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## **Reconditioned Controls under the Gas Appliance Regulation**

Reconditioned Controls are all those controls, that are collected or bought by companies or individuals taking ownership of these products to do repairs or refurbishment. To finally put them back on the market still under the name of the original manufacturer without his authorization. This is an existing business that can cause significant safety issues.

The Afecor opinion is that the regulations as the Gas Appliance Regulation and as they have been implemented into National Law are sufficient to cover this issue.

Here the major considerations:

1. Any repair or modification of a control certified to the essential requirements of the Gas Appliance Regulation must follow the procedures and specifications for parts, assembly and testing as defined by the manufacturer and certified by the Notified Bodies.
2. The manufacturer specifies authorized repair and sometimes spare parts and sales channels for them in the service and installation sheets supplied with the product. Spare parts obtained from the manufacturer will be shipped with instructions for correct replacement and test. Documents and procedures are all included in the type examination and certification of a product.
3. Any modification of a control that exceeds the range as described under 2. Is a significant modification of the product which can imply also significant consequences for its safety.
4. Any deviation from the defined and certified procedures implies that a product cannot finally regarded as being safe. This could cause serious risks for the end user such as explosions, property damage or injuries.

A wrong interpretation of this aspect leads to unjustified claims to the manufacturer regarding warranty or liability. This cannot be accepted by manufacturers.

To guarantee compliance with the essential safety requirements any company or individual that does significant modifications to a product as explained above has to be regarded as manufacturer. The regulations for type examination and production surveillance do apply as well as the requirements for certification and labeling under the name of this company.

## **Examples for Safety Relevant Repairs of Controls**

### First Example – Gas Valves

To change the rubber seal of a valve seat it is required to open chambers of the valve which under operation are exposed to gas. To achieve that static seals will have to be opened or removed. The rubber material used for sealing purposes has to comply with the requirements as defined as part of the certification of the product. Use of standard o-rings as they are available on the market does not comply with these requirements. Resistance against temperature loads and gas compositions are relevant parameters. After re-assembly of a valve the necessary and defined test procedures for internal and external leakage have to be executed. It is unlikely that a company active in the field of reconditioning controls does know the exact procedures or complies with them.

### Second Example – Ignition Controls

Electronic devices with safety relevant functions in gas appliances pose a very high risk in case of an unauthorized reconditioning. In many cases there is no housing or cover making the control tamper proof. For the components used on the printed circuit board there are replacements on the market, that seem to have the same nominal value, e.g. electrical resistance. However, they most likely do not meet all required primary specifications, such as tolerance band, temperature range, aging, worst case calculations etc. These specifications are documented by the manufacturer in drawings or other technical files. In addition, these controls have to pass a test following a procedure which requires use of special equipment, test adapters and a program covering the full range of operation and safety of such a control. Companies, that are active in the field of reconditioning these controls, will most likely not have the necessary equipment and will not be able to follow the procedures certified for that product.