



Lab Test Results

Summary: A customer wanted continuous visual monitoring of liquid levels in a tank used to store high performance hydraulic oil. Because the oil and the tank were the same color, this was problematical. The customer asked the Acculube Lab to determine the effect on the hydraulic tanks of dyeing the hydraulic oil blue.

Acculube developed a protocol for testing and inspection based on 3 possible dye concentrations, photographing test pieces at various stages.

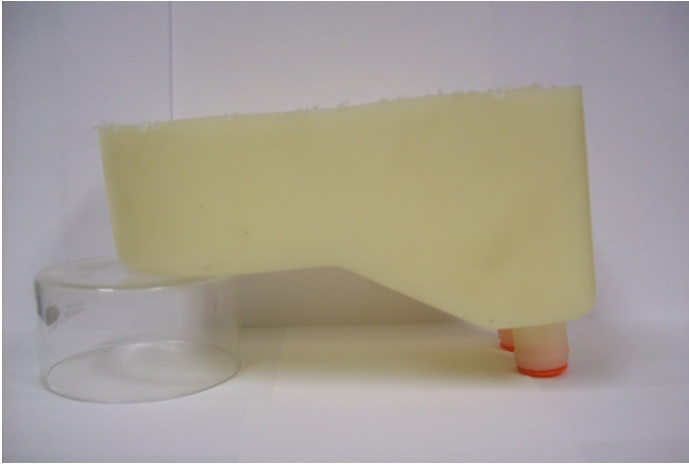
The Acculube testing showed that the dye would have no long-lasting effect at any of the proposed concentrations. The client dyed the hydraulic oil, and is now able to easily and continuously monitor oil levels.

Product Identification:	ISO 32 Oil (with Blue Hydraulic Oil Dye)
Purpose for Product Analyses:	Determine effect of Blue Dyed ISO 32 hydraulic oil on Plastic Hydraulic Oil Tanks.
Test Method:	<p>Samples of ISO 32 hydraulic oil were mixed with blue hydraulic oil dye to yield the solution used in these tests.</p> <p>A plastic hydraulic oil tank was donated by the manufacturer for use in these tests. The tank was cut up such that the two ends could be used to determine if exposure to the blue dyed hydraulic oil would cause staining of the plastic tank.</p> <p>The partially filled test pieces containing the blue dyed oils were allowed to sit at room temperature for 28 days. The test pieces were periodically inspected for signs of staining.</p> <p>After 28 days, the blue dyed oil was removed from the test pieces, and the test pieces were rinsed with mineral spirits and wiped with a shop rag to remove the blue dyed oil. The test pieces were then inspected for signs of staining.</p>
<u>RESULTS:</u>	Photographs of the test pieces at various stages of the test are shown below.
Comments:	Based on these test results, it does not appear that ISO 32 hydraulic oil containing the blue hydraulic oil dye in the range of 62 to 42 ppm will cause permanent staining of the plastic hydraulic oil tank.

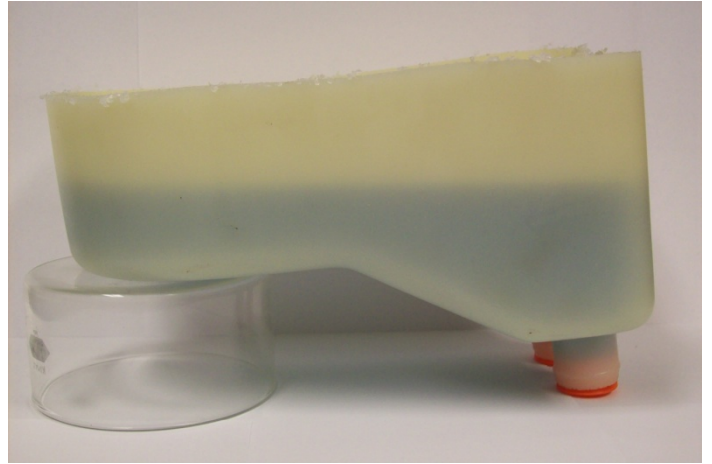


Lab Test Results

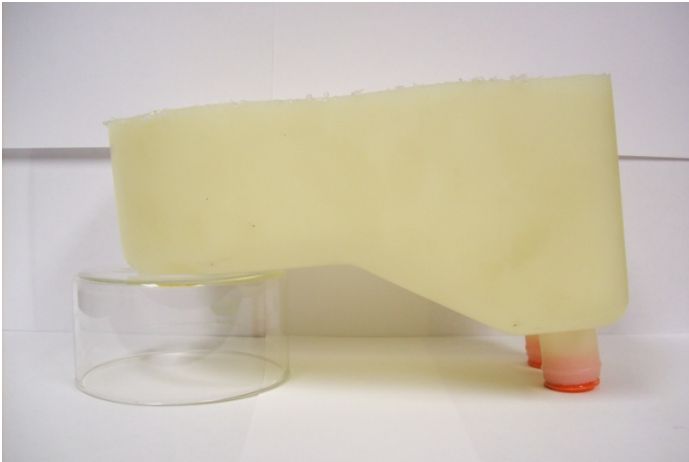
Test Piece exposed to ISO 32 hydraulic oil containing blue hydraulic oil dye



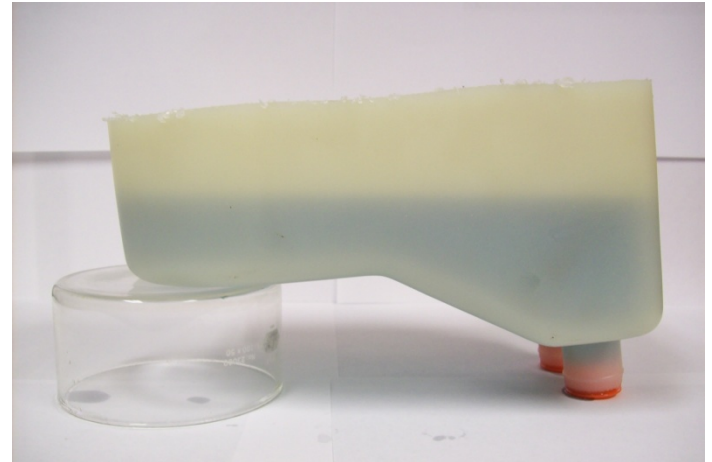
Test Piece Prior to Exposure



Test Piece at Beginning of Exposure



Test Piece After 28 Day Exposure
(Rinsed and Dried)



Test Piece after 28 day Exposure

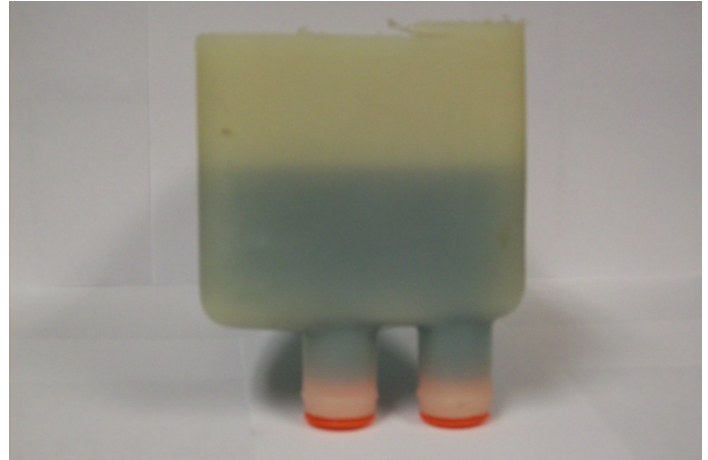


Lab Test Results

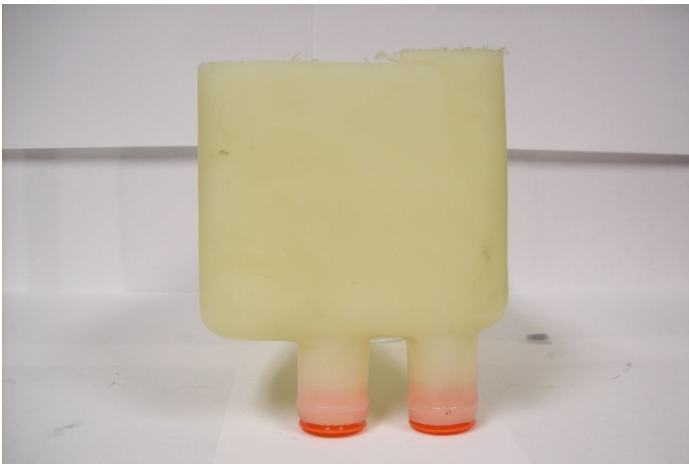
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Test Piece at Beginning of Exposure



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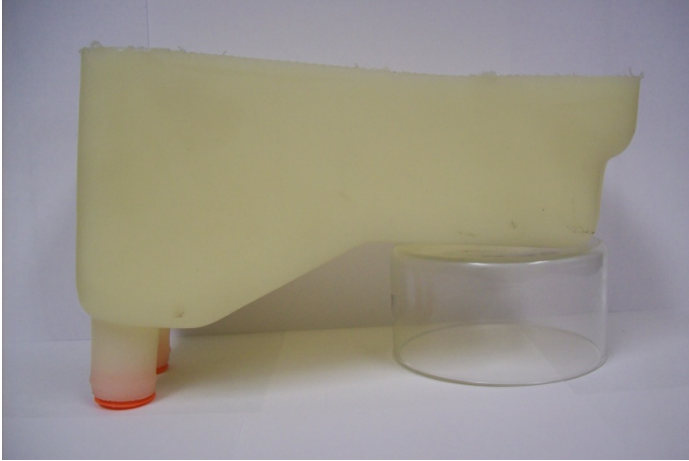


Test Piece after 28 day Exposure

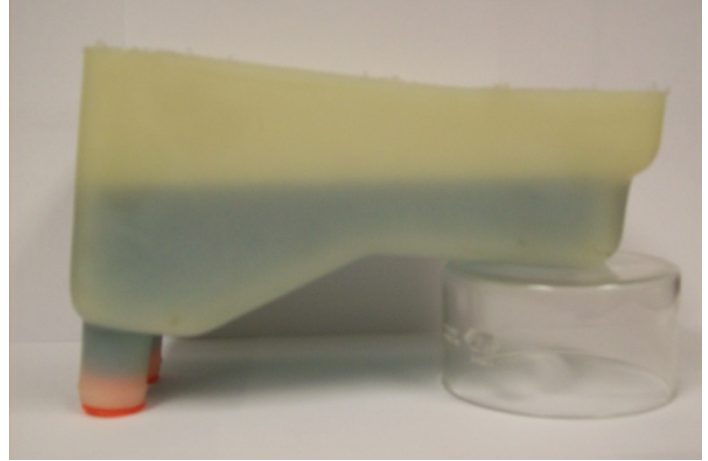


Lab Test Results

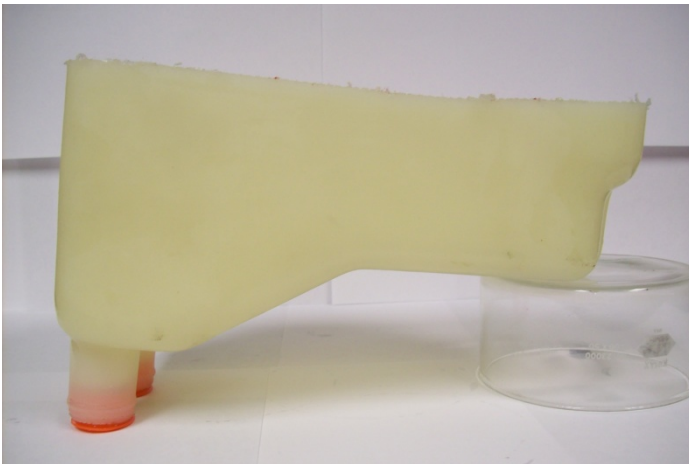
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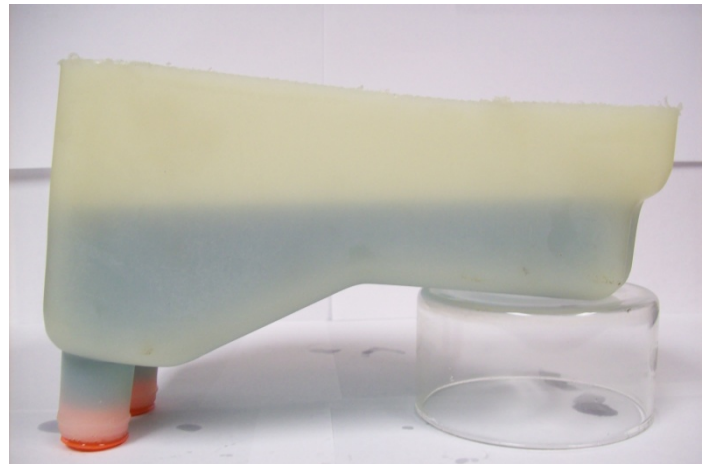
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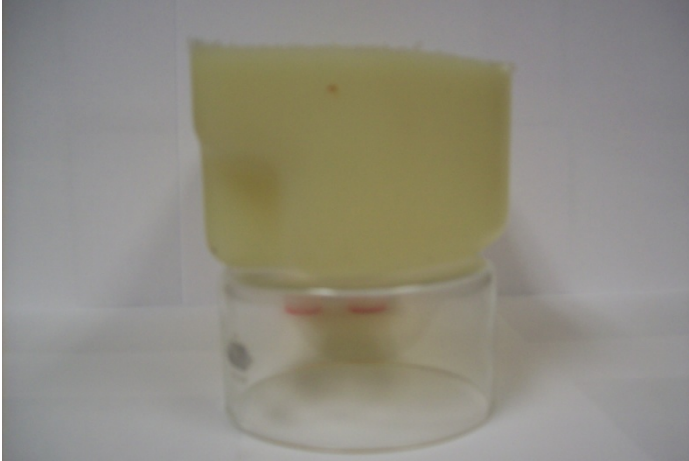


Test Piece after 28 day Exposure

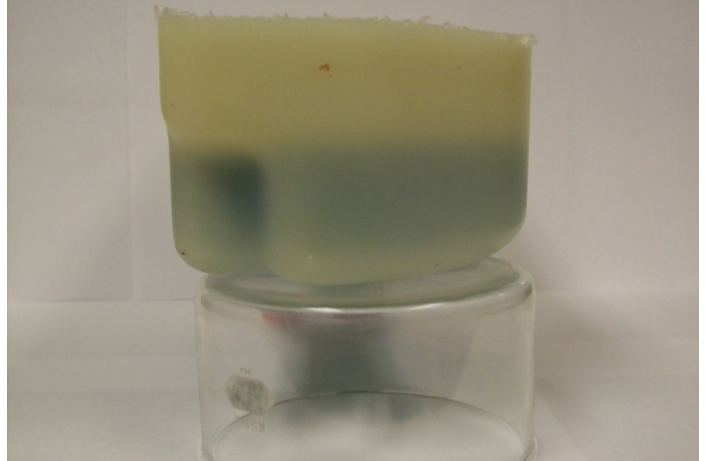


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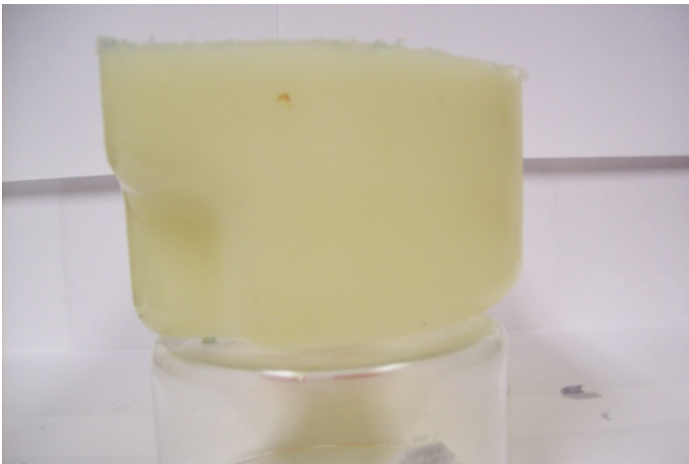
Test Piece exposed to ISO 32 hydraulic oil containing blue hydraulic oil dye.



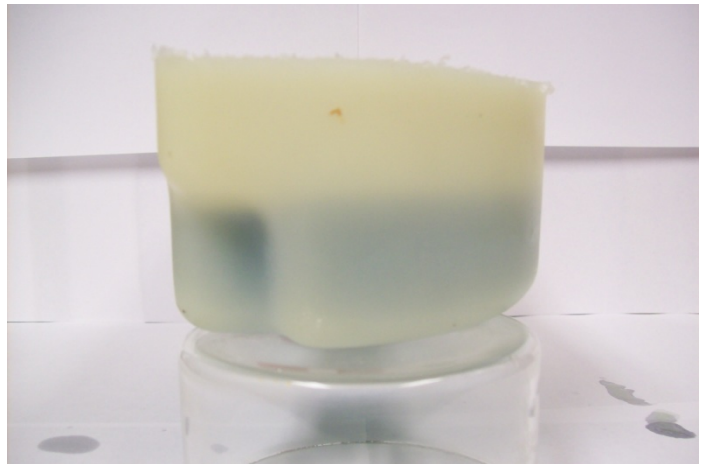
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Test Piece at Beginning of Exposure



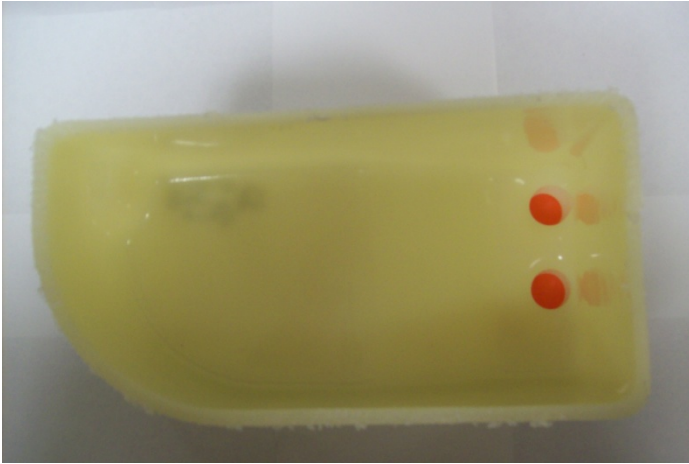
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(Rinsed and Dried)



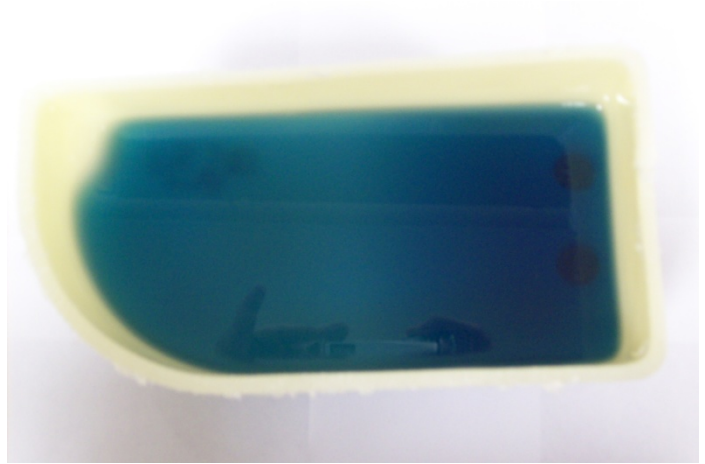
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Test Piece at Beginning of Exposure



Test Piece After 28 Day Exposure
(Rinsed and Dried)



Test Piece after 28 day Exposure



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