LIQUID LEAK DETECTION SYSTEMS
OIL & GAS DIVISION

Rev. 2 – September 2017

TTK Hydrocarbon Leak Detection Sense Cable FG-OD Cleaning Procedure

Cleaning Liquids

The liquid below shall be used to clean the FG-OD sense cable from a hydrocarbon liquid or a non-volatile solvent:

- **Hydro-treated Naphtha, SPB 100-160**
  Composed by Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

EEC / EINECS No: 920-750-0 or equivalent

REACH Registration No: 01-2119473851-33-0002

This is de-aromatized naphtha, usually employed for dry cleaning or other domestic cleaning.

Liquid used for refilling cigarette lighters has a similar composition and can also be used as a solvent to clean FG-OD cables.

In case hydro-treated naphtha is not available on the installation site, the following liquid could be used as an alternative cleaning solvent :

- **Commercial-grade Motor Gasoline – Unleaded**

Following EN 228 or ASTM D4814 or JIS K 2202 or CGSB 3.5-2004 or equivalent

NB : Commercial motor gasoline would be most suitable for cleaning liquids such as jet fuel or heavier

Note however that, depending on local specifications and production processes (distillation, blending), some motor gasolines may contain some heavy ends which could cause alarm status on the sensing cable concerned by the cleaning process.

If this is the case, then the cable should be :

- either cleaned again by using hydro-treated naphtha
- or exposed to a mild heat source (sun, hot fan, …) in order to increase the cable temperature (max. 80°C) for sufficient time. In this case, the heating process will be stopped once the heavy ends are evaporated and the alarm disappeared.

Other volatile petrol distillation cuts, such as condensate, can also be used as cleaning solvent.

NB: TTK advice not to use other types of solvents such as trichlorethylene or tetrachlorethylene, also used in dry cleaning.

LIQUID LEAK DETECTION SYSTEMS
OIL & GAS DIVISION

Cleaning Procedure

Precautions:

Recommendations included in the Material Safety Data Sheet (MSDS) of the selected liquid shall be followed.

MSDS's are made available by the liquid supplier (usually on their website).

Read the applicable MSDS carefully prior to start using the selected liquid.

Health and safety precautions related to handling of harmful, flammable / hazardous liquid shall be respected, including (but not limited to) :

- breathing of vapors from the cleaning liquid shall be avoided;
- cleaning shall be performed in a place sufficiently ventilated;
- no ignition source shall be present close to the cleaning area.

Cleaning Process flow:

- See flow diagram on the following page.

Cleaning solvent disposal:

- Provide proper disposal (e.g. combustion in adequate location) of the used cleaning solvent - not to be dispersed in the environment.

LIQUID LEAK DETECTION SYSTEMS
OIL & GAS DIVISION

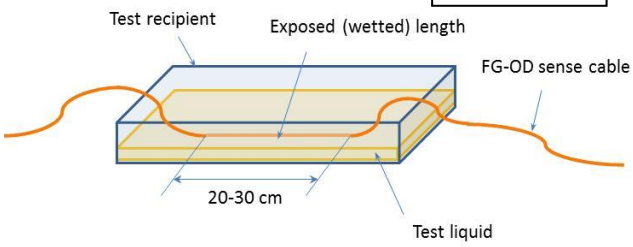
Hydrocarbon Leak Detection Sense Cable
FG-OD Cleaning Process Flow

START

Disconnect the sense cable, remove it from the oil contamination and wipe the excess of oil on the cable with absorbent paper.

Place the sense cable in a cleaning recipient (Refer to Figure 1)

Figure 1



Pour one cleaning liquid specified above in the cleaning recipient, by filling about 3 cm of the recipient height.

Place the sense cable in contact with the cleaning liquid, by full immersion, respecting the guidelines below :

Leave at least 5 mm of liquid on the top of the immersed cable.	Length to be immersed = length in contact with diesel plus 20 cm on each side.	Use fresh (unused) liquid.

Wait at least 1 hour

Take the sense cable out of the liquid and place it in a ventilated place to allow solvent weathering – possibly outdoor and at the sunshine.

Wait 1 to 2 hours - depending on ventilation and temperature. Increase weathering time if the ambient temperature is lower than 15°C.

Re-connect the cable and check its status

Is the cable still in alarm ?

NO → **END** of cleaning procedure

YES → Allow more weathering time, possibly increasing the cable temperature (up to 80°C max.)

Re-connect the cable and check its status

Is the cable still in alarm ?

YES → back to "Place the sense cable in a cleaning recipient (Refer to Figure 1)"

NO → **END** of cleaning procedure