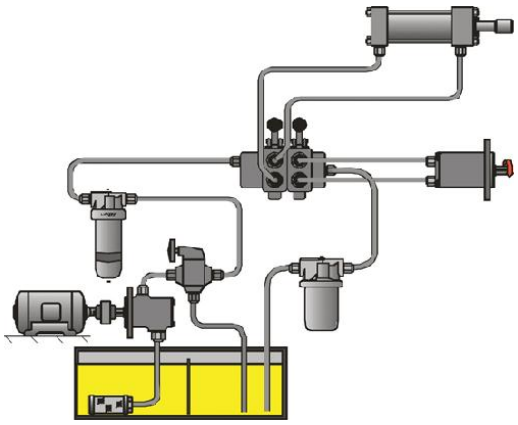
CTRL Systems, Inc. Best Practice



Industry
Manufacturing / Production

Application
NDT Leak Detection

System
Hydraulic Fluid System Quality Control

Component
Valves, Fittings, Hoses, Lines, Pumps, Transmissions

Current Procedures
Two different procedures to verify hydraulic system integrity include visual inspection and pressure decay testing. A visual inspection is sometimes used after the system has been pressurized with hydraulic fluid. A technician walks around operating equipment looking for leaking hydraulic fluid. Using air for over pressure decay leak testing is another way to confirm the integrity of the hydraulic system. If the test fails, finding the leak may involve using a water dunk tank or a spray solution looking for bubbles around valves, fittings, hoses, lines, Etc.

CTRL's Solution
1. After a short training lesson of familiarization and application a user selects the UL101 Receiver, Headset, and appropriate Concentrator from case.
2. Attach concentrator and plug in headset to UL101 receiver.
3. Verify operation of UL101 in accordance with operators manual.
4. Cap off all ends and apply 14psig to failed hydraulic system or system part.
5. On the UL101 turn the gain switch to ½ scale (half-moon); adjust potentiometer knob between 1 and 2. With the head set on, point UL101 in direction of the failed hydraulic part or system and listen.
6. A leak is indicated by a jump in the meter and a rushing sound through the headset.
7. Once a leak or leaks are detected, pinpoint by switching to the Mini-Concentrator attachment. If needed, adjust the potentiometer down to locate the exact location of the leak.
8. Indicate leak location and repair. Verify repairs with UL101.

Benefit
The UL101 is much faster and more effective at locating Hydraulic fluid system leaks, even during peak operation. Technicians do not have to feel around operating machinery or failed parts with their hands to find leaks or spray down components with soap and water solution looking for bubbles to find leaks. Ultrasound Leak Detection is not hindered by facility operation noise and, therefore, less guess work is involved in leak isolation.

This allows the company to focus more on production and less time on quality control inspections, warranty rework and infield repairs.

Additional uses of the UL101 include using the provided solid probe attachment to listen for ultrasound. Pressing the tip of the solid probe (attached to the UL101 receiver) against a valve, the user can easily hear the valve functioning and determine its operating condition, such as leak by.