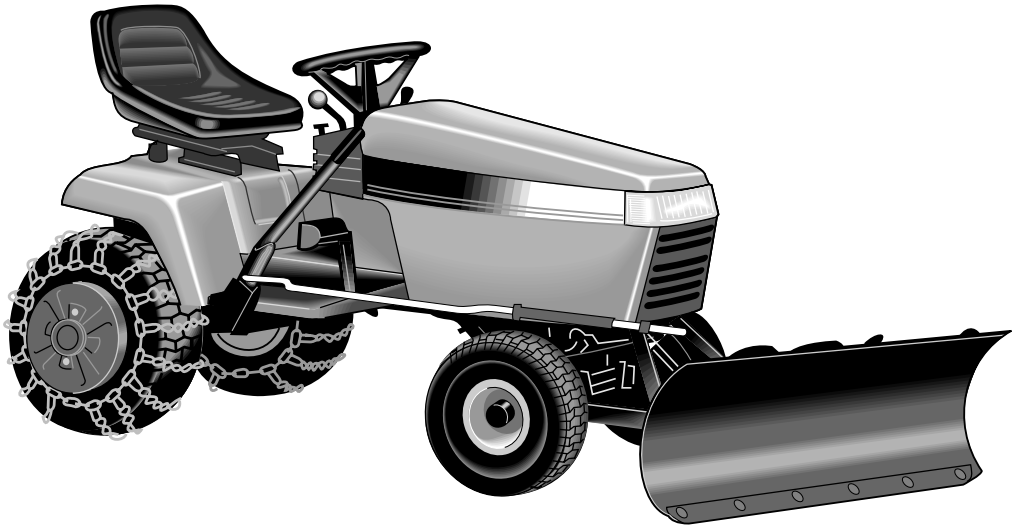
Simplicity MASSEY FERGUSON AGCO ALLIS

# ATTACHMENT OPERATOR'S MANUAL



## Snow/Dozer

# Blade & Hitch

### Snow Plow/Dozer Blade

| Mfg. No. | Description |
|---|---|
| 1691520 | 42" Snow Plow/Dozer Blade |

### Hitch

| Mfg. No. | Description |
|---|---|
| 1692039 | Hitch (for Landlord / 1700 / 2700 Series & Broadmoor / 1600 / 2600 Series) |
| 1692624 | Hitch (for Regent / 500 / 2500 Series) |

1715046-02

Rev 10/97
TP 100-2122-02-AT-SMA

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*NOTE: In these instructions, "left" and "right" are referred to as seen from the operating position.*

## Recommended Accessories

For best performance, it is recommended to use tire chains and two (2) rear wheel weights. A rear-mounted weight box can also be added for additional traction. The maximum weight added to the tractor should not exceed 35 lbs./wheel, plus100 additional pounds in the rear weight box.

An Electric Lift Kit is available for the 14 HP Landlord/1700 Series tractors to raise and lower attachments.

## Required Accessories

A Lift Lever Kit is required for the following models, and must be installed prior to hitch installation.

- Broadmoor/LT/1600/2600: Lift Kit, mfg. no. 1691832
- Regent/500/2500Series: Lift Kit, mfg. no. 1692623

# Safety Rules

**Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of vehicle, severe personal injury to yourself or bystanders, or damage to property or equipment. The triangle ⚠ in the text signifies important cautions or warnings which must be followed.**

**⚠ WARNING**

**For operation on slopes greater than 15% (8.5°), weight box, tire chains, and wheel weights are recommended. Never operate on slopes greater than 30% (16.7°)**

## General

- Read the operator's manual carefully. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
- Never allow children to operate the machine. Do not allow adults to operate it without proper instruction.
- Keep the area of operation clear of all persons, particularly small children and pets.
- Do not carry passengers.
- Make sure:

  a. tractor and attachments are in good operating condition.

  b. all safety devices and shields are in place

  c. and in good working condition, and

  d. all adjustments (skid shoe height, etc.) have been made.

## Preparation

- Handle gasoline with care — it is highly flammable.

  a. Use only an approved gasoline container.

  b. Never remove the cap of the fuel tank or add gasoline to a running or hot engine, or fill the fuel tank indoors. Wipe up spilled gasoline.

- Do not run the engine indoors. Exhaust fumes are dangerous.
- Shift into neutral before attempting to start the engine.
- Wear proper footwear. Do not operate tractor when barefoot or when wearing open sandals or canvas shoes.

## Operation

- Do not allow anyone to use the snow plow/dozer blade unless they have been instructed on how to operate it safely.
- Never attempt to adjust, repair or service the snow plow/dozer blade while the tractor engine is running.
- Do not allow others near the snow/dozer blade while it is being used.
- Use the snow plow/dozer blade only in daylight, or good artificial light.
- Always lower the snow plow/dozer blade completely to the ground when leaving it unattended to prevent it from being accidentally lowered and causing injury. Make sure blade is locked in "DOWN" position due to spring-assist.
- Always operate the tractor at reasonable speeds to prevent the blade from catching an object and stopping the tractor abruptly.

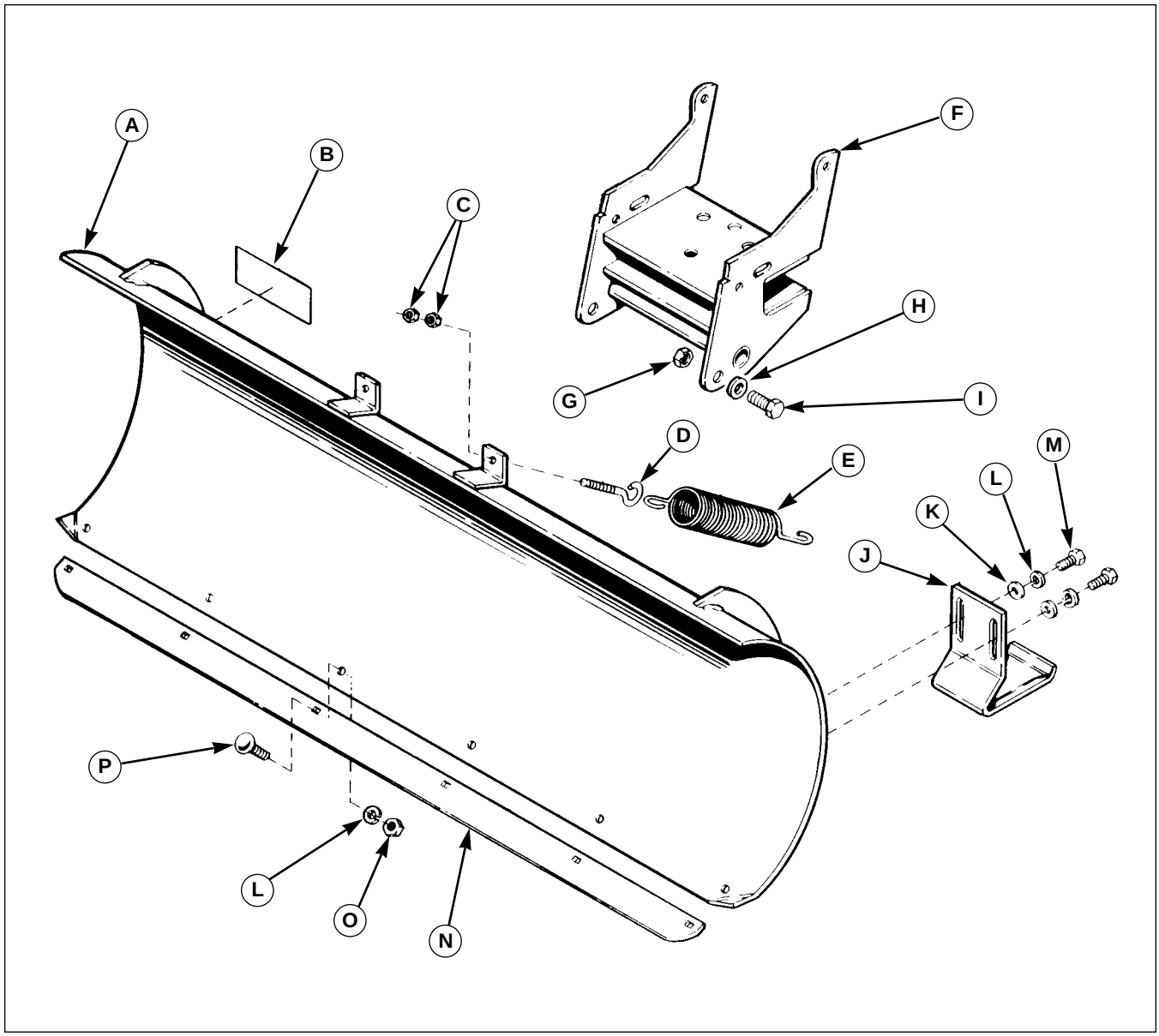



**Figure 1. Mfg. No. 1691520 42" Snow Plow/Dozer Blade Components**

A. Blade Assembly
B. I.D. Plate
C. Hex Nut, 5/16-18 (4)
D. Eyebolt (2)
E. Tension Spring (2)
F. Pivot Frame Assembly
G. Hex Lock Nut, 1/2-13 (2)
H. Spacer (2)
I. Hex Capscrew, 1/2-13 x 1 (2)
J. Shoe Assembly (2)
K. Plain Washer, 3/8 (4)
L. Lockwasher, 3/8 (10)
M. Hex Head Capscrew, 3/8-16 x 3/4 (4)
N. Wear Plate
O. Hex Nut, 3/8-16
P. Carriage Bolt, 3/8-16 x 1

# Components

## Broadmoor/LT/1600/2600, & Landlord/GT/1700/2700 Series Parts

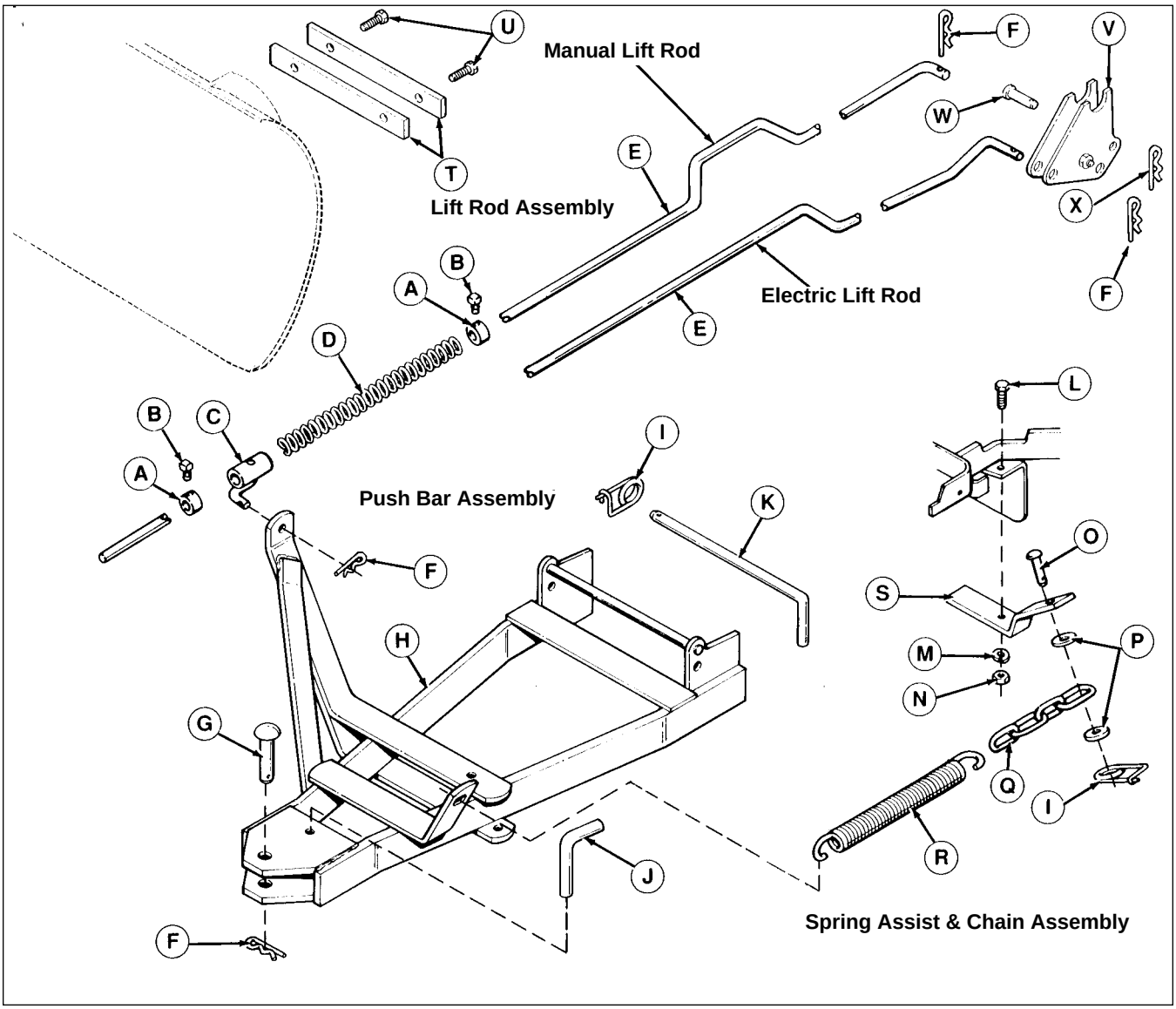



**Figure 2. Mfg. No. 1692039 Push Bar & Lift Rod Components**

A. Set Collar (Qty. 2)
B. Setscrew, 5/16 x 1/2 (Qty. 2)
C. Rod Guide Assembly
D. Spring
E. Lift Rod, (Manual or Electric Lift)
F. Clip, Spring (Qty. 3)
G. King Pin
H. Push Bar Assembly
I. Safety Clip (Qty. 2)
J. Pivot Pin
K. Latch Rod (Qty. 4)
L. Hex Capscrew, 5/16-18 x 1
M. Lockwasher, 5/16
N. Full Hex Nut, 5/16-18
O. Hitch Pin
P. Plain Washer, 5/16 (Qty. 2)
Q. Chain
R. Spring
S. Spring Anchor Bracket
T. Bar Stop (Qty. 2)
U. Taptite Screw, 5/16-18 x 1
V. Lift Extension Lever
W. Clevis Pin
X. Spring Clip

## Regent/500/2500 Series Parts

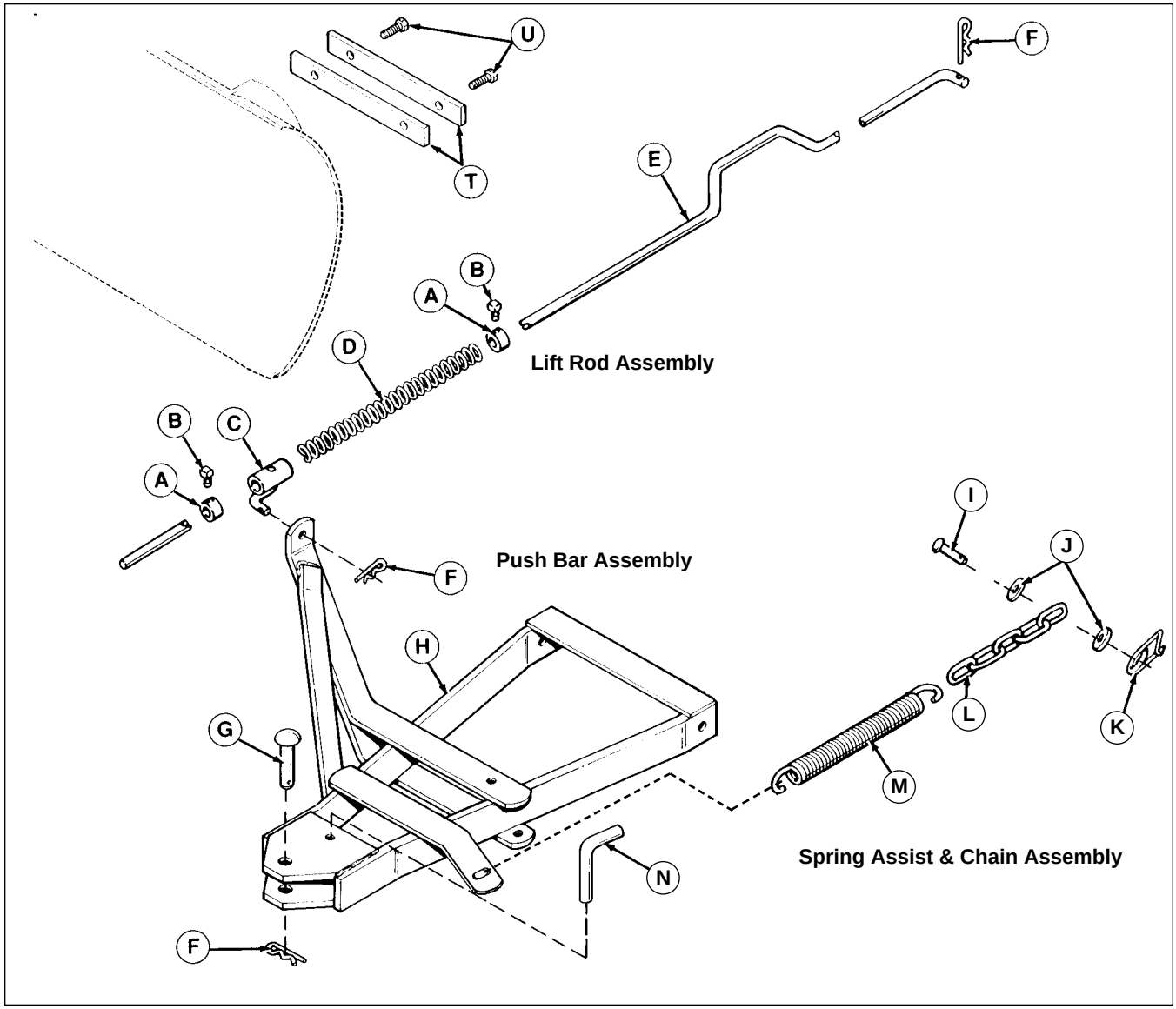



**Figure 3A. Mfg. No. 1692624 Push Bar & Lift Rod Components**

A. Set Collar (Qty. 2)
B. Setscrew, 5/16 x 2 (Qty. 2)
C. Rod Guide Assembly
D. Spring
E. Lift Rod
F. Spring Clip (Qty. 3)
G. Clevis Pin, 3/8 (Qty. 2)
H. Push Bar Assembly
I. Hitch Pin
J. Plain Washer 5/16
K. Safety Clip
L. Chain
M. Spring
N. Pivot Pin

# Components

## Regent/500/2500 Series Parts

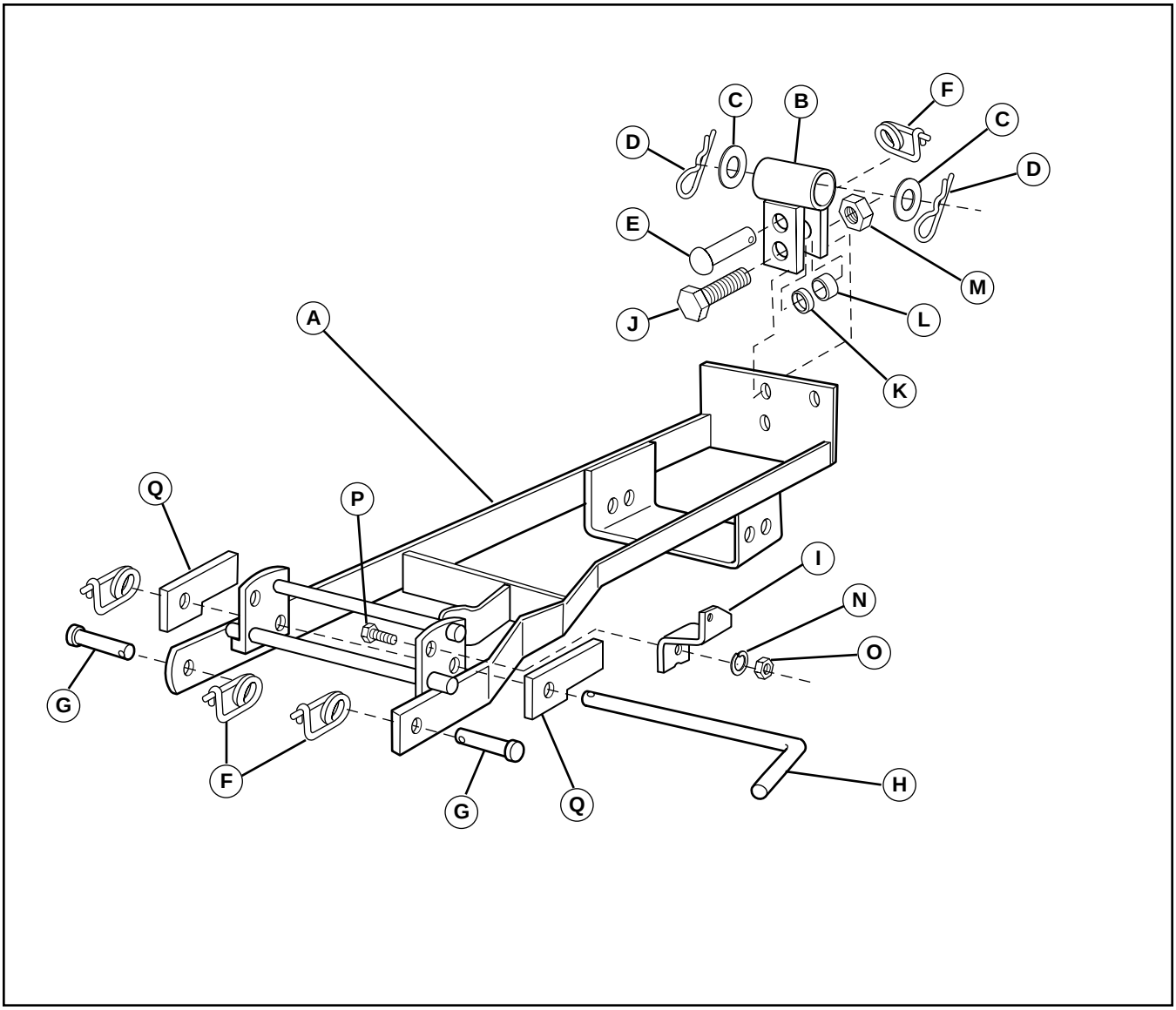



**Figure 3B. Mfg. No. 1692624 Hitch Assembly**

A. Hitch Assy.
B. Rear Support Assy.
C. Washers (Qty. 2)
D. Hairpin Clip (Qty. 2)
E. Pin
F. Spring Clip (Qty. 4)
G. Clevis Pin, 3/8 (Qty. 2)
H. Rod
I. Spring Assist Bracket
J. Capscrew, 3/8-16 x 2
K. Spacer, 25/64 x 5/8 x 17/64
L. Spacer, 13/32 x 1 x 13/16
M. Nut, Whizlock, 3/8-16
N. Lockwasher, 1/2
O. Hex Nut, 1/2-13
P. Capscrew, 1/2-13 x 1-1/4
Q. Upstop (Qty. 2)

## All Models

1. Place the blade on a flat surface.
2. **Regent/500/2500 & Broadmoor/LT/1600/2600 Series:** See Figure 4. Install one bar stop (A) using the two 5/16-18 x 1 taptite screws (B). Do not install second bar stop.

   **Landlord/GT/1700/2700 Series:** Do not install bar stops.

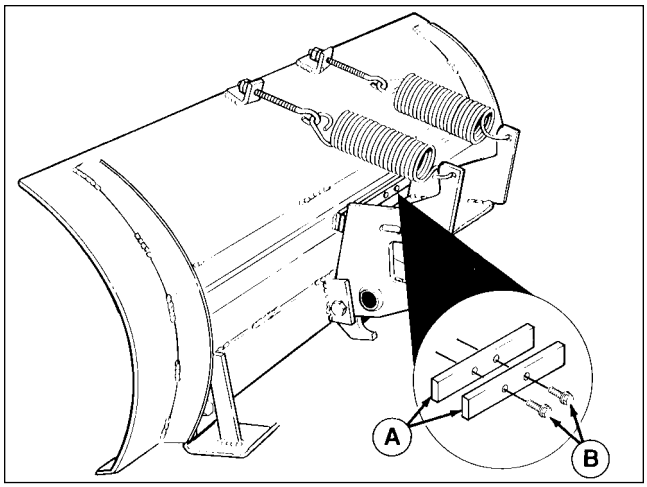



**Figure 4. Bar Stop**
**A. Bar Stop**
**B. Taptite Screw, 5/16-18 x 1**

3. See Figure 5. Insert threaded end of eyebolt (A) thru lug on blade, and screw on 5/16 nut (B) just far enough so that it is flush with the end of the eyebolt.
4. See Figure 5. Hook the springs (C) into the pivot frame (D). Using a pliers, stretch the springs to hook the opposite ends to the eyebolts (A).
5. See Figure 5. Tighten the nut (B) on each eyebolt enough to expose about 3/4" (19 mm) of thread.
6. See Figure 5. Holding the first nut (B) with a wrench,add a second nut (E) to each eyebolt, and tighten securely against the first nut to act as a jam nut.

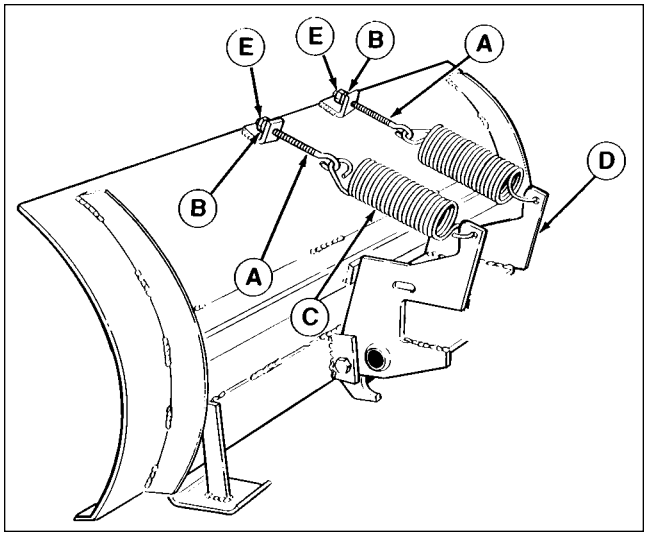



**Figure 5. Tension Springs**
**A. Eyebolt**
**B. Nut, 5/16**
**C. Spring**
**D. Pivot Frame**
**E. Nut, 5/16**

# Assembly

*NOTE: On single cylinder tractors, clevis pin (B, Figure 6) must be installed to bracket before mounting bracket on tractor frame.*

*NOTE: Spring-assist bracket (A, Figure 6) does not need to be installed on units with electric lift.*

### Broadmoor/LT/1600/2600 Series & Landlord/GT/1700/2700 Series Only:

7. See Figure 6. Install the spring-assist bracket (A) to tractor frame (bracket is mounted underneath frame). Secure with capscrew (from top), lockwasher, and nut. Place clevis pin (B) through bracket and install flat washer, chain (C), flat washer, and safety clip.

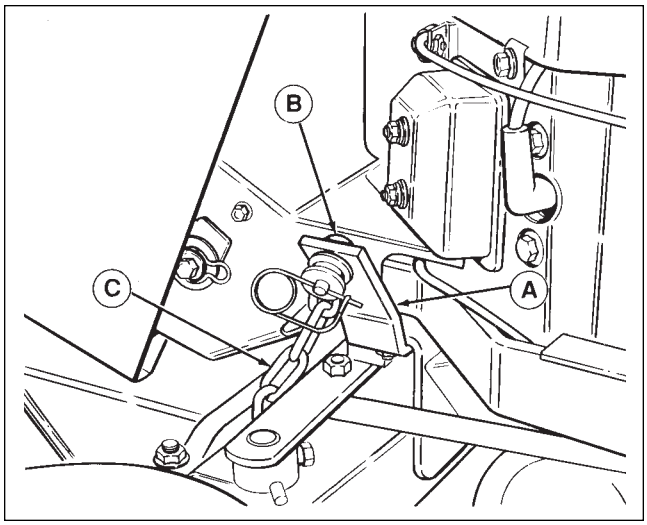



**Figure 6. Spring Assist Bracket**
**A. Bracket**
**B. Clevis Pin**
**C. 4-Link Chain**

### Regent/500/2500 Series Only:

8. See Figure 7. Assemble the spring-assist bracket (A) to the hitch assembly (E). Secure with capscrew, lockwasher, and nut.

9. See Figure 7. Insert spring assist clevis pin through inside of spring-assist bracket (A), and secure spring assist chain using flat washers and safety clip in same manner as shown in Figure 6.

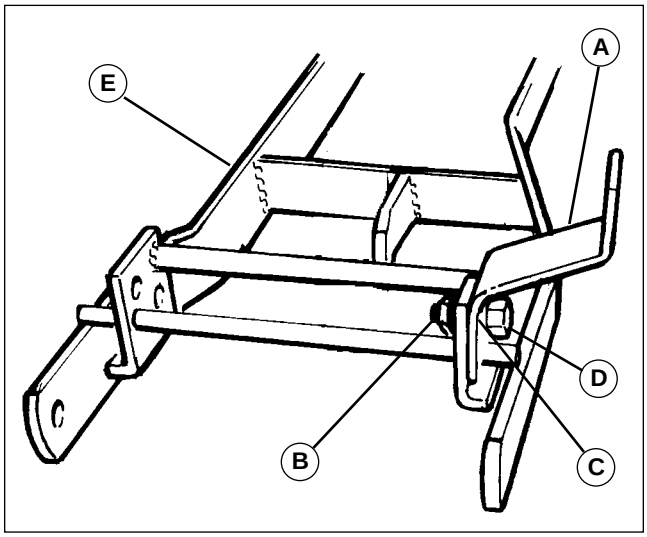



**Figure 7. Spring Assist Bracket**
**A. Spring Assist Bracket**
**B. Capscrew, 1/2-13 x 1-1/4**
**C. Lockwasher, 1/2**
**D. Hex Nut, 1/2-13**
**E. Hitch**

### Regent/500/2500 Series & Broadmoor/LT/1600/2600 Series

*NOTE: If your tractor is not equipped with the Large Lift Lever, install it at this time. Follow the instructions supplied with the kit.*

- *Broadmoor/LT/1600/2600 Series, order Lift Lever Kit, mfg. no. 1691832.*
- *Regent/500/2500 Series, order Lift Lever Kit, mfg. no. 1692623.*

## Regent/500/2500 Series Only:

1. Increase front tire pressure to 20 psi (138 kPa) to compensate for added weight of the hitch, plus bar and blade. Be sure both tires have equal pressure.
2. From the front of tractor, slide the hitch under the tractor so that the hitch bar is positioned at the front of the unit.
3. See Figure 8. Turn the wheels fully left and lift the front hitch bar (A) up onto the tractor brackets (D). Make sure it is fully seated into the tractor brackets. Install the long hitch pin (B) through the bracket (bottom rear holes) and up-stop brackets (E). Secure it with the safety clip (C).

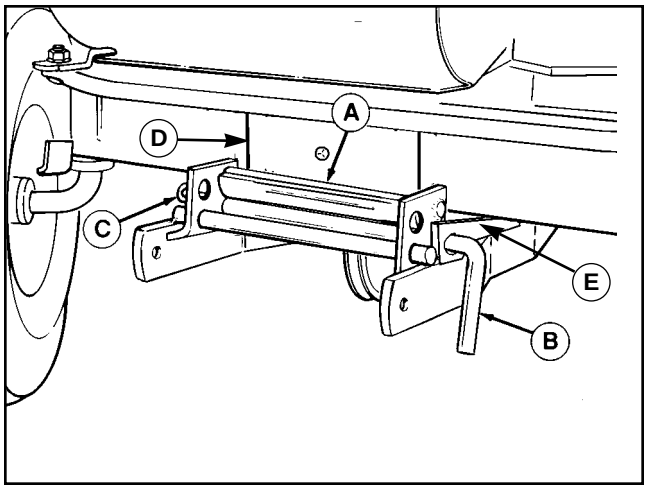



**Figure 8. Installing Hitch to Front of Tractor**

**A. Hitch Bar**
**B. Hitch Pin**
**C. Safety Clip**
**D. Tractor Brackets**
**E. Up-Stop Brackets**

4. See Figure 9. Slide the rear bracket (A), and washers (D), onto the lift lever shaft, and secure with the spring clips (C).
5. See Figure 9. Position the rear plate of the hitch assembly between the hanger tabs on the rear bracket, and secure at the top mounting hole using the clevis pin (F), and safety clip (K).
6. See Figure 9. Install the capscrew (G), spacers (H & I), and whizlock nut (J) in the lower mounting hole as shown, and tighten securely.
7. The hitch assembly is now assembled to the unit, and you may proceed to installation of the push bar and blade.

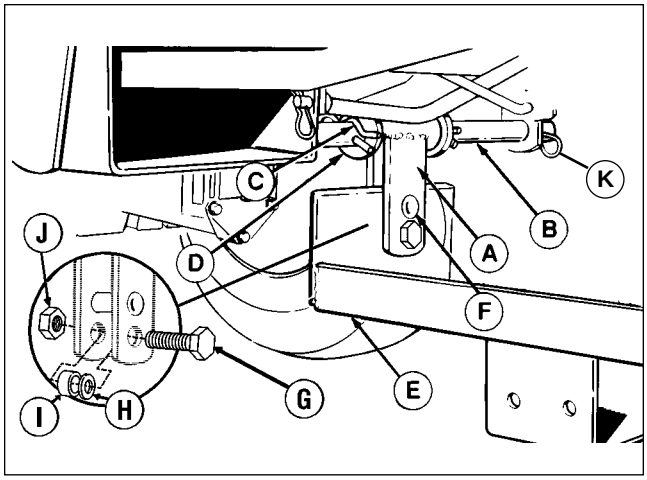



**Figure 9. Installing Hitch to Rear Bracket**

**A. Rear Bracket**
**B. Lift Lever Rod**
**C. Spring Clip**
**D. Washer**
**E. Hitch**
**F. Clevis Pin**
**G. Capscrew, 3/8-16 x 2**
**H. Spacer, 25/64 x 5/8 x 17/64**
**I. Spacer, 13/32 x 1 x 13/16**
**J. Nut, Whizlock, 3/8-16**
**K. Safety Clip**

# Installation

## Broadmoor/LT/1600/2600 Series & Landlord/GT/1700/2700 Series

1. Drive the tractor over the push bar until rear of push bar is under front hitch.
2. Stop engine, remove key and set parking brake.
3. See Figure 10. Position the push bar hitch (A) into the tractor frame brackets (B). Secure push bar with pin (C) and safety clip (D).

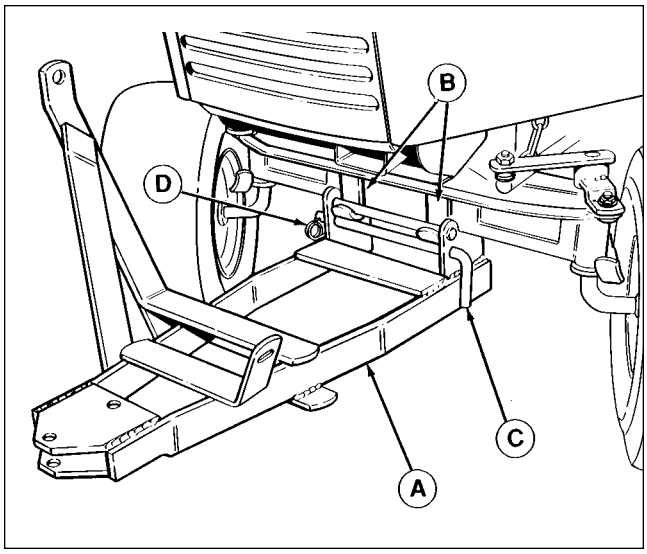



**Figure 10.**
**A. Push Bar Hitch**
**B. Frame Bracket**
**C. Hitch Pin**
**D. Safety Clip**

## Regent/500/2500 Series Only:

1. Drive the tractor over the push bar until the rear of the push bar is positioned between the side rail extensions on the front of the hitch.
2. Stop engine, remove key and set parking brake.
3. See Figure 11. Align the mounting holes in the rear corners of the push bar (A) with the mounting holes in the hitch (B), and secure the push bar to the hitch with a clevis pin (C), and spring clip (D) at each corner.

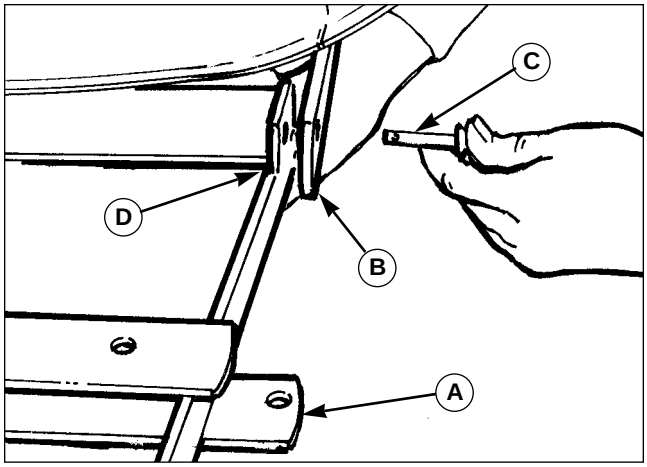



**Figure 11.**
**A. Push Bar**
**B. Hitch**
**C. Clevis Pin**
**D. Spring Clip (Not shown)**

## All Models

4. See Figure 12. Raise the push bar and attach the spring (A) to the push bar bracket and the open end link of the 4-link spring assist chain.

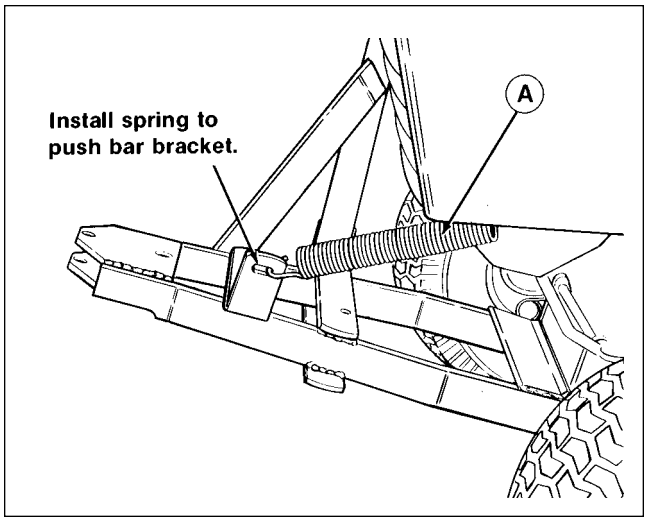



**Figure 12.**
**A. Spring**

5. See Figure 13. Insert front of push bar (A) into pivot frame (B) on rear of blade. Then install king pin (C) down thru front holes in hitch and pivot frame. Secure king pin with spring clip (D).
6. See Figure 13. Using the king pin as a pivot, swivel the dozer blade to the desired position (angled left, straight, or angled right), and align one of the three rear holes in the pivot frame with the rear hole in the hitch. Install pin (E) downward through the aligned holes to lock the blade in the selected position.

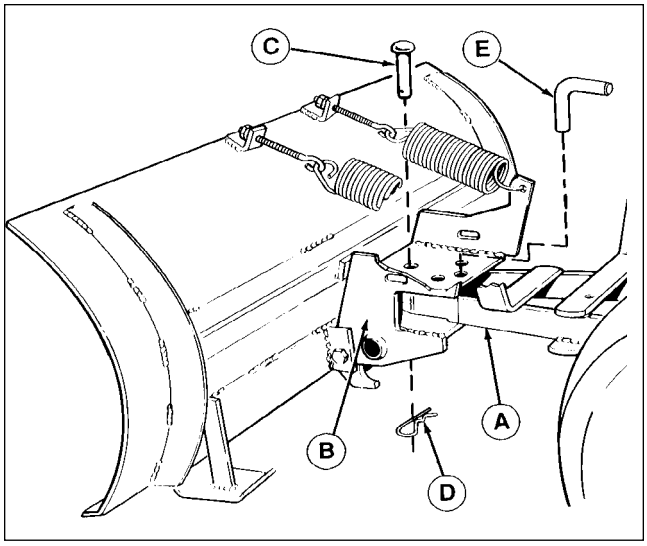



**Figure 13. Dozer Blade Assembled and Installed**
**A. Push Bar**
**B. Pivot Frame**
**C. King Pin**
**D. Spring Clip**
**E. Pivot Pin**

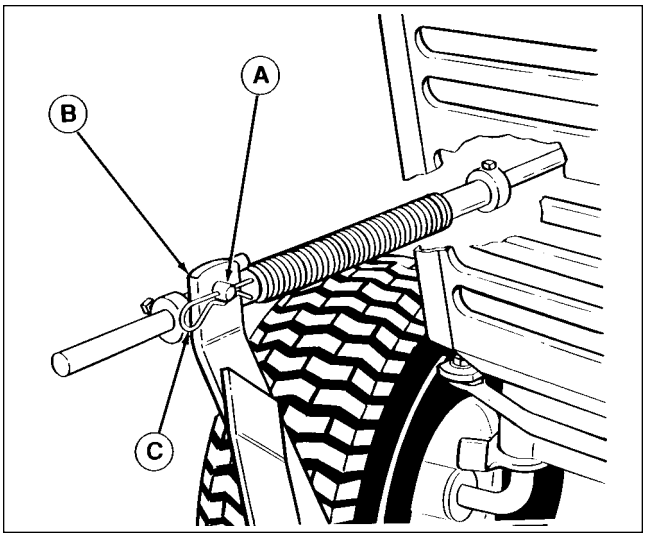



**Figure 14.**
**A. Rod Guide**
**B. Push Bar**
**C. Spring Clip**

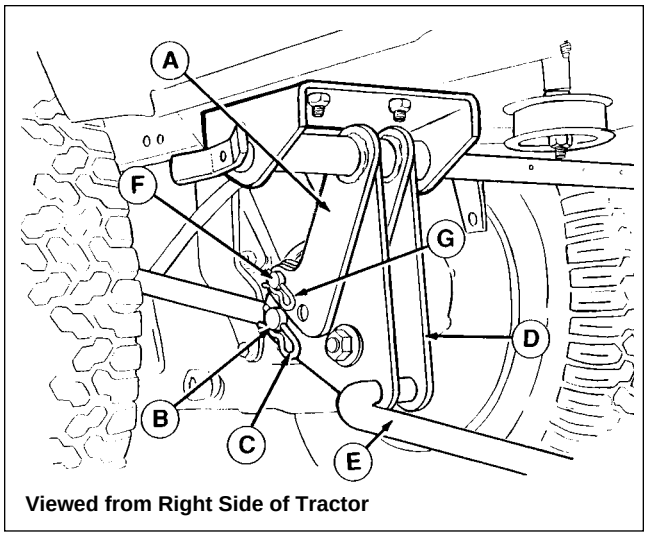



**Figure 15. Electric Lift Bracket**
**A. Lift Arm**
**B. Clevis Pin**
**C. Safety Clip**
**D. Lift Lever Extension Assy.**
**E. Front Attachment Lift Rod**
**F. Clevis Pin**
**G. Spring Clip**
**H. Rear Attachment Lift Rod (Optional)**

*NOTE: Two lift rods are packaged with the Broadmoor/LT/1600/2600 & Landlord/GT/1700/2700 hitch assembly. Use the correct lift rod for manual or electric lift as shown in Figure 2.*

7. Assemble lift rod per Figure 2 or 3.
8. See Figure 14. Insert prong of rod guide (A) through hole in upright of push bar (B), and secure with spring clip (C).
9. **Electric Lift Units:** See Figure 15. If your tractor is equipped with an electric lift, install the lift lever extension assembly (D) to the lift arm (A) as shown. Secure with clevis pin (F) and spring clip (G) provided.
10. **Manual Lift Lever Units:** See Figure 16. Connect rear of lift rod (A) to manual lift lever (B), and secure with spring clip (C).
11. Perform Lift Rod Adjustment, page 14.

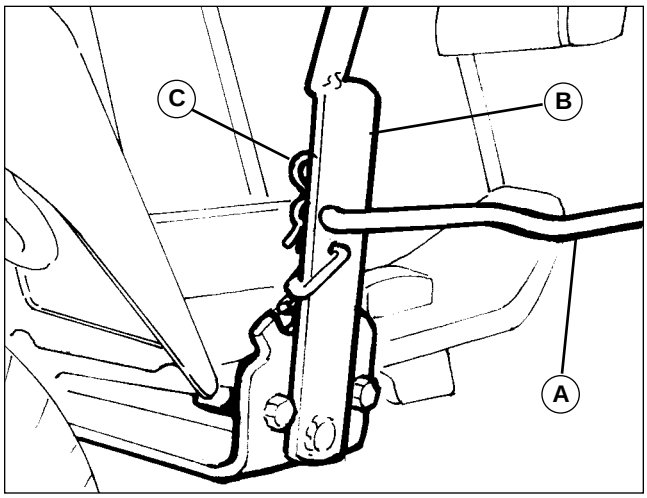



**Figure 16. Installing Lift Rod to Manual Lift Lever**
**A. Lift Rod**
**B. Manual Lift Lever**
**C. Spring Clip**

## Removal

1. Lower the blade.
2. Remove blade and lift rod from push bar.
3. Raise push bar and unhook the spring from the chain. Remove the chain from the frame bracket. Reinstall safety clip to clevis pin.
4. Disconnect the lift rod from the lift lever on tractor by removing the spring clip.
5. Remove the latch rod and spring clip securing push bar to tractor frame brackets, or clevis pins and spring clips securing push bar to hitch rail extensions. Remove push bar.
6. Reinstall all pins (king pin, pivot pin, hitch pin) and secure with spring clip or safety clip for storage.

## Operation & Normal Care

### Transporting

For maximum ground clearance, transport the blade to and from work areas fully raised and angled straight ahead.

**WARNING**

**Be particularly careful and operate at low tractor speeds in any area where the blade can hook on solid objects. Such objects can cause the tractor to be jarred or come to an abrupt stop.**

### Dozing and Snow Plowing

When dozing, push the dirt to the desired location, then drag the blade backwards for final leveling. Pack down the dirt or gravel by driving the tractor over the leveled area.

Use the grade of the area being plowed or dozed to your advantage. Plow downhill and set the blade angle so that plowed material (especially snow) is moving downhill as it leaves the blade. To change blade angle, pull out the blade pivot pin. Pivot the blade to one of the other three holes and reinstall the pivot pin.

For large drifts of snow, plow narrower paths instead of attempting to plow a full blade width.

Set tractor speed to obtain the needed power to move the material. Operate at a safe speed, depending on conditions, so that you have complete control of the tractor. Rear wheel weights and chains are recommended for slippery surfaces.

A weight box is recommended for additional traction.

### Operation On Slopes

Never operate on slopes greater than 30 percent (16.7°) which is a rise of three feet (91 cm) in ten feet (305 cm) forward. Use two rear wheel weights (one per wheel) when operating on slopes greater than 20 percent (11.3°).

For additional traction, tire chains and a weight box can be added. Maximum weight added to tractor should not exceed 35 lbs. per wheel and 100 additional lbs. in weight box.

Always operate up and down the face of slopes, and never across the face. Use a slow ground speed on slopes.

### Normal Care

After dozing jobs, hose down the blade to remove excess dirt. Coat bare metal surfaces to prevent rusting. Lightly oil all pivot points.

If the wear plate on bottom of the blade is worn excessively, replace it with a new one by removing the six carriage bolts.

# Adjustments

## Lift Rod

See Figure 17. For initial setting, place front set collar (A) one inch from rod guide with blade fully lowered. Place rear set collar (B) against spring (C). Tighten the setscrews in the two set collars.To adjust, perform the following:

1. Fully raise the blade by pulling back on the tractor lift lever. Measure distance between scraper bar and ground. If it measures approximately six inches, it is properly adjusted. If not, proceed to step 2.
2. Lower the blade. Loosen the setscrew in the front set collar. move the set collar back to increase ground clearance, forward to decrease ground clearance. Tighten the setscrew. Recheck the measurement.

*NOTE: Different ground contours may require different adjustments. Moving the rear set collar toward rear will allow the blade to follow a rolling contour. Lower the blade to adjust the rear set collar. The farther back the rear set collar is positioned, the more the blade will float. Moving the rear set collar toward the front will increase down pressure.*

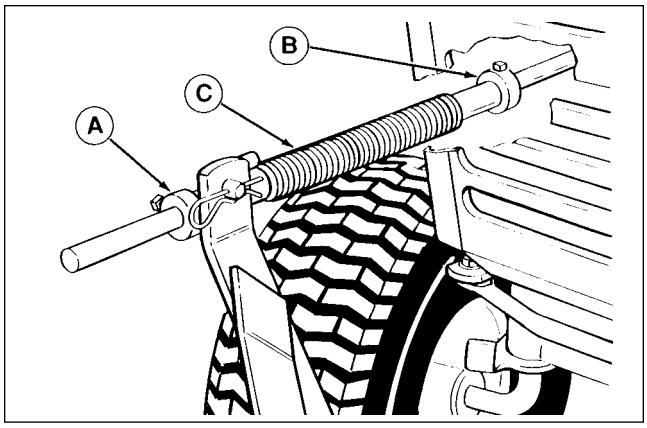



**Figure 17. Lift Rod Adjustment**
**A. Front Set Collar**
**B. Rear Set Collar**
**C. Spring**

## Skid Shoe Adjustment

Slotted holes are provided to permit adjustment of the shoe assemblies for raising and lowering the blade to various working heights (see Figure 18).

When cleaning snow from gravel or earth drives or walks, the shoe assemblies should be lowered fully to prevent blade contact with gravel or ground. When cleaning smooth hard surfaces like concrete, the shoe assemblies are normally placed fully up to allow the blade to scrape the surface.

To adjust the skid, raise the blade off the ground and block with a piece of wood. Loosen the bolts (B, Figure 18) and move the skid shoes (A) up or down to desired height. Tighten the bolts securely.

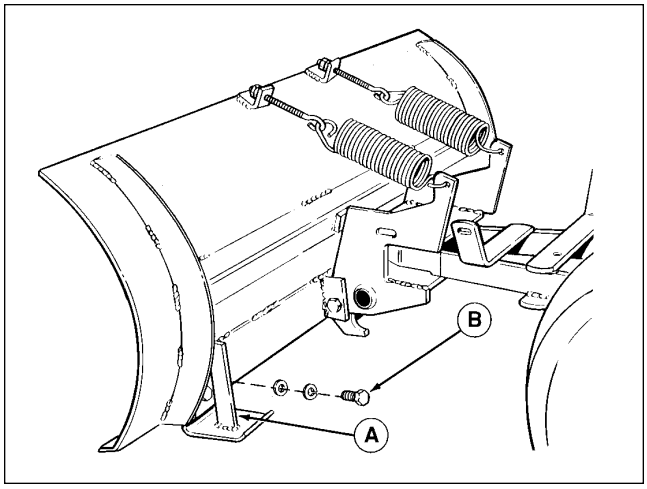



**Figure 18.**
**A. Skid Shoes**
**B. Bolts**

## Spring Tension

See Figure 19. This snow plow/dozer blade is spring loaded so that when the blade strikes a solid object, the springs will allow the blade to release as shown, rather than cause damage. The blade will go back to its original position after object is cleared.

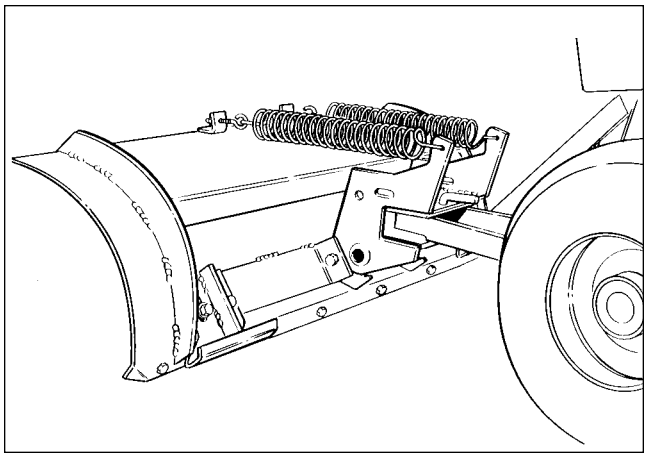


**Figure 19. Dozer Blade "Released"**

See Figure 20. To adjust spring tension hold rear nut (B) and loosen front nut (E). Tighten rear nut (B) to increase spring tension, or loosen to decrease tension.

For initial adjustment, tighten nut (B) on each eyebolt enough to expose about 3/4" (19mm) of thread. Tighten front nut (E) against rear nut (B) to lock adjustment in place.

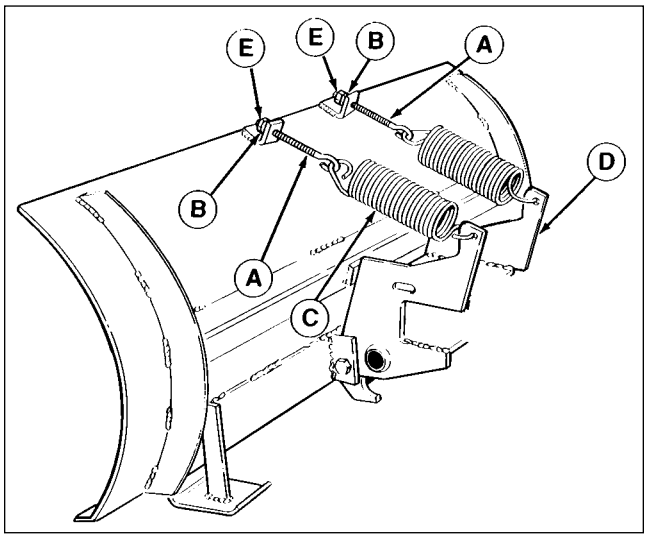
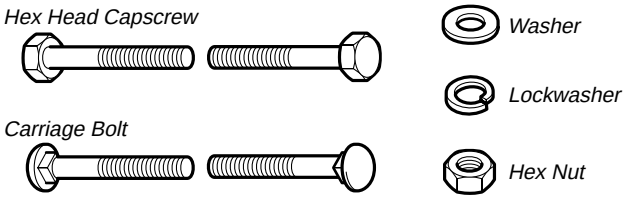



**Figure 20. Tension Springs**

**A. Eyebolt**
**B. Nut, 5/16**
**C. Spring**
**D. Pivot Frame**
**E. Nut, 5/16**

# Hardware Identification & Torque Specifications

**Common Hardware Types**

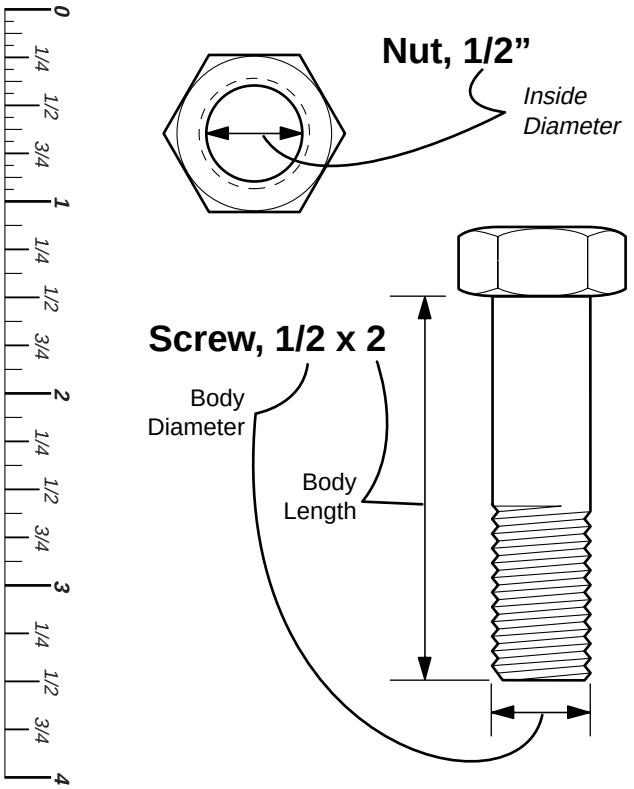



**Standard Hardware Sizing**

When a washer or nut is identified as **1/2"**, this is the *Nominal size*, meaning the *inside diameter* is 1/2 inch; if a second number is present it represent the *threads per inch*

When bolt or capscrew is identified as **1/2 - 16 x 2"**, this means the *Nominal size*, or *body diameter* is 1/2 inch; the second number represents the *threads per inch* (16 in this example, and the final number is the *body length* of the bolt or screw (in this example 2 inches long).

***The guides and ruler furnished below are designed to help you select the appropriate hardware and tools.***




## Torque Specification Chart

FOR STANDARD MACHINE HARDWARE (Tolerance ± 20%)

| Hardware Grade | No Marks SAE Grade 2 | | SAE Grade 5 | | SAE Grade 8 | |
|---|---|---|---|---|---|---|
| **Size Of Hardware** | *in/lbs* **ft/lbs** | Nm. | *in/lbs* **ft/lbs** | Nm. | **in/lbs** **ft/lbs** | Nm. |
| 8-32 | *19* | 2.1 | *30* | 3.4 | *41* | 4.6 |
| 8-36 | *20* | 2.3 | *31* | 3.5 | *43* | 4.9 |
| 10-24 | *27* | 3.1 | *43* | 4.9 | *60* | 6.8 |
| 10-32 | *31* | 3.5 | *49* | 5.5 | *68* | 7.7 |
| 1/4-20 | *66* | 7.6 | **8** | 10.9 | **12** | 16.3 |
| 1/4-28 | *76* | 8.6 | **10** | 13.6 | **14** | 19.0 |
| 5/16-18 | **11** | 15.0 | **17** | 23.1 | **25** | 34.0 |
| 5/16-24 | **12** | 16.3 | **19** | 25.8 | **27** | 34.0 |
| 3/8-16 | **20** | 27.2 | **30** | 40.8 | **45** | 61.2 |
| 3/8-24 | **23** | 31.3 | **35** | 47.6 | **50** | 68.0 |
| 7/16-14 | **30** | 40.8 | **50** | 68.0 | **70** | 95.2 |
| 7/16-20 | **35** | 47.6 | **55** | 74.8 | **80** | 108.8 |
| 1/2-13 | **50** | 68.0 | **75** | 102.0 | **110** | 149.6 |
| 1/2-20 | **55** | 74.8 | **90** | 122.4 | **120** | 163.2 |
| 9/16-12 | **65** | 88.4 | **110** | 149.6 | **150** | 204.0 |
| 9/16-18 | **75** | 102.0 | **120** | 163.2 | **170** | 231.2 |
| 5/8-11 | **90** | 122.4 | **150** | 204.0 | **220** | 299.2 |
| 5/8-18 | **100** | 136 | **180** | 244.8 | **240** | 326.4 |
| 3/4-10 | **160** | 217.6 | **260** | 353.6 | **386** | 525.0 |
| 3/4-16 | **180** | 244.8 | **300** | 408.0 | **420** | 571.2 |
| 7/8-9 | **140** | 190.4 | **400** | 544.0 | **600** | 816.0 |
| 7/8-14 | **155** | 210.8 | **440** | 598.4 | **660** | 897.6 |
| 1-8 | **220** | 299.2 | **580** | 788.8 | **900** | 1,244.0 |
| 1-12 | **240** | 326.4 | **640** | 870.4 | **1,000** | 1,360.0 |

**NOTES**

1. These torque values are to be used for all hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
2. Recommended seating torque values for locknuts:
   a. for prevailing torque locknuts - use 65% of grade 5 torques.
   b. for flange whizlock nuts and screws - use 135% of grade 5 torques.
3. Unless otherwise noted on assembly drawings, all torque values must meet this specification.

## Wrench & Fastener Size Guide


**1/4" Bolt or Nut**
Wrench—7/16"


**5/16" Bolt or Nut**
Wrench—1/2"


**3/8" Bolt or Nut**
Wrench—9/16"


**7/16" Bolt or Nut**
Wrench (Bolt)—5/8"
Wrench (Nut)—11/16"


**1/2" Bolt or Nut**
Wrench—3/4"

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