Cadman

Mini-Travellers

OPERATOR'S, PARTS and MAINTENANCE MANUAL

2008 EDITION

Cadman
POWER EQUIPMENT
Limited
AGRICULTURAL MACHINERY & IRRIGATION EQUIPMENT
BOX 100, COURTLAND, ONT. CAN. N0J 1E0
Phone (519) 688 - 2222 Fax (519) 688 - 2100

TR-MAN-1421

Table of Contents

Cadman Mini-Travellers

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

Figure 1 – Cadman Mini-Travellers

img-00355-A

BEFORE operating your new **Cadman Mini-Traveller**, inspect the machine for any damage or parts which 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, 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.

Safety Precautions

Please take the time to read and **understand** this manual so that unnecessary errors and risks are avoided. If you have any questions or concerns, please contact **Cadman Power Equipment Limited** or your local dealer/distributor.

OPERATOR NOTE

Safety is just a word until put into practice.

Safety must be the first thing on your mind when operating any piece of machinery.

Failure to follow all safety instructions can result in serious injury or death to you or any spectators.

Remember…

SAFETY FIRST!

- **DO NOT** move or operate this machine until you have read and understand the 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 CERTAIN** all mechanical and hydraulic tension has been released before attempting any service on the machine.
- **MAKE CERTAIN** all water pressure has been released before removing supply lines or adjusting sprinkler. Pressurized water can be trapped within the supply hose when the automatic sprinkler shut off is engaged.
- **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.
- **STAY CLEAR** of power lines, contact with power lines with irrigation water WILL result in the machine being a conductor of electricity.
- **DO NOT** remove or alter any shielding on this machine.
- **BE CERTAIN** that the machine is securely anchored (using stabilizer legs) 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.
- **REGULAR INSPECTION** of your pipe 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 certain you fully understand and abide by the given instructions or warnings.

Safety Decals

Cadman Power Equipment Limited has determined the potential hazards and has labeled the machine accordingly. The safety decals on this machine are intended to warn the operator of potential hazards.

Figure 2 - Signal Word Panels

img-00340

Each safety decal on this machine contains a Signal Word Panel which indicates the degree of hazard. Definitions of the Signal Words are as noted below…

- **DANGER -** an imminently hazardous situation that, if not avoided, WILL result in death or serious injury.
- **WARNING -** a potentially hazardous situation that, if not avoided, could result in death or serious injury, and include hazards that are exposed when guards are removed.
- **CAUTION -** a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

It is important that these decals are properly maintained.

- keep all safety decals legible (remove dirt or debris)
- replace any damaged or illegible decals
- replace any missing decals
- if applicable, install the current safety decal specified by **Cadman Power Equipment Limited** on any components installed during repair

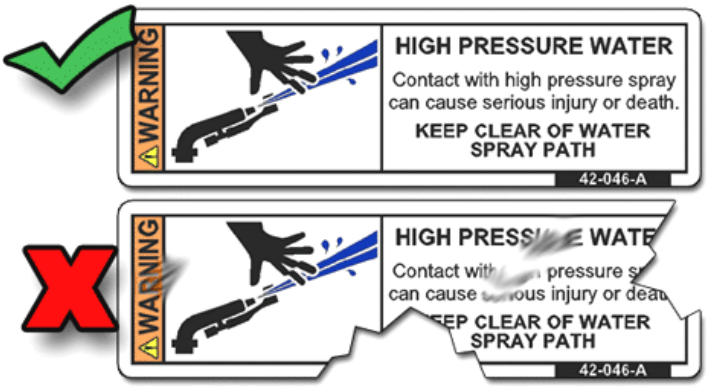


Figure 3 – Replace Decal

img-00131-A

Location of Safety Labels

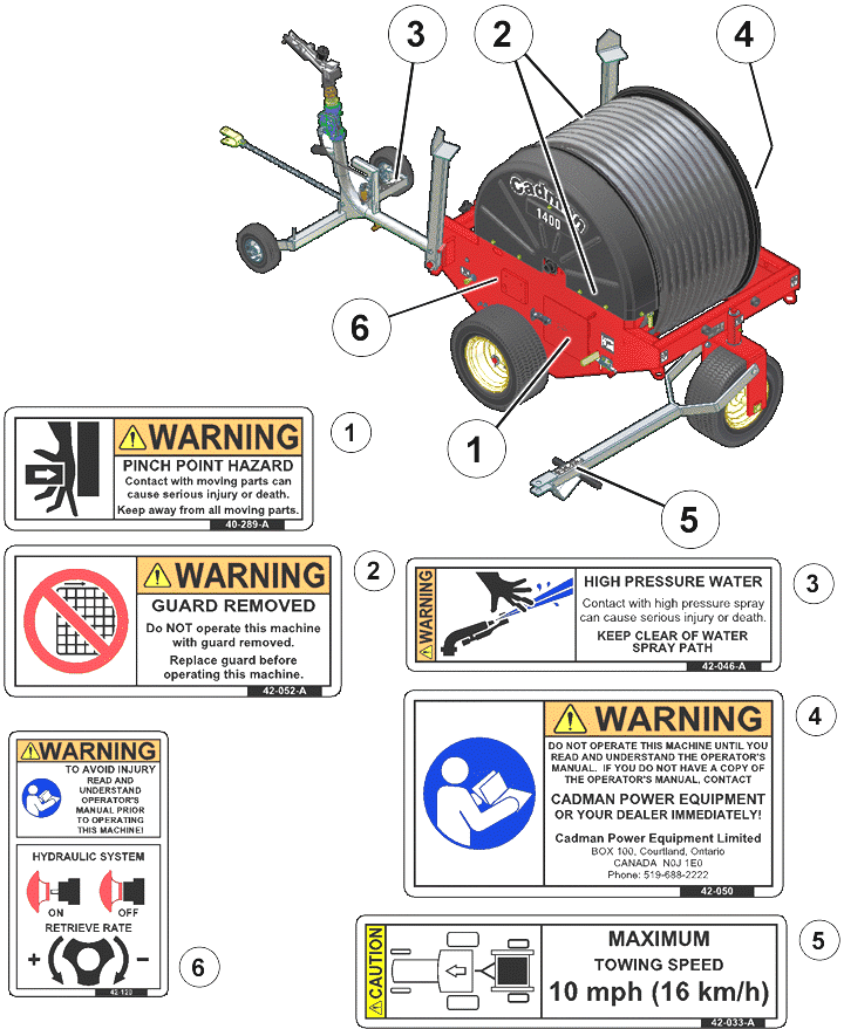


Figure 4 - Safety Labels

img-00341

To obtain the required replacement safety decals contact **Cadman Power Equipment Limited**. Re-install all decals in the proper location on the machine.

Planning Your Application

You will benefit from having an accurate plan to follow before you set-up or operate your equipment. When creating your plan, remember that a properly planned field layout will cover the most area with the least amount of set-up time.

Field Preparation:

1. **Determine the depth of application in inches.**

   - Irrigating deeper than the root zone is considered over watering. The most common depth for turf is between 0.2 – 0.3 inches (5 – 7.5mm).

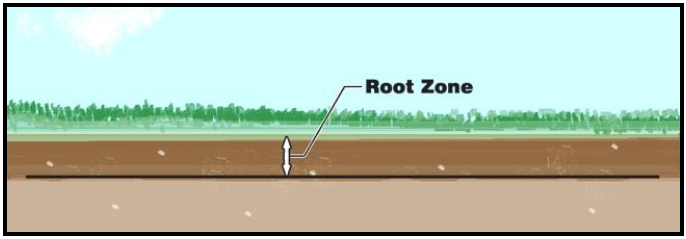
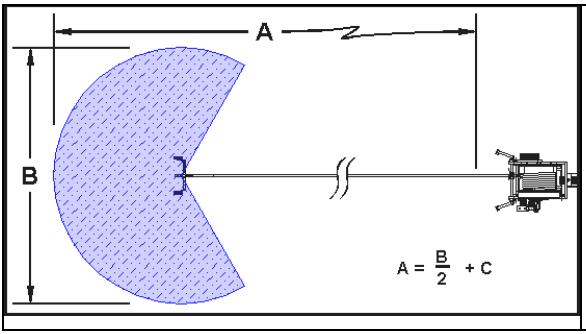


Figure 5 - Root Zone - Depth of Application

img-00197

2. **Divide your field into the least number of sections to obtain complete coverage.**

   - First determine the area you plan to irrigate. If your field width is greater than what can be achieved with one (1) pull you will be required to divide the field into the least number of sections to reduce setup time. Use your sprinkler performance data tables to determine the coverage of your **Cadman Mini-Traveller**. The sprinkler should be set up so that the spray diameter is covered plus sufficient overlap (beyond the edge of the crop) to provide adequate watering at the edge of the field.



Hose Length "C"

Model	Feet	Meters
1400	350	106.5
1800	380	115.5
2000S	320	97.5
2000XL	580	176.5
2100	400	121.5

Figure 6 - Reel Coverage

img-00193

You MUST leave as a MINIMUM one (1) coil of hose on the drum at all times. Failure to do so WILL result in hose damage.

- Customize your application by choosing the right nozzle and pressure combination to accommodate the area to be irrigated. Changing the nozzle size and adjusting the water pressure can improve your irrigation plan. For sprinkler information see "**Appendix A – Sprinkler Data"** on page 85.
- Avoid quarter circle (partial pattern) operations while irrigating. During quarter circle operation, sprinkler thrust tends to steer the sprinkler cart in the direction of the water being thrown. Reduce the size of the sprinkler nozzle and water pressure to reduce the diameter of spray. Remember the retrieve rate WILL require adjustment to accommodate the reduced flow.

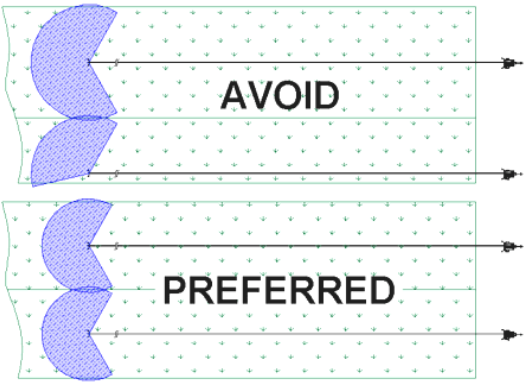


Figure 7 - Avoid Quarter Circle Applications

img-00199

- If conditions dictate that a quarter circle (partial pattern) pass is unavoidable, prepare the travel lane with a shallow trench for the hose to follow. Adding extra weight to the rear of the sprinkler cart is also beneficial. If these preparations are not possible or prove inadequate you must adjust your set up to allow for a full spray pattern.

OPERATOR NOTE

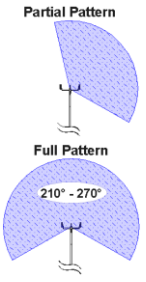
There are two (2) reasons for this.

(1)

Even divisions of the field allow maximum versatility to combat rising winds from any direction.

(2)

The sprinkler cart will track straight and be less affected by sprinkler thrust.



img-00200

- During normal operation, (full pattern the sprinkler operates to both sides of the cart) sprinkler thrust will correct this steering action automatically. The side to side movement of the cart should be no more than the width of the cart's rear tube. (where hose and sprinkler cart are connected)
- Cadman Power Equipment Limited does **NOT** recommend a curved hose pull out. This puts the equipment into a situation where it could become damaged. If a curved pull is necessary, pull a minimum of **100 feet (30.5 m)** of hose straight out from the machine prior to beginning a long gradual curve. The arc or curve must **NOT** form a ninety degree (90°) bend.

3. Use the following example to help determine your retrieve rate.

Determine the retrieve rate required to apply 0.50" of water to an area 100 feet in width using an 1800 model traveller fitted with a Rain Bird 85EHD sprinkler. The sprinkler has a $^{17}/_{32}$" **nozzle** operating at **25 PSI**.

- Using the Rain Bird sprinkler chart (**Appendix A – Sprinkler Data**" found on page 85), find the GPM listed. The chart tells you that the sprinkler is flowing 37.10 GPM with a wetted diameter of 132 feet.
- For proper coverage the sprinkler spray diameter should be 80% of the posted value of your sprinkler. Eighty percent (80%) of 132 feet is 105 feet.
- From Table 1 on page 11, determine the how long it should take to cover one (1) acre in minutes, by crossing the GPM (from above) by the required application of 0.50". The shaded block tells you it should take 388 minutes to cover one (1) acre.
- From Table 2 on page 11, determine the retrieve rate you need to obtain the desired application of 0.50" by crossing the time required to cover one acre (388 minutes) by the lane spacing (105 feet). The shaded block tells you to set the hose retrieve rate at 13 inches per minute.

Keep in mind that the charts should be used as a guide only. Always check the actual application amount with rain gauges to confirm your retrieve rate is correct.

PRECIPITATION RATE (ACRE INCHES)									
GPM	0.20	0.30	0.40	0.50	0.60	0.75	1.00	1.25	1.50
25	217	326	434	543	652	815	1086	1358	1629
35	155	233	310	388	465	582	776	970	1164
45	121	181	241	302	362	453	603	754	905
55	99	148	197	247	296	370	494	617	741
65	84	125	167	209	251	313	418	522	627
75	72	109	145	181	217	272	362	453	543
85	64	96	128	160	192	240	319	399	479
95	57	86	114	143	171	214	286	357	429
105	52	78	103	129	155	194	259	323	388
115	47	71	94	118	142	177	236	295	354
125	43	65	87	109	130	163	217	272	326
135	40	60	80	101	121	151	201	251	302
145	37	56	75	94	112	140	187	234	281
155	35	53	70	88	105	131	175	219	263

Table 1 - Minutes Required to Water One (1) Acre

LANE SPACING (Feet)									
Min/Acre	75	100	125	150	175	200	225	250	275
35	199	149	119	100	85	75	66	60	54
40	174	131	105	87	75	65	58	52	48
45	155	116	93	77	66	58	52	46	42
50	139	105	84	70	60	52	46	42	38
55	127	95	76	63	54	48	42	38	35
65	107	80	64	54	46	40	36	32	29
75	93	70	56	46	40	35	31	28	25
85	82	61	49	41	35	31	27	25	22
95	73	55	44	37	31	28	24	22	20
100	70	52	42	35	30	26	23	21	19
125	56	42	33	28	24	21	19	17	15
150	46	35	28	23	20	17	15	14	13
175	40	30	24	20	17	15	13	12	11
200	35	26	21	17	15	13	12	10	10
300	23	17	14	12	10	9	8	7	6
400	17	13	10	9	7	7	6	5	5
500	14	10	8	7	6	5	5	4	4
600	12	9	7	6	5	4	4	3	3
700	10	7	6	5	4	4	3	3	3
800	9	7	5	4	4	3	3	3	2
1000	7	5	4	3	3	3	2	2	2
1200	6	4	3	3	2	2	2	2	2
1400	5	4	3	2	2	2	2	1	1
1600	4	3	3	2	2	2	1	1	1

Table 2 - Retrieve Rate (inches per Minute)

4. **Determine the best position for your reel in each section.**

- The best start position for your reel is at the center of the furthest section away from the source of water. By doing this your subsequent setups will not require additional water source changes.

Ensure you abide by local by-laws and regulations for water usage. Cadman Power Equipment Limited recommends that you consult with your local water authority.

- Where field conditions permit, always attempt to pull the hose either up or down sloping terrain instead of operating on the side of a hill. If a side hill condition is unavoidable, provide a hilled trench as a guide for the hose and add extra weight to the sprinkler cart to prevent upset.

The hose will slide down the hill if a trench is not created. The hose will become much heavier once water is introduced. Failing to provide a trench will result in serious equipment damage and could result in you and/or your spectators being injured.

- Obstacles will play a big part in the planning process. If an obstacle interferes with the area to be irrigated an adjustment to the plan will be required.

Figure 8 - Obstacles in Plan

img-00234

The hose will naturally take the shortest path (a straight line). Without resistance such as a contour, trench or a furrow the hose will tend to straighten. The sprinkler cart will make contact with any obstacle if there is no resistance. Failure to provide a form of resistance will result in serious equipment damage and could result in you and/or your spectators being injured.

Equipment Set-up

Now that you have created a plan you are ready to set up your **Cadman Mini-Traveller** in the field. Complete the following instructions to prepare for irrigation.

Step 1

Following your plan, tow the machine to the first section.

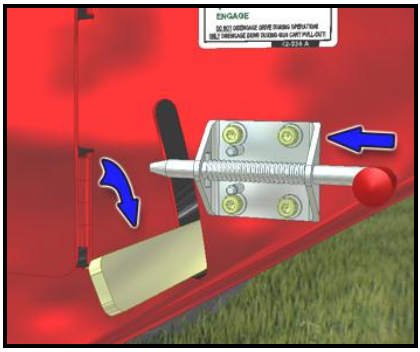


Figure 9 - Engage Drive System Prior to Transport

img-00335

It is important to verify that the drive system is engaged prior to moving your Cadman Mini-Traveller. Failure to do so can result in equipment damage.

Step 2

To allow for better coverage, park the reel 5 ft. (1.5m) minimum from the beginning of the section to be irrigated.

Keep the machine on firm and level ground.

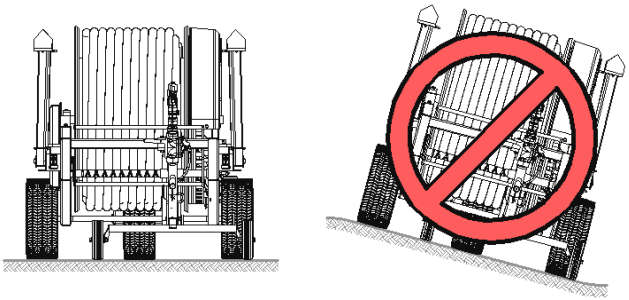


Figure 10 - Work on Firm and Level Ground (image exaggerated)

img-00330

Step 3

Stabilize your machine by fully engaging the fold down stabilizer legs.

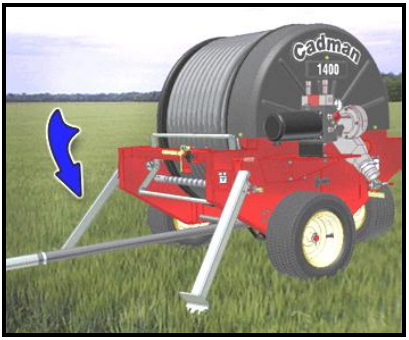


Figure 11 - Engage Stabilizers

img-00332

Never operate this machine without BOTH (2) stabilizer legs engaged. Failure to engage both stabilizer legs will result in serious equipment damage and potential for injuries to you and/or spectators.

Step 4

Disconnect your machine from the towing vehicle. Place the tongue of the machine so that it is parallel to the hose.

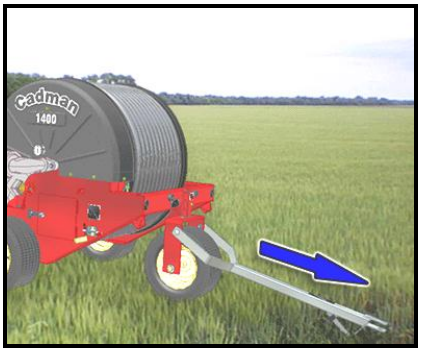


Figure 12 - Tongue Placement

img-00331

Never operate this machine without the tongue properly placed. Failure to place the tongue correctly can result in the machine moving erratically when pulling out the hose. This could result in equipment damage and potential for injuries to you and/or spectators.

Step 5

Disengage the Drive System.

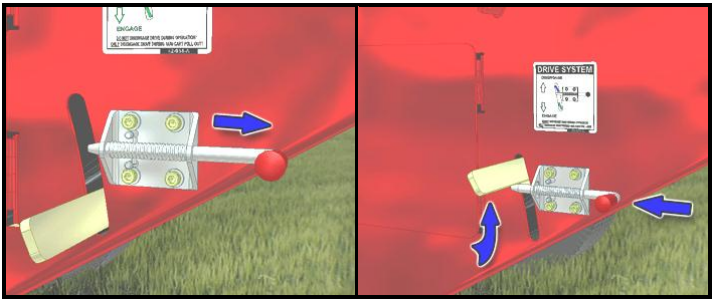


Figure 13 - Disengage Drive System

img-00333 & img-00334

Step 6

Lower the sprinkler cart from the transport bracket. On the 1400 simply lift the sprinkler cart by the handle and swing the transport latch. Lower the sprinkler cart to the ground. On 1800 thru 2100 machines you must lower the sprinkler cart using the winch. Before turning the handle, firmly grip the winch handle and disengage the ratchet pawl or engage it in the reverse direction. You may have to take in a small amount of belt to allow the ratchet pawl to unload. With a firm grip on the winch handle, slowly lower the sprinkler cart to the ground.

Figure 14 - Transport Latch

img-00342 & img-00343

Use extreme caution when operating the cart lift winch. NEVER let the winch freewheel to lower the sprinkler cart. Always have a firm grip on the handle during lowering and lifting of the sprinkler cart. Failure to follow these instructions will result in injury to you and/or spectators.

Step 7

Tow the sprinkler cart to the start point of irrigation. Always leave a minimum of one (1) wrap of hose on the drum. When pulling the hose out keep it straight. If obstacles require you to change your path, make the change gradual.

The hose will naturally take the shortest path. Without resistance such as a contour, trench or a furrow the hose will tend to straighten. You may have to adjust your irrigation plan to accommodate for obstacles. (Refer to **"Planning Your Application"** on page 8.)

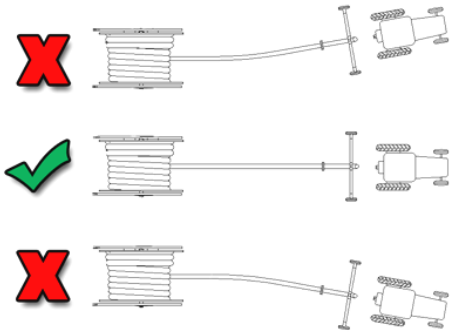


Figure 15 - Pull Out Hose Straight

img-00244

DO NOT exceed 3 mph (5 km/h) while pulling out the hose. DO NOT stop suddenly at the end of your travel lane. Slow gradually when nearing the end of the pull. Keep spectators away from the machine while pulling out the hose. Failure to follow these instructions may result in serious equipment damage and potential for injuries to you and/or spectators.

Step 8

Verify the sprinkler set up is correct. Install the correct nozzle and tighten the nozzle cone. Also at this time, set the part circle stops on the sprinkler. The sprinkler should be set behind the cart so that the travel path remains dry until the cart passes.

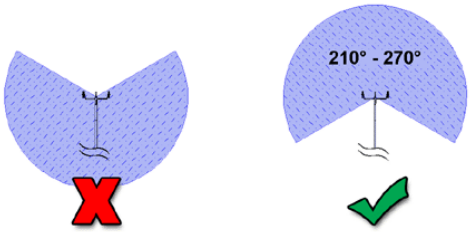


Figure 16 - Correct Pray Setting

img-00201

Step 9

Your 1000 Series Cadman Traveller is equipped with an auto sprinkler shut off system. This system will stop the flow of water to the sprinkler at the end of each retrieve cycle.

Disabled

If you would like to disable the automatic water shut off, turn the ball valve to the off position. Water will continue to flow once the sprinkler cart has been retrieved. No further sprinkler cart adjustments will be required.

Enabled

Once the sprinkler cart has been set up ensure the water shut off valve is disengaged. The valve trigger should be pulled away from the valve and valve button pushed in towards the hose end of the sprinkler cart. This will allow water flow to the sprinkler. When the sprinkler cart has been retrieved the valve trigger will shift the water shut off valve and stop the flow of water to the sprinkler.

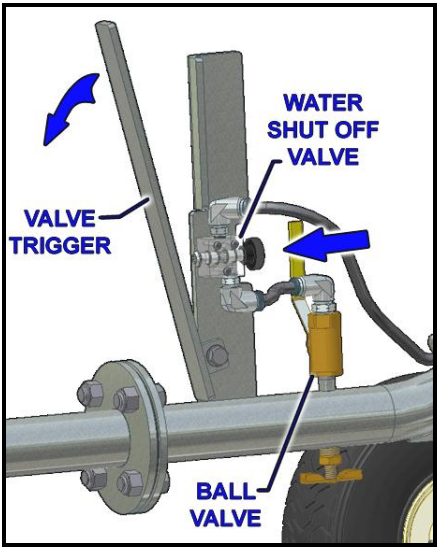


Figure 17 - Water Shut Off Valve

img-00223

When the Auto Shut off System is used, there WILL be a pressure spike within the supply circuit. Take the appropriate precautions to prevent equipment damage and/or injury to you and/or spectators.

If you do not have appropriate precautions in place DO NOT use this feature!

Step 10

Return to the machine and inspect the hose remaining on the drum. The hose should be tightly coiled and not loose. If the hose is loose, tighten the coils so that they form a neatly packed spool. Rotate the drum if necessary.

The most common cause of the hose being loose is poor brake tension. If the brake tension requires adjustment refer to the **"Brake Adjustment Instructions"** found on page 81.

Figure 18 - Spool Condition

img-00245

Step 11

Inspect the indexer. The hose should travel in a straight line through the hose guide. If the hose is angled through the indexer refer to the **"Indexer Adjustment Instructions"** found on page 82

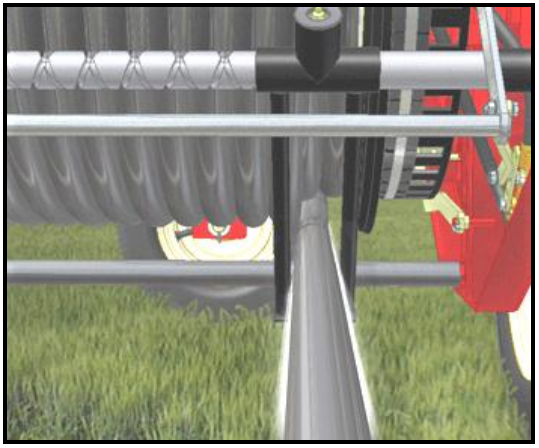


Figure 19 - Indexer / Hose Alignment

img-00337

Step 12

Before operating your traveller it is important to check the hydraulic power pack's oil level. The level should be $^{3}/_{4}$" (19mm) from the top of the tank. Only use clean oil and pouring tools to prevent contamination.

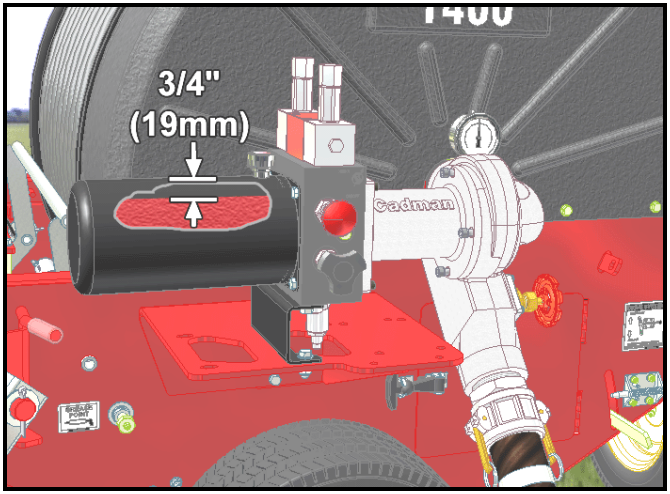


Figure 20 - Check Hydraulic Oil level

img-00372

Failure to use clean oil as recommended by Cadman Power Equipment Limited WILL result in damage to the hydraulic power pack.

Beginning Irrigation

Once you have successfully set up your **Cadman Mini-Traveller** you can begin irrigating.

Step 1

Clear the area of operation of spectators prior to starting irrigation.

Figure 21 - Clear Irrigation Zone

img-00336

The irrigation sprinkler projects a large volume of pressurized water. Contact with the sprinkler's discharge will result in injury. Avoid the area where irrigation is taking place.

Step 2

Engage the drive system. Ensure the lock pawl is engaged.

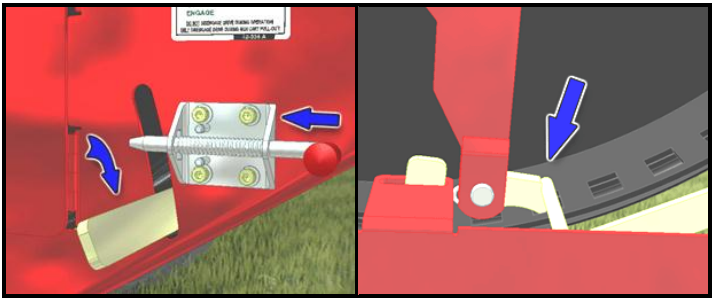


Figure 22 - Engage Drive System

img-00335 & img-00339

Step 3

Ensure the red hydraulic control valve (1) is in the off position (pushed in). This will prevent the retrieve cycle from beginning. For Cadman Hydradrive Turbine Option, ensure the by-pass valve (2) is fully opened by turning the valve handle counter clockwise.

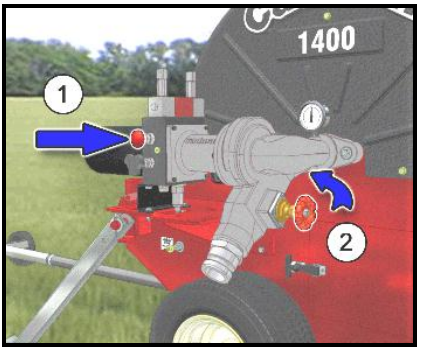


Figure 23 - Disengage Control Valve

img-00338

Step 4

Connect the main water supply line to your machine. Make sure the hose sweeps in a gentle arc away from the control area of the machine.

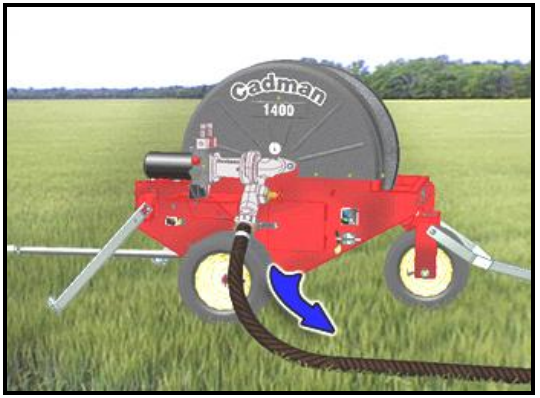


Figure 24 - Supply Layout

img-00348

Step 5

GRADUAL pressurization of the system may now being. Keep the pressure low (under 20 psi [138 bar]) until **ALL** air is purged from the system and a steady stream is flowing from the sprinkler nozzle. **AFTER** all the air is purged from the system, pressure may be slowly raised up to the maximum operating pressure of 150 psi (10.4 bar).

Now you are ready to begin the hose retrieval. See individual instruction based on your drive option.

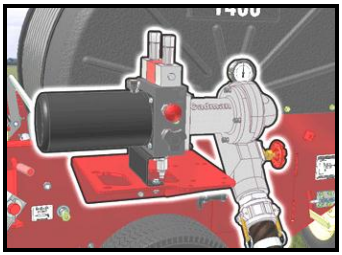


Figure 25 - Cadman Hydradrive Turbine Option on page 23

img-00349

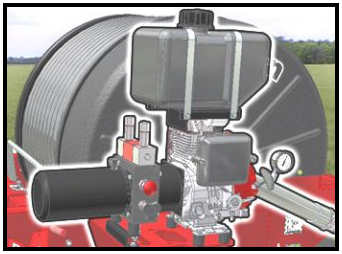


Figure 26 - Cadman Engine Drive Option on page 25

img-00350

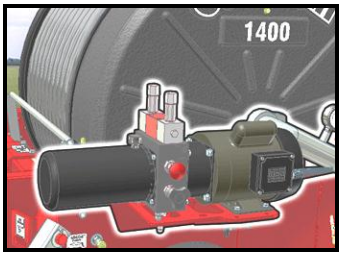


Figure 27 - Cadman Electric Drive Option on page 28

img-00351

Cadman Hydradrive Turbine Retrieval

Complete the following steps to start hose retrieval with the Cadman Hydradrive Turbine …

Step 1

Activate the hydraulic system by pulling the red control knob (1).

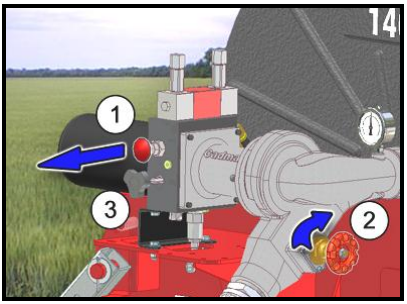


Figure 28 - Engage Control Valve and Rotate By-pass Valve

img-00356

Step 2

Turn the black control knob (3) counter clockwise (ccw) to the fully open position

Turn the by-pass valve clockwise until the drum begins to rotate. Continue to turn the by-pass valve until the desired retrieve rate has been achieved. In some cases the turbine bypass (2) may need to be turned in, and then the black control knob (3) turned down to set the retrieve rate. Turning the valve clockwise (cw) will reduce the retrieval speed; counter clockwise (ccw) rotation will increase the speed.

With the traveller drive system engaged mark the hose and measure the distance covered in one minute. This will provide an accurate retrieve rate.

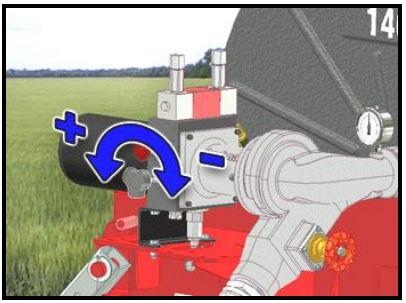


Figure 29 - Adjust Retrieval Rate

img-00357

Step 3

Verify the Shut off System is in working order. Rotate the shut off bar. If the retrieval stops, release the shut off bar to continue the retrieval. If not, stop use of the equipment and contact Cadman Power Equipment Limited or your dealer for further instructions.

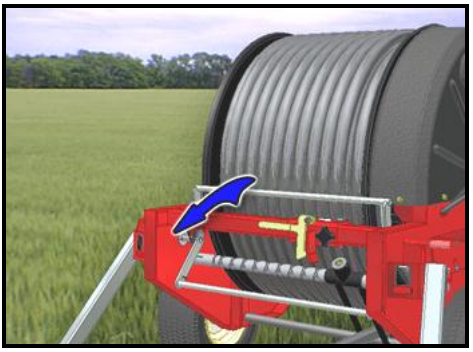


Figure 30 - Verify Shut off System

img-00358

Step 4

Allow the machine to complete the irrigation cycle. Push the red control knob in, to stop the hydraulic system.

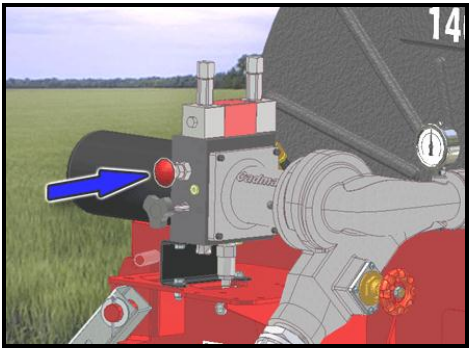


Figure 31 - Stop Hydraulic System

img-00381

Step 5

Continue to "**Completing Irrigation**" on page 31.

Cadman Engine Drive Retrieval

Complete the following steps to start hose retrieval with the Cadman Engine Drive …

Cadman Power Equipment Limited recommends that you read and understand the Honda Engine owner's manual prior to operating your Mini-Traveller. Please follow all procedures and warnings prescribed in the Honda engine owner's manual.

Step 1

Before starting the pump, check the fuel and oil level of the Honda engine and refill if necessary.

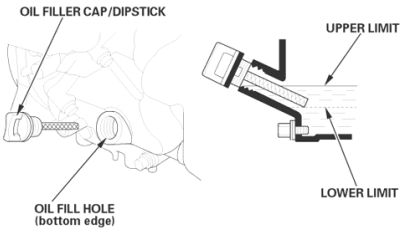


Figure 32 - Check Oil Level

img-00382

Step 2

Start the engine power pack. Adjust the throttle to the minimum selection. Turn the ignition to the on position and adjust the choke. Open the fuel valve. Pull the recoil cable. Once the engine is running adjust the choke and throttle to the required levels.

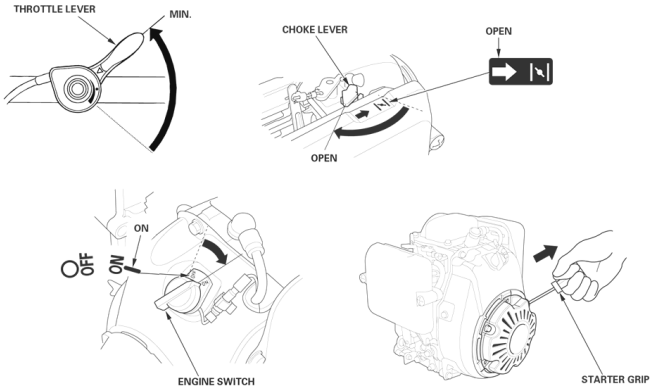


Figure 33 - Engine Start

img-00344

The engine power pack must only be run in a well ventilated area. The engine produces carbon-monoxide which has NO SMELL, NO TASTE and NO COLOUR. Carbon monoxide can poison and kill with little or no warning!

Step 3

Activate the hydraulic system by pulling the red control knob.

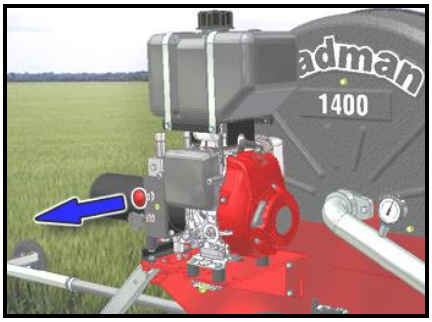


Figure 34 - Engage Drive System

img-00352

Step 4

With the traveller drive system engaged mark the hose and measure the distance covered in one minute. This will provide an accurate retrieve rate.

Adjust the retrieval rate by turning the black control knob. Turning the valve clockwise will reduce the retrieval speed; counter clockwise rotation will increase the speed. If the maximum retrieval rate needs to be increase more than the control knob can provide try increasing the RPM of the engine.

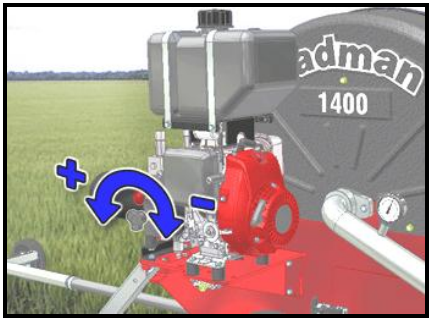


Figure 35 - Adjust Retrieval Rate

img-00354

Step 5

Verify the Shut off System is in working order. Rotate the shut off bar. If the retrieval stops, release the shut off bar to continue the retrieval. If not, stop use of the equipment and contact Cadman Power Equipment Limited or your dealer for further instructions.

Figure 36 - Verify Shut off System

img-00353

Step 6

Allow the machine to complete the irrigation cycle. Push the red control knob in, to stop the hydraulic system.

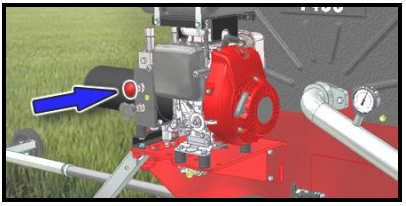


Figure 37 - Stop Hydraulic System

img-00383

Step 7

Reduce the throttle to idle speed, then turn the engine switch to the off position and close the fuel valve.

Always shut off the fuel valve after each use. Failure to shut the fuel valve will result in engine damage.

Step 8

Continue to "**Completing Irrigation**" on page 31.

Cadman Electric Drive Retrieval

Complete the following steps to start hose retrieval with the Cadman Electric Drive …

Step1

Connect the power cord to a Ground Fault Circuit Interrupted (GFCI) protected outlet.

Failure to connect this equipment to a proper GFCI protected circuit could result in serious injury or death to you and/or spectators. It is recommended that a certified electrician verify the GFCI circuit is properly installed.

Step 2

Press the green RESET button on the power plug to connect power. A red mechanical indicator will show that the circuit is powered (live).

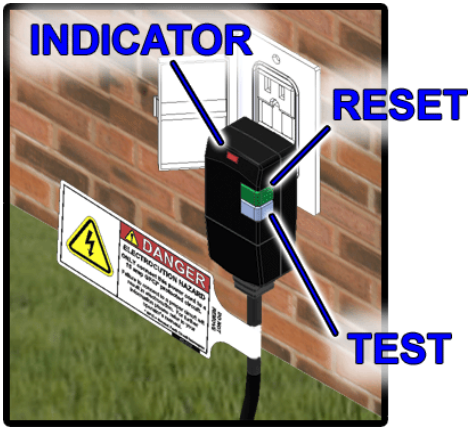


Figure 38 - Power Plug

img-00360

Step 3

Press the blue TEST button on the power plug. This should immediately disconnect power to the circuit. The mechanical indicator should now show a black window.

If the circuit is not disconnected, STOP and disconnect the power plug from the GFCI outlet and discontinue operation of this equipment, for further information contact Cadman Power Equipment Limited or your dealer. Failure to discontinue operation of this equipment could result in equipment damage and may result in serious injury to you and/or spectators.

Step 4

Turn the power switch to the “ON” position.

Step 5

Activate the hydraulic system by pulling the red control knob.

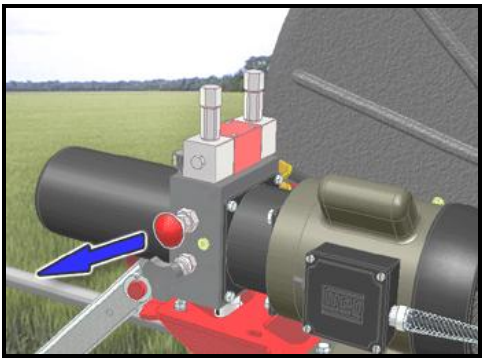


Figure 39 - Engage Drive System

img-00369

Step 6

With the traveller drive system engaged mark the hose and measure the distance covered in one minute. This will provide an accurate retrieve rate.

Adjust the retrieval rate by turning the black control knob. Turning the valve clockwise will reduce the retrieval speed; counter clockwise rotation will increase the speed.

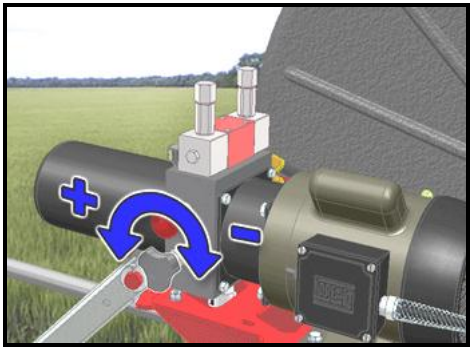


Figure 40 - Adjust Retrieve Rate

img-00361

Step 7

Verify the Shut off System is in working order. Rotate the shut off bar. If the retrieval stops, release the shut off bar to continue the retrieval. If not, stop use of the equipment and contact Cadman Power Equipment Limited or your dealer for further instructions.

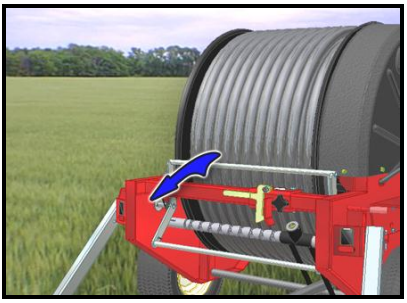


Figure 41 - Verify Shut off System

img-00358

Step 8

Allow the machine to complete the irrigation cycle. Push the red control knob in to stop the hydraulic system.

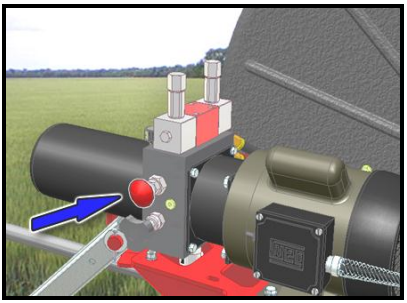


Figure 42 - Stop Hydraulic System

img-00384

Step 9

Turn the power switch to the “OFF” position.

Step 10

Continue to “**Completing Irrigation**” on page 31.

Completing Irrigation

Step 1

Once the sprinkler cart has returned to the traveller, turn off the water supply. Depressurize the supply line.

Water under pressure can be very dangerous. Please use proper methods to bleed the supply line prior to disconnecting from the traveller. Failure to properly bleed the pressure can result in equipment damage and potential for injuries to you and/or spectators.

Step 2

Disconnect the supply line and power supply *(if applicable)*, then prepare the machine for transport by engaging the drive system, raising the stabilizers and lifting the sprinkler cart.

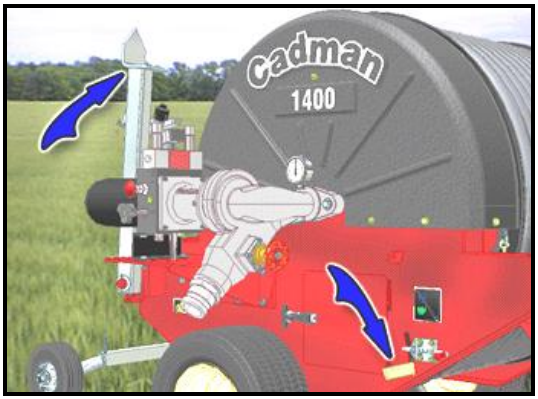


Figure 43 - Prepare for Transport

img-00359

DO NOT move your Cadman Mini-Traveller without properly preparing it for transport. Failure to engage the drive system, raise the stabilizers and lift the sprinkler cart will result in equipment damage and may result in injury to you and/or spectators.

Step 3

Complete any required maintenance as prescribe in the "**Required Maintenance**" section found on page 76.

Booster Pumps

In some cases you may be required to use a booster pump to increase water flow or pressure for your irrigation needs. **Cadman Power Equipment Limited** offers booster pump packages to meet your requirements. To operate your booster pump complete the following instructions:

Step 1

Connect your water supply to the booster pump suction.

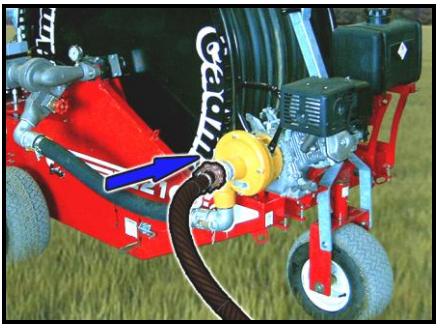


Figure 44 - Connect Water Supply

img-00373

If you are using the automatic sprinkler shut off system you will be required to take precautions to prevent pressure spikes. It is required that an automatic pump shut off system be used.

Step 2

Before starting the pump, check the fuel and oil level of the Honda engine and refill if necessary.

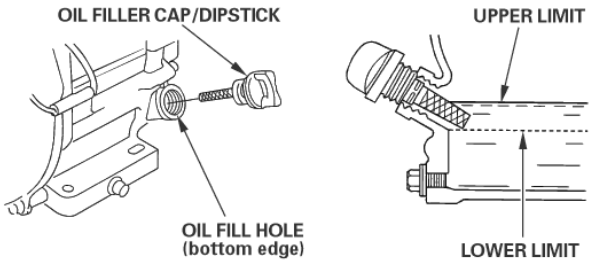


Figure 45 - Check Oil Level

img-00370

Step 3

Prime the pump to fill the casing and suction line with water.

WARNING: DO NOT run the pump before priming it, since the seal and impeller could become permanently damaged.

Step 4

Start the Honda Engine. Adjust the throttle to the minimum selection. Turn the ignition to the on position and adjust the choke. Open the fuel valve. Pull the recoil cable. Once the engine is running adjust the choke and throttle to the required levels.

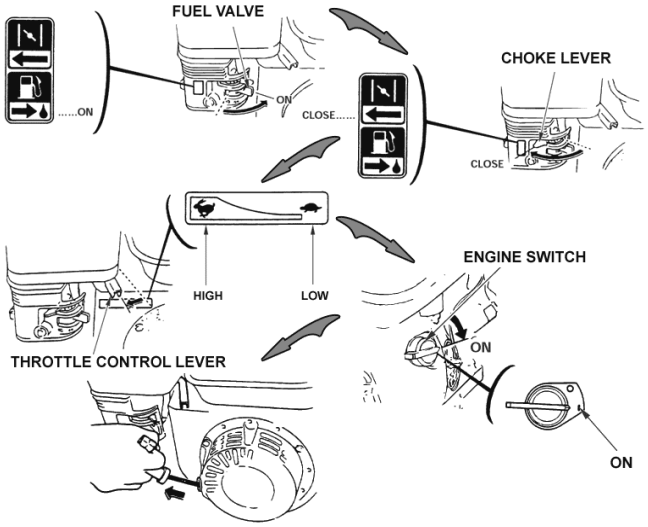


Figure 46 - Engine Start-up

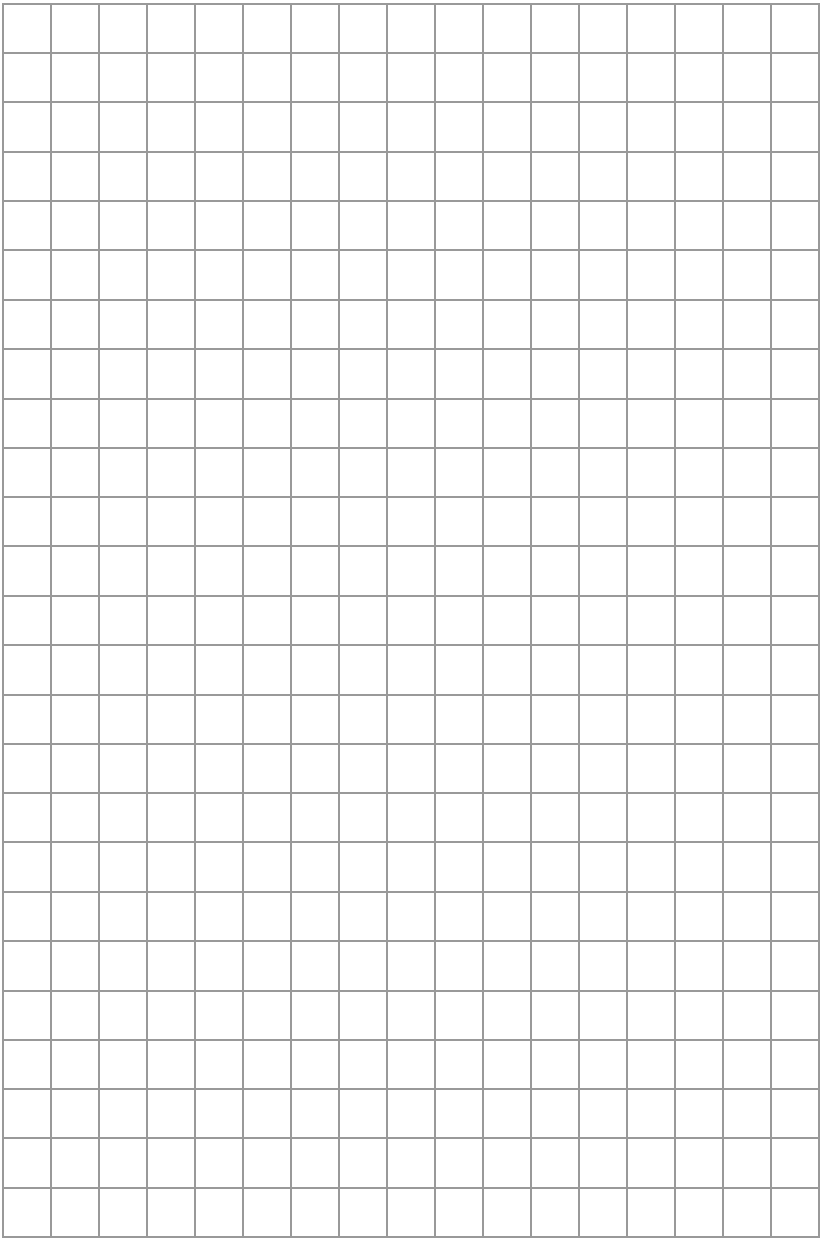
img-00371

Allow the engine to run for half (1/2) a minute. If the pump does not deliver water by this time, **STOP** the engine and repeat the priming operation. Several attempts may be required to purge the air in the suction line.

Always shut off the fuel valve after each use. Failure to shut the fuel valve will result in engine damage.

The engine power pack must only be run in a well ventilated area. The engine produces carbon-monoxide which has NO SMELL, NO TASTE and NO COLOUR. Carbon monoxide can poison and kill with little or no warning!

Notes:

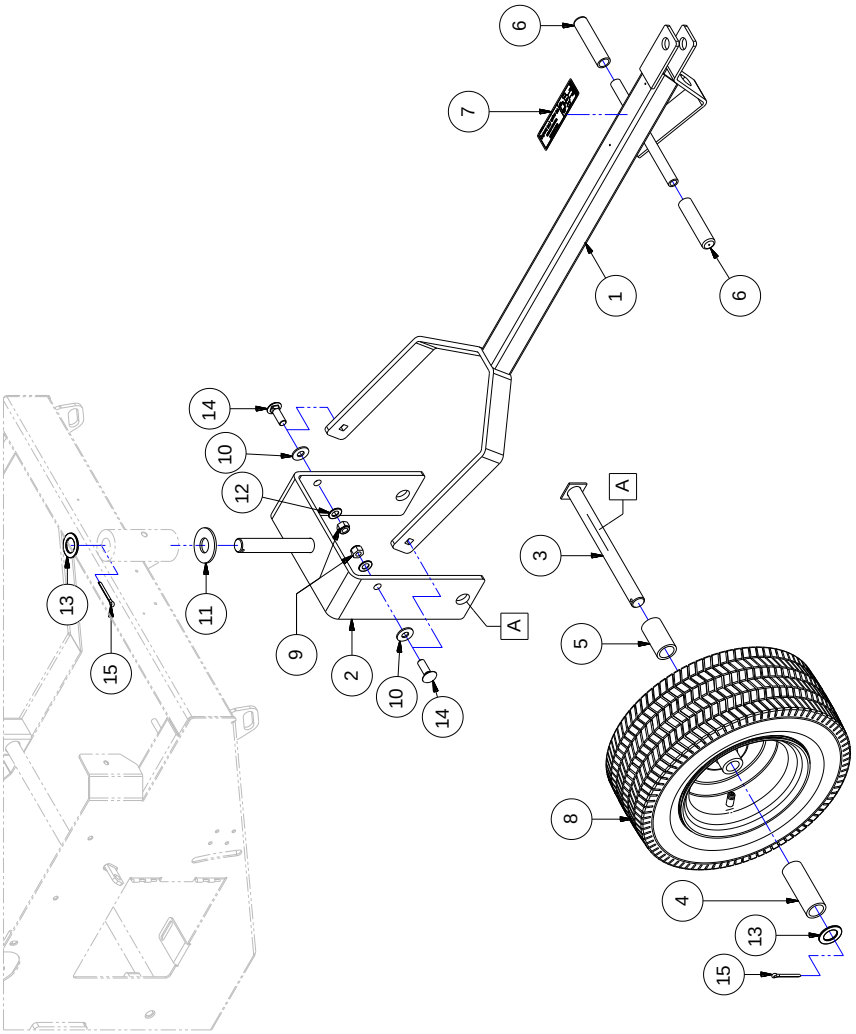


Parts Section

Symbol Legend

↳	Model Variations
•	Standard Equipment
○	Optional Equipment
◆	Complete Assembly

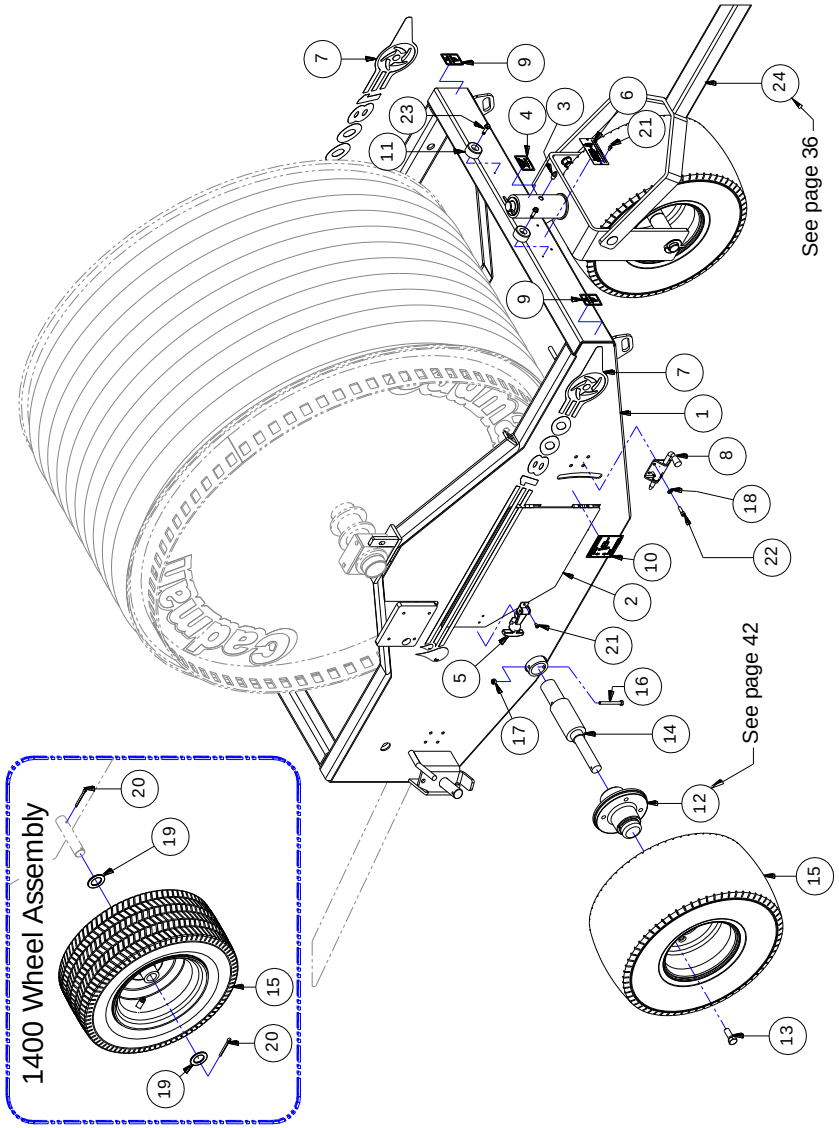
Tongue Assembly



Tongue Assembly

Item	Description	1400	1800	2000S	2000XL	2100	Part Number	Qty
◆	**TONGUE ASSEMBLY**	•					**TR-TNG-1400**	◆
◆	**TONGUE ASSEMBLY**		•	•	•	•	**TR-TNG-1800/2100**	◆
1	TONGUE WELDMENT	•	•	•	•	•	27-200	1
2	FRONT YOKE WELDMENT	•	•	•	•	•	27-604	1
3	AXLE WELDMENT - FRONT HUB	•	•	•	•	•	27-618-B	1
4	SPACER - 1.50 X 0.19W X 4.19	•					27-651	1
↳	SPACER – 1.50 X 0.19W X 3.28		•	•	•	•	28-625	1
5	SPACER - 1.50 X 0.19W X 2.69	•					27-652	1
↳	SPACER – 1.50 X 0.19W X 3.28		•	•	•	•	28-625	1
6	HAND GRIP - 0.75 X 4.00	•	•	•	•	•	42-019	2
7	LABEL - MAX TOW SPEED	•	•	•	•	•	42-033-A	1
8	WHEEL ASSEMBLY - 16 X 6.5	•					55-145	1
↳	WHEEL ASSEMBLY - 18 X 8.5		•	•	•	•	55-150	1
9	NUT LOCK - 1/2-13 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC050-13	2
10	WASHER FLAT - 1/2 STAINLESS STEEL	•	•	•	•	•	88-WSR-FLT050	2
11	WASHER FLAT - 1 IN. STAINLESS STEEL	•	•	•	•	•	88-WSR-FLT100	1
12	WASHER SAE - 1/2 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE050	2
13	WASHER SAE - 1.00 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE100	2
14	BOLT CARRIAGE - 1/2-13 X 1.50 LONG	•	•	•	•	•	90-BLT-CG05013X150	2
15	COTTER PIN - 3/16 X 1.75 LONG	•	•	•	•	•	90-PIN-CT019X175	2

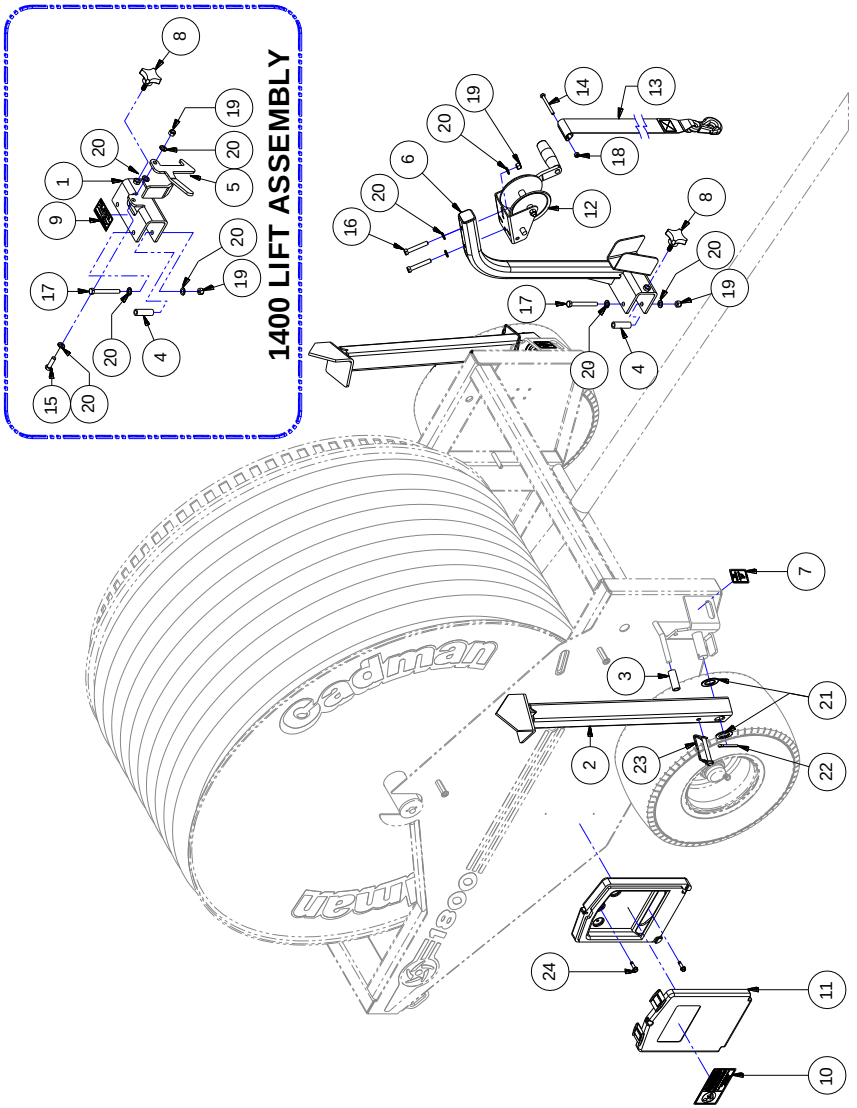
Frame Assembly – Front



Frame Assembly – Front

Item	Description	1400	1800	2000S	2000XL	2100	Part Number	Qty
1	FRAME WELDMENT	•					27-400-B	1
↳	FRAME WELDMENT		•	•			29-400-A	1
↳	FRAME WELDMENT				•	•	28-400-A	1
2	DOOR WELDMENT	•					27-631	1
↳	DOOR WELDMENT		•	•	•	•	29-613	1
3	GREASE FITTING - 1/8 NPT	•	•	•	•	•	40-001	1
4	LABEL - GREASE POINT	•	•	•	•	•	40-041-A	1
5	RUBBER LATCH KIT	•	•	•	•	•	40-217	1
6	CADMAN SERIAL NUMBER TAG	•	•	•	•	•	40-238	1
7	PANEL DECAL - 1800 L & R		•				40-530-1800-A	1
↳	PANEL DECAL - 2000S L & R			•			40-530-2000-A	1
↳	PANEL DECAL - 2000XL L & R				•		40-530-2000XL-A	1
↳	PANEL DECAL - 2100 L & R					•	40-530-2100-A	1
8	SPRING LATCH WITH 3/8 ROD	•	•	•	•	•	40-608	1
9	LABEL - TIE DOWN POINT	•	•	•	•	•	40-947	2
10	LABEL - DRIVE SYSTEM	•	•	•	•	•	42-034-A	1
11	RUBBER BUMPER	•	•	•	•	•	42-063	2
12	4 BOLT HUB ASS'Y - 1000 #	•	•	•	•	•	55-002	2
13	BOLT WHEEL - 1/2-20 X 60 DEG		•	•	•	•	55-007-60	8
14	SPINDLE - 2.0" X 13.50"	•	•	•	•	•	55-148-B	2
15	WHEEL ASSEMBLY - 16 X 6.5	•					55-145	2
↳	WHEEL ASSEMBLY - 18 X 8.5		•	•			55-151	2
↳	WHEEL ASSEMBLY - 20 X 10.0				•	•	55-149	2
16	BOLT - 1/4-20 X 2.50 STAINLESS STEEL	•	•	•	•	•	88-BLT-02520X250	2
17	NUT LOCK -1/4-20 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC025-20	2
18	WASHER LOCK - 1/4 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOC025	4
19	WASHER SAE - 1.00 STAINLESS	•					88-WSR-SAE100	4
20	COTTER PIN, 3/16 X 1.75 LONG	•					90-PIN-CT019X175	4
21	RIVET - 3/16 X 3/8 LONG	•	•	•	•	•	90-RIV-019X038	6
22	SOCKET CAP SCREW - 1/4-20 X 075	•	•	•	•	•	90-SCR-SH02520X075	4
23	SCREW TEK - 1/4 X 1.00	•	•	•	•	•	90-SCR-TEK025X100	2
24	TONGUE ASSEMBLY	•					TR-TNG-1400	1
↳	TONGUE ASSEMBLY		•	•	•	•	TR-TNG-1800-2100	1

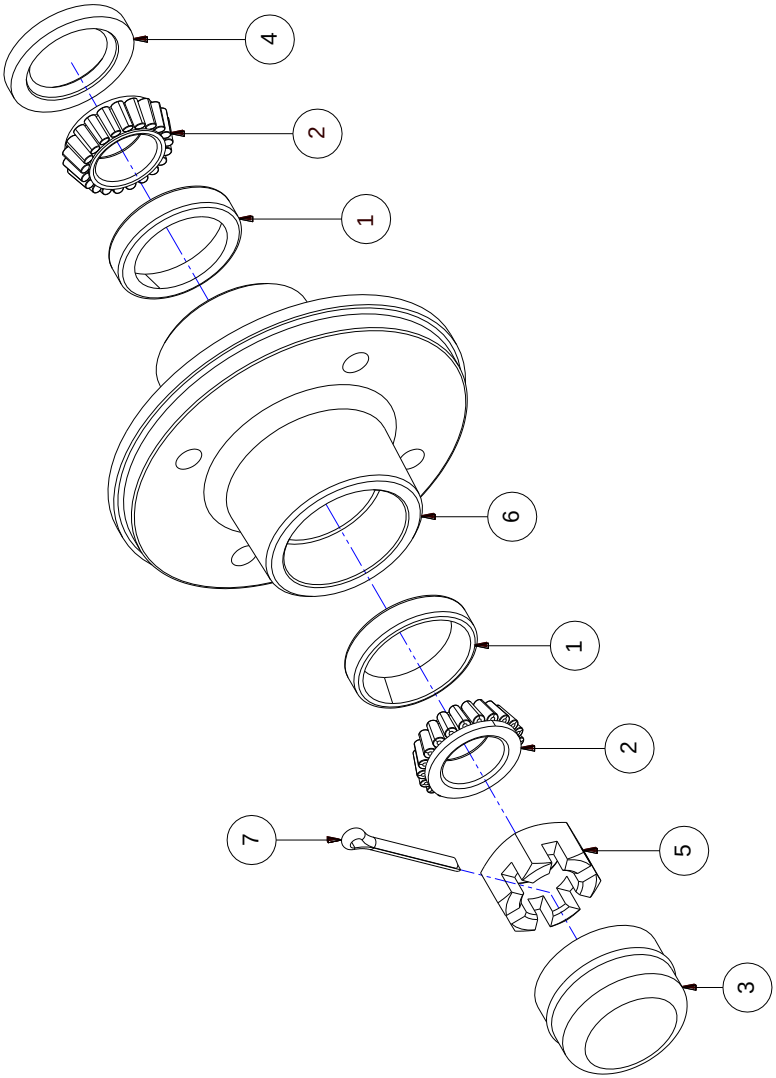
Frame Assembly – Rear



Frame Assembly – Rear

Item	Description	1400	1800	2000S	2000XL	2100	Part Number	Qty
1	TRANSPORT BRACKET - SPRINKLER CART	•					27-609	1
2	STABILIZER LEG WELDMENT	•	•	•	•	•	27-610-A	2
3	STABILIZER BUMPER	•	•	•	•	•	27-635	2
4	SPACER - 2 IN.	•	•	•	•	•	27-643	2
5	TRANSPORT LATCH - PLATED	•					27-645-A	1
6	LIFT - SPRINKLER CART		•	•	•	•	28-627	1
7	LABEL - TIE DOWN POINT	•	•	•	•	•	40-947	2
8	CONTROL KNOB - 3/8-16 X 1 STUD	•	•	•	•	•	42-025	1
9	LABEL - SPRINKLER CART TRANS.	•					42-040	1
10	LABEL - OPERATOR MANUAL	•	•	•	•	•	42-050	1
11	MANUAL PAK - SMALL	•	•	•	•	•	42-070	1
12	WINCH - #600		•	•	•	•	42-093	1
13	CART LIFT STRAP - 2" X 3'		•	•	•	•	42-103	1
14	BOLT GR. 8 - 1/4-20 X 2.50		•	•	•	•	89-BLT-02520X250	1
15	BOLT - 3/8-16 X 1.25 STAINLESS STEEL	•					88-BLT-03816X125	1
16	BOLT - 3/8-16 X 2.25 STAINLESS STEEL		•	•	•	•	88-BLT-03816X225	2
17	BOLT - 3/8-16 X 3.25 STAINLESS STEEL	•	•	•	•	•	88-BLT-03816X325	2
18	NUT LOCK - 1/4-20 STAINLESS STEEL		•	•	•	•	88-NUT-LOC025-20	1
19	NUT LOCK - 3/8-16 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC038-16	5
20	WASHER SAE - 3/8 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE038	11
21	WASHER SAE - 1.00 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE100	4
22	COTTER PIN, 3/16 X 1.75 LONG	•	•	•	•	•	90-PIN-CT019X175	2
23	QUICK PIN - 3/8 X 2 1/2 LONG	•	•	•	•	•	90-PIN-QD038X250	2
24	SCREW TEK - 1/4 X 1.00	•	•	•	•	•	90-SCR-TEK025X100	2

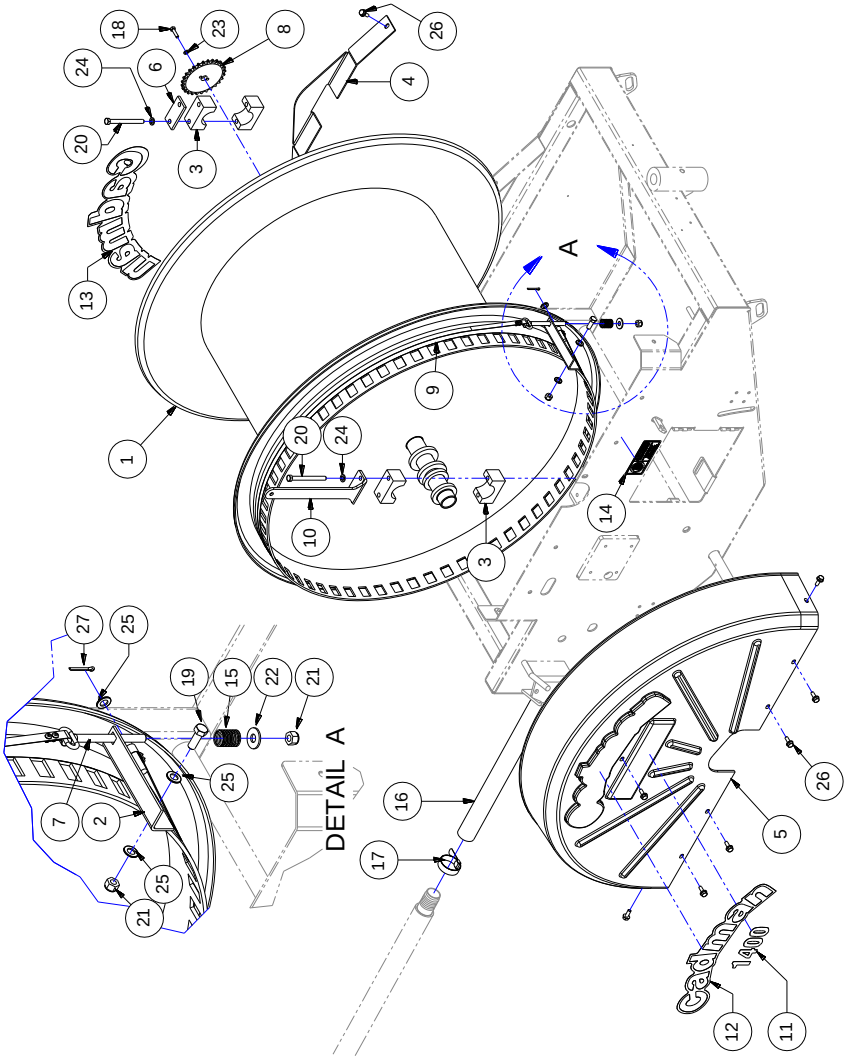
Wheel Hub Assembly – 1800 ⇨ 2100



Wheel Hub Assembly – 1800 ⇨ 2100

Item	Description	1400	1800	2000S	2000XL	2100	Part Number	Qty
◆	**WHEEL HUB ASSEMBLY**		•	•	•	•	**55-002**	◆
1	BEARING-CUP - #1000 HUB		•	•	•	•	55-153	2
2	BEARING-CONE - #1000 HUB		•	•	•	•	55-154	2
3	DUST CAP - #1000 HUB		•	•	•	•	55-155	1
4	GREASE SEAL - #1000 HUB		•	•	•	•	55-156	1
5	CASTLE NUT - #1000 HUB		•	•	•	•	55-157	1
6	HUB - #1000 HUB		•	•	•	•	55-158	1
7	COTTER PIN - 3/16 X 1.75 LONG		•	•	•	•	90-PIN-CT019X175	1

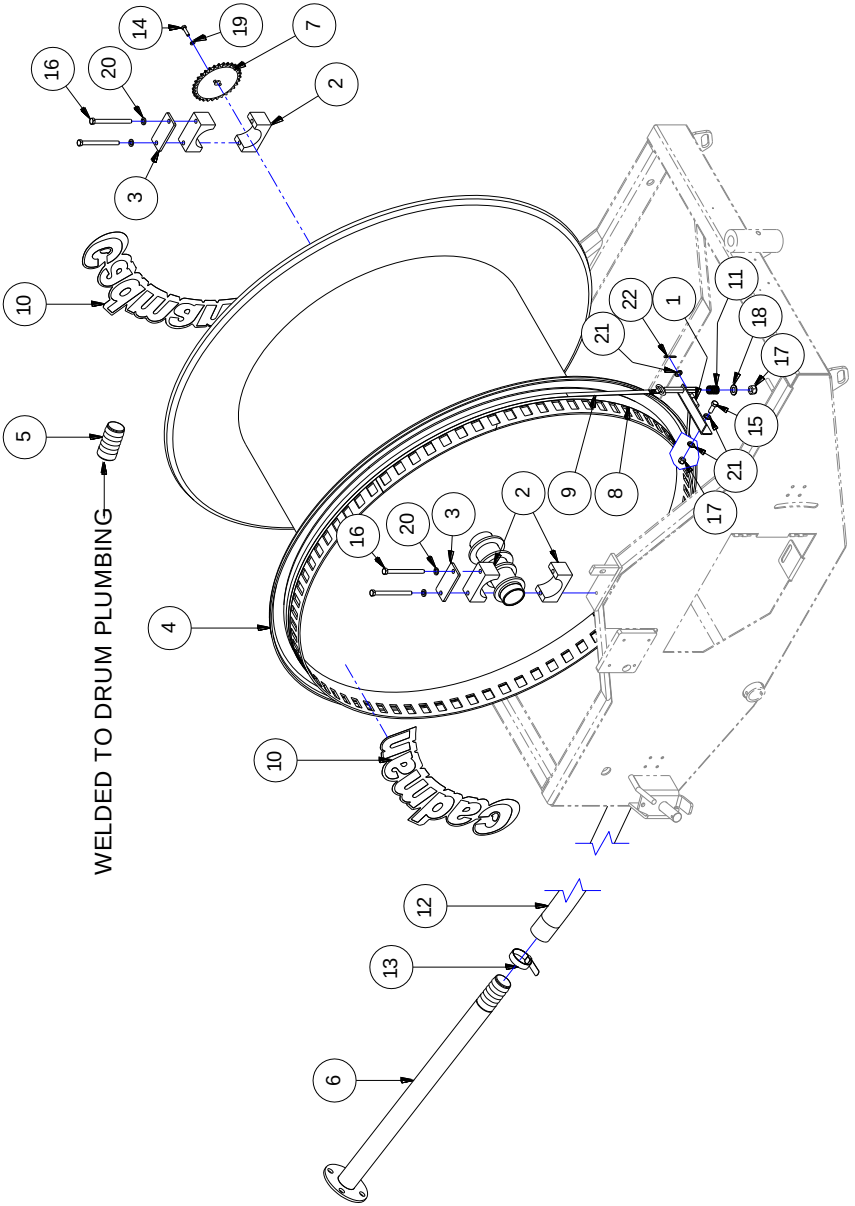
Drum Assembly – 1400



Drum Assembly – 1400

Item	Description	1400	1800	2000S	2000XL	2100	Part Number	Qty
1	DRUM WELDMENT - 1400	•					27-500	1
2	BRAKE BAND BRACKET WELDMENT	•					27-602	1
3	BEARING	•					27-606-C	4
4	GUARD - PAINTED	•					27-615	1
5	DRIVE SHIELD - 1400	•					27-619-B	1
6	BEARING BLOCK PLATE	•					27-634	1
7	BRAKE BAND - 1400	•					27-650	1
8	SPROCKET, 40A27 X 0.625 - MODIFIED	•					27-660	1
9	UHMW TAPE - 1.50" X 0.010"	•					27-664	1
10	MOUNT - DRIVE SHIELD	•					27-678	1
11	1400 PANEL DECAL	•					40-530-1400	1
12	1400 DRUM DECAL	•					42-031-1400	1
13	1400 DRUM DECAL - LEFT SIDE	•					42-031-1401	2
14	LABEL - GUARD REMOVED	•					42-052-A	1
15	COMPRESSION SPRING - STAINLESS	•					42-062	1
16	HOSE - 1.7OD X 1.44ID SDR13 X 350'	•					50-099-350	1
17	BAND IT CLAMP - 3 IN	•					50-103	2
18	BOLT - 1/4-20 X 1.00 STAINLESS STEEL	•					88-BLT-02520X100	2
19	BOLT - 3/8-16 X 1.00 STAINLESS STEEL	•					88-BLT-03816X100	1
20	BOLT - 3/8-16 X 4.00 STAINLESS STEEL	•					88-BLT-03816X400	4
21	NUT LOCK - 3/8-16 STAINLESS STEEL	•					88-NUT-LOC038-16	2
22	WASHER FLAT - 3/8 STAINLESS STEEL	•					88-WSR-FLT038	1
23	WASHER LOCK - 1/4 STAINLESS STEEL	•					88-WSR-LOC025	2
24	WASHER LOCK - 3/8 STAINLESS STEEL	•					88-WSR-LOC038	4
25	WASHER SAE - 3/8 STAINLESS STEEL	•					88-WSR-SAE038	3
26	BOLT FLANGE HEAD - 5/16-18X3/4 LONG	•					90-BLT-F03118X075	9
27	COTTER PIN - 1/8 X 1.00 LONG	•					90-PIN-CT013X100	1

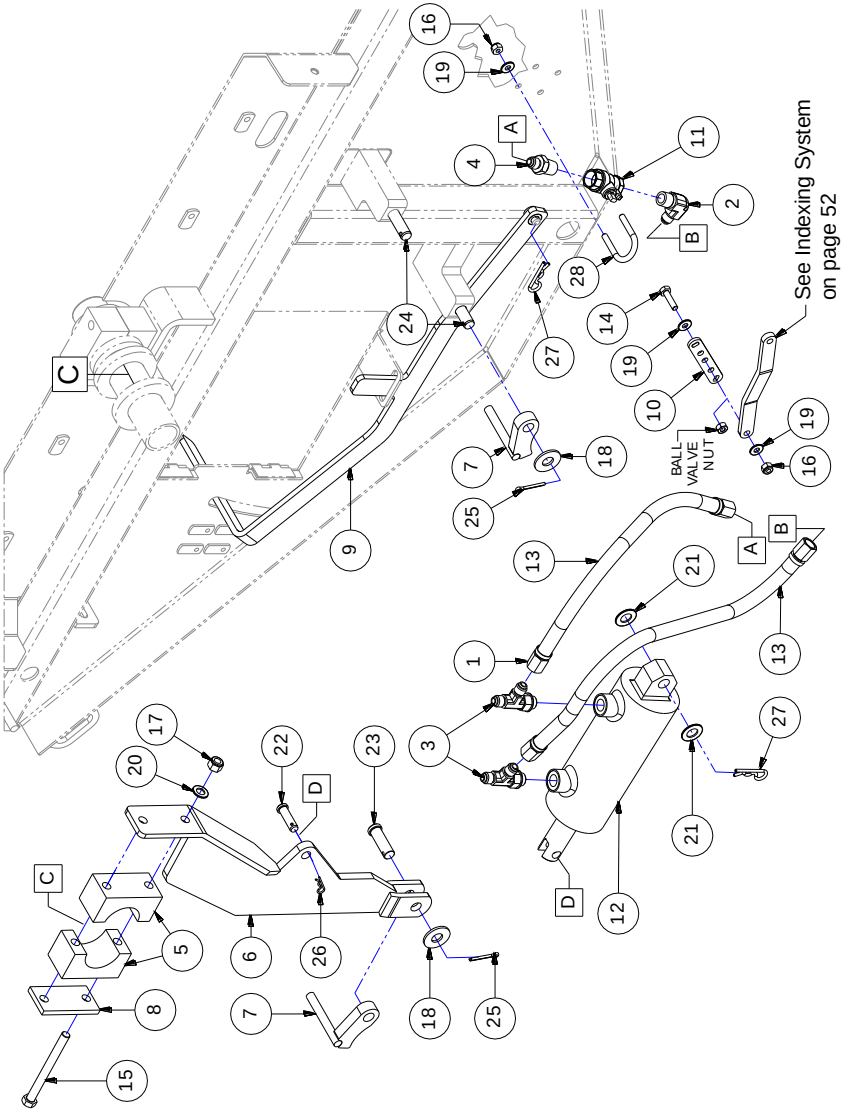
Drum Assembly – 1800 ⇨ 2100



Drum Assembly – 1800 ⇨ 2100

Item	Description	1400	1800	2000S	2000XL	2100	Part Number	Qty
1	BRAKE BAND BRACKET WELDMENT		•	•	•	•	27-602	1
2	UHMW BEARING BLOCK - BLACK		•	•	•	•	28-606-C	2
3	BEARING BLOCK PLATE		•	•	•	•	28-623	2
4	DRUM WELDMENT		•	•			29-500	1
↳	DRUM WELDMENT				•	•	28-500-B	1
5	HOSE BARB - 1.90"		•				29-510	1
↳	HOSE BARB - 2.00"			•	•		28-514	1
↳	HOSE BARB - 2.10"					•	28-510	1
6	TUBE EXTENSION		•				29-604	1
↳	TUBE EXTENSION			•	•		29-605	1
↳	TUBE EXTENSION					•	28-613	1
7	SPROCKET, 40A31 X 0.625 - MODIFIED		•				29-609	1
↳	SPROCKET, 40A29 X 0.625 - MODIFIED			•			29-611	1
↳	SPROCKET, 40A36 X 0.625 - MODIFIED				•		28-630	1
↳	SPROCKET, 40A27 X 0.625 - MODIFIED					•	27-660	1
8	UHMW TAPE - 1.50" X 0.010"		•	•			29-614	1
↳	UHMW TAPE - 1.50" X 0.010"				•	•	28-634	1
9	BRAKE BAND - 1800-2000		•	•			29-615	1
↳	BRAKE BAND - 2000XL/2100				•	•	28-635	1
10	DRUM DECAL - 1800/2000		•	•			42-031-1800-A	4
↳	DRUM DECAL - 2000XL/2100				•	•	42-031-2100-A	4
11	COMPRESSION SPRING - STAINLESS		•	•	•	•	42-062	1
12	HOSE - 1.82 ID X 380'		•				50-101-380	1
↳	HOSE - 1.97 ID X 320'			•			50-101-320	1
↳	HOSE - 2.03 ID X 580'				•		50-100-580	1
↳	HOSE - 2.12 ID X 400'					•	50-100-400	1
13	BAND IT CLAMP - 3 IN		•	•	•	•	50-103	2
14	BOLT - 1/4-20 X 1.00 STAINLESS STEEL		•	•	•	•	88-BLT-02520X100	2
15	BOLT - 3/8-16 X 1.00 STAINLESS STEEL		•	•	•	•	88-BLT-03816X100	1
16	BOLT 3/8-16 X 4.50 STAINLESS STEEL		•	•	•	•	88-BLT-03816X450	4
17	NUT LOCK - 3/8-16 STAINLESS STEEL		•	•	•	•	88-NUT-LOC038-16	2
18	WASHER FLAT - 3/8 STAINLESS STEEL		•	•	•	•	88-WSR-FLT038	1
19	WASHER LOCK - 1/4 STAINLESS STEEL		•	•	•	•	88-WSR-LOC025	2
20	WASHER LOCK - 3/8 STAINLESS STEEL		•	•	•	•	88-WSR-LOC038	4
21	WASHER SAE - 3/8 STAINLESS STEEL		•	•	•	•	88-WSR-SAE038	3
22	COTTER PIN - 1/8 X 1.00 LONG		•	•	•	•	90-PIN-CT013X100	1

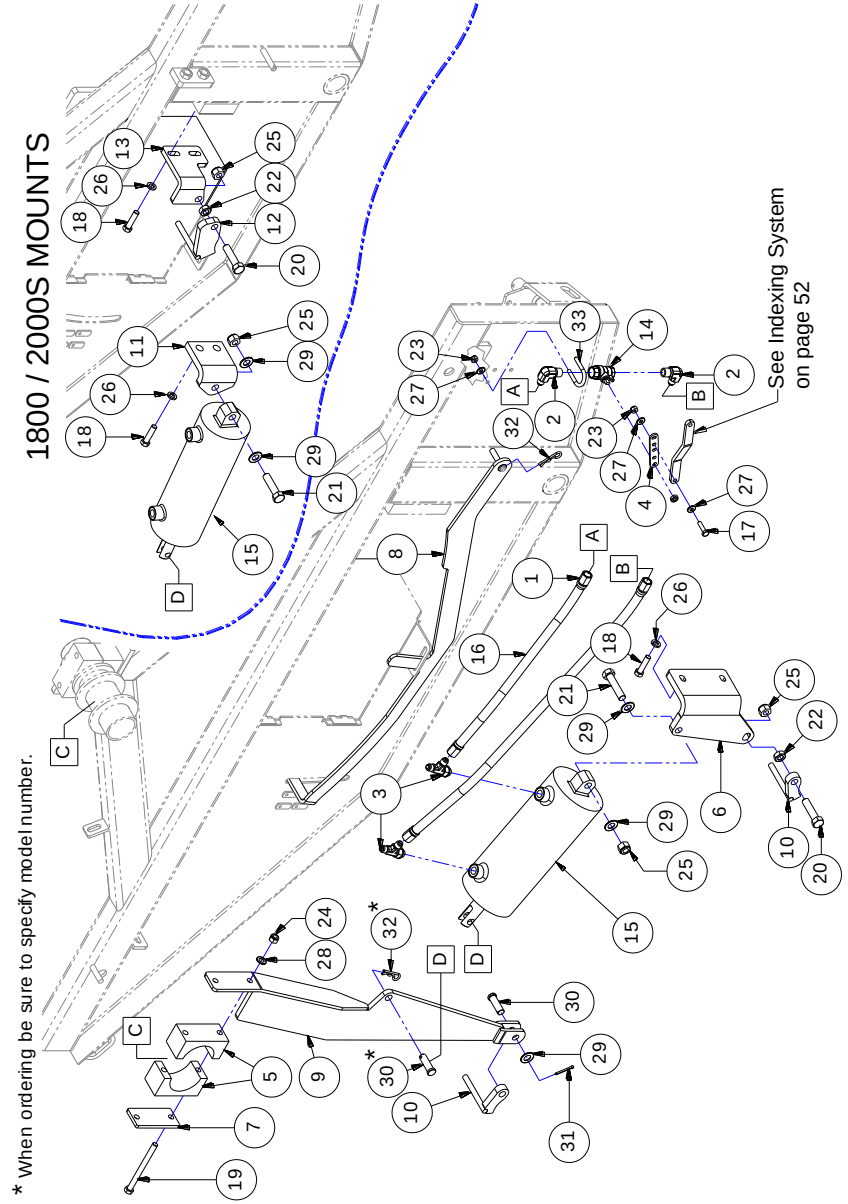
Drive System – 1400



Drive System – 1400

Item	Description	1400	1800	2000S	2000XL	2100	Part Number	Qty
1	ADAPTER - 06 JIC-FSW X 06 HOSE BARB	•					25-WHD-10006B606	4
2	ELBOW - #6 JIC-M X #6 NPT-M X 90°	•					25-WHD-5405X6X6	1
3	RUN TEE - #06 JIC X #06 JIC X #06 SAE	•					25-WHD-5716X6	2
4	ADAPTER - #06 JIC-M X #06 NPT-M	•					25-WHD-C5205X6X6	1
5	BEARING	•					27-606-C	1
6	SWING ARM	•					27-617-B	1
7	LOCK PAWL WELDMENT	•					27-632-A	2
8	BEARING BLOCK PLATE	•					27-634	1
9	DISENGAGEMENT BAR WELDMENT	•					27-661	1
10	VALVE HANDLE	•					27-669-B	1
11	BALL VALVE - 3/8 F X F	•					40-NPT-VLV038BLLFF	1
12	DRIVE CYLINDER – 1400	•					42-044	1
13	HOSE 3/8" PUSH LOCK, BLACK	•					50-104	3
14	BOLT - 1/4-20 X 1.00 STAINLESS STEEL	•					88-BLT-02520X100	1
15	BOLT - 3/8-16 X 4.00 STAINLESS STEEL	•					88-BLT-03816X400	2
16	NUT LOCK - 1/4-20 STAINLESS STEEL	•					88-NUT-LOC025-20	5
17	NUT LOCK - 3/8-16 STAINLESS STEEL	•					88-NUT-LOC038-16	2
18	WASHER FLAT - 1/2 STAINLESS STEEL	•					88-WSR-FLT050	2
19	WASHER SAE - 1/4 STAINLESS STEEL	•					88-WSR-SAE025	6
20	WASHER SAE - 3/8 STAINLESS	•					88-WSR-SAE038	2
21	WASHER SAE - 1/2 STAINLESS STEEL	•					88-WSR-SAE050	2
22	CLEVIS PIN - 3/8 X 1.00 LONG	•					90-PIN-CL038X125	1
23	CLEVIS PIN -1/2 X 1.50 LONG	•					90-PIN-CL050X150	1
24	CLEVIS PIN - 1/2 X 4.50 LONG	•					90-PIN-CL050X450	2
25	COTTER PIN - 1/8 X 1.00 LONG	•					90-PIN-CT013X100	2
26	HAIR PIN - 1/16 X 1 1/8 LONG	•					90-PIN-HP006X113	1
27	HAIR PIN - 1/8 X 1 3/4 LONG	•					90-PIN-HP013X175	2
28	U-BOLT ROUND - 1/4-20	•					90-UBT-RND02520X200-100	2

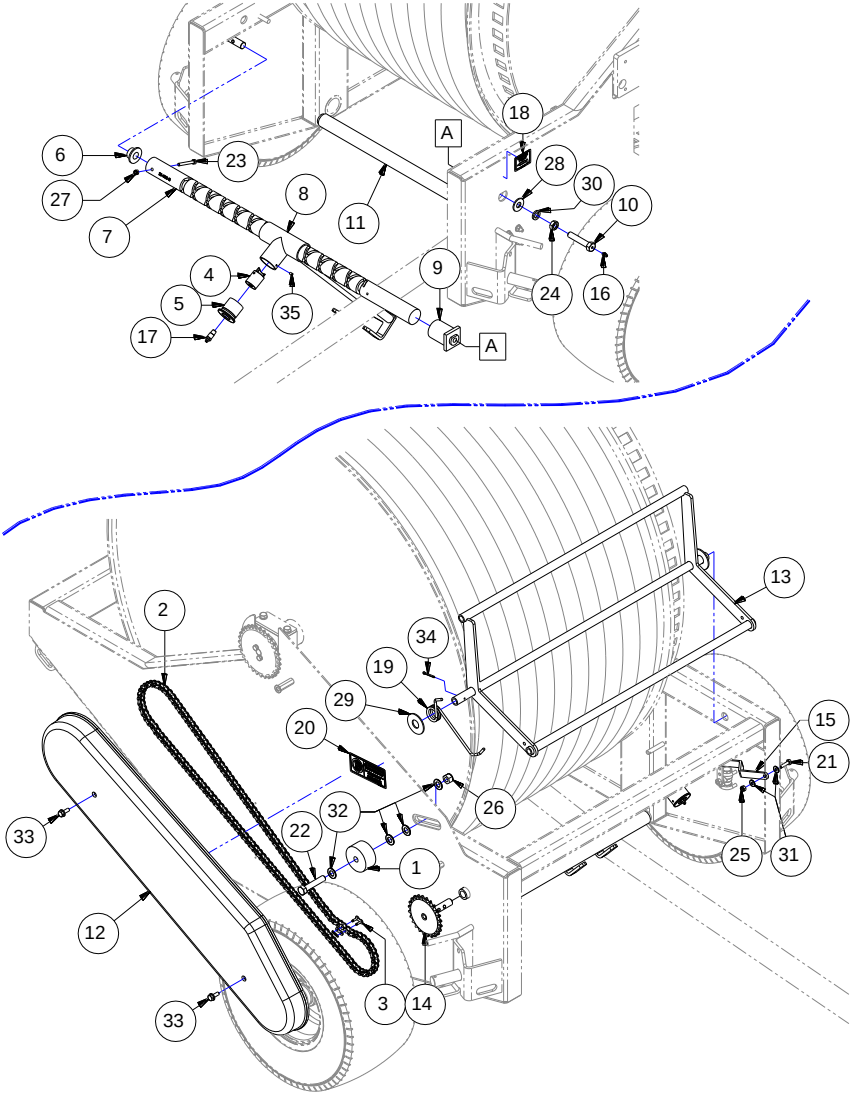
Drive System – 1800 ⇨ 2100



Drive System – 1800 ⇨ 2100

Item	Description	1400	1800	2000S	2000XL	2100	Part Number	Qty
1	ADAPTER - 06 JIC-FSW X 06 HOSE BARB		•	•	•	•	25-WHD-10006B606	4
2	ELBOW - #6 JIC-M X #6 NPT-M X 90°		•	•	•	•	25-WHD-5405X6X6	2
3	RUN TEE - #06 JIC X #06 JIC X #06 SAE		•	•	•	•	25-WHD-5716X6	2
4	VALVE HANDLE		•	•	•	•	27-669-A	1
5	UHMW BEARING BLOCK - BLACK		•	•	•	•	28-606-C	1
6	CYLINDER MOUNT BRACKET.		•	•	•	•	28-620-C	1
7	BEARING BLOCK PLATE		•	•	•	•	28-623	1
8	DISENGAGEMENT BAR WELDMENT		•	•			29-607	1
↳	DISENGAGEMENT BAR WELDMENT				•	•	28-626	1
9	SWING ARM WELDMENT		•	•			29-600-B	1
↳	SWING ARM WELDMENT				•	•	28-628-B	1
10	LOCK PAWL - 3.00"		•	•	•	•	28-642	2
11	CYLINDER BRACKET		•	•	•	•	29-617-A	1
12	BRAKE PAWL WELDMENT		•	•	•	•	29-621	1
13	BRAKE PAWL BRACKET		•	•	•	•	29-630	1
14	BALL VALVE - 3/8 F X F		•	•	•	•	40-NPT-VLV038BLLFF	1
15	DRIVE CYLINDER - 1800/2000S		•	•			42-067	1
↳	DRIVE CYLINDER - 2000XL/2100				•	•	42-068	1
16	HOSE 3/8" PUSH LOCK, BLACK		•	•			50-104	3
↳	HOSE 3/8" PUSH LOCK, BLACK				•	•	50-104	4.5
17	BOLT - 1/4-20 X 1.00 STAINLESS STEEL		•	•	•	•	88-BLT-02520X100	1
18	BOLT - 3/8-16 X 1.50 STAINLESS STEEL		•	•	•	•	88-BLT-03816X150	2
19	BOLT - 3/8-16 X 4.50 STAINLESS STEEL		•	•	•	•	88-BLT-03816X450	2
20	BOLT - 1/2-13 X 2.00 STAINLESS STEEL		•	•	•	•	88-BLT-05013X200	1
21	BOLT - 1/2-13 X 2.25 STAINLESS STEEL		•	•	•	•	88-BLT-05013X225	1
22	NUT JAM - 1/2-13 STAINLESS STEEL		•	•	•	•	88-NUT-JAM050-13	1
23	NUT LOCK - 1/4-20 STAINLESS STEEL		•	•	•	•	88-NUT-LOC025-20	5
24	NUT LOCK - 3/8-16 STAINLESS STEEL		•	•	•	•	88-NUT-LOC038-16	2
25	NUT LOCK - 1/2-13 STAINLESS STEEL		•	•	•	•	88-NUT-LOC050-13	2
26	WASHER LOCK - 3/8 STAINLESS STEEL		•	•	•	•	88-WSR-LOC038	2
27	WASHER SAE - 1/4 STAINLESS STEEL		•	•	•	•	88-WSR-SAE025	6
28	WASHER SAE - 3/8 STAINLESS STEEL		•	•	•	•	88-WSR-SAE038	2
29	WASHER SAE - 1/2 STAINLESS STEEL		•	•	•	•	88-WSR-SAE050	3
30	CLEVIS PIN - 3/8 X 1.50 LONG		•	•			90-PIN-CL038X150	1
↳	CLEVIS PIN - 1/2 X 1.50 LONG		•	•	•	•	90-PIN-CL050X150	2
31	COTTER PIN - 1/8 X 1.00 LONG		•	•	•	•	90-PIN-CT013X100	1
32	HAIR PIN - 1/8 X 1 3/4 LONG		•	•			90-PIN-HP006X113	1
↳	HAIR PIN - 1/8 X 1 3/4 LONG		•	•	•	•	90-PIN-HP013X175	2
33	U-BOLT ROUND - 1/4-20		•	•	•	•	90-UBT-RND02520X200-100	2

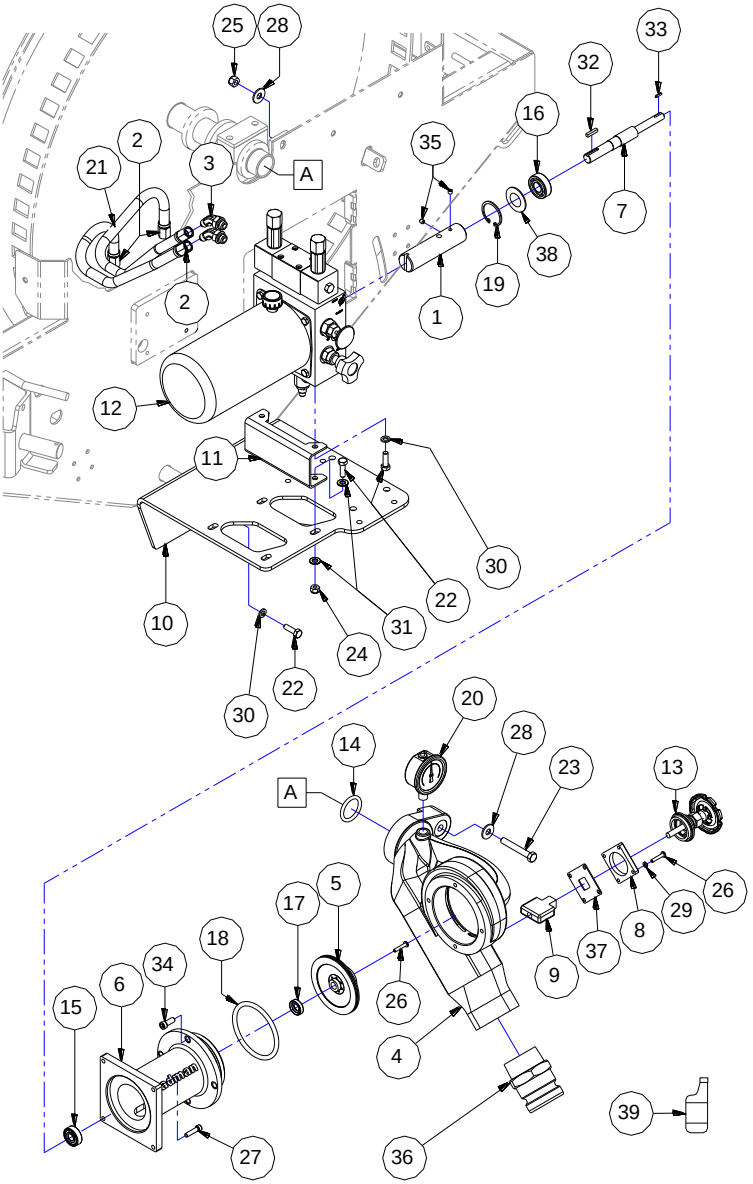
Indexing System



Indexing System

Item	Description	1400	1800	2000S	2000XL	2100	Part Number	Qty
1	IDLER WHEEL - RUB BLOCK	•	•	•	•	•	08-653	1
2	ROLLER CHAIN - #40 RIVETED	•					10-CHN-40-1RIV	109
↳	ROLLER CHAIN - #40 RIVETED		•	•			10-CHN-40-1RIV	142
↳	ROLLER CHAIN - #40 RIVETED				•	•	10-CHN-40-1RIV	172
3	#40 CONNECTING LINK	•	•	•	•	•	10-LNK-40CONN	1
4	KNIFE – LEVEL WIND	•	•	•	•	•	27-611-B	1
5	KNIFE RETAINER	•	•	•	•	•	27-612-B	1
6	BUSHING FLANGE	•	•	•	•	•	27-628	1
7	INDEXER SCREW – PLATED	•					27-692	1
↳	INDEXER SCREW – PLATED		•	•	•	•	28-644	1
8	HOSE GUIDE WELDMENT	•					27-600-A	1
↳	HOSE GUIDE WELDMENT		•	•	•	•	28-603-A	1
9	LEVEL WIND SLEEVE WELDMENT	•	•	•	•	•	28-609	1
10	INDEXER STUD - PLATED	•	•	•	•	•	28-610-A	1
11	TUBE - AXLE GUARD	•					27-629	1
↳	TUBE - AXLE GUARD		•	•	•	•	28-633	1
12	GUARD - INDEXER CHAIN	•					27-620-B	1
↳	GUARD - INDEXER CHAIN		•	•			29-602-A	1
↳	GUARD - INDEXER CHAIN				•	•	28-624-A	1
13	SHUT OFF BAR WELDMENT	•					27-605-B	1
↳	SHUT OFF BAR WELDMENT		•	•	•	•	29-603	1
14	INDEXER SPROCKET SHAFT	•			•		27-627	1
↳	INDEXER SPROCKET SHAFT		•				29-610	1
↳	INDEXER SPROCKET SHAFT			•			29-612	1
↳	INDEXER SPROCKET SHAFT					•	28-631	1
15	SHUT OFF ARM	•					27-668	1
↳	SHUT OFF ARM		•	•	•	•	29-616-A	1
16	GREASE FITTING -1/4-28	•	•	•	•	•	40-001-02528	1
17	GREASE FITTING - 1/8 NPT LONG	•	•	•	•	•	40-001-125L	1
18	LABEL - GREASE POINT	•	•	•	•	•	40-041-A	1
19	SPRING	•	•	•	•	•	42-006	1
20	LABEL - GUARD REMOVED	•	•	•	•	•	42-052-A	1
21	BOLT - 1/4-20 X 1.00 STAINLESS STEEL	•	•	•	•	•	88-BLT-02520X100	2
22	BOLT - 1/2-13 X 2.50 STAINLESS STEEL	•	•	•	•	•	88-BLT-05013X250	1
23	BOLT - M6-1.00 x 50MM STAINLESS STEEL	•	•	•	•	•	88-BLT-M06100X050	1
24	NUT JAM - 1/2-13 STAINLESS STEEL	•	•	•	•	•	88-NUT-JAM050-13	1
25	NUT LOCK - 1/4-20 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC025-20	2
26	NUT LOCK - 1/2-13 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC050-13	1
27	NUT LOCK - M06 X 1.00	•	•	•	•	•	88-NUT-LOCM06-100	1
28	WASHER FLAT - 1/2 STAINLESS STEEL	•	•	•	•	•	88-WSR-FLT050	1
29	WASHER FLAT - 3/4 STAINLESS STEEL	•	•	•	•	•	88-WSR-FLT075	1
30	WASHER LOCK - 1/2 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOC050	1
31	WASHER SAE - 1/4 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE025	4
32	WASHER SAE - 1/2 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE050	4
33	BOLT FLANGE HEAD - 5/16-18 X 3/4 LONG	•	•	•	•	•	90-BLT-F03118X075	2
34	COTTER PIN, 1/8 X 1.00 LONG	•	•	•	•	•	90-PIN-CT013X100	1
35	SET SCREW - #10-32 X 5/16 LONG	•	•	•	•	•	90-SCR-ST01032X031	1

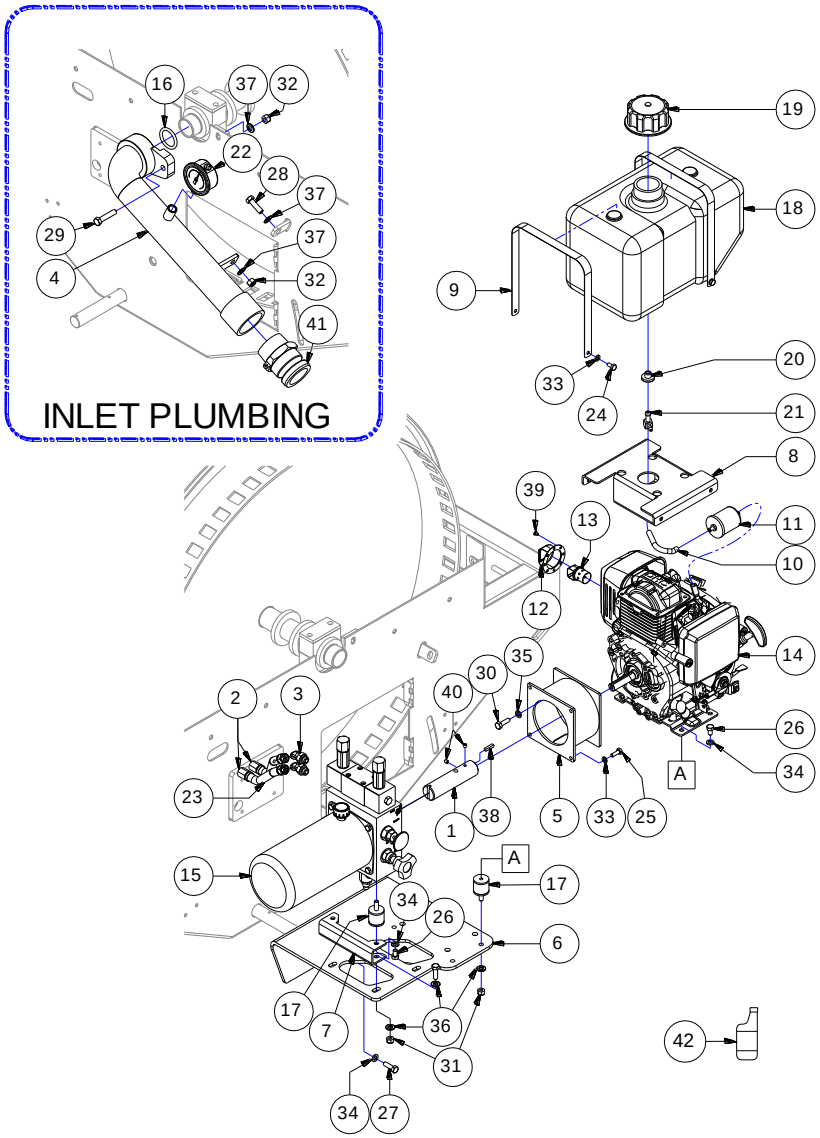
Power Unit – Hydradrive Turbine



Power Unit – Hydradrive Turbine

◆	**HYDRADRIVE TURBINE PACKAGE**	•					**TR-OPT-HDT-1400**	◆
◆	**HYDRADRIVE TURBINE PACKAGE**		•	•			**TR-OPT-HDT-1800**	◆
◆	**HYDRADRIVE TURBINE PACKAGE**				•	•	**TR-OPT-HDT-2100**	◆
1	SHAFT COUPLER	•	•	•	•	•	15-181-D	1
2	ADAPTER - 06 JIC-FSW X 06 HOSE BARB	•	•	•	•	•	25-WHD-10006B606	4
3	ELBOW - #06 JIC-M X #06 SAE-M X 45°	•	•	•	•	•	25-WHD-C5365X6	2
4	SPIRAL CASE - 1 5/8" OUTLET	•					27-621-D	1
↳	SPIRAL CASE - 2 3/8" OUTLET		•	•	•	•	28-621-C	1
5	RUNNER - TURBINE	•	•	•	•	•	27-622-E	1
6	BEARING SUPPORT - MACHINED	•	•	•	•	•	27-623-E	1
7	BEARING SHAFT	•	•	•	•	•	27-625-E	1
8	BLOCK - WEDGE GATE	•	•	•	•	•	27-662-B	1
9	GATE - TURBINE	•	•	•	•	•	27-663-A	1
10	POWER UNIT MOUNT WELDMENT	•	•	•	•	•	27-679	1
11	MOUNT - ENDHEAD	•	•	•	•	•	27-685	1
12	HYDRAULIC POWER PACK	•					40-HYD-2550024.325	1
↳	HYDRAULIC POWER PACK		•	•			40-HYD-2550024.125	1
↳	HYDRAULIC POWER PACK				•	•	40-HYD-2550024.525	1
13	1 1/4 IN GATE VALVE, F X F	•	•	•	•	•	40-NPT-VLV125GATFF	1
14	O-RING - 1.5/8 ID X 2 OD X 3/16 W	•					42-037	1
↳	O-RING - 2 3/8 ID X 2 3/4 OD X 3/16 W		•	•	•	•	42-066	1
15	BEARING - 6203	•	•	•	•	•	42-042	1
16	BEARING - 6203	•	•	•	•	•	42-059	1
17	LIP SEAL – 1/2 ID X 1 OD X 1/4 W	•	•	•	•	•	42-061	1
18	O-RING – 3 1/2 ID X 4 OD X 1/4 W	•	•	•	•	•	42-094	1
19	RETAINING RING - M40	•	•	•	•	•	42-108	1
20	GAUGE - 0-160 PSI WET	•	•	•	•	•	45-017	1
21	HOSE - 3/8" PUSH LOCK, BLACK	•					50-104	2.2
↳	HOSE - 3/8" PUSH LOCK, BLACK		•	•	•	•	50-104	2.5
22	BOLT - 5/16-18 X 1.00 STAINLESS STEEL	•	•	•	•	•	88-BLT-03118X100	8
23	BOLT - 3/8-16 X 2.50 STAINLESS STEEL	•	•	•	•	•	88-BLT-03816X250	1
24	NUT LOCK -5/16-18 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC031-18	2
25	NUT LOCK - 3/8-16 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC038-16	1
26	SCREW - #10-24 X 1.00 STAINLESS STEEL	•	•	•	•	•	88-SCR-PH1024X100	5
27	SCREW SOCKET CAP - 1/4-20 X 1 STAINLESS	•	•	•	•	•	88-SCR-SH02520X100	4
28	WASHER FLAT - 3/8 STAINLESS STEEL	•	•	•	•	•	88-WSR-FLT038	2
29	WASHER LOCK - #10 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOC010	4
30	WASHER LOCK - 5/16 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOC031	6
31	WASHER SAE - 5/16 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE031	4
32	KEY - 3/16" SQUARE X 0.875	•	•	•	•	•	90-KEY-SQ019X088	1
33	ROLL PIN - 3/32 X 0.50 LONG	•	•	•	•	•	90-PIN-RL009X050	1
34	SCREW SOCKET CAP - 5/16-18 X 075	•	•	•	•	•	90-SCR-SH03118X075	4
35	SET SCREW - 1/4" -20 X 1/4" LONG	•	•	•	•	•	90-SCR-ST02528X025	2
36	CAM LOCK - F200	•	•	•	•	•	IR-CAM-200/F	1
37	GASKET - TURBINE GATE	•	•	•	•	•	IR-GKT-TURBINE-B	1
38	SHIM - 0.005 X 1.00 ID X 1.50 OD	○	○	○	○	○	90-SHM-0005X100	AR
↳	SHIM - 0.012 X 1.00 ID X 1.50 OD	○	○	○	○	○	90-SHM-0012X100	AR
↳	SHIM - 0.031 X 1.00 ID X 1.50 OD	○	○	○	○	○	90-SHM-0031X100	AR
39	AUTOMATIC TRANSMISSION FLUID	•	•	•	•	•	85-LUB-ATF	3

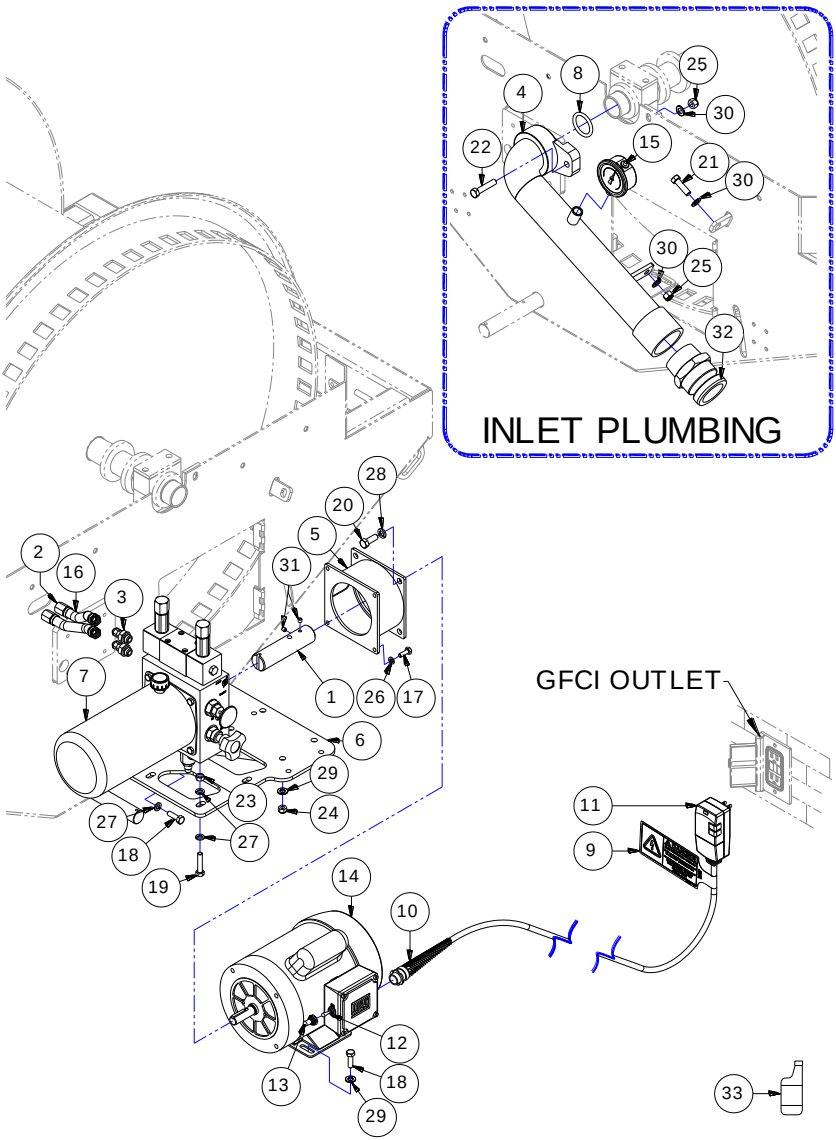
Power Unit – Engine



Power Unit – Engine

◆	**HONDA ENGINE DRIVE PACKAGE**	○					**TR-OPT-ENGDRV-1400**	◆
◆	**HONDA ENGINE DRIVE PACKAGE**		○	○			**TR-OPT-ENGDRV-1800**	◆
◆	**HONDA ENGINE DRIVE PACKAGE**				○	○	**TR-OPT-ENGDRV-2100**	◆
1	SHAFT COUPLER	•	•	•	•	•	15-181-D	1
2	ADAPTER - 06 JIC-FSW X 06 HOSE BARB	•	•	•	•	•	25-WHD-10006B606	4
3	ELBOW - #06 JIC-M X #06 SAE-M X 45°	•	•	•	•	•	25-WHD-C5365X6	2
4	INLET ELBOW - 1400	•					27-675	1
↳	INLET ELBOW - 1800/2100		•	•	•	•	29-618	1
5	BELL HOUSING - GAS MOTOR	•	•	•	•	•	27-676	1
6	POWER UNIT MOUNT WELDMENT	•	•	•	•	•	27-679	1
7	MOUNT - ENDHEAD	•	•	•	•	•	27-683	1
8	MOUNT PLATE WELDMENT	•	•	•	•	•	27-686	1
9	TANK STRAP	•	•	•	•	•	27-688	2
10	FUEL LINE - 1/4 NEOPRENE	•	•	•	•	•	40-066	1
11	FUEL FILTER - 1/4"	•	•	•	•	•	40-326	1
12	MUFFLER SHIELD	•	•	•	•	•	40-HDA-18348ZL8000	1
13	EXHAUST DEFLECTOR	•	•	•	•	•	40-HDA-18430ZL8000	1
14	HONDA ENGINE - GX100	•	•	•	•	•	40-HDA-GX100	1
15	HYDRAULIC POWER PACK	•					40-HYD-2550024.425	1
↳	HYDRAULIC POWER PACK		•	•			40-HYD-2550024.225	1
↳	HYDRAULIC POWER PACK				•	•	40-HYD-2550024.625	1
16	O-RING - 1.5/8 ID X 2 OD X 3/16 W	•					42-037	1
↳	O-RING - 2 3/8 ID 2 3/4 OD X 3/16 W		•	•	•	•	42-066	1
17	MOUNT - ANTI VIBRATION	•	•	•	•	•	42-095	6
18	FUEL TANK - 2.5 GAL BLACK	•	•	•	•	•	42-098	1
19	FUEL CAP - 2.25" VENTED	•	•	•	•	•	42-099	1
20	BUSHING - FUEL TANK	•	•	•	•	•	42-100	1
21	FUEL TANK FITTING 90°	•	•	•	•	•	42-101	1
22	GAUGE - 0-160 PSI WET	•	•	•	•	•	45-017	1
23	HOSE - 3/8" PUSH LOCK, BLACK	•					50-104	2.2
↳	HOSE - 3/8" PUSH LOCK, BLACK		•	•	•	•	50-104	2.5
24	BOLT - 1/4-20 X 0.50 STAINLESS STEEL	•	•	•	•	•	88-BLT-02520X050	4
25	BOLT - 1/4-20 X 0.75 STAINLESS STEEL	•	•	•	•	•	88-BLT-02520X075	4
26	BOLT - 5/16-18 X 0.50 STAINLESS STEEL	•	•	•	•	•	88-BLT-03118X050	6
27	BOLT - 5/16-18 X 1.00 STAINLESS STEEL	•	•	•	•	•	88-BLT-03118X100	6
28	BOLT - 3/8-16 X 1.25 STAINLESS STEEL	•	•	•	•	•	88-BLT-03816X125	1
29	BOLT - 3/8-16 X 1.75 STAINLESS STEEL	•	•	•	•	•	88-BLT-03816X175	1
30	BOLT - M8-1.25 X 25MM STAINLESS STEEL	•	•	•	•	•	88-BLT-M08125X025	4
31	NUT LOCK - 5/16-18 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC031-18	6
32	NUT LOCK - 3/8-16 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC038-16	2
33	WASHER LOCK - 1/4 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOC025	8
34	WASHER LOCK - 5/16 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOC031	10
35	WASHER LOCK - M08 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOCM08	4
36	WASHER SAE - 5/16 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE031	8
37	WASHER SAE - 3/8 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE038	3
38	KEY - 3/16" SQUARE X 0.875	•	•	•	•	•	90-KEY-SQ019X088	1
39	SCREW PH - M4-0.70 X 6MM	•	•	•	•	•	90-SCR-PHM4.70X006	2
40	SET SCREW - 1/4" -28 X 1/4" LONG	•	•	•	•	•	90-SCR-ST02528X025	2
41	CAM LOCK - F200	•	•	•	•	•	IR-CAM-200/F	1
42	AUTOMATIC TRANSMISSION FLUID	•	•	•	•	•	85-LUB-ATF	3

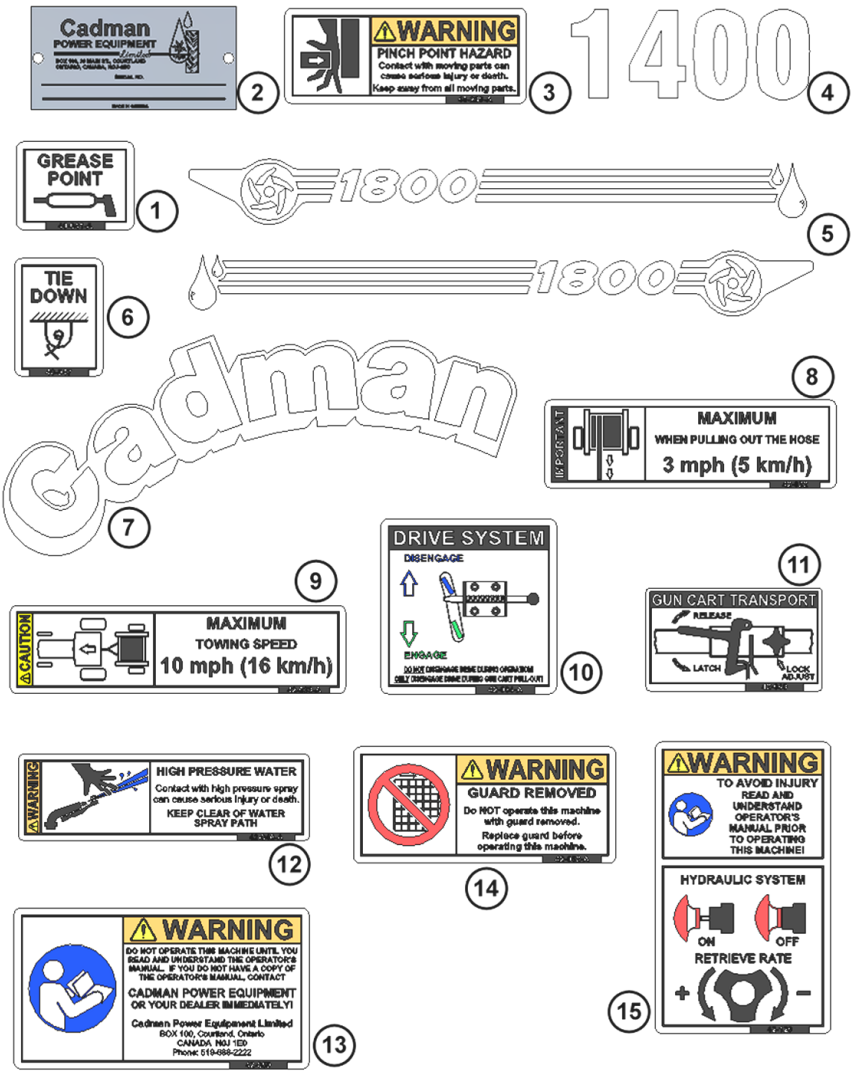
Power Unit – Electric Motor



Power Unit – Electric Motor

◆	**ELECTRIC DRIVE PACKAGE**	○					**TR-OPT-ELECDRV-1400**	◆
◆	**ELECTRIC DRIVE PACKAGE**		○	○			**TR-OPT-ELECDRV-1800**	◆
◆	**ELECTRIC DRIVE PACKAGE**				○	○	**TR-OPT-ELECDRV-2100**	◆
1	SHAFT COUPLER	•	•	•	•	•	15-181-C	1
2	ADAPTER - 06 JIC-FSW X 06 HOSE BARB	•	•	•	•	•	25-WHD-10006B606	4
3	ELBOW - #06 JIC-M X #06 SAE-M X 45°	•	•	•	•	•	25-WHD-C5365X6	2
4	INLET ELBOW - 1400	•					27-675	1
↳	INLET ELBOW - 1800/2100		•	•	•	•	29-618	1
5	BELL HOUSING - ELECT. MOTOR	•	•	•	•	•	27-677-B	1
6	POWER UNIT MOUNT WELDMENT	•	•	•	•	•	27-679	1
7	HYDRAULIC POWER PACK	•					40-HYD-2550024.425	1
↳	HYDRAULIC POWER PACK		•	•			40-HYD-2550024.225	1
↳	HYDRAULIC POWER PACK				•	•	40-HYD-2550024.625	1
8	O-RING - 1 5/8 ID X 2 OD X 3/16 W	•					42-037	1
↳	O-RING - '2 3/8 ID 2 3/4 OD X 3/16 W		•	•	•	•	42-066	1
9	LABEL - ELECTROCUTION	•	•	•	•	•	42-118-A	1
10	STRAIN RELIEF	•	•	•	•	•	42-119	1
11	POWER CORD - 35' w/GFCI	•	•	•	•	•	42-120	1
12	SWITCH - 15AMP 110V	•	•	•	•	•	42-121	1
13	BOOT - SWITCH SEAL	•	•	•	•	•	42-122	1
14	ELECTRIC MOTOR - 1/2 HP 110V	•	•	•	•	•	42-123	1
15	GAUGE - 0-160 PSI WET	•	•	•	•	•	45-017	1
16	HOSE - 3/8" PUSH LOCK, BLACK	•	•	•	•	•	50-104	3.2
17	BOLT - 1/4-20 X 0.75 STAINLESS STEEL	•	•	•	•	•	88-BLT-02520X075	4
18	BOLT - 5/16-18 X 1.00 STAINLESS STEEL	•	•	•	•	•	88-BLT-03118X100	8
19	BOLT - 5/16-18 X 1.5 STAINLESS STEEL	•	•	•	•	•	88-BLT-03118X150	2
20	BOLT - 3/8-16 X 1.00 STAINLESS STEEL	•	•	•	•	•	88-BLT-03816X100	4
21	BOLT - 3/8-16 X 1.25 STAINLESS STEEL	•	•	•	•	•	88-BLT-03816X125	1
22	BOLT - 3/8-16 X 1.75 STAINLESS STEEL	•	•	•	•	•	88-BLT-03816X175	1
23	NUT HEX - 5/16-18 STAINLESS STEEL	•	•	•	•	•	88-NUT-HEX031-18	2
24	NUT LOCK - 5/16-18 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC031-18	4
25	NUT LOCK - 3/8-16 STAINLESS STEEL	•	•	•	•	•	88-NUT-LOC038-16	2
26	WASHER LOCK - 1/4 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOC025	4
27	WASHER LOCK - 5/16 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOC031	8
28	WASHER LOCK - 3/8 STAINLESS STEEL	•	•	•	•	•	88-WSR-LOC038	4
29	WASHER SAE - 5/16 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE031	8
30	WASHER SAE - 3/8 STAINLESS STEEL	•	•	•	•	•	88-WSR-SAE038	3
31	SET SCREW - 1/4" -28 X 1/4" LONG	•	•	•	•	•	90-SCR-ST02528X025	2
32	CAM LOCK - F200	•	•	•	•	•	IR-CAM-200/F	1
33	AUTOMATIC TRANSMISSION FLUID	•	•	•	•	•	85-LUB-ATF	3

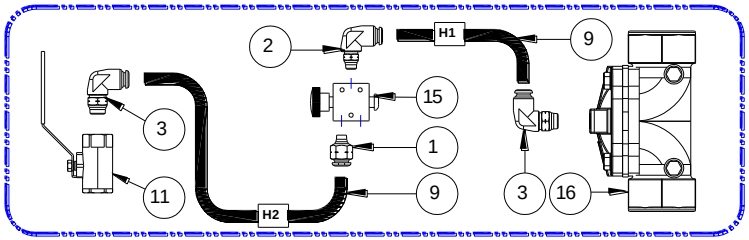
Decals

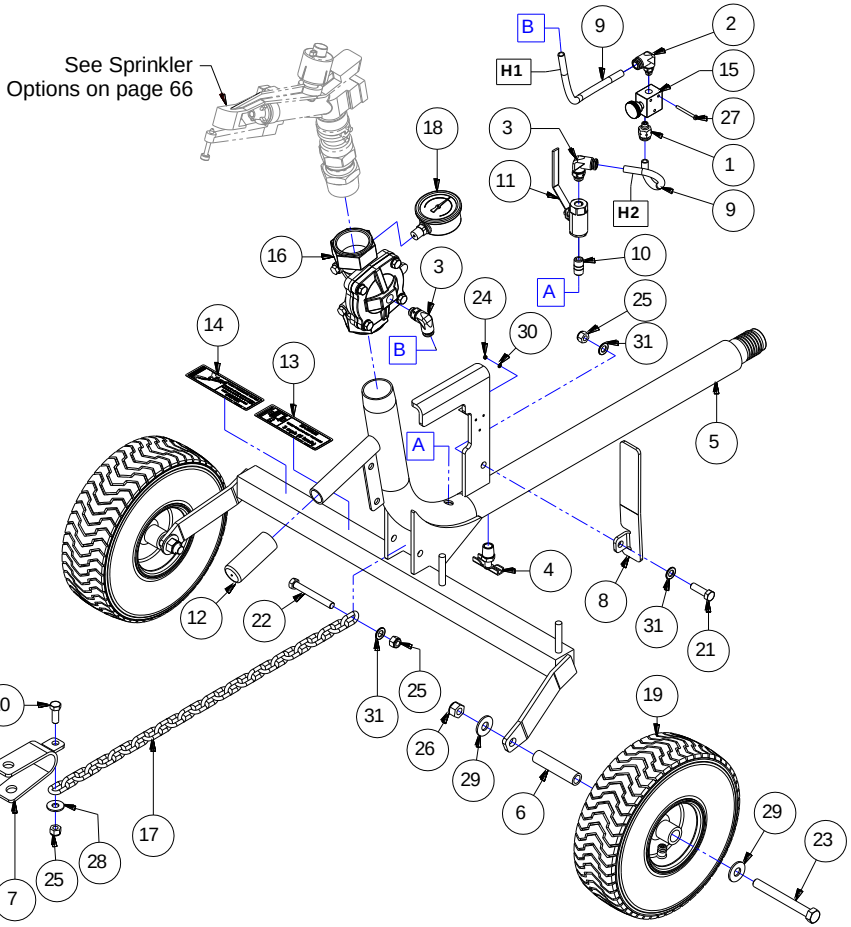

Cadman
POWER EQUIPMENT
2
WARNING
PINCH POINT HAZARD
Contact with moving parts can cause serious injury or death.
Keep away from all moving parts.
3
1400
4
GREASE POINT
1
1800
5
TIE DOWN
6
1800
Cadman
7
8
MAXIMUM
WHEN PULLING OUT THE HOSE
3 mph (5 km/h)
DRIVE SYSTEM
DISENGAGE
ENGAGE
10
9
CAUTION
MAXIMUM
TOWING SPEED
10 mph (16 km/h)
11
GUN CART TRANSPORT
RELEASE
LATCH
LOCK ADJUST
WARNING
HIGH PRESSURE WATER
Contact with high pressure spray can cause serious injury or death.
KEEP CLEAR OF WATER SPRAY PATH
12
WARNING
GUARD REMOVED
Do NOT operate this machine with guard removed.
Replace guard before operating this machine.
14
WARNING
TO AVOID INJURY
READ AND UNDERSTAND OPERATOR'S MANUAL PRIOR TO OPERATING THIS MACHINE!
HYDRAULIC SYSTEM
ON
OFF
RETRIEVE RATE
15
WARNING
DO NOT OPERATE THIS MACHINE UNTIL YOU READ AND UNDERSTAND THE OPERATOR'S MANUAL. IF YOU DO NOT HAVE A COPY OF THE OPERATOR'S MANUAL, CONTACT
CADMAN POWER EQUIPMENT OR YOUR DEALER IMMEDIATELY!
Cadman Power Equipment Limited
BOX 100, Courtland, Ontario
CANADA N0J 1E0
Phone: 519-688-2222
13

Decals

1	LABEL – GREASE POINT	•	•	•	•	•	40-041-A	2
2	SERIAL NUMBER TAG	•	•	•	•	•	40-238	1
3	LABEL – PINCH POINT	•	•	•	•	•	40-289-A	1
4	PANEL DECAL – 1400	•					40-530-1400	1
5	PANEL DECAL – 1800 LEFT & RIGHT		•				40-530-1800-A	1
↳	PANEL DECAL – 2000S LEFT & RIGHT			•			40-530-2000S-A	1
↳	PANEL DECAL – 2000XL LEFT & RIGHT				•		40-530-2000XL-A	1
↳	PANEL DECAL – 2100 LEFT & RIGHT					•	40-530-2100-A	1
6	LABEL – TIE DOWN POINT	•	•	•	•	•	40-947	4
7	SHIELD DECAL – 1400	•					42-031-1400	1
↳	DRUM DECAL – 1400	•					42-031-1401	2
↳	DRUM DECAL – 1800		•	•			42-031-1800-A	4
↳	DRUM DECAL – 2100				•	•	42-031-2100-A	4
8	LABEL – MAX HOSE PULL	•	•	•	•	•	42-032	1
9	LABEL – MAX TOW SPEED	•	•	•	•	•	42-033-A	1
10	LABEL – DRIVE SYSTEM	•	•	•	•	•	42-034-A	1
11	LABEL – TRANSPORT LABEL	•					42-040	1
12	LABEL – HIGH WATER PRESSURE	•	•	•	•	•	42-046-A	1
13	LABEL – OPERATOR'S MANUAL	•	•	•	•	•	42-050	1
14	LABEL – GUARD REMOVED	•					42-052-A	2
↳	LABEL – GUARD REMOVED		•	•	•	•	42-052-A	1
15	LABEL – HYDRAULIC CONTROLS	•	•	•	•	•	42-129	1

Sprinkler Cart Assembly – 1400

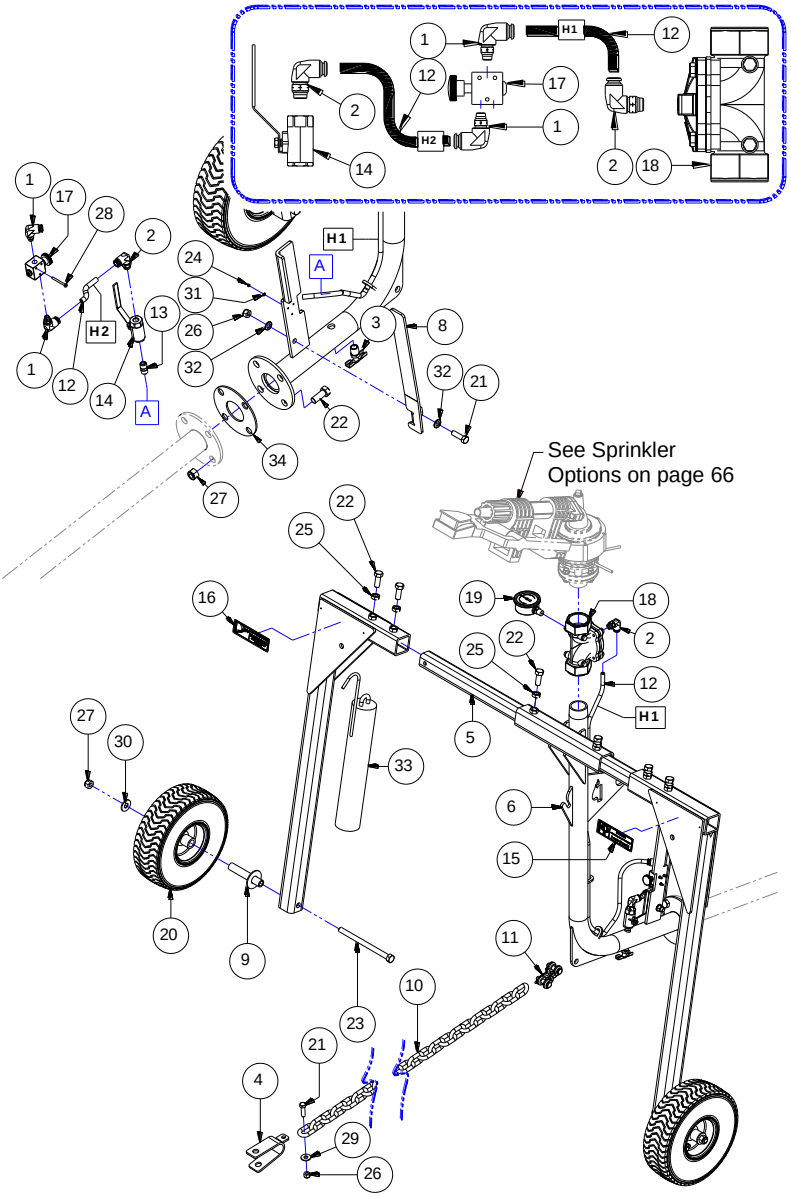




Sprinkler Cart Assembly – 1400

◆	SPRINKLER CART ASSEMBLY (COMPLETE)	•	TR-CRT-1400	◆
1	ADAPTER - #06 TUBE X #02 M-NPT	•	25-HYD-87000-06-02	1
2	ELBOW - #06 TUBE X #02 M-NPT X 90°	•	25-HYD-87110-06-02	1
3	ELBOW - #06 TUBE X #04 M-NPT X 90°	•	25-HYD-87110-06-04	2
4	DRAIN COCK - 3/8 M-NPT	•	25-WHD-270	1
5	GUN CART WELDMENT - 1400	•	27-614	1
6	AXLE SLEEVE - GUN CART	•	27-646-A	2
7	CLEVIS - PULL CHAIN	•	27-658	1
8	BUMPER - SPRINKLER CART SHUT OFF	•	27-689	1
9	HOSE - 3/8 BLACK POLYETHYLENE	•	40-HHZ-0167	2
10	NIPPLE CLOSE - 1/4 NPT GALV.	•	40-NPT-NPLC025G	1
11	BALL VALVE - 1/4 IN F X F	•	40-NPT-VLV025BLLFF	1
12	HAND GRIP - 1.00 X 3.00	•	42-024	1
13	LABEL - MAX HOSE PULL	•	42-032	1
14	LABEL - HIGH PRESS. WATER	•	42-046-A	1
15	VALVE - 3 WAY	•	42-048	1
16	VALVE - 1 1/2 IN. CONTROL	•	42-049	1
17	CHAIN - 3/16 GALVANIZED, 26 LINKS	•	42-055-26	1
18	GAUGE - 0-100 PSI WET	•	45-022	1
19	WHEEL ASS'Y - 4.10-4 2PR SAW TOOTH	•	55-152	2
20	BOLT - 3/8-16 X 1.00 STAINLESS STEEL	•	88-BLT-03816X100	1
21	BOLT - 3/8-16 X 1.25 STAINLESS STEEL	•	88-BLT-03816X125	1
22	BOLT - 3/8-16 X 3.00 STAINLESS STEEL	•	88-BLT-03816X300	1
23	BOLT - 1/2-13 X 4.50 STAINLESS STEEL	•	88-BLT-05013X450	2
24	NUT HEX - #6-32 STAINLESS STEEL	•	88-NUT-HEX006-32	3
25	NUT LOCK - 3/8-16 STAINLESS STEEL	•	88-NUT-LOC038-16	3
26	NUT LOCK - 31/2-13 STAINLESS STEEL	•	88-NUT-LOC050-13	2
27	SCREW MACH. - #6-32 X 1 1/2 STAINLESS STEEL	•	88-SCR-PHP06-32X150	3
28	WASHER FLAT - 3/8 STAINLESS	•	88-WSR-FLT038	1
29	WASHER FLAT - 1/2 STAINLESS STEEL	•	88-WSR-FLT050	4
30	WASHER LOCK - #6 STAINLESS	•	88-WSR-LOC006	3
31	WASHER SAE - 3/8 STAINLESS STEEL	•	88-WSR-SAE038	3

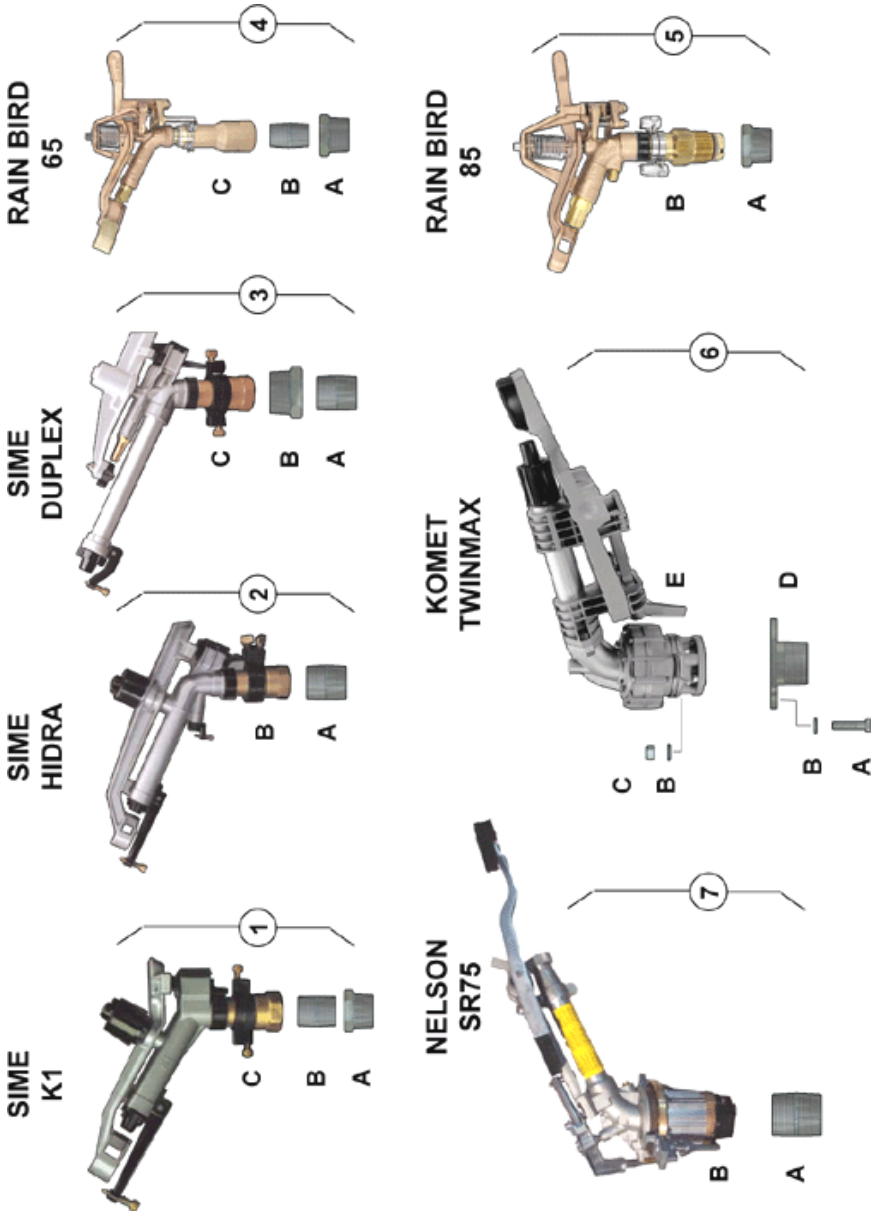
Sprinkler Cart Assembly – 1800 ⇨ 2100



Sprinkler Cart Assembly – 1800 ⇨ 2100

◆	**SPRINKLER CART ASSEMBLY (COMPLETE)**		•	•	•	•	**TR-CRT-1800/2100**	◆
1	ELBOW - #06 TUBE X #02 M-NPT X 90°		•	•	•	•	25-HYD-87110-06-02	2
2	ELBOW - #06 TUBE X #04 M-NPT X 90°		•	•	•	•	25-HYD-87110-06-04	2
3	DRAIN COCK - 3/8 M-NPT		•	•	•	•	25-WHD-270	1
4	CLEVIS - PULL CHAIN		•	•	•	•	27-658	1
5	CROSS TUBE - GUN CART		•	•	•	•	28-615	1
6	TUBE WELDMENT - 36" GUN CART		•	•	•	•	28-618	1
7	LEG WELDMENT - 36" GUN CART		•	•	•	•	28-619-A	2
8	BUMPER – SPRINKLER CART SHUT OFF		•	•	•	•	28-641	1
9	BUSHING WELDMENT - AXLE		•	•	•	•	28-645	2
10	TOW CHAIN - 3/8 X 24 LINKS		•	•	•	•	40-065-24	1
11	MID LINK - 3/8 IN.		•	•	•	•	40-520	1
12	HOSE - 3/8 BLACK POLYETHYLENE		•	•	•	•	40-HHZ-0167	5
13	NIPPLE - 1/4 NPT X 1 IN. GALV.		•	•	•	•	40-NPT-NPL025X100G	1
14	BALL VALVE - 1/4 IN F X F		•	•	•	•	40-NPT-VLV025BLLFF	1
15	LABEL - MAX HOSE PULL		•	•	•	•	42-032	1
16	LABEL - HIGH PRESS. WATER		•	•	•	•	42-046-A	1
17	VALVE - 3 WAY		•	•	•	•	42-048	1
18	VALVE - 1 1/2 IN. CONTROL		•	•	•	•	42-049	1
19	GAUGE - 0-100 PSI WET		•	•	•	•	45-022	1
20	WHEEL ASS'Y - 4.10-4 2PR SAW TOOTH		•	•	•	•	55-152	2
21	BOLT - 3/8-16 X 1.25 STAINLESS STEEL		•	•	•	•	88-BLT-03816X125	2
22	BOLT - 1/2-13 X 1.25 STAINLESS STEEL		•	•	•	•	88-BLT-05013X125	10
23	BOLT - 1/2-13 X 7.00 STAINLESS STEEL		•	•	•	•	88-BLT-05013X700	2
24	NUT HEX - #6-32 STAINLESS STEEL		•	•	•	•	88-NUT-HEX006-32	3
25	NUT JAM - 1/2-13 STAINLESS STEEL		•	•	•	•	88-NUT-JAM050-13	6
26	NUT LOCK - 3/8-16 STAINLESS STEEL		•	•	•	•	88-NUT-LOC038-16	2
27	NUT LOCK - 31/2-13 STAINLESS STEEL		•	•	•	•	88-NUT-LOC050-13	6
28	SCREW MACH. - #6-32 X 1 1/2 STAINLESS STEEL		•	•	•	•	88-SCR-PHP06-32X150	3
29	WASHER FLAT - 3/8 STAINLESS		•	•	•	•	88-WSR-FLT038	1
30	WASHER FLAT - 1/2 STAINLESS STEEL		•	•	•	•	88-WSR-FLT050	2
31	WASHER LOCK - #6 STAINLESS		•	•	•	•	88-WSR-LOC006	3
32	WASHER SAE - 3/8 STAINLESS STEEL		○	○	○	○	88-WSR-SAE038	2
33	WEIGHT - 20 LB		•	•	•	•	BR-PRT-W20	2
34	FLANGE GASKET - 1 1/2, 4 BOLT		•	•	•	•	IR-GKT-FL150-A	1

Sprinkler Options

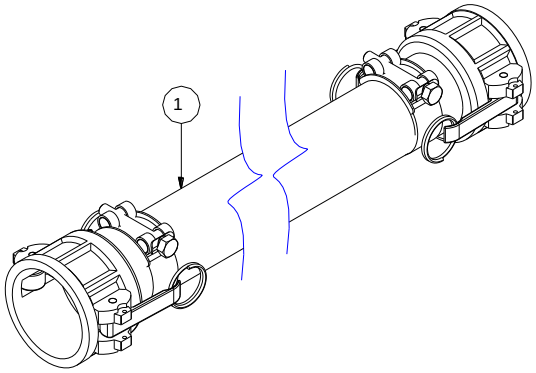


Sprinkler Options

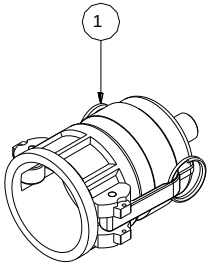
1◆	**SIME K1 OPTION**	○	○	○	○	○	**SP-SIM-K1KIT**	◆
A	REDUCER - #24 M-NPT X #20 F-NPT GALV.						40-NPT-RB150X125G	1
B	NIPPLE CLOSE - 1.25" GALV.						40-NPT-NPLC125G	1
C	SPRINKLER - SIME K1						SP-SIM-K1	1
2◆	**SIME HIDRA OPTION**	○	○	○	○	○	**SP-SIM-HIDRAKIT**	◆
A	NIPPLE CLOSE - 1 1/2" NPT GALV.						40-NPT-NPLC150G	1
B	SPRINKLER - SIME HIDRA						SP-SIM-HIDRA	1
3◆	**SIME DUPLEX OPTION**	○	○	○	○	○	**SP-SIM-DUPLEXKIT**	◆
A	NIPPLE CLOSE - 1 1/2" NPT GALV.						40-NPT-NPLC150G	1
B	REDUCER - #32 M-NPT X #24 F-NPT GALV.						40-NPT-RB200X150G	1
C	SPRINKLER - SIME DUPLEX						SP-SIM-DUPLEX	1
4◆	**RAIN BIRD 65 OPTION**	○	○	○	○	○	**SP-RBD-65PJKIT**	◆
A	REDUCER - #24 M-NPT X #16 F-NPT GALV.						40-NPT-RB150X100G	1
B	NIPPLE CLOSE - 1" NPT GALV.						40-NPT-NPLC100G	1
C	SPRINKLER - RAIN BIRD 65						SP-RBD-KIT65PJTNT	1
5◆	**RAIN BIRD 85 OPTION**	○	○	○	○	○	**SP-RBD-85EHDKIT**	◆
A	REDUCER - #24 M-NPT X #20 F-NPT GALV.						40-NPT-RB150X125G	1
B	SPRINKLER - RAIN BIRD 85						SP-RBD-85EHDLA	1
6◆	**KOMET TWINMAX OPTION**	○	○	○	○	○	**SP-KOM-TMKIT**	◆
A	5/16-18 X 1.5 STAINLESS STEEL BOLT						88-BLT-03118X150	4
B	5/16 STAINLESS STEEL SAE FLAT WASHER						88-WSR-SAE031	8
C	5/16-18 STAINLESS STEEL LOCKNUT						88-NUT-LOC031-18	4
D	FLANGE WELDMENT - TWINMAX 24						27-659	1
E	SPRINKLER - KOMET TWINMAX						SP-KOM-1A40330030	1
7◆	**NELSON SR75 OPTION**	○	○	○	○	○	**SP-NEL-SR75KIT**	◆
A	NIPPLE CLOSE - 1 1/2" NPT GALV.						40-NPT-NPLC150G	1
B	SPRINKLER - NELSON SR75						SP-NEL-SR75	1

Standard and Optional Equipment

STANDARD EQUIPMENT



OPTIONAL EQUIPMENT



Standard and Optional Equipment

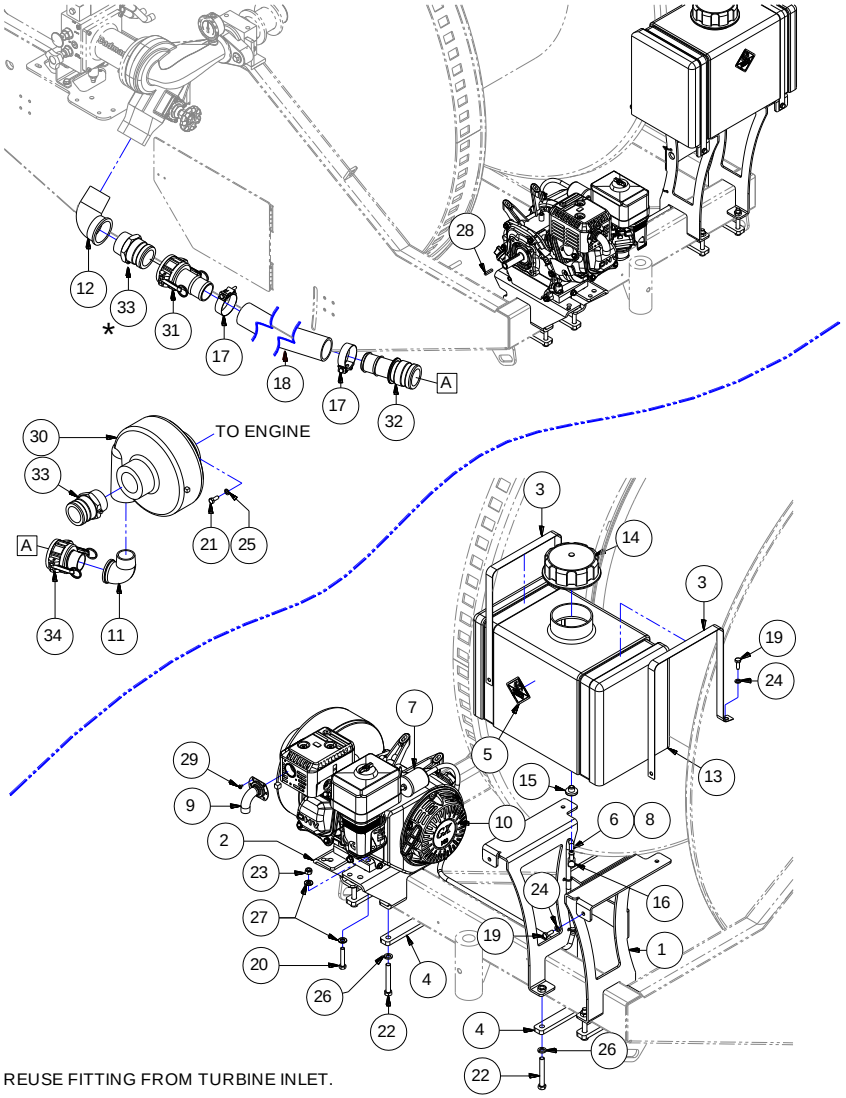
Standard Equipment

1	FEEDER HOSE - 2" X 20 FEET	•	•	•	•	•	TR-HOZ-2X20	1

Optional Equipment

1	BLOW OUT ADAPTER	○	○	○	○	○	TR-KIT-BLOW2	1

Booster Pump Option – 5.5hp Cornell (optional)

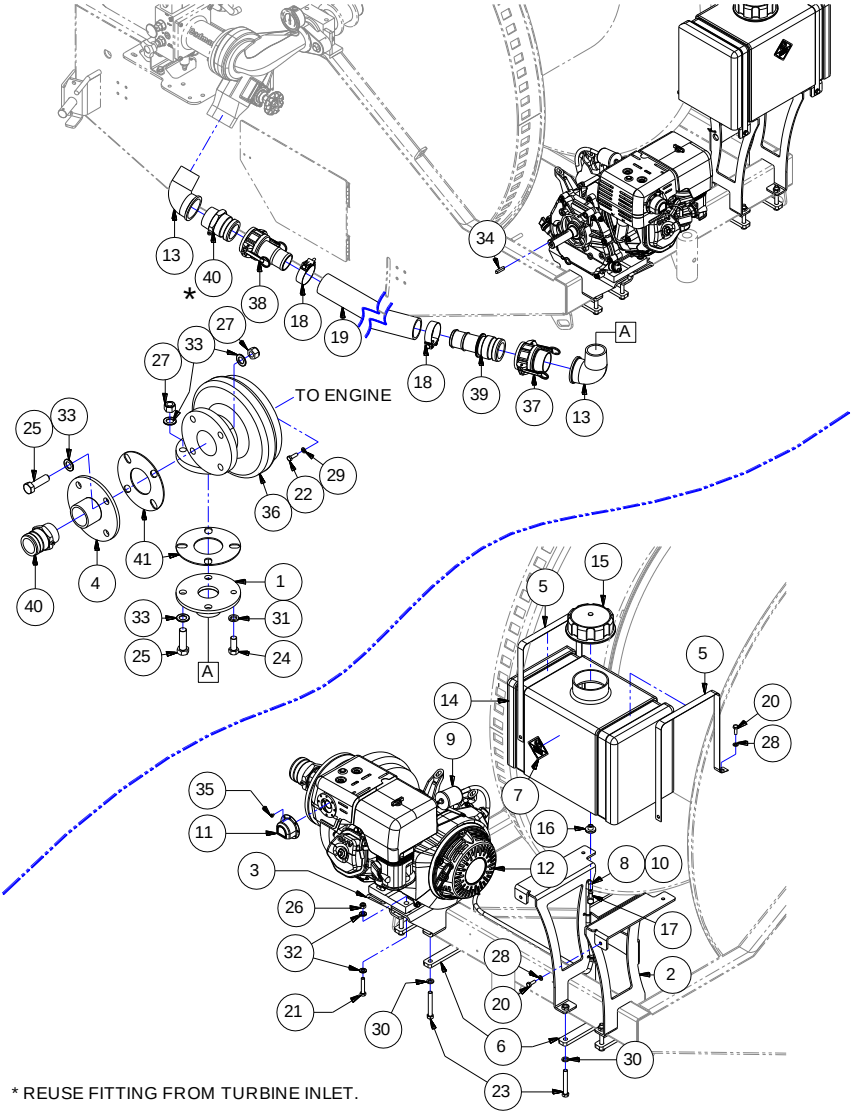


* REUSE FITTING FROM TURBINE INLET.

Booster Pump Option – 5.5hp Cornell (optional)

◆	BOOSTER PUMP OPTION – 5.5HP CORNELL	○	○	○	○	○	TR-OPT-BPC55	◆
1	FUEL TANK CRADLE WELDMENT						29-626	1
2	ENGINE MOUNT WELDMENT						29-627	1
3	STRAP FUEL TANK						29-720	2
4	MOUNT BAR						29-725	4
5	LABEL - GASOLINE						40-039-A	1
6	FUEL LINE - 1/4 NEOPRENE *(CUT TO LENGTH)*						40-066	60
7	FUEL FILTER - 1/4"						40-326	1
8	CABLE TIE - 4 IN. BLACK						40-391	3
9	EXHAUST DEFLECTOR - GX-120/160						40-HDA-18340ZE1000	1
10	HONDA ENGINE - GX-160						40-HDA-GX160	1
11	ELBOW - 1 1/2 X 90° STREET GALV.						40-NPT-ELS150X90G	1
12	ELBOW - 2 X 90° STREET GALV.						40-NPT-ELS200X90G	1
13	TANK - 5 GAL. PLASTIC GASOLINE						42-096	1
14	FUEL CAP - 3.50" VENTED						42-097	1
15	BUSHING - FUEL TANK						42-100	1
16	FUEL TANK FITTING 90°						42-101	1
17	MAXI-CLAMP – 2 1/2 IN.						50-052	2
18	HOSE - 2" BLACK TANK TRUCK *(CUT TO LENGTH)*						50-105	3.16
19	BOLT - 1/4-20 X 0.75 STAINLESS STEEL						88-BLT-02520X075	4
20	BOLT - 5/16-18 X 1.75 STAINLESS STEEL						88-BLT-03118X175	4
21	BOLT - 5/16-24 X 0.75 STAINLESS STEEL						88-BLT-03124X075	4
22	BOLT - 3/8-16 X 2.75 STAINLESS STEEL						88-BLT-03816X275	8
23	NUT LOCK - 5/16-18 STAINLESS STEEL						88-NUT-LOC031-18	4
24	WASHER LOCK - 1/4 STAINLESS STEEL						88-WSR-LOC025	4
25	WASHER LOCK - 5/16 STAINLESS STEEL						88-WSR-LOC031	4
26	WASHER LOCK - 3/8 STAINLESS STEEL						88-WSR-LOC038	8
27	WASHER SAE - 5/16 STAINLESS STEEL						88-WSR-SAE031	8
28	KEY - 3/16 SQ. X 1.13 IN. LONG						90-KEY-SQ019X113	1
29	SCREW PH - M4-0.70 X 6MM						90-SCR-PHM4.70X006	2
30	CORNELL PUMP - 1.5 WH						CO-PMP-15WH	1
31	CAM LOCK - C200						IR-CAM-200/C	1
32	CAM LOCK - E200						IR-CAM-200/E	1
33	CAM LOCK - F200						IR-CAM-200/F	1
34	CAM LOCK - B200X150						IR-CAM-200X150/B	1

Booster Pump Option – 9hp Cornell (optional)

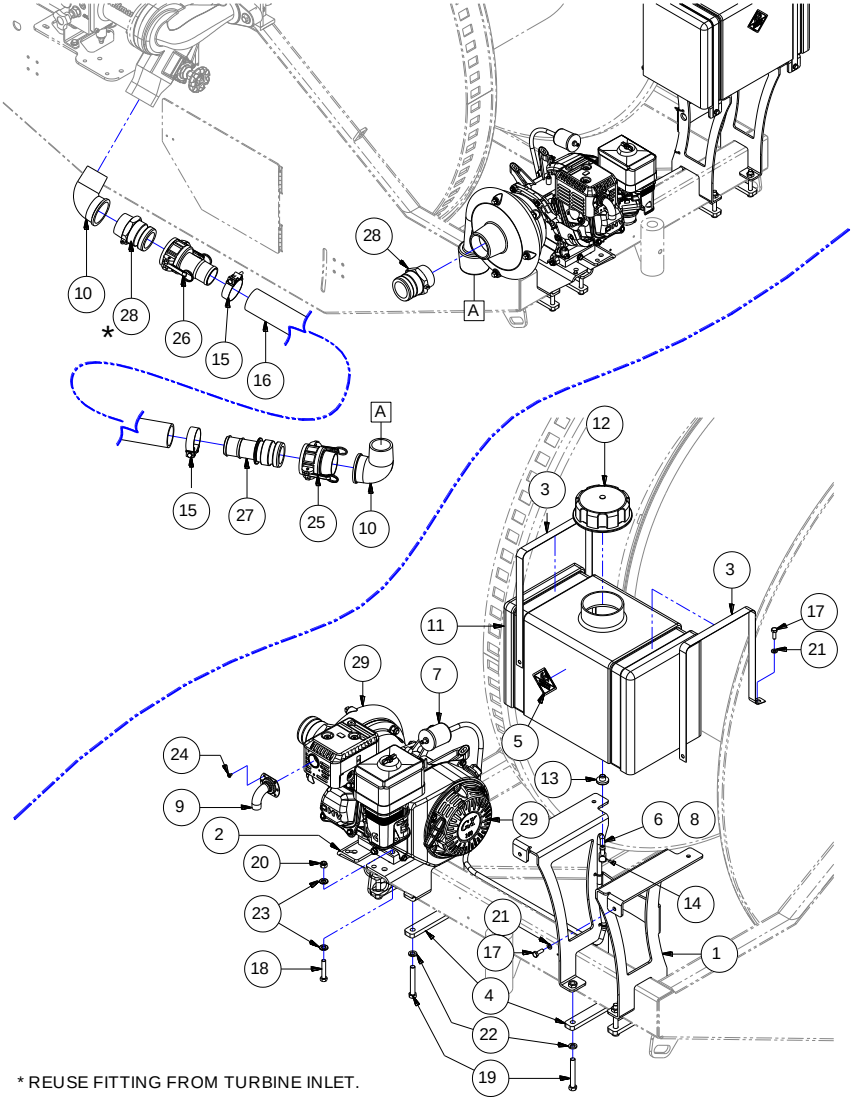


* REUSE FITTING FROM TURBINE INLET.

Booster Pump Option – 9hp Cornell (optional)

◆	BOOSTER PUMP OPTION – 9HP CORNELL	○	○	○	○	○	TR-OPT-BPC9	◆
1	DISCHARGE FLANGE - CORNELL 2.5WH						29-620	1
2	FUEL TANK CRADLE WELDMENT						29-626	1
3	ENGINE MOUNT WELDMENT						29-627	1
4	SUCTION FLANGE - CORNELL 2.5WH						29-629	1
5	STRAP FUEL TANK						29-720	2
6	MOUNT BAR						29-725	4
7	LABEL - GASOLINE						40-039-A	1
8	FUEL LINE - 1/4 NEOPRENE *(CUT TO LENGTH)*						40-066	60
9	FUEL FILTER - 1/4"						40-326	1
10	CABLE TIE - 4 IN. BLACK						40-391	3
11	EXHAUST DEFLECTOR - GX-240/270						40-HDA-18331ZE2810	1
12	HONDA ENGINE - GX-270						40-HDA-GX270	1
13	ELBOW - 2 X 90° STREET GALV.						40-NPT-ELS200X90G	2
14	TANK - 5 GAL. PLASTIC GASOLINE						42-096	1
15	FUEL CAP - 3.50" VENTED						42-097	1
16	BUSHING - FUEL TANK						42-100	1
17	FUEL TANK FITTING 90°						42-101	1
18	MAXI-CLAMP – 2 1/2 IN.						50-052	2
19	HOSE - 2" BLACK TANK TRUCK *(CUT TO LENGTH)*						50-105	3.16
20	BOLT - 1/4-20 X 0.75 STAINLESS STEEL						88-BLT-02520X075	4
21	BOLT - 5/16-18 X 1.75 STAINLESS STEEL						88-BLT-03118X175	4
22	BOLT - 5/16-24 X 1.00 STAINLESS STEEL						88-BLT-03124X100	4
23	BOLT 3/8-16 X 2.75 STAINLESS STEEL						88-BLT-03816X275	8
24	BOLT 5/8-11 X 1.50 STAINLESS STEEL						88-BLT-06311X150	1
25	BOLT 3/4-10 X 2.50 STAINLESS STEEL						88-BLT-07510X250	7
26	NUT LOCK - 5/16-18 STAINLESS STEEL						88-NUT-LOC031-18	4
27	NUT LOCK - 3/4-10 STAINLESS STEEL						88-NUT-LOC075-10	7
28	WASHER LOCK - 1/4 STAINLESS STEEL						88-WSR-LOC025	4
29	WASHER LOCK - 5/16 STAINLESS STEEL						88-WSR-LOC031	4
30	3/8 STAINLESS STEEL						88-WSR-LOC038	8
31	WASHER LOCK - 5/8 STAINLESS STEEL						88-WSR-LOC063	1
32	WASHER SAE - 5/16 STAINLESS STEEL						88-WSR-SAE031	8
33	WASHER SAE - 3/4 STAINLESS STEEL						88-WSR-SAE075	14
34	KEY - 1/4 SQ. X 1.25 LONG						90-KEY-SQ025X125	1
35	SCREW PH - M4-0.70 X 6MM						90-SCR-PHM4.70X006	2
36	PUMP - CORNELL 2.5WH CC						CO-PMP-25WH	1
37	CAM LOCK - B200X200						IR-CAM-200/B	1
38	CAM LOCK - C200						IR-CAM-200/C	1
39	CAM LOCK - E200						IR-CAM-200/E	1
40	CAM LOCK - F200						IR-CAM-200/F	1
41	GASKET - CORNELL 2.5WH						IR-GKT-BPC9	2

Booster Pump Options – Monarch (optional)



* REUSE FITTING FROM TURBINE INLET.

Booster Pump Options – Monarch (optional)

◆	**BOOSTER PUMP OPTION – 5.5HP MONARCH**	○	○	○	○	○	**TR-OPT-BPM55**	◆
◆	**BOOSTER PUMP OPTION – 9HP MONARCH**	○	○	○	○	○	**TR-OPT-BPM9**	◆
1	FUEL TANK CRADLE WELDMENT						29-626	1
2	ENGINE MOUNT WELDMENT						29-627	1
3	STRAP FUEL TANK						29-720	2
4	MOUNT BAR						29-725	4
5	LABEL - GASOLINE						40-039-A	1
6	FUEL LINE - 1/4 NEOPRENE *(CUT TO LENGTH)*						40-066	60
7	FUEL FILTER - 1/4"						40-326	1
8	CABLE TIE - 4 IN. BLACK						40-391	3
9	EXHAUST DEFLECTOR - GX-120/160						40-HDA-18340ZE1000	1
↳	EXHAUST DEFLECTOR - GX-240/270						40-HDA-18331ZE2810	1
10	ELBOW - 2 X 90° STREET GALV.						40-NPT-ELS200X90G	2
11	TANK - 5 GAL. PLASTIC GASOLINE						42-096	1
12	FUEL CAP - 3.50" VENTED						42-097	1
13	BUSHING - FUEL TANK						42-100	1
14	FUEL TANK FITTING 90°						42-101	1
15	MAXI-CLAMP – 2 1/2 IN.						50-052	2
16	HOSE - 2" BLACK TANK TRUCK *(CUT TO LENGTH)*						50-105	3.16
17	BOLT - 1/4-20 X 0.75 STAINLESS STEEL						88-BLT-02520X075	4
18	BOLT - 5/16-18 X 1.75 STAINLESS STEEL						88-BLT-03118X175	4
19	BOLT - 3/8-16 X 2.75 STAINLESS STEEL						88-BLT-03816X275	8
20	NUT LOCK - 5/16-18 STAINLESS STEEL						88-NUT-LOC031-18	4
21	WASHER LOCK - 1/4 STAINLESS STEEL						88-WSR-LOC025	4
22	WASHER LOCK - 3/8 STAINLESS STEEL						88-WSR-LOC038	8
23	WASHER SAE - 5/16 STAINLESS STEEL						88-WSR-SAE031	8
24	SCREW PH - M4-0.70 X 6MM						90-SCR-PHM4.70X006	2
25	CAM LOCK - B200X200						IR-CAM-200/B	1
26	CAM LOCK - C200						IR-CAM-200/C	1
27	CAM LOCK - E200						IR-CAM-200/E	1
28	CAM LOCK - F200						IR-CAM-200/F	1
29	MONARCH 2 IN BOOSTER PUMP (5.5 HP)						MO-KIT-2X2GX160	1
↳	MONARCH 2 IN BOOSTER PUMP (9 HP)						MO-KIT-2X2GX270	1

Required Maintenance

Prevention of mechanical failure is the goal of any good maintenance schedule. The secret to preventing unwanted down time is to adhere to a maintenance schedule suited to the way you use the equipment. Your maintenance schedule should include the following minimum requirements:

ONLY perform maintenance when the machine is shut down and is in a non-loaded condition. This means that no water is being pumped through the reel, all water pressure has been appropriately bled and all mechanical and hydraulic tension has been released from the hose rewind system.

After performing any maintenance or repair work on the hydraulic system (i.e. hose change) you must purge all air from the system. In most cases air in the system can be bled by disengaging the drive system and pulling the red control knob to the "ON" position. This will cycle oil through the system and air will return to the reservoir. During this process the reservoir oil level must be maintained to avoid running the pump dry (see Figure 50). Failure to follow this procedure will result in performance loss and possible equipment damage.

Each Use

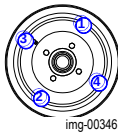
Visually inspect equipment	N / A	Walk around the unit and inspect for loose, missing or damaged items. Check the hydraulic hose connections for leaks. Replace missing or damaged items and tighten loosened items.
Maintain tire pressure	N / A	Using a tire pressure gauge, check the pressure of each tire and add or remove air to achieve the manufacturer's recommended pressure posted on the tire sidewall. **DO NOT LOWER TIRE PRESSURE BELOW THE RECOMMENDED LEVEL. A lower pressure than the recommended pressure could result in the tire separating from the rim.**
Tighten all wheel bolts *(1800 ⇨ 2100)*	 img-00346	Before moving the unit, verify that the wheel bolts are tight. When tightening the lug nuts use a star pattern with your torque wrench set at 85-95 ft/lbs (115-129 N.m).
Lubricate the level wind knife and indexer screw	Figure 48	Using a grease gun liberally inject acceptable grease to each grease nipple, also liberally coat the indexer screw with grease using a brush.
Check engine oil and air filter.	Figure 49	Check the oil level of the Honda engine, replenish if required. Check the condition of the air filter, replace if necessary.
Check power unit oil level	Figure 50	Check the oil level of the power unit, replenish if required.

Table 3 - Required Maintenance - Each Use

After First 20 Hours

Change engine oil	N / A	Change the engine oil. Consult the Honda engine manual for further information on oil requirements and change intervals as well as other required engine maintenance.
Check power unit oil level	Figure 50	Check the oil level of the power unit, replenish if required.

Table 4 – After First 20 Hours of Use

Every 100 Hours

Change engine oil	N / A	Change the engine oil. Consult the Honda engine manual for further information on oil requirements and change intervals as well as other required engine maintenance.
Adjust, if necessary, the tension of the indexer chain	Figure 47	Remove protective shield. The indexer chain is properly tensioned when it has no visible slack. Adjustments are made by moving the idler wheel (rub block) towards the chain. Replace the shield before operating this machine.
Lubricate the following	Figure 48	• Tongue Yoke Tube • Indexer Screw • Indexer Chain • Level Wind Knife • Wheel Axles Main Chassis (1400 Model Only) • Wheel Axle Tongue Assembly (all Models)
Check power unit oil level	Figure 50	Check the oil level of the power unit, replenish if required.

Table 5 – Every 100 Hours of Use

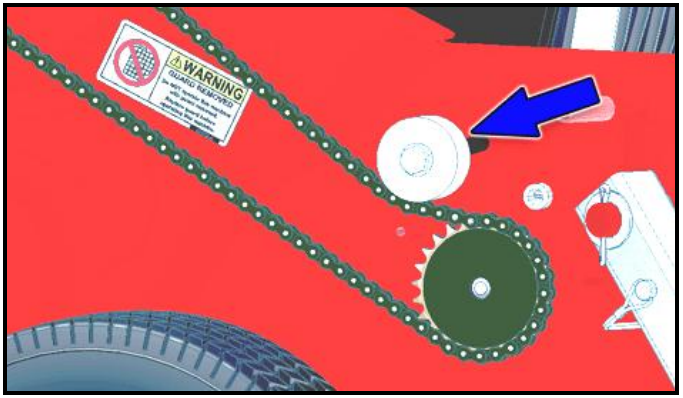


Figure 47 - Adjust Indexer Chain

img-00347

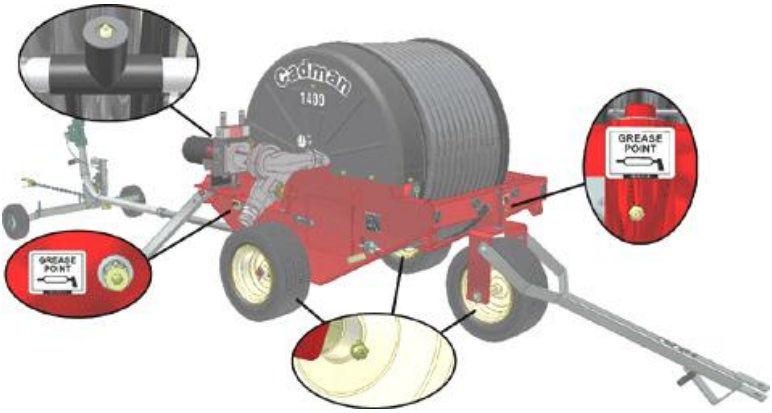


Figure 48 - Lubrication Points

img-00362

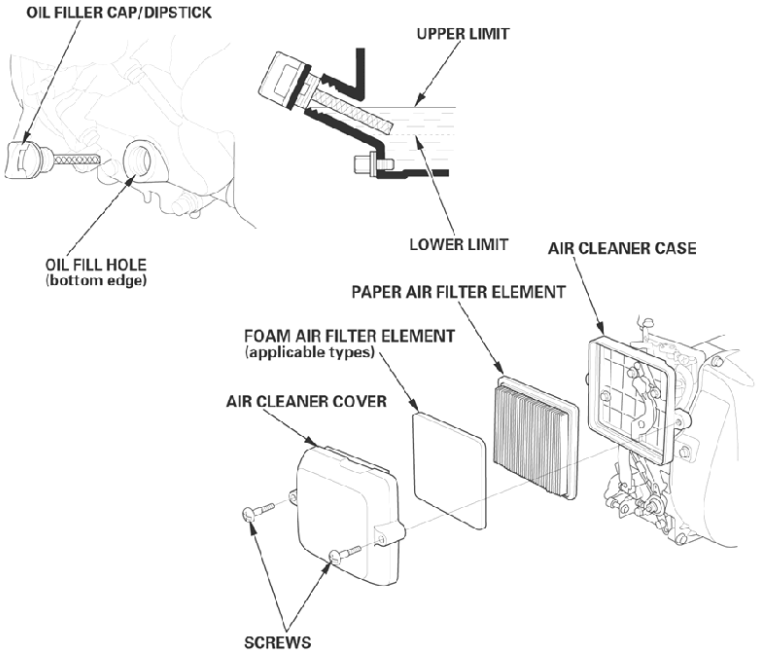


Figure 49 - Check Engine Oil / Air Filter (if equipped)

img-00345

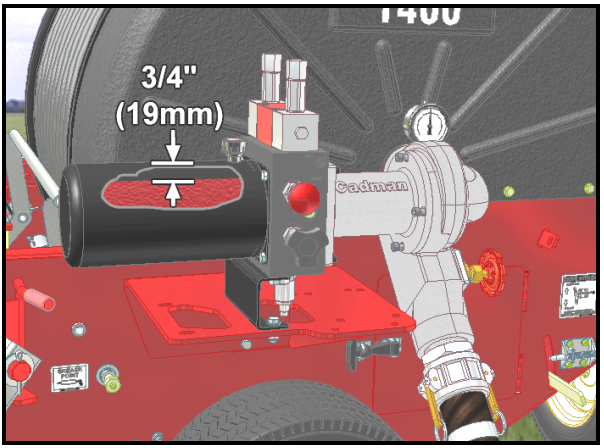


Figure 50 - Check Hydraulic Oil Level

img-00372

Before Storing

You MUST properly empty your Cadman Mini-Traveller before storing the machine for long periods of time. Failure to properly clean out the hose could result in the hose being plugged with sediment.

Drain the traveller	N / A	For cold climates you must winterize your equipment. All liquid must be drained from the machine. Open the turbine by-pass fully (if equipped). Use compressed air to purge the machine. For further information contact Cadman Power Equipment Limited or your dealer.
Retract cylinder	N / A	It is recommended when storing your traveller that you retract the hydraulic cylinder so that the rod is not exposed to the elements. This will prolong the seal life of your cylinder.
Main chassis wheel bearings *(1800 ⇨ 2100)*	Page 42	Disassemble, clean, inspect and re-pack the main chassis wheel bearings with acceptable grease. (see Lubricants)
Lubricate the following	Figure 48	• Tongue Yoke Tube • Indexer Screw • Indexer Chain • Level Wind Knife • Wheel Axles Main Chassis (1400 Model Only) • Wheel Axle Tongue Assembly (all Models)
Prepare Honda Engine	N / A	Prepare the Honda Engine for storage. See the storage instructions provided in the Honda Engine manual.
Cap all openings	N / A	Once the machine is drained, cap all openings such as water inlet and sprinkler nozzle. This will prevent insects or rodents from blocking the system with debris.

Table 6 - Required Maintenance – Before Storing

Before Start Up *(After long term storage)*

Review Operator's manual	N / A	Review this manual to refresh your memory regarding the proper operation of this machine. This will reduce the potential for equipment damage and user injury.
Maintain tire pressure	N / A	Using a tire pressure gauge, check the pressure of each tire and add or remove air to achieve the manufacturer's recommended pressure posted on the tire sidewall. **DO NOT LOWER TIRE PRESSURE BELOW THE RECOMMENDED LEVEL. A lower pressure than the recommended pressure could result in the tire separating from the rim.**
Fill fuel system	N / A	Fill the fuel system with fresh fuel.

Table 7 - Required Maintenance - After Long Term Storage

Lubricants

Grease: Any good grade multi-purpose, waterproof grease is compatible with the greasing requirements of your Cadman Mini-Traveller.
Engine Oil: Consult the Honda owner's manual for oil recommendations.
Power Unit Oil: Automatic Transmission Fluid (P/N 85-LUB-ATF)

Brake Adjustment Instructions

Brake tension may require adjusting periodically. If this is the case simply complete the following instructions to achieve proper brake tension.

Step 1

Using a screwdriver, insert the head into the loop at the top of the tensioning rod. This will prevent the rod from turning.

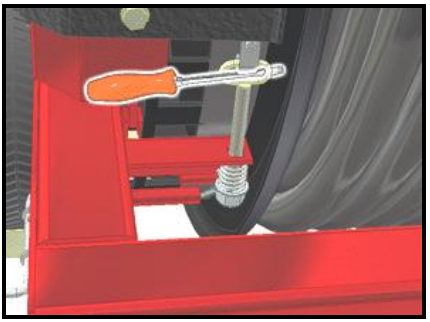


Figure 51 - Insert Screwdriver

img-00363

Step 2

Using a $^{9}/_{16}$" wrench tighten the nut on the tensioning rod until all the slack has been taken up on the brake band.

Figure 52 - Tighten Tensioning Rod

img-00364

The compression spring should not be compressed to a length shorter than 1" (25mm). If this is the case you must replace the brake band assembly. Failure to have proper brake tension could result in equipment damage.

Indexer Adjustment Instructions

In some cases indexer adjustment may be required. If required simply complete the following instructions to achieve proper indexer adjustment.

Only perform the indexer adjustment procedure when the hose is pulled out to the base layer. If there are spaces in the base layer you will be required to tighten the coils so that they form a neatly packed spool. Rotate the drum if necessary. In some cases the indexer may not be out of adjustment and will not require any adjustments. If the indexer is still out of alignment continue with the instructions below.

Step 1

Remove the indexer chain guard.

Figure 53 - Remove Chain Guard

img-00365

Step 2

Loosen the indexer chain idler, and then remove the chain connector link.

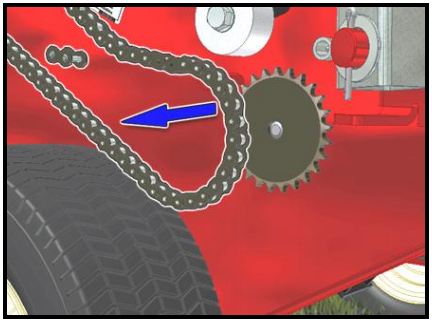


Figure 54 - Remove Indexer Chain

img-00366

Step 3

Rotate the indexer sprocket until the hose guide is lined up with the hose. Make sure that the hose is directly in the center of the hose guide.

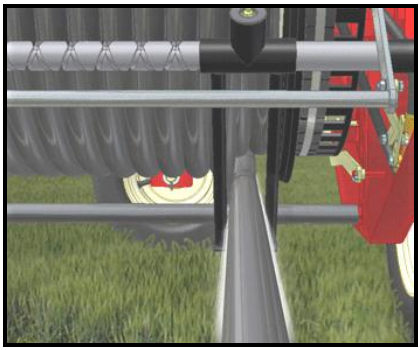


Figure 55 - Align Hose Guide

img-00337

It is IMPORTANT that the hose guide is traveling in the same direction as the hose. When rotating the indexer sprocket note the direction of travel for the hose. If the hose guide travels opposite to the hose, equipment damage WILL occur.

Step 4

Re-install the chain and chain connector link.

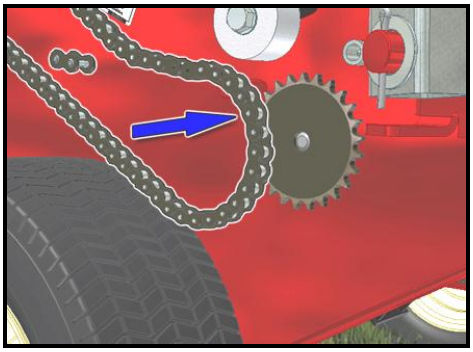


Figure 56 - Re-install Chain and Chain Connector Link

img-00367

Step 5

Remove all slack in the indexer chain by adjusting the chain idler.

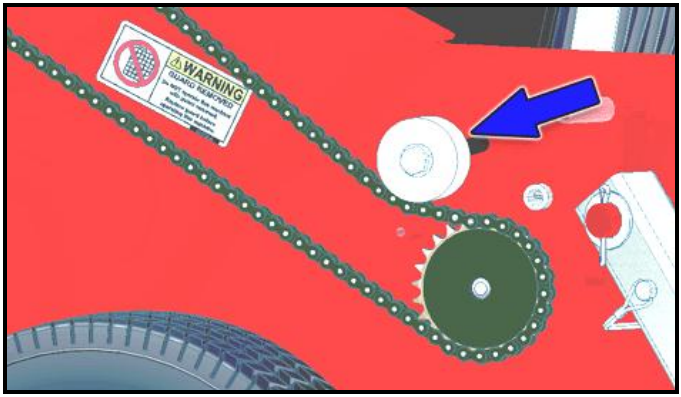


Figure 57 - Adjust Indexer Chain

img-00347

Step 6

Re-install the indexer chain guard.

Figure 58 – Re-install Indexer Chain Guard

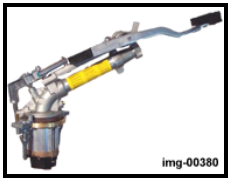
img-00368

DO NOT operate this machine without all guards properly installed. Failure to have guards properly installed may result in serious injury to you and/or spectators.

Appendix A – Sprinkler Data

Komet® - Twin® Max – 24°																								
PSI	Nozzle 0.39"		Nozzle 0.43"		Nozzle 0.47"		Nozzle 0.51"		Nozzle 0.55"		Nozzle 0.59"		Nozzle 0.63"		Nozzle 0.67"		Nozzle 0.71"		Nozzle 0.79"		Nozzle 0.87"		Nozzle 0.94"	
	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
25	—	—	—	—	32	148'	37	156'	43	163'	50	170'	57	177'	64	185'	72	191'	89	202'	107	213'	128	223'
30	24	148'	29	156'	35	162'	41	171'	48	180'	55	187'	62	193'	70	201'	79	207'	97	221'	118	231'	140	243'
35	26	156'	32	165'	38	173'	44	183'	51	191'	59	199'	67	205'	76	214'	85	221'	105	237'	127	244'	151	256'
40	28	163'	34	174'	40	182'	47	193'	55	201'	63	209'	72	216'	81	225'	91	233'	112	247'	136	255'	162	268'
45	30	170'	36	180'	43	190'	50	200'	58	209'	67	218'	76	225'	86	233'	96	242'	119	257'	144	265'	171	279'
50	31	177'	38	188'	45	197'	53	207'	62	213'	71	225'	80	232'	91	242'	102	250'	125	266'	152	274'	181	290'
55	33	183'	40	195'	47	204'	56	214'	65	221'	74	232'	84	240'	95'	249'	107	258'	132	274'	159	285'	190	300'
60	34	191'	42	202'	50	212'	58	221'	67	229'	77	240'	88	247'	99	256'	111	266'	138	282'	166	292'	198	309'
65	36	198'	43	208'	52	218'	60	228'	70	236'	81	274'	92	254'	103	264'	116	273'	143	290'	173	300'	206	318'
70	37	205'	45	215'	53	225'	63	235'	73	244'	84	254'	95	262'	107	271'	120	280'	148	297'	180	307'	214	323'
80	40	216'	48	227'	57	237'	67	248'	78	257'	89	266'	102	276'	115	285'	129	294'	159	309'	192	318'	229	343'

Table 8 – Komet® Twin® Max – 24° (U.S. units) †

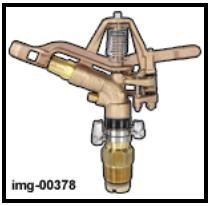


Nelson – SR75																		
PSI	Nozzle 0.40"		Nozzle 0.45"		Nozzle 0.50"		Nozzle 0.55"		Nozzle 0.60"		Nozzle 0.65"		Nozzle 0.70"		Nozzle 0.75"		Nozzle 0.80"	
	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
25							**42**	**146**	**50**	**155**	**59**	**161**	**69**	**167**	**80**	**174**	**91**	**182**
30					**37**	**158**	**45**	**158**	**55**	**165**	**64**	**172**	**75**	**182**	**87**	**187**	**99**	**192**
35			32	154	40	164	49	172	59	178	69	191	81	196	93	202	**106**	**208**
40	27	149	35	160	43	171	52	180	63	190	74	198	87	204	98	213	112	221
45	29	155	37	167	46	180	56	189	67	198	79	206	91	214	104	223	118	230
50	30	161	39	174	48	186	59	195	70	203	83	212	95	220	109	230	123	237
55	32	165	41	179	50	193	62	203	74	213	87	221	100	230	115	239	130	247
60	33	169	42	184	53	198	64	208	77	220	91	228	104	237	120	245	136	254
65	35	172	44	189	55	205	67	216	80	227	95	237	109	247	125	254	142	263
70	36	175	45	194	57	210	69	221	83	232	98	243	113	254	129	260	147	270
75	37	179	47	201	59	217	72	228	86	239	101	250	117	261	134	268	153	277
80	39	182	49	207	61	222	74	234	89	244	105	256	121	266	138	274	158	283

Table 9 - Nelson – SR75 (U.S. units) †

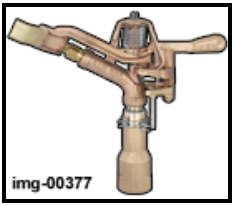
Pressure/nozzle combinations OUTSIDE of the shaded areas produce a more desirable stream.

† Table Data taken from manufacturer's literature and depict ideal testing conditions. Pressure (PSI) refers to pressure at nozzle. For every 3° drop of the trajectory angle the throw is reduced by approximately 3 to 4%. Data may change without notice.



Rain Bird® - 85EHD																				
PSI	Nozzle 11/32"		Nozzle 3/8"		Nozzle 13/32"		Nozzle 7/16"		Nozzle 15/32"		Nozzle 1/2"		Nozzle 17/32"		Nozzle 9/16"		Nozzle 5/8"		Nozzle 11/16"	
	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
25	17.10	122'	20.30	124'	23.40	128'	26.70	132'	30.30	132'	33.80	132'	37.10	132'	42.30	132'	51.50	132'	61.90	132'
30	18.80	128'	22.30	130'	25.70	136'	29.30	138'	33.20	144'	37.10	146'	40.80	146'	43.40	146'	56.50	146'	68.10	146'
35	20.30	134'	24.10	136'	27.80	144'	31.70	148'	35.90	154'	40.10	158'	44.10	158'	50.20	158'	61.10	158'	73.80	158'
40	21.80	138'	25.81	142'	29.70	150'	33.90	154'	38.50	160'	42.90	166'	47.20	166'	53.70	172'	65.40	172'	79.20	172'
45	23.10	142'	27.40	146'	31.60	144'	36.00	158'	40.80	164'	46.60	170'	50.10	176'	57.10	180'	69.50	184'	84.20	184'
50	24.40	146'	28.90	150'	33.30	158'	38.00	162'	43.10	168'	48.10	174'	52.90	180'	60.20	188'	73.30	190'	88.90	194'
55	25.50	150'	30.30	154'	34.90	162'	39.70	166'	45.30	172'	50.30	178'	55.60	184'	63.20	192'	77.30	198'	93.50	200'
60	25.80	154'	30.80	158'	35.90	166'	41.60	172'	47.40	176'	53.00	182'	58.80	188'	65.50	194'	80.10	202'	97.80	208'
65	26.90	158'	32.00	162'	37.40	168'	43.30	174'	49.90	180'	55.30	186'	61.20	192'	69.40	198'	84.40	204'	102.00	212'
70	28.10	162'	33.30	166'	38.90	172'	45.10	178'	51.40	182'	57.50	186'	63.50	196'	72.20	202'	87.80	208'	106.00	216'
75	29.20	164'	34.50	168'	40.30	174'	46.80	180'	53.30	186'	59.60	192'	65.80	198'	74.90	204'	91.00	210'	109.90	218'
80	30.40	166'	35.70	172'	41.80	178'	48.40	184'	55.10	188'	61.60	194'	68.10	202'	77.50	208'	94.10	214'	113.70	220'

Table 10 - Rain Bird® - 85EHD (U.S. units) ‡



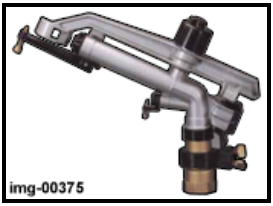
Rain Bird® - 65PJ		
PSI	Nozzle 1/4"	
	GPM	DIA.
50	12.90	114'
55	13.60	114'
60	14.20	116'
65	14.80	124'
70	15.40	126'
75	16.00	128'
80	16.50	130'

Table 11 – Rain Bird® - 65PJ (U.S. units) ‡

‡ Table Data taken from manufacturer's literature and depict ideal testing conditions. Pressure (PSI) refers to pressure at nozzle. For every 3° drop of the trajectory angle the throw is reduced by approximately 3 to 4%. Data may change without notice.

SIME – K1								
PSI	Nozzle 8mm		Nozzle 9mm		Nozzle 10mm		Nozzle 12mm	
	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
22.0	12.94	102'	16.38	108'	20.08	112'	29.06	112'
29.4	15.06	112'	18.76	115'	23.25	118'	33.55	125'
44.1	18.23	125'	22.98	128'	28.27	135'	40.95	138'
58.8	21.13	135'	26.42	138'	32.76	144'	47.29	154'

Table 12 - SIME – K1 (U.S. units) §



SIME – Hidra								
PSI	Nozzle 12mm / 5mm		Nozzle 14mm / 5mm		Nozzle 16mm / 5mm		Nozzle 18mm / 5mm	
	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
29.4	40.15	131'	51.51	138'	65.25	144'	—	—
44.1	48.08	157'	63.14	164'	80.04	170'	99.86	184'
58.8	55.74	177'	73.18	190'	92.72	197'	115.18	203'
73.5	62.35	197'	81.63	203'	103.29	217'	128.65	210'
88.2	—	—	—	—	—	—	140.80	236'

Table 13 - SIME – Hidra (U.S. units) §

SIME – Duplex										
PSI	Nozzle 12mm / 8mm		Nozzle 14mm / 8mm		Nozzle 16mm / 8mm		Nozzle 18mm / 8mm		Nozzle 20mm / 8mm	
	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.	GPM	DIA.
22.0	42.00	131'	—	—	—	—	—	—	—	—
29.4	48.61	151'	60.76	164'	74.50	177'	90.61	184'	108.57	190'
44.1	59.17	177'	73.97	190'	90.88	203'	114.65	217'	137.37	223'
58.8	68.42	197'	85.86	210'	105.40	223'	133.67	236'	160.09	249'
73.5	—	—	96.16	223'	117.82	243'	148.20	262'	173.56	282'

Table 14 - SIME – Duplex (U.S. units) §

§ Table Data taken from manufacturer's literature and depict ideal testing conditions. Pressure (PSI) refers to pressure at nozzle. For every 3° drop of the trajectory angle the throw is reduced by approximately 3 to 4%. Data may change without notice.

Useful Information

Length

1 FOOT	= 12	Inches	**1 METER**	= 39.37	Inches
1 ROD	= 0.3048	Meter	**1 MILE**	= 5280	Feet

Area

1 SQUARE FOOT	= 144	Square Inches
	= 0.0929	Square Meters
1 SQUARE YARD	= 1296	Square Inches
	= 0.8361	Square Meters
1 SQUARE METER	= 1549.4	Square Inches
	= 10.764	Square Feet
1 ACRE	= 43560	Square Feet
	= 4047	Square Meters
	= 0.4047	Hectare
1 HECTARE	= 107642.62	Square Feet
	= 10000	Square Meters
	= 2.47105	Acres
1 SQUARE MILE	= 640	Acres
	= 259	Hectares

Volume

1 GALLON (US)	= 0.8327	Imperial Gallons
	= 231	Cubic Inches
	= 0.1337	Cubic Feet
	= 8.345	Pounds
1 CUBIC FOOT	= 1728	Cubic Inches
	= 7.48	Gallons (US)
	= 62.4	Pounds
	= 28.32	Liters
1 ACRE INCH	= 27154	Gallons (US)
	= 254	Cubic Meters / Hectare

AREA OF A CIRCLE = Diameter² X 0.7854

CYLINDER VOLUME (US GAL.) = Diameter² X Length X 5.8748