

FINAL PRODUCT TEST AND INSPECTION REPORT

PRD109022

1. Applicant Kelso Technologies Inc.
 Address 2777 Finlay Road, Suite 15, Downers Grove, IL 60515
 2. Manufacturer Same as above
 Address Same as above

AAR No. _____
 AAR Docket No. _____
 AAR Service Trial No. BT-438
 Date 7/1/14

3. Description of device Pressure Relief Valve
 4. Device designation or model no. JS165H Series
 5. Total number of devices in service 26
 6. Number of devices for teardown 5
 7. Service data from latest Form AAR 4-4 dated 4/3/2014
 Total load/unload cycles 24 loaded trips per car (12 trips averaged/year)
 Total service time 2 years
 Total loaded mileage 23,411

8. Teardown data
 From car number (2 Valves per Car)
 Last lading _____
 Model number _____
 Serial number _____
 Test pressure, psi (kPa) _____
 Test temperature, °F (°C) _____
 Test medium _____
 Cycles _____
 STD psi (kPa) _____
 Vapor tight, psi (kPa) _____
 Test remarks _____
 Physical condition (See attached Photos) _____
 Compare critical final dimensions to original _____

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
	XOMX-340014	XOMX-340014	XOMX-340010	XOMX-340010	XOMX-340002
	Ethanol/Petroleum Products				
	JS165HS	JS165HS	JS165HS	JS165HS	JS165HS
	12009	12010	10840	10841	10843
	78 F (23.8 C)	78 F (23.8 C)	78 F (23.8 C)	78 F (23.8 C)	78 F (23.8 C)
	Nitrogen	Nitrogen	Nitrogen	Nitrogen	Nitrogen
	189.1 (1166)	173 (1193)	176 (1206)	177 (1220)	172.1 (1187)
	186.2 (1146)	167.2 (1152)	172.3 (1188)	186.1 (1145)	183.3 (1126)
	Valve performed consistent over 3 tests - negligible variations	Valve performed consistent over 3 tests - negligible variations	Valve performed consistent over 3 tests - negligible variations	Valve performed consistent over 3 tests - negligible variations	Valve performed consistent over 3 tests - negligible variations
	Some debris and dust from being in service and normal wear and tear	Some debris and dust from being in service and normal wear and tear	Some debris and dust from being in service and normal wear and tear	Some debris and dust from being in service and normal wear and tear	Some debris and dust from being in service and normal wear and tear
	Negligible/ No change	Negligible/ No change	Negligible/ No change	Negligible/ No change	Negligible/ No change
	201052	201052	201052	201052	201052
	N/A	N/A	N/A	N/A	N/A
	No Changes	No Changes	No Changes	No Changes	No Changes
	N/A	N/A	N/A	N/A	N/A

9. Drawing numbers _____
 (Ref. Form AAR 4-3 or AAR 4-5) _____
 Revisions made _____
 Revision date _____

Valves performed very consistent after 3 pressure tests. The results do show a slight increase in pressure for the STD. See attached document for detailed conclusion and for more information and photos.

10. Conclusions

11. Recommendations to Tank Car Committee

See attached document for reasoning behind the slight high STD pressures

12. CERTIFICATION

The above data is correct and complies with the AAR Specifications for Tank Cars, Appendix A. Devices tested conform to the drawings listed above.

MANUFACTURER or APPLICANT

[Signature]
 (Signature)
 Title Lead Engineer
 Company Kelso Technologies

INDEPENDENT OBSERVER

[Signature]
 (Signature)
 Title JR. INSPECTOR
 Company TTCI/BUREAU OF EXPLOSIVES

13. APPROVAL AAR Tank Car Committee

Date approved NOV 24 2014

[Signature]
 (Signature) on behalf of Tank Car Committee

NOTE: The AAR Tank Car Committee reserves the right to designate an independent observer to be present during test and teardown activity.