



Collaborative Testing Services, Inc.

Containerboard Interlaboratory Testing Program

Participant Summary Report #548 (E) - May 2015

[Introduction to the Containerboard Program](#)

[Explanation of Tables and Definitions of Terms](#)

Analysis	Sample Lot	Analysis Name
201	BOX9	Box Compression Strength, Corrugated Boxes
202	ECT8	Edgewise Compressive Strength, Wax (T811), Corrugated board
203	ECT8	Edgewise Compressive Strength by Clamp (T839), Corrugated board
205	42D1	Mullen Burst of Linerboard, 42 lb Linerboard
206	69C2	Mullen Burst of Linerboard, 69 lb Linerboard
215	42D1	Ring Crush of Linerboard, Rigid Platen Type, 42 lb Linerboard
216	69C2	Ring Crush of Linerboard, Rigid Platen Type, 69 lb Linerboard
223	42D1	STFI of Linerboard, 42 lb Linerboard
224	69C2	STFI of Linerboard, 69 lb Linerboard
228	69C	Roughness - Stylus Method, 69 lb Linerboard
231	36Z	Internal Bond Strength, Linerboard, 36 lb Linerboard
234	36Z	Coefficient of Static Friction - Inclined Plane, 36 lb Linerboard
237	36Z	Air Resistance - Gurley Method, Linerboard, 36 lb Linerboard
240	CM73	Flat Crush Strength (CMT) of Medium, 26 lb Corrugating Medium
250	CM73	Fluted Crush of Medium, 26 lb Corrugating Medium
255	CM73	Ring Crush of Medium, 26 lb Corrugating Medium
261	CM73	STFI of Medium, 26 lb Corrugating Medium

ABOUT CTS

Founded in 1971, Collaborative Testing Services, Inc. (CTS) is a privately-owned company that specializes in interlaboratory tests for a wide variety of industries, including rubber, plastics, fasteners and metals, containerboard, paper, color, and wine, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality control objectives. Labs from the U.S., as well as more than 80 countries, currently participate in the CTS programs.

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**Collaborative Testing Services, Inc.
CONTAINERBOARD INTERLABORATORY TESTING PROGRAM**

INTRODUCTION

The Interlaboratory Testing Program for Containerboard is operated and maintained by Collaborative Testing Services, Inc. (CTS), with technical guidance provided by the Containerboard Group of the American Forest & Paper Association. The tests are conducted on a monthly basis.

For these tests samples of linerboard and corrugating medium, that each have been separately randomized from narrow rolls, are distributed for testing weekly. One weight of medium (26 lb.) is used for Concora Flat Crush Strength, Corrugated Fluted Crush Strength, Ring Crush Strength, and STFI Compression. Two weights of linerboard are tested each month for Mullen Burst, Ring Crush, and STFI Compression: 42 lb. - every month; 36 lb. and 69 lb. - alternate months. The participants return their test results for analysis and receive a monthly report.

Please refer to the section, "EXPLANATION OF TABLES", for definitions of terms and guidelines to interpreting the results.

USE OF AVERAGE MEAN AS A COLLABORATIVE REFERENCE VALUE

The samples of linerboard and corrugating medium, which have been randomized and placed in sealed packages for distribution in this program, may be used as collaborative reference materials. The values most representative of each material are the Cumulative Grand Means in the latest reports, given at the bottom right of each table. Comparisons can only be made within one lot of material; therefore check your measurements against the Cumulative Grand Means with the same lot code as on the packages being tested.

Material	Lot Code	Dates in Use
36# Linerboard	36Z1	June 2010 - December 2011
	36Z2	February 2012 - Current
42# Linerboard	42B2	June 2012 - April 2013
	42B3	May 2013 - Current
69# Linerboard	69A2	January 2013 - September 2013
	69C1	November 2013 - Current
26# Corrugating Medium	CM73	December 2012 - Current

EXPLANATION OF TABLES

Each analysis is divided into three time spans. On the left side of the table are the individual laboratory results for each week of the month; in the center are each lab's statistical data for the month; and on the right are each lab's cumulative data for up to 16 weeks. At the bottom of the table are the consensus statistics for all the participants for each of the three time spans.

Definitions of Terms Used

Weekly Results

Laboratory Data

- | | |
|--------------|--|
| WebCode | - A six character laboratory identifier used to maintain information on a confidential basis. The WebCode is unique for each cycle and will change for each report. Your WebCode can be found in your Individual Report (Current Month Performance Report) and your datasheet. |
| Weekly Means | - The average of the test results obtained by the participant for each week that data were reported. |

Consensus Data

- | | |
|---------------|---|
| Wk Mean | - For each week, the average of the Means for all the participants, excluding those laboratories flagged with an 'X'. |
| Avg SDr | - For each week, the average of the within-laboratory standard deviations (SDr's) for all the participants, excluding those laboratories flagged with an 'X'. The Avg SDr is an indication of the variation of measurements within an average laboratory. |
| SD btwn Labs | - For each week, the standard deviation of the laboratory Means about the Wk Mean, excluding those laboratories flagged with an 'X'. The SD LABS is an indication of the precision of measurement between the laboratories. |
| Labs Incld | - The number of laboratory Means included in the Wk Mean for that week. |
| Labs Excld | - The number of laboratory Means reported but excluded from the Wk Mean for that week because of outlying results ('X' following Mean). |
| Labs not rcvd | - The number of laboratories failing to report for that week. |

Monthly Results

Laboratory Data

- | | |
|-------|---|
| Mean | - For each laboratory, the average of all the weekly Means reported for this month. |
| CPV | - Comparative Performance Value , an indication of how well a laboratory's Mean agrees with the other participants. The CPV is a ratio indicating the number of standard deviations from the consensus mean (Monthly Mean). The closer a laboratory's CPV is to zero, the more consistent its results are with the other participants' data. |
| SDr | - For each laboratory, the average of the weekly within-lab standard deviations (SDr's) for all reported Weekly Means this month. |
| SD Wk | - The standard deviation among the laboratory's weekly Means, including those Means flagged with an 'X'. The SD Wks is an indication of that laboratory's ability to obtain constant results from week to week. |

Consensus Data

- | | |
|---------------|---|
| Month Mean | - The average of the Means for all the participants, excluding those laboratories flagged with an 'X', reporting data for this month. |
| Avg SDr | - For the current month, the average of the within-laboratory standard deviations (SDr's) for all the participants, excluding those laboratories flagged with an 'X'. |
| SD btwn Labs | - For the current month, the standard deviation of the laboratory Means about the Month Mean, excluding those laboratories flagged with an 'X'. |
| SD btwn Group | - For the current month, the standard deviation of the laboratory Means within the group about the Month Mean, excluding those laboratories flagged with an 'X'. |
| SD btwn Wks | - For the current month, the average of the laboratory between week standard deviations (SD Wks') for all |

Cumulative Results

Laboratory Data

Mean CPV	- For each lab, the average of all the monthly Means reported for the weeks shown. - Comparative Performance Value , an indication of how well a laboratory's cumulative mean agrees with the other participants. The CPV is a ratio indicating the number of standard deviations from the consensus mean (Monthly Mean).
SDr	- For each laboratory, the average of the weekly within-lab standard deviations (SDr's) for the weeks shown.
SD Wk	- The standard deviation among the laboratory's weekly Means for the weeks shown, including those Means flagged with an 'X'. The SD Wks is an indication of that laboratory's ability to obtain constant results from week to week.
Wks	- The number of weeks included in the cumulative period.
Inst	- The two letter instrument code. Codes are summarized at the bottom of the last analysis page.

Consensus Data

Grand Mean	- The average of the Means for all the participants, excluding those laboratories flagged with an 'X', reporting data for the number of weeks included in the cumulative period.
Avg SDr	- For the cumulative period, the average of the within-laboratory standard deviations (SDr's) for all the participants, excluding those laboratories flagged with an 'X'.
SD btwn Labs	- For the cumulative period, the standard deviation of the laboratory Means about the Month Mean, excluding those laboratories flagged with an 'X'.
SD btwn Wks	- For the cumulative period, the average of the laboratory between week standard deviations for all the participants.

Any laboratory that receives a 'flag' following a mean or standard deviation should refer to the chart below for an explanation of the data flag symbol:

<u>Flag</u>	<u>Explanation</u>
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Data Flags "**X**" and "*****" indicate a laboratory's performance on an average value differed from the consensus.

Data Flags "**H**" and "**L**" indicate a laboratory's performance on a standard deviation differed from the consensus.

Flags assigned to Weekly Means, Monthly Mean and Cumulative Mean:

- X** Excluded from the weekly means, monthly means and/or the cumulative mean. Immediate review of data and/or testing procedure is recommended.
- *** Included in the weekly means, monthly means and/or the cumulative mean; however, lab should review testing procedure and monitor future results.

Flags assigned to Weekly Means:

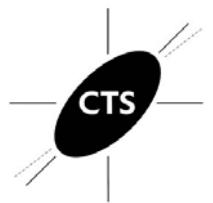
- H** Indicates high within-laboratory standard deviation. The laboratory SDr for each week is not shown, but laboratory average SDr and consensus average SDr values are shown.
- L** Indicates low within-laboratory standard deviation. The laboratory SDr for each week is not shown, but laboratory monthly average SDr and consensus average SDr values are shown.

Flags assigned to Monthly SD Wks and Cumulative SD Wks:

- H** Indicates high variability between weekly means (high week-to-week variation).
- L** Indicates low variability between weekly means (low week-to-week variation).

Top to Bottom Box Compression Strength, Corrugated Boxes - BOX9

TAPPI Official Test Method T804



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
64PALZ	742.2	-1.49	31.4	743.2	-1.72	33.1	3	LG
7CJ82U	786.0	-0.76	40.7	820.8	-0.39	31.1	4	ET
9TWX3H	779.2	-0.88	50.7	838.5	-0.09	47.9	4	LM
9WHCGY	912.9	1.35	30.5	897.6	0.93	29.9	4	TE
AD2P9W	829.3	-0.04	29.9	804.9	-0.66	31.7	4	LL
ALTDDR	743.6	-1.47	50.7	774.3	-1.19	57.5	4	ES
G2M9R7	865.0	0.55	103.8	830.7	-0.22	69.4	4	LS
G4MAGN	925.6	1.56	32.8	935.6	1.58	33.0	4	TB
HB6AM7	930.0	1.63	44.7	939.7	1.65	50.4	4	TS
HB7YFN	906.2	1.23	26.6	908.1	1.11	33.6	3	LS
HG8LGG	514.3	-5.28 X	60.5	800.9	-0.73	46.7	4	ER
HHQ8BT	818.7	-0.22	84.7	861.8	0.31	60.8	4	ER
HUXD47	839.7	0.13	55.6	876.2	0.56	38.8	3	LG
HXGARW	833.0	0.02	36.6	826.0	-0.30	50.1	4	LG
LTRZ9A	884.0	0.87	55.4	937.8	1.62	54.0	4	LH
VLHVDT	847.5	0.26	77.0	845.4	0.03	66.6	4	ER
VMDEFU	841.1	0.15	50.5	894.1	0.87	67.0	4	LH
XHVTJT	822.9	-0.15	97.6	816.5	-0.47	57.3	4	EX
XL8ZHC	806.6	-0.42	59.0	810.6	-0.57	62.3	4	ER
XM8ZKX	724.6	-1.78	53.3	770.2	-1.26	57.9	4	LL
ZX22A8	800.4	-0.52	40.5	782.6	-1.05	47.0	4	LM
Consensus (All Labs) Results								
Month Mean	831.93			Grand Mean	843.59			
Avg SDr	56.93			Avg SDr	50.51			
SD btwn Labs	60.19			SD btwn Labs	58.20			
Labs Incl'd	20			Labs Incl'd	21			

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Hot melt adhesive sealing	829.90	54.93	2.02	5
Clip sealing	787.29	94.32	44.63	13
Tape sealing	922.84	8.86	90.92	3



Instrument Code List as Reported by the Labs

(ER) - Emerson 6200 Series

(ET) - Emerson 7200

(LG) - TLS / L.A.B. Validator Series

(LL) - Lansmont 76-5K

(LS) - Lansmont Squeezer

(TE) - Testometric M500 - 25 KN

(ES) - Emerson 8510

(EX) - Emerson Apparatus (Model not specified)

(LH) - L.A.B. Compression Tester Model #10610

(LM) - Lansmont 122-15k

(TB) - TMI Monitor/Compression Tester, Model 17-70

(TS) - Tinus Olsen Model CTM

Edgewise Compressive Strength, by T811, Corrugated board - ECT8
 TAPPI T811


WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
7CJ82U	64.4	1.56	2.5	66.2	2.12 *	1.9	4	TD
G2M9R7	58.2	-0.03	2.1	57.4	-0.23	1.9	4	LC
H8LM2T	60.2	0.48	1.9	57.2	-0.26	3.6	4	XX
HB7YFN	51.5	-1.73	2.5	53.3	-1.31	2.4	2	EM
HUWHHF	58.5	0.04	1.5	58.2	-0.02	1.4	3	TB
HXGARW	60.0	0.43	4.5	60.6	0.62	3.8	4	LC
LTRZ9A	52.0	-1.62	1.1	53.2	-1.35	2.0	4	TC
QUC8K9	60.7	0.61	4.7	60.7	0.65	4.7	1	LC
VLHVDT	59.9	0.39	2.1	58.0	-0.05	2.0	4	EN
ZVCPDM	57.8	-0.13	0.9	57.6	-0.18	1.2	3	WK

Consensus (All Labs) Results

Month Mean	58.31	Grand Mean	58.24
Avg SDr	2.67	Avg SDr	2.71
SD btwn Labs	3.94	SD btwn Labs	3.77
Labs Incl'd	10	Labs Incl'd	10

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200 Series

(EN) - Emerson 2200

(LC) - L&W Crush Tester 48

(TB) - TMI Monitor/Compression Tester, Model 17-70

(TC) - TMI Monitor/Compression Tester, Model 17-37

(TD) - TMI Digital Crush Tester, Model 17-09

(WK) - Zwick Z005 Crush Tester

(XX) - Instrument make/model not specified by lab

Edgewise Compressive Strength by T839, Corrugated board - ECT8
TAPPI T839

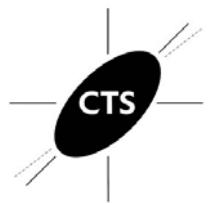

WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
3TVEBY	59.0	0.16	2.4	59.9	0.26	2.3	4	LC
4988FH	59.1	0.20	2.0	56.3	-1.25	3.4	4	LD
9TWX3H	58.7	0.04	1.5	60.1	0.31	1.7	4	TC
AD2P9W	59.3	0.29	0.8	60.1	0.31	1.2	4	BU
ALCP6T	57.8	-0.38	2.0	63.3	1.66	2.0	4	TX
ALTDDR	57.2	-0.65	7.4	57.2	-0.88	4.0	4	LD
B7DUUQ	62.4	1.69	2.9	59.4	0.05	2.3	4	LD
BERJUK	58.1	-0.24	2.2	58.8	-0.23	1.8	4	TG
CTNMMW	62.4	1.67	1.8	64.5	2.18 *	1.4	4	LC
FUMREE	59.0	0.17	5.3	55.2	-1.71	2.9	4	LC
G2M9R7	59.0	0.14	3.0	59.0	-0.11	2.1	4	LC
G4MAGN	56.3	-1.04	1.0	60.5	0.49	1.1	4	LC
HB6AM7	56.4	-1.00	2.9	60.3	0.43	2.1	4	CT
HB7YFN	56.0	-1.20	1.0	55.7	-1.53	1.3	2	EM
HG8LGG	59.3	0.27	1.5	54.9	-1.85	1.9	4	EM
HHQ8BT	55.2	-1.56	5.4	58.7	-0.25	3.7	4	EN
HUWHF	58.7	0.03	1.1	58.6	-0.31	1.2	3	TG
HUXD47	57.7	-0.44	4.6	56.6	-1.14	3.7	3	EM
HXGARW	64.5	2.61 *	2.4	64.5	2.17 *	2.7	4	LC
J8W72F	60.7	0.94	2.3	62.5	1.34	2.0	4	LD
LTRZ9A	60.3	0.74	0.9	61.2	0.80	0.9	4	TC
MVVEV7	59.2	0.26	2.6	61.4	0.87	1.8	4	LC
NUZWT6	59.3	0.31	1.8	60.5	0.48	2.4	4	TB
PEGQWV	57.6	-0.45	1.8	58.5	-0.33	1.8	2	EX
QR2PZ3	58.4	-0.12	2.1	57.5	-0.76	3.3	4	TD
QUC8K9	121.4	28.19 X	9.3	74.5	6.36 X	5.3	4	LC
R63NLE	60.0	0.61	3.7	60.2	0.38	3.0	4	LD
U397CC	59.1	0.21	1.2	58.9	-0.16	3.0	3	TB
UBMK42	59.6	0.43	2.2	60.2	0.35	1.8	4	TM
VLHVDT	61.8	1.40	1.0	60.4	0.47	1.8	4	EN
VMDEFU	55.0	-1.63	4.8	60.0	0.28	4.6	4	EM
XAH2TV	54.7	-1.79	3.5	55.3	-1.68	3.0	4	LC
XHVTJT	55.3	-1.49	1.1	60.1	0.33	1.9	4	TL
XL8ZHC	61.1	1.11	3.0	58.9	-0.16	2.2	4	LD
XM8ZKX	57.3	-0.61	3.4	59.5	0.10	3.1	4	LC
ZX22A8	57.2	-0.66	1.4	57.1	-0.91	1.3	4	EM

**Consensus (All Labs) Results**

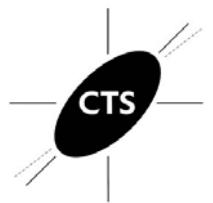
Month Mean	58.64	Grand Mean	59.31
Avg SDr	2.92	Avg SDr	2.47
SD btwn Labs	2.23	SD btwn Labs	2.38
Labs Incl'd	35	Labs Incl'd	35

Instrument Code List as Reported by the Labs

(BU) - Buchel Digital Crush Tester	(CT) - Con-Ten
(EM) - Emerson 1200 Series	(EN) - Emerson 2200
(EX) - Emerson (model not specified)	(LC) - L&W Crush Tester 48
(LD) - L&W Crush Tester 248	(TB) - TMI Monitor/Compression Tester, Model 17-70
(TC) - TMI Monitor/Compression Tester, Model 17-37	(TD) - TMI Digital Crush Tester, Model 17-09
(TG) - TMI Digital Crush Tester, 17-76	(TL) - Tech-Lab Systems Compression
(TM) - TMI/Hinde & Dausch	(TX) - TMI (model not specified)



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
2JDDFY	111.9	109.2	107.4	111.6	110.0	0.39	10.7	2.1	109.9	0.21	11.3	1.8	6	AH
3TVEBY	96.7 *	101.0	105.5	103.3	101.6	-1.82	9.5	3.7	104.0	-1.40	11.1	4.4	8	LA
46PT9B	112.3	105.4	112.4	109.4	109.9	0.36	11.2	3.3	110.9	0.47	10.8	2.5	8	LA
4988FH	113.1	108.5	117.5 *	116.2	113.8	1.40	7.5	4.0	114.4	1.41	8.8	3.6	8	AA
64PALZ	No Data	111.9	108.8	No Data	110.4	0.48	7.9	2.2	110.3	0.30	9.4	1.6	3	AH
7GVKTM	107.4 L	107.8 L	106.4 L	107.3	107.2	-0.35	3.8	0.6 L	104.9	-1.14	6.1	2.5	8	LJ
7VR3HK	107.4	107.2	111.9	112.1	109.7	0.30	10.1	2.7	110.8	0.45	10.1	3.5	8	LC
7YQDCY	106.7	109.3	104.0	105.0	106.3	-0.60	9.6	2.3	106.4	-0.73	11.2	2.4	8	LC
84EHH9	118.5	112.7	108.5	113.7	113.3	1.27	8.3	4.1	112.2	0.82	8.2	3.2	8	TB
8EZJ3N	108.5	106.9	103.6	113.9	108.2	-0.08	12.0	4.3	109.9	0.19	11.2	3.7	8	AH
9LFPCZ	106.4 L	106.4 L	107.1	106.3	106.5	-0.53	10.9	0.4 L	105.8	-0.91	10.1	1.2	8	LA
9QALY7	102.5	106.6	102.3	106.0	104.4	-1.11	9.8	2.3	105.5	-0.98	9.6	2.9	8	LA
ABCQ4R	103.1	104.9	110.1	101.9	105.0	-0.94	11.7	3.6	103.6	-1.49	10.2	3.6	8	LC
ALTDDR	113.5	108.3	110.3	112.1	111.1	0.67	12.9	2.3	109.6	0.12	12.4	3.0	8	LA
CB3TKQ	107.7	106.2	108.5	115.1	109.4	0.22	10.3	3.9	112.0	0.77	11.6	4.4	8	LA
DANPPE	109.0	101.5	109.5	108.7	107.2	-0.36	9.3	3.8	106.7	-0.66	8.9	2.7	8	LJ
DTXL7P	107.9	107.1	106.1	106.8	107.0	-0.41	10.1	0.7	106.4	-0.73	11.9	2.0	8	LA
EHEYNV	118.3	120.2 *	126.4 X	126.2 X	122.8	3.77	X 6.2	4.1	123.5	3.85 X	7.0	3.1	8	AH
EPYRLT	118.9	113.4	110.0	117.3	114.9	1.69	9.3	4.0	117.2	2.16 *	10.8	3.7	8	LA
FC7X3R	102.6	106.4	105.0	103.4	104.4	-1.11	9.6	1.7	113.2	1.07	8.2	9.5 H	8	RE
G2M9R7	105.6	101.7	102.7	103.9	103.5	-1.34	9.6	1.7	104.2	-1.34	8.8	2.0	8	AH
GPTWFR	103.7	107.5	104.6	107.8	105.9	-0.70	11.2	2.1	105.9	-0.89	11.1	2.2	8	TB
HB6AM7	112.1 H	107.3 H	112.8 H	110.9	110.8	0.59	16.3	2.4	109.4	0.07	15.5	3.0	8	XX
HL6Z48	103.9	100.5	102.2	111.0	104.4	-1.09	9.5	4.6	104.4	-1.28	9.1	3.7	8	AX
HP8BCM	103.9	113.0	112.9	109.8	109.9	0.36	11.1	4.3	110.1	0.25	11.4	3.7	8	TP
HXGARW	115.8	114.0	112.1	111.9	113.5	1.30	11.1	1.8	113.8	1.24	12.0	1.4	8	LZ
J9XEG8	114.8	109.4	113.2	111.1	112.1	0.95	9.3	2.4	111.4	0.60	9.5	3.5	8	LZ
JMVVHM	113.9	103.3 H	102.9	106.9	106.8	-0.47	11.6	5.1	106.2	-0.80	10.2	4.0	8	LC
KA2QBE	106.6	109.1	109.9 L	109.4 L	108.8	0.06	4.8	1.4	108.3	-0.22	5.1	1.4	8	LA
KXTLM8	104.5	107.0	No Data	No Data	105.8	-0.73	8.5	1.8	106.0	-0.85	11.3	3.0	6	TB
L4AJQK	111.4	108.6	113.9	110.8	111.2	0.71	10.8	2.2	111.0	0.50	12.5	4.0	8	AX
LTRZ9A	115.5	113.5	109.0	111.5	112.4	1.02	12.4	2.8	112.1	0.79	12.7	2.6	8	AA
N3AHED	84.7 XL	112.4	111.8	111.0	105.0	-0.94	6.2	13.5 H	109.4	0.08	8.0	10.4 H	8	LC
N7TDH7	112.5	112.4	111.3	119.0 *	113.8	1.39	12.5	3.5	114.3	1.39	12.7	3.0	8	LJ
NUZWT6	100.7	108.3	108.9	103.9	105.4	-0.82	12.1	3.9	107.7	-0.38	12.1	4.8	8	LA



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
PCDWYQ	103.8	106.9	102.1	103.8	104.1	-1.17	7.8	2.0	105.8	-0.91	8.9	3.1	8	LB
QEBVNA	116.1	117.1	117.5 *	113.6	116.1	2.00	* 11.4	1.8	114.5	1.45	12.1	2.3	8	LC
QUC8K9	97.0 *	111.8	105.0	104.3	104.5	-1.06	8.9	6.0	107.3	-0.49	10.8	5.7	8	LA
R63NLE	107.0	105.5	102.0	102.0	104.1	-1.16	7.9	2.6	104.0	-1.38	7.3	3.2	8	LA
RDXLB3	111.7	111.9 L	105.4	104.9	108.5	-0.02	8.9	3.8	108.4	-0.20	9.9	3.8	8	LC
RVGGPB	106.9	103.9	107.7	107.2	106.4	-0.56	9.6	1.7	107.0	-0.58	9.6	1.9	7	LC
TNX3DC	107.6	103.5	103.4	107.5	105.5	-0.80	8.2	2.4	106.6	-0.68	7.7	2.2	8	AH
UJ292A	113.4	115.0	112.9	111.0	113.1	1.20	12.6	1.6	113.5	1.17	11.4	1.8	7	LA
WANYPZ	108.8	111.6	103.6	104.5	107.1	-0.37	10.8	3.7	107.3	-0.50	11.0	3.3	5	LC
WJQGZ3	105.5	107.8	115.6	110.9	110.0	0.38	11.0	4.4	111.7	0.68	11.4	5.1	8	LA
WYN7GA	101.7	97.7 *	104.5	103.6	101.9	-1.76	10.5	3.0	104.2	-1.32	11.2	3.7	8	LC
XL8ZHC	109.4	110.5	113.9	113.0	111.7	0.84	11.0	2.1	110.4	0.33	10.6	2.7	8	AH
XULPJ7	119.4	113.2 H	113.2	113.3	114.8	1.65	13.2	3.1	115.9	1.82	12.4	3.0	8	TB
Y8AB4R	121.7 *	104.7	108.4 L	107.3 L	110.5	0.53	6.1	7.6 H	114.9	1.55	7.1	7.2 H	8	LA
YZAUPE	116.3 L	114.7	112.5	115.8	114.8	1.66	7.2	1.7	114.6	1.47	7.7	2.1	8	LC
ZX22A8	104.1	104.7	104.1	104.2	104.3	-1.13	8.8	0.3 L	103.6	-1.50	7.8	1.5	8	AH
Consensus (All Labs) Results														
Wk Mean	109.14	108.42	108.47	109.08	Month Mean				Grand Mean				109.15	
Avg SDr	9.82	9.99	10.54	10.34	Avg SDr				Avg SDr				10.40	
SD btwn Labs	5.86	4.49	4.30	4.33	SD btwn Labs				SD btwn Labs				3.72	
Labs Incld	49	51	49	48	SD btwn Wks				SD btwn Wks				3.79	
Labs Excld	1	0	1	1	Labs Incld				Labs Incld				50	
Labs not rcvd	1	0	1	2										

Instrument Code List as Reported by the Labs

- (AA) - Perkins Model A
- (AX) - Perkins Mullen Tester (model not specified)
- (LB) - L & W Burst-O-Matic
- (LJ) - L & W Bursting Strength Tester J-Type
- (RE) - Regmed/Mullen Tester
- (TP) - Technidyne PROFILE/Plus
- (AH) - Perkins Model AH
- (LA) - L & W Bursting Strength Tester
- (LC) - L & W Autoline
- (LZ) - L & W (model not specified)
- (TB) - TMI Monitor/Burst 1000
- (XX) - Instrument make/model not specified by lab



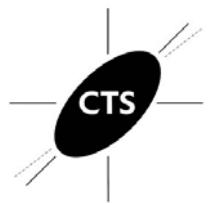
WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
2JDDFY	152.9	153.3	148.7	162.2	154.3	-0.15	11.1	5.7	156.5	0.18	11.9	5.9	7	AH
3TVEBY	156.1	149.9	146.7	152.0	151.2	-0.70	9.9	3.9	147.9	-1.43	9.2	7.3	H	8
46PT9B	161.4	156.6	159.2	158.1	158.8	0.66	9.5	2.0	158.7	0.61	11.6	1.7	8	LA
4988FH	163.0	164.9	165.4	155.5	162.2	1.26	10.8	4.6	160.6	0.96	11.3	5.0	8	AA
64PALZ	No Data	148.7	150.2	No Data	149.5	-1.00	8.9	1.1	149.5	-1.14	8.9	1.1	2	AH
7GVKTM	155.5	156.2	157.4	156.0	156.3	0.21	6.6	0.8	157.9	0.46	6.0	2.5	8	LJ
7VR3HK	153.4	158.6	156.1	152.7	155.2	0.02	9.1	2.7	155.1	-0.08	8.9	3.7	8	LC
7YQDCY	153.1	160.5	156.3	149.5	154.9	-0.05	11.4	4.7	155.0	-0.10	11.0	7.6	H	8
84EHH9	165.0	167.9	163.6	167.2 *	165.9	1.91	11.5	2.0	167.1	2.18 *	10.9	2.9	8	TB
8EZJ3N	143.2	152.2	149.6	154.1	149.8	-0.95	11.2	4.8	150.5	-0.95	11.8	3.6	8	AH
9LFPCZ	164.2	157.4 L	152.3	158.6	158.1	0.53	9.0	4.9	158.3	0.54	10.2	5.6	8	LA
9QALY7	150.6	151.6	161.4	153.3	154.2	-0.16	12.3	4.9	155.2	-0.05	11.9	3.6	8	LA
ABCQ4R	150.7	137.7 *	147.0	145.1	145.2	-1.77	11.0	5.5	147.0	-1.60	10.7	4.2	8	LC
ALTDDR	154.2	156.9 H	159.5	157.0	156.9	0.32	13.7	2.2	159.4	0.74	11.9	3.4	8	LA
CB3TKQ	156.9	155.7	157.8	155.7	156.5	0.25	11.4	1.0	158.1	0.50	11.0	3.3	8	LA
DANPPE	153.8	157.2	162.9	153.4	156.8	0.30	11.9	4.4	156.8	0.25	11.9	4.4	4	LJ
DTXL7P	157.3	157.6	153.3	154.4	155.6	0.09	13.6	2.1	153.6	-0.36	11.8	5.2	8	LA
EHEYNV	156.1	150.4	154.9	153.3	153.7	-0.26	6.8	2.5	153.9	-0.30	6.7	3.6	8	AH
EPYRLT	170.3 *	165.6	169.3 *	164.0	167.3	2.16 *	8.1	3.0	166.3	2.05 *	9.6	3.4	8	LA
FC7X3R	154.4	158.2	158.6 L	158.4	157.4	0.41	9.5	2.0	156.8	0.24	9.8	3.7	8	RE
G2M9R7	145.9	147.3	146.2	152.2	147.9	-1.28	10.1	2.9	149.4	-1.15	9.1	3.2	8	AH
GPTWFR	151.2	153.6	151.2	158.6	153.6	-0.26	10.9	3.5	152.8	-0.51	11.2	3.0	8	TB
HB6AM7	152.1	165.2	155.0 H	157.0	157.3	0.39	14.9	5.6	160.3	0.90	15.4	5.1	8	XX
HL6Z48	139.4 *	142.9	148.9	142.2 *	143.4	-2.08 *	9.0	4.0	142.2	-2.51 *	9.7	3.2	8	AX
HP8BCM	150.5 L	158.2	145.5 L	155.9	152.5	-0.46	4.4	5.7	152.4	-0.59	5.2	4.4	8	TP
HXGARW	160.8	161.2	160.8	161.6	161.1	1.07	12.2	0.4 L	159.2	0.69	12.6	2.8	8	LZ
J9XEG8	158.0	158.6	159.7	160.2	159.1	0.71	12.3	1.0	157.6	0.39	12.7	2.7	8	LZ
JMVVHM	159.7	155.0	149.9	152.8	154.4	-0.13	9.4	4.1	152.5	-0.57	10.7	6.0	8	LC
KA2QBE	172.3 *	162.1	165.2	162.5	165.6	1.85	10.5	4.7	166.1	2.01 *	9.6	3.6	8	LA
KXTLM8	147.8	141.5	No Data	No Data	144.6	-1.86	9.0	4.4	147.2	-1.57	9.7	3.5	6	TB
L4AJQK	159.5	160.4 H	159.3	155.6	158.7	0.63	12.1	2.1	158.7	0.60	11.6	2.5	8	AX
LTRZ9A	149.3	155.5	155.5	152.0	153.1	-0.36	13.2	3.0	154.4	-0.21	11.0	3.9	8	AA
N3AHED	146.8	147.7	152.7	150.5	149.4	-1.01	11.8	2.7	150.9	-0.87	11.0	3.3	8	LC
N7TDH7	159.6	162.6	159.8	150.5	158.1	0.53	10.8	5.3	157.9	0.46	10.8	4.1	8	LJ
NUZWT6	152.6	155.1	158.9	151.7	154.6	-0.09	13.7	3.2	153.8	-0.32	12.6	4.4	8	LA



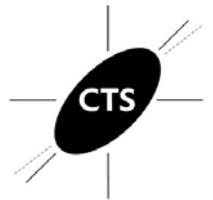
WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
PCDWYQ	149.9 L	154.3	153.5	155.3	153.2	-0.33	5.8	2.3	156.1	0.12	8.3	4.6	8	LB
QEBVNA	156.2	163.7	145.7	156.8	155.6	0.08	10.7	7.4	158.0	0.48	11.6	5.7	8	XX
QUC8K9	151.6	159.5	154.9	161.5	156.9	0.31	11.6	4.5	157.2	0.32	12.5	3.5	8	LA
R63NLE	148.0	152.8	148.9	145.3	148.8	-1.12	10.4	3.1	150.5	-0.95	9.6	4.6	8	LA
RDXLB3	149.1	140.5 *	149.4	154.3	148.3	-1.20	8.0	5.7	150.7	-0.90	9.2	6.3	8	LC
RVGGPB	151.7	149.2	148.5	147.0	149.1	-1.06	9.8	1.9	150.6	-0.93	10.1	3.0	8	LC
TNX3DC	153.8	156.3	154.9	156.8	155.5	0.06	10.4	1.4	155.7	0.04	9.9	2.9	8	AH
UJ292A	155.8	158.9	154.6	153.1	155.6	0.09	12.4	2.5	155.8	0.06	12.7	2.9	7	LA
WANYPZ	151.9	143.4	144.9	154.4	148.7	-1.15	10.9	5.3	150.9	-0.87	10.4	5.5	8	LC
WJQGZ3	151.5	159.4	143.4	161.1	153.8	-0.22	11.6	8.1 H	157.2	0.31	11.2	7.4 H	8	LA
WYN7GA	152.0	150.3	157.0	152.1	152.9	-0.40	10.8	2.9	154.4	-0.22	11.5	3.2	8	LC
XL8ZHC	157.4	163.6	155.8	165.5	160.6	0.97	11.7	4.7	154.0	-0.29	11.0	7.9 H	8	AH
XULPJ7	168.8	168.0	174.1 X	165.3	169.0	2.47 *	12.5	3.7	166.4	2.06 *	13.0	3.8	8	TB
Y8AB4R	173.2 *	164.0	160.8	162.2 L	165.1	1.76	7.9	5.6	166.9	2.15 *	7.5	5.4	8	LA
YZAUPE	153.3	149.5	145.0	152.5	150.1	-0.89	8.3	3.8	151.9	-0.68	8.7	5.1	8	LC
ZX22A8	156.7	155.6	151.9	154.5	154.7	-0.08	12.4	2.0	154.8	-0.13	12.9	2.2	8	AH
Consensus (All Labs) Results														
Wk Mean	155.17	155.55	154.45	155.54	Month Mean				Grand Mean				155.50	
Avg SDr	10.94	10.98	10.55	10.55	Avg SDr				Avg SDr				10.74	
SD btwn Labs	6.93	7.05	6.18	5.35	SD btwn Labs				SD btwn Labs				5.29	
Labs Incld	50	51	49	49	SD btwn Wks				SD btwn Wks				4.41	
Labs Excld	0	0	1	0	Labs Incld				Labs Incld				51	
Labs not rcvd	1	0	1	2										

Instrument Code List as Reported by the Labs

- (AA) - Perkins Model A
- (AX) - Perkins Mullen Tester (model not specified)
- (LB) - L & W Burst-O-Matic
- (LJ) - L & W Bursting Strength Tester J-Type
- (RE) - Regmed/Mullen Tester
- (TP) - Technidyne PROFILE/Plus
- (AH) - Perkins Model AH
- (LA) - L & W Bursting Strength Tester
- (LC) - L & W Autoline
- (LZ) - L & W (model not specified)
- (TB) - TMI Monitor/Burst 1000
- (XX) - Instrument make/model not specified by lab



WebCode	Weekly Means				Monthly Results				Cumulative Results									
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst				
3TVEBY	90.8	84.8	84.7	83.8	86.0	0.11	3.2	3.2	85.0	-0.27	3.7	3.1	8	LC				
46PT9B	86.8	83.2	82.9	85.9	84.7	-0.20	3.8	1.9	84.5	-0.39	3.8	1.6	8	LC				
4988FH	82.9	79.6	81.8	80.1	81.1	-1.03	3.4	1.5	82.3	-0.91	3.6	1.8	8	LD				
6H46R3	87.3	90.2	89.5	84.7	87.9	0.55	4.7	2.5	86.4	0.07	4.4	2.9	8	TH				
7GVKTM	87.9	86.5	87.5	87.7	87.4	0.43	3.5	0.6	90.7	1.11	3.1	3.9	8	LD				
7VR3HK	90.0	91.9	91.8	94.3	92.0	1.49	4.1	1.8	93.4	1.75	4.8	4.6	8	TC				
7YQDCY	91.2	H	92.0	82.4	88.4	0.65	8.0	4.4	87.1	0.25	8.2	3.3	8	LA				
84EHH9	94.8	*	88.4	93.4	90.8	1.45	4.7	2.9	92.0	1.42	4.6	3.0	8	LX				
8EZJ3N	86.0	87.4	80.2	86.3	85.0	-0.14	5.0	3.3	91.0	1.17	4.9	9.8	H	8				
9LFPCZ	82.9	L	86.4	L	86.0	0.19	3.4	1.7	84.7	-0.34	3.7	1.4	8	LD				
9QALY7	93.1	65.7	XH	68.7	XH	87.0	78.6	-1.60	7.9	13.5	H	82.0	-0.98	7.4	13.0	H		
9WHCGY	87.1	88.4	86.0	86.6	87.0	0.33	3.5	1.0	87.0	0.22	3.9	1.4	8	LD				
ABCQ4R	88.9	89.1	88.0	88.5	H	88.6	0.71	5.6	0.5	L	89.4	0.80	5.1	2.4	8	LC		
BERJUK	93.0	92.6	93.3	92.5	92.9	1.69	4.6	0.4	L	92.0	1.42	4.1	1.1	8	TH			
CB3TKQ	90.1	89.8	89.9	84.7	88.6	0.71	3.6	2.6	89.8	0.90	4.2	2.3	8	LD				
DANPPE	84.6	88.6	82.1	85.4	85.2	-0.08	4.4	2.7	82.0	-0.99	4.2	4.2	8	LD				
DTXL7P	84.9	85.5	81.8	84.5	84.2	-0.32	3.6	1.6	84.7	-0.34	3.8	1.4	8	LC				
EHEYNV	93.0	92.1	93.4	92.0	92.6	1.63	4.1	0.7	L	93.1	1.67	4.2	2.0	8	LD			
EPYRLT	81.4	80.6	81.5	85.2	82.2	-0.78	3.8	2.1	82.3	-0.91	3.6	2.2	8	LZ				
FC7X3R	89.7	88.8	88.1	88.1	L	88.7	0.72	2.8	0.7	L	89.5	0.82	3.7	1.2	8	LZ		
G2M9R7	87.4	88.7	85.1	89.2	87.6	0.48	4.8	1.8	87.6	0.35	4.6	1.8	8	LC				
GPTWFR	84.6	67.2	X	88.0	66.2	X	76.5	-2.09	*	3.9	11.4	H	76.0	-2.43	*	3.8	10.5	H
HG8LGG	80.2	80.1	80.0	81.5	80.5	-1.18	3.7	0.7	L	79.8	-1.52	3.6	1.2	8	EX			
HHQ8BT	81.8	84.1	82.0	84.9	83.2	-0.54	3.6	1.6	82.5	-0.86	3.7	1.3	8	EN				
HL6Z48	93.2	94.9	92.3	98.6	X	94.8	2.13	*	4.6	2.8	93.8	1.85	4.7	2.4	8	LZ		
HP8BCM	81.7	85.3	84.6	86.3	84.5	-0.24	3.8	2.0	86.3	0.06	4.3	2.5	8	TH				
HUXD47	78.9	78.0	*	83.5	72.9	X	78.3	-1.67	4.3	4.3	78.4	-1.85	4.3	3.2	8	EM		
HXGARW	82.4	87.0	85.6	84.9	85.0	-0.13	3.4	1.9	85.3	-0.20	3.3	1.4	8	LC				
JGQPPH	85.5	85.8	91.2	84.9	L	86.8	0.30	3.4	2.9	85.4	-0.16	3.9	2.5	8	LD			
JMVVHM	82.2	86.0	85.0	85.1	84.6	-0.23	5.1	1.7	86.1	0.01	4.8	2.3	8	LD				
K27NA3	87.7	No Data	91.2	No Data	89.5	0.91	4.6	2.5	91.2	1.22	3.8	2.1	5	MB				
KA2QBE	86.9	L	88.1	L	87.9	86.9	L	87.5	0.44	1.9	0.6	L	87.9	0.44	2.2	0.8	8	LZ
KXTLM8	89.1	88.8	No Data	No Data	89.0	0.79	4.0	0.3	L	90.3	1.01	4.0	1.9	6	LC			
L4AJQK	84.9	H	88.3	78.0	87.3	-0.22	5.5	4.6	86.4	0.06	4.9	3.6	8	LC				
N3AHED	83.6	82.7	83.6	83.8	83.4	-0.49	4.6	0.5	L	84.0	-0.49	4.4	1.1	8	LC			



WebCode	Weekly Means				Monthly Results				Cumulative Results							
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst		
N7TDH7	79.6	87.8	81.9	L	80.5	L	82.5	-0.71	2.5	3.7	83.2	-0.71	2.9	2.9	8	LC
N9WBPR	76.0 *	69.2 X	75.1 *	81.1	75.3	-2.36 *	4.3	4.8	77.8	-1.99	4.7	4.2	8	MB		
PCDWYQ	87.5	84.2	87.4	86.2	86.3	0.17	3.9	1.5	85.7	-0.08	4.1	2.3	8	LC		
PN4QBK	85.1	86.3 L	85.9	84.4	85.4	-0.03	3.2	0.8	85.8	-0.07	3.7	0.8	8	LD		
QN47Y6	82.4	83.2	82.2	81.6	82.3	-0.74	5.0	0.6 L	83.1	-0.71	4.1	1.5	8	LD		
QR2PZ3	92.1 L	93.8 L	93.5	91.8 L	92.8	1.67	1.8	1.0	92.9	1.63	1.5	1.3	8	TD		
QR2RQ8	85.0	85.8	No Data	No Data	85.4	-0.03	4.9	0.5 L	85.7	-0.10	4.2	0.9	4	EX		
QUC8K9	84.1	76.5 *H	80.2	76.7 *	79.4	-1.43	11.2	3.6	82.3	-0.90	8.8	4.0	8	LC		
R63NLE	84.8	87.6	83.5	84.4	85.1	-0.11	3.9	1.8	86.0	-0.02	3.9	1.7	8	LD		
RVGGPB	87.1	91.3	96.1 *	92.0	91.6	1.40	4.7	3.7	91.0	1.19	4.7	4.5	7	LC		
VMDEFU	83.3	85.7 L	87.6	86.4	85.7	0.04	3.2	1.8	87.4	0.31	3.7	2.2	8	EM		
WYN7GA	79.1	85.1	85.9	85.7	83.9	-0.37	3.7	3.2	84.3	-0.42	3.5	2.2	8	LD		
X7YEB3	86.6	49.4 X	83.8	91.6	77.9	-1.77	4.4	19.3 H	82.0	-0.98	4.6	13.5 H	8	XX		
XL8ZHC	84.3	88.2	84.8	88.2	86.4	0.19	3.7	2.1	83.6	-0.61	3.5	3.5	8	LD		
XULPJ7	80.8	84.3	86.4	87.3	84.7	-0.20	4.3	2.9	84.2	-0.46	3.8	2.6	8	LC		
Y8AB4R	89.0	92.0	89.5	86.5	89.3	0.85	4.7	2.3	89.7	0.88	4.8	2.3	8	LD		
ZX22A8	82.0	79.7	82.7	81.2	81.4	-0.96	3.9	1.3	82.4	-0.89	3.1	1.4	8	EM		
					Consensus (All Labs) Results											
Wk Mean	85.87	86.70	85.89	86.09	Month Mean				Grand Mean				86.09			
Avg SDr	4.45	4.94	4.16	4.22	Avg SDr				Avg SDr				4.38			
SD btwn Labs	4.24	4.11	4.52	3.59	SD btwn Labs				SD btwn Labs				4.17			
Labs Incl'd	52	47	49	46	SD btwn Wks				SD btwn Wks				4.07			
Labs Excl'd	0	4	1	3	Labs Incl'd				Labs Incl'd				52			
Labs not rcvd	0	1	2	3												

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200

(EX) - Emerson (model not specified)

(LC) - L & W Crush Tester 48

(LX) - L & W 506

(MB) - Messmer Buchel K440

(TD) - TMI Digital Crush Tester, Model 17-09

(XX) - Instrument make/model not specified by lab

(EN) - Emerson 2200

(LA) - L&W Autoline

(LD) - L&W Crush Tester 248

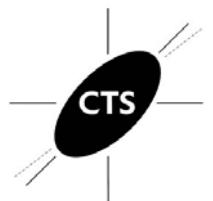
(LZ) - L & W Crush Tester (model not specified)

(TC) - TMI Monitor/Compression Tester, Model 17-37

(TH) - TMI Compression Tester, Model 17-76



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
3TVEBY	135.5	132.6	118.6	120.2	126.7	-0.48	5.1	8.6	127.3	-0.50	5.3	6.4	8	LC
46PT9B	133.3	133.9	134.9	L 135.4	134.4	0.50	2.7	1.0	130.2	-0.13	2.7	4.8	8	LC
4988FH	119.4	114.4	116.0	116.1	116.5	-1.78	3.3	2.1	117.9	-1.70	3.3	2.2	8	LD
6H46R3	133.2	131.9	133.5	133.8	133.1	0.34	5.2	0.8	131.7	0.06	4.4	1.8	8	TH
7GVKTM	133.8	133.9	133.9	134.3	133.9	0.44	3.4	0.2 L	133.6	0.31	3.1	0.9 L	8	LD
7VR3HK	132.0	129.9	134.8	137.4	133.5	0.39	3.4	3.3	134.1	0.37	4.2	3.2	8	TC
7YQDCY	129.6 H	130.1	126.7 H	127.8	128.6	-0.24	6.6	1.6	129.1	-0.27	6.4	3.9	8	LA
84EHH9	152.5 *	150.8 *	151.6 *	146.4 *	150.3	2.52 *	4.2	2.7	149.6	2.36 *	3.9	2.2	8	LX
8EZJ3N	118.3	120.6	126.4	122.9	122.1	-1.07	5.7	3.4	141.8	1.36	17.0	22.8 H	8	LC
9LFPCZ	126.4 L	124.9	123.1	125.6	125.0	-0.70	3.4	1.4	125.1	-0.78	3.0	2.1	8	LD
9QALY7	135.2	110.2 *H	141.9	124.2	127.9	-0.33	7.2	13.9 H	132.8	0.21	6.9	11.3 H	8	LC
9WHCGY	126.9	126.5 L	124.4	124.4 H	125.6	-0.62	5.0	1.3	126.3	-0.62	4.2	3.7	8	LD
ABCQ4R	147.7	132.6	143.1	145.6	142.2	1.49	5.4	6.7	139.3	1.04	7.0	6.2	8	LC
BERJUK	132.0	131.5	130.7	131.5	131.4	0.12	3.3	0.5 L	130.9	-0.04	2.8	0.8 L	8	TH
CB3TKQ	130.8	129.5	131.4	129.1	130.2	-0.03	4.0	1.1	130.4	-0.10	3.8	0.8 L	8	LD
DANPPE	130.9	128.8	122.4	132.6	128.7	-0.23	5.8	4.5	128.7	-0.32	5.8	4.5	4	LD
DTXL7P	121.5	120.3	131.4 L	129.7	125.7	-0.60	3.3	5.6	124.4	-0.86	3.1	4.4	8	LC
EHEYNV	135.9	135.3	133.4	133.1	134.4	0.50	3.5	1.4	134.3	0.40	4.1	1.8	8	LD
EPYRLT	129.1	134.7	122.5	126.6	128.2	-0.29	4.5	5.1	128.1	-0.40	5.1	4.7	8	LZ
FC7X3R	127.8 L	133.2	130.9	128.9	130.2	-0.04	3.3	2.4	134.6	0.44	3.1	5.0	8	LZ
G2M9R7	127.7	125.1	126.7	132.4	127.9	-0.32	3.8	3.1	127.3	-0.50	3.8	3.9	8	LC
GPTWFR	134.3	110.1 *	139.0 H	105.3 X	122.2	-1.06	5.3	16.9 H	126.5	-0.60	5.3	12.4 H	8	LZ
HG8LGG	115.6	118.1	119.1	116.4	117.3	-1.68	4.0	1.6	117.7	-1.72	3.6	1.2	8	EX
HHQ8BT	126.3	128.7	127.1	129.8	128.0	-0.32	3.8	1.6	126.9	-0.55	3.5	3.9	8	EN
HL6Z48	140.9	138.7	139.8	136.9	139.1	1.09	5.2	1.7	141.7	1.35	4.9	4.1	8	LZ
HP8BCM	135.5	131.6 L	130.8 L	131.2	132.2	0.23	2.6	2.2	129.3	-0.24	2.9	3.7	8	TH
HUXD47	120.0 H	119.1	125.7 H	117.1	120.5	-1.27	6.3	3.7	122.1	-1.17	7.0	5.3	8	EM
HXGARW	123.3 L	124.6	124.3	125.1	124.3	-0.78	3.5	0.7 L	126.4	-0.61	3.3	2.9	8	LC
JGQPPH	134.5	127.3	124.5	124.9	127.8	-0.34	4.0	4.6	128.0	-0.41	4.3	3.6	8	LD
JMVVHM	120.2	128.6	138.8	127.1 H	128.7	-0.23	5.3	7.7	130.7	-0.07	5.4	6.2	8	LD
K27NA3	145.7	No Data	139.6	No Data	142.7	1.55	4.8	4.3	142.3	1.43	4.0	4.3	6	MB
KA2QBE	136.2 L	133.5	132.4	132.0	133.5	0.39	2.0	1.9	133.6	0.31	2.4	1.3	8	LZ
KXTLM8	143.9	139.6 H	No Data	No Data	141.7	1.43	10.5	3.1	141.1	1.27	7.1	3.7	6	LC
L4AJQK	125.0	128.4	121.8 H	124.7	125.0	-0.70	6.7	2.7	126.1	-0.65	5.6	2.5	8	LC
N3AHED	132.4	133.7	131.6	136.2	133.5	0.38	3.4	2.0	129.6	-0.20	3.6	4.3	8	LC



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
N7TDH7	116.8	124.9	125.0	118.2	121.2	-1.17	3.6	4.3	125.2	-0.76	3.7	6.1	8	LC
N9WBPR	119.2	123.8 H	117.8 H	116.6	119.3	-1.41	6.9	3.1	118.6	-1.61	6.2	3.6	8	MB
PCDWYQ	135.0	138.8	144.7	143.4	140.4	1.27	4.6	4.4	140.9	1.25	4.3	3.5	8	LC
PN4QBK	125.7 L	126.0 L	124.9	124.6	125.3	-0.66	3.3	0.6 L	125.5	-0.72	3.4	1.1	8	LD
QN47Y6	122.8	121.4	123.0	124.0	122.8	-0.98	3.6	1.1	117.7	-1.72	7.6	5.6	8	LD
QR2PZ3	147.9 L	150.3 *L	145.7 L	147.5 *	147.8	2.21 *	1.7	1.9	148.0	2.16 *	1.9	1.4	8	TD
QR2RQ8	145.1	146.8	No Data	No Data	145.9	1.96	4.4	1.2	145.9	1.89	4.4	1.2	2	EX
QUC8K9	134.3 H	128.9	131.3	132.7	131.8	0.17	6.6	2.3	133.4	0.28	7.7	2.8	8	LC
R63NLE	127.5	126.2	128.9 L	126.0	127.2	-0.42	2.9	1.3	127.0	-0.53	3.6	1.7	8	LD
RVGGPB	136.1	137.1	135.1	134.2	135.6	0.65	3.3	1.3	139.5	1.07	3.6	4.4	8	LC
VMDEFU	137.0	135.3	136.6	136.2	136.3	0.74	3.5	0.7 L	138.7	0.97	3.7	3.3	8	EM
WYN7GA	123.1	122.8 L	134.9	127.0	126.9	-0.45	3.7	5.6	128.9	-0.29	4.5	4.3	8	LD
X7YEB3	127.4	125.3	126.8 H	143.4	130.7	0.03	6.2	8.5	130.6	-0.08	6.5	8.1	6	XX
XL8ZHC	130.9	131.1	133.4	132.0	131.9	0.18	3.4	1.1	131.3	0.02	3.9	3.5	8	LD
XULPJ7	127.9	129.2	129.9	129.9	129.2	-0.16	4.2	0.9	131.9	0.09	4.2	3.9	8	LC
Y8AB4R	138.9	147.0	143.8	142.4	143.0	1.59	3.7	3.4	142.4	1.44	3.7	2.4	8	LD
ZX22A8	117.4	118.2	114.5	114.6	116.2	-1.82	3.8	1.9	116.1	-1.93	3.2	1.3	8	EM
Consensus (All Labs) Results														
Wk Mean	130.88	129.52	130.58	129.83	Month Mean				Grand Mean				131.17	
Avg SDr	4.35	4.95	4.88	3.99	Avg SDr				Avg SDr				5.16	
SD btwn Labs	8.60	8.76	8.21	8.19	SD btwn Labs				SD btwn Labs				7.81	
Labs Incld	52	51	50	48	SD btwn Wks				SD btwn Wks				5.40	
Labs Excld	0	0	0	1	Labs Incld				Labs Incld				52	
Labs not rcvd	0	1	2	3										

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200

(EX) - Emerson (model not specified)

(LC) - L & W Crush Tester 48

(LX) - L & W 506

(MB) - Messmer Buchel K440

(TD) - TMI Digital Crush Tester, Model 17-09

(XX) - Instrument make/model not specified by lab

(EN) - Emerson 2200

(LA) - L&W Autoline

(LD) - L&W Crush Tester 248

(LZ) - L & W Crush Tester (model not specified)

(TC) - TMI Monitor/Compression Tester, Model 17-37

(TH) - TMI Compression Tester, Model 17-76



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
2JDDFY	23.2	23.2	21.5	23.1	22.8	0.65	2.0	0.8	23.4	1.10	2.1	1.2	6	LU
3TVEBY	22.8	22.3	20.8	20.8	21.7	-0.20	2.4	1.0	21.5	-0.49	2.2	1.4	8	LY
46PT9B	21.6	20.0	21.1	21.1	21.0	-0.81	1.8	0.7	21.2	-0.78	1.8	0.6	8	LA
4988FH	19.8	19.3	* 19.7	20.1 L	19.7	-1.79	1.5	0.3	20.1	-1.67	1.6	0.6	8	LW
4ZTWEX	21.3	21.3	21.2	22.2	21.5	-0.35	1.8	0.5	21.5	-0.51	1.8	0.5	8	LY
64PALZ	No DATA	24.3	21.7 L	No DATA	23.0	0.87	1.5	1.8 H	22.3	0.14	1.4	1.8	3	LU
6H46R3	22.4	23.4	24.3	25.0	23.8	1.47	2.3	1.1	23.5	1.12	2.1	0.8	8	XX
7VR3HK	21.7 L	22.9 L	22.8 L	22.8	22.5	0.48	0.9	0.5	22.7	0.50	0.7	0.7	8	LA
7YQDCY	23.3 L	21.6 L	22.7 L	22.1 L	22.4	0.37	0.5	0.7	21.8	-0.24	0.5	1.1	8	LA
8EZJ3N	22.3	23.2	23.7	22.1	22.8	0.69	0.9	0.8	22.6	0.42	0.9	0.6	8	LY
9QALY7	22.7 L	21.7 L	20.6 L	17.8 *L	20.7	-1.02	0.5	2.1 H	23.6	1.23	1.4	6.7 H	8	LW
9WHCGY	21.2	21.0	21.4	21.1	21.2	-0.62	1.8	0.2	20.9	-0.98	1.9	0.3	8	LY
ABCQ4R	22.3	22.0 L	23.1 L	21.3 L	22.2	0.17	1.2	0.7	22.8	0.59	0.9	1.1	8	LA
BAU3F6	21.0 L	19.9 L	19.5	18.4 *L	19.7	-1.82	0.6	1.1	22.3	0.16	1.0	7.4 H	8	LW
CB3TKQ	23.1	22.3	22.5	22.4	22.6	0.49	1.6	0.4	22.6	0.43	1.8	0.3	8	XX
DANPPE	22.9	22.2	19.9	22.0	21.8	-0.16	2.0	1.3	21.6	-0.42	2.0	1.2	8	LU
DTXL7P	21.4	21.7	21.0	20.8	21.2	-0.57	1.4	0.4	21.4	-0.60	1.4	0.4	8	LW
EPYRLT	20.0	21.3	20.2	21.2	20.7	-1.05	1.9	0.7	20.7	-1.15	1.8	0.5	8	LW
F93UYN	21.5	21.3	21.0	21.2	21.2	-0.57	1.5	0.2	21.3	-0.64	1.4	0.3 L	8	LW
G2M9R7	22.1	22.1	22.2	21.6	22.0	0.02	2.1	0.3	21.9	-0.14	2.0	0.3	8	LU
GPTWFR	20.3	20.5	20.5	21.5	20.7	-1.00	1.7	0.6	21.0	-0.94	1.8	0.7	8	LZ
HHQ8BT	20.3	20.4	20.3	20.6	20.4	-1.24	1.9	0.1 L	20.4	-1.45	1.8	0.4	8	LU
HP8BCM	22.8	22.7	21.5	23.3	22.6	0.52	1.1	0.8	22.3	0.16	1.3	0.7	8	TT
HXGARW	21.2	20.8	21.0	21.9	21.2	-0.58	1.9	0.5	21.5	-0.49	1.8	0.6	8	LW
J9XEG8	23.6	23.4	23.1	22.8	23.2	1.03	2.2	0.3	23.4	1.03	2.0	0.5	8	LZ
JGQPPH	20.1	20.9	19.6	18.9	19.9	-1.69	2.1	0.9	20.1	-1.67	2.1	0.6	8	LY
JMVVHM	20.0	22.5	22.1	21.8	21.6	-0.29	1.9	1.1	21.8	-0.22	1.9	0.9	8	LZ
K27NA3	21.7 L	No DATA	20.7 L	No DATA	21.2	-0.62	0.1	0.7	21.7	-0.31	0.1	0.8	5	LA
L4AJQK	19.5	20.8	19.4	19.9	19.9	-1.67	1.8	0.7	19.4	-2.27 *	1.6	0.9	8	XX
N3AHED	20.3 L	21.4 L	22.1 L	21.9 L	21.4	-0.43	0.3	0.8	21.8	-0.25	0.4	0.9	8	LA
N9WBPR	24.0 L	22.4 L	22.4 L	21.8 L	22.7	0.59	0.5	0.9	24.0	1.60	0.6	1.7	8	BK
NUZWT6	20.9	20.9	21.1	21.4	21.1	-0.71	1.6	0.3	21.0	-0.92	1.8	0.3 L	7	LY
PCDWYQ	23.0	23.0	23.0	22.8	22.9	0.80	1.8	0.1 L	22.8	0.61	1.8	0.2 L	8	LU
QEVBNA	22.8	21.2	22.4	23.0	22.4	0.33	1.5	0.8	22.5	0.32	1.5	0.8	8	XX
QN47Y6	21.9	22.2	21.9	21.5	21.9	-0.05	2.0	0.3	21.5	-0.48	1.9	0.5	8	LY



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
QR2RQ8	26.1 *L	25.5 *L	No DATA	No DATA	25.8	3.12 X	0.0	0.4	26.3	3.43 X	0.0	0.6	4	LZ
QUC8K9	21.7	21.6	21.8	22.0	21.8	-0.14	1.8	0.2	22.2	0.08	1.6	0.6	8	LU
R63NLE	21.3	21.2	22.1	22.7	21.8	-0.10	1.6	0.7	21.6	-0.40	1.3	0.6	8	BK
RDXLB3	21.0 L	21.0 L	20.6 L	21.9 L	21.1	-0.67	0.3	0.6	20.6	-1.25	0.3	0.8	8	LA
RVGGPB	24.6 L	24.2 L	24.4 L	22.7 L	24.0	1.65	0.0	0.8	24.3	1.82	0.0	0.7	7	LA
TDVDKU	18.4 *L	19.3 *L	20.6 L	23.0 L	20.3	-1.31	0.0	2.0 H	21.3	-0.66	0.0	1.7	8	TS
TNX3DC	23.8	22.5	22.4	23.3	23.0	0.86	1.0	0.7	23.0	0.77	1.2	0.6	8	TT
UJ292A	23.5	22.2	23.4	24.3	23.4	1.14	2.1	0.9	23.6	1.26	2.2	0.8	7	LW
WANYPZ	23.3	26.6 X	25.1 *	24.6	24.9	2.38 *	1.7	1.3	24.6	2.08 *	1.8	1.3	5	LA
WJQGZ3	23.8	22.9	22.6	24.3	23.4	1.19	1.7	0.8	23.0	0.76	1.6	0.8	8	LU
WYN7GA	20.8	22.9	22.0	20.7	21.6	-0.28	1.6	1.1	21.7	-0.32	2.2	0.9	8	LA
X7YEB3	21.7 L	23.4 L	23.6 L	20.9 L	22.4	0.35	0.1	1.3	26.4	3.59 X	0.1	9.1 H	8	XX
XL8ZHC	22.5	21.3	21.5	20.7	21.5	-0.37	1.8	0.8	21.3	-0.66	1.8	0.6	8	LU
XULPJ7	21.6	23.6	21.7	22.5	22.4	0.33	1.8	0.9	22.9	0.68	1.9	1.0	8	LW
YWP2FX	23.7 L	23.1 L	23.7 L	24.5 L	23.8	1.46	0.0	0.6	23.1	0.85	0.0	1.0	8	LU
YZAUPE	24.6	25.0 *	24.9 *	24.6	24.8	2.29 *	2.1	0.2	24.8	2.23 *	2.1	0.7	8	LA
Consensus (All Labs) Results														
Wk Mean	22.03	22.03	21.85	21.94	Month Mean				Grand Mean				22.10	
Avg SDr	1.56	1.64	1.49	1.66	Avg SDr				Avg SDr				1.60	
SD btwn Labs	1.51	1.35	1.40	1.54	SD btwn Labs				SD btwn Labs				1.21	
Labs Incld	50	49	50	48	SD btwn Wks				SD btwn Wks				1.66	
Labs Excld	0	1	0	0	Labs Incld				Labs Incld				49	
Labs not rcvd	1	1	1	3										

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

(LA) - L & W Autoline

(LU) - L & W 52 without moisture correction(was 53)

(LW) - L & W 53 with moisture correction (was 53M)

(LY) - L & W 152 without moisture correction

(LZ) - L & W (model not specified)

(TS) - TMI Monitor/STFI Compression Tester, 17-33

(TT) - TMI Short Span Compression, 17-34 (MB K455)

(XX) - Instrument make/model not specified by lab



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst
2JDDFY	35.4	37.6	34.7	34.3	35.5	1.10	1.9	1.5	34.5	0.65	1.7	1.7	8	LU
3TVEBY	35.0	33.4	31.1	32.5	33.0	-0.05	1.9	1.6	32.8	-0.12	1.9	1.2	8	LY
46PT9B	30.8	31.7	29.8	30.7	30.8	-1.07	1.6	0.8	31.4	-0.73	1.8	0.9	8	LA
4988FH	31.3	28.6	29.3	29.6	29.7	-1.55	1.8	1.1	30.2	-1.28	1.8	1.0	8	LW
4ZTWEX	31.3	31.5	31.7	31.9	31.6	-0.68	1.4	0.2	32.1	-0.44	1.5	0.6	8	LY
64PALZ	No Data	33.4	36.3	No Data	34.8	0.78	1.8	2.1	34.8	0.80	1.8	2.1	2	LU
6H46R3	33.0	33.0	33.9	34.0	33.5	0.16	1.9	0.6	34.1	0.49	1.9	0.8	8	XX
7VR3HK	32.1 L	34.7 L	32.8 L	34.2	33.4	0.15	1.1	1.2	32.6	-0.18	0.9	1.3	8	LA
7YQDCY	33.1 L	31.7 L	32.0 L	No Data	32.3	-0.38	0.6	0.8	32.4	-0.27	0.6	1.2	7	LA
8EZJ3N	35.6	35.2	36.3	34.9	35.5	1.08	1.3	0.6	36.2	1.43	1.4	1.0	8	LY
9QALY7	37.1	36.5	35.1	26.8 *	33.9	0.35	1.9	4.8 H	34.3	0.58	2.0	3.2 H	8	LW
9WHCGY	31.1	31.4	31.6	31.2	31.3	-0.81	1.8	0.2 L	31.2	-0.80	1.6	0.4	8	LY
ABCQ4R	33.9 L	33.0 L	31.6 L	32.8 L	32.8	-0.14	0.6	1.0	34.0	0.43	0.7	1.5	8	LA
BAU3F6	33.4	34.7	32.5	29.3	32.5	-0.28	2.1	2.3	31.9	-0.50	1.9	1.9	8	LW
CB3TKQ	34.2	32.3	33.9	35.0	33.8	0.33	1.8	1.1	33.6	0.27	1.8	0.8	8	XX
DANPPE	35.3	34.3	30.6	34.3	33.6	0.23	1.7	2.1	33.6	0.26	1.7	2.1	4	LU
DTXL7P	30.8	31.1	31.1	31.8	31.2	-0.87	1.4	0.5	30.6	-1.07	1.3	1.0	8	LW
EPYRLT	31.8	31.9	31.4	33.1	32.0	-0.49	1.9	0.7	32.3	-0.33	1.9	0.8	8	LW
F93UYN	31.4	31.8	31.3	31.0	31.4	-0.78	1.5	0.3	30.9	-0.96	1.4	0.9	8	LW
G2M9R7	32.0	30.8	30.6	31.3	31.1	-0.89	1.6	0.6	31.3	-0.78	1.6	0.5	8	LU
GPTWFR	30.1	31.5	31.0	31.1	30.9	-1.00	1.6	0.6	30.7	-1.05	1.6	0.6	8	LZ
HHQ8BT	29.8	30.0	28.9	29.3	29.5	-1.65	1.3	0.5	30.1	-1.30	1.5	1.0	8	LU
HP8BCM	32.8	32.9	32.6	32.7	32.8	-0.16	1.2	0.1 L	32.7	-0.16	1.2	0.3 L	8	TT
HXGARW	31.2	31.9	32.5	31.2	31.7	-0.65	1.4	0.6	32.0	-0.46	1.4	0.7	8	LW
J9XEG8	35.4	36.3	33.7	34.7	35.0	0.87	2.3	1.1	35.0	0.90	2.2	0.8	8	LZ
JGQPPH	30.4	32.4	31.7	31.0	31.4	-0.79	1.8	0.9	31.4	-0.74	1.7	0.7	8	LY
JMVVHM	30.1	33.7	33.2	32.4	32.3	-0.35	1.7	1.6	33.4	0.16	1.9	1.6	8	LZ
K27NA3	34.3 L	No Data	33.7 L	No Data	34.0	0.39	0.1	0.4	33.7	0.29	0.1	0.8	6	LA
L4AJQK	25.5 X	26.0 *	27.1 *	27.4 *	26.5	-2.99 X	1.5	0.9	27.6	-2.43 *	1.6	1.3	8	XX
N3AHED	30.5 L	30.7 L	28.8 L	30.3 L	30.1	-1.38	0.5	0.9	30.9	-0.93	0.5	1.2	8	LA
N9WBPR	38.1 L	35.7 L	37.5 L	34.7 L	36.5	1.54	0.7	1.6	36.5	1.54	0.7	1.0	8	BK
NUZWT6	30.3	29.6	30.5	31.0	30.4	-1.25	1.5	0.6	30.6	-1.09	1.6	0.6	8	LU
PCDWYQ	34.0	33.9	34.0	34.9	34.2	0.48	1.5	0.5	34.5	0.66	1.6	0.5	8	LU
QEVBNA	34.4	35.1	33.9	35.0	34.6	0.68	1.7	0.6	34.1	0.47	1.6	0.9	8	LU
QN47Y6	31.2	31.4	31.5	31.7	31.4	-0.76	1.5	0.2 L	31.4	-0.75	1.5	0.4	8	LY



WebCode	Weekly Means				Monthly Results				Cumulative Results						
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst	
QR2RQ8	37.2 L	36.9 L	No DATA	No DATA	37.1	1.79	0.0	0.3	37.1	1.79	0.0	0.3 L	2	LZ	
QUC8K9	33.3	33.9	33.4	34.8	33.9	0.35	2.0	0.7	33.6	0.26	1.8	0.8	8	LU	
R63NLE	31.8	31.5	30.8	31.7	31.5	-0.75	1.2	0.4	31.3	-0.79	1.3	0.7	8	BK	
RDXLB3	29.4 L	30.1 L	30.2 L	29.8 L	29.9	-1.48	0.4	0.4	30.0	-1.37	0.4	0.4	8	LA	
RVGGPB	36.8 L	35.2 L	36.7 L	34.8 L	35.9	1.26	0.0	1.0	35.8	1.24	0.0	0.7	8	LA	
TDVDKU	31.2 L	32.9 L	34.3 L	36.0 L	33.6	0.23	0.0	2.0	33.4	0.15	0.0	1.4	8	TS	
TNX3DC	34.1	32.6	32.8	32.8	33.1	-0.03	1.1	0.7	33.0	-0.01	1.2	0.5	8	TT	
UJ292A	35.1	36.0	36.5	36.8	36.1	1.36	2.2	0.8	35.8	1.24	2.1	0.7	7	LW	
WANYPZ	38.0	39.9 *	39.4 *	37.8 *	38.8	2.57 *	1.9	1.0	36.7	1.63	1.8	2.3	8	LA	
WJQGZ3	37.2	37.1	35.4	36.7	36.6	1.59	1.8	0.8	35.8	1.22	1.6	1.2	8	LU	
WYN7GA	28.8	31.0	31.8 L	32.9	31.1	-0.91	1.7	1.8	31.0	-0.90	1.5	1.4	8	LA	
X7YEB3	34.5 L	35.6 L	34.0 L	34.8 L	34.7	0.74	0.1	0.6	38.2	2.30 *	0.7	10.4 H	8	XX	
XL8ZHC	31.1	31.0	32.2	31.1	31.4	-0.80	1.8	0.6	31.5	-0.67	1.9	0.5	8	LU	
XULPJ7	31.2	30.8	33.9	32.3	32.1	-0.48	1.8	1.4	32.2	-0.39	1.6	1.1	8	LW	
YWP2FX	33.9 L	33.4 L	34.1 L	34.0 L	33.9	0.34	0.0	0.3	32.4	-0.27	0.0	1.8	8	LU	
YZAUPE	37.4	37.7	38.1 *	37.6	37.7	2.08 *	1.7	0.3	37.5	2.01 *	1.8	0.3 L	8	LA	
Consensus (All Labs) Results															
Wk Mean	33.10	33.10	32.83	32.77	Month Mean				Grand Mean				33.04		
Avg SDr	1.53	1.50	1.59	1.58	Avg SDr				Avg SDr				1.52		
SD btwn Labs	2.51	2.61	2.51	2.49	SD btwn Labs				SD btwn Labs				2.24		
Labs Incld	49	50	50	47	SD btwn Wks				SD btwn Wks				1.86		
Labs Excld	1	0	0	0	Labs Incld				Labs Incld				51		
Labs not rcvd	1	1	1	4											

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

(LA) - L & W Autoline

(LU) - L & W 52 without moisture correction (was 53)

(LW) - L & W 53 with moisture correction (was 53M)

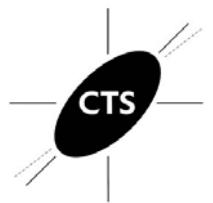
(LY) - L & W 152 with moisture correction

(LZ) - L & W (model not specified)

(TS) - TMI Monitor/STFI Compression Tester, 17-33

(TT) - TMI Short Span Compression, 17-34 (MB K455)

(XX) - Instrument make/model not specified by lab



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
2R9GJW	143.3	0.65	19.2	132.8	-0.38	14.0	3	EV
8EZJ3N	105.1	-1.92	8.3	98.9	-3.45 X	8.7	4	EV
9QALY7	145.9	0.83	10.2	133.9	-0.28	7.4	4	EV
ABCQ4R	120.2	-0.90	20.5	145.2	0.74	18.1	4	LA
DTXL7P	147.8	0.96	11.5	147.7	0.97	11.7	4	EV
EPYRLT	114.2	-1.30	7.4	125.0	-1.09	11.1	4	EV
HHQ8BT	147.9	0.97	16.7	149.9	1.17	16.6	4	EV
J9XEG8	128.7	-0.33	21.8	124.7	-1.11	14.9	4	LA
JMVVHM	130.6	-0.20	15.3	142.9	0.53	13.2	4	LA
K27NA3	137.1	0.24	17.5	138.7	0.15	16.6	4	LA
N3AHED	149.2	1.06	21.7	154.9	1.62	23.3	4	LA
N9WBPR	131.3	-0.15	12.3	135.1	-0.18	13.9	4	EV
NUZWT6	145.3	0.80	9.3	143.9	0.63	13.8	4	EV
QUC8K9	134.6	0.07	13.3	139.4	0.22	10.1	4	EV
RDXLB3	118.6	-1.01	7.3	120.1	-1.53	8.4	4	EV
RVGGPB	124.1	-0.64	12.4	125.2	-1.06	14.6	4	LA
WANYPZ	115.6	-1.21	14.6	119.3	-1.60	15.4	4	LA
WJQGZ3	124.3	-0.62	15.4	141.1	0.37	13.2	4	EV
X7YEB3	167.5	2.29 *	25.2	154.2	1.56	20.9	4	EV
XL8ZHC	141.8	0.56	16.4	141.8	0.43	13.7	4	EV
Y8AB4R	131.4	-0.14	16.4	124.4	-1.14	12.6	3	EV
Consensus (All Labs) Results								
Month Mean	133.55			Grand Mean	137.01			
Avg SDr	15.67			Avg SDr	14.66			
SD btwn Labs	14.83			SD btwn Labs	11.05			
Labs Incl'd	21			Labs Incl'd	20			

Instrument Code List as Reported by the Labs

(EV) - Emveco Microgage Model 210-R

(LA) - L & W Autoline



WebCode	Monthly Results				Cumulative Results				
	Mean	CPV	SDr		Mean	CPV	SDr	Months	Inst
46PT9B	189.6	1.14	10.5		196.8	1.56	8.9	3	HY
4988FH	174.6	0.38	5.3		174.4	0.46	6.6	4	TM
7VR3HK	154.6	-0.65	5.7		155.1	-0.49	4.3	4	SC
7YQDCY	162.2	-0.26	6.1		165.6	0.03	15.1	4	TM
9LFPCZ	182.2	0.76	10.0		175.7	0.52	6.8	4	SC
9QALY7	196.0	1.47	18.5		181.0	0.78	18.1	4	SC
DANPPE	177.8	0.54	1.5		177.8	0.63	1.5	1	HZ
DTXL7P	207.4	2.05 *	7.2		197.1	1.58	8.5	4	HY
G2M9R7	163.9	-0.17	0.8		171.0	0.29	5.1	4	HY
J9XEG8	164.8	-0.13	28.8		147.3	-0.87	16.0	4	TM
L4AJQK	133.8	-1.71	10.9		121.1	-2.16 *	12.5	4	SC
N3AHED	175.9	0.44	6.7		183.4	0.90	7.2	4	HY
Q2BW3X	158.8	-0.43	7.2		163.3	-0.08	4.6	4	TM
QUC8K9	145.4	-1.12	6.5		144.8	-1.00	6.7	4	TM
WJQGZ3	142.8	-1.25	11.3		140.1	-1.23	7.0	4	TM
WYN7GA	68.0	-5.07 X	0.5		66.2	-4.86 X	1.0	4	LZ
XL8ZHC	152.4	-0.76	4.7		151.6	-0.66	5.8	4	TM
Y8AB4R	161.0	-0.32	2.0		160.0	-0.25	14.0	4	HY
Consensus (All Labs) Results									
Month Mean	167.25				Grand Mean	165.04			
Avg SDr	10.69				Avg SDr	9.86			
SD btwn Labs	19.57				SD btwn Labs	20.34			
Labs Incl'd	17				Labs Incl'd	17			

Instrument Code List as Reported by the Labs

(HY) - Huygen Digitized Scott Internal Bond Tester

(HZ) - Huygen Internal Bond Tester with AccuPress

(LZ) - L & W (model not specified)

(SC) - Scott Internal Bond Tester (Manual)

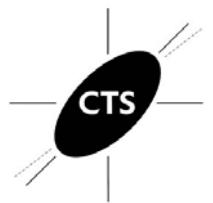
(TM) - TMI Monitor/Internal Bond Tester



WebCode	Monthly Results			Cumulative Results			
	Mean	CPV	SDr	Mean	CPV	SDr	Months
29DNYX	29.1	0.72	3.6	27.2	0.02	3.8	4
4988FH	23.7	-2.23 *	2.1	25.9	-0.72	2.4	4
64PALZ	26.8	-0.54	2.3	27.7	0.34	2.2	3
7VR3HK	30.0	1.21	1.0	29.5	1.40	1.2	4
7YQDCY	29.2	0.77	3.1	30.7	2.10 *	2.8	4
9QALY7	27.0	-0.43	1.6	26.4	-0.42	1.6	4
DTXL7P	27.8	0.01	3.1	26.4	-0.45	1.9	4
G2M9R7	26.6	-0.65	0.9	24.3	-1.68	1.6	4
HHQ8BT	26.3	-0.79	1.5	25.0	-1.24	1.4	4
J9XEG8	27.2	-0.32	2.6	24.5	-1.56	1.7	4
KXTLM8	29.4	0.88	3.0	26.0	-0.65	3.0	4
N3AHED	28.6	0.45	0.5	28.9	1.06	2.2	4
NUZWT6	30.0	1.21	0.7	29.0	1.07	2.7	4
QEBVNA	26.9	-0.49	2.1	26.2	-0.56	1.9	4
QUC8K9	26.5	-0.71	0.7	26.9	-0.15	0.9	4
WJQGZ3	25.2	-1.42	2.5	27.2	0.02	2.1	4
WYN7GA	28.4	0.34	1.3	28.5	0.78	1.1	4
XL8ZHC	31.2	1.87	1.9	27.8	0.42	2.1	4
XULPJ7	28.0	0.12	2.0	27.5	0.23	3.0	4
Consensus (All Labs) Results							
Month Mean	27.79			Grand Mean	27.11		
Avg SDr	2.12			Avg SDr	2.20		
SD btwn Labs	1.83			SD btwn Labs	1.71		
Labs Incl'd	19			Labs Incl'd	19		

Instrument Code List as Reported by the Labs

(ZZ) - Instruments No Longer Tracked



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
29DNYX	49.8	-1.13	2.2	49.3	-0.34	2.2	4	GA
4988FH	51.9	0.20	2.2	52.4	0.62	2.6	4	HG
7YQDCY	50.1	-0.96	3.2	51.7	0.38	2.4	4	LP
9LFPCZ	51.3	-0.21	1.0	50.9	0.13	1.7	4	LP
9QALY7	50.9	-0.45	2.6	52.2	0.55	3.4	4	HG
9WHCGY	50.1	-0.96	0.9	49.8	-0.21	1.3	4	LP
ABCQ4R	50.5	-0.68	1.3	50.8	0.12	1.8	4	LA
DTXL7P	52.1	0.33	1.8	51.7	0.38	2.0	4	LP
G2M9R7	52.1	0.28	2.6	51.5	0.32	2.9	4	TP
J9XEG8	52.0	0.25	2.4	44.2	-1.92	4.5	4	XX
K36UNC	51.9	0.16	1.3	53.4	0.91	2.0	4	XX
KA2QBE	54.4	1.77	4.5	54.4	1.23	2.9	4	XX
N3AHED	51.2	-0.26	2.0	51.6	0.36	1.8	4	LA
N9WBPR	54.6	1.90	1.4	53.8	1.05	1.5	4	XX
NUZWT6	50.9	-0.44	1.9	51.3	0.27	1.4	4	LP
PEGTKE	48.7	-1.83	2.8	48.4	-0.63	2.2	4	LA
QEBVNA	43.3	-5.24 X	2.4	42.2	-2.53 *	2.1	4	XX
QUC8K9	54.0	1.52	2.0	54.0	1.10	2.3	4	LA
RVGGPB	53.7	1.35	2.9	52.9	0.77	3.3	4	TL
WJQGZ3	44.0	-4.80 X	1.9	44.2	-1.93	2.4	4	XX
WYN7GA	26.8	-15.75 X	1.7	47.2	-1.00	1.5	4	LA
X7YEB3	50.9	-0.46	1.3	50.9	0.16	3.0	4	LW
XULPJ7	51.0	-0.39	3.1	51.1	0.20	2.0	4	LP
Consensus (All Labs) Results								
Month Mean	51.61			Grand Mean	50.43			
Avg SDr	2.33			Avg SDr	2.42			
SD btwn Labs	1.58			SD btwn Labs	3.24			
Labs Incl'd	20			Labs Incl'd	23			

Instrument Code List as Reported by the Labs

(GA) - Gurley Precision #4340 Automatic Densometer

(HG) - Technidyne - Hagerty Model #1 and Profile System

(LA) - L & W Autoline

(LP) - L & W Air Permeance Tester SE 166

(LW) - L & W Gurley Densometer, Oil Flotation

(TL) - Teledyne Gurley Densometer #4110, Oil Flotation

(TP) - Technidyne Profile/ plus Roughness & Porosity

(XX) - Instrument make/model not specified by lab



WebCode	Weekly Means				Monthly Results				Cumulative Results								
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst			
2G7X79	62.0	61.7	62.6	61.5	62.0	0.06	2.5	0.5	62.2	0.16	2.3	0.5	16	LC			
3THLWK	61.6	L No Data	No Data	No Data	61.6	-0.10	1.4	0.0 L	61.4	-0.24	1.8	0.6	13	LC			
3THNK4	64.5	65.9	64.4	64.8	64.9	1.39	2.8	0.7	63.5	0.81	2.8	1.4	16	LD			
449Y82	62.9	62.6	L	62.6	62.6	0.39	1.6	0.2 L	62.7	0.40	1.9	0.4	16	LD			
46PT9B	61.8	61.6	61.9	61.7	61.8	-0.03	2.4	0.1 L	59.5	-1.17	2.5	1.7	16	LC			
64PALZ	60.7	64.2	63.6	61.2	62.4	0.27	2.8	1.7	60.9	-0.47	2.6	1.6	12	LD			
6H46R3	60.9	63.4	62.0	60.6	61.7	-0.04	2.7	1.3	61.4	-0.21	3.0	1.5	12	TH			
7GVKTM	62.7	62.9	62.7	62.2	62.6	0.36	2.9	0.3 L	63.6	0.84	3.0	1.1	16	LD			
7H7P34	62.3	61.9	62.3	61.6	62.0	0.09	2.3	0.3	62.3	0.21	2.4	0.6	16	LD			
7QWB83	60.5	L	59.6	61.4	59.7	-0.68	2.3	0.8	60.7	-0.57	2.4	1.2	12	LC			
84EHH9	61.9	61.3	61.3	61.5	61.5	-0.14	2.5	0.3	62.2	0.16	3.1	0.9	16	LD			
CB3TKQ	59.2	62.3	63.1	61.7	61.6	-0.11	3.3	1.7	63.2	0.65	3.5	1.9	16	LD			
DANPPE	65.1	73.9	XH	77.1	XH	70.5	X	71.7	4.42	X	5.1	5.1 H	6.8 H	6	LC		
DTXL7P	No Data	61.7	61.4	61.6	61.6	-0.12	4.0	0.1 L	60.9	-0.50	4.0	1.0	15	LC			
G2M9R7	62.2	62.2	62.5	60.9	61.9	0.06	3.0	0.7	61.2	-0.32	3.5	1.2	16	LC			
GPTWFR	65.5	65.8	59.2	59.4	62.5	0.29	3.2	3.7 H	61.6	-0.11	3.0	3.3 H	16	LZ			
HP8BCM	61.1	62.3	61.4	62.1	61.7	-0.04	2.6	0.6	61.6	-0.12	2.6	1.0	16	TH			
HXGARW	62.6	62.1	62.7	66.7	L	63.5	0.76	2.3	2.2	65.4	1.79	2.5	1.8	16	LC		
J8W72F	62.1	61.2	61.2	62.3	61.7	-0.05	3.4	0.6	61.6	-0.11	3.1	0.8	16	LD			
JGQPPH	60.4	H	63.6	61.3	H	62.2	H	61.8	0.01	5.9	1.4	62.2	0.19	4.3	1.6	16	LD
JMVVHM	60.9	62.0	62.6	63.1	62.1	0.15	2.5	1.0	60.0	-0.95	2.7	2.0	16	LD			
K27NA3	56.0	* No Data	58.2	No Data	57.1	-2.13	*	3.6	1.6	58.6	-1.62	3.9	2.0	13	MB		
K36UNC	63.6	63.0	62.7	61.7	62.7	0.41	3.0	0.8	62.0	0.07	2.6	0.9	16	LD			
L4AJQK	62.0	58.5	64.4	60.7	61.4	-0.18	3.2	2.5	60.7	-0.56	3.0	2.0	16	LC			
N7TDH7	64.7	63.1	62.3	64.4	63.6	0.81	2.7	1.1	63.2	0.68	3.1	1.9	16	LC			
N9WBPR	62.8	63.5	65.4	65.0	64.2	1.05	3.1	1.2	65.0	1.57	4.1	2.8	16	MB			
NUZWT6	59.6	58.2	59.4	58.5	58.9	-1.30	2.7	0.7	60.4	-0.75	2.7	1.1	16	LZ			
PCDWYQ	63.2	62.0	62.1	L	62.3	0.22	1.9	0.6	61.6	-0.11	2.1	1.2	16	LD			
PEGTKE	67.3	*	66.9	H	65.5	66.6	2.12	*	4.3	0.8	66.1	2.12 *	4.2	1.4	16	LC	
QGHFF	66.9	*	66.0	64.9	66.5	1.91	2.8	0.9	66.1	2.10 *	2.7	0.8	12	TM			
QR2PZ3	62.6	65.0	L	63.8	64.7	L	64.0	0.99	1.2	1.1	63.2	0.65	1.1	1.7	16	TD	
QR2RQ8	59.9	59.0	No Data	No Data	59.4	-1.06	3.0	0.6	59.3	-1.27	2.6	1.2	6	LZ			
QUC8K9	62.0	60.1	61.4	62.8	61.6	-0.11	3.7	1.1	62.4	0.26	4.0	3.0 H	16	LC			
T3HVBC	61.4	59.9	61.1	59.5	L	-0.60	2.4	0.9	61.5	-0.17	2.4	1.1	16	EM			
TNX3DC	61.6	H	58.6	60.5	H	61.2	-0.60	4.8	1.3	61.4	-0.24	5.1	1.9	16	TG		



WebCode	Weekly Means				Monthly Results				Cumulative Results						
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst	
UE7E7T	No DATA	61.4	60.7	No DATA	61.0	-0.36	2.5	0.5	59.9	-0.99	2.8	1.5	14	LZ	
UJ292A	64.1	61.8	61.3	64.0	62.8	0.43	3.8	1.4	61.8	-0.02	4.0	1.4	14	LC	
V39XRC	59.8	58.4	59.1	58.2	58.9	-1.32	3.1	0.7	35.4	-13.16X	2.3	25.2 H	8	TH	
VFWZB4	70.0 X	66.9 H	69.9 X	56.4 *H	65.8	1.78	8.2	6.4 H	64.2	1.15	5.8	3.4 H	16	LC	
WYN7GA	61.2	56.2 *	55.6 X	58.3	57.8	-1.80	2.5	2.5	61.0	-0.41	2.5	3.9 H	8	LD	
X7YEB3	61.1	54.4 XH	56.9 *	58.5	57.7	-1.84	6.4	2.8	57.5	-2.17 *	5.5	4.0 H	16	XX	
XL8ZHC	59.0	59.5	59.2	59.4	59.3	-1.14	2.6	0.2 L	58.6	-1.62	2.6	1.6	16	LD	
XULPJ7	61.4	63.9	62.5	61.0	62.2	0.17	3.4	1.3	63.7	0.90	3.2	1.9	16	LC	
YZAUPE	57.3	58.8	57.6 *	56.9	57.7	-1.87	3.3	0.8	58.6	-1.63	3.5	1.5	16	LD	
ZX22A8	67.6 *	64.9	65.5	66.1	66.0	1.89	2.9	1.1	65.1	1.62	2.9	1.0	16	EM	
Consensus (All Labs) Results															
Wk Mean	62.04	62.04	61.86	61.74	Month Mean				Grand Mean				61.86		
Avg SDr	3.31	3.15	3.07	3.69	Avg SDr				Avg SDr				3.24		
SD btwn Labs	2.38	2.52	2.06	2.57	SD btwn Labs				SD btwn Labs				2.01		
Labs Incld	42	41	40	40	SD btwn Wks				SD btwn Wks				1.82		
Labs Excld	1	2	3	1	Labs Incld				Labs Incld				43		
Labs not rcvd	2	2	2	4											

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200 Series

(LD) - L&W Crush Tester 248

(MB) - Messmer Buchel K440

(TG) - TMI Compression Tester, Model 17-10

(TM) - TMI/Hinde & Dauch

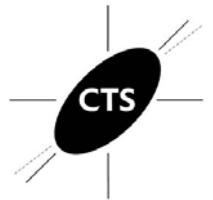
(LC) - L & W Crush Tester 48

(LZ) - L & W Crush Tester (model not specified)

(TD) - TMI Digital Crush Tester, Model 17-09

(TH) - TMI Compression Tester, Model 17-76

(XX) - Instrument make/model not specified by lab



WebCode	Weekly Means				Monthly Results					Cumulative Results						
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wks	Mean	CPV	SDr	SD Wks	Wks	Inst		
36NV3L	65.5 *	61.0 X	64.3 XH	62.7 X	63.4	-5.26	X	3.2	2.0	71.5	-1.26	4.0	6.6 H	16	TU	
449Y82	72.7	73.2	72.7	72.6	72.8	-0.57		1.9	0.3 L	72.8	-0.52	1.9	0.6	16	LD	
7QWB83	71.5	74.3	76.5	73.0	73.8	-0.06		2.9	2.1	73.2	-0.33	3.5	1.6	12	LZ	
G2M9R7	77.7	78.2	78.5	79.7 *	78.5	2.28	*	2.7	0.9	77.6	2.13 *	2.5	1.3	16	LC	
GPTWFR	76.4	68.4 H	75.1 H	77.3	74.3	0.17		5.4	4.0 H	75.5	0.98	3.5	3.4	16	LZ	
HXGARW	76.4 H	74.8	75.2	75.4	75.5	0.76		2.8	0.7	75.1	0.73	2.5	0.8	16	LC	
KA2QBE	73.2	73.3 L	74.6 L	72.7 L	73.5	-0.23		1.4	0.8	72.8	-0.54	1.4	0.9	16	XX	
PCDWYQ	71.3 L	71.7 L	71.4	73.2	71.9	-1.01		1.6	0.9	72.0	-1.00	1.5	0.7	16	LD	
QR2PZ3	72.0	75.4 L	73.0 L	70.3 L	72.7	-0.64		1.1	2.1	72.6	-0.65	0.9	1.2	16	TD	
WYN7GA	74.7	75.1	74.5	74.8	74.8	0.41		2.3	0.3 L	74.7	0.54	2.6	1.3	8	LD	
XULPJ7	71.9	71.1	71.6	72.2	71.7	-1.11		2.3	0.5	73.6	-0.07	3.1	1.6	16	XX	
Consensus (All Labs) Results																
Wk Mean	73.03	73.55	74.31	74.11	Month Mean				73.94	Grand Mean				73.77		
Avg SDr	2.53	3.37	2.63	2.11	Avg SDr				2.70	Avg SDr				2.65		
SD btwn Labs	3.37	2.69	2.21	2.77	SD btwn Labs				2.01	SD btwn Labs				1.81		
Labs Incl'd	11	10	10	10	SD btwn Wks				1.68	SD btwn Wks				2.47		
Labs Excl'd	0	1	1	1	Labs Incl'd				10	Labs Incl'd				11		
Labs not rcvd	0	0	0	0												

Instrument Code List as Reported by the Labs

(LC) - L & W Crush Tester 48

(LD) - L&W Crush Tester 248

(LZ) - L & W Crush Tester (model not specified)

(TD) - TMI Digital Crush Tester, Model 17-09

(TU) - TMI Universal Crush Tester (TMI K440)

(XX) - Instrument make/model not specified by lab



Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

(LA) - L & W Autoline

(LB) - L & W Model 152

(LU) - L & W 52 without moisture correction (was 53)

(LW) - L & W 53 with moisture correction (was 53M)

(LZ) - L & W (model not specified)

(TT) - TMI Short Span Compression, 17-34 (MB K455)

(XX) - Instrument make/model not specified by lab