



5000 Series

Irrigation Travellers

3300 XLB, 3600 XLB, 4000 XL

4500 WB, 5000 WB



OPERATOR'S MANUAL

2018 Edition



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5000 Series Irrigation Traveller

We would like to thank you for purchasing your new **Cadman 5000 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 – 3300 XLB Irrigation Traveller

img-01351

BEFORE operating your new **Cadman 5000 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 5000 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

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- **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.

- 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

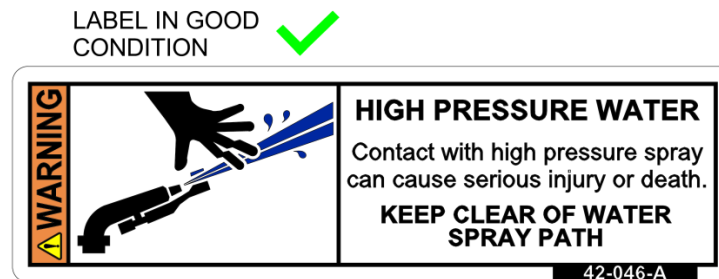
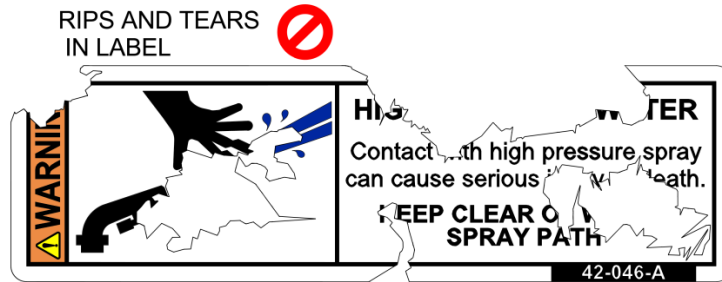


Figure 5 - Replace Decals

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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.

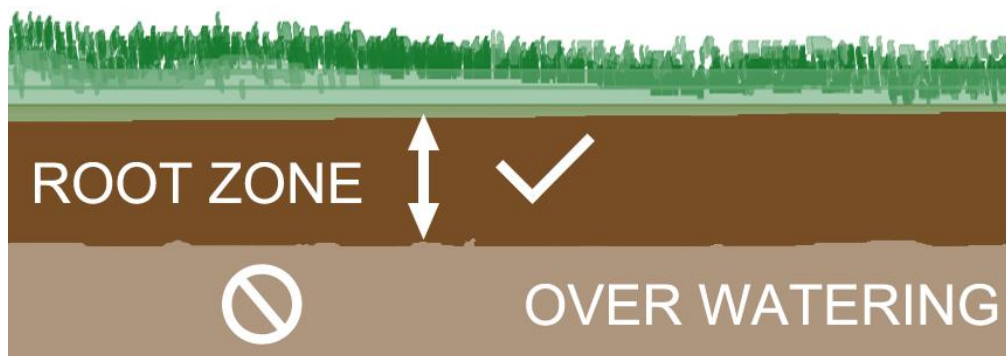


Figure 6 – Root Zone: Depth of Application

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 137 to determine your traveller's irrigation area.

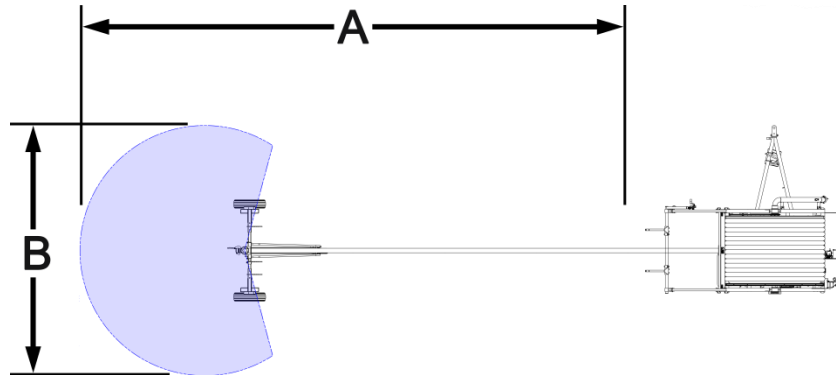


Figure 7 – Reel Coverage

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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 133 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.

5000 Series Hose Lengths:

WB MODEL	HOSE LENGTH (FT)
3300 XLB	2350
3600 XLB	2250
4000 XL	1400
4000 XL	1550
4000XL	1800
4500 WB	1320
5000 WB	1200

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.

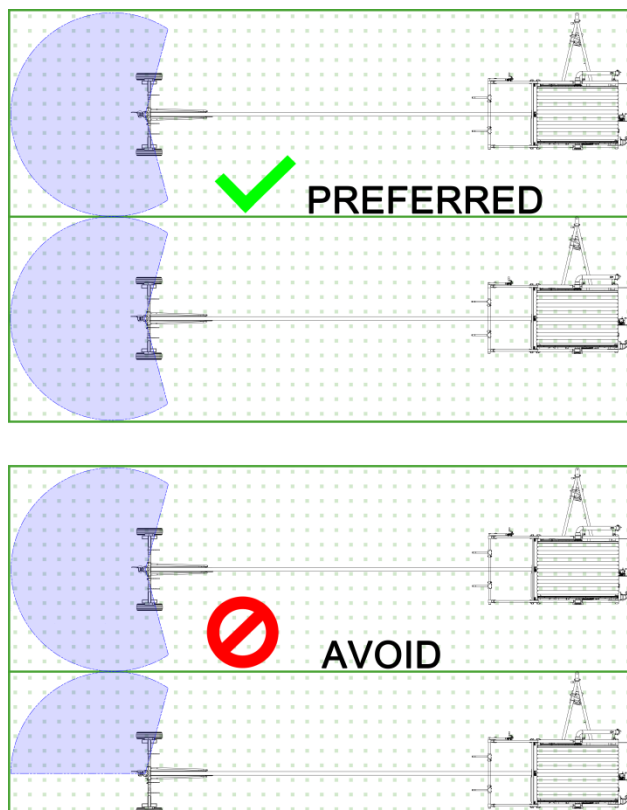


Figure 8 – Avoid Quarter Circle Applications

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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 a 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 hilled 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.

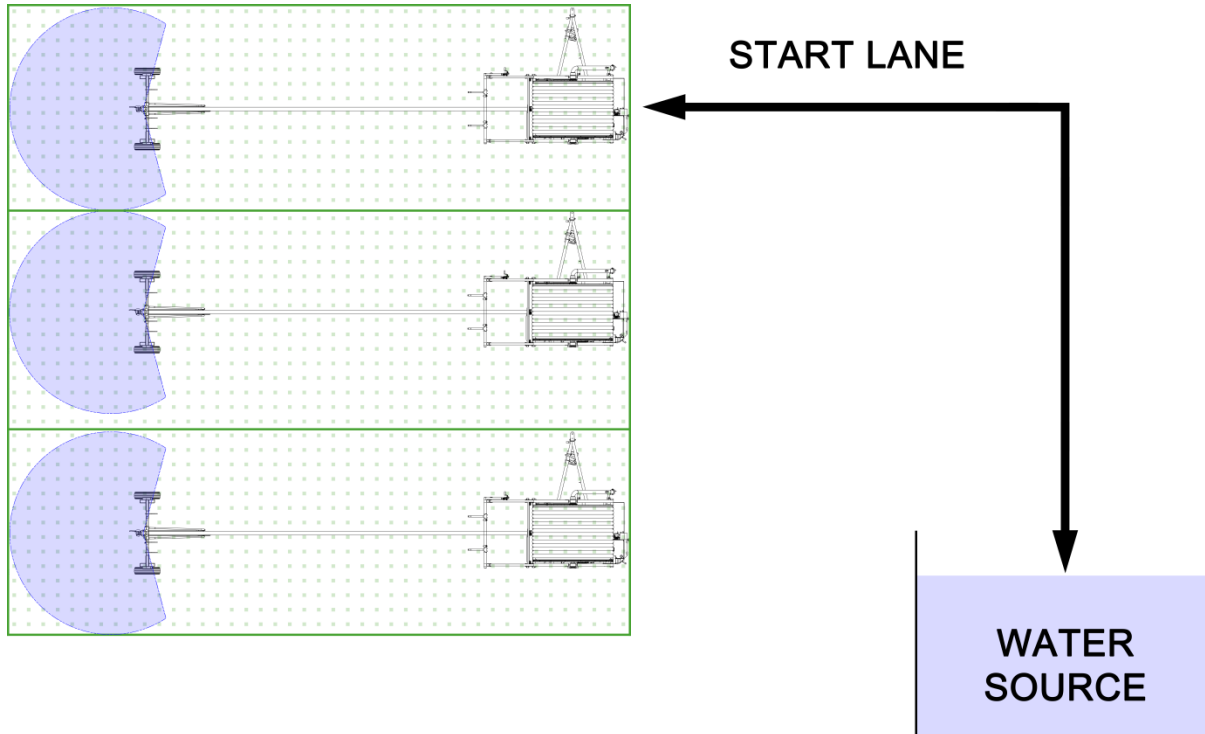


Figure 9 – Multiple Pass Setup

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 **4500 WB traveller** is fitted with a **Nelson SR200** sprinkler gun. The **Nelson SR200** will be using a **1.56 inch ring nozzle** operating at **100 psi**.

Use the above information to plan for a field using 350 foot lane spacing that needs 1.25 inches of irrigation depth.

A.) Use example table 1 to find the GPM you will be pumping. For this example, cross the **1.56 inch ring diameter** with the **100 psi operating pressure**.

A 1.56 inch ring nozzle operating at 100 psi will irrigate at 500 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 **1.25 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 68 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 **350 foot lane spacing**.

81 minutes to cover 1 acre with a 350 foot wide lane will give a retrieval rate of 21 inches per minute.

E.) You must set the gun up so that the 350 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 SR200 Big Gun® (27 Degree Trajectory, Ring Nozzle)

NOZZLE PSI	Ø 1.29		Ø 1.46		Ø 1.56		Ø 1.66		Ø 1.74		Ø 1.83		Ø 1.93	
	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
50	230	325	300	355	350	370	410	390	470	405	535	420	640	435
60	250	340	330	370	385	390	445	410	515	425	585	440	695	455
70	270	355	355	385	415	405	480	425	555	440	630	455	755	475
80	290	370	380	400	445	420	515	440	590	455	675	470	805	490
90	310	380	405	415	475	435	545	455	625	470	715	485	855	505
100	325	390	425	425	500	445	575	465	660	480	755	500	900	520
110	355	400	445	435	525	455	605	475	695	490	790	510	945	535

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	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

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	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	----	----	----	----	----	----	----	----

5000 Series Traveller Start Up

Prepare your 5000 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.

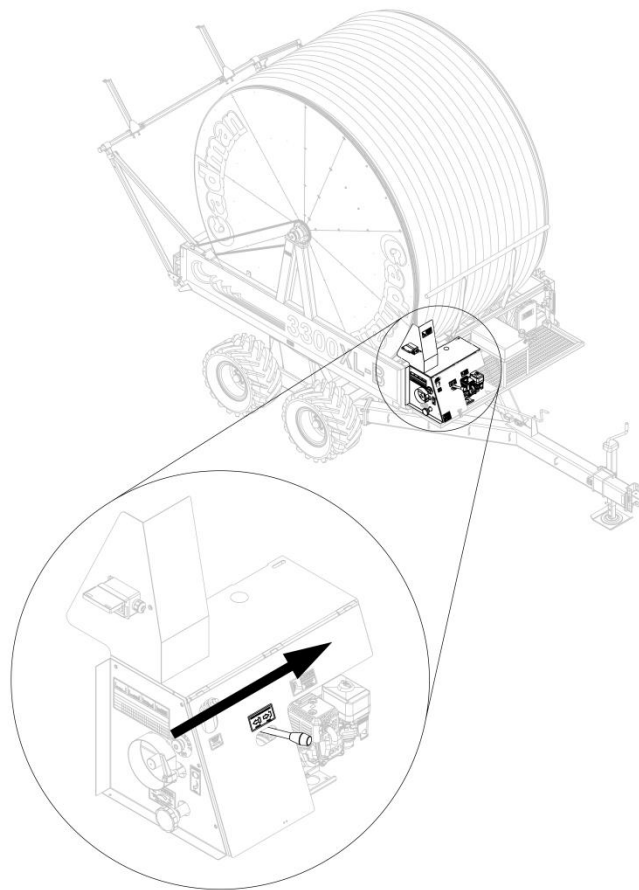


Figure 10 – Engage Drive System

img-01352



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.

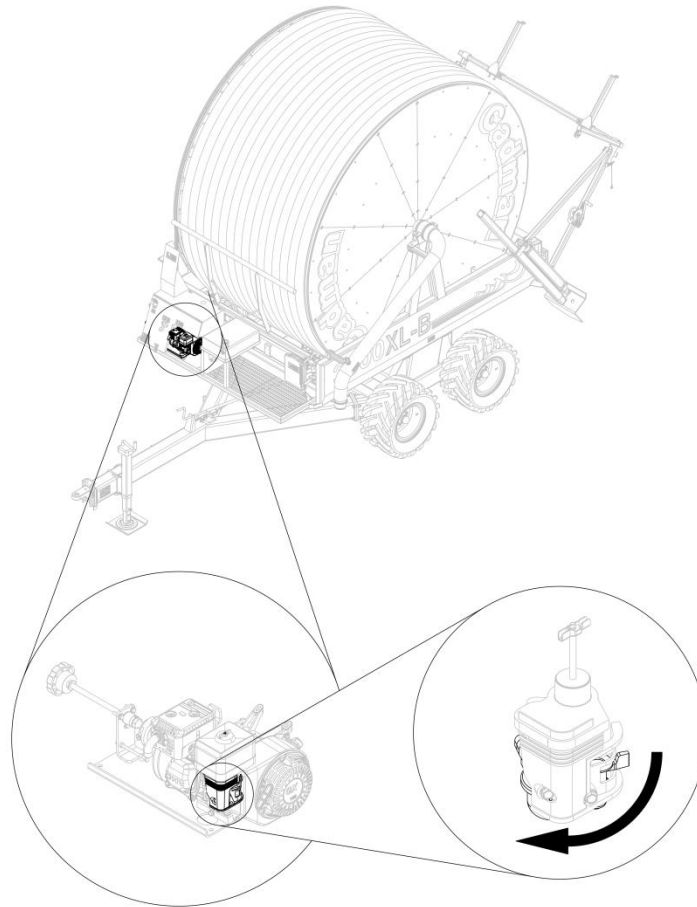


Figure 11 – Shut Fuel Valve

img-01353



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.

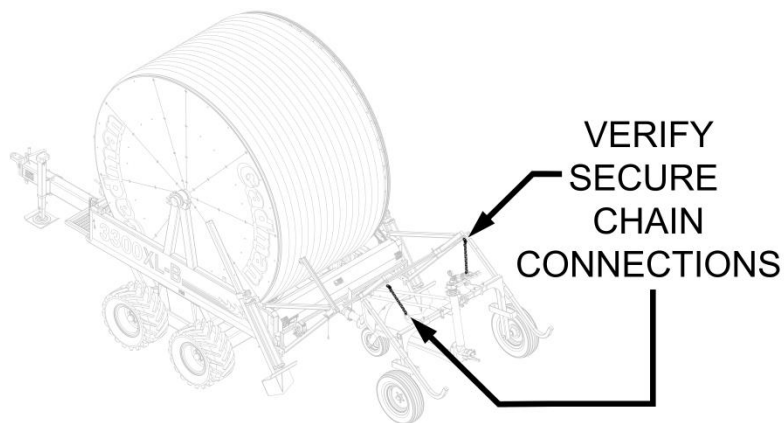


Figure 12 – Verify Gun Cart Chain Connection

img-01354



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. Connect the traveller to the tractor's hydraulics.

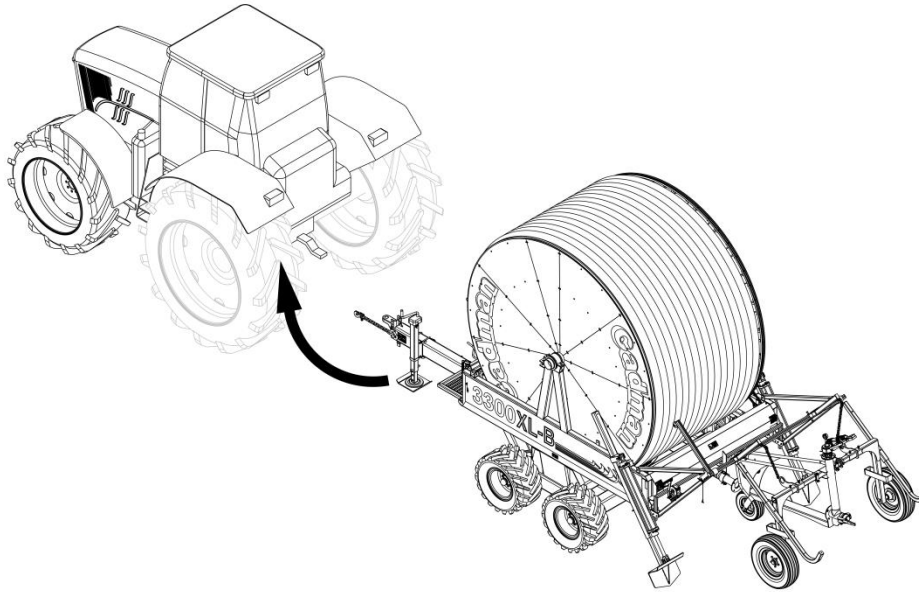


Figure 13 – Connect Safety Chain

img-01355

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.

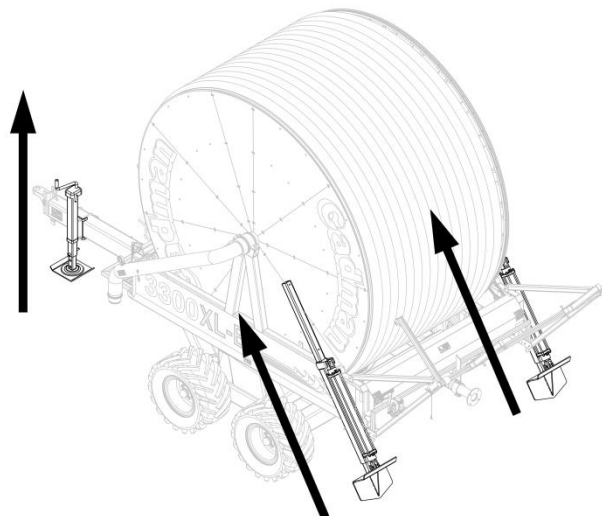


Figure 14 – Raise Tongue Jack and Stabilizers

img-01356



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.

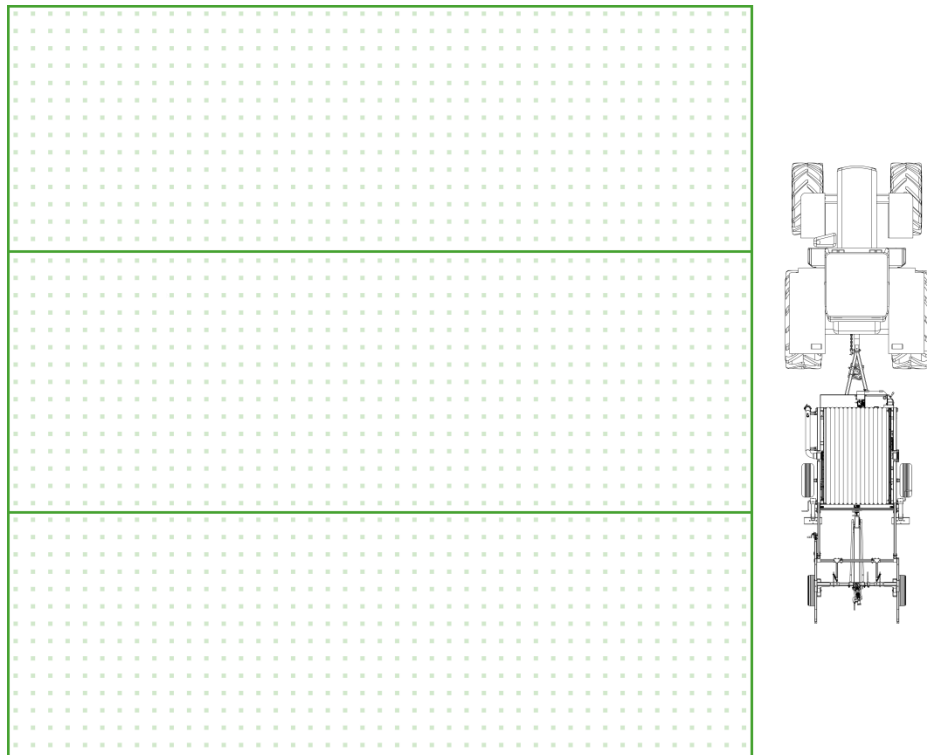


Figure 15 – Parking at Right Angle to Field

img-01334

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

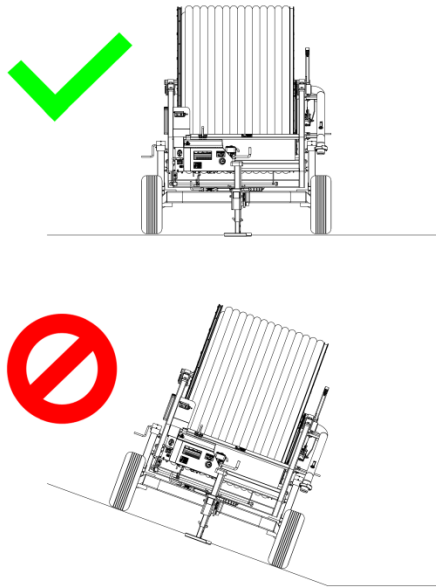


Figure 16 – Work on Firm and Level Ground

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 and holding the turntable lock cable handle in the open position. Rotate the traveller to your start position using the turntable hand crank. Lock the turntable by moving the turntable lock cable handle back to the lock position.

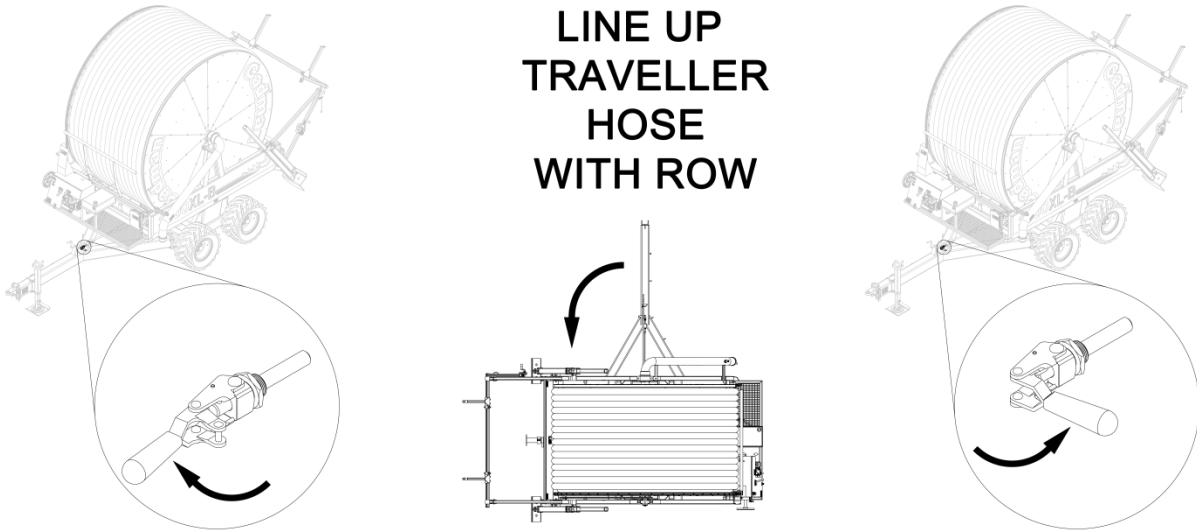


Figure 17 –Rotate Upper Frame

img-01357

B.) Verify that you can pull the hose out of the traveller in a straight line after you have lined up the traveller with the row you will be irrigating. If the hose is not travelling through the indexer in a straight line, see the procedure for adjusting the indexer on page 130.

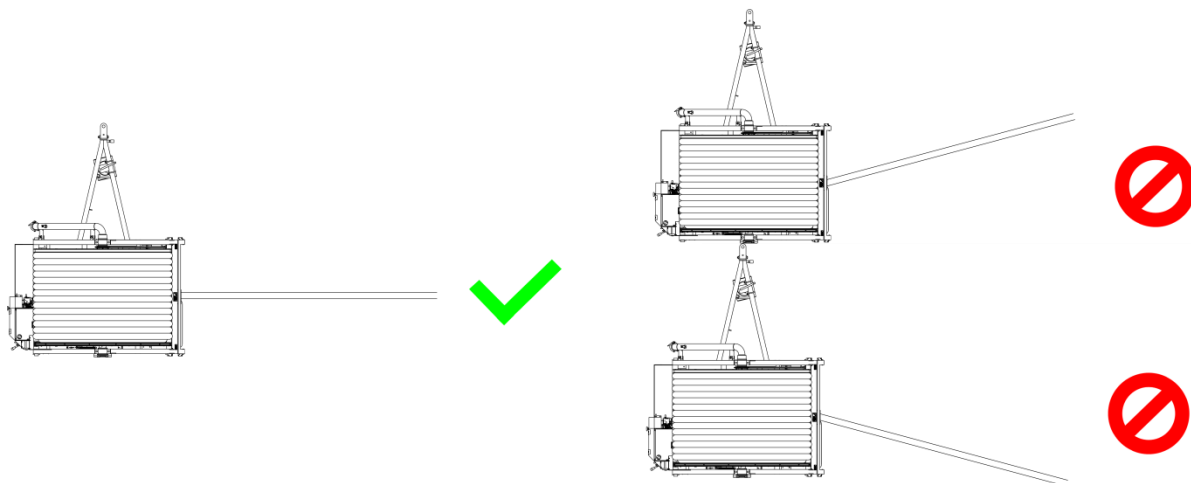


Figure 18 –Correct Upper Frame Position

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.) Use the tow vehicle's hydraulics to fully lower both stabilizers into the ground. Do not operate your traveller without both stabilizers fully lowered.

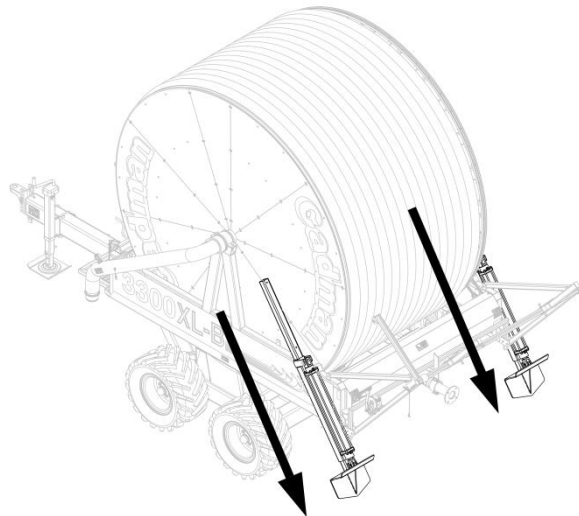


Figure 19 – Extending Stabilizers

img-01358



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

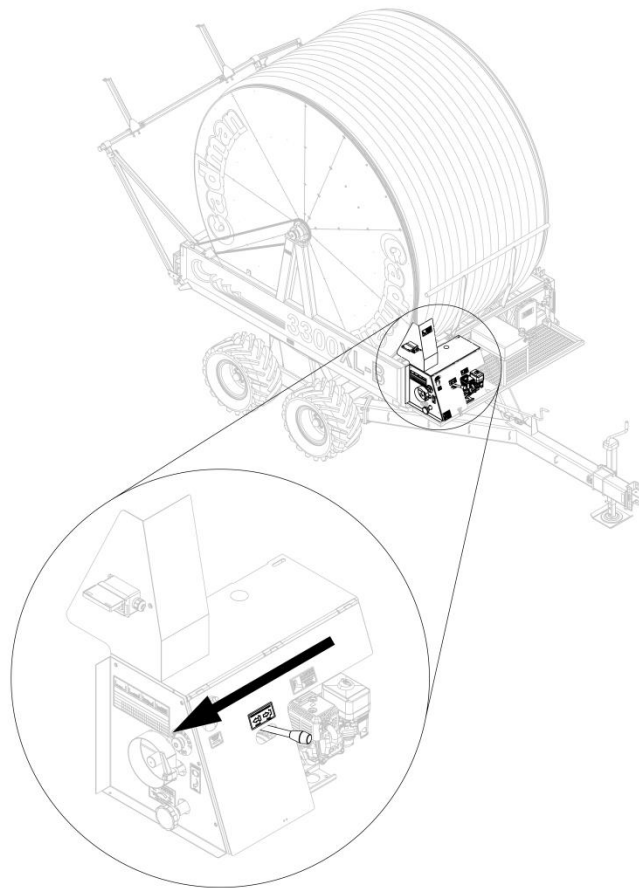


Figure 20 – Disengage Drive System

img-01359

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.

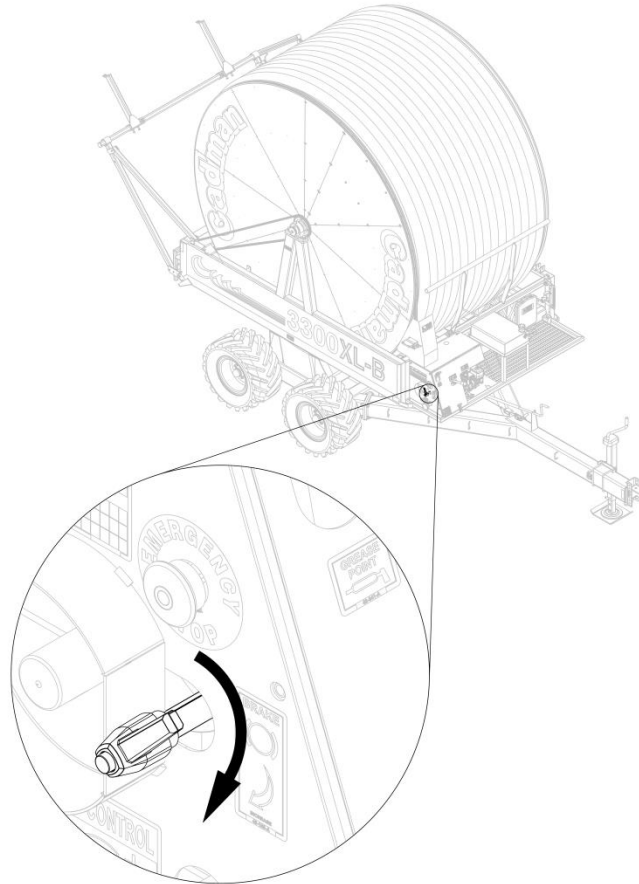


Figure 21 – Adjust Brake Tension

img-01360

Step 6

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

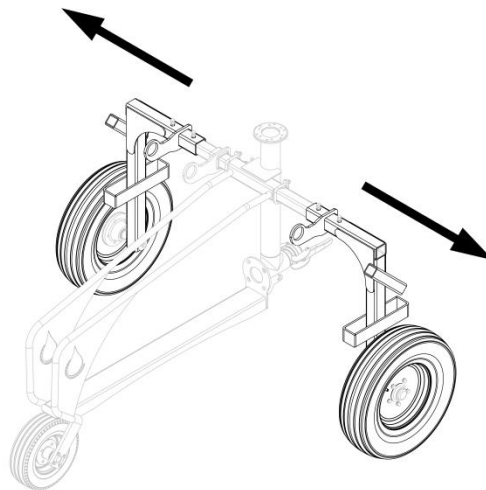


Figure 22 – Adjust gun Cart Width

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.

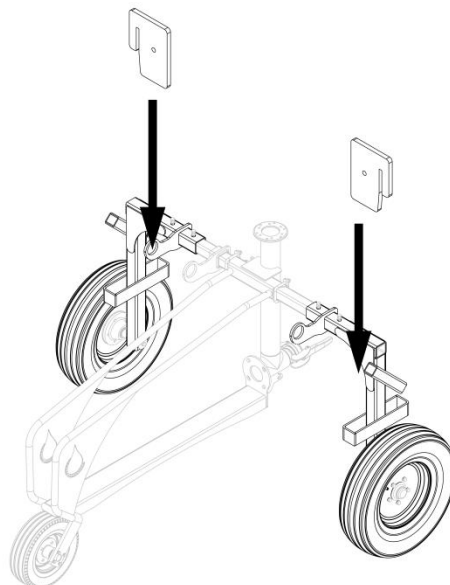


Figure 23 – Gun Cart Weight

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, 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.

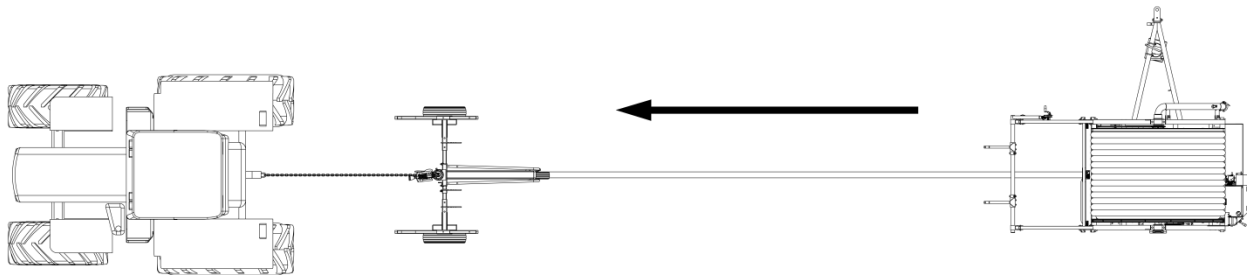


Figure 24 – Towing Gun Cart

img-01336



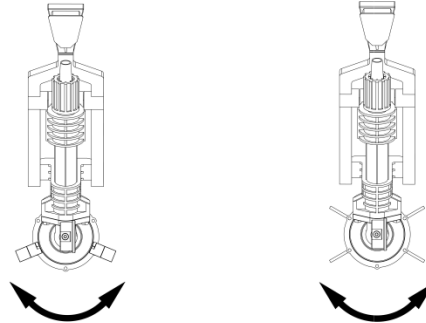
Towing above 3 mph (5 km/h) and/or stopping suddenly will result in pulling the hose out unsafely. Pulling the hose out unsafely may cause you to pull the hose off of the gun cart. This may result in serious injury and/or death to operators and/or spectators. This will also damage the traveller

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.

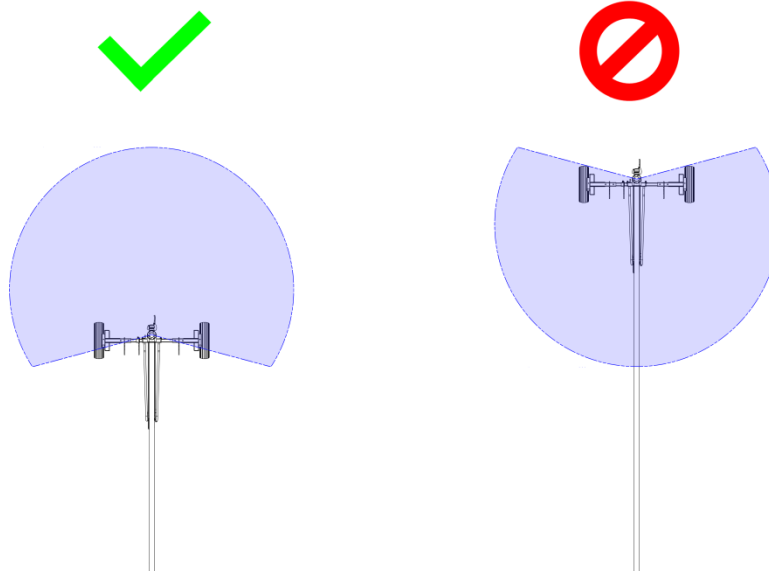


Figure 26 –Correct Spray Setting

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.

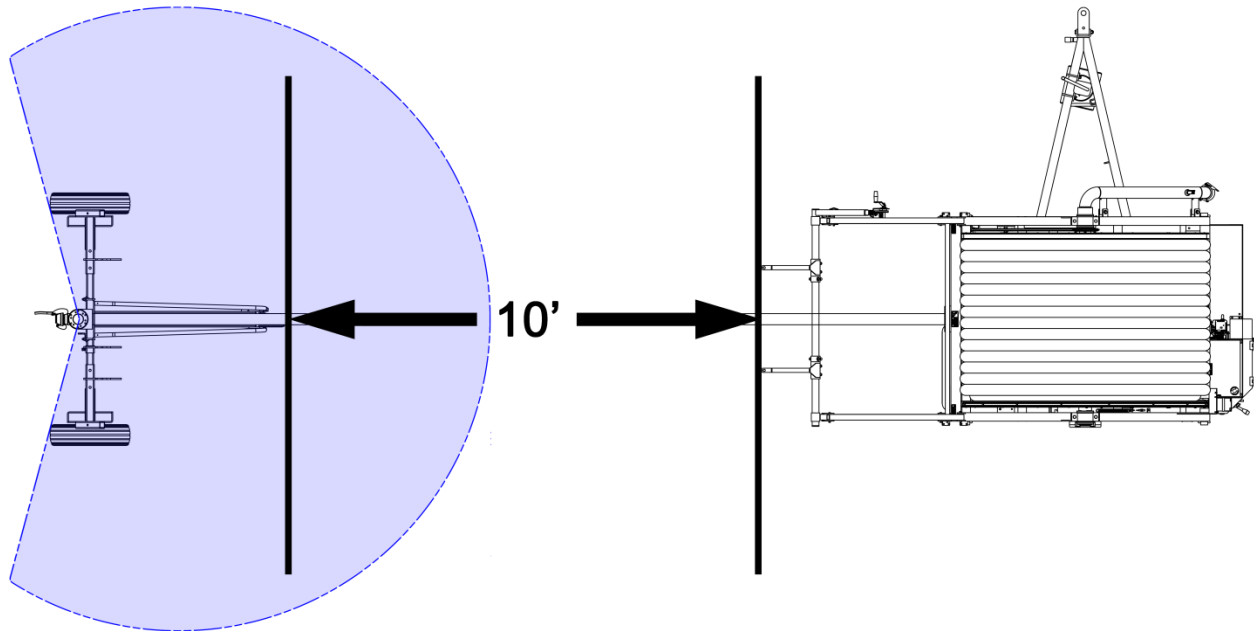


Figure 27 – Stop 10 Feet Before Traveller

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.

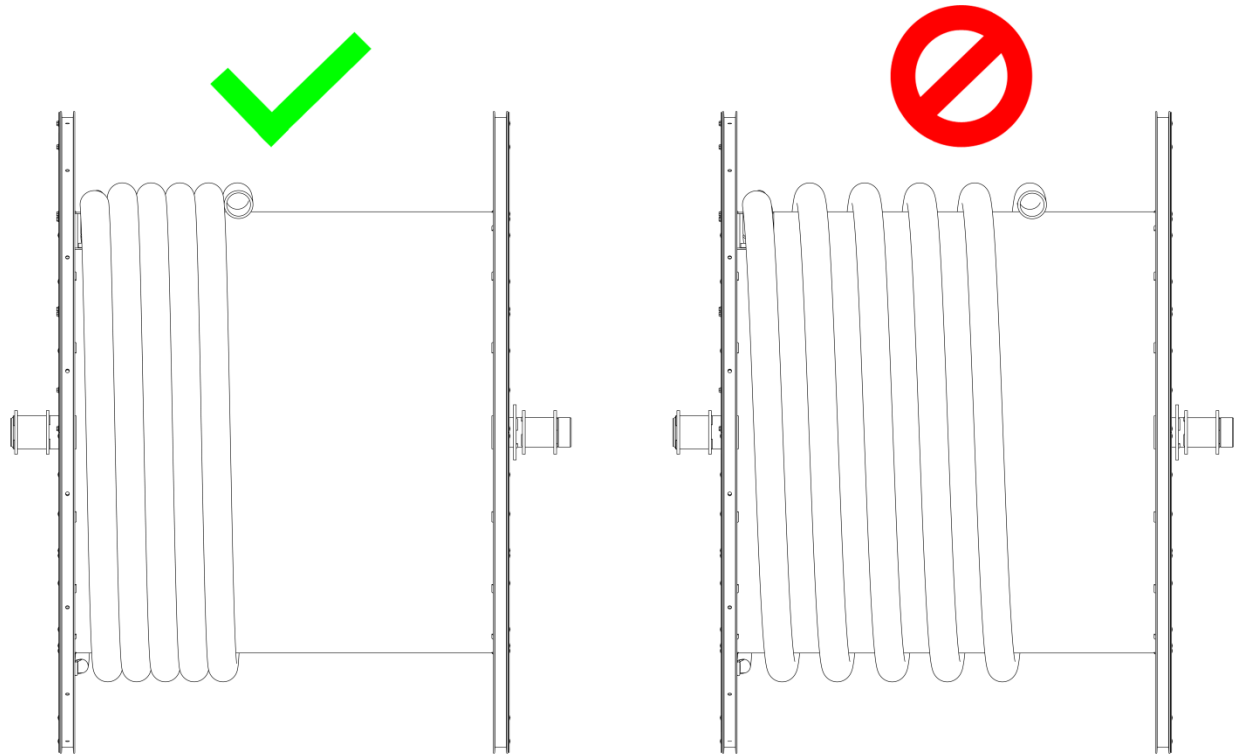


Figure 28 – Spool Condition

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.

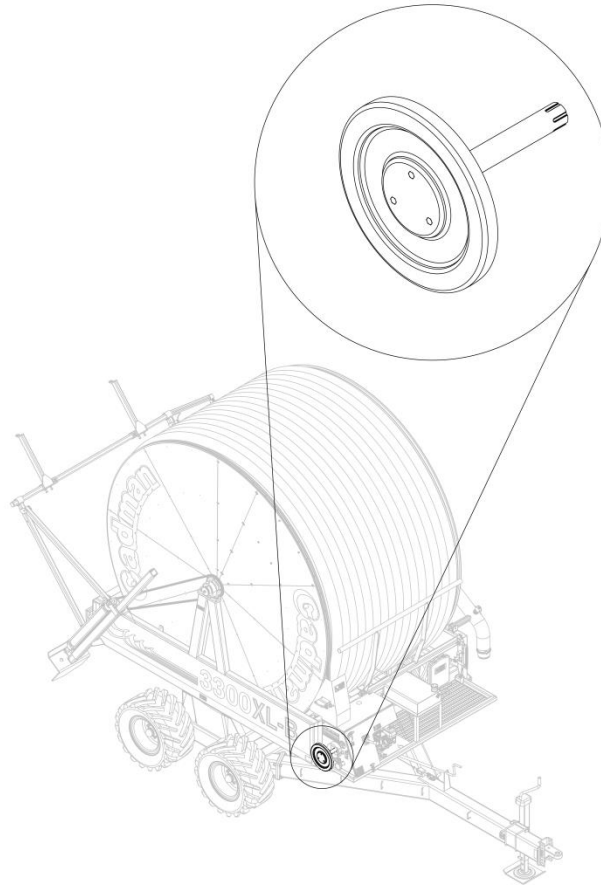


Figure 29 –Hand Crank

img-01361



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 130.

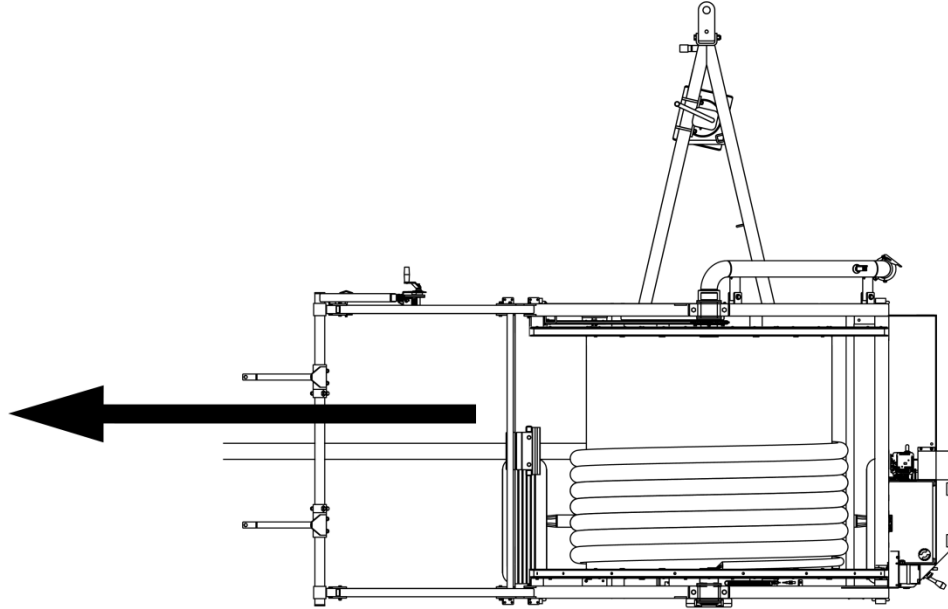


Figure 30 –Indexer/Hose Alignment

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.

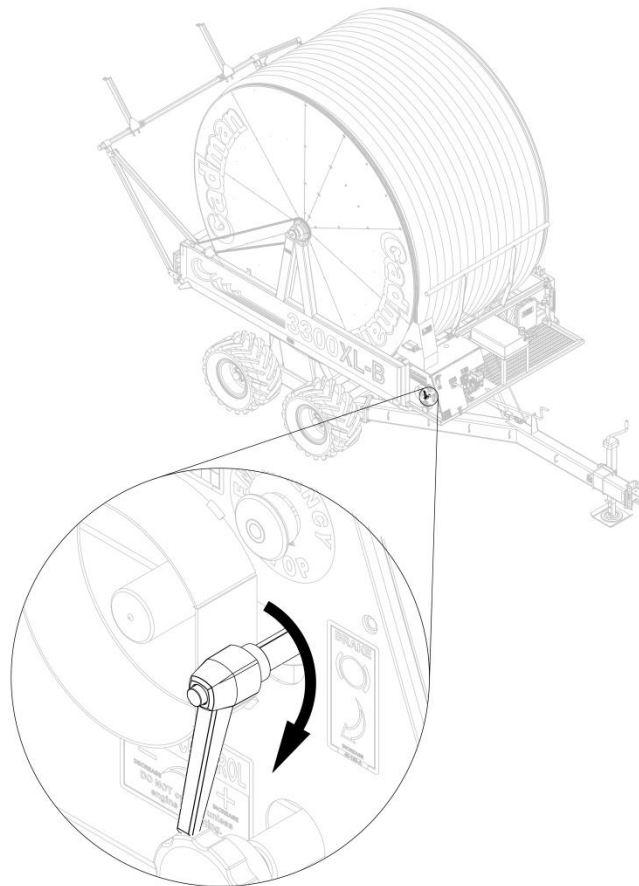


Figure 31 – Fully Apply Brake

img-01362

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.

5000 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.

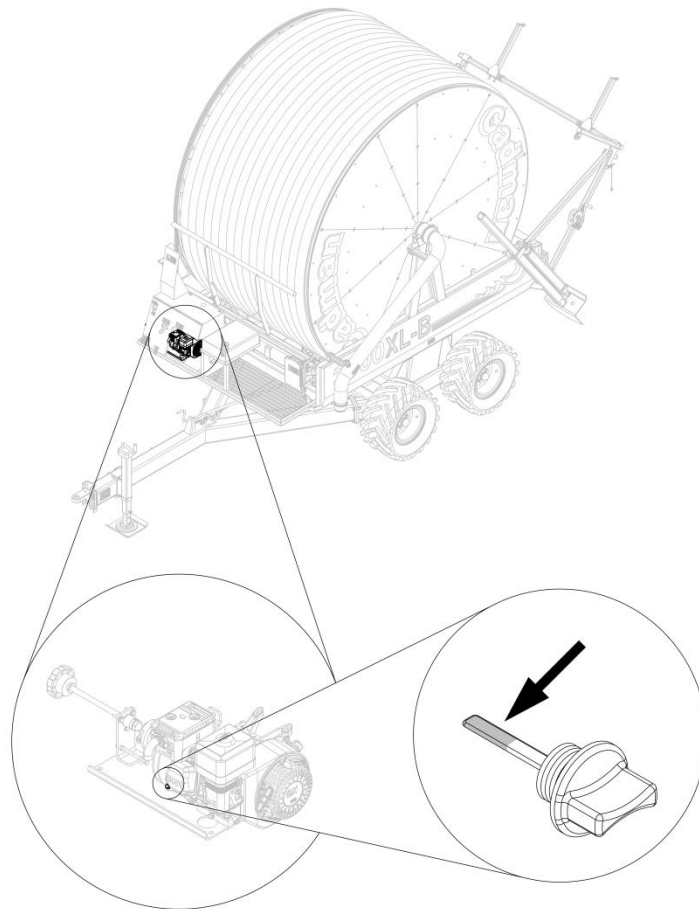


Figure 32 – Check Engine Oil

img-01363



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.

For diesel engines: minimum 40 cetane rated 2-D Diesel fuel oil is required.



Using diesel fuel oil in a gasoline engine will result in damage to the engine's fuel system. This may result in engine damage, and may result in the gasoline engine becoming inoperable



Using gasoline in a diesel engine will result in damage to the engine's fuel system in addition to not lubricating the engine correctly. This may result in a seized engine. This may lead to serious injury of operators and/or spectators. This will also lead to the diesel engine becoming inoperable

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

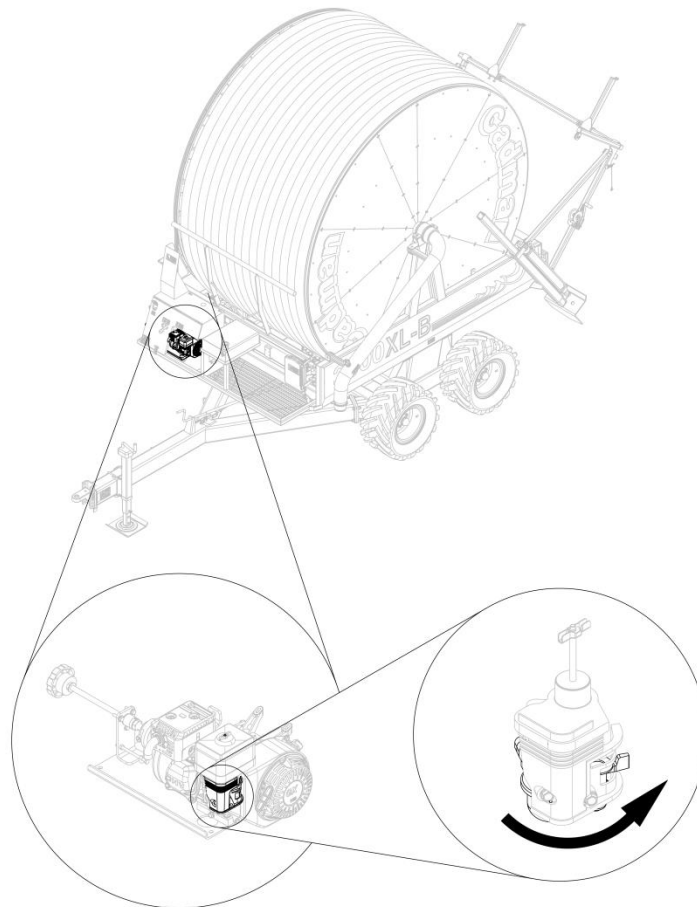


Figure 33 – Open Fuel Valve

img-01364

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

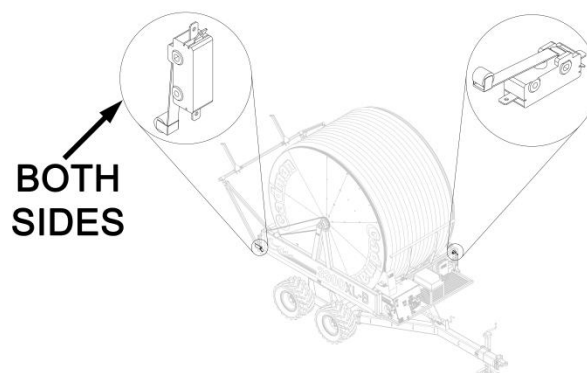


Figure 34 – Shutoff Switch Locations

img-01365

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.

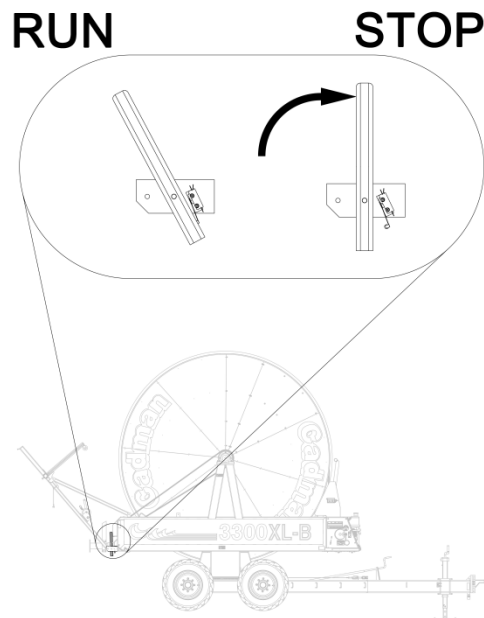


Figure 35 – Rear Shutoff switches

img-01366

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.

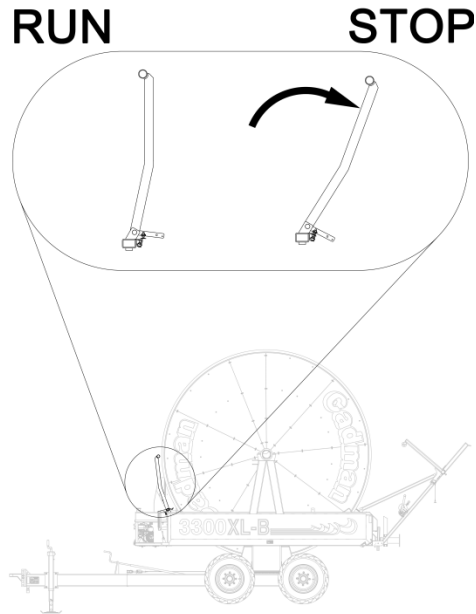


Figure 36 – Front Shutoff switch

img-01367

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

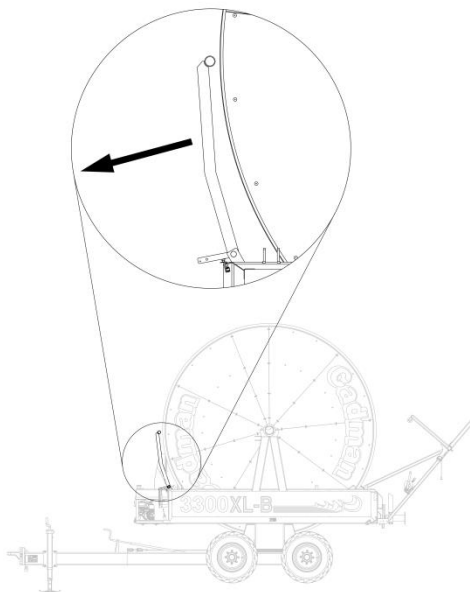


Figure 37 – Test Front Shutoff Switch

img-01368

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

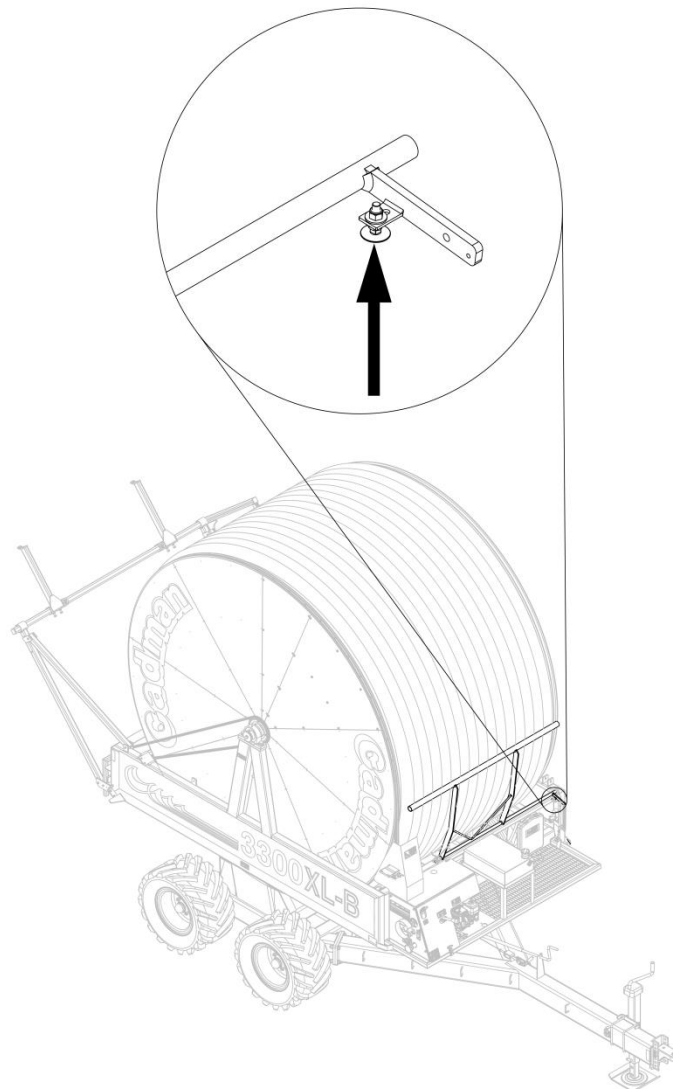


Figure 38 – Adjusting Front Shutoff Switch Trigger

img-01369



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 systems of travellers in use are working correctly.

If the compensation system is working correctly then the pulley cam roller should rest near the top of the ramp as shown:

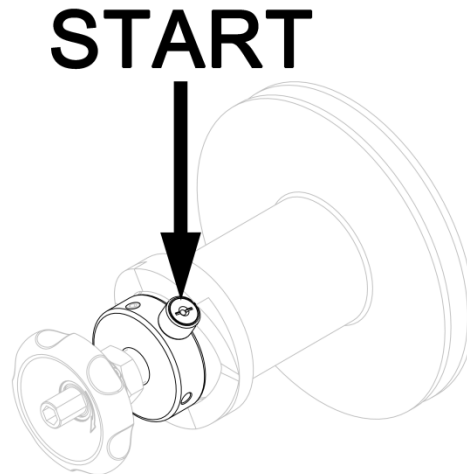


Figure 39 – Compensator Pulley Cam Start Position

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:

2ND LAYER

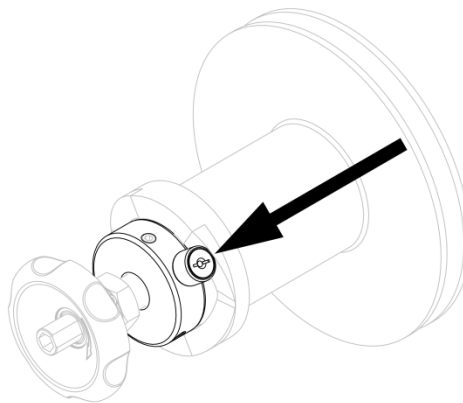


Figure 40 – Compensator Pulley Cam Second Position

img-01343

3RD LAYER

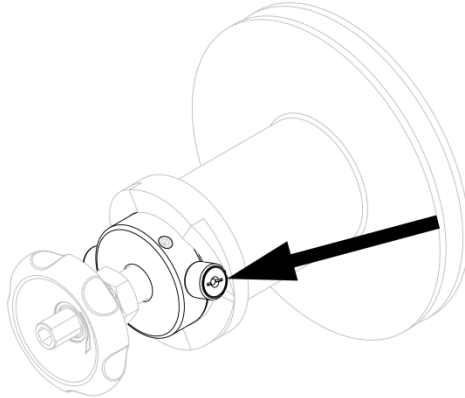


Figure 41 – Compensator Pulley Cam Third Position

img-01344

4TH LAYER

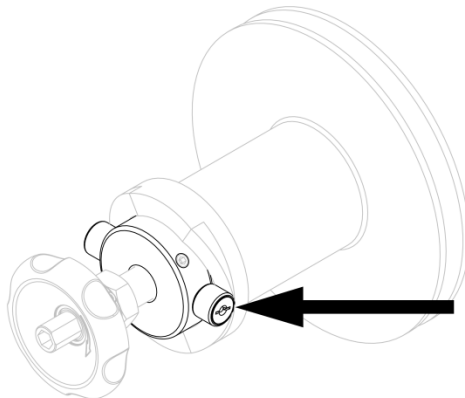


Figure 42 – Compensator Pulley Cam Fourth Position

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.

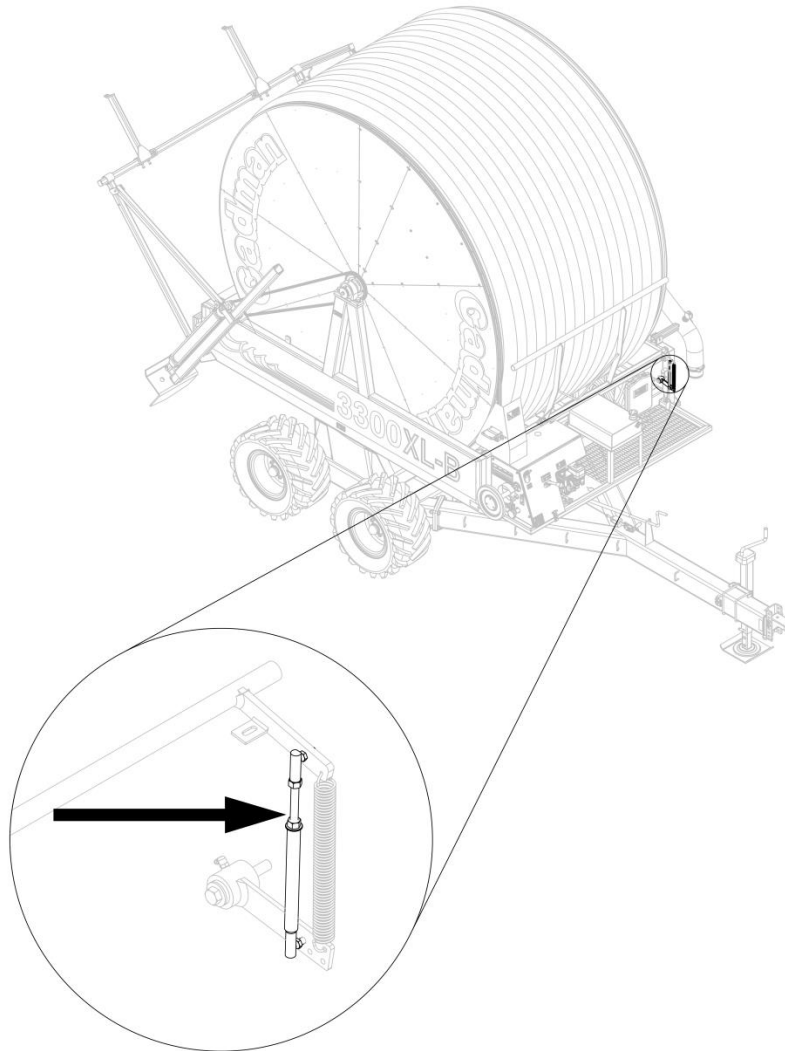


Figure 43 – 4000 and 5000 Series Compensator Cable Adjustment

img-01370

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.

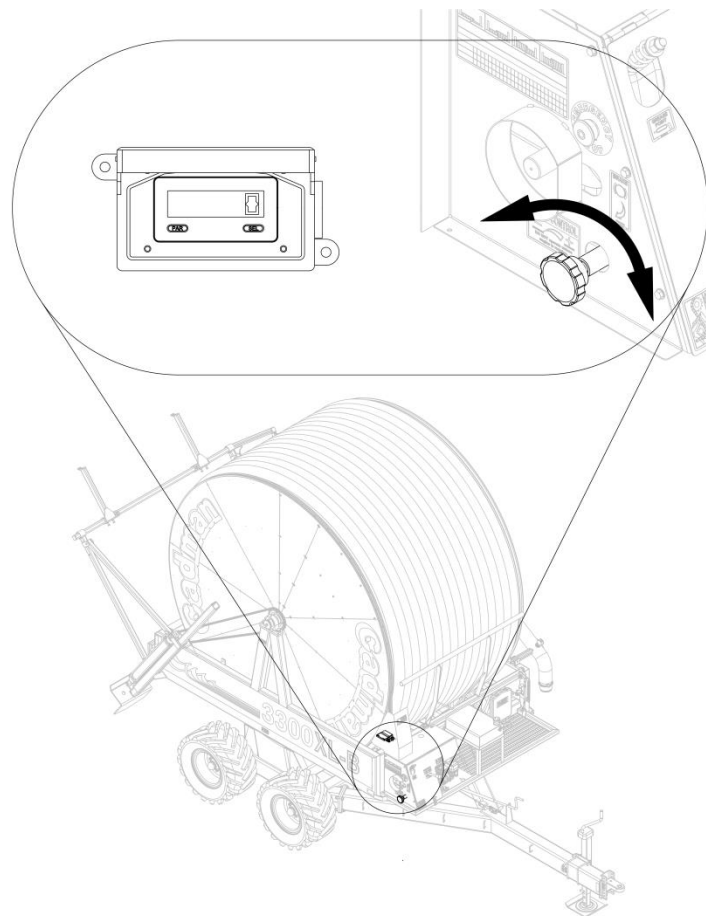


Figure 44 – 4000 and 5000 Series Control Knob/Speedometer

img-01371



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.

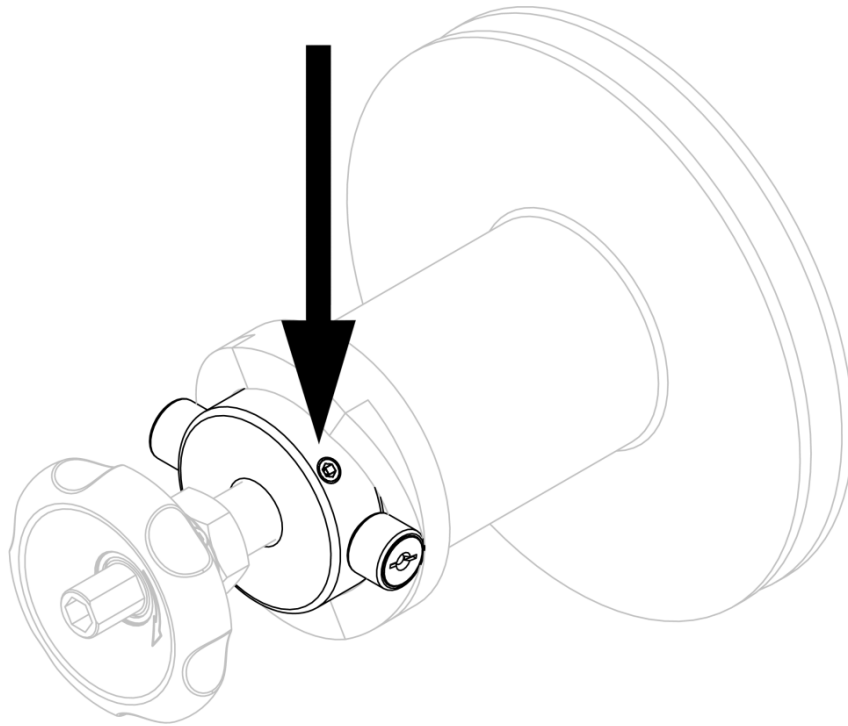


Figure 45 – Drag screw

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.

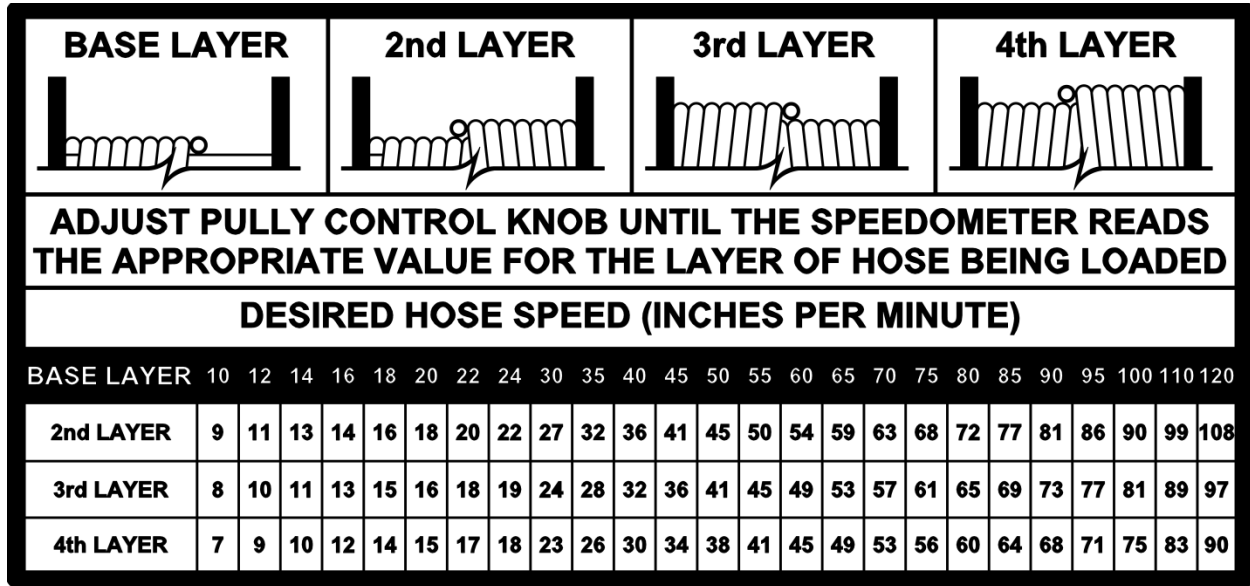


Figure 46 – Speed Conversion Chart Label

img-00255-A



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, 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.

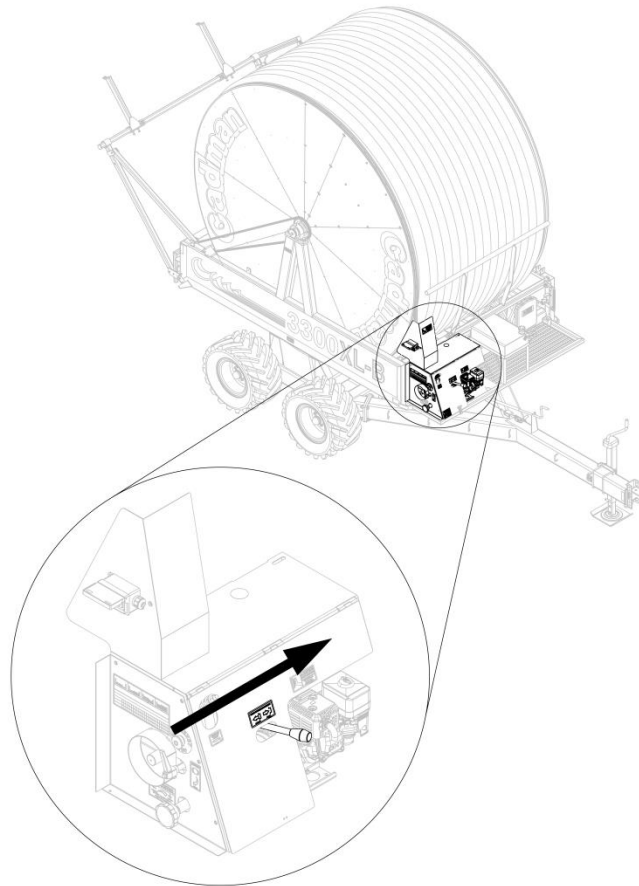


Figure 47 – Engage Drive System

img-01352

Step 5

Fully release the brake.

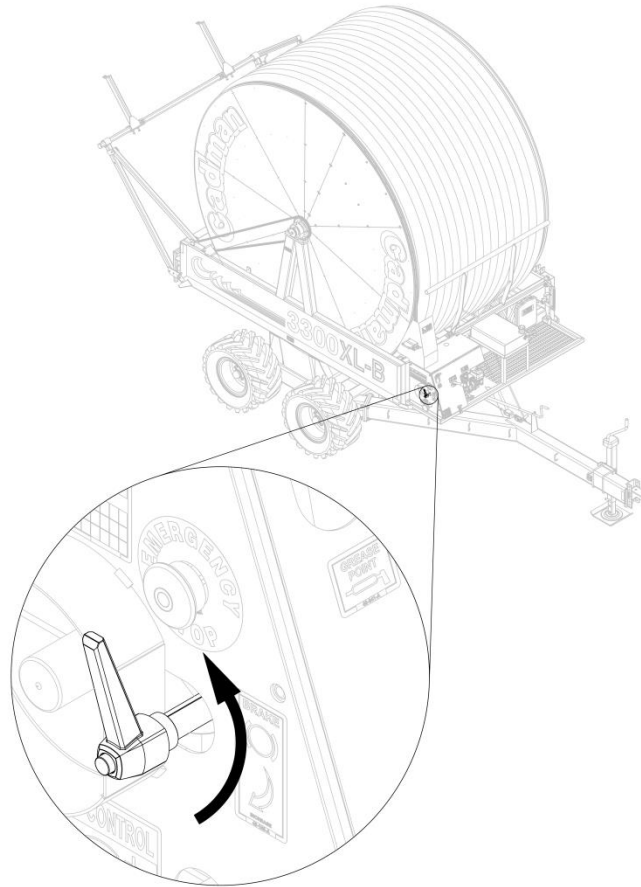


Figure 48 – Fully Release Brake

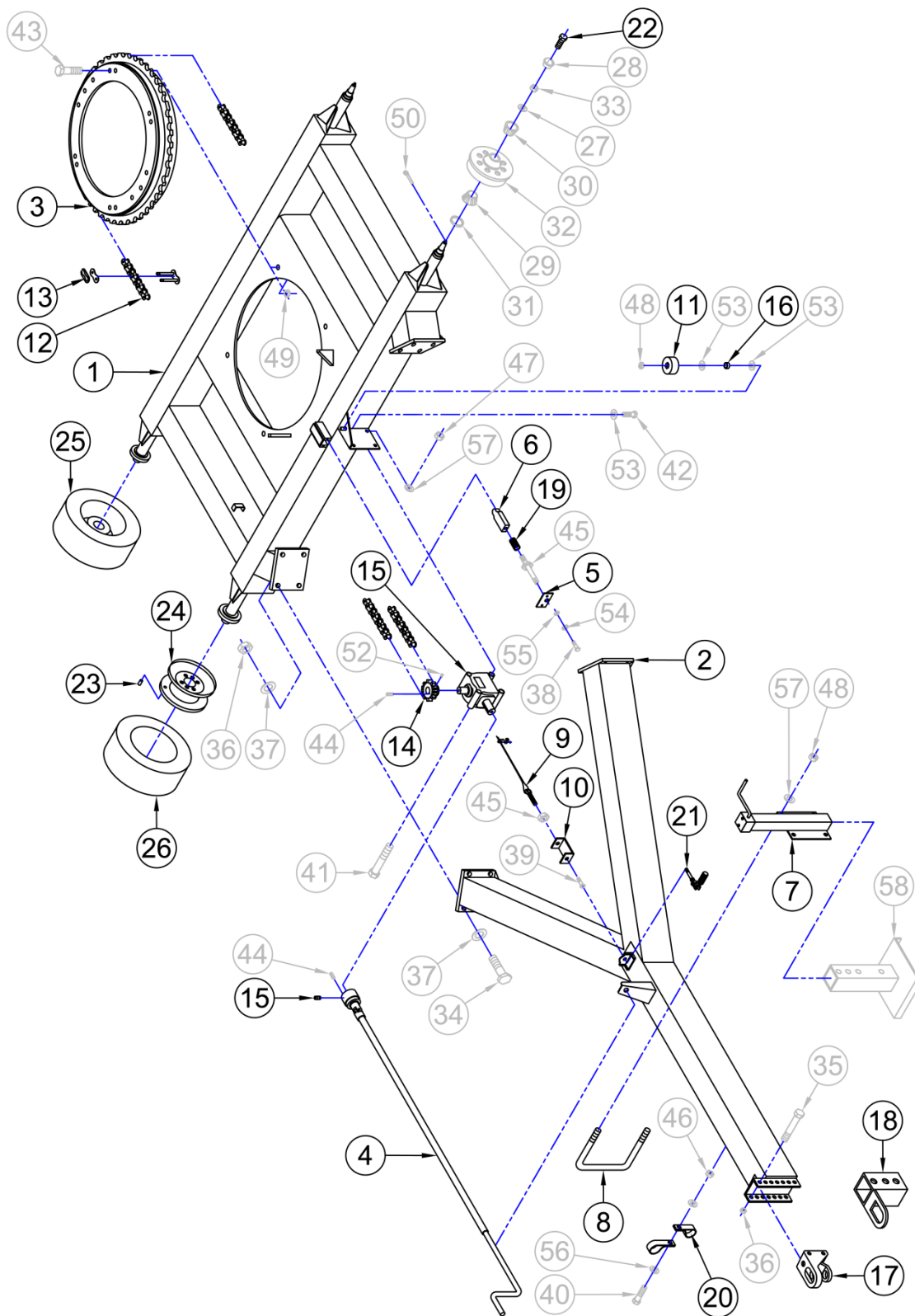
img-01372



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Lower Frame Assembly (1 of 2)

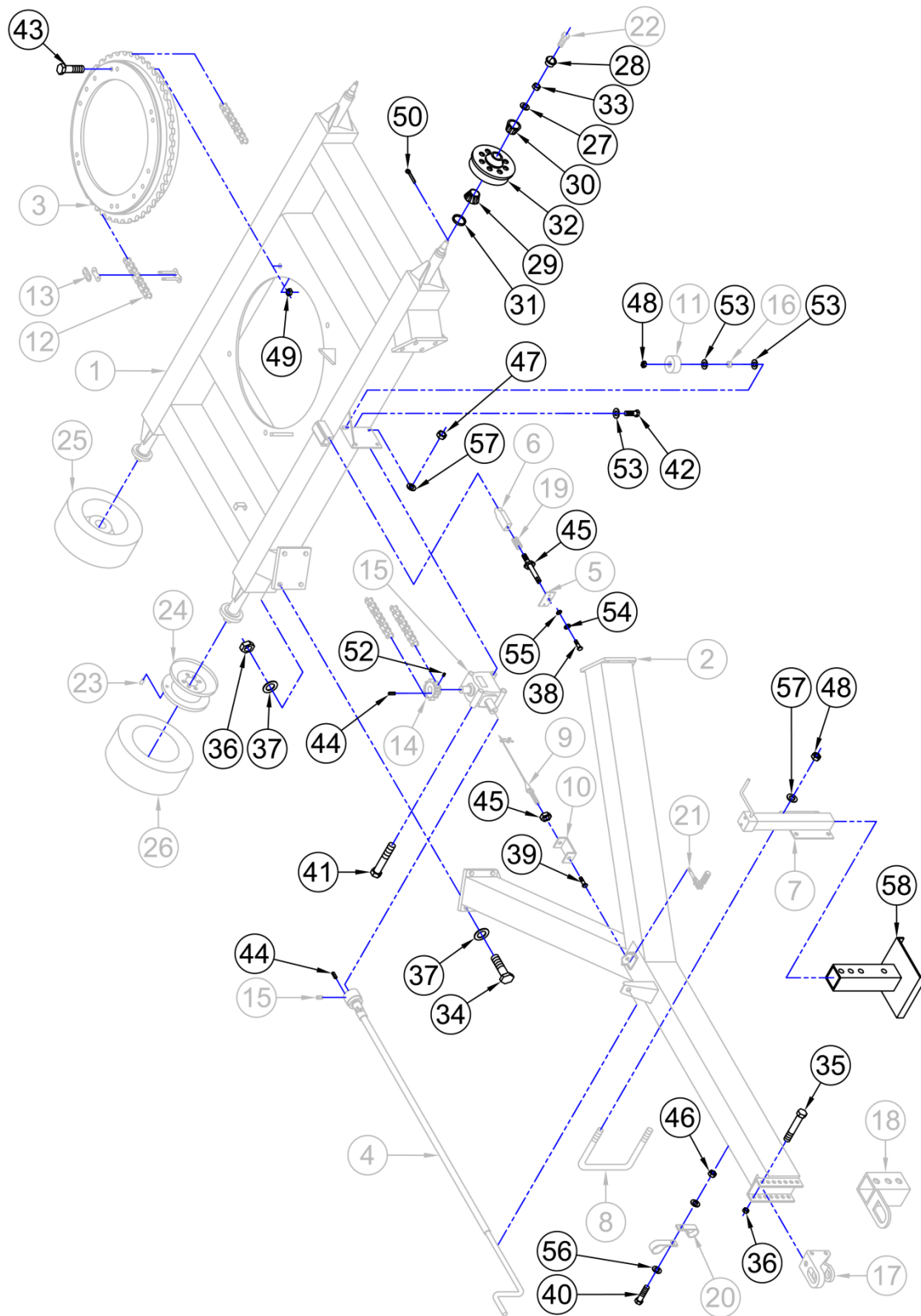




Lower Frame Assembly (1 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	LOWER FRAME	05-100-C	1	
2	TONGUE	05-200-C	1	
3	TURNTABLE RING	05-612	1	
4	GEARBOX HANDLE	05-613	1	
5	TURNTABLE LOCK COVER	05-619	1	
6	TURNTABLE LOCK PIN	05-620	1	
7	TONGUE JACK	05-623-A	1	
8	U BOLT, 1/2"-13 X 8 9/16" X 8" LG.	05-624	2	
9	TURNTABLE LOCK CABLE	05-638-A	1	
10	CABLE ADJUSTMENT BRACKET	05-753-A	1	
11	RUB BLOCK IDLER WHEEL	08-653	1	
12	#60 ROLLER CHAIN, 137 1/2" LG.	10-CHN-60-1RIV	103 P	
13	#60 CONNECTING LINK	10-LNK-60CONN	2	
14	SPROCKET, 60B10 X 1.00"	10-SPT-60B10X100	1	
15	RIGHT ANGLE GEARBOX	40-084	1	
16	SPACER, 5/8" ID X 1/2" LG.	40-153	1	
17	PINTLE HITCH	40-402-RED	1	
18	PAINTED CLEVIS KIT	40-403-RED	1	
19	TURNTABLE LOCK SPRING	40-406	1	
20	HYDRAULIC HOSE CLAMP, 5/8"	40-416	2	
21	TURNTABLE LOCK CABLE LEVER	40-422	1	
22	WHEEL BOLT, 9/16"-18	55-032	32	
23	VALVE STEM	55-046	4	
24	RIM, 14L - 16.1" X 8 BOLT	55-067-RIM	4	4000 XL, 4500 WB, 5000 WB
	RIM, 16.5L - 16.1" X 8 BOLT, GALVANIZED	55-077-A	4	3300 XL-B, 3600 XL-B
25	WHEEL ASSEMBLY	55-067-S	4	4000 XL, 4500 WB, 5000 WB
	WHEEL ASSEMBLY	55-077	4	3300 XL-B, 3600 XL-B
26	TIRE, 14L-16.1 8 PLY, TUBELESS	55-067-TIRE	4	4000 XL, 4500 WB, 5000 WB
	POWER IMPLEMENT TIRE, 16.5-16.1, 10 PLY	55-077-B	4	3300 XL-B, 3600 XL-B

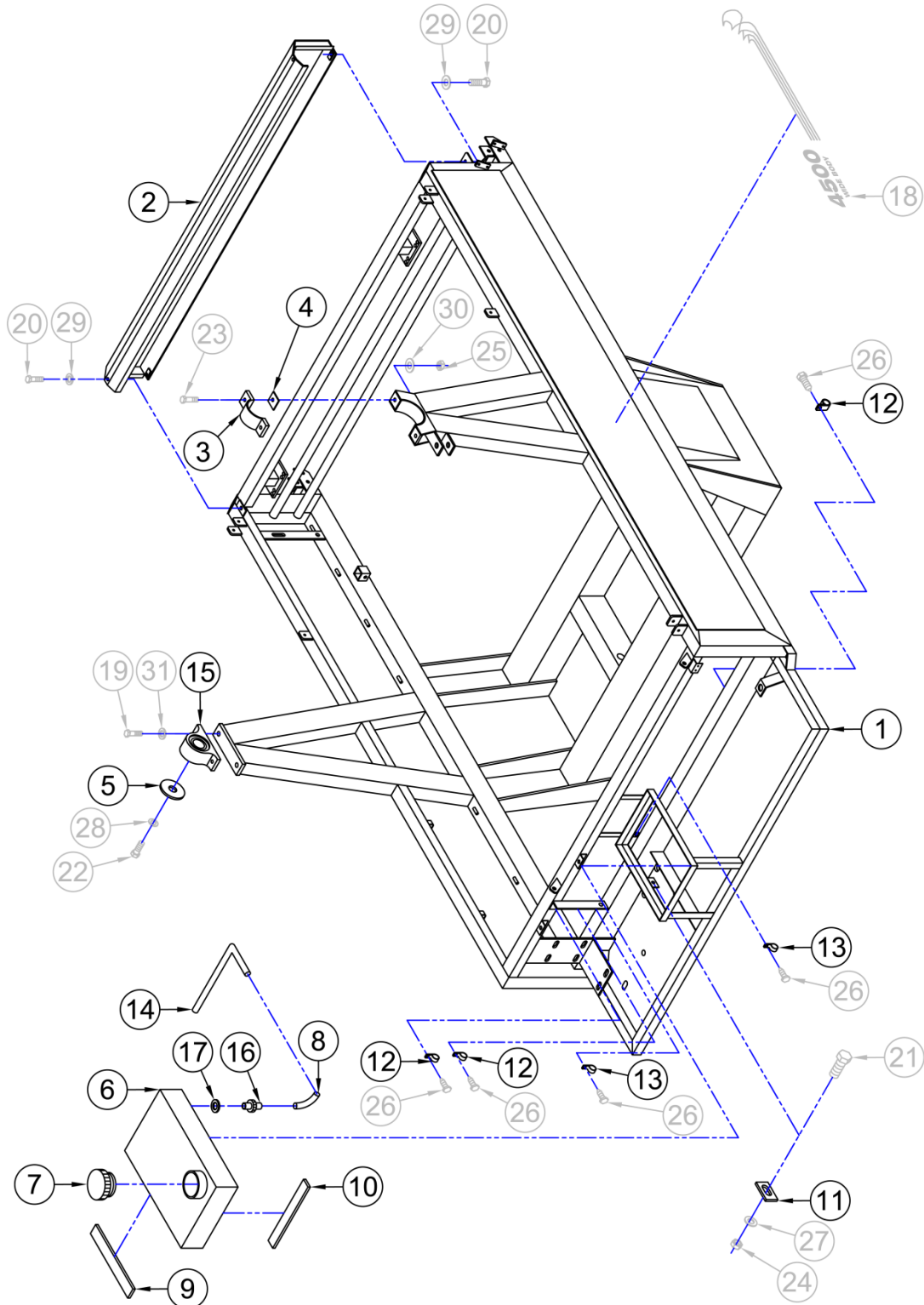
Lower Frame Assembly (2 of 2)



Lower Frame Assembly (2 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
27	SPINDLE WASHER	55-099-9	4	
28	DUST CAP - #10,000	55-109	4	
	BEARING CONE - #10,000 INNER (NOT SHOWN)	55-129	4	
	BEARING CONE - #10,000 OUTER (NOT SHOWN)	55-130	4	
29	INNER BEARING - #10,000	55-131	4	
30	OUTER BEARING - #10,000	55-132	4	
31	GREASE SEAL	55-133	4	
32	8 BOLT HUB - #10,000	55-136	4	
33	SPINDLE NUT	55-147	32	
34	GRADE 8 BOLT, 3/4" X 3" LG.	89-BLT-07510X300	8	
35	GRADE 8 BOLT, 3/4" X 6" LG.	89-BLT-07510X600	2	
36	GRADE 8 LOCK NUT, 3/4"-10	89-NUT-LOC075-10	10	
37	GRADE 8 SAE WASHER, 3/4"	89-WSR-SAE075	16	
38	BOLT, 1/4" X 1" LG.	90-BLT-02520X100	2	
39	BOLT, 5/16" X 1" LG.	90-BLT-03118X100	1	
40	BOLT, 5/16" X 1 1/4" LG.	90-BLT-03118X125	1	
41	BOLT, 3/8" X 5" LG.	90-BLT-03816X500	4	
42	BOLT, 1/2" X 2 1/2" LG.	90-BLT-05013X250	1	
43	BOLT, 3/4" X 2" LG.	90-BLT-07510X200	4	
44	KEY, 1/4" X 1 1/4" LG.	90-KEY-SQ025X125	2	
45	JAM NUT, 1/2"-13	90-NUT-JAM050-13	2	
46	LOCK NUT, 5/16"-18	90-NUT-LOC03118	1	
47	LOCK NUT, 3/8"-16	90-NUT-LOC03816	4	
48	LOCK NUT, 1/2"-13	90-NUT-LOC05013	5	
49	LOCK NUT, 3/4"-10	90-NUT-LOC07510	4	
50	COTTER PIN, 5/32" DIA. X 2.00" LG.	90-PIN-CT016X200	4	
51	SET SCREW, 1/4" X 5/16" LG.	90-SCR-ST02520X031	1	
52	SET SCREW, 5/16" X 1/4" LG.	90-SCR-ST03118X025	2	
53	FLAT WASHER, 1/2"	90-WSR-FLT050	3	
54	LOCK WASHER, 1/4"	90-WSR-LOC025	2	
55	SAE WASHER, 1/4"	90-WSR-SAE025	2	
56	SAE WASHER, 5/16"	90-WSR-SAE031	2	
57	SAE WASHER, 1/2"	90-WSR-SAE050	4	
58	JACK DROP LEG	C3-641	1	

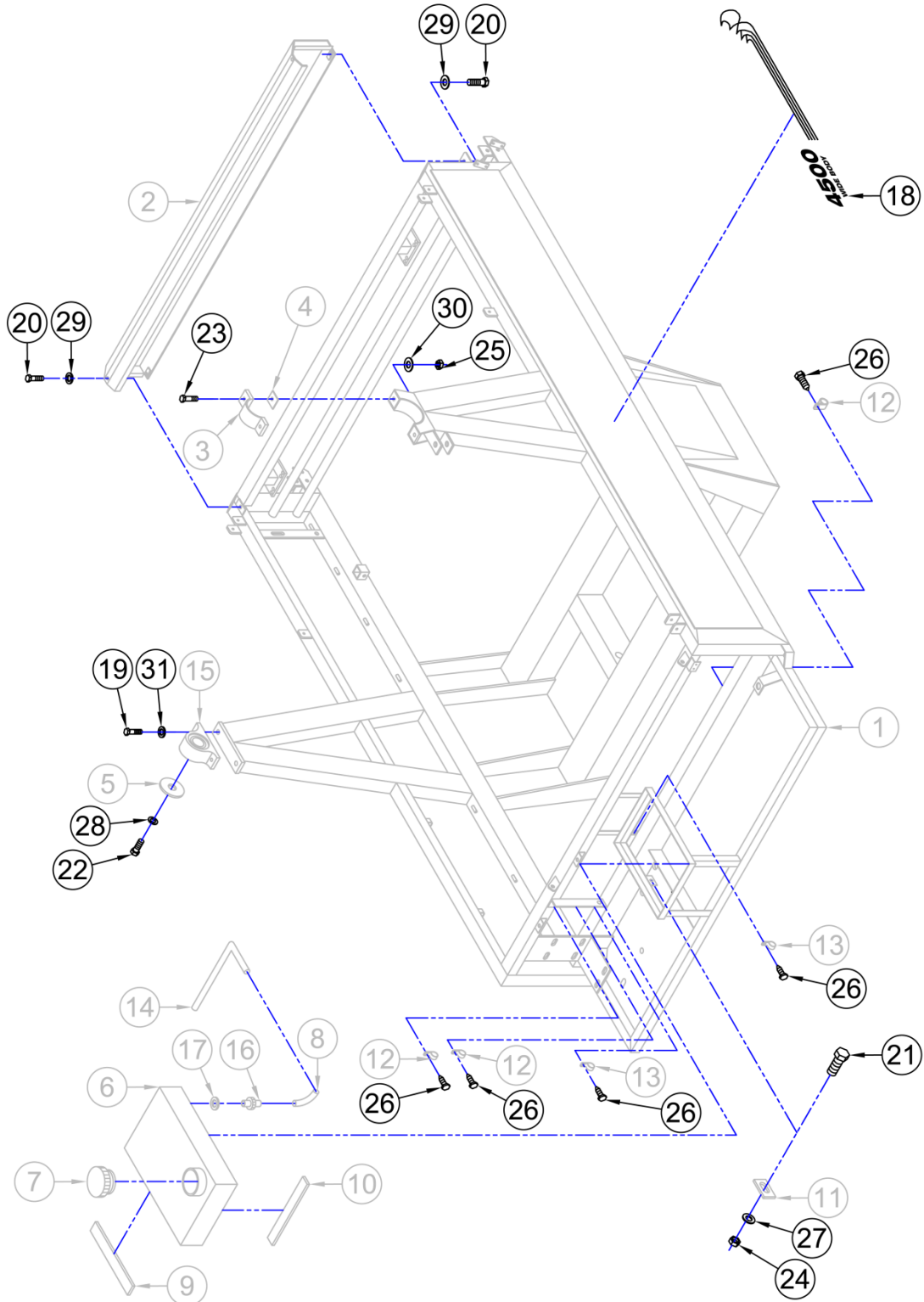
Upper Frame Assembly (1 of 2)



Upper Frame Assembly (1 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	5000 SERIES UPPER FRAME	05-400-E	1	
2	INDEXER SHIELD	05-605	1	
3	BEARING CAP	05-617	2	
4	ANTI ROTATION PLATE - LARGE	05-621-A	2	
5	BEARING RETAINER PLATE	05-622	1	
6	FUEL TANK, 5.0 IMP. GAL.	40-017	1	
7	VENTED GAS CAP	40-017-A	1	
8	NEOPRENE FUEL LINE, 3/16" DIA. X 2" LG.	40-066	1	
9	TANK CUSHION, 20" LG.	40-093-20	2	
10	TANK CUSHION, 12" LG.	40-094	2	
11	VIBRATION ISOLATOR	40-095	2	
12	NYLON CLAMP, 3/8"	40-096	5	
13	NYLON CLAMP, 1/4"	40-149	2	
14	COPPER FUEL LINE, 1/4" DIA. X 32" LG.	40-156	1	
15	3" PILLOW BLOCK BEARING	40-410-RED	1	
16	FUEL TANK STRAINER	40-HDA-16955ZE1000	1	
17	O-RING FOR FUEL TANK STRAINER	40-HDA-91353671004	1	

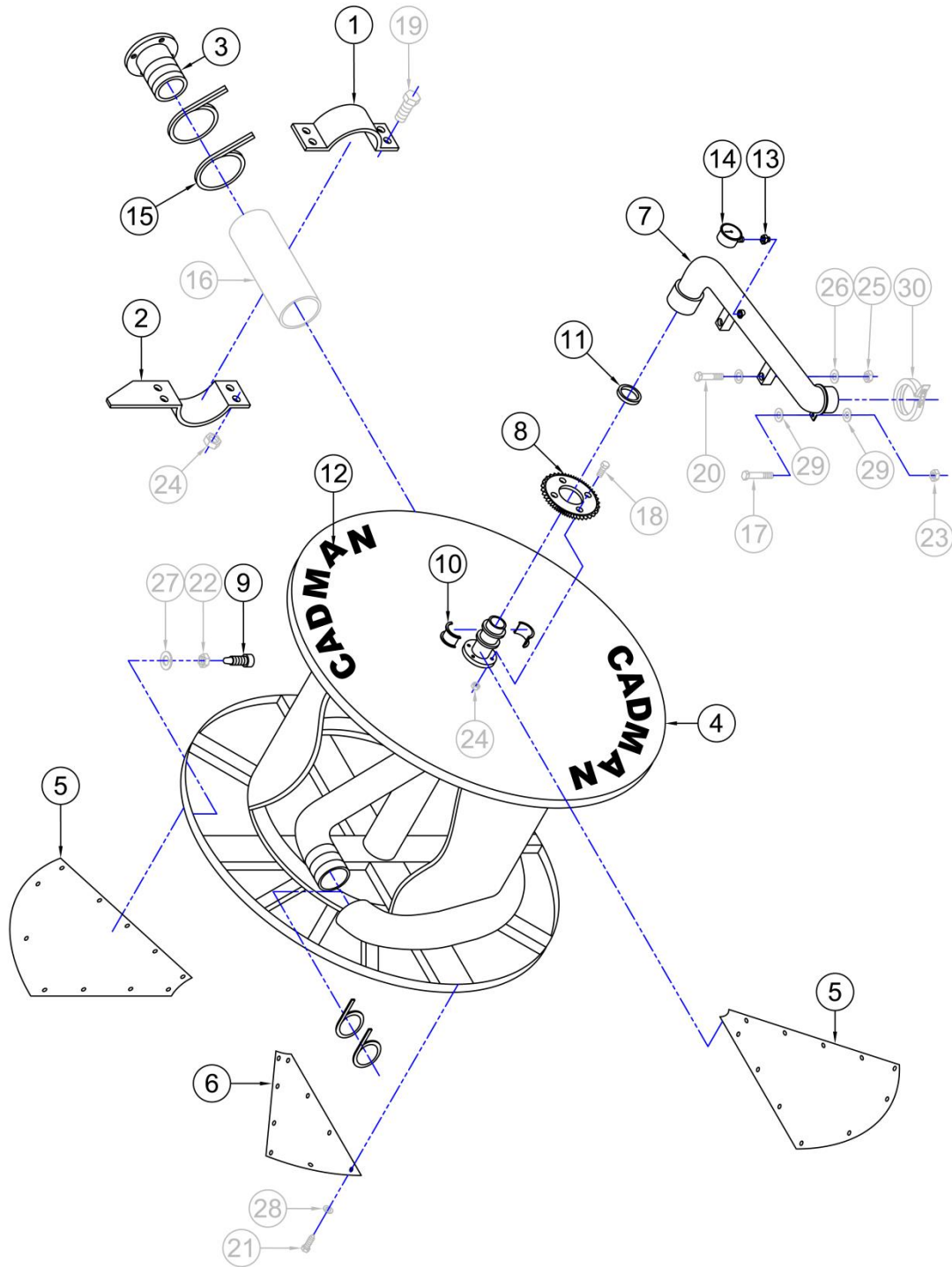
Upper Frame Assembly (2 of 2)



Upper Frame Assembly (2 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
18	DECAL, 3300 XL-B LEFT SIDE PANEL	42-DCL-3300XL-BL	1	3300 XL-B
	DECAL, 3300 XL-B RIGHT SIDE PANEL	42-DCL-3300XL-BR	1	3300 XL-B
	DECAL, 3600 XL-B LEFT SIDE PANEL	42-DCL-3600XL-BL	1	3600 XL-B
	DECAL, 3600 XL-B RIGHT SIDE PANEL	42-DCL-3600XL-BR	1	3600 XL-B
	DECAL, 4000 XL LEFT SIDE PANEL	42-DCL-4000XLWBL	1	4000 XL
	DECAL, 4000 XL RIGHT SIDE PANEL	42-DCL-4000XLWBR	1	4000 XL
	DECAL, 4500 WB LEFT SIDE PANEL	42-DCL-4500WBL	1	4500 WB
	DECAL, 4500 WB RIGHT SIDE PANEL	42-DCL-4500WBR	1	4500 WB
	DECAL, 5000 WB LEFT SIDE PANEL	42-DCL-5000WBL	1	5000 WB
	DECAL, 5000 WB RIGHT SIDE PANEL	42-DCL-5000WBR	1	5000 WB
19	GRADE 8 BOLT, 7/8" X 2 1/2" LG.	89-BLT-08809X250	2	
20	BOLT, 5/16" X 3/4" LG.	90-BLT-03118X075	4	
21	BOLT, 3/8" X 1 1/4" LG.	90-BLT-03816X125	1	
22	BOLT, 5/8" X 1 1/2" LG.	90-BLT-06311X150	1	
23	BOLT, 5/8" X 2 1/4" LG.	90-BLT-06311X225	2	
24	LOCK NUT, 3/8"-16	90-NUT-LOC03816	1	
25	LOCK NUT, 5/8"-11	90-NUT-LOC06311	1	
26	TEK SCREW, 1/4" X 1" LG.	90-SCR-TEK025X100	7	
27	FLAT WASHER, 3/8"	90-WSR-FLT038	1	
28	LOCK WASHER, 5/8"	90-WSR-LOC063	1	
29	SAE WASHER, 5/16"	90-WSR-SAE031	4	
30	SAE WASHER, 5/8"	90-WSR-SAE063	2	
31	SAE WASHER, 7/8"	90-WSR-SAE088	2	

5000 Series Drum Assembly (1 of 2)

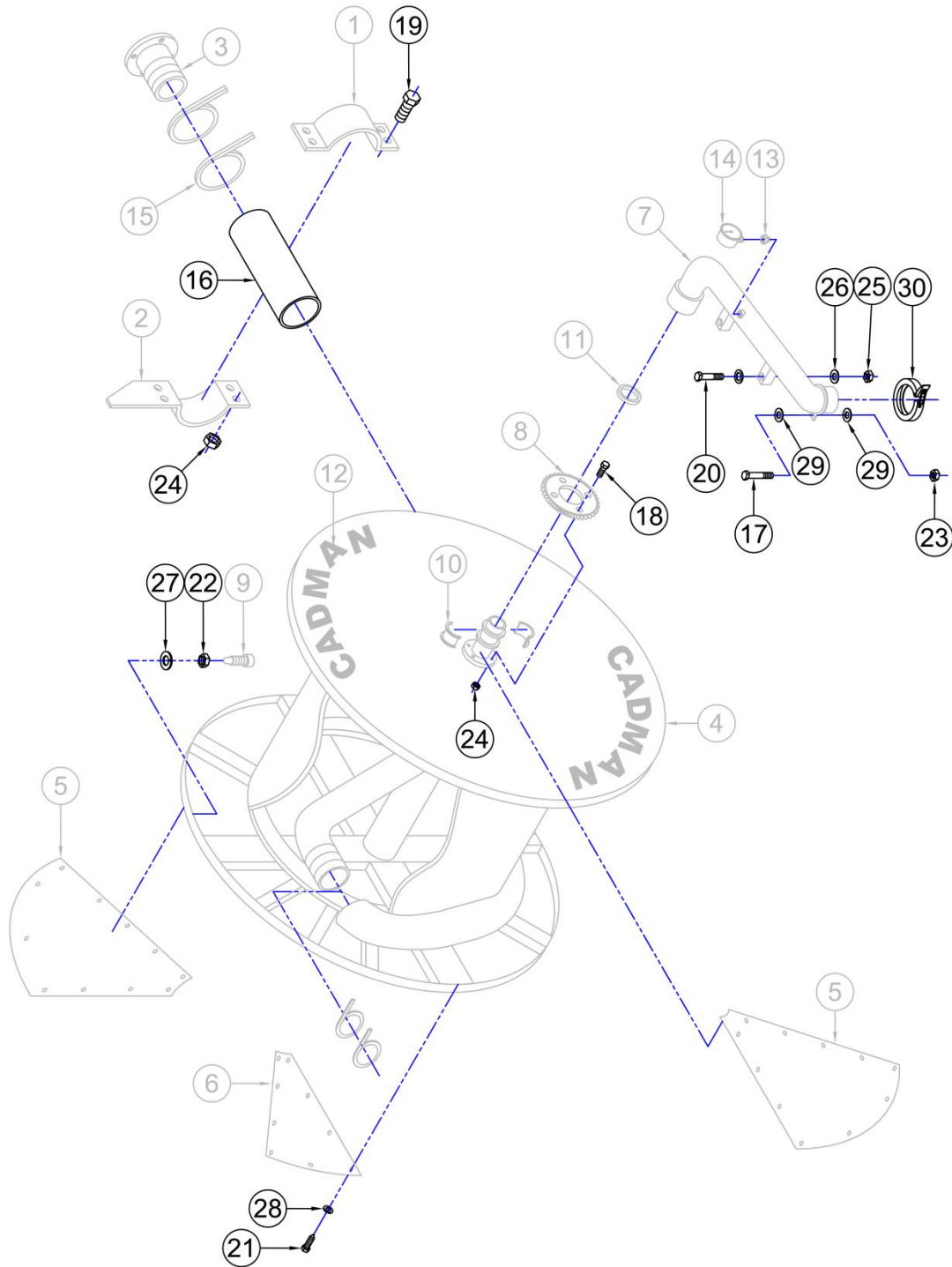




5000 Series Drum Assembly (1 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	MARKER CLAMP - 3300XL-B	05-655	1	3300 XL-B
	MARKER CLAMP - 3600XL-B	05-649	1	3600 XL-B
	MARKER CLAMP - 4000 XL	04-690	1	4000 XL
	MARKER CLAMP - 4500 WB	04-687-A	1	4500 WB
	MARKER CLAMP - 5000 WB	05-632	1	5000 WB
2	MARKER FLAG - 3300XL-B	05-656	1	3300 XL-B
	MARKER FLAG - 3600XL-B	05-648	1	3600 XL-B
	MARKER FLAG - 4000 XL	04-689	1	4000 XL
	MARKER FLAG - 4500 WB	04-686	1	4500 WB
	MARKER FLAG - 5000 WB	05-631	1	5000 WB
3	FLANGED HOSE END - 3300 XL-B	07-620	1	3300 XL-B
	FLANGED HOSE END - 3600XL-B	05-639	1	3600 XL-B
	FLANGED HOSE END - 4000 XL	06-626-A	1	4000 XL
	FLANGED HOSE END - 4500 WB	04-674	1	4500 WB
	FLANGED HOSE END - 5000 WB	05-630	1	5000 WB
4	DRUM	05-599-F	1	3300 XL-B
	DRUM	05-550-F	1	3600 XL-B
	DRUM	05-500-G	1	4000 XL, 4500 WB, 5000 WB
5	LARGE DRUM SKIN	05-594-B	16	
6	SMALL DRUM SKIN	05-595-B	2	
7	INLET ELBOW	05-608-A	1	
8	SPROCKET, 50A46	10-069	1	3300 XL-B
	SPROCKET, 50A48	10-086	1	3600 XL-B, 4000 XL, 5000 WB
	SPROCKET, 50A50	10-087	1	4500 WB
9	DRUM DRIVE LUG	15-040-B	51	
10	DRUM BEARING	40-335	1	
11	5 1/2" INLET ELBOW SEAL	40-404	1	
12	DRUM DECAL	40-DCL-014	4	
13	REDUCING BUSHING, 3/4"-1/4", GALVANIZED	40-NPT-RB075X025G	1	
14	PRESSURE GAUGE, 0-160 PSI, WET	45-017	1	
15	6" BAND-IT® CLAMP	50-016	6	3300 XL-B, 3600 XL-B
			4	4000 XL, 4500 WB, 5000 WB
	7" BAND-IT® CLAMP	50-072	4	5000 WB

5000 Series Drum Assembly (2 of 2)

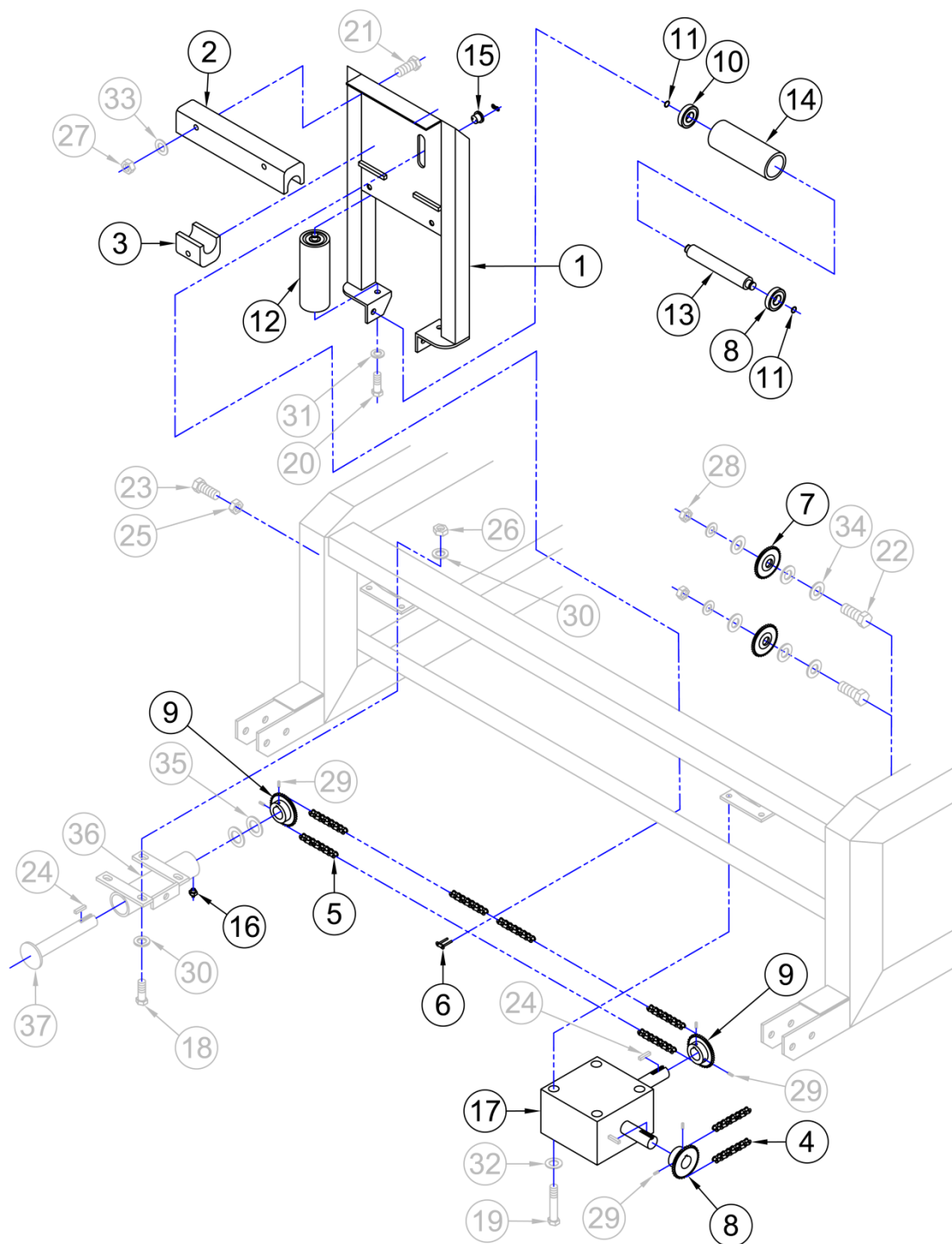




5000 Series Drum Assembly (2 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
16	PE HOSE, 3.3" ID X 2350'	52-018-2350	1	3300 XL-B
	PE HOSE, 3.6" ID X 2250'	52-014-2250	1	3600 XL-B
	PE HOSE, 4" ID X 1400'	50-062-1400	1	4000 XL
	PE HOSE, 4" ID X 1550'	50-062-1550	1	4000 XL
	PE HOSE, 4" ID X 1850'	50-062-1850	1	4000 XL
	PE HOSE, 4 1/2" ID X 2350'	50-061-1320	1	4500 WB
	PE HOSE, 5" ID X 2350'	50-054-1200	1	5000 WB
17	BOLT, 1/4" X 2" LG.	90-BLT-02520X200	1	
18	BOLT, 3/8" X 1 1/4" LG.	90-BLT-03816X125	4	
19	BOLT, 3/8" X 1 1/2" LG.	90-BLT-03816X150	4	
20	BOLT, 1/2" X 4" LG.	90-BLT-05013X400	2	
21	HEX HEAD PLASTIC BOLT, 5/16"-18 X 1" LG.	90-BLT-PL03118X100	12	
22	JAM NUT, 1/2"-13	90-NUT-JAM050-13	51	
23	LOCK NUT, 1/4"-20	90-NUT-LOC025-20	1	
24	LOCK NUT, 3/8"-16	90-NUT-LOC038-16	8	
25	LOCK NUT, 1/2"-13	90-NUT-LOC050-13	2	
26	FLAT WASHER, 1/2"	90-WSR-FLT050	4	
27	LOCK WASHER, 1/2"	90-WSR-LOC050	51	
28	5/16" ID PLASTIC WASHER 3/4" OD	90-WSR-PL031X075	12	
29	SAE WASHER, 1/4"	90-WSR-SAE025	2	
30	5" RINGLOCK FITTING CLAMP	IR-FCL-5	1	

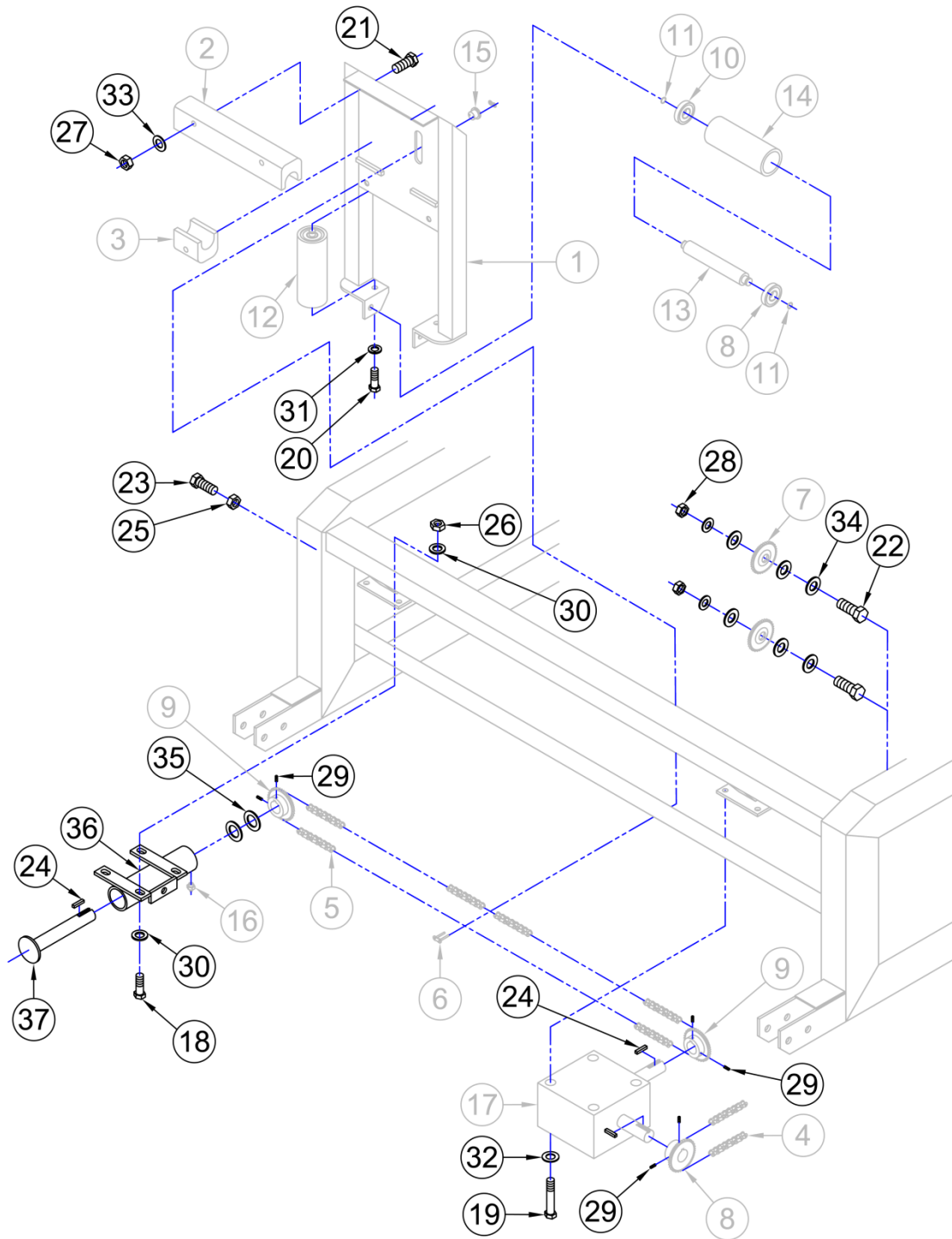
Indexer Assembly (1 of 2)



Indexer Assembly (1 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	HOSE GUIDE	05-614	1	3300 XL-B, 3600 XL-B
	HOSE GUIDE	05-614	1	4000 XL, 4500 WB
	HOSE GUIDE	05-604	1	5000 WB
2	UPPER SLIDE	05-615	1	
3	LOWER SLIDE	05-616	2	
4	#50 ROLLER CHAIN	10-CHN-50-1RIV	122 P	
5	#60 ROLLER CHAIN	10-CHN-60-1RIV	104 P	
	#50 CONNECTING LINK (NOT SHOWN)	10-LNK-50CONN	1	
6	#60-2 CONNECTING LINK	10-LNK-60-2CONN	1	
7	IDLER SPROCKET, 50A17 X 5/8"	10-SPT-50-17IDLER	2	
8	SPROCKET, 50B32 X 1.00"	10-SPT-50B32X100	1	3300 XL-B, 3600 XL-B
	SPROCKET, 50B30 X 1.00"	10-SPT-50B30X100	1	4000 XL
	SPROCKET, 50B31 X 1.00"	10-SPT-50B31X100	1	4500 WB
	SPROCKET, 50B25 X 1.00"	10-SPT-50B25X100	1	5000 WB
9	SPROCKET, 60B12 X 1.00"	10-SPT-60B12X100	1	3300XL-B, 3600 XL-B
	SPROCKET, 60B12 X 1.00"	10-SPT-60B12X100	1	4000 XL, 5000 WB
	SPROCKET, 60B13 X 1.00"	10-SPT-60B13X100	1	4500 WB
10	6203 BEARING	15-018-C	2	
11	EXTERNAL SNAP RING, 5/8"	15-018-D	2	
12	6" HOSE GUIDE ROLLER ASSEMBLY	15-019	3	
13	ROLLER SHAFT, 6"	15-019-F	1	
14	ROLLER BODY, 6"	15-019-G	1	
15	INDEXER DRIVE BUTTON	15-041	1	
16	1/8" NPT GREASE FITTING	40-001	1	
17	RIGHT ANGLE GEARBOX	40-084	1	

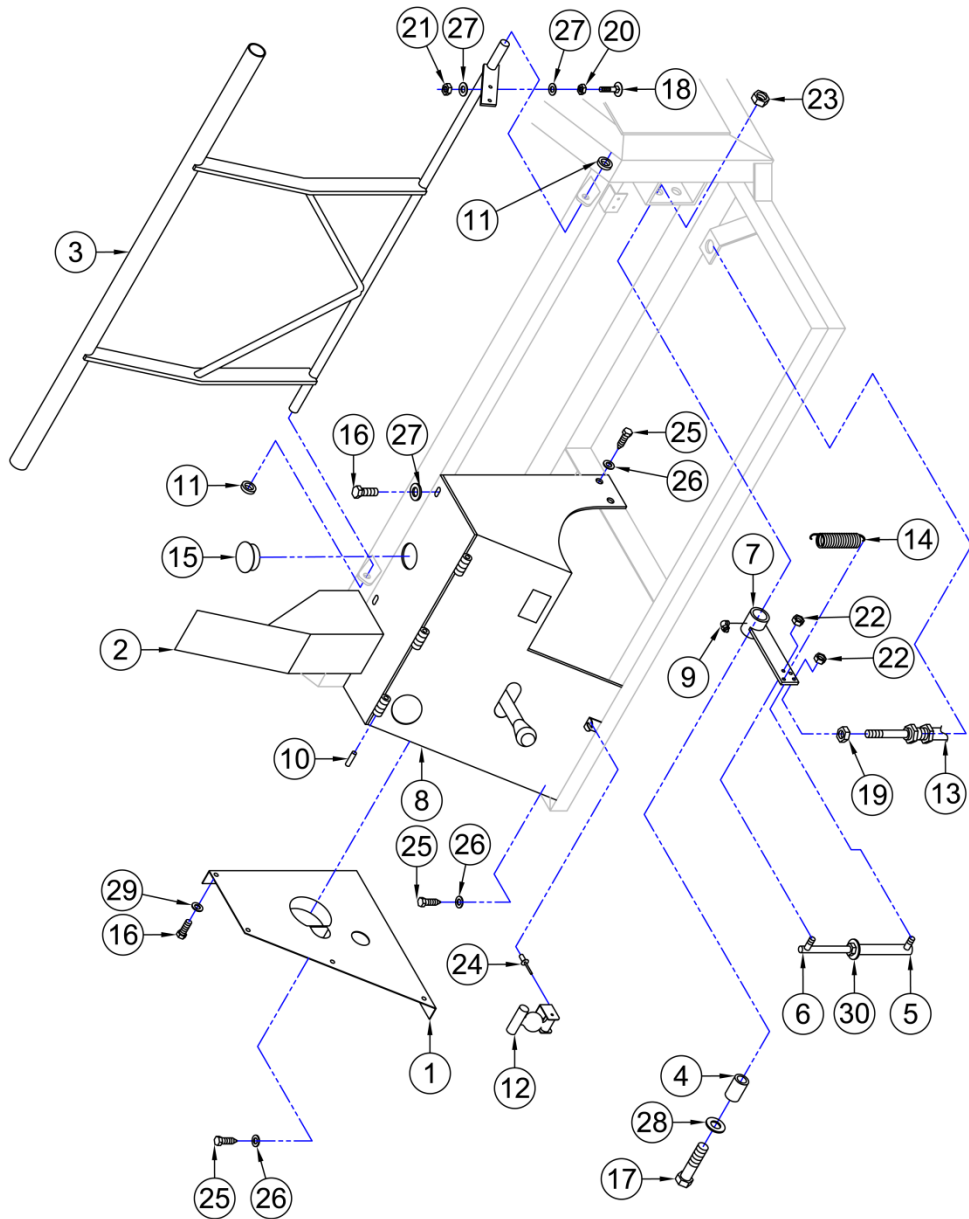
Indexer Assembly (2 of 2)



Indexer Assembly (2 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
18	BOLT, 3/8" x 1 3/4" LG.	90-BLT-03816X175	4	
19	BOLT, 3/8" x 4 1/2" LG.	90-BLT-03816X450	4	
20	BOLT, 1/2" x 1 1/4" LG.	90-BLT-05013X125	6	
21	BOLT, 1/2" x 3 1/2" LG.	90-BLT-05013X350	4	
22	BOLT, 5/8" x 3" LG.	90-BLT-06311X300	2	
23	FULL THREAD BOLT, 1/2" x 2 1/2" LG.	90-BLT-FT05013X250	1	
24	KEY, 1/4" X 1 1/4" LG.	90-KEY-SQ025	3	
25	JAM NUT, 1/2"-13	90-NUT-JAM050-13	1	
26	LOCK NUT, 3/8"-16	90-NUT-LOC038-16	4	
27	LOCK NUT, 1/2"-13	90-NUT-LOC050-13	4	
28	LOCK NUT, 5/8"-11	90-NUT-LOC063-11	2	
29	SET SCREW, 5/16"-18 X 1/4" LG.	90-SCR-ST03118X025	6	
30	FLAT WASHER, 3/8"	90-WSR-FLT038	8	
31	LOCK WASHER, 1/2"	90-WSR-LOC050	6	
32	SAE WASHER, 3/8"	90-WSR-SAE038	4	
33	SAE WASHER, 1/2"	90-WSR-SAE050	4	
34	SAE WASHER, 5/8"	90-WSR-SAE063	10	
35	SAE WASHER, 1"	90-WSR-SAE100	2	
36	INDEXER IDLER BLOCK	C3-303	1	
37	INDEXER IDLER SHAFT	C3-626	1	

Compensator Assembly

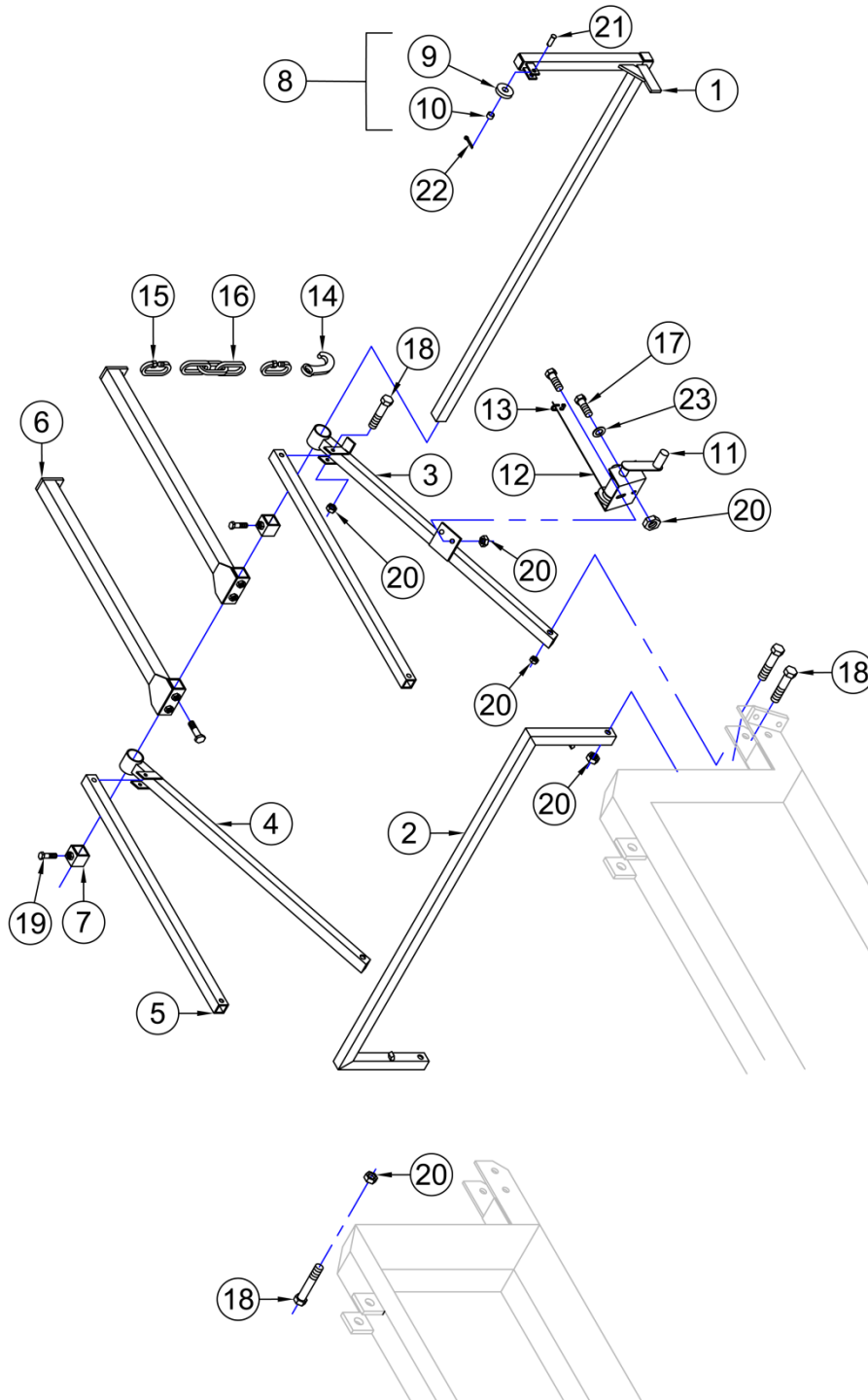




Compensator Assembly

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	END COVER	05-602	1	
2	DRIVE COVER	05-603-D	1	
3	COMPENSATOR FRAME	05-640	1	3300 XL-B, 3600 XL-B
	COMPENSATOR FRAME	05-601	1	4000 XL, 4500 WB, 5000 WB
4	IDLER ARM BUSHING, 1 1/4" ID X 2" LG.	06-656-A	1	
5	PUSHROD, FEMALE	06-660	1	
6	PUSHROD, MALE	06-661-A	1	
7	DRIVEN ARM	06-663-B	1	
8	DRIVE COVER DOOR	06-665-F	1	
9	1/8" NPT 90 DEG. GREASE FITTING	40-001-90	1	
10	BRASS HINGE PIN, 3/16" DIA. X 3" LG.	40-200-C	3	
11	1" DOUBLE SPLIT SET COLLAR	40-214	2	
12	LATCH KIT	40-217	1	
13	CONTROL CABLE, 99.5" LG.	40-227-A	1	
14	EXTENSION SPRING	40-229	1	
15	PANEL PLUG	42-283	1	
16	BOLT, 5/16" X 3/4" LG.	90-BLT-03118X075	6	
17	BOLT, 1/2" X 3 1/2" LG.	90-BLT-05013X350	1	
18	ELEVATOR BOLT, 5/16" X 1 1/2" LG.	90-BLT-EL03118X150	1	
19	HEX NUT, #10-32	90-NUT-HEX010-32	1	
20	HEX NUT, 5/16"-18	90-NUT-HEX031-18	1	
21	LOCK NUT, 5/16"-18	90-NUT-LOC031-18	1	
22	LOCK NUT, 5/16"-24	90-NUT-LOC031-24	2	
23	LOCK NUT, 1/2"-13	90-NUT-LOC050-13	1	
24	RIVET, 3/16" DIA. X 3/8" LG.	90-RIV-019X038	4	
25	TEK SCREW, 1/4" X 1" LG.	90-SCR-TEK025X100	4	
26	NYLON FLAT WASHER, 1/4"	90-WSR-FLT025NYLON	4	
27	FLAT WASHER, 5/16"	90-WSR-FLT031	4	
28	FLAT WASHER, 1/2"	90-WSR-FLT050	1	
29	SAE WASHER, 5/16"	90-WSR-SAE031	4	
30	SAE WASHER, 3/8"	90-WSR-SAE038	1	

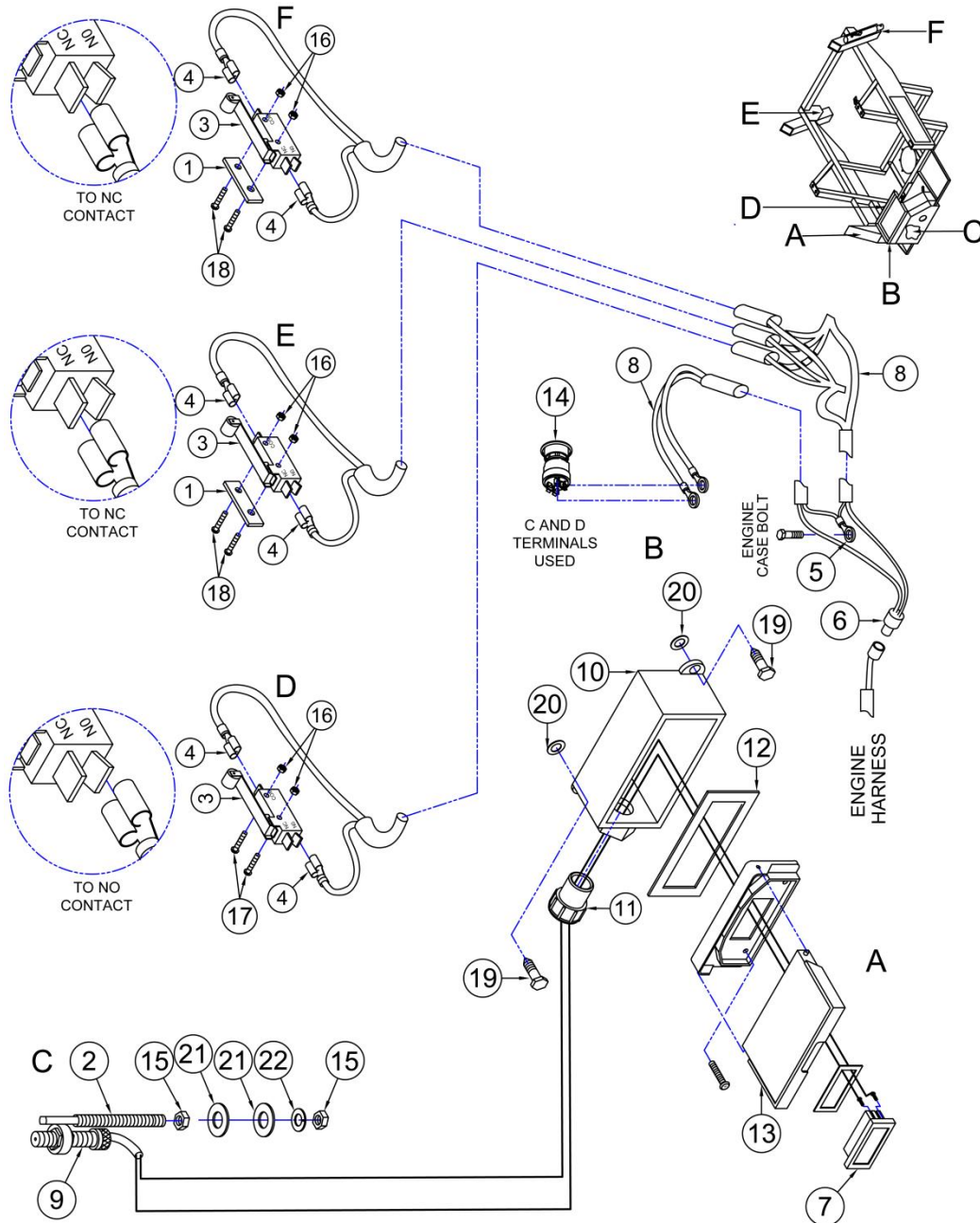
Cart Lift Assembly



Cart Lift Assembly

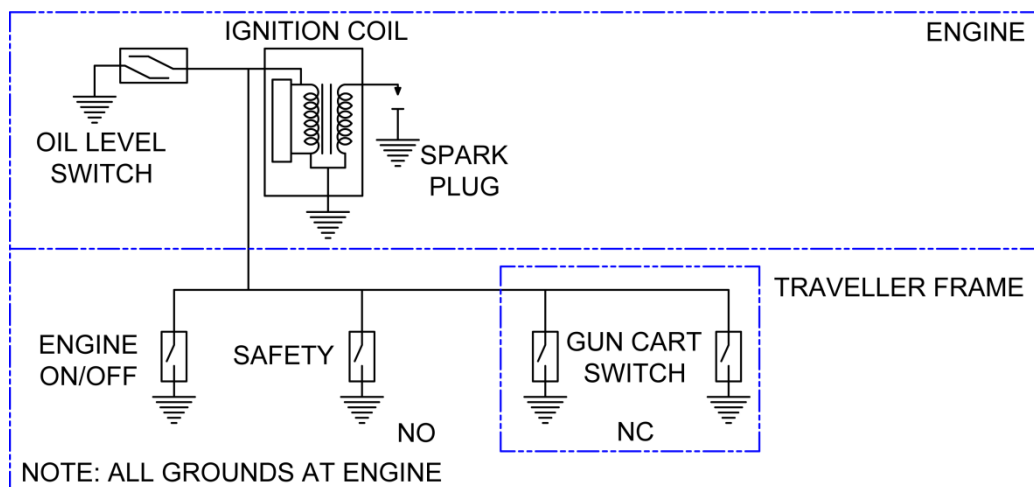
ITEM	DESCRIPTION	PART #	QTY
1	BOOM	05-606-A	1
2	SHUT OFF BAR	05-607	1
3	BOOM ARM, LEFT	05-626-D	1
4	BOOM ARM, RIGHT	05-627-C	1
5	BOOM BRACE	06-618	2
6	LIFT ARM	06-620	2
7	RETAINING COLLAR	11-454	2
8	3 IN. CABLE PULLEY ASSEMBLY	15-003	1
9	3 IN. CABLE PULLEY - PLATED	15-003-A	1
10	OILITE BUSHING, 1/2" ID	15-003-B	1
11	HAND WINCH, 1000 LB.	40-024-A	1
12	AIRCRAFT CABLE, 3/16" X 14' LG.	40-058	1
13	CABLE CLAMP	40-060	2
14	3/4 TON SAFETY HOOK	40-062	2
15	RAPID LINK, 3/8"	40-063	4
16	GALVANIZED CHAIN, 3/8"	40-519	2
17	BOLT, 3/8" X 1 1/4" LG.	90-BLT-03816X125	2
18	BOLT, 3/8" X 3 1/4" LG.	90-BLT-03816X325	8
19	BOLT, 1/2" X 1 1/4" LG.	90-BLT-05013X125	8
20	LOCKNUT, 3/8"-16	90-NUT-LOC038-16	10
21	CLEVIS PIN, 1/2" X 1 1/2" LG.	90-PIN-CL050X150	1
22	COTTER PIN, 5/32" X 1.00" LG	90-PIN-CT016X100	1
23	FLAT WASHER, 3/8"	90-WSR-FLT038	1

Electrical Wiring Assembly

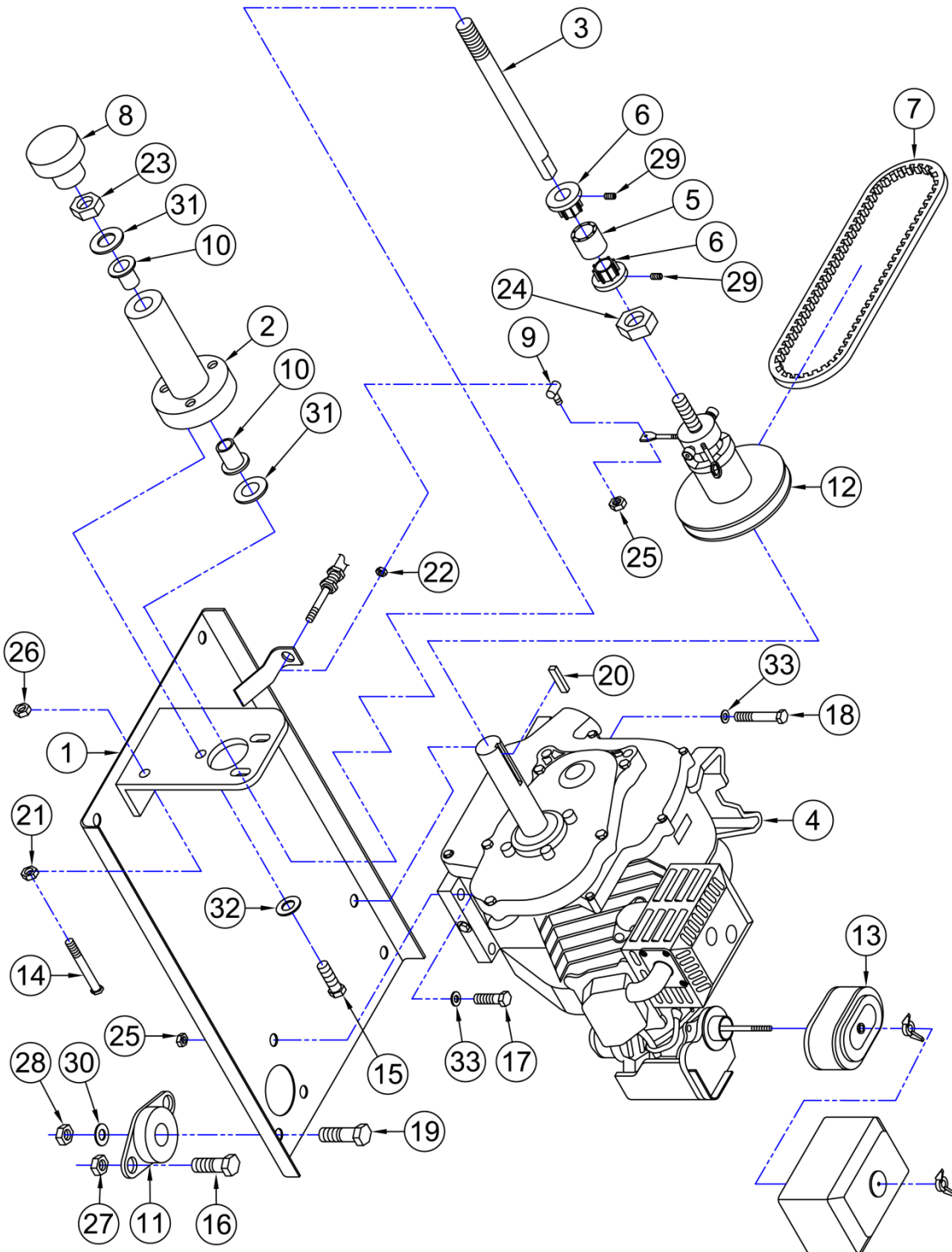


Electrical Wiring Assembly

ITEM	DESCRIPTION	PART #	QTY
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 W/LID	40-271	1
14	SEALED PUSH/PULL SWITCH	42-268	1
15	HEX NUT, 1/2" - 13	90-NUT-HEX050-13	2
16	LOCKNUT, #6-32	90-NUT-LOC006-32	6
17	MACHINE SCREW, #6-32 X 1" LG.	90-SCR-RM0632X125	2
18	MACHINE SCREW, #6-32 X 1 3/4" LG.	90-SCR-RM0632X175	4
19	TEK SCREW, 1/4" X 1" LG.	90-SCR-TEK025X100	2
20	FLAT WASHER, 1/4" NYLON	90-WSR-FLT025NYLON	2
21	1/2" FLAT WASHER	90-WSR-FLT050	2
22	LOCK WASHER, 1/2"	90-WSR-LOC050	1



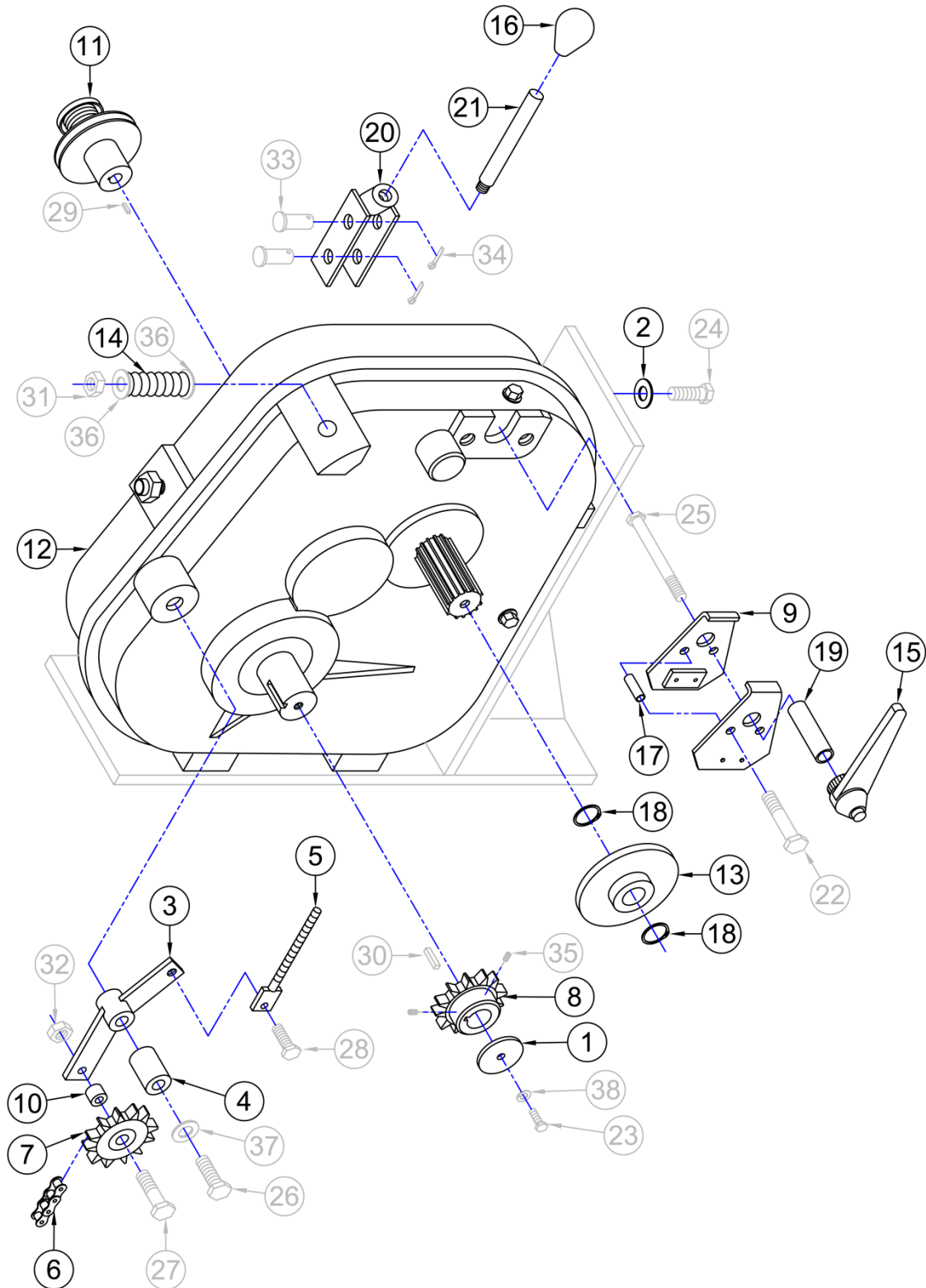
5.5 HP Gasoline Engine Assembly



5.5 HP Gasoline Engine Assembly

ITEM	DESCRIPTION	PART #	QTY
1	ENGINE MOUNT PLATE	06-609-H	1
2	EXTENSION HOUSING	15-072	1
3	EXTENSION SHAFT	15-075-A	1
4	5.5 HP HONDA ENGINE, GX160K1LX	40-078-KIT	1
5	COUPLING ELEMENT, 0.85" LG.	40-165-B	1
6	COUPLING HALF, 1/2" DIA. BORE	40-165-C	2
7	V - BELT, BX38	40-172	1
	HEAT SHRINK TUBE, 1/4" X 2 1/2" LG. (NOT SHOWN)	40-210	1
8	CONTROL KNOB	40-220	1
9	THROTTLE BALL JOINT, #10-32	40-225	1
10	FLANGED OILITE BUSHING, 1/2" ID	40-233	2
	FEMALE BULLET CONNECTOR, BLUE (NOT SHOWN)	40-247	1
11	ENGINE MOUNT	40-285	4
12	VARIABLE SPEED PULLEY WITH CAM, 7"	40-316-A	1
13	AIR FILTER	40-HDA-17210ZE1517	1
14	BOLT, 1/4" X 4" LG.	90-BLT-02520X400	1
15	FINE THREAD BOLT, 1/4" X 1" LG.	90-BLT-02528X100	3
16	BOLT, 5/16" X 3/4" LG.	90-BLT-03118X075	8
17	BOLT, 5/16" X 1 1/2" LG.	90-BLT-03118X150	3
18	BOLT, 5/16" X 3" LG.	90-BLT-03118X300	1
19	BOLT, 3/8" X 2 1/4" LG.	90-BLT-03816X225	3
20	SQ. KEY, 5 mm X 35mm LG.	90-KEY-SQ5MMX35MM	1
21	HEX NUT, 1/4"	90-NUT-HEX025-20	1
22	HEX NUT, #10-32	90-NUT-HEX10-32	1
23	JAM NUT, 1/2" - 13	90-NUT-JAM050-13	1
24	LEFT-HAND THREAD JAM NUT, 5/8"-18	90-NUT-JAM063-18LH	1
25	LOCK NUT, #10-32	90-NUT-LOC010-32	1
26	LOCK NUT, 1/4"	90-NUT-LOC025-20	1
27	LOCK NUT, 5/16"	90-NUT-LOC031-18	12
28	LOCK NUT, 3/8"	90-NUT-LOC038-16	3
29	SET SCREW, 1/4"-20 X 5/16" LG.	90-SCR-ST02520X031	2
30	FLAT WASHER, 3/8"	90-WSR-FLT038	3
31	FLAT WASHER, 1/2"	90-WSR-FLT050	2
32	SAE WASHER, 1/4"	90-WSR-SAE025	3
33	SAE WASHER, 5/16"	90-WSR-SAE031	4

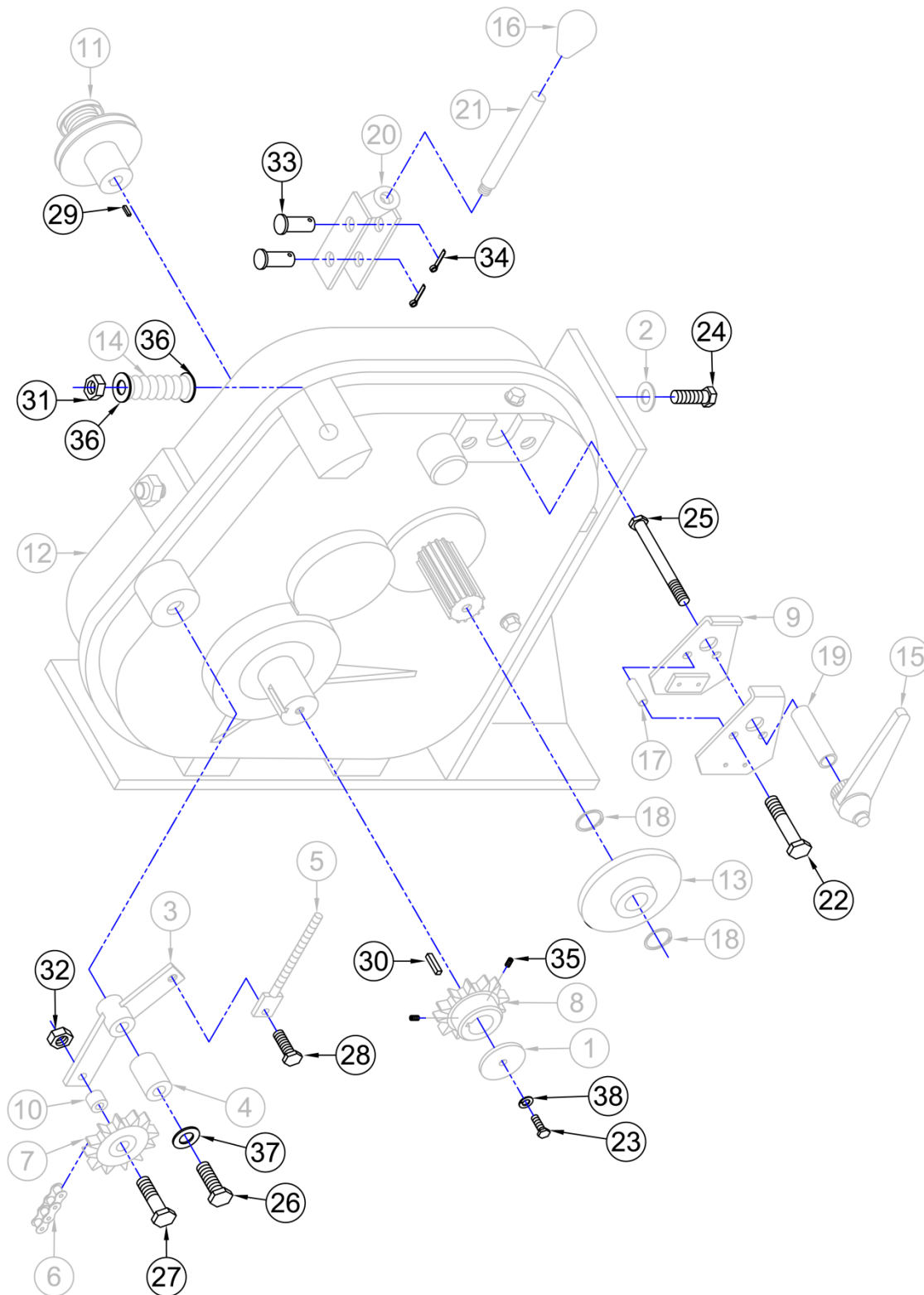
Transmission Assembly (1 of 2)



Transmission Assembly (1 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	SPROCKET RETAINING PLATE	01-314-B	1	
2	TRANSMISSION WASHER	05-740	6	
3	DRIVE CHAIN IDLER ARM - PAINTED	06-652-D	1	
4	IDLER ARM BUSHING, 1 1/4" ID X 2" LG.	06-656-A	1	
5	SPRING ADJ. ROD – 9" PLATED	06-658-A	1	
6	#80 ROLLER CHAIN	10-CHN-80-S-422	383 P	
7	IDLER SPROCKET, 80-12 X 3/4"	10-SPT-80-12IDLER	1	
8	SPROCKET, 80B12 X 1 3/4"	10-SPT-80B12X175	1	
	SPROCKET, 80B15 X 1 3/4"	10-SPT-80B15X175	1	OPTIONAL
9	CALIPER HALF	17-639	2	
10	SPACER, 3/4" X 1/2" LG.	40-110	1	
11	SPRING LOADED PULLEY, 7"	40-128	1	
12	TRANSMISSION	40-169	1	
13	BRAKE DISC	40-169-CM017	1	
14	IDLER SPRING	40-177-A	1	
15	BRAKE HANDLE	40-179	1	
16	SHIFTER KNOB	40-182	1	
17	SPACER, 3/4" X 1 3/4" LG.	40-183	2	
18	SNAP RING, 1 3/8" OD	40-184	2	
19	SPACER, 1/2" ID X 2 1/2" LG.	40-185	1	
20	SHIFTER FORK	40-221	1	
21	SHIFTER HANDLE	40-222	1	

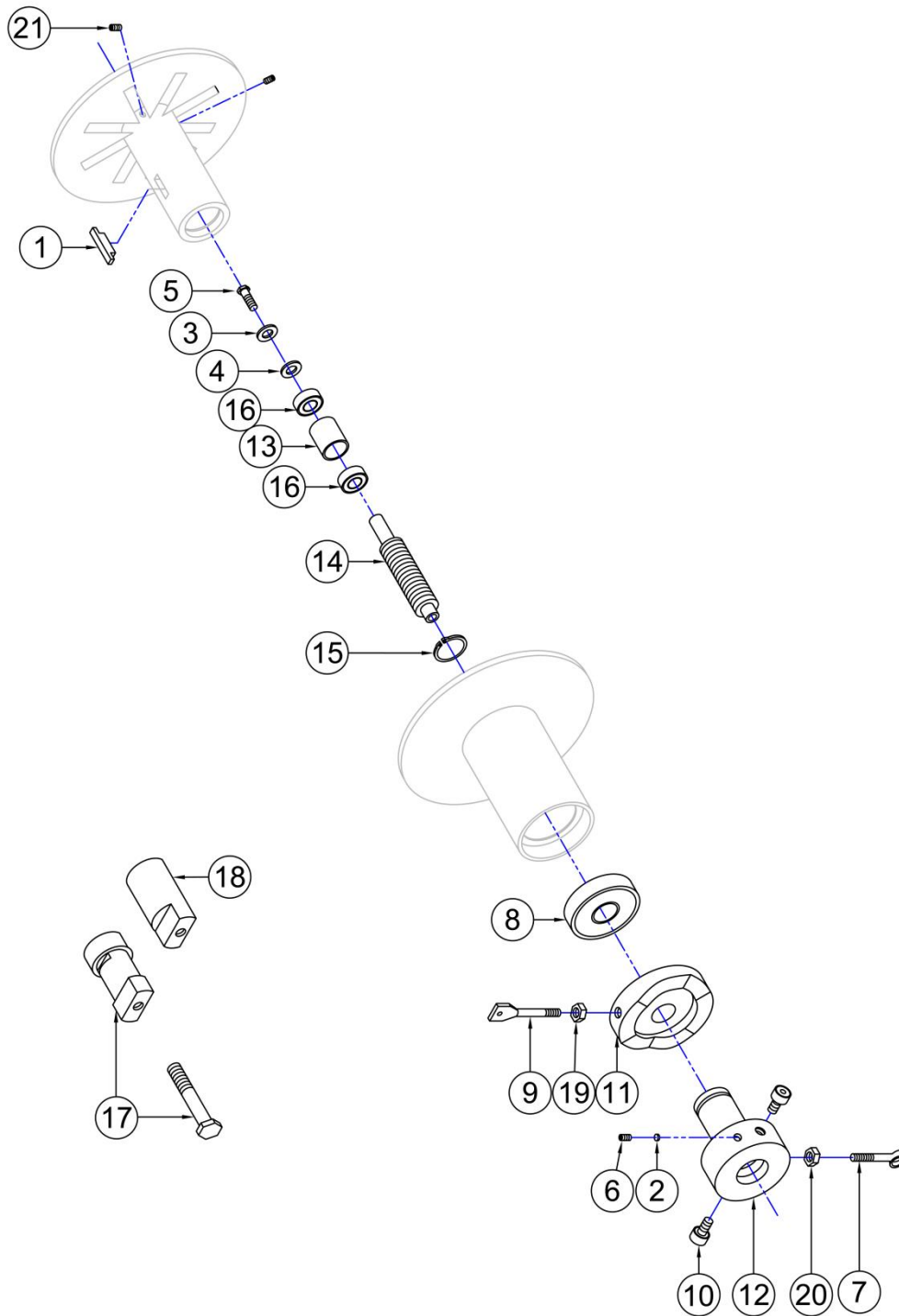
Transmission Assembly (2 of 2)



Transmission Assembly (2 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
22	BOLT, 3/8"-16 X 2 1/4" LG.	90-BLT-03816X225	2	
23	BOLT, 1/2"-13 X 1" LG.	90-BLT-05013X100	1	
24	BOLT, 1/2"-13 X 1 1/4" LG.	90-BLT-05013X125	6	
25	BOLT, 1/2"-13 X 4 1/2" LG.	90-BLT-05013X450	1	
26	BOLT, 5/8"-11 X 3 3/4" LG.	90-BLT-06311X375	1	
27	BOLT, 3/4"-10 X 2 1/2" LG.	90-BLT-07510X250	1	
28	SHOULDER BOLT, 3/8"-16 X 1/2" LG.	90-BLT-SH03118X031	1	
29	SQ KEY, 3/16" X 2" LG.	90-KEY-SQ019	1	
30	SQ KEY, 1/2" X 1 5/8" LG.	90-KEY-SQ050	1	
31	LOCK NUT, 1/2"-13	90-NUT-LOC050-13	1	
32	LOCK NUT, 3/4"-10	90-NUT-LOC075-10	1	
33	CLEVIS PIN, 3/16" DIA. X 1 1/2" LG.	90-PIN-CL031X125	2	
34	COTTER PIN, 1/8" DIA. X 1" LG.	90-PIN-CT013X100	2	
35	SET SCREW, 3/8"-18 X 3/8" LG.	90-SCR-ST03816X038	2	
36	FLAT WASHER, 1/2"	90-WSR-FLT050	2	
37	FLAT WASHER, 5/8"	90-WSR-FLT063	1	
38	LOCK WASHER, 1/2"	90-WSR-LOC050	1	

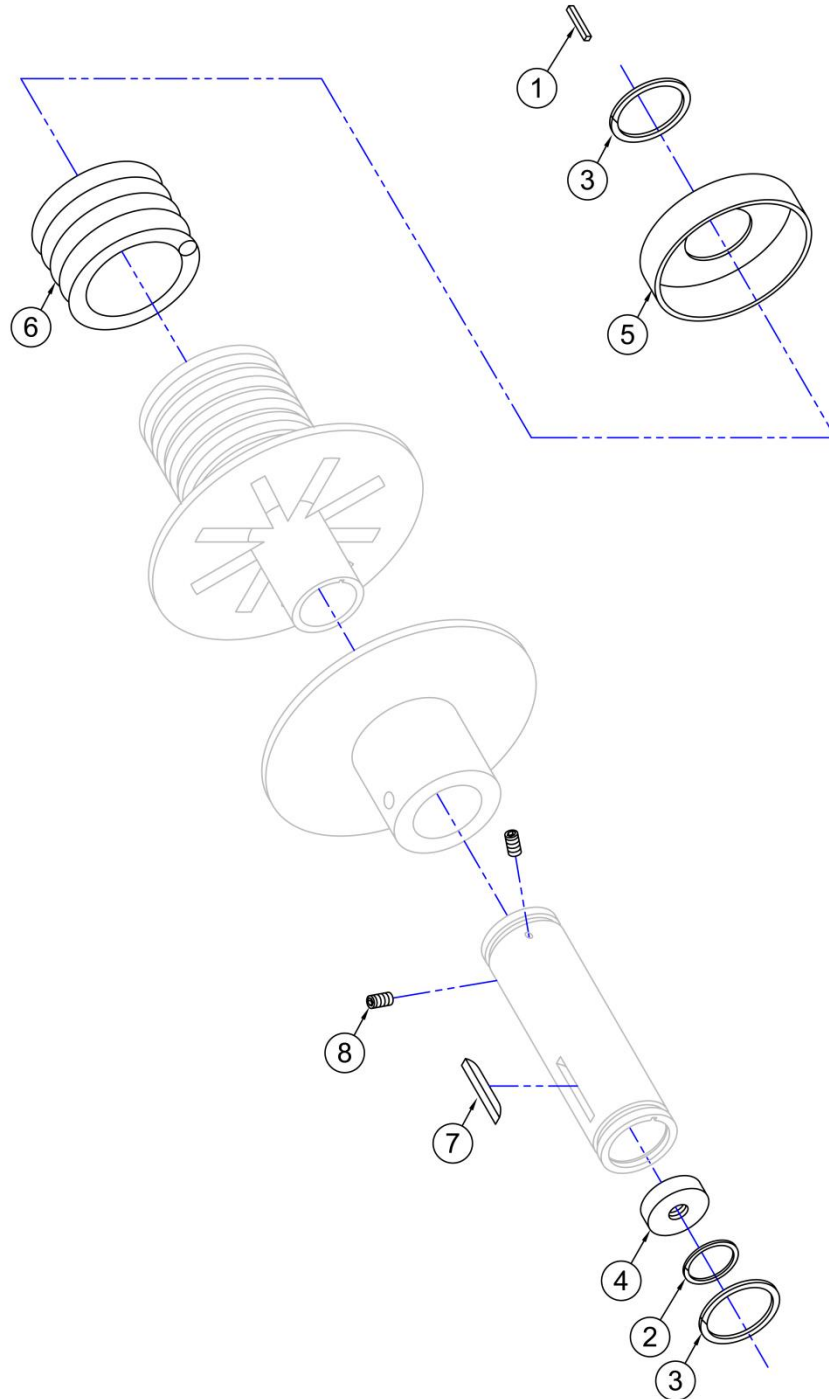
7" V.S. Pulley with Cam Assembly



7" V.S. Pulley with Cam Assembly

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	SPECIAL KEY	40-129-2181	1	
2	NYLON PLUG	40-129-2454	2	
3	SPRING WASHER	40-129-3231	1	
4	FLAT WASHER, #10	40-129-3232	1	
5	BOLT, #10-32 X 3/8" LG.	40-129-3305	1	
6	1/4"-28 X 1/2 IN. NYLON TIP S.S.	40-129-NTSS	1	
7	EYE TYPE TORQUE ARM, 2 3/4" LG.	40-216-A-2596	1	
8	CAM BEARING	40-216-BRG6205	1	
9	TORQUE ARM WITH 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	

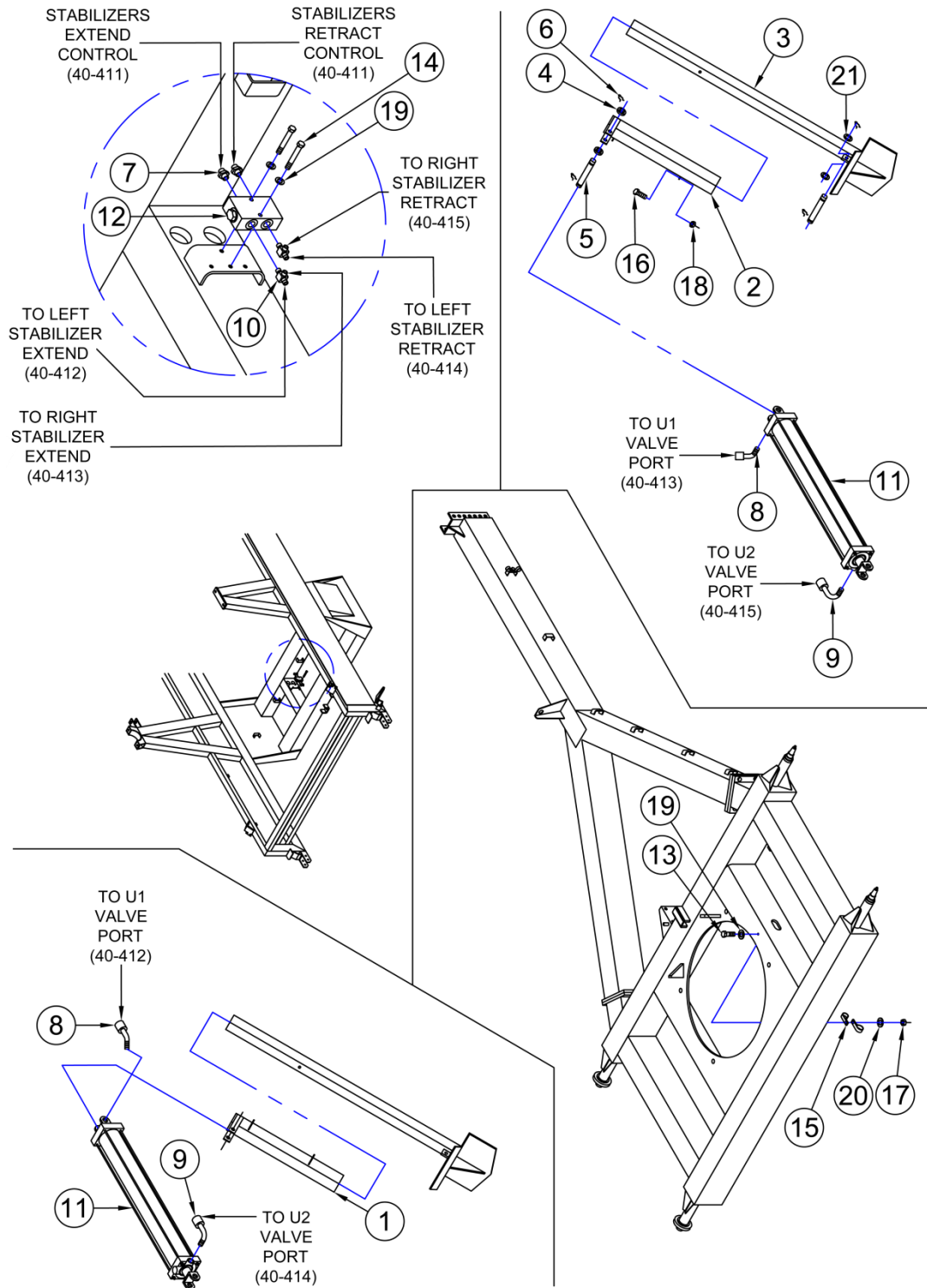
7" V.S. Spring Loaded Pulley Assembly



7" V.S. Spring Loaded Pulley Assembly

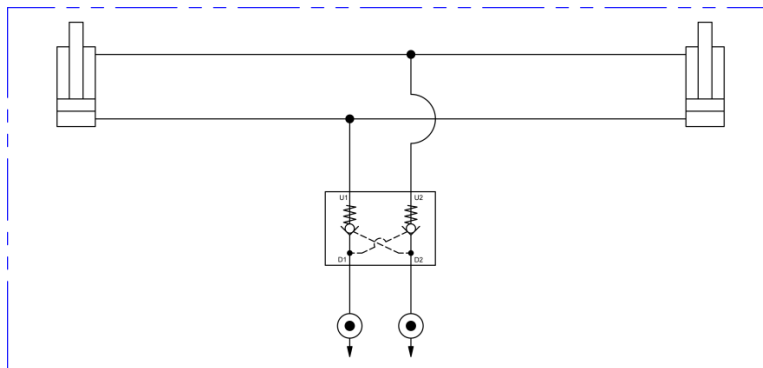
ITEM	DESCRIPTION	PART #	QTY
1	KEY	40-128-2195	1
2	PLUG RETAINING RING	40-195-2670	1
3	RETAINING RING	40-195-3070	2
4	PLUG ADAPTER	40-195-A-625-052	1
5	SPRING RETAINER	40-195-A-633-1	1
6	SPRING	40-314-107-232	1
7	KEY, 3/16" SQ. X 2" LG.	90-KEY-019	1
8	SET SCREW, 5/16"-24 X 5/32" LG.	90-SCR-ST03124X016	2

Hydraulic Stabilizer Jack Assembly

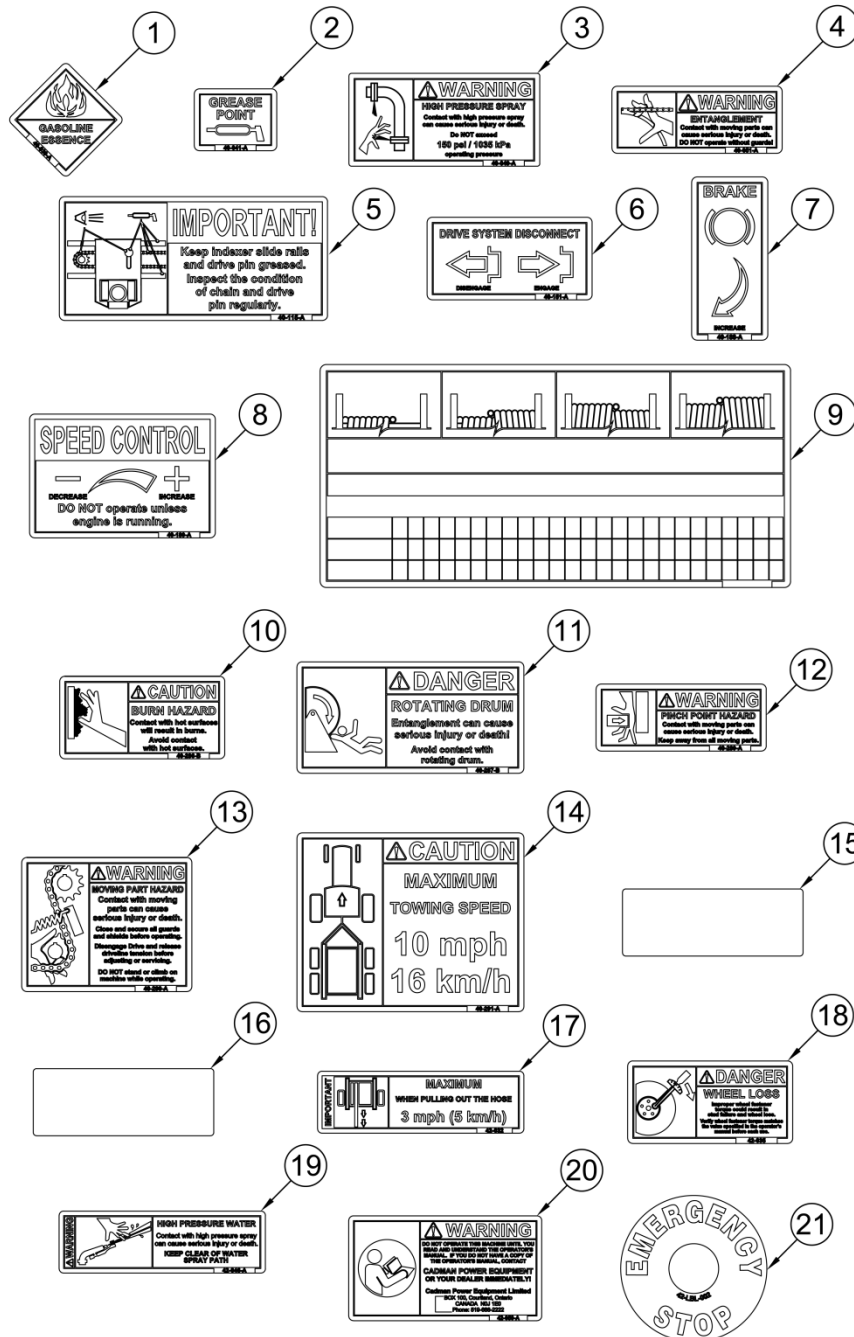


Hydraulic Stabilizer Jack Assembly

ITEM	DESCRIPTION	PART #	QTY
1	LEFT HYDRAULIC JACK BODY	05-609-B	1
2	RIGHT HYDRAULIC JACK BODY	05-610-B	1
3	HYDRAULIC JACK FOOT	05-611-B	2
4	PLATED JACK SPACER	05-625	2
5	STABILIZER JACK PIN	05-628	2
6	STABILIZER JACK PIN RETAINER	05-628-RP	4
7	ADAPTER, #06 M-JIC X #06 M-SAE	25-WHD-5315X6	2
8	ELBOW, #06 M-JIC X #08 M-SAE X 45 DEG.	25-WHD-5365X6X8	2
9	ELBOW, #06 M-JIC X #08 M-SAE X 90 DEG.	25-WHD-5515X6X8	2
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 269" LG. (NOT SHOWN)	40-411	2
	HYDRAULIC HOSE, 3/8" ID X 118" LG. (NOT SHOWN)	40-412	1
	HYDRAULIC HOSE, 3/8" ID X 140" LG. (NOT SHOWN)	40-413	1
	HYDRAULIC HOSE, 3/8" ID X 151" LG. (NOT SHOWN)	40-414	1
	HYDRAULIC HOSE, 3/8" ID X 178" LG. (NOT SHOWN)	40-415	1
13	HYDRAULIC HOSE CLAMP, 5/8"	40-416	2
	HYDRAULIC COUPLER TIP, 1/2" (NOT SHOWN)	40-563	2
14	BOLT, 1/4" X 2" LG.	90-BLT-02520X200	2
15	BOLT, 5/16" X 1 1/4" LG.	90-BLT-03118X125	1
16	BOLT, 1/2" X 1 1/2" LG.	90-BLT-05013X150	8
17	LOCK NUT, 5/16"-18	90-NUT-LOC031-18	2
18	LOCK NUT, 1/2"-13	90-NUT-LOC050-13	8
19	SAE WASHER, 1/4"	90-WSR-SAE025	2
20	SAE WASHER, 5/16"	90-WSR-SAE031	2
21	SAE WASHER, 1"	90-WSR-SAE100	4



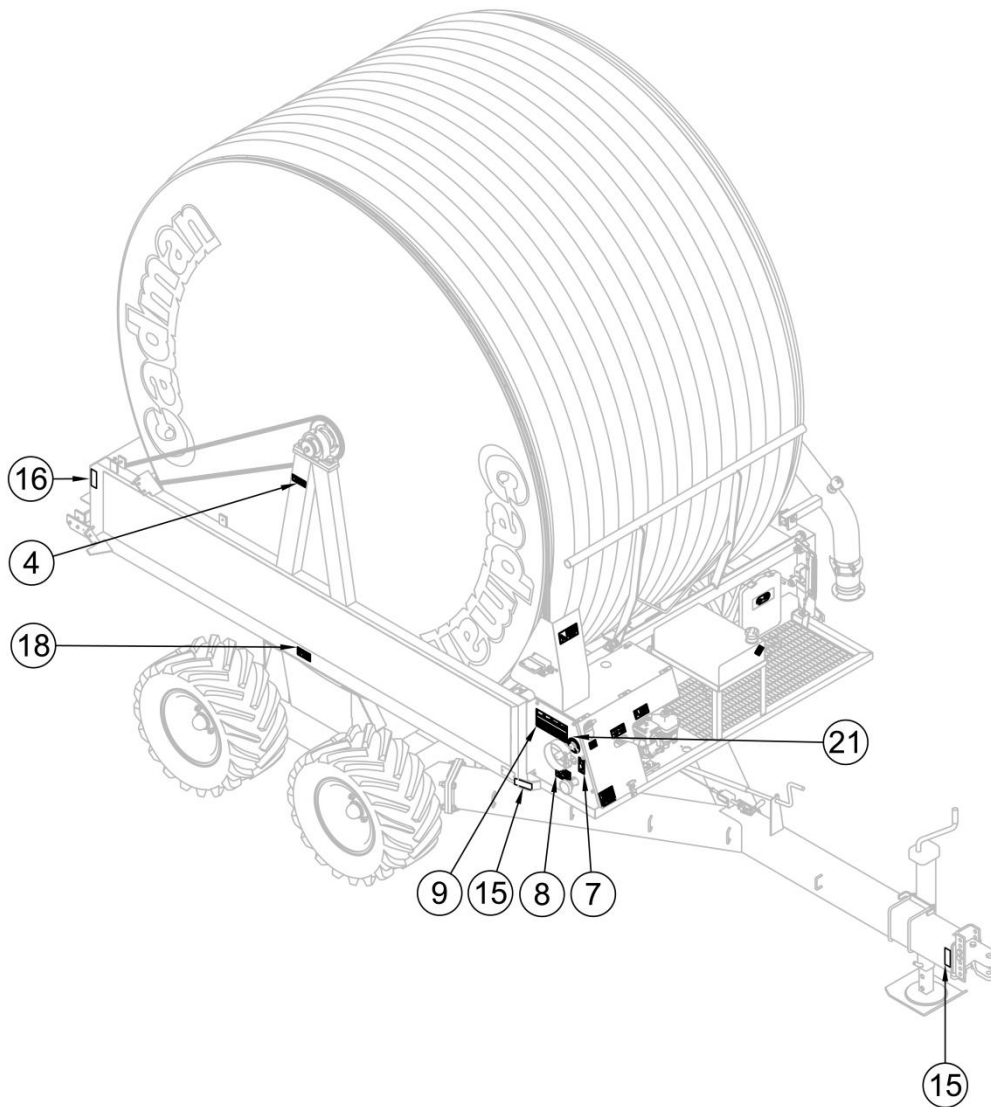
Label Assembly



Label Assembly

ITEM	DESCRIPTION	PART #	QTY
1	LABEL - GASOLINE	40-039-A	1
2	LABEL - GREASE POINT	40-041-A	3
3	CAUTION-MAX. PRESSURE DECAL	40-049-A	1
4	LABEL - ENTANGLEMENT	40-051-A	3
5	LABEL - INDEXER CONDITION	40-115-A	1
6	LABEL - DRIVE SYSTEM DISCONNECT	40-151-A	1
7	LABEL - BRAKE (W/ VERT. ARROW)	40-188-A	1
8	SPEED CONTROL DECAL	40-189-A	1
9	SPEED CONVERSION CHART DECAL	40-218-A	1
10	LABEL - BURN HAZARD (PERMAGRIP)	40-286-B	1
11	LABEL - ROTATING DRUM	40-287-B	2
12	LABEL - WARNING-PINCH POINT	40-289-A	2
13	LABEL - MOVING PARTS HAZARD	40-290-A	2
14	LABEL - MAX TOW SPEED	40-291-A	1
15	REFLECTOR - AMBER WIDE ANGLE	40-598	4
16	REFLECTOR - RED WIDE ANGLE	40-599	4
17	LABEL - MAX HOSE PULL	42-032	1
18	LABEL - TORQUE WHEELS	42-035	2
19	LABEL - HIGH PRESSURE WATER	42-046-A	1
20	LABEL - OPERATOR'S MANUAL	42-050-A	1
21	LABEL - EMERGENCY STOP	42-LBL-002	1

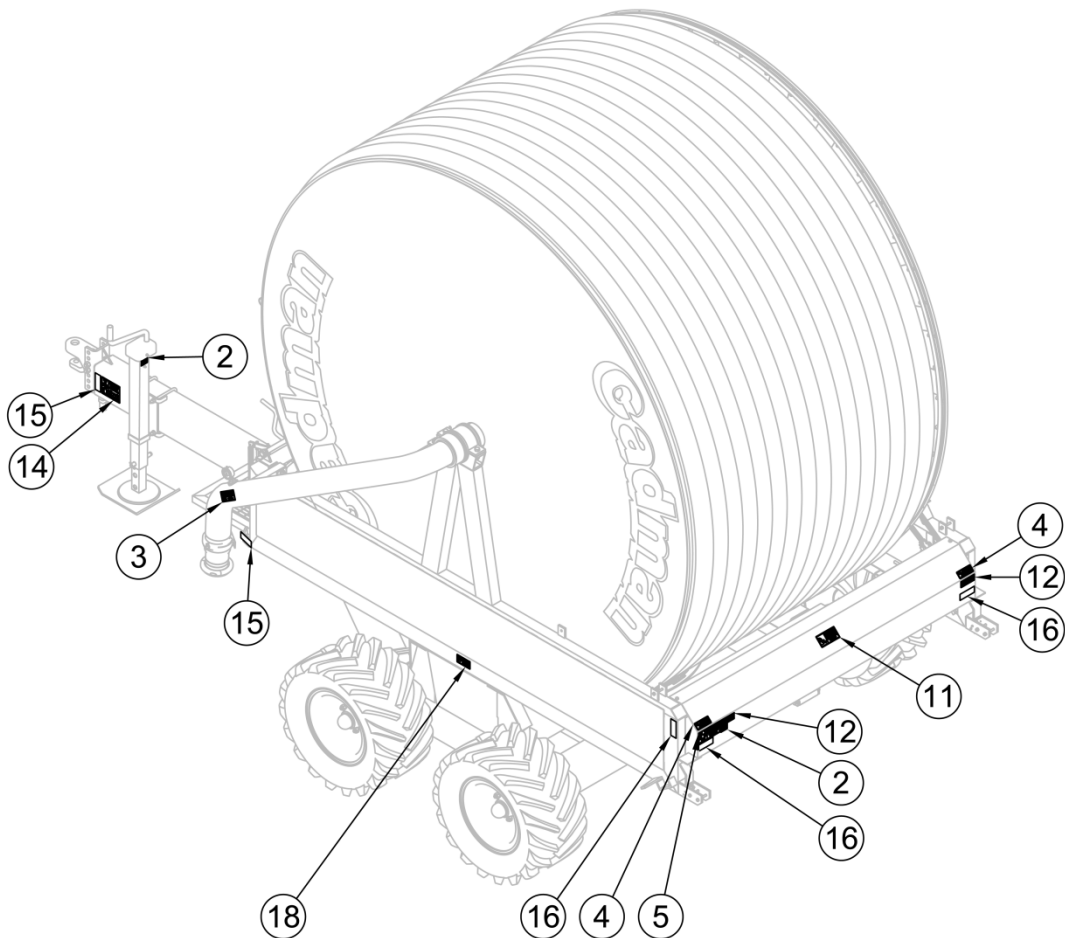
Label Assembly Locations (1 of 3)



Label Assembly Locations (1 of 3)

ITEM	DESCRIPTION	PART #	QTY
1	LABEL - GASOLINE	40-039-A	1
2	LABEL - GREASE POINT	40-041-A	3
3	CAUTION-MAX. PRESSURE DECAL	40-049-A	1
4	LABEL - ENTANGLEMENT	40-051-A	3
5	LABEL - INDEXER CONDITION	40-115-A	1
6	LABEL - DRIVE SYSTEM DISCONNECT	40-151-A	1
7	SPEED CONTROL DECAL	40-189-A	1
8	SPEED CONVERSION CHART DECAL	40-218-A	1
9	LABEL - BURN HAZARD (PERMAGRIP)	40-286-B	1
10	LABEL - ROTATING DRUM	40-287-B	2
11	LABEL - WARNING-PINCH POINT	40-289-A	2
12	LABEL - MOVING PARTS HAZARD	40-290-A	2
13	LABEL - MAX TOW SPEED	40-291-A	1
14	BRAKE DECAL w/HORIZ. ARROW	40-293-A	1
15	REFLECTOR - AMBER WIDE ANGLE	40-598	4
16	REFLECTOR - RED WIDE ANGLE	40-599	4
17	LABEL - MAX HOSE PULL	42-032	1
18	LABEL - TORQUE WHEELS	42-035	2
19	LABEL - HIGH PRESSURE WATER	42-046-A	1
20	LABEL - OPERATOR'S MANUAL	42-050-A	1
21	LABEL - EMERGENCY STOP	42-LBL-002	1

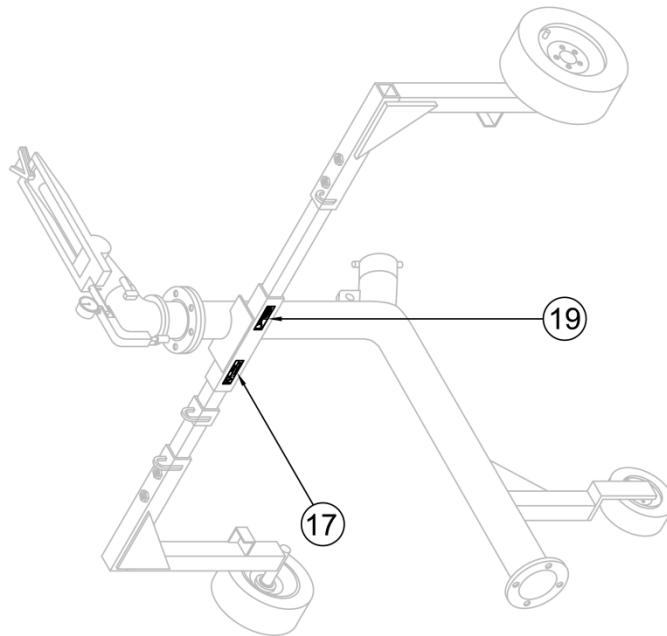
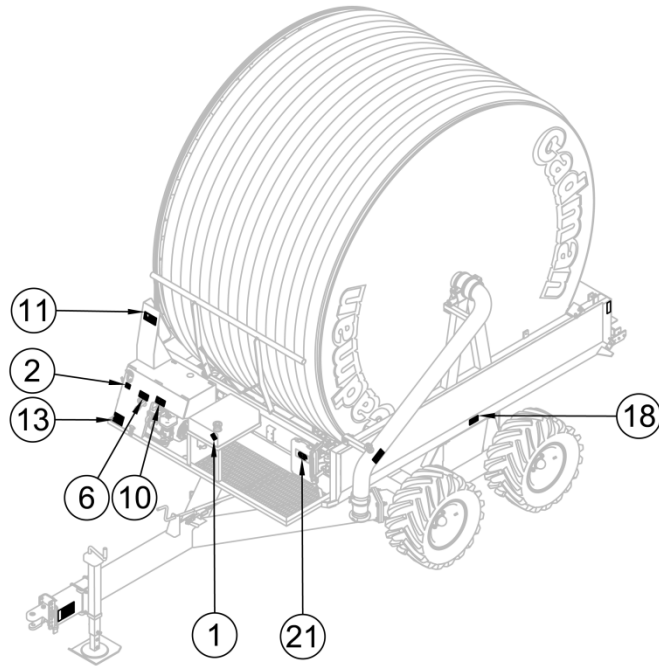
Label Assembly Locations (2 of 3)



Label Assembly Locations (2 of 3)

ITEM	DESCRIPTION	PART #	QTY
1	LABEL - GASOLINE	40-039-A	1
2	LABEL - GREASE POINT	40-041-A	3
3	CAUTION-MAX. PRESSURE DECAL	40-049-A	1
4	LABEL - ENTANGLEMENT	40-051-A	3
5	LABEL - INDEXER CONDITION	40-115-A	1
6	LABEL - DRIVE SYSTEM DISCONNECT	40-151-A	1
7	LABEL - BRAKE (W/ VERT. ARROW)	40-188-A	1
8	SPEED CONTROL DECAL	40-189-A	1
9	SPEED CONVERSION CHART DECAL	40-218-A	1
10	LABEL - BURN HAZARD (PERMAGRIP)	40-286-B	1
11	LABEL - ROTATING DRUM	40-287-B	2
12	LABEL - WARNING-PINCH POINT	40-289-A	2
13	LABEL - MOVING PARTS HAZARD	40-290-A	2
14	LABEL - MAX TOW SPEED	40-291-A	1
15	REFLECTOR - AMBER WIDE ANGLE	40-598	4
16	REFLECTOR - RED WIDE ANGLE	40-599	4
17	LABEL - MAX HOSE PULL	42-032	1
18	LABEL - TORQUE WHEELS	42-035	2
19	LABEL - HIGH PRESSURE WATER	42-046-A	1
20	LABEL - OPERATOR'S MANUAL	42-050-A	1
21	LABEL - EMERGENCY STOP	42-LBL-002	1

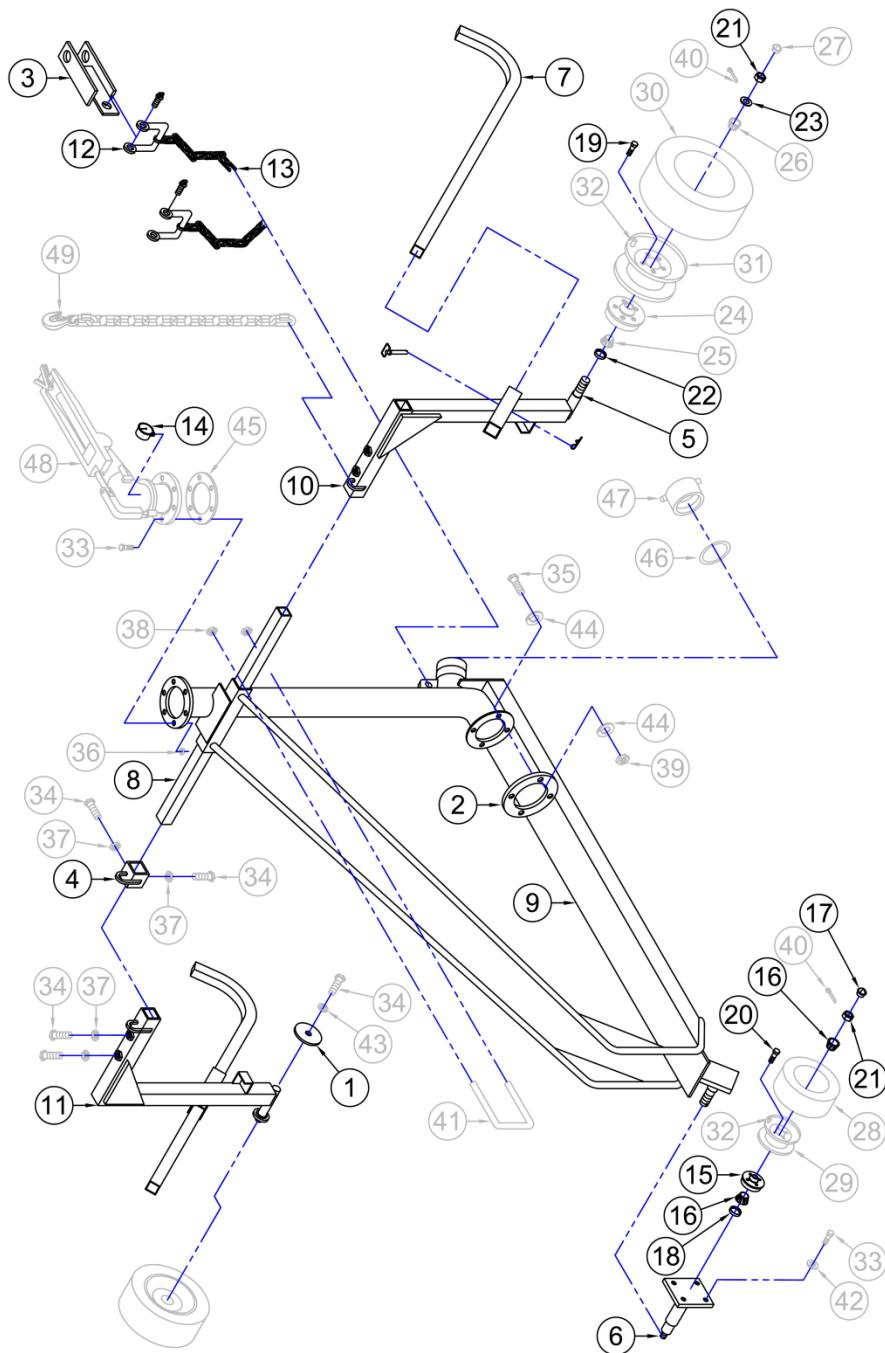
Label Assembly Locations (3 of 3)



Label Assembly Locations (3 of 3)

ITEM	DESCRIPTION	PART #	QTY
1	LABEL - GASOLINE	40-039-A	1
2	LABEL - GREASE POINT	40-041-A	3
3	CAUTION-MAX. PRESSURE DECAL	40-049-A	1
4	LABEL - ENTANGLEMENT	40-051-A	3
5	LABEL - INDEXER CONDITION	40-115-A	1
6	LABEL - DRIVE SYSTEM DISCONNECT	40-151-A	1
7	LABEL - BRAKE (W/ VERT. ARROW)	40-188-A	1
8	SPEED CONTROL DECAL	40-189-A	1
9	SPEED CONVERSION CHART DECAL	40-218-A	1
10	LABEL - BURN HAZARD (PERMAGRIP)	40-286-B	1
11	LABEL - ROTATING DRUM	40-287-B	2
12	LABEL - WARNING-PINCH POINT	40-289-A	2
13	LABEL - MOVING PARTS HAZARD	40-290-A	2
14	LABEL - MAX TOW SPEED	40-291-A	1
15	REFLECTOR - AMBER WIDE ANGLE	40-598	4
16	REFLECTOR - RED WIDE ANGLE	40-599	4
17	LABEL - MAX HOSE PULL	42-032	1
18	LABEL - TORQUE WHEELS	42-035	2
19	LABEL - HIGH PRESSURE WATER	42-046-A	1
20	LABEL - OPERATOR'S MANUAL	42-050-A	1
21	LABEL - EMERGENCY STOP	42-LBL-002	1

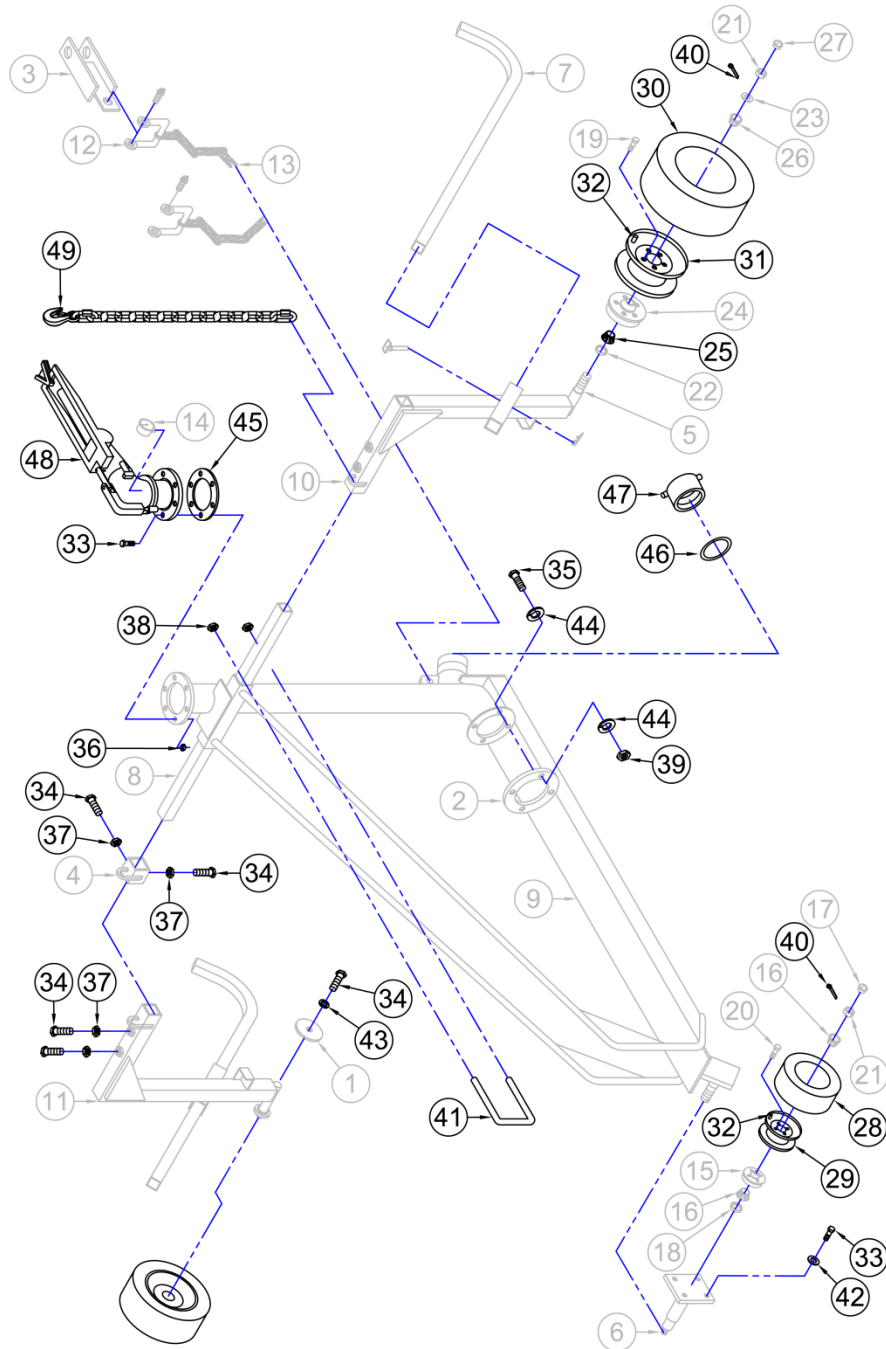
4000 Series 46" and 62" Gun Cart Assemblies (1 of 2)



4000 Series 46" and 62" Gun Cart Assemblies (1 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	SPROCKET RETAINING PLATE	01-314-B	2	
2	HOSE FLANGE GASKET	02-216-A	1	
3	GUN CART CLEVIS ASSEMBLY	02-220	1	
4	LONG PICKUP COLLAR	02-232-A	1	
5	SPINDLE - 1 3/4" DIA. X 9.00" LG.	02-255-B	2	
6	FRONT SPINDLE	02-256-A	1	
7	STABILIZER LEG - GALVANIZED	04-826-A	2	
8	72" LG. CROSS TUBE - GALVANIZED	04-831-72G	1	
9	46" GALVANIZED CART BODY	04-834-C	1	46" GUN CART
	62" GALVANIZED CART BODY	04-800-E	1	62" GUN CART
10	46" GALVANIZED CART LEG, LEFT	04-832-B	1	46" GUN CART
	62" GALVANIZED CART LEG, LEFT	04-864-B	1	62" GUN CART
11	46" GALVANIZED CART LEG, RIGHT	04-833-B	1	46" GUN CART
	62" GALVANIZED CART LEG, RIGHT	04-865-B	1	62" GUN CART
12	3/8" GALVANIZED SHACKLE	40-064	2	
13	3/8 GALV. GRADE 40 CHAIN x 6' LG.	40-519-72	1	
14	PRESSURE GAUGE, 0-100 PSI WET	45-022	1	
	PRESSURE GAUGE, 0-160 PSI LIQUID	45-017	1	OPTIONAL
15	4 BOLT HUB - #1000	55-002-A	1	
	BEARING CUP - #1000 HUB (NOT SHOWN)	55-003	1	
16	BEARING CONE - #1000 HUB	55-004	2	
17	DUST CAP - #1000 HUB	55-005	1	
18	GREASE SEAL - #1000 HUB	55-006	1	
19	WHEEL BOLT, 1/2"-20 X 45 DEG.	55-007-45	10	
20	WHEEL BOLT, 1/2"-20 X 60 DEG.	55-007-60	4	
21	SPINDLE NUT	55-008	3	
22	GREASE SEAL - #4500	55-015	2	
23	WASHER	55-016	2	

4000 Series 46" and 62" Gun Cart Assemblies (2 of 2)

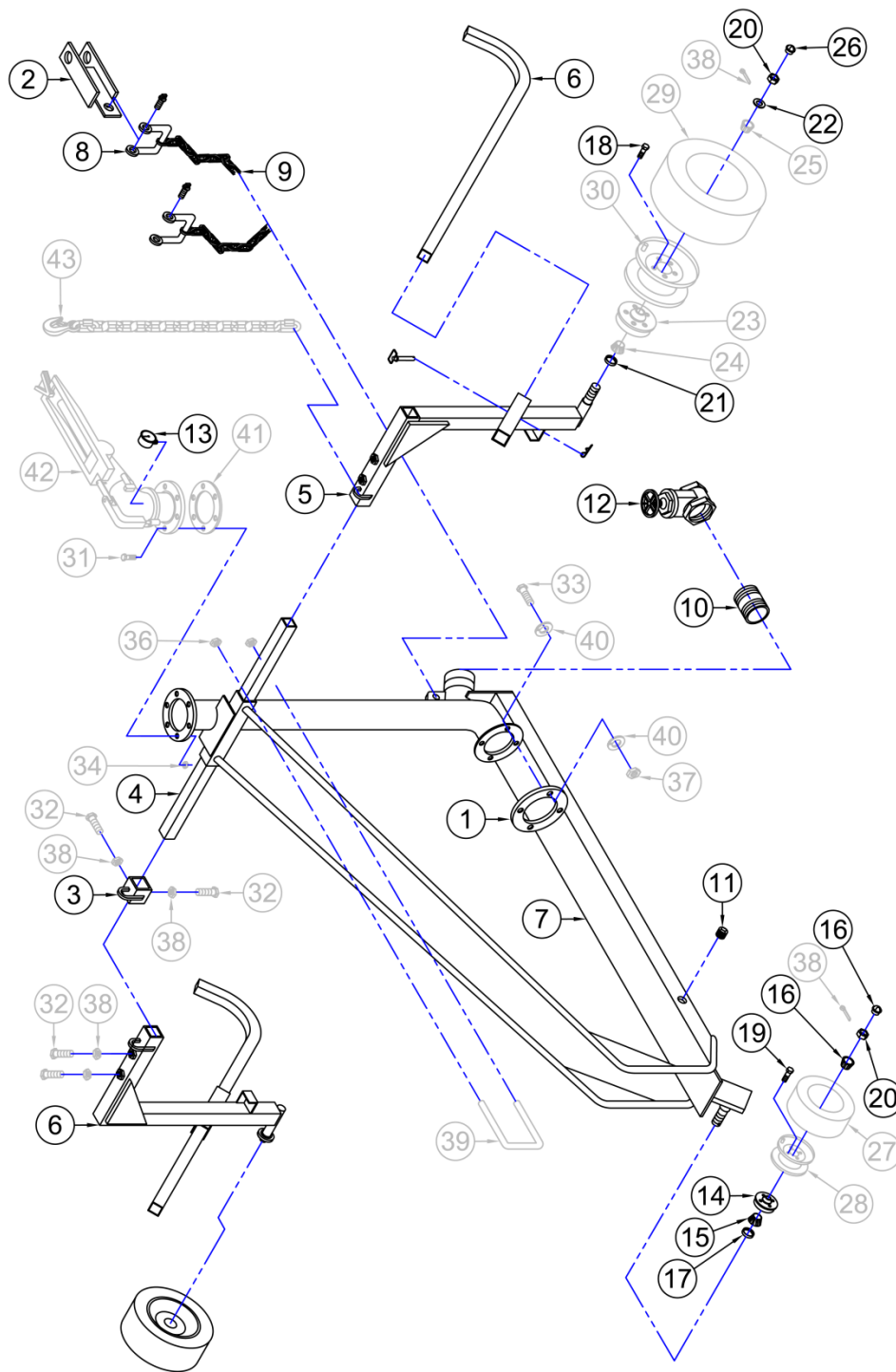




4000 Series 46" and 62" Gun Cart Assemblies (2 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
24	5 BOLT HUB - #4500	55-018-A	2	
	INNER BEARING - #4500 CUP (NOT SHOWN)	55-019	2	
25	INNER BEARING - #4500 CONE	55-020	2	
	OUTER BEARING - #4500 CUP (NOT SHOWN)	55-021	2	
26	OUTER BEARING - #4500 CONE	55-022	2	
27	DUST CAP - #4500 HUB	55-023	2	
28	480-8 TIRE, LOW SPEED, TBLS	55-037	1	
29	8 x 3.75 WHEEL RIM, 4 BOLT	55-038	1	
30	670-15 TIRE	55-041-TIRE	2	
31	WHEEL RIM, 15" X 5" X 5 BOLT	55-042-A	2	
32	VALVE STEM	55-046	3	
33	BOLT, 3/8"-16 X 1 1/4" LG.	90-BLT-03816X125	10	
34	BOLT, 1/2"-13 X 1 1/4" LG.	90-BLT-05013X125	8	
35	BOLT, 5/8"-11 X 2" LG.	90-BLT-06311X200	4	
36	3/8"-16 HEX NUT	90-NUT-HEX038-16	6	
37	1/2"-13 JAM NUT	90-NUT-JAM050-13	6	
38	LOCK NUT, 1/2"-13	90-NUT-LOC050-13	4	
39	LOCK NUT, 5/8"-11	90-NUT-LOC063-11	4	
40	COTTER PIN, 3/16" DIA. X 2.00" LG.	90-PIN-CT019X200	3	
41	SQ. UBOLT, 1/2"-13 X 3" X 4" LG.	90-UBT-SQ05013X400	2	
42	LOCK WASHER, 3/8"	90-WSR-LOC038	4	
43	LOCK WASHER, 1/2"	90-WSR-LOC050	2	
44	SAE WASHER, 5/8"	90-WSR-SAE063	8	
45	NELSON GUN FLANGE GASKET	DO-PRT-30-040-A	1	
46	3" WILLOC GASKET	IR-GKT-WL3	1	
47	3" WIL-LOC END PLUG GALVANIZED	IR-PLG-WL3	1	
48	KOMET TWIN 160 NOZZLE KIT	SP-KOM-T160NOZZLEKIT	1	
	KOMET TWIN ULTRA 160 VARI-ANGLE	SP-KOM-T160A	1	OPTIONAL
	KOMET TWIN 202 NOZZLE KIT	SP-KOM-T202	1	OPTIONAL
	KOMET TWIN ULTRA 202 VARI-ANGLE	SP-KOM-T202A	1	OPTIONAL
	NELSON SR-150 GUN KIT	SP-NEL-SP150KIT	1	OPTIONAL
	NELSON SR-200 GUN	SP-NEL-SR200	1	OPTIONAL
	NELSON SR-200 GUN, 24 DEG.	SP-NEL-SR200-24	1	OPTIONAL
49	13 LINK CART LIFT CHAIN	TR-CHN-13L	2	46" GUN CART
	5 LINK CART LIFT CHAIN	TR-CHN-5L	2	62" GUN CART

5000 Series 46" and 62" Gun Cart Assemblies (1 of 2)

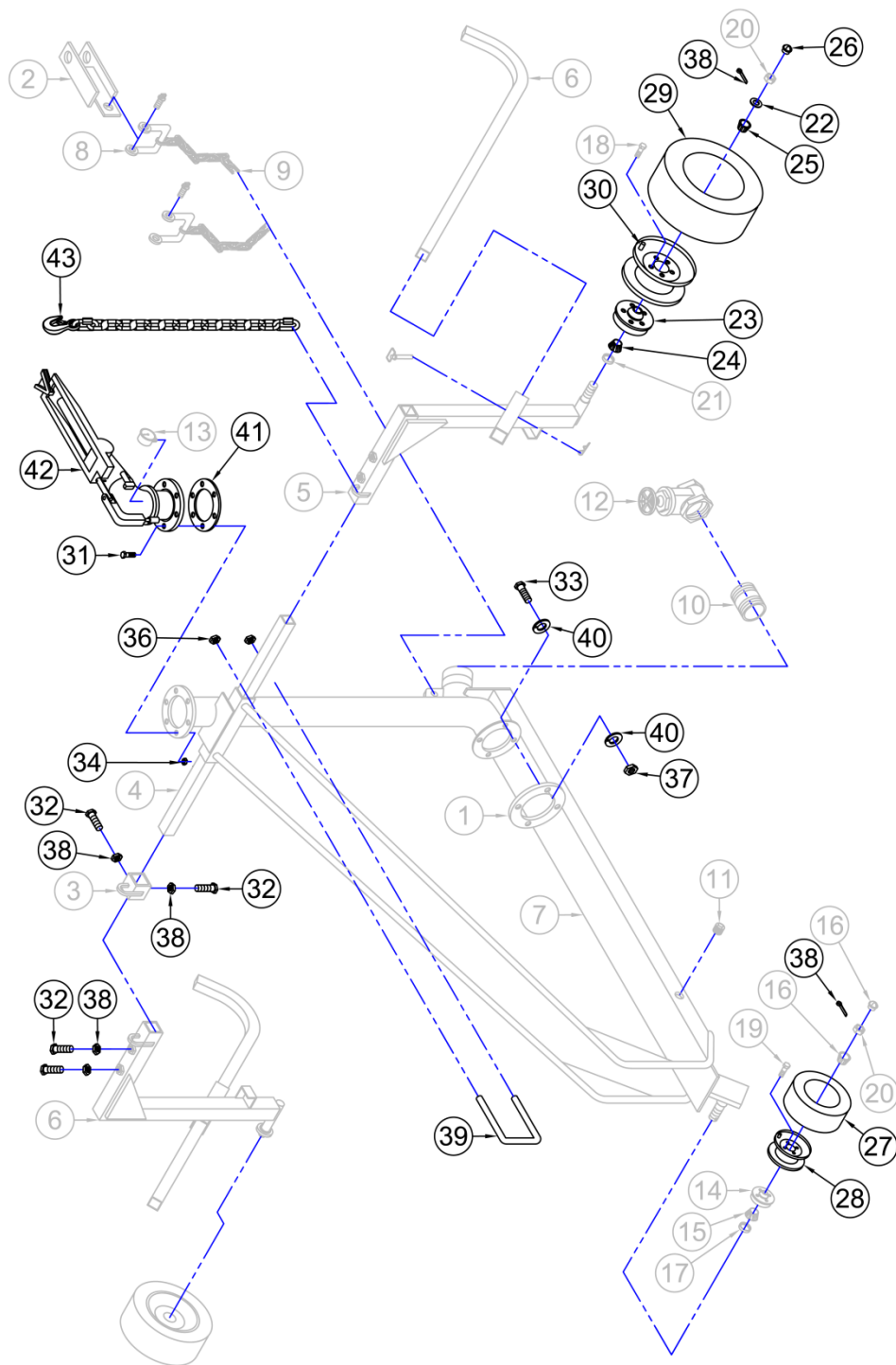




5000 Series 46" and 62" Gun Cart Assemblies (1 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	HOSE FLANGE GASKET	02-216-A	1	
2	GUN CART CLEVIS ASSEMBLY	02-220	1	
3	LONG PICKUP COLLAR	02-232-A	1	
4	72" LG. CROSS TUBE, GALVANIZED	04-831-72G	1	
5	46" CART LEG, LEFT	04-832	1	46" GUN CART
	62" CART LEG, LEFT	04-827-LB	1	62" GUN CART
6	46" CART LEG, RIGHT	04-833	1	46" GUN CART
	62" CART LEG, RIGHT	04-827-RB	1	62" GUN CART
7	46" CART BODY	04-840	1	46" GUN CART
	62" CART BODY	04-854	1	62" GUN CART
8	3/8" GALVANIZED SHACKLE	40-064	2	
9	3/8" GRADE 40 CHAIN x 6', GALVANIZED	40-519-72	1	
10	3" NPT CLOSE NIPPLE, GALVANIZED	40-NPT-NPLC300G	1	
11	1 1/2" NPT PLUG, GALVANIZED	40-NPT-PLG150G	1	
12	3" GATE VALVE	40-NPT-VLV300GATFF	1	
13	GAUGE, 0-100 PSI WET	45-022	1	
	GAUGE, 0-160 PSI LIQUID	45-017	1	OPTIONAL
14	4 BOLT HUB, #1000	55-002-A	1	
	BEARING CUP - #1000 HUB (NOT SHOWN)	55-003	1	
15	BEARING CONE - #1000 HUB	55-004	2	
16	DUST CAP - #1000 HUB	55-005	1	
17	GREASE SEAL - #1000 HUB	55-006	1	
18	1/2-20 x 45 DEG. WHEEL BOLT - SIDE	55-007-45	10	
19	1/2-20 x 60 DEG WHEEL BOLT - FRONT	55-007-60	4	
20	NUT SPINDLE - THIN	55-008	3	
21	GREASE SEAL - #4500 HUB	55-015	2	
22	WASHER	55-016	2	

5000 Series 46" and 62" Gun Cart Assemblies (2 of 2)

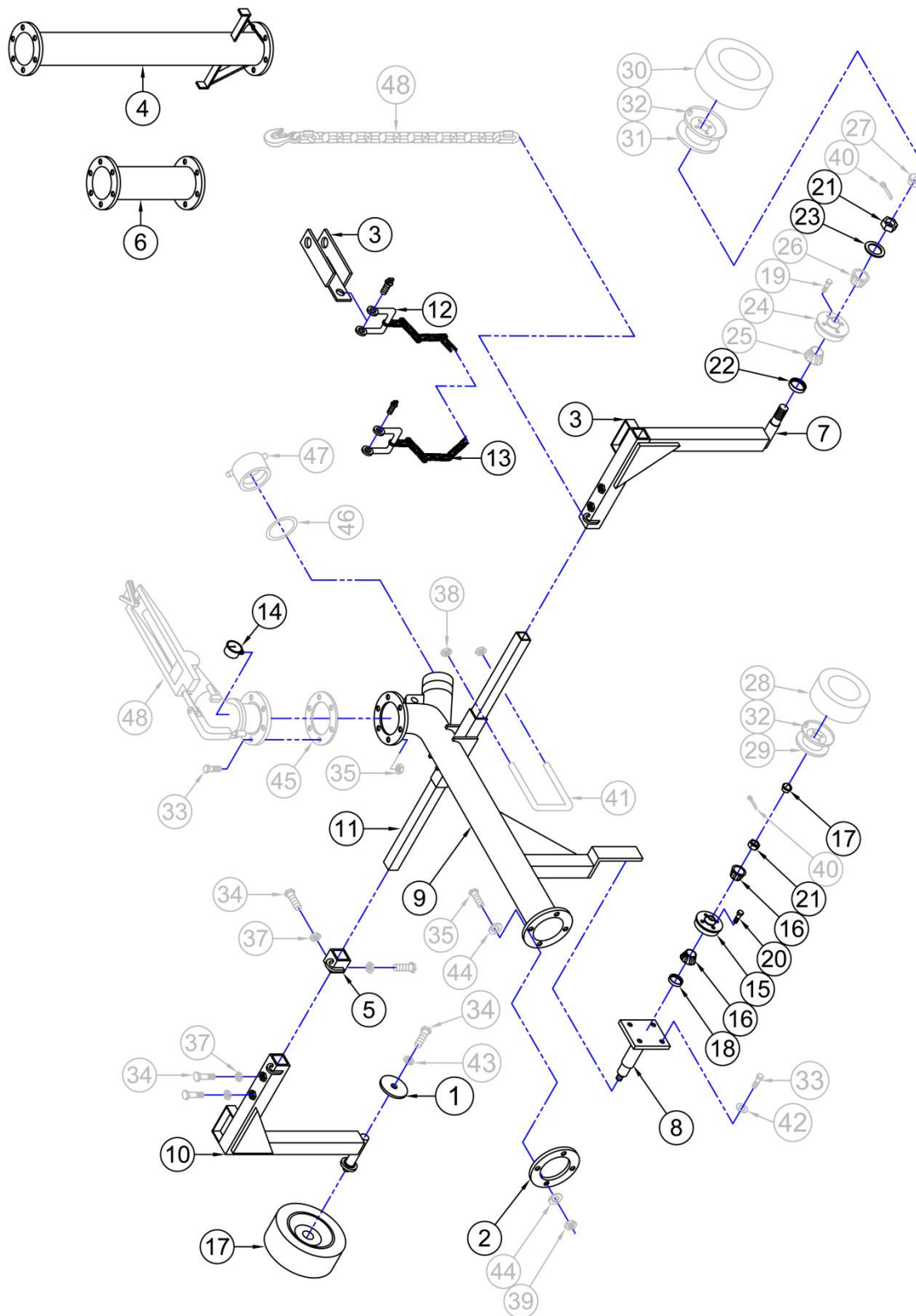




5000 Series 46" and 62" Gun Cart Assemblies (2 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
23	5 BOLT HUB, #4500	55-018-A	2	
	INNER BEARING - #4500 CUP (NOT SHOWN)	55-019	2	
24	INNER BEARING - #4500 CONE	55-020	2	
	OUTER BEARING - #4500 CUP (NOT SHOWN)	55-021	2	
25	OUTER BEARING - #4500 CONE	55-022	2	
26	DUST CAP - #4500 HUB	55-023	2	
27	480-8 TIRE , LOW SPEED,TBLS	55-037	1	
28	8 x 3.75 WHEEL RIM, 4 BOLT	55-038	1	
29	670-15 TIRE	55-041-TIRE	2	
30	VALVE STEM	55-046	3	
31	3/8-16 X 1 1/4 LG BOLT GR 5 ZINC	90-BLT-03816X125	6	
32	1/2-13 X1 1/4 BOLT GR 5 ZINC HEX	90-BLT-05013X125	6	
33	5/8-11 X 2 LG BOLT GR 5 ZINC HEX	90-BLT-06311X200	4	
34	3/8-16 HEX NUT	90-NUT-HEX038-16	6	
35	1/2-13 JAM NUT	90-NUT-JAM050-13	6	
36	1/2-13 HEX LOCK NUT NYLON	90-NUT-LOC050-13	4	
37	5/8-11 HEX LOCK NUT NYLON	90-NUT-LOC063-11	4	
38	COTTER PIN - 3/16 X 2.00 LG	90-PIN-CT019X200	3	
39	1/2-13 x 3 IN. x 4 LG. SQR UBOLT	90-UBT-SQ05013X400	2	
40	5/8 SAE WASHER	90-WSR-SAE063	8	
41	NELSON GUN FLANGE GASKET	DO-PRT-30-040-A	1	
42	KOMET TWIN 160 NOZZLE KIT	SP-KOM-T160NOZZLEKIT	1	
	KOMET TWIN ULTRA 160 VARI-ANGLE	SP-KOM-T160A	1	OPTIONAL
	KOMET TWIN 202 NOZZLE KIT	SP-KOM-T202	1	OPTIONAL
	KOMET TWIN ULTRA 202 VARI-ANGLE	SP-KOM-T202A	1	OPTIONAL
	NELSON SR-150 GUN KIT	SP-NEL-SP150KIT	1	OPTIONAL
	NELSON SR-200 GUN	SP-NEL-SR200	1	OPTIONAL
	NELSON SR-200 GUN, 24 DEG.	SP-NEL-SR200-24	1	OPTIONAL
43	13 LINK CART LIFT CHAIN	TR-CHN-13L	2	46" GUN CART
	5 LINK CART LIFT CHAIN	TR-CHN-5L	2	62" GUN CART

Optional 28" Gun Cart Assembly (1 of 2)

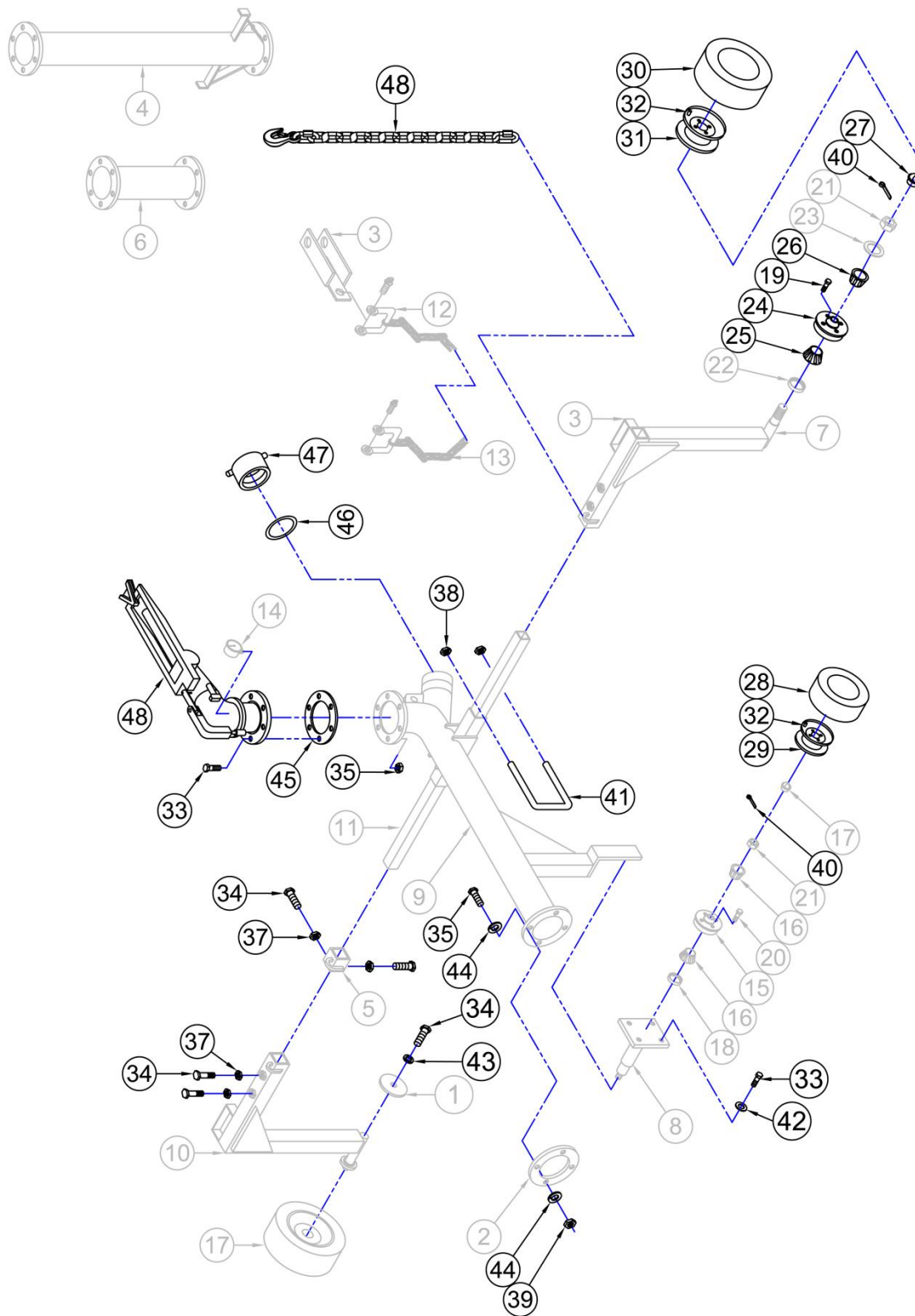




Optional 28" Gun Cart Assembly (1 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
1	SPROCKET RETAINING PLATE	01-314-B	2	
2	HOSE FLANGE GASKET	02-216-A	1	
3	GUN CART CLEVIS ASSEMBLY	02-220	1	
4	ORCHARD EXTENSION, 5'	02-226	1	OPTIONAL
5	SHORT PICK UP COLLAR, GALVANIZED	02-234-G	1	
6	EXTENSION, 2'	02-237	1	OPTIONAL
7	SPINDLE- 1 3/4" DIA. X 9.00" LG.	02-255-B	2	
8	FRONT SPINDLE	02-256-A	1	
9	28" GALVANIZED CART BODY	02-266-A	1	
10	28" GALVANIZED CART LEG	02-267-B	2	
11	72" LG. CROSS TUBE, GALVANIZED	04-831-72G	1	
12	3/8" GALVANIZED SHACKLE	40-064	2	
13	3/8" GALVANIZED GRADE 40 CHAIN X 6'	40-519-72	1	
14	PRESSURE GAUGE, 0-100 PSI, WET	45-022	1	
	PRESSURE GAUGE, 0-160 PSI, WET	45-017	1	OPTIONAL
15	4 BOLT HUB - #1000	55-002-A	1	
	BEARING CUP - #1000 HUB (NOT SHOWN)	55-003	1	
16	BEARING CONE - #1000 HUB	55-004	2	
17	DUST CAP - #1000 HUB	55-005	1	
18	GREASE SEAL - #1000 HUB	55-006	1	
19	WHEEL BOLT, 1/2"-20 x 45 DEG.	55-007-45	10	
20	WHEEL BOLT, 1/2"-20 x 60 DEG.	55-007-60	4	
21	SPINDLE NUT	55-008	3	
22	GREASE SEAL - #4500 HUB	55-015	2	
23	SPINDLE WASHER, 1.00"	55-016	2	

Optional 28" Gun Cart Assembly (2 of 2)

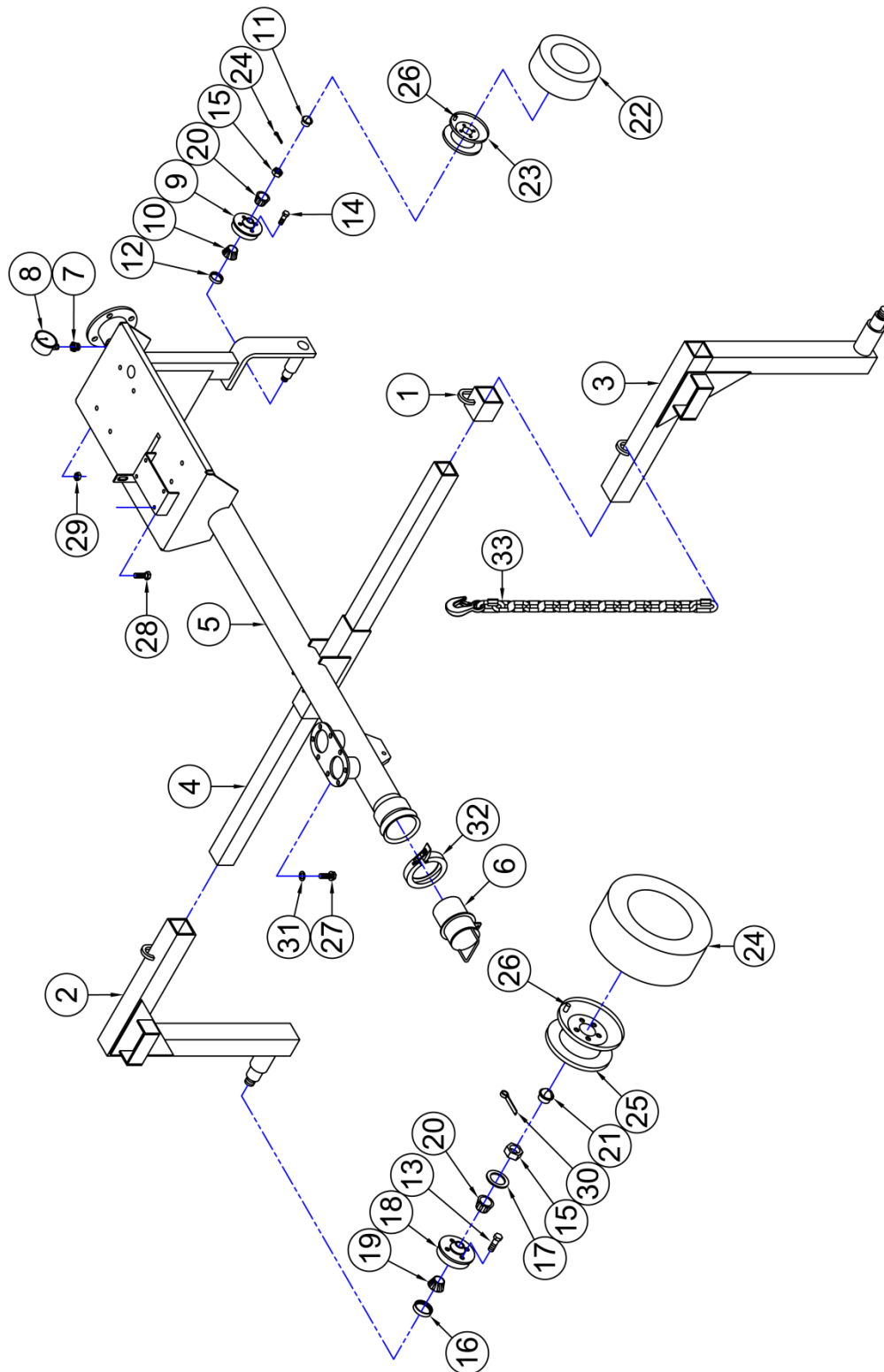




28" Gun Cart Assembly (2 of 2)

ITEM	DESCRIPTION	PART #	QTY	MODEL
24	5 BOLT HUB - #4500	55-018-A	2	
	INNER BEARING - CUP (NOT SHOWN)	55-019	2	
25	INNER BEARING - CONE	55-020	2	
	OUTER BEARING - CUP (NOT SHOWN)	55-021	2	
26	OUTER BEARING - CONE	55-022	2	
27	CAP - DUST	55-023	2	
28	TIRE, 480 X 8, 5 RIB	55-037	1	
29	WHEEL RIM, 8" X 3.75" X 4 BOLT	55-038	1	
30	670-15 TIRE	55-041-TIRE	2	
31	VALVE STEM	55-046	3	
32	BOLT, 3/8"-16 X 1 1/4" LG.	90-BLT-03816X125	10	
33	BOLT, 1/2"-13 X1 1/4" LG.	90-BLT-05013X125	8	
34	BOLT, 5/8"-11 X 2" LG.	90-BLT-06311X200	4	
35	HEX NUT, 3/8"-16	90-NUT-HEX038-16	6	
36	JAM NUT, 1/2"-13	90-NUT-JAM050-13	6	
37	LOCK NUT, 1/2"-13	90-NUT-LOC050-13	4	
38	LOCK NUT, 5/8"-11	90-NUT-LOC063-11	4	
39	COTTER PIN - 3/16" DIA. X 2.00" LG.	90-PIN-CT019X200	3	
40	SQ. UBOLT, 1/2"-13 X 3" X 4" LG.	90-UBT-SQ05013X400	2	
41	LOCK WASHER, 3/8"	90-WSR-LOC038	4	
42	LOCK WASHER, 1/2"	90-WSR-LOC050	2	
43	SAE WASHER, 5/8"	90-WSR-SAE063	8	
44	NELSON GUN FLANGE GASKET	DO-PRT-30-040-A	1	
45	3" WILLOC GASKET	IR-GKT-WL3	1	
46	3" WIL-LOC END PLUG GALVANIZ	IR-PLG-WL3	1	
47	KOMET TWIN 140 NOZZLE KIT	SP-KOM-T140NOZZLEKIT	1	
	KOMET TWIN ULTRA 140 VARI-ANGLE	SP-KOM-T140A	1	OPTIONAL
	KOMET TWIN 160 NOZZLE KIT	SP-KOM-T160NOZZLEKIT	1	OPTIONAL
	KOMET TWIN ULTRA 160 VARI-ANGLE	SP-KOM-T160A	1	OPTIONAL
	NELSON SR-150 GUN KIT	SP-NEL-SP150KIT	1	OPTIONAL
48	13 LINK CART LIFT CHAIN	TR-CHN-25L	2	

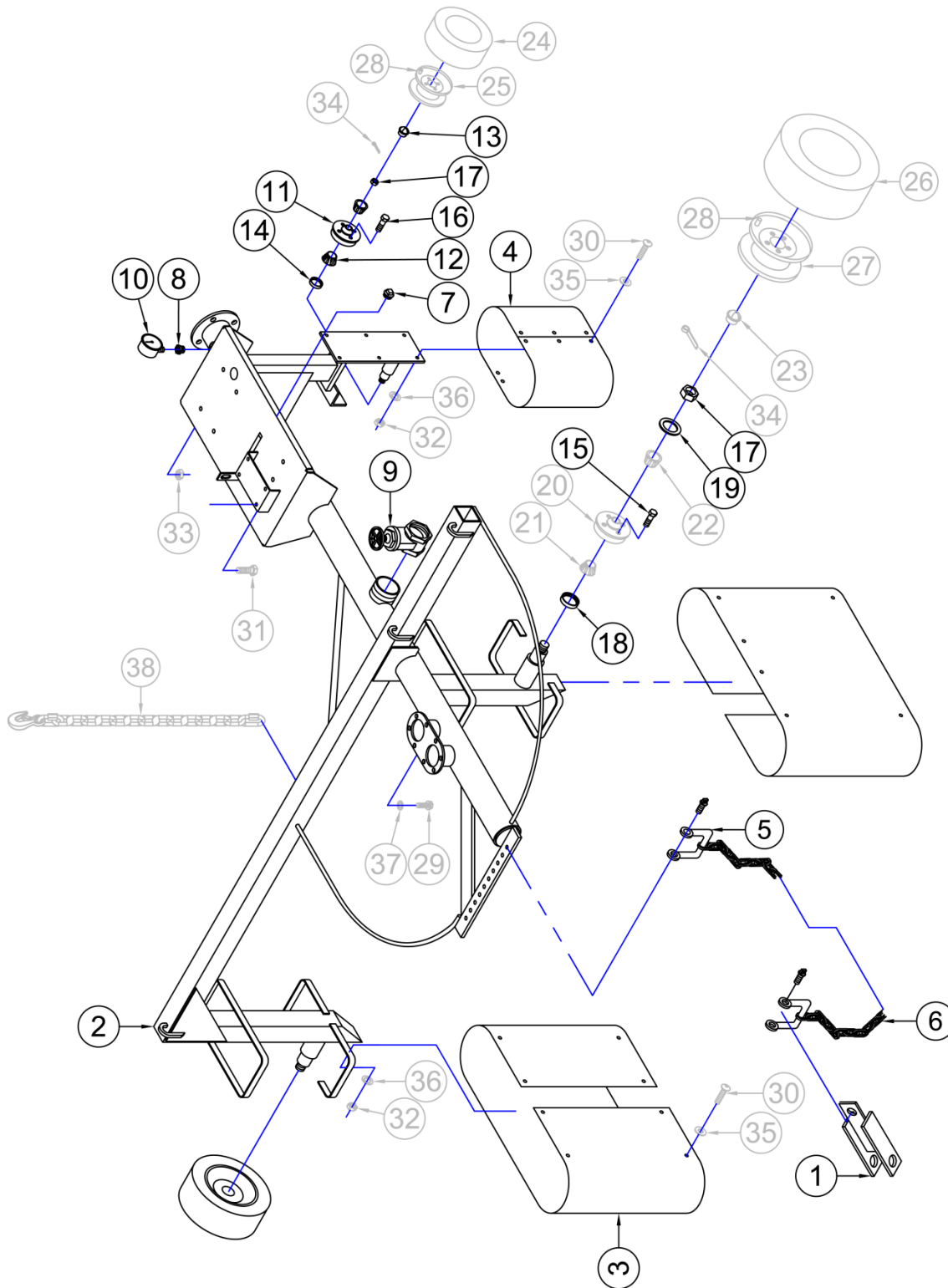
Optional Broadcast Cart Assembly



Optional Broadcast Cart Assembly

ITEM	DESCRIPTION	PART #	QTY
1	SHORT PICK UP COLLAR	02-234-G	1
2	28" CART LEG, LEFT	02-243-L	1
3	28" CART LEG, RIGHT	02-243-R	1
4	72" LG. CROSS TUBE	04-831-72G	1
5	CART BODY, SYMMETRICAL	14-114	1
6	COUPLING PLUG	14-115	1
7	3/4"-1/4" REDUCING BUSHING	40-NPT-RB075X025	1
8	PRESSURE GAUGE, 0-160 PSI, WET	45-017	1
9	4 BOLT HUB - #1000	55-002-A	1
	BEARING CUP - #1000 INNER (NOT SHOWN)	55-003	1
10	BEARING CONE - #1000 INNER	55-004	1
11	DUST CAP - #1000	55-005	1
12	GREASE SEAL - #1000	55-006	1
13	1/2"-20 X 45 DEG. WHEEL BOLT	55-007-45	10
14	1/2"-20 X 60 DEG WHEEL BOLT	55-007-60	4
15	SPINDLE NUT	55-008	3
16	GREASE SEAL - #4500 HUB	55-015	2
17	SPINDLE WASHER, 1.00"	55-016	2
18	5 BOLT HUB - #4500	55-018-A	1
	BEARING CUP - #4500 INNER (NOT SHOWN)	55-019	1
19	BEARING CONE - #4500 INNER	55-020	2
	BEARING CUP - #4500 OUTER (NOT SHOWN)	55-021	2
20	BEARING CONE - #4500 OUTER	55-022	2
21	DUST CAP - #4500	55-023	2
22	TIRE, 480 X 8, 5 RIB	55-037	1
23	WHEEL RIM, 8" X 3.75" X 4 BOLT	55-038	1
24	TIRE, 670-15 RIBBED IMPLEMENT	55-041-TIRE	2
25	WHEEL RIM, 15" X 5" X 5 BOLT	55-042-A	2
26	VALVE STEM	55-046	3
27	BOLT, 3/8" X 1 1/2" LG.	90-BLT-03816X150	8
28	FLANGE HEAD BOLT, 5/16"-18 X 3/4" LG.	90-BLT-F03118X075	4
29	LOCK NUT, 5/16"-18	90-NUT-LOC031-18	4
30	COTTER PIN, 3/16" DIA. X 2.00" LG.	90-PIN-CT019X200	3
31	LOCK WASHER, 3/8"	90-WSR-LOC038	8
32	4" RINGLOCK COUPLING, STEEL	IR-CPL-RL4P	1
33	25 LINK CART LIFT CHAIN	TR-CHN-25L	2

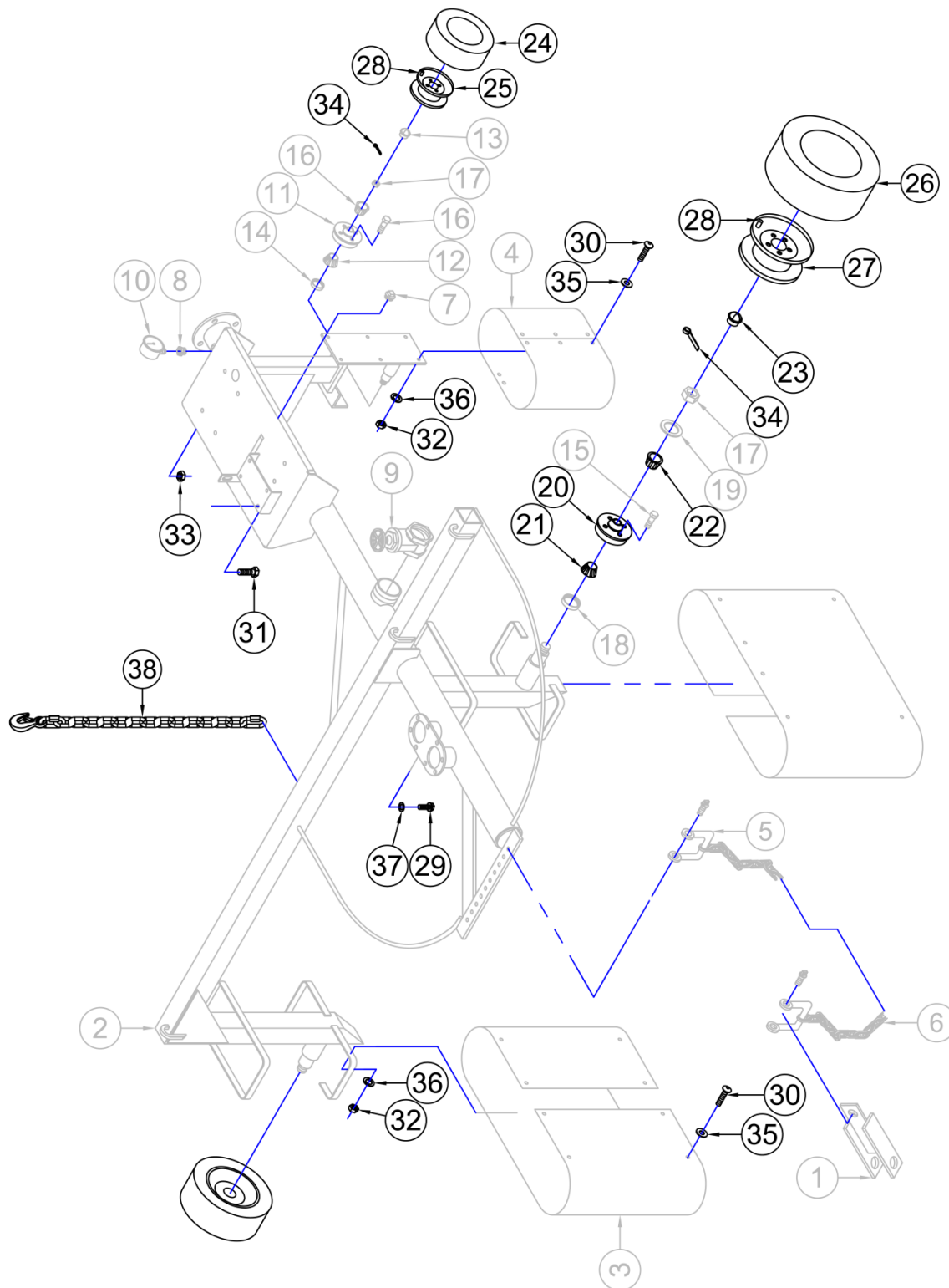
Optional Ginseng Cart Assembly (1 of 2)



Optional Ginseng Cart Assembly (1 of 2)

ITEM	DESCRIPTION	PART #	QTY
1	GUN CART CLEVIS ASSEMBLY	02-220	1
2	CART BODY	14-101-A	1
3	REAR WHEEL COVER	14-235-A	2
4	FRONT WHEEL COVER	14-236-A	1
5	3/8 IN. GALVANIZED SHACKLE	40-064	2
6	3/8 GALV. GRADE 40 CHAIN x 6 FT	40-519-72	1
7	3/4 NPT PLUG, GALV.	40-NPT-PLG075G	1
8	3/4 - 1/4 REDUCING BUSHING	40-NPT-RB075X025	1
9	3" GATE VALVE	40-NPT-VLV300GATFF	1
10	PRESSURE GAUGE, 0-160 PSI, WET	45-017	1
11	4 BOLT HUB, #1000	55-002-A	1
	BEARING CUP - #1000 INNER (NOT SHOWN)	55-003	1
12	BEARING CONE, INNER	55-004	1
13	DUST CAP	55-005	1
14	GREASE SEAL	55-006	1
15	1/2-20 x 45 DEG WHEEL BOLT-SIDE	55-007-45	10
16	1/2-20 x 60 DEG WHEEL BOLT-FRONT	55-007-60	4
17	SPINDLE NUT	55-008	3
18	GREASE SEAL	55-015	2
19	SPINDLE WASHER	55-016	2

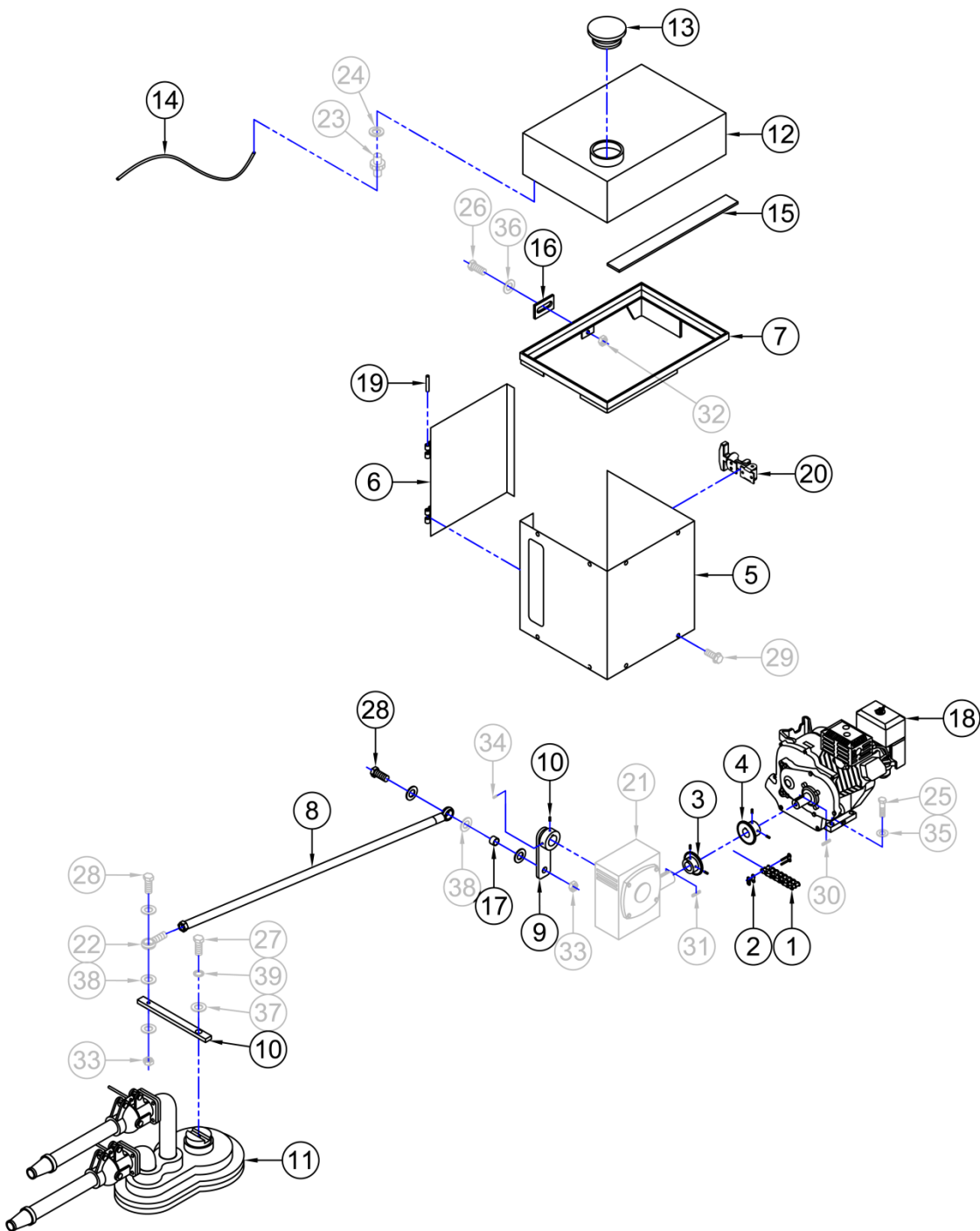
Optional Ginseng Cart Assembly (2 of 2)



Optional Ginseng Cart Assembly (2 of 2)

ITEM	DESCRIPTION	PART #	QTY
20	5 BOLT HUB - #4500	55-018-A	2
	BEARING CONE - #4500 INNER (NOT SHOWN)	55-019	2
21	BEARING CONE - #4500 INNER	55-020	1
	BEARING CUP - #4500 OUTER (NOT SHOWN)	55-021	1
22	BEARING CONE - #4500 OUTER	55-022	1
23	DUST CAP - #4500	55-023	1
24	TIRE, 480 X 8, 5 RIB	55-037	1
25	WHEEL RIM, 8" X 3.75" X 4 BOLT	55-038	1
26	TIRE, 670-15 RIBBED IMPLEMENT	55-041-TIRE	2
27	WHEEL RIM, 15" X 5" X 5 BOLT	55-042-A	2
28	VALVE STEM	55-046	3
29	BOLT, 3/8" X 1 1/2" LG.	90-BLT-03816X150	8
30	CARRIAGE BOLT, 1/4" X 1" LG.	90-BLT-CG02520-100	36
31	FLANGE HEAD BOLT, M10-150 X 20 mm LG.	90-BLT-FM10150X020	4
32	HEX NUT, 1/4"-20	90-NUT-HEX025-20	36
33	LOCK NUT, 5/16"-18	90-NUT-LOC031-18	4
34	COTTER PIN, 3/16" DIA. X 2.00" LG.	90-PIN-CT019X200	3
35	FENDER WASHER, 1/4"	90-WSR-FEN025	36
36	LOCK WASHER, 1/4"	90-WSR-LOC025	36
37	LOCK WASHER, 3/8"	90-WSR-LOC038	8
38	CART LIFT CHAIN	TR-CHN-25L	2

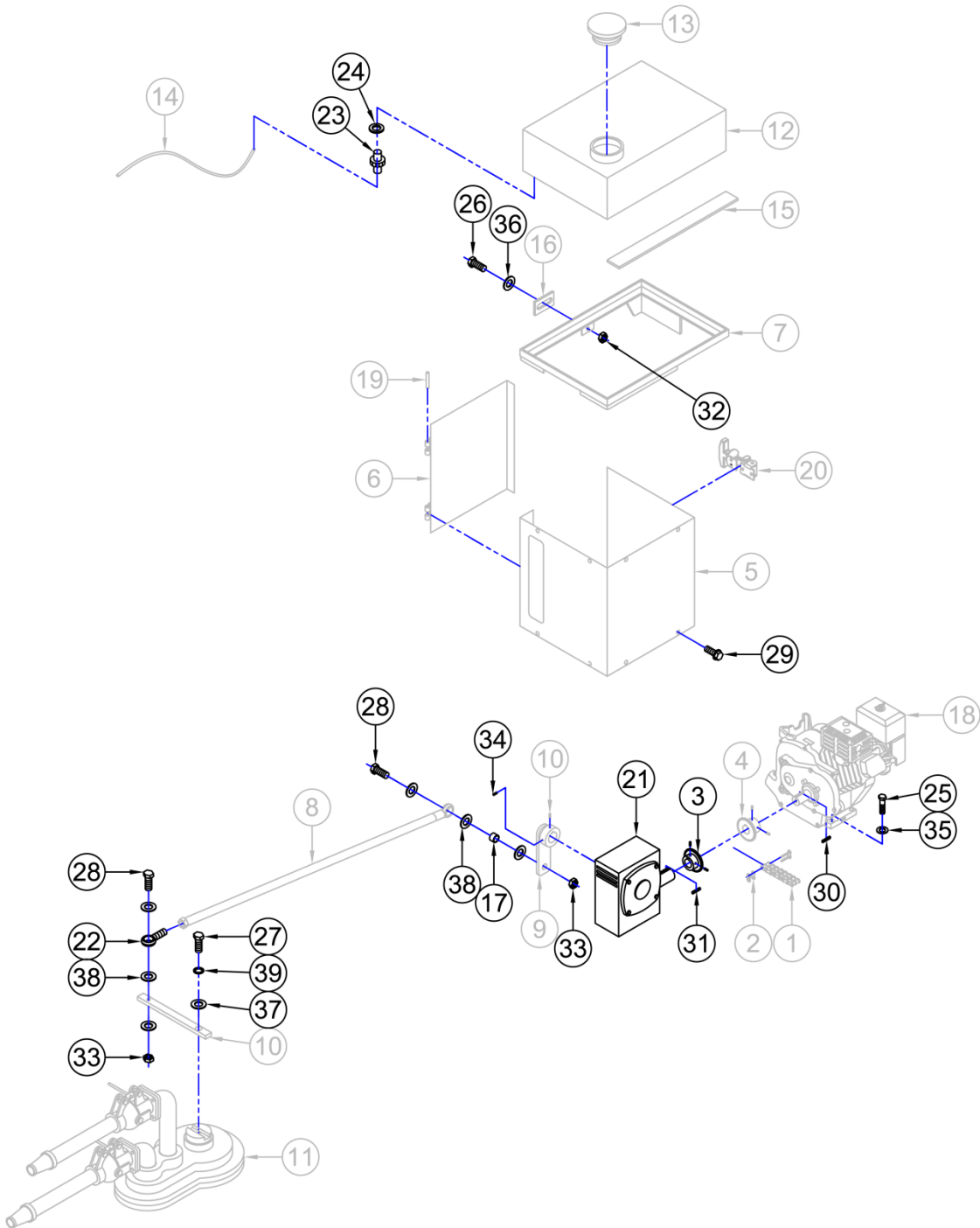
Broadcast Cart and Ginseng Cart Drive Assembly (1 of 2)



Broadcast Cart and Ginseng Cart Drive Assembly (1 of 2)

ITEM	DESCRIPTION	PART #	QTY
1	#50-2 ROLLER CHAIN	10-CHN-50-2RIV	14 P
2	CONNECTING LINK, #50-2	10-LNK-50-2CONN	1
3	GEAR, H50-14-3/4"	10-SPT-50B14X075	1
4	GEAR, H50-14-1 1/8"	10-SPT-50B14X113	1
5	GEARBOX HOUSING	14-102	1
6	GEARBOX HOUSING DOOR	14-103-A	1
7	FUEL TANK CRADLE	14-104	1
8	DRIVE LINK	14-105	1
9	GEAR BOX ARM	14-108	1
10	DRIVE ARM	14-240	1
11	GINSENG GUN ASSEMBLY	20-000	1
12	ALUMINUM FUEL TANK, 5 GAL.	40-017	1
13	VENTED GAS CAP	40-017-A	1
14	NEOPRENE FUEL LINE, 3/16" DIA. X 16" LG.	40-066	1
15	TANK CUSHION	40-093-20	2
16	VIBRATION ISOLATOR	40-095	1
17	SPACER, 3/4" DIA. X 1/2" LG.	40-110	1
18	5.5 HP. HONDA ENGINE, GX120K1LX	40-159-A	1
19	BRASS HINGE PIN, 3/16" DIA. X 3" LG.	40-200-C	2
20	LATCH KIT	40-217	1

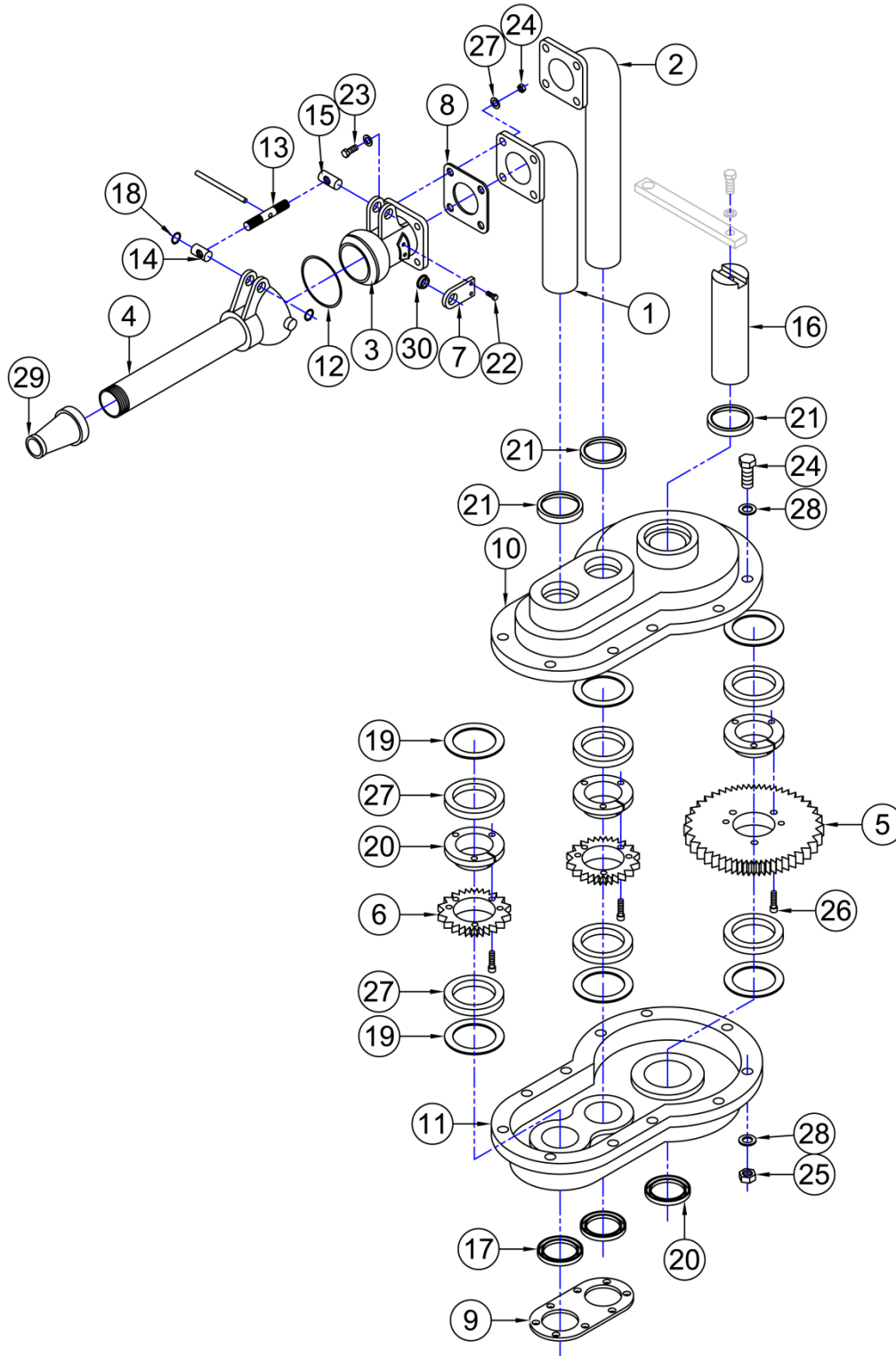
Broadcast Cart and Ginseng Cart Drive Assembly (2 of 2)



Broadcast Cart and Ginseng Cart Drive Assembly (2 of 2)

ITEM	DESCRIPTION	PART #	QTY
21	GEAR BOX	40-486	1
22	ROD END, 3/4" - 16 MALE THREAD	40-488	1
23	FUEL TANK STRAINER	40-HDA-16955ZE1000	1
24	14MM O-RING	40-HDA-91353671004	1
25	BOLT, 5/16" X 1 1/2" LG.	90-BLT-03118X150	4
26	BOLT, 3/8" X 1 1/4" LG.	90-BLT-03816X125	1
27	BOLT, 1/2" X 1 1/4" LG.	90-BLT-05013X125	1
28	BOLT, 3/4" X 3" LG.	90-BLT-07510X300	2
29	FLANGE HEAD BOLT, M10 X 20MM	90-BLT-F03118X075	12
30	3/16" SQ. X 1 1/8" LG. KEY	90-KEY-SQ019X113	1
31	1/4" SQ. X 1 1/4" LG. KEY	90-KEY-SQ025X125	1
32	LOCK NUT, 3/8" - 16	90-NUT-LOC038-16	1
33	LOCK NUT, 3/4" - 10	90-NUT-LOC075-10	2
34	SET SCREW	90-SCR-ST02520X025	1
35	FLAT WASHER, 5/16"	90-WSR-FLT031	4
36	FLAT WASHER, 3/8"	90-WSR-FLT038	1
37	FLAT WASHER, 1/2"	90-WSR-FLT050	1
38	FLAT WASHER, 3/4"	90-WSR-FLT075	6
39	LOCK WASHER, 1/2"	90-WSR-LOC050	1

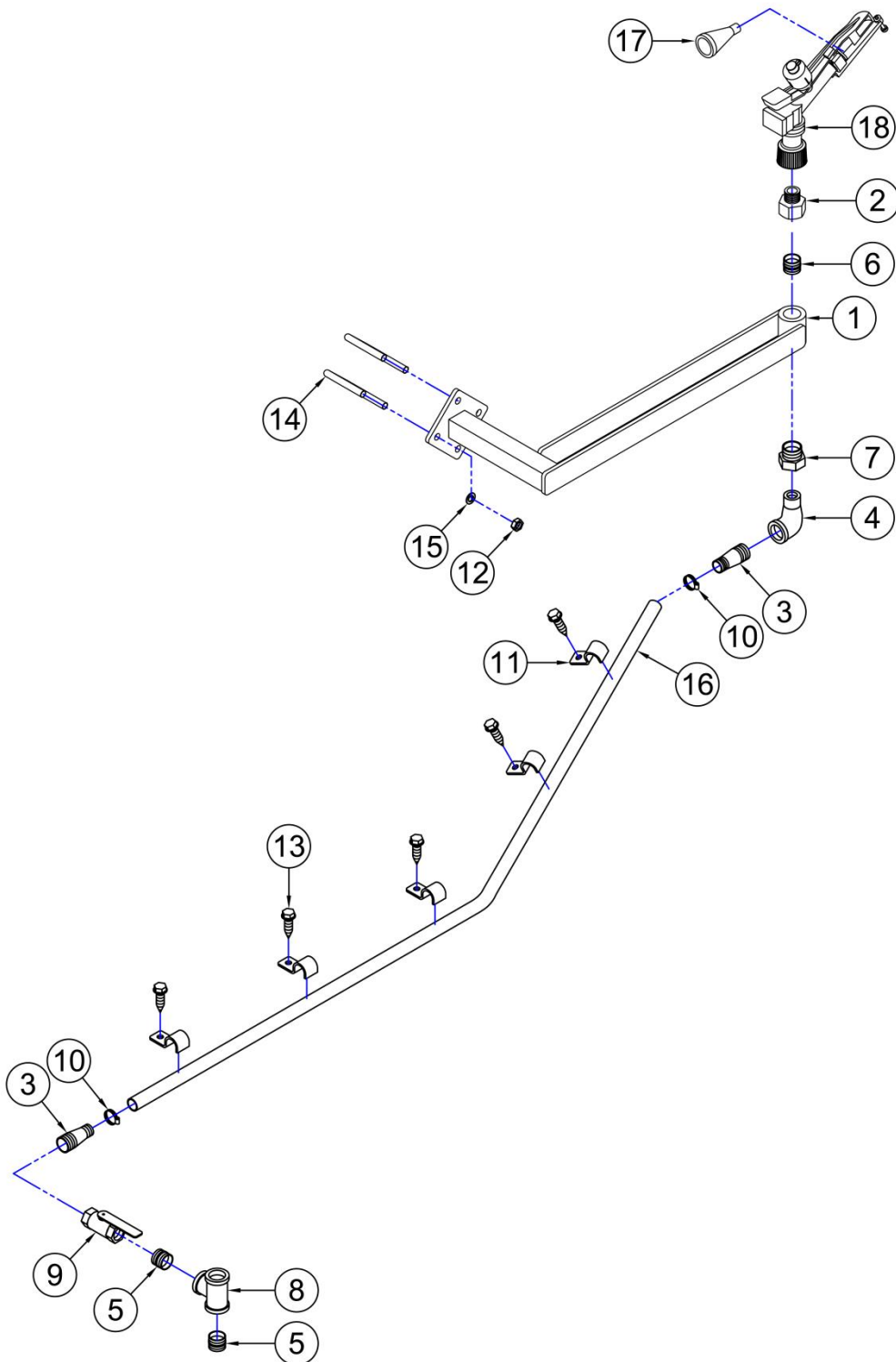
Broadcast Cart and Ginseng Cart Gearbox Assembly



Broadcast Cart and Ginseng Cart Gearbox Assembly

ITEM	DESCRIPTION	PART #	QTY
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	STAINLESS STEEL EXTERNAL RETAINING RING, 5/8"	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" LG.	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

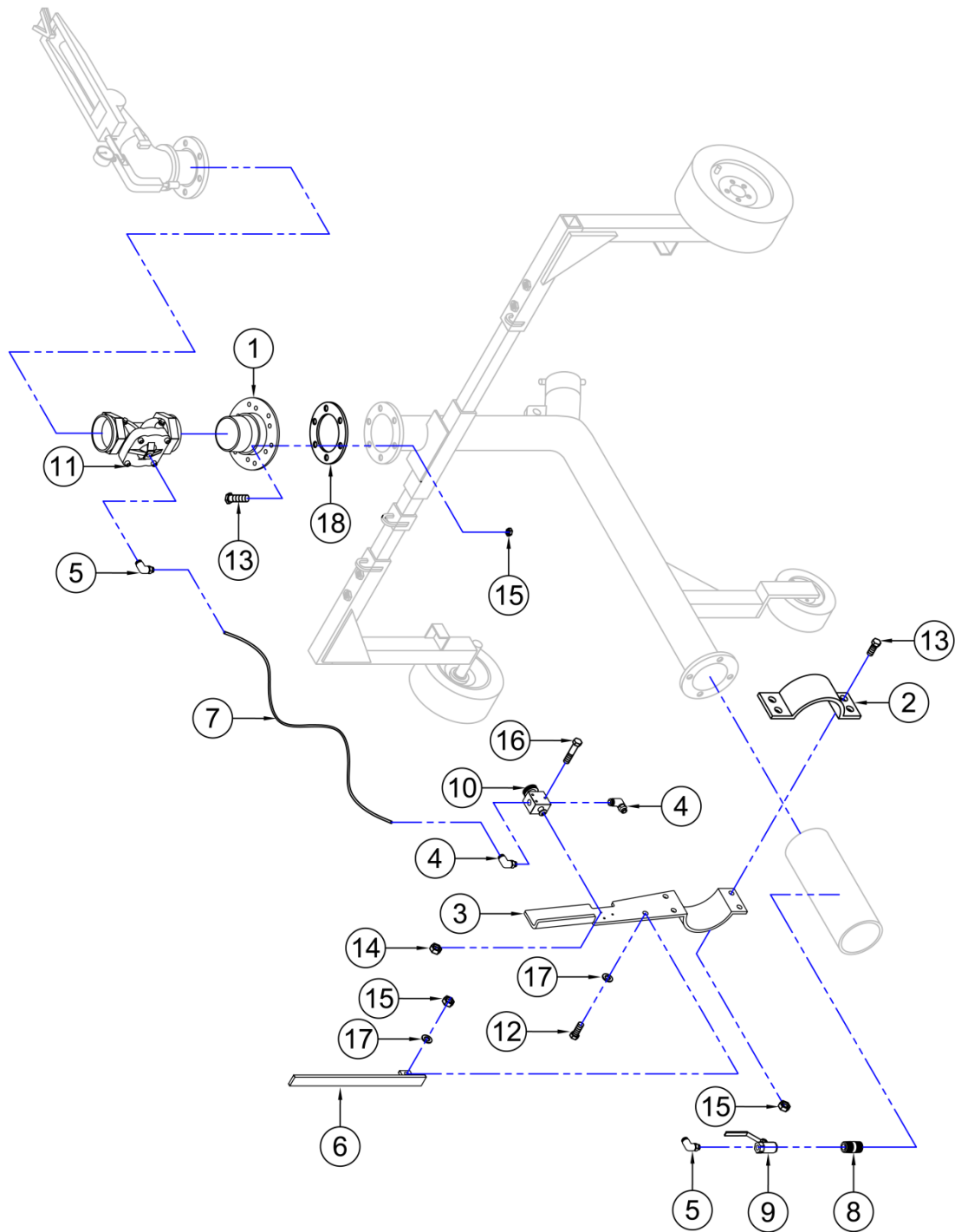
Optional Sprinkler Kit Assembly



Optional Sprinkler Kit Assembly

ITEM	DESCRIPTION	PART #	QTY
1	SPRINKLER MOUNT	06-687-B	1
2	ADAPTER - #16 M-BPS X #16 F-NPT	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" REDUCING 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
12	LOCKNUT, 3/8"	90-NUT-LOC038-16	4
13	TEK SCREW, 1/4" X 1" LG.	90-SCR-TEK025X100	5
14	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

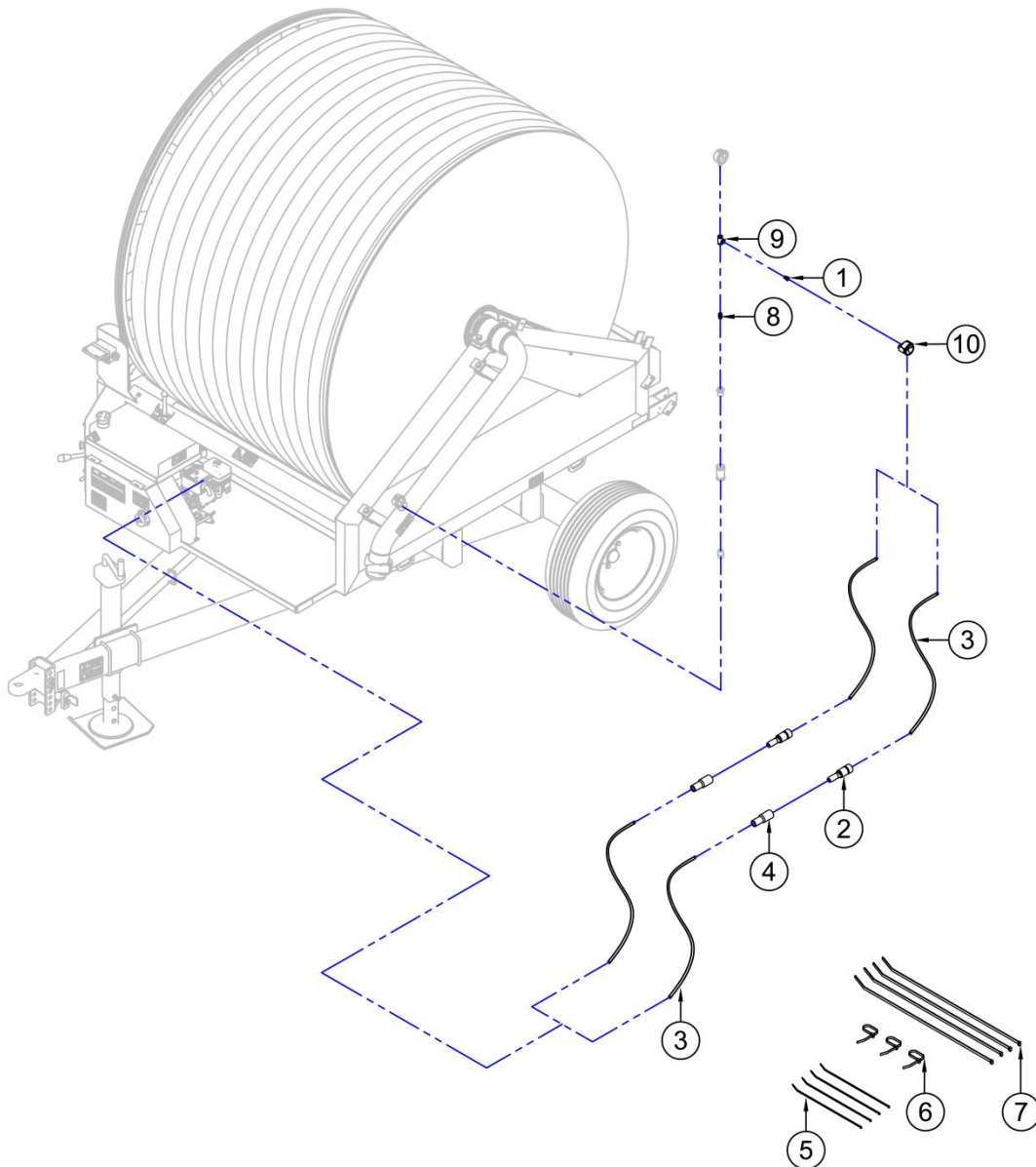
Optional Raphael Valve Assembly



Optional Raphael Valve Assembly

ITEM	DESCRIPTION	PART #	QTY
1	KOMET/NELSON GUN ADAPTER	02-224-B	2
2	MARKER CLAMP - 3750S/XL	03-609	1
3	3 3/4" 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' LG.	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	3" RAPHAEL CONTROL VALVE	42-076	1
12	BOLT, 3/8" X 1 1/4" LG.	90-BLT-03816X125	1
13	BOLT, 3/8" 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	PAN HEAD SCREW, #6-32 X 1 1/2" LG.	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

ITEM	DESCRIPTION	PART #	QTY
1	BRASS REDUCER BUSHING, #04 M-NPT X #02 M-NPT	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

Required Maintenance

To make sure your 5000 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
Gasoline 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
Diesel Engine oil	See diesel drive manual
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
Inspect tire pressure	<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>
Inspect all wheel nuts (See Star Pattern for Tightening Wheel Nuts, Page 127)	<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;">110 ft•lbs [149 N•m]</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>
Verify fluid levels and filter condition	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
Verify indexer chain tension	Remove the guard, then adjust indexer chain so that it contains no visible slack. Replace the guard when finished
Verify man drive chain alignment and tension	Inspect alignment and tension of main drive chain. Adjust if needed.

After The First 25 Hours (New Machines Only)

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

Every 100 Hours


MAINTENANCE ITEM	PROCEDURE
Inspect tire pressure	<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>
Change engine oil	Change the oil in the engine. Refer to Honda engine manual or diesel drive 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 3 Point Hitch Injector's 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.

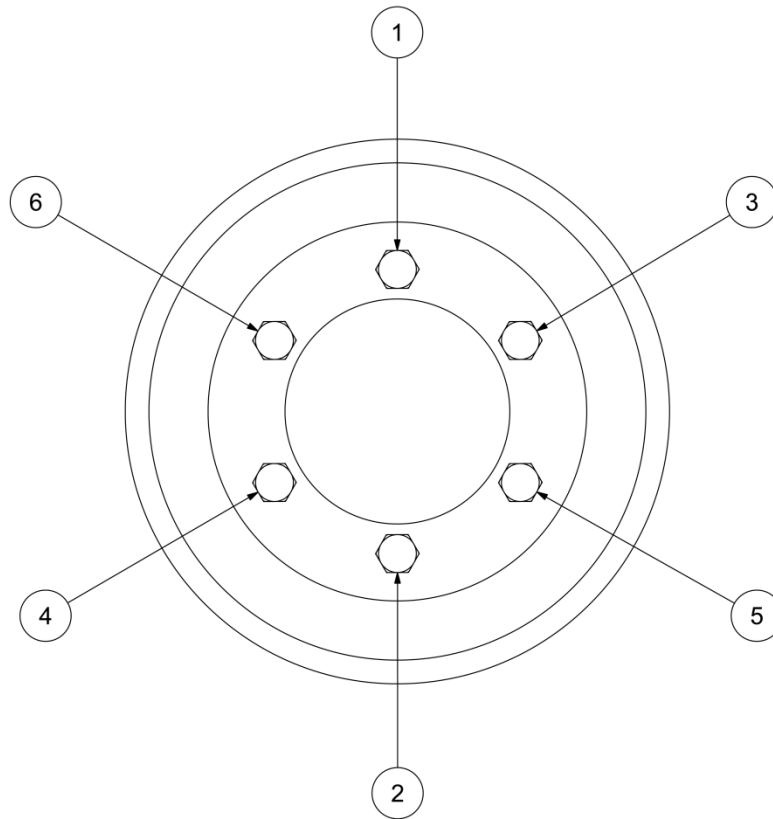


Figure 49 – Tightening Wheel Nuts

img-01194



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.

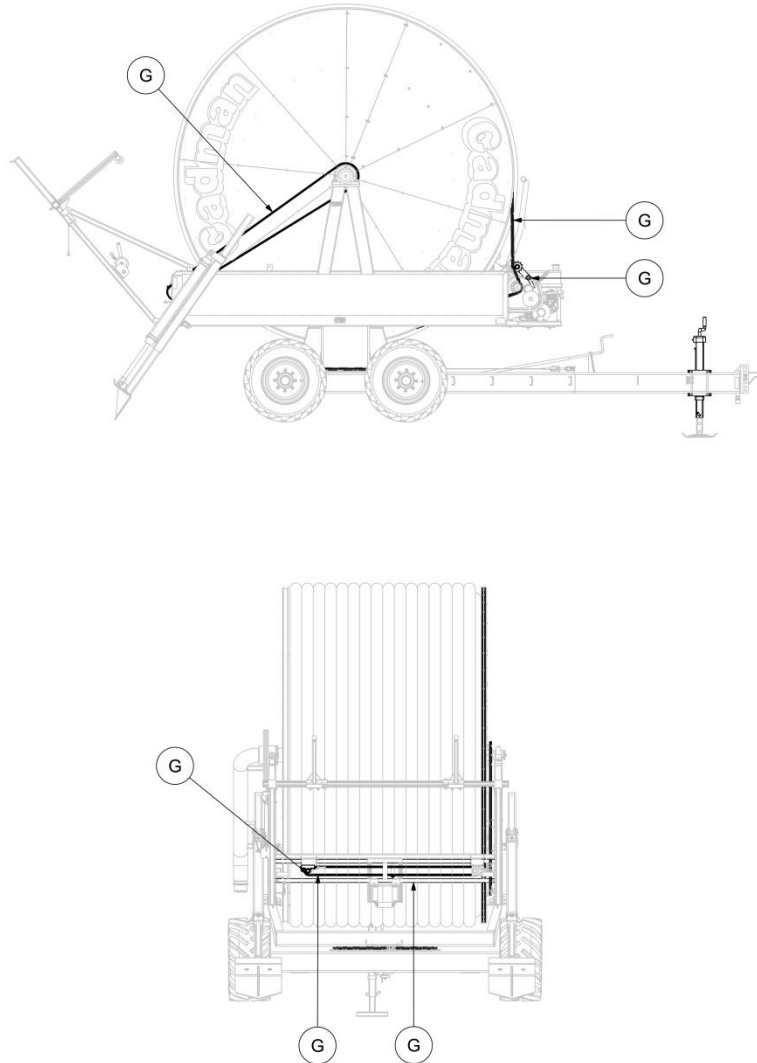


Figure 50 – 5000 Series Traveller Grease Points

img-01373

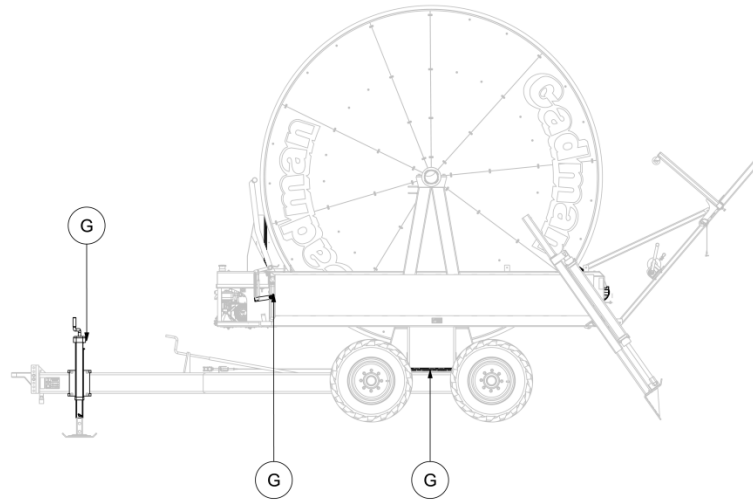


Figure 51 – 5000 Series Traveller Grease Points

img-01374



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 shield from the traveller.

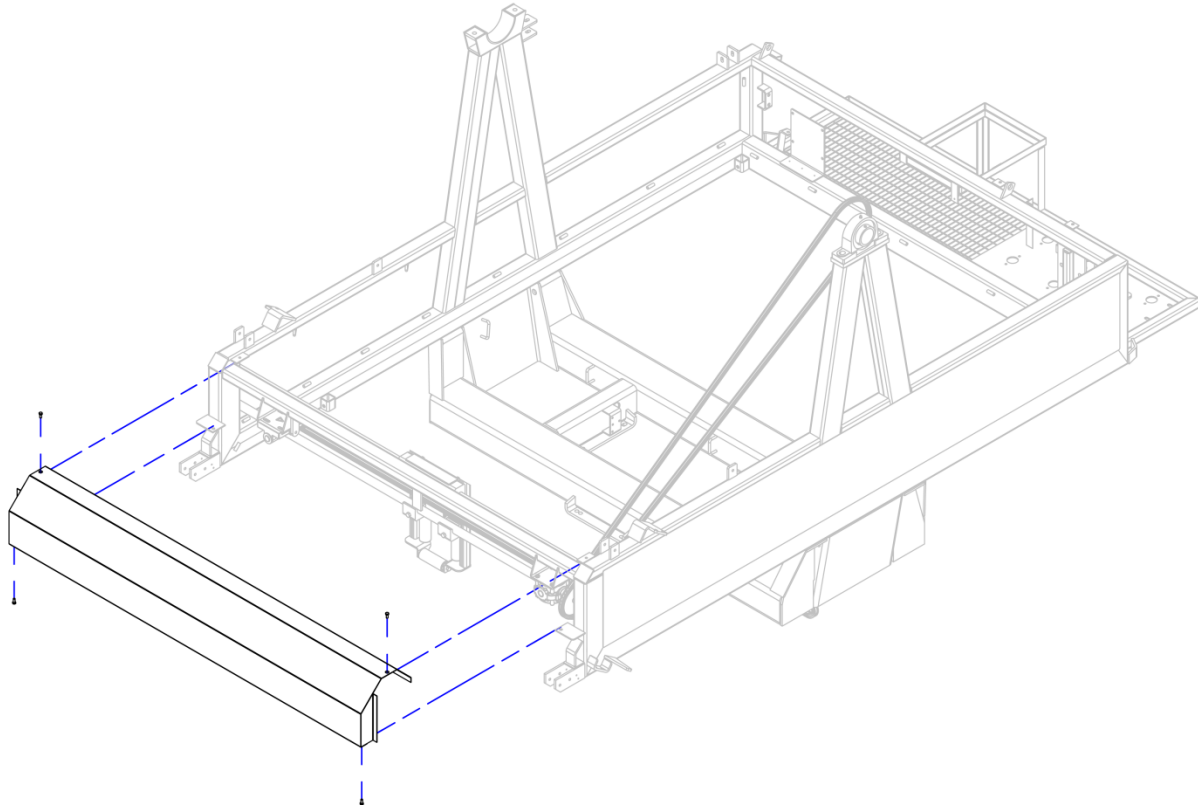


Figure 52 – Remove Shields

img-01375

Step 2

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

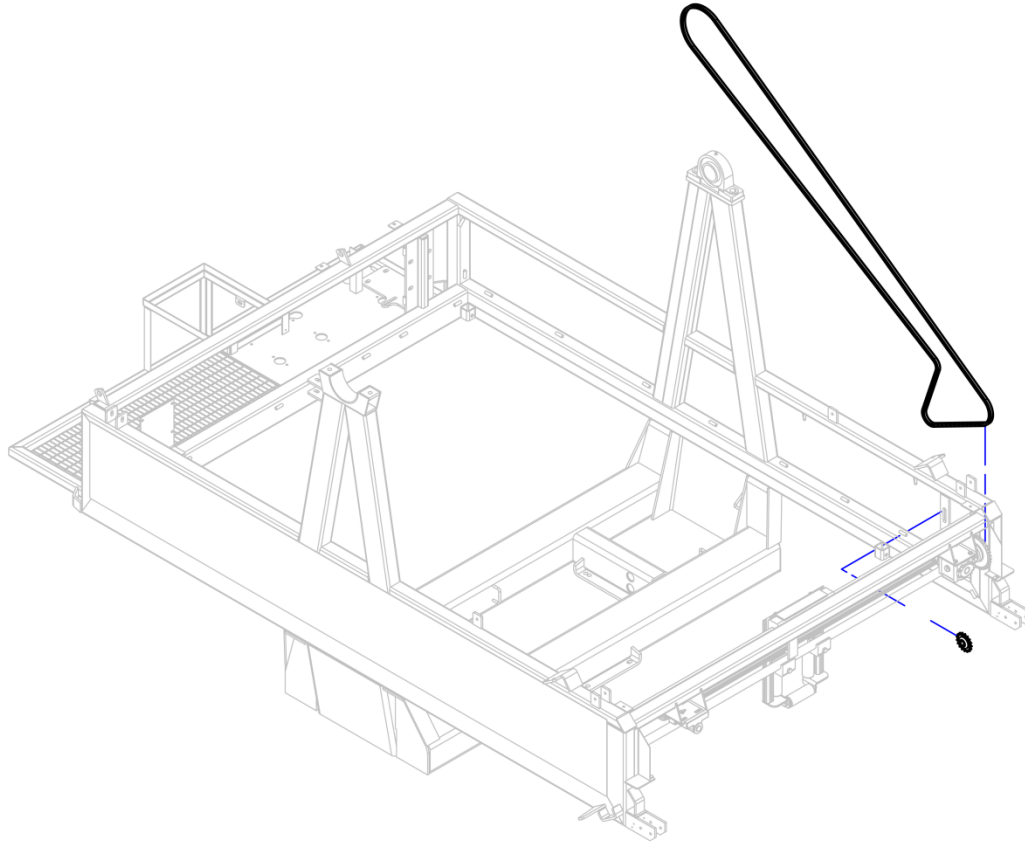


Figure 53 – Loosen Chain

img-01376

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.

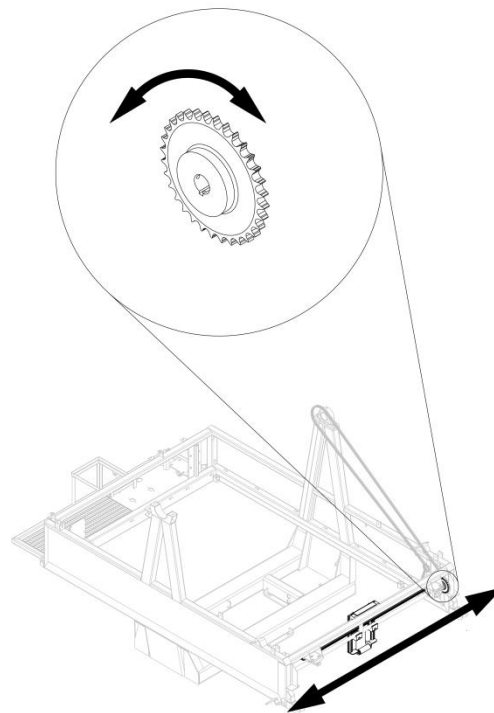


Figure 54 – Adjust Indexer

img-01377

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 5000 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 13 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 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	DIA.
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	DIA.
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

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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

Komet Twin 202 Ultra Performance data (24 degree trajectory, Taper Bore)

NOZZLE	Ø 0.87		Ø 0.91		Ø 0.94		Ø 0.98		Ø 1.02		Ø 1.06		Ø 1.10	
	PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM
50	153	285	168	290	182	294	197	299	215	304	230	310	248	315
60	167	307	184	313	199	319	216	326	235	333	252	340	272	347
70	181	319	199	325	215	332	233	340	254	349	273	357	294	365
80	193	328	212	336	230	343	249	352	272	361	291	370	314	380
90	205	338	225	347	244	355	264	364	288	374	309	383	333	393
100	216	349	237	357	257	366	278	375	304	385	326	394	351	404
110	226	359	249	368	270	377	292	386	319	396	342	405	368	415

NOZZLE	Ø 1.14		Ø 1.18		Ø 1.22		Ø 1.26		Ø 1.30		Ø 1.34		Ø 1.38	
	PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM
50	266	319	285	322	305	326	326	330	343	333	366	336	388	340
60	292	352	312	358	334	363	357	369	376	374	400	379	425	384
70	315	372	337	379	361	386	386	393	406	400	433	406	459	413
80	337	387	360	395	386	403	412	411	434	418	462	426	491	433
90	357	401	382	409	410	417	437	425	461	433	490	442	521	450
100	377	412	403	420	432	428	461	437	486	447	517	456	549	465
110	395	423	423	431	453	440	484	448	509	459	542	469	576	478



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NOZZLE	Ø 1.42		Ø 1.46		Ø 1.50		Ø 1.54		Ø 1.57		Ø 1.61	
PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
50	409	343	433	346	458	349	481	351	503	354	536	356
60	449	389	474	395	501	400	527	403	551	407	587	411
70	484	420	512	426	541	433	569	437	595	443	634	448
80	518	441	548	449	579	456	608	462	636	468	678	475
90	549	459	581	467	614	475	645	482	675	489	719	496
100	579	474	612	484	647	493	680	500	711	508	757	516
110	607	489	642	499	679	509	713	516	746	524	794	533

NOZZLE	Ø 1.65		Ø 1.69		Ø 1.73		Ø 1.77	
PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
50	555	358	586	360	613	363	640	362
60	608	415	642	418	671	422	701	424
70	656	453	694	458	725	464	758	469
80	702	481	742	487	775	493	810	499
90	744	503	787	510	822	517	859	523
100	784	523	829	531	867	538	905	546
110	823	541	870	549	909	557	950	565

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	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



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
50	408	373
60	446	396
70	483	412
80	516	427
90	547	442
100	577	458
110	605	471

Nelson SR200 Big Gun® (27 degree trajectory, Ring Nozzle)

NOZZLE	Ø 1.29		Ø 1.46		Ø 1.56		Ø 1.66		Ø 1.74		Ø 1.83		Ø 1.93	
	PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM
50	230	325	300	355	350	370	410	390	470	405	535	420	640	435
60	250	340	330	370	385	390	445	410	515	425	585	440	695	455
70	270	355	355	385	415	405	480	425	555	440	630	455	755	475
80	290	370	380	400	445	420	515	440	590	455	675	470	805	490
90	310	380	405	415	475	435	545	455	625	470	715	485	855	505
100	325	390	425	425	500	445	575	465	660	480	755	500	900	520
110	340	400	445	435	525	455	605	475	695	490	790	510	945	535



Nelson SR200 Big Gun® (27 degree trajectory, Taper Bore)

NOZZLE	Ø 1.05		Ø 1.1		Ø 1.2		Ø 1.3		Ø 1.4		Ø 1.5		Ø 1.6	
PSI	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
60	250	345	285	355	330	375	385	390	445	410	515	430	585	445
70	270	360	310	380	355	395	415	410	480	430	555	450	630	465
80	290	375	330	395	380	410	445	430	515	450	590	470	675	485
90	310	390	350	410	405	425	475	445	545	465	625	485	715	505
100	325	400	370	420	425	440	500	460	575	480	660	500	755	520
110	340	410	390	430	445	450	525	470	605	495	695	515	790	535

NOZZLE	Ø 1.75		Ø 1.9	
PSI	GPM	DIA.	GPM	DIA.
60	695	470	825	495
70	755	495	890	515
80	805	515	950	535
90	855	535	1005	555
100	900	550	1060	575
110	945	565	1110	590

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	----	----	----	----	----	----	----	----

5000 Series Dimensions and Weight (1 of 2)

The dimensions and weights shown on the following pages are only approximate, and are specific to the 3300 XLB and 3600 XLB

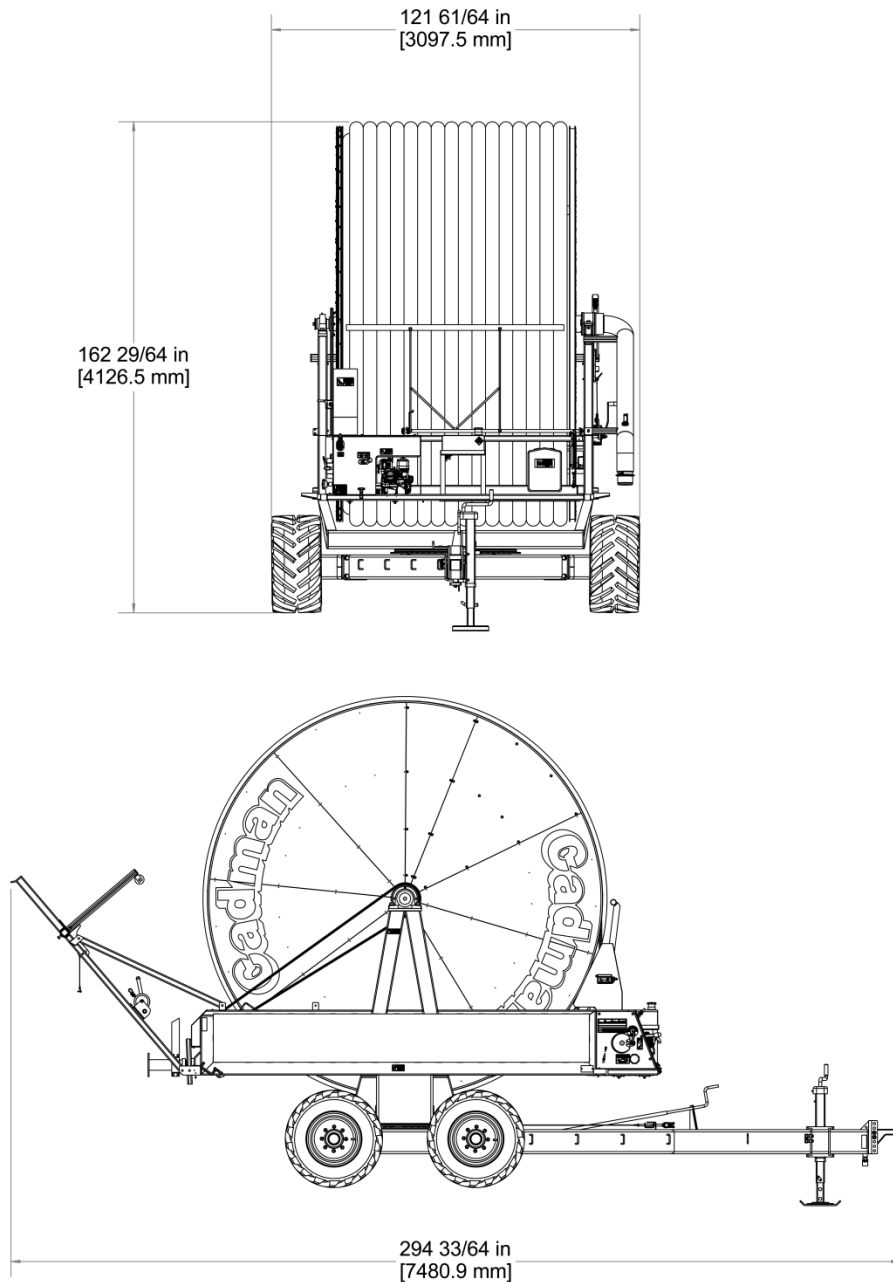


Figure 55 – 3300XLB, 3600 XLB Overall Dimensions

img-01378

The weight for an empty Cadman 3300 XLB is 15,400 lbs (6,802 kg).

The weight for an empty Cadman 3600 XLB is 16,250 lbs (7,178 kg).

5000 Series Dimensions and Weight (2 of 2)

The dimensions and weight shown on the following pages are only approximate, and are specific to the 4000 XL, 4500 WB, and 5000 WB

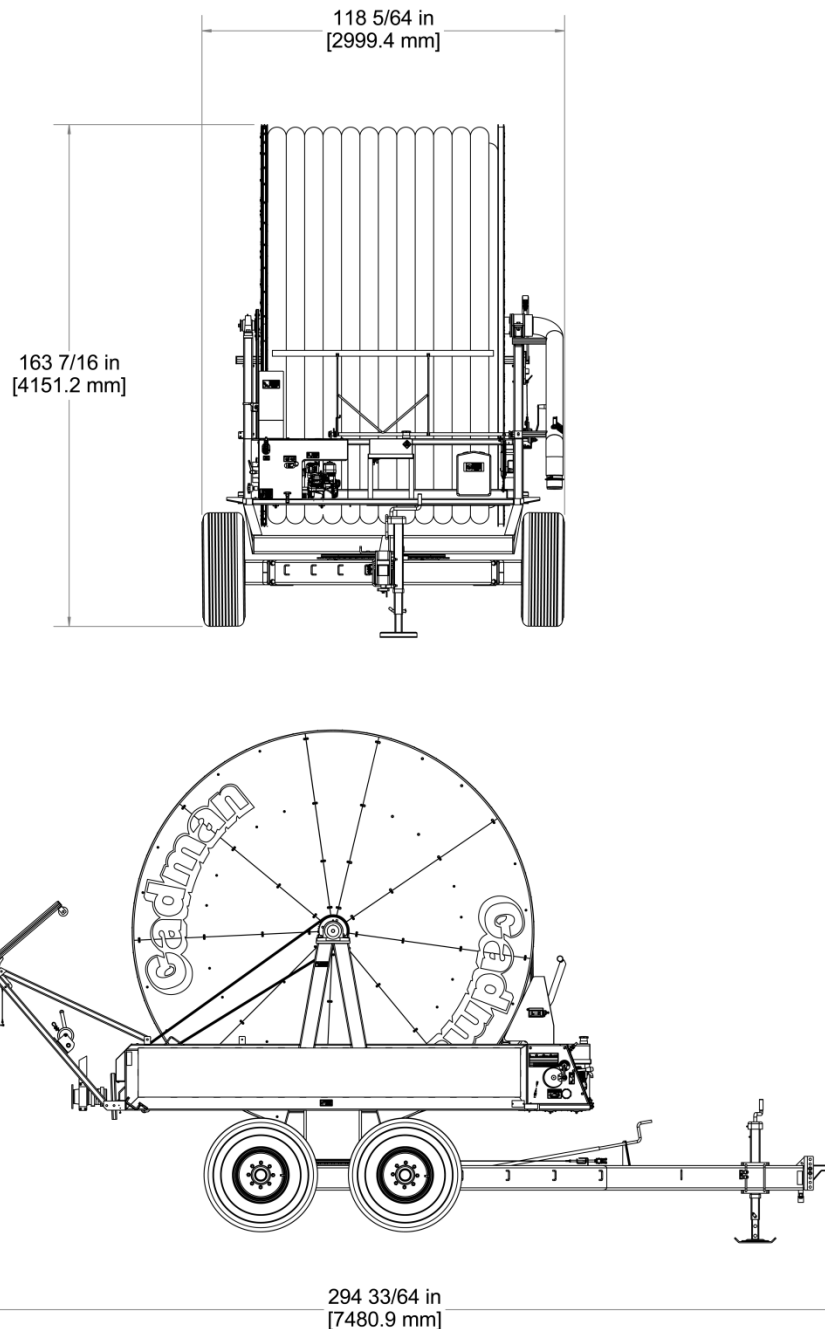


Figure 56 – 4000 XL, 4500 WB, 5000 WB Overall Dimensions

img-01379

The weight for an empty Cadman 4000 XL, 4500 WB, or 5000 WB traveller is 14,700 lbs (6,493 kg).

Useful Information

LENGTH

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

AREA

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

VOLUME

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

