Test Monitoring Center
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June 11, 2008

To The Participants of the
ASTM International Light Duty Rating Workshop

The 2008 ASTM International Light Duty Rating Workshop was held Monday, May 12, through Friday, May 16, 2008. This workshop was the first held under the auspices of ASTM International. ASTM International appreciates the importance of the rating activities to the lubricant testing industry and has committed to back those activities with their full support. The ASTM Test Monitoring Center is pleased to continue its role as coordinator for this workshop. Enclosed are the minutes for the workshop and a copy of all of the data generated. For those who met the necessary requirements, a certificate of participation is also enclosed.

I would like to take this opportunity to thank you for your participation in this workshop. It is the full participation of the entire rating community that allows the rating methods of Manuals 20 and 21 to be the vital industry tools that they are. The input of each and every rater is a valued component of that tool.

Sincerely,

Scott Parke
Workshop Coordinator

Enclosure

MINUTES
ASTM INTERNATIONAL LIGHT DUTY RATING WORKSHOP
SAN ANTONIO, TX

May 12-16, 2008

Workshop Coordinator: Scott Parke
Deposit Rating Project Leader: Tony Barrera

Sunday:

18:30-20:00	Workshop Coordinator, Scott Parke loaded truck and transported to hotel.
20:30-22:00	Unload truck; set up booths. Thanks is due to Brian Foecking of Lubrizol, David Caproni and Jonathon Cales of Ashland, and Jack Kobrinetz of Afton for their assistance.
22:00-02:00	Scott completed room and computer network setup.

Monday:

08:00-09:00	Deposit Rating Project Leader, Tony Barrera directed parts setup.
09:00-09:30	Scott Parke made introductory remarks, helped raters to connect to the workshop computer network, and did a brief demo of the data entry system. Rating forms and new, serialized rust/varnish/lacquer scales were distributed.
09:30-10:45	Rating of "composite" calibration pistons CAL1A & CAL1B.
10:45-11:15	Review of data from calibration exercise 1.
11:15-12:00	Rating of "composite" calibration pistons CAL2A & CAL2B.
12:00-13:00	Lunch.
	Total ratings: 20
13:00-16:00	Continue rating CAL2A & CAL2B, sequence V calibration pistons, and induction/combustion calibration parts.
16:00-16:30	Review of data from calibration exercise 2.
	Total ratings: 81
16:30-17:30	Rating of all parts. (most raters chose not to rate after the data review preferring instead to pick up again in the morning.)
17:30-20:00	Frank Farber and Scott Parke computer cleanups and modifications (data entry)
20:00-21:00	Dinner.
21:00-22:00	Frank Farber and Scott Parke computer cleanups and modifications (data analysis)

Tuesday:

8:00-12:00	Continuation of rating.
12:00-13:00	Lunch.
	Total ratings: 200
13:00-16:00	Continuation of rating.
16:00-17:30	Final data review.
	Total ratings: 270
17:30-19:30	Cleanup/setup for session B.

Wednesday:

08:00-09:00	Frank Farber and Scott Parke helped raters to connect to the workshop computer network, and did a brief demo of the data entry system. Rating forms and new, serialized rust/varnish/lacquer scales were distributed.
09:00-09:30	Scott Parke made introductory remarks and did a brief demo of the data entry system.
9:30-11:50	Rating of "composite" calibration pistons CAL1A & CAL1B.
11:50-12:10	Review of data from calibration exercise 1.
12:10-13:00	Lunch. *Total ratings:* 302
13:00-16:30	Rating of "composite" calibration pistons CAL2A & CAL2B, sequence V calibration pistons, and induction/combustion calibration parts.
16:30-17:10	Review of data from calibration exercise 2. *Total ratings:* 406
17:10- 18:00	Data backup/daily cleanup.

Thursday:

08:00-12:00	Rating of rate all parts.
12:00-13:00	Lunch.
13:00-16:00	Continuation of rating. Most raters concluded their rating for the day at 16:00; Three continued until 17:00. *Total ratings:* 653
17:00-18:00	Modifications to data analysis system.

Friday:

08:00-10:30	Continuation of rating.
10:30-12:00	Final data review. *Total ratings:* 703
12:00-13:00	Discussion.
13:00-16:00	Frank Farber and Scott Parke dismantled equipment and loaded the truck.
16:15-17:17	Frank and Scott unloaded the truck and returned equipment to storage.

DISCUSSIONS

Rating workshop ownership/responsibility – In August of 2007, CRC notified industry of its intention to discontinue its involvement with the rating activities. Their intention was to transfer all rating activities to SAE. The October 2007 heavy duty workshop was held under SAE auspices. While the Professional Development group within SAE was pleased with the workshop and had plans to continue and grow all the workshop related activities, the Publications group expressed some reservations after examining what would be necessary to support the manual and rating aids. Ultimately, these concerns convinced SAE to abort their assumption of rating responsibilities in February of this year. CRC then asked ASTM International if they would be able to assume all rating activities and they agreed. Scott Parke of the ASTM Test Monitoring Center will continue to serve as Workshop Coordinator with Manuals 20 and 21 and all other rating aids available from ASTM International (contact information provided at the end of these minutes).

Online rating/workshop computer network – The data entry system and computer network developed by Frank Farber continues to improve. Frank incorporated many of the comments provided by raters during the fall workshop. Sludge data entry in particular has been completely revamped to more closely mirror how the rating is generated. Overall response of the workshop participants was favorable.

Oil screen clogging – Some time was spent discussing the poor precision typically produced on oil screen clogging. The guidelines regarding the definition of debris added to the VG procedure in Information Letter 05-01 have helped to tighten the debris clogging data but the oil screen sludge data still varies widely. The causes for this variability are several. One problem is that the oil screen is not flat. At the periphery of the screen where it is crimped into its fixture at the end of the pickup tube, the screen is curled upward. Some raters include the entirety of all visible screen in their screen area while others include only the flat part. Another source of variability is that often, obscured screen openings are covered only by a thin film of oil (even after blowing the screen in accordance with the procedure). Some raters try to visually assess whether this film is merely oil (and thus, not "clogging"); others call anything "blocking daylight" as clogging. And, finally, as a guideline for distinguishing between "filmed over" and truly "clogged", some raters only call clogging if the film is of sufficient thickness to obscure the wire of the screen.

After much discussion, no agreement was reached on what the one, "right", Manual 20 way was of rating oil screen sludge clogging. What was agreed was that none of the various interpretations was wrong; the differences are all a matter of preference. As such, the raters need some guidance as to the preference of the VG surveillance panel. Scott Parke agreed to present the panel's comments to the VG surveillance panel and request that they provide clear procedural guidance.

***Contact Information for Manuals 20 & 21 and other rating scales and aids*:**

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Notes on the Data

Following is the data produced during the May 12-16, 2008, ASTM International Light Duty Rating Workshop.

Some of the evaluation techniques are destructive and, therefore, do not easily allow repeated measurement (measurable sludge deposits, ring sticking, carbon probing, and parts wiping for example). Every effort is made to limit the destructive impact of repeated measurement of these deposits but repeatability and reproducibility cannot help but be adversely affected. This must be a consideration when reviewing data from deposits of this type.

The statistics presented include the data from all parts (including calibration parts and practical application parts) and all participants (including novice, field, and standardized engine test raters). It is important to have some knowledge of the raters involved when comparing results.

ASTM International strives to make this data useful to as broad a range of industry consumers as possible, however it is primarily intended to provide guidance to workshop participants. ASTM International endorses its use for no other purpose.

Light Duty Rating Workshop

Rater/Parts Crosstab

	Total parts rated	**Calibration_1_Piston_A**	**Calibration_1_Piston_B**	**Calibration_2_Piston_A**	**Calibration_2_Piston_B**	A1-Sequence_III_Piston	A2-Sequence_III_Piston	A3-Sequence_III_Piston	A4-Sequence_III_Piston	A5-Square-cut_Piston	A6-Sequence_III_Piston	B1-Sequence_III_Piston	B2-Sequence_III_Piston	B3-Sequence_III_Piston	B4-Sequence_III_Piston	B5-Square-cut_Piston	B6-Sequence_III_Piston	Calibration_Seq_V_Pistons	Calibration_Seq_V_Varnish	Calibration_Seq_V_Sludge	D1-8_Seq_V_Pistons	E1-8_Seq_V_Pistons	Seq_V_Varnish	Seq_V_Sludge	Seq_V_Clogging	Calibration_Piston_Tops	Calibration_Valves	F1-8_Valves	G1-8_Valves	H1-8_Valves	I1-8_Valves	J1-8_Piston_Tops	*K1-8_Combustion_Chambers*	*L1-8_Intake Runners*
Barrera, Tony	28	●	●	●	●	●						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Cales, Jonathon	24	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Caproni, David	24	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Foecking, Brian	30	●	●	●	●	●	●	●	●	●	●	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Garcia, Orlando	31	●	●	●	●	●	●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Hills, Barry	17	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●							●										
Kobrinetz, Jack	33	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Lopez, Frank	25	●	●	●	●	●	●	●	●	●	●							●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
Pansza, Mike	31	●	●	●	●	●	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Sanchez, Art	25	●	●	●	●							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Yanchar, Paul	33	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Adams, Pat	33	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Avis, Steve	26	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●			●	●	●		●	●	●	●	●			
Castillo, George	33	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Greenland, Paul	20	●	●	●	●	●	●	●	●	●	●								●	●			●	●	●		●	●	●	●	●			
Hill, John	27	●	●	●	●	●	●	●	●	●	●							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Lowsky, John	31	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●
May, Marianne	24	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
Pitta, Jimmy	22	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									●	●	●	●	●	●			
Radonich, Pete	33	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rodriguez, Jesse	27	●	●	●	●							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Seiz, Ray	26	●	●	●	●		●			●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●		
Shoda, Ron	33	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Terrado, Teresa	20	●	●	●	●	●	●	●	●		●	●	●	●	●		●									●	●	●	●	●	●			
Trevino, Robert	17	●	●	●	●							●	●	●	●	●	●	●	●	●		●	●	●	●									
Viera, Ralph	30	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
Total Ratings	703	26	26	26	26	22	22	21	21	20	22	22	23	23	22	19	22	21	23	23	18	19	23	24	23	19	21	21	21	20	20	16	14	14

MIN RATINGS/RATER	17	MIN RATINGS/PART	14
MAX RATINGS/RATER	33	MAX RATINGS/PART	26
AVG RATINGS/RATER	27	AVG RATINGS/PART	21

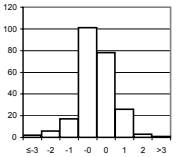
Piston Assignment Key:
Primary Part =
Secondary Part =

Light Duty Rating Workshop

PART ID = Calibration 1 Piston A

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	2.06	4.12	7.22	1.15	5.60	4.45	9.39	9.94	9.67						34.27	5.22
Cales, Jonathon	2.33	4.11	6.67	1.10	5.76	4.91	9.44	9.95	9.69						34.56	5.21
Caproni, David	2.51	3.97	6.72	1.80	5.74	4.75	9.51	10.00	9.76						35.24	5.31
Foecking, Brian	2.66	4.15	6.59	0.95	5.22	3.92	9.60	9.90	9.75						33.24	4.94
Garcia, Orlando	2.37	4.61	7.06	1.29	5.92	3.60	9.33	9.97	9.65						34.50	5.29
Hills, Barry	2.33	4.09	**8.01**	0.79	5.55	4.00	9.60	9.90	9.75						34.50	5.28
Kobrinetz, Jack	2.03	4.58	6.89	0.91	5.34	4.60	9.36	9.90	9.63						33.98	5.10
Lopez, Frank	1.49	3.79	7.34	0.80	5.81	3.30	9.70	9.90	9.80						32.32	5.09
Pansza, Mike	2.67	4.55	7.21	1.23	6.25	4.96	9.55	9.90	9.72						**36.60**	**5.56**
Sanchez, Art	2.89	3.73	**7.95**	0.90	5.53	4.34	9.73	9.90	9.81						35.15	5.32
Yanchar, Paul	1.57	3.99	6.86	1.11	5.32	3.52	9.58	9.95	9.76						32.12	4.94
Adams, Pat	1.46	4.74	7.19	1.23	6.02	3.12	9.48	9.90	9.69						33.45	5.26
Avis, Steve	2.94	3.59	7.13	1.01	5.56	3.78	9.71	9.99	9.85						33.84	5.11
Castillo, George	1.91	4.13	6.90	1.21	5.43	4.42	9.56	9.98	9.77						33.77	5.12
Greenland, Paul	2.31	3.47	6.43	1.15	6.11	3.78	9.40	9.90	9.65						32.90	5.10
Hill, John	1.92	4.96	7.00	1.21	5.10	4.84	9.69	9.95	9.82						34.85	5.17
Lowsky, John	3.00	4.21	6.60	1.20	5.72	4.75	**9.11**	**9.71**	**9.41**						34.89	5.20
May, Marianne	1.85	4.29	6.77	1.15	5.69	4.05	9.37	9.85	9.61						33.41	5.12
Pitta, Jimmy	2.25	4.43	6.83	1.09	4.96	5.35	9.49	9.96	9.72						34.63	5.08
Radonich, Pete	2.14	**5.56**	6.48	1.11	5.36	2.91	9.61	9.95	9.78						33.34	5.00
Rodriguez, Jesse	2.18	4.19	7.12	1.16	5.25	4.32	9.60	9.90	9.75						33.97	5.11
Seiz, Ray	1.93	3.93	7.28	1.38	6.16	4.13	9.54	9.80	9.67						34.48	5.38
Shoda, Ron	1.73	3.62	6.16	0.93	5.30	3.25	**8.94**	9.95	**9.44**						**30.43**	**4.68**
Terrado, Teresa	1.75	**2.76**	**5.70**	**5.25**	**4.30**	4.75	9.40	9.80	9.60						34.11	5.02
Trevino, Robert	2.17	3.98	7.20	1.20	5.40	4.45	9.43	9.93	9.68						34.08	5.16
Viera, Ralph	1.88	4.51	7.33	1.00	5.50	3.34	9.65	9.99	9.82						33.38	5.13
MAXIMUM	3.00	5.56	8.01	5.25	6.25	5.35	9.73	10.00	9.85						36.60	5.56
MINIMUM	1.46	2.76	5.70	0.79	4.30	2.91	8.94	9.71	9.41						30.43	4.68
RANGE (MAX-MIN)	1.54	2.80	2.31	4.46	1.95	2.44	0.79	0.29	0.44						6.16	0.88
MEAN	2.17	4.16	6.95	1.28	5.53	4.14	9.49	9.91	9.70						33.92	5.15
STD	0.43	0.54	0.49	0.83	0.41	0.65	0.18	0.07	0.11						1.18	0.17



yi within 1	76%
yi within 2	95%
yi within 3	99%

PART ID = Calibration 1 Piston A

Yi VALUES

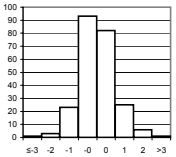
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	-0.24	-0.07	0.56	-0.16	0.15	0.48	-0.56	0.46	-0.33						0.29	0.44	0.09	0.38
Cales, Jonathon	0.37	-0.10	-0.57	-0.22	0.54	1.19	-0.28	0.54	-0.07						0.54	0.37	0.21	0.50
Caproni, David	0.79	-0.35	-0.45	0.63	0.49	0.94	0.11	1.29	0.49						1.12	0.95	0.55	0.57
Foecking, Brian	1.16	-0.01	-0.74	-0.39	-0.75	-0.33	0.58	-0.22	0.42						-0.58	-1.24	-0.19	0.69
Garcia, Orlando	0.48	0.84	0.23	0.01	0.94	-0.82	-0.89	0.84	-0.50						0.49	0.81	0.22	0.68
Hills, Barry	0.38	-0.13	**2.18**	-0.59	0.03	-0.21	0.60	-0.22	0.45						0.49	0.80	0.34	0.74
Kobrinetz, Jack	-0.32	0.79	-0.11	-0.44	-0.47	0.71	-0.72	-0.22	-0.69						0.05	-0.30	-0.16	0.50
Lopez, Frank	-1.57	-0.68	0.79	-0.58	0.67	-1.29	1.16	-0.22	0.92						-1.36	-0.34	-0.23	0.98
Pansza, Mike	1.17	0.73	0.54	-0.06	1.73	1.26	0.33	-0.22	0.21						**2.26**	**2.44**	0.95	0.91
Sanchez, Art	1.68	-0.78	**2.04**	-0.46	-0.01	0.31	1.31	-0.22	1.05						1.04	1.00	0.63	0.92
Yanchar, Paul	-1.40	-0.30	-0.19	-0.20	-0.53	-0.96	0.49	0.54	0.59						-1.52	-1.26	-0.43	0.78
Adams, Pat	-1.64	1.09	0.49	-0.06	1.17	-1.56	-0.06	-0.22	-0.12						-0.40	0.63	-0.06	0.92
Avis, Steve	1.80	-1.06	0.36	-0.32	0.06	-0.56	1.19	1.14	1.38						-0.07	-0.23	0.34	0.91
Castillo, George	-0.60	-0.05	-0.10	-0.08	-0.25	0.43	0.38	0.99	0.64						-0.13	-0.19	0.10	0.46
Greenland, Paul	0.33	-1.28	-1.06	-0.16	1.39	-0.55	-0.50	-0.22	-0.50						-0.87	-0.31	-0.34	0.73
Hill, John	-0.57	1.50	0.11	-0.08	-1.05	1.08	1.10	0.54	1.11						0.78	0.12	0.42	0.79
Lowsky, John	1.94	0.10	-0.71	-0.10	0.45	0.94	**-2.10**	**-3.09**	**-2.76**						0.82	0.32	-0.38	1.62
May, Marianne	-0.74	0.25	-0.36	-0.16	0.38	-0.13	-0.67	-0.97	-0.87						-0.43	-0.17	-0.35	0.44
Pitta, Jimmy	0.19	0.51	-0.24	-0.23	-1.39	1.86	0.00	0.69	0.21						0.60	-0.41	0.16	0.81
Radonich, Pete	-0.06	**2.61**	-0.96	-0.20	-0.42	-1.88	0.66	0.54	0.73						-0.49	-0.88	-0.03	1.17
Rodriguez, Jesse	0.03	0.06	0.35	-0.14	-0.69	0.28	0.60	-0.22	0.45						0.04	-0.25	0.05	0.37
Seiz, Ray	-0.54	-0.42	0.67	0.12	1.52	-0.02	0.28	-1.73	-0.30						0.47	1.37	0.13	0.91
Shoda, Ron	-1.02	-0.99	-1.61	-0.42	-0.58	-1.36	**-3.05**	0.54	**-2.44**						**-2.95**	**-2.81**	-1.52	1.17
Terrado, Teresa	-0.97	**-2.60**	**-2.55**	**4.76**	**-2.98**	0.94	-0.50	-1.73	-0.97						0.16	-0.80	-0.66	**2.16**
Trevino, Robert	0.01	-0.33	0.52	-0.10	-0.32	0.48	-0.34	0.24	-0.21						0.13	0.06	0.01	0.31
Viera, Ralph	-0.67	0.66	0.78	-0.34	-0.08	-1.22	0.88	1.14	1.11						-0.46	-0.13	0.15	0.80
Yi MAXIMUM	1.94	2.61	-2.55	4.76	-2.98	-1.88	-3.05	-3.09	-2.76						-2.95	-2.81	-1.52	2.16
Yi MINIMUM	-0.06	-0.01	-0.10	-0.06	-0.01	-0.02	0.00	-0.22	-0.07						0.04	-0.13	-0.03	0.31
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	2.17	4.16	6.95	1.28	5.53	4.14	9.49	9.91	9.70						33.92	5.15		
Ratings STD	0.43	0.54	0.49	0.83	0.41	0.65	0.18	0.07	0.11						1.18	0.17		

Light Duty Rating Workshop

PART ID = **Calibration 1 Piston B**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	2.15	3.95	8.68	1.03	5.55	1.73	8.74	9.86	9.30						32.38	5.16
Cales, Jonathon	2.35	3.78	8.18	1.09	5.63	1.84	8.71	9.90	9.31						32.17	5.10
Caproni, David	2.23	3.85	8.52	1.99	5.91	1.75	8.81	9.90	9.35						33.60	5.38
Foecking, Brian	2.53	3.79	8.89	1.22	5.18	1.74	8.97	9.88	9.42						32.76	5.13
Garcia, Orlando	2.42	3.77	8.73	1.52	6.14	1.83	8.43	9.96	9.20						33.61	5.42
Hills, Barry	1.58	3.94	9.35	1.22	5.14	1.30	9.12	9.90	9.51						32.04	5.15
Kobrinetz, Jack	2.18	3.80	8.94	1.34	5.82	1.52	9.04	9.80	9.42						33.03	5.32
Lopez, Frank	1.80	3.55	8.89	1.36	5.28	1.48	9.33	9.90	9.61						31.96	5.12
Pansza, Mike	2.91	3.86	9.37	1.55	6.51	1.43	9.01	9.90	9.45						35.08	5.68
Sanchez, Art	2.00	4.51	9.68	1.63	6.12	1.55	9.23	9.80	9.51						34.99	5.67
Yanchar, Paul	1.62	3.79	9.10	1.30	5.51	1.36	9.03	9.85	9.44						32.12	5.21
Adams, Pat	1.99	3.78	9.20	1.19	5.83	1.30	9.19	9.90	9.54						32.83	5.33
Avis, Steve	3.28	3.78	9.40	0.69	5.09	1.90	9.36	9.99	9.67						33.81	5.21
Castillo, George	2.11	3.92	8.89	1.47	5.76	1.75	9.24	9.98	9.61						33.51	5.36
Greenland, Paul	1.76	4.23	8.74	1.48	6.21	2.40	8.63	9.80	9.22						34.03	5.50
Hill, John	2.78	4.18	8.52	1.86	6.53	2.44	9.04	9.90	9.47						35.78	5.69
Lowsky, John	2.59	4.03	8.65	1.79	6.29	2.70	8.47	9.80	9.14						35.18	5.60
May, Marianne	1.86	4.02	9.06	1.36	5.92	1.35	8.97	9.87	9.42						32.99	5.36
Pitta, Jimmy	2.17	4.17	8.62	1.59	1.56	2.70	8.45	9.90	9.17						29.98	4.14
Radonich, Pete	1.99	4.06	9.11	1.52	5.35	1.45	8.95	9.95	9.45						32.93	5.25
Rodriguez, Jesse	1.87	3.75	8.90	1.03	5.93	1.72	9.07	9.90	9.48						32.68	5.30
Seiz, Ray	2.64	4.27	8.98	1.84	5.69	1.77	9.07	9.80	9.43						34.62	5.46
Shoda, Ron	2.29	3.99	8.79	0.68	5.72	1.15	8.98	9.85	9.41						32.03	5.15
Terrado, Teresa	1.82	3.34	9.05	8.70	0.96	2.40	8.85	9.80	9.33						35.60	5.00
Trevino, Robert	1.94	3.69	8.81	1.16	4.60	2.00	8.84	9.90	9.37						31.57	4.92
Viera, Ralph	2.16	4.54	9.00	1.21	6.24	1.45	9.35	9.98	9.66						34.26	5.53
MAXIMUM	3.28	4.54	9.68	8.70	6.53	2.70	9.36	9.99	9.67						35.78	5.69
MINIMUM	1.58	3.34	8.18	0.68	0.96	1.15	8.43	9.80	9.14						29.98	4.14
RANGE (MAX-MIN)	1.70	1.20	1.51	8.02	5.57	1.55	0.93	0.19	0.54						5.79	1.55
MEAN	2.19	3.94	8.92	1.65	5.40	1.77	8.96	9.88	9.42						33.29	5.27
STD	0.41	0.27	0.32	1.47	1.31	0.44	0.27	0.06	0.14						1.39	0.31



yi within 1	75%
yi within 2	95%
yi within 3	99%

PART ID = **Calibration 1 Piston B**

Yi VALUES

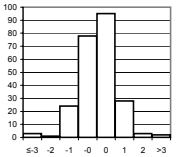
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	-0.10	0.05	-0.76	-0.42	0.11	-0.10	-0.81	-0.40	-0.83						-0.65	-0.37	-0.39	0.34
Cales, Jonathon	0.37	-0.58	-2.33	-0.38	0.17	0.16	-0.92	0.28	-0.79						-0.81	-0.57	-0.49	0.77
Caproni, David	0.08	-0.32	-1.27	0.23	0.39	-0.04	-0.57	0.28	-0.47						0.22	0.34	-0.10	0.51
Foecking, Brian	0.83	-0.55	-0.12	-0.29	-0.17	-0.08	0.03	-0.06	0.02						-0.38	-0.45	-0.11	0.37
Garcia, Orlando	0.56	-0.60	-0.60	-0.08	0.56	0.14	-1.98	1.29	-1.56						0.23	0.46	-0.14	0.97
Hills, Barry	-1.51	0.03	1.32	-0.29	-0.20	-1.08	0.60	0.28	0.61						-0.90	-0.40	-0.14	0.83
Kobrinetz, Jack	-0.02	-0.50	0.05	-0.21	0.32	-0.56	0.32	-1.41	0.01						-0.19	0.15	-0.19	0.50
Lopez, Frank	-0.96	-1.43	-0.10	-0.20	-0.10	-0.68	1.40	0.28	1.35						-0.96	-0.50	-0.17	0.90
Pansza, Mike	1.75	-0.28	1.38	-0.07	0.85	-0.78	0.20	0.28	0.24						1.29	1.30	0.56	0.80
Sanchez, Art	-0.48	2.11	2.35	-0.01	0.55	-0.50	1.01	-1.41	0.64						1.22	1.28	0.62	1.15
Yanchar, Paul	-1.40	-0.54	0.56	-0.24	0.08	-0.94	0.28	-0.56	0.14						-0.84	-0.21	-0.33	0.59
Adams, Pat	-0.49	-0.58	0.86	-0.31	0.33	-1.08	0.88	0.28	0.87						-0.33	0.18	0.05	0.66
Avis, Steve	2.65	-0.58	1.48	-0.65	-0.24	0.30	1.52	1.80	1.77						0.38	-0.21	0.75	1.13
Castillo, George	-0.20	-0.07	-0.12	-0.12	0.28	-0.04	1.06	1.63	1.32						0.16	0.28	0.38	0.65
Greenland, Paul	-1.05	1.10	-0.57	-0.12	0.62	1.45	-1.23	-1.41	-1.42						0.53	0.74	-0.12	1.06
Hill, John	1.42	0.91	-1.26	0.14	0.86	1.54	0.31	0.28	0.35						1.78	1.33	0.70	0.86
Lowsky, John	0.97	0.35	-0.85	0.10	0.68	2.14	-1.83	-1.41	-1.98						1.36	1.05	0.05	1.38
May, Marianne	-0.81	0.31	0.42	-0.19	0.40	-0.96	0.05	-0.23	0.00						-0.22	0.29	-0.09	0.46
Pitta, Jimmy	-0.06	0.87	-0.94	-0.04	-2.94	2.14	-1.90	0.28	-1.70						-2.38	-3.64	-0.94	1.75
Radonich, Pete	-0.49	0.46	0.58	-0.09	-0.04	-0.73	-0.02	1.12	0.21						-0.26	-0.08	0.06	0.52
Rodriguez, Jesse	-0.79	-0.69	-0.08	-0.42	0.40	-0.11	0.43	0.28	0.45						-0.44	0.09	-0.08	0.45
Seiz, Ray	1.09	1.24	0.17	0.13	0.22	0.00	0.43	-1.41	0.11						0.96	0.59	0.32	0.72
Shoda, Ron	0.24	0.20	-0.42	-0.66	0.24	-1.42	0.09	-0.56	-0.03						-0.90	-0.41	-0.33	0.54
Terrado, Teresa	-0.91	-2.22	0.39	4.78	-3.40	1.45	-0.40	-1.41	-0.66						1.66	-0.88	-0.15	2.20
Trevino, Robert	-0.62	-0.92	-0.37	-0.33	-0.61	0.53	-0.44	0.28	-0.35						-1.24	-1.15	-0.47	0.54
Viera, Ralph	-0.08	2.24	0.24	-0.30	0.64	-0.73	1.48	1.63	1.70						0.70	0.81	0.76	0.93
Yi MAXIMUM	2.65	2.24	2.35	4.78	-3.40	2.14	-1.98	1.80	-1.98						-2.38	-3.64	-0.94	2.20
Yi MINIMUM	-0.02	0.03	-0.08	-0.01	-0.04	-0.04	-0.02	-0.06	-0.03						-0.19	-0.08	-0.08	0.34
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	2.19	3.94	8.92	1.65	5.40	1.77	8.96	9.88	9.42						33.29	5.27		
Ratings STD	0.41	0.27	0.32	1.47	1.31	0.44	0.27	0.06	0.14						1.39	0.31		

Light Duty Rating Workshop

PART ID = **Calibration 2 Piston A**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	1.26	0.75	8.01	1.13	5.09	1.77	9.15	9.91	9.53						27.54	4.57
Cales, Jonathon	1.56	0.65	7.55	1.20	5.74	1.75	**8.93**	9.95	9.44						27.90	4.68
Caproni, David	1.35	0.75	7.43	1.56	5.43	1.90	9.35	9.90	9.63						28.05	4.64
Foecking, Brian	1.44	0.75	7.76	1.22	5.18	1.74	8.97	9.88	9.42						27.51	4.55
Garcia, Orlando	1.24	0.70	7.34	1.08	5.61	1.82	9.09	9.97	9.53						27.33	4.58
Hills, Barry	1.09	0.76	8.27	1.00	4.92	1.30	9.53	9.89	9.71						27.06	4.51
Kobrinetz, Jack	1.32	0.73	7.97	1.05	5.21	1.49	9.26	9.90	9.58						27.35	4.56
Lopez, Frank	1.10	0.75	8.18	1.35	4.95	1.28	9.51	9.90	9.71						27.32	4.55
Pansza, Mike	1.39	0.68	8.13	1.38	4.91	2.20	9.27	9.90	9.59						28.28	4.62
Sanchez, Art	1.30	0.74	8.19	1.15	4.20	1.52	9.49	9.90	9.70						26.80	4.33
Yanchar, Paul	1.06	0.74	7.85	1.12	5.18	1.38	9.45	9.95	9.70						27.02	4.53
Adams, Pat	1.34	0.74	7.95	1.49	4.79	1.40	9.38	9.90	9.64						27.35	4.50
Avis, Steve	1.31	0.68	7.84	1.43	5.35	1.91	9.45	9.81	9.63						28.15	4.68
Castillo, George	1.08	0.74	7.91	1.29	5.60	1.70	9.49	9.95	9.72						28.04	4.73
Greenland, Paul	1.43	0.75	7.23	1.59	5.42	2.20	9.23	9.80	9.51						28.13	4.63
Hill, John	1.51	**0.88**	8.03	1.60	4.88	2.39	8.99	9.85	9.42						28.71	4.66
Lowsky, John	1.17	0.75	7.55	1.43	5.35	**3.04**	9.19	9.80	9.49						28.79	4.72
May, Marianne	1.15	0.75	7.76	1.30	5.42	1.45	9.28	9.92	9.60						27.43	4.61
Pitta, Jimmy	1.52	0.72	7.15	1.82	**1.06**	**3.35**	9.25	9.90	9.57						**25.19**	**3.46**
Radonich, Pete	1.16	0.75	7.40	1.27	4.90	1.58	9.30	9.95	9.63						26.69	4.39
Rodriguez, Jesse	1.41	0.75	7.91	1.54	5.39	1.61	9.37	9.90	9.63						28.24	4.70
Seiz, Ray	1.51	**0.84**	7.90	1.99	5.78	1.66	9.57	9.80	9.68						29.37	4.91
Shoda, Ron	1.28	0.68	6.99	1.08	5.22	1.72	9.36	9.95	9.65						26.62	4.40
Terrado, Teresa	**0.63**	0.75	**6.30**	**5.67**	5.65	2.50	9.40	9.81	9.61						**31.11**	5.12
Trevino, Robert	1.00	0.71	7.60	1.15	5.28	1.86	9.25	9.84	9.55						27.15	4.54
Viera, Ralph	1.34	0.74	8.03	1.52	5.57	1.13	9.51	9.98	9.74						28.07	4.73
MAXIMUM	1.56	0.88	8.27	5.67	5.78	3.35	9.57	9.98	9.74						31.11	5.12
MINIMUM	0.63	0.65	6.30	1.00	1.06	1.13	8.93	9.80	9.42						25.19	3.46
RANGE (MAX-MIN)	0.93	0.22	1.97	4.67	4.72	2.22	0.64	0.18	0.32						5.91	1.66
MEAN	1.27	0.74	7.70	1.52	5.08	1.83	9.31	9.89	9.60						27.74	4.57
STD	0.20	0.05	0.44	0.88	0.89	0.52	0.18	0.06	0.09						1.08	0.28



yi within 1	74%
yi within 2	96%
yi within 3	98%

PART ID = **Calibration 2 Piston A**

Yi VALUES

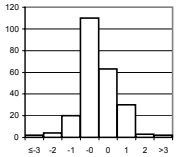
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	-0.01	0.23	0.68	-0.44	0.01	-0.11	-0.86	0.31	-0.73						-0.18	-0.02	-0.10	0.45
Cales, Jonathon	1.44	-1.93	-0.33	-0.36	0.74	-0.16	**-2.14**	1.04	-1.75						0.15	0.37	-0.27	1.21
Caproni, David	0.41	0.23	-0.60	0.05	0.39	0.13	0.23	0.13	0.26						0.29	0.26	0.16	0.27
Foecking, Brian	0.85	0.23	0.13	-0.34	0.11	-0.19	-1.92	-0.23	-1.92						-0.22	-0.08	-0.32	0.85
Garcia, Orlando	-0.12	-0.77	-0.81	-0.50	0.60	-0.02	-1.22	1.40	-0.76						-0.38	0.03	-0.23	0.74
Hills, Barry	-0.86	0.45	1.29	-0.58	-0.18	-1.02	1.24	0.02	1.20						-0.63	-0.22	0.07	0.86
Kobrinetz, Jack	0.23	-0.27	0.60	-0.53	0.15	-0.66	-0.27	0.13	-0.22						-0.36	-0.04	-0.11	0.37
Lopez, Frank	-0.85	0.23	1.07	-0.19	-0.14	-1.05	1.14	0.13	1.13						-0.39	-0.07	0.09	0.76
Pansza, Mike	0.60	-1.32	0.96	-0.15	-0.19	0.70	-0.22	0.13	-0.17						0.50	0.18	0.09	0.62
Sanchez, Art	0.16	-0.10	1.10	-0.41	-0.98	-0.59	1.04	0.13	1.04						-0.87	-0.87	-0.03	0.80
Yanchar, Paul	-1.02	0.07	0.33	-0.45	0.11	-0.88	0.79	1.04	1.07						-0.66	-0.17	0.02	0.74
Adams, Pat	0.36	0.01	0.56	-0.03	-0.33	-0.83	0.40	0.13	0.42						-0.36	-0.28	0.01	0.42
Avis, Steve	0.21	-1.32	0.31	-0.10	0.30	0.15	0.79	-1.51	0.31						0.38	0.37	-0.01	0.73
Castillo, George	-0.92	0.01	0.47	-0.26	0.58	-0.25	1.02	1.04	1.28						0.28	0.55	0.35	0.66
Greenland, Paul	0.80	0.23	-1.06	0.08	0.38	0.70	-0.44	-1.69	-0.92						0.37	0.20	-0.12	0.80
Hill, John	1.19	**3.01**	0.75	0.10	-0.22	1.07	-1.78	-0.78	-1.94						0.90	0.30	0.23	1.42
Lowsky, John	-0.46	0.23	-0.34	-0.10	0.30	**2.31**	-0.66	-1.69	-1.14						0.98	0.52	0.00	1.08
May, Marianne	-0.58	0.23	0.13	-0.24	0.38	-0.73	-0.16	0.49	-0.01						-0.29	0.14	-0.06	0.38
Pitta, Jimmy	1.24	-0.43	-1.24	0.35	**-4.51**	**2.90**	-0.33	0.13	-0.28						**-2.36**	**-4.02**	-0.78	**2.18**
Radonich, Pete	-0.53	0.23	-0.68	-0.28	-0.20	-0.48	-0.05	1.04	0.26						-0.98	-0.65	-0.21	0.56
Rodriguez, Jesse	0.70	0.23	0.47	0.03	0.35	-0.43	0.34	0.13	0.37						0.47	0.46	0.28	0.30
Seiz, Ray	1.19	**2.23**	0.45	0.54	0.78	-0.33	1.46	-1.69	0.91						1.51	1.21	0.75	1.05
Shoda, Ron	0.06	-1.32	-1.60	-0.49	0.16	-0.22	0.29	1.04	0.58						-1.03	-0.64	-0.29	0.82
Terrado, Teresa	**-3.14**	0.23	**-3.15**	**4.71**	0.64	1.28	0.51	-1.51	0.05						**3.12**	1.99	0.43	**2.41**
Trevino, Robert	-1.32	-0.65	-0.23	-0.41	0.22	0.05	-0.33	-0.96	-0.60						-0.55	-0.12	-0.45	0.44
Viera, Ralph	0.36	0.01	0.74	0.01	0.55	-1.35	1.13	1.58	1.55						0.31	0.58	0.50	0.82
Yi MAXIMUM	-3.14	3.01	-3.15	4.71	-4.51	2.90	-2.14	-1.69	-1.94						3.12	-4.02	-0.78	2.41
Yi MINIMUM	-0.01	-0.10	-0.23	-0.03	0.01	-0.02	-0.05	0.02	-0.01						-0.18	-0.02	0.00	0.27
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	1.27	0.74	7.70	1.52	5.08	1.83	9.31	9.89	9.60						27.74	4.57		
Ratings STD	0.20	0.05	0.44	0.88	0.89	0.52	0.18	0.06	0.09						1.08	0.28		

Light Duty Rating Workshop

PART ID = **Calibration 2 Piston B**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	1.06	1.81	9.28	0.63	7.14	3.78	9.32	9.93	9.63						33.32	5.67
Cales, Jonathon	1.54	1.92	9.62	0.63	7.32	4.06	9.10	9.90	9.50						34.59	5.84
Caproni, David	1.94	2.22	9.22	0.80	7.24	3.47	9.30	10.00	9.65						34.54	5.77
Foecking, Brian	1.49	1.97	9.74	0.58	7.25	3.04	9.18	9.90	9.54						33.60	5.74
Garcia, Orlando	1.72	1.91	9.42	0.68	7.50	3.30	9.12	10.00	9.56						34.10	5.80
Hills, Barry	1.08	1.29	9.87	0.62	7.26	3.60	9.67	9.90	9.78						33.50	5.77
Kobrinetz, Jack	1.61	1.92	9.70	0.59	7.50	3.59	9.30	9.90	9.60						34.52	5.87
Lopez, Frank	0.88	2.06	9.80	0.61	7.30	2.99	9.30	9.90	9.60						33.25	5.75
Pansza, Mike	1.04	2.29	9.82	0.70	7.63	3.46	9.47	9.90	9.68						34.62	5.95
Sanchez, Art	1.75	1.81	9.63	0.55	6.67	3.10	9.51	9.90	9.70						33.21	5.56
Yanchar, Paul	1.02	1.87	9.80	0.58	7.33	3.22	9.48	9.95	9.71						33.55	5.78
Adams, Pat	1.27	1.96	9.74	0.63	7.31	2.52	9.29	9.90	9.59						33.02	5.71
Avis, Steve	1.70	2.01	9.73	0.63	7.20	3.25	9.59	9.90	9.74						34.26	5.79
Castillo, George	1.10	1.96	9.78	0.64	7.13	3.53	9.55	10.00	9.78						33.92	5.77
Greenland, Paul	1.38	1.88	9.53	0.59	7.40	4.25	9.20	9.90	9.55						34.58	5.85
Hill, John	1.18	2.46	9.75	0.75	6.70	4.29	9.23	9.85	9.54						34.67	5.76
Lowsky, John	1.69	1.86	9.35	0.75	6.81	4.20	9.17	9.80	9.49						34.15	5.66
May, Marianne	1.17	1.87	9.63	0.67	7.57	2.80	9.31	9.92	9.62						33.33	5.78
Pitta, Jimmy	1.23	2.19	9.65	0.60	7.19	3.95	9.23	9.90	9.56						34.37	5.81
Radonich, Pete	1.06	1.92	9.75	0.62	7.03	3.80	9.43	9.95	9.69						33.87	5.75
Rodriguez, Jesse	1.36	2.18	9.75	0.62	7.73	3.28	9.41	9.90	9.65						34.57	5.94
Seiz, Ray	1.16	2.28	9.46	0.85	9.57	4.71	9.40	9.80	9.60						37.63	6.61
Shoda, Ron	1.14	2.03	9.74	0.59	7.30	3.40	9.52	9.95	9.74						33.94	5.80
Terrado, Teresa	0.15	6.15	9.61	0.22	6.80	3.71	9.23	9.89	9.56						36.20	5.94
Trevino, Robert	1.45	1.98	9.55	0.57	6.97	3.38	9.29	9.92	9.61						33.51	5.66
Viera, Ralph	0.98	2.36	9.83	0.63	8.35	2.85	9.52	9.97	9.75						34.74	6.11
MAXIMUM	1.94	6.15	9.87	0.85	9.57	4.71	9.67	10.00	9.78						37.63	6.61
MINIMUM	0.15	1.29	9.22	0.22	6.67	2.52	9.10	9.80	9.49						33.02	5.56
RANGE (MAX-MIN)	1.79	4.86	0.65	0.63	2.90	2.19	0.57	0.20	0.30						4.61	1.05
MEAN	1.28	2.16	9.64	0.63	7.35	3.52	9.35	9.91	9.63						34.21	5.82
STD	0.36	0.85	0.17	0.11	0.57	0.52	0.15	0.05	0.09						0.98	0.19



yi within 1	74%
yi within 2	95%
yi within 3	98%

PART ID = **Calibration 2 Piston B**

Yi VALUES

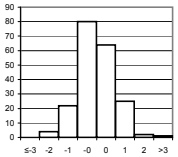
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	-0.58	-0.42	-2.08	-0.03	-0.37	0.49	-0.18	0.35	-0.06						-0.92	-0.81	-0.42	0.70
Cales, Jonathon	0.72	-0.28	-0.14	0.01	-0.06	1.05	-1.66	-0.25	-1.56						0.38	0.08	-0.16	0.83
Caproni, David	1.82	0.07	-2.43	1.55	-0.20	-0.10	-0.31	1.75	0.24						0.33	-0.29	0.22	1.21
Foecking, Brian	0.58	-0.23	0.58	-0.39	-0.19	-0.94	-1.15	-0.25	-1.10						-0.62	-0.44	-0.38	0.58
Garcia, Orlando	1.22	-0.29	-1.29	0.50	0.26	-0.43	-1.50	1.75	-0.84						-0.12	-0.12	-0.08	0.99
Hills, Barry	-0.53	-1.03	1.29	-0.12	-0.16	0.15	2.07	-0.25	1.78						-0.73	-0.30	0.20	1.04
Kobrinetz, Jack	0.93	-0.28	0.32	-0.33	0.25	0.14	-0.31	-0.25	-0.35						0.31	0.24	0.06	0.40
Lopez, Frank	-1.07	-0.11	0.89	-0.17	-0.09	-1.03	-0.32	-0.25	-0.36						-0.98	-0.37	-0.35	0.56
Pansza, Mike	-0.64	0.15	1.00	0.65	0.48	-0.12	0.78	-0.25	0.62						0.42	0.66	0.34	0.50
Sanchez, Art	1.29	-0.41	-0.07	-0.73	-1.20	-0.82	1.02	-0.25	0.84						-1.03	-1.37	-0.25	0.93
Yanchar, Paul	-0.69	-0.34	0.89	-0.39	-0.04	-0.57	0.84	0.75	0.97						-0.68	-0.23	0.05	0.68
Adams, Pat	-0.01	-0.24	0.55	0.01	-0.08	-1.94	-0.40	-0.25	-0.43						-1.21	-0.61	-0.42	0.67
Avis, Steve	1.17	-0.18	0.49	0.01	-0.27	-0.52	1.56	-0.25	1.32						0.05	-0.20	0.29	0.73
Castillo, George	-0.49	-0.24	0.78	0.15	-0.39	0.02	1.32	1.75	1.70						-0.30	-0.26	0.37	0.86
Greenland, Paul	0.29	-0.33	-0.66	-0.35	0.08	1.42	-0.98	-0.25	-0.96						0.37	0.14	-0.11	0.69
Hill, John	-0.26	0.35	0.60	1.10	-1.14	1.49	-0.79	-1.25	-1.07						0.47	-0.33	-0.08	0.94
Lowsky, John	1.14	-0.36	-1.69	1.10	-0.95	1.32	-1.18	-2.25	-1.71						-0.07	-0.82	-0.50	1.24
May, Marianne	-0.29	-0.34	-0.08	0.38	0.38	-1.40	-0.27	0.15	-0.20						-0.91	-0.20	-0.25	0.52
Pitta, Jimmy	-0.12	0.04	0.03	-0.26	-0.29	0.83	-0.79	-0.25	-0.78						0.16	-0.08	-0.14	0.45
Radonich, Pete	-0.59	-0.28	0.60	-0.08	-0.57	0.54	0.52	0.75	0.68						-0.35	-0.40	0.07	0.54
Rodriguez, Jesse	0.23	0.02	0.60	-0.08	0.66	-0.47	0.38	-0.25	0.27						0.37	0.60	0.21	0.37
Seiz, Ray	-0.32	0.14	-1.06	2.01	3.88	2.31	0.32	-2.25	-0.37						3.49	4.03	1.11	2.14
Shoda, Ron	-0.37	-0.15	0.55	-0.35	-0.09	-0.23	1.10	0.75	1.21						-0.28	-0.12	0.18	0.60
Terrado, Teresa	-3.08	4.72	-0.20	-3.70	-0.97	0.37	-0.79	-0.45	-0.84						2.03	0.62	-0.21	2.28
Trevino, Robert	0.48	-0.21	-0.54	-0.53	-0.67	-0.27	-0.40	0.15	-0.31						-0.72	-0.87	-0.35	0.39
Viera, Ralph	-0.82	0.24	1.06	0.01	1.74	-1.30	1.10	1.15	1.32						0.54	1.47	0.59	0.97
Yi MAXIMUM	-3.08	4.72	-2.43	-3.70	3.88	2.31	2.07	-2.25	1.78						3.49	4.03	1.11	2.28
Yi MINIMUM	-0.01	-0.11	-0.07	-0.03	-0.04	-0.10	-0.18	-0.25	-0.06						-0.07	-0.08	-0.08	0.37
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	1.28	2.16	9.64	0.63	7.35	3.52	9.35	9.91	9.63						34.21	5.82		
Ratings STD	0.36	0.85	0.17	0.11	0.57	0.52	0.15	0.05	0.09						0.98	0.19		

Light Duty Rating Workshop

PART ID = **A1 - Sequence III Piston**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	0.75	7.01	8.67	1.68	8.51	5.66	9.76	9.94	9.85						42.13	6.83
Cales, Jonathon	0.75	6.69	8.93	2.33	8.71	5.21	9.71	9.95	9.83						42.45	6.96
Caproni, David	0.68	7.08	**8.13**	2.41	**8.34**	5.85	9.80	10.00	9.90						42.39	6.81
Foecking, Brian	0.75	7.16	9.16	1.92	9.09	5.08	9.66	9.90	9.78						42.94	7.09
Garcia, Orlando	0.82	6.49	8.78	2.09	8.67	5.28	9.69	9.93	9.81						41.94	6.87
Hills, Barry	0.75	**6.05**	9.61	1.23	9.19	5.20	9.68	9.90	9.79						41.82	7.00
Kobrinetz, Jack	0.75	7.61	9.17	1.37	9.28	5.21	9.70	9.90	9.80						43.19	7.12
Lopez, Frank	0.75	7.91	9.27	1.55	9.15	5.96	9.83	9.90	9.86						44.46	7.24
Pansza, Mike	0.75	7.79	9.24	2.53	9.15	**6.47**	9.65	9.90	9.77						**45.70**	**7.41**
Yanchar, Paul	0.82	7.21	9.50	1.69	9.21	5.38	9.80	9.90	9.85						43.66	7.20
Adams, Pat	0.75	7.43	9.42	1.63	8.78	5.72	9.69	9.90	9.79						43.52	7.09
Avis, Steve	0.75	8.02	9.38	1.59	9.47	5.33	9.62	9.89	9.76						44.30	7.30
Castillo, George	0.75	7.02	9.06	1.93	8.87	5.36	9.75	9.97	9.86						42.85	7.02
Greenland, Paul	0.75	6.92	8.73	1.76	8.74	4.93	9.63	9.85	9.74						41.57	6.83
Hill, John	0.88	7.03	9.11	1.86	8.57	5.79	9.79	9.90	9.84						43.08	6.98
Lowsky, John	0.75	6.84	9.27	2.31	9.22	**6.45**	9.67	**9.80**	9.74						44.58	7.31
May, Marianne	0.75	7.00	9.16	2.01	8.99	5.20	9.62	9.91	9.76						42.87	7.06
Pitta, Jimmy	**0.98**	7.26	8.78	2.40	9.03	4.90	9.82	9.92	9.87						43.22	7.08
Radonich, Pete	0.75	7.27	9.20	1.60	9.32	5.33	9.80	9.95	9.88						43.34	7.16
Shoda, Ron	0.75	7.59	9.28	1.16	9.05	5.45	9.71	9.95	9.83						43.11	7.07
Terrado, Teresa	0.75	7.33	8.67	1.89	8.85	5.06	9.80	9.90	9.85						42.40	6.93
Viera, Ralph	0.79	7.56	9.20	2.09	8.71	5.86	9.85	9.99	9.92						44.13	7.14
MAXIMUM	0.98	8.02	9.61	2.53	9.47	6.47	9.85	10.00	9.92						45.70	7.41
MINIMUM	0.68	6.05	8.13	1.16	8.34	4.90	9.62	9.80	9.74						41.57	6.81
RANGE (MAX-MIN)	0.30	1.97	1.48	1.37	1.13	1.57	0.23	0.20	0.18						4.13	0.61
MEAN	0.77	7.19	9.08	1.87	8.95	5.49	9.73	9.92	9.82						43.17	7.07
STD	0.06	0.46	0.34	0.38	0.29	0.44	0.07	0.04	0.05						1.01	0.16



yi within 1	73%
yi within 2	96%
yi within 3	99%

PART ID = **A1 - Sequence III Piston**

Yi VALUES

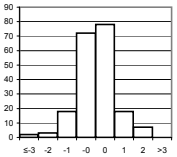
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	-0.35	-0.40	-1.20	-0.48	-1.49	0.40	0.43	0.55	0.54						-1.02	-1.47	-0.41	0.81
Cales, Jonathon	-0.35	-1.09	-0.44	1.21	-0.81	-0.63	-0.25	0.78	0.15						-0.71	-0.67	-0.26	0.70
Caproni, David	-1.52	-0.25	**-2.80**	1.42	**-2.07**	0.83	0.97	1.91	1.51						-0.77	-1.60	-0.21	1.63
Foecking, Brian	-0.35	-0.07	0.24	0.14	0.47	-0.93	-0.93	-0.36	-0.82						-0.22	0.11	-0.25	0.49
Garcia, Orlando	0.81	-1.52	-0.88	0.59	-0.95	-0.47	-0.53	0.32	-0.24						-1.21	-1.22	-0.48	0.78
Hills, Barry	-0.35	**-2.47**	1.57	-1.66	0.81	-0.65	-0.66	-0.36	-0.63						-1.33	-0.39	-0.56	1.10
Kobrinetz, Jack	-0.35	0.90	0.27	-1.29	1.12	-0.63	-0.39	-0.36	-0.43						0.02	0.33	-0.07	0.70
Lopez, Frank	-0.35	1.55	0.55	-0.81	0.68	1.09	1.38	-0.36	0.83						1.27	1.06	0.62	0.79
Pansza, Mike	-0.35	1.29	0.48	1.73	0.68	**2.25**	-1.07	-0.36	-0.92						**2.50**	**2.10**	0.76	1.31
Yanchar, Paul	0.81	0.03	1.24	-0.46	0.88	-0.24	0.97	-0.36	0.54						0.49	0.81	0.43	0.59
Adams, Pat	-0.35	0.51	1.01	-0.61	-0.58	0.54	-0.53	-0.36	-0.53						0.35	0.15	-0.04	0.57
Avis, Steve	-0.35	1.78	0.89	-0.72	1.76	-0.36	-1.48	-0.59	-1.31						1.11	1.43	0.20	1.22
Castillo, George	-0.35	-0.38	-0.05	0.17	-0.27	-0.29	0.29	1.23	0.73						-0.31	-0.28	0.04	0.52
Greenland, Paul	-0.35	-0.59	-1.03	-0.27	-0.71	-1.27	-1.34	-1.50	-1.60						-1.57	-1.47	-1.07	0.50
Hill, John	1.81	-0.35	0.09	-0.01	-1.29	0.70	0.83	-0.36	0.44						-0.08	-0.53	0.11	0.82
Lowsky, John	-0.35	-0.76	0.57	1.16	0.92	**2.21**	-0.80	**-2.64**	-1.70						1.39	1.45	0.13	1.50
May, Marianne	-0.35	-0.42	0.24	0.38	0.14	-0.65	-1.48	-0.13	-1.11						-0.29	-0.03	-0.34	0.57
Pitta, Jimmy	**3.47**	0.14	-0.88	1.39	0.27	-1.34	1.24	0.09	0.93						0.05	0.05	0.49	1.28
Radonich, Pete	-0.35	0.16	0.36	-0.69	1.26	-0.36	0.97	0.78	1.03						0.18	0.56	0.35	0.63
Shoda, Ron	-0.35	0.85	0.60	-1.84	0.34	-0.08	-0.25	0.78	0.15						-0.06	0.00	0.01	0.74
Terrado, Teresa	-0.35	0.29	-1.20	0.06	-0.34	-0.97	0.97	-0.36	0.54						-0.76	-0.82	-0.27	0.67
Viera, Ralph	0.31	0.79	0.36	0.59	-0.81	0.86	1.65	1.69	1.90						0.95	0.43	0.79	0.77
Yi MAXIMUM	3.47	-2.47	-2.80	-1.84	-2.07	2.25	1.65	-2.64	1.90						2.50	2.10	-1.07	1.63
Yi MINIMUM	-0.35	-0.07	-0.05	-0.01	-0.27	-0.08	-0.25	-0.13	0.15						-0.06	-0.03	-0.04	0.49
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	0.77	7.19	9.08	1.87	8.95	5.49	9.73	9.92	9.82						43.17	7.07		
Ratings STD	0.06	0.46	0.34	0.38	0.29	0.44	0.07	0.04	0.05						1.01	0.16		

Light Duty Rating Workshop

PART ID = **A2 - Sequence III Piston**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Cales, Jonathon	0.75	5.33	9.20	3.20	9.44	5.88	9.60	9.95	9.78						43.58	7.29
Caproni, David	0.75	7.55	9.21	3.90	9.31	6.20	9.37	10.00	9.68						46.61	7.60
Foecking, Brian	0.75	5.98	9.22	2.74	9.56	4.94	9.47	9.95	9.71						42.90	7.22
Garcia, Orlando	0.75	6.21	9.32	2.89	9.45	5.90	9.38	9.95	9.66						44.18	7.35
Hills, Barry	0.75	6.22	9.20	2.88	9.54	5.40	9.40	9.88	9.64						43.63	7.30
Kobrinetz, Jack	0.75	6.23	9.10	2.95	9.55	5.21	9.51	9.90	9.70						43.50	7.28
Lopez, Frank	0.75	7.03	9.06	3.36	9.36	5.14	9.62	9.90	9.76						44.46	7.35
Pansza, Mike	0.75	6.64	9.14	2.80	9.49	5.68	9.39	9.90	9.64						44.15	7.33
Yanchar, Paul	0.75	5.75	9.11	2.90	9.42	5.22	9.66	9.95	9.80						42.95	7.20
Adams, Pat	0.75	6.62	9.11	2.53	9.42	5.63	9.48	9.90	9.69						43.75	7.26
Avis, Steve	0.75	6.40	9.05	3.75	9.51	5.49	9.51	9.90	9.70						44.66	7.42
Castillo, George	0.71	6.07	9.19	2.88	9.48	5.71	9.55	9.90	9.72						43.76	7.30
Greenland, Paul	0.75	7.34	9.25	3.63	9.40	4.50	9.40	9.90	9.65						44.52	7.40
Hill, John	0.75	6.09	9.10	3.20	9.35	5.30	9.40	9.90	9.65						43.44	7.25
Lowsky, John	0.75	6.99	9.07	2.74	1.17	6.68	9.47	9.80	9.64						37.03	4.94
May, Marianne	0.75	6.26	9.22	2.84	9.17	5.45	9.45	9.96	9.71						43.40	7.20
Pitta, Jimmy	0.83	6.35	9.09	2.83	9.29	4.88	9.46	9.95	9.70						42.97	7.16
Radonich, Pete	0.75	6.44	9.14	3.16	9.57	5.28	9.65	9.95	9.80						44.14	7.36
Seiz, Ray	0.68	6.28	9.17	2.95	9.34	6.26	9.86	9.90	9.88						44.56	7.35
Shoda, Ron	0.75	6.56	9.07	2.95	9.35	5.35	9.74	9.95	9.84						43.87	7.27
Terrado, Teresa	0.75	6.98	9.18	2.48	9.63	5.61	9.45	9.90	9.67						44.31	7.36
Viera, Ralph	0.62	6.07	9.11	3.55	9.53	6.03	9.59	9.99	9.79						44.70	7.43
MAXIMUM	0.83	7.55	9.32	3.90	9.63	6.68	9.86	10.00	9.88						46.61	7.60
MINIMUM	0.62	5.33	9.05	2.48	1.17	4.50	9.37	9.80	9.64						37.03	4.94
RANGE (MAX-MIN)	0.21	2.22	0.27	1.42	8.46	2.18	0.49	0.20	0.24						9.57	2.66
MEAN	0.74	6.43	9.15	3.05	9.06	5.53	9.52	9.92	9.72						43.69	7.21
STD	0.04	0.52	0.07	0.38	1.77	0.50	0.13	0.04	0.07						1.69	0.52



yi within 1	76%
yi within 2	94%
yi within 3	99%

PART ID = **A2 - Sequence III Piston**

Yi VALUES

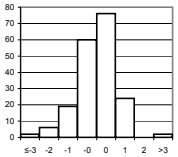
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Cales, Jonathon	0.20	-2.13	0.70	0.40	0.21	0.69	0.66	0.65	0.81						-0.06	0.15	0.21	0.82
Caproni, David	0.20	2.18	0.84	2.24	0.14	1.33	-1.16	1.81	-0.51						1.73	0.76	0.87	1.11
Foecking, Brian	0.20	-0.87	0.98	-0.82	0.28	-1.19	-0.38	0.65	-0.15						-0.47	0.02	-0.16	0.67
Garcia, Orlando	0.20	-0.42	2.40	-0.42	0.22	0.73	-1.08	0.65	-0.79						0.30	0.26	0.19	0.93
Hills, Barry	0.20	-0.40	0.70	-0.45	0.27	-0.27	-0.93	-0.97	-1.15						-0.03	0.17	-0.26	0.59
Kobrinetz, Jack	0.20	-0.38	-0.72	-0.26	0.28	-0.65	-0.07	-0.51	-0.22						-0.11	0.13	-0.21	0.33
Lopez, Frank	0.20	1.17	-1.28	0.81	0.17	-0.79	0.79	-0.51	0.57						0.46	0.28	0.17	0.74
Pansza, Mike	0.20	0.41	-0.09	-0.66	0.25	0.29	-1.04	-0.51	-1.12						0.27	0.23	-0.16	0.57
Yanchar, Paul	0.20	-1.31	-0.58	-0.40	0.20	-0.63	1.10	0.65	1.21						-0.43	-0.03	0.00	0.77
Adams, Pat	0.20	0.37	-0.58	-1.37	0.20	0.19	-0.30	-0.51	-0.43						0.04	0.09	-0.19	0.51
Avis, Steve	0.20	-0.05	-1.43	1.84	0.25	-0.09	-0.07	-0.51	-0.22						0.57	0.41	0.08	0.79
Castillo, George	-0.89	-0.69	0.56	-0.45	0.24	0.35	0.24	-0.51	0.07						0.05	0.17	-0.08	0.47
Greenland, Paul	0.20	1.77	1.41	1.53	0.19	-2.07	-0.93	-0.51	-1.01						0.49	0.37	0.13	1.19
Hill, John	0.20	-0.65	-0.72	0.39	0.16	-0.47	-0.93	-0.51	-1.01						-0.15	0.07	-0.33	0.49
Lowsky, John	0.20	1.09	-1.14	-0.82	-4.47	2.30	-0.38	-2.82	-1.22						-3.94	-4.40	-1.42	2.25
May, Marianne	0.20	-0.31	0.98	-0.56	0.06	-0.17	-0.50	0.88	-0.18						-0.17	-0.02	0.02	0.50
Pitta, Jimmy	2.36	-0.15	-0.86	-0.58	0.13	-1.31	-0.46	0.65	-0.22						-0.42	-0.09	-0.09	0.96
Radonich, Pete	0.20	0.03	-0.15	0.29	0.29	-0.51	1.02	0.65	1.14						0.27	0.29	0.32	0.48
Seiz, Ray	-1.70	-0.28	0.27	-0.26	0.16	1.45	2.66	-0.51	2.29						0.52	0.28	0.44	1.26
Shoda, Ron	0.20	0.26	-1.14	-0.26	0.16	-0.37	1.72	0.65	1.79						0.11	0.12	0.29	0.85
Terrado, Teresa	0.20	1.07	0.42	-1.50	0.32	0.15	-0.54	-0.51	-0.65						0.37	0.29	-0.03	0.70
Viera, Ralph	-3.32	-0.69	-0.58	1.31	0.27	0.99	0.55	1.58	1.00						0.60	0.43	0.20	1.36
Yi MAXIMUM	-3.32	2.18	2.40	2.24	-4.47	2.30	2.66	-2.82	2.29						-3.94	-4.40	-1.42	2.25
Yi MINIMUM	0.20	-0.05	-0.09	-0.26	0.06	-0.09	-0.07	-0.51	-0.15						-0.03	-0.02	0.00	0.33
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	0.74	6.43	9.15	3.05	9.06	5.53	9.52	9.92	9.72						43.69	7.21		
Ratings STD	0.04	0.52	0.07	0.38	1.77	0.50	0.13	0.04	0.07						1.69	0.52		

Light Duty Rating Workshop

PART ID = A3 - Sequence III Piston

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Cales, Jonathon	0.63	2.32	8.73	1.24	7.31	2.14	7.68	9.95	8.81						31.18	5.48
Caproni, David	0.58	3.51	8.90	1.64	7.94	2.80	8.52	10.00	9.26						34.63	5.99
Foecking, Brian	0.70	2.92	9.03	1.34	8.56	2.28	8.65	9.95	9.30						34.13	6.06
Garcia, Orlando	0.75	2.63	8.88	1.29	8.32	2.48	8.72	9.96	9.34						33.69	5.95
Hills, Barry	0.75	2.56	8.97	1.67	8.80	1.90	9.11	9.90	9.50						34.15	6.12
Kobrinetz, Jack	0.70	2.77	8.85	1.51	8.46	2.35	8.70	9.90	9.30						33.94	6.01
Lopez, Frank	0.64	2.85	8.97	1.30	8.48	1.90	9.24	9.90	9.57						33.71	6.00
Pansza, Mike	0.68	3.33	9.00	1.13	8.56	2.80	8.44	9.80	9.12						34.62	6.10
Yanchar, Paul	0.75	2.45	9.02	1.13	8.46	2.04	8.96	9.95	9.45						33.31	5.94
Adams, Pat	0.66	3.16	8.94	1.46	8.41	2.15	8.65	9.95	9.30						34.08	6.02
Avis, Steve	0.75	3.05	8.98	1.36	8.63	1.70	9.39	9.90	9.64						34.11	6.07
Castillo, George	0.71	3.02	8.83	1.30	8.28	2.33	8.87	9.99	9.43						33.90	5.96
Greenland, Paul	0.71	3.81	9.07	1.46	8.50	3.50	8.78	9.90	9.34						36.39	6.28
Hill, John	0.95	3.66	9.10	1.74	8.92	2.70	8.18	9.80	8.99						36.06	6.34
Lowsky, John	0.75	3.60	8.94	1.41	8.67	4.58	8.58	9.80	9.19						37.14	6.37
May, Marianne	0.71	2.70	8.83	1.29	8.36	2.05	8.90	9.91	9.40						33.34	5.92
Pitta, Jimmy	0.75	2.68	8.81	1.28	8.30	2.70	7.99	9.92	8.95						33.48	5.92
Radonich, Pete	0.71	3.17	9.11	1.41	8.42	2.80	8.75	9.95	9.35						34.97	6.13
Shoda, Ron	0.70	2.88	8.71	1.35	8.29	3.15	8.38	9.95	9.16						34.25	5.99
Terrado, Teresa	0.55	2.35	8.58	0.43	7.86	2.98	8.15	9.95	9.05						31.80	5.60
Viera, Ralph	0.64	3.20	8.76	1.53	8.38	2.85	9.12	9.98	9.55						34.91	6.09
MAXIMUM	0.95	3.81	9.11	1.74	8.92	4.58	9.39	10.00	9.64						37.14	6.37
MINIMUM	0.55	2.32	8.58	0.43	7.31	1.70	7.68	9.80	8.81						31.18	5.48
RANGE (MAX-MIN)	0.40	1.49	0.53	1.31	1.61	2.88	1.71	0.20	0.83						5.96	0.89
MEAN	0.70	2.98	8.91	1.35	8.38	2.58	8.66	9.92	9.29						34.18	6.02
STD	0.08	0.43	0.14	0.26	0.34	0.65	0.42	0.06	0.22						1.34	0.20



yi within 1	72%
yi within 2	95%
yi within 3	98%

PART ID = A3 - Sequence III Piston

Yi VALUES

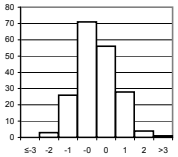
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Cales, Jonathon	-0.91	-1.54	-1.27	-0.40	-3.11	-0.68	-2.31	0.52	-2.19						-2.23	-2.61	-1.52	1.09
Caproni, David	-1.54	1.22	-0.04	1.11	-1.27	0.34	-0.32	1.38	-0.13						0.34	-0.11	0.09	0.94
Foecking, Brian	-0.04	-0.14	0.90	-0.02	0.53	-0.46	-0.01	0.52	0.06						-0.04	0.22	0.14	0.38
Garcia, Orlando	0.58	-0.82	-0.18	-0.21	-0.17	-0.15	0.15	0.69	0.24						-0.37	-0.33	-0.05	0.44
Hills, Barry	0.58	-0.98	0.47	1.22	1.23	-1.05	1.08	-0.33	1.01						-0.02	0.50	0.34	0.83
Kobrinetz, Jack	-0.04	-0.49	-0.40	0.62	0.24	-0.35	0.11	-0.33	0.06						-0.18	-0.02	-0.07	0.33
Lopez, Frank	-0.79	-0.31	0.47	-0.17	0.30	-1.05	1.39	-0.33	1.31						-0.35	-0.09	0.03	0.78
Pansza, Mike	-0.29	0.81	0.69	-0.82	0.53	0.34	-0.51	-2.05	-0.78						0.33	0.39	-0.12	0.86
Yanchar, Paul	0.58	-1.23	0.83	-0.82	0.24	-0.83	0.72	0.52	0.78						-0.65	-0.36	-0.02	0.77
Adams, Pat	-0.54	0.41	0.25	0.43	0.10	-0.66	-0.01	0.52	0.06						-0.08	0.04	0.05	0.38
Avis, Steve	0.58	0.16	0.54	0.05	0.74	-1.35	1.74	-0.33	1.66						-0.05	0.24	0.36	0.87
Castillo, George	0.08	0.09	-0.55	-0.17	-0.28	-0.38	0.51	1.21	0.66						-0.21	-0.28	0.06	0.53
Greenland, Paul	0.08	1.92	1.19	0.43	0.36	1.42	0.30	-0.33	0.24						1.65	1.31	0.78	0.74
Hill, John	3.08	1.57	1.41	1.49	1.58	0.18	-1.13	-2.05	-1.38						1.40	1.59	0.70	1.58
Lowsky, John	0.58	1.43	0.25	0.24	0.85	3.08	-0.18	-2.05	-0.45						2.21	1.76	0.70	1.40
May, Marianne	0.08	-0.65	-0.55	-0.21	-0.05	-0.82	0.58	-0.16	0.55						-0.62	-0.48	-0.21	0.47
Pitta, Jimmy	0.58	-0.70	-0.69	-0.25	-0.22	0.18	-1.58	0.01	-1.54						-0.53	-0.50	-0.48	0.66
Radonich, Pete	0.08	0.44	1.48	0.24	0.13	0.34	0.22	0.52	0.29						0.59	0.54	0.44	0.38
Shoda, Ron	-0.04	-0.24	-1.41	0.01	-0.25	0.88	-0.65	0.52	-0.57						0.05	-0.15	-0.17	0.60
Terrado, Teresa	-1.91	-1.47	-2.36	-3.46	-1.51	0.62	-1.20	0.52	-1.10						-1.78	-2.02	-1.42	1.18
Viera, Ralph	-0.79	0.51	-1.05	0.69	0.01	0.42	1.10	1.04	1.22						0.54	0.35	0.37	0.73
Yi MAXIMUM	3.08	1.92	-2.36	-3.46	-3.11	3.08	-2.31	-2.05	-2.19						-2.23	-2.61	-1.52	1.58
Yi MINIMUM	-0.04	-0.14	-0.04	-0.02	-0.05	-0.15	-0.01	-0.16	-0.13						-0.02	-0.02	-0.02	0.33
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	0.70	2.98	8.91	1.35	8.38	2.58	8.66	9.92	9.29						34.18	6.02		
Ratings STD	0.08	0.43	0.14	0.26	0.34	0.65	0.42	0.06	0.22						1.34	0.20		

Light Duty Rating Workshop

PART ID = A4 - Sequence III Piston

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Cales, Jonathon	2.70	1.93	6.92	0.90	5.53	3.54	6.97	10.00	8.48						30.01	4.71
Caproni, David	0.88	2.35	7.05	1.12	5.71	4.62	8.13	10.00	9.07						30.80	4.94
Foecking, Brian	1.21	1.20	7.43	1.20	5.68	2.99	7.34	9.95	8.64						28.35	4.71
Garcia, Orlando	2.72	2.65	7.22	1.43	5.18	4.01	7.91	9.97	8.94						32.15	4.91
Hills, Barry	1.02	1.62	7.53	0.93	5.44	3.05	8.36	9.90	9.13						28.71	4.71
Kobrinetz, Jack	1.03	2.06	7.36	0.75	5.76	3.66	8.25	9.90	9.07						29.70	4.84
Lopez, Frank	1.09	2.09	7.55	0.88	5.79	2.79	8.42	9.90	9.16						29.35	4.84
Pansza, Mike	1.01	2.45	7.27	1.21	6.47	4.38	7.84	9.90	8.87						31.66	5.20
Yanchar, Paul	1.16	1.56	7.56	0.85	5.25	3.12	7.63	9.85	8.74						28.24	4.61
Adams, Pat	1.44	2.28	7.53	1.15	5.72	4.19	8.09	9.90	8.99						31.30	5.01
Avis, Steve	0.82	2.39	7.56	0.93	5.90	3.68	8.39	9.90	9.14						30.43	4.98
Castillo, George	1.42	1.98	7.29	0.99	5.62	3.34	8.47	9.96	9.22						29.85	4.82
Greenland, Paul	1.02	1.88	6.84	0.91	5.21	3.80	7.66	9.90	8.78						28.44	4.56
Hill, John	1.60	3.10	6.89	1.08	7.39	3.60	7.90	9.85	8.88						32.53	5.39
Lowsky, John	0.75	3.04	7.15	1.16	6.03	4.48	8.29	9.80	9.05						31.66	5.11
May, Marianne	1.42	1.59	7.45	0.67	5.16	2.95	8.26	9.92	9.09						28.33	4.57
Pitta, Jimmy	1.12	2.05	6.80	0.96	4.98	3.90	7.55	9.92	8.74						28.55	4.52
Radonich, Pete	0.90	1.49	7.10	0.85	5.75	3.65	7.65	9.90	8.77						28.51	4.71
Shoda, Ron	1.02	1.53	6.72	0.88	5.45	3.73	7.77	9.95	8.86						28.19	4.57
Terrado, Teresa	2.75	2.75	7.11	0.84	5.42	4.42	6.53	9.95	8.24						31.53	4.85
Viera, Ralph	1.16	2.46	7.29	0.79	6.28	3.25	8.08	9.97	9.03						30.26	4.99
MAXIMUM	2.75	3.10	7.56	1.43	7.39	4.62	8.47	10.00	9.22						32.53	5.39
MINIMUM	0.75	1.20	6.72	0.67	4.98	2.79	6.53	9.80	8.24						28.19	4.52
RANGE (MAX-MIN)	2.00	1.90	0.84	0.76	2.41	1.83	1.94	0.20	0.98						4.35	0.87
MEAN	1.34	2.12	7.22	0.98	5.70	3.67	7.88	9.92	8.90						29.93	4.84
STD	0.61	0.52	0.27	0.18	0.53	0.54	0.50	0.05	0.24						1.45	0.23



yi within 0.67
yi within 0.96
yi within 0.99

PART ID = A4 - Sequence III Piston

Yi VALUES

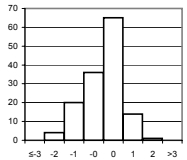
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Cales, Jonathon	2.20	-0.36	-1.10	-0.41	-0.32	-0.25	-1.83	1.64	-1.71						0.05	-0.56	-0.24	1.23
Caproni, David	-0.76	0.45	-0.62	0.79	0.02	1.75	0.50	1.64	0.68						0.60	0.45	0.50	0.78
Foecking, Brian	-0.22	-1.76	0.77	1.23	-0.04	-1.27	-1.09	0.63	-1.05						-1.08	-0.54	-0.40	0.96
Garcia, Orlando	2.24	1.02	0.00	2.49	-0.97	0.62	0.06	1.03	0.17						1.53	0.32	0.77	1.03
Hills, Barry	-0.53	-0.96	1.12	-0.23	-0.49	-1.15	0.96	-0.37	0.95						-0.84	-0.57	-0.19	0.82
Kobrinetz, Jack	-0.51	-0.11	0.51	-1.23	0.11	-0.03	0.74	-0.37	0.72						-0.16	0.03	-0.03	0.57
Lopez, Frank	-0.41	-0.05	1.21	-0.52	0.17	-1.64	1.08	-0.37	1.07						-0.40	0.00	0.01	0.85
Pansza, Mike	-0.54	0.64	0.18	1.28	1.44	1.31	-0.08	-0.37	-0.12						1.19	1.59	0.59	0.80
Yanchar, Paul	-0.30	-1.07	1.25	-0.69	-0.84	-1.03	-0.50	-1.38	-0.66						-1.16	-0.98	-0.67	0.71
Adams, Pat	0.15	0.31	1.14	0.95	0.04	0.96	0.42	-0.37	0.39						0.95	0.78	0.52	0.47
Avis, Steve	-0.85	0.53	1.25	-0.25	0.37	0.01	1.02	-0.37	1.01						0.34	0.65	0.34	0.65
Castillo, George	0.12	-0.26	0.26	0.08	-0.15	-0.62	1.18	0.83	1.30						-0.05	-0.09	0.24	0.61
Greenland, Paul	-0.53	-0.45	-1.39	-0.36	-0.92	0.23	-0.44	-0.37	-0.49						-1.03	-1.20	-0.63	0.46
Hill, John	0.42	1.89	-1.21	0.57	3.16	-0.14	0.04	-1.38	-0.10						1.79	2.45	0.68	1.47
Lowsky, John	-0.97	1.77	-0.26	1.01	0.62	1.49	0.82	-2.38	0.60						1.19	1.19	0.46	1.22
May, Marianne	0.12	-1.01	0.84	-1.67	-1.01	-1.34	0.76	0.03	0.78						-1.10	-1.16	-0.43	0.95
Pitta, Jimmy	-0.37	-0.13	-1.54	-0.08	-1.35	0.42	-0.66	0.03	-0.68						-0.95	-1.38	-0.61	0.65
Radonich, Pete	-0.72	-1.20	-0.44	-0.69	0.09	-0.04	-0.46	-0.37	-0.51						-0.97	-0.56	-0.54	0.37
Shoda, Ron	-0.53	-1.13	-1.83	-0.52	-0.47	0.10	-0.22	0.63	-0.16						-1.20	-1.16	-0.59	0.70
Terrado, Teresa	2.29	1.22	-0.40	-0.74	-0.53	1.38	-2.71	0.63	-2.72						1.10	0.07	-0.04	1.61
Viera, Ralph	-0.30	0.66	0.26	-1.01	1.08	-0.78	0.40	1.03	0.52						0.22	0.68	0.25	0.69
Yi MAXIMUM	2.29	1.89	-1.83	2.49	3.16	1.75	-2.71	-2.38	-2.72						1.79	2.45	0.77	1.61
Yi MINIMUM	-0.22	-0.05	-0.26	-0.08	-0.04	-0.03	-0.08	-0.37	-0.10						0.05	-0.09	-0.03	0.37
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	1.34	2.12	7.22	0.98	5.70	3.67	7.88	9.92	8.90						29.93	4.84		
Ratings STD	0.61	0.52	0.27	0.18	0.53	0.54	0.50	0.05	0.24						1.45	0.23		

Light Duty Rating Workshop

PART ID = **A5 - Square-cut Piston**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4								UWPD	WPD
Cales, Jonathon	0.48	9.00	9.89	9.95	6.18	9.90	9.90								45.40	7.24
Caproni, David	0.71	9.70	9.70	10.00	6.52	9.60	9.60								46.23	7.36
Foecking, Brian	0.77	9.49	9.88	9.90	7.23	9.90	9.90								47.17	7.61
Hills, Barry	0.63	9.62	9.90	9.90	8.17	9.80	9.80								48.02	7.89
Kobrinetz, Jack	0.61	9.39	9.80	9.80	7.54	9.70	9.80								46.84	7.63
Lopez, Frank	0.62	9.38	9.90	9.90	7.22	9.80	9.90								46.82	7.58
Pansza, Mike	0.37	9.21	9.80	9.80	5.31	9.40	9.50								43.89	6.90
Yanchar, Paul	0.59	9.14	9.90	9.90	7.31	9.65	9.80								46.49	7.57
Adams, Pat	0.83	9.08	9.90	9.90	6.48	9.85	9.90								46.04	7.34
Avis, Steve	0.48	9.28	9.80	9.83	7.04	9.80	9.80								46.23	7.48
Castillo, George	0.64	9.09	9.92	10.00	7.57	9.51	9.74								46.73	7.65
Greenland, Paul	0.55	9.67	9.80	9.80	7.72	9.75	9.80								47.29	7.72
Hill, John	0.59	9.56	9.90	10.00	7.25	9.90	9.90								47.20	7.63
Lowsky, John	0.91	9.65	9.80	9.80	7.56	9.80	9.80								47.52	7.69
May, Marianne	0.52	9.22	9.87	9.92	7.33	9.70	9.79								46.56	7.58
Pitta, Jimmy	0.53	9.49	9.84	9.80	7.34	9.80	9.80								46.80	7.60
Radonich, Pete	0.61	9.67	9.95	9.95	7.45	9.90	9.90								47.53	7.70
Seiz, Ray	0.63	9.52	9.90	9.95	7.05	9.85	9.85								46.90	7.56
Shoda, Ron	0.57	9.54	9.95	9.95	7.41	9.95	9.95								47.37	7.68
Viera, Ralph	0.41	9.08	9.74	9.84	7.38	9.68	9.65								46.13	7.53
MAXIMUM	0.91	9.70	9.95	10.00	8.17	9.95	9.95								48.02	7.89
MINIMUM	0.37	9.00	9.70	9.80	5.31	9.40	9.50								43.89	6.90
RANGE (MAX-MIN)	0.54	0.70	0.25	0.20	2.86	0.55	0.45								4.13	0.99
MEAN	0.60	9.39	9.86	9.89	7.15	9.76	9.80								46.66	7.55
STD	0.13	0.23	0.07	0.07	0.62	0.14	0.11								0.90	0.21

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yi within    0.72
yi within    0.96
yi within    1.00
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PART ID = **A5 - Square-cut Piston**

Yi VALUES

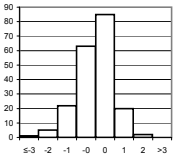
	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4								UWPD	WPD	MEAN	STD
Cales, Jonathon	-0.93	-1.67	0.48	0.77	-1.56	0.97	0.85								-1.40	-1.47	-0.44	1.17
Caproni, David	0.82	1.34	-2.29	1.47	-1.02	-1.14	-1.81								-0.48	-0.88	-0.45	1.36
Foecking, Brian	1.29	0.43	0.34	0.08	0.12	0.97	0.85								0.57	0.29	0.55	0.41
Hills, Barry	0.21	0.99	0.63	0.08	1.63	0.27	-0.04								1.52	1.64	0.77	0.69
Kobrinetz, Jack	0.06	0.00	-0.83	-1.31	0.62	-0.44	-0.04								0.20	0.40	-0.15	0.61
Lopez, Frank	0.13	-0.04	0.63	0.08	0.11	0.27	0.85								0.18	0.16	0.26	0.29
Pansza, Mike	-1.77	-0.77	-0.83	-1.31	-2.96	-2.55	-2.70								-3.09	-3.08	-2.12	0.96
Yanchar, Paul	-0.10	-1.07	0.63	0.08	0.25	-0.79	-0.04								-0.19	0.09	-0.13	0.52
Adams, Pat	1.73	-1.33	0.63	0.08	-1.08	0.62	0.85								-0.69	-0.97	-0.02	1.05
Avis, Steve	-0.93	-0.47	-0.83	-0.90	-0.18	0.27	-0.04								-0.48	-0.33	-0.43	0.41
Castillo, George	0.28	-1.28	0.92	1.47	0.67	-1.78	-0.57								0.08	0.48	0.03	1.05
Greenland, Paul	-0.40	1.21	-0.83	-1.31	0.91	-0.08	-0.04								0.70	0.81	0.11	0.86
Hill, John	-0.10	0.73	0.63	1.47	0.16	0.97	0.85								0.60	0.40	0.64	0.46
Lowsky, John	2.34	1.12	-0.83	-1.31	0.65	0.27	-0.04								0.96	0.68	0.43	1.08
May, Marianne	-0.63	-0.72	0.19	0.35	0.28	-0.44	-0.12								-0.11	0.15	-0.12	0.40
Pitta, Jimmy	-0.55	0.43	-0.25	-1.31	0.30	0.27	-0.04								0.16	0.23	-0.08	0.55
Radonich, Pete	0.06	1.21	1.36	0.77	0.48	0.97	0.85								0.97	0.76	0.82	0.39
Seiz, Ray	0.21	0.56	0.63	0.77	-0.17	0.62	0.41								0.27	0.04	0.37	0.31
Shoda, Ron	-0.25	0.65	1.36	0.77	0.41	1.33	1.30								0.79	0.65	0.78	0.52
Viera, Ralph	-1.47	-1.33	-1.71	-0.76	0.36	-0.58	-1.37								-0.59	-0.06	-0.83	0.69
Yi MAXIMUM	2.34	-1.67	-2.29	1.47	-2.96	-2.55	-2.70								-3.09	-3.08	-2.12	1.36
Yi MINIMUM	-0.10	-0.04	0.19	0.08	-0.17	-0.08	-0.04								-0.11	-0.06	-0.02	0.29
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00								0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00								1.00	1.00		
Ratings MEAN	0.60	9.39	9.86	9.89	7.15	9.76	9.80								46.66	7.55		
Ratings STD	0.13	0.23	0.07	0.07	0.62	0.14	0.11								0.90	0.21		

Light Duty Rating Workshop

PART ID = A6 - Sequence III Piston

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Cales, Jonathon	0.75	2.82	8.36	1.31	4.94	2.35	7.03	9.90	8.46						28.99	4.75
Caproni, David	0.64	3.68	8.22	1.87	5.82	3.22	8.51	9.90	9.20						32.66	5.31
Foecking, Brian	0.49	3.68	8.68	1.61	5.21	1.70	7.82	9.88	8.85						30.22	4.99
Garcia, Orlando	0.71	3.24	8.67	1.82	5.64	2.86	8.11	9.89	9.00						31.94	5.24
Hills, Barry	0.75	3.27	8.92	1.02	5.37	2.00	8.35	9.87	9.11						30.44	5.02
Kobrinetz, Jack	0.48	3.57	8.73	1.08	5.78	1.90	8.64	9.80	9.22						30.76	5.13
Lopez, Frank	0.75	3.25	8.62	1.59	5.56	2.01	7.96	9.90	8.93						30.71	5.09
Pansza, Mike	0.52	3.79	8.84	2.02	6.75	3.13	8.80	9.85	9.33						34.38	5.75
Yanchar, Paul	0.75	3.35	8.77	1.08	5.45	1.73	8.42	9.85	9.14						30.27	5.01
Adams, Pat	0.60	3.47	8.80	1.30	5.65	2.94	8.44	9.80	9.12						31.89	5.23
Avis, Steve	0.30	3.33	8.84	1.01	5.40	1.85	8.69	9.89	9.29						30.02	5.00
Castillo, George	0.50	3.47	8.52	1.37	5.40	2.44	8.68	9.89	9.29						30.99	5.07
Greenland, Paul	0.75	3.75	8.72	1.68	6.55	2.88	8.10	9.85	8.98						33.31	5.56
Hill, John	0.88	4.07	8.83	1.45	5.72	2.14	8.31	8.85	8.58						31.67	5.22
Lowsky, John	0.75	3.74	8.69	1.45	5.57	3.60	7.80	9.78	8.79						32.59	5.28
May, Marianne	0.62	3.72	8.67	1.32	5.52	2.18	8.06	9.82	8.94						30.97	5.10
Pitta, Jimmy	0.36	3.63	8.54	1.69	5.79	1.90	7.74	9.92	8.83						30.74	5.15
Radonich, Pete	0.69	3.55	8.75	1.38	5.50	2.33	8.23	9.88	9.05						31.25	5.13
Seiz, Ray	0.43	4.04	8.46	1.78	5.95	3.65	8.46	9.75	9.11						33.41	5.44
Shoda, Ron	0.68	3.77	8.79	1.13	5.79	2.48	8.33	9.90	9.11						31.75	5.23
Terrado, Teresa	0.75	3.55	8.77	0.87	6.02	2.81	8.11	9.90	9.00						31.77	5.26
Viera, Ralph	0.56	3.60	8.73	1.32	6.58	2.20	8.58	9.94	9.26						32.25	5.45
MAXIMUM	0.88	4.07	8.92	2.02	6.75	3.65	8.80	9.94	9.33						34.38	5.75
MINIMUM	0.30	2.82	8.22	0.87	4.94	1.70	7.03	8.85	8.46						28.99	4.75
RANGE (MAX-MIN)	0.58	1.25	0.70	1.15	1.81	1.95	1.77	1.09	0.86						5.38	1.00
MEAN	0.62	3.56	8.68	1.42	5.73	2.47	8.24	9.82	9.03						31.50	5.20
STD	0.15	0.28	0.17	0.31	0.44	0.59	0.41	0.22	0.22						1.27	0.22

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yi within    0.75
yi within    0.96
yi within    0.99
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PART ID = A6 - Sequence III Piston

Yi VALUES

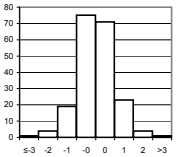
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Cales, Jonathon	0.84	-2.64	-1.89	-0.34	-1.78	-0.20	-2.97	0.37	-2.51						-1.97	-2.09	-1.38	1.31
Caproni, David	0.11	0.42	-2.72	1.45	0.21	1.28	0.68	0.37	0.80						0.91	0.51	0.37	1.11
Foecking, Brian	-0.89	0.42	0.01	0.62	-1.17	-1.31	-1.02	0.28	-0.79						-1.01	-0.99	-0.53	0.71
Garcia, Orlando	0.58	-1.14	-0.05	1.29	-0.19	0.67	-0.31	0.32	-0.12						0.35	0.19	0.14	0.63
Hills, Barry	0.84	-1.03	1.44	-1.27	-0.81	-0.80	0.28	0.23	0.37						-0.83	-0.83	-0.22	0.89
Kobrinetz, Jack	-0.95	0.03	0.31	-1.07	0.12	-0.97	1.00	-0.08	0.86						-0.58	-0.31	-0.15	0.71
Lopez, Frank	0.84	-1.11	-0.34	0.56	-0.38	-0.78	-0.68	0.37	-0.43						-0.62	-0.53	-0.28	0.61
Pansza, Mike	-0.69	0.81	0.96	1.93	2.33	1.13	1.39	0.14	1.33						2.26	2.52	1.28	0.98
Yanchar, Paul	0.84	-0.75	0.55	-1.07	-0.63	-1.26	0.46	0.14	0.48						-0.97	-0.89	-0.28	0.78
Adams, Pat	-0.15	-0.32	0.70	-0.36	-0.16	0.80	0.51	-0.08	0.42						0.30	0.15	0.16	0.41
Avis, Steve	-2.15	-0.82	0.96	-1.30	-0.74	-1.05	1.12	0.32	1.18						-1.16	-0.93	-0.42	1.12
Castillo, George	-0.82	-0.32	-0.94	-0.15	-0.74	-0.05	1.10	0.32	1.15						-0.40	-0.59	-0.13	0.72
Greenland, Paul	0.84	0.67	0.25	0.84	1.87	0.70	-0.33	0.14	-0.23						1.42	1.65	0.71	0.73
Hill, John	1.71	1.81	0.90	0.11	-0.01	-0.56	0.18	-4.37	-2.00						0.13	0.09	-0.18	1.74
Lowsky, John	0.84	0.64	0.07	0.11	-0.35	1.93	-1.07	-0.17	-1.06						0.86	0.35	0.19	0.88
May, Marianne	-0.02	0.57	-0.05	-0.31	-0.47	-0.49	-0.43	0.01	-0.39						-0.42	-0.46	-0.22	0.32
Pitta, Jimmy	-1.75	0.25	-0.82	0.88	0.15	-0.97	-1.22	0.46	-0.88						-0.60	-0.23	-0.43	0.80
Radonich, Pete	0.44	-0.04	0.43	-0.12	-0.51	-0.24	-0.01	0.28	0.13						-0.19	-0.31	-0.01	0.31
Seiz, Ray	-1.29	1.70	-1.29	1.16	0.51	2.01	0.55	-0.31	0.35						1.51	1.12	0.55	1.12
Shoda, Ron	0.38	0.74	0.66	-0.91	0.15	0.02	0.23	0.37	0.39						0.20	0.15	0.22	0.43
Terrado, Teresa	0.84	-0.04	0.55	-1.75	0.67	0.58	-0.31	0.37	-0.10						0.22	0.29	0.12	0.71
Viera, Ralph	-0.42	0.14	0.31	-0.31	1.94	-0.46	0.85	0.55	1.04						0.59	1.16	0.49	0.74
Yi MAXIMUM	-2.15	-2.64	-2.72	1.93	2.33	2.01	-2.97	-4.37	-2.51						2.26	2.52	-1.38	1.74
Yi MINIMUM	-0.02	-0.04	-0.05	-0.12	-0.01	-0.05	-0.01	-0.08	-0.10						-0.19	-0.23	-0.01	0.31
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	0.62	3.56	8.68	1.42	5.73	2.47	8.24	9.82	9.03						31.50	5.20		
Ratings STD	0.15	0.28	0.17	0.31	0.44	0.59	0.41	0.22	0.22						1.27	0.22		

Light Duty Rating Workshop

PART ID = **B1 - Sequence III Piston**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	2.91	0.72	9.59	1.07	6.67	1.88	9.87	9.97	9.92						32.76	5.48
Cales, Jonathon	**2.41**	0.67	9.66	1.17	6.00	1.69	9.89	9.95	9.92						**31.52**	5.26
Caproni, David	3.15	0.75	9.80	1.04	7.22	1.90	9.80	9.90	9.85						33.71	5.69
Foecking, Brian	2.85	0.74	9.90	1.08	6.53	1.63	9.84	9.90	9.87						32.60	5.47
Garcia, Orlando	3.12	0.68	9.82	1.38	6.82	1.64	**9.74**	10.00	9.87						33.31	5.59
Hills, Barry	2.53	0.74	9.83	0.99	6.45	1.40	9.88	9.90	9.89						31.83	5.38
Kobrinetz, Jack	3.17	0.74	9.85	1.01	7.21	1.66	9.80	9.90	9.85						33.49	5.67
Sanchez, Art	2.86	0.71	9.86	1.06	6.90	1.60	9.79	9.90	9.84						32.83	5.56
Yanchar, Paul	2.75	0.74	9.80	1.08	6.74	1.40	9.75	9.90	9.82						32.33	5.48
Adams, Pat	3.10	0.74	9.71	1.13	6.51	2.13	9.85	9.90	9.88						33.20	5.49
Avis, Steve	2.99	0.72	9.81	1.01	5.96	1.50	9.87	9.90	9.88						31.88	5.26
Castillo, George	2.75	0.74	9.90	1.18	6.25	1.71	9.90	10.00	9.95						32.48	5.41
Lowsky, John	2.95	0.75	**9.38**	1.38	6.93	2.63	9.86	**9.80**	9.83						33.85	5.63
May, Marianne	2.98	0.73	9.73	1.41	7.07	1.50	9.82	9.96	9.89						33.31	5.64
Pitta, Jimmy	2.63	0.68	9.58	1.04	6.87	**3.10**	9.90	9.90	9.90						33.80	5.63
Radonich, Pete	3.28	0.75	9.95	1.09	6.64	1.85	9.85	9.95	9.90						33.46	5.56
Rodriguez, Jesse	2.79	0.73	9.80	1.14	6.69	1.74	9.87	9.90	9.88						32.77	5.51
Seiz, Ray	2.66	**0.83**	9.77	1.50	6.66	1.64	9.86	9.90	9.88						32.94	5.55
Shoda, Ron	**3.49**	0.75	9.83	1.11	6.80	1.70	9.80	9.90	9.85						33.53	5.58
Terrado, Teresa	3.01	0.75	9.70	**0.66**	6.32	2.20	9.86	9.95	9.90						32.54	5.37
Trevino, Robert	3.06	0.75	9.71	1.22	6.28	2.18	9.80	9.94	9.87						33.07	5.44
Viera, Ralph	2.82	0.74	9.77	**1.75**	7.24	1.68	9.94	9.99	**9.96**						33.96	5.77
MAXIMUM	3.49	0.83	9.95	1.75	7.24	3.10	9.94	10.00	9.96						33.96	5.77
MINIMUM	2.41	0.67	9.38	0.66	5.96	1.40	9.74	9.80	9.82						31.52	5.26
RANGE (MAX-MIN)	1.08	0.16	0.57	1.09	1.28	1.70	0.20	0.20	0.14						2.44	0.51
MEAN	2.92	0.73	9.76	1.16	6.67	1.83	9.84	9.92	9.88						32.96	5.52
STD	0.25	0.03	0.13	0.22	0.36	0.41	0.05	0.05	0.04						0.68	0.13



yi within 1	74%
yi within 2	95%
yi within 3	99%

PART ID = **B1 - Sequence III Piston**

Yi VALUES

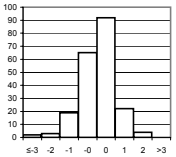
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	-0.04	-0.43	-1.35	-0.41	0.00	0.11	0.54	1.02	1.04						-0.30	-0.31	-0.01	0.69
Cales, Jonathon	**-2.02**	-1.96	-0.80	0.05	-1.84	-0.36	0.94	0.59	1.04						**-2.11**	-1.99	-0.77	1.28
Caproni, David	0.91	0.49	0.30	-0.54	1.51	0.16	-0.84	-0.51	-0.92						1.09	1.29	0.27	0.88
Foecking, Brian	-0.28	0.18	1.09	-0.36	-0.39	-0.50	-0.05	-0.51	-0.36						-0.53	-0.39	-0.19	0.48
Garcia, Orlando	0.77	-1.81	0.46	1.00	0.40	-0.48	**-2.11**	1.68	-0.42						0.51	0.54	0.05	1.16
Hills, Barry	-1.55	0.18	0.54	-0.77	-0.61	-1.07	0.74	-0.51	0.20						-1.66	-1.06	-0.50	0.82
Kobrinetz, Jack	0.99	0.18	0.70	-0.68	1.48	-0.43	-0.84	-0.51	-0.92						0.77	1.13	0.17	0.88
Sanchez, Art	-0.26	-0.66	0.76	-0.43	0.63	-0.58	-1.04	-0.51	-1.06						-0.19	0.31	-0.28	0.61
Yanchar, Paul	-0.68	0.18	0.30	-0.36	0.19	-1.07	-1.83	-0.51	-1.62						-0.92	-0.31	-0.60	0.71
Adams, Pat	0.71	0.18	-0.40	-0.13	-0.44	0.73	0.15	-0.51	-0.22						0.34	-0.19	0.02	0.44
Avis, Steve	0.28	-0.43	0.38	-0.68	-1.95	-0.82	0.54	-0.51	0.06						-1.59	-1.94	-0.61	0.91
Castillo, George	-0.68	0.18	1.09	0.09	-1.16	-0.31	1.14	1.68	1.89						-0.71	-0.82	0.22	1.07
Lowsky, John	0.12	0.49	**-3.00**	1.00	0.71	1.96	0.35	**-2.69**	-1.48						1.30	0.85	-0.04	1.63
May, Marianne	0.24	-0.12	-0.25	1.14	1.10	-0.82	-0.45	0.81	0.20						0.51	0.92	0.30	0.66
Pitta, Jimmy	-1.15	-1.65	-1.43	-0.54	0.55	**3.11**	1.14	-0.51	0.48						1.23	0.86	0.19	1.41
Radonich, Pete	1.43	0.49	1.49	-0.31	-0.08	0.04	0.15	0.59	0.48						0.73	0.31	0.48	0.57
Rodriguez, Jesse	-0.52	-0.12	0.30	-0.09	0.05	-0.23	0.54	-0.51	0.06						-0.28	-0.04	-0.07	0.32
Seiz, Ray	-1.03	**2.94**	0.07	1.55	-0.03	-0.48	0.35	-0.51	-0.08						-0.03	0.20	0.27	1.09
Shoda, Ron	**2.26**	0.49	0.54	-0.22	0.36	-0.33	-0.84	-0.51	-0.92						0.83	0.44	0.19	0.91
Terrado, Teresa	0.36	0.49	-0.48	**-2.27**	-0.96	0.90	0.35	0.59	0.62						-0.61	-1.12	-0.19	0.98
Trevino, Robert	0.55	0.49	-0.40	0.28	-1.07	0.85	-0.84	0.37	-0.36						0.16	-0.58	-0.05	0.63
Viera, Ralph	-0.40	0.18	0.07	**2.68**	1.56	-0.38	1.93	1.46	**2.31**						1.47	1.89	1.16	1.10
Yi MAXIMUM	2.26	2.94	-3.00	2.68	-1.95	3.11	-2.11	-2.69	2.31						-2.11	-1.99	1.16	1.63
Yi MINIMUM	-0.04	-0.12	-0.25	-0.09	0.00	0.04	-0.05	-0.51	-0.08						-0.03	-0.04	-0.01	0.32
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	2.92	0.73	9.76	1.16	6.67	1.83	9.84	9.92	9.88						32.96	5.52		
Ratings STD	0.25	0.03	0.13	0.22	0.36	0.41	0.05	0.05	0.04						0.68	0.13		

Light Duty Rating Workshop

PART ID = **B2 - Sequence III Piston**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	0.63	0.75	9.51	0.94	3.77	4.30	9.14	9.78	9.46						29.36	4.66
Cales, Jonathon	0.98	0.75	9.73	0.90	3.37	3.42	**8.72**	9.80	**9.26**						28.41	**4.48**
Caproni, David	0.79	0.75	9.80	1.08	4.20	4.54	8.98	**10.00**	9.49						30.65	4.90
Foecking, Brian	1.00	0.75	9.87	0.98	3.87	3.42	9.23	9.76	9.49						29.38	4.70
Garcia, Orlando	1.18	0.75	9.86	0.98	4.15	4.22	8.94	9.74	9.34						30.48	4.85
Hills, Barry	0.75	0.75	9.88	0.97	4.04	3.68	9.40	9.81	9.61						29.68	4.77
Kobrinetz, Jack	0.92	0.75	9.80	0.86	4.38	3.74	9.25	9.73	9.49						29.94	4.85
Pansza, Mike	0.80	0.75	9.85	**1.18**	4.06	4.33	9.44	9.80	9.62						30.60	4.88
Sanchez, Art	0.84	0.75	9.86	0.93	3.78	3.48	9.33	9.78	9.55						29.19	4.67
Yanchar, Paul	0.91	0.75	9.83	0.97	3.99	3.00	9.18	9.72	9.45						28.90	4.67
Adams, Pat	1.10	0.75	9.74	0.97	4.57	3.40	9.41	9.79	9.60						30.13	4.89
Avis, Steve	1.17	0.75	9.82	0.90	3.90	3.30	9.35	9.64	9.50						29.34	4.68
Castillo, George	0.84	0.75	9.88	0.87	3.80	4.04	9.09	9.86	9.47						29.65	4.71
Lowsky, John	1.16	0.75	9.72	0.91	4.27	**5.05**	9.10	9.66	9.38						**31.24**	4.94
May, Marianne	0.78	0.75	9.80	1.01	4.59	3.37	9.21	9.81	9.51						29.81	4.89
Pitta, Jimmy	0.77	0.75	**9.35**	**1.22**	4.17	4.30	9.22	9.71	9.47						30.02	4.79
Radonich, Pete	0.86	0.75	9.80	0.95	3.93	3.94	9.08	9.70	9.39						29.62	4.73
Rodriguez, Jesse	0.75	0.75	9.66	0.96	4.41	3.53	9.48	9.77	9.63						29.68	4.83
Seiz, Ray	0.89	**0.71**	9.79	1.11	4.74	4.07	9.56	9.81	9.69						31.00	5.04
Shoda, Ron	0.91	0.75	9.85	1.01	3.66	3.67	8.94	9.83	9.38						29.24	4.65
Terrado, Teresa	0.78	0.75	9.80	1.02	**3.13**	3.98	9.20	9.61	9.40						28.87	4.50
Trevino, Robert	0.83	0.75	9.53	0.96	4.15	3.91	9.24	9.81	9.53						29.65	4.75
Viera, Ralph	0.68	0.75	9.86	1.02	4.39	3.60	9.19	9.79	9.49						29.79	4.86
MAXIMUM	1.18	0.75	9.88	1.22	4.74	5.05	9.56	10.00	9.69						31.24	5.04
MINIMUM	0.63	0.71	9.35	0.86	3.13	3.00	8.72	9.61	9.26						28.41	4.48
RANGE (MAX-MIN)	0.55	0.04	0.53	0.36	1.61	2.05	0.84	0.39	0.43						2.83	0.55
MEAN	0.88	0.75	9.76	0.99	4.06	3.84	9.20	9.77	9.49						29.77	4.77
STD	0.15	0.01	0.14	0.09	0.38	0.48	0.20	0.08	0.10						0.69	0.14



yi within 1	76%
yi within 2	96%
yi within 3	99%

PART ID = **B2 - Sequence III Piston**

Yi VALUES

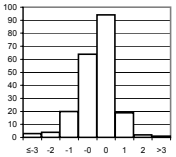
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	-1.65	0.21	-1.89	-0.52	-0.75	0.97	-0.32	0.12	-0.27						-0.59	-0.84	-0.50	0.81
Cales, Jonathon	0.63	0.21	-0.26	-0.97	-1.79	-0.88	**-2.46**	0.37	**-2.25**						-1.97	**-2.12**	-1.04	1.14
Caproni, David	-0.61	0.21	0.26	1.03	0.37	1.47	-1.14	**2.86**	0.03						1.28	0.96	0.61	1.09
Foecking, Brian	0.76	0.21	0.78	-0.08	-0.49	-0.88	0.14	-0.12	0.08						-0.55	-0.53	-0.06	0.53
Garcia, Orlando	1.93	0.21	0.70	-0.08	0.24	0.80	-1.34	-0.37	-1.46						1.03	0.62	0.21	1.00
Hills, Barry	-0.87	0.21	0.85	-0.19	-0.05	-0.33	1.00	0.50	1.17						-0.13	0.03	0.20	0.62
Kobrinetz, Jack	0.24	0.21	0.26	-1.41	0.84	-0.21	0.24	-0.50	0.03						0.25	0.57	0.05	0.60
Pansza, Mike	-0.54	0.21	0.67	**2.17**	0.02	1.03	1.20	0.37	1.32						1.21	0.80	0.77	0.74
Sanchez, Art	-0.28	0.21	0.70	-0.63	-0.72	-0.75	0.64	0.12	0.68						-0.83	-0.77	-0.15	0.64
Yanchar, Paul	0.17	0.21	0.48	-0.19	-0.18	-1.76	-0.12	-0.62	-0.36						-1.26	-0.71	-0.39	0.66
Adams, Pat	1.41	0.21	-0.19	-0.19	1.33	-0.92	1.05	0.25	1.12						0.53	0.92	0.50	0.74
Avis, Steve	1.87	0.21	0.41	-0.97	-0.41	-1.13	0.75	-1.62	0.08						-0.63	-0.65	-0.19	0.98
Castillo, George	-0.28	0.21	0.85	-1.30	-0.67	0.42	-0.58	1.12	-0.12						-0.16	-0.41	-0.08	0.70
Lowsky, John	1.80	0.21	-0.33	-0.85	0.55	**2.54**	-0.53	-1.37	-1.06						**2.14**	1.24	0.39	1.36
May, Marianne	-0.67	0.21	0.26	0.26	1.39	-0.98	0.03	0.50	0.23						0.06	0.89	0.20	0.65
Pitta, Jimmy	-0.76	0.21	**-3.07**	**2.56**	0.30	0.97	0.08	-0.75	-0.22						0.37	0.18	-0.01	1.36
Radonich, Pete	-0.15	0.21	0.26	-0.41	-0.33	0.21	-0.63	-0.87	-0.96						-0.21	-0.28	-0.29	0.42
Rodriguez, Jesse	-0.87	0.21	-0.78	-0.30	0.92	-0.65	1.41	0.00	1.37						-0.12	0.42	0.15	0.81
Seiz, Ray	0.04	**-4.59**	0.19	1.37	1.78	0.49	1.81	0.50	1.97						1.78	1.98	0.66	1.90
Shoda, Ron	0.17	0.21	0.63	0.26	-1.04	-0.35	-1.34	0.75	-1.01						-0.77	-0.92	-0.31	0.74
Terrado, Teresa	-0.67	0.21	0.26	0.37	**-2.42**	0.30	-0.02	-1.99	-0.81						-1.31	-1.97	-0.73	1.05
Trevino, Robert	-0.35	0.21	-1.74	-0.30	0.24	0.15	0.19	0.50	0.38						-0.16	-0.11	-0.09	0.61
Viera, Ralph	-1.32	0.21	0.70	0.37	0.87	-0.50	-0.07	0.25	0.03						0.03	0.67	0.11	0.62
Yi MAXIMUM	1.93	-4.59	-3.07	2.56	-2.42	2.54	-2.46	2.86	-2.25						2.14	-2.12	-1.04	1.90
Yi MINIMUM	-0.15	0.21	-0.19	-0.08	-0.05	-0.21	-0.02	0.00	-0.12						-0.12	-0.11	-0.01	0.42
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	0.88	0.75	9.76	0.99	4.06	3.84	9.20	9.77	9.49						29.77	4.77		
Ratings STD	0.15	0.01	0.14	0.09	0.38	0.48	0.20	0.08	0.10						0.69	0.14		

Light Duty Rating Workshop

PART ID = B3 - Sequence III Piston

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	0.70	5.11	9.29	1.26	7.81	4.16	8.83	9.91	9.37						37.70	6.29
Cales, Jonathon	0.75	4.98	9.32	1.12	**7.54**	3.51	**8.22**	9.80	**9.01**						**36.23**	**6.08**
Caproni, David	0.75	5.41	9.42	1.14	8.33	4.16	9.17	9.90	9.53						38.74	6.50
Foecking, Brian	0.75	5.43	9.47	1.20	7.75	3.74	8.86	9.82	9.34						37.68	6.29
Garcia, Orlando	0.75	5.71	9.65	1.43	8.35	4.07	8.79	9.86	9.32						39.28	6.60
Hills, Barry	0.75	5.91	9.48	1.47	8.10	4.03	9.50	9.88	9.69						39.43	6.55
Kobrinetz, Jack	0.75	5.85	9.43	1.18	8.12	3.95	9.22	9.80	9.51						38.79	6.47
Pansza, Mike	0.75	5.85	9.50	1.35	8.12	4.38	9.30	9.90	9.60						39.55	6.56
Sanchez, Art	0.75	5.42	9.51	1.00	8.07	4.04	9.07	9.85	9.46						38.25	6.40
Yanchar, Paul	0.75	5.38	9.51	1.19	7.82	3.24	9.20	9.85	9.53						37.42	6.28
Adams, Pat	**0.52**	5.27	9.44	1.32	7.89	3.40	9.30	9.84	9.57						37.41	6.30
Avis, Steve	0.69	5.54	9.39	1.06	8.26	4.45	9.34	9.86	9.60						38.99	6.51
Castillo, George	0.75	5.76	9.48	1.26	8.05	3.78	9.10	9.94	9.52						38.60	6.44
Lowsky, John	0.75	5.83	9.44	1.37	8.10	**5.05**	8.82	**9.74**	9.28						39.82	6.58
May, Marianne	0.75	5.61	**9.24**	1.46	7.92	3.58	9.11	9.80	9.45						38.01	6.34
Pitta, Jimmy	0.74	**8.07**	9.33	1.39	8.13	4.85	8.85	9.89	9.37						**41.88**	**6.78**
Radonich, Pete	0.75	5.62	9.60	1.22	8.14	3.88	9.01	9.86	9.43						38.65	6.48
Rodriguez, Jesse	0.75	5.89	9.44	1.07	8.36	3.53	9.12	9.86	9.49						38.53	6.48
Seiz, Ray	**0.54**	5.71	9.38	**1.65**	8.14	4.58	9.51	9.85	9.68						39.68	6.59
Shoda, Ron	0.75	5.86	9.50	1.31	7.63	3.43	9.28	9.85	9.57						38.05	6.31
Terrado, Teresa	0.75	5.13	9.63	0.94	7.80	4.19	9.15	9.90	9.52						37.97	6.33
Trevino, Robert	0.75	5.56	9.36	1.16	8.01	4.03	9.21	9.93	9.57						38.44	6.40
Viera, Ralph	0.75	5.69	9.49	1.25	8.51	3.50	9.14	9.96	9.55						38.74	6.55
MAXIMUM	0.75	8.07	9.65	1.65	8.51	5.05	9.51	9.96	9.69						41.88	6.78
MINIMUM	0.52	4.98	9.24	0.94	7.54	3.24	8.22	9.74	9.01						36.23	6.08
RANGE (MAX-MIN)	0.23	3.09	0.41	0.71	0.97	1.81	1.29	0.22	0.68						5.65	0.70
MEAN	0.73	5.68	9.45	1.25	8.04	3.98	9.09	9.86	9.48						38.60	6.44
STD	0.06	0.59	0.10	0.17	0.24	0.47	0.28	0.05	0.15						1.11	0.15



yi within 1	76%
yi within 2	95%
yi within 3	98%

PART ID = B3 - Sequence III Piston

Yi VALUES

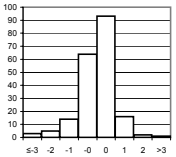
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	-0.33	-0.98	-1.54	0.05	-0.95	0.38	-0.94	0.92	-0.72						-0.81	-1.01	-0.54	0.72
Cales, Jonathon	0.38	-1.19	-1.25	-0.79	**-2.06**	-1.00	**-3.14**	-1.24	**-3.15**						**-2.14**	**-2.39**	-1.63	1.06
Caproni, David	0.38	-0.46	-0.27	-0.67	1.19	0.38	0.28	0.72	0.39						0.13	0.42	0.23	0.53
Foecking, Brian	0.38	-0.42	0.22	-0.31	-1.20	-0.51	-0.83	-0.84	-0.93						-0.83	-1.02	-0.57	0.50
Garcia, Orlando	0.38	0.06	1.98	1.06	1.27	0.19	-1.09	-0.06	-1.03						0.62	1.06	0.40	0.94
Hills, Barry	0.38	0.40	0.31	1.30	0.24	0.11	1.47	0.33	1.44						0.75	0.72	0.68	0.50
Kobrinetz, Jack	0.38	0.29	-0.17	-0.43	0.32	-0.06	0.46	-1.24	0.22						0.17	0.19	0.01	0.49
Pansza, Mike	0.38	0.29	0.51	0.59	0.32	0.85	0.75	0.72	0.83						0.86	0.80	0.63	0.22
Sanchez, Art	0.38	-0.44	0.61	-1.51	0.12	0.13	-0.08	-0.26	-0.12						-0.32	-0.25	-0.16	0.55
Yanchar, Paul	0.38	-0.51	0.61	-0.37	-0.91	-1.57	0.39	-0.26	0.32						-1.07	-1.08	-0.37	0.73
Adams, Pat	**-3.23**	-0.70	-0.08	0.41	-0.62	-1.23	0.75	-0.45	0.63						-1.08	-0.91	-0.59	1.11
Avis, Steve	-0.56	-0.23	-0.57	-1.15	0.90	1.00	0.90	-0.06	0.83						0.35	0.46	0.17	0.73
Castillo, George	0.38	0.14	0.31	0.05	0.04	-0.42	0.03	1.51	0.29						0.00	0.03	0.21	0.48
Lowsky, John	0.38	0.26	-0.08	0.71	0.24	**2.27**	-0.98	**-2.41**	-1.33						1.10	0.92	0.10	1.28
May, Marianne	0.38	-0.12	**-2.03**	1.24	-0.50	-0.85	0.07	-1.24	-0.15						-0.53	-0.63	-0.40	0.86
Pitta, Jimmy	0.22	**4.08**	-1.15	0.83	0.36	1.85	-0.87	0.53	-0.72						**2.96**	**2.27**	0.94	1.67
Radonich, Pete	0.38	-0.10	1.49	-0.19	0.41	-0.21	-0.29	-0.06	-0.28						0.04	0.24	0.13	0.52
Rodriguez, Jesse	0.38	0.36	-0.08	-1.09	1.31	-0.95	0.10	-0.06	0.09						-0.06	0.30	0.03	0.65
Seiz, Ray	**-2.92**	0.06	-0.66	**2.38**	0.41	1.28	1.51	-0.26	1.37						0.97	1.00	0.47	1.42
Shoda, Ron	0.38	0.31	0.51	0.35	-1.69	-1.17	0.68	-0.26	0.59						-0.50	-0.88	-0.15	0.81
Terrado, Teresa	0.38	-0.93	1.78	-1.87	-0.99	0.45	0.21	0.72	0.32						-0.57	-0.74	-0.11	1.01
Trevino, Robert	0.38	-0.20	-0.86	-0.55	-0.13	0.11	0.43	1.31	0.63						-0.15	-0.25	0.07	0.60
Viera, Ralph	0.38	0.02	0.41	-0.01	1.93	-1.02	0.18	1.90	0.49						0.12	0.74	0.47	0.84
Yi MAXIMUM	-3.23	4.08	-2.03	2.38	-2.06	2.27	-3.14	-2.41	-3.15						2.96	-2.39	-1.63	1.67
Yi MINIMUM	-0.33	-0.10	-0.08	-0.01	-0.13	-0.06	-0.08	-0.06	-0.12						0.00	-0.25	-0.11	0.22
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	0.73	5.68	9.45	1.25	8.04	3.98	9.09	9.86	9.48						38.60	6.44		
Ratings STD	0.06	0.59	0.10	0.17	0.24	0.47	0.28	0.05	0.15						1.11	0.15		

Light Duty Rating Workshop

PART ID = **B4 - Sequence III Piston**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	0.75	4.23	9.24	2.27	7.27	4.69	8.64	9.87	9.26						37.70	6.22
Cales, Jonathon	0.75	3.92	9.29	2.17	6.71	4.29	7.84	9.83	8.84						35.97	5.94
Caproni, David	0.75	4.28	9.45	3.49	6.93	5.14	8.93	9.90	9.41						39.45	6.41
Garcia, Orlando	0.75	4.50	9.62	2.87	7.65	4.31	8.39	9.87	9.13						38.83	6.48
Hills, Barry	0.75	4.45	9.85	2.40	7.71	3.65	9.24	9.88	9.56						38.37	6.45
Kobrinetz, Jack	0.75	4.90	9.63	2.25	8.03	4.66	8.63	9.80	9.22						39.43	6.59
Pansza, Mike	0.77	4.33	9.48	3.12	7.44	4.81	9.06	9.75	9.41						39.35	6.49
Sanchez, Art	0.75	5.19	9.70	2.64	7.27	3.98	9.04	9.85	9.45						38.98	6.42
Yanchar, Paul	0.75	4.36	9.74	2.31	7.56	3.81	8.76	9.85	9.31						37.84	6.35
Adams, Pat	0.75	4.53	9.44	2.18	7.36	5.10	8.87	9.87	9.37						38.73	6.36
Avis, Steve	0.71	5.37	9.70	2.34	8.09	4.01	8.77	9.87	9.32						39.54	6.62
Castillo, George	0.75	4.23	9.66	2.43	7.72	4.78	8.89	9.93	9.41						38.98	6.49
Lowsky, John	0.75	4.72	9.70	3.12	7.24	4.83	8.68	9.72	9.20						39.56	6.49
May, Marianne	0.75	4.55	9.72	2.68	7.94	4.17	8.79	9.90	9.34						39.16	6.57
Pitta, Jimmy	0.75	4.18	9.40	2.85	7.55	4.60	7.85	9.90	8.87						38.20	6.38
Radonich, Pete	0.75	4.82	9.81	2.90	7.77	4.20	8.58	9.86	9.22						39.47	6.59
Rodriguez, Jesse	0.75	4.30	9.50	2.57	7.26	3.77	9.02	9.82	9.42						37.57	6.25
Seiz, Ray	0.75	4.52	9.46	2.85	7.40	4.17	9.43	9.88	9.66						38.81	6.41
Shoda, Ron	0.75	4.54	9.74	2.26	7.34	3.95	8.67	9.90	9.28						37.86	6.30
Terrado, Teresa	0.38	3.60	8.69	6.94	5.56	4.44	7.50	9.90	8.70						38.30	6.14
Trevino, Robert	0.75	4.05	9.41	2.66	6.79	4.73	8.95	9.89	9.42						37.81	6.18
Viera, Ralph	0.72	4.00	9.44	2.84	7.81	3.81	8.62	9.98	9.30						37.92	6.40
MAXIMUM	0.77	5.37	9.85	6.94	8.09	5.14	9.43	9.98	9.66						39.56	6.62
MINIMUM	0.38	3.60	8.69	2.17	5.56	3.65	7.50	9.72	8.70						35.97	5.94
RANGE (MAX-MIN)	0.39	1.77	1.16	4.77	2.53	1.49	1.93	0.26	0.96						3.59	0.68
MEAN	0.73	4.44	9.53	2.82	7.38	4.36	8.69	9.86	9.28						38.54	6.39
STD	0.08	0.40	0.25	0.98	0.55	0.44	0.46	0.06	0.23						0.89	0.17



yi within 1	79%
yi within 2	94%
yi within 3	98%

PART ID = **B4 - Sequence III Piston**

Yi VALUES

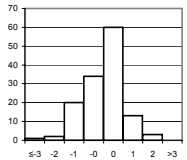
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	0.24	-0.51	-1.15	-0.56	-0.20	0.74	-0.11	0.10	-0.09						-0.94	-0.98	-0.32	0.58
Cales, Jonathon	0.24	-1.27	-0.95	-0.67	-1.23	-0.16	-1.86	-0.61	-1.94						-2.90	-2.70	-1.28	1.00
Caproni, David	0.24	-0.38	-0.32	0.68	-0.82	1.76	0.53	0.63	0.61						1.03	0.15	0.37	0.72
Garcia, Orlando	0.24	0.16	0.35	0.05	0.49	-0.11	-0.65	0.10	-0.64						0.33	0.56	0.08	0.41
Hills, Barry	0.24	0.04	1.27	-0.43	0.60	-1.59	1.21	0.27	1.25						-0.19	0.35	0.27	0.85
Kobrinetz, Jack	0.24	1.15	0.39	-0.58	1.18	0.68	-0.13	-1.14	-0.27						1.01	1.20	0.34	0.80
Pansza, Mike	0.49	-0.26	-0.20	0.30	0.11	1.01	0.81	-2.03	0.56						0.92	0.61	0.21	0.85
Sanchez, Art	0.24	1.86	0.67	-0.19	-0.20	-0.85	0.77	-0.26	0.74						0.49	0.17	0.31	0.72
Yanchar, Paul	0.24	-0.19	0.83	-0.52	0.33	-1.23	0.16	-0.26	0.12						-0.79	-0.24	-0.14	0.57
Adams, Pat	0.24	0.23	-0.36	-0.66	-0.04	1.67	0.40	0.10	0.41						0.22	-0.16	0.19	0.59
Avis, Steve	-0.26	2.31	0.67	-0.49	1.29	-0.78	0.18	0.10	0.19						1.13	1.42	0.52	0.93
Castillo, George	0.24	-0.51	0.51	-0.40	0.62	0.95	0.44	1.16	0.59						0.50	0.63	0.43	0.50
Lowsky, John	0.24	0.70	0.67	0.30	-0.26	1.06	-0.02	-2.56	-0.34						1.15	0.63	0.14	1.02
May, Marianne	0.24	0.28	0.75	-0.15	1.02	-0.43	0.22	0.63	0.30						0.70	1.11	0.43	0.47
Pitta, Jimmy	0.24	-0.63	-0.52	0.03	0.31	0.54	-1.83	0.63	-1.77						-0.38	-0.07	-0.31	0.84
Radonich, Pete	0.24	0.95	1.11	0.08	0.71	-0.36	-0.24	-0.08	-0.25						1.05	1.21	0.40	0.61
Rodriguez, Jesse	0.24	-0.33	-0.12	-0.26	-0.22	-1.32	0.72	-0.79	0.63						-1.09	-0.83	-0.31	0.67
Seiz, Ray	0.24	0.21	-0.28	0.03	0.03	-0.43	1.62	0.27	1.66						0.30	0.14	0.35	0.68
Shoda, Ron	0.24	0.26	0.83	-0.57	-0.08	-0.92	-0.04	0.63	0.04						-0.76	-0.50	-0.08	0.56
Terrado, Teresa	-4.43	-2.06	-3.34	4.18	-3.32	0.18	-2.60	0.63	-2.53						-0.27	-1.49	-1.37	2.43
Trevino, Robert	0.24	-0.95	-0.48	-0.17	-1.08	0.83	0.57	0.45	0.63						-0.82	-1.28	-0.19	0.77
Viera, Ralph	-0.13	-1.07	-0.36	0.02	0.78	-1.23	-0.15	2.04	0.10						-0.70	0.10	-0.06	0.90
Yi MAXIMUM	-4.43	2.31	-3.34	4.18	-3.32	1.76	-2.60	-2.56	-2.53						-2.90	-2.70	-1.37	2.43
Yi MINIMUM	-0.13	-0.19	-0.12	-0.15	-0.04	-0.11	-0.02	-0.08	-0.09						-0.19	-0.07	-0.06	0.41
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	0.73	4.44	9.53	2.82	7.38	4.36	8.69	9.86	9.28						38.54	6.39		
Ratings STD	0.08	0.40	0.25	0.98	0.55	0.44	0.46	0.06	0.23						0.89	0.17		

Light Duty Rating Workshop

PART ID = **B5 - Square-cut Piston**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4								UWPD	WPD
Barrera, Tony	0.77	6.92	9.98	9.94	2.37	9.10	9.62								39.08	5.84
Cales, Jonathon	0.63	5.72	9.79	9.80	2.30	**8.16**	8.71								**36.40**	5.54
Caproni, David	0.86	6.19	9.90	10.00	3.01	8.60	**7.86**								38.56	5.90
Hills, Barry	0.73	**8.06**	9.80	9.90	2.18	9.28	9.69								39.95	5.87
Kobrinetz, Jack	0.70	6.68	9.60	9.70	2.76	9.29	9.30								38.73	5.84
Sanchez, Art	0.65	7.23	9.90	9.90	2.45	9.25	9.45								39.38	5.88
Yanchar, Paul	0.65	6.59	9.90	9.90	1.94	9.16	9.32								38.14	5.65
Adams, Pat	0.74	6.65	9.90	9.90	2.36	8.49	8.77								38.04	5.72
Avis, Steve	0.80	7.21	9.80	9.90	2.00	9.24	9.65								38.95	5.73
Castillo, George	0.77	5.99	9.75	9.90	3.32	8.33	8.47								38.06	5.90
Lowsky, John	**0.88**	7.43	9.71	9.74	**3.54**	9.15	9.40								**40.45**	**6.17**
May, Marianne	0.69	6.12	9.71	9.78	2.22	9.27	9.40								37.79	5.65
Pitta, Jimmy	0.62	5.67	9.94	9.98	2.29	8.77	8.98								37.27	5.65
Radonich, Pete	0.71	6.43	9.95	9.95	2.36	9.14	9.40								38.54	5.78
Rodriguez, Jesse	0.73	6.30	9.68	9.80	2.73	8.82	9.19								38.06	5.77
Seiz, Ray	0.71	6.73	9.85	9.99	2.52	9.28	9.34								39.08	5.86
Shoda, Ron	0.68	6.17	9.95	9.95	2.07	8.88	9.31								37.70	5.64
Trevino, Robert	0.74	6.45	9.63	9.98	2.68	9.08	9.43								38.56	5.82
Viera, Ralph	0.80	6.69	**9.22**	9.70	2.58	8.82	8.92								37.81	5.66
MAXIMUM	0.88	8.06	9.98	10.00	3.54	9.29	9.69								40.45	6.17
MINIMUM	0.62	5.67	9.22	9.70	1.94	8.16	7.86								36.40	5.54
RANGE (MAX-MIN)	0.26	2.39	0.76	0.30	1.60	1.13	1.83								4.05	0.63
MEAN	0.73	6.59	9.79	9.88	2.51	8.95	9.17								38.45	5.78
STD	0.07	0.60	0.18	0.10	0.42	0.35	0.46								0.94	0.14



yi within 1	71%
yi within 2	95%
yi within 3	99%

PART ID = **B5 - Square-cut Piston**

Yi VALUES

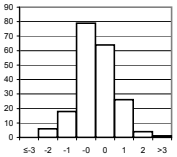
	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4								UWPD	WPD	MEAN	STD
Barrera, Tony	0.56	0.55	1.08	0.62	-0.33	0.42	0.99								0.67	0.39	0.55	0.40
Cales, Jonathon	-1.38	-1.45	0.01	-0.82	-0.49	**-2.28**	-1.00								**-2.19**	-1.74	-1.26	0.76
Caproni, David	1.81	-0.67	0.63	1.24	1.18	-1.01	**-2.86**								0.12	0.86	0.14	1.45
Hills, Barry	0.01	**2.45**	0.07	0.21	-0.78	0.94	1.14								1.60	0.61	0.69	0.96
Kobrinetz, Jack	-0.41	0.15	-1.05	-1.85	0.59	0.97	0.29								0.30	0.37	-0.07	0.88
Sanchez, Art	-1.10	1.07	0.63	0.21	-0.14	0.85	0.61								0.99	0.69	0.42	0.69
Yanchar, Paul	-1.10	0.00	0.63	0.21	-1.34	0.59	0.33								-0.33	-0.91	-0.21	0.75
Adams, Pat	0.15	0.10	0.63	0.21	-0.35	-1.33	-0.87								-0.44	-0.42	-0.26	0.60
Avis, Steve	0.98	1.03	0.07	0.21	-1.20	0.82	1.05								0.53	-0.38	0.35	0.76
Castillo, George	0.56	-1.00	-0.21	0.21	1.91	-1.79	-1.53								-0.42	0.84	-0.16	1.19
Lowsky, John	**2.09**	1.40	-0.43	-1.44	**2.43**	0.57	0.50								**2.13**	**2.71**	1.11	1.41
May, Marianne	-0.55	-0.79	-0.43	-1.03	-0.68	0.91	0.50								-0.70	-0.95	-0.41	0.67
Pitta, Jimmy	-1.52	-1.54	0.85	1.04	-0.52	-0.53	-0.41								-1.26	-0.96	-0.54	0.94
Radonich, Pete	-0.27	-0.27	0.91	0.73	-0.35	0.54	0.50								0.10	0.00	0.21	0.47
Rodriguez, Jesse	0.01	-0.49	-0.60	-0.82	0.52	-0.38	0.05								-0.42	-0.07	-0.24	0.41
Seiz, Ray	-0.27	0.23	0.35	1.14	0.02	0.94	0.37								0.67	0.55	0.45	0.44
Shoda, Ron	-0.69	-0.70	0.91	0.73	-1.04	-0.21	0.31								-0.80	-0.99	-0.28	0.75
Trevino, Robert	0.15	-0.24	-0.88	1.04	0.40	0.36	0.57								0.12	0.24	0.20	0.53
Viera, Ralph	0.98	0.17	**-3.17**	-1.85	0.17	-0.38	-0.54								-0.68	-0.84	-0.68	1.22
Yi MAXIMUM	2.09	2.45	-3.17	-1.85	2.43	-2.28	-2.86								-2.19	2.71	-1.26	1.45
Yi MINIMUM	0.01	0.00	0.01	0.21	-0.14	-0.21	0.05								0.10	0.00	-0.07	0.40
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00								0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00								1.00	1.00		
Ratings MEAN	0.73	6.59	9.79	9.88	2.51	8.95	9.17								38.45	5.78		
Ratings STD	0.07	0.60	0.18	0.10	0.42	0.35	0.46								0.94	0.14		

Light Duty Rating Workshop

PART ID = **B6 - Sequence III Piston**

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD
Barrera, Tony	2.87	0.72	**8.74**	1.22	2.50	1.48	9.41	9.84	9.63						27.15	4.01
Cales, Jonathon	2.07	0.70	8.92	1.27	3.31	1.57	9.73	9.95	9.84						27.68	4.28
Caproni, David	1.93	0.72	9.13	1.54	3.19	2.11	9.60	10.00	9.80						28.42	4.37
Garcia, Orlando	**3.44**	**0.79**	9.09	1.34	3.24	1.41	**9.19**	9.98	9.58						28.89	4.34
Hills, Barry	1.36	0.73	9.07	1.17	2.55	1.20	9.65	9.90	9.77						25.85	3.99
Kobrinetz, Jack	2.54	0.74	8.91	1.23	2.44	1.31	9.60	**9.80**	9.70						26.87	4.00
Pansza, Mike	1.84	0.75	9.14	1.36	2.95	1.30	9.70	9.90	9.80						27.14	4.19
Sanchez, Art	2.33	0.72	9.01	**0.96**	2.33	1.50	9.74	9.90	9.82						26.67	3.97
Yanchar, Paul	2.37	0.71	9.05	1.30	2.30	1.14	9.65	9.90	9.77						26.64	3.98
Adams, Pat	1.91	0.71	8.97	1.43	3.06	1.49	9.52	9.94	9.73						27.30	4.22
Avis, Steve	2.33	0.71	8.93	1.19	2.10	1.20	9.35	9.90	9.63						26.09	3.86
Castillo, George	2.24	0.75	9.06	1.15	2.50	1.49	9.53	10.00	9.76						26.96	4.05
Lowsky, John	2.50	0.75	9.02	1.14	**3.63**	**2.73**	9.26	9.90	**9.58**						**29.35**	**4.50**
May, Marianne	2.44	0.76	8.85	1.28	2.69	1.35	9.53	9.94	9.73						27.11	4.08
Pitta, Jimmy	2.27	0.69	8.98	1.55	2.53	1.35	9.79	9.90	9.84						27.21	4.09
Radonich, Pete	2.24	0.75	9.10	1.23	2.16	1.50	9.69	9.95	9.82						26.80	3.97
Rodriguez, Jesse	1.85	0.69	8.97	1.42	2.56	1.55	9.61	9.90	9.75						26.79	4.07
Seiz, Ray	**3.61**	**0.63**	8.92	1.46	3.19	1.72	9.79	9.90	9.84						**29.37**	4.36
Shoda, Ron	1.96	0.73	9.16	1.22	1.91	1.10	9.75	9.95	9.85						25.93	3.85
Terrado, Teresa	1.86	0.75	9.20	1.02	2.02	2.30	9.70	9.90	9.80						26.95	3.98
Trevino, Robert	2.93	0.73	9.05	1.31	2.58	1.83	9.49	9.91	9.70						28.13	4.15
Viera, Ralph	2.72	0.70	9.04	1.14	2.52	1.43	9.67	9.98	9.82						27.37	4.07
MAXIMUM	3.61	0.79	9.20	1.55	3.63	2.73	9.79	10.00	9.85						29.37	4.50
MINIMUM	1.36	0.63	8.74	0.96	1.91	1.10	9.19	9.80	9.58						25.85	3.85
RANGE (MAX-MIN)	2.25	0.16	0.46	0.59	1.72	1.63	0.60	0.20	0.27						3.52	0.64
MEAN	2.35	0.72	9.01	1.27	2.65	1.55	9.59	9.92	9.75						27.30	4.11
STD	0.53	0.03	0.11	0.15	0.46	0.39	0.17	0.05	0.09						0.99	0.17



yi within 1	72%
yi within 2	94%
yi within 3	99%

PART ID = **B6 - Sequence III Piston**

Yi VALUES

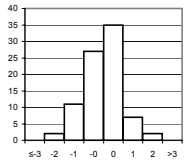
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	Under-crown	Thrust	Anti-thrust	Average Skirt						UWPD	WPD	MEAN	STD
Barrera, Tony	0.98	-0.13	**-2.51**	-0.33	-0.32	-0.17	-1.08	-1.67	-1.51						-0.15	-0.58	-0.68	0.95
Cales, Jonathon	-0.52	-0.74	-0.86	0.00	1.44	0.06	0.85	0.62	1.00						0.38	1.01	0.30	0.77
Caproni, David	-0.78	-0.13	1.06	1.78	1.18	1.43	0.07	1.67	0.53						1.13	1.53	0.86	0.83
Garcia, Orlando	**2.06**	**2.02**	0.70	0.46	1.29	-0.35	**-2.40**	1.25	-1.98						1.61	1.35	0.55	1.52
Hills, Barry	-1.85	0.18	0.51	-0.66	-0.21	-0.89	0.37	-0.42	0.24						-1.47	-0.66	-0.44	0.76
Kobrinetz, Jack	0.36	0.49	-0.95	-0.26	-0.45	-0.61	0.07	**-2.50**	-0.64						-0.44	-0.62	-0.50	0.80
Pansza, Mike	-0.95	0.79	1.16	0.60	0.66	-0.63	0.67	-0.42	0.53						-0.17	0.50	0.25	0.68
Sanchez, Art	-0.03	-0.13	-0.04	**-2.04**	-0.69	-0.12	0.91	-0.42	0.77						-0.64	-0.82	-0.30	0.80
Yanchar, Paul	0.05	-0.43	0.33	0.20	-0.76	-1.04	0.37	-0.42	0.24						-0.67	-0.76	-0.26	0.51
Adams, Pat	-0.82	-0.43	-0.40	1.06	0.90	-0.15	-0.41	0.42	-0.28						0.00	0.62	0.04	0.61
Avis, Steve	-0.03	-0.43	-0.77	-0.52	-1.19	-0.89	-1.44	-0.42	-1.51						-1.24	-1.40	-0.90	0.50
Castillo, George	-0.20	0.79	0.42	-0.79	-0.32	-0.15	-0.35	1.67	0.13						-0.35	-0.35	0.04	0.69
Lowsky, John	0.29	0.79	0.05	-0.85	**2.13**	**3.01**	-1.98	-0.42	**-2.04**						**2.07**	**2.24**	0.48	1.73
May, Marianne	0.18	1.10	-1.51	0.07	0.09	-0.50	-0.35	0.42	-0.23						-0.20	-0.19	-0.10	0.64
Pitta, Jimmy	-0.14	-1.05	-0.31	1.85	-0.26	-0.50	1.21	-0.42	1.06						-0.09	-0.10	0.11	0.87
Radonich, Pete	-0.20	0.79	0.79	-0.26	-1.06	-0.12	0.61	0.62	0.77						-0.51	-0.79	0.06	0.69
Rodriguez, Jesse	-0.93	-1.05	-0.40	0.99	-0.19	0.00	0.13	-0.42	0.01						-0.52	-0.23	-0.24	0.55
Seiz, Ray	**2.38**	**-2.89**	-0.86	1.26	1.18	0.44	1.21	-0.42	1.06						**2.10**	1.46	0.63	1.51
Shoda, Ron	-0.73	0.18	1.34	-0.33	-1.60	-1.14	0.97	0.62	1.12						-1.39	-1.46	-0.22	1.12
Terrado, Teresa	-0.91	0.79	1.71	-1.65	-1.37	1.91	0.67	-0.42	0.53						-0.36	-0.75	0.01	1.19
Trevino, Robert	1.10	0.18	0.33	0.27	-0.15	0.72	-0.60	-0.21	-0.64						0.84	0.26	0.19	0.56
Viera, Ralph	0.70	-0.74	0.24	-0.85	-0.28	-0.30	0.49	1.25	0.83						0.07	-0.24	0.11	0.66
Yi MAXIMUM	2.38	-2.89	-2.51	-2.04	2.13	3.01	-2.40	-2.50	-2.04						2.10	2.24	-0.90	1.73
Yi MINIMUM	-0.03	-0.13	-0.04	-0.26	-0.15	-0.12	-0.35	-0.21	-0.23						0.00	-0.10	-0.10	0.50
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						1.00	1.00		
Ratings MEAN	2.35	0.72	9.01	1.27	2.65	1.55	9.59	9.92	9.75						27.30	4.11		
Ratings STD	0.53	0.03	0.11	0.15	0.46	0.39	0.17	0.05	0.09						0.99	0.17		

Light Duty Rating Workshop

PART ID = **Calibration - Sequence V Pistons**

RATED VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8
Barrera, Tony	8.99	8.33	8.67	7.45				
Cales, Jonathon	9.12	8.56	8.98	7.46				
Caproni, David	8.77	8.16	8.94	7.64				
Foecking, Brian	9.32	7.74	9.00	6.60				
Garcia, Orlando	9.06	8.16	8.84	7.31				
Kobrinetz, Jack	9.00	7.97	8.86	6.53				
Lopez, Frank	8.96	7.69	9.02	6.97				
Pansza, Mike	8.80	7.80	8.69	6.92				
Sanchez, Art	9.12	8.06	8.78	7.16				
Yanchar, Paul	8.81	7.89	8.68	6.38				
Adams, Pat	9.36	7.73	8.40	6.10				
Castillo, George	8.53	**6.95**	8.48	6.02				
Hill, John	8.71	8.31	8.66	7.52				
Lowsky, John	8.73	7.70	8.73	7.50				
May, Marianne	9.10	8.10	8.91	7.51				
Radonich, Pete	8.83	7.62	8.55	6.32				
Rodriguez, Jesse	8.94	7.71	9.06	7.33				
Seiz, Ray	**8.37**	**9.32**	**9.23**	8.08				
Shoda, Ron	8.79	7.39	8.58	6.16				
Trevino, Robert	9.03	8.03	8.90	7.23				
Viera, Ralph	9.03	8.00	8.60	6.36				
MAXIMUM	9.36	9.32	9.23	8.08				
MINIMUM	8.37	6.95	8.40	6.02				
RANGE (MAX-MIN)	0.99	2.37	0.83	2.06				
MEAN	8.92	7.96	8.79	6.98				
STD	0.24	0.47	0.21	0.60				



yi within 1	74%
yi within 2	95%
yi within 3	100%

PART ID = **Calibration - Sequence V Pistons**

Yi VALUES

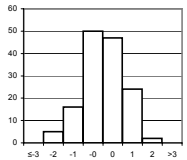
	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	MEAN	STD
Barrera, Tony	0.28	0.78	-0.56	0.79					0.32	0.63
Cales, Jonathon	0.83	1.28	0.90	0.80					0.95	0.22
Caproni, David	-0.64	0.42	0.71	1.11					0.40	0.75
Foecking, Brian	1.67	-0.48	1.00	-0.63					0.39	1.13
Garcia, Orlando	0.58	0.42	0.24	0.55					0.45	0.15
Kobrinetz, Jack	0.33	0.02	0.34	-0.75					-0.02	0.51
Lopez, Frank	0.16	-0.58	1.09	-0.01					0.16	0.70
Pansza, Mike	-0.51	-0.35	-0.46	-0.10					-0.36	0.19
Sanchez, Art	0.83	0.21	-0.04	0.30					0.33	0.37
Yanchar, Paul	-0.47	-0.16	-0.51	-1.00					-0.54	0.35
Adams, Pat	1.84	-0.50	-1.83	-1.47					-0.49	1.65
Castillo, George	-1.65	**-2.16**	-1.46	-1.60					-1.72	0.31
Hill, John	-0.89	0.74	-0.61	0.90					0.04	0.92
Lowsky, John	-0.81	-0.56	-0.28	0.87					-0.19	0.74
May, Marianne	0.75	0.29	0.57	0.89					0.63	0.26
Radonich, Pete	-0.39	-0.73	-1.13	-1.10					-0.84	0.35
Rodriguez, Jesse	0.07	-0.54	1.28	0.59					0.35	0.77
Seiz, Ray	**-2.32**	**2.90**	**2.08**	1.84					1.13	**2.34**
Shoda, Ron	-0.56	-1.22	-0.98	-1.37					-1.03	0.35
Trevino, Robert	0.45	0.14	0.53	0.42					0.39	0.17
Viera, Ralph	0.45	0.08	-0.89	-1.03					-0.35	0.73
Yi MAXIMUM	-2.32	2.90	2.08	1.84					-1.72	2.34
Yi MINIMUM	0.07	0.02	-0.04	-0.01					-0.02	0.15
Yi MEAN	0.00	0.00	0.00	0.00						
Yi STD	1.00	1.00	1.00	1.00						
Ratings MEAN	8.92	7.96	8.79	6.98						
Ratings STD	0.24	0.47	0.21	0.60						

Light Duty Rating Workshop

PART ID = **D1-8 - Sequence V Pistons**

RATED VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8
Barrera, Tony	9.13	9.12	8.85	8.49	8.29	8.41	8.24	8.05
Cales, Jonathon	9.14	9.08	9.00	8.86	**8.72**	8.56	8.44	**8.34**
Caproni, David	8.94	8.89	8.52	8.79	8.34	8.53	8.45	7.74
Foecking, Brian	9.34	9.28	9.05	8.30	8.24	8.10	7.60	7.29
Garcia, Orlando	9.09	9.00	8.70	8.40	8.20	7.90	7.80	7.68
Kobrinetz, Jack	**8.73**	**8.68**	**8.21**	8.06	8.06	**7.60**	7.66	7.26
Lopez, Frank	9.12	8.91	8.38	8.33	8.31	8.06	7.88	7.78
Pansza, Mike	8.98	8.90	8.68	8.08	**7.80**	7.85	7.80	7.73
Sanchez, Art	9.17	9.15	8.85	8.48	8.37	7.95	8.01	7.45
Yanchar, Paul	9.01	8.94	8.79	8.36	8.32	8.43	8.15	7.70
Adams, Pat	9.24	9.27	9.23	8.74	8.35	8.04	8.31	7.57
Castillo, George	9.20	9.16	8.80	8.29	8.08	8.04	7.78	7.56
Hill, John	8.85	8.83	8.47	8.04	8.36	7.86	8.18	7.75
May, Marianne	9.27	9.20	9.03	8.88	8.56	8.43	8.29	8.11
Radonich, Pete	9.18	9.16	8.79	8.46	8.30	8.18	7.99	7.79
Rodriguez, Jesse	9.18	8.88	8.70	8.41	8.17	8.13	7.89	7.35
Shoda, Ron	9.22	9.18	8.66	8.30	8.15	8.05	7.85	7.55
Viera, Ralph	9.02	9.06	8.76	8.58	8.05	8.12	8.28	8.00
MAXIMUM	9.34	9.28	9.23	8.88	8.72	8.56	8.45	8.34
MINIMUM	8.73	8.68	8.21	8.04	7.80	7.60	7.60	7.26
RANGE (MAX-MIN)	0.61	0.60	1.02	0.84	0.92	0.96	0.85	1.08
MEAN	9.10	9.04	8.75	8.44	8.26	8.12	8.03	7.71
STD	0.15	0.17	0.25	0.26	0.20	0.26	0.27	0.29



yi within 1	67%
yi within 2	95%
yi within 3	100%

PART ID = **D1-8 - Sequence V Pistons**

Yi VALUES

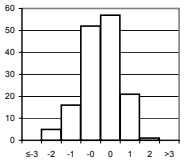
	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	MEAN	STD
Barrera, Tony	0.19	0.49	0.41	0.21	0.15	1.10	0.78	1.19	0.56	0.41
Cales, Jonathon	0.26	0.25	1.01	1.65	**2.27**	1.67	1.53	**2.20**	1.35	0.79
Caproni, David	-1.04	-0.89	-0.91	1.38	0.40	1.56	1.57	0.12	0.27	1.14
Foecking, Brian	1.55	1.45	1.21	-0.53	-0.10	-0.09	-1.63	-1.44	0.05	1.25
Garcia, Orlando	-0.07	-0.23	-0.19	-0.14	-0.29	-0.86	-0.88	-0.09	-0.34	0.33
Kobrinetz, Jack	**-2.40**	**-2.14**	**-2.15**	-1.46	-0.98	**-2.02**	-1.40	-1.54	-1.76	0.48
Lopez, Frank	0.13	-0.77	-1.47	-0.41	0.25	-0.25	-0.58	0.26	-0.36	0.59
Pansza, Mike	-0.78	-0.83	-0.27	-1.39	**-2.27**	-1.05	-0.88	0.08	-0.92	0.71
Sanchez, Art	0.45	0.67	0.41	0.17	0.55	-0.67	-0.09	-0.89	0.07	0.58
Yanchar, Paul	-0.59	-0.59	0.17	-0.30	0.30	1.17	0.44	-0.02	0.07	0.59
Adams, Pat	0.90	1.39	1.92	1.18	0.45	-0.32	1.04	-0.47	0.76	0.83
Castillo, George	0.64	0.73	0.21	-0.57	-0.88	-0.32	-0.95	-0.50	-0.21	0.66
Hill, John	-1.62	-1.25	-1.11	-1.54	0.50	-1.02	0.55	0.15	-0.67	0.91
May, Marianne	1.10	0.97	1.13	1.73	1.48	1.17	0.97	1.40	1.24	0.27
Radonich, Pete	0.51	0.73	0.17	0.09	0.20	0.21	-0.16	0.29	0.26	0.27
Rodriguez, Jesse	0.51	-0.95	-0.19	-0.10	-0.44	0.02	-0.54	-1.23	-0.36	0.55
Shoda, Ron	0.77	0.85	-0.35	-0.53	-0.54	-0.29	-0.69	-0.54	-0.16	0.61
Viera, Ralph	-0.52	0.13	0.05	0.56	-1.03	-0.02	0.93	1.02	0.14	0.70
Yi MAXIMUM	-2.40	-2.14	-2.15	1.73	2.27	-2.02	-1.63	2.20	-1.76	1.25
Yi MINIMUM	-0.07	-0.23	-0.19	-0.10	-0.10	-0.02	-0.09	-0.02	0.05	0.27
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	9.10	9.04	8.75	8.44	8.26	8.12	8.03	7.71		
Ratings STD	0.15	0.17	0.25	0.26	0.20	0.26	0.27	0.29		

Light Duty Rating Workshop

PART ID = **E1-8 - Sequence V Pistons**

RATED VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8
Barrera, Tony	9.08	8.76	8.60	8.82	8.26	7.63	6.94	7.10
Cales, Jonathon	9.40	9.16	8.96	8.66	8.66	8.20	7.66	7.48
Caproni, David	8.94	8.63	8.49	8.57	8.14	6.93	6.54	6.63
Foecking, Brian	9.36	9.14	9.01	**9.24**	7.73	7.17	6.44	6.53
Garcia, Orlando	8.92	8.60	8.70	8.80	**7.30**	7.00	6.82	6.90
Kobrinetz, Jack	8.97	8.68	8.57	8.53	7.34	6.80	5.90	6.40
Lopez, Frank	9.08	8.64	8.38	8.73	8.03	7.34	6.72	6.78
Pansza, Mike	9.06	8.95	8.90	9.00	7.54	7.30	7.10	7.20
Sanchez, Art	9.06	8.91	8.84	8.87	7.84	6.58	6.34	6.45
Yanchar, Paul	9.03	8.69	8.69	8.74	8.23	7.75	7.18	7.37
Adams, Pat	8.94	9.15	9.02	9.19	8.17	6.99	**5.58**	**5.78**
Castillo, George	9.18	8.91	8.66	8.97	7.91	7.40	6.72	6.60
Hill, John	8.84	**8.32**	**7.91**	8.61	7.90	7.50	7.18	7.04
May, Marianne	9.37	9.00	8.88	9.03	8.32	7.84	7.38	7.31
Radonich, Pete	9.25	8.94	8.81	9.01	8.04	7.62	7.38	7.33
Rodriguez, Jesse	9.15	8.80	8.43	8.82	8.21	7.77	6.91	7.03
Shoda, Ron	9.19	9.05	8.90	8.80	8.05	7.40	7.00	6.90
Trevino, Robert	9.14	8.89	8.77	8.77	8.43	8.01	7.28	7.41
Viera, Ralph	8.81	8.37	8.21	8.71	8.05	7.75	6.98	6.44
MAXIMUM	9.40	9.16	9.02	9.24	8.66	8.20	7.66	7.48
MINIMUM	8.81	8.32	7.91	8.53	7.30	6.58	5.58	5.78
RANGE (MAX-MIN)	0.59	0.84	1.11	0.71	1.36	1.62	2.08	1.70
MEAN	9.09	8.82	8.67	8.84	8.01	7.42	6.84	6.88
STD	0.17	0.24	0.29	0.20	0.35	0.43	0.52	0.44



yi within 1	72%
yi within 2	96%
yi within 3	100%

PART ID = **E1-8 - Sequence V Pistons**

Yi VALUES

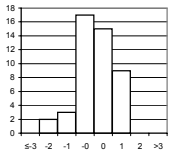
	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	MEAN	STD
Barrera, Tony	-0.08	-0.25	-0.24	-0.08	0.72	0.49	0.18	0.50	0.16	0.37
Cales, Jonathon	1.79	1.39	1.00	-0.89	1.87	1.81	1.58	1.35	1.24	0.91
Caproni, David	-0.89	-0.78	-0.62	-1.35	0.38	-1.14	-0.59	-0.56	-0.69	0.52
Foecking, Brian	1.55	1.31	1.17	**2.06**	-0.80	-0.58	-0.78	-0.78	0.39	1.24
Garcia, Orlando	-1.01	-0.90	0.10	-0.18	**-2.03**	-0.98	-0.05	0.05	-0.62	0.74
Kobrinetz, Jack	-0.72	-0.58	-0.35	-1.56	-1.91	-1.44	-1.83	-1.07	-1.18	0.59
Lopez, Frank	-0.08	-0.74	-1.00	-0.54	0.06	-0.19	-0.24	-0.22	-0.37	0.36
Pansza, Mike	-0.19	0.53	0.79	0.84	-1.34	-0.28	0.49	0.72	0.20	0.75
Sanchez, Art	-0.19	0.37	0.59	0.18	-0.48	-1.95	-0.98	-0.96	-0.43	0.84
Yanchar, Paul	-0.37	-0.53	0.07	-0.49	0.64	0.77	0.65	1.11	0.23	0.64
Adams, Pat	-0.89	1.35	1.21	1.81	0.46	-1.00	**-2.45**	**-2.47**	-0.25	1.70
Castillo, George	0.51	0.37	-0.03	0.69	-0.28	-0.05	-0.24	-0.62	0.04	0.44
Hill, John	-1.47	**-2.05**	**-2.62**	-1.15	-0.31	0.19	0.65	0.36	-0.80	1.20
May, Marianne	1.61	0.73	0.73	0.99	0.89	0.98	1.04	0.97	0.99	0.28
Radonich, Pete	0.91	0.49	0.48	0.89	0.09	0.46	1.04	1.02	0.67	0.34
Rodriguez, Jesse	0.33	-0.08	-0.83	-0.08	0.58	0.81	0.13	0.34	0.15	0.50
Shoda, Ron	0.56	0.94	0.79	-0.18	0.12	-0.05	0.30	0.05	0.32	0.41
Trevino, Robert	0.27	0.28	0.35	-0.33	1.21	1.37	0.84	1.20	0.65	0.60
Viera, Ralph	-1.65	-1.84	-1.59	-0.64	0.12	0.77	0.26	-0.98	-0.69	0.99
Yi MAXIMUM	1.79	-2.05	-2.62	2.06	-2.03	-1.95	-2.45	-2.47	1.24	1.70
Yi MINIMUM	-0.08	-0.08	-0.03	-0.08	0.06	-0.05	-0.05	0.05	0.04	0.28
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	9.09	8.82	8.67	8.84	8.01	7.42	6.84	6.88		
Ratings STD	0.17	0.24	0.29	0.20	0.35	0.43	0.52	0.44		

Light Duty Rating Workshop

PART ID = **Calibration - Seq V Varnish**

RATED VALUES

	Rocker Cover Baffle L	Rocker Cover Baffle R
Barrera, Tony	9.57	9.60
Cales, Jonathon	9.65	9.71
Caproni, David	9.40	9.25
Foecking, Brian	9.69	9.65
Garcia, Orlando	9.69	9.73
Kobrinetz, Jack	9.60	9.50
Lopez, Frank	9.70	9.80
Pansza, Mike	9.56	9.45
Sanchez, Art	9.52	9.46
Yanchar, Paul	9.60	9.60
Adams, Pat	9.80	9.90
Avis, Steve	9.60	9.47
Castillo, George	9.52	9.44
Greenland, Paul	9.65	9.64
Hill, John	9.60	9.50
Lowsky, John	9.42	9.27
May, Marianne	9.64	9.66
Radonich, Pete	9.74	9.78
Rodriguez, Jesse	9.77	9.55
Seiz, Ray	9.77	9.57
Shoda, Ron	9.80	9.77
Trevino, Robert	9.66	9.65
Viera, Ralph	9.52	9.46
MAXIMUM	9.80	9.90
MINIMUM	9.40	9.25
RANGE (MAX-MIN)	0.40	0.65
MEAN	9.63	9.58
STD	0.11	0.16



yi within 1	70%
yi within 2	96%
yi within 3	100%

PART ID = **Calibration - Seq V Varnish**

Yi VALUES

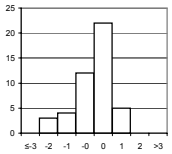
	Rocker Cover Baffle L	Rocker Cover Baffle R	MEAN	STD
Barrera, Tony	-0.49	0.11	-0.19	0.43
Cales, Jonathon	0.19	0.77	0.48	0.41
Caproni, David	-2.08	-2.04	-2.06	0.03
Foecking, Brian	0.57	0.42	0.49	0.11
Garcia, Orlando	0.57	0.88	0.72	0.22
Kobrinetz, Jack	-0.27	-0.51	-0.39	0.17
Lopez, Frank	0.64	1.34	0.99	0.49
Pansza, Mike	-0.64	-0.81	-0.73	0.12
Sanchez, Art	-1.02	-0.76	-0.89	0.18
Yanchar, Paul	-0.27	0.11	-0.08	0.26
Adams, Pat	1.55	1.95	1.75	0.29
Avis, Steve	-0.27	-0.71	-0.49	0.31
Castillo, George	-0.95	-0.87	-0.91	0.06
Greenland, Paul	0.19	0.36	0.28	0.13
Hill, John	-0.27	-0.51	-0.39	0.17
Lowsky, John	-1.93	-1.92	-1.92	0.01
May, Marianne	0.11	0.47	0.29	0.25
Radonich, Pete	1.02	1.24	1.13	0.15
Rodriguez, Jesse	1.25	-0.20	0.52	1.02
Seiz, Ray	1.25	-0.10	0.57	0.95
Shoda, Ron	1.55	1.13	1.34	0.29
Trevino, Robert	0.26	0.42	0.34	0.11
Viera, Ralph	-0.95	-0.76	-0.86	0.13
Yi MAXIMUM	-2.08	-2.04	-2.06	1.02
Yi MINIMUM	-0.27	-0.10	-0.08	0.01
Yi MEAN	0.00	0.00		
Yi STD	1.00	1.00		
Ratings MEAN	9.63	9.58		
Ratings STD	0.11	0.16		

Light Duty Rating Workshop

PART ID = **Sequence V - Varnish**

RATED VALUES

	Rocker Cover Baffle L	Rocker Cover Baffle R
Barrera, Tony	9.58	9.57
Cales, Jonathon	9.66	9.80
Caproni, David	9.60	9.80
Foecking, Brian	9.73	9.75
Garcia, Orlando	9.73	9.74
Kobrinetz, Jack	9.60	9.80
Lopez, Frank	9.70	9.70
Pansza, Mike	9.55	9.75
Sanchez, Art	9.50	**9.38**
Yanchar, Paul	9.63	9.73
Adams, Pat	9.70	9.81
Avis, Steve	9.52	9.61
Castillo, George	9.50	9.67
Greenland, Paul	9.68	9.48
Hill, John	**9.40**	9.75
Lowsky, John	9.44	**9.42**
May, Marianne	9.58	9.74
Radonich, Pete	9.78	9.80
Rodriguez, Jesse	9.65	9.75
Seiz, Ray	9.70	9.80
Shoda, Ron	9.77	9.90
Trevino, Robert	9.65	9.66
Viera, Ralph	9.53	9.79
MAXIMUM	9.78	9.90
MINIMUM	9.40	9.38
RANGE (MAX-MIN)	0.38	0.52
MEAN	9.62	9.70
STD	0.10	0.13



yi within 1	74%
yi within 2	93%
yi within 3	100%

PART ID = **Sequence V - Varnish**

Yi VALUES

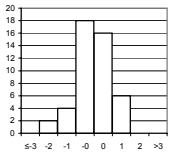
	Rocker Cover Baffle L	Rocker Cover Baffle R	MEAN	STD
Barrera, Tony	-0.33	-0.97	-0.65	0.45
Cales, Jonathon	0.39	0.72	0.56	0.23
Caproni, David	-0.17	0.72	0.28	0.63
Foecking, Brian	1.12	0.35	0.73	0.55
Garcia, Orlando	1.12	0.28	0.70	0.59
Kobrinetz, Jack	-0.17	0.72	0.28	0.63
Lopez, Frank	0.80	-0.03	0.38	0.58
Pansza, Mike	-0.65	0.35	-0.15	0.71
Sanchez, Art	-1.14	**-2.48**	-1.81	0.95
Yanchar, Paul	0.15	0.22	0.19	0.05
Adams, Pat	0.80	0.79	0.79	0.01
Avis, Steve	-0.89	-0.72	-0.81	0.12
Castillo, George	-1.14	-0.28	-0.71	0.60
Greenland, Paul	0.64	-1.72	-0.54	1.67
Hill, John	**-2.10**	0.35	-0.88	1.73
Lowsky, John	-1.74	**-2.16**	-1.95	0.30
May, Marianne	-0.33	0.28	-0.02	0.43
Radonich, Pete	1.60	0.72	1.16	0.62
Rodriguez, Jesse	0.31	0.35	0.33	0.02
Seiz, Ray	0.80	0.72	0.76	0.05
Shoda, Ron	1.44	1.48	1.46	0.03
Trevino, Robert	0.31	-0.34	-0.02	0.46
Viera, Ralph	-0.81	0.66	-0.08	1.04
Yi MAXIMUM	-2.10	-2.48	-1.95	1.73
Yi MINIMUM	-0.17	-0.03	-0.02	0.01
Yi MEAN	0.00	0.00		
Yi STD	1.00	1.00		
Ratings MEAN	9.62	9.70		
Ratings STD	0.10	0.13		

Light Duty Rating Workshop

PART ID = **Calibration - Sequence V Sludge**

RATED VALUES

	Rocker Cover Baffle L	Rocker Cover Baffle R
Barrera, Tony	9.04	7.50
Cales, Jonathon	8.73	7.85
Caproni, David	8.79	8.01
Foecking, Brian	8.81	7.85
Garcia, Orlando	9.19	7.75
Kobrinetz, Jack	8.98	8.12
Lopez, Frank	9.05	7.44
Pansza, Mike	9.26	8.35
Sanchez, Art	8.72	7.42
Yanchar, Paul	9.16	7.57
Adams, Pat	8.52	6.93
Avis, Steve	9.10	8.22
Castillo, George	8.98	7.34
Greenland, Paul	8.70	7.19
Hill, John	8.19	7.34
Lowsky, John	**7.95**	**6.51**
May, Marianne	8.43	7.50
Radonich, Pete	9.03	7.58
Rodriguez, Jesse	8.53	7.19
Seiz, Ray	9.07	7.98
Shoda, Ron	8.70	7.85
Trevino, Robert	8.43	7.91
Viera, Ralph	8.60	7.31
MAXIMUM	9.26	8.35
MINIMUM	7.95	6.51
RANGE (MAX-MIN)	1.31	1.84
MEAN	8.78	7.60
STD	0.34	0.43



yi within 1	74%
yi within 2	96%
yi within 3	100%

PART ID = **Calibration - Sequence V Sludge**

Yi VALUES

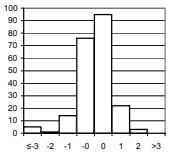
	Rocker Cover Baffle L	Rocker Cover Baffle R	MEAN	STD
Barrera, Tony	0.77	-0.22	0.27	0.70
Cales, Jonathon	-0.15	0.59	0.22	0.52
Caproni, David	0.03	0.96	0.49	0.66
Foecking, Brian	0.09	0.59	0.34	0.35
Garcia, Orlando	1.22	0.36	0.79	0.61
Kobrinetz, Jack	0.59	1.21	0.90	0.44
Lopez, Frank	0.80	-0.36	0.22	0.82
Pansza, Mike	1.43	1.74	1.59	0.22
Sanchez, Art	-0.18	-0.41	-0.29	0.16
Yanchar, Paul	1.13	-0.06	0.53	0.84
Adams, Pat	-0.78	-1.54	-1.16	0.54
Avis, Steve	0.95	1.44	1.20	0.35
Castillo, George	0.59	-0.59	0.00	0.84
Greenland, Paul	-0.24	-0.94	-0.59	0.49
Hill, John	-1.76	-0.59	-1.18	0.83
Lowsky, John	**-2.48**	**-2.51**	**-2.49**	0.03
May, Marianne	-1.05	-0.22	-0.63	0.58
Radonich, Pete	0.74	-0.04	0.35	0.55
Rodriguez, Jesse	-0.75	-0.94	-0.84	0.14
Seiz, Ray	0.86	0.89	0.88	0.02
Shoda, Ron	-0.24	0.59	0.17	0.59
Trevino, Robert	-1.05	0.73	-0.16	1.25
Viera, Ralph	-0.54	-0.66	-0.60	0.09
Yi MAXIMUM	-2.48	-2.51	-2.49	1.25
Yi MINIMUM	-0.15	-0.04	0.00	0.02
Yi MEAN	0.00	0.00		
Yi STD	1.00	1.00		
Ratings MEAN	8.78	7.60		
Ratings STD	0.34	0.43		

Light Duty Rating Workshop

PART ID = Sequence V Sludge

RATED VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R
Barrera, Tony	9.36	9.35	7.50	9.09	8.53	9.29	9.22	8.70	9.19
Cales, Jonathon	9.24	9.21	7.69	8.72	8.77	9.29	9.18	9.08	9.19
Caproni, David	9.28	9.32	7.61	8.73	8.43	9.11	9.06	9.03	9.18
Foecking, Brian	9.37	9.33	8.05	8.75	8.73	9.30	9.14	9.02	9.24
Garcia, Orlando	9.24	9.31	7.85	9.01	8.89	9.33	9.21	9.08	9.29
Hills, Barry	9.30	9.25	**8.89**	9.06	8.98	9.23	8.98	8.38	9.11
Kobrinetz, Jack	9.22	9.31	7.87	8.70	8.70	9.18	9.04	9.05	9.17
Lopez, Frank	9.34	9.24	7.63	8.62	8.72	9.32	9.17	9.02	9.28
Pansza, Mike	**9.56**	9.58	7.55	8.35	9.02	9.47	8.89	8.60	9.44
Sanchez, Art	9.29	9.30	7.66	8.68	8.12	9.31	9.07	9.12	9.40
Yanchar, Paul	9.37	9.49	7.61	8.52	8.45	9.32	9.11	9.07	9.38
Adams, Pat	9.31	9.35	7.72	8.15	8.02	9.26	9.07	9.08	9.21
Avis, Steve	9.31	9.44	8.19	8.83	8.62	9.19	8.75	9.09	9.31
Castillo, George	9.23	9.25	7.36	8.96	8.15	9.23	9.06	8.83	9.11
Greenland, Paul	9.28	9.24	7.32	8.60	7.79	9.07	8.79	8.55	9.16
Hill, John	**9.00**	**8.66**	**9.00**	8.66	7.69	**8.11**	**7.95**	**7.98**	**8.62**
Lowsky, John	9.09	9.20	7.10	8.24	7.70	9.14	8.83	8.68	9.31
May, Marianne	9.35	9.35	7.64	8.94	8.83	9.43	9.20	9.19	9.45
Radonich, Pete	9.31	9.19	7.46	8.59	8.24	9.36	9.15	9.04	9.26
Rodriguez, Jesse	9.18	9.34	7.44	8.43	8.05	9.10	9.02	8.79	9.27
Seiz, Ray	9.44	9.34	8.57	8.94	8.43	9.17	9.23	9.22	9.52
Shoda, Ron	9.37	9.25	7.70	8.43	8.48	9.26	8.85	8.75	9.22
Trevino, Robert	9.45	9.48	7.87	8.30	8.94	9.31	9.05	8.96	9.25
Viera, Ralph	9.46	9.40	7.06	8.77	8.43	9.41	9.00	8.60	9.21
MAXIMUM	9.56	9.58	9.00	9.09	9.02	9.47	9.23	9.22	9.52
MINIMUM	9.00	8.66	7.06	8.15	7.69	8.11	7.95	7.98	8.62
RANGE (MAX-MIN)	0.56	0.92	1.94	0.94	1.33	1.36	1.28	1.24	0.90
MEAN	9.31	9.30	7.76	8.67	8.45	9.22	9.00	8.87	9.24
STD	0.12	0.17	0.49	0.26	0.40	0.26	0.26	0.30	0.17



yi within 1	79%
yi within 2	96%
yi within 3	98%

PART ID = Sequence V Sludge

Yi VALUES

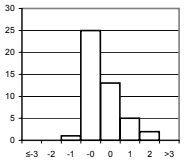
	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R	MEAN	STD
Barrera, Tony	0.45	0.30	-0.54	1.61	0.21	0.29	0.83	-0.58	-0.30	0.25	0.69
Cales, Jonathon	-0.56	-0.53	-0.15	0.19	0.81	0.29	0.68	0.71	-0.30	0.13	0.54
Caproni, David	-0.22	0.12	-0.32	0.23	-0.04	-0.41	0.22	0.54	-0.36	-0.03	0.33
Foecking, Brian	0.54	0.18	0.59	0.31	0.71	0.33	0.53	0.50	0.00	0.41	0.22
Garcia, Orlando	-0.56	0.06	0.18	1.30	1.11	0.44	0.79	0.71	0.29	0.48	0.57
Hills, Barry	-0.05	-0.29	**2.31**	1.49	1.33	0.05	-0.08	-1.66	-0.77	0.26	1.23
Kobrinetz, Jack	-0.73	0.06	0.22	0.12	0.63	-0.14	0.15	0.60	-0.41	0.06	0.44
Lopez, Frank	0.28	-0.35	-0.28	-0.19	0.68	0.40	0.64	0.50	0.23	0.21	0.40
Pansza, Mike	**2.13**	1.68	-0.44	-1.22	1.43	0.99	-0.42	-0.92	1.18	0.49	1.24
Sanchez, Art	-0.14	0.00	-0.21	0.04	-0.81	0.36	0.26	0.84	0.94	0.14	0.54
Yanchar, Paul	0.54	1.14	-0.32	-0.57	0.01	0.40	0.41	0.67	0.82	0.35	0.55
Adams, Pat	0.03	0.30	-0.09	-1.99	-1.06	0.17	0.26	0.71	-0.18	-0.21	0.82
Avis, Steve	0.03	0.84	0.87	0.61	0.43	-0.10	-0.95	0.74	0.41	0.32	0.59
Castillo, George	-0.64	-0.29	-0.83	1.11	-0.74	0.05	0.22	-0.14	-0.77	-0.22	0.63
Greenland, Paul	-0.22	-0.35	-0.91	-0.27	-1.64	-0.57	-0.80	-1.09	-0.47	-0.70	0.46
Hill, John	**-2.58**	**-3.82**	**2.54**	-0.04	-1.89	**-4.30**	**-3.99**	**-3.01**	**-3.65**	**-2.30**	**2.24**
Lowsky, John	-1.82	-0.59	-1.36	-1.64	-1.86	-0.30	-0.65	-0.65	0.41	-0.94	0.78
May, Marianne	0.37	0.30	-0.26	1.04	0.96	0.83	0.76	1.08	1.23	0.70	0.47
Radonich, Pete	0.03	-0.65	-0.62	-0.30	-0.51	0.56	0.57	0.57	0.12	-0.03	0.52
Rodriguez, Jesse	-1.06	0.24	-0.67	-0.92	-0.99	-0.45	0.07	-0.27	0.17	-0.43	0.51
Seiz, Ray	1.13	0.24	1.66	1.04	-0.04	-0.18	0.87	1.18	1.65	0.84	0.68
Shoda, Ron	0.54	-0.29	-0.13	-0.92	0.08	0.17	-0.57	-0.41	-0.12	-0.18	0.43
Trevino, Robert	1.21	1.08	0.22	-1.41	1.23	0.36	0.19	0.30	0.06	0.36	0.81
Viera, Ralph	1.29	0.60	-1.45	0.38	-0.04	0.75	0.00	-0.92	-0.18	0.05	0.84
Yi MAXIMUM	-2.58	-3.82	2.54	-1.99	-1.89	-4.30	-3.99	-3.01	-3.65	-2.30	2.24
Yi MINIMUM	-0.05	0.00	-0.09	-0.04	-0.04	0.05	0.00	-0.14	0.00	-0.03	0.22
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	9.31	9.30	7.76	8.67	8.45	9.22	9.00	8.87	9.24		
Ratings STD	0.12	0.17	0.49	0.26	0.40	0.26	0.26	0.30	0.17		

Light Duty Rating Workshop

PART ID = **Sequence V - Oil Screen Clogging**

RATED VALUES

	% Sludge	% Debris
Barrera, Tony	22.00	1.00
Cales, Jonathon	31.00	3.00
Caproni, David	17.00	1.00
Foecking, Brian	35.00	2.00
Garcia, Orlando	17.00	3.00
Kobrinetz, Jack	23.00	3.00
Lopez, Frank	25.00	1.00
Pansza, Mike	52.00	2.00
Sanchez, Art	40.00	2.00
Yanchar, Paul	22.00	2.00
Adams, Pat	**55.00**	2.00
Avis, Steve	**58.00**	1.00
Castillo, George	17.00	1.00
Greenland, Paul	23.00	2.00
Hill, John	25.00	2.00
Lowsky, John	30.00	1.00
May, Marianne	22.00	3.00
Radonich, Pete	22.00	1.00
Rodriguez, Jesse	21.00	1.00
Seiz, Ray	22.00	2.00
Shoda, Ron	30.00	1.00
Trevino, Robert	16.00	1.00
Viera, Ralph	25.00	1.00
MAXIMUM	58.00	3.00
MINIMUM	16.00	1.00
RANGE (MAX-MIN)	42.00	2.00
MEAN	28.26	1.70
STD	12.11	0.76



yi within 1	83%
yi within 2	96%
yi within 3	100%

PART ID = **Sequence V - Oil Screen Clogging**

Yi VALUES

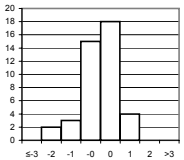
	% Sludge	% Debris	MEAN	STD
Barrera, Tony	-0.52	-0.91	-0.71	0.28
Cales, Jonathon	0.23	1.71	0.97	1.05
Caproni, David	-0.93	-0.91	-0.92	0.01
Foecking, Brian	0.56	0.40	0.48	0.11
Garcia, Orlando	-0.93	1.71	0.39	1.86
Kobrinetz, Jack	-0.43	1.71	0.64	1.51
Lopez, Frank	-0.27	-0.91	-0.59	0.45
Pansza, Mike	1.96	0.40	1.18	1.10
Sanchez, Art	0.97	0.40	0.68	0.40
Yanchar, Paul	-0.52	0.40	-0.06	0.65
Adams, Pat	**2.21**	0.40	1.30	1.28
Avis, Steve	**2.46**	-0.91	0.77	**2.38**
Castillo, George	-0.93	-0.91	-0.92	0.01
Greenland, Paul	-0.43	0.40	-0.02	0.59
Hill, John	-0.27	0.40	0.06	0.47
Lowsky, John	0.14	-0.91	-0.38	0.74
May, Marianne	-0.52	1.71	0.59	1.57
Radonich, Pete	-0.52	-0.91	-0.71	0.28
Rodriguez, Jesse	-0.60	-0.91	-0.75	0.22
Seiz, Ray	-0.52	0.40	-0.06	0.65
Shoda, Ron	0.14	-0.91	-0.38	0.74
Trevino, Robert	-1.01	-0.91	-0.96	0.07
Viera, Ralph	-0.27	-0.91	-0.59	0.45
Yi MAXIMUM	2.46	1.71	1.30	2.38
Yi MINIMUM	-0.27	-0.91	-0.02	0.01
Yi MEAN	0.00	0.00		
Yi STD	1.00	1.00		
Ratings MEAN	28.26	1.70		
Ratings STD	12.11	0.76		

Light Duty Rating Workshop

PART ID = **Calibration - Valves**

RATED VALUES

	Valve 1	Valve 2
Barrera, Tony	8.50	9.10
Foecking, Brian	9.30	9.00
Garcia, Orlando	9.10	8.40
Kobrinetz, Jack	9.20	8.50
Lopez, Frank	9.40	9.10
Pansza, Mike	9.20	8.60
Sanchez, Art	9.50	9.10
Yanchar, Paul	9.50	8.90
Adams, Pat	9.30	9.20
Avis, Steve	9.15	8.95
Castillo, George	9.30	8.90
Greenland, Paul	9.00	8.90
Hill, John	9.30	9.45
Lowsky, John	9.00	9.25
Pitta, Jimmy	9.30	9.10
Radonich, Pete	9.50	8.90
Rodriguez, Jesse	9.00	8.70
Seiz, Ray	9.10	9.20
Shoda, Ron	9.70	9.10
Terrado, Teresa	9.60	9.40
Viera, Ralph	9.10	8.80
MAXIMUM	9.70	9.45
MINIMUM	8.50	8.40
RANGE (MAX-MIN)	1.20	1.05
MEAN	9.24	8.98
STD	0.26	0.27



yi within 1	79%
yi within 2	95%
yi within 3	100%

PART ID = **Calibration - Valves**

Yi VALUES

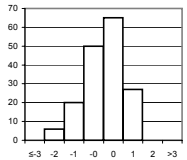
	Valve 1	Valve 2	MEAN	STD
Barrera, Tony	-2.82	0.45	-1.19	2.31
Foecking, Brian	0.23	0.08	0.15	0.10
Garcia, Orlando	-0.54	-2.12	-1.33	1.12
Kobrinetz, Jack	-0.15	-1.75	-0.95	1.13
Lopez, Frank	0.61	0.45	0.53	0.11
Pansza, Mike	-0.15	-1.39	-0.77	0.87
Sanchez, Art	0.99	0.45	0.72	0.38
Yanchar, Paul	0.99	-0.29	0.35	0.90
Adams, Pat	0.23	0.81	0.52	0.41
Avis, Steve	-0.34	-0.10	-0.22	0.17
Castillo, George	0.23	-0.29	-0.03	0.36
Greenland, Paul	-0.92	-0.29	-0.60	0.44
Hill, John	0.23	1.73	0.98	1.06
Lowsky, John	-0.92	1.00	0.04	1.35
Pitta, Jimmy	0.23	0.45	0.34	0.15
Radonich, Pete	0.99	-0.29	0.35	0.90
Rodriguez, Jesse	-0.92	-1.02	-0.97	0.07
Seiz, Ray	-0.54	0.81	0.14	0.95
Shoda, Ron	1.75	0.45	1.10	0.92
Terrado, Teresa	1.37	1.55	1.46	0.12
Viera, Ralph	-0.54	-0.65	-0.59	0.08
Yi MAXIMUM	-2.82	-2.12	1.46	2.31
Yi MINIMUM	-0.15	0.08	-0.03	0.07
Yi MEAN	0.00	0.00		
Yi STD	1.00	1.00		
Ratings MEAN	9.24	8.98		
Ratings STD	0.26	0.27		

Light Duty Rating Workshop

PART ID = Valve Set F

RATED VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8
Barrera, Tony	9.10	9.00	9.00	8.80	8.90	8.90	8.80	9.10
Foecking, Brian	9.70	9.50	9.10	7.50	8.60	9.50	8.30	8.90
Garcia, Orlando	8.90	9.00	9.30	8.70	9.10	9.30	7.80	9.20
Kobrinetz, Jack	9.50	9.00	8.60	7.90	8.30	9.00	8.10	8.50
Lopez, Frank	9.40	8.10	9.10	8.80	9.00	8.00	7.50	9.10
Pansza, Mike	9.40	8.50	8.80	8.10	8.40	8.60	8.90	9.10
Sanchez, Art	9.70	9.30	8.50	7.00	7.50	9.40	8.50	9.10
Yanchar, Paul	9.20	9.40	9.20	8.40	8.60	9.40	8.90	8.70
Adams, Pat	9.60	8.40	9.10	9.20	9.20	8.50	8.00	9.30
Avis, Steve	9.60	9.10	9.30	8.50	8.80	9.20	9.10	9.20
Castillo, George	9.20	9.30	9.00	8.00	8.70	9.40	8.10	8.90
Greenland, Paul	9.30	8.90	8.60	8.10	8.50	9.10	8.20	8.40
Hill, John	9.70	9.20	8.80	8.30	8.40	9.30	8.90	9.00
Lowsky, John	9.50	9.00	9.25	8.35	8.80	9.25	7.90	9.20
Pitta, Jimmy	9.70	9.60	9.40	9.10	9.20	9.60	9.10	9.30
Radonich, Pete	9.30	8.80	8.70	7.80	8.10	9.10	8.30	8.50
Rodriguez, Jesse	9.20	9.00	8.70	8.00	8.60	9.00	8.30	8.70
Seiz, Ray	9.50	8.80	9.10	8.90	9.00	8.80	8.60	9.00
Shoda, Ron	9.30	9.10	9.00	8.00	8.20	9.40	9.00	9.10
Terrado, Teresa	9.70	9.60	9.30	8.50	8.75	9.70	9.50	9.50
Viera, Ralph	9.20	9.30	9.10	8.90	9.00	9.30	8.80	9.10
MAXIMUM	9.70	9.60	9.40	9.20	9.20	9.70	9.50	9.50
MINIMUM	8.90	8.10	8.50	7.00	7.50	8.00	7.50	8.40
RANGE (MAX-MIN)	0.80	1.50	0.90	2.20	1.70	1.70	2.00	1.10
MEAN	9.41	9.04	9.00	8.33	8.65	9.13	8.50	9.00
STD	0.23	0.38	0.27	0.55	0.41	0.40	0.51	0.29



yi within 1	68%
yi within 2	96%
yi within 3	100%

PART ID = Valve Set F

Yi VALUES

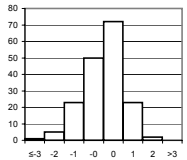
	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8	MEAN	STD
Barrera, Tony	-1.35	-0.11	0.01	0.87	0.61	-0.57	0.58	0.36	0.05	0.73
Foecking, Brian	1.23	1.19	0.39	-1.51	-0.12	0.92	-0.40	-0.33	0.17	0.94
Garcia, Orlando	-2.21	-0.11	1.14	0.68	1.09	0.42	-1.37	0.71	0.04	1.22
Kobrinetz, Jack	0.37	-0.11	-1.50	-0.78	-0.85	-0.33	-0.79	-1.71	-0.71	0.69
Lopez, Frank	-0.06	-2.46	0.39	0.87	0.85	-2.81	-1.96	0.36	-0.60	1.54
Pansza, Mike	-0.06	-1.42	-0.74	-0.41	-0.61	-1.32	0.77	0.36	-0.43	0.77
Sanchez, Art	1.23	0.67	-1.87	-2.42	-2.79	0.67	-0.01	0.36	-0.52	1.58
Yanchar, Paul	-0.92	0.93	0.76	0.13	-0.12	0.67	0.77	-1.02	0.15	0.78
Adams, Pat	0.80	-1.68	0.39	1.60	1.33	-1.57	-0.98	1.05	0.12	1.33
Avis, Steve	0.80	0.15	1.14	0.32	0.36	0.17	1.16	0.71	0.60	0.41
Castillo, George	-0.92	0.67	0.01	-0.60	0.12	0.67	-0.79	-0.33	-0.15	0.62
Greenland, Paul	-0.49	-0.37	-1.50	-0.41	-0.36	-0.08	-0.59	-2.06	-0.73	0.68
Hill, John	1.23	0.41	-0.74	-0.05	-0.61	0.42	0.77	0.02	0.18	0.67
Lowsky, John	0.37	-0.11	0.95	0.04	0.36	0.30	-1.18	0.71	0.18	0.64
Pitta, Jimmy	1.23	1.46	1.51	1.41	1.33	1.17	1.16	1.05	1.29	0.16
Radonich, Pete	-0.49	-0.63	-1.12	-0.96	-1.33	-0.08	-0.40	-1.71	-0.84	0.54
Rodriguez, Jesse	-0.92	-0.11	-1.12	-0.60	-0.12	-0.33	-0.40	-1.02	-0.58	0.40
Seiz, Ray	0.37	-0.63	0.39	1.05	0.85	-0.82	0.19	0.02	0.17	0.65
Shoda, Ron	-0.49	0.15	0.01	-0.60	-1.09	0.67	0.96	0.36	0.00	0.69
Terrado, Teresa	1.23	1.46	1.14	0.32	0.24	1.42	1.94	1.75	1.19	0.62
Viera, Ralph	-0.92	0.67	0.39	1.05	0.85	0.42	0.58	0.36	0.42	0.59
Yi MAXIMUM	-2.21	-2.46	-1.87	-2.42	-2.79	-2.81	-1.96	-2.06	1.29	1.58
Yi MINIMUM	-0.06	-0.11	0.01	-0.05	-0.12	-0.08	-0.01	-0.33	0.00	0.16
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	9.41	9.04	9.00	8.33	8.65	9.13	8.50	9.00		
Ratings STD	0.23	0.38	0.27	0.55	0.41	0.40	0.51	0.29		

Light Duty Rating Workshop

PART ID = Valve Set G

RATED VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8
Barrera, Tony	9.40	8.90	9.00	8.80	9.50	9.00	9.40	8.80
Foecking, Brian	9.80	9.30	8.70	7.40	9.40	9.50	9.70	8.20
Garcia, Orlando	9.20	9.00	8.80	8.60	9.50	9.10	9.30	8.70
Kobrinetz, Jack	9.80	9.00	8.40	8.00	9.40	9.00	9.60	8.20
Lopez, Frank	9.50	8.20	9.00	8.30	9.50	**8.10**	9.40	8.60
Lopez, Frank	9.50	8.20	9.00	8.30	9.50	**8.10**	9.40	8.60
Pansza, Mike	9.50	8.60	9.10	7.70	**8.70**	8.60	9.40	8.60
Sanchez, Art	9.60	9.10	8.50	7.20	9.50	9.30	9.60	**7.30**
Yanchar, Paul	9.30	9.40	8.50	8.00	9.40	9.40	9.50	8.30
Adams, Pat	9.60	**8.10**	8.90	8.90	9.60	8.20	9.60	**9.60**
Avis, Steve	9.80	9.10	9.20	8.40	9.70	9.30	9.60	8.90
Castillo, George	9.60	9.30	9.00	7.80	9.50	9.40	9.50	8.10
Greenland, Paul	9.20	8.50	8.50	8.20	9.10	9.00	9.20	8.10
Hill, John	9.60	8.80	**7.80**	7.50	9.40	9.30	9.60	8.30
Lowsky, John	9.60	9.00	8.90	7.75	9.60	9.10	9.60	8.50
Pitta, Jimmy	9.70	9.50	9.30	8.80	9.60	9.50	9.70	9.00
Radonich, Pete	9.30	8.80	8.40	7.70	9.20	8.90	9.30	8.00
Rodriguez, Jesse	9.50	9.00	8.20	7.40	9.50	8.90	9.60	7.90
Seiz, Ray	9.50	9.10	9.00	8.40	9.20	8.80	9.60	9.10
Shoda, Ron	9.60	9.10	8.70	8.00	9.60	9.40	9.30	8.10
Terrado, Teresa	9.80	9.40	9.10	8.25	9.70	9.70	**9.90**	8.50
Viera, Ralph	9.40	9.10	8.90	8.80	9.30	9.20	9.40	9.10
MAXIMUM	9.80	9.50	9.30	8.90	9.70	9.70	9.90	9.60
MINIMUM	9.20	8.10	7.80	7.20	8.70	8.10	9.20	7.30
RANGE (MAX-MIN)	0.60	1.40	1.50	1.70	1.00	1.60	0.70	2.30
MEAN	9.54	8.93	8.77	8.10	9.43	9.04	9.51	8.48
STD	0.18	0.40	0.36	0.51	0.23	0.45	0.17	0.50



yi within 1	69%
yi within 2	95%
yi within 3	99%

PART ID = Valve Set G

Yi VALUES

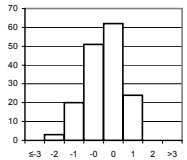
	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8	MEAN	STD
Barrera, Tony	-0.74	-0.08	0.64	1.38	0.32	-0.08	-0.66	0.64	0.18	0.72
Foecking, Brian	1.43	0.93	-0.19	-1.38	-0.12	1.03	1.15	-0.55	0.29	0.99
Garcia, Orlando	-1.83	0.17	0.09	0.99	0.32	0.14	-1.26	0.44	-0.12	0.94
Kobrinetz, Jack	1.43	0.17	-1.01	-0.20	-0.12	-0.08	0.55	-0.55	0.02	0.73
Lopez, Frank	-0.20	-1.85	0.64	0.40	0.32	**-2.08**	-0.66	0.24	-0.40	1.05
Lopez, Frank	-0.20	-1.85	0.64	0.40	0.32	**-2.08**	-0.66	0.24	-0.40	1.05
Pansza, Mike	-0.20	-0.84	0.91	-0.79	**-3.23**	-0.97	-0.66	0.24	-0.69	1.21
Sanchez, Art	0.35	0.43	-0.74	-1.78	0.32	0.59	0.55	**-2.35**	-0.33	1.16
Yanchar, Paul	-1.28	1.18	-0.74	-0.20	-0.12	0.81	-0.05	-0.35	-0.09	0.79
Adams, Pat	0.35	**-2.10**	0.36	1.58	0.77	-1.86	0.55	**2.24**	0.24	1.52
Avis, Steve	1.43	0.43	1.19	0.59	1.21	0.59	0.55	0.84	0.85	0.38
Castillo, George	0.35	0.93	0.64	-0.59	0.32	0.81	-0.05	-0.75	0.21	0.62
Greenland, Paul	-1.83	-1.09	-0.74	0.20	-1.45	-0.08	-1.86	-0.75	-0.95	0.76
Hill, John	0.35	-0.33	**-2.67**	-1.19	-0.12	0.59	0.55	-0.35	-0.40	1.09
Lowsky, John	0.35	0.17	0.36	-0.69	0.77	0.14	0.55	0.05	0.21	0.43
Pitta, Jimmy	0.89	1.44	1.46	1.38	0.77	1.03	1.15	1.04	1.15	0.26
Radonich, Pete	-1.28	-0.33	-1.01	-0.79	-1.01	-0.30	-1.26	-0.95	-0.87	0.38
Rodriguez, Jesse	-0.20	0.17	-1.57	-1.38	0.32	-0.30	0.55	-1.15	-0.44	0.82
Seiz, Ray	-0.20	0.43	0.64	0.59	-1.01	-0.53	0.55	1.24	0.21	0.73
Shoda, Ron	0.35	0.43	-0.19	-0.20	0.77	0.81	-1.26	-0.75	-0.01	0.73
Terrado, Teresa	1.43	1.18	0.91	0.30	1.21	1.48	**2.36**	0.05	1.11	0.72
Viera, Ralph	-0.74	0.43	0.36	1.38	-0.57	0.36	-0.66	1.24	0.23	0.83
Yi MAXIMUM	-1.83	-2.10	-2.67	-1.78	-3.23	-2.08	2.36	-2.35	1.15	1.52
Yi MINIMUM	-0.20	-0.08	-0.19	-0.20	-0.12	-0.08	-0.05	-0.35	-0.01	0.26
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	9.54	8.93	8.77	8.10	9.43	9.04	9.51	8.48		
Ratings STD	0.18	0.40	0.36	0.51	0.23	0.45	0.17	0.50		

Light Duty Rating Workshop

PART ID = **Valve Set H**

RATED VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8
Barrera, Tony	9.40	8.90	9.00	8.70	9.60	8.80	9.00	9.00
Foecking, Brian	9.70	9.40	8.90	7.90	9.80	9.70	9.30	8.90
Garcia, Orlando	9.30	9.10	9.20	8.40	9.60	9.00	8.60	9.10
Kobrinetz, Jack	9.60	9.10	8.50	7.60	9.50	8.80	9.00	8.40
Pansza, Mike	9.30	8.80	8.90	7.80	**9.20**	8.60	8.70	**8.20**
Sanchez, Art	9.60	9.10	8.70	7.00	9.60	9.30	9.30	9.00
Yanchar, Paul	9.40	9.40	8.90	7.90	9.70	9.40	9.10	8.60
Adams, Pat	9.50	**8.30**	9.30	9.10	9.50	8.90	9.20	9.10
Avis, Steve	9.70	9.20	9.20	8.70	9.70	9.20	9.30	9.10
Castillo, George	9.40	9.30	8.60	7.60	9.60	9.30	8.90	8.40
Greenland, Paul	9.50	9.10	9.10	8.00	9.50	9.00	8.90	9.00
Hill, John	9.70	9.30	9.10	8.20	9.70	9.30	8.90	8.90
Lowsky, John	9.60	9.25	9.40	8.25	9.85	9.10	8.60	9.50
Pitta, Jimmy	9.70	9.50	9.10	8.80	9.60	9.40	9.30	9.10
Radonich, Pete	9.60	8.90	8.50	7.20	9.60	8.80	8.90	8.70
Rodriguez, Jesse	9.50	8.80	8.60	7.30	9.60	8.80	8.50	8.30
Seiz, Ray	9.70	8.70	9.20	9.00	9.50	8.60	9.20	9.10
Shoda, Ron	9.50	9.10	8.60	7.50	9.70	9.30	9.60	9.00
Terrado, Teresa	9.80	9.60	9.30	8.25	9.80	9.70	9.60	9.10
Viera, Ralph	9.40	9.00	9.10	8.70	9.70	8.90	9.10	8.90
MAXIMUM	9.80	9.60	9.40	9.10	9.85	9.70	9.60	9.50
MINIMUM	9.30	8.30	8.50	7.00	9.20	8.60	8.50	8.20
RANGE (MAX-MIN)	0.50	1.30	0.90	2.10	0.65	1.10	1.10	1.30
MEAN	9.55	9.09	8.96	8.10	9.62	9.10	9.05	8.87
STD	0.15	0.31	0.29	0.62	0.14	0.33	0.31	0.33



yi within 1	71%
yi within 2	98%
yi within 3	100%

PART ID = **Valve Set H**

Yi VALUES

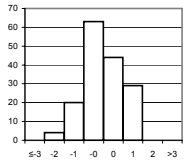
	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8	MEAN	STD
Barrera, Tony	-0.99	-0.63	0.14	0.98	-0.12	-0.90	-0.16	0.39	-0.16	0.67
Foecking, Brian	1.06	1.01	-0.21	-0.32	1.28	1.85	0.81	0.09	0.70	0.77
Garcia, Orlando	-1.67	0.02	0.84	0.49	-0.12	-0.29	-1.45	0.69	-0.19	0.94
Kobrinetz, Jack	0.37	0.02	-1.60	-0.80	-0.82	-0.90	-0.16	-1.41	-0.66	0.69
Pansza, Mike	-1.67	-0.96	-0.21	-0.48	**-2.93**	-1.51	-1.13	**-2.01**	-1.36	0.87
Sanchez, Art	0.37	0.02	-0.91	-1.78	-0.12	0.63	0.81	0.39	-0.07	0.87
Yanchar, Paul	-0.99	1.01	-0.21	-0.32	0.58	0.93	0.16	-0.81	0.04	0.76
Adams, Pat	-0.31	**-2.60**	1.18	1.63	-0.82	-0.60	0.48	0.69	-0.04	1.34
Avis, Steve	1.06	0.35	0.84	0.98	0.58	0.32	0.81	0.69	0.70	0.27
Castillo, George	-0.99	0.68	-1.25	-0.80	-0.12	0.63	-0.48	-1.41	-0.47	0.80
Greenland, Paul	-0.31	0.02	0.49	-0.15	-0.82	-0.29	-0.48	0.39	-0.14	0.44
Hill, John	1.06	0.68	0.49	0.17	0.58	0.63	-0.48	0.09	0.40	0.47
Lowsky, John	0.37	0.52	1.53	0.25	1.63	0.02	-1.45	1.89	0.60	1.09
Pitta, Jimmy	1.06	1.33	0.49	1.14	-0.12	0.93	0.81	0.69	0.79	0.45
Radonich, Pete	0.37	-0.63	-1.60	-1.45	-0.12	-0.90	-0.48	-0.51	-0.67	0.65
Rodriguez, Jesse	-0.31	-0.96	-1.25	-1.29	-0.12	-0.90	-1.77	-1.71	-1.04	0.60
Seiz, Ray	1.06	-1.29	0.84	1.47	-0.82	-1.51	0.48	0.69	0.11	1.15
Shoda, Ron	-0.31	0.02	-1.25	-0.96	0.58	0.63	1.77	0.39	0.11	0.97
Terrado, Teresa	1.74	1.66	1.18	0.25	1.28	1.85	1.77	0.69	1.30	0.58
Viera, Ralph	-0.99	-0.30	0.49	0.98	0.58	-0.60	0.16	0.09	0.05	0.65
Yi MAXIMUM	1.74	-2.60	-1.60	-1.78	-2.93	1.85	1.77	-2.01	-1.36	1.34
Yi MINIMUM	-0.31	-0.30	0.14	-0.15	-0.12	-0.29	-0.16	0.09	-0.04	0.27
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	9.55	9.09	8.96	8.10	9.62	9.10	9.05	8.87		
Ratings STD	0.15	0.31	0.29	0.62	0.14	0.33	0.31	0.33		

Light Duty Rating Workshop

PART ID = Valve Set I

RATED VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8
Barrera, Tony	9.10	8.90	8.60	8.50	9.20	8.80	9.00	8.80
Foecking, Brian	9.60	9.60	8.20	7.70	9.30	9.70	9.60	8.70
Garcia, Orlando	9.40	9.20	8.60	8.30	9.40	9.10	9.30	8.90
Kobrinetz, Jack	9.60	9.10	7.80	7.50	8.80	9.00	9.10	8.00
Pansza, Mike	9.30	8.60	8.00	7.60	9.20	8.90	9.00	8.70
Sanchez, Art	9.60	9.40	**7.00**	6.80	9.30	9.50	9.20	**7.00**
Yanchar, Paul	9.30	9.50	8.00	7.70	9.10	9.40	**8.30**	8.10
Adams, Pat	9.50	8.90	8.80	8.50	9.50	8.70	9.30	9.10
Avis, Steve	9.70	9.30	8.70	7.70	9.30	9.20	9.40	8.70
Castillo, George	9.40	9.30	8.00	7.40	9.20	9.40	8.80	8.30
Greenland, Paul	9.10	9.00	7.90	7.50	**8.70**	9.10	9.00	8.10
Hill, John	9.30	9.20	7.80	8.20	9.60	9.10	9.20	8.70
Lowsky, John	9.65	9.25	8.15	7.15	9.50	9.25	8.85	8.70
Pitta, Jimmy	9.80	9.60	9.10	8.50	9.50	9.50	9.60	9.10
Radonich, Pete	9.40	8.80	7.20	6.60	9.10	8.70	8.90	8.20
Rodriguez, Jesse	9.30	8.70	7.90	7.30	9.00	8.80	8.70	7.90
Seiz, Ray	9.30	8.90	9.00	9.00	9.30	8.70	8.90	9.00
Shoda, Ron	9.20	9.10	7.70	6.80	9.40	9.20	8.70	8.40
Terrado, Teresa	9.50	9.50	8.25	7.75	9.40	9.70	8.75	8.50
Viera, Ralph	9.30	9.00	8.60	8.50	9.20	9.10	9.00	9.10
MAXIMUM	9.80	9.60	9.10	9.00	9.60	9.70	9.60	9.10
MINIMUM	9.10	8.60	7.00	6.60	8.70	8.70	8.30	7.00
RANGE (MAX-MIN)	0.70	1.00	2.10	2.40	0.90	1.00	1.30	2.10
MEAN	9.42	9.14	8.17	7.75	9.25	9.14	9.03	8.50
STD	0.20	0.29	0.55	0.66	0.23	0.32	0.32	0.52



yi within 1	67%
yi within 2	98%
yi within 3	100%

PART ID = Valve Set I

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8	MEAN	STD
Barrera, Tony	-1.62	-0.83	0.79	1.14	-0.22	-1.07	-0.09	0.58	-0.17	0.97
Foecking, Brian	0.93	1.56	0.06	-0.08	0.22	1.75	1.78	0.39	0.83	0.78
Garcia, Orlando	-0.09	0.20	0.79	0.83	0.65	-0.13	0.84	0.77	0.48	0.42
Kobrinetz, Jack	0.93	-0.14	-0.66	-0.38	-1.95	-0.45	0.22	-0.97	-0.42	0.85
Pansza, Mike	-0.60	-1.85	-0.30	-0.23	-0.22	-0.76	-0.09	0.39	-0.46	0.66
Sanchez, Art	0.93	0.88	**-2.10**	-1.44	0.22	1.12	0.53	**-2.90**	-0.34	1.57
Yanchar, Paul	-0.60	1.22	-0.30	-0.08	-0.65	0.81	**-2.28**	-0.77	-0.33	1.06
Adams, Pat	0.42	-0.83	1.15	1.14	1.08	-1.39	0.84	1.16	0.45	1.00
Avis, Steve	1.44	0.54	0.97	-0.08	0.22	0.18	1.16	0.39	0.60	0.53
Castillo, George	-0.09	0.54	-0.30	-0.53	-0.22	0.81	-0.72	-0.39	-0.11	0.52
Greenland, Paul	-1.62	-0.49	-0.48	-0.38	**-2.39**	-0.13	-0.09	-0.77	-0.79	0.80
Hill, John	-0.60	0.20	-0.66	0.68	1.52	-0.13	0.53	0.39	0.24	0.72
Lowsky, John	1.19	0.37	-0.03	-0.91	1.08	0.34	-0.56	0.39	0.23	0.73
Pitta, Jimmy	1.96	1.56	1.69	1.14	1.08	1.12	1.78	1.16	1.44	0.35
Radonich, Pete	-0.09	-1.17	-1.74	-1.74	-0.65	-1.39	-0.41	-0.58	-0.97	0.63
Rodriguez, Jesse	-0.60	-1.51	-0.48	-0.68	-1.08	-1.07	-1.03	-1.16	-0.95	0.34
Seiz, Ray	-0.60	-0.83	1.51	1.89	0.22	-1.39	-0.41	0.97	0.17	1.18
Shoda, Ron	-1.11	-0.14	-0.84	-1.44	0.65	0.18	-1.03	-0.19	-0.49	0.72
Terrado, Teresa	0.42	1.22	0.15	0.00	0.65	1.75	-0.87	0.00	0.41	0.81
Viera, Ralph	-0.60	-0.49	0.79	1.14	-0.22	-0.13	-0.09	1.16	0.19	0.72
Yi MAXIMUM	1.96	-1.85	-2.10	1.89	-2.39	1.75	-2.28	-2.90	1.44	1.57
Yi MINIMUM	-0.09	-0.14	-0.03	-0.08	-0.22	-0.13	-0.09	-0.19	-0.11	0.34
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	9.42	9.14	8.17	7.75	9.25	9.14	9.03	8.50		
Ratings STD	0.20	0.29	0.55	0.66	0.23	0.32	0.32	0.52		

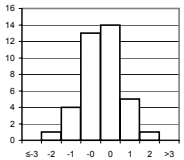
May 12-16, 2008

Light Duty Rating Workshop

PART ID = **Calibration - Piston Tops**

RATED VALUES

	Piston 1	Piston 2
Barrera, Tony	8.44	8.32
Foecking, Brian	8.90	**8.90**
Garcia, Orlando	7.91	8.03
Kobrinetz, Jack	7.88	7.85
Lopez, Frank	8.29	7.92
Pansza, Mike	8.60	8.10
Sanchez, Art	8.18	7.71
Yanchar, Paul	8.83	8.74
Adams, Pat	7.74	7.73
Castillo, George	8.24	8.08
Hill, John	8.66	8.29
Lowsky, John	7.95	7.95
Pitta, Jimmy	8.50	8.20
Radonich, Pete	8.70	8.50
Rodriguez, Jesse	8.51	8.46
Seiz, Ray	7.66	**7.21**
Shoda, Ron	8.50	8.20
Terrado, Teresa	7.50	7.80
Viera, Ralph	7.50	7.80
MAXIMUM	8.90	8.90
MINIMUM	7.50	7.21
RANGE (MAX-MIN)	1.40	1.69
MEAN	8.24	8.09
STD	0.44	0.40



yi within 1	71%
yi within 2	95%
yi within 3	100%

PART ID = **Calibration - Piston Tops**

Yi VALUES

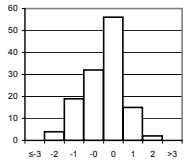
	Piston 1	Piston 2	MEAN	STD
Barrera, Tony	0.46	0.57	0.51	0.08
Foecking, Brian	1.49	**2.03**	1.76	0.38
Garcia, Orlando	-0.73	-0.16	-0.45	0.40
Kobrinetz, Jack	-0.80	-0.62	-0.71	0.13
Lopez, Frank	0.12	-0.44	-0.16	0.40
Pansza, Mike	0.82	0.01	0.42	0.57
Sanchez, Art	-0.13	-0.97	-0.55	0.60
Yanchar, Paul	1.34	1.63	1.48	0.21
Adams, Pat	-1.12	-0.92	-1.02	0.14
Castillo, George	0.01	-0.04	-0.01	0.03
Hill, John	0.95	0.49	0.72	0.32
Lowsky, John	-0.64	-0.36	-0.50	0.20
Pitta, Jimmy	0.59	0.27	0.43	0.23
Radonich, Pete	1.04	1.02	1.03	0.01
Rodriguez, Jesse	0.62	0.92	0.77	0.22
Seiz, Ray	-1.30	**-2.23**	-1.76	0.66
Shoda, Ron	0.59	0.27	0.43	0.23
Terrado, Teresa	-1.66	-0.74	-1.20	0.65
Viera, Ralph	-1.66	-0.74	-1.20	0.65
Yi MAXIMUM	-1.66	-2.23	-1.76	0.66
Yi MINIMUM	0.01	-0.04	-0.01	0.01
Yi MEAN	0.00	0.00		
Yi STD	1.00	1.00		
Ratings MEAN	8.24	8.09		
Ratings STD	0.44	0.40		

Light Duty Rating Workshop

PART ID = **J1-8 - Piston Tops**

RATED VALUES

	1	2	3	4	5	6	7	8
Barrera, Tony	8.73	8.76	8.75	8.73	8.59	8.54	8.56	8.61
Foecking, Brian	8.20	8.40	8.32	8.40	7.64	7.39	7.49	7.75
Garcia, Orlando	8.08	8.24	8.22	8.28	8.02	7.83	7.81	7.88
Kobrinetz, Jack	8.31	8.38	8.21	8.26	8.04	7.86	7.96	7.89
Lopez, Frank	8.52	8.51	8.38	8.48	8.26	7.18	7.63	8.08
Pansza, Mike	8.56	8.34	8.90	8.80	8.23	7.10	7.98	7.50
Sanchez, Art	7.65	7.57	7.57	7.47	7.41	7.00	7.05	7.05
Yanchar, Paul	8.75	8.72	8.69	8.61	8.46	8.13	8.12	8.44
Adams, Pat	7.98	7.90	7.95	7.96	7.85	7.54	7.45	7.84
Castillo, George	7.98	7.97	7.77	7.88	7.77	7.68	7.79	7.64
Hill, John	8.85	8.76	8.78	8.61	8.01	7.80	8.21	8.73
Lowsky, John	7.28	7.18	7.28	7.15	7.18	6.95	7.06	7.08
Radonich, Pete	8.50	8.60	8.70	8.40	8.20	7.50	7.60	7.90
Rodriguez, Jesse	8.67	8.65	8.43	8.35	8.27	7.76	7.83	7.91
Seiz, Ray	7.85	7.88	7.72	7.54	7.40	7.52	7.81	7.70
Shoda, Ron	8.70	8.60	8.70	8.50	8.10	7.00	7.30	7.60
MAXIMUM	8.85	8.76	8.90	8.80	8.59	8.54	8.56	8.73
MINIMUM	7.28	7.18	7.28	7.15	7.18	6.95	7.05	7.05
RANGE (MAX-MIN)	1.57	1.58	1.62	1.65	1.41	1.59	1.51	1.68
MEAN	8.29	8.28	8.27	8.21	7.96	7.55	7.73	7.85
STD	0.45	0.46	0.49	0.48	0.40	0.44	0.41	0.47



yi within 1	69%
yi within 2	95%
yi within 3	100%

PART ID = **J1-8 - Piston Tops**

Yi VALUES

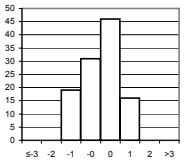
	1	2	3	4	5	6	7	8	MEAN	STD
Barrera, Tony	0.98	1.04	0.97	1.07	1.57	2.24	2.05	1.63	1.44	0.51
Foecking, Brian	-0.19	0.26	0.10	0.39	-0.82	-0.36	-0.59	-0.21	-0.18	0.41
Garcia, Orlando	-0.46	-0.08	-0.11	0.14	0.14	0.63	0.20	0.06	0.07	0.31
Kobrinetz, Jack	0.05	0.22	-0.13	0.10	0.19	0.70	0.57	0.09	0.22	0.28
Lopez, Frank	0.51	0.50	0.22	0.55	0.74	-0.83	-0.24	0.49	0.24	0.53
Pansza, Mike	0.60	0.13	1.28	1.22	0.67	-1.01	0.62	-0.75	0.34	0.84
Sanchez, Art	-1.41	-1.54	-1.43	-1.54	-1.39	-1.24	-1.67	-1.72	-1.49	0.16
Yanchar, Paul	1.02	0.96	0.85	0.82	1.25	1.31	0.97	1.27	1.05	0.19
Adams, Pat	-0.68	-0.82	-0.66	-0.53	-0.29	-0.02	-0.69	-0.02	-0.46	0.31
Castillo, George	-0.68	-0.67	-1.03	-0.69	-0.49	0.30	0.15	-0.45	-0.45	0.45
Hill, John	1.24	1.04	1.03	0.82	0.11	0.57	1.19	1.89	0.99	0.52
Lowsky, John	-2.23	-2.38	-2.03	-2.21	-1.97	-1.35	-1.65	-1.65	-1.93	0.35
Radonich, Pete	0.47	0.70	0.87	0.39	0.59	-0.11	-0.32	0.11	0.34	0.41
Rodriguez, Jesse	0.84	0.80	0.32	0.28	0.77	0.48	0.25	0.13	0.48	0.28
Seiz, Ray	-0.97	-0.86	-1.13	-1.40	-1.42	-0.06	0.20	-0.32	-0.75	0.61
Shoda, Ron	0.91	0.70	0.87	0.59	0.34	-1.24	-1.05	-0.54	0.07	0.88
Yi MAXIMUM	-2.23	-2.38	-2.03	-2.21	-1.97	2.24	2.05	1.89	-1.93	0.88
Yi MINIMUM	-0.19	-0.08	0.10	0.10	-0.29	-0.02	-0.24	-0.02	-0.18	0.16
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	8.29	8.28	8.27	8.21	7.96	7.55	7.73	7.85		
Ratings STD	0.45	0.46	0.49	0.48	0.40	0.44	0.41	0.47		

Light Duty Rating Workshop

PART ID = **K1-8 - Combustion Chambers**

RATED VALUES

	1	2	3	4	5	6	7	8
Barrera, Tony	8.48	8.48	8.37	8.43	8.30	8.09	8.55	8.42
Foecking, Brian	8.30	8.39	8.33	8.70	7.52	7.40	8.10	7.80
Garcia, Orlando	8.25	8.35	8.24	8.40	8.13	8.12	8.26	8.29
Kobrinetz, Jack	8.44	8.44	8.47	8.59	8.21	8.19	8.47	8.53
Lopez, Frank	7.88	7.88	8.03	8.20	7.42	7.21	7.51	7.77
Pansza, Mike	7.49	8.00	7.73	7.83	7.18	7.30	7.34	7.40
Yanchar, Paul	8.71	8.73	8.70	8.93	8.34	8.33	8.82	8.79
Adams, Pat	8.07	8.02	8.06	8.13	8.01	7.88	8.13	8.13
Castillo, George	8.42	8.17	8.28	8.42	7.66	7.47	7.75	7.84
Hill, John	8.22	8.36	8.12	8.82	8.23	8.26	8.22	8.20
Lowsky, John	7.54	7.77	7.75	7.93	7.47	7.49	7.66	7.82
Radonich, Pete	8.12	8.15	8.20	8.30	8.20	8.15	8.35	8.39
Rodriguez, Jesse	7.91	7.93	8.10	8.42	7.87	7.80	8.10	8.21
Shoda, Ron	8.00	8.10	8.30	8.50	7.30	7.20	7.50	7.70
MAXIMUM	8.71	8.73	8.70	8.93	8.34	8.33	8.82	8.79
MINIMUM	7.49	7.77	7.73	7.83	7.18	7.20	7.34	7.40
RANGE (MAX-MIN)	1.22	0.96	0.97	1.10	1.16	1.13	1.48	1.39
MEAN	8.13	8.20	8.19	8.40	7.85	7.78	8.05	8.09
STD	0.35	0.27	0.26	0.31	0.41	0.42	0.44	0.38



yi within 1	69%
yi within 2	100%
yi within 3	100%

PART ID = **K1-8 - Combustion Chambers**

Yi VALUES

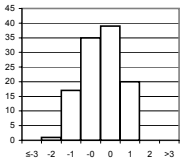
	1	2	3	4	5	6	7	8	MEAN	STD
Barrera, Tony	1.00	1.05	0.69	0.10	1.11	0.75	1.12	0.86	0.83	0.34
Foecking, Brian	0.49	0.71	0.53	0.96	-0.80	-0.90	0.10	-0.76	0.04	0.75
Garcia, Orlando	0.34	0.56	0.19	0.00	0.70	0.82	0.47	0.52	0.45	0.27
Kobrinetz, Jack	0.89	0.90	1.07	0.61	0.89	0.98	0.94	1.15	0.93	0.16
Lopez, Frank	-0.72	-1.18	-0.62	-0.64	-1.04	-1.36	-1.23	-0.84	-0.95	0.29
Pansza, Mike	-1.84	-0.73	-1.78	-1.83	-1.63	-1.14	-1.62	-1.81	-1.55	0.40
Yanchar, Paul	1.66	1.97	1.96	1.70	1.21	1.32	1.73	1.83	1.67	0.28
Adams, Pat	-0.17	-0.66	-0.51	-0.87	0.40	0.24	0.17	0.10	-0.16	0.47
Castillo, George	0.83	-0.10	0.34	0.06	-0.45	-0.74	-0.69	-0.66	-0.18	0.56
Hill, John	0.26	0.60	-0.28	1.35	0.94	1.15	0.38	0.28	0.58	0.54
Lowsky, John	-1.69	-1.59	-1.70	-1.51	-0.92	-0.69	-0.89	-0.71	-1.21	0.45
Radonich, Pete	-0.03	-0.18	0.03	-0.32	0.87	0.89	0.67	0.78	0.34	0.51
Rodriguez, Jesse	-0.63	-0.99	-0.35	0.06	0.06	0.05	0.10	0.31	-0.17	0.44
Shoda, Ron	-0.37	-0.36	0.42	0.32	-1.34	-1.38	-1.26	-1.03	-0.62	0.73
Yi MAXIMUM	-1.84	1.97	1.96	-1.83	-1.63	-1.38	1.73	1.83	1.67	0.75
Yi MINIMUM	-0.03	-0.10	0.03	0.00	-0.45	0.05	0.10	-0.66	0.04	0.16
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	8.13	8.20	8.19	8.40	7.85	7.78	8.05	8.09		
Ratings STD	0.35	0.27	0.26	0.31	0.41	0.42	0.44	0.38		

Light Duty Rating Workshop

PART ID = **L1-8 - Intake Manifold Runners**

RATED VALUES

	1	2	3	4	5	6	7	8
Barrera, Tony	8.08	8.65	9.17	8.55	8.75	8.40	8.46	8.57
Foecking, Brian	7.40	7.70	7.80	7.50	8.40	7.70	7.70	7.90
Garcia, Orlando	8.23	8.28	8.80	8.42	8.58	8.15	8.23	8.06
Kobrinetz, Jack	8.35	8.73	8.93	8.73	8.56	8.28	8.59	8.66
Lopez, Frank	6.93	7.23	8.74	7.19	7.45	7.00	**6.80**	7.19
Pansza, Mike	7.80	7.80	7.50	7.70	8.30	7.60	7.80	7.90
Yanchar, Paul	7.40	7.50	8.00	7.60	7.60	7.20	7.40	7.40
Adams, Pat	7.58	7.73	7.76	7.84	7.97	7.80	7.80	7.80
Castillo, George	7.90	8.33	8.96	8.15	8.15	8.51	8.28	7.99
Hill, John	8.36	8.11	8.76	8.61	8.82	8.62	8.62	8.37
Lowsky, John	7.45	8.41	9.13	8.53	8.11	8.08	8.33	8.11
Radonich, Pete	7.40	8.80	9.20	7.80	8.30	7.95	8.00	8.15
Rodriguez, Jesse	7.61	8.37	8.71	8.09	7.90	7.76	8.20	7.83
Shoda, Ron	7.50	7.00	8.40	8.30	8.20	7.30	7.80	7.50
MAXIMUM	8.36	8.80	9.20	8.73	8.82	8.62	8.62	8.66
MINIMUM	6.93	7.00	7.50	7.19	7.45	7.00	6.80	7.19
RANGE (MAX-MIN)	1.43	1.80	1.70	1.54	1.37	1.62	1.82	1.47
MEAN	7.71	8.05	8.56	8.07	8.22	7.88	8.00	7.96
STD	0.42	0.56	0.57	0.48	0.40	0.50	0.50	0.42



yi within 1	66%
yi within 2	99%
yi within 3	100%

PART ID = **L1-8 - Intake Manifold Runners**

Yi VALUES

	1	2	3	4	5	6	7	8	MEAN	STD
Barrera, Tony	0.87	1.07	1.07	1.01	1.32	1.04	0.92	1.46	1.10	0.20
Foecking, Brian	-0.74	-0.61	-1.33	-1.20	0.45	-0.37	-0.60	-0.14	-0.57	0.57
Garcia, Orlando	1.22	0.42	0.42	0.73	0.90	0.54	0.46	0.24	0.62	0.32
Kobrinetz, Jack	1.51	1.22	0.65	1.38	0.85	0.80	1.18	1.68	1.16	0.37
Lopez, Frank	-1.86	-1.45	0.31	-1.86	-1.92	-1.78	**-2.41**	-1.84	-1.60	0.82
Pansza, Mike	0.20	-0.44	-1.86	-0.78	0.20	-0.57	-0.40	-0.14	-0.47	0.66
Yanchar, Paul	-0.74	-0.97	-0.98	-0.99	-1.55	-1.38	-1.20	-1.34	-1.14	0.27
Adams, Pat	-0.32	-0.56	-1.40	-0.49	-0.63	-0.17	-0.40	-0.38	-0.54	0.38
Castillo, George	0.44	0.51	0.70	0.16	-0.18	1.27	0.56	0.07	0.44	0.44
Hill, John	1.53	0.11	0.35	1.13	1.49	1.49	1.24	0.98	1.04	0.54
Lowsky, John	-0.62	0.65	1.00	0.96	-0.28	0.40	0.66	0.36	0.39	0.57
Radonich, Pete	-0.74	1.34	1.12	-0.57	0.20	0.14	0.00	0.46	0.24	0.73
Rodriguez, Jesse	-0.25	0.58	0.26	0.04	-0.80	-0.25	0.40	-0.31	-0.04	0.45
Shoda, Ron	-0.51	-1.86	-0.28	0.48	-0.05	-1.17	-0.40	-1.10	-0.61	0.73
Yi MAXIMUM	-1.86	-1.86	-1.86	-1.86	-1.92	-1.78	-2.41	-1.84	-1.60	0.82
Yi MINIMUM	-0.25	-0.44	0.26	-0.49	-0.05	-0.17	0.00	-0.14	-0.04	0.20
Yi MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Ratings MEAN	7.71	8.05	8.56	8.07	8.22	7.88	8.00	7.96		
Ratings STD	0.42	0.56	0.57	0.48	0.40	0.50	0.50	0.42		

Outline of Rating Workshop Data Analysis Method

1. Calculate the mean and standard deviation of all rated zones for all parts.

2. Convert each individual rating result to a standardized result (Y_i):
   Y_i = (rating - mean)/standard deviation

3. Assess distribution of data using histogram of Y_i results. Investigate causes for any distribution that is not statistically normal and reject data where no resolution is possible.

4. Summarize standardized results for each rater across all parts and determine the following:

   number of Y_i values where $-1 < Y_i \leq 1$
   number of Y_i values where $-2 < Y_i \leq 2$
   number of Y_i values where $-3 < Y_i \leq 3$
   overall standard deviation of the Y_i s

5. Compare and group according to the criteria below:

Group	n*	Within ± 1 Y_i	Within ± 2 Y_i	Maximum Std. Dev.
Blue	6	85%	98%	0.75
Red	6	80%	95%	0.85
White	6	60%	90%	1.20
Yellow	-	-	-	-

* Varies by test area

May 2, 2005
Revised: June 5, 2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

	Number of Parts Rated	-1 < yi ≤ 1	-2 < yi ≤ 2	-3 < yi ≤ 3	>3	Yi STD	Group
Barrera, Tony	11	85.1%	97.7%	100.0%	0.0%	0.73	Red
Cales, Jonathon	16	65.9%	89.7%	98.4%	1.6%	1.08	Yellow
Caproni, David	16	61.1%	92.9%	100.0%	0.0%	1.10	White
Foecking, Brian	13	86.4%	100.0%	100.0%	0.0%	0.66	Blue
Garcia, Orlando	14	71.4%	93.8%	100.0%	0.0%	0.96	White
Hills, Barry	16	73.0%	96.8%	100.0%	0.0%	0.88	White
Kobrinetz, Jack	16	88.1%	99.2%	100.0%	0.0%	0.65	Blue
Lopez, Frank	10	73.4%	100.0%	100.0%	0.0%	0.78	White
Pansza, Mike	14	72.1%	92.8%	100.0%	0.0%	0.98	White
Sanchez, Art	10	77.2%	94.9%	100.0%	0.0%	0.85	White
Yanchar, Paul	16	81.7%	100.0%	100.0%	0.0%	0.70	Red
Adams, Pat	16	84.1%	99.2%	99.2%	0.8%	0.74	Red
Avis, Steve	16	70.6%	97.6%	100.0%	0.0%	0.94	White
Castillo, George	16	79.4%	100.0%	100.0%	0.0%	0.74	White
Greenland, Paul	10	67.1%	98.7%	100.0%	0.0%	0.92	White
Hill, John	10	59.5%	93.7%	94.9%	5.1%	1.20	Yellow
Lowsky, John	16	58.7%	81.0%	96.0%	4.0%	1.40	Yellow
May, Marianne	16	87.3%	99.2%	100.0%	0.0%	0.64	Blue
Pitta, Jimmy	16	69.8%	92.1%	96.0%	4.0%	1.21	Yellow
Radonich, Pete	16	88.1%	99.2%	100.0%	0.0%	0.65	Blue
Rodriguez, Jesse	10	93.7%	100.0%	100.0%	0.0%	0.55	Blue
Seiz, Ray	13	60.8%	87.3%	98.0%	2.0%	1.25	Yellow
Shoda, Ron	16	78.6%	98.4%	99.2%	0.8%	0.83	White
Terrado, Teresa	14	58.0%	77.7%	87.5%	12.5%	1.76	Yellow
Trevino, Robert	10	91.1%	100.0%	100.0%	0.0%	0.58	Blue
Viera, Ralph	16	65.9%	96.0%	98.4%	1.6%	1.03	White

Group Criteria

	Minimum Number of Parts Rated	Minimum Yi's within 1 STD of mean	Minimum Yi's within 2 STD of mean	Maximum Overall Yi STD	Group Totals	
White	6	60%	90%	1.20	11	42%
Red	6	80%	95%	0.85	3	12%
Blue	6	85%	98%	0.75	6	23%
Yellow	-	-	-	-	6	23%

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

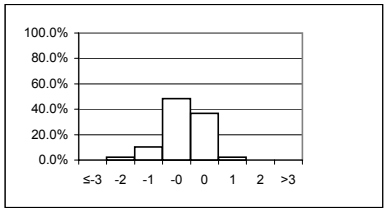
Rater = **Barrera, Tony**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-0.24	-0.07	0.56		-0.16	0.15		0.48	-0.56	0.46								0.29	0.44	0.08	0.40
Calibration_1_Piston_B	-0.10	0.05	-0.76		-0.42	0.11		-0.10	-0.81	-0.40								-0.65	-0.37	-0.30	0.35
Calibration_2_Piston_A	-0.01	0.23	0.68		-0.44	0.01		-0.11	-0.86	0.31								-0.18	-0.02	-0.02	0.47
Calibration_2_Piston_B	-0.58	-0.42	**-2.08**		-0.03	-0.37		0.49	-0.18	0.35								-0.92	-0.81	-0.35	0.79
A1-Sequence_III_Piston	-0.35	-0.40	-1.20		-0.48	-1.49		0.40	0.43	0.55								-1.02	-1.47	-0.32	0.76
A2-Sequence_III_Piston																					
A3-Sequence_III_Piston																					
A4-Sequence_III_Piston																					
A5-Square-cut_Piston																					
A6-Sequence_III_Piston																					
B1-Sequence_III_Piston	-0.04	-0.43	-1.35		-0.41	0.00		0.11	0.54	1.02								-0.30	-0.31	-0.07	0.71
B2-Sequence_III_Piston	-1.65	0.21	-1.89		-0.52	-0.75		0.97	-0.32	0.12								-0.59	-0.84	-0.48	0.96
B3-Sequence_III_Piston	-0.33	-0.98	-1.54		0.05	-0.95		0.38	-0.94	0.92								-0.81	-1.01	-0.42	0.83
B4-Sequence_III_Piston	0.24	-0.51	-1.15		-0.56	-0.20		0.74	-0.11	0.10								-0.94	-0.98	-0.18	0.57
B5-Square-cut_Piston	0.56	0.55	1.08	0.62	-0.33	0.42	0.99											0.67	0.39	0.56	0.46
B6-Sequence_III_Piston	0.98	-0.13	**-2.51**		-0.33	-0.32		-0.17	-1.08	-1.67								-0.15	-0.58	-0.65	1.07
Yi MAXIMUM	-1.65	-0.98	**-2.51**	0.62	-0.56	-1.49	0.99	0.97	-1.08	-1.67										-0.65	1.07
Yi MINIMUM	-0.01	0.05	0.56	0.62	-0.03	0.00	0.99	-0.10	-0.11	0.10										-0.02	0.35
Yi MEAN	-0.14	-0.17	-0.92	0.62	-0.33	-0.31	0.99	0.32	-0.39	0.18											
Yi STD	0.67	0.43	1.20		0.20	0.56		0.38	0.56	0.77											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	2	2.3%	-1 < yi ≤ 1	85.1%
-2 lt yi le -1	9	10.3%	-2 < yi ≤ 2	97.7%
-1 lt yi le 0	42	48.3%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	32	36.8%	>3	0.0%
1 lt yi le 2	2	2.3%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.73
3 lt yi	0	0.0%		
total	87	100.0%	Parts Rated	11

Yi distribution (excluding shaded columns)



Group: Red

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

Rater = **Cales, Jonathon**

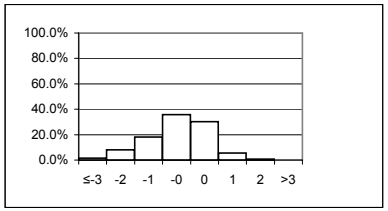
Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	0.37	-0.10	-0.57		-0.22	0.54		1.19	-0.28	0.54								0.54	0.37	0.18	0.57
Calibration_1_Piston_B	0.37	-0.58	**-2.33**		-0.38	0.17		0.16	-0.92	0.28								-0.81	-0.57	-0.40	0.90
Calibration_2_Piston_A	1.44	-1.93	-0.33		-0.36	0.74		-0.16	**-2.14**	1.04								0.15	0.37	-0.21	1.31
Calibration_2_Piston_B	0.72	-0.28	-0.14		0.01	-0.06		1.05	-1.66	-0.25								0.38	0.08	-0.08	0.80
A1-Sequence_III_Piston	-0.35	-1.09	-0.44		1.21	-0.81		-0.63	-0.25	0.78								-0.71	-0.67	-0.20	0.79
A2-Sequence_III_Piston	0.20	**-2.13**	0.70		0.40	0.21		0.69	0.66	0.65								-0.06	0.15	0.17	0.95
A3-Sequence_III_Piston	-0.91	-1.54	-1.27		-0.40	**-3.11**		-0.68	**-2.31**	0.52								**-2.23**	**-2.61**	-1.21	1.13
A4-Sequence_III_Piston	**2.20**	-0.36	-1.10		-0.41	-0.32		-0.25	-1.83	1.64								0.05	-0.56	-0.05	1.34
A5-Square-cut_Piston	-0.93	-1.67	0.48	0.77	-1.56	0.97	0.85											-1.40	-1.47	-0.15	1.19
A6-Sequence_III_Piston	0.84	**-2.64**	-1.89		-0.34	-1.78		-0.20	**-2.97**	0.37								-1.97	**-2.09**	-1.08	1.43
B1-Sequence_III_Piston	**-2.02**	-1.96	-0.80		0.05	-1.84		-0.36	0.94	0.59								**-2.11**	-1.99	-0.68	1.18
B2-Sequence_III_Piston	0.63	0.21	-0.26		-0.97	-1.79		-0.88	**-2.46**	0.37								-1.97	**-2.12**	-0.64	1.09
B3-Sequence_III_Piston	0.38	-1.19	-1.25		-0.79	**-2.06**		-1.00	**-3.14**	-1.24								**-2.14**	**-2.39**	-1.29	1.01
B4-Sequence_III_Piston	0.24	-1.27	-0.95		-0.67	-1.23		-0.16	-1.86	-0.61								**-2.90**	**-2.70**	-0.81	0.66
B5-Square-cut_Piston	-1.38	-1.45	0.01	-0.82	-0.49	**-2.28**	-1.00											**-2.19**	-1.74	-1.06	0.74
B6-Sequence_III_Piston	-0.52	-0.74	-0.86		0.00	1.44		0.06	0.85	0.62								0.38	1.01	0.11	0.82
Yi MAXIMUM	**2.20**	**-2.64**	**-2.33**	-0.82	-1.56	**-3.11**	-1.00	1.19	**-3.14**	1.64										-1.29	1.43
Yi MINIMUM	0.20	-0.10	0.01	0.77	0.00	-0.06	0.85	0.06	-0.25	-0.25										-0.05	0.57
Yi MEAN	0.08	-1.17	-0.69	-0.02	-0.31	-0.70	-0.07	-0.08	-1.24	0.38											
Yi STD	1.07	0.81	0.80	1.12	0.61	1.35	1.31	0.67	1.41	0.70											

	count	percent
yi le -3	2	1.6%
-3 lt yi le -2	10	7.9%
-2 lt yi le -1	23	18.3%
-1 lt yi le 0	45	35.7%
0 lt yi le 1	38	30.2%
1 lt yi le 2	7	5.6%
2 lt yi le 3	1	0.8%
3 lt yi	0	0.0%
total	126	100.0%

-1 < yi ≤ 1	65.9%
-2 < yi ≤ 2	89.7%
-3 < yi ≤ 3	98.4%
>3	1.6%
Overall Yi STD	1.08
Parts Rated	16

Yi distribution (excluding shaded columns)



Group: Yellow

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

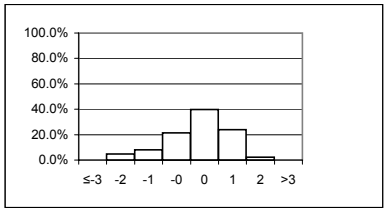
Rater = **Caproni, David**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	0.79	-0.35	-0.45		0.63	0.49		0.94	0.11	1.29								1.12	0.95	0.43	0.62
Calibration_1_Piston_B	0.08	-0.32	-1.27		0.23	0.39		-0.04	-0.57	0.28								0.22	0.34	-0.15	0.55
Calibration_2_Piston_A	0.41	0.23	-0.60		0.05	0.39		0.13	0.23	0.13								0.29	0.26	0.12	0.32
Calibration_2_Piston_B	1.82	0.07	**-2.43**		1.55	-0.20		-0.10	-0.31	1.75								0.33	-0.29	0.27	1.43
A1-Sequence_III_Piston	-1.52	-0.25	**-2.80**		1.42	**-2.07**		0.83	0.97	1.91								-0.77	-1.60	-0.19	1.75
A2-Sequence_III_Piston	0.20	**2.18**	0.84		**2.24**	0.14		1.33	-1.16	1.81								1.73	0.76	0.95	1.18
A3-Sequence_III_Piston	-1.54	1.22	-0.04		1.11	-1.27		0.34	-0.32	1.38								0.34	-0.11	0.11	1.12
A4-Sequence_III_Piston	-0.76	0.45	-0.62		0.79	0.02		1.75	0.50	1.64								0.60	0.45	0.47	0.93
A5-Square-cut_Piston	0.82	1.34	**-2.29**	1.47	-1.02	-1.14	-1.81											-0.48	-0.88	-0.38	1.55
A6-Sequence_III_Piston	0.11	0.42	**-2.72**		1.45	0.21		1.28	0.68	0.37								0.91	0.51	0.23	1.29
B1-Sequence_III_Piston	0.91	0.49	0.30		-0.54	1.51		0.16	-0.84	-0.51								1.09	1.29	0.19	0.80
B2-Sequence_III_Piston	-0.61	0.21	0.26		1.03	0.37		1.47	-1.14	**2.86**								1.28	0.96	0.56	1.25
B3-Sequence_III_Piston	0.38	-0.46	-0.27		-0.67	1.19		0.38	0.28	0.72								0.13	0.42	0.19	0.63
B4-Sequence_III_Piston	0.24	-0.38	-0.32		0.68	-0.82		1.76	0.53	0.63								1.03	0.15	0.29	0.81
B5-Square-cut_Piston	1.81	-0.67	0.63	1.24	1.18	-1.01	**-2.86**											0.12	0.86	0.05	1.65
B6-Sequence_III_Piston	-0.78	-0.13	1.06		1.78	1.18		1.43	0.07	1.67								1.13	1.53	0.79	0.94
Yi MAXIMUM	1.82	**2.18**	**-2.80**	1.47	**2.24**	**-2.07**	**-2.86**	1.76	-1.16	**2.86**										0.95	1.75
Yi MINIMUM	0.08	0.07	-0.04	1.24	0.05	0.02	-1.81	-0.04	0.07	0.13										0.05	0.32
Yi MEAN	0.15	0.25	-0.67	1.35	0.74	-0.04	**-2.34**	0.83	-0.07	1.14											
Yi STD	1.00	0.77	1.27	0.16	0.93	0.99	0.74	0.68	0.67	0.90											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	6	4.8%	-1 < yi ≤ 1	61.1%
-2 lt yi le -1	10	7.9%	-2 < yi ≤ 2	92.9%
-1 lt yi le 0	27	21.4%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	50	39.7%	>3	0.0%
1 lt yi le 2	30	23.8%		
2 lt yi le 3	3	2.4%	Overall Yi STD	1.10
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



Group: White

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

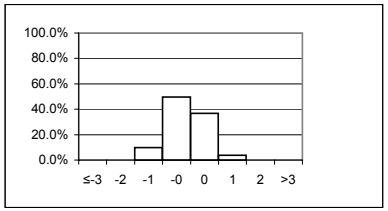
Rater = **Foecking, Brian**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	1.16	-0.01	-0.74		-0.39	-0.75		-0.33	0.58	-0.22								-0.58	-1.24	-0.09	0.66
Calibration_1_Piston_B	0.83	-0.55	-0.12		-0.29	-0.17		-0.08	0.03	-0.06								-0.38	-0.45	-0.05	0.40
Calibration_2_Piston_A	0.85	0.23	0.13		-0.34	0.11		-0.19	-1.92	-0.23								-0.22	-0.08	-0.17	0.80
Calibration_2_Piston_B	0.58	-0.23	0.58		-0.39	-0.19		-0.94	-1.15	-0.25								-0.62	-0.44	-0.25	0.62
A1-Sequence_III_Piston	-0.35	-0.07	0.24		0.14	0.47		-0.93	-0.93	-0.36								-0.22	0.11	-0.22	0.52
A2-Sequence_III_Piston	0.20	-0.87	0.98		-0.82	0.28		-1.19	-0.38	0.65								-0.47	0.02	-0.14	0.79
A3-Sequence_III_Piston	-0.04	-0.14	0.90		-0.02	0.53		-0.46	-0.01	0.52								-0.04	0.22	0.16	0.45
A4-Sequence_III_Piston	-0.22	-1.76	0.77		1.23	-0.04		-1.27	-1.09	0.63								-1.08	-0.54	-0.22	1.07
A5-Square-cut_Piston	1.29	0.43	0.34	0.08	0.12	0.97	0.85											0.57	0.29	0.58	0.46
A6-Sequence_III_Piston	-0.89	0.42	0.01		0.62	-1.17		-1.31	-1.02	0.28								-1.01	-0.99	-0.38	0.79
B1-Sequence_III_Piston	-0.28	0.18	1.09		-0.36	-0.39		-0.50	-0.05	-0.51								-0.53	-0.39	-0.10	0.54
B2-Sequence_III_Piston	0.76	0.21	0.78		-0.08	-0.49		-0.88	0.14	-0.12								-0.55	-0.53	0.04	0.57
B3-Sequence_III_Piston	0.38	-0.42	0.22		-0.31	-1.20		-0.51	-0.83	-0.84								-0.83	-1.02	-0.44	0.54
B4-Sequence_III_Piston																					
B5-Square-cut_Piston																					
B6-Sequence_III_Piston																					
Yi MAXIMUM	1.29	-1.76	1.09	0.08	1.23	-1.20	0.85	-1.31	-1.92	-0.84										0.58	1.07
Yi MINIMUM	-0.04	-0.01	0.01	0.08	-0.02	-0.04	0.85	-0.08	-0.01	-0.06										0.04	0.40
Yi MEAN	0.33	-0.20	0.40	0.08	-0.07	-0.16	0.85	-0.72	-0.55	-0.04											
Yi STD	0.66	0.60	0.52		0.52	0.65		0.42	0.72	0.47											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	86.4%
-2 lt yi le -1	10	9.7%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	51	49.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	38	36.9%	>3	0.0%
1 lt yi le 2	4	3.9%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.66
3 lt yi	0	0.0%		
total	103	100.0%	Parts Rated	13

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

Rater = Garcia, Orlando

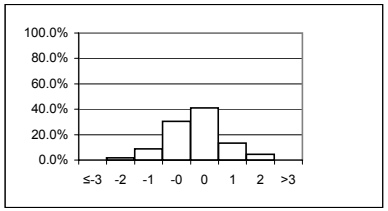
Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	0.48	0.84	0.23		0.01	0.94		-0.82	-0.89	0.84								0.49	0.81	0.20	0.73
Calibration_1_Piston_B	0.56	-0.60	-0.60		-0.08	0.56		0.14	-1.98	1.29								0.23	0.46	-0.09	0.99
Calibration_2_Piston_A	-0.12	-0.77	-0.81		-0.50	0.60		-0.02	-1.22	1.40								-0.38	0.03	-0.18	0.85
Calibration_2_Piston_B	1.22	-0.29	-1.29		0.50	0.26		-0.43	-1.50	1.75								-0.12	-0.12	0.03	1.14
A1-Sequence_III_Piston	0.81	-1.52	-0.88		0.59	-0.95		-0.47	-0.53	0.32								-1.21	-1.22	-0.33	0.82
A2-Sequence_III_Piston	0.20	-0.42	**2.40**		-0.42	0.22		0.73	-1.08	0.65								0.30	0.26	0.29	1.05
A3-Sequence_III_Piston	0.58	-0.82	-0.18		-0.21	-0.17		-0.15	0.15	0.69								-0.37	-0.33	-0.01	0.48
A4-Sequence_III_Piston	**2.24**	1.02	0.00		**2.49**	-0.97		0.62	0.06	1.03								1.53	0.32	0.81	1.16
A5-Square-cut_Piston																					
A6-Sequence_III_Piston	0.58	-1.14	-0.05		1.29	-0.19		0.67	-0.31	0.32								0.35	0.19	0.15	0.74
B1-Sequence_III_Piston	0.77	-1.81	0.46		1.00	0.40		-0.48	**-2.11**	1.68								0.51	0.54	-0.01	1.35
B2-Sequence_III_Piston	1.93	0.21	0.70		-0.08	0.24		0.80	-1.34	-0.37								1.03	0.62	0.26	0.95
B3-Sequence_III_Piston	0.38	0.06	1.98		1.06	1.27		0.19	-1.09	-0.06								0.62	1.06	0.47	0.94
B4-Sequence_III_Piston	0.24	0.16	0.35		0.05	0.49		-0.11	-0.65	0.10								0.33	0.56	0.08	0.35
B5-Square-cut_Piston																					
B6-Sequence_III_Piston	**2.06**	**2.02**	0.70		0.46	1.29		-0.35	**-2.40**	1.25								1.61	1.35	0.63	1.46
Yi MAXIMUM	**2.24**	**2.02**	**2.40**		**2.49**	1.29		-0.82	**-2.40**	1.75										0.81	1.46
Yi MINIMUM	-0.12	0.06	0.00		0.01	-0.17		-0.02	0.06	-0.06										-0.01	0.35
Yi MEAN	0.85	-0.22	0.22		0.44	0.28		0.02	-1.06	0.78											
Yi STD	0.73	1.04	1.03		0.81	0.69		0.52	0.78	0.66											

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	2	1.8%
-2 lt yi le -1	10	8.9%
-1 lt yi le 0	34	30.4%
0 lt yi le 1	46	41.1%
1 lt yi le 2	15	13.4%
2 lt yi le 3	5	4.5%
3 lt yi	0	0.0%
total	112	100.0%

-1 < yi ≤ 1	71.4%
-2 < yi ≤ 2	93.8%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.96
Parts Rated	14

Yi distribution (excluding shaded columns)



Group: White

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

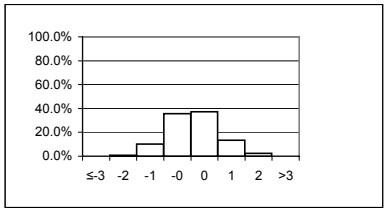
Rater = **Hills, Barry**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	0.38	-0.13	2.18		-0.59	0.03		-0.21	0.60	-0.22								0.49	0.80	0.25	0.86
Calibration_1_Piston_B	-1.51	0.03	1.32		-0.29	-0.20		-1.08	0.60	0.28								-0.90	-0.40	-0.11	0.90
Calibration_2_Piston_A	-0.86	0.45	1.29		-0.58	-0.18		-1.02	1.24	0.02								-0.63	-0.22	0.05	0.89
Calibration_2_Piston_B	-0.53	-1.03	1.29		-0.12	-0.16		0.15	2.07	-0.25								-0.73	-0.30	0.18	1.01
A1-Sequence_III_Piston	-0.35	-2.47	1.57		-1.66	0.81		-0.65	-0.66	-0.36								-1.33	-0.39	-0.47	1.27
A2-Sequence_III_Piston	0.20	-0.40	0.70		-0.45	0.27		-0.27	-0.93	-0.97								-0.03	0.17	-0.23	0.59
A3-Sequence_III_Piston	0.58	-0.98	0.47		1.22	1.23		-1.05	1.08	-0.33								-0.02	0.50	0.28	0.95
A4-Sequence_III_Piston	-0.53	-0.96	1.12		-0.23	-0.49		-1.15	0.96	-0.37								-0.84	-0.57	-0.21	0.83
A5-Square-cut_Piston	0.21	0.99	0.63	0.08	1.63	0.27	-0.04											1.52	1.64	0.54	0.60
A6-Sequence_III_Piston	0.84	-1.03	1.44		-1.27	-0.81		-0.80	0.28	0.23								-0.83	-0.83	-0.14	0.98
B1-Sequence_III_Piston	-1.55	0.18	0.54		-0.77	-0.61		-1.07	0.74	-0.51								-1.66	-1.06	-0.38	0.80
B2-Sequence_III_Piston	-0.87	0.21	0.85		-0.19	-0.05		-0.33	1.00	0.50								-0.13	0.03	0.14	0.63
B3-Sequence_III_Piston	0.38	0.40	0.31		1.30	0.24		0.11	1.47	0.33								0.75	0.72	0.57	0.52
B4-Sequence_III_Piston	0.24	0.04	1.27		-0.43	0.60		-1.59	1.21	0.27								-0.19	0.35	0.20	0.92
B5-Square-cut_Piston	0.01	2.45	0.07	0.21	-0.78	0.94	1.14											1.60	0.61	0.58	1.04
B6-Sequence_III_Piston	-1.85	0.18	0.51		-0.66	-0.21		-0.89	0.37	-0.42								-1.47	-0.66	-0.37	0.77
Yi MAXIMUM	-1.85	-2.47	2.18	0.21	-1.66	1.23	1.14	-1.59	2.07	-0.97										0.58	1.27
Yi MINIMUM	0.01	0.03	0.07	0.08	-0.12	0.03	-0.04	0.11	0.28	0.02										0.05	0.52
Yi MEAN	-0.33	-0.13	0.97	0.14	-0.24	0.11	0.55	-0.70	0.72	-0.13											
Yi STD	0.82	1.08	0.55	0.10	0.90	0.57	0.83	0.52	0.79	0.41											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	0.8%	-1 < yi ≤ 1	73.0%
-2 lt yi le -1	13	10.3%	-2 < yi ≤ 2	96.8%
-1 lt yi le 0	45	35.7%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	47	37.3%	>3	0.0%
1 lt yi le 2	17	13.5%		
2 lt yi le 3	3	2.4%	Overall Yi STD	0.88
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

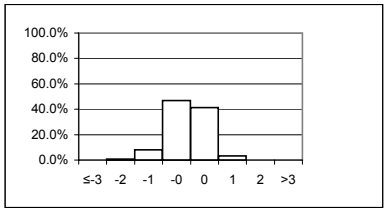
Rater = **Kobrinetz, Jack**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-0.32	0.79	-0.11		-0.44	-0.47		0.71	-0.72	-0.22								0.05	-0.30	-0.10	0.55
Calibration_1_Piston_B	-0.02	-0.50	0.05		-0.21	0.32		-0.56	0.32	-1.41								-0.19	0.15	-0.25	0.57
Calibration_2_Piston_A	0.23	-0.27	0.60		-0.53	0.15		-0.66	-0.27	0.13								-0.36	-0.04	-0.08	0.43
Calibration_2_Piston_B	0.93	-0.28	0.32		-0.33	0.25		0.14	-0.31	-0.25								0.31	0.24	0.06	0.44
A1-Sequence_III_Piston	-0.35	0.90	0.27		-1.29	1.12		-0.63	-0.39	-0.36								0.02	0.33	-0.09	0.81
A2-Sequence_III_Piston	0.20	-0.38	-0.72		-0.26	0.28		-0.65	-0.07	-0.51								-0.11	0.13	-0.26	0.37
A3-Sequence_III_Piston	-0.04	-0.49	-0.40		0.62	0.24		-0.35	0.11	-0.33								-0.18	-0.02	-0.08	0.39
A4-Sequence_III_Piston	-0.51	-0.11	0.51		-1.23	0.11		-0.03	0.74	-0.37								-0.16	0.03	-0.11	0.62
A5-Square-cut_Piston	0.06	0.00	-0.83	-1.31	0.62	-0.44	-0.04											0.20	0.40	-0.28	0.64
A6-Sequence_III_Piston	-0.95	0.03	0.31		-1.07	0.12		-0.97	1.00	-0.08								-0.58	-0.31	-0.20	0.74
B1-Sequence_III_Piston	0.99	0.18	0.70		-0.68	1.48		-0.43	-0.84	-0.51								0.77	1.13	0.11	0.86
B2-Sequence_III_Piston	0.24	0.21	0.26		-1.41	0.84		-0.21	0.24	-0.50								0.25	0.57	-0.04	0.68
B3-Sequence_III_Piston	0.38	0.29	-0.17		-0.43	0.32		-0.06	0.46	-1.24								0.17	0.19	-0.06	0.57
B4-Sequence_III_Piston	0.24	1.15	0.39		-0.58	1.18		0.68	-0.13	-1.14								1.01	1.20	0.22	0.82
B5-Square-cut_Piston	-0.41	0.15	-1.05	-1.85	0.59	0.97	0.29											0.30	0.37	-0.19	0.99
B6-Sequence_III_Piston	0.36	0.49	-0.95		-0.26	-0.45		-0.61	0.07	**-2.50**								-0.44	-0.62	-0.48	0.95
Yi MAXIMUM	0.99	1.15	-1.05	-1.85	-1.41	1.48	0.29	-0.97	1.00	**-2.50**										-0.48	0.99
Yi MINIMUM	-0.02	0.00	0.05	-1.31	-0.21	0.11	-0.04	-0.03	-0.07	-0.08										-0.04	0.37
Yi MEAN	0.06	0.14	-0.05	-1.58	-0.43	0.38	0.13	-0.26	0.02	-0.66											
Yi STD	0.51	0.50	0.58	0.38	0.64	0.59	0.23	0.50	0.52	0.69											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	0.8%	-1 < yi ≤ 1	88.1%
-2 lt yi le -1	10	7.9%	-2 < yi ≤ 2	99.2%
-1 lt yi le 0	59	46.8%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	52	41.3%	>3	0.0%
1 lt yi le 2	4	3.2%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.65
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

Rater = **Lopez, Frank**

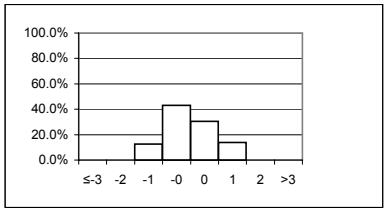
Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-1.57	-0.68	0.79		-0.58	0.67		-1.29	1.16	-0.22								-1.36	-0.34	-0.22	1.00
Calibration_1_Piston_B	-0.96	-1.43	-0.10		-0.20	-0.10		-0.68	1.40	0.28								-0.96	-0.50	-0.22	0.86
Calibration_2_Piston_A	-0.85	0.23	1.07		-0.19	-0.14		-1.05	1.14	0.13								-0.39	-0.07	0.04	0.79
Calibration_2_Piston_B	-1.07	-0.11	0.89		-0.17	-0.09		-1.03	-0.32	-0.25								-0.98	-0.37	-0.27	0.61
A1-Sequence_III_Piston	-0.35	1.55	0.55		-0.81	0.68		1.09	1.38	-0.36								1.27	1.06	0.46	0.88
A2-Sequence_III_Piston	0.20	1.17	-1.28		0.81	0.17		-0.79	0.79	-0.51								0.46	0.28	0.07	0.86
A3-Sequence_III_Piston	-0.79	-0.31	0.47		-0.17	0.30		-1.05	1.39	-0.33								-0.35	-0.09	-0.06	0.77
A4-Sequence_III_Piston	-0.41	-0.05	1.21		-0.52	0.17		-1.64	1.08	-0.37								-0.40	0.00	-0.07	0.92
A5-Square-cut_Piston	0.13	-0.04	0.63	0.08	0.11	0.27	0.85											0.18	0.16	0.29	0.33
A6-Sequence_III_Piston	0.84	-1.11	-0.34		0.56	-0.38		-0.78	-0.68	0.37								-0.62	-0.53	-0.19	0.70
B1-Sequence_III_Piston																					
B2-Sequence_III_Piston																					
B3-Sequence_III_Piston																					
B4-Sequence_III_Piston																					
B5-Square-cut_Piston																					
B6-Sequence_III_Piston																					
Yi MAXIMUM	-1.57	1.55	-1.28	0.08	-0.81	0.68	0.85	-1.64	1.40	-0.51										0.46	1.00
Yi MINIMUM	0.13	-0.04	-0.10	0.08	0.11	-0.09	0.85	-0.68	-0.32	0.13										0.04	0.33
Yi MEAN	-0.48	-0.08	0.39	0.08	-0.12	0.15	0.85	-0.80	0.81	-0.14											
Yi STD	0.72	0.92	0.76		0.50	0.34		0.77	0.77	0.32											

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	10	12.7%
-1 lt yi le 0	34	43.0%
0 lt yi le 1	24	30.4%
1 lt yi le 2	11	13.9%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	79	100.0%

-1 < yi ≤ 1	73.4%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.78
Parts Rated	10

Yi distribution (excluding shaded columns)



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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

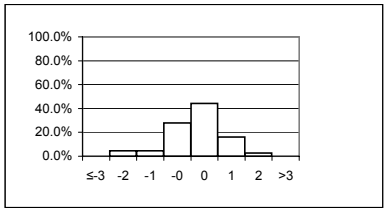
Rater = **Pansza, Mike**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	1.17	0.73	0.54		-0.06	1.73		1.26	0.33	-0.22								**2.26**	**2.44**	0.69	0.68
Calibration_1_Piston_B	1.75	-0.28	1.38		-0.07	0.85		-0.78	0.20	0.28								1.29	1.30	0.42	0.86
Calibration_2_Piston_A	0.60	-1.32	0.96		-0.15	-0.19		0.70	-0.22	0.13								0.50	0.18	0.06	0.72
Calibration_2_Piston_B	-0.64	0.15	1.00		0.65	0.48		-0.12	0.78	-0.25								0.42	0.66	0.26	0.57
A1-Sequence_III_Piston	-0.35	1.29	0.48		1.73	0.68		**2.25**	-1.07	-0.36								**2.50**	**2.10**	0.58	1.14
A2-Sequence_III_Piston	0.20	0.41	-0.09		-0.66	0.25		0.29	-1.04	-0.51								0.27	0.23	-0.15	0.53
A3-Sequence_III_Piston	-0.29	0.81	0.69		-0.82	0.53		0.34	-0.51	**-2.05**								0.33	0.39	-0.16	0.97
A4-Sequence_III_Piston	-0.54	0.64	0.18		1.28	1.44		1.31	-0.08	-0.37								1.19	1.59	0.48	0.80
A5-Square-cut_Piston	-1.77	-0.77	-0.83	-1.31	**-2.96**	**-2.55**	**-2.70**											**-3.09**	**-3.08**	-1.84	0.91
A6-Sequence_III_Piston	-0.69	0.81	0.96		1.93	**2.33**		1.13	1.39	0.14								**2.26**	**2.52**	1.00	0.96
B1-Sequence_III_Piston																					
B2-Sequence_III_Piston	-0.54	0.21	0.67		**2.17**	0.02		1.03	1.20	0.37								1.21	0.80	0.64	0.83
B3-Sequence_III_Piston	0.38	0.29	0.51		0.59	0.32		0.85	0.75	0.72								0.86	0.80	0.55	0.21
B4-Sequence_III_Piston	0.49	-0.26	-0.20		0.30	0.11		1.01	0.81	**-2.03**								0.92	0.61	0.03	0.94
B5-Square-cut_Piston																					
B6-Sequence_III_Piston	-0.95	0.79	1.16		0.60	0.66		-0.63	0.67	-0.42								-0.17	0.50	0.23	0.78
Yi MAXIMUM	-1.77	-1.32	1.38	-1.31	**-2.96**	**-2.55**	**-2.70**	**2.25**	1.39	**-2.05**										-1.84	1.14
Yi MINIMUM	0.20	0.15	-0.09	-1.31	-0.06	0.02	**-2.70**	-0.12	-0.08	0.13										0.03	0.21
Yi MEAN	-0.09	0.25	0.53	-1.31	0.32	0.47	**-2.70**	0.67	0.25	-0.35											
Yi STD	0.91	0.71	0.60		1.32	1.12		0.84	0.79	0.83											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	5	4.5%	-1 < yi ≤ 1	72.1%
-2 lt yi le -1	5	4.5%	-2 < yi ≤ 2	92.8%
-1 lt yi le 0	31	27.9%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	49	44.1%	>3	0.0%
1 lt yi le 2	18	16.2%		
2 lt yi le 3	3	2.7%	Overall Yi STD	0.98
3 lt yi	0	0.0%		
total	111	100.0%	Parts Rated	14

Yi distribution (excluding shaded columns)



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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

Rater = **Sanchez, Art**

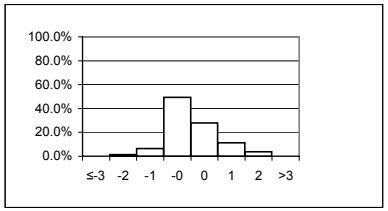
Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	1.68	-0.78	**2.04**		-0.46	-0.01		0.31	1.31	-0.22								1.04	1.00	0.48	1.05
Calibration_1_Piston_B	-0.48	**2.11**	**2.35**		-0.01	0.55		-0.50	1.01	-1.41								1.22	1.28	0.45	1.32
Calibration_2_Piston_A	0.16	-0.10	1.10		-0.41	-0.98		-0.59	1.04	0.13								-0.87	-0.87	0.04	0.74
Calibration_2_Piston_B	1.29	-0.41	-0.07		-0.73	-1.20		-0.82	1.02	-0.25								-1.03	-1.37	-0.15	0.88
A1-Sequence_III_Piston																					
A2-Sequence_III_Piston																					
A3-Sequence_III_Piston																					
A4-Sequence_III_Piston																					
A5-Square-cut_Piston																					
A6-Sequence_III_Piston																					
B1-Sequence_III_Piston	-0.26	-0.66	0.76		-0.43	0.63		-0.58	-1.04	-0.51								-0.19	0.31	-0.26	0.63
B2-Sequence_III_Piston	-0.28	0.21	0.70		-0.63	-0.72		-0.75	0.64	0.12								-0.83	-0.77	-0.09	0.59
B3-Sequence_III_Piston	0.38	-0.44	0.61		-1.51	0.12		0.13	-0.08	-0.26								-0.32	-0.25	-0.13	0.65
B4-Sequence_III_Piston	0.24	1.86	0.67		-0.19	-0.20		-0.85	0.77	-0.26								0.49	0.17	0.26	0.84
B5-Square-cut_Piston	-1.10	1.07	0.63	0.21	-0.14	0.85	0.61											0.99	0.69	0.30	0.74
B6-Sequence_III_Piston	-0.03	-0.13	-0.04		**-2.04**	-0.69		-0.12	0.91	-0.42								-0.64	-0.82	-0.32	0.83
Yi MAXIMUM	1.68	**2.11**	**2.35**	0.21	**-2.04**	-1.20	0.61	-0.85	1.31	-1.41										0.48	1.32
Yi MINIMUM	-0.03	-0.10	-0.04	0.21	-0.01	-0.01	0.61	-0.12	-0.08	0.12										0.04	0.59
Yi MEAN	0.16	0.27	0.88	0.21	-0.66	-0.17	0.61	-0.42	0.62	-0.34											
Yi STD	0.82	1.04	0.78		0.64	0.72		0.42	0.73	0.45											

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	1	1.3%
-2 lt yi le -1	5	6.3%
-1 lt yi le 0	39	49.4%
0 lt yi le 1	22	27.8%
1 lt yi le 2	9	11.4%
2 lt yi le 3	3	3.8%
3 lt yi	0	0.0%
total	79	100.0%

-1 < yi ≤ 1	77.2%
-2 < yi ≤ 2	94.9%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.85
Parts Rated	10

Yi distribution (excluding shaded columns)



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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

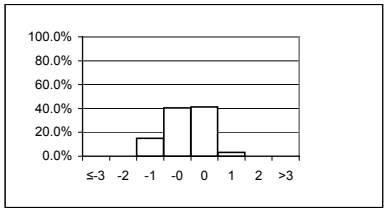
Rater = Yanchar, Paul

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-1.40	-0.30	-0.19		-0.20	-0.53		-0.96	0.49	0.54								-1.52	-1.26	-0.32	0.66
Calibration_1_Piston_B	-1.40	-0.54	0.56		-0.24	0.08		-0.94	0.28	-0.56								-0.84	-0.21	-0.34	0.65
Calibration_2_Piston_A	-1.02	0.07	0.33		-0.45	0.11		-0.88	0.79	1.04								-0.66	-0.17	0.00	0.74
Calibration_2_Piston_B	-0.69	-0.34	0.89		-0.39	-0.04		-0.57	0.84	0.75								-0.68	-0.23	0.05	0.67
A1-Sequence_III_Piston	0.81	0.03	1.24		-0.46	0.88		-0.24	0.97	-0.36								0.49	0.81	0.36	0.69
A2-Sequence_III_Piston	0.20	-1.31	-0.58		-0.40	0.20		-0.63	1.10	0.65								-0.43	-0.03	-0.09	0.78
A3-Sequence_III_Piston	0.58	-1.23	0.83		-0.82	0.24		-0.83	0.72	0.52								-0.65	-0.36	0.00	0.83
A4-Sequence_III_Piston	-0.30	-1.07	1.25		-0.69	-0.84		-1.03	-0.50	-1.38								-1.16	-0.98	-0.57	0.81
A5-Square-cut_Piston	-0.10	-1.07	0.63	0.08	0.25	-0.79	-0.04											-0.19	0.09	-0.15	0.59
A6-Sequence_III_Piston	0.84	-0.75	0.55		-1.07	-0.63		-1.26	0.46	0.14								-0.97	-0.89	-0.22	0.81
B1-Sequence_III_Piston	-0.68	0.18	0.30		-0.36	0.19		-1.07	-1.83	-0.51								-0.92	-0.31	-0.47	0.73
B2-Sequence_III_Piston	0.17	0.21	0.48		-0.19	-0.18		-1.76	-0.12	-0.62								-1.26	-0.71	-0.25	0.69
B3-Sequence_III_Piston	0.38	-0.51	0.61		-0.37	-0.91		-1.57	0.39	-0.26								-1.07	-1.08	-0.28	0.74
B4-Sequence_III_Piston	0.24	-0.19	0.83		-0.52	0.33		-1.23	0.16	-0.26								-0.79	-0.24	-0.08	0.62
B5-Square-cut_Piston	-1.10	0.00	0.63	0.21	-1.34	0.59	0.33											-0.33	-0.91	-0.10	0.80
B6-Sequence_III_Piston	0.05	-0.43	0.33		0.20	-0.76		-1.04	0.37	-0.42								-0.67	-0.76	-0.21	0.53
Yi MAXIMUM	-1.40	-1.31	1.25	0.21	-1.34	-0.91	0.33	-1.76	-1.83	-1.38										-0.57	0.83
Yi MINIMUM	0.05	0.00	-0.19	0.08	-0.19	-0.04	-0.04	-0.24	-0.12	0.14										0.00	0.53
Yi MEAN	-0.21	-0.45	0.54	0.14	-0.44	-0.13	0.15	-1.00	0.29	-0.05											
Yi STD	0.75	0.51	0.46	0.10	0.41	0.55	0.26	0.39	0.75	0.67											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	81.7%
-2 lt yi le -1	19	15.1%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	51	40.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	52	41.3%	>3	0.0%
1 lt yi le 2	4	3.2%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.70
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



Group: Red

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

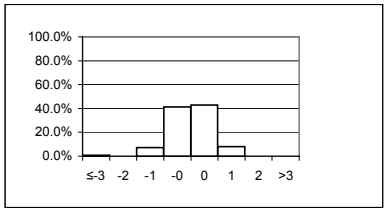
Rater = **Adams, Pat**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-1.64	1.09	0.49		-0.06	1.17		-1.56	-0.06	-0.22								-0.40	0.63	-0.10	1.06
Calibration_1_Piston_B	-0.49	-0.58	0.86		-0.31	0.33		-1.08	0.88	0.28								-0.33	0.18	-0.02	0.71
Calibration_2_Piston_A	0.36	0.01	0.56		-0.03	-0.33		-0.83	0.40	0.13								-0.36	-0.28	0.03	0.45
Calibration_2_Piston_B	-0.01	-0.24	0.55		0.01	-0.08		-1.94	-0.40	-0.25								-1.21	-0.61	-0.29	0.72
A1-Sequence_III_Piston	-0.35	0.51	1.01		-0.61	-0.58		0.54	-0.53	-0.36								0.35	0.15	-0.05	0.63
A2-Sequence_III_Piston	0.20	0.37	-0.58		-1.37	0.20		0.19	-0.30	-0.51								0.04	0.09	-0.22	0.59
A3-Sequence_III_Piston	-0.54	0.41	0.25		0.43	0.10		-0.66	-0.01	0.52								-0.08	0.04	0.06	0.45
A4-Sequence_III_Piston	0.15	0.31	1.14		0.95	0.04		0.96	0.42	-0.37								0.95	0.78	0.45	0.53
A5-Square-cut_Piston	1.73	-1.33	0.63	0.08	-1.08	0.62	0.85											-0.69	-0.97	0.21	1.09
A6-Sequence_III_Piston	-0.15	-0.32	0.70		-0.36	-0.16		0.80	0.51	-0.08								0.30	0.15	0.12	0.47
B1-Sequence_III_Piston	0.71	0.18	-0.40		-0.13	-0.44		0.73	0.15	-0.51								0.34	-0.19	0.04	0.49
B2-Sequence_III_Piston	1.41	0.21	-0.19		-0.19	1.33		-0.92	1.05	0.25								0.53	0.92	0.37	0.83
B3-Sequence_III_Piston	**-3.23**	-0.70	-0.08		0.41	-0.62		-1.23	0.75	-0.45								-1.08	-0.91	-0.64	1.22
B4-Sequence_III_Piston	0.24	0.23	-0.36		-0.66	-0.04		1.67	0.40	0.10								0.22	-0.16	0.20	0.69
B5-Square-cut_Piston	0.15	0.10	0.63	0.21	-0.35	-1.33	-0.87											-0.44	-0.42	-0.21	0.69
B6-Sequence_III_Piston	-0.82	-0.43	-0.40		1.06	0.90		-0.15	-0.41	0.42								0.00	0.62	0.02	0.69
Yi MAXIMUM	**-3.23**	-1.33	1.14	0.21	-1.37	1.33	-0.87	-1.94	1.05	0.52										-0.64	1.22
Yi MINIMUM	-0.01	0.01	-0.08	0.08	0.01	0.04	0.85	-0.15	-0.01	-0.08										-0.02	0.45
Yi MEAN	-0.14	-0.01	0.30	0.14	-0.14	0.07	-0.01	-0.25	0.20	-0.08											
Yi STD	1.15	0.57	0.56	0.10	0.65	0.70	1.22	1.08	0.51	0.35											

	count	percent		
yi le -3	1	0.8%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	84.1%
-2 lt yi le -1	9	7.1%	-2 < yi ≤ 2	99.2%
-1 lt yi le 0	52	41.3%	-3 < yi ≤ 3	99.2%
0 lt yi le 1	54	42.9%	>3	0.8%
1 lt yi le 2	10	7.9%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.74
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



Group: Red

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

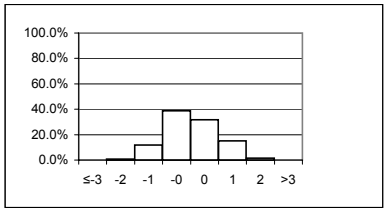
Rater = **Avis, Steve**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	1.80	-1.06	0.36		-0.32	0.06		-0.56	1.19	1.14								-0.07	-0.23	0.33	0.98
Calibration_1_Piston_B	**2.65**	-0.58	1.48		-0.65	-0.24		0.30	1.52	1.80								0.38	-0.21	0.78	1.24
Calibration_2_Piston_A	0.21	-1.32	0.31		-0.10	0.30		0.15	0.79	-1.51								0.38	0.37	-0.15	0.82
Calibration_2_Piston_B	1.17	-0.18	0.49		0.01	-0.27		-0.52	1.56	-0.25								0.05	-0.20	0.25	0.75
A1-Sequence_III_Piston	-0.35	1.78	0.89		-0.72	1.76		-0.36	-1.48	-0.59								1.11	1.43	0.12	1.21
A2-Sequence_III_Piston	0.20	-0.05	-1.43		1.84	0.25		-0.09	-0.07	-0.51								0.57	0.41	0.02	0.91
A3-Sequence_III_Piston	0.58	0.16	0.54		0.05	0.74		-1.35	1.74	-0.33								-0.05	0.24	0.27	0.90
A4-Sequence_III_Piston	-0.85	0.53	1.25		-0.25	0.37		0.01	1.02	-0.37								0.34	0.65	0.21	0.72
A5-Square-cut_Piston	-0.93	-0.47	-0.83	-0.90	-0.18	0.27	-0.04											-0.48	-0.33	-0.44	0.47
A6-Sequence_III_Piston	**-2.15**	-0.82	0.96		-1.30	-0.74		-1.05	1.12	0.32								-1.16	-0.93	-0.46	1.15
B1-Sequence_III_Piston	0.28	-0.43	0.38		-0.68	-1.95		-0.82	0.54	-0.51								-1.59	-1.94	-0.40	0.81
B2-Sequence_III_Piston	1.87	0.21	0.41		-0.97	-0.41		-1.13	0.75	-1.62								-0.63	-0.65	-0.11	1.14
B3-Sequence_III_Piston	-0.56	-0.23	-0.57		-1.15	0.90		1.00	0.90	-0.06								0.35	0.46	0.03	0.81
B4-Sequence_III_Piston	-0.26	**2.31**	0.67		-0.49	1.29		-0.78	0.18	0.10								1.13	1.42	0.38	1.02
B5-Square-cut_Piston	0.98	1.03	0.07	0.21	-1.20	0.82	1.05											0.53	-0.38	0.42	0.82
B6-Sequence_III_Piston	-0.03	-0.43	-0.77		-0.52	-1.19		-0.89	-1.44	-0.42								-1.24	-1.40	-0.71	0.46
Yi MAXIMUM	**2.65**	**2.31**	1.48	-0.90	1.84	-1.95	1.05	-1.35	1.74	1.80										0.78	1.24
Yi MINIMUM	-0.03	-0.05	0.07	0.21	0.01	0.06	-0.04	0.01	-0.07	-0.06										0.02	0.46
Yi MEAN	0.29	0.03	0.26	-0.34	-0.41	0.12	0.51	-0.44	0.59	-0.20											
Yi STD	1.21	0.98	0.80	0.78	0.74	0.93	0.77	0.65	1.00	0.89											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	0.8%	-1 < yi ≤ 1	70.6%
-2 lt yi le -1	15	11.9%	-2 < yi ≤ 2	97.6%
-1 lt yi le 0	49	38.9%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	40	31.7%	>3	0.0%
1 lt yi le 2	19	15.1%		
2 lt yi le 3	2	1.6%	Overall Yi STD	0.94
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

Rater = **Castillo, George**

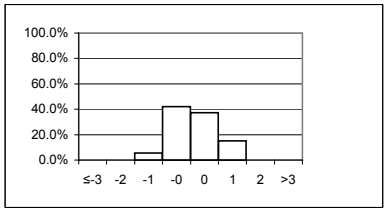
Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-0.60	-0.05	-0.10		-0.08	-0.25		0.43	0.38	0.99								-0.13	-0.19	0.09	0.49
Calibration_1_Piston_B	-0.20	-0.07	-0.12		-0.12	0.28		-0.04	1.06	1.63								0.16	0.28	0.30	0.68
Calibration_2_Piston_A	-0.92	0.01	0.47		-0.26	0.58		-0.25	1.02	1.04								0.28	0.55	0.21	0.69
Calibration_2_Piston_B	-0.49	-0.24	0.78		0.15	-0.39		0.02	1.32	1.75								-0.30	-0.26	0.36	0.83
A1-Sequence_III_Piston	-0.35	-0.38	-0.05		0.17	-0.27		-0.29	0.29	1.23								-0.31	-0.28	0.04	0.54
A2-Sequence_III_Piston	-0.89	-0.69	0.56		-0.45	0.24		0.35	0.24	-0.51								0.05	0.17	-0.14	0.55
A3-Sequence_III_Piston	0.08	0.09	-0.55		-0.17	-0.28		-0.38	0.51	1.21								-0.21	-0.28	0.06	0.57
A4-Sequence_III_Piston	0.12	-0.26	0.26		0.08	-0.15		-0.62	1.18	0.83								-0.05	-0.09	0.18	0.59
A5-Square-cut_Piston	0.28	-1.28	0.92	1.47	0.67	-1.78	-0.57											0.08	0.48	-0.04	1.20
A6-Sequence_III_Piston	-0.82	-0.32	-0.94		-0.15	-0.74		-0.05	1.10	0.32								-0.40	-0.59	-0.20	0.68
B1-Sequence_III_Piston	-0.68	0.18	1.09		0.09	-1.16		-0.31	1.14	1.68								-0.71	-0.82	0.26	0.98
B2-Sequence_III_Piston	-0.28	0.21	0.85		-1.30	-0.67		0.42	-0.58	1.12								-0.16	-0.41	-0.03	0.82
B3-Sequence_III_Piston	0.38	0.14	0.31		0.05	0.04		-0.42	0.03	1.51								0.00	0.03	0.25	0.56
B4-Sequence_III_Piston	0.24	-0.51	0.51		-0.40	0.62		0.95	0.44	1.16								0.50	0.63	0.38	0.59
B5-Square-cut_Piston	0.56	-1.00	-0.21	0.21	1.91	-1.79	-1.53											-0.42	0.84	-0.26	1.30
B6-Sequence_III_Piston	-0.20	0.79	0.42		-0.79	-0.32		-0.15	-0.35	1.67								-0.35	-0.35	0.13	0.79
Yi MAXIMUM	-0.92	-1.28	1.09	1.47	1.91	-1.79	-1.53	0.95	1.32	1.75										0.38	1.30
Yi MINIMUM	0.08	0.01	-0.05	0.21	0.05	0.04	-0.57	0.02	0.03	0.32										-0.03	0.49
Yi MEAN	-0.23	-0.21	0.26	0.84	-0.04	-0.38	-1.05	-0.02	0.56	1.12											
Yi STD	0.48	0.50	0.56	0.89	0.68	0.72	0.68	0.43	0.60	0.61											

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	7	5.6%
-1 lt yi le 0	53	42.1%
0 lt yi le 1	47	37.3%
1 lt yi le 2	19	15.1%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	126	100.0%

-1 < yi ≤ 1	79.4%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.74
Parts Rated	16

Yi distribution (excluding shaded columns)



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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

Rater = **Greenland, Paul**

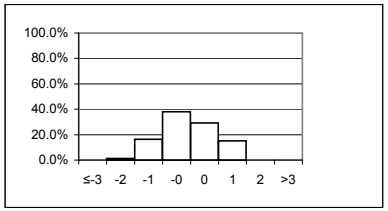
Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	0.33	-1.28	-1.06		-0.16	1.39		-0.55	-0.50	-0.22								-0.87	-0.31	-0.25	0.84
Calibration_1_Piston_B	-1.05	1.10	-0.57		-0.12	0.62		1.45	-1.23	-1.41								0.53	0.74	-0.15	1.10
Calibration_2_Piston_A	0.80	0.23	-1.06		0.08	0.38		0.70	-0.44	-1.69								0.37	0.20	-0.12	0.88
Calibration_2_Piston_B	0.29	-0.33	-0.66		-0.35	0.08		1.42	-0.98	-0.25								0.37	0.14	-0.10	0.73
A1-Sequence_III_Piston	-0.35	-0.59	-1.03		-0.27	-0.71		-1.27	-1.34	-1.50								-1.57	-1.47	-0.88	0.47
A2-Sequence_III_Piston	0.20	1.77	1.41		1.53	0.19		**-2.07**	-0.93	-0.51								0.49	0.37	0.20	1.34
A3-Sequence_III_Piston	0.08	1.92	1.19		0.43	0.36		1.42	0.30	-0.33								1.65	1.31	0.67	0.76
A4-Sequence_III_Piston	-0.53	-0.45	-1.39		-0.36	-0.92		0.23	-0.44	-0.37								-1.03	-1.20	-0.53	0.47
A5-Square-cut_Piston	-0.40	1.21	-0.83	-1.31	0.91	-0.08	-0.04											0.70	0.81	-0.08	0.90
A6-Sequence_III_Piston	0.84	0.67	0.25		0.84	1.87		0.70	-0.33	0.14								1.42	1.65	0.62	0.65
B1-Sequence_III_Piston																					
B2-Sequence_III_Piston																					
B3-Sequence_III_Piston																					
B4-Sequence_III_Piston																					
B5-Square-cut_Piston																					
B6-Sequence_III_Piston																					
Yi MAXIMUM	-1.05	1.92	1.41	-1.31	1.53	1.87	-0.04	**-2.07**	-1.34	-1.69										-0.88	1.34
Yi MINIMUM	0.08	0.23	0.25	-1.31	0.08	0.08	-0.04	0.23	0.30	0.14										-0.08	0.47
Yi MEAN	0.02	0.42	-0.37	-1.31	0.25	0.32	-0.04	0.23	-0.66	-0.68											
Yi STD	0.60	1.08	0.99		0.65	0.85		1.27	0.51	0.66											

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	1	1.3%
-2 lt yi le -1	13	16.5%
-1 lt yi le 0	30	38.0%
0 lt yi le 1	23	29.1%
1 lt yi le 2	12	15.2%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	79	100.0%

-1 < yi ≤ 1	67.1%
-2 < yi ≤ 2	98.7%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.92
Parts Rated	10

Yi distribution (excluding shaded columns)



Group: White

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

Rater = **Hill, John**

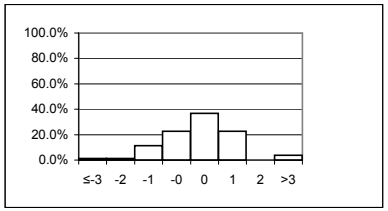
Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-0.57	1.50	0.11		-0.08	-1.05		1.08	1.10	0.54								0.78	0.12	0.33	0.89
Calibration_1_Piston_B	1.42	0.91	-1.26		0.14	0.86		1.54	0.31	0.28								1.78	1.33	0.53	0.89
Calibration_2_Piston_A	1.19	**3.01**	0.75		0.10	-0.22		1.07	-1.78	-0.78								0.90	0.30	0.42	1.45
Calibration_2_Piston_B	-0.26	0.35	0.60		1.10	-1.14		1.49	-0.79	-1.25								0.47	-0.33	0.01	1.04
A1-Sequence_III_Piston	1.81	-0.35	0.09		-0.01	-1.29		0.70	0.83	-0.36								-0.08	-0.53	0.18	0.94
A2-Sequence_III_Piston	0.20	-0.65	-0.72		0.39	0.16		-0.47	-0.93	-0.51								-0.15	0.07	-0.31	0.49
A3-Sequence_III_Piston	**3.08**	1.57	1.41		1.49	1.58		0.18	-1.13	**-2.05**								1.40	1.59	0.77	1.67
A4-Sequence_III_Piston	0.42	1.89	-1.21		0.57	**3.16**		-0.14	0.04	-1.38								1.79	**2.45**	0.42	1.51
A5-Square-cut_Piston	-0.10	0.73	0.63	1.47	0.16	0.97	0.85											0.60	0.40	0.67	0.52
A6-Sequence_III_Piston	1.71	1.81	0.90		0.11	-0.01		-0.56	0.18	**-4.37**								0.13	0.09	-0.03	1.94
B1-Sequence_III_Piston																					
B2-Sequence_III_Piston																					
B3-Sequence_III_Piston																					
B4-Sequence_III_Piston																					
B5-Square-cut_Piston																					
B6-Sequence_III_Piston																					
Yi MAXIMUM	**3.08**	**3.01**	1.41	1.47	1.49	**3.16**	0.85	1.54	-1.78	**-4.37**										0.77	1.94
Yi MINIMUM	-0.10	-0.35	0.09	1.47	-0.01	-0.01	0.85	-0.14	0.04	0.28										0.01	0.49
Yi MEAN	0.89	1.08	0.13	1.47	0.40	0.30	0.85	0.54	-0.24	-1.10											
Yi STD	1.15	1.11	0.91		0.52	1.39		0.81	0.97	1.47											

	count	percent
yi le -3	1	1.3%
-3 lt yi le -2	1	1.3%
-2 lt yi le -1	9	11.4%
-1 lt yi le 0	18	22.8%
0 lt yi le 1	29	36.7%
1 lt yi le 2	18	22.8%
2 lt yi le 3	0	0.0%
3 lt yi	3	3.8%
total	79	100.0%

-1 < yi ≤ 1	59.5%
-2 < yi ≤ 2	93.7%
-3 < yi ≤ 3	94.9%
>3	5.1%
Overall Yi STD	1.20
Parts Rated	10

Yi distribution (excluding shaded columns)



Group: Yellow

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

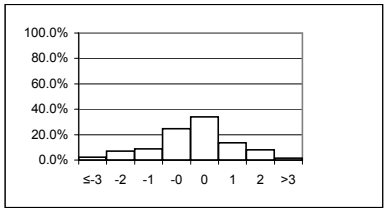
Rater = Lowsky, John

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	1.94	0.10	-0.71		-0.10	0.45		0.94	-2.10	-3.09								0.82	0.32	-0.32	1.63
Calibration_1_Piston_B	0.97	0.35	-0.85		0.10	0.68		2.14	-1.83	-1.41								1.36	1.05	0.02	1.32
Calibration_2_Piston_A	-0.46	0.23	-0.34		-0.10	0.30		2.31	-0.66	-1.69								0.98	0.52	-0.05	1.14
Calibration_2_Piston_B	1.14	-0.36	-1.69		1.10	-0.95		1.32	-1.18	-2.25								-0.07	-0.82	-0.36	1.39
A1-Sequence_III_Piston	-0.35	-0.76	0.57		1.16	0.92		2.21	-0.80	-2.64								1.39	1.45	0.04	1.50
A2-Sequence_III_Piston	0.20	1.09	-1.14		-0.82	-4.47		2.30	-0.38	-2.82								-3.94	-4.40	-0.76	2.14
A3-Sequence_III_Piston	0.58	1.43	0.25		0.24	0.85		3.08	-0.18	-2.05								2.21	1.76	0.53	1.45
A4-Sequence_III_Piston	-0.97	1.77	-0.26		1.01	0.62		1.49	0.82	-2.38								1.19	1.19	0.26	1.39
A5-Square-cut_Piston	2.34	1.12	-0.83	-1.31	0.65	0.27	-0.04											0.96	0.68	0.31	1.22
A6-Sequence_III_Piston	0.84	0.64	0.07		0.11	-0.35		1.93	-1.07	-0.17								0.86	0.35	0.25	0.90
B1-Sequence_III_Piston	0.12	0.49	-3.00		1.00	0.71		1.96	0.35	-2.69								1.30	0.85	-0.13	1.77
B2-Sequence_III_Piston	1.80	0.21	-0.33		-0.85	0.55		2.54	-0.53	-1.37								2.14	1.24	0.25	1.34
B3-Sequence_III_Piston	0.38	0.26	-0.08		0.71	0.24		2.27	-0.98	-2.41								1.10	0.92	0.05	1.35
B4-Sequence_III_Piston	0.24	0.70	0.67		0.30	-0.26		1.06	-0.02	-2.56								1.15	0.63	0.02	1.12
B5-Square-cut_Piston	2.09	1.40	-0.43	-1.44	2.43	0.57	0.50											2.13	2.71	0.73	1.37
B6-Sequence_III_Piston	0.29	0.79	0.05		-0.85	2.13		3.01	-1.98	-0.42								2.07	2.24	0.38	1.60
Yi MAXIMUM	2.34	1.77	-3.00	-1.44	2.43	-4.47	0.50	3.08	-2.10	-3.09										-0.76	2.14
Yi MINIMUM	0.12	0.10	0.05	-1.31	-0.10	0.24	-0.04	0.94	-0.02	-0.17										0.02	0.90
Yi MEAN	0.70	0.59	-0.50	-1.38	0.38	0.14	0.23	2.04	-0.75	-2.00											
Yi STD	0.97	0.67	0.91	0.09	0.87	1.40	0.38	0.65	0.86	0.88											

	count	percent		
yi le -3	3	2.4%		
-3 lt yi le -2	9	7.1%	-1 < yi ≤ 1	58.7%
-2 lt yi le -1	11	8.7%	-2 < yi ≤ 2	81.0%
-1 lt yi le 0	31	24.6%	-3 < yi ≤ 3	96.0%
0 lt yi le 1	43	34.1%	>3	4.0%
1 lt yi le 2	17	13.5%		
2 lt yi le 3	10	7.9%	Overall Yi STD	1.40
3 lt yi	2	1.6%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



Group: Yellow

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

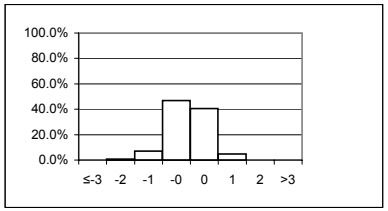
Rater = **May, Marianne**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-0.74	0.25	-0.36		-0.16	0.38		-0.13	-0.67	-0.97								-0.43	-0.17	-0.30	0.48
Calibration_1_Piston_B	-0.81	0.31	0.42		-0.19	0.40		-0.96	0.05	-0.23								-0.22	0.29	-0.13	0.53
Calibration_2_Piston_A	-0.58	0.23	0.13		-0.24	0.38		-0.73	-0.16	0.49								-0.29	0.14	-0.06	0.45
Calibration_2_Piston_B	-0.29	-0.34	-0.08		0.38	0.38		-1.40	-0.27	0.15								-0.91	-0.20	-0.18	0.57
A1-Sequence_III_Piston	-0.35	-0.42	0.24		0.38	0.14		-0.65	-1.48	-0.13								-0.29	-0.03	-0.29	0.60
A2-Sequence_III_Piston	0.20	-0.31	0.98		-0.56	0.06		-0.17	-0.50	0.88								-0.17	-0.02	0.07	0.59
A3-Sequence_III_Piston	0.08	-0.65	-0.55		-0.21	-0.05		-0.82	0.58	-0.16								-0.62	-0.48	-0.22	0.45
A4-Sequence_III_Piston	0.12	-1.01	0.84		-1.67	-1.01		-1.34	0.76	0.03								-1.10	-1.16	-0.41	0.97
A5-Square-cut_Piston	-0.63	-0.72	0.19	0.35	0.28	-0.44	-0.12											-0.11	0.15	-0.16	0.45
A6-Sequence_III_Piston	-0.02	0.57	-0.05		-0.31	-0.47		-0.49	-0.43	0.01								-0.42	-0.46	-0.15	0.36
B1-Sequence_III_Piston	0.24	-0.12	-0.25		1.14	1.10		-0.82	-0.45	0.81								0.51	0.92	0.21	0.74
B2-Sequence_III_Piston	-0.67	0.21	0.26		0.26	1.39		-0.98	0.03	0.50								0.06	0.89	0.12	0.72
B3-Sequence_III_Piston	0.38	-0.12	**-2.03**		1.24	-0.50		-0.85	0.07	-1.24								-0.53	-0.63	-0.38	1.01
B4-Sequence_III_Piston	0.24	0.28	0.75		-0.15	1.02		-0.43	0.22	0.63								0.70	1.11	0.32	0.47
B5-Square-cut_Piston	-0.55	-0.79	-0.43	-1.03	-0.68	0.91	0.50											-0.70	-0.95	-0.29	0.72
B6-Sequence_III_Piston	0.18	1.10	-1.51		0.07	0.09		-0.50	-0.35	0.42								-0.20	-0.19	-0.06	0.76
Yi MAXIMUM	-0.81	1.10	**-2.03**	-1.03	-1.67	1.39	0.50	-1.40	-1.48	-1.24										-0.41	1.01
Yi MINIMUM	-0.02	-0.12	-0.05	0.35	0.07	-0.05	-0.12	-0.13	0.03	0.01										-0.06	0.36
Yi MEAN	-0.20	-0.10	-0.09	-0.34	-0.03	0.24	0.19	-0.73	-0.18	0.08											
Yi STD	0.42	0.56	0.80	0.98	0.69	0.65	0.44	0.38	0.55	0.62											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	0.8%	-1 < yi ≤ 1	87.3%
-2 lt yi le -1	9	7.1%	-2 < yi ≤ 2	99.2%
-1 lt yi le 0	59	46.8%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	51	40.5%	>3	0.0%
1 lt yi le 2	6	4.8%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.64
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

Rater = **Pitta, Jimmy**

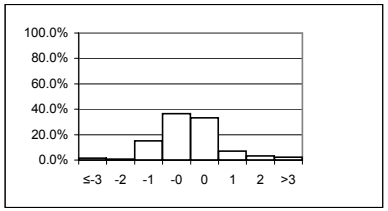
Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	0.19	0.51	-0.24		-0.23	-1.39		1.86	0.00	0.69								0.60	-0.41	0.17	0.93
Calibration_1_Piston_B	-0.06	0.87	-0.94		-0.04	**-2.94**		**2.14**	-1.90	0.28								**-2.38**	**-3.64**	-0.33	1.59
Calibration_2_Piston_A	1.24	-0.43	-1.24		0.35	**-4.51**		**2.90**	-0.33	0.13								**-2.36**	**-4.02**	-0.24	2.13
Calibration_2_Piston_B	-0.12	0.04	0.03		-0.26	-0.29		0.83	-0.79	-0.25								0.16	-0.08	-0.10	0.46
A1-Sequence_III_Piston	**3.47**	0.14	-0.88		1.39	0.27		-1.34	1.24	0.09								0.05	0.05	0.55	1.50
A2-Sequence_III_Piston	**2.36**	-0.15	-0.86		-0.58	0.13		-1.31	-0.46	0.65								-0.42	-0.09	-0.03	1.14
A3-Sequence_III_Piston	0.58	-0.70	-0.69		-0.25	-0.22		0.18	-1.58	0.01								-0.53	-0.50	-0.33	0.66
A4-Sequence_III_Piston	-0.37	-0.13	-1.54		-0.08	-1.35		0.42	-0.66	0.03								-0.95	-1.38	-0.46	0.68
A5-Square-cut_Piston	-0.55	0.43	-0.25	-1.31	0.30	0.27	-0.04											0.16	0.23	-0.16	0.61
A6-Sequence_III_Piston	-1.75	0.25	-0.82		0.88	0.15		-0.97	-1.22	0.46								-0.60	-0.23	-0.38	0.93
B1-Sequence_III_Piston	-1.15	-1.65	-1.43		-0.54	0.55		**3.11**	1.14	-0.51								1.23	0.86	-0.06	1.60
B2-Sequence_III_Piston	-0.76	0.21	**-3.07**		**2.56**	0.30		0.97	0.08	-0.75								0.37	0.18	-0.06	1.61
B3-Sequence_III_Piston	0.22	**4.08**	-1.15		0.83	0.36		1.85	-0.87	0.53								**2.96**	**2.27**	0.73	1.65
B4-Sequence_III_Piston	0.24	-0.63	-0.52		0.03	0.31		0.54	-1.83	0.63								-0.38	-0.07	-0.15	0.82
B5-Square-cut_Piston	-1.52	-1.54	0.85	1.04	-0.52	-0.53	-0.41											-1.26	-0.96	-0.37	1.02
B6-Sequence_III_Piston	-0.14	-1.05	-0.31		1.85	-0.26		-0.50	1.21	-0.42								-0.09	-0.10	0.05	0.97
Yi MAXIMUM	**3.47**	**4.08**	**-3.07**	-1.31	**2.56**	**-4.51**	-0.41	**3.11**	-1.90	-0.75										0.73	2.13
Yi MINIMUM	-0.06	0.04	0.03	1.04	0.03	0.13	-0.04	0.18	0.00	0.01										-0.03	0.46
Yi MEAN	0.12	0.02	-0.82	-0.14	0.35	-0.57	-0.22	0.76	-0.43	0.11											
Yi STD	1.35	1.30	0.85	1.66	0.92	1.38	0.27	1.47	1.07	0.46											

	count	percent
yi le -3	2	1.6%
-3 lt yi le -2	1	0.8%
-2 lt yi le -1	19	15.1%
-1 lt yi le 0	46	36.5%
0 lt yi le 1	42	33.3%
1 lt yi le 2	9	7.1%
2 lt yi le 3	4	3.2%
3 lt yi	3	2.4%
total	126	100.0%

-1 < yi ≤ 1	69.8%
-2 < yi ≤ 2	92.1%
-3 < yi ≤ 3	96.0%
>3	4.0%
Overall Yi STD	1.21
Parts Rated	16

Yi distribution (excluding shaded columns)



Group: Yellow

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

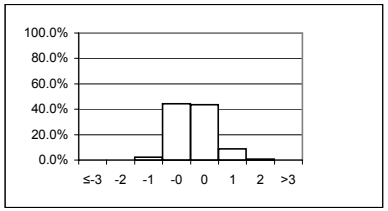
Rater = **Radonich, Pete**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-0.06	2.61	-0.96		-0.20	-0.42		-1.88	0.66	0.54								-0.49	-0.88	0.04	1.32
Calibration_1_Piston_B	-0.49	0.46	0.58		-0.09	-0.04		-0.73	-0.02	1.12								-0.26	-0.08	0.10	0.60
Calibration_2_Piston_A	-0.53	0.23	-0.68		-0.28	-0.20		-0.48	-0.05	1.04								-0.98	-0.65	-0.12	0.55
Calibration_2_Piston_B	-0.59	-0.28	0.60		-0.08	-0.57		0.54	0.52	0.75								-0.35	-0.40	0.11	0.55
A1-Sequence_III_Piston	-0.35	0.16	0.36		-0.69	1.26		-0.36	0.97	0.78								0.18	0.56	0.27	0.70
A2-Sequence_III_Piston	0.20	0.03	-0.15		0.29	0.29		-0.51	1.02	0.65								0.27	0.29	0.23	0.47
A3-Sequence_III_Piston	0.08	0.44	1.48		0.24	0.13		0.34	0.22	0.52								0.59	0.54	0.43	0.45
A4-Sequence_III_Piston	-0.72	-1.20	-0.44		-0.69	0.09		-0.04	-0.46	-0.37								-0.97	-0.56	-0.48	0.41
A5-Square-cut_Piston	0.06	1.21	1.36	0.77	0.48	0.97	0.85											0.97	0.76	0.81	0.44
A6-Sequence_III_Piston	0.44	-0.04	0.43		-0.12	-0.51		-0.24	-0.01	0.28								-0.19	-0.31	0.03	0.33
B1-Sequence_III_Piston	1.43	0.49	1.49		-0.31	-0.08		0.04	0.15	0.59								0.73	0.31	0.47	0.67
B2-Sequence_III_Piston	-0.15	0.21	0.26		-0.41	-0.33		0.21	-0.63	-0.87								-0.21	-0.28	-0.21	0.42
B3-Sequence_III_Piston	0.38	-0.10	1.49		-0.19	0.41		-0.21	-0.29	-0.06								0.04	0.24	0.18	0.59
B4-Sequence_III_Piston	0.24	0.95	1.11		0.08	0.71		-0.36	-0.24	-0.08								1.05	1.21	0.30	0.56
B5-Square-cut_Piston	-0.27	-0.27	0.91	0.73	-0.35	0.54	0.50											0.10	0.00	0.26	0.53
B6-Sequence_III_Piston	-0.20	0.79	0.79		-0.26	-1.06		-0.12	0.61	0.62								-0.51	-0.79	0.15	0.66
Yi MAXIMUM	1.43	2.61	1.49	0.77	-0.69	1.26	0.85	-1.88	1.02	1.12										0.81	1.32
Yi MINIMUM	0.06	0.03	-0.15	0.73	-0.08	-0.04	0.50	0.04	-0.01	-0.06										0.03	0.33
Yi MEAN	-0.03	0.36	0.54	0.75	-0.16	0.07	0.68	-0.27	0.17	0.39											
Yi STD	0.52	0.82	0.78	0.03	0.32	0.61	0.25	0.58	0.52	0.56											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	88.1%
-2 lt yi le -1	3	2.4%	-2 < yi ≤ 2	99.2%
-1 lt yi le 0	56	44.4%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	55	43.7%	>3	0.0%
1 lt yi le 2	11	8.7%		
2 lt yi le 3	1	0.8%	Overall Yi STD	0.65
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

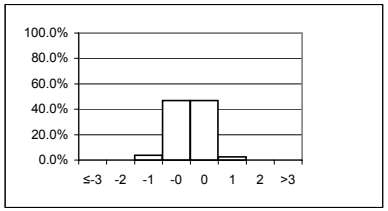
Rater = **Rodriguez, Jesse**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	0.03	0.06	0.35		-0.14	-0.69		0.28	0.60	-0.22								0.04	-0.25	0.04	0.40
Calibration_1_Piston_B	-0.79	-0.69	-0.08		-0.42	0.40		-0.11	0.43	0.28								-0.44	0.09	-0.12	0.48
Calibration_2_Piston_A	0.70	0.23	0.47		0.03	0.35		-0.43	0.34	0.13								0.47	0.46	0.23	0.34
Calibration_2_Piston_B	0.23	0.02	0.60		-0.08	0.66		-0.47	0.38	-0.25								0.37	0.60	0.14	0.40
A1-Sequence_III_Piston																					
A2-Sequence_III_Piston																					
A3-Sequence_III_Piston																					
A4-Sequence_III_Piston																					
A5-Square-cut_Piston																					
A6-Sequence_III_Piston																					
B1-Sequence_III_Piston	-0.52	-0.12	0.30		-0.09	0.05		-0.23	0.54	-0.51								-0.28	-0.04	-0.07	0.37
B2-Sequence_III_Piston	-0.87	0.21	-0.78		-0.30	0.92		-0.65	1.41	0.00								-0.12	0.42	-0.01	0.82
B3-Sequence_III_Piston	0.38	0.36	-0.08		-1.09	1.31		-0.95	0.10	-0.06								-0.06	0.30	0.00	0.77
B4-Sequence_III_Piston	0.24	-0.33	-0.12		-0.26	-0.22		-1.32	0.72	-0.79								-1.09	-0.83	-0.26	0.62
B5-Square-cut_Piston	0.01	-0.49	-0.60	-0.82	0.52	-0.38	0.05											-0.42	-0.07	-0.25	0.46
B6-Sequence_III_Piston	-0.93	-1.05	-0.40		0.99	-0.19		0.00	0.13	-0.42								-0.52	-0.23	-0.23	0.64
Yi MAXIMUM	-0.93	-1.05	-0.78	-0.82	-1.09	1.31	0.05	-1.32	1.41	-0.79										-0.26	0.82
Yi MINIMUM	0.01	0.02	-0.08	-0.82	0.03	0.05	0.05	0.00	0.10	0.00										0.00	0.34
Yi MEAN	-0.15	-0.18	-0.03	-0.82	-0.08	0.22	0.05	-0.43	0.52	-0.20											
Yi STD	0.58	0.45	0.47		0.55	0.62		0.49	0.39	0.33											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	93.7%
-2 lt yi le -1	3	3.8%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	37	46.8%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	37	46.8%	>3	0.0%
1 lt yi le 2	2	2.5%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.55
3 lt yi	0	0.0%		
total	79	100.0%	Parts Rated	10

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

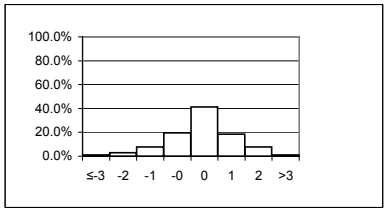
Rater = Seiz, Ray

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-0.54	-0.42	0.67		0.12	1.52		-0.02	0.28	-1.73								0.47	1.37	-0.01	0.95
Calibration_1_Piston_B	1.09	1.24	0.17		0.13	0.22		0.00	0.43	-1.41								0.96	0.59	0.23	0.81
Calibration_2_Piston_A	1.19	**2.23**	0.45		0.54	0.78		-0.33	1.46	-1.69								1.51	1.21	0.58	1.19
Calibration_2_Piston_B	-0.32	0.14	-1.06		**2.01**	**3.88**		**2.31**	0.32	**-2.25**								**3.49**	**4.03**	0.63	1.99
A1-Sequence_III_Piston																					
A2-Sequence_III_Piston	-1.70	-0.28	0.27		-0.26	0.16		1.45	**2.66**	-0.51								0.52	0.28	0.22	1.32
A3-Sequence_III_Piston																					
A4-Sequence_III_Piston																					
A5-Square-cut_Piston	0.21	0.56	0.63	0.77	-0.17	0.62	0.41											0.27	0.04	0.43	0.32
A6-Sequence_III_Piston	-1.29	1.70	-1.29		1.16	0.51		**2.01**	0.55	-0.31								1.51	1.12	0.38	1.26
B1-Sequence_III_Piston	-1.03	**2.94**	0.07		1.55	-0.03		-0.48	0.35	-0.51								-0.03	0.20	0.36	1.29
B2-Sequence_III_Piston	0.04	**-4.59**	0.19		1.37	1.78		0.49	1.81	0.50								1.78	1.98	0.20	2.06
B3-Sequence_III_Piston	**-2.92**	0.06	-0.66		**2.38**	0.41		1.28	1.51	-0.26								0.97	1.00	0.22	1.62
B4-Sequence_III_Piston	0.24	0.21	-0.28		0.03	0.03		-0.43	1.62	0.27								0.30	0.14	0.21	0.62
B5-Square-cut_Piston	-0.27	0.23	0.35	1.14	0.02	0.94	0.37											0.67	0.55	0.40	0.49
B6-Sequence_III_Piston	**2.38**	**-2.89**	-0.86		1.26	1.18		0.44	1.21	-0.42								**2.10**	1.46	0.29	1.64
Yi MAXIMUM	**-2.92**	**-4.59**	-1.29	1.14	**2.38**	**3.88**	0.41	**2.31**	**2.66**	**-2.25**										0.63	2.06
Yi MINIMUM	0.04	0.06	0.07	0.77	0.02	-0.03	0.37	0.00	0.28	-0.26										-0.01	0.32
Yi MEAN	-0.22	0.09	-0.10	0.96	0.78	0.92	0.39	0.61	1.11	-0.75											
Yi STD	1.36	2.00	0.66	0.26	0.89	1.05	0.02	1.00	0.78	0.88											

	count	percent		
yi le -3	1	1.0%		
-3 lt yi le -2	3	2.9%	-1 < yi ≤ 1	60.8%
-2 lt yi le -1	8	7.8%	-2 < yi ≤ 2	87.3%
-1 lt yi le 0	20	19.6%	-3 < yi ≤ 3	98.0%
0 lt yi le 1	42	41.2%	>3	2.0%
1 lt yi le 2	19	18.6%		
2 lt yi le 3	8	7.8%	Overall Yi STD	1.25
3 lt yi	1	1.0%		
total	102	100.0%	Parts Rated	13

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

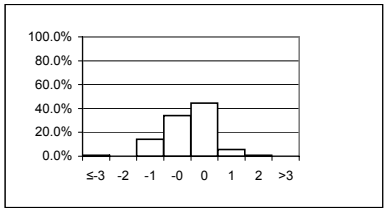
Rater = Shoda, Ron

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-1.02	-0.99	-1.61		-0.42	-0.58		-1.36	-3.05	0.54								-2.95	-2.81	-1.06	1.04
Calibration_1_Piston_B	0.24	0.20	-0.42		-0.66	0.24		-1.42	0.09	-0.56								-0.90	-0.41	-0.29	0.59
Calibration_2_Piston_A	0.06	-1.32	-1.60		-0.49	0.16		-0.22	0.29	1.04								-1.03	-0.64	-0.26	0.87
Calibration_2_Piston_B	-0.37	-0.15	0.55		-0.35	-0.09		-0.23	1.10	0.75								-0.28	-0.12	0.15	0.57
A1-Sequence_III_Piston	-0.35	0.85	0.60		-1.84	0.34		-0.08	-0.25	0.78								-0.06	0.00	0.00	0.88
A2-Sequence_III_Piston	0.20	0.26	-1.14		-0.26	0.16		-0.37	1.72	0.65								0.11	0.12	0.15	0.83
A3-Sequence_III_Piston	-0.04	-0.24	-1.41		0.01	-0.25		0.88	-0.65	0.52								0.05	-0.15	-0.15	0.70
A4-Sequence_III_Piston	-0.53	-1.13	-1.83		-0.52	-0.47		0.10	-0.22	0.63								-1.20	-1.16	-0.50	0.75
A5-Square-cut_Piston	-0.25	0.65	1.36	0.77	0.41	1.33	1.30											0.79	0.65	0.79	0.59
A6-Sequence_III_Piston	0.38	0.74	0.66		-0.91	0.15		0.02	0.23	0.37								0.20	0.15	0.20	0.51
B1-Sequence_III_Piston	2.26	0.49	0.54		-0.22	0.36		-0.33	-0.84	-0.51								0.83	0.44	0.22	0.96
B2-Sequence_III_Piston	0.17	0.21	0.63		0.26	-1.04		-0.35	-1.34	0.75								-0.77	-0.92	-0.09	0.76
B3-Sequence_III_Piston	0.38	0.31	0.51		0.35	-1.69		-1.17	0.68	-0.26								-0.50	-0.88	-0.11	0.87
B4-Sequence_III_Piston	0.24	0.26	0.83		-0.57	-0.08		-0.92	-0.04	0.63								-0.76	-0.50	0.04	0.58
B5-Square-cut_Piston	-0.69	-0.70	0.91	0.73	-1.04	-0.21	0.31											-0.80	-0.99	-0.10	0.76
B6-Sequence_III_Piston	-0.73	0.18	1.34		-0.33	-1.60		-1.14	0.97	0.62								-1.39	-1.46	-0.08	1.04
Yi MAXIMUM	2.26	-1.32	-1.83	0.77	-1.84	-1.69	1.30	-1.42	-3.05	1.04										-1.06	1.04
Yi MINIMUM	-0.04	-0.15	-0.42	0.73	0.01	-0.08	0.31	0.02	-0.04	-0.26										0.00	0.51
Yi MEAN	0.00	-0.02	-0.01	0.75	-0.41	-0.21	0.80	-0.47	-0.09	0.42											
Yi STD	0.74	0.68	1.13	0.03	0.56	0.76	0.70	0.65	1.18	0.50											

	count	percent		
yi le -3	1	0.8%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	78.6%
-2 lt yi le -1	18	14.3%	-2 < yi ≤ 2	98.4%
-1 lt yi le 0	43	34.1%	-3 < yi ≤ 3	99.2%
0 lt yi le 1	56	44.4%	>3	0.8%
1 lt yi le 2	7	5.6%		
2 lt yi le 3	1	0.8%	Overall Yi STD	0.83
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Sequence III

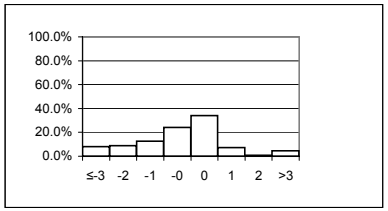
Rater = Terrado, Teresa

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-0.97	-2.60	-2.55		4.76	-2.98		0.94	-0.50	-1.73								0.16	-0.80	-0.70	2.56
Calibration_1_Piston_B	-0.91	-2.22	0.39		4.78	-3.40		1.45	-0.40	-1.41								1.66	-0.88	-0.21	2.51
Calibration_2_Piston_A	-3.14	0.23	-3.15		4.71	0.64		1.28	0.51	-1.51								3.12	1.99	-0.05	2.58
Calibration_2_Piston_B	-3.08	4.72	-0.20		-3.70	-0.97		0.37	-0.79	-0.45								2.03	0.62	-0.51	2.54
A1-Sequence_III_Piston	-0.35	0.29	-1.20		0.06	-0.34		-0.97	0.97	-0.36								-0.76	-0.82	-0.24	0.69
A2-Sequence_III_Piston	0.20	1.07	0.42		-1.50	0.32		0.15	-0.54	-0.51								0.37	0.29	-0.05	0.78
A3-Sequence_III_Piston	-1.91	-1.47	-2.36		-3.46	-1.51		0.62	-1.20	0.52								-1.78	-2.02	-1.35	1.37
A4-Sequence_III_Piston	2.29	1.22	-0.40		-0.74	-0.53		1.38	-2.71	0.63								1.10	0.07	0.14	1.57
A5-Square-cut_Piston																					
A6-Sequence_III_Piston	0.84	-0.04	0.55		-1.75	0.67		0.58	-0.31	0.37								0.22	0.29	0.11	0.84
B1-Sequence_III_Piston	0.36	0.49	-0.48		-2.27	-0.96		0.90	0.35	0.59								-0.61	-1.12	-0.13	1.06
B2-Sequence_III_Piston	-0.67	0.21	0.26		0.37	-2.42		0.30	-0.02	-1.99								-1.31	-1.97	-0.50	1.11
B3-Sequence_III_Piston	0.38	-0.93	1.78		-1.87	-0.99		0.45	0.21	0.72								-0.57	-0.74	-0.03	1.16
B4-Sequence_III_Piston	-4.43	-2.06	-3.34		4.18	-3.32		0.18	-2.60	0.63								-0.27	-1.49	-1.34	2.83
B5-Square-cut_Piston																					
B6-Sequence_III_Piston	-0.91	0.79	1.71		-1.65	-1.37		1.91	0.67	-0.42								-0.36	-0.75	0.09	1.37
Yi MAXIMUM	-4.43	4.72	-3.34		4.78	-3.40		1.91	-2.71	-1.99										-1.35	2.83
Yi MINIMUM	0.20	-0.04	-0.20		0.06	0.32		0.15	-0.02	-0.36										-0.03	0.69
Yi MEAN	-0.88	-0.02	-0.61		0.14	-1.23		0.68	-0.45	-0.35											
Yi STD	1.78	1.86	1.68		3.14	1.38		0.72	1.11	0.97											

	count	percent		
yi le -3	9	8.0%		
-3 lt yi le -2	10	8.9%	-1 < yi ≤ 1	58.0%
-2 lt yi le -1	14	12.5%	-2 < yi ≤ 2	77.7%
-1 lt yi le 0	27	24.1%	-3 < yi ≤ 3	87.5%
0 lt yi le 1	38	33.9%	>3	12.5%
1 lt yi le 2	8	7.1%		
2 lt yi le 3	1	0.9%	Overall Yi STD	1.76
3 lt yi	5	4.5%		
total	112	100.0%	Parts Rated	14

Yi distribution (excluding shaded columns)



Group: Yellow

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

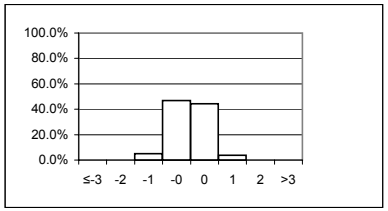
Rater = **Trevino, Robert**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	0.01	-0.33	0.52		-0.10	-0.32		0.48	-0.34	0.24								0.13	0.06	0.02	0.36
Calibration_1_Piston_B	-0.62	-0.92	-0.37		-0.33	-0.61		0.53	-0.44	0.28								-1.24	-1.15	-0.31	0.48
Calibration_2_Piston_A	-1.32	-0.65	-0.23		-0.41	0.22		0.05	-0.33	-0.96								-0.55	-0.12	-0.45	0.51
Calibration_2_Piston_B	0.48	-0.21	-0.54		-0.53	-0.67		-0.27	-0.40	0.15								-0.72	-0.87	-0.25	0.39
A1-Sequence_III_Piston																					
A2-Sequence_III_Piston																					
A3-Sequence_III_Piston																					
A4-Sequence_III_Piston																					
A5-Square-cut_Piston																					
A6-Sequence_III_Piston																					
B1-Sequence_III_Piston	0.55	0.49	-0.40		0.28	-1.07		0.85	-0.84	0.37								0.16	-0.58	0.03	0.71
B2-Sequence_III_Piston	-0.35	0.21	-1.74		-0.30	0.24		0.15	0.19	0.50								-0.16	-0.11	-0.14	0.71
B3-Sequence_III_Piston	0.38	-0.20	-0.86		-0.55	-0.13		0.11	0.43	1.31								-0.15	-0.25	0.06	0.67
B4-Sequence_III_Piston	0.24	-0.95	-0.48		-0.17	-1.08		0.83	0.57	0.45								-0.82	-1.28	-0.07	0.71
B5-Square-cut_Piston	0.15	-0.24	-0.88	1.04	0.40	0.36	0.57											0.12	0.24	0.20	0.61
B6-Sequence_III_Piston	1.10	0.18	0.33		0.27	-0.15		0.72	-0.60	-0.21								0.84	0.26	0.21	0.54
Yi MAXIMUM	-1.32	-0.95	-1.74	1.04	-0.55	-1.08	0.57	0.85	-0.84	1.31										-0.45	0.71
Yi MINIMUM	0.01	0.18	-0.23	1.04	-0.10	-0.13	0.57	0.05	0.19	0.15										0.02	0.36
Yi MEAN	0.06	-0.26	-0.47	1.04	-0.14	-0.32	0.57	0.38	-0.19	0.24											
Yi STD	0.68	0.48	0.63		0.35	0.53		0.39	0.48	0.61											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	91.1%
-2 lt yi le -1	4	5.1%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	37	46.8%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	35	44.3%	>3	0.0%
1 lt yi le 2	3	3.8%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.58
3 lt yi	0	0.0%		
total	79	100.0%	Parts Rated	10

Yi distribution (excluding shaded columns)



Group: Blue

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May 12-16, 2008

Light Duty Rating Workshop - Sequence III

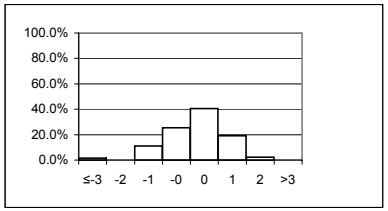
Rater = Viera, Ralph

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	Under-crown	Thrust	Anti-thrust								UWPD	WPD	MEAN	STD
Calibration_1_Piston_A	-0.67	0.66	0.78		-0.34	-0.08		-1.22	0.88	1.14								-0.46	-0.13	0.14	0.85
Calibration_1_Piston_B	-0.08	**2.24**	0.24		-0.30	0.64		-0.73	1.48	1.63								0.70	0.81	0.64	1.05
Calibration_2_Piston_A	0.36	0.01	0.74		0.01	0.55		-1.35	1.13	1.58								0.31	0.58	0.38	0.88
Calibration_2_Piston_B	-0.82	0.24	1.06		0.01	1.74		-1.30	1.10	1.15								0.54	1.47	0.40	1.06
A1-Sequence_III_Piston	0.31	0.79	0.36		0.59	-0.81		0.86	1.65	1.69								0.95	0.43	0.68	0.80
A2-Sequence_III_Piston	**-3.32**	-0.69	-0.58		1.31	0.27		0.99	0.55	1.58								0.60	0.43	0.01	1.58
A3-Sequence_III_Piston	-0.79	0.51	-1.05		0.69	0.01		0.42	1.10	1.04								0.54	0.35	0.24	0.80
A4-Sequence_III_Piston	-0.30	0.66	0.26		-1.01	1.08		-0.78	0.40	1.03								0.22	0.68	0.17	0.79
A5-Square-cut_Piston	-1.47	-1.33	-1.71	-0.76	0.36	-0.58	-1.37											-0.59	-0.06	-0.98	0.71
A6-Sequence_III_Piston	-0.42	0.14	0.31		-0.31	1.94		-0.46	0.85	0.55								0.59	1.16	0.33	0.81
B1-Sequence_III_Piston	-0.40	0.18	0.07		**2.68**	1.56		-0.38	1.93	1.46								1.47	1.89	0.89	1.17
B2-Sequence_III_Piston	-1.32	0.21	0.70		0.37	0.87		-0.50	-0.07	0.25								0.03	0.67	0.06	0.70
B3-Sequence_III_Piston	0.38	0.02	0.41		-0.01	1.93		-1.02	0.18	1.90								0.12	0.74	0.47	0.99
B4-Sequence_III_Piston	-0.13	-1.07	-0.36		0.02	0.78		-1.23	-0.15	**2.04**								-0.70	0.10	-0.01	1.04
B5-Square-cut_Piston	0.98	0.17	**-3.17**	-1.85	0.17	-0.38	-0.54											-0.68	-0.84	-0.66	1.41
B6-Sequence_III_Piston	0.70	-0.74	0.24		-0.85	-0.28		-0.30	0.49	1.25								0.07	-0.24	0.06	0.73
Yi MAXIMUM	**-3.32**	**2.24**	**-3.17**	-1.85	**2.68**	1.94	-1.37	-1.35	1.93	**2.04**										-0.98	1.58
Yi MINIMUM	-0.08	0.01	0.07	-0.76	0.01	0.01	-0.54	-0.30	-0.07	0.25										-0.01	0.70
Yi MEAN	-0.44	0.12	-0.11	-1.30	0.21	0.58	-0.96	-0.50	0.82	1.31											
Yi STD	1.03	0.84	1.09	0.77	0.87	0.90	0.58	0.77	0.63	0.50											

	count	percent		
yi le -3	2	1.6%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	65.9%
-2 lt yi le -1	14	11.1%	-2 < yi ≤ 2	96.0%
-1 lt yi le 0	32	25.4%	-3 < yi ≤ 3	98.4%
0 lt yi le 1	51	40.5%	>3	1.6%
1 lt yi le 2	24	19.0%		
2 lt yi le 3	3	2.4%	Overall Yi STD	1.03
3 lt yi	0	0.0%		
total	126	100.0%	Parts Rated	16

Yi distribution (excluding shaded columns)



Group: White

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May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

	Number of Parts Rated	-1 < yi ≤ 1	-2 < yi ≤ 2	-3 < yi ≤ 3	>3	Yi STD	Group
Barrera, Tony	5	91.7%	100.0%	100.0%	0.0%	0.54	Blue
Cales, Jonathon	5	41.7%	91.7%	100.0%	0.0%	0.74	Yellow
Caproni, David	5	62.5%	91.7%	100.0%	0.0%	1.05	White
Foecking, Brian	5	54.2%	95.8%	100.0%	0.0%	1.08	Yellow
Garcia, Orlando	5	87.5%	95.8%	100.0%	0.0%	0.71	Red
Kobrinetz, Jack	5	50.0%	83.3%	100.0%	0.0%	0.89	Yellow
Lopez, Frank	5	83.3%	100.0%	100.0%	0.0%	0.65	Red
Pansza, Mike	5	83.3%	95.8%	100.0%	0.0%	0.77	Red
Sanchez, Art	5	83.3%	95.8%	100.0%	0.0%	0.85	White
Yanchar, Paul	5	87.5%	100.0%	100.0%	0.0%	0.57	Blue
Adams, Pat	5	41.7%	91.7%	100.0%	0.0%	1.39	Yellow
Avis, Steve	2	100.0%	100.0%	100.0%	0.0%	0.27	Blue
Castillo, George	5	79.2%	95.8%	100.0%	0.0%	0.79	White
Greenland, Paul	2	75.0%	100.0%	100.0%	0.0%	1.08	White
Hill, John	5	58.3%	87.5%	100.0%	0.0%	1.02	Yellow
Lowsky, John	3	50.0%	87.5%	100.0%	0.0%	1.06	Yellow
May, Marianne	5	66.7%	100.0%	100.0%	0.0%	0.48	White
Radonich, Pete	5	70.8%	100.0%	100.0%	0.0%	0.70	White
Rodriguez, Jesse	5	87.5%	100.0%	100.0%	0.0%	0.63	Blue
Seiz, Ray	3	37.5%	62.5%	100.0%	0.0%	1.60	Yellow
Shoda, Ron	5	75.0%	100.0%	100.0%	0.0%	0.86	White
Trevino, Robert	4	81.3%	100.0%	100.0%	0.0%	0.49	Red
Viera, Ralph	5	75.0%	100.0%	100.0%	0.0%	0.85	White

Group Criteria

	Minimum Number of Parts Rated	Minimum Yi's within 1 STD of mean	Minimum Yi's within 2 STD of mean	Maximum Overall Yi STD	Group Totals	
White	0	60%	90%	1.20	8	35%
Red	0	80%	95%	0.85	4	17%
Blue	0	85%	98%	0.75	4	17%
Yellow	-	-	-	-	7	30%

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

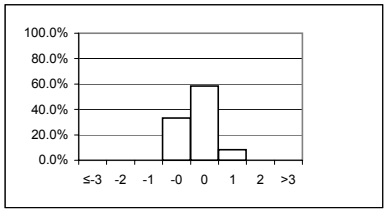
Rater = **Barrera, Tony**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	0.28	0.78	-0.56	0.79																0.32	0.63
D1-8_Seq_V_Pistons	0.19	0.49	0.41	0.21	0.15	1.10	0.78	1.19												0.56	0.41
E1-8_Seq_V_Pistons	-0.08	-0.25	-0.24	-0.08	0.72	0.49	0.18	0.50												0.16	0.37
Calibration_Seq_V_Varni									-0.49	0.11										-0.19	0.43
Seq_V_Varnish									-0.33	-0.97										-0.65	0.45
Yi MAXIMUM	0.28	0.78	-0.56	0.79	0.72	1.10	0.78	1.19	-0.49	-0.97										-0.65	0.63
Yi MINIMUM	-0.08	-0.25	-0.24	-0.08	0.15	0.49	0.18	0.50	-0.33	0.11										0.16	0.37
Yi MEAN	0.13	0.34	-0.13	0.31	0.44	0.79	0.48	0.85	-0.41	-0.43											
Yi STD	0.19	0.53	0.49	0.44	0.40	0.43	0.42	0.49	0.12	0.76											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	91.7%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	8	33.3%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	14	58.3%	>3	0.0%
1 lt yi le 2	2	8.3%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.54
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

Rater = **Cales, Jonathon**

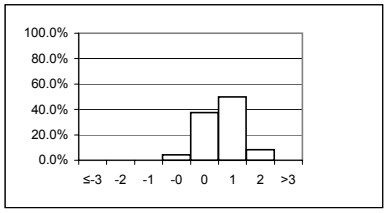
Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pistor	0.83	1.28	0.90	0.80																0.95	0.22
D1-8_Seq_V_Pistons	0.26	0.25	1.01	1.65	**2.27**	1.67	1.53	**2.20**												1.35	0.79
E1-8_Seq_V_Pistons	1.79	1.39	1.00	-0.89	1.87	1.81	1.58	1.35												1.24	0.91
Calibration_Seq_V_Varni									0.19	0.77										0.48	0.41
Seq_V_Varnish									0.39	0.72										0.56	0.23
Yi MAXIMUM	1.79	1.39	1.01	1.65	**2.27**	1.81	1.58	**2.20**	0.39	0.77										1.35	0.91
Yi MINIMUM	0.26	0.25	0.90	0.80	1.87	1.67	1.53	1.35	0.19	0.72										0.48	0.22
Yi MEAN	0.96	0.97	0.97	0.52	**2.07**	1.74	1.55	1.78	0.29	0.75											
Yi STD	0.77	0.63	0.06	1.29	0.29	0.10	0.03	0.60	0.15	0.04											

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	1	4.2%
0 lt yi le 1	9	37.5%
1 lt yi le 2	12	50.0%
2 lt yi le 3	2	8.3%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	41.7%
-2 < yi ≤ 2	91.7%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.74
Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Yellow

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May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

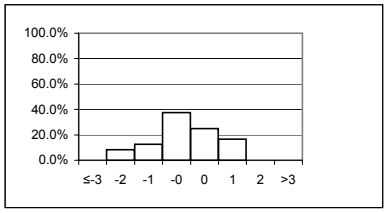
Rater = **Caproni, David**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	-0.64	0.42	0.71	1.11																0.40	0.75
D1-8_Seq_V_Pistons	-1.04	-0.89	-0.91	1.38	0.40	1.56	1.57	0.12												0.27	1.14
E1-8_Seq_V_Pistons	-0.89	-0.78	-0.62	-1.35	0.38	-1.14	-0.59	-0.56												-0.69	0.52
Calibration_Seq_V_Varni									**-2.08**	**-2.04**										**-2.06**	0.03
Seq_V_Varnish									-0.17	0.72										0.28	0.63
Yi MAXIMUM	-1.04	-0.89	-0.91	1.38	0.40	1.56	1.57	-0.56	**-2.08**	**-2.04**										**-2.06**	1.14
Yi MINIMUM	-0.64	0.42	-0.62	1.11	0.38	-1.14	-0.59	0.12	-0.17	0.72										0.27	0.03
Yi MEAN	-0.86	-0.42	-0.27	0.38	0.39	0.21	0.49	-0.22	-1.13	-0.66											
Yi STD	0.20	0.73	0.87	1.50	0.01	1.91	1.53	0.48	1.35	1.96											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	2	8.3%	-1 < yi ≤ 1	62.5%
-2 lt yi le -1	3	12.5%	-2 < yi ≤ 2	91.7%
-1 lt yi le 0	9	37.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	6	25.0%	>3	0.0%
1 lt yi le 2	4	16.7%		
2 lt yi le 3	0	0.0%	Overall Yi STD	1.05
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

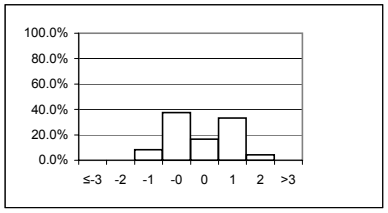
Rater = **Foecking, Brian**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pistor	1.67	-0.48	1.00	-0.63																0.39	1.13
D1-8_Seq_V_Pistons	1.55	1.45	1.21	-0.53	-0.10	-0.09	-1.63	-1.44												0.05	1.25
E1-8_Seq_V_Pistons	1.55	1.31	1.17	2.06	-0.80	-0.58	-0.78	-0.78												0.39	1.24
Calibration_Seq_V_Varni									0.57	0.42										0.49	0.11
Seq_V_Varnish									1.12	0.35										0.73	0.55
Yi MAXIMUM	1.67	1.45	1.21	2.06	-0.80	-0.58	-1.63	-1.44	1.12	0.42										0.73	1.25
Yi MINIMUM	1.55	-0.48	1.00	-0.53	-0.10	-0.09	-0.78	-0.78	0.57	0.35										0.05	0.11
Yi MEAN	1.59	0.76	1.13	0.30	-0.45	-0.34	-1.21	-1.11	0.84	0.38											
Yi STD	0.07	1.07	0.11	1.53	0.49	0.34	0.60	0.47	0.39	0.05											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	54.2%
-2 lt yi le -1	2	8.3%	-2 < yi ≤ 2	95.8%
-1 lt yi le 0	9	37.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	4	16.7%	>3	0.0%
1 lt yi le 2	8	33.3%		
2 lt yi le 3	1	4.2%	Overall Yi STD	1.08
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

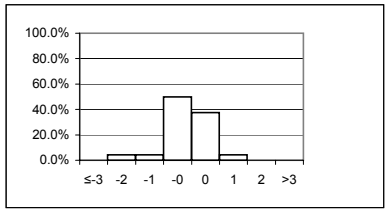
Rater = **Garcia, Orlando**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	0.58	0.42	0.24	0.55																0.45	0.15
D1-8_Seq_V_Pistons	-0.07	-0.23	-0.19	-0.14	-0.29	-0.86	-0.88	-0.09												-0.34	0.33
E1-8_Seq_V_Pistons	-1.01	-0.90	0.10	-0.18	**-2.03**	-0.98	-0.05	0.05												-0.62	0.74
Calibration_Seq_V_Varni									0.57	0.88										0.72	0.22
Seq_V_Varnish									1.12	0.28										0.70	0.59
Yi MAXIMUM	-1.01	-0.90	0.24	0.55	**-2.03**	-0.98	-0.88	-0.09	1.12	0.88										0.72	0.74
Yi MINIMUM	-0.07	-0.23	0.10	-0.14	-0.29	-0.86	-0.05	0.05	0.57	0.28										-0.34	0.15
Yi MEAN	-0.17	-0.24	0.05	0.08	-1.16	-0.92	-0.46	-0.02	0.84	0.58											
Yi STD	0.80	0.66	0.22	0.41	1.23	0.08	0.59	0.10	0.39	0.42											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	4.2%	-1 < yi ≤ 1	87.5%
-2 lt yi le -1	1	4.2%	-2 < yi ≤ 2	95.8%
-1 lt yi le 0	12	50.0%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	9	37.5%	>3	0.0%
1 lt yi le 2	1	4.2%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.71
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Red

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

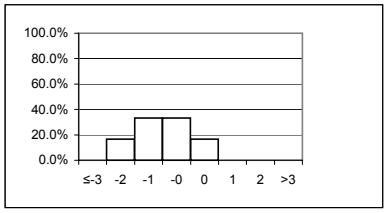
Rater = **Kobrinetz, Jack**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	0.33	0.02	0.34	-0.75																-0.02	0.51
D1-8_Seq_V_Pistons	-2.40	-2.14	-2.15	-1.46	-0.98	-2.02	-1.40	-1.54												-1.76	0.48
E1-8_Seq_V_Pistons	-0.72	-0.58	-0.35	-1.56	-1.91	-1.44	-1.83	-1.07												-1.18	0.59
Calibration_Seq_V_Varni									-0.27	-0.51										-0.39	0.17
Seq_V_Varnish									-0.17	0.72										0.28	0.63
Yi MAXIMUM	-2.40	-2.14	-2.15	-1.56	-1.91	-2.02	-1.83	-1.54	-0.27	0.72										-1.76	0.63
Yi MINIMUM	0.33	0.02	0.34	-0.75	-0.98	-1.44	-1.40	-1.07	-0.17	-0.51										-0.02	0.17
Yi MEAN	-0.93	-0.90	-0.72	-1.26	-1.45	-1.73	-1.62	-1.31	-0.22	0.11											
Yi STD	1.38	1.12	1.29	0.44	0.66	0.41	0.30	0.33	0.07	0.87											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	4	16.7%	-1 < yi ≤ 1	50.0%
-2 lt yi le -1	8	33.3%	-2 < yi ≤ 2	83.3%
-1 lt yi le 0	8	33.3%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	4	16.7%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.89
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

Rater = **Lopez, Frank**

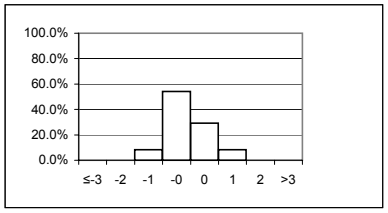
Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	0.16	-0.58	1.09	-0.01																0.16	0.70
D1-8_Seq_V_Pistons	0.13	-0.77	-1.47	-0.41	0.25	-0.25	-0.58	0.26												-0.36	0.59
E1-8_Seq_V_Pistons	-0.08	-0.74	-1.00	-0.54	0.06	-0.19	-0.24	-0.22												-0.37	0.36
Calibration_Seq_V_Varni									0.64	1.34										0.99	0.49
Seq_V_Varnish									0.80	-0.03										0.38	0.58
Yi MAXIMUM	0.16	-0.77	-1.47	-0.54	0.25	-0.25	-0.58	0.26	0.80	1.34										0.99	0.70
Yi MINIMUM	-0.08	-0.58	-1.00	-0.01	0.06	-0.19	-0.24	-0.22	0.64	-0.03										0.16	0.36
Yi MEAN	0.07	-0.70	-0.46	-0.32	0.16	-0.22	-0.41	0.02	0.72	0.65											
Yi STD	0.13	0.10	1.36	0.27	0.13	0.04	0.24	0.34	0.11	0.97											

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	2	8.3%
-1 lt yi le 0	13	54.2%
0 lt yi le 1	7	29.2%
1 lt yi le 2	2	8.3%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	83.3%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.65
Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Red

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

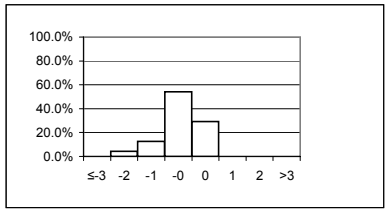
Rater = **Pansza, Mike**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	-0.51	-0.35	-0.46	-0.10																-0.36	0.19
D1-8_Seq_V_Pistons	-0.78	-0.83	-0.27	-1.39	-2.27	-1.05	-0.88	0.08												-0.92	0.71
E1-8_Seq_V_Pistons	-0.19	0.53	0.79	0.84	-1.34	-0.28	0.49	0.72												0.20	0.75
Calibration_Seq_V_Varni									-0.64	-0.81										-0.73	0.12
Seq_V_Varnish									-0.65	0.35										-0.15	0.71
Yi MAXIMUM	-0.78	-0.83	0.79	-1.39	-2.27	-1.05	-0.88	0.72	-0.65	-0.81										-0.92	0.75
Yi MINIMUM	-0.19	-0.35	-0.27	-0.10	-1.34	-0.28	0.49	0.08	-0.64	0.35										-0.15	0.12
Yi MEAN	-0.50	-0.22	0.02	-0.21	-1.80	-0.67	-0.19	0.40	-0.65	-0.23											
Yi STD	0.29	0.69	0.68	1.12	0.65	0.55	0.97	0.45	0.01	0.82											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	4.2%	-1 < yi ≤ 1	83.3%
-2 lt yi le -1	3	12.5%	-2 < yi ≤ 2	95.8%
-1 lt yi le 0	13	54.2%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	7	29.2%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.77
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Red

10:59 AM 5/19/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

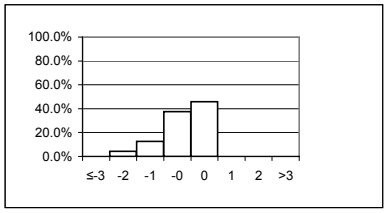
Rater = **Sanchez, Art**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	0.83	0.21	-0.04	0.30																0.33	0.37
D1-8_Seq_V_Pistons	0.45	0.67	0.41	0.17	0.55	-0.67	-0.09	-0.89												0.07	0.58
E1-8_Seq_V_Pistons	-0.19	0.37	0.59	0.18	-0.48	-1.95	-0.98	-0.96												-0.43	0.84
Calibration_Seq_V_Varni									-1.02	-0.76										-0.89	0.18
Seq_V_Varnish									-1.14	**-2.48**										-1.81	0.95
Yi MAXIMUM	0.83	0.67	0.59	0.30	0.55	-1.95	-0.98	-0.96	-1.14	**-2.48**										-1.81	0.95
Yi MINIMUM	-0.19	0.21	-0.04	0.17	-0.48	-0.67	-0.09	-0.89	-1.02	-0.76										0.07	0.18
Yi MEAN	0.36	0.41	0.32	0.22	0.03	-1.31	-0.53	-0.92	-1.08	-1.62											
Yi STD	0.52	0.23	0.32	0.07	0.73	0.91	0.63	0.05	0.08	1.21											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	4.2%	-1 < yi ≤ 1	83.3%
-2 lt yi le -1	3	12.5%	-2 < yi ≤ 2	95.8%
-1 lt yi le 0	9	37.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	11	45.8%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.85
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

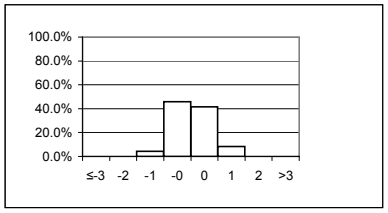
Rater = **Yanchar, Paul**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pistor	-0.47	-0.16	-0.51	-1.00																-0.54	0.35
D1-8_Seq_V_Pistons	-0.59	-0.59	0.17	-0.30	0.30	1.17	0.44	-0.02												0.07	0.59
E1-8_Seq_V_Pistons	-0.37	-0.53	0.07	-0.49	0.64	0.77	0.65	1.11												0.23	0.64
Calibration_Seq_V_Varni									-0.27	0.11										-0.08	0.26
Seq_V_Varnish									0.15	0.22										0.19	0.05
Yi MAXIMUM	-0.59	-0.59	-0.51	-1.00	0.64	1.17	0.65	1.11	-0.27	0.22										-0.54	0.64
Yi MINIMUM	-0.37	-0.16	0.07	-0.30	0.30	0.77	0.44	-0.02	0.15	0.11										0.07	0.05
Yi MEAN	-0.48	-0.43	-0.09	-0.59	0.47	0.97	0.54	0.54	-0.06	0.16											
Yi STD	0.11	0.24	0.37	0.36	0.24	0.29	0.15	0.80	0.30	0.08											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	87.5%
-2 lt yi le -1	1	4.2%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	11	45.8%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	10	41.7%	>3	0.0%
1 lt yi le 2	2	8.3%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.57
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Blue

10:59 AM 5/19/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

Rater = **Adams, Pat**

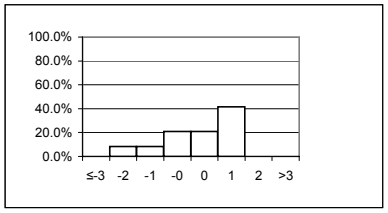
Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	1.84	-0.50	-1.83	-1.47																-0.49	1.65
D1-8_Seq_V_Pistons	0.90	1.39	1.92	1.18	0.45	-0.32	1.04	-0.47												0.76	0.83
E1-8_Seq_V_Pistons	-0.89	1.35	1.21	1.81	0.46	-1.00	**-2.45**	**-2.47**												-0.25	1.70
Calibration_Seq_V_Varni									1.55	1.95										1.75	0.29
Seq_V_Varnish									0.80	0.79										0.79	0.01
Yi MAXIMUM	1.84	1.39	1.92	1.81	0.46	-1.00	**-2.45**	**-2.47**	1.55	1.95										1.75	1.70
Yi MINIMUM	-0.89	-0.50	1.21	1.18	0.45	-0.32	1.04	-0.47	0.80	0.79										-0.25	0.01
Yi MEAN	0.62	0.75	0.43	0.51	0.46	-0.66	-0.70	-1.47	1.17	1.37											
Yi STD	1.39	1.08	1.99	1.74	0.01	0.48	2.47	1.41	0.53	0.83											

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	2	8.3%
-2 lt yi le -1	2	8.3%
-1 lt yi le 0	5	20.8%
0 lt yi le 1	5	20.8%
1 lt yi le 2	10	41.7%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	41.7%
-2 < yi ≤ 2	91.7%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	1.39
Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Yellow

10:59 AM 5/19/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

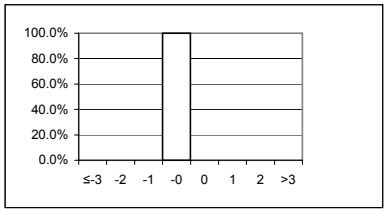
Rater = **Avis, Steve**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto																					
D1-8_Seq_V_Pistons																					
E1-8_Seq_V_Pistons																					
Calibration_Seq_V_Varni									-0.27	-0.71										-0.49	0.31
Seq_V_Varnish									-0.89	-0.72										-0.81	0.12
Yi MAXIMUM									-0.89	-0.72										-0.81	0.31
Yi MINIMUM									-0.27	-0.71										-0.49	0.12
Yi MEAN									-0.58	-0.72											
Yi STD									0.44	0.01											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	100.0%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	4	100.0%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	0	0.0%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.27
3 lt yi	0	0.0%		
total	4	100.0%	Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

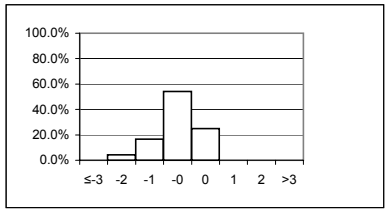
Rater = **Castillo, George**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pistor	-1.65	-2.16	-1.46	-1.60																-1.72	0.31
D1-8_Seq_V_Pistons	0.64	0.73	0.21	-0.57	-0.88	-0.32	-0.95	-0.50												-0.21	0.66
E1-8_Seq_V_Pistons	0.51	0.37	-0.03	0.69	-0.28	-0.05	-0.24	-0.62												0.04	0.44
Calibration_Seq_V_Varni									-0.95	-0.87										-0.91	0.06
Seq_V_Varnish									-1.14	-0.28										-0.71	0.60
Yi MAXIMUM	-1.65	-2.16	-1.46	-1.60	-0.88	-0.32	-0.95	-0.62	-1.14	-0.87										-1.72	0.66
Yi MINIMUM	0.51	0.37	-0.03	-0.57	-0.28	-0.05	-0.24	-0.50	-0.95	-0.28										0.04	0.06
Yi MEAN	-0.17	-0.36	-0.43	-0.49	-0.58	-0.19	-0.60	-0.56	-1.04	-0.57											
Yi STD	1.29	1.58	0.90	1.15	0.43	0.20	0.50	0.09	0.13	0.41											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	4.2%	-1 < yi ≤ 1	79.2%
-2 lt yi le -1	4	16.7%	-2 < yi ≤ 2	95.8%
-1 lt yi le 0	13	54.2%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	6	25.0%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.79
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: White

10:59 AM 5/19/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

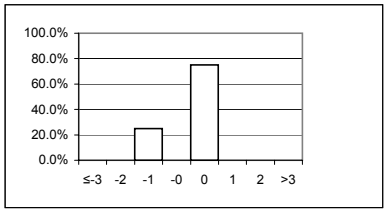
Rater = **Greenland, Paul**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto																					
D1-8_Seq_V_Pistons																					
E1-8_Seq_V_Pistons																					
Calibration_Seq_V_Varni									0.19	0.36										0.28	0.13
Seq_V_Varnish									0.64	-1.72										-0.54	1.67
Yi MAXIMUM									0.64	-1.72										-0.54	1.67
Yi MINIMUM									0.19	0.36										0.28	0.13
Yi MEAN									0.41	-0.68											
Yi STD									0.32	1.48											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	75.0%
-2 lt yi le -1	1	25.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	0	0.0%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	3	75.0%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	1.08
3 lt yi	0	0.0%		
total	4	100.0%	Parts Rated	2

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

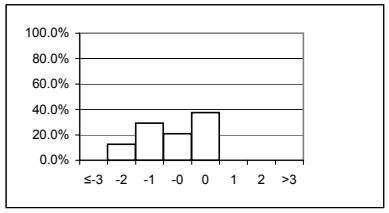
Rater = **Hill, John**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	-0.89	0.74	-0.61	0.90																0.04	0.92
D1-8_Seq_V_Pistons	-1.62	-1.25	-1.11	-1.54	0.50	-1.02	0.55	0.15												-0.67	0.91
E1-8_Seq_V_Pistons	-1.47	**-2.05**	**-2.62**	-1.15	-0.31	0.19	0.65	0.36												-0.80	1.20
Calibration_Seq_V_Varni									-0.27	-0.51										-0.39	0.17
Seq_V_Varnish									**-2.10**	0.35										-0.88	1.73
Yi MAXIMUM	-1.62	**-2.05**	**-2.62**	-1.54	0.50	-1.02	0.65	0.36	**-2.10**	-0.51										-0.88	1.73
Yi MINIMUM	-0.89	0.74	-0.61	0.90	-0.31	0.19	0.55	0.15	-0.27	0.35										0.04	0.17
Yi MEAN	-1.33	-0.85	-1.45	-0.59	0.09	-0.42	0.60	0.26	-1.18	-0.08											
Yi STD	0.39	1.44	1.05	1.31	0.57	0.85	0.07	0.15	1.30	0.60											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	3	12.5%	-1 < yi ≤ 1	58.3%
-2 lt yi le -1	7	29.2%	-2 < yi ≤ 2	87.5%
-1 lt yi le 0	5	20.8%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	9	37.5%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	1.02
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Yellow

10:59 AM 5/19/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

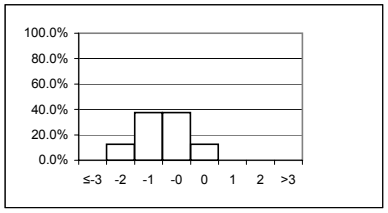
Rater = **Lowsky, John**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	-0.81	-0.56	-0.28	0.87																-0.19	0.74
D1-8_Seq_V_Pistons																					
E1-8_Seq_V_Pistons																					
Calibration_Seq_V_Varni									-1.93	-1.92										-1.92	0.01
Seq_V_Varnish									-1.74	**-2.16**										-1.95	0.30
Yi MAXIMUM	-0.81	-0.56	-0.28	0.87					-1.93	**-2.16**										-1.95	0.74
Yi MINIMUM	-0.81	-0.56	-0.28	0.87					-1.74	-1.92										-0.19	0.01
Yi MEAN	-0.81	-0.56	-0.28	0.87					-1.84	**-2.04**											
Yi STD									0.14	0.18											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	12.5%	-1 < yi ≤ 1	50.0%
-2 lt yi le -1	3	37.5%	-2 < yi ≤ 2	87.5%
-1 lt yi le 0	3	37.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	1	12.5%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	1.06
3 lt yi	0	0.0%		
total	8	100.0%	Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

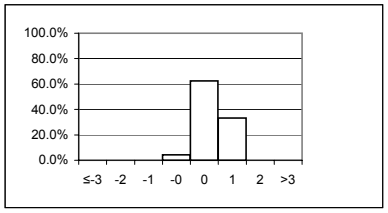
Rater = **May, Marianne**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	0.75	0.29	0.57	0.89																0.63	0.26
D1-8_Seq_V_Pistons	1.10	0.97	1.13	1.73	1.48	1.17	0.97	1.40												1.24	0.27
E1-8_Seq_V_Pistons	1.61	0.73	0.73	0.99	0.89	0.98	1.04	0.97												0.99	0.28
Calibration_Seq_V_Varni									0.11	0.47										0.29	0.25
Seq_V_Varnish									-0.33	0.28										-0.02	0.43
Yi MAXIMUM	1.61	0.97	1.13	1.73	1.48	1.17	1.04	1.40	-0.33	0.47										1.24	0.43
Yi MINIMUM	0.75	0.29	0.57	0.89	0.89	0.98	0.97	0.97	0.11	0.28										-0.02	0.25
Yi MEAN	1.15	0.66	0.81	1.20	1.19	1.07	1.00	1.19	-0.11	0.38											
Yi STD	0.43	0.34	0.29	0.46	0.42	0.14	0.05	0.30	0.31	0.13											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	66.7%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	1	4.2%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	15	62.5%	>3	0.0%
1 lt yi le 2	8	33.3%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.48
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: White

10:59 AM 5/19/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

Rater = **Radonich, Pete**

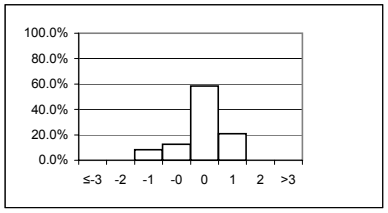
Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	-0.39	-0.73	-1.13	-1.10																-0.84	0.35
D1-8_Seq_V_Pistons	0.51	0.73	0.17	0.09	0.20	0.21	-0.16	0.29												0.26	0.27
E1-8_Seq_V_Pistons	0.91	0.49	0.48	0.89	0.09	0.46	1.04	1.02												0.67	0.34
Calibration_Seq_V_Varni									1.02	1.24										1.13	0.15
Seq_V_Varnish									1.60	0.72										1.16	0.62
Yi MAXIMUM	0.91	-0.73	-1.13	-1.10	0.20	0.46	1.04	1.02	1.60	1.24										1.16	0.62
Yi MINIMUM	-0.39	0.49	0.17	0.09	0.09	0.21	-0.16	0.29	1.02	0.72										0.26	0.15
Yi MEAN	0.35	0.16	-0.16	-0.04	0.15	0.34	0.44	0.65	1.31	0.98											
Yi STD	0.67	0.78	0.85	1.00	0.08	0.18	0.85	0.51	0.41	0.36											

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	2	8.3%
-1 lt yi le 0	3	12.5%
0 lt yi le 1	14	58.3%
1 lt yi le 2	5	20.8%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	70.8%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.70
Parts Rated	5

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

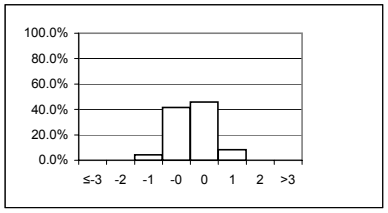
Rater = **Rodriguez, Jesse**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	0.07	-0.54	1.28	0.59																0.35	0.77
D1-8_Seq_V_Pistons	0.51	-0.95	-0.19	-0.10	-0.44	0.02	-0.54	-1.23												-0.36	0.55
E1-8_Seq_V_Pistons	0.33	-0.08	-0.83	-0.08	0.58	0.81	0.13	0.34												0.15	0.50
Calibration_Seq_V_Varni									1.25	-0.20										0.52	1.02
Seq_V_Varnish									0.31	0.35										0.33	0.02
Yi MAXIMUM	0.51	-0.95	1.28	0.59	0.58	0.81	-0.54	-1.23	1.25	0.35										0.52	1.02
Yi MINIMUM	0.07	-0.08	-0.19	-0.08	-0.44	0.02	0.13	0.34	0.31	-0.20										0.15	0.02
Yi MEAN	0.31	-0.52	0.09	0.14	0.07	0.42	-0.21	-0.45	0.78	0.07											
Yi STD	0.22	0.43	1.08	0.39	0.72	0.56	0.47	1.11	0.66	0.39											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	87.5%
-2 lt yi le -1	1	4.2%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	10	41.7%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	11	45.8%	>3	0.0%
1 lt yi le 2	2	8.3%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.63
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: Blue

10:59 AM 5/19/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

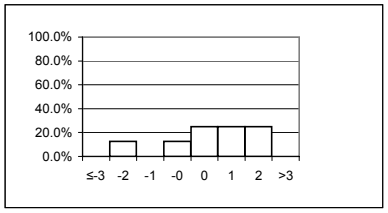
Rater = Seiz, Ray

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	-2.32	2.90	2.08	1.84																1.13	2.34
D1-8_Seq_V_Pistons																					
E1-8_Seq_V_Pistons																					
Calibration_Seq_V_Varni									1.25	-0.10										0.57	0.95
Seq_V_Varnish									0.80	0.72										0.76	0.05
Yi MAXIMUM	-2.32	2.90	2.08	1.84					1.25	0.72										1.13	2.34
Yi MINIMUM	-2.32	2.90	2.08	1.84					0.80	-0.10										0.57	0.05
Yi MEAN	-2.32	2.90	2.08	1.84					1.02	0.31											
Yi STD									0.32	0.58											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	12.5%	-1 < yi ≤ 1	37.5%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	62.5%
-1 lt yi le 0	1	12.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	2	25.0%	>3	0.0%
1 lt yi le 2	2	25.0%		
2 lt yi le 3	2	25.0%	Overall Yi STD	1.60
3 lt yi	0	0.0%		
total	8	100.0%	Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

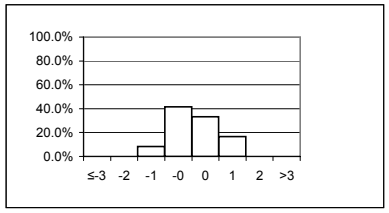
Rater = **Shoda, Ron**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pistor	-0.56	-1.22	-0.98	-1.37																-1.03	0.35
D1-8_Seq_V_Pistons	0.77	0.85	-0.35	-0.53	-0.54	-0.29	-0.69	-0.54												-0.16	0.61
E1-8_Seq_V_Pistons	0.56	0.94	0.79	-0.18	0.12	-0.05	0.30	0.05												0.32	0.41
Calibration_Seq_V_Varni									1.55	1.13										1.34	0.29
Seq_V_Varnish									1.44	1.48										1.46	0.03
Yi MAXIMUM	0.77	-1.22	-0.98	-1.37	-0.54	-0.29	-0.69	-0.54	1.55	1.48										1.46	0.61
Yi MINIMUM	-0.56	0.85	-0.35	-0.18	0.12	-0.05	0.30	0.05	1.44	1.13										-0.16	0.03
Yi MEAN	0.26	0.19	-0.18	-0.69	-0.21	-0.17	-0.19	-0.24	1.49	1.30											
Yi STD	0.72	1.22	0.90	0.61	0.47	0.17	0.70	0.42	0.08	0.24											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	75.0%
-2 lt yi le -1	2	8.3%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	10	41.7%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	8	33.3%	>3	0.0%
1 lt yi le 2	4	16.7%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.86
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: White

10:59 AM 5/19/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

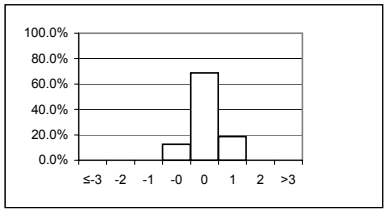
Rater = **Trevino, Robert**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pistor	0.45	0.14	0.53	0.42																0.39	0.17
D1-8_Seq_V_Pistons																					
E1-8_Seq_V_Pistons	0.27	0.28	0.35	-0.33	1.21	1.37	0.84	1.20												0.65	0.60
Calibration_Seq_V_Varni									0.26	0.42										0.34	0.11
Seq_V_Varnish									0.31	-0.34										-0.02	0.46
Yi MAXIMUM	0.45	0.28	0.53	0.42	1.21	1.37	0.84	1.20	0.31	0.42										0.65	0.60
Yi MINIMUM	0.27	0.14	0.35	-0.33	1.21	1.37	0.84	1.20	0.26	-0.34										-0.02	0.11
Yi MEAN	0.36	0.21	0.44	0.04	1.21	1.37	0.84	1.20	0.29	0.04											
Yi STD	0.13	0.10	0.13	0.53					0.04	0.54											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	81.3%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	2	12.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	11	68.8%	>3	0.0%
1 lt yi le 2	3	18.8%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.49
3 lt yi	0	0.0%		
total	16	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Red

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Varnish

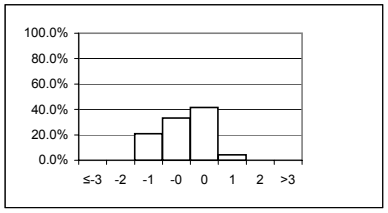
Rater = **Viera, Ralph**

Yi VALUES

	Piston 1	Piston 2	Piston 3	Piston 4	Piston 5	Piston 6	Piston 7	Piston 8	Rocker Cover Baffle L	Rocker Cover Baffle R										MEAN	STD
Calibration_Seq_V_Pisto	0.45	0.08	-0.89	-1.03																-0.35	0.73
D1-8_Seq_V_Pistons	-0.52	0.13	0.05	0.56	-1.03	-0.02	0.93	1.02												0.14	0.70
E1-8_Seq_V_Pistons	-1.65	-1.84	-1.59	-0.64	0.12	0.77	0.26	-0.98												-0.69	0.99
Calibration_Seq_V_Varni									-0.95	-0.76										-0.86	0.13
Seq_V_Varnish									-0.81	0.66										-0.08	1.04
Yi MAXIMUM	-1.65	-1.84	-1.59	-1.03	-1.03	0.77	0.93	1.02	-0.95	-0.76										-0.86	1.04
Yi MINIMUM	0.45	0.08	0.05	0.56	0.12	-0.02	0.26	-0.98	-0.81	0.66										-0.08	0.13
Yi MEAN	-0.57	-0.54	-0.81	-0.37	-0.46	0.37	0.59	0.02	-0.88	-0.05											
Yi STD	1.05	1.13	0.82	0.83	0.82	0.55	0.47	1.42	0.09	1.01											

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	75.0%
-2 lt yi le -1	5	20.8%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	8	33.3%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	10	41.7%	>3	0.0%
1 lt yi le 2	1	4.2%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.85
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	5

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

	Number of Parts Rated	-1 < yi ≤ 1	-2 < yi ≤ 2	-3 < yi ≤ 3	>3	Yi STD	Group
Barrera, Tony	2	90.9%	100.0%	100.0%	0.0%	0.66	Blue
Cales, Jonathon	2	100.0%	100.0%	100.0%	0.0%	0.51	Blue
Caproni, David	2	100.0%	100.0%	100.0%	0.0%	0.41	Blue
Foecking, Brian	2	100.0%	100.0%	100.0%	0.0%	0.23	Blue
Garcia, Orlando	2	72.7%	100.0%	100.0%	0.0%	0.56	White
Hills, Barry	1	55.6%	88.9%	100.0%	0.0%	1.23	Yellow
Kobrinetz, Jack	2	90.9%	100.0%	100.0%	0.0%	0.54	Blue
Lopez, Frank	2	100.0%	100.0%	100.0%	0.0%	0.44	Blue
Pansza, Mike	2	36.4%	90.9%	100.0%	0.0%	1.20	Yellow
Sanchez, Art	2	100.0%	100.0%	100.0%	0.0%	0.52	Blue
Yanchar, Paul	2	81.8%	100.0%	100.0%	0.0%	0.56	Red
Adams, Pat	2	72.7%	100.0%	100.0%	0.0%	0.85	White
Avis, Steve	2	90.9%	100.0%	100.0%	0.0%	0.64	Blue
Castillo, George	2	90.9%	100.0%	100.0%	0.0%	0.63	Blue
Greenland, Paul	2	81.8%	100.0%	100.0%	0.0%	0.44	Red
Hill, John	2	18.2%	36.4%	54.5%	45.5%	2.07	Yellow
Lowsky, John	2	45.5%	81.8%	100.0%	0.0%	0.94	Yellow
May, Marianne	2	63.6%	100.0%	100.0%	0.0%	0.71	White
Radonich, Pete	2	100.0%	100.0%	100.0%	0.0%	0.52	Blue
Rodriguez, Jesse	2	90.9%	100.0%	100.0%	0.0%	0.49	Blue
Seiz, Ray	2	54.5%	100.0%	100.0%	0.0%	0.61	Yellow
Shoda, Ron	2	100.0%	100.0%	100.0%	0.0%	0.45	Blue
Trevino, Robert	2	54.5%	100.0%	100.0%	0.0%	0.85	Yellow
Viera, Ralph	2	81.8%	100.0%	100.0%	0.0%	0.80	Red

Group Criteria

	Minimum Number of Parts Rated	Minimum Yi's within 1 STD of mean	Minimum Yi's within 2 STD of mean	Maximum Overall Yi STD	Group Totals	
White	0	60%	90%	1.20	3	13%
Red	0	80%	95%	0.85	3	13%
Blue	0	85%	98%	0.75	12	50%
Yellow	-	-	-	-	6	25%

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

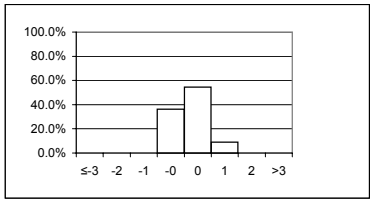
Rater = **Barrera, Tony**

Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			0.77	-0.22																0.27	0.70
Seq_V_Sludge	0.45	0.30	-0.54	1.61	0.21	0.29	0.83	-0.58	-0.30											0.25	0.69
Yi MAXIMUM	0.45	0.30	0.77	1.61	0.21	0.29	0.83	-0.58	-0.30											0.27	0.70
Yi MINIMUM	0.45	0.30	-0.54	-0.22	0.21	0.29	0.83	-0.58	-0.30											0.25	0.69
Yi MEAN	0.45	0.30	0.11	0.69	0.21	0.29	0.83	-0.58	-0.30												
Yi STD			0.93	1.30																	

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	90.9%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	4	36.4%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	6	54.5%	>3	0.0%
1 lt yi le 2	1	9.1%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.66
3 lt yi	0	0.0%		
total	11	100.0%	Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Cales, Jonathon**

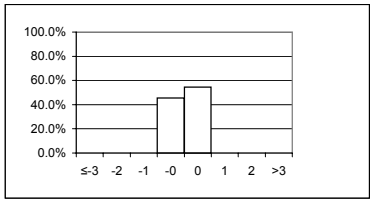
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-0.15	0.59																0.22	0.52
Seq_V_Sludge	-0.56	-0.53	-0.15	0.19	0.81	0.29	0.68	0.71	-0.30											0.13	0.54
Yi MAXIMUM	-0.56	-0.53	-0.15	0.59	0.81	0.29	0.68	0.71	-0.30											0.22	0.54
Yi MINIMUM	-0.56	-0.53	-0.15	0.19	0.81	0.29	0.68	0.71	-0.30											0.13	0.52
Yi MEAN	-0.56	-0.53	-0.15	0.39	0.81	0.29	0.68	0.71	-0.30												
Yi STD			0.00	0.28																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	5	45.5%
0 lt yi le 1	6	54.5%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	100.0%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.51
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

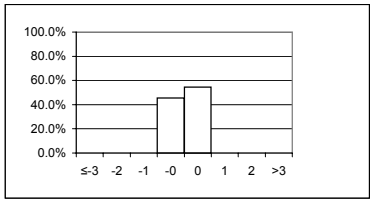
Rater = **Caproni, David**

Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			0.03	0.96																0.49	0.66
Seq_V_Sludge	-0.22	0.12	-0.32	0.23	-0.04	-0.41	0.22	0.54	-0.36											-0.03	0.33
Yi MAXIMUM	-0.22	0.12	-0.32	0.96	-0.04	-0.41	0.22	0.54	-0.36											0.49	0.66
Yi MINIMUM	-0.22	0.12	0.03	0.23	-0.04	-0.41	0.22	0.54	-0.36											-0.03	0.33
Yi MEAN	-0.22	0.12	-0.14	0.59	-0.04	-0.41	0.22	0.54	-0.36												
Yi STD			0.24	0.51																	

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	100.0%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	5	45.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	6	54.5%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.41
3 lt yi	0	0.0%		
total	11	100.0%	Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Foecking, Brian**

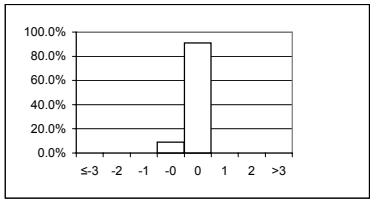
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			0.09	0.59																0.34	0.35
Seq_V_Sludge	0.54	0.18	0.59	0.31	0.71	0.33	0.53	0.50	0.00											0.41	0.22
Yi MAXIMUM	0.54	0.18	0.59	0.59	0.71	0.33	0.53	0.50	0.00											0.41	0.35
Yi MINIMUM	0.54	0.18	0.09	0.31	0.71	0.33	0.53	0.50	0.00											0.34	0.22
Yi MEAN	0.54	0.18	0.34	0.45	0.71	0.33	0.53	0.50	0.00												
Yi STD			0.35	0.20																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	1	9.1%
0 lt yi le 1	10	90.9%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	100.0%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.23
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = Garcia, Orlando

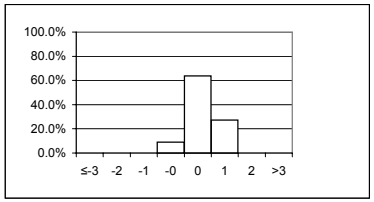
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			1.22	0.36																0.79	0.61
Seq_V_Sludge	-0.56	0.06	0.18	1.30	1.11	0.44	0.79	0.71	0.29											0.48	0.57
Yi MAXIMUM	-0.56	0.06	1.22	1.30	1.11	0.44	0.79	0.71	0.29											0.79	0.61
Yi MINIMUM	-0.56	0.06	0.18	0.36	1.11	0.44	0.79	0.71	0.29											0.48	0.57
Yi MEAN	-0.56	0.06	0.70	0.83	1.11	0.44	0.79	0.71	0.29												
Yi STD			0.74	0.67																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	1	9.1%
0 lt yi le 1	7	63.6%
1 lt yi le 2	3	27.3%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	72.7%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.56
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

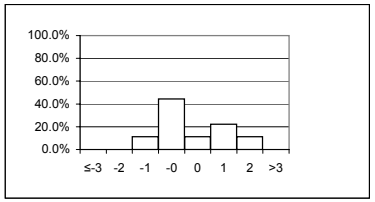
Rater = **Hills, Barry**

Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge																					
Seq_V_Sludge	-0.05	-0.29	2.31	1.49	1.33	0.05	-0.08	-1.66	-0.77											0.26	1.23
Yi MAXIMUM	-0.05	-0.29	2.31	1.49	1.33	0.05	-0.08	-1.66	-0.77											0.26	1.23
Yi MINIMUM	-0.05	-0.29	2.31	1.49	1.33	0.05	-0.08	-1.66	-0.77											0.26	1.23
Yi MEAN	-0.05	-0.29	2.31	1.49	1.33	0.05	-0.08	-1.66	-0.77												
Yi STD																					

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	55.6%
-2 lt yi le -1	1	11.1%	-2 < yi ≤ 2	88.9%
-1 lt yi le 0	4	44.4%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	1	11.1%	>3	0.0%
1 lt yi le 2	2	22.2%		
2 lt yi le 3	1	11.1%	Overall Yi STD	1.23
3 lt yi	0	0.0%		
total	9	100.0%	Parts Rated	1

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Kobrinetz, Jack**

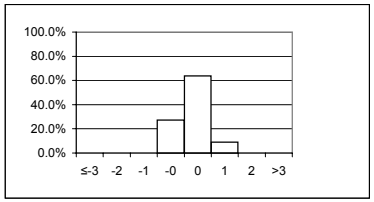
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			0.59	1.21																0.90	0.44
Seq_V_Sludge	-0.73	0.06	0.22	0.12	0.63	-0.14	0.15	0.60	-0.41											0.06	0.44
Yi MAXIMUM	-0.73	0.06	0.59	1.21	0.63	-0.14	0.15	0.60	-0.41											0.90	0.44
Yi MINIMUM	-0.73	0.06	0.22	0.12	0.63	-0.14	0.15	0.60	-0.41											0.06	0.44
Yi MEAN	-0.73	0.06	0.41	0.66	0.63	-0.14	0.15	0.60	-0.41												
Yi STD			0.27	0.78																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	3	27.3%
0 lt yi le 1	7	63.6%
1 lt yi le 2	1	9.1%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	90.9%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.54
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Lopez, Frank**

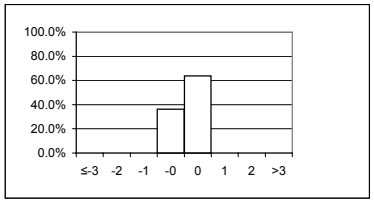
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			0.80	-0.36																0.22	0.82
Seq_V_Sludge	0.28	-0.35	-0.28	-0.19	0.68	0.40	0.64	0.50	0.23											0.21	0.40
Yi MAXIMUM	0.28	-0.35	0.80	-0.36	0.68	0.40	0.64	0.50	0.23											0.22	0.82
Yi MINIMUM	0.28	-0.35	-0.28	-0.19	0.68	0.40	0.64	0.50	0.23											0.21	0.40
Yi MEAN	0.28	-0.35	0.26	-0.28	0.68	0.40	0.64	0.50	0.23												
Yi STD			0.76	0.12																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	4	36.4%
0 lt yi le 1	7	63.6%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	100.0%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.44
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

11:16 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Pansza, Mike**

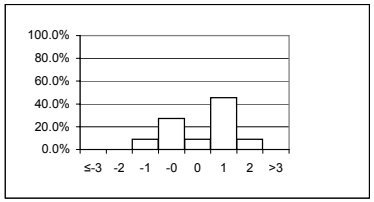
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			1.43	1.74																1.59	0.22
Seq_V_Sludge	2.13	1.68	-0.44	-1.22	1.43	0.99	-0.42	-0.92	1.18											0.49	1.24
Yi MAXIMUM	2.13	1.68	1.43	1.74	1.43	0.99	-0.42	-0.92	1.18											1.59	1.24
Yi MINIMUM	2.13	1.68	-0.44	-1.22	1.43	0.99	-0.42	-0.92	1.18											0.49	0.22
Yi MEAN	2.13	1.68	0.49	0.26	1.43	0.99	-0.42	-0.92	1.18												
Yi STD			1.32	2.10																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	1	9.1%
-1 lt yi le 0	3	27.3%
0 lt yi le 1	1	9.1%
1 lt yi le 2	5	45.5%
2 lt yi le 3	1	9.1%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	36.4%
-2 < yi ≤ 2	90.9%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	1.20
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Yellow

11:16 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Sanchez, Art**

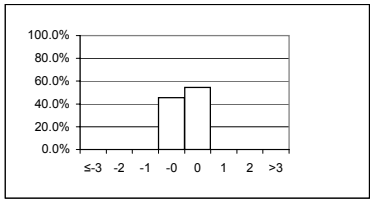
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-0.18	-0.41																-0.29	0.16
Seq_V_Sludge	-0.14	0.00	-0.21	0.04	-0.81	0.36	0.26	0.84	0.94											0.14	0.54
Yi MAXIMUM	-0.14	0.00	-0.21	-0.41	-0.81	0.36	0.26	0.84	0.94											-0.29	0.54
Yi MINIMUM	-0.14	0.00	-0.18	0.04	-0.81	0.36	0.26	0.84	0.94											0.14	0.16
Yi MEAN	-0.14	0.00	-0.20	-0.18	-0.81	0.36	0.26	0.84	0.94												
Yi STD			0.02	0.32																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	5	45.5%
0 lt yi le 1	6	54.5%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	100.0%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.52
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Yanchar, Paul**

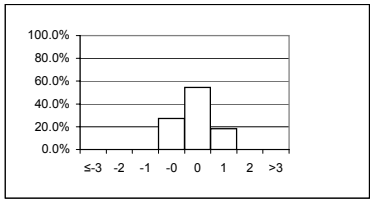
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			1.13	-0.06																0.53	0.84
Seq_V_Sludge	0.54	1.14	-0.32	-0.57	0.01	0.40	0.41	0.67	0.82											0.35	0.55
Yi MAXIMUM	0.54	1.14	1.13	-0.57	0.01	0.40	0.41	0.67	0.82											0.53	0.84
Yi MINIMUM	0.54	1.14	-0.32	-0.06	0.01	0.40	0.41	0.67	0.82											0.35	0.55
Yi MEAN	0.54	1.14	0.41	-0.32	0.01	0.40	0.41	0.67	0.82												
Yi STD			1.02	0.36																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	3	27.3%
0 lt yi le 1	6	54.5%
1 lt yi le 2	2	18.2%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	81.8%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.56
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Red

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

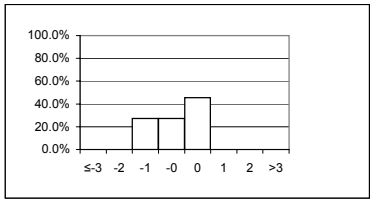
Rater = **Adams, Pat**

Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-0.78	-1.54																-1.16	0.54
Seq_V_Sludge	0.03	0.30	-0.09	-1.99	-1.06	0.17	0.26	0.71	-0.18											-0.21	0.82
Yi MAXIMUM	0.03	0.30	-0.78	-1.99	-1.06	0.17	0.26	0.71	-0.18											-1.16	0.82
Yi MINIMUM	0.03	0.30	-0.09	-1.54	-1.06	0.17	0.26	0.71	-0.18											-0.21	0.54
Yi MEAN	0.03	0.30	-0.43	-1.77	-1.06	0.17	0.26	0.71	-0.18												
Yi STD			0.49	0.32																	

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	72.7%
-2 lt yi le -1	3	27.3%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	3	27.3%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	5	45.5%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.85
3 lt yi	0	0.0%		
total	11	100.0%	Parts Rated	2

Yi distribution (excluding shaded columns)



Group: White

11:16 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

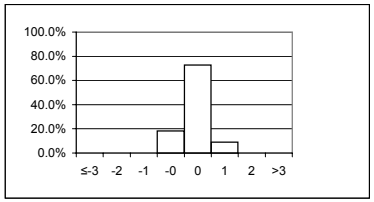
Rater = **Avis, Steve**

Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			0.95	1.44																1.20	0.35
Seq_V_Sludge	0.03	0.84	0.87	0.61	0.43	-0.10	-0.95	0.74	0.41											0.32	0.59
Yi MAXIMUM	0.03	0.84	0.95	1.44	0.43	-0.10	-0.95	0.74	0.41											1.20	0.59
Yi MINIMUM	0.03	0.84	0.87	0.61	0.43	-0.10	-0.95	0.74	0.41											0.32	0.35
Yi MEAN	0.03	0.84	0.91	1.03	0.43	-0.10	-0.95	0.74	0.41												
Yi STD			0.05	0.59																	

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	90.9%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	2	18.2%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	8	72.7%	>3	0.0%
1 lt yi le 2	1	9.1%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.64
3 lt yi	0	0.0%		
total	11	100.0%	Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

11:16 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Castillo, George**

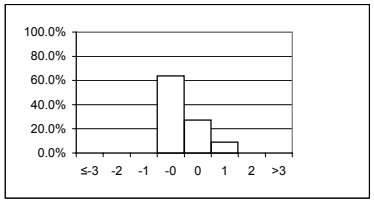
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			0.59	-0.59																0.00	0.84
Seq_V_Sludge	-0.64	-0.29	-0.83	1.11	-0.74	0.05	0.22	-0.14	-0.77											-0.22	0.63
Yi MAXIMUM	-0.64	-0.29	-0.83	1.11	-0.74	0.05	0.22	-0.14	-0.77											-0.22	0.84
Yi MINIMUM	-0.64	-0.29	0.59	-0.59	-0.74	0.05	0.22	-0.14	-0.77											0.00	0.63
Yi MEAN	-0.64	-0.29	-0.12	0.26	-0.74	0.05	0.22	-0.14	-0.77												
Yi STD			1.01	1.21																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	7	63.6%
0 lt yi le 1	3	27.3%
1 lt yi le 2	1	9.1%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	90.9%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.63
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Greenland, Paul**

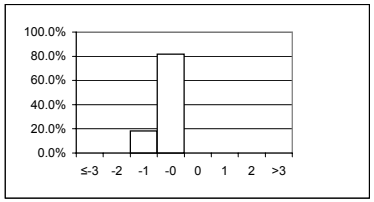
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-0.24	-0.94																-0.59	0.49
Seq_V_Sludge	-0.22	-0.35	-0.91	-0.27	-1.64	-0.57	-0.80	-1.09	-0.47											-0.70	0.46
Yi MAXIMUM	-0.22	-0.35	-0.91	-0.94	-1.64	-0.57	-0.80	-1.09	-0.47											-0.70	0.49
Yi MINIMUM	-0.22	-0.35	-0.24	-0.27	-1.64	-0.57	-0.80	-1.09	-0.47											-0.59	0.46
Yi MEAN	-0.22	-0.35	-0.58	-0.60	-1.64	-0.57	-0.80	-1.09	-0.47												
Yi STD			0.47	0.48																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	2	18.2%
-1 lt yi le 0	9	81.8%
0 lt yi le 1	0	0.0%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	81.8%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.44
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Red

11:16 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Hill, John**

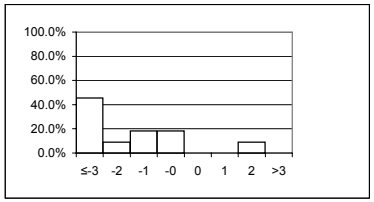
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-1.76	-0.59																-1.18	0.83
Seq_V_Sludge	-2.58	-3.82	2.54	-0.04	-1.89	-4.30	-3.99	-3.01	-3.65											-2.30	2.24
Yi MAXIMUM	-2.58	-3.82	2.54	-0.59	-1.89	-4.30	-3.99	-3.01	-3.65											-2.30	2.24
Yi MINIMUM	-2.58	-3.82	-1.76	-0.04	-1.89	-4.30	-3.99	-3.01	-3.65											-1.18	0.83
Yi MEAN	-2.58	-3.82	0.39	-0.31	-1.89	-4.30	-3.99	-3.01	-3.65												
Yi STD			3.04	0.39																	

	count	percent
yi le -3	5	45.5%
-3 lt yi le -2	1	9.1%
-2 lt yi le -1	2	18.2%
-1 lt yi le 0	2	18.2%
0 lt yi le 1	0	0.0%
1 lt yi le 2	0	0.0%
2 lt yi le 3	1	9.1%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	18.2%
-2 < yi ≤ 2	36.4%
-3 < yi ≤ 3	54.5%
>3	45.5%
Overall Yi STD	2.07
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Yellow

11:16 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Lowsky, John**

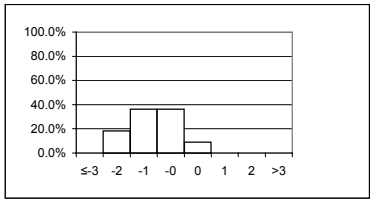
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-2.48	-2.51																-2.49	0.03
Seq_V_Sludge	-1.82	-0.59	-1.36	-1.64	-1.86	-0.30	-0.65	-0.65	0.41											-0.94	0.78
Yi MAXIMUM	-1.82	-0.59	-2.48	-2.51	-1.86	-0.30	-0.65	-0.65	0.41											-2.49	0.78
Yi MINIMUM	-1.82	-0.59	-1.36	-1.64	-1.86	-0.30	-0.65	-0.65	0.41											-0.94	0.03
Yi MEAN	-1.82	-0.59	-1.92	-2.08	-1.86	-0.30	-0.65	-0.65	0.41												
Yi STD			0.79	0.61																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	2	18.2%
-2 lt yi le -1	4	36.4%
-1 lt yi le 0	4	36.4%
0 lt yi le 1	1	9.1%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	45.5%
-2 < yi ≤ 2	81.8%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.94
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **May, Marianne**

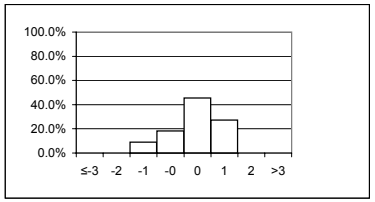
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-1.05	-0.22																-0.63	0.58
Seq_V_Sludge	0.37	0.30	-0.26	1.04	0.96	0.83	0.76	1.08	1.23											0.70	0.47
Yi MAXIMUM	0.37	0.30	-1.05	1.04	0.96	0.83	0.76	1.08	1.23											0.70	0.58
Yi MINIMUM	0.37	0.30	-0.26	-0.22	0.96	0.83	0.76	1.08	1.23											-0.63	0.47
Yi MEAN	0.37	0.30	-0.65	0.41	0.96	0.83	0.76	1.08	1.23												
Yi STD			0.56	0.89																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	1	9.1%
-1 lt yi le 0	2	18.2%
0 lt yi le 1	5	45.5%
1 lt yi le 2	3	27.3%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	63.6%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.71
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Radonich, Pete**

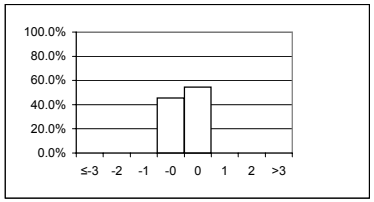
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			0.74	-0.04																0.35	0.55
Seq_V_Sludge	0.03	-0.65	-0.62	-0.30	-0.51	0.56	0.57	0.57	0.12											-0.03	0.52
Yi MAXIMUM	0.03	-0.65	0.74	-0.30	-0.51	0.56	0.57	0.57	0.12											0.35	0.55
Yi MINIMUM	0.03	-0.65	-0.62	-0.04	-0.51	0.56	0.57	0.57	0.12											-0.03	0.52
Yi MEAN	0.03	-0.65	0.06	-0.17	-0.51	0.56	0.57	0.57	0.12												
Yi STD			0.97	0.19																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	5	45.5%
0 lt yi le 1	6	54.5%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	100.0%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.52
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Rodriguez, Jesse**

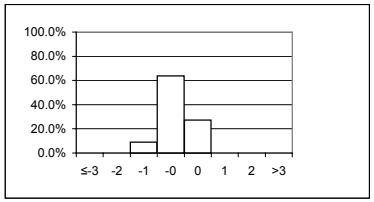
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-0.75	-0.94																-0.84	0.14
Seq_V_Sludge	-1.06	0.24	-0.67	-0.92	-0.99	-0.45	0.07	-0.27	0.17											-0.43	0.51
Yi MAXIMUM	-1.06	0.24	-0.75	-0.94	-0.99	-0.45	0.07	-0.27	0.17											-0.84	0.51
Yi MINIMUM	-1.06	0.24	-0.67	-0.92	-0.99	-0.45	0.07	-0.27	0.17											-0.43	0.14
Yi MEAN	-1.06	0.24	-0.71	-0.93	-0.99	-0.45	0.07	-0.27	0.17												
Yi STD			0.06	0.02																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	1	9.1%
-1 lt yi le 0	7	63.6%
0 lt yi le 1	3	27.3%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	90.9%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.49
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Seiz, Ray**

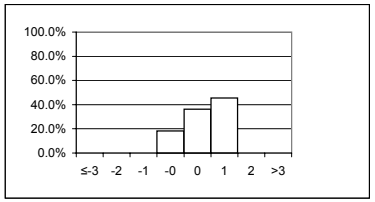
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			0.86	0.89																0.88	0.02
Seq_V_Sludge	1.13	0.24	1.66	1.04	-0.04	-0.18	0.87	1.18	1.65											0.84	0.68
Yi MAXIMUM	1.13	0.24	1.66	1.04	-0.04	-0.18	0.87	1.18	1.65											0.88	0.68
Yi MINIMUM	1.13	0.24	0.86	0.89	-0.04	-0.18	0.87	1.18	1.65											0.84	0.02
Yi MEAN	1.13	0.24	1.26	0.96	-0.04	-0.18	0.87	1.18	1.65												
Yi STD			0.56	0.10																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	2	18.2%
0 lt yi le 1	4	36.4%
1 lt yi le 2	5	45.5%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	54.5%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.61
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Shoda, Ron**

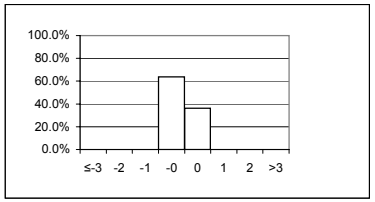
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-0.24	0.59																0.17	0.59
Seq_V_Sludge	0.54	-0.29	-0.13	-0.92	0.08	0.17	-0.57	-0.41	-0.12											-0.18	0.43
Yi MAXIMUM	0.54	-0.29	-0.24	-0.92	0.08	0.17	-0.57	-0.41	-0.12											-0.18	0.59
Yi MINIMUM	0.54	-0.29	-0.13	0.59	0.08	0.17	-0.57	-0.41	-0.12											0.17	0.43
Yi MEAN	0.54	-0.29	-0.19	-0.16	0.08	0.17	-0.57	-0.41	-0.12												
Yi STD			0.08	1.06																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	7	63.6%
0 lt yi le 1	4	36.4%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	100.0%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.45
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

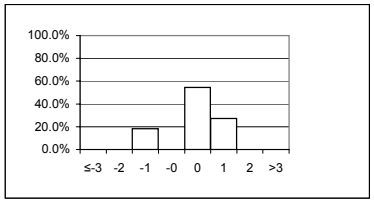
Rater = **Trevino, Robert**

Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-1.05	0.73																-0.16	1.25
Seq_V_Sludge	1.21	1.08	0.22	-1.41	1.23	0.36	0.19	0.30	0.06											0.36	0.81
Yi MAXIMUM	1.21	1.08	-1.05	-1.41	1.23	0.36	0.19	0.30	0.06											0.36	1.25
Yi MINIMUM	1.21	1.08	0.22	0.73	1.23	0.36	0.19	0.30	0.06											-0.16	0.81
Yi MEAN	1.21	1.08	-0.41	-0.34	1.23	0.36	0.19	0.30	0.06												
Yi STD			0.89	1.51																	

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	54.5%
-2 lt yi le -1	2	18.2%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	0	0.0%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	6	54.5%	>3	0.0%
1 lt yi le 2	3	27.3%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.85
3 lt yi	0	0.0%		
total	11	100.0%	Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Yellow

11:16 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Sequence V Sludge

Rater = **Viera, Ralph**

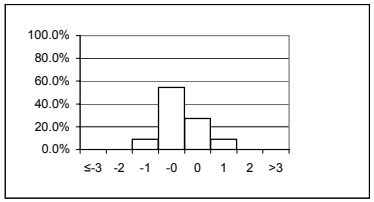
Yi VALUES

	Rocker Cover L	Rocker Cover R	Rocker Cover Baffle L	Rocker Cover Baffle R	Timing Chain Cover	Oil Pan Baffle	Oil Pan	Valve Deck Area L	Valve Deck Area R											MEAN	STD
Calibration_Seq_V_Sludge			-0.54	-0.66																-0.60	0.09
Seq_V_Sludge	1.29	0.60	-1.45	0.38	-0.04	0.75	0.00	-0.92	-0.18											0.05	0.84
Yi MAXIMUM	1.29	0.60	-1.45	-0.66	-0.04	0.75	0.00	-0.92	-0.18											-0.60	0.84
Yi MINIMUM	1.29	0.60	-0.54	0.38	-0.04	0.75	0.00	-0.92	-0.18											0.05	0.09
Yi MEAN	1.29	0.60	-0.99	-0.14	-0.04	0.75	0.00	-0.92	-0.18												
Yi STD			0.64	0.74																	

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	1	9.1%
-1 lt yi le 0	6	54.5%
0 lt yi le 1	3	27.3%
1 lt yi le 2	1	9.1%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	11	100.0%

-1 < yi ≤ 1	81.8%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.80
Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Red

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

	Number of Parts Rated	-1 < yi ≤ 1	-2 < yi ≤ 2	-3 < yi ≤ 3	>3	Yi STD	Group
Barrera, Tony	4	84.4%	100.0%	100.0%	0.0%	0.76	Red
Foecking, Brian	4	56.3%	100.0%	100.0%	0.0%	0.88	Yellow
Garcia, Orlando	4	75.0%	96.9%	100.0%	0.0%	0.92	White
Kobrinetz, Jack	4	78.1%	100.0%	100.0%	0.0%	0.77	White
Lopez, Frank	2	68.8%	81.3%	100.0%	0.0%	1.28	Yellow
Pansza, Mike	4	71.9%	90.6%	96.9%	3.1%	0.94	White
Sanchez, Art	4	65.6%	84.4%	100.0%	0.0%	1.27	Yellow
Yanchar, Paul	4	81.3%	96.9%	100.0%	0.0%	0.83	Red
Adams, Pat	4	46.9%	90.6%	100.0%	0.0%	1.26	Yellow
Avis, Steve	4	75.0%	100.0%	100.0%	0.0%	0.40	White
Castillo, George	4	93.8%	100.0%	100.0%	0.0%	0.66	Blue
Greenland, Paul	4	75.0%	93.8%	100.0%	0.0%	0.72	White
Hill, John	4	84.4%	96.9%	100.0%	0.0%	0.79	Red
Lowsky, John	4	78.1%	100.0%	100.0%	0.0%	0.74	White
Pitta, Jimmy	4	21.9%	100.0%	100.0%	0.0%	0.39	Yellow
Radonich, Pete	4	59.4%	100.0%	100.0%	0.0%	0.54	Yellow
Rodriguez, Jesse	4	56.3%	100.0%	100.0%	0.0%	0.60	Yellow
Seiz, Ray	4	68.8%	100.0%	100.0%	0.0%	0.91	White
Shoda, Ron	4	78.1%	100.0%	100.0%	0.0%	0.78	White
Terrado, Teresa	4	40.6%	96.9%	100.0%	0.0%	0.74	Yellow
Viera, Ralph	4	84.4%	100.0%	100.0%	0.0%	0.68	Red

Group Criteria

	Minimum Number of Parts Rated	Minimum Yi's within 1 STD of mean	Minimum Yi's within 2 STD of mean	Maximum Overall Yi STD	Group Totals	
White	0	60%	90%	1.20	8	38%
Red	0	80%	95%	0.85	4	19%
Blue	0	85%	98%	0.75	1	5%
Yellow	-	-	-	-	8	38%

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

Rater = **Barrera, Tony**

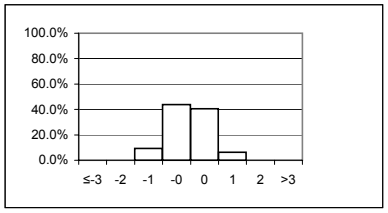
Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-1.35	-0.11	0.01	0.87	0.61	-0.57	0.58	0.36												0.05	0.73
G1-8_Valves	-0.74	-0.08	0.64	1.38	0.32	-0.08	-0.66	0.64												0.18	0.72
H1-8_Valves	-0.99	-0.63	0.14	0.98	-0.12	-0.90	-0.16	0.39												-0.16	0.67
I1-8_Valves	-1.62	-0.83	0.79	1.14	-0.22	-1.07	-0.09	0.58												-0.17	0.97
Yi MAXIMUM	-1.62	-0.83	0.79	1.38	0.61	-1.07	-0.66	0.64												0.18	0.97
Yi MINIMUM	-0.74	-0.08	0.01	0.87	-0.12	-0.08	-0.09	0.36												0.05	0.67
Yi MEAN	-1.18	-0.41	0.39	1.09	0.15	-0.66	-0.08	0.49													
Yi STD	0.39	0.37	0.38	0.22	0.39	0.44	0.51	0.14													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	3	9.4%
-1 lt yi le 0	14	43.8%
0 lt yi le 1	13	40.6%
1 lt yi le 2	2	6.3%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	32	100.0%

-1 < yi ≤ 1	84.4%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.76
Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Red

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

Rater = **Foecking, Brian**

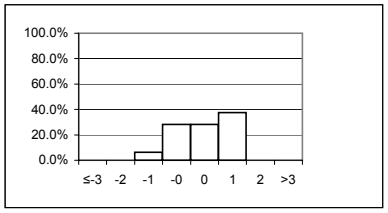
Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	1.23	1.19	0.39	-1.51	-0.12	0.92	-0.40	-0.33												0.17	0.94
G1-8_Valves	1.43	0.93	-0.19	-1.38	-0.12	1.03	1.15	-0.55												0.29	0.99
H1-8_Valves	1.06	1.01	-0.21	-0.32	1.28	1.85	0.81	0.09												0.70	0.77
I1-8_Valves	0.93	1.56	0.06	-0.08	0.22	1.75	1.78	0.39												0.83	0.78
Yi MAXIMUM	1.43	1.56	0.39	-1.51	1.28	1.85	1.78	-0.55												0.83	0.99
Yi MINIMUM	0.93	0.93	0.06	-0.08	-0.12	0.92	-0.40	0.09												0.17	0.77
Yi MEAN	1.16	1.17	0.01	-0.82	0.31	1.39	0.83	-0.10													
Yi STD	0.22	0.28	0.28	0.73	0.66	0.48	0.92	0.42													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	2	6.3%
-1 lt yi le 0	9	28.1%
0 lt yi le 1	9	28.1%
1 lt yi le 2	12	37.5%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	32	100.0%

-1 < yi ≤ 1	56.3%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.88
Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Yellow

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

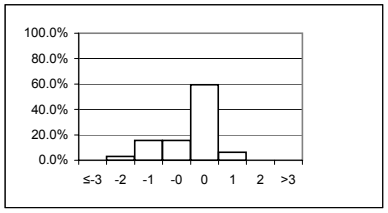
Rater = **Garcia, Orlando**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-2.21	-0.11	1.14	0.68	1.09	0.42	-1.37	0.71												0.04	1.22
G1-8_Valves	-1.83	0.17	0.09	0.99	0.32	0.14	-1.26	0.44												-0.12	0.94
H1-8_Valves	-1.67	0.02	0.84	0.49	-0.12	-0.29	-1.45	0.69												-0.19	0.94
I1-8_Valves	-0.09	0.20	0.79	0.83	0.65	-0.13	0.84	0.77												0.48	0.42
Yi MAXIMUM	-2.21	0.20	1.14	0.99	1.09	0.42	-1.45	0.77												0.48	1.22
Yi MINIMUM	-0.09	0.02	0.09	0.49	-0.12	-0.13	0.84	0.44												0.04	0.42
Yi MEAN	-1.45	0.07	0.71	0.75	0.49	0.03	-0.81	0.65													
Yi STD	0.93	0.14	0.44	0.21	0.51	0.31	1.10	0.14													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	3.1%	-1 < yi ≤ 1	75.0%
-2 lt yi le -1	5	15.6%	-2 < yi ≤ 2	96.9%
-1 lt yi le 0	5	15.6%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	19	59.4%	>3	0.0%
1 lt yi le 2	2	6.3%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.92
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: White

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

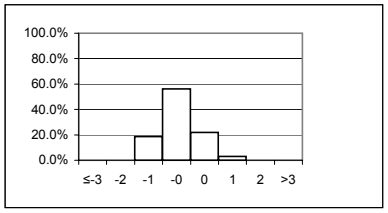
Rater = **Kobrinetz, Jack**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	0.37	-0.11	-1.50	-0.78	-0.85	-0.33	-0.79	-1.71												-0.71	0.69
G1-8_Valves	1.43	0.17	-1.01	-0.20	-0.12	-0.08	0.55	-0.55												0.02	0.73
H1-8_Valves	0.37	0.02	-1.60	-0.80	-0.82	-0.90	-0.16	-1.41												-0.66	0.69
I1-8_Valves	0.93	-0.14	-0.66	-0.38	-1.95	-0.45	0.22	-0.97												-0.42	0.85
Yi MAXIMUM	1.43	0.17	-1.60	-0.80	-1.95	-0.90	-0.79	-1.71												-0.71	0.85
Yi MINIMUM	0.37	0.02	-0.66	-0.20	-0.12	-0.08	-0.16	-0.55												0.02	0.69
Yi MEAN	0.78	-0.01	-1.19	-0.54	-0.94	-0.44	-0.05	-1.16													
Yi STD	0.51	0.14	0.44	0.30	0.76	0.34	0.57	0.51													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	78.1%
-2 lt yi le -1	6	18.8%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	18	56.3%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	7	21.9%	>3	0.0%
1 lt yi le 2	1	3.1%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.77
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: White

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

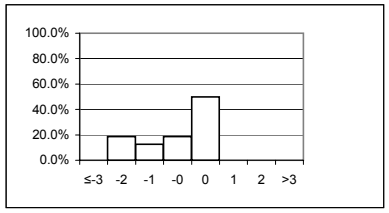
Rater = **Lopez, Frank**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-0.06	**-2.46**	0.39	0.87	0.85	**-2.81**	-1.96	0.36												-0.60	1.54
G1-8_Valves	-0.20	-1.85	0.64	0.40	0.32	**-2.08**	-0.66	0.24												-0.40	1.05
H1-8_Valves																					
I1-8_Valves																					
Yi MAXIMUM	-0.20	**-2.46**	0.64	0.87	0.85	**-2.81**	-1.96	0.36												-0.60	1.54
Yi MINIMUM	-0.06	-1.85	0.39	0.40	0.32	**-2.08**	-0.66	0.24												-0.40	1.05
Yi MEAN	-0.13	**-2.16**	0.51	0.63	0.59	**-2.45**	-1.31	0.30													
Yi STD	0.10	0.43	0.18	0.33	0.37	0.52	0.92	0.08													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	3	18.8%	-1 < yi ≤ 1	68.8%
-2 lt yi le -1	2	12.5%	-2 < yi ≤ 2	81.3%
-1 lt yi le 0	3	18.8%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	8	50.0%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	1.28
3 lt yi	0	0.0%		
total	16	100.0%	Parts Rated	2

Yi distribution (excluding shaded columns)



Group: Yellow

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

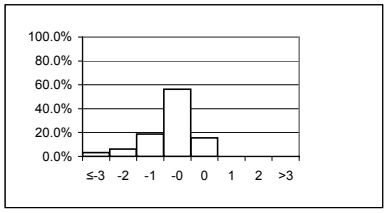
Rater = **Pansza, Mike**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-0.06	-1.42	-0.74	-0.41	-0.61	-1.32	0.77	0.36												-0.43	0.77
G1-8_Valves	-0.20	-0.84	0.91	-0.79	**-3.23**	-0.97	-0.66	0.24												-0.69	1.21
H1-8_Valves	-1.67	-0.96	-0.21	-0.48	**-2.93**	-1.51	-1.13	**-2.01**												-1.36	0.87
I1-8_Valves	-0.60	-1.85	-0.30	-0.23	-0.22	-0.76	-0.09	0.39												-0.46	0.66
Yi MAXIMUM	-1.67	-1.85	0.91	-0.79	**-3.23**	-1.51	-1.13	**-2.01**												-1.36	1.21
Yi MINIMUM	-0.06	-0.84	-0.21	-0.23	-0.22	-0.76	-0.09	0.24												-0.43	0.66
Yi MEAN	-0.63	-1.27	-0.08	-0.48	-1.75	-1.14	-0.28	-0.26													
Yi STD	0.73	0.46	0.71	0.23	1.55	0.34	0.82	1.17													

	count	percent		
yi le -3	1	3.1%		
-3 lt yi le -2	2	6.3%	-1 < yi ≤ 1	71.9%
-2 lt yi le -1	6	18.8%	-2 < yi ≤ 2	90.6%
-1 lt yi le 0	18	56.3%	-3 < yi ≤ 3	96.9%
0 lt yi le 1	5	15.6%	>3	3.1%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.94
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: White

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

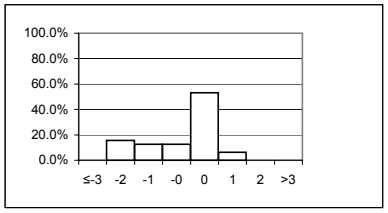
Rater = **Sanchez, Art**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	1.23	0.67	-1.87	**-2.42**	**-2.79**	0.67	-0.01	0.36												-0.52	1.58
G1-8_Valves	0.35	0.43	-0.74	-1.78	0.32	0.59	0.55	**-2.35**												-0.33	1.16
H1-8_Valves	0.37	0.02	-0.91	-1.78	-0.12	0.63	0.81	0.39												-0.07	0.87
I1-8_Valves	0.93	0.88	**-2.10**	-1.44	0.22	1.12	0.53	**-2.90**												-0.34	1.57
Yi MAXIMUM	1.23	0.88	**-2.10**	**-2.42**	**-2.79**	1.12	0.81	**-2.90**												-0.52	1.58
Yi MINIMUM	0.35	0.02	-0.74	-1.44	-0.12	0.59	-0.01	0.36												-0.07	0.87
Yi MEAN	0.72	0.50	-1.40	-1.85	-0.59	0.75	0.47	-1.12													
Yi STD	0.43	0.37	0.68	0.41	1.48	0.25	0.34	1.75													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	5	15.6%	-1 < yi ≤ 1	65.6%
-2 lt yi le -1	4	12.5%	-2 < yi ≤ 2	84.4%
-1 lt yi le 0	4	12.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	17	53.1%	>3	0.0%
1 lt yi le 2	2	6.3%		
2 lt yi le 3	0	0.0%	Overall Yi STD	1.27
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Yellow

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

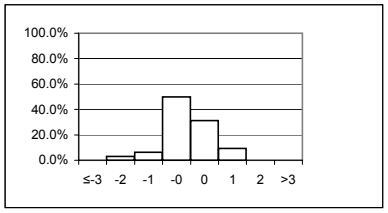
Rater = **Yanchar, Paul**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-0.92	0.93	0.76	0.13	-0.12	0.67	0.77	-1.02												0.15	0.78
G1-8_Valves	-1.28	1.18	-0.74	-0.20	-0.12	0.81	-0.05	-0.35												-0.09	0.79
H1-8_Valves	-0.99	1.01	-0.21	-0.32	0.58	0.93	0.16	-0.81												0.04	0.76
I1-8_Valves	-0.60	1.22	-0.30	-0.08	-0.65	0.81	-2.28	-0.77												-0.33	1.06
Yi MAXIMUM	-1.28	1.22	0.76	-0.32	-0.65	0.93	-2.28	-1.02												-0.33	1.06
Yi MINIMUM	-0.60	0.93	-0.21	-0.08	-0.12	0.67	-0.05	-0.35												0.04	0.76
Yi MEAN	-0.95	1.09	-0.12	-0.11	-0.08	0.80	-0.35	-0.74													
Yi STD	0.28	0.14	0.63	0.19	0.50	0.11	1.33	0.28													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	3.1%	-1 < yi ≤ 1	81.3%
-2 lt yi le -1	2	6.3%	-2 < yi ≤ 2	96.9%
-1 lt yi le 0	16	50.0%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	10	31.3%	>3	0.0%
1 lt yi le 2	3	9.4%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.83
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Red

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

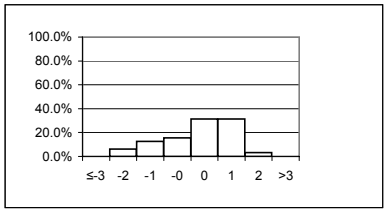
Rater = **Adams, Pat**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	0.80	-1.68	0.39	1.60	1.33	-1.57	-0.98	1.05												0.12	1.33
G1-8_Valves	0.35	**-2.10**	0.36	1.58	0.77	-1.86	0.55	**2.24**												0.24	1.52
H1-8_Valves	-0.31	**-2.60**	1.18	1.63	-0.82	-0.60	0.48	0.69												-0.04	1.34
I1-8_Valves	0.42	-0.83	1.15	1.14	1.08	-1.39	0.84	1.16												0.45	1.00
Yi MAXIMUM	0.80	**-2.60**	1.18	1.63	1.33	-1.86	-0.98	**2.24**												0.45	1.52
Yi MINIMUM	-0.31	-0.83	0.36	1.14	0.77	-0.60	0.48	0.69												-0.04	1.00
Yi MEAN	0.31	-1.80	0.77	1.49	0.59	-1.35	0.22	1.29													
Yi STD	0.46	0.75	0.46	0.23	0.97	0.54	0.82	0.67													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	2	6.3%	-1 < yi ≤ 1	46.9%
-2 lt yi le -1	4	12.5%	-2 < yi ≤ 2	90.6%
-1 lt yi le 0	5	15.6%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	10	31.3%	>3	0.0%
1 lt yi le 2	10	31.3%		
2 lt yi le 3	1	3.1%	Overall Yi STD	1.26
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Yellow

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

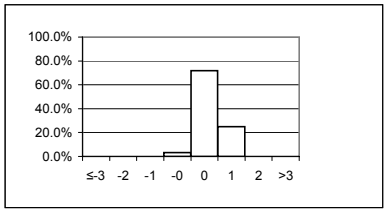
Rater = **Avis, Steve**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	0.80	0.15	1.14	0.32	0.36	0.17	1.16	0.71												0.60	0.41
G1-8_Valves	1.43	0.43	1.19	0.59	1.21	0.59	0.55	0.84												0.85	0.38
H1-8_Valves	1.06	0.35	0.84	0.98	0.58	0.32	0.81	0.69												0.70	0.27
I1-8_Valves	1.44	0.54	0.97	-0.08	0.22	0.18	1.16	0.39												0.60	0.53
Yi MAXIMUM	1.44	0.54	1.19	0.98	1.21	0.59	1.16	0.84												0.85	0.53
Yi MINIMUM	0.80	0.15	0.84	-0.08	0.22	0.17	0.55	0.39												0.60	0.27
Yi MEAN	1.18	0.37	1.03	0.45	0.59	0.31	0.92	0.66													
Yi STD	0.31	0.16	0.16	0.45	0.44	0.19	0.30	0.19													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	75.0%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	1	3.1%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	23	71.9%	>3	0.0%
1 lt yi le 2	8	25.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.40
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: White

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

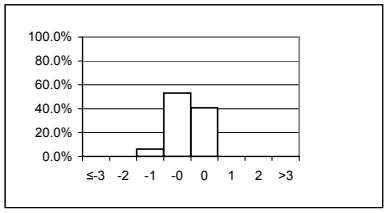
Rater = **Castillo, George**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-0.92	0.67	0.01	-0.60	0.12	0.67	-0.79	-0.33												-0.15	0.62
G1-8_Valves	0.35	0.93	0.64	-0.59	0.32	0.81	-0.05	-0.75												0.21	0.62
H1-8_Valves	-0.99	0.68	-1.25	-0.80	-0.12	0.63	-0.48	-1.41												-0.47	0.80
I1-8_Valves	-0.09	0.54	-0.30	-0.53	-0.22	0.81	-0.72	-0.39												-0.11	0.52
Yi MAXIMUM	-0.99	0.93	-1.25	-0.80	0.32	0.81	-0.79	-1.41												-0.47	0.80
Yi MINIMUM	-0.09	0.54	0.01	-0.53	0.12	0.63	-0.05	-0.33												-0.11	0.52
Yi MEAN	-0.41	0.70	-0.23	-0.63	0.03	0.73	-0.51	-0.72													
Yi STD	0.65	0.16	0.79	0.12	0.24	0.09	0.33	0.50													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	93.8%
-2 lt yi le -1	2	6.3%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	17	53.1%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	13	40.6%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.66
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

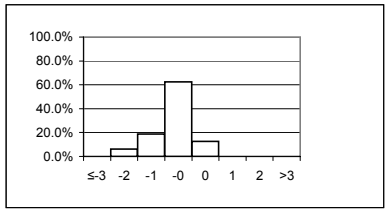
Rater = **Greenland, Paul**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-0.49	-0.37	-1.50	-0.41	-0.36	-0.08	-0.59	**-2.06**												-0.73	0.68
G1-8_Valves	-1.83	-1.09	-0.74	0.20	-1.45	-0.08	-1.86	-0.75												-0.95	0.76
H1-8_Valves	-0.31	0.02	0.49	-0.15	-0.82	-0.29	-0.48	0.39												-0.14	0.44
I1-8_Valves	-1.62	-0.49	-0.48	-0.38	**-2.39**	-0.13	-0.09	-0.77												-0.79	0.80
Yi MAXIMUM	-1.83	-1.09	-1.50	-0.41	**-2.39**	-0.29	-1.86	**-2.06**												-0.95	0.80
Yi MINIMUM	-0.31	0.02	-0.48	-0.15	-0.36	-0.08	-0.09	0.39												-0.14	0.44
Yi MEAN	-1.06	-0.48	-0.56	-0.19	-1.26	-0.15	-0.76	-0.80													
Yi STD	0.77	0.46	0.82	0.28	0.88	0.10	0.77	1.00													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	2	6.3%	-1 < yi ≤ 1	75.0%
-2 lt yi le -1	6	18.8%	-2 < yi ≤ 2	93.8%
-1 lt yi le 0	20	62.5%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	4	12.5%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.72
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: White

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

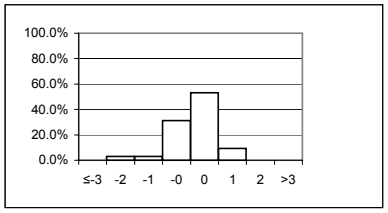
Rater = **Hill, John**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	1.23	0.41	-0.74	-0.05	-0.61	0.42	0.77	0.02												0.18	0.67
G1-8_Valves	0.35	-0.33	-2.67	-1.19	-0.12	0.59	0.55	-0.35												-0.40	1.09
H1-8_Valves	1.06	0.68	0.49	0.17	0.58	0.63	-0.48	0.09												0.40	0.47
I1-8_Valves	-0.60	0.20	-0.66	0.68	1.52	-0.13	0.53	0.39												0.24	0.72
Yi MAXIMUM	1.23	0.68	-2.67	-1.19	1.52	0.63	0.77	0.39												0.40	1.09
Yi MINIMUM	0.35	0.20	0.49	-0.05	-0.12	-0.13	-0.48	0.02												0.18	0.47
Yi MEAN	0.51	0.24	-0.90	-0.10	0.34	0.38	0.34	0.03													
Yi STD	0.83	0.43	1.31	0.79	0.92	0.35	0.56	0.30													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	1	3.1%	-1 < yi ≤ 1	84.4%
-2 lt yi le -1	1	3.1%	-2 < yi ≤ 2	96.9%
-1 lt yi le 0	10	31.3%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	17	53.1%	>3	0.0%
1 lt yi le 2	3	9.4%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.79
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Red

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

Rater = **Lowsky, John**

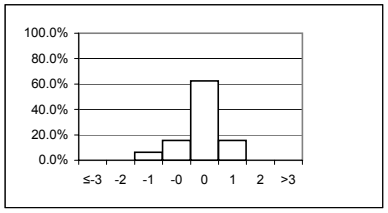
Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	0.37	-0.11	0.95	0.04	0.36	0.30	-1.18	0.71												0.18	0.64
G1-8_Valves	0.35	0.17	0.36	-0.69	0.77	0.14	0.55	0.05												0.21	0.43
H1-8_Valves	0.37	0.52	1.53	0.25	1.63	0.02	-1.45	1.89												0.60	1.09
I1-8_Valves	1.19	0.37	-0.03	-0.91	1.08	0.34	-0.56	0.39												0.23	0.73
Yi MAXIMUM	1.19	0.52	1.53	-0.91	1.63	0.34	-1.45	1.89												0.60	1.09
Yi MINIMUM	0.35	-0.11	-0.03	0.04	0.36	0.02	0.55	0.05												0.18	0.43
Yi MEAN	0.57	0.24	0.70	-0.33	0.96	0.20	-0.66	0.76													
Yi STD	0.41	0.27	0.68	0.56	0.53	0.15	0.89	0.80													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	2	6.3%
-1 lt yi le 0	5	15.6%
0 lt yi le 1	20	62.5%
1 lt yi le 2	5	15.6%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	32	100.0%

-1 < yi ≤ 1	78.1%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.74
Parts Rated	4

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

Rater = **Pitta, Jimmy**

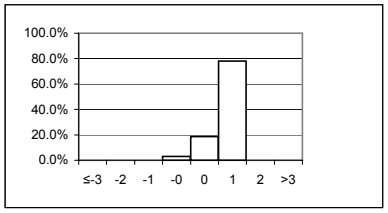
Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	1.23	1.46	1.51	1.41	1.33	1.17	1.16	1.05												1.29	0.16
G1-8_Valves	0.89	1.44	1.46	1.38	0.77	1.03	1.15	1.04												1.15	0.26
H1-8_Valves	1.06	1.33	0.49	1.14	-0.12	0.93	0.81	0.69												0.79	0.45
I1-8_Valves	1.96	1.56	1.69	1.14	1.08	1.12	1.78	1.16												1.44	0.35
Yi MAXIMUM	1.96	1.56	1.69	1.41	1.33	1.17	1.78	1.16												1.44	0.45
Yi MINIMUM	0.89	1.33	0.49	1.14	-0.12	0.93	0.81	0.69												0.79	0.16
Yi MEAN	1.28	1.45	1.29	1.27	0.77	1.06	1.22	0.99													
Yi STD	0.47	0.09	0.54	0.15	0.64	0.10	0.41	0.20													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	1	3.1%
0 lt yi le 1	6	18.8%
1 lt yi le 2	25	78.1%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	32	100.0%

-1 < yi ≤ 1	21.9%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.39
Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Yellow

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

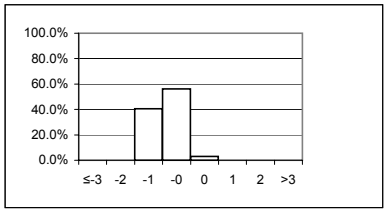
Rater = **Radonich, Pete**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-0.49	-0.63	-1.12	-0.96	-1.33	-0.08	-0.40	-1.71												-0.84	0.54
G1-8_Valves	-1.28	-0.33	-1.01	-0.79	-1.01	-0.30	-1.26	-0.95												-0.87	0.38
H1-8_Valves	0.37	-0.63	-1.60	-1.45	-0.12	-0.90	-0.48	-0.51												-0.67	0.65
I1-8_Valves	-0.09	-1.17	-1.74	-1.74	-0.65	-1.39	-0.41	-0.58												-0.97	0.63
Yi MAXIMUM	-1.28	-1.17	-1.74	-1.74	-1.33	-1.39	-1.26	-1.71												-0.97	0.65
Yi MINIMUM	-0.09	-0.33	-1.01	-0.79	-0.12	-0.08	-0.40	-0.51												-0.67	0.38
Yi MEAN	-0.37	-0.69	-1.37	-1.24	-0.78	-0.67	-0.64	-0.94													
Yi STD	0.70	0.35	0.36	0.44	0.52	0.59	0.42	0.55													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	59.4%
-2 lt yi le -1	13	40.6%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	18	56.3%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	1	3.1%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.54
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Yellow

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

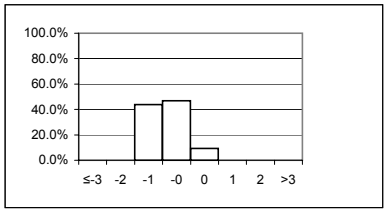
Rater = **Rodriguez, Jesse**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-0.92	-0.11	-1.12	-0.60	-0.12	-0.33	-0.40	-1.02												-0.58	0.40
G1-8_Valves	-0.20	0.17	-1.57	-1.38	0.32	-0.30	0.55	-1.15												-0.44	0.82
H1-8_Valves	-0.31	-0.96	-1.25	-1.29	-0.12	-0.90	-1.77	-1.71												-1.04	0.60
I1-8_Valves	-0.60	-1.51	-0.48	-0.68	-1.08	-1.07	-1.03	-1.16												-0.95	0.34
Yi MAXIMUM	-0.92	-1.51	-1.57	-1.38	-1.08	-1.07	-1.77	-1.71												-1.04	0.82
Yi MINIMUM	-0.20	-0.11	-0.48	-0.60	-0.12	-0.30	-0.40	-1.02												-0.44	0.34
Yi MEAN	-0.51	-0.60	-1.10	-0.99	-0.25	-0.65	-0.66	-1.26													
Yi STD	0.32	0.77	0.46	0.41	0.59	0.40	0.98	0.31													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	56.3%
-2 lt yi le -1	14	43.8%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	15	46.9%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	3	9.4%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.60
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Yellow

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

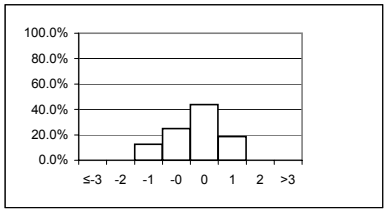
Rater = Seiz, Ray

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	0.37	-0.63	0.39	1.05	0.85	-0.82	0.19	0.02												0.17	0.65
G1-8_Valves	-0.20	0.43	0.64	0.59	-1.01	-0.53	0.55	1.24												0.21	0.73
H1-8_Valves	1.06	-1.29	0.84	1.47	-0.82	-1.51	0.48	0.69												0.11	1.15
I1-8_Valves	-0.60	-0.83	1.51	1.89	0.22	-1.39	-0.41	0.97												0.17	1.18
Yi MAXIMUM	1.06	-1.29	1.51	1.89	-1.01	-1.51	0.55	1.24												0.21	1.18
Yi MINIMUM	-0.20	0.43	0.39	0.59	0.22	-0.53	0.19	0.02												0.11	0.65
Yi MEAN	0.16	-0.58	0.84	1.25	-0.19	-1.06	0.20	0.73													
Yi STD	0.72	0.72	0.48	0.56	0.88	0.47	0.44	0.53													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	68.8%
-2 lt yi le -1	4	12.5%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	8	25.0%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	14	43.8%	>3	0.0%
1 lt yi le 2	6	18.8%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.91
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: White

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

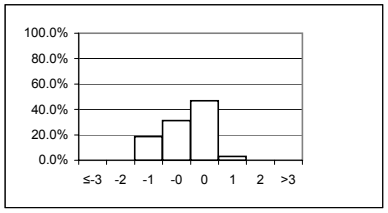
Rater = **Shoda, Ron**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-0.49	0.15	0.01	-0.60	-1.09	0.67	0.96	0.36												0.00	0.69
G1-8_Valves	0.35	0.43	-0.19	-0.20	0.77	0.81	-1.26	-0.75												-0.01	0.73
H1-8_Valves	-0.31	0.02	-1.25	-0.96	0.58	0.63	1.77	0.39												0.11	0.97
I1-8_Valves	-1.11	-0.14	-0.84	-1.44	0.65	0.18	-1.03	-0.19												-0.49	0.72
Yi MAXIMUM	-1.11	0.43	-1.25	-1.44	-1.09	0.81	1.77	-0.75												-0.49	0.97
Yi MINIMUM	-0.31	0.02	0.01	-0.20	0.58	0.18	0.96	-0.19												0.00	0.69
Yi MEAN	-0.39	0.11	-0.57	-0.80	0.23	0.57	0.11	-0.05													
Yi STD	0.60	0.24	0.58	0.53	0.88	0.27	1.49	0.54													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	78.1%
-2 lt yi le -1	6	18.8%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	10	31.3%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	15	46.9%	>3	0.0%
1 lt yi le 2	1	3.1%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.78
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: White

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

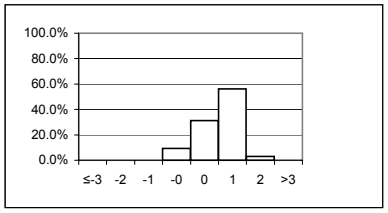
Rater = **Terrado, Teresa**

Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	1.23	1.46	1.14	0.32	0.24	1.42	1.94	1.75												1.19	0.62
G1-8_Valves	1.43	1.18	0.91	0.30	1.21	1.48	2.36	0.05												1.11	0.72
H1-8_Valves	1.74	1.66	1.18	0.25	1.28	1.85	1.77	0.69												1.30	0.58
I1-8_Valves	0.42	1.22	0.15	0.00	0.65	1.75	-0.87	0.00												0.41	0.81
Yi MAXIMUM	1.74	1.66	1.18	0.32	1.28	1.85	2.36	1.75												1.30	0.81
Yi MINIMUM	0.42	1.18	0.15	0.00	0.24	1.42	-0.87	0.00												0.41	0.58
Yi MEAN	1.20	1.38	0.85	0.22	0.85	1.62	1.30	0.62													
Yi STD	0.56	0.22	0.48	0.15	0.49	0.21	1.47	0.81													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	40.6%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	96.9%
-1 lt yi le 0	3	9.4%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	10	31.3%	>3	0.0%
1 lt yi le 2	18	56.3%		
2 lt yi le 3	1	3.1%	Overall Yi STD	0.74
3 lt yi	0	0.0%		
total	32	100.0%	Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Yellow

11:18 AM 6/10/2008

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Valves

Rater = **Viera, Ralph**

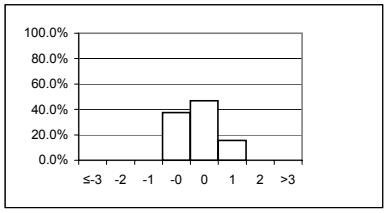
Yi VALUES

	Valve 1	Valve 2	Valve 3	Valve 4	Valve 5	Valve 6	Valve 7	Valve 8												MEAN	STD
F1-8_Valves	-0.92	0.67	0.39	1.05	0.85	0.42	0.58	0.36												0.42	0.59
G1-8_Valves	-0.74	0.43	0.36	1.38	-0.57	0.36	-0.66	1.24												0.23	0.83
H1-8_Valves	-0.99	-0.30	0.49	0.98	0.58	-0.60	0.16	0.09												0.05	0.65
I1-8_Valves	-0.60	-0.49	0.79	1.14	-0.22	-0.13	-0.09	1.16												0.19	0.72
Yi MAXIMUM	-0.99	0.67	0.79	1.38	0.85	-0.60	-0.66	1.24												0.42	0.83
Yi MINIMUM	-0.60	-0.30	0.36	0.98	-0.22	-0.13	-0.09	0.09												0.05	0.59
Yi MEAN	-0.81	0.08	0.51	1.14	0.16	0.01	0.00	0.71													
Yi STD	0.18	0.56	0.19	0.18	0.66	0.48	0.52	0.57													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	12	37.5%
0 lt yi le 1	15	46.9%
1 lt yi le 2	5	15.6%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	32	100.0%

-1 < yi ≤ 1	84.4%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.68
Parts Rated	4

Yi distribution (excluding shaded columns)



Group: Red

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

	Number of Parts Rated	-1 < yi ≤ 1	-2 < yi ≤ 2	-3 < yi ≤ 3	>3	Yi STD	Group
Barrera, Tony	3	33.3%	91.7%	100.0%	0.0%	0.44	Yellow
Foecking, Brian	3	91.7%	100.0%	100.0%	0.0%	0.63	Blue
Garcia, Orlando	3	95.8%	100.0%	100.0%	0.0%	0.37	Blue
Kobrinetz, Jack	3	70.8%	100.0%	100.0%	0.0%	0.49	White
Lopez, Frank	3	54.2%	95.8%	100.0%	0.0%	0.96	Yellow
Pansza, Mike	3	54.2%	100.0%	100.0%	0.0%	1.01	Yellow
Sanchez, Art	1	0.0%	100.0%	100.0%	0.0%	0.16	Yellow
Yanchar, Paul	3	33.3%	100.0%	100.0%	0.0%	1.26	Yellow
Adams, Pat	3	95.8%	100.0%	100.0%	0.0%	0.41	Blue
Castillo, George	3	91.7%	100.0%	100.0%	0.0%	0.60	Blue
Hill, John	3	50.0%	100.0%	100.0%	0.0%	0.55	Yellow
Lowsky, John	3	50.0%	83.3%	100.0%	0.0%	1.09	Yellow
Radonich, Pete	3	91.7%	100.0%	100.0%	0.0%	0.54	Blue
Rodriguez, Jesse	3	100.0%	100.0%	100.0%	0.0%	0.48	Blue
Seiz, Ray	1	62.5%	100.0%	100.0%	0.0%	0.61	White
Shoda, Ron	3	62.5%	100.0%	100.0%	0.0%	0.82	White

Group Criteria

	Minimum Number of Parts Rated	Minimum Yi's within 1 STD of mean	Minimum Yi's within 2 STD of mean	Maximum Overall Yi STD	Group Totals	
White	0	60%	90%	1.20	3	19%
Red	0	80%	95%	0.85	0	0%
Blue	0	85%	98%	0.75	6	38%
Yellow	-	-	-	-	7	44%

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

Rater = **Barrera, Tony**

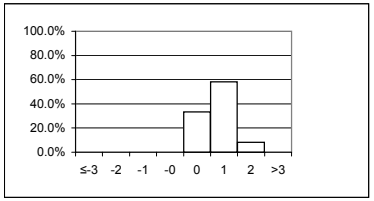
Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	0.98	1.04	0.97	1.07	1.57	2.24	2.05	1.63												1.44	0.51
K1-8_Combustion_Chambers	1.00	1.05	0.69	0.10	1.11	0.75	1.12	0.86												0.83	0.34
L1-8_Intake Runners	0.87	1.07	1.07	1.01	1.32	1.04	0.92	1.46												1.10	0.20
Yi MAXIMUM	1.00	1.07	1.07	1.07	1.57	2.24	2.05	1.63												1.44	0.51
Yi MINIMUM	0.87	1.04	0.69	0.10	1.11	0.75	0.92	0.86												0.83	0.20
Yi MEAN	0.95	1.05	0.91	0.72	1.34	1.34	1.36	1.32													
Yi STD	0.07	0.02	0.20	0.54	0.23	0.79	0.60	0.41													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	0	0.0%
0 lt yi le 1	8	33.3%
1 lt yi le 2	14	58.3%
2 lt yi le 3	2	8.3%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	33.3%
-2 < yi ≤ 2	91.7%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.44
Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

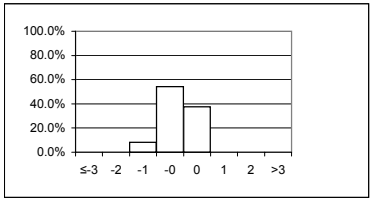
Rater = **Foecking, Brian**

Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	-0.19	0.26	0.10	0.39	-0.82	-0.36	-0.59	-0.21												-0.18	0.41
K1-8_Combustion_Chambers	0.49	0.71	0.53	0.96	-0.80	-0.90	0.10	-0.76												0.04	0.75
L1-8_Intake Runners	-0.74	-0.61	-1.33	-1.20	0.45	-0.37	-0.60	-0.14												-0.57	0.57
Yi MAXIMUM	-0.74	0.71	-1.33	-1.20	-0.82	-0.90	-0.60	-0.76												-0.57	0.75
Yi MINIMUM	-0.19	0.26	0.10	0.39	0.45	-0.36	0.10	-0.14												0.04	0.41
Yi MEAN	-0.15	0.12	-0.23	0.05	-0.39	-0.54	-0.36	-0.37													
Yi STD	0.62	0.67	0.98	1.12	0.72	0.31	0.40	0.34													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	91.7%
-2 lt yi le -1	2	8.3%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	13	54.2%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	9	37.5%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.63
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

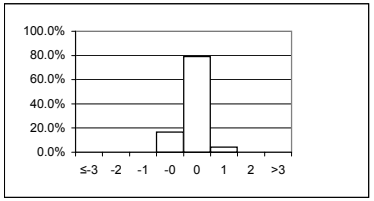
Rater = **Garcia, Orlando**

Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	-0.46	-0.08	-0.11	0.14	0.14	0.63	0.20	0.06												0.07	0.31
K1-8_Combustion_Chambers	0.34	0.56	0.19	0.00	0.70	0.82	0.47	0.52												0.45	0.27
L1-8_Intake Runners	1.22	0.42	0.42	0.73	0.90	0.54	0.46	0.24												0.62	0.32
Yi MAXIMUM	1.22	0.56	0.42	0.73	0.90	0.82	0.47	0.52												0.62	0.32
Yi MINIMUM	0.34	-0.08	-0.11	0.00	0.14	0.54	0.20	0.06												0.07	0.27
Yi MEAN	0.37	0.30	0.17	0.29	0.58	0.66	0.38	0.27													
Yi STD	0.84	0.34	0.26	0.39	0.39	0.14	0.15	0.23													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	95.8%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	4	16.7%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	19	79.2%	>3	0.0%
1 lt yi le 2	1	4.2%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.37
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

Rater = **Kobrinetz, Jack**

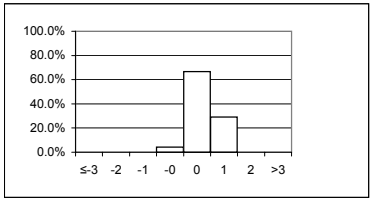
Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	0.05	0.22	-0.13	0.10	0.19	0.70	0.57	0.09												0.22	0.28
K1-8_Combustion_Chambers	0.89	0.90	1.07	0.61	0.89	0.98	0.94	1.15												0.93	0.16
L1-8_Intake Runners	1.51	1.22	0.65	1.38	0.85	0.80	1.18	1.68												1.16	0.37
Yi MAXIMUM	1.51	1.22	1.07	1.38	0.89	0.98	1.18	1.68												1.16	0.37
Yi MINIMUM	0.05	0.22	-0.13	0.10	0.19	0.70	0.57	0.09												0.22	0.16
Yi MEAN	0.81	0.78	0.53	0.70	0.64	0.83	0.90	0.97													
Yi STD	0.73	0.51	0.61	0.65	0.39	0.14	0.31	0.81													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	1	4.2%
0 lt yi le 1	16	66.7%
1 lt yi le 2	7	29.2%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	70.8%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.49
Parts Rated	3

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

Rater = **Lopez, Frank**

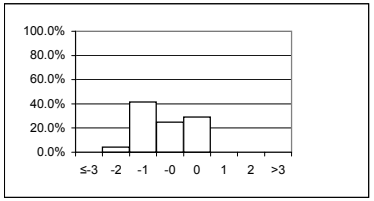
Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	0.51	0.50	0.22	0.55	0.74	-0.83	-0.24	0.49												0.24	0.53
K1-8_Combustion_Chambers	-0.72	-1.18	-0.62	-0.64	-1.04	-1.36	-1.23	-0.84												-0.95	0.29
L1-8_Intake Runners	-1.86	-1.45	0.31	-1.86	-1.92	-1.78	**-2.41**	-1.84												-1.60	0.82
Yi MAXIMUM	-1.86	-1.45	-0.62	-1.86	-1.92	-1.78	**-2.41**	-1.84												-1.60	0.82
Yi MINIMUM	0.51	0.50	0.22	0.55	0.74	-0.83	-0.24	0.49												0.24	0.29
Yi MEAN	-0.69	-0.71	-0.03	-0.65	-0.74	-1.32	-1.29	-0.73													
Yi STD	1.18	1.06	0.51	1.20	1.36	0.47	1.08	1.17													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	1	4.2%
-2 lt yi le -1	10	41.7%
-1 lt yi le 0	6	25.0%
0 lt yi le 1	7	29.2%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	54.2%
-2 < yi ≤ 2	95.8%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.96
Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

Rater = **Pansza, Mike**

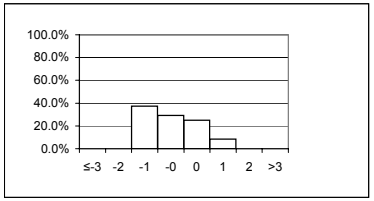
Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	0.60	0.13	1.28	1.22	0.67	-1.01	0.62	-0.75												0.34	0.84
K1-8_Combustion_Chambers	-1.84	-0.73	-1.78	-1.83	-1.63	-1.14	-1.62	-1.81												-1.55	0.40
L1-8_Intake Runners	0.20	-0.44	-1.86	-0.78	0.20	-0.57	-0.40	-0.14												-0.47	0.66
Yi MAXIMUM	-1.84	-0.73	-1.86	-1.83	-1.63	-1.14	-1.62	-1.81												-1.55	0.84
Yi MINIMUM	0.20	0.13	1.28	-0.78	0.20	-0.57	-0.40	-0.14												0.34	0.40
Yi MEAN	-0.34	-0.35	-0.79	-0.47	-0.25	-0.91	-0.47	-0.90													
Yi STD	1.31	0.44	1.79	1.55	1.21	0.30	1.12	0.84													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	9	37.5%
-1 lt yi le 0	7	29.2%
0 lt yi le 1	6	25.0%
1 lt yi le 2	2	8.3%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	54.2%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	1.01
Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

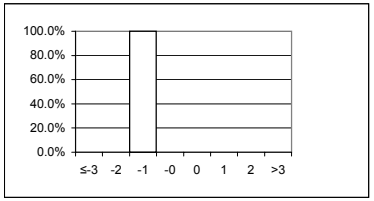
Rater = **Sanchez, Art**

Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	-1.41	-1.54	-1.43	-1.54	-1.39	-1.24	-1.67	-1.72												-1.49	0.16
K1-8_Combustion_Chambers																					
L1-8_Intake Runners																					
Yi MAXIMUM	-1.41	-1.54	-1.43	-1.54	-1.39	-1.24	-1.67	-1.72												-1.49	0.16
Yi MINIMUM	-1.41	-1.54	-1.43	-1.54	-1.39	-1.24	-1.67	-1.72												-1.49	0.16
Yi MEAN	-1.41	-1.54	-1.43	-1.54	-1.39	-1.24	-1.67	-1.72													
Yi STD																					

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	0.0%
-2 lt yi le -1	8	100.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	0	0.0%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	0	0.0%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.16
3 lt yi	0	0.0%		
total	8	100.0%	Parts Rated	1

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

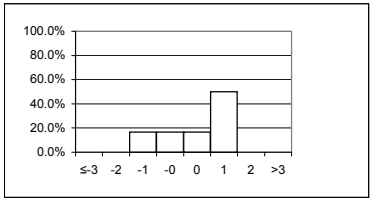
Rater = **Yanchar, Paul**

Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	1.02	0.96	0.85	0.82	1.25	1.31	0.97	1.27												1.05	0.19
K1-8_Combustion_Chambers	1.66	1.97	1.96	1.70	1.21	1.32	1.73	1.83												1.67	0.28
L1-8_Intake Runners	-0.74	-0.97	-0.98	-0.99	-1.55	-1.38	-1.20	-1.34												-1.14	0.27
Yi MAXIMUM	1.66	1.97	1.96	1.70	-1.55	-1.38	1.73	1.83												1.67	0.28
Yi MINIMUM	-0.74	0.96	0.85	0.82	1.21	1.31	0.97	1.27												1.05	0.19
Yi MEAN	0.65	0.65	0.61	0.51	0.30	0.42	0.50	0.58													
Yi STD	1.25	1.49	1.49	1.37	1.60	1.55	1.52	1.69													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	33.3%
-2 lt yi le -1	4	16.7%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	4	16.7%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	4	16.7%	>3	0.0%
1 lt yi le 2	12	50.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	1.26
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

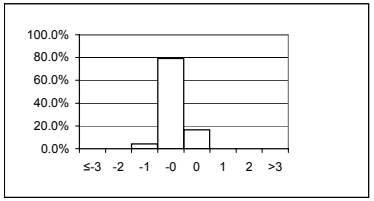
Rater = **Adams, Pat**

Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	-0.68	-0.82	-0.66	-0.53	-0.29	-0.02	-0.69	-0.02												-0.46	0.31
K1-8_Combustion_Chambers	-0.17	-0.66	-0.51	-0.87	0.40	0.24	0.17	0.10												-0.16	0.47
L1-8_Intake Runners	-0.32	-0.56	-1.40	-0.49	-0.63	-0.17	-0.40	-0.38												-0.54	0.38
Yi MAXIMUM	-0.68	-0.82	-1.40	-0.87	-0.63	0.24	-0.69	-0.38												-0.54	0.47
Yi MINIMUM	-0.17	-0.56	-0.51	-0.49	-0.29	-0.02	0.17	-0.02												-0.16	0.31
Yi MEAN	-0.39	-0.68	-0.86	-0.63	-0.17	0.02	-0.31	-0.10													
Yi STD	0.26	0.13	0.48	0.21	0.52	0.21	0.44	0.25													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	95.8%
-2 lt yi le -1	1	4.2%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	19	79.2%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	4	16.7%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.41
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

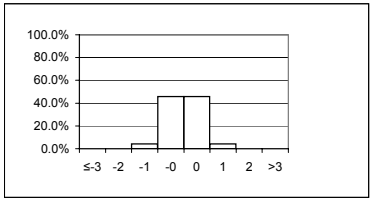
Rater = **Castillo, George**

Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	-0.68	-0.67	-1.03	-0.69	-0.49	0.30	0.15	-0.45												-0.45	0.45
K1-8_Combustion_Chambers	0.83	-0.10	0.34	0.06	-0.45	-0.74	-0.69	-0.66												-0.18	0.56
L1-8_Intake Runners	0.44	0.51	0.70	0.16	-0.18	1.27	0.56	0.07												0.44	0.44
Yi MAXIMUM	0.83	-0.67	-1.03	-0.69	-0.49	1.27	-0.69	-0.66												-0.45	0.56
Yi MINIMUM	0.44	-0.10	0.34	0.06	-0.18	0.30	0.15	0.07												-0.18	0.44
Yi MEAN	0.20	-0.09	0.00	-0.15	-0.37	0.28	0.01	-0.35													
Yi STD	0.78	0.59	0.91	0.47	0.17	1.00	0.64	0.38													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	91.7%
-2 lt yi le -1	1	4.2%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	11	45.8%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	11	45.8%	>3	0.0%
1 lt yi le 2	1	4.2%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.60
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

Rater = **Hill, John**

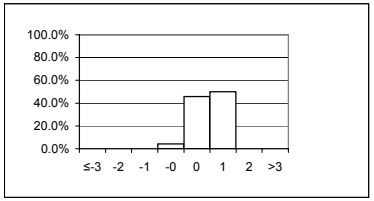
Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	1.24	1.04	1.03	0.82	0.11	0.57	1.19	1.89												0.99	0.52
K1-8_Combustion_Chambers	0.26	0.60	-0.28	1.35	0.94	1.15	0.38	0.28												0.58	0.54
L1-8_Intake Runners	1.53	0.11	0.35	1.13	1.49	1.49	1.24	0.98												1.04	0.54
Yi MAXIMUM	1.53	1.04	1.03	1.35	1.49	1.49	1.24	1.89												1.04	0.54
Yi MINIMUM	0.26	0.11	-0.28	0.82	0.11	0.57	0.38	0.28												0.58	0.52
Yi MEAN	1.01	0.59	0.37	1.10	0.85	1.07	0.93	1.05													
Yi STD	0.67	0.46	0.65	0.26	0.69	0.47	0.49	0.81													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	1	4.2%
0 lt yi le 1	11	45.8%
1 lt yi le 2	12	50.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	50.0%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.55
Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

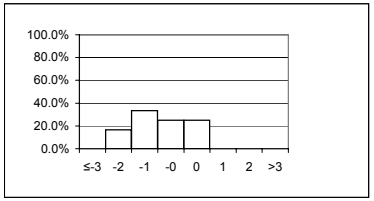
Rater = **Lowsky, John**

Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	-2.23	-2.38	-2.03	-2.21	-1.97	-1.35	-1.65	-1.65												-1.93	0.35
K1-8_Combustion_Chambers	-1.69	-1.59	-1.70	-1.51	-0.92	-0.69	-0.89	-0.71												-1.21	0.45
L1-8_Intake Runners	-0.62	0.65	1.00	0.96	-0.28	0.40	0.66	0.36												0.39	0.57
Yi MAXIMUM	-2.23	-2.38	-2.03	-2.21	-1.97	-1.35	-1.65	-1.65												-1.93	0.57
Yi MINIMUM	-0.62	0.65	1.00	0.96	-0.28	0.40	0.66	0.36												0.39	0.35
Yi MEAN	-1.52	-1.11	-0.91	-0.92	-1.06	-0.55	-0.63	-0.67													
Yi STD	0.82	1.57	1.66	1.67	0.86	0.88	1.18	1.01													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	4	16.7%	-1 < yi ≤ 1	50.0%
-2 lt yi le -1	8	33.3%	-2 < yi ≤ 2	83.3%
-1 lt yi le 0	6	25.0%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	6	25.0%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	1.09
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Yellow

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

Rater = **Radonich, Pete**

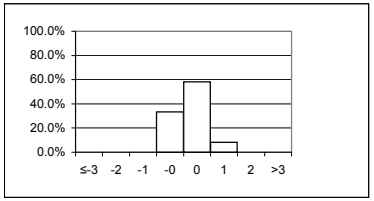
Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	0.47	0.70	0.87	0.39	0.59	-0.11	-0.32	0.11												0.34	0.41
K1-8_Combustion_Chambers	-0.03	-0.18	0.03	-0.32	0.87	0.89	0.67	0.78												0.34	0.51
L1-8_Intake Runners	-0.74	1.34	1.12	-0.57	0.20	0.14	0.00	0.46												0.24	0.73
Yi MAXIMUM	-0.74	1.34	1.12	-0.57	0.87	0.89	0.67	0.78												0.34	0.73
Yi MINIMUM	-0.03	-0.18	0.03	-0.32	0.20	-0.11	0.00	0.11												0.24	0.41
Yi MEAN	-0.10	0.62	0.67	-0.17	0.55	0.31	0.12	0.45													
Yi STD	0.61	0.76	0.57	0.50	0.34	0.52	0.50	0.34													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	0	0.0%
-1 lt yi le 0	8	33.3%
0 lt yi le 1	14	58.3%
1 lt yi le 2	2	8.3%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	91.7%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.54
Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

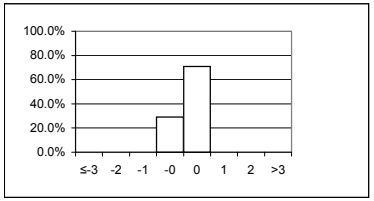
Rater = **Rodriguez, Jesse**

Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	0.84	0.80	0.32	0.28	0.77	0.48	0.25	0.13												0.48	0.28
K1-8_Combustion_Chambers	-0.63	-0.99	-0.35	0.06	0.06	0.05	0.10	0.31												-0.17	0.44
L1-8_Intake Runners	-0.25	0.58	0.26	0.04	-0.80	-0.25	0.40	-0.31												-0.04	0.45
Yi MAXIMUM	0.84	-0.99	-0.35	0.28	-0.80	0.48	0.40	-0.31												0.48	0.45
Yi MINIMUM	-0.25	0.58	0.26	0.04	0.06	0.05	0.10	0.13												-0.04	0.28
Yi MEAN	-0.01	0.13	0.08	0.13	0.01	0.09	0.25	0.04													
Yi STD	0.77	0.98	0.37	0.13	0.79	0.36	0.15	0.32													

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	100.0%
-2 lt yi le -1	0	0.0%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	7	29.2%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	17	70.8%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.48
3 lt yi	0	0.0%		
total	24	100.0%	Parts Rated	3

Yi distribution (excluding shaded columns)



Group: Blue

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

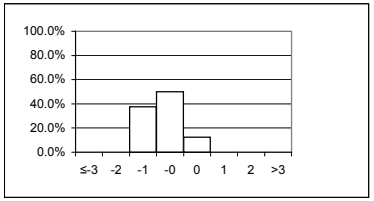
Rater = **Seiz, Ray**

Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	-0.97	-0.86	-1.13	-1.40	-1.42	-0.06	0.20	-0.32												-0.75	0.61
K1-8_Combustion_Chambers																					
L1-8_Intake Runners																					
Yi MAXIMUM	-0.97	-0.86	-1.13	-1.40	-1.42	-0.06	0.20	-0.32												-0.75	0.61
Yi MINIMUM	-0.97	-0.86	-1.13	-1.40	-1.42	-0.06	0.20	-0.32												-0.75	0.61
Yi MEAN	-0.97	-0.86	-1.13	-1.40	-1.42	-0.06	0.20	-0.32													
Yi STD																					

	count	percent		
yi le -3	0	0.0%		
-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	62.5%
-2 lt yi le -1	3	37.5%	-2 < yi ≤ 2	100.0%
-1 lt yi le 0	4	50.0%	-3 < yi ≤ 3	100.0%
0 lt yi le 1	1	12.5%	>3	0.0%
1 lt yi le 2	0	0.0%		
2 lt yi le 3	0	0.0%	Overall Yi STD	0.61
3 lt yi	0	0.0%		
total	8	100.0%	Parts Rated	1

Yi distribution (excluding shaded columns)



Group: White

May 12-16, 2008

Light Duty Rating Workshop - Ind/Comb Deposits

Rater = **Shoda, Ron**

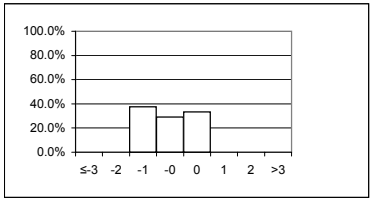
Yi VALUES

	1	2	3	4	5	6	7	8												MEAN	STD
J1-8_Piston_Tops	0.91	0.70	0.87	0.59	0.34	-1.24	-1.05	-0.54												0.07	0.88
K1-8_Combustion_Chambers	-0.37	-0.36	0.42	0.32	-1.34	-1.38	-1.26	-1.03												-0.62	0.73
L1-8_Intake Runners	-0.51	-1.86	-0.28	0.48	-0.05	-1.17	-0.40	-1.10												-0.61	0.73
Yi MAXIMUM	0.91	-1.86	0.87	0.59	-1.34	-1.38	-1.26	-1.10												-0.62	0.88
Yi MINIMUM	-0.37	-0.36	-0.28	0.32	-0.05	-1.17	-0.40	-0.54												0.07	0.73
Yi MEAN	0.01	-0.51	0.34	0.46	-0.35	-1.26	-0.90	-0.89													
Yi STD	0.78	1.28	0.58	0.14	0.88	0.11	0.45	0.31													

	count	percent
yi le -3	0	0.0%
-3 lt yi le -2	0	0.0%
-2 lt yi le -1	9	37.5%
-1 lt yi le 0	7	29.2%
0 lt yi le 1	8	33.3%
1 lt yi le 2	0	0.0%
2 lt yi le 3	0	0.0%
3 lt yi	0	0.0%
total	24	100.0%

-1 < yi ≤ 1	62.5%
-2 < yi ≤ 2	100.0%
-3 < yi ≤ 3	100.0%
>3	0.0%
Overall Yi STD	0.82
Parts Rated	3

Yi distribution (excluding shaded columns)



Group: White