

**Balcrank<sup>®</sup>**

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**FUSION  
CENTRAL CONTROL FLUID  
MANAGEMENT SYSTEM  
Model 3110-012**



**Thoroughly read and understand this manual before installing, operating or servicing this equipment.**

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**OPERATION, INSTALLATION,  
MAINTENANCE AND REPAIR GUIDE**

# Disclaimer

The user/purchaser is expected to read and understand the information provided in this manual, follow any listed Safety Precautions and Instructions and keep this manual with the equipment for future reference.

The information in this manual has been carefully checked and is believed to be entirely reliable and consistent with the product described. However, no responsibility is assumed for inaccuracies, nor does Balcrank Products, Inc. assume any liability arising out of the application and use of the equipment described.

Should the equipment be used in a manner not specified by Balcrank Products, Inc., the protection provided by the equipment may be impaired.

## Questions or Service Assistance

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or call your local Balcrank Products, Inc. representative.

## Product Identification Information

Record the product identification numbers from the nameplate here.

Model Number \_\_\_\_\_  
Serial Number \_\_\_\_\_  
Tag Number \_\_\_\_\_ (if applicable)

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## Central Control Keypad Mounting

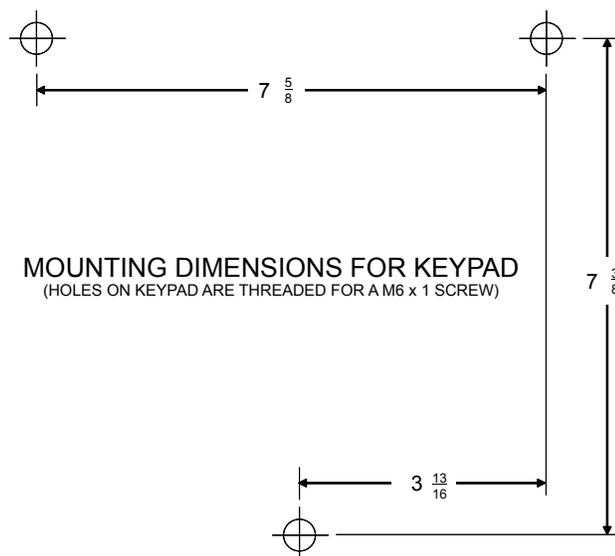
### Keypad Installation

The Central Control Keypad should be mounted upright with the antenna pointing upward, near a 120VAC electrical outlet.

It should be mounted to a structurally sound wall through the two (2) holes on the top of the keypad case and one hole on the bottom of the keypad.

Height on the wall should be 5 feet to 6 feet.

Avoid direct, significant, heat sources.



Care should be taken to avoid mounting the Central Control Keypad behind any steel objects (tool storage cabinets or metal chain link fences) that may block the RF communication signals.

### Specifications

Power Requirements: 120VAC 50/60Hz

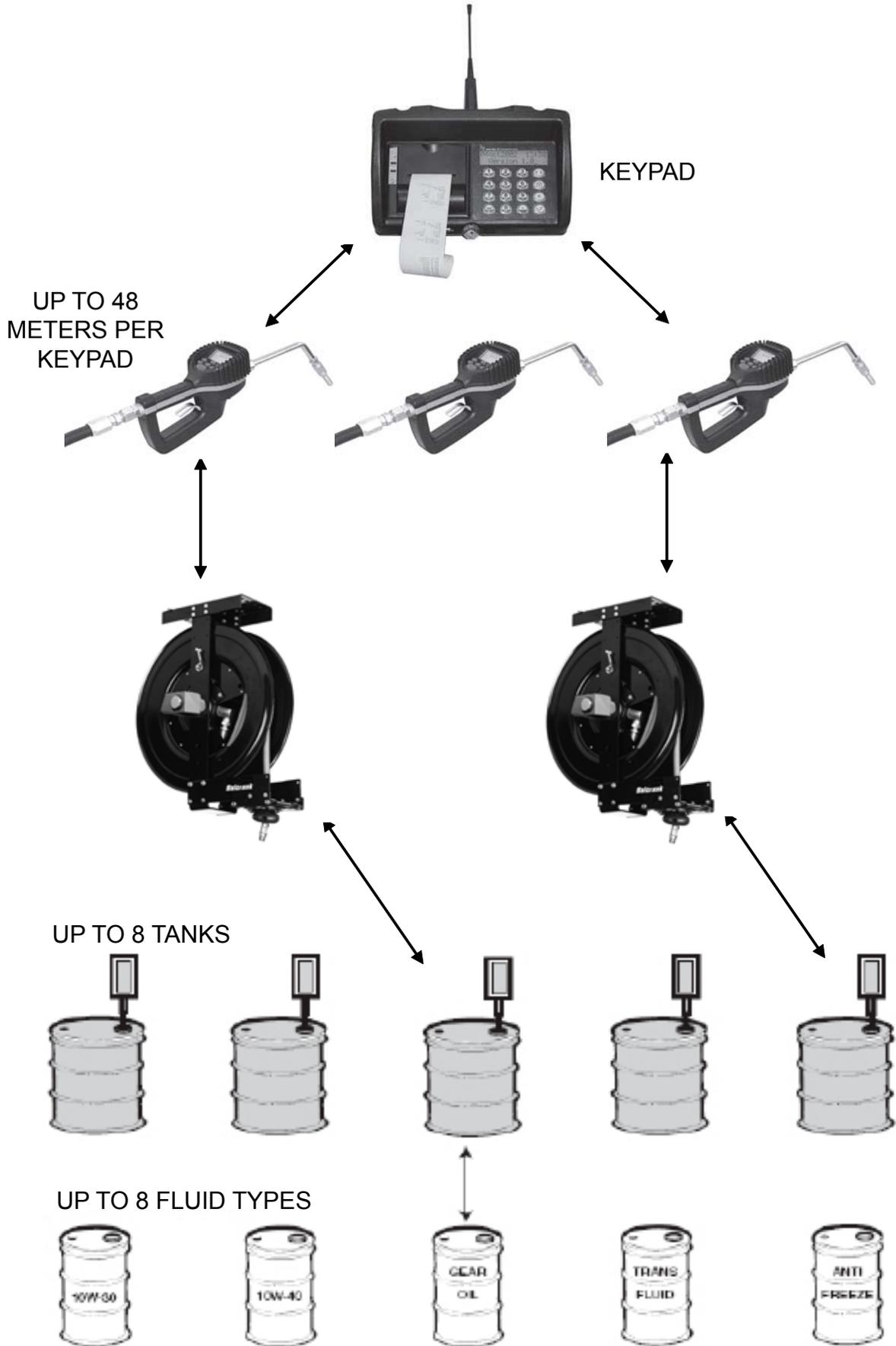
RF Communications: 2-way, 902-928MHz Frequency Hopping Spread Spectrum per FCC, Part 15.247, Part 15.109

Operating Temperature: 14° F to +140° F (-10° C to +60° C)

**FCC ID: GIF-RF KEYPAD**  
**FCC CERTIFIED, PART 15, SUB-PART C**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

# Pictorial Diagram of Set-up



## Description of Central Control Keypad Keys



Keypad Screen

Keypad Keys



Central Control Keypad



Scroll Key: Used to select options on the active display



Home Key: Pressing this key returns the display to the default screen display



Backspace Key: Used to backspace when entering data



Enter Key: Used to enter data and move to the next screen



Space Key: Used to enter a space character when entering data



Alphanumeric Keys: Used to enter numbers and alpha characters. Press and release the desired key to enter a number. To enter a letter, press and hold the key with the desired letter. When the desired letter displays, release the key.

# Central Control Keypad Operation

## Default Screens



The first default screen shows the software version number for informational purposes only.

Default screens alternate between the System Version screen (above) and the Enter Pin No. screen (below).



Enter Pin No. screen displays for 3 seconds out of every 5 seconds.

There can only be one supervisor account on each keypad.

Enter Pin No. screen is used by the supervisor to access the management screens; Initialization, Configuration, Meter, Report, External printer, and Internal printer.

The Personal Identification Number (PIN) is four (4) digits. To access management screens enter the supervisor PIN number. The default is 0000 at initial power-up.

## Management Screens

The management Select screen displays after entering the supervisor PIN number.



Use the Scroll key  to select which menu option is wanted. Then press the Enter key .

Screens in Initialization (INI) can be accessed only when the Dispense Order list is empty. The supervisor must clear all transactions through Configure (CNF) before the INI menu can be accessed.

## Multiple Choice Screens

For multiple choice screens the selection is in inverse video, green on black.

Use the Scroll key  to select an answer, YES or NO. The selection is in inverse video. It is validated by pressing the Enter key .

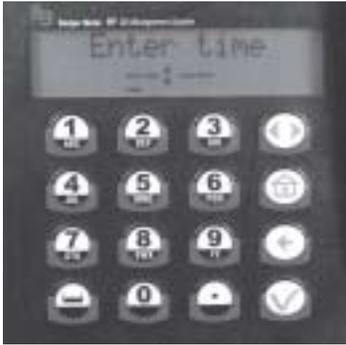
Move the Scroll key  to your choice, YES or NO and press Enter .

## Initialization Menu Screens (INI):

- System date and time are initially blank
- System time is in military standard
- System date is in format DD/MMM/YYYY (in English)

### **Enter Time**

This screen is used to set or change the system time.



Active keys:

Numeric keys, , , 

Action:

Enter time by using the numeric keys to set a 24 -hour military time of day. Press Enter  when finished, to move to the next Initialization screen.

### **Enter Date**

This screen is used to set or change the system date.



Active keys:

Numeric keys, , , , 

Action:

Enter Date by first entering the two digit day. The cursor automatically moves to the month. Use the Scroll key  to select a month. Then enter a four-digit year. After date is set, press Enter  to move to the next Initialization screen.

**NOTE:** To not change the time or date, press Enter  to advance to the Tank Unit screen.

## Tank Initialization

The Tank Initialization screens are used to set up tanks in the system. Each tank is assigned a number and a starting quantity level in the desired unit of measure. The parameters are:

- Maximum of 8 Tanks.
- Tank ID's are numbered 1 thru 8.
- Tank unit of measure can be quarts, liters, pints or gallons.
- Set the dispensing unit of measure to the desired unit.
- The tank stock level setting is updated after each dispense from the associated tank.
- The tank stock level quantity setting format is 5.3 digits (99999.999).
- The remaining tank stock level quantity is printed to the nearest whole number after each dispense on a ticket.
- The Supervisor updates the tank level quantity setting at any time by entering these screens to change stock levels.

### To Install a Tank:

#### Select Tank Unit Number



Active keys:

Numeric keys,



Action:

Enter a numeric value from 1 to 8 and press Enter .

Pressing the Enter key  with no entry advances to Fluids screens.

## Select Fluid Quantity or Remove a Tank



Active keys:

Numeric keys,



Action:

Use Scroll  to select between LITER, GALLONS, PINTS, QUARTS and REMOVE. The REMOVE option deletes a tank from the system.

Press Enter  to move to the next screen.

## Select a Tank Stock Level



Active keys:

Numeric keys,



Action:

Use the numeric keys to enter a stock level from 00000.000 to 99999.999.

Press Enter  to move to the next screen.

When all tanks have been added, press Enter  to move to the next screen.

## Fluid Initialization

This screen is used to set initial tank stock level or whenever a supplier delivers fluid. The fluid screens allow a supervisor to set Fluid Names used in the system.

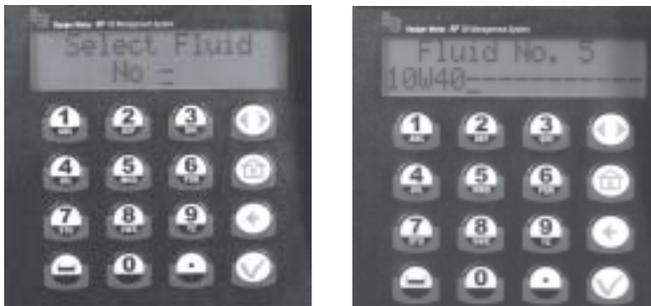
The parameters are:

- Maximum of 8 fluid types
- The fluid type ID number ranges from 1 to 8
- The fluid type name is a 16 alphanumeric string
- Initially, the fluid type name is blank

## Tank-Fluid Relationship Screens

The relationship between tank ID and fluid type ID is 1:1 (one tank assigned to one fluid type). For example, a supervisor may associate tank #1 with fluid #3 or tank #5 with fluid #5. Each tank must be associated with one, and only one, fluid type.

The user must enter a valid number for the fluid and then enter a name for the fluid.



Active keys:

Numeric keys,



The user must enter a valid number for the tank.

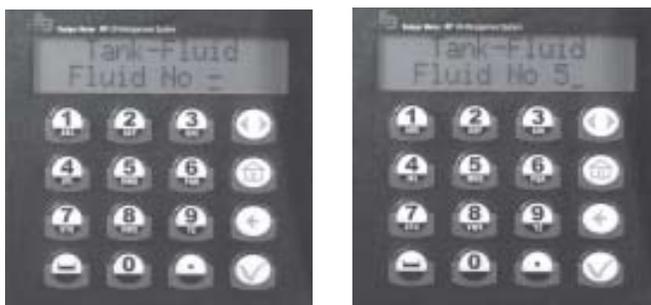


Active keys:

Numeric keys,



The user must enter a valid number for the fluid in the tank.



Active keys:  ,  , 

Action:  
Pressing Enter  after a valid tank number brings up the Tank-Fluid, Fluid No screen again.

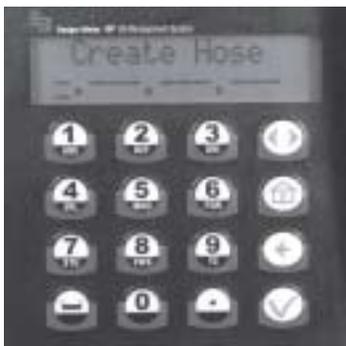
Pressing Enter  while the Tank-Fluid, Tank No.screen is blank moves to Adding Hoses screen.

Pressing the Enter key  with no entry moves to the Create Hose screen

### **Create or Delete an RF Meter (Meter and Hose are synonymous)**

This set of screens allows a supervisor to create or delete RF Meters from the keypad.

- The RF Meter identification number can be found on the RF Meter under the battery pack or on an attached tag
- The RF Meter identification number format is 10 decimal digits (X.XXX.XXX.XXX)
- Leading zeros must be entered
- RF Meters can be added and deleted
- Maximum of 48 RF Meters in the system
- Initially the RF Meter address list is empty
- A given keypad can exchange data only with RF Meters whose identification number has been entered
- All RF Meter addresses and IDs are unique
- The relationship between tank and RF Meter is 1:n (one tank is assigned to n RF Meters). Since there is a relationship between tank and fluid type, a RF Meter is assigned to only one fluid type.



Active keys:  ,  , 

The user must enter a valid number for the fluid in the tank.

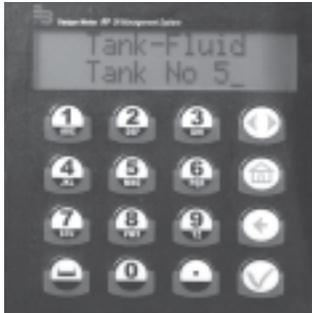
Action:  
After a valid RF Meter address is entered, the Tank-Hose screen displays.

If a RF Meter address is already used, Hose Address Already Used screen displays.

Pressing the Enter key  with no entry moves to the Delete Hose screen.

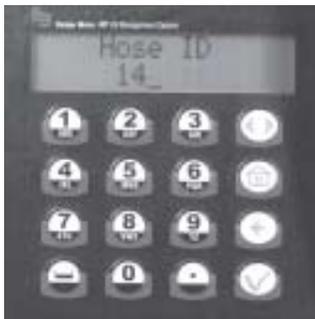
### Tank-Hose Screen

On the Tank-Hose screen, a number must be entered corresponding to the tank and hose. The relationship between tank and RF Meter is 1:n (one tank is assigned to n meters). There is a relationship between tank and fluid type. The RF Meter is assigned to one fluid type. Assign the RF Meter to the tank to which it is connected.



Active keys: , , 

The next screen to show is Hose ID. This screen identifies which hose is assigned to the tank and fluid



Active keys:  
None

**NOTE:** *Hose ID is the number used to create dispense orders for a meter by an operator.*

### Hose Address Already Used

This screen displays if another RF Meter already uses the last three numbers of an RF Meter. If this screen displays, check the RF Meters in the system to make sure duplicate RF Meters do not exist. Then check to see if this RF Meter has already been created in the system.

It displays for 3 seconds. Then it returns to Create Hose screen.



No Action

## Delete a Hose

The supervisor has the option to delete a Hose/RF Meter through this screen. This is necessary when there is a change to the system; whereby a RF Meter needs replacement for any reason.

**The supervisor should delete from the keypad the removed RF Meter prior to creating a new RF Meter. This puts the new RF Meter in the same logical position with the keypad and the dispense order process remaining the same.**



Active keys:  
Numeric keys,  ,  , 

### Action:

When a RF Meter is deleted, the Delete Hose screen displays.

Pressing the Enter key  with no entry displays the Create Operator screen.

## Adding and Deleting Operators

- Only an operator with a valid PIN can dispense fluid
- A Maximum of 50 operators may be active in the system at one time
- The operator ID (PIN number) format is 4 numeric digits
- The operator name format is 16 alphanumeric digits. Initially, the operator list is empty.



Active keys:  
Numeric keys,  ,  , 

### Action:

The New Operator screen (above) displays.

Type in the operator's 4 digit ID PIN number, press Enter  to add it to the list.

Type in the operator's name using the keypad and then press Enter  to add it.

Add another operator number and press Enter  to add it to the list.

Add the operator's name and press Enter  to add it to the list.

When finished adding Operators, press Enter  .

### Deleting an Operator



Active keys:

Numeric keys, , , 

Action:

The Delete Operator screen ( above) displays if the Enter key  is pressed with no entry.

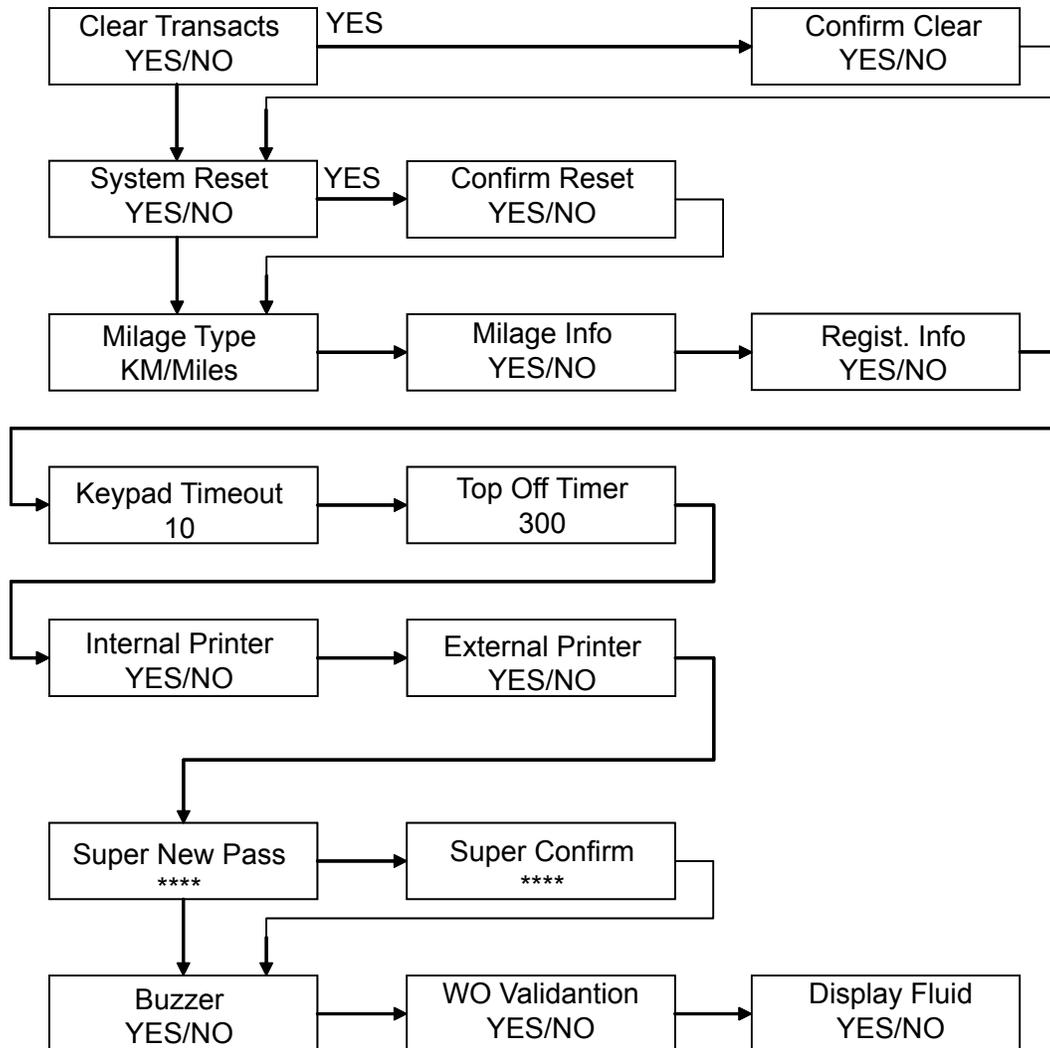
To delete an operator, enter his four-digit ID number and press Enter  .

When finished deleting operators, press Enter  while "Delete Operator" is blank.

## Configuration Menu (CNF)

The Configuration Menu (CNF) allows a supervisor to set-up all parameters for the Keypad Operation. A supervisor is the only user with access to these screens.

Configuration Menu Flowchart:



Press the scroll bar  until CNF is highlighted.

Next, press Enter  .



## Clearing Transactions from Keypad Memory

- Removes all transactions (Dispense Orders) previously recorded in memory
- Clear transactions erases WO results data. Data is cleared confirmation.



Active keys:



Use the Scroll key  to select between YES or NO.

Action:

If YES - the keypad asks for a confirm

If NO - the menu advances to System Reset



## System Reset

System Reset allows a supervisor to reset all configuration parameters to default values.



Active keys:



Use the scroll key  to select Yes or No.

Action:

If YES - the keypad asks a supervisor to Confirm Reset



If NO - the keypad displays Mileage Type screen

**Mileage Type**

Allows a supervisor to select how vehicle mileage is stored in the keypad

- KM/MILES
- KM is the Default mileage



Active keys:



Action:

Press the scroll key  to select KM or Miles.

Press the Enter key  to move to Mileage Info screen

### Mileage Information Option

Selects the option to collect vehicle mileage information for each dispense order.

- 16 numeric digit field
- YES or NO for the option
- Default mileage is NO



Active keys:



Action:

Use the Scroll key  to select YES or NO

Press ENTER key  to move to the Registration Information screen

### Registration Information Option

Selects the option to collect registration information for each dispense order.

- YES or NO for the option
- Default registration is NO



Active keys:



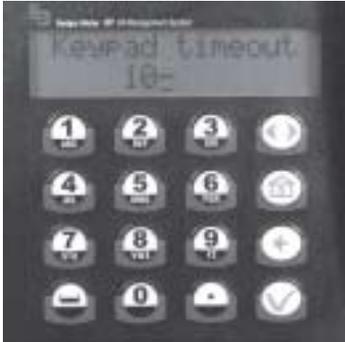
Action:

Use the Scroll key  to select YES or NO

Press ENTER key  to move to the Keypad Timeout screen

## Keypad Timeout Options

- Timeout parameter corresponds to the time it takes to validate after all dispense order data has been entered. If the Enter button is not pressed within the time allocated, the keypad display goes back to initial menu and the input data is erased.
- The Keypad Timeout is between 0 to 255 seconds (0 = no timeout) and the default for this feature is 10 seconds.



Active keys:  ,  , 

Action:  Press Enter  to move to the Hose Inactive Timeout option

## Topoff Timer Option

- This is the time a user has to top-off a dispense after the complete preset batch has been dispensed.
- If a user has not pressed reset on a RF Meter within the timeout period, the RF Meter transmits a dispense order quantity to the keypad and locks out the RF Meter.
- The topoff time is equal to one (1) second for each count. i.e., 600= 600 seconds or 10 minutes.
- The topoff timer can be set from zero to (900) 15 minutes.

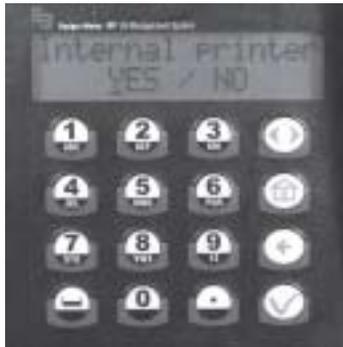


Active keys:  ,  , 

Action:  Press Enter  to move to the Display Timeout Option

### Internal Printer Option

- The Internal Printer can be used to print dispense ticket information
- To print the dispense ticket on the keypad printer, set this option to Yes
- To print to a remote printer or to not print a ticket, set this option to No



Active keys:



Action:

Use the Scroll key  to select the Internal Printer of Yes or No

Press ENTER key  to select the Internal Printer setting and move to External Printer option

### External Printer Option

- The External Printer (EPSON LX-300) is used to print the report information. This must be set to Yes to print reports.



Active keys:



Action:

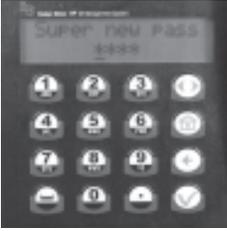
Use the Scroll key  to select the External Printer setting of Yes or No

Press ENTER key  to select the External Printer setting and go to Supervisor Password option

Please reference Appendix A, Epson LX-300+II printer for more information.

## Supervisor Password Option

- The default Supervisor Password is 0000.
- A Supervisor can change this password during initial system set-up.
- Maximum of one (1) Supervisor login password is allowed.



Active keys:

Numeric key,

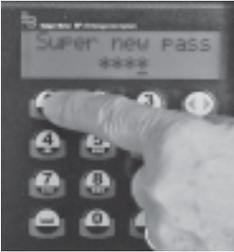


Action:

Use the numeric keys to enter a new password. Then press Enter



Reenter new Password to confirm.



When changing a password, first delete the active password.

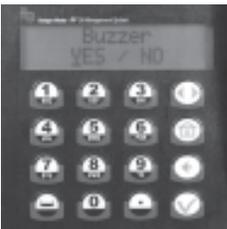
Pressing Enter



with no entry brings no change to Password and Buzzer option displays.

## Buzzer Option

This screen provides a user with the option to have a beep on every key entry. The default is YES.



Active keys:



Action:

Select YES or NO by using the Scroll



key. Then press Enter



to advance to the work order option.

## Work Order Option

Selects the option to require a work order number to be entered.

- YES or NO for the option.
- Default work order is yes.



Active keys:



Use the Scroll key  to select YES or NO.

Press ENTER key  to move to the display fluid screen.

## Display Fluid Option

Selects the option to display the fluid selected.

- YES or NO for the option.
- Default option is yes.



Active keys:



Use the Scroll key  to select YES or NO.

Press ENTER key  to move back to the Select screen.

The Keypad displays the Select menu.



## Using the Internal (Keypad) Printer

When everything is complete in the Configuration Menu, it is recommended the supervisor print the settings from the keypad and put them in a safe place.

To use the internal keypad printer:

Press the Scroll  key to move the cursor to Rep.



Press Scroll  one more time to bring up screen 190.



Press Enter  to bring up the FLU, HOS, TNK, and USE screen.

Press Enter  to print Fluid (FLU).



Press Scroll  to move cursor to Hose (HOS).

Press Enter  to print HOS.



Press Scroll  to move the cursor to Tank (TNK).

Press Enter  to print TNK.



Press Scroll  to move the cursor to User (USE).

Press Enter  to print USE.



Scroll  until screen WO, PEN, PAR, and MEM appears.

Scroll  to PAR.

Press Enter  to print.



Tear the ticket off of the keypad. Put it in a safe place in case it should be necessary to reprogram the keypad.



Press Home  to go back to the Default Screens.

## Meter Reset Menu (MET)

- Only the supervisor has access to MET.
- The supervisor may delete a dispense order in the keypad que for a single hose or all hoses in the system.
- If the supervisor selects all RF Meters, all dispense orders in the que are deleted.



### Active Keys:



### Action:

Press Enter  to go to Init All Hose



### Action:

If YES - start (Start Hoses Init) displays



### Action:

Press Enter  to Start Hoses Initiation

The screen then returns to the Select menu.

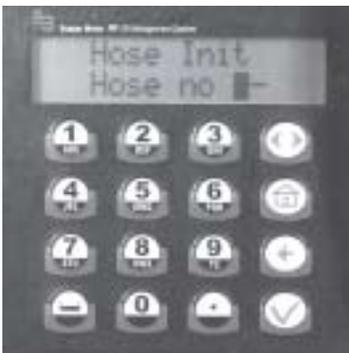


If NO - user is prompted for a hose number to reset



Type in a hose number

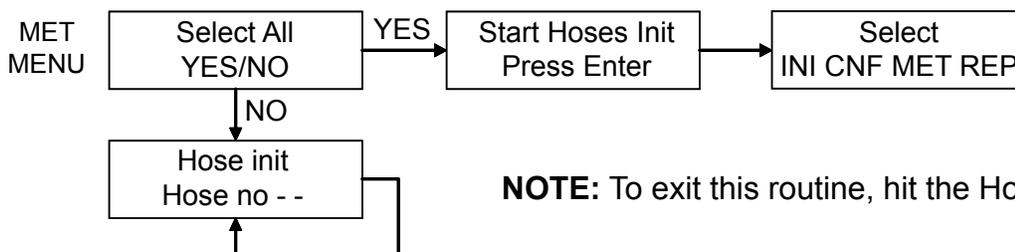
Press Enter  to reset the hose screen



Do this until all the hoses that need to be initiated, are initiated

Press the Home  key to return to the Select screen

### Meter Reset Menu Flowchart



**NOTE:** To exit this routine, hit the Home  Key

## Report Menu Screens (REP)

The supervisor has the opportunity to print out a variety of reports to the External Printer.

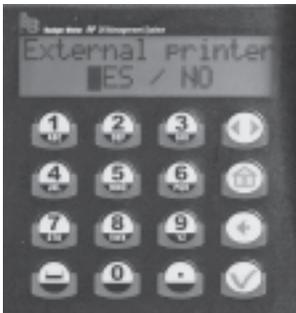
INI: Prints all parameters associated with the system initialization

CNF: Prints all parameters selected for a keypad configuration

MET: Prints the status of all hoses/meters

REP: Prints the dispense order history

To print reports the External Printer option must be set to YES (see the *Configuration Menu (CNF)* section of this manual).



From the Select screen scroll  to Rep.



Press Enter  to go to the Select First Report screen



Active keys:



Action:

Use the Scroll key  to select the desired report

Press Enter  to print the report

# Initialization Report

DD/MMM/YYYY INITIALIZATION REPORT HH:MI

TNK	PRODUCT	LEVEL	UNT
1	Fluid 1 name	99999	LITERS
2	Fluid 2 name	99999	LITERS
(...)	(...)	(...)	(...)
7	Fluid 7 name	99999	LITERS
8	Fluid 8 name	99999	LITERS

ID	ADDR	TNK
123	124456	1
234	561444	2
(...)	(...)	(...)

ID	PIN	NAME
1	1234	John SMITH
2	1235	Paul GREEN
3	1236	Mike BROWN
(...)	(...)	(...)

ID	PRODUCT
1	Fluid 1 name
2	Fluid 2 name
(...)	(...)
7	Fluid 7 name
8	Fluid 8 name

DD/MMM/YYYY      Date of the printout  
 HH:MI              Time of the printout  
 TNK                 Tank No.  
 PRODUCT          Fluid type name  
 QTY                 Quantity dispensed  
 UNT                 Unit

ADDR                Meter RF address  
 ID                    RF Meter Id (Last 3 address characters)  
 TNK                 Tank No.

PIN                  User pin number  
 NAME                User name



Active keys:



Action:  
 Use Scroll  to move to CNF and press Enter 

## Configuration Report

DD/MMM/YYYY **CONFIGURATION REPORT** HH:MI

Mileage Type	KM
Registration Info	NO
Mileage Info	NO
Internal printer	Yes
External printer	Yes
Address printer	
Buzzer	Yes
Approved PTB	NO
Supervisor pass	1234
Hose Inactive	600
Keypad Timeout	10
Display Timeout	2
On-Off sequence	999999



Active keys:



Action:

Use Scroll  to move to COM and press Enter 

## Communications Report

DD/MMM/YYYY **COMMUNICATION REPORT** HH:MI

---

ADDR	ID	STA
=====	=====	=====
0.000.000.101	1	inactive
0.000.000.137	2	inactive
0.000.000.111	3	inactive
0.000.000.126	4	inactive
0.000.000.127	5	inactive
0.000.000.109	6	inactive
0.000.000.100	7	inactive
0.000.000.135	8	inactive

DD/MMM/YYYY      Date of printout  
HH:MI              Time of printout  
ADDR                Meter RF address  
ID                    RF Meter Id (Last 3 address characters)  
STA                  Status of RF link:  
                      • OK   RF link established  
                      • KO   RF link not established  
                      • ? RF link doubtful



Active keys:



Action:

Use Scroll  to move to WO. Press Enter 

## Work Order Report



There are four reports that may be printed associated with Work Orders:

- USR: Print dispense orders by User
- PRO: Print dispense orders by Fluid Type
- HOS: Print dispense orders by Hose/Meter
- TNK: Print dispense orders by Tank

After printing the Work Order List Reports, the Work Order list memory is erased automatically.

Active keys:



### Use Report (USR)

DD/MMM/YYYY STATISTICAL REPORT BY USER HH:MI

<u>USER</u>	<u>PRODUCT</u>	<u>QTY</u>
=====	=====	=====
JOHN SMITH	FLUID TYPE 1	99999
	FLUID TYPE 2	99999
	FLUID TYPE 3	99999
	FLUID TYPE 4	99999
PAUL GREEN	FLUID TYPE 5	99999
	FLUID TYPE 6	99999
	FLUID TYPE 7	99999
	FLUID TYPE 8	99999
(...)		

**Product Report (PRO)**

DD/MMM/YYYY STATISTICAL REPORT BY PRODUCT HH:MI

PRODUCT	USER	QTY
=====	=====	=====
FLUID TYPE 1	JOHN SMITH	99999
	PAUL GREEN	99999
FLUID TYPE 2	JOHN SMITH	99999
	PAUL GREEN	99999
FLUID TYPE 3	JOHN SMITH	99999
	PAUL GREEN	99999
(...)		

**Hose/Meter Report (HOS)**

DD/MMM/YYYY STATISTICAL REPORT BY RF METER HH:MI

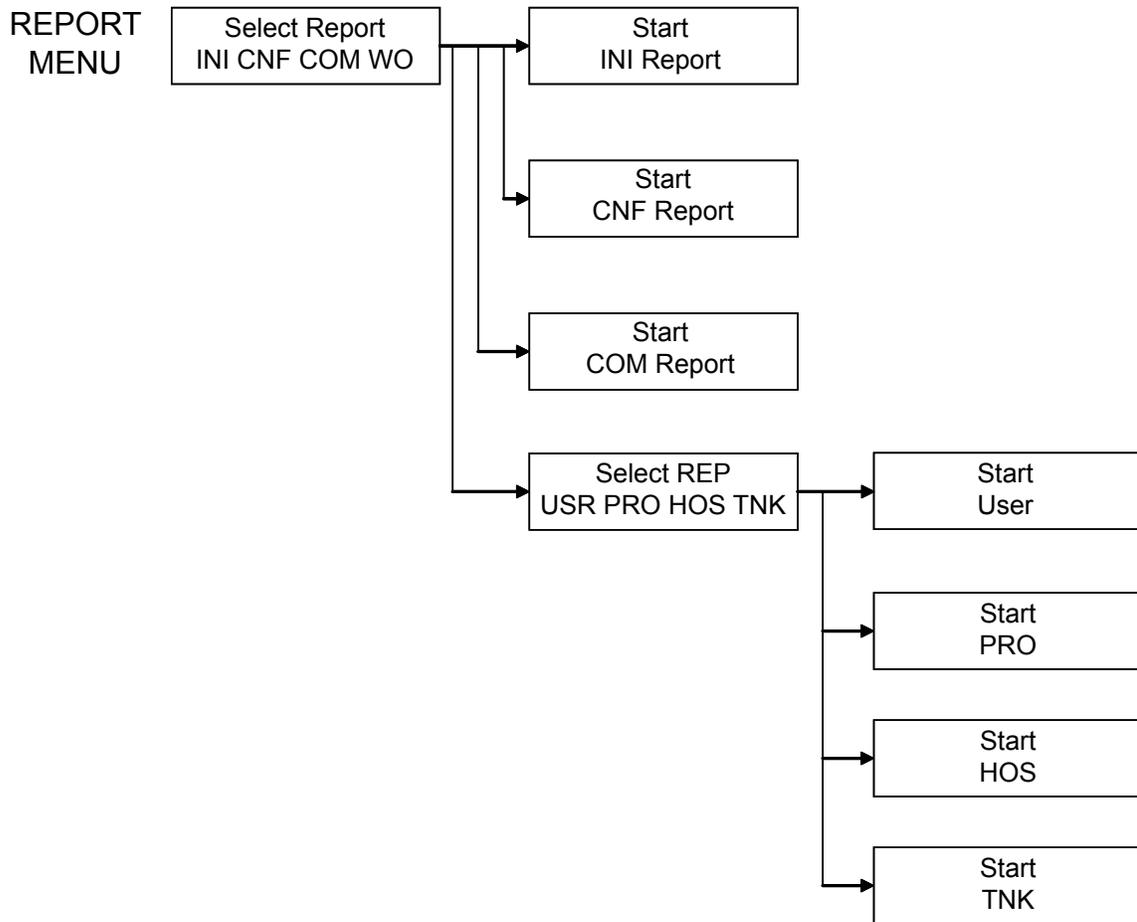
ADDR	ID	USER	QTY
=====	===	=====	=====
123456	456	JOHN SMITH	99999
		PAUL GREEN	99999
234561	561	JOHN SMITH	99999
		PAUL GREEN	99999
(...)			

**Tank Report (TNK)**

DD/MMM/YYYY STATISTICAL REPORT TANK LEVEL HH:MI

TNK	PRODUCT	LEVEL	UNT
=====	=====	=====	=====
1	5W30 OIL	123	LITERS
2	GEAR OIL	1111	LITERS
3	ATF 111	11111	GALLONS
4	HYDRAULIC FLUID	232	QUARTS
5	10W40 OIL	3466	PINTS
6	WASHER FLUID	1	LITERS
7	5W40 OIL	2344	LITERS
8	BEER	43234	PINTS

## Report Menu Flowchart (Requires External Printer)



**NOTE:** *It is recommended that the Supervisor print all internal reports and store hard copies after setting up the system.*

## Keypad Test Program

1. Unplug the keypad
2. Hold down 1 and 2 on the keypad while plugging in the keypad
3. "LCD Test Validate?" appears. Press the check mark 
4. FT 190 Test. Press the check mark 
5. Keyboard test Press Key no 1. Press the number 1 key
6. Keyboard test Press Key no 7. Press the number 6 key
7. Keyboard test Press Key no 12. Press backspace 
8. Keyboard test Press Key no 14. Press the number 0 key
9. Buzzer test validate. Press check mark 
10. LX-300+ test validate. Press check mark 
11. RF card test, please wait. Wait
12. Turn off the mains 10s. Unplug the keypad for 10 seconds
13. Plug the keypad in after 10 seconds
14. Date Hour validate. Press check mark 
15. End Test Passed

Unplug the keypad for 10 seconds. When the keypad is plugged back in the message, "Switch on for the first time" appears on screen for about five (5) seconds. Then the normal Pin number screen appears.

The system is now ready to use.

Hose number 1 is overwritten during the test procedure. This must be re-entered into the keypad. See the *Create or Delete An RF Meter* section in this manual.

**FLUID TYPE DEFINITIONS**

<b>Fluid Identification</b>	<b>Name</b>
1	
2	
3	
4	
5	
6	
7	
8	

Maximum Fluid types is 8  
The Fluid name can be 16 characters in length

## TANK DEFINITIONS

Tank Identification	Fluid Identification or Name	Tank Level	Tank Capacity
1			
2			
3			
4			
5			
6			
7			
8			

Maximum of 8 Tanks

The Tank capacity value is formatted xxxxx.xxx

## HOSE/METER DEFINITIONS

Hose/Meter Identification	Address Number x.xxx.xxx.xxx	Tank Number
1	.	.
2	.	.
3	.	.
4	.	.
5	.	.
6	.	.
7	.	.
8	.	.
9	.	.
10	.	.
11	.	.
12	.	.
13	.	.
14	.	.
15	.	.
16	.	.
17	.	.
18	.	.
19	.	.
20	.	.
21	.	.
22	.	.
23	.	.
24	.	.

Maximum of 48 Hose/Meters

Hose/Meter address is a 10 digit number

Address Data Format is x.xxx.xxx.xxx

## HOSE/METER DEFINITIONS

Hose/Meter Identification	Address Number x.xxx.xxx.xxx	Tank Number
25	.	.
26	.	.
27	.	.
28	.	.
29	.	.
30	.	.
31	.	.
32	.	.
33	.	.
34	.	.
35	.	.
36	.	.
37	.	.
38	.	.
39	.	.
40	.	.
41	.	.
42	.	.
43	.	.
44	.	.
45	.	.
46	.	.
47	.	.
48	.	.

Maximum of 48 Hose/Meters

Hose/Meter address is a 10 digit number

Address Data Format is x.xxx.xxx.xxx



Font LEDs  
 ::: Pause LED  
 :::  
 \*\* High speed draft \*\*  
 Off  
 On

\*\* I/F mode \*\*  
 Auto  
 Parallel  
 Serial

\*\* Auto I/F wait time \*\*  
 10 seconds  
 30 seconds

\*\* Baud rate \*\*  
 19200BPS  
 9600BPS  
 4800BPS  
 2400BPS  
 1200BPS  
 600BPS  
 300BPS

\*\* Parity \*\*  
 None  
 Even  
 Odd  
 Ignore

\*\* Data length \*\*  
 8bit  
 7bit

\*\* Parallel I/F bidirectional mode \*\*  
 Off  
 On

\*\* Packet mode \*\*  
 Auto  
 Off

\*\* Character table \*\*  
 Italic  
 PC 437  
 PC 850  
 PC 860  
 PC 863  
 PC 865  
 PC 861

Font LEDs  
 ::: Pause LED  
 :::

BRASCII  
 Abicom  
 Roman 8  
 ISO Latin 1  
 PC 858  
 ISO 8859-15

\*\* International character set for Italic table \*\*  
 Italic U.S.A.  
 Italic France  
 Italic Germany  
 Italic U.K.

Italic Denmark 1  
 Italic Sweden  
 Italic Italy  
 Italic Spain 1

\*\* Manual feed wait time \*\*  
 1 seconds  
 1.5 seconds  
 2 seconds  
 3 seconds

- (1) Select menu by pressing the Tear Off switch.  
Following LEDs show menu selected at that time.

```

Font LEDs
: : Pause LED
: : :
: : : ** Menu **
███  Page length for tractor
███  Skip over perforation
███  Auto tear Off
███  Auto line feed
███  Print direction
███  Software
███  0 slash
███  High speed draft
███  I/F mode
███  Auto I/F wait time
███  Baud rate
███  Parity
███  Data length
███  Parallel I/F bidirectional mode
███  Packet mode
███  Character table
███  International character set for Italic table
███  Manual feed wait time
███  Buzzer
███  Auto CR (IBM 2380 Plus)
███  IBM character table

```

- (2) Change setting value pressing the LF/FF switch.  
Following LEDs show setting value selected at that time.

- (3) Repeat (1) and (2) according to following guide printing.

<pre> Font LEDs : : Pause LED : : : : : : ** Page length for tractor ** ███  3 inch ███  3.5 inch ███  4 inch ███  5.5 inch ███  6 inch ███  7 inch ███  8 inch  ** Skip over perforation ** ███  Off ███  On  ** Auto tear Off ** ███  Off ███  On  ** Auto line feed ** ███  Off ███  On  ** Print direction ** ███  Bi-D ███  Uni-D  ** Software ** ███  ESC/P ███  IBM 2380 Plus  ** 0 slash ** ███  0 ███  ♂ </pre>	<pre> Font LEDs : : Pause LED : : : : : : ███  8.5 inch ███  11 inch ███  70/6 inch ███  12 inch ███  14 inch ███  17 inch ███  Others </pre>
--	---



## Balcrank Lubrication Equipment Warranty Statement

All Balcrank equipment sold by authorized Balcrank distributors is warranted to their original customer to be free from defects in materials and workmanship for a period of one year from the date of sale to that customer. Selected Balcrank equipment carries warranty terms for a more extended period as defined in the Balcrank Lubrication Equipment & Accessories User Price List, wherein a "lifetime" warranty represents a warranty period of thirty years. Within the initial one-year warranty period, Balcrank will repair or replace all Balcrank equipment determined by Balcrank to have defective materials or workmanship. For equipment carrying more extended warranties, Balcrank will repair or replace the product including parts and labor during the first full year and will provide parts only for the remainder of the warranty period.

This warranty applies only to equipment installed and operated according to applicable Balcrank Service Bulletins and Installation Instructions.

Any equipment claimed to be defective must be returned, freight prepaid, to an Authorized Balcrank Service Center (ASC). Upon receiving candidate warranty equipment from a customer, ASC will: 1) diagnose to determine the warrantable condition of the equipment, 2) submit, prior to repair or replacement, a request to Balcrank for warranty authorization, then 3) in cooperation with Balcrank, proceed with repair locally or forward the equipment to Balcrank and obtain replacement. If the part(s) or equipment items are found defective upon inspection by Balcrank, they will be repaired or replaced, and then will be returned to the ASC. If Balcrank finds the claimed part(s) or equipment not to be defective, the ASC will receive written authorization from the original customer, and then repair them for a reasonable charge to the customer, which will include all applicable parts, labor, and return transportation costs.

Optionally, the customer may submit certain eligible products directly to Balcrank for warranty return by using Balcrank Lubrication Equipment Direct Service Warranty Procedure. Eligible products are defined in the Balcrank Lubrication Equipment & Accessories User Price List. Refer to the Balcrank web site [www.balcrank.com](http://www.balcrank.com) for a copy.

Any equipment returned to Balcrank must have the Warranty Service Claim number (WSC#) clearly marked on the outside of the carton. Balcrank's sole responsibility is for defects in material and workmanship, and Buyer's sole and exclusive remedy hereunder, shall be limited to repair or replacement of the defective part or equipment.

This warranty does not cover, nor shall Balcrank be liable for repair or replacement of parts or equipment resulting from general wear and tear through use, or damage or failure caused by improper installation, abuse, misapplication, abrasion, corrosion, insufficient or improper maintenance, negligence, accident, alteration, or substitution of non-Balcrank parts.

Furthermore, the Warranty for Lubrication Equipment and Accessories does not cover the following specific conditions:

- Failure or damage to equipment caused by dirt or debris in compressed air lines and fluid lines. This includes, but is not limited to, clogged inlet filters, strainers, or regulators; fluid meters; control handles; fluid tips; and valves.
- Failure of normal wear parts including but not limited to: o-rings, packings, seals and valves unless originally improperly installed by the factory.
- Products placed in applications for which their use was not intended. Examples include but are not limited to Lubricant pump being used to pump solvents, or placing equipment intended strictly for indoor use outdoors
- Damage to equipment resulting from operation above and beyond Balcrank's recommendations.
- Leaks at air and fluid fittings and connections.
- Damage caused by thermal expansion whenever adequate pressure relief was not included in the system.
- Loose suction tubes on pumps.
- Incorrect hose reel spring tension, requiring adjustment.

THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL BALCRANK BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL, OR OTHER DAMAGES OF SIMILAR NATURE, INCLUDING BUT NOT LIMITED TO LOST PROFITS, LOST PRODUCTION, PROPERTY DAMAGE, PERSONAL INJURY, WHETHER SUFFERED BY BUYER OR ANY THIRD PARTY, IRRESPECTIVE OF WHETHER CLAIMS OR ACTIONS, LEGAL OR EQUITABLE, FOR SUCH DAMAGES ARE BASED UPON CONTRACTS, WARRANTY, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE. ANY CLAIM OR ACTION FOR BREACH OF WARRANTY MUST BE BROUGHT WITHIN TWO (2) YEARS FROM THE DATE OF SALE TO THE ORIGINAL CUSTOMER.

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