

BEHIND THE SCENES AT THE MAIN CALOR GAS REFURBISHMENT PLANT, JOHN WICKERSHAM LOOKS INTO THE SECRET WORLD OF...



CALOR gas cylinders

The name Calor has been part of the caravanners' vocabulary as long as I can remember. But what do you think of the company's gas? Well, according to recent market research, most caravan and motor caravan owners like the range of cylinders and like the ease of making a purchase, but sometimes they claim it's costly.

Of course, when you hire your first cylinder, there's 17.5% VAT on the bill. Then there's a 5% VAT element included in the cost of the gas. All rather confusing.

That aside, I discussed the costs with Calor and was given some interesting answers. Then, to gain further insight, I spent a day at a Calor Gas plant.

Now I don't know about other Club members, but I'd always thought that an empty cylinder was merely refilled, given a slap of paint (occasionally) and duly sent back to a safety cage. But no! When dealing with this safety-critical commodity, it's not like that at all. And that's what I learnt at Saxham in Suffolk.

CALOR DIRECT
Simply dial: 0800 662663 whereupon the nearest dealer automatically takes the call and arranges delivery of an exchange cylinder. In remote areas this might cost £1, but most places are free!

Cylinder refurbishment

Most cylinders sent to this processing plant will receive extensive refurbishment – and that's carried out for our safety. For example:

- Every returned cylinder receives a visual inspection to evaluate its condition. The assessor checks paint finish, dents, clarity of safety notices, operation of the lifting handle, integrity of the base and the condition of its valve connection.

- What follows might be a simple wash and paint, but most cylinders go through a refurbishment programme.

That's what I wanted to see, and I was surprised to see how involved the process is.

Removal of remaining gas

- As a prelude to refurbishment it's crucial that *all* residual gas is evacuated from a cylinder.



The steam cleaning process clears final remnants of gas

- After an initial removal of gas, the entire valve mechanism on top of the cylinder is unscrewed and scrapped if necessary.

- Cylinders are now steam cleaned inside. Large probes are inserted, and the injection of steam is essential to ensure, once again, that there's no gas left inside.

FAR LEFT: Valves are removed and, if necessary, scrapped

LEFT: With a valve removed, the cleansing begins in earnest

It's also an important cleansing process.

- A blob of yellow paint is daubed on the cylinders to signify that steam cleaning has been done. But even that's not enough!

- To be 'treble sure' there's no gas left inside, the cylinder is next checked by using a meter. That earns a green blob of paint as well, leaving nothing to chance.

Refurbishment work

Needless to say, the amount of repair work which follows varies from cylinder to cylinder. Some 15% of returned units will be condemned, at which point a large hole is punched in their sides so no one could try to return them to service. So what happens to the others?

- Any rust spots are inspected with care; it's the base of the unit which is usually affected. This isn't normally a problem as long as it's only surface rust. However, if a cylinder bears signs of pitting, it's then immediately scrapped.

- Provided there are only a few dents, these can often be 'pulled out'. This is effected by placing a lance inside and inflating a cylinder with nitrogen. Now a skilled operator heats the area around the dent until the metal's red hot, and then knocks it hard with a wooden mallet. The shape is thereby restored – though charred mallets need replacing often!

- At this point, any damaged shrouds are replaced. New base sections often have to be welded on as well.

- Now each cylinder travels horizontally down a conveyor and through an oven heated to 650degC. This is to re-temper the steel, bearing in mind that replacement sections and tapped-out dents must receive this treatment.

- Next, into the shot blasting booth. After that, each cylinder, bereft of its former livery, progresses into a zinc-coating booth. The silvered finish makes it look really sound... but don't be fooled by the surface.

- Could there be a tiny leak? This is checked by forcing kerosene into a cylinder and leaving it under pressure (325psi) for one minute. If there's a fault, a small amount of kerosene will seep on to the surface.

- However, provided the unit's sound, it then proceeds to the final painting booth. Tops and bottoms are coated first, before the cylinders enter a spraying booth.

- Now the brightly painted cylinder is given its aluminium data collar and a brand new valve, which is tightened by a machine. The aluminium collar gives its



FROM THE TOP: A new base has been welded in place

With a nitrogen-filled cylinder, heated dents can be pulled out

After tempering the steel, cylinders are given a zinc coating



Refilling

A lot of the refurbished cylinders will then be sent from Saxham to the company's other six refilling plants. Those that remain here will be taken on to the refilling booths.

Each cylinder is loaded on to a weighing platform with a digital readout, and it's then filled with gas. This takes less than a minute but, as with so many jobs in life, it's the preparation that is time consuming!



In the kerosene leak test, the cylinder on the far left is weeping

tare (empty) weight, in pounds and ounces.

- Finally it's down to the stencil stamping which designates how much gas is contained in the cylinder, in kilograms. (It's a pity the tare weight of a Calor cylinder is given imperially when the weight is expressed in kilograms. If you want to see how much gas is remaining in a part-used cylinder, you have to do a few sums!)

Conclusion

Having seen the work involved, I'm more appreciative about production costs. Even the drivers who distribute Calor cylinders have to hold special qualifications.

On the subject of delivery, I hadn't used the Calor Gas Direct home delivery service. I've always driven seven miles to exchange a cylinder but will now use Calor Direct.



Process complete, and the cylinders are ready to deliver to dealers