

T-12 Phase I Oil Consumption Study

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Revised Study Plan

the red parts indicate what changed from the prior stage

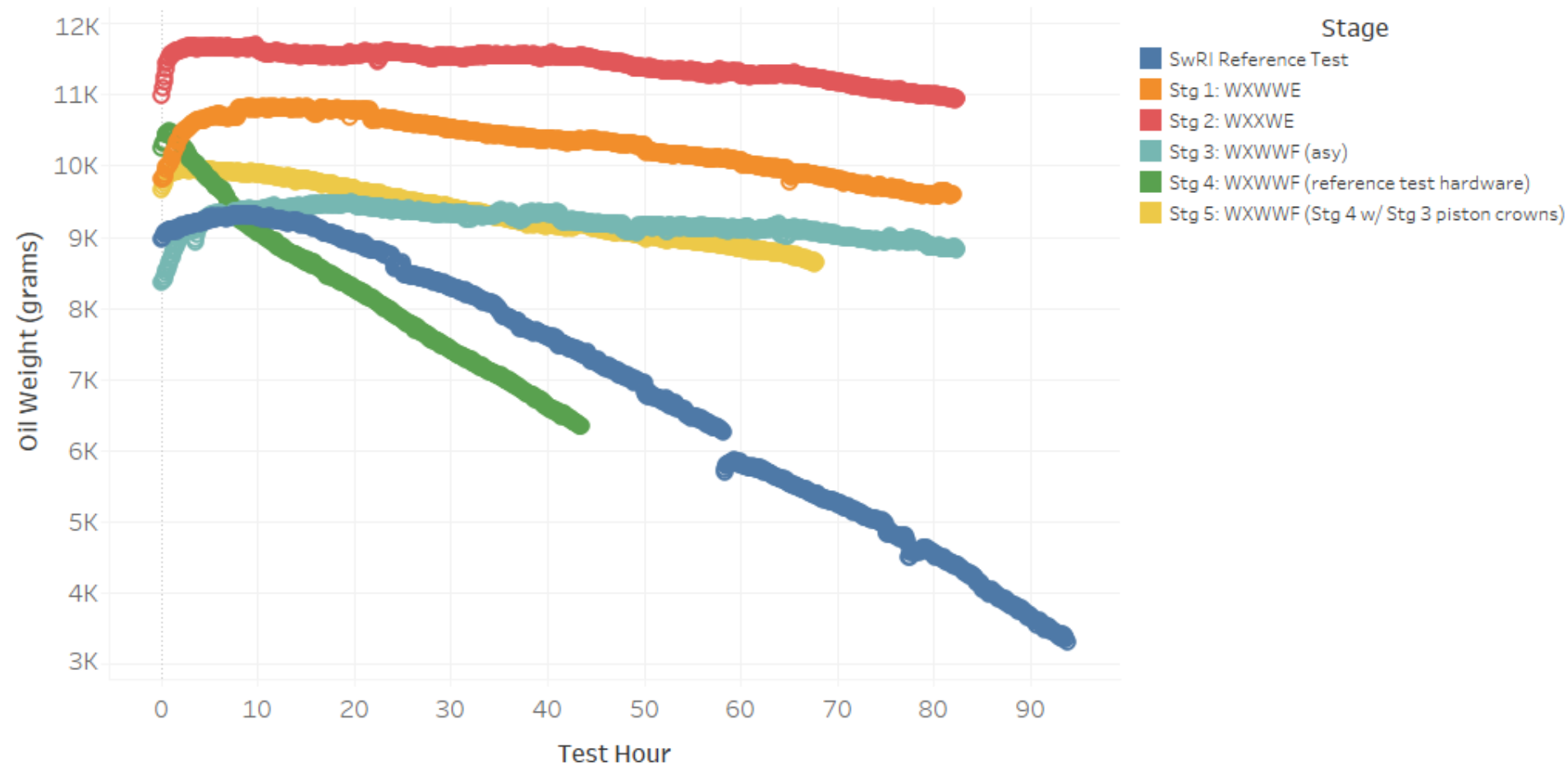
	Stage 1	Stage 2	Stage 3	Stage 4 *Installed SwRI Reference Test Hardware*	Stage 5
Current Hardware	2 nd Rings (W) Oil Rings (W) Piston Crowns (E)	Oil Rings (W) Piston Crowns (E)		*All of Cyl 6 and oil rings on Cyl 2 & 4 remained the same as Stage 3*	*Only changed piston crowns to those used in Stage 3. Liners and rings same as Stage 4*
New Hardware	Liners (W-TEI)	Liners (W-TEI) 2nd Rings (X-TEI)	Liners (W-TEI) 2 nd Rings (X-TEI) Oil Rings (X Asymmetric) Piston Crowns (F-TEI)	Liners (W-ref) 2nd Rings (X-ref) Oil Rings (X-ref) Piston Crowns (F-ref)	Liners (W-ref) 2 nd Rings (X-ref) Oil Rings (X-ref) Piston Crowns (F-TEI)
Phase 1 Oil Consumption	20.6 g/hr	21 g/hr	15.2 g/hr Phase 2: 90 g/hr	70 g/hr	19.5 g/hr

Stage 1 to 3 were on hardware provided by TEI. After stage 3 did not produce the expected high oil consumption like in the coordinated references, the hardware that remained after SwRI's terminated reference test were installed for stage 4 to reproduce high oil consumption conditions. Working backwards from the high oil consumption point, the newer-TEI provided piston crowns from Stage 3 were reinstalled for Stage 5 using the same reference-test liners and rings as stage 4, which brought oil consumption back down to reasonable levels.



Oil Consumption Trends

T-12 Phase 1 Consumption



Top Groove Measurements

2nd Groove Measurements

Oil Ring Groove Measurements

