OPERATION

PROGRAMMING

Wayne 2400/Plus™ Management Control System Software Release 49

Wayne DRESSER

IMPORTANT

SOFTWARE RELEASE INFORMATION

This manual describes and explains the features found in Software ID 49 of the Wayne 2400/Plus Management Control System.

To verify your system has the appropriate software version, complete the following steps:

1. Enter Mode 90 submode 08 (the actual keystrokes are "9", "0", and "8").
2. Press the **Prnt/Entr** key.
3. Verify the console display is showing an eight digit number beginning with 49 (i.e., 49XXXXXX).

If your system fails to operate as described in this manual or if the first two digits displayed in mode 90-08 are not 49, contact the Wayne Technical Services Help Desk at
1-800-AT-WAYNE or 1-800-289-2963 for assistance.

Wayne 2400/Plus™ Management Control System (Software Release 49) Operation and Programming Manual

June 1992 *Part No. 917434 Rev B*

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INTRODUCTION

1.1. PURPOSE OF THIS MANUAL

This manual describes operation and programming instructions for the Wayne 2400/Plus™ system (2400/Plus). To meet the changing requirements of the station environment, the operator will learn how to modify the 2400/Plus programming. Modifying the system programming allows the 2400/Plus to satisfy specific operating conditions for the station site.

1.2. SYSTEM OVERVIEW

The 2400/Plus is designed to combine features of the Wayne 2400 Cash/Credit system and the Wayne 2400 Blending system. Combining these features enables the 2400/Plus to dispense blended grades of fuel using dual pricing. The dual pricing feature on the 2400/Plus allows each fuel product a cash and credit unit price. With correct programming by the operator, the 2400/Plus also functions without dual pricing.

1.3. WAYNE 2400/PLUS FEATURES

The following list identifies features included in the Wayne 2400/Plus system.

- Two Tier-Two Level Unit Pricing
- Programmable Ration Limits
- Declining Balance Inventory System

1.3. WAYNE 2400/PLUS FEATURES, continued

- Built-In Clock and Calendar
- Programmable Receipt Headings
- Self-Test Diagnostics and Error Reporting
- Programmable Mode Access Restrictions
- Password Protected Blend Ratios
- Non-Resettable Totals
- Simultaneous Cash and Volume Display
- Grade and Fueling Point Number Display
- Previous Sale Recall, Paid and Unpaid
- Three Status Indicator Lamps Per Fueling Point
- All Fueling Point Stop and Start
- Individual Fueling Point Stop and Start
- Battery Protected Data Memory
- Separate Cash and Credit Display
- Data and Mode Number Display
- Totalization by Shift
- Fueling Point Totalizers
- Attended Sales
- Postpay Sales (Optional - System Programmable)
- Prepay Sales (Optional - System Programmable)
- Preset Sales For Cash and Volume (Optional - System Programmable)

1.4. PRODUCT GRADE DESCRIPTIONS

The 2400/Plus controls a maximum of nine fuel grades. The nine fuel grades are divided into five stored grades and four blended grades. Stored grades are deposited in a site tank while blended grades combine two stored feedstock grades in a defined ratio. Stored grades include grades 1 through 5 and blended grades include grades 6 through 9. Grades four and five are classified as low and high feedstock grades for all blending fueling points in the system.

1.5. PRODUCT PRICING STRUCTURE

Each of the nine grades can be assigned up to eight unit prices that support 2-tier, 2-level, cash/credit pricing. Ascendancy by grade number for unit prices and blend ratios may be selected as an option. When selected, the ascendancy option applies to all blending fueling points at the site.

1.5. PRODUCT PRICING STRUCTURE, continued

IMPORTANT: When the dual pricing (cash/credit) option is selected, the credit price(s) assigned to the fueling point grade(s) must be higher than or equal to the cash price(s). This applies to all fueling point types.

1.5.1. Ascendancy Option

The ascendancy option prevents accidental pricing of a higher grade product at a lower grade price. The ascendancy option applies only to grades (from low to high) 4, 6, 7, 8, 9, and 5. Because grade 5 is the high feedstock grade, the system assigns grade 5 a higher level than grade 9.

The system must be programmed to use the ascendancy option. All ascendancy programming must be completed for both cash and credit prices and blend ratios for the entire grade range 4 through 9. The system checks the grade and blend ascendancy assignments to determine if they are correct when the ascendancy option is selected.

When the operator decides to exclude a grade from the ascendancy option, and the grade falls within the range of 4 through 9, the operator programs the unit price as 0.00 and the blend ratio as 101. The following example describes how the system verifies the ascendancy option.

TABLE 1-1. ASCENDANCY OPTION EXAMPLE

Grade 6 has a credit price of 0.00 for Tier 1, Level 1. When attempts are made to change the credit price of grade 7 (for the same tier and level), grade 6 is not be tested because of its 0.00 unit price. If grade 4 has a non-zero price per gallon, for this tier and level, it becomes the next lower qualified grade. This same procedure applies when checking ascendancy for the next higher grade. If grades 4 and 6 are programmed with a zero for credit pricing (tier 1, level 1) then grade 7 is the lowest qualified grade in the system for credit pricing (tier 1, level 1) and no lower grade testing is required.

Grades having a programmed blend ratio of 101 are not tested by the system to determine ascendancy conditions. The procedure to determine qualified grades is similar to unit price programming. However, grades 4 and 5 are not considered because the blend ratios assigned to these grades are fixed.

Attempts to enter unit prices or blend ratios are rejected when the ascendancy option is selected during system programming. A beep alerts the operator to the rejection if the system is equipped with a standard console.

1.6. AUTHORIZATION TYPES

Preset, prepay, and postpay sales are supported for all grade authorizations and all fueling points. Attended operations are supported as an option-selected feature.

When a customer or operator requests authorization, the system verifies the authorization and allows access based on the station programming. The console beeps when an authorization is rejected. Mode 30 may be selected at this time to determine the reason for the authorization rejection.

All fueling points except Types 3 through 29 (Multi-Grade Blender) support selection of cash or credit at the fueling point. Fuel unit prices for Types 3 through 29 fueling points can be toggled between cash and credit using the Cash/Cred key. The price shown on the dispenser display changes to match the price shown on the console.

1.7. TOTALS

Fueling point totalizers are maintained for each fueling point position by cash, credit, and volume. They are updated following each sale. For blending fueling points, the feedstock volume totals (low and high) are also recorded at this time.

Fueling point shift sales and volume totals are maintained by position for the current and previous shift. Shift feedstock volume totals are maintained for blending fueling points.

Grade shift totals are maintained by sales (money) and volume for each sale type. For sales authorized at the credit price and paid at the cash price (or vice-versa) the Fueling Point Difference totalizers maintain sale authorizations. These values are available for the current shift, 1st, 2nd, and 3rd previous shifts, and for the 1st + 2nd and 1st + 2nd + 3rd previous shifts. Non-resettable totals are maintained for station and shift information. These totals can never be cleared.

1.8. 2400/PLUS SUPPORTED FUELING POINTS

The 2400/Plus can control and collect data from up to 24 of any combination of the fueling point types listed in Table 1-2.

The 2400/Plus supports single, duo, and quadro type dispensers because the programming is similar to a multi-grade dispenser with one, two, three, or four hoses. The 2400/Plus does not support mechanical pulsing dispensers.

1.8. 2400/PLUS SUPPORTED FUELING POINTS, continued

TABLE 1-2. FUELING POINT TYPES

Type	Fueling Point
Type 1	4-Product MGD (Duplex Computer)
Type 2	3-Product MGD (SC82 Computer)
Type 3-29	Multi-grade Blender (SC82B Computer)
Type 30	Fixed Blender (Duplex Computer)
Type 40	Variable Ratio Blender (Duplex Computer)

1.9. TYPE 1 FOUR-PRODUCT MULTI-GRADE DISPENSER (MGD)

The Type 1 dispenser is equipped with a Duplex fueling point computer and has a maximum of four nozzles on each side of the dispenser. The following illustration shows a Type 1 dispenser.

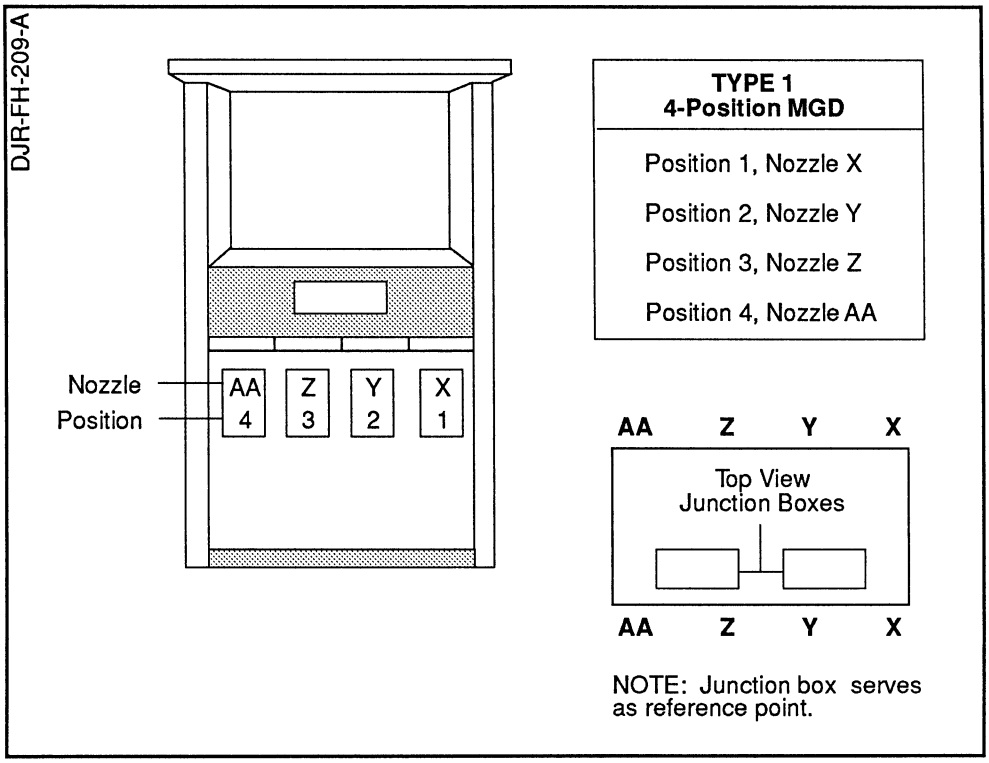


FIGURE 1-1. TYPE 1 FUELING POINT

The single Duplex (SC-86) computer operates each dispenser side independently. The control system recognizes each side as an individual fueling point with its own fueling point number.

1.9. TYPE 1 FOUR-PRODUCT MULTI-GRADE DISPENSER (MGD), continued

Each position on the fueling point is assigned a grade from the stored grades. This grade number is used to identify the product dispensed at the position and specifies the product unit price. Each position on the fueling point is also assigned a product tank number to allow the system to monitor tank declining balances. Authorizations are made by grade.

1.10. TYPE 2 THREE-PRODUCT MULTI-GRADE DISPENSER (MGD)

Type 2 dispensers are equipped with either an SC-82 or a Duplex computer programmed to operate as a Type 2. The following illustration shows an MGD, Type 2, 3 Product dispenser. Single, dual, and quadro type dispensers (not shown) are also included.

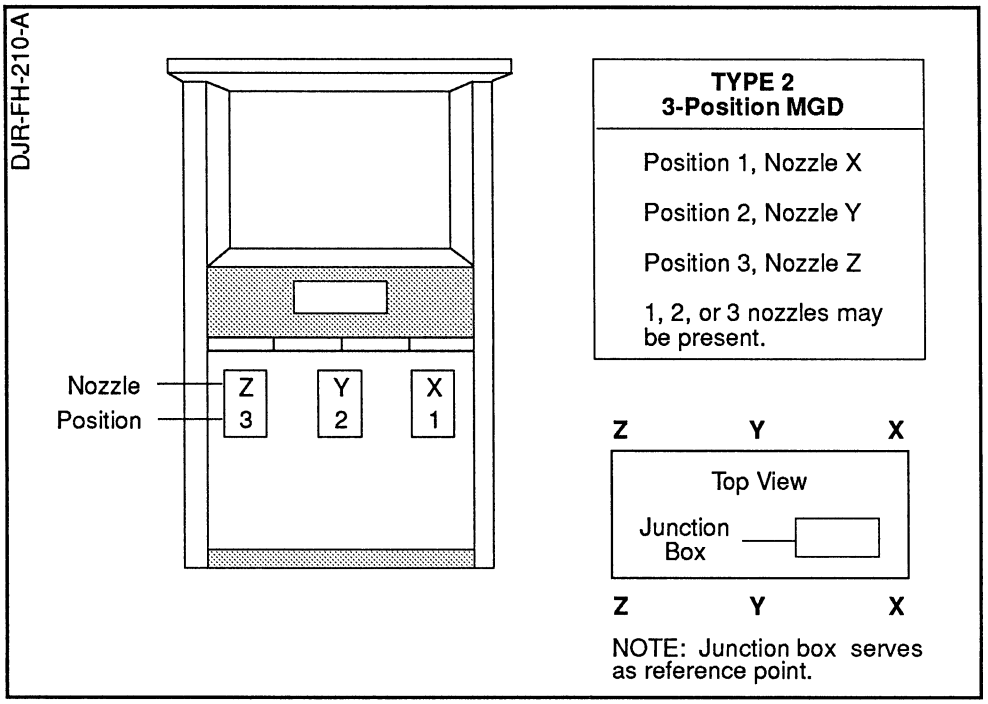


FIGURE 1-2. TYPE 2 FUELING POINT

The maximum number of positions for Type 2 fueling points is three. Type 2 fueling points have a tank and a stored grade number assigned to each of the fueling point positions. When the operator authorizes a fueling point position with a grade authorization, the fueling point dispenses only the grade selected by the operator.

1.11. TYPE 3 THROUGH 29 MULTI-GRADE BLENDER (MGB)

Types 3 through 29 dispensers are equipped with the SC-82B computer and can dispense a range of products through a single nozzle. Refer to Figure 1-3 for an illustration of a multi-grade blender dispenser.

1.11. TYPE 3 THROUGH 29 MULTI-GRADE BLENDER (MGB), continued

Products dispensed through a multi-grade blender are produced by mixing two stored products in a defined ratio. Standard fueling points have six product unit price displays (five blended, and one fixed) and five blend product select buttons (positions) from which the customer selects the desired blended product. The customer must press the product select button before the dispenser recognizes the handle is in the ON position.

The type number returned by a fueling point in this class identifies the configuration of the fueling point when it is operated in a stand-alone mode (Refer to Mode 34 in Chapter 6). The range of types available can be divided into two major divisions as described in the following paragraphs.

Retrofit Blender Units: Odd numbered fueling point types are assigned to retrofit units. The retrofit blend fueling point types support only a blend nozzle.

Standard Blender Units: Even numbered fueling point types are assigned to blender units. The units described as standard blenders can support a single-product nozzle in addition to the blending nozzle. The single-product nozzle is used to dispense a non-blended single product.

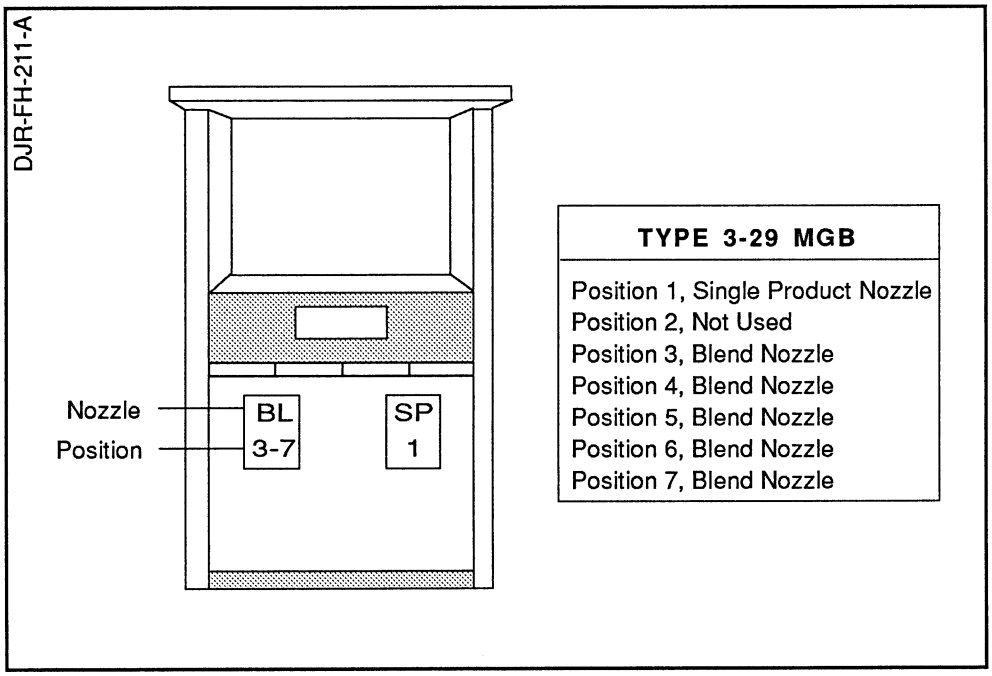


FIGURE 1-3. TYPES 3-29 MGB FUELING POINT

Units equipped with the single product nozzle have an additional unit price display and product select pushbutton. It is important to note that while a particular fueling point type may only support three or four product positions in standalone, the fueling point supports both the single product position and 5 blending positions when connected to the control system.

1.11. TYPE 3 THROUGH 29 MULTI-GRADE BLENDER, continued

IMPORTANT: The fueling point computer supports five blending product positions with position #2 reserved for future use.

When a MGB fueling point is under system control, each product position used must be assigned a grade number. Position 1 is reserved for the single product position (should one be available), while positions 3 through 7 are the blending positions. Grades assigned to blended product positions should have a designated blend ratio other than 101.

The single product position may be assigned any grade from the stock grade group (grades 1 through 3). The range of valid grade numbers for the blending positions is 4 through 9, with 4 and 5 being the low and high feedstock grades. The blending position assignments are not fueling point position dependent by number. It is not required that the two feedstock grades be assigned to two of the blending positions.

All versions of the MGB fueling point require unit prices entered at the fueling point to be in ascending value by grade number. Blend ratios cannot be entered at the fueling point. Blend ratios and grade-to-position assignments are made using Modes 17 and 18.

Multi-grade blender (MGB) fueling points do not support selection of payment at the fueling point. This ability does exist at the console. The MGB uses fueling point position numbers to report the fueling point volume totalizer values to the 2400/Plus. The MGB also reports total sales (money) and both of the feedstock volume totalizers to the 2400/Plus.

1.12. TYPE 30 FIXED RATIO BLENDER (FRB)

The Fixed-Ratio Blending (FRB) fueling point uses a Duplex computer. The Duplex computer is programmed to respond as a Type 30 fueling point. Refer to Mode 34. Type 30 fueling points have 3 nozzles and one extra position reserved for future use. Figure 1-4 illustrates a Type 30 fueling point.

1.12. TYPE 30 FIXED RATIO BLENDER (FRB), continued

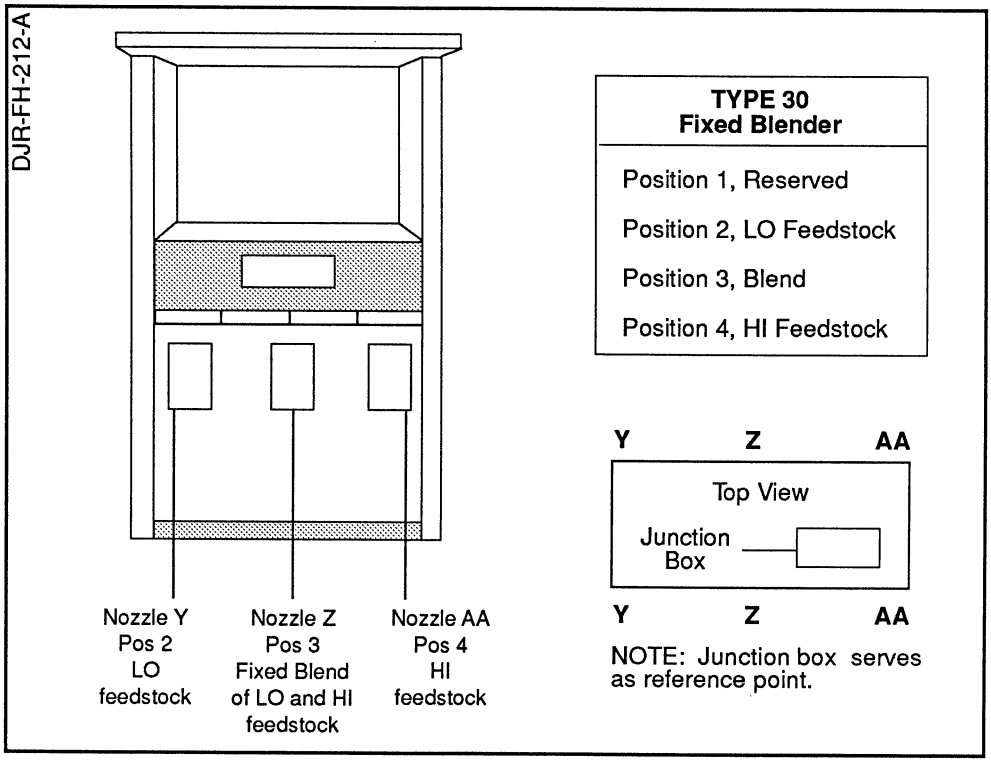


FIGURE 1-4. TYPE 30 FUELING POINT

Type 30 FRB fueling points dispense both blended and stored fuel products. Each position is assigned a number relating to either a blended product grade or a stored product. When controlled from the console, fuel product selection is made by grade. The four positions available on the Type 30 FRB are designated as positions 1 through 4 and are defined in Table 1-3.

TABLE 1-3. FRB FUELING POINTS

Position	Description
Position 1	Reserved
Position 2	Low Feedstock Product (Stored Grade)
Position 3	Blended Product (Blended Grade)
Position 4	High Feedstock Product (Stored Grade)

Customers can select either a stored or blended product by lifting the nozzle start lever. While positions 2 through 4 are blend positions, only position 3 is used to dispense a blended grade product. Positions 2 and 4 dispense the low and high feedstocks grades (grades 4 and 5).

1.12. TYPE 30, FIXED RATIO BLENDER (FRB), continued

The FRB reports fueling point totalizer values to the 2400/Plus control system by position number for cash, credit, and volume. The FRB also reports values for each feedstock volume totalizer to the 2400/Plus system.

1.13. TYPE 40 VARIABLE RATIO BLENDER

Type 40 fueling points are equipped with a Duplex computer and dispense a total of five products with the blended product dispensed through the blending nozzle. Type 40 is currently installed in the following Vista fueling point models: V580, V395, and V585. Both the V580 and V585 operate with one blending nozzle while the V395 operates with both a single product nozzle and a blending nozzle. Typical to the Type 40 fueling point is a single unit price display and the push-to-start method that activates the fueling point. Refer to section 1.14 for more information about the Type 40 single unit price display.

While Type 40 fueling points are not currently designed to allow the customer a cash or credit selection at the fueling point, the Fueling Point Totalizers Report shows cash, credit, and volume totals for each product position.

The process of setting Type 40 fueling points for operation is similar to Type 3-29 MGB dispensers. A minimum of two tanks must be assigned to the dispenser with Mode 03. The tanks must be assigned the feedstock grades 4 and 5 with Mode 02. Each fueling point position in use must be assigned a grade with Mode 18. Some fueling point positions have a reserved status and should have a zero assigned as the grade. Assigning zero as the grade indicates to the system that the fueling point position is not available.

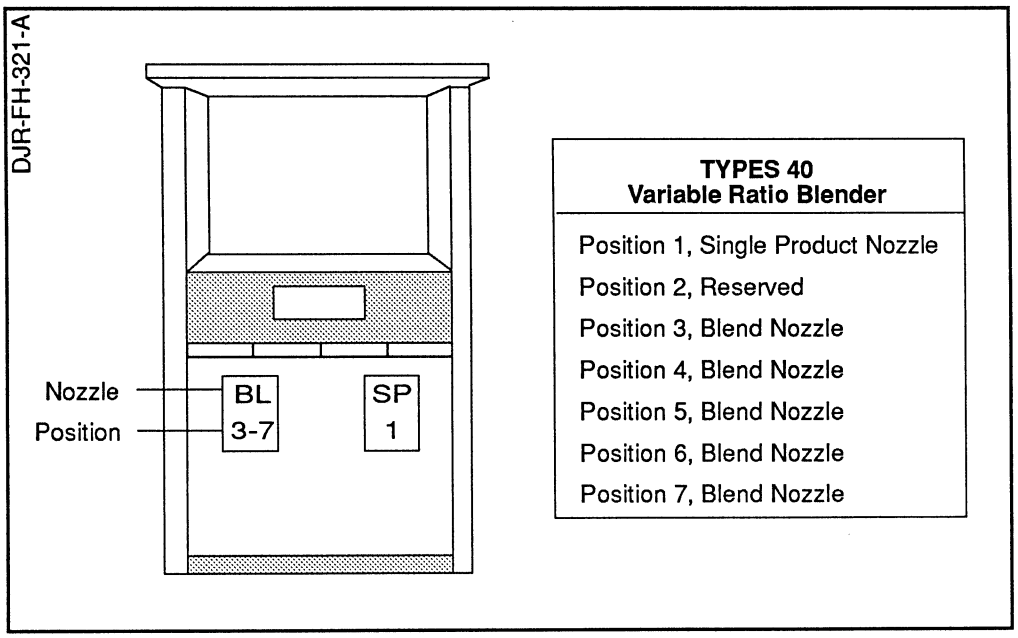


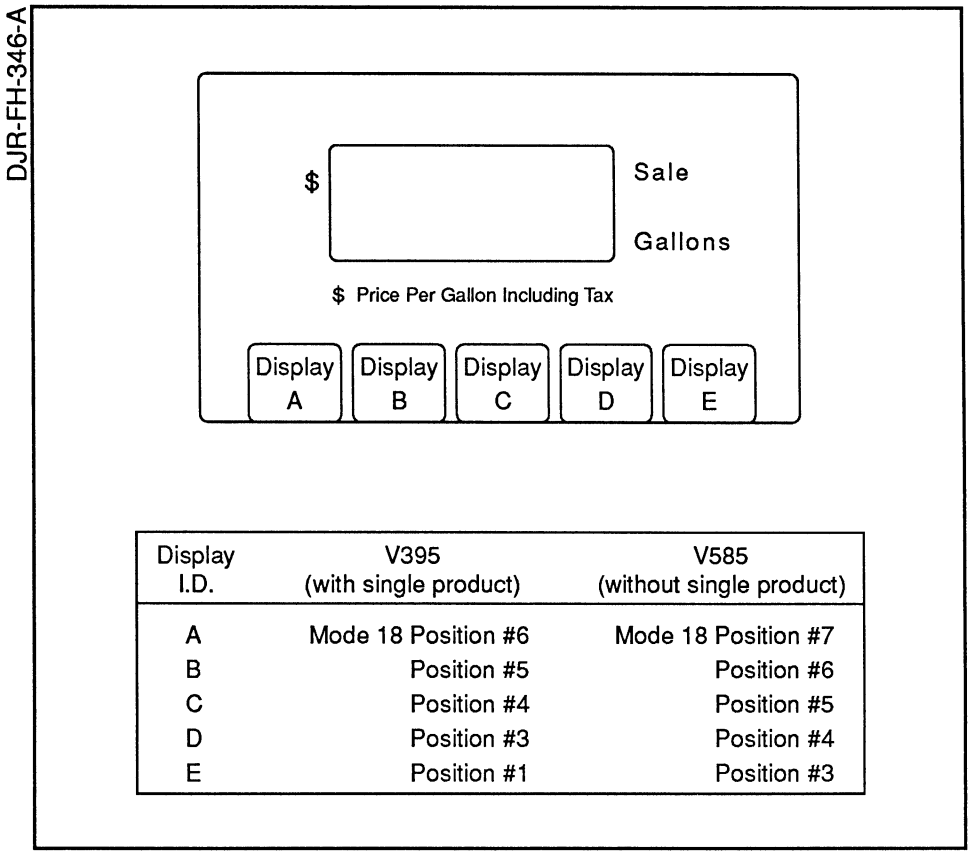
FIGURE 1-5. TYPE 40 FUELING POINT

1.14. TYPE 40 VISTA SALE DISPLAY

Type 40 dispensers are currently equipped with the Vista unified sale display. The Vista display supports a maximum of five products. Because of this particular feature, dispensers not equipped with a single product nozzle are able to support five products from the blend hose. In addition, dispensers equipped with a single product nozzle can support a maximum of four blend products.

Each product select position available for use is assigned a product grade number from the control system with Mode 18. The product select buttons on the dispenser are mapped to one of the Vista unit price displays. Both the product position number and the unit price display assignment varies for dispensers equipped with a single product nozzle. Refer to Figure 1-6.

NOTE: Type 40 dispensers use blend positions 3 through 7 and never use position 2.



Display I.D.	V395 (with single product)	V585 (without single product)
A	Mode 18 Position #6	Mode 18 Position #7
B	Position #5	Position #6
C	Position #4	Position #5
D	Position #3	Position #4
E	Position #1	Position #3

FIGURE 1-6. TYPE 40 VISTA DISPLAY ASSIGNMENTS

OPERATION

2.1. INTRODUCTION

This chapter explains how to operate the 2400/Plus system on single and dual (cash and credit) pricing dispensers. This chapter also includes descriptions for the status indicator lamps and operating instructions for fuel sales with postpay and prepay conditions.

2.2. SYSTEM POWER

The 2400/Plus system automatically clears the display screen when the system is turned on for the first time. As a result of programming with Mode 09, the 2400/Plus polls for the maximum number of pump computers assigned to the system. The polling operation allows the 2400/Plus to test all fueling points. When the 2400/Plus begins polling each fueling point, all pump status lamps on the console indicate a Stopped status for each fueling point responding to the system.

Complete the following steps to turn the power on for the 2400/Plus system.

1. Verify all service panel circuit breakers for control power, dispenser power, and pump motors are in the **On** position.
2. Locate the switches labelled Bypass/Auto in the data distribution cabinet. Set the switches to **Auto** for all fueling points connected to the cabinet. Refer to Figure 2-1.

2.2. SYSTEM POWER, continued

3. For all switches not in use, set these in the Bypass position. Switches causing the red LED (Light Emitting Diode) status lamps in the data distribution cabinet to turn off should be left in the Bypass position.

4. To begin fueling point operation, press the **Pump Start** key when the console display screen is blank.

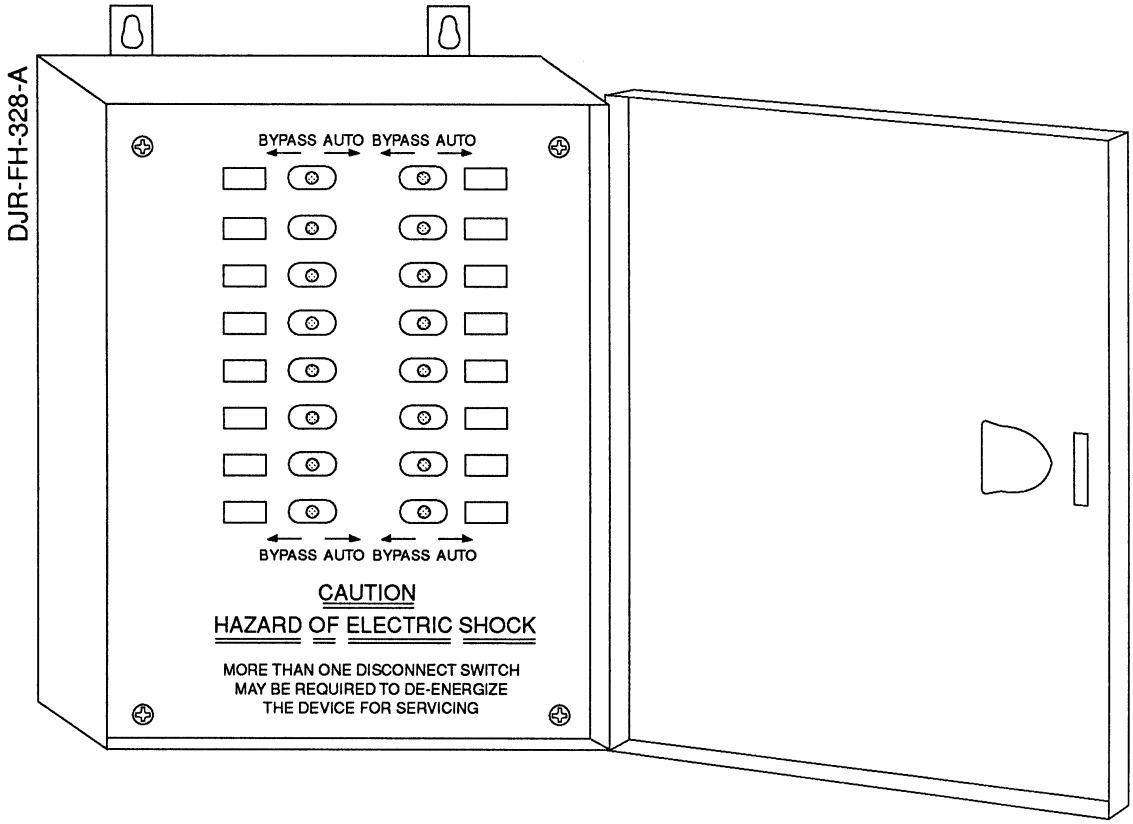


FIGURE 2-1. DATA DISTRIBUTION CABINET

2.3. 2400/PLUS CONSOLE

Figures 2-2 and 2-3 on the following pages illustrate the 2400/Plus console and the names used for the keys and displays. The word "pump" is used on two keys as well as above two digits on the display. Pump, as it is used on the console, refers to a fueling point. The term fueling point is used throughout this manual to refer to one side of a dispenser. The function of each key and display is described in the following paragraphs.

2.3.1. 2400/Plus Keyboard

The numeric keypad and the function keys on the 2400/Plus console allow the operator to perform the following: select a fueling point, enter a prepay or preset amount, enter mode data, and display the time and date. The following paragraphs describe how the function keys perform during system operations.

2.3.1.1. Stop Key

Use this key to suspend fuel flow for all fueling points responding to the 2400/Plus system.

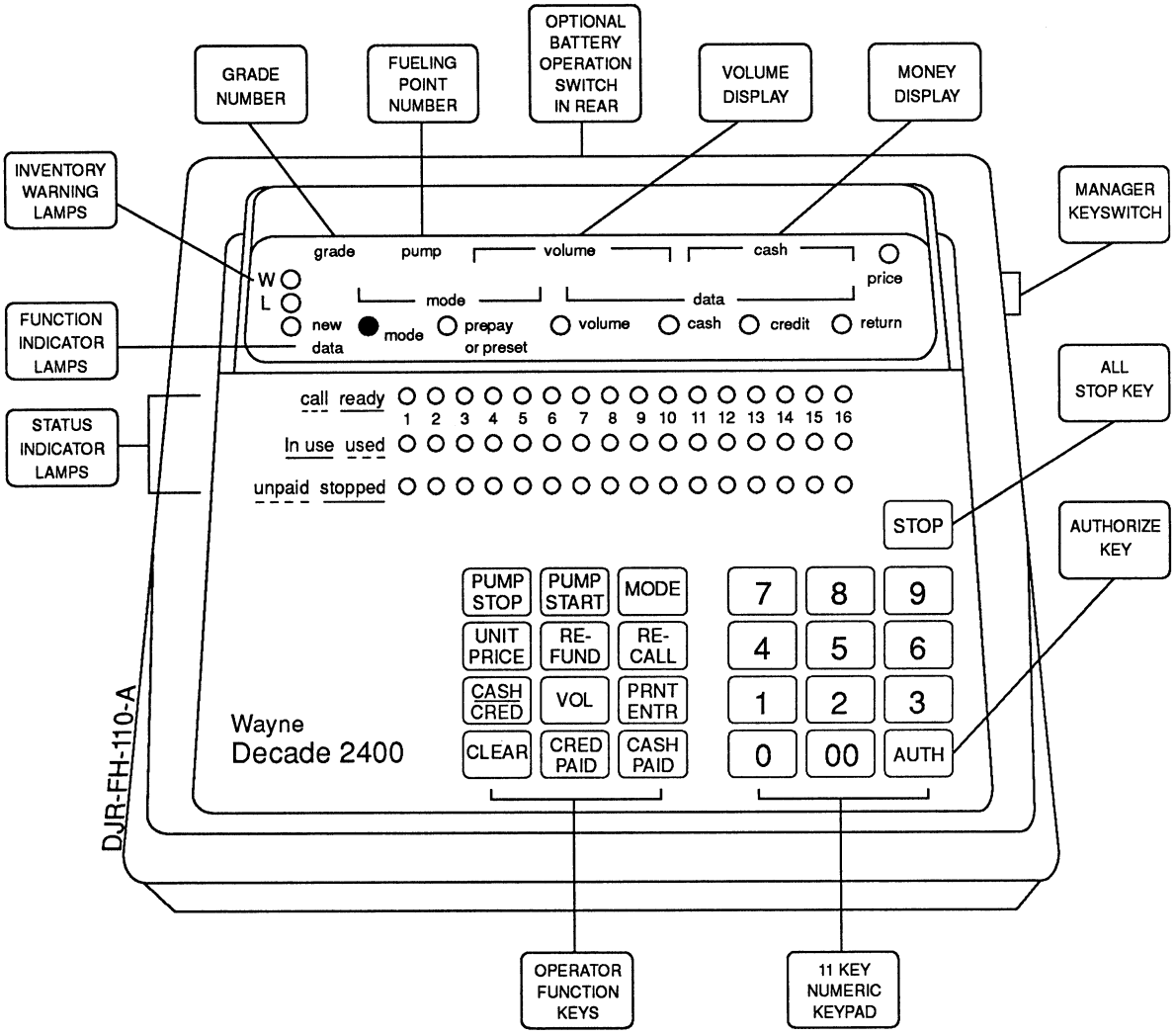


FIGURE 2-2. 2400/PLUS CONSOLE FUELING POINT CONTROLS

2.3.1.2. Pump Stop Key (Fueling Point Stop)

Use the Pump Stop key to suspend fuel flow for individual fueling points or to de-authorize individual fueling points.

2.3.1.3. Pump Start Key (Fueling Point Start)

The Pump Start key activates fuel flow for all fueling points responding to the 2400/Plus system.

2.3.1.4. Mode Key

Use the Mode key to enter or exit the system data mode.

2.3.1.5. Unit Price Key

Use this key to view unit price information for current fuel sales or recall fuel sales on the console display screen.

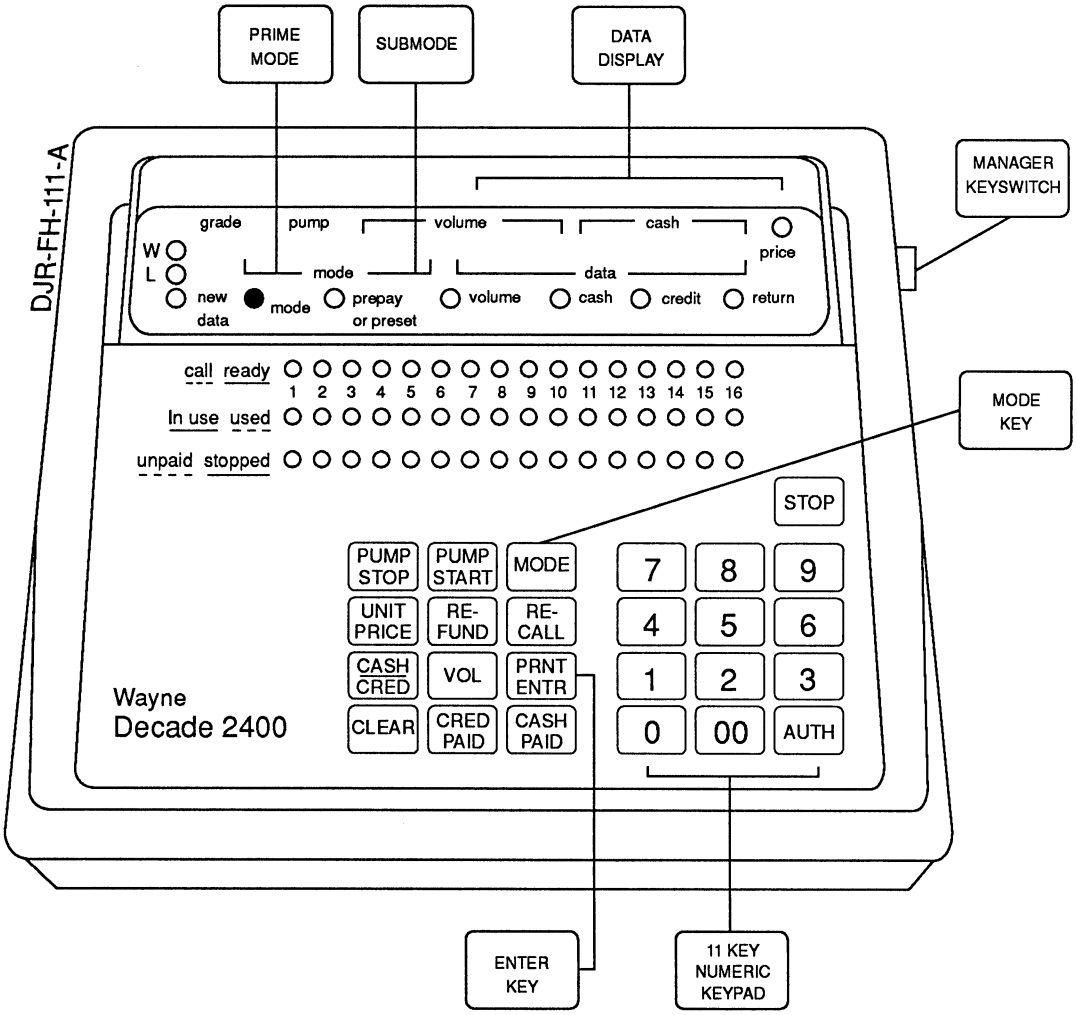


FIGURE 2-3. 2400/PLUS CONSOLE MODE DATA DISPLAY

2.3.1.6. Refund Key

Use this key to determine the customer refund amount for incomplete prepay fuel sales. The refund amount appears on the console display screen. Selecting the Refund key also clears the flashing indicator lamp for an incomplete prepay fuel sale.

2.3.1.7. Recall Key

Selecting the Recall key allows data from a previous fuel sale to appear on the display screen. During mode functions, data also appears on the display screen when the Recall key is pressed.

2.3.1.8. Cash/Cred Key

Use this key to display the cash or credit unit price on the display screen.

2.3.1.9. Vol Key

During certain mode functions, this key allows the operator to view volume amounts on the console display screen. Selecting the Vol key also shows volume preset or volume prepay amounts on the display screen.

2.3.1.10. Prnt/Entr Key

When this key is used as **Entr**, the operator enters specific fuel sale data on the numeric keypad. When this key is used as **Prnt,** fuel sale data either transfers and prints on the RTP or transfers to the ECR and does not print.

2.3.1.11. Clear Key

Use the Clear key to clear on sale information from the console display screen.

2.3.1.12. Cred Paid Key

The Cred Paid key is used for fuel sales paid with credit and to print a sale receipt on the ECR.

2.3.1.13. Cash Paid Key

The Cash Paid key is used for fuel sales paid with cash and to print a sale receipt on the ECR.

2.3.1.14. Auth Key (Numeric Keypad)

Pressing the Auth key allows the operator to authorize a fueling point to begin dispensing fuel. This key is also used to initiate a shift change and to display the shift sequence number.

2.3.1.15. Manager Keylock Switch

To override Level 1 and Level 2 restrictions (refer to Mode 99) during mode function access, such as price setting, turn the Manager Keylock Switch on. This key is also used to bypass the ration limit function (refer to Mode 07).

2.3.2. 2400/Plus Display Screens

Displays on the 2400/Plus console screen identify activated mode functions. The following list contains the 2400/Plus console displays and each display function. Refer to Figure 2-2 and Figure 2-3.

2.3.2.1. Cash Display

The Cash display identifies a fuel sale money amount, a fuel sale refund amount, or a fuel sale unit price.

2.3.2.2. Volume Display

The Volume display shows the fuel sale volume amount.

2.3.2.3. Fueling Point (Pump) Number Display

This display shows the fueling point number for a selected fueling point. The word "pump" on the computer screen refers to a fueling point.

2.3.2.4. Grade Display

The Grade display allows the operator to view the grade type for a selected fueling point or view the fuel sale grade number for a selected fueling point.

2.3.3. 2400/Plus Function and Warning Indicator Lamps

The 2400/Plus console operates with several indicator lamps. The following paragraphs describe function and warning indicator lamps located on the console. Also provided is an explanation of how each lamp performs during system operations. To determine the location of the lamps on the console, refer to Figure 2-2 and Figure 2-3.

2.3.3.1. Low Fuel (L) Warning Lamp

The letter L represents "low fuel" on the 2400/Plus console. As a result of programming the system with Mode 15, this warning lamp turns on when the fuel grade shown on the display screen falls below the volume amount programmed for that tank. The lamp also turns on when low volume amounts are detected for a declining balance volume or the optional TIG (Tank Inventory Gauge) volume.

2.3.3.2. Water In Tank (W) Warning Lamp

The letter W represents "water in tank" on the 2400/Plus console. This warning lamp signals the operator when the fuel grade shown on the display screen is coming from a tank containing an excessive amount of water. This lamp functions only when the TIG system is installed.

2.3.3.3. New Data Function Lamp

The New Data function lamp turns on when data is written to the manual data memory by a peripheral program, such as telecommunications. To turn this lamp off, program the system with Mode 80.

2.3.3.4. Mode Function Lamp

When the operator performs mode functions on the console, the Mode lamp turns on.

2.3.3.5. Prepay and Preset Function Lamps

This lamp turns on when the operator is performing a prepay or preset fuel sale.

2.3.3.6. Volume Function Lamp

When the operator is viewing a volume amount on the console display screen, the Volume function lamp turns on.

2.3.3.7. Cash and Credit Function Lamps

The following paragraphs describe function characteristics of the cash and credit lamps and explain operating conditions that effect both lamps. Refer to Table 2-2 and Table 2-3 in section 2.3.5. for a detailed description of the cash and credit lamps on the console.

Slow Flash/Unpaid Fuel Sale. An unpaid fuel sale causes the cash or credit lamp to show a slow flash when the display screen unit price is the same as the fueling point unit price. If the credit lamp is flashing slowly, the cash lamp is off or vice versa. In addition, either the In Use/Used lamp or the Unpaid/Stopped lamp flashes slow at this time.

Fast Flash/Unpaid Fuel Sale. An unpaid fuel sale causes the cash or credit lamp to show a fast flash when the display screen unit price is NOT the same as the fueling point unit price. If the credit lamp is flashing fast, the cash lamp is off or vice versa. In addition, either the In Use/Used lamp or the Unpaid/Stopped lamp flashes fast at this time.

Slow Flash/Paid Fuel Sale. A paid fuel sale causes the cash or credit lamp to show a slow flash when the unit price on the display screen matches the unit price used for the payment method. For example, a cash unit price on the display screen and a cash payment method causes the cash lamp to flash slowly and the credit lamp to turn on (or vice versa).

Fast Flash/Paid Fuel Sale. A paid fuel sale causes the cash or credit lamp to show a fast flash when the display screen unit price is NOT the same as the unit price used for the payment method. For example, a cash unit price on the display screen and a credit payment method causes the cash lamp to flash fast and the credit lamp to turn on (or vice versa).

On/Paid Fuel Sale. A paid fuel sale causes the cash or credit lamp to turn on when the display screen unit price matches the fueling point unit price and the customer payment method matches both the display screen and fueling point unit price. For example, a cash unit price on the display screen and a cash unit price at the fueling point must have a cash payment method in order for the cash lamp to turn on and the credit lamp to turn off (or vice versa). Refer to Table 2-2.

2.3.3.8. Return Function Lamp

The Return lamp turns on when an incomplete prepay sale shows on the console display screen.

2.3.3.9. Price Function Lamp

The fuel sale unit price showing on the display screen causes the price lamp to turn on. When the system is programmed for dual pricing,(refer to Mode 33-02) the price lamp also shows the cash, credit, or select pricing mode for the dispenser. When a fueling point is selected on the console and the fuel sale unit price is not shown on the display screen, the price lamp supplies the pricing mode for that fueling point.

2.3.3.9. Price Function Lamp, continued

The operator programs the pricing mode for the dispenser using either Mode 33-07-0 for credit pricing or Mode 33-07-1 for cash pricing. Table 2-1 lists the price indicator lamp status for both credit and cash pricing selections.

TABLE 2-1. PRICE INDICATOR LAMP STATUS

Credit Pricing (Mode 33-07-0)	Cash Pricing (Mode 33-07-1)	Price Lamp Status
Select	Select	Off
Credit	Cash	Slow Flash (S.F.)
Cash	Credit	Fast Flash (F.F.)

2.3.4. Fueling Point Status Lamps

The following paragraphs describe fueling point status lamps located on the console. Also provided is an explanation of how each lamp performs during system operations. To determine the location of the lamps on the console, refer to Figure 2-2 and Figure 2-3.

2.3.4.1. Call/Ready Status Lamp

The following descriptions provide an explanation of how the Call/Ready lamp reacts for different types of fuel sales.

On. The lamp is on when the fueling point is authorized and ready to dispense fuel.

Slow Flash. The lamp indicates a slow flash when service is requested at the fueling point.

Fast Flash. The lamp shows a fast flash when the customer selects a product but does not make a cash or credit selection. This condition applies to dispensers programmed with the auto-authorize feature.

2.3.4.2. In Use/Used Status Lamp

The following descriptions provide an explanation of how the In Use/Used lamp reacts for different types of fuel sales.

On. The lamp is on when the fueling point is dispensing fuel.

Slow Flash. The lamp shows a slow flash when the fueling point is dispensing fuel and the customer needs to pay for the fuel. The lamp also flashes when an activated fueling point completes a sale but the sale needs to be transferred to the ECR. When the system is programmed with Mode 50, pressing the Prnt/Entr key on the console transfers the completed sale information to the ECR.

Fast Flash. The lamp indicates a fast flash for an incomplete prepay fuel sale. At this point, a refund is due.

2.3.4.3. Unpaid/Stopped Status Lamp

The following descriptions provide an explanation of how the Unpaid/Stopped lamp reacts for different types of fuel sales.

On. The lamp is on when the fuel flow at the fueling point is stopped.

Slow Flash. The lamp displays a slow flash when the current sale is dispensing fuel and the previous fuel sale is still unpaid. Pressing the Recall key allows the operator to view the previous fuel sale.

Fast Flash. The lamp shows a fast flash when the fueling point is stopped and the previous sale is still unpaid.

2.3.5. Operator's Guide To Status and Function Lamps

The information in Table 2-2 and 2-3 serves as an operator's guide for the 2400/Plus status and function lamps. In both tables, "S.F." represents slow flash and "F.F." represents fast flash.

TABLE 2-2. CASH & CREDIT LAMPS FOR INDOOR FUEL SALES

Lamp		Method of Payment /Paid?	Console Display Unit Price	Fueling Point Unit Price (Cash or Credit)	Pricing Single or Dual
Cash	Credit				
Off	On	Credit	Sale	No Choice	Single
On	Off	Cash	Sale	No Choice	Single
Off	F.F.	No	Credit	Cash	Dual
Off	S.F.	No	Credit	Credit	Dual
S.F.	Off	No	Cash	Cash	Dual
F.F.	Off	No	Cash	Credit	Dual
S.F.	On	Credit	Credit	Cash	Dual
Off	On	Credit	Credit	Credit	Dual
F.F.	On	Credit	Cash	Either	Dual
On	F.F.	Cash	Credit	Either	Dual
On	Off	Cash	Cash	Cash	Dual
On	S.F.	Cash	Cash	Credit	Dual

2.3.5. Operator's Guide To Status and Function Lamps, continued

TABLE 2-3. CASH & CREDIT LAMPS FOR ATTENDED FUEL SALES

Lamp		Method of Payment /Paid?	Console Display Unit Price	Fueling Point Unit Price (Cash or Credit)	Pricing (Single or Dual)	Fueling Point Attended ? (Y/N)	Programmed for Auto-Pay
Cash	Credit						
S.F.	S.F.	Auto	Sale	No Choice	Single	Yes	Yes
Off	S.F.	No	Credit	Either	Dual	Yes	Yes
S.F.	Off	No	Cash	Either	Dual	Yes	Yes
S.F.	F.F.	Auto	Credit	Either	Dual	Yes	Yes
F.F.	S.F.	Auto	Cash	Either	Dual	Yes	Yes

2.4. 2400/PLUS OPERATION

The following paragraphs explain how to operate the 2400/Plus at the beginning of a fuel sale. Also included are operating instructions for completing different types of fuel sales.

2.4.1. Fueling Point Call Signal

When the customer activates a fueling point at the dispenser, a call signal is transmitted to the 2400/Plus to begin a fuel sale. Depending on the type of dispenser located at the station site, customers can activate the fueling point call signal two different ways. The fueling point call signal is activated when the customer lifts the nozzle start lever on the dispenser. For MGB dispensers, the fueling point call signal is activated when the customer presses a product select button and lifts the nozzle start lever.

When activated, the pump computer transmits an assigned position number for the fueling point to the 2400/Plus system. The transmitted position number causes a Call/Ready lamp on the console to begin flashing. A flashing Call/Ready lamp serves as the fueling point call signal. The lamp continues to flash until the operator authorizes the fuel sale. When the operator responds to the status lamp by entering the fueling point number on the console, this action is known as fueling point selection.

NOTE: In addition to the flashing status lamp, programming the system with Mode 08 signals the operator with an audible call sound (beep).

2.4.2. Fueling Point Selection

Selecting a fueling point consists of entering the fueling point number on the numeric keypad. The fueling point selection must match the fueling point number located below the flashing Call/Ready lamp. Refer to Figure 2-2. Programming the system with Mode 09 allows the system to deny access to a fueling point when the operator enters a fueling point number that is larger than the actual number of fueling points at the station site.

2.4.2. Fueling Point Selection, continued

Complete the following steps to select a fueling point on the console keyboard.

1. Press the **Clear** key to clear the display screen.
2. Locate the fueling point number below the flashing Call/Ready lamp.
3. With the fueling point number located in step 2, enter this number on the numeric keypad.

NOTE: The operator can enter a single digit number (1-9) on the keypad if the station site has less than 10 fueling points.

2.4.3. Unit Price Selection

When the fueling point selection is made, the operator continues the fuel sale with selection of the unit price key. When the unit price key is pressed, the console screen displays the following fueling point information: grade number, fueling point number, and unit price.

To display a unit price for a fuel sale, perform the following steps.

1. Press the **Clear** key to clear the console display screen.
2. Enter the **Fueling Point Number** on the keypad.
3. Press the **Unit Price** key.

For fueling points equipped with dual pricing, complete steps 4 and 5.

4. Press the **Cash/Cred** to alternate the unit price lamp from cash to credit or vice versa.
5. When a cash or credit unit price is selected, press the **Unit Price** key again to re-display the fuel sale information on the console screen.

NOTE: The DL3 dispenser series allows selection of the cash or credit unit price at the fueling point. The DL, DL1, and DL2 dispensers series does not allow selection of cash or credit unit pricing at the fueling point.

2.4.4. Cash and Credit Lamps During Dual Pricing

For dual pricing fueling points, the display screen shows the following conditions for the cash and credit indicator lamps: slow flash, fast flash, OFF, or ON. The Cash and Credit lamps indicate unit price information for the fuel sale displayed at the console. Both lamps also indicate the sale money value for cash, credit, or automatic methods of payment. Also indicated is whether a fuel sale is paid or unpaid. Refer to section 2.3.5. for more information on the 2400/Plus status lamps.

Perform the following step to view the sale money value for cash or credit unit prices.

1. Press the **Cash/Credit** key on the console keyboard.

2.4.5. Postpay Operation

Regardless of the unit price selection made by the customer at the beginning of a fuel sale, the postpay operation allows the operator to complete the sale as either cash or credit.

Perform the following steps for a postpay fuel sale.

1. Press the **Clear** key to clear the console display screen.
2. Enter the **Fueling Point Number** on the keypad.
3. Press the **Unit Price** key.
4. For dual pricing, press the **Cash/Cred** key on the console. Pressing the Cash/Cred allows the operator to alternate the sale display between the cash sale value and the credit sale value.
5. For single pricing, press the **Cash Paid** key.
6. To print a sales receipt on a Receipt Totals Printer (RTP) or to transfer a sale to the Electronic Cash Register (ECR), press the **Prnt/Entr** key.

2.4.6. Pre-Authorized Fuel Sale

The operator can pre-authorize a fuel sale that allows the customer to make whatever product selection is necessary.

Perform the following steps on the console before the customer activates the fueling point.

1. Press the **Clear** key to clear the console display screen.
2. Enter the **Fueling Point Number** on the keypad.
3. Press the **Auth** key to authorize the fuel sale. The fueling point is now authorized to dispense whatever product the customer selects.

2.4.7. Specific Fuel Grade Selection

Using the console, the operator can authorize a fueling point to dispense a specific fuel grade.

To make the fueling point dispense a specific fuel grade, perform the following steps.

1. Press the **Clear** key to clear the console display screen.
2. Enter the **Fueling Point Number** on the keypad.
3. Enter the **Grade Number** assigned to the fueling point.
4. Press the **Auth** key to authorize the fuel sale. The fueling point is now authorized to dispense a specific fuel grade.

For dual pricing fueling points, the customer selects the unit price and the fuel sale continues. Fuel sales for single pricing fueling points are activated as soon as the operator authorizes the sale on the console.

2.4.7. Specific Fuel Grade Selection, continued

NOTE: When Mode 33 and Submodes 07, 08, and 09, are programmed for fueling points with dual pricing, the system authorizes only a cash unit price or only a credit unit price.

2.4.8. Stacked Sale

A stacked sale occurs when the operator authorizes a second fuel sale and the first fuel sale is unpaid. The first unpaid fuel sale is placed into the system recall memory causing the Unpaid/Stopped lamp to flash slowly. A stacked sale also occurs when auto-pay (auto-totalization) is not selected for auto-authorized fuel sales.

All unpaid fuel sales placed in the system recall memory must be paid before the operator can authorize additional fuel sales. To bypass this restriction, set Mode 33-18 to one. The operator can now authorize another fuel sale while leaving the unpaid fuel sale in the system recall memory.

To authorize a second fuel sale and place the unpaid fuel sale into the system recall memory, press the **Auth** key on the console.

To pay the unpaid fuel sale placed into the system recall memory, perform the following steps on the console.

1. Press the **Recall** key.
2. To display the cash or credit money value on the console screen, press the **Cash/Cred** key.
3. Depending on the payment method selected by the customer, press either the **Cash Paid** key or the **Cred Paid** key.
4. Press the **Recall** key again to return the current sale data to the console screen.

2.4.9. Prepay Operation

The following paragraphs explain how to complete a fuel sale with cash, credit, and volume prepay conditions on either a single or dual pricing dispenser.

2.4.9.1. Cash Or Credit Prepay Sale

When the operator receives payment for a fuel sale before the customer dispenses the product at the fueling point, a cash or credit prepay fuel sale occurs.

To perform a cash or credit prepay fuel sale, complete the following steps.

1. Press the **Clear** key to clear the console display screen.
2. Enter the **Fueling Point Number** on the keypad.
3. Using the numeric keypad on the console, enter the fuel sale money amount.
4. If an incorrect prepay amount is entered, press the **Clear** key and continue with step 2.

2.4.9.1. Cash Or Credit Prepay Sale, continued

5. If the customer is paying with cash, press the **Cash Paid** key. The Call/Ready lamp turns on (not flashing) to indicate the fueling point is authorized to begin the fuel sale. When the customer activates the fueling point, the In Use/Used lamp turns on (not flashing) indicating the customer is dispensing fuel at the dispenser.
6. If the customer is paying with credit, press the **Cred Paid** key. The Call/Ready lamp turns on (not flashing) to indicate the fueling point is authorized to begin the fuel sale. When the customer activates the fueling point, the In Use/Used lamp turns on (not flashing) indicating the customer is dispensing fuel at the dispenser.

Depending on the payment selection made in steps 5 and 6, the fuel sale uses either the cash or credit unit price. For single pricing dispensers, the cash unit price and the credit unit price are the same.

The fueling point automatically stops the fuel flow when the prepaid amount of product is finished dispensing. When the customer turns off the nozzle start lever at the fueling point, the In Use/Used lamp on the console turns off and the fueling point is ready for another fuel sale.

2.4.9.2. Specified Grade Prepay Sale

To perform cash or credit prepay sales with a specified grade, complete the following steps. Specifying a grade for single grade fueling points is not required.

1. Press the **Clear** key to clear the console display screen.
2. Enter the **Fueling Point Number** on the keypad.
3. Using the numeric keypad on the console, enter the fuel sale money amount.
4. To specify a grade, press the **Prnt/Entr** key. The console display screen flashes a "0" grade number until the operator enters a grade number on the numeric keypad.
5. If grade selection is not desired after the Prnt/Entr key is pressed, press the **Clear** key and enter the correct selection.
6. If the customer is paying with cash, press the **Cash Paid** key.
7. If the customer is paying with credit, press the **Cred Paid** key.

When the operator enters a valid grade number, the fuel sale volume is automatically calculated and displayed on the console screen. If the operator selects an invalid grade number, the volume display is blank and the fuel sale is disallowed when the Cash Paid or Cred Paid key is pressed.

2.4.9.3. De-Authorizing a Prepay Sale

The operator can de-authorize a fueling point if the customer has not started dispensing fuel.

Perform the following steps to de-authorize a fueling point.

2.4.9.3. De-Authorizing a Prepay Sale, continued

1. To de-authorize the fuel sale, press the **Pump Stop** key on the console. Pressing the Pump Stop key causes the In Use/Used status lamp to flash rapidly.
2. Press the **Refund** key.
3. Press the **Clear** key and continue with the prepay sale procedure.

2.4.9.4. Incomplete Prepay Sale

If the customer does not take the full prepaid amount, the In Use/Used lamp flashes rapidly. The rapid flash indicates an incomplete prepay sale.

Perform the following steps for an incomplete prepay fuel sale.

1. Press the **Refund** key to display the money amount to be returned to the customer. Pressing the Refund also causes the In Use/Used lamp to stop flashing.
2. Press the **Refund** key again to return to the fuel sale display on the console.

2.4.9.5. Volume Prepay Sale

A volume prepay sale occurs when the customer pays for a specific amount of fuel before activating a single pricing or a dual pricing fueling point.

Perform the following steps to complete a volume prepay fuel sale.

1. Press the **Clear** key to clear the console display screen.
2. Enter the **Fueling Point Number** on the keypad.
3. Press the **Vol** key and enter the volume amount on the console keypad.

A grade number must be specified after the volume amount is entered. For single grade fueling points, specifying a grade is not required.

4. To specify a grade, press the **Prnt/Entr** key. The console display screen flashes a "0" grade number until the operator enters a grade number on the numeric keypad.
5. If an incorrect prepay amount is entered, press the **Clear** key and continue with step 2.

When the operator enters a valid grade number, the fuel sale dollar amount is automatically calculated and displayed on the console screen. If the operator selects an invalid grade number, the fuel sale dollar amount display is blank and the fuel sale is disallowed when the Cash Paid or Cred Paid key is pressed.

6. For dual pricing fueling points, press the **Cash/Cred** key to alternate the money value display between credit and cash.
7. If the customer is paying with cash, press the **Cash Paid** key. The Call/Ready lamp turns on (not flashing) to indicate the fueling point is authorized to begin the fuel sale. When the customer activates the fueling point, the In Use/Used lamp turns on (not flashing) indicating the customer is dispensing fuel at the dispenser.

2.4.9.5. Volume Prepay Sale, continued

8. If the customer is paying with credit, press the **Cred Paid** key. The Call/Ready lamp turns on (not flashing) to indicate the fueling point is authorized to begin the fuel sale. When the customer activates the fueling point, the In Use/Used lamp turns on (not flashing) indicating the customer is dispensing fuel at the dispenser.

The fueling point automatically stops the fuel flow when the prepaid amount of product is finished dispensing. When the customer turns off the nozzle start lever at the fueling point, the In Use/Used lamp on the console turns off and the fueling point is ready for another fuel sale.

2.4.10. Preset Operation

The following paragraphs explain how to complete a fuel sale with preset cash, preset credit, or preset volume conditions on the 2400/Plus for either single or dual pricing fueling points.

2.4.10.1. Preset Cash and Preset Credit Sale

A preset cash or credit fuel sale is similar to a prepay cash or credit fuel sale. This type of fuel sale occurs when the operator receives payment for a fuel sale before the customer dispenses the product at the fueling point.

To perform a cash or credit prepay fuel sale, complete the following steps.

1. Press the **Clear** key to clear the console display screen.
2. Enter the **Fueling Point Number** on the keypad.
3. Using the numeric keypad on the console, enter the fuel sale money amount.
4. If an incorrect prepay amount is entered, press the **Clear** key and continue with step 2.
5. Press the **Auth** key to begin the fuel sale.

The fueling point automatically stops the fuel flow when the preset cash or credit amount of fuel is finished dispensing. At the end of the sale, the In Use/Used lamp indicates an unpaid sale. To complete the sale, continue with the following steps.

6. If the customer is paying with cash, press the **Cash Paid** key.
7. If the customer is paying with credit, press the **Cred Paid** key.

2.4.10.2. Preset Volume Sale

A volume preset sale is similar to a volume prepay sale. A volume preset sale occurs when the customer requests a specific amount of fuel and completes the fuel sale with either cash or credit.

Complete the following steps to perform a volume preset fuel sale.

1. Press the **Clear** key to clear the console display screen.
2. Enter the **Fueling Point Number** on the keypad.

2.4.10.2. Preset Volume Sale, continued

3. Press the **Vol** key and enter the volume amount on the console keypad.

4. To begin the fuel sale, press the **Auth** key.

The fueling point automatically stops the fuel flow when the preset amount of fuel is finished dispensing. At the end of the sale, the In Use/Used lamp indicates an unpaid sale. To complete the sale, continue with the following steps.

5. If the customer is paying with cash, press the **Cash Paid** key.

6. If the customer is paying with credit, press the **Cred Paid** key.

2.4.11. Previous Sale Recall (Recall Sale)

A recall sale can be accessed while viewing a current fuel sale on the display screen. The 2400/Plus identifies a recall sale on the display screen with a flashing fueling point number. When the entire display screen flashes, the system is signaling the operator the recall sale is unpaid.

Perform the following steps for a recall sale.

1. Press the **Recall** key on the console keyboard.

2. Press the **Cash/Credit** key to view the cash or credit sale value on the display screen.

3. For a cash sale value, press the **Cash Paid** key.

4. For a credit sale value, press the **Cred Paid** key.

NOTE: The cash or credit sale value on the display screen must match the key used to pay the sale. Otherwise, the system does not acknowledge the fuel sale payment.

5. To return the display screen to the current fuel sale, press the **Recall** key again.

2.4.12. All Fueling Points Stop (All-Stop)

When an All-Stop condition occurs, fuel flow stops at all fueling points. The Unpaid/Stopped lamp either turns on for a paid recall sale or flashes fast for an unpaid recall sale.

IMPORTANT: The fueling point control switches in the data distribution box must be set in the Auto position to stop the fuel flow for all fueling points. Refer to Figure 2-1.

During the All-Stop condition, the operator can end a fuel sale when the nozzle start lever is turned off at the fueling point. If the operator does not end the fuel sale, the sale continues once the All-Stop condition is cleared from the system.

NOTE: The Stop key is not an emergency power cutoff.

Perform the following step to stop all fueling points.

1. Press the **Stop** key.

2.4.12. All Fueling Points Stop (All-Stop), continued

To re-activate all fueling points, complete the following steps.

1. Press the **Clear** key to clear the console display screen.
2. Press the **Pump Start** key.

2.4.13. Individual Fueling Point Stop

When a fueling point is dispensing fuel, the operator can stop the fuel flow. If a recall sale is in progress when the fueling point is stopped, the Unpaid/Stopped lamp flashes fast to signal the operator of an unpaid fuel sale.

To stop an authorized fueling point that is NOT dispensing fuel, the nozzle start lever must be in the off position. If a prepay sale is in progress when the fueling point is stopped, the Call/Ready lamp and the In Use/Used lamp flashes fast to signal the operator of an incomplete prepay sale.

To stop a fueling point, complete the following steps.

1. Press the **Clear** key.
2. Enter the fueling point number on the numeric keypad.
3. Press the **Pump Stop** key.

To re-activate the fueling point, perform the following steps.

1. Press the **Clear** key.
2. Enter the fueling point number on the numeric keypad.
3. Press the **Pump Start** key.

2.4.14. Console Manager Keylock Switch

To prevent unauthorized access or changes to data in the 2400/Plus system, use the manager keylock switch to lock the console. The switch is also used to bypass the ration limit function and is used in combination with Mode 48, Ration Limits.

2.5. FUELING POINT CONTROL SWITCHES

Each fueling point is controlled individually with switches located in the data distribution box. Refer to Figure 2-1. To direct a fueling point from the 2400/Plus console, the control switch must be in the Auto position. Otherwise, when the control switch is in the Bypass position, the operator can not control the fueling point at the console.

Perform the following step for a malfunctioning fueling point.

1. Set the control switch in the data distribution box to the Bypass position.

Setting the control switch in the Bypass position prevents a defective fueling point from interfering with fueling points that are operating properly.

2.6. STATION CLOSING

The 2400/Plus system should not be turned off during normal operating conditions. To prevent fueling points from operating, turn the pump motor circuit breakers off.

2.7. POWER FAILURE

In the event of a power failure, all pre-programmed functions and fuel sale data is kept in battery-protected memory. The battery is non-rechargeable and requires periodic testing to ensure retention of memory.

Fueling point operation during a power failure is not possible. Operating the console during a power failure requires installation of an optional battery pack. When operating the console with the battery pack, the display screen is less bright and may also flicker. After five minutes of battery pack operation, the system shuts itself down to conserve battery power. The total operating time for the battery pack is 15 minutes after the power failure. Although incomplete fuel sales can not be paid until normal power is restored, completed fuel sales can be paid when operating the console with the battery pack.

Complete the following steps to activate the battery pack on the 2400/Plus console.

1. Locate the push-button switch on the back of the console.
2. Press the push-button switch down until an audio tone sounds. At this point, the system is operating with the battery pack.
3. To conserve battery power and turn the system off, press the **Stop** key.
4. When the system shuts itself down to conserve battery power, press the push-button again to restart the system.

2.8. REAL TIME CLOCK

When the 2400/Plus is programmed with Mode 60, the Real Time Clock shows the time in either a 12 hour or a 24 hour mode. In the 12 hour mode, a glowing decimal point placed next to the hours is used to indicate P.M. While viewing either the time or date, the operator can also view the shift sequence number. The shift sequence number is a 3 digit number that increases each time a shift change occurs.

Perform the following steps to operate the Real Time Clock.

1. To display the time, press the **0** key twice on the numeric keypad. If less than 10 fueling points are assigned to the 2400/Plus, press the 0 key once to display the time.
2. To briefly display the date, press the **00** key when the time display appears on the console screen. After two seconds, the time display automatically returns and the date display disappears.
3. While viewing either the time or date, press the **Auth** key to view the shift sequence number.

2.9. RECEIPT PRINTING WITH A RTP OR ECR

Fuel sale receipts are printed on either an ECR (Electronic Cash Register) or a RTP (Receipt Totals Printer). Programming the 2400/Plus system with Mode 50 allows the operator to select printing options for the ECR or RTP. Printing options include duplicate receipt printing, automatic printing, and print-on-demand. These options pertain to fuel sale data transferring from the 2400/Plus console to the printer in the form of a receipt.

The ECR responds to all Mode 50 programmable options except duplicate receipt printing while the RTP responds to all Mode 50 programmable options with no exceptions.

2.9.1. ECR Print-On-Demand

The following instructions demonstrate how to transfer sales to the ecr with the print-on-demand option selected for the ECR.

1. If the customer is paying with cash, press the **Cash Paid** key. If the customer is paying with credit, press the **Cred Paid** key.
2. To transfer fuel sale data from the console to the ECR, press the **Prnt/Entr** key.

When the Prnt/Entr key is NOT used to transfer fuel sale data for a paid sale to the ECR, the In Use/Used status lamp flashes slowly. If the operator authorizes another fuel sale, the previous untransferred sale moves to the recall buffer causing the Unpaid/Stopped status lamp to flash slowly. At this point, the operator can not authorize additional fuel sales until the untransferred sale is either moved from the recall buffer to the ECR or is bypassed with a mode selection made by the operator.

To transfer data for a paid fuel sale placed in the recall buffer to the ECR, perform the following steps.

1. Press the **Clear** key to clear the console display screen.
2. Enter the fueling point number.
3. Press the **Recall** key.
4. Press the **Prnt/Entr** key to transfer the fuel sale data to the ECR.

To transfer data for an unpaid fuel sale placed in the recall buffer to the ECR, perform the following steps.

1. Press the **Clear** key to clear the console display screen.
2. Enter the fueling point number.
3. Press the **Recall** key.
4. If the customer is paying with cash, press the **Cash Paid** key. If the customer is paying with credit, press the **Cred Paid** key.
5. Press the **Prnt/Entr** key to transfer the fuel sale data to the ECR.

2.9.1. ECR Print-On-Demand, continued

The following steps demonstrate how to bypass a fuel sale placed in the recall buffer in order to authorize additional fuel sales.

1. Press the **Clear** key to clear the console display screen.
2. Press the **Mode** key to begin the mode selection.
3. Enter **33-18-1** on the numeric keypad and then press the **Prnt/Entr** key.
4. Press the **Mode** key again to return to normal console operation.

2.9.2. RTP Print-On-Demand

The following step demonstrates how to print receipts with the print-on-demand option selected for the RTP.

1. Press the **Prnt/Entr** key to transfer fuel sale data to the RTP and print the sale receipt.

2.9.3. ECR and RTP Automatic Printing

For automatic printing on an ECR or RTP, the 2400/Plus must be programmed with Mode 50. Submode and data values relating to the type of printer must also be entered when programming the system with Mode 50. With appropriate programming, selecting any of the following keys causes the system to print a postpay fuel sale receipt on either the RTP or the ECR: Prnt/Entr, Cash Paid, or Cred Paid. Refer to Table 3-47 in chapter 3 for a description of Mode 50 and the available submode and data options.

2.9.4. RTP Duplicate Sales Receipt Printing

The following instructions demonstrate how to print duplicate sale receipts with the RTP.

1. Press the **Prnt/Entr** key to transfer fuel sale data to the RTP and print the sale receipt.
2. Press the **Prnt/Entr** key again to print a duplicate fuel sale receipt.

2.9.5. ECR and RTP Sale Receipts For Prepaid Fuel Sales

Sale receipts for prepaid fuel sales do not indicate fuel grade or fuel volume information as does a sale receipt printed after the customer dispenses fuel. To print a sale receipt for a prepaid fuel sale, complete the following steps.

1. Press the **Clear** key to clear the console display screen.
2. Enter the fueling point number on the numeric keypad.
3. Enter the fuel sale money amount on the numeric keypad.
4. Press the **Cash Paid** key if the customer is paying with cash or press the **Cred Paid** key if the customer is paying with credit.
5. With the RTP, press the **Prnt/Entr** key to print the prepaid sale receipt.

2.9.5. ECR and RTP Sale Receipts For Prepaid Fuel Sales, continued

6. With the ECR, press the **Prnt/Entr** key to transfer the prepaid fuel sale information to the ECR.

PROGRAMMING

3.1. INTRODUCTION

The 2400/Plus provides programming modes for cash/credit and blending station operations. Using modes to program the 2400/Plus allows the operator to configure the system in such a way that all fueling point station requirements can be achieved.

To accomplish specific programming requirements for the station, the operator may select modes containing option features and may also select modes that apply to all fueling point and fuel sale types. Table 3-1 identifies minimum programming requirements for cash/credit and blending operations.

TABLE 3-1. PROGRAMMING MODE ASSIGNMENTS

Programming Mode	Programming Description
Mode 18	Grade-To-Position Assignment
Mode 03	Tank-To-Fueling Point Assignment
Mode 02	Grade-To-Tank Assignment
Mode 17 (Blending Systems Only)	Blend Ratio-To-Grade Assignment
Mode 01	Cash/Credit Unit Price
Mode 09-00	Maximum Fueling Point Number
Mode 60	Clock Set

3.2. MODE DESCRIPTION

A mode consists of three parts. The first part is the prime mode number relating to a general category. The second part is the submode number relating to a sub-category containing specific details. The third part of a mode is the data that contains the programming information. When the data is incorrect or is restricted for a selected mode, an audio tone sound occurs.

The following example demonstrates a situation that requires the operator to enter a mode selection in the 2400/Plus.

EXAMPLE. The 2400/Plus denies access when the operator tries to authorize an additional fuel sale for a fueling point with a current sale displaying on the console screen and another fuel sale residing in the recall buffer. To bypass the access restriction and authorize the additional fuel sale, the operator enters a mode selection of 33-18-1 into the 2400/Plus. Refer to Figure 3-1.

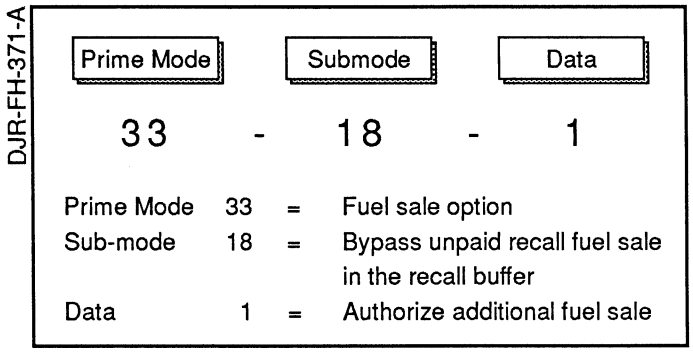


FIGURE 3-1. MODE DESCRIPTION EXAMPLE

3.3. MODES AND 2400/PLUS INSTALLATION

When the 2400/Plus is installed for the first time, data (programming information) and restriction values are automatically assigned to some modes. Modes automatically assigned non-zero data values at installation are identified in Table 3-2. To view the restriction values assigned to modes at installation, enter Mode 99 on the 2400/Plus console.

3.3. MODES AND 2400/PLUS INSTALLATION, continued

TABLE 3-2. MODES AND DATA ASSIGNMENTS AT INSTALLATION

Prime Mode	Submode	Data Assigned at Installation	Description
00	00	1	Station unit price tier
00	01 (Max. F.P. No.*)	1	Fueling point unit price tier
02	01	1	Tank 1 contains grade 1
02	02	2	Tank 2 contains grade 2
02	03	3	Tank 3 contains grade 3
02	04	4	Tank 4 contains grade 4
02	05	5	Tank 5 contains grade 5
02	06	1	Tank 6 contains grade 1
04	01 (Max. F.P. No.*)	1	All fueling points are assigned with level 1 pricing
06	01 (Max. F.P. No.*)	0.200	All fueling points are assigned a pre-cutoff value of 0.200
07	00	$990.00	Cash ration limit
07	00	990.000	Volume ration limit
09	00	8	Maximum number of fueling points in the system
17	06-09	101	Blend ratio = grade not used
32	01, 02	2, 3	Decimal point location for totals and = XX . XX; for unit price = X.XXX
33	00, 01	1	Prepay/preset and postpay sales allowed
50	11/21	1	Data output to peripheral attached to console 1
	12/22	0	
	13/23	0	

NOTE: * 01-Max. F.P. no. = 01 - Maximum fueling point number as set in Mode 09.

3.4. ENTERING A MODE SELECTION

A mode selection consists of pressing the mode key, entering a two digit prime mode number, entering a one or two digit submode number, and entering a one digit data number on the numeric keypad. When certain prime mode numbers are entered in the system, a zero may automatically appear in the submode number.

3.4. ENTERING A MODE SELECTION, continued

The following steps demonstrate how to enter a mode selection in the 2400/Plus system.

1. To bypass most mode access restrictions, turn on the **Manager Keyswitch.**
2. Press the **Mode** key. The display screen becomes blank and the mode lamp turns on.
3. Enter a two digit **Prime Mode** number on the numeric keypad. The selected prime mode number appears on the display screen. Refer to Figure 3-2.

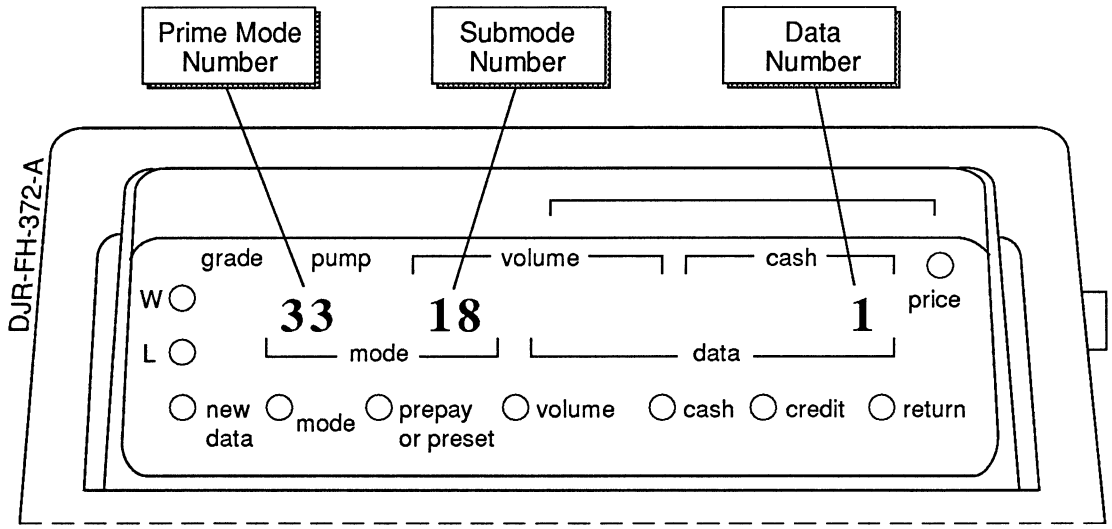


FIGURE 3-2. MODE DATA LOCATION

4. Enter a one or two digit **Submode Number.** The selected submode number also appears on the display screen next to the prime mode number. The display screen also indicates the current program data for the selected mode.
5. If the program data on the screen is correct, press the **Recall** key to advance to the next submode number.
6. To change the program data on the screen, enter the new data and press the **Prnt/Entr** key. If the console beeps, the new data value may be incorrect. Verify the numbers entered and re-enter the mode data.

NOTE: Pressing the Clear key twice causes the submode and prime mode numbers to disappear from the display screen. Pressing the Clear key again allows the operator to exit from the mode operation.

7. Pressing the **Mode** key allows the operator to exit the mode operation either during or after mode selections.

3.4. ENTERING A MODE SELECTION, continued

NOTE: Programming the 2400/Plus with particular prime mode numbers causes the system to automatically proceed to the next larger submode number after the operator has entered a data value.

3.5. SYSTEM PROGRAMMING GUIDELINES

The following paragraphs describe how to configure specific programming options required by the station site.

3.5.1. Grade-To-Position Programming

Programming the system with Mode 18 allows a fueling point position to dispense a particular fuel grade. Grade-to-position programming consists of assigning a non-zero value that relates to a specific fuel grade, fueling point position, and fueling point type. Refer to the Mode 18 table in this chapter for further details.

The following examples represent incorrect grade-to-position programming assignments.

Example 1. Blending grades 6 through 9 are assigned to MGD fueling point positions.

Example 2. Grades 1 through 3 are assigned to fueling point positions that dispense blended products.

3.5.2. Tank-To-Fueling Point Programming

Active positions on MGD fueling points must have non-zero tank numbers assigned to identify the source of the product. The feedstock tanks assigned to blending fueling points have 5 and 4 assigned as the feedstock grades. Non-zero tank values that have feedstock grades assigned must be designated for blending fueling points if a blend product is to be dispensed. Refer to the Mode 03 table in this chapter.

3.5.3. Grade-To-Tank Programming

When the source tank is identified with the tank-to-fueling point assignment the grade assigned to the stored product must be evaluated. This is necessary to ensure there is not a conflict between the grade assigned to the selected position and the grade assigned to the tank(s) that supplies the source fuel. Refer to the Mode 02 table in this chapter.

3.5.4. Cash/Credit Unit Price Programming

The credit price assigned to the selected grade must be greater than or equal to the cash price when the cash/credit pricing option is selected. The values to be evaluated are identified by the tier/level combination assigned to the fueling point. If a grade is not selected as one of the authorization parameters, the test is applied to all available fueling point grades. Refer to the Mode 01 table in this chapter.

3.5.5. Pricing Tiers

To control fuel sale prices at the fueling point, program the 2400/Plus with prime mode numbers 00, 01, 02, 03, 04, and 18. Refer to Table 3-3.

3.5.5. Pricing Tiers, continued

TABLE 3-3. MODE ASSIGNMENTS FOR FUEL SALE PRICING

Prime Mode Number	Mode Function
Mode 00	Assigns the station tier for daytime or nighttime operation.
Mode 01	Assigns a price for each fuel product.
Mode 02	Assigns a fuel product to a specific tank.
Mode 03	Assigns a tank to a specific dispenser.
Mode 04	Assigns a fueling point price level for either self-service or full-service station sites.
Mode 18	Assigns a grade for each fueling point position.

The 2400/Plus supports pricing assignments for either all fueling points or for a specific fueling point. Unit price assignments consist of either a first tier level or a second tier level. The system supports unit pricing by grade, price tier, price level, cash, or credit. Two tiers are available for each grade. Tier pricing allows different fuel prices for certain times of the day such as day/night pricing. Each fueling point is assigned to tier 1 or tier 2 to support full and self-service pricing. Figure 3-1 shows each of nine grades with eight unit prices. For additional information, refer to the tables in this chapter on Mode 35, 36, and 01.

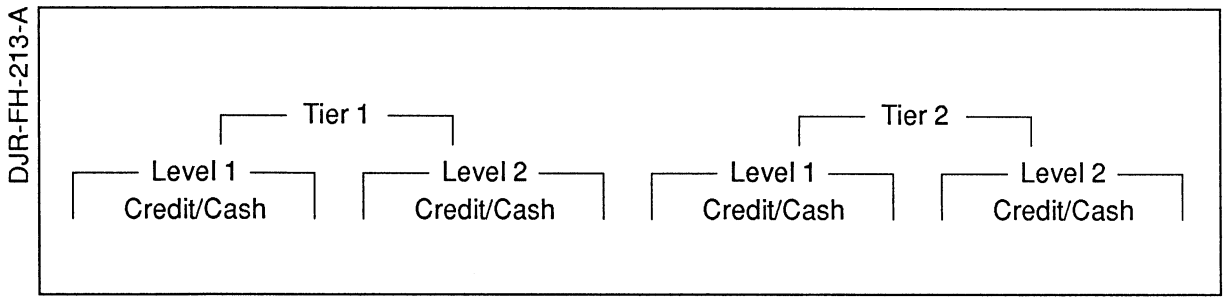


FIGURE 3-3. PRICING TIER

3.5.6. Auto-Authorize Operation

The Wayne 2400/Plus system can operate without an operator pressing keys at the console. Mode 35 outlines three different ways to automatically authorize a fueling point. A key switch at the fueling point is used to allow an attendant to authorize sales at the fueling point. Mode 36, Fueling Point Auto-Totalization Options, should be programmed in conjunction with Mode 35. The locally authorized sale may be automatically paid and totalized by the system. Refer to the table for Mode 36 in this chapter.

3.5.6. Auto-Authorize Operation, continued

Sales collected by an attendant at the fueling point and auto-paid sales are recorded as separate totals in the shift totals report. Refer to Chapter 6 of this manual, Mode 10, Grade Total Attended Sales.

3.6. SECURITY LEVELS

The Wayne 2400/Plus system meets security requirements for blend ratio programming through the use of four programmable levels of security available through Mode 99.

Mode 99 allows restrictions to be placed on any of the other modes. Mode restriction may be selectively chosen to allow display but no entry, or to disallow display. If the manager's keylock switch is on, Level 1 and Level 2 restrictions are lifted, but any Level 3 (password) restrictions are still in effect. The following paragraph explains the different levels of security provides by the Wayne 2400/Plus system provides.

The following table identifies available levels of security:

TABLE 3-4. SECURITY LEVEL TYPES

Security Level	Type of Security
Level 0	No restrictions.
Level 1	Manager's key required for data entry.
Level 2	Manager's key required for data display or entry.
Level 3	No access unless lock is opened with Mode 96, Submode 04.

3.6.1. Blend Ratio Security

Blend ratios are programmed after installation and startup. Blend ratios are entered using Mode 17 which has a submode range of 06 through 09 that corresponds to the blend grades 6 through 9. Mode 17 is automatically assigned a security level of 1, allowing access with only the manager's key.

The following example describes how to program the blend ratio security levels at start up.

Station Start Up Example: Assume that ratios of 40, 50, and 60 percent are to be assigned to grades 6, 7, and 8. Grade 4 (low feedstock) and Grade 5 (high feedstock) have blend ratios of 0 and 100 that can not be changed by system programming. Any grades not used are assigned ratio 101. Complete the following steps to program the blend ratios:

1. Insert the manager's key into the console key lock and turn the key to the unlock position.
2. Press the **Mode** key and enter the following data from Table 3-5.

3.6.1. Blend Ratio Security, continued

NOTE: Notice that each time the **Prnt/Entr** key is pressed, the submode number moves automatically to the next grade.

TABLE 3-5. BLEND RATIO SECURITY

Prime Mode	Submode	Ratio Data	Entry	Result
17	06	40	Prnt/Entr	Grade 6 ratio = 40
17	07	50	Prnt/Entr	Grade 7 ratio = 50
17	08	60	Prnt/Entr	Grade 8 ratio = 60
17	09	101	Prnt/Entr	Grade 9 ratio = 101

3. Clear the display by pressing the **Clear** key twice.
4. Enter 96, 04, and then the password.
5. Press the **Auth** key.

NOTE: Notice that a one is displayed in the data window of the console. This indicates that the correct password was entered and the Level 3 security lock is open and remains open until you exit the mode function and the mode light on the display disappears.

6. Clear the display by pressing the **Clear** key twice.
7. Enter 99, 17, 3, then press the **Prnt/Entr** key.
8. Press the **Mode** key.

Security level 3 is now assigned to Mode 17. Attempts to display or change any of the blend ratios are denied unless the lock is first opened with Mode 96, Submode 04.

3.6.2. Changing A Blend Ratio

The following steps demonstrate how to change the blend ratio programming.

1. Clear the display by pressing the **Clear** key.
2. Press the **Mode** key.
3. Enter 96, 04, and then the password.
4. Press the **Auth** key.

Note: Notice that a one is displayed in the data window of the console. This indicates that the correct password was entered and the Level 3 security lock is open and remains open until the operator exits the mode function and the mode light on the display disappears.

5. Clear the display by pressing the **Clear** key twice.
6. Select Mode 17 and enter the new blend ratio(s).

3.6.2. Changing A Blend Ratio, continued

7. Press the **Mode** key after the new ratios are entered to exit and restore password security (it is not necessary to enter Mode 99 again).

3.6.3. Changing A Level 3 Password

Should a RAM clear be executed, or it becomes necessary to change a Level 3 password, perform the following steps:

1. Clear the display by pressing the **Clear** key twice.
2. Press the **Mode** key and enter 96, 04, and then the current password.
3. Press the **Auth** key.

Note: The system displays a "1" to indicate the correct password was entered and Level 3 security lock is open. Level 3 security remains open until you exit the mode function and the "Mode" light on the display disappears.

4. Enter the new password and press the **Prnt/Entr** key.
5. Record the new password for future reference before exiting this mode.
6. Press the **Mode** key.

3.7. FUELING POINT PROGRAMMING EXAMPLES

The following fueling point example is designed to show programming requirements that meet a specific situation. The fueling points selected for the example show how programming requirements may vary.

EXAMPLE: Using Mode 02, Tanks 1 through 5 hold grades 1 through 5 respectively. The station has four fueling points and each fueling point has a different product type. Refer to Table 3-5 for further information.

TABLE 3-6. EXAMPLE OF STATION SET-UP

Fueling Point Number	Fueling Point Type	Available Products
1	Type 1 4-Product MGD	Grades 1, 2, 3, and 4 at nozzles X, Y, Z, and AA.
2	Type 2 3-Product MGD	Grades 1, 2, and 3 at nozzles X, Y, and Z.
3	Type 10 Multi-Grade Blender	Grade 1 at single-product nozzle. Grades 4, 6, 7, 8, and 5 at blend nozzle.
4	Type 30 Fixed-Ratio Blender	Grades 4, 6, and 5 at nozzles Y, Z, and AA.
5	Type 40 Variable Blender	Grade 4, 6, 7, and 5 at blend nozzle Grade 1 at single product nozzle

3.7. FUELING POINT PROGRAMMING EXAMPLES, continued

Table 3-6 lists the System Blend Ratios that are expressed as a percentage of the Hi product and also lists the equivalent Blend Ratio Assignments for the station example.

TABLE 3-7. BLEND RATIO ASSIGNMENTS

System Blend Ratios	Blend Ratio Assignments
Grade 6 - 40%	Mode 17 - 06 = 40
Grade 7 - 50%	Mode 17 - 07 = 50
Grade 8 - 60%	Mode 17 - 08 = 60
Grade 9 - 101% = Not Used	Mode 17 - 09 = 101

The following paragraphs explain the fueling point programming information for the station example.

Fueling Point 1 Programming. Mode 03-01 = 4321 (Mode 03, Submode 01). Tanks 4, 3, 2, and 1 are assigned to nozzles AA, Z, Y, and X.

Mode 18-01 = position 1 = 1 (grade 1 at position 1)
position 2 = 2 (grade 2 at position 2)
position 3 = 3 (grade 3 at position 3)
position 4 = 4 (grade 4 at position 4)
positions 5 through 7 = 0

Fueling Point 2 Programming. Mode 03-02 = 0321 (Mode 03, Submode 02). Tanks 3,2,1 are assigned to Nozzles Z, Y, X.

Mode 18-02 = position 1 = 1 (grade 1 at position 1)
position 2 = 2 (grade 2 at position 2)
position 3 = 3 (grade 3 at position 3)
positions 4 through 7 = 0

3.7. FUELING POINT PROGRAMMING EXAMPLES, continued

Fueling Point 3 Programming, Mode 03-03 = 0541 (Mode 03, Submode 03). Tank 4 is the low feedstock tank and Tank 5 is the high feedstock tank. Tank 1 contains the single product for position 1.

Mode 18-03 = position 1 = 1 (grade 1 at position 1)
position 2 = 0 (no grade at position 2, reserved)
position 3 = 4 (grade 4 at position 3)
position 4 = 6 (grade 6 at position 4)
position 5 = 7 (grade 7 at position 5)
position 6 = 8 (grade 8 at position 6)
position 7 = 5 (grade 5 at position 7)

Fueling Point 4 Programming. Mode 03-04 = 0540 (Mode 03, Submode 04). Tank 4 is the low feedstock tank and Tank 5 is the high feedstock tank while the single product tank is not assigned.

Mode 18-04 = position 1 = 0 (no grade at position 1, reserved)
position 2 = 4 (grade 4 at position 2)
position 3 = 6 (grade 6 at position 3)
position 4 = 5 (grade 5 at position 4)
positions 5, 6, and 7 = 0

Fueling Point 5 Programming. Mode 03-05 = 0541 (Mode 03, Submode 05). Tank 4 is the low feedstock tank and Tank 5 is the high feedstock tank. Tank 1 contains the single product for position 1.

Mode 18-05 = position 1 = 1 (grade 1 at position 1)
position 2 = 0 (no grade at position 2, reserved)
position 3 = 4 (grade 3 at position 4)
position 4 = 6 (grade 4 at position 6)
position 5 = 7 (grade 5 at position 7)
position 6 = 5 (grade 6 at position 5)
position 7 = 0 (no grade at position 7, reserved)

3.8. MODE DATA DESCRIPTIONS

To understand how modes are used to program the 2400/Plus system, the following tables provide a brief explanation for each mode, submode, and programming data.

3.8.1. Mode 00 Station and Fueling Point Operation/Pricing Tiers

TABLE 3-8. MODE 00

Prime Mode	Submode	Data	Description
00	00	0-2	**Station Operating Pricing Tier:** Mode 00 can be used to assign all fueling points to either tier 1 or tier 2. A mix of tier 1 and tier 2 is also possible. 0 - Display Only - Mix of tier 1 and tier 2 unit prices. 1 - Tier 1 operation/pricing for all fueling points. 2 - Tier 2 operation/pricing for all fueling points. **NOTE:** Initially, the system assigns the station tier to 1.
00	01 - MAX. F.P. No,	1-2	**Fueling Point Operation/Pricing Tier:** This pricing tier provides selection of either tier 1 or tier 2 prices for each fueling point. Refer to Mode 04 for programming price levels within a tier for each fueling point. **NOTE:** Initially, unit price tier 1 is assigned to all fueling points.

3.8.2. Mode 01 Unit Price

Mode 01 allows the entry of unit prices by grade, price tier, price level, and credit and cash. Each of the nine grades can have eight unit prices.

NOTE: Enter unit prices prior to operating the system. The cash unit price must be less than or equal to the corresponding credit unit price. Otherwise, the system does not authorize a fueling point with cash/credit pricing.

No restrictions exist on the entry of unit prices when the ascending order (lowest to highest) option is not selected (Mode 33-16). Ascending order may be used when a station is configured with blending fueling points. When the ascending order option is selected, the unit prices must be in ascending order for grades 4, 6, 7, 8, 9, and 5 before entry is allowed.

3.8.2. Mode 01 Unit Price, continued

TABLE 3-9. MODE 01

Prime Mode	Submode	Data	Description
01	(1-8) (1-9)	4-Digit	**Unit Price:** When cash/credit pricing is selected for fuel grades, the cash unit price must be less than or equal to the credit unit price. Otherwise, the system does not authorize the fueling point when cash/credit pricing is in effect.
	11-19		Credit, Tier 1, Level 1
	21-29		Credit, Tier 1, Level 2
	31-39		Credit, Tier 2, Level 1
	41-49		Credit, Tier 2, Level 2
	51-59		Cash, Tier 1, Level 1
	61-69		Cash, Tier 1, Level 2
	71-79		Cash, Tier 2, Level 1
	81-89		Cash, Tier 2, Level 2

EXAMPLE: Mode 01 submode 23 is assigned to tier 1 level 2 with a credit unit price for grade 3. Depending on where the decimal point is located (see Mode 32) a unit price of up to 9999 money units may be entered.

3.8.3. Mode 02 Tank Grade Assignment

TABLE 3-10. MODE 02

Prime Mode	Submode	Data	Description
02	01-06 (Tank No.)	1-5 (Grade)	**Tank Grade Assignment:** A grade number must be assigned to each fuel product stored in each of the six tanks controlled by the Wayne 2400/Plus. The only grades that can be assigned to tanks are grades 1 through 5. Grades 4 and 5 must be assigned to tanks supplying the low and high feedstock products to blending pumps (see Mode 03). Initially, the system assigns grades 1 through 5 to tanks 1 through 5 respectively, and grade 1 to tank 6.

3.8.4. Mode 03 Tank-To-Fueling Point Assignment

Accessing Mode 03 allows the operator to either display or enter fuel tank assignments for each fueling point. This is usually a one time programming function unless the station plumbing is changed. The submode number indicates the fueling point number. Authorization of a pump is disallowed when an assigned tank grade does not match the grade assignment for the fueling point position (refer to Mode 18).

3.8.4. Mode 03 Tank-To-Fueling Point Assignment, continued

TABLE 3-11. MODE 03

Prime Mode	Submode	Data	Description
03	01 - MAX. F.P. No.	4-Digit	**Tank-To-Fueling Point Assignment:** If the dispenser is a Type 1 or Type 2 MGD, tank assignment for the fueling point is a 4-digit number in the following form: A A Z Y X. A A Nozzle Position A A Z Nozzle Position Z Y Nozzle Position Y X Nozzle Position X Example: 0 3 2 1 Nozzle position X is connected to tank 1 Nozzle position Y is connected to tank 2 Nozzle position Z is connected to tank 3 Nozzle position AA is not connected If the pump is blending (Types 3-29, Type 30 or Type 40), the tank-to-fueling point assignment is a four digit number with the following form: XHLS. X - not used, entry of zero (0) suggested H - high feedstock tank (must contain grade 5) L - low feedstock tank (must contain grade 4) S - single product tank Example: 0 5 4 1 - X is zero - high feedstock tank = tank 5 - low feedstock tank = tank 4 - single-product tank = tank 1 **NOTE:** Blending pump authorization is disallowed when the following conditions occur: • High feedstock tank does not contain grade 5. • Low feedstock tank does not contain grade 4. • A fuel grade in the single-product tank does not match the fuel grade assigned to position 1 (refer to Mode 18). The system allows zero through 6 for tank-to-fueling point assignments. A zero display indicates no tank assignments. The system initially designates 0000 as the tank-to-fueling point assignment. Mode 03 provides fueling point plumbing descriptions. Using Mode 03 and 02 together also provides support for product inventory totals and tank declining balances.

3.8.5. Mode 04 Fueling Point Price Level

Mode 04 allows the operator to select either of the two unit price levels for the current tier option selected in Mode 00. Each fueling point must be assigned to one of two price levels. The price level assignment for the fueling points allows different modes of operation, such as full-service or self-service. Refer to Mode 01 for a description on unit prices for each price level. Each of the nine grades have eight unit prices.

The following table describes the Mode 04 functions for the Wayne 2400/Plus system.

TABLE 3-12. MODE 04

Prime Mode	Submode	Data	Description
04	01 - MAX. F.P. No.	1-2	The submode number indicates the fueling point number and may not exceed the number of fueling points assigned in Mode 09. When the Enter key is pressed for a data entry, the submode automatically increases to the next fueling point number. Typical entries are 1 for self-service and 2 for full-service. The initial price level assigned by the system is price level 1. Example: Assume that tier 2 has been selected for the station. An entry of 2 in Mode 04 selects the tier 2, level 2 cash and credit, or normal unit prices for the selected fueling point.

3.8.6. Mode 05 Fueling Point Totalizer

Mode 05 provides a display of the fueling point totalizers for money and volume. Refer to Table 3-13 for further details on Mode 05 features.

3.8.6. Mode 05 Fueling Point Totalizer, continued

TABLE 3-13. MODE 05

Prime Mode	Submode	Data	Description
05	01 - MAX. F.P. No.	8-Digit	Pressing the **Recall** key causes the system to display the next fueling point totalizer. Pressing the **Vol**, **Cash Paid** or **Cred Paid** keys causes the system to display the fueling point totalizers beginning with fueling point position 1. Pressing any of these keys can alternately display any of the totalizers without the fueling point position number (submode number) being changed. Pressing the **Vol** key lights the volume indicator lamp and also displays the volume totalizer for a selected fueling point position. The grade number also appears on the grade display. Pressing the **Cash Paid** key lights the cash indicator lamp and displays the cash totalizer for a selected fueling point position. The grade number also appears on the grade display. Pressing the **Cred Paid** key lights the credit indicator lamp and displays the credit totalizer for a selected fueling point position. The grade number also appears on the grade display. When position 1 is not available, the display sequence proceeds with the next higher available position. The fueling point positions available at a particular fueling point depend on the fueling point type and the grades assigned to that fueling point in Mode 18. (See Mode 16 to determine how pump types and mode programming relate to each other.). Pressing the **Recall** key allows the system to display the next available sequential fueling point position without altering the cash, credit, or volume selection. When the last fueling point position totalizer is shown, the totalizer for the low feedstock volume is displayed. The volume indicator lamp identifies the value as a volume quantity. The low feedstock grade number flashes in the grade window to show that this is a volume totalizer. Pressing the **Recall** key again causes the high feedstock volume to display on the screen. Pressing the **Recall** key a final time causes the system to display the next fueling point position totalizer on the screen.

3.8.7. Mode 06 Volume Pre-Cutoff

TABLE 3-14. MODE 06

Prime Mode	Submode	Data	Description
06	01 - MAX. F.P. No.	4-Digit	Accessing Mode 06 allows the operator to either display or enter a volume pre-cutoff value. Selecting 0.200 gallons as a pre-cutoff volume amount results in a fast fuel delivery up to the designated 0.200 gallons. When the system reaches the pre-cuoff volume amount, the fuel flow begins a slow delivery until a prepaid sale amount or a preset amount is completed. Initially, the system sets the pre-cutoff volume amount at 0.200 (two tenths of a volume unit, gallons or liters). The maximum pre-cutoff volume amount is 9.999. Recommended Entries: Gallons (up to 12 GPM) - 0.200 Liters (up to 45 LPM) - 0.800 The submode number indicates the fueling point number and may not exceed the maximum number of fueling points assigned in Mode 09. When the **Prnt/Entr** key is pressed for a data entry, the submode number automatically increases to the next fueling point number.

3.8.8. Mode 07 Ration Limit

TABLE 3-15. MODE 07

Prime Mode	Submode	Data	Description
07	00	5 or 6 Digit	Accessing Mode 07 with submode 00 allows the operator to either display or enter the volume or cash limit amount for a postpay fuel sale. Volume display or entry is selected by pressing the **Vol** key after the submode entry. An entry up to $999.99 or 999.999 gallons is permitted. The system initially sets the values at $990.00 and 990.000 gallons.
	01	0-1	Submode 01 provides for preset/prepay sales that exceed ration limits. 0 - ration limits in effect for preset/prepay sales 1 - ration limits bypassed for preset/prepay sales **IMPORTANT:** Submode 01 is a console related function. Bypassing ration limits may be specified on a per fueling point basis in Mode 48. For ration limits to be in effect for a sale at a particular console and fueling point, the ration limits option must be programmed for that console using Mode 07 and that fueling point using Mode 48. With the manager's key in the ON position, the operator can bypass ration limits even if submode 01 has a data value assignment of "0".

3.8.9. Mode 08 Console Functions

Mode 08 provides control of console functions as listed in the table below. These functions are console related and not system related functions.

TABLE 3-16. MODE 08

Prime Mode	Submode	Data	Description
08	01-05	0-1	If two consoles are installed, use Mode 08 to program each console separately. With Mode 08, the operator can program each console to operate with different functions.
	01	0-1	0 - Key beep, OFF 1 - Key beep, ON
	02	0-1	0 - Audible call signal, ON 1 - Audible call signal, OFF
	03	0-1	Sale end alert, OFF Sale end alert, ON
	04	0-1	0 - No auto-clear of console sale display 1 - Auto-clear of console sale display on authorization paid and receipt printing
	05	0-1	0 - Grade select postpay sales allowed 1 - Grade select postpay sales not allowed

3.8.10. Mode 09 Maximum Fueling Point Number/Console Config

TABLE 3-17. MODE 09

Prime Mode	Submode	Data	Description
09	00	01-24	**Maximum Fueling Point Number:** Accessing Mode 09 allows the operator to either display or enter the total number of fueling points for the system. Unless fueling points are added or removed from a station, this is normally a one time programming function. Initially, the system assigns 8 fueling points.
	01	0-1	**Fueling Point Number Display Control:** Provides control of the fueling point number entry on the console as follows: 0 - Blank leading 0 of fueling point if system has less than 10 fueling points. 1 - Two-digit entry of fueling point number required.
	02	0-1	**Console 2 Status Lamp Configuration:** Provides control of the fueling point status lamp display on the second console as follows: 0 - Lamps display status of fueling points 1 through 16 (used for 2 console system with less than 17 fueling points). 1 - Lamps display status of fueling points 9 through 24 (used for 2 console system with more than 16 fueling points). **NOTE:** For systems with more than 16 fueling points, submode 02 must have a data entry of 1.

3.8.11. Mode 10 Current Shift Totals/Shift Change

TABLE 3-18. MODE 10

Prime Mode	Submode	Sale Type	Data	Description
10	00-09 00	0-9	8 Digit	**Current Shift Totals:** Mode 10 displays current shift totals according to payment methods (sale type), grade assignments, and feedstock grades. Submode 00 provides the station totals with 01 through 09 indicating individual grade totals. A flashing number located to the right of the submode number indicates the type of fuel sale. The following paragraphs explain how to display current shift totals on the console display for Modes 10, 19, and 20. Pressing the **Recall** key causes the display to proceed to the next grade (0-9, 0 = no grade). For both the grade number and submode number, the least significant digit changes to the next assigned grade in the system. Once the system reaches the highest grade number, the least significant digit wraps around for both the grade number and the submode number. Pressing the **Cash/Credit** key causes the sale type number of the display to cycle through each of the sale types. The sale type digit increases to the next available sale type based on Mode 38 programming. The sale type number wraps around after reaching the highest sale type number. Pressing the **Vol** key displays the designated volume for the sale type. Pressing the **Vol** key again returns the display to the sale value (cash or credit). **NOTE**: The exception is pump difference which does not have a volume. * The cash lamp is on when cash values are displayed. * The credit lamp is on when credit values are displayed. * The volume lamp is on when volume values are displayed. * If the pump difference is negative, the submode number flashes. * The sale type number always flashes.

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3.8.11. Mode 10 Current Shift Totals/Shift Change, continued

TABLE 3-18. MODE 10, continued

Prime Mode	Submode	Sale Type	Data	Description
10	00-09	0-9	8 Digit	**Current Shift Totals:**
10	00	0		Sum of all cash, credit, attended, and OCPT (Outdoor Card Processing Terminal) sales for all grades.
		1		Sum of the pump difference values for all grades.
		2		Sum of the credit sales for all grades. Credit lamp is on.
		3		Sum of cash sales for all grades. Cash lamp is on.
		4		Sum of all attended credit sales for all grades. Credit lamp is on.
		5		Sum of all attended cash sales for all grades. Cash lamp is on.
		6		Sum of all OCPT credit sales for all grades. Credit lamp is on.
		7		Sum of all OCPT cash sales for all grades. Cash lamp is on.
		8		Low feedstock volume: amount of grade 4 sold from a blending dispenser as grade 4, plus amount of grade 4 sold as a part of grade 6 through grade 9.
		9		High feedstock volume: amount of grade 5 sold from a blending dispenser as grade 5 plus amount of grade 5 sold as a part of grade 6 through grade 9.
				If the submode number is 01 through 09 it represents a grade 1 through 9. The sale types have the following meanings.
10	01-09	0	8 Digit	Sum of all cash, credit, and attended sales for indicated grade.
		1		Grade pump difference.
		2		Grade credit sales. Credit function lamp is lit.
		3		Grade cash sales. Cash function lamp is lit.
		4		Grade attended credit sales. Credit Function lamp is lit.
		5		Grade attended cash sales. Cash function lamp is lit.

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3.8.11. Mode 10 Current Shift Totals/Shift Change, continued

TABLE 3-18. MODE 10, continued

Prime Mode	Submode	Sale Type	Data	Description
10	01-09	6	8 Digit	Grade OCPT credit sales. Credit function lamp is lit.
		7		Grade OCPT cash sales. Cash Function lamp is lit.
		8		Low feedstock volume. Sale type 8 can only be accessed with grades 4, and 6 through 9 as the Submode value.
		9		High feedstock volume. Sale type 9 can only be accessed with grades 5 through 9 as the Submode value.

Perform the following steps to complete a shift change.

1. Press the **Mode** key.
2. Enter mode 10, submode 00.
3. Press the **Auth** key.
4. Press the **Prnt/Entr** key.
5. Press the **Mode** key to return to sales.

NOTE: The minimum amount of time for a shift change is one hour.unless bypassed with Mode 96-02. Using Mode 96-02 requires a password entry.

3.8.12. Mode 11 Current Shift Tank Drop Volume

TABLE 3-19. MODE 11

Prime Mode	Submode	Data	Description
11	01-06 (Tank)	8 digit	Mode 11 provides display and entry of an 8 digit drop volume. All entries during a shift are added. When a tank drop volume delivery is made, that volume must be entered for the respective tank so the system can maintain a tank declining balance. Example: The data display shows 2000.00 volume units and another 1000.00 volume units have just been received. The operator enters the received amount and presses the **Prnt/Entr** key. The system automatically adds 1000.00 to 2000.00 and displays a value of 3000.00. To correct errors, use Mode 14.

3.8.13. Mode 12 Current Shift Tank Declining Balance

TABLE 3-20. MODE 12

Prime Mode	Submode	Data	Description
12	01-06 (Tank)	8 digit	Mode 12 provides display and entry of declining balance volumes for selected tanks. The declining balance is reduced by the amount of volume pumped from each respective tank. Using this mode allows the operator to determine tank volume levels for the following: determine tank volume levels at station start-up or make corrections to the tank volume level after manually reading the tank volume. This balance does not account for leaks, evaporation, expansion and so on. Tanks should be accurately measured periodically and the correct volume value entered in this mode for each tank. When the **Prnt/Entr** key is pressed after a data entry, the submode number automatically increases to the next tank number.

3.8.14. Mode 13 Current Shift Tank Inventory Gauge

TABLE 3-21. MODE 13

Prime Mode	Submode	Data	Description
13	01-06 (Tank)	8 digit	Use Mode 13 when optional tank inventory gauges are connected to the system. This mode allows the system to display the optional tank gauge volume for a selected tank on the console screen. For systems operating without a tank inventory gauge, volume amounts taken from a dipstick reading may be entered in the system.

3.8.15. Mode 14 Drop Volume Correction

TABLE 3-22. MODE 14

Prime Mode	Submode	Data	Description
14	01-06 (Tank)	8 digit	Mode 14 provides for correction of drop entry errors made in Mode 11 for the respective tank indicated by the submode number. When first selected, the data display shows the total drop volume for the current shift. Enter the drop amount as it should have been entered. The system then makes the necessary adjustments to the balance. The current shift drop entry for each tank becomes the total drop volume for the entire shift.

3.8.16. Mode 15 Low Fuel Volume

TABLE 3-23. MODE 15

Prime Mode	Submode	Data	Description
15	01-06 (Tank)	2 digit	Accessing Mode 15 allows the operator to either display or enter a low fuel volume for a selected tank. When entering a low fuel volume amount in the system, multiply the low fuel volume number by 100. Example The low fuel volume is 5000 gallons for an entry of 50. When the system reaches the low fuel volume amount, the low fuel lamp marked **L** on the console turns on. The **L** fuel lamp continues to light up when a sale is displayed and the grade for that sale is coming from a tank with a low fuel inventory. A low fuel condition occurs when either a tank inventory gauge reading or a declining tank balance drops below the programmed low fuel value. To disable a low fuel lamp for a specific tank, enter "0" for the low fuel volume.

3.8.17. Mode 16 Current Shift Fueling Point Totals

TABLE 3-24. MODE 16

Prime Mode	Submode	Data	Description
16	01-MAX. F.P. No.	8 digit	Accessing Mode 16 allows the operator to display sales and volume totals for each active position of a selected fueling point. Mode 16 also allows the operator to display feedstock volumes for blending pumps and display the fueling point grade number if the grade number has previously been assigned to that fueling point position with Mode 18. When no fueling point grade assignments are made with Mode 18, a zero is displayed in the grade window and zero is shown for the total in the console data window. Pressing the **Vol** key alternates the display between sales and volume totals. Pressing the **Recall** key advances the display to the next available fueling point position total for that fueling point being viewed or advances to the next fueling point.

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3.8.17. Mode 16 Current Shift Fueling Point Totals

TABLE 3-24. MODE 16, continued

Prime Mode	Submode	Data	Description
16	01-MAX. F.P. No.	8 digit	**EXAMPLE #1:** Fueling Point Type 1, 4-Product MGD The following are programming features for fueling point number one: Mode 18-01 Position 1 = 1 (grade 1 at position 1) Position 2 = 2 (grade 2 at position 2) Position 3 = 3 (grade 3 at position 3) Position 4 = 4 (grade 4 at position 4) Position 5 through 7 = 0 When the operator uses Mode 16 and Submode 01 to select fueling point position 1, the following position information displays on the console screen: Mode 16-01 Position 1 (grade 1) Money/Volume Position 2 (grade 2) Money/Volume Position 3 (grade 3) Money/Volume Position 4 (grade 4) Money/Volume **NOTE:** Because no grade assignments were made for fueling point positions 5 through 7, the console screen does not display information for these particular positions. Positions 5 through 7 are also not available at the fueling point. **EXAMPLE #2:** Fueling Point Type 2, 3-Product MGD is similar to Type 1 with the exception of fueling point positions 4 through 7 not being displayed. **EXAMPLE #3:** Fueling Point Type 3, MGB The following are programming features for fueling point number 2: Mode 18-02 Position 1 = 1 (grade 1 at position 1) Position 2 = 0 (no grade at position 2) Position 3 = 4 (grade 4 at position 3) Position 4 = 6 (grade 6 at position 4) Position 5 = 7 (grade 7 at position 5) Position 6 = 8 (grade 8 at position 6) Position 7 = 5 (grade 5 at position 7) When the operator uses Mode 16 and Submode 02 to select fueling point position 2, the following position information displays on the console screen:

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3.8.17. Mode 16 Current Shift Fueling Point Totals continued

TABLE 3-24. MODE 16, continued

Prime Mode	Submode	Data	Description
16	01-MAX. F.P. No.	8 digit	Mode 16-02 Position 1 (grade 1) Money/Volume Position 3 (grade 4) Money/Volume Position 4 (grade 6) Money/Volume Position 5 (grade 7) Money/Volume Position 6 (grade 8 Money/Volume Position 7 (grade 5) Money/Volume Low Feedstock Volume (grade is a flashing 4) High Feedstock Volume (grade is a flashing 5) **NOTE:** Position 2 was not displayed because a grade was not assigned to this position. **EXAMPLE #4:** Fueling Point Type 30, FRB (Fixed Ratio Blender) The following are programming features for fueling point number 3: Mode 18-03 Position 1 = 0 (no grade at position 1) Position 2 = 4 (grade 4 at position 2) Position 3 = 6 (grade 6 at position 3) Position 4 = 5 (grade 5 at position 4) Positions 6, 7 = 0 When the operator uses Mode 16 and Submode 03 to select fueling point position 3, the following position information displays on the console screen: Mode 16-03 Position 2 (grade 4) Money/Volume Position 3 (grade 6) Money/Volume Position 4 (grade 5) Money/Volume Low Feedstock Volume (grade is a flashing 4) High Feedstock Volume (grade is a flashing 5) **NOTE:** Because no grade assignments were made for fueling point positions 1, 6 and 7, the console screen does not display information for these particular positions. Positions 1, 6, and 7 are also not available at the fueling point.

3.8.18. Mode 17 Blend Ratio-to-Grade Assignment

TABLE 3-25. MODE 17

Prime Mode	Submode	Data	Description
17	6-9 Grade No.	1, 2, 3 Digit	The 2400/Plus system accepts blend ratio values in a range of 1 through 99. Mixed product grades of 6 through 9 are assigned a blend ratio of 101. The following values are assigned to blend ratios: 0 = Low feedstock 1-99 = Blended product 100 = High feedstock 101 = Grade not used Blend ratio values may normally be entered without regard to ascending order (lowest to highest). However, if the ascending order option is selected the ratio values should be entered with ascending values by grade number. Entering values in ascending order ensures that higher grade numbers have higher blend ratios required to satisfy the ascending order requirement. An example of the assignment structure is as follows: Submode = Grade Number — Blend Ratio 6 — 14 7 — 40 8 — 75 9 — 85 The entries 1 through 99 (blended products are expressed as a percentage of the high grade feedstock. For example, Submode 6 blend ratio 14 is a mixture of 14 percent high feedstock and 86 percent low feedstock. A blend ratio value of 101 is not evaluated for ascending order (lowest to highest) and should be assigned to unused mixed grades. 101 is the default value for an unprogrammed system. Grades four and five have ratios of 0 and 100 assigned by the system and cannot be programmed Mode 17.

3.8.19. Mode 18 Grade-to-Position Assignment

TABLE 3-26. MODE 18

Prime Mode	Submode	Data	Description
18	0 - FP MAX F.P. No.	0-9 Grade No.	Mode 18 allows the operator to assign grades to fueling point positions at the fueling point. An entry of 0 means there is not a grade assigned to the fueling point position. Valid entries are 1 through 9. When programming, press the **Recall** key to advance to the next fueling point. To advance to the next fueling point position, press the **Cash/Cred** key . The following list identifies fueling point positions available for different fueling point types. **Fueling Point Type** — **Positions** 4 Product MGD — Positions 1 - 4 3 Product MGD — Positions 1 - 3 MGB Blender — Positions 1, 3 - 7 (2 is reserved) Fixed Ratio Blender — Positions 2 - 4 (1 is reserved) Type 40 Variable Ratio Blender with single product — Positions 1, 3-6 (2 and 7 reserved) Type 40 Variable Ratio Blender without single product — Positions 3-7 The system classifies grades as either stored or mixed. The following paragraphs describe both types. **Stored Grades**: Grades 1 through 5 are used to identify stored products. These grades may be assigned to any position on a MGD fueling point but only grades 1 through 3 may be assigned to the single product position (position 1) of a blending fueling point. Grades 4 and 5 are designated respectively as the low and high feedstock grades for all blending units. **Mixed Grades:** Grades 6 through 9 are used for mixed products. Other than the feedstock grades, these are the only grades that may be assigned to blending positions. These grades must not be assigned to multi-grade fueling point positions or to the single product fueling point position of a blending fueling point. **NOTE:** Incorrect assignment of mixed grades can prevent authorization.

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3.8.19. Mode 18 Grade-to-Position Assignment, continued

TABLE 3-26. MODE 18, continued

Prime Mode	Submode	Data	Description
18	0 - FP MAX F.P. No.	0-9 Grade No.	To change a grade assignment, enter a new grade value within a range of zero through 9 and press the **Enter** key. The flashing position number increases to the next fueling point position while the grade assignment for the new position number displays on the console screen. The mode and submode values do not change. **NOTE:** Assignment of a 0 prevents the system from authorizing the position. Use caution when assigning grades in this mode. Make sure grade assignments are assigned to appropriate fueling point types. Type 2 fueling points use positions 1 through 3 which correspond to nozzle positions X through Z. Type 1 fueling points use positions 1 through 4 which correspond to positions X through AA. Grades 1 through 5 are valid assignments for these fueling points. The system denies fueling point authorization when higher grade numbers are assigned to the fueling point types described above. The current version of the Type 30 fueling point uses positions 2 through 4. The two feedstock grades must be correctly assigned to the feedstock positions before the fueling point can operate. Position 2 must have the low feedstock grade 4. Position 4 must have the high feedstock grade 5. Grades 1 through 5 are not valid assignments for fueling point position 3. This position requires a mixed grade such as grades 6 through 9.

3.8.20. Mode 19 Non-Resettable Totals

TABLE 3-27. MODE 19

Prime Mode	Submode	Data	Description
19	00	8 Digit	Non-resettable totals are never cleared from the system. They roll over at 1,000,000. The flashing number to the right of the submode number is the sale type. Submode 00 provides 8 digit individual shift grand totals as follows: Sale Type 0 - Station totals 1 - Station fueling point difference 2 - Station credit 3 - Station cash 4 - Station attended credit 5 - Station attended cash 6 - Station OCPT credit 7 - Station OCPT cash 8 - Station low feedstock volume 9 - Station high feedstock volume
	01-09	8 Digit	Submodes 01 through 09 provide 8 digit individual grade values for grades 01 through 09 as follows: Sale Type 0 - Shift grade totals 1 - Shift grade fueling point difference 2 - Shift grade credit 3 - Shift grade cash 4 - Shift grade attended credit 5 - Shift grade attended cash 6 - Shift grade OCPT credit 7 - Shift grade OCPT cash 8 - Grade low feedstock volume 9 - Grade high feedstock volume The non-resettable totals are displayed according to the following descriptions. The same format is used for Mode 10 and Mode 20. The flashing digit immediately to the right of the submode is the sale type. Pressing the **Cash/Cred** key causes the sale type digit of the display to cycle through each of the sale types (0-8). The sale type digit increases to the next available sale type based on Mode 38 programming. The sale type digit wraps around after reaching its upper limit.

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3.8.20. Mode 19 Non-Resettable Totals, continued

TABLE 3-27. MODE 19, continued

Prime Mode	Submode	Data	Description
19	01-09	8 Digit	Pressing the **Recall** key causes the display to advance to the next grade (0-9, 0 = no grade). The grade digit and the submode least significant digit increase to the next assigned grade in the system. The grade digit and the submode least significant digit wrap around after reaching the upper limit. Pressing the **Vol** key displays the corresponding volume. Pressing the **Vol** key again returns to the sales value. When a cash value is displayed the cash lamp is lit. When a credit value is displayed the credit lamp is lit. When a volume value is displayed the volume lamp is lit. If the fueling point difference is negative, the submode number flashes. The sale type digit flashes constantly.

3.8.21. Mode 20 Previous Shift Totals

TABLE 3-28. MODE 20

Prime Mode	Submode	Data	Description
20	(1-5) (0-9) Shift Grade	8 Digit	Mode 20 uses the same display key sequences and format as Mode 10 and Mode 19 with the following exceptions: 1 - First previous shift 2 - Second previous shift 3 - Third previous shift 4 - Summary of first and second previous shifts 5 - Summary of first, second and third previous shifts
	(1-5) 0	8 Digit	Submode 10 through Submode 50 provide 8 digit individual grand totals as follows: Sale Type 0 - Station shift(s) totals 1 - Station shift(s) pump difference 2 - Station shift(s) credit 3 - Station shift(s) cash 4 - Station shift(s) attended credit 5 - Station shift(s) attended cash 6 - Station shift(s) OCPT credit 7 - Station shift(s) OCPT cash 8 - Station shift(s) low feedstock volume 9 - Station shift(s) high feedstock volume
	01-09	8 Digit	Submodes 01 through 09 provide 8 digit individual grade totals for grades 1 through 9 as follows: Sale Type 0 - Shift(s) grade totals 1 - Shift(s) grade pump difference 2 - Shift(s) grade credit 3 - Shift(s) grade cash 4 - Shift(s) grade attended credit 5 - Shift(s) grade attended cash 6 - Shift(s) grade OCPT credit 7 - Shift(s) grade OCPT cash 8 - Shift(s) grade low feedstock volume 9 - Shift(s) grade high feedstock volume

3.8.22. Mode 21 Previous Shift Tank Drop Volume

TABLE 3-29. MODE 21

Prime Mode	Submode	Data	Description
21	11-16 21-26 31-36 (Shift) (Tank)	8 digit	Accessing Mode 21 allows the operator to determine tank drop volumes for each tank during the 3 previous shifts. The first submode digit selects the shift and the second submode digit selects the tank.

3.8.23. Mode 22 Previous Shift Tank Declining Balance

TABLE 3-30. MODE 22

Prime Mode	Submode	Data	Description
22	11-16 21-26 31-36 (Shift) (Tank)	8 digit	Programming the system with Mode 22 allows the operator to determine product volumes for each tank during the 3 previous shifts. The first submode digit selects the shift, and the second submode digit selects the tank.

3.8.24. Mode 23 Previous Shift Tank Inventory Gauge

TABLE 3-31. MODE 23

Prime Mode	Submode	Data	Description
23	11-16 21-26 31-36 (Shift) (Tank)	8 digit	Programming with Mode 23 causes the system to display the optional tank gauge volume for a particular tank at shift change. Using this mode also displays tank gauge volumes for three previous shifts The first submode digit selects the shift and the second submode digit selects the tank.

3.8.25. Mode 24 Shift Time and Sequence

TABLE 3-32. MODE 24

Prime Mode	Submode	Data	Description
24	01-03 (Shift)		Mode 24 provides a display of the time, date, and shift change sequence numbers. Submode 01 selects the most recent shift change time. Submode 02 selects the next previous shift time and Submode 03 selects the third previous shift time. The shift change time is displayed when the submode is entered. Pressing 00 displays the date for a short interval. Pressing the **Auth** key displays the shift sequence number for a short interval. The shift sequence number is a 3 digit number that increases when a shift change occurs.

3.8.26. Mode 26 First Previous Shift Fueling Point Totals

TABLE 3-33. MODE 26

Prime Mode	Submode	Data	Description
26	01-MAX (Fueling Point No.)		Mode 26 provides a display of eight digit sales and volume totals for the first previous shift for a selected fueling point. There are sales and volume totals for each assigned position of each fueling point. A fueling point position is assigned if a grade number has been entered for that fueling point position in Mode 18. Pressing the **Vol** key alternates the display between sales and volume totals. Pressing the **Recall** key advances the display to the next available position total for the fueling point being viewed.

3.8.27. Mode 30 Authorization Error Codes

TABLE 3-34. MODE 30

Prime Mode	Submode	Data	Description
30	01-MAX. F.P. No.	0-99	Mode 30 allows the operator to determine the cause for an authorization error. Mode 30 applies to preset, prepay, and postpay authorization attempts. The submode indicates the fueling point number. Authorization Error Codes 0 - No authorization error 1 - Disqualified due to unit prices 2 - Grade not in range of 1-9 3 - Grade not in grade-to-position order 4 - Non-blender and grade is a mixed grade 5 - Position grade does not equal tank grade 6 - Blender and grade blend ratio greater than 100 7 - Blender and single product position has grade greater than 3 8 - Blender without single product position and grade is 1-3 9 - Blender and feedstock grades not in feedstock tanks 10 - Mandatory grade entry 11 - Disallow recall 12 - Ready/In-Use maximum exceeded 13 - One time authorize exceeded 14 - Postpay disallowed 15 - Prepay/Preset disallowed 16 - Pump is stopped 17 - Pump has authorize reserved 18 - Pump is off line 19 - Conflicting unit price selection at fueling point 20 - Volume prepay without grade selection 21 - Pump authorized or has authorization pending 22 - Unpaid sale in recall buffer 23 - Current sale is incomplete prepay 24- Blender and sale pulse counts not received 25 - Invalid authorization code from peripheral controller 26 - Preset/Prepay for an invalid or 0 amount 27 - Only Prepay authorization allowed from console 28 - All authorizations not allowed from console 29 - Dual pricing not configured 30 - Volume prepay method does not match console display 31 - Position out, conflicting grade select 99 - Any other reason

3.8.28. Mode 31 Grade Descriptor Codes

TABLE 3-35. MODE 31

Prime Mode	Submode	Data	Description
31	01-09 (Grade)	00-99	Accessing Mode 31 allows the operator to either display or enter a two digit code number used to identify grade-to-product assignments. For RTP equipped systems, either the grade number or a product name, such as "REGULAR", prints on the fuel sale ticket. The available product codes and their associated product names are listed below. Product Code — Product Name 00 — Grade Number is printed 01 — SUPR UNL 02 — SUPR L-F 03 — PREM UNL 04 — DIESEL 05 — ECONOMY 06 — REGULAR 07 — PLUS 08 — SUPER 09 — PREMIUM 10 — NO LEAD 11 — PREM L-F 12 — UNLEADED 13 — LEAD FREE 14 — KEROSENE 15 — GASOHOL 16 — ULTRA

3.8.29. Mode 32 Decimal Location

TABLE 3-36. MODE 32

Prime Mode	Submode	Data	Description
32	01-02	0-3	Mode 32 provides display and entry of decimal location codes for all console sales and unit price displays. Submode 01: sets the sales and the total sales decimal location. Submode 02: sets the unit price decimal location. The data entered for either Submode 01 or Submode 02 may be any of the four following codes: 0 - XXXX (no decimal point) 1 - XXX.X 2 - XX.XX 3 - X.XXX The standard settings are as follows: Submode 01 - 2 Submode 02 - 3 **NOTE**: The decimal movement has been extended to the RTP. This operation requires a console option interface revision PTECRG or later.

3.8.30. Mode 33 Sale Options

TABLE 3-37. MODE 33

Prime Mode	Submode	Data	Description
33	00-17	0-24	Sale Options
	00	0-1	Prepay/Preset sales: 0 - disallow prepay/preset sales 1 - allow prepay/preset sales
	01	0-1	Postpay sales: 0 - disallow postpay sales 1 - allow postpay sales
	02	0-1	Pricing: 0 - normal pricing 1 - cash/credit pricing
	03	0-1	Limited Authorization: 0 - disable limited authorization 1 - select limited authorization If a sale has not started, limited authorization causes the fueling point to stop automatically 10 seconds after authorization. The fueling point stop lamp lights up and the fueling point cannot be started unless the Pump Start key is pressed when the fueling point is selected at the console.
	04	0-1	Date Options: 0 - all dates appear as Month/Day/Year 1 - all dates appear as Day/Month/Year
	05	1-24	Maximum Number of Pumps In use/Authorized: limits the total number of fueling points that can be authorized or in use at any one time
	06	0-1	Mandatory grade entry if MGD (Multi-grade Dispenser): 0 - grade entry not needed 1 - must enter required grade number if using MGD type: fueling point
	07	0-1	Preferential Cash (dual pricing): 0 - dispenser normally displays the credit price 1 - displays cash price if cash/credit is programmed in Mode 33 Submode 02 This mode is used to select price displayed at the fueling point when the Auth key is pressed.

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3.8.30. Mode 33 Sale Options, continued

TABLE 3-37. MODE 33, continued

Prime Mode	Submode	Data	Description
33	00-17	0-24	Sale Options
	08	0-1	Auto-Select Pump Cash/Credit: 0 - no Auto-select 1 - auto-select Submode 08 provides automatic postpay price selection. When the fueling point position is selected with a general postpay authorization, the fueling point position does not operate until the customer makes a cash or credit choice or the pre-programmed auto-selection takes place. **NOTE**: Mode 33 Submode 08 must be set to 0 if cash/credit confirmation is enabled at the fueling point. Auto-selection chooses either cash or credit as programmed in Mode 33 Submode 07. Auto-selection occurs when: * cash/credit pricing is selected in Mode 33-02 * SW1-7 option at pump (AP) is "must select" * SW2-5 option AP is "dual unit price displays" * Mode 33-08 is one
	09	0-3	Prepay/Preset Authorized Different Than Pump: 0 - console does not allow override with the nozzle out 1 - console does allow override of fueling point cash/credit selection 2 - customer cash/credit selection can be changed at the console. The selection on the dispenser changes if the customer selects credit and prepays with cash. 3 - console does not allow override. The selection must be changed before authorization is complete. Use Submode 09 whenever the console should override a selection made at the fueling point. **NOTE**: If the override is allowed, the price at the fueling point and at the console are different. However, the volume amount delivered is correct for the amount paid.
	10	0-1	Unit Price Ratio (special pump code required): 0 - sale/unit price ratio = 10 to 1 1 - sale/unit price ratio = 1 to 1 **NOTE**: When the unit price of the fuel is too high to be entered, enter the unit price at one tenth of its actual value and set this option.

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3.8.30. Mode 33 Sale Options, continued

TABLE 3-37. MODE 33, continued

Prime Mode	Submode	Data	Description
33	00-17	0-24	Sale Options
	11	0-1	Peripheral Fueling Point Controller Interlock: 0 - interlocks to the recall sale. Stacked sales are allowed. 1 - interlocks to the current sale. Stacked sales are not allowed.
	12	0-1	Clear Sale Display Command to Fueling Point After Payment: 0 - no clear command to fueling point 1 - clear command to fueling point
	13	0-1	Bypass Data Change Tally Printout: 0 - no bypass to printout 1 - bypasses the data change printout
	14	0-1	Override Fueling Point Grade Selection: 0 - inhibits selected authorization of one fueling point position when another fueling point position is selected 1 - any fueling point position may be authorized
	15	0-2	Volume Units Switch Override: 0 - use the fueling point switch settings to determine the units printed on the RTP receipts 1 - gallons printed on the RTP receipts 2 - liters printed on the RTP receipts **NOTE:** If the value of the sales grand total is not zero for the current shift, a shift change must be performed before a change is allowed to Mode 33 Submode 15.
	16	0-1	Ascending Order Option: 0 - ascending order not required 1 - ascending order required Unit prices and blend ratios for grades 4, 6, 7, 8, 9, and 5 (in that sequence) must be in order of lowest value to highest value. The system does not accept blend ratios or unit prices not in ascending order.
	17	0-1	Export Rounding Option (special pump code required): 0 - rounding not implemented 1 - sale money rounded The following rule is used in rounding: **Calculated Value / Display Value / Carry** 0, 1, 2 / 0 / 0 3, 4, 5, 6, 7 / 5 / 0 8, 9 / 0 / 1

CONTINUED

3.8.30. Mode 33 Sale Options, continued

TABLE 3-37. MODE 33, continued

Prime Mode	Submode	Data	Description
33	00-17	0-24	Sale Options
	18	0-1	Bypass Unpaid Recall Buffer Sales: 0 - authorization not allowed if the sale in the recall buffer is not final 1 - authorization allowed if the recall buffer sale is not final and the current buffer sale has been finalized
	19	0-1	Dispenser Remote Mode Control: This feature allows a peripheral controller to set the cash /credit mode and the push-to-start function in the dispenser. 0 - do not allow the peripheral controller to change the dispenser mode 1 - allow remote control of dispenser mode

3.8.31. Mode 34 Fueling Point Type and Software Revision

TABLE 3-38. MODE 34

Prime Mode	Submode	Data	Description
34	01-MAX. F.P. No.	000.000- 255.255	When Mode 34 is selected, the fueling point computer type and software revision are displayed in the format of TTT.RRR. TTT is the computer type and RRR is the fueling point software revision. Both TTT and RRR may have values of 000-255.

3.8.32. Mode 35 Fueling Point Automatic Authorization Option

TABLE 3-39. MODE 35

Prime Mode	Submode	Data	Description
35	01-MAX. F.P. No.	x y	The data entry for Mode 35 is a two digit number. The left digit (x) is used when the dispenser is set to 2 (tier 2 operation) for Mode 00. The right hand digit (y) is used when the dispenser is set to 1 (tier 1 operation) for Mode 00. Fueling Point Automatic Authorization Option: 0 - no automatic authorization 1 - authorize if the fueling point local authorize key has been on (latched operation). 2 - authorize only if the fueling point local authorize key is on now 3 - authorize fueling point when it is ready. This setting is for complete full service or manual operation. When a fueling point receives authorization from the console, the fueling point clears the sale display to zero for each beginning sale. Example: During the day fueling point number 2 is a full-service operation controlled by an attendant with the key. At night, fueling point number 2 is a self-service operation controlled by the operator in the kiosk. Assuming tier 1 is daytime and tier 2 is night time, we would program fueling point 2 as: Mode 35, Submode 02, Data 01.

3.8.33. Mode 36 Fueling Point Automatic-Totalization Options

TABLE 3-40. MODE 36

Prime Mode	Submode	Data	Description
36	01-MAX. F.P. No.	x y	The data entry for Mode 36 is a two digit number. The left digit (x) is used when is set to 2 (tier 2 operation) for Mode 00-XX. The right hand digit (y) is used when the dispenser is set to 1 (tier 1 operation) for Mode 00-XX. Fueling Point Automatic-Totalization Options: 0 - no automatic totalization 1 - authorize at end of sale if sale is auto-authorized 2 - unconditional auto-totalize at end of sale Auto-pay sales are automatically totalled and automatically paid and accumulated in the Wayne 2400/Plus system as station total attended sales (see Mode 10 and Mode 20). Example: Mode 35 example can also be used for Mode 36. The program entry is as follows: Mode 36, Submode 02, Data 20

3.8.34. Mode 37 Console Authorization Control

TABLE 3-41. MODE 37

Prime Mode	Submode	Data	Description
37	01-FP MAX.	x y	Mode 37 allows the entry of any one of four codes for each fueling point. The fueling point is indicated by the submode number. Console Authorization Control: 0 - all authorizations from the console are allowed for this fueling point 1 - only prepay authorizations are allowed from the console for this fueling point 2 - no authorizations are allowed form the console for this fueling point 3 - a one time authorization is allowed from the console for this fueling point after a flag is set by the card processing system. Although this function is operational in the 2400/Plus system, no provision has yet been made for the card processing system to set the one time authorization flag.

3.8.35. Mode 38 Skip Report Printing and Display of Sales Type

TABLE 3-42. MODE 38

Prime Mode	Submode	Data	Description
38	01-08	0-1	Mode 38 allows the operator to remove any sales type from the printed report or from the display on the console using Modes 10, 19, and 20. If a sale type is removed from the report the sale is not considered in the TOTAL line in the above formats. This is true even though there may have been sales from that sales type. Skip Report Printing and Display of Sales Type 0 - use sale type during report printing 1 - skip sale type during report printing

Submode	Sale Types
01	Pump Difference
02	Credit
03	Cash
04	Attended Credit
05	Attended Cash
06	OCPT Credit
07	OCPT Cash
08	Feedstock Volume

3.8.36. Mode 40 Print System Data

TABLE 3-43. MODE 40

Prime Mode	Submode	Data	Description
40	00-08	1-2	Programming the system with Mode 40 allows the operator to print system data. Refer to the list of submode numbers below to determine the type of system data to print. To begin printing system data, press the Prnt/Entr key. Data may be printed to either a RTP or an ECR. To cancel a printout, press the Pump Stop key while still in the selected mode.
			Print System Data:
	00		Station Data
	01		Current Shift Totals
	02		1st Previous Shift Totals
	03		2nd Previous Shift Totals
	04		3rd Previous Shift Totals
	05		Fueling Point Totalizers
	06		Non-resettable Totals
	07		Unit Prices
	08		Manual Data
	09		Printer Test Pattern
			Appearing on the console display screen during the print operation is either a 1 or 2 value. Console 1 is assigned the 1 value and console 2 is assigned the 2 value. During the print operation, the system identifies which console is printing data with either the 1 or 2 value displaying on the console screen.

3.8.37. Mode 41 Sale Ticket Number

TABLE 3-44. MODE 41

Prime Mode	Submode	Data	Description
41	00	6 Digit	Accessing Mode 41 allows the operator to display a current fuel sale receipt number.

3.8.38. Mode 42 Telecommunications Poll I.D.

TABLE 3-45. MODE 42

Prime Mode	Submode	Data	Description
42	00		Accessing Mode 42 causes the system to display the last system telecommunications poll. Press the 00 key on the numeric keypad to display the last poll date. To display the poll sequence number, press the Auth key.

3.8.39. Mode 48 Fueling Point Ration Limit

TABLE 3-46. MODE 48

Prime Mode	Submode	Data	Description
48	01-MAX. F.P. No.	0-1	Mode 48 provides enabling of ration limits for each fueling point on preset or prepay sales. Allowed data entries are as follows: Fueling Point Ration Limit Enable: 0 - ration limits not in effect for preset/prepay sales 1 - ration limits in effect for preset/prepay sales (Mode 07, Submode 01 must be set to 0) **NOTE**: All ration limits are disabled if the manager's key is on.

3.8.40. Mode 50 Console Peripheral Control

TABLE 3-47. MODE 50

Prime Mode	Submode	Data	Description
50	00-43	1 Digit	When Submode 00 is first selected, the console displays a 1 or 2 to indicate if console 1 or console 2 is responding to system operations. No entry is allowed at this time. Submodes for Mode 50 are arranged as follows:
	11-13		assigned to console 1
	21-23		assigned to console 2
	31-33		assigned to auxiliary fueling point controller channel 1
	41-43		assigned to auxiliary fueling point controller channel 2
	11/21 31/41	1-2	1 - data output to the peripheral assigned to console 1 2 - data output to the peripheral assigned to console 2
	12/22 32/42	0-1-2	0 - no peripheral is attached to the console 1 - RTP is attached 2 - ECR is attached
	13/23 33/43	0-1	0 - postpay sales transferred to the RTP or ECR with the Prnt/Entr key 1 - Postpay sales transferred to the RTP or ECR with the Cash Paid or Cred Paid key.

3.8.41. Mode 51 RTP Sales Receipt Heading and Character Codes

TABLE 3-48. MODE 51

Prime Mode	Submode	Data	Description
51	01-60	0-127	Mode 51 provides display and entry of the characters used as a heading on sales receipts. The characters are represented in decimal ASCII code, as shown in this mode. Entering numbers from 0 to 127 into submodes 01-60 allows any desired heading, up to 60 characters, to be printed. The first character (Submode 01) must be non-zero for the programmed heading to be printed. If this character is a 0, then the standard heading in the console options interface is printed. A 0 or null character in any position 2-60 should be used to fill up the remaining unused character positions in a message. A printed line has 40 character positions using normal print, or 20 character positions using bold print. A carriage return is used to end a line, unless a character appears in position 20 using bold print, or in position 40 using normal print. XON turns on bold print. XOFF turns off bold printing. The system automatically sets bold print at the beginning of the header. At the end of heading message, the system sets the normal message width and skips a line before the body of the receipt ticket is started. Any values shown in the table as "not used" should not be used because the printer may not operate correctly. The Station Data Printout (Mode 40, Submode 00) includes a listing of the heading messages entered in this mode. The available character codes are listed on the following page. **GENERAL GUIDELINES** The following information is provided as a general guide to help set up the heading. This does not mean that other formats could not be designed. • Total of 60 characters (including spaces and carriage returns). • Three lines of printing. • Maximum of twenty characters per line. • Use spaces at left side to center printing. • Never use spaces on the right side of the line. Use a carriage return after the last character.

CONTINUED

3.8.41. Mode 51 RTP Sales Receipt Heading and Character Codes, continued

TABLE 3-48. MODE 51, continued

Character Codes			
0 - Null	58 -:	90 - Z	122 - x
1-12 - Not Used	59 - ;	91 - [	123 - £
13 - Carriage Return	60 - <	92 - \	124 - 1/2
14 - Xon	61 - =	93 - }	125 - } ASCII 125
15 - Xoff	62 - >	94 - ^	126 - ~ ASCII 126
16-31 - Not Used	63 - ?	95 - _	127 - Not Used
32 - Space	64 - @	96 - '	
33 - !	65 - A	97 - a	
34 - "	66 - B	98 - b	
35 - #	67 - C	99 - c	
36 - $	68 - D	100 - d	
37 - %	69 - E	101- e	
38 - &	70 - F	102 - f	
39 - '	71 - G	103 - g	
40 - (	72 - H	104 - h	
41 -)	73 - I	105 - i	
42 - *	74 - J	106 - j	
43 - +	75 - K	107 - k	
44 - ,	76 - L	108 - l	
45 - -	77 - M	109 - m	
46 - .	78 - N	110 - n	
47 - /	79 - O	111 - o	
48 - 0	80 - P	112 - p	
49 - 1	81 - Q	113 - q	
50 - 2	82 - R	114 - r	
51 - 3	83 - S	115 - s	
52 - 4	84 - T	116 - s	
53 - 5	85 - U	117 - u	
54 - 6	86 - V	118 - v	
55 - 7	87 - W	119 - w	
56 - 8	88 - X	120 - x	
57 - 9	89 - Y	121 - y	

3.8.42. Mode 60 Clock Set

TABLE 3-49. MODE 60

Prime Mode	Submode	Data	Description	
60	00-06	1 OR 2 Digit	Mode 60 provides display and entry of time and date for the system clock.	
	00	0-2	Submode 00 allows the selection of a 12 or 24 hour clock. The following data entries are defined: Clock Set: 0 - 12 Hour mode, AM 1 - 12 Hour mode, PM 2 - 24 Hour mode Submodes 01--06 are defined as follows:	
	01	00-59	Minutes	Display and entry
	02	00-23	Hours	Display and entry
	03	01-07	Day-of-Week	Display only
	04	01-31	Day-of-Month	Display and entry
	05	01-12	Month	Display and entry
	06	00-99	Year	Display and entry
			When the minutes entry is made the clock sets the seconds to zero.	

3.8.43. Mode 61 Data Entry Time and Date

TABLE 3-50. MODE 61

Prime Mode	Submode	Data	Description
61	00-99		Mode 61 provides display only of the time and date of the most recent entry to selected modes. As an example, Mode 61, Submode 01, shows the time and date of the latest unit price change. The entry date may be displayed momentarily by pressing the **00** key. This feature is found in the modes listed below: 00 02 03 04 06 09 11 12 14 17 18 31 33 35 50 51 60 80 81 99 If the **Prnt/Entr** key is pressed, a system with an RTP or an ECR prints out the time and date for the last mode entries. It also prints out a date and time record of the last six times system power was cycled.

3.8.44. Mode 80 Manual Data Entry

TABLE 3-51. MODE 80

Prime Mode	Submode	Data	Description
80	00-99 (Data Location)	8 Digit	Mode 80 provides display and entry of a block of 8 digit numbers. The functions of these entries are defined by the system user. This is an optional mode that may be used, for example, in station reporting and product inventory control systems. This mode uses the same 100 data storage locations as Mode 81. An entry in this mode over-writes anything that may have accumulated in Mode 81.

3.8.45. Mode 81 Accumulating Manual Data

TABLE 3-52. MODE 81

Prime Mode	Submode	Data	Description
81	00-99 (Data Location)	8 Digit	Mode 81 is identical to Mode 80 with the addition of an accumulating feature. Data entries are added to the current value in the data location. Mode 81 is used when totalizing a series of entries. This mode uses the same 100 data storage locations as Mode 80 and adds to any initial value entered in Mode 80.

3.8.46. Mode 82 Peripheral Commands

TABLE 3-53. MODE 82

Prime Mode	Submode	Data	Description
82	01-08 (Data Location)	2 Digit	Mode 82 provides system access for activating peripheral functions, such as special peripheral configuration and set up. Data entered in Mode 82 is read by a peripheral on the multi-processor bus.

3.8.47. Mode 88 Blend Grade to Wayne 1000 Cross Reference

TABLE 3-54. MODE 88

Prime Mode	Submode	Data	Description
88	01-06	1-6	The Wayne 1000 ECR does not recognize grade numbers greater than six for a given sale transferred from the Wayne 2400/Plus. To work around this restriction, grades 4 through 9 can be given new values prior to transfer to the ECR Submodes 01 through 06 allow new values to be assigned to grade 4 through 9 before the sale is transferred to the Wayne 1000. Default values are: 88-01 2 Grade 4 transfers as 2 88-02 6 Grade 5 transfers as 6 88-03 3 Grade 6 transfers as 3 88-04 4 Grade 7 transfers as 4 88-05 5 Grade 8 transfers as 5 88-06 1 Grade 9 transfers as 1

3.8.48. Mode 90 Self Test

TABLE 3-55. MODE 90

Prime Mode	Submode	Data	Description
90	01-08		Mode 90 allows the operator to perform the system tests listed below. Pressing the **Prnt/Entr** key after entry of the test number starts the test. An audible tone and the test results appearing on the display indicate the test is complete.
	01		**Console Display Test:** Includes the following: • The displays indicate all 8's during the console display test. • All function and status lamps flash. • The annunciator emits an audible tone several times.
	02		Console Program Revision 04
	03		Console Program Checksum 00
	04		Console Timeout Counter -
	05		Console Scratchpad Ram Test 128
	06		Main CPU Ram Test 16384
	07		Main CPU Program Checksum 0
	08		Main CPU Program Version Number 49wwyy00 (ww = week, yy = year)
	09		Main CPU Program Sub-version Number 000-999

3.8.49. Mode 91 Console Communication Error Count

TABLE 3-56. MODE 91

Prime Mode	Submode	Data	Description
91	01-02	0-255	Mode 91 provides a count of timeouts and error blocks for each console. The counter increases with each error up to a maximum count of 255. The maximum count is retained until reset by an entry of 0 by the operator. Only 0 is accepted for entry. Submode 01 selects console 1. Submode 02 selects console 2.

3.8.50. Mode 92 Fueling Point Data Link Error Count

TABLE 3-57. MODE 92

Prime Mode	Submode	Data	Description
92	01-MAX. F.P. No.	0-255	Mode 92 provides a count of the communication timeouts and number of error blocks for each fueling point. The counter increases with each error up to the maximum count. The maximum count is retained until reset by an entry of 0 by the operator. Only 0 is accepted for entry.

3.8.51. Mode 93 Fueling Point Data Link Activity

TABLE 3-58. MODE 93

Prime Mode	Submode	Data	Description
93	01-MAX. F.P. No.	3 Digit	Mode 93 provides a display of data link communications activity for a selected fueling point. The conditions shown on the display are as follows: Units Digit: (0) Fueling Point is assigned to Data Link A. (1) Fueling Point is assigned to Data Link B. Tens Digit: (0) Fueling Point is being polled. (1) Fueling Point polling is inhibited. Hundreds Digit: (0) Fueling Point communications active (1) Fueling Point communications inactive A normal operating fueling point shows 000 or 001. If the link is inoperative or faulty, a display sequence of 100, 110, 100, 110, 111, 101,.is shown. When the link is inoperative or faulty, the system periodically polls and switches links in an attempt to establish communications with the fueling point.

3.8.52. Mode 94 Peripheral Program I.D.

TABLE 3-59. MODE 94

Prime Mode	Submode	Data	Description
94	01-08 (Peripheral)	6 Digit	Mode 94 provides display of the program checksum and revision level of the selected peripheral controller. The three least significant digits are the checksum (should be zero), and the three most significant digits are the program identification (for example, 34000). The submode number is the address of the peripheral.
	01		TIGS
	02		Telecommunications
	03		OCIA/PIB
	04		Wayne Plus/D8000
	05-08		Not used

3.8.53. Mode 95 Memory Access

TABLE 3-60. MODE 95

Prime Mode	Submode	Data	Description
95	00-03	6 Digit	Mode 95 provides display of data at any system memory location. Use Submode 00 to locate data for a particular address. To display 1, 2, or 3 data bytes, select submodes 01, 02, or 03 as follows:
	00		Entry and display of address for data displayed in submodes 1 through 3.
	01		Display 1 byte data at the selected address.
	02		Display 2 byte data at the selected address.
	03		Display 3 byte data at the selected address.
			EXAMPLE: Because the D2400 counts and stores information in a specific address on the system, viewing certain system information is possible with Mode 95. For example, Mode 95 allows the operator to view the number of times a particular key is pressed on specific console.

3.8.54. Mode 96 Security Lock Access

TABLE 3-61. MODE 96

Prime Mode	Submode	Data	Description
96	01-04	Varies	Locks are defined as follows: Lock 96-01 = Mode 95 data entry. Lock 96-02 = Shift change minimum time bypass. Lock 96-03 = Telecom password entry. Lock 96-04 = Mode 99 security level 3. To gain access to a lock, the correct password must be entered. The following instructions explain how to open a lock. • Select the mode and submode. • Enter the password. • Press the **Auth** key. When a 1 (one) appears in the data window the lock is opened. The lock remains opened as long as the mode lamp is on. Once the lock is opened, the password may be changed. **NOTE:** Do not forget the new password.

3.8.55. Mode 99 Mode Restrictions

TABLE 3-62. MODE 99

Prime Mode	Submode	Data	Description
99	(Mode)	0-2	Mode 99 provides access restrictions for display and entry of prime modes. Restriction codes are as follows: 0 - No restriction 1 - Manager's key required for data entry 2 - Manager's key required for data display or entry 3 - Lock 96-04 Access When Mode 99 has a 3 (three) entered for any mode, the following access rules apply for that particular mode: * Allow access to the mode only if lock 96-04 is open or lock 96-04 has a password of 0 (zero). * Always ignore the position of the Manager's Key. Lock 96-04 must be open or the password must be 0 (zero) if the operator wants to change the restriction code either FROM 3 or TO 3 for a particular mode in Mode 99.

4

REPORTS

4.1. REPORT INFORMATION

The Wayne 2400/Plus control system provides report to describe the system configuration, station totals data and dispenser totals data. These reports are printed by the RTP or the ECR. The report format for each printer differs because the printers support different line lengths. The RTP has a maximum of 40 characters per line while the ECR printer has 18 characters per line.

4.1. REPORT INFORMATION, continued

Table 4-1 lists the reports available using both Mode 40 and specific submodes.

TABLE 4-1. MODE 40 REPORT SELECTIONS

Mode and Submode	Report Selection
40-00	Station Data
40-01	Current Shift Totals
40-02	1st Previous Shift Totals
40-03	2nd Previous Shift Totals
40-04	3rd Previous Shift Totals
40-05	Pump Totalizers
40-06	Non-Resettable
40-07	Unit Prices
40-08	Manual Data
40-09	Printer Test Pattern
40-10	Implement shift change and run a Shift Change report.

The reports in the following sections are for a system with 8 pumps assigned on data link number 2 and only the first 5 pumps communicating. (There are 2 pump data links, 1 and 2.)

The pumps listed in Table 4-1 have the following characteristics:

TABLE 4-2. PUMP CHARACTERISTICS

Pump Number	Pump Type
1	Type 1, 4 Product MGD
2	Type 2, 3 Product MGD
3	Type 3, 6 Product MGB
4	Type 30, 3 Product Fixed-Ratio Blender
5	Type 40, 5 Product Variable Ratio Blender

There are 8 grades assigned in the system: 1, 2, 3, 4, 6, 7, 8, and 5. Grade 4 is the low feedstock, grade 5 is the high feedstock, and grades 6, 7, and 8 are blended grades.

Cash/Credit pricing is selected in Mode 33-02. This option effects the form of the Pump Totalizers sections in the Shift Change report, all other shift reports (Modes 40-01, 02, 03, and 04), and the Pump Totalizers report (Mode 40-05).

4.2. SHIFT CHANGE - MODE 10-00

The following ending shift information appears on the Shift Change Report:

- Combined Grade Totals (Grand Totals)
- Individual Grade Totals
- Tank Inventory
- Dispenser Totals
- Dispenser Totalizers

The shift change does a "copy-down" from a running totals buffer to a 1st previous shift buffer. The "copy-down" may be described as follows: The 1st previous shift buffer is copied to the 2nd previous shift buffer, the 2nd to the 3rd, and the 3rd is discarded.

Current shift grade totals are produced by taking the difference between the current shift buffer and the 1st previous shift buffer prior to the copy-down.

IMPORTANT: Mode 38 may be used to remove sale types from the Grade Totals sections of the report. For example, if the station does not have Full Service or OCPTs (Outdoor Card Processing Terminals), then use Mode 38 to remove these lines from the report. Note that the feedstock volume is treated as a sale type and may be removed from the report if there are not any blending pumps in the station.

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-1. SHIFT CHANGE REPORT

DJR-FH-348-A

SHIFT CHANGE TOTS - 02/27/89 MON 09:54A			Time and Date of Report
SHIFT SEQ 3 = 001			Press the **AUTH** key when the Time is displayed to view the Shift Seq # at the console.
START - 02/27/89 MON 08:00A			
END - 02/27/89 MON 09:54A			
GRAND TOTALS	SALES	VOLUME	Shift sales for all grades
PUMP DIFFERENCE	$ 0.00	0.00	Pumped one way, paid another
CREDIT	$ 0.00	0.00	Credit for all grades
CASH	$ 0.00	0.00	Cash for all grades
ATTENDED CREDIT	$ 0.00	0.00	Full service credit for all grades
ATTENDED CASH	$ 0.00	0.00	Full service cash for all grades
OCPT CREDIT	$ 0.00	0.00	Outdoor credit for all grades
OCPT CASH	$ 0.00	0.00	Outdoor cash for all grades
TOTAL	$ 0.00	0.00	Shift sales for all grades
LOW FEEDSTOCK		0.00	Grade # 4 dispensed by blenders
HIGH FEEDSTOCK		0.00	Grade # 5 dispensed by blenders
GRADE 1	SALES	VOLUME	
PUMP DIFFERENCE	$ 0.00	0.00	Pumped one way, paid another
CREDIT	$ 0.00	0.00	
CASH	$ 0.00	0.00	
ATTENDED CREDIT	$ 0.00	0.00	
ATTENDED CASH	$ 0.00	0.00	
OCPT CREDIT	$ 0.00	0.00	
OCPT CASH	$ 0.00	0.00	
TOTAL	$ 0.00	0.00	Total grade 1 shift sales

CONTINUED

NOTE: Grades 2 and 3 print in the same format as grade 1.

4.2. SHIFT CHANGE-MODE 10-00, continued

REPORT 4-1. SHIFT CHANGE REPORT, continued

DJR-FH-349-A

GRADE 4		SALES	VOLUME	
PUMP DIFFERENCE	$	0.00	0.00	Pumped one way, paid another
CREDIT	$	0.00	0.00	
CASH	$	0.00	0.00	
ATTENDED CREDIT	$	0.00	0.00	
ATTENDED CASH	$	0.00	0.00	
OCPT CREDIT	$	0.00	0.00	
OCPT CASH	$	0.00	0.00	
TOTAL	$	0.00	0.00	Total grade 4 shift sales
LOW FEEDSTOCK			0.00	Grade 4 dispensed as grade 4 from blending dispensers
GRADE 5		SALES	VOLUME	
PUMP DIFFERENCE	$	0.00	0.00	Pumped one way, paid another
CREDIT	$	0.00	0.00	
CASH	$	0.00	0.00	
ATTENDED CREDIT	$	0.00	0.00	
ATTENDED CASH	$	0.00	0.00	
OCPT CREDIT	$	0.00	0.00	
OCPT CASH	$	0.00	0.00	
TOTAL	$	0.00	0.00	Total grade 5 shift sales
HIGH FEEDSTOCK			0.00	Grade 5 dispensed as grade 5 from blending dispensers
GRADE 6		SALES	VOLUME	
PUMP DIFFERENCE	$	0.00	0.00	Pumped one way, paid another
CREDIT	$	0.00	0.00	
CASH	$	0.00	0.00	
ATTENDED CREDIT	$	0.00	0.00	
ATTENDED CASH	$	0.00	0.00	
OCPT CREDIT	$	0.00	0.00	
OCPT CASH	$	0.00	0.00	
TOTAL	$	0.00	0.00	Total grade 6 shift sales
LOW FEEDSTOCK			0.00	Grade 4 part of total volume
HIGH FEEDSTOCK			0.00	Grade 5 part of total volume

CONTINUED

NOTE: Grades 7 through 9 print in the same format as grade 6.

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-1. SHIFT CHANGE REPORT, continued

DJR-FH-350-A

TANK INVENTORY

TANK	DECL BAL	TIG VOL	DROP VOL
1	0.00	0.00	0.00
2	0.00	0.00	0.00
3	0.00	0.00	0.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00

See Mode 12 for DECL BAL
See Mode 13 for TIG VOL
See Mode 11 for DROP VOL

DISPENSER TOTALS

DISP		SALES	GRADE	VOLUME
1	$	0.00	1	0.00
	$	0.00	2	0.00
	$	0.00	3	0.00
	$	0.00	4	0.00
2	$	0.00	1	0.00
	$	0.00	2	0.00
	$	0.00	3	0.00
3	$	0.00	1	0.00
	$	0.00	4	0.00
	$	0.00	6	0.00
	$	0.00	7	0.00
	$	0.00	8	0.00
	$	0.00	5	0.00
			PL	
			PH	
4	$	0.00	4	0.00
	$	0.00	6	0.00
	$	0.00	5	0.00
			PL	0.00
			PH	0.00
5	$	0.00	1	0.00
	$	0.00	4	0.00
	$	0.00	6	0.00
	$	0.00	7	0.00
	$	0.00	8	0.00
	$	0.00	5	0.00
			PL	0.00
			PH	0.00
6				
7				
8				

The form of this section is NOT affected by the Cash/Credit option set in Mode 33-02.

The values in this section are accumulated by the pump controller and not from the pump totalizers.

Grade 4 plus low blend component
Grade 5 plus high blend component

Grade 4 plus low blend component
Grade 5 plus high blend component

Grade 4 plus low blend component
Grade 5 plus high blend component

Pumps 6, 7, and 8 are assigned in Mode 09 and are off-line.

CONTINUED

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-1. SHIFT CHANGE REPORT, continued

DJR-FH-351-A

DISPENSER TOTALIZERS

DISP	SALES-CRED	CASH	GRD	VOLUME	
1	$ 0.00	$ 0.00	1	0.00	The format of this report is affected by the cash/credit option set in Mode 33-02. In systems with single unit pricing, credit and cash sales are broken out (see note below). The display of the pump totalizers in Mode 5 uses the pump cash and cred totalizer sequence option to allow or disallow the display of separate cash and credit sales.
	$ 0.00	$ 0.00	2	0.00	
	$ 0.00	$ 0.00	3	0.00	
	$ 0.00	$ 0.00	4	0.00	
2	$ 0.00	$ 0.00	1	0.00	
	$ 0.00	$ 0.00	2	0.00	
	$ 0.00	$ 0.00	3	0.00	
	$ 0.00	$ 0.00	4	0.00	
3	$ 0.00		1	0.00	The multi-grade blender pump provides only total money and individual volumes.
			4	0.00	
			6	0.00	
			7	0.00	
			8	0.00	
			5	0.00	
			PL	0.00	Grade 4 plus low blend component
			PH	0.00	Grade 5 plus high blend component
4	$ 0.00	$ 0.00	4	0.00	
	$ 0.00	$ 0.00	6	0.00	
	$ 0.00	$ 0.00	5	0.00	
			PL	0.00	Grade 4 plus low blend component
			PH	0.00	Grade 5 plus high blend component
5	$ 0.00	$ 0.00	1	0.00	
	$ 0.00	$ 0.00	4	0.00	
	$ 0.00	$ 0.00	6	0.00	
	$ 0.00	$ 0.00	7	0.00	
	$ 0.00	$ 0.00	8	0.00	
	$ 0.00	$ 0.00	5	0.00	
			PL	0.00	Grade 4 plus low blend component
			PH	0.00	Grade 5 plus high blend component
6					
7					
8					

NOTE: When cash and credit values are combined under sales, for example when single pricing is selected in Mode 33-02, the system reads the cash and credit totalizers from the pump separately but adds them together for printing.

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-2. ECR SHIFT CHANGE REPORT

DJR-FH-352-A

```
SHIFT CHANGE TOTS
MON  02/27/89  11:25
SHIFT SEQ #     001

SHIFT START
MON  02/27/89  08:00
SHIFT END
MON  02/27/89  11:25

GRAND TOTAL      SALES
PMP DIF    $      0.00
CREDIT     $      0.00
CASH       $      0.00
AT'D CR    $      0.00
AT'D CA    $      0.00
OCPT CR    $      0.00
OCPT CA    $      0.00
TOTAL      $      0.00

GRAND TOTAL    VOLUME
CREDIT     :      0.00
CASH       :      0.00
AT'D CR    :      0.00
AT'D CA    :      0.00
OCPT CR    :      0.00
OCPT CA    :      0.00
TOTAL      :      0.00
LO FSTK    :      0.00
HI FSTK    :      0.00

GRADE 1          SALES
PMP DIF    $      0.00
CREDIT     $      0.00
CASH       $      0.00
AT'D CR    $      0.00
AT'D CA    $      0.00
OCPT CR    $      0.00
OCPT CA    $      0.00
TOTAL      $      0.00

GRADE 1        VOLUME
CREDIT     :      0.00
CASH       :      0.00
AT'D CR    :      0.00
AT'D CA    :      0.00
OCPT CR    :      0.00
OCPT CA    :      0.00
TOTAL      :      0.00
```

Date and time of report from D2400 pump controller. To view the Shift Seq # at the console, press the **AUTH** key when the time is displayed.

Dual pricing (PMP DIF): pumped at one price and paid at a different price
Credit money for all grades
Cash money for all grades
Full service credit money for all grades
Full service cash money for all grades
Outdoor card terminal credit money for all grades
Outdoor card terminal cash money for all grades
Sum of money for all grades for this shift

Credit volume for all grades
Cash volume for all grades
Full service credit volume for all grades
Full service cash volume for all grades
Outdoor card terminal credit volume for all grades
Outdoor card terminal cash volume for all grades
Sum of volume for all grades for this shift
Grade 4 dispensed by blenders
Grade 5 dispensed by blenders

Total grade 1 money for this shift.

Total grade 1 volume for this shift.

CONTINUED

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-2. ECR SHIFT CHANGE REPORT, continued

DJR-FH-353-A

GRADE 4		SALES	
PMP DIF	$	0.00	
CREDIT	$	0.00	Dual pricing: pumped at one price and paid at another price.
CASH	$	0.00	
AT'D CR	$	0.00	
AT'D CA	$	0.00	
OCPT CR	$	0.00	
OCPT CA	$	0.00	
TOTAL	$	0.00	Total grade 4 money for this shift.
GRADE 4		VOLUME	
CREDIT	:	0.00	
CASH	:	0.00	
AT'D CR	:	0.00	
AT'D CA	:	0.00	
OCPT CR	:	0.00	
OCPT CA	:	0.00	
TOTAL	:	0.00	Total grade 4 volume for this shift.
LO FSTK	:	0.00	Grade 4 dispensed as grade 4 by blenders.
GRADE 5		SALES	
PMP DIF	$	0.00	Dual pricing: pumped at one price and paid at another price.
CREDIT	$	0.00	
CASH	$	0.00	
AT'D CR	$	0.00	
AT'D CA	$	0.00	
OCPT CR	$	0.00	
OCPT CA	$	0.00	
TOTAL	$	0.00	Total grade 5 money for this shift.
GRADE 5		VOLUME	
CREDIT	:	0.00	
CASH	:	0.00	
AT'D CR	:	0.00	
AT'D CA	:	0.00	
OCPT CR	:	0.00	
OCPT CA	:	0.00	Total grade 5 volume for this shift.
TOTAL	:	0.00	Grade 5 dispensed as grade 5 by blenders.
HI FSTK	:	0.00	

CONTINUED

NOTE: Grades 2 and 3 are printed in the same format as grade 1.

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-2. ECR SHIFT CHANGE REPORT, continued

DJR-FH-354-A

GRADE 6		SALES	
PMP DIF	$	0.00	Dual pricing: pumped at one price and paid at another price.
CREDIT	$	0.00	
CASH	$	0.00	
AT'D CR	$	0.00	
AT'D CA	$	0.00	
OCPT CR	$	0.00	
OCPT CA	$	0.00	
TOTAL	$	0.00	Total grade 6 money for this shift.
GRADE 6		VOLUME	
CREDIT	:	0.00	
CASH	:	0.00	
AT'D CR	:	0.00	
AT'D CA	:	0.00	
OCPT CR	:	0.00	
OCPT CA	:	0.00	
TOTAL	:	0.00	Total grade 6 volume for this shift.
LO FSTK	:	0.00	Grade 4 part of total volume.
HI FSTK	:	0.00	Grade 5 part of total volume.

CONTINUED

NOTE: Grades 7 through 9 are printed in the same format as grade 6.

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-2. ECR SHIFT CHANGE REPORT, continued

DJR-FH-355-A

```
TANK INVENTORY
 DROP   VOL     DECL    BAL
1
          0.00            0.00
2
          0.00            0.00
3
          0.00            0.00
4
          0.00            0.00
5
          0.00            0.00
6
          0.00            0.00
                      TIG VOL
1                         0.00
2                         0.00
3                         0.00
4                         0.00
5                         0.00
6                         0.00

DISP   TOTALS
       GRD          SALES   VOL
 1       1                    0.00
       $                   0.00
         2                    0.00
       $                   0.00
         3                    0.00
       $                   0.00
         4                    0.00
       $                   0.00

 2       1                    0.00
       $                   0.00
         2                    0.00
       $                   0.00
         3                    0.00
       $                   0.00
```

CONTINUED

See Mode 12 for DECL BAL.
See Mode 11 for DROP VOL.

See Mode 13 for TIG VOL.

The form of this section is NOT affected by the cash/credit setting in Mode 33-02.

The values in this section are accumulated by the pump controller and are not computed from the pump totalizers.

Pump 2 values.

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-2. ECR SHIFT CHANGE REPORT, continued

DJR-FH-356-A

DISP TOTALS

DISP	GRD	SALES	VOL	
3	1		0.00	Pump 3 values.
	$	0.00		
	4		0.00	
	$	0.00		
	6		0.00	
	$	0.00		
	7		0.00	
	$	0.00		
	8		0.00	
	$	0.00		
	5		0.00	
	$	0.00		
	PL		0.00	Grd 4 + low blend component of blended grade.
	PH		0.00	Grd 5 + high blend component of blended grade.
4	4		0.00	Pump 4 values.
	$	0.00		
	6		0.00	
	$	0.00		
	5		0.00	
	$	0.00		
	PL		0.00	Grd 4 + low blend component of blended grade.
	PH		0.00	Grd 5 + high blend component of blended grade.
5	1		0.00	Pump 5 values.
	$	0.00		
	4		0.00	
	$	0.00		
	6		0.00	
	$	0.00		
	7		0.00	
	$	0.00		
	8		0.00	
	$	0.00		
	5		0.00	
	$	0.00		
	PL		0.00	Grd 4 + low blend component of blended grade.
	PH		0.00	Grd 5 + high blend component of blended grade.
6				Pumps 6, 7, and 8 are off-line.
7				
8				

CONTINUED

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-2. ECR SHIFT CHANGE REPORT, continued

DJR-FH-357-A

```
DISP   TOTALIZERS
  #    GRD        VOL
  1      1        0.00
CREDIT     $      0.00
CASH       $      0.00
         2        0.00
CREDIT     $      0.00
CASH       $      0.00
         3        0.00
CREDIT     $      0.00
CASH       $      0.00
         4        0.00
CREDIT     $      0.00
CASH       $      0.00
                  0.00

  2      1        0.00
CREDIT     $      0.00
CASH       $      0.00
         2        0.00
CREDIT     $      0.00
CASH       $      0.00
         3        0.00
CREDIT     $      0.00
CASH       $      0.00

  3      1        0.00
         4        0.00
         6        0.00
         7        0.00
         8        0.00
         5        0.00
SALES      $      0.00
   PL               0.00
   PH               0.00
```

The form of this section is affected by the cash/credit option set in Mode 33-02. In systems with single unit pricing, cash and credit values are not broken out. Refer to the note below. The display of pump totalizers in Mode 5 uses the pump Cash+Credit totalizer sequence option to either allow or disallow the display of separate cash and credit sales.

Pump 2 values.

Pump 3 values.

CONTINUED

NOTE: If cash and credit are combined under sales only, as is the case when single pricing is selected in Mode 33-02, the pump reads the cash and credit totalizers from the pump separately and adds the two together for printing.

4.2. SHIFT CHANGE - MODE 10-00, continued

REPORT 4-2. ECR SHIFT CHANGE REPORT, continued

DJR-FH-358-A

4	4	0.00	Pump 4 values.
CREDIT	$	0.00	
CASH	$	0.00	
	6	0.00	
CREDIT	$	0.00	
CASH	$	0.00	
	5	0.00	
CREDIT	$	0.00	
CASH	$	0.00	
PL		0.00	Grd 4 plus low blend component of blend grade.
PH		0.00	Grd 5 plus high blend component of blend grade.
5	1	0.00	Pump 5 values.
CREDIT	$	0.00	
CASH	$	0.00	
	4	0.00	
CREDIT	$	0.00	
CASH	$	0.00	
	6	0.00	
CREDIT	$	0.00	
CASH	$	0.00	
	7	0.00	
CREDIT	$	0.00	
CASH	$	0.00	
	8	0.00	
CREDIT	$	0.00	
CASH	$	0.00	
	5	0.00	
PL	$	0.00	Grd 4 plus low blend component of blend grade.
PH	$	0.00	Grd 5 plus high blend component of blend grade.
6			Pump 6, 7, and 8 are off-line.
7			
8			

4.3. STATION DATA - MODE 40-00

The station data report provides information on the following:

- Control Parameters
- Console Options
- Pump Configuration
- Pump Position Grade Date

4.3. STATION DATA - MODE 40-00, continued

- Grade Blend Ratios
- Tank Data
- System Configuration Mode Restrictions

IMPORTANT: Station data is the best source of information for resolving incorrect system configuration problems.

The blend ratio data gives the ratios assigned to the system blended grades. The Low and High feedstock grades have their blend ratios fixed at 0 and 100 and are not included in this report. A blend ratio of 101 indicates that the grade is not used for blending sales.

REPORT 4-3 RTP STATION DATA REPORT

DJR-FH-359-A

STATION DATA - 02/20/89 --- 08:36A	Report ID, time, and date.
NUMBER OF DISPENSERS.....8	Refer to Mode 09-00
STATION TIER 1	Refer to Mode 00
CURRENT TICKET # 001	Refer to Mode 41
PROGRAM VERSION.....49069100	Refer to Mode 90-08
PROGRAM SUB-VERSION 26	Refer to Mode 90-09
PREPAY ..... YES	Refer to Mode 33-00
POSTPAY ..... YES	Refer to Mode 33-01
CASH/CREDIT PRICING ..... YES	Refer to Mode 33-02
PREFERENTIAL CASH ..... NO	Refer to Mode 33-07
AUTO SELECT DISP $ / CRED.... NO	Refer to Mode 33-08
AUTO C/C CONTROL CODE 0	Refer to Mode 33-09
CLEAR PMP DISPLAY AT PAY ..... NO	Refer to Mode 33-12
PPC NON-RECALL OPERATION ... NO	Refer to Mode 33-11
SALE/UNIT PRICE RATIO 10:1	Refer to Mode 33-10
LIMITED AUTHORIZE ..... NO	Refer to Mode 33-03
MAX # OF DISP AUTHORIZED..... 24	Refer to Mode 33-05
MANDATORY GRADE # IF MGD.....NO	Refer to Mode 33-06
OVERRIDE DISP GRADE SEL .....NO	Refer to Mode 33-14
DATA CHANGE TALLY PRINT..... NO	Refer to Mode 33-13
CON #2 DISPENSER LAMPS.....1-16	Refer to Mode 09-02
1ST PUMP # ZERO BLANKED..... YES	Refer to Mode 09-01
SALES RATION LIMIT.....$990.00	Refer to Mode 07-00
VOLUME RATION LIMIT.....990.000	Refer to Mode 07-00
UP/BR ASCENDANCY ..... NO	Refer to Mode 33-16
EXPORT ROUNDING ..... NO	Refer to Mode 33-17
BYPASS UNPAID RECAL..... NO	Refer to Mode 33-18
PUMP REMOTE MODE CONTROL..NO	Refer to Mode 33-19

CONTINUED

4.3. STATION DATA - MODE 40-00, continued

REPORT 4-3. RTP STATION DATA REPORT, continued

DJR-FH-360-A

PERIPHERAL PROCESSORS
  # ID CODE
  3 36000

OPTIONS CON 1 CON 2
  KEY ALERT NO NO
  CALL ALERT YES YES
  USED ALERT NO NO
  AUTO PUMP CLEAR NO NO
  SEL'D POSTPAY YES YES
  DATA TO CON 1 CON 2
  PERIPHERAL PTR ECR
  AUTO TRANSFER NO NO
  PPAY LIMIT NO NO

DISPENSER DATA

#DL	TP	RV	TANK	P	RL	T	L	PCOVOL	AUTO	C
1 2	1	6	4321	4	N	1	1	0.200G	00-00	
2 2	2	15	0321	3	N	1	1	0.200G	00-00	2
3 2	4	15	0541	6	N	1	1	0.200G	00-00	1
4 2	30	9	0540	3	N	1	1	0.200G	00-00	
5 2	40	1	0541	5	N	1	1	0.200G	00-00	
6 *	0	0	0000	0	N	1	1	0.2001	00-00	
7 *	0	0	0000	0	N	1	1	0.2001	00-00	
8 *	0	0	0000	0	N	1	1	0.2001	00-00	

DISPENSER COMPUTER TYPE (DUAL OR NOT)
PUMP # 12345678901234567890123 4
DUAL ? YYNNY***

CONTINUED

Present only if peripheral processors are in system.

PIB version is an example.

Con 1, Con 2 options
Refer to Mode 08-01
Refer to Mode 08-02
Refer to Mode 08-03
Refer to Mode 08-04
Refer to Mode 08-05
Refer to Mode 50-x1
Refer to Mode 50-x2
Refer to Mode 50-x3
Refer to Mode 07-01

# = Pump number
DL = Data link (1 or 2)
TP = Pump Type, see Mode 34
RV = Pump Rev, see Mode 34
Tank, see Mode 03
P = Products, Pump Options
RL = Ration Lim, see Mode 48
T = Price Tier, see Mode 00
L = Price Lev, see Mode 04
PCOVOL, see Mode 06
AUTO, see Modes 35 and 36
C = Auth Cont, see Mode 37

Pump numbers 1 to 24
Dual or not, Yes/No
* = pump off-line

4.3. STATION DATA - MODE 40-00, continued

REPORT 4-3. RTP STATION DATA REPORT, continued

DJR-FH-361-A

DISPENSER GRADE/POSITION DATA

DISP	POS-1	2	3	4	5	6	7
1	1	2	3	4	0	0	0
2	1	2	3	0	0	0	0
3	1	0	4	6	7	8	5
4	0	4	6	5	0	0	0
5	1	0	4	6	7	8	5
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0

Refer to Mode 18.

Positions at pump.
Grade at pump position.

GRADE BLEND RATIO DATA

GRADE	6	7	8	9
RATIO	40	50	60	101

Refer to Mode 17.

TANK DATA

TANK	GRADE	GRD CODE	LF LIM
1	1	GRADE 1	0.00
2	2	GRADE 2	0.00
3	3	GRADE 3	0.00
4	4	GRADE 4	0.00
5	5	GRADE 5	0.00
6	1	GRADE 1	0.00

Mode 31 for grade code.
Mode 15 for low fuel volume.

MODE RESTRICTIONS

MODE	DATA	MODE	DATA
0	1	1	1
2	1	3	1
4	1	6	1
7	1	9	1
31	1	32	1
33	1	35	1
36	1	37	1
48	1	50	1
51	1	60	1
80	1	81	1
95	2	96	2
99	1		

Refer to Mode 99.

4.3. STATION DATA - MODE 40-00, continued

REPORT 4-3. RTP STATION DATA REPORT, continued

DJR-FH-362-A

```
MON 02/20/89 --- 08:36A

  STATION DATA

# OF DISPENSERS ..... 8
STATION TIER .....1
TICKET # ..... 001
PROGM VER ..... 49069100
PROG SUB-VER ..... 26
PREPAY .....YES
POSTPAY .....YES
DUAL PRICING .....YES
  PREF CASH ..... NO
  AUTO SEL C/C ..... NO
  AUTO C/C CODE ..... 0
CLR DISP @ PAY ..... NO
PPC NON-RECALL ..... NO
SALE/UP RATIO ..... 10:1
LIM'D AUT ..... NO
MAX DISP AUTH ..... 24
GRADE # IF MGD ..... NO
OVERRIDE DISP ..... NO
DATA CHG PRINT .....YES
CON #2 LAMPS ..... 1-16
1ST P# 0 BLANK ..... YES
SALES LIMIT..... $990.00
VOL LIMIT ..... 990.000
UP/BR ASCEND ..... NO
EXPORT ROUND ..... NO
BYPASS UNPAID ..... NO
REMOTE MODE ..... NO
```

CONTINUED

D2400/Plus date and time of report.

Refer to Mode 09-00
Refer to Mode 00
Refer to Mode 41
Refer to Mode 90-08
Refer to Mode 90-09
Refer to Mode 33-00
Refer to Mode 33-01
Refer to Mode 33-02
Refer to Mode 33-07
Refer to Mode 33-08
Refer to Mode 33-09
Refer to Mode 33-12
Refer to Mode 33-11
Refer to Mode 33-10
Refer to Mode 33-03
Refer to Mode 33-05
Refer to Mode 33-06
Refer to Mode 33-14
Refer to Mode 33-13
Refer to Mode 09-02
Refer to Mode 09-01
Refer to Mode 07-00
Refer to Mode 07-00
Refer to Mode 33-16
Refer to Mode 33-17
Refer to Mode 33-18
Refer to Mode 33-19

4.3. STATION DATA - MODE 40-00, continued

REPORT 4-4. ECR STATION DATA REPORT

DJR-FH-363-A

```
PERIPHERAL PROCESSORS
   #                ID CODE
   3                  36000
OPTIONS        CON 1  CON 2
   KEY ALERT      NO     NO
   CAL ALERT     YES    YES
   USD ALERT      NO     NO
   A PMP CLR      NO     NO
   SEL POSTP     YES    YES
   DATA TO     CON 1  CON 2
   PERIPH        PTR    ECR
   AUTO XFER      NO     NO
   PPAY LIM       NO     NO
DISPENSER DATA
 #  L   T   R   P    V AUT  C
 1  2   1   6   4    G00-00
 2  2  21   5   3    G00-00
 3  2  41   5   6    G00-00
 4 23   0   9   3    G00-00
 5 24   0   1   5    G00-00
 6  *   0   0   0    100-00
 7  *   0   0   0    100-00
 8  *   0   0   0    100-00
DISP CONFIG DATA
 #  TANK  R  TL   PCVOL
 1  4321  N  11   0.200
 2  0321  N  11   0.200
 3  0541  N  11   0.200
 4  0540  N  11   0.200
 5  0541  N  11   0.200
 6  0000  N  11   0.200
 7  0000  N  11   0.200
 8  0000  N  11   0.200
DISP DUAL OR NOT
PMP # 123456789012
DUAL? YNNYY***
```

Present only if peripheral processors are in system.

PIB version is an example.

Con 1, Con 2 options

Refer to Mode 08-01

Refer to Mode 08-02

Refer to Mode 08-03

Refer to Mode 08-04

Refer to Mode 08-05

Refer to Mode 50-x1 (x = 1,2,3,or 4)

Refer to Mode 50-x2 (x = 1,2,3,or 4)

Refer to Mode 50-x3 (x = 1,2,3,or 4)

Refer to Mode 07-01

= pump #, L = data link

T = pump type

R = pump firmware revision

P = number of products at that pump

V = volume units, gallons/liters

AUT = Mode 35, 36 auto-auth, auto-tot options

C = Mode 37 console authorizaton code

* = pump is off-line

= pump

R = ration limit, see Mode 48

T = pricing tier, see Mode 00

L = princing level, see Mode 04

PCVOL = pre-cutoff volume, see mode 06

pump numbers 1 to 12

dual or not, yes/no, * = off-line

CONTINUED

4.3. STATION DATA - MODE 40-00, continued

REPORT 4-4 ECR STATION DATA REPORT, continued

DJR-FH-364-A

DISP GRD/POS DATA

Refer to Mode 18.

#POS	1	2	3	4	5	6	7
1	1	2	3	4	0	0	0
2	1	2	3	0	0	0	0
3	1	0	4	6	7	8	5
4	0	4	6	5	0	0	0
5	1	0	4	6	7	8	5
6	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0

Positions at pump.
Grade at pump position.

GRD BLEND RATIOS

Refer to Mode 17.

GRD	6	7	8	9
RAT	40	50	60	101

TANK DATA

#	GRADE	LF LIM
1	1	0.00
2	2	0.00
3	3	0.00
4	4	0.00
5	5	0.00
6	1	0.00

Mode 31 for grade code.
Mode 15 for low fuel volume.

MODE RESTRICTIONS

Refer to Mode 99.

MD #	DATA	MD #	DATA
0	1	1	1
2	1	3	1
4	1	6	1
7	1	9	1
31	1	32	1
33	1	35	1
36	1	37	1
48	1	50	1
51	1	60	1
80	1	81	1
95	2	96	2
99	1		

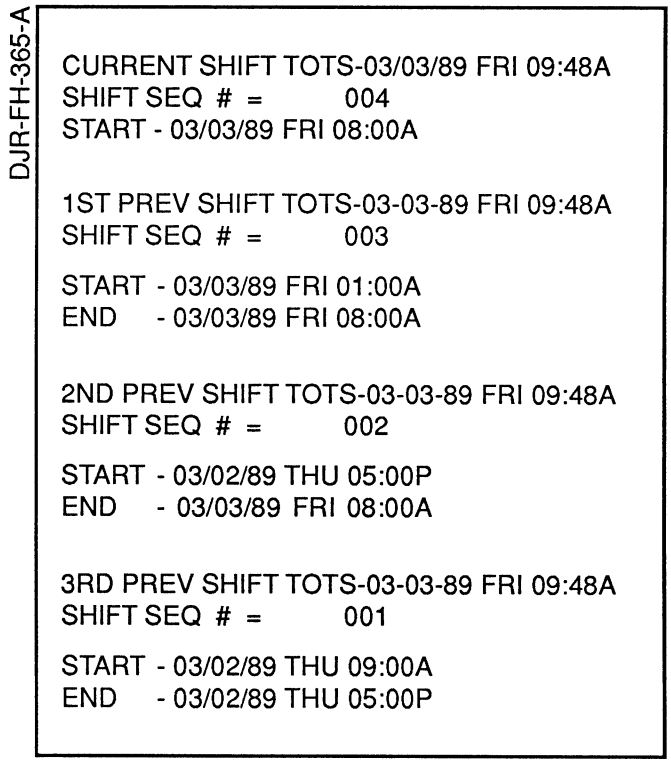
4.4. SHIFT REPORTS - MODES 40-01, 40-02, 40-03, 40-04

Shift totals for the stations are provided on the Shift Reports. The Shift Reports have the same format as the Shift Change report except the Shift Reports do not have the Dispenser Totalizers section.

IMPORTANT: The Dispenser Totals section exists only for the current and the first previous reports. Note that Dispenser Totalizers and Dispenser Totals are not the same information. The following sections show only the different headings on the four different Shift Reports.

The time on the Shift Reports can be tracked backwards with the shift sequence number. The start time of one shift is the end time of the previous shift.

REPORT 4-5 RTP SHIFT REPORT HEADINGS



4.4. SHIFT REPORTS - MODES 40-01, 40-02, 40-03, 40-04

REPORT 4-6. ECR SHIFT REPORT HEADINGS

DJR-FH-366-A

```
FRI 03/03/89 09:48
CURRENT SHIFT TOTS
SHIFT SEQ  #  =   004
START
FRI 03/03/89 08:00
```

Date and time of report.

```
FRI 03/03/89 09:48
1ST PREV SHIFT TOT
SHIFT SEQ  #  =  003
SHIFT START
FRI 03/03/89 01:00
SHIFT END
FRI 03/03/89 08:00
```

Date and time of report.

```
FRI 03/03/89 09:48
2ND PREV SHIFT TOT
SHIFT SEQ  #  =  002
SHIFT START
FRI 03/02/89 17:00
SHIFT END
FRI 03/03/89 01:00
```

Date and time of report.

```
FRI 03/03/89 09:48
3RD PREV SHIFT TOT
SHIFT SEQ  #  =  001
SHIFT START
FRI 03/02/89 08:00
SHIFT END
FRI 03/02/89 17:00
```

Date and time of report.

4.5. DISPENSER TOTALIZERS - MODE 40-05

The Dispenser Totalizers report provides a listing of the dispenser totalizers available at the dispenser head. The totalizers are read from the dispenser by the pump controller at the of each sale.

The following RTP and ECR Dispenser Totalizers Reports will have only the headers shown. The body of both report will have the same format as the Dispenser Totalizers section of the Shift Change Report, the Current Shift Report, and the 1st Previous Shift Report.

4.5. DISPENSER TOTALIZERS - MODE 40-05, continued

REPORT 4-7. RTP DISPENSER TOTALIZERS REPORT

DISPENSER TOTALIZERS 03/03/89 FRI 08:00A	Date and time of report

The following ECR Dispenser Totalizers Report will have only the header shown. The body of the report has the same format as the Dispenser Totalizers section of the Shift Change Report, the Current Shift Report, and the 1st Previous Shift Report.

REPORT 4-8. ECR DISPENSER TOTALIZERS REPORT

FRI 03/03/89 08:00	Date and time of report

4.6. STATION TOTALIZERS (NON-RESETTABLE TOTALS) MODE 40-06

The data in the Station Totalizers Report is the continuously accumulated grade sales for the system. These totals are not cleared unless a memory-clear is executed. Each total rolls over at one million.

The following RTP Station Totalizers Report will have only the header shown. The body of the report has the same format as the Station Grade Totals section of the Shift Change Report and the RTP and ECR Shift Reports.

REPORT 4-9. RTP STATION TOTALIZERS REPORT

STATION TOTALIZERS 03/03/89 FRI 08:00A	Date and time of report

The following ECR Non-Resettable Totals Report will have only the header shown. The body of the report has the same format as the Station Grade Totals section of the Shift Change Report and the RTP and ECR Shift Reports.

REPORT 4-10. ECR NON-RESETTABLE TOTALS REPORT

STATION TOTALIZERS FRI 03/03/89 08:00	Date and time of report

4.7. GRADE UNIT PRICES - MODE 40-07

The following RTP Grade Unit Price report illustrates two tiers and two levels for cash and credit grade unit prices.

REPORT 4-11. RTP GRADE UNIT PRICE REPORT

DJR-FH-367-A

UNIT PRICE - 03/03/89 FRI 08:00A

CREDIT

GRADE	TIER 1		TIER 2	
#	LEVEL 1	LEVEL 2	LEVEL 1	LEVEL 2
1	$ .000	$ .000	$ .000	$ .000
2	$ .000	$ .000	$ .000	$ .000
3	$ .000	$ .000	$ .000	$ .000
4	$ .000	$ .000	$ .000	$ .000
5	$ .000	$ .000	$ .000	$ .000
6	$ .000	$ .000	$ .000	$ .000
7	$ .000	$ .000	$ .000	$ .000
8	$ .000	$ .000	$ .000	$ .000
9	$ .000	$ .000	$ .000	$ .000

CASH

GRADE	TIER 1		TIER 2	
#	LEVEL 1	LEVEL 2	LEVEL 1	LEVEL 2
1	$ .000	$ .000	$ .000	$ .000
2	$ .000	$ .000	$ .000	$ .000
3	$ .000	$ .000	$ .000	$ .000
4	$ .000	$ .000	$ .000	$ .000
5	$ .000	$ .000	$ .000	$ .000
6	$ .000	$ .000	$ .000	$ .000
7	$ .000	$ .000	$ .000	$ .000
8	$ .000	$ .000	$ .000	$ .000
9	$ .000	$ .000	$ .000	$ .000

4.7. GRADE UNIT PRICES - MODE 40-07, continued

The following ECR Grade Unit Price report illustrates two tiers and two levels for cash and credit grade unit prices.

REPORT 4-12. ECR GRADE UNIT PRICE REPORT

DJR-FH-368-A

FRI 03/03/89 08:00A

CREDIT UNIT PRICES

TIER 1

G	LEVEL 1	LEVEL 2
1	$ .000	$ .000
2	$ .000	$ .000
3	$ .000	$ .000
4	$ .000	$ .000
5	$ .000	$ .000
6	$ .000	$ .000
7	$ .000	$ .000
8	$ .000	$ .000
9	$ .000	$ .000

TIER 2

G	LEVEL 1	LEVEL 2
1	$ .000	$ .000
2	$ .000	$ .000
3	$ .000	$ .000
4	$ .000	$ .000
5	$ .000	$ .000
6	$ .000	$ .000
7	$ .000	$ .000
8	$ .000	$ .000
9	$ .000	$ .000

CONTINUED

CASH UNIT PRICES

TIER 1

G	LEVEL 1	LEVEL 2
1	$ .000	$ .000
2	$ .000	$ .000
3	$ .000	$ .000
4	$ .000	$ .000
5	$ .000	$ .000
6	$ .000	$ .000
7	$ .000	$ .000
8	$ .000	$ .000
9	$ .000	$ .000

TIER 2

G	LEVEL 1	LEVEL 2
1	$ .000	$ .000
2	$ .000	$ .000
3	$ .000	$ .000
4	$ .000	$ .000
5	$ .000	$ .000
6	$ .000	$ .000
7	$ .000	$ .000
8	$ .000	$ .000
9	$ .000	$ .000

4.8. MANUAL DATA - MODE 40-08

The Manual Data Report lists 100 manual entry data elements and is accessed using either Mode 80 or Mode 81.

REPORT 4-13. RTP MANUAL DATA REPORT

DJR-FH-369-A

MANUAL DATA - 03/01/89 WED 08:00A

LOC	DATA	LOC	DATA
0	0.00	50	0.00
1	0.00	51	0.00
2	0.00	52	0.00
.	.	.	.
.	.	.	.
49	0.00	99	0.00

REPORT 4-14. ECR MANUAL DATA REPORT

DJR-FH-370-A

FRI 03/03/89 08:00
MANUAL DATA

LOC	DATA
0	0.00
1	0.00
2	0.00
.	.
.	.
99	0.00

5

SHIFT CHANGE SUGGESTIONS

5.1. INTRODUCTION

If the optional Receipt Totals Printer (RTP) is provided with the system, performing a shift change in Mode 10 will cause all shift information to automatically print (programming in Mode 50 must be set). Shift change data may also be printed with Electronic Cash Register (ECR) equipped systems. If the RTP or ECR is not available, shift data may be copied onto a shift change sheet. The following procedures are provided as guides for a shift change without a printer.

5.2. SHIFT CHANGE PROCEDURE

The following list contains suggestions for a successful shift change.

Check Transactions - To prevent shift total errors, verify all sales (self-service/unattended and full-service/attended) are paid and all prepay transactions are complete. Make sure no sales remain to be transferred to the ECR and no drops are taking place during the shift change.

Read fueling point totalizers - Refer to Chapter 6 for a description of Mode 05, Reading Fueling Point Totalizers.

Read fueling point totals - Refer to Chapter 6 for a description of Mode 16, Reading Current Shift Fueling Point Totals.

5.2. SHIFT CHANGE PROCEDURE, continued

Read inventory totals - Refer to the Mode 12 table in chapter 3 on "Reading Current Shift Tank Declining Balances".

Read station and grade totals - Refer to the Mode 10 table in chapter 3 on "Reading Current Shift Totals".

Read current shift tank drop volume - Refer to the Mode 11 table in chapter 3.

Implement shift change - The following list of steps demonstrate how to implement a shift change.

1. Press the **Mode** key.
2. Enter Mode 10 and Submode 00.
3. Press the **Auth** key.
4. Press the **Prnt/Entr** key.
5. Press the **Mode** key to return to sales.

NOTE: The maximum time between shift changes is one hour unless bypassed with Mode 96-02 which requires password entry.

5.3. RECORDING TOTALS AFTER SHIFT CHANGE

Should the station be too busy for the operator to record the totals at shift change, the operator can view the Fueling Point Totalizers report using Mode 05 and can then execute the shift change. Prior to the next shift change, retrieve the totals using Modes 20, 21, 22, and 26 instead of Modes 10, 11, 12, and 26.

NOTE: To prevent data errors, the conditions described in the paragraph, "Check Transactions in section 5.2, must be observed.

GLOSSARY

Call Signal	An alert signal to a cashier when a customer requests access to a fueling point.
Data	A number used for a sale transaction; a number used to identify the status of the system in specific mode functions; or an entry in the management function.
Data Link System	A system that uses a data communications method to transmit sale information between the dispensers and the central control system.
Declining Inventory Balance	A mathematical reduction of a product inventory based on dispenser sales.
ECR	Acronym for Electronic Cash Register.

Fueling Point	A specific fuel dispensing location on a dispenser. There may be more than one fueling point in one enclosure, and more than one nozzle at a single fueling point. One side of a dispenser can have up to 4 hoses. Typically one computer represents a fueling point. However, it is possible for two fueling points to be controlled with a Duplex computer.
Fueling Point Position	May be a nozzle or one of several product select buttons on a blending system.
Fueling Point Totals	The sale totals of individual fueling points. Includes total sales for all grades, and total volume for each separate grade.
Last Sale Recall	A feature of the 2400/Plus system that allows an operator to display the previous unpaid fuel sale.
Mode	A term for the operation of the control system that allows access to management functions.
Mode Code	A number which designates a specific management function. A mode code may have two parts, a prime mode and a submode.
OCPT	Acronym for Outdoor Card Processing Terminal.
Operator Function Keys	Keys located on the console that allow the system to perform specific functions when pressed.
Postpay Sale	A sale where the customer pays after fueling.
Prepay Sale	A sale where the customer pays before fueling. The customer may ask for a specific volume or dollar amount when he prepays for the fuel.
Preset Sale	A sale where the customer requests a specific volume or dollar amount of fuel, and pays after receiving the requested amount.
Pump Difference	A quantity that is a correction factor, either added or subtracted to make controller totals agree with pump totals. It is produced whenever a sale is pumped at one price (CREDIT or CASH) but paid at the other price.
Ration Limit	A system related feature that allows a specified amount of fuel to be dispensed for each sale. This feature is used primarily for fuel rationing.

RTP	Acronym for Receipt/Totals Printer.
Shift Change	A function performed to totalize sales during a specified period of time for management control.
Tank Drop	A delivery of a product at an operating location by a tank vehicle.
TIG	Acronym for Tank Inventory Gauge.
Unit Price	The sales amount charged per unit of product dispensed.
Volume Flow Slow-Down Point	The point at which a slow-down valve is activated in a fueling point on a prepay sale to insure the fueling point stops at a specified amount. The pre-cutoff amount specified in Mode 06 is the amount short of the full amount of volume where the slow valve is activated.

WARRANTY AND LIMITATION OF REMEDY AND LIABILITY

Seller warrants that new products and parts of its own design and manufacture when shipped, will be of good quality and will be free from defects in material and workmanship and will conform to applicable specifications. Work, when performed by Seller, will meet applicable work requirements. No warranty is made with respect to used or rebuilt equipment and with respect to products not manufactured by Seller, Seller's only obligation shall be to assign to Buyer, at the time of sale, whatever warranty Seller has received from the manufacturer. Items such as but not limited to lamps, electric motors, hoses, nozzles, hose swivels and safety impact valves are included in the category referred to in the previous sentence. Seller's recommendations with respect to the operation of Seller's equipment are advisory only and are not warranted. All claims under this warranty must be made in writing immediately upon discovery and, in any event, within twelve (12) months from date of installation, if a product is involved, or from completion of the applicable work, if work is involved, or fifteen (15) months from date of invoice (whichever shall occur first). (Provided however, that with respect to the Decade 1000 electronic cash register, receipts/totals printers, and any other printers or printing mechanisms, all claims must be made in writing within ninety (90) days from date of installation.) Defective and nonconforming items must be held for Seller's inspection and returned to the original f.o.b. point upon request. Seller's warranty on service parts, whether new or reconditioned, is ninety (90) days from the date of installation, or twelve (12) months from date of invoice, whichever first occurs. THE FOREGOING IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESSED, IMPLIED AND STATUTORY, INCLUDING WITHOUT LIMITATIONS, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS.

Upon Buyer's submission of a claim as provided above and its substantiation, Seller shall, at its option either (I) repair or replace its product or work at the original f.o.b. point or location of purchase products and/or parts or (II) refund an equitable portion of the purchase price.

THE FOREGOING IS SELLER'S ONLY OBLIGATION AND BUYER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY AND, EXCEPT FOR GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, THE FOREGOING IS BUYER'S EXCLUSIVE REMEDY AGAINST SELLER FOR ALL CLAIMS ARISING HEREUNDER OR RELATING HERETO WHETHER SUCH CLAIMS ARE BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES. BUYER'S FAILURE TO SUBMIT A CLAIM AS PROVIDED ABOVE SHALL SPECIFICALLY WAIVE ALL CLAIMS FOR DAMAGES OR OTHER RELIEF, INCLUDING BUT NOT LIMITED TO CLAIMS BASED ON LATENT DEFECTS. IN NO EVENT SHALL BUYER BE ENTITLED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES. ANY ACTION BY BUYER ARISING HEREUNDER OR RELATING HERETO, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES, MUST BE COMMENCED WITHIN ONE (1) YEAR AFTER THE CAUSE OF ACTION ACCRUES OR IT SHALL BE BARRED.

"NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense."

Wayne DRESSER

Wayne Division, Dresser Industries, Inc., P.O. Box 1859, Salisbury, MD 21802-1859, (410) 546-6600

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