

**Twyford Waterworks Trust Risk Assessments (2)
Restoration
Internal Combustion Engine Restoration**

Date	Reviewer
September 2015	Graham Feldwick
February 2017	Geoff Bailey/Ray Caine

Process: Internal Combustion Engine Restoration			
Specific part of process and details: 1. Stripping down			
<p>Risks:</p> <p>Sump may contain large volume of oil.</p> <p>Fuel tank may contain fuel.</p> <p>All parts will be contaminated with oils, greases and other lubricants.</p>	<p>Risk Owner & deputy Geoff Bailey TBA dependent on engine</p>	<p>Risk Rating: M</p>	<p>Control(s): Oil absorbing sheets / oil spill kit should be available at all times</p> <p>Sump and fuel tank should be completely drained before commencement of work - see 'Use of oil, lubricants, fuels, solvents & cleaning materials'</p> <p>All parts should be dismantled carefully, in, or subsequently placed in, a sealed tray or bunded area.</p> <p>Appropriate PPE must be worn at all times - see H&S Handbook</p> <p>Any spillages should be contained and mopped up immediately using purpose made absorbent materials, and reported to the H&S Manager.</p>
Control Status: Effective			
Risk Assessment Review Period: Annual			

Process: Internal Combustion Engine Restoration			
Specific part of process and details: 2. Flushing / cleaning			
<p>Risk:</p> <p>All parts will be contaminated with oils, greases and other lubricants.</p> <p>Use of solvents and degreasers.</p>	<p>Risk Owner & deputy Geoff Bailey TBA dependent on engine</p>	<p>Risk Rating: M</p>	<p>Control(s): Oil absorbing sheets / oil spill kit should be available at all times</p> <p>Cleaning of parts using solvents should be carried out within a sealed or bunded area, and waste material / cleaning</p>

<p>H&S Issue due to risk of inhalation, ingestion or contact with skin and/or eyes</p>			<p>cloths should be disposed of in a safe manner – see ‘Use of oil, lubricants, fuels, solvents & cleaning materials’</p> <p>Personnel dealing with these materials should be familiar with the H&S issues set out in the COSHH Data sheets (and RA where available)</p> <p>Appropriate PPE must be worn at all times and recommendations for first aid/clean up to be followed if clothing/skin has been affected</p> <p>Any spillages should be contained and mopped up immediately using purpose made absorbent materials, and reported to the H&S Manager.</p>
<p>Control Status: Effective</p>			
<p>Risk Assessment Review Period: Annual</p>			

<p>Process: Internal Combustion Engine Restoration</p>			
<p>Specific part of process and details: 3. Rebuilding (including gaskets & oil leakage)</p>			
<p>Risk: Leakage of oils, fuel and other lubricants due to incorrect reassembly or use of inappropriate gaskets</p>	<p>Risk Owner & deputy Geoff Bailey TBA dependent on engine</p>	<p>Risk Rating: L</p>	<p>Control(s): Oil absorbing sheets / oil spill kit should be available at all times</p> <p>Reassembly should follow written instruction, either from original manuals or from procedure agreed with IC Team Leader (Geoff Bailey)</p> <p>Correct torque settings and gaskets must be used at all times</p> <p>Engine should be checked for leaks immediately after the addition of oils and/or fuel, and again at hourly intervals for a full day</p> <p>Fuel tanks should only contain enough fuel for the operation, and should be emptied at the end of each day</p>

Control Status: Effective

Risk Assessment Review Period: Annual

Process: Internal Combustion Engine Restoration

Specific part of process and details: 4. Commissioning

Risk: Leakage of oils, fuel and other lubricants due to incorrect running of engine caused by inappropriate settings, incorrect reassembly or use of inappropriate gaskets.	Risk Owner & deputy Geoff Bailey TBA dependent on engine	Risk Rating: M	Control(s): Oil absorbing sheets / oil spill kit should be available at all times Carrying out of full commissioning programme, to observe the engine in operation, and to make changes as appropriate to ensure correct running Engine should be checked for leaks at regular intervals throughout commissioning programme, and these should be rectified immediately Fuel tanks should only contain enough fuel for the operation, and should be emptied at the end of each day
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Control Status: Effective

Risk Assessment Review Period: Annual

Process: Internal Combustion Engine Restoration

Specific part of process and details: 5. Fuel tanks

Risk: Fuel tanks can become corroded, especially if water has been allowed to collect during a period of disuse	Risk Owner & deputy Geoff Bailey TBA dependent on engine	Risk Rating: L	Control(s): Fuel tank should be carefully inspected for internal and external corrosion before reuse Fuel tanks should be tested within a bunded area before reassembly by adding fuel and watching for seepage.
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Control Status: Effective

Risk Assessment Review Period: Annual

Process: Internal Combustion Engine Restoration

Specific part of process and details: 6. Fuel handling

Risk: Spillage of fuel while filling/emptying fuel tank.	Risk Owner & deputy Geoff Bailey TBA dependent on engine	Risk Rating: M	Control(s): Fuel/Oil absorbing sheets and fuel/ oil spill kit should be available at all times
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<p>Leakage of fuel whilst held in fuel tank.</p>			<p>See 'Storage and use of oils, lubricants, fuels, solvents & cleaning materials' and 'Internal Combustion Engine Operation Risk Assessments'</p> <p>No fuel to be left in any fuel tank between demonstrations of operation of the engine</p> <p>Only sufficient fuel required for operation to be added to fuel tank.</p>
<p>Control Status:</p>			
<p>Risk Assessment Review Period: Annual</p>			