

FuelMaster® 2525 Installation & Operations Manual

UIT Operations

```
[ A=More      D=Exit ]
```

```
[ DIAGNOSTICS MENU: ]
```

```
[ 5-PRINTER TEST    ]
```

```
[                  ]
```

```
[ A=More      D=Exit ]
```

1 - Counts Test

This menu is used to test the communication between the fueling device and the UIT and also to determine if pulses are coming from the pulser. First the user must choose which type of fueling device to link to:

```
[   SELECT LINK:    ]
```

```
[ 1 = WIRED NPI     ]
```

```
[ 2 = WIRED TIM     ]
```

```
[ 3 = RF NPI/TIM    ] -> only if RF board is installed and  
enabled
```

After the device is selected and successfully linked to, the following is displayed:

```
[ Y - START PUMP    ]
```

```
[ N - STOP PUMP     ]
```

```
[ D - EXIT          ]
```

```
[ PULSES: xxxxxxxx ]
```

The pulses are continually updated from the fueling device and displayed. When the pump is started or stopped, the pulses are reset to 000000.

2 - Card Reader Test

This menu is used to test the card reader and display information on a magnetic stripe card.

```
[                  ]
```

```
[   INSERT CARD     ]
```

```
[                  ]
```

```
[                  D=Exit ]
```

After a card is inserted:

```
[                  ]
```

```
[   REMOVE CARD     ]
```

```
[   QUICKLY...      ]
```

```
[                  ]
```

If a card is read successfully:

```
[ 1=Track1  2=Track2 ]
[xxxxxxxxxxxxxxxxxxxx]-\____CARD DATA
[xxxxxxxxxxxxxxxxxxxx]-/
[ A=More      D=Exit ]
```

If a card is not read successfully, the error is indicated in the card data field.

```
[ 1=Track1  2=Track2 ]
[   TRACK X ERROR   ]
[       (X)         ]
[ A=More      D=Exit ]
```

“More” will show the next page of card data. ‘1’ and ‘2’ will switch to the appropriate track.

3 - LCD Test

This menu is used to test all pixels of the LCD.

```
[ LCD TEST - PRESS ]
[   A KEY TO BEGIN ]
[   DURING TEST -  ]
[   ANY KEY TO EXIT ]
```

4 - UIT Stats

This menu is used to test all pixels of the LCD.

```
[ 1-CONFIG STATS      ]
[ 2-TRANSACTION STATS ]
[ 3-HARDWARE STATS    ]
[ D-EXIT              ]
```

1 - Config Status

‘A’ will show the next screen of configuration data, ‘C’ will send the entire configuration status prompts to the printer.

```
[ CONFIG STATS          ]
[   UIT ID:            ]
[   xxxxxx             ]
[ A=More C=Prn D=Exit]
```

```
[ CONFIG STATS      ]  
[  BASE ID:        ]  
[  xxxxxxxx        ]  
[ A=More C=Prn D=Exit]
```

```
[ CONFIG STATS      ]  
[ NO PULSE TIMEOUT: ]  
[  xxx             ]  
[ A=More C=Prn D=Exit]
```

```
[ CONFIG STATS      ]  
[ PUMP FINISH TO:   ]  
[  xxx             ]  
[ A=More C=Prn D=Exit]
```

```
[ CONFIG STATS      ]  
[ MAX QUANTITY:     ]  
[  xxxxxxxx        ]  
[ A=More C=Prn D=Exit]
```

```
[ CONFIG STATS      ]  
[ RF OPTIONS:       ]  
[  ENABLED          ]  
[ A=More C=Prn D=Exit]
```

```
[ CONFIG STATS      ]  
[ SLEEP TIMER:      ]  
[  xxx MINUTES      ]  
[ A=More C=Prn D=Exit]
```

2 - Transaction Status

'A' will show the next screen of transaction stats, 'C' will send the entire transaction stats prompts to the printer.

```
[TRANSACTION STATS  ]  
[ CURRENT TXNS: xxxx ]  
[                   ]  
[ A=More C=Prn D=Exit]
```

```
[TRANSACTION STATS  ]  
[ LAST DOWNLOAD:     ]  
[ XX/XX/XXXX XX:XX:XX ]  
[ A=More C=Prn D=Exit]
```

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```
[TRANSACTION STATS  ]
[ LAST TRANSACTION:  ]
[ xx/xx/xxxx xx:xx:xx]
[ A=More C=Prn D=Exit]
```

3 - Hardware Stats

This option will attempt to talk to all possible hardware:

Printer
Wired NPI
Wired TIM
RF board link status
Internal Battery
External Battery

```
[ ]
[ DETECTING HARDWARE ]
[ PLEASE WAIT...     ]
[ ]
```

Examples:

```
[ HARDWARE STATUS    ]
[ PRINTER: DETECTED  ]
[ STAT: NO ERROR     ]
[ A=More C=Prn D=Exit]
```

```
[ HARDWARE STATUS    ]
[ NPI: NOT DETECTED  ]
[ ]
[ A=More C=Prn D=Exit]
```

```
[ HARDWARE STATUS    ]
[ TIM: xxxxxx v xxx  ]
[ DIV RATE: xxx:xxx   ]
[ A=More C=Prn D=Exit]
```

```
[ HARDWARE STATUS    ]
[ RF BOARD: NOT      ]
[      DETECTED ]
[ A=More C=Prn D=Exit]
```

```
[ HARDWARE STATUS    ]
[ INT BATT: NOT      ]
[      DETECTED ]
```

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```
[ A=More C=Prn D=Exit]
```

```
[ HARDWARE STATUS      ]
[ EXT BATT: NOT        ]
[      DETECTED        ]
[ A=More C=Prn D=Exit]
```

5 - Printer Test

The printer test prints the ASCII character set as well as some test patterns. Before printing begins, communications with the printer is tested and any error conditions are reported back, the test is aborted. If there are no errors, then the test proceeds.

```
[
[ PRINTER SHOULD      ]
[ BE PRINTING...      ]
[
```

UIT Supervisor Accessible Menus

Note

This section applies to menus accessible only with the use of a Supervisor Card.

To gain access to this menu, a valid supervisor card is required. This card is entered at the "SELECT LINK" prompt.

```
[   SELECT LINK:      ]
[ 1 = WIRED NPI      ]
[ 2 = WIRED TIM      ]
[ 3 = RF NPI/TIM      ] -> only if RF board is installed and
enabled
```

These menus allow changes to be made to the UIT's configuration.

```
[ CONFIG MENU:        ]
[ 1-SET TIME/DATE      ]
[ 2-PROGRAM REMOTE     ]
[ A=More              ] D=Exit ]
```

```
[ CONFIG MENU:        ]
[ 3-SET UIT ID         ]
[ 4-RF ENABLE          ]
[ A=More              ] D=Exit ]
```

```
[ CONFIG MENU:      ]
[ 5-BASE STATION ID ]
[ 6-QUANTITY LIMIT  ]
[ A=More           D=Exit ]
```

1 - Time & Date

This menu is used to set the time and date used for transactions.

```
[TIME/DATE MENU: dow ]
[ hh:mm:ss mm/dd/yy ]
[ A=TIME           B=DATE ]
[ C=DAY           D=Exit ]
```

Time

```
[TIME: hh:mm:ss      ]
[NEW TIME (hh:mm:ss) ]
[--> __:__:__        ]
[                    D=Exit ]
```

Date

```
[DATE: mm/dd/yy      ]
[NEW DATE (mm/dd/yy) ]
[--> __/__/__        ]
[                    D=Exit ]
```

Day

```
[SET DAY OF WEEK:    ]
[ A=CHANGE B=ACCEPT  ]
[   DAY: XXXXXXXX    ]
[                    D=Exit ]
```

'A' scrolls through days of week.

2 - Program Remote

This menu is used to configure a fueling device (NPI,TIM,RF TIM/NPI).
First the user must select the type of link the fueling device is configured for.

```
[   SELECT LINK:      ]
[ 1 = WIRED NPI      ]
[ 2 = WIRED TIM      ]
```

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[3 = RF NPI/TIM] -> only if RF board is installed and enabled

After the link is selected, the UIT gets the status of the remote device to verify communications and displays any errors. If an error occurs the process is terminated and the user is returned to the previous menu. If no errors occur the user is prompted for the new configuration information, one at a time (device ID, then divide rate).

```
[ CURRENT ID: xxxxxx ]
[ ENTER DEVICE ID   ]
[ -> _____    ]
[                   ]
```

'Y' is entered to accept the setting. The UIT then programs the remote fueling device with the new device ID and gets the status to read back the device ID. If communications are successful and the ID read back matches the ID entered then the following is displayed:

```
[ CURRENT ID: xxxxxx ]
[ ENTER DEVICE ID   ]
[ -> xxx_____    ]
[ REMOTE ID SET!    ]
```

If communications errors occur, the UIT does not proceed to the divide rate. Otherwise:

```
[ CURRENT DIVIDE    ]
[ RATE IS xxx:xxx   ]
[ SET DIVIDE RATE:  ]
[ -> ____:____     ]
```

Leading zero's must be entered for the divide rate.

'Y' is entered to accept the setting. The UIT then programs the remote fueling device with the new divide rate and gets the status to read back the divide rate. If communications are successful and the divide rate read back matches the divide rate entered then the following is displayed:

```
[ CURRENT DIVIDE    ]
[ RATE IS xxx:xxx   ]
[ SET DIVIDE RATE:  ]
[ DIVIDE RATE SET!  ]
```

3 – Set UIT Id

This menu is used to set the ID for the UIT. This ID is used to identify the UIT.

```
[ CURRENT UIT      ]
```

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```
[ ID: xxxxxx      ]  
[ ENTER UIT ID    ]  
[ -> _____ ]
```

'Y' is entered to accept the setting. The UIT then stores its new ID and following is displayed:

```
[  
[STORING UIT ID... ]  
[  
[
```

4 – RF Enable

This is used to enable/disable the UIT's RF functions.

```
[ RF FUNCTIONS:    ]  
[ ENABLED          ]  
[                  ]  
[ A=TOGGLE      D=Exit ]
```

When the menu is exited, the last entry is kept.

5 – Set Base ID

This menu is used to set the ID for the base which the UIT will attempt to download the transactions automatically via RF (if enabled).

```
[ CURRENT BASE ID:  ]  
[ xxxxxx           ]  
[ ENTER NEW BASE    ]  
[ STATION ID ->_____]
```

'Y' is entered to accept the setting. The UIT then stores the new ID and following is displayed:

```
[  
[STORING BASE ID... ]  
[  
[
```

6 – Set Quantity Limit

This menu is used to set the quantity limit for fueling. This is in the units for which the pulsers are calibrated for at the fueling site.

```
[ CURRENT QTY LIMIT: ]  
[ xxxxxx             ]
```

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```
[ ENTER NEW LIMIT      ]  
[ ->_____           ]
```

'Y' is entered to accept the setting. The UIT then stores its new ID and following is displayed:

```
[                      ]  
[STORING NEW LIMIT...]  
[                      ]  
[                      ]
```

**FuelMaster® 2525 INSTALLATION MANUAL
FUEL TRUCK PREPARATION****NOTE**

Almost all fuel trucks are different, which necessitate that the Fuel Truck Preparation instructions be very general. It is important to note however that the types of equipment and their placement is essential in order for the FuelMaster® 2525 equipment to meet its Class 1, Division 1, Group D requirements.

- Step 1** On most fuel trucks, a solenoid valve is used to control each hose. Fuelmaster® 2525 supplies this air solenoid attached to the TIM to control the fueling. The TIM is mounted under or behind the front seat of the truck. Therefore, no mounting of the solenoid is required, but the air hoses will need to be routed into the cab of the vehicle. A convenient place to start tracing the air lines is at the deadman hose reel. Trace the deadman's air line to a convenient place where one of the air lines can be cut and reattached to lines which will lead to the cab of the vehicle. Insure that the selected area is away from potential damage from the hose and nozzle.
- Step 2** Locate and mark a route from the selected area in Step 1 to the cab of the vehicle.
- Step 3** A pulser will be added to the fuel meter's register. Locate the register, record register's make and model number, and mark a route to the cab of the vehicle.
- Step 4** The Fuelmaster® 2525's TIM and a mounting bracket for the UIT will need to be mounted in the truck's cab. The Tim needs to be mounted conveniently out of the way under or behind the seat. Note a place for the TIM and a place for the air lines to come through the cab's metal skin. The UIT needs a mounting bracket. The UIT can be operated either in the bracket or remote from the vehicle (held by the operator). The most convenient place for this is behind the driver's seat attached to the cab's metal skin at about eye height when a person is standing on the ground.

For assistance and recommendations as to the best method of installation contact:

**Syn-Tech Systems, Inc.
Attn: Product Support
P.O. Box 5258
Tallahassee, FL 32314
@
1-(800) 888-9136**

**FuelMaster® 2525 INSTALLATION MANUAL
HOSECART/PANTOGRAPH PREPARATION****NOTE**

HoseCart and Pantographs are different, which necessitates that the HoseCart/Pantograph Preparation instructions be very general. It is important to note however that the types of equipment and their placement is essential in order for the FuelMaster® 2525 equipment to meet its Class 1, Division 1, Group D requirements.

- Step 1** On most HoseCart/Pantographs, a solenoid valve is used to control each hose. Fuelmaster® 2525 supplies this air solenoid attached to the NPI to control the fueling. The NPI is mounted on a bracket on the HoseCart/Pantograph. Therefore, no mounting of the solenoid is required, but the air hoses will need to be routed to this position. A convenient place to start tracing the air lines is at the deadman hose reel. Trace the deadman's air lines to a convenient place where one of the air lines can be cut and reattached to lines which will lead to the NPI. Insure that the selected area is away from potential damage from the hose and nozzle.
- Step 2** Locate and mark a route from the selected area in Step 1 to the NPI's future position.
- Step 3** A pulser will be added to the fuel meter's register. Locate the register, record register's make and model number, and mark a route to the NPI's future position.
- Step 4** The Fuelmaster® 2525's NPI needs to be mounted on the HoseCart/Pantograph. The NPI needs to be mounted conveniently out of the way. Note a place for the NPI and for air lines.

For assistance and recommendations as to the best method of installation contact:

Syn-Tech Systems, Inc.
Attn: Product Support
P.O. Box 5258
Tallahassee, FL 32314
@
1-(800) 888-9136

**FuelMaster® 2525 INSTALLATION MANUAL
INSTALLATION of the TIM****Step 1**

Unpack the FuelMaster® 2525 equipment, inspect for any signs of damage from shipment, and ensure all equipment listed on the packing list is available.

Note

Fuelmaster® 2525 equipment should be installed on the side of the fueling vehicle corresponding to the hose reel and the side of the fueling vehicle incorporating the fueling controls. For this installation manual this is assumed to be the driver's side. Should the hose reel and the side of the fueling vehicle incorporating the fueling controls be the passenger side of the vehicle install the Fuelmaster® 2525 on the passenger side.

Note

The UIT should be mounted to the back of the cab directly aft of the driver's side seat, and at approximately eye level for an individual standing on the ground adjacent to the driver's side door. Ideally the selected position for the UIT and its mounting bracket will allow the UIT to be used and viewed when mounted in the cab by an operator standing on the ground adjacent to the open driver's side door. And, ideally the mounting position will allow the operator to remove the UIT from its mounting bracket and carry it around as other fueling tasks are undertaken.

Step 2

Locate the UIT and its mounting bracket. Install the UIT's mounting bracket to the back of the cab, on the inside of the cab, aft of the driver's side seat at a position convenient for both UIT removal and convenient for use in the mounted position using the hardware provided.

Note

When mounting the TIM insure that it doesn't interfere with operation or removal of the UIT.

Step 3

Locate the TIM. The TIM should be mounted to the cab floor under the driver's side seat or on the back of the cab directly aft of the driver's side seat. Install the TIM with the hardware provided.

CAUTION

DO NOT attach the power pigtail to the TIM at this time.

CAUTION

Locate the power pigtail in-line fuses close to the truck's power supply (i.e., as close to the truck's fuse panel as practicable).

Note

Switched +12VDC means a +12VDC power source that is on when the vehicle's ignition switch is on and the +12VDC is off when the ignition switch is off.

**FuelMaster® 2525 INSTALLATION MANUAL
INSTALLATION of the TIM**

- Step 4** Locate the power cable pigtail, P/N 981B0xxx, for the TIM. Find both a suitable source for switched +12VDC power and a seat mount bolt for ground. The truck's fuse panel would be the ideal location. Attach the black (ground) wire to the truck's chassis using a bolt and a crimp-on terminal. Shorten or lengthen the wires as required. Attach the red pigtail with in-line fuse to the +12VDC switched power source.

Note

The Temperature Sensing Assembly, P/N 981D0xxx, is to be mounted on a fuel pipe close to the hose reel. Care shall be taken that the position selected is protected from the hose reel, the nozzle, etc. and that there is a wire routing path that can also be protected from the hose reel, the nozzle, the operator, etc.

- Step 5** Locate the Temperature Sensing Assembly, P/N 981D0xxx. Mount the Temperature Sensing Assembly on the selected area of fuel pipe with the clamps provided. Wrap the fuel pipe, the Temperature Sensing Assembly and the wire pigtail (but NOT the connector) with the insulation tape provided.

CAUTION

DO NOT cut any wires, fuel lines, brake lines, etc., and DO NOT drill into frames or reinforcing channels. Inspect both sides of the cab's sheet metal prior to drilling a hole.

- Step 6** Locate the supplied grommet, and locate a convenient place for a hole in the cab's sheet metal. Using a pilot drill a xxx diameter hole. Using a xxx diameter chassis punch, make a xxxx diameter hole in the cab's sheet metal.

- Step 7** Locate the pulser/temperature pigtail, P/N 981B0xxx. Attach this pigtail to the TIM and route the other ends of the pigtail through the cab's sheet metal via the grommated hole. Rout the two leads of the pigtail to the register and to the temperature sensor assembly.

Note

The connectors will be subject to corrosion if not properly protected from moisture.

- Step 8** Connect the pulser/temperature pigtail to the temperature sensor assembly. Using the Teflon tape supplied, wrap the two connectors.

Note

Choose a route for the pulser/temperature cable and positions for the cable so that it is protected from damage from the fueling hose, the nozzle, the operator, etc.

- Step 9** Route the pulser's wires so as to assure that they are safely away from potential damage from the fuel hose and nozzle. Secure both leads of the pulser/temperature to the truck's frame and/or equipment with the supplied ty-

raps.

Caution

Read Step 12 and carefully inspect the pulser installation prior to undertaking Step 11. UNDRILLING a hole is very difficult.

Step 10 Locate the register and remove the register cover by removing four 1/4-inch (7/16 socket/wrench) cover bolts from under the register, one at each corner. Drill a xxx diameter hole in the register's case for the pulser's wiring and a grommet. Install the grommet.

Step 11 Count gear teeth and calculate the mechanical divide ratio. Record same. See Bill for details

Step 12 Locate the pulser. Mount the pulser IAW:

1. Locate the pulser. The pulser cable routed from the Truck Interface Module (TIM) connects to a small circuit board attached to the pulser.

NOTE

Do not loosen or remove the circuit board from the pulser! Adjusting the circuit board on the pulser can prevent pulses from being counted.

2. Loosen the two Philips-head adjusting screws (#2 Philips screwdriver) on the pulser.
3. Connect the pulser cable connector to the circuit board receptacle (the connector and receptacle are keyed to ensure correct pin engagement).
4. Position the pulser in the register and align the pulser mount screw hole with the threaded register mount screw hole. If there is gear interference, the loosened adjusting screws will allow the pulser gear to be adjusted away from the register gear.

CAUTION

Do not over tighten mount screw. The register is made of aluminum. Over torquing of the mounting bolt will strip the threads in register mount hole.

5. Apply Loctite 222 to 1/4-inch mount screw and secure the pulser to the register with the mount screw and flat washer.

CAUTION

All register gears are not perfectly round. Engaging pulser gear with register gear without slight free play may cause damage as gears rotate.

6. Adjust the pulser gear to mesh with the register gear. Gears should mesh with slight free play.

7. When proper gear alignment is achieved, tighten two Philips head-adjusting screws.
8. Check pulser cable and grommet are properly positioned in cutout in side of register housing and re-install register cover.
9. Secure register cover to register with four 1/4-inch bolts installed up from underside of register at each of four corners.

Step 13 Locate the TIM Air Control Lines, P/N 981B0xxx-xx. Connect the correct end of these lines to the air solenoid on the TIM. Route the air control lines through the grommeted hole and on to the selected area of the deadman control's air lines.

WARNING

Turn off and bleed the air lines prior to cutting the lines.

CAUTION

Double check, so as to insure that the correct line is cut.

Step 14 Cut the selected air line. Attach the new end fittings to the cut air line ends and attach the new end fittings to the TIM Air Control Lines, P/N 981B0xxx.

STOP

Initialization can be completed only by a Syn-Tech Systems, Inc., FuelMaster® 2525 technician, or a technician who has completed the Syn-Tech Systems, Inc., FuelMaster® 2525 Technical Training Course. Before proceeding any further with testing, you must determine who is doing the initialization.

If you are authorized to continue, you may do so. If you are not authorized, or if you have contracted for a Syn-Tech Systems, Inc., representative to make a site visit, refer to Pre-Initialization Check List.

When finished, be sure to forward a copy of the initialization paperwork to:

**Syn-Tech Systems, Inc.
Attn: Product Support
P.O. Box 5258, Tallahassee, FL 32314
1-(800) 888-9136**

Step 15 Double check that all connections are secure. Attach the power cable to the TIM.

- Step 1** Unpack the FuelMaster® 2525 equipment, inspect for any signs of damage from shipment, and ensure all equipment listed on the packing list is available.

Note

Fuelmaster® 2525 NPI should be installed on the Pantograph near the Pantograph's register and as conveniently as possible out of harm's way. When mounting the NPI insure that it doesn't interfere with operation or removal of the Battery pack.

Note

The battery pack holder can be mounted in any of a number of positions on the NPI in two sets of four holes. Insure that the unused holes are plugged with the screws provided in order to insure that no water enters the NPI.

- Step 2** Locate the NPI. If required, relocate the NPI's battery holder to match the specific installation. Mount the NPI on the fuel pipe with the bracket and hardware provided.

Note

The Temperature Sensing Assembly, P/N 981D0xxx, is to be mounted on a fuel pipe close to the NPI. Everything on a Pantograph is susceptible to damage, however selected a place where the Temperature Sensing Assembly and its wiring harness will be the least susceptible to damage.

- Step 3** Locate the Temperature Sensing Assembly, P/N 981D0xxx. Mount the Temperature Sensing Assembly on the selected area of fuel pipe with the clamps provided. Wrap the fuel pipe, the Temperature Sensing Assembly and the wire pigtail (but NOT the connector) with the insulation tape provided.

- Step 4** Locate the pulser/temperature pigtail, P/N 981B0xxx. Attach this pigtail to the NPI. Rout the two leads of the pigtail to the register and to the temperature sensor assembly.

Note

The connectors will be subject to corrosion if not properly protected from moisture.

- Step 5** Connect the pulser/temperature pigtail to the temperature sensor assembly. Using the Teflon tape supplied, wrap the two connectors.

Note

Choose a route for the pulser/temperature cable and positions for the cable so that it is protected from damage.

- Step 6** Route the pulser's wires so as to assure that they are safely away from potential damage. Secure both leads of the pulser/temperature with the supplied ty-raps.

Caution

Read Step 8 and carefully inspect the pulser installation prior to undertaking Step 7. UNDRILLING a hole is very difficult.

Step 7 Locate the register and remove the register cover by removing four 1/4-inch (7/16 socket/wrench) cover bolts from under the register, one at each corner. Drill a xxx diameter hole in the register's case for the pulser's wiring and a grommet. Install the grommet.

Step 8 Count gear teeth and calculate the mechanical divide ratio. Record same. See Bill for details

Step 9 Locate the pulser. Mount the pulser IAW:

1. Locate the pulser. The pulser cable routed from the Truck Interface Module (NPI) connects to a small circuit board attached to the pulser.

NOTE

Do not loosen or remove the circuit board from the pulser! Adjusting the circuit board on the pulser can prevent pulses from being counted.

2. Loosen the two Philips-head adjusting screws (#2 Philips screwdriver) on the pulser.
3. Connect the pulser cable connector to the circuit board receptacle (the connector and receptacle are keyed to ensure correct pin engagement).
4. Position the pulser in the register and align the pulser mount screw hole with the threaded register mount screw hole. If there is gear interference, the loosened adjusting screws will allow the pulser gear to be adjusted away from the register gear.

CAUTION

Do not over tighten mount screw. The register is made of aluminum. Over torquing of the mount bolt will strip the threads in register mount hole.

5. Apply Loctite 222 to 1/4-inch mount screw and secure the pulser to the register with the mount screw and flat washer.

CAUTION

All register gears are not perfectly round. Engaging pulser gear with register gear without slight free play may cause damage as gears rotate.

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INSTALLATION of the NPI**

6. Adjust the pulser gear to mesh with the register gear. Gears should mesh with slight free play.
7. When proper gear alignment is achieved, tighten two Philips head-adjusting screws.
8. Check pulser cable and grommet are properly positioned in cutout in side of register housing and re-install register cover.
9. Secure register cover to register with four 1/4-inch bolts installed up from underside of register at each of four corners.

Step 10

Locate the NPI Air Control Lines, P/N 981B0xxx-xx. Connect the correct end of these lines to the air solenoid on the NPI. Route the air control lines to the selected area of the deadman control's air lines.

WARNING

Turn off and bleed the air/nitrogen lines prior to cutting the lines.

CAUTION

Double check, so as to insure that the correct line is cut.

Step 11

Cut the selected air line. Attach the new end fittings to the cut air/nitrogen line ends and attach the new end fittings to the NPI Air Control Lines, P/N 981B0xxx.

STOP

Initialization can be completed only by a Syn-Tech Systems, Inc., FuelMaster® 2525 technician, or a technician who has completed the Syn-Tech Systems, Inc., FuelMaster® 2525 Technical Training Course. Before proceeding any further with testing, you must determine who is doing the initialization. If you are authorized to continue, you may do so. If you are not authorized, or if you have contracted for a Syn-Tech Systems, Inc., representative to make a site visit, refer to Pre-Initialization Check List. When finished, be sure to forward a copy of the initialization paperwork to:

**Syn-Tech Systems, Inc.
Attn: Product Support
P.O. Box 5258, Tallahassee
FL 32314
1-(800) 888-9136**

TIM & NPI Initialization

Once all wires are pulled and connections made, you may proceed with the initialization.

Note

There are only two items stored in the TIM and the NPI, the Device ID and the Divide Ratio. This procedure will follow the instruction set for the TIM. For initialization of the NPI the same instruction set is applicable, just select NPI at the appropriate locations.

Note

The initial step, turn on the vehicle's ignition is applicable only for the Fuel Truck installation.

Turn on the vehicle's ignition.

Connect the UIT to the TIM via the xxxxxxxxxxxx Cable, P/N 981xxxxx.

Select any key on the UIT to wake it up the UIT and the UIT's LCD will display:

```
[   SELECT LINK:   ]
[ 1 = WIRED NPI   ]
[ 2 = WIRED TIM   ]
```

At the "SELECT LINK" prompt, enter a Supervisor Card and the LCD menu will change to:

```
[ CONFIG MENU:    ]
[ 1-SET TIME/DATE ]
[ 2-PROGRAM REMOTE ]
[ A=More          D=Exit ]
```

```
[ CONFIG MENU:    ]
[ 3-SET UIT ID    ]
[ 4-RF ENABLE     ]
[ A=More          D=Exit ]
```

```
[ CONFIG MENU:    ]
[ 5-BASE STATION ID ]
[ 6-QUANTITY LIMIT ]
[ A=More          D=Exit ]
```

Select 2 – Program Remote and the LCD menu will change to:

```
[   SELECT LINK:   ]  
[ 1 = WIRED NPI   ]  
[ 2 = WIRED TIM    ]
```

This menu is used to configure a fueling device (NPI,TIM,RF TIM/NPI). First the user must select the type of link the fueling device is configured for. Select 2 – Wired TIM.

After the link is selected, the UIT gets the status of the remote device to verify communications and displays any errors. If an error occurs the process is terminated and the user is returned to the previous menu. If no errors occur the user is prompted for the new configuration information, one at a time (device ID, then divide rate). Each TIM comes with a unique Device ID on the outside. Enter this Device ID.

```
[ CURRENT ID: xxxxxx ]  
[ ENTER DEVICE ID   ]  
[ -> _____    ]  
[                   ]
```

'Y' is entered to accept the setting. The UIT then programs the remote fueling device with the new device ID and gets the status to read back the device ID. If communications are successful and the ID read back matches the ID entered then the following is displayed:

```
[ CURRENT ID: xxxxxx ]  
[ ENTER DEVICE ID   ]  
[ -> xxx_____    ]  
[ REMOTE ID SET!    ]
```

If communications errors occur, the UIT does not proceed to the divide rate. Otherwise:

```
[ CURRENT DIVIDE     ]  
[ RATE IS xxx:xxx    ]  
[ SET DIVIDE RATE:   ]  
[ -> ____:____      ]
```

Leading zero's must be entered for the divide rate. Enter 001:001

'Y' is entered to accept the setting. The UIT then programs the remote fueling device with the new divide rate and gets the status to read back the divide rate. If communications are successful and the divide rate read back matches the divide rate entered then the following is displayed:

```
[ CURRENT DIVIDE     ]  
[ RATE IS xxx:xxx    ]  
[ SET DIVIDE RATE:   ]  
[DIVIDE RATE SET!    ]
```

**FuelMaster® 2525 INSTALLATION MANUAL
FuelMaster® 2525 INITIALIZATION CHECKLIST****UIT Initialization**

There are two areas where data needs to be initialized/entered into the UIT, via the User Accessible Menu and the Supervisor Menu.

Note

The supervisor section applies to menus accessible only with the use of a Supervisor Card.

To gain access to the supervisor menu, a valid supervisor card is required. This card is entered at the "SELECT LINK" prompt.

```
[  SELECT LINK:  ]  
[ 1 = WIRED NPI  ]  
[ 2 = WIRED TIM  ]  
[ 3 = RF NPI/TIM ] -> only if RF board is installed and  
enabled
```

The supervisor menu allows data entry of:

- UIT Time
- UIT Date
- UIT Day
- TIM ID
- TIM Divide Ratio
- UIT ID
- RF Enable
- Set Base ID
- Quantity Limit

This data must be entered prior to use. The particulars of their functions can be found in the section UIT OPERATIONS.

The user menu allows data entry and/or data verification of:

- Download Transaction data
- Settings
 - Sleep Timer
 - Pump Timeouts
 - No pulse timeout:
 - Pump finish timeout:
- LCD Contrast
- DIAGNOSTICS
 - Counts Test
 - Card Reader Test
 - LCD Test
 - UIT Stats
 - Config Status