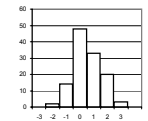


Heavy Duty Diesel Rating Workshop

PART ID = calibration piston 1

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	TGF								UWPD	WPD
Avis, Steve	61.00	5.11	0.13	17.32	2.31	67.00								85.87	223.47
Barrera, Tony	66.75	5.03	0.46	19.92	2.27	75.00								94.43	248.27
Castillo, George	60.75	4.74	0.58	14.28	2.34	72.00								82.69	225.23
Clapperty, Leon	61.37	4.59	0.27	16.58	1.88	66.00								84.69	212.35
Engelskirchen, Jim	69.00	5.61	0.14	16.98	2.70	68.00								94.43	243.43
Garcia, Pat	60.25	3.79	0.24	22.56	3.50	58.00								90.34	255.51
Garrett, Thomas	60.00	5.49	0.50	17.93	2.25	61.00								86.17	240.16
Greenland, Paul	56.50	3.99	0.69	16.81	3.33	63.00								81.32	245.81
Guarda, Waldyr	58.75	3.80	0.30	17.81	3.07	56.00								83.73	230.99
Hill, Howard	63.75	3.81	0.81	14.98	2.76	67.00								86.11	237.83
Kobrinetz, Jack	61.50	4.47	0.30	17.34	2.74	70.00								86.35	232.19
Love, Ed	65.25	5.89	0.20	23.46	2.65	58.00								97.45	266.26
May, Marianne	61.00	4.65	0.63	19.01	2.19	77.00								87.48	239.89
Mundt, Matthias	66.00	4.74	0.20	23.73	3.16	66.00								97.83	266.66
Mundt, Tarsten	62.25	4.67	0.49	21.05	2.39	58.00								90.85	247.51
Pansza, Mike	61.25	4.10	0.90	20.48	1.66	62.00								88.39	238.63
Sanchez, Arthur	57.50	3.36	0.56	8.06	2.20	55.00								71.68	182.91
Tschirhart, Garland	59.75	5.67	0.30	25.80	2.35	49.00								93.87	264.25
Viera, Ralph	64.50	4.92	0.43	16.35	2.37	69.00								88.57	233.38
Yanchar, Paul	63.00	5.01	0.28	20.24	2.51	72.00								91.04	243.94
MAXIMUM	69.00	5.89	0.90	25.80	3.50	77.00								97.83	266.66
MINIMUM	56.50	3.36	0.13	8.06	1.66	49.00								71.68	182.91
RANGE (MAX-MIN)	12.50	2.53	0.77	17.74	1.84	28.00								26.15	83.75
MEAN	62.01	4.67	0.42	18.53	2.53	64.45								88.16	238.93
STD	3.13	0.70	0.22	3.93	0.47	7.29								6.11	19.33



yi within 1 67.5%
 yi within 2 95.8%
 yi within 3 100.0%

PART ID = calibration piston 1

Yi VALUES

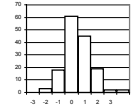
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	TGF								UWPD	WPD	MEAN	STD
Avis, Steve	-0.32	0.62	-1.31	-0.31	-0.48	0.35								-0.38	-0.80	-0.33	0.61
Barrera, Tony	1.51	0.51	0.18	0.35	-0.56	1.45								1.03	0.48	0.62	0.69
Castillo, George	-0.40	0.10	0.72	-1.08	-0.41	1.04								-0.90	-0.71	-0.21	0.76
Clapperty, Leon	-0.20	-0.12	-0.68	-0.50	-1.40	0.21								-0.57	-1.38	-0.58	0.57
Engelskirchen, Jim	2.23	1.34	-1.27	-0.40	0.36	0.49								1.03	0.23	0.50	1.07
Garcia, Pat	-0.56	-1.26	-0.81	1.02	2.08	-0.89								0.36	0.86	0.10	1.16
Garrett, Thomas	-0.64	1.16	0.36	-0.15	-0.60	-0.47								-0.33	0.06	-0.08	0.61
Greenland, Paul	-1.76	-0.97	1.20	-0.44	1.71	-0.20								-1.12	0.36	-0.15	1.19
Guarda, Waldyr	-1.04	-1.24	-0.54	-0.18	1.16	-1.16								-0.73	-0.41	-0.52	0.77
Hill, Howard	0.56	-1.23	1.76	-0.90	0.49	0.35								-0.34	-0.06	0.08	0.94
Kobrinetz, Jack	-0.16	-0.29	-0.54	-0.30	0.45	0.76								-0.30	-0.35	-0.09	0.45
Love, Ed	1.04	1.73	-0.99	1.25	0.25	-0.89								1.52	1.41	0.67	1.09
May, Marianne	-0.32	-0.03	0.95	0.12	-0.73	1.72								-0.11	0.05	0.21	0.77
Mundt, Matthias	1.27	0.10	-0.99	1.32	1.35	0.21								1.58	1.43	0.78	0.92
Mundt, Tarsten	0.08	0.00	0.31	0.64	-0.30	-0.89								0.44	0.44	0.09	0.49
Pansza, Mike	-0.24	-0.81	2.17	0.49	-1.87	-0.34								0.04	-0.02	-0.07	1.15
Sanchez, Arthur	-1.44	-1.87	0.63	-2.66	-0.71	-1.30								-2.70	-2.90	-1.62	1.19
Tschirhart, Garland	-0.72	1.42	-0.54	1.85	-0.39	-2.12								0.93	1.31	0.22	1.37
Viera, Ralph	0.80	0.35	0.04	-0.56	-0.35	0.62								0.07	-0.29	0.09	0.48
Yanchar, Paul	0.32	0.48	-0.63	0.43	-0.05	1.04								0.47	0.26	0.29	0.48
Yi MAXIMUM	2.23	-1.87	2.17	-2.66	2.08	-2.12								-2.70	-2.90	-1.62	1.37
Yi MINIMUM	0.08	0.00	0.04	0.12	-0.05	-0.20								0.04	-0.02	-0.07	0.45
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	62.01	4.67	0.42	18.53	2.53	64.45								88.16	238.93		
Ratings STD	3.13	0.70	0.22	3.93	0.47	7.29								6.11	19.33		

Heavy Duty Diesel Rating Workshop

PART ID = calibration piston 2

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 2	Land 3	TGF									UWPD	WPD
Avis, Steve	10.00	12.92	0.11	10.81	0.21	5.50									34.05	185.09
Barrera, Tony	8.71	10.23	0.23	13.11	0.58	5.00									32.86	176.55
Caproni, David	11.82	6.94	0.30	10.80	0.46	10.00									30.32	138.72
Castillo, George	10.80	11.40	0.29	9.75	0.76	7.00									33.00	184.28
Clapperty, Leon	12.32	12.24	0.22	9.96	0.30	12.00									35.04	183.28
Engelskirchen, Jim	15.01	12.02	0.58	11.99	0.90	13.00									40.50	215.48
Garcia, Pat	6.83	12.33	0.08	10.51	0.38	5.00									30.13	177.32
Guarda, Waldyr	11.89	9.22	0.32	11.56	1.58	8.00									34.57	187.35
Hill, Howard	8.30	10.47	0.14	9.90	0.25	9.00									29.06	157.55
Hills, Barry	8.86	12.02	0.58	13.06	0.72	7.00									35.24	209.47
Hurtado, Cirilo	12.13	11.07	0.60	10.44	1.54	10.44									35.78	211.17
Kobrinetz, Jack	9.11	12.86	0.32	11.22	0.52	3.00									34.03	198.58
Lopez, Frank	8.16	13.26	0.22	12.78	0.78	5.00									35.19	208.79
Love, Ed	13.47	14.50	0.40	14.04	0.78	12.00									43.19	237.21
Lowsky, John	5.28	13.28	0.50	11.62	0.98	6.00									31.66	215.85
Massicotte, Pierre	12.82	6.74	1.12	13.40	1.37	11.00									35.45	193.72
May, Marianne	11.49	12.92	0.29	11.33	0.32	7.00									36.35	196.90
Mundt Matthias	13.24	13.13	0.12	18.20	1.29	12.00									45.98	238.24
Mundt, Tarsten	14.47	12.79	0.34	13.48	0.52	6.00									41.60	211.77
Pansza, Mike	9.02	8.02	0.03	11.10	0.25	8.00									28.42	134.12
Rodriguez, Jesus	6.37	11.73	0.24	9.98	1.10	5.00									29.42	189.04
Tschirhart, Garland	11.78	10.30	0.20	15.80	0.37	12.00									38.45	184.48
Verlinde, Marcel	12.94	11.95	0.17	10.39	0.44	10.00									35.89	183.56
Viera, Ralph	7.66	11.34	0.18	9.47	0.28	5.00									28.93	166.11
Yanchar, Paul	11.82	14.13	0.17	11.86	0.35	8.00									38.33	207.58
MAXIMUM	15.01	14.50	1.12	18.20	1.58	13.00									45.98	238.24
MINIMUM	5.28	6.74	0.03	9.47	0.21	3.00									28.42	134.12
RANGE (MAX-MIN)	9.73	7.76	1.09	8.73	1.37	10.00									17.56	104.12
MEAN	10.57	11.51	0.31	11.86	0.68	8.08									34.94	191.69
STD	2.62	2.04	0.23	2.04	0.42	2.89									4.57	25.66



yi within 1 70.7%
 yi within 2 95.3%
 yi within 3 98.7%

PART ID = calibration piston 2

YI VALUES

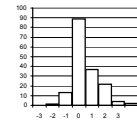
	Groove 1	Groove 2	Groove 3	Land 2	Land 3	TGF									UWPD	WPD	MEAN	STD
Avis, Steve	-0.22	0.69	-0.87	-0.52	-1.12	-0.89									-0.19	-0.26	-0.42	0.57
Barrera, Tony	-0.71	-0.63	-0.35	0.61	-0.24	-1.07									-0.45	-0.59	-0.43	0.49
Caproni, David	0.48	-2.25	-0.04	-0.52	-0.53	0.67									-1.01	-2.06	-0.66	1.07
Castillo, George	0.09	-0.06	-0.09	-1.03	0.19	-0.37									-0.42	-0.29	-0.25	0.38
Clapperty, Leon	0.67	0.36	-0.39	-0.93	-0.91	1.36									0.02	-0.33	-0.02	0.79
Engelskirchen, Jim	1.70	0.25	1.18	0.06	0.52	1.70									1.22	0.93	0.94	0.62
Garcia, Pat	-1.43	0.40	-1.00	-0.66	-0.72	-1.07									-1.05	-0.56	-0.76	0.55
Guarda, Waldyr	0.50	-1.13	0.04	-0.15	2.14	-0.03									-0.08	-0.17	0.14	0.93
Hill, Howard	-0.87	-0.51	-0.74	-0.96	-1.03	0.32									-1.29	-1.33	-0.80	0.53
Hills, Barry	-0.65	0.25	1.18	0.59	0.09	-0.37									0.07	0.69	0.23	0.59
Hurtado, Cirilo	0.60	-0.22	1.26	-0.70	2.05	0.82									0.18	0.76	0.59	0.86
Kobrinetz, Jack	-0.56	0.66	0.04	-0.31	-0.38	-1.76									-0.20	0.27	-0.28	0.71
Lopez, Frank	-0.92	0.86	-0.38	0.45	0.22	-1.07									0.06	0.67	-0.01	0.71
Love, Ed	1.11	1.47	0.39	1.07	0.24	1.36									1.80	1.77	1.15	0.58
Lowsky, John	-2.02	0.87	0.83	-0.12	0.71	-0.72									-0.72	0.94	-0.03	1.07
Massicotte, Pierre	0.86	-2.34	3.53	0.75	1.64	1.01									0.11	0.08	0.71	1.65
May, Marianne	0.35	0.69	-0.09	-0.26	-0.86	-0.37									0.31	0.20	0.00	0.49
Mundt Matthias	1.02	0.79	-0.83	3.10	1.45	1.36									2.42	1.81	1.39	1.17
Mundt, Tarsten	1.49	0.63	0.13	0.79	-0.39	-0.72									1.46	0.78	0.52	0.80
Pansza, Mike	-0.59	-1.72	-1.22	-0.37	-1.03	-0.03									-1.43	-2.24	-1.08	0.73
Rodriguez, Jesus	-1.61	0.11	-0.30	-0.92	1.00	-1.07									-1.21	-0.10	-0.51	0.85
Tschirhart, Garland	0.46	-0.60	-0.48	1.93	-0.74	1.36									0.77	-0.28	0.30	0.99
Verlinde, Marcel	0.91	0.21	-0.61	-0.72	-0.57	0.67									0.21	-0.32	-0.03	0.62
Viera, Ralph	-1.11	-0.08	-0.57	-1.17	-0.96	-1.07									-1.31	-1.00	-0.91	0.40
Yanchar, Paul	0.48	1.29	-0.61	0.00	-0.79	-0.03									0.74	0.62	0.21	0.70
Yi MAXIMUM	-2.02	-2.34	3.53	3.10	2.14	-1.76									2.42	-2.24	1.39	1.65
Yi MINIMUM	0.09	-0.06	0.04	0.00	0.09	-0.03									0.02	0.08	0.00	0.38
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	10.57	11.51	0.31	11.86	0.68	8.08									34.94	191.69		
Ratings STD	2.62	2.04	0.23	2.04	0.42	2.89									4.57	25.66		

Heavy Duty Diesel Rating Workshop

PART ID = Piston A1 - square cut

RATED VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	TGF								UWPD	WPD
Avis, Steve	34.39	14.09	0.10	0.12	16.82	0.20	0.15	32.00							65.87	255.31	
Barrera, Tony	33.50	14.59	0.02	0.01	16.34	0.37	0.31	28.00							65.14	256.24	
Caproni, David	37.25	14.02	0.10	0.10	15.65	0.60	0.30	32.00							68.02	265.23	
Castillo, George	32.22	14.10	0.03	0.03	16.22	0.30	0.22	31.00							63.12	246.84	
Garcia, Pat	38.04	14.06	0.04	0.00	16.18	0.15	0.10	28.00							68.57	243.17	
Garrett, Thomas	34.93	15.85	0.06	0.03	16.45	0.39	0.30	23.00							68.01	273.51	
Greenland, Paul	31.43	13.09	0.10	0.10	16.43	0.42	0.40	38.00							61.97	252.74	
Guarda, Waldyr	25.50	13.64	0.30	0.30	16.35	0.47	0.40	24.00							56.96	274.03	
Hill, Howard	29.93	13.86	0.03	0.01	16.00	0.13	0.22	34.00							60.18	236.51	
Hills, Barry	27.49	12.96	0.20	0.20	16.22	0.59	0.01	19.00							57.67	247.01	
Hurtado, Cirilo	35.75	25.21	0.15	0.24	22.08	0.36	0.32	34.63							84.11	405.58	
Lopez, Frank	35.17	14.06	0.10	0.10	18.89	0.95	0.80	19.00							70.07	299.33	
Love, Ed	30.60	14.00	0.20	0.10	16.86	0.60	0.50	28.00							62.86	273.11	
Lowsky, John	29.79	17.86	0.03	0.03	16.08	1.23	0.90	36.00							65.92	323.92	
Massicotte, Pierre	33.29	13.36	0.18	0.25	40.94	0.83	0.80	35.00							89.65	378.58	
Mundt, Tarsten	36.44	16.59	0.20	0.20	27.48	0.55	0.50	41.00							81.96	348.02	
Pansza, Mike	30.80	14.14	0.10	0.00	18.55	0.56	0.38	29.00							64.53	265.13	
Tschirhart, Garland	39.60	12.62	0.20	0.20	20.05	0.31	0.20	30.00							73.18	270.18	
Verlinde, Marcel	34.64	13.88	0.00	0.00	16.69	0.12	0.10	20.10							65.43	237.76	
Viera, Ralph	38.17	13.81	0.03	0.02	15.52	0.15	0.12	29.00							67.82	240.24	
Yanchar, Paul	32.25	14.77	0.00	0.00	17.37	0.19	0.10	23.00							64.68	248.05	
MAXIMUM	39.60	25.21	0.30	0.30	40.94	1.23	0.90	41.00							89.65	405.58	
MINIMUM	25.50	12.62	0.00	0.00	15.52	0.12	0.01	19.00							56.96	236.51	
RANGE (MAX-MIN)	14.10	12.59	0.30	0.30	25.42	1.11	0.89	22.00							32.69	169.07	
MEAN	33.39	14.79	0.10	0.10	18.72	0.45	0.34	29.23							67.89	278.12	
STD	3.63	2.67	0.08	0.10	5.79	0.29	0.25	6.20							8.30	47.30	



yi within 1 75.0%
 yi within 2 95.8%
 yi within 3 98.8%

PART ID = Piston A1 - square cut

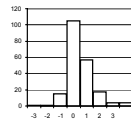
Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	TGF								UWPD	WPD	MEAN	STD
Avis, Steve	0.28	-0.26	-0.04	0.24	-0.33	-0.87	-0.77	0.45							-0.24	-0.48	-0.20	0.44	
Barrera, Tony	0.03	-0.07	-1.00	-0.89	-0.41	-0.28	-0.12	-0.20							-0.33	-0.46	-0.37	0.34	
Caproni, David	1.06	-0.29	-0.04	0.03	-0.53	0.52	-0.16	0.45							0.02	-0.27	0.08	0.47	
Castillo, George	-0.32	-0.26	-0.88	-0.69	-0.43	-0.52	-0.48	0.29							-0.57	-0.66	-0.45	0.32	
Garcia, Pat	1.28	-0.27	-0.76	-1.00	-0.44	-1.04	-0.97	-0.20							0.08	-0.74	-0.41	0.70	
Garrett, Thomas	0.42	0.40	-0.52	-0.69	-0.39	-0.21	-0.16	-1.00							0.01	-0.10	-0.22	0.45	
Greenland, Paul	-0.54	-0.64	-0.04	0.03	-0.40	-0.11	0.25	1.42							-0.71	-0.54	-0.13	0.63	
Guarda, Waldyr	-2.17	-0.43	2.35	2.08	-0.41	0.07	0.25	-0.84							-1.32	-0.09	-0.05	1.39	
Hill, Howard	-0.95	-0.35	-0.86	-0.91	-0.47	-1.11	-0.48	0.77							-0.93	-0.88	-0.62	0.55	
Hills, Barry	-1.62	-0.68	1.16	1.06	-0.43	0.48	-1.34	-1.65							-1.23	-0.66	-0.49	1.05	
Hurtado, Cirilo	0.65	3.90	0.56	1.47	0.58	-0.31	-0.08	0.87							1.95	2.69	1.23	1.30	
Lopez, Frank	0.49	-0.27	-0.04	0.03	0.03	1.73	1.87	-1.65							0.26	0.45	0.29	1.00	
Love, Ed	-0.77	-0.29	1.16	0.03	-0.32	0.52	0.65	-0.20							-0.61	-0.11	0.01	0.60	
Lowsky, John	-0.99	1.15	-0.88	-0.69	-0.46	2.69	2.27	1.09							-0.24	0.97	0.49	1.33	
Massicotte, Pierre	-0.03	-0.53	0.92	1.57	3.84	1.31	1.87	0.93							2.62	2.12	1.46	1.26	
Mundt, Tarsten	0.84	0.67	1.16	1.06	1.51	0.34	0.65	1.90							1.70	1.48	1.13	0.51	
Pansza, Mike	-0.71	-0.24	-0.04	-1.00	-0.03	0.38	0.16	-0.04							-0.41	-0.27	-0.22	0.41	
Tschirhart, Garland	1.71	-0.81	1.16	1.06	0.23	-0.49	-0.57	0.13							0.64	-0.17	0.29	0.83	
Verlinde, Marcel	0.34	-0.34	-1.24	-1.00	-0.35	-1.14	-0.97	-1.47							-0.30	-0.85	-0.73	0.55	
Viera, Ralph	1.32	-0.37	-0.88	-0.79	-0.55	-1.04	-0.89	-0.04							-0.01	-0.80	-0.40	0.70	
Yanchar, Paul	-0.31	-0.01	-1.24	-1.00	-0.23	-0.90	-0.97	-1.00							-0.39	-0.64	-0.67	0.41	
Yi MAXIMUM	-2.17	3.90	2.35	2.08	3.84	2.69	2.27	1.90							2.62	2.69	1.46	1.39	
Yi MINIMUM	-0.03	-0.01	-0.04	0.03	0.03	0.07	-0.08	-0.04							-0.01	-0.09	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			
Yi STD	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							1.00	1.00			
Ratings MEAN	33.39	14.79	0.10	0.10	18.72	0.45	0.34	29.23							67.89	278.12			
Ratings STD	3.63	2.67	0.08	0.10	5.79	0.29	0.25	6.20							8.30	47.30			

PART ID = Piston A2 - keystone

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Upper Skirt	Under-crown	TGF	2nd GF	TLHC, %	TLFC, %			UWPD	WPD
Avis, Steve	29.86	19.09	0.25	3.14	20.08	0.68	0.94	0.41	13.50	20.00	0.00	0.00			74.45	175.10
Barrera, Tony	29.25	24.52	0.38	4.89	22.47	1.32	1.04	0.12	10.00	15.00	0.00	0.00			83.99	204.92
Caproni, David	30.50	23.20	0.50	5.09	24.27	0.82	0.10	0.50	12.00	11.00	6.00	0.00			84.98	157.91
Garcia, Pat	28.75	25.54	0.36	5.47	22.85	0.62	0.05	0.64	9.00	23.00	0.00	0.00			84.28	149.56
Garrett, Thomas	29.50	24.92	0.44	5.29	24.39	0.95	0.10	0.61	12.00	25.00	0.00	1.00			86.20	163.26
Greenland, Paul	29.25	22.75	0.45	1.94	23.45	0.76	0.15	0.52	11.00	15.00	0.00	0.00			79.27	151.54
Guarda, Waldyr	26.78	23.05	0.41	4.62	22.71	2.35	0.46	1.12	17.00	21.00	0.00	0.00			81.50	216.48
Hill, Howard	16.50	18.35	0.58	3.98	20.48	1.21	0.03	1.04	11.00	26.00	0.00	0.00			62.17	143.79
Hills, Barry	28.18	19.95	0.24	2.23	20.56	0.84	0.20	0.38	12.00	13.00	0.00	0.00			72.57	139.44
Lopez, Frank	29.25	26.50	0.66	7.83	23.10	1.79	0.28	1.14	15.00	14.00	0.00	0.00			90.53	212.25
Love, Ed	28.25	22.70	1.75	5.44	23.17	0.68	0.40	0.58	15.00	18.00	0.00	0.00			82.97	197.39
Lowsky, John	29.60	21.95	0.65	4.20	22.71	0.98	0.30	0.68	10.00	22.00	0.00	0.00			81.07	173.59
Pansza, Mike	29.50	24.29	0.73	6.91	20.28	1.03	0.00	0.52	13.00	7.00	0.00	0.00			83.26	162.28
Tschirhart, Garland	30.00	26.20	0.28	7.92	30.50	0.94	0.20	0.76	16.00	16.00	0.00	0.00			96.80	178.42
Verlinde, Marcel	33.75	26.51	0.52	2.28	23.68	1.59	0.12	0.70	18.85	17.45	0.00	0.00			89.15	189.10
Viera, Ralph	29.75	25.41	0.13	6.55	23.80	0.46	0.07	0.45	13.00	10.00	0.00	0.00			86.62	140.34
Yanchar, Paul	29.50	24.92	0.28	6.54	20.56	1.08	0.06	0.43	8.00	13.00	0.00	0.00			83.37	154.33
MAXIMUM	33.75	26.51	1.75	7.92	30.50	2.35	1.04	1.14	18.85	26.00	6.00	1.00			96.80	216.48
MINIMUM	16.50	18.35	0.13	1.94	20.08	0.46	0.00	0.12	8.00	7.00	0.00	0.00			62.17	139.44
RANGE (MAX-MIN)	17.25	8.16	1.62	5.98	10.42	1.89	1.04	1.02	10.85	19.00	6.00	1.00			34.63	77.04
MEAN	28.72	23.52	0.51	4.96	22.89	1.06	0.26	0.62	12.73	16.85	0.35	0.06			82.54	171.16
STD	3.44	2.52	0.36	1.86	2.44	0.48	0.30	0.27	2.92	5.40	1.46	0.24			7.69	25.15



yi within 1 79.4%
 yi within 2 95.1%
 yi within 3 97.5%

PART ID = Piston A2 - keystone

YI VALUES

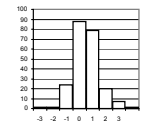
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Upper Skirt	Under-crown	TGF	2nd GF	TLHC, %	TLFC, %			UWPD	WPD	MEAN	STD
Avis, Steve	0.33	-1.76	-0.71	-0.98	-1.15	-0.81	2.23	-0.79	0.27	0.58	-0.24	-0.24			-1.05	0.16	-0.30	0.99
Barrera, Tony	0.16	0.40	-0.35	-0.04	-0.17	0.54	2.56	-1.85	-0.93	-0.34	-0.24	-0.24			0.19	1.34	0.07	1.02
Caproni, David	0.52	-0.13	-0.02	0.07	0.57	-0.51	-0.54	-0.45	-0.25	-1.08	3.88	-0.24			0.32	-0.53	0.11	1.17
Garcia, Pat	0.01	0.80	-0.41	0.27	-0.01	-0.93	-0.71	0.06	-1.28	1.14	-0.24	-0.24			0.23	-0.86	-0.15	0.67
Garrett, Thomas	0.23	0.56	-0.18	0.18	0.62	-0.24	-0.54	-0.05	-0.25	1.51	-0.24	3.88			0.48	-0.31	0.40	1.13
Greenland, Paul	0.16	-0.31	-0.16	-1.63	0.23	-0.64	-0.38	-0.38	-0.59	-0.34	-0.24	-0.24			-0.43	-0.78	-0.41	0.44
Guarda, Waldyr	-0.56	-0.19	-0.27	-0.18	-0.07	2.70	0.65	1.83	1.46	0.77	-0.24	-0.24			-0.14	1.80	0.52	1.03
Hill, Howard	-3.55	-2.05	0.20	-0.53	-0.98	0.31	-0.78	1.54	-0.59	1.69	-0.24	-0.24			-2.65	-1.09	-0.64	1.44
Hills, Barry	-0.16	-1.42	-0.74	-1.47	-0.95	-0.47	-0.21	-0.91	-0.25	-0.71	-0.24	-0.24			-1.30	-1.26	-0.74	0.49
Lopez, Frank	0.16	1.18	0.41	1.55	0.09	1.51	0.05	1.89	0.78	-0.53	-0.24	-0.24			1.04	1.63	0.66	0.81
Love, Ed	-0.14	-0.33	3.45	0.26	0.12	-0.81	0.45	-0.16	0.78	0.21	-0.24	-0.24			0.06	1.04	0.32	1.02
Lowsky, John	0.26	-0.62	0.40	-0.41	-0.07	-0.18	0.12	0.21	-0.93	0.95	-0.24	-0.24			-0.19	0.10	-0.06	0.46
Pansza, Mike	0.23	0.31	0.62	1.05	-1.07	-0.07	-0.88	-0.38	0.09	-1.82	-0.24	-0.24			0.09	-0.35	-0.19	0.72
Tschirhart, Garland	0.37	1.06	-0.63	1.59	3.12	-0.26	-0.21	0.51	1.12	-0.16	-0.24	-0.24			1.85	0.29	0.58	1.05
Verlinde, Marcel	1.46	1.19	0.04	-1.44	0.33	1.10	-0.48	0.28	2.10	0.11	-0.24	-0.24			0.86	0.71	0.41	0.91
Viera, Ralph	0.30	0.75	-1.04	0.86	0.37	-1.27	-0.64	-0.64	0.09	-1.27	-0.24	-0.24			0.53	-1.23	-0.26	0.76
Yanchar, Paul	0.23	0.56	-0.63	0.85	-0.95	0.03	-0.68	-0.71	-1.62	-0.71	-0.24	-0.24			0.11	-0.67	-0.33	0.65
Yi MAXIMUM	-3.55	-2.05	3.45	-1.63	3.12	2.70	2.56	1.89	2.10	-1.82	3.88	3.88			-2.65	1.80	-0.74	1.44
Yi MINIMUM	0.01	-0.13	-0.02	-0.04	-0.01	0.03	0.05	-0.05	0.09	0.11	-0.24	-0.24			0.06	0.10	-0.06	0.44
Yi MEAN	0.00	0.00	0.00	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	1.00			1.00	1.00		
Ratings MEAN	28.72	23.52	0.51	4.96	22.89	1.06	0.26	0.62	12.73	16.85	0.35	0.06			82.54	171.16		
Ratings STD	3.44	2.52	0.36	1.86	2.44	0.48	0.30	0.27	2.92	5.40	1.46	0.24			7.69	25.15		

Heavy Duty Diesel Rating Workshop

PART ID = Piston A3 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Avis, Steve	24.18	13.45	2.03	17.92	13.16	6.47	0.84	16.00	25.00	12.40	13.00	0.00	0.00		119.05	395.01
Barrera, Tony	21.60	12.56	2.86	25.44	13.72	6.18	1.28	21.92	25.00	8.00	8.00	4.00	5.00		130.56	439.50
Caproni, David	33.75	11.77	2.39	27.25	12.80	5.13	1.76	7.50	25.00	18.00	8.00	0.00	0.00		127.35	444.46
Garcia, Pat	19.78	17.60	2.49	24.80	17.73	5.16	1.46	22.95	25.00	17.00	18.00	4.00	0.00		136.97	446.40
Garrett, Thomas	15.25	15.64	2.95	20.39	14.24	6.94	2.42	19.58	25.00	19.00	4.00	2.00	7.00		122.41	515.61
Greenland, Paul	28.75	15.70	2.73	27.25	12.95	5.34	1.53	14.00	23.83	12.00	12.00	3.00	4.00		132.08	449.82
Guarda, Waldyr	24.33	15.13	3.06	18.10	14.55	6.90	1.57	15.78	24.50	16.00	9.00	4.00	3.00		123.92	477.23
Hill, Howard	27.00	14.15	3.30	16.53	13.74	6.21	1.08	16.20	25.00	27.00	22.00	3.00	0.00		123.21	437.90
Hills, Barry	28.25	15.49	2.78	20.05	13.30	6.35	1.23	19.13	25.00	18.00	11.00	3.00	0.00		131.58	450.95
Lopez, Frank	25.08	13.33	2.92	20.27	13.26	6.67	1.55	25.00	25.00	12.00	6.00	5.00	0.00		133.07	472.33
Love, Ed	22.35	13.80	2.40	19.20	15.75	6.54	0.92	18.85	25.00	20.00	4.00	0.00	0.00		124.81	417.90
Lowsky, John	21.00	13.17	2.50	21.93	12.02	5.33	1.73	3.00	25.00	23.00	17.00	0.00	0.00		105.68	415.40
Pansasza, Mike	22.04	12.88	2.58	19.90	13.52	5.84	1.54	20.90	7.50	21.00	12.00	6.00	0.00		106.70	428.63
Tschirhart, Garland	28.60	15.70	3.60	23.70	20.35	6.73	4.70	21.50	25.00	20.00	10.00	10.00	0.00		149.88	711.65
Verinde, Marcel	18.60	12.16	2.36	14.68	12.19	6.94	1.60	6.30	19.15	7.20	6.25	4.00	0.00		93.98	422.81
Viera, Ralph	25.92	14.22	2.62	20.48	12.66	6.72	1.85	23.25	25.00	18.00	7.00	4.00	2.00		132.72	486.51
Yanchar, Paul	22.83	16.12	1.96	18.28	13.65	6.62	1.32	20.48	25.00	15.00	14.00	3.00	2.00		126.26	437.03
MAXIMUM	33.75	17.60	3.60	27.25	20.35	6.94	4.70	25.00	25.00	27.00	22.00	10.00	7.00		149.88	711.65
MINIMUM	15.25	11.77	1.96	14.68	12.02	5.13	0.84	3.00	7.50	7.20	4.00	0.00	0.00		93.98	395.01
RANGE (MAX-MIN)	18.50	5.83	1.64	12.57	8.33	1.81	3.86	22.00	17.50	19.80	18.00	10.00	7.00		55.90	316.64
MEAN	24.08	14.29	2.68	20.95	14.09	6.24	1.67	17.20	23.53	16.68	10.66	3.24	1.35		124.72	461.71
STD	4.45	1.61	0.42	3.64	2.11	0.64	0.86	6.31	4.37	5.17	5.02	2.54	2.18		13.07	70.68



yi within 1 75.6%
 yi within 2 95.5%
 yi within 3 99.1%

PART ID = Piston A3 - two-piece

Yi VALUES

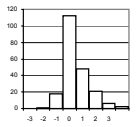
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Avis, Steve	0.02	-0.52	-1.54	-0.83	-0.44	0.36	-0.96	-0.19	0.34	-0.83	0.47	-1.27	-0.62		-0.43	-0.94	-0.49	0.60
Barrera, Tony	-0.56	-1.08	0.43	1.23	-0.18	-0.09	-0.45	0.75	0.34	-1.68	-0.53	0.30	1.67		0.45	-0.31	0.02	0.86
Caproni, David	2.17	-1.57	-0.68	1.73	-0.61	-1.73	0.10	-1.54	0.34	0.25	-0.53	-1.27	-0.62		0.20	-0.24	-0.27	1.13
Garcia, Pat	-0.97	2.06	-0.45	1.06	1.72	-1.68	-0.24	0.91	0.34	0.06	1.46	0.30	-0.62		0.94	-0.22	0.31	1.05
Garrett, Thomas	-1.98	0.84	0.65	-0.15	0.07	1.09	0.87	0.38	0.34	0.45	-1.33	-0.49	2.59		-0.18	0.76	0.26	1.06
Greenland, Paul	1.05	0.88	0.12	1.73	-0.54	-1.40	-0.16	-0.51	0.07	-0.90	0.27	-0.09	1.22		0.56	-0.17	0.14	0.84
Guarda, Waldyr	0.06	0.53	0.91	-0.78	0.22	1.03	-0.11	-0.22	0.22	-0.13	-0.33	0.30	0.76		-0.06	0.22	0.17	0.49
Hill, Howard	0.66	-0.08	1.48	-1.21	-0.17	-0.05	-0.68	-0.16	0.34	1.99	2.26	-0.09	-0.62		-0.12	-0.34	0.21	0.99
Hills, Barry	0.94	0.75	0.24	-0.25	-0.38	0.17	-0.51	0.31	0.34	0.25	0.07	-0.09	-0.62		0.52	-0.15	0.11	0.45
Lopez, Frank	0.23	-0.60	0.56	-0.19	-0.40	0.67	-0.14	1.24	0.34	-0.90	-0.93	0.70	-0.62		0.64	0.15	0.05	0.65
Love, Ed	-0.39	-0.30	-0.66	-0.48	0.78	0.47	-0.87	0.26	0.34	0.64	-1.33	-1.27	-0.62		0.01	-0.62	-0.27	0.66
Lowsky, John	-0.69	-0.70	-0.42	0.27	-0.98	-1.42	0.07	-2.25	0.34	1.22	1.26	-1.27	-0.62		-1.46	-0.66	-0.49	0.98
Pansasza, Mike	-0.46	-0.88	-0.23	-0.29	-0.27	-0.62	-0.15	0.59	-3.67	0.83	0.27	1.09	-0.62		-1.38	-0.47	-0.42	1.11
Tschirhart, Garland	1.02	0.88	2.19	0.75	2.96	0.77	3.50	0.68	0.34	0.64	-0.13	2.67	-0.62		1.92	3.54	1.41	1.30
Verinde, Marcel	-1.23	-1.32	-0.76	-1.72	-0.90	1.09	-0.08	-1.73	-1.00	-1.83	-0.88	0.30	-0.62		-2.35	-0.55	-0.91	0.88
Viera, Ralph	0.41	-0.04	-0.14	-0.13	-0.68	0.75	0.21	0.96	0.34	0.25	-0.73	0.30	0.30		0.61	0.35	0.18	0.47
Yanchar, Paul	-0.28	1.14	-1.71	-0.73	-0.21	0.59	-0.40	0.52	0.34	-0.33	0.66	-0.09	0.30		0.12	-0.35	-0.03	0.68
Yi MAXIMUM	2.17	2.06	2.19	1.73	2.96	-1.73	3.50	-2.25	-3.67	1.99	2.26	2.67	2.59		-2.35	3.54	1.41	1.30
Yi MINIMUM	0.02	-0.04	0.12	-0.13	0.07	-0.05	0.07	-0.16	0.07	0.06	0.07	-0.09	0.30		0.01	0.15	0.02	0.45
Yi MEAN	0.00	0.00	0.00	0.00	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	1.00	1.00		1.00	1.00		
Ratings MEAN	24.08	14.29	2.68	20.95	14.09	6.24	1.67	17.20	23.53	16.68	10.66	3.24	1.35		124.72	461.71		
Ratings STD	4.45	1.61	0.42	3.64	2.11	0.64	0.86	6.31	4.37	5.17	5.02	2.54	2.18		13.07	70.68		

Heavy Duty Diesel Rating Workshop

PART ID = Piston A4 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Avis, Steve	26.00	30.44	0.70	21.85	19.32	2.62	0.22	3.90	3.30	12.00	30.00	0.00	0.00		108.35	308.28
Barrera, Tony	25.06	47.52	1.18	22.34	22.86	3.40	0.59	3.70	1.65	7.00	49.00	0.00	0.00		128.30	415.13
Caproni, David	23.00	23.74	0.70	23.83	20.04	2.67	0.80	6.90	4.50	8.00	12.00	0.00	0.00		106.18	325.72
Garcia, Pat	27.25	27.57	0.69	22.20	20.37	2.62	0.38	4.58	4.80	10.00	33.00	0.00	0.00		110.46	316.50
Garrett, Thomas	27.25	56.17	0.63	20.94	25.73	2.56	0.22	3.75	3.10	10.00	47.00	0.00	0.00		140.35	403.44
Greenland, Paul	27.00	37.55	0.90	22.00	19.55	2.77	0.41	3.00	4.50	14.00	34.00	0.00	0.00		117.68	350.55
Guarda, Waldyr	26.25	23.46	0.87	20.87	18.12	3.50	0.35	5.40	2.40	21.00	18.00	1.00	0.00		101.22	313.11
Hill, Howard	26.75	41.64	0.28	20.48	18.32	3.23	0.07	3.90	2.10	22.00	42.00	0.00	0.00		116.77	333.21
Hills, Barry	25.00	38.89	0.70	20.92	17.56	3.07	0.20	5.26	6.60	18.00	38.00	0.00	0.00		118.20	336.23
Lopez, Frank	25.00	25.33	1.26	21.65	20.64	3.74	0.63	1.80	5.40	10.00	14.00	0.00	0.00		105.44	351.50
Love, Ed	26.25	25.00	0.64	21.00	20.50	3.26	0.40	4.50	1.50	20.00	25.00	0.00	0.00		103.05	317.25
Lowsky, John	27.50	28.28	1.13	27.61	17.16	2.24	0.60	5.85	7.20	27.00	39.00	6.00	0.00		117.57	331.78
Pansza, Mike	25.50	28.51	1.60	19.78	17.38	2.19	0.40	1.50	3.00	14.00	16.00	0.00	0.00		99.86	311.25
Tschirhart, Garland	30.00	31.50	0.80	20.80	27.91	3.45	0.30	4.20	6.00	18.00	36.00	0.00	0.00		124.96	369.23
Verlinde, Marcel	27.25	23.86	0.46	19.45	16.93	2.88	0.20	3.60	2.10	11.35	9.60	0.00	0.00		96.73	279.77
Yanchar, Paul	26.25	30.38	0.54	21.37	20.53	2.91	0.30	5.40	3.00	12.00	25.00	0.00	0.00		110.68	320.50
MAXIMUM	30.00	56.17	1.60	27.61	27.91	3.74	0.80	6.90	7.20	27.00	49.00	6.00	0.00		140.35	415.13
MINIMUM	23.00	23.46	0.28	19.45	16.93	2.19	0.07	1.50	1.50	7.00	9.60	0.00	0.00		96.73	279.77
RANGE (MAX-MIN)	7.00	32.71	1.32	8.16	10.98	1.55	0.73	5.40	5.70	20.00	39.40	6.00	0.00		43.62	135.36
MEAN	26.33	32.49	0.82	21.69	20.18	2.94	0.38	4.20	3.82	14.65	29.23	0.44	0.00		112.86	336.47
STD	1.53	9.47	0.33	1.89	3.07	0.46	0.19	1.41	1.80	5.72	12.59	1.50	0.00		11.61	35.15



yi within 1 76.9%
 yi within 2 95.7%
 yi within 3 99.0%

PART ID = Piston A4 - two-piece

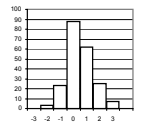
Yi VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Avis, Steve	-0.22	-0.22	-0.35	0.08	-0.28	-0.71	-0.83	-0.21	-0.29	-0.46	0.06	-0.29	0.00		-0.39	-0.80	-0.33	0.28
Barrera, Tony	-0.83	1.59	1.09	0.34	0.87	1.00	1.10	-0.36	-1.21	-1.34	1.57	-0.29	0.00		1.33	2.24	0.47	1.10
Caproni, David	-2.18	-0.92	-0.35	1.13	-0.05	-0.60	2.19	1.92	0.38	-1.16	-1.37	-0.29	0.00		-0.58	-0.31	-0.15	1.18
Garcia, Pat	0.60	-0.52	-0.38	0.27	0.06	-0.71	0.00	0.27	0.54	-0.81	0.30	-0.29	0.00		-0.21	-0.57	-0.10	0.45
Garrett, Thomas	0.60	2.50	-0.56	-0.40	1.81	-0.84	-0.83	-0.32	-0.40	-0.81	1.41	-0.29	0.00		2.37	1.91	0.41	1.24
Greenland, Paul	0.44	0.53	0.25	0.16	-0.21	-0.38	0.16	-0.85	0.38	-0.11	0.38	-0.29	0.00		0.42	0.40	0.08	0.39
Guarda, Waldyr	-0.05	-0.95	0.16	-0.43	-0.67	1.22	-0.15	0.85	-0.79	1.22	-0.89	0.37	0.00		-1.00	-0.66	-0.13	0.75
Hill, Howard	0.27	0.97	-1.61	-0.64	-0.61	0.62	-1.60	-0.21	-0.96	1.28	1.01	-0.29	0.00		0.34	-0.09	-0.10	0.89
Hills, Barry	-0.87	0.68	-0.35	-0.41	-0.85	0.27	-0.93	0.75	1.55	0.59	0.70	-0.29	0.00		0.46	-0.01	0.09	0.71
Lopez, Frank	-0.87	-0.76	1.32	-0.02	0.15	1.74	1.28	-1.71	0.88	-0.81	-1.21	-0.29	0.00		-0.64	0.43	-0.03	1.01
Love, Ed	-0.05	-0.79	-0.53	-0.37	0.10	0.69	0.11	0.21	-1.29	0.94	-0.34	-0.29	0.00		-0.85	-0.55	-0.20	0.58
Lowsky, John	0.76	-0.44	0.94	3.13	-0.98	-1.54	1.15	1.17	1.88	2.16	0.78	3.70	0.00		0.41	-0.13	0.86	1.44
Pansza, Mike	-0.54	-0.42	2.35	-1.01	-0.91	-1.65	0.11	-1.92	-0.46	-0.11	-1.05	-0.29	0.00		-1.12	-0.72	-0.52	0.98
Tschirhart, Garland	2.40	-0.10	-0.05	-0.47	2.52	1.11	-0.41	0.00	1.21	0.59	0.54	-0.29	0.00		1.04	0.93	0.60	0.94
Verlinde, Marcel	0.60	-0.91	-1.07	-1.18	-1.06	-0.14	-0.93	-0.43	-0.96	-0.58	-1.56	-0.29	0.00		-1.39	-1.61	-0.77	0.62
Yanchar, Paul	-0.05	-0.22	-0.83	-0.17	0.11	-0.08	-0.41	0.85	-0.46	-0.46	-0.34	-0.29	0.00		-0.19	-0.45	-0.20	0.37
Yi MAXIMUM	2.40	2.50	2.35	3.13	2.52	1.74	2.19	-1.92	1.88	2.16	1.57	3.70	0.00		2.37	2.24	0.86	1.44
Yi MINIMUM	-0.05	-0.10	-0.05	-0.02	-0.05	-0.08	0.00	0.00	-0.29	-0.11	0.06	-0.29	0.00		-0.19	-0.01	-0.03	0.28
Yi MEAN	0.00	0.00	0.00	0.00	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	1.00	0.00		1.00	1.00		
Ratings MEAN	26.33	32.49	0.82	21.69	20.18	2.94	0.38	4.20	3.82	14.65	29.23	0.44	0.00		112.86	336.47		
Ratings STD	1.53	9.47	0.33	1.89	3.07	0.46	0.19	1.41	1.80	5.72	12.59	1.50	0.00		11.61	35.15		

PART ID = Piston A5 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Avis, Steve	61.70	13.96	0.79	38.30	23.44	2.21	0.26	5.10	3.90	69.00	6.00	19.00	0.00		149.66	356.55
Barrera, Tony	68.75	18.18	0.50	52.81	25.03	3.01	0.61	5.20	4.05	72.00	11.00	38.00	0.00		178.14	433.97
Caproni, David	67.00	13.46	3.62	47.50	15.95	2.00	0.50	3.90	2.70	74.00	15.00	30.00	0.00		156.63	417.38
Garcia, Pat	67.50	13.26	1.09	43.75	26.25	2.12	0.88	4.80	5.70	73.00	14.00	25.00	0.00		165.35	421.93
Garrett, Thomas	73.50	13.90	0.43	49.93	27.29	2.10	0.60	4.50	3.60	82.00	6.00	34.00	3.00		175.85	413.40
Greenland, Paul	63.75	11.76	0.77	49.00	22.59	1.16	0.30	4.51	5.70	74.00	9.00	34.00	2.00		159.54	343.51
Guardo, Waldyr	59.75	15.10	0.81	54.67	25.97	2.03	0.72	5.40	3.00	62.00	9.00	44.00	0.00		167.45	404.28
Hill, Howard	73.00	15.61	0.63	40.27	25.70	1.65	0.58	9.20	4.80	80.00	4.00	24.00	1.00		171.44	402.20
Hills, Barry	60.25	13.88	1.37	35.14	24.03	1.87	0.68	6.90	4.06	80.00	6.00	0.00	0.00		148.18	383.90
Lopez, Frank	57.00	14.32	0.69	46.42	25.11	1.91	0.28	6.00	4.20	52.00	4.00	29.00	0.00		155.92	355.21
Love, Ed	75.50	15.00	0.65	60.06	26.45	1.76	0.50	4.80	1.50	78.00	12.00	48.00	0.00		186.22	419.16
Pansza, Mike	67.25	15.49	0.78	52.70	14.80	1.30	0.50	3.60	2.40	82.00	15.00	0.00	0.00		158.82	354.47
Tschirhart, Garland	66.50	13.40	1.25	65.40	30.12	2.20	0.34	6.00	4.80	64.00	16.00	55.00	0.00		190.01	426.76
Verlinde, Marcel	71.75	16.68	1.46	60.53	18.76	1.82	0.18	3.90	4.50	71.30	8.50	51.00	0.00		179.58	392.90
Viera, Ralph	62.25	15.80	4.28	56.02	24.50	3.11	1.39	5.41	6.00	69.00	7.00	63.00	0.00		178.76	541.03
Yanchar, Paul	61.50	15.07	0.75	41.51	23.88	2.39	0.30	5.40	4.05	70.00	7.00	23.00	0.00		154.85	369.59
MAXIMUM	75.50	18.18	4.28	65.40	30.12	3.11	1.39	9.20	6.00	82.00	16.00	63.00	3.00		190.01	541.03
MINIMUM	57.00	11.76	0.43	35.14	14.80	1.16	0.18	3.60	1.50	52.00	4.00	0.00	0.00		148.18	343.51
RANGE (MAX-MIN)	18.50	6.42	3.85	30.26	15.32	1.95	1.21	5.60	4.50	30.00	12.00	63.00	3.00		41.83	197.52
MEAN	66.06	14.68	1.24	49.63	23.74	2.04	0.54	5.29	4.06	72.02	9.34	32.31	0.38		167.28	402.26
STD	5.49	1.53	1.10	8.58	4.06	0.51	0.30	1.35	1.24	8.00	4.02	17.73	0.89		13.10	47.20



yi within 1 72.1%
 yi within 2 95.2%
 yi within 3 100.0%

PART ID = Piston A5 - two-piece

Yi VALUES

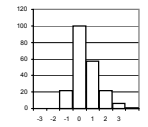
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Avis, Steve	-0.79	-0.47	-0.41	-1.32	-0.07	0.33	-0.93	-0.14	-0.13	-0.38	-0.83	-0.75	-0.42		-1.34	-0.97	-0.58	0.47
Barrera, Tony	0.49	2.29	-0.67	0.37	0.32	1.90	0.24	-0.07	-0.01	0.00	0.41	0.32	-0.42		0.83	0.67	0.44	0.78
Caproni, David	0.17	-0.80	2.15	-0.25	-1.92	-0.08	-0.13	-1.03	-1.10	0.25	1.41	-0.13	-0.42		-0.81	0.32	-0.16	1.00
Garcia, Pat	0.26	-0.93	-0.14	-0.68	0.62	0.16	1.14	-0.36	1.33	0.12	1.16	-0.41	-0.42		-0.15	0.42	0.14	0.69
Garrett, Thomas	1.36	-0.51	-0.74	0.04	0.87	0.12	0.21	-0.58	-0.37	1.25	-0.83	0.10	2.97		0.65	0.24	0.32	1.00
Greenland, Paul	-0.42	-1.91	-0.43	-0.07	-0.28	-1.72	-0.80	-0.58	1.33	0.25	-0.09	0.10	1.84		-0.59	-1.24	-0.31	0.99
Guardo, Waldyr	-1.15	0.28	-0.39	0.59	0.55	-0.02	0.61	0.08	-0.86	-1.25	-0.09	0.66	-0.42		0.01	0.04	-0.09	0.62
Hill, Howard	1.26	0.61	-0.55	-1.09	0.48	-0.76	0.14	2.89	0.60	1.00	-1.33	-0.47	0.71		0.32	0.00	0.25	1.06
Hills, Barry	-1.06	-0.52	0.12	-1.69	0.07	-0.33	0.47	1.19	0.00	1.00	-0.83	-1.82	-0.42		-1.46	-0.39	-0.38	0.90
Lopez, Frank	-1.65	-0.24	-0.50	-0.37	0.34	-0.26	-0.88	0.53	0.11	-2.50	-1.33	-0.19	-0.42		-0.87	-1.00	-0.62	0.79
Love, Ed	1.72	0.21	-0.54	1.22	0.67	-0.55	-0.13	-0.36	-2.07	0.75	0.66	0.88	-0.42		1.45	0.36	0.26	0.97
Pansza, Mike	0.22	0.53	-0.42	0.36	-2.20	-1.45	-0.13	-1.25	-1.34	1.25	1.41	-1.82	-0.42		-0.65	-1.01	-0.46	1.08
Tschirhart, Garland	0.08	-0.84	0.01	1.84	1.57	0.31	-0.66	0.53	0.60	-1.00	1.66	1.28	-0.42		1.74	0.52	0.48	0.97
Verlinde, Marcel	1.04	1.31	0.20	1.27	-1.23	-0.43	-1.20	-1.03	0.36	-0.09	-0.21	1.05	-0.42		0.94	-0.20	0.09	0.88
Viera, Ralph	-0.69	0.73	2.75	0.75	0.19	2.09	2.85	0.09	1.57	-0.38	-0.58	1.73	-0.42		0.88	2.94	0.97	1.29
Yanchar, Paul	-0.83	0.26	-0.45	-0.95	0.03	0.69	-0.80	0.08	-0.01	-0.25	-0.58	-0.53	-0.42		-0.95	-0.69	-0.36	0.48
Yi MAXIMUM	1.72	2.29	2.75	1.84	-2.20	2.09	2.85	2.89	-2.07	-2.50	1.66	-1.82	2.97		1.74	2.94	0.97	1.29
Yi MINIMUM	0.08	0.21	0.01	0.04	0.03	-0.02	-0.13	-0.07	0.00	0.00	-0.09	0.10	-0.42		0.01	0.00	0.09	0.47
Yi MEAN	0.00	0.00	0.00	0.00	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	1.00	1.00		1.00	1.00		
Ratings MEAN	66.06	14.68	1.24	49.63	23.74	2.04	0.54	5.29	4.06	72.02	9.34	32.31	0.38		167.28	402.26		
Ratings STD	5.49	1.53	1.10	8.58	4.06	0.51	0.30	1.35	1.24	8.00	4.02	17.73	0.89		13.10	47.20		

Heavy Duty Diesel Rating Workshop

PART ID = Piston A6 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Avis, Steve	63.75	20.55	1.01	14.17	11.51	1.98	0.15	4.80	4.50	73.00	18.00	0.00	0.00		122.42	313.70
Barrera, Tony	68.25	20.84	1.20	21.48	12.16	2.32	0.31	2.70	0.30	68.00	13.00	0.00	0.00		129.56	348.83
Caproni, David	78.50	18.11	1.00	25.00	10.67	0.80	0.20	1.95	1.50	85.00	13.00	0.00	0.00		137.73	319.04
Garcia, Pat	76.50	22.38	1.16	21.80	15.44	1.76	0.32	4.20	4.50	70.00	14.00	0.00	0.00		148.06	372.31
Garrett, Thomas	76.25	20.96	1.28	16.29	11.59	2.16	0.40	3.15	2.25	76.00	15.00	2.00	0.00		134.33	363.52
Guarda, Waldyr	77.75	21.06	0.90	14.20	12.67	1.48	0.66	6.90	3.90	78.00	16.00	1.00	0.00		139.52	366.94
Hill, Howard	77.50	24.30	0.79	12.06	11.88	1.55	0.09	2.40	1.50	72.00	14.00	0.00	0.00		132.07	330.95
Hills, Barry	55.00	20.51	1.20	20.31	13.98	2.10	0.58	5.10	4.36	60.00	13.00	1.00	0.00		123.14	341.86
Lopez, Frank	64.25	22.24	1.84	18.60	11.42	1.26	0.20	4.50	8.03	60.00	10.00	0.00	0.00		132.32	330.47
Love, Ed	76.50	24.28	0.60	20.85	12.28	1.20	0.30	4.50	1.80	78.00	18.00	3.00	0.00		142.31	342.93
Lowsky, John	62.25	20.56	1.10	14.39	10.19	2.43	0.55	4.05	3.90	65.00	23.00	0.00	0.00		119.42	340.74
Pansza, Mike	63.50	21.66	1.40	12.86	9.36	2.22	0.30	2.10	2.10	66.00	14.00	0.00	0.00		115.50	326.47
Tschirhart, Garland	62.50	18.85	0.84	18.85	15.35	0.95	0.40	4.50	5.40	65.00	22.00	5.00	0.00		127.64	313.45
Verlinde, Marcel	78.50	21.36	1.55	9.63	11.94	1.04	0.30	1.50	3.90	76.10	11.40	0.00	0.00		129.72	339.78
Viera, Ralph	66.50	18.06	1.00	20.43	11.58	2.05	0.06	12.00	4.11	70.00	14.00	0.00	0.00		135.79	321.01
Yanchar, Paul	67.75	22.22	0.65	16.84	12.83	1.98	0.18	4.80	1.95	67.00	11.00	0.00	0.00		129.20	326.67
MAXIMUM	78.50	24.30	1.84	25.00	15.44	2.43	0.66	12.00	8.03	85.00	23.00	5.00	0.00		148.06	372.31
MINIMUM	55.00	18.06	0.60	9.63	9.36	0.80	0.06	1.50	0.30	60.00	10.00	0.00	0.00		115.50	313.45
RANGE (MAX-MIN)	23.50	6.24	1.24	15.37	6.08	1.63	0.60	10.50	7.73	25.00	13.00	5.00	0.00		32.56	58.86
MEAN	69.70	21.12	1.09	17.36	12.18	1.71	0.31	4.32	3.37	70.57	14.96	0.75	0.00		131.17	337.42
STD	7.57	1.81	0.32	4.22	1.65	0.53	0.17	2.49	1.91	6.89	3.67	1.44	0.00		8.57	18.32



yi within 1 75.5%
 yi within 2 96.6%
 yi within 3 99.5%

PART ID = Piston A6 - two-piece

Yi VALUES

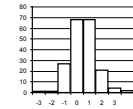
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Avis, Steve	-0.79	-0.32	-0.26	-0.76	-0.41	0.52	-0.94	0.19	0.59	0.35	0.83	-0.52	0.00		-1.02	-1.29	-0.25	0.65
Barrera, Tony	-0.19	-0.16	0.33	0.98	-0.01	1.17	-0.01	-0.65	-1.61	-0.37	-0.53	-0.52	0.00		-0.19	0.62	-0.08	0.68
Caproni, David	1.16	-1.66	-0.29	1.81	-0.92	-1.72	-0.65	-0.95	-0.98	2.09	-0.53	-0.52	0.00		0.77	-1.00	-0.23	1.17
Garcia, Pat	0.90	0.70	0.20	1.05	1.98	0.10	0.04	-0.05	0.59	-0.08	-0.26	-0.52	0.00		1.97	1.90	0.57	0.83
Garrett, Thomas	0.87	-0.09	0.57	-0.25	-0.36	0.86	0.51	-0.47	-0.59	0.79	0.01	0.87	0.00		0.37	1.42	0.30	0.60
Guarda, Waldyr	1.06	-0.03	-0.60	-0.75	0.30	-0.43	2.01	1.04	0.28	1.08	0.28	0.17	0.00		0.97	1.61	0.47	0.81
Hill, Howard	1.03	1.76	-0.94	-1.25	-0.18	-0.29	-1.29	-0.77	-0.98	0.21	-0.26	-0.52	0.00		0.10	-0.35	-0.25	0.82
Hills, Barry	-1.94	-0.34	0.33	0.70	1.09	0.75	1.55	0.31	0.52	-1.53	-0.53	0.17	0.00		-0.94	0.24	0.03	0.95
Lopez, Frank	-0.72	0.62	2.29	0.29	-0.46	-0.84	-0.65	0.07	2.44	-1.53	-1.35	-0.52	0.00		0.13	-0.38	-0.04	1.14
Love, Ed	0.90	1.74	-1.53	0.83	0.06	-0.96	-0.07	0.07	-0.83	1.08	0.83	1.57	0.00		1.30	0.30	0.35	0.95
Lowsky, John	-0.98	-0.31	0.02	-0.70	-1.21	1.38	1.38	-0.11	0.28	-0.81	2.19	-0.52	0.00		-1.37	0.18	-0.04	1.02
Pansza, Mike	-0.82	0.30	0.94	-1.07	-1.71	0.98	-0.07	-0.89	-0.67	-0.66	-0.26	-0.52	0.00		-1.83	-0.60	-0.46	0.81
Tschirhart, Garland	-0.95	-1.25	-0.79	0.35	1.93	-1.43	0.51	0.07	1.06	-0.81	1.92	2.96	0.00		-0.41	-1.31	0.12	1.34
Verlinde, Marcel	1.16	0.13	1.41	-1.83	-0.14	-1.26	-0.07	-1.13	0.28	0.80	-0.97	-0.52	0.00		-0.17	0.13	-0.15	0.90
Viera, Ralph	-0.42	-1.69	-0.29	0.73	-0.36	0.65	-1.46	3.08	0.39	-0.08	-0.26	-0.52	0.00		0.54	-0.90	-0.04	1.12
Yanchar, Paul	-0.26	0.61	-1.37	-0.12	0.40	0.52	-0.77	0.19	-0.75	-0.52	-1.08	-0.52	0.00		-0.23	-0.59	-0.30	0.58
Yi MAXIMUM	-1.94	1.76	2.29	-1.83	1.98	-1.72	2.01	3.08	2.44	2.09	2.19	2.96	0.00		1.97	1.90	0.57	1.34
Yi MINIMUM	-0.19	-0.03	0.02	-0.12	-0.01	0.10	-0.01	-0.05	0.28	-0.08	0.01	0.17	0.00		0.10	0.13	0.03	0.58
Yi MEAN	0.00	0.00	0.00	0.00	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	1.00	0.00		1.00	1.00		
Ratings MEAN	69.70	21.12	1.09	17.36	12.18	1.71	0.31	4.32	3.37	70.57	14.96	0.75	0.00		131.17	337.42		
Ratings STD	7.57	1.81	0.32	4.22	1.65	0.53	0.17	2.49	1.91	6.89	3.67	1.44	0.00		8.57	18.32		

Heavy Duty Diesel Rating Workshop

PART ID = Piston B1 - square cut

RATED VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	TGF							UWPD	WPD
Avis, Steve	21.11	10.31	0.20	0.15	12.75	0.30	0.20	13.00							45.02	199.34
Barrera, Tony	19.52	9.36	0.03	0.03	16.10	0.33	0.30	11.00							45.67	189.72
Caproni, David	26.78	9.64	0.10	0.10	13.50	0.20	0.10	16.00							50.42	188.43
Castillo, George	24.15	7.68	0.07	0.12	12.38	0.31	0.30	15.00							45.01	171.83
Clapperty, Leon	22.12	8.53	0.19	0.19	10.82	0.24	0.18	11.00							42.27	176.34
Engelskirchen, Jim	24.47	10.87	0.20	0.20	13.26	0.20	0.20	16.00							49.40	211.58
Garrett, Thomas	20.46	9.96	0.01	0.01	16.34	0.50	0.80	11.00							48.08	216.30
Greenland, Paul	22.39	10.28	0.10	0.20	13.85	0.30	0.30	21.00							47.42	207.67
Hill, Howard	24.61	7.28	0.02	0.02	15.58	0.11	0.01	17.00							47.63	156.57
Hills, Barry	18.62	8.82	0.12	0.11	27.78	0.20	0.10	13.00							55.75	223.45
Hurtado, Cirilo	17.36	3.82	0.06	0.04	3.15	0.06	0.04	16.13							24.53	74.09
Kobrinetz, Jack	18.15	10.39	0.20	0.20	12.19	0.40	0.30	10.00							41.83	204.22
Love, Ed	18.94	10.25	0.20	0.30	13.90	0.40	0.40	15.00							44.39	220.09
Massicotte, Pierre	27.61	11.48	0.05	0.08	18.39	0.88	0.63	20.00							59.12	253.78
May, Marianne	23.23	9.98	0.25	0.18	11.57	0.30	0.24	14.00							45.75	199.28
Mundt, Matthias	22.39	9.47	0.00	0.00	15.73	0.15	0.08	15.00							47.82	177.77
Mundt, Tarsten	17.68	7.53	0.21	0.23	16.18	0.30	0.13	10.00							42.26	183.47
Pansza, Mike	16.13	9.86	0.14	0.20	12.99	0.36	0.30	16.00							39.98	196.80
Rodriguez, Jesus	20.49	9.63	0.14	0.10	13.92	0.20	0.10	10.00							44.58	184.91
Sanchez, Arthur	24.85	6.24	0.10	0.10	8.74	0.50	0.50	17.00							41.03	155.84
Tschirhart, Garland	25.75	8.62	0.20	0.20	21.85	0.30	0.30	22.00							57.22	225.93
Verlinde, Marcel	24.47	11.14	0.06	0.00	13.06	0.16	0.16	18.20							49.05	192.48
Viera, Ralph	24.02	8.92	0.02	0.00	12.65	0.17	0.15	11.00							45.93	166.85
Yanchar, Paul	21.16	11.31	0.05	0.04	13.74	0.30	0.05	10.00							46.65	194.65
MAXIMUM	27.61	11.48	0.25	0.30	27.78	0.88	0.80	22.00							59.12	253.78
MINIMUM	16.13	3.82	0.00	0.00	3.15	0.06	0.01	10.00							24.53	74.09
RANGE (MAX-MIN)	11.48	7.66	0.25	0.30	24.63	0.82	0.79	12.00							34.59	179.69
MEAN	21.94	9.22	0.11	0.12	14.18	0.30	0.24	14.51							46.12	190.47
STD	3.15	1.75	0.08	0.09	4.49	0.17	0.19	3.61							6.66	33.81



yi within 1 70.8%
 yi within 2 95.8%
 yi within 3 98.4%

PART ID = Piston B1 - square cut

Yi VALUES

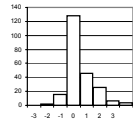
	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	TGF							UWPD	WPD	MEAN	STD
Avis, Steve	-0.26	0.62	1.13	0.38	-0.32	0.01	-0.23	-0.42							-0.16	0.26	0.10	0.49
Barrera, Tony	-0.77	0.08	-1.07	-1.00	0.43	0.19	0.29	-0.97							-0.07	-0.02	-0.29	0.59
Caproni, David	1.54	0.24	-0.17	-0.19	-0.15	-0.59	-0.76	0.41							0.65	-0.06	0.09	0.66
Castillo, George	0.70	-0.88	-0.56	0.04	-0.40	0.07	0.29	0.13							-0.17	-0.55	-0.13	0.47
Clapperty, Leon	0.06	-0.40	1.00	0.84	-0.75	-0.35	-0.34	-0.97							-0.58	-0.42	-0.19	0.65
Engelskirchen, Jim	0.80	0.94	1.13	0.96	-0.21	-0.59	-0.23	0.41							0.49	0.62	0.43	0.59
Garrett, Thomas	-0.47	0.42	-1.33	-1.23	0.48	1.21	2.93	-0.97							0.29	0.76	0.21	1.30
Greenland, Paul	0.14	0.60	-0.17	0.96	-0.07	0.01	0.29	1.80							0.20	0.51	0.43	0.59
Hill, Howard	0.85	-1.11	-1.27	-1.09	0.31	-1.11	-1.24	0.69							0.23	-1.00	-0.47	0.88
Hills, Barry	-1.05	-0.23	0.09	-0.08	3.03	-0.59	-0.76	-0.42							1.45	0.98	0.24	1.24
Hurtado, Cirilo	-1.45	-3.08	-0.69	-0.88	-2.46	-1.44	-1.08	0.45							-3.24	-3.44	-1.73	1.28
Kobrinetz, Jack	-1.20	0.67	1.13	0.96	-0.44	0.61	0.29	-1.25							-0.64	0.41	0.05	0.87
Love, Ed	-0.95	0.59	1.13	2.10	-0.06	0.61	0.82	0.13							-0.26	0.88	0.50	0.84
Massicotte, Pierre	1.80	1.29	-0.82	-0.42	0.94	3.50	2.03	1.52							1.95	1.87	1.37	1.24
May, Marianne	0.41	0.43	1.77	0.73	-0.58	0.01	-0.02	-0.14							-0.06	0.26	0.28	0.64
Mundt, Matthias	0.14	0.14	-1.46	-1.34	0.34	-0.90	-0.89	0.13							0.26	-0.38	-0.39	0.70
Mundt, Tarsten	-1.35	-0.97	1.20	1.30	0.44	0.01	-0.60	-1.25							-0.58	-0.21	-0.20	0.94
Pansza, Mike	-1.84	0.36	0.35	0.96	-0.27	0.37	0.29	0.41							-0.92	0.19	-0.01	0.81
Rodriguez, Jesus	-0.46	0.23	0.35	-0.19	-0.06	-0.59	-0.76	-1.25							-0.23	-0.16	-0.31	0.47
Sanchez, Arthur	0.92	-1.70	-0.17	-0.19	-1.21	1.21	1.35	0.69							-0.76	-1.02	-0.09	1.08
Tschirhart, Garland	1.21	-0.34	1.13	0.96	1.71	0.01	0.29	2.07							1.67	1.05	0.97	0.78
Verlinde, Marcel	0.80	1.09	-0.69	-1.34	-0.25	-0.84	-0.44	1.02							0.44	0.06	-0.01	0.84
Viera, Ralph	0.66	-0.17	-1.20	-1.34	-0.34	-0.78	-0.50	-0.97							-0.03	-0.70	-0.54	0.60
Yanchar, Paul	-0.25	1.19	-0.82	-0.88	-0.10	0.01	-1.02	-1.25							0.08	0.12	-0.29	0.72
Yi MAXIMUM	-1.84	-3.08	1.77	2.10	3.03	3.50	2.93	2.07							-3.24	-3.44	-1.73	1.30
Yi MINIMUM	0.06	0.08	0.09	0.04	-0.06	0.01	-0.02	0.13							-0.03	-0.02	-0.01	0.47
Yi MEAN	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		
Ratings MEAN	21.94	9.22	0.11	0.12	14.18	0.30	0.24	14.51							46.12	190.47		
Ratings STD	3.15	1.75	0.08	0.09	4.49	0.17	0.19	3.61							6.66	33.81		

Heavy Duty Diesel Rating Workshop

PART ID = Piston B2 - keystone

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Upper Skirt	Under-crown	TGF	2nd GF	TLHC, %	TLFC, %			UWPD	WPD
Avis, Steve	44.82	28.10	0.85	19.02	24.76	1.45	0.45	0.73	30.00	35.00	0.00	0.00			120.18	247.76
Barrera, Tony	36.66	22.72	1.18	20.60	28.29	1.24	0.58	0.96	22.00	27.00	0.00	0.00			112.23	246.66
Castillo, George	35.12	22.59	1.03	25.00	24.75	1.72	1.22	0.30	22.00	15.00	0.00	0.00			111.73	272.07
Clapperty, Leon	37.59	23.83	0.57	17.97	26.33	1.16	0.37	0.36	25.00	22.00	0.00	0.00			108.18	205.38
Engelskirchen, Jim	40.37	22.80	1.13	25.75	37.64	1.68	0.40	0.20	28.00	1.00	1.00	0.00			129.97	252.40
Garrett, Thomas	37.64	23.50	1.10	19.87	29.31	1.08	0.40	0.83	21.00	18.00	0.00	0.00			113.73	231.99
Greenland, Paul	31.75	23.36	0.97	19.38	26.02	1.60	0.55	0.62	20.00	28.00	0.00	0.00			104.24	231.99
Hill, Howard	36.07	20.37	1.35	17.01	23.29	1.05	0.31	1.28	28.00	34.00	0.00	2.00			100.73	226.06
Hills, Barry	32.30	22.93	1.13	13.27	26.96	1.22	0.51	0.28	18.00	14.00	0.00	0.00			98.60	212.93
Kobrinetz, Jack	35.87	23.02	1.02	21.48	23.97	1.22	0.38	0.52	27.00	27.00	0.00	0.00			107.48	219.19
Love, Ed	41.25	22.60	0.90	19.70	28.30	1.37	0.78	0.86	40.00	20.00	0.00	0.00			115.76	256.73
May, Marianne	38.73	22.85	1.18	16.28	23.09	1.39	0.45	0.50	26.00	7.00	0.00	0.00			104.47	228.49
Mundt, Matthias	42.05	23.54	0.71	10.86	36.10	1.28	0.22	0.30	27.00	18.00	0.00	0.00			115.06	211.85
Mundt, Tarsten	36.86	26.95	0.95	18.31	35.29	2.32	0.73	2.40	35.00	54.00	2.00	0.00			123.81	315.57
Pansza, Mike	41.07	24.44	1.14	24.68	29.10	1.19	0.93	0.55	34.00	16.00	0.00	0.00			123.10	267.80
Sanchez, Arthur	43.89	39.24	0.97	26.35	43.29	1.17	0.39	1.00	40.00	61.00	5.00	1.00			156.30	287.34
Tschirhart, Garland	47.95	26.40	0.82	25.00	32.95	1.37	0.95	0.81	39.00	31.00	0.00	0.00			136.25	287.93
Verlinde, Marcel	45.62	36.08	1.32	25.00	29.94	1.74	0.42	0.75	37.70	47.50	0.00	0.00			140.87	289.99
Yanchar, Paul	37.50	22.80	0.96	24.32	24.82	1.31	0.57	0.50	25.00	20.00	0.00	0.00			112.78	234.84
MAXIMUM	47.95	39.24	1.35	26.35	43.29	2.32	1.22	2.40	40.00	61.00	5.00	2.00			156.30	315.57
MINIMUM	31.75	20.37	0.57	10.86	23.09	1.05	0.22	0.20	18.00	1.00	0.00	0.00			98.60	205.38
RANGE (MAX-MIN)	16.20	18.87	0.78	15.49	20.20	1.27	1.01	2.20	22.00	60.00	5.00	2.00			57.70	110.19
MEAN	39.11	25.16	1.01	20.52	29.17	1.40	0.56	0.72	28.67	26.08	0.42	0.16			117.66	248.79
STD	4.40	4.77	0.20	4.39	5.54	0.31	0.26	0.50	7.04	15.30	1.22	0.50			14.75	30.96



yi within 1 76.3%
 yi within 2 94.7%
 yi within 3 98.2%

PART ID = Piston B2 - keystone

YI VALUES

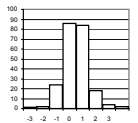
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Upper Skirt	Under-crown	TGF	2nd GF	TLHC, %	TLFC, %			UWPD	WPD	MEAN	STD
Avis, Steve	1.30	0.62	-0.84	-0.34	-0.80	0.17	-0.42	0.01	0.19	0.58	-0.35	-0.31			0.17	-0.03	0.00	0.58
Barrera, Tony	-0.56	-0.51	0.85	0.02	-0.16	-0.52	0.09	0.48	-0.95	0.06	-0.35	-0.31			-0.37	-0.07	-0.16	0.46
Castillo, George	-0.91	-0.54	0.08	1.02	-0.80	1.05	2.59	-0.85	-0.95	-0.72	-0.35	-0.31			-0.40	0.75	-0.02	1.03
Clapperty, Leon	-0.35	-0.28	-2.27	-0.58	-0.51	-0.78	-0.74	-0.73	-0.52	-0.27	-0.35	-0.31			-0.64	-1.40	-0.69	0.54
Engelskirchen, Jim	0.29	-0.50	0.59	1.19	1.53	0.92	-0.62	-1.05	-0.09	-1.64	0.48	-0.31			0.84	0.12	0.12	0.89
Garrett, Thomas	-0.33	-0.35	0.44	-0.15	0.03	-1.04	-0.62	0.21	-1.09	-0.53	-0.35	-0.31			-0.27	-0.54	-0.35	0.42
Greenland, Paul	-1.67	-0.38	-0.25	-0.26	-0.57	0.66	-0.03	-0.22	-1.23	0.13	-0.35	-0.31			-0.91	-0.54	-0.42	0.57
Hill, Howard	-0.69	-1.00	1.71	-0.80	-1.06	-1.14	-0.97	1.12	-0.09	0.52	-0.35	3.67			-1.15	-0.73	-0.07	1.40
Hills, Barry	-1.55	-0.47	0.59	-1.65	-0.40	-0.58	-0.19	-0.89	-1.51	-0.79	-0.35	-0.31			-1.29	-1.16	-0.75	0.63
Kobrinetz, Jack	-0.74	-0.45	0.03	0.22	-0.94	-0.58	-0.70	-0.41	-0.24	0.06	-0.35	-0.31			-0.69	-0.96	-0.43	0.36
Love, Ed	0.49	-0.54	-0.58	-0.19	-0.16	-0.09	0.87	0.28	1.61	-0.40	-0.35	-0.31			-0.13	0.26	0.05	0.61
May, Marianne	-0.09	-0.48	0.85	-0.97	-1.10	-0.03	-0.42	-0.45	-0.38	-1.25	-0.35	-0.31			-0.89	-0.66	-0.47	0.52
Mundt, Matthias	0.67	-0.34	-1.55	-2.20	1.25	-0.39	-1.34	-0.85	-0.24	-0.53	-0.35	-0.31			-0.18	-1.19	-0.54	0.88
Mundt, Tarsten	-0.51	0.37	-0.33	-0.50	1.11	3.02	0.67	3.38	0.90	1.82	1.30	-0.31			0.42	2.16	0.96	1.26
Pansza, Mike	0.44	-0.15	0.64	0.95	-0.01	-0.68	1.45	-0.35	0.76	-0.66	-0.35	-0.31			0.37	0.61	0.19	0.65
Sanchez, Arthur	1.09	2.95	-0.23	1.33	2.55	-0.75	-0.66	0.56	1.61	2.28	3.76	1.68			2.62	1.24	1.43	1.36
Tschirhart, Garland	2.01	0.26	-0.99	1.02	0.68	-0.09	1.53	0.17	1.47	0.32	-0.35	-0.31			1.26	1.26	0.59	0.87
Verlinde, Marcel	1.48	2.29	1.56	1.02	0.14	1.12	-0.54	0.05	1.28	1.40	-0.35	-0.31			1.57	1.33	0.86	0.88
Yanchar, Paul	-0.37	-0.50	-0.28	0.87	-0.78	-0.29	0.05	-0.45	-0.52	-0.40	-0.35	-0.31			-0.33	-0.45	-0.29	0.38
Yi MAXIMUM	2.01	2.95	-2.27	-2.20	2.55	3.02	2.59	3.38	1.61	2.28	3.76	3.67			2.62	2.16	1.43	1.40
Yi MINIMUM	-0.09	-0.15	0.03	0.02	-0.01	-0.03	-0.03	0.01	-0.09	0.06	-0.35	-0.31			-0.13	-0.03	0.00	0.36
Yi MEAN	0.00	0.00	0.00	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	1.00			1.00	1.00		
Ratings MEAN	39.11	25.16	1.01	20.52	29.17	1.40	0.56	0.72	28.67	26.08	0.42	0.16			117.66	248.79		
Ratings STD	4.40	4.77	0.20	4.39	5.54	0.31	0.26	0.50	7.04	15.30	1.22	0.50			14.75	30.96		

Heavy Duty Diesel Rating Workshop

PART ID = Piston B3 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Avis, Steve	37.40	10.36	1.73	20.03	15.00	1.95	0.25	3.00	7.20	25.00	2.00	9.00	0.00		96.92	266.11
Barrera, Tony	40.75	10.12	2.12	21.35	15.07	2.82	1.04	3.30	7.20	27.00	4.00	8.00	13.00		103.77	346.52
Castillo, George	39.25	11.00	1.52	18.88	13.74	1.86	0.52	2.25	6.90	33.00	4.00	10.00	14.00		95.92	276.10
Clapperty, Leon	37.00	9.18	0.92	21.99	14.11	1.76	0.48	1.80	6.60	38.00	3.00	12.00	0.00		93.84	253.36
Engelskirchen, Jim	40.50	10.30	1.45	22.09	14.72	1.86	0.40	6.30	7.50	29.00	7.00	12.00	0.00		105.12	278.40
Garrett, Thomas	37.00	10.08	2.46	20.01	14.05	1.73	0.53	3.14	5.86	27.00	3.00	8.00	15.00		94.86	288.07
Greenland, Paul	38.75	10.38	1.74	27.11	13.44	2.91	0.57	3.00	7.36	25.00	6.00	11.00	12.00		105.26	309.95
Hill, Howard	44.75	10.87	0.57	21.04	10.88	2.09	0.39	0.98	3.00	37.00	7.00	1.00	12.00		94.57	254.77
Kobrinetz, Jack	39.25	10.07	2.10	25.56	12.55	2.85	1.21	4.95	8.35	37.00	4.00	12.00	10.00		106.89	352.65
Love, Ed	37.50	10.88	1.20	22.04	15.34	1.56	0.60	4.80	3.60	38.00	8.00	8.00	0.00		97.52	273.50
May, Marianne	37.75	11.14	2.07	23.00	14.24	2.19	0.70	3.30	7.35	30.00	3.00	12.00	13.00		101.74	308.82
Mundt, Matthias	51.25	10.35	0.28	20.91	16.45	1.38	0.33	4.50	6.30	39.00	7.00	12.00	0.00		111.74	264.24
Mundt, Tarsten	57.00	10.59	1.05	21.49	10.97	1.96	0.64	4.50	4.80	70.00	6.00	10.00	12.00		113.00	305.67
Pansza, Mike	47.00	2.66	10.16	16.78	10.26	2.78	0.75	3.45	3.30	44.00	9.00	6.00	0.00		97.14	458.44
Sanchez, Arthur	40.00	9.10	2.27	25.97	13.31	1.82	0.83	5.10	6.76	25.00	4.00	17.00	17.00		105.16	313.28
Verlinde, Marcel	50.00	9.50	1.62	19.12	14.54	1.85	0.51	2.10	6.30	43.70	5.80	12.00	0.00		105.54	296.49
Yanchar, Paul	42.50	11.21	1.04	22.67	15.52	2.24	0.53	4.95	5.25	33.00	3.00	11.00	12.00		105.91	292.84
MAXIMUM	57.00	11.21	10.16	27.11	16.45	2.91	1.21	6.30	8.35	70.00	9.00	17.00	17.00		113.00	458.44
MINIMUM	37.00	2.66	0.28	16.78	10.26	1.38	0.25	0.98	3.00	25.00	2.00	1.00	0.00		93.84	253.36
RANGE (MAX-MIN)	20.00	8.55	9.88	10.33	6.19	1.54	0.96	5.32	5.35	45.00	7.00	16.00	17.00		19.16	205.08
MEAN	42.21	9.87	2.02	21.77	13.78	2.09	0.60	3.61	6.10	35.34	5.05	10.06	7.65		102.05	302.31
STD	5.86	1.96	2.18	2.63	1.73	0.47	0.25	1.40	1.58	10.95	2.07	3.40	6.75		6.02	49.33



yi within 1 76.9%
 yi within 2 95.9%
 yi within 3 98.6%

PART ID = Piston B3 - two-piece

Yi VALUES

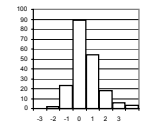
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Avis, Steve	-0.82	0.25	-0.13	-0.66	0.71	-0.30	-1.44	-0.44	0.70	-0.94	-1.47	-0.31	-1.13		-0.85	-0.73	-0.51	0.68
Barrera, Tony	-0.25	0.13	0.05	-0.16	0.75	1.53	1.77	-0.22	0.70	-0.76	-0.51	-0.61	0.79		0.29	0.90	0.29	0.76
Castillo, George	-0.51	0.58	-0.23	-1.10	-0.02	-0.49	-0.34	-0.97	0.51	-0.21	-0.51	-0.02	0.94		-1.02	-0.53	-0.26	0.59
Clapperty, Leon	-0.89	-0.35	-0.50	0.08	0.19	-0.71	-0.51	-1.29	0.32	0.24	-0.99	0.57	-1.13		-1.36	-0.99	-0.49	0.64
Engelskirchen, Jim	-0.29	0.22	-0.26	0.12	0.54	-0.49	-0.83	1.91	0.89	-0.58	0.94	0.57	-1.13		0.51	-0.48	0.11	0.80
Garrett, Thomas	-0.89	0.11	0.20	-0.67	0.16	-0.77	-0.30	-0.34	-0.15	-0.76	-0.99	-0.61	1.09		-1.19	-0.29	-0.36	0.59
Greenland, Paul	-0.59	0.26	-0.13	2.03	-0.19	1.72	-0.14	-0.44	0.80	-0.94	0.46	0.28	0.64		0.53	0.15	0.30	0.80
Hill, Howard	0.43	0.51	-0.66	-0.28	-1.67	-0.01	-0.87	-1.87	-1.95	0.15	0.94	-2.66	0.64		-1.24	-0.96	-0.63	1.09
Kobrinetz, Jack	-0.51	0.10	0.04	1.44	-0.71	1.59	2.46	0.95	1.42	0.15	-0.51	0.57	0.35		0.80	1.02	0.61	0.89
Love, Ed	-0.80	0.52	-0.37	0.10	0.90	-1.13	-0.02	0.85	-1.58	0.24	1.43	-0.61	-1.13		-0.75	-0.58	-0.20	0.86
May, Marianne	-0.76	0.65	0.02	0.47	0.27	0.20	0.39	-0.22	0.79	-0.49	-0.99	0.57	0.79		-0.05	0.13	0.12	0.54
Mundt, Matthias	1.54	0.24	-0.80	-0.33	1.54	-1.52	-1.12	0.63	0.13	0.33	0.94	0.57	-1.13		1.61	-0.77	0.13	1.04
Mundt, Tarsten	2.52	0.37	-0.44	-0.11	-1.62	-0.28	0.14	0.63	-0.82	3.17	0.46	-0.02	0.64		1.82	0.07	0.44	1.24
Pansza, Mike	0.82	-3.68	3.73	-1.89	-2.03	1.45	0.59	-0.12	-1.76	0.79	1.91	-1.19	-1.13		-0.82	3.17	-0.01	2.05
Sanchez, Arthur	-0.38	-0.39	0.12	1.60	-0.27	-0.58	0.91	1.06	0.42	-0.94	-0.51	2.04	1.38		0.52	0.22	0.35	0.89
Verlinde, Marcel	1.33	-0.19	-0.18	-1.01	0.44	-0.52	-0.38	-1.08	0.13	0.76	0.36	0.57	-1.13		0.58	-0.12	-0.03	0.72
Yanchar, Paul	0.05	0.68	-0.45	0.34	1.01	0.31	-0.30	0.95	-0.53	-0.21	-0.99	0.28	0.64		0.64	-0.19	0.15	0.59
Yi MAXIMUM	2.52	-3.68	3.73	2.03	-2.03	1.72	2.46	1.91	-1.95	3.17	1.91	-2.66	1.38		1.82	3.17	-0.63	2.05
Yi MINIMUM	0.05	0.10	0.02	0.08	-0.02	-0.01	-0.02	-0.12	0.13	0.15	0.36	-0.02	0.35		-0.05	0.07	-0.01	0.54
Yi MEAN	0.00	0.00	0.00	0.00	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	1.00	1.00		1.00	1.00		
Ratings MEAN	42.21	9.87	2.02	21.77	13.78	2.09	0.60	3.61	6.10	35.34	5.05	10.06	7.65		102.05	302.31		
Ratings STD	5.86	1.96	2.18	2.63	1.73	0.47	0.25	1.40	1.58	10.95	2.07	3.40	6.75		6.02	49.33		

Heavy Duty Diesel Rating Workshop

PART ID = Piston B4 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Avis, Steve	25.80	34.80	0.56	22.94	18.83	1.54	0.12	5.01	5.28	6.00	33.00	0.00	0.00		114.88	292.28
Barrera, Tony	26.59	47.50	1.60	22.24	18.88	2.14	0.50	3.90	1.50	10.00	44.00	1.00	0.00		124.85	384.01
Castillo, George	23.58	31.60	0.92	20.20	18.40	1.94	0.28	4.00	6.40	14.00	31.00	0.00	0.00		107.32	298.56
Clapperty, Leon	26.27	39.88	0.38	18.59	17.48	1.40	0.19	1.80	3.44	11.00	40.00	0.00	0.00		109.43	293.73
Engelskirchen, Jim	24.12	32.50	0.33	20.99	20.84	2.05	0.70	7.13	4.15	5.00	17.00	1.00	0.00		112.81	328.06
Hill, Howard	24.56	40.38	0.18	18.66	18.32	1.60	0.10	4.65	3.00	17.00	36.00	0.00	0.00		111.45	291.57
Hurtado, Cirilo	23.16	34.75	0.30	22.50	22.55	1.86	0.14	3.24	4.35	11.00	23.00	3.00	0.00		112.85	297.74
Kobrinetz, Jack	25.31	28.65	1.07	20.76	18.69	1.86	0.33	5.55	2.40	11.00	39.00	0.00	0.00		104.62	298.55
May, Marianne	24.66	31.78	0.81	19.95	19.63	1.94	0.27	4.20	6.53	6.00	42.00	0.00	1.00		109.77	302.17
Mundt, Matthias	24.03	41.50	0.45	22.93	17.26	1.83	0.20	6.30	1.50	5.00	36.00	1.00	0.00		116.00	312.08
Mundt, Tarsten	25.33	37.75	0.71	17.08	19.47	1.81	0.52	4.65	1.50	15.00	42.00	1.00	0.00		108.82	326.40
Pansza, Mike	25.30	38.50	0.62	22.75	19.39	2.10	0.50	2.10	2.10	12.00	21.00	1.00	0.00		113.36	334.57
Sanchez, Arthur	32.00	45.25	0.59	27.86	30.91	1.03	0.26	5.26	4.66	20.00	37.00	10.00	1.00		147.82	375.93
Verlinde, Marcel	24.31	50.71	0.75	20.31	19.70	1.47	0.27	4.80	2.25	9.70	41.20	1.00	0.00		124.57	346.69
Yanchar, Paul	26.53	40.00	0.65	23.34	21.31	1.43	0.10	5.55	3.45	10.00	44.00	1.00	0.00		122.36	315.21
MAXIMUM	32.00	50.71	1.60	27.86	30.91	2.14	0.70	7.13	6.53	20.00	44.00	10.00	1.00		147.82	384.01
MINIMUM	23.16	28.65	0.18	17.08	17.26	1.03	0.10	1.80	1.50	5.00	17.00	0.00	0.00		104.62	291.57
RANGE (MAX-MIN)	8.84	22.06	1.42	10.78	13.65	1.11	0.60	5.33	5.03	15.00	27.00	10.00	1.00		43.20	92.44
MEAN	25.44	38.37	0.66	21.41	20.11	1.73	0.30	4.54	3.50	10.85	35.08	1.33	0.13		116.06	319.84
STD	2.10	6.25	0.35	2.58	3.30	0.31	0.18	1.43	1.70	4.38	8.57	2.53	0.35		10.66	29.69



yi within 1 73.3%
 yi within 2 94.4%
 yi within 3 98.5%

PART ID = Piston B4 - two-piece

Yi VALUES

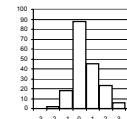
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Avis, Steve	0.17	-0.57	-0.29	0.59	-0.39	-0.62	-0.99	0.33	1.05	-1.11	-0.24	-0.53	-0.38		-0.11	-0.93	-0.27	0.60
Barrera, Tony	0.55	1.46	2.65	0.32	-0.37	1.31	1.12	-0.45	-1.18	-0.19	1.04	-0.13	-0.38		0.82	2.16	0.58	1.06
Castillo, George	-0.89	-1.08	0.73	-0.47	-0.52	0.66	-0.10	-0.38	1.71	0.72	-0.48	-0.53	-0.38		-0.82	-0.72	-0.17	0.78
Clapperty, Leon	0.40	0.24	-0.79	-1.09	-0.80	-1.07	-0.60	-1.92	-0.04	0.04	0.57	-0.53	-0.38		-0.62	-0.88	-0.50	0.66
Engelskirchen, Jim	-0.63	-0.94	-0.93	-0.16	0.22	1.02	2.23	1.81	0.38	-1.34	-2.11	-0.13	-0.38		-0.30	0.28	-0.07	1.14
Hill, Howard	-0.42	0.32	-1.36	-1.06	-0.54	-0.43	-1.11	0.08	-0.30	1.41	0.11	-0.53	-0.38		-0.43	-0.95	-0.37	0.68
Hurtado, Cirilo	-1.09	-0.58	-1.02	0.42	0.74	0.41	-0.88	-0.91	0.50	0.04	-1.41	0.66	-0.38		-0.30	-0.74	-0.30	0.71
Kobrinetz, Jack	-0.06	-1.56	1.15	-0.25	-0.43	0.41	0.17	0.70	-0.65	0.04	0.46	-0.53	-0.38		-1.07	-0.72	-0.18	0.70
May, Marianne	-0.37	-1.06	0.42	-0.56	-0.15	0.66	-0.16	-0.24	1.79	-1.11	0.81	-0.53	2.46		-0.59	-0.60	0.05	1.01
Mundt, Matthias	-0.67	0.50	-0.60	0.59	-0.86	0.31	-0.53	1.23	-1.18	-1.34	0.11	-0.13	-0.38		-0.01	-0.26	-0.21	0.70
Mundt, Tarsten	-0.05	-0.10	0.14	-1.68	-0.19	0.25	1.23	0.08	-1.18	0.95	0.81	-0.13	-0.38		-0.68	0.22	-0.05	0.76
Pansza, Mike	-0.07	0.02	-0.12	0.52	-0.22	1.18	1.12	-1.71	-0.83	0.26	-1.64	-0.13	-0.38		-0.25	0.50	-0.12	0.83
Sanchez, Arthur	3.13	1.10	-0.20	2.50	3.28	-2.26	-0.22	0.50	0.68	2.09	0.22	3.43	2.46		2.98	1.89	1.44	1.64
Verlinde, Marcel	-0.54	1.98	0.25	-0.42	-0.12	-0.85	-0.16	0.18	-0.74	-0.26	0.71	-0.13	-0.38		0.80	0.90	0.08	0.75
Yanchar, Paul	0.52	0.26	-0.03	0.75	0.36	-0.97	-1.11	0.70	-0.03	-0.19	1.04	-0.13	-0.38		0.59	-0.16	0.08	0.61
Yi MAXIMUM	3.13	1.98	2.65	2.50	3.28	-2.26	2.23	-1.92	1.79	2.09	-2.11	3.43	2.46		2.98	2.16	1.44	1.64
Yi MINIMUM	-0.05	0.02	-0.03	-0.16	-0.12	0.25	-0.10	0.08	-0.03	0.04	0.11	-0.13	-0.38		-0.01	-0.16	-0.05	0.60
Yi MEAN	0.00	0.00	0.00	0.00	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	1.00	1.00		1.00	1.00		
Ratings MEAN	25.44	38.37	0.66	21.41	20.11	1.73	0.30	4.54	3.50	10.85	35.08	1.33	0.13		116.06	319.84		
Ratings STD	2.10	6.25	0.35	2.58	3.30	0.31	0.18	1.43	1.70	4.38	8.57	2.53	0.35		10.66	29.69		

Heavy Duty Diesel Rating Workshop

PART ID = Piston B5 - two-piece

RATED VALUES

Table with columns: Groove 1, Groove 2, Groove 3, Land 1, Land 2, Land 3, Land 4, Under-crown, Oil Gallery, TGF, 2nd GF, TLHC, %, TLFC, %, UYPD, WPD. Includes summary rows for MAXIMUM, MINIMUM, RANGE, MEAN, and STD.



yi within 1 73.1%
yi within 2 95.6%
yi within 3 100.0%

PART ID = Piston B5 - two-piece

YI VALUES

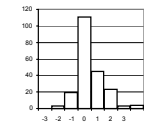
Table with columns: Groove 1, Groove 2, Groove 3, Land 1, Land 2, Land 3, Land 4, Under-crown, Oil Gallery, TGF, 2nd GF, TLHC, %, TLFC, %, UYPD, WPD, MEAN, STD. Includes summary rows for YI MAXIMUM, YI MINIMUM, YI MEAN, YI STD, Ratings MEAN, and Ratings STD.

Heavy Duty Diesel Rating Workshop

PART ID = Piston B6 - two-piece

RATED VALUES

Table with columns: Groove 1, Groove 2, Groove 3, Land 1, Land 2, Land 3, Land 4, Under-crown, Oil Gallery, TGF, 2nd GF, TLHC, %, TLFC, %, UYPD, WPD. Rows include individual ratings for various people and summary statistics like MAXIMUM, MINIMUM, RANGE, MEAN, and STD.



yi within 1 75.0%
yi within 2 95.2%
yi within 3 98.1%

PART ID = Piston B6 - two-piece

YI VALUES

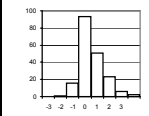
Table with columns: Groove 1, Groove 2, Groove 3, Land 1, Land 2, Land 3, Land 4, Under-crown, Oil Gallery, TGF, 2nd GF, TLHC, %, TLFC, %, UYPD, WPD, MEAN, STD. Rows include individual YI values and summary statistics.

Heavy Duty Diesel Rating Workshop

PART ID = Piston C1 - square cut

RATED VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	TGF							UWPD	WPD
Barrera, Tony	73.57	15.92	0.19	0.08	29.80	0.18	0.12	78.00							119.86	357.12
Caproni, David	68.75	15.72	0.20	0.10	25.00	0.50	0.30	70.00							110.57	347.95
Castillo, George	57.30	14.08	0.17	0.03	25.55	0.05	0.03	72.00							97.21	297.63
Clapperty, Leon	57.31	16.10	0.19	0.17	27.58	0.17	0.20	70.00							101.72	343.79
Garrett, Thomas	73.04	16.30	0.40	0.30	38.03	0.12	0.08	73.00							128.27	409.35
Greenland, Paul	69.55	13.17	0.30	0.20	24.55	0.24	0.20	68.00							108.21	323.48
Guarda, Waldyr	74.56	12.10	0.30	0.40	34.16	0.46	0.30	84.00							122.28	373.32
Hill, Howard	73.81	11.88	0.02	0.01	29.22	0.07	0.03	78.00							115.04	298.52
Hills, Barry	61.25	12.49	0.21	0.20	43.01	0.12	0.10	75.00							117.38	363.99
Hurtado, Cirilo	79.65	10.80	0.31	0.32	50.15	0.32	0.03	79.63							141.58	403.88
Kobrinetz, Jack	66.54	14.57	0.10	0.10	28.52	0.10	0.10	72.00							110.03	328.06
Lopez, Frank	73.80	14.78	0.01	0.10	29.02	0.23	0.10	71.00							118.04	338.60
Love, Ed	76.25	20.87	0.30	0.20	28.75	0.50	0.30	75.00							127.17	430.58
Lowsky, John	55.28	14.42	0.03	0.03	24.54	0.05	0.05	63.00							94.40	291.27
Massicotte, Pierre	61.04	18.31	0.88	0.60	50.39	0.89	0.73	60.00							132.84	536.66
May, Marianne	63.86	13.91	0.02	0.00	27.33	0.08	0.06	77.00							105.26	303.02
Mundt, Matthias	76.02	17.33	0.22	0.10	42.29	0.51	0.10	69.00							136.56	425.45
Pansza, Mike	86.25	12.75	0.10	0.00	27.54	0.20	0.10	80.00							126.94	321.14
Rodriguez, Jesus	71.02	15.98	0.10	0.10	40.27	0.70	0.70	73.00							128.87	420.77
Sanchez, Arthur	74.52	17.76	0.40	0.30	38.50	0.40	0.40	72.00							132.28	443.87
Tschirhart, Garland	78.06	13.00	0.30	0.20	29.53	0.30	0.20	76.00							121.59	348.92
Verlinde, Marcel	81.03	17.06	0.03	0.00	24.50	0.22	0.20	78.90							123.04	349.83
Viera, Ralph	76.02	17.41	0.08	0.08	24.52	0.10	0.08	70.00							118.29	349.14
Yanchar, Paul	67.79	14.17	0.05	0.03	28.28	0.11	0.05	69.00							110.48	316.27
MAXIMUM	86.25	20.87	0.88	0.60	50.39	0.89	0.73	84.00							141.58	536.66
MINIMUM	55.28	10.80	0.01	0.00	24.50	0.05	0.03	60.00							94.40	291.27
RANGE (MAX-MIN)	30.97	10.07	0.87	0.60	25.89	0.84	0.70	24.00							47.18	245.39
MEAN	70.68	15.04	0.20	0.15	32.13	0.28	0.19	73.06							118.66	363.44
STD	8.05	2.39	0.19	0.15	8.04	0.22	0.19	5.48							12.26	58.27



yi within 1 75.0%
 yi within 2 95.3%
 yi within 3 99.0%

PART ID = Piston C1 - square cut

Yi VALUES

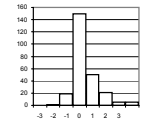
	Groove 1	Groove 2	Groove 3	Groove 4	Land 2	Land 3	Land 4	TGF							UWPD	WPD	MEAN	STD
Barrera, Tony	0.36	0.37	-0.08	-0.49	-0.29	-0.37	-0.37	0.90							0.10	-0.11	0.00	0.44
Caproni, David	-0.24	0.29	-0.02	-0.35	-0.89	1.02	0.58	-0.56							-0.66	-0.27	-0.11	0.59
Castillo, George	-1.66	-0.40	-0.18	-0.82	-0.82	-1.02	-0.84	-0.19							-1.75	-1.13	-0.88	0.54
Clapperty, Leon	-1.66	0.44	-0.08	0.12	-0.57	-0.48	0.05	-0.56							-1.38	-0.34	-0.44	0.66
Garrett, Thomas	0.29	0.53	1.03	1.00	0.73	-0.71	-0.58	-0.01							0.78	0.79	0.39	0.63
Greenland, Paul	-0.14	-0.78	0.51	0.33	-0.94	-0.16	0.05	-0.92							-0.85	-0.69	-0.36	0.54
Guarda, Waldyr	0.48	-1.23	0.51	1.68	0.25	0.84	0.58	1.99							0.30	0.17	0.56	0.88
Hill, Howard	0.39	-1.32	-0.98	-0.99	-0.36	-0.93	-0.83	0.90							-0.30	-1.11	-0.55	0.71
Hills, Barry	-1.17	-1.07	0.04	0.33	1.35	-0.71	-0.47	0.35							-0.10	0.01	-0.14	0.75
Hurtado, Cirilo	1.11	-1.77	0.56	1.14	2.24	0.20	-0.84	1.20							1.87	0.69	0.64	1.21
Kobrinetz, Jack	-0.51	-0.20	-0.55	-0.35	-0.45	-0.80	-0.47	-0.19							-0.70	-0.61	-0.48	0.20
Lopez, Frank	0.39	-0.11	-1.03	-0.35	-0.39	-0.21	-0.47	-0.38							-0.05	-0.43	-0.30	0.36
Love, Ed	0.69	2.44	0.51	0.33	-0.42	1.02	0.58	0.35							0.69	1.15	0.73	0.74
Lowsky, John	-1.91	-0.26	-0.92	-0.82	-0.94	-1.02	-0.74	-1.84							-1.98	-1.24	-1.17	0.57
Massicotte, Pierre	-1.20	1.37	3.58	3.03	2.27	2.79	2.83	-2.38							1.16	2.97	1.64	1.98
May, Marianne	-0.85	-0.47	-0.98	-1.03	-0.60	-0.89	-0.68	0.72							-1.09	-1.04	-0.69	0.54
Mundt, Matthias	0.66	0.96	0.06	-0.35	1.26	1.04	-0.47	-0.74							1.46	1.06	0.49	0.80
Pansza, Mike	1.93	-0.96	-0.55	-1.03	-0.57	-0.34	-0.47	1.26							0.68	-0.73	-0.08	1.01
Rodriguez, Jesus	0.04	0.39	-0.55	-0.35	1.01	1.93	2.68	-0.01							0.83	0.98	0.70	1.02
Sanchez, Arthur	0.48	1.14	1.03	1.00	0.79	0.56	1.10	-0.19							1.11	1.38	0.84	0.46
Tschirhart, Garland	0.92	-0.85	0.51	0.33	-0.32	0.11	0.05	0.54							0.24	-0.25	0.13	0.50
Verlinde, Marcel	1.29	0.85	-0.92	-1.03	-0.95	-0.25	0.05	1.06							0.36	-0.23	0.02	0.85
Viera, Ralph	0.66	0.99	-0.66	-0.49	-0.95	-0.80	-0.58	-0.56							-0.03	-0.25	-0.26	0.64
Yanchar, Paul	-0.36	-0.36	-0.82	-0.82	-0.48	-0.75	-0.74	-0.74							-0.67	-0.81	-0.65	0.18
Yi MAXIMUM	1.93	2.44	3.58	3.03	2.27	2.79	2.83	-2.38							-1.98	2.97	1.64	1.98
Yi MINIMUM	0.04	-0.11	-0.02	0.12	0.25	0.11	0.05	-0.01							-0.03	0.01	0.00	0.18
Yi MEAN	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		
Ratings MEAN	70.68	15.04	0.20	0.15	32.13	0.28	0.19	73.06							118.66	363.44		
Ratings STD	8.05	2.39	0.19	0.15	8.04	0.22	0.19	5.48							12.26	58.27		

Heavy Duty Diesel Rating Workshop

PART ID = Piston C2 - keystone

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Upper Skirt	Under-crown	TGF	2nd GF	TLHC, %	TLFC, %			UWPD	WPD
Caproni, David	45.75	25.00	0.64	11.96	28.39	0.95	0.27	0.40	39.00	20.00	0.00	0.00			113.36	207.73
Castillo, George	43.76	25.75	0.52	20.28	23.28	1.48	0.55	0.26	33.00	23.00	0.00	0.00			115.88	230.53
Clapperty, Leon	42.55	28.00	0.50	15.00	21.78	0.75	0.41	0.38	29.00	37.00	0.00	0.00			109.37	201.96
Garrett, Thomas	41.56	29.50	0.71	11.98	25.36	0.62	0.37	0.42	30.00	26.00	0.00	0.00			110.52	204.08
Greenland, Paul	40.25	27.25	0.58	8.15	25.90	0.96	0.56	0.48	27.00	16.00	0.00	0.00			104.13	211.30
Guarda, Waldyr	38.36	25.00	0.58	10.35	28.43	2.41	0.31	0.90	33.00	20.00	0.00	0.00			106.34	242.07
Hill, Howard	42.81	25.00	1.30	10.16	21.49	1.00	0.19	0.44	33.00	22.00	0.00	0.00			102.38	208.87
Hills, Barry	32.97	26.50	0.46	8.58	22.39	1.05	0.32	0.20	22.00	14.00	2.00	0.00			92.47	177.93
Kobrinetz, Jack	43.08	27.25	0.52	14.82	24.90	0.84	0.35	0.28	34.00	20.00	0.00	0.00			112.04	202.32
Lopez, Frank	40.85	25.00	1.13	17.43	25.03	1.53	1.10	0.53	29.00	14.00	0.00	0.00			112.59	273.16
Love, Ed	54.56	25.00	0.42	12.80	26.32	1.15	0.80	1.31	55.00	15.00	0.00	0.00			122.36	263.91
Lowsky, John	38.51	25.00	1.53	10.28	25.01	1.45	0.58	0.70	39.00	20.00	0.00	0.00			103.06	248.06
Massicotte, Pierre	48.29	38.50	1.28	6.13	30.99	1.79	0.30	0.30	50.00		0.00	0.00			127.58	265.06
May, Marianne	41.86	27.25	0.37	10.71	23.28	0.78	0.31	0.12	31.00	17.00	0.00	0.00			104.68	184.31
Mundt, Matthias	46.06	28.00	0.60	10.25	26.96	0.96	0.59	0.44	30.00	11.00	0.00	0.00			113.85	225.22
Pansza, Mike	38.35	26.50	0.71	21.37	26.43	0.84	0.59	0.30	45.00	32.00	0.00	0.00			115.09	219.33
Rodriguez, Jesus	42.30	25.00	0.74	12.47	25.15	0.96	0.30	0.27	26.00	10.00	0.00	0.00			107.19	201.47
Tschirhart, Garland	48.70	25.00	0.46	11.33	26.65	1.12	0.56	0.28	35.00	21.00	0.00	0.00			114.10	221.63
Verlinde, Marcel	47.06	25.00	0.65	19.99	22.80	0.68	0.33	0.25	37.40	10.00	1.00	0.00			116.76	205.63
Viera, Ralph	42.36	27.25	0.83	13.01	24.61	0.83	0.49	0.21	31.00	18.00	0.00	0.00			109.59	212.24
Yanchar, Paul	42.00	26.50	0.68	19.35	24.76	0.91	0.38	0.20	30.00	11.00	0.00	0.00			114.78	209.61
MAXIMUM	54.56	38.50	1.53	21.37	30.99	2.41	1.10	1.31	55.00	37.00	2.00	0.00			127.58	273.16
MINIMUM	32.97	25.00	0.37	6.13	21.49	0.62	0.19	0.12	22.00	10.00	0.00	0.00			92.47	177.93
RANGE (MAX-MIN)	21.59	13.50	1.16	15.24	9.50	1.79	0.91	1.19	33.00	27.00	2.00	0.00			35.11	95.23
MEAN	42.95	26.82	0.72	13.16	25.23	1.10	0.46	0.41	34.21	18.85	0.14	0.00			110.86	219.83
STD	4.53	2.99	0.32	4.30	2.34	0.43	0.21	0.27	7.92	7.05	0.48	0.00			7.51	25.69



yi within 1 79.7%
 yi within 2 95.6%
 yi within 3 98.0%

PART ID = Piston C2 - keystone

Yi VALUES

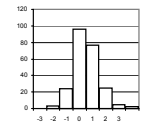
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Upper Skirt	Under-crown	TGF	2nd GF	TLHC, %	TLFC, %			UWPD	WPD	MEAN	STD
Caproni, David	0.62	-0.61	-0.26	-0.28	1.35	-0.35	-0.91	-0.04	0.60	0.16	-0.30	0.00			0.33	-0.47	-0.01	0.59
Castillo, George	0.18	-0.36	-0.64	1.66	-0.83	0.90	0.43	-0.56	-0.15	0.59	-0.30	0.00			0.67	0.42	0.14	0.69
Clapperty, Leon	-0.09	0.39	-0.70	0.43	-1.47	-0.82	-0.24	-0.12	-0.66	2.57	-0.30	0.00			-0.20	-0.70	-0.14	0.93
Garrett, Thomas	-0.31	0.90	-0.04	-0.27	0.05	-1.12	-0.43	0.03	-0.53	1.01	-0.30	0.00			-0.05	-0.61	-0.12	0.55
Greenland, Paul	-0.60	0.14	-0.45	-1.17	0.28	-0.32	0.48	0.23	-0.91	-0.40	-0.30	0.00			-0.90	-0.33	-0.30	0.49
Guarda, Waldyr	-1.01	-0.61	-0.45	-0.65	1.36	3.08	-0.72	1.79	-0.15	0.16	-0.30	0.00			-0.60	0.87	0.20	1.17
Hill, Howard	-0.03	-0.61	1.81	-0.70	-1.60	-0.23	-1.31	0.08	-0.15	0.45	-0.30	0.00			-1.13	-0.43	-0.30	0.83
Hills, Barry	-2.21	-0.11	-0.83	-1.07	-1.21	-0.11	-0.67	-0.78	-1.54	-0.69	3.88	0.00			-2.45	-1.63	-0.67	1.51
Kobrinetz, Jack	0.03	0.14	-0.64	0.39	-0.14	-0.61	-0.52	-0.48	-0.03	0.16	-0.30	0.00			0.16	-0.68	-0.18	0.35
Lopez, Frank	-0.46	-0.61	1.26	0.99	-0.09	1.02	3.06	0.41	-0.66	-0.09	-0.30	0.00			0.23	2.08	0.45	1.12
Love, Ed	2.56	-0.61	-0.96	-0.08	0.46	0.12	1.63	3.29	2.62	-0.55	-0.30	0.00			1.53	1.72	0.82	1.38
Lowsky, John	-0.98	-0.61	2.53	-0.67	-0.10	0.83	0.58	1.05	0.60	0.16	-0.30	0.00			-1.04	1.10	0.23	0.98
Massicotte, Pierre	1.18	3.91	1.75	-1.64	2.46	1.63	-0.76	-0.41	1.99		-0.30	0.00			2.23	1.76	1.06	1.56
May, Marianne	-0.24	0.14	-1.11	-0.57	-0.83	-0.75	-0.72	-1.07	-0.41	-0.26	-0.30	0.00			-0.82	-1.38	-0.59	0.44
Mundt, Matthias	0.69	0.39	-0.39	-0.68	0.74	-0.34	0.60	0.10	-0.53	-1.11	-0.30	0.00			0.40	0.21	-0.02	0.56
Pansza, Mike	-1.02	-0.11	-0.04	1.91	0.51	-0.61	0.62	-0.41	1.36	1.87	-0.30	0.00			0.56	-0.02	0.31	0.89
Rodriguez, Jesus	-0.14	-0.61	0.05	-0.16	-0.04	-0.32	-0.76	-0.52	-1.04	-1.26	-0.30	0.00			-0.49	-0.71	-0.45	0.40
Tschirhart, Garland	1.27	-0.61	-0.83	-0.43	0.60	0.05	0.48	-0.48	0.10	0.30	-0.30	0.00			0.43	0.07	0.05	0.56
Verlinde, Marcel	0.91	-0.61	-0.23	1.59	-1.04	-0.98	-0.62	-0.59	0.40	-1.26	1.79	0.00			0.79	-0.55	-0.03	0.98
Viera, Ralph	-0.13	0.14	0.33	-0.04	-0.27	-0.63	0.15	-0.74	-0.41	-0.12	-0.30	0.00			-0.17	-0.30	-0.18	0.30
Yanchar, Paul	-0.21	-0.11	-0.14	1.44	-0.20	-0.44	-0.38	-0.78	-0.53	-1.11	-0.30	0.00			0.52	-0.40	-0.19	0.60
Yi MAXIMUM	2.56	3.91	2.53	1.91	2.46	3.08	3.06	3.29	2.62	2.57	3.88	0.00			-2.45	2.08	1.06	1.56
Yi MINIMUM	0.03	-0.11	-0.04	-0.04	-0.04	0.05	0.15	0.03	-0.03	-0.12	-0.30	0.00			-0.05	-0.02	-0.01	0.30
Yi MEAN	0.00	0.00	0.00	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	0.00			1.00	1.00		
Ratings MEAN	42.95	26.82	0.72	13.16	25.23	1.10	0.46	0.41	34.21	18.85	0.14	0.00			110.86	219.83		
Ratings STD	4.53	2.99	0.32	4.30	2.34	0.43	0.21	0.27	7.92	7.05	0.48	0.00			7.51	25.69		

Heavy Duty Diesel Rating Workshop

PART ID = Piston C3 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Caproni, David	79.30	7.84	2.88	33.25	8.74	2.16	1.16	7.50	5.01	81.00	6.00	11.00	0.00		147.84	422.00
Clapperty, Leon	66.00	7.89	1.33	24.54	9.48	1.16	0.28	1.58	1.50	77.00	2.00	5.00	2.00		113.76	277.58
Garrett, Thomas	76.75	8.89	1.78	28.37	10.32	1.83	0.56	4.51	2.86	83.00	2.00	10.00	3.00		135.87	351.24
Greenland, Paul	77.75	7.79	2.30	27.93	8.17	1.92	0.71	4.50	6.00	82.00	4.00	10.00	2.00		137.07	365.81
Guarda, Waldyr	74.00	4.93	2.80	32.53	9.65	4.43	1.63	4.50	3.30	78.00	1.00	14.00	4.00		137.77	472.82
Hill, Howard	86.50	7.57	2.50	33.80	10.01	2.49	0.36	2.55	3.00	85.00	2.00	16.00	0.00		148.78	384.99
Hills, Barry	65.75	7.13	1.60	20.48	9.28	1.73	0.72	3.90	3.90	69.00	6.00	4.00	0.00		114.49	316.86
Kobrinetz, Jack	78.50	7.64	1.91	29.94	8.33	1.90	0.62	5.85	4.95	81.00	1.00	10.00	3.00		139.64	356.58
Lopez, Frank	70.20	8.91	1.91	29.94	10.07	1.80	0.88	6.30	6.30	68.00	1.00	10.00	0.00		136.29	363.30
Love, Ed	83.75	6.20	1.60	31.65	10.31	1.40	0.60	6.30	3.30	85.00	2.00	11.00	0.00		145.11	352.63
Lowsky, John	64.50	6.61	2.03	34.00	7.82	2.28	1.35	15.35	6.75	73.00	3.00	12.00	1.00		140.69	392.22
Massicotte, Pierre	75.75	7.68	3.25	23.05	9.18	2.50	1.65	3.46	4.66	71.00	2.00				131.18	444.92
May, Marianne	78.25	8.01	2.39	30.64	11.76	2.63	0.54	3.60	7.20	86.00	2.00	12.00	7.00		145.02	386.45
Pansza, Mike	80.00	5.31	2.66	32.30	8.53	2.68	0.86	2.40	3.30	86.00	4.00	14.00	0.00		138.04	396.27
Rodriguez, Jesus	81.50	7.02	2.33	29.58	9.22	1.85	0.80	4.35	4.50	86.00	1.00	12.00	1.00		141.15	379.50
Verlinde, Marcel	88.25	5.57	1.71	32.95	7.68	1.42	0.62	5.70	3.00	89.00	1.10	18.00	0.00		146.90	356.20
Viera, Ralph	70.00	8.53	1.88	33.69	8.77	2.51	1.30	3.75	6.60	65.00	1.00	15.00	1.00		137.03	398.44
Yanchar, Paul	75.75	8.74	1.40	31.93	10.89	2.19	0.62	6.45	3.00	84.00	1.00	11.00	1.00		140.97	359.27
MAXIMUM	88.25	8.91	3.25	34.00	11.76	4.43	1.65	15.35	7.20	89.00	6.00	18.00	7.00		148.78	472.82
MINIMUM	64.50	4.93	1.33	20.48	7.68	1.16	0.28	1.58	1.50	65.00	1.00	4.00	0.00		113.76	277.58
RANGE (MAX-MIN)	23.75	3.98	1.92	13.52	4.08	3.27	1.37	13.77	5.70	24.00	5.00	14.00	7.00		35.02	195.24
MEAN	76.25	7.35	2.13	30.03	9.34	2.16	0.85	5.14	4.40	79.39	2.34	11.47	1.47		137.64	376.50
STD	6.87	1.21	0.54	3.89	1.09	0.72	0.41	2.99	1.64	7.26	1.64	3.50	1.91		9.75	44.24



yi within 1 74.6%
 yi within 2 95.7%
 yi within 3 99.1%

PART ID = Piston C3 - two-piece

Yi VALUES

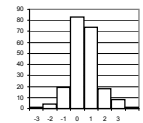
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Caproni, David	0.44	0.41	1.39	0.83	-0.56	0.00	0.77	0.79	0.37	0.22	2.23	-0.13	-0.77		1.05	1.03	0.54	0.76
Clapperty, Leon	-1.49	0.45	-1.46	-1.41	0.12	-1.39	-1.40	-1.19	-1.77	-0.33	-0.21	-1.85	0.28		-2.45	-2.24	-1.09	0.92
Garrett, Thomas	0.07	1.28	-0.64	-0.43	0.90	-0.46	-0.71	-0.21	-0.94	0.50	-0.21	-0.42	0.80		-0.18	-0.57	-0.08	0.66
Greenland, Paul	0.22	0.37	0.32	-0.54	-1.08	-0.33	-0.34	-0.21	0.98	0.36	1.01	-0.42	0.28		-0.06	-0.24	0.02	0.56
Guarda, Waldyr	-0.33	-2.00	1.24	0.64	0.28	3.16	1.93	-0.21	-0.67	-0.19	-0.82	0.72	1.33		0.01	2.18	0.48	1.32
Hill, Howard	1.49	0.18	0.69	0.97	0.61	0.46	-1.20	-0.87	-0.85	0.77	-0.21	1.29	-0.77		1.14	0.19	0.26	0.86
Hills, Barry	-1.53	-0.18	-0.97	-2.45	-0.06	-0.60	-0.31	-0.41	-0.30	-1.43	2.23	-2.13	-0.77		-2.38	-1.35	-0.84	1.17
Kobrinetz, Jack	0.33	0.24	-0.40	-0.02	-0.93	-0.36	-0.56	0.24	0.34	0.22	-0.82	-0.42	0.80		0.20	-0.45	-0.11	0.49
Lopez, Frank	-0.88	1.29	-0.41	-0.02	0.66	-0.50	0.07	0.39	1.16	-1.57	-0.82	-0.42	-0.77		-0.14	-0.30	-0.15	0.78
Love, Ed	1.09	-0.95	-0.97	0.42	0.89	-1.06	-0.61	0.39	-0.67	0.89	-0.21	-0.13	-0.77		0.77	-0.54	-0.11	0.76
Lowsky, John	-1.71	-0.61	-0.18	1.02	-1.40	0.17	1.24	3.41	1.44	-0.88	0.40	0.15	-0.25		0.31	0.36	0.23	1.25
Massicotte, Pierre	-0.07	0.28	2.07	-1.79	-0.15	0.47	1.98	-0.56	0.16	-1.16	-0.21				-0.66	1.55	0.15	1.15
May, Marianne	0.29	0.55	0.49	0.16	2.22	0.65	-0.76	-0.51	1.71	0.91	-0.21	0.15	2.90		0.76	0.22	0.64	0.99
Pansza, Mike	0.55	-1.69	0.98	0.58	-0.75	0.72	0.03	-0.92	-0.67	0.91	1.01	0.72	-0.77		0.04	0.45	0.08	0.84
Rodriguez, Jesus	0.76	-0.27	0.38	-0.12	-0.11	-0.43	-0.12	-0.26	0.06	0.91	-0.82	0.15	-0.25		0.36	0.07	0.02	0.45
Verlinde, Marcel	1.75	-1.47	-0.76	0.75	-1.53	-1.03	-0.56	0.19	-0.85	1.32	-0.76	1.86	-0.77		0.95	-0.46	-0.09	1.14
Viera, Ralph	-0.91	0.98	-0.45	0.94	-0.53	0.49	1.11	-0.46	1.34	-1.98	-0.82	1.01	-0.25		-0.06	0.50	0.06	0.95
Yanchar, Paul	-0.07	1.15	-1.33	0.49	1.42	0.04	-0.56	0.44	-0.85	0.64	-0.82	-0.13	-0.25		0.34	-0.39	0.01	0.76
Yi MAXIMUM	1.75	-2.00	2.07	-2.45	2.22	3.16	1.98	3.41	-1.77	-1.98	2.23	-2.13	2.90		-2.45	-2.24	-1.09	1.32
Yi MINIMUM	0.07	-0.18	-0.18	-0.02	-0.06	0.00	0.03	0.19	0.06	-0.19	-0.21	-0.13	-0.25		0.01	0.07	0.01	0.45
Yi MEAN	0.00	0.00	0.00	0.00	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	1.00	1.00		1.00	1.00		
Ratings MEAN	76.25	7.35	2.13	30.03	9.34	2.16	0.85	5.14	4.40	79.39	2.34	11.47	1.47		137.64	376.50		
Ratings STD	6.87	1.21	0.54	3.89	1.09	0.72	0.41	2.99	1.64	7.26	1.64	3.50	1.91		9.75	44.24		

Heavy Duty Diesel Rating Workshop

PART ID = Piston C4 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Caproni, David	28.00	39.25	0.40	28.75	22.92	2.12	0.20	5.70	4.50	23.00	31.00	1.00	0.00		131.84	341.61
Garrett, Thomas	29.75	32.47	0.46	22.58	21.94	4.23	0.26	3.60	3.30	18.00	32.00	3.00	0.00		118.59	359.96
Greenland, Paul	31.75	35.78	0.82	24.10	19.72	4.23	0.20	5.56	4.50	17.00	31.00	3.00	1.00		126.66	374.91
Guarda, Waldyr	27.75	43.00	0.83	23.53	18.43	5.44	0.30	4.50	1.50	27.00	40.00	4.00	0.00		125.28	411.97
Hill, Howard	18.76	38.34	0.41	14.57	2.90	5.41	0.03	1.50	3.00	39.00	44.00	3.00	0.00		84.92	297.01
Hills, Barry	27.75	36.47	1.50	20.24	23.27	4.80	0.35	3.90	3.60	23.00	18.00	4.00	0.00		121.88	407.66
Lopez, Frank	26.56	35.56	1.03	25.71	20.30	5.32	0.28	2.70	5.40	14.00	28.00	4.00	0.00		122.85	395.53
Love, Ed	42.00	31.00	0.66	26.95	20.26	4.82	0.30	6.30	1.50	40.00	30.00	4.00	0.00		133.79	399.38
Lowsky, John	28.25	34.00	1.51	26.19	19.42	4.48	1.01	8.90	6.60	23.00	36.00	5.00	0.00		130.36	435.55
Massicotte, Pierre	30.00	36.08	1.85	18.53	19.72	3.28	0.56	3.61	4.21	28.00	36.00	4.00	0.00		117.84	387.85
May, Marianne	30.25	37.39	0.88	22.19	21.58	4.59	0.34	3.90	5.40	22.00	38.00	3.00	1.00		126.52	396.00
Pansza, Mike	32.00	39.00	1.15	25.73	20.02	3.47	0.40	2.55	2.70	21.00	38.00	5.00	0.00		127.02	387.09
Rodriguez, Jesus	26.50	31.31	0.44	20.05	20.66	4.49	0.18	6.00	2.40	7.00	17.00	3.00	0.00		112.03	345.56
Verlinde, Marcel	35.50	37.75	0.85	20.47	18.89	4.89	0.25	3.60	5.70	24.40	25.30	5.00	0.00		127.90	397.64
Viera, Ralph	29.25	36.25	0.28	24.87	19.00	3.89	0.11	4.80	6.25	14.00	30.00	4.00	1.00		124.70	347.05
Yanchar, Paul	31.00	37.75	0.42	26.46	22.08	4.30	0.19	5.70	4.20	20.00	42.00	4.00	0.00		132.10	381.55
MAXIMUM	42.00	43.00	1.85	28.75	23.27	5.44	1.01	8.90	6.60	40.00	44.00	5.00	1.00		133.79	435.55
MINIMUM	18.76	31.00	0.28	14.57	2.90	2.12	0.03	1.50	1.50	7.00	17.00	1.00	0.00		84.92	297.01
RANGE (MAX-MIN)	23.24	12.00	1.57	14.18	20.37	3.32	0.98	7.40	5.10	33.00	27.00	4.00	1.00		48.87	138.54
MEAN	29.69	36.34	0.84	23.18	19.44	4.36	0.31	4.55	4.05	22.53	32.27	3.69	0.19		122.77	379.14
STD	4.82	3.10	0.47	3.69	4.64	0.86	0.22	1.79	1.58	8.47	7.76	1.01	0.40		11.61	33.88



yi within 1 75.5%
 yi within 2 93.3%
 yi within 3 99.0%

PART ID = Piston C4 - two-piece

YI VALUES

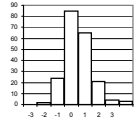
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Caproni, David	-0.35	0.94	-0.95	1.51	0.75	-2.59	-0.49	0.64	0.29	0.06	-0.16	-2.65	-0.47		0.78	-1.11	-0.25	1.21
Garrett, Thomas	0.01	-1.25	-0.82	-0.16	0.54	-0.15	-0.22	-0.53	-0.47	-0.53	-0.03	-0.68	-0.47		-0.36	-0.57	-0.38	0.41
Greenland, Paul	0.43	-0.18	-0.05	0.25	0.06	-0.15	-0.49	0.56	0.29	-0.65	-0.16	-0.68	2.02		0.34	-0.12	0.10	0.65
Guarda, Waldyr	-0.40	2.15	-0.03	0.09	-0.22	1.25	-0.04	-0.03	-1.61	0.53	1.00	0.31	-0.47		0.22	0.97	0.25	0.87
Hill, Howard	-2.27	0.65	-0.93	-2.33	-3.56	1.22	-1.26	-1.70	-0.66	1.94	1.51	-0.68	-0.47		-3.26	-2.42	-0.95	1.71
Hills, Barry	-0.40	0.04	1.41	-0.80	0.82	0.51	0.18	-0.36	-0.28	0.06	-1.84	0.31	-0.47		-0.08	0.84	0.00	0.77
Lopez, Frank	-0.65	-0.25	0.40	0.68	0.18	1.11	-0.13	-1.03	0.85	-1.01	-0.55	0.31	-0.47		0.01	0.48	0.00	0.66
Love, Ed	2.55	-1.72	-0.39	1.02	0.18	0.53	-0.04	0.98	-1.61	2.06	-0.29	0.31	-0.47		0.95	0.60	0.31	1.16
Lowsky, John	-0.30	-0.75	1.43	0.81	-0.01	0.14	3.14	2.43	1.61	0.06	0.48	1.29	-0.47		0.65	1.66	0.81	1.11
Massicotte, Pierre	0.06	-0.08	2.17	-1.26	0.06	-1.25	1.12	-0.53	0.10	0.65	0.48	0.31	-0.47		-0.42	0.26	0.08	0.87
May, Marianne	0.12	0.34	0.08	-0.27	0.46	0.27	0.13	-0.36	0.85	-0.06	0.74	-0.68	2.02		0.32	0.50	0.30	0.63
Pansza, Mike	0.48	0.86	0.66	0.69	0.12	-1.03	0.40	-1.12	-0.85	-0.18	0.74	1.29	-0.47		0.37	0.23	0.15	0.73
Rodriguez, Jesus	-0.66	-1.62	-0.87	-0.85	0.26	0.15	-0.58	0.81	-1.04	-1.83	-1.97	-0.68	-0.47		-0.92	-0.99	-0.75	0.76
Verlinde, Marcel	1.20	0.46	0.01	-0.73	-0.12	0.61	-0.27	-0.53	1.04	0.22	-0.90	1.29	-0.47		0.44	0.55	0.19	0.69
Viera, Ralph	-0.09	-0.03	-1.21	0.46	-0.10	-0.54	-0.90	0.14	1.39	-1.01	-0.29	0.31	2.02		0.17	-0.95	-0.04	0.88
Yanchar, Paul	0.27	0.46	-0.91	0.89	0.57	-0.07	-0.54	0.64	0.10	-0.30	1.25	0.31	-0.47		0.80	0.07	0.21	0.59
Yi MAXIMUM	2.55	2.15	2.17	-2.33	-3.56	-2.59	3.14	2.43	1.61	2.06	-1.97	-2.65	2.02		-3.26	-2.42	-0.95	1.71
Yi MINIMUM	0.01	-0.03	0.01	0.09	-0.01	-0.07	-0.04	-0.03	0.10	0.06	-0.03	0.31	-0.47		0.01	0.07	0.00	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	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	1.00	1.00		1.00	1.00		
Ratings MEAN	29.69	36.34	0.84	23.18	19.44	4.36	0.31	4.55	4.05	22.53	32.27	3.69	0.19		122.77	379.14		
Ratings STD	4.82	3.10	0.47	3.69	4.64	0.86	0.22	1.79	1.58	8.47	7.76	1.01	0.40		11.61	33.88		

Heavy Duty Diesel Rating Workshop

PART ID = Piston C5 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Avis, Steve	45.70	19.64	1.08	25.00	23.19	1.43	0.29	5.50	6.30						128.13	321.14
Caproni, David	63.00	17.44	1.23	52.75	19.93	2.21	0.70	1.50	5.00	65.00	16.00	32.00	0.00		163.76	405.66
Garrett, Thomas	58.50	20.97	0.44	45.92	29.42	1.42	0.19	2.26	5.20	59.00	16.00	29.00	0.00		164.32	367.55
Greenland, Paul	51.75	18.42	0.84	41.50	31.17	1.35	0.35	4.50	6.46	52.00	26.00	22.00	0.00		156.34	366.30
Guarda, Waldyr	34.91	20.83	1.20	54.93	32.13	2.84	0.78	4.50	1.50	36.00	12.00	22.00	0.00		153.62	416.48
Hill, Howard	53.04	18.63	0.98	36.05	21.76	3.28	0.73	2.10	4.50	57.00	19.00	16.00	0.00		141.07	396.65
Hills, Barry	35.00	19.60	1.86	28.27	21.40	2.96	0.50	3.90	4.93	35.00	13.00	10.00	0.00		118.42	354.04
Love, Ed	57.25	21.50	1.05	43.75	22.80	0.85	0.30	3.90	3.60	60.00	30.00	25.00	0.00		155.00	352.85
Lowsky, John	40.34	18.63	1.48	35.50	21.60	2.73	1.90	2.10	3.75	54.00	26.00	14.00	0.00		128.03	439.05
Massicotte, Pierre	50.78	31.83	1.78	38.63	23.75	2.45	0.98	3.01	3.01	52.00	34.00	24.00	0.00		156.22	454.85
May, Marianne	49.25	19.60	1.97	34.84	24.46	3.09	0.37	2.70	6.90	58.00	16.00	14.00	3.00		143.18	395.07
Pansza, Mike	44.53	16.71	1.10	50.50	39.40	0.82	0.40	5.10	4.68	41.00	19.00	34.00	0.00		163.24	377.73
Rodriguez, Jesus	54.06	17.04	1.67	42.10	27.62	2.74	0.20	3.45	4.95	43.00	20.00	25.00	0.00		153.83	390.33
Verlinde, Marcel	68.75	24.96	1.36	57.85	20.85	1.92	0.29	4.50	5.53	47.00	21.70	47.00	0.00		186.01	423.05
Viera, Ralph	54.00	18.97	1.00	47.18	29.00	2.49	0.40	6.76	5.11	58.00	13.00	30.00	0.00		164.91	402.21
Yanchar, Paul	50.78	20.16	1.14	38.50	25.40	2.28	0.76	5.25	5.82	48.00	18.00	18.00	0.00		150.09	398.90
MAXIMUM	68.75	31.83	1.97	57.85	39.40	3.28	1.90	6.76	6.90	65.00	34.00	47.00	3.00		186.01	454.85
MINIMUM	34.91	16.71	0.44	25.00	19.93	0.82	0.19	1.50	1.50	35.00	12.00	10.00	0.00		118.42	321.14
RANGE (MAX-MIN)	33.84	15.12	1.53	32.85	19.47	2.46	1.71	5.26	5.40	30.00	22.00	37.00	3.00		67.59	133.71
MEAN	50.73	20.31	1.26	42.08	25.87	2.18	0.57	3.81	4.83	51.00	19.98	24.13	0.20		151.64	391.36
STD	9.23	3.66	0.41	9.24	5.26	0.79	0.43	1.47	1.37	9.09	6.47	9.49	0.77		16.86	34.20



yi within 1 73.5%
 yi within 2 95.6%
 yi within 3 98.5%

PART ID = Piston C5 - two-piece

Yi VALUES

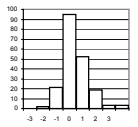
	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Avis, Steve	-0.54	-0.18	-0.45	-1.85	-0.51	-0.95	-0.66	1.15	1.08						-1.39	-2.05	-0.58	1.02
Caproni, David	1.33	-0.78	-0.08	1.15	-1.13	0.04	0.30	-1.58	0.13	1.54	-0.61	0.83	-0.26		0.72	0.42	0.13	0.91
Garrett, Thomas	0.84	0.18	-2.02	0.42	0.68	-0.96	-0.90	-1.06	0.27	0.88	-0.61	0.51	-0.26		0.75	-0.70	-0.13	0.87
Greenland, Paul	0.11	-0.52	-1.04	-0.06	1.01	-1.05	-0.52	0.47	1.19	0.11	0.93	-0.22	-0.26		0.28	-0.73	-0.02	0.71
Guarda, Waldyr	-1.71	0.14	-0.15	1.39	1.19	0.84	0.49	0.47	-2.43	-1.65	-1.23	-0.22	-0.26		0.12	0.73	-0.15	1.13
Hill, Howard	0.25	-0.46	-0.69	-0.65	-0.78	1.39	0.37	-1.17	-0.24	0.66	-0.15	-0.86	-0.26		-0.63	0.15	-0.20	0.67
Hills, Barry	-1.70	-0.19	1.47	-1.49	-0.85	0.99	-0.17	0.06	0.07	-1.76	-1.08	-1.49	-0.26		-1.97	-1.09	-0.63	1.03
Love, Ed	0.71	0.33	-0.52	0.18	-0.58	-1.68	-0.64	0.06	-0.90	0.99	1.55	0.09	-0.26		0.20	-1.13	-0.11	0.84
Lowsky, John	-1.13	-0.46	0.54	-0.71	-0.81	0.70	3.12	-1.17	-0.79	0.33	0.93	-1.07	-0.26		-1.40	1.39	-0.05	1.23
Massicotte, Pierre	0.01	3.15	1.28	-0.37	-0.40	0.34	0.96	-0.55	-1.33	0.11	2.17	-0.01	-0.26		0.27	1.86	0.48	1.19
May, Marianne	-0.16	-0.19	1.74	-0.78	-0.27	1.15	-0.47	-0.76	1.52	0.77	-0.61	-1.07	3.61		-0.50	0.11	0.27	1.27
Pansza, Mike	-0.67	-0.98	-0.40	0.91	2.57	-1.72	-0.40	0.88	-0.11	-1.10	-0.15	1.04	-0.26		0.69	-0.40	-0.01	1.07
Rodriguez, Jesus	0.36	-0.89	1.01	0.00	0.33	0.71	-0.87	-0.25	0.09	-0.88	0.00	0.09	-0.26		0.13	-0.03	-0.03	0.55
Verlinde, Marcel	1.95	1.27	0.24	1.71	-0.95	-0.33	-0.66	0.47	0.51	-0.44	0.27	2.41	-0.26		2.04	0.93	0.61	1.07
Viera, Ralph	0.35	-0.37	-0.64	0.55	0.60	0.39	-0.40	2.01	0.21	0.77	-1.08	0.62	-0.26		0.79	0.32	0.26	0.74
Yanchar, Paul	0.01	-0.04	-0.30	-0.39	-0.09	0.13	0.44	0.98	0.73	-0.33	-0.31	-0.65	-0.26		-0.09	0.22	0.00	0.44
Yi MAXIMUM	1.95	3.15	-2.02	-1.85	2.57	-1.72	3.12	2.01	-2.43	-1.76	2.17	2.41	3.61		2.04	-2.05	-0.63	1.27
Yi MINIMUM	0.01	-0.04	-0.08	0.00	-0.09	0.04	-0.17	0.06	0.07	0.11	0.00	-0.01	-0.26		-0.09	-0.03	0.00	0.44
Yi MEAN	0.00	0.00	0.00	0.00	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	1.00	1.00		1.00	1.00		
Ratings MEAN	50.73	20.31	1.26	42.08	25.87	2.18	0.57	3.81	4.83	51.00	19.98	24.13	0.20		151.64	391.36		
Ratings STD	9.23	3.66	0.41	9.24	5.26	0.79	0.43	1.47	1.37	9.09	6.47	9.49	0.77		16.86	34.20		

Heavy Duty Diesel Rating Workshop

PART ID = Piston C6 - two-piece

RATED VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD
Avis, Steve	41.20	25.24	0.46	15.00	11.74	2.20	0.20	4.45	1.85	46.20	12.70	0.00	0.00		102.34	278.92
Caproni, David	71.00	25.05	0.91	0.25	11.93	1.60	0.20	5.26	1.50	65.00	15.00	42.00	0.00		117.70	321.40
Garrett, Thomas	60.00	24.88	0.76	16.34	13.54	2.84	0.20	3.46	1.95	59.00	23.00	1.00	0.00		123.97	340.04
Greenland, Paul	55.50	22.36	0.30	25.75	13.26	1.50	0.20	3.60	4.36	61.00	17.00	1.00	0.00		126.83	297.39
Guarda, Waldyr	32.25	22.33	0.80	11.44	12.42	2.93	0.40	5.65	3.60	26.00	14.00	1.00	0.00		91.82	286.24
Hill, Howard	59.75	23.35	1.07	12.48	9.96	1.65	0.04	3.20	0.75	59.00	20.00	0.00	0.00		112.25	292.05
Love, Ed	49.00	23.90	0.65	19.40	15.60	1.25	0.20	4.50	1.50	55.00	23.00	0.00	0.00		116.00	291.15
Lowsky, John	47.25	23.47	1.63	25.00	10.88	2.15	0.98	4.50	2.26	58.00	32.00	0.00	0.00		118.12	362.58
Massicotte, Pierre	32.25	24.78	1.75	9.93	8.46	1.80	0.38	4.06	3.46	15.00	8.00	0.00	0.00		86.87	273.74
May, Marianne	52.25	23.02	0.79	18.37	14.76	2.75	0.30	3.90	6.90	60.00	16.00	0.00	4.00		123.04	332.36
Pansza, Mike	53.25	22.77	0.07	11.50	9.33	1.06	0.10	5.76	2.10	52.00	17.00	1.00	0.00		105.94	249.73
Rodriguez, Jesus	51.00	24.20	0.80	12.73	17.11	2.30	0.10	5.25	1.80	48.00	11.00	1.00	0.00		115.29	312.81
Verlinde, Marcel	56.00	26.11	1.07	10.39	13.35	1.38	0.00	4.20	2.10	49.70	13.30	0.00	0.00		114.60	295.02
Viera, Ralph	52.75	24.08	1.01	21.00	11.22	2.85	0.22	4.80	2.26	43.00	12.00	0.00	0.00		120.19	328.73
Yanchar, Paul	54.50	23.16	0.56	17.83	14.28	2.06	0.10	4.80	1.65	55.00	8.00	1.00	0.00		118.94	303.18
MAXIMUM	71.00	26.11	1.75	25.75	17.11	2.93	0.98	5.76	6.90	65.00	32.00	42.00	4.00		126.83	362.58
MINIMUM	32.25	22.33	0.07	0.25	8.46	1.06	0.00	3.20	0.75	15.00	8.00	0.00	0.00		86.87	249.73
RANGE (MAX-MIN)	38.75	3.78	1.68	25.50	8.65	1.87	0.98	2.56	6.15	50.00	24.00	42.00	4.00		39.96	112.85
MEAN	51.20	23.91	0.84	15.16	12.52	2.02	0.24	4.49	2.54	50.13	16.13	3.20	0.27		112.93	304.35
STD	10.15	1.13	0.44	6.51	2.38	0.62	0.23	0.78	1.52	13.61	6.35	10.75	1.03		11.53	28.99



yi within 1 75.4%
 yi within 2 95.9%
 yi within 3 98.5%

PART ID = Piston C6 - two-piece

Yi VALUES

	Groove 1	Groove 2	Groove 3	Land 1	Land 2	Land 3	Land 4	Under-crown	Oil Gallery	TGF	2nd GF	TLHC, %	TLFC, %		UWPD	WPD	MEAN	STD
Avis, Steve	-0.99	1.18	-0.86	-0.02	-0.33	0.29	-0.18	-0.05	-0.45	-0.29	-0.54	-0.30	-0.26		-0.92	-0.88	-0.31	0.55
Caproni, David	1.95	1.01	0.15	-2.29	-0.25	-0.68	-0.18	0.99	-0.68	1.09	-0.18	3.61	-0.26		0.41	0.59	0.35	1.34
Garrett, Thomas	0.87	0.86	-0.19	0.18	0.43	1.32	-0.18	-1.33	-0.39	0.65	1.08	-0.20	-0.26		0.96	1.23	0.34	0.75
Greenland, Paul	0.42	-1.38	-1.22	1.63	0.31	-0.84	-0.18	-1.15	1.20	0.80	0.14	-0.20	-0.26		1.21	-0.24	0.02	0.93
Guarda, Waldyr	-1.87	-1.40	-0.09	-0.57	-0.04	1.46	0.68	1.49	0.70	-1.77	-0.34	-0.20	-0.26		-1.83	-0.62	-0.31	1.09
Hill, Howard	0.84	-0.50	0.51	-0.41	-1.08	-0.60	-0.88	-1.66	-1.17	0.65	0.61	-0.30	-0.26		-0.06	-0.42	-0.31	0.73
Love, Ed	-0.22	-0.01	-0.43	0.65	1.29	-1.24	-0.18	0.01	-0.68	0.36	1.08	-0.30	-0.26		0.27	-0.46	-0.01	0.66
Lowsky, John	-0.39	-0.39	1.78	1.51	-0.69	0.21	3.17	0.01	-0.18	0.58	2.50	-0.30	-0.26		0.45	2.01	0.67	1.21
Massicotte, Pierre	-1.87	0.77	2.05	-0.80	-1.70	-0.36	0.60	-0.56	0.61	-2.58	-1.28	-0.30	-0.26		-2.26	-1.06	-0.60	1.26
May, Marianne	0.10	-0.79	-0.12	0.49	0.94	1.17	0.25	-0.76	2.87	0.73	-0.02	-0.30	3.61		0.88	0.97	0.67	1.22
Pansza, Mike	0.20	-1.01	-1.74	-0.56	-1.34	-1.55	-0.60	1.63	-0.29	0.14	0.14	-0.20	-0.26		-0.61	-1.88	-0.53	0.91
Rodriguez, Jesus	-0.02	0.25	-0.09	-0.37	1.92	0.45	-0.60	0.97	-0.48	-0.16	-0.81	-0.20	-0.26		0.21	0.29	0.07	0.68
Verlinde, Marcel	0.47	1.95	0.51	-0.73	0.35	-1.03	-1.03	-0.38	-0.29	-0.03	-0.45	-0.30	-0.26		0.15	-0.32	-0.09	0.74
Viera, Ralph	0.15	0.15	0.38	0.90	-0.55	1.33	-0.09	0.40	-0.18	-0.52	-0.65	-0.30	-0.26		0.63	0.84	0.15	0.59
Yanchar, Paul	0.33	-0.67	-0.64	0.41	0.74	0.06	-0.60	0.40	-0.58	0.36	-1.28	-0.20	-0.26		0.52	-0.04	-0.10	0.57
Yi MAXIMUM	1.95	1.95	2.05	-2.29	1.92	-1.55	3.17	-1.66	2.87	-2.58	2.50	3.61	3.61		-2.26	2.01	0.67	1.34
Yi MINIMUM	-0.02	-0.01	-0.09	-0.02	-0.04	0.06	-0.09	0.01	-0.18	-0.03	-0.02	-0.20	-0.26		-0.06	-0.04	-0.01	0.55
Yi MEAN	0.00	0.00	0.00	0.00	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	1.00	1.00		1.00	1.00		
Ratings MEAN	51.20	23.91	0.84	15.16	12.52	2.02	0.24	4.49	2.54	50.13	16.13	3.20	0.27		112.93	304.35		
Ratings STD	10.15	1.13	0.44	6.51	2.38	0.62	0.23	0.78	1.52	13.61	6.35	10.75	1.03		11.53	28.99		

October 23, 2003

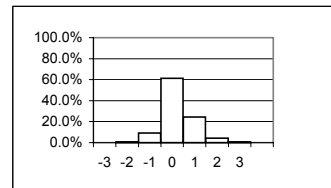
Heavy Duty Diesel Rating Workshop

Rater = **Avis, Steve**

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	0.28	-0.26	-0.04	0.24		-0.33	-0.87	-0.77				-0.24	-0.48	0.45				-0.20	0.44
A2_keystone	0.33	-1.76	-0.71		-0.98	-1.15	-0.81		2.23	-0.79		-1.05	0.16	0.27	0.58	-0.24	-0.24	-0.30	0.99
A3_two-piece	0.02	-0.52	-1.54		-0.83	-0.44	0.36	-0.96		-0.19	0.34	-0.43	-0.94	-0.83	0.47	-1.27	-0.62	-0.49	0.60
A4_two-piece	-0.22	-0.22	-0.35		0.08	-0.28	-0.71	-0.83		-0.21	-0.29	-0.39	-0.80	-0.46	0.06	-0.29	0.00	-0.33	0.28
A5_two-piece	-0.79	-0.47	-0.41		-1.32	-0.07	0.33	-0.93		-0.14	-0.13	-1.34	-0.97	-0.38	-0.83	-0.75	-0.42	-0.58	0.47
A6_two-piece	-0.79	-0.32	-0.26		-0.76	-0.41	0.52	-0.94		0.19	0.59	-1.02	-1.29	0.35	0.83	-0.52	0.00	-0.25	0.65
B1_square	-0.26	0.62	1.13	0.38		-0.32	0.01	-0.23				-0.16	0.26	-0.42				0.10	0.49
B2_keystone	1.30	0.62	-0.84		-0.34	-0.80	0.17		-0.42	0.01		0.17	-0.03	0.19	0.58	-0.35	-0.31	0.00	0.58
B3_two-piece	-0.82	0.25	-0.13		-0.66	0.71	-0.30	-1.44		-0.44	0.70	-0.85	-0.73	-0.94	-1.47	-0.31	-1.13	-0.51	0.68
B4_two-piece	0.17	-0.57	-0.29		0.59	-0.39	-0.62	-0.99		0.33	1.05	-0.11	-0.93	-1.11	-0.24	-0.53	-0.38	-0.27	0.60
B5_two-piece	-0.47	-0.52	0.01		-0.50	0.49	-1.04	0.02		0.84	0.67	-0.36	-0.60	-0.54	-0.77	-0.66	-0.68	-0.27	0.56
B6_two-piece	-1.26	-0.24	-0.24		0.17	0.31	1.03	-0.20		1.01	-0.61	-0.81	-0.31	-0.51	-0.37	-0.27	-0.25	-0.17	0.61
C1_square																			
C2_keystone																			
C3_two-piece																			
C4_two-piece																			
C5_two-piece	-0.54	-0.18	-0.45		-1.85	-0.51	-0.95	-0.66		1.15	1.08	-1.39	-2.05					-0.58	1.02
C6_two-piece	-0.99	1.18	-0.86		-0.02	-0.33	0.29	-0.18		-0.05	-0.45	-0.92	-0.88	-0.29	-0.54	-0.30	-0.26	-0.31	0.55
calibration_piston_1	-0.32	0.62	-1.31			-0.31	-0.48					-0.38	-0.80	0.35				-0.33	0.61
calibration_piston_2	-0.22	0.69	-0.87			-0.52	-1.12					-0.19	-0.26	-0.89				-0.42	0.57
Yi MAXIMUM	1.30	-1.76	-1.54	0.38	-1.85	-1.15	-1.12	-1.44	2.23	1.15	1.08	-1.39	-2.05	-1.11	-1.47	-1.27	-1.13	-0.58	1.02
Yi MINIMUM	0.02	-0.18	0.01	0.24	-0.02	-0.07	0.01	0.02	-0.42	0.01	-0.13	-0.11	-0.03	0.19	0.06	-0.24	0.00	0.00	0.28
Yi MEAN	-0.29	-0.07	-0.45	0.31	-0.53	-0.27	-0.26	-0.68	0.91	0.14	0.29	-0.59	-0.67	-0.32	-0.15	-0.50	-0.39		
Yi STD	0.62	0.71	0.61	0.10	0.68	0.46	0.65	0.44	1.88	0.59	0.62	0.47	0.57	0.52	0.73	0.31	0.33		

bins	count	percent		
-3	0	0.0%		
-2	1	0.5%	-1 < yi ≤ 1	85.6%
-1	17	9.0%	-2 < yi ≤ 2	98.9%
0	115	61.2%	-3 < yi ≤ 3	100.0%
1	46	24.5%	>3	0.0%
2	8	4.3%		
3	1	0.5%		
	0	0.0%		
total	188	100.0%		



October 23, 2003

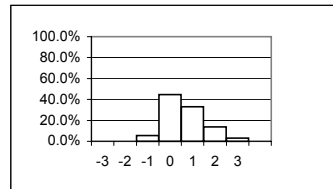
Heavy Duty Diesel Rating Workshop

Rater = Barrera, Tony

YI VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	0.03	-0.07	-1.00	-0.89		-0.41	-0.28	-0.12				-0.33	-0.46	-0.20				-0.37	0.34
A2_keystone	0.16	0.40	-0.35		-0.04	-0.17	0.54		2.56	-1.85		0.19	1.34	-0.93	-0.34	-0.24	-0.24	0.07	1.02
A3_two-piece	-0.56	-1.08	0.43		1.23	-0.18	-0.09	-0.45		0.75	0.34	0.45	-0.31	-1.68	-0.53	0.30	1.67	0.02	0.86
A4_two-piece	-0.83	1.59	1.09		0.34	0.87	1.00	1.10		-0.36	-1.21	1.33	2.24	-1.34	1.57	-0.29	0.00	0.47	1.10
A5_two-piece	0.49	2.29	-0.67		0.37	0.32	1.90	0.24		-0.07	-0.01	0.83	0.67	0.00	0.41	0.32	-0.42	0.44	0.78
A6_two-piece	-0.19	-0.16	0.33		0.98	-0.01	1.17	-0.01		-0.65	-1.61	-0.19	0.62	-0.37	-0.53	-0.52	0.00	-0.08	0.68
B1_square	-0.77	0.08	-1.07	-1.00		0.43	0.19	0.29				-0.07	-0.02	-0.97				-0.29	0.59
B2_keystone	-0.56	-0.51	0.85		0.02	-0.16	-0.52		0.09	0.48		-0.37	-0.07	-0.95	0.06	-0.35	-0.31	-0.16	0.46
B3_two-piece	-0.25	0.13	0.05		-0.16	0.75	1.53	1.77		-0.22	0.70	0.29	0.90	-0.76	-0.51	-0.61	0.79	0.29	0.76
B4_two-piece	0.55	1.46	2.65		0.32	-0.37	1.31	1.12		-0.45	-1.18	0.82	2.16	-0.19	1.04	-0.13	-0.38	0.58	1.06
B5_two-piece	1.28	1.54	-0.31		-0.23	0.82	0.74	1.90		-0.39	-0.12	0.87	1.59	0.73	-0.18	-0.43	1.40	0.61	0.82
B6_two-piece																			
C1_square	0.36	0.37	-0.08	-0.49		-0.29	-0.43	-0.37				0.10	-0.11	0.90				0.00	0.44
C2_keystone																			
C3_two-piece																			
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	1.51	0.51	0.18			0.35	-0.56					1.03	0.48	1.45				0.62	0.69
calibration_piston_2	-0.71	-0.63	-0.35			0.61	-0.24					-0.45	-0.59	-1.07				-0.43	0.49
Yi MAXIMUM	1.51	2.29	2.65	-1.00	1.23	0.87	1.90	1.90	2.56	-1.85	-1.61	1.33	2.24	-1.68	1.57	-0.61	1.67	0.62	1.10
Yi MINIMUM	0.03	-0.07	0.05	-0.49	0.02	-0.01	-0.09	-0.01	0.09	-0.07	-0.01	-0.07	-0.02	0.00	0.06	-0.13	0.00	0.00	0.34
Yi MEAN	0.04	0.42	0.12	-0.79	0.32	0.18	0.45	0.55	1.32	-0.31	-0.44	0.32	0.60	-0.38	0.11	-0.22	0.28		
Yi STD	0.74	0.97	0.96	0.27	0.50	0.46	0.83	0.86	1.75	0.74	0.89	0.58	0.94	0.90	0.76	0.33	0.80		

bins	count	percent		
-3	yi le -3	0	0.0%	
-2	-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1 77.6%
-1	-2 lt yi le -1	9	5.6%	-2 < yi ≤ 2 96.9%
0	-1 lt yi le 0	72	44.7%	-3 < yi ≤ 3 100.0%
1	0 lt yi le 1	53	32.9%	>3 0.0%
2	1 lt yi le 2	22	13.7%	
3	2 lt yi le 3	5	3.1%	
	3 lt yi	0	0.0%	
	total	161	100.0%	



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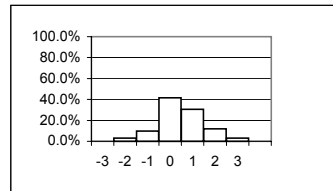
Heavy Duty Diesel Rating Workshop

Rater = Caproni, David

YI VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	1.06	-0.29	-0.04	0.03		-0.53	0.52	-0.16				0.02	-0.27	0.45				0.08	0.47
A2_keystone	0.52	-0.13	-0.02		0.07	0.57	-0.51		-0.54	-0.45		0.32	-0.53	-0.25	-1.08	3.88	-0.24	0.11	1.17
A3_two-piece	2.17	-1.57	-0.68		1.73	-0.61	-1.73	0.10			0.34	0.20	-0.24	0.25	-0.53	-1.27	-0.62	-0.27	1.13
A4_two-piece	-2.18	-0.92	-0.35		1.13	-0.05	-0.60	2.19		1.92	0.38	-0.58	-0.31	-1.16	-1.37	-0.29	0.00	-0.15	1.18
A5_two-piece	0.17	-0.80	2.15		-0.25	-1.92	-0.08	-0.13		-1.03	-1.10	-0.81	0.32	0.25	1.41	-0.13	-0.42	-0.16	1.00
A6_two-piece	1.16	-1.66	-0.29		1.81	-0.92	-1.72	-0.65		-0.95	-0.98	0.77	-1.00	2.09	-0.53	-0.52	0.00	-0.23	1.17
B1_square	1.54	0.24	-0.17	-0.19		-0.15	-0.59	-0.76				0.65	-0.06	0.41				0.09	0.66
B2_keystone																			
B3_two-piece																			
B4_two-piece																			
B5_two-piece																			
B6_two-piece																			
C1_square	-0.24	0.29	-0.02	-0.35		-0.89	1.02	0.58				-0.66	-0.27	-0.56				-0.11	0.59
C2_keystone	0.62	-0.61	-0.26		-0.28	1.35	-0.35		-0.91	-0.04		0.33	-0.47	0.60	0.16	-0.30	0.00	-0.01	0.59
C3_two-piece	0.44	0.41	1.39		0.83	-0.56	0.00	0.77		0.79	0.37	1.05	1.03	0.22	2.23	-0.13	-0.77	0.54	0.76
C4_two-piece	-0.35	0.94	-0.95		1.51	0.75	-2.59	-0.49		0.64	0.29	0.78	-1.11	0.06	-0.16	-2.65	-0.47	-0.25	1.21
C5_two-piece	1.33	-0.78	-0.08		1.15	-1.13	0.04	0.30		-1.58	0.13	0.72	0.42	1.54	-0.61	0.83	-0.26	0.13	0.91
C6_two-piece	1.95	1.01	0.15		-2.29	-0.25	-0.68	-0.18		0.99	-0.68	0.41	0.59	1.09	-0.18	3.61	-0.26	0.35	1.34
calibration_piston_1																			
calibration_piston_2	0.48	-2.25	-0.04			-0.52	-0.53					-1.01	-2.06	0.67				-0.66	1.07
Yi MAXIMUM	-2.18	-2.25	2.15	-0.35	-2.29	-1.92	-2.59	2.19	-0.91	1.92	-1.10	1.05	-2.06	2.09	2.23	3.88	-0.77	-0.66	1.34
Yi MINIMUM	0.17	-0.13	-0.02	0.03	0.07	-0.05	0.00	0.10	-0.54	-0.04	0.13	0.02	-0.06	0.06	0.16	-0.13	0.00	-0.01	0.47
Yi MEAN	0.62	-0.44	0.06	-0.17	0.54	-0.35	-0.56	0.14	-0.73	-0.13	-0.16	0.16	-0.28	0.40	-0.07	0.30	-0.30		
Yi STD	1.10	0.98	0.80	0.19	1.26	0.83	0.94	0.83	0.26	1.18	0.65	0.67	0.78	0.82	1.11	2.03	0.27		

bins	count	percent		
-3	0	0.0%		
-2	5	3.0%	-1 < yi ≤ 1	72.3%
-1	16	9.6%	-2 < yi ≤ 2	94.0%
0	69	41.6%	-3 < yi ≤ 3	100.0%
1	51	30.7%	>3	0.0%
2	20	12.0%		
3	5	3.0%		
3 lt yi	0	0.0%		
total	166	100.0%		



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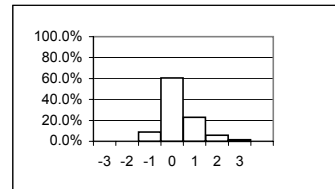
Heavy Duty Diesel Rating Workshop

Rater = Castillo, George

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	-0.32	-0.26	-0.88	-0.69		-0.43	-0.52	-0.48				-0.57	-0.66	0.29				-0.45	0.32
A2_keystone																			
A3_two-piece																			
A4_two-piece																			
A5_two-piece																			
A6_two-piece																			
B1_square	0.70	-0.88	-0.56	0.04		-0.40	0.07	0.29				-0.17	-0.55	0.13				-0.13	0.47
B2_keystone	-0.91	-0.54	0.08		1.02	-0.80	1.05		2.59	-0.85		-0.40	0.75	-0.95	-0.72	-0.35	-0.31	-0.02	1.03
B3_two-piece	-0.51	0.58	-0.23		-1.10	-0.02	-0.49	-0.34		-0.97	0.51	-1.02	-0.53	-0.21	-0.51	-0.02	0.94	-0.26	0.59
B4_two-piece	-0.89	-1.08	0.73		-0.47	-0.52	0.66	-0.10		-0.38	1.71	-0.82	-0.72	0.72	-0.48	-0.53	-0.38	-0.17	0.78
B5_two-piece	-0.29	-0.64	-0.70		0.01	0.62	0.95	-0.55		-0.80	-1.87	-0.41	-0.12	-0.54	-0.18	-0.21	0.15	-0.31	0.65
B6_two-piece	-0.03	-0.50	-0.21		1.02	-1.42	1.41	-0.79		0.02	2.02	0.16	-0.20	-0.76	-0.20	-0.27	-0.25	0.00	0.88
C1_square	-1.66	-0.40	-0.18	-0.82		-0.82	-1.02	-0.84				-1.75	-1.13	-0.19				-0.88	0.54
C2_keystone	0.18	-0.36	-0.64		1.66	-0.83	0.90		0.43	-0.56		0.67	0.42	-0.15	0.59	-0.30	0.00	0.14	0.69
C3_two-piece																			
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	-0.40	0.10	0.72			-1.08	-0.41					-0.90	-0.71	1.04				-0.21	0.76
calibration_piston_2	0.09	-0.06	-0.09			-1.03	0.19					-0.42	-0.29	-0.37				-0.25	0.38
Yi MAXIMUM	-1.66	-1.08	-0.88	-0.82	1.66	-1.42	1.41	-0.84	2.59	-0.97	2.02	-1.75	-1.13	1.04	-0.72	-0.53	0.94	-0.88	1.03
Yi MINIMUM	-0.03	-0.06	0.08	0.04	0.01	-0.02	0.07	-0.10	0.43	0.02	0.51	0.16	-0.12	0.13	-0.18	-0.02	0.00	0.00	0.32
Yi MEAN	-0.37	-0.37	-0.18	-0.49	0.36	-0.61	0.25	-0.40	1.51	-0.59	0.59	-0.51	-0.34	-0.09	-0.25	-0.28	0.02		
Yi STD	0.63	0.46	0.53	0.46	1.05	0.56	0.80	0.40	1.52	0.37	1.77	0.63	0.54	0.60	0.46	0.17	0.49		

bins	count	percent		
-3	0	0.0%		
-2	0	0.0%	-1 < yi ≤ 1	83.6%
-1	11	9.0%	-2 < yi ≤ 2	98.4%
0	74	60.7%	-3 < yi ≤ 3	100.0%
1	28	23.0%	>3	0.0%
2	7	5.7%		
3	2	1.6%		
3 lt yi	0	0.0%		
total	122	100.0%		



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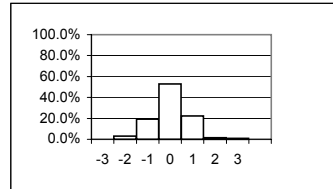
Heavy Duty Diesel Rating Workshop

Rater = Clapperty, Leon

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square																			
A2_keystone																			
A3_two-piece																			
A4_two-piece																			
A5_two-piece																			
A6_two-piece																			
B1_square	0.06	-0.40	1.00	0.84		-0.75	-0.35	-0.34				-0.58	-0.42	-0.97				-0.19	0.65
B2_keystone	-0.35	-0.28	-2.27		-0.58	-0.51	-0.78		-0.74	-0.73		-0.64	-1.40	-0.52	-0.27	-0.35	-0.31	-0.69	0.54
B3_two-piece	-0.89	-0.35	-0.50		0.08	0.19	-0.71	-0.51		-1.29	0.32	-1.36	-0.99	0.24	-0.99	0.57	-1.13	-0.49	0.64
B4_two-piece	0.40	0.24	-0.79		-1.09	-0.80	-1.07	-0.60		-1.92	-0.04	-0.62	-0.88	0.04	0.57	-0.53	-0.38	-0.50	0.66
B5_two-piece	-0.13	0.78	-1.25		-1.56	-0.54	-1.02	-0.72		-2.18	0.67	-0.98	-1.18	0.25	1.00	-1.23	-0.68	-0.58	0.92
B6_two-piece	0.48	-0.11	-0.16		-0.74	-0.17	-1.31	-0.35		-1.45	-0.74	-0.47	-0.36	1.57	0.81	-0.27	-0.25	-0.24	0.76
C1_square	-1.66	0.44	-0.08	0.12		-0.57	-0.48	0.05				-1.38	-0.34	-0.56				-0.44	0.66
C2_keystone	-0.09	0.39	-0.70		0.43	-1.47	-0.82		-0.24	-0.12		-0.20	-0.70	-0.66	2.57	-0.30	0.00	-0.14	0.93
C3_two-piece	-1.49	0.45	-1.46		-1.41	0.12	-1.39	-1.40		-1.19	-1.77	-2.45	-2.24	-0.33	-0.21	-1.85	0.28	-1.09	0.92
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	-0.20	-0.12	-0.68			-0.50	-1.40					-0.57	-1.38	0.21				-0.58	0.57
calibration_piston_2	0.67	0.36	-0.39			-0.93	-0.91					0.02	-0.33	1.36				-0.02	0.79
Yi MAXIMUM	-1.66	0.78	-2.27	0.84	-1.56	-1.47	-1.40	-1.40	-0.74	-2.18	-1.77	-2.45	-2.24	1.57	2.57	-1.85	-1.13	-1.09	0.93
Yi MINIMUM	0.06	-0.11	-0.08	0.12	0.08	0.12	-0.35	0.05	-0.24	-0.12	-0.04	0.02	-0.33	0.04	-0.21	-0.27	0.00	-0.02	0.54
Yi MEAN	-0.29	0.13	-0.66	0.48	-0.70	-0.54	-0.93	-0.55	-0.49	-1.27	-0.31	-0.84	-0.93	0.06	0.50	-0.56	-0.35		
Yi STD	0.77	0.39	0.84	0.51	0.74	0.48	0.35	0.45	0.35	0.70	0.97	0.69	0.60	0.81	1.15	0.77	0.46		

bins		count	percent		
-3	yi le -3	0	0.0%		
-2	-3 lt yi le -2	4	3.2%	-1 < yi ≤ 1	75.2%
-1	-2 lt yi le -1	24	19.2%	-2 < yi ≤ 2	96.0%
0	-1 lt yi le 0	66	52.8%	-3 < yi ≤ 3	100.0%
1	0 lt yi le 1	28	22.4%	>3	0.0%
2	1 lt yi le 2	2	1.6%		
3	2 lt yi le 3	1	0.8%		
	3 lt yi	0	0.0%		
	total	125	100.0%		



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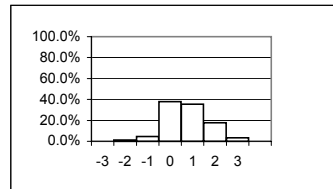
Heavy Duty Diesel Rating Workshop

Rater = Engelskirchen, Jim

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square																			
A2_keystone																			
A3_two-piece																			
A4_two-piece																			
A5_two-piece																			
A6_two-piece																			
B1_square	0.80	0.94	1.13	0.96		-0.21	-0.59	-0.23				0.49	0.62	0.41				0.43	0.59
B2_keystone	0.29	-0.50	0.59		1.19	1.53	0.92		-0.62	-1.05		0.84	0.12	-0.09	-1.64	0.48	-0.31	0.12	0.89
B3_two-piece	-0.29	0.22	-0.26		0.12	0.54	-0.49	-0.83		1.91	0.89	0.51	-0.48	-0.58	0.94	0.57	-1.13	0.11	0.80
B4_two-piece	-0.63	-0.94	-0.93		-0.16	0.22	1.02	2.23		1.81	0.38	-0.30	0.28	-1.34	-2.11	-0.13	-0.38	-0.07	1.14
B5_two-piece	0.78	-0.26	0.78		1.60	-0.41	0.24	-0.47		1.22	1.60	1.31	0.52	-0.38	-0.77	0.93	-0.68	0.40	0.84
B6_two-piece	-0.35	-0.16	-0.27		0.64	-0.22	-0.86	-0.42		2.02	-0.74	-0.22	-0.45	-0.25	-0.37	-0.27	-0.25	-0.14	0.68
C1_square																			
C2_keystone																			
C3_two-piece																			
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	2.23	1.34	-1.27			-0.40	0.36					1.03	0.23	0.49				0.50	1.07
calibration_piston_2	1.70	0.25	1.18			0.06	0.52					1.22	0.93	1.70				0.94	0.62
Yi MAXIMUM	2.23	1.34	-1.27	0.96	1.60	1.53	1.02	2.23	-0.62	2.02	1.60	1.31	0.93	1.70	-2.11	0.93	-1.13	0.94	1.14
Yi MINIMUM	0.29	-0.16	-0.26	0.96	0.12	0.06	0.24	-0.23	-0.62	-1.05	0.38	-0.22	0.12	-0.09	-0.37	-0.13	-0.25	-0.07	0.59
Yi MEAN	0.57	0.11	0.12	0.96	0.68	0.14	0.14	0.06	-0.62	1.18	0.53	0.61	0.22	0.00	-0.79	0.31	-0.55		
Yi STD	1.02	0.75	0.93		0.73	0.65	0.71	1.24		1.29	0.98	0.61	0.50	0.90	1.19	0.50	0.36		

bins	count	percent		
-3	0	0.0%		
-2	1	1.1%	-1 < yi ≤ 1	73.3%
-1	4	4.4%	-2 < yi ≤ 2	95.6%
0	34	37.8%	-3 < yi ≤ 3	100.0%
1	32	35.6%	>3	0.0%
2	16	17.8%		
3	3	3.3%		
3 lt yi	0	0.0%		
total	90	100.0%		



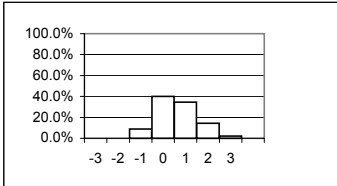
Heavy Duty Diesel Rating Workshop

Rater = Garcia, Pat

YI VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	1.28	-0.27	-0.76	-1.00		-0.44	-1.04	-0.97				0.08	-0.74	-0.20				-0.41	0.70
A2_keystone	0.01	0.80	-0.41		0.27	-0.01	-0.93		-0.71	0.06		0.23	-0.86	-1.28	1.14	-0.24	-0.24	-0.15	0.67
A3_two-piece	-0.97	2.06	-0.45		1.06	1.72	-1.68	-0.24		0.91	0.34	0.94	-0.22	0.06	1.46	0.30	-0.62	0.31	1.05
A4_two-piece	0.60	-0.52	-0.38		0.27	0.06	-0.71	0.00		0.27	0.54	-0.21	-0.57	-0.81	0.30	-0.29	0.00	-0.10	0.45
A5_two-piece	0.26	-0.93	-0.14		-0.68	0.62	0.16	1.14		-0.36	1.33	-0.15	0.42	0.12	1.16	-0.41	-0.42	0.14	0.69
A6_two-piece	0.90	0.70	0.20		1.05	1.98	0.10	0.04		-0.05	0.59	1.97	1.90	-0.08	-0.26	-0.52	0.00	0.57	0.83
B1_square																			
B2_keystone																			
B3_two-piece																			
B4_two-piece																			
B5_two-piece																			
B6_two-piece																			
C1_square																			
C2_keystone																			
C3_two-piece																			
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	-0.56	-1.26	-0.81			1.02	2.08					0.36	0.86	-0.89				0.10	1.16
calibration_piston_2	-1.43	0.40	-1.00			-0.66	-0.72					-1.05	-0.56	-1.07				-0.76	0.55
Yi MAXIMUM	-1.43	2.06	-1.00	-1.00	1.06	1.98	2.08	1.14	-0.71	0.91	1.33	1.97	1.90	-1.28	1.46	-0.52	-0.62	-0.76	1.16
Yi MINIMUM	0.01	-0.27	-0.14	-1.00	0.27	-0.01	0.10	0.00	-0.71	-0.05	0.34	0.08	-0.22	0.06	-0.26	-0.24	0.00	-0.10	0.45
Yi MEAN	0.01	0.12	-0.47	-1.00	0.39	0.54	-0.34	0.00	-0.71	0.17	0.70	0.27	0.03	-0.52	0.76	-0.23	-0.26		
Yi STD	0.94	1.08	0.39		0.72	0.98	1.15	0.76		0.47	0.43	0.89	0.96	0.55	0.72	0.32	0.27		

bins	count	percent		
-3	yi le -3	0	0.0%	
-2	-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1 74.4%
-1	-2 lt yi le -1	8	8.9%	-2 < yi ≤ 2 97.8%
0	-1 lt yi le 0	36	40.0%	-3 < yi ≤ 3 100.0%
1	0 lt yi le 1	31	34.4%	>3 0.0%
2	1 lt yi le 2	13	14.4%	
3	2 lt yi le 3	2	2.2%	
	3 lt yi	0	0.0%	
	total	90	100.0%	



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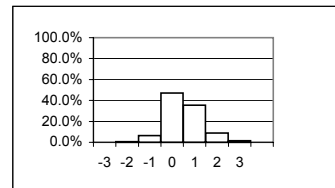
Heavy Duty Diesel Rating Workshop

Rater = Garrett, Thomas

YI VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	0.42	0.40	-0.52	-0.69		-0.39	-0.21	-0.16				0.01	-0.10	-1.00				-0.22	0.45
A2_keystone	0.23	0.56	-0.18		0.18	0.62	-0.24		-0.54	-0.05		0.48	-0.31	-0.25	1.51	-0.24	3.88	0.40	1.13
A3_two-piece	-1.98	0.84	0.65		-0.15	0.07	1.09	0.87		0.38	0.34	-0.18	0.76	0.45	-1.33	-0.49	2.59	0.26	1.06
A4_two-piece	0.60	2.50	-0.56		-0.40	1.81	-0.84	-0.83		-0.32	-0.40	2.37	1.91	-0.81	1.41	-0.29	0.00	0.41	1.24
A5_two-piece	1.36	-0.51	-0.74		0.04	0.87	0.12	0.21		-0.58	-0.37	0.65	0.24	1.25	-0.83	0.10	2.97	0.32	1.00
A6_two-piece	0.87	-0.09	0.57		-0.25	-0.36	0.86	0.51		-0.47	-0.59	0.37	1.42	0.79	0.01	0.87	0.00	0.30	0.60
B1_square	-0.47	0.42	-1.33	-1.23		0.48	1.21	2.93				0.29	0.76	-0.97				0.21	1.30
B2_keystone	-0.33	-0.35	0.44		-0.15	0.03	-1.04		-0.62	0.21		-0.27	-0.54	-1.09	-0.53	-0.35	-0.31	-0.35	0.42
B3_two-piece	-0.89	0.11	0.20		-0.67	0.16	-0.77	-0.30		-0.34	-0.15	-1.19	-0.29	-0.76	-0.99	-0.61	1.09	-0.36	0.59
B4_two-piece																			
B5_two-piece																			
B6_two-piece																			
C1_square	0.29	0.53	1.03	1.00		0.73	-0.71	-0.58				0.78	0.79	-0.01				0.39	0.63
C2_keystone	-0.31	0.90	-0.04		-0.27	0.05	-1.12		-0.43	0.03		-0.05	-0.61	-0.53	1.01	-0.30	0.00	-0.12	0.55
C3_two-piece	0.07	1.28	-0.64		-0.43	0.90	-0.46	-0.71		-0.21	-0.94	-0.18	-0.57	0.50	-0.21	-0.42	0.80	-0.08	0.66
C4_two-piece	0.01	-1.25	-0.82		-0.16	0.54	-0.15	-0.22		-0.53	-0.47	-0.36	-0.57	-0.53	-0.03	-0.68	-0.47	-0.38	0.41
C5_two-piece	0.84	0.18	-2.02		0.42	0.68	-0.96	-0.90		-1.06	0.27	0.75	-0.70	0.88	-0.61	0.51	-0.26	-0.13	0.87
C6_two-piece	0.87	0.86	-0.19		0.18	0.43	1.32	-0.18		-1.33	-0.39	0.96	1.23	0.65	1.08	-0.20	-0.26	0.34	0.75
calibration_piston_1	-0.64	1.16	0.36			-0.15	-0.60					-0.33	0.06	-0.47				-0.08	0.61
calibration_piston_2																			
Yi MAXIMUM	-1.98	2.50	-2.02	-1.23	-0.67	1.81	1.32	2.93	-0.62	-1.33	-0.94	2.37	1.91	1.25	1.51	0.87	3.88	0.41	1.30
Yi MINIMUM	0.01	-0.09	-0.04	-0.69	0.04	0.03	0.12	-0.16	-0.43	0.03	-0.15	0.01	0.06	-0.01	0.01	0.10	0.00	-0.08	0.41
Yi MEAN	0.06	0.47	-0.24	-0.30	-0.14	0.40	-0.16	0.05	-0.53	-0.36	-0.30	0.26	0.22	-0.12	0.04	-0.17	0.84		
Yi STD	0.83	0.85	0.79	1.16	0.30	0.56	0.84	1.05	0.10	0.49	0.40	0.79	0.83	0.77	0.98	0.46	1.49		

bins		count	percent		
-3	yi le -3	0	0.0%		
-2	-3 lt yi le -2	1	0.5%	-1 < yi ≤ 1	82.7%
-1	-2 lt yi le -1	12	6.3%	-2 < yi ≤ 2	97.9%
0	-1 lt yi le 0	90	47.1%	-3 < yi ≤ 3	100.0%
1	0 lt yi le 1	68	35.6%	> 3	0.0%
2	1 lt yi le 2	17	8.9%		
3	2 lt yi le 3	3	1.6%		
	3 lt yi	0	0.0%		
	total	191	100.0%		



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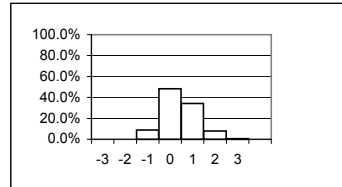
Heavy Duty Diesel Rating Workshop

Rater = Greenland, Paul

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD	
A1_square	-0.54	-0.64	-0.04	0.03		-0.40	-0.11	0.25				-0.71	-0.54	1.42				-0.13	0.63	
A2_keystone	0.16	-0.31	-0.16		-1.63	0.23	-0.64		-0.38	-0.38		-0.43	-0.78	-0.59	-0.34	-0.24	-0.24	-0.41	0.44	
A3_two-piece	1.05	0.88	0.12		1.73	-0.54	-1.40	-0.16			0.07	0.56	-0.17	-0.90	0.27	-0.09	1.22	0.14	0.84	
A4_two-piece	0.44	0.53	0.25		0.16	-0.21	-0.38	0.16			-0.85	0.38	0.42	0.40	-0.11	0.38	-0.29	0.00	0.39	
A5_two-piece	-0.42	-1.91	-0.43		-0.07	-0.28	-1.72	-0.80			-0.58	1.33	-0.59	-1.24	0.25	-0.09	0.10	1.84	-0.31	0.99
A6_two-piece																				
B1_square	0.14	0.60	-0.17	0.96		-0.07	0.01	0.29				0.20	0.51	1.80				0.43	0.59	
B2_keystone	-1.67	-0.38	-0.25		-0.26	-0.57	0.66		-0.03	-0.22		-0.91	-0.54	-1.23	0.13	-0.35	-0.31	-0.42	0.57	
B3_two-piece	-0.59	0.26	-0.13		2.03	-0.19	1.72	-0.14			-0.44	0.80	0.53	0.15	-0.94	0.46	0.28	0.64	0.30	0.80
B4_two-piece																				
B5_two-piece																				
B6_two-piece																				
C1_square	-0.14	-0.78	0.51	0.33		-0.94	-0.16	0.05				-0.85	-0.69	-0.92				-0.36	0.54	
C2_keystone	-0.60	0.14	-0.45		-1.17	0.28	-0.32		0.48	0.23		-0.90	-0.33	-0.91	-0.40	-0.30	0.00	-0.30	0.49	
C3_two-piece	0.22	0.37	0.32		-0.54	-1.08	-0.33	-0.34			-0.21	0.98	-0.06	-0.24	0.36	1.01	-0.42	0.28	0.02	0.56
C4_two-piece	0.43	-0.18	-0.05		0.25	0.06	-0.15	-0.49			0.56	0.29	0.34	-0.12	-0.65	-0.16	-0.68	2.02	0.10	0.65
C5_two-piece	0.11	-0.52	-1.04		-0.06	1.01	-1.05	-0.52			0.47	1.19	0.28	-0.73	0.11	0.93	-0.22	-0.26	-0.02	0.71
C6_two-piece	0.42	-1.38	-1.22		1.63	0.31	-0.84	-0.18			-1.15	1.20	1.21	-0.24	0.80	0.14	-0.20	-0.26	0.02	0.93
calibration_piston_1	-1.76	-0.97	1.20			-0.44	1.71											-0.15	1.19	
calibration_piston_2																				
Yi MAXIMUM	-1.76	-1.91	-1.22	0.96	2.03	-1.08	1.72	-0.80	0.48	-1.15	1.33	1.21	-1.24	1.80	1.01	-0.68	2.02	0.43	1.19	
Yi MINIMUM	0.11	0.14	-0.04	0.03	-0.06	0.06	0.01	0.05	-0.03	-0.21	0.07	-0.06	-0.12	0.11	-0.09	-0.09	0.00	0.02	0.39	
Yi MEAN	-0.18	-0.28	-0.10	0.44	0.19	-0.19	-0.20	-0.17	0.02	-0.28	0.78	-0.14	-0.28	-0.12	0.21	-0.22	0.45			
Yi STD	0.77	0.78	0.59	0.47	1.18	0.53	0.97	0.35	0.43	0.53	0.48	0.70	0.49	0.91	0.47	0.25	0.87			

bins	count	percent		
-3	yi le -3	0	0.0%	
-2	-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1 82.6%
-1	-2 lt yi le -1	16	9.0%	-2 < yi ≤ 2 99.4%
0	-1 lt yi le 0	86	48.3%	-3 < yi ≤ 3 100.0%
1	0 lt yi le 1	61	34.3%	>3 0.0%
2	1 lt yi le 2	14	7.9%	
3	2 lt yi le 3	1	0.6%	
	3 lt yi	0	0.0%	
	total	178	100.0%	



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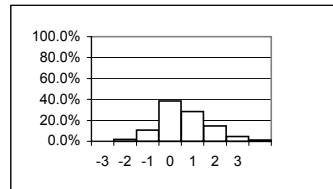
Heavy Duty Diesel Rating Workshop

Rater = Guardia, Waldyr

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	-2.17	-0.43	2.35	2.08		-0.41	0.07	0.25				-1.32	-0.09	-0.84				-0.05	1.39
A2_keystone	-0.56	-0.19	-0.27		-0.18	-0.07	2.70		0.65	1.83		-0.14	1.80	1.46	0.77	-0.24	-0.24	0.52	1.03
A3_two-piece	0.06	0.53	0.91		-0.78	0.22	1.03	-0.11		-0.22	0.22	-0.06	0.22	-0.13	-0.33	0.30	0.76	0.17	0.49
A4_two-piece	-0.05	-0.95	0.16		-0.43	-0.67	1.22	-0.15		0.85	-0.79	-1.00	-0.66	1.11	-0.89	0.37	0.00	-0.13	0.75
A5_two-piece																			
A6_two-piece	1.06	-0.03	-0.60		-0.75	0.30	-0.43	2.01		1.04	0.28	0.97	1.61	1.08	0.28	0.17	0.00	0.47	0.81
B1_square																			
B2_keystone																			
B3_two-piece																			
B4_two-piece																			
B5_two-piece																			
B6_two-piece																			
C1_square	0.48	-1.23	0.51	1.68		0.25	0.84	0.58				0.30	0.17	1.99				0.56	0.88
C2_keystone	-1.01	-0.61	-0.45		-0.65	1.36	3.08		-0.72	1.79		-0.60	0.87	-0.15	0.16	-0.30	0.00	0.20	1.17
C3_two-piece	-0.33	-2.00	1.24		0.64	0.28	3.16	1.93		-0.21	-0.67	0.01	2.18	-0.19	-0.82	0.72	1.33	0.48	1.32
C4_two-piece	-0.40	2.15	-0.03		0.09	-0.22	1.25	-0.04		-0.03	-1.61	0.22	0.97	0.53	1.00	0.31	-0.47	0.25	0.87
C5_two-piece	-1.71	0.14	-0.15		1.39	1.19	0.84	0.49		0.47	-2.43	0.12	0.73	-1.65	-1.23	-0.22	-0.26	-0.15	1.13
C6_two-piece	-1.87	-1.40	-0.09		-0.57	-0.04	1.46	0.68		1.49	0.70	-1.83	-0.62	-1.77	-0.34	-0.20	-0.26	-0.31	1.09
calibration_piston_1	-1.04	-1.24	-0.54			-0.18	1.16					-0.73	-0.41	-1.16				-0.52	0.77
calibration_piston_2	0.50	-1.13	0.04			-0.15	2.14					-0.08	-0.17	-0.03				0.14	0.93
Yi MAXIMUM	-2.17	2.15	2.35	2.08	1.39	1.36	3.16	2.01	-0.72	1.83	-2.43	-1.83	2.18	1.99	-1.23	0.72	1.33	0.56	1.39
Yi MINIMUM	-0.05	-0.03	-0.03	1.68	0.09	-0.04	0.07	-0.04	0.65	-0.03	0.22	0.01	-0.09	-0.03	0.16	0.17	0.00	-0.05	0.49
Yi MEAN	-0.54	-0.49	0.24	1.88	-0.14	0.14	1.42	0.62	-0.03	0.78	-0.61	-0.32	0.51	0.02	-0.16	0.10	0.10		
Yi STD	0.98	1.06	0.84	0.29	0.74	0.58	1.09	0.82	0.96	0.82	1.12	0.75	0.94	1.18	0.76	0.36	0.58		

bins	count	percent		
-3	0	0.0%		
-2	3	2.0%	-1 < yi ≤ 1	66.9%
-1	16	10.6%	-2 < yi ≤ 2	92.1%
0	58	38.4%	-3 < yi ≤ 3	98.7%
1	43	28.5%	> 3	1.3%
2	22	14.6%		
3	7	4.6%		
3 lt yi	2	1.3%		
total	151	100.0%		



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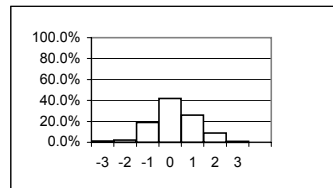
Heavy Duty Diesel Rating Workshop

Rater = Hill, Howard

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD	
A1_square	-0.95	-0.35	-0.86	-0.91		-0.47	-1.11	-0.48				-0.93	-0.88	0.77				-0.62	0.55	
A2_keystone	-3.55	-2.05	0.20		-0.53	-0.98	0.31		-0.78	1.54		-2.65	-1.09	-0.59	1.69	-0.24	-0.24	-0.64	1.44	
A3_two-piece	0.66	-0.08	1.48		-1.21	-0.17	-0.05	-0.68		-0.16	0.34	-0.12	-0.34	1.99	2.26	-0.09	-0.62	0.21	0.99	
A4_two-piece	0.27	0.97	-1.61		-0.64	-0.61	0.62	-1.60		-0.21	-0.96	0.34	-0.09	1.28	1.01	-0.29	0.00	-0.10	0.89	
A5_two-piece	1.26	0.61	-0.55		-1.09	0.48	-0.76	0.14		2.89	0.60	0.32	0.00	1.00	-1.33	-0.47	0.71	0.25	1.06	
A6_two-piece	1.03	1.76	-0.94		-1.25	-0.18	-0.29	-1.29		-0.77	-0.98	0.10	-0.35	0.21	-0.26	-0.52	0.00	-0.25	0.82	
B1_square	0.85	-1.11	-1.27	-1.09		0.31	-1.11	-1.24				0.23	-1.00	0.69				-0.47	0.88	
B2_keystone	-0.69	-1.00	1.71		-0.80	-1.06	-1.14		-0.97	1.12		-1.15	-0.73	-0.09	0.52	-0.35	3.67	-0.07	1.40	
B3_two-piece	0.43	0.51	-0.66		-0.28	-1.67	-0.01	-0.87		-1.87	-1.95	-1.24	-0.96	0.15	0.94	-2.66	0.64	-0.63	1.09	
B4_two-piece	-0.42	0.32	-1.36		-1.06	-0.54	-0.43	-1.11		0.08	-0.30	-0.43	-0.95	1.41	0.11	-0.53	-0.38	-0.37	0.68	
B5_two-piece	0.67	-0.98	0.38		0.46	-0.10	-0.61	-1.17		-1.00	-0.64	0.16	-0.51	1.20	1.00	0.02	-0.27	-0.09	0.74	
B6_two-piece	0.98	0.06	-0.31		-0.63	-0.35	-0.06	-1.59		-0.75	-0.61	0.00	-0.36	0.14	-1.55	-0.27	-0.25	-0.37	0.64	
C1_square	0.39	-1.32	-0.98	-0.99		-0.36	-0.93	-0.83				-0.30	-1.11	0.90				-0.55	0.71	
C2_keystone	-0.03	-0.61	1.81		-0.70	-1.60	-0.23		-1.31	0.08		-1.13	-0.43	-0.15	0.45	-0.30	0.00	-0.30	0.83	
C3_two-piece	1.49	0.18	0.69		0.97	0.61	0.46	-1.20		-0.87	-0.85	1.14	0.19	0.77	-0.21	1.29	-0.77	0.26	0.86	
C4_two-piece	-2.27	0.65	-0.93		-2.33	-3.56	1.22	-1.26		-1.70	-0.66	-3.26	-2.42	1.94	1.51	-0.68	-0.47	-0.95	1.71	
C5_two-piece	0.25	-0.46	-0.69		-0.65	-0.78	1.39	0.37		-1.17	-0.24	-0.63	0.15	0.66	-0.15	-0.86	-0.26	-0.20	0.67	
C6_two-piece	0.84	-0.50	0.51		-0.41	-1.08	-0.60	-0.88		-1.66	-1.17	-0.06	-0.42	0.65	0.61	-0.30	-0.26	-0.31	0.73	
calibration_piston_1	0.56	-1.23	1.76			-0.90	0.49					-0.34	-0.06	0.35				0.08	0.94	
calibration_piston_2	-0.87	-0.51	-0.74			-0.96	-1.03					-1.29	-1.33	0.32				-0.80	0.53	
Yi MAXIMUM	-3.55	-2.05	1.81	-1.09	-2.33	-3.56	1.39	-1.60	-1.31	2.89	-1.95	-3.26	-2.42	1.99	2.26	-2.66	3.67	-0.95	1.71	
Yi MINIMUM	-0.03	0.06	0.20	-0.91	-0.28	-0.10	-0.01	0.14	-0.78	0.08	-0.24	0.00	0.00	-0.09	0.11	0.02	0.00	-0.07	0.53	
Yi MEAN	0.05	-0.26	-0.12	-1.00	-0.68	-0.70	-0.19	-0.91	-1.02	-0.30	-0.62	-0.56	-0.64	0.68	0.44	-0.42	0.10			
Yi STD	1.23	0.91	1.11	0.09	0.75	0.91	0.76	0.57	0.27	1.31	0.68	1.04	0.62	0.67	1.05	0.79	1.07			

bins	count	percent		
-3	3	1.3%		
-2	5	2.1%		
-1	45	18.9%	-1 < yi ≤ 1	68.1%
0	100	42.0%	-2 < yi ≤ 2	95.8%
1	62	26.1%	-3 < yi ≤ 3	98.7%
2	21	8.8%	>3	1.3%
3	2	0.8%		
3 lt yi	0	0.0%		
total	238	100.0%		



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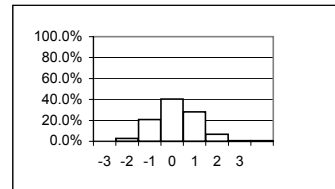
Heavy Duty Diesel Rating Workshop

Rater = Hills, Barry

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD	
A1_square	-1.62	-0.68	1.16	1.06		-0.43	0.48	-1.34				-1.23	-0.66	-1.65				-0.49	1.05	
A2_keystone	-0.16	-1.42	-0.74		-1.47	-0.95	-0.47		-0.21	-0.91		-1.30	-1.26	-0.25	-0.71	-0.24	-0.24	-0.74	0.49	
A3_two-piece	0.94	0.75	0.24		-0.25	-0.38	0.17	-0.51		0.31	0.34	0.52	-0.15	0.25	0.07	-0.09	-0.62	0.11	0.45	
A4_two-piece	-0.87	0.68	-0.35		-0.41	-0.85	0.27	-0.93		0.75	1.55	0.46	-0.01	0.59	0.70	-0.29	0.00	0.09	0.71	
A5_two-piece	-1.06	-0.52	0.12		-1.69	0.07	-0.33	0.47		1.19	0.00	-1.46	-0.39	1.00	-0.83	-1.82	-0.42	-0.38	0.90	
A6_two-piece	-1.94	-0.34	0.33		0.70	1.09	0.75	1.55		0.31	0.52	-0.94	0.24	-1.53	-0.53	0.17	0.00	0.03	0.95	
B1_square	-1.05	-0.23	0.09	-0.08		3.03	-0.59	-0.76				1.45	0.98	-0.42				0.24	1.24	
B2_keystone	-1.55	-0.47	0.59		-1.65	-0.40	-0.58		-0.19	-0.89		-1.29	-1.16	-1.51	-0.79	-0.35	-0.31	-0.75	0.63	
B3_two-piece																				
B4_two-piece																				
B5_two-piece																				
B6_two-piece	-1.75	-0.09	-0.24		-0.93	1.59	0.42	0.32		-0.05	0.21	-1.16	-0.36	-2.45	-0.70	-0.27	-0.25	-0.38	0.96	
C1_square	-1.17	-1.07	0.04	0.33		1.35	-0.71	-0.47				-0.10	0.01	0.35				-0.14	0.75	
C2_keystone	-2.21	-0.11	-0.83		-1.07	-1.21	-0.11		-0.67	-0.78		-2.45	-1.63	-1.54	-0.69	3.88	0.00	-0.67	1.51	
C3_two-piece	-1.53	-0.18	-0.97		-2.45	-0.06	-0.60	-0.31		-0.41	-0.30	-2.38	-1.35	-1.43	2.23	-2.13	-0.77	-0.84	1.17	
C4_two-piece	-0.40	0.04	1.41		-0.80	0.82	0.51	0.18		-0.36	-0.28	-0.08	0.84	0.06	-1.84	0.31	-0.47	0.00	0.77	
C5_two-piece	-1.70	-0.19	1.47		-1.49	-0.85	0.99	-0.17		0.06	0.07	-1.97	-1.09	-1.76	-1.08	-1.49	-0.26	-0.63	1.03	
C6_two-piece																				
calibration_piston_1																				
calibration_piston_2	-0.65	0.25	1.18			0.59	0.09					0.07	0.69	-0.37				0.23	0.59	
Yi MAXIMUM	-2.21	-1.42	1.47	1.06	-2.45	3.03	0.99	1.55	-0.67	1.19	1.55	-2.45	-1.63	-2.45	2.23	3.88	-0.77	-0.84	1.51	
Yi MINIMUM	-0.16	0.04	0.04	-0.08	-0.25	-0.06	0.09	-0.17	-0.19	-0.05	0.00	0.07	-0.01	0.06	0.07	-0.09	0.00	0.00	0.45	
Yi MEAN	-1.12	-0.24	0.23	0.43	-1.05	0.23	0.02	-0.18	-0.36	-0.07	0.26	-0.79	-0.35	-0.71	-0.38	-0.21	-0.30			
Yi STD	0.81	0.57	0.80	0.57	0.85	1.17	0.55	0.79	0.27	0.68	0.59	1.13	0.83	1.04	1.07	1.59	0.25			

bins	count	percent		
-3	0	0.0%		
-2	5	2.8%	-1 < yi ≤ 1	68.5%
-1	37	20.8%	-2 < yi ≤ 2	96.1%
0	72	40.4%	-3 < yi ≤ 3	99.4%
1	50	28.1%	>3	0.6%
2	12	6.7%		
3	1	0.6%		
3 lt yi	1	0.6%		
total	178	100.0%		



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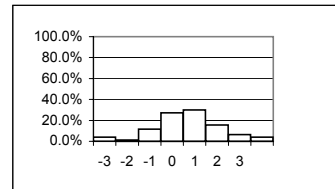
Heavy Duty Diesel Rating Workshop

Rater = Hurtado, Cirilo

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD	
A1_square	0.65	3.90	0.56	1.47		0.58	-0.31	-0.08				1.95	2.69	0.87				1.23	1.30	
A2_keystone																				
A3_two-piece																				
A4_two-piece																				
A5_two-piece																				
A6_two-piece																				
B1_square	-1.45	-3.08	-0.69	-0.88		-2.46	-1.44	-1.08				-3.24	-3.44	0.45				-1.73	1.28	
B2_keystone																				
B3_two-piece																				
B4_two-piece	-1.09	-0.58	-1.02		0.42	0.74	0.41	-0.88		-0.91	0.50	-0.30	-0.74	0.04	-1.41	0.66	-0.38	-0.30	0.71	
B5_two-piece	0.86	0.03	2.75		1.43	-1.80	2.54	-0.55		-0.66	-0.37	0.96	1.59	-0.30	1.18	2.70	-0.68	0.64	1.40	
B6_two-piece	-0.51	-0.46	3.75		0.95	1.25	-1.17	-0.42		-0.87	0.62	1.66	3.66	-0.20	0.60	3.74	-0.25	0.82	1.69	
C1_square	1.11	-1.77	0.56	1.14		2.24	0.20	-0.84				1.87	0.69	1.20				0.64	1.21	
C2_keystone																				
C3_two-piece																				
C4_two-piece																				
C5_two-piece																				
C6_two-piece																				
calibration_piston_1																				
calibration_piston_2	0.60	-0.22	1.26			-0.70	2.05					0.18	0.76	0.82				0.59	0.86	
Yi MAXIMUM	-1.45	3.90	3.75	1.47	1.43	-2.46	2.54	-1.08		-0.91	0.62	-3.24	3.66	1.20	-1.41	3.74	-0.68	-1.73	1.69	
Yi MINIMUM	-0.51	0.03	0.56	-0.88	0.42	0.58	0.20	-0.08		-0.66	-0.37	0.18	0.69	0.04	0.60	0.66	-0.25	-0.30	0.71	
Yi MEAN	0.02	-0.31	1.02	0.57	0.94	-0.02	0.32	-0.64		-0.82	0.25	0.44	0.74	0.41	0.13	2.36	-0.44			
Yi STD	1.03	2.15	1.73	1.27	0.50	1.70	1.51	0.36		0.13	0.54	1.84	2.34	0.58	1.36	1.56	0.22			

bins	count	percent		
-3	3	3.9%		
-2	1	1.3%	-1 < yi ≤ 1	57.1%
-1	9	11.7%	-2 < yi ≤ 2	84.4%
0	21	27.3%	-3 < yi ≤ 3	92.2%
1	23	29.9%	>3	7.8%
2	12	15.6%		
3	5	6.5%		
	3	3.9%		
total	77	100.0%		



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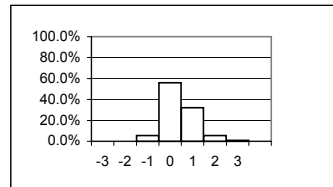
Heavy Duty Diesel Rating Workshop

Rater = Kobrinetz, Jack

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square																			
A2_keystone																			
A3_two-piece																			
A4_two-piece																			
A5_two-piece																			
A6_two-piece																			
B1_square	-1.20	0.67	1.13	0.96		-0.44	0.61	0.29				-0.64	0.41	-1.25				0.05	0.87
B2_keystone	-0.74	-0.45	0.03		0.22	-0.94	-0.58		-0.70	-0.41		-0.69	-0.96	-0.24	0.06	-0.35	-0.31	-0.43	0.36
B3_two-piece	-0.51	0.10	0.04		1.44	-0.71	1.59	2.46		0.95	1.42	0.80	1.02	0.15	-0.51	0.57	0.35	0.61	0.89
B4_two-piece	-0.06	-1.56	1.15		-0.25	-0.43	0.41	0.17		0.70	-0.65	-1.07	-0.72	0.04	0.46	-0.53	-0.38	-0.18	0.70
B5_two-piece	-1.55	-0.41	-0.73		-0.72	-0.08	0.25	-0.02		0.84	-0.38	-1.10	-0.67	-0.38	-0.18	-0.77	0.56	-0.36	0.62
B6_two-piece	-0.68	-0.21	-0.23		1.32	-0.11	0.81	0.32		0.90	-0.47	-0.18	-0.19	-0.25	0.14	0.07	-0.25	0.07	0.55
C1_square	-0.51	-0.20	-0.55	-0.35		-0.45	-0.80	-0.47				-0.70	-0.61	-0.19				-0.48	0.20
C2_keystone	0.03	0.14	-0.64		0.39	-0.14	-0.61		-0.52	-0.48		0.16	-0.68	-0.03	0.16	-0.30	0.00	-0.18	0.35
C3_two-piece	0.33	0.24	-0.40		-0.02	-0.93	-0.36	-0.56		0.24	0.34	0.20	-0.45	0.22	-0.82	-0.42	0.80	-0.11	0.49
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	-0.16	-0.29	-0.54			-0.30	0.45					-0.30	-0.35	0.76				-0.09	0.45
calibration_piston_2	-0.56	0.66	0.04			-0.31	-0.38					-0.20	0.27	-1.76				-0.28	0.71
Yi MAXIMUM	-1.55	-1.56	1.15	0.96	1.44	-0.94	1.59	2.46	-0.70	0.95	1.42	-1.10	1.02	-1.76	-0.82	-0.77	0.80	0.61	0.89
Yi MINIMUM	0.03	0.10	0.03	-0.35	-0.02	-0.08	0.25	-0.02	-0.52	0.24	0.34	0.16	-0.19	-0.03	0.06	0.07	0.00	0.05	0.20
Yi MEAN	-0.51	-0.12	-0.06	0.30	0.34	-0.44	0.13	0.31	-0.61	0.39	0.05	-0.34	-0.27	-0.27	-0.10	-0.25	0.11		
Yi STD	0.54	0.61	0.66	0.92	0.79	0.30	0.74	1.01	0.12	0.62	0.85	0.58	0.60	0.70	0.44	0.44	0.47		

bins		count	percent		
-3	yi le -3	0	0.0%		
-2	-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1	88.0%
-1	-2 lt yi le -1	7	5.6%	-2 < yi ≤ 2	99.2%
0	-1 lt yi le 0	70	56.0%	-3 < yi ≤ 3	100.0%
1	0 lt yi le 1	40	32.0%	>3	0.0%
2	1 lt yi le 2	7	5.6%		
3	2 lt yi le 3	1	0.8%		
	3 lt yi	0	0.0%		
	total	125	100.0%		



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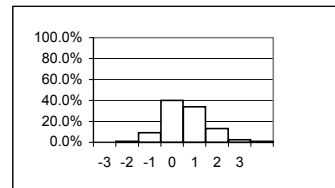
Heavy Duty Diesel Rating Workshop

Rater = Lopez, Frank

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	0.49	-0.27	-0.04	0.03		0.03	1.73	1.87				0.26	0.45	-1.65				0.29	1.00
A2_keystone	0.16	1.18	0.41		1.55	0.09	1.51		0.05	1.89		1.04	1.63	0.78	-0.53	-0.24	-0.24	0.66	0.81
A3_two-piece	0.23	-0.60	0.56		-0.19	-0.40	0.67	-0.14		1.24	0.34	0.64	0.15	-0.90	-0.93	0.70	-0.62	0.05	0.65
A4_two-piece	-0.87	-0.76	1.32		-0.02	0.15	1.74	1.28		-1.71	0.88	-0.64	0.43	-0.81	-1.21	-0.29	0.00	-0.03	1.01
A5_two-piece	-1.65	-0.24	-0.50		-0.37	0.34	-0.26	-0.88		0.53	0.11	-0.87	-1.00	-2.50	-1.33	-0.19	-0.42	-0.62	0.79
A6_two-piece	-0.72	0.62	2.29		0.29	-0.46	-0.84	-0.65		0.07	2.44	0.13	-0.38	-1.53	-1.35	-0.52	0.00	-0.04	1.14
B1_square																			
B2_keystone																			
B3_two-piece																			
B4_two-piece																			
B5_two-piece																			
B6_two-piece																			
C1_square	0.39	-0.11	-1.03	-0.35		-0.39	-0.21	-0.47				-0.05	-0.43	-0.38				-0.30	0.36
C2_keystone	-0.46	-0.61	1.26		0.99	-0.09	1.02		3.06	0.41		0.23	2.08	-0.66	-0.69	-0.30	0.00	0.45	1.12
C3_two-piece	-0.88	1.29	-0.41		-0.02	0.66	-0.50	0.07		0.39	1.16	-0.14	-0.30	-1.57	-0.82	-0.42	-0.77	-0.15	0.78
C4_two-piece	-0.65	-0.25	0.40		0.68	0.18	1.11	-0.13		-1.03	0.85	0.01	0.48	-1.01	-0.55	0.31	-0.47	0.00	0.66
C5_two-piece																			
C6_two-piece																			
calibration_piston_1																			
calibration_piston_2	-0.92	0.86	-0.38			0.45	0.22					0.06	0.67	-1.07				-0.01	0.71
Yi MAXIMUM	-1.65	1.29	2.29	-0.35	1.55	0.66	1.74	1.87	3.06	1.89	2.44	1.04	2.08	-2.50	-1.35	0.70	-0.77	0.66	1.14
Yi MINIMUM	0.16	-0.11	-0.04	0.03	-0.02	0.03	-0.21	0.07	0.05	0.07	0.11	0.01	0.15	-0.38	-0.53	-0.19	0.00	0.00	0.36
Yi MEAN	-0.45	0.10	0.35	-0.16	0.36	0.05	0.56	0.12	1.56	0.22	0.96	0.06	0.34	-1.03	-0.93	-0.12	-0.32		
Yi STD	0.67	0.75	0.97	0.27	0.66	0.36	0.93	0.96	2.13	1.15	0.82	0.53	0.90	0.84	0.34	0.41	0.30		

bins	count	percent			
-3	yi le -3	0	0.0%		
-2	-3 lt yi le -2	1	0.8%	-1 < yi ≤ 1	73.8%
-1	-2 lt yi le -1	12	9.2%	-2 < yi ≤ 2	96.2%
0	-1 lt yi le 0	52	40.0%	-3 < yi ≤ 3	99.2%
1	0 lt yi le 1	44	33.8%	>3	0.8%
2	1 lt yi le 2	17	13.1%		
3	2 lt yi le 3	3	2.3%		
	3 lt yi	1	0.8%		
	total	130	100.0%		



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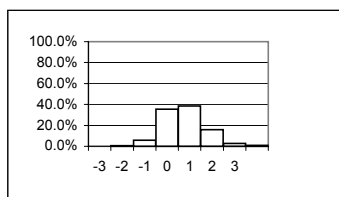
Heavy Duty Diesel Rating Workshop

Rater = Love, Ed

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD	
A1_square	-0.77	-0.29	1.16	0.03		-0.32	0.52	0.65				-0.61	-0.11	-0.20				0.01	0.60	
A2_keystone	-0.14	-0.33	3.45		0.26	0.12	-0.81		0.45	-0.16		0.06	1.04	0.78	0.21	-0.24	-0.24	0.32	1.02	
A3_two-piece	-0.39	-0.30	-0.66		-0.48	0.78	0.47	-0.87		0.26	0.34	0.01	-0.62	0.64	-1.33	-1.27	-0.62	-0.27	0.66	
A4_two-piece	-0.05	-0.79	-0.53		-0.37	0.10	0.69	0.11		0.21	-1.29	-0.85	-0.55	0.94	-0.34	-0.29	0.00	-0.20	0.58	
A5_two-piece	1.72	0.21	-0.54		1.22	0.67	-0.55	-0.13		-0.36	-2.07	1.45	0.36	0.75	0.66	0.88	-0.42	0.26	0.97	
A6_two-piece	0.90	1.74	-1.53		0.83	0.06	-0.96	-0.07		0.07	-0.83	1.30	0.30	1.08	0.83	1.57	0.00	0.35	0.95	
B1_square	-0.95	0.59	1.13	2.10		-0.06	0.61	0.82				-0.26	0.88	0.13				0.50	0.84	
B2_keystone	0.49	-0.54	-0.58		-0.19	-0.16	-0.09		0.87	0.28		-0.13	0.26	1.61	-0.40	-0.35	-0.31	0.05	0.61	
B3_two-piece	-0.80	0.52	-0.37		0.10	0.90	-1.13	-0.02		0.85	-1.58	-0.75	-0.58	0.24	1.43	-0.61	-1.13	-0.20	0.86	
B4_two-piece																				
B5_two-piece																				
B6_two-piece	0.62	-0.24	-0.25		0.17	1.24	-1.27	1.05		0.37	-0.61	0.18	-0.25	0.53	0.64	-0.27	-0.25	0.11	0.66	
C1_square	0.69	2.44	0.51	0.33		-0.42	1.02	0.58				0.69	1.15	0.35				0.73	0.74	
C2_keystone	2.56	-0.61	-0.96		-0.08	0.46	0.12		1.63	3.29		1.53	1.72	2.62	-0.55	-0.30	0.00	0.82	1.38	
C3_two-piece	1.09	-0.95	-0.97		0.42	0.89	-1.06	-0.61		0.39	-0.67	0.77	-0.54	0.77	-0.21	-0.13	-0.77	-0.11	0.76	
C4_two-piece	2.55	-1.72	-0.39		1.02	0.18	0.53	-0.04		0.98	-1.61	0.95	0.60	2.06	-0.29	0.31	-0.47	0.31	1.16	
C5_two-piece	0.71	0.33	-0.52		0.18	-0.58	-1.68	-0.64		0.06	-0.90	0.20	-1.13	0.99	1.55	0.09	-0.26	-0.11	0.84	
C6_two-piece	-0.22	-0.01	-0.43		0.65	1.29	-1.24	-0.18		0.01	-0.68	0.27	-0.46	0.36	1.08	-0.30	-0.26	-0.01	0.66	
calibration_piston_1	1.04	1.73	-0.99			1.25	0.25					1.52	1.41	-0.89				0.67	1.09	
calibration_piston_2	1.11	1.47	0.39			1.07	0.24					1.80	1.77	1.36				1.15	0.58	
Yi MAXIMUM	2.56	2.44	3.45	2.10	1.22	1.29	-1.68	1.05	1.63	3.29	-2.07	1.80	1.77	2.62	1.55	1.57	-1.13	1.15	1.38	
Yi MINIMUM	-0.05	-0.01	-0.25	0.03	-0.08	0.06	-0.09	-0.02	0.45	0.01	0.34	0.01	-0.11	0.13	-0.21	0.09	0.00	0.01	0.58	
Yi MEAN	0.56	0.18	-0.12	0.82	0.29	0.41	-0.24	0.05	0.98	0.48	-0.99	0.45	0.29	0.79	0.25	-0.07	-0.36			
Yi STD	1.05	1.08	1.14	1.12	0.52	0.61	0.84	0.58	0.60	0.92	0.68	0.84	0.88	0.81	0.86	0.69	0.33			

bins	count	percent		
-3	yi le -3	0	0.0%	
-2	-3 lt yi le -2	1	0.5%	-1 < yi ≤ 1 74.1%
-1	-2 lt yi le -1	12	5.7%	-2 < yi ≤ 2 95.8%
0	-1 lt yi le 0	75	35.4%	-3 < yi ≤ 3 99.1%
1	0 lt yi le 1	82	38.7%	>3 0.9%
2	1 lt yi le 2	34	16.0%	
3	2 lt yi le 3	6	2.8%	
	3 lt yi	2	0.9%	
	total	212	100.0%	



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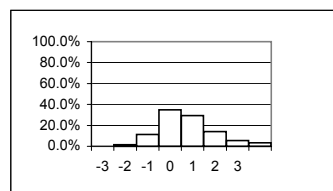
Heavy Duty Diesel Rating Workshop

Rater = Lowsky, John

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD	
A1_square	-0.99	1.15	-0.88	-0.69		-0.46	2.69	2.27				-0.24	0.97	1.09				0.49	1.33	
A2_keystone	0.26	-0.62	0.40		-0.41	-0.07	-0.18		0.12	0.21		-0.19	0.10	-0.93	0.95	-0.24	-0.24	-0.06	0.46	
A3_two-piece	-0.69	-0.70	-0.42		0.27	-0.98	-1.42	0.07		-2.25	0.34	-1.46	-0.66	1.22	1.26	-1.27	-0.62	-0.49	0.98	
A4_two-piece	0.76	-0.44	0.94		3.13	-0.98	-1.54	1.15		1.17	1.88	0.41	-0.13	2.16	0.78	3.70	0.00	0.86	1.44	
A5_two-piece																				
A6_two-piece	-0.98	-0.31	0.02		-0.70	-1.21	1.38	1.38		-0.11	0.28	-1.37	0.18	-0.81	2.19	-0.52	0.00	-0.04	1.02	
B1_square																				
B2_keystone																				
B3_two-piece																				
B4_two-piece																				
B5_two-piece																				
B6_two-piece																				
C1_square	-1.91	-0.26	-0.92	-0.82		-0.94	-1.02	-0.74				-1.98	-1.24	-1.84				-1.17	0.57	
C2_keystone	-0.98	-0.61	2.53		-0.67	-0.10	0.83		0.58	1.05		-1.04	1.10	0.60	0.16	-0.30	0.00	0.23	0.98	
C3_two-piece	-1.71	-0.61	-0.18		1.02	-1.40	0.17	1.24		3.41	1.44	0.31	0.36	-0.88	0.40	0.15	-0.25	0.23	1.25	
C4_two-piece	-0.30	-0.75	1.43		0.81	-0.01	0.14	3.14		2.43	1.61	0.65	1.66	0.06	0.48	1.29	-0.47	0.81	1.11	
C5_two-piece	-1.13	-0.46	0.54		-0.71	-0.81	0.70	3.12		-1.17	-0.79	-1.40	1.39	0.33	0.93	-1.07	-0.26	-0.05	1.23	
C6_two-piece	-0.39	-0.39	1.78		1.51	-0.69	0.21	3.17		0.01	-0.18	0.45	2.01	0.58	2.50	-0.30	-0.26	0.67	1.21	
calibration_piston_1																				
calibration_piston_2	-2.02	0.87	0.83			-0.12	0.71					-0.72	0.94	-0.72				-0.03	1.07	
Yi MAXIMUM	-2.02	1.15	2.53	-0.82	3.13	-1.40	2.69	3.17	0.58	3.41	1.88	-1.98	2.01	2.16	2.50	3.70	-0.62	-1.17	1.44	
Yi MINIMUM	0.26	-0.26	0.02	-0.69	0.27	-0.01	0.14	0.07	0.12	0.01	-0.18	-0.19	0.10	0.06	0.16	0.15	0.00	-0.03	0.46	
Yi MEAN	-0.84	-0.26	0.51	-0.76	0.47	-0.65	0.22	1.64	0.35	0.53	0.65	-0.55	0.56	0.07	1.07	0.16	-0.23			
Yi STD	0.84	0.62	1.06	0.10	1.30	0.49	1.20	1.40	0.32	1.73	1.00	0.90	0.96	1.14	0.80	1.52	0.21			

bins	count	percent		
-3	0	0.0%		
-2	2	1.4%	-1 < yi ≤ 1	64.3%
-1	16	11.2%	-2 < yi ≤ 2	89.5%
0	50	35.0%	-3 < yi ≤ 3	96.5%
1	42	29.4%	>3	3.5%
2	20	14.0%		
3	8	5.6%		
3 lt yi	5	3.5%		
total	143	100.0%		



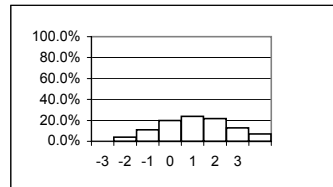
Heavy Duty Diesel Rating Workshop

Rater = Massicotte, Pierre

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD	
A1_square	-0.03	-0.53	0.92	1.57		3.84	1.31	1.87				2.62	2.12	0.93				1.46	1.26	
A2_keystone																				
A3_two-piece																				
A4_two-piece																				
A5_two-piece																				
A6_two-piece																				
B1_square	1.80	1.29	-0.82	-0.42		0.94	3.50	2.03				1.95	1.87	1.52				1.37	1.24	
B2_keystone																				
B3_two-piece																				
B4_two-piece																				
B5_two-piece																				
B6_two-piece																				
C1_square	-1.20	1.37	3.58	3.03		2.27	2.79	2.83				1.16	2.97	-2.38				1.64	1.98	
C2_keystone	1.18	3.91	1.75		-1.64	2.46	1.63		-0.76	-0.41		2.23	1.76	1.99		-0.30	0.00	1.06	1.56	
C3_two-piece	-0.07	0.28	2.07		-1.79	-0.15	0.47	1.98		-0.56	0.16	-0.66	1.55	-1.16	-0.21			0.15	1.15	
C4_two-piece	0.06	-0.08	2.17		-1.26	0.06	-1.25	1.12		-0.53	0.10	-0.42	0.26	0.65	0.48	0.31	-0.47	0.08	0.87	
C5_two-piece	0.01	3.15	1.28		-0.37	-0.40	0.34	0.96		-0.55	-1.33	0.27	1.86	0.11	2.17	-0.01	-0.26	0.48	1.19	
C6_two-piece	-1.87	0.77	2.05		-0.80	-1.70	-0.36	0.60		-0.56	0.61	-2.26	-1.06	-2.58	-1.28	-0.30	-0.26	-0.60	1.26	
calibration_piston_1																				
calibration_piston_2	0.86	-2.34	3.53			0.75	1.64					0.11	0.08	1.01				0.71	1.65	
Yi MAXIMUM	-1.87	3.91	3.58	3.03	-1.79	3.84	3.50	2.83	-0.76	-0.56	-1.33	2.62	2.97	-2.58	2.17	0.31	-0.47	1.64	1.98	
Yi MINIMUM	0.01	-0.08	-0.82	-0.42	-0.37	0.06	0.34	0.60	-0.76	-0.41	0.10	0.11	0.08	0.11	-0.21	-0.01	0.00	0.08	0.87	
Yi MEAN	0.08	0.87	1.83	1.39	-1.17	0.89	1.12	1.63	-0.76	-0.52	-0.11	0.55	1.27	0.01	0.29	-0.08	-0.25			
Yi STD	1.13	1.89	1.34	1.73	0.59	1.70	1.49	0.77		0.06	0.84	1.58	1.25	1.67	1.45	0.29	0.19			

bins	count	percent		
-3	0	0.0%		
-2	4	4.0%	-1 < yi ≤ 1	43.6%
-1	11	10.9%	-2 < yi ≤ 2	76.2%
0	20	19.8%	-3 < yi ≤ 3	93.1%
1	24	23.8%	> 3	6.9%
2	22	21.8%		
3	13	12.9%		
3 lt yi	7	6.9%		
total	101	100.0%		



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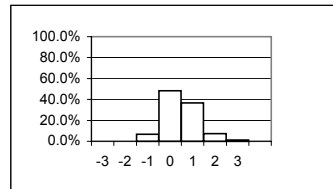
Heavy Duty Diesel Rating Workshop

Rater = May, Marianne

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square																			
A2_keystone																			
A3_two-piece																			
A4_two-piece																			
A5_two-piece																			
A6_two-piece																			
B1_square	0.41	0.43	1.77	0.73		-0.58	0.01	-0.02				-0.06	0.26	-0.14				0.28	0.64
B2_keystone	-0.09	-0.48	0.85		-0.97	-1.10	-0.03		-0.42	-0.45		-0.89	-0.66	-0.38	-1.25	-0.35	-0.31	-0.47	0.52
B3_two-piece	-0.76	0.65	0.02		0.47	0.27	0.20	0.39		-0.22	0.79	-0.05	0.13	-0.49	-0.99	0.57	0.79	0.12	0.54
B4_two-piece	-0.37	-1.06	0.42		-0.56	-0.15	0.66	-0.16		-0.24	1.79	-0.59	-0.60	-1.11	0.81	-0.53	2.46	0.05	1.01
B5_two-piece	-0.44	-0.30	-0.48		0.06	0.62	0.68	-0.19		-0.10	1.59	-0.03	0.02	1.36	-1.65	-0.21	2.23	0.21	0.96
B6_two-piece	-0.50	-0.19	-0.28		-0.32	-0.54	1.16	0.61		-0.48	1.84	-0.32	-0.22	0.14	0.31	-0.27	3.75	0.31	1.16
C1_square	-0.85	-0.47	-0.98	-1.03		-0.60	-0.89	-0.68				-1.09	-1.04	0.72				-0.69	0.54
C2_keystone	-0.24	0.14	-1.11		-0.57	-0.83	-0.75		-0.72	-1.07		-0.82	-1.38	-0.41	-0.26	-0.30	0.00	-0.59	0.44
C3_two-piece	0.29	0.55	0.49		0.16	2.22	0.65	-0.76		-0.51	1.71	0.76	0.22	0.91	-0.21	0.15	2.90	0.64	0.99
C4_two-piece	0.12	0.34	0.08		-0.27	0.46	0.27	0.13		-0.36	0.85	0.32	0.50	-0.06	0.74	-0.68	2.02	0.30	0.63
C5_two-piece	-0.16	-0.19	1.74		-0.78	-0.27	1.15	-0.47		-0.76	1.52	-0.50	0.11	0.77	-0.61	-1.07	3.61	0.27	1.27
C6_two-piece	0.10	-0.79	-0.12		0.49	0.94	1.17	0.25		-0.76	2.87	0.88	0.97	0.73	-0.02	-0.30	3.61	0.67	1.22
calibration_piston_1	-0.32	-0.03	0.95			0.12	-0.73					-0.11	0.05	1.72				0.21	0.77
calibration_piston_2	0.35	0.69	-0.09			-0.26	-0.86					0.31	0.20	-0.37				0.00	0.49
Yi MAXIMUM	-0.85	-1.06	1.77	-1.03	-0.97	2.22	1.17	-0.76	-0.72	-1.07	2.87	-1.09	-1.38	1.72	-1.65	-1.07	3.75	-0.69	1.27
Yi MINIMUM	-0.09	-0.03	0.02	0.73	0.06	0.12	0.01	-0.02	-0.42	-0.10	0.79	-0.03	0.02	-0.06	-0.02	0.15	0.00	0.00	0.44
Yi MEAN	-0.18	-0.05	0.23	-0.15	-0.23	0.02	0.19	-0.09	-0.57	-0.50	1.62	-0.16	-0.10	0.24	-0.31	-0.30	2.11		
Yi STD	0.40	0.54	0.88	1.24	0.51	0.86	0.76	0.45	0.21	0.30	0.65	0.59	0.62	0.80	0.82	0.44	1.49		

bins	count	percent		
-3	yi le -3	0	0.0%	
-2	-3 lt yi le -2	0	0.0%	-1 < yi ≤ 1 84.8%
-1	-2 lt yi le -1	11	6.7%	-2 < yi ≤ 2 98.8%
0	-1 lt yi le 0	79	48.2%	-3 < yi ≤ 3 100.0%
1	0 lt yi le 1	60	36.6%	>3 0.0%
2	1 lt yi le 2	12	7.3%	
3	2 lt yi le 3	2	1.2%	
	3 lt yi	0	0.0%	
	total	164	100.0%	



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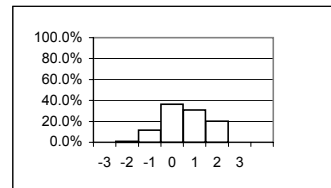
Heavy Duty Diesel Rating Workshop

Rater = Mundt, Matthias

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square																			
A2_keystone																			
A3_two-piece																			
A4_two-piece																			
A5_two-piece																			
A6_two-piece																			
B1_square	0.14	0.14	-1.46	-1.34		0.34	-0.90	-0.89				0.26	-0.38	0.13				-0.39	0.70
B2_keystone	0.67	-0.34	-1.55		-2.20	1.25	-0.39		-1.34	-0.85		-0.18	-1.19	-0.24	-0.53	-0.35	-0.31	-0.54	0.88
B3_two-piece	1.54	0.24	-0.80		-0.33	1.54	-1.52	-1.12		0.63	0.13	1.61	-0.77	0.33	0.94	0.57	-1.13	0.13	1.04
B4_two-piece	-0.67	0.50	-0.60		0.59	-0.86	0.31	-0.53		1.23	-1.18	-0.01	-0.26	-1.34	0.11	-0.13	-0.38	-0.21	0.70
B5_two-piece	-0.36	1.06	-0.45		-0.35	0.32	-1.05	-0.53		1.60	1.07	0.04	-0.63	1.52	-0.48	-0.55	-0.68	0.03	0.86
B6_two-piece	1.27	-0.34	-0.29		0.34	-1.12	-0.25	-0.33		1.44	-0.74	0.37	-0.28	0.53	1.32	-0.27	-0.25	0.09	0.77
C1_square	0.66	0.96	0.06	-0.35		1.26	1.04	-0.47				1.46	1.06	-0.74				0.49	0.80
C2_keystone	0.69	0.39	-0.39		-0.68	0.74	-0.34		0.60	0.10		0.40	0.21	-0.53	-1.11	-0.30	0.00	-0.02	0.56
C3_two-piece																			
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	1.27	0.10	-0.99			1.32	1.35					1.58	1.43	0.21				0.78	0.92
calibration_piston_2																			
Yi MAXIMUM	1.54	1.06	-1.55	-1.34	-2.20	1.54	-1.52	-1.12	-1.34	1.60	-1.18	1.61	1.43	1.52	1.32	0.57	-1.13	0.78	1.04
Yi MINIMUM	0.14	0.10	0.06	-0.35	-0.33	0.32	-0.25	-0.33	0.60	0.10	0.13	-0.01	0.21	0.13	0.11	-0.13	0.00	-0.02	0.56
Yi MEAN	0.58	0.30	-0.72	-0.85	-0.44	0.53	-0.19	-0.65	-0.37	0.69	-0.18	0.62	-0.09	-0.01	0.04	-0.17	-0.46		
Yi STD	0.75	0.49	0.54	0.70	0.99	0.97	0.95	0.30	1.37	0.94	0.99	0.73	0.86	0.82	0.94	0.39	0.40		

bins	count	percent		
-3	0	0.0%		
-2	1	1.0%		
-1	12	11.5%	-1 < yi ≤ 1	67.3%
0	38	36.5%	-2 < yi ≤ 2	99.0%
1	32	30.8%	-3 < yi ≤ 3	100.0%
2	21	20.2%	>3	0.0%
3	0	0.0%		
total	104	100.0%		



October 23, 2003

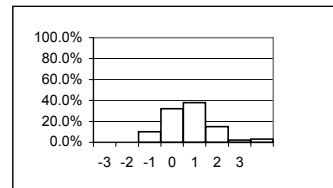
Heavy Duty Diesel Rating Workshop

Rater = Mundt, Tarsten

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	0.84	0.67	1.16	1.06		1.51	0.34	0.65				1.70	1.48	1.90				1.13	0.51
A2_keystone																			
A3_two-piece																			
A4_two-piece																			
A5_two-piece																			
A6_two-piece																			
B1_square	-1.35	-0.97	1.20	1.30		0.44	0.01	-0.60				-0.58	-0.21	-1.25				-0.20	0.94
B2_keystone	-0.51	0.37	-0.33		-0.50	1.11	3.02		0.67	3.38		0.42	2.16	0.90	1.82	1.30	-0.31	0.96	1.26
B3_two-piece	2.52	0.37	-0.44		-0.11	-1.62	-0.28	0.14		0.63	-0.82	1.82	0.07	3.17	0.46	-0.02	0.64	0.44	1.24
B4_two-piece	-0.05	-0.10	0.14		-1.68	-0.19	0.25	1.23		0.08	-1.18	-0.68	0.22	0.95	0.81	-0.13	-0.38	-0.05	0.76
B5_two-piece	-0.90	-0.72	-0.39		-1.27	0.71	-0.73	0.55		0.27	-0.64	-1.07	-0.64	-0.69	1.00	0.36	-0.68	-0.32	0.71
B6_two-piece	-0.57	-0.28	-0.25		-1.68	0.77	-1.15	0.46		0.05	-0.47	-1.10	-0.50	0.66	1.49	-0.27	-0.25	-0.21	0.81
C1_square																			
C2_keystone																			
C3_two-piece																			
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	0.08	0.00	0.31			0.64	-0.30					0.44	0.44	-0.89				0.09	0.49
calibration_piston_2	1.49	0.63	0.13			0.79	-0.39					1.46	0.78	-0.72				0.52	0.80
Yi MAXIMUM	2.52	-0.97	1.20	1.30	-1.68	-1.62	3.02	1.23	0.67	3.38	-1.18	1.82	2.16	3.17	1.82	1.30	-0.68	1.13	1.26
Yi MINIMUM	-0.05	0.00	0.13	1.06	-0.11	-0.19	0.01	0.14	0.67	0.05	-0.47	0.42	0.07	0.66	0.46	-0.02	-0.25	-0.05	0.49
Yi MEAN	0.17	0.00	0.17	1.18	-1.05	0.46	0.08	0.41	0.67	0.88	-0.78	0.27	0.42	0.45	1.11	0.25	-0.20		
Yi STD	1.24	0.58	0.63	0.17	0.71	0.91	1.20	0.61		1.41	0.30	1.18	0.92	1.47	0.54	0.63	0.50		

bins	count	percent		
-3	0	0.0%		
-2	0	0.0%	-1 < yi ≤ 1	70.0%
-1	10	10.0%	-2 < yi ≤ 2	95.0%
0	32	32.0%	-3 < yi ≤ 3	97.0%
1	38	38.0%	>3	3.0%
2	15	15.0%		
3	2	2.0%		
	3	3.0%		
total	100	100.0%		



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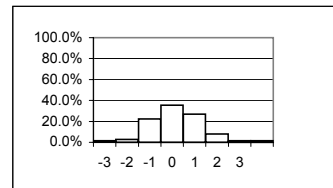
Heavy Duty Diesel Rating Workshop

Rater = Pansza, Mike

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square																			
A2_keystone																			
A3_two-piece	-0.46	-0.88	-0.23		-0.29	-0.27	-0.62	-0.15		0.59	-3.67	-1.38	-0.47	0.83	0.27	1.09	-0.62	-0.42	1.11
A4_two-piece	-0.54	-0.42	2.35		-1.01	-0.91	-1.65	0.11		-1.92	-0.46	-1.12	-0.72	-0.11	-1.05	-0.29	0.00	-0.52	0.98
A5_two-piece	0.22	0.53	-0.42		0.36	-2.20	-1.45	-0.13		-1.25	-1.34	-0.65	-1.01	1.25	1.41	-1.82	-0.42	-0.46	1.08
A6_two-piece	-0.82	0.30	0.94		-1.07	-1.71	0.98	-0.07		-0.89	-0.67	-1.83	-0.60	-0.66	-0.26	-0.52	0.00	-0.46	0.81
B1_square																			
B2_keystone																			
B3_two-piece	0.82	-3.68	3.73		-1.89	-2.03	1.45	0.59		-0.12	-1.76	-0.82	3.17	0.79	1.91	-1.19	-1.13	-0.01	2.05
B4_two-piece	-0.07	0.02	-0.12		0.52	-0.22	1.18	1.12		-1.71	-0.83	-0.25	0.50	0.26	-1.64	-0.13	-0.38	-0.12	0.83
B5_two-piece	-1.40	-1.35	1.09		-0.64	-2.19	-0.52	0.35		-0.29	-0.38	-1.44	-0.80	-1.01	1.58	-0.66	-0.68	-0.56	0.97
B6_two-piece	-0.93	-0.67	-0.19		0.64	-1.57	0.64	2.59		-1.65	-0.27	-1.17	-0.22	1.18	1.15	-0.27	-0.25	-0.07	1.14
C1_square																			
C2_keystone																			
C3_two-piece	0.55	-1.69	0.98		0.58	-0.75	0.72	0.03		-0.92	-0.67	0.04	0.45	0.91	1.01	0.72	-0.77	0.08	0.84
C4_two-piece	0.48	0.86	0.66		0.69	0.12	-1.03	0.40		-1.12	-0.85	0.37	0.23	-0.18	0.74	1.29	-0.47	0.15	0.73
C5_two-piece																			
C6_two-piece																			
calibration_piston_1																			
calibration_piston_2	-0.59	-1.72	-1.22			-0.37	-1.03					-1.43	-2.24	-0.03				-1.08	0.73
Yi MAXIMUM	-1.40	-3.68	3.73		-1.89	-2.20	-1.65	2.59		-1.92	-3.67	-1.83	3.17	1.25	1.91	-1.82	-1.13	-1.08	2.05
Yi MINIMUM	-0.07	0.02	-0.12		-0.29	0.12	-0.52	0.03		-0.12	-0.27	0.04	-0.22	-0.03	-0.26	-0.13	0.00	-0.01	0.73
Yi MEAN	-0.25	-0.79	0.69		-0.21	-1.10	-0.12	0.48		-0.93	-1.09	-0.88	-0.16	0.29	0.51	-0.18	-0.47		
Yi STD	0.70	1.30	1.39		0.91	0.87	1.13	0.84		0.79	1.01	0.69	1.35	0.76	1.17	0.98	0.35		

bins	count	percent		
-3	2	1.4%		
-2	4	2.9%		
-1	31	22.5%	-1 < yi ≤ 1	62.3%
0	49	35.5%	-2 < yi ≤ 2	92.8%
1	37	26.8%	-3 < yi ≤ 3	97.1%
2	11	8.0%	>3	2.9%
3	2	1.4%		
total	138	100.0%		



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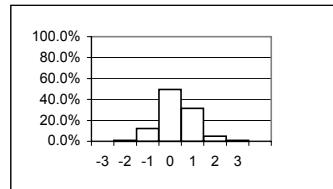
Heavy Duty Diesel Rating Workshop

Rater = Rodriguez, Jesus

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD	
A1_square																				
A2_keystone																				
A3_two-piece																				
A4_two-piece																				
A5_two-piece																				
A6_two-piece																				
B1_square	-0.46	0.23	0.35	-0.19		-0.06	-0.59	-0.76				-0.23	-0.16	-1.25				-0.31	0.47	
B2_keystone																				
B3_two-piece																				
B4_two-piece																				
B5_two-piece																				
B6_two-piece	1.27	-0.23	-0.33		0.18	-1.14	0.62	-1.01		-0.58	-0.61	0.19	-0.28	-1.54	-2.05	-0.27	-0.25	-0.40	0.83	
C1_square	0.04	0.39	-0.55	-0.35		1.01	1.93	2.68				0.83	0.98	-0.01				0.70	1.02	
C2_keystone	-0.14	-0.61	0.05		-0.16	-0.04	-0.32		-0.76	-0.52		-0.49	-0.71	-1.04	-1.26	-0.30	0.00	-0.45	0.40	
C3_two-piece	0.76	-0.27	0.38		-0.12	-0.11	-0.43	-0.12		-0.26	0.06	0.36	0.07	0.91	-0.82	0.15	-0.25	0.02	0.45	
C4_two-piece	-0.66	-1.62	-0.87		-0.85	0.26	0.15	-0.58		0.81	-1.04	-0.92	-0.99	-1.83	-1.97	-0.68	-0.47	-0.75	0.76	
C5_two-piece	0.36	-0.89	1.01		0.00	0.33	0.71	-0.87		-0.25	0.09	0.13	-0.03	-0.88	0.00	0.09	-0.26	-0.03	0.55	
C6_two-piece	-0.02	0.25	-0.09		-0.37	1.92	0.45	-0.60		0.97	-0.48	0.21	0.29	-0.16	-0.81	-0.20	-0.26	0.07	0.68	
calibration_piston_1																				
calibration_piston_2	-1.61	0.11	-0.30			-0.92	1.00					-1.21	-0.10	-1.07				-0.51	0.85	
Yi MAXIMUM	-1.61	-1.62	1.01	-0.35	-0.85	1.92	1.93	2.68	-0.76	0.97	-1.04	-1.21	-0.99	-1.83	-2.05	-0.68	-0.47	-0.75	1.02	
Yi MINIMUM	-0.02	0.11	0.05	-0.19	0.00	-0.04	0.15	-0.12	-0.76	-0.25	0.06	0.13	-0.03	-0.01	0.00	0.09	0.00	0.02	0.40	
Yi MEAN	-0.05	-0.29	-0.04	-0.27	-0.22	0.14	0.39	-0.18	-0.76	0.03	-0.40	-0.13	-0.10	-0.76	-1.15	-0.20	-0.25			
Yi STD	0.83	0.66	0.56	0.11	0.36	0.93	0.80	1.29		0.68	0.48	0.65	0.57	0.86	0.78	0.30	0.15			

bins	count	percent		
-3	yi le -3	0	0.0%	
-2	-3 lt yi le -2	1	1.0%	-1 < yi ≤ 1 81.0%
-1	-2 lt yi le -1	13	12.4%	-2 < yi ≤ 2 98.1%
0	-1 lt yi le 0	52	49.5%	-3 < yi ≤ 3 100.0%
1	0 lt yi le 1	33	31.4%	>3 0.0%
2	1 lt yi le 2	5	4.8%	
3	2 lt yi le 3	1	1.0%	
	3 lt yi	0	0.0%	
	total	105	100.0%	



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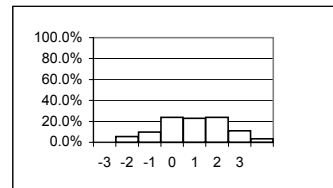
Heavy Duty Diesel Rating Workshop

Rater = Sanchez, Arthur

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square																			
A2_keystone																			
A3_two-piece																			
A4_two-piece																			
A5_two-piece																			
A6_two-piece																			
B1_square	0.92	-1.70	-0.17	-0.19		-1.21	1.21	1.35				-0.76	-1.02	0.69				-0.09	1.08
B2_keystone	1.09	2.95	-0.23		1.33	2.55	-0.75		-0.66	0.56		2.62	1.24	1.61	2.28	3.76	1.68	1.43	1.36
B3_two-piece	-0.38	-0.39	0.12		1.60	-0.27	-0.58	0.91		1.06	0.42	0.52	0.22	-0.94	-0.51	2.04	1.38	0.35	0.89
B4_two-piece	3.13	1.10	-0.20		2.50	3.28	-2.26	-0.22		0.50	0.68	2.98	1.89	2.09	0.22	3.43	2.46	1.44	1.64
B5_two-piece	1.93	2.12	-0.28		1.67	0.09	-0.07	2.27		0.00	-0.15	1.97	1.88	-1.96	-1.36	1.04	1.40	0.70	1.34
B6_two-piece	1.81	3.69	-0.25		-2.13	0.63	-1.04	0.76		0.27	1.77	2.64	0.49	0.53	-0.70	-0.27	-0.25	0.53	1.48
C1_square	0.48	1.14	1.03	1.00		0.79	0.56	1.10				1.11	1.38	-0.19				0.84	0.46
C2_keystone																			
C3_two-piece																			
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	-1.44	-1.87	0.63			-2.66	-0.71					-2.70	-2.90	-1.30				-1.62	1.19
calibration_piston_2																			
Yi MAXIMUM	3.13	3.69	1.03	1.00	2.50	3.28	-2.26	2.27	-0.66	1.06	1.77	2.98	-2.90	2.09	2.28	3.76	2.46	-1.62	1.64
Yi MINIMUM	-0.38	-0.39	0.12	-0.19	1.33	0.09	-0.07	-0.22	-0.66	0.00	-0.15	0.52	0.22	-0.19	0.22	-0.27	-0.25	-0.09	0.46
Yi MEAN	0.94	0.88	0.08	0.40	0.99	0.40	-0.45	1.03	-0.66	0.48	0.68	1.05	0.40	0.07	-0.01	2.00	1.33		
Yi STD	1.42	2.06	0.49	0.84	1.80	1.91	1.05	0.81		0.39	0.81	1.97	1.65	1.42	1.40	1.68	0.99		

bins	count	percent		
-3	yi le -3	0	0.0%	
-2	-3 lt yi le -2	5	5.4%	-1 < yi ≤ 1 46.7%
-1	-2 lt yi le -1	9	9.8%	-2 < yi ≤ 2 80.4%
0	-1 lt yi le 0	22	23.9%	-3 < yi ≤ 3 96.7%
1	0 lt yi le 1	21	22.8%	>3 3.3%
2	1 lt yi le 2	22	23.9%	
3	2 lt yi le 3	10	10.9%	
	3 lt yi	3	3.3%	
	total	92	100.0%	



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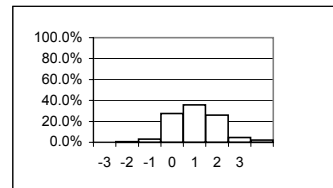
Heavy Duty Diesel Rating Workshop

Rater = Tschirhart, Garland

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	1.71	-0.81	1.16	1.06		0.23	-0.49	-0.57				0.64	-0.17	0.13				0.29	0.83
A2_keystone	0.37	1.06	-0.63		1.59	3.12	-0.26		-0.21	0.51		1.85	0.29	1.12	-0.16	-0.24	-0.24	0.58	1.05
A3_two-piece	1.02	0.88	2.19		0.75	2.96	0.77	3.50		0.68	0.34	1.92	3.54	0.64	-0.13	2.67	-0.62	1.41	1.30
A4_two-piece	2.40	-0.10	-0.05		-0.47	2.52	1.11	-0.41		0.00	1.21	1.04	0.93	0.59	0.54	-0.29	0.00	0.60	0.94
A5_two-piece	0.08	-0.84	0.01		1.84	1.57	0.31	-0.66		0.53	0.60	1.74	0.52	-1.00	1.66	1.28	-0.42	0.48	0.97
A6_two-piece	-0.95	-1.25	-0.79		0.35	1.93	-1.43	0.51		0.07	1.06	-0.41	-1.31	-0.81	1.92	2.96	0.00	0.12	1.34
B1_square	1.21	-0.34	1.13	0.96		1.71	0.01	0.29				1.67	1.05	2.07				0.97	0.78
B2_keystone	2.01	0.26	-0.99		1.02	0.68	-0.09		1.53	0.17		1.26	1.26	1.47	0.32	-0.35	-0.31	0.59	0.87
B3_two-piece																			
B4_two-piece																			
B5_two-piece																			
B6_two-piece																			
C1_square	0.92	-0.85	0.51	0.33		-0.32	0.11	0.05				0.24	-0.25	0.54				0.13	0.50
C2_keystone	1.27	-0.61	-0.83		-0.43	0.60	0.05		0.48	-0.48		0.43	0.07	0.10	0.30	-0.30	0.00	0.05	0.56
C3_two-piece																			
C4_two-piece																			
C5_two-piece																			
C6_two-piece																			
calibration_piston_1	-0.72	1.42	-0.54			1.85	-0.39					0.93	1.31	-2.12				0.22	1.37
calibration_piston_2	0.46	-0.60	-0.48			1.93	-0.74					0.77	-0.28	1.36				0.30	0.99
Yi MAXIMUM	2.40	1.42	2.19	1.06	1.84	3.12	-1.43	3.50	1.53	0.68	1.21	1.92	3.54	-2.12	1.92	2.96	-0.62	1.41	1.37
Yi MINIMUM	0.08	-0.10	0.01	0.33	0.35	0.23	0.01	0.05	-0.21	0.00	0.34	0.24	0.07	0.10	-0.13	-0.24	0.00	0.05	0.50
Yi MEAN	0.81	-0.15	0.06	0.78	0.67	1.56	-0.09	0.39	0.60	0.21	0.80	1.01	0.58	0.34	0.64	0.82	-0.23		
Yi STD	1.02	0.87	0.99	0.40	0.91	1.07	0.67	1.44	0.88	0.40	0.41	0.72	1.21	1.18	0.83	1.48	0.24		

bins		count	percent		
-3	yi le -3	0	0.0%		
-2	-3 lt yi le -2	1	0.7%	-1 < yi ≤ 1	63.4%
-1	-2 lt yi le -1	4	3.0%	-2 < yi ≤ 2	92.5%
0	-1 lt yi le 0	37	27.6%	-3 < yi ≤ 3	97.8%
1	0 lt yi le 1	48	35.8%	>3	2.2%
2	1 lt yi le 2	35	26.1%		
3	2 lt yi le 3	6	4.5%		
	3 lt yi	3	2.2%		
	total	134	100.0%		



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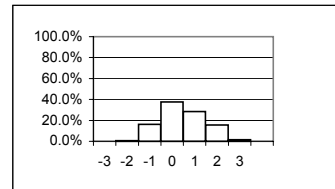
Heavy Duty Diesel Rating Workshop

Rater = Verlinde, Marcel

YI VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	0.34	-0.34	-1.24	-1.00		-0.35	-1.14	-0.97				-0.30	-0.85	-1.47				-0.73	0.55
A2_keystone	1.46	1.19	0.04		-1.44	0.33	1.10		-0.48	0.28		0.86	0.71	2.10	0.11	-0.24	-0.24	0.41	0.91
A3_two-piece	-1.23	-1.32	-0.76		-1.72	-0.90	1.09	-0.08		-1.73	-1.00	-2.35	-0.55	-1.83	-0.88	0.30	-0.62	-0.91	0.88
A4_two-piece	0.60	-0.91	-1.07		-1.18	-1.06	-0.14	-0.93		-0.43	-0.96	-1.39	-1.61	-0.58	-1.56	-0.29	0.00	-0.77	0.62
A5_two-piece	1.04	1.31	0.20		1.27	-1.23	-0.43	-1.20		-1.03	0.36	0.94	-0.20	-0.09	-0.21	1.05	-0.42	0.09	0.88
A6_two-piece	1.16	0.13	1.41		-1.83	-0.14	-1.26	-0.07		-1.13	0.28	-0.17	0.13	0.80	-0.97	-0.52	0.00	-0.15	0.90
B1_square	0.80	1.09	-0.69	-1.34		-0.25	-0.84	-0.44				0.44	0.06	1.02				-0.01	0.84
B2_keystone	1.48	2.29	1.56		1.02	0.14	1.12		-0.54	0.05		1.57	1.33	1.28	1.40	-0.35	-0.31	0.86	0.88
B3_two-piece	1.33	-0.19	-0.18		-1.01	0.44	-0.52	-0.38		-1.08	0.13	0.58	-0.12	0.76	0.36	0.57	-1.13	-0.03	0.72
B4_two-piece	-0.54	1.98	0.25		-0.42	-0.12	-0.85	-0.16		0.18	-0.74	0.80	0.90	-0.26	0.71	-0.13	-0.38	0.08	0.75
B5_two-piece																			
B6_two-piece																			
C1_square	1.29	0.85	-0.92	-1.03		-0.95	-0.25	0.05				0.36	-0.23	1.06				0.02	0.85
C2_keystone	0.91	-0.61	-0.23		1.59	-1.04	-0.98		-0.62	-0.59		0.79	-0.55	0.40	-1.26	1.79	0.00	-0.03	0.98
C3_two-piece	1.75	-1.47	-0.76		0.75	-1.53	-1.03	-0.56		0.19	-0.85	0.95	-0.46	1.32	-0.76	1.86	-0.77	-0.09	1.14
C4_two-piece	1.20	0.46	0.01		-0.73	-0.12	0.61	-0.27		-0.53	1.04	0.44	0.55	0.22	-0.90	1.29	-0.47	0.19	0.69
C5_two-piece	1.95	1.27	0.24		1.71	-0.95	-0.33	-0.66		0.47	0.51	2.04	0.93	-0.44	0.27	2.41	-0.26	0.61	1.07
C6_two-piece	0.47	1.95	0.51		-0.73	0.35	-1.03	-1.03		-0.38	-0.29	0.15	-0.32	-0.03	-0.45	-0.30	-0.26	-0.09	0.74
calibration_piston_1																			
calibration_piston_2	0.91	0.21	-0.61			-0.72	-0.57					0.21	-0.32	0.67				-0.03	0.62
Yi MAXIMUM	1.95	2.29	1.56	-1.34	-1.83	-1.53	-1.26	-1.20	-0.62	-1.73	1.04	-2.35	-1.61	2.10	-1.56	2.41	-1.13	-0.91	1.14
Yi MINIMUM	0.34	0.13	0.01	-1.00	-0.42	-0.12	-0.14	0.05	-0.48	0.05	0.13	0.15	0.06	-0.03	0.11	-0.13	0.00	-0.01	0.55
Yi MEAN	0.88	0.46	-0.13	-1.12	-0.21	-0.48	-0.32	-0.52	-0.55	-0.44	-0.15	0.35	-0.04	0.29	-0.32	0.57	-0.37		
Yi STD	0.80	1.16	0.80	0.19	1.30	0.61	0.82	0.41	0.07	0.66	0.72	1.03	0.74	1.02	0.85	1.00	0.33		

bins	count	percent		
-3	0	0.0%		
-2	1	0.5%	-1 < yi ≤ 1	66.2%
-1	33	16.2%	-2 < yi ≤ 2	98.0%
0	77	37.7%	-3 < yi ≤ 3	100.0%
1	58	28.4%	>3	0.0%
2	32	15.7%		
3	3	1.5%		
3 lt yi	0	0.0%		
total	204	100.0%		



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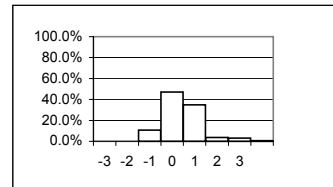
Heavy Duty Diesel Rating Workshop

Rater = Viera, Ralph

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD
A1_square	1.32	-0.37	-0.88	-0.79		-0.55	-1.04	-0.89				-0.01	-0.80	-0.04				-0.40	0.70
A2_keystone	0.30	0.75	-1.04		0.86	0.37	-1.27		-0.64	-0.64		0.53	-1.23	0.09	-1.27	-0.24	-0.24	-0.26	0.76
A3_two-piece	0.41	-0.04	-0.14		-0.13	-0.68	0.75	0.21		0.96	0.34	0.61	0.35	0.25	-0.73	0.30	0.30	0.18	0.47
A4_two-piece																			
A5_two-piece	-0.69	0.73	2.75		0.75	0.19	2.09	2.85		0.09	1.57	0.88	2.94	-0.38	-0.58	1.73	-0.42	0.97	1.29
A6_two-piece	-0.42	-1.69	-0.29		0.73	-0.36	0.65	-1.46		3.08	0.39	0.54	-0.90	-0.08	-0.26	-0.52	0.00	-0.04	1.12
B1_square	0.66	-0.17	-1.20	-1.34		-0.34	-0.78	-0.50				-0.03	-0.70	-0.97				-0.54	0.60
B2_keystone																			
B3_two-piece																			
B4_two-piece																			
B5_two-piece																			
B6_two-piece																			
C1_square	0.66	0.99	-0.66	-0.49		-0.95	-0.80	-0.58				-0.03	-0.25	-0.56				-0.26	0.64
C2_keystone	-0.13	0.14	0.33		-0.04	-0.27	-0.63		0.15	-0.74		-0.17	-0.30	-0.41	-0.12	-0.30	0.00	-0.18	0.30
C3_two-piece	-0.91	0.98	-0.45		0.94	-0.53	0.49	1.11		-0.46	1.34	-0.06	0.50	-1.98	-0.82	1.01	-0.25	0.06	0.95
C4_two-piece	-0.09	-0.03	-1.21		0.46	-0.10	-0.54	-0.90		0.14	1.39	0.17	-0.95	-1.01	-0.29	0.31	2.02	-0.04	0.88
C5_two-piece	0.35	-0.37	-0.64		0.55	0.60	0.39	-0.40		2.01	0.21	0.79	0.32	0.77	-1.08	0.62	-0.26	0.26	0.74
C6_two-piece	0.15	0.15	0.38		0.90	-0.55	1.33	-0.09		0.40	-0.18	0.63	0.84	-0.52	-0.65	-0.30	-0.26	0.15	0.59
calibration_piston_1	0.80	0.35	0.04			-0.56	-0.35					0.07	-0.29	0.62				0.09	0.48
calibration_piston_2	-1.11	-0.08	-0.57			-1.17	-0.96					-1.31	-1.00	-1.07				-0.91	0.40
Yi MAXIMUM	1.32	-1.69	2.75	-1.34	0.94	-1.17	2.09	2.85	-0.64	3.08	1.57	-1.31	2.94	-1.98	-1.27	1.73	2.02	0.97	1.29
Yi MINIMUM	-0.09	-0.03	0.04	-0.49	-0.04	-0.10	-0.35	-0.09	0.15	0.09	-0.18	-0.01	-0.25	-0.04	-0.12	-0.24	0.00	-0.04	0.30
Yi MEAN	0.09	0.10	-0.26	-0.87	0.56	-0.35	-0.05	-0.06	-0.25	0.54	0.72	0.19	-0.10	-0.38	-0.64	0.29	0.10		
Yi STD	0.70	0.69	1.01	0.43	0.39	0.49	1.01	1.24	0.56	1.29	0.69	0.56	1.08	0.73	0.38	0.74	0.75		

bins	count	percent		
-3	0	0.0%		
-2	0	0.0%		
-1	17	10.6%	-1 < yi ≤ -1	82.0%
0	76	47.2%	-2 < yi ≤ 2	96.3%
1	56	34.8%	-3 < yi ≤ 3	99.4%
2	6	3.7%	>3	0.6%
3	5	3.1%		
3 lt yi	1	0.6%		
total	161	100.0%		



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Heavy Duty Diesel Rating Workshop

Rater = Yanchar, Paul

Yi VALUES

	Groove 1	Groove 2	Groove 3	Groove 4	Land 1	Land 2	Land 3	Land 4	Upper Skirt	Under-crown	Oil Gallery	UWPD	WPD	TGF	2nd GF	TLHC, %	TLFC, %	MEAN	STD	
A1_square	-0.31	-0.01	-1.24	-1.00		-0.23	-0.90	-0.97				-0.39	-0.64	-1.00				-0.67	0.41	
A2_keystone	0.23	0.56	-0.63		0.85	-0.95	0.03		-0.68	-0.71		0.11	-0.67	-1.62	-0.71	-0.24	-0.24	-0.33	0.65	
A3_two-piece	-0.28	1.14	-1.71		-0.73	-0.21	0.59	-0.40		0.52	0.34	0.12	-0.35	-0.33	0.66	-0.09	0.30	-0.03	0.68	
A4_two-piece	-0.05	-0.22	-0.83		-0.17	0.11	-0.08	-0.41		0.85	-0.46	-0.19	-0.45	-0.46	-0.34	-0.29	0.00	-0.20	0.37	
A5_two-piece	-0.83	0.26	-0.45		-0.95	0.03	0.69	-0.80		0.08	-0.01	-0.95	-0.69	-0.25	-0.58	-0.53	-0.42	-0.36	0.48	
A6_two-piece	-0.26	0.61	-1.37		-0.12	0.40	0.52	-0.77		0.19	-0.75	-0.23	-0.59	-0.52	-1.08	-0.52	0.00	-0.30	0.58	
B1_square	-0.25	1.19	-0.82	-0.88		-0.10	0.01	-1.02				0.08	0.12	-1.25				-0.29	0.72	
B2_keystone	-0.37	-0.50	-0.28		0.87	-0.78	-0.29		0.05	-0.45		-0.33	-0.45	-0.52	-0.40	-0.35	-0.31	-0.29	0.38	
B3_two-piece	0.05	0.68	-0.45		0.34	1.01	0.31	-0.30		0.95	-0.53	0.64	-0.19	-0.21	-0.99	0.28	0.64	0.15	0.59	
B4_two-piece	0.52	0.26	-0.03		0.75	0.36	-0.97	-1.11		0.70	-0.03	0.59	-0.16	-0.19	1.04	-0.13	-0.38	0.08	0.61	
B5_two-piece	0.02	-0.34	-0.42		0.02	1.47	-0.36	-0.88		0.65	-1.04	0.05	-0.44	0.73	-0.18	-0.32	-0.68	-0.11	0.65	
B6_two-piece	0.15	-0.01	-0.27		1.01	0.86	1.03	-1.01		-0.26	-0.61	0.24	-0.15	0.66	-0.53	-0.27	-0.25	0.04	0.61	
C1_square	-0.36	-0.36	-0.82	-0.82		-0.48	-0.75	-0.74				-0.67	-0.81	-0.74				-0.65	0.18	
C2_keystone	-0.21	-0.11	-0.14		1.44	-0.20	-0.44		-0.38	-0.78		0.52	-0.40	-0.53	-1.11	-0.30	0.00	-0.19	0.60	
C3_two-piece	-0.07	1.15	-1.33		0.49	1.42	0.04	-0.56		0.44	-0.85	0.34	-0.39	0.64	-0.82	-0.13	-0.25	0.01	0.76	
C4_two-piece	0.27	0.46	-0.91		0.89	0.57	-0.07	-0.54		0.64	0.10	0.80	0.07	-0.30	1.25	0.31	-0.47	0.21	0.59	
C5_two-piece	0.01	-0.04	-0.30		-0.39	-0.09	0.13	0.44		0.98	0.73	-0.09	0.22	-0.33	-0.31	-0.65	-0.26	0.00	0.44	
C6_two-piece	0.33	-0.67	-0.64		0.41	0.74	0.06	-0.60		0.40	-0.58	0.52	-0.04	0.36	-1.28	-0.20	-0.26	-0.10	0.57	
calibration_piston_1	0.32	0.48	-0.63			0.43	-0.05					0.47	0.26	1.04				0.29	0.48	
calibration_piston_2	0.48	1.29	-0.61			0.00	-0.79					0.74	0.62	-0.03				0.21	0.70	
Yi MAXIMUM	-0.83	1.29	-1.71	-1.00	1.44	1.47	1.03	-1.11	-0.68	0.98	-1.04	-0.95	-0.81	-1.62	-1.28	-0.65	-0.68	-0.67	0.76	
Yi MINIMUM	0.01	-0.01	-0.03	-0.82	0.02	0.00	0.01	-0.30	0.05	0.08	-0.01	0.05	-0.04	-0.03	-0.18	-0.09	0.00	0.00	0.18	
Yi MEAN	-0.03	0.29	-0.69	-0.90	0.31	0.22	-0.06	-0.64	-0.34	0.28	-0.31	0.12	-0.26	-0.24	-0.36	-0.23	-0.17			
Yi STD	0.34	0.60	0.44	0.09	0.69	0.66	0.54	0.39	0.36	0.58	0.53	0.48	0.37	0.67	0.77	0.26	0.33			

bins	count	percent		
-3	0	0.0%		
-2	0	0.0%		
-1	14	5.9%	-1 < yi ≤ 1	88.7%
0	130	54.6%	-2 < yi ≤ 2	100.0%
1	81	34.0%	-3 < yi ≤ 3	100.0%
2	13	5.5%	>3	0.0%
3	0	0.0%		
total	238	100.0%		

