

Lake Forest Live Steamers Railway Museum DEERFIELD AND ROUNDABOUT RAILWAY

LOCOMOTIVE VALVE MOTION REPORT DATA ACQUISITION Page 1 of 2

REPORTING MARKS	DRRY	ENG. NO.	326	FILE NAME	drry-ylv-rpt-326-12-22-2013-final
CYLINDER STROKE	3.500	DATE AQR'D.	12/22/2013	AQR'D. BY	J. G. Hook

	LEFT FRONT	LEFT REAR	RIGHT FRONT	RIGHT REAR		FORWARD	BACKWARD
INDICATED STEAM PORT MARK	1.432	0.989	1.502	1.040	REVERSE LEVER NOTCHES AFTER CENTER	4	1

FORWARD				
REVERSE LEVER NOTCH FWD OF CENTER	MAXIMUM INDICATED VALVE TRAVEL			
	LEFT FRONT	LEFT REAR	RIGHT FRONT	RIGHT REAR
Fwd 1	1.507	0.918	1.546	0.993
Fwd 2	1.558	0.861	1.592	0.937
Fwd 3	1.626	0.790	1.647	0.868
Full Fwd	1.761	0.657	1.764	0.747

FORWARD			
MEASURED PISTON TRAVEL AT CUT-OFF			
LEFT FRONT	LEFT REAR	RIGHT FRONT	RIGHT REAR
2.100	1.960	1.653	1.650
2.488	2.269	2.183	2.089
2.798	2.540	2.593	2.412
3.085	2.848	2.983	2.794

BACKWARD				
REVERSE LEVER NOTCH BWD OF CENTER	MAXIMUM INDICATED VALVE TRAVEL			
	LEFT FRONT	LEFT REAR	RIGHT FRONT	RIGHT REAR
Full Bwd	1.700	0.682	1.799	0.718

- GENERAL INSTRUCTIONS**
1. Valves to be adjusted to minimize forward left and right travel differentials with reverse lever in first notch forward of center or equivalent.
 2. For backward gear, only full backward left and right travel differentials need be tested.
 3. For cut-offs, only forward gear need be tested.
 4. Enter in notes if dead centers, eccentric cranks or eccentrics have been tested or adjusted immediately prior to valve motion report data acquisition.
 5. If engine is equipped with screw reverser instead of latch lever reverser then notes shall describe means used to convert screw reverse positions to equivalent latch lever positions.

**Lake Forest Live Steamers Railway Museum
DEERFIELD AND ROUNDABOUT RAILWAY**

LOCOMOTIVE VALVE MOTION REPORT DATA RESULTS Page 2 of 2

REPORTING MARKS	DRRY		ENG. NO.	326	FILE NAME	drry-ylv-rpt-326-12-22-2013-final				
REPORT DATE	12/22/2013				BY	J. G. Hook				

NOTES Dimensions in inches. Full backward gear is actual 3rd notch back from center.

FORWARD

REVERSE LEVER NOTCH FWD OF CENTER	LEFT							RIGHT						
	FRONT STEAM PORT OPENING TRAVEL	TRAVEL DIFF.	TRAVEL DIFF.	REAR STEAM PORT OPENING TRAVEL	TOTAL VALVE TRAVEL	FRONT CUT-OFF	REAR CUT-OFF	FRONT STEAM PORT OPENING TRAVEL	TRAVEL DIFF.	TRAVEL DIFF.	REAR STEAM PORT OPENING TRAVEL	TOTAL VALVE TRAVEL	FRONT CUT-OFF	REAR CUT-OFF
Fwd 1	0.075	0.004	4%	0.071	0.589	60%	56%	0.044	0.003	4%	0.047	0.553	47%	47%
Fwd 2	0.126	0.002	1%	0.128	0.697	71%	65%	0.090	0.013	9%	0.103	0.655	62%	60%
Fwd 3	0.194	0.005	2%	0.199	0.836	80%	73%	0.145	0.027	12%	0.172	0.779	74%	69%
Full Fwd	0.329	0.003	1%	0.332	1.104	88%	81%	0.262	0.031	8%	0.293	1.017	85%	80%

BACKWARD

REVERSE LEVER NOTCH BWD OF CENTER	LEFT							RIGHT						
	FRONT STEAM PORT OPENING TRAVEL	TRAVEL DIFF.	TRAVEL DIFF.	REAR STEAM PORT OPENING TRAVEL	TOTAL VALVE TRAVEL			FRONT STEAM PORT OPENING TRAVEL	TRAVEL DIFF.	TRAVEL DIFF.	REAR STEAM PORT OPENING TRAVEL	TOTAL VALVE TRAVEL		
Full Bwd	0.268	0.039	9%	0.307	1.018			0.297	0.025	5%	0.322	1.081		