



Natural Gas Compressor Case Study

NATURAL GAS COMPRESSOR REMOTE VISUAL INSPECTION

Reciprocating engines come in all sizes, from a tiny, 10cc piston engine that powers a model airplane, to the massive Wartsila RTA 96-C, with each of its 14 cylinders displacing 1,820,000 cc. While our borescopes won't be much help on the model airplane engine, if you work on any medium or large size reciprocating engine, the chances are good that we have a video borescope that can make your job faster and easier.

One of the key applications for our video borescope involves the maintenance and repair of piston engines used in natural gas compressors. With the rise of US natural gas production, this sector of the economy is poised for significant growth, and fast, efficient maintenance of the compressors that move the gas will become more and more important over the coming years.



In this case study, a Michigan natural gas compressor facility was having problems with their backup compressor, a Waukesha 7042. Control panel readings suggested coolant seepage into one or more of the 12 combustion chambers. The diagnosis could only be confirmed visually, which meant removal of the cylinder heads, requiring 6 hours of labor, or a 30 minute borescope inspection using the VJ-ADV from RF System Lab.

Using the VJ-ADV's 6.9 mm diameter insertion tube and joystick-controlled 4-way camera articulation, technicians were able to access the combustion chamber through the spark plug hole and see unusual build-up on the valves and valve seats of cylinders 6 and 4, along with minor seepage down the cylinder walls. By the time the technicians reached cylinder 10, the full extent of the problem came clearly into view: a pool of coolant lying on top of the piston.



Four Way - 360° Articulation



2.8mm 3.9mm 6.9mm
Three insertion tube dimensions available



Photos of the inspection, captured directly onto the VJ-ADV, were immediately emailed to the owner of the compressor, and the engine overhaul was approved the same day.