



# **Subway Work Car RT6 and RT17 Hydraulic Fluid Leak Investigation Preliminary Findings Report From HATCH**

April 15, 2026

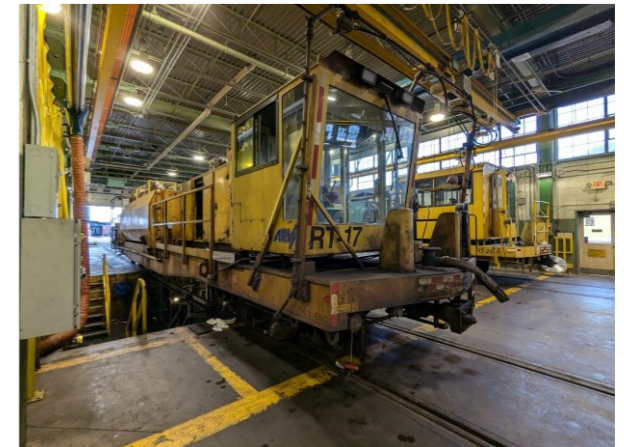
# Hatch Mandate

TTC requested Hatch to independently investigate recent RT6 and RT17 hydraulic leaks after April 7 and 10 incidents.

Observations of the last four days are presented here along with a preliminary next step action plans.

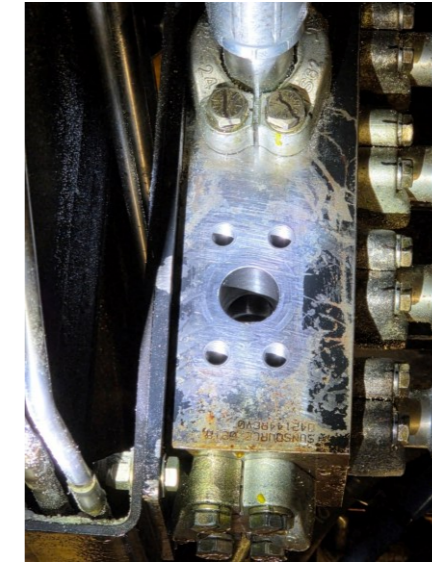
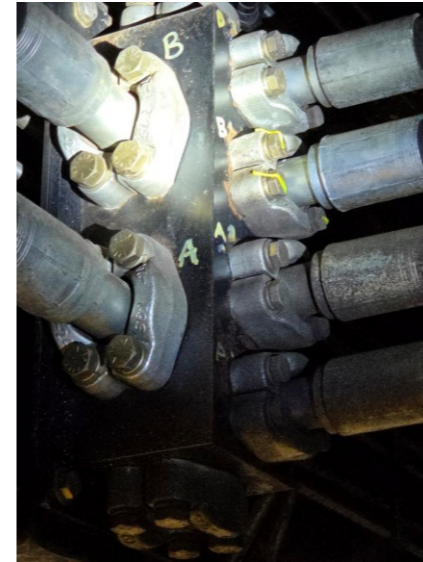
Hatch considers these two incidents:

- Do not appear to be atypical
- Random in nature
- Could not have been predicted.
- Not uncommon for a similar sized transit authority such as the TTC.



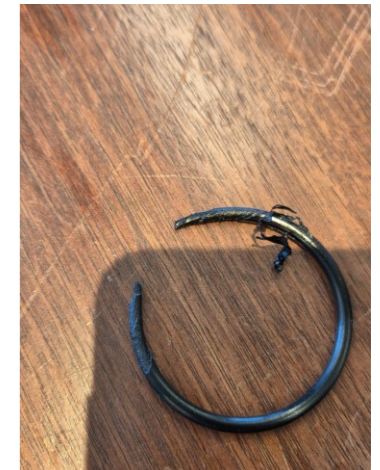
# Findings – RT6

High pressure hydrostatic fitting incorrectly assembled with the mounting bolts torqued below specification.



View on car

Resulted in O-ring wear causing catastrophic failure



## Next Steps – RT6

- Review the installation process for areas of potential incorrect assembly and develop improvement steps and protocols.
- Inspect other work cars with similar fittings repaired over the last 3 to 4 weeks and recertify work performed as a containment measure.
- Send the failed O-ring for analyses to confirm failure mode, chemical composition and mechanical properties



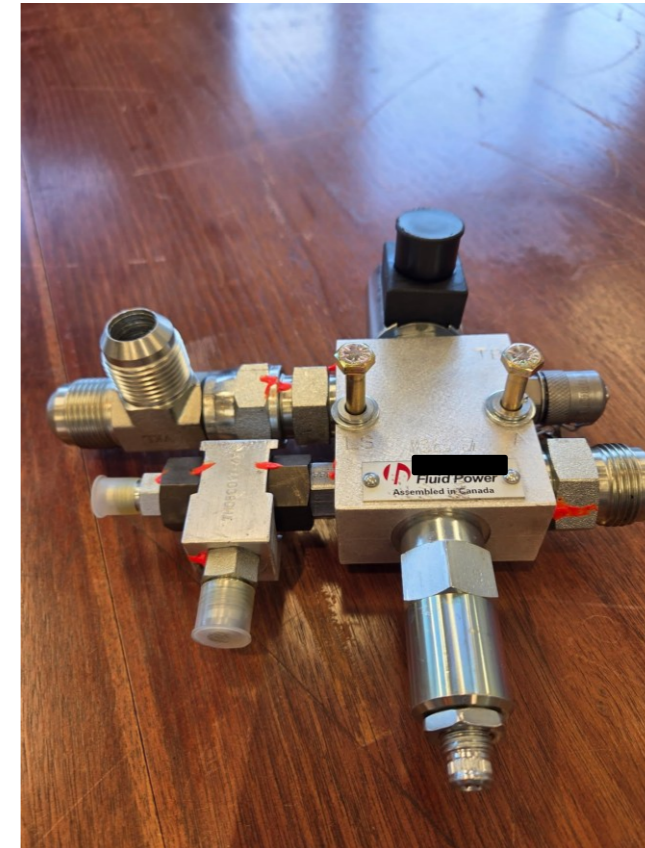
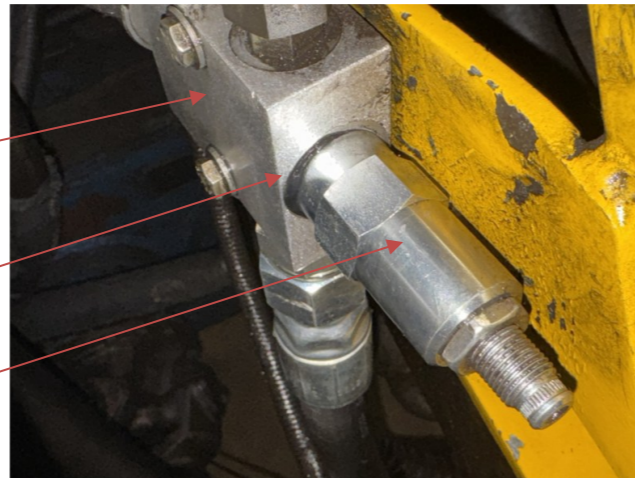
# Findings – RT17

Supplier assembled Flow Control Valve found with exposed O-ring at leak location, a result of under torque during assembly

Manifold

Exposed O-ring

Flow Control Valve



Compressor Distribution Manifold Assembly



## Next Steps – RT17

- Immediately identify and quarantine all similar manifold assemblies, including on-car and in-stock inventory.
- Supplier to perform failure analyses on RT17 manifold assembly including inspection of the FCV mounting geometry and analyse of the O-ring (material, mechanical properties)
- Supplier to develop and implement a quality control policy that assures specification compliant assembly of the units and a pre-ship inspection process
- Review TTC's incoming inspection process for vendor supplied hydraulic components where there is a concern and ensure they are compliant to the manufacturing specifications before they are assembled into work cars.



# Hatch Investigation Mandate Next Steps

- Conclude the investigation of the RT6 and RT17 leak incidents, including comprehensive findings, root cause analysis, and recommendations for prevention of future failures.
- TTC and Hatch to jointly review and develop additional scope of work to further follow-up on Hatch's 2024 Subway Hydraulic Fluid Leak Investigation Report



