

# Solution Profile: Hydraulic Power Units



Monitoring Hydraulic Power Units (HPUs) helps you avoid unexpected maintenance problems and their expense



## Reduce Costs

- Save energy when equipment isn't overworked, and it maintains correct fluid temperatures and levels
- Keep equipment healthy by ensuring it's performing as intended
- Base maintenance on usage and load instead of routine and often unnecessary, preventive steps



## Increase Productivity

- Avoid unexpected line shutdowns and associated maintenance
- Reduce manufacturing rejects from inconsistent hydraulic system operations
- Maximize output due to holding optimal operating pressures



## Reduced Manual Labor

- Reduced labor due to automated condition monitoring of pressure and reservoir levels, temperatures, pump current draw and motor/pump vibration
- Reduced maintenance due to equipment running at optimal temperatures, pressures and fluid levels
- Less need to clean production areas due to proper filtration

Reduce System  
Operating Cost by

**25%**

Saved  
in Excess of

**\$30,000**

Payback on Investment  
Achieved in Fewer Than

**3 Months**

After adding Banner monitoring solution to its hydraulic power units, a customer discovered that its systems were not operating within the manufacturer's recommended temperatures or at the proper pressures.

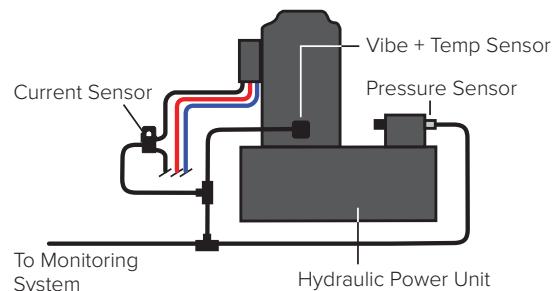
The customer estimates it will save in excess of \$30,000 in the first year on 6 HPUs they are monitoring through lower maintenance service fees and replacement parts. They also anticipate more consistent operations by having properly operating HPUs.

A \$5,000 investment in a Banner monitoring solution provided immediate payback when considering the previous cost of excessive maintenance and service fees. The ROI is even greater when the customer considered its previous approach of non-monitored HPUs resulted in multiple replacement units being purchased.

# How to Begin Monitoring Hydraulic Power Units

**Core principle:** The status of an HPU can be achieved via monitoring pressure, temperature, vibration and motor current draw

By monitoring the system pressure, fluid temperature, current draw, and hydraulic pump motor vibration, the overall performance of your HPUs can be assessed to prevent unwanted downtime and expensive repairs. Through current draw and vibration monitoring, you can also gain insight to the reservoir fluid level.



## Parts you will need

This is a basic list of parts needed to get started. Many more options exist for sensor types, cable lengths, and remote connectivity. Wireless options offer simpler installation, while the wired version offers local monitoring with faster sensor update rates. Consult your local Banner representative for help building the solution that best fits your application.



Scan to View Products

Solution with Wireless Sensors



Wireless Nodes and Sensors

DX80N9Q45UPSD, DX80N9Q45DT,  
DX80N9Q45CT, DX80N9Q45VAC,  
BWA-PRESSURE-SENSOR-3000

Asset Monitoring Gateway with CLOUD ID

with Verizon Modem  
DXM1200-CK9-V

Solution with Wired Sensors



Wired Sensors and Converters

S15C-CT150A-MQ, S15C-PS5000A-MQ,  
S15C-DTMS-MQ, QM30VT2



Asset Monitoring Gateway with SNAP ID

with Verizon Modem  
AMG-SNAP-ID-V

## Install and commission your monitoring system

The three typical sensors are mounted directly to the HPU, and the wireless nodes can be mounted in a location to maximize RF performance. Mount the pressure sensor via a "T" in the hydraulic line (typically near the existing mechanical pressure dial). The current monitoring transducer is installed around one of the power legs (typically L1) in either the power source panel or in the HPU electrical connection box. Temperature probes can be placed in various locations: typically on the fluid exit and return lines by the pump.

Mount the Asset Monitoring Gateway to a location per the instruction manual, and apply power. Follow the instructions to connect the wireless sensor to the gateway.

Finally, follow the instructions to log onto your free trial of Banner Cloud Data Services (CDS). Once logged on and your gateway is sending data to the cloud, you can monitor all the performance parameters from anywhere by viewing the dashboard in CDS. Set an alert that triggers an alarm based on the appropriate parameters, and have it text or email you when that value is reached, so you can schedule maintenance during downtime.

## Take the next step

Visit [www.bannerengineering.com/monitoringsolutions](http://www.bannerengineering.com/monitoringsolutions) to build your next monitoring system, find an authorized distributor, or chat with a technical expert.



Access the Digital Version



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