



# Test Monitoring Center

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MEMORANDUM: 04-069  
DATE: September 22, 2004  
TO: L-37 Surveillance Panel  
FROM: Donald Lind  
SUBJECT: Reference Oil Targets

During the September 21, 2004 L-37 Surveillance Panel teleconference call, the panel approved test targets for lubrified hardware, gear batch V1L686/P4L626A, on reference oils 152 and 153. Do to the N size being less than 15 tests a pooled standard deviation across industry oils was used. The approved reference oil test targets are shown in the tables below.

REFERENCE OIL 152					
Parameter	N	PINION		RING	
		Mean	Standard Deviation	Mean	Standard Deviation
WEAR	8	6.25	0.905	7.00	0.939
RIDGING	8	-1.467	0.3430	-1.277	0.5198
RIPPLING	8	-0.195	0.4944	-0.195	0.5240
SPITTING	8	-0.157	0.6976	0.483	0.3080
SCORING	8	10.0	0.001	10.0	0.001

REFERENCE OIL 153					
Parameter	N	PINION		RING	
		Mean	Standard Deviation	Mean	Standard Deviation
WEAR	8	6.88	0.905	7.13	0.939
RIDGING	8	-1.294	0.3430	-0.886	0.5198
RIPPLING	8	-0.968	0.4944	0.144	0.5240
SPITTING	8	-0.043	0.6976	0.514	0.3080
SCORING	8	10.0	0.001	10.0	0.001

These targets are effective for all tests completed on or after September 21, 2004.

DML/dml

c: Frank Farber, TMC  
John L. Zalar, TMC

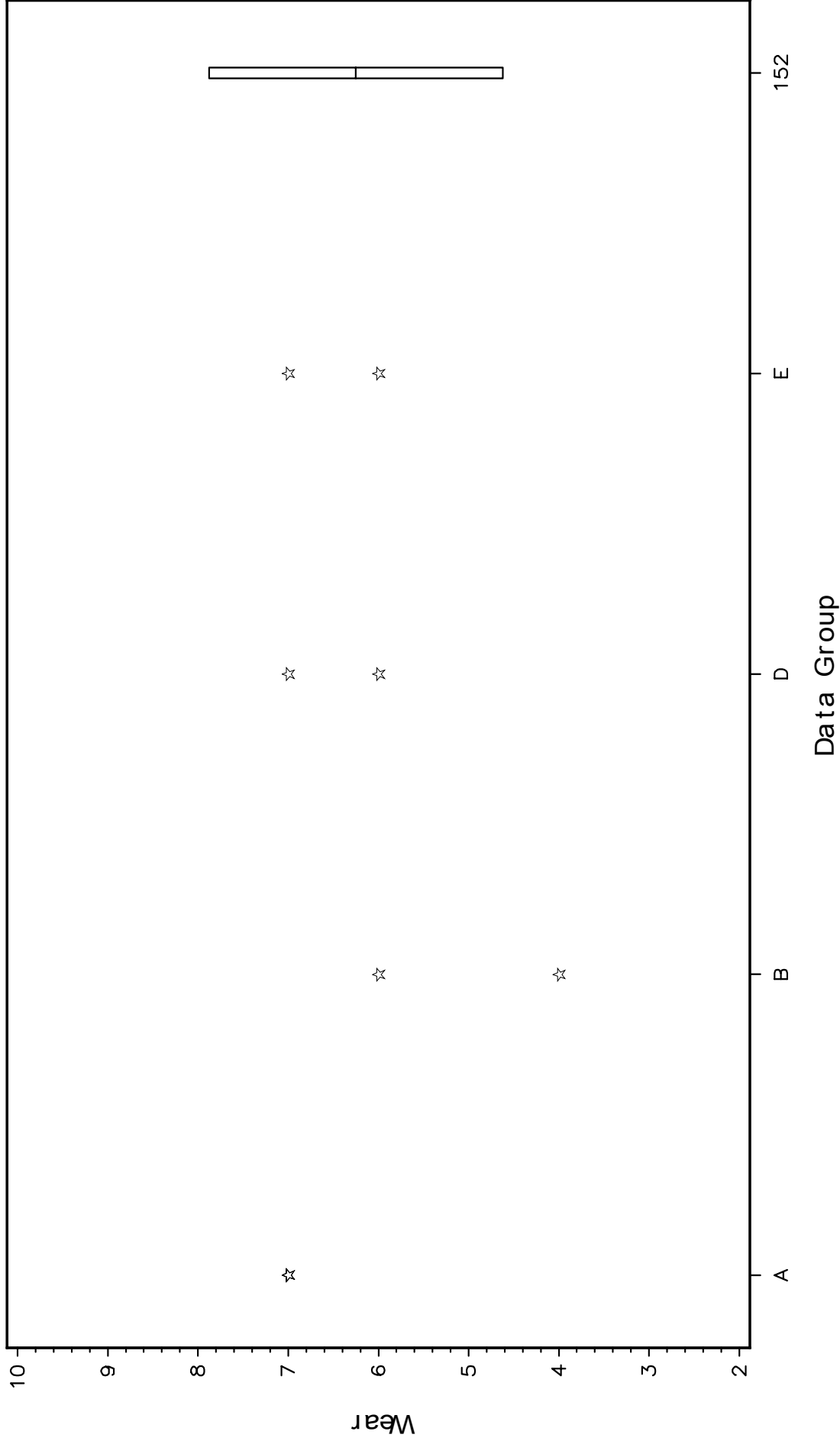
<ftp://ftp.astmtmc.cmu.edu/docs/gears/l37/memos/mem04-069.pdf>

Distribution: Electronic Mail

L-37 Lubricated Hardware (Pinion Batch V1L686/P4L626A)  
Reference Oil 152

Test Target Data Set and Shewart Severity Limits

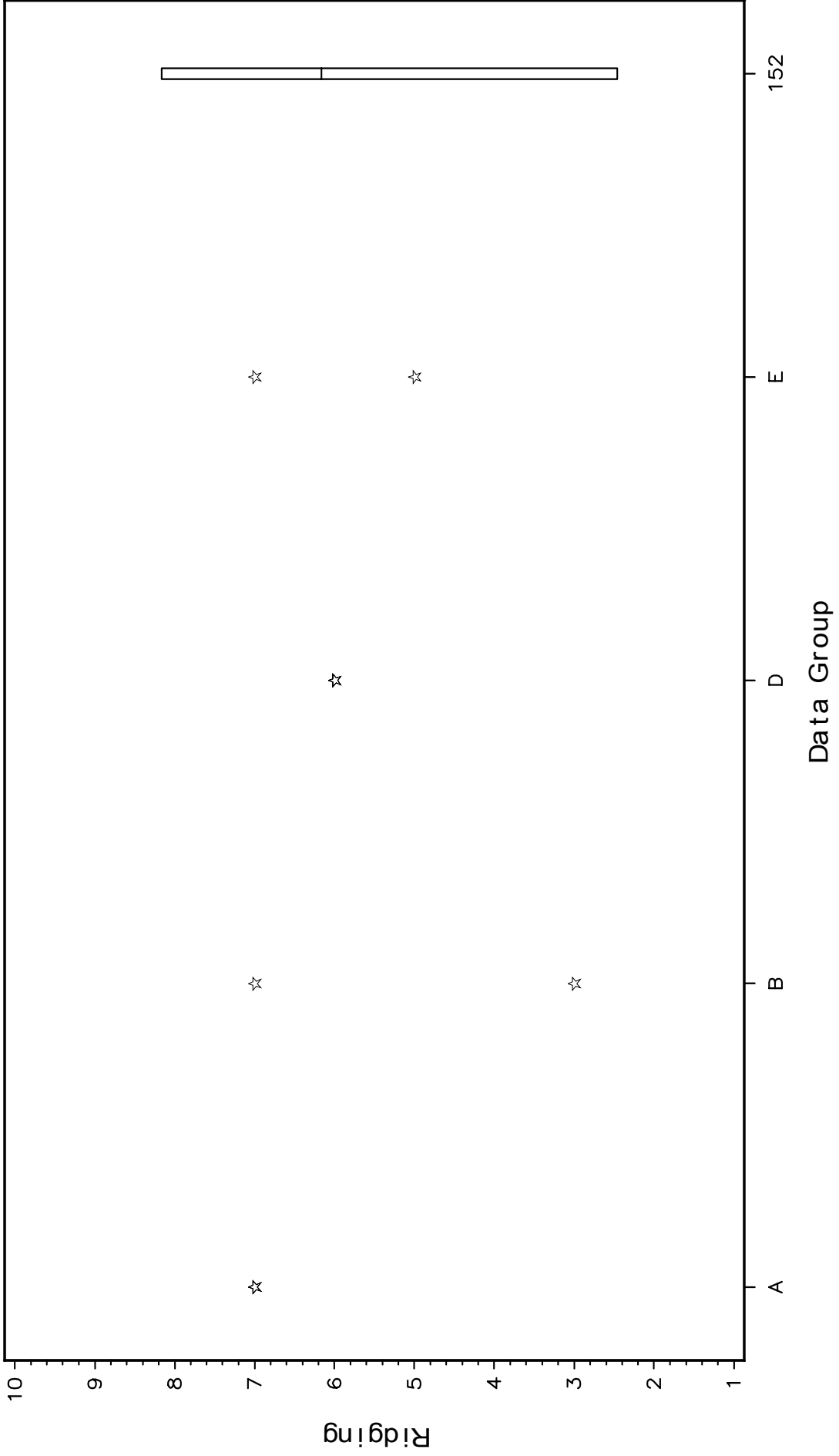
Pinion Wear (Industry Pooled S.D. = 0.905)



L-37 Lubricated Hardware, Pinion Batch V1L686/P4L626A  
Reference Oil 152

Test Target Data Set and Shewart Severity Limits

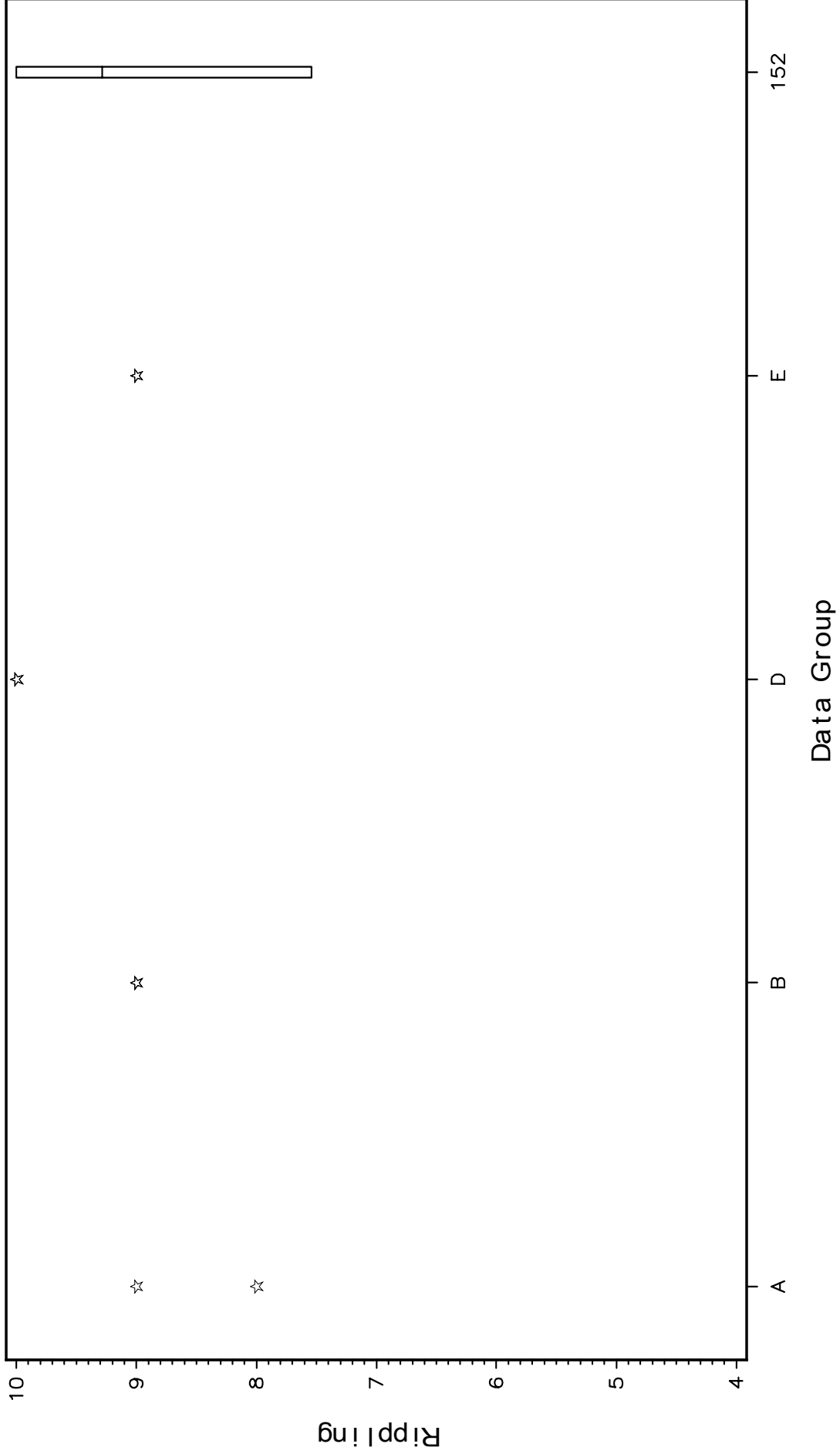
Pinion Ridging, Industry Pooled S.D. = 0.3430



L-37 Lubrified Hardware, Pinion Batch V1L686/P4L626A  
Reference Oil 152

Test Target Data Set and Shewart Severity Limits

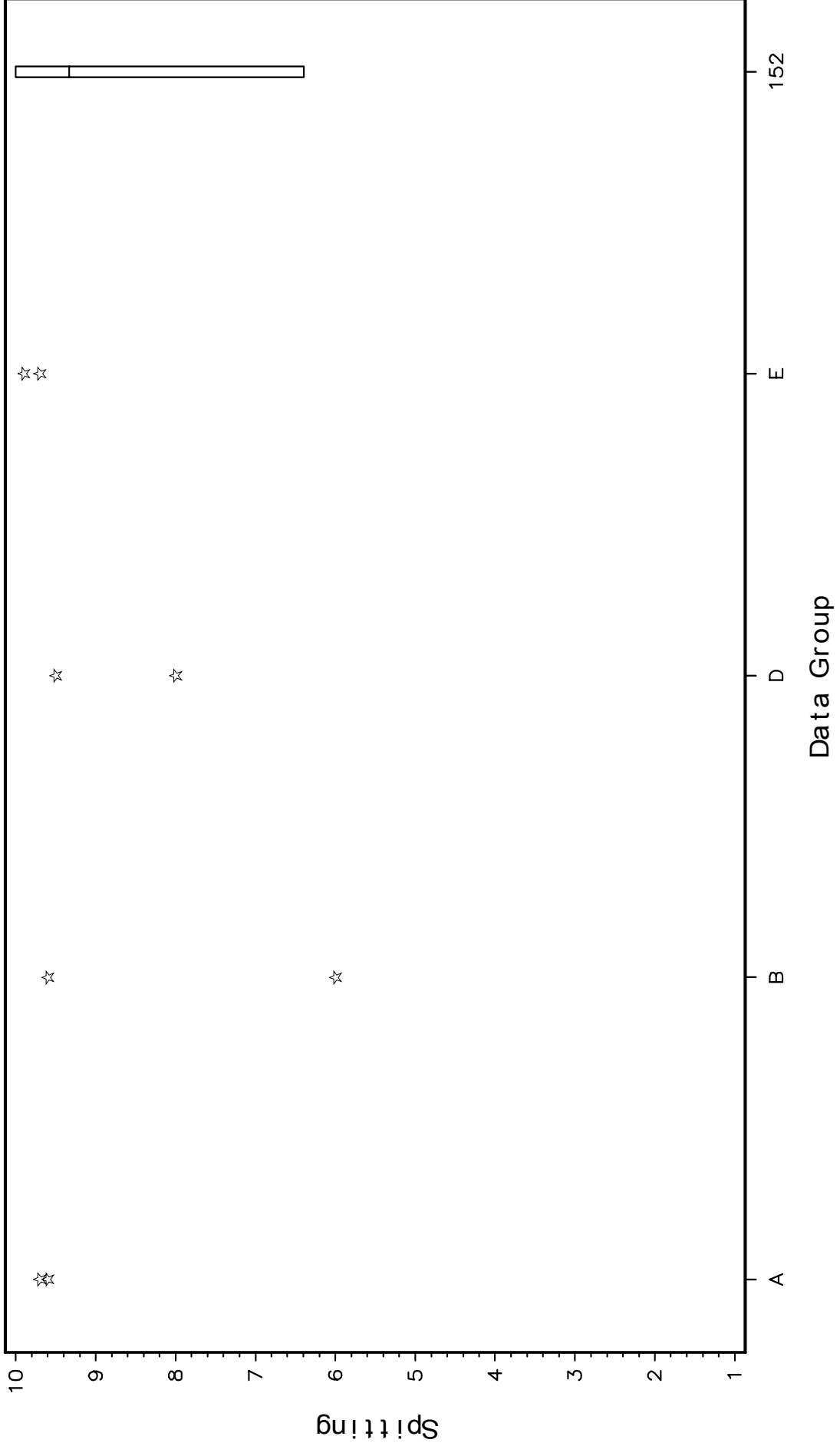
Pinion Rippling, Industry Pooled S.D. = 0.4944



L-37 Lubricated Hardware, Pinion Batch V1L686/P4L626A  
Reference Oil 152

Test Target Data Set and Shewart Severity Limits

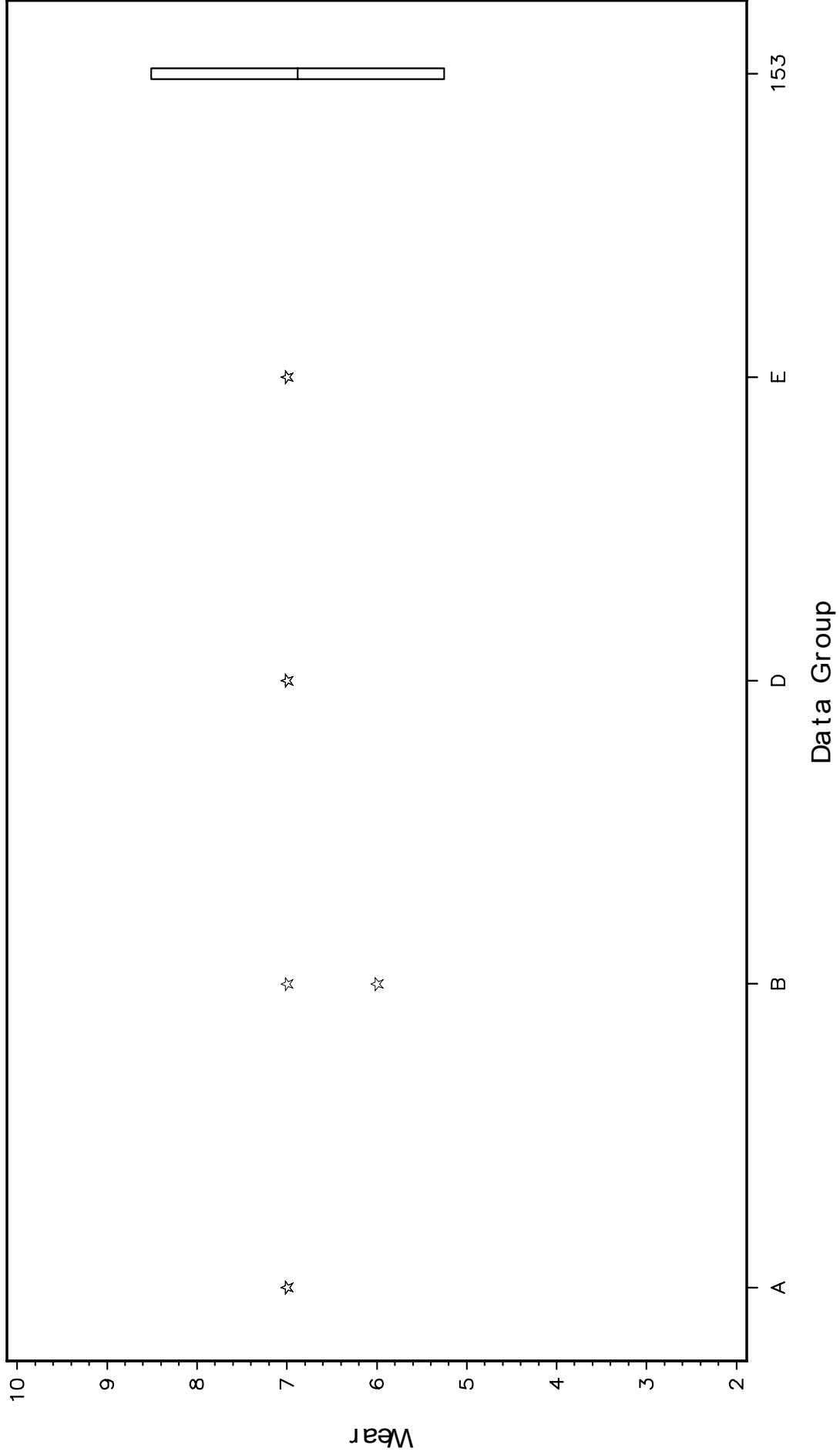
Pinion Spitting, Industry Pooled S.D. = 0.6976



L-37 Lubricated Hardware (Pinion Batch V1L686/P4L626A)  
Reference Oil 153

Test Target Data Set and Shewart Severity Limits

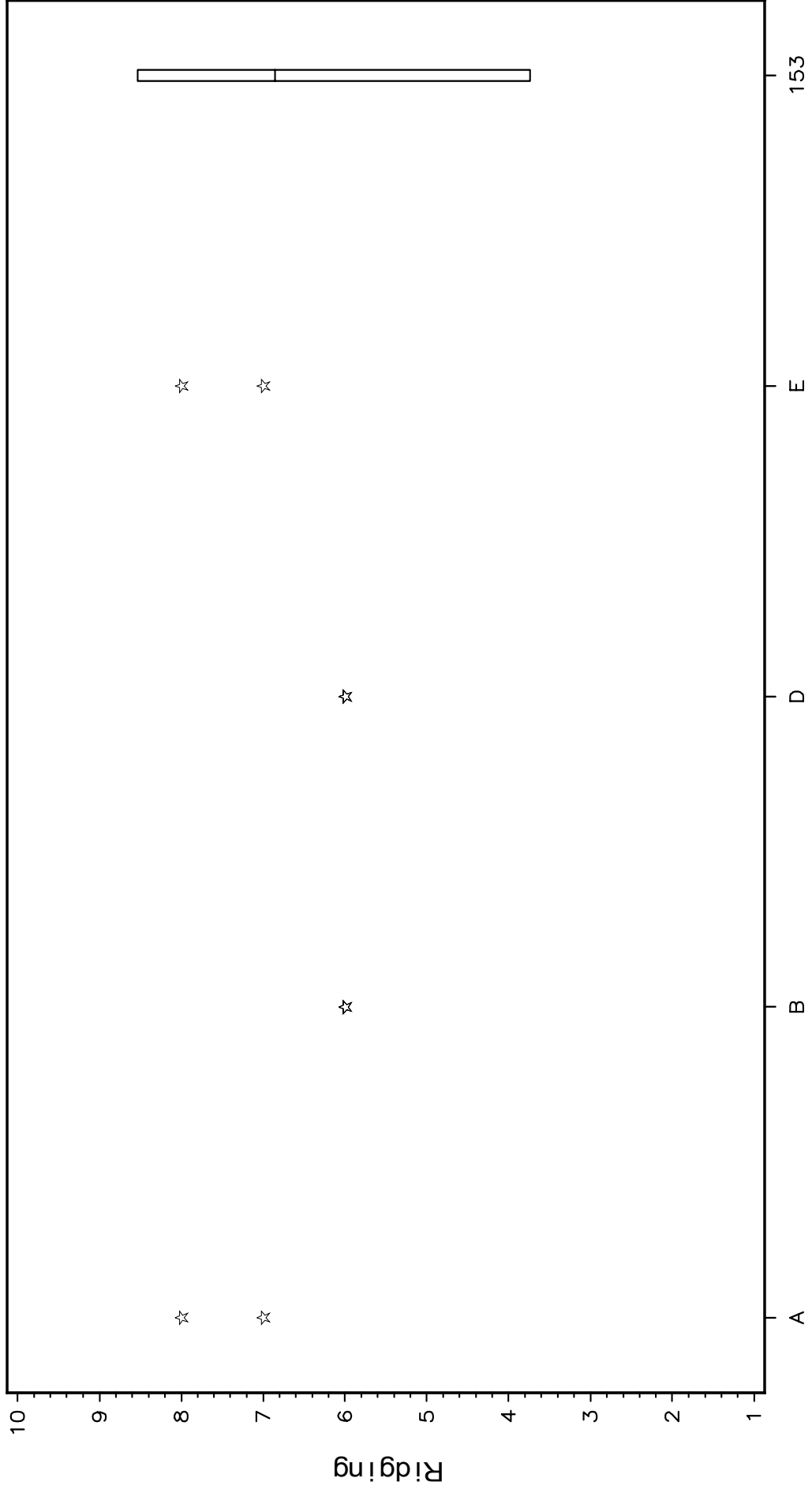
Pinion Wear (Industry Pooled S.D. = 0.905)



L-37 Lubricated Hardware, Pinion Batch V1L686/P4L626A  
Reference Oil 153

Test Target Data Set and Shewart Severity Limits

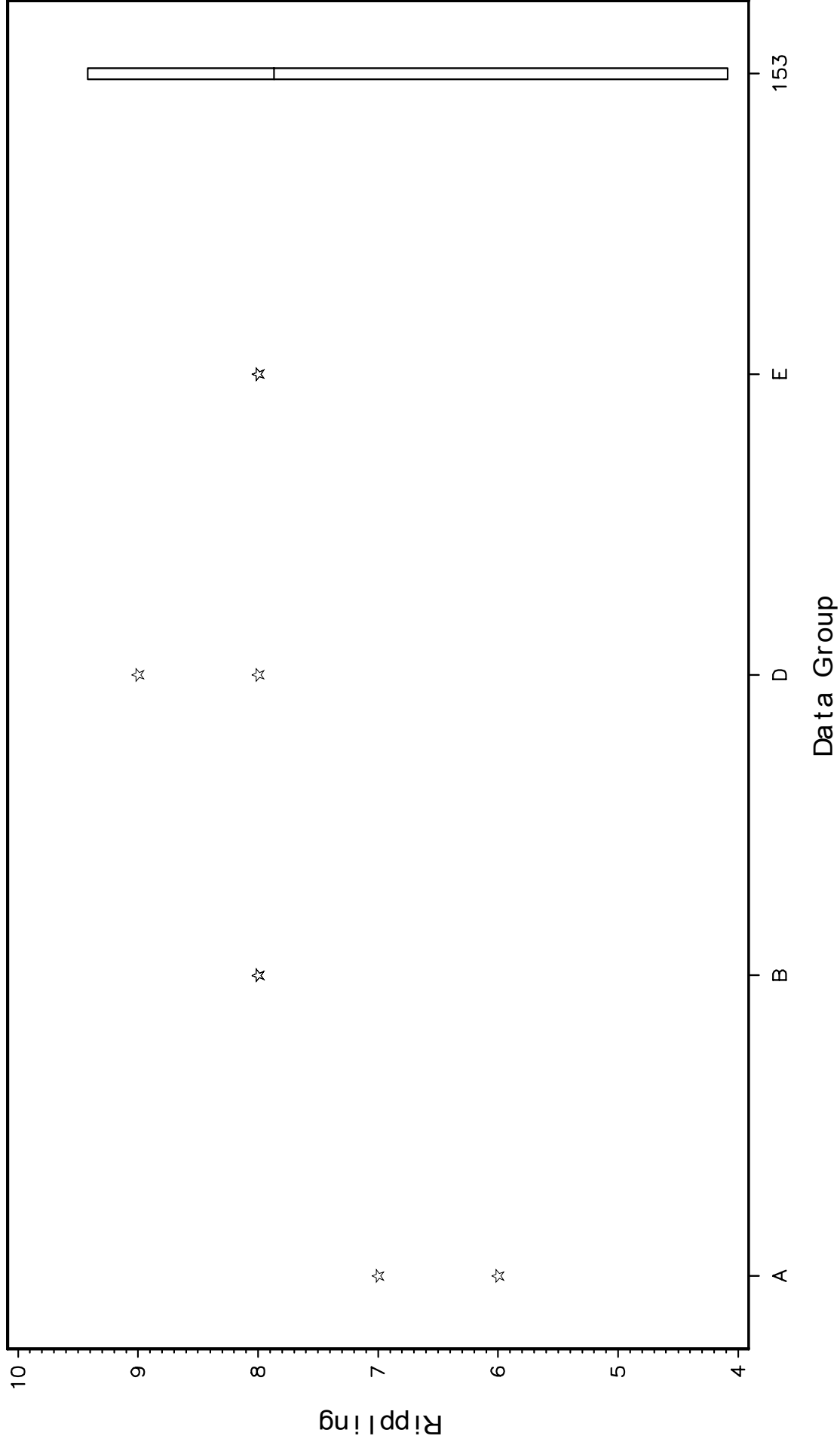
Pinion Ridging, Industry Pooled S.D. = 0.3430



L-37 Lubricated Hardware, Pinion Batch V1L686/P4L626A  
Reference Oil 153

Test Target Data Set and Shewart Severity Limits

Pinion Rippling, Industry Pooled S.D. = 0.4944

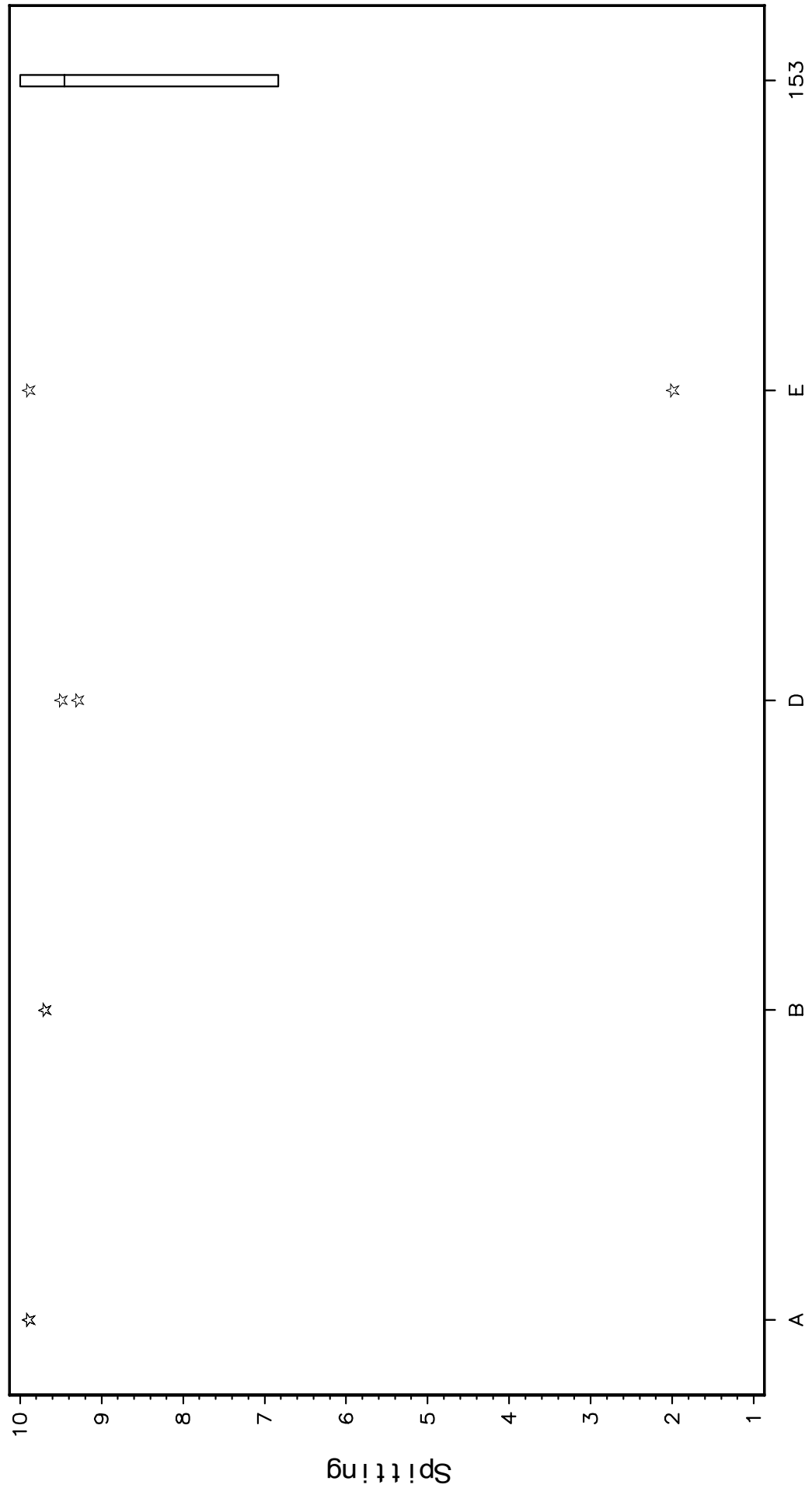




L-37 Lubricated Hardware, Pinion Batch V1L686/P4L626A  
Reference Oil 153

Test Target Data Set and Shewart Severity Limits

Pinion Spitting, Industry Pooled S.D. = 0.6976



TESTKEY	L7M5LAB	IND	PINBAT	RINGBAT	DTCOMP	WEAR	RIDG	RIDGTti	RIPP	RIPPTi	SPIT	SPITti
52385	A	152	V1L686	P4L626A	20040707	7.0	7.0	-1.2528	9.0	-0.4055	9.6	0.1054
52386	A	152	V1L686	P4L626A	20040713	7.0	7.0	-1.2528	8.0	-0.9163	9.7	0.2231
52394	B	152	V1L686	P4L626A	20040705	6.0	7.0	-1.2528	9.0	-0.4055	9.6	0.1054
52395	B	152	V1L686	P4L626A	20040707	4.0	3.0	-2.0149	9.0	-0.4055	6.0	-1.5041
52415	D	152	V1L686	P4L626A	20040713	7.0	6.0	-1.5041	10.0	0.6931	9.5	0.0000
52416	D	152	V1L686	P4L626A	20040723	6.0	6.0	-1.5041	10.0	0.6931	8.0	-0.9163
52098	E	152	V1L686	P4L626A	20040718	6.0	5.0	-1.7047	9.0	-0.4055	9.7	0.2231
52099	E	152	V1L686	P4L626A	20040725	7.0	7.0	-1.2528	9.0	-0.4055	9.9	0.5108
52389	A	153	V1L686	P4L626A	20040711	7.0	8.0	-0.9163	7.0	-1.2528	9.9	0.5108
52390	A	153	V1L686	P4L626A	20040712	7.0	7.0	-1.2528	6.0	-1.5041	9.9	0.5108
52399	B	153	V1L686	P4L626A	20040710	7.0	6.0	-1.5041	8.0	-0.9163	9.7	0.2231
52400	B	153	V1L686	P4L626A	20040711	6.0	6.0	-1.5041	8.0	-0.9163	9.7	0.2231
52090	D	153	V1L686	P4L626A	20040715	7.0	6.0	-1.5041	8.0	-0.9163	9.5	0.0000
52421	D	153	V1L686	P4L626A	20040727	7.0	6.0	-1.5041	9.0	-0.4055	9.3	-0.1823
52410	E	153	V1L686	P4L626A	20040722	7.0	8.0	-0.9163	8.0	-0.9163	9.9	0.5108
52411	E	153	V1L686	P4L626A	20040723	7.0	7.0	-1.2528	8.0	-0.9163	2.0	-2.1401