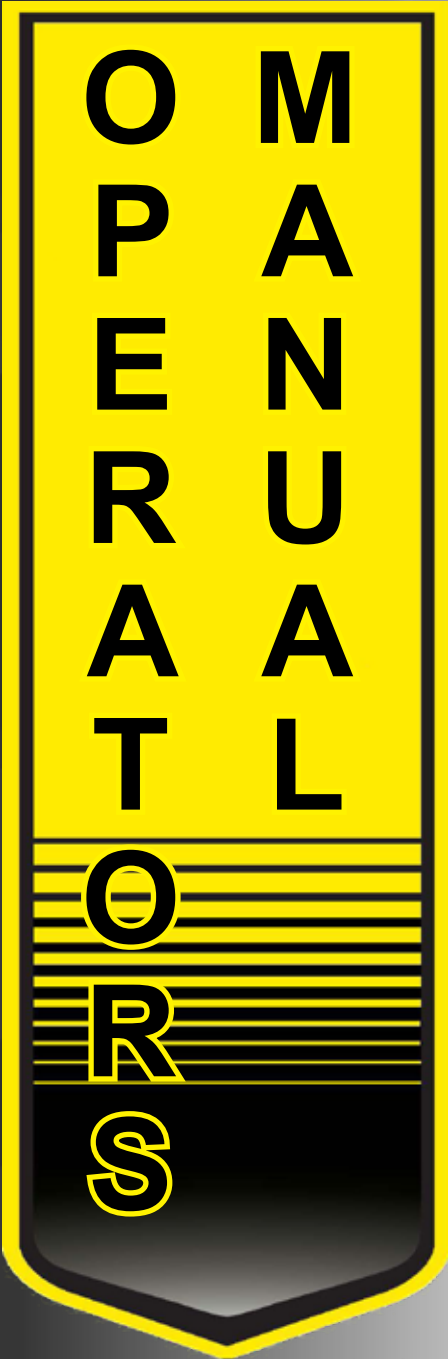




**1226 & 1230  
BIG DOG  
FORAGE  
BOXES**



**WARNING**

READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THIS EQUIPMENT. UNSAFE OPERATION OR MAINTENANCE OF THIS EQUIPMENT CAN RESULT IN SERIOUS INJURY OR DEATH.

BD1226 Starting Serial #321BD26001  
BD1230 Starting Serial #321BD30001

Part #93850

Rev. #00

HSMFG0123

**STRONG HERITAGE - STRONG PEOPLE - STRONGER FUTURE**

# **CONTENTS**

|   |       |
|---|-------|
| Warranty . . . . .  | 1     |
| Manufacturer's Statement . . . . .                                      | 2     |
| Dealer Pre-Delivery Checklist . . . . .                                 | 5     |
| Dealer Delivery Checklist . . . . .                                     | 7     |
| Safety Information - Be Alert Symbol . . . . .                          | 9     |
| Explanation of Safety Signs . . . . .                                   | 10    |
| Safety Decals . . . . .   | 11    |
| Safety Information - Warning - Owner Must Read and Understand . . . . . | 12    |
| Cap Screw Torque Values . . . . .                                       | 13    |
| Hydraulic Torque Specs. . . . .   | 14-15 |
| Set-Up & Assembly . . . . .   | 16    |
| Preparing for Operation . . . . .                                       | 17    |
| Operation . . . . .   | 18-19 |
| Adjustments . . . . .   | 20    |
| Optional Equipment . . . . .  | 21    |
| Lubrication Guide . . . . .   | 22    |
| Decal Location . . . . .  | 23-26 |
| Troubleshooting . . . . .   | 27    |
| Service Notes . . . . .   | 28    |

## **H&S WARRANTY**

H&S Manufacturing Co., Inc. ("H&S") warrants this product to be free from defect in material and workmanship. Except as noted below, this warranty term is twelve (12) months on parts and labor, and twenty-four (24) months on parts only from the date of delivery of the product to the original purchaser by an authorized H&S dealer. Under this warranty, H&S will repair or replace, at its option, any covered part which is found to be defective in material or workmanship during the applicable warranty term. In no case will the covered repair cost of a part or parts exceed the replacement cost of that part. In no case, unless pre-authorized by H&S, will a component be replaced versus repaired unless the cost of labor and parts exceeds 75% of the cost of a new component. Warranty repairs must be performed by H&S or a dealer authorized by H&S to sell and/or service the product involved, and will use only new or remanufactured parts or components furnished by H&S. Any warranty repairs needing to be performed by a third party must be pre-authorized by H&S. Standard freight costs will be covered by H&S for any part used to make a warrantable repair, any form of express freight will not be covered unless pre-authorized by H&S. This warranty includes approved parts and labor to repair the product but does not include, and the purchaser is responsible for, any service call and/or transportation of the product to and from the dealer's place of business, for any costs related to travel, for any premium charged for overtime labor requested by the purchaser, and for any service work not directly related to any defect covered under this warranty.

This warranty includes only those components of the product manufactured by H&S. Warranty for any component not manufactured by H&S including, but not limited to, engines, batteries, tires, rims, hydraulic motors, pumps, etc. are covered by the warranty, if any, provided separately by their respective manufacturers. H&S reserves the right to request the return of any failed component.

This warranty in all its parts is extended solely to the original purchaser of the product, is terminated upon any subsequent transfer or sale from or by the original purchaser, and extends no third party benefits or rights whatsoever.

The warranty term for any product used in any for hire, rental fleet or rental application, is limited to six (6) months from the date of delivery of the product to the original purchaser by an authorized H&S dealer.

This warranty does not include: (1) Any product that has been altered or modified in ways not approved by H&S; (2) Depreciation or damage caused by normal wear, use for which the product was not designed, misuse, improper or insufficient maintenance, improper operation, accident or failure to follow the product Operator's Manual recommendations and product decal recommendations; (3) Normal maintenance parts and service; (4) Repairs made with parts other than those available from H&S or performed by anyone other than H&S or a dealer authorized by H&S to sell and/or service the product involved.

To secure warranty service the purchaser must report the product defect to a dealer authorized by H&S to sell and/or service the product involved within the applicable warranty term together with evidence of the warranty start date and make the product available to that dealer within a reasonable period of time.

For these warranty terms to be in effect the selling authorized H&S dealer and/or the customer must submit the warranty registration to H&S.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. H&S and the companies affiliated with it make no warranties, representations, or promises, express or implied, as to the performance or freedom from defect of its products other than those set forth above and NO IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS OR FITNESS FOR A PARTICULAR PURPOSE IS MADE. IN NO EVENT WILL THE DEALER, H&S OR ANY COMPANY AFFILIATED WITH H&S BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. The ONLY REMEDY the purchaser has in connection with the breach of performance of any warranty on H&S products are those set forth above.

The selling dealer has no authority to make any representation or promise on behalf of H&S, or to modify the terms or limitations of this warranty in any way.

12/20/22

## **MANUFACTURER'S STATEMENT**

Congratulations on your selection of an H&S product. Your new H&S product has been manufactured of the finest quality materials and components. The performance you receive from your machine is largely dependent upon how well you read, understand this manual, and apply this knowledge. There is a right and a wrong way to do everything. Please do not assume that you know how to operate and maintain your machine before reading this manual carefully. Keep this manual available for ready reference. We are very appreciative of your patronage.

H&S reserves the right to make changes or add improvements to its products at any time without incurring any obligation to make such changes to products previously manufactured. Specifications, statements and descriptions of Products contained in this publication are subject to change without prior notification.

## WARRANTY REGISTRATION

- Date of Purchase: \_\_\_\_\_
- Purchaser Name: \_\_\_\_\_
- Street Address: \_\_\_\_\_
- City: \_\_\_\_\_
- State: \_\_\_\_\_ Zip: \_\_\_\_\_
- Phone Number: \_\_\_\_\_
- E-mail Address: \_\_\_\_\_
- Product: \_\_\_\_\_
- Model Number: \_\_\_\_\_
- Serial Number: \_\_\_\_\_
- You have received the operator's manual for this product. Yes \_\_\_\_\_ No \_\_\_\_\_
- Interested in receiving the H&S E-mail Newsletter? Yes \_\_\_\_\_ No \_\_\_\_\_

- 
- Dealer Name: \_\_\_\_\_
  - Street Address: \_\_\_\_\_
  - City: \_\_\_\_\_
  - State: \_\_\_\_\_ Zip: \_\_\_\_\_
  - Signature: \_\_\_\_\_

- All fields must be filled out to ensure prompt notification of product and/or warranty updates.

**Please mail the completed WARRANTY REGISTRATION FORM to:  
H&S Manufacturing Co., Inc.  
2608 S. Hume Ave.  
Marshfield, WI 54449**

**Intentionally Left Blank**

# DEALER PRE-DELIVERY CHECKLIST

## AFTER COMPLETION, DEALER SHOULD REMOVE AND RETAIN FOR RECORDS

After the **BIG DOG** has been completely set up, check to be certain it is in correct operating order before delivering to the customer. The following is a list of points to inspect. Check off each item as you have made the proper adjustments and found the item operating satisfactorily.

- BIG DOG** was not damaged in shipment. Check for dents and loose or missing parts. Report damage immediately to H&S Manufacturing Co., Inc.
- BIG DOG** has been correctly assembled according to instructions in this manual. Wheel nuts and all other fasteners are tightly secured.
- All bolts and fasteners are tight.
- All shields and guards are in place and fastened.
- All grease fittings have been lubricated. Both final drive assemblies are at proper gear lube level in site glass. (See Lubrication Chapter in this manual).
- Hoses and fittings are properly attached and there are no visible leaks.
- All mechanisms are operating trouble-free.
- Final drive chains are at proper tension.
- Apron chains are adjusted properly.
- Decals are in place and legible.

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

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

Dealer's Name \_\_\_\_\_

Inspection Date \_\_\_\_\_

Signature of Pre-Delivery Inspector \_\_\_\_\_

(Remove Dealers File Copy At Perforation)

**Intentionally Left Blank**



# DEALER DELIVERY CHECKLIST

## AFTER COMPLETION, DEALER SHOULD REMOVE AND RETAIN FOR RECORDS

This checklist that follows is an important reminder of valuable information that should be passed on to the customer at the time this **Big Dog** is delivered.

Check off each item as you explain it to the customer.

This delivery checklist, when properly filled out and signed, assures the customer that the pre-delivery service was satisfactorily performed.

- Explain to the customer that the pre-delivery inspection was made.
- Explain to the customer all the safety precautions they must exercise when operating this unit.
- Explain recommended loads for different types of materials.
- Explain to customer that regular lubrication is required for proper operation and long life of the machine.
- Show customer the lubrication section of Owner's Manual.
- Give the customer Operator's Manual and make sure they read and understand all operating and service instructions.
- Have customer sign a completed "Warranty Registration" and mail it promptly.

Date Delivered \_\_\_\_\_

Dealer's Name \_\_\_\_\_

By \_\_\_\_\_

Signature of Original Buyer \_\_\_\_\_

Note: Warranty is not valid until warranty card is completed and returned to H&S Mfg. Co., Inc.

**Intentionally Left Blank**

## **SAFETY INFORMATION**



**BE  
ALERT!**

**YOUR SAFETY  
IS INVOLVED.**

**THIS SYMBOL IS USED THROUGHOUT THIS BOOK WHENEVER YOUR PERSONAL SAFETY IS INVOLVED. TAKE TIME TO BE CAREFUL. REMEMBER: THE CAREFUL OPERATOR IS THE BEST OPERATOR. MOST ACCIDENTS ARE CAUSED BY HUMAN ERROR. CERTAIN PRECAUTIONS MUST BE OBSERVED TO PREVENT THE POSSIBILITY OF INJURY OR DAMAGE.**

**H&S MANUFACTURING CO. INC.**

# SAFETY INFORMATION

Keep signs in good condition. Immediately replace any missing or damaged signs.

## RECOGNIZE SAFETY INFORMATION

This is the safety alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



## UNDERSTAND SIGNAL WORDS

A signal word - DANGER, WARNING, or CAUTION - is used with the safety alert symbol. DANGER identifies the most serious hazards.

Safety signs with signal word DANGER or WARNING are typically near specific hazards.

General precautions are listed on CAUTION safety signs.



**WARNING**



**CAUTION**



**CAUTION**

## FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual, and all safety signs on your machine. Follow all recommended precautions and safe operating procedures.

## OBSERVE MAXIMUM TRANSPORT SPEED

The maximum transport speed for this implement is 32 km/h (20 mph).

Some tractors are capable of operating at speeds that exceed the maximum transport speed of this implement. Regardless of the maximum speed capability of the tractor being used to tow this implement, do not exceed the implement's maximum transport speed.

Exceeding the implement's maximum transport speed can result in:

- \* Loss of control of the tractor/implement combination
- \* Reduced or no ability to stop during braking
- \* Implement tire failure
- \* Damage to the implement structure or its components

Use additional caution and reduce speed when towing under adverse surface conditions, when turning, and when on inclines.

Do not attempt transport if the fully loaded implement weighs more than 1.5 times the weight of the tractor.




# SAFETY INFORMATION

|   |   |
|---|---|
|  | <p style="text-align: center;"><b>⚠ WARNING</b></p> <p style="text-align: center;"><b>STAY CLEAR<br/>MOVING PARTS<br/>UNDER THIS<br/>AREA</b></p> |
| 1494C   |   |

|   |
|---|
| <b>⚠ WARNING</b>  |
|  |
| <p><b>DO NOT<br/>REMOVE<br/>SHIELDS<br/>MOVING<br/>PARTS<br/>INSIDE</b></p>         |
| 1494K   |

|   |  |
|---|--|
|  | <p style="text-align: center;"><b>⚠ WARNING</b></p> <p style="text-align: center;"><b>DO NOT GO NEAR LEAKS</b></p> <ul style="list-style-type: none"> <li>• High pressure oil easily punctures skin causing serious injury, gangrene or death.</li> <li>• If injured, seek emergency medical help. Immediate surgery is required to remove oil.</li> <li>• Do not use finger or skin to check for leaks.</li> <li>• Lower load or relieve hydraulic pressure before loosening fittings.</li> </ul> |
| 11599   |  |

|  |
|--|
| <b>⚠ WARNING</b>   |
|    |
| <p><b>STAY CLEAR OF<br/>DOOR HINGE AREA</b></p> <p>FAILURE TO HEED THIS<br/>WARNING MAY RESULT<br/>IN SERIOUS INJURY OR<br/>DEATH</p> <p>KEEP YOURSELF AND<br/>OTHERS WELL CLEAR</p> |
| 3304A  |

|   |   |
|---|---|
|  | <p style="text-align: center;"><b>⚠ DANGER</b></p> <p style="text-align: center;"><b>STAY CLEAR OF REAR DOORS<br/>WHEN OPENING<br/>OR CLOSING.</b></p> <p style="text-align: center;">FAILURE TO HEED THIS<br/>WARNING MAY RESULT IN<br/>PERSONAL INJURY OR DEATH</p> <hr style="width: 20%; margin: auto;"/> <p style="text-align: center;">KEEP YOURSELF AND<br/>OTHERS WELL CLEAR.</p> |
| 3304B   |   |

|   |  |
|---|--|
|  | <p style="text-align: center;"><b>⚠ WARNING</b></p> <p style="text-align: center;"><b>STAY CLEAR<br/>MOVING PARTS<br/>BEHIND THIS<br/>AREA</b></p> |
| 1906E   |  |

|  |
|--|
| <b>⚠ WARNING</b>   |
| <b>HELP AVOID INJURY</b>   |
| <ul style="list-style-type: none"> <li>• READ &amp; UNDERSTAND THE OPERATORS MANUAL PROVIDED WITH THIS MACHINE. IF MISPLACED CALL H &amp; S MANUFACTURING AT 715-387-3414 WITH MODEL AND SERIAL NUMBER.</li> <li>• UNDERSTAND ALL SAFETY WARNINGS AND FUNCTION OF CONTROLS.</li> <li>• KEEP SAFETY DEVICES IN PLACE AND WORKING.</li> <li>• KEEP YOURSELF AND OTHERS WELL CLEAR OF MOVING PARTS.</li> <li>• DISCONNECT ALL POWER BEFORE SERVICING OR CLEANING THIS MACHINE.</li> <li>• DO NOT EXCEED 20 MPH</li> </ul> |
| 72203A   |

## SAFETY INFORMATION



# WARNING

### TO PREVENT SERIOUS INJURY OR DEATH

BEFORE YOU ATTEMPT TO OPERATE THIS EQUIPMENT, READ AND STUDY THE FOLLOWING INFORMATION. IN ADDITION, MAKE SURE THAT EVERY INDIVIDUAL WHO OPERATES OR WORKS WITH THIS EQUIPMENT, WHETHER FAMILY MEMBER OR EMPLOYEE, IS FAMILIAR WITH THESE SAFETY PRECAUTIONS. KNOW HOW TO STOP UNLOADING MECHANISM BEFORE STARTING IT.

If the machine becomes clogged, disengage truck hydraulics, stop the truck engine, remove ignition key and allow all mechanisms to stop before cleaning or working on the machine.

**DO NOT ALLOW PERSONNEL OTHER THAN QUALIFIED OPERATOR NEAR THE MACHINE.**

**DO NOT** attempt to perform maintenance or repair with truck or tractor running and hydraulics hooked to the power source.

**DO NOT** step up on machine at any time.

**DO NOT** leave truck or tractor cab when box is in operation.

**DO NOT** allow minors to operate or be near machine.

**STAY CLEAR** of rear of the **Big Dog** at all times.

**DO NOT** clean, adjust, or lubricate the machine when any part is in operation.

**BE SURE** the machine is clear of people, tools, and any other objects before engaging hydraulics.

**NEVER** start **Big Dog** until all guards and safety shields are secured in place.

**STAY CLEAR** of hydraulic lines, they may be under extreme pressure or heat.

**CAUTION** - Beware of low electrical wires.

Loose or floppy clothing should not be worn by the operator.

H&S Mfg. Co. always takes the operator and their safety into consideration and guards exposed moving parts for their protection. However, some areas cannot be guarded or shielded in order to ensure proper operation. In addition, the operator's manual and decals on the machine itself warn you of further danger and should be read and observed closely.

**Study The Above Safety Rules**

**ATTENTION - BE ALERT - YOUR SAFETY IS INVOLVED**

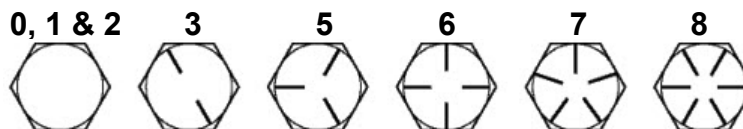
# CAP SCREW TORQUE VALUES

The specifications below are the torque values for fasteners as it adheres to the SAE torque value standards. All fasteners should be torqued to the proper values found in the figures below unless otherwise specified by the engineering drawing.

- Lubed torque would be any fastener that has grease, liquid Loctite, oil, etc. on the threads.
- Dry torque would be any fastener which has threads that are clean and dry and do not have any liquid Loctite or grease on them.

## Hex Head Fasteners

The figure shown below shows how to determine what SAE grade a fastener is.




| SUGGESTED ASSEMBLY TORQUE VALUES |              |               |              |               |              |               | WORKING TORQUE |           |           |                |
|----------------------------------|--------------|---------------|--------------|---------------|--------------|---------------|----------------|-----------|-----------|----------------|
| SAE GR. 2-6"                     |              | SAE GR. 5     |              | SAE GR. 8     |              |               | 18-8 SS        | 316 SS    | Brass     | Silicon Bronze |
| Dia. & Thrds. per inch           | Dry Ft. Lbs. | Lube Ft. Lbs. | Dry Ft. Lbs. | Lube Ft. Lbs. | Dry Ft. Lbs. | Lube Ft. Lbs. | Inch Lbs.      | Inch Lbs. | Inch Lbs. | Inch Lbs.      |
| 1/4-20                           | 5.5          | 4.2           | 8            | 6.3           | 12           | 9             | 75.2           | 78.8      | 61.5      | 68.6           |
| 1/4-28                           | 6.3          | 4.7           | 10           | 7.2           | 14           | 10            | 94.0           | 99.0      | 77.0      | 87.0           |
| 5/16-20                          | 11           | 8             | 17           | 13            | 24           | 18            | 132            | 138       | 107       | 123            |
| 5/16-28                          | 12           | 9             | 19           | 14            | 27           | 20            | 142            | 147       | 116       | 131            |
| 3/8-16                           | 20           | 15            | 30           | 23            | 45           | 35            | 236            | 247       | 192       | 219            |
| 3/8-24                           | 23           | 17            | 35           | 25            | 50           | 35            | 259            | 271       | 212       | 240            |
| 7/16-14                          | 32           | 24            | 50           | 35            | 70           | 50            | 376            | 393       | 317       | 349            |
| 7/16-20                          | 36           | 27            | 55           | 40            | 80           | 60            | 400            | 418       | 327       | 371            |
| 1/2-13                           | 50           | 35            | 75           | 55            | 110          | 80            | 517            | 542       | 422       | 480            |
| 1/2-20                           | 55           | 40            | 85           | 65            | 120          | 90            | 541            | 565       | 443       | 502            |
| 9/16-12                          | 70           | 55            | 110          | 80            | 150          | 110           | 682            | 713       | 558       | 632            |
| 9/16-18                          | 80           | 60            | 120          | 90            | 170          | 130           | 752            | 787       | 615       | 697            |
| 5/8-11                           | 100          | 75            | 150          | 110           | 210          | 160           | 1110           | 1160      | 907       | 1030           |
| 5/8-18                           | 110          | 85            | 170          | 130           | 240          | 180           | 1244           | 1301      | 1016      | 1154           |
| 3/4-10                           | 175          | 130           | 260          | 200           | 380          | 280           | 1530           | 1582      | 1249      | 1416           |
| 3/4-16                           | 200          | 140           | 300          | 220           | 420          | 310           | 1490           | 1558      | 1220      | 1382           |
| 7/8-9                            | 170          | 125           | 430          | 320           | 600          | 450           | 2328           | 2430      | 1905      | 2140           |
| 7/8-14                           | 180          | 140           | 470          | 350           | 670          | 500           | 2318           | 2420      | 1895      | 2130           |
| 1-8                              | 250          | 190           | 640          | 480           | 910          | 680           | 3440           | 3595      | 2815      | 3185           |
| 1-14                             | 280          | 210           | 720          | 540           | 1020         | 760           | 3110           | 3250      | 2545      | 2885           |

# HYDRAULIC FITTING TORQUE SPECIFICATIONS

| Tapered Pipe Thread Size - Assembly turns from Finger Tight (TFFT) for Tapered Threads |               | TFFT      |
|--|---------------|-----------|
| BSPT (Uncommon)  | NPTF (Common) |           |
| 1/8-28   | 1/8-27        | 2 - 3     |
| 1/4-19   | 1/4-18        | 2 - 3     |
| 3/8-19   | 3/8-18        | 2 - 3     |
| 1/2-14   | 1/2-14        | 2 - 3     |
| 3/4-14   | 3/4-14        | 2 - 3     |
| 1-11   | 1-11 1/2      | 1.5 - 2.5 |
| 1 1/4-11   | 1 1/4-11 1/2  | 1.5 - 2.5 |
| 1 1/2-11   | 1 1/2-11 1/2  | 1.5 - 2.5 |
| 2-11   | 2-11 1/2      | 1.5 - 2.5 |



| ORB - SAE J1926 Straight Thread Port Assembly Torques                             |                   |  |   |                     |   |                     |   |                     |   |                     |   |                     |   |
|---|-------------------|--|---|---------------------|---|---------------------|---|---------------------|---|---------------------|---|---------------------|---|
|  |                   | Assembly Torque (+10% -0)<br>**If fitting is being torqued into aluminum or brass, subtract 35% from standard torque value** |   |                     |   |                     |   |                     |   |                     |   |                     |   |
|   |                   | Non-Adjustable   |   |                     |   | Adjustable          |   |                     |   | Plugs               |   |                     |   |
|   |                   | ORFS   |   | JIC NPT             |   | ORFS                |   | JIC                 |   | Hollow Hex          |   | Hex Head            |   |
| Dash Size   | SAE Size (UN/UNF) | Ft. lbs. (In. lbs.)  | Into Alum. Or Brass Ft. lbs. (in. lbs.) | Ft. lbs. (In. lbs.) | Into Alum. Or Brass Ft. lbs. (in. lbs.) | Ft. lbs. (In. lbs.) | Into Alum. Or Brass Ft. lbs. (in. lbs.) | Ft. lbs. (In. lbs.) | Into Alum. Or Brass Ft. lbs. (in. lbs.) | Ft. lbs. (In. lbs.) | Into Alum. Or Brass Ft. lbs. (in. lbs.) | Ft. lbs. (In. lbs.) | Into Alum. Or Brass Ft. lbs. (in. lbs.) |
| 2   | 5/16-24           | -  | -                                       | (85)                | (55)                                    | -                   | -                                       | (60)                | (39)                                    | (30)                | (19.5)                                  | (85)                | (55)                                    |
| 3   | 3/8-24            | -  | -                                       | (155)               | (101)                                   | -                   | -                                       | (100)               | (65)                                    | (55)                | (36)                                    | (155)               | (101)                                   |
| 4   | 7/16-20           | (310)  | (201.5)                                 | (260)               | (169)                                   | (180)               | (117)                                   | (180)               | (117)                                   | (120)               | (78)                                    | (260)               | (169)                                   |
| 5   | 1/2-20            | (360)  | (234)                                   | (280)               | (182)                                   | (360)               | (234)                                   | (250)               | (162.5)                                 | (170)               | (110.5)                                 | (280)               | (182)                                   |
| 6   | 9/16-18           | (420)  | (283)                                   | (350)               | (227.5)                                 | (420)               | (273)                                   | (350)               | (227.5)                                 | (410)               | (266.5)                                 | (350)               | (175)                                   |
| 8   | 3/4-16            | 60   | 39                                      | (620)               | (403)                                   | 60                  | 39                                      | (620)               | (217)                                   | 60                  | 39                                      | (620)               | (403)                                   |
| 10  | 7/8-14            | 100  | 65                                      | 85                  | 55                                      | 100                 | 65                                      | 85                  | 55.25                                   | 100                 | 65                                      | 85                  | 55                                      |
| 12  | 1 1/16-12         | 135  | 88                                      | 135                 | 88                                      | 135                 | 88                                      | 135                 | 88                                      | 135                 | 88                                      | 135                 | 88                                      |
| 14  | 1 3/16-12         | 175  | 114                                     | 175                 | 114                                     | 175                 | 114                                     | 175                 | 114                                     | 175                 | 114                                     | 175                 | 114                                     |
| 16  | 1 5/16-12         | 200  | 130                                     | 200                 | 130                                     | 200                 | 130                                     | 200                 | 130                                     | 200                 | 130                                     | 200                 | 130                                     |
| 20  | 1 5/8-12          | 250  | 162.5                                   | 250                 | 162.5                                   | 250                 | 162.5                                   | 250                 | 162.5                                   | 250                 | 162.5                                   | 250                 | 162.5                                   |
| 24  | 1 7/8-12          | 305  | 198                                     | 305                 | 198                                     | 305                 | 198                                     | 305                 | 198                                     | 305                 | 198                                     | 305                 | 198                                     |
| 32  | 2 1/2-12          | 375  | 244                                     | 375                 | 244                                     | 375                 | 244                                     | 375                 | 244                                     | 375                 | 244                                     | 375                 | 244                                     |

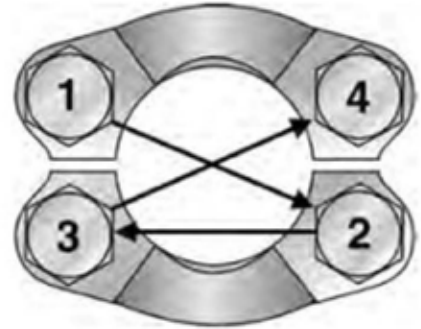


# HYDRAULIC FITTING TORQUE SPECIFICATIONS

## Code 61 and 62 Flange Recommended Bolt Torques

### Steps to Properly Assemble the Flange Port Clamping Bolts:

1. Inspect components to ensure that male and female port threads and sealing surfaces are free of burrs, nicks and scratches, or any foreign material.
2. Lubricate the O-ring
3. Position flange and clamp halves
4. Place lock washers on bolts and insert through clamp halves
5. Hand tighten bolts.
6. Torque bolts in diagonal sequence in small increments to the appropriate torque level \*\*refer to the table below.



*Flange Bolt Tightening Sequence*

| Code 61   |             |                      |                 |                        |            | Code 62   |             |                      |                 |                        |            |
|-----------|-------------|----------------------|-----------------|------------------------|------------|-----------|-------------|----------------------|-----------------|------------------------|------------|
| Dash Size | Flange Size | Inch Bolt (SAE J518) | Torque ft. lbs. | Metric Bolt (ISO 6162) | Torque N-m | Dash Size | Flange Size | Inch Bolt (SAE J518) | Torque ft. lbs. | Metric Bolt (ISO 6162) | Torque N-m |
| 8         | 1/2         | 5/16-18              | 17 ± 2          | M8                     | 24         | 8         | 1/2         | 5/16-18              | 17 ± 2          | M8                     | 24         |
| 12        | 3/4         | 3/8-16               | 31              | M10                    | 50         | 12        | 3/4         | 3/8-16               | 31              | M10                    | 50         |
| 16        | 1           | 3/8-16               | 31 ± 4.5        | M10                    | 50         | 16        | 1           | 7/16-14              | 52              | M12                    | 92         |
| 20        | 1-1/4       | 7/16-14              | 52              | M12                    | 92         | 20        | 1-1/4       | 1/2-13               | 77              | M14                    | 130        |
| 24        | 1-1/2       | 1/2-13               | 77              | M12                    | 92         | 24        | 1-1/2       | 5/8-11               | 155             | M16                    | 210        |
| 32        | 2           | 1/2-13               | 77              | M12                    | 92         | 32        | 2           | 3/4-10               | 265             | M20                    | 400        |
| 40        | 2-1/2       | 1/2-13               | 77              | M12                    | 92         |           |             |                      |                 |                        |            |
| 48        | 3           | 5/8-11               | 155             | M16                    | 210        |           |             |                      |                 |                        |            |
| 56        | 3-1/2       | 5/8-11               | 155             | M16                    | 210        |           |             |                      |                 |                        |            |
| 64        | 4           | 5/8-11               | 155             | M16                    | 210        |           |             |                      |                 |                        |            |
| 80        | 5           | 5/8-11               | 155             | M16                    | 210        |           |             |                      |                 |                        |            |

| <b>37° Flare (JIC) Assembly Torques and FFWR</b> |             |                          |         |                      |                                    |
|--|-------------|--------------------------|---------|----------------------|------------------------------------|
| SAE Dash Size                                    | Thread Size | Assembly Torque (+10%-0) |         | Tube Connection FFWR | Swivel Nut or Hose Connection FFWR |
|  |             | In. lb.                  | ft. lb. |                      |                                    |
| -2   | 5/16-24     | 35                       | 3       | -                    | -                                  |
| -3   | 3/8-24      | 65                       | 5       | -                    | -                                  |
| -4   | 7/16-20     | 155                      | 13      | 2 1/2                | 2                                  |
| -5   | 1/2-20      | 165                      | 14      | 2                    | 2                                  |
| -6   | 9/16-18     | 265                      | 22      | 2                    | 1 1/2                              |
| -8   | 3/4-16      | 505                      | 42      | 2                    | 1 1/2                              |
| -10  | 7/8-14      | 720                      | 60      | 1 1/2                | 1 1/2                              |
| -12  | 1 1/16-12   | 1000                     | 84      | 1 1/2                | 1 1/4                              |
| -14  | 1 3/16-12   | 1200                     | 100     | 1 1/2                | 1 1/4                              |
| -16  | 1 5/16-12   | 1415                     | 118     | 1 1/2                | 1                                  |
| -20  | 1 5/8-12    | 2015                     | 168     | 1                    | 1                                  |
| -24  | 1 7/8-12    | 2340                     | 195     | 1                    | 1                                  |
| -32  | 2 1/2-12    | 3180                     | 265     | 1                    | 1                                  |
| -40  | 3-12        | -                        | -       | 1                    | 1                                  |

## **SET-UP & ASSEMBLY**

**Note: Determine right and left side of the *Big Dog* by viewing it from the rear. If instructions or parts lists call for hardened bolts, refer to Cap Screw Torque Values page to identify.**

1. Check the ***Big Dog*** for proper assembly and adjustment.
2. Make sure that all bolts are tightened.
3. Check wheel bolts upon delivery, and periodically thereafter. Wheel bolts should be tightened to 450 ft./lbs. of torque. This torque is needed for the axle to carry its rated capacity.
3. Check the tires for proper air pressure. Refer to the manufacturer's recommended PSI rating.
4. Lubricate the ***Big Dog*** completely. (See Lubrication Chapter in this manual).
5. Check all taillights and clearance lights that they are functioning properly.

# PREPARING FOR OPERATION

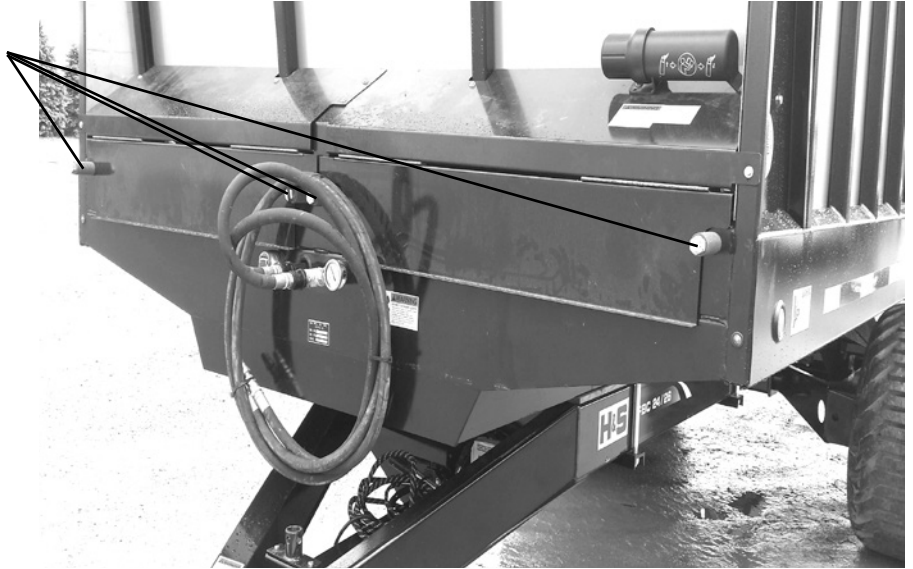
## PREPARING THE *BIG DOG*

Properly lubricate the **BIG DOG**, check oil level in the final drives, and fill to level if necessary before operating. Refer to the Lubrication Chapter of this manual for locations.

Four main apron adjustment bolts with tension springs are located on the idler shaft at the front of the box.

Check to make sure that the main apron chains are adjusted evenly before you use the **BIG DOG**. Check again after the first few loads. The main aprons should be at proper tension at all times.

Refer to the Adjustment Chapter in this manual for proper tension and adjustment.



Run the unloading mechanism for several minutes. This will serve as a break-in and as a check that all parts are assembled and lubricated properly. Successful operation will be achieved by periodic adjustments and experience of the operator.

After you have run your **BIG DOG** for a few loads, check the main apron chains again for proper adjustment, as paint may initially come off the apron chains and chains may loosen.

## TRANSPORTING

When transporting on the highway or roads, regularly clean the lights and reflective tape on the sides and at the rear of the **BIG DOG**.



**NOTE: Obey all state and local laws concerning the use of the *BIG DOG* on public roads.**

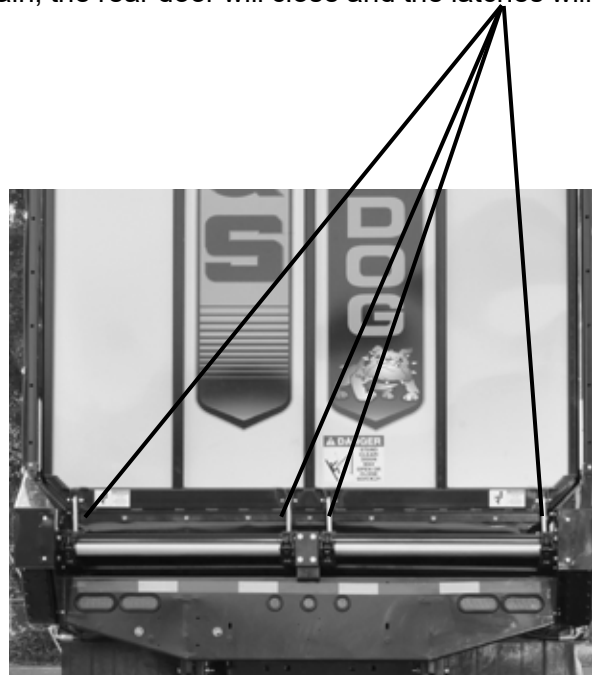
# OPERATION

## UNLOADING

1. Park the **Big Dog** on level ground whenever possible during unloading.
2. With the operator in the truck or tractor seat, and all others well clear of the **Big Dog**, engage the hydraulics.
3. Engage the switch for the gate delay.
4. During unloading, move the truck forward to allow the material to fall away from the rear of box.
5. When the **Big Dog** is empty, disengage the hydraulics.
6. Disengage the switch for the gate delay, or engage the switch for the barn doors to close them.
7. Check the rear door to make sure it is securely latched.

## TOP PIVOT DOOR/REAR DOOR LATCHES/GATE DELAY

Located at the bottom left, center, and right-hand side of the rear door are the door latches. The latches lock into the apron chain to hold the door closed when loading. When the hydraulics for the main apron chain are activated, the latches automatically flip to open with the movement of the apron chains. The rear door is held open by two hydraulic cylinders. This system allows for a total cleanout of the box. Upon completion of unloading & switching off the apron chain, the rear door will close and the latches will automatically lock into the apron chain.



# OPERATION

## BARN DOORS - OPTIONAL

Barn doors are optional on the **Big Dog**. Latches for the doors are located at the bottom center of the rear doors.

These latches lock in the main apron chain of the rear drive shaft to hold doors closed when loading. When the hydraulics are activated, the main aprons turn, and the latches flip to open, allowing the rear door to swing free. Upon completion of unloading, activate the switch for the rear door air cylinders to close.



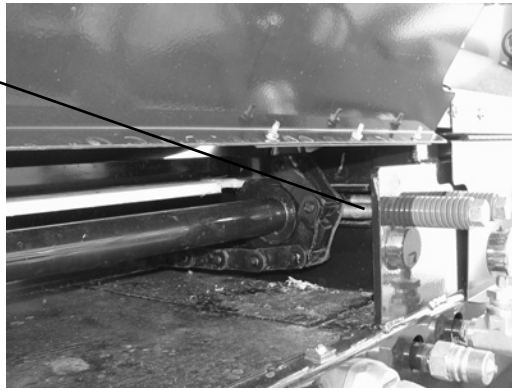
# ADJUSTMENTS

## MAIN APRON ADJUSTMENT

The four main apron adjustment bolts are spring loaded to help maintain proper tension on the apron chains.



Tighten the full threaded bolts to adjust aprons. Aprons are properly adjusted when two cross slats, or about three feet of chain lift off the chain return slides from the front of the box. Maintain this when operating the box.



# OPTIONAL EQUIPMENT

## TARPS

There are two tarp systems available for the **Big Dog**. The side-to-side system will provide a nearly watertight system ideal for grain hauling. The end-to-end arm system is ideal for forage and is a fast and easy system to use. See your dealer for these systems.

## GRAIN HOPPER

A optional rear gravity unload hopper for grains is available for the **Big Dog**. After the hydraulics have been engaged to run the main apron chain, the operator controls the main apron speed by the variable speed control from the left rear side of the box. The flow of material can also be controlled by the gate control of the hopper.



## OTHER OPTIONS

- \* **Screen Filler Kit** - Closes off top screens for hauling grain
- \* **Electric Actuator** - for Front Flip-Down instead of manual
- \* **Roof Hood** - Helps keep forage from blowing out of the opposing side of the box
- \* **Chassis & Truck Mount Scale System**

# LUBRICATION GUIDE

Become familiar with all lubrication points and establish a systematic routine to ensure complete and quick lubrication of the machine.

## GENERAL INFORMATION

**IMPORTANT:** *Catch and dispose of fluid per local waste disposal regulations whenever service is performed on hydraulic components, valves, cylinders, hoses, etc.*

## Grease Zerks

Grease daily during normal use and **before and after storage and after power washing.** Use a good grade of high-quality grease.

Listed are the location and quantity of zerks.

Barn  
Doors  
1  
zerk  
on  
each  
hinge  
point  
of  
each  
door





# DECAL LOCATION

Your H&S **Big Dog** was manufactured with operator safety in mind. Located on the TOP DOG are various decals to aid in operation and warn of caution areas. Pay close attention to all decals.



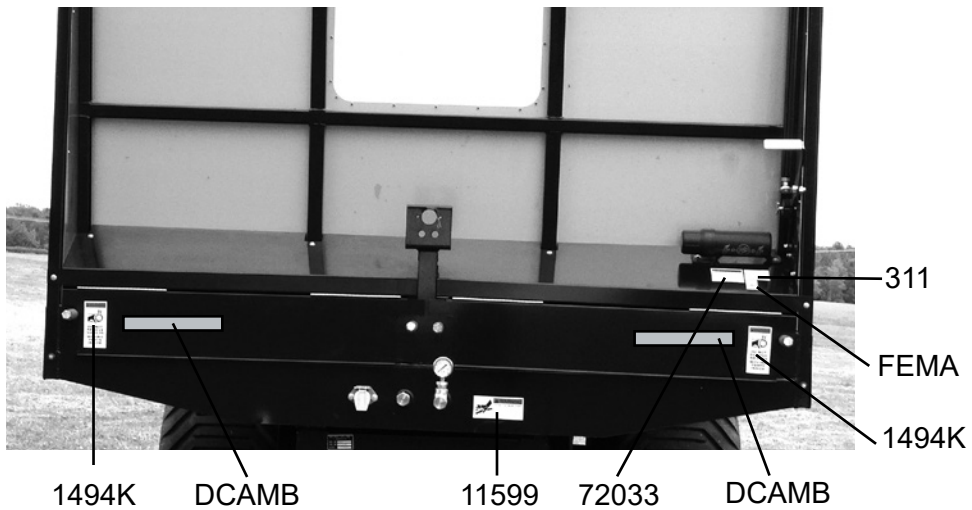
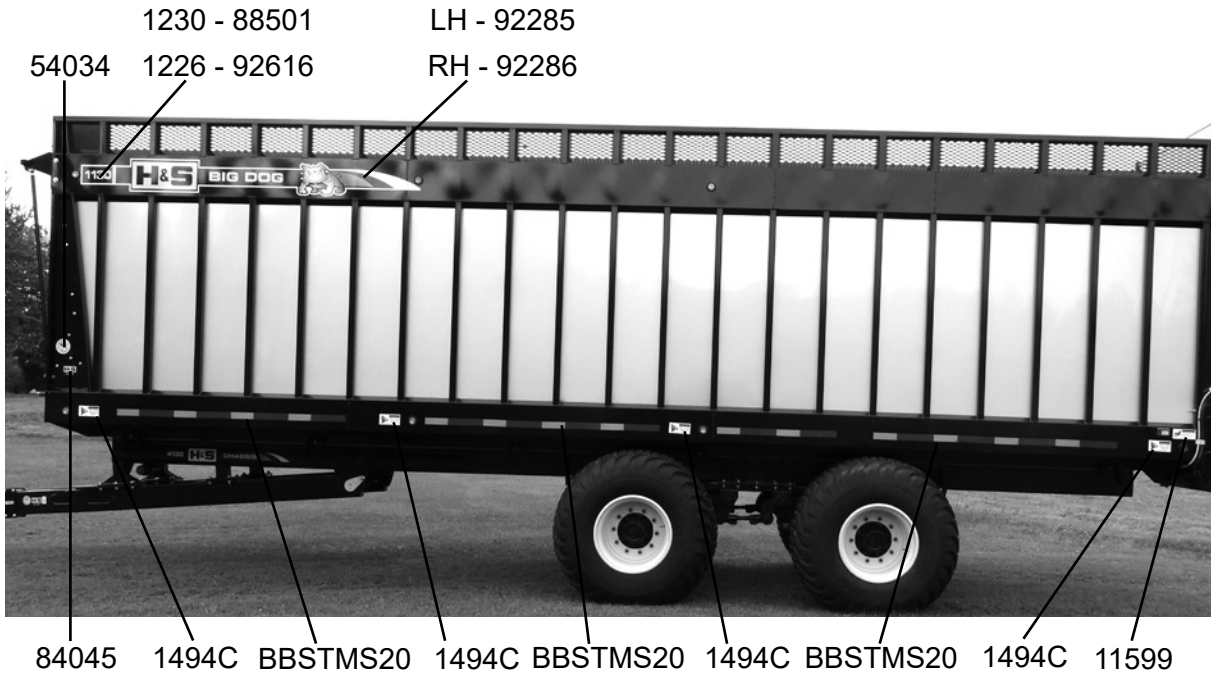
**DO NOT REMOVE ANY OF THESE DECALS. IF DECALS ARE LOST, DAMAGED, OR IF THE TOP DOG IS REPAINTED, REPLACE DECALS.  
REMEMBER: DECALS ARE FOR YOUR PROTECTION AND INFORMATION.**

Listed below are the decals on your **Big Dog** Forage Box.

| <u>Part #</u> | <u>Quantity</u> | <u>Description</u>  |
|---------------|-----------------|---|
| 311           | 1               | Patent Decal  |
| 1494C         | 10              | Warning - Stay Clear Moving Parts Under This Area                       |
| 1494K         | 4               | Warning - Do Not Remove Shields   |
| 1906E         | 1               | Warning-Stay Clear Moving Parts Behind This Area<br>(Grain Hopper ONLY) |
| 3304A         | 2               | Warning - Stay Clear of Door Hinge Area (Barn Doors Only)               |
| 3304B         | 2               | Danger - Stay Clear of Rear Door (Top Pivot Door Only)                  |
| 8035          | 4               | 2" x 12" White DOT Strips   |
| 8039          | 1               | Webb Wheel Torque Specs Decal   |
| 8040          | 1               | Hutch Torque Requirement Decal  |
| 92285         | 1               | <b>Big Dog</b> Decal - Left   |
| 92286         | 1               | <b>Big Dog</b> Decal - Right  |
| 92287         | 1               | <b>Big Dog</b> Decal - Front  |
| 92291         | 1               | <b>Big Dog</b> Decal - Back   |
| 90626         | 2               | <b>H&amp;S</b> Decal - Front  |
| 11599         | 3               | Warning - Do not go near leaks  |
| 32323         | 2               | Lube/Oil Decal  |
| 54034         | 1               | U.S.A.  |
| 56105         | 2               | Attention Change Oil  |
| 65255         | 1               | DOT Conspicuity Tape 2" X 90" (Rear Frame)                              |
| 65256         | 1               | DOT Conspicuity Tape 2" X 7" (Grain Hopper ONLY)                        |
| 65257         | 1               | DOT Conspicuity Tape 2" X 25" (Grain Hopper ONLY)                       |
| 65258         | 1               | DOT Conspicuity Tape 2" X 35" (Grain Hopper ONLY)                       |
| 72203         | 1               | Warning - Help Avoid Injury   |
| 093020        | 4 or 8          | Grease Zerk Decal (4 w/Top Pivot Door/8 w/Barn Doors)                   |
| BSSTMS19      | 1               | DOT Conspicuity Tape 2" X 97" (Bumper)                                  |
| BSSTMS20      | 8               | DOT Conspicuity Tape 2" X 72" (Side Frame)                              |
| DCAMB         | 2               | Amber Reflector   |

# DECAL LOCATION

DECALS ARE THE SAME ON LEFT & RIGHT SIDES OF THE BOX EXCEPT FOR THE BRANDING DECALS



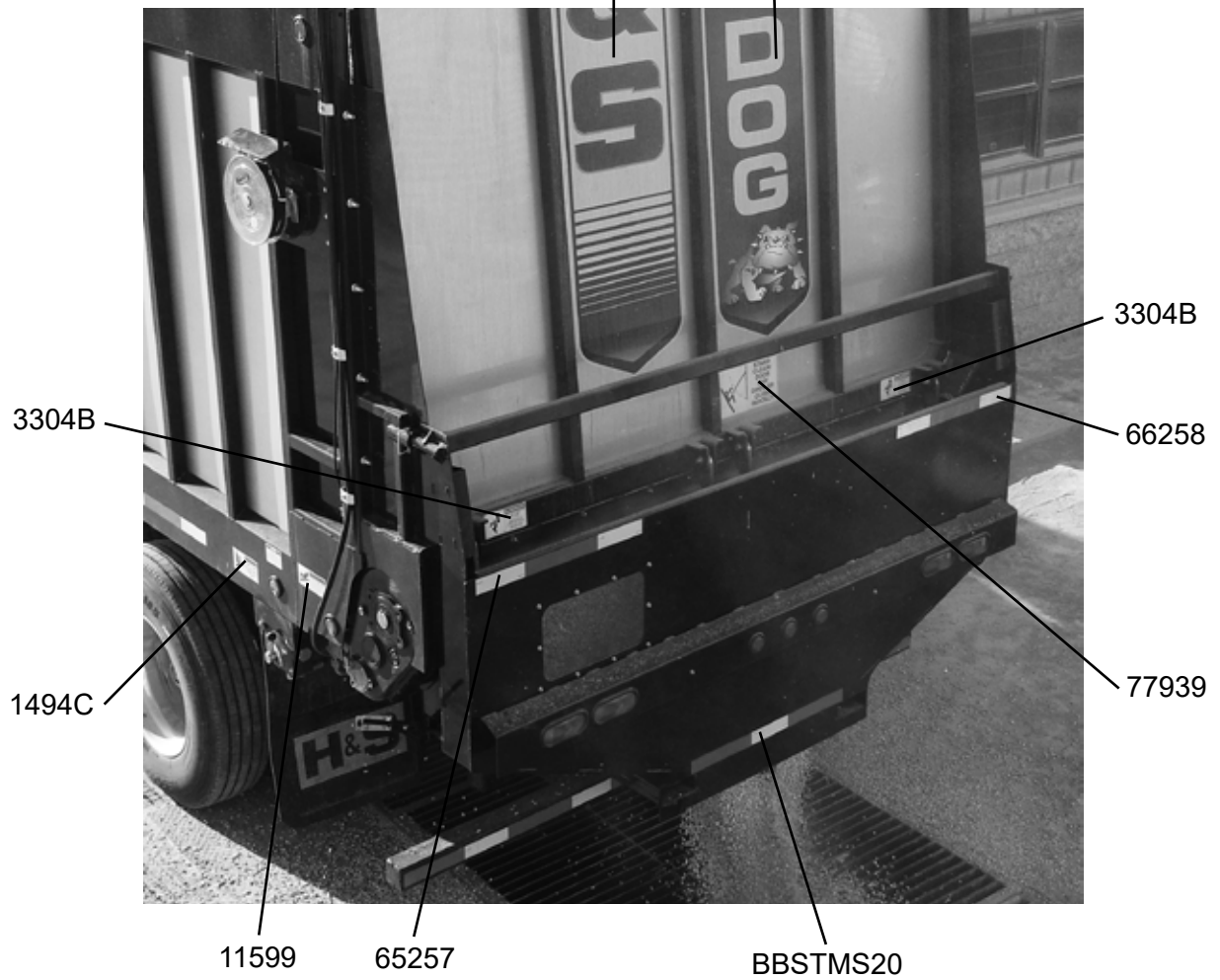
# DECAL LOCATION

8035

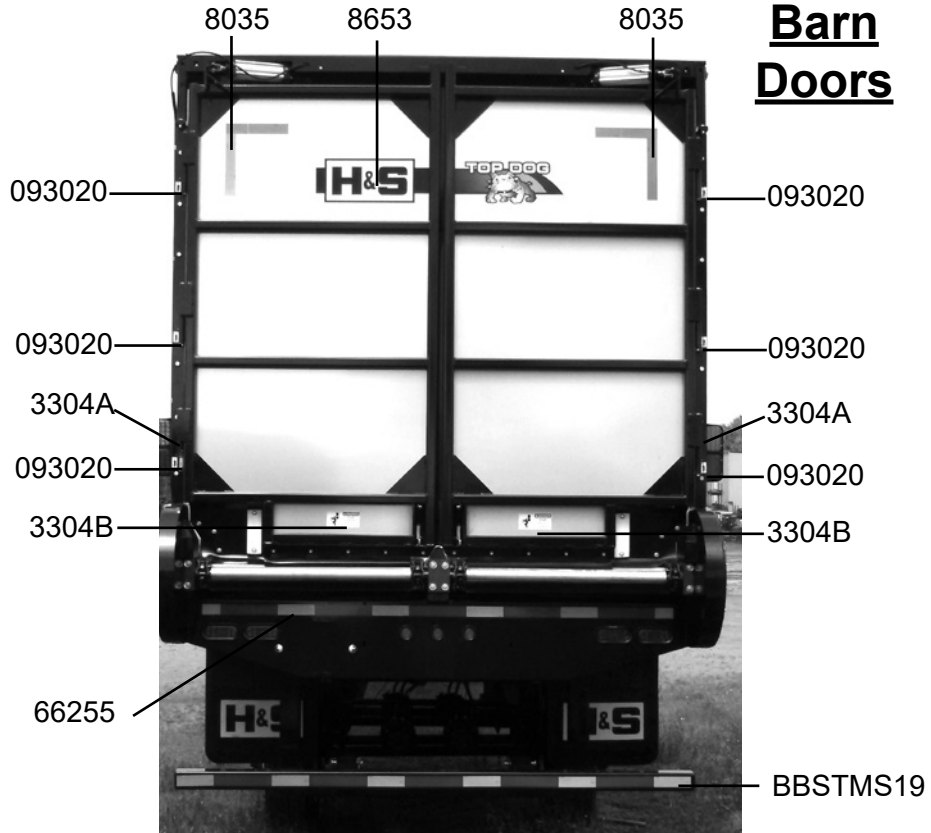


90626

92291



# DECAL LOCATION



# TROUBLESHOOTING



**WARNING:**  
**MAKE SURE THE TRUCK/TRACTOR IS SHUT OFF AND THE TRUCK/TRAILER CANNOT MOVE BEFORE SERVICING. MAINTENANCE AND REPAIR SERVICE WORK MUST BE PERFORMED BY A QUALIFIED SERVICE PERSON ONLY.**

| TROUBLE                       | CAUSE   | REMEDY   |
|-------------------------------|---|--|
| Load will not move            | Truck PTO not engaged   | Engage truck PTO   |
|                               | Tractor Hydraulics not engaged  | Engage tractor hydraulics  |
|                               | Hydraulic couplers between truck and <b>Big Dog</b> are not connected or faulty | Check hydraulic couplers to make sure they are connected. Replace if faulty couplers are found |
|                               | Insufficient hydraulic flow and or pressure                                     | Check flow and pressure in truck. Should have minimum 35 GPM and 3000 PSI                      |
|                               | Drive chain off or broken   | Replace or repair drive chain  |
|                               | Drive motor faulty or worn out  | Repair or replace faulty drive motor   |
|                               | Key sheared on motor drive  | Replace sheared key on motor   |
|                               | Drive sprockets broken  | Replace sprockets  |
| Top hinge door will not latch | Feed left in door opening   | Clean feed out of door opening   |
|                               | Door bent or sprung   | Straighten or replace rear door  |
|                               | Top hinge pins binding  | Lubricate top hinge pins   |
| Barn doors will not close     | Loss of power or blown fuse on door control box                                 | Check for power or replace or latch blown fuse on control box                                  |
|                               | Low truck air pressure  | Make sure truck has at least 110 PSI   |
|                               | Feed left in door opening   | Clean feed out of door opening   |
|                               | Door bent or sprung   | Straighten or replace rear door  |
|                               | Door hinge pins binding   | Lubricate door hinge pins  |





# **H&S MFG. CO.**

products approved

for the

## **FEMA SEAL OF QUALITY**



Manufactured By:

**H&S MANUFACTURING CO., INC.**

2608 S. HUME AVE. MARSHFIELD, WI 54449

(715) 387-3414 | [hsmfgco.com](http://hsmfgco.com)

