THE DUTCH COMPOSTER
OWNERS MANUAL

Protected in part, or in whole by the following Patents: CA2441658
Patents Pending in the United States, and Europe

Manufactured By:
Dutch Industries Ltd.
Phone: 1-800-663-8824
E-mail: sales@dutchind.com

DUTCH INDUSTRIES

Revised: June 2011

TABLE OF CONTENTS

DUTCH Industries Ltd.
300 Portico Dr. Box 568
Pilot Butte, SK Canada S0G 3Z0
DUTCH Warranty Registration Form and Inspection Report

Warranty Registration

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery and returned to DUTCH Industries Ltd..

Customer's Name _____ Dealer Name

Address _____ Address

City _____ Prov/State _____ City _____ Prov/State

Postal Code/ZIP _____ Country _____ Postal Code/ZIP _____ Country

Phone Number (___) _____ Phone Number (___)

Model _____ Check One of the Following:

Serial Number _____ Commercial Use _____ Farm Use

Delivery Date _____

DEALER INSPECTION REPORT

_____ Pick List Verified Quantity

____ Fasteners Tight

_____ Review Operating and Safety Instructions

I have thoroughly instructed the buyer on the above described equipment which review included the Operator's Manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Date _____ Dealer's Rep Signature

The above equipment and Operator's Manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date _____ Owner's Signature

Warranty

DUTCH Industries Ltd. (the seller) warrants the articles and units sold to be free from defects in material and workmanship and to conform to applicable specifications. These express warranties are the sole warranties of seller and any other warranties, express, implied in law or implied in fact, are hereby specifically excluded.

Seller's sole obligations under its warranties shall be, at its option, to repair or replace any article or part thereof which is proved to be other than warranted.

All warranties shall expire 12 months from the date the article or unit is placed in service or 12 months from the date the article or unit is delivered by seller, whichever period first expires.

NO ALLOWANCES SHALL BE MADE TO BUYER FOR ANY TRANSPORTATION, LABOUR CHARGES OR PARTS, ADJUSTMENTS OR REPAIRS, OR ANY OTHER WORK, UNLESS SUCH CHARGES ARE AUTHORIZED IN ADVANCE BY THE SELLER.

Seller shall in no event be liable for special or consequential damages. If an article is claimed to be defective in material or workmanship or not to conform to specifications. The warranties shall not extend to any articles or units or parts thereof which have been installed, used or serviced, otherwise than in conformity with sellers applicable specification, manuals, bulletins, or instructions or, if none, which shall have been subjected to improper installation, misuse or neglect.

Parts not manufactured by Dutch Industries Ltd. Will be warranted subject to the suppliers warranty.

Safety, Getting Started & Tools and Materials Required

CAUTION !:

Do not operate this machinery unless you have read this owners manual in full detail. Failure to do so may result in serious injury or death.
Do not climb into machine or work on the machine unless the machine is unplugged from its power source and the upper and lower lids are open. Also the upper lid must be secured in its open position by attaching the chain to the composter leg so that it cannot be closed. If you do climb into the machine and the motor starts running, you will be seriously injured or killed.
Only experienced personnel should work on this machine, and all safety precautions must be taken to avoid falling or being seriously injured by moving parts.
Block ladder when not in use to avoid unauthorized persons from climbing to the top of the composter.
When unloading this machine ensure that you are clear from the lower lid when the unloading cycle begins. Do not put any objects into this opening as it will cause serious injury or death.
When using the optional hoist, stand clear of the loading system or animal carcass, as it may fall and cause injury or death.
Look out for pinch points on the composter.

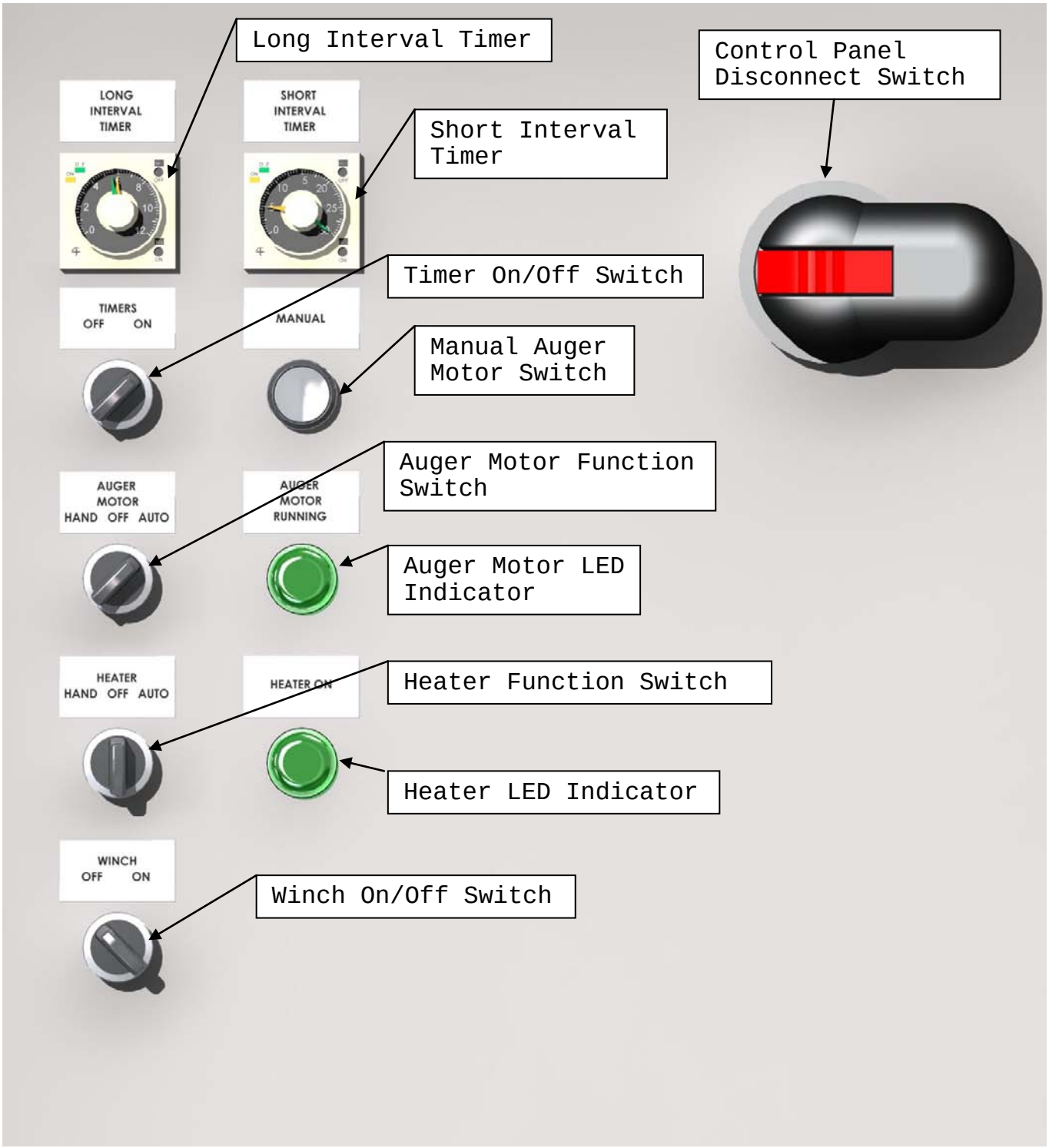
TOOLS AND MATERIALS REQUIRED FOR COMPOSTER INSTALLATION

- gravel
- cement
- shovel
- wrenches for 1/4" - 3/4" bolts and nuts
- level
- tape measure
- hammer
- safety belt and rope (To meet Safety Standards)

Installation of Composter

Pour Concrete Pad to install composter onto. It is recommended to allow sufficient room for the loading system to operate as well. The concrete pad needs to be at least 6ft x 18ft for the footprint of the composter and the loading system to fit. The concrete must be a minimum of reinforced 8" thick 3500lb concrete.

Control Panel Layout



Control Panel - Definitions

Long Interval Timer
This Timer is the first timer in the circuit. The auger will stir for the amount of time that the ON position is set for. Then it will switch to the Short Interval Timer for the amount of time that the OFF position is set for.

Short Interval Timer
This Timer is the secondary timer in the circuit. This timer is only engaged when the Long Interval Timer is in its OFF cycle. The auger will stir for the amount of time that the ON position is set for. Then it will turn off for the amount of time that the OFF position is set for. The purpose for this is to ensure that some stirring happens during the Long Interval Timer OFF cycle so that the compost mixture does not become stagnant.

Timer On/Off Switch
This disengages or engages the timers. This is useful when you would like the machine to run continuously in order to finish a batch off for emptying.

Manual Auger Motor Switch
This is used to empty the composter. When the bottom hatch is open there is a switch that prevents the operator from running the machine with the hatch open unless this button is depressed.

Auger Motor Function Switch
The Auger Motor can be set to HAND, OFF, or AUTO. The HAND selection should be used if you need to jog the machine forward but maintain control at the control box. Select OFF to turn the Auger off. Select AUTO to have the Auger run automatically. AUTO is the setting most commonly used.

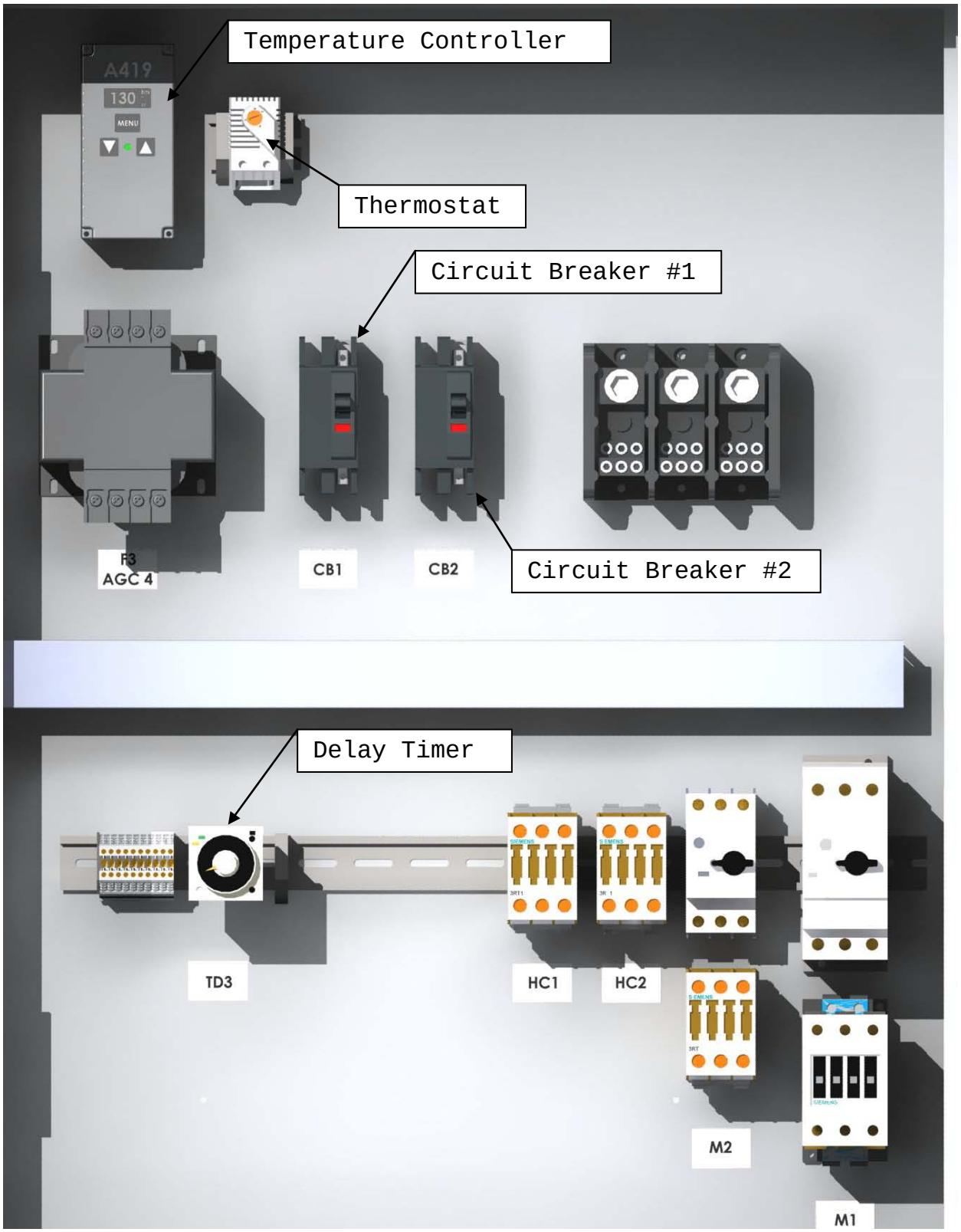
Auger Motor LED Indicator
When this light is on, the Auger Motor is running.

Heater Function Switch
The Heaters can be set to HAND, OFF, or AUTO. The HAND selection should be used if you need to turn the heaters for testing purposes. Select OFF to turn the Heaters off. Select AUTO to have the Heaters run automatically. AUTO or OFF are the settings most commonly used.

Heater LED Indicator
When this light is on, the Heaters are running.

Winch On/Off Switch
Used to turn the Winch on or off.

Electrical Panel Layout



Electrical Panel Controls - Definitions

Temperature Controller
This controller sets the temperature set point for the heaters. When the temperature in the tank reaches the temperature set point, the heaters turn off. The optimal setting for this is 130 F.

Thermostat
This controls the temperature inside the control panel. This is set at the factory and should not be changed.

Circuit Breaker #1
This Breaker is for Heater #1

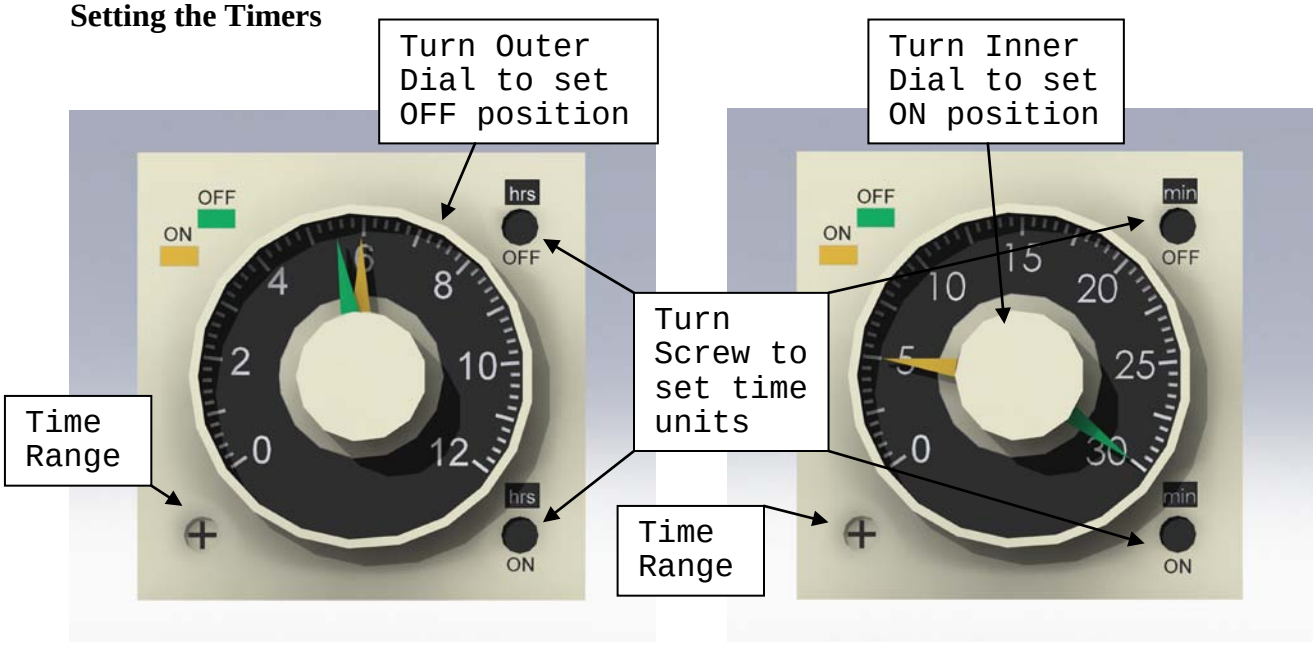
Circuit Breaker #2
This Breaker is for Heater #2

Delay Timer
This timer is a safety so that the heaters do not turn on until a specified time after the machine first starts up. This is to prevent the carbon source from pushing up into the heaters and starting a fire inside the machine. The standard setting for this timer is 2 HRS.

Operation of the Dutch Composter

There are certain aspects of the material used in composting that change how good your compost material can be. One of our recommendations is to use a dry carbon source. If you are using straw or sawdust try to store it in a covered area. This helps to speed up the composting process.

Setting the Timers



Long Interval Timer **Short Interval Timer**

Long Interval Timer time units to be set for **HRS**, and the time range should be set to **0 to 12**.

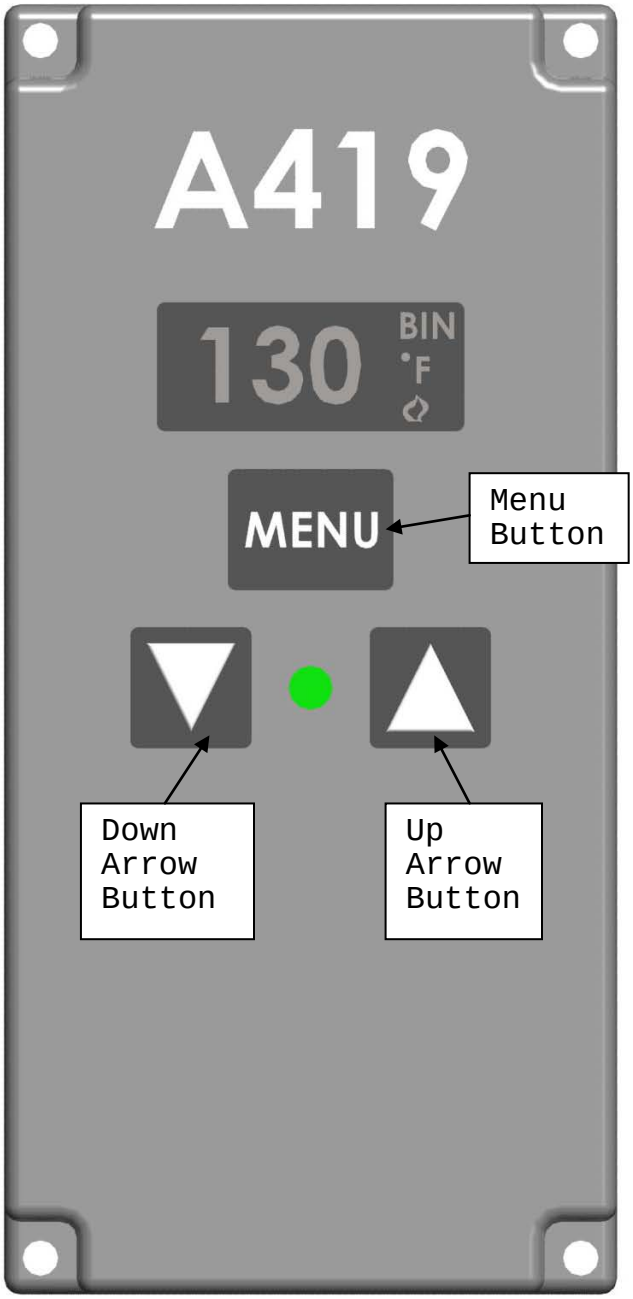
Short Interval Timer time units to be set for **MIN**, and the time range should be set to **0 to 30**.

Heater Delay Timer time units to be set for **HRS**, and the time range should be set to **0 to 12**.

To set the timers you must know roughly how much volume of material will be put through the machine. Set the Timers according to these settings:

Daily Composter Inputs	Long Interval Timer	Short Interval Timer
0 lbs to 250 lbs	6 Hrs On/ 8-9 Hrs Off	5 Minutes On/ 30 Minutes Off
250 lbs to 450 lbs	6 Hrs On/ 5-3/4 Hrs Off	5 Minutes On/ 30 Minutes Off
450 lbs to 800 lbs	7-8 Hrs On/5-3/4 Hrs Off	5 Minutes On/ 30 Minutes Off

The **Heater Delay Timer** inside the electrical panel must be set at a **MINIMUM of 2 Hrs**



Setting the Heaters

The heaters are controlled by the temperature controller inside the electrical panel. Once this is set it should not have to be adjusted again. When the temperature in the tank reaches the temperature set point, the heaters turn off. The optimal setting for this is 130 F.

Changing the Temperature Units

To convert from Fahrenheit units to Celsius, press the Up and Down buttons simultaneously. Press them again to return to Fahrenheit.

Setting the Temperature Set point

To view and adjust the temperature set point, follow these steps:

1. Press and hold the **MENU** button until the display changes to flashing **SP**. This will take about 2 seconds.

2. Press the **MENU** button again. The current set point is displayed.

3. Press the **Up** and **Down** button to adjust the set point temperature. Set to 130 F.

4. Press the **MENU** button to save. The display then returns to the sensor temperature.

NOTE: If the **MENU** button is not pressed after changing the set point value, the new value is not saved and the A419 control reverts to the previously saved set point value.

Starting your first batch

First estimate how many pounds of animal carcass you will be putting into the composter. Once you have that number, divide that by 2. This is the amount of carbon source that must be mixed with those carcasses. The carbon source preferred is wheat straw, wood chips, corn stalks, or sawdust. This mixture ratio is only a starting point. Each carbon source will have a different carbon concentration and moisture content, and therefore experimentation will be needed to determine this exact ratio for future batches.

Dump the carbon source into the composter tank.
Next dump the animal carcasses into the composter tank. It is important to put the carbon source in the tank first as it lends to better mixing.
Close the lid and let the Dutch composter do its work.
This first batch will take much longer than normal, as the composting process needs to start from scratch.

Check periodically to see if the mixture is the correct moisture content. If it appears to be wet or in a non fluffy state, add more carbon source. It is always better to have more carbon source rather than too little into the mixture. Not enough carbon source will halt the composting process.

The color of the mixture will change to a darker almost dirt like appearance.
Now you are ready to start your next batch.

Continuous composting
Keep adding animal carcasses and carbon source according to your ratio, to the mixture in the tank.
Once the tank is full, empty the composter of excess compost. Leave at least 2 feet of material in the bottom of the tank. Start another batch.

Batch composting
Empty the composter of excess compost, but leave at least 2 feet of material in the bottom of the tank. This is very important. Not leaving compost in the tank will slow down your next batch.
Add your carbon source using the ratio that you found worked best from your first batch.
Add your animal carcasses.
Let the mixture run for 2-3 days before removing the compost out of the tank.

Machine Emptying
When you would like to empty the machine, it is important to run the Dutch composter for at least 2-3 days after the last animal was added to the mixture. This will ensure that the bones, hide, and pathogen destruction will occur.

Mortality Composting Principles

Basics of Composting

Composting is a natural biological process of decomposition of organic materials in a predominantly aerobic (presence of air) environment. During this process, bacteria, fungi, and other micro-organisms break down organic materials into a stable mixture called compost, while consuming oxygen and releasing heat, water, and carbon dioxide (CO_2). The finished compost resembles humus and can be used as a soil amendment. Composting reduces the volume of the parent materials, and pathogens are destroyed if the process is controlled properly.
Micro-organisms involved in composting can be classified according to temperatures most favorable to their metabolism and growth. The mesophilic 10 - 43°C (50 - 110°F) and thermophilic micro-organism 43 - 71°C (110 - 160°F) are the principal groups. A simplified view of the composting process is presented in ***Figure 1***.

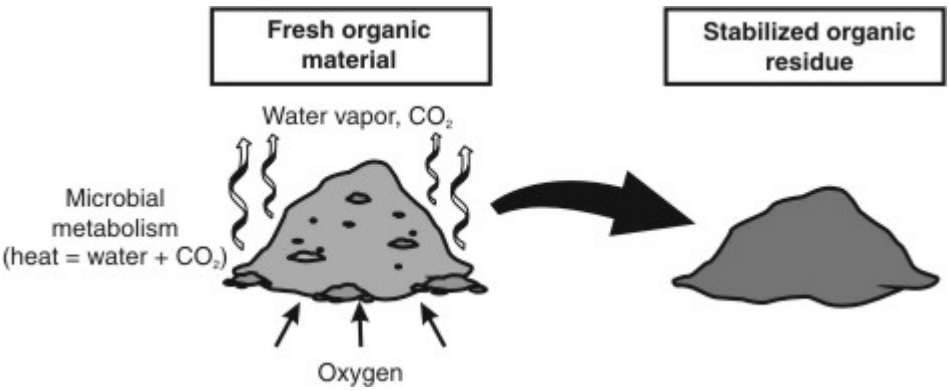


Figure 1. Composting process.

Under controlled conditions, composting is accomplished in two main stages: a composting stage and a curing stage (see ***Figure 2***). The composting stage involves three sub-stages:
An initial stage (lasting one to three days) when mesophilic micro-organisms degrade constituents such as sugars, starch, and proteins and compost temperatures rise rapidly.
A high rate thermophilic stage (lasting 10 to 100 days) in which temperatures rise above 41°C (110°F) and fats, hemicellulose, cellulose and some lignins are degraded and pathogens are destroyed.

Note: The first and second stage are what the Dutch Composter does. The Dutch Composter also regulates the temperature, which speeds up the composting process.
A stabilization stage (lasting 10 to 100 days) during which time the temperature declines and further degradation of cellulose, hemicellulose and lignins occurs.

Note: The third stage would be the material taken out of the composter. It is recommended to stock pile this material to help it stabilize and finish the composting process.

The high-rate stage is accomplished through a high rate of oxygen uptake and carbon dioxide (CO_2) output. Ammonia(NH_3) and other gases may be released if the process is not controlled well. During curing or maturation, mesophilic organisms recolonize the compost. The length of curing time depends on market opportunities but typically represents a minimum of one month and generally lasts three to six months.

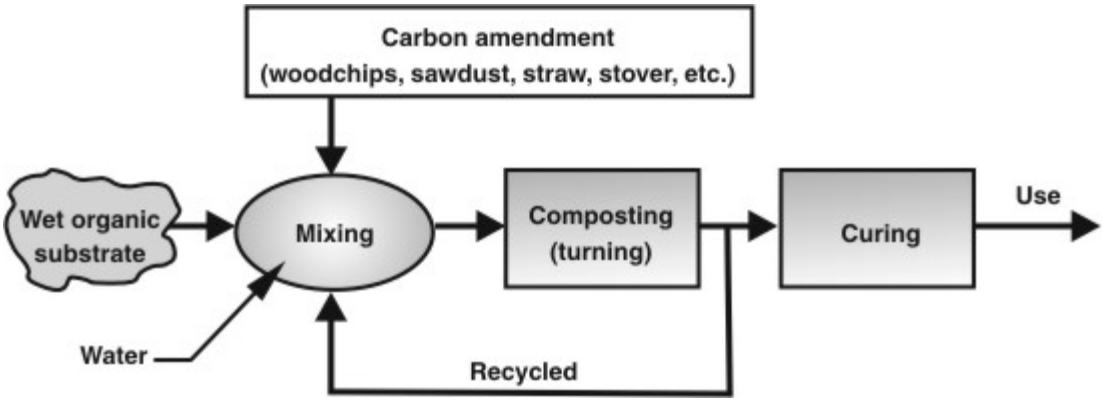


Figure 2. Material flow for the conventional composting process.

Factors Affecting Composting

While composting is a natural process, it requires proper conditions to occur rapidly, minimize odour generation, and prevent nuisance problems. Over twenty controllable factors affect composting. Four major factors to be controlled in the composting process are the material mix (nutrient balance), water content, porosity, and temperature.

Material Mix (C:N)

The proper compost mix requires both carbon and nitrogen at the proper C:N ratio. This will result in a composting process that generates little odour, yet offers an environment where micro-organisms can flourish. Generally, an initial C:N ratio ranging from 20:1 to 40:1 is satisfactory.

NOTE: Dutch Industries tests have found that a 2:1 weight ratio works best with the Dutch Composter. This is based solely on weight of material. For every 2 lbs of animal carcass, we used 1 lb of straw. This is mostly to do with the moisture content and time frame.

Most compostable materials have a C:N ratio that is too low to compost properly on their own. In order to compost these materials, amendments that contain a high C:N ratio must be added. Plant materials such as wood chips, sawdust, chopped corn stover, shredded paper, or straw have a high C:N ratio for on-farm composting.

NOTE: The smaller the particle size the faster and better the composting process works. For an example, chopped straw works better that non-chopped straw.

Water Content and Porosity

Like all living things, micro-organisms need water. To encourage their growth and rapid composting, water content of the mixture should be 50 - 60% (wet basis). It is important to avoid excess water due to the potential for odour and leachate conditions. If the mixture feels moist, yet no water drips from it when a handful is squeezed, the mixture probably has adequate water content.

Micro-organisms that are encouraged to grow in a compost pile are aerobic, or require oxygen. Open spaces (porosity) must be maintained to allow air to penetrate and move through the pile providing oxygen. Ideally, 35 - 45% of the pile volume should be small, open spaces. Optimum porosity is achieved by balancing the material's particle sizes, water content of the mix, and pile size.

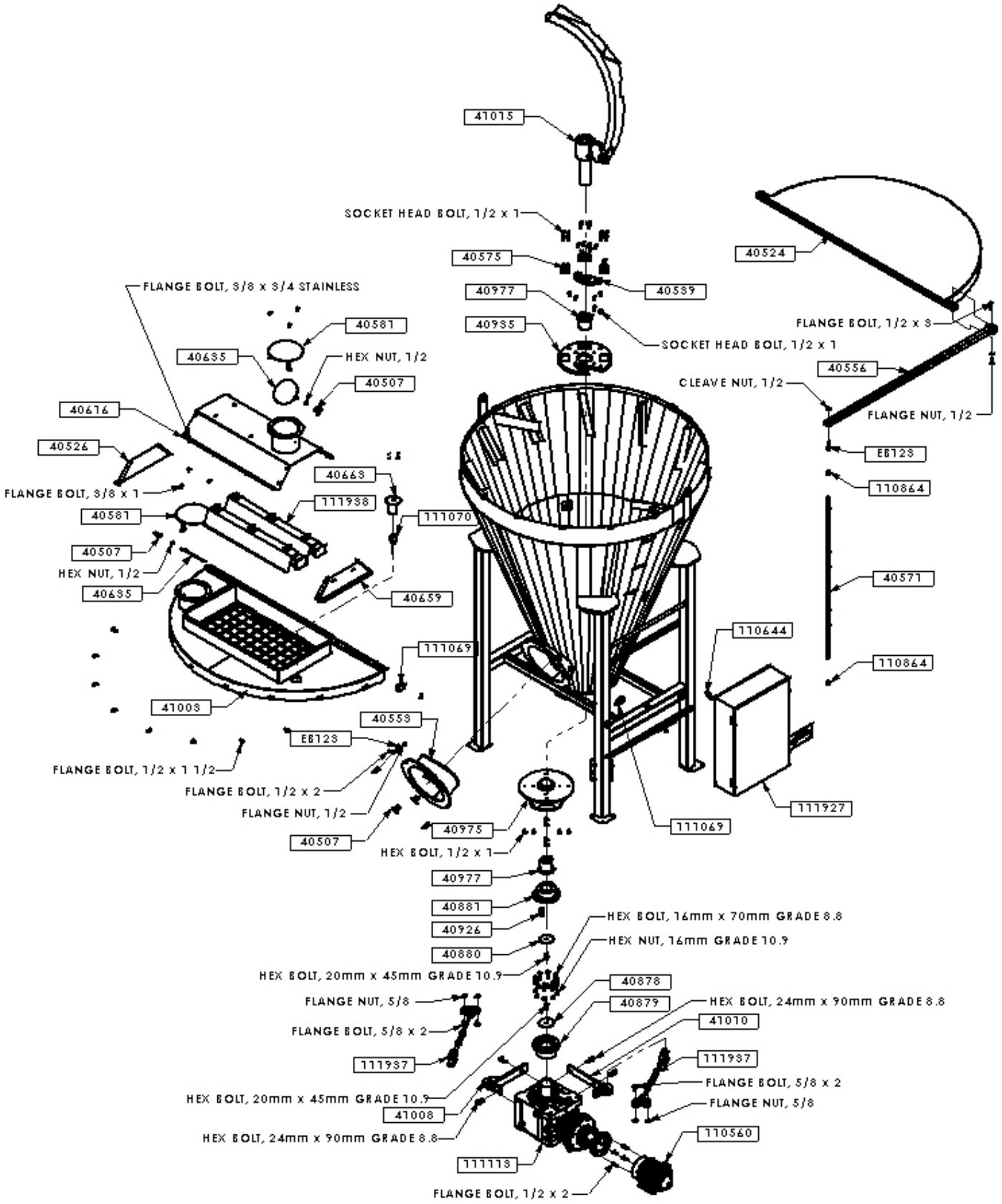
NOTE: This is maintained on the Dutch Composter by the vent on the top lid of the machine.

Temperature

The composting process will generate and regulate its own temperature. However, to maintain high temperatures the pile must be large or have some insulation. A layer of inactive material, sawdust, or finished compost placed over the entire pile will insulate the pile. As the pile heats up, warm air within the mixture will rise and move out of the pile, while fresh air will be drawn in to replace it. This process exhausts the CO_2 created in the pile and maintains an aerobic environment for the micro-organisms.

The highest rates of decomposition occur for temperatures in the range of 43 - 66°C (110 - 150°F). Also, high temperatures above 55°C (131°F) over three days will kill parasites, and fecal and plant pathogens within the pile. At temperatures above 66°C (150°F), microbial activity declines rapidly with activity approaching low values as compost temperature exceeds 71°C (160°F).

DUTCH COMPOSTER ASSEMBLY DRAWING

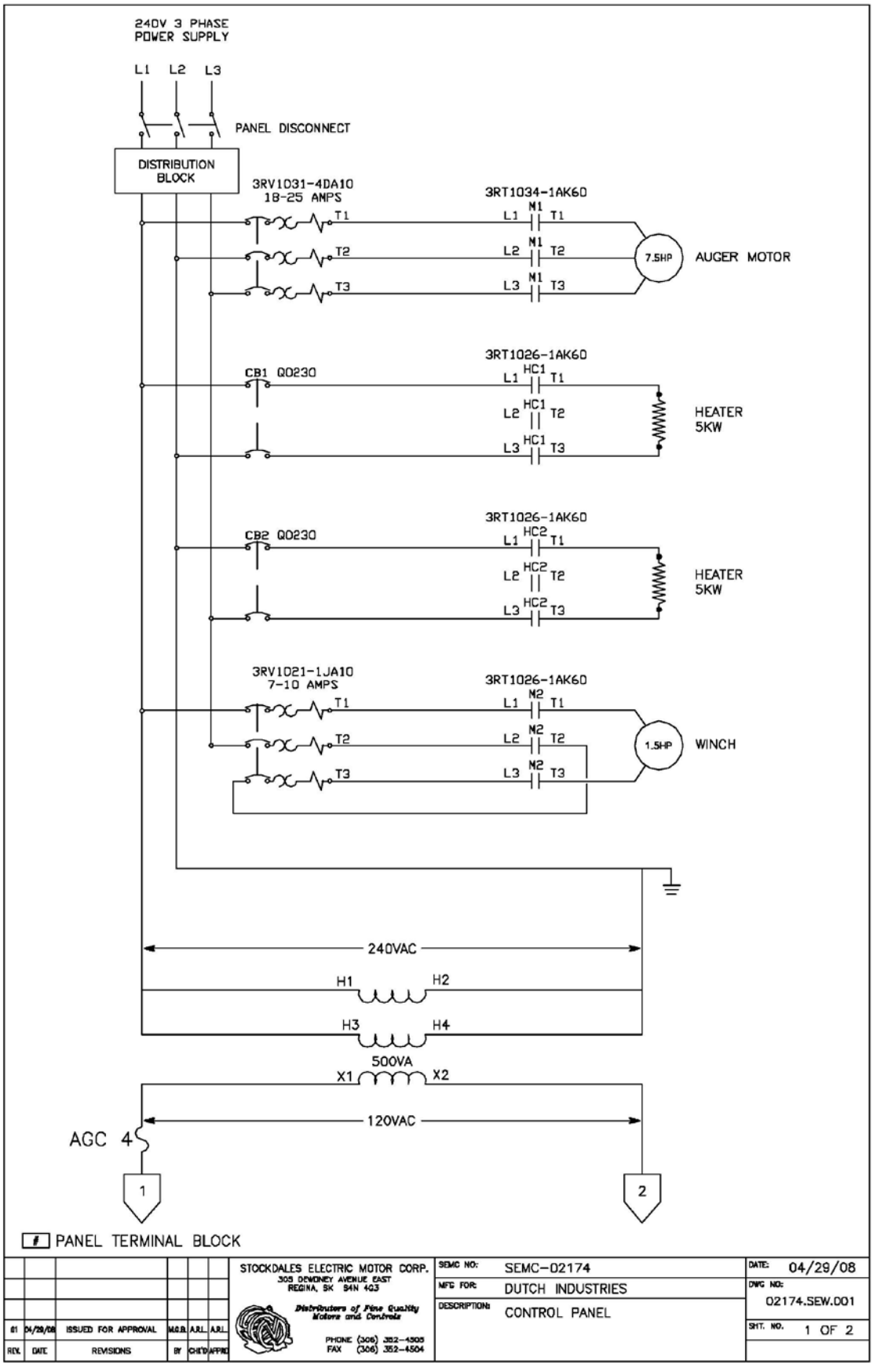


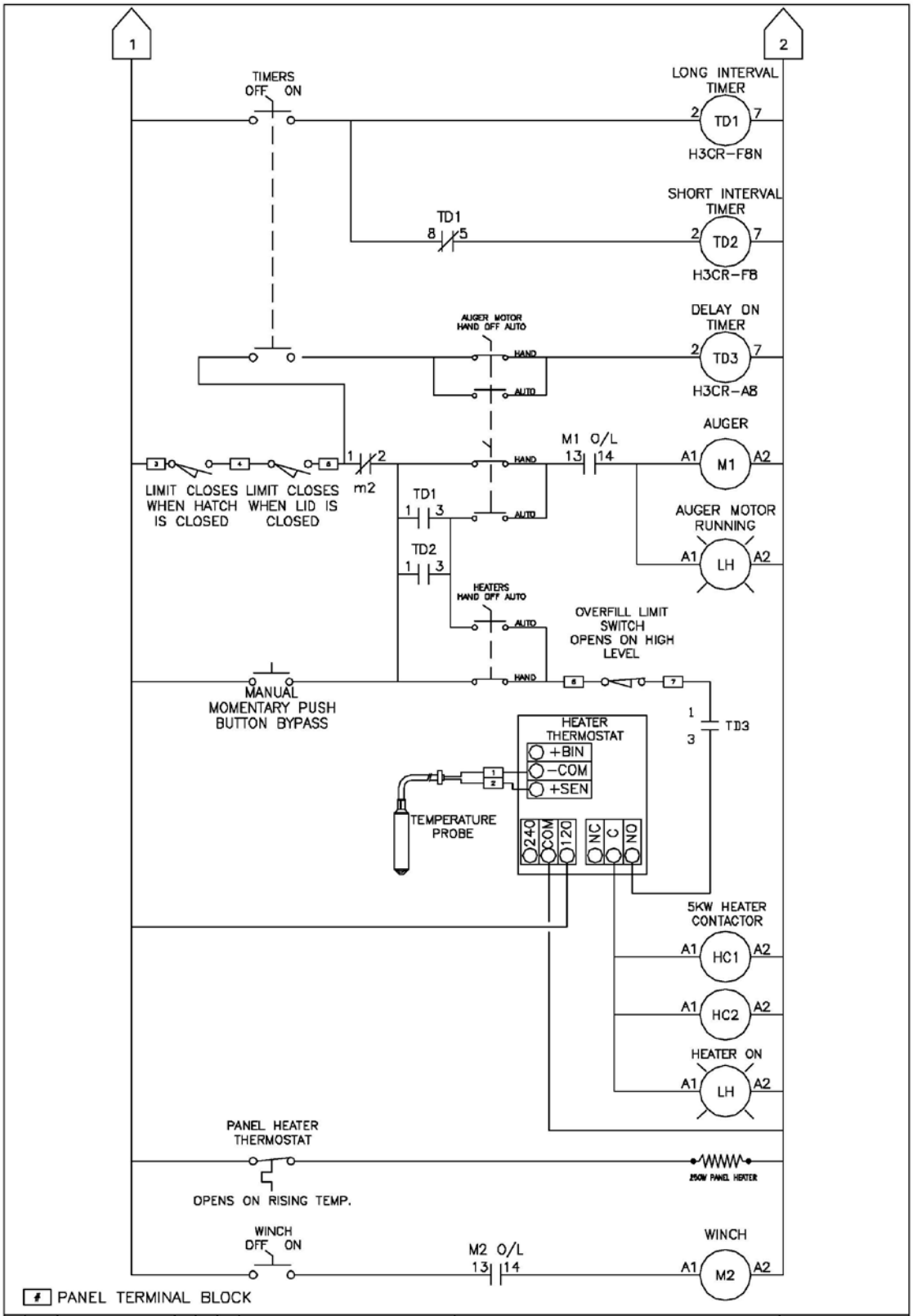
DUTCH COMPOSTER PARTS LIST

PART NUMBER	QUANTITY	DESCRIPTION
40507	6	Front Hatch Tightener
40524	1	Roof Door Assembly
40526	1	Heater Cover Sides Blank
40539	1	Square Teeth Plate Assembly
40553	1	Front Hatch Assembly
40556	1	Lid Handle Assembly
40571	1	Chain For Compost Turner Lid
40575	3	Large Tooth Plate Assembly
40581	2	Top Filter Cover
40616	1	Heater Lid Assembly
40635	2	Vent Flap Assembly
40659	1	Heater Cover Heater Side Blank
40663	1	Cap for Limit Switch
40878	1	4 7/16" Keeper Plate
40879	1	4 7/16" Coupler
40880	1	Input Coupler Keeper Plate
40881	1	4" Coupler
40926	1	1" Key Stock
40935	1	Bottom Auger Plate
40975	1	BUSHING SUPPORT FOR STIRRING
40977	2	Bronze Bushing
41001	1	Compost Turner Bin
41003	1	Fixed Roof Panel
41008	1	GearBox Turn Buckle Mount Plate
41010	1	Gearbox Turn Buckle Mount Plate
41015	1	Main Auger Assembly
110518	1	Lid Seal Rubber
110556	1	Piano Hinge - 3"
110557	1	Dutch Decal - Composter
110560	1	Electric Motor - 7.5 HP - 1800RPM
110864	2	Spring Link Snap - 1/4"
111113	1	Composter Gearbox
111927	1	Electrical Control Panel - Composter
111937	2	E Gearbox - Torque Arm
111938	2	Composter Heater - CH-424-1A
10000480	1	Serial Plate
CN12PL	1	CLEAVE NUT, 1/2
FN38PL	18	FLANGE NUT, 3/8

FN38SS	8	FLANGE NUT, 3/8, STAINLESS
FN12PL	13	FLANGE NUT, 1/2
FN58PL	4	FLANGE NUT, 5/8
HH121PLC5	8	HEX BOLT, 1/2 x 1
HH1670PLC8.8	8	HEX BOLT, 16mm x 70mm GRADE 8.8
HH2045PLC109	2	HEX BOLT, 20mm x 45mm GRADE 10.9
HH2490PLC8.8	4	HEX BOLT, 24mm x 90mm GRADE 8.8
HHW3834PLC5	12	FLANGE BOLT, 3/8 x 3/4
HHW3834SS	8	FLANGE BOLT, 3/8 x 3/4 STAINLESS
HHW381PLC5	6	FLANGE BOLT, 3/8 x 1
HHW12112PLC5	8	FLANGE BOLT, 1/2 x 1 1/2
HHW122PLC5	8	FLANGE BOLT, 1/2 x 2
HHW123PLC5	1	FLANGE BOLT, 1/2 x 3
HHW582PLC5	4	FLANGE BOLT, 5/8 x 2
HHW141PLC5	23	SELF TAP FLANGE BOLT - 1/4" x 1"
HN12PLC5	2	HEX NUT, 1/2
HN16PLC109	8	HEX NUT, 16mm GRADE 10.9
SH121PLC5	23	SOCKET HEAD BOLT, 1/2 x 1
EB123	5	Eye Bolt - 1/2" x 3" NC PL

Wiring Diagram




1
2
TIMERS
OFF ON
LONG INTERVAL TIMER
TD1
H3CR-F8N
SHORT INTERVAL TIMER
TD2
H3CR-F8
DELAY ON TIMER
TD3
H3CR-A8
AUGER MOTOR HAND OFF AUTO
HAND
AUTO
AUGER
M1
M1 O/L
LIMIT CLOSES WHEN HATCH IS CLOSED
LIMIT CLOSES WHEN LID IS CLOSED
m2
AUGER MOTOR RUNNING
LH
HEATERS HAND OFF AUTO
OVERFILL LIMIT SWITCH OPENS ON HIGH LEVEL
MANUAL MOMENTARY PUSH BUTTON BYPASS
HEATER THERMOSTAT
+BIN
-COM
+SEN
TEMPERATURE PROBE
240
COM
120
NC
C
NO
5KW HEATER CONTACTOR
HC1
HC2
HEATER ON
PANEL HEATER THERMOSTAT
OPENS ON RISING TEMP.
250W PANEL HEATER
WINCH
OFF ON
M2 O/L
M2
PANEL TERMINAL BLOCK
STOCKDALES ELECTRIC MOTOR CORP.
305 DEWDNEY AVENUE EAST
REGINA, SK S4N 4G3
Distributors of Fine Quality Motors and Controls
PHONE (306) 352-4505
FAX (306) 352-4504
SEMC NO: SEMC-02174
MFG FOR: DUTCH INDUSTRIES
DESCRIPTION: CONTROL PANEL
DATE: 05/29/08
DWG NO: 02174.SEW.001
SHT. NO. 2 OF 2
02 04/29/08 ADDED TD3 TIMER T.G.K. A.R.L. A.R.L.
01 04/29/08 ISSUED FOR APPROVAL M.G.B. A.R.L. A.R.L.
REV. DATE REVISIONS BY CHK'D APPRD

Composter Operation Checklist

Final inspection should include:
Check all fasteners for proper torque:

- 1/4" bolts - 8 ft. lbs.	-	5/16" bolts - 17 ft.lbs.
- 3/8" bolts - 30 ft. lbs.	-	1/2" bolts - 75 ft. lbs.
- 5/8" bolts - 150 ft. lbs.	-	3/4" bolts - 270 ft. lbs.

Ensure that there are no obstructions inside the tank, small pieces of steel are especially damaging to the tank.

Ensure that Lower Lid is closed and tightened sufficiently to avoid leakage. Before putting material into the machine ensure that heaters are working properly

Composter Maintenance

The Dutch composter requires little maintenance or spare parts; however, it is wise to keep some oil in stock, for the gear box should it need to be replaced.

Guidelines for oil replenishment and change intervals as per the manufacturer:

1. Maintain proper oil levels at all times.
2. An oil change after the first 500 hours of operation is highly recommended.
3. Sumitomo recommends an oil change every 2500 hours, or six months, whichever comes first. If a proper preventive maintenance program is implemented and maintained, a longer change period may be acceptable.
4. If the unit is running in a high ambient, high humidity, or corrosive environment, the lubricant will have to be changed more frequently. Consult the factory for recommendations.

Note: The Cyclo portion and Bevel portion must be filled with oil separately. Oil does not flow from one section to the other. See Page 19 for Oil Types and Quantities

Check Hoist Chain annually to ensure that no damage has occurred. Replace if necessary.

Check Composter Teeth inside the tank for wear annually. These should be replaced if there is significant wear.

Clean lower tank lid seal regularly. This will protect the seal and ensure a proper seal to the tank.

Check periodically to ensure that unwanted debris such as metal scraps, are removed from the tank. This will avoid excessive wearing of the tank components.

Check Inner Cone Liner for wear. If there are any holes in this liner it must be replaced immediately or damage to the composter will occur.

Check the gearbox for movement when not in operation. Pull/push the gearbox from side to side. If there is excessive movement the Brass Bushing may need to be replaced.

Oil Replacement Information

Standard Oils

Ambient Temperature (F)	ChevronTexaco	Exxon Oil	Mobil Oil	Shell Oil	BP Oil
14 to 41	EP Gear Compound 68	Spartan EP 68	Mobilgear 600 XP 68 (ISO VG 68)	Omala Oil 68	Energol GR-XP 68
32 to 95	EP Gear Compound 100, 150	Spartan EP 100 EP 150	Mobilgear 600 XP 100, 150 (ISO VG 100, 150)	Omala Oil 100, 150	Energol GR-XP 100 GR-XP 150
86 to 122	EP Gear Compound 220, 320, 460	Spartan EP 220 EP 320 EP 460	Mobilgear 600 XP 200, 320, 460 (ISO VG 220-460)	Omala Oil 220, 320 460	Energol GR-XP 220 GR-XP 320 GR-XP 460

Oil Fill Quantities (US Gallons)

Output (Bevel Gear Box)	Input (Cyclo Gear Box)
2.80	0.24

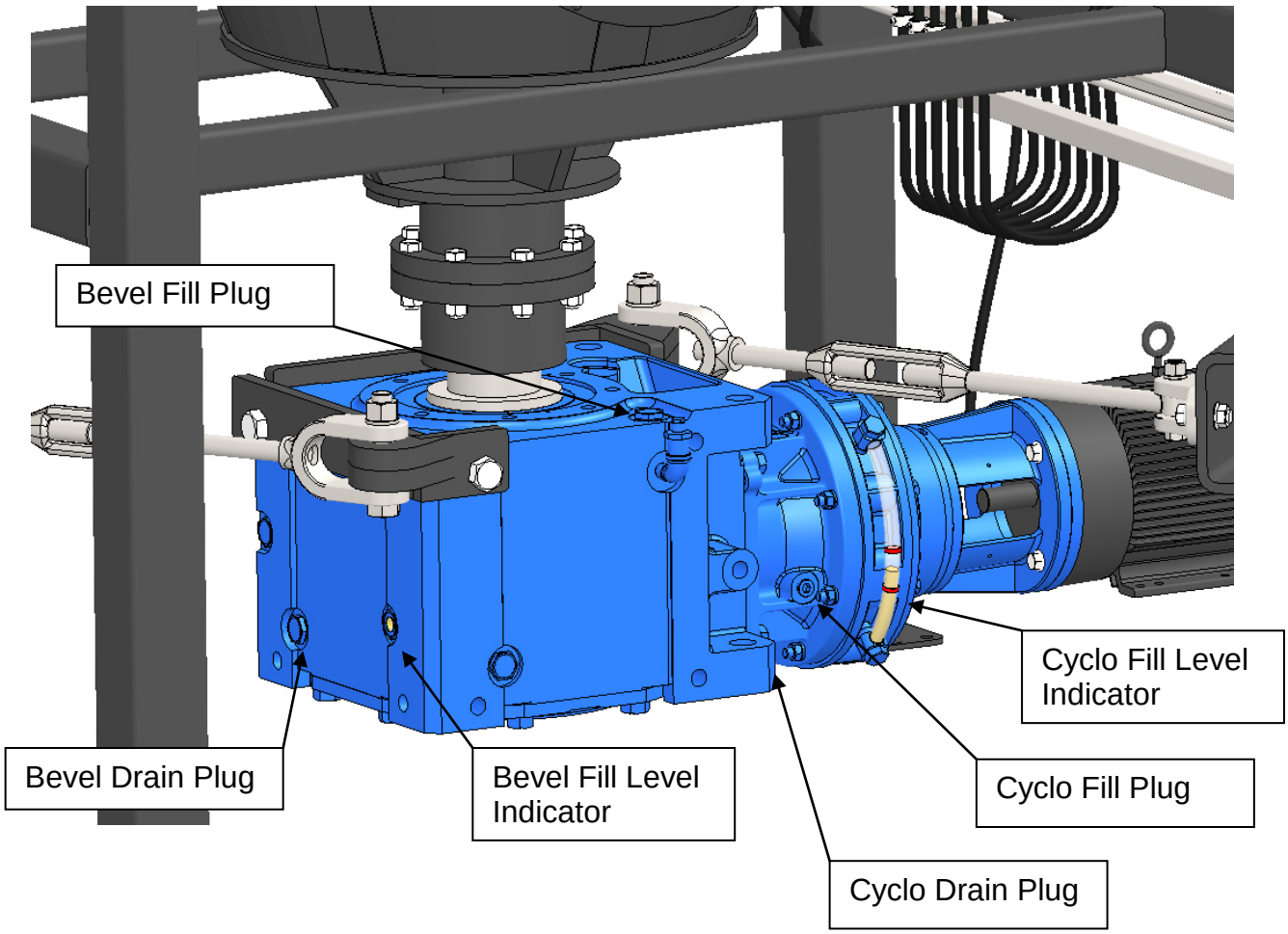
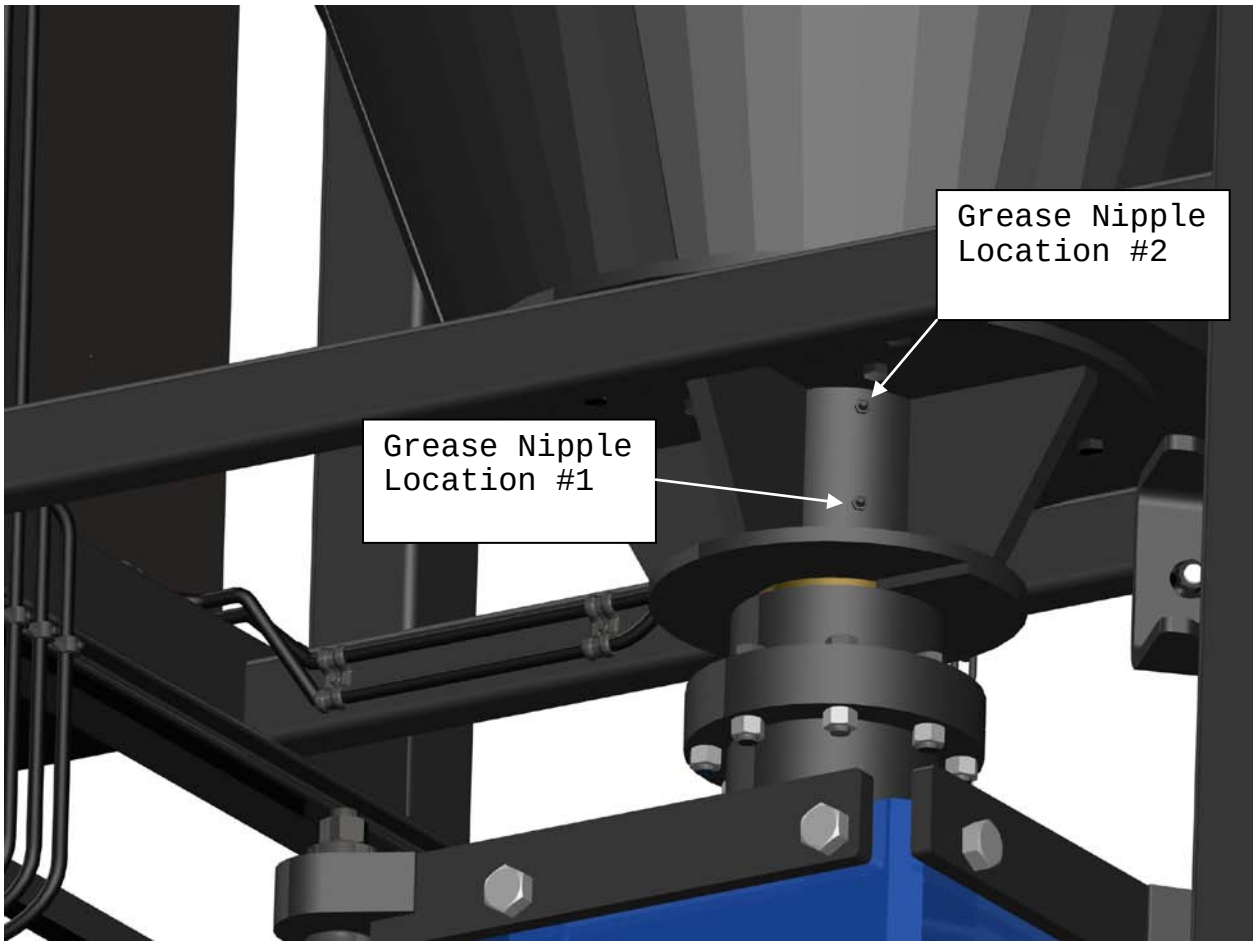


Figure 3: Gear Box Oil Plug Locations

Gearbox Operation and Maintenance Manual if located on this site:
http://www.smcyclo.com/uploads/product/files/file-73.pdf

Grease Locations & Instructions



There are 2 Grease nipple locations located under the main holding tank, just above the gearbox. These locations should be greased daily to prevent excessive wear on the main bushings.

We recommend a Lithium Based grease to provide the necessary lubrication for the bronze bushings. Failure to use this type of grease may decrease the life expectancy of the bushing material.

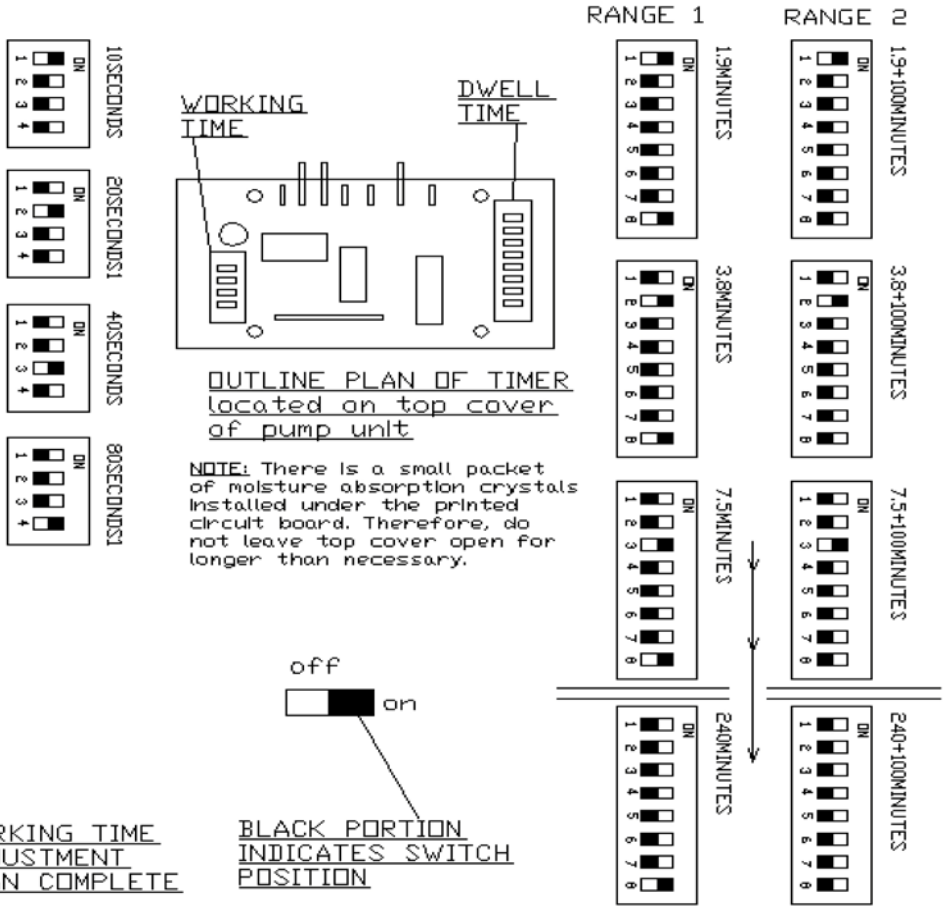
Recommended Grease or equivalent:
Mystik Centra-Lube Grease
Product Code 665023002044

Automatic greasing systems are available as an option.

AutoGreaser Settings and Operation

A full tank of grease should last for 26 days on a 1.5 Liter tank of grease. We recommend filling the grease up every 2 weeks to ensure that the tank never runs dry.
Also periodic checks to ensure that the auto greasing unit is running can be done using the provided magnet or filler cap and placing it on the top of the unit over the symbol with 2 gears and a teardrop to manually activate the pump.

We recommend a Lithium Based grease to provide the necessary lubrication for the bronze bushings. Failure to use this type of grease may decrease the life expectancy of the bushing material. Must be a EP grease (Extreme Pressure).
Recommended Grease or equivalent:
Mobilux EP2



NOTE:

For range 1 switch No.8 Must always remain in the right hand position.

For range 2 switch No.8 Must always remain in the left hand position.

DWELL TIME (Minutes) – SWITCH NUMBERS								
RANGE	1	2	3	4	5	6	7	8
1	1.9	3.8	7.5	15	30	60	120	240
2	101.9	103.8	107.5	115	130	160	220	340

Auto Greaser Settings:

Working Time - 10 Seconds
1 switch set to on position

Dwell Time - 30 minutes
5 & 8 switch set to on position