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CUSTOMER OPERATIONS MANUAL

TIGER MANUFACTURING - 2,000 & 4,000 GALLON WATER TANKS



Contact Tiger Manufacturing at (325) 677-2112



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Overview

Tiger Manufacturing thanks and congratulates you on the purchase of your water tank.

Tiger Water Tank Features:

- Hydraulic Spray and/or Gravity Bar System
- Formed heads and baffles
- Self-loading pump with a priming standpipe
- Standard 2,000 or 4,000 gallon capacity
- Fillable from hydrant, overhead tank or natural water source
- Additional equipment customization options

Your Tiger water tank has undergone years of development, design, production and testing. Our time-tested fabrication and assembly process has offered unparalleled insight into the world of water trucks. Which we've used to deliver the highest quality product to our customers. The water tank's priority is to become the strongest workhorse in any fleet or single truck operation.

We, at Tiger Manufacturing, took the time to listen to and understand some of the trials that come with current equipment on the market. Which is why we have standardized practices like using a self-loading pump and priming standpipe to offer greater control of the spray's characteristics. We have set up each tank to be as close to drop-on as possible, whether installation occurs in-house or in the field.

Tiger Manufacturing thanks and congratulates you again on the purchase of your water tank.

Should you have any questions, comments or concerns throughout the process, please contact us.

Website: www.tigermfgco.com/contact-us

Office: (325) 677-2112

Or through your personal Tiger Manufacturing sales representative



Training Acknowledgement

The following sheet is provided to accurately track the training operators shall receive prior to any and all operation of the water tank.

[illegible]



Inspection Checklist

The following tables are provided to accurately track the inspection of the water tank.

	DAILY	WEEKLY	MONTHLY	ANNUALLY
Hydraulic Pump Condition	X	X	X	X
All Fittings/Flanges Condition	X	X	X	X
Hydraulic Fluid Level	X	X	X	X
All Bearing Lubrication		X	X	X
Gravity Bar and Stopper Condition		X	X	X
All Spray Heads Alignment		X	X	X
Water Tank Condition			X	X
All Air System Components			X	X
All Solenoid Valves Condition			X	X
Exterior Body and Paint Condition			X	X
All Spray Heads Condition				X
All Water System Components				X
All Hydraulic System Components				X



Inspection Record Log

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Notice

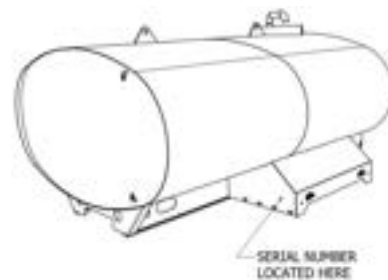
This operations manual covers the standard features found on the 2,000 and 4,000 gallon water tanks. This information will not be applicable on every unit. For operation questions regarding customized units, please contact your personal Tiger Manufacturing sales representative.

Model Identification

Tank Style

Operation of all of Tiger Manufacturing's units remains the same, however, there are several components that vary according to tank style and capacity. When ordering replacement parts, seeking additional information or troubleshooting, please have the serial number readily available.

The serial number can be found on a tag attached to the front end cap of the driver side fender assembly.



Hydraulic Spray vs. Gravity Bar Systems

- **Hydraulic Spray System:** There will be multiple spray heads found around the unit. Our most common 5-spray will have (2) heads on the front of the truck, (2) heads on the rear of the truck and (1) head on the driver side of the truck, near the pump.
- **Gravity Bar System:** At the rear of the truck, there will be a T-shaped device coming through the bottom of the tank and through the rear of the truck. This bar is where water will be discharged from.

It is not uncommon for a unit to feature both a spray system and gravity bar system.



Tank Filling Methods

Externally Pressurized Source

Externally pressurized water sources are sources that are capable of supplying their own pressure to discharge water and load the water tank.

1. If your model comes equipped with a spray system, close all spray valve switches and the spray system shut off, primary suction and priming valves. *(Reference the attached drawings for all valve locations.)*
2. If your model comes equipped with a gravity bar stopper, ensure it is in the closed position.
3. Connect the external water source to the main fill valve that is located near the bottom of the fill tube assembly.
4. Open the main fill valve.
5. Activate the external water source.
6. Monitor the fill level by using the included sight tube.
7. Once the desired fill level is reached, close the main fill valve.
8. Shut off the external water source.
9. Complete the filling process by disconnecting the external water source from the main fill valve.

Alternatively; the water tank can be loaded through one of the two auxiliary valves by opening the auxiliary valve and spray system shut off valve, closing all other valves and spray valve switches and completing the loading steps as described above.

Non-Pressurized Source

Non-pressurized sources will rely on the supplied spray system pump to load the tank. The procedure relies on the internal standpipe, meaning the standpipe must have been full prior to using this method and the standpipe shall be full before using this method again.

If the source's water level is substantially higher than the pump, you can connect the source to the main fill valve and use gravitational pressure to fill the tank. If the source's water level is not substantially higher than the pump, use the method below.



1. Start the water truck.
2. Verify that the truck's transmission is in neutral, and that the parking brake is set for all stationary operations.
3. Close all spray valve switches, both auxiliary valves, the primary suction and main fill valves.
4. If your model comes equipped with a gravity bar stopper, ensure it is in the closed position.
5. Connect your water source to the self-load valve.
6. Open the self-load valve.
7. Flood the water source hose and connection. *A full standpipe has enough capacity to flood water through approximately 20 feet of empty 3" hose.*
8. Prime the pump and suction hose by opening the priming valve. *A foot valve or check valve must be installed at the end of the suction hose to self-load the tank.*
9. Close the priming valve.
10. Open the rear spray system shut off valve.
11. Ensure the truck's transmission is in neutral and engage the PTO to start the pump. The pump should begin drawing in water from the source.
12. Monitor the fill level by using the included sight tube.
13. Once the desired fill level is reached, disengage the PTO to stop the pump.
14. Close the self-load valve.
15. Close the rear spray shut off valve.
16. Complete filling by disconnecting the water source from the self-load valve.

This method is intended to be completed with a loading hose fitted with a 'foot valve' on one end.

Discharging Tank

Gravity Bar Operation

1. Ensure the water tank is filled.
2. Close all applicable valves.



3. Start the truck.
4. Shift the truck's transmission into gear.
5. Pull the gravity bar stopper air valve, located in the cab, to open the stopper assembly and begin discharging water.
6. The rate and spread of discharge is controlled by the speed at which the operator drives.
The spray deflector may be adjusted to achieve different flow characteristics.
7. Monitor the water level of the tank throughout the discharging process by using the included sight tube.
8. Once the desired amount has been discharged, complete the operation by pushing the gravity bar stopper air valve, located in the cab. This will close the stopper assembly and stop discharging water.

If your older model Tiger water tank comes equipped with a rope pull system, follow the steps below for the discharging process.

1. Ensure the water tank is filled.
2. Close all applicable valves.
3. Start the truck.
4. Shift the truck's transmission into gear.
5. Pull on the rope that is connected to the stopper assembly to open the stopper and begin discharging water.
6. The rate the spread of discharge is controlled by the speed at which the operator drives.
7. Monitor the water level of the tank throughout the discharging process by using the included sight tube.
8. Once the desired amount has been discharged, complete the operation by releasing the rope to close the stopper assembly. This will stop the discharge of water.

Spray System Operation

The spray system is composed of several components that can be operated independently, all at once or in combination with one another. These components consist of a front spray bar, side spray assembly, rear spray bar and two auxiliary valves. Use the spray bars/assembly to spray



water to their respective locations. Use the auxiliary valves to connect to extra equipment, such as a hose reel.

1. Ensure the water tank is filled.
2. Ensure the main fill valve, priming valve and self-load valves are closed.
3. If your model comes equipped with a gravity bar stopper, ensure it is in the closed position.
4. Start the truck.
5. Open the primary suction valve.
6. Engage the PTO to start the pump.
7. Shift the truck's transmission into gear and begin driving.
 - a. The spray system may only spray while the truck is in motion.
 - b. The spray system requires an approximate minimum RPM of 1100 to begin spraying.
8. Engage the appropriate spray valve switch(s) inside of the cab to begin spraying.
9. Monitor the water level of the tank throughout the discharging process by using the included sight tube.
10. Once the desired amount has been discharged, disengage the spray valve switch(s).
11. Complete the discharging process by disengaging the PTO.

Maintenance







In addition to the items in the inspection checklist found in the beginning of this manual, complete the following maintenance intervals:

- Periodically inspect the tank mounting hardware.
 - With the tank completely empty, the springs should not be fully compressed.
 - With the tank completely full, the bolts should not be loose.
- Periodically inspect all air system components and connections for leaks.
- Periodically inspect for hydraulic leaks at the PTO Pump and Hydraulic Pump.
- Periodically grease the bearings within the water pump

For all third party components, refer to the original manufacturer's maintenance and service intervals. *If this manual is in conflict with the original manufacturer's intervals, follow the equipment's original manufacturer's instructions.*

General Repair Parts


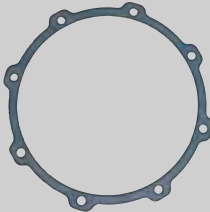


Product Photo	Number (Photo Guide)	Part Name	Part Number
	1	Ball Valve	12000110
	2	Butterfly Valve	9028
	3	Deflector Spray Head	7283
	4	AV Diaphragm Valve	7281

	5	2 1/2" Dust Cap	4036
	6	3" Dust Cap	30000118
	7	Hydraulic Hose	18000500
	8	Side Spray Head	7288
	9	Sight Tube	19781
	10	Hydraulic Filter	5066

	<i>11</i>	90° Elbow	7282
	<i>12</i>	4” Rigid Groove Clamp	8014
	<i>13</i>	3” Rigid Groove Clamp	9752
	<i>14</i>	CCW Water Pump	7271
	<i>15</i>	AV Valve Gasket	12738
	<i>16</i>	Air Toggle Switch	16756

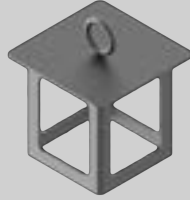

Water Pump Repair Parts



**For the 7271 Water Pump*

Product Photo	Number (Photo Guide)	Part Name	Part Number
	17	Shaft Kit	19710
	18	Impeller	19711
	19	Volute Gasket	19712
	20	Rope Packing (6 pcs)	19713
	21	Slinger Water Seal	19714



	22	Inner Bearing Cap	19715
	23	Packing Gland	19716
	24	Nuts and Bolts (for 19716)	7288

Gravity Stopper Repair Parts

Product Photo	Number (Photo Guide)	Part Name	Part Number
	25	Plunger	7245
	26	Air Cylinder	19828

	27	Plunger Gasket	19827
	28	Plunger Cable	19825

Option Equipment Parts

Product Photo	Part Name	Part Number
	Hose Reel Kit	10110271
	Suction Hose Kit	20205

To acquire parts for replacement or repair on your water tank, please contact Tiger Manufacturing or reach out to your personal Tiger Manufacturing sales representative.



Troubleshooting

Tank Filling

- Verify the correct method has been chosen depending on the applicable water source.
- Verify the operating condition of all components involved in the filling process.
- If using the 'Non-Pressurized Source' method, ensure the priming standpipe is full prior to beginning.
- If using the 'Non-Pressurized Source' method, ensure the suction hose is equipped with a check valve or foot valve on the furthest end of the hose.

Discharging

- Verify the water tank has water in it.
- Ensure that nothing is causing a blockage within the system.
- Ensure the pump is properly primed and operational.
- Ensure the suction and discharge lines are full/filling.
- Verify the operating condition of all components involved in the discharging process.
- The spray system may not spray with the motor at idle. Ensure that the truck is in motion and the RPM's are above the approximate minimum RPM of 1100 to begin spraying.

Spray Heads

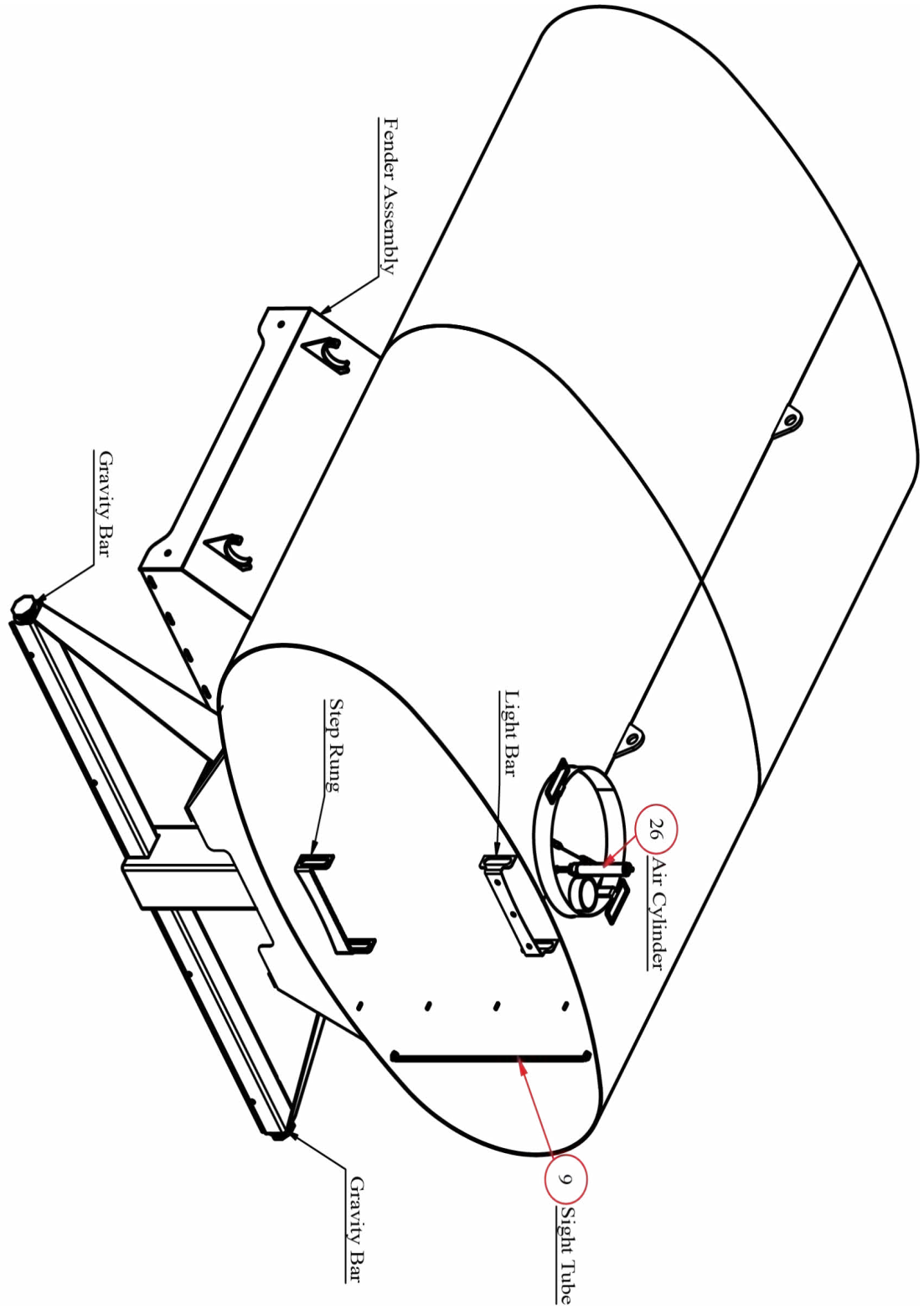
- If the spray heads are leaking water, inspect all air system components for a potential air leak. Spray heads require air to be "closed."
- The spray characteristics of the deflector heads can be adjusted by increasing or decreasing the gap. *Do not over-tighten the bolt, this could damage spray components.*
 - To increase the spray distance, loosen the bolt on the bottom of the spray head and lower the head to decrease the gap. Tighten the bolt once adjusted.
 - To decrease the spray distance, loosen the bolt on the button of the spray head and raise the head to increase the gap. Tighten the bolt once adjusted.

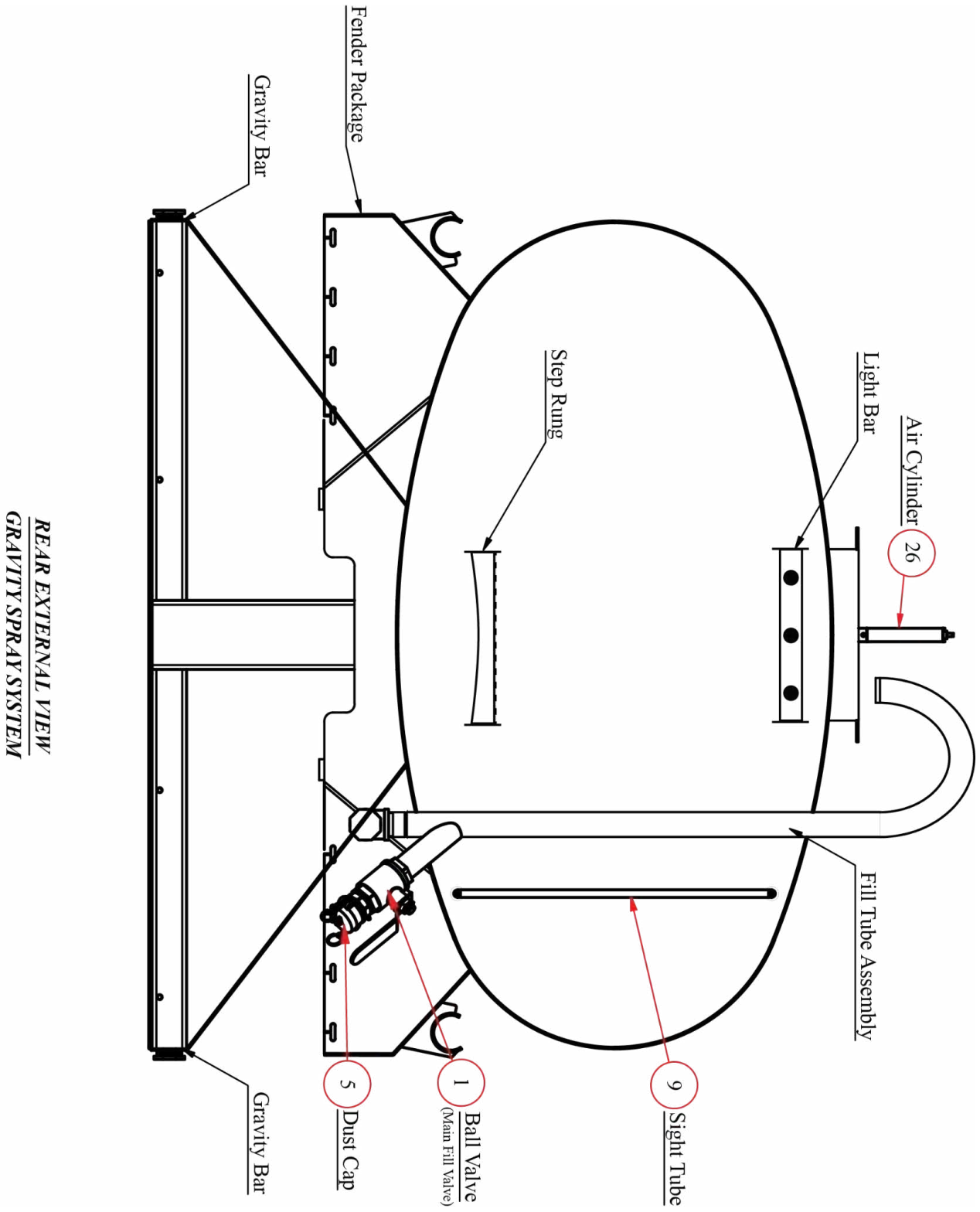
For more complex issues, directly contact Tiger Manufacturing for more assistance.

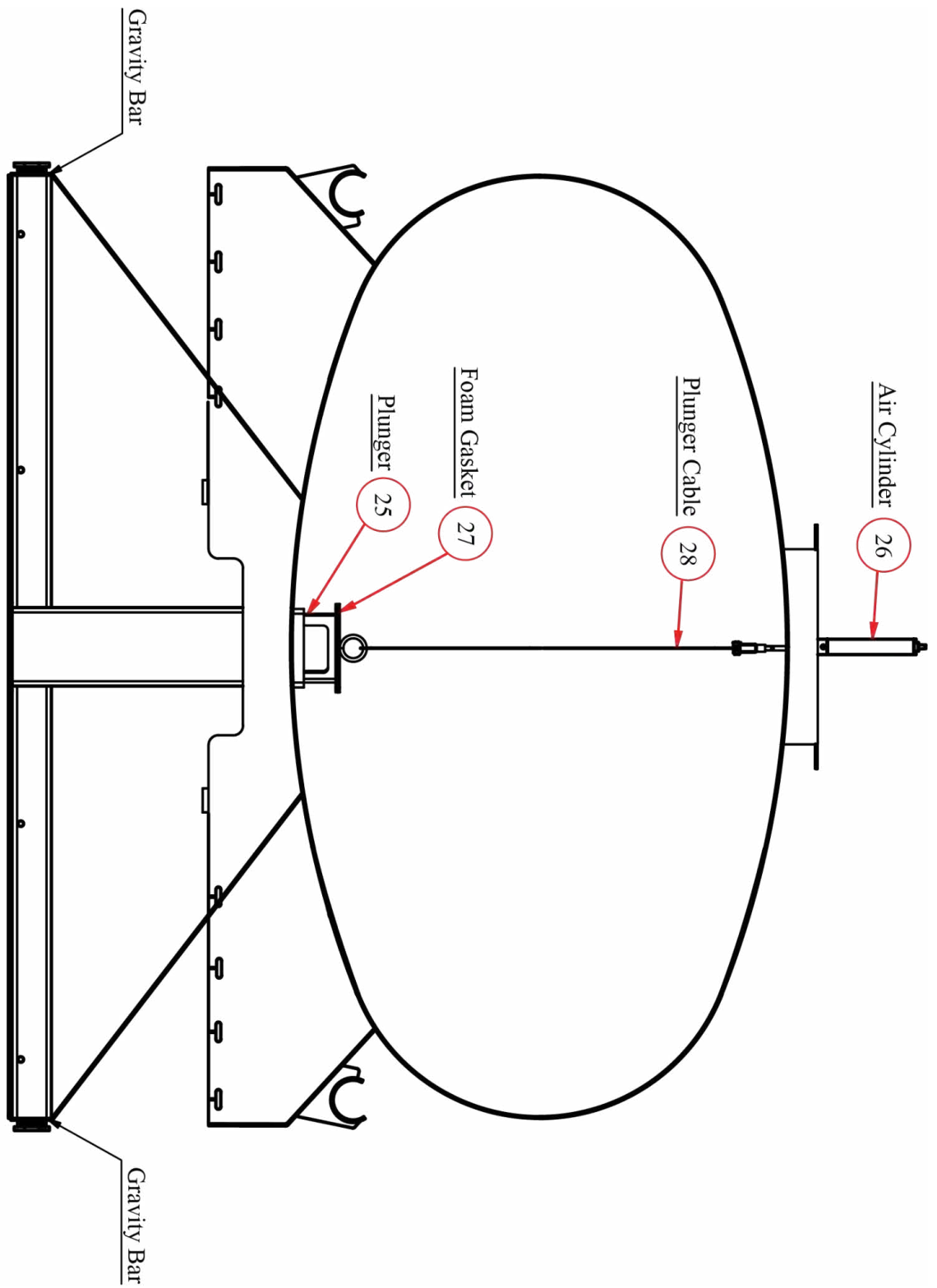
Photo Reference Guide

Gravity Bar

REAR ISOMETRIC VIEW
GRAVITY SPRAY SYSTEM

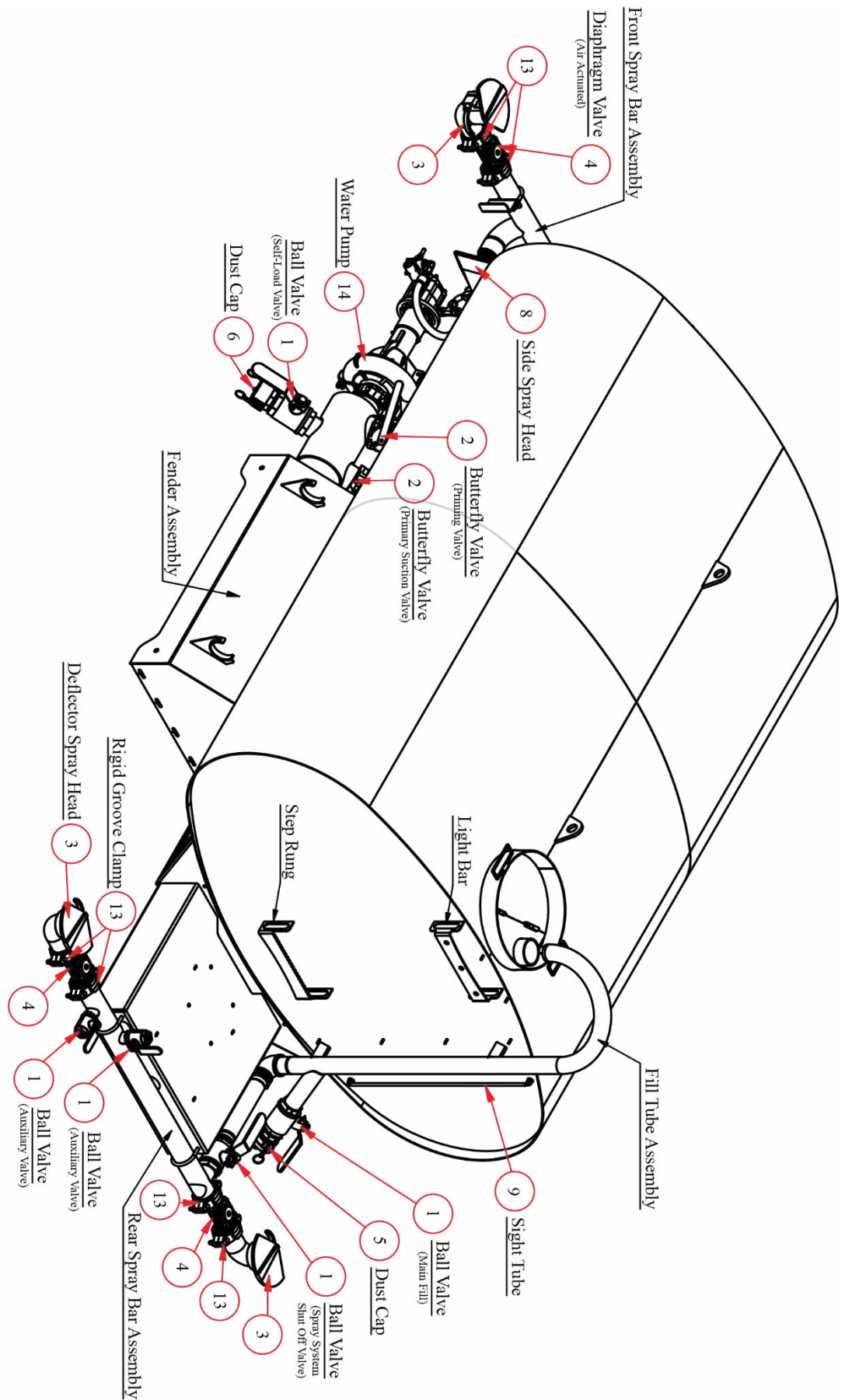




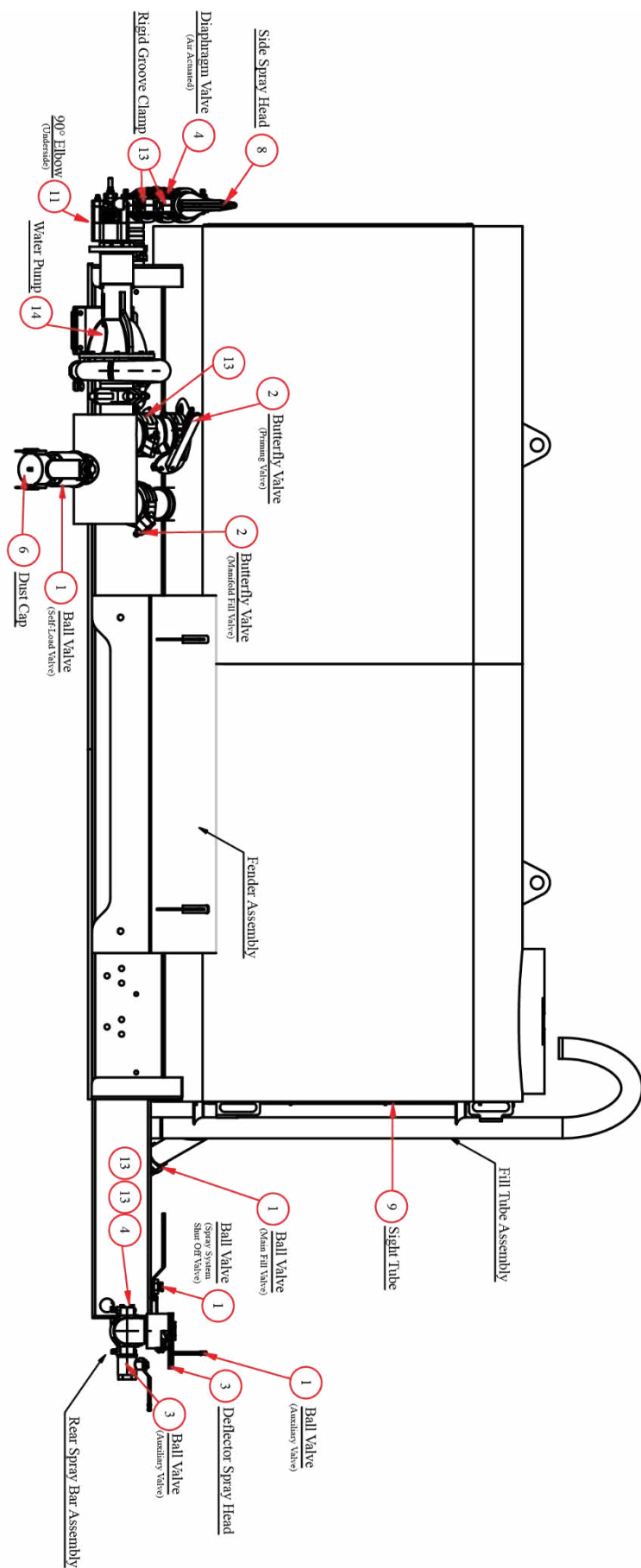


REAR INTERNAL VIEW
GRAVITY SPRAY SYSTEM

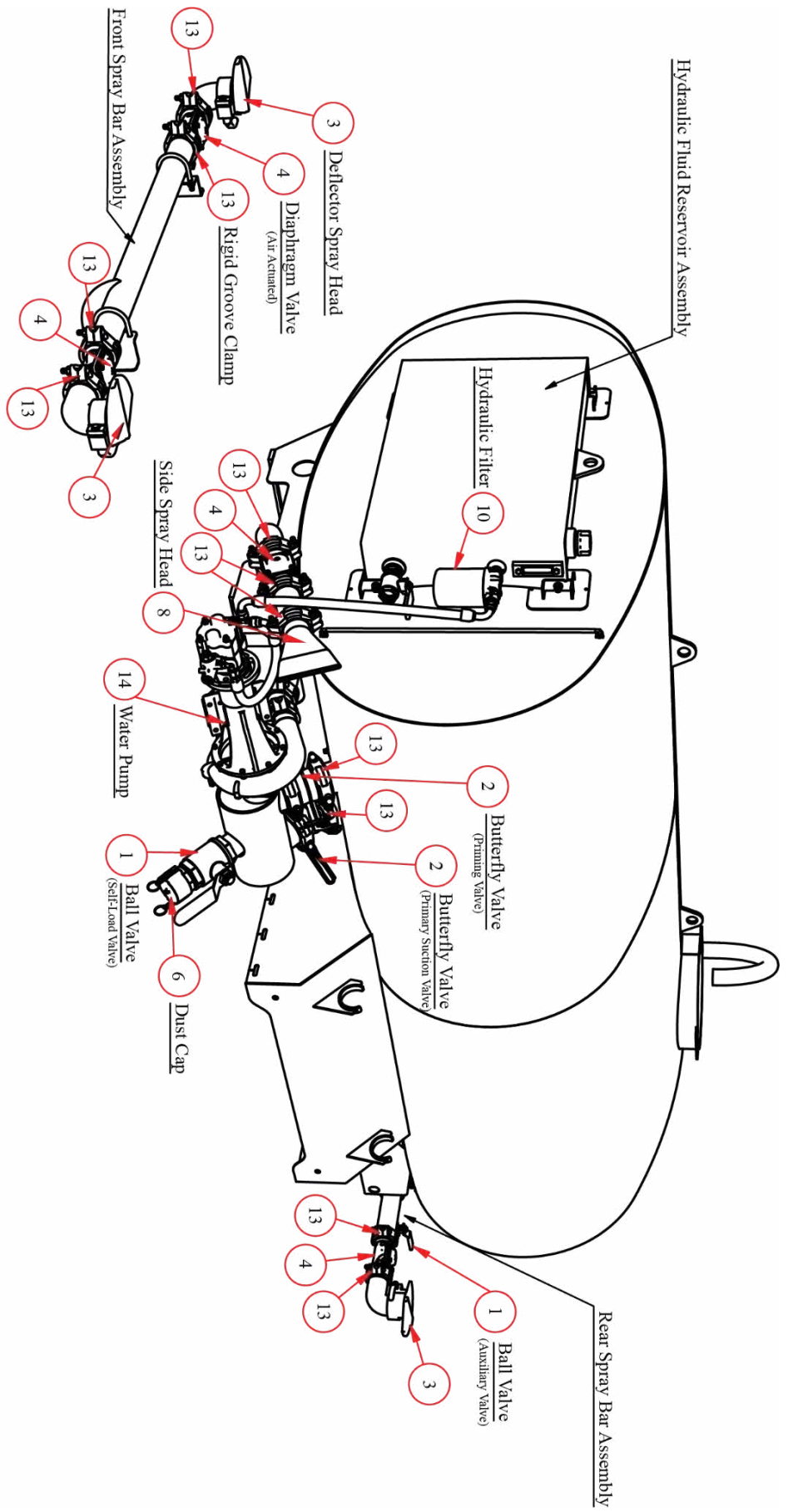
Spray System



REAR ISOMETRIC VIEW
HYDRAULIC SPRAY SYSTEM

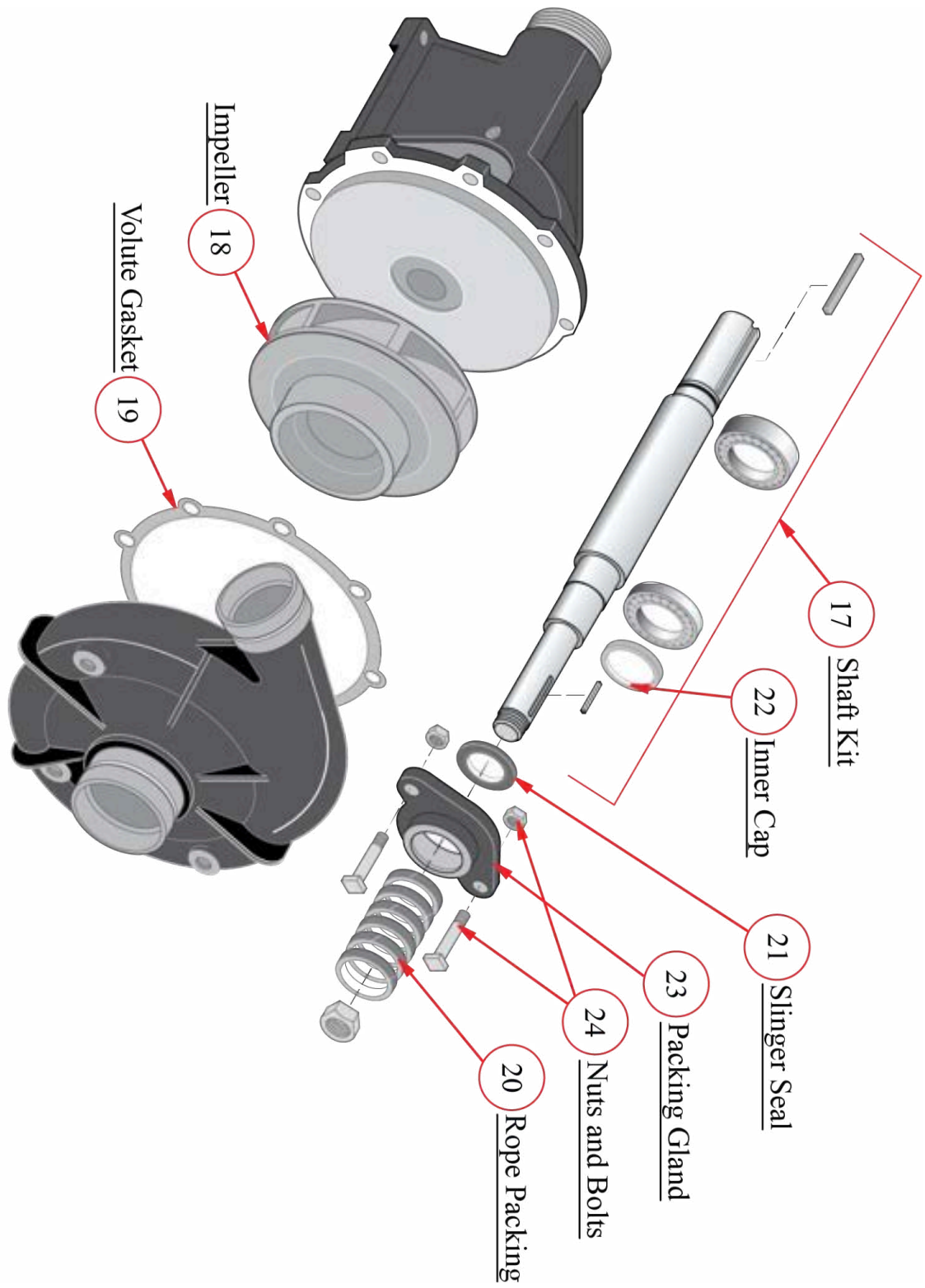


STREET SIDE VIEW



PERSPECTIVE VIEW

Water Pump



BREAKDOWN

TIGER MFG CO. - 7271 WATER PUMP



If you have any questions, comments or concerns regarding Tiger Manufacturing's water tanks, please contact Tiger Manufacturing or your sales representative for assistance.

Rev. 1 - August 2nd, 2024

Revision Change Notes: