Operation manual

Please visit the Smart-Fill web page regularly to download the latest free updated version of this manual.

This manual Suits Smart-Fill with the following software versions…

9.6 – Standard single and multi hose systems. (Model numbers SF1006, Sf1005 SF1007, SF1008, SF1009 SF1010)

10.6 – NMI approved single hose systems. (Model numbers SF1001)

11.6 and NMI approved multi hose systems (Model numbers SF1002) with USB and modem connection data downloading.

PLEASE NOTE- This manual does not suit Smart-Fill systems previous to the above versions.
It is not suitable for systems using a memory key (ibutton) for data downloading.
Version 7.2, version 8 or version 9.4 manuals are required for memory key downloading.

Please read section 9, warranty terms, prior to use of your Smart-Fill equipment.

Safety warnings.

- Any safety concerns about the system should be immediately reported to your Smart-Fill supplier and the manufacturer.
- The system must be put out of order and not used if you have any safety concerns.

HIGH VOLTAGE WARNING.

- The Smart-Fill system usually involves hazardous electrical voltage levels.
- Any electrical installation, testing, repairs **MUST** be carried out by a suitably licensed electrician. The Smart-Fill manufacturer's bear no responsibility / liability for any work carried out by unqualified service personnel.
- All wiring MUST be in accordance with the relevant local / state / national regulations as required, and in accordance with AS/NZS 3000:2000.
- Special care must be taken to ensure that the wiring and location of Smart-Fill systems is in accordance with the relevant regulations and authorities for that location. Special attention must be paid to locating equipment in possibly hazardous areas.
- The manufacturer can not provide advice or specification for correct wiring or hazardous area regulations.
- Information must be sought from the relevant local authorities by the installing company.
- Smart-Fill enclosures are not rated for use in hazardous areas.
- The Smart-Fill must only be located in a non-hazardous area.
- The safety panel inside the Smart-Fill MUST NOT BE REMOVED. If the panel become broken or is missing, please contact your Smart-Fill supplier for a replacement safety panel.

Smart-Fill warranty statement.

- The Smart-Fill manufacturers warrant each Smart-Fill system against manufacturing faults or defects for 12 months from the date of purchase on manufacturer's sales invoice.
- Every Smart-Fill system is manufactured with all possible due care in design and assembly, and with good intent.
- Due to the remote nature of most of this type of equipment, the following warranty terms are strictly adhered to.
    - Warranty repair labour is only covered at the manufacturer's premises (located in Western Australia).
    - The warranty period commences from the date of purchase (invoice date) from the manufacturer to the end user or reselling agent.
    - Smart-Fill parts are warranted for a period of 9 months.
    - Smart-Fill repair labour is warranted for a period of 9 months, at the manufacturers premises only.
    - All fault diagnosis, removal / replacement and freight expenses are at the owners expense. The manufacturers are not liable for any of the costs in diagnosing / repairing faults / freight etc.
    - Any faults caused by electrical disturbance, poor installation quality, misuse or neglect will not be covered by any warranty.
    - An on-site warranty may be able to be negotiated with your Smart-Fill supplier. The manufacturer does not provide an on site warranty option.
    - **No warranty will apply if commissioning documents and photographs (as outlined in the commissioning document supplied with each Smart-Fill), are not sent to the manufacturer within 14 days of the system installation.**

- The manufacturers may not be held liable for any product or data loss, equipment damage or loss, equipment or business downtime, personal injury or death which is either directly or indirectly caused by the system hardware or software, regardless of the cause of the failure.
- If these conditions can not be agreed upon or are deemed unacceptable by the client, then the client must contact their supplier to arrange a resolution.

SPECIAL NOTES FOR USE WITH GENERATORS.

- **No warranty is available for Smart-Fill systems powered by portable generators, without an individual approval for the particular installation from the Smart-Fill manufacturers.**
- These approvals are issued only for a single installation.
- A separate approval is required for each individual system being powered by a portable generator.
- To enable the manufacturers to warrant any system connected to a portable generator, the system MUST be designed so that it is not possible for the generator to be started or stopped while the Smart-Fill is electrically connected to its power output.

    i.e.: The Smart-Fill must only be powered up after the generator is running with a stable regulated power supply, and must be disconnected from the power supply before the generator stops.

    At the very minimum a power failure relay and current sensing relay will be required.

Important notes.

IMPORTANT - Back up your data !

You should regularly back up your Smart-Fill system information, both at the Smart-Fill and at your office PC.

At the Smart-Fill system.

- **Use a USB drive to 'Export keys and PINs'.**
  This will back up a copy of the keys and PIN numbers on your Smart-Fill onto the memory card.
  If you ever had a lightning strike / power surge etc, this simple backup can save you all the work of having to reload your keys / PINs into the Smart-Fill.
- **Download your fuel data regularly.**
  You can download data onto the USB drive, or via the mobile phone network if your Smart-Fill has an optional modem fitted.

At your Office PC.

- **Back up the complete Smart-Fill folder each time you add a Vehicle or Driver to the lists.**
  Backup the data to your server or onto a USB drive, your USB drive etc.
  The default location for the Smart-Fill program is…
  "c:/ program files/ smartfill95/"
  Be sure to also back up the 'fuel reports' folder, which is located in C:\Users\Public\Fuel reports location. Do this after each data download.

- **Record your key numbers.**
  In the Smart-Fill software, you can record the internal ID number of each SmartFill key.

  If you did not record the key numbers when you allocated keys to vehicles, and you loaded the keys in manually at your Smart-Fill, please see the section explaining 'Copying KEYS and PINS from the Smart-Fill to your office PC'.

Smart-Fill Terminology.

There are words and descriptions used in this manual that may require some explanation.

Ibutton.
The small buttons which look like a watch battery. They are used to identify each vehicle. They may be mounted either in a key fob for attaching to a key ring etc, or they may be mounted directly onto your vehicle (when a reader wand is used).

Sensor pads.
The 2 stainless steel pads on the front of the Smart-Fill. You touch the ibutton keys onto the sensor pads to log into the Smart-Fill and start a fuel issue.

Vehicle key.
Another word for the unique ibutton that identifies each vehicle.

PIN number.
The unique identification number (any number from 1000 to 65000) which is used to identify each driver. PIN numbers can be linked to drivers, or to keys.

Driver ID number.
The number (1-2000) which identifies each driver loaded into the Smart-Fill.

Menu key.
The ibutton key which is used by the manager to access the system to add and disable keys and PIN numbers, and to change settings etc. There is only one MENU key supplied with each Smart-Fill, and it should be guarded carefully. It has a key tag with MENU KEY written on it. You can make 1 spare key into an extra Menu key.

Master key.
A key which can be used to fuel any vehicle. The driver then types in the vehicle number when prompted. A normal ibutton key can be loaded in and used as a master key.

USB drive.
The USB drive is used to download data from your Smart-Fill onto your pc. It can also be used to copy keys / pins between Smart-Fills etc.

Download.
The process of transferring data from the Smart-Fill onto your pc, where the vehicle details and driver names are attached to each fuel issue, and it is then converted into a spreadsheet so that you can view / print / further process the data.

LCD.
The liquid crystal display panel which you view on the Smart-Fill front door.

Walktime.
Sometimes also known as a no-flow timer.
This is a feature which stops the fuel pump from running for long periods of time without any fuel flow. It turns the pump off after its preset Walktime (number of seconds). This time period is adjustable by the manager.

Mode.
A system which the Smart-Fill uses to turn options on and off, and to configure the Smart-Fill.

Regular maintenance.

The Smart-Fill is relatively maintenance free. However there are a few items which may require attention occasionally.

Enclosure cleanliness.
The Smart-Fill enclosure should be kept as clean as possible.

Sensor cleanliness.
The sensors where the vehicle key is touched on should be kept clean.
If electrolysis is allowed to form on the surfaces around the studs, then the keys may not read correctly in damp / wet weather.

Keypad cleanliness.
The keypad silicon rubber cover should be kept clean, and free of petroleum products.
The silicon cover will handle most dirt and grime well, but it will swell up and fail if it becomes 'wet' with petroleum product. NEVER use solvents for cleaning, use only a weak detergent mix.
The keypad numbers (tiles) may be replaced if necessary without changing the whole keypad.

You can purchase new tiles (numbers) for the keypad if the old numbers have worn off.
The old tiles are removable, so you don't need to replace the whole keypad.

Basic Parts Identification.

MENU KEY

VEHICLE IDENTIFCATION KEY
(ibutton)

Getting more from your Smart-Fill.

Reader Wand.

Enables you to mount the vehicle touch keys onto the vehicle, somewhere near the fuel tank.
If you have trouble with staff losing keys, or using keys from other vehicles, taking keys home etc, then this solves all of those problems.
The key is mounted onto the vehicle, and a small hand held reader wand is connected to the Smart-Fill by a thin data cable. To start a fuel issue, you simply touch the wand onto the key near the fuel tank.
The data cable is a low cost consumable part, and should be replaced at least every 12 months.

Extra keys.

You can purchase extra fuel keys from your Smart-Fill supplier. It is advisable to have a few spare keys available, as freight of keys to some remote sites may take a few days.

Software and operator manual updates.

The latest PC software and operator manual updates are available free of charge at the Smart-Fill web page on the UPDATES page. If your version of pc software has an upgrade there, you are able to download the update free of charge.
The Smart-Fill web page is at   www.Smart-Fill.com.au

Spare MENU key.

It is advisable for you to set up a spare MENU key when you first install the Smart-Fill.
If you lose your MENU key, it is a detailed procedure to replace it if you haven't made a spare.
Please see section 5.1 on adding vehicle keys for the correct number to use to make a spare MENU key. You can use a spare vehicle key to create the spare MENU key.

Master key for fuelling any vehicle.

You can set up a normal identification key (ibutton) as a Master key.
This enables you to fill any vehicle, using the Master key.
When you touch the Master key onto the sensors to start a fuel delivery, the Smart-Fill will prompt you to enter the vehicle ID number (1 to 2000).
This is ideal for a service truck operator to be able to fuel all vehicles in a fleet.
WARNING : The operator must enter in the correct number, or the fuel will be allocated to the wrong vehicle. See the section on ADDING KEYS for information on creating a master key.
You can actually create 2 master keys from normal keys.

Linking keys and PIN numbers.

You can set the Smart-Fill system so that a PIN number is linked to the ibutton key, instead of the PIN number being linked to each driver. See the section on adding PIN numbers for details.

Linking keys to pump 1 or 2.

On a Smart-Fill which only controls 2 hoses (pump 1 and 2), you can set the system so that all odd numbered keys will operate pump 1, and even numbered keys will operate pump 2.
When the driver touches the key on, the system automatically selects pump 1 or 2.
See the section on the MODE setting for setup details.

How it works.

How it controls access and records fuel.

There are basically 2 different types of Smart-Fill systems.
They differ in the way they control the fuel dispenser. Some systems control fuel flow directly by switching a valve or motor, and count the Litres by receiving pulses from the flow meter or a pulser interface.
Other systems control the complete dispenser system via communications, where it simply 'tells' the dispenser when to start, and 'asks' how many Litres were taken etc.

On version 9 systems.
- The Smart-Fill controls the fuel dispensing system by switching the pump motor on / off, or switching a valve of some type.
- It record the Litres of fuel taken by counting pulses which are produced by the dispenser fuel meter. Sometimes a pulse interface device is installed to generate pulses as fuel flows.
- The Smart-Fill will not switch on the pump or valve until it has been authorised by a valid KEY and PIN number (if PIN number requesting is turned on).

On version 10 and 11 systems.
- The Smart-Fill controls the dispenser via communications, basically it tells the dispenser when to start / stop, and asks the dispenser how many Litres were taken.
- The Smart-Fill will not tell the dispenser to start until it has been authorised by a valid KEY and PIN number (if PIN number requesting is turned on).

Recording data.
- At the end of each fuel issue, the Smart-Fill saves the fuel issue data into 2 permanent memory chips.
- Chip 1 can be reset by the manager after the data has been downloaded to a pc.
- Chip 2 can not be reset, and it always contains the most recent 4000 fuel issues.
- All of the data stored in the Smart-Fill memory is safe for at least 20 years without power being connected.

Downloading data to your pc.
- Downloading data is the process of getting your fuel transactions from the Smart-Fill onto your pc. There are a few ways to do this.
    - Using an USB drive.
    - Using a mobile phone modem.
    - Using a satellite phone modem.
    - Using a cable connection.
- When you download data to your pc, you are simply copying each fuel issue from the Smart-Fill memory to your computer.
- The Smart-Fill software is used to get the data from the SD card or via the phone network, and to convert the data into a spreadsheet so that you can view it, print it, or further process for you company internal book-keeping.
- When you download the data from the Smart-Fill, it is not deleted automatically.
- You MUST clear the memory manually if you wish to delete the data downloaded.
- The data is not cleared at the Smart-Fill unless you clear it using the MENU key, or the special access code when connected via phone network or cable.

Getting started.

Touching the keys to the sensors.

When you touch your key onto the sensors on the Smart-Fill door, the front and side surfaces of the key need to touch onto the 2 sensor studs as shown below. The middle of the key must touch the bottom stud, and the outside of the key must touch the longer top stud.

- **Please note that some systems may take up to 2 seconds to see the key at the sensor, depending on the options attached to the Smart-Fill.**
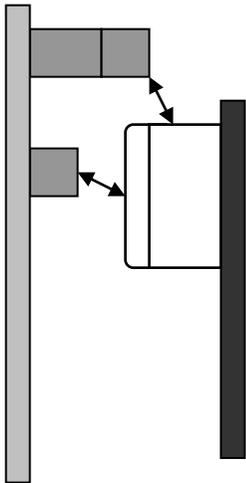
Allocating vehicle numbers.

- Before you can use the Smart-Fill system, you must allocate a key to each vehicle which needs to access the system.

- The system has a capacity of 2000 keys, so you must allocate each vehicle a number from 1 to 2000.

Allocating PIN numbers.

- A PIN number can be any number from 1000 to 65000.
- PIN numbers can be set up in the Smart-Fill in 2 ways.

You set your preferred PIN number setup in the **MODE** options setup.

You can set the system PIN numbers up in the following 2 ways…

- **The PIN numbers are linked to each driver, and the driver is identified for each fuel issue.**
  Advantages…
  - Drivers can be identified for each fuel issue, (higher security).
  - Any driver in your fleet can fuel any vehicle, and they need only to know their own PIN number.
  - You can lock a driver out of the system by changing their PIN number at any time.
  Disadvantages…
  - More work in maintaining your list of drivers and loading / disabling PIN numbers.

- **The PIN numbers are linked to each key, and the driver is not identified at each fuel issue.**
  Advantages…
  - Groups of keys can use the same PIN number.
  - Less work maintaining your PIN numbers in the Smart-Fill.
  Disadvantages…
  - Unable to identify the driver taking fuel each fuel issue.
  - Groups of people need to know the PIN number (lower security).

How to take fuel from the system.

- The driver touches the vehicle ID key (button) onto the sensors on the Smart-Fill unit. This key identifies the vehicle to the Smart-Fill.

  The Smart-Fill checks if the key is authorized, if the vehicle key is not authorized, the pump won't start.

- The Smart-Fill then requests the Speedo / hour meter reading. The driver enters this into the Smart-Fill keypad. (only if Speedo requesting is turned on in the MODE setup).

- The Smart-Fill then requests the PIN number. The driver enters this into the keypad.
  (only if PIN number requesting is turned on in the MODE setting).

  The Smart-Fill checks the pin number. If the pin number is not valid, the fuel pump won't start.

- The driver fuels the vehicle. Once the fuel delivery is complete, the Smart-Fill stores the details in its memory.

The Smart-Fill MENU.

The Smart-Fill MENU is used to add keys and PIN numbers, and change the system settings etc.
The MENU is accessed by touching the MENU key (managers key) onto the sensors.
The MENU will scroll through, and you simply press ENTer to select the option you would like, while it appears on the screen.
PLEASE NOTE – Some of the following options will not appear on your Smart-Fill system, depending on the version you have.

Add a new touch key.

Used to enter a new vehicle key into the system, or to disable an existing key. See the section on 'Adding keys' for details.

Add a new driver PIN.

Used to enter a new driver PIN number into the system, or to disable an existing PIN / exclude the driver. See the section on 'Adding PINs' for details.

Save data to USB Device.

Used to copy fuel transaction data from the Smart-Fill memory onto the USB drive.

Clear system memory.

Used to clear the fuel transactions from the Smart-Fill memory, after a data download.
The data on the main memory chip is cleared, but the backup memory is not (it can not be cleared).
The KEYS / PIN numbers are not cleared, only the fuel transactions in the main memory chip.
NOTE – The data does not clear unless you PRESS and HOLD the ENTer key until 'CLEARING' shows on the display. You are warned a few time 'Are you sure', you must keep pressing the ENTer key until CLEARING appears.

View fuel totals.

Used to view the cumulated total for a particular key. Can also be accessed on some systems by pressing 2 on the keypad.

View system settings.

Scrolls through and displays the most important of the Smart-Fill settings.

Set time and date.

Used to set the time and date in the Smart-Fill.
Clock format is 24 hour.
You must type in every digit, and the new setting is not saved until you press a key on the last digit.

Set system Mode.

The Smart-Fill mode sets up the system options.
DO NOT change this setting unless you understand what you are doing.
Please contact your Smart-Fill supplier, or consult the relevant section of this manual before changing the MODE setting.

Low memory alarm.

The level at which the low memory warning will appear, can be adjusted by the manager. The default setting is 2400 fuel issues (80% of memory capacity).
So when the Smart-Fill contains 2400 fuel issues in its memory, the display will show 'LOW MEMORY', and the system will beep regularly.
The data must be downloaded, and the memory must be then cleared to remove the warning.

The Test comms TX line.

If you have a pc connected to the Smart-Fill via a hardwired connection, you can test the comms TX line from the Smart-Fill to the pc. This is useful for technicians to diagnose faults or check system setups etc.
To test the comms line.
Connect the test rs232 or rs485 receiving pc to the office end.
Start the terminal program, such as Hyper-terminal or similar.
Touch the MENU key to the sensors to start the MENU operating.
When "COMMS TEST" or "TEST COMMS TX LINE" appears, press the ENTer key.
A test data string will stream from the Smart-Fill TX line, at 9600,n,8,1, with no handshaking.
You can test the Smart-Fill rx line by sending the 3 characters "XX", CR (ENTER) to stop the data stream.

Read touch key ID number.

If you have a pc connection to your Smart-Fill, you can load keys into the system remotely. Also you can enter your key (ibutton) id numbers into the Smart-Fill pc software for backup or transferring to a Smart-Fill.
To do this you need to know the internal ID number of the ibutton (vehicle key) you are loading into the system. The ID number is laser printed onto the front of the key, but normal wear and tear scratches this off in a short time. In this case, to see the internal ID number, you can view it on the Smart-Fill screen.

To read a key ID number.
Touch the MENU key to the sensors to start the MENU operating.
When "READ TOUCH KEY ID NO" appears, press the ENTer key.
Touch the key to the sensors.
The ID number will appear on the screen, write it down.

Maximum delivery.

        The maximum amount of fuel allowed in one issue can be set by the manager.
The Smart-Fill will stop the pump / valve at the set amount.
This is a global setting for all fuel issues, and **can not be set individually** for each key / vehicle.
To set the maximum delivery.
Touch the MENU key to the sensors to start the MENU operating.
When "Maximum delivery" appears, press the ENTer key.
Type in the number of Litres you want as a maximum, and press ENT.
NOTE – The maximum value you can set is 60,000 Litres.

Set Walk-time (no flow).

The Smart-Fill has a feature which prevents the pump from running for extended periods with no fuel flow. We call this 'Walktime'. The amount of time can be adjusted on version 9.5 systems for up to 2 minutes, in 1 second increments.
To set the walk-time.
Touch the MENU key to the sensors to start the MENU operating.
When "SET WALKTIME" appears, press the ENTer key.
Type in the number of seconds you require for Walktime, and then press the ENTer key.

Set site ID number. (Single hose Smart-Fills only)

Users of more than 1 Smart-Fill, can set a site ID number internally in the Smart-Fill, to identify which system the download is from. The number can be any number from 1 to 16. The site ID number then appears in the 'PUMP NUMBER' column of the data download.

To set the site ID number.
Touch the MENU key to the sensors to start the MENU operating.
When "SET SITE ID NUMBER" appears, press the ENTer key.
Type in the number and press the ENTer key.

Set site Offset. (Multiple hose Smart-Fills only).

Users of multi hose Smart-Fills, can set the offset number for that system.
E.g.:
Your company has 2 dual hose Smart-Fill systems, so the data from both would show in the download as pumps 1 and 2. You can set the offset number in one of the systems to 2, and this would then make the pump numbers appear in the download as 3 and 4.
The offset number is simply added to the pump number for the data recording purposes.

To set the site offset number.
Touch the MENU key to the sensors to start the MENU operating.
When "SET SITE OFFSET" appears, press the ENTer key.
Type in the number and press the ENTer key.

Calibrate KFactor.

Used to adjust the calibration of the Smart-Fill, to the number of pulses per Litre it is receiving from the flow meter / interface.
Should only be adjusted by installation / service staff.
Calibration instructions are not provided with this manual.
Consult your Smart-Fill supplier for calibration advice.

Export Keys and PINs.

Used to copy the complete list of keys and PIN numbers from the Smart-Fill system onto the USB drive.
See the relevant section of this manual for a detailed explanation.

Import Keys and PINs.

Used to copy a list of keys and PIN numbers from the USB drive into the Smart-Fill.
This requires an ACCESS code, the access code is the 'ID Number' written on the MENU key tag (NOT the Serial Number.).
See the relevant section of this manual for a detailed explanation.

Issue display time.

Not available on all versions.
The Smart-Fill shows the fuel delivery details on its display at the end of a delivery. The amount of time that it stays on the display can be set, to a maximum of 1 minute, in 1 second increments.
To set the display time.
Touch the MENU key to the sensors to start the MENU operating.
When "ISSUE DISPLAY TIME" appears, press the ENTer key.
Type in the number of seconds, and press the ENTer key.

Adding vehicle keys.

The ibutton type ID keys will not work until you load them into the Smart-Fill using the MENU (managers) key.

You can load them into the Smart-Fill system via the following methods...

- Enter them into the Smart-Fill system manually, using the MENU key.
- Enter them into the Smart-Fill program on your PC, and then use the memory card to copy them to the Smart-Fill system.
- Dial in remotely if you have a modem link or cable connection, and load them one by one.
- Copy them over from another Smart-Fill using the memory card.

A few facts about the vehicle touch keys (ibuttons)...

- The keys are very secure. The Smart-Fill gives 16,777,216 possible key combinations.
- You can use one key in each vehicle, and use that key at multiple Smart-Fill systems.
- You can load up to 2000 keys into each Smart-Fill system.
- You can only have 1 key for each vehicle, (unless you allocate more than 1 id number (1 to 2000) to the vehicle).
- You can use your MENU key to disable a key, by simply loading the MENU key into its place.
- You can use keys again if you have lost / disabled them.
- **NOTE**. If you load a key in as more than 1 ID number, then it will always find the lowest number first.
- You can purchase new / replacement keys from your Smart-Fill supplier.
- You can mount the keys (buttons to the vehicle to prevent swapping and loss, and use a special reader wand to touch onto the vehicle mounted button.

The following key locations are reserved...
- **2001 - Can not be used.**
  Location 2001 is reserved to identify unauthorized fuel issues detected by the Smart-Fill. Any fuel issue which has key number 2001 indicates that the fuel meter sent out a pulse when the Smart-Fill was not authorised by a key.
- **2002 and 2003 - Master keys.**
  These keys will allow the operator to type in the vehicle ID number (1 to 2000). Ideal for service truck operators.
- **2004 - Spare MENU key.**
  We recommend you create a spare MENU KEY as backup.

How to add a new vehicle key into your Smart-Fill.

- Have the new key ready.
- Touch the **MENU** key onto the sensors, to start the MENU operating.
- When "**ADD NEW KEY**" appears, press enter.
- The system will show "**ENTER VALUE**" on the display.
- Type in the ID number for the key (a number from **1 to 2000**), and press Enter.
- When prompted, touch the new key to the sensors, <u>being sure to make a clean contact without pressing too hard.</u>
- The display will show '**ENTER VALUE**' again, you can either load in another new key, or press cancel to exit.

How to disable a lost or no longer required vehicle key…

- Touch the **MENU** key onto the sensors, to start the MENU operating.
- When "**ADD NEW KEY**" appears, press enter.
- The system will show "**ENTER VALUE**" on the display.
- Type in the ID number for the key you are disabling (a number from **1 to 2000**), and press Enter.
- When prompted, touch the **MENU** key back onto the sensors, being sure to make a clean contact without pressing too hard, as shown previously.
- This will stop the original key from operating.
- You can either disable another key again, or press cancel to exit the routine.

Transferring keys from version 9.4 to new 9.6 system…

NOTE – You first MUST have the LATEST release of version 9.4 and 9.5 SmartFill software on your PC.

1. Create a backup **memory key** in your **v9.4** SmartFill, as key number **1004**.
    NOTE – You need a memory key, not a standard vehicle key, they are different.
    You can use your data downloading key, but you must first disable key 1001.
2. Download the keys and pins from the v9.4 system onto the key, by clipping it inside the door. Then wait until REMOVE KEY appears.
3. You need to update your SmartFill version **9.4** pc software, to the latest version **9.4** exe file (**NOT 9.5**) from the UPDATES page at the SmartFill web site before continuing.
4. Start the SmartFill **v9.4** software.
5. Clip the memory key into the download cable.
6. Click on USB or SERIAL for the download adaptor type.
7. Click on TOOLS then IMPORT / EXPORT KEYS for SDcard.
8. Follow the prompts.
9. Note where you have saved the 2 files.

Using your new version 9.6 pc software…
1. Start the version **9.6** software.
2. Click the top Vehicle list tab.
3. Click 'get keys from Sd card'.
4. Browse to the files you created previously.
5. Click on the correct file and click OK.
6. Now click on the Driver / Pin list tab.
7. Click 'get PINs from SD card'.
8. Browse to the files you created previously.
9. Click on the correct file and click OK.

Save the vehicles and Pins onto your USB drive…
1. Start the version **9.6** software.
2. Click the top Vehicle list tab.
3. Click 'Save keys to Sd card'.
4. Follow the prompts and save to the SD card.
5. Now click on the Driver / Pin list tab.
6. Click 'Save PINs to SD card'.
7. Follow the prompts and save to the SD card.

Copy your Keys and PINs from the USB drive to your new SmartFill…
1. Take the USB drive and the door key to the SmartFill unit.
2. Unlock the SmartFill door.
3. Insert the USB drive into the USB connector on the front of the door
4. Wait about 10 seconds.
5. Start the Menu running by touching the MENU key to the sensors.
6. Press ENTer when "Import Keys and Pins' appears on the display.
7. Enter the Access code, this is the ID number (not the serial number) written on your MENU key.
8. The keys and pins will copy into the SmartFill.
9. Test a key and PIN number.

Adding vehicle keys remotely via modem or cable...

NOTE – You first MUST have the version 9.6.1or later SmartFill software on your PC.

1. You must have dialed in and connected to your SmartFill, with the window below on your screen.
2. Click on "Add a vehicle key"
3. In the first popup window, type in the vehicle number (1 to 2000) and then press Enter.
   NOTE – You can also enter master keys as number 2002, 2003 plus a spare MENU key as number 2004.
4. In the second popup window, type in the 6 digit ibutton ID number and then press Enter.
   NOTE: The number is engraved onto the steel ibutton face. It is also on the plastic key fob on newer ibutton keys.
   If the markings have worn off, you can also view the 6 Digit ID by just touching the key onto a SmartFill system.
5. Repeat the above process to add more keys.

Deleting vehicle keys remotely via modem or cable...

NOTE – You first MUST have the version 9.6.1 or later SmartFill software on your PC.

1. You must have dialed in and connected to your SmartFill, with the window below on your screen.
2. Click on "Delete a vehicle key".
3. In the popup window, type in the key number you wish to delete. (1-2000) and then press Enter. *NOTE – You can also delete key numbers 2002, 2003 and 2004.*
4. Repeat the above process to delete more keys.
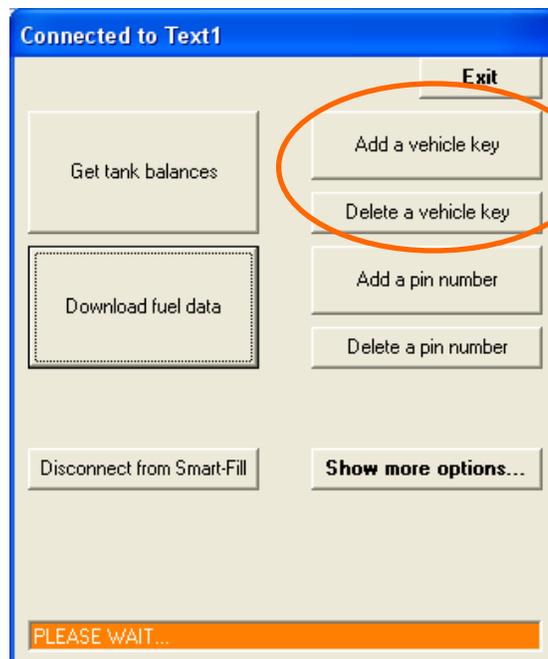
Adding PIN numbers.

A few facts about PIN numbers…

- The PIN number system is designed primarily to provide extra security for your Smart-Fill system, and also to identify the driver who fuelled the vehicle if required.
- You can load up to 2000 PIN numbers into the system.
- A PIN number can be any number from 1000 to 65000.
- You can disable a PIN, by simply loading a different PIN into its place.
- **WARNING**. If you have PINS not linked to keys, and you load the same PIN number into the system for 2 drivers, it will always find the lowest driver ID number first. To prevent this, ensure that all drivers have different PIN numbers.

How to add a PIN number for a driver.

- Touch the MENU key onto the sensors.
- When "ADD PIN NUMBER" appears, press enter.
- The system will show "ENTER VALUE" on the display.
- Type in the ID number for the driver (a number from 1 to 2000), and press Enter.
- Type in the PIN number for the driver (a number from 1000 to 65000), and press Enter.
- You can either add another PIN again, or press cancel to exit the routine.

How to disable a PIN number…

- Touch the MENU key onto the sensors.
- When "ADD PIN NUMBER" appears, press enter.
- The system will show "ENTER VALUE" on the display.
- Type in the ID number for the driver or Key, and press ENTer.
- Type in a random PIN number from 1000 to 65000 and press ENTer.
  TIP – Use a 5 digit number (less than 65000) when disabling a PIN number.
- You can either disable another PIN again, or press cancel to exit the routine.

Copying KEYS and PIN numbers between Smart-Fill systems.

Note, the 'source' system is the Smart-Fill you are copying the keys from.
The 'destination' system is the Smart-Fill you are copying the keys onto.

Copying keys and pins from the Smart-Fill onto the memory card.
At the SOURCE Smart-Fill.
- Insert the memory card into the slot behind the door on the RED circuit board.
- Start the MENU with the MENU key.
- Press ENTer when **EXPORT KEYS PINS** appears on the screen.
- Do not remove the card until "Remove Card" appears.

Copying keys and pins from the memory card onto the Smart-Fill.
IMPORTANT – Before you can copy the keys and pins to the destination Smart-Fill, you MUST rename the first 4 digits of the 2 files on the SD card, to match the serial number of the destination Smart-Fill.
Example : If you are copying from system serial No 1355 to system 1349, then you must rename the files called 1355KEYS.SFK and 1355PINS.SFP
You must rename them to
1349KEYS.SFK and 1349PINS.SFP

You will need the MENU key and door key for the destination Smart-Fill, and the SD card to perform this operation.
- Open the destination Smart-Fill door, and insert the SD card into the slot on the RED board.
- Touch the MENU key to the Smart-Fill to start the menu scrolling on the display.
- When IMPORT KEYS PINS appears on the screen, press ENTer.
- When 'ACESS CODE' appears, type in the MENU key ID number and press ENTer. The MENU key ID number is written on the MENU key tag, NOTE – ID number – not Serial number.
- WARNING - Do not remove the card until "Remove card" appears.

Always test a few keys and pin numbers to be sure that keys have copied across OK.

Downloading data.

Downloading normal fuel transactions using memory card.

- Take the USB drive and a door key to the Smart-Fill.
- Unlock the Smart-Fill door.
- Insert the memory card into the slot on the RED circuit board.
- Start the MENU using the MENU key.
- Press ENTer when 'Save data to USB device appears on the screen.
- Nothing will happen for a few seconds while the Smart-Fill checks the card, then you should see numbers counting on the screen as the data is copied.
- **DO NOT** remove the card until 'Remove USB' appears on the screen.
- Go to your pc and download data from the card onto a computer.
  SEE SEPARATE INSTRUCTIONS FOR DOWNLOADING DATA AT THE PC.
- **After confirming that all data looks OK, return to the Smart-Fill and clear the memory.**
- NOTE – The Smart-Fill can be configured to automatically clear the memory after downloading data to the USB drive. WARNING – This is will clear the normal memory automatically as soon as the data is downloaded, without checking any of the data. However the backup data will remain unchanged, as it can not be cleared.
  To make your Smart-Fill automatically clear the memory, simply set the low memory warning to 2401.

Downloading BACKUP fuel transactions using USB Drive.

- Take the USB Drive to the Smart-Fill.
- Unlock the Smart-Fill door.
- Insert the memory card into the slot on the RED circuit board.
- Start the MENU using the MENU key.
- Press ENTer when 'Save data to USB device appears on the screen, then…
- **IMMEDIATELY Press and hold 1** on the keypad for 15 seconds.
- You should see numbers counting on the screen as the data is copied.
- **NOTE** – This procedure takes approximately 15 – 20 minutes, due to the large amount of data being copied to the card (4000 fuel issues).
- **DO NOT** remove the card until 'Remove card' appears on the screen.
- Go to your pc and download data from the card onto a computer.
  PLEASE SEE SEPARATE INSTRUCTIONS FOR DOWNLOADING DATA AT THE PC.
- You can not clear / delete the backup memory.

Download using modem.

The procedure for downloading data using a pc connection is outlined in the separate information sheet to suit the download method. However, the basic procedure for all pc connections is…

- Start the Smart-Fill program on your pc.
- Click on *Download data from …*   **MODEM**.
- Click on the button at left of the Smart-Fill you want to connect to.
- When connected, click on the **DOWNLOAD** button.
- Once downloaded, you can choose to clear the memory if required.
  The access code to clear the memory is the ID number written on the MENU key.
- Click to **DISCONNECT** from the Smart-Fill. You **MUST** disconnect this way.
- Click on CREATE A FUEL DATA FILE.
- Follow the prompts to save the data file in a spreadsheet format.

Downloading from a modem / Smart-Fill on a vehicle.

It is recommended the following procedure be followed to ensure good communications...

- The vehicle **MUST be stationary**.
- The vehicle should have its engine switched off.
- The Smart-Fill must be powered on.
- The vehicle needs to be in an area with acceptable phone signal strength.
- NOTE - The Smart-Fill incorporates a method to check the signal strength. Simply press 4 on the keypad, and the signal strength is shown on the display.

Clearing the memory in the Smart-Fill.

- The memory in the Smart-Fill **MUST** be cleared regularly after downloading data, to prevent the Smart-Fill memory from becoming overfull.
- The maximum number of fuel issues allowable in memory is 3000.
- If you use a modem or cable connection to dial into the Smart-Fill, you cannot clear the memory until **after** you have downloaded data. You also need to enter an access code to clear the memory. The access code is the MENU key ID number written on the MENU key tag (not the serial number – please check).
- **TIP** – If you wish to automatically have the memory cleared after downloading (to SD card only), set the 'Low Memory Alarm' level to 2401. Then as soon as the data has been saved to the memory card, the memory will be cleared. **Do not do this until you are familiar with the operation of the Smart-Fill system.**

Clearing the memory for memory card type downloads.

- At the Smart-Fill, touch the MENU key to the sensors to start the MENU operating.
- When "CLEAR SYSTEM MEMORY" appears, press and hold the ENTer key.
- When "CLEARING" appears on the display, you can stop pressing the ENTer key.
- The memory has now been cleared.
  WARNING – The memory only clears if CLEARING shows on the display.

Clearing the memory for modem / hardwire type downloads.

When you click on DOWNLOAD after connecting to the Smart-Fill, the download can commence.
After the data has finished downloading, the DOWNLOAD button now shows CLEAR MEMORY.
This is the only time it is possible to clear the memory when dialing in remotely.
If you forget to clear the memory at this point, you will need to download data again before the CLEAR MEMORY button will become available.

- Immediately after downloading data to your pc, click on CLEAR MEMORY.
- When prompted for an access code, type it in and press OK.
- NOTE – The access code is the ID number (not the serial number) written on the MENU key.
- The response message box should turn red and confirm that the memory has been cleared.

Smart-Fill MODE options.

The Smart-Fill mode setting is used to set up the system options. This enables the manager to turn on or off, items such as PIN number requesting, Speedo requesting, modem communications etc.

The method used, is simply adding a different amount for each option, to a mode number. The number starts as zero, and then you add a certain number onto the mode if you want that particular option, or don't add it to the mode if you don't want the option.

Mode charts.

NOTE – Mode charts differ depending on the model of your Smart-Fill system. Some options listed may not suit your Smart-Fill, depending on the build date.
For this reason it is important to select your type of Smart-Fill before you change the mode setting, and contact the manufacturers by email only before adjusting the Mode setting. Email address is sales@Smart-Fill.com.au Please include details on the options you wish to use, and tell us your system Serial number (which is written on the MENU key, and on the Smart-Fill ID data plate, usually affixed to the bottom RH side of the Smart-Fill.

The charts below give basic numbers and explanations for each mode option.

Again, please **EMAIL** us if you are unsure.

Mode options for AC powered systems only.

Value	v9.5 Single	v9.5 Multi	v10.5 Gilbarco comms single	v10.5 Acme single	v11.5 Multi Gilbarco or Acme comms
1	N/A	Link keys to Pump 1 or 2	N/A	Link PINs to Keys	Link keys to Pump 1 or Pump 2
2	Radio start	Radio start	N/A	N/A	Radio start
4	Preset Delivery	Preset Delivery	Preset Delivery	Preset Delivery	Preset Delivery
8	Comms type	Comms type	N/A	Comms type	Comms type
16	N/A	N/A	5 / 6 Digit	N/A	N/A
32	Turn comms On	Turn comms On	Turn comms On	Turn comms On	Turn comms On
64	SmartDip fitted	SmartDip fitted	SmartDip fitted	SmartDip fitted	SmartDip fitted
128	Ask for Pin No	Ask for Pin No	Ask for Pin No	Ask for Pin No	Ask for Pin No
256	Display Litres	N/A	N/A	N/A	N/A
512	Flow meter detect	N/A	Radio start	N/A	N/A
1024	Link Pins to Keys	Link Pins to Keys	Link Pins to Keys	N/A	Link Pins to Keys
2048	Daily Dip SMS	Daily Dip SMS	N/A	Daily Dip SMS	Daily Dip SMS
4096	N/A	N/A	N/A	N/A	N/A
8192	N/A	N/A	N/A	N/A	N/A
16384	Ask for Speedo	Ask for Speedo	Ask for Speedo	Ask for Speedo	Ask for Speedo
32768	N/A	N/A	Pump Codes	N/A	N/A

Mode options for DC powered systems only.

Value	v9.5 Single	v9.5 Multi	v10.5 Acme single	v11.5 Multi Acme comms
1	N/A	Link keys to Pump 1 or Pump 2	Link PINs to Keys	Link keys to Pump 1 or Pump 2
2	Radio start	Radio start	N/A	Radio start
4	Preset Delivery	Preset Delivery	Preset Delivery	Preset Delivery
8	Comms type	Comms type	Comms type	Comms type
16	N/A	N/A	N/A	N/A
32	Turn comms On	Turn comms On	Turn comms On	Turn comms On
64	SmartDip fitted	SmartDip fitted	SmartDip fitted	SmartDip fitted
128	Ask for Pin No	Ask for Pin No	Ask for Pin No	Ask for Pin No
256	Display Litres	N/A	N/A	N/A
512	Flow meter detect	N/A	N/A	N/A
1024	Link Pins to Keys	Link Pins to Keys	N/A	Link Pins to Keys
2048	Daily Dip SMS	Daily Dip SMS	Daily Dip SMS	Daily Dip SMS
4096	N/A	N/A	N/A	N/A
8192	Auto power off	Auto power off	Auto power off	N/A
16384	Ask for Speedo	Ask for Speedo	Ask for Speedo	Ask for Speedo
32768	Set as 2 hose single. NOTE-Rev09c.pcb or later circuit board only	N/A	Set as 2 hose single. NOTE-Rev09c.pcb or later circuit board only	N/A

Mode chart abbreviation meanings.

- **Radio start.**
  Add if vehicle radio authorization modules are used in any of your vehicles, and a radio module fitted to the Smart-Fill.
- **Preset Delivery.**
  Add if you wish to preset Litres before a delivery, and turn the pump / valve off at the requested amount. **WARNING** – Does not ramp down the flow prior to stopping, care must be taken with sudden stopping of some dispensing systems.
- **Comms type.**
  Add only if using a cable connection between the Smart-Fill and office pc. Leave out for 3G or satellite modem comms.
- **Turn Comms On.**
  Add if using any type of data connection (modem or cable) between Smart-Fill and office pc.
- **SmartDip fitted.**
  Add if a SmartDip tank gauging system is built into the Smart-Fill system.
- **Ask for Pin No.**
  Add if you want to request a PIN number for each fuel issue.
- **Flow meter Detect.**
  Add if you wish for the Smart-Fill to detect flow meter movement when the system is unauthorized. This option should not be used unless the metering system is set up correctly with non return valves etc, as errors will occur.
  Its primary purpose is to alert you if fuel has been taken when the system has not

been authorised with a key.
This feature is not available with all Smart-Fill versions for various reasons.

- **Link Pins to Keys.**
  Add if you require the PIN numbers to be linked to vehicle keys, instead of the PIN numbers identifying the driver issuing the fuel. This method will NOT identify the driver at each fuel issue.
- **Daily Dip SMS.**
  Add if you have SmartDip (Version 7 or later only) fitted, plus you have a modem connected to the SmartFill, and you wish to receive a daily SMS message, at a preset time. The preset time is set in the V7 SmartDip board.
- **Auto power off.**
  Add if you wish for the Smart-Fill to power itself off after a timeout period in minutes. The time period can be set in minutes in the MENU. Available on DC powered systems only.
- **Ask for Speedo.**
  Add if you wish to enter Speedo / Hour meter readings for each fuel issue.
- **Link keys to Pump 1 or Pump 2. (2 hose systems only)**
  Add if you wish for Odd numbered keys to automatically start pump 1, and even numbered keys to automatically start pump 2.
  The driver will not be required to enter a pump number.
  This can be used to prevent diesel keys accessing petrol pumps etc.
- **Show pump codes.**
  Add if you wish to permanently show Gilbarco comms pump codes on the display. This is for service personnel only. See Smart-Fill / Gilbarco comms documentation for further information.
- **Set as 2 hose single.**
  Add if your system is a single SmartFill, but you have 2 outlet hoses, each controlled by a solenoid valve etc. This enables you to use only 1 pump and flow meter, and select hose 1 or 2 for the delivery.

Calculating the correct mode setting.

First, you must select your version of Smart-Fill from the charts above.
The mode value is obtained by adding together the options that you need from the chart. For example, to turn Pin number requesting on, and turn Speedo requesting on, you would add 128 and 16384. The result is 16512. Any of the options that you don't need, don't add their value to the mode value, i.e.: treat them as a zero.

Changing the mode setting.

The mode value is easily changed, using the MENU key.
- Touch the MENU key to the sensors, to start the menu operating.
- When "SET SYSTEM MODE" appears, press ENTer.
- Type in the new mode value, and press ENTer.
- The mode setting will now be updated.

Smart-Fill PC software

Installing software onto a pc

You may need to have your I.T. people do the software installation, so that it can be done under the administrator's password.
The most common cause of problems when installing software is that the installation is done without administrator's rights.

The Smart-Fill software comes with your Smart-Fill on either an USB drive, or a USB drive.
The latest version software is also available as a free download from the Smart-Fill web page, on the software updates page.   www.smartfill.com.au

You should download and install the latest exe file regularly to keep your software at the latest version.

- Insert the Smart-Fill memory card or USB drive into your pc.
- Wait for it to be recognized by your PC.
- Open the folder 'SmartFill v95 PC software'.
- Run (double click on) the file 'Smart-Fill95.msi .
- Go along with the suggested default location for the Smart-Fill program.
- Run the Smart-Fill program (from the icon in the START menu).
- Remove the CD or USB drive, and store in a safe place.
- After you enter your vehicles / key numbers and drivers into the software, back up the lists to the memory card.

How a data download works.

- Data is stored in the Smart-Fill on a memory chip.
- When you do a download, you simply copy the data from the Smart-Fill memory onto the memory card, or directly to your pc if you use a cable or modem.
- After the download, the data file needs to be converted into a useable spreadsheet containing your vehicle / driver details.
- All of this is handled very simply by the Smart-Fill software.
- After downloading data, the memory should be cleared at the Smart-Fill. See the relevant sections for clearing the memory.

Downloading data from the Smart-Fill to your pc can be done in the following ways depending on the hardware / setup of your Smart-Fill system.

Using a memory card.

- The data is copied from the Smart-Fill onto the USB drive by inserting the driver into the connector on the front of the door
- The USB drive is then taken to your office computer and inserted into USB port on your pc.
- The Smart-Fill software copies the fuel data onto the pc.
- The Smart-Fill software is used to create a fuel data file. This procedure adds vehicle registration numbers, fleet codes, driver names etc to the fuel data, and it converts the data into a spreadsheet format so that it can be easily viewed, or further processed.
- Once confirming that the data looks OK, the operator then returns to the Smart-Fill and clears the memory using the MENU key.

Using a mobile phone or satellite modem, or a data cable.

- The operator starts the Smart-Fill program on the office pc, and selects which Smart-Fill to connect to.
- The Smart-Fill software connects via the mobile phone network to the Smart-Fill.
- The operator clicks on DOWNLOAD, and all data is copied to the office pc.
- The operator then can clear the memory using a special access code.
- The operator disconnects from the Smart-Fill.
- The Smart-Fill software is used to create a fuel data file. This procedure adds vehicle registration numbers, fleet codes, driver names etc to the fuel data, and it converts the data into a spreadsheet format so that it can be easily viewed, or further processed.

Setting up software for a modem connection.

Please note that you need to put your pc com-port number at step 7. If you don't know what com-port number to use, look in Control Panel, Phone and modem options, then click on modems.

After installing the Smart-Fill software...

- Start the Smart-Fill program.
- Click on "Modem" in the download type box, and a window will open up.
- In this window, click on "Add / Edit details", this unlocks the boxes so that you can add your phone number etc.
- Put your choice of text in for your Smart-Fill location.
    TIP- If you put your access code (ID number on the MENU key) in with the company name / location, you will be able to see it on the top of the window later when you need it to clear the memory in your Smart-Fill.
- Put the data phone number in the next box, without spaces – E.g.: 0417123456.
- Put your Smart-Fill serial number in the next box.
- Put the com-port number in the comport box on the RH side.
- Click save changes.
- Exit the Smart-Fill program and then re-open it.
- Click on modem again.
- Click on the 'radio' button at the left of the top line, and then wait.
- The pc should connect to the Smart-Fill, and when it has connected, a window with your options should appear.

NOTES:
- When you have downloaded your fuel data, an option appears to "Clear memory".
- When you do choose to clear the memory, you will be asked for an access code. This is the ID number (not serial number) written on your MENU key tag.

Troubleshooting Modem type download problems.

The phone number **MUST** be a data number, not a voice number. Your phone company should have set the account up with 2 phone numbers. If your only have 1 number, please contact your phone company and confirm that you have a data number attached to your voice number.
- The com port number must match the port number that your modem is connected to.

- The Smart-Fill must be powered on.
- The Smart-Fill will not answer if it is busy fuelling a vehicle.
- The Smart-Fill modem must have adequate phone coverage. You can test the signal strength at the Smart-Fill by pressing 4 on the keypad.
- The Smart-Fill mode setting must have comms turned on.

Setting up software for a hardwired connection.

After installing the Smart-Fill software...

- Start the Smart-Fill program.
- Click on "Modem" in the download type box, and a window will open up.
- In this window, click on "Add / Edit details", this unlocks the boxes so that you can add your phone number etc.
- Put whatever you want for your company name or Smart-Fill location.
     TIP- If you put your access code (ID number on MENU key) in with the company name / location, you will be able to see it on the top of the window later when you need it to clear the memory in your Smart-Fill.
- In the phone number box, type Hardwire exactly as shown, with no spaces etc.
- In the Serial number box, type RING exactly as shown, with no spaces etc.
- Put the com-port number that the hardwired cable is connected to, in the comport box on the RH side.
- Click save changes.
- Exit the Smart-Fill program and then re-open it.
- Click on modem again.
- Click on the 'radio' button at the left of the top line, and then wait.
- The pc should connect to the Smart-Fill, and when it has connected, a window with your options should appear.

NOTES:
- When you have downloaded your fuel data, an option appears to "Clear memory".
- When you do choose to clear the memory, you will be asked for an access code. This is the ID number (not serial number) written on your MENU key tag.

Troubleshooting Hardwire type download problems.

- The phone number MUST be entered as Hardwire, with capital H.
- Some systems will not answer if RING is not put in the serial number box.
- The comport number must match the port number that your Smart-Fill is connected to.
- The Smart-Fill must be powered on.
- The Smart-Fill will not answer if it is busy fuelling a vehicle.
- The Smart-Fill mode setting must have comms turned on.
- The cable length and type must be suitable for the type of communications being used, egg RS232 or RS485.
- Try clicking RESET and attempt to connect a few times.

Testing the comms line.

The Smart-Fill has a feature which allows you to test the comms TX/ rx line from the Smart-Fill to the office pc.
- Connect a pc with hyper-terminal or similar terminal program to the office end of the cable.
- At the Smart-Fill, start the menu with the MENU key, and press ENTer when TEST COMMS appears.
- The Smart-Fill will send data strings every few seconds for about 20 minutes, which you should see at the pc end if the TX line is connected correctly. If you see the data at your PC, then the TX line is OK.

- Type XX (quickly) at the pc end to stop the data stream, to test the Smart-Fill rx line.
  If the data stream stops when you type XX (with Caps Lock ON), the Smart-Fill RX line
  is OK.
- Com settings are 9600 n,8,1 no handshaking.

Smart-Fill PC Software setup.

Software installation.

NOTES :

- Your pc software package is pre-loaded onto the USB drive which came with your Smart-Fill system.
- If you do not have the software, it can be downloaded free of charge from the Smart-Fill web page.
- If you do not have a card reader slot on your pc, use the memory card / USB adaptor supplied with the Smart-Fill.
- You may need top have your I.T. people do the software installation.

Installation…

- Insert the USB drive into your pc.
- Wait a minute or so for it to be recognized as a new drive, egg drive :F
- Open the folder egg :F.
- Open the folder **'Smart-Fill v9.6 PC Software'**

- Double click on the file **'Smart-Fill96.msi'** to start the installation…
- The default installation folder for the software is c:\progrm files\SmartFill 9.6
- The default folder for fuel reports is c:\Users\Public\Fuel reports

A welcome window will appear, Click NEXT

An installation folder window will appear, Click NEXT to accept the default installation folder, or change the location if required.

Click NEXT to confirm the installation

Please wait while the software is installed...

Click on FINISH to finish the installation.
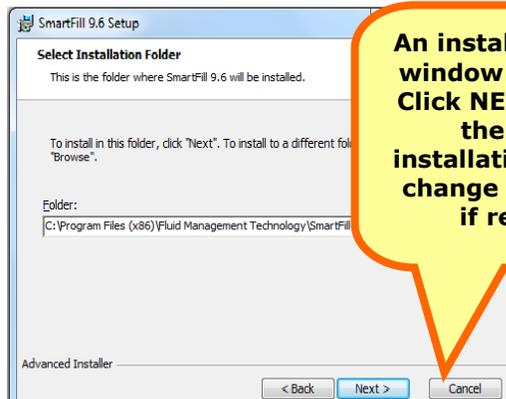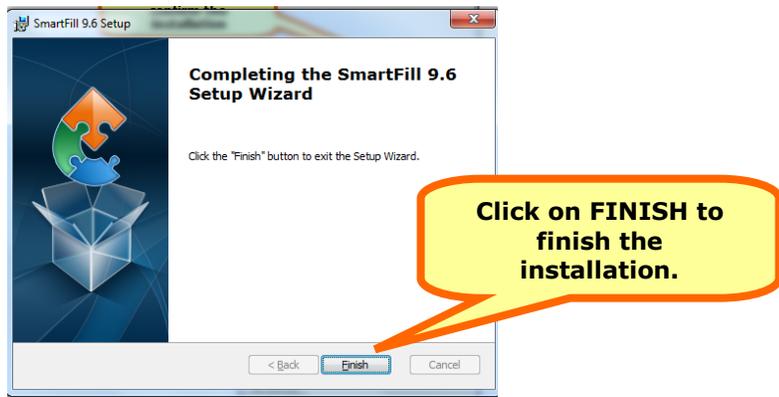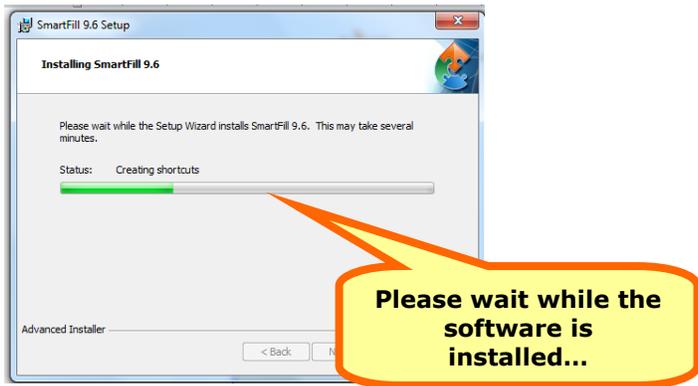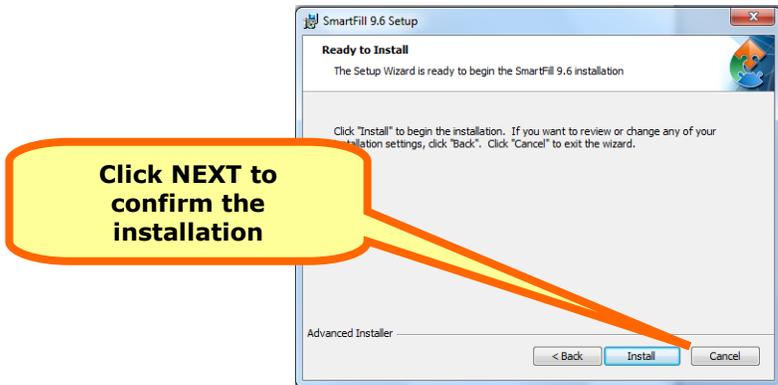
Your Smart-Fill software is now installed.

You can now enter your vehicle / driver details into the Smart-Fill software.

Entering vehicle details into the Smart-Fill software.

- You need to enter vehicle details into the Smart-Fill software.
- It is recommended to also enter ibutton key ID numbers into the software as a backup, and for trace-ability of the keys at a later date.
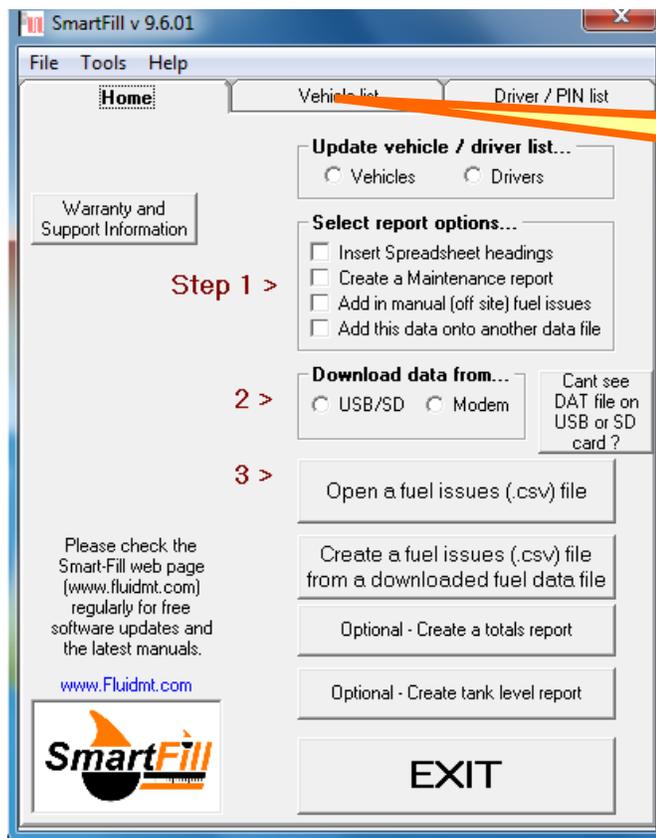
Start the Smart-Fill program, then click on 'Vehicle list'.

any number from 1 to 2000.

Then press ENTER or TAB to step to the next cell.

Type in the **6 digit ID number** of the vehicle ibutton key.

Then press ENTER or TAB to step to the next cell.

Type in the **description** of the vehicle.

Then press ENTER or TAB to step to the next cell.

Type in the **registration number** of the vehicle.

Then press ENTER or TAB to step to the next cell.

Type in the **fleet code or accounts code** for the vehicle.
Then press ENTER or TAB to step to the next cell.

SmartFill v 9.6.01

File   Tools   Help

| Home | Vehicle list | Driver / PIN list |

NOTE- You only need to fill in the last 6 digits of your vehicle ID buttons if you wish to save them to the USB/SDcard, and then copy them all to the SmartFill.
You can read the numbers etched into the yellow key fob or the face of the ibutton. Note that only later model keys have the etching on the plastic fob,

Example ID Button

CC   FF

005411CFA3B

Vehicle ID Key No (1 - 2000) `1`
Last 6 digits of ibutton ID No `FFFFFF`
Vehicle Description `Description`
Registration Number `Reg No`
Fleet / accounting Code `FleetNo`
Last service odometer reading `0` ☐ Updating Speedo's
Vehicle Service Interval `0`

1CFA3B

| Get keys from USB/SD card | Save keys to USB/SD card | Create vehicle list for viewing / printing |

Click here for help

SmartFill

NOTE- You only need to fill in the last 6 digits of your vehicle ID buttons if you wish to save them to the USB/SDcard, and then copy them all to the SmartFill.

You can read the numbers etched into the yellow key fob or the face of the ibutton. Note that only later model keys have the etching on the plastic fob.

Vehicle ID Key No (1 - 2000) 1
Last 6 digits of ibutton ID No FFFFFF
Vehicle Description Description
Registration Number Reg No
Fleet / accounting Code FleetNo
Last service odometer reading 0
Vehicle Service Interval 0

Type in the **service interval** for the vehicle. i.e. the number of Kilometers or hours between services.

NOTE – Only required if you wish to create basic maintenance reports using the Smart-Fill software.

Get keys from USB/SD card | Save keys to USB/SD card | Create vehicle list for viewing / printing

Click here for help

Repeat the above process for each vehicle.
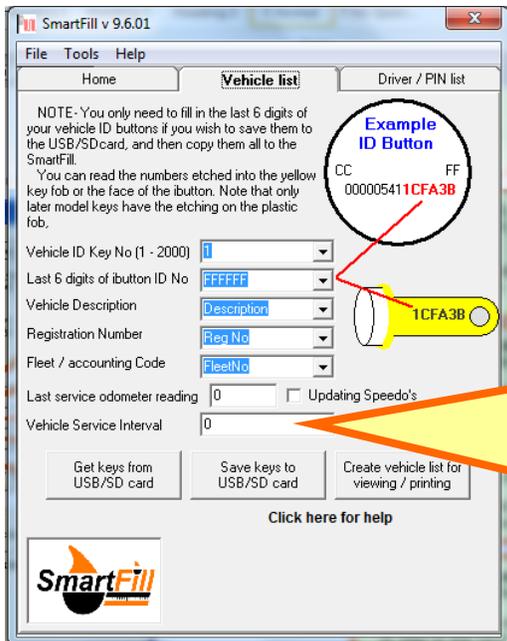
TIP

When creating a maintenance report, you need to update the most recent service odometer / hour meter readings for each vehicle, **BEFORE** you do the data download.

Checking this box before entering the service readings simplifies the process, by jumping straight to this cell after you press Enter when selecting the vehicle number.
It also automatically increases the vehicle number by 1 after saving the data.

Changing the spreadsheet headings..

You can change the names of the column headings which appear at the top of the spreadsheet columns to suit your company.

Note that you cannot move the columns, only change the names at the top of each column.

The names only appear on the top of each column if you click on the checkbox "Insert spreadsheet headings" before you create a fuel data file.

To change the headings…

- Open the file called 'headings.txt' in your Smart-Fill folder.
- Change the headings as you wish.

    IMPORTANT…
- Each heading MUST be separated by a comma.
- You must not use any " (quotation marks).
- Put your cursor after the last character on the line, and press 'delete' several times to make sure there are no spaces or carriage returns etc after the last character.
- Save the file.

If you make a mistake, the Smart-Fill software will re-build the file with the default headings, which are shown below…

Key No,Vehicle,Reg No,Fleet No,Driver No,Driver name,Litres,Speedo,Time,Date,Pump

Smart-Fill maintenance reporting.

The Smart-Fill software can create a basic maintenance report, which will show how many kilometers / hours each vehicle has to go before it is due for service etc.
It will tell you if vehicles are overdue, or due soon etc.

The service report uses the most recent odometer / hours reading entered at the Smart-Fill to calculate the report. Your drivers need to enter accurate figures to ensure that your maintenance report is correct.

This feature requires that you enter the following into the Smart-Fill pc software.
- When you add a vehicle into the system, you need to also put in the service interval for each vehicle, in Kilometers or Hours.
- Before you download data from the Smart-Fill to the pc, you need to get from your maintenance staff, the last odometer or hour-meter reading that each vehicle was serviced, and enter that in for each vehicle before downloading to the pc.
- **TIP** – Click on SPEEDO's in the edit vehicles area, and it will speed up the process of updating service odometer readings. It will also automatically increment the vehicle number. Use the ENTER key to step through.
- To generate a report, simply select YES when prompted to create a maintenance report when creating fuel data files.

Smart-Fill manual entries.

The Smart-Fill software has a feature which allows fuel which was not dispensed through the Smart-Fill, to be included in the reports. This is useful when you have vehicles working away, and you would like the fuel purchased at service stations etc to be combined in the issues and totals reports.

To enter a manual fuel entry...
1. Start the Smart-Fill program.
2. Click on TOOLS then MANUAL FUEL ENTRY.
3. Select the vehicle from the list.
4. Select the driver from the list.
5. Click on ENTER DETAILS.
6. Follow the prompts.

After downloading data from the memory key, and then creating the fuel reports, you must clear the manual entries on file, or they will be included in the next download.

To clear manual fuel entries on file...
1. Start the Smart-Fill program.
2. Click on TOOLS then MANUAL FUEL ENTRY.
3. Click on CLEAR ENTRIES IN FILE.
4. Click YES to confirm.

Troubleshooting at the Smart-Fill unit.

Smart-Fill keys

IMPORTANT.
Some types of ibutton keys do not operate correctly with Smart-Fill system due to differences inside the ibutton.
Always check with your supplier to guarantee that the keys are Smart-Fill compatible.

Require more vehicle keys.

- You can purchase extra Smart-Fill keys from your Smart-Fill supplier.

Smart-Fill does nothing when a key is touched on.

- Ensure the Smart-Fill is powered on.
- Check the area around the sensors for dirt or moisture, clean with a soft cloth if necessary.
- Perform a power reset by turning the power OFF to the Smart-Fill for 30 seconds, then on again.
- Try another key, if it works, then the ibutton may be faulty.
- If another key also does not work, have an electrician check the Smart-Fill is properly powered.
- If the key has not been supplied by the Smart-Fill manufacturers, it may not be compatible.
- If all above are OK, arrange a Smart-Fill supplier to inspect / service your Smart-Fill.

Keys shows 'INVALID'

The key has not been loaded into the Smart-Fill, or is not a compatible type key (not a genuine manufacturer supplied Smart-Fill key).

Key shows as wrong number.

Either…
- The key has been loaded into the system as the wrong number, or
- The key has been loaded in as more than one number.

If the key shows as a lower number than it should, simply disable the lower numbered key. (See the section about disabling keys).

Lost vehicle keys.

If you lose a vehicle key…
- Disable the key, or…
- Replace the key with a new one. If you replace it, the old key will no longer operate the system.
- If you find old keys, you can use them again. Test them on the Smart-Fill when finding them to ensure they will not operate the system, if they do, disable that number in the system.

Lost MENU key.

- You can install a new MENU key if you lose it.
- You must contact your Smart-Fill supplier and provide the serial number of your Smart-Fill, to purchase a MENU key replacement procedure.

- There is a fee charged by the manufacturer for the time researching / updating your system software, to obtain the special access codes for your Smart-Fill.
- We strongly recommend making a spare MENU key when first installing your system.
- NOTE – You may also need to change your Smart-Fill door lock for security reasons if the keys have been lost. See 'Lost Door Lock Key' below.

Lost door lock key.

If you lose your Smart-Fill door lock key, you should replace the lock immediately.
Some Smart-Fill systems have a bypass switch fitted internally, and having the door key may give the person the opportunity to bypass the Smart-Fill, and take fuel unauthorized, and unrecorded.

Smart-Fill PIN numbers.

Not asking for PIN number.

The Smart-Fill does not have PIN number requesting turned on in the MODE setup.
Turn the PIN number requesting ON.

Wrong driver number showing.

The same PIN number has been loaded in for more than driver. You can not use the same PIN number for multiple drivers, unless you choose to LINK KEYS AND PINS in the MODE setup.

Not accepting a new PIN number.

The PIN <u>MUST</u> be between 1000 and 65000, to ensure a minimum 4 digit PIN is used.

Pump / dispenser problems.

Pump stops after a short period.

The cause of this problem is easier to identify, if you check that the Litres taken were recorded or not.

- **If Litres are NOT recorded by the Smart-Fill...**
  - o   The Smart-Fill is most likely not receiving pulses from the flow meter.

- **If Litres ARE recorded by the Smart-Fill.**
  - o   The Smart-Fill thinks that the nozzle has been hung up.
    Check wiring / micros witches etc.
  - o   The wiring to the pump / valve may be faulty / poor connections. Check all wiring.

Smart-Fill is not recording Litres accurately.

Version 9 systems (pulse input and relay / valve control).

- Smart-Fill is not calibrated correctly to flow meter / dispenser.
  The Smart-Fill should be calibrated with a proving measure or master flow meter.
- Pulses from flow meter are too fast for the Smart-Fill. The maximum pulse rate is approx 50 Hz if you wish to display Litres.
- Flow meter pulses are too fast and Smart-Fill is set to display Litres, turn the display Litres option off in the MODE options setup.
- You can check if the pulses are too fast by running a few fuel issues at low speed and see if the accuracy improves.
- Operators may be turning the power off via an emergency stop switch, which also turns the Smart-Fill power off before it can save the fuel data. Some systems will record data in a power failure, depending on the system type / configuration.

Version 10 or 11 systems (communications control).

Gilbarco communications systems...
- The Smart-Fill and the dispenser <u>MUST</u> both be in the same 5 or 6 digit mode. If they are set differently, the Decimal point in the Litres reading may be in the wrong place. See the relevant installers documentation for 5/6 digit setup procedures.
- The Dispenser may be set in 5 digit mode, but still allowing a fuel delivery over 999.99 Litres. This has occurred previously on PEC dispensers, and it causes the dispenser to lose the 1000's in the Litres, i.e. a delivery of 1354.77 Litres is recorded as 354.77. This is a dispenser issue, not a Smart-Fill issue.
  Ensure that both the Smart-Fill and the dispenser are both set in 6 digit mode wherever possible.

Acme communications systems (bulk flow meters).
The Acme unit internal settings are factory preset and **MUST NOT** be changed.

The only setting in the Acme unit which may be adjusted by the installer is the calibration adjustment (scale / KFactor).

Any change to decimal point placement settings etc will affect the accuracy of the system.

Data download problems at the Smart-Fill.

'Card Fault' shows at the Smart-Fill.

- The card may not be inserted correctly. Remove the card for approx 10 seconds and re-insert it.
- The card may need to be formatted.
- The Smart-Fill USB drive must be formatted as 16 bit.

Troubleshooting Smart-Fill pc software.

'File not found' error when starting the program.

- Install the software from the original installer package, or download the latest version 9.5 software from the Smart-Fill web page.
  The software may have been copied from another pc, instead of being reinstalled using the Smart-Fill installer package.

Unable to edit vehicle or driver list.

- Users must have Modify Rights to the C:\program files\Smartfill folder. Your I.T staff will need to change this setting.

Vehicle or Driver lists are corrupted or contain errors.

- If the vehicle or driver lists become corrupted, you should replace them with your backed up lists.
  The files are called 'vehicles.dat' and 'drivers.dat' and they reside in the Smart-Fill program folder.
  The default location of the Smart-Fill folder is…
  "c:/program files/ smartfill95/"
- **If you have re-installed your software** onto or from another pc, you will need to copy the original files to the Smart-Fill folder on the new pc.

Several files on the card have scribbled file names.

Any files with scrambled characters etc on the card can simply be deleted.
This is very rare, and usually only occurs when the Smart-Fill processor is reprogrammed while the memory card is inserted. It does not harm existing files on the card.

A data error appears when 'Creating the fuel data file'.

If this error appears. Please email the XXXXFUELDATA.DAT (where XXXX is the Smart-Fill serial number) file on the memory card to sales@smartfill.com.au for analysis / repair.