

Day Tank

Operation

Manual

SIMPLX[®]

SST

Day Tank Identification & Warranty Information

Attention Simplex Day Tank end user. This Day Tank Identification Form and the enclosed Day Tank Registration Card serves as your warranty registration. Please fill out the enclosed registration card completely and mail it to Simplex Inc.

Simplex Day Tank Weld Tag Serial Number: _____

Simplex Work Order Number: _____ U.L. Number: _____

Date Purchased: _____

Date Shipped/Warranty Commencement: _____

Day Tank Sold To: _____

Customer Identification Number: _____

SPECIFICATIONS:

Day Tank Model/Size: _____

Day Tank Pump/Motor Size: _____

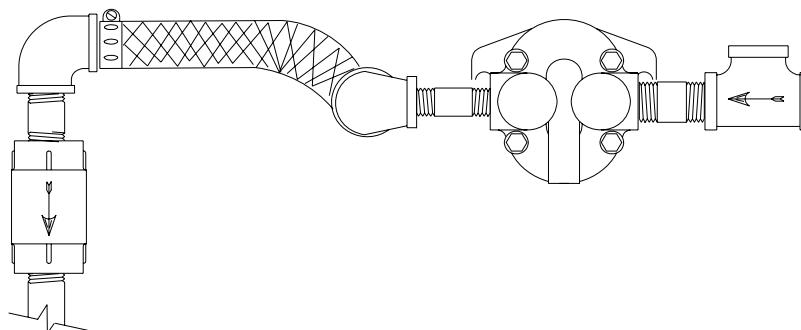
Day Tank Options: _____



SIMPLEX DAY TANK SYSTEM MANUAL

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Simplex Super-XL pump, optional pump priming tee, solenoid valve.
(Arrows indicate direction of fuel flow.)

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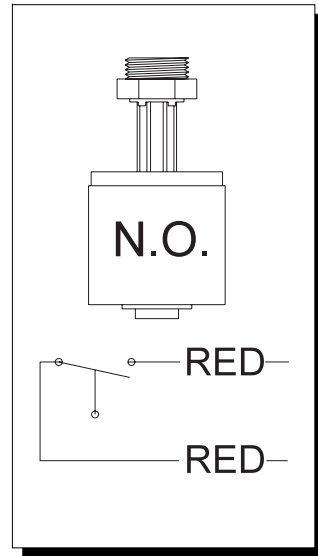


SIMPLEX DAY TANK SYSTEM MANUAL

SECTION I. DAY TANK ABBREVIATIONS

Listed below are abbreviations of terms found on Simplex Day Tank systems, and their drawings. When following a Day Tank drawing utilize this guide to define abbreviated system and component names. As this is a master list, drawings and text pertaining to your equipment may not contain all these terms.

- AC-Alternating Current
- DC-Direct Current
- DPDT-Double Pole Double Throw
- GA-Gauge
- GAL-Gallons
- GPM-Gallons Per Minute
- HG-Mercury
- HP-Horsepower
- HZ-Hertz
- I.D.-Inside Diameter
- INHG-Inches of Mercury
- L.E.D.-Light Emitting Diode
- LAFD-Los Angeles Fire Department
- MOT-Motor
- N.C.-Normally Closed
- NEC-National Electric Code
- NEMA-National Electric Manufacturers Association
- NFPA-National Fire Protection Association
- N.O.-Normally Open
- NPT-National Pipe Thread
- O.D.-Outside Diameter
- OPT-Option
- PSI-Pounds per Square Inch
- SST-Simplex Super Tank



SST DAY TANK SENDING UNIT

SECTION II. SST DAY TANK OPTIONS

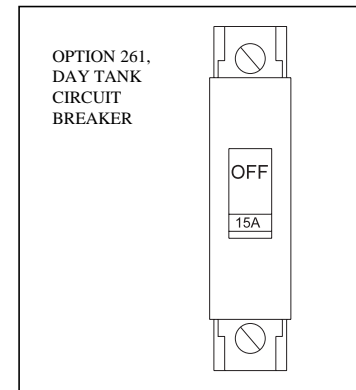
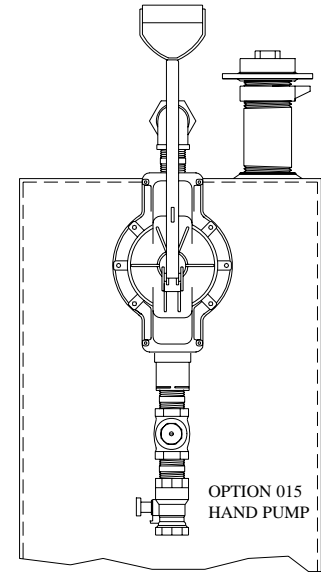
The following options are available on Simplex SST Day Tanks. Consult the unit identification card stapled to the inside cover of this manual for a complete list of options installed on your particular Day Tank.

Mechanical

- 010 Auxiliary hand pump, ½" NPT
- 015 Auxiliary hand pump, 1" NPT
- 025 Locking manual fuel fill cap
- 040 Wall-mounting brackets
- 050 Pipe stand adapter
- 060 Fuel strainer
- 062 Duplex strainer
- 063 Vent cap
- 064 Emergency vent
- 065 Drain hand valve
- 068 Emergency quick-drain
- 070 Priming tee & check valve assembly
- 080 AC Solenoid valve
- 083 DC Solenoid valve
- 087 Manual shut-off valve, bronze
- 088 Manual shut-off valve, fire rated
- 090 Foot valve
- 093 Fusible link valve
- 095 Pressure relief valve
- 100 Pressure gauge
- 101 Vacuum gauge
- 103 Flow gauge
- 104 Ball motion flow indicator
- 120 Extra 1" NPT pipe connection
- 125 Extra supply suction tube
- 130 Oversize pipe connection, 1 ¼" to 2 ½" NPT
- 131 Oversize pipe connection, 3" to 6" NPT
- 140 Special paint color
- 141 Epoxy primer
- 180 Weatherproof Modification
- 190 Overflow basin
- 191 Overflow basin float switch
- 192 Basin drain hand valve
- 195 Screen top for overflow basin
- 196 Weatherproof cover for overflow basin

Control Devices and Alarms

- 260 Disconnect switch
- 261 System circuit breaker
- 262 Control power transformer
- 265 Day tank heater
- 270 Power available green pilot light
- 280 Operation mode selector switch
- 285 Loss of flow alarm
- 295 Remote low fuel level alarm dry signal contacts
- 297 Remote high fuel level alarm dry signal contacts
- 299 Auxiliary relay, use w/options 295 and 297 above
- 311 Local/remote low fuel level alarm
- 312 Local/remote high fuel level alarm
- 325 High fuel level emergency pump-stop switch



- 329 Low fuel level red light
- 333 Critical low fuel level alarm-engine shut down
- 334 Alarm horn
- 340 "Pump Running" amber light

Duplex Pump Systems

- 345 Multifunction duplex pump controller
- 346 Two running time meters
- 347 Manual duplex pump selector switch

Gravity Fed Day Tanks

- 060, 080,
- 087 Solenoid valve, with fuel strainer, on intake to prevent tank flooding
- 376 Manual reset, normally open, electrically operated valve
- 377 Siphon-break solenoid valve for remote installation
- 378 Anti-siphon valve
- 383 Overflow-return tank
- 390 Overflow return pump & controller
- 190,
- 191 Overflow basin and overflow alarm
- 067 Flame arrestor vent, 2"

Sight Glasses

- 211 Safety sight glass without rupture basins
- 212 Digital level indicator, 115V AC
- 213 Digital level indicator with 4–20ma output
- 214 Digital fuel flow indicator, 24V DC

Fuel Oil Coolers

- 396 Radiator with electric fan, flow switch

Pumps and Motors

- 400 7 GPM
- 410 10 GPM
- 415 17 GPM
- 417 25 GPM
- 420 3 GPM
- 422 5 GPM
- 424 11 GPM
- 426 13 GPM
- 428 28 GPM
- 430 45 GPM
- 432 61 GPM
- 510 Transformer, 480/120V AC, 1ø, 50-60 Hz
- 511 Transformer, 480/120V AC, 1ø, 50-60 Hz
- 605 1/3 HP, 230V AC, 1ø, 60 Hz motor, ODP
- 615 1/3 HP, 110V AC, 1ø, 50 Hz motor, ODP
- 616 1/3 HP, 220V AC, 1ø, 50 Hz motor, ODP

- 621 1/3 HP, 230/460V AC, 3ø, motor w/starter, ODP
- 622 1/3 HP, 230/460V AC, 3ø, motor w/starter, TEFC
- 630 1/3 HP, 12V DC motor
- 635 1/3 HP, 24V DC motor
- 645 1/3 HP, 115V AC, 1ø, 60 Hz motor, TEFC
- 700 1/2 HP, 115V AC, 1ø, 60 Hz motor, ODP
- 705 1/2 HP, 230V AC, 1ø, 60 Hz motor, ODP
- 715 1/2 HP, 110V AC, 1ø, 50 Hz motor, ODP
- 716 1/2 HP, 220V AC, 1ø, 50 Hz motor, ODP
- 721 1/2 HP, 230/460V AC, 3ø, motor w/starter, ODP
- 722 1/2 HP, 230/460V AC, 3ø, motor w/starter, TEFC
- 730 1/2 HP, 12V DC motor
- 735 1/2 HP, 24V DC motor.
- 745 1/2 HP, 230/115V AC, 1ø, 60 Hz motor, TEFC
- 768 1ø magnetic motor starter
- 770 3ø magnetic motor starter
- 800 3/4 HP, 115V AC, 1ø, 60Hz motor, ODP
- 805 3/4 HP, 230V AC, 1ø, 60Hz motor, ODP
- 822 3/4 HP, 230/460V AC, 3ø, 60Hz motor w/starter, TEFC
- 825 3/4 HP, 230/460V AC, 3ø, 60Hz motor w/starter, ODP
- 845 3/4 HP, 115/230V AC, 1ø, 60Hz motor, TEFC
- 900 1 HP, 115V AC, 1ø, 60Hz motor
- 905 1 HP, 230V AC, 1ø, 60Hz motor
- 922 1 HP, 230/460V AC, 3ø, 60Hz motor w/starter, TEFC
- 925 1 HP, 230/460V AC, 3ø, 60Hz motor w/starter, ODP
- 945 1 HP, 115/230V AC, 1ø, 60Hz motor, TEFC

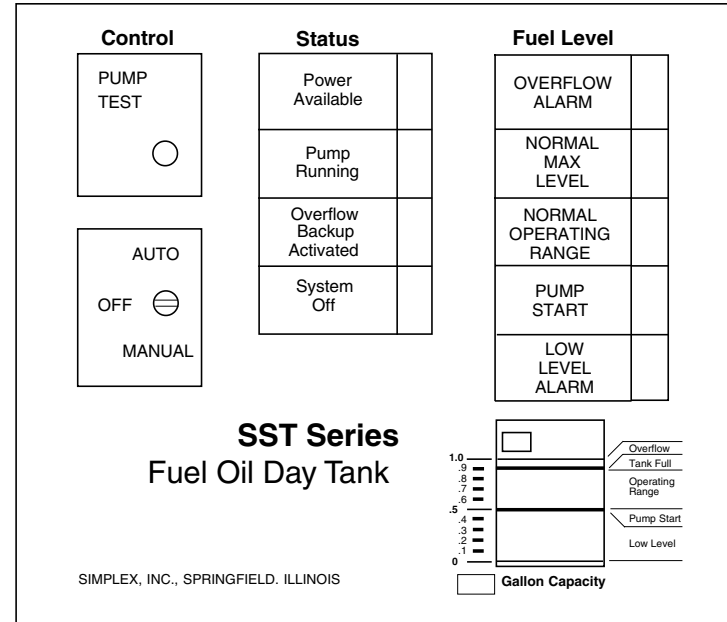
Optional motors requiring SPS/SKS Pump Set when used with 10 through 400 gallon models

- 1000 1 1/2 HP, 115V AC, 1ø, 60Hz, ODP
- 1005 1 1/2 HP, 230V AC, 1ø, 60Hz, ODP
- 1022 1 1/2 HP, 230/460V AC, 3ø, 60Hz, w/starter, TEFC
- 1025 1 1/2 HP, 230/460V AC, 3ø, 60Hz, w/starter, ODP
- 1045 1 1/2 HP, 115/230V AC, 1ø, 60 Hz, TEFC
- 1100 2 HP, 115V AC, 1ø, 60Hz, ODP
- 1105 2 HP, 230V AC, 1ø, 60Hz, ODP
- 1122 2 HP, 208V AC, 3ø, 60Hz, ODP
- 1125 2 HP, 230/460V AC, 3ø, 60Hz, w/starter, ODP
- 1145 2 HP, 115/230V AC, 1ø, 60Hz, TEFC
- 1200 3 HP, 115V AC, 1ø, 60Hz, ODP
- 1205 3 HP, 230V AC, 1ø, 60Hz, ODP
- 1225 3 HP, 230/460V AC, 3ø, 60Hz, w/starter, ODP
- 1305 5 HP, 230V AC, 1ø, 60Hz, ODP
- 1322 5 HP, 230V AC, 3ø, 60Hz, TEFC
- 1325 5 HP, 230/460V AC, 3ø, 60Hz, w/starter, ODP
- 1405 7 1/2 HP, 230V AC, 1ø, 60Hz, ODP
- 1422 7 1/2 HP, 208V AC, 3ø, 60Hz, ODP
- 1425 7 1/2 HP, 230/460V AC, 3ø, 60Hz, w/starter, ODP

SECTION III. SST DAY TANK OPERATION

The standard Simplex SST Day Tank control panel is illustrated below. The SST nameplate consists of a durable, fuel oil resistant, lexan membrane which contains the Day Tank operation status indicators and controls. The control panel is the control point for Day Tank operation and is where the Day Tank operating mode is selected.

In the lower right hand corner of the Day Tank control panel nameplate is a graphic representation of Day Tank operation. The Day Tank fuel levels are shown on the left and the corresponding status modes are shown on the right (.5 or 50% corresponds to pump start, etc.). The SST Day Tank control panel contains the following switches and indicators: the three position Day Tank mode selector toggle switch, pump test push-button, power available L.E.D., overflow backup activated L.E.D., normal maximum level L.E.D., normal operating range L.E.D., pump start L.E.D., and low level alarm L.E.D. Each of these controls and indicators has a specific function and is described in the automatic and manual operation sections.

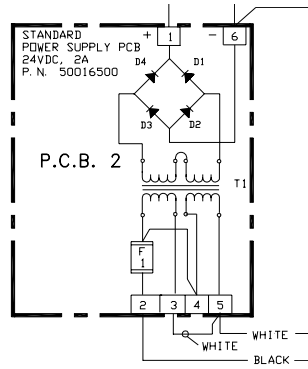


IMPORTANT NOTE!! The system shall be for use with fuel oil as described by NFPA321, "Basic Classification of Flammable and Combustible Liquids." As defined by this standard, the fuel supply system shall be for use with "combustible liquids," those having a flash point at or above 100°F and further defined as Class II or Class III liquids. In no case shall a liquid having a flash point less than 100°F be used. In every case, the system shall not be used or applied at a temperature in excess of the flash point of the contents. Electrical equipment used in the system shall be in accordance with NFPA30, section 5-7, wherein it states "For areas where Class II or Class III liquids only are stored or handled at a temperature below their flash points, the electrical equipment may be installed in accordance with provisions of NFPA70, National Electrical Code, for ordinary locations..."



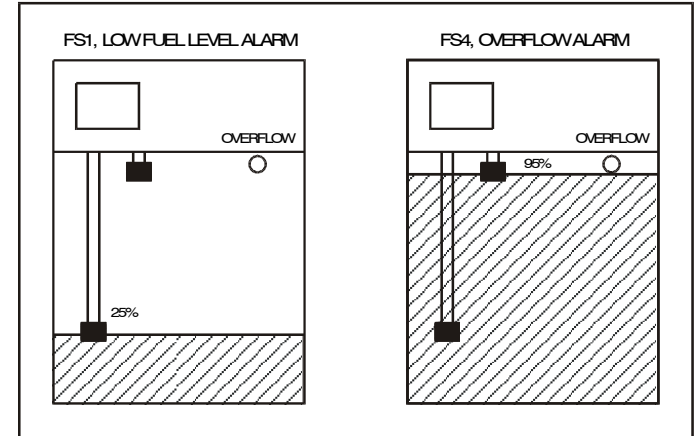
SIMPLEX DAY TANK SYSTEM MANUAL

The Day Tank control circuitry contains the following serviceable components: red, green, and amber socket mounted L.E.D.'s (part numbers 24249600, 24249650, and 24249700 respectively) motor starting contactor (PCRX, part number 24820000), and control fuses (F1-F3, part number 14010000). Control fuses are 2A, 250VAC, AGC type, and the standard motor starting contactor is a single pole, 24VDC coil, rated at 30A. The prime controller in the Day Tank is the SST printed circuit board (part number 500010000) illustrated in drawing 8B79514A. The Day Tank printed circuit board is powered by a fused internal 24VDC, 2A, power supply (part number 50016500) shown on the right. The printed circuit board utilizes 24VDC components to analyze the fuel level data it receives from the four Day Tank fuel level sensors (FS1-FS4, part number 25242150). The four fuel level sensors together with the sensor mounting plate comprise the fuel level sensor assembly. This assembly is shown below. When 120VAC, single phase, 60Hz control power is supplied to the Day Tank control system the Power Available L.E.D. is illuminated.



AUTOMATIC OPERATION

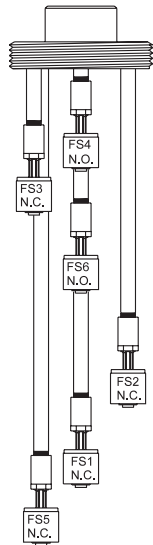
The SST Day Tank mode selector switch should be left in the automatic position for normal unattended operation. Regardless of operating mode, the Pump Running L.E.D. will be illuminated any time the pump/motor is energized. The standard Day Tank motor is thermally protected and has the following specifications: 1/3HP, 115V, single phase, 60Hz. Optional motors (1/3-5HP) are available and may have been supplied with this Day Tank. Consult the registration card in the front of this manual. As the prime mover consumes fuel the Day Tank pump and motor will cycle through the normal operating range as determined by the fuel level sensors. This normal operating range is: pump energize at 50% and pump de-energize at 90%. The control panel L.E.D.'s will continuously visually annunciate fuel level in the Day Tank. Automatic operation is explained below.



The Day Tank operator selects the Day Tank operating mode at the three position Day Tank mode selector toggle switch. The operator may choose Automatic, Manual, or Off. To alert the Day Tank operator, the red System Off lamp flashes continuously when the Day Tank mode selector switch is left in the Off position. This is the only flashing lamp on the control panel. Normally the mode selector switch is left in the automatic position. After initial Day Tank installation, priming, and fill, the SST controller printed circuit board will energize and de-energize the Day Tank pump/motor as determined by the opening and closing of the fuel level sensors (FS1-FS4). Fuel level sensors FS1 and FS4 are shown above. The table below illustrates control panel L.E.D. illumination.

<u>L.E.D.</u>	<u>FUEL LEVEL</u>
Low Level Alarm	25%
Pump Start	50%
Normal Operating Range	50-90%
Normal Maximum Level	90%
Overflow Alarm	95%

WARNING!! Always connect the Day Tank to an earth ground before Day Tank operation! Electrical shock can cause personal injury or death!

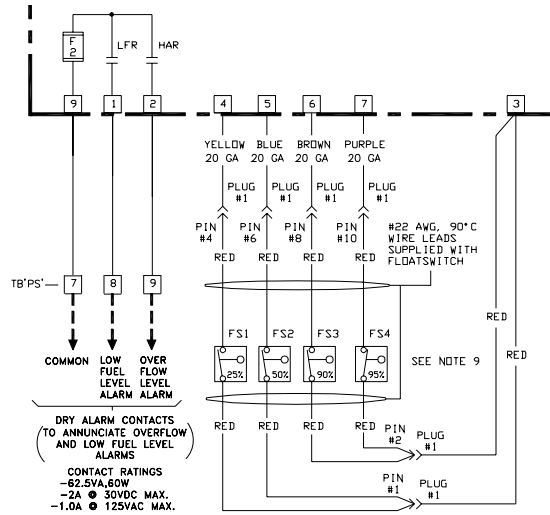


During automatic operation, the printed circuit board energizes and de-energizes control relays, the motor starter contactor (PCRX), and the pump/motor to automatically refill the Day Tank as fuel is consumed by the prime mover.

Dry contacts for relays LFR and HAR (low fuel level, overflow) are wired out to terminals 1, 2, and 9 on the printed circuit board terminal board for customer use as shown on drawing 8B39717G. The customer may utilize these contacts to annunciate overflow and low fuel level. LFR and HAR contacts are rated at the following specifications: 2Amp @ 30VDC, 1Amp @ 125VAC. Control fuse F1 is rated at 2Amp. See page 7 diagram.



As the Day Tank continues to fill and the fuel level reaches 50% capacity the Normal Operating Range L.E.D. will be illuminated. The Day Tank pump/motor will de-energize when the fuel level reaches 90% (the Normal Operating Range L.E.D. is extinguished and the Normal Maximum L.E.D. is illuminated). During normal operation fuel is consumed by the prime mover and the Day Tank cycles between 50 and 90% capacity, energizing and de-energizing the motor/pump as necessary. If the pump/motor continues to run past the 90% capacity level, normally open fuel level sensor FS4 will close when 95% capacity is reached. At this point the Overflow Alarm and Overflow Backup Activated L.E.D.'s will be illuminated and the pump will de-energize. The fuel level sensor and dry alarm contacts are shown below.

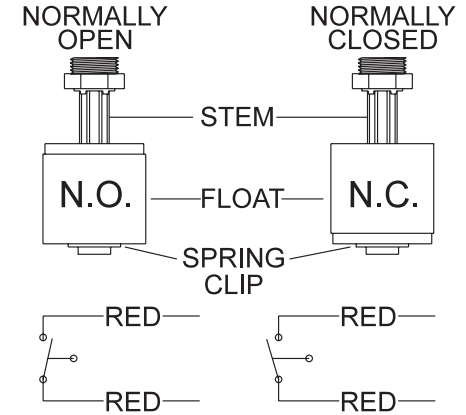


OVERFLOW BACKUP ACTIVATED - MANUAL/AUTOMATIC

An Overflow Backup Activated alarm causes the Day Tank to enter a new mode of operation dependent on the mode selector switch position. The Overflow Backup Activated/Manual Mode differs from the Overflow Backup Activated/Automatic Mode as described below. Regardless of operation mode, Overflow Backup Activated indicates that fuel level has reached or exceeded 95% capacity. The pump/motor is de-energized and will remain locked-out until the Day Tank fuel level is decreased to 90% capacity or less. The Overflow Backup Activated L.E.D. will remain illuminated until reset by the operator regardless of Day Tank fuel level. In example, if an overflow condition occurs when the operator is not present and Day Tank fuel level is reduced to normal levels due to subsequent prime mover fuel consumption, the Backup Overflow Activated L.E.D. will remain illuminated until reset by the operator. To reset the Overflow Backup Activated failure the operator must place the Day Tank mode selector switch in the Off position and then return it to the Manual or Automatic position. When Overflow Backup Activated is entered from the automatic mode the Day Tank continues to operate normally and cycle from

50 to 90%, but the Overflow Backup Activated L.E.D. will remain illuminated until reset. When the Overflow Backup Activated mode is entered from the manual mode the Day Tank pump/motor will cycle between the 90% and 95% levels as determined by fuel level sensors FS3 and FS4. After the condition is corrected and the control circuitry is reset the pump/motor will resume normal operation and cycle between 50% and 90%.

Fuel level sensors FS1-FS3 (low fuel level alarm, pump start, and full, respectively) have normally closed contacts. FS4 is the only fuel level sensor with normally open contacts. Two raised dots on the switch top or bottom indicate the switch configuration. On the normally closed switch the dots are on the bottom, on the normally open switch they are on the top. The switch logic of any fuel level sensor may be changed by performing the procedure detailed below.



1. Remove the spring clip from the bottom of the float
2. Remove the float from the stem and turn over the float
3. Re-install the float on the stem and replace the spring clip

PUMP TEST PUSH-BUTTON

The pump test push-button is a momentary type, SPST push-button which can be utilized to provide a quick verification of overall pump/motor/fuel level sensor operation when the system is in the Auto mode. When the mode selector switch is placed in the Off position, the pump test push-button is disabled. When the mode selector switch is left in the Automatic position, the pump test push-button is enabled.

The operator may manually energize the pump/motor with this push-button to test and cycle the Day Tank through the specified capacity range. When the pump is operated by continuously holding the pump test push-button the pump/motor will continue to run past the normal stop level until 95% capacity is reached, at which point the pump/motor is de-energized and locked out by fuel level sensor FS4. The Overflow Backup Activated lamp will be illuminated. The opening and closing of fuel level sensors FS1 and FS2 will be indicated by the illumination of the corresponding control panel L.E.D.'s. See the control panel illustration on page 4 of this manual for a graphic representation of Day Tank operator controls.

LOW LEVEL ALARM

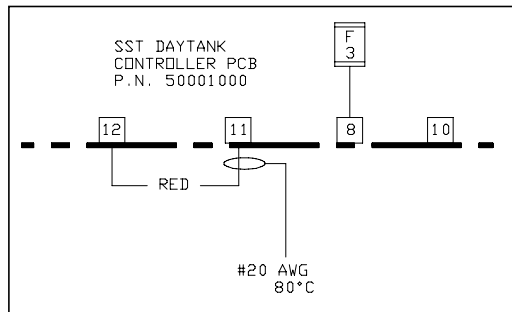
During normal operation, the pump/motor is energized and the Pump Start L.E.D. is illuminated when the Day Tank fuel level reaches 50% capacity. If the pump/motor does not energize a low fuel level alarm will be initiated when Day Tank fuel capacity reaches the 25% level. The low fuel alarm relay LFR energizes, the Low Fuel Alarm L.E.D. is illuminated, and LFR dry contacts close. The Day Tank user may utilize these contacts to sound an alarm horn or provide an input to a remote annunciator (contacts limited to 62.5VA; 1A @115VAC, 2A @ 32VDC).

MANUAL OPERATION

For manual (continuous run) operation, the Day Tank operator must choose the Manual mode at the three position Day Tank mode selector toggle switch. Manual operation allows the Day Tank operator to manually energize and run continuously the pump/motor independent of fuel level sensors FS1-FS3. During manual operation the control panel L.E.D.'s will continue to annunciate fuel level to the Day Tank operator. The Day Tank will continue to fill until 95% capacity is reached at which time the Overflow Backup mode will be initiated. The Day Tank pump/motor will be de-energized and locked out until Day Tank fuel level is reduced to 90% capacity and fuel level sensor FS3 changes state. Until the alarm condition is corrected and the control circuitry is reset to "Auto" the Day Tank pump/motor will continue to cycle between the 90% and 95% levels. Upon return to auto, the control circuitry is reset and the pump/motor will resume normal operation and cycle between 50% and 90%.

REMOTE OPERATION

All SST Day Tanks are shipped with a jumper installed across terminals 11 and 12 of the printed circuit board terminal board (see drawing 8B79514A). With this jumper removed the Day Tank pump/motor is totally disabled. The Day Tank user has the option of installing a switch, remote disconnect, or overload relay to enable or disable the Day Tank pump/motor. In example a fuel sensor located in the Day Tank rupture basin (see options 190 and 191) could be wired across these contacts to disable the pump/motor in the event of a Day Tank rupture.

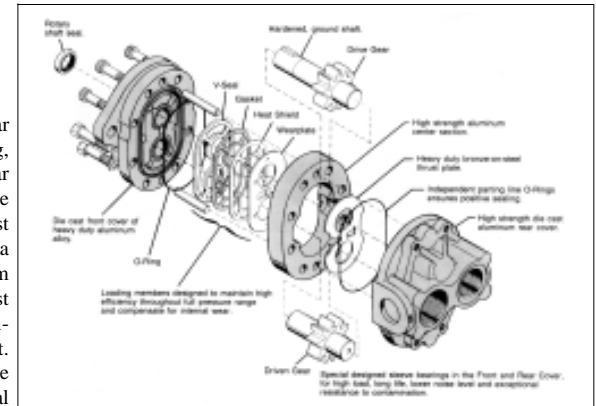


WARNING!! Day tank operation is automatic and the day tank motor may start at any time! After a motor thermal overload reset the motor may restart at any time!

SECTION IV. SIMPLEX PUMPS

SUPER X-L HYDRAULIC PUMP

A Simplex Super-XL loaded gear pump consists of two intermeshing, hardened steel, precision ground gear assemblies. These precision gears are enclosed by a high strength, die cast aluminum front cover, back cover and a high yield strength extruded aluminum center section. Gear assemblies consist of one drive gear shrink fit on a precision ground and polished drive shaft. This drive shaft extends outside the pump to permit coupling to an external prime mover by means of a standard key way. The second gear being the driven gear is also shrink fit on a precision ground and polished driven shaft. Retaining rings installed in grooves provided on the shaft ensure that the gears will not move axially and a key keeps the drive gear from moving radially.



A lip type shaft seal is provided at the drive shaft to prevent external leakage of pump fluid. The sealing lip in contact with the fluid is spring loaded. Vent passages within the housings and driven shaft communicate pump

PUMP MODEL	DISPLACEMENT IN ³ (CC/REV.)	RPM	100 PSI (6.9 Bar)	1000 PSI (69 Bar)	1500 PSI (103 Bar)	2000 PSI (138 Bar)	2500 PSI (172 Bar)
SUPER XL-11	.225(4.18)	1800	1.99 (7.54)	1.86 (7.05)	1.79 (6.78)	1.73 (6.56)	1.66 (6.29)
SUPER XL-39	.91(14.92)	1800	7.08 (26.83)	6.87 (26.04)	6.77 (25.66)	6.66 (25.24)	6.56 (24.86)
SUPER XL-62	1.42(23.28)	1800	11.10 (42.07)	10.81 (40.97)	10.70 (40.55)	10.60 (40.17)	10.40 (39.42)
SUPER XL-90	2.15 (35.25)	1800	16.70 (63.29)	16.50 (62.54)	16.30 (61.78)		
SUPER XL-114	3.25(53.28)	1800	25.30 (95.89)	24.90 (94.37)	24.60 (93.23)	24.40 (92.48)	

inlet pressure to the rotary seal area, thus imposing the lowest possible pressure to the rotary seal for extended life. The phenolic heat shield, backup gasket, and molded rubber seal form chambers behind the steel backed bronze wearplate. These chambers are connected either to inlet or discharge pressure. Discharge pressure, acting within the chambers, axially loads and deflects the wearplate toward the gear faces

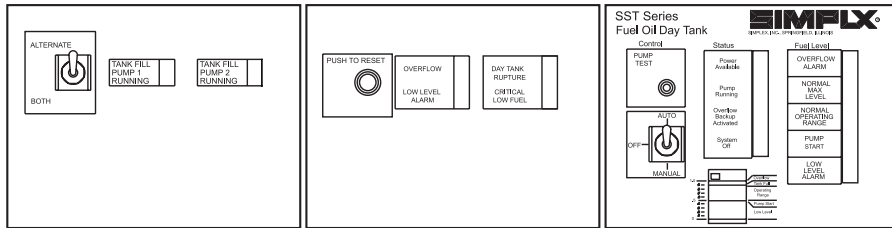
to take up gear side clearances. This pressure loading on the wearplate increases pump efficiency by reducing internal leakage to a minimum, providing longer pump life.

Pump rotation is dependent on proper orientation of heat shield, backup gasket, and rubber seal in the front cover housing, the center section and rear cover oriented respectively. Pumping action is achieved by connecting the pump drive shaft to a prime mover and rotating the gears away from the inlet port. Rotation causes the gear mesh to increase on the inlet side and decrease on the outlet (pressure) side.

HORSE POWER	VOLTAGE	FULL LOAD AMPS	OPTION #
1/3 H.P.	115/230	7.0/3.5	605
1/3 H.P.	115	6.6	STD
1/2 H.P.	115/208-230	8.0/4.0	645
1/2 H.P.	115	9.2	700
1/2 H.P.	115/208-230	8.0/4.0	705
1/2 H.P.	115/208-230	8.0/4.0	745
3/4 H.P.	115	11.0	800
3/4 H.P.	208-230	5.5	805
1.0 H.P.	115/230	13.6/6/8	900
1.0 H.P.	115/230	13.6/6/8	905

**AUTOMATIC DUPLEX PUMP CONTROLLER
OPTION 345, SEE DRAWING #8B79516A**

Duplex pump options are used to increase the reliability of a day tank system through the addition of a second, back-up pump and level control. In a duplex system, one pump is designated the “lead” pump and the other is the “lag” pump. The lead pump automatically refills the day tank over the tank’s normal operating range of 50% to full. Normally, once the tank has been initially filled, the fuel level should never drop below 50%. Less than 50% is indicative of either a failure of the lead pump or consumption in excess of pump capacity. The lag pump and its separate level controller, acting as a backup senses a drop in fuel level below 50% and starts the lag pump, which then continues to run, along with the lead pump, until the tank is full.



Switch #2

Switch #1

Multi-function duplex pump controller system providing selectable operating modes, including:

- Automatic lead pump alternating with automatic lag pump back-up
- Automatic twin pump operation (both pumps run simultaneously,) automatic level control back-up
- Manual operation

Basic System includes the following:

- All SST controller features
- Mode selector switch
- Pump running indicators for each pump
- Two pumps, each with check valves

Operation: With Switch #2 in the Alternate position, Pump 1 will start at 50% and shut off at the 90% level. For utilization of both Pump 1 and Pump 2 simultaneously, switch to Both position. In this position Pump 1 and Pump 2 will start at the 50% level and shut off at the 90% level.

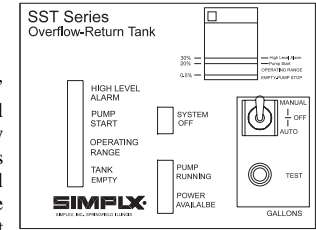
When Switch #1 is in the Manual position all floatswitches, except the high fuel level floatswitch are overridden, and either position (Alternate or Both) may be selected. The pumps will continue to run until Switch #1 is returned to the Off or Auto position or if a high fuel condition occurs.

For standard duplex operation, Switch #2 should be in the Alternate position and Switch #1 should be in the Auto position. Pump #1 will then start at 50% level and stop at the 90% level. The next time fuel drops back to the 50% level Pump #2 will start and then stop at the 90% level. Continuing operation alternates between Pump #1 and Pump #2.

When the fuel drops to the 25% level, both pumps will run simultaneously until the fuel level returns to the 90% fuel level.

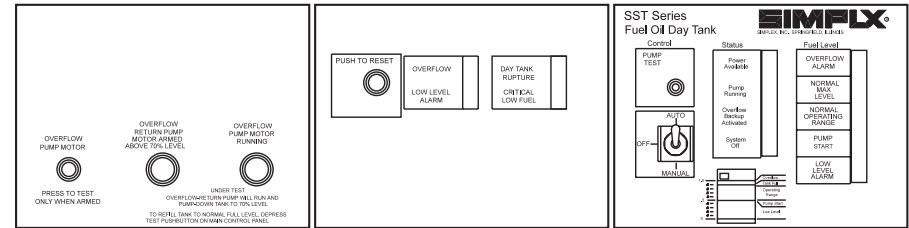
**OVERFLOW-RETURN TANK
OPTION 383, SEE DRAWING 8B79519A**

Operation: The control switch should always be in the “automatic” position. The “Power Available” indicator is illuminated. The level controller is set to pump the tank to virtually empty. Therefore, normally the tank is empty and the “Normal Empty Fuel Level” indicator is illuminated. If the adjacent Day Tank should overflow and overflow, oil will flow from the overflow line of the Day Tank to the inlet port of the overflow-return tank. Above empty level, float switch FS3 will close. At 20% level in the overflow-return tank, float switch FS2 will close, activating the overflow-return pump which is installed on the tank. The “pump start” indicator will illuminate and the tank will be pumped-down to empty. At empty level, float switch FS3 will open and stop the pump. If the level in the overflow-return tank should continue to rise above the pump start level, float switch FS1 will close at the 30% level activating the “high fuel level” alarm indicator and remote signal contacts.



**OVERFLOW-RETURN PUMP AND CONTROLLER ADDED TO DAY TANK
OPTION 390, SEE DRAWING 8B79517A**

Operation: Normally the SST Day Tank operates automatically to control the fuel level between the 50% and normal full level, which is set at the position of the overflow or vent fitting on the tank. An overflow can occur if the control switch is left in the manual position, if there is a leak in a control valve permitting gravity or siphon flow of oil into the tank, or if there is a control failure. In the event of an overflow, float switch FS4 will close, activating the “overflow,” and “overflow backup activated” indicators on the SST control panel. In addition, the fill pump will be disabled. The tank should not fill above this point, which is approximately 1.0” above the normal full level but 1.0-2.0” below the top of the tank. With the addition of option 390, the overflow-return pump will be activated by the overflow alarm circuit and will operate as described below.

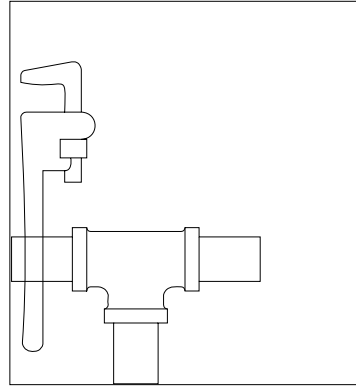


Above 70% level, float switch FS7 closes and arms the overflow-return controller, illuminating the “overflow return armed” indicator and enabling the overflow pump test push-button. Upon activation of the overflow alarm by float switch FS4, as described above, the overflow pump contactor PCRX2 will be energized and the overflow pump will run. Contactor PCRX2 is latched-in via 70% level float switch FS7 and the tank will be pumped down to the 70% level. This intermediate in the normal operating range of 50% to full and the tank should remain at this level; the refill pump will not start until the tank reaches the 50% level. As the overflow pump is running, the “pump running” indicator will be illuminated.

To test the overflow-return pump, depress the test push-button. This push-button is armed only above the 70% level, when the indicator is illuminated. The overflow pump will pump-down the tank to the 70% level. If desired, the tank can be refilled to normal full by depressing the test push-button on the SST panel.

SECTION V. DAY TANK INSTALLATION

Location of the Day Tank is of prime importance and should be done by trained personnel. It is one of the most critical factors involved in reliable and safe operation. The Day Tank must be positioned and installed according to the main fuel storage tank and engine location. In general locate the Day Tank as close to the engine as possible consistent with applicable local and national plumbing and electrical codes. Always position the Day Tank so that the highest fuel level in the tank is lower than the engine injectors. The Day Tank must be located not farther than 200' from the main fuel tank. The Day Tank must not be more than 18' higher than the lowest fuel level in the main fuel tank. Never locate the Day Tank in a confined space without consideration for accidental fuel spillage and use a rupture basin when necessary. Never locate the Day Tank near a surface or object which may be adversely affected by fuel oil. Never locate a Day Tank system above a residential living space.



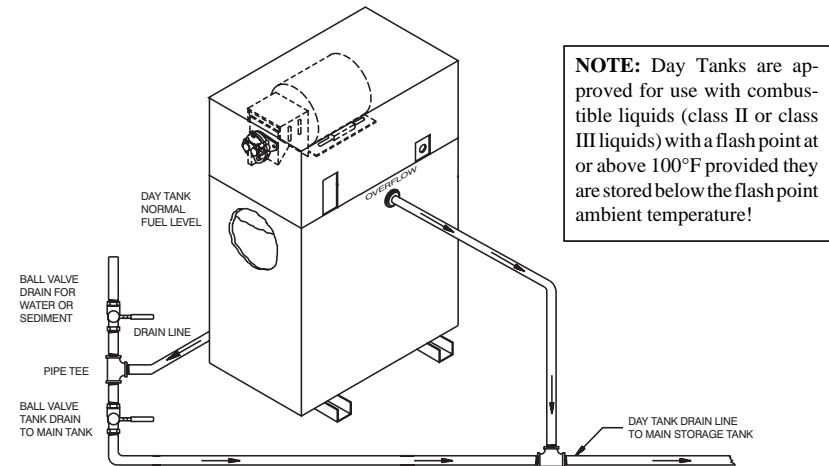
1. Remove the Day Tank top. Check all visible hardware for tightness. Attach the Vent Pipe. This is a NPT internal connection. The vent pipe allows equalization of internal Day Tank pressure. **DO NOT INSTALL A VALVE IN THE VENT LINE!!** Venting provides pressure relief in case of overflow, rapid expansion, or gasification of contents in the event of fire. The Day Tank may become permanently distorted at pressures above 5PSI and may rupture at pressures above the maximum withstand pressure of 25PSI. Day Tank operation without a vent pipe is strictly not recommended. The vent pipe should be at least 5 feet higher than any other pipe and should terminate outdoors. The vent pipe must not extend or terminate more than 12' above the Day Tank. There should be no low portions or sags in the vent pipe which can trap liquid. The end of the pipe should be fitted with a 180° weather protected vent cap to shed water and should be screened to keep out pests, leaves, etc.
2. Attach the Overflow Pipe. This is a NPT internal connection. Simplex recommends the configuration shown in the illustration below. The overflow pipe runs from the Day Tank back to the main storage tank and allows for draining of the tank should it become overfilled. This pipe should be sized at least twice the diameter of the pump fill pipe (minimum 1" I.D.). If the tank becomes overfilled and the overflow line is not connected or is obstructed the tank will distort and possibly rupture. In installations where the main fuel tank is above ground the overflow pipe should be connected to an overflow tank (option #390 recommended). **DO NOT INSTALL A VALVE IN THE OVERFLOW LINE!!**

NOTE: If you have any questions regarding Day Tank installation, call the Simplex service manager at (217) 525-6995 (24 hrs.).

PORT	SIZE
Inlet to tank	.50" NPT. male
Inspection port	3.50" NPT. female
Float switch mounting port	3.50" NPT. female
Engine supply	10-25 gal. stand pipe .50" NPT. male
Engine supply	50-400 gal. stand pipe .75" NPT. male
Engine return	1.00" NPT. female
10-25 gal. tank vent	1.50" NPT. female
50-300 gal. tank vent	2.00" NPT. female
Overflow	1.00" NPT. female
Tank drain	.375" NPT. female
Manual fill port	2.00" NPT. female
Emergency Vent 100-400 gal.	4.00" NPT. female


The schedule at the left illustrates Day Tank port sizes and types. Use this schedule as a general guide for Day Tank installation. All plumbing to and from the Day Tank should be black iron pipe or copper tubing. All plumbing connections at the tank should be made with pipe unions to facilitate installation and service. Special attention must be given to pump suction pipe connections to avoid possible air leaks and subsequent loss of pump prime. Never allow the Day Tank pump to run "dry" as immediate pump damage will occur. Before applying power to the pump/motor be sure all fuel connections have been made and tightened and all holes are plugged. Option 010 or 015, auxiliary hand pump, is recommended for installation on all Day Tanks with motor-pumps. The hand pump is used for initial priming of the fuel line from the main tank and as a back up to the motor-pump.

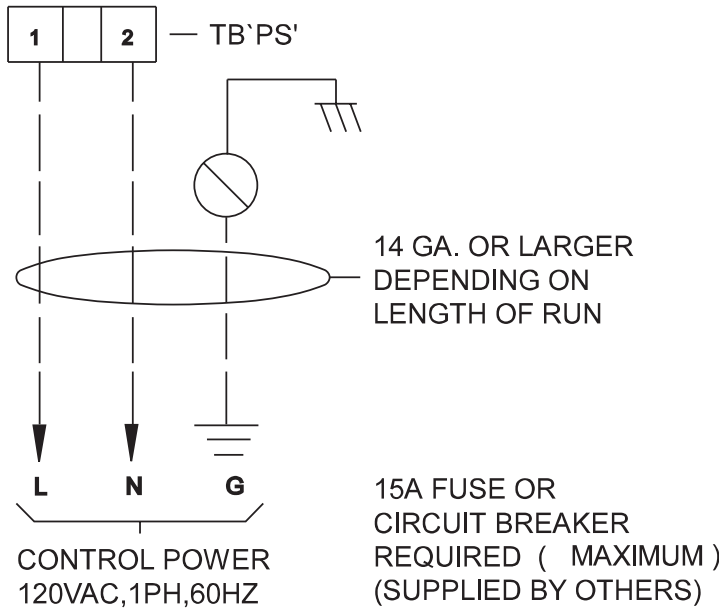
WARNING!! The overflow connection is a mandatory connection! Never use a Day Tank to transfer or store class I, flammable, or liquids with a flash point less than 100°F. Ignition of fuel can cause severe personal injury or death by fire and explosion!



3. Attach the Day Tank Intake Line (fill pipe) from the main fuel tank to the pump inlet. This is a NPT internal connection. Use black pipe with a union and size per the installation drawing in this manual. Optional fuel strainer (option 060) with #60 mesh is recommended.
4. Attach the Engine Supply Line. This is a NPT external connection. Use black pipe with a union and size per the installation drawing in this manual.
5. Attach the Engine Return Line. This is a NPT internal connection. Use black pipe with a union and size per the installation drawing in this manual.
6. **WARNING! Ensure the Day Tank mode selector switch is in the off position.** Supply a 115-1-60, 15A, circuit breaker protected circuit from a reliable power bus to the control power terminal board (TB'PS') at terminals 1 and 2. **GROUND THE DAY TANK!!** Secure the conduit end to the left side of the cover at the holes provided. Replace the cover.

7. The pump has been pre-lubricated with heavy oil prior to shipment. Prime the system by using the hand pump (option 010 or 015) to transfer fuel from the main tank to the Day Tank. If the Day Tank is not equipped with a hand pump, remove the tank inlet priming tee plug and fill the entire inlet line with fuel. Replace the tee plug. Energize the Day Tank pump/motor by placing the Day Tank mode selector switch in the automatic position. Ensure that fuel is exiting the pump by watching the clear pump outlet tubing. If not, repeat this procedure and prime the pump also at the pump priming tee. Make sure all unused Day Tank holes are plugged, all pipe connections are secure and no leaks are present. The Day Tank is now ready for unattended automatic operation. If the Day Tank has been stored for extended periods of time pre-lube the pump with oil at the pump priming tee.

 **WARNING: Repairs or alterations of this fuel tank without written approval from Simplex may void the warranty and incur liability for anyone making such unauthorized repairs or alterations. Alterations may result in severe personal injury or death due to electrical shock, fire or explosion.**



NOTE: The emergency vent line capacity specified on the placard at the top of the tank must be considered in order to maintain the fire safety factors established by NFPA 30 and UL 142. If installation is intended to conform and benefit from the inherent safety advantages of NFPA 30 and UL 142 installation standards, observance of this value is mandatory. It may be necessary to increase the vent pipe if the run is excessively long.



DAY TANK SYSTEM VENT OPENINGS

**Table 1.
VENTING CAPACITY**

WETTED SURFACE, SQUARE FEET ^{a,c}	VENTING CAPACITY, CUBIC FEET PER HOUR ^{d,e}	MINIMUM OPENING, NOMINAL PIPE SIZE, INCHES ^f
20	21,100	2
30	31,600	2
40	42,100	3
50	52,700	3
60	63,200	3
70	73,700	4
80	84,200	4
90	94,800	4
100	105,000	4
120	126,000	5
140	147,000	5
160	168,000	5
180	190,000	5
200	211,000	6
250	239,000	6
300	265,000	6
350	288,000	8
400	312,000	8
500	354,000	8
600	392,000	8
700	428,000	8
800	462,000	8
900	493,000	8
1000	524,000	10
1200	557,000	10
1400	587,000	10
1600	614,000	10
1800	639,000	10
2000	662,000	10
2400	704,000	10
2800 and over	742,000	10

^a At 14.7 psia and 60°F (101.4kPa and 16°C)

^b Interpolate for intermediate values

^c For SI units, m² = ft² /0.09.

^d These values taken from NFPA 30

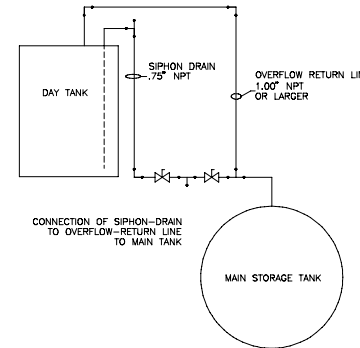
^e For SI units, m³/s = ft³/hr X 0.03

^f These pipe sizes apply only to open vent pipes of the specified diameter not more than 12 inches (0.3m) long and a pressure tank of not more than 2.5 psig (17.1kPa). If tank is to be equipped with venting device or flame arrester, the vent opening is to accommodate the venting device or flame arrester sized in accordance with column 2 of this table.

VENT OPENINGS

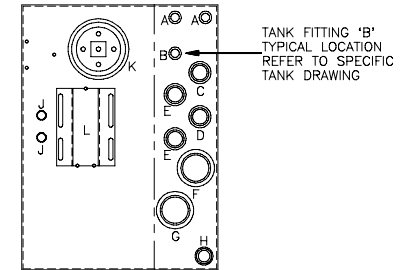
Each horizontal tank and each compartment of a compartment tank shall have provision for both normal and emergency venting. A vent opening shall be in addition to the filling and withdrawal openings. A vent opening that provides for both emergency and normal venting shall have a capacity not less than that specified in the above table. The wetted area of a horizontal tank is calculated on the basis of 75 percent of the total exposed area.

INSTRUCTIONS FOR USE OF SIPHON-DRAIN



Simplex C-Series tanks are equipped with a “Siphon-Drain” drop tube. This tube exits the top of the tank and drops to nearly the bottom of the tank. Refer to the dimensional drawing for your tank to determine the location of the siphon-drain fitting. The siphon-drain is used for service draining of the tank and is the only means of draining the tank.

To use the siphon-drain, field install the fittings shown in the drawing below. This assembly is available factory installed as

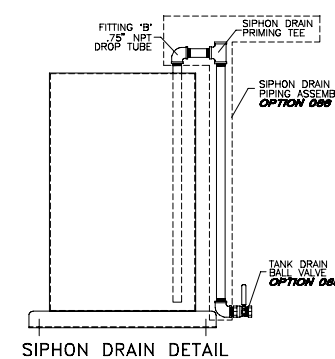


**TANK FITTINGS
TOP VIEW**

option #066.

At the time of initial filling and start-up of the tank, prime the siphon-drain as follows:

1. Fill the tank to its normal maximum full level.
2. Remove the plug in the siphon-drain priming tee.
3. Be sure the lower end of the siphon-drain tube is closed.
4. Using a funnel, manually fill the priming tube.
5. When the tube is full, plug the priming tee. Be sure to use pipe thread sealant.
6. Test the siphon-drain by opening the drain valve and drain into a bucket.
7. Repeat steps 1-6 if required to make prime.
8. Close drain valve.
9. The siphon-drain should hold prime and be available for tank draining at any time.



Once primed, the siphon-drain may be connected via a shut-off valve or solenoid valve to the overflow-return to the main tank provided that the main tank is below the level of the Day Tank and all flow is by gravity. Any run of pipe above the level of the drain termination may require priming. With the siphon-drain so connected to the Day Tank overflow-return line, manual or automatic draining of the Day Tank back to the main tank is possible.

A manual or electric pump may be connected to the siphon-drain at either the lower termination or at the priming tee plug.

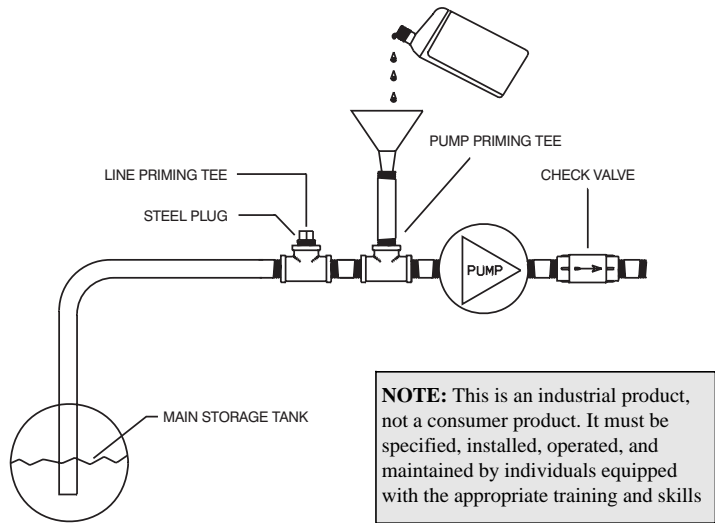
SECTION VI. EASY DAY TANK PUMP PRIMING PROCEDURE

The Simplex SST Day Tank pump priming assembly is illustrated below. The Day Tank pump is shipped from the factory pre-primed with SAE 50 oil. On initial start-up the pump must be manually pre-primed. Do not prime the system by running the motor pump!!

A simple field priming procedure is detailed below. Normally it is not necessary to fill the supply line with fuel to prime the pump. Refer to the illustration below:

- install priming tee if not supplied as system option
- remove the steel plug from the pump priming tee and insert a short piece of pipe in the pump priming tee and attach a reducing coupler or funnel
- fill the line from the check valve to the pump with fuel oil or lube oil, energize the pump/motor and observe fuel flowing through the clear flex hose. Allow the pipe to drain about halfway then hold your hand on top of the pipe to temporarily seal the open tee. The oil drawn into the pump will act to seal the pump and allow a large vacuum to be generated. Repeat as required until line is primed. After pump is primed remove pipe/funnel and replace plug in pump priming tee.

WARNING: Attempting to pre-prime the Day Tank fuel delivery system by running the pump will cause serious damage to the pump!!



Ampere Ratings of Motors

Ampere ratings of motors vary somewhat, depending upon the type of motor. The values given below are for drip-proof, Class B insulated (T Frame) where available, 1.15 service factor, NEMA Design B motors. These values represent an average full load motor current which was calculated from the motor performance data published by several motor manufacturers. In case of high torque squirrel cage motors, the ampere ratings will be at least 10% greater than the values given below. **Caution—These average ratings could be high or low for a specific motor and therefore heater coil selection on this basis always involves risk. For fully reliable motor protection, select heater coils on the basis of full load current rating as shown on the motor nameplate.**

Ampere Ratings of Three-Phase, 60 Hertz, AC Induction Motor

HP	Syn. Speed RPM	Current in Amperes				
		200 Volts	230 Volts	380 ¹ Volts	460 Volts	575 Volts
1/4	1800	1.09	.95	.55	.48	.38
	1200	1.61	1.40	.81	.70	.56
	900	1.84	1.60	.93	.80	.64
1/3	1800	1.37	1.19	.69	.60	.48
	1200	1.83	1.59	.92	.80	.64
	900	2.07	1.80	1.04	.90	.72
1/2	1800	1.98	1.72	.99	.86	.69
	1200	2.47	2.15	1.24	1.08	.86
	900	2.74	2.38	1.38	1.19	.95
3/4	1800	2.83	2.46	1.42	1.23	.98
	1200	3.36	2.92	1.69	1.46	1.17
	900	3.75	3.26	1.88	1.63	1.30
1	3600	3.22	2.80	1.70	1.40	1.12
	1800	4.09	3.56	2.06	1.78	1.42
	1200	4.32	3.76	2.28	1.88	1.50
1 1/2	900	4.95	4.30	2.60	2.15	1.72
	3600	5.01	4.36	2.64	2.18	1.74
	1800	5.59	4.86	2.94	2.43	1.94
2	1200	6.07	5.28	3.20	2.64	2.11
	900	6.44	5.60	3.39	2.80	2.24
	1800	7.36	6.40	3.87	3.20	2.56
3	1200	7.87	6.84	4.14	3.42	2.74
	900	9.09	7.90	4.77	3.95	3.16
	3600	9.59	8.34	5.02	4.17	3.34
5	1800	10.80	9.40	5.70	4.70	3.76
	1200	11.70	10.20	6.20	5.12	4.10
	900	13.10	11.40	6.90	5.70	4.55
7 1/2	3600	15.50	13.50	8.20	6.76	5.41
	1800	16.60	14.40	8.74	7.21	5.78
	1200	18.20	15.80	9.59	7.91	6.32
10	900	18.30	15.90	9.60	7.92	6.33
	3600	22.40	19.50	11.80	9.79	7.81
	1800	24.70	21.50	13.00	10.70	8.55
15	1200	25.10	21.80	13.20	10.90	8.70
	900	26.50	23.00	13.90	11.50	9.19
	3600	29.20	25.40	15.40	12.70	10.10
20	1800	30.80	26.80	16.30	13.40	10.70
	1200	32.20	28.00	16.90	14.00	11.20
	900	35.10	30.50	18.50	15.20	12.20
30	3600	41.90	36.40	22.00	18.20	14.50
	1800	45.10	39.20	23.70	19.60	15.70
	1200	47.60	41.40	25.00	20.70	16.50
40	900	51.20	44.50	26.90	22.20	17.80
	3600	58.00	50.40	30.50	25.20	20.10
	1800	58.90	51.20	31.00	25.60	20.50
50	1200	60.70	52.80	31.90	26.40	21.10
	900	63.10	54.90	33.20	27.40	21.90

¹ 380V, 50Hz

Ampere Ratings of Single Phase AC Motors
The following table of full load current values conforms with Table 430-148 N.E. Code.¹ Different types and makes of motors may vary considerably above or below the current values given in this table. **Selection of overload relay coils, whenever possible, should be made from actual motor current as shown on the motor nameplate or as obtained from the motor manufacturer.**

HP	Full Load Current ²	
	115 Volts	230Volts
1/6	4.4	2.2
1/4	5.8	2.9
1/3	7.2	3.6
1/2	9.8	4.9
3/4	13.8	6.9
1	16	8
1 1/2	20	10
2	24	12
3	34	17
5	56	28
7 1/2	80	40
10	100	50

To obtain full-load currents of 208 and 200V motors, increase corresponding 230V motor full-load current by 10% and 15%, respectively.

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² These values of full-load current are for motors running at usual speeds and motors with normal torque characteristics. Motors built for especially low speeds or high torques may have higher full-load currents and multispeed motors will have full-load current varying with speed, in which case the nameplate current ratings should be used.

DC Motors — Ampere Ratings and Fuse Sizes

HP	Ratings of DC Motors		Amp. Cap. of Fuses for Motors	
	Full-Load Amperes		Recommended Values	
	120Volts	240 Volts	120Volts	240Volts
1/8	1.4	.7	3	3
1/6	1.8	.9	3	3
1/4	2.9	1.5	5	3
1/3	3.6	1.8	5	3
1/2	5.2	2.6	7	3
3/4	7.4	3.7	10	5
1	9.4	4.7	15	7
1 1/2	13.2	6.6	20	10
2	17	8.5	25	12
3	25	12.2	30	15
5	40	20	50	25
7 1/2	58	29	80	40
10	76	38	100	50

SECTION VII. DAY TANK SYSTEM TROUBLESHOOTING

No Fuel Delivered

1. Pump not primed.
2. Lift is too high.
3. Rotation direction incorrect.
4. Check valve installed backwards.

Insufficient Fuel Delivered

1. Air leak at inlet.
2. Defective solenoid valve or check valve.
3. Lift too high.
4. Pump worn.
5. Inoperative foot valve.
6. Piping improperly installed.
7. Fuel strainer plugged.

Rapid Pump Wear

1. Dirt or grit in fuel.
2. Pipe strain on pump causing bind.
3. Worn pump/motor coupler.
4. Pump has been run dry or with insufficient fuel.

Pump Delivers for Short Period and Quits

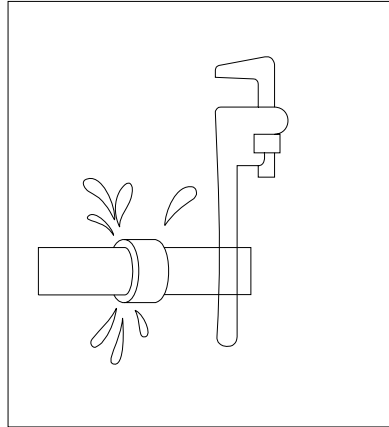
1. Leak at inlet.
2. End of inlet not deep enough.
3. Air or gas in fuel.
4. Supply exhausted.
5. Vaporization of fuel at inlet.
6. Air or gas in inlet line.
7. Sand or abrasives in fuel.

Pump Requires Too Much Power

1. Air in plumbing lines.
2. Liquid heavy or too viscous.
3. Bent pump shaft, binding rotating element.
4. Misalignment of pump/motor coupler.

Noisy Operation

1. Insufficient fuel supply.
2. Air leaks in the inlet pipe.
3. Air or gas at the inlet connection.
4. Pump and motor out of alignment.
5. Worn out spider coupling.
6. Pump coupler out of balance.



Pump Requires Frequent Re-priming

1. Inoperative foot valve.
2. Inoperative check valve.
3. Inoperative solenoid valve.
4. Pump cavitation.
5. Plumbing air leaks.
6. Lift too high.
7. Pump seals leaking.

Motor Does Not Turn or Turns Intermittently

1. Control power not available.
2. Motor thermal overload condition.
3. Pump failed and seized.
4. Motor failure.

Pump Leaks Fuel

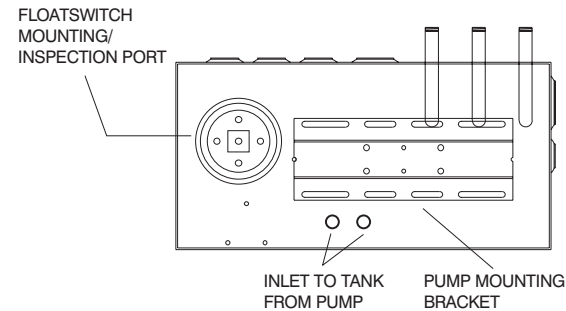
1. Loose pump plumbing fittings.
2. Worn pump shaft seal.
3. Pump pressure relief valve failure.
4. Fuel leak elsewhere running towards pump area.
5. Excessive head from overhead storage tank.
6. Worn pump O-rings.

SECTION VIII. DAY TANK MAINTENANCE

The Simplex Day Tank has been designed to require minimum maintenance. All components have been chosen for a long, reliable life. The Day Tank is constantly lubricated by the diesel fuel it transfers. Inspect this tank at least once every year for damage, leakage, or rust on both inside and outside the tank. Promptly repair or replace any significantly damaged or deteriorated Day Tank. Two basic intervals of maintenance are required: each year and after the first 3 years.

EACH YEAR -

1. Water and sediment should be drained from the tank each year. If normal engine/generator testing does not consume one tank full of fuel each year the tank should be drained and refilled with fresh fuel.
2. Remove the inspection port from the Day Tank. The port is shown in the illustration below. Examine the interior of the Day Tank. Using an inspection lamp examine all internal Day Tank components. With tank drained test sending unit operation. Install a new inspection port gasket and replace the inspection port cover.



**Day tank top view,
less equipment
and cover**

3. Depress the Press-To-Test button and observe pump and motor performance.
4. Inspect pump/motor alignment and wear. Inspect the pump for leaks.
5. Re-tighten hose clamps at pump/hose connections. Re-tighten the pump bracket, motor bracket, and pump/motor coupler hardware.
6. Inspect all plumbing connections for leaks. Test all options and fuel level alarms for proper operation.
7. Re-tighten all electrical connections.

AFTER THE FIRST 3 YEARS - After three years of normal use re-oil the Day Tank motor with 10 drops of 5W30 or 10W oil. Do not over oil the motor.

NOTE: If you have any questions regarding Day Tank maintenance call the Simplex service manager at (217) 525-6995 (24 hours). Always refer to the day tank serial number. This number is stamped on a welded on tag, located on the top of the Day Tank.



SECTION IX. SST DAY TANK RECOMMENDED SPARE PARTS LIST

The following is a list of recommended spare parts for the SST day tank. The Simplex service department recommends keeping these parts at the day tank installation to aid the service technician in maintaining and repairing Simplex day tanks with a minimum of down time. The number in the left margin indicates the importance of the spare part as illustrated below:

- ① Highly Recommended
- ② Recommended
- ③ Optional

ITEM	PART NUMBER	QUAN.	DESCRIPTION
① FS1-FS4	25242150	2	Float switch, vertical float actuation, SPST, 20VA pilot duty, switch logic by reversing float
② SST DAY TANK P.C.B. 1	50001000	1	Liquid level controller printed circuit board, 24VDC input supply voltage, 4 liquid level inputs
② STANDARD POWER SUPPLY P.C.B. 2	50016500	1	Power supply printed circuit board, 120VAC input, 2A fused, 24VDC output (full wave rectified) 56VA
② INDICATORS	24249650	2	Green L.E.D., socket mount
	24249700	2	Amber L.E.D., socket mount
	24249600	2	Red L.E.D., socket mount
① PCRX	24832000	1	Motor starting contactor, 24VDC coil, 1 pole, normally open, contacts rated at 1H.P. @ 125VAC, 2 H.P. 250VAC, 30A, 277VAC (resistive)
① F1-F3	14010000	2	Fuse, 2A, 250VAC, AGC-2
③ MOT/PUMP	24626100	1	Motor, .33H.P., 120VAC, 60Hz, 1 phase
	24741020	1	Super X-L pump, 2 GPM
③ [MOT]	24741020	1	Motor mounting bracket, 2 GPM pump
③ [MOT]	24647000	1	.5-.5 shaft coupler and spider assembly
②	22702150	A/R	Hose, .875 diameter O.D., Hose clamp,
	22203000	1	1 inch

SECTION X. DAY TANK DRAWINGS

Listed below are drawings for Simplex SST Day Tanks. Drawing numbers shown below are located in the drawing legend in the lower right hand corner of each drawing. Included in the list are both standard and optional drawings. Refer to the Day Tank registration sheet in the front of this manual for a list of applicable Day Tank options.

Drawing	Title	Drawing	Title
8BD80391A	Standard Fuel Supply Network	8B79514A	SST Wiring Diagram
8BD62919	Standard Fuel Port Network	8BD80144	SST Control Panel
8BD80390A	SST Assembly	8B79515A	SST Wiring Diagram (w/ Options 375,334,333,191,080)
8BD80392A	Day Tank Nameplates	8BD80145	SST Control Panel (w/ Options 375,334,333,191,080)
8BD79003B	Day Tank (10 gal.)	8B79516A	SST Wiring Diagram (w/ Options 375,345,334,333,191,080)
8BD79004A	Day Tank (10 gal. w/Option 190)	8BD80146A	SST Control Panel (w/ Options 375,345,334,333,191,080)
8BD79005A	Day Tank (10 gal. w/Option 190/196)	8B79519	SST Wiring Diagram(w/ Option 383)
8BD79006B	Day Tank (25 gal.)	8BD80149	SST Control Panel (w/ Option 383)
8BD79007A	Day Tank (25 gal. w/Option 190)	8B79520	SST Wiring Diagram (w/ Options 383,191)
8BD79008A	Day Tank (25 gal. w/Options 190/196)	8BD80150	SST Control Panel (w/ Options 383,191)
8BD79009A	Day Tank (50 gal.)	8B79517A	SST Wiring Diagram (w/ Options 390,375,334,333,191,080)
8BD79010A	Day Tank (50 gal. w/Option 190)	8B79518A	SST Wiring Diagram (w/ Options 390,375,334,333,191,080,X002)
8BD79011A	Day Tank (50 gal. w/Options 190/196)	8BD80148A	SST Control Panel (w/ Options 390,334,333,191,X002)
8BD79012B	Day Tank (75 gal.)	8BD101215A	SST Control Panel (w/ Options 390,334,333,191,070, X002)
8BD79013B	Day Tank (75 gal. w/Option 190)	8A43715A	SST Plug Receptacle
8BD79014A	Day Tank (75 gal. w/Options 190/196)	8A43190B	SST Floatswitch Connection
8BD79015A	Day Tank (100 gal.)	8DB77905E	Floatswitch Assembly Chart
8BD79016A	Day Tank (100 gal. w/Option 190)	8BD78134	Rupture Basin Floatswitch Assembly Chart
8BD79017A	Day Tank (100 gal. w/Options 190/196)		
8BD79018A	Day Tank (150 gal.)		
8BD79019A	Day Tank (150 gal. w/Option 190)		
8BD79020A	Day Tank (150 gal. w/Options 190/196)		
8BD79021A	Day Tank (200 gal.)		
8BD79022A	Day Tank (200 gal. w/Option 190)		
8BD79023A	Day Tank (200 gal. w/Options 190/196)		
8BD79024A	Day Tank (275 gal.)		
8BD79025A	Day Tank (275 gal. w/Option 190)		
8BD79026A	Day Tank (275 gal. w/Options 190/196)		
8BD79027A	Day Tank (325 gal.)		
8BD79028A	Day Tank (325 gal. w/Option 190)		
8BD79029A	Day Tank (325 gal. w/Options 190/196)		
8BD79030A	Day Tank (400 gal.)		
8BD79031A	Day Tank (400 gal. w/Option 190)		
8BD79032A	Day Tank (400 gal. w/Options 190/196)		

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