# Stage II Vapour Recovery
## An option - lower cost retrofitting of existing dispenser

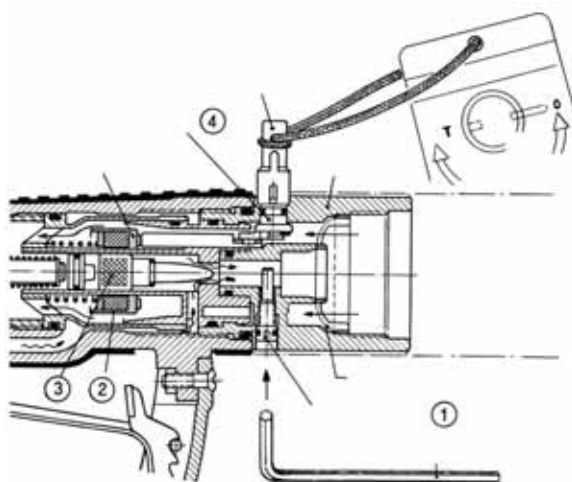By Anton Martiniussen, Elaflex



ZVA 200 GRVP nozzle with integrated vapour/volume control on the nozzle

The countdown to Stage II implementation is moving relentlessly on. In the trade journals contributors are emphasising that qualifying forecourts will have to be complete by the 1st of January 2010. It's obviously important that the equipment you are being offered or intending to install is suitable for use. The simplest way to is to ask to see the appropriate system approvals for Stage II. Alternatively you could visit other European countries where Stage II equipment is installed and in large scale use and see for yourself. Normally the dispenser manufacturers or service companies will be glad to provide advice. Whilst many stations will be upgraded with new dispensers there are a significant number of dispensers that could be upgraded by retrofitting components and this might keep some costs down. With some older dispensers it might be less expensive than fitting electronic controls or there may be insufficient space in the dispenser to fit many components.
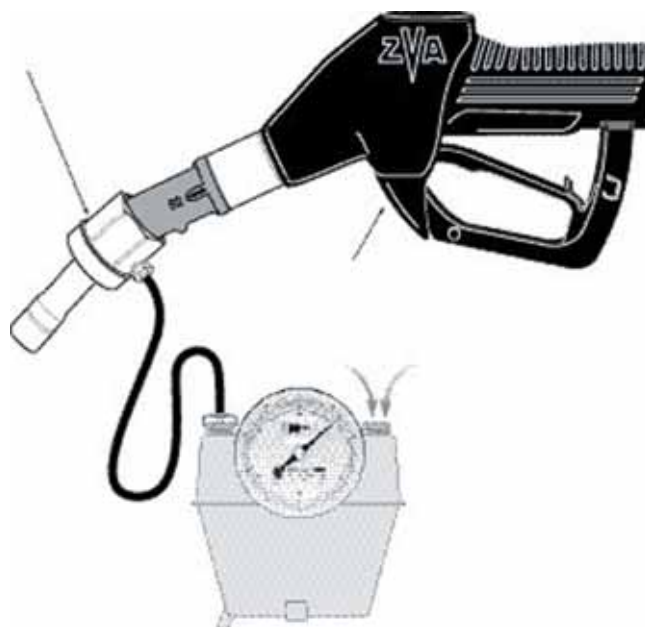
Of particular interest is the Elaflex ZVA 200 GRVP vapour recovery nozzle. The difference between this version and the standard ZVA 200 GR vapour recovery nozzle that is normally used is that the vapour volume control can be done on the nozzle itself without the need to fit expensive electronic vapour control devices. You can even do the "Dry Test" on it too. In other European countries this nozzle is extensively used for retrofitting. For the motorist there is no noticeable difference. Some further features of interest is the adjustable control of the vapour volume flow independent of the fuel flow delivery. There is an ON/OFF function with secure termination of the vapour line which is important when connecting two or more hoses to a vacuum pump. For the "Dry Test" all that is required is to open the valve with a special key and by turning it from position "o" to position "t" to meet the so-called "K-factor" certification required for the different makes of vapour pumps. In doing so the 100% recovery rate is set.



ZVA 200 GRVP nozzle showing adjustment key for vapour volume flow setting

Vapour Recovery certification is based on the German TüV certificate test which allows for the maximum fuel flow rate for Vapour Recovery. The simulation point for the dry test is set at 40 litres/min so it can also be used on older or weaker fuel and vapour pumps.

It is important to note that not all so-called Vapour Recovery equipment is suitable. It is worthwhile to see what equipment has been installed in other European countries or consult with your pump supplier so to avoid expensive cost later.

You will of course have to fit a vacuum pump and have the necessary pipework done as well as fitting a Coax VR hose and some other key components. The hose is a very important component of the installation. The kinking of the inner vapour line could shut down your system so a good quality VR hose is important. The most commonly used VR hoses are textile braided. These handle well with all makes of pumps even in cold temperature conditions. The first thing to do is to if you have to upgrade your site is to plan well ahead and to discuss the technical requirements with your equipment supplier. Then get a site survey done. If you leave it too late it might become costly or there may not be enough suitably trained engineers available to do the work. It's important that equipment fitted has to be approved type and meet the appropriate system efficiency requirements. The FEF organisation which represent leading equipment producers have published a helpful code of practice for Stage II. It's downloadable for free from their web site at www.fef.org.uk Only suitably qualified engineers must retro fit or upgrade dispensers for stage II. It is strongly advised that if you are considering an upgrade you consult with your supplier or with Elaflex for further advice.



ZVA 200 GRVP nozzle with gas meter for Dry test and vapour volume setting