, pulley L. H. 3/8 x 1" cd or zn-pltd hex-hd BOLT (2) 3/8" cd or zn-pltd NUT (2) 3/8" lock WASHER (2)
17	464 357 R1	SPACER, double vee pulley			
18	464 531 R1	SPACER (2)			

PARTS LIST

GAUGE WHEEL ATTACHMENT



Ref. No.	Part Number	Description
1	464 521 R1	WHEEL, gauge (2) 1/8 x 1" cd or zn-pltd cotter PIN (2)
	178 373 R1	17/32 x 1" x 16 ga cd or zn-pltd WASHER (6)
2	464 524 R1	BRACKET, gauge wheel LH
	464 525 R1	BRACKET, gauge wheel RH 3/8 x 3/4" cd or zn-pltd crg BOLT (4)
	124 829	3/8" cd or zn-pltd jam NUT (4) 3/8" cd or zn-pltd lock WASHER (4)
3	464 516 R91	ARM, gauge wheel LH
	464 517 R91	ARM, gauge wheel RH
	124 829	3/8" cd or zn-pltd jam NUT (4) 3/8 x 1" cd or zn-pltd hex-hd cap SCREW (4) 3/8" cd or zn-pltd lock WASHER (4)

*Play Safe . . . . .*  
**INSIST ON  PARTS**

**WHEN** you bought your International Harvester tractor or machine, you made a good choice—you have a machine that deserves good care and good service. When wear and tear make new parts necessary, remember why you bought an International Harvester *Quality Product*. You bought quality to be sure of performance. Don't handicap your equipment by careless selection of replacement parts.

**PLAY SAFE!** Go to the International Harvester dealer for IH parts. The IH trademark is your guarantee of quality, your best assurance that your International Harvester equipment will continue to give you top-grade performance, no matter what you ask of it.