

# PREVENTATIVE MAINTENANCE

## Servohydraulic Systems



Preventative Maintenance of servohydraulic systems is essential to prolong service life and maximize uptime through increased reliability, helping you maintain operational effectiveness and throughput. This includes a thorough inspection and testing of your equipment's safety systems ensuring correct operation and protection for both operators and equipment.

Instron's factory-trained Field Service Engineers have access to the latest documentation, official spare parts, and tools required to maintain your equipment at its peak performance. During your Preventative Maintenance visit, our Field Service Engineers will check the overall performance of your system, including condition, configuration, correct operation, PC, software, and safety checks.



### WHY IS SERVOHYDRAULIC PREVENTATIVE MAINTENANCE IMPORTANT?

Maintaining your servohydraulic system is essential for ensuring the safety of your employees. Servohydraulic systems present unique hazards, including the risk of hydraulic injection injuries, which can be life threatening. Instron's comprehensive Preventative Maintenance service assists in minimizing these risks, protecting your operators and your business.



### HYDRAULIC HOSE REPLACEMENT

Hydraulic hose failure can have an impact on system performance, and the health and safety of your facilities and staff. Early indications of an impending catastrophic hose failure, such as blistering, fitting weep, and chaffing can be detected as part of your annual Preventative Maintenance visit.

Oil sample testing might also indicate the possibility of more subtle hose failure, such as the erosion of the internal hose wall, which can have a marked impact on the performance of the system, especially in areas such as the servo valve. Instron recommends that you replace your hydraulic hoses every 5 years.

## PREVENTATIVE MAINTENANCE REPORT

During your Preventative Maintenance visit, our Field Service Engineers follow a comprehensive checklist, completing a predefined set of maintenance activities designed to maximize your system's uptime and performance. Instron's factory-trained Field Service Engineers follow procedures, including:

- Safety checks of the system's frame and power pack.
- Checking the system's PC and software are working as intended.
- Inspection of the system to ensure there are no fluid leaks.
- Check the pressure line accumulator.
- Checking that the system is configured correctly and is performing as intended.
- Full inspection of the system's power pack.
- Visual inspection and evaluation of hydraulic hoses.
- Checks on the safety circuits and indicators.
- Check servo valve mechanical and adjust if required.
- Verify hydraulic oil is at the correct temperature.
- Hydraulic oil test sample, including a follow-up review and consultation regarding hydraulic oil test sample results (includes data trending from previous tests).



### OIL ANALYSIS

During normal operation, hydraulic oil will become contaminated and begin to break down. Maintaining hydraulic oil viscosity and cleanliness is essential for ensuring that any servohydraulic system is functioning correctly, as it has a direct influence on the system's performance, loop gains, and system control.

Laboratory hydraulic oil analysis is included as part of Instron systems Preventative Maintenance service. The analysis indicates the degree of oil break down and specific contaminant build-up. This provides accurate monitoring and evaluation of changes and trends in viscosity, contaminants, and oil additives present in your servohydraulic system.

### HYDRAULIC OIL CHANGE

With regular preventative maintenance, appropriate monitoring, and regular filter changes, hydraulic oil can last more than 10,000 hours.

It is recommended to change the hydraulic oil every 10,000 operating hours when mechanical equipment failure occurs (hydraulic pump or heat exchanger), or if the system experiences abnormally high operating temperatures that severely impact oil quality.

Instron has the equipment and expertise to quickly and cleanly replace your system's oil. Our hydraulic oil change service includes: system flushing, filter change, accumulator charge, oil replacement and servo valve nulling.

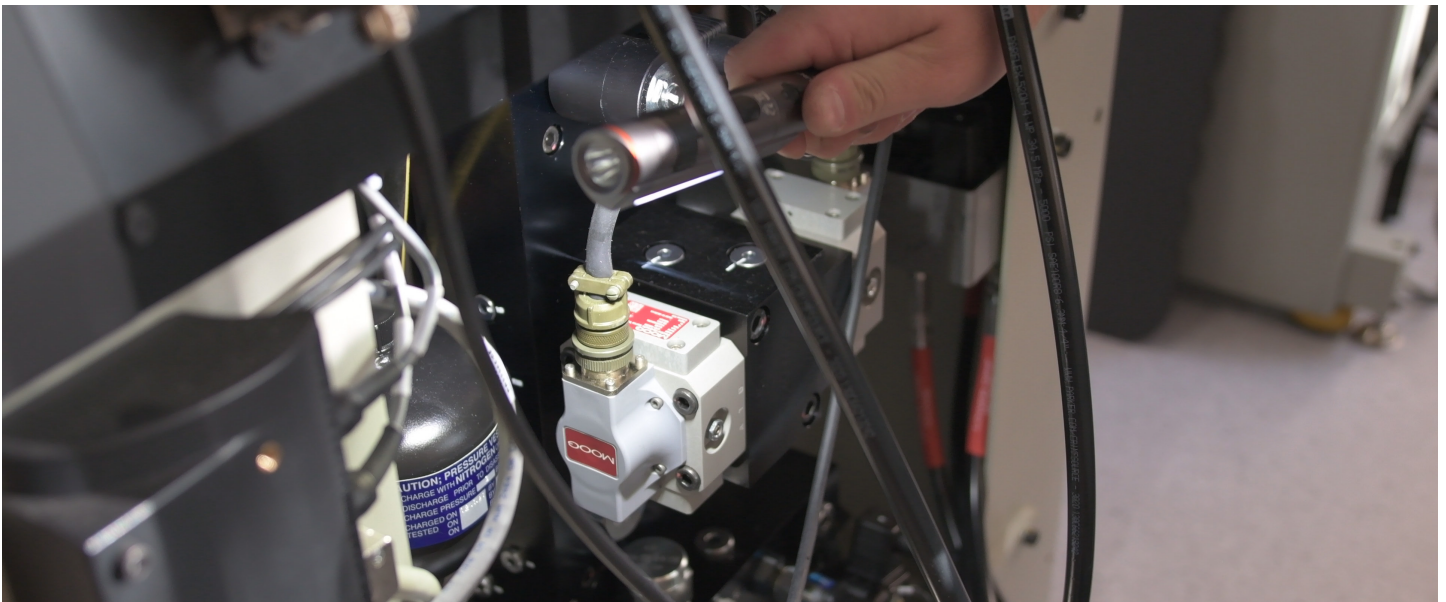
## BENEFITS OF INSTRON SERVICE

Our Preventative Maintenance visits are scheduled at a time that suits your business. We will consult with you and take care of all the arrangements, while keeping you informed along the way with the aim of minimizing disruption to your operation.

- Instron offers a range of different Service Agreement options, where you can combine Preventative Maintenance, Calibration and Instron Connect into a single plan, bringing you consistency in your lab.
- While on-site, your Instron Field Service Engineer has access to your Instron system's calibration and service history, up to date preventative maintenance procedures, software updates, and factory designed diagnostics.
- We are fully equipped to support you with over 250 factory trained Field Service Engineers, supported by local service operations to provide a fast on-site response that creates a uniform process and consistency in your labs worldwide.
- Over time your servohydraulic system will unavoidably experience wear. Rather than replace your system, Instron can refurbish and restore your existing servohydraulic system, providing additional years of reliable testing. Depending on your system's needs, Instron can perform a full servohydraulic refurbishment or focus on a specific component. Available refurbishment services include servo valve cleaning, actuator reseal, actuator re-chrome and pump repair.

## ACCESS YOUR PREVENTATIVE MAINTENANCE REPORTS WITH INSTRON CONNECT

Instron Connect includes a number of technologies that create a secure connection between the testing systems at your facility and Instron. These technologies include a support portal and an AI driven mobile app where you can access your Instron system's preventative maintenance reports, service history and calibration certificates at any time.



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