



# Control Valve Assembly Maintenance Recommendations

Fisher™  
FIELDVUE™  
Instruments



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# CHALLENGES

You've invested in Fisher™ FIELDVUE™ instruments for diagnostic capabilities and valve maintenance guidance. Your company processes recommend performing an open and inspect every three to five years, disregarding your long-term investment in diagnostic capabilities.



## Investment

Your latest diagnostic instrument scan indicates your valves are meeting operational requirements.



## Process

Your company processes stop you from leveraging the diagnostic equipment investment, forcing you to open and inspect a control valve.



## Cost

Disassembling control valves that are meeting operational requirements utilizes valuable resources and adds unnecessary costs.

# YOUR OPPORTUNITY

Emerson offers global expertise and support in updating your maintenance processes and practices.



## Investment

Emerson experts are available to guide you in maximizing your instruments' diagnostics capabilities in preparation for your next scheduled maintenance event.



## Process

Work with Emerson experts to take advantage of the diagnostics information to improve your existing maintenance practices.



## Cost

Disassembling control valves adds unnecessary cost and valuable recourses.





# Maintenance Guides provide recommended actions based on OEM service and control valve expertise.

**Maintenance recommendations are for applications that have direct and significant impact on your process control.**



1.

**Plant Critical** - Significantly impacts plant performance directly affecting operations and may cause the plant to be shut down until the issue is resolved. Specialty trim solutions potentially required.



2.

**Severe Service: Moderate to Significant** - Moderate to Significant impact on valve trim, and application typically includes; cavitation, flashing, outgassing, noise, corrosion, erosion, particulate, vibration, etc. Specialty trim solutions required.



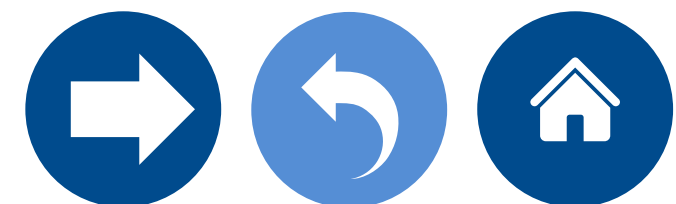
3.

**Severe Service: Mild** - Mild risk of trim damage or failure. Specialty trim solutions may be required.



4.

**General Service** - Control valve applications include basic process control and are not exposed to potential cavitation, vibration, noise and erosive service situations. No specialty trim solutions required.



## General Applications with Fisher™ FIELDVUE™ Instruments

### Maintenance Interval

### Assembly Visual Inspection Recommendation

### Diagnostics Recommendation

#### Periodic Maintenance

Open and inspect only upon diagnostic findings that would recommend such an action (valve signature, step response, travel deviation, drive signal, Performance Diagnostic indicators).

- Enable 3 key alerts: travel deviation, supply pressure, and drive signal. Enable other alerts as needed based on the specific application.
- Preserve information by enabling the alert record and setting up the triggered profile.
- Routinely monitor and review the alert record for new alerts. Create and follow an action plan based on the alerts received.

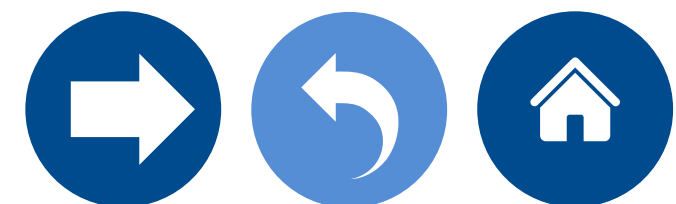
#### Every 1 - 3 Years

#### What to look for when visually inspecting the valve assembly

- Loose and broken bracketry
- Air leaks in tubing
- Leakage in between bonnet and body, packing and stem, flanges, broken hardware
- Process leakage between body and pipe flange

#### What to run and what to look for

- Review control system log of performance abnormalities.
- Perform a dynamic scan and observe the seat load, friction, spring rate, and air supply.
- Run a step response and observe the response of the entire valve assembly to small and large steps.



# General Applications **without** Fisher™ FIELDVUE™ Instruments

Maintenance Interval	Assembly Visual Inspection Recommendation
<b>Periodic Maintenance</b>	<b>Monitor condition of body and bonnet for deterioration; consider replacement over time</b>
<b>Every 1 - 3 Years</b>	<b>Perform visual inspection</b> <ul style="list-style-type: none"><li>○ Loose and broken bracketry</li><li>○ Air leaks in tubing</li><li>○ Leakage in between bonnet and body, packing and stem, flanges, broken hardware</li><li>○ Process leakage between body and pipe flange</li></ul> <b>Consider having recommended spare parts for replacement</b>
<b>Every 3 - 5 Years Open and Inspect Event</b>	<b>Perform visual inspection</b> <ul style="list-style-type: none"><li>○ Loose and broken bracketry</li><li>○ Air leaks in tubing</li><li>○ Leakage in between bonnet and body, packing and stem, flanges, broken hardware</li><li>○ Process leakage between body and pipe flange</li></ul> <b>Complete an Open and Inspection of the valve utilizing new soft goods</b> <b>Complete valve repair utilizing recommended spare parts</b>



## Critical and Severe Applications with Fisher™ FIELDVUE™ Instruments

### Maintenance Interval

### Assembly Visual Inspection Recommendation

### Diagnostics Recommendation

#### Periodic Maintenance

- Open and inspect only upon diagnostic findings that would recommend such an action (valve signature, step response, travel deviation, drive signal, Performance Diagnostic indicators).
- Perform a general inspection to identify obvious damage or issues that may impact control or safety on a systematic basis.

- Recommend utilization of the Emerson Valve Condition Monitoring Program.
- Monitor condition of body and bonnet for wear; consider replacement over time.

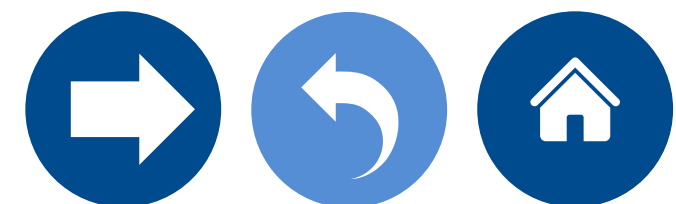
#### Every 1 - 3 Years

#### What to look for when visually inspecting the valve assembly

- Loose and broken bracketry
- Air leaks in tubing
- Leakage in between bonnet and body, packing and stem, flanges, broken hardware
- Process leakage between body and pipe flange
- Vibration related damage
- Broken FIELDVUE covers
- Broken gauges
- Compromised insulation

#### What to run and what to look for

- Review the instrument alert log for alerts indicative of potential instrument or valve assembly issues.
- Review control system log of performance abnormalities.
- Perform valve signature/step response and observe for high cycle count, travel deviation alerts, I/P (current-to-pressure transducer) drive signal alerts, seat profile, air leaks, spring rate.
- Perform and review Performance Diagnostics (PD).



# Critical and Severe Applications **without** Fisher™ FIELDVUE™ Instruments

Maintenance Interval	Assembly Visual Inspection Recommendation
<b>Periodic Maintenance</b>	<b>Monitor condition of body and bonnet for deterioration; consider replacement over time</b>
<b>Every 1 - 3 Years</b>	<b>Perform visual inspection</b> <ul style="list-style-type: none"><li>○ Loose and broken bracketry</li><li>○ Air leaks in tubing</li><li>○ Leakage in between bonnet and body, packing and stem, flanges, broken hardware</li></ul> <b>Consider having recommended spare parts for replacement</b>
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# Control Valve Assembly Maintenance Recommendations Guide

## Recommended Spare Parts for Customer Self Inventory

The Customer On-site Inventory recommendation chart below provides suggested actions based on OEM service and control valve expertise. Customers are encouraged to maintain spare part stock for Critical applications and consider lead time for General and Severe applications. Along with this chart, it is imperative to follow OEM instruction manuals and use OEM parts to maintain plant safety and reliability.

Type of Application	Customer On-Site Inventory Recommendations		
<b>Plant Critical</b>	Highly Recommend Ordering Inventory to Stock	Highly Recommend Ordering Inventory to Stock	Actively Store Local Inventory
<b>Severe Service - Moderate to Significant</b>	Evaluate Cost / Benefits for Probable Inventory Stock	Highly Recommend Ordering Inventory to Stock	Highly Recommend Ordering Inventory to Stock
<b>Severe Service - Mild</b>	Receive spare parts within 10 business days	Evaluate Cost / Benefits for Probable Inventory Stock	Highly Recommend Ordering Inventory to Stock
<b>General</b>	Priority for Inventory Stock Minimal	Inventory Stock a Low Priority	Evaluate Cost / Benefits for Probable Inventory Stock
	Immediately Available 1 - 2 days	Accessible Lead Time 2 - 6 weeks	Accessible Lead Time 6+ weeks
	Speed of Spare Parts Availability		

Maintenance recommendations are for applications that have direct and significant impact on your process control.

**Plant Critical** - Significantly impacts plant performance directly affecting operations and may cause the plant to be shut down until the issue is resolved. Specialty trim solutions potentially required.

**Severe Service: Moderate to Significant** – Moderate to Significant impact on valve trim, and application typically includes; cavitation, flashing, outgassing, noise, corrosion, erosion, particulate, vibration, etc. Specialty trim solutions required.

**Severe Service: Mild** – Mild impact on valve trim, increased risk of damage or failure. Specialty trim solutions may be required.

**General Service** – Control valve applications include basic process control and are not exposed to potential cavitation, vibration, noise and erosive service situations. No specialty trim solutions required.

Risk Continuum: < Lower Risk of a Critical Process Being Down Higher Risk of a Critical Process Being Down >

Consider holding inventory of full valve assemblies based on criticality of application, valve size, material and complexity of repair.



# Contacts and References

Fisher spare parts minimize variability, reduce costs, and support safety by using genuine original equipment manufacturer (OEM) valve, actuator, and regulator spare parts.

[▶ Learn more here on the Spare Parts Page](#)

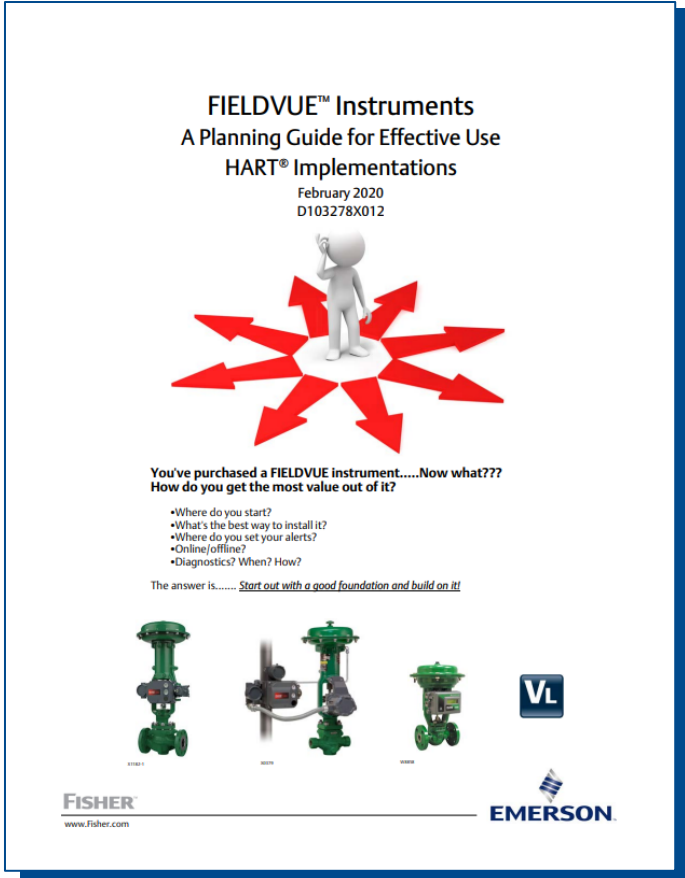
For more details connect with an Emerson sales office at [Emerson.com/ContactUs](https://www.emerson.com/ContactUs) to support your Spare Part needs.

## Resources

**Guide:** ▶▶▶

**FIELDVUE™ Instruments:  
A Planning Guide for Effective  
Use HART® Implementations**  
on effectively using the state-of-the-art  
diagnostics in your FIELDVUE  
Instruments.

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**Flyer:** ▶▶▶

**Effective Use of FIELDVUE™  
DVC6200 Instrument Diagnostics  
HART® Communication Protocol**  
supports basic steps to provide  
immediate value and build  
momentum toward  
broader utilization.

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