



ADVICE ON PIPE WORK AND DETECTOR INSTALLATION

1	The Detectors are mounted upright - see drawing QMI-05-1099 Part 2-8
2	Make sure the Detectors are mounted on the down side of the engine rotation - see drawing QMI-05-1099 Part 2-8
3	The Baffles must be mounted vertically so that oil does not become trapped in the Baffle.
4	<p>Please ensure:</p> <ul style="list-style-type: none">- There is enough pipework outside the engine to knock out any droplets of oil that have passed the baffle- All pipes are either vertical or horizontal so that no oil traps are formed- A ball valve is placed in the pipework just before the fan to control the air flow through the Detectors- The pipework after the fan should return to either the breather or crankspace so the pressure is equalised. See Part 2-4 and 2-5. If the engine has a fan in the breather pipe, we suggest you take the QMI exhaust pipe to the breather making sure a ball valve is installed to control the air flow through the QMI Detector - see Part 2-5- Make sure the pipework is not under stress
5	<p>IMPORTANT NOTES:</p> <p>IT IS VERY IMPORTANT THAT NEITHER THE DETECTORS NOR THE FANS ARE BRACKETED TO THE ENGINE</p> <p>THE DETECTORS AND FANS SHOULD BE SUSPENDED ON PIPEWORK THAT IS BRACKETED TO THE ENGINE – see schematic on Part 2-6 and 2-7.</p>



DETECTOR MOUNTING AND LOCATION

LOCATION OF QMI MULTIPLEX OIL MIST DETECTOR HEADS IN THE CRANKCASE

The Detector should always be mounted on the down side of the crank rotation. If the Detector is mounted on the up side of the crank rotation, it may cause contamination of the Head and require more frequent cleaning.

TRUNK PISTON ENGINES

The end of the sampling pipe within the crankspace should be between the piston bearing and the main bearing. This is the area where oil mist is most likely to be trapped. In engines that rotate in one direction only, it is possible to place the extraction point close to the side next to the crankspace compartment wall.

CROSSHEAD ENGINES

The normal place for the sampling pipe is in the upper area of the crankspace. This is the area where the oil mist usually accumulates.

RETROFITS

When a QMI MULTIPLEX Oil Mist Detection System replaces another system, the same entry points into the crankspace may be used. In this instance use an elbow after entering the crankspace and attach a baffle to the sampling end of this elbow.

The pipe on the outside of the engine must be extended to raise the Detector to a height of 150mm to 200mm above the outlet if possible – see Part 2-8.



Engine Oil Mist Detection System

LAYOUT OF PIPEWORK

PIPEWORK LAYOUT

See drawing QMI-05-1098 Part 2-6

The pipework for the MULTIPLEX system should be laid in such a way that there are no low points for condensed oil mist to collect. Failure to lay the pipes properly may cause a blockage thus affecting the efficiency of the system.

The Fan and Detectors should be supported by the pipework and not fixed by brackets to the engine, see QMI-05-1098 Part 2-6 and QMI-05-1099 Part 2-8.

A ball valve is normally placed in the sample extraction pipe to adjust the air flow – see Part 2-6 and 2-7.

When fitting the Detector try to ensure that there is a vertical distance of 150mm to 200mm, if possible between the sample exit point on the engine and the $\frac{3}{4}$ " BSP entry into the Detector Head – see QMI-05-1099 Part 2-8.

The Baffle supplied will reduce heavy oil contamination of the Detector Head and give longer periods between cleaning.

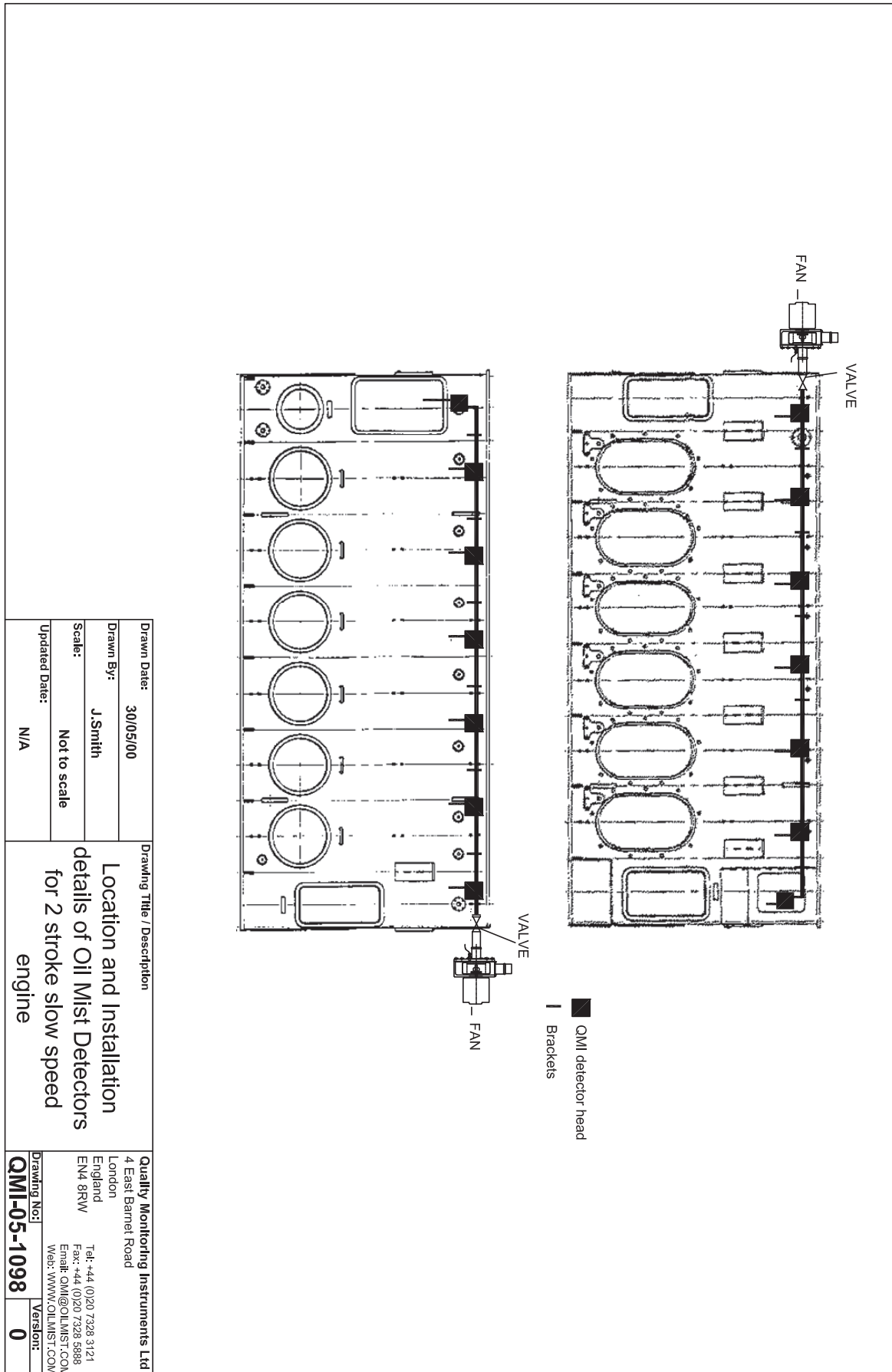
FAN SUCTION ADJUSTMENT

The valve fitted in the suction manifold, just in front of the intake of the fan, is used to control the airflow. This is to minimise the amount of oil and oil mist passing through the Detector so as to obtain the best results.

With the valve fully open and the engine working under full load, note each channel number with its associated oil mist reading. Slowly close the valve until the reading drops by about five points.

Re-open the valve slowly until the original readings return. Secure the valve in this position as this is the setting required to achieve the best readings and reduce Detector maintenance.

The Detector Heads must at all times be fitted vertically to prevent oil mist condensate from blocking the internal labyrinth (see drawing QMI-05-1099 Part 2-8).

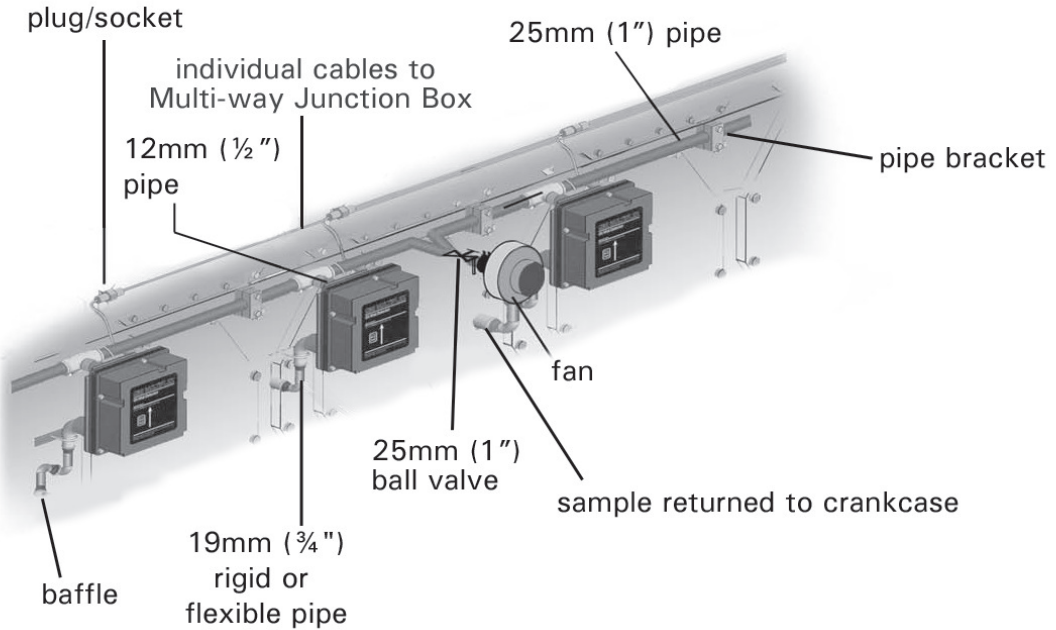


LAYOUT OF PIPEWORK

PIPE WORK RETURNING TO CRANK SPACE

PIPE LAYOUTS

Note: On slow speed 2 stroke engine, use 1 1/4" (38mm) manifold pipe in both layouts below.



PIPEWORK RETURNING TO BREATHER

