INSTALLATION INSTRUCTIONS

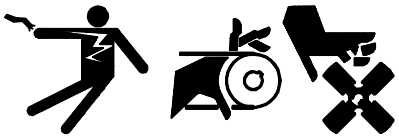
Original Issue Date: **6/89**
Model: **All Diesel-Powered Models**
Market: **Industrial**
Subject: **Day Tank Kits 274602 to 292259, 274602-SD to 292259-SD, 336846, 336847, 336860, 336861, 347627 to 347630, 354711 to 354716**

These operation and installation instructions contain important safety, installation, and operating instructions for day tanks with electronic control modules (ECM) and day tanks without ECMs.

A day tank is a diesel fuel transfer system which provides fuel storage immediately adjacent to the engine. This allows the engine fuel transfer pump to easily draw fuel when starting and provides a convenient location to connect injector return lines. A properly installed day tank ensures a specified amount of fuel is readily available. The day tank is located between the engine and the main fuel storage tank.

Read through this manual and carefully follow all procedures and safety precautions to ensure proper operation and to avoid serious bodily injury. Keep this manual with the day tank for future reference.

⚠ WARNING



Accidental starting.
Can cause severe injury or death.

Disconnect battery cables before working on generator set. (Remove negative (–) lead first when disconnecting battery. Reconnect negative (–) lead last when reconnecting battery.)

Disabling generator set. Accidental starting can cause severe injury or death. Before working on the generator set or connected equipment, disable the generator set as follows: 1) Turn the generator set master switch to OFF position. 2) Disconnect power to battery charger. 3) Remove battery cables (remove negative (–) lead first). Reconnect negative (–) lead last when reconnecting battery. Follow these precautions to prevent starting of generator set by an automatic transfer switch or remote start/stop switch.

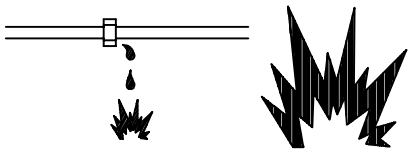
⚠ WARNING

Fire.
Can cause severe injury or death.

Do not smoke or permit flame or spark to occur near fuel or fuel system.

Servicing fuel system. A flash fire can cause severe injury or death. Do not smoke or permit flame or spark to occur near carburetor, fuel line, fuel filter, fuel pump, or other potential sources of spilled fuel or fuel vapors. Catch all fuel in a suitable container when removing fuel line or carburetor.

⚠ WARNING



Explosive fuel vapors.
Can cause severe injury or death.

Use extreme care when handling, storing, and using fuels.

Fuel system. Explosive fuel vapors can cause severe injury or death. All fuels are highly explosive in a vapor state. Use extreme care when handling and storing fuels. Store fuel in a well-ventilated area away from spark-producing equipment and out of the reach of children. Never add fuel to the tank while the engine is running because spilled fuel may ignite on contact with hot parts or from spark. Do not smoke or permit flame or spark to occur near sources of spilled fuel or fuel vapors. Keep fuel lines and connections tight and in good condition. Do not replace flexible fuel lines with rigid lines. Use flexible sections to avoid breakage caused by vibration. Do not operate generator set in the presence of fuel leaks, fuel accumulation, or sparks. Repair systems before resuming generator set operation.

Fuel tanks. Explosive fuel vapors can cause severe injury or death. Gasoline and other volatile fuels stored in day tanks or subbase fuel tanks can cause an explosion. Store only diesel fuel in tanks.

Draining fuel system. Explosive fuel vapors can cause severe injury or death. Spilled fuel can cause an explosion. Use a container to catch fuel when draining fuel system. Wipe up all spilled fuel after draining system.

Servicing day tank. Hazardous voltage can cause severe injury or death. Service day tank Electrical Control Module (ECM) as prescribed in equipment manual. Disconnect power to day tank before servicing. Press the day tank ECM OFF pushbutton to disconnect power. Be aware that line voltage is still present within the ECM when the POWER ON light is lit. Be sure that generator set and day tank are electrically grounded. Do not operate day tank when standing in water or on wet ground as the chance of electrocution increases under such conditions.

Specifications

Day Tank Kit Numbers and Specifications

Kit No.	Tank Size gal. (L)	Tank Material Gauge	Tank Dimensions inches (mm)**			Input Voltage		Rupture Basin gal. (L)	ECM Yes/No
			Length	Width	Height	Volts AC	Hz		
292242	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	110/120	60	N/A	Yes
292242-SD	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	110/120	60	N/A	Yes
292243	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	110/120	60	15 (56.8)	Yes
292243-SD	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	110/120	60	15 (56.8)	Yes
292244	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	230/460*	50	N/A	Yes
292244-SD	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	230/460*	50	N/A	Yes
292245	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	230/460*	50	15 (56.8)	Yes
292245-SD	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	230/460*	50	15 (56.8)	Yes
292246	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	240/480*	60	N/A	Yes
292246-SD	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	240/480*	60	N/A	Yes
292247	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	240/480*	60	15 (56.8)	Yes
292247-SD	10 (37.8)	14	24 (609.6)	12 (304.8)	20.0 (508.0)	240/480*	60	15 (56.8)	Yes
274602	10 (37.8)	14	24 (609.6)	12 (304.8)	18.4 (466.9)	110/120	60	N/A	Yes
274602-SD	10 (37.8)	14	24 (609.6)	12 (304.8)	18.4 (466.9)	110/120	60	N/A	Yes
274603	10 (37.8)	14	25 (609.6)	12 (304.8)	18.4 (466.9)	110/120	60	15 (56.8)	Yes
274603-SD	10 (37.8)	14	24 (609.6)	12 (304.8)	18.4 (466.9)	110/120	60	15 (56.8)	Yes
292248	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	110/120	60	N/A	Yes
292248-SD	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	110/120	60	N/A	Yes
292249	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	110/120	60	38 (143.8)	Yes
292249-SD	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	110/120	60	38 (143.8)	Yes
292250	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	230/460*	50	N/A	Yes
292250-SD	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	230/460*	50	N/A	Yes
292251	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	230/460*	50	38 (143.8)	Yes
292251-SD	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	230/460*	50	38 (143.8)	Yes
292252	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	240/480*	60	N/A	Yes
292252-SD	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	240/480*	60	N/A	Yes
292253	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	240/480*	60	38 (143.8)	Yes
292253-SD	25 (94.6)	12	24 (609.6)	12 (304.8)	32.0 (812.8)	240/480*	60	38 (143.8)	Yes

***** **Day tanks indicated are equipped with a 1/3 HP, 120 vac, 1 Phase, 50/60 Hz motor. Voltages above 120 vac have a step down transformer included for the ECM and motor.**

****** **See dimension drawings following for rupture basin dimensions.**

N/A **Not Available**

Day Tank Kit Numbers and Specifications (cont.)

Kit No.	Tank Size gal. (L)	Tank Material Gauge	Tank Dimensions inches (mm)**			Input Voltage		Rupture Basin gal. (L)	ECM Yes/ No
			Length	Width	Height	Volts AC	Hz		
274604	25 (94.6)	12	24 (609.6)	12 (304.8)	30.4 (771.7)	110/120	60	N/A	No
274604-SD	25 (94.6)	12	24 (609.6)	12 (304.8)	30.4 (771.7)	110/120	60	N/A	No
274605	25 (94.6)	12	24 (609.6)	12 (304.8)	30.4 (771.7)	110/120	60	38 (144)	No
274605-SD	25 (94.6)	12	24 (609.6)	12 (304.8)	30.4 (771.7)	110/120	60	38 (144)	No
292254	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	110/120	60	N/A	Yes
292254-SD	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	110/120	60	N/A	Yes
292255	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	110/120	60	75 (284)	Yes
292255-SD	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	110/120	60	75 (284)	Yes
292256	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	230/460*	50	N/A	Yes
292256-SD	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	230/460*	50	N/A	Yes
292257	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	230/460*	50	75 (284)	Yes
292257-SD	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	230/460*	50	75 (284)	Yes
292258	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	240/480*	60	N/A	Yes
292258-SD	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	240/480*	60	N/A	Yes
292259	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	240/480*	60	75 (284)	Yes
292259-SD	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	240/480*	60	75 (284)	Yes
274606	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	110/120	60	N/A	No
274606-SD	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	110/120	60	N/A	No
274607	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	110/120	60	75 (284)	No
274607-SD	50 (189.2)	12	24 (609.6)	18 (457.2)	39.0 (990.6)	110/120	60	75 (284)	No
274854	100 (378.5)	12	24 (609.6)	24 (609.6)	52.0 (1320.8)	110/120	60	N/A	Yes
274854-SD	100 (378.5)	12	24 (609.6)	24 (609.6)	52.0 (1320.8)	110/120	60	N/A	Yes
274855	100 (378.5)	12	24 (609.6)	24 (609.6)	52.0 (1320.8)	110/120	60	150 (568)	Yes
274855-SD	100 (378.5)	12	24 (609.6)	24 (609.6)	52.0 (1320.8)	110/120	60	150 (568)	Yes
274856	100 (378.5)	12	24 (609.6)	24 (609.6)	52.0 (1320.8)	110/120	60	N/A	No
274856-SD	100 (378.5)	12	24 (609.6)	24 (609.6)	52.0 (1320.8)	110/120	60	N/A	No
274857	100 (378.5)	12	24 (609.6)	24 (609.6)	52.0 (1320.8)	110/120	60	150 (568)	No
274857-SD	100 (378.5)	12	24 (609.6)	24 (609.6)	52.0 (1320.8)	110/120	60	150 (568)	No

*** Day tanks indicated are equipped with a 1/3 HP, 120 vac, 1 Phase, 50/60 Hz motor. Voltages above 120 vac have a step down transformer included for the ECM and motor.**

**** See dimension drawings following for rupture basin dimensions.**

N/A Not Available

Day Tank Kit Numbers and Specifications (cont.)

Kit No.	Tank Size gal. (L)	Tank Material Gauge	Tank Dimensions inches (mm)*			Input Voltage		Rupture Basin** gal. (L)
			Length	Width	Height	Volts AC	Hz	
336846	10 (37.9)	14	24 (610)	12 (305)	21.2 (538.5)	110/120	60	15 (57)
336847	50 (189.3)	12	24 (610)	18 (457)	40.2 (1021.1)	110/120	60	75 (284)
336860	60 (227.1)	12	24 (610)	20 (508)	40.2 (1021.1)	110/120	60	90 (341)
336861	75 (283.9)	12	24 (610)	24 (610)	40.2 (1021.1)	110/120	60	113 (428)
347627	150 (567.8)	12	24 (610)	36 (914)	53.2 (1351.3)	110/120	60	225 (852)
347629	275 (1040.9)	12	24 (610)	66 (1676)	53.2 (1351.3)	110/120	60	413 (1563)
354711	25 (94.6)	12	24 (610)	12 (305)	33.3 (845.8)	110/120	60	38 (144)
354713	100 (378.5)	12	24 (610)	24 (610)	40.3 (1023.6)	110/120	60	150 (568)
354715	150 (567.8)	12	24 (610)	36 (914)	53.3 (1353.8)	110/120	60	225 (852)
354716	275 (1040.9)	12	24 (610)	66 (1676)	53.3 (1353.8)	110/120	60	413 (1563)

*** See dimension drawings following for rupture basin dimensions.**
**** Includes rupture basin alarm.**

Day Tank Float Sensors

Float Sensor Kits	Float Sensor Part No.
292242 to 292247 274602 to 274603 292242-SD to 292247-SD 274602-SD to 274603-SD	274961
292248 to 292253 274604 to 274605 292248-SD to 292253-SD 274604-SD to 274605-SD	274827
292256 to 292259 274606 to 274607 292254-SD to 529229-SD 274606-SD to 274607-SD	274962

Features

Storage Tank

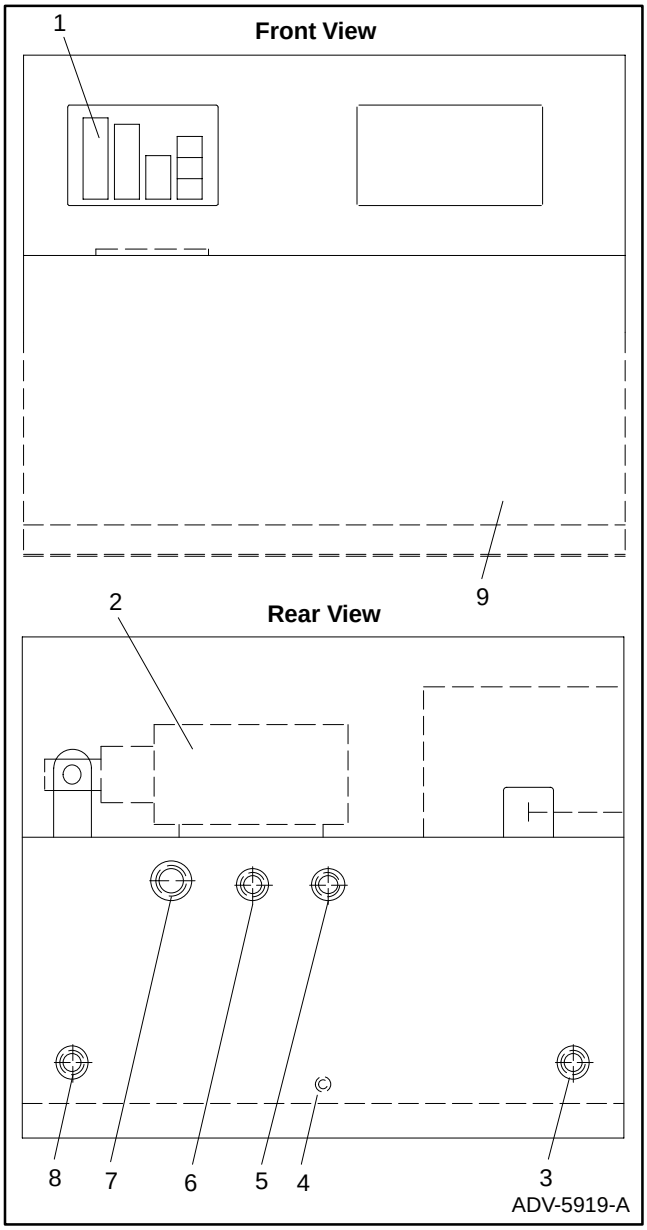
The day tank's heavy gauge steel construction is epoxy coated inside and prime coated and painted outside for rust prevention. Tank connections consist of four 1 in. NPT (National Standard taper pipe thread per general use) (fuel return, alternate fuel return, engine supply, and overflow), one 1 1/4 in. NPT (vent), and one 3/8 in. NPT (drain). ECM (electronic control module) equipped day tanks have a 4-1/2 in. (114.3 mm) square inspection port located below the electrical controls. For day tank part numbers and specifications, see Day Tank Kit Numbers and Specifications; for features, see Figure 1.

Motor

The standard day tank motor is a 1/3 HP, 120 vac, 60 Hz, 1 Ph, 20-amp maximum thermally protected motor. A larger 1/2 HP motor is available.

Pump

- Heavy duty 2 gpm (7.6 L/min) self-priming, positive displacement rotary gear pump. Larger capacity tanks have a 7 gpm (26.5 L/min) pump. The 7 gpm (26.5 L/min) pump is available as an option on tanks that have the 2 gpm (7.6 L/min) pump standard.
- 3/8 in. NPT female threaded fitting fuel inlet.
- Corrosion-resistant bronze housing, gears with stainless steel shafts, and self-lubricating carbon bearings with lipseals.
- A carbonator style split-tang shaft coupling mounts the pump directly to the motor.



1. ECM (certain models)
2. Pump motor
3. Alternate fuel return
4. Drain
5. Fuel return
6. Overflow
7. Vent
8. Engine supply
9. Tank

Figure 1. Common Day Tank Features (ECM Model Shown)

Controller (ECM Models)

Features of the electronic control module (ECM) follow:

- Fuel level gauge
- Pump control
- High fuel level warning
- Low fuel level warning
- Critical low level shutdown
- Fuel in rupture basin warning (requires float switch to monitor fuel in rupture basin)
- ECM functional signal

The ECM is standard on select day tanks. See Day Tank Kit Numbers and Specifications section. The ECM manual controls include ON, OFF, and TEST pushbuttons. An internal test pushbutton allows for a periodic test of all indicator LEDs and remote annunciation relays. Each alarm is indicated locally by an LED and remotely by a relay. These relays provide normally open and normally closed contacts for customer connections. The ECM operates on a standard 120 vac, 60 Hz, 1 phase system. See Figure 2 for ECM front panel layout.

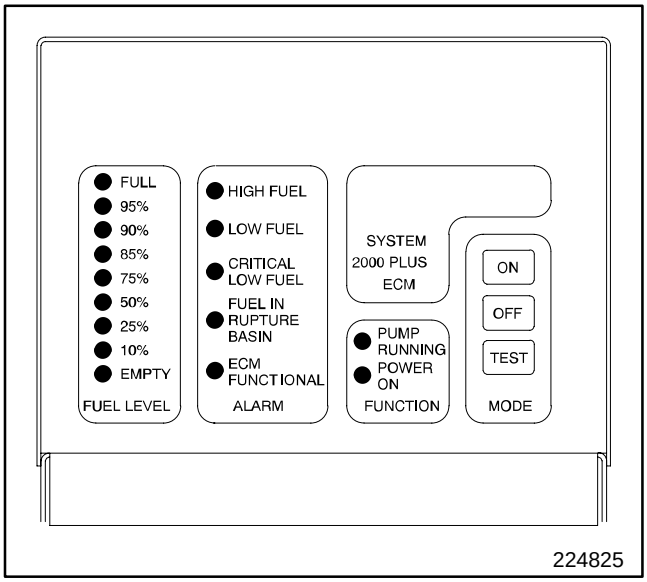


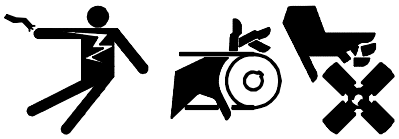
Figure 2. ECM Front Panel Layout

Installation

General

This section covers the mechanical installation of all day tank systems including placement and plumbing of the unit into the fuel system. Have a qualified technician install the day tank. The day tank installation must comply with the applicable articles of ANSI/NFPA70, National Electric Code and NFPA37 as well as state and local requirements.

⚠ WARNING



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Can cause severe injury or death.

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Fuel tanks. Explosive fuel vapors can cause severe injury or death. Gasoline and other volatile fuels stored in day tanks or subbase fuel tanks can cause an explosion. Store only diesel fuel in tanks.

Pump Lift and Pump Head

The pump is self-priming and capable of lifting (suction) #2 diesel fuel over 17 ft. (5.2 m) at sea level. Design the system with no more than 17 ft. (5.2 m) of vertical lift. See Figure 3, Figure 4, Figure 5, and Figure 6 to estimate frictional loss in pipe and fittings and for altitude deviations. If the site design requires more than 17 ft. (5.2 m) of vertical pipe between the main tank and day tank, place a remote pumping station at the main tank. The pumping station utilizes the head (pushing) capabilities of the pump. The pump's theoretical head is the vertical distance it will push fuel. Standard day tank pumps (2 gpm [7.6L/min] 1/3 HP) have 231 ft. (70.5 m) of head (100 psi [689.5 kPa]).

Use supplied technical data when calculating pump head and especially pump lift to avoid costly repairs because of incorrect installation.

NOTE

1. 1 psi = 2.31 ft. (1 kPa + 0.102 m) of head is the conversion for water. As a general rule, this is a safe conversion for #2 diesel fuel.
2. For more precise calculations refer to the formulas and conversions listed below:

   a. Head in Feet = $\frac{\text{psi x 2.31}}{\text{Specific Gravity}}$

   Head in Meters = $\frac{\text{kPa x 0.102}}{\text{Specific Gravity}}$

   b. Psi = $\frac{\text{Head x Specific Gravity}}{2.31}$

   kPa = $\frac{\text{Head x Specific Gravity}}{0.102}$

   c. Specific Gravity of #2 diesel fuel = 0.88 at 60° F (16 ° C)

   d. Weight of #2 diesel fuel = 7.3 lbs/gallon (3.3 kg/L)

3. All calculations are based on a 60° F (16° C) temperature. Make allowances for extreme temperature variances.

   a. Viscosity of #2 diesel fuel:

Viscosity	Temp. °F (°C)
35	100 (38)
40	70 (21)
60	20 (-7)
80	0 (-18)
200	-30 (-34)

   b. Use an immersion heater for below 32° F (0° C) applications.

Consider the following factors to determine the total available lift:

- Vertical distance from tank to pump
- Total length of pipe and size
- Type and number of fittings in the line
- Elevation above sea level

Read the following examples and complete the Installation Work Sheet following to determine pump lift and pump head.

Example One:

Given:

Vertical distance	12 ft. (3.7 m)
Total length of pipe	100 ft. (30.5 m)
Pipe size	1 in. NPT
Pump size	2 gpm (7.6 L/min)
Fittings	3 90° elbows
Elevation above sea level	3000 ft. (915 m)

Solution: referring to Figure 4, a 1 in. 90° elbow equals 2.6 ft. of pipe.

2.6 ft. x 3 90° elbows = 7.8 ft.
(0.8 m x 3 90° elbows = 2.4 m)

The corrected length of pipe is now 107.8 ft. (32.9 m).

Referring to Figure 3, a 1 in. diameter pipe is equal to 0.5 ft. (0.2 m) of frictional head loss for 100 ft. (30.5 m) of pipe based on a 2 gpm (7.6 L/min) pump.

107.8 ft. x 0.5/100 = 0.54 ft.
(32.9 m x 0.2/30.5 = 0.2 m)

The actual head loss is 0.54 ft. (0.2 m).

Therefore the total lift needed for this system is the vertical distance from the tank to the pump plus 0.54 ft. (0.2 m) (the head loss) or 12.5 ft. (3.8 m).

Because the pump is safely capable of lifting 15 ft. (4.6 m) at a 3000 ft. (915 m) elevation (see Figure 5), the equipment in this example will perform satisfactorily.

To determine the total available head, consider three factors:

- Vertical distance from pump to day tank
- Total length of pipe and size
- Fittings in the line

NOTE

Elevation is not considered in head calculations.

Example Two:

Given:

Vertical distance	150 ft. (45.8 m)
Total length of pipe	175 ft. (53.4 m)
Pipe size	0.38 (9.5 mm) diameter
Pump size	2 gpm (7.6 L/min)
Fittings	2 90° elbows
	1 check valve
	1 solenoid valve

Solution:
Referring to Figure 4, a 3/8 NPT 90° elbow equals 1.4 ft. (0.4 m) of pipe.

1.4 ft. x 2 90° elbows = 2.8 ft.
(0.4 m x 2 90° elbows = 0.8 m)

The check valve equals 3.6 ft. (1.1 m) of pipe.

The solenoid valve also has a 0.6 psi (4.1 kPa) drop (consult manufacturer) which calculates to 1.39 ft. (0.4 m) of pipe (.6 x 2.31).

The total adjusted length of pipe is

175 ft. + 2.8 ft. + 3.6 ft. +1.39 ft. = 183 ft.
(53.4 m + 0.9 m + 1.1 m + 0.4 m = 55.8 m)

Referring to Figure 3, 183 ft. (55.8 m) of 3/8 NPT pipe with a 2 gpm (7.6L/min) pump interpolated to 27.8 ft. (8.5 m) of head loss.

183 ft./100 ft. = 1.83 ft.
(55.8 m/30.5 m = 1.83 m)

1.83 ft. x 15.2 ft. = 27.8 ft.
(1.83 m x 4.6 m = 8.5 m)

Therefore total equivalent height is

150 ft. + 27.8 ft. = 177.8 ft.
(45.8 m + 8.5 m = 54.2 m)

Note: The resulting pressure at the day tank is

(231 ft.–177.8 ft.) divided by 2.31 = 23 psi
(70.5 m – 54.2 m) divided by 0.102 = 159 kPa

The pump system will work and push fuel to a height of 231 ft. (70.5 m).

GPM (L/min)	Pipe Size in. (NPT)						
	3/8	1/2	3/4	1	1 1/4	1 1/2	2
2 (8)	15.2 (4.6)	5.5 (1.7)	1.1 (0.3)	0.5 (0.2)	0.2 (0.1)		
4 (15)	55.5 (16.9)	20.3 (6.2)	5.1 (1.6)	1.4 (0.4)	0.5 (0.2)	0.2 (0.1)	
7 (26.5)		61.0 (18.6)	15.3 (4.7)	4.6 (1.4)	1.2 (0.4)	0.5 (0.2)	
10 (37.9)			26.3 (8.0)	8.5 (2.6)	2.5 (0.8)	0.9 (0.3)	0.2 (0.1)
19 (71.9)				28.5 (8.7)	7.5 (2.3)	3.5 (1.1)	1.2 (0.4)

Figure 3. Frictional Head Loss in Feet (m) for 100 ft. (30.5) of Standard Weight Pipe at 60° F (16° C) at Sea Level—Diesel Fuel

Pipe Size in. (mm)	Ball Valve	45° D Elbow	Standard Elbow	Standard Tee	Check Valve	Angle Valve	Globe Valve	Diaphragm Valve
3/8	0.28 (0.1)	0.70 (0.2)	1.4 (0.4)	2.6 (0.8)	3.6 (1.1)	8.6 (2.6)	16.5 (5.0)	
1/2	0.35 (0.1)	0.78 (0.2)	1.7 (0.5)	3.3 (1.0)	4.3 (1.3)	9.3 (2.8)	18.6 (5.7)	40.0 (12.2)
3/4	0.44 (0.1)	0.97 (0.3)	2.1 (0.6)	4.2 (1.3)	5.3 (1.6)	11.5 (3.5)	23.1 (7.0)	
1	0.56 (0.2)	1.23 (0.4)	2.6 (0.8)	5.3 (1.6)	6.8 (2.1)	14.7 (4.5)	29.4 (9.0)	
1 1/4	0.74 (0.2)	1.60 (0.5)	3.5 (1.1)	7.0 (2.1)	8.9 (2.7)	19.3 (5.9)	38.6 (11.8)	
1 1/2	0.86 (0.3)	1.90 (0.6)	4.1 (1.3)	8.1 (2.5)	10.4 (3.2)	22.6 (6.9)	45.2 (13.8)	
2	1.10 (0.3)	2.40 (0.7)	5.2 (1.6)	10.4 (3.2)	13.4 (4.1)	29.0 (8.8)	58.0 (17.7)	

Figure 4. Frictional Loss in Pipe Fittings in Terms of Equivalent Feet (m) of Straight Pipe

	Elevation						
	Sea Level	1000 feet. (305 m)	2000 feet. (610 m)	3000 feet. (915 m)	4000 feet. (1220 m)	5000 feet. (1525 m)	6000 feet. (1830 m)
Atmospheric Pressure psi (kPa)	14.7 (4.5)	14.2 (4.3)	13.6 (4.1)	13.1 (4.0)	12.6 (3.8)	12.1 (3.7)	11.7 (3.6)
Available Lift ft. (m)	17.0 (5.2)	16.0 (4.9)	15.5 (4.7)	15.0 (4.6)	14.5 (4.4)	14.0 (4.3)	13.5 (4.1)

Figure 5. Lifting Capacities at Various Elevations

Motor HP	Nominal Pump Size gpm (L/min.) at 1725 RPM					
	2 (7.6)	4 (15)	7 (26)	10 (38)	19 (72)	23 (87)
1/3	100 (689)	60 (414)	2 (14)			
1/2		100 (689)	20 (138)	2 (14)		
3/4			40 (276)	20 (138)		
1			100 (689)	40 (276)	20 (138)	2 (14)
1-1/2				80 (552)	40 (276)	40 (276)
2				125 (862)	60 (414)	60 (414)
3				150 (1034)	100 (689)	125 (862)

Figure 6. Pump Discharge Pressure psi (kPa)

Pump Lift/Pump Head Worksheet

Lift Required for Day Tank and Pump Above Main Tank:

Directions: Use questions 1-10 for both applications, 11-14 for day tank located above main tank, and 15-18 for day tank located below main tank.

1. Total vertical pipe distance (day tank inlet to main tank bottom) . . . . . _____ ft. (m)
2. Total length of pipe (vertical and horizontal) (calculate each pipe size in the line individually) . . . . . _____ ft. (m)
3. Added length due to fittings in line (see Figure 3 and Figure 4) . . . . . _____ ft. (m)
4. Add lines 2 and 3 . . . . . _____ ft. (m)
5. Divide line 4 by 100 . . . . . _____ C ft. (C m)
6. Pipe size . . . . . _____ in. (mm)
7. Pump capacity . . . . . _____ gpm/L/min
8. Friction head loss for 100 feet (See Figure 3) . . . . . _____ ft. (m)
9. Additional head loss—multiply line 5 by line 8 . . . . . _____ ft. (m)
10. Repeat lines 2-9 for each pipe size used in line . . . . . _____ ft. (m)

Use questions 11-14 to compute pump lift.

11. Total lifting capacity needed (add lines 1, 9, and 10) . . . . . _____ ft. (m)
12. Fuel tank elevation (above sea level) . . . . . _____ ft. (m)
13. Available pump lift (see Figure 5) . . . . . _____ ft. (m)
14. Subtract line 11 from line 13 (subtract even if result is a negative number) . . . . . _____ ft. (m)

Use questions 15-18 for pump head.

15. Total head capacity needed (add lines 1, 9, and 10) . . . . . _____ ft. (m)
16. Pump discharge pressure (see Figure 6) . . . . . _____ psi/kPa
17. Available pump head (multiply line 16 by 2.31) . . . . . _____ ft. (m)
18. Subtract line 15 from line 17 (subtract even if result is a negative number) . . . . . _____ ft. (m)

Pump-Lift Results

If line 14 is a positive number, the system is correctly sized. If line 14 is a negative number, the system is beyond the safe lifting capacity. If line 1 is less than line 13, increase pipe size. If line 1 is larger than line 13, install a remote pumping unit.

Pump-Head Results

If line 18 is a positive number, the system is correctly sized. If line 18 is a negative number, the system is beyond a safe pushing capacity. Redesign system.

Tank Placement

Install the day tank as close to the engine as practical but make sure it is still serviceable from all sides. Position the tank to allow fuel and vent port service. Locate the tank a minimum of 6-8 in. (152.4-203.2 mm) from any wall for piping installation. Position day tanks equipped with the electronic control module (ECM) so that the ECM can be easily seen and operated.

The base of each day tank has built-in bolt-down slots. Bolt down the day tank before installing any piping. Make sure to correct any pipe misalignment before fitting the pipe to the day tank. The day tank is not built to absorb pipe stress caused by installation misalignment.

Plumbing Connections

The factory ships the day tank with the drain port plugged by a 3/8 in. NPT pipe plug.

Avoid vertical piping loops or traps when designing a pumping system. Cavitation will eventually ruin a pump and can occur for many reasons:

- Total equivalent lift too high for pump
- Total equivalent head too high for pump
- Restrictions on lines
- Air leaks
- Incorrectly plumbed systems

Use 90° elbows to facilitate any minor adjustments to the plumbing of the day tank. Install pipe unions as needed to allow for future maintenance or break down of the piping. Clearly label all piping connections on the day tank for future reference.

Tighten all threaded connections using pipe sealant which is compatible with #2 diesel fuel. Connections should be able to hold twice the anticipated operating pressure; tighten connections accordingly.

Do not apply pressure above 5 psig (34.5 kPa) to the day tank. See design drawing for plumbing connections.

Fuel Line Selection

Use schedule 40 black iron pipe or copper tubing for fuel lines. Never use galvanized pipe or fittings with diesel fuel systems. The fuel reacts chemically with the galvanized coating, causing it to peel and damage the pump. Use an in-line fuel strainer on the inlet side of the pump to ensure pump life and proper valve seating. Check and clean the strainer periodically to remove particle build up which limits pumping capabilities.

Engine Supply

Pipe the engine supply port to the engine. Follow the engine manufacturer's recommendations for pipe size, flex hose requirements, and final connection to the engine. Engine supply port is essentially a gravity feed from the day tank. Place the top of the day tank at least 6 in. (152.4 mm) below engine injectors.

Fuel Return

Fuel return ports return excess fuel from the engine to the day tank. Typically, only one port is required. Plug the unused port with a 1 in. NPT black iron pipe plug.

Overflow

Do not use the overflow port when the day tank is below the main tank because such an arrangement poses a potentially dangerous situation. In a normal application where the day tank is above the main fuel tank, the excess fuel will transfer back to the main tank by gravity. Do not reduce the 1 in. NPT overflow port.

Vent

Route the vent pipe immediately outside and upward to the highest point in the fuel system. Make sure there are no downflows or traps in this line. Consult local building codes on minimum heights, vent cap requirements, etc. Do not plug the vent.

Drain

It is not necessary to plumb the drain to any permanent drain line. Use an iron bronze body ball valve if a locally supplied valve is used.

Fuel Inlet

The fuel inlet to the day tank pump is a 3/8 in. NPT female threaded fitting. For models with ECM remove the plastic day tank cover by loosening the four screws on the sides of the cover. Plumb the fuel line from the main tank to the day tank pump. Pay particular attention to the pipe connection to the pump to avoid transmission of mechanical stresses to the pump. This connection is critical in order to maintain fuel pump prime. Maintain fuel in the suction side of the pipe with no air pockets. Use a foot valve at the main tank to prevent fuel from flowing back to the main tank and losing prime.

Use a hand pump for initial priming to avoid undue wear on the fuel pump. If the fuel pump must be used for initial priming, do not run fuel pump for more than 60 seconds. Fuel should be flowing within that time.

Gravity System

With the main tank above the day tank, a gravity feed may be sufficient. Gravity feed is dangerous because a 10,000 gallon (37,850 L) tank can be located above a 50 gallon (189 L) day tank. Because of the inherent danger of day tank overflow with a gravity feed system, use the following safety accessories:

- High Level Alarm
- Rupture basin and fuel in rupture basin alarm—this is a tank that surrounds the day tank to allow time for corrective action to a problem before flooding occurs.
- Solenoid valve or float valve to stop flow of fuel to day tank.
- Filter or strainer to maintain clean fuel which will ensure seating of valves.
- Manual shut-off valve to stop flow of fuel.
- Reverse pumping system to pump the overflow fuel back to the main tank.

Electrical Connections

ECM Models

The electrical current requirement for the ECM and motor is 20 amps maximum, 120 vac. The remote relay contacts are rated at 1 amp, 120 vac. See Figure 9 for wiring diagram.

1. Access power terminals by loosening the four nuts securing the plastic cover to unit and removing the cover.
2. Remove the four top screws from the ECM and lift the ECM cover off, exposing the terminal strip located on the bottom left side. See Figure 7 for remote annunciation connections and Figure 8 for input power terminal layout.
3. Run wires through the knockouts provided. Have electrical connections performed by a qualified electrician.

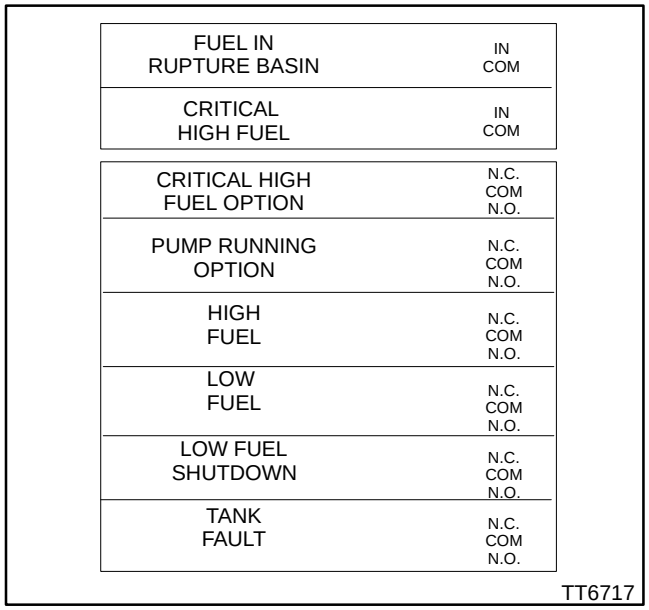


Figure 7. ECM Remote Annunciation Connections

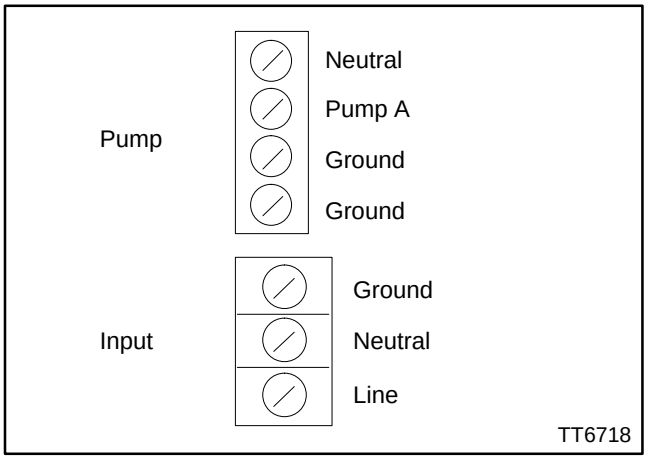


Figure 8. ECM Input Power Terminal Layout

Non-ECM Models

The electrical current requirement for the non-ECM day tank motor is 20 amps maximum, 120 vac.

1. Bring both power and common leads to float switch electrical box and connect to terminal strip marked LINE.
2. Ground electrical box to one of the bracket mounting screws inside box.

No power terminals for electrical warning accessories are available on non-ECM models. Have final electrical connections performed by a qualified electrician.

ECM Functional Alarm

The ECM functional alarm performs many internal checks to ensure proper operation. If a fault occurs the relay de-energizes and the LED darkens. Wire alarm to the normally closed contact, thereby providing a signal if a fault does occur. See Figure 7 for remote annunciation connections.

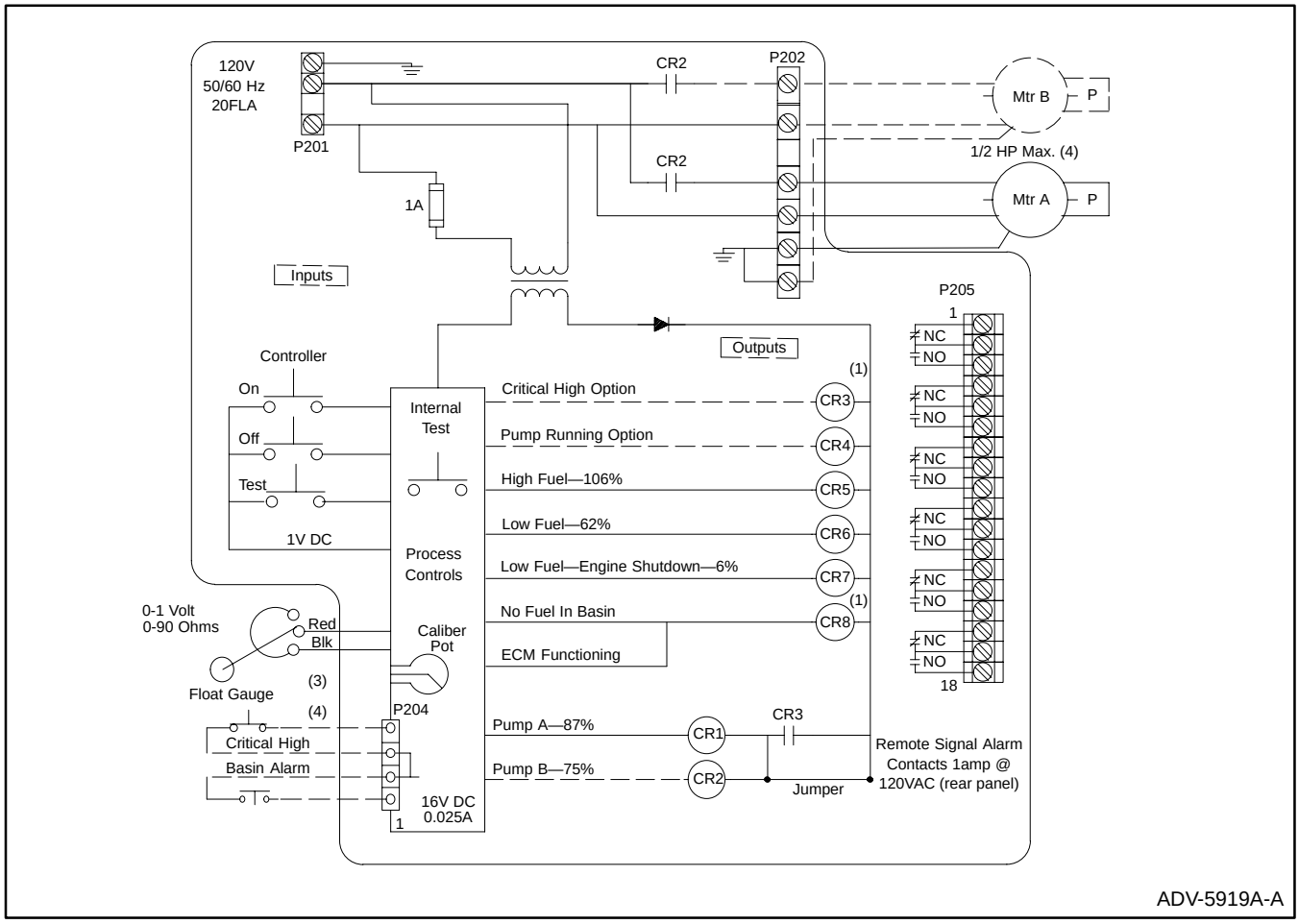


Figure 9. Day Tank Wiring Diagram

Testing and Mechanical Inspection

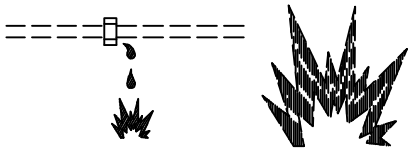
General

Use this section as a guide to test the day tank for correct installation. All parts must be clean, all connections tight, and all components in working order for the day tank to operate correctly. Follow all safety precautions listed in front of this manual.

NOTE

Do not pressurize the day tank to more than 5 psig (34.5 kPa).

⚠ WARNING



Explosive fuel vapors.
Can cause severe injury or death.

Use extreme care when handling, storing, and using fuels.

Fuel system. Explosive fuel vapors can cause severe injury or death. All fuels are highly explosive in a vapor state. Use extreme care when handling and storing fuels. Store fuel in a well-ventilated area away from spark-producing equipment and out of the reach of children. Never add fuel to the tank while the engine is running because spilled fuel may ignite on contact with hot parts or from spark. Do not smoke or permit flame or spark to occur near sources of spilled fuel or fuel vapors. Keep fuel lines and connections tight and in good condition. Do not replace flexible fuel lines with rigid lines. Use flexible sections to avoid breakage caused by vibration. Do not operate generator set in the presence of fuel leaks, fuel accumulation, or sparks. Repair systems before resuming generator set operation.

Draining fuel system. Explosive fuel vapors can cause severe injury or death. Spilled fuel can cause an explosion. Use a container to catch fuel when draining fuel system. Wipe up all spilled fuel after draining system.

Testing

Pressure test all lines leading to and from the day tank to twice the anticipated operating pressure.

The day tank has been factory tested to 5 psig. Do not pressurize day tank to more than 5 psig when pressure testing the lines. Day tanks are built with flat sides to minimize space requirements; over-pressure can severely distort the tank.

NOTE

2.31 ft. fuel head = 1 psig.

Air leaks in the lines will defeat the pump's lift and no fuel will be pumped. Continued operation of the pump without fuel can destroy the pump.

Pay particular attention to the condition of the fuel supply line from the main tank to the day tank.

Mechanical Inspection

Verify that all valves and lines are pressure tested, clear and open. Confirm that installation is in accordance with the mechanical specifications and local building codes.

External and Internal Test (ECM Models)

Perform external and internal test when the mechanical inspection is complete. Prime the pump and fill the tank to capacity. The external test pushbutton will test all front panel LEDs for 3 seconds and activate pump/motor for as long as the pushbutton is depressed. All alarm relays will maintain their original state, either open or closed. The internal test pushbutton located inside ECM will test each LED and remote annunciation relay in sequential order (high fuel to ECM functional).

NOTE

Activate both the external and internal test switch as a part of a periodic maintenance program to ensure reliable operation of the day tank.

External Test (Non-ECM Models)

Test the pump/motor by manually moving the adjustment disc. This will open and close contacts to operate the motor. When the day tank is full of fuel, a pliers may be needed to move the adjustment disc.

Operation (ECM)

General

The electronic control module (ECM) maintains the fuel level of the day tank by controlling a pump/motor. The pump remains off at the normal fuel level and activates at 87% full. A pump running indicator LED lights when the pump activates. The motor relay is prewired to the pump/motor. The ECM panel also contains the power ON, which lights when the power is applied to the ECM. Follow all safety precautions listed in the front of this manual.

Servicing day tank. Hazardous voltage can cause severe injury or death. Service day tank Electrical Control Module (ECM) as prescribed in equipment manual. Disconnect power to day tank before servicing. Press the day tank ECM OFF pushbutton to disconnect power. Be aware that line voltage is still present within the ECM when the POWER ON light is lit. Be sure that generator set and day tank are electrically grounded. Do not operate day tank when standing in water or on wet ground as the chance of electrocution increases under such conditions.

Level Sensor

An electronic analog float gauge located below the ECM on the mounting bracket determines the day tank fuel level. Nine LEDs on the ECM indicate the day tank fuel level from full to empty. See Figure 10 for front panel layout.

Alarms

The ECM has five standard alarm conditions indicated locally by an LED and remotely by a relay. Make customer connections to the normally open and normally closed relay contacts provided.

1. **High Fuel.** Alarm activates at 106% of normal fuel level.
2. **Low Fuel.** Alarm activates at 62% of normal fuel level. The alarm enables reaction time to a potential problem before low fuel shutdown occurs.
3. **Critical Low Fuel (engine shutdown).** Alarm activates at 6% of normal fuel level to enable the customer to shut down engine/generator before fuel runs out.
4. **Fuel In Rupture Basin.** If equipped with a rupture basin float switch, the ECM monitors for fuel leaked into the rupture basin.
5. **ECM Functional.** The ECM performs many internal checks to ensure proper operation.

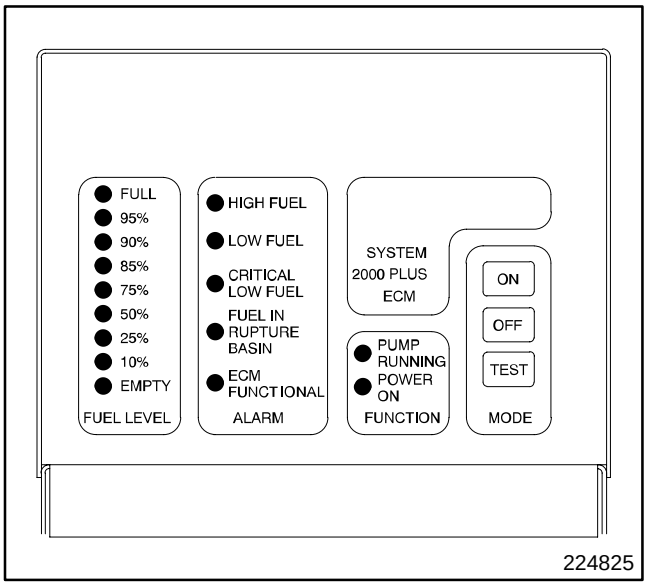


Figure 10. ECM Front Panel Layout

Mode

The ECM has three modes of operation and one internal test button.

Off. Pushbutton disables the ECM for routine maintenance to the tank system without disrupting the ECM.

NOTE

When ECM functional alarm relay de-energizes, it can activate a customer-installed alarm wired to this relay.

On. Pushbutton activates the ECM after the OFF pushbutton is depressed. On any initial power-up after a power outage, the ECM will automatically turn on.

Test. Pushbutton tests all front panel LEDs for 3 seconds and activates pump/motor for as long as the pushbutton is depressed. All alarm relays maintain their original positions.

Internal Test. Pushbutton (located inside ECM) tests each LED and remote annunciation relay in sequential order (high fuel to ECM functional).

Operation (Non-ECM)

General

Non-ECM day tanks include a float switch (side-mounted) that directly controls the pump/motor, pump, and motor.

Level Sensor

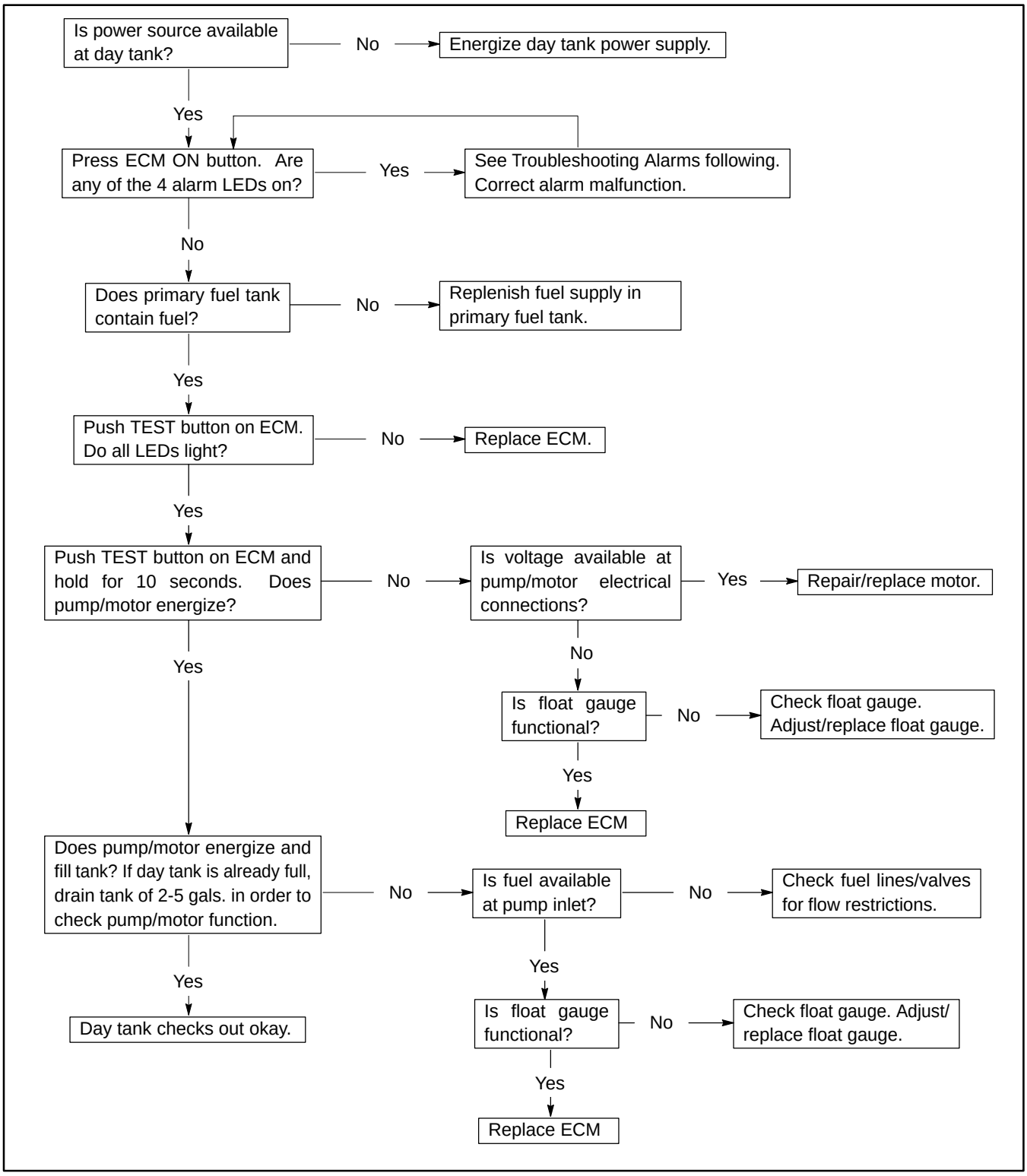
Day tanks without the ECM include a fuel level gauge and a 1/2 HP rated float switch which directly controls the pump/motor. The side-mounted float switch activates at approximately 75% of normal fuel level. Upon activation the pump/motor fills the tank with fuel. The float switch deactivates pump/motor when the day tank fuel level reaches 100%.

The factory sets the float switch assembly. Use the following procedure if the switch needs further adjustment.

1. Disconnect power lines to tank.
2. Reposition the two adjusting screws on the pie-shaped disc behind the electrical box.
   a. Adjust the bottom screw to change the point for the pump to start. Slide screw up the slot to start the pump at a higher level, down for a lower level.
   b. Adjust the top screw to change the point for the pump to stop. Slide screw up the slot to start the pump at a higher level, down for lower level.
3. Reconnect power and test.

Troubleshooting

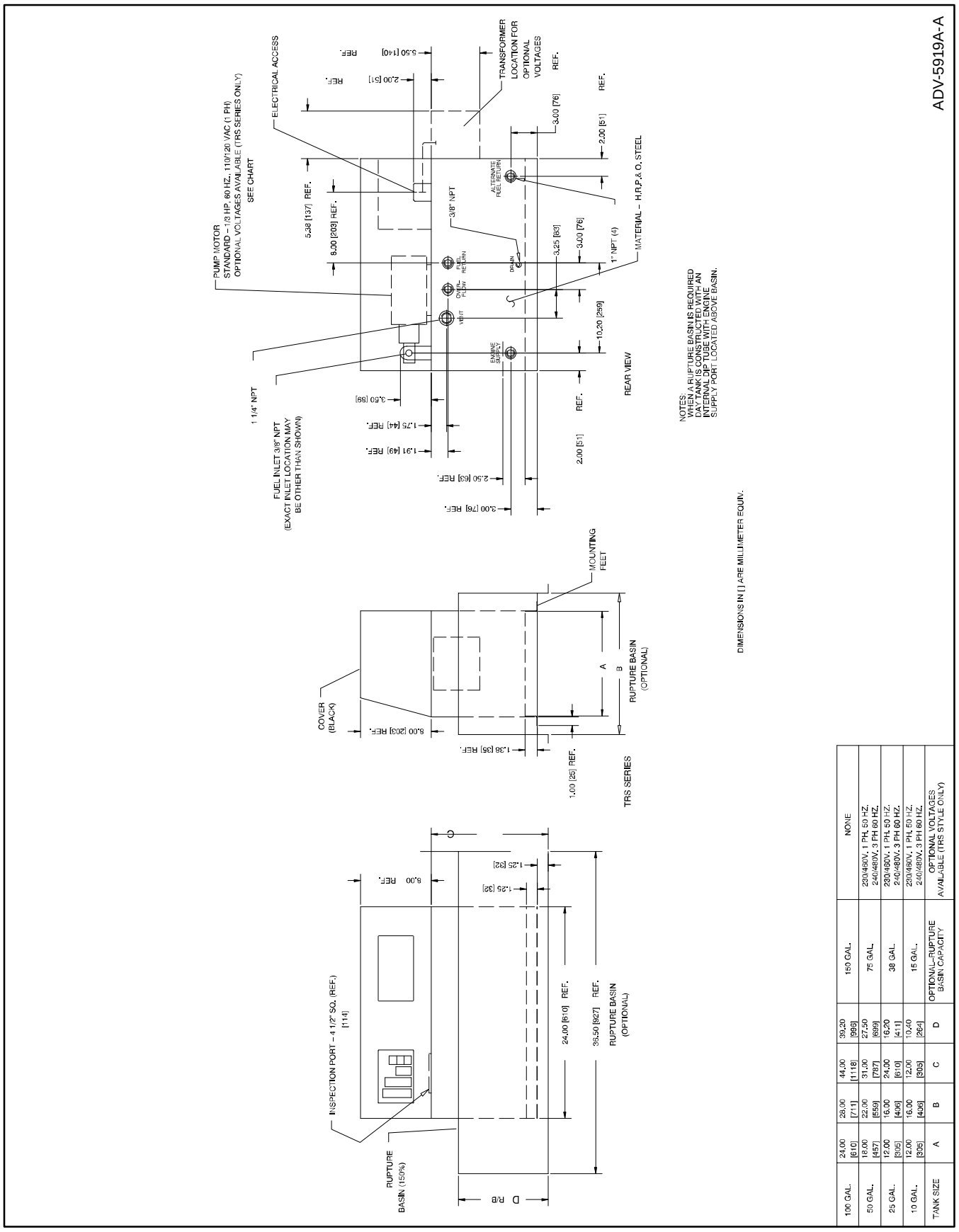
Testing Day Tank Function



Troubleshooting Alarms

Alarm LED	Possible Cause	Check/Corrective Action
ECM functional		If ECM functional LED is not illuminated, replace ECM.
High fuel (106% of full)	Check critical high switch and wiring	Check switch contact function. Replace if defective.
	Check ECM function	If ECM functional LED is not illuminated, replace ECM.
Low fuel (62% of full)	Check fuel level in primary tank	Replenish as necessary.
	Check supply voltage to day tank	Energize power supply.
	Check pump/motor function	Repair/replace pump/motor. Use Testing Day Tank Function flowchart.
	Check float gauge sender and wiring	Test float switch using an ohmmeter (R x 1). If resistance range is 0-90 ohms, float switch is okay. Replace float switch if float switch does not meet above specs.
	Check ECM function	If ECM functional LED is not illuminated, replace ECM.
Critical low fuel (6% of full)	Check float gauge sender and wiring	Test float switch using an ohmmeter (R x 1). If resistance range is 0-90 ohms, float switch is okay. Replace float switch if float switch does not meet above specs.
	Check ECM function	If ECM functional LED is not illuminated, replace ECM.
Fuel in rupture basin	Check basin alarm switch and wiring	Check switch contact function. Replace if defective.
	Check ECM function	If ECM functional LED is not illuminated, replace ECM.
	Fuel tank defective	If fuel is present in rupture basin, check source of fuel. Replace day tank if leaking.

Dimension Drawings



TANK SIZE	A	B	C	D	150 GAL.	NONE
100 GAL.	24.00 [610]	28.00 [711]	44.00 [1118]	39.20 [996]	75 GAL.	230/460V. 1 PH, 50 HZ. 240/480V. 3 PH 60 HZ.
50 GAL.	18.00 [457]	22.00 [559]	31.00 [787]	27.50 [699]	38 GAL.	230/460V. 1 PH, 50 HZ. 240/480V. 3 PH 60 HZ.
25 GAL.	12.00 [305]	16.00 [406]	24.00 [610]	16.20 [411]	15 GAL.	230/460V. 1 PH, 50 HZ. 240/480V. 3 PH 60 HZ.
10 GAL.	12.00 [305]	16.00 [406]	12.00 [305]	10.40 [264]	OPTIONAL–RUPTURE BASIN CAPACITY	OPTIONAL VOLTAGES AVAILABLE (TRS STYLE ONLY)

Figure 11. Day Tank with ECM Dimension Drawing

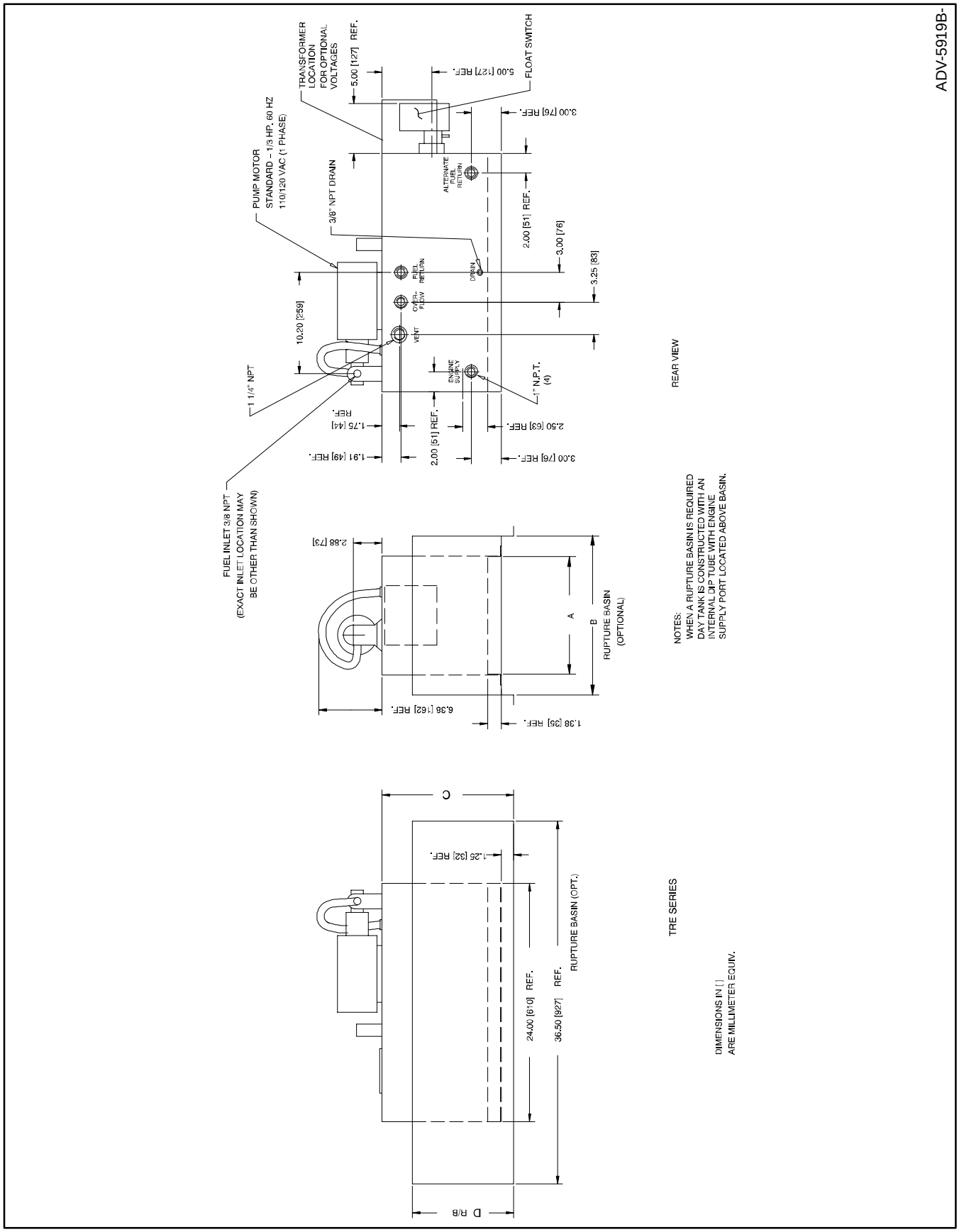
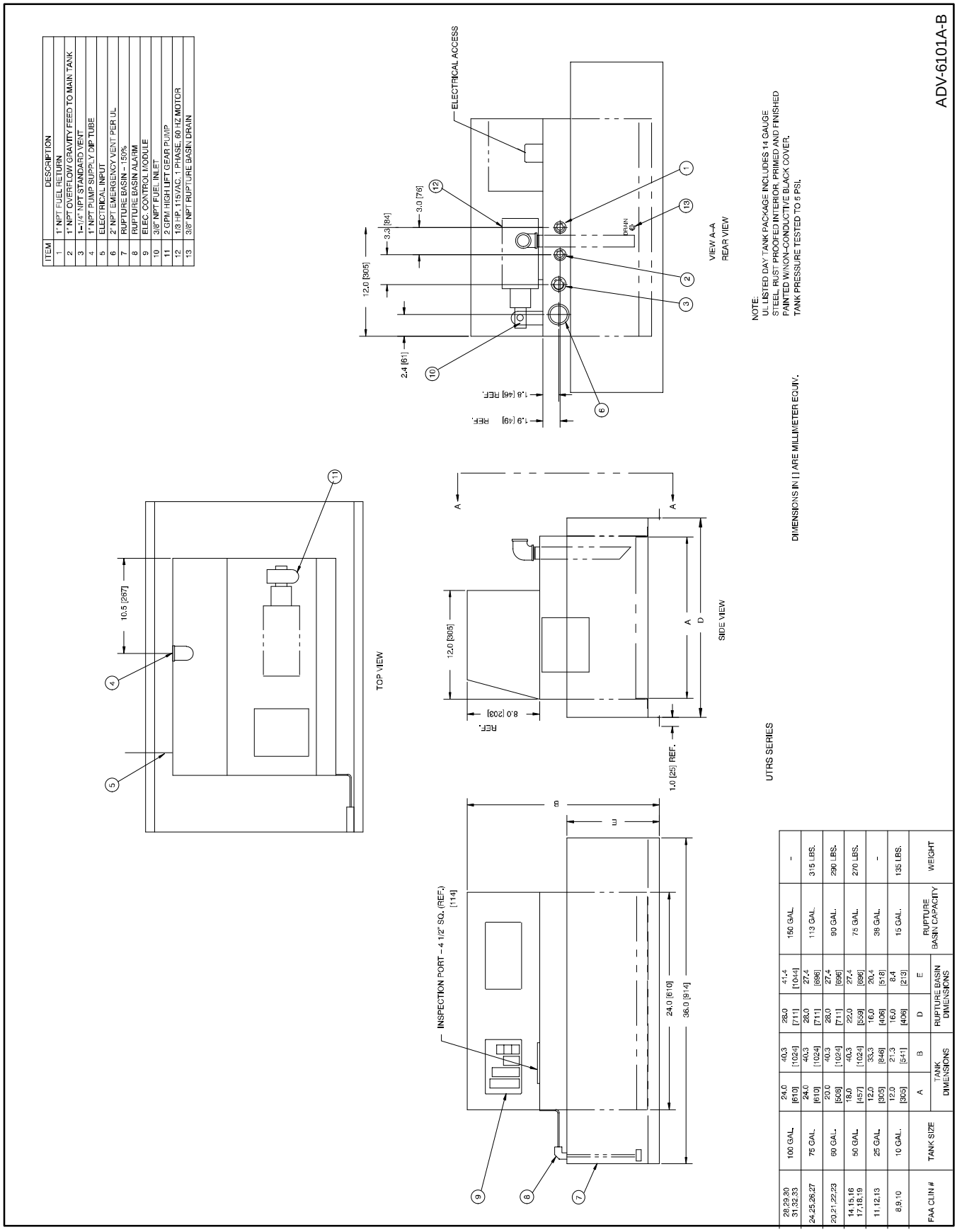
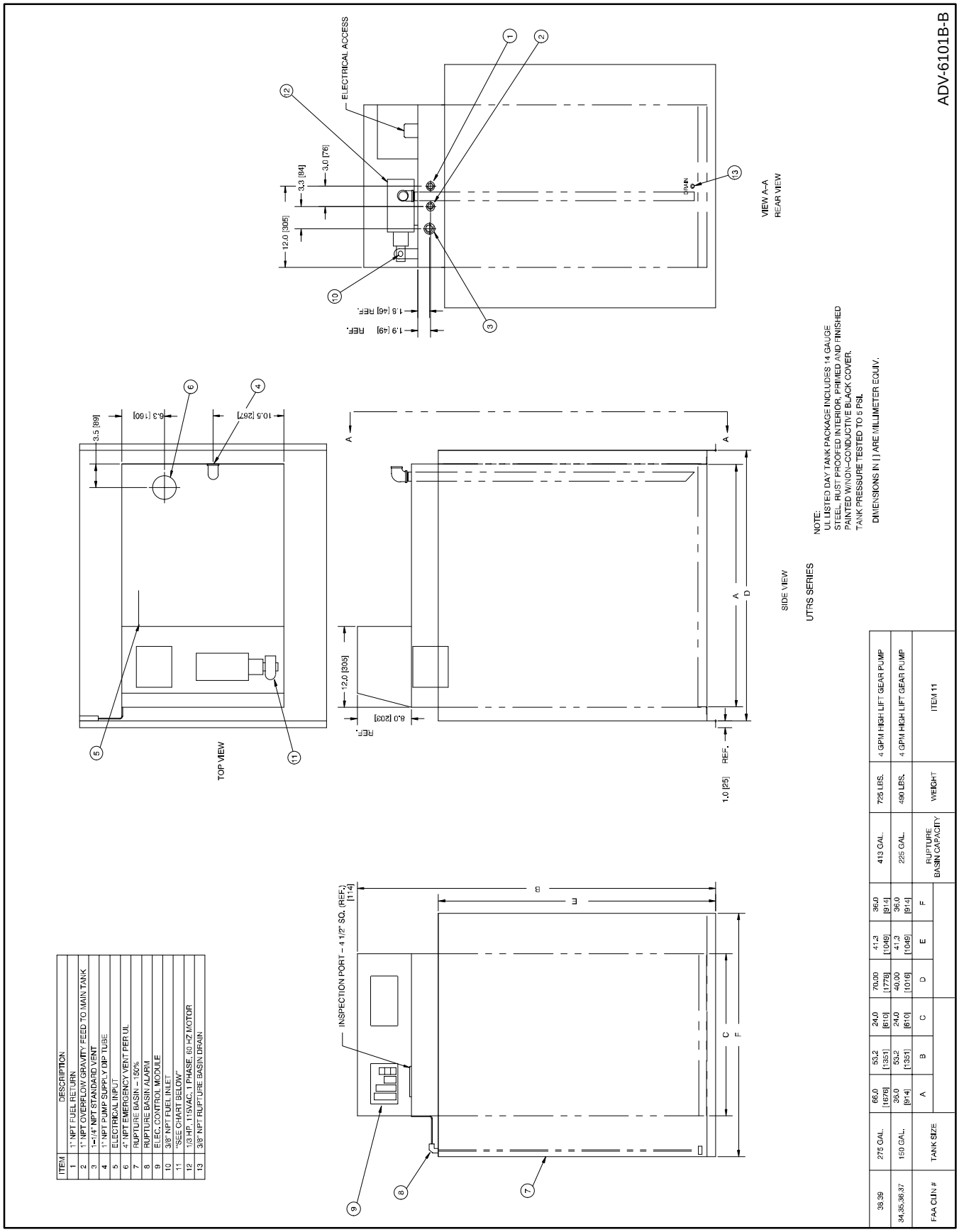


Figure 12. Day Tank Without ECM Dimension Drawing



FAA CLIN #	TANK SIZE	TANK DIMENSIONS A	TANK DIMENSIONS B	RUPTURE BASIN DIMENSIONS D	RUPTURE BASIN DIMENSIONS E	RUPTURE BASIN CAPACITY	WEIGHT
28,29,30 31,32,33	100 GAL.	24.0 [610]	40.3 [1024]	28.0 [711]	41.4 [1044]	150 GAL.	-
24,25,26,27	75 GAL.	24.0 [610]	40.3 [1024]	28.0 [711]	27.4 [696]	113 GAL.	315 LBS.
20,21,22,23	60 GAL.	20.0 [508]	40.3 [1024]	28.0 [711]	27.4 [696]	90 GAL.	290 LBS.
14,15,16 17,18,19	50 GAL.	18.0 [457]	40.3 [1024]	22.0 [559]	27.4 [696]	75 GAL.	270 LBS.
11,12,13	25 GAL.	12.0 [305]	33.3 [846]	16.0 [406]	20.4 [518]	38 GAL.	-
8,9,10	10 GAL.	12.0 [305]	21.3 [541]	16.0 [406]	8.4 [213]	15 GAL.	135 LBS.

Figure 13. Dimension Drawing for FAA CLINS 8-19



ITEM	DESCRIPTION
1	1" NPT FUEL RETURN
2	1" NPT OVERFLOW GRAVITY FEED TO MAIN TANK
3	1-1/4" NPT STANDARD VENT
4	1" NPT PUMP SUPPLY DIP TUBE
5	ELECTRICAL INPUT
6	4" NPT EMERGENCY VENT PER UL
7	RUPTURE BASIN – 150%
8	RUPTURE BASIN ALARM
9	ELEC. CONTROL MODULE
10	3/8" NPT FUEL INLET
11	"SEE CHART BELOW"
12	1/2 HP, 115VAC, 1 PHASE, 60 HZ MOTOR
13	3/8" NPT RUPTURE BASIN DRAIN

FAA CLIN #	TANK SIZE	A	B	C	D	E	F	RUPTURE BASIN CAPACITY	WEIGHT	ITEM 11
38,39	275 GAL.	66.0 [1676]	53.2 [1351]	24.0 [610]	70.00 [1778]	41.3 [1049]	36.0 [914]	413 GAL.	725 LBS.	4 GPM HIGH LIFT GEAR PUMP
34,35,36,37	150 GAL.	36.0 [914]	53.2 [1351]	24.0 [610]	40.00 [1016]	41.3 [1049]	36.0 [914]	225 GAL.	490 LBS.	4 GPM HIGH LIFT GEAR PUMP

Figure 14. Dimension Drawing for FAA CLINS 20-39

Installation Drawings

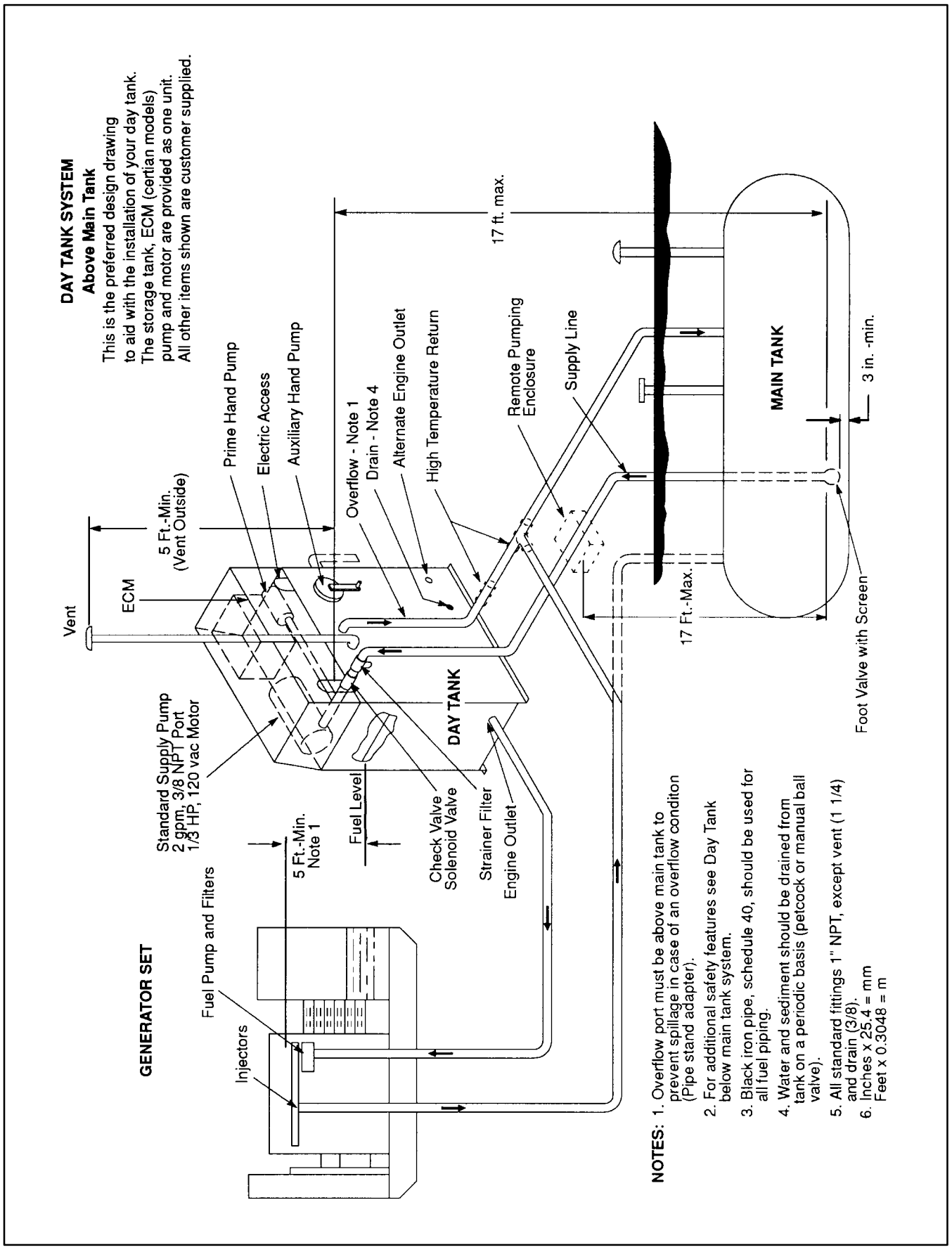


Figure 15. Day Tank System Above Main Tank

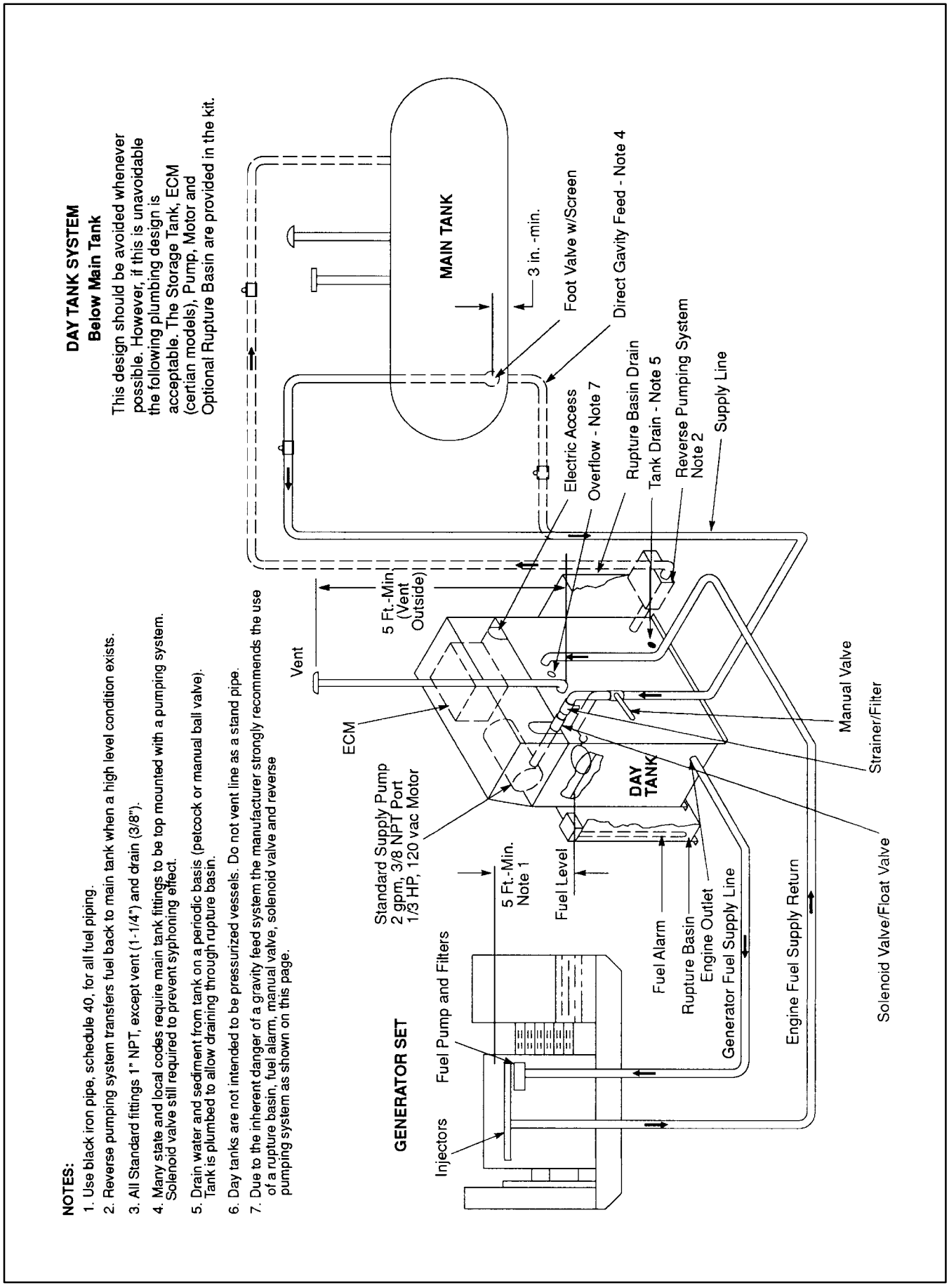
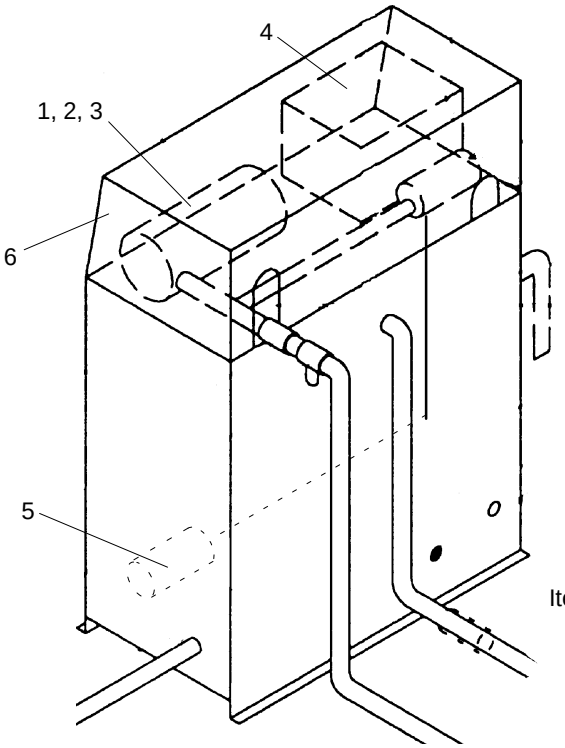


Figure 16. Day Tank System Below Main Tank

Parts List



Items 7, 8, 9, 10, 11, and 12 not shown

PB70

Figure 17. Day Tank and System Parts

FAA Day Tank Kits

Parts List							
		Kits: PA-336846, PA-336847, PA-336860, PA-336861		Unique Parts			
Item	Qty.	Description	Common Parts	PA-336846	PA-336847	PA-336860	PA-336861
1	1	Motor, pump	352898				
2	1	Pump	352899				
3	1	Coupling, pump drive	352900				
4	1	Controller, pump	354366				
5	1	Sensor, float		354367	352897	352897	352897
6	1	Cover, tank	354368				
7	1	Basin, rupture		354369	354372	354382	354382
8	1	Switch, basin	354370				
9	1	Switch, float	354371				

FAA Day Tank Kits

Parts List					
		Kits: PA-347627, PA-347629		Unique Parts	
Item	Qty.	Description	Common Parts	PA-347627	PA-347629
1	1	Motor, pump		352898	352898
2	1	Pump		352899	352899
3	1	Coupling, pump drive		352900	352900
4	1	Controller, pump	354366		
5	1	Sensor, float		354373	354373
6	1	Cover, tank	354368		
7	1	Basin, rupture		354374	354376
8	1	Switch, basin	354370		
9	1	Switch, float	354371		

FAA Day Tank Kits

Parts List							
		Kits: PA-354711, PA-354713, PA-354715, PA-354716		Unique Parts			
Item	Qty.	Description	Common Parts	PA-354711	PA-354713	PA-354715	PA-354716
1	1	Motor, pump		352898			352898
2	1	Pump		352899	352899	354378	354378
3	1	Coupling, pump drive		352900	352900	354380	354380
4	1	Controller, pump	354366				
5	1	Sensor, float		354719	354373	354373	354373
6	1	Cover, tank	354368				
7	1	Basin, rupture		354712	354714	354374	354376
8	1	Switch, basin	354370				
9	1	Switch, float	354371				
1	1	Motor				354379	354379

Day Tank Kits

Parts List							
		Kits: 292242, 292242-SD, 292243, 292243-SD, 292244, 292244-SD, 292245, 292245-SD		Unique Parts			
Item	Qty.	Description	Common Parts	292242 292242-SD	292243 292243-SD	292244 292244-SD	292245 292245-SD
1	1	Motor, pump	352898				
2	1	Pump	352899				
3	1	Coupling, pump	352900				
4	1	Controller, pump	354366				
5	1	Sensor, float	354367				
6	1	Cover, tank	354368				
7	1	Basin, rupture			354369		354369
8	1	Switch, basin			354370		354370
9	1	Switch, float			354371		354371
10	1	Transformer, step down				354415	354415

Day Tank Kits

Parts List							
		Kits: 292246, 292246-SD, 292247, 292247-SD, 274602, 274602-SD, 274603, 274603-SD		Unique Parts			
Item	Qty.	Description	Common Parts	292246 292246-SD	292247 292247-SD	274602 274602-SD	274603 274603-SD
1	1	Motor, pump	352898				
2	1	Pump	352899				
3	1	Coupling, pump	352900				
4	1	Controller, pump		354366	354366		
5	1	Sensor, float		354367	354367		
6	1	Cover, tank		354368	354368		
7	1	Basin, rupture			354369		354369
8	1	Switch, basin			354370		354370
9	1	Switch, float			354371		354371
10	1	Transformer, step down		354416	354416		
11	1	Switch, float (tre model)				354417	354417

Day Tank Kits

Parts List							
Kits: 292248, 292248-SD, 292249, 292249-SD, 292256, 292256-SD, 292257, 292257-SD				Unique Parts			
Item	Qty.	Description	Common Parts	292248 292248-SD	292249 292249-SD	292256 292256-SD	292257 292257-SD
1	1	Motor, pump	352898				
2	1	Pump	352899				
3	1	Coupling, pump	352900				
4	1	Controller, pump	354366				
6	1	Cover, tank	354368				
5	1	Float, sensor		354418	354418	352897	352897
7	1	Basin, rupture			354419		354372
8	1	Switch, basin			354370		354370
9	1	Switch, float			354371		354371
10	1	Transformer, step down				354415	354415

Day Tank Kits

Parts List							
Kits: 292258, 292258-SD, 292259, 292259-SD, 274606, 274606-SD, 292250, 292250-SD				Unique Parts			
Item	Qty.	Description	Common Parts	292258 292258-SD	292259 292259-SD	274606 274606-SD	292250 292250-SD
1	1	Motor, pump	352898				
2	1	Pump	352899				
3	1	Coupling, pump	352900	352897	352897		354418
5	1	Sensor, float					
4	1	Controller, pump		354366	354366		354366
6	1	Cover, tank		354368	354368		354368
7	1	Basin, rupture			354372		
8	1	Switch, basin			354370		
9	1	Switch, float			354371	354417	
10	1	Transformer, step down		354416	354416		354415

Day Tank Kits

Parts List							
Kits: 292251, 292251–SD, 292252, 292252-SD 292253, 292253-SD, 274604, 274604-SD				Unique Parts			
Item	Qty.	Description	Common Parts	292251 292251-SD	292252 292252-SD	292253 292253-SD	274604 274604-SD
1	1	Motor, pump	352898				
2	1	Pump	352899				
3	1	Coupling, pump	352900				
4	1	Controller, pump		354366	354366	354366	
6	1	Cover, tank		354368	354368	354368	
8	1	Switch, basin		354370		354370	
9	1	Switch, float		354371		354371	354417
10	1	Transformer, step down		354415	354416	354416	
5	1	Sensor, float		354418	354418	354418	
7	1	Basin, rupture		354419		354419	

Day Tank Kits

Parts List							
Kits: 274605, 274605-SD, 274717, 274717-SD, 274718, 274718-SD, 292254, 292254-SD				Unique Parts			
Item	Qty.	Description	Common Parts	274605 274605-SD	274717 274717-SD	274718 274718-SD	292254 292254-SD
1	1	Motor, pump	352898				
2	1	Pump	352899				
3	1	Coupling, pump	352900				
4	1	Controller, pump			354366	354366	354366
11	1	Switch, float (tre model)		354417			
8	1	Switch, basin		354370		354370	
7	1	Basin, rupture		354419		354419	
5	1	Sensor, float		354418		354418	
6	1	Cover, tank			354420	354420	354368
9	1	Switch, float		354371		354371	
12	1	Valve, check			354421	354421	

Day Tank Kits

Parts List							
Kits: 292255, 292255-SD, 274607, 274607-SD, 274854, 274854-SD, 274855, 274855-SD				Unique Parts			
Item	Qty.	Description	Common Parts	292255 292255-SD	274607 274607-SD	274854 274854-SD	274855 274855-SD
1	1	Motor, pump		352898	352898	354422	354422
2	1	Pump		352899	352899	354423	354423
3	1	Coupling, pump		352900	352900	354424	354424
4	1	Controller, pump		354366		354366	354366
5	1	Sensor, float		354367		354373	354373
6	1	Cover, tank		354368		354368	354368
8	1	Switch, basin		354370	354370		354370
9	1	Switch, float		354371	354371		354371
7	1	Basin, rupture		354372	354372		354425
11	1	Switch, float (tre model)			354417		

Day Tank Kits

Parts List					
Kits: 274856, 274856-SD, 274857, 274857-SD,				Unique Parts	
Item	Qty.	Description	Common Parts	274856 274856-SD	274857 274857-SD
12	1	Switch, float (tre model)	354417		
1	1	Motor, pump	354422		
2	1	Pump	354423		
3	1	Coupling, pump	354424		
7	1	Basin, rupture			354425
8	1	Switch, basin			354370
9	1	Switch, float			354371