**MOVABLE BRIDGE HYDRAULIC INSPECTION REPORT – VERTICAL LIFT BRIDGES**

Wisconsin Department of Transportation

DT2028 6/2017 s.84.17 Wis. Stats.

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| --- | --- |
| Bridge Number      | Overall Rating of Hydraulic System      |
| Bridge Name      | Date Inspected      |
| Lead Hydraulic Inspector      | Weather      |
| Inspection Team Leader      |  |

Notes:

* This form provides specific inspection detail in conjunction with the items provided in the HSI Movable Inspection Tab. While there may be some overlap with the routine inspection, updates to the Elements and Assessments Inspections Tabs are not necessarily required.
* Place comments in each box next to the component inspected.
* For each component rating, enter “(1)” for Good, “(2)” for Fair, “(3)” for Poor, or “(4)” for Severe.
* If the component does not apply to this bridge enter “NA”.
* Include a comment and photo reference documenting any components rated (3) or (4).

**Hydraulic Power Unit** Component Rating:

|  |  |
| --- | --- |
| **Component** | **Finding/Comment** |
| Leaking at / under HPU’s? | Yes [ ]  | No [ ]  |       |
| Pipes / Lines / Hoses leaking? | Yes [ ]  | No [ ]  |       |
| Excessive noise during operation? | Yes [ ]  | No [ ]  |       |
| Oil at improper levels? | Yes [ ]  | No [ ]  |       |
| Oil in overflow/drip pan? | Yes [ ]  | No [ ]  |       |
| Other HPU Items/Issues |       |

**Hydraulic Pump Motor** Component Rating:

|  |  |
| --- | --- |
| **Component** | **Finding/Comment** |
| Excessive noise during operation? | Yes [ ]  | No [ ]  |       |
| Excessive vibration? | Yes [ ]  | No [ ]  |       |
| Corrosion on exterior surface? | Yes [ ]  | No [ ]  |       |
| Other Hydraulic Pump Motor Items/Issues |       |

**Hydraulic Cylinders** Component Rating:

|  |  |
| --- | --- |
| **Component** | **Finding/Comment** |
| Cylinder rods scored? | Yes [ ]  | No [ ]  |       |
| Cylinder rod seals leaking? | Yes [ ]  | No [ ]  |       |
| Cylinder Pedestals in poor condition? | Yes [ ]  | No [ ]  |       |
| Hydraulic lines leaking at cylinder? | Yes [ ]  | No [ ]  |       |
| Other Hydraulic Cylinder Items/Issues |       |

**Valves and Instruments** Component Rating:

|  |  |
| --- | --- |
| **Component** | **Finding/Comment** |
| **Directional Control Valves** – Verify that spool moves freely. Energize spool in both direction to ensure it is not sticking. Check for leaks. |       |
| **Pressure Relief Valves** – Verify that pressure settings are correct. Check for leaks. |       |
| **Shut-Off Valves** – Check for leaks. Verify that valves are working properly. |       |
| **Pressure and Flow Instruments** – Inspect for damage, corrosion or build-up of dirt and leaks. Check calibration of devices. |       |

**Filters** Component Rating:

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| --- | --- |
| **Component** | **Finding/Comment** |
| **Pressure Filter** – Check for clogging. Record filter replacement date if available. If filter is replaced during the inspection, check for leaks afterwards. |       |
| **Return Line Filters** – Check for clogging. Record filter replacement date if available. If filter is replaced during the inspection, check for leaks afterwards. |       |

**Hydraulic Fluids** Component Rating:

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| --- | --- |
| **Component** | **Finding/Comment** |
| **Hydraulic Fluid Visual Inspection** – Visually inspect fluid for signs of water, deterioration and/or contamination. |       |
| **Hydraulic Fluid Sampling & Testing** – Take fluid sample to be analyzed for particle count and acceptable continued use; attach copy of test report when received. |       |

**Span Drive Operating Pressure and Cycle Times** Component Rating:

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| --- | --- |
| **Component** | **Finding/Comment** |
| Maximum operating pressure (psi) when opening |       |
| Maximum operating pressure (psi) when closing |       |
| Opening Time (seconds) at normal speed |       |
| Closing Time (seconds) at normal speed |       |
| Above values inconsistent with those from previous years’ inspections? | Yes [ ]  | No [ ]  |       |

**Recommended Short Term Actions & Repairs for Hydraulic System:**

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|       |

**Recommended Long Term Rehabilitation Needs for Hydraulic System:**

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|       |

**General Remarks – Hydraulic System** Overall Rating *(Also enter on page 1)*:

(Overall Rating is lowest of all of the component ratings above.)

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|       |