user manual
Total Eclipse Controller

HYDRO

a DOVER company

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Safety Precautions

⚠️ **WARNING!** Please read precautions thoroughly before operation. Meet all applicable local codes and regulations.

THANK YOU FOR YOUR INTEREST IN OUR PRODUCTS
Please use this equipment carefully and observe all warnings and cautions.

WEAR   protective clothing and eyewear when dispensing chemicals or other materials or when working in the vicinity of all chemicals, filling or emptying equipment, or changing metering tips.

ALWAYS
observe safety and handling instructions of the chemical manufacturer.
direct discharge away from you or other persons or into approved containers.
dispense cleaners and chemicals in accordance with manufacturer's instructions. Exercise CAUTION when maintaining your equipment.
reassemble equipment according to instruction procedures. Be sure all components are firmly screwed or latched into position.

KEEP   equipment clean to maintain proper operation.

1.01 System Components

1) Total Eclipse Controller, Gray (HYD01-08900-11)

The actual components delivered will depend on the configuration of the system ordered. The Total Eclipse Controller is an integral part of the Total Eclipse Chemical Management System, which also includes these components:

- Machine Interface – Accepts washer signals and converts them to safe, low-voltage inputs.

- Product Dispenser – Provides product transfer to the wash machine.

- Flush Manifold (optional) – Available for water flush chemical transfer applications.

The Total Eclipse Controller is compatible with any Hydro Laundry dispenser.

Total Eclipse Controller

1.02 Features

The Total Eclipse Chemical Management System uses technological advances to create an innovative system that adapts to the electronic and language needs of global clients. The easy-to-read, seven-line screen displays plain-text formula names, customized by language and customer. Formulas and controller setups can be programmed at the controller or with Formula Editor computer software and uploaded via a USB flash drive (16 GB or smaller) to each controller. Reports on product usage, costs per formula, system settings, and diagnostics are easily downloaded to the USB flash drive and viewed or imported into various financial software.

Designed for maximum versatility in OPL or large laundry wash machines, selectable operating logic allows operation with trigger signals from fully-programmable washers or with manually triggered signals (or cycle time extenders) from non-programmable, fixed-time washer

⚠️ **WARNING!**
The Total Eclipse Chemical Management System is intended to be installed by experienced installers, in accordance with all applicable electrical and plumbing codes.

NOTE: Always use proper lockout or tagout procedures when servicing the dispenser.

⚠️ **CAUTION!**
This manual was written and illustrated to present the basic installation, operation and servicing instructions of the Total Eclipse Chemical Management System. Guidelines are suggested in reference to the preferred method of installation, but the variety of equipment and the surrounding environment will dictate the actual installation of the Total Eclipse.

1.02 Features (continued)

Feature	Description
Maximum Formula Power	Up to 20 different formulas let you tailor your chemical requirements to each wash classification. Program the controller via the keypad or upload formulas and settings from a USB flash drive that has been programmed on a personal computer using our Formula Editor software.
Eight Product Capability	Up to eight products, each with three dispense amounts (A, B, and C) and a delay, may be connected. The maximum dispense amount is 99.99 oz. (2999 ml.).
Compatibility	Use with components from earlier Hydro laundry systems or adapt to future updates by adding modular components and loading updated software at the customer's site.
Easiest Operation	User-friendly, large screen display offers seven lines of text and customized formula and product names. Setting, formula, and production information are retained even when controller is powered off. Two pre-installed languages are standard (English plus another, based upon area of sales). Language choices may include Spanish, French, Portuguese, German, and Swedish. All operating and programming menus are in the installer-selected language.
Product and Formula Names	Add names to the pre-numbered products and formulas for operator's ease of formula selection. Formula and product names can differ from the controller's primary menu language, offering the ability to tailor menu names to the operator's language.
Data Reporting	Reports include Productivity Report (total logged load counts, weights and chemical costs by formula); Formula Report (formula setups with dispense amounts and delays); Settings Report (controller settings, except formulas), and Diagnostic Report (amounts dispensed, number of User Primes).
Auto Formula Select (AFS)	When used with a fully-programmable, microprocessor-controlled washer, the washer uses a timed signal to automatically select the chemical formula.
Three Calibration Methods	Calibrate by time, volume, or manually to accommodate different dispenser types and installation configurations.
Flush Interlock	Optional flush manifold (with flow switch) shuts off the dispenser if water flow falls below 0.65 gallons per minute (GPM).
Security	Formula programming and data reporting are password-protected. A real-time clock is set with a date and time stamp upon startup.
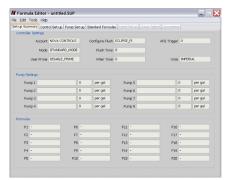
1.03 Formula Editor

The optional Formula Editor reduces installation time and cost by allowing an off-site technician to create a set of efficient and cost-effective settings and formulas on a personal computer.

An installer can load these Setup Files (via a USB flash drive) to multiple Total Eclipse installations. With the Formula Editor, up to 20 industry-specific formulas can be quickly created and managed as part of a cohesive chemical program.

Take a Setup File (Formulas and Settings that were created with Formula Editor software on a computer or read from a Total Eclipse controller) and write the Setup File to another Total Eclipse controller via a USB flash drive.

Another use for the USB Flash drive is to read reports from the controller and view them on a computer.

1.04 Operation

The Machine Interface (MI) receives supply signals from the laundry machine at pre-determined times in the wash formula. The MI sends these signals to the Total Eclipse controller.
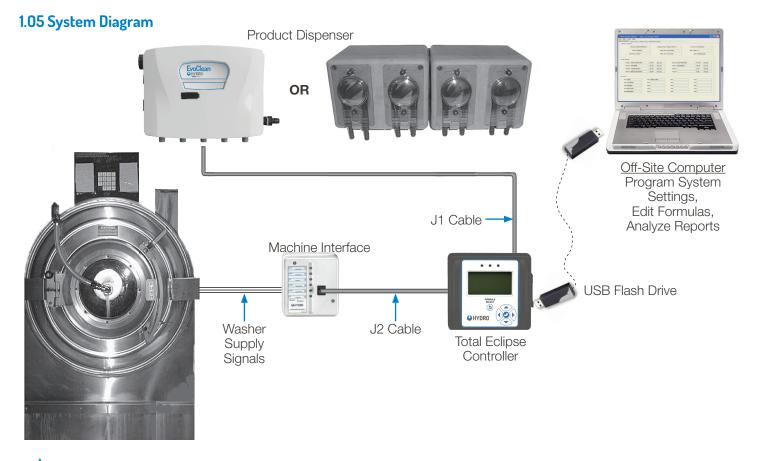
The controller functions are governed by the Operation Mode selected, the features enabled, and the formula rules. In most modes, the laundry operator can change the formula or load size, according to the load type.

The controller activates the dispenser to inject specific products, based on the "supply signals" from the laundry machine for completely automatic control of each product delivery.

The MI is installed near the laundry machine control wiring area, often to the exterior of the laundry machine, and can accept supply signal voltages ranging from 24-240VAC or from 22-24VDC.

The various product dispensers operate on either 115VAC at 60 Hz, 220VAC at 60Hz, or 230VAC at 50 Hz. The product dispenser is also what supplies the low voltage power to the controller and provides an interface for the optional flush manifold.

A Flush Manifold (optional for pumpstands) provides a way of using a water flush to transfer product to the laundry machine.

1.05 System Diagram

Product Dispenser

OR

Off-Site Computer
Program System Settings,
Edit Formulas,
Analyze Reports

J1 Cable

Machine Interface

USB Flash Drive

Washer
Supply
Signals

J2 Cable

Total Eclipse
Controller

NOTE! As the traditional product dispensers have been pumps, some standard terms such as "Count Pump" and "Pump Interface" are used in this document, even though you may be using an eductor dispenser (such as EvoClean).

1.06 Modes of Operation

Each operating mode has a different combination of rules for creating and editing settings. These rules affect subsequent dispensing. When selecting a Mode of Operation, consider both the type and capabilities of the laundry machine and the variety of linen to be washed. Use the following table to compare modes. Read the following section for a detailed explanation of each Operating Mode and the accompanying feature.

(continued)

1.06 Modes of Operation (continued)

Operation Mode	Count Pump	Cycle Time Limit	AFS [1]	8 Products	Simultaneous Run (Non-Flush)
Standard	Yes (selectable)	Yes	Yes	Yes [2]	Up to 6 products
Relay	Fixed (product)	No	No	No	Up to 6 products
Event [3]	No	No	Yes	Yes	Up to 3 products
Group	Yes (selectable)	Yes = Group Interlock Time	Yes	Yes	Up to 6 products (if two Groups triggered simultaneously)
Occurrence [4]	Yes (selectable)	Yes	Yes	Yes	Up to 3 products

1- AFS is intended for use with fully-programmable, microprocessor-controller laundry machines.

2- 8-Product control is allowed, but products 3 and 7 are linked to each other, as are products 5 and 8 linked to each other.

3- Event Mode is designed to work with fixed-cycle washers.

4- Occurrence Mode is best suited for laundry machines in which trigger signals do not have specific functions.

1.07 Standard Mode (default)

The most common mode used for North American installations, Standard Mode allows the operator to quickly select a formula from a list of formulas. A formula can include up to 8 products, each with three possible programmable amounts (A, B, and C amount). Each washer trigger signal notifies the corresponding product to dispense the set amount (i.e. trigger 1 starts product 1, trigger 2 starts product 2, etc.). All amounts and delays are based on the currently selected formula. Non-flush systems can dispense up to six (6) products simultaneously. Please note that eductor dispensers have a built-in flush manifold, always utilize flush and cannot dispense products simultaneously.

Standard Mode is the only mode that features Auto-Formula Select via the AFS Trigger. When using an 8-product pump interface (PI) this mode links products 3 and 7 to each other and links products 5 and 8 to each other. (See also: "Formula Rules" on page 13 for dispensing rules and exceptions.)

1.08 Relay Mode

The Relay Mode is designed for use with programmable laundry machines and allows the washer's trigger signals to directly control the amount of chemicals dispensed. Products dispense for the duration of the trigger signal, after being qualified by the Signal Filter Time. Trigger 1 runs product 1, trigger 2 runs product 2, etc. Relay Mode does not use the formula settings, other than Default Load Weight (or Actual) for reports. It does not use Cycle Time.

If Flush is enabled in Relay Mode, any products attempting to run simultaneously will automatically be run in a queue with a 2 second pre-flush between each product run and the post-flush after all queued products have run.

To use Relay Mode:

• Go to Installer Menu > Initial System Setup > Operation Mode and select Relay Mode.
• Go to Installer Menu > Installer Service > Service Products > Calibration to calibrate products.
• Go to Installer Menu > Program Formulas > F01 > Set Default Weight and set a Load Size for F01 (Formula 1).

No other programming is needed.

1.09 Event Mode

The Event Mode option allows automatic operation of washers that offer no supply trigger connections, such as fixed-cycle washers. Product dispensing is paced by machine events, rather than fixed-time as in Standard Mode. Four trigger signals are used. The typical connections are:

Trigger 1	Power on signal: Washer Door Switch (Wash Cycle Indication)
Trigger 2 and/or 3	Fill signal: Hot or Cold (Triggers Dispensing)
Trigger 4	Drain (Concludes one Event and allows another Event to occur.)
Trigger 5 and 6	- Not used in this mode. -

1.10 Event Mode Rules

Up to 16 Events can be programmed, and up to 3 products (each with A, B, and C amounts) may be added to an Event.

A product can only be used once per Event, but the same product can be used in multiple Events. If a product is used in more than one Event, the A amount dispenses in the first Event in which the product is used, the B amount dispenses in the second Event in which the product is used, and the C amount dispenses in the third (and all subsequent Events) in which that product is used. If there is no C amount, there will be a maximum of two (2) runs per wash cycle for that product. No Count Pump is used in Event Mode, nor is Cycle Time used. Non-flush systems can start up to three products simultaneously.

1.11 Group Mode

In the Group Mode option, the six trigger signals are placed into four, pre-defined groups (see the following table). Between 0 and 3 products may be assigned to each group. A product may be used in more than one group. The trigger signals determine which group of products dispense their programmed formula amounts, and in which order. All dispensed amounts and delays are based upon the currently selected formula.

Group	Trigger Signal Inputs
Group 1	Trigger 1 and / or 2
Group 2	Trigger 3 and / or 4
Group 3	Trigger 5
Group 4	Trigger 6

1.12 Group Interlock Rules

If a group is set to run more than once per wash cycle, Group Interlock must be OFF and all products within the group must fully run to allow repeat activation of the group when it receives the trigger signal.

When Group Interlock is ON: A group can only run once per wash cycle (regardless of the number of triggers received) and there is a 5-minute lockout period after the Count Pump runs. During lockout, trigger signals are ignored.

When Group Interlock is ON, the wash cycle ends either five (5) minutes after the count pump has run or when the programmed Cycle Time is reached, whichever occurs first.

When Group Interlock is OFF: A group can run more than once per load.

When Group Interlock is OFF, the cycle ends immediately after the count pump has run or when the programmed Cycle Time is reached, whichever occurs first.

Non-Flush systems can run up to 6 products simultaneously if two groups are triggered simultaneously and each group has 3 products assigned.
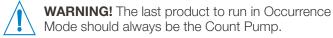
1.13 Occurrence Mode

Occurrence Mode is best suited for washers in which trigger signals do not have a specific function. Any qualified trigger (1–6) will start an Occurrence. Each new qualified signal, on any trigger, signifies a new Occurrence within the current wash cycle; triggers occurring with two seconds of each other are considered one Occurrence. The first trigger starts Occurrence 1, the second trigger starts Occurrence 2, and so forth.

Up to 16 occurrences can be programmed, with up to 3 products dispensing per occurrence. All dispensed amounts and delays are based upon the currently selected formula. If there is no product assigned to an occurrence, nothing is dispensed and the occurrence acts as a "space holder."

Occurrence Mode differs from Event Mode in the following ways:

WARNING! The last product to run in Occurrence Mode should always be the Count Pump.

- The wash cycle begins when the first product is dispensed.
- A qualified signal from any trigger signal initiates an Occurrence.
- There is no specific wash cycle indication. A wash cycle ends after the Count Pump runs, or when the programmed Cycle Time is reached, whichever occurs first.

2.00 features and options

The following features and options, which may be set during the Initial System Setup, affect the product dispensing sequence in conjunction with the chosen mode of operation.

2.01 Auto Formula Select (AFS)

AFS is only available when operating in Standard Mode. AFS allows the installer to choose a trigger signal that will select and run any programmed formula using a timed signal. The AFS signal does not need to be qualified by a Filter Time when it is selecting a formula. After a formula has begun, the trigger chosen for AFS may also be used as a product trigger, which must then be qualified by the Filter Time before the dispense will occur. The AFS trigger should not be a trigger signal that starts or ends a formula. (The first product triggered starts the formula and the Count Pump ends the formula.) The AFS trigger signal must occur before a wash cycle begins or after a wash cycle has ended, not while a formula is running. The washer supply signal must be programmed for a total of 2 seconds multiplied by the desired formula, for example:

a 2-second signal = Formula 01 ... a 4-second signal = Formula 02 ... a 6-second signal = Formula 03 ...

When AFS begins, the controller displays "SELECTING F[##]." Every two seconds, the next formula number [##] displays, until such time as the signal ends, at which point the selected formula is displayed again (e.g. if the washer supply signal is set for 20 seconds, F10 WHITE SHEETS is selected to run and displays on the Home Screen).

2.02 Count Pump

In all Modes of Operation (except Event Mode), a Count Pump is used to determine when the wash cycle is completed. The system records a complete wash cycle after all programmed amounts for the Count Pump are dispensed. In Event Mode, a sequence that begins with Trigger 1 ON and ends with Trigger 1 OFF indicates a complete wash cycle and counts as one load. In Relay Mode, the Count Pump is fixed as Product 1. In Standard, Occurrence, and Group Modes, the default Count Pump is the highest number for which an amount is programmed. In these three modes, the default Count Pump may be overridden by the installer, who may select a Count Pump other than the default. The Count Pump can correctly register a load only if the following three conditions are met:

- At least one amount is programmed for the Count Pump.
- The Count Pump must be the last to run.
- The Count Pump is requested to run for all programmed amounts (Standard, Group, or Occurrence modes). If two or three amounts have been assigned to the Count Pump, it must be requested to run at least two or three times, respectively.

2.03 Cycle Time (Standard, Group or Occurrence Modes ONLY)

Cycle Time acts as a backup shut off to ensure that the cycle ends and product is not wasted in the event of a formula run error. At the Cycle Time limit, the wash cycle stops, even if the Count Pump has not yet run. In Group Mode, the setting for Cycle Time is also used as the Group Interlock time.

Cycle Time should be set to at least 5 minutes longer than longest estimated time that any wash cycle will run. Cycle Time can be set to 00 (OFF), or between 30 – 99 minutes. The default is 90 minutes. For loads (such as a soak load) that typically last longer than 99 minutes, it is recommended that the Cycle Time be set to 00 (OFF).

NOTE: If Cycle Time is set to 00 (OFF), the Count Pump must run in order to end the wash cycle.

2.04 Flush Operation (ONLY for a flush-compatible PI NOTE: Eductor PI's are flush-compatible.)

Flush prevents incompatible chemicals from combining. When a flush-compatible Pump Interface (PI) is selected during Initial Set-up, flush can be enabled by setting a Flush Time, up to 99 seconds. For all flush compatible PI's (except eductor PI's) if the Flush Time is set to zero (0), flush is disabled. For eductor PI's the allowable flush time range is 10 to 99 seconds.

When Flush is enabled:

Only one product can be dispensed at a time. If there is a request for multiple products to dispense at the same time, a flush-enabled system causes each product to dispense sequentially. (See also "Trigger Spacing and Product Queue" on page 7.)

- A fixed, 2 second pre-flush occurs before the product dispenses.
- Flush occurs continuously for the entire time the product is dispensing.

2.05 Non-Flush Operation

Allows from three to six products to run simultaneously, depending upon the Mode of Operation selected. Systems using an eductor dispenser, which always uses flush, cannot run products simultaneously.

2.06 Formula

A formula specifies which product dispenses and in what order when a trigger signal is received. In Modes of Operations that use formulas (Standard, Event, Group, and Occurrence), a product may be set to dispense multiple times, with up to three different amounts (identified as Amounts A, B and C) and a delay. A product will only dispense when at least one amount (not zero) is set. A formula may also establish a default load weight, a name that is added to the formula number and, in some Operation Modes, the Count Pump number.

2.07 Formula Rules

If only the A amount is programmed for a product in a formula, the first request results in the dispensing of Amount A. Additional requests within the same wash cycle are ignored.

If only A and B amounts are programmed for a product in a formula, the first request results in the dispensing of Amount A and the second request results in the dispensing of Amount B. Additional requests (after the second request) are ignored.

If all three amounts (A, B, and C) are programmed for a product in a formula, the first request results in the dispensing of Amount A, the second request results in the dispensing of Amount B and the third request results in the dispensing of Amount C. Subsequent requests (after the third) result in the dispensing of Amount C. The dispensing sequence is reset when the wash cycle ends.

2.08 Trigger Spacing and Product Queue

Products can be triggered to dispense in several different ways, depending on the Mode of Operation. If a trigger for a product to run occurs and the product is already dispensing, the trigger is ignored. In Occurrence, Event, or Group mode, this could result in not running some or all of the products called for by a trigger signal.

With a Pump Interface (PI) with Flush enabled, different products that attempt to run simultaneously are placed in a queue and then dispense in sequence. A product is added to the queue whenever there is a valid trigger for it, as long as it is not currently running and is not already in the queue. The queue allows for up to 7 products (other than the currently dispensing product), to be "queued up" (waiting to dispense in sequence).

NOTE: It is imperative that the installer allow plenty of time between triggers to ensure that a product (or group of products) will dispense for each of its triggers.

2.09 Trigger Signal Filter Time

Signal filter time is the amount of time that a trigger must remain continuously ON before being recognized as a qualified trigger and starting the dispense. The factory default time is 2 seconds. Longer times (10, 20, 30, 60 or 90 seconds) may be set if washers present problems, i.e., unreliable signals falsely triggering dispenses. The Auto Formula Select (AFS) signal does not use a signal filter time.

2.10 8-Pump Interface

Regardless of the selected Mode of Operation or the Flush setting, products 3 and 7 and products 5 and 8 cannot run simultaneously on an 8-Pump Interface. They can be requested to run at the same time, but they will run sequentially, based on the Mode of Operation, product order, or delays set.

In Standard Mode, products 3 and 7 are triggered by the same trigger signal, Trigger 3. Products 5 and 8 are also triggered by the same trigger signal, Trigger 5.

If Amounts A, B, and C are programmed for both product 3 and product 7, then on the first instance of Trigger 3, product 3 Amount A will dispense and then product 7 Amount A will dispense. On the second instance of Trigger 3, product 3 Amount B will dispense and then product 7 Amount B, and so on.

2.00 features and options (continued)

2.11 Acronyms and Abbreviations

The following is an alphabetized list of Acronyms and Abbreviations (with definitions) that are found in the Total Eclipse controller and/or in this Installation, Programming, and Operation manual.

Acronym / Abbreviation	Definition
CALIB	Calibration
E1	Event Number One
F01	Formula Number One
FAT or FAT32	Formatting Needed on USB Flash Drive
G1	Group Number One
GAL	Gallon
GPM	Gallons per Minute
ID	Identifying Number of Software
INSTL	Installer (used in INSTL PASSWORD)
KG	Kilogram
LB	Pounds
L	Liters
LCD	Display Screen on Total Eclipse Controller
LNG	Total Eclipse Controller Language File
MAX	Maximum
MGR	Manager (used in MGR PASSWORD)
MI	Machine Interface
Min	Minutes
ML	Millileters
O1	Occurrence Number One
OZ	Ounces
PI	Pump Interface
P1	Product Number One
P1A - P1B - P1C	Product Number One, "A" Amount - Product Number One, "B" Amount - Product Number One, "C" Amount
PROPERTIES	Formula Editor Language File
SAE	United States Units of Measurement (OZ, LB, GAL)
SEC	Seconds
SUP	Setup File

3.00 installation
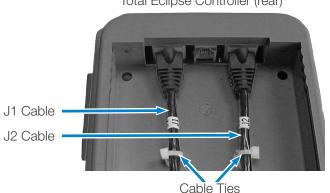
3.01 Machine Interface Installation

1) Route MI signal wires through 1/2 inch knock-out on washer (within the wiring area). Use lock nut on MI 1/2 inch nipple to secure MI to washer.

Machine Interface (MI)

Front   Rear

J2 Cable Connection   Lock Nut   Signal Wires

2) Connect cable marked J2 into Machine Interface. Bundle excess J2 cable outside washer and connect other end to the connector labeled J2 on the rear of the Controller.

3) Connect cable marked J1 from the dispense module to the connector labeled J1 on the Controller.

4) For additional cable strain relief, secure J1 and J2 cables to controller tie-down posts with cable ties (aka tie wraps, zip ties).

Total Eclipse Controller (rear)

J1 Cable

J2 Cable

Cable Ties

3.02 Signal Wire Installation

The Machine Interface will work with any signal voltage between 24 – 240VAC or 22 – 24VDC. With DC signals, polarity must be observed, where common connects to negative. The signals must be positive voltages.

Supply Trigger Wiring:

1) Identify the washer supply signals. Check with technical service or with the washer manufacturer if you are not sure of the connections.

2) Identify the Mode of Operation to be used. Use appropriate terminal connectors to connect the signal wires to the Machine Interface wires, based upon the table on the next page.

WARNING! The Total Eclipse controller is intended to be installed by a qualified technician only, in accordance with all applicable electrical and plumbing codes.

DISCONNECT POWER to the laundry machine and dispenser during installation and/ or any time the dispenser cabinet is opened.

WARNING! Keep the Machine Interface and the communication cables away from high voltage wires and relays. NEVER run the J1 and J2 cables parallel with high voltage lines.

NOTE: This manual describes only the installation and programming of the Total Eclipse Controller, which is a portion of the Total Eclipse Chemical Management System. Please refer to the reference manual included with your dispenser or upgrade kit for additional instructions.

Electrical wiring connections for supply triggers are to be done inside the supply junction box. (See A."Supply Trigger Wiring" on page 10) for connection information.)

NOTE: The maximum distance for the J1 cable from the product dispenser to the controller is 75 feet.

"J" cables are available in 15 and 30 foot lengths. A coupler is available to join cables together for longer distances under 75 feet.

"J" cable runs longer than 75 feet require the use of break out boxes and hard wiring. Contact Hydro Systems Co. for details.

WARNING! Always verify all voltage sources with a voltage meter.

DISCONNECT POWER to the laundry machine and dispenser during installation and/ or any time the dispenser cabinet is opened.

3.03 Supply Trigger Wiring

Supply Trigger Wiring by Operation Mode

Trigger	Supply Signal	Signal Common	Connect by Operating Mode to: Standard or Relay	Group	Event	Occurrence
Signal 1	Black Wire	White&Black Wire	Product 1	Group 1	Washer "On" Signal	Only 1or 2 signals need to be connected, because any signal, on any trigger, will be an occurrence. Connect one trigger to the Drain Valve OR one trigger to each Hot and Cold Water Valve, if the drain valve solenoid is not accessible.
Signal 2	Brown Wire	White&Brown Wire	Product 2	Group 1	Washer Hot OR Cold Valve	
Signal 3	Red Wire	White&Red Wire	Product 3	Group 2	Washer Cold OR Hot Valve	
Signal 4	Orange Wire	White&Orange Wire	Product 4	Group 2	Washer Drain Valve	
Signal 5	Yellow Wire	White&Yellow Wire	Product 5	Group 3	(not used)	
Signal 6	Blue Wire	White&Blue Wire	Product 6	Group 4	(not used)	

3.04 Trigger Signal Wiring Notes

- If one or more product signals are not used, they do not need to be connected.
- If you are triggering more than one product from a single signal, connect all of the Machine Interface signal wires for those products to that signal.
- Protect any unused wire with a wire nut. If the washer has only a single common, wire nut all the common wires together.
- One of the 6 LEDs on the Machine Interface will light up when the corresponding valid signal is received.
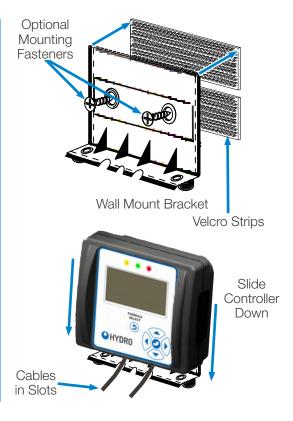
3.05 Total Eclipse Controller Mounting

The Total Eclipse controller may be mounted either horizontally (such as on top of the washer) or vertically (such as on the front of the washer).

Mount the unit using the self-adhesive strips provided, or for added security, you may use nuts and Allen bolts or other fasteners (provided) as is appropriate to the mounting surface.

1) Position the controller for easy access to the keypad and display screen.

2) Mark a mounting location that is on, or close to, the washer. The mounting surface must be clean and dry.

3) Join the four Velcro-style strips firmly together to form two pair.

4) Peel backing from one strip of each pair and place, adhesive-side down, in each recess on the mounting bracket. Press firmly for good adhesion.

5) Peel backing from opposite strips and press mounting bracket onto smooth, clean surface (use alcohol wipe, if needed) at marked location.

6) With cables connected, slide controller front down onto mounting bracket (controller back), guiding cables into slots and pressing down firmly until front and back snap into place.

Optional Mounting Fasteners

Wall Mount Bracket

Velcro Strips

Slide Controller Down

Cables in Slots

3.06 Set Operating Language, Date & Time on Start-Up
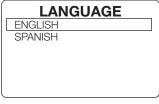
After all electrical, plumbing, and mechanical installation is complete, apply power to the Total Eclipse Controller. At the first power up, the LANGUAGE menu follows the splash screen to allow menu language selection. Choose one of the menu languages that are pre-installed in each controller (English or Spanish for the Americas; English or German in the EU]; or download additional Total Eclipse Controller menu language files from the Hydro Systems website to a USB flash drive. Installing a language from a USB flash drive to a controller can only replace the non-English menu language in the controller as the English language option is permanently installed.

3.07 Select Operating Language

1) Move the selection box, using the Up / Down arrow keys, ⬆⬇ until it frames your desired language (US controller defaults shown below).

(Optional) To replace the non-English language with a different language connect a USB flash drive containing the downloaded languages to USB port "A" (the lower USB port on the controller's right side). Available languages will appear for selection.

2) Press the Enter key ⏎ to select the operating language and launch the DATE & TIME menu.

LANGUAGE
ENGLISH
SPANISH

US Default Language Menu

LANGUAGE
ENGLISH
SPANISH
FRANCAIS
DEUTSCH
SVENSKA
PORTUGUESE

With USB Language Drive

3.08 Changing Operating Language After First Power Up

1) Shut off power to Total Eclipse by unplugging the J1 cable or shutting off dispenser power switch. (Settings and logged data are retained.)

2) Connect a USB flash drive and restore power. The LANGUAGE menu will appear. Select the other operating language on the controller, or select a different language file that may be contained on the USB flash drive. Formulas and setup information (operating mode, calibration, etc.) are retained when a operating language is changed. Custom formula and product names are not translated when a change is made to the operating language.

3.09 Setting the Date and Time

After setting the operating language on the first power-up from the factory, or whenever the controller is powered up afterward, the DATE & TIME menu is displayed.

When installing the controller, you **must** change the Date and Time to the current date and time, as this controls the data contained in reports.

The display is in ISO 8601 standard format: **YYYY-MM-DD HH:MM** (Year-Month-Day Hour:Minute). The clock is a 24-hour clock, with no AM/PM setting. Once set, the date and time (real-time clock) are retained by battery power if the main power is turned off or if there is a power failure.

Setting the Date and Time:

1) ⬆⬇ The first number of the year is selected as the active digit, indicated by the double-arrow cursor.

2) ⬆⬇ You can change the value of the active digit by pressing the Up / Down arrow keys.

3) ▶◀ To move to the next digit, press the Right arrow key. To backspace, press the Left arrow key.

4) ⏎ When the correct date and time are displayed, press the Enter key to save the settings and launch the Total Eclipse Home Screen. (See section 5.02 Home Screen on page 20 for more information.)

Note: ↩ To exit the Date & Time menu without saving changes and move to the Home Screen, press the Exit key. Also, the display will automatically exit the Date & Time menu if no keys are pressed for 15 seconds, without saving changes.

DATE & TIME
▲
2018-07-28   17:06
▼
YYYY-MM-DD   HH:MM
⏎ OK   ↩ EXIT
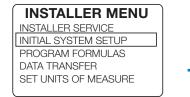
3.00 installation (continued)
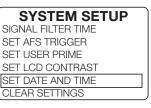
3.10 Setting the Date and Time After Initial Power-Up

Moving to the DATE & TIME Menu:

1) From the INSTALLER MENU, select INITIAL SYSTEM SETUP, and press the Enter key. The SYSTEM SETUP menu will be displayed.

2) Move the selection box to SET DATE AND TIME and press the Enter key. The DATE & TIME menu will be displayed.

3) Follow the steps at the bottom of the previous page "Setting the Date and Time:".

INSTALLER MENU
INSTALLER SERVICE
INITIAL SYSTEM SETUP
PROGRAM FORMULAS
DATA TRANSFER
SET UNITS OF MEASURE

SYSTEM SETUP
SIGNAL FILTER TIME
SET AFS TRIGGER
SET USER PRIME
SET LCD CONTRAST
SET DATE AND TIME
CLEAR SETTINGS

DATE & TIME

▲
2018-07-28   17:06
▼

YYYY-MM-DD   HH:MM

OK   EXIT

4.00 controls
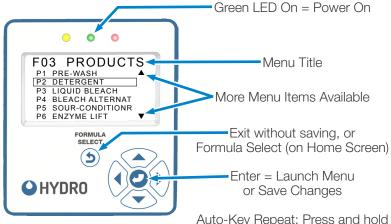
4.01 Overview

The Total Eclipse Controller's back-lit screen displays seven lines of text, with on-screen prompts, in the operating language selected by the installer.

A green LED indicates power is on. The six-button keypad is used by the machine operator for formula selection and modification during normal operation; and by the installer during installation, service, and data transfer.

The USB port accepts a Type-A USB flash drive (16 GB or smaller). It is used to read and write formulas and settings between the flash drive and the controller. It is also used to write Summary Reports from the controller to the USB flash drive. In addition, it may also be used to install future firmware updates.

4.02 Menu Navigation

Green LED On = Power On

F03 PRODUCTS
P1 PRE-WASH
P2 DETERGENT
P3 LIQUID BLEACH
P4 BLEACH ALTERNAT
P5 SOUR-CONDITIONR
P6 ENZYME LIFT

FORMULA SELECT

HYDRO

Menu Title

More Menu Items Available

Exit without saving, or Formula Select (on Home Screen)

Enter = Launch Menu or Save Changes
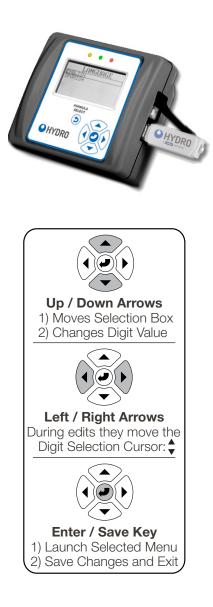
Auto-Key Repeat: Press and hold any key to repeat key press

NOTE: Press the Enter ⏎ key to **save** your setting changes and return to a previous menu.

Press the Exit ↺ key to **cancel** changes without saving, and return to a previous menu.

Up / Down Arrows
1) Moves Selection Box
2) Changes Digit Value

Left / Right Arrows
During edits they move the Digit Selection Cursor: ▲▼

Enter / Save Key
1) Launch Selected Menu
2) Save Changes and Exit

5.00 operator menus
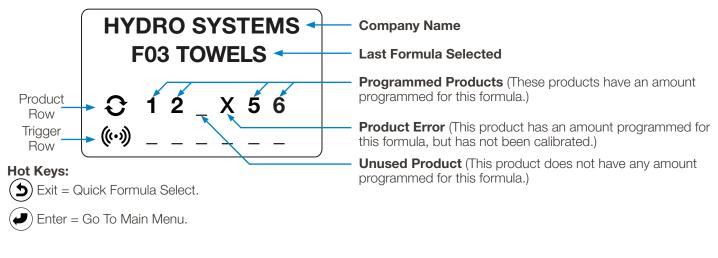
5.01 Keys and Menu Symbols

Button / Symbol	Operator Menus	Installer Menus
1) Enter a Menu 2) OK 3) Start 4) Stop	• Select Menu Item. • Save Changes. • Start or Stop Prime or Flush.	• Select an item with screen prompt "OK". • Save Changes and exit menu. • Start or Stop an Action.
1) Exit Menu (without saving changes) 2) Formula Select	• Return to Previous Menu (changes not saved). • Press & HOLD to return to Home Screen (changes not saved). • Jump to select formula from list of formulas.	• Exit to Previous Menu (changes not saved). • Press & HOLD to return to Home Screen (changes not saved).
Up / Down Arrows	• Move Selection Box to menu item. • Change Load Weight (change digit value). • Enter Password (change digit value).	• Move Selection Box to menu item. • Edit numbers (0-9), letters (A-Z), hyphen (-), underscore (_), or space.
Left / Right Arrows	• Move Digit Selection Cursor left and right.	• Move Digit Selection Cursor left and right.
Selection Box	• Indicates Formula that will be selected. • Indicates Menu that will be launched.	• Indicates Menu that will be launched. • Indicates Menu Item that will be selected. • Indicates Product or Formula that will be edited.
2 — Digit Selection Cursor	• Indicates the digit that you can edit.	• Indicates the digit that you can edit.
Scroll Arrows (additional items available)	• Indicates additional menu items are off-screen. (Use Up / Down Arrow keys to see the items.)	• Indicates additional menu items are off-screen. (Use Up / Down Arrow keys to see the items.)
Product Dispensing Row Icon (On Home Screen)	• Identifies row where Product Dispensing shown. (On Home Screen)	• Identifies row where Product Dispensing shown. (On Home Screen)
Trigger Signal Row Icon (On Home Screen)	• Identifies row where Trigger Signals are shown. (On Home Screen)	• Identifies row where Trigger Signals are shown. (On Home Screen)
Product Dispensing (when flush disabled)	• Black bars moving left to right indicate product being dispensed or priming (when flush disabled).	• Black bars moving left to right indicate product being calibrated or priming (when flush disabled).
Product Dispensing (when flush enabled)	• White bars moving left to right indicate product being dispensed or priming (when flush enabled).	• White bars moving left to right indicate product being calibrated or priming (when flush enabled).
Flushing Only	• Solid black bar indicates flushing only.	• Solid black bar indicates pre-flush before dispensing.

	Operator Menus allow the Operator to:
	• View Current Formula Information.
	• Select the Formula to Run.
	• View or Change Load Weight (One Cycle).
	• Stop Dispensing in an Emergency.
	• Prime Products (if priming is enabled).
	• Manually Flush.
	• Write Manager Reports (password protected).
		Installer Menus allow the Installer to:
		• Perform Initial System Setup.
		• Program and Name Formulas.
		• Name Products and Calibrate Dispensing.
		• Set Mode of Operation.
		• Configure Flush.
		• Perform Periodic Service.
		• Use Transfer Data Menu:
		  1) Write Reports to USB Drive.
		  2) Transfer Formulas and Settings to USB Drive.
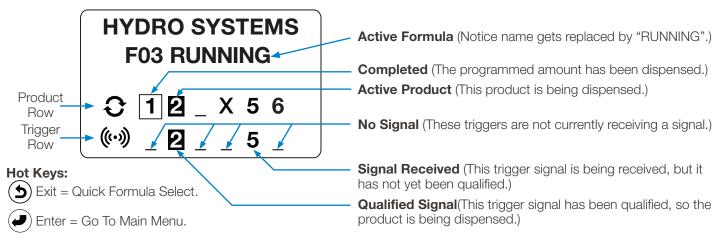
5.02 Home Screen

The Home Screen appears after the controller language has been selected (See section 3.06 Set Operating Language, Date & Time on Start-Up on page 14 for more information) or whenever the controller is active.

Home Screen: (Idle - No formula running.)

HYDRO SYSTEMS ← **Company Name**

F03 TOWELS ← **Last Formula Selected**

Programmed Products (These products have an amount programmed for this formula.)

Product Row → ↻ **1 2 _ X 5 6**

Product Error (This product has an amount programmed for this formula, but has not been calibrated.)

Trigger Row → ((•)) **_ _ _ _ _ _**

Unused Product (This product does not have any amount programmed for this formula.)

Hot Keys:

↺ Exit = Quick Formula Select.

↵ Enter = Go To Main Menu.

Home Screen: (Active - Formula running.)

HYDRO SYSTEMS

F03 RUNNING ← **Active Formula** (Notice name gets replaced by "RUNNING".)

Completed (The programmed amount has been dispensed.)
Active Product (This product is being dispensed.)

Product Row → ↻ **[1] [2] _ X 5 6**

No Signal (These triggers are not currently receiving a signal.)

Trigger Row → ((•)) **_ [2] _ _ 5 _**

Signal Received (This trigger signal is being received, but it has not yet been qualified.)

Qualified Signal (This trigger signal has been qualified, so the product is being dispensed.)

Hot Keys:

↺ Exit = Quick Formula Select.

↵ Enter = Go To Main Menu.

5.03 Formula Quick-Select

To prevent data logging errors, the operator must select a formula before washer operation starts; and all programmed products must be triggered during the cycle.

1) ↺ From the **Home Screen** press the **Exit / Formula Select** key.

2) ▲ Press the **Up / Down Arrow** keys to move selection box to the correct formula. All formulas appear, but only formulas with ▼ programmed products are selectable.

3) ↵ Press the **Enter** key to select the formula and return to the **Home Screen**, which will display the new formula selected.

4) ↵ (Optional) Press the **Enter** key to go the **Main Menu** where the load weight can be adjusted.

HYDRO SYSTEMS
F03 TOWELS

↻ **1 2 _ X 5 6**
((•)) **_ _ _ _ _ _**

↺ Press Exit to Launch Select Formula Menu

SELECT FORMULA
F01 PADS ▲
F02 CURTAINS
F03 TOWELS
F04 BED LINEN
F05 BLANKETS
F06 TABLE LINEN ▼

▲ Press Up / Down
▼ Arrows to move Selection Box

↵ Press Enter to Select Formula

5.00 operator menus (continued)

5.04 Main Menu

To reach the **Main Menu** from the **Home Screen** press any key (except the **Exit** key).

Main Menu:

```
        MAIN MENU
  EMERGENCY STOP          ▲
  LOAD SIZE        075 LB
  USER PRIME
  USER MANUAL FLUSH
  MANAGER REPORTS
  INSTALLER MENU          ▼
  VIEW LOAD COUNT
```

Emergency Stop: Stops all dispensing and formulas.

Load Size Menu: Displays the default load weight for the current formula.

Selection Box: Use **Up / Down Arrow** to move to the desired menu. Press ⏎**Enter** key to launch the menu.

Print Manager Reports: Enter FROM and TO date range.

Installer Programs and Settings: Enter Installer password.

View Load Count: View the number of loads run for each formula.
(The View Load Count menu will appear when the Selection Box is moved below the Installer Menu using the Down Arrow.)

Return to HOME SCREEN:
↩ You can press the Exit key, or wait 15 seconds without pressing any keys.

(Operator Menu Tree shown on next page.)

5.05 Operator Menu Tree (All Menus)

Home Screen

```
HYDRO SYSTEMS
F03 TOWELS

   ⟳  1 2 _ X 5 6
  ((•))  _ _ _ _ _ _
```

Formula Select

```
SELECT FORMULA        ▲
F01 PADS
F02 CURTAINS
F03 TOWELS
F04 BED LINEN
F05 BLANKETS
F06 TABLE LINEN       ▼
```

Selects Formula and returns to Home Screen.

Guide to Keypad & Menus

Selection Box & Enter key = Up/Down Arrows Move Selection Box → Enter key Selects or Launches | Enter key Starts/Stops Actions

220 LB Value Edit = Up/Down Arrows Edit Value (0-9, A-Z) → Left/Right Arrows Move Digit Cursor → Enter key Saves & Exits or Exit (No Save)

Menu Symbols — More Items | Dispensing (No Flush) | Flush Only | Dispensing (With Flush)

Home Screen Icons — Product Row Icon ⟳ | Trigger Row Icon ((•))

Home Screen (Emergency Stop)

```
MAIN MENU
EMERGENCY STOP        ▲
LOAD SIZE      075 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU        ▼
VIEW LOAD COUNT
```

Emergency Stop

```
EMERGENCY STOP

STOP ALL DISPENSING
AND FORMULAS

  STOP      EXIT
```

Home Screen (Load Size)

```
MAIN MENU
EMERGENCY STOP        ▲
LOAD SIZE      075 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU        ▼
VIEW LOAD COUNT
```

Input Actual Load Weight

```
LOAD WEIGHT

       ▲
     220 LB
       ▼
   (SINGLE LOAD)
  OK        EXIT
```

Home Screen (User Prime)

```
MAIN MENU
EMERGENCY STOP        ▲
LOAD SIZE      075 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU        ▼
VIEW LOAD COUNT
```

Select Product to Prime

```
SET PRIME             ▲
P1 PRE-WASH
P2 DETERGENT
P3 LIQUID BLEACH
P4 BLEACH ALTERNAT
P5 SOUR-CONDITIONR
P6 ENZYME LIFT        ▼
```

Start / Stop Prime

```
PRIME

P3 LIQUID BLEACH

  ▨▨▨ ▨▨▨

  START/STOP   EXIT
```

Installer Menu Access

```
MAIN MENU
EMERGENCY STOP        ▲
LOAD SIZE      180 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU        ▼
```

```
INSTL PASSWORD

       ▲
     0 1 2 3 4
       ▼
  OK        EXIT
```

Home Screen (Manual Flush)

```
MAIN MENU
EMERGENCY STOP        ▲
LOAD SIZE      075 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU        ▼
VIEW LOAD COUNT
```

Start / Stop Flush

```
MANUAL FLUSH

  ██████████

  START/STOP   EXIT
```

Home Screen (Manager Reports)

```
MAIN MENU
EMERGENCY STOP        ▲
LOAD SIZE      075 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU        ▼
VIEW LOAD COUNT
```

Input Manager Password

```
MGR PASSWORD

       ▲
     0 1 2 3
       ▼
  OK        EXIT
```

Report Date

```
REPORT DATE
FROM:
       ▲
     2018-06-01
       ▼
  OK        EXIT
```

Set Report FROM & TO Dates

```
REPORT DATE
TO:
       ▲
     2018-06-30
       ▼
  OK        EXIT
```

Create Filename for Report

```
REPORT NAME

       ▲
     WASH23 18-06-30
       ▼
  INSERT USB DRIVE
  OK        EXIT
```

After pressing Enter, display will automatically return to Main Menu when Data Transfer is complete.

Home Screen (View Load Count)

```
MAIN MENU
LOAD SIZE      075 LB ▲
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU
VIEW LOAD COUNT       ▼
```

View Load Count

```
TOTAL LOAD COUNT
F01 PADS            0
F02 CURTAINS      123
F03 TOWELS         75
F04 BED LINEN       2
F05 BLANKETS        0
F06 TABLE LINEN   213 ▼
```

5.06 Operator Main Menu

⚠️ **Note! "Power Saver":** If the display is on some screen other than the Home Screen, and their are no key presses for 15 seconds, the display reverts to the Home Screen.

If the controller is idle (no key presses and no cycle activity) for 15 minutes, the **Power Saver** feature shuts off the display backlight. Pressing any key returns the controller to normal operation.

At the Home Screen, press any key (except Exit) to launch the MAIN MENU. On the MAIN MENU, the operator can:

- Activate the emergency stop.
- Input load size (if different from default).
- Prime or manually flush (if enabled).
- Print Manager Reports (password protected).
- Access the password-protected INSTALLER MENU, which includes programming, setup and maintenance menus.

HYDRO SYSTEMS
F03 TOWELS

⟳ 1 2 _ X 5 6
((•)) _ _ _ _ _ _

Press Enter key to Launch Main Menu

MAIN MENU
EMERGENCY STOP ▲
LOAD SIZE   075 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU ▼
VIEW LOAD COUNT

5.07 Emergency Stop

Stops all dispensing and cancels the formula currently running.

1) From the HOME SCREEN, press ENTER to launch the MAIN MENU.

2) At the MAIN MENU press ENTER to launch the EMERGENCY STOP menu.

3) At the EMERGENCY STOP menu, press ENTER to stop all dispensing and formulas, then press EXIT to return to the MAIN MENU.

EMERGENCY STOP

STOP ALL DISPENSING
AND FORMULAS

⏻ STOP   ↺ EXIT

Press Enter key to stop dispensing and cancel current formula.

5.08 Change Load Size (Weight)

For accurate data reporting, the operator should input the actual weight of each load, which overrides the formula's default weight for a single load.
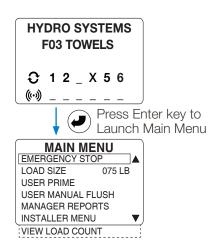
1) At the MAIN MENU, move the selection box to the LOAD SIZE menu item and press ENTER. The default load weight will be displayed.

2) To change a digit's value press the Up/Down Arrow keys. To move the digit selection cursor, press the Left / Right arrow keys.

3) When the proper load weight is displayed, press ENTER save and exit. (Or press EXIT to return to the MAIN MENU without saving).

LOAD WEIGHT

▲
220 LB
▼
(SINGLE LOAD)
⏻ OK   ↺ EXIT

Use Up/Down Arrow keys to edit digit, use Left/Right Arrow keys to move cursor. Press Enter key to save.

5.09 User Prime (if enabled)

USER PRIME allows the operator to fill the intake tube after product container or tube change. An animated progress bar will indicate that prime is running.

The operator is expected to stop the prime manually. Dispensing will stop automatically after 10 minutes. If User Prime is set to LIMITED (30 SEC), each product can instead be primed for only 30 seconds and the same product cannot be primed again until a complete formula has run.

1) On the MAIN MENU, move the selection box to USER PRIME and press ENTER. The SET PRIME menu will display all available products. (If User Prime is not enabled, the factory default, "DISABLED" will be displayed.)

(continued)

MAIN MENU
EMERGENCY STOP ▲
LOAD SIZE   075 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU ▼
VIEW LOAD COUNT

Press Enter to Launch User Prime Menu

SET PRIME
P1 PRE-WASH ▲
P2 DETERGENT
P3 LIQUID BLEACH
P4 BLEACH ALTERNAT
P5 SOUR-CONDITIONR
P6 ENZYME LIFT ▼

(continued)

23

5.09 User Prime (if enabled) (continued)

2) Press the Up / Down Arrow keys to choose a product to prime.

3) When the selection box is on the desired product, press the Enter key to launch the manual prime menu for that product.

4) When in the Prime menu, press the Enter key to start the prime.

5) Press the Enter key again to stop the prime.

6) Press the Exit once to select another product to prime, or twice to return to the MAIN MENU.

```
        SET PRIME
P1 PRE-WASH               ▲
P2 DETERGENT
P3 LIQUID BLEACH
 P4 BLEACH ALTERNAT
 P5 SOUR-CONDITIONR
 P6 ENZYME LIFT           ▼
```

↵ Press Enter to Launch Product's Prime Menu

```
         PRIME

P3 LIQUID BLEACH
       ▨▨▨ ▨▨▨


 ↻ START/STOP   ↺ EXIT
```

5.10 User Manual Flush (if enabled)

USER MANUAL FLUSH allows the operator to activate the flush manifold solenoid valve and clear the line. An solid black progress bar displays while flush is running. The operator is expected to stop the flush manually, or it will stop automatically after 10 minutes of keyboard inactivity.

In order to use USER MANUAL FLUSH a flush compatible PI must be installed, along with a flush manifold, and the Flush Time must be set to a value greater then zero. (Note: Eductor PI's are flush compatible.)

The default Pump Interface setting (see 8.12 "Set Pump Interface" on page 37) is ECLIPSE PI with FLUSH TIME set to 00 = OFF. When the PI or Flush Time settings to not allow flush, "DISABLED" will be displayed.

1) On the MAIN MENU, move the selection box to USER MANUAL FLUSH and press ENTER.

2) In the Flush menu, press the Enter key to start the flush, and press the Enter key again to stop the flush.

5) Press the Exit key to return to the MAIN MENU.

```
        MAIN MENU
 EMERGENCY STOP          ▲
 LOAD SIZE        075 LB
 USER PRIME
 USER MANUAL FLUSH
 MANAGER REPORTS
 INSTALLER MENU          ▼
 VIEW LOAD COUNT
```

↵ Press Enter to Launch User Flush Menu

```
      MANUAL FLUSH


        ▬▬▬▬


 ↻ START/STOP   ↺ EXIT
```
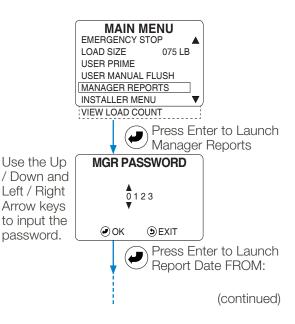
5.11 Manager Reports (with Manager Password)

Between 2-3 months of report data can be held in the controller's memory, depending upon machine usage. Once the memory is full, new data will overwrite the oldest data. It is recommended that Manager Reports be run every 30-60 days.

1) On the MAIN MENU, move the selection box to MANAGER REPORTS and press ENTER to launch the MGR PASSWORD input screen.

2) Enter the Manager Password (default is 0123) to save a Productivity Report to a USB Flash Drive.

Use the Up / Down Arrow keys to change the selected digit value, and the Left / Right Arrow keys to move the digit selection cursor. When the correct password has been input, press the Enter key to begin saving the report.

Screens will then display asking for a FROM report date and a TO report date (inclusive), as well as a filename for the report that will be saved to the USB drive.

```
        MAIN MENU
 EMERGENCY STOP          ▲
 LOAD SIZE        075 LB
 USER PRIME
 USER MANUAL FLUSH
 MANAGER REPORTS
 INSTALLER MENU          ▼
 VIEW LOAD COUNT
```

↵ Press Enter to Launch Manager Reports

Use the Up / Down and Left / Right Arrow keys to input the password.

```
      MGR PASSWORD

         ▲
        0 1 2 3
         ▼

 ↻ OK          ↺ EXIT
```

↵ Press Enter to Launch Report Date FROM:

(continued)

5.11 Manager Reports (with Manager Password) (continued)

3) After the Manager password is entered, the FROM report date screen is displayed. Input the start date for the report using the arrows keys and press the Enter key to move to the TO report date screen. The date format is YYYY-MM-DD. The last date entered will show by default.

4) On the TO Report date screen, use the arrow keys to input the last date to be included in the report and press the Enter key to move to the report filename input screen. The date format is YYYY-MM-DD. The last date entered will show by default. The year 2039 is the highest year that can be entered.

5) At the Report Name screen, use the arrow keys to create a descriptive filename for the report. The last filename entered will show by default.

6) Insert a USB drive into the lower (Type A) USB port on the side of the Total Eclipse controller and press the ENTER key (⏎) to save the Productivity Report to the USB drive. When the save is complete the display will return to the Main Menu.

(If a report with the same filename is already on the USB drive, a warning will appear asking if you want to overwrite the existing report. If you do NOT want to replace the existing report, press EXIT (↺) to input a new filename.)

```
          REPORT DATE
   FROM:
              ▲
              2018-06-01
              ▼

      ⏎ OK      ↺ EXIT
```

⏎ Press Enter to Launch Report TO Date Menu

```
          REPORT DATE
   TO:
              ▲
              2018-06-30
              ▼

      ⏎ OK      ↺ EXIT
```

⏎ Press Enter to Launch Report Name Menu

```
          REPORT NAME

         ▲
   WASH23 18-06-30
         ▼

   INSERT USB DRIVE
      ⏎ OK      ↺ EXIT
```

⏎ Press Enter to save the report and return to the Main Menu.
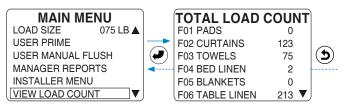
5.12 View Load Count

View Load Count provides the capability to view the number of loads ran for each wash formula since the last time the data log was cleared. (See section 7.12 Clear Data Log on page 31 for more details.)

1) On the Main Menu move the selection box onto the View Load Count menu item and press the Enter key.
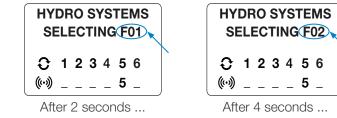
2) At the View Load Count menu, use the Up / Down arrow keys to examine the load counts, listed by Formula.

3) Press the Exit key to return to the Main Menu.

```
        MAIN MENU
   LOAD SIZE         075 LB ▲
   USER PRIME
   USER MANUAL FLUSH
   MANAGER REPORTS
   INSTALLER MENU
   VIEW LOAD COUNT          ▼
```

```
   TOTAL LOAD COUNT
   F01 PADS             0
   F02 CURTAINS       123
   F03 TOWELS          75
   F04 BED LINEN        2
   F05 BLANKETS         0
   F06 TABLE LINEN    213 ▼
```

5.13 About Auto Formula Select Operation (AFS)

AFS allows an installer-chosen trigger to select any programmed formula with a timed signal from the washer. That washer supply signal must be programmed for a total of 2 seconds multiplied by the formula number. With AFS set to Trigger 5:

```
   HYDRO SYSTEMS
   SELECTING F01

   ↻ 1 2 3 4 5 6
   ((•)) _ _ _ _ 5 _
```
After 2 seconds ...

```
   HYDRO SYSTEMS
   SELECTING F02

   ↻ 1 2 3 4 5 6
   ((•)) _ _ _ _ 5 _
```
After 4 seconds ...

```
   HYDRO SYSTEMS
   SELECTING F03

   ↻ 1 2 3 4 5 6
   ((•)) _ _ _ _ 5 _
```
After 6 seconds ...
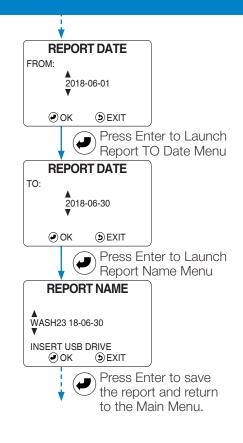
```
   HYDRO SYSTEMS
   F03 TOWELS

   ↻ 1 2 3 4 5 6
   ((•)) _ _ _ _ _ _
```
When signal ends ...

When AFS begins, the controller displays "SELECTING F[##]." Every two seconds, the next formula number [##] displays, until such time as the signal ends, at which point the selected formula is displayed on the Home Screen (e.g. as shown above, if the washer supply signal is set for 6 seconds, F03 TOWELS is selected to run).

NOTE: There is no signal filter qualifying time for the AFS trigger. See 2.01 Auto Formula Select on page 12 for more details.

6.00 installer menus

6.01 Overview (Service and Settings using Controller Keypad)

Initial system setup and Formula programming can be done using either the controller's Installer Menu and five-button keypad, or the computer-based Formula Editor and transfered to the controller using a USB flash drive (see Chapter 11 on page 49).

Settings that can ONLY be adjusted by the controller display and keypad are marked in this section with this small icon. Those settings are: **Installer Password**, **Manager Password**, **Machine Name**, **Company Name** and **Calibration**.

An Installer Password is needed to access the Installer Menu, with it's sub-menus, each of which contain additional menus. (See "Installer Menu Tree" on the next page.)

⚠ **WARNING! Entering Installer Menu aborts Formulas!** If the installer Password is input while a formula is running, the formula is aborted and the load is recorded as an incomplete load.

⚠ **NOTE! Installer Menu Timeout!** When in the Installer Menu (and its sub-menus), if there is no keypad activity for 5 minutes, the display will return to the Home Screen and the Installer Password will be required again.

6.02 Key Functions

ENTER: Used to enter a menu, or accept a value.

EXIT: Exits the current menu without saving changes, and returns to the previous menu or the Main Menu.

UP/DOWN ARROW: Changes the value of a selected digit **2** or moves the Selection Box up and down.

LEFT/RIGHT ARROW: Moves the Digit Selection Cursor left and right.

(Exit Installer Menus): Repeatedly press (or press and hold) the Exit key.

6.03 Password Access to Installer Menus

When launching the Installer Menu a password entry is required. The factory default password is "01234". For added security it is strongly recommended that you change the password at installation.

1) On the Main Menu move the selection box onto the INSTALLER MENU item and press the Enter key to launch the Installer Menu.

2) Enter the Installer Password, using the Up / Down arrow keys to change the selected digit value, and the Left / Right arrow keys to move the Digit Selection Cursor. Press the enter key to input the password.

3) A successful password entry will launch the Installer Menus. See the next page for the complete Installer Menu Tree.

```
        MAIN MENU
   EMERGENCY STOP        ▲
   LOAD SIZE        180 LB
   USER PRIME
   USER MANUAL FLUSH
   MANAGER REPORTS
   INSTALLER MENU          ▼
```

Press Enter to
Launch Password
Entry Screen

```
     INSTL PASSWORD

            ▲
          0 1 2 3 4
            ▼

     ⏎ OK      ↺ EXIT
```

6.04 Minimum Programming Required (Standard and Relay Operating Modes)
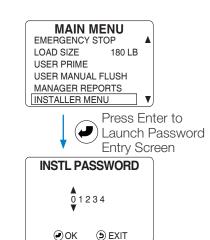
NOTE: These settings will produce a functioning controller, but will not give accurate reports or enable features.

Standard Mode:
1) System Setup > Set PI
2) Installer Service > Service Product > Calibrate
3) Program Formulas > Select a Formula > Product Settings > Select a Product > Set Dispense Amounts/Delay
4) Units of Measure > SAE or Metric

Relay Mode:
1) Initial System Setup > Operation Mode > Relay Mode
2) Units of Measure > SAE or Metric.

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6.00 installer menus (continued)

6.05 Installer Menu Tree

Navigation Keys

Up / Down Arrow
- Moves Selection Box
- Changes Digit Value

Left / Right Arrow
- Moves Digit Selection Cursor during edits

Enter / Save Key
- Launches Menu
- Saves input and Exits

Home Screen

HYDRO SYSTEMS
F03 TOWELS

1 2 _ X 5 6
_ _ _ _ _ _

Main Menu

MAIN MENU
EMERGENCY STOP
LOAD SIZE   075 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU

Installer Password Menu

INSTL PASSWORD

0 1 2 3 4

⏎ OK   ⓢ EXIT

Installer Menu (Top Level)

INSTALLER MENU
INSTALLER SERVICE
INITIAL SYSTEM SETUP
PROGRAM FORMULAS
DATA TRANSFER
SET UNITS OF MEASURE

---

1) Service / Maintenance

INSTALLER SERVICE
SERVICE PRODUCTS
VIEW LOAD WEIGHT
VIEW AMT DISPENSED
CLEAR DATA LOG

Product Service Menu

SERVICE PRODUCTS
PRIME
CALIBRATION
NAME PRODUCTS
ENTER PRODUCT COSTS
DATE TUBE CHANGED

View Load Weight Menu

TOTAL WEIGHT
F01 PADS   0
F02 CURTAINS   0
F03 TOWELS   0
F04 BED LINEN   0
F05 BLANKETS   0
F06 TABLE LINEN   0

View Amount Dispensed

DISPENSED (GAL)
P1 PRE-WASH   0.0
P2 DETERGENT   0.0
P3 LIQUID BLEA   0.0
P4 BLEACH ALTE   0.0
P5 SOUR-CONDIT   0.0
P6 ENZYME LIFT   0.0

Clear Data Log Menu

ZERO DATA LOG
WARNING! ALL LOGS
(LOADS & VOLUMES)
WILL BE CLEARED!

⏎ OK   ⓢ EXIT

---

2) Initial System Setup

SYSTEM SETUP
EDIT INST PASSWORD
EDIT MGR PASSWORD
OPERATION MODE
EDIT ACCOUNT NAME
EDIT MACHINE NAME
EDIT COMPANY NAME
SET INTERFACE
SET CYCLE TIME
SIGNAL FILTER TIME
SET AFS TRIGGER
SET USER PRIME
SET LCD CONTRAST
SET DATE AND TIME
CLEAR SETTINGS
VIEW SOFTWARE ID

Edit Installer Password

INSTL PASSWORD

0 1 2 3 4

⏎ OK   ⓢ EXIT

Edit Manager Password

MGR PASSWORD

0 1 2 3

⏎ OK   ⓢ EXIT

Set Operation Mode

OPERATION MODE
STANDARD
RELAY
EVENT
GROUP
OCCURRENCE

Edit Account Name

ACCOUNT NAME

ECLIPSE HOTEL 37

⏎ OK   ⓢ EXIT

Edit Machine Name

MACHINE NAME

HOUSEKEEPING 01

⏎ OK   ⓢ EXIT

Edit Company Name

COMPANY NAME

HYDRO SYSTEMS CO

⏎ OK   ⓢ EXIT

Select Interface and Flush Time (as needed)

SET INTERFACE
NON-FLUSH P.I.
ECLIPSE FLUSH P.I.
ORION II FLUSH P.I.
8-PUMP FLUSH P.I.
4-EDUCTOR FLUSH P.I
6-EDUCTOR FLUSH P.I

Set Cycle Time Limit

CYCLE TIME LIMIT
2 SECONDS
10 SECONDS
20 SECONDS
30 SECONDS
60 SECONDS
90 SECONDS

Set Trigger Signal Filter

TRIGGER FILTER

00 MINUTES

(0 = OFF)

⏎ OK   ⓢ EXIT

Set AFS trigger

AFS TRIGGER

0

(0 = OFF)

⏎ OK   ⓢ EXIT

User Prime Enable

SET USER PRIME
DISABLE
ENABLE
LIMITED 30 SEC

⏎ OK   ⓢ EXIT

Adjust Display Contrast

LCD CONTRAST

60

⏎ OK   ⓢ EXIT

Set Date & Time

DATE & TIME
2018-07-28   17:06
YYYY-MM-DD HH:MM

⏎ OK   ⓢ EXIT

Clear Controller Settings

CLEAR SETTINGS
WARNING! ALL SETUPS
WILL BE CLEARED TO
FACTORY DEFAULTS!

⏎ OK   ⓢ EXIT

---

3) Formula Programming

PROGRAM FORMULAS
F01 PADS
F02 CURTAINS
F03 TOWELS
F04 BED LINEN
F05 BLANKETS
F06 TABLE LINEN

Formula Settings

F01 PADS
PRODUCT SETTINGS
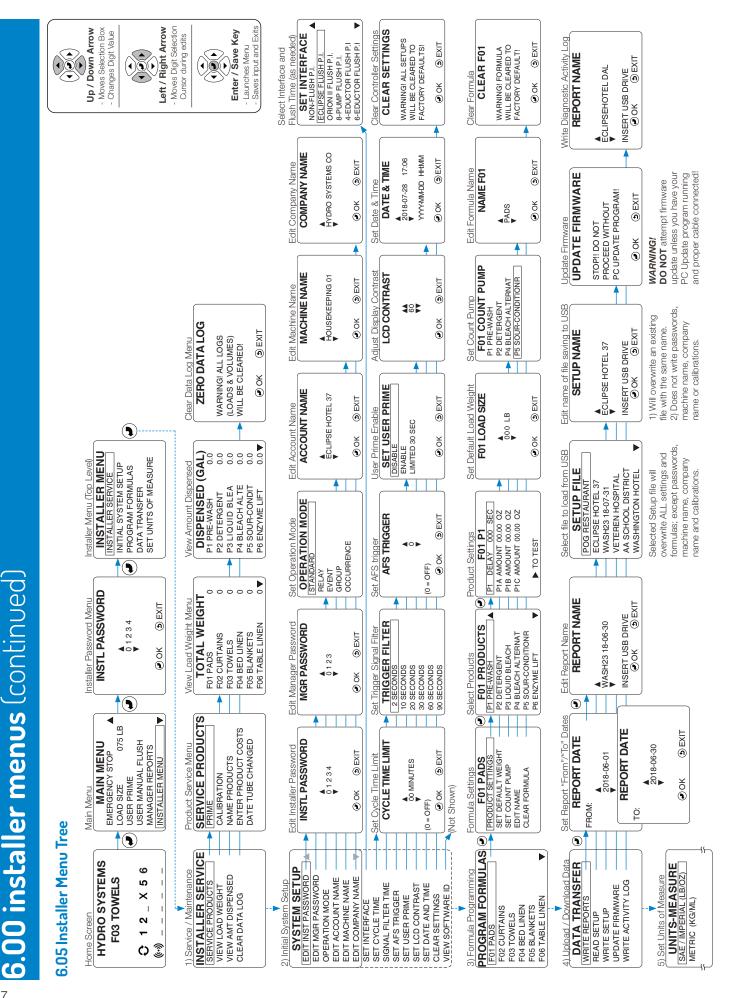SET DEFAULT WEIGHT
SET COUNT PUMP
EDIT NAME
CLEAR FORMULA

Select Products

F01 PRODUCTS
P1 PRE-WASH
P2 DETERGENT
P3 LIQUID BLEACH
P4 BLEACH ALTERNAT
P5 SOUR-CONDITIONR
P6 ENZYME LIFT

Product Settings

F01 P1
P1 DELAY 000 SEC
P1A AMOUNT 00.00 OZ
P1B AMOUNT 00.00 OZ
P1C AMOUNT 00.00 OZ

▲ TO TEST

⏎ OK   ⓢ EXIT

Set Default Load Weight

F01 LOAD SIZE

000 LB

⏎ OK   ⓢ EXIT

Set Count Pump

F01 COUNT PUMP
P1 PRE-WASH
P2 DETERGENT
P4 BLEACH ALTERNAT
P5 SOUR-CONDITIONR

⏎ OK   ⓢ EXIT

Edit Formula Name

NAME F01

PADS

⏎ OK   ⓢ EXIT

Clear Formula

CLEAR F01
WARNING! FORMULA
WILL BE CLEARED TO
FACTORY DEFAULT!

⏎ OK   ⓢ EXIT

---

4) Upload / Download Data

DATA TRANSFER
WRITE REPORTS
READ SETUP
WRITE SETUP
UPDATE FIRMWARE
WRITE ACTIVITY LOG

Edit Report Name

REPORT NAME

WASH23 18-06-30

INSERT USB DRIVE
⏎ OK   ⓢ EXIT

Set Report "From"/"To" Dates

REPORT DATE
FROM:
2018-06-01

REPORT DATE
TO:
2018-06-30

⏎ OK   ⓢ EXIT

Select file to load from USB

SETUP FILE
POG RESTAURANT
ECLIPSE HOTEL 37
WASH23 18-07-31
VETEREN HOSPITAL
AA SCHOOL DISTRICT
WASHINGTON HOTEL

Selected Setup file will overwrite ALL settings and formulas; except passwords, machine name, company name and calibrations.

Edit name of file saving to USB

SETUP NAME

ECLIPSE HOTEL 37

INSERT USB DRIVE
⏎ OK   ⓢ EXIT

1) Will overwrite an existing file with the same name.
2) Does not write passwords, machine name, company name or calibrations.

Update Firmware

UPDATE FIRMWARE
STOP!! DO NOT
PROCEED WITHOUT
PC UPDATE PROGRAM!

⏎ OK   ⓢ EXIT

WARNING!
DO NOT attempt firmware update unless you have your PC Update program running and proper cable connected!

Write Diagnostic Activity Log

REPORT NAME

ECLIPSEHOTEL DAL

INSERT USB DRIVE
⏎ OK   ⓢ EXIT

---

5) Set Units of Measure

UNITS-MEASURE
SAE / IMPERIAL (LB/OZ)
METRIC (KG/ML)

7.00 installer service menus

The INSTALLER SERVICE menu is used during routine maintenance visits.

7.01 Service Products

The SERVICE PRODUCTS menu can be used to prime or calibrate products, typically during the initial setup.

NOTE: A product name only appears with the product number if a name was input or was part of a USB Setup File Transfer.

1) In the INSTALLER MENU, move the Selection Box onto the INSTALLER SERVICE menu item and press the Enter key.

2) On the INSTALLER SERVICE menu, move the Selection Box over the SERVICE PRODUCTS menu item and press the Enter key.

7.02 Prime

This feature is used to fill or "prime" the intake tube after a product container or tube change. An animated progress bar will indicates when the PRIME function is running.

From the SERVICE PRODUCTS menu, select PRIME and press the Enter key, to launch the SET PRIME menu. The SET PRIME menu displays a list of available products (with names, if previously input or uploaded by the installer).

1) Press the Up / Down Arrow keys to select a product to prime.

2) Press the Enter key to launch the PRIME screen for the chosen product.

3) Press the Enter key to start priming, and an animated progress bar will be displayed.

4) Press the Enter key again to stop priming, and the animation will stop.

5) Press the Exit key once to select another product to prime, or twice to return to the SERVICE PRODUCTS menu.

7.03 Calibration

You must calibrate all products you will use in a formula, using the method best suited for the system installed. Programmed formulas will not run if products are not calibrated. In Relay Mode, you must calibrate products in order to establish product output.

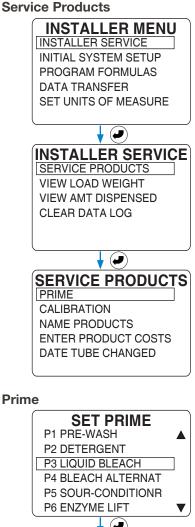Choosing a Calibration Method:
TIME: Use when working with large displacement dispensers, such as our large laundry peristaltic pumps or double diaphragm air products, when calibrating products with a flush manifold installed or when calibrating eductor laundry dispensers.
VOLUME: Use this method only for medium volume dispensers, like 12-18 oz/min (355-532 ml/min).
MANUAL: Use if you already know the product's flow rate in oz/min.

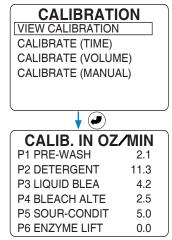View Calibration Settings:
1) On the SERVICE PRODUCTS menu, move the selection box onto the CALIBRATION menu item and press the Enter key.
2) Move the selection box to VIEW CALIBRATION and press the Enter key to see the current setting for each product.
3) Press the Exit key to return to the CALIBRATION screen, then select a calibration method and proceed with calibration.

Service Products

```
        INSTALLER MENU
  INSTALLER SERVICE
  INITIAL SYSTEM SETUP
  PROGRAM FORMULAS
  DATA TRANSFER
  SET UNITS OF MEASURE
```

```
      INSTALLER SERVICE
  SERVICE PRODUCTS
  VIEW LOAD WEIGHT
  VIEW AMT DISPENSED
  CLEAR DATA LOG
```

```
      SERVICE PRODUCTS
  PRIME
  CALIBRATION
  NAME PRODUCTS
  ENTER PRODUCT COSTS
  DATE TUBE CHANGED
```

Prime

```
         SET PRIME
  P1 PRE-WASH          ▲
  P2 DETERGENT
  P3 LIQUID BLEACH
  P4 BLEACH ALTERNAT
  P5 SOUR-CONDITIONR
  P6 ENZYME LIFT       ▼
```

```
            PRIME

  P3 LIQUID BLEACH
        ▥▥▥  ▥▥▥

   ↵ START/STOP  ↩ EXIT
```

View Calibration

```
        CALIBRATION
  VIEW CALIBRATION
  CALIBRATE (TIME)
  CALIBRATE (VOLUME)
  CALIBRATE (MANUAL)
```

```
      CALIB. IN OZ/MIN
  P1 PRE-WASH          2.1
  P2 DETERGENT        11.3
  P3 LIQUID BLEA       4.2
  P4 BLEACH ALTE       2.5
  P5 SOUR-CONDIT       5.0
  P6 ENZYME LIFT       0.0
```

7.03 Calibration (continued)

Equipment Needed:
Both time and volume calibration methods require a graduated measuring container to measure the amount of product dispensed.

When calibrating a pump, measure the output of the pump, capturing the product dispensed into the graduated measuring container.

To calibrate an eductor system, measure how much product the chemical intake draws out of the graduated measuring container.

In either case make sure the dispenser intake is primed before starting the timed calibration process. When using the timed method, the measuring container must be able to hold at least the amount of product this system can dispense in 20 seconds.

7.04 Time Calibration
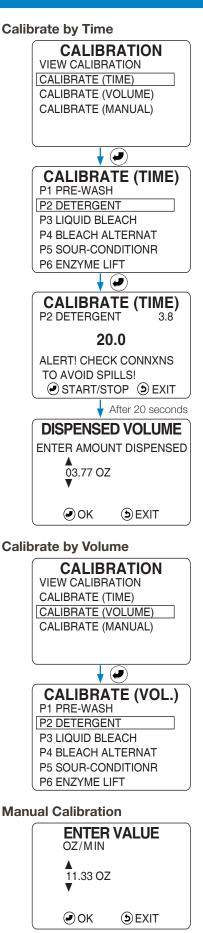
1) On the Calibration menu select CALIBRATE (TIME) and press Enter.

2) At CALIBRATE (TIME) select a product to calibrate and press Enter.

3) Once a product has been selected, the calibration countdown display will appear, with the selected product and its previous 20 second calibration value displayed. Get the measuring container ready, either to collect the output of a pump, or to be drawn out of by an eductor.

4) Press Enter to begin dispensing as the countdown begins (with a 2 second delay if flush enabled). Allow the countdown to go to 0.0 at which point the DISPENSED VOLUME display will appear.

5) Input the volume of product that was either pumped out or drawn in by an eductor. Then press Enter to complete the product calibration.

7.05 Volume Calibration

1) On the Calibration menu select CALIBRATE (VOLUME) and press Enter.

2) At CALIBRATE (VOL.) select a product to calibrate and press Enter.

3) Once a product has been selected, the volume calibration display will appear, with the selected product indicated. Get the measuring container ready, either to collect the output of a pump, or to draw product out of for an eductor.

4) Press Enter to begin dispensing (with a 2 second delay if flush enabled). Press Enter to stop the calibration when 8 oz (250 ml) of product has been pumped into the measuring container or drawn out by an eductor.

5) The time required to dispense is automatically calculated , no data input is needed. Use the VIEW CALIBRATION menu to confirm the new value.

7.06 Manual Calibration

1) On the Calibration menu select CALIBRATE (MANUAL) and press Enter.

2) At MANUAL CALIBRATE select a product to calibrate and press Enter.

3) Once the product is selected, the input screen for the manual calibration will appear. Enter the predetermined value in oz/min.

Calibrate by Time

```
        CALIBRATION
 VIEW CALIBRATION
 [CALIBRATE (TIME)        ]
 CALIBRATE (VOLUME)
 CALIBRATE (MANUAL)
```
↓ ↵
```
     CALIBRATE (TIME)
 P1 PRE-WASH
 [P2 DETERGENT           ]
 P3 LIQUID BLEACH
 P4 BLEACH ALTERNAT
 P5 SOUR-CONDITIONR
 P6 ENZYME LIFT
```
↓ ↵
```
     CALIBRATE (TIME)
 P2 DETERGENT        3.8

          20.0
 ALERT! CHECK CONNXNS
  TO AVOID SPILLS!
   ↵ START/STOP   ↺ EXIT
```
↓ After 20 seconds
```
    DISPENSED VOLUME
 ENTER AMOUNT DISPENSED
          ▲
       03.77 OZ
          ▼

    ↵ OK       ↺ EXIT
```

Calibrate by Volume

```
        CALIBRATION
 VIEW CALIBRATION
 CALIBRATE (TIME)
 [CALIBRATE (VOLUME)     ]
 CALIBRATE (MANUAL)
```
↓ ↵
```
     CALIBRATE (VOL.)
 P1 PRE-WASH
 [P2 DETERGENT           ]
 P3 LIQUID BLEACH
 P4 BLEACH ALTERNAT
 P5 SOUR-CONDITIONR
 P6 ENZYME LIFT
```

Manual Calibration

```
        ENTER VALUE
 OZ/MIN
          ▲
       11.33 OZ
          ▼

    ↵ OK       ↺ EXIT
```

7.00 installer service menus (continued)

7.07 Name Products (optional)

This allows a name to be added to a product number, "P1 PRE-WASH" for example. The name is not translated if the controller language is changed.

1) At the SERVICE PRODUCTS menu, move selection box to NAME PRODUCTS. Press the Enter key to launch SELECT PRODUCT menu.

2) Use the Up / Down Arrows to select the product to name (or rename).

3) Press Enter to launch the NAME PRODUCT (P#) input screen. The current name (if any) is displayed with the first letter selected for entry.

4) Use the Up / Down Arrows to move through letters, numbers, hyphen, underscore and space that can be input for that digit.

5) Use the Left / Right arrows to move the digit selection arrows. A maximum of 15 characters can be used for a product name.

6) Press the Enter key to save the product name and return to the SELECT PRODUCT menu. Select another product to name, or press the Exit key to return to the SERVICE PRODUCTS menu.

7.08 Enter Product Costs (optional)
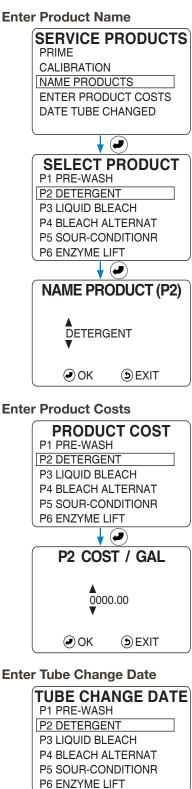
Enter the cost (per gallon or liter) for a product, so the cost for the amount dispensed can be calculated in reports. Any currency may be used since the currency type is not considered by the controller. The available digits are 0000.00 (per gallon or liter).

1) At the SERVICE PRODUCTS menu, move selection box to INPUT PRODUCT COST. Press Enter to launch PRODUCT COST menu.

2) Select a product and press the Enter key. The P# COSTS/GAL (L) input screen will be displayed, where the cost for product can be entered.

3) Use the Left / Right arrows to move the digit selection arrows, and use the Up / Down arrows to change the value of a digit, until the correct cost is displayed (per gallon or liter) for this product.

4) Press the Enter key to save the cost and return to the PRODUCT COST menu or press the Exit key to cancel the cost value entry.

7.09 Enter Tube Change Date (optional)

For peristaltic pumps only, this menu allows the date a tube is changed to be recorded, for maintenance records or reports.

1) At the SERVICE PRODUCTS menu, move selection box to DATE TUBE CHANGED. Press Enter to launch TUBE DATE CHANGE menu.

2) Select a product and press the Enter key. The P# TUBE CHANGE input screen will be displayed, where the date of the change can be entered.

3) Use the Left / Right arrows to move the digit selection arrows, and use the Up / Down arrows to change the value of a digit, until the desired date is displayed. The current date is the default value (YYYY-MM-DD).

4) Press the Enter key to save the date and return to the TUBE DATE CHANGE menu or press the Exit key to cancel the date entry.

Enter Product Name

Enter Product Costs

Enter Tube Change Date

30

7.10 View Load Weight

This menu displays the total weight washed, by formula, since the last time the data log was cleared (see 7.17 "Clear Data Log" below).

1) On the INSTALLER MENU menu, move the selection box onto the INSTALLER SERVICE menu item and press the Enter key.

2) Put the selection box on VIEW LOAD WEIGHT and press the Enter key.

3) The TOTAL WEIGHT menu will display the total weight washed by formula.

4) Use the Up / Down Arrows to view all formulas.

5) Press the Exit key to return to the INSTALLER SERVICE menu.

7.11 View Amount Dispensed

This menu displays the amount of each product that has been dispensed (in gallons of liters) since the last time the data log was cleared (see 7.17 "Clear Data Log" below).

1) On the INSTALLER MENU menu, move the selection box onto the INSTALLER SERVICE menu item and press the Enter key.

2) Move the selection box onto VIEW AMT DISPENSED and press the Enter key.

3) The DISPENSED (GAL)/(L) menu will display the amount dispensed of each product.

4) If necessary, use the Up / Down Arrows to view all products.

5) Press the Exit key to return to the INSTALLER SERVICE menu.

7.12 Clear Data Log

The ZERO DATA LOG function re-sets all counters to zero (0), including the Load Count, Load Weight, and Amount Dispensed to. Control settings & Formulas are not affected by this function.

1) On the INSTALLER MENU menu, move the selection box onto the CLEAR DATA LOG menu item and press the Enter key.

2) The "Zero Data Log" screen will appear, with which all data logs can be cleared.

   CAUTION! All logged data for load weight, total loads run, and product amounts will be reset to zero.

3) Press the Enter key to indicate it is "OK" to clear all data logged and reset counters to zero. Or press the Exit key to cancel this function.

NOTE: Past information for Manager Reports, Summary Reports, and the Activity Log is no longer available when the Data Log is cleared.

Also, when the Data Log reaches the point where it is completely filled, any new info that is recorded will overwrite the oldest record. It is recommended that required reports be run at least every 30-60 days to avoid loss of information.

View Load Weight

```
        INSTALLER MENU
 INSTALLER SERVICE
 INITIAL SYSTEM SETUP
 PROGRAM FORMULAS
 DATA TRANSFER
 SET UNITS OF MEASURE
```

```
INSTALLER SERVICE
 SERVICE PRODUCTS
 VIEW LOAD WEIGHT
 VIEW AMT DISPENSED
 CLEAR DATA LOG
```

```
      TOTAL WEIGHT
 F01 PADS               0
 F02 CURTAINS         150
 F03 TOWELS           375
 F04 BED LINEN        600
 F05 BLANKETS         300
 F06 TABLE LINEN      100 ▼
```

View Amount Dispensed

```
INSTALLER SERVICE
 SERVICE PRODUCTS
 VIEW LOAD WEIGHT
 VIEW AMT DISPENSED
 CLEAR DATA LOG
```

```
     DISPENSED (GAL)
 P1 PRE-WASH          1.1
 P2 DETERGENT        23.5
 P3 LIQUID BLEA       7.1
 P4 BLEACH ALTE      12.0
 P5 SOUR-CONDIT       6.8
 P6 ENZYME LIFT       0.4 ▼
```

Clear (Reset) Data Logs

```
INSTALLER SERVICE
 SERVICE PRODUCTS
 VIEW LOAD WEIGHT
 VIEW AMT DISPENSED
 CLEAR DATA LOG
```

```
     ZERO DATA LOG

 WARNING! ALL LOGS
 (LOADS & VOLUMES)
 WILL BE CLEARED!

     ↵ OK      ↺ EXIT
```

8.00 initial system setup menus

8.01 Edit Installer Password

The Installer Password may be changed from the factory default (01234) to any five-number password.

WARNING! Be sure to note any new Installer Password. If the password is lost, the Installer Menus will be inaccessible and the controller will have to be returned to Hydro Systems and reprogrammed to factory defaults.

1) On the INSTALLER MENU menu, move the selection box onto the INITIAL SYSTEM SETUP menu item and press the Enter key.

2) At the SYSTEM SETUP menu, put the selection box on the EDIT INST PASSWORD menu item and press the Enter key.

3) The INSTL PASSWORD menu will display the current password, and a new password can be defined

4) Use the Up / Down Arrows to change a digit's value and use the Left / Right arrows to move the Digit Selection Cursor.

5) Press the Enter key to save a new password and return to the SYSTEM SETUP menu. Or press the Exit key to cancel the password edit.

8.02 Edit Manager Password

The Manager Password allows the Productivity Report to be generated from the MANAGER REPORTS menu, which requires a password.

1) At the SYSTEM SETUP menu, put the selection box on the EDIT MGR PASSWORD menu item and press the Enter key.

2) The MGR PASSWORD menu will display the current password. The factory default (0123) can be changed to any four-number password.

3) Use the Up / Down Arrows to change a digit's value and use the Left / Right arrows to move the Digit Selection Cursor.

4) Press the Enter key to save a new password and return to the SYSTEM SETUP menu. Or press the Exit key to cancel the password edit.

8.03 Set Operation Mode

Each operation mode has a different combination of rules that govern the dispensing sequence. To understand these rules, see "Modes of Operation" on page 9 and also "Features and Options" on page 12.

8.04 Set Operation Mode to Standard

Standard Mode is the default mode (and used in most North American installations). Each washer trigger signal notifies the corresponding product to dispense the amount(s) based on the selected formula. Standard Mode also features AFS, explained in "Auto Formula Select (AFS)" on page 12.

1) At the SYSTEM SETUP menu, put the selection box on the OPERATION MODE menu item and press the Enter key.

2) When the OPERATION MODE menu appears, move the selection box onto the STANDARD menu item and press the Enter key to select that operation mode and return to the SYSTEM SETUP menu, or press the Exit key to cancel the operation mode selection.

Edit Installer Password

```
         INSTALLER MENU
      INSTALLER SERVICE
     [ INITIAL SYSTEM SETUP ]
      PROGRAM FORMULAS
      DATA TRANSFER
      SET UNITS OF MEASURE
```

```
          SYSTEM SETUP
     [ EDIT INST PASSWORD ]   ▲
      EDIT MGR PASSWORD
      OPERATION MODE
      EDIT ACCOUNT NAME
      EDIT MACHINE NAME
      EDIT COMPANY NAME      ▼
```

```
          INSTL PASSWORD

               ▲
             0 1 2 3 4
               ▼

        ↵ OK      ↺ EXIT
```

Edit Manager Password

```
          SYSTEM SETUP
      EDIT INST PASSWORD     ▲
     [ EDIT MGR PASSWORD ]
      OPERATION MODE
      EDIT ACCOUNT NAME
      EDIT MACHINE NAME
      EDIT COMPANY NAME      ▼
```

```
          MGR PASSWORD

               ▲
             0 1 2 3
               ▼

        ↵ OK      ↺ EXIT
```

Set Operation Mode to Standard

```
          SYSTEM SETUP
      EDIT INST PASSWORD     ▲
      EDIT MGR PASSWORD
     [ OPERATION MODE ]
      EDIT ACCOUNT NAME
      EDIT MACHINE NAME
      EDIT COMPANY NAME      ▼
```

```
          OPERATION MODE
     [ STANDARD ]
      RELAY
      EVENT
      GROUP
      OCCURRENCE
```

8.05 Set Operation Mode to Relay

Relay Mode dedicates control of products to the washer supply signals. Products are dispensed for the duration of supply signal time, after being qualified by the signal filter time.

1) At the SYSTEM SETUP menu, put the selection box on the OPERATION MODE menu item and press the Enter key.

2) When the OPERATION MODE menu appears, move the selection box onto the RELAY menu item and press the Enter key to select that operation mode and return to the SYSTEM SETUP menu, or press the Exit key to cancel the operation mode selection.

8.06 Set Operation Mode to Event

Event Mode uses programmed formulas for automatic operation with washers that offer no supply trigger connections, like fixed cycle washers.

Product dispensing is paced by machine events, rather than fixed-times as in Standard Mode. Event mode requires four signal connections to the MI (see section 3.03 Supply Trigger Wiring on page 16).

An Event occurs when a trigger signal is detected on Triggers 2 or 3 (the hot and cold fill valves).

Up to 16 Events can be programmed (most washers use 5), and up to 3 products (with A, B, and/or C amounts) may be added to an Event.

To decide which products to include in an event, it is important to read and understand section 1.10 Event Mode Rules on page 11 and the section 2.07 Formula Rules on page 13.

1) At the SYSTEM SETUP menu, put the selection box on the OPERATION MODE menu item and press the Enter key.

2) When the OPERATION MODE menu appears, move the selection box onto the EVENT menu item and press the Enter key to select that operation mode and launch the EVENTS Menu, or press the Exit key to cancel the operation mode selection.

3) On the the EVENTS menu, sixteen events are displayed, Event 01 to 16.

4) Move the selection box onto the Event you wish to configure and press the Enter key to launch the E# PROD SELECT menu.
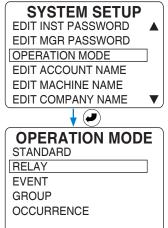
Any products selected to dispense from a previous event configuration will already have a check mark to the right of the product identifier.

5) Use the Up / Down Arrows to move the selection box among the products and press the Enter key to select or deselect products.
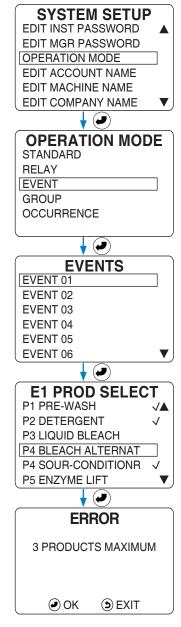
Up to three products can be selected for a single event. Trying to select more then three products for a single event will generate an error.

6) When all the desired products have been selected for this event press the Exit key to return to the EVENTS menu; where another event may be selected for configuration.

7) When all events needed have been configured, press the Exit key repeatedly to return to the SYSTEM SETUP menu.

Set Operation Mode to Relay

```
         SYSTEM SETUP
  EDIT INST PASSWORD      ▲
  EDIT MGR PASSWORD
  OPERATION MODE
  EDIT ACCOUNT NAME
  EDIT MACHINE NAME
  EDIT COMPANY NAME       ▼
```

```
         OPERATION MODE
  STANDARD
  RELAY
  EVENT
  GROUP
  OCCURRENCE
```

Set Operation Mode to Event

```
         SYSTEM SETUP
  EDIT INST PASSWORD      ▲
  EDIT MGR PASSWORD
  OPERATION MODE
  EDIT ACCOUNT NAME
  EDIT MACHINE NAME
  EDIT COMPANY NAME       ▼
```

```
         OPERATION MODE
  STANDARD
  RELAY
  EVENT
  GROUP
  OCCURRENCE
```

```
            EVENTS
  EVENT 01
  EVENT 02
  EVENT 03
  EVENT 04
  EVENT 05
  EVENT 06                ▼
```

```
       E1 PROD SELECT
  P1 PRE-WASH           ✓▲
  P2 DETERGENT          ✓
  P3 LIQUID BLEACH
  P4 BLEACH ALTERNAT
  P4 SOUR-CONDITIONR    ✓
  P5 ENZYME LIFT          ▼
```

```
            ERROR

      3 PRODUCTS MAXIMUM



       ⏎ OK      ↺ EXIT
```

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8.07 Set Operation Mode to Group

Group Mode places the six trigger signals into four, pre-defined groups (see table). Between 0-3 products may be assigned to each group. A product may be used in more than one group. The trigger signals determine which group of products dispense their programmed formula amounts, and in what order.

Group	Trigger Signal Inputs
Group 1	Trigger 1 and / or 2
Group 2	Trigger 3 and / or 4
Group 3	Trigger 5
Group 4	Trigger 6

All product amounts and delays are based upon the currently selected formula. If a trigger for a product to run occurs and the product is already running, the trigger is ignored. The installer **MUST** allow enough time between triggers to ensure a product (or group of products) can run for each of its triggers. Also, If a product is included in a group, but is not in the currently selected formula, the product will not run when triggered. This could result in not running some or all of the products called for by a trigger signal.

1) At the SYSTEM SETUP menu, put the selection box on the OPERATION MODE menu item and press the Enter key.

2) When the OPERATION MODE menu appears, move the selection box onto the GROUP menu item and press the Enter key to select that operation mode and launch the GROUP MODE menu, or press the Exit key to cancel the operation mode selection.

Group Interlock: If Group Interlock is set to ON:
a) Each product group runs only once per washer load (regardless of how many times the washer turns on supply signals).

b) The wash cycle ends either 5 minutes after the Count Pump has run or when the programmed Cycle Time is reached, whichever occurs first.

Set Cycle Time to the desired Group Interlock Time (See sections 8.14 Set Cycle Time Limit on page 37 and 1.12 Group Interlock Rules on page 11).

1) On the GROUP MODE menu, move the selection box onto the SET GROUP INTERLOCK menu item and press the Enter key to launch the GROUP INTERLOCK menu.

2) Move the selection box onto OFF (to disable Group Interlock) or ON (to enable Group Interlock) and press the Enter key to confirm your selection. If you enable Group Interlock, remember to set the Cycle Time to the desired Group Interlock Time.

3) Press the Exit key to return to the GROUP MODE menu.

Set Group (Add Products to a Group):
1) On the GROUP MODE menu, move the selection box onto the SET GROUPS menu item and press Enter to launch the GROUPS menu.

2) At the GROUPS menu, select the group you want to add products to and press the Enter key to launch the G# PROD SELECT menu. Any products selected to dispense from a previous group configuration will already have a check mark to the right of the product identifier.

5) Use the Up / Down Arrows to move the selection box among the products and press the Enter key to select or deselect products. Up to three products can be selected for any group. Trying to select more then three products for a group will generate an error display.

6) When all the desired products have been selected for this group press the Exit key to return to the GROUPS menu; where another group may be selected for configuration.

7) When all products needed have been assigned to their groups, press the Exit key repeatedly to return to the SYSTEM SETUP menu.

Set Operation Mode to Group

```
   OPERATION MODE
  STANDARD
  RELAY
  EVENT
 ┌──────────────────────┐
 │ GROUP                │
 └──────────────────────┘
  OCCURRENCE
```

```
      GROUP MODE
 ┌──────────────────────┐
 │ SET GROUP INTERLOCK  │
 └──────────────────────┘
  SET GROUPS
```

Set Group Interlock On / Off

```
   GROUP INTERLOCK
  OFF
 ┌──────────────────────┐
 │ ON                   │
 └──────────────────────┘

      ✔ OK      ↺ EXIT
```

**Set Groups
(Add Products to a Group)**

```
        GROUPS
 ┌──────────────────────┐
 │ GROUP 1   (TRIG 1 / 2)│
 └──────────────────────┘
  GROUP 2   (TRIG 3 / 4)
  GROUP 3   (TRIG 5)
  GROUP 4   (TRIG 6)
```

```
   G1 PROD SELECT
  P1 PRE-WASH          ✓▲
  P2 DETERGENT         ✓
  P3 LIQUID BLEACH
 ┌──────────────────────┐
 │ P4 BLEACH ALTERNAT   │
 └──────────────────────┘
  P4 SOUR-CONDITIONR   ✓
  P5 ENZYME LIFT        ▼
```

8.08 Set Operation Mode to Occurrence

The Occurrence Operation Mode option is best suited for washers in which trigger signals do not have a specific function.

An Occurrence is a qualified signal received on any of the designated inputs. Each new qualified signal signifies a new Occurrence within the current wash cycle. Simultaneous triggers (i.e. triggers that occur within 2 seconds of each other, or whatever the filter time is set to) are considered one (1) Occurrence.

Up to 16 Occurrences can be programmed, with up to 3 products (each with A, B, and C amounts) dispensing per Occurrence. Each product can only be used once per Occurrence, but the same product can be used in multiple Occurrences. All dispensed amounts and delays are based upon the currently selected formula. If there is no product assigned to an Occurrence, nothing is dispensed and the Occurrence acts as a "place holder."

Each time a particular product is dispensed within the formula and Occurrences, it will sequentially step through the programmed A, B, and/or C amounts. If the product is to be dispensed in two Occurrences, the B amount will be dispensed for the second Occurrence (even if it is set to zero (0). If the product is to be dispensed in three or more Occurrences, the C amount must be set and that amount will be dispensed in the third Occurrence and all subsequent Occurrences within that wash cycle.

If a trigger for a product to run occurs and the product is already running, the trigger is ignored. This could result in not running some or all of the products called for by a trigger signal. If a product is included in an Occurrence, but is not in the currently selected formula, the product will not run when triggered. See also section 1.13 Occurrence Mode on page 11 for additional rules about this mode.

NOTE: It is imperative that when the installer is programming the washer signals, to allow plenty of time between triggers to ensure that a product (or group of products) will run for each of its triggers.

1) At the SYSTEM SETUP menu, put the selection box on the OPERATION MODE menu item and press the Enter key.

2) When the OPERATION MODE menu appears, move the selection box onto the OCCURRENCE menu item and press the Enter key to select that operation mode and launch the OCCURRENCES menu, or press the Exit key to cancel the operation mode selection.

3) On the the OCCURRENCES menu, sixteen Occurrences are displayed, Occurrence 01 to 16.

4) Move the selection box onto the Occurrence you wish to configure and press the Enter key to launch the O# PROD SELECT menu.
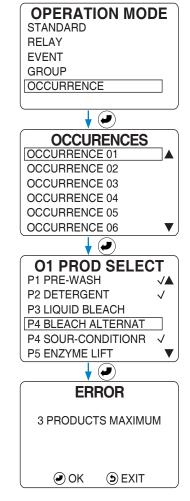
   Any products selected to dispense from a previous occurrence configuration will already have a check mark to the right of the product identifier.

5) Use the Up / Down Arrows to move the selection box among the products and press the Enter key to select or deselect products to be dispensed when this occurrence is triggered.

   Up to three products can be selected for a single occurrence. Trying to select more then three products for a single occrrence will generate an error display.

6) When all the desired products have been selected for this occurrence press the Exit key to return to the OCCURRENCES menu; where another occurrence may be selected for configuration.

7) When all occurrences needed have been configured, press the Exit key repeatedly to return to the SYSTEM SETUP menu.

Set Operation Mode to Occurrence

```
┌─────────────────────────────┐
│      OPERATION MODE         │
│  STANDARD                   │
│  RELAY                      │
│  EVENT                      │
│  GROUP                      │
│ ┌─────────────────────────┐ │
│ │ OCCURRENCE              │ │
│ └─────────────────────────┘ │
└─────────────────────────────┘
            ↓ ↵
┌─────────────────────────────┐
│       OCCURENCES            │
│ ┌─────────────────────┐     │
│ │ OCCURRENCE 01       │  ▲  │
│ └─────────────────────┘     │
│  OCCURRENCE 02              │
│  OCCURRENCE 03              │
│  OCCURRENCE 04              │
│  OCCURRENCE 05              │
│  OCCURRENCE 06          ▼  │
└─────────────────────────────┘
            ↓ ↵
┌─────────────────────────────┐
│      O1 PROD SELECT         │
│  P1 PRE-WASH          ✓▲   │
│  P2 DETERGENT          ✓   │
│  P3 LIQUID BLEACH          │
│ ┌─────────────────────┐    │
│ │ P4 BLEACH ALTERNAT  │    │
│ └─────────────────────┘    │
│  P4 SOUR-CONDITIONR    ✓   │
│  P5 ENZYME LIFT        ▼  │
└─────────────────────────────┘
            ↓ ↵
┌─────────────────────────────┐
│          ERROR             │
│                            │
│    3 PRODUCTS MAXIMUM      │
│                            │
│                            │
│   ↵ OK        ↺ EXIT       │
└─────────────────────────────┘
```

8.09 Edit Account Name (optional)

For the input of a client or account name that appears on reports. The name can use capital A-Z, 0-9, underscore, hyphen or space.

1) In the SYSTEM SETUP menu move the selection box to the EDIT ACCOUNT NAME menu item and press the Enter key to launch the ACCOUNT NAME input screen. The current name (if any) is displayed with the first letter selected for entry.

2) Use the Up / Down Arrows to move through the capital letters, numbers, hyphen, underscore and space that can be input for that digit.

3) Use the Left / Right arrows to move the digit selection cursor. A maximum of 15 characters can be used for the account name.

4) Press the Enter key to save the account name and return to the SYSTEM SETUP menu or press the Exit key to cancel account naming.

8.10 Edit Machine Name (optional)

To input a name for the washing machine that appears on reports. The name can use capital A-Z, 0-9, underscore, hyphen or space.

Follow the same procedure as in 8.09 above, except for launching the EDIT MACHINE NAME menu on the SYSTEM SETUP menu.

8.11 Edit Company Name (optional)
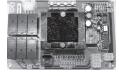
To input the chemical company's name that appears on the Home Screen. The name can use capital A-Z, 0-9, underscore, hyphen or space.

Follow the same procedure as in 8.09 above, except for launching the EDIT COMPANY NAME menu on the SYSTEM SETUP menu.

Edit Account Name

```
       SYSTEM SETUP
 EDIT INST PASSWORD      ▲
 EDIT MGR PASSWORD
 OPERATION MODE
 EDIT ACCOUNT NAME
 EDIT MACHINE NAME
 EDIT COMPANY NAME       ▼
```

```
       ACCOUNT NAME

         ▲
       ECLIPSE HOTEL 37
         ▼

     ↵ OK      ⟲ EXIT
```

Edit Machine Name

```
       MACHINE NAME

         ▲
       HOUSEKEEPING 01
         ▼

     ↵ OK      ⟲ EXIT
```

Edit Company Name

```
       COMPANY NAME

         ▲
       HYDRO SYSTEMS
         ▼

     ↵ OK      ⟲ EXIT
```

About Setting the Pump Interface:

NOTE! "Pump Interface" (PI) is a generic term for the printed circuit board inside a product dispenser that receives signals from the controller and operates the pump motors or eductor solenoids. Each pumpstand or eductor dispenser has a unique PI board. The following illustrations may help to identify the PI board.

Eclipse 6 Product - Menu Name: "**Eclipse Flush PI**"
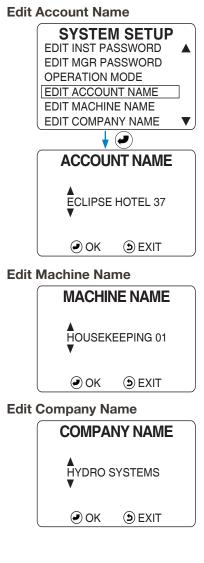
Large Laundry 6 Product - Menu Name: "**Orion II Flush PI**"

Eductor 6 Product - Menu Name: "**6-Eductor Flush PI**"

Large Laundry 8 Product - Menu Name: "**8-Product Flush PI**"

The Total Eclipse controller only controls flush when used with a flush-compatible Hydro Pump Interface (PI) board. The boards can be used with or without a flush manifold, while an eductor dispenser has a flush manifold built in. When flush mode is enabled, only one product may run at a time, and if multiple products are triggered simultaneously, they are placed in a queue to run sequentially.

⚠️ **NOTE!** It is important to select the correct Pump Interface (corresponding to the dispenser) to ensure proper and safe operation.

A confirmation warning message (shown to the right) will appear whenever an eductor PI is selected, or if a controller configured for eductors is connected to a peristaltic pump dispenser.

8.12 Select Pump Interface

Here the appropriate Pump Interface for this installation must be selected so the proper control signals are sent to correctly dispense products. See "About Setting the Pump Interface" on the previous page for details.

1) At the SYSTEM SETUP menu, move the selection box down until the menu scrolls up, and onto the SET INTERFACE menu item and press the Enter key.

2) On the SET INTERFACE menu, move the selection box onto the Pump Interface (PI) that corresponds to the dispenser being used and press Enter to select. The factory default selection is "ECLIPSE FLUSH PI".

8.13 Set Flush Time (Enable Flush Operation)

1) When a flush compatible PI board is selected, the FLUSH TIME menu will launch, for setting the flush time after dispensing, in seconds. Also see Flush Operation (for a Flush-compatible PI ONLY) on page 12. All flush compatible PI boards will default to 10 seconds. Eductor flush can be set from 10 to 99 seconds. For peristaltic installations where a flush manifold is NOT installed, the Flush Time can be set to zero to disable flush. **A flush time MUST be used with any flush manifold, to avoid hazardous chemical mixing!** With flush enabled there will always be a fixed 2-second pre-flush before dispensing, as well as the post-flush using this Flush Time setting, up to 99 seconds.

2) Use the Up / Down Arrows to move through the values 0 to 9, and use the Left / Right arrows to move the digit selection cursor.

3) Press Enter to save the Flush Time value and return to the SET INTERFACE menu or press the Exit key to cancel the Flush Time input.

⚠️ **NOTE!** The TE controller only controls flush with a flush-compatible PI board. With flush mode enabled, only one product may run at a time. If multiple products are triggered simultaneously, they are queued to run sequentially.

8.14 Set Cycle Time Limit

Set Cycle Time Limit for Standard, Group, or Occurrence Operation Mode unless the installation has loads that last longer than 99 minutes. For these extra-long loads, the Cycle Time Limit can be set to zero (0=OFF) and will no longer end a wash cycle, causing complete reliance on the Count Pump to end the wash cycle.

Cycle Time should be set to five minutes longer than the longest wash cycle. The range is 0 or 30 - 99 minutes. The factory default is 90 minutes. If Group Mode is selected, the Cycle Time is also used as the Group Interlock time. For additional information see section 2.03 Cycle Time (Standard, Group, or Occurrence Modes ONLY)" on page 12.
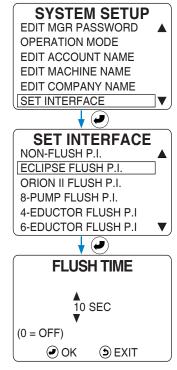
1) At the SYSTEM SETUP menu, move the selection box down until the menu scrolls up, and onto the SET CYCLE TIME menu item and press the Enter key to launch the CYCLE TIME LIMIT input screen.

2) Use the Up / Down Arrows to move through the values 0 to 9 and the Left / Right arrows to move the digit selection cursor.

3) Press Enter to save the Cycle Time value and return to the SYSTEM SETUP menu or press the Exit key to cancel the Cycle Time input.
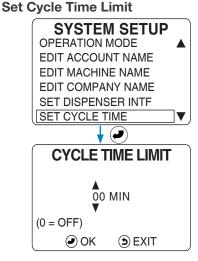
Eductor PI Selection Confirmation

```
          WARNING

EDUCTOR P.I SELECTED
ARE YOU SURE THAT AN
EDUCTOR DISPENSER IS
CONNECTED?
      ↵ OK        ↩ EXIT
```

Select Pump Interface

```
       SYSTEM SETUP
EDIT MGR PASSWORD      ▲
OPERATION MODE
EDIT ACCOUNT NAME
EDIT MACHINE NAME
EDIT COMPANY NAME
[SET INTERFACE]        ▼
```
↓ ↵

```
       SET INTERFACE
NON-FLUSH P.I.          ▲
[ECLIPSE FLUSH P.I.]
ORION II FLUSH P.I.
8-PUMP FLUSH P.I.
4-EDUCTOR FLUSH P.I
6-EDUCTOR FLUSH P.I     ▼
```
↓ ↵

```
       FLUSH TIME

            ▲
          10 SEC
            ▼
(0 = OFF)
      ↵ OK        ↩ EXIT
```

Set Cycle Time Limit

```
       SYSTEM SETUP
OPERATION MODE         ▲
EDIT ACCOUNT NAME
EDIT MACHINE NAME
EDIT COMPANY NAME
SET DISPENSER INTF
[SET CYCLE TIME]       ▼
```
↓ ↵

```
     CYCLE TIME LIMIT

            ▲
          00 MIN
            ▼
(0 = OFF)
      ↵ OK        ↩ EXIT
```

NOTE! The minimum non-zero Cycle Time Limit value is 30. The maximum is 99.

8.00 initial system setup menus (continued)

8.15 Set Signal Filter Time

The Signal Filter Time is the amount of time a trigger signal needs to be on continuously before the controller will accept the signal as valid. Only when a trigger has been on as long as the setting (2 seconds is the default) is the signal considered "qualified" (a true signal). Use a longer filter time if a washer produces unreliable signals that falsely triggers products. This one filter time setting is used for all trigger signals, except an AFS trigger.

1) At the SYSTEM SETUP menu, move the selection box down until the menu scrolls up, and onto the SIGNAL FILTER TIME menu item and press the Enter key to launch the TRIGGER FILTER selection menu.

2) On the TRIGGER FILTER menu, use the Up / Down Arrows to move the selection box onto the desired signal filter time and press the Enter key to select that setting, or press the Exit key to cancel the selection.

8.16 Set [AFS] Auto-Formula Select Trigger (Standard Mode ONLY)

The AFS feature of the Standard operation mode allows a timed trigger signal from the washer to automatically select and run any programmed formula. The Trigger Filter Time is not used on an AFS signal. The default trigger setting for the AFS trigger is 0 (Off).

NOTE! To avoid confusion do not to use a trigger signal that starts or ends a formula for AFS. (The first product triggered starts a formula and the Count Pump ends the formula.) See "2.01 Auto Formula Select (AFS)" on page 12 for more information.

To use an AFS trigger the installer must program the corresponding washer supply signal to energize for a total of 2 seconds multiplied by the desired formula number. For example:
- a 2 second signal = Formula 1 (2 x 1 = 2)
- a 4 second signal = Formula 2 (2 x 2 = 4)
- a 6 second signal = Formula 3 (2 x 3 = 6), and so forth.
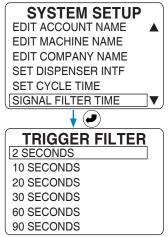
1) At the SYSTEM SETUP menu, move the selection box down until the menu scrolls up, and onto the SET AFS TRIGGER menu item and press the Enter key to launch the AFS TRIGGER menu.

2) On the AFS TRIGGER menu, use the Up / Down Arrows to indicate the desired AFS trigger (0-6) and press the Enter key to save that setting..
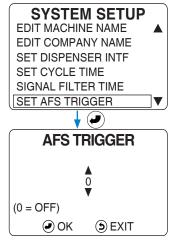
8.17 Set User Prime

The User Prime feature (when enabled) allows the machine operator to prime products without needing a password. By default User Prime is disabled. The ENABLE choice will allow the operator to determine the length of time prime will run (up to 5 minutes), while the LIMITED 30 SEC choice will limit the User Prime to 30 seconds per product, per wash cycle.

1) At the SYSTEM SETUP menu, move the selection box down until the menu scrolls up, and onto the SET USER PRIME menu item and press the Enter key to launch the USER PRIME configuration menu.

2) Use the Up / Down Arrows to move the selection box to one of the three options: DISABLE, ENABLE or LIMITED 30 SEC.

3) Press Enter to save the configuration and return to the SYSTEM SETUP menu or press the Exit key to cancel the USER PRIME configuration.
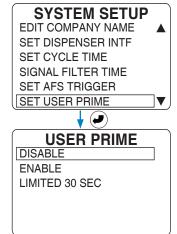
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Set Signal Filter Time

SYSTEM SETUP
EDIT ACCOUNT NAME ▲
EDIT MACHINE NAME
EDIT COMPANY NAME
SET DISPENSER INTF
SET CYCLE TIME
SIGNAL FILTER TIME ▼

TRIGGER FILTER
2 SECONDS
10 SECONDS
20 SECONDS
30 SECONDS
60 SECONDS
90 SECONDS

Set / Enable AFS Trigger Signal

SYSTEM SETUP
EDIT MACHINE NAME ▲
EDIT COMPANY NAME
SET DISPENSER INTF
SET CYCLE TIME
SIGNAL FILTER TIME
SET AFS TRIGGER ▼

AFS TRIGGER
▲
0
▼
(0 = OFF)
OK EXIT

NOTE! Setting the AFS Trigger Signal to any non-zero value automatically enables the Auto-Formula Select feature. A setting of zero (0) will disable Auto-Formula Select.

Set User Prime

SYSTEM SETUP
EDIT COMPANY NAME ▲
SET DISPENSER INTF
SET CYCLE TIME
SIGNAL FILTER TIME
SET AFS TRIGGER
SET USER PRIME ▼

USER PRIME
DISABLE
ENABLE
LIMITED 30 SEC

8.18 Set LCD Contrast

The contrast on the controller's display screen can be adjusted to adapt to the environment and the viewing needs of the user. The default setting is 60; the range is 30 (light) - 99 (dark). The two, double-arrow cursors indicate that both digits will increase or decrease at the same time.

1) On the SYSTEM SETUP menu, move the selection box down until the menu scrolls up, and onto the SET LCD CONTRAST menu item and press the Enter key to launch the LCD CONTRAST adjustment menu.

2) At the LCD CONTRAST menu, use the Up / Down Arrows to adjust the display contrast. A higher value will increase contrast (darken the screen) and a lower value will reduce contrast (lighten the screen).

3) Press the Enter key to save the contrast adjustment and return to the SYSTEM SETUP, or press the Exit key to cancel the adjustment.

8.19 Set Date & Time

This menu allows the date and time to be set, as needed. Keep the date and time correct, as they are important for creating accurate reports! For instructions on changing the date or time, see section 3.09 Set Date & Time" on page 17. These setting are retained if the power is turned off.

8.20 Clear Settings to Factory Defaults

Clears all controller settings (passwords, mode of operation, formulas, trigger assignments, flush, etc.) and restores the controller to the factory default settings. Once CLEAR SETTINGS has been performed, it cannot be undone. The Date & Time settings are not affected by this function.

1) At the SYSTEM SETUP menu, move the selection box down until the menu scrolls up, and onto the CLEAR SETTINGS menu item and press the Enter key to launch the CLEAR SETTINGS menu.

2) The first of two warnings will be displayed. Using this function will erase all controller settings (passwords, mode of operation, formulas, trigger assignments, flush, etc.) and restore the controller to the factory default settings. To continue press the Enter key or press the Exit key to cancel.

3) The second warning will be displayed to ask "**ARE YOU SURE?**" Once the CLEAR SETTINGS has been performed, it cannot be undone! To continue press the Enter key or press the Exit key to cancel.

8.21 View Software ID

For diagnostic or troubleshooting purposes, Hydro Systems' Technical Support personnel may need to know the software ID for a particular Total Eclipse controller. This is also how to check if the software is up to date.

1) At the SYSTEM SETUP menu, move the selection box down until the menu scrolls up, and onto the VIEW SOFTWARE ID menu item and press the Enter key to launch the VIEW SOFTWARE ID display.

2) The Hydro Systems part number for the software installed in the Total Eclipse controller will be displayed, along with the revision number of that software version.

3) Press any key to return to the SYSTEM SETUP menu.

Set LCD Contrast

SYSTEM SETUP
SET DISPENSER INTF ▲
SET CYCLE TIME
SIGNAL FILTER TIME
SET AFS TRIGGER
SET USER PRIME
SET LCD CONTRAST ▼

LCD CONTRAST
▲▲
60
▼▼
↵ OK ↻ EXIT

Reset to Factory Defaults

SYSTEM SETUP
SIGNAL FILTER TIME ▲
SET AFS TRIGGER
SET USER PRIME
SET LCD CONTRAST
SET DATE & TIME
CLEAR SETTINGS ▼

CLEAR SETTINGS
WARNING! ALL SETUPS
WILL BE CLEARED TO
FACTORY DEFAULTS!
↵ OK ↻ EXIT

CLEAR SETTINGS
ARE YOU SURE?
↵ OK ↻ EXIT

View Software ID

SYSTEM SETUP
SET AFS TRIGGER ▲
SET USER PRIME
SET LCD CONTRAST
SET DATE & TIME
CLEAR SETTINGS
VIEW SOFTWARE ID ▼

VIEW SOFTWARE ID
TOTAL ECLISPE
P/N: 95-09114-07
REV: 284

About Programming Formulas:

The PROGRAM FORMULAS menu allows the installer to create and edit formulas for the Standard, Group, Event, and Occurrence Modes. See section 8.03 Set Operation Mode on page 32 for explanations of each mode of operation.

⚠️ **NOTE!** When using the Relay mode of operation, the installer should set a default weight for Formula 1 to enable accurate reports. No other formula parameters need to be set. An operator can override the default load weight at wash time with the actual weight of a particular load.

The Total Eclipse controller allows up to 20 formulas to be created, each using up to 8 products.

- Each formula is designated by a unique formula number (F01, F02, F03...).
- For ease of selection, a name can be added to the formula number. (See section 9.06 Edit Name (Optional) on page 42.)
- Formula names only appear when input by the installer or uploaded from a setup file on a USB flash drive.
- Formula names are not translated if the controller's operating language is changed.
- Each formula can include up to 6 products when using a 6-product dispenser, or 8 products with an 8-product dispenser.
- Each product in a formula may be programmed for up to 3 amounts (A, B, and C Amount).
- A delay time may be programmed for any product in any formula.
- A product can be included in more than one formula, with different A, B, and C Amounts and a different delay.
- Each possible product is also given a unique product number (P1, P2, P3...).
- For ease of selection, a name can be added to the product number. (See 7.07 Name Products (Optional) on page 30.)
- Product names only appear when input by the installer or uploaded from a setup file on a USB flash drive.
- Product names are not translated if the controller's operating language is changed.
- Each product in a formula must be calibrated before running the formula (See section 7.03 Calibration on page 28.)

About the "Count Pump":

A load is counted (except in Event Mode) when the "Count Pump" product dispenses it's last programmed amount. (Event mode does not use a Count Pump, see 1.09 Event Mode on page 10). By default the "Count Pump" will be assigned to the highest *numbered* product (with an amount programmed) in each formula. Which will work if that product is *always* the last product to be dispensed. Instead, it is recommended that the "Count Pump" designation always be manually assigned by the installer to the last product dispensed in each formula, rather than relying on the "highest numbered" default rule. Also, if a product assigned as the "Count Pump" has more than one amount programmed, the load will not be counted unless the last amount is dispensed.

9.01 Formula Rules

In Modes of Operations that use formulas (Standard, Event, Group and Occurrence), a product may be programmed to dispense multiple times, with up to three different amounts (identified as Amount A, B and C). A product will not dispense unless at least one non-zero amount is set for that product in the formula.

If only the A amount is programmed for a product in a formula, the first request results in Amount A dispensing. Additional requests within the same wash cycle are ignored.

If only A and B amounts are programmed for a product in a formula, the first request results in the dispensing of Amount A. The second request results in the dispensing of Amount B. Additional requests (after the second request) are ignored.

If all three amounts (A, B, and C) are programmed for a product in a formula, the first request results in the dispensing of Amount A. The second request results in the dispensing of Amount B and the third request results in the dispensing of Amount C. Each additional request (after the third request) results in the dispensing of Amount C again.

These dispensing sequences are reset when the wash cycle ends, either because the Count Pump's highest amount has been dispensed or the Cycle Time has been reached, whichever comes first (except in Event Mode).

⚠️ **WARNING!** It is imperative that when the installer is programming the washer signals, to allow plenty of time between triggers to ensure that a product (or group of products) will run for each of its triggers.
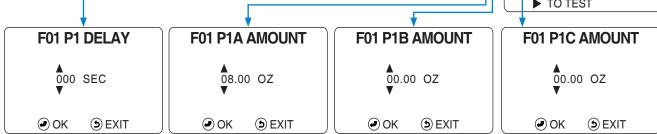
Programming Notes:

- Only program the product amounts that will actually be triggered by the washer supply signals.

- Program A, B, and C amounts for different product amounts within a wash formula, or use the amounts as a lockout by not programming any B or C amount.

- With an 8-product PI products 7 and 8 share the same trigger signals (respectively) as products 3 and 5. By programing alternating A, B and/or C amounts for product 3 and 7 (or 5 and 8) up to 8 products can be dispensed with only 6 signals.

- When using a flush manifold only one product may run at a time, and if multiple products are triggered simultaneously, they are placed in a queue to run sequentially
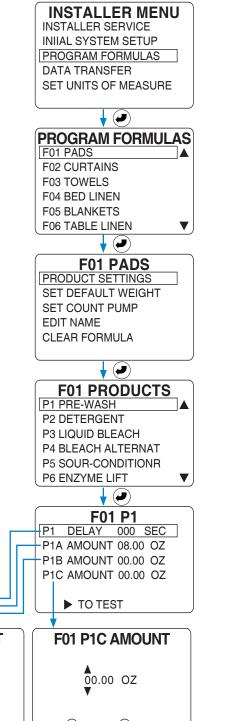
9.02 Program Formulas Menu

1) On the INSTALLER MENU menu, move the selection box onto the PROGRAM FORMULAS menu item and press the Enter key to launch the PROGRAM FORMULAS menu.

2) On the PROGRAM FORMULAS menu, use the Up / Down Arrows to indicate the formula to be configured and press the Enter key to launch the F## <formula name> menu.

9.03 Product Settings

1) At the F## <formula name> menu, move the selection box onto the PRODUCT SETTINGS menu item and press the Enter key to launch the F## PRODUCTS menu.

2) On the F## PRODUCTS menu, use the Up / Down Arrows to indicate the first product to be added to the formula and press Enter to launch the F## P# menu for that product. (F## is the Formula, P# is a Product.)

3) On the F## P# menu move the selection box onto the product parameter to configure and press the Enter key to launch the input screen for that value.

4) The F## P# DELAY input screen is where to input a value to delay the dispensing of any of the programmed amount by 0 to 999 seconds.

5) The F## P#A AMOUNT input screen is where to designate how much product will be dispensed by the first trigger signal, in ounces or ml.

6) The F## P#B AMOUNT input screen is where to designate how much product will be dispensed by the second trigger signal, in ounces or ml.

7) The F## P#C AMOUNT input screen is where to designate how much product will be dispensed by the second trigger signal, in ounces or ml.

8) The Right Arrow can be used to test a product delivery amount when the selection box is on a product amount menu item (not the Delay).

9) Once this product delivery has been configured press Exit to return to the F## PRODUCTS menu to select another product for this formula.

Set Product Amounts and Delay

```
        INSTALLER MENU
  INSTALLER SERVICE
  INIIAL SYSTEM SETUP
 [PROGRAM FORMULAS     ]
  DATA TRANSFER
  SET UNITS OF MEASURE
```
↓ ↵

```
     PROGRAM FORMULAS
 [F01 PADS             ]  ▲
  F02 CURTAINS
  F03 TOWELS
  F04 BED LINEN
  F05 BLANKETS
  F06 TABLE LINEN        ▼
```
↓ ↵

```
         F01 PADS
 [PRODUCT SETTINGS     ]
  SET DEFAULT WEIGHT
  SET COUNT PUMP
  EDIT NAME
  CLEAR FORMULA
```
↓ ↵

```
        F01 PRODUCTS
 [P1 PRE-WASH          ]  ▲
  P2 DETERGENT
  P3 LIQUID BLEACH
  P4 BLEACH ALTERNAT
  P5 SOUR-CONDITIONR
  P6 ENZYME LIFT         ▼
```
↓ ↵

```
          F01 P1
 [P1   DELAY    000  SEC ]
  P1A  AMOUNT  08.00  OZ
  P1B  AMOUNT  00.00  OZ
  P1C  AMOUNT  00.00  OZ

         ▶ TO TEST
```

```
   F01 P1 DELAY

        ▲
      000  SEC
        ▼

   ↵ OK      ↺ EXIT
```

```
   F01 P1A AMOUNT

        ▲
     08.00  OZ
        ▼

   ↵ OK      ↺ EXIT
```

```
   F01 P1B AMOUNT

        ▲
     00.00  OZ
        ▼

   ↵ OK      ↺ EXIT
```

```
   F01 P1C AMOUNT

        ▲
     00.00  OZ
        ▼

   ↵ OK      ↺ EXIT
```

9.04 Set Default Weight

Here the default load weight for this formula can be input. When a load runs, either the default load weight or the operator-entered actual load weight for a specific load is recorded in the data log (for Reports).

1) Move the selection box onto the SET DEFAULT WEIGHT menu item and press the Enter key to launch the F## LOAD SIZE input screen.

2) Change the active digit by pressing the Up / Down Arrow keys. Move the digit selection cursor with the Left / Right Arrow keys.

3) When the desired load size has been input, press the Enter key to save the weight and return to F## <formula name> menu.

9.05 Set Count Pump (Standard, Group and Occurrence Mode Only)

An installer should ALWAYS designate a Count Pump to indicate the end of a wash cycle, overriding the default automatic selection of the highest *numbered* product in a formula. (The traditional term "Count Pump" is still used, even when dispensing products with an eductor dispenser.)

NOTE! Only when the *last* programmed amount for the Count Pump product is dispensed, will the Count Pump feature end the wash cycle and reset the formula! Therefore, the installer must ensure that at least one amount is programmed for the Count Pump product AND that the last programmed amount is dispensed! (Or the cycle will be recorded as an "incomplete load" and the Load Count statistical data will be incorrect.)

1) Select SET COUNT PUMP and press Enter key. The F0# COUNT PUMP selection screen displays all products with at least one amount set.

2) Move the selection box to the Count Pump product, and press Enter key to save the selection and return to the F## <formula name> screen.
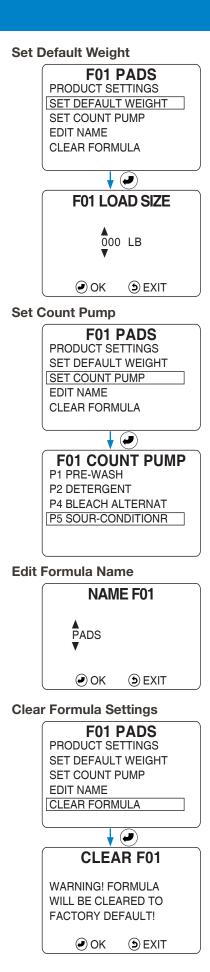
9.06 Edit Name (Optional)

This feature allows a name to be added to a formula, up to 15 characters.

1) Move the selection box onto the EDIT NAME menu item and press the Enter key to launch the NAME F## input screen.

2) Change the active digit by pressing the Up / Down Arrow keys. Move the digit selection cursor with the Left / Right Arrow keys.

3) When the desired formula name has been input, press the Enter key to save the weight and return to F## <formula name> menu.

9.07 Clear Formula

Use this menu only if you want to completely clear a formula's settings.

1) Move the selection box onto the CLEAR FORMULA menu item and press the Enter key to launch the CLEAR F## confirmation screen.

2) Press the Enter key to indicate it is OK to completely clear this formula's settings, or press the Exit key to cancel the CLEAR FORMULA function.

3) After the Formula's settings are deleted, the display will automatically return the F## <formula name> menu.

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Set Default Weight

```
      F01 PADS
PRODUCT SETTINGS
[SET DEFAULT WEIGHT]
 SET COUNT PUMP
 EDIT NAME
 CLEAR FORMULA
```
↓
```
   F01 LOAD SIZE

      ▲
      000  LB
      ▼

   ↵ OK      ↩ EXIT
```

Set Count Pump

```
      F01 PADS
 PRODUCT SETTINGS
 SET DEFAULT WEIGHT
[SET COUNT PUMP]
 EDIT NAME
 CLEAR FORMULA
```
↓
```
  F01 COUNT PUMP
 P1 PRE-WASH
 P2 DETERGENT
 P4 BLEACH ALTERNAT
[P5 SOUR-CONDITIONR]
```

Edit Formula Name

```
      NAME F01

      ▲
      PADS
      ▼

   ↵ OK      ↩ EXIT
```

Clear Formula Settings

```
      F01 PADS
 PRODUCT SETTINGS
 SET DEFAULT WEIGHT
 SET COUNT PUMP
 EDIT NAME
[CLEAR FORMULA]
```
↓
```
     CLEAR F01

 WARNING! FORMULA
 WILL BE CLEARED TO
 FACTORY DEFAULT!

   ↵ OK      ↩ EXIT
```

9.08 Data Transfer Menus

This set of menus allows the installer to transfer data (i.e., formulas, settings, usage reports) to and from the Total Eclipse controller via a USB flash drive.

In these menus, the word WRITE means to send data (also called "download") from the controller to the USB flash drive. The word READ means to transfer data (also called "upload") from the USB drive to the Controller. These data transfers can take from 2 to 20 seconds or more.
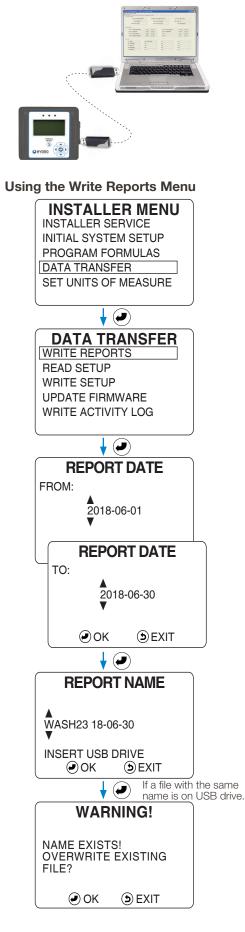
9.09 Write Reports

This menu can be used to transfer the laundry machine data, in four separate Reports, from the controller to a USB flash drive. The reports are in HTML format and can be viewed and printed on a computer with a spreadsheet program such as Microsoft Excel. Each report includes the Account and Machine names (if they were input by the installer) and the information included in the date range specified.

The four reports that are written to the USB flash drive are:
- REPORT NAME_D.HTM (Diagnostic Report)
- REPORT NAME_F.HTM (Formula Report)
- REPORT NAME_P.HTM (Productivity Summary Report)
- REPORT NAME_S.HTM (Settings Report)

NOTE! Between 2-3 month's of report data can be held in the controller's memory, depending upon machine usage. Once the memory is full, new data will overwrite the oldest data. It is recommended that the "Write Reports" function be used every 30-60 days to avoid loss of information.

1) On the INSTALLER MENU move the selection box to DATA TRANSFER and press Enter to launch the DATA TRANSFER menu.

2) Then move the selection box onto WRITE REPORTS and press the Enter key to start the Write Report process.

3) Use the Left / Right Arrow keys to move the digit selection cursor and the Up / Down Arrows to input the FROM report date. The default date will be the current date or the last FROM date that was used.

4) Press the Enter key when the FROM date is properly displayed, to launch the TO report date input menu.

5) Use the Left / Right Arrow keys to move the digit selection cursor and the Up / Down Arrows to input the TO report date. The default date will be the current date or the last TO date that was used.

6) Press the Enter key when the TO date is properly displayed, to launch the REPORT NAME input menu.

7) Use the Left / Right Arrow keys to move the digit selection cursor and the Up / Down Arrows to input the REPORT NAME. The default name will be blank or the last REPORT NAME used.

8) Connect a USB drive to the controller and press the Enter key to start the transfer. (If a report with the same name is on the USB drive, a warning appears. You can overwrite the existing report by pressing the Enter key, or press the Exit key to cancel and input a different name.)

Using the Write Reports Menu

INSTALLER MENU
INSTALLER SERVICE
INITIAL SYSTEM SETUP
PROGRAM FORMULAS
DATA TRANSFER
SET UNITS OF MEASURE

DATA TRANSFER
WRITE REPORTS
READ SETUP
WRITE SETUP
UPDATE FIRMWARE
WRITE ACTIVITY LOG

REPORT DATE
FROM:
▲
2018-06-01
▼

REPORT DATE
TO:
▲
2018-06-30
▼
OK   EXIT

REPORT NAME
▲
WASH23 18-06-30
▼
INSERT USB DRIVE
OK   EXIT

If a file with the same name is on USB drive.

WARNING!
NAME EXISTS!
OVERWRITE EXISTING FILE?
OK   EXIT

9.10 Read Setup

NOTE! Five settings (plus language, date and time) are NOT INCLUDED in data transfer and are unique to each controller. They are the **Installer Password**, **Manager Password**, **Calibration**, **Machine Name**, and **Company Name**. They must be set individually on each controller. Look for this icon to find the instructions for these settings in this chapter:

This menu can be used to transfer Setup Files (settings and formulas) from a USB flash drive into a Total Eclipse controller. If more than six setup files are contained on the USB drive, use the Up / Down Arrow keys to view all the files, on the SETUP FILE selection screen shown to the right.

1) At the DATA TRANSFER menu, move the selection box onto the READ SETUP menu item and press the Enter key to launch the SETUP FILE selection screen.

2) Use the Up / Down Arrow keys to move the selection box onto the setup file that is to be transferred from the USB drive to the Total Eclipse controller.

   (If no setup files displayed, make sure the USB drive is inserted properly. The USB drive must be formatted as "FAT" or "FAT32" and have at least one setup file on it, or the SETUP FILE list will be blank.)

3) Press the Enter key to start the setup file transfer. A warning will be displayed that the data transfer will overwrite and erase all existing settings and formulas on the controller (except for the settings described in the note above). Press Enter again to continue, or press Exit to cancel the transfer and return to the DATA TRANSFER menu.

9.11 Write Setup

NOTE! There are five settings (plus language, date and time) NOT INCLUDED in data transfers that are unique to each controller. They are the **Installer Password**, **Manager Password**, **Calibration**, **Machine Name**, and **Company Name**. They must be set individually on each controller. Look for this icon to find the instructions for these settings:

Additionally, it is important to verify the PI selection is correct, when transferring a setup file. A warning will appear if a setup file with an Eductor PI selected is read into a controller set to a peristaltic PI

The converse of Read Setup, the Write Setup function allows the settings and formulas (that make up a setup file) to be transferred from a Total Eclipse controller to a USB drive.

1) At the DATA TRANSFER menu, move the selection box onto the WRITE SETUP menu item and press the Enter key to launch the SETUP NAME input screen.

2) Use the Up / Down Arrow keys to edit the character indicated by the digit selection cursor, and use the Left / Right Arrow keys to move the digit selection cursor. Setup file names can be up to 15 characters long.

3) Once the setup file name has been input, press the Enter key to start the transfer of the setup file from the controller to the USB drive.

   If a setup file with the same name is already on the USB drive, a warning appears. You can overwrite the existing file by pressing the Enter key, or press the Exit key to cancel and input a different name.

   (An error message "UNABLE TO OPEN FILE" may appear if the USB drive is full, or if the USB drive is not formatted as "FAT" or "FAT32".)

Using the Read Setup Menu

```
        DATA TRANSFER
  WRITE REPORTS
  [READ SETUP            ]
  WRITE SETUP
  UPDATE FIRMWARE
  WRITE ACTIVITY LOG
```

```
         SETUP FILE
  [POG RESTAURANT        ]
  ECLIPSE HOTEL 37
  WASH23 18-07-31
  VETEREN HOSPITAL
  AA SCHOOL DISTRICT
  WASHINGTON HOTEL     ▼
```

```
           WARNING

  THIS WILL OVERWRITE
  EXISTING SETTINGS
  AND FORMULAS!

     ↵ OK      ↺ EXIT
```

Using the Write Setup Menu

```
        DATA TRANSFER
  WRITE REPORTS
  READ SETUP
  [WRITE SETUP           ]
  UPDATE FIRMWARE
  WRITE ACTIVITY LOG
```

```
          SETUP NAME

          ▲
       POG RESTURANT
          ▼
    INSERT USB DRIVE
       ↵ OK      ↺ EXIT
```

If a file with the same name is on USB drive.

```
          WARNING!

  NAME EXISTS!
  OVERWRITE EXISTING
  FILE?

     ↵ OK      ↺ EXIT
```

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9.12 Update Firmware

⚠️ **DO NOT** attempt to update firmware unless directed to do so by Hydro Systems' Technical Support. If you press the Enter key at the UPDATE FIRMWARE warning screen shown, and are not ready to proceed with the update, you will have to turn the power to the controller off and on to return to normal operation.

NOTE! Updating the firmware of the Total Eclipse controller will revert all the settings and formulas to the factory defaults. Therefore it is recommended to write the Setup File to a USB drive before updating firmware. (See 9.11 Write Setup on page 44.)

9.13 Write Activity Log

The Activity Log is a more detailed diagnostic report than the Summary Diagnostic Report. The Activity Log gives added details about a particular wash cycle and/or wash operation that will aid in troubleshooting problems. The log contains details about the last 40-50 wash cycles (depending upon the complexity of the cycles), with time-stamped activity of trigger signals, product dispense signals and the flush signal.

No date range can be selected for this report. All activity is printed, from the oldest to the most recent. If the Activity Log buffer is filled, the most recent activity overwrites the oldest activity.

NOTE! The Activity Log can be erased by using the Clear Data Log menu as described in section 7.13 Clear Data Log on page 31.

1) At the DATA TRANSFER menu, move the selection box onto the WRITE ACTIVITY LOG menu item and press the Enter key to launch the REPORT NAME input screen.

2) Use the Up / Down Arrow keys to edit the character indicated by the digit selection cursor, and use the Left / Right Arrow keys to move the digit selection cursor. Activity Log names can have up to 15 characters.

3) Once the Activity Log name has been input, press the Enter key to start the transfer of the report from the controller to the USB drive.

   If an Activity Log with the same name is already on the USB drive, a warning appears. You can overwrite the existing file by pressing the Enter key, or press the Exit key to cancel and input a different name.

   (An error message "UNABLE TO OPEN FILE" may appear if the USB drive is full, or if the USB drive is not formatted as "FAT" or "FAT32".)

9.14 Set Units of Measure

When the units of measure are changed, existing volumes and weights, such as doses in a Formula, are properly converted to the new system.
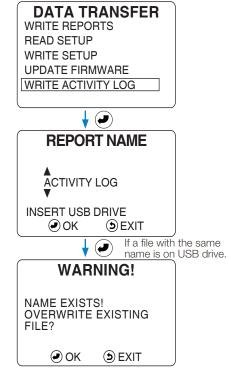
Product cost-per-volume is reset to zero, however, and must be re-input. See section 7.09 Enter Product Costs (Optional) on page 30.

1) At the INSTALLER MENU, move the selection box onto the SET UNITS OF MEASURE menu item and press the Enter key to launch the UNITS-MEASURE selection screen.

2) Use the Up / Down Arrow keys to move the selection box onto the desired units, and press the Enter key to make the selection.
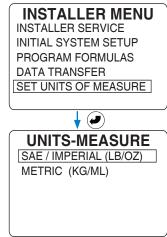
Update Firmware Warning

```
┌─────────────────────────┐
│   UPDATE FIRMWARE       │
│                         │
│ STOP!!! DO NOT          │
│ PROCEED WITHOUT         │
│ PC UPDATE PROGRAM!      │
│                         │
│   ↵ OK      ↩ EXIT      │
└─────────────────────────┘
```

Writing the Activity Log

```
┌─────────────────────────┐
│    DATA TRANSFER        │
│ WRITE REPORTS           │
│ READ SETUP              │
│ WRITE SETUP             │
│ UPDATE FIRMWARE         │
│ WRITE ACTIVITY LOG      │
└─────────────────────────┘
          ↓ ↵
┌─────────────────────────┐
│     REPORT NAME         │
│                         │
│    ▲                    │
│    ACTIVITY LOG         │
│    ▼                    │
│  INSERT USB DRIVE       │
│   ↵ OK      ↩ EXIT      │
└─────────────────────────┘
```
↓ ↵ If a file with the same name is on USB drive.
```
┌─────────────────────────┐
│      WARNING!           │
│                         │
│ NAME EXISTS!            │
│ OVERWRITE EXISTING      │
│ FILE?                   │
│                         │
│   ↵ OK      ↩ EXIT      │
└─────────────────────────┘
```

Setting Units of Measure

```
┌─────────────────────────┐
│    INSTALLER MENU       │
│ INSTALLER SERVICE       │
│ INITIAL SYSTEM SETUP    │
│ PROGRAM FORMULAS        │
│ DATA TRANSFER           │
│ SET UNITS OF MEASURE    │
└─────────────────────────┘
          ↓ ↵
┌─────────────────────────┐
│    UNITS-MEASURE        │
│ SAE / IMPERIAL (LB/OZ)  │
│ METRIC  (KG/ML)         │
│                         │
│                         │
└─────────────────────────┘
```

9.15 Frequently Asked Questions

This section provides information about the topics that come up most frequently during calls to our Technical Support team. These are included in order to provide help when it is most important: during installation or report evaluation.

How is a Flush System Configured?

The Total Eclipse system offers flush manifold control when used with all Orion II, Eclipse, 8-Product PI or Eductor dispensers or upgrade kits. When programming for flush manifold installations, confirm that the "Configure PI" setting is appropriate for the Pump Interface (PI) being used and that the Flush Time is set to a non-zero number of seconds. Use the illustrations in section 8.12 "Set Interface" on page 37, to select the correct PI configuration.

How is a Non-Flush System Configured?

Use this selection for non-flush operation. On an 8-Product PI, the Flush/Non-Flush Selection Jumper must be in the non-flush position to enable non-flush operation.

Eclipse Dispensers with Flush (up to 6 products)

This is the factory default PI This selection enables the flush control functions of our Eclipse Dispensers if Flush Time is set to a non-zero number of seconds. If no flow is sensed, or water flow falls below .65 GPM, an optional flow switch on the flush manifold causes all products to shut down. This provides a safety interlock in the event of low water flow or other water flush system failures.

A flush jumper is present at the flush connector on the Dispenser. Remove this jumper to connect the Flush Manifold Interface Cable. Products will not run without either the flush jumper installed or a functioning Flush Manifold connected.
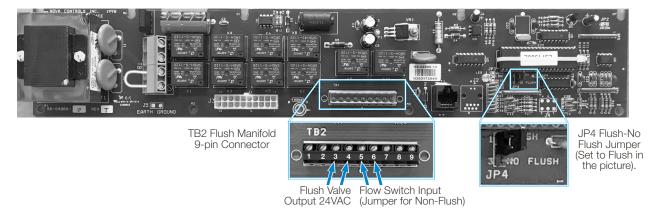
Orion 2 Dispensers (up to 6 products) with Flush and an Orion 2 PI board

This selection enables the flush control functions of the LM-100, LL-6000 or LL-8000 6-product Orion systems that use an Orion II PI board. Flush Time must be set to a non-zero number. If no flow is sensed, or water flow falls below .65 GPM, an optional flow switch on the flush manifold causes all products to shut down. This provides a safety interlock in the event of low water flow or other water flush system failures.

A flush jumper is present at the flush connector on the Dispenser. Remove this jumper to connect the Flush Manifold Interface Cable. Products will not run without either the flush jumper or a functioning Flush Manifold connected.

Orion Dispensers (up to 8 Products) with Flush and an 8-Product PI board

This selection enables the flush control functions of our LM-100 Orion series using an 8-Product-capable Pump Interface Boards. These are typically used in LL-6000 units, LL-8000 units and 8-Product upgrade kits. In addition to setting the Controller flush system configurations, confirm that all safety interlocks are set correctly on the PI board, i.e. solenoid connected, pressure or flow switch connected and contacts closed with flow, flush/non-flush jumper set to flush.

TB2 Flush Manifold 9-pin Connector

Flush Valve Output 24VAC

Flow Switch Input (Jumper for Non-Flush)

JP4 Flush-No Flush Jumper (Set to Flush in the picture).

NOTE! In flush configurations, multiple products triggered to run at the same time will run one at a time, in queue. It is imperative that the installer allow plenty of time between triggers to ensure that a product (or group of products) will run for each of its triggers. Failure to allow sufficient time between triggers could result in triggers for products being ignored.

9.15 Frequently Asked Questions (continued)

What if Auto Formula Select Doesn't Work?

Auto formula select uses a programmable timed washer signal to pre-select the desired dispenser formula for "hands-free" operation and dedication of the dispensing system to microprocessor controlled washers. Ideally, use of an unused trigger input to the Machine Interface is advisable. In cases where this is not feasible, you may use a trigger signal input if the following guidelines are met:

- The washer must always be run "full cycle" so that the programmed Count Pump runs to count the load and reset the dispenser to an idle condition.
- The auto formula select signal may not be the trigger signal that starts or ends a formula cycle (first product triggered starts the formula cycle and the Count Pump ends the formula cycle).

Failure to follow these guidelines will result in erratic auto selection of formulas. For more information, see section 8.16 Set Auto-Formula Select [AFS] Trigger on page 38.

(Formula Worksheet shown on next page.)

10.00 formula worksheet

Reproduce this sheet, document your formulas, and keep on file as a backup and as a guide for future installations.

Product #	Product Name	Formula 1				Formula 2				Formula 3				Formula 4			
		A	B	C	Delay	A	B	C	Delay	A	B	C	Delay	A	B	C	Delay
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	

Product #	Product Name	Formula 5				Formula 6				Formula 7				Formula 8			
		A	B	C	Delay	A	B	C	Delay	A	B	C	Delay	A	B	C	Delay
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	

Product #	Product Name	Formula 9				Formula 10				Formula 11				Formula 12			
		A	B	C	Delay	A	B	C	Delay	A	B	C	Delay	A	B	C	Delay
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	

Product #	Product Name	Formula 13				Formula 14				Formula 15				Formula 16			
		A	B	C	Delay	A	B	C	Delay	A	B	C	Delay	A	B	C	Delay
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	

11.01 Transferring a Formula Editor Setup File

The easy way to program a Total Eclipse controller is to define the settings and formulas on the computer, using the Formula Editor from Hydro Systems, and then transfer the saved Setup File to the controller using a USB drive.

The Formula Editor software (and controller language files) can be downloaded from www.hydrosystemsco.com.

When a setup file is saved onto a 16 GB or smaller USB drive, it is easy to transfer the file (in the language used for input) to any Total Eclipse controller, using the controller's DATA TRANSFER function.

Remember there are five (5) settings (and the controller menu language, date, and time) that are unique to each controller, cannot be transferred via a USB flash drive, and must be individually set using each controller's keypad. Those five settings are: **Installer Password**, **Manager Password**, **Machine Name**, **Company Name**, and **Calibration**. The keypad must also be used to input the Installer Password to access the controller's Installer Menus and the DATA TRANSFER menus.

⚠️ **WARNING!** All the formulas and settings that are stored in the controller will be erased and overwritten when a setup file is transferred from a USB flash drive to the controller. There is no "undo" function that will restore the overwritten settings and formulas, so be certain before transferring a setup file to the controller.

11.02 Access to Data Transfer Menu

To do the data transfer of the setup file to the controller, access to the DATA TRANSFER menus within the INSTALLER MENU is required, and the Installer Password.
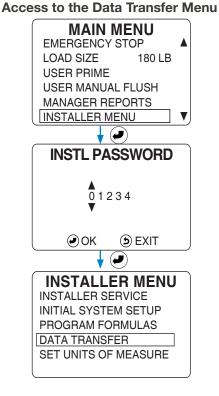
1) Press the Enter key on an idle controller to display the MAIN MENU, then use the Up / Down Arrow keys to move the selection box onto the INSTALLER MENU item.

2) Press the Enter key to launch the Installer Password input screen. The factory default installer password is 01234. It is highly recommended that the password be changed from the default to prevent unauthorized access to the installer functions!!

3) On the INSTL PASSWORD input screen use the Up / Down Arrow keys to change the number indicated by the digit selection cursor, and use the Left / Right Arrow keys to move the digit selection cursor. Installer passwords are numbers only and five digits in length. Once the proper password has been input, press the Enter key to launch the Installer Menus.

4) In the Installer Menu move the selection box onto the DATA TRANSFER menu item and press the Enter key to launch the Data Transfer menus. See section 9.08 Data Transfer Menus on page 43 for more details.

Access to the Data Transfer Menu

MAIN MENU
EMERGENCY STOP ▲
LOAD SIZE   180 LB
USER PRIME
USER MANUAL FLUSH
MANAGER REPORTS
INSTALLER MENU ▼

INSTL PASSWORD
▲
0 1 2 3 4
▼
OK   EXIT

INSTALLER MENU
INSTALLER SERVICE
INITIAL SYSTEM SETUP
PROGRAM FORMULAS
DATA TRANSFER
SET UNITS OF MEASURE

11.03 Additional Data Transfer Information

It is possible to transfer setup files between Total Eclipse controllers or create and save controller usage reports (in HTML format) from a controller to a computer via a USB flash drive. (See section 9.08 Data Transfer Menus on page 43 for details.)

Language Files:

• Two types of language files can be downloaded from Hydro Systems' website. A Formula Editor language file changes only the menu screens in Formula Editor software (file extension **.properties**). These language files should be downloaded to the computer on which the Formula Editor is used and placed in the Program Files \ Hydro Controls \ Formula Editor \ Languages folder. Start the Formula Editor and click Tools / Customize / Languages to   select the new language.

• To change the Total Eclipse controller's menu language, you must download a controller language file (file extension **.LNG**) to a USB flash drive. Power off the TOTAL ECLIPSE controller, connect the USB flash drive, and restore power to the controller. Select the new language when the LANGUAGE menu appears.

12.00 controller reports

12.01 Controller Reports Overview

The Write Reports function available when logged in with the Installer password generates four types of reports, collectively called the Summary Reports, which are output to a USB drive. (These report are explained further below.) There is also a fifth report that can be generated and saved to a USB drive, the detailed Activity Log. With the Manager password only the Manager Reports function is available, which will generate just the Productivity Report and write it to a USB drive.

On the controller the information contained in these reports is secure in the sense that a password is required to generate the reports and have them written to a USB drive. But once they are on the USB drive there is no security, anyone with the reports can open them, so taking precautions to secure the reports after they are written is recommended.

The reports are expected to be opened on or downloaded to a computer with a USB port. Since the reports are in HTML format, they can be viewed and printed with a web browser or imported into a spreadsheet program, such as Microsoft Excel. For complete data transfer instructions, see Section 9.09 Write Reports on page 43.

All four of the Summary Reports have the same header and footer. The header field at the top of the reports will display the following information, which is input by the installer on the controller:

- Account Name (This optional data is input once in the Initial System Startup menus.)
- Machine Name (This optional data is input once in the Initial System Startup menus.)
- FROM Date (Input each time a report is requested, the reports will contain data starting at 12:00 am of this date.)
- TO Date (Input each time a report is requested, the reports will contain data stopping at 11:59 pm of this date.)

The footer field at the bottom of each report will indicate the Total Eclipse firmware part number and revision.

Definitions of the table headings in the Productivity Report:

Table Heading	Definition
Total Loads	A summation count of all completed loads, stopped loads and incomplete loads that have run, since the last time the "Clear Data Log" feature was invoked.
Stopped Loads	How many loads were stopped without the Count Pump dispensing it's last programed amount, since the last time the "Clear Data Log" feature was invoked.
Incomplete Loads	How many loads had the Count Pump dispense it's last programed amount, but one or more products programmed in the formula did not get dispensed, since the last time the "Clear Data Log" feature was invoked.
Total Weight	A total of all the weights (default or manually input) for all the loads in the Total Loads category.
Stop / Incmplt. Weight	A total of all the weights (default or manually input) for all the loads in the Stopped and Incomplete categories.
Chem. Cost	Calculated for every product triggered, with the amount in the formula, times the input chemical cost per unit.
Chem. Cost/100 Weight	The chemical cost above, normalized for every 100 Lbs (or Kg) from the Total Weight Category.

12.02 Sample Controller Reports

On the following fives pages, an example report is displayed on each page or the various reports that can be generated by the Total Eclipse controller.

The first four pages show examples of the four Summary Reports (REPORT NAME stands for the name that was input):

- REPORT NAME_D.HTM (Diagnostic Report) Tally of Product Triggers and User Primes
- REPORT NAME_F.HTM (Formula Report) Formula Product Amounts, Delay and Count Pump (in red)
- REPORT NAME_P.HTM (Productivity Summary Report) Total Load Counts, Weights and Product Costs
- REPORT NAME_S.HTM (Settings Report) Overview of Controller Settings

The fifth page following this one shows an example of the Activity Log, a very detailed report designed for diagnostic use. It does not use a TO or FROM date, as it can only report on recent activity. It tracks data associated with every trigger signal, but due to the amount of detail being recorded the Activity Log Report can only hold several days worth of data.

- REPORT NAME_L.HTM (Activity Log Report) Detailed Diagnostic Report for every recent Trigger Signal

Diagnostic Report

Report From: 2018-11-08

To: 2018-12-08

Account: HYDRO

Machine: WASHR03

USER PRIME	PRE-WASH	DETERGENT	LIQUID BLEACH	BLEACH ALT	SOUR-CONDIT	P6	P7	P8
Amount	0	0	0	0	0	0	0	0

PADS	PRE-WASH	DETERGENT	LIQUID BLEACH	BLEACH ALT	SOUR-CONDIT	P6	P7	P8
Amount A	1	1	0	0	1	0	0	0
Amount B	0	0	0	0	0	0	0	0
Amount C	0	0	0	0	0	0	0	0

CURTAINS	PRE-WASH	DETERGENT	LIQUID BLEACH	BLEACH ALT	SOUR-CONDIT	P6	P7	P8
Amount A	0	4	0	0	3	0	0	0
Amount B	0	3	0	0	0	0	0	0
Amount C	0	1	0	0	0	0	0	0

TOWELS	PRE-WASH	DETERGENT	LIQUID BLEACH	BLEACH ALT	SOUR-CONDIT	P6	P7	P8
Amount A	1	1	1	0	1	0	0	0
Amount B	0	0	0	0	0	0	0	0
Amount C	0	0	0	0	0	0	0	0

BED LINEN	PRE-WASH	DETERGENT	LIQUID BLEACH	BLEACH ALT	SOUR-CONDIT	P6	P7	P8
Amount A	0	0	0	0	0	0	0	0
Amount B	0	0	0	0	0	0	0	0
Amount C	0	0	0	0	0	0	0	0

TOTAL ECLIPSE
P/N: 95-09114-00I
REV: 1325

Formula Report

Report From: 2018-11-08
To: 2018-12-08

Account: HYDRO
Machine: WASHR03
RED = Count Pump

PADS	COST: 14.38	DEFAULT WEIGHT: 150					
PRODUCTS	PRE-WASH	DETERGENT	LIQUID BLEACH	BLEACH ALT	SOUR-CONDIT	P6	P7	P8
DELAY	0	0	0	0	0	0	0	0
QTY A OZ	40.00	12.00	0.00	0.00	10.00	0.00	0.00	0.00
QTY B OZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QTY C OZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CURTAINS	COST: 8.12	DEFAULT WEIGHT: 200					
PRODUCTS	PRE-WASH	DETERGENT	LIQUID BLEACH	BLEACH ALT	SOUR-CONDIT	P6	P7	P8
DELAY	0	0	0	0	0	0	0	0
QTY A OZ	0.00	14.00	0.00	0.00	20.00	0.00	0.00	0.00
QTY B OZ	0.00	18.00	0.00	0.00	0.00	0.00	0.00	0.00
QTY C OZ	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00

TOWELS	COST: 7.19	DEFAULT WEIGHT: 220					
PRODUCTS	PRE-WASH	DETERGENT	LIQUID BLEACH	BLEACH ALT	SOUR-CONDIT	P6	P7	P8
DELAY	0	0	0	0	0	0	0	0
QTY A OZ	10.00	12.00	8.00	0.00	10.00	0.00	0.00	0.00
QTY B OZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QTY C OZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

F07	COST: 0.00	DEFAULT WEIGHT: 0					
PRODUCTS	PRE-WASH	DETERGENT	LIQUID BLEACH	BLEACH ALT	SOUR-CONDIT	P6	P7	P8
DELAY	0	0	0	0	0	0	0	0
QTY A OZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QTY B OZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QTY C OZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TOTAL ECLIPSE

P/N: 95-09114-00I

REV: 1325

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Productivity Report

Report From: 2018-11-08
To: 2018-12-08

Account: HYDRO

Machine: WASHR03

#	Formula	Total Loads	Stopped Loads	Incomplete Loads	Total Weight	Stop / Incmplt. Weight	*Chem. Cost	*Chem. Cost / 100 Wgt.
1	PADS	1	0	0	150	0	14.39	9.60
2	CURTAINS	4	1	0	800	200	20.29	2.54
3	TOWELS	1	0	0	220	0	7.22	3.28
4	BED_LINEN	0	0	0	0	0	0.00	0.00
5	BLANKETS	1	0	0	110	0	3.55	3.22
6	TABLE_LINEN	0	0	0	0	0	0.00	0.00
7		0	0	0	0	0	0.00	0.00
8		0	0	0	0	0	0.00	0.00
9		0	0	0	0	0	0.00	0.00
10		0	0	0	0	0	0.00	0.00
11		0	0	0	0	0	0.00	0.00
12		0	0	0	0	0	0.00	0.00
13		0	0	0	0	0	0.00	0.00
14		0	0	0	0	0	0.00	0.00
15		0	0	0	0	0	0.00	0.00
16		0	0	0	0	0	0.00	0.00
17		0	0	0	0	0	0.00	0.00
18		0	0	0	0	0	0.00	0.00
19		0	0	0	0	0	0.00	0.00
20		0	0	0	0	0	0.00	0.00
-	NO CHEMICAL	0	0	0	0	0	0.00	0.00
		7	**1**	**0**	**1280**	**200**	**45.45**	

#	PRODUCT	Amount (GAL)	*Chem. Cost
1	PRE-WASH	0.39	15.64
2	DETERGENT	1.28	25.64
3	LIQUID BLEACH	0.06	2.19
4	BLEACH ALT	0.08	1.97
5	SOUR-CONDIT	0.62	0.00
6		0.00	0.00

*Does not include User Prime costs.

TOTAL ECLIPSE

P/N: 95-09114-00I, REV: 1325

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Settings Report

Report From: 2018-11-08
To: 2018-12-08

Account: HYDRO
Machine: WASHR03

OPERATION MODE	STANDARD
UNITS-MEASURE	SAE/IMPERIAL (LB/OZ)
TRIGGER FILTER	2 SECONDS
PUMP INTERFACE	ECLIPSE FLUSH P.I.
FLUSH TIME	1 SEC
CYCLE TIME LIMIT	0 MIN
USER PRIME	ENABLE
AFS TRIGGER	5

#	PRODUCT	CALIB. IN OZ/MIN	COST/GAL	TUBE CHANGE DATE
1	PRE-WASH	137.1	40.00	2010-01-01
2	DETERGENT	137.1	20.00	2010-01-01
3	LIQUID BLEACH	192.0	35.00	2010-01-01
4	BLEACH ALT	252.6	25.00	2010-01-01
5	SOUR-CONDIT	252.6	0.00	2010-01-01
6		0.0	0.00	2010-01-01
7		0.0	0.00	2010-01-01
8		0.0	0.00	2010-01-01

TOTAL ECLIPSE
P/N: 95-09114-00I
REV: 1325
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Activity Log Report

Account: HYDRO
Machine: WASHR03

Time Stamp	Formula	T1	T2	T3	T4	T5	T6 .	P1	P2	P3	P4	P5	P6	P7	P8	Flush
2010-12-08 14:43:52	F01	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2010-12-08 14:43:56	F01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:43:57	F01	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
2010-12-08 14:44:00	F01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:44:01	F01	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
2010-12-08 14:44:04	F01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:44:05	F01	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
2010-12-08 14:44:07	F01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:44:08	F01	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2010-12-08 14:44:10	F01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:52:28	F01	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:52:30	F01	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2010-12-08 14:52:35	F01	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2010-12-08 14:52:47	F01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:52:48	F01	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:52:50	F01	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
2010-12-08 14:52:55	F01	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:52:59	F01	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:01	F01	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0
2010-12-08 14:53:04	F01	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:08	F01	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:08	F02	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
2010-12-08 14:53:14	F02	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
2010-12-08 14:53:14	F02	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:16	F02	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
2010-12-08 14:53:20	F02	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
2010-12-08 14:53:23	F02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:25	F02	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:27	F02	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
2010-12-08 14:53:29	F02	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2010-12-08 14:53:32	F02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:42	F03	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:44	F03	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2010-12-08 14:53:47	F03	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2010-12-08 14:53:48	F03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:50	F03	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:52	F03	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
2010-12-08 14:53:55	F03	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
2010-12-08 14:53:57	F03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:53:58	F03	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
2010-12-08 14:54:00	F03	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
2010-12-08 14:54:03	F03	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

12.03 PC-Based Formula Editor Summary Report

Perhaps not strictly a controller report, an extremely useful document is the Formula Editor's Summary Report. Generated by the Formula Editor on a computer, it provides complete details of all the settings and formulas within a Setup File. In the Formula Editor program press CTRL + P on the computer keyboard to view the Summary Report on the default web browser. Then from the web browser the report can be printed or saved as a file.

Two pages of a example report are shown below:

---

xyz co setup.sup Summary Report

HYDRO
a DOVER company

NAME: xyz co setup.sup

Date: Wed Nov 12 10:44:39 PST 2018

Controller Settings

Account: Hydro

Mode: Standard

Units of Measure: SAE/Imperial

User Prime: Limited

Configure Flush: Eclipse Flush P.I.

Flush Time: 30 Seconds

Filter Time: 2 Seconds Cycle Time: 90 Minutes

AFS Trigger: 5

Pump Settings

Product	ChemicalName	Cost Per Volume
P01	STAIN TREATMENT 2	5.63 / per gallon
P02	SOFTENER	8.77 / per gallon
P03	LIQUID BLEACH	13.88 / per gallon
P04	BLEACH ALTERNAT	6.88 / per gallon
P05	RUST REMOVER	28.45 / per gallon
P06	DETERGENT	12.15 / per gallon
P07		0.0 / per gallon
P08		0.0 / per gallon

Page 1

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xyz co setup.sup Summary Report

Formula Settings

Formula Name F01: PADS

Default Load Weight: 200 (lbs)

Count Pump: default

Product:	Delay:	Amount A (oz):	Amount B (oz):	Amount C (oz):
P01	0	1	1	1
P02	0	2	2	2
P03	0	3	3	3
P04	0	4	4	4
Po5	0	5	5	5

Formula Name F02: CURTAINS

Default Load Weight: 240 (lbs)

Count Pump: default

Product:	Delay:	Amount A (oz):	Amount B (oz):	Amount C (oz):
P04	0	4	5	6
P05	0	6	6	7

Formula Name F03: TOWELS

Default Load Weight: 240 (lbs)

Count Pump: default

Product:	Delay:	Amount A (oz):	Amount B (oz):	Amount C (oz):
P06	0	3	4	4

Formula Name F04: BED LINEN

Default Load Weight: 230 (lbs)

Count Pump: default

Product:	Delay:	Amount A (oz):	Amount B (oz):	Amount C (oz):
P01	0	1	1	2
P02	0	2	2	3
P03	0	3	3	4
P04	0	4	4	5

Page 2

13.00 troubleshooting

13.01 Troubleshooting Basics

Confirm Correct Calibration and Formula Programming in Controller

When troubleshooting for no product on signal, always confirm calibration and formula amounts are correctly programmed in the Controller.

Confirm J1 and J2 Cable Integrity

Always ensure that all telco connectors (J1 and J2 Cables) are clean and corrosion free. Examine cables for cuts or kinks which can indicate broken wires. When in doubt, replace possibly defective cables.

Consider Product Run Order

Only one product may run at a time in flush mode. Multiple products that are triggered simultaneously will queue up. Based on this rule, all products triggered will run as long as the load Count Pump trigger is last. Sufficient time must be allowed between triggers to enable all triggered products to run. Failure to allow sufficient time between triggers could result in triggers for products being ignored.

Suggested Service Parts

We advise keeping an inventory of the following new or "known good" service parts to use for substitution purposes when troubleshooting (or these components can be can "borrowed" from an adjacent dispensing system):

- Controller
- Pump Interface PCB
- Wiring Harness Plate Assembly
- J1 Cable
- Machine Interface (with J2 Cable)

13.02 Load Count or Product Run Errors

Some load count or product run errors can be avoided by ensuring that (1) each wash formula has a load Count Pump set to be the last product run within that formula and (2) the washer has completed the cycle and all dispense amounts are correct.

We suggest using the diagnostic capabilities of the Activity Log to reconstruct a recent history of machine or operator problems that may explain poor results, excessive costs, or both. Although it can only hold several days of activity data it has the details that may be necessary to determine why an issue is occurring.

Additional Data Logging Factors:

- The dispenser "formula cycle" begins upon the first product trigger and ends when the Count Pump dispenses its last programmed amount, or when the dispenser operation is interrupted.
- If an Installer Password is input while a formula is running, the formula is aborted, the load is recorded as an incomplete load and the formula must be restarted upon exiting the Installer Menus.
- Synchronization of the dispenser controller to washer cycles is critical. Ensure that the load Count Pump assignment is correct for all wash formulas to assist in maintaining this synchronization.
- The Cycle Timer will start on the first product trigger of a load. It will reset the controller and stop the current load if it's duration setting occurs before the Count Pump is run. It is preferred to use a designated Count Pump to stop a load, instead of the Cycle Timer.

Load Counts Too Low:

If load counts seem low, confirm the number of times the Count Pump ran vs. other products in the formula to see if the washer trigger signal is inconsistent or if the machine operator may be short cycling the washer.

Load Counts Too High:

Confirm the number of times that the Count Pump ran by checking the washer trigger signal for the Count Pump.

13.00 troubleshooting (continued)

13.03 Troubleshooting Table

The most important first step in troubleshooting the dispensing system is to confirm the failure or symptom that was reported.

Problem	Cause	Solution
1. Dead, no display	a. No power at source.	• Restore Power.
	b. Tripped or defective circuit breaker.	• Reset, or replace, circuit breaker.
	c. Defective PI PCB, J1 Cable, or Controller.	• Substitute components, one at a time.
2. No products run on Prime or on signal	a. No contact closure at flush connector.	• Reconnect Flush Jumper (non-flush) or troubleshoot flush system flow switch.
	b. Products are not calibrated.	• Perform Product Calibration.
	c. Damaged J1 Cable.	• Replace J1 Cable.
	d. Defective PI PCB, J1 Cable, or Controller.	• Substitute components, one at a time.
3. Some (but not all) products do not run on Prime or on signal.	a. Loose solenoid or motor wire connection.	• Repair loose solenoid or motor wire connection.
	b. Products are not calibrated.	• Perform Product Calibration.
	c. Damaged J1 Cable.	• Replace J1 Cable.
	d. Defective PI PCB, J1 Cable, or Controller.	• Substitute components, one at a time.
4. One or more products do not run on signal, but all products prime OK.	a. Products are not calibrated.	• Perform Product Calibration.
	b. Delay time preventing product from running or placing product in queue.	• Reprogram product delay times as described in section 9.00 Programming on page 40.
	c. Washer not sending signal, or signal wire loose.	• Repair/reprogram washer, reconnect signal wire(s).
	d. Product Interlock is only allowing dispenser to recognize first signal for each product in a load.	• Reset Controller by turning power off, then on.
	e. Defective PI PCB, J1 Cable, or Controller.	• Substitute components, one at a time.
	f. No amount programmed for product.	• Check formula, confirm amount is programmed.
5. Loads are not being counted.	a. "Count Pump" not running at all.	• Troubleshoot per Problem 4 above.
	b. Count Pump's last amount not being triggered.	• Reprogram washer supply signals and/or controller formulas to ensure all Count Pump amounts run.

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14.00 service parts

14.01 Ordering Information – Controller and Accessories

Description	Part No.
Total Eclipse Controller (Dark Grey)	HYD01-08900-11
Total Eclipse Controller (Grey/Teal)	HYD01-08500-00
Total Eclipse Controller (Black/Red)	HYD01-08900-00
Wall Mounting Bracket Kit (Grey)	HYD13-08462-00
Wall Mounting Bracket Kit (Black)	HYD13-08916-00
Machine Interface Module with J2 Cable, 7.5 ft. 2.3 meter) (White)	HYD10-03609-00
Machine Interface Module with J2 Cable, 7.5 ft. (2.3 meter) (Black)	HYD03-03609-02
Machine Interface Module with J2 Cable, 7.5 ft. (2.3 meter) (Grey)	HYD03-08771-02
J1 Cable, 7.5 foot (2.3 meter)	HYD13-05516-075
J1 Cable, 15 foot (4.6 meter)	HYD13-05516-150
J1 Cable, 30 foot (9.2 meter)	HYD13-05516-300
J1 Cable, 7.5 foot (2.3 meter)	HYD13-07492-075
Telco Cable w/ Coupler, Kit, 15 foot (4.6 meter)	HYD13-03312-15
Telco Cable w/ Coupler, Kit, 30 foot (9.2 meter)	HYD13-03312-30

15.00 controller specifications

Category	Specification
Size	5.2" W x 4.50" H x 2.5" D (13.2 cm W x 11.4 cm H x 6.4 cm D)
Weight	0.65 lb. (0.30 kg)
Power Rating	SELV. Power source is dispenser.
System Capacity	99.99 oz. (2999 ml.) 8 product (with 3 amount settings per product) maximum
Data Input Field	15 characters maximum: (letters A-Z, numbers 0-9, hyphen [-], underscore [_] ans space [ ]
Environmental Specifications	
IP, Pollution, Installation	IP Rating : 44 Pollution Category: 2 Installation Category: II
Operating Temperature	10° to 49° C (50° to 120° F) maximum
Operating Humidity	95% relative humidity, maximum
Operating Altitude	Install at or below 6.500 ft. (2000 M) maximum
Indoor Installation	Approved for indoor use only. Must not be installed outdoors.

Specifications subject to change without notice.

16.00 warranty

16.01 Limited Warranty

Seller warrants solely to **Buyer** the Products will be free from defects in material and workmanship under normal use and service for a period of one year from the date of completion of manufacture. This limited warranty does not apply to (a) hoses; (b) and products that have a normal life shorter than one year; or (c) failure in performance or damage caused by chemicals, abrasive materials, corrosion, lightning, improper voltage supply, physical abuse, mishandling or misapplication. In the event the Products are altered or repaired by **Buyer** without **Seller's** prior written approval, all warranties will be void.
No other warranty, oral, express or implied, including any warranty of merchantability or fitness for any particular purpose, is made for these products, and all other warranties are hereby expressly excluded.

Seller's sole obligation under this warranty will be, at **Seller's** option, to repair or replace F.O.B. **Seller's** facility in Cincinnati, Ohio any Products found to be other than as warranted.

16.02 Limitation of Liability

Seller's warranty obligations and **Buyer's** remedies are solely and exclusively as stated herein. **Seller** shall have no other liability, direct or indirect, of any kind, including liability for special, incidental, or consequential damages or for any other claims for damage or loss resulting from any cause whatsoever, whether based on negligence, strict liability, breach of contract or breach of warranty.

Hydro Systems
3798 Round Bottom Road
Cincinnati, OH 45244

Phone 513.271.8800
Toll Free 800.543.7184
Fax 513.271.0160
Web hydrosystemsco.com

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