

Submittal Manual: Day Tank – TRX Series

Included in this manual

- Standard TRX day tank
- Mechanical and plumbing guide
- Generic Tramont day tank diagrams
- Warranty

Warning

This tank has been pressure tested from 3 to 5 psi for weld integrity. However, it has not been designed as a pressure vessel.

This tank must be vented atmospherically through a minimum of a 2" NPT atmospheric pipe vent. Additional emergency venting requirements also may have to be met. All emergency fittings are supplied.

Tanks that are filled by fuel transfer pumps must have the "overflow" fitting plumbed in a continuous downward path to the main tank without downsizing. During an overflow condition, any upward plumbing will result in an undesirable fuel pressure situation. This may result in a Diesel Fuel Spill.

If a continuous downward path is not possible, a reverse pumping system, or reverse pumping tank is required. Consult factory for specification and sizing.

Standard Day Tank Parts

Listed below are parts currently standard on Tramont TRX day tanks. TRX Series tanks incorporate the same quality construction as the TRS & TRE Series. However, they do not include controls or pump and motor assembly.

TRX Series Day Tank

- Heavy gauge steel construction
- Rust inhibitor coated interior and gray painted exterior
- Tank 1" NPT fittings are engine supply, engine return, overflow and alternate engine return. Other fittings include 2" NPT for normal vent, NPT sized as appropriate for emergency vent, and one 3/8" NPT basin drain for tanks through 275 gallons, 1" NPT for larger tanks. (If tank includes containment basin, alternate engine fitting omitted and drain provided on basin only).
- Square 4 1/2" inspection port and gauge.

Specification: Diesel Fuel Primary Day Tank

A. Manufacturer Qualifications

Manufacturer shall have a minimum ten years' experience in the design and construction of Underwriters Laboratories (UL) listed day tank systems.

B. Construction

Day tank shall be Tramont Model TRX or approved equivalent, and constructed in accordance with Underwriters Laboratories Standard UL-142. The day tank shall also be constructed in accordance with Flammable and Combustible Liquids Code, NFPA 30; and The Standard for Installation and use of Stationary Combustible Engine and Gas Turbines, NFPA 37. Day tank shall be made of heavy gauge steel construction. Tank shall be coated with rust inhibitor inside, primed and finish painted outside. Required tank connections include:

- 1" NPT engine supply
- 1" NPT engine return
- NPT fitting for emergency vent, sized as appropriate.
- 1" NPT overflow.
- 2" NPT normal vent
- 4 1/2" square inspection port with manual fuel level gauge and manual fill cap

It shall be provided with atmospheric (normal) vent cap with screen and appropriately sized zinc-plated emergency vent cap. Emergency vent cap shall be spring-pressure operated. Opening pressure shall be 0.5 psig; full opening pressure shall be 2.5 psig. Limits shall be marked on top of each vent.

C. Fuel Containment Basin

The day tank shall include a welded steel containment basin to prevent escape of fuel into the environment in the event of a tank rupture. Rupture basin (indoor applications only): The basin shall consist of an open-top, welded heavy gauge steel structure sized at a minimum of 150% of the tank capacity. The basin shall be primed and finish painted. Double wall basin (outdoor applications and indoor applications where required by local codes): The basin shall consist of a welded heavy gauge steel structure sized at a minimum of 150% of the tank capacity. The exterior of the basin shall be primed and finish painted. The basin shall include a welded steel top with an appropriately sized NPT fitting for emergency vent, and appropriately sized zinc-plated emergency vent cap. Emergency vent cap shall be springpressure operated. Opening pressure shall be 0.5 psig; full opening pressure 2.5 psig. Limits shall be marked on top of each vent.

D. Leak Detection System

A rupture basin leak detector switch shall be wired into the electronic control module (ECM). This will shut down the supply pump and motor in case of a fuel leak into the containment basin.

Mechanical & Plumbing Guide: Day Tank Systems

Mechanical installation

This guide covers the mechanical installation of a standard Tramont day tank system. Installation should be performed by a qualified mechanical installer or plumber experienced in black iron piping, valves and connections. This guide primarily covers "standard" tanks; that is, tanks without optional accessories or equipment. Certain optional devices may require special consideration during installation. For TRE-Series tanks also see "Electrical installation guide: TRE-Series Day Tanks." For TRS-Series tanks also see "System 2000PLUS" specification sheet.

!WARNING!

THIS TANK IS DESIGNED AND CONSTRUCTED TO HOLD DIESEL FUEL ONLY.

Tank placement

Upon receipt of the Tramont day tank, inspect for obvious signs of shipment damage. If damage is visible (dents, water logging, etc.), notify the freight company and file a claim for damages with them. This step must take place on the receiving end of the shipment; Tramont cannot do this for the purchaser or end user. Unpack the unit and inspect closely. The Tramont day tank can withstand normal stresses of shipping. However, rough handling, such as dropping the unit, may result in scratches, dents and damage to tank components and weld seams. Again, if you detect any signs of damage notify the freight company immediately.

Place the tank as close to the gen-set as practical. It should be fully accessible from all sides. The front of the unit must be visible and accessible. Position the tank so that fittings and vents can be easily connected and checked. Make sure that there is room to access the basin/tank drain. Generally a minimum of 6" - 8" from any wall is required for piping installation. Allowing adequate space for piping will make future repair and maintenance much easier.

Slots are located on the base of the tank if you choose to bolt it to the floor. Complete all piping before bolting the tank to any surface. This will make it much easier to correct any misalignment of piping. **The day tank is not designed to absorb the force exerted by improperly aligned pipe. "Forcing" pipes to line up with the fittings may damage the tank.**

Plumbing connections

Day tanks typically are installed with three 90° elbows in the fuel line between the day tank and the point where the line is firmly fixed to a wall or floor. This will facilitate minor adjustments when leading the piping to the tank. Pipe unions should be installed as needed to allow for future breakdown or maintenance of pipes. All threaded connections shall be covered with Teflon™ tape, thread sealant or comparable material. DO NOT use any sealant that is not compatible with #2 diesel oil. All threaded connections must be tightened leak-tight.

IMPORTANT: Gen-set installations generally are not set up so that high pressure can form in piping lines, and **the Tramont day tank is not a pressure vessel.** However, all connections still should be tightened so that the piping can withstand considerable pressure if necessary. Use only clean, new pipe connections. Rust, dirt, tars and other contaminants can prevent proper operation of tank components such as pumps, and may result in damage or destruction of these components.

Engine supply

The engine supply fitting (1" NPT) is located on the left-hand side at the bottom rear of tanks without a basin. On tanks with a basin the supply fitting is located on the top rear of the tank, and a dip tube extends to the bottom of the tank. Follow the gen-set supplier's requirements for pipe size; flex hose and connections to the engine.

Fuel return

On tanks without a basin there are two 1" NPT fuel return fittings on the back of the tank. One is located at the lower right-hand side of the tank; the other is located near the top of the tank. On tanks with a basin there is a single fuel return fitting on the back of the tank near the top. The fuel return fittings are for excess hot fuel returned from the engine. If your tank does not include a basin Tramont recommends using the bottom fuel return fitting. Seal the unused fuel return fitting with a 1" NPT black iron pipe plug. Another option is to pipe the fuel return line directly to the main tank, thereby eliminating a possible fuel temperature increase in the day tank.

Overflow

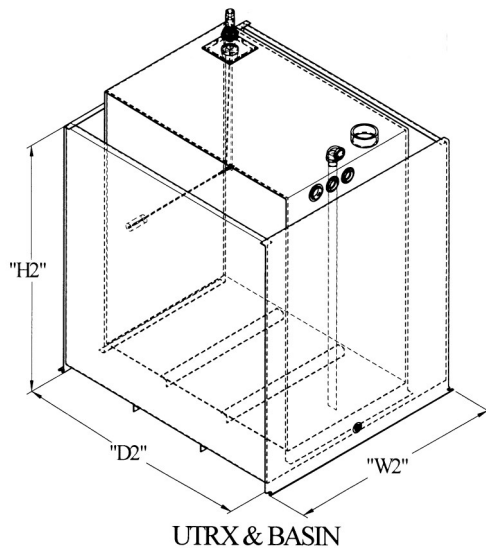
The 1" NPT overflow fitting is located at the upper rear of the tank. It prevents overfilling of the day tank by routing excess fuel directly back to a main tank.

Tramont Manufacturing LLC

3637 N. Holton St., Milwaukee, WI 53212

PH: 414-967-8800 FX: 414-967-8811 www.tramont.com

Day Tank - TRX Series



Dimensions for standard Day Tanks are listed below. Please consult a Tramont service representative if your application requires special dimensions.

Fuel Containment basins for day tanks are optional. Most day tank users include them to satisfy local code requirements. Basins are available in standard sizes of 150% and 200% of the tank capacity. A 150% capacity basin is adequate for most applications; however, some jurisdictions require a 200% capacity basin. Check with your local fire marshal or other code enforcement authorities to verify basin requirements. There are two types of containment, open top rupture and closed top double wall basins.

Tank Capacity		Steel Gauge	Emergency Vent	Tank Dimensions (in.) Single Wall			Weight (lbs.)
Gallons	Liters			Length	Width	Height	
10	38	12	2	12	24	12	48
15	57	12	2	12	24	16	57
25	95	12	2	12	24	24	76
50	189	12	2	18	24	31	114
60	227	12	2	20	24	31	121
75	284	12	2	24	24	31	136
100	378	12	3	24	24	44	177
150	568	12	3	36	24	44	230
200	757	12	3	46	24	44	275
275	1041	12	4	66	24	44	364
300	1136	12	4	40	36	50	344
350	1325	12	4	46	36	50	378
400	1514	12	4	55	36	50	429
450	1703	12	4	61	36	50	463
500	1893	12	4	68	36	50	502
550	2082	10	4	74	36	50	689
600	2271	10	5	81	36	50	740
700	2650	10	5	70	48	50	782
800	3028	10	5	80	48	50	864
900	3407	10	5	90	48	50	947
1000	3785	10	5	100	48	50	1030

Day Tank - TRX Series



Tank Capacity		150% Containment Option Number		Tank Dimensions (in.) 150% Open or Double Wall			Weight (lbs.) TRX
		Open Top Basin	Double Wall	Length	Width	Height	
Gallons	Liters						
10	38	2900	7000	16	36	13.5	115
15	57	2905	7005	16	36	17.5	138
25	95	2910	7010	16	36	25.5	184
50	189	2920	7015	22	36	32.5	271
60	227	2940	7020	28	36	32.5	303
75	284	2940	7020	28	36	32.5	318
100	378	2950	7030	28	36	41.5	418
150	568	2960	7035	40	36	41.5	532
200	757	2970	7040	50	36	41.5	628
275	1041	2990	7045	70	36	41.5	818
300	1136	2989	7050	45	48	51.5	773
350	1325	2991	7055	51	48	51.5	977
400	1514	2992	7060	60	48	51.5	1101
450	1703	2993	7065	66	48	51.5	1183
500	1893	2994	7070	73	48	51.5	1278
550	2082	2995	7075	79	48	51.5	1513
600	2271	2996	7080	86	48	51.5	1620
700	2650	2980	7085	84	60	51.5	1778
800	3028	2981	7090	96	60	51.5	1969
900	3407	2982	7095	108	60	51.5	2160
1000	3785	2983	7100	120	60	51.5	2351
Tank within Containment Only for Overall Height - Add 1.25"							

Rupture Basin

A rupture basin is open top. The day tank is placed in the basin. Because water and debris can collect in the containment area, rupture basins are used only for indoor applications.

Double Wall

A double wall basin is closed top. The top is sealed and welded into place. An additional pressure relief vent cap is required to vent the containment area. Double wall tanks typically are used in outdoor applications. Local codes may require a double wall for indoor applications. Other options may be required to dually weatherproof the tank.

Tank Capacity		200% Containment Option Number		Tank Dimensions (in.) 200% Open or Double Wall			Weight (lbs.) TRX	
		Open Top Basin	Double Wall	Length	Width	Height		
Gallons	Liters							
10	38	2905	7005	16	36	12.5	196	
15	57	2910	7010	16	36	20.5	246	
25	95	2920	7015	22	36	27.5	341	
50	189	2940	7020	28	36	27.5	453	
60	227	2940	7020	28	36	27.5	485	
75	284	2950	7030	28	36	41.5	559	
100	378	2960	7035	40	36	41.5	720	
150	568	2970	7040	50	36	41.5	885	
200	757	2990	7045	70	36	41.5	1082	
275	1041	2997	7046	70	48	41.5	1503	
300	1136	2993	7065	66	48	47	1493	
350	1325	2994	7070	73	48	47	1753	
400	1514	2995	7075	79	48	47	1925	
450	1703	2996	7080	86	48	47	2063	
500	1893	2980	7085	84	60	47	2274	
550	2082	2981	7090	96	60	47	2618	
600	2271	2982	7095	108	60	47	2833	
700	2650	2983	7100	120	60	47	3099	
800	3028	Consult Factory for 200% Containment Designs						
900	3407							
1000	3785							
Tank within Containment Only for Overall Height - Add 1.25"								

Tramont Manufacturing LLC
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