

# Stock Reconciliation for Petrol and Diesel at Service Stations

## Purpose of stock reconciliation

Strict regular and systematic stock control is essential. Accounting for product handled is just as important as accounting for cash handled.

## Procedure for accounting for stock

Accounting for stock has five main steps. The tasks involved in each step are described below.

<b>Step 1: Measure the quantity of product in each tank</b>	
<b>Task</b>	<b>Action</b>
1	Measure the quantity of product in each tank: <ul style="list-style-type: none"> <li>• before and after each delivery of product to the site</li> <li>• at least daily on busy sites.</li> </ul>
2	Each tank should have its own dipstick calibrated for that tank. Check the dipstick matches the tank in which it is being used.
3	If the stick is kept in the dip tube of the tank: <ul style="list-style-type: none"> <li>• remove it</li> <li>• check the product level indication</li> <li>• wipe the stick dry at and around the liquid level.</li> </ul>
4	Lower the stick slowly and carefully into the dip tube. Do not plunge it in, as this may create a surge in the dip tube. Pause when the stick is within 50 mm of the bottom of the tank to allow any surge to die down, then slowly lower the stick until it just touches the bottom of the tank and withdraw it immediately.
5	Read the liquid level and record it in a notebook.
6	Wipe the stick dry at and around the liquid level. Repeat Task 4.
7	Check whether the measurement (from Task 6) agrees with the quantity recorded (Task 5). If it does not agree, repeat the dip (Tasks 3 and 4) until a consistent result (within 1 mm to 2 mm on the stick) is achieved. Record this quantity.
8	Go to step 2.
<b>Note</b> If you have difficulty reading the product level on the stick, product-finding paste may be smeared lightly on the face of the stick at and around the liquid level. This will give a clear 'cut' on the stick.	

<b>Step 2: Check how much water (if any) is in each tank</b>	
<b>Task</b>	<b>Action</b>
1	Any water present will lie in the bottom of the tank (motor fuels all float on water, which readily separates and sinks). It can only be identified by using a water-finding paste, which changes colour when immersed in water. Smear a little water-finding paste on the bottom 100 mm or so of the dip stick and lower it carefully into the tank. Leave it in contact with the bottom of the tank for about 15 seconds and withdraw.
2	If you find an indication of water, but no clear cut, try again (repeat Task 1).
3	If you have a clear cut, record the quantity of water in the tank. If no water is indicated, record nil.
4	Any significant amount of water should be removed from the tank.
5	Go to Step 3.

<b>Step 3: Check all dispensing equipment meter readings and record</b>	
<b>Task</b>	<b>Action</b>
1	Check all dispensing equipment meter readings and record the readings.
2	Check all dispensing equipment meter readings again.
3	Make sure the repeated readings (Task 2) agree with the recorded readings (Task 1). If <b>yes</b> , go to Step 4. If <b>no</b> , repeat Tasks 1 and 2.
4	Go to Step 4.

<b>Step 4: Enter the figures recorded in the appropriate spaces on the Pump Meter/Tank Dip Reconciliation Form</b>	
<b>Task</b>	<b>Action</b>
1	Following the instructions on the form, calculate the overs (gains) or unders (losses) for the reconciliation period, taking into account: <ul style="list-style-type: none"> <li>• any deliveries received</li> <li>• product used in meter calibration and returned to the tank</li> <li>• any meter replacements</li> <li>• any other product movements in or out of the tank that might affect the result.</li> </ul>
2	Transfer the daily overs and unders to the Reconciliation Summary.
3	Update the Reconciliation Graph.

<b>Step 5: Maintain continuous review of loss trend</b>	
<b>Task</b>	<b>Action</b>
1	Review the trend. If the trend indicates that losses are consistently in excess of 0.5%, you must investigate further.
2	<p>If you find a sudden large loss or gain, check your arithmetic. If the arithmetic is correct, check the tank dips and the delivery dockets that record the amounts delivered.</p> <p>If there is still a sudden large loss recorded, it may be theft or a major failure of the tank or, more probably, the pipework.</p> <ul style="list-style-type: none"> <li>• Are all tank openings sealed and locked?</li> <li>• Has there been any recent heavy traffic movement or construction work done in the vicinity of the tank or pipework?</li> </ul>
3	<p>If a tank shows a consistent gain in water, it may be getting in via the tank fittings. Check dip caps, and both tank-top and remote fill points to make sure that cap washers are seating properly and that caps are tight.</p> <p><b>Note:</b> When the water gain is large and sudden, it may have been inadvertently delivered along with a product delivery. If a water gain persists, investigate further.</p>
4	<p>Whenever there is a significant change in the normal pattern of losses and gains, the operator should advise the owner, and also the supplier, who can offer guidance.</p> <p>When there is a physical loss, take action to minimise further losses.</p>

## Instructions for Pump Meter/Tank Dip Reconciliation

### Pump meter and tank dip reconciliation

The reconciliation is to be done daily (preferably at a similar time each day). Details are to be transferred on to a monthly reconciliation summary which shall be held on site. Wait for a quieter time on the forecourt, or the end of a shift when you may have extra personnel available.

Step	Action
1	Read the pump meters and take tank dips.
2	Enter the meter readings under the appropriate product heading and add them down the column. The total of each column becomes the <b>Total Closing Meters</b> amount.
3	Refer to the previous day's reconciliation and take the <b>Total Closing Meters</b> amount and enter it as today's <b>Total Opening Meters</b> amount.
4	Any pump testing or meter alterations should be entered in the <b>Meter Testing</b> box. Supporting documents should also be attached.
5	Subtract <b>Total Opening Meters</b> and <b>Meter Testing</b> amounts from the <b>Total Closing Meters</b> . The balance should be entered in the <b>Total Meter Sales</b> box. The <b>Total Meter Sales</b> is the actual amount of product that has passed through the pumps.
6	Refer to the previous day's reconciliation and take the <b>Total All Tanks</b> amount and enter it in today's <b>Total Opening Dips</b> .
7	Enter any deliveries received since the last reconciliation in the <b>Today's Deliveries</b> box. Add <b>Total Opening Dips</b> and <b>Today's Deliveries</b> , and enter this amount as the <b>Sub-total</b> .
8	Enter <b>Total Meter Sales</b> figure (from Step 5) and subtract it from the <b>Sub-total</b> (Step 7) to get the <b>Calculated Closing Dips</b> . The <b>Calculated Closing Dips</b> are the theoretical amounts that should be in the tanks.
9	Enter today's tank dip readings and the time the dips were recorded. Add them down the column and enter the figure in the <b>Total All Tanks</b> box.

Task	Action
10	<p>Enter the <b>Calculated Closing Dips</b> amount (from Step 8) and subtract from <b>Total All Tanks</b>. Enter this amount in the <b>Today Over/(Under)</b> box.</p> <p>(If the figure is negative it is an under and should have brackets around it to indicate this).</p> <p><b>Today Over/(Under)</b> is the difference between the amount of fuel that should be in your tanks compared with what is actually in your tanks.</p>
11	<p>Refer to previous day's reconciliation and take the <b>Year To Date Over/(Under)</b> and add/subtract it to <b>Today's Over/(Under)</b>.</p> <p>Enter this figure in the <b>Year To Date Over/(Under)</b> box. This is the total loss or gain for the year to date on your site for each product.</p>
12	<p>Each month transfer the details onto a monthly Reconciliation Summary Form.</p>

## Pump Meter/Tank Dip Reconciliation Form

**Pump meter/  
tank dip  
reconciliation** Must be completed between 8 and 24 hours after each delivery or when a pump or the tote is changed. Meter testing, pump or tote changes should be supported by fitter's documentation.

Site: _____	Date: ____/____/____
Time dips recorded: _____	

**Important: Dips and meters should be read at the same time**

METERS	Pump	91	95	Diesel
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
	10			
Total Closing Meters				
<b>less</b> Total Opening Meters <i>(These are Total Closing Meters from previous day's reconciliation)</i>				
<b>less</b> Meter Testing <i>(or any product returned to tanks)</i>				
= Total Meter Sales				
<b>CALCULATED TANK DIPS</b>	Total Opening Dips <i>(These are Total All Tanks from previous day)</i>			
	<b>plus</b> Today's Deliveries			
	= Sub-total			
	<b>less</b> Total Meter Sales			
	= Calculated Closing Dips <i>(what should be in the tanks)</i>			
<b>ACTUAL TANK DIPS</b>	Tank 1			
<i>Enter water dip test beside tank number.</i>	Tank 2			
<i>Take water dips at least weekly.</i>	Tank 3			
	Tank 4			
	Total All Tanks			
	<b>less</b> Calculated Closing Dip			
	= Today's Over/(Under)			
	= Year to Date Over/(Under) <i>(Combine previous day's Year to Date balance)</i>			

Prepared by: \_\_\_\_\_

## Instructions for Reconciliation Summary

### Updating the reconciliation summary

This form should be updated each day in conjunction with the Pump Meter/Tank Dip Reconciliation Form.

Step	Action
1	Enter the date, <b>Total Meter Sales</b> and <b>Today Over/(Under)</b> figures from the Pump/Meter Tank Dip Reconciliation Form.
2	At the end of each seven-day period, total each column and enter this amount in the <b>Weekly Total</b> box.
3	At the end of the month, add down the column each amount in the <b>Weekly Total</b> boxes, and enter this figure in the <b>Monthly Total</b> . Note: Amounts appearing as an 'under' are a negative amount, and should be subtracted.
4	At the end of each week, plot the <b>Weekly Over/(Under) Variance</b> total figure on graph at the appropriate place. The resulting monthly graphs provide an easy to see summary of the <b>overs/unders</b> for the site.

### Reconciliation Graph





