



**3000 / 3250 / 3500**  
**WIDE BODY & XL WIDE BODY SERIES**  
**CADMAN TRAVELLER**



**OPERATOR'S, PARTS and MAINTENANCE MANUAL**

**2020 EDITION**

**TR-MAN-3000**





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## **3000 Series Irrigation Traveller**

We would like to thank you for purchasing your new **Cadman 3000 Series Irrigation Traveller**. You have purchased a product of superior quality that will serve your needs for a long time as long as you follow this manual and safety procedures.



*Figure 1 – 3250WB XL Irrigation Traveller*

*img-01412*

**BEFORE** operating your new **Cadman 3000 series irrigation traveller**, inspect the machine for any damage or parts that may have come loose during shipping. **REPORT ANY DAMAGE TO CADMAN POWER EQUIPMENT LIMITED OR YOUR LOCAL DEALER IMMEDIATELY**

## Warranty Policy

**CADMAN POWER EQUIPMENT LIMITED** warrants that each machine it manufactures shall be free from defects in materials and workmanship. The terms of this warranty are as follows:

- All components manufactured by **CADMAN POWER EQUIPMENT LIMITED** shall be warranted for a period of one (1) year from the date of delivery, except the frame and hose drum structures which shall be warranted for a period of three (3) years.
- **CADMAN POWER EQUIPMENT LIMITED** makes no warranty whatsoever in regard to tires, engines, and other trade accessories used on its equipment. The customer shall rely solely on the warranties offered (if any) by the respective manufacturer of these trade accessories.

The sole obligation to **CADMAN POWER EQUIPMENT LIMITED** under this warranty is limited to the repair or replacement of any part it manufactured, which, in the judgment of **CADMAN POWER EQUIPMENT LIMITED**, failed under normal and proper use and maintenance due to defective materials or workmanship. All freight charges incurred shall be the sole responsibility of the customer.

**CADMAN POWER EQUIPMENT LIMITED** and its dealers (**who are neither authorized nor qualified to undertake any obligations on behalf of CADMAN POWER EQUIPMENT LIMITED**) **DO NOT**, under any circumstances, accept any responsibility for any losses or costs incurred due to parts failure and/or delays during the parts replacement process.

This warranty will be considered void if any alterations or modifications have been made to the machine without the express written consent of **CADMAN POWER EQUIPMENT LIMITED** outlining the nature and the extent of such modifications. **CADMAN POWER EQUIPMENT LIMITED** will not provide any warranty express or implied to any overdue accounts.

**CADMAN POWER EQUIPMENT LIMITED**, whose policy is one of continuous improvement, reserves the right to change specifications and designs without notice or incurring obligation.

The warranties expressed herein are non-transferable and replace any other warranties, either written or verbal, which may have been given or implied.

## **When Applying Liquid Manure**

Current and pending laws in agricultural regions of North America change the ways in which the agricultural community needs to manage their liquid animal waste products. As a manufacturer of agricultural equipment, we feel it necessary to make you aware that the municipal, regional and state governing bodies in your area may have created new laws or updated current laws for nutrient handling practices and procedures. The changes in these laws typically target run-off prevention and soil nutrient loading.

**Run off may result from several factors. Some (but not all) of the factors are:**

- Incorrect application
- Difficult application areas containing steep hills or other features that may make run off more likely to happen
- Changes in weather that would allow run off to happen (sudden storms just before or just after applying, ground frost, etc....)

Constant watch must be kept and immediate action taken when needed to prevent run off from happening.

**Soil nutrient loading depends on several variables. Some (but not all) of these variables are:**

- The type of crop(s) being grown
- The type of soil the crop(s) are growing in
- Nutritional value of what you are applying
- Nutritional needs of the crop(s) and soil they are growing in

Application timing, nutritional value of what you are applying, and the type of soil will determine the intake rate at which liquid may be applied. Soil analysis taken at appropriate times will help you create a correct application plan for your crop(s). In addition; local colleges, universities, and agricultural extension services are a good source of information. They may be able to help you create an application program that will help prevent problems with your application.

**CADMAN POWER EQUIPMENT LIMITED** is unable to provide up-to-date recommendations for the laws you must follow in your area. It is your responsibility to make yourself aware of and follow the law in your area. Please contact your local agricultural representative to obtain the latest information for legal handling and application of nutrient.

## **Safety Precautions**



Please take the time to read and understand this manual to avoid errors and unnecessary risks. If you have any questions or concerns, please contact **CADMAN POWER EQUIPMENT LIMITED** or your local dealer/distributor.

### **FAILURE TO FOLLOW ALL SAFETY INSTRUCTIONS CAN RESULT IN DEATH OR SERIOUS INJURY FOR YOU AND/OR ANY SPECTATORS.**

- **DO NOT** move or operate this machine until you have read and understand these instructions in this manual.
- **NEVER** allow untrained persons to operate this machine.
- **DO NOT** attempt to service this machine while it is in operation.
- **MAKE SURE** all mechanical and hydraulic tension has been released before attempting any service on the machine.
- **CHECK** all fasteners (nuts and bolts) regularly for tightness.
- **PERFORM REQUIRED MAINTENANCE** as prescribed or as necessary to keep this machine in safe operating condition.
- **KEEP ALL SPECTATORS** at a safe distance.
- **STAY CLEAR** of high pressure supply lines, especially when first pressurizing the system.
- **DO NOT** remove or alter any shielding on this machine.
- **MAKE SURE** that the machine is securely anchored (using a tractor) before unwinding the hose.
- **KEEP CLEAR** of all moving parts.
- **NEVER** tow this machine at speeds greater than **10 mph [16 km/h]** and be certain the tow vehicle has adequate braking capacity to maintain safe control at all times.
- **NEVER** tow this machine with the hose loaded with fluid.
- **BE AWARE** of any obstacles (i.e. mail boxes, fence posts, and other equipment) that you may encounter when transporting the machine.
- **REGULAR INSPECTION** of your pipe/hose couplings, tubing and gaskets should be a part of your regular set-up routine. Any defective parts **MUST** be replaced or repaired before the machine is put into service.



This symbol, the **safety-alert symbol**, indicates a hazard. When you come across the **safety-alert symbol** in this manual, make sure you fully understand and abide by the given instructions or warnings.



## Safety Decals

Cadman Power Equipment Limited has determined the potential hazards on your 4000 series irrigation traveller and has labeled the machine accordingly. The safety decals on this machine are there to warn operators of potential hazards. Each safety decal on this machine contains a Signal Word Panel which shows the degree of hazard. Definitions of the Signal Words are as noted below.



*Figure 2 - Danger Decal*

*img-00340-A*

- **DANGER** - an immediate, hazardous situation that if not avoided, WILL RESULT IN DEATH OR SERIOUS INJURY.



*Figure 3 - Warning Decal*

*img-00340-B*

- **WARNING** - a potentially hazardous situation that if not avoided could result in death or serious injury. This includes hazards that are exposed when guards are removed.



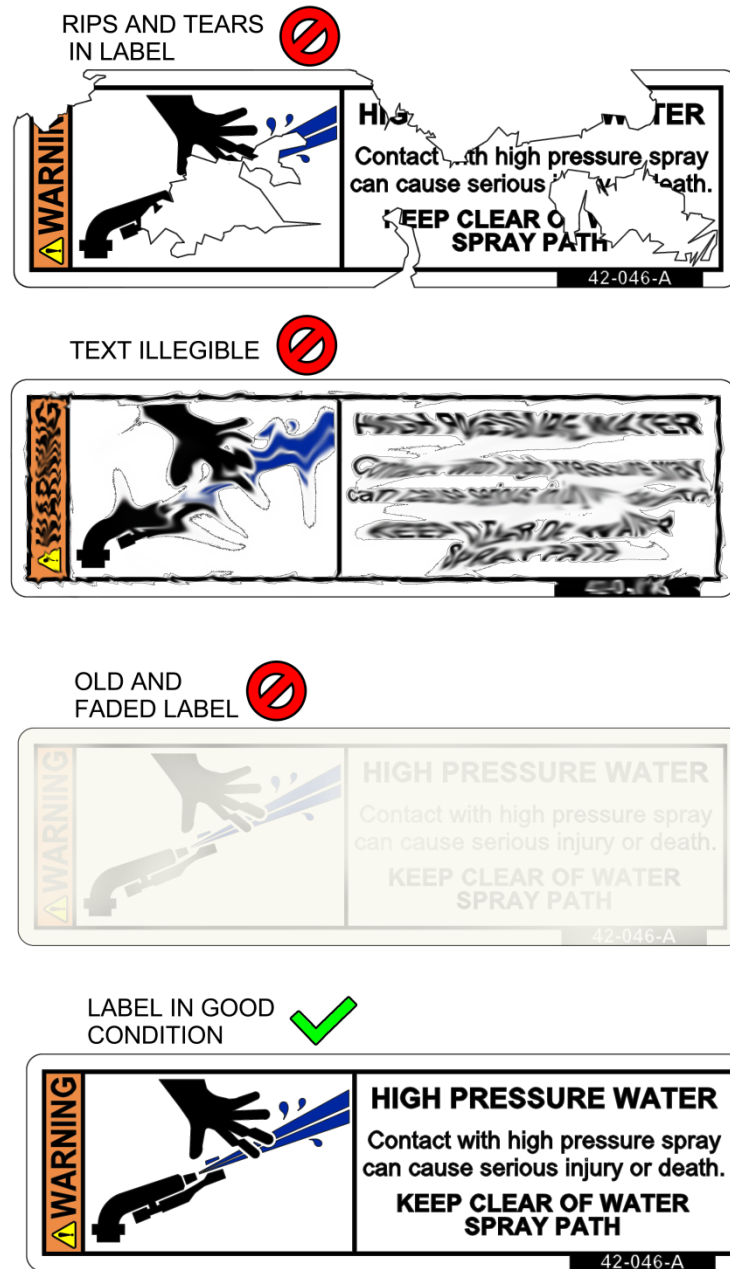
*Figure 4 - Caution Decal*

*img-00340-C*

- **CAUTION** - a potentially hazardous situation that if not avoided may result in minor or moderate injury.

It is important that these decals are properly maintained.

- All safety decals must be clean, clear, and easy to read
- Replace any decal that is not in good condition
- Replace any missing decals, it is important to double check that all labels are on your machine, especially if you have modified your machine or have had your machine serviced



*Figure 5 - Replace Decals*

img-00131-B

## Planning Your Application

Complete the steps shown in order to create a plan to irrigate your field:

### Step 1

- A. If you are using a new traveller for the first time, or a traveller that was drained before storage, you must start somewhere that will allow you to pull out the hose. You must leave at least one full coil of hose on the drum after pulling the hose out. Verify that the hose coils on the base layer are packed tightly with no gaps between coils.

**Failing to leave at least one coil of hose on the traveller drum will result in damage to the hose. You also risk pulling the travelling hose off of the drum barb**

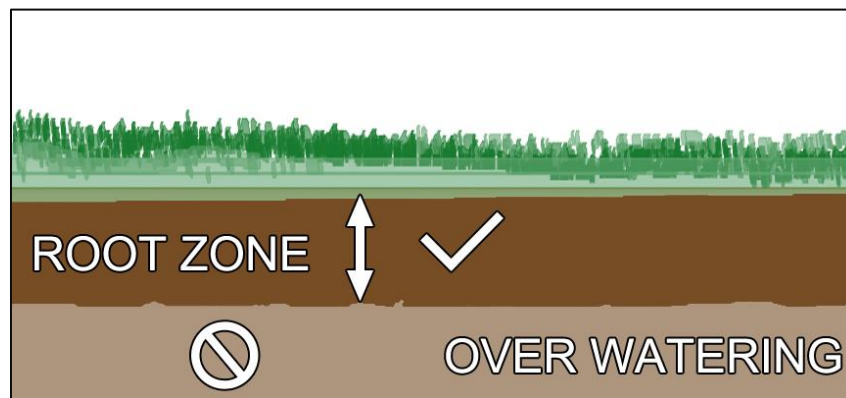


**Damaging the traveller's hose and/or pulling the traveller's hose off of the drum barb will lead to pooling/ponding of water. This will muddy the area around the traveller and may cause injury to operators and/or spectators. This will also damage the traveller**

- B. Check the traveller's fluid levels and verify all fluid levels are correct.

### Step 2

Determine your application depth in inches. Do not irrigate deeper than the root zone of the crops you are irrigating as you will over water. Over watering your crops will result in wasting time and raising irrigation cost of your crops.



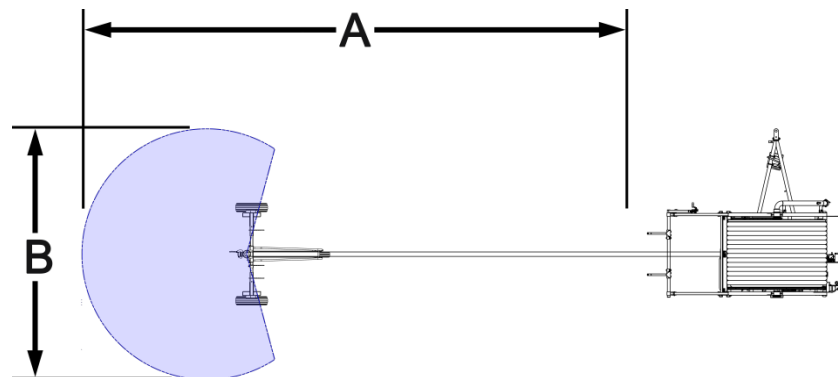
*Figure 6 – Root Zone: Depth of Application*

*img-00197-A*

### Step 3

Divide your field into the least number of sections for complete coverage.

- A. Choose the area you plan to irrigate. If this area is greater than what you can irrigate in one pull you need to divide the area into the least number of sections. Use the performance data tables on page 131 to determine your traveller's irrigation area.



*Figure 7 – Reel Coverage*

*img-00193-A*

The total length of your irrigation pull can be calculated from the following equation

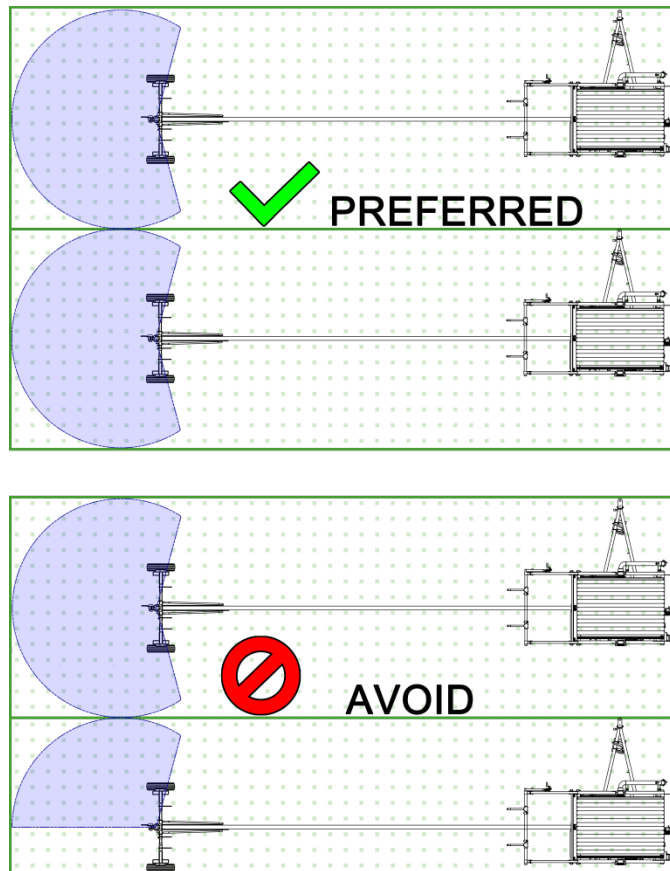
$$A = \frac{B}{2} + C$$

- A** is the total irrigated length in feet
- B** is the diameter of your sprinkler throw in feet. See page 128 for sprinkler gun performance data
- C** is the length of your machine's hose. See one of the tables below for your traveller's hose length.

**3000 Series Hose Lengths:**

WB MODEL	HOSE LENGTH (FT)
3000WB	1075
3000XL-WB	1390
3250WB	975
3250XL-WB	1250
3500WB	925
3500XL-WB	1150

- B. Avoid quarter circle irrigation pulls whenever possible. Reduce your sprinkler gun's nozzle size and/or lowering the operating pressure may reduce the spray so that you can irrigate your field without using quarter circle irrigation pulls. If you change your flow rate you must adjust your retrieval rate to match the new flow rate.



*Figure 8 – Avoid Quarter Circle Applications*

img-00199-A

- C. If you cannot avoid a quarter circle irrigation pull, prepare the travel lane with a shallow trench for the hose to follow. You may also add weights to the gun cart to assist in the gun cart track in a straight line. If you are unable to set the gun cart up for a quarter circle irrigation pull then you must change your plan to use full irrigation pulls.
- D. If you need to perform a curved irrigation pull, you must pull out at least 200 feet (61 meters) of hose straight out of the machine before starting a long, gradual curve. The curve must not form a 90 degree bend.



**Failing to provide a trench or furrow during a quarter circle pull or curved pull will lead to the gun cart tracking unpredictably. This may result in the gun cart colliding with anything in the gun cart path.**

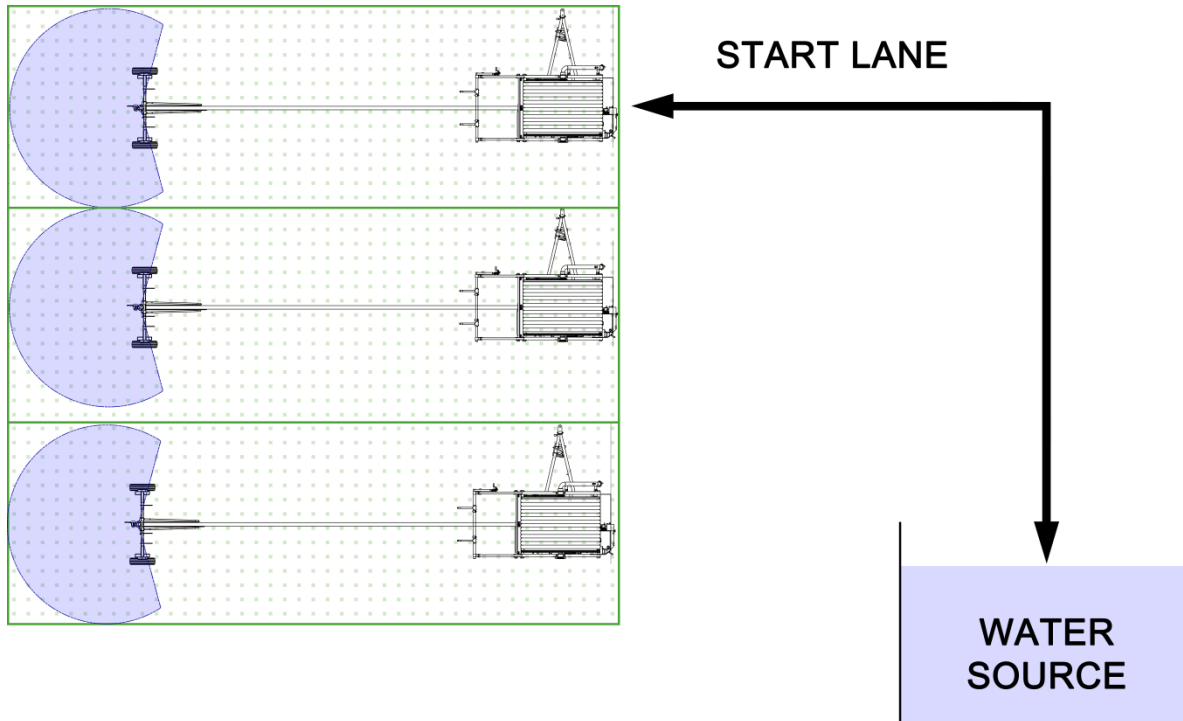
**Collision with an unpredictably tracking gun cart will cause serious injury to operators and/ or spectators. It will also cause damage to the gun cart and any object it collides with**

- E. Plan to leave open travel lanes and ample head lands. Travel lanes and head lands that have been tilled and cultivated will lower the towing effort needed to pull the gun cart into position. Hilled and cultivated lands will also provide guidance for the hose. Make sure to provide ample head land space to safely turn your traveller and set it up.
- F. Some crops (e.g. alfalfa, peas, potatoes, sod) will provide high resistance to pulling the hose out. If you irrigate a crop that provides high resistance for hose pull out decoupling the feeder hose at the mainline valve and pulling the hose out slower may assist hose pull out.



**Decoupling the feeder hose at the mainline valve will drain the irrigation traveller's hose. The hose contains several hundred gallons of water and will muddy the area around the traveller. This may cause injury to operators and/or spectators**

- G. Start your irrigation pull at the section furthest from your water source when possible. This will prevent changing water sources during a multiple pass irrigation pull.



*Figure 9 – Multiple Pass Setup*

*img-00233-A*

- H. Pull the hose up or down sloping terrain when possible. If operating on the side of a hill cannot be avoided you must dig a hilled trench for the hose to follow in addition to adding extra weight to the gun cart to prevent it from tipping and falling downhill.



**Failing to provide a hilled trench and/or adding weights to the gun cart will result in the gun cart sliding or falling downhill during operation. This may cause serious injury and/or death to operators and/or spectators. This will also cause damage to the gun cart**

Make sure to note all the obstacles in the area you want to irrigate. You will need to adjust your plan for obstacles in order to safely irrigate the area you are planning for.

- I. Determine the retrieval rate using the sprinkler gun data charts, system pressure, and field width. See the retrieval rate selection example below.

## **Retrieval Rate Selection Example**

For this example a **3250 WB traveller** is fitted with a **Nelson SR150** sprinkler gun. The **Nelson SR150** will be using a **1.18 inch ring nozzle** operating at **70 psi**.

Use the above information to plan for a field using 250 foot lane spacing that needs 0.75 inches of irrigation depth.

- A. Use example table 1 to find the GPM you will be pumping. For this example, cross the **1.18 inch ring diameter** with the **70 psi operating pressure**.

A 1.18 inch ring nozzle operating at 70 psi will irrigate at 245 GPM.

- B. Next, use example table 2 to look up the time it will take to cover one acre in minutes by crossing the **GPM from step A** and the **0.75 inch irrigation depth** used in this example. If the GPM from step A does not match with one of the flow rates in example table 2, the flow rate in example table 2 that is closest to the GPM from step A is chosen.

A flow rate of 245 GPM with an irrigation depth of 0.75 inches will give a time of 81 minutes.

- C. Use example table 3 to look up the retrieve rate you need by crossing the **time needed to cover 1 acre** from step B with the **250 foot lane spacing**.

81 minutes to cover 1 acre with a 250 foot wide lane will give a retrieval rate of 26 inches per minute.

- D. You must set the gun up so that the 250 foot section is covered in addition to enough overlap to provide adequate watering at the edge of your field.



**The following charts are to be used as a guide only. Always verify the application amount with rain gauges to confirm that your application is correct**





**Example Table 1: Nelson 150 Series Big Gun® (27 Degree Trajectory, Ring Nozzle)**

NOZZLE PSI	Ø 0.86		Ø 0.97		Ø 1.08		Ø 1.18		Ø 1.26		Ø 1.34		Ø 1.41	
	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
50	100	245	130	265	165	285	205	300	255	320	300	335	350	350
60	110	260	143	280	182	300	225	315	275	335	330	350	385	365
70	120	270	155	290	197	310	245	330	295	350	355	365	415	380
80	128	280	165	300	210	320	260	340	315	360	380	380	445	395
90	135	290	175	310	223	330	275	350	335	370	405	390	475	405
100	143	300	185	320	235	340	290	360	355	380	425	400	500	415
110	150	310	195	330	247	350	305	370	370	390	445	410	525	425

Disclaimer: Nelson Big Gun® performance data has been obtained under ideal test conditions and may be adversely affected by wind, poor hydraulic entrance conditions or other factors. Nelson Irrigation Corporation makes no representation regarding droplet condition, uniformity or application rate.

**Example Table 2: Time required to water one acre (in min.)**

GPM	PRECIPITATION RATE ( ACRE INCHES )								
	0.20"	0.30"	0.40"	0.50"	0.75"	1.00"	1.25"	1.50"	2.00"
150	36	54	72	91	136	181	226	272	----
175	31	47	62	78	116	155	194	233	----
200	27	41	54	68	102	136	170	204	272
225	24	36	48	60	91	121	151	181	241
250	22	33	43	54	<b>81</b>	109	136	163	217
275	20	30	39	49	74	99	123	148	197
300	18	27	36	45	68	91	113	136	181
350	16	23	31	39	58	78	97	116	155
400	----	20	27	34	51	68	85	102	136
450	----	18	24	30	45	60	75	91	121
500	----	16	22	27	41	54	68	81	109
550	----	15	20	25	37	49	62	74	99
600	----	----	18	23	34	45	57	68	91
650	----	----	17	21	31	42	52	63	84

**Example Table 3: Retrieval rate (in inches)**

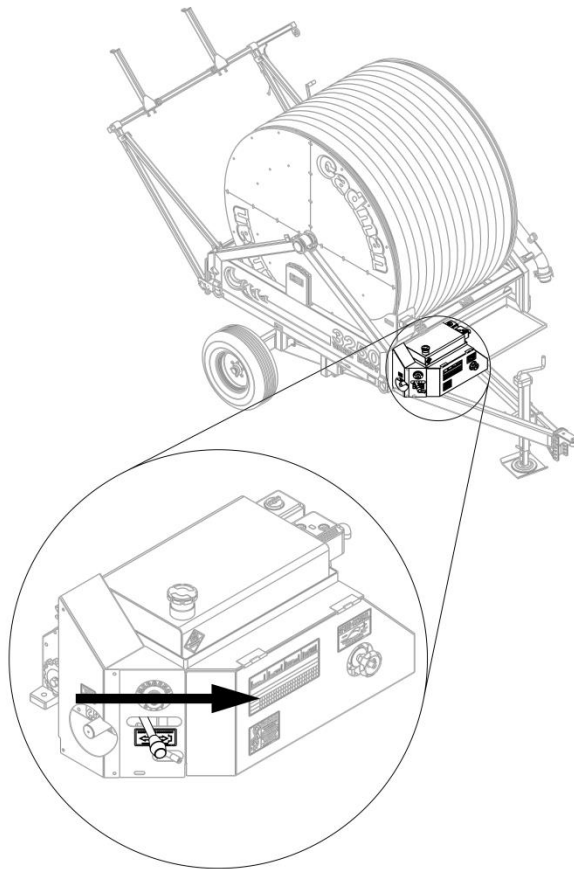
MIN. / ACRE	LANE SPACING ( FEET )								
	200	225	250	275	300	325	350	375	400
15	----	----	----	127	116	107	100	93	87
20	----	116	105	95	87	80	75	70	65
25	105	93	84	76	70	64	60	56	52
30	87	77	70	63	58	54	50	46	44
35	75	66	60	54	50	46	43	40	37
40	65	58	52	48	44	40	37	35	33
45	58	52	46	42	39	36	33	31	29
50	52	46	42	38	35	32	30	28	26
60	44	39	35	32	29	27	25	23	22
70	37	33	30	27	25	23	21	20	19
80	33	29	<b>26</b>	24	22	20	19	17	16
90	29	26	23	21	19	18	17	15	15
100	26	23	21	19	17	16	15	14	13
125	21	19	17	15	14	13	12	11	10
150	17	15	14	13	12	11	10	----	----
175	15	13	12	11	10	----	----	----	----
200	13	12	10	10	----	----	----	----	----
225	12	10	----	----	----	----	----	----	----
250	10	----	----	----	----	----	----	----	----

## **3000 Series Traveller Start Up**

Prepare your 3000 series traveller for use in the field by completing the following steps in order:

### **Step 1**

- A. Verify that the drive system is engaged. If the drive system is not disengaged you must disengage it before towing.



*Figure 10 – Engage Drive System*

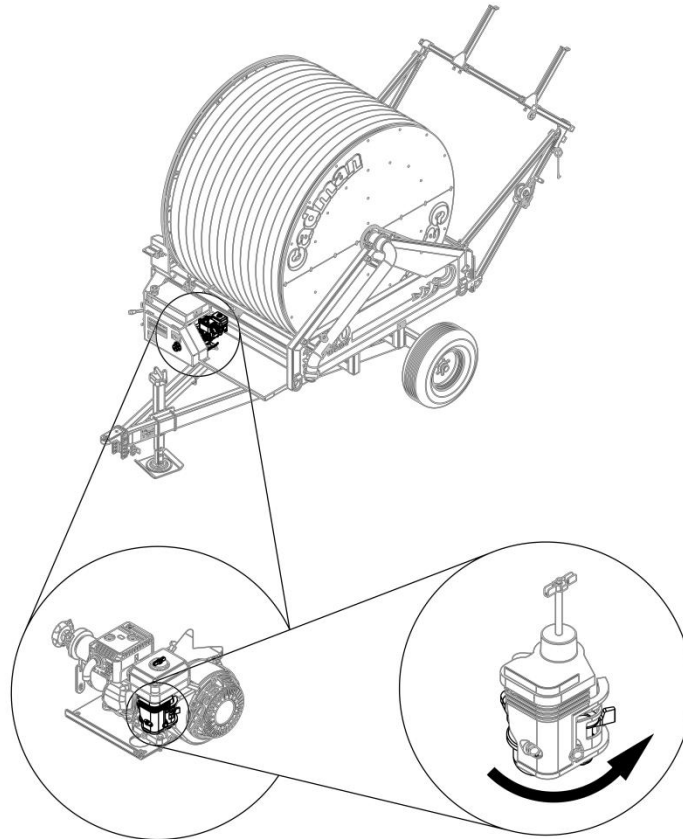
*img-00231-A*



**Failure to verify that the drive system is engaged before towing will result in excess shock in the drive system. This may lead to damage to the traveller**

- B. Verify the engine fuel valve is in the off position by pulling it to the right. The engine fuel valve is located on the rear side of the engine as shown. If the engine fuel valve is not off you must switch it to the off position before towing.

If you need to shut the engine fuel valve off immediately after use, avoid touching the engine.



*Figure 11 – Shut Fuel Valve*

*img-00263-A*



**Failure to verify that the engine fuel valve is off before towing will result in the fuel system remaining on during transport. This may lead to damage to the traveller**



**The engine will be hot due to running continuously while doing irrigation pulls. Touching the engine during, or after an irrigation pull without time to cool down will lead to operator injury**

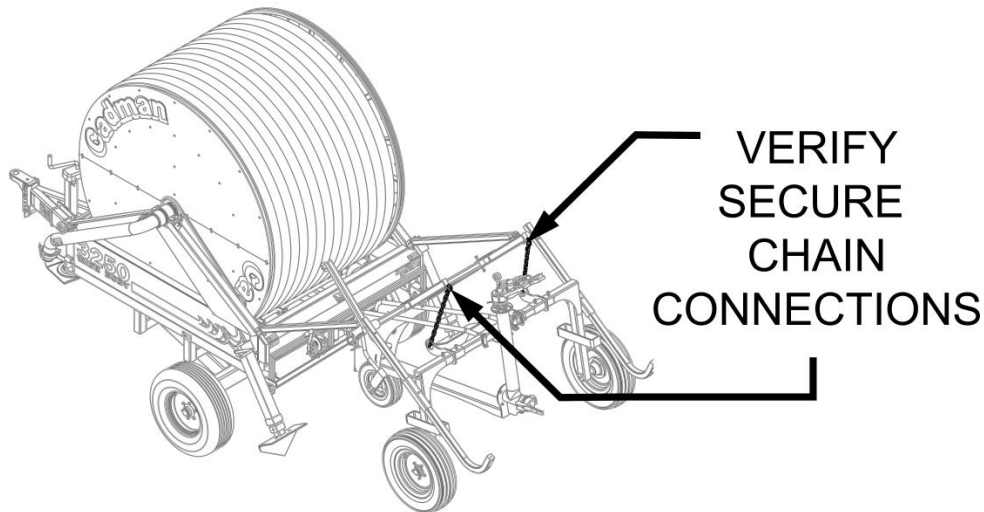
C. Verify that the drum brake is applied. If the drum brake is not applied, you must apply it before towing.



Failure to verify that the drum brake is applied may lead to the drum rotating during transport. This may lead to damage to the traveller

## **Step 2**

A. Verify that the gun cart lift chains are secure.



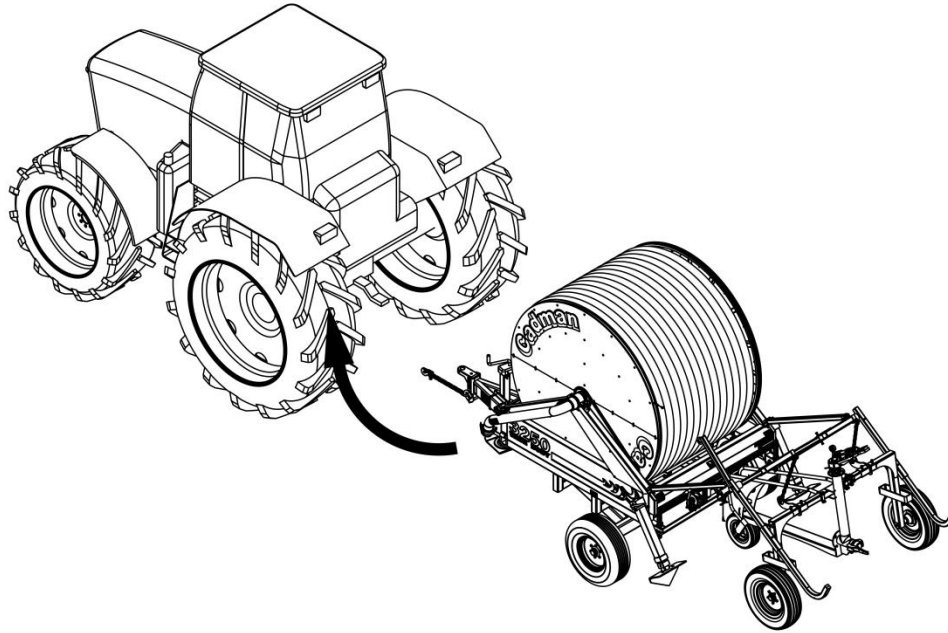
*Figure 12 – Verify Gun Cart Chain Connection*

*img-01331*



Failing to verify that the gun cart lift chains are secure may lead to the gun cart swinging and/or falling off the traveller during transport. This may cause serious injury and/or death to operators and or spectators. This will also damage the gun cart, and may lead to damage to the traveller

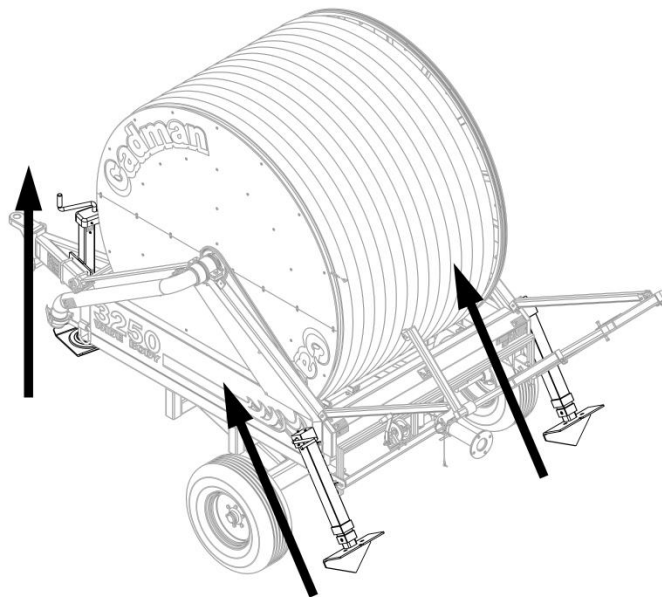
B. Hitch the traveller to your tow vehicle, then attach the safety chain



*Figure 13 – Connect Safety Chain*

*img-01332*

C. Raise the tongue jack and retract the rear stabilizers, then tow your traveller to the irrigation site. Do not exceed 10 mph (16 km/h) while towing.



*Figure 14 – Raise Tongue Jack and Stabilizers*

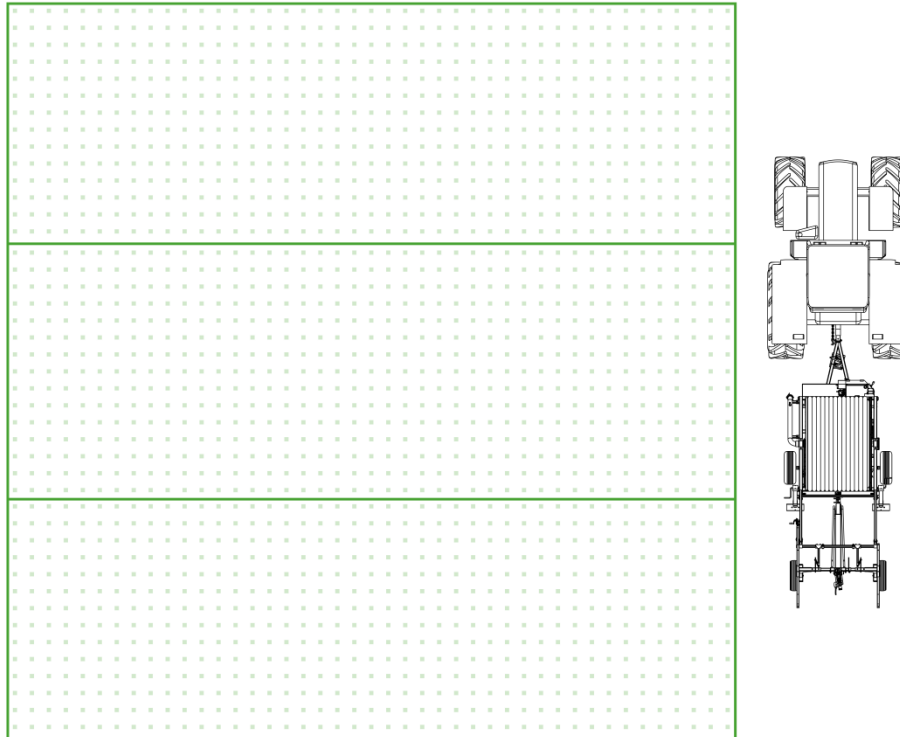
*img-01333*



Towing faster than 10 mph (16 km/h) during transport may lead to wheel separation, tow vehicle/traveller separation, and/or a rollover. This will result in serious injury and/or death to operators and/or spectators. This will also damage to the traveller

### **Step 3**

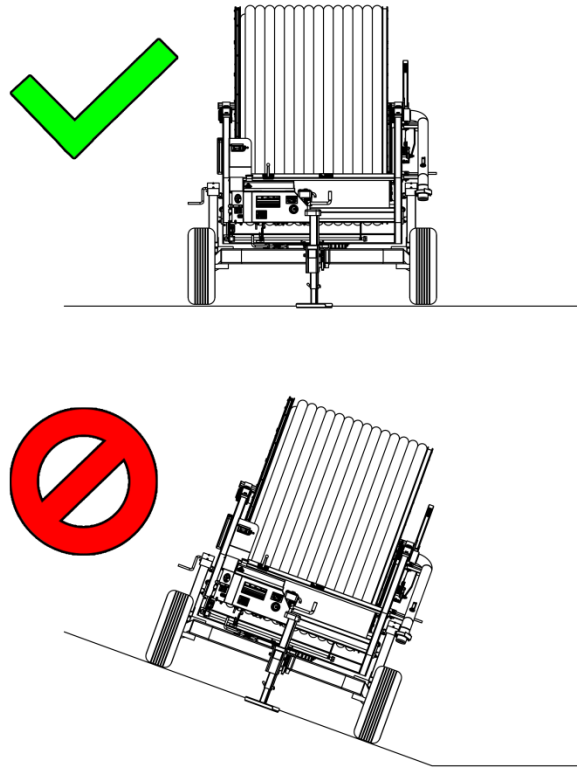
- A. Once you arrive at the irrigation site, park at a right angle to the lanes you will be irrigating.



*Figure 15 – Parking at Right Angle to Field*

*img-01334*

- B. Verify that the traveller is resting on firm and level ground, and then lower the tongue jack to level the traveller.



*Figure 16 – Work on Firm and Level Ground*

*img-00119-A*

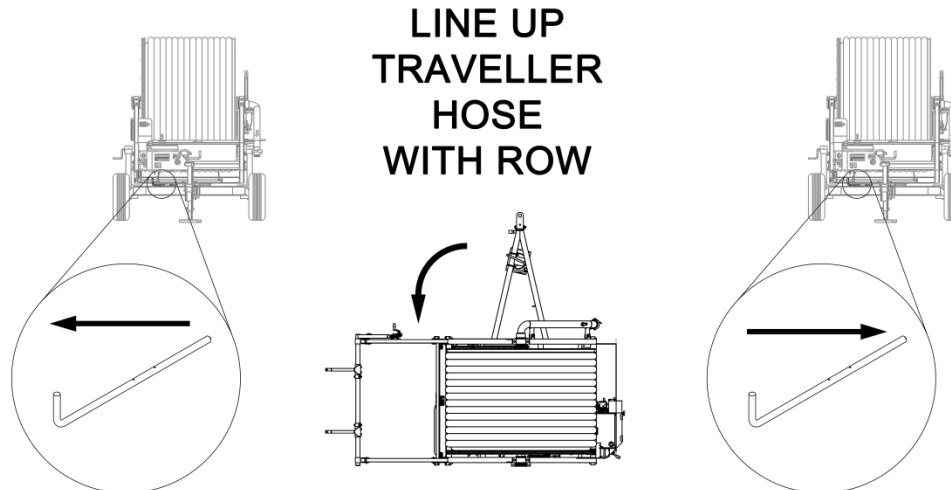


**Failing to work on firm and level ground will not give the traveller a steady base to irrigate from, and may result in the traveller tipping over. This will cause serious injury and/or death to operators and spectators. This will also cause damage to the traveller**



**Step 4**

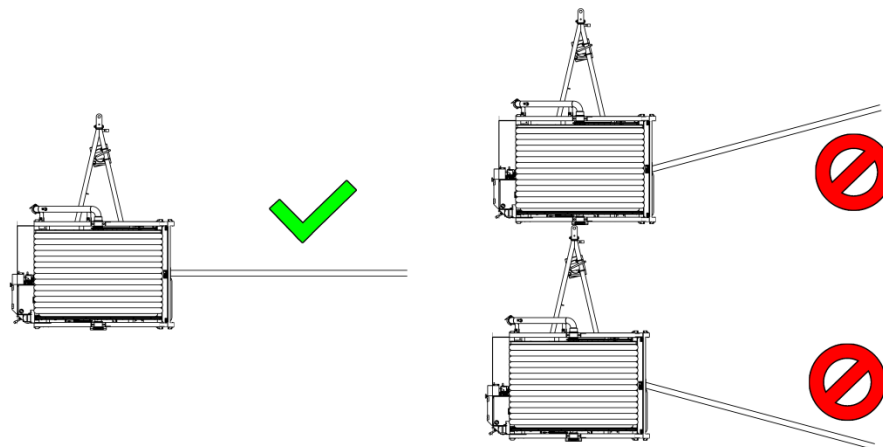
- A. Release the turntable lock by pulling it out. Then rotate the traveller to your start position. Once you have rotated your traveller to the start position.



*Figure 17 – Rotate Upper Frame*

*img-00239-A*

- B. Verify that you can pull the hose out of the traveller in a straight line, and then engage the turntable lock by pushing it in. If the hose is not travelling through the indexer in a straight line, see the procedure for adjusting the indexer on page 125.



*Figure 18 – Correct Upper Frame Position*

*img-00240-A*



**Failing to pull the hose out of the machine in a straight line will place excess strain on the traveller. This will lead to damage to the indexing system, hose, and/or the traveller**

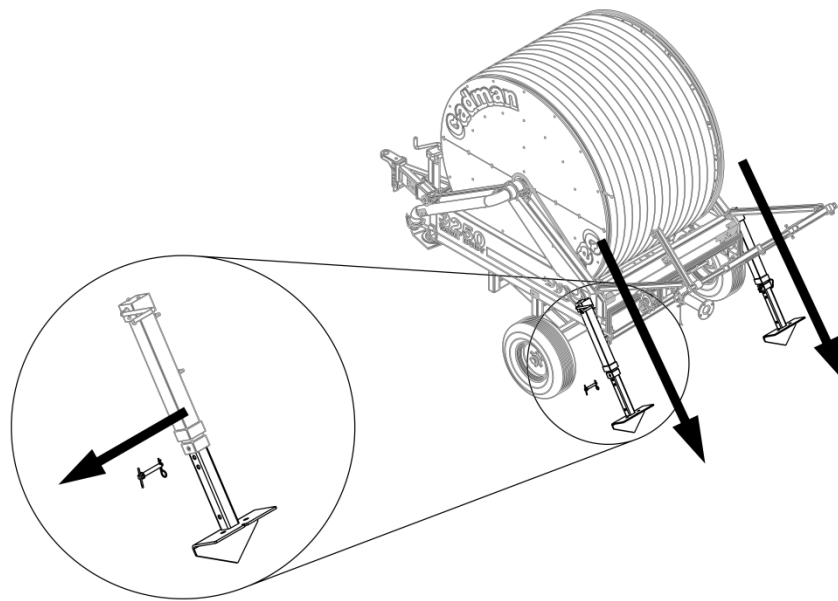
- C. If you need to do a rear pull, you must leave a tractor hitched to the traveller. The tractor must be left in gear in addition to applying the parking brake. You must leave the tractor hitched to the machine for the duration of the pull in order to safely stabilize the traveller.



**Failing to leave a tractor hitched to the traveller during a rear pull will lead to an unstable traveller during operation. The traveller may tip, and may cause serious injury and/or death to operators and spectators. This will also damage the traveller**

## **Step 5**

- A. Remove the pins holding the stabilizers in place, and then fully lower both stabilizers into the ground. Do not operate your traveller without both stabilizers fully lowered.



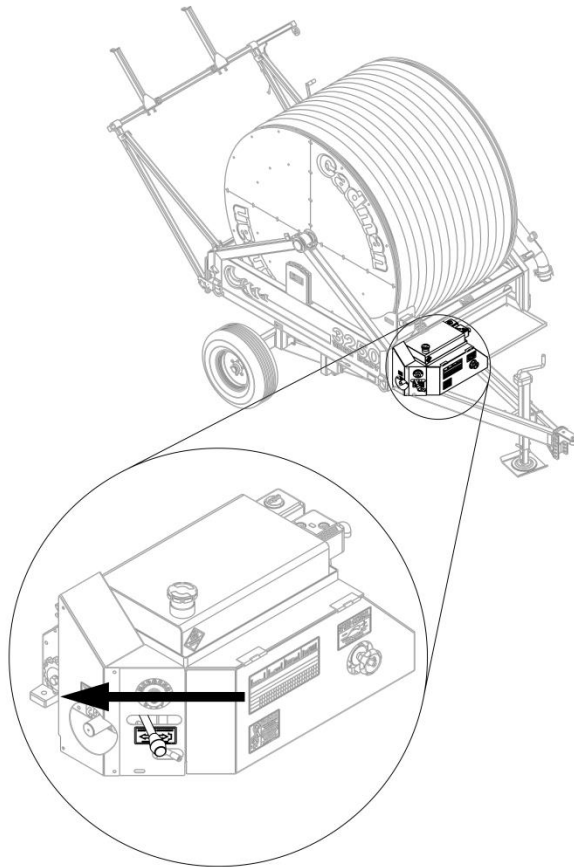
*Figure 19 – Extending Stabilizers*

*img-00241-A*



**Failing to fully lower the traveller stabilizers for an irrigation pull will lead to an unstable traveller during operation. The traveller may tip, and may cause serious injury and/or death to operators and spectators. This will also damage the traveller**

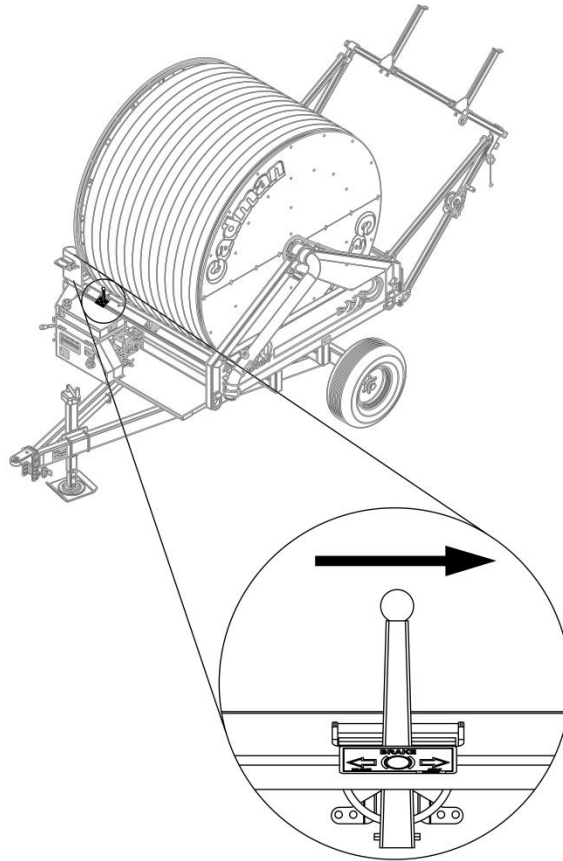
- B. Disengage the drive system



*Figure 20 –Disengage Drive System*

*img-00242-A*

- C. Adjust the brake handle so a slight amount of brake tension is applied. There needs to be enough tension to prevent the hose from going loose on the drum if the tractor pulling out the hose stops.

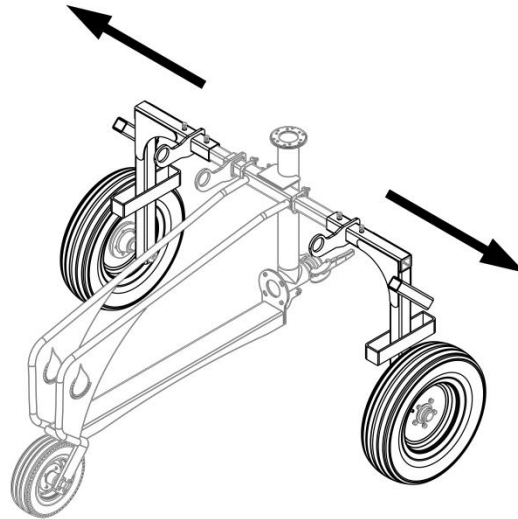


*Figure 21 – Adjust Brake Tension*

*img-00243-A*

**Step 6**

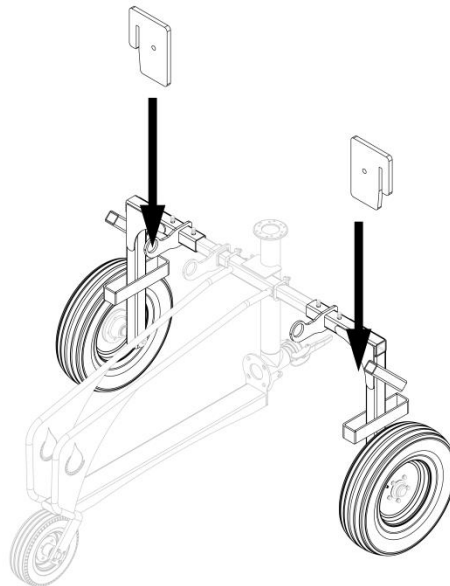
- A. Set the gun cart track width as wide as possible.



*Figure 22 – Adjust gun Cart Width*

*img-01335*

- B. If your flow rate is 240 GPM or higher, or if you are irrigating on uneven terrain you must add weights to the gun cart to stabilize it.



*Figure 23 – Gun Cart Weight*

*img-00258-B*

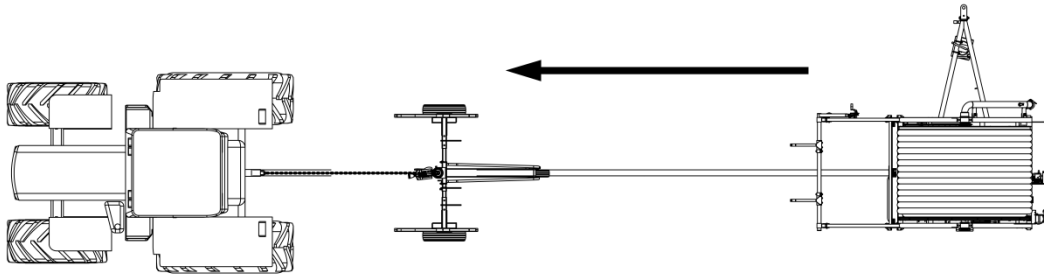
Additional weight can be added by loading the rear gun cart tires with ballast such as beet juice. Suitcase weights for tractors may also be used.



Failing to stabilize the gun cart will lead to the gun cart being unstable during an irrigation pull. This may cause the gun cart to tip over, and will result in serious injury and/or death to operators and/or spectators. It will also damage the gun cart

## **Step 7**

- A. Lower the gun cart to the ground using the hand winch on the cart lift, then remove the lift chains from the gun cart
- B. Attach the gun cart to your tractor's draw bar using the gun cart tow chain, and then tow the gun cart to the start of the irrigation pull. You must pull the hose in a straight line while towing the gun cart to its start position. Do not exceed 3 mph (5 km/h) when towing the gun cart, and do not stop suddenly when stopping is needed.



*Figure 24 – Towing Gun Cart*

*img-01336*

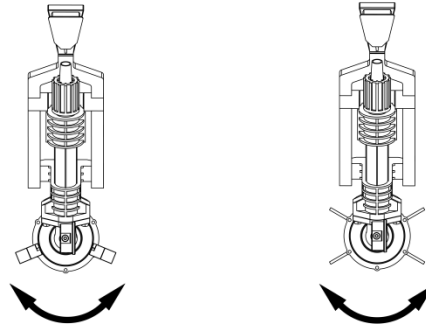


Towing above 3 mph (5 km/h) and/or stopping suddenly will result in pulling the hose out unsafely. Pulling the hose out unsafely may cause you to pull the hose off of the gun cart. This may result in serious injury and/or death to operators and/or spectators. This will also damage the traveller

**Step 8**

- A. Install the nozzle you will be using and tighten the nozzle cone.
- B. Set the stops on the sprinkler gun.

C CLAMP STOPS      WIRE STOPS

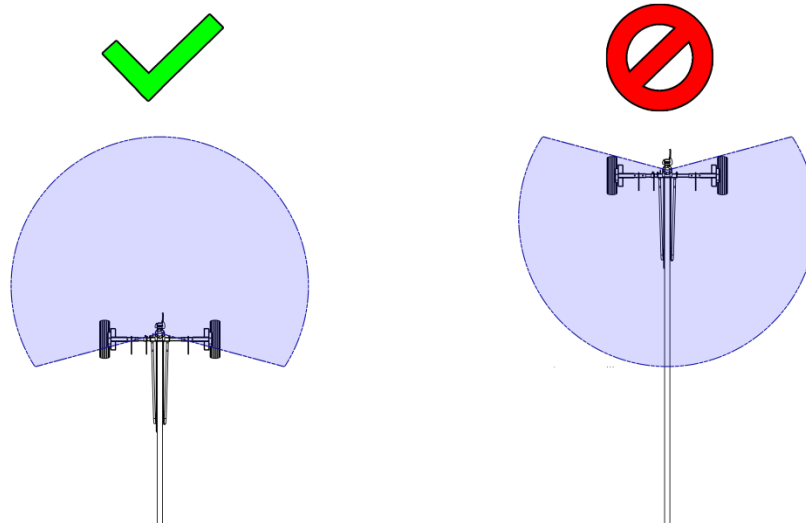


SET FOR 210 DEGREE TO  
270 DEGREE ROTATION

*Figure 25 –Set Sprinkler Gun Stops*

*img-01337*

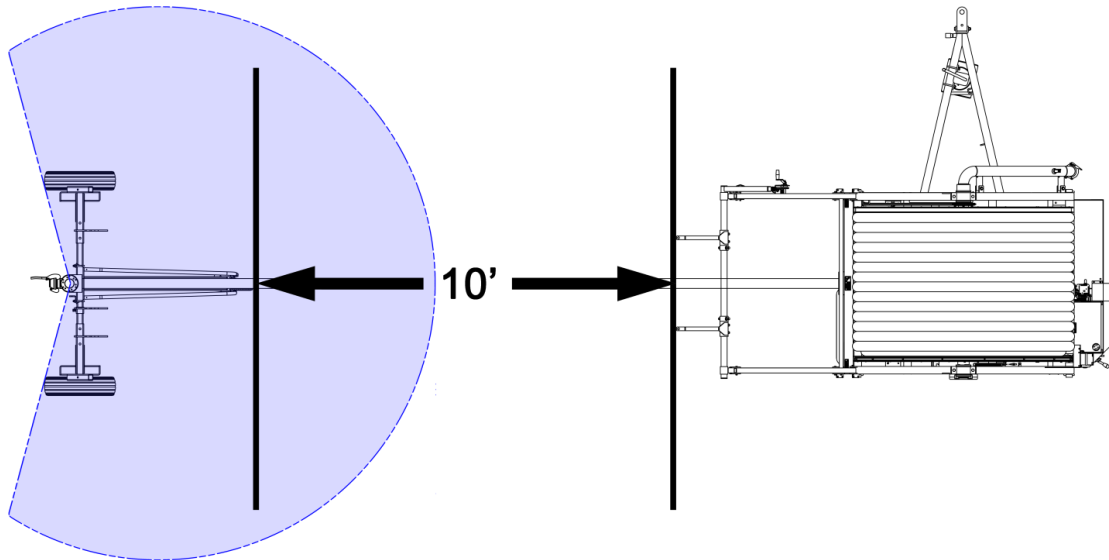
Verify that the sprinkler gun will irrigate behind the gun cart to keep the gun cart's travel path dry.



*Figure 26 –Correct Spray Setting*

*img-00201-A*

- C. If you need to set your sprinkler gun to irrigate ahead of the gun cart's travel path, you must stop the gun cart at least 10 feet (3 meters) from the traveller.



*Figure 27 – Stop 10 Feet Before Traveller*

*img-01338*



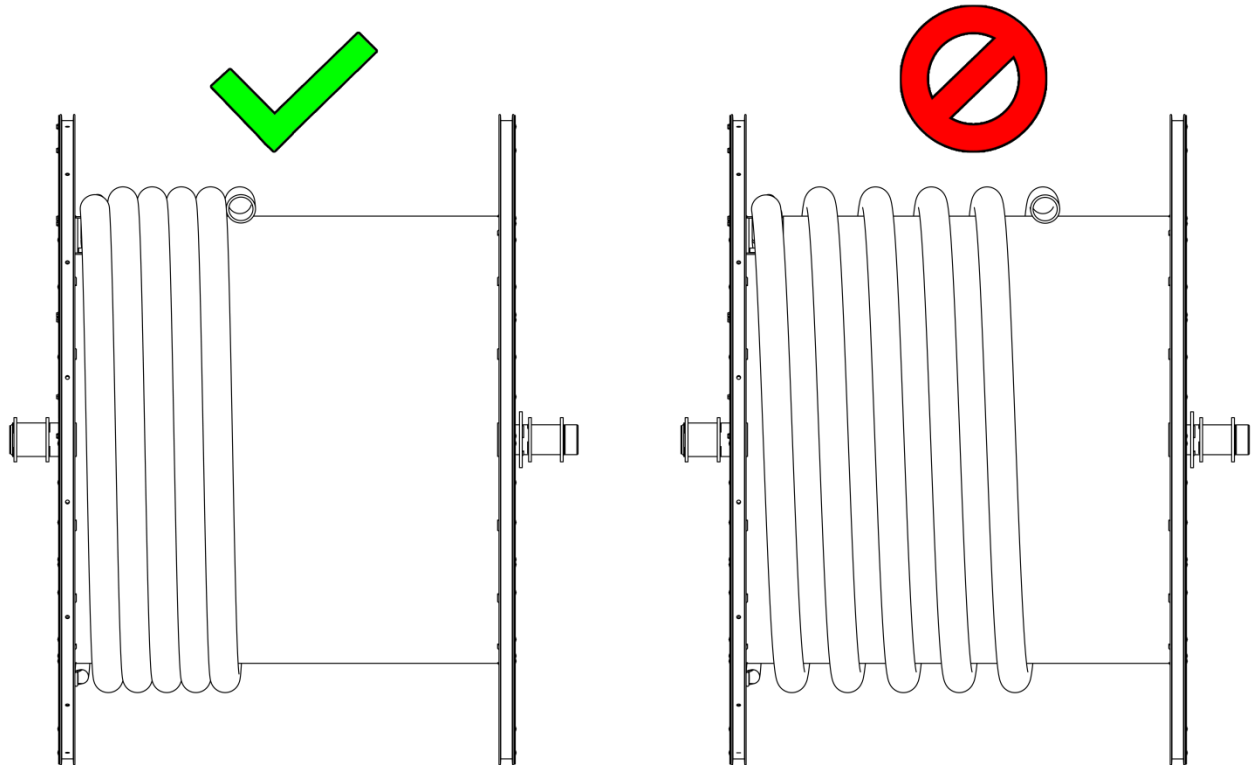
**Failing to stop at least 10 feet before the traveller if you irrigate ahead of the gun cart will result in the gun cart colliding with the traveller. This will result in serious injury to operators and/or spectators. This will also damage the gun cart as well as the traveller**



## **Step 9**

- A. Verify that the area surrounding the traveller and gun cart will be free and clear of all obstacles, then return to the traveller to inspect the hose wrapping on the drum.

The hose must fit tightly together with no gaps between coils. If the hose coils contain gaps then you must close all gaps between the coils before continuing.



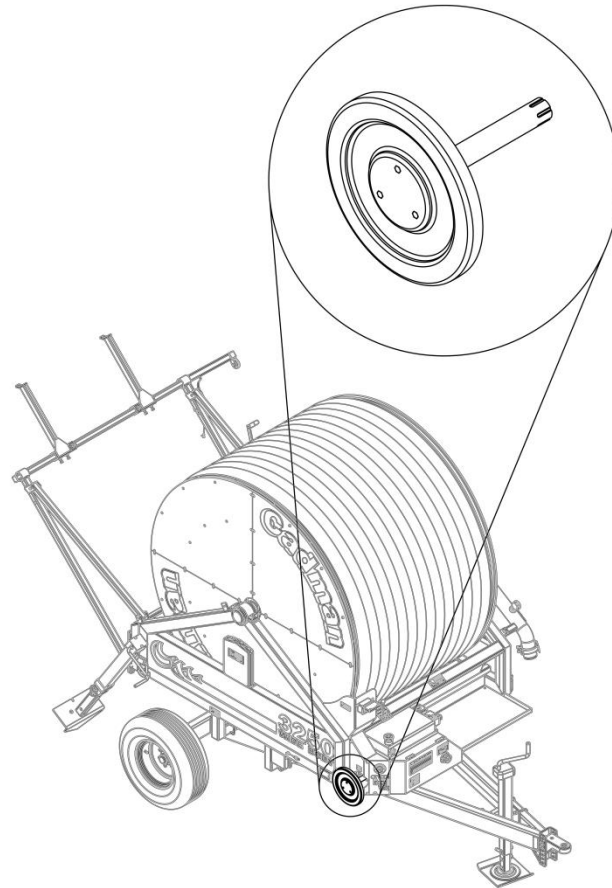
*Figure 28 – Spool Condition*

*img-00245-A*



**Failing to close gaps between the coils on the hose will result in misaligning the hose during a pull. This will result in damage to the traveller's indexing system, hose, and/or drum**

- B. If needed, rotate the drum using the hand crank. Remove the hand crank and store it while not in use. Do not operate the traveller for an irrigation pull with the hand crank attached to the traveller drive.



*Figure 29 –Hand Crank*

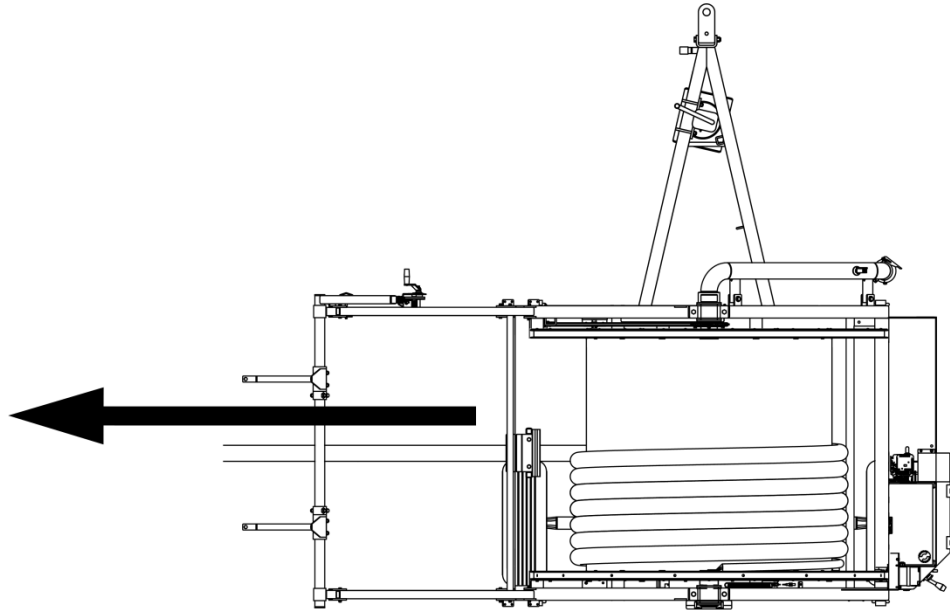
*img-01339*



**Failing to remove the hand crank from the traveller drive before operating the traveller may result in an operator, spectator, and/or objects coming into contact with the hand crank. This will result in serious injury and/or death to operators**

## **Step 10**

Verify that the hose will travel in a straight line through the indexer. If the hose is not travelling through the indexer in a straight line, see the procedure for adjusting the indexer on page 125.



*Figure 30 –Indexer/Hose Alignment*

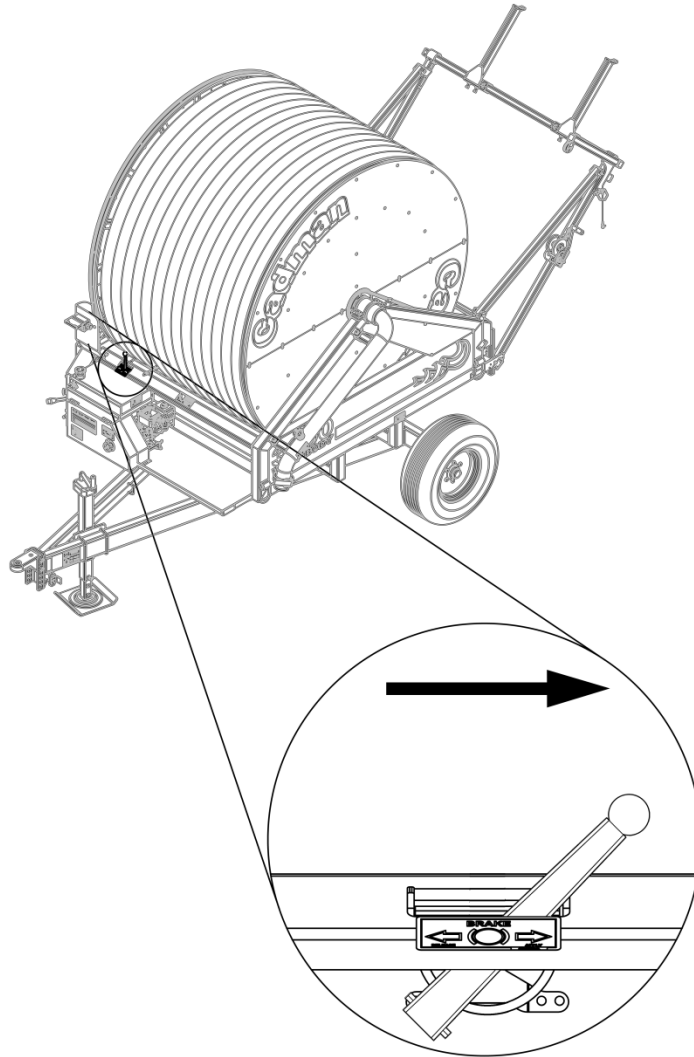
*img-00238-A*



**Failing to adjust the hose will result in the traveller operating with the hose at an angle. This will result in improper irrigation pulls. This will also damage the traveller's indexing system, hose, and/or drum**

## **Step 11**

Adjust the brake handle to fully apply the brake after verifying the hose fits tightly together with no gaps between coils on the drum.



*Figure 31 – Fully Apply Brake*

*img-01340*

## **Step 12**

- A. Connect your source to the traveller's inlet pipe. Verify that the mainline connection and inlet pipe connection are secure.



**Failing to verify secure connections will lead to pooling of water. This will muddy the area around the traveller and may cause injury to operators and/or spectators**

- B. Verify that all operators and/or spectators are free and clear of the areas around the traveller and gun cart. Slowly bring everything up to a pressure of 50 psi (345 kPa) to purge air from all hoses and the traveller. Once air has been completely purged from all hoses and the traveller, slowly raise the pressure up to a maximum of 150 psi (1,034 kPa).



**Failing to remain free and clear of the areas around the traveller and gun cart may result contact with the gun discharge. In addition, any connection that has not been secured may break free.**

**Coming into contact with the high pressure water stream and/or any hardware from a broken connection will result in serious injury and/or death to operators and/or spectators. It may also damage the traveller.**

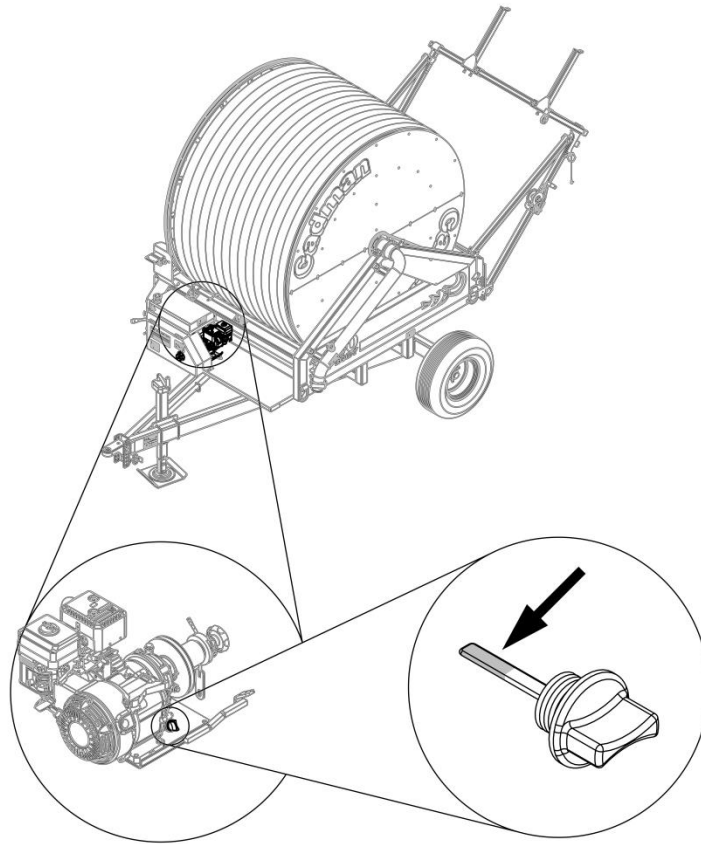
An inlet pipe pressure range of 120 psi (827 kPa) to 150 psi (1,034 kPa) will result in a pressure range of 50 psi (345 kPa) to 110 psi (758 kPa) at the sprinkler gun. This will result in even, uniform irrigation pulls if you have selected an appropriate nozzle setup that receives an appropriate flow volume.

## **3000 Series Traveller Operation**

After completing the equipment setup, begin your irrigation pull by completing the following steps in order:

### **Step 1**

- A. Verify you have enough fuel in the tank to complete an irrigation pull. Then verify that there is enough engine oil in the engine.



*Figure 32 – Check Engine Oil*

*img-00246-B*



**Failing to verify the oil level may result in running the engine dry. Running the engine dry will seize it, causing damage to the traveller**

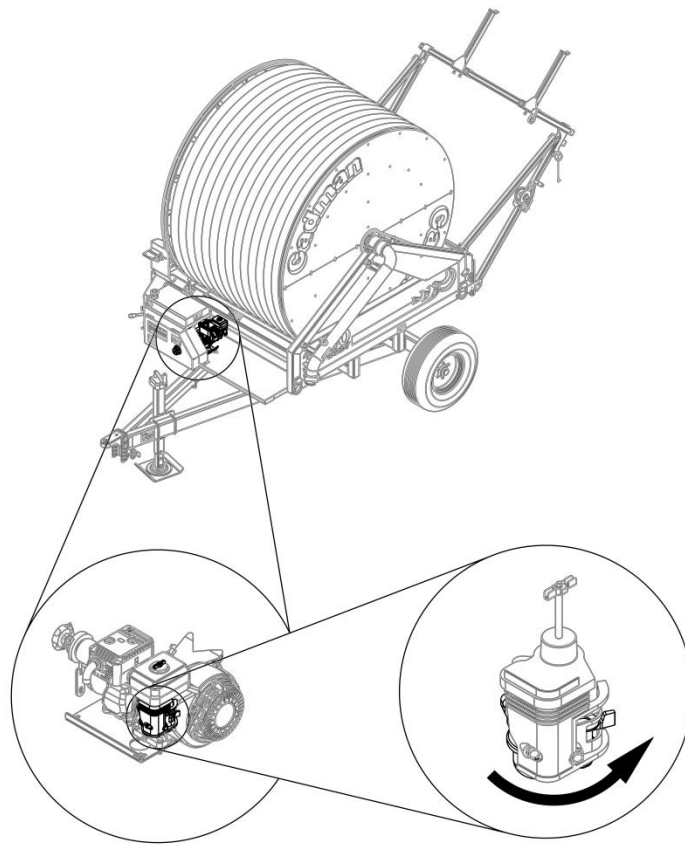
- B. When you need to refuel, verify that the engine is off. Then refill the fuel tank slowly to avoid fuel spills.



Filling the fuel tank quickly may result in fuel spills on the traveller. This may result in the engine catching fire, and may cause serious injury and/or death to operators and/or spectators. This will also damage the traveller

For gasoline engines: minimum 87 octane rated gasoline is required, use unleaded or low lead gasoline when possible

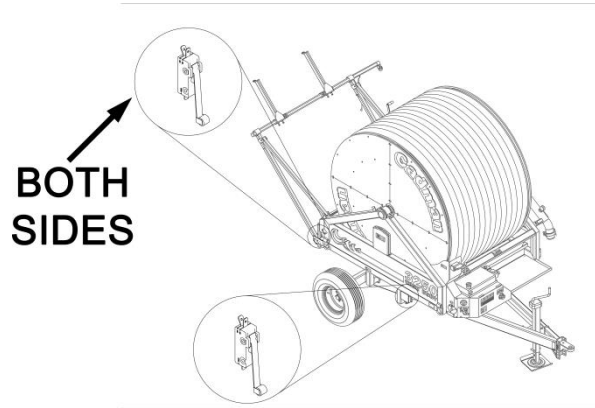
C. Open the fuel valve on the engine, and then start it.



*Figure 33 – Open Fuel Valve*

*img-00263-A*

If the engine does not start after several attempts verify that all three engine shutoff switches are fully released.



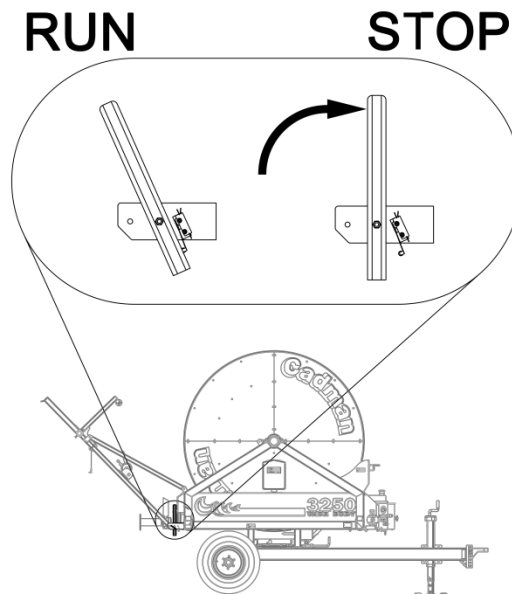
*Figure 34 – Shutoff Switch Locations*

*img-01341*

- D. Once the engine is running smoothly, verify that each engine shutoff switch will shut off the engine.

To verify that the two engine shutoff switches at the rear of the traveller are working, hold one of the engine shutoff switches closed while lifting the bar to the stop position while the engine is running. The engine should automatically shut down.

Do not operate the traveller if one or more safety switches fails to shut the engine down.



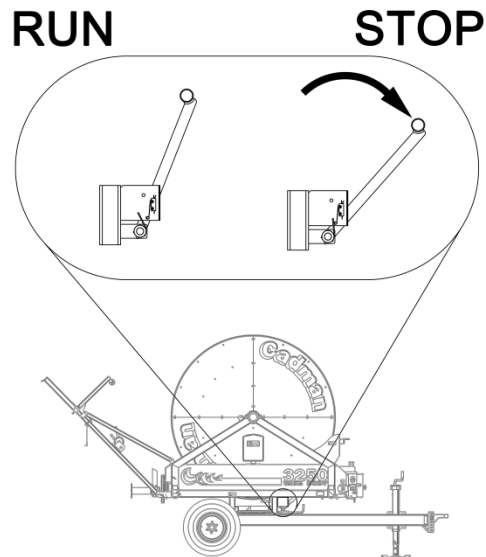
*Figure 35 – Rear Shutoff switches*

*img-00248-A*

Restart the engine and repeat this step for the second engine shutoff switch.



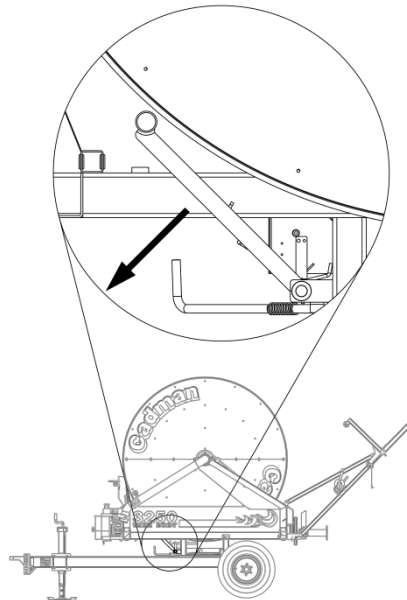
- E. To verify that the compensator bar shutoff switch is working, pull down on the compensator bar while the engine is running.



*Figure 36 – Front Shutoff switch*

*img-01342*

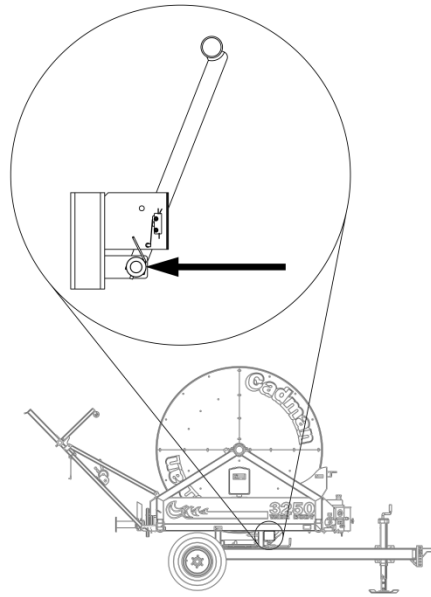
The engine should automatically shut down when the compensator bar is pulled approximately 2 inches away from the outside rim of the drum.



*Figure 37 – Test Front Shutoff Switch*

*img-00249-A*

- F. If the engine does not shut off after pulling the compensator bar, you will need to adjust the front engine shutoff switch trigger so that the engine will automatically shut down.



*Figure 38 – Adjusting Front Shutoff Switch Trigger*

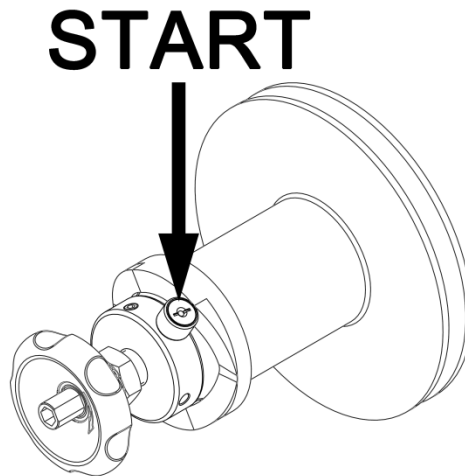
*img-00250-A*



**Operating the traveller with one or more faulty safety switches will result in the traveller not shutting down automatically after a completed irrigation pull. This may result in serious injury and/or death to operators and/or spectators.**

## **Step 2**

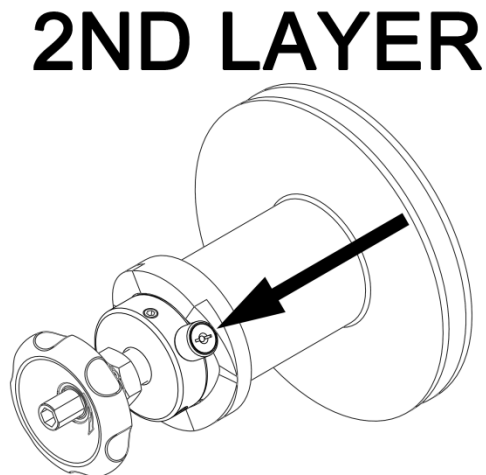
- A. If you are using a new traveller for the first time, verify the compensation system setup is working correctly. In addition, periodically verify the compensation system of traveller in use is working correctly. If the compensation system is working correctly then the pulley cam roller should rest near the top of the ramp as shown:



*Figure 39 – Compensator Pulley Cam Start Position*

*img-00251-A*

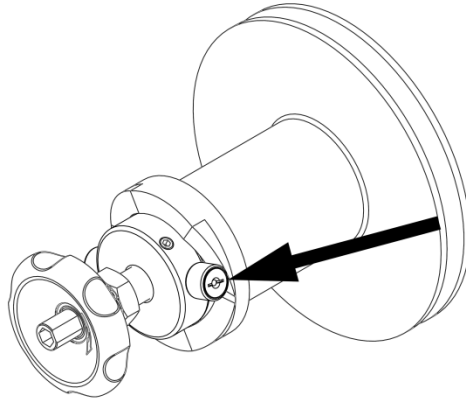
During the irrigation pull the pulley cam roller will shift positions as the hose wraps additional layers onto the drum as shown:



*Figure 40 – Compensator Pulley Cam Second Position*

*img-01343*

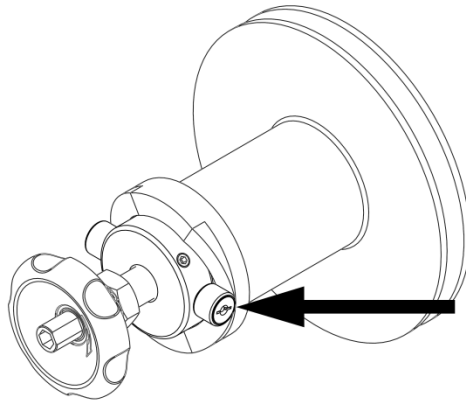
## 3RD LAYER



*Figure 41 – Compensator Pulley Cam Third Position*

*img-01344*

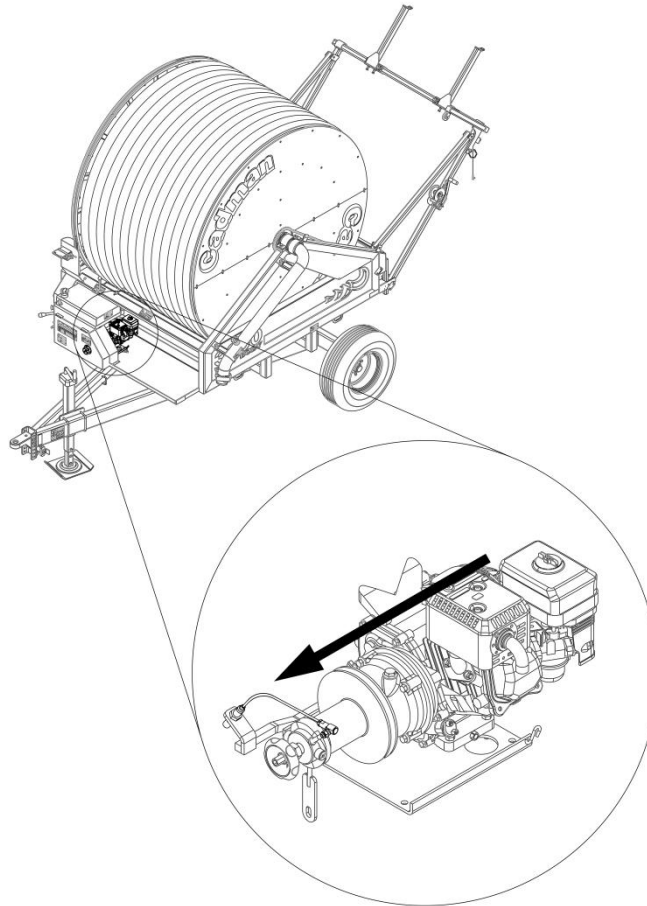
## 4TH LAYER



*Figure 42 – Compensator Pulley Cam Fourth Position*

*img-01345*

If the pulley cam roller does not reset to the start position shown, adjust the compensator cable so that the pulley cam roller is in the start position.

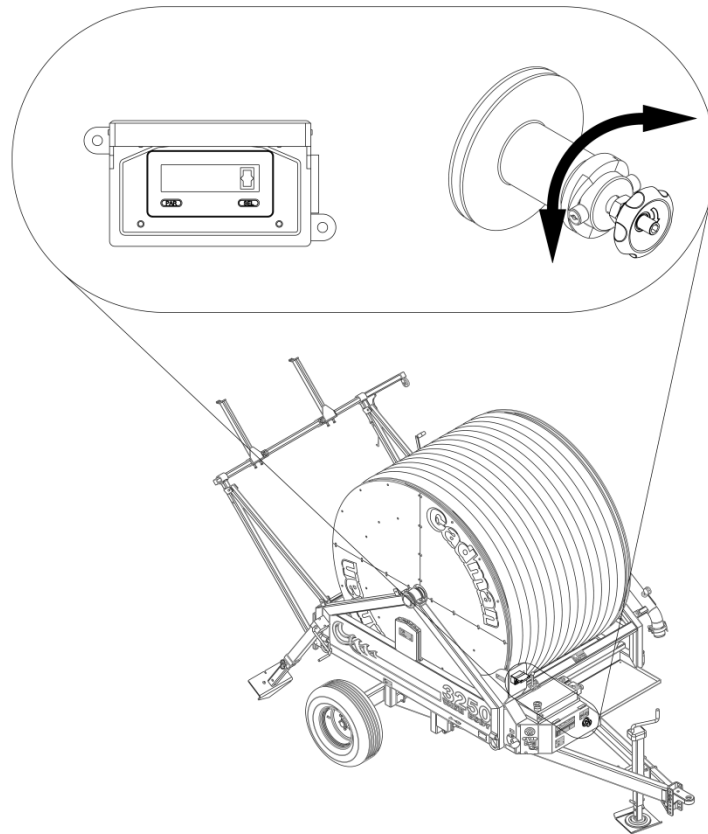


*Figure 43 – 3000 Series Compensator Cable Adjustment*

*img-01350*

### **Step 3**

- A. With the engine running, adjust the pulley control knob until the speedometer reads the retrieval rate you need for your current irrigation pull. Do not adjust the pulley if the engine is not running.



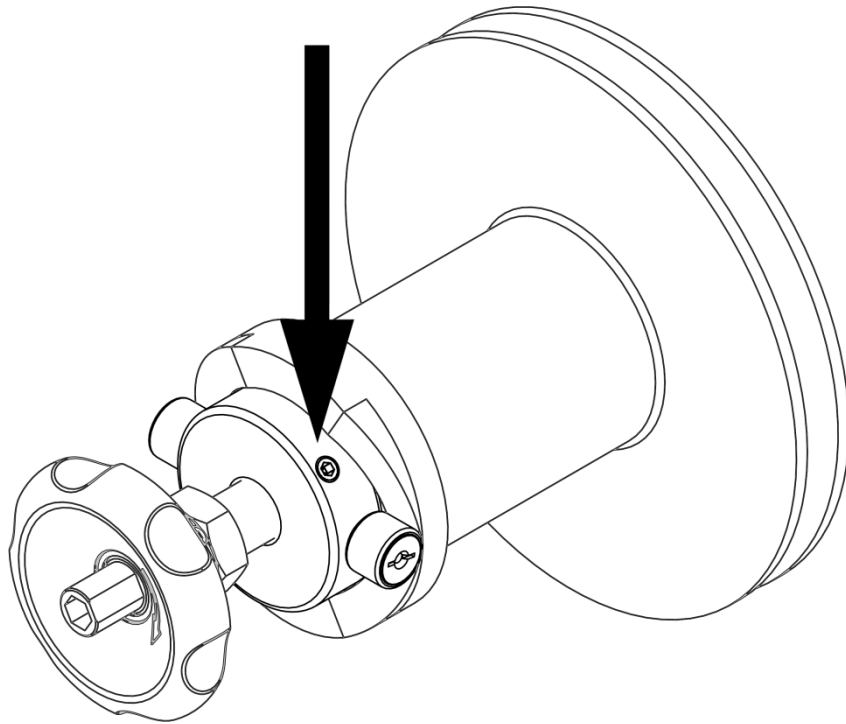
*Figure 44 – Control Knob/Speedometer*

*img-00254-A*



**Adjusting the pulley if the engine is not running will permanently damage the pulley. Operating the traveller with a damaged pulley will lead to additional damage to the traveller**

The pulley control knob should maintain its position after it's adjusted. If the pulley control knob shifts without an operator adjusting it, tighten the drag adjustment screw so that the pulley control knob will maintain its position.



*Figure 45 – Drag screw*

*img-01349*

- B. If you set the retrieval rate on the second, third, or fourth layer then you must set the speedometer reading to match the appropriate value on the speed conversion chart. The speedometer will only give actual hose speed for the base layer.






BASE LAYER	2nd LAYER	3rd LAYER	4th LAYER	5th LAYER																					
																									
<b>ADJUST PULLY CONTROL KNOB UNTIL THE SPEEDOMETER READS THE APPROPRIATE VALUE FOR THE LAYER OF HOSE BEING LOADED</b>																									
<b>DESIRED HOSE SPEED (INCHES PER MINUTE)</b>																									
<b>BASE LAYER</b>	10	12	14	16	18	20	22	24	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	110	120
<b>2nd LAYER</b>	9	11	13	14	16	18	20	22	27	32	36	41	45	50	54	59	63	68	72	77	81	86	90	99	108
<b>3rd LAYER</b>	8	10	11	13	15	16	18	19	24	28	32	36	41	45	49	53	57	61	65	69	73	77	81	89	97
<b>4th LAYER</b>	7	9	10	12	14	15	17	18	23	26	30	34	38	41	45	49	53	56	60	64	68	71	75	83	90
<b>5th LAYER</b>	6	8	9	11	13	14	15	16	20	23	26	30	34	36	40	43	47	49	53	56	60	62	66	73	79

Figure 46 – Speed Conversion Chart Label

img-00255-B



**Failing to adjust for the appropriate hose layer when setting the speedometer will result in an incorrect retrieval rate. This will result in an incorrect irrigation pull, which may damage crops**

### Speed Selection Example

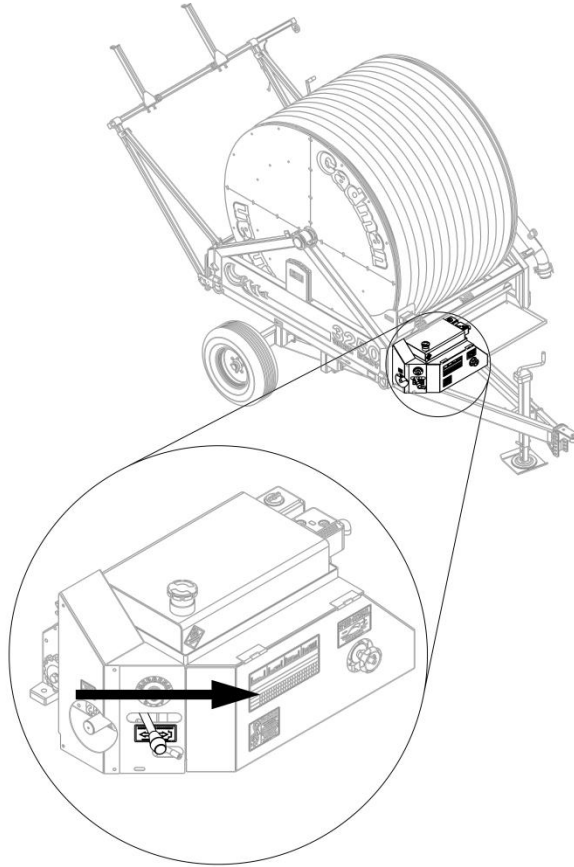
For this example, a retrieval rate of 30 inches per minute is needed, and the hose speed will be set when the drum is on the second layer.

- A. Find the 30 inches per minute on the base layer row, and then read the 2nd layer row value that crosses with the 30 inches per minute column. The corrected Value is 27 inches per minute
- B. Set the speedometer for the corrected value of 27 inches per minute.
- C. The actual retrieval rate you will be irrigating at will be 30 inches per minute.
- D. If you need to verify the retrieval rate then measure the hose movement for 3 minutes. Divide the inches the hose has travelled by 3. This will be your retrieval rate in inches per minute.



**Step 4**

Engage the drive system.

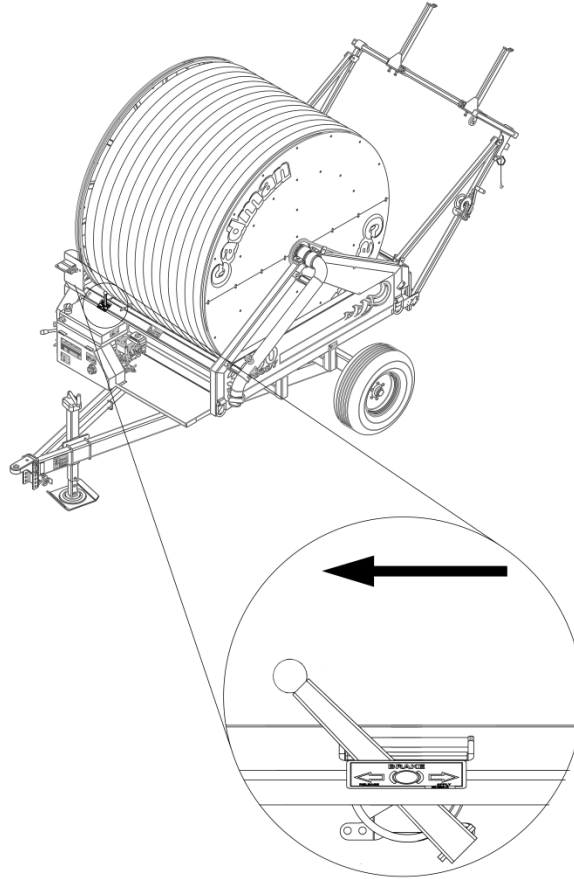


*Figure 47 – Engage Drive System*

*img-00231-A*

**Step 5**

Fully release the brake.



*Figure 48 – Fully Release Brake*

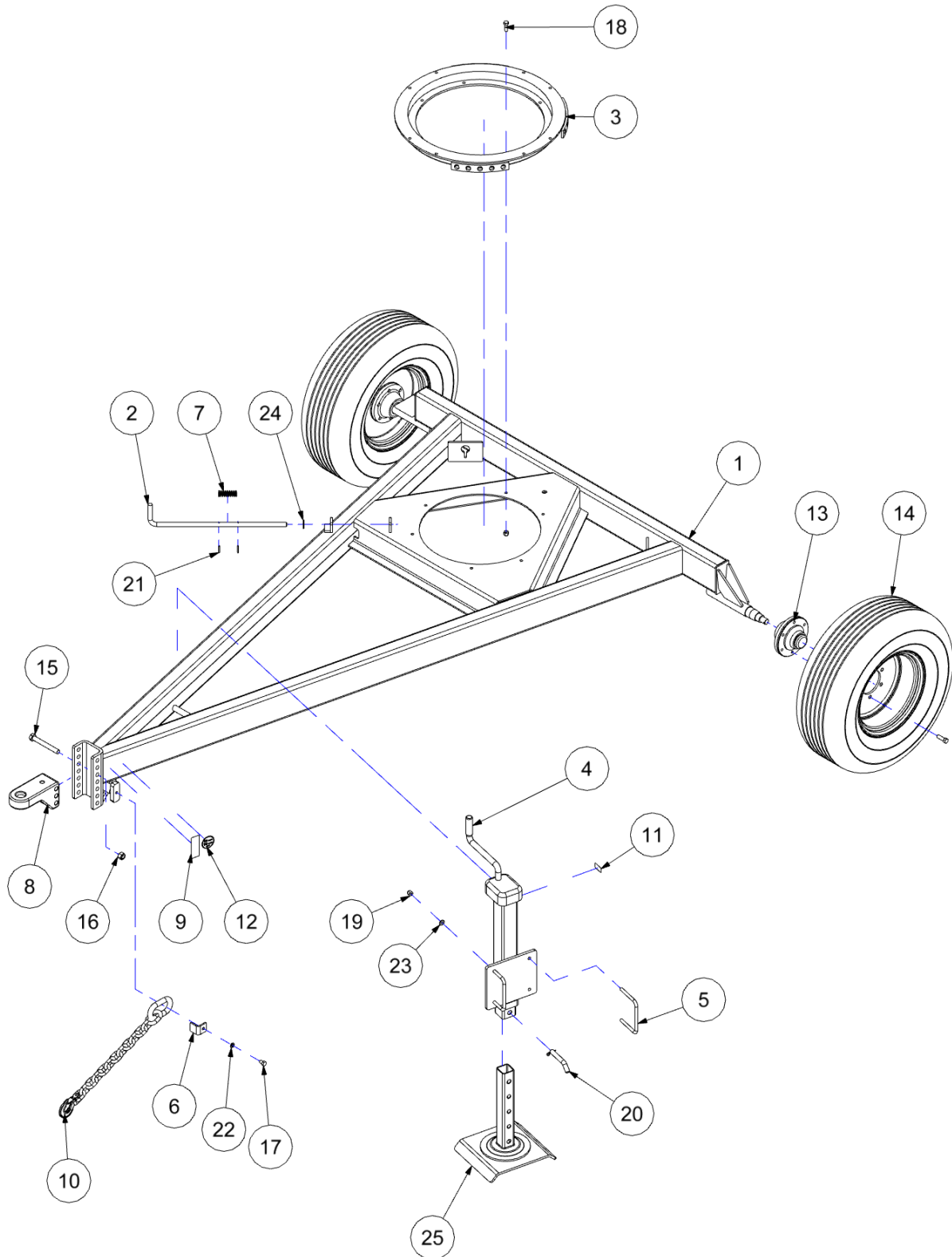
*img-00256-A*



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**Lower Frame Assembly**

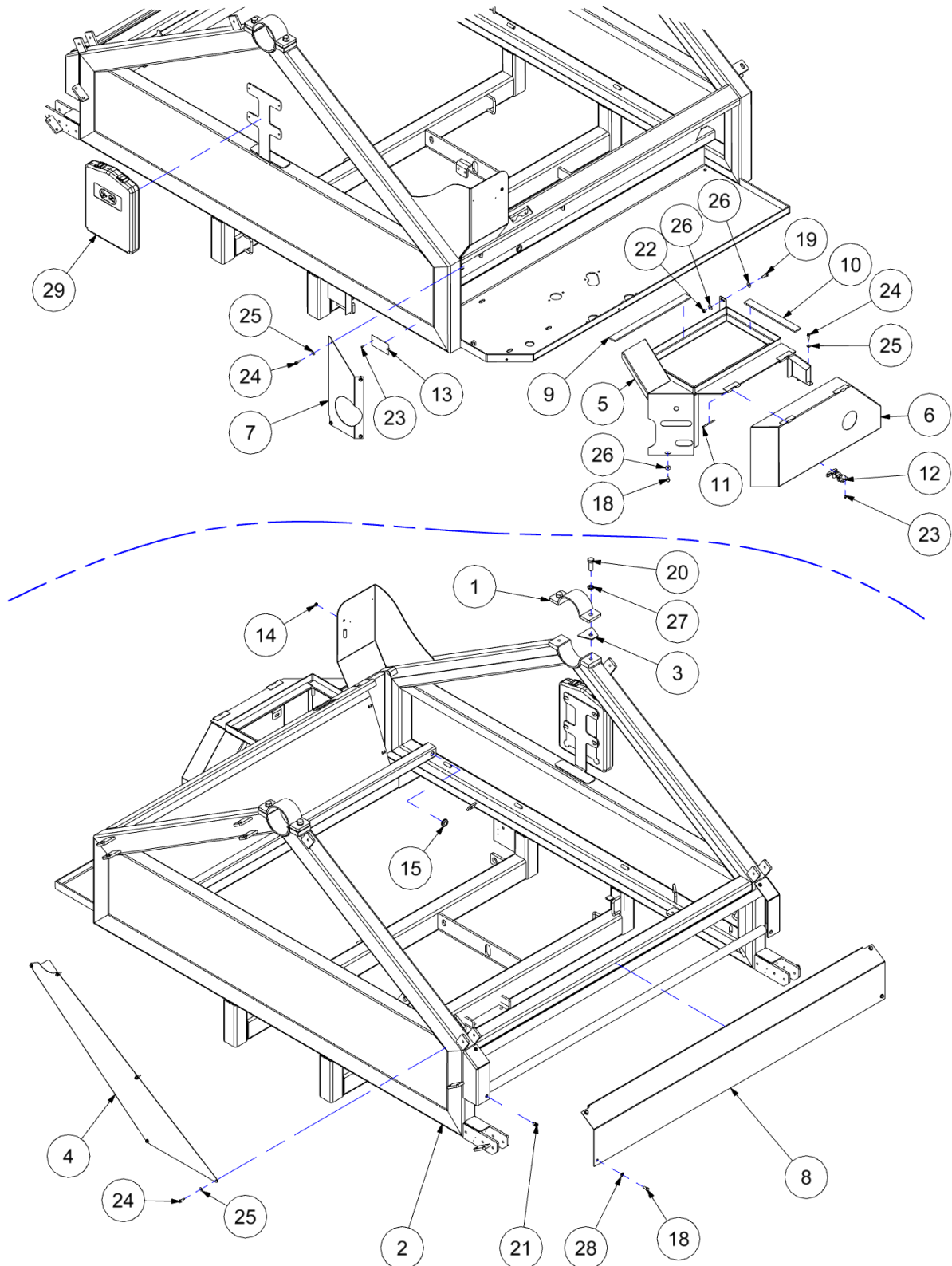




**Lower Frame Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	3000 SERIES LOWER FRAME WELDMENT	07-150-D	1	
2	LOCK PIN	07-601	1	
3	TURNTABLE WELDMENT	07-602-A	1	
4	TONGUE JACK WELDMENT	07-691-A	1	
5	U-BOLT SQ - 1/2-13 X 4 3/4 X 6 P	07-693	2	
6	SAFETY CHAIN RETAINER	17-213	1	
7	COMPRESSION SPRING	40-053	1	
8	PAINTED HITCH	40-402-RED	1	
9	DECAL - AMBER REFLECTIVE	40-598	2	
10	SAFETY CHAIN - 20 000 LBS	40-674	1	
11	LABEL - GREASE POINT	42-LBL-115	1	
12	LABEL - MAX TOW SPEED	42-LBL-119	1	
13	HUB ASSEMBLY - 6 BOLT - 5000	55-026	2	<b>PAGE 90</b>
14	WHEEL ASS'Y - 11L-15 8 PLY H-WAY	55-166-S	2	
15	BOLT GR.8 - 3/4-10 X 6.00	89-BLT-07510X600	2	
16	NUT LOCK GR.8 - 3/4-10	89-NUT-LOC075-10	2	
17	BOLT - 1/2-13 X 3/4	90-BLT-05013X075	1	
18	BOLT - 1/2-13 X 1 1/2	90-BLT-05013X150	6	
19	NUT LOCK - 1/2-13	90-NUT-LOC050-13	10	
20	HITCH PIN - 3/4 X 3 1/2 w/COTTER	90-PIN-HT075X350	1	
21	ROLL PIN - 3/16 X 1.50 LG PLATED	90-PIN-RL018X150	2	
22	WASHER LOCK - 1/2	90-WSR-LOC050	1	
23	WASHER SAE - 1/2	90-WSR-SAE050	4	
24	WASHER SAE - 3/4	90-WSR-SAE075	2	
25	JACK FOOT - WELDMENT	C3-641-A	1	

## Upper Frame Assembly

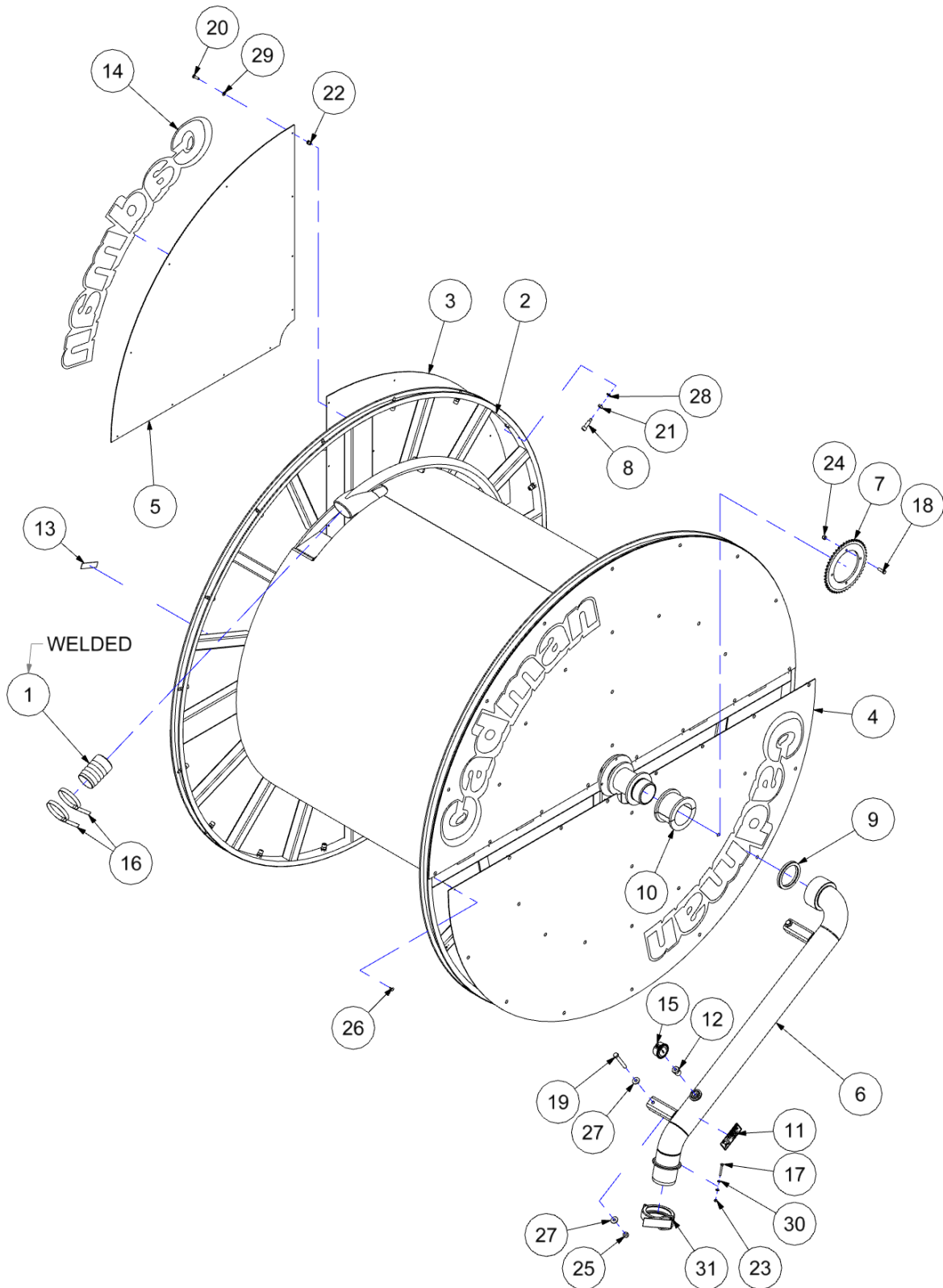




**Upper Frame Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	CAP - BEARING	02-631-A	2	
2	3000 WB UPPER FRAME	07-400-M	1	
↳	3000XL WB UPPER FRAME	07-481-J	1	XLWB
3	ANTI-ROTATION PLATE	07-623-A	2	
4	CHAIN COVER - INDEXER DRIVE	07-625-C	1	
5	FUEL TANK CRADLE WELD'T	07-676-J	1	
6	DRIVE COVER DOOR WELDMENT	07-677-C	1	
7	END SHIELD	07-678-B	1	
8	INDEXER SHIELD	07-685-C	1	
9	ROUGH TOP BELT - 1 3/8 IN. X 18"	40-093-18	2	
10	ROUGH TOP BELT - 1 3/8 IN. X 12"	40-094	2	
11	HINGE PIN - 3/16 X 3.00 BRASS	40-200-C	2	
12	RUBBER LATCH KIT	40-217	1	
13	CADMAN SERIAL NUMBER TAG	40-238-B	1	
14	GROMMET - 1/4 ID X 5/8 OD X 1/16	40-253	1	
15	GROMMET - 1" X 1 5/16" X 7/16"	42-406	3	
18	BOLT - 5/16-18 X 3/4	90-BLT-03118X075	5	
19	BOLT - 5/16-18 X 1.00	90-BLT-03118X100	2	
20	BOLT - 5/8-11 X 1 3/4	90-BLT-06311X175	4	
21	THREADED INSERT - 5/16-18 SHORT	90-NUT-HTR03118S	4	
22	NUT LOCK - 5/16-18	90-NUT-LOC031-18	2	
23	RIVET - 3/16 X 3/8	90-RIV-019X038	6	
24	TEK SCREW - 1/4 X 1.00	90-SCR-TEK025X100	11	
25	WASHER FLAT - 1/4 NYLON	90-WSR-FLT025NYLON	11	
26	WASHER FLAT - 5/16	90-WSR-FLT031	5	
27	WASHER LOCK - 5/8	90-WSR-LOC063	4	
28	WASHER SAE - 5/16	90-WSR-SAE031	4	
29	MANUAL BOX - LARGE ASSEMBLY	TR-MAN-LGPAK	1	

## Drum Assembly



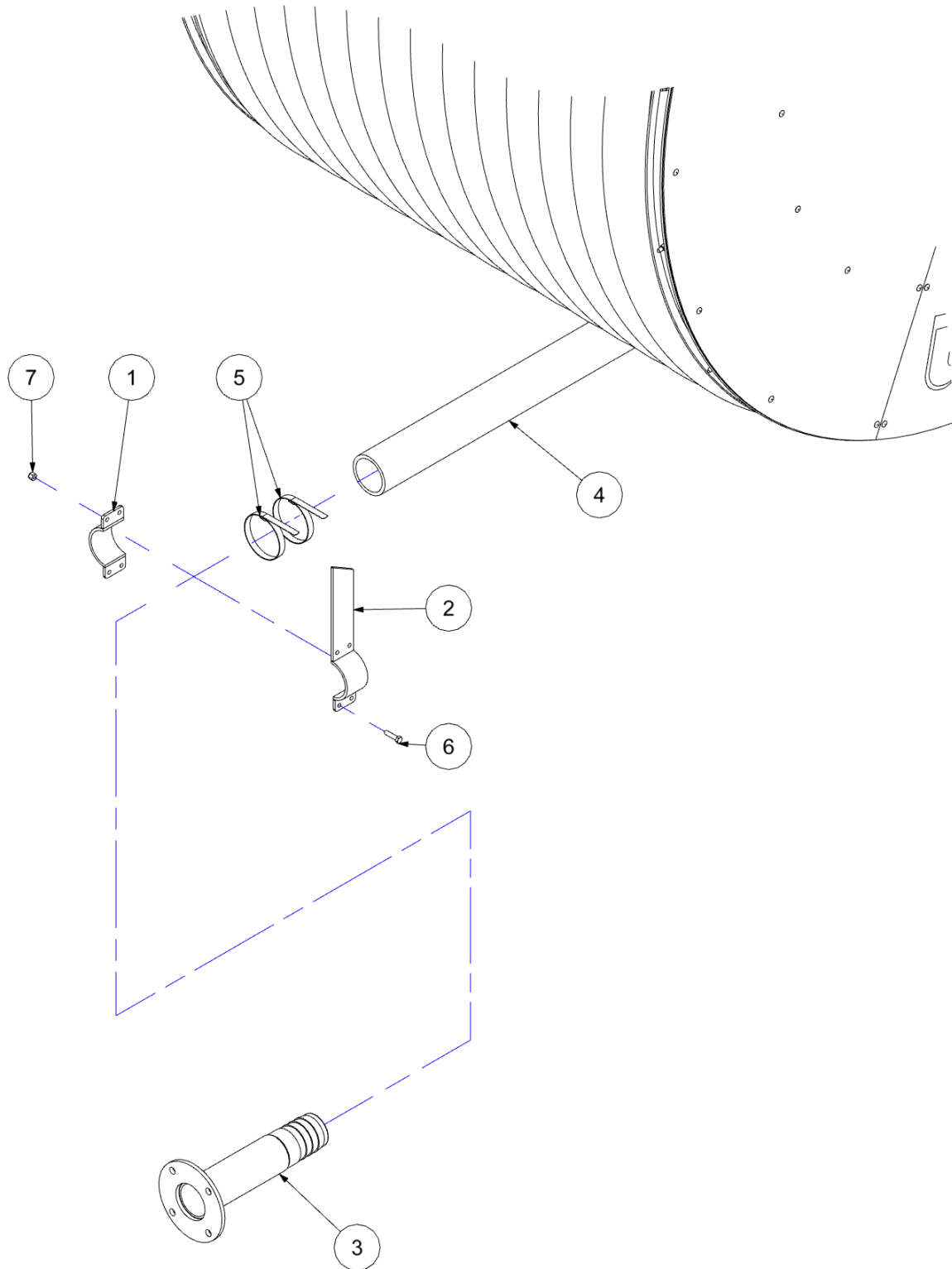




**Drum Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	HOSE BARB - 3.00"	02-675	1	3000
↳	HOSE BARB - 3.25"	02-676	1	3250
↳	HOSE BARB - 3.50"	07-775	1	3500
2	DRUM WELDMENT	07-500-H	1	
↳	DRUM WELDMENT	07-550-D		XLWB
3	DRUM QUARTER SKIN	07-511-D	1	
↳	DRUM QUARTER SKIN	07-556	1	XLWB
4	DRUM HALF SKIN	07-512-D	3	
↳	DRUM HALF SKIN	07-557	3	XLWB
5	DRUM ACCESS PANEL	07-513-D	1	
↳	DRUM ACCESS PANEL	07-558-A	1	XLWB
6	INLET ELBOW WELDMENT - 3000/3250	07-680-D	1	
7	SPROCKET - 50A43 X 6.00 P.B	10-077	1	
↳	SPROCKET – 50A45 X 6.00 P.B.	10-090	1	3500
8	DRUM DRIVE LUG - 80 CHAIN	15-040-B	16	
9	SEAL - 4.00" INLET ELBOW	40-014	1	
10	DRUM BEARING - CUT 4.00 IN H-TYPE	40-021-CUT	2	
11	LABEL - HIGH PRESS SPRAY	40-049-A	1	
12	REDUCER - #12 M-NPT X #04 F-NPT	40-NPT-RB075X025G	1	
13	VINYL FOAM TAPE - 1"	42-297	40	
14	DECAL - DRUM R32"	42-DCL-002	4	
15	GAUGE - 0-160 PSI WET	45-017	1	
16	CLAMP - 4 IN. BAND-IT STAINLESS	50-055	2	
17	BOLT - 1/4-20 X 2.00	90-BLT-02520X200	1	
18	BOLT - 3/8-16 X 1 1/4	90-BLT-03816X125	4	
19	BOLT - 1/2-13 X 4.00	90-BLT-05013X400	2	
20	BOLT PLASTIC - 5/16-18 X 1.00	90-BLT-PL03118X100	11	
21	NUT JAM - 1/2-13	90-NUT-JAM050-13	16	
22	THREADED INSERT - 5/16-18 SHORT	90-NUT-KTR03118S	11	
23	NUT LOCK - 1/4-20	90-NUT-LOC025-20	1	
24	NUT LOCK - 3/8-16	90-NUT-LOC038-16	4	
25	NUT LOCK - 1/2-13	90-NUT-LOC050-13	2	
26	RIVET - 3/16 X 7/16 BLACK	90-RIV-019X045BLK	86	
27	WASHER FLAT - 1/2	90-WSR-FLT050	4	
28	WASHER LOCK - 1/2	90-WSR-LOC050	16	
29	WASHER FLAT - 5/16 NYLON	90-WSR-PL031X075	11	
30	WASHER SAE – 1/4	90-WSR-SAE025	2	
31	CLAMP - 4 IN. RINGLOCK FITTING	IR-FCL-4	1	

## Hose and Barb Assembly

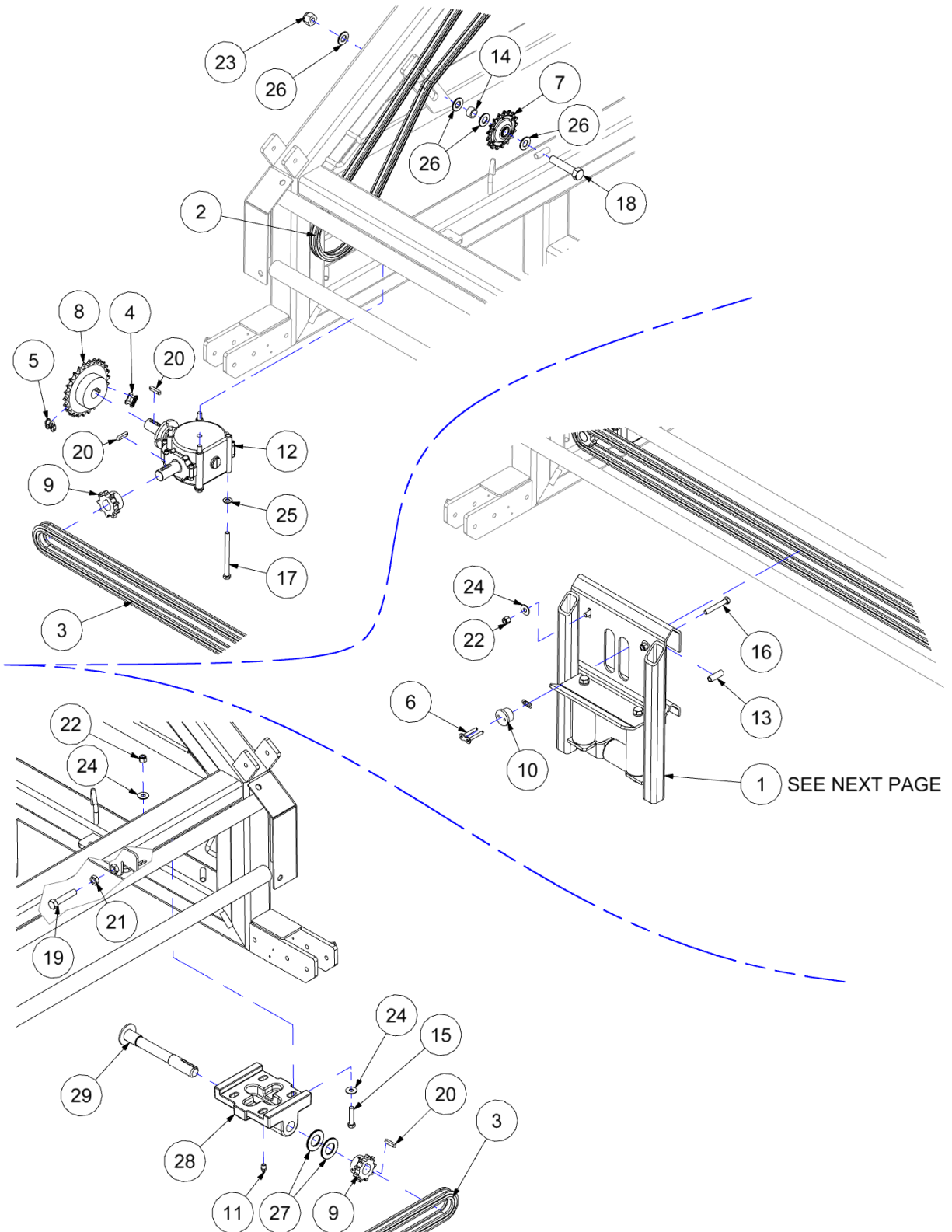




**Hose and Barb Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	CLAMP - MARKER	02-681-B	1	ALL
2	MARKER FLAG WELDMENT	02-773	1	ALL
3	3250 HOSE END SHORT WELDMENT	07-619	1	3000
↳	3250 HOSE END SHORT WELDMENT	07-620	1	3250
↳	3250 HOSE END SHORT WELDMENT	07-620	1	3500
4	HOSE - 3.00 ID X 1075	50-001-1075	1	3000WB
↳	HOSE - 3.25 ID X 975 FT	50-002-975	1	3250WB
↳	HOSE - 3.50 ID X 925 FT	50-064-725	1	3500WB
↳	HOSE - 3.00 ID X 1390 FT	50-132-1390	1	3000XLWB
↳	HOSE - 3.25 ID X 1250 FT	50-002-1250	1	3250XLWB
↳	HOSE - 3.50 ID X 1150 FT	50-064-1150	1	3500XLWB
5	CLAMP - 4 IN. BAND-IT STAINLESS	50-055	2	
6	BOLT - 3/8-16 X 1 1/2	90-BLT-03816X150	4	
7	NUT LOCK - 3/8-16	90-NUT-LOC038-16	4	

## Indexer Assembly

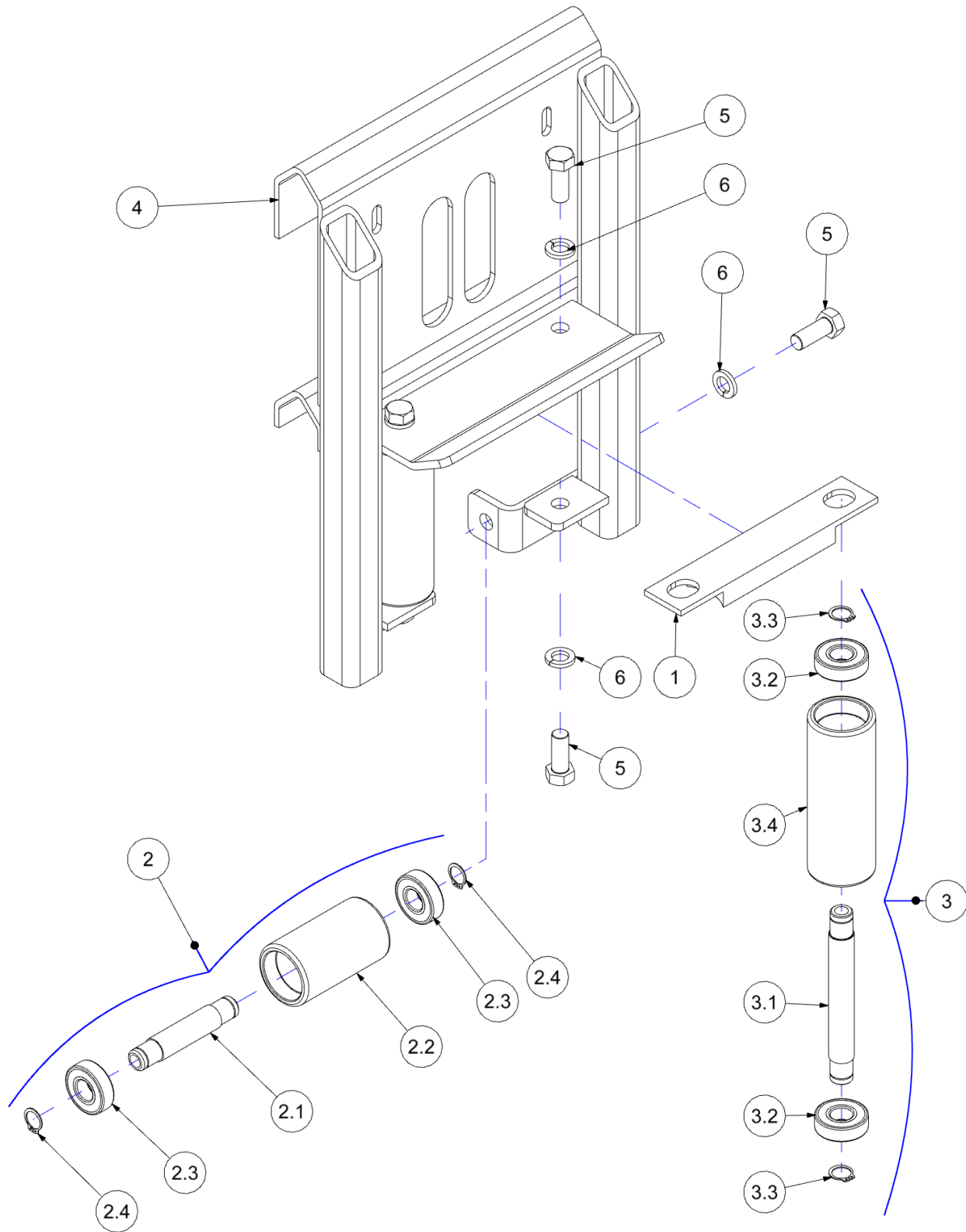




**Indexer Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	HOSE GUIDE ASS'Y	07-1000	1	<b>PAGE 60</b>
2	ROLLER CHAIN - NO. 50	10-CHN-50-1RIV	200 P	WB
↳	ROLLER CHAIN - NO. 50	10-CHN-50-1RIV	220 P	XLWB
3	ROLLER CHAIN - NO. 60	10-CHN-60-1X106	142 P	
4	CONNECTING LINK - 50	10-LNK-50CONN	1	
5	OFFSET LINK - 50	10-LNK-50OFFSET	1	
6	CONNECTING LINK - 60-2	10-LNK-60-2CONN	1	
7	SPROCKET - 50-17 AETNA IDLER	10-SPT-50-17IDLER	1	
8	SPROCKET - 50B29 X 1.00	10-SPT-50B29X100	1	3000
↳	SPROCKET - 50B26 X 1.00	10-SPT-50B26X100	1	3250
↳	SPROCKET - 50B28 X 1.00	10-SPT-50B28X100	1	3500
9	SPROCKET - 60B09 X 1.00	10-SPT-60B09X100	2	
↳	SPROCKET - 60B10 X 1.00	10-SPT-60B10X100	2	3500
10	INDEXER DRIVE BUTTON - 60 PL	15-041	1	
11	GREASE FITTING - 1/8 NPT	40-001	1	
12	RIGHT ANGLE GEARBOX - INDEXER	40-084	1	
13	WIRE LOOM	40-108	2	
14	SPACER - 5/8 ID X 1/2 LG.	40-109	1	
15	BOLT - 3/8-16 X 1 3/4	90-BLT-03816X175	4	
16	BOLT - 3/8-16 X 2 1/2	90-BLT-03816X250	2	
17	BOLT - 3/8-16 X 4 1/2	90-BLT-03816X450	4	
18	BOLT - 5/8-11 X 3.00	90-BLT-06311X300	1	
19	BOLT FT - 1/2-13 X 2 1/2	90-BLT-FT05013X250	1	
20	KEY - 1/4 SQ. X 1 1/4 LG	90-KEY-SQ025X125	3	
21	NUT JAM - 1/2-13	90-NUT-JAM050-13	1	
22	3/8-16 HEX LOCK NUT NYLON	90-NUT-LOC038-16	6	
23	NUT LOCK - 5/8-11	90-NUT-LOC063-11	1	
24	WASHER FLAT - 3/8	90-WSR-FLT038	10	
25	WASHER SAE - 3/8	90-WSR-SAE038	4	
26	WASHER SAE - 5/8	90-WSR-SAE063	4	
27	WASHER SAE - 1.00	90-WSR-SAE100	2	
28	INDEXER IDLER - MACHINED	C3-303	1	
29	IDLER SHAFT - INDEXER	C3-626-B	1	

**Indexer Head Assembly**



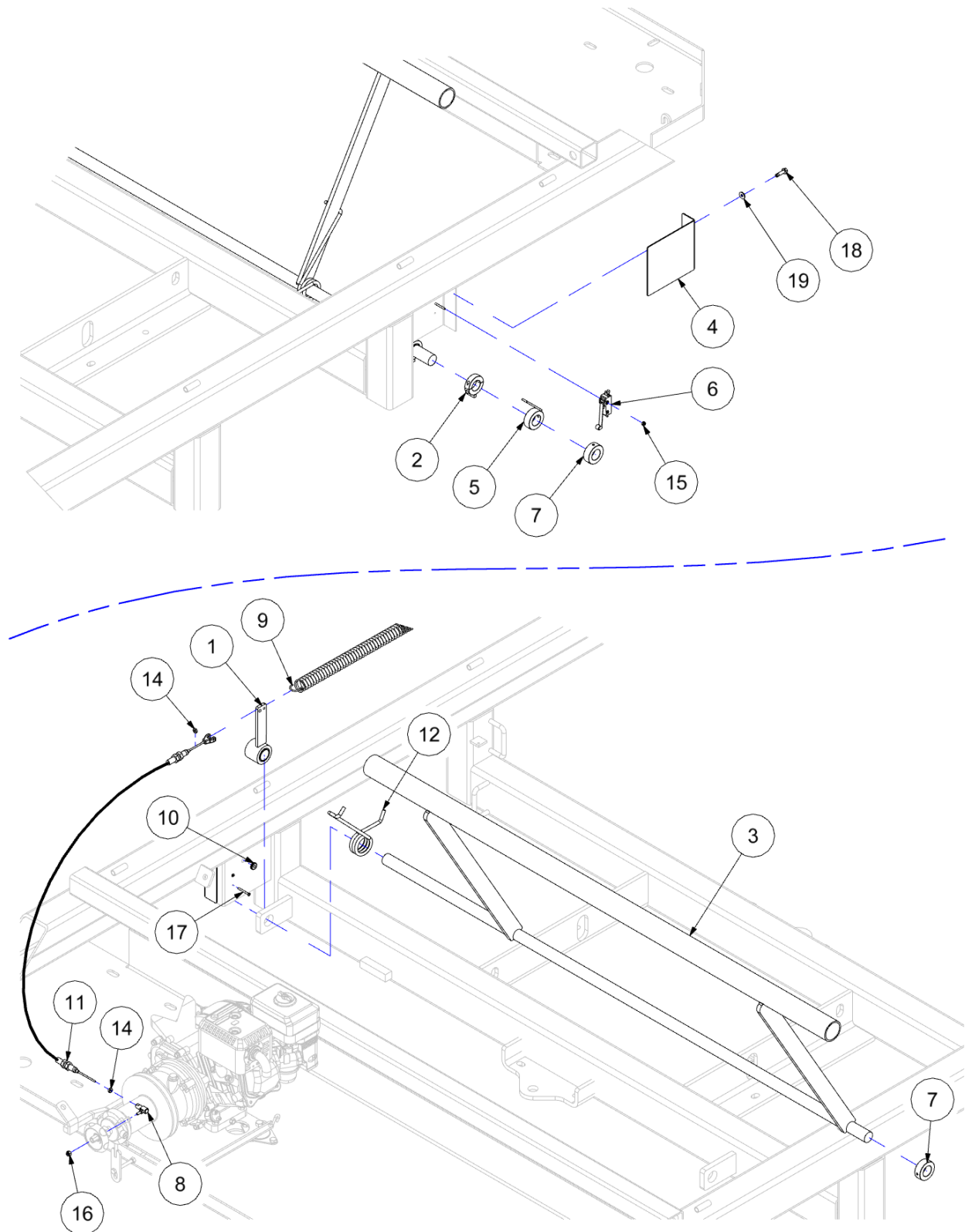


**Indexer Head Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	HOSE RUB BLOCK	07-682-B	1	
2	4 IN. GUIDE ROLLER ASSY.	15-018	1	*
2.1	4 IN. ROLLER SHAFT	15-018-F	1	
2.2	4 IN. ROLLER BODY	15-018-G	1	
2.3	BEARING - 6203	15-018-C	2	
2.4	SNAP RING	15-018-D	2	
3	6 IN. GUIDE ROLLER ASSEMBLY	15-019	2	*
3.1	ROLLER SHAFT - 6"	15-019-F	1	
3.2	BEARING - 6203	15-018-C	2	
3.3	SNAP RING	15-018-D	2	
3.4	6 IN. ROLLER BODY	15-019-G	1	
4	HOSE GUIDE WELDMENT	17-644	1	
5	BOLT - 1/2-13 X 1 1/4	90-BLT-05013X125	6	
6	WASHER LOCK - 1/2	90-WSR-LOC050	6	

\* = FULL ASSEMBLY

## Compensator Assembly



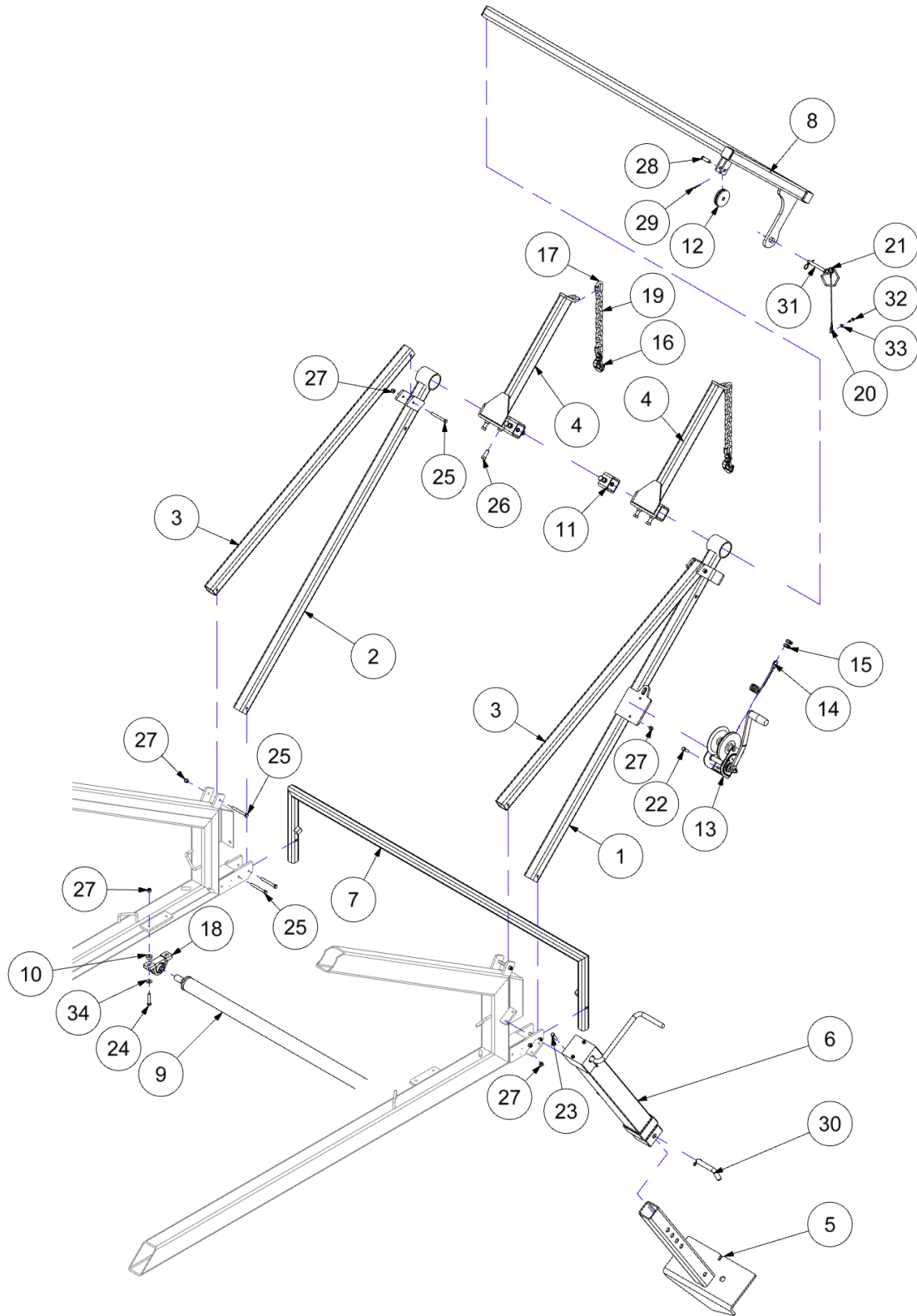




**Compensator Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	CABLE DRIVE ARM ASSEMBLY	07-632-B	1	
2	ARM - DRIVE	07-633-A	1	
3	COMPENSATOR FRAME WELDMENT 3250 WB	07-683	1	
4	SAFETY SWITCH COVER	07-684	1	
5	SAFETY SWITCH LEVER WELDMENT	08-648	1	
6	LIMIT SWITCH - COATED	40-020	1	
7	SET COLLAR - 1.00	40-144	2	
8	BALL JOINT 10-32	40-225	1	
9	1.00" X 12.00" LG EXT SPRING	40-228	1	
10	GROMMET - 1/4 ID X 5/8 OD X 1/16	40-253	1	
11	CONTROL CABLE - 66.5 IN	40-272	1	
12	COMPENSATOR SPRING	40-279	1	
14	NUT HEX - 10-32	90-NUT-HEX010-32	2	
15	NUT LOCK - 06-32	90-NUT-LOC006-32	2	
16	NUT LOCK - 10-32	90-NUT-LOC010-32	1	
17	MACHINE SCREW PAN - 06-32 X 1.25	90-SCR-RM06-32X125	2	
18	TEK SCREW - 1/4 X 1.00	90-SCR-TEK025X100	1	
19	WASHER FLAT - 1/4 NYLON	90-WSR-FLT025NYLON	1	

## Cart Lift Assembly

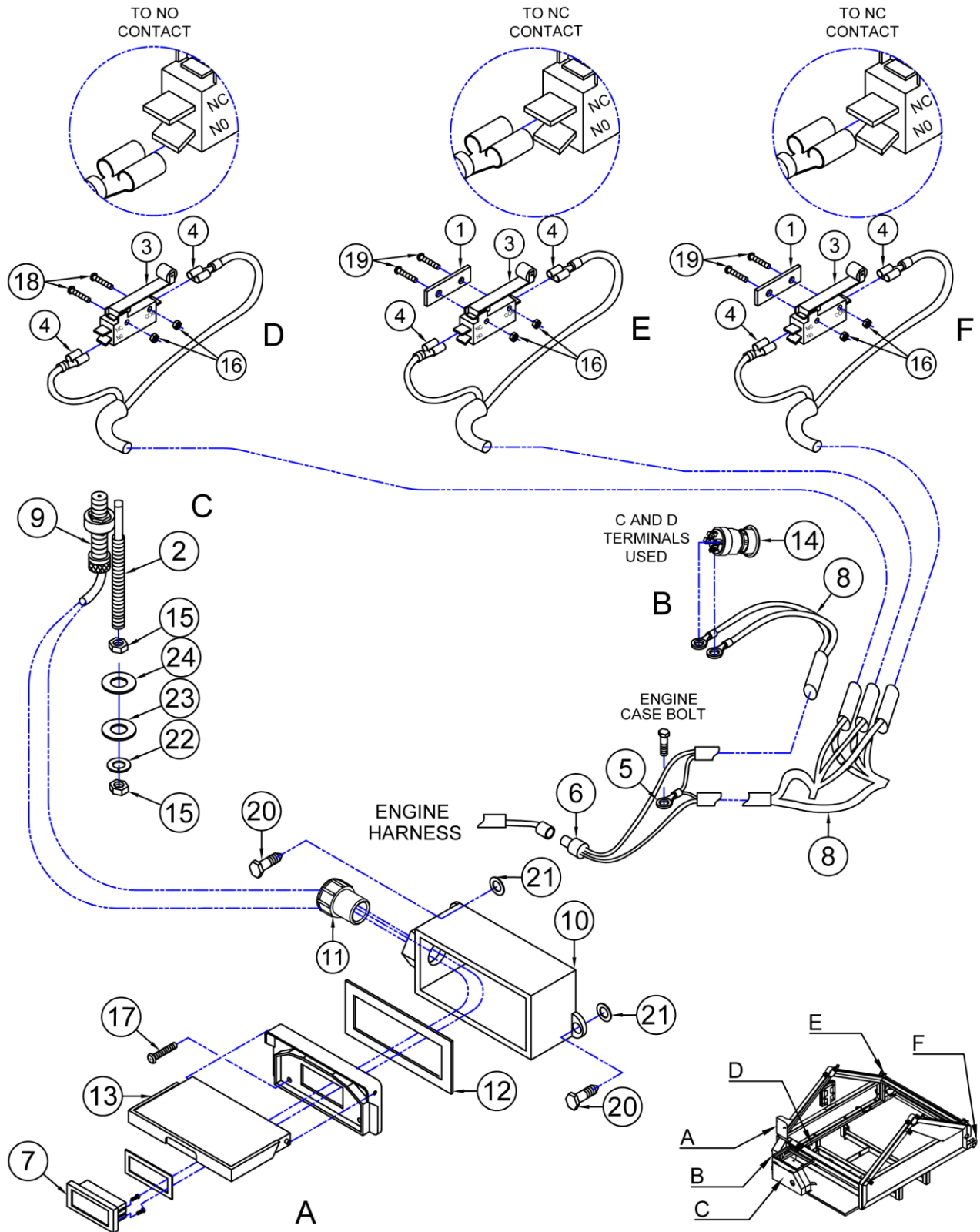




**Cart Lift Assembly**

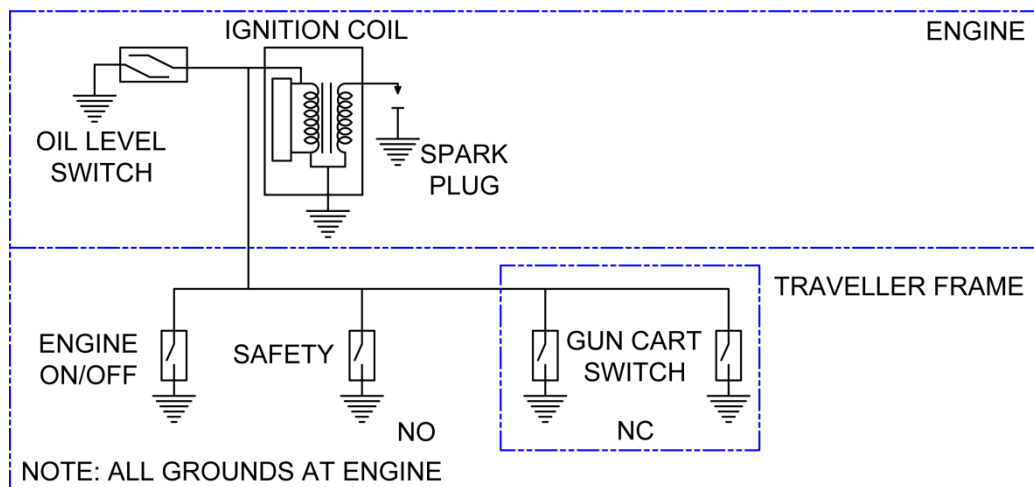
ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	BOOM ARM LEFT WELD'T	06-617-LD	1	
2	BOOM ARM RIGHT WELD'T	06-617-RB	1	
3	BOOM - BRACE	06-618	2	
4	LIFT ARM WELDMENT	06-620	2	
5	STABILIZER JACK DROP LEG WELD'T	07-624	2	
6	STABILIZER JACK BODY	07-628	2	
7	SHUT OFF BAR WELDMENT	07-686-A	1	
8	BOOM WELDMENT	07-687-B	1	
9	HOSE ROLLER WELDMENT	07-688-E	1	
10	SPACER - RADIATOR SUPPORT	09-155	4	3500
11	BOOM STOP COLLAR WELD'T	11-454	2	
12	CABLE PULLEY ASSEMBLY - 3.00"	15-003	1	
13	1000 LB. WINCH	40-024-A	1	
14	AIRCRAFT CABLE - 3/16	40-058	120	
15	1/8 IN. CABLE CLAMP	40-060	2	
16	SAFETY HOOK - 3/4 TON	40-062	2	
17	RAPID LINK - 3/8"	40-063	4	
18	PILLOW BLOCK BEARING - 1.00"	40-143	2	
19	CHAIN LINK (SALVAGED) - 3/8 GR40	40-519	14	
20	LANYARD - 12" STAINLESS	42-439	1	
21	RING - LANYARD	42-440	1	
22	BOLT - 3/8-16 X 1 1/4	90-BLT-03816X125	2	
23	BOLT - 3/8-16 X 1 1/2	90-BLT-03816X150	8	
24	BOLT - 3/8-16 X 2.00	90-BLT-03816X200	4	
25	BOLT - 3/8-16 X 3 1/4	90-BLT-03816X325	8	
26	BOLT - 1/2-13 X 1 1/4	90-BLT-05013X125	8	
27	NUT LOCK - 3/8-16	90-NUT-LOC038-16	22	
28	CLEVIS PIN - 1/2 X 1.50 LG	90-PIN-CL050X150	1	
29	COTTER PIN - 5/32 X 1.00	90-PIN-CT016X100	1	
30	HITCH PIN - 3/4 X 3 1/2 w/COTTER	90-PIN-HT075X350	2	
31	HITCH PIN - 1/2 X 3 1/2	90-PIN-HTC050X350	1	
32	TEK SCREW - 1/4 X 1.00	90-SCR-TEK025X100	1	
33	WASHER FLAT - 1/4 NYLON	90-WSR-FLT025NYLON	1	
34	WASHER FLAT - 3/8	90-WSR-FLT038	5	

**Electrical Wiring Assembly**

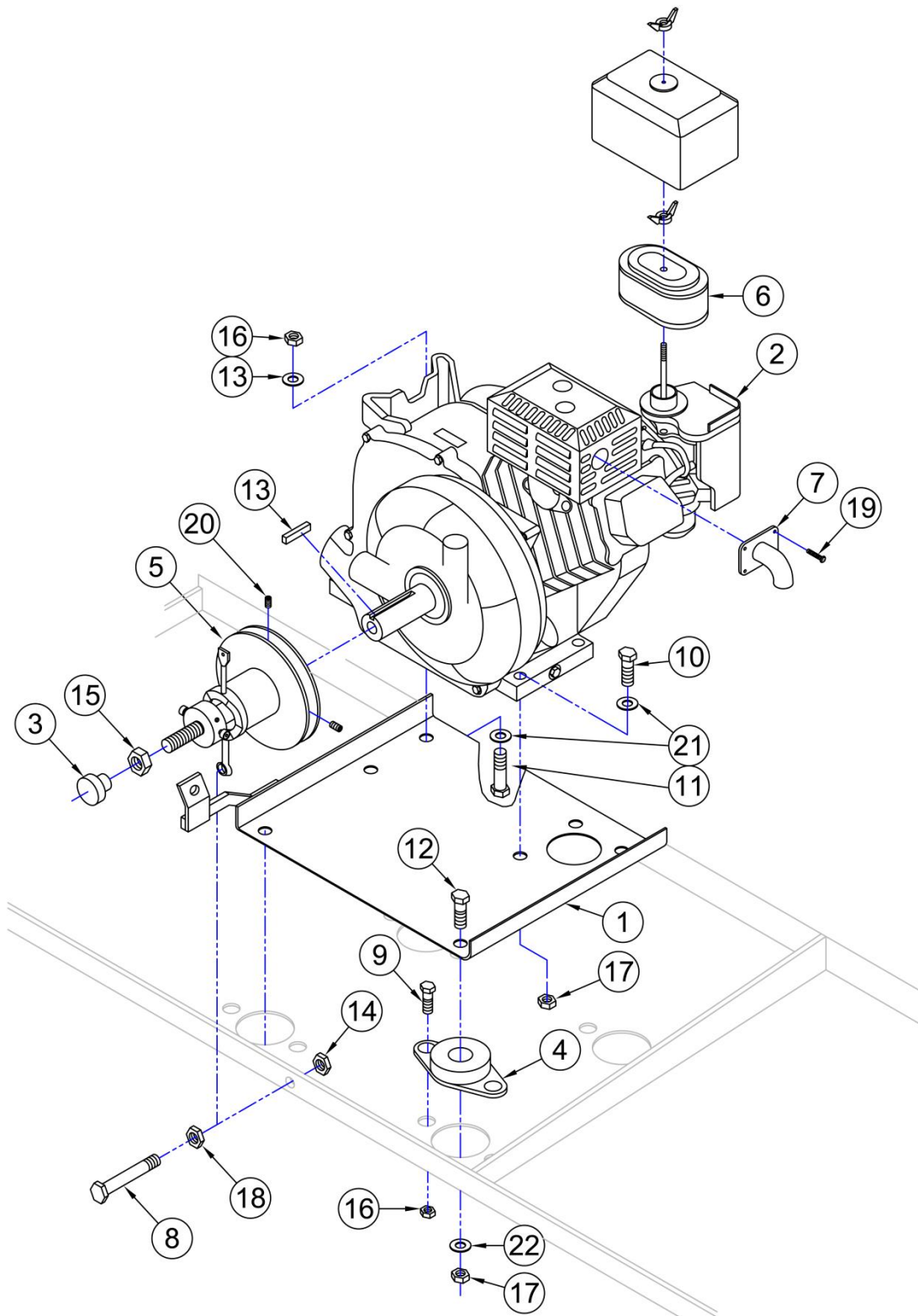


## Electrical Wiring Assembly

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	SWITCH SPACER BLOCK	04-628	2	
2	PICKUP MOUNT	07-645	1	
3	SHUT OFF SWITCH	40-020-UP	3	
4	FEMALE SPADE CONNECTOR, BLUE	40-068	6	
5	TERMINAL EYE, #10 BLUE	40-069	1	
6	MALE BULLET CONNECTOR, BLUE	40-070	1	
7	SPEEDOMETER KIT	40-190-RL	1	
8	WIRE HARNESS	40-202-A	1	
9	MAGNETIC PICKUP ASSEMBLY, 5/8" DIA.	40-239-RL	1	
10	PVC BOX	40-262	1	
11	STRAIN RELIEF KIT - 3/4	40-263	1	
12	GASKET	40-264	1	
13	BOX COVER WITH LID	40-271	1	
14	SEALED PUSH/PULL SWITCH	42-268	1	
15	HEX NUT - 1/2-13	90-NUT-HEX050-13	2	
16	LOCK NUT - 06-32	90-NUT-LOC006-32	6	
17	MACHINE SCREW PAN - 06-32 X 5/8	90-SCR-PHP006-32X063	4	
18	MACHINE SCREW - 06-32 X 1" LG.	90-SCR-RM0632X125	2	
19	MACHINE SCREW - 06-32 X 1 3/4" LG.	90-SCR-RM0632X175	4	
20	TEK SCREW - 1/4 X 1.00	90-SCR-TEK025X100	2	
21	NYLON FLAT WASHER - 1/4	90-WSR-FLT025NYLON	2	
22	FLAT WASHER - 1/2	90-WSR-FLT050	2	
23	LOCK WASHER - 1/2	90-WSR-LOC050	1	



**Engine Assembly – 4.0 HP**

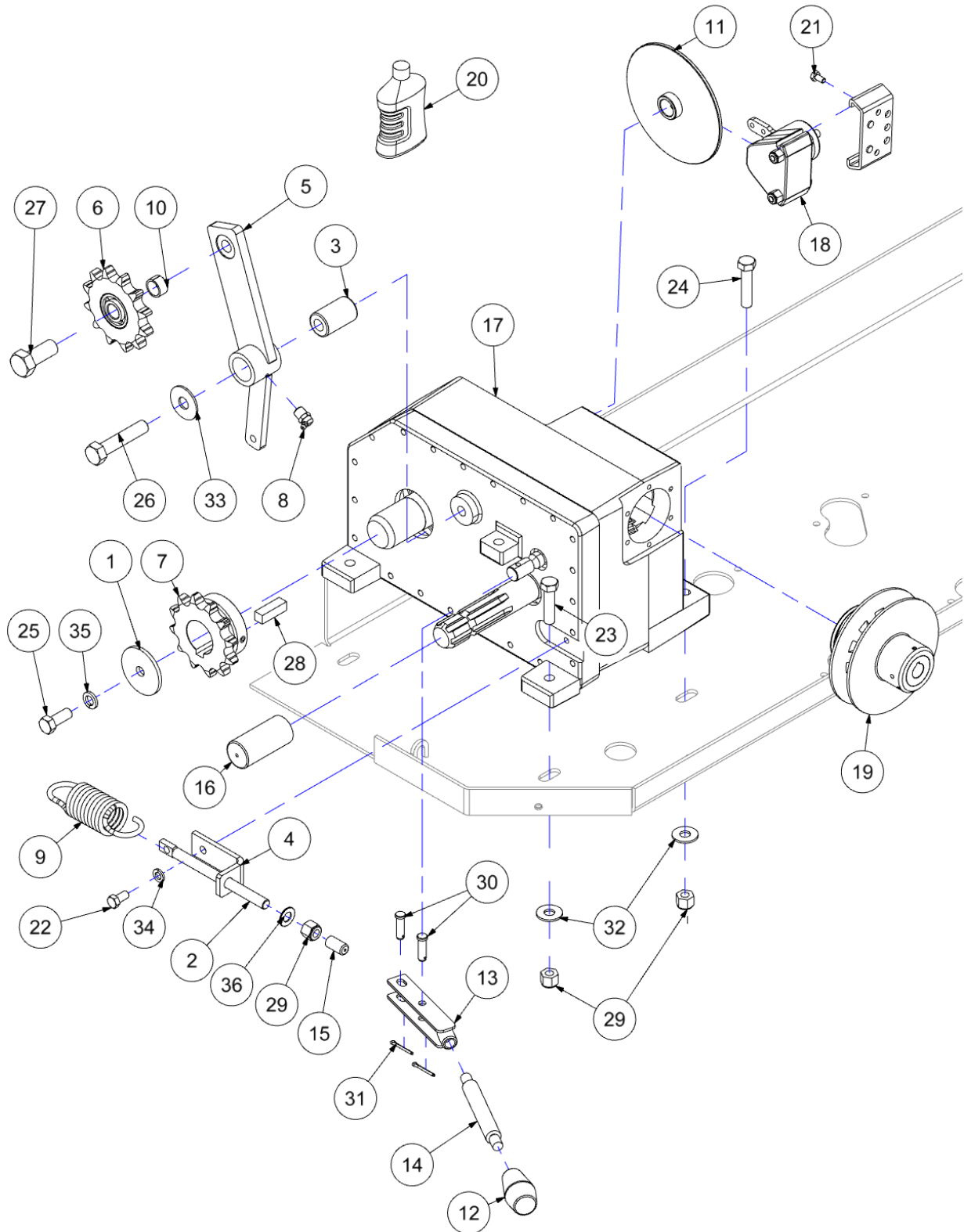




**Engine Assembly – 4.0 HP**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	ENGINE MOUNT PLATE	07-604-D	1	
2	4.0 HP HONDA ENGINE, GX120K1HX	40-159-A	1	
3	HAND WHEEL	40-191-B-407-712	1	
	HEAT SHRINK TUBE - 1/4 X 2 1/2	40-210	AR	
	FEMALE BULLET CONNECTOR - BLUE	40-247	AR	
4	RUBBER ENGINE MOUNT	40-285	4	
5	VARIABLE SPEED PULLEY WITH CAM - 6"	40-315-A	1	<b>PAGE 72</b>
6	AIR FILTER	40-HDA-17210ZEO505	1	
7	EXHAUST DEFLECTOR	40-HDA-18340ZE1000	1	
8	BOLT - 1/4-20 X 4.00	90-BLT-02520X400	1	
9	BOLT - 5/16-18 X 3/4	90-BLT-03118X075	8	
10	BOLT - 5/16-18 X 1 1/2	90-BLT-03118X150	3	
11	BOLT - 5/16-18 X 3	90-BLT-03118X300	1	
12	BOLT - 3/8-16 X 2 1/4	90-BLT-03816X225	3	
13	SQ. KEY - 3/16X 1 1/4	90-KEY-019X125	1	
14	HEX NUT - 1/4	90-NUT-HEX025-20	1	
15	LEFT-HAND THREAD JAM NUT - 5/8-18	90-NUT-JAM063-18LH	1	
16	LOCKNUT - 5/16	90-NUT-LOC031-18	11	
17	LOCKNUT - 3/8	90-NUT-LOC038-16	3	
18	LOCKNUT – 1/4	90-NUT-LOC052-20	1	
19	PAN HEAD SCREW	90-SCR-PHM4.70X006	2	
20	SET SCREW - 5/16-24 X 1/4	90-SCR-ST03124X025	2	
21	SAE WASHER - 5/16	90-WSR-SAE031	5	
22	SAE WASHER - 3/8	90-WSR-SAE050	3	

**Transmission Assembly**



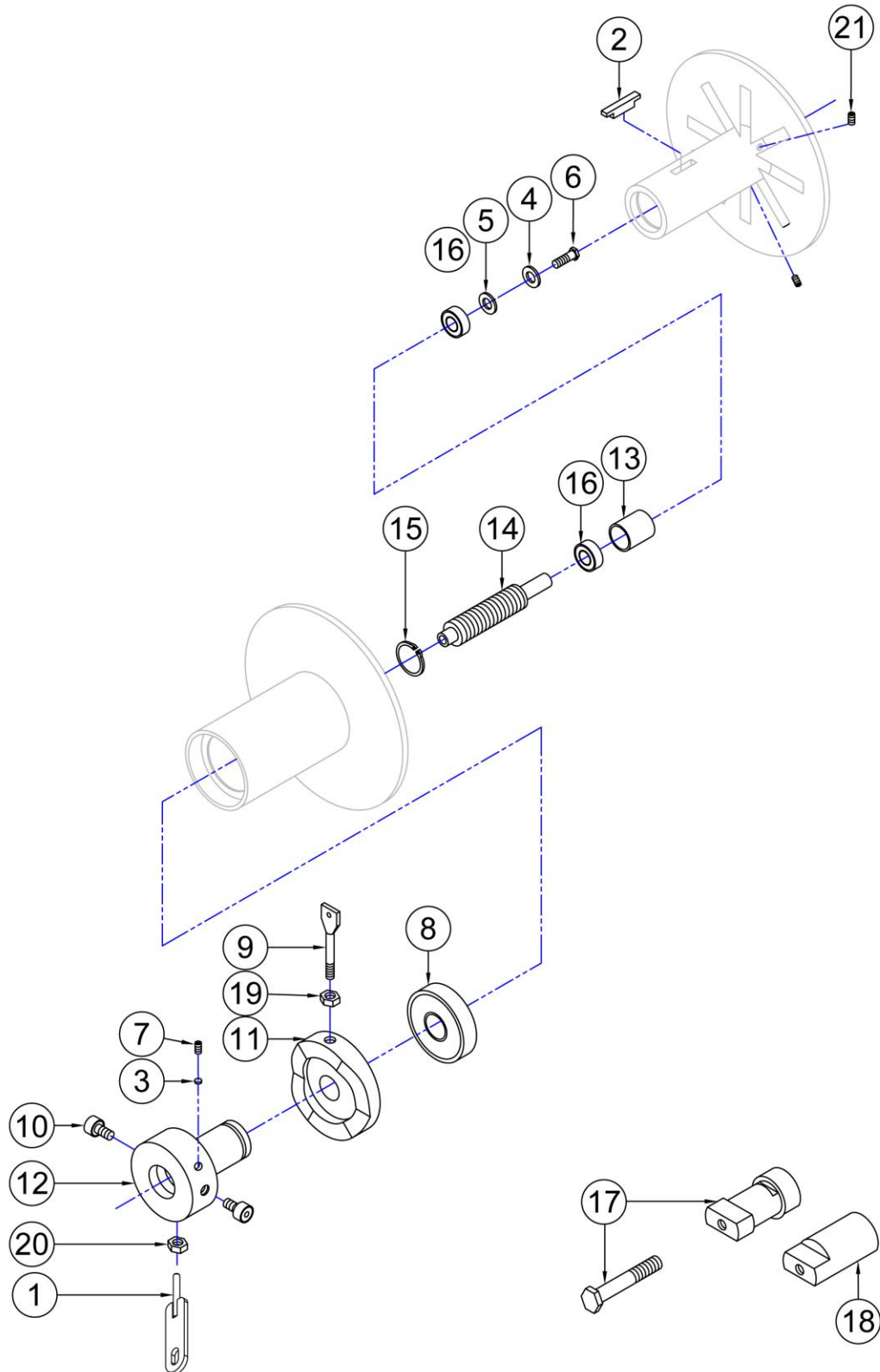




**Transmission Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	SPROCKET RETAINING PLATE	01-314-B	1	
2	ROD - SPRING - ADJUSTING	06-635-B	1	
3	PIVOT BUSHING - 1.00 X 2.00 LG	06-656-A	1	
4	IDLER TENSIONING BRACKET 025	08-650	1	
5	IDLER ARM - PURCHASED	08-656-C	1	
6	SPROCKET - #80-12 X 3/4 IDLER	10-SPT-80-12IDLER-KN	1	
7	SPROCKET - 80B12 X 1 3/4 BORE	10-SPT-80B12X175	1	
8	GREASE FITTING - 1/8 NPT - 45°	40-001-45	1	
9	SPRING - 1 3/4 X 5 EXT. (IDLER)	40-056	1	
10	SPACER - 3/4 ID X 1/2 LG.	40-110	1	
11	TRANSMISSION BRAKE DISC	40-169-CM017	1	
12	HANDLE KNOB	40-182	1	
13	SHIFTER FORK	40-221	1	
14	SCREW IN SHIFT HANDLE	40-222	1	
15	CAP VINYL - 1/2 X 1.00 LG. RED	40-230	1	
16	CAP VINYL - 1 3/8 X 3.00 LG. BLK	40-231	1	
17	TRANSMISSION - RIGHT ANGLE	40-267	1	
18	BRAKE CALIPER WITH BRACKET	40-296	1	
19	PULLEY - 7.00 X 3/4 SPRING	40-313	1	<b>PAGE 74</b>
20	GEAR OIL - 80W90	85-LUB-OIL/80W90	3	
21	BOLT - 1/4-20 X 1/2	90-BLT-02520X050	2	
22	BOLT - 3/8-16 X 3/4	90-BLT-03816X075	1	
23	BOLT - 1/2-13 X 2.00	90-BLT-05013X200	2	
24	BOLT - 1/2-13 X 2 1/4	90-BLT-05013X225	2	
25	BOLT - 1/2-20 X 1 1/4	90-BLT-05020X125	1	
26	BOLT - 5/8-11 X 3.00	90-BLT-06311X300	1	
27	BOLT - 3/4-10 X 1 3/4	90-BLT-07510X175	1	
28	KEY - 1/2 SQ. X 1 5/8 LG	90-KEY-SQ050X163	1	
29	NUT LOCK - 1/2-13	90-NUT-LOC050-13	5	
30	CLEVIS PIN - 3/8 X 1 1/4 LG	90-PIN-CL038X125	2	
31	COTTER PIN - 1/8 X 1.00	90-PIN-CT013X100	2	
32	WASHER FLAT - 1/2	90-WSR-FLT050	4	
33	WASHER FLAT - 5/8	90-WSR-FLT063	1	
34	WASHER LOCK - 3/8	90-WSR-LOC038	1	
35	WASHER LOCK - 1/2	90-WSR-LOC050	1	
36	WASHER SAE - 1/2	90-WSR-SAE050	1	

**Pulley with Cam Assembly – 6"**

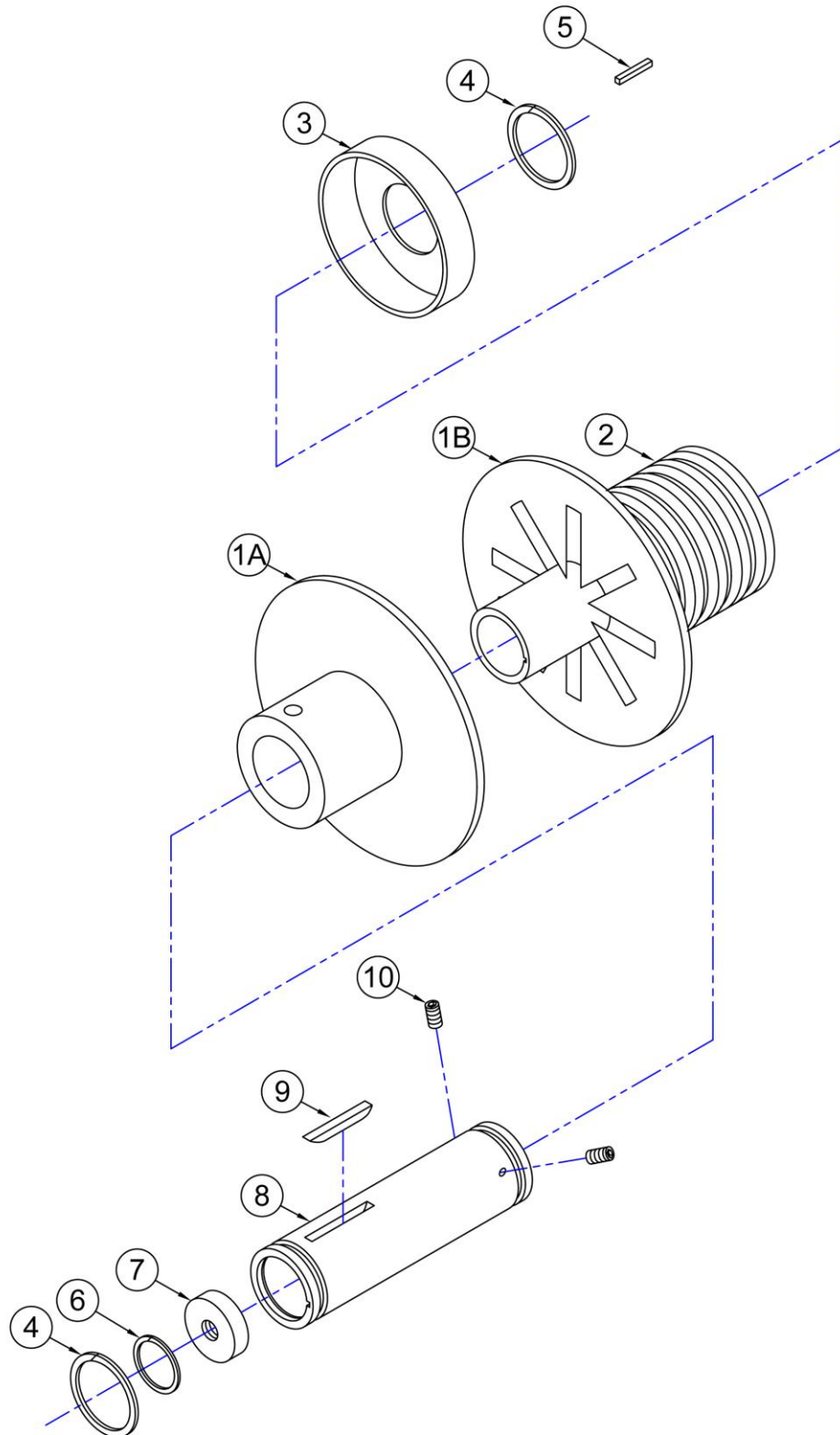




**Pulley with Cam Assembly – 6”**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	TORQUE ARM WELDMENT	03-600	1	
2	SPECIAL KEY	40-129-2181	1	
3	NYLON PLUG	40-129-2454	2	
4	SPRING WASHER	40-129-3231	1	
5	FLAT WASHER, #10	40-129-3232	1	
6	BOLT, #10-32 X 3/8" LG.	40-129-3305	1	
7	NYLON TIP SET SCREW, 1/4"-28 x 1/2" LG.	40-129-NTSS	1	
8	CAM BEARING	40-216-BRG6205	1	
9	TORQUE ARM W/FLAT END	40-243-2588	1	
10	CAM ROLLER	40-243-2589	1	
11	CAM	40-243-99	1	
12	THRUST NUT, CAM TYPE	40-243-C	1	
13	BEARING SPACER	40-316-206-074	1	
14	CONTROL STEM	40-316-207-291	1	
15	SNAP RING	40-316-3334	1	
16	CONTROL STEM BEARING	40-316-3386	2	
17	CONTROL STEM & BEARING PULLER	88-TOL-SSBRGPULLER	1	OPTIONAL
18	PULLEY PULLER	88-TOL-SSPULLEYPUL	1	OPTIONAL
19	JAM NUT, 1/4"-20	90-NUT-JAM025-20	1	
20	JAM NUT, 1/4"-28	90-NUT-JAM025-28	1	
21	SET SCREW, 1/4"-28 X 1/4" LG.	90-SCR-ST02528X025	2	

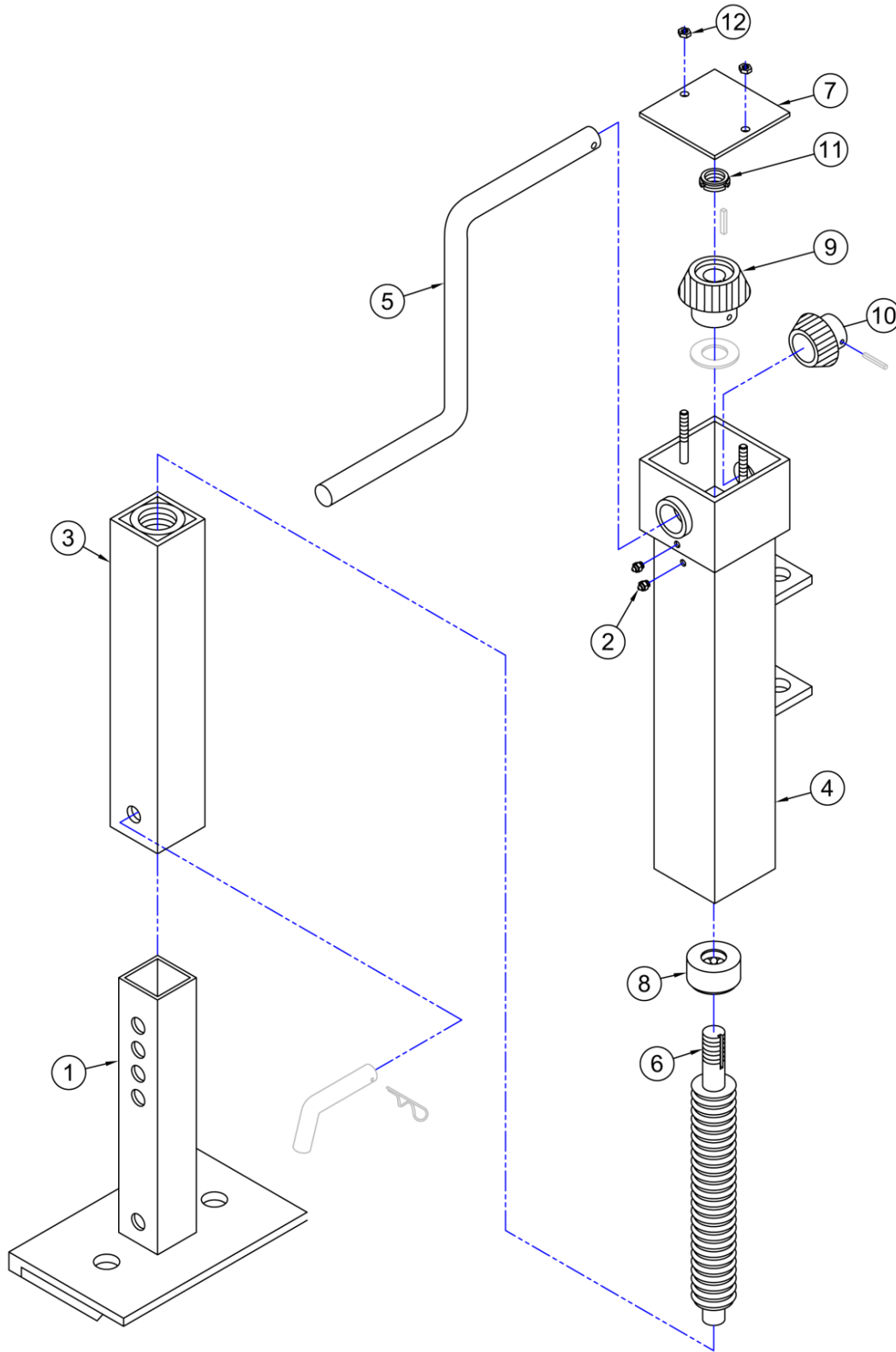
**Spring Loaded Pulley Assembly – 6"**



**Spring Loaded Pulley Assembly – 6”**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>MODEL</b>
1A	PULLEY - FIXED	40-313-626-3	1	
1B	PULLEY - MOVING	40-313-630-2	1	
2	SPRING	40-195-A-632-1	1	
3	SPRING RETAINER	40-195-A-633-1	1	
4	RETAINING RING	40-195-3070	2	
5	SQ. KEY, 3/16" X 2" LG.	90-KEY-019	1	
6	PLUG RETAINING RING	40-195-2671	1	
7	PLUG ADAPTER	40-195-A-625-052	1	
8	SHAFT - PULLEY	40-313-628-4	1	
9	KEY	40-128-2195	1	
10	SET SCREW, 5/16"-24 X 5/32" LG.	90-SCR-ST03124X016	2	

**Stabilizer Jack Assembly**





## Stabilizer Jack Assembly

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	STABILIZER JACK DROP LEG	07-624	1	STABILIZER
2	1/8" NPT GREASE FITTING	40-001	2	BOTH
3	MIDDLE LEG TUBE	40-176-B	1	BOTH
4	STABILIZER JACK BODY	40-176-C	1	BOTH
5	JACK HANDLE	40-176-E	1	BOTH
6	JACK SCREW	40-176-FTK	1	BOTH
7	COVER PLATE	40-176-G	1	STABILIZER
8	THRUST BEARING	40-176-H	1	BOTH
9	BEVEL GEAR, 24T	40-176-J24	1	BOTH
10	BEVEL GEAR, 16T	40-176-K	1	BOTH
11	LOCKING NUT	40-176-L	1	BOTH
12	LOCK NUT, M8-1.25	88-NUT-HEXM8-125	2	STABILIZER

### Label Assembly

**42-LBL-119**

**42-LBL-122**

**42-LBL-127**

**42-LBL-118**

**42-LBL-116**

**42-LBL-135**

**42-LBL-117**

**42-LBL-113**

**46-188-A**

**46-181-A**

**42-LBL-104**

**42-LBL-076**

**46-355-A**

**46-333-A**

**42-348-A**

**46-283-A**

**46-218-A**

**42-458**

**48-118-A**

	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100		
BASE LAYER	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100		
2nd LAYER	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75	77	79	81	83	85	87	89	91	93	95	97	99	101	
3rd LAYER	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	
4th LAYER	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75	77	79	81	83	85	87	89	91	93	95	97	99	101

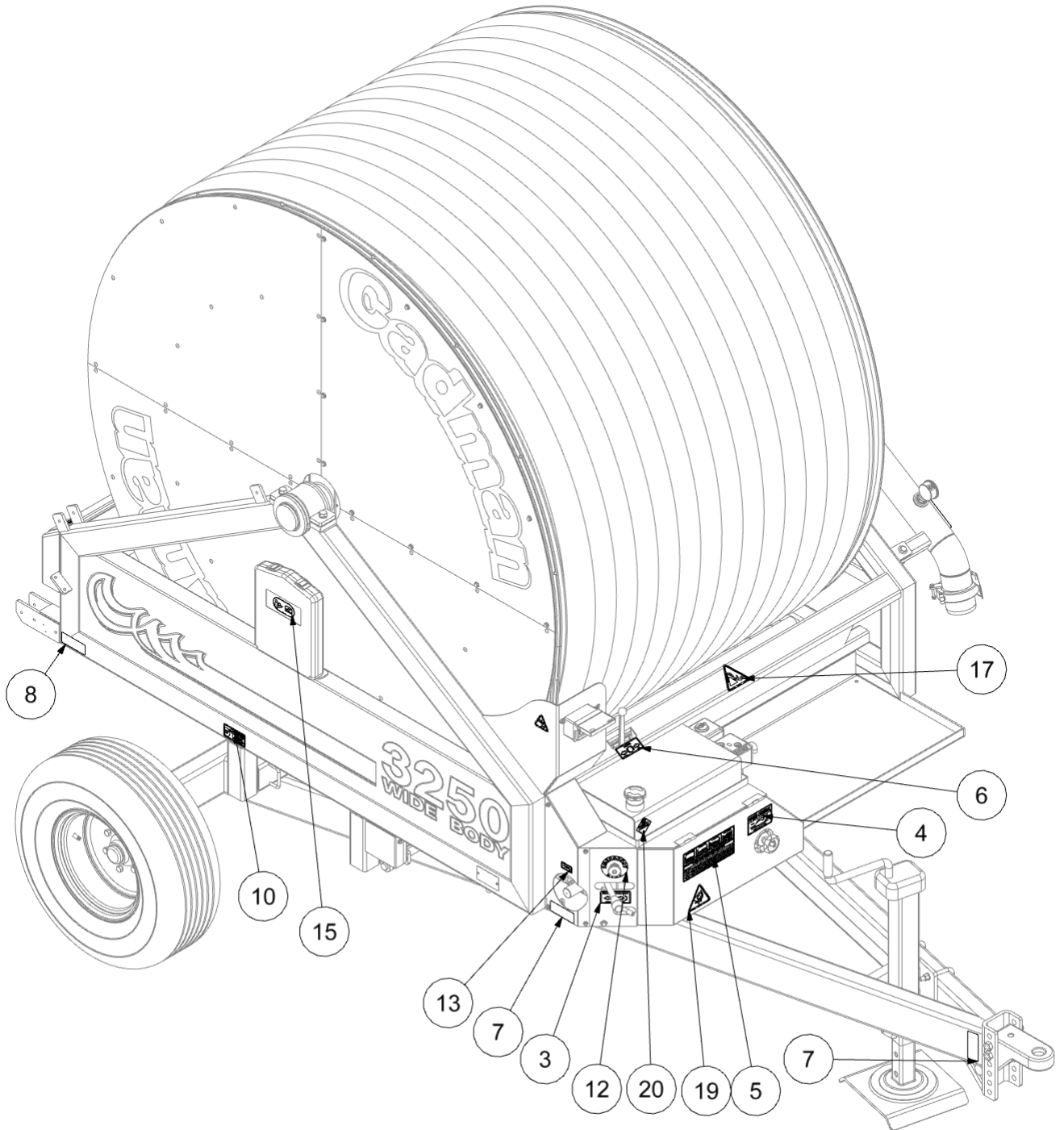




**Label Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	LABEL - HIGH PRESS SPRAY	40-049-A	1	
2	LABEL - INDEXER CONDITION	40-115-A	1	
3	LABEL - DRIVE DISCONNECT	40-151-A	1	
4	LABEL - SPEED CONTROL	40-189-A	1	
5	LABEL - SPEED ADJUST CTRL	40-218-A	1	
↳	LABEL - SPEED ADJUST CTRL	42-LBL-152	1	XLWB
6	LABEL - BRAKE CONTROL	40-293-A	1	
7	DECAL - AMBER REFLECTIVE	40-598	4	
8	DECAL - RED REFLECTIVE	40-599	4	
9	LABEL - MAX HOSE PULL	42-032	1	
10	LABEL - TORQUE WHEELS	42-035	2	
11	LABEL - HIGH PRESS. WATER	42-046-A	1	
12	LABEL - EMERGENCY STOP	42-LBL-002	1	
13	LABEL - GREASE POINT	42-LBL-115	3	
14	LABEL - PINCH HAND HAZARD	42-LBL-117	2	
15	LABEL - MANUALS	42-LBL-118	1	
16	LABEL - MAX TOW SPEED	42-LBL-119	1	
17	LABEL - ROTATING DRUM	42-LBL-122	2	
18	LABEL - ENTANGLEMENT	42-LBL-123	4	
19	LABEL - ENTANGLEMENT HAZARD	42-LBL-127	2	
20	LABEL - GASOLINE	42-LBL-134	1	
21	LABEL - BURN HAZARD	42-LBL-135	1	

**Label Assembly Locations (1 of 3)**

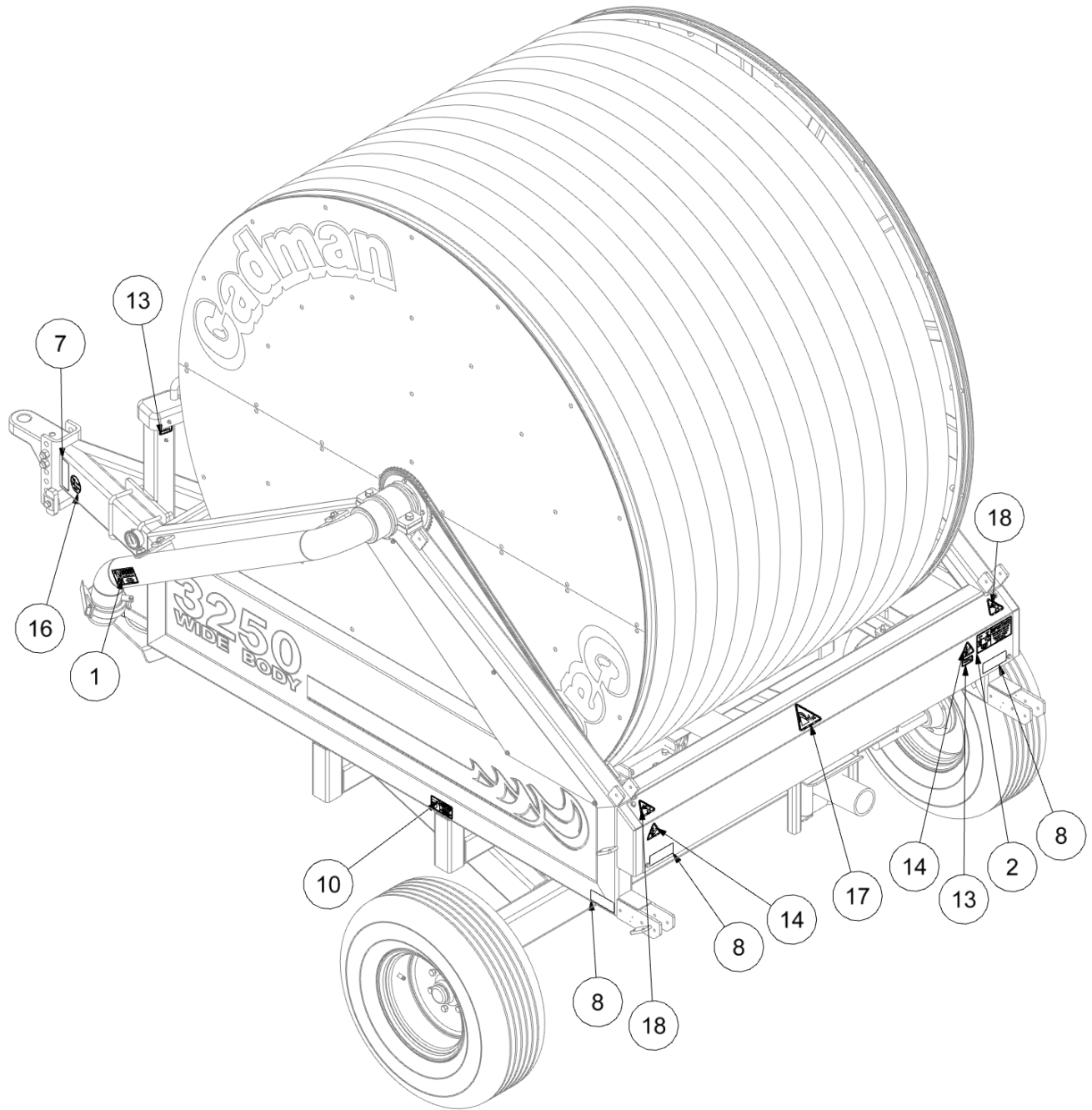




**Label Assembly Locations (1 of 3)**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	LABEL - HIGH PRESS SPRAY	40-049-A	1	
2	LABEL - INDEXER CONDITION	40-115-A	1	
3	LABEL - DRIVE DISCONNECT	40-151-A	1	
4	LABEL - SPEED CONTROL	40-189-A	1	
5	LABEL - SPEED ADJUST CTRL	40-218-A	1	
↳	LABEL - SPEED ADJUST CTRL	42-LBL-152	1	XLWB
6	LABEL - BRAKE CONTROL	40-293-A	1	
7	DECAL - AMBER REFLECTIVE	40-598	4	
8	DECAL - RED REFLECTIVE	40-599	4	
9	LABEL - MAX HOSE PULL	42-032	1	
10	LABEL - TORQUE WHEELS	42-035	2	
11	LABEL - HIGH PRESS. WATER	42-046-A	1	
12	LABEL - EMERGENCY STOP	42-LBL-002	1	
13	LABEL - GREASE POINT	42-LBL-115	3	
14	LABEL - PINCH HAND HAZARD	42-LBL-117	2	
15	LABEL - MANUALS	42-LBL-118	1	
16	LABEL - MAX TOW SPEED	42-LBL-119	1	
17	LABEL - ROTATING DRUM	42-LBL-122	2	
18	LABEL - ENTANGLEMENT	42-LBL-123	4	
19	LABEL - ENTANGLEMENT HAZARD	42-LBL-127	2	
20	LABEL - GASOLINE	42-LBL-134	1	
21	LABEL - BURN HAZARD	42-LBL-135	1	

**Label Assembly Locations (2 of 3)**

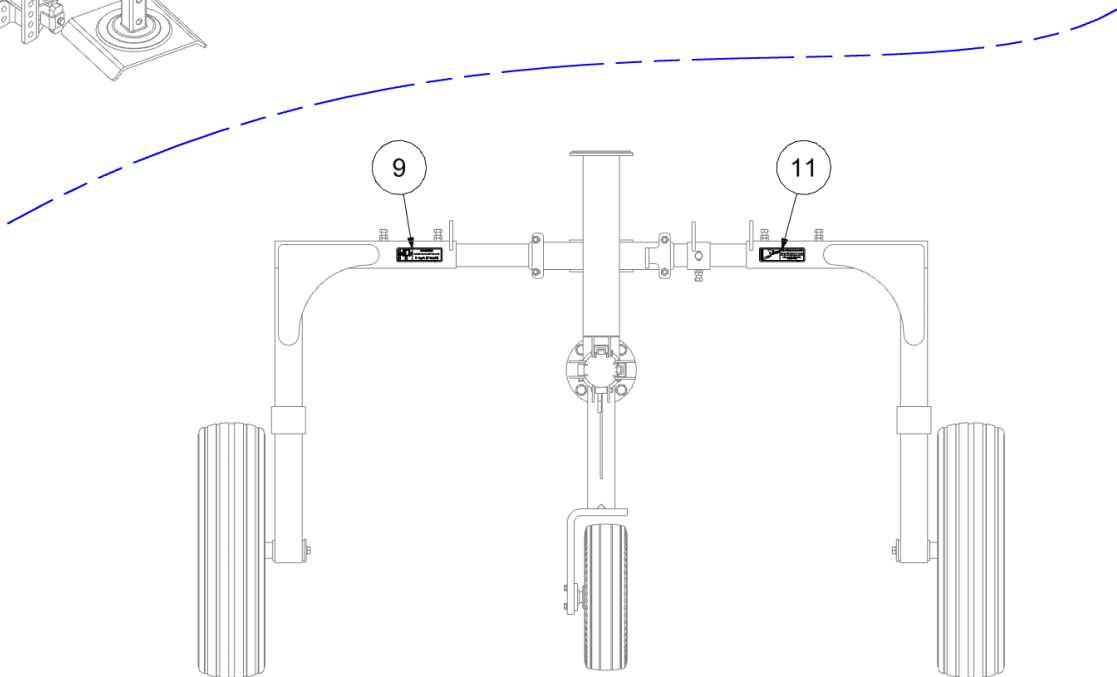
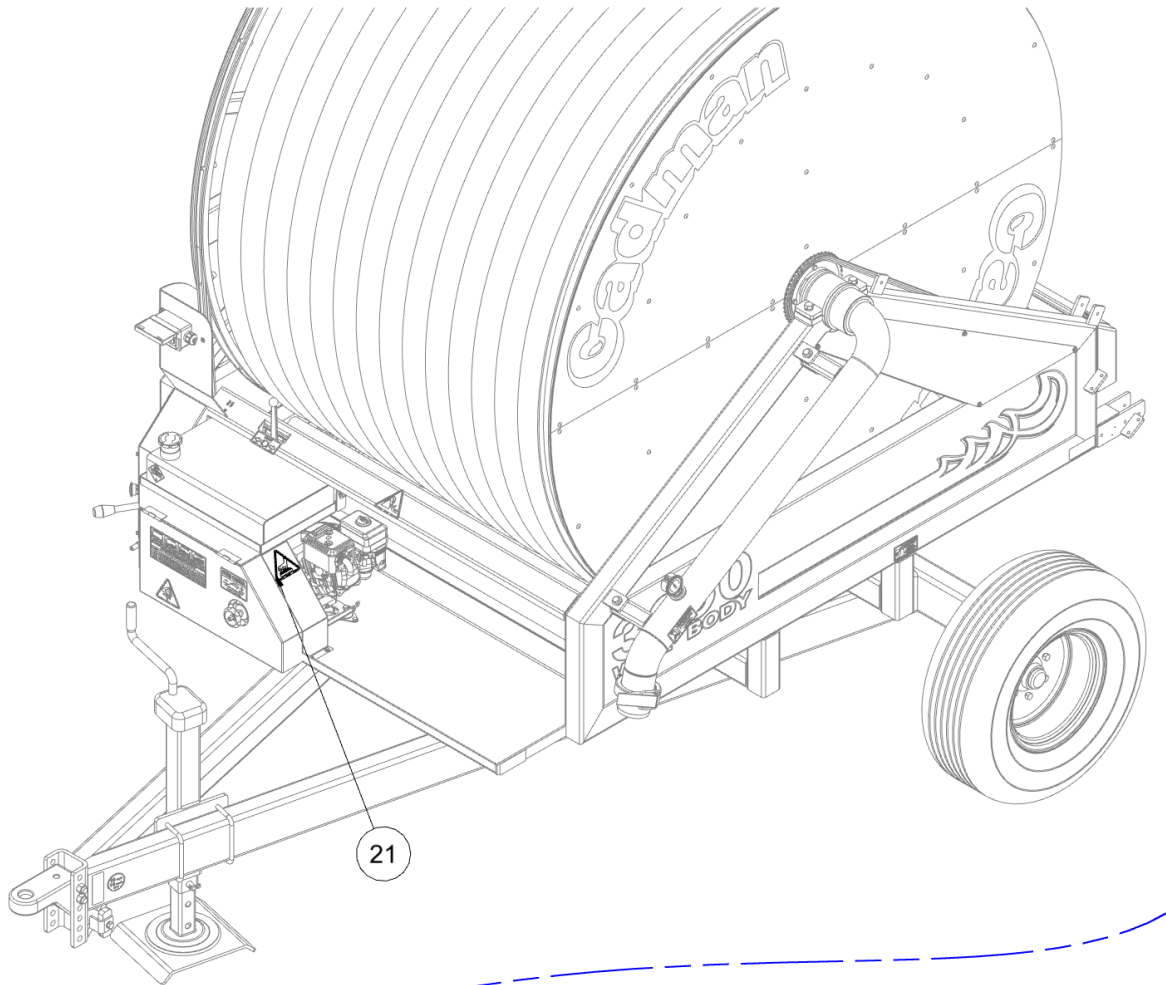




**Label Assembly Locations (2 of 3)**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	LABEL - HIGH PRESS SPRAY	40-049-A	1	
2	LABEL - INDEXER CONDITION	40-115-A	1	
3	LABEL - DRIVE DISCONNECT	40-151-A	1	
4	LABEL - SPEED CONTROL	40-189-A	1	
5	LABEL - SPEED ADJUST CTRL	40-218-A	1	
↳	LABEL - SPEED ADJUST CTRL	42-LBL-152	1	XLWB
6	LABEL - BRAKE CONTROL	40-293-A	1	
7	DECAL - AMBER REFLECTIVE	40-598	4	
8	DECAL - RED REFLECTIVE	40-599	4	
9	LABEL - MAX HOSE PULL	42-032	1	
10	LABEL - TORQUE WHEELS	42-035	2	
11	LABEL - HIGH PRESS. WATER	42-046-A	1	
12	LABEL - EMERGENCY STOP	42-LBL-002	1	
13	LABEL - GREASE POINT	42-LBL-115	3	
14	LABEL - PINCH HAND HAZARD	42-LBL-117	2	
15	LABEL - MANUALS	42-LBL-118	1	
16	LABEL - MAX TOW SPEED	42-LBL-119	1	
17	LABEL - ROTATING DRUM	42-LBL-122	2	
18	LABEL - ENTANGLEMENT	42-LBL-123	4	
19	LABEL - ENTANGLEMENT HAZARD	42-LBL-127	2	
20	LABEL - GASOLINE	42-LBL-134	1	
21	LABEL - BURN HAZARD	42-LBL-135	1	

**Label Assembly Locations (3 of 3)**

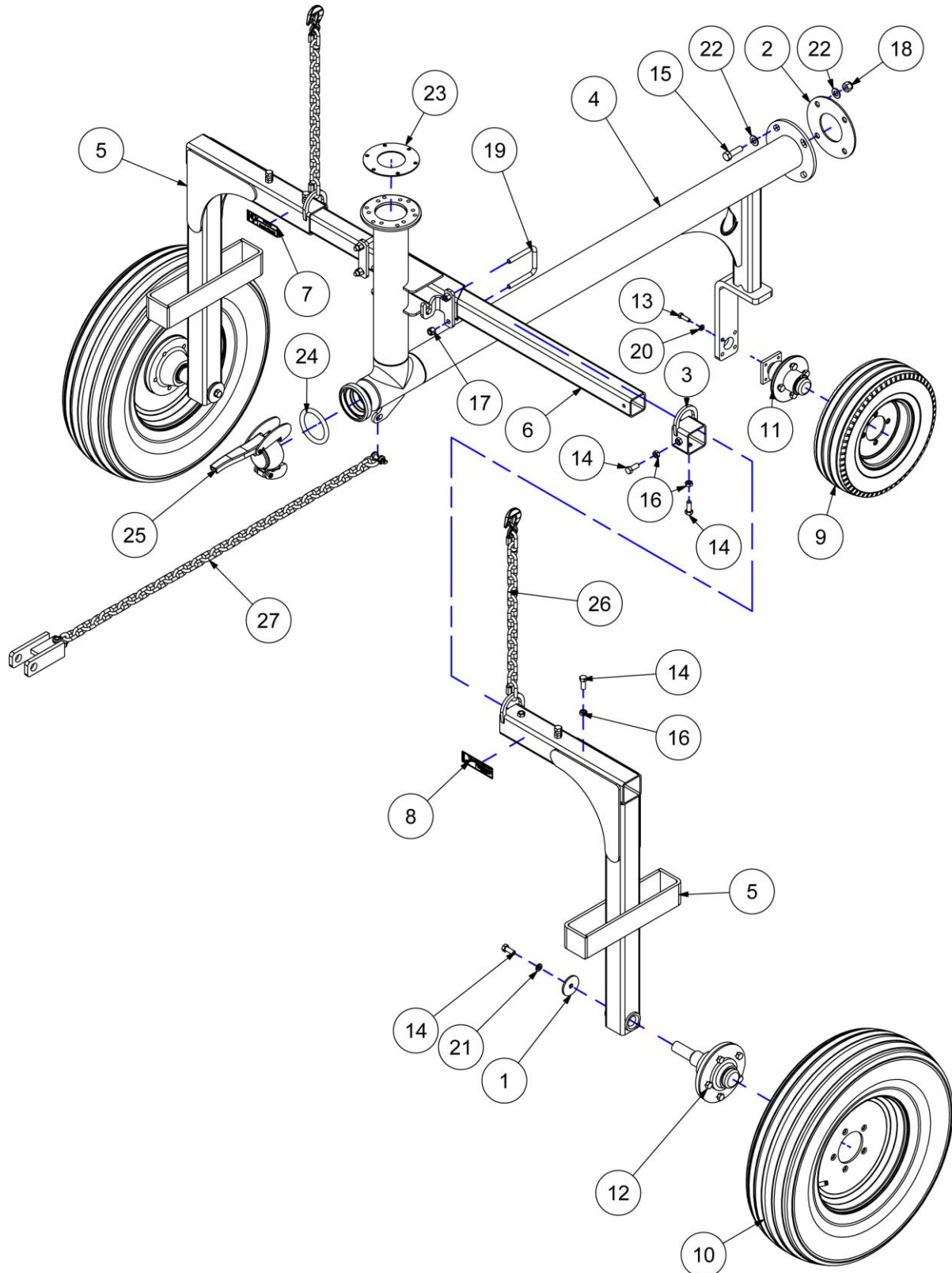




**Label Assembly Locations (3 of 3)**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	LABEL - HIGH PRESS SPRAY	40-049-A	1	
2	LABEL - INDEXER CONDITION	40-115-A	1	
3	LABEL - DRIVE DISCONNECT	40-151-A	1	
4	LABEL - SPEED CONTROL	40-189-A	1	
5	LABEL - SPEED ADJUST CTRL	40-218-A	1	
↳	LABEL - SPEED ADJUST CTRL	42-LBL-152	1	XLWB
6	LABEL - BRAKE CONTROL	40-293-A	1	
7	DECAL - AMBER REFLECTIVE	40-598	4	
8	DECAL - RED REFLECTIVE	40-599	4	
9	LABEL - MAX HOSE PULL	42-032	1	
10	LABEL - TORQUE WHEELS	42-035	2	
11	LABEL - HIGH PRESS. WATER	42-046-A	1	
12	LABEL - EMERGENCY STOP	42-LBL-002	1	
13	LABEL - GREASE POINT	42-LBL-115	3	
14	LABEL - PINCH HAND HAZARD	42-LBL-117	2	
15	LABEL - MANUALS	42-LBL-118	1	
16	LABEL - MAX TOW SPEED	42-LBL-119	1	
17	LABEL - ROTATING DRUM	42-LBL-122	2	
18	LABEL - ENTANGLEMENT	42-LBL-123	4	
19	LABEL - ENTANGLEMENT HAZARD	42-LBL-127	2	
20	LABEL - GASOLINE	42-LBL-134	1	
21	LABEL - BURN HAZARD	42-LBL-135	1	

**Sprinkler Cart Assembly - 3000**



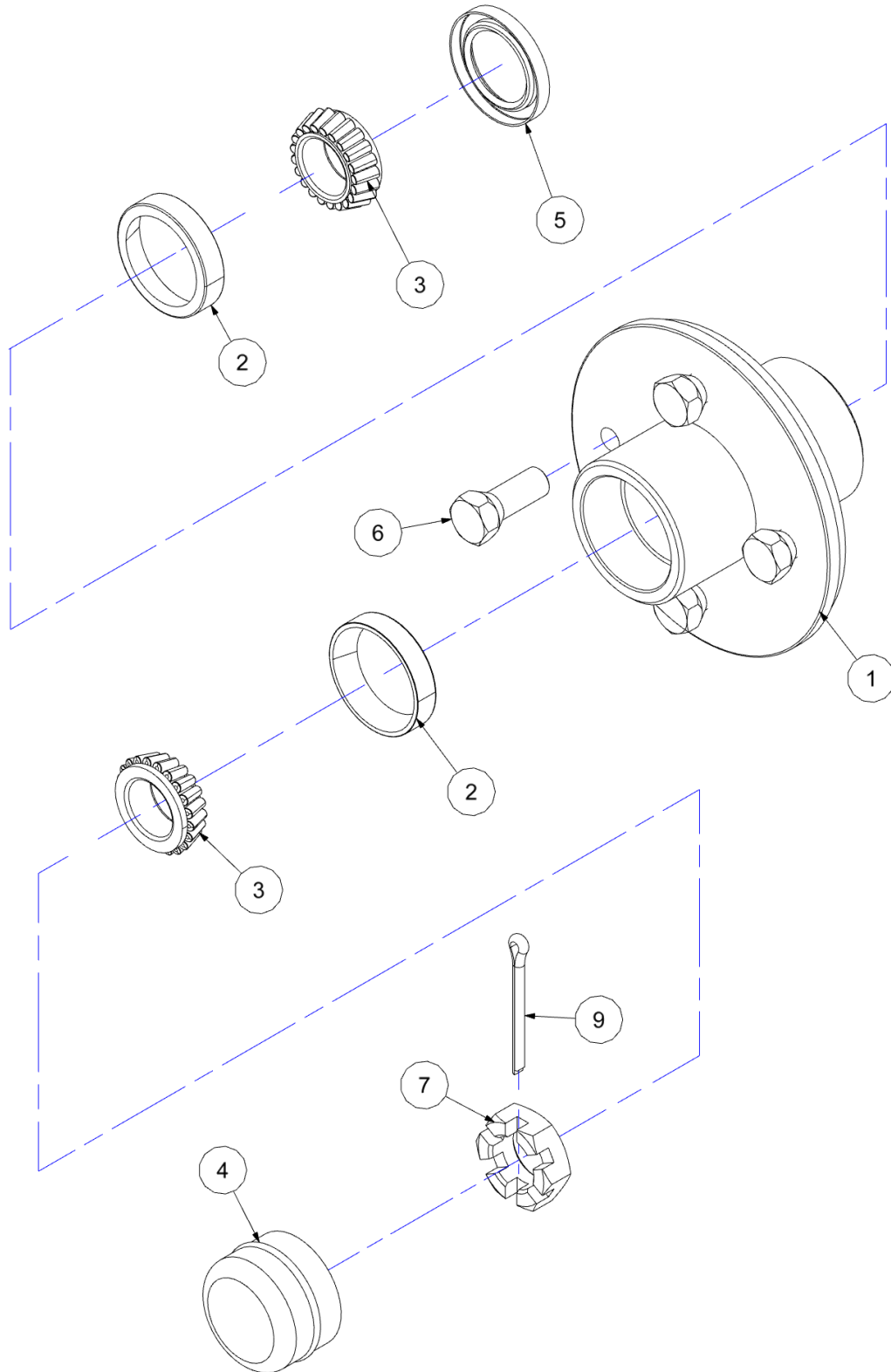




**Sprinkler Cart Assembly – 3000**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	SPROCKET RETAINING PLATE	01-314-B	2	
2	HOSE FLANGE GASKET	02-216-A	1	
3	PICK UP COLLAR - SHORT GALV.	02-234-G	1	
4	CART BODY - 28"	02-266-A	1	28" CART
↳	CART BODY - 46"	02-252-B	1	46" CART
↳	CART BODY - 62"	02-260-B	1	62" CART
5	CART LEG - 28" GALVANIZED	02-267-B	2	28" CART
↳	CART LEG - 46" GALVANIZED	02-253-C	2	46" CART
↳	CART LEG - 62" GALVANIZED	02-258-B	2	62" CART
6	CROSS TUBE - GALVANIZED	04-831-72G	1	
7	LABEL - MAX HOSE PULL	42-032	1	
8	LABEL - HIGH PRESS. WATER	42-046-A	1	
9	WHEEL ASS'Y - 4 BOLT RIM GALV.	55-036-G	1	
10	WHEEL ASS'Y - 670-15 GALVANIZED	55-041-G	2	
11	HUB ASSEMBLY – 4 BOLT	55-237	1	<b>PAGE 92</b>
12	HUB ASSEMBLY – 5 BOLT	55-238	2	<b>PAGE 94</b>
13	BOLT - 3/8-16 X 1 1/4	90-BLT-03816X125	4	
14	BOLT - 1/2-13 X 1 1/4	90-BLT-05013X125	8	
15	BOLT - 5/8-11 X 2.00	90-BLT-06311X200	4	
16	NUT JAM - 1/2-13	90-NUT-JAM050-13	6	
17	NUT LOCK - 1/2-13	90-NUT-LOC050-13	4	
18	NUT LOCK - 5/8-11	90-NUT-LOC063-11	4	
19	U-BOLT SQ - 1/2-13 X 3.00 X 4.00	90-UBT-SQ05013X400	2	
20	WASHER LOCK - 3/8	90-WSR-LOC038	4	
21	WASHER LOCK - 1/2	90-WSR-LOC050	2	
22	WASHER SAE - 5/8	90-WSR-SAE063	8	
23	GASKET - NELSON GUN FLANGE	DO-PRT-30-040-A	1	
24	GASKET - 3" (WIL-LOC)	IR-GKT-WL3	1	
25	END CAP 4" - WIL-LOC	IR-PLG-WL3	1	
26	CART LIFT CHAIN - 13 LINK	TR-CHN-13L	2	
27	CART TOW CHAIN ASSEMBLY	TR-CRT-TOWCHAIN	1	

**Hub Assembly – 55-002**



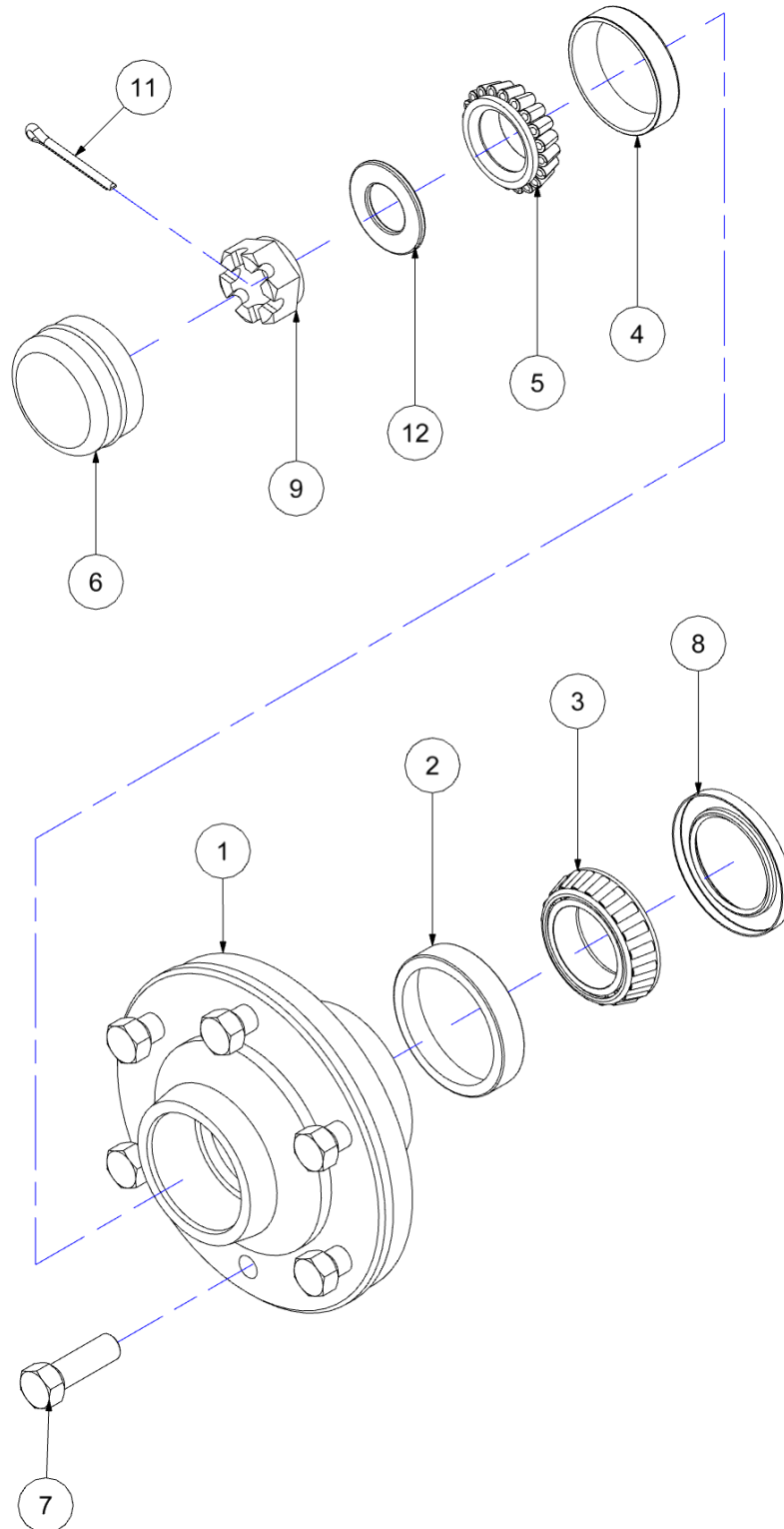


**Hub Assembly – 55-002**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
	HUB ASSEMBLY	55-002		*
1	HUB - #1000 HUB	55-002-A	1	
2	BEARING-CUP - 1000 HUB	55-003	2	
3	BEARING-CONE - #1000 HUB	55-004	2	
4	DUST CAP - #1000 HUB	55-005	1	
5	GREASE SEAL - #1000 HUB	55-006	1	
6	WHEEL BOLT - 1/2-20 x 60°	55-007-60	4	
7	NUT SPINDLE - THIN	55-008	1	
8	O.G. (WHEEL BEARING) GREASE	85-LUB-GRS/OG	1	
9	COTTER PIN - 3/16 X 2.00	90-PIN-CT019X200	1	

\* = FULL ASSEMBLY

**Hub Assembly – 55-026**

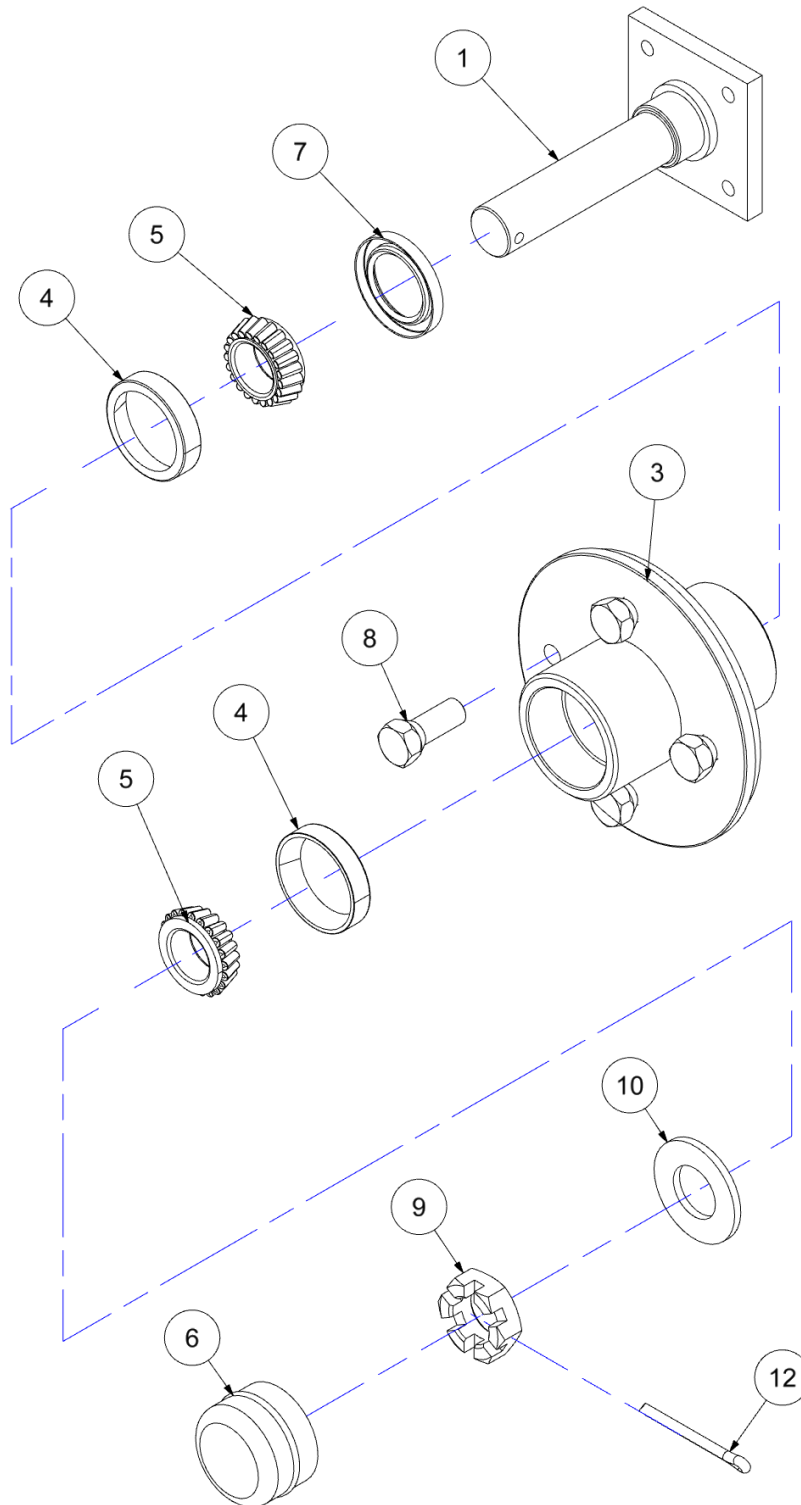




**Hub Assembly – 55-026**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
	HUB ASSEMBLY	55-026		*
1	HUB ONLY - 6 BOLT	55-026-A	1	
2	OUTER CUP	55-027	1	
3	INNER CONE	55-028	1	
4	OUTER CUP	55-029	1	
5	INNER CONE	55-030	1	
6	DUST CAP	55-031	1	
7	WHEEL BOLT - 9/16-18	55-032	6	
8	GREASE SEAL	55-033	1	
9	SPINDLE NUT - 100-14	55-034	1	
10	O.G. (WHEEL BEARING) GREASE	85-LUB-GRS/OG	AR	
11	COTTER PIN - 3/16 X 1 3/4 LG	90-PIN-CT019X175	1	
12	WASHER SAE - 1.00	90-WSR-SAE100	1	
* = FULL ASSEMBLY				

**Hub Assembly – 55-237**



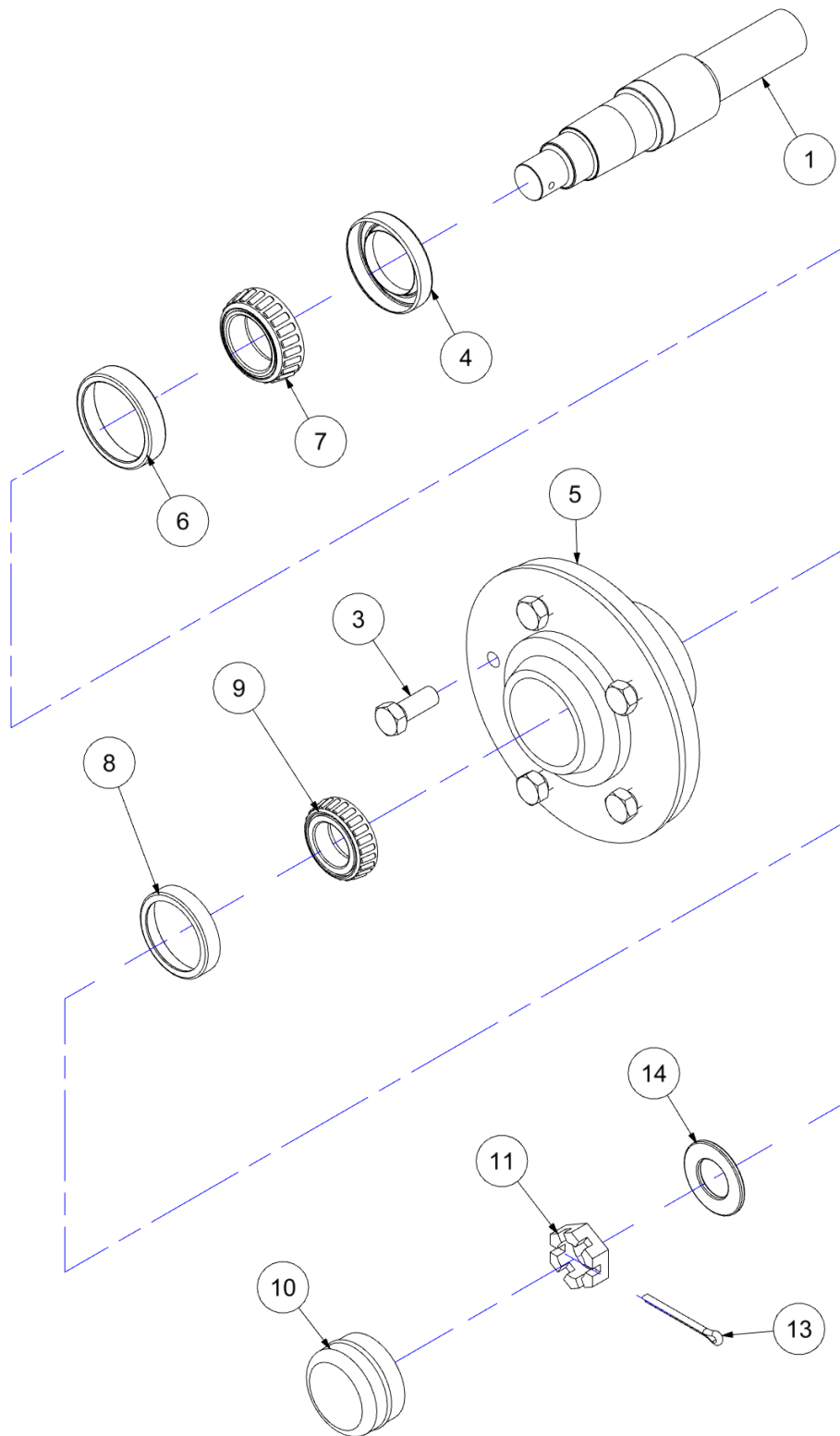


**Hub Assembly – 55-237**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	FRONT SPINDLE	02-256-A	1	
2	HUB ASSEMBLY - 4 BOLT 1000	55-002	1	*
3	HUB - #1000 HUB	55-002-A	1	
4	BEARING-CUP - #1000 HUB	55-003	1	
5	BEARING-CONE - #1000 HUB	55-004	2	
6	DUST CAP - #1000 HUB	55-005	1	
7	GREASE SEAL - #1000 HUB	55-006	1	
8	WHEEL BOLT - 1/2-20 x 60°	55-007-60	4	
9	NUT SPINDLE - THIN	55-008	1	
10	WASHER	55-016	1	
11	O.G. (WHEEL BEARING) GREASE	85-LUB-GRS/OG	AR	
12	COTTER PIN - 3/16 X 2.00	90-PIN-CT019X200	1	

\* = FULL ASSEMBLY

**Hub Assembly – 55-238**





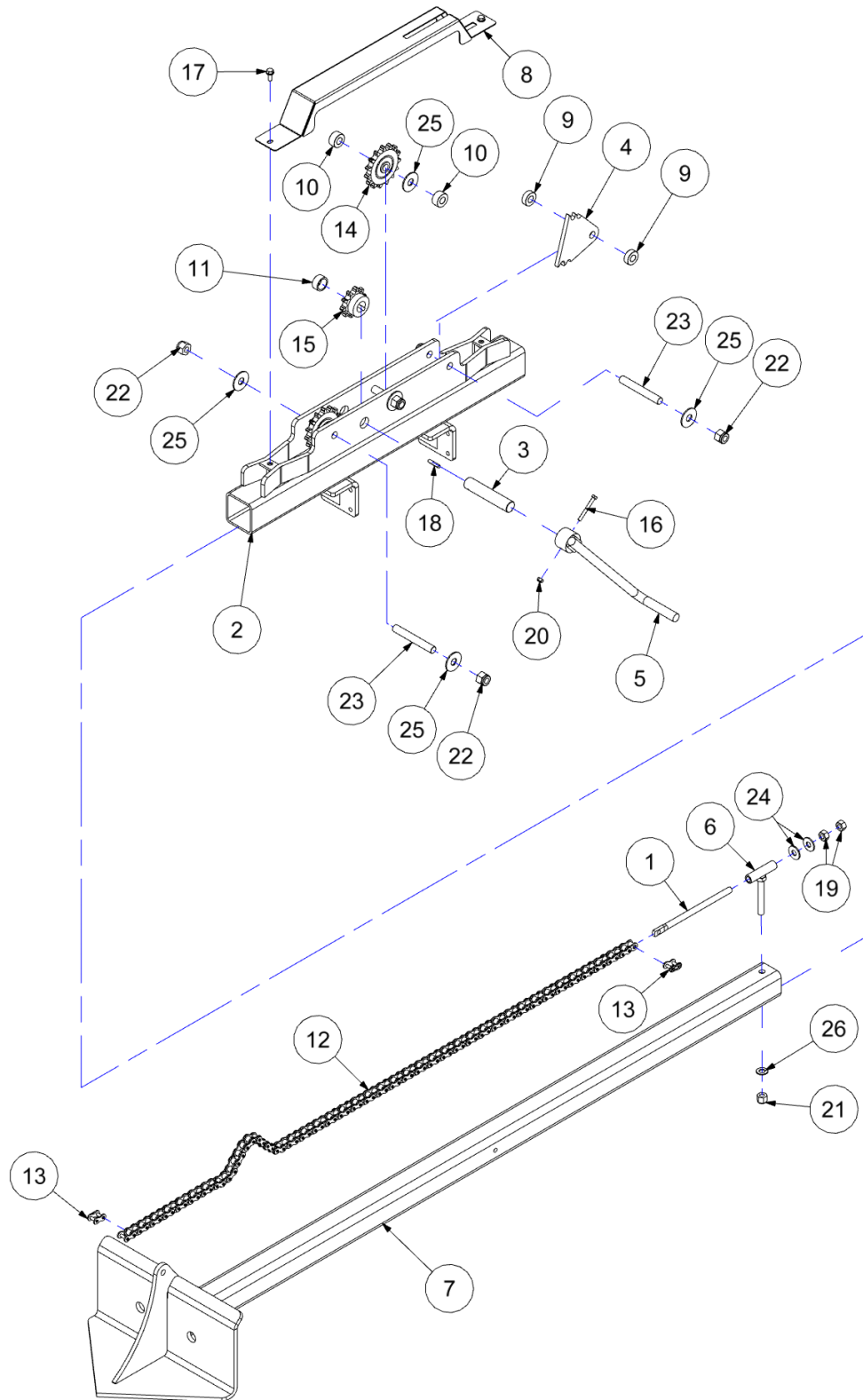


**Hub Assembly – 55-238**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	SPINDLE - 1 3/4 X 9.00	02-255-C	1	
2	HUB ASSEMBLY - 5 BOLT 4500	50-018	1	*
3	WHEEL BOLT - 1/2-20 X 45°	55-007-45	5	
4	SEAL - GREASE	55-015	1	
5	HUB - 5 BOLT	55-018-A	1	
6	INNER BEARING - CUP	55-019	1	
7	INNER BEARING - CONE	55-020	1	
8	OUTER BEARING - CUP	55-021	1	
9	OUTER BEARING - CONE	55-022	1	
10	CAP - DUST	55-023	1	
11	NUT	55-260	1	
12	O.G. (WHEEL BEARING) GREASE	85-LUB-GRS/OG	AR	
13	COTTER PIN - 3/16 X 2.00	90-PIN-CT019X200	1	
14	WASHER SAE - 1.00	90-WSR-SAE100	1	

\* = FULL ASSEMBLY

## Optional Chain Jack Assembly

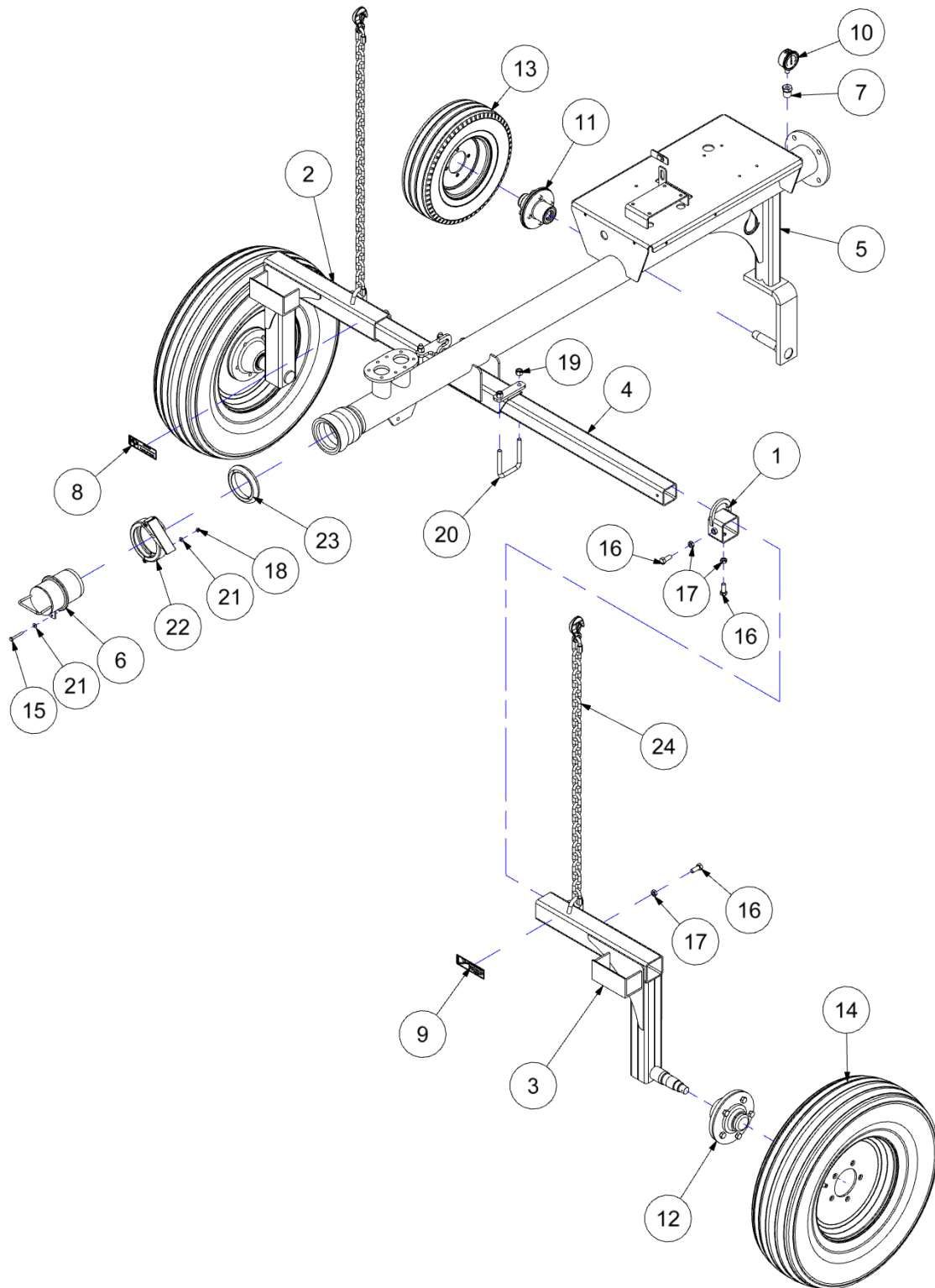




**Optional Chain Jack Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
	CHAIN JACK ASSEMBLY	07-825		*
1	SPRING ADJ. ROD - 9 IN. PLATED	06-658-A	1	
2	BODY - CHAIN JACK	07-820	1	
3	JACK SHAFT	07-824	1	
4	CHAIN LOCK	07-826	1	
5	CRANK HANDLE	07-829	1	
6	CHAIN ADJUSTER WELDMENT	07-834	1	
7	STABILIZER LEG WELDMENT	07-836	1	
8	CHAIN GUARD	07-843-A	1	
9	SPACER - 5/8ID X 1 1/4OD X 7/16	07-845	3	
10	SPACER	07-846	3	
11	SPACER - 1 1/4" X 9/16" X 1/8" W	07-854	1	
12	60 RIVETED ROLLER CHAIN / LINK	10-CHN-60-1RIV	64 P	
13	CONNECTING LINK - #60-2	10-LNK-60-CONN	2	
14	SPROCKET - 60-15 IDLER	10-SPT-60-15IDLER	2	
15	SPROCKET - 60B10 X 1.00	10-SPT-60B10X100	1	
16	BOLT - 1/4-20 X 2 1/4	90-BLT-02520X225	1	
17	BOLT FLG - 5/16-18 X 3/4	90-BLT-F03118X075	2	
18	KEY - 1/4 SQ. X 1 1/4 LG	90-KEY-SQ025X125	1	
19	NUT HEX - 1/2-13	90-NUT-HEX050-13	2	
20	NUT LOCK - 1/4-20	90-NUT-LOC025-20	1	
21	NUT LOCK - 1/2-13	90-NUT-LOC050-13	1	
22	NUT LOCK - 5/8-11	90-NUT-LOC063-11	6	
23	THREADED ROD - 5/8-11	90-ROD-06311X0450	3	
24	WASHER FLAT - 1/2	90-WSR-FLT050	2	
25	WASHER FLAT - 5/8	90-WSR-FLT063	8	
26	WASHER SAE - 1/2	90-WSR-SAE050	1	
* = FULL ASSEMBLY				

**Optional Broadcast Cart Assembly**

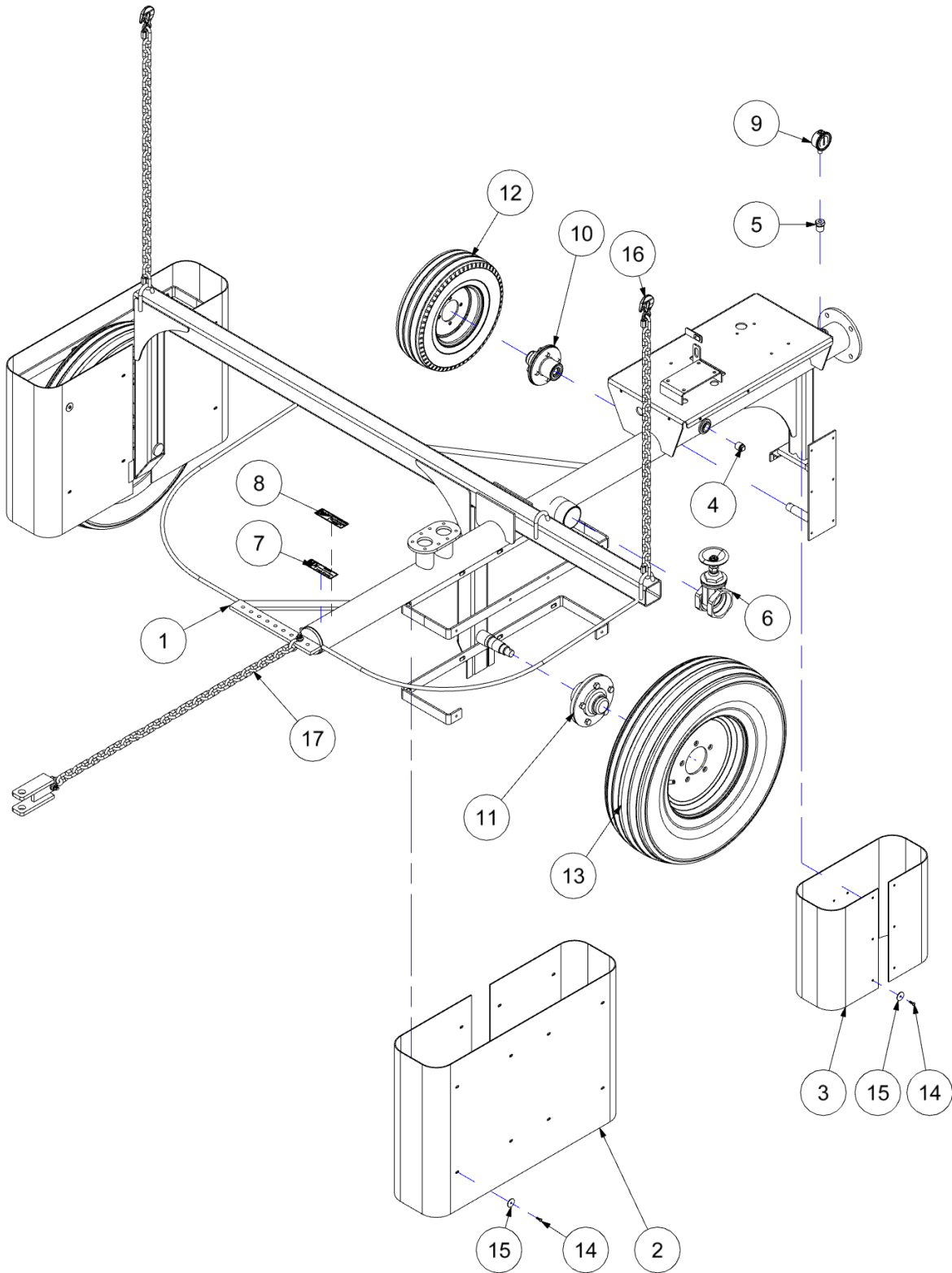




**Optional Broadcast Cart Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
	BROADCAST CART ASSEMBLY	TR-CRT-BROADCAST	1	*
1	PICK UP COLLAR - SHORT GALV.	02-234-G	1	
2	CART LEG - EXTRA LOW L.H.	02-243-L	1	
3	CART LEG - EXTRA LOW R.H.	02-243-R	1	
4	CROSS TUBE - GALVANIZED	04-831-72G	1	
5	BROADCAST CART WELDMENT	14-114	1	
6	COUPLING PLUG WELDMENT	14-115	1	
7	REDUCER - #12 M-NPT X #04 F-NPT	40-NPT-RB075X025G	1	
8	LABEL - MAX HOSE PULL	42-032	1	
9	LABEL - HIGH PRESS. WATER	42-046-A	1	
10	GAUGE - 0-160 PSI WET	45-017	1	
11	HUB ASS'Y - 4 BOLT	55-002	1	<b>PAGE 94</b>
12	HUB ASS'Y - 5 BOLT	55-018	2	<b>PAGE 88</b>
13	WHEEL ASS'Y - 4 BOLT RIM GALV.	55-036-G	1	
14	WHEEL ASS'Y - 670-15 GALVANIZED	55-041-G	2	
15	BOLT - 1/4-20 X 2.00	90-BLT-02520X200	1	
16	BOLT - 1/2-13 X 1 1/4	90-BLT-05013X125	6	
17	NUT JAM - 1/2-13	90-NUT-JAM050-13	6	
18	NUT LOCK - 1/4-20	90-NUT-LOC025-20	1	
19	NUT LOCK - 1/2-13	90-NUT-LOC050-13	4	
20	U-BOLT SQ - 1/2-13 X 3.00 X 4.00	90-UBT-SQ05013X400	2	
21	WASHER SAE - 1/4	90-WSR-SAE025	2	
22	4 IN. RINGLOCK FITTING CLAMP	IR-FCL-4	1	
23	4 IN. PIERCE GASKET	IR-GKT-PIERCE4	1	
24	CART LIFT CHAIN - 25 LINK	TR-CHN-25L	2	
* = FULL ASSEMBLY				

**Optional Ginseng Cart Assembly**



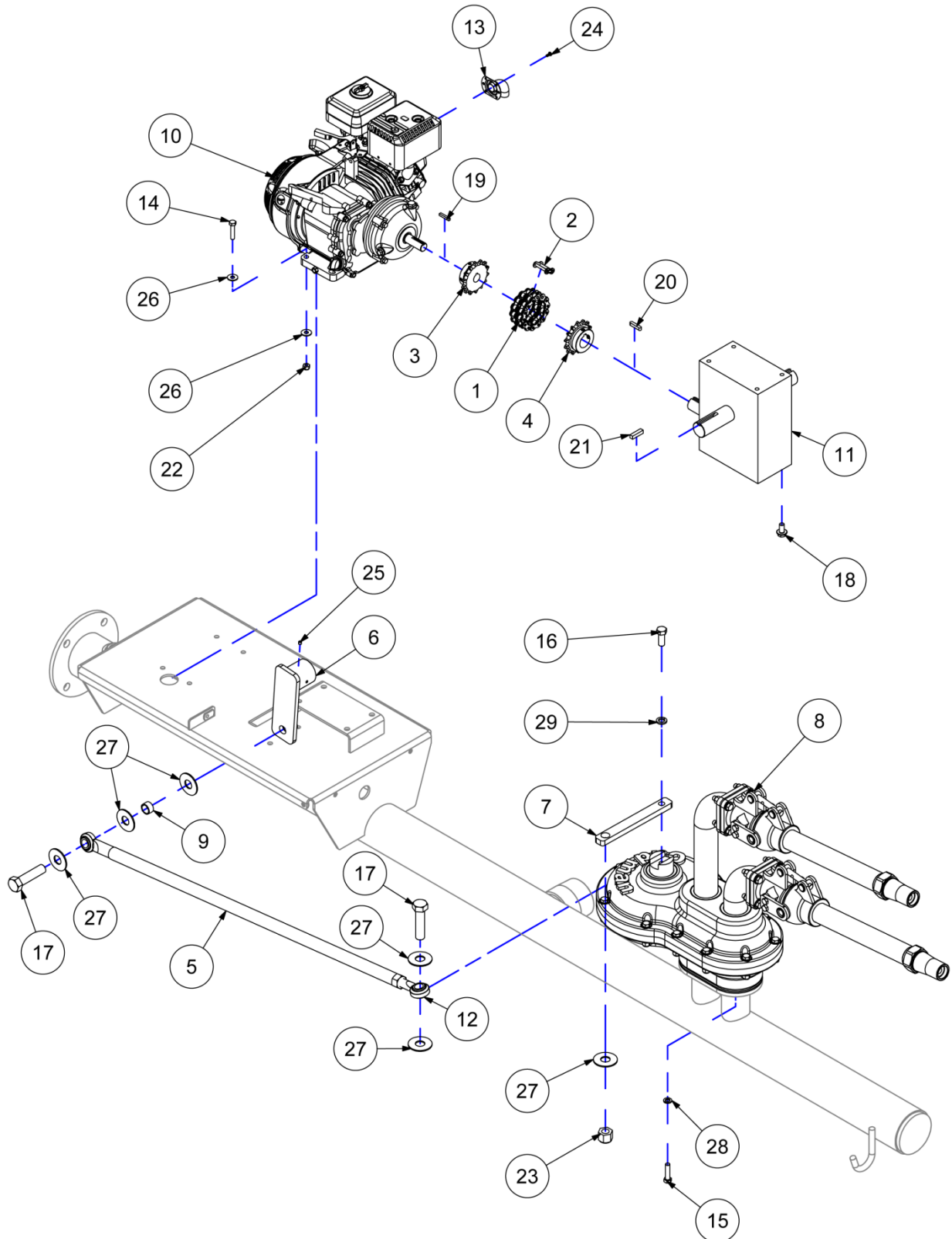


**Optional Ginseng Cart Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
	GINSENG CART ASSEMBLY	TR-CRT-GINSENG	1	*
1	CART BODY WELDMENT - GINSENG	14-101-A	1	
2	DOOR WELDMENT - GEARBOX HOUSING	14-103-A	1	
3	WHEEL COVER - REAR	14-235-A	2	
4	WHEEL COVER - FRONT	14-236-A	1	
5	PLUG - 3/4 NPT GALV.	40-NPT-PLG075G	1	
6	REDUCER - #12 M-NPT X #04 F-NPT	40-NPT-RB075X025G	1	
7	GATE VALVE - 3"	40-NPT-VLV300GATFF	1	
8	LABEL - MAX HOSE PULL	42-032	1	
9	LABEL - HIGH PRESS. WATER	42-046-A	1	
10	GAUGE - 0-160 PSI WET	45-017	1	
11	HUB ASS'Y - 4 BOLT	55-002	1	<b>PAGE 94</b>
12	HUB ASS'Y - 5 BOLT	55-018	2	<b>PAGE 88</b>
13	WHEEL ASS'Y - 4 BOLT RIM GALV	55-036-G	1	
14	WHEEL ASS'Y - 670-15 GALVANIZED	55-041-G	2	
15	SCREW BUTTON - 1/2-20 X 3/4	90-SCR-BH02520X075	40	
16	1/4 IN. FENDER WASHER	90-WSR-FEN025	40	
17	CART LIFT CHAIN - 25 LINK	TR-CHN-25L	2	
18	CART TOW CHAIN ASSEMBLY	TR-CRT-TOWCHAIN	1	

\* = FULL ASSEMBLY

**Broadcast Cart and Ginseng Cart Drive Assembly**



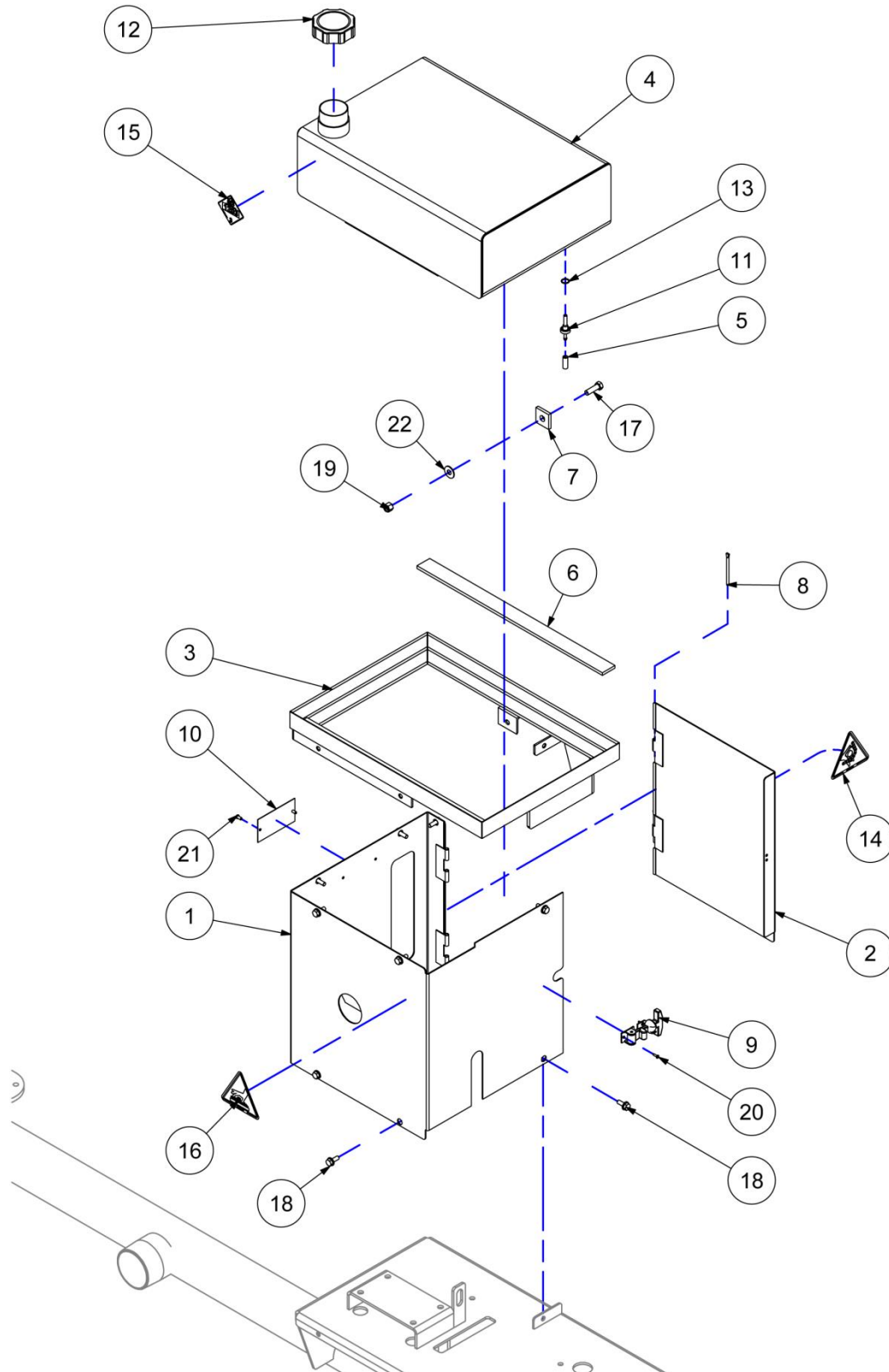




**Broadcast Cart and Ginseng Cart Drive Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	ROLLER CHAIN - 50 - 2 RIVETED	10-CHN-50-2RIV	1	
2	#50 -2 CONNECTING LINK	10-LNK-50-2CONN	1	
3	SPROCKET - 50B14 X 3/4" BORE	10-SPT-50B14X075	1	
4	SPROCKET - 50B14 X 1 1/8" BORE	10-SPT-50B14X113	1	
5	DRIVE LINK WELDMENT	14-105	1	
6	GEARBOX ARM WELDMENT	14-108	1	
7	ARM - GUN BLOCK	14-240	1	
8	BROADCAST SPRINKLER ASSEMBLY	20-000	1	<b>PAGE 106</b>
9	SPACER - 3/4 ID X 1/2 LG.	40-110	1	
10	ENGINE - GX120 w/6:1 GEARBOX	40-159-A	1	
11	GEARBOX REDUCER - C80-D50	40-486	1	
12	ROD END - 3/4-16 MALE THREAD	40-488	1	
13	EXHAUST DEFLECTOR - GX-120/160	40-HDA-18340ZE1000	1	
14	BOLT - 5/16-18 X 1 1/2	90-BLT-03118X150	4	
15	BOLT - 3/8-16 X 1 1/2	90-BLT-03816X150	8	
16	BOLT - 1/2-13 X 1 1/4	90-BLT-05013X125	1	
17	BOLT - 3/4-10 X 3.00	90-BLT-07510X300	2	
18	BOLT FLG - M10X1.50 X 20mm	90-BLT-FM10150X020	4	
19	KEY - 3/16" SQUARE X 1 1/8	90-KEY-SQ019X113	1	
20	KEY - 1/4 SQ. X 1 1/4 LG	90-KEY-SQ025X125	1	
21	KEY - 5/16 SQ. X 1 3/8	90-KEY-SQ031X125	1	
22	NUT LOCK - 5/16-18	90-NUT-LOC031-18	4	
23	NUT LOCK - 3/4-10	90-NUT-LOC075-10	2	
24	MACH. SCREW PAN - 08-32 X 3/8	90-SCR-PH8X038	2	
25	SET SCREW - 1/4-20 X 1/4 LG	90-SCR-ST02520X025	2	
26	WASHER FLAT - 5/16	90-WSR-FLT031	8	
27	WASHER FLAT - 3/4"	90-WSR-FLT075	6	
28	WASHER LOCK - 3/8	90-WSR-LOC038	8	
29	WASHER LOCK - 1/2	90-WSR-LOC050	1	

## **Broadcast Cart and Ginseng Cart Shrouds Assembly**

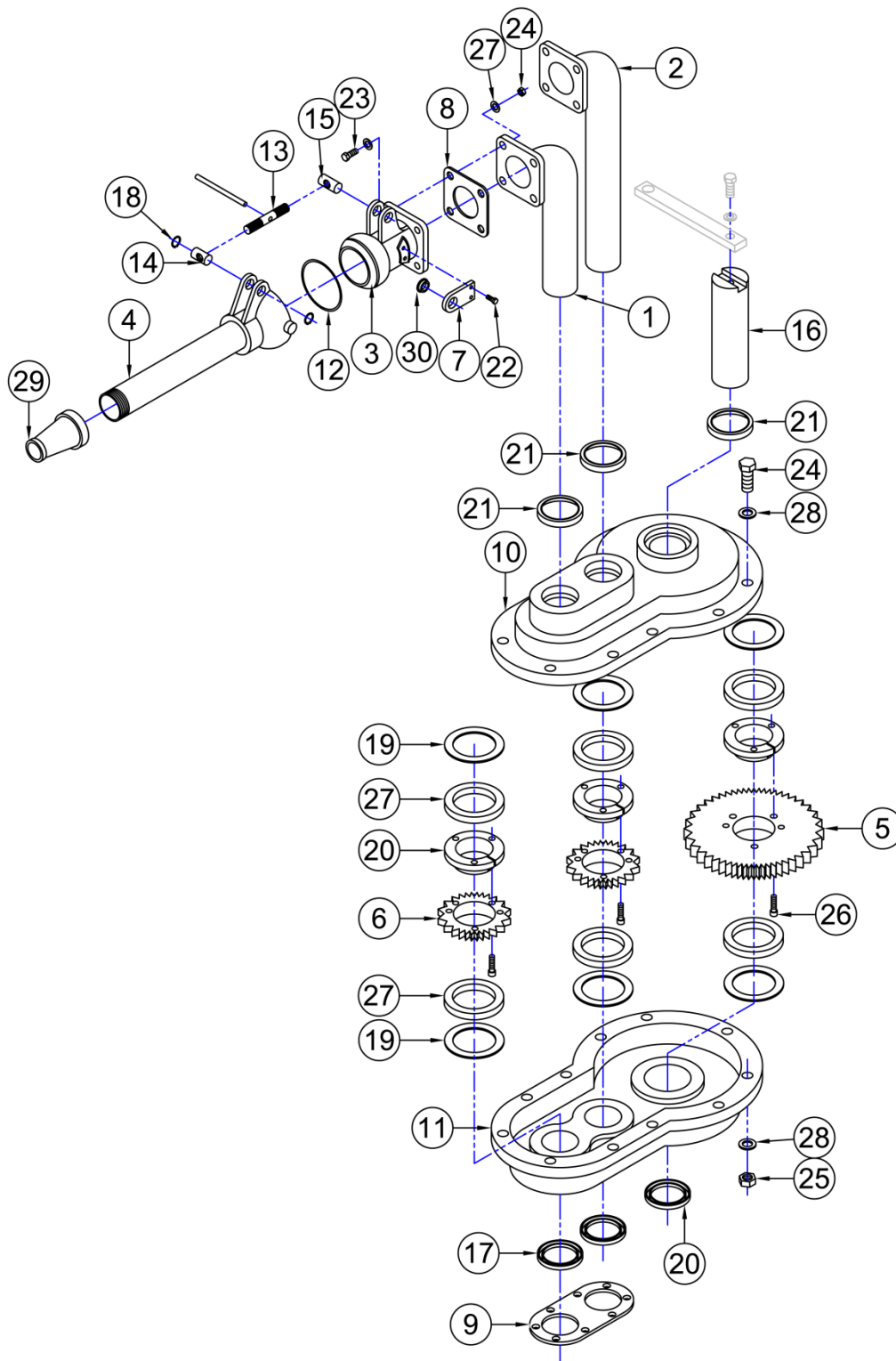




**Broadcast Cart and Ginseng Cart Shroud Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	GEARBOX HOUSING WELDMENT	14-102	1	
2	DOOR WELDMENT - GEARBOX HOUSING	14-103-A	1	
3	FUEL TANK CRADLE WELDMENT	14-104	1	
4	FUEL TANK - 5 GAL. ALUMINUM	40-017	1	
5	FUEL LINE - 1/4 NEOPRENE	40-066	16	
6	ROUGH TOP BELT - 1 3/8 IN. X 20"	40-093-20	2	
7	VIBRATION ISOLATOR	40-095	1	
8	HINGE PIN - 3/16 X 3.00 BRASS	40-200-C	2	
9	RUBBER LATCH KIT	40-217	1	
10	CADMAN SERIAL NUMBER TAG	40-238-B	1	
11	FUEL STRAINER - SALVAGED	40-HDA-16955ZE1000	1	
12	VENTED GAS CAP	40-HDA-17620Z4H900	1	
13	O RING SALVAGE FROM HONDA GX 120	40-HDA-91353671004	1	
14	LABEL - ENTANGLEMENT HAZARD	42-LBL-127	1	
15	LABEL - GASOLINE	42-LBL-134	1	
16	LABEL - BURN HAZARD	42-LBL-135	1	
17	BOLT - 3/8-16 X 1 1/4	90-BLT-03816X125	1	
18	BOLT FLG - 5/16-18 X 3/4	90-BLT-F03118X075	12	
19	NUT LOCK - 3/8-16	90-NUT-LOC038-16	1	
20	RIVET - 1/8 X 3/8 LG.	90-RIV-013X038	4	
21	RIVET - 3/16 X 3/8	90-RIV-019X038	2	
22	WASHER FLAT - 3/8	90-WSR-FLT038	1	

## Broadcast Cart and Ginseng Cart Gearbox Assembly



**Broadcast Cart and Ginseng Cart Gearbox Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	SHORT INLET	20-002-A	1	
2	LONG INLET	20-003-A	1	
3	GUN BALL	20-004	2	
4	RANGE TUBE WELDMENT	20-005	2	
5	CROWN GEAR	20-006	1	
6	PINION GEAR	20-007	2	
7	PIVOT ARM	20-008	4	
8	FLANGE GASKET - VITON	20-009-V	2	
9	GUN GASKET - VITON	20-010-V	1	
10	GEAR CASE - TOP	20-011	1	
11	GEAR CASE - BOTTOM	20-012	1	
12	O-RING, 2 3/4" ID X 0.135" - VITON	20-013-V	2	
13	ADJUSTING ROD	20-014	2	
14	PIVOT, RIGHT-HAND THREAD	20-015	2	
15	PIVOT, LEFT-HAND THREAD	20-016	2	
16	SHAFT	20-017	1	
17	2" INLET SEAL	20-018	2	
18	EXTERNAL RETAINING RING, 5/8" STAINLESS	20-019	8	
19	ARBOR SHIM, 2" ID X 2 3/4" OD X 0.015"	20-020	6	
20	2" TAPER BUSHING	40-467	3	
21	2" SHAFT SEAL	40-468	4	
22	BOLT, 5/16" X 3/4" LG.	90-BLT-03118X075	8	
23	BOLT, 3/8" X 1 3/4" LG.	90-BLT-03816X175	8	
24	BOLT, 3/8" X 2" LG.	90-BLT-03816X200	11	
25	LOCK NUT, 3/8"-16	90-NUT-LOC038-16	19	
26	SOCKET HEAD CAP SCREW, 1/4"-20 X 1 1/2"	90-SCR-SHO2520X150	9	
27	2" X 14 GA. MACHINERY BUSHING	90-WSR-M51	6	
28	SAE WASHER, 3/8"	90-WSR-SAE038	30	
29	NELSON 100T 0.50" TAPER NOZZLE	SP-NEL-9309-050	2	
30	ROTATION BUSHING	SP-NEL-9993	4	

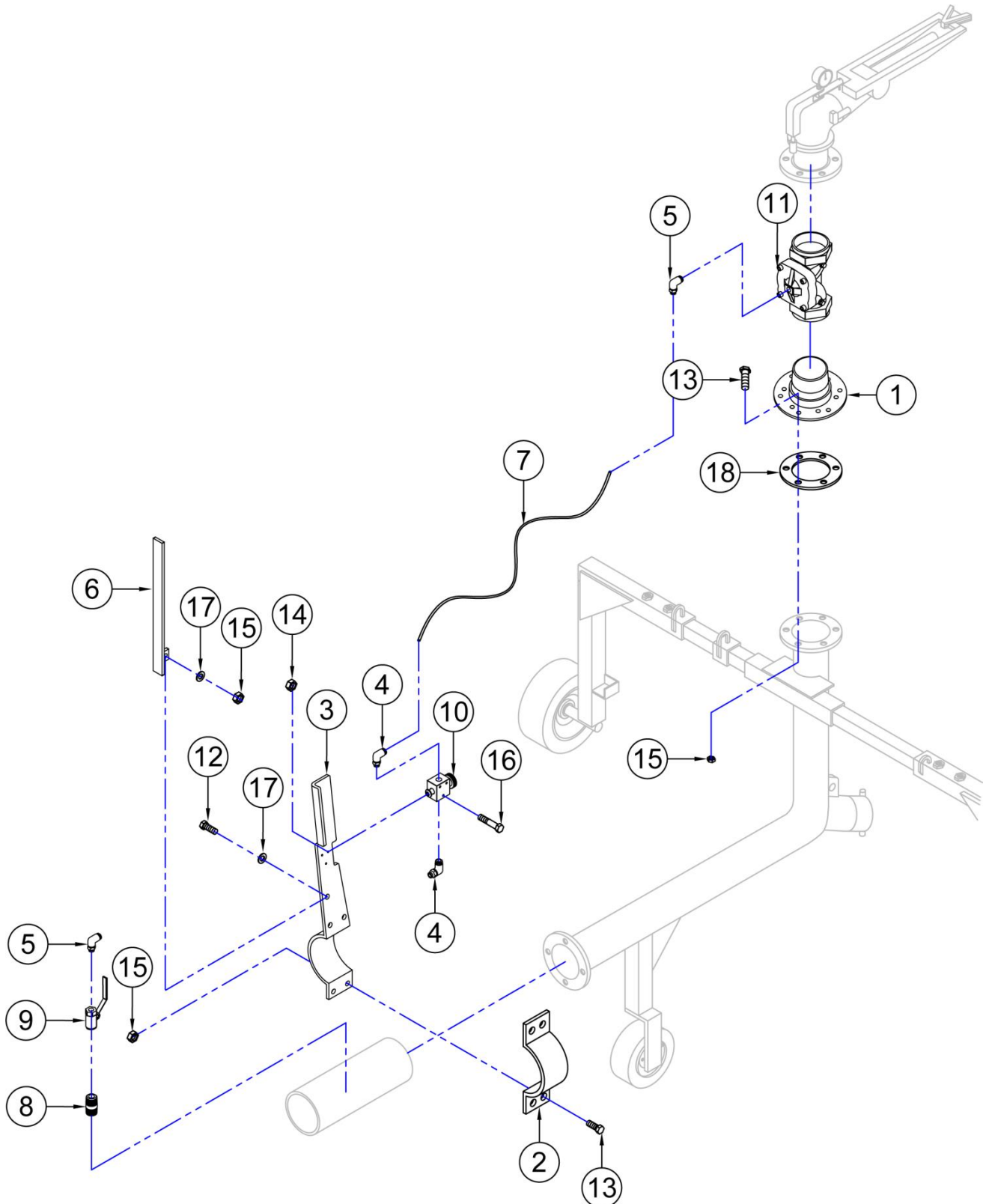




**Optional Sprinkler Kit Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	SPRINKLER MOUNT	06-687-B	1	
2	ADAPTER - 16 BPS-M X 16 NPT-F	15-250-100	1	
3	3/4" NPT X 3/4" HOSE BARB, GALVANIZED	40-NPT-BRB075G	2	
4	3/4" X 90 DEG STREET ELBOW, GALVANIZED	40-NPT-ELS075X90G	1	
5	3/4" CLOSE NIPPLE, GALVANIZED	40-NPT-NPLC075G	2	
6	1" NPT CLOSE NIPPLE, GALVANIZED	40-NPT-NPLC100G	1	
7	1" - 3/4" RED. BUSHING, GALVANIZED	40-NPT-RB100X075G	1	
8	3/4" NPT TEE, GALVANIZED	40-NPT-TEE075G	1	
9	3/4" BALL VALVE, F X F	40-NPT-VLV075BLLFF	1	
10	GEAR CLAMP, HS-10	50-026	2	
11	SINGLE TUBE CLAMP, 1" GALVANIZED	50-058	5	
13	LOCKNUT, 3/8"	90-NUT-LOC038-16	4	
14	TEK SCREW, 1/4" X 1" LG.	90-SCR-TEK025X100	5	
12	BOLT, 3/8" X 3 3/4" LG.	90-UBT-SQ05013X400	2	
15	3/8 SAE WASHER	90-WSR-SAE038	4	
16	3/4" SUCTION HOSE X 15' LG.	IR-HOZ-SUC075	1	
17	8 mm F43 NOZZLE	SP-KOM-040101-80	1	
18	KOMET F43 SPRINKLER	SP-KOM-F43	1	

## Optional Raphael Valve Assembly



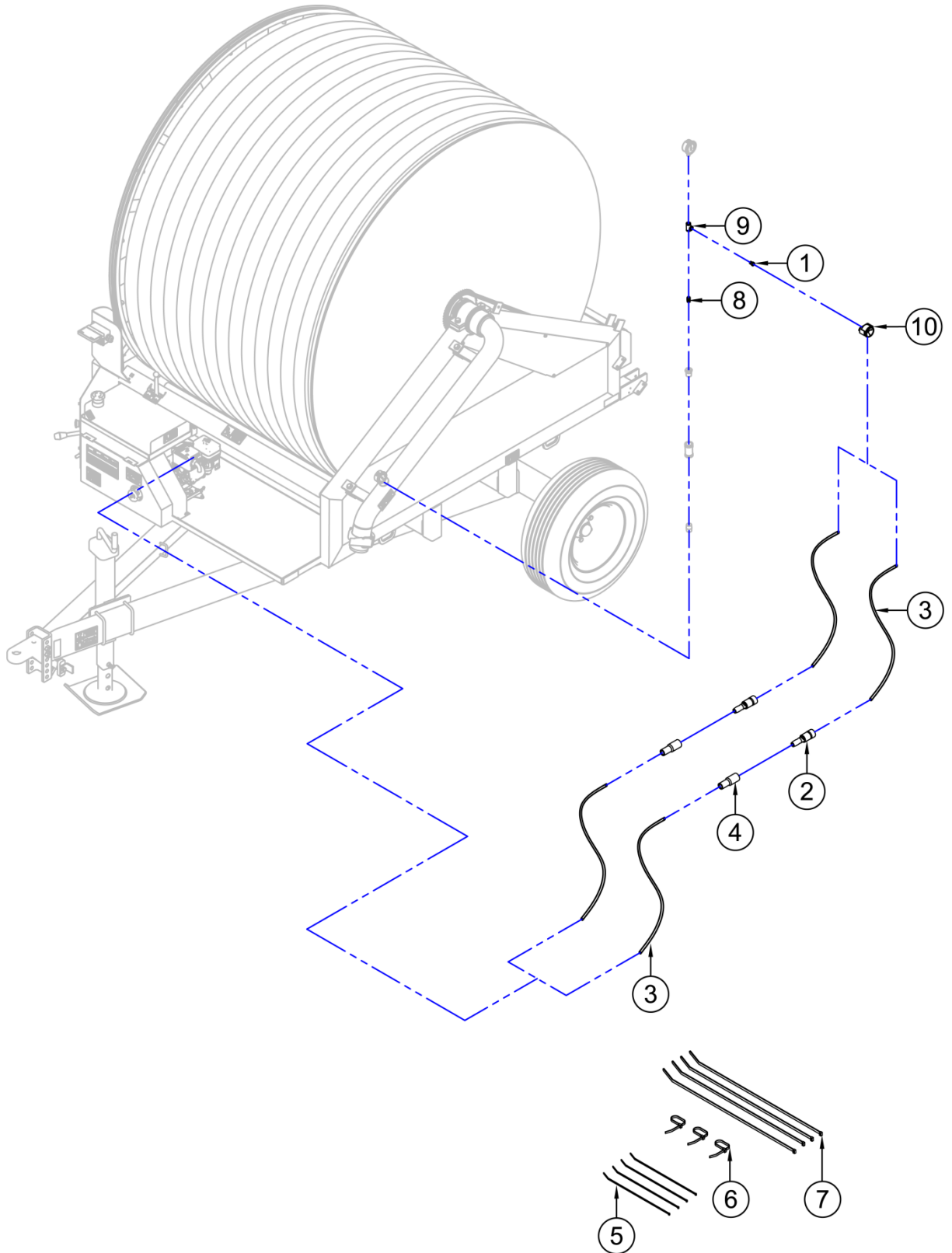




**Optional Raphael Valve Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	KOMET/NELSON GUN ADAPTER	02-224-B	2	
2	MARKER CLAMP - 3750S/XL	03-609	1	
3	3.75" MARKER FLAG WELDMENT	03-623	1	
4	ELBOW, #06 TUBE X #02 M-NPT X 90 DEG.	25-HYD-87110-06-02	2	
5	ELBOW, #06 TUBE X #04 M-NPT X 90 DEG.	25-HYD-87110-06-04	2	
6	SHUT OFF TRIGGER	28-616	1	
7	BLACK POLYETHYLENE HOSE, 3/8" DIA. X 20'	40-HHZ-0167	1	
8	1/4" NPT CLOSE NIPPLE, GALV.	40-NPT-NPLC025G	1	
9	1/4" BALL VALVE F X F	40-NPT-VLV025BLLFF	1	
10	3 WAY VALVE	42-048	1	
11	VALVE – 3" CONTROL RAPHAEL	42-076	1	
12	BOLT, 3/8"-16 X 1 1/4" LG.	90-BLT-03816X125	1	
13	BOLT, 3/8"-16 X 1 1/2" LG.	90-BLT-03816X150	10	
14	HEX NUT, #6-32	90-NUT-HEX006-32	3	
15	LOCK NUT, 3/8"-16	90-NUT-LOC038-16	11	
16	STAINLESS PAN HEAD SCREW, #6-32 X 1 1/2"	90-SCR-PHP06-32X150	3	
17	SAE WASHER, 3/8"	90-WSR-SAE038	2	
18	NELSON GUN FLANGE GASKET	DO-PRT-30-040-A	1	

**Optional Murphy Gauge Assembly**



**Optional Murphy Gauge Assembly**

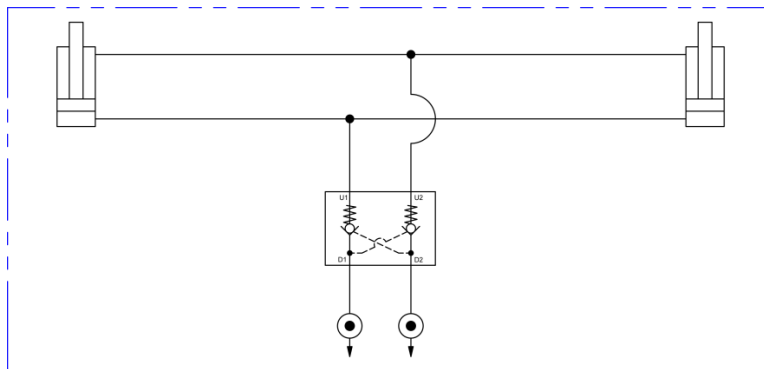
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>PART NUMBER</b>	<b>QTY</b>	<b>MODEL</b>
1	BRASS RED. BUSHING - 4 MNPT X 2 MNPT	25-WHD-3220X4X2	1	
2	MALE BULLET CONNECTOR, BLUE	40-070	2	
3	16/2 LOW TENSION CABLE X 10' LG.	40-147-FT	1	
4	FEMALE BULLET CONNECTOR, BLUE	40-247	1	
5	BLACK CABLE TIE - 4" LG.	40-391	6	
6	BLACK 50 LB CABLE TIE - 7" LG.	40-424	2	
7	BLACK CABLE TIE - 14" LG.	40-425	2	
8	1/4" NPT CLOSE NIPPLE, GALVANIZED	40-NPT-NPLC025G	1	
9	1/4" NPT TEE, GALVANIZED	40-NPT-TEE025G	1	
10	MURPHY 20-P7 0-150 PSI GAUGE	IR-MPY-20-P7_150	1	



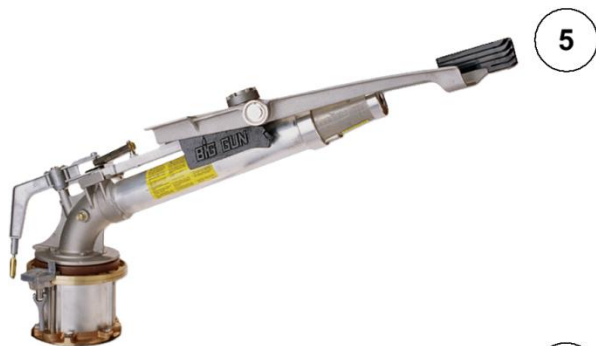
**Optional Hydraulic Jacks Assembly**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	HYDRAULIC JACK FOOT	05-611-B	2	
2	JACK SPACER	05-625	4	
3	STABILIZER JACK PIN	05-628	2	
4	STABILIZER JACK PIN RETAINER	05-628-RP	4	
5	VALVE MOUNT BRACKET	06-689-B	1	
6	LEFT HYDRAULIC JACK BODY	06-693-A	1	
7	RIGHT HYDRAULIC JACK BODY	06-694-A	1	
8	ADAPTER, #06 M-JIC X #06 M-SAE	25-WHD-5315X6	2	
9	ELBOW, #06 M-JIC X #08 M-NPT X 90 DEG.	25-WHD-5515X6X8	4	
10	RUN TEE, #06 M-JIC X #06 M-SAE X #06 M-JIC	25-WHD-5716X6	2	
11	HYD. CYLINDER, 2.50" BORE X 36" STROKE	40-334-RED	2	
12	PILOT OPERATED CHECK VALVE	40-399-A	1	
	HYDRAULIC HOSE, 3/8" ID X 140" LG	40-413	1	NS
	HYDRAULIC HOSE, 3/8" ID X 216" LG.	40-417	2	NS
	HYDRAULIC HOSE, 3/8" ID X 140" LG.	40-420	1	NS
	HYDRAULIC HOSE, 3/8" ID X 167" LG.	40-421	1	NS
	HD BLACK CABLE TIE - 8 1/2" LG.	40-470	10	NS
	HYDRAULIC HOSE, 3/8" ID X 109" LG.	40-482	1	NS
	HYDRAULIC COUPLER TIP, 1/2"	40-563	2	NS
13	BOLT, 1/4"-20 X 1" LG.	90-BLT-02520X100	2	
14	BOLT, 1/4"-20 X 2" LG.	90-BLT-02520X200	2	
15	BOLT, 3/8"-16 X 1 1/2" LG.	90-BLT-03816X150	8	
16	LOCK NUT, 1/4"-20	90-NUT-LOC025-20	2	
17	LOCK NUT, 3/8"-16	90-NUT-LOC038-16	8	
18	SAE WASHER, 1/4"	90-WSR-SAE025	6	
19	SAE WASHER, 1"	90-WSR-SAE100	4	

**NS = NOT SHOWN**



**Optional Sprinklers**





**Optional Sprinklers**

ITEM	DESCRIPTION	PART NUMBER	QTY	MODEL
1	SPRINKLER - KOMET TWIN PRO 140	SP-KOM-T140	1	
2	SPRINKLER - KOMET VARI-ANGLE 140	SP-KOM-T140A	1	
↳	KOMET TWIN 140 NOZZLE KIT	SP-KOM-T140NOZZLEKIT	1	NS
3	SPRINKLER - KOMET TWIN PRO 160	SP-KOM-T160	1	
4	SPRINKLER - KOMET VARI-ANGLE 160	SP-KOM-T160A	1	
↳	KOMET TWIN 160 NOZZLE KIT	SP-KOM-T160NOZZLEKIT	1	NS
5	SPRINKLER - NELSON SR150	SP-NEL-SR150	1	
6	SPRINKLER - NELSON SR150 VAR-ANGLE	SP-NEL-SR150A	1	
↳	NESLON SR150 NOZZLE KIT	SP-NEL-SR150NOZZLEKIT	1	NS
<b>NS = NOT SHOWN</b>				

## Required Maintenance

To make sure your 3000 series traveller performs as intended it is important to follow the maintenance schedule in this manual.



**Maintenance must be done only when the traveller is shut down and is in a non-loaded condition. This means that all mechanical and hydraulic tension has been released from the traveller.**

**Performing maintenance on the traveller during operation may result in serious injury and/or death to operators**

## Greases and Lubricants

See the following table for the greases and lubricants used for your traveller.



ITEM	SPECIFICATION
Engine oil	10W-30 for general use. Refer to Honda engine manual for details if you need a different oil to match your operating conditions
Grease	NGLI Grade 2 grease
Transmission oil	80W-90 gear oil
Indexer gearbox oil	80W-90 gear oil

## Each use (1 of 2)

MAINTENANCE ITEM	PROCEDURE
Visually inspect equipment	Walk around the traveller and check for loose, missing, and/or damaged items. Replace missing and/or damaged items. Tighten loose items.
Inspect all pins	Check pins for wear and/or damage. Replace worn and/or damaged pins
Inspect all lubrication points	Check all grease points. Use grease gun to lubricate grease points as needed. Use a brush to apply grease to the indexer rails and drive button. Do not exceed times set in Grease Points Upkeep




**Each Use (2 of 2)**

MAINTENANCE ITEM	PROCEDURE
<p>Inspect tire pressure</p>	<p>Check sidewall tire for operating pressure and use tire pressure gauge to see if inflation is correct</p> <p>Do not lower the tire pressure below the tire's recommended level. Do not overinflate tires.</p> <p> Failure to use recommended tire pressure may result in the tire exploding, or separating from the wheel rim. This may result in serious injury and/or death. This will also damage the traveller</p>
<p>Inspect all wheel nuts                      (See Star Pattern for Tightening Wheel Nuts, Page 123)</p>	<p>Check and see if wheel nuts are tight. If they need to be tightened then tighten them with a torque wrench to:</p> <p style="text-align: center;"><b>110 ft•lbs</b>  <b>[149 N•m]</b></p> <p>Do not operate the traveller if the wheel nuts are loose</p> <p> Using the traveller if the wheel nuts are not correctly torqued may result in wheel separation. This may result in serious injury and/or death, and will damage the traveller</p>
<p>Verify fluid levels and filter condition</p>	<p>Inspect Honda engine air filter. Verify fluid levels for Honda engine. Refill fluids and/or replace filter as needed. Refer to Honda engine manual for details</p>
<p>Verify indexer chain tension</p>	<p>Remove the guard, then adjust indexer chain so that it contains no visible slack. Replace the guard when finished</p>
<p>Verify man drive chain alignment and tension</p>	<p>Inspect alignment and tension of main drive chain. Adjust if needed.</p>

## After The First 25 Hours (New Machines Only)

MAINTENANCE ITEM	PROCEDURE
Change engine oil	Change the oil in the Honda engine. Refer to Honda engine manual for details
Change transmission oil	Empty transmission of all old oil. Refill transmission using new oil

## Every 100 Hours


MAINTENANCE ITEM	PROCEDURE
Change engine oil	Change the oil in the Honda engine. Refer to Honda engine manual for details
Check transmission oil level	Verify that transmission contains enough oil to operate safely
Check indexer gearbox oil level	Verify that indexer gearbox contains enough oil to operate safely
Lubricate the listed major components	<p>1. Turntable ring            2. Indexer rails            3. Indexer idler block            4. Drive chain idler arm pivot            5. Drive pulley lead screw            6. All chains on traveller</p> <p>Reinstall any guards that may have been removed in order to grease the above components. Do not operate the traveller with missing or damaged guards</p> <p> Operating the traveller with missing and/or damaged guards may lead to operators, spectators, and/or objects to come into contact with moving parts. This will cause serious injury and/or death to operators and/or spectators. This will also damage the traveller</p>

## Every 250 Hours

MAINTENANCE ITEM	PROCEDURE
Inspect gun cart wheel bearings	Disassemble, clean, inspect, and repack gun cart wheel bearings with new grease. Replace any worn, broken, or defective parts as needed

## Before Storage


When the traveller is placed in storage for more than one day, the hose must be completely emptied.

MAINTENANCE ITEM	PROCEDURE
Drain the hose	<p>Pull the hose out in a level area leaving at least 1 full coil on the drum. Remove the drain plug from the gun cart, then reel the hose in with either the Honda engine on the traveller or a tractor PTO shaft. Adjust the hose while it is reeling in so that the coils are tightly packed.</p> <p>Do not leave the traveller unattended during this procedure</p> <p> Leaving the traveller unattended may result the hose wrapping on the drum incorrectly. This will lead to damage to the indexing system, hose, and/or the traveller</p>
Clean the variable speed pulley	Remove the moving face of the variable speed pulley. Remove all containments from the bronze bushing and shaft. Lubricate the shaft and bushing using light oil
Inspect traveller wheel bearings	Disassemble, clean, inspect, and repack wheel bearings with new grease. Replace any worn, broken, or defective parts as needed
Lubricate all chains	Use a brush to apply grease to all chains
Prepare Honda engine for storage	Refer to Honda engine manual for storage preparation procedure



**Failing to clean out the traveller before long term storage will result in the traveller becoming clogged. A clogged hose will result in a build of gasses during long term storage. This may cause serious injury and/or death to operators and/or spectators. This may also damage the traveller**

## Before Start Up After Long Term Storage

MAINTENANCE ITEM	PROCEDURE
Review operator's manual	Review this manual to verify how to operate the traveller safely. This will reduce the chance of user injury and equipment damage
Inspect tires	<p>Verify that tires are in good condition with no cracks, uneven wear, or other problems. Check sidewall of tire for operating pressure and use tire pressure gauge to see if inflation is correct.</p> <p>Do not lower the tire pressure below the tire's recommended level. Do not overinflate tires.</p> <p> Failure to use recommended tire pressure may result in the tire exploding, or separating from the wheel rim. This may result in serious injury and/or death. This will also damage the traveller</p>
Change indexer gearbox and transmission oil	Empty indexer gearbox and transmission of all old oil. Refill indexer gearbox and transmission using new oil
Inspect gas tank	Verify that gas tank and fuel lines are in good condition with no leaks. Fill gas tank with new fuel

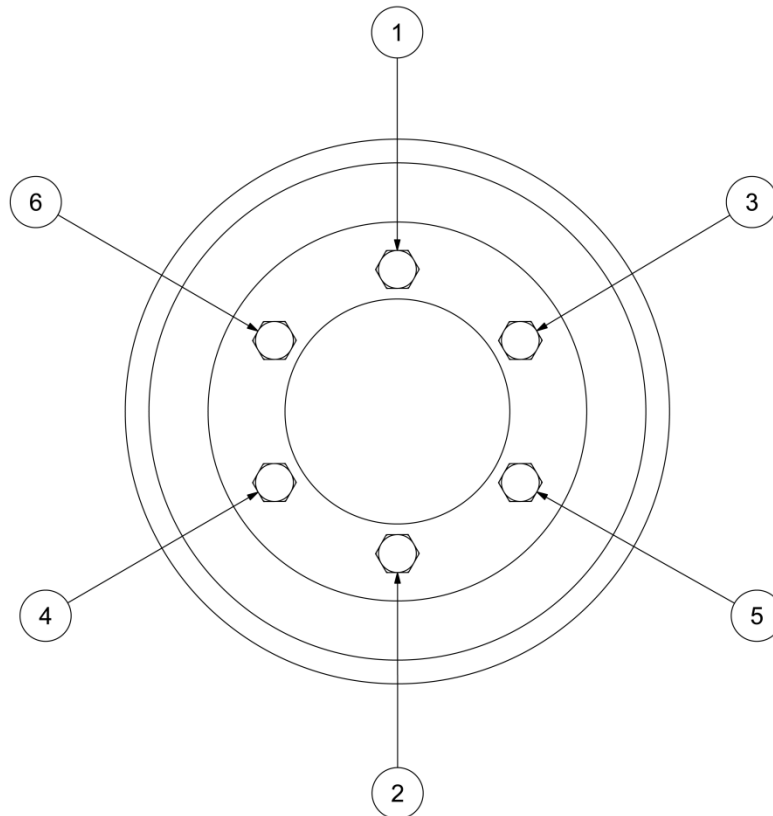


Failing to review the operator's manual and/or inspecting the unit after long term storage may result in incorrect traveller operation and/or not performing maintenance on items that may require repair. This may result in serious injury and/or death to operators and/or spectators. This may also damage the traveller

## **Star Pattern for Tightening Wheel Bolts**

Follow the numbered pattern below when tightening your 3000 Series Travellers wheel nuts to their required torque values. After you are finished tightening all nuts to their required values, repeat the numbered pattern to check that all nuts are correctly torqued.

A 6 bolt pattern is shown here. For other bolt patterns, do the same procedure.



*Figure 49 – Tightening Wheel Nuts*

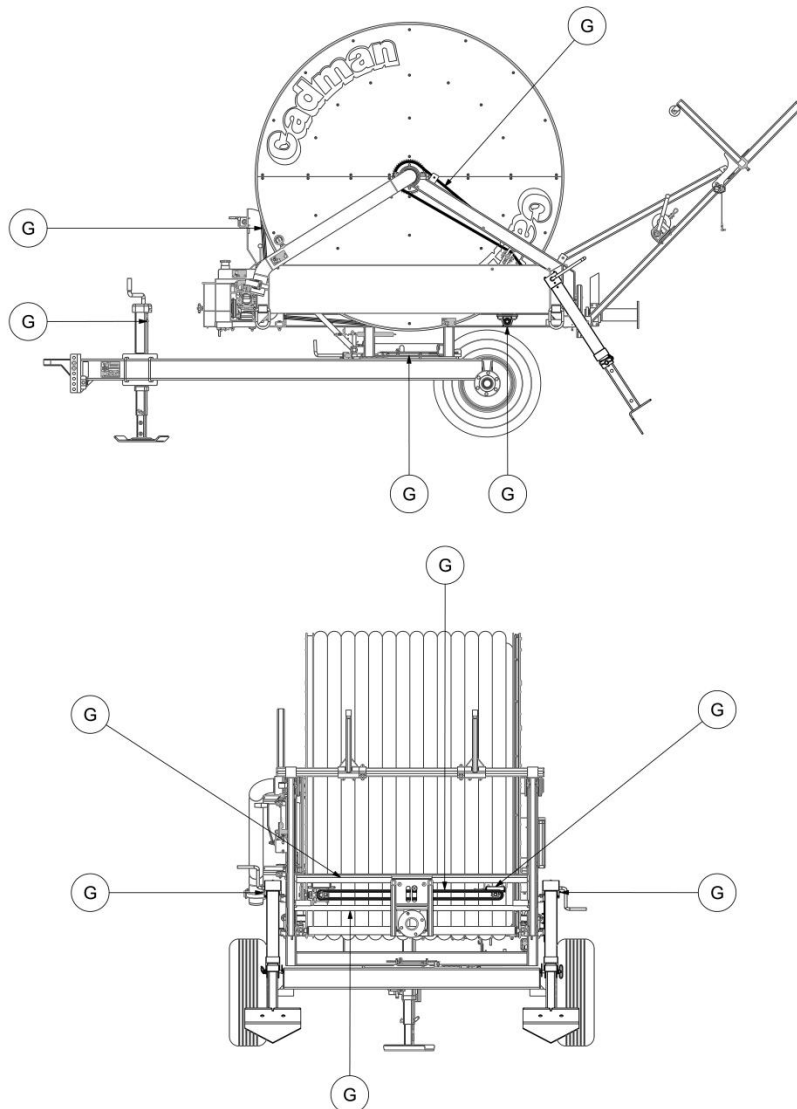
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**Failing to use a star pattern will result in some or all of the wheel bolts being torqued incorrectly. This may result in wheel separation, and will cause serious injury and/or death to operators and/or spectators. It will also damage the traveller**

## Grease Point Locations

If you need to remove a guard to grease any part of the traveller you must replace it immediately after greasing. Do not operate the traveller with missing or damaged guards.



*Figure 50 – 3000 Series Traveller Grease Points*

*img-01346*



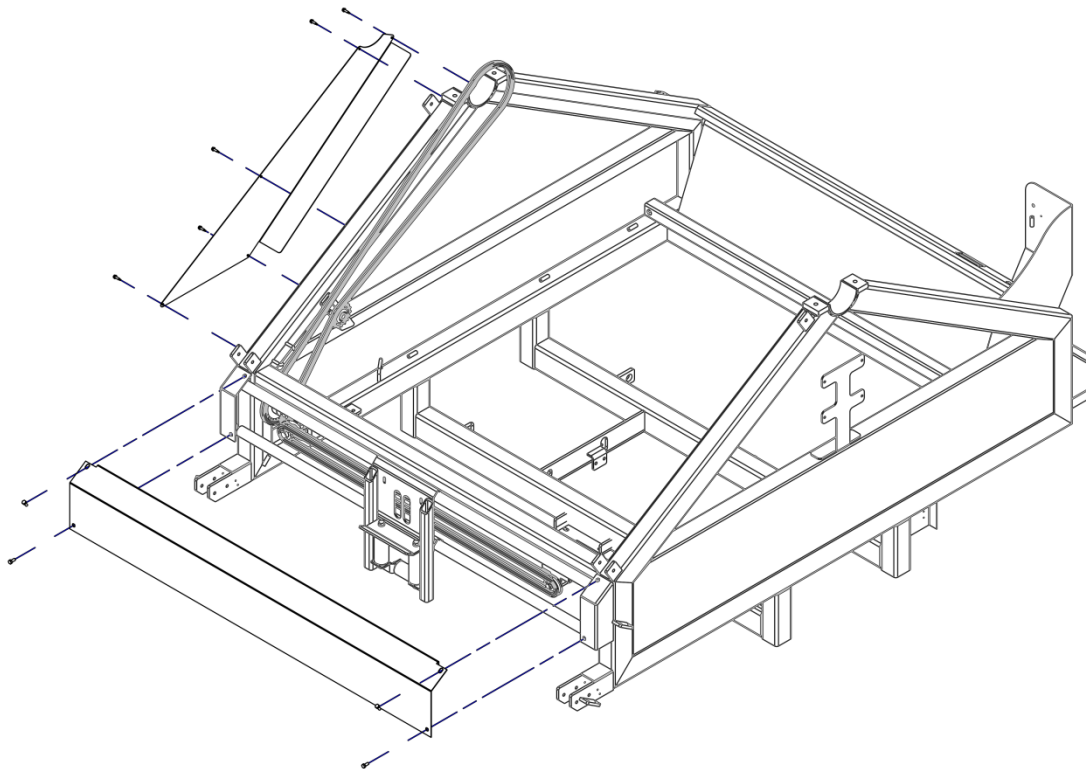
**Operating the traveller with missing and/or damaged guards may lead to operators, spectators, and/or objects to come into contact with moving parts. This will cause serious injury and/or death to operators and/or spectators. This will also damage the traveller**

## **Indexing System Adjustment**

Only adjust the traveller's indexing when the base layer is visible. In addition, the hose connection to the drum must be at the six o'clock position with no gaps between the hoses before adjusting the traveller's indexing.

### **Step 1**

Remove the indexer and idler shields from the traveller.

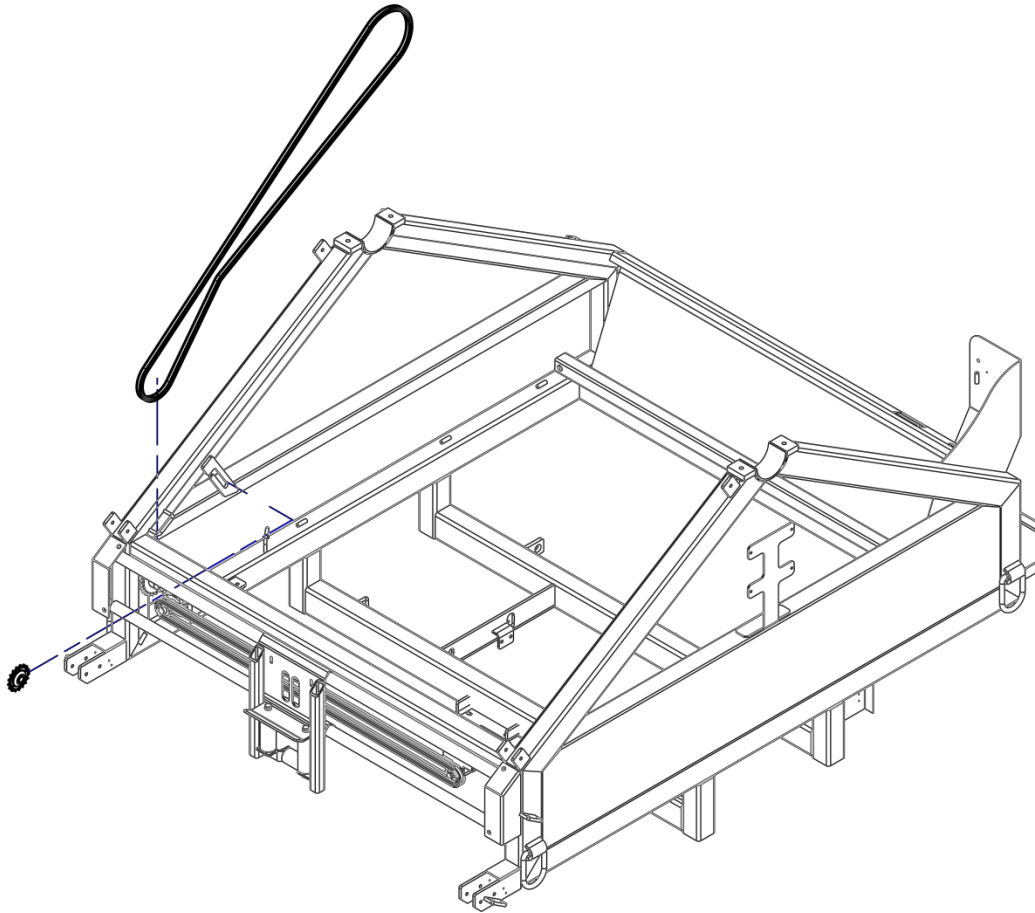


*Figure 51 – Remove Shields*

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## **Step 2**

Loosen the #50 chain and idler sprocket. Then remove the #50 chain from the gearbox sprocket.



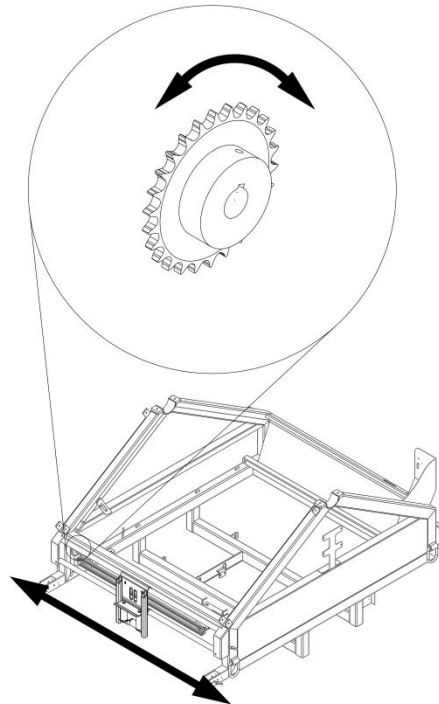
*Figure 52 – Loosen Chain*

*img-00236-A*



### **Step 3**

Manually adjust the hose guide position by rotating the sprocket on the indexer gearbox. The hose guide must be in a position that will allow the hose to wrap onto the drum in a straight line.



*Figure 53 – Adjust Indexer*

*img-00237-A*

### **Step 4**

Reinstall the #50 chain onto the indexer gearbox sprocket. Then reinstall the idler sprocket. Remove all the slack from the #50 chain by pushing with a 15/16 inch wrench on the inside nut of the idler sprocket during reassembly before tightening the idler sprocket back onto the traveller.

### **Step 5**

Reinstall the indexer and idler shields.



**Operating the traveller with missing and/or damaged guards may lead to operators, spectators, and/or objects to come into contact with moving parts. This will cause serious injury and/or death to operators and/or spectators. This will also damage the traveller**

## Sprinkler Performance Data

Your 3000 series traveller will come equipped with one of several sprinkler guns. Use the data from the chart that matches which sprinkler gun your traveller is equipped with when determining your retrieval rates. See page 14 for a retrieval rate selection example.

Disclaimer: Performance data has been obtained under ideal test conditions and may be adversely affected by wind, poor hydraulic entrance conditions or other factors.



**The following charts are to be used as a guide only. Always verify the application amount with rain gauges to confirm that your application is correct**

### Komet Twin 140 Ultra Performance data (24 degree trajectory, Taper Bore)

NOZZLE	Ø 0.63		Ø 0.67		Ø 0.71		Ø 0.75		Ø 0.79		Ø 0.83		Ø 0.87	
PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
50	80	234	90	242	101	251	113	259	125	267	138	271	151	275
60	87	248	99	257	111	266	124	275	137	283	151	289	165	295
70	94	260	107	269	119	277	134	286	148	295	163	302	178	308
80	101	271	114	280	128	289	143	298	158	307	174	314	191	321
90	107	282	121	291	135	300	151	309	168	318	185	326	202	334
100	113	290	128	299	143	308	160	317	177	326	195	335	213	343
110	118	296	134	306	150	315	167	324	186	334	204	343	224	352

NOZZLE	Ø 0.91		Ø 0.94		Ø 0.98		Ø 1.02		Ø 1.06		Ø 1.06		Ø 1.1	
PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
50	164	279	180	284	195	289	212	294	228	299	228	299	245	304
60	180	300	197	306	214	312	232	319	250	326	250	326	268	333
70	194	315	212	321	231	329	251	337	270	345	270	345	289	353
80	208	329	227	336	247	345	268	354	288	363	288	363	309	372
90	220	342	241	350	262	359	284	369	306	378	306	378	328	387
100	232	352	254	360	276	370	300	379	322	389	322	389	346	398
110	244	361	266	369	290	379	314	388	338	397	338	397	363	406



NOZZLE	Ø 1.14		Ø 1.18		Ø 1.22		Ø 1.26		Ø 1.3		Ø 1.34	
	PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM
50	265	307	281	311	300	314	322	318	339	321	361	324
60	290	338	308	343	328	348	353	354	371	358	395	363
70	313	360	332	367	355	374	381	381	401	387	427	393
80	335	379	355	387	379	395	407	402	429	410	457	417
90	355	395	377	403	402	411	432	419	455	427	484	436
100	375	406	397	414	424	422	455	430	480	440	511	449
110	393	414	416	423	445	431	478	439	503	450	535	459

**Komet Twin 160 Ultra Performance data (24 degree trajectory, Taper Bore)**

NOZZLE	Ø 0.71		Ø 0.75		Ø 0.79		Ø 0.83		Ø 0.87		Ø 0.91		Ø 0.94	
	PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM
50	102	256	113	265	127	273	138	277	153	282	168	286	182	290
60	112	275	124	284	139	293	152	299	167	305	184	310	199	316
70	121	285	134	294	150	303	164	310	181	317	199	324	215	330
80	130	294	143	303	160	312	175	319	193	327	212	334	230	341
90	137	303	152	312	170	321	186	329	205	337	225	345	244	353
100	145	311	160	321	179	330	196	338	216	347	237	355	257	364
110	152	319	168	329	188	338	205	347	226	356	249	365	270	374

NOZZLE	Ø 0.98		Ø 1.02		Ø 1.06		Ø 1.10		Ø 1.14		Ø 1.18		Ø 1.22	
	PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM
50	197	295	215	301	230	306	248	311	266	315	285	318	305	322
60	216	323	235	330	252	337	272	344	292	349	312	355	334	360
70	233	339	254	347	273	355	294	363	315	370	337	377	361	384
80	249	351	272	360	291	369	314	378	337	385	360	393	386	401
90	264	362	288	372	309	381	333	391	357	399	382	407	410	415
100	278	373	304	383	326	392	351	402	377	410	403	418	432	426
110	292	384	319	393	342	402	368	412	395	420	423	428	453	436



NOZZLE	Ø 1.26		Ø 1.30		Ø 1.34		Ø 1.38		Ø 1.42		Ø 1.46		Ø 1.50	
	PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM
50	326	325	343	328	366	332	388	335	409	338	433	342	458	345
60	357	366	376	371	400	376	425	381	449	386	474	391	501	397
70	386	391	406	397	433	404	459	411	484	417	512	424	541	431
80	412	409	434	416	462	424	491	431	518	439	548	446	579	454
90	437	423	461	431	490	440	521	448	549	456	581	465	614	473
100	461	434	486	444	517	453	549	462	579	472	612	481	647	490
110	484	445	509	456	542	465	576	475	607	485	642	495	679	505

**Nelson SR150 Big Gun® (24 degree trajectory, Ring Nozzle)**

NOZZLE	Ø 0.86		Ø 0.97		Ø 1.08		Ø 1.18		Ø 1.26		Ø 1.34		Ø 1.41	
	PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM
50	100	245	130	265	165	285	205	300	255	320	300	335	350	350
60	110	260	143	280	182	300	225	315	275	335	330	350	385	365
70	120	270	155	290	197	310	245	330	295	350	355	365	415	380
80	128	280	165	300	210	320	260	340	315	360	380	380	445	395
90	135	290	175	310	223	330	275	350	335	370	405	390	475	405
100	143	300	185	320	235	340	290	360	355	380	425	400	500	415
110	150	310	195	330	247	350	305	370	370	390	445	410	525	425

**Nelson SR150 Big Gun® (24 degree trajectory, Taper Bore)**

NOZZLE	Ø 0.7		Ø 0.8		Ø 0.9		Ø 1.0		Ø 1.1		Ø 1.2		Ø 1.3	
	PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM
50	100	250	130	270	165	290	205	310	255	330	300	345	350	360
60	110	265	143	285	182	305	225	325	275	345	330	365	385	380
70	120	280	155	300	197	320	245	340	295	360	355	380	415	395
80	128	290	165	310	210	335	260	355	315	375	380	395	445	410
90	135	300	175	320	223	345	275	365	335	390	405	410	475	425
100	143	310	185	330	235	355	290	375	355	400	425	420	500	440
110	150	320	195	340	247	365	305	385	370	410	445	430	525	450



NOZZLE		Ø 1.4	
PSI	GPM	DIA.	
50	408	373	
60	446	396	
70	483	412	
80	516	427	
90	547	442	
100	577	458	
110	605	471	

**Time required to water one acre (in min.)**

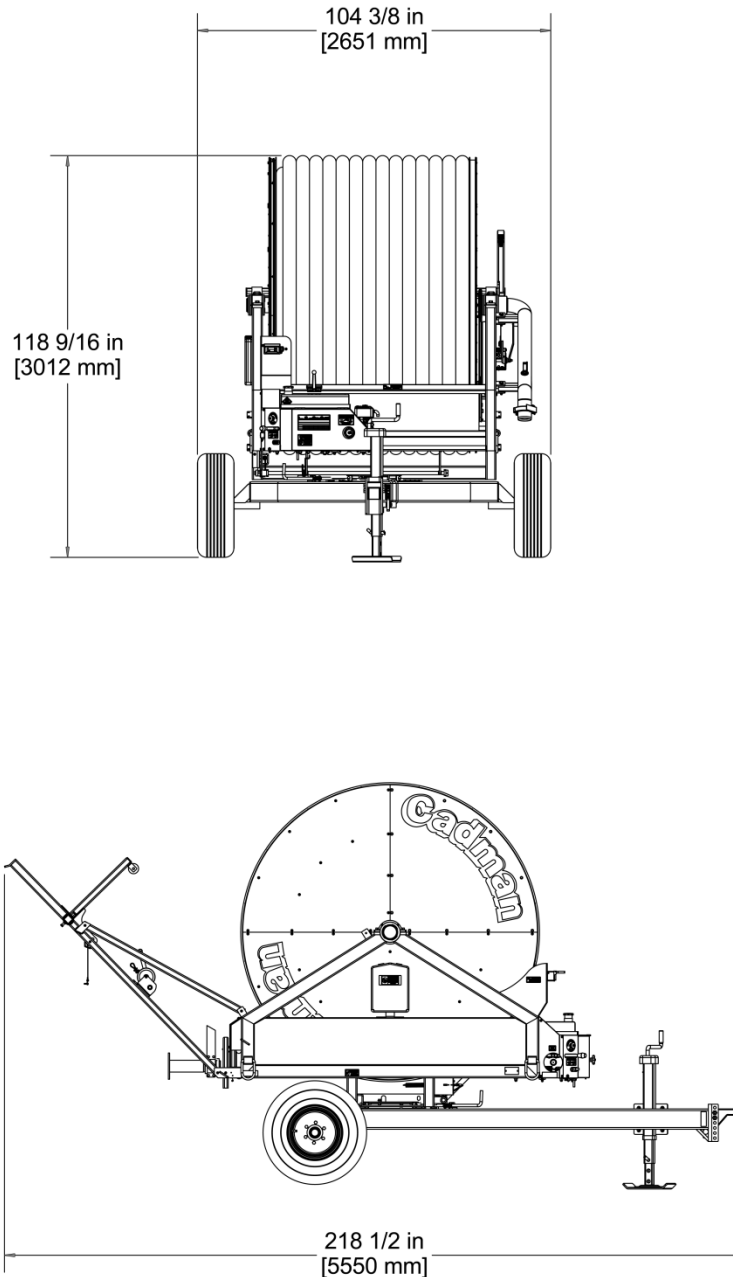
GPM	PRECIPITATION RATE ( ACRE INCHES )								
	0.20"	0.30"	0.40"	0.50"	0.75"	1.00"	1.25"	1.50"	2.00"
150	36	54	72	91	136	181	226	272	----
175	31	47	62	78	116	155	194	233	----
200	27	41	54	68	102	136	170	204	272
225	24	36	48	60	91	121	151	181	241
250	22	33	43	54	81	109	136	163	217
275	20	30	39	49	74	99	123	148	197
300	18	27	36	45	68	91	113	136	181
350	16	23	31	39	58	78	97	116	155
400	----	20	27	34	51	68	85	102	136
450	----	18	24	30	45	60	75	91	121
500	----	16	22	27	41	54	68	81	109
550	----	15	20	25	37	49	62	74	99
600	----	----	18	23	34	45	57	68	91
650	----	----	17	21	31	42	52	63	84

**Retrieval Rate (in.)**

MIN/ACRE	LANE SPACING (FT.)								
	200	225	250	275	300	325	350	375	400
15	----	----	----	127	116	107	100	93	87
20	----	116	105	95	87	80	75	70	65
25	105	93	84	76	70	64	60	56	52
30	87	77	70	63	58	54	50	46	44
35	75	66	60	54	50	46	43	40	37
40	65	58	52	48	44	40	37	35	33
45	58	52	46	42	39	36	33	31	29
50	52	46	42	38	35	32	30	28	26
60	44	39	35	32	29	27	25	23	22
70	37	33	30	27	25	23	21	20	19
80	33	29	26	24	22	20	19	17	16
90	29	26	23	21	19	18	17	15	15
100	26	23	21	19	17	16	15	14	13
125	21	19	17	15	14	13	12	11	10
150	17	15	14	13	12	11	10	----	----
175	15	13	12	11	10	----	----	----	----
200	13	12	10	10	----	----	----	----	----
225	12	10	----	----	----	----	----	----	----
250	10	----	----	----	----	----	----	----	----

## **3000 Wide Body Series Dimensions and Weight**

The dimensions shown on the following pages are only approximate, and are specific to the 3000 WB, 3250 WB, and 3500 WB



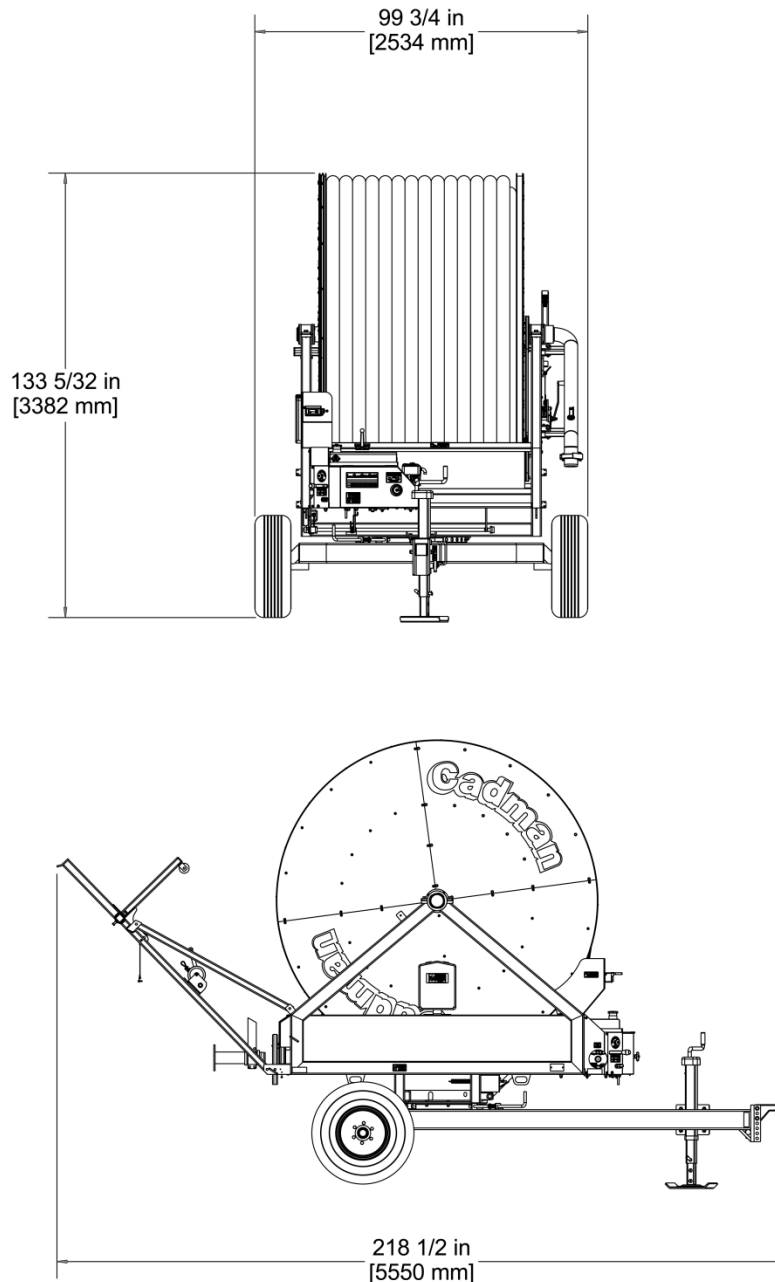
*Figure 54 – 3000 Wide Body Overall Dimensions*

*img-01347*

The approximate weight for an empty Cadman 3000 WB series traveller is 5,350 lbs (2,634 kg).

## **3000 XL Wide Body Series Dimensions and Weight**

The dimensions shown on the following pages are only approximate, and are specific to the 3000 XL WB, 3250 XL WB, and 3500 XL WB



*Figure 55 – 3000 XL Wide Body Overall Dimensions*

*img-01348*

The approximate weight for an empty Cadman 3000 XL WB series traveller is 6,350 lbs (2,805 kg).





## Useful Information

### LENGTH

<b>1 FOOT</b>	= 12 = 0.3048	Inches Meter	<b>1 METER</b>	= 39.37 = 3.2808	Inches Feet
<b>1 ROD</b>	= 198 = 16.5 = 5.5 = 5.029	Inches Feet Yards Meters	<b>1 MILE</b>	= 5280 = 1760 = 320 = 1609	Feet Yards Rods Meters

### AREA

<b>1 SQUARE FOOT</b>	= 144 = 0.0929	Square Inches Square Meters
<b>1 SQUARE YARD</b>	= 1296 = 0.8361	Square Inches Square Meters
<b>1 SQUARE METER</b>	= 1550 = 10.764	Square Inches Square Feet
<b>1 ACRE</b>	= 43560 = 4047 = 0.4047	Square Feet Square Meters Hectare
<b>1 HECTARE</b>	= 107639 = 10000 = 2.47105	Square Feet Square Meters Acres
<b>1 SQUARE MILE</b>	= 640 = 259	Acres Hectares

### VOLUME

<b>1 GALLON ( US )</b>	= 0.8327 = 231 = 0.1337 = 8.345	Imperial Gallons Cubic Inches Cubic Feet Pounds
<b>1 CUBIC FOOT</b>	= 1728 = 7.48 = 62.4 = 28.32	Cubic Inches Gallons ( US ) Pounds Liters
<b>1 ACRE INCH</b>	= 27154 = 254	Gallons ( US ) Cubic Meters / Hectare
<b>AREA OF A CIRCLE</b>		= Diameter x Diameter x 0.7854
<b>CYLINDER VOLUME ( US GAL. )</b>		= Diameter (ft.) x Diameter (ft.) x Length (ft.) x 5.8752