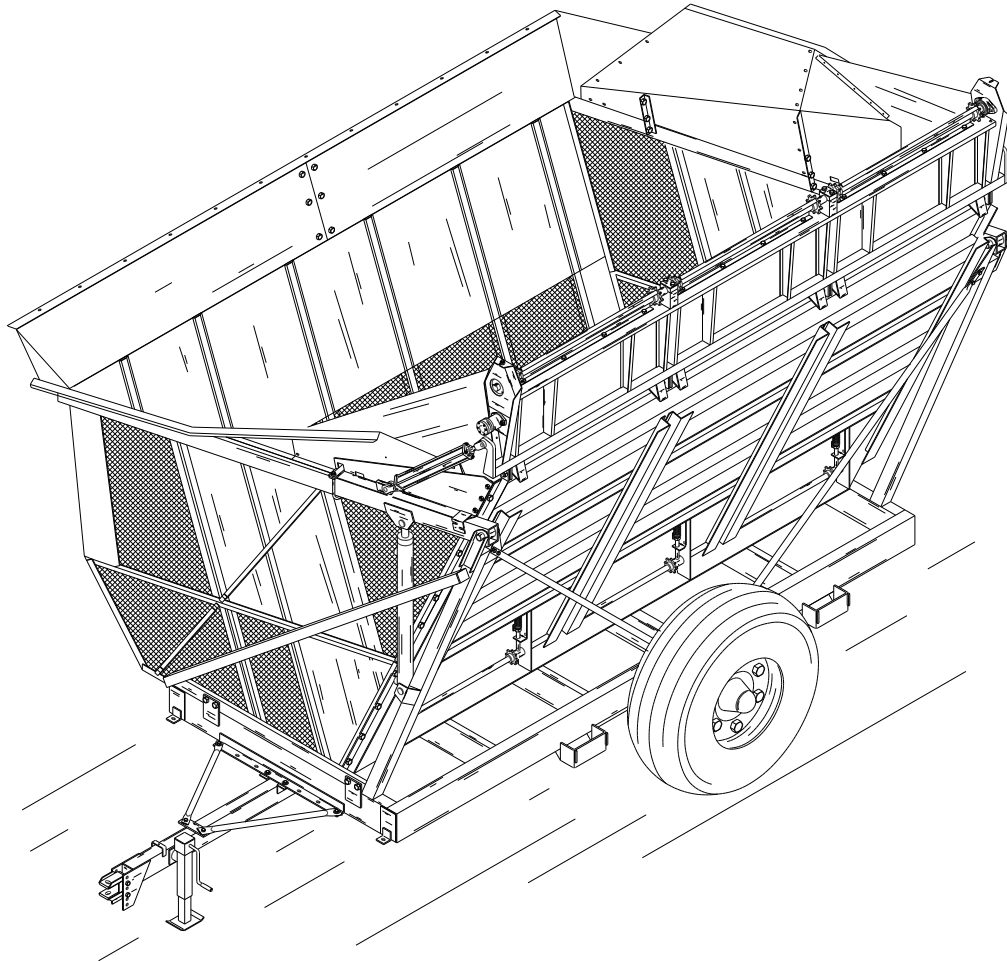




Super
BOLL BUGGY
OWNER'S MANUAL



SAFETY PRECAUTIONS



The following information is on the decal attached to your machine. Read and follow these instructions for your safety and the safety of anyone around the machine.



CAUTION



1. ALWAYS DISMOUNT FROM THE SIDE OF THE TRACTOR, NEVER AT THE REAR.
1. DO NOT ALLOW PEOPLE TO RIDE ON THIS MACHINE.
3. NEVER CARRY ANYONE ON THE TRACTOR.
4. BE SURE EVERYONE IS CLEAR OF THE MACHINE BEFORE STARTING ENGINE OR OPERATION.
5. USE S.M.V. EMBLEM WHEN OPERATING ON HIGHWAYS, EXCEPT WHEN PROHIBITED BY LAW.
6. WHEN TRANSPORTING UNIT ON ROADS OR HIGHWAYS ALWAYS WATCH FOR WIDTH AND OVERHEAD OBSTRUCTIONS.
7. NEVER DUMP WHEN STRONG WIND BLOWS FROM RIGHT.
8. ALWAYS DUMP WITH MACHINE LEVEL OR RIGHT SIDE LOWER.
9. WHEN DUMPING BASKET, ALWAYS WATCH FOR OVERHEAD OBSTRUCTIONS.
10. NEVER LUBRICATE OR MAKE ADJUSTMENTS WHEN ENGINE IS RUNNING OR BASKET IS IN RAISED POSITION.
11. KNOW YOUR MACHINE, STUDY OPERATOR'S MANUAL. ASK YOUR DEALER IF YOU HAVE ANY QUESTIONS ON THE OPERATION OF THIS MACHINE.
12. USE CAUTION WHEN TURNING OR CROSSING ROUGH TERRAIN.
13. USE CAUTION WHEN OPERATING AROUND ELECTRIC POWER LINES.

WARNING

**DO NOT DUMP AROUND
ELECTRICAL POWER LINES
ELECTROCUTION CAN RESULT**

May we suggest that you take a few additional minutes to read over more than once the areas of this manual where **SAFETY SYMBOLS** and **CAUTION** notes appear. These are areas where the operator should use particular care. Play it "SAFE." **KNOW THE DANGER AREAS AND AVOID THEM.**

Look for this symbol to point out important safety precautions. It means---



**ATTENTION!
BECOME ALERT!
YOUR SAFETY
IS INVOLVED.**

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Identification

Your Boll Buggy is identified by a Serial Number and Model Number. Record these numbers in the spaces provided in this manual and refer to them when ordering parts or requesting service.

Serial Number	Model Number
---------------	--------------

Warranty

WARRANTY: In addition to the implied warranties of fitness and of merchantability, CrustBuster/Speed King warrants new products sold by it to be free from defects in workmanship and material for a period of 12 months, from the date of delivery to the first user customer. Warranty on purchased parts (cylinder and motors) will be the same as that offered by the appropriate manufacturer of these parts.

EXCLUSIONS: No warranty of any kind is made by CrustBuster/Speed King with regard to new products which have been subject to operation in excess of recommended capacities, misuse, abuse, negligence, or accident, or have been altered or repaired in any manner not authorized by CrustBuster/Speed King. CrustBuster/Speed King is constantly striving to improve its products. Changes in design and improvement will be made whenever CrustBuster/Speed King believes the efficiency of its products will be improved thereby, but without incurring any obligation to incorporate such improvements in any products which have been shipped or are in service. No obligation exists for compensation of unauthorized repairs or modifications without prior approval. And in no event will CrustBuster/Speed King be liable for consequential damages, such as but not limited to: downtime, delays, etc.

WARRANTY REGISTRATION: This warranty is not valid unless registered with CrustBuster/Speed King within 10 days from the date of purchase. It is the sole responsibility of the selling retail dealer to fill out the registration forms and see that they are properly filed with CrustBuster/Speed King.

WARRANTY PROCEDURE: Should any part fail to conform with this warranty, CrustBuster/Speed King will repair or replace the part or parts which do not conform. If a part is defective, take it to your authorized CrustBuster Farm Equipment Dealer immediately, along with your warranty registration, and complete the proper forms requesting a warranty adjustment. Our representative will pick up the part to be returned to the factory for examination. If the customer (first user) requests that a new part be substituted for the old part, a new part will be charged to the dealer who will in turn charge the customer. If the part is found by us to be defective, a credit for the part will be given to the dealer to be passed on to the customer. If the dealer or customer wishes to repair the part, this will be done only if authorized by CrustBuster/Speed King. This warranty procedure is in addition to all remedies authorized by law.

CRUSTBUSTER/SPEED KING, INC.
Box 1438
Dodge City, KS 67801

Dealer Check List

Pre-Delivery Check List

After the Boll Buggy has been completely assembled and lubricated, inspect it thoroughly to be certain it is in good running order before delivering it to the customer. The following check list is a reminder of points to inspect. Check off each item as it is found satisfactory, or after proper adjustment is made.

Boll Buggy Inspection

- _____ Check all bolts and nuts to be sure they are on tight.
- _____ Check hydraulic system to make sure it has been purged to remove air as instructed in owner's manual.
- _____ Hitch adjusted to level Boll Buggy as instructed in owner's manual.
- _____ Check and, if necessary, lubricate all lubrication points.
- _____ Check to see if the Safety Decal is in place. (Refer to inside cover for decal information.)
- _____ Check wheel hubs for bearing preload and remove end play if necessary.

Boll Buggy Functional Test

- _____ Attach Boll Buggy to tractor drawbar with $\frac{7}{8}$ " diameter hitch pin or larger. Raise basket gradually, paying particular attention to the last 8 to 10 inches of cylinder stroke not to unbalance the unit with a sudden surge of hydraulic pressure. **Models equipped with regulator, fold-out door and/or chain dump side must have a minimum of 1,000 pounds of tractor weights added to weight brackets opposite dump out side.**

NOTE: Observe safety precautions on the decal and in the manual while dumping basket. WATCH FOR OVERHEAD OBSTRUCTION.

Delivery Check List

- _____ Explain the adjustments for implement operation.
- _____ Review safety precautions with the owner and operator as stated on the safety decal and in the manual.
- _____ Give the customer the owner's manual and explain the importance of reading this manual.

IMPORTANT: The Warranty Registration form must be completed, signed by both dealer and customer and returned to CrustBuster/Speed King, Inc., Box 1438, Dodge City, KS 67801, to validate the warranty. If warranty registration is not completed and returned, the product concerned will not be covered by warranty policy.

Model 601

Super Boll Buggy Specifications

Tandem Axle	Single Axle	
029348	029249	Model 601 Basket
029355	029256	Model 601 Basket w/Fold Out Door
029363	029264	Model 601 Basket w/Packer Panel
029371	029272	Model 601 Basket w/Packer Panel w/Fold Out Door
029389	029280	Model 601 Basket w/Regulator
029397	029298	Model 601 Basket w/Regulator w/Fold Out Door
029405	029306	Model 601 Basket w/Packer & Regulator
029413	029314	Model 601 Basket w/Packer & Regulator w/Fold Out Door
029421	029322	Model 601 Basket w/Chain Dump
029439	029330	Model 601 Basket w/Packer & Chain Dump

Capacity

Volume 1840 Cu. Ft.

Height

Ground to basket pivot point	12'-0" and 12'-6" (Single Axle-120")
Ground to top panel (dump in side)	11'-0" and 11'-6" (Single Axle-120")

Ground to bottom of main frame 22½" and 28½" (Single Axle-120")
Ground to top panel (dump out side) 14'-0" and 14'-6" (Single Axle-120")

Basket

Length at top	16'-6"
Length at top with extensions	20'-0"
Width at top	14'-6"
Width at bottom	65 ⁷ / ₈ "

Length:

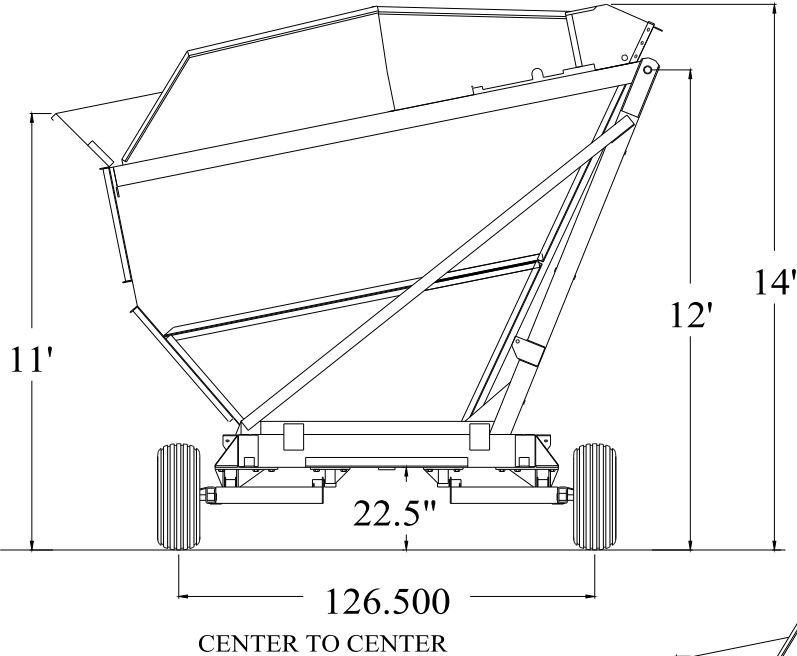
Overall Length	25'
Empty Weight (less tires)	8115#
Tongue Jack Stand	Standard
Walking Beam Axles	126 1/2" (Center to Center)
Single Axles	120" or 140" (Center to Center)
Hydraulic Cylinders:	
Basket Lift	4" diameter x 60" strokes
	2 1/2" Rod diameter
Packer Panel	2 1/2" diameter x 32" strokes
	1 1/2" Rod diameter
Regulator Hydraulic Motor	22.5 Cu. In. Displacement
	15 GPM Flo-1200 PSI Continuous Operation

Tires

Walking Beam Axle	12.5L x 15	12 Ply
Single Axle	18.4 - 26	12 Ply

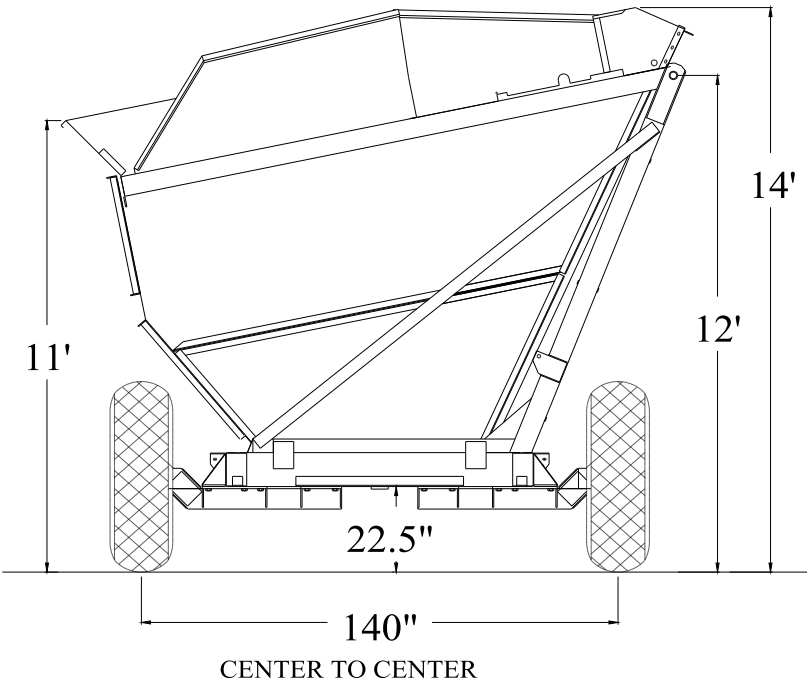
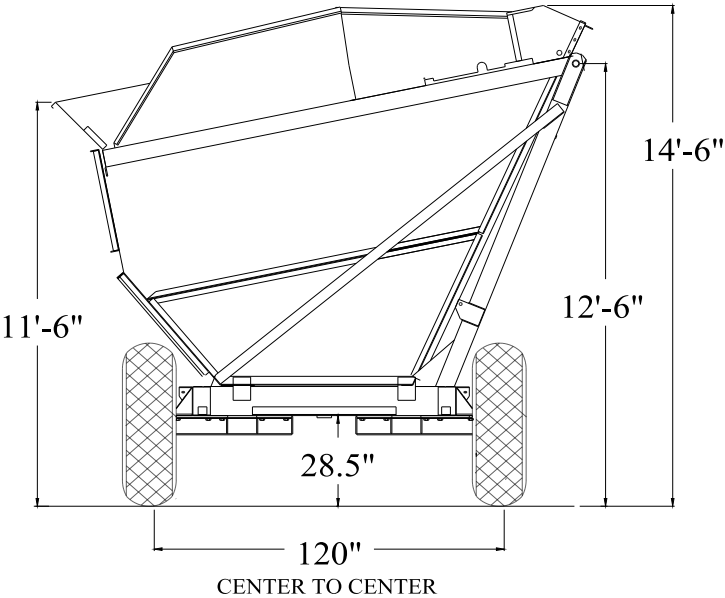
NOTE: Specifications are subject to change without prior notice.

Boll Buggy Dimensions



Walking Beam Axles

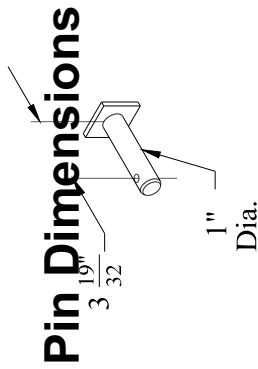
Single Axles



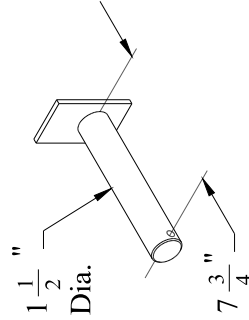
NOTE:
The straight axle is also available in 140" width.

Refer to these pin drawings during the assembly procedures to identify the correct pin to use in each assembly operation.

TONGUE PIVOT PIN

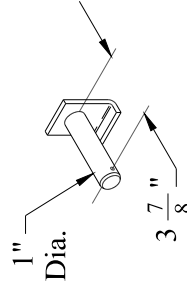


WALKING BEAM
INSIDE PIN



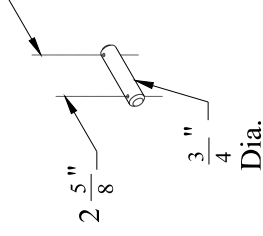
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BASKET CYLINDER
UPPER PIN



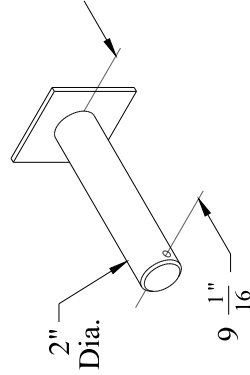
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PACKER PANEL
UPPER CYLINDER PIN



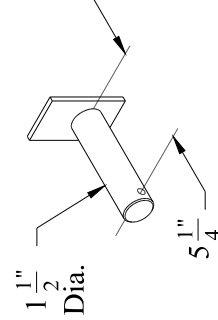
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BASKET PIVOT PIN



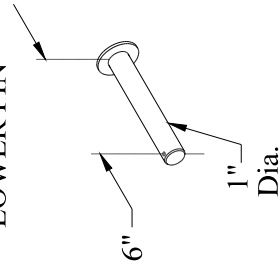
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WALKING BEAM
OUTSIDE PIN



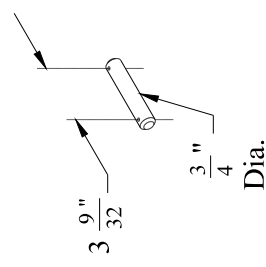
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BASKET CYLINDER
LOWER PIN



#307140

PACKER PANEL
LOWER CYLINDER PIN



Assembly Instructions

For assembly, select a level area with overhead hoist capable of lifting 15 feet or an area in which a fork or snorkel lift will have an easy access. Tools required for assembly are: impact wrench with appropriate sockets, tapered end hole alignment tool, and five gallons of hydraulic oil.

Block main frame level and approximately two feet above ground. (Two feet measured to bottom side of main frame.)



CAUTION: When blocking main frame, set blocks securely and at enough points to avoid danger of frame falling during assembly.

1. **WALKING BEAM** -Refer to Figure 1. Remove walking beam axle pivot pins from parts box (Items 1 & 2) and walking beam attaching brackets (Items 3 & 4). Install walking beam brackets to bottom of main frame using 1" x 3" bolts, nuts, and lock washers. Install walking beam axles to the walking beam brackets as shown in Figure 1.

NOTE: Always install pivot pins with extended length of pin head rotated so that it fits between the two gussets on the walking beam brackets.

- 1.1 Mount 12.5L x 15 10 ply tire and rim assembly on walking axle hubs.
2. **SINGLE AXLE** -Refer to Figure 1. Install single axle frame (Item 5 or Item 5A) to bottom of main frame using 1" x 3" bolts, nuts, and lock washers.
- 2.1 Mount 18.4-26 12 ply tire and rim assemblies on single axle hubs after basket and "A" frames have been installed so tires will not be in the way and hard to work around.

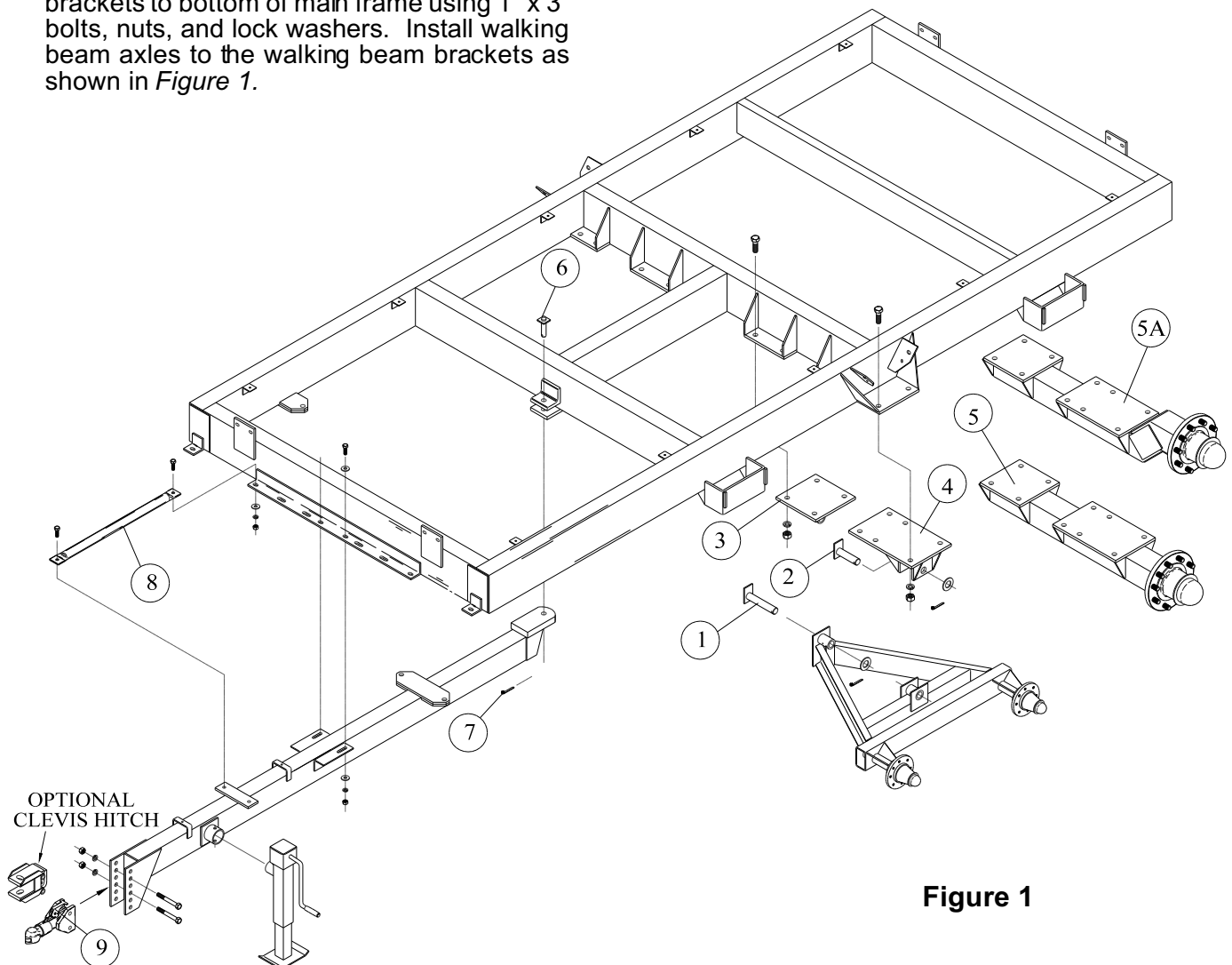


Figure 1

Assembly Instructions

3. **TONGUE** -Refer to *Figure 1*. Insert tongue swivel flat on end of tongue into clevis on center frame cross tube. Insert pin and cotter (Items 6 & 7). Install 5/8" x 1 3/4" bolts with flat washers through angle on front of frame and through slots in angle on the side of the tongue. **DO NOT TIGHTEN AT THIS TIME.** Attach diagonal pipe braces (Item 8) to flat bar on tongue and to outside angle on front of frame. Secure with 5/8" x 1 3/4" bolts, flat washers, lock washer, and hex nuts. Tighten all bolts securely at this time.
4. **HITCH** - Install hitch (Item 9 - *Figure 1*) using two (2) 3/4" x 6" bolts, hex nuts, and lock washers. Several mounting holes are provided in the tongue so the frame may be leveled when installed on the different tractor drawbar heights. The clevis hitch may be installed two different ways providing eight (8) different drawbar heights. The ball hitch mounts only one way providing four (4) different heights.
5. **SWING HITCH OPTION** -Refer to *Figure 4*. Install cylinder (Item 1) using cylinder pins provided.

NOTE: The base end of cylinder pins to the tongue, and the rod end pins to the main frame.

 - 5.1 Install the UHMW skid pad (Item 2) using two (2) attaching straps (Item 3), four (4) 1/2" x 1 1/2" carriage bolts, lock washers, and hex nuts.
 - 5.2 Install tongue rail (Item 4) and slide (Item 5) using three (3) 5/8" x 8 1/2" bolts, flat washer, lock washers, and hex nuts.
 - 5.3 Install fittings (Item 6) to cylinder and hoses (Items 7 & 8) as shown using five (5) double hose clamps (Item 9), five (5) 3/8" x 1" bolts, lock washers, and hex nuts. The clamp bracket (Item 10) attaches to the carriage bolt holding the skid pad (Item 2) in place. Attach adapters (Item 11) and couplers (Item 12) to hose ends.

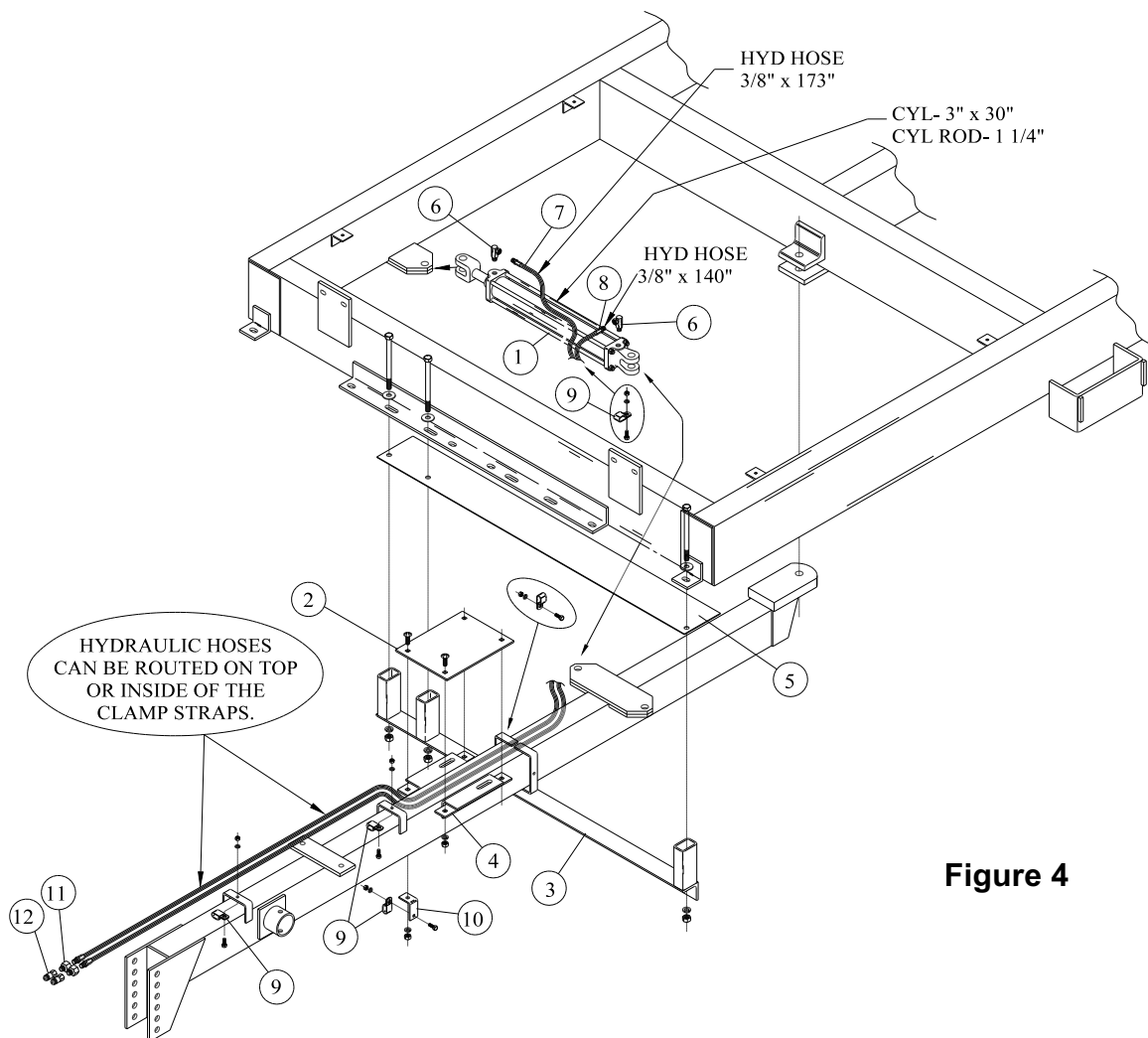
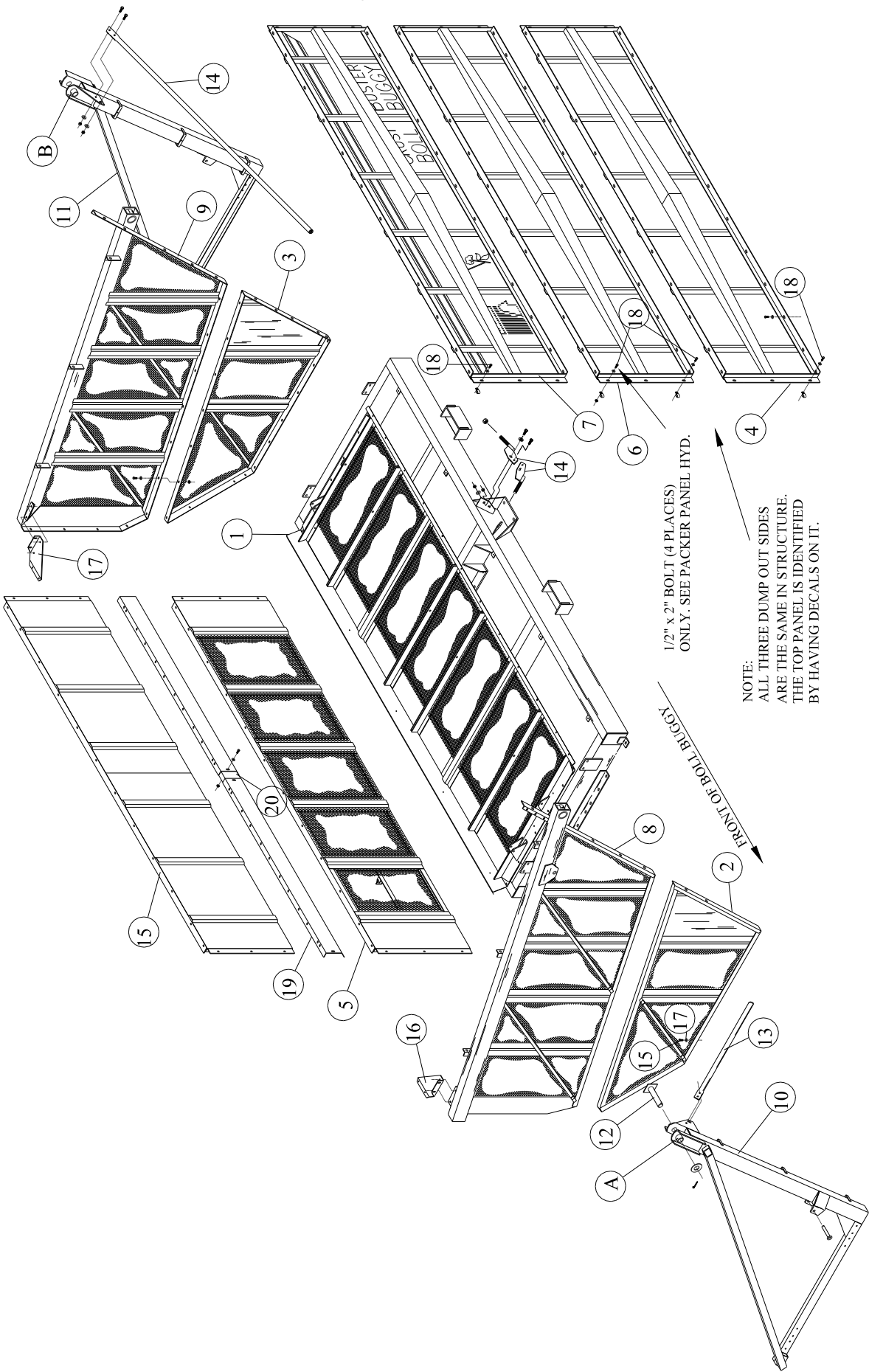


Figure 4

Assembly Instructions

Figure 5



Assembly Instructions

6. BASKET -Refer to Figures 5, 6, & 7. Place bottom panel (Item 1-Figure 5) on main frame with high side of bottom panel located on right hand side of main frame (Figures 6 & 7).

NOTE: These instructions are for a left hand dump boll buggy. The left side is determined by standing at rear of machine and looking forward in direction of travel.

- 6.1 Set lower front panel (Item 2) and lower rear panel (Item 3) on bottom panel. Install 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. DO NOT TIGHTEN AT THIS TIME!

- 6.2 (If you have purchased a Boll Buggy with a chain dump, omit STEP 6.2.) Locate one of the two (2) dump-out side panels (Item 4), and install it on the left side of the basket using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts.

NOTE: Install the panel with decal on it (Item 7) at the top. All dump-out side panels, (Items 4, 6, & 7) are symmetrical, but the center brace must be on the outside.

NOTE: Locate the four (4) 1/2" x 2" bolts (Item 18) required to secure the hydraulic hoses for the packer panel. Install as shown in Figure 5.

Figure 6

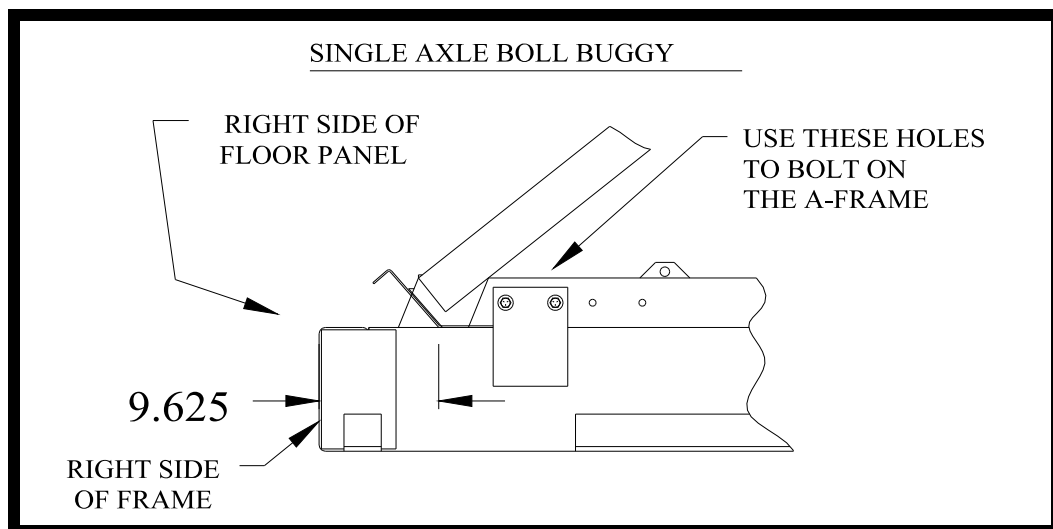
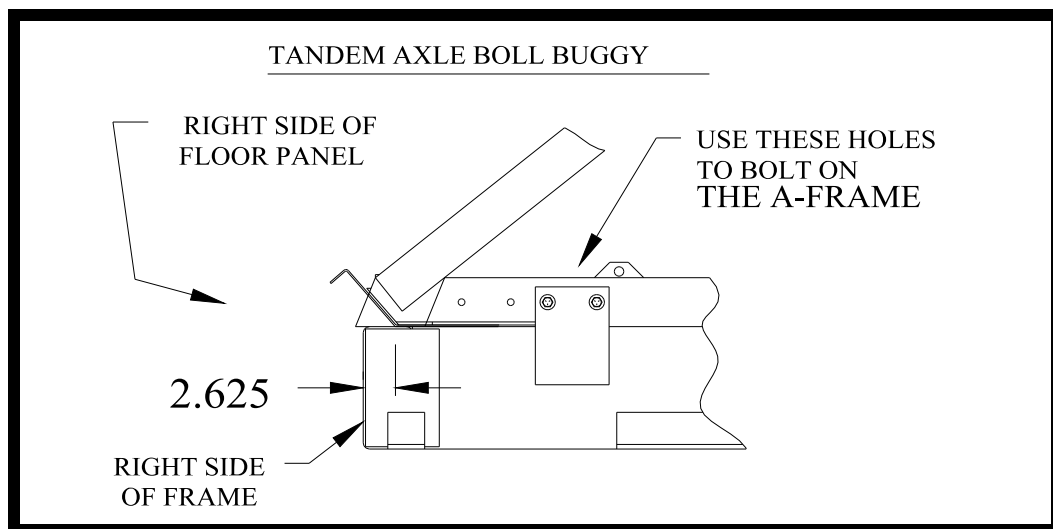


Figure 7



Assembly Instructions

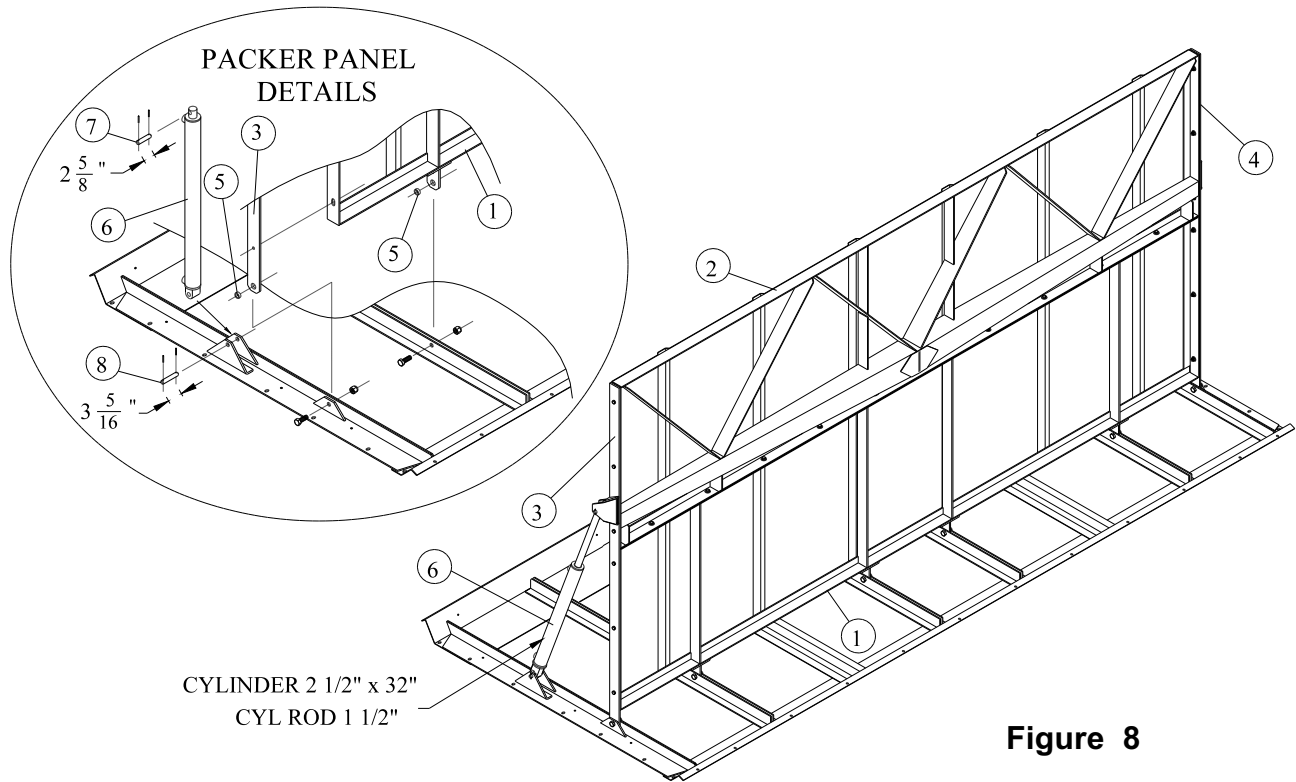


Figure 8

6.3 **PACKER PANELS** -Refer to *Figure 8*. (If you have purchased a Boll Buggy without packer panels, omit STEPS 6.3 & 6.4.) Lay packer panels (Items 1 & 2) on the ground and loosely bolt together using 1/2" x 1 1/4" bolts, flat washer, and flange lock nuts. Install the cylinder anchor side bars (Items 3 & 4) on each end of the packer panels making sure that the hydraulic cylinder mounting ears point to the side of panels opposite large cross rib. Lift complete assembly. Insert bushings (Item 5) at each panel pivot point and install packer panel to bottom of basket with cross ribs facing to left side of basket using 3/4" x 2" bolts and lock nuts.

6.4 Install the two (2) packer panel hydraulic cylinders (Item 6) as shown, securing with cylinder pins and roll pins (Items 7 & 8 - *Figure 8*).

NOTE: Make sure cylinder fittings are facing the right hand side of basket. Tighten all packer panel bolts at this time.

NOTE: If you have purchased a chain dump for your boll buggy, you will not assemble Items 4, 6, & 7 - *Figure 5, page 8*.

6.5 Install lower right side panel (Item 5 - *Figure 5, page 8*) with expanded metal facing inside of basket. Secure with 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. At this time securely tighten all bolts attaching lower end panels (Items 2 & 3) to floor panel (Item 1). Now tighten all bolts attaching angle on side panels (Items 4 & 5) to floor panel (Item 1) and bolts attaching side panels (Items 4 & 5) to lower end panels (Items 2 & 3).

6.6 Install the basket "A" frames (Items 10 & 11) by raising and setting on top of main frame. Secure with 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. **DO NOT TIGHTEN AT THIS TIME!** (*Refer to Figures 6 & 7 for hole locations.*)

6.7 Install "A" frame pipe braces (Items 13 & 14) as shown using 5/8" x 1 3/4" bolts, and lock nuts. **DO NOT TIGHTEN AT THIS TIME!**

6.8 Install the top front panel (Item 8) and the rear top panel (Item 9) on the lower end panels (Items 2 & 3) by first locating the pivot tube (Locations A & B) on the clevis at the top of the "A" frames (Items 10 & 11). Secure the "A" frame to the top front and top

Assembly Instructions

rear panels with the basket pivot pins (Item 12), 2" flat washers and cotter pins. Align the top front panel and top rear panel (Items 8 & 9) with the lower front panel and the lower rear panel (Items 2 & 3). Secure using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts.

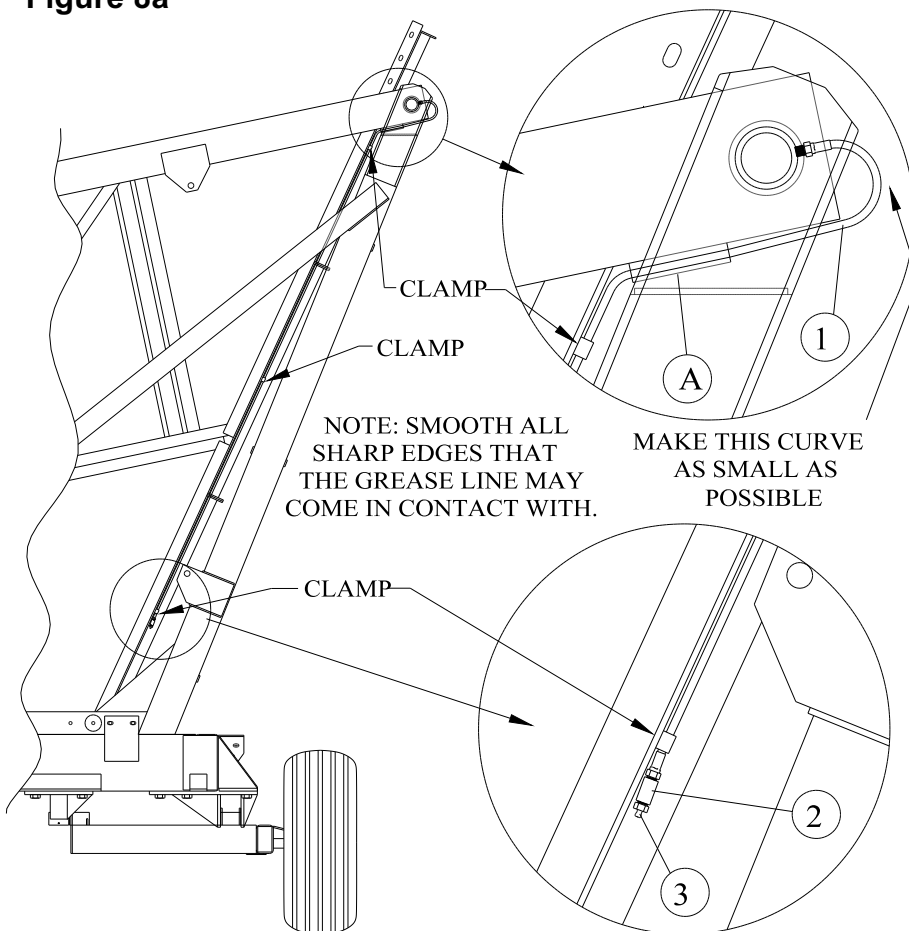
- 6.9 (If you have purchased a boll buggy with a chain dump, omit this STEP.) Install the middle dump-out side panel (Item 6) and secure using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. Securely tighten these bolts at this time.

- 6.10 Assemble the splice plates (Items 19 & 20) and install splice assembly and the top load side panel (Item 15) using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts.

- 6.11 (If you have purchased a boll buggy with a chain dump, omit this STEP.) Install the top dump-out side panel (Item 7) and secure using 1/2" x 1 1/4" bolts, flat washers, and lock nuts.

- 6.12 Install the top load side gussets (Items 16 & 17) and secure using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts.

Figure 8a



- 6.13 Screw grease line (Item 1 - *Figure 8a*) into basket pivot at the top of the A-frame. Run the line thru angle (Item A) on the bottom of 4" x 6" tube and down the corner of the basket. Make the bend coming out of the 4" x 6" tubing as short as possible as noted in illustration. Clamp to the basket as shown using 5/16" hose clamps - three (3) places. Connect 1/8" pipe coupler and 1/8" zerk (Items 2 & 3) to bottom end of grease line. Repeat this procedure at the other basket pivot.

- 6.14 At this time, all remaining basket bolts should be tightened. Also tighten bolts left loose on "A" frames and braces. If your unit is equipped with a regulator, follow STEPS 7 thru 7.7 before proceeding to STEP 8. If your unit is equipped with a chain dump, proceed with STEP 9.

Assembly Instructions

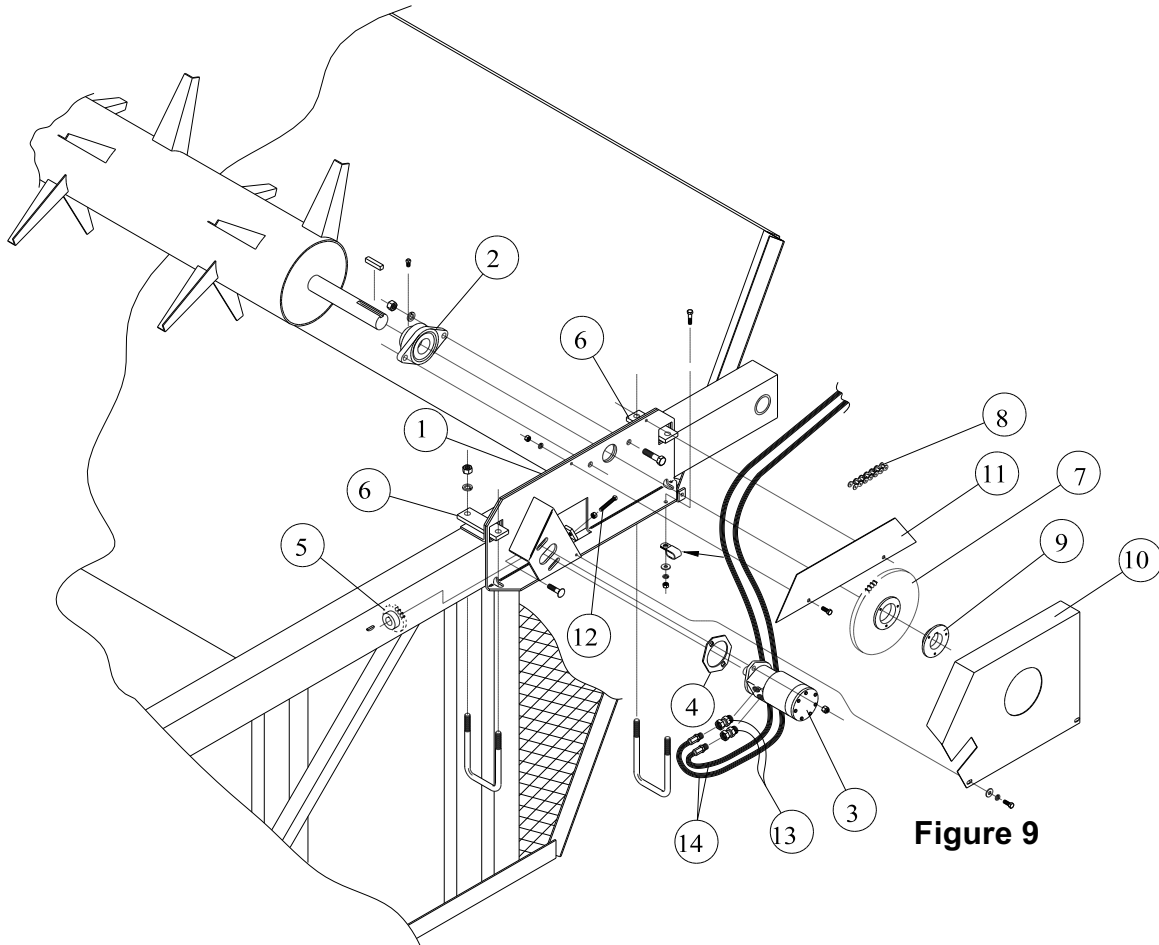


Figure 9

7. **REGULATOR OPTION:** Refer to *Figure 9*. Locate front regulator frame (Item 1). When positioned on top of the front end panel, the motor mount will be on the outside of the basket and toward the dump-in side.

7.1 Attach 1 15/16" bearing (Item 2) to regulator frame (Item 1) using 5/8" x 2 1/2" bolts, lock washers, and nuts. Make sure the bearing is to the inside of the basket.

7.2 Install the hydraulic motor (Item 3), motor spacer (Item 4), and sprocket (Item 5) using 1/2" x 2" carriage bolts and lock nuts as shown in diagram with motor outlets pointing toward right side of buggy.

7.3 Slip front frame assembly over regulator shaft with bearing collar on inside next to regulator drum. Loosely lock down bearing collar to keep assembly from slipping off regulator shaft when lifting.

7.4 Assemble the other bearing to rear regulator frame using 5/8" x 2 1/2" bolts, lock washers, and nuts. Make sure bearing is to the basket side. Loosely lock collar to keep assembly from slipping off regulator shaft when lifting.

7.5 Using hoist, lift regulator assembly to top of dump-out side of Boll Buggy with motor

forward. Position so u-bolts closest to dump-in side go through the first set of ribs. Secure both front and back using u-bolt straps (Item 6), 5/8" u-bolts, lock washers and nuts. Loosen lock collars on bearings and shift regulator frames as required.

7.6 Attach sprocket, chain, and bushing (Items 7, 8, & 9), shifting regulator and sprockets as needed for alignment (to run chain straight). Tighten the chain with the 3/8" x 2 1/2" square head set screw (Item 12) and 3/8" nut against the hydraulic motor. Lock set screw in place with 3/8" nut. Secure motor by tightening the carriage bolts installed earlier.

7.7 Connect the two (2) 3/8" x 312" hydraulic hoses (Item 14) to the hydraulic motor using two (2) straight swivels (Item 13). Curve hoses under the hydraulic motor and clamp to bottom far end of the mount as shown in *Figure 9*. From this clamp leave enough slack in the hoses to keep them from being pulled too tight when basket is up. Clamp hoses to inside of A-frame and on top of tongue with other hoses.

7.8 Lock both regulator shaft bearings in place and tighten all bolts. Install chain shields (Items 10 & 11) using 3/8" bolts, lock washers, flat washers, and nuts. Inspect finished assembly.

Assembly Instructions

8. EXTENSION PANELS -Refer to Figure 10. Install the front and rear extension panels (Items 1 thru 6) to the Boll Buggy as shown using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts.

8.1 Models ordered without the regulator option should install the cover plate (Item 7) on extension panels (Items 1 & 2). Secure with 3/8" x 1" bolts, lock washers, and nuts.

8.2 Install the rubber belting (Item 8) to the dump-out side panel (Item 9) using 1/2" x 1 1/4" bolts, flat washers, and lock nuts.

8.3 Install the two (2) right side extension panels (Items 10 & 11) and corner pieces (Items 12 & 13) to top right side panel. Use 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. DO NOT TIGHTEN BOLTS AT THIS TIME!

8.4 Install splice plate (Item 14) and guard angle (Item 15) to extension panels (Items 10 & 11) using 1/2" x 1" bolts, flat washers, and flange lock nuts.

NOTE: After all extension parts have been properly fitted, tighten all bolts securely.

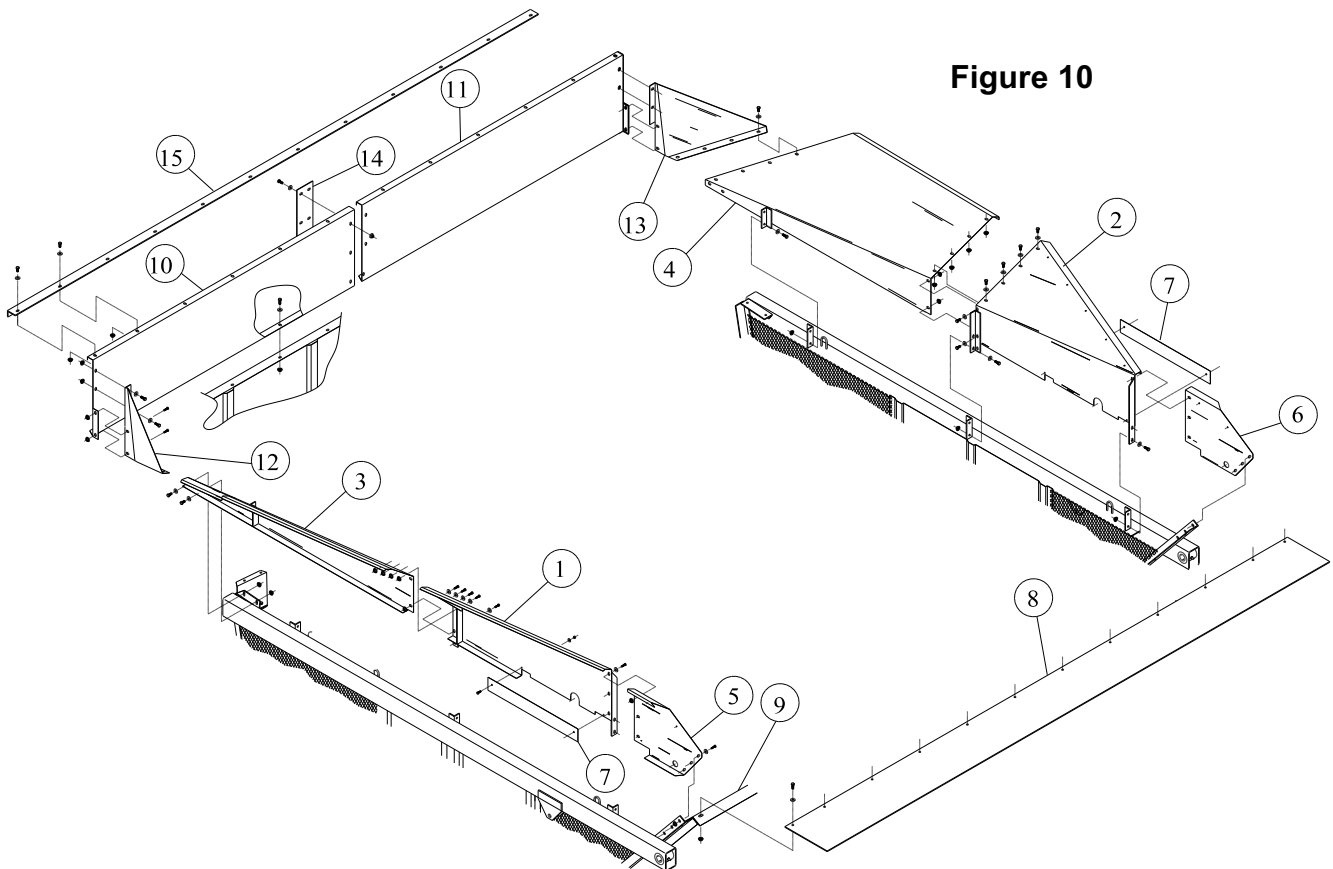


Figure 10

Assembly Instructions

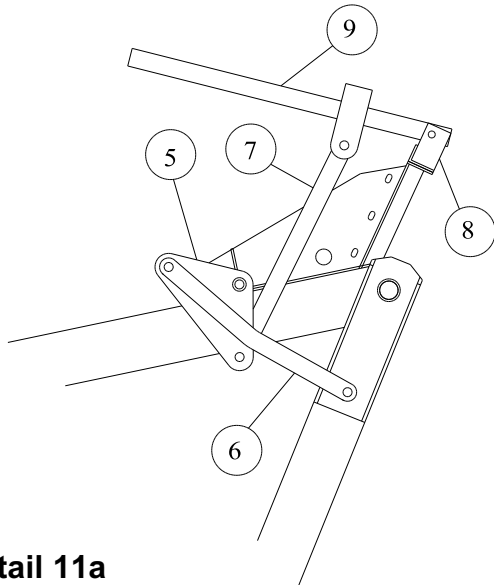
9. FOLD-OUT DOOR -Refer to Figure 11.
Install front and rear pivot brackets (Items 1 & 2) with the three(3) - 1/2" bolts at top of end panels. Secure other end of pivots with 1/2" x 4" x 7 1/2" u-bolts and plate (Items 3 & 4).

- 9.1 Place a 1" machine bushing on pivot shaft, slide front pivot (Item 5) onto shaft, install another 1" machine bushing on outside and secure with 5/32" x 1 1/2" cotter pin.

NOTE: BE SURE OUTSIDE PIN OF PIVOT IS TOWARD DUMP IN SIDE OF BASKET.

- 9.2 Refer to Detail Figure 11a.

Slide lower arm (Item 6 - This is the 3/4" x 2" x 26" arm which has a slight bend in it) over the shaft on the A-frame and the outside shaft on the pivot. Install with bend down to clear basket pivot pin when basket is raised. Secure arm with 1" machine bushing and 5/32" x 1 1/2" cotter pins.



Detail 11a

- 9.3 Slide top arm (Item 7) onto inside pin of pivot and secure with 1" machine bushing and 5/32" x 1 1/2" cotter pin.
- 9.4 Assemble the pivot mechanism and arms to the rear of the buggy the same as the front - STEPS 9.1 thru 9.3.
- 9.5 Assemble door hinge angle to fold-out door (Items 8 & 9) as shown in *Detail Figure 11a* using four (4) 3/4" x 3" bolt and locknuts.

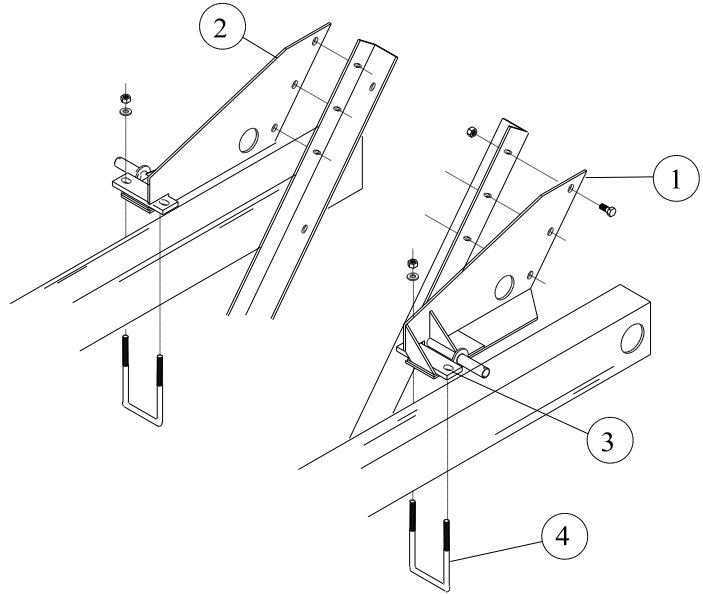
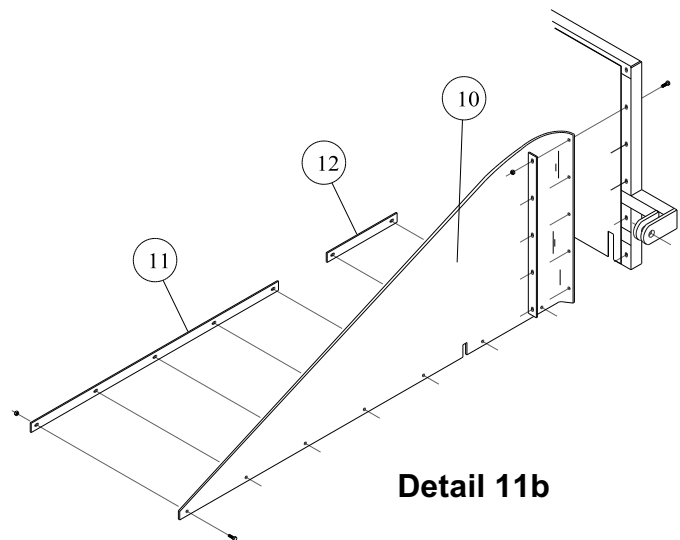


Figure 11

- 9.6 Safely lift door and hinge. Assemble to top of dump out side and bolt door hinge angle to top angle with 1/2" x 1 1/4" bolts and whiz nuts.

- 9.7 Attach rubber skirt (Item 10) using 3/16" x 1 1/2" x 26" back-up straps and 5/16" x 1" bolts and locknuts.

NOTE: Bend rubber skirt in toward basket when assembling. See *Detail Figure 11b*.



Detail 11b

Assembly Instructions

- 9.8 Attach long tapered end of rubber skirt to end extension using 3/16" x 1 1/2" x 46" backup strap (Item 11) and 3/16" x 1 1/2" x 13" backup strap (Item 12) with 5/16" x 1" bolts and locknuts.
- 9.9 Lay fold-out door into basket until upper arm (Item 7) can be attached to lug on end of fold-out door with 1" x 3 1/2" bolts and locknuts.

Operating the Fold-Out Door

As basket is raised, the door will fold out. When basket is fully up, the fold-out door will be level with dump out side of basket.

NOTE: When raising and lowering basket the first time, make sure parts move freely with no interference and door operates properly.

Assembly Instructions

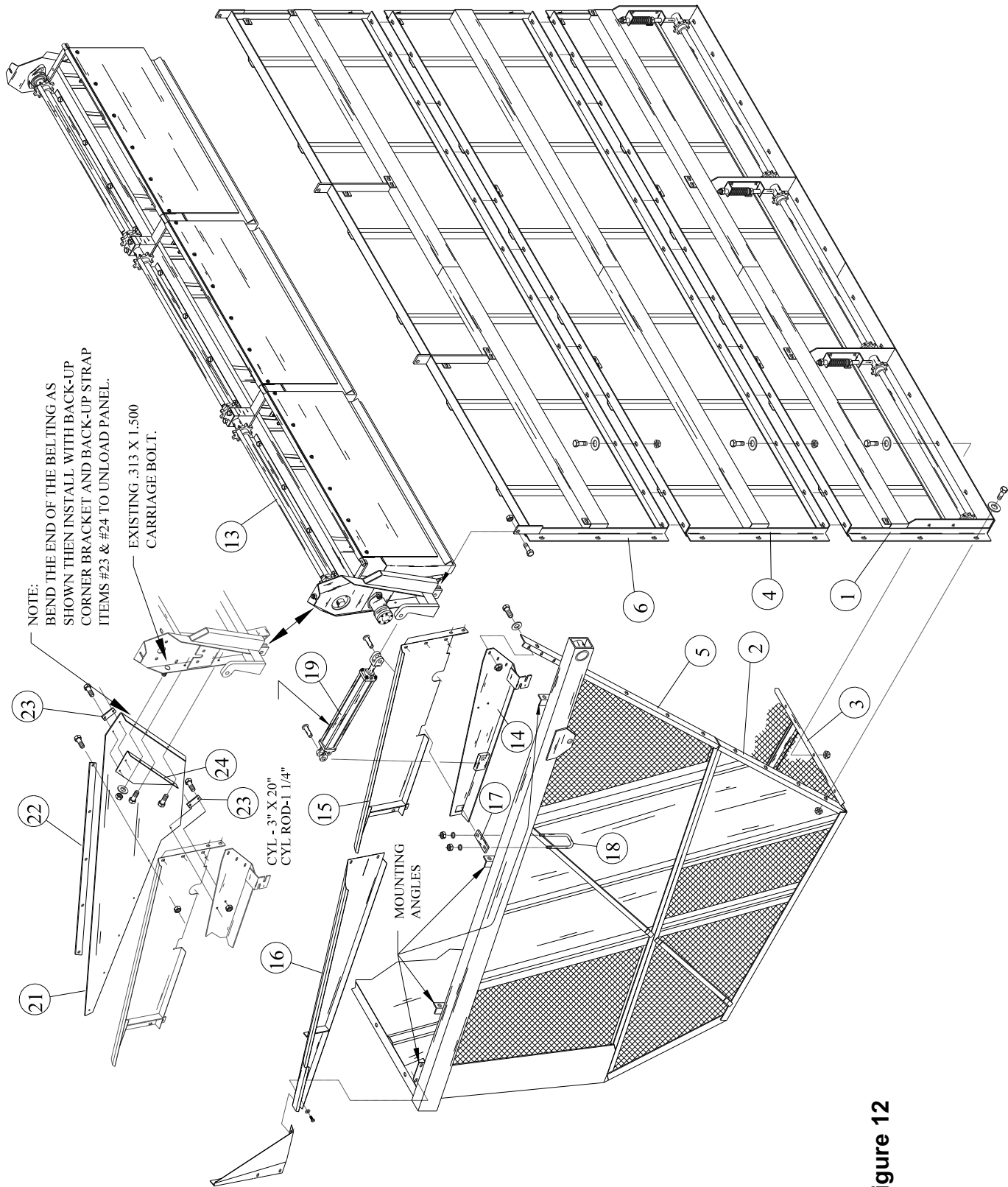


Figure 12

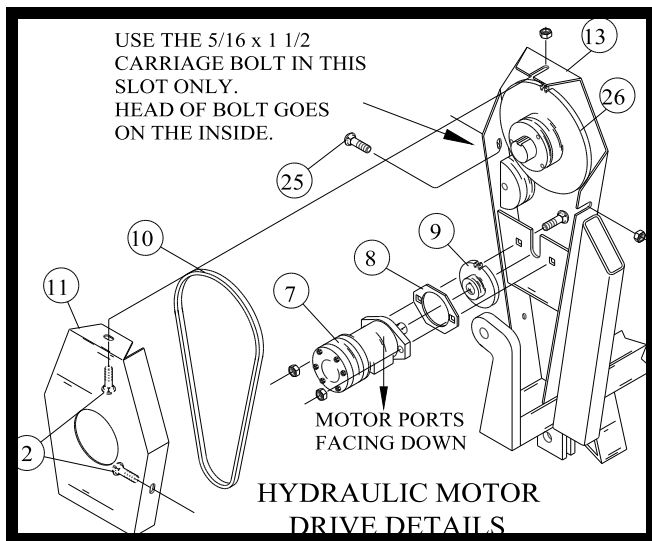
Assembly Instructions

10. CHAIN DUMP SIDE -Refer to Figure 12. Attach the chain dump lower panel (Item 1) to the Boll Buggy bottom end panel (Item 2) and the floor panel (Item 3) using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. **DO NOT TIGHTEN BOLTS AT THIS TIME!**

- 10.1 Attach the chain dump mid panel (Item 4) to the chain dump lower panel, Boll Buggy end panel and top panel (Items 1, 2, & 5) using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. **DO NOT TIGHTEN AT THIS TIME!**

NOTE: Make sure panel is assembled with tabs up so inside chain guides can be assembled later. Refer to Figure 21 and STEP 14.1 for clarification.

- 10.2 Attach the chain dump upper panel (Item 6) to the chain dump mid-panel (Item 4) and to Boll Buggy end panels (Item 5) using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. **AT THIS TIME, SQUARE THE CHAIN DUMP PANELS WITH EACH OTHER AND THE BOLL BUGGY AND TIGHTEN ALL BOLTS PREVIOUSLY INSTALLED.**



Detail 12a

- 10.3 (Detail 12a) Assemble the hydraulic motor (Item 7), the motor spacer plate (Item 8) and the 12T sprocket (Item 9) using two (2) 1/2" x 2" carriage bolts and lock nuts.
- 10.4 (Detail 12a) Align the 12T sprocket (Item 9) with the 42T sprocket (Item 26) and assemble the #60 chain (Item 10).

- 10.5 (Detail 12a) Assemble the chain guard (Item 11) using two (2) 5/16" x 3/4" carriage bolts (Item 12) and nuts, one (1) 5/16" x 1 1/2" carriage bolt (Item 25) and nut. Note the location of the 5/16" x 1 1/2" carriage bolt. It will be used to help attach the skirtboard (Item 21 - Figure 12) in a later step.

NOTE: STEPS 10.3, 10.4, and 10.5 should be done prior to attaching unload panel (Item 13) on Boll Buggy.

- 10.6 Attach the unload panel assembly (Item 13) to the chain dump upper panel (Item 6) using four (4) 3/4" x 3" bolts and lock nuts.

NOTE: The two (2) plates welded in pairs to the bottom of the unload panel assembly (Item 13) fit over the single plates that are welded to the upper panel (Item 6) to form a hinge.

- 10.7 Assemble the hydraulic cylinder mount (Item 14) by setting it on top of the Boll Buggy top end panels (Item 5) and attaching to the extended angles using three (3) 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. **DO NOT TIGHTEN BOLTS AT THIS TIME!**

- 10.8 Assemble the chain dump extension sides (Item 15) by sliding the lower flange under the hydraulic cylinder mount (Item 14). The mounting angles on the inside of the extension panels should line up with the mounting angles on the inside of the Boll Buggy top end panels (Item 5). Loosely attach the extension panels to the mounting angles using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts. (The remaining chain dump extension sides attach exactly the same as the regular extension sides. STEPS 8 thru 8.5 -Figure 10, page 13.)

- 10.9 Loosely assemble the extensions (Item 16) to the chain dump extension sides (Item 15) and to the mounting angles located on the Boll Buggy using 1/2" x 1 1/4" bolts, flat washers, and flange lock nuts.

- 10.10 Assemble the u-bolt straps (Item 17) through the square holes in the hydraulic cylinder mount (Item 14) and the chain dump extensions (Item 15). Attach with 1/2" u-bolt, lock washers and nuts.

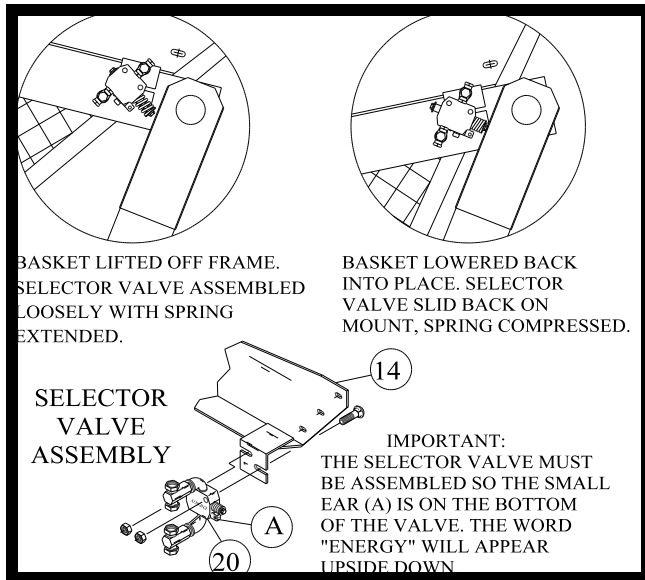
- 10.11 Check for alignment and square, then tighten all bolts from STEP 10.7 to present.

Assembly Instructions

- 10.12 (Refer to Figure 12 - page 16.) Assemble the hydraulic cylinder (Item 19) to the hydraulic cylinder mounts (Item 14) and to the unload panel assembly (Item 13).

NOTE: Cylinder ports should be facing to the outside of the Boll Buggy.

IMPORTANT: HYDRAULIC CYLINDERS SHOULD BE IN TIME WITH EACH OTHER.



Detail 12b

- 10.13 (Detail 12b). Lift the Boll Buggy basket off the frame approximately 12" to 18". Assemble the selector valve (Item 20) to the hydraulic cylinder mount (Item 14) using two (2) 3/8" x 2 1/2" carriage bolts and lock nuts.

NOTE: Pay special attention to the assembly instructions in *Detail 12b*. This will insure the proper assembly of the selector valve.

Leave the 3/8" carriage bolts in the selector valve loose enough so when the basket is lowered back into place the spring on the selector valve will compress and the valve will slide back on the mount into its working position.

Locating the selector valve in this manner will prevent any damage to the valve by being located too close to the "A" frame. After the basket has been lowered back onto the frame and the selector valve is positioned properly, tighten the two (2) 3/8" carriage bolts.

- 10.14 Refer to Figure 12, page 16. Assemble the skirtboards (Item 21) to the chain dump extension sides and the hydraulic cylinder mounts (Items 14 & 15) using two (2) back-up straps (Item 22 & 23). Secure with 5/16" x 1" bolts and lock nuts. Bend the end of the skirtboard as shown and attach to the unload panel with back-up straps (Items 23 & 24) using two (2) 5/16" x 3/4" self tapping screws, two (2) 5/16" x 1" bolts, and three (3) lock nuts.

11. **BASKET LIFT CYLINDER** -Refer to Figure 13. Install basket lift cylinder (Item 1), connecting the rod end of cylinder to the basket, and the base of the cylinder to "A" frame.



CAUTION: Cylinders must be installed so fittings are facing toward right side of machine. If placed in opposite direction fittings will be broken off when basket is raised.

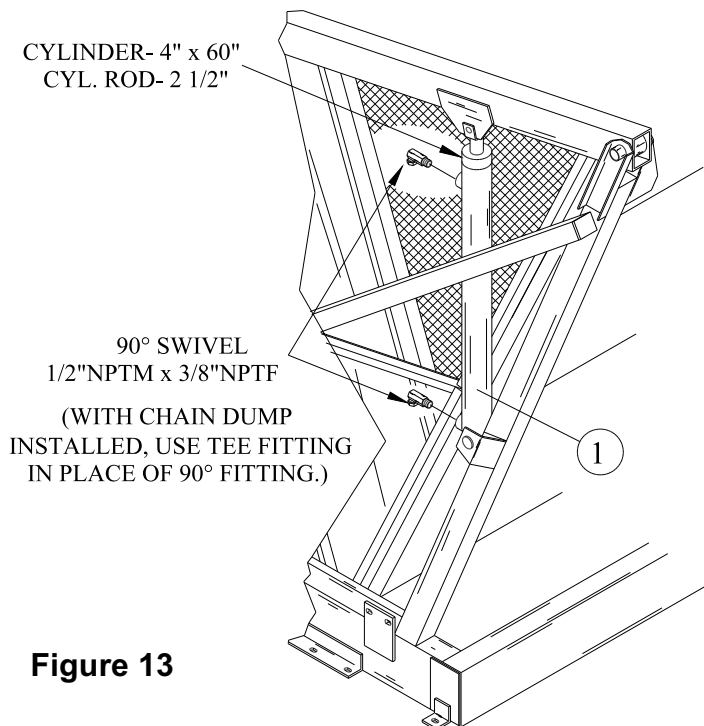


Figure 13

Assembly Instructions

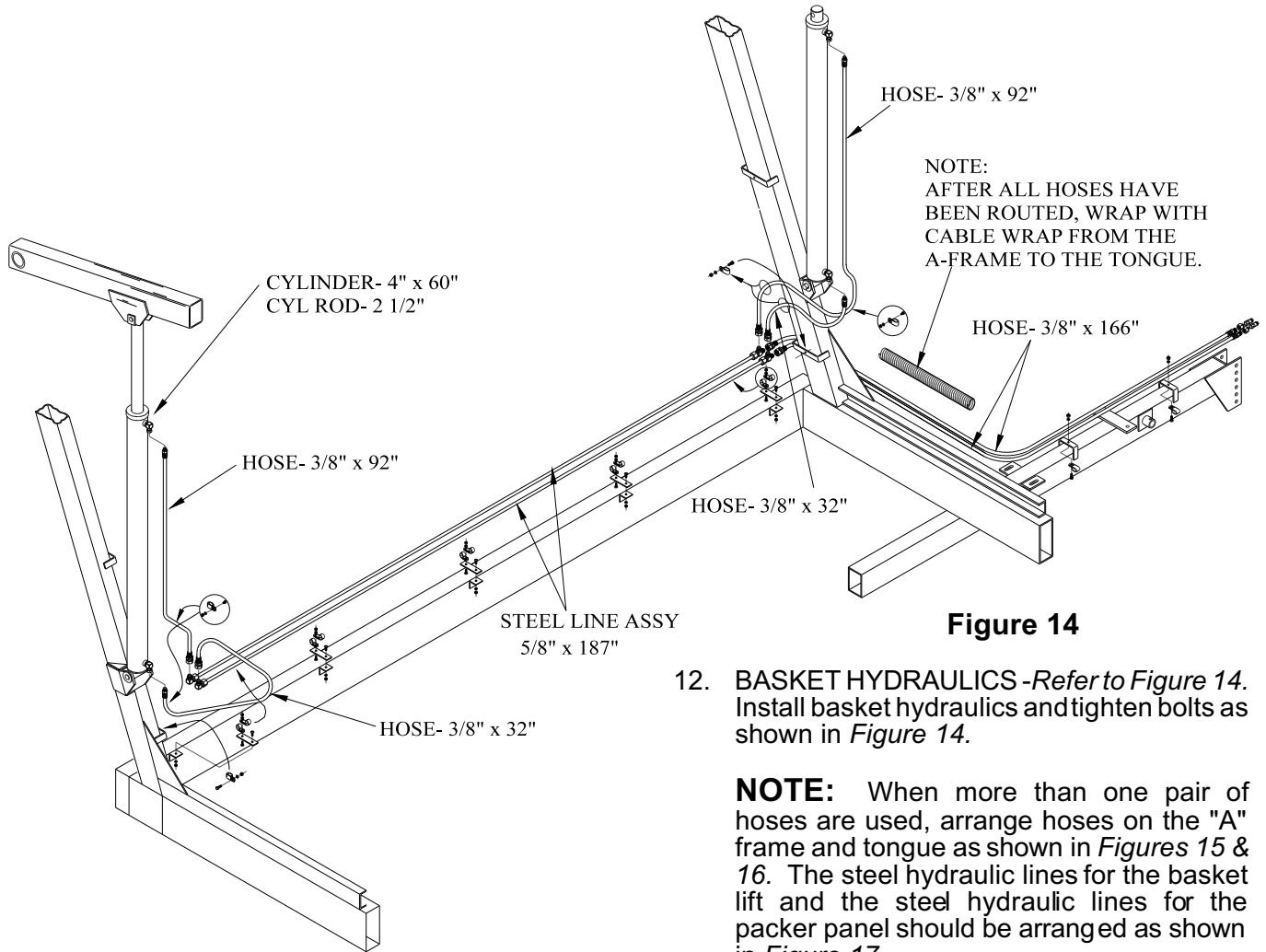


Figure 14

12. BASKET HYDRAULICS -Refer to Figure 14. Install basket hydraulics and tighten bolts as shown in Figure 14.

NOTE: When more than one pair of hoses are used, arrange hoses on the "A" frame and tongue as shown in Figures 15 & 16. The steel hydraulic lines for the basket lift and the steel hydraulic lines for the packer panel should be arranged as shown in Figure 17.

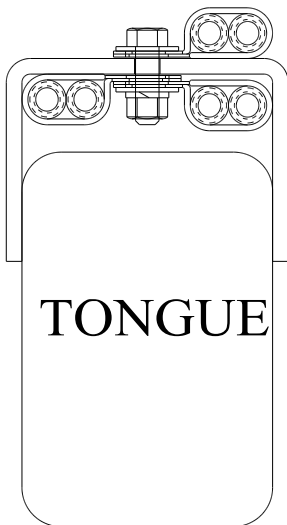


Figure 15

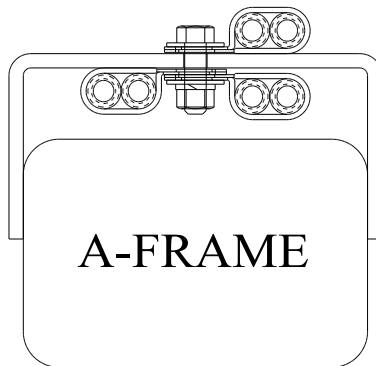
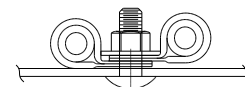


Figure 16



STEEL LINES

Figure 17

Assembly Instructions

13. CHAIN DUMP HYDRAULICS -Refer to Figure 18. Install the unload panel hydraulic cylinder hoses as shown.

NOTE: Unload panel hydraulics are typical on both ends of the Boll Buggy.



CAUTION: Provide sufficient slack in hydraulic hose at pivot point to prevent stretching and tearing of hoses.

- 13.1 Refer to Figure 19. Install the hydraulic motor hoses as shown. Please pay close attention to which port the hoses are called out for.



CAUTION: Provide sufficient slack in hydraulic hose at pivot point to prevent stretching and tearing of hoses.

IMPORTANT: Before start-up, operate the basket up and down slowly and check the hydraulic hoses for tight points. Also operate the hydraulic motor and check for proper rotation.

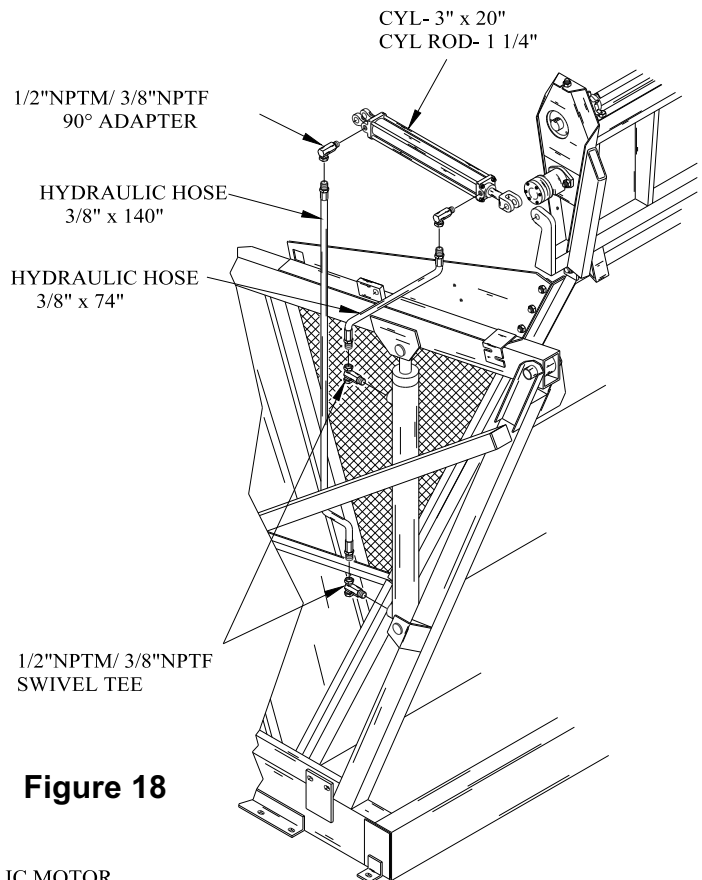


Figure 18

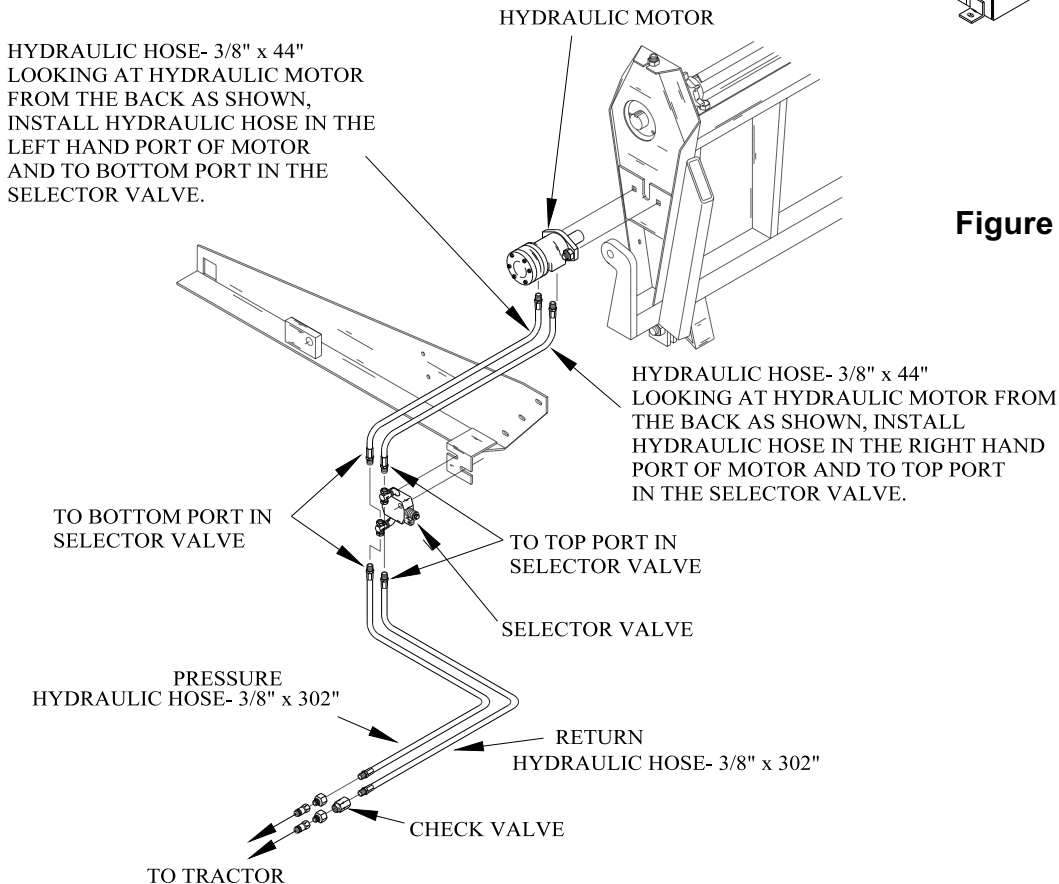


Figure 19

Assembly Instructions

14. CHAIN AND SLAT ASSEMBLY -Refer to Figure 20. Install the chain and slat assembly to the Boll Buggy by first folding the unload panel into the inside of the Boll Buggy. This position is where the chain has the most slack in it. Wrap the chain around the top sprockets first and attach chain connectors at the bottom.

- 14.1 Refer to Figure 21. On the inside of the Boll Buggy, assemble the chain slide straps (Item 1) and the chain guides (Item 2) to the chain dump panels using 3/8" x 1 1/4" carriage bolts, flat washers, and lock nuts.

- 14.2 Refer to Figure 21. Assemble the first clean out plate (Item 3) to the chain guides (Item 2) using 3/8" x 3/4" carriage bolts, flat washers, and lock nuts.

- 14.3 Refer to Figure 21. Assemble the second clean out plate (Item 4) to the chain guides as was done on opposite end, using 3/8" x 3/4" carriage bolts, flat washers, and lock nuts.

- 14.4 Refer to Figure 21. Assemble the mid clean out plate (Item 5) to the two previously installed clean out plates (Items 3 & 4) as shown, using 3/8" x 3/4" carriage bolts, flat washers, and lock nuts.

- 14.5 Refer to Figure 21. Assemble the seven (7) back-up straps (Item 6) as shown, using 3/8" x 1 1/4" carriage bolts, flat washer, and lock nuts.

- 14.6 Refer to Figure 20. Assemble the outside chain guide assemblies (Items 1 & 2) as shown, using 3/8" x 1" carriage bolts, flat washers, and lock nuts.

- 14.7 **IMPORTANT:** Follow instructions below to set springs correctly. (Detail 20a)

With top panel folded to inside of basket, adjust spring spool so only .062" remains above guide bracket.

Make sure top and bottom nuts are tight against spool, so the spool does not catch in guide bracket.

SLOWLY fold top panel out, while making sure spring DOES NOT compress to solid height, and bend guide bracket. Move spool DOWN the threaded shaft f spring becomes fully compressed, even if .062" gap no longer remains.

Figure 20

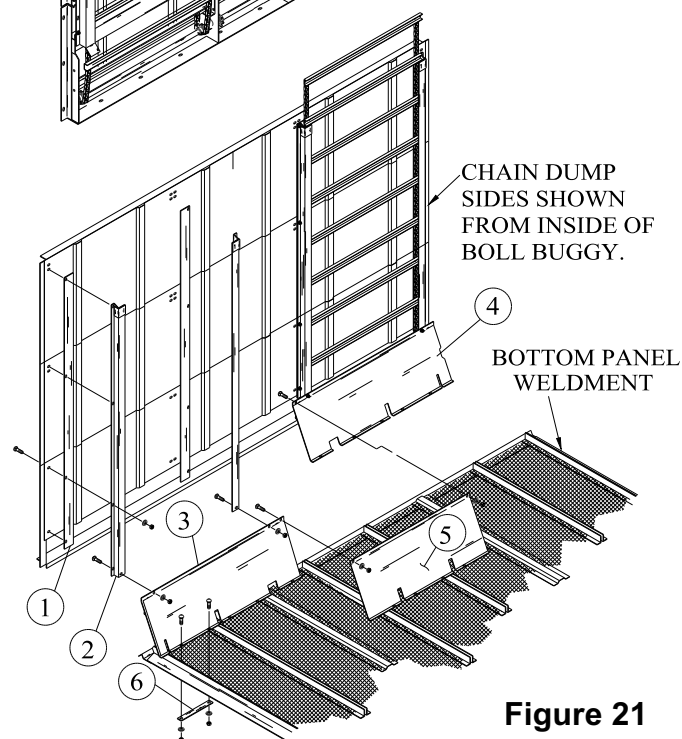
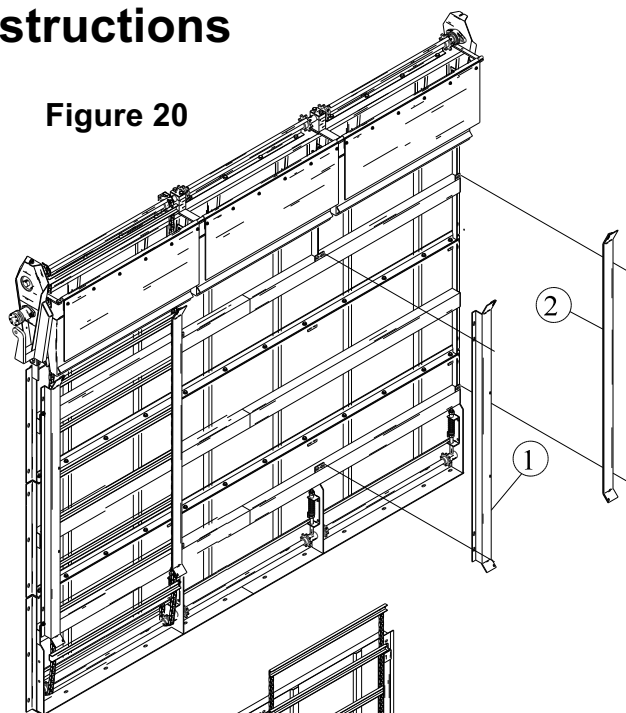
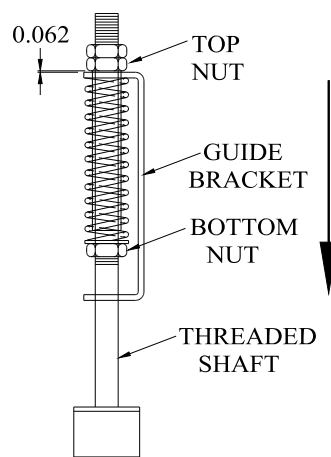


Figure 21

Detail 20a



Assembly Instructions

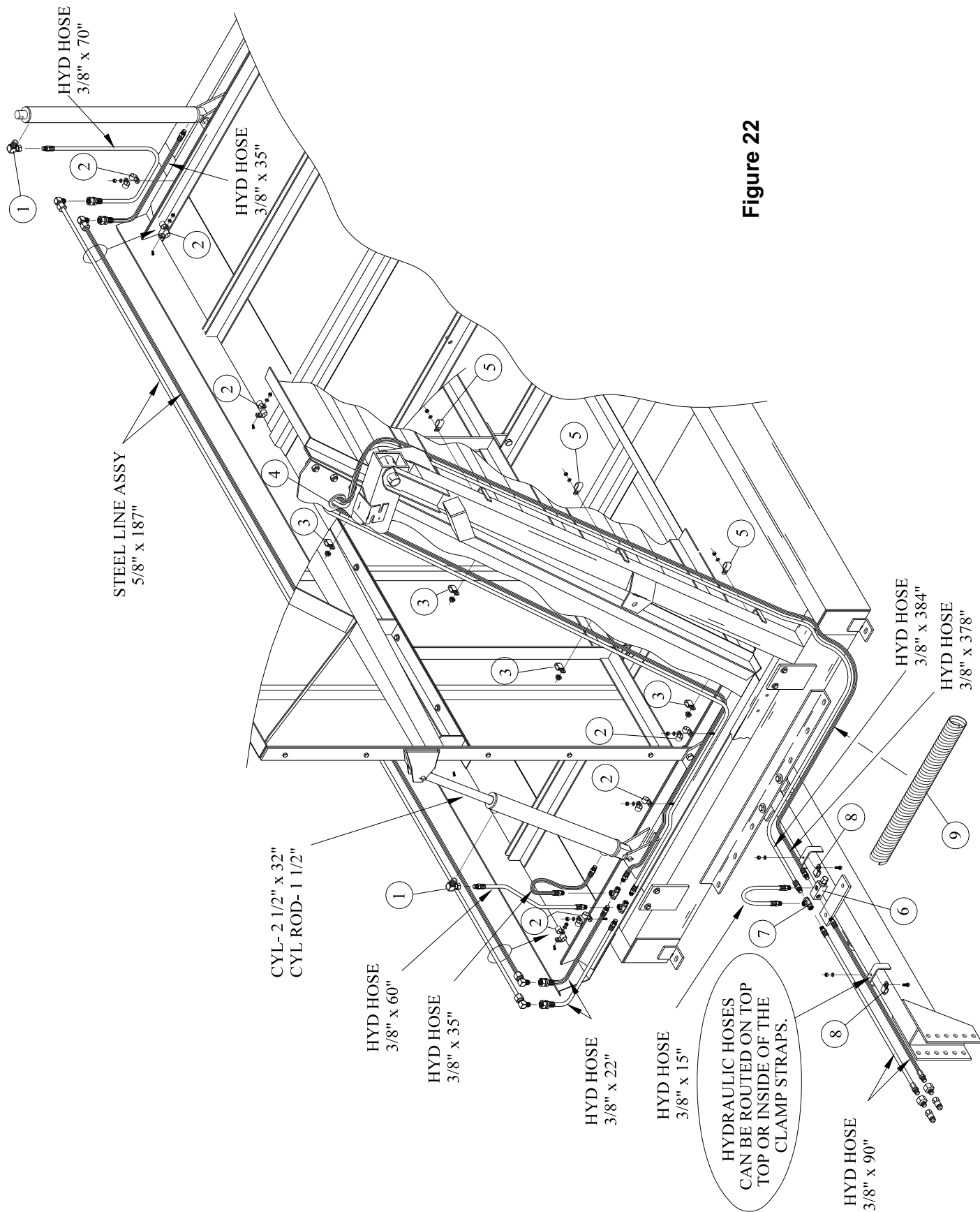


Figure 22

Assembly Instructions

15. PACKER PANEL HYDRAULICS -Refer to Figure 22. Install the elbow fittings in the top cylinder ports (Item 1). Tighten until the hose connecting swivel is pointing downward.
 - 15.1 Assemble hoses, fittings, and steel lines as shown in Figure 22.
 - 15.2 Secure hoses and steel lines around the floor panel at each point shown in the illustration using eighteen (18) single hose clamps (Item 2), nine(9) 3/8" x 1 1/4" carriage bolts, lock washers, and nuts.
 - 15.3 Run hydraulic hoses up the corner between the dump-out side panel and the front panels as shown. Attach using four (4) double hose clamps. Clamps are to be used with four (4) 1/2" x 2" bolts that have been previously installed. (See basket assembly Figure 5 - page 8.) Secure clamps using four(4) 1/2" flange lock nuts.
 - 15.4 Route hoses through rubber grommet (Item 4) in top front extension panel. Secure hoses to inside of "A" frame tube at locations indicated using three(3) double hose clamps, three(3) 3/8" x 1" bolts, lock washers, and nuts. Refer to Figure 16.
- 15.5 Route hose over to top of tongue. Assemble relief valve (Item 6) on line coming from the base of the cylinders and the hydraulic tee (Item 7) on the line coming from the rod end of the cylinders. Clamp hoses using two (2) double hose clamps (Item 8), two (2) 3/8" x 1" bolts, lock washers, and nuts.
- 15.6 After all hoses are in place and secured, wrap hoses between the "A" frame and the tongue with the cable wrap (Item 9) as shown in Figure 22.
16. REGULATOR AND CHAIN DUMP HYDRAULICS -Refer to Figure 22. If your unit is equipped with a regulator or the chain dump option, route the hoses from the hydraulic motor along the back side of the "A" frame tube. Attach in the same manner as the packer panel hoses.

Unit should now be completely assembled and ready for check out, purging of hydraulic cylinders with oil, and connection to tractor.



CAUTION: Provide sufficient slack in hydraulic hoses at pivot point so basket can be raised without stretching or tearing hoses. This requires a good amount of slack. When dumping basket for the first time watch for tight hoses at this point.

IMPORTANT: Do not attempt to operate this unit until hydraulic system has been completely purged of air as outlined in the operation section of this manual.

Operation

Familiarize yourself with the various features of the Boll Buggy before operating. Read this section of your manual carefully.

Attaching to Tractor

1. Adjust tongue ball hitch (standard) or clevis hitch (optional) to the appropriate holes on the tongue to level main frame when attached to tractor drawbar.
2. Attach Boll Buggy to tractor (for the standard ball hitch) using a 2 5/16" ball (minimum capacity 12,500#) with enough shank and thread length to secure it with a full depth nut and lock washer. Make sure the ball shank threads go all the way through the nut.
3. The tongue on the Boll Buggy can be mounted in three positions: offset left or right, and on center line. Determine required position and bolt in place. See Figure 23 for dimensions.

NOTE: Support tongue when removing bolts to adjust.

Hydraulic System Purging Procedure

Hydraulic cylinders and hoses must be run without load to remove all air from system.

1. Remove basket cylinder rod pins attaching upper end of cylinder to basket and block or tie in place so when rod is extended it will not hit or interfere with any portion of the basket.
2. Install the required male quick coupler end onto hoses going to tractor and then attach hoses to a pair of quick coupler hydraulic fluid outlets on the tractor. Check the tractor hydraulic fluid and add fluid if system is not completely full.
3. Start tractor engine and activate valve lever to extend hydraulic cylinders approximately one-third of stroke or 20 inches. Stop at this point and check hydraulic fluid level in tractor. Add required amount to bring level to full. Again extend hydraulic cylinder an additional 20 inches of stroke. Repeat procedure above in checking fluid level in tractor. Extend cylinders to maximum extended position and repeat procedure used to check fluid level.
4. With the tractor fluid at a safe operational level, fully retract and extend the cylinders several times to insure removal of all air from system.
5. Retract cylinders to fully closed position and reconnect cylinder rod to basket using cylinder pin.

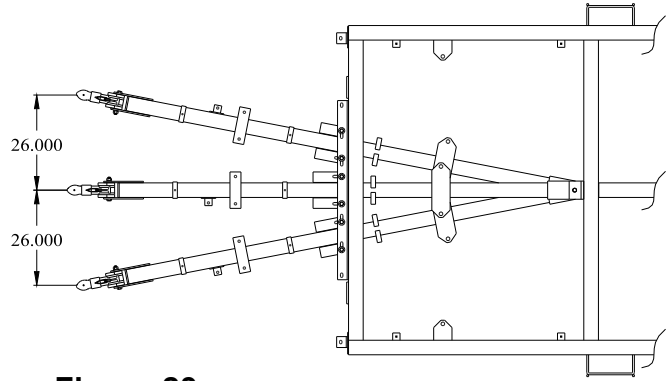


Figure 23

6. Repeat above procedure for packer panel, swing tongue and chain dump unload panel cylinders; except it is not necessary to disconnect cylinders during purging procedure.
7. After cycling all cylinders and purging lines and cylinders of any air locks, check to be certain all cylinder pins are securely held in place and will not work out under load.
8. You are now ready to dry run the unit. Complete the lubrication of the unit as described on page 25. Read the operating section of this manual on pages 25 and 26 before dry running of unit.



CAUTION:

While cycling the basket for the first time it is best to have an observer on the ground at a safe distance to give instructions to the operator. The observer will be looking for any hydraulic hose pinch points, loose connections, any binding of basket or packer panel, or anything else that would prohibit the safe and successful operation of the unit. Be sure to observe the hoses at the main pivot point in the upper corner for sufficient slack.

Units equipped with a regulator must have a minimum of 1,000 pounds of tractor weights on the two weight brackets on the frame opposite the dump out side. Operation without proper weighting of unit, could cause the Boll Buggy to turn over when the basket is fully raised.

The Boll Buggy is equipped with weight brackets on both left and right sides of frame. Some units are assembled for reverse dump, which use the left weight brackets. Make certain the 1,000 pounds or more weight are applied to side opposite dump-out side.

Operation

Operating Information

Before operating this unit, *refer to the Lubrication section in this manual on page 26* and make sure machine is properly lubricated.

The Boll Buggy is designed with a unique packerpanel allowing the basket to hold two dumps from most cotton pickers and strippers as well as the ability to dump the two dumps separately. This means the Boll Buggy can dump without overfilling the module builder.

To receive load from harvesting unit, retract packer panel cylinders so top end of packer panel is against the right side or dump-in side of basket. Position Boll Buggy along the side of harvester, close enough to allow transfer of cotton from harvester to Boll Buggy.

After the harvester has dumped into the Boll Buggy, the packer panel cylinders may be extended as far as possible, thus compacting and moving the cotton to the left side of the basket.

NOTE: A relief valve has been placed in the circuit as a safety precaution so high pressures cannot be built up during the pack cycle.

At this time, the Boll Buggy is ready to receive the second dump from the harvesting unit. After receiving the second dump, the Boll Buggy packer cylinders should again be retracted enough to release compaction force on first dump and at the same time compact and hold second dump.



CAUTION: When turning or crossing rough terrain, slow tractor speed down.



CAUTION: Be sure everyone is clear of the machine before starting engine or operation.

To dump the Boll Buggy, simply drive along side of trailer or module and stop at the required position. Set tractor engine RPM at approximately 1/2 to 3/4 maximum engine RPM. Actuate tractor valve lever to raise basket.



CAUTION: Use the following cautions when dumping the Boll Buggy basket:

1. Use caution when operating around power lines.

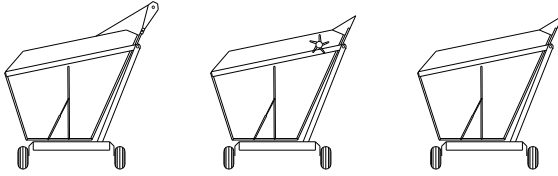
2. Watch for overload obstructions which might interfere with the basket.
3. Always select level area for dumping. If the area is uneven, position units so when the Boll Buggy is dumping, the dump-in side of the unit is lower than the dump-out side. This will minimize the possibility of unit overturning during dump cycle.
4. Do not move unit with basket partially up or basket lift cylinders partially extended. Damage could result to cylinders and/or basket frame.
5. When dumping, always note direction strong winds are blowing from. Position units so Boll Buggy basket is dumping into wind current, or that wind current is blowing into either the front or rear of the Boll Buggy.
6. Do not move Boll Buggy with the basket in the dump position.
7. Units with regulators must be properly weighted before dumping. Minimum of 1,000 pounds of weight applied to side opposite dump-out side.

Once the first dump has left basket, the remaining dump can be released by extending packer panel cylinders to maximum stroke. This will place the top end of packer panel against dump-out side allowing cotton to move out of basket.

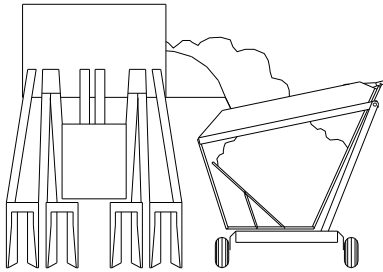
The complete fill and dump cycle has now been completed and can be started again in the same sequence.

NOTE: Units with regulators are loaded and dumped in the same sequence as described above; however, the regulator will be turning while dumping. The regulator is designed to operate successfully by turning in either direction. Normally the drum will be turned in a direction to take the cotton under the drum until it is slugged. Then reverse the drum taking the slugged cotton over the top of the drum. By holding one dump of cotton with the packer panel against the dump-in side and metering only the cotton on the dump-out side, the regulator is working on only one-half a Boll Buggy load at a time. Following this procedure will meter cotton into the module builder or trailer very successfully.

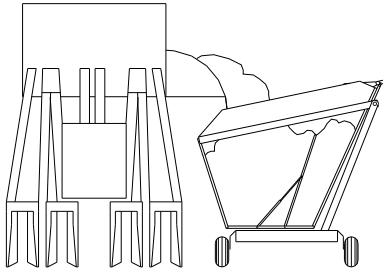
Operation



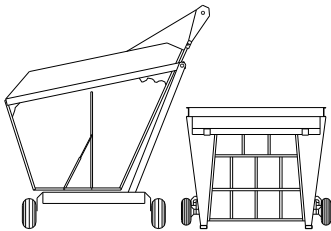
LOADING / UNLOADING PROCEDURE TYPICAL ALL BOLL BUGGY MODELS WITH PACKER / DIVIDER PANEL



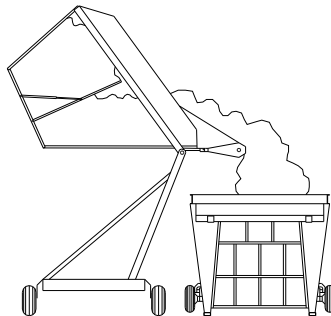
FILL BOLL BUGGY WITH PACKER / DIVIDER AGAINST INLOAD SIDE.



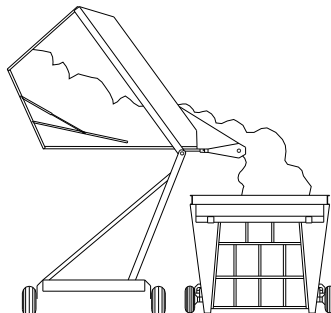
PACK COTTON TO OUTLOAD SIDE OF BOLL BUGGY AND DUMP SECOND LOAD.



MOVE PACKER / DIVIDER BACK TO INLOAD SIDE TO START UNLOAD.



RAISE BASKET AND START CHAIN DUMP, OR IF REGULATOR IS USED, START AT THIS TIME. CONTINUE UNTIL FIRST LOAD HAS BEEN EMPTIED.



MOVE PACKER / DIVIDER BACK TO UNLOAD SIDE UNTIL COTTON SLIDES ONTO CHAIN AND EMPTY SECOND LOAD.



CAUTION: DO NOT LET THE PACKER / DIVIDER COME INTO CONTACT WITH CHAIN & SLAT.

Lubrication and Maintenance

IMPORTANT: Before operating your Boll Buggy, make sure it is properly lubricated and thoroughly inspected. Only a minimum of time and effort is required to regularly lubricate and maintain this machine to insure long life and trouble-free operation.

Lubrication

- ◇ Keep all lubricants and lubrication points free from dirt and grit.
- ◇ Use a general purpose lithium base grease to lubricate the pressure grease fittings.
- ◇ The following lubrication schedule is recommended:

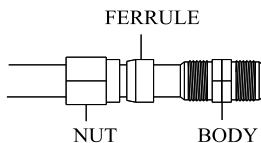
Walking Beams(4-Fittings) Daily
Basket Pivots (2-Fittings) Weekly
Wheel Bearings Repack Yearly

Maintenance

- ◇ Inspect your machine regularly to prevent accidents and breakdowns.
- ◇ Check hitch pin periodically for wear and replace if worn excessively.
- ◇ Check hitch mounting bolts occasionally to make sure they are tight.
- ◇ Check wheel spindle bearing preload after twenty(20) hours operation.

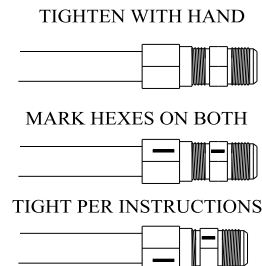
Tube Fitting Assembly

1. Clean all dirt and grit from the I.D. and O.D.
2. Slide the nut and then the ferrule onto the tube. Make sure the tapered end of ferrule points toward the nut.



3. Lubricate all mating surfaces of nut, ferrule and body with a heavy lubricant such as Aeroquip Lube Oil.
4. Place end of tube against standard S.A.E. 37° flare body.

5. Slide the ferrule and nut against body and tighten the nut onto the body "hand tight." Mark the nut in relation to the body for location.



6. Hold tube against body and tighten nut as follows:
 - a. 1 1/4 turns on tube size 3/16" (dash size -3) through tube size 5/8" (dash size -10).
 - b. 1 1/2 turns on tube size 3/4" (dash size -12) through tube size 2" (dash size -32).

Storage

The Boll Buggy should be stored in an enclosed building to prevent hoses, cylinders, and metal surfaces from deteriorating due to weather exposure.

Recommended storage procedure follows:

1. Elevate frame so tires will clear ground.

NOTE: Support frame securely so there is no danger of it falling.

2. Remove clamps from hydraulic hoses going to the tractor and elevate them above the front hydraulic cylinder to prevent oil from seeping out of quick couplers while not in use.

NOTE: When preparing to use machine after storage, check for any oil leaking. If there is any indication of oil leaking from fittings, hoses, or cylinders the hydraulic system should be purged prior to raising the basket. (Follow instructions in manual for hydraulic system purging -page 24.)

Trouble Shooting

NOTE: Step Number 1 in all cases is to familiarize yourself with the information in the owner's manual pertaining to assembly, operation, lubrication, and maintenance.

Trouble	Possible Cause	Possible Remedy
Basket fails to raise.	◇ Hoses not correctly ◇ Tractor system pressure not sufficient ◇ Tractor hydraulic oil level is low.	Connect or insert quick coupler correctly. coupled to tractor. Check tractor system pressure. Fill per purging instructions - page 24.
Basket fails to raise evenly.	◇ System not purged of all air. ◇ Hose is pinched or has a clear restriction. ◇ Defective cylinder due to worn or bad piston seals.	Purge system as described in operation section. Replace hose and re-route so that it is of pinch point. Repair cylinders inspecting all parts for wear. Replace seal kit.
Cotton will not dump out when basket is raised.	◇ Dumping area sloping severely to right.	Move to level area for dumping.