



**MANUFACTURING, CO.**

**Z-BLADE**  
**GRADER SCRAPER**  
OPERATOR'S MANUAL  
PART IDENTIFICATION



Rev: 6/13/2023

#103642

**AMCO MANUFACTURING COMPANY**

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# FOREWORD

You've just joined an exclusive but rapidly growing club. For our part, we want to welcome you to the group and thank you for buying an AMCO product.

We hope your new AMCO implement will help you achieve efficiency so that you may generate more profit.

This operator's manual has been designed into five major sections: Foreword, Safety Precautions, Operation, Troubleshooting and Parts Identification.

It is important the owner/operator knows the implement model number and serial number. Write the serial and model in the space provided and use it in all correspondence when referring to the implement.

Throughout the manual, references may be made to the left side and right side. These terms are used as viewed from the operator's seat facing the front of the tractor.

This **SAFETY ALERT SYMBOL**



indicates important safety messages in the manual. When you see this symbol, be alert to the possibility of **PERSONAL INJURY** and carefully read the message that follows.

The word **NOTE** is used to convey information that is out of context with the manual text. It contains special information such as specifications, techniques, referencing information and other information of a supplementary nature.

The word **IMPORTANT** is used in the text when immediate damage will occur to the machine due to improper technique or operation. Important will apply to the same information as specified by **NOTE** only of an immediate and urgent nature.

It is the responsibility of the user to read the operator's manual and comply with the safe and correct operating procedure and to lubricate and maintain the product according to the maintenance schedule in the operator's manual.

The user is responsible for inspecting his machine and for having parts repaired or replaced when continued use of the product would cause damage or excessive wear to the other parts.

If you are unable to understand or follow the instructions provided in the publication, consult your local AMCO dealer or contact:

**AMCO MANUFACTURING COMPANY**

(662) 746-4464 Local

(800) 748-9022 Toll Free

(662) 746-6825 Fax

Website: [www.amcomfg.com](http://www.amcomfg.com)

Email: [sales@amcomfg.com](mailto:sales@amcomfg.com)  
[parts@amcomfg.com](mailto:parts@amcomfg.com)

AMCO Manufacturing warrants all products manufactured and sold by it against defects in material. This warranty being expressly limited to replacement at the factory such as parts or products as will appear to be defective after inspection. This warranty does not obligate the Company to bear cost of labor in replacement of parts. It is the policy of the company to make improvements without incurring obligations to add them to any unit already sold. No warranty is made or authorized to be made, other than herein set forth. This warranty is in effect for one year after purchase.

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Dealer: \_\_\_\_\_

AMCO Manufacturing warrants its own products only and cannot be responsible for damage to equipment on which mounted.

## SAFETY

A brief description of signal words that may be used in this manual:

**CAUTION:** Used as a general reminder of good safety practices or to direct attention to unsafe practices.

**WARNING:** Denotes a specific potential hazard.

**DANGER:** Denotes the most serious specific potential hazard.

## SAFETY PRECAUTIONS

You can make your farm a safer place to live and work if you observe the safety precautions given. Study these precautions carefully and insist that they be followed by those working with you and for you.



### WARNING

Never clean, lubricate or adjust a machine that is in motion. Always lower or block the implement before performing service.

If a machine must be serviced in the raised position, jack or block it up to prevent it from

accidentally falling and injuring someone.

Do not allow riders on the tractor or implement.

Use speeds and caution dictated by the terrain traversed. Do not operate on any slope steep enough to cause tipping or loss of control.

Be sure all personnel are clear of the immediate area before operating.

Read and understand the operator's manual and require all other persons who will operate the equipment to do the same.

Be familiar with all tractor and implement controls and be prepared to stop engine and implements quickly in an emergency.



## CAUTION

Consult your implement and tractor operator's manual for correct and safe operating practices.

Beware of towed implement width and allow safe clearance.

**FAILURE TO HEED MAY RESULT IN PERSONAL INJURY OR DEATH.**

## SPECIFICATIONS

| Model | Working Width | Approx. Maximum Engine HP | Approx. Weight lbs. |
|-------|---------------|---------------------------|---------------------|
| Z-8   | 8'            | 90                        | 1,025               |
| Z-10  | 10'           | 100                       | 1,195               |
| Z-12  | 12'           | 110                       | 1,460               |
| Z-14  | 14'           | 120                       | 1,630               |

*Specifications subject to change without notice.*

# BOLT TORQUE







## WARNING

Before making any adjustments, inspections, lubricating or repairing. First, find a suitable safe location to park the tractor. Then slowly lower the implement until it is touching the ground. Before dismounting from the tractor shut off the engine set the parking brake and remove the key.

### READ THESE INSTRUCTIONS FIRST:

1. Improperly tightened bolts will result in damage, breakage, expense, and down time.
2. Always replace bolts with the specified grade and type.
3. Torque properly before first use of the machine and every 2-4 hours of use until you are sure the bolts are staying tight.
4. The chart below is a guide for proper torque. Use it unless a specified torque is called out elsewhere in the manual.
5. Torque is the force you apply to the wrench handle or the cheater bar, times the length of the handle or bar.
6. Use a torque wrench whenever possible.

The following table shows torque in ft. lbs.

| BOLT DIA.<br>AND<br>THREADS PER<br>INCH | <br>GRADE 2 |  OR <br>GRADE 5 A-325 | <br>GRADE 8 |
|---|--|---|---|
| 3/8-16                                  | 25   | 35  | 50  |
| 7/16-14                                 | 35   | 55  | 80  |
| 1/2-13                                  | 55   | 85  | 125   |
| 9/16-12                                 | 75   | 125   | 175   |
| 5/8-11                                  | 105  | 170   | 235   |
| 3/4-10                                  | 185  | 305   | 425   |
| 7/8-9                                   | 170  | 445   | 690   |
| 1-8                                     | 260  | 670   | 1030  |
| 1 1/8-7                                 | 365  | 900   | 1460  |
| 1 1/4-7                                 | 515  | 1275  | 2060  |
| 1 3/8-6                                 | 675  | 1675  | 2700  |
| 1 1/2-6                                 | 900  | 2150  | 3500  |
| 1 3/4-5                                 | 1410   | 3500  | 5600  |

### Shear Bolt Torque Rating

- Metric bolt torque for M12 Class 8.8 zinc plated is 55.1 foot-pounds.

## WARNING DECALS

Familiarize yourself with the warning decals affixed to the implement. It is important for you to operate the implement safely. Read and follow the safety directions on all warning decals.

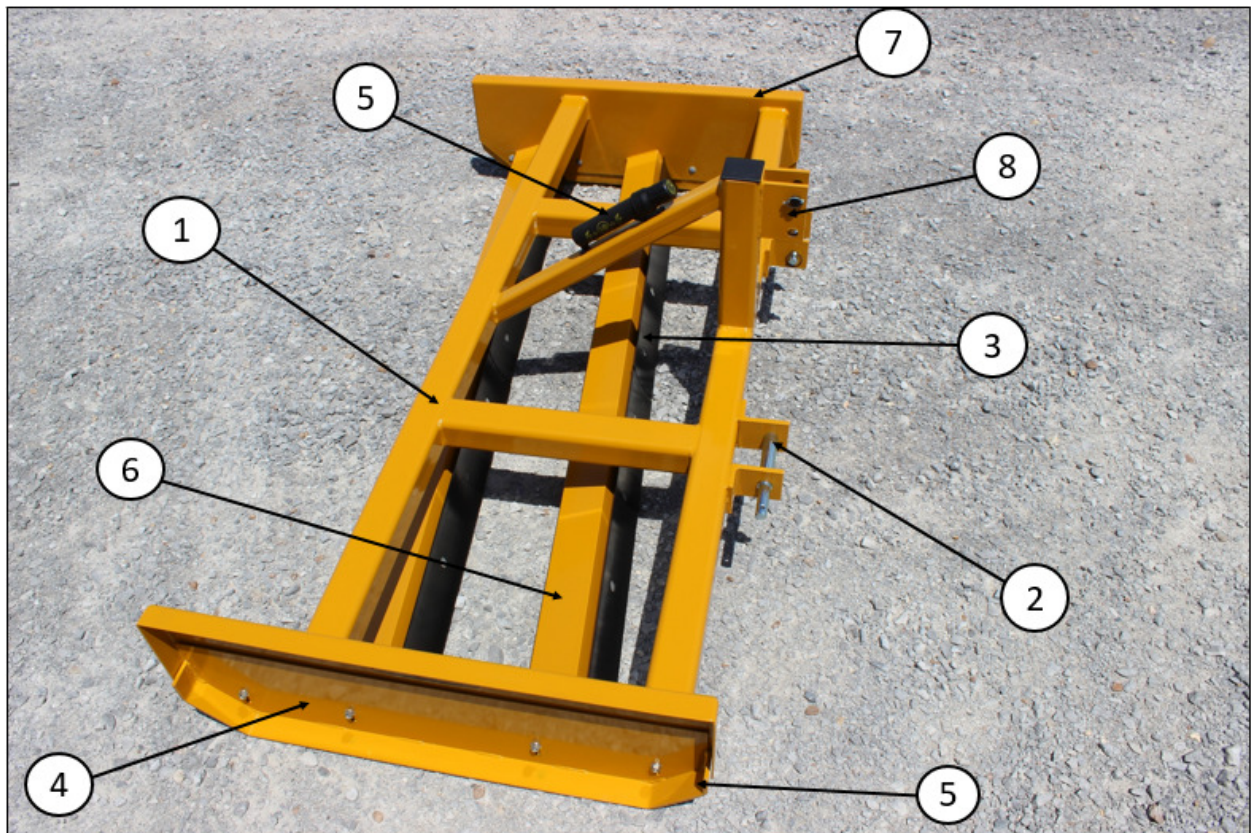
1. For operator safety make sure all warning decals are clean and legible.
2. Immediately replace any damaged or missing warning decals.
3. Never cover or obscure a warning decal.
4. Refer to the Parts Identification Section of this manual for correct warning decal locations.
5. Replacement warning decals can be obtained from your AMCO Dealer or by contacting AMCO at [amcomfg.com](http://amcomfg.com).

See pages 16-17



# Z-BLADE COMPONENTS

1. All-welded mainframe constructed of 4x4x3/8" tubing
2. Fits Category II and III hitches; quick-hitch compatible
3. Reversible and Replaceable, 1/2" x 6" High Carbon Heat Treated Blades
4. Tall side pans with depth adjustment
5. Replaceable skid plates 3" wide x 3/8" thick
6. Blade mount 5x5x1/2" Angle
7. Powder-Coated finish
8. Serial Plate



## **TRACTOR HORSEPOWER GUIDELINES**



### **WARNING**

Never operate the implement at excessive ground speed which can cause personal injury or damage to your tractor or implement.

### **Z-Blade Models**

| Model | Working Width | Approx. Maximum Engine HP |
|-------|---------------|---------------------------|
| Z-8   | 8'            | 90                        |
| Z-10  | 10'           | 100                       |
| Z-12  | 12'           | 110                       |
| Z-14  | 14'           | 120                       |

## HITCHING THE IMPLEMENT TO THE TRACTOR



### WARNING

Before dismounting from the tractor shut off the engine, set the parking brake and remove the key.



### WARNING

While backing the tractor to hitch the implement do not permit anyone to stand behind the tractor or be near the implement. Before operating the hydraulic 3-point lift controls be certain no one is directly behind the tractor or near the implement.

### Tractor without 3-point quick hitches:

1. Check and make certain the tractor drawbar will not come in contact with the implement when it is raised or lowered. If necessary reposition the drawbar or remove it. It is recommended to verify there is ample clearance the first time the implement is raised.
2. The three tractor lift links should be connected to the implement hitch.
3. After verifying the implement is securely connected to the tractor 3-point hitch slowly raise the implement.

### Tractors with 3-point quick hitches:

1. Check and make certain the tractor drawbar will not come in contact with the implement when it is raised or lowered. If necessary reposition the drawbar or remove it. It is recommended to verify there is ample clearance the first time the implement is raised.
2. The tractor 3-point hitch lift links should be connected to the implement hitch and lower hook locks latched.
3. After verifying the tractor 3-point hitch is securely connected to the implement slowly raise the implement.

## UNHITCHING THE IMPLEMENT FROM THE TRACTOR



### WARNING

Before dismounting from the tractor shut off the engine set the parking brake and remove the key.

### Tractors without 3-point quick hitches:

1. Slowly lower the implement onto a firm flat surface.
2. Remove the klik pin and pin connecting the tractor 3-point center link to the implement.
3. Remove lower 3-point klik pins and hitch pins from lower 3-point clevises.
4. Lower the 3-point lift arms below the clevises.
5. Use care while driving the tractor away from implement. Make sure the lower 3-point lift arms are free from the implement and do not pull against it.
6. Slowly pull the tractor away from the implement. Before dismounting the tractor shut off the engine set the parking brake and remove the key. Reinstall the implement 3-point hitch pins, bushing, and klik pins.

### Tractors with 3-point quick hitches:

1. Slowly lower the implement onto a firm flat surface.
2. Release lower hook locks.
3. Lower the quick hitch until the hitch is free from the implement.
4. Use care while driving the tractor away from the implement. Make sure the quick hitch is lowered so it will not pull against the implement.
5. Slowly pull the tractor away from the implement. Before dismounting the tractor shut off the engine set the parking brake and remove the key.

# OPERATION

The operator is responsible for the safe operation of this equipment. Operators should be familiar with the equipment, the tractor, and all safety practices before starting operation.

## CHECKLIST BEFORE USING THE IMPLEMENT

1. Check the implement for parts that are broken or have excessive wear. If any are found replace them.
2. Make sure the implement is properly attached to the tractor.
3. Read and understand the operator's manual.
4. Read and familiarize yourself with the safety and warning decals on the implement.
5. Check all bolts to verify proper torque.

### **Adjusting Top Link**

The scraper is leveled by adjusting the length of the tractor's top link.

- Shortening the top link will raise the rear of the scraper.
- Lengthening the top link will lower the rear of the scraper.

Lengthening or shortening the adjustable lift link (draft arm) changes the angle of the scraper side to side (left to right). The most common position for effective grading will be level front to back and side to side. Experience will allow the operator to determine the best setting for the application being done.

### **Scraping**

1. Adjust cutting edges by raising or lowering skid shoes to expose desired depth of cutting blade. The lower the cutting edge is below the skid shoes, the more aggressive the cut it will make.
2. Lower scraper and drive forward to cut and distribute material.

**NOTE:** The scraper does not scrape if tractor is moving in reverse.

3. To change levelness of scraper, one skid shoe can be adjusted lower than the other. The tilt link on the lower lift arm of the tractor can also be adjusted to provide the correct slope.

**NOTE:** The angle of the cutting edges produce an aggressive and level cut. The angle also pulls the material slightly to the left hand side of the scraper (as you sit in the tractor's seat).

## **Spreading & Leveling**

1. To spread material, back into loose material and set scraper on the ground. Drive forward, pulling material with you. Material will flow over cutting edges and spread along direction of travel. When material is gone, back up and make another pass. Repeat this process until material is spread as desired.
2. To crown a roadway, drive down the right hand side if the roadway and the scraper will loosen material and pull it slightly left, toward center of roadway. The lower lift arm of the tractor can be adjusted to tilt scraper for a more aggressive crowning action.

**NOTE:** When the top link is adjusted properly, both the front and rear grading blades should engage the ground and or material being leveled.

**NOTE:** Top link adjustment for loose material will differ from adjustment for hard or compacted material.

## **Adjusting Skid Shoes**

1. Safely place unit on wooden blocks or sufficient supports under the blades allowing the bottom of the skid shoes to be elevated.



2. Loosen 4 nuts on each side of skid shoe



3. Raise or lower skid shoe to desired height using a tape measure to make sure front and back are same height.

- Set blade depth according to desired aggressiveness of cut. The lower the blade, the more aggressive the cut.

4. Tighten 4 nuts on each side of skid shoe.

## **Cleaning**

After each use:

- Remove large debris such as clumps of dirt, grass, crop residue, etc. from machine.
- Inspect machine and replace worn or damaged parts.
- Replace any safety decals that are missing or not readable.

Periodically or Before Extended Storage

- Clean large debris such as clumps of dirt, grass, crop residue, etc. from machine.
- Remove the remainder using a low-pressure water spray.
  1. Be careful when spraying near scratched or torn safety decals or near edges of decals as water spray can peel decal off surface.
  2. Be careful when spraying near chipped or scratched paint as water spray can lift paint.
  3. If a pressure washer is used, follow the advice of the pressure washer manufacturer.
- Inspect machine and replace worn or damaged parts.
- Replace any safety decals that are missing or not readable.

## **Storage**

- Block equipment securely for stage.
- Keep children and bystanders away from storage area.
- To help prevent injury caused by a falling implement, always detach on a hard level surface.
- Do not climb or lean on stored equipment.

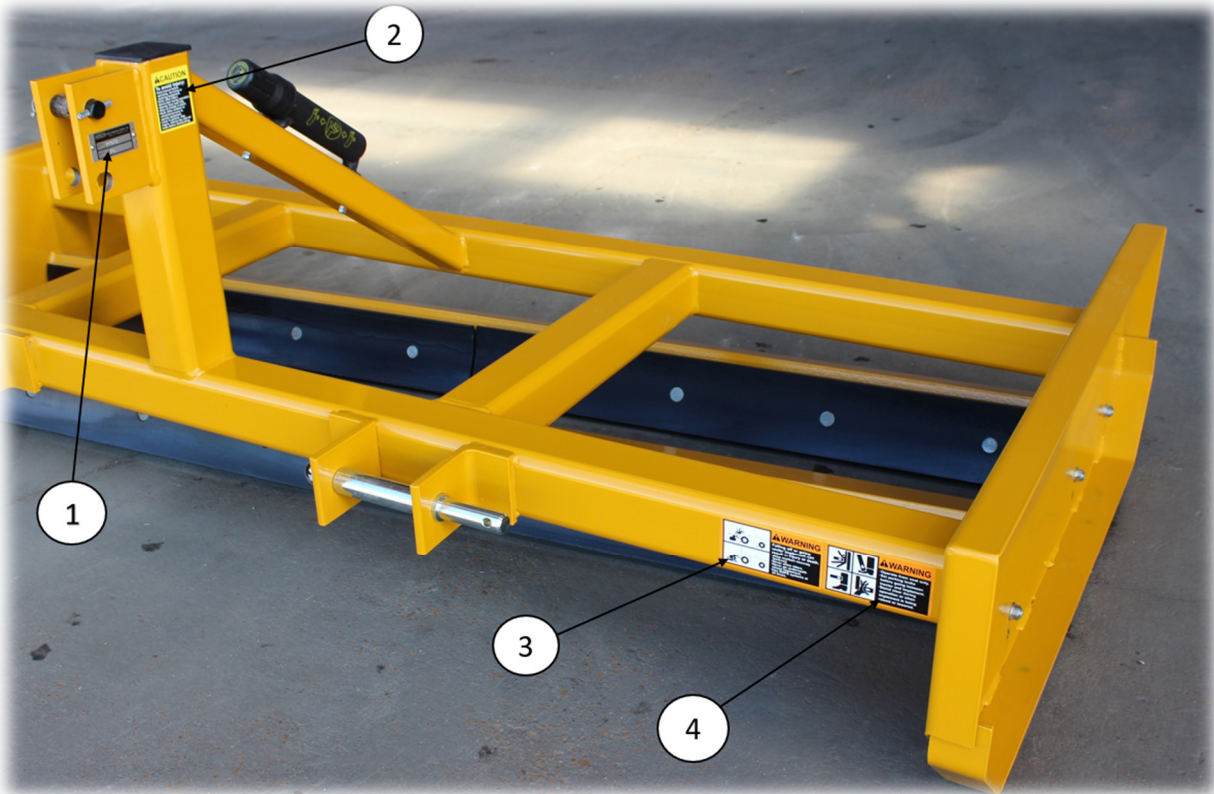




## SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Replace Immediately If Damaged!



1 – #11713 Serial Tag

|  |                      |
|--|----------------------|
| <b>AMCO MFG. CO.</b>   |                      |
| YAZOO CITY, MS. USA - <a href="http://WWW.AMCOMFG.COM">WWW.AMCOMFG.COM</a> |                      |
| PHONE: 800-748-9022  |                      |
| MODEL #  | <input type="text"/> |
| SERIAL #   | <input type="text"/> |

### BE CAREFUL!

- Use a clean, damp cloth to clean safety decals.
- Avoid spraying too close to decals when using a pressure washer; high-pressure water can enter through very small scratches or under edges of decals causing them to peel or come off.
- Replacement safety decals can be ordered free from your AMCO dealer. To locate your nearest dealer, check the Dealer Locator at [www.AMCOmfg.com](http://www.AMCOmfg.com), or call (800) 748-9022.





## SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

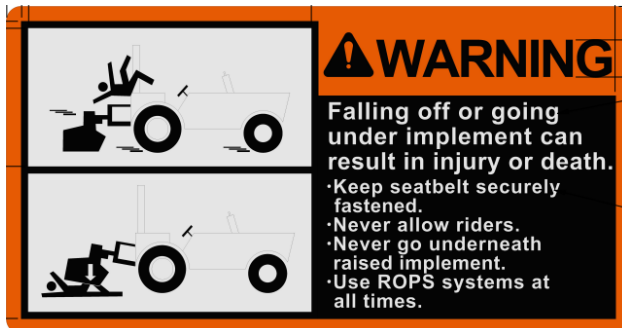
Replace Immediately If Damaged!



### 2 - #103648 General Safety Decal



### 3 - #103646 Implement Safety Decal



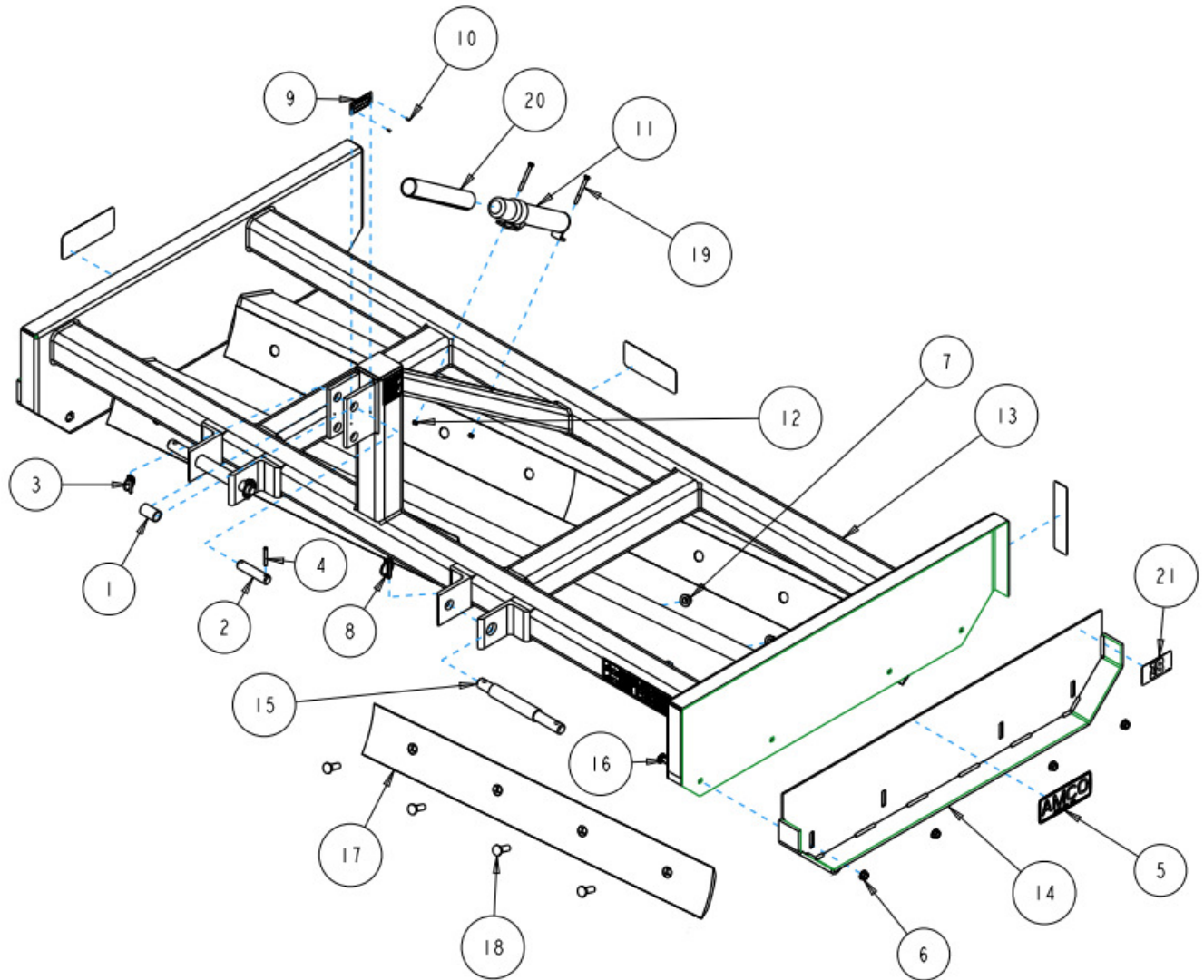
### 4 - #103647 Pinch & Crush Decal



# TROUBLESHOOTING GUIDE

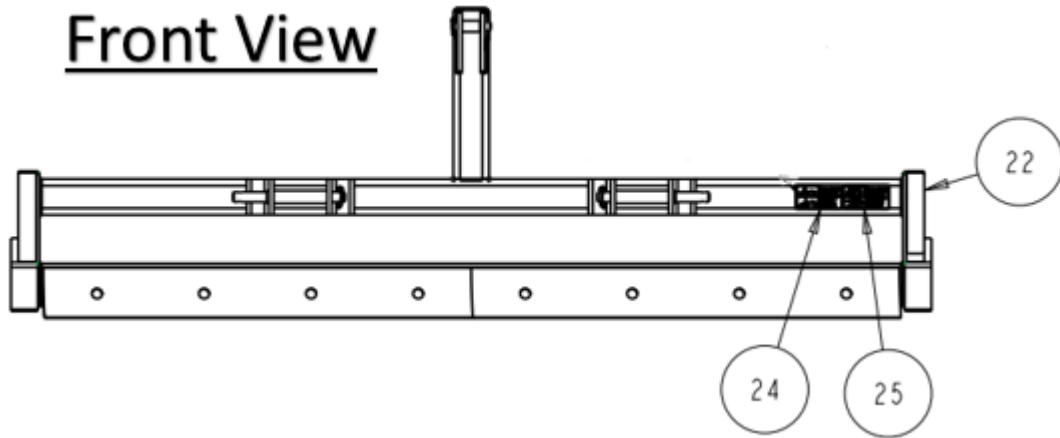
| Problem  | Possible Cause                 | Solution  |
|--|--------------------------------|---|
| Material building up on first blade                                    | Unit tilted forward            | Lengthen Top Link   |
| Material not being graded by first blade / building up on second blade | Unit tilted back               | Shorten top link  |
| Material spread is not level   | Skid shoes not adjusted evenly | Measure skid shoe position on each side and make even         |
| Material not flowing   | Too much moisture in material  | Wait until material has a better moisture content             |
| Unit not cutting material  | Cutting edges are worn         | Reverse cutting edges by turning over / Replace cutting edges |

# PARTS DIAGRAM

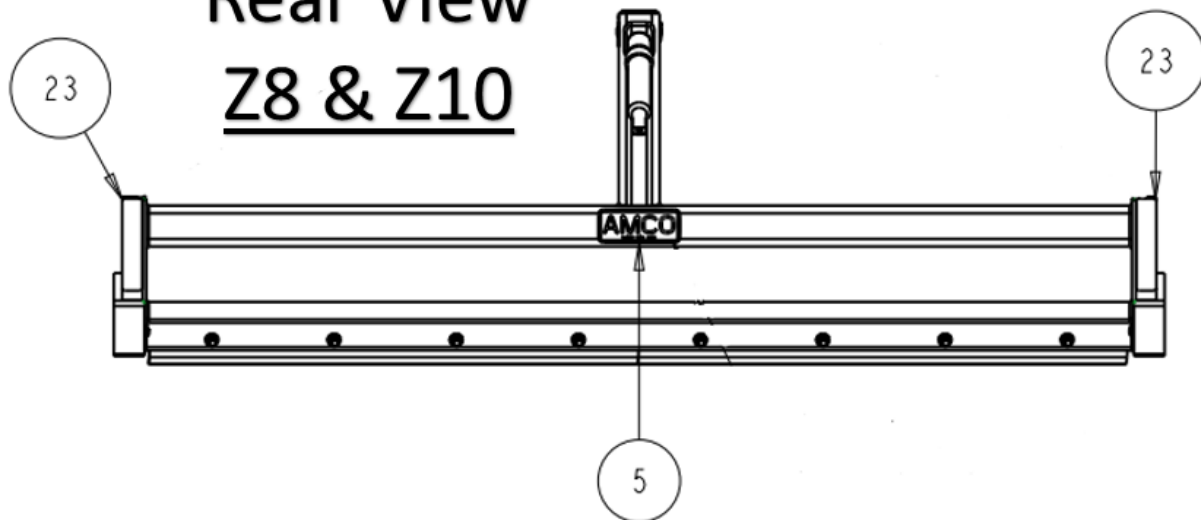


| <b>Ref. No.</b> | <b>Part No.</b> | <b>Description</b>                | <b>Z8</b> | <b>Z10</b> | <b>Z12</b> | <b>Z14</b> |
|-----------------|-----------------|-----------------------------------|-----------|------------|------------|------------|
| 1               | 6570            | Bushing                           | 1         | 1          | 1          | 1          |
| 2               | 7397            | Connecting Pin                    | 1         | 1          | 1          | 1          |
| 3               | 10317           | Klik Pin 1/4"                     | 1         | 1          | 1          | 1          |
| 4               | 10910           | 5/16 x 2-1/4" Roll Pin, ZP        | 1         | 1          | 1          | 1          |
| 5               | 11465           | "AMCO" Logo Decal                 | 3         | 3          | 3          | 3          |
| 6               | 11646           | 1/2" NC GR 'G' Flange Locknut     | 8         | 8          | 8          | 8          |
| 7               | 11647           | 5/8" NC GR 'G' Flange Locknut     | 16        | 20         | 24         | 28         |
| 8               | 11697           | Klik Pin 7/16"                    | 2         | 2          | 2          | 2          |
| 9               | 11713           | Serial Plate                      | 1         | 1          | 1          | 1          |
| 10              | 11714           | Drive Screw (Type U) 6 GA x .313" | 2         | 2          | 2          | 2          |
| 11              | 19013           | Operator's Manual Holder (Small)  | 1         | 1          | 1          | 1          |
| 12              | 19067           | 5/16-18 Lock Hex Nut, ZP          | 2         | 2          | 2          | 2          |
| 13              | 21118           | 8' Grader Frame, W.A.             | 1         |            |            |            |
| 13              | 21120           | 10' Grader Frame, W.A.            |           | 1          |            |            |
| 13              | 21121           | 12' Grader Frame, W.A.            |           |            | 1          |            |
| 13              | 21122           | 14' Grader Frame, W.A.            |           |            |            | 1          |
| 14              | 21119           | Skid, W.A.                        | 2         | 2          | 2          | 2          |
| 15              | 101739          | Lower Hitch Pin, ZP               | 2         | 2          | 2          | 2          |
| 16              | 103638          | 1/2-13 x 1 Carriage Bolt, GR5, ZP | 8         | 8          | 8          | 8          |
| 17              | 103639          | Grader Blade, 48"                 | 4         |            |            |            |
| 17              | 103650          | Grader Blade, 60"                 |           | 4          |            |            |
| 17              | 103654          | Grader Blade, 72"                 |           |            | 4          |            |
| 17              | 103657          | Grader Blade, 84"                 |           |            |            | 4          |
| 18              | 103640          | 5/8-11 x 2, #3 Plow Bolt, GR5, ZP | 16        | 20         | 24         | 28         |
| 19              | 103641          | 5/16-18 x 3 HHCS, GR5, ZP         | 2         | 2          | 2          | 2          |
| 20              | 103642          | Grader Manual                     | 1         | 1          | 1          | 1          |
| 21              | 103643          | 8' Grader Decal, Z8               | 2         |            |            |            |
| 21              | 103651          | 10' Grader Decal, Z10             |           | 2          |            |            |
| 21              | 103655          | 12' Grader Decal, Z12             |           |            | 2          |            |
| 21              | 103658          | 14' Grader Decal, Z14             |           |            |            | 2          |
| 22              | 103644          | Yellow Reflective Decal, 2" x 9"  | 2         | 2          | 2          | 2          |
| 23              | 103645          | Red Reflective Decal, 2" x 9"     | 2         | 2          | 2          | 2          |
| 24              | 103646          | Implement Safety Decal            | 1         | 1          | 1          | 1          |
| 25              | 103647          | Pinch & Crush Decal               | 1         | 1          | 1          | 1          |
| 26              | 103648          | General Safety Decal              | 1         | 1          | 1          | 1          |
| 27              | 12540           | Orange Reflective Decal, 2" x 9"  |           |            | 3          | 3          |

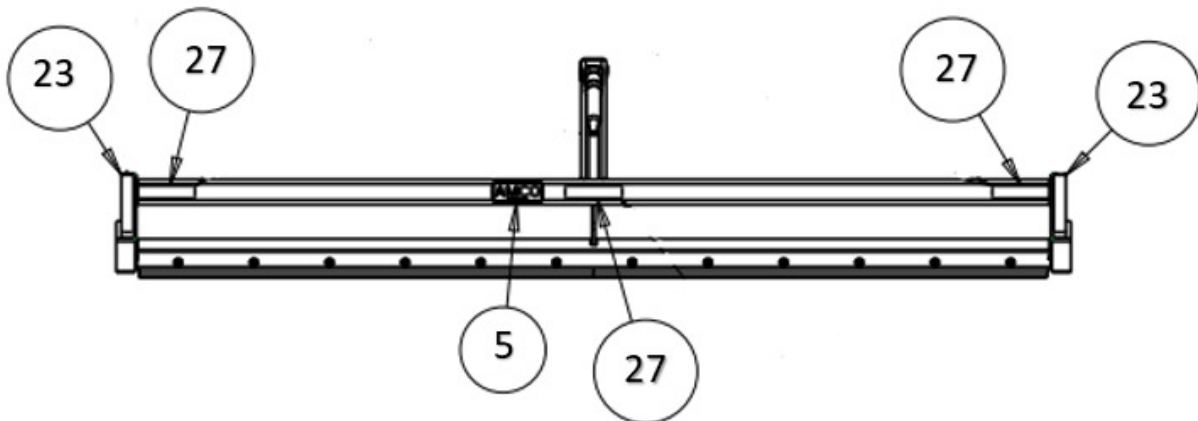
## Front View

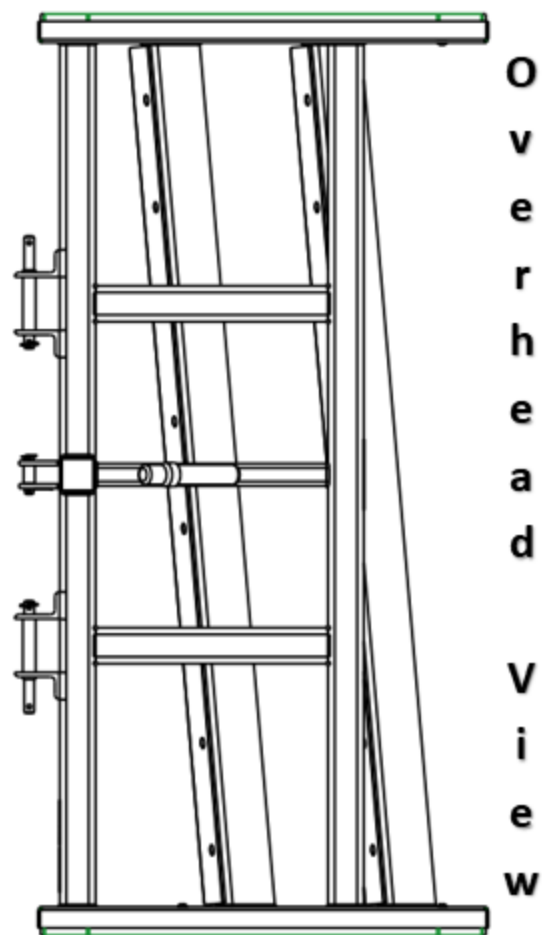
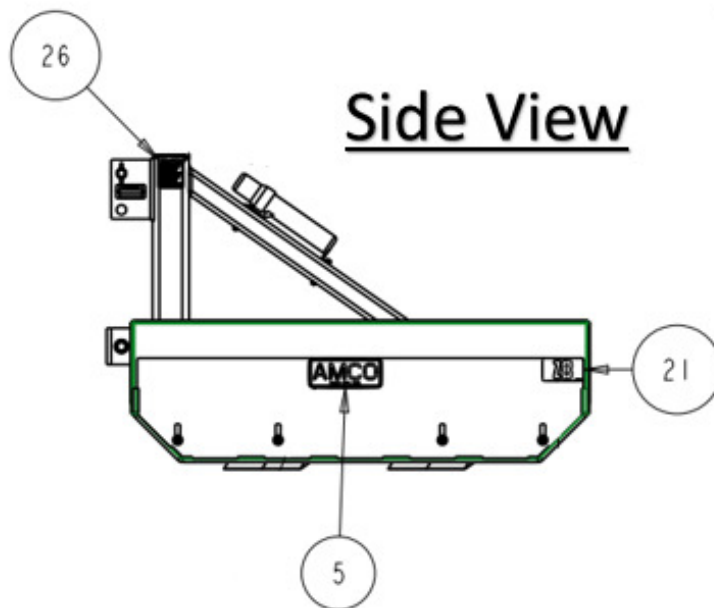


## Rear View Z8 & Z10



## Rear View Z12 & Z14







## AMCO WARRANTY

AMCO Manufacturing, Inc., warrants all equipment manufactured and sold by them to be free from defects in material or workmanship under normal use and service. If any part of the equipment sold by the company proves to be defective in material or workmanship within one year from date of original sale at retail or eighteen months from date of shipment from the company's factory, except for Protect-O-Shield® bearings for which the time of warranty is two years from date of original sale of the implement, return defective equipment to the factory, transportation charges prepaid; if the company finds such equipment to be defective in material or workmanship, it will be repaired or replaced, free of charge, f.o.b. factory. This warranty shall not be deemed to place any liability on AMCO Manufacturing, Inc., for any transportation charges, any labor or cost in the replacement of any parts.

The company assumes no liability for consequential damages of any kind and the purchaser by his acceptance of this equipment will assume liability for the consequences of its use or misuse by the purchaser, his employees or others. This warranty shall not apply to any piece of equipment or part thereof sold by this company which has been subject to any accident caused in transit, alterations by unauthorized service, negligence, abuse, or damage by flood, fire, or act of God. A defect in the meaning of this warranty in any part of said equipment shall not, when such part is capable of being removed, repaired, or replaced, operate to condemn such equipment.

This warranty shall constitute the entire warranty and/or agreement between the manufacturer and the purchaser, and the manufacturer will not be responsible for any other warranties, guarantees, representations, obligations or liabilities, either oral or written, expressed or implied.

**AMCO MANUFACTURING, INC.**

Yazoo City, Mississippi, U.S.A.

## This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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