

Appendix A2

Petrol

MON – Results

Petrol - Motor Octane Number (MON) - Monthly Results

July '07 to Jun '08

Participant	Jul '07	Aug '07	Sep '07	Oct '07	Nov '07	Dec '07	Jan '08	Feb'08	Mar '08	Apr '08	May '08	Jun '08
BP - Bulwer Isl - Engine No. 2	82.5	85.2	85.5	85.4	84.1	82.1	82.5	84.0	85.0	86.8	83.9	82.6
BP - Kwinana - Engine No. 2		84.8	85.3	85.3								
BP - Kwinana - Engine No. 5	82.1			85.6	84.3	81.8	82.8	84.8	84.4	87.2	83.4	82.6
Caltex - Kurnell - Engine No. 2	82.3	85.0	85.6	85.6	84.8						84.0	
Caltex - Kurnell - Engine No. 3						82.1	82.9	84.8				83.0
Caltex - Lytton - Engine No. 2		85.0	85.0	85.0	84.6		82.4	85.0	84.9	87.6	83.2	81.9
Independent - Whangarei - Engine No. 1			85.6	85.7	85.5	§ 82.3		85.0	84.4	87.0	84.5	82.9
Independent - Whangarei - Engine No. 3	82.5	85.3										
Intertek - Melbourne	81.3	§ 85.3	85.6	85.3	84.0	82.0	82.8	85.0	85.0	87.4	84.0	82.4
Mobil - Altona	82.5	85.3	85.9	85.8	84.3	82.0	82.6	84.9	84.7	87.3	83.6	82.2
Intertek - Clyde	82.4	85.1	85.4	85.7	83.5	81.6	82.7	85.3	84.6	87.5	84.0	82.5
<i>No. of Results:</i>	7	8	8	9	8	7	7	8	7	7	8	8
<i>Median:</i>	82.40	85.15	85.55	85.60	84.30	82.00	82.70	84.95	84.70	87.30	83.95	82.55
<i>Normalised IQR:</i>	0.44	0.22	0.17	0.30	0.43	0.15	0.19	0.15	0.33	0.26	0.37	0.24
<i>Robust CV:</i>	0.3%	0.3%	0.2%	0.3%	0.5%	0.2%	0.2%	0.2%	0.4%	0.3%	0.3%	0.3%
<i>Minimum:</i>	81.3	84.8	85.0	85.0	83.5	81.6	82.4	84.0	84.4	86.8	83.2	81.9
<i>Maximum:</i>	82.5	85.3	85.9	85.8	85.5	82.3	82.9	85.3	85.0	87.6	84.5	83.0
<i>Range:</i>	1.2	0.5	0.9	0.8	2.0	0.7	0.5	1.3	0.6	0.8	1.3	1.1

AS1

§ - denotes an outlier result (i.e. a result for which |z-score| > 3).

Petrol - MON - Z-Scores
July '07 to Jun '08

Participant	Jul '07	Aug '07	Sep '07	Oct '07	Nov '07	Dec '07	Jan '08	Feb '08	Mar '08	Apr '08	May '08	Jun '08
BP - Bulwer Isl - Engine No. 2	0.31	0.15	-0.31	-0.62	-0.62	0.31	-0.62	-2.93	0.92	-1.69	-0.15	0.15
BP - Kwinana - Engine No. 2		-1.08		-0.92								
BP - Kwinana - Engine No. 5	-0.92			0.00	0.00	-0.62	0.31	-0.46	-0.92	-0.46	-1.69	0.15
Caltex - Kurnell - Engine No. 2	-0.31	-0.46	0.00	0.00	1.54					0.77	0.15	
Caltex - Kurnell - Engine No. 3						0.31	0.62	-0.46				1.39
Caltex - Lytton - Engine No. 2		-0.46	-1.85	-1.85	0.92		-0.92	0.15	0.62	0.77	-2.31	-2.00
Independent - Whangarei - Engine No. 1			0.00	0.31	3.70	0.92		0.15	-0.92	-1.08	1.69	1.08
Independent - Whangarei - Engine No. 3	0.31	0.46										
Intertek - Melbourne	-3.39	0.46	0.00	-0.92	-0.92	0.00	0.31	0.15	0.92	0.15	0.15	-0.46
Mobil - Altona	0.31	0.46	0.92	0.62	0.00	0.00	-0.31	-0.15	0.00	-0.15	-1.08	-1.08
Intertek - Clyde	0.00	-0.15	-0.62	0.31	-2.46	-1.23	0.00	1.08	-0.31	0.46	0.15	-0.15

A2.2

Note: *Outlier results are those for which |z-score| > 3, where z-score = (participant result - consensus median) ÷ normalised IQR. They are indicated in **bold***

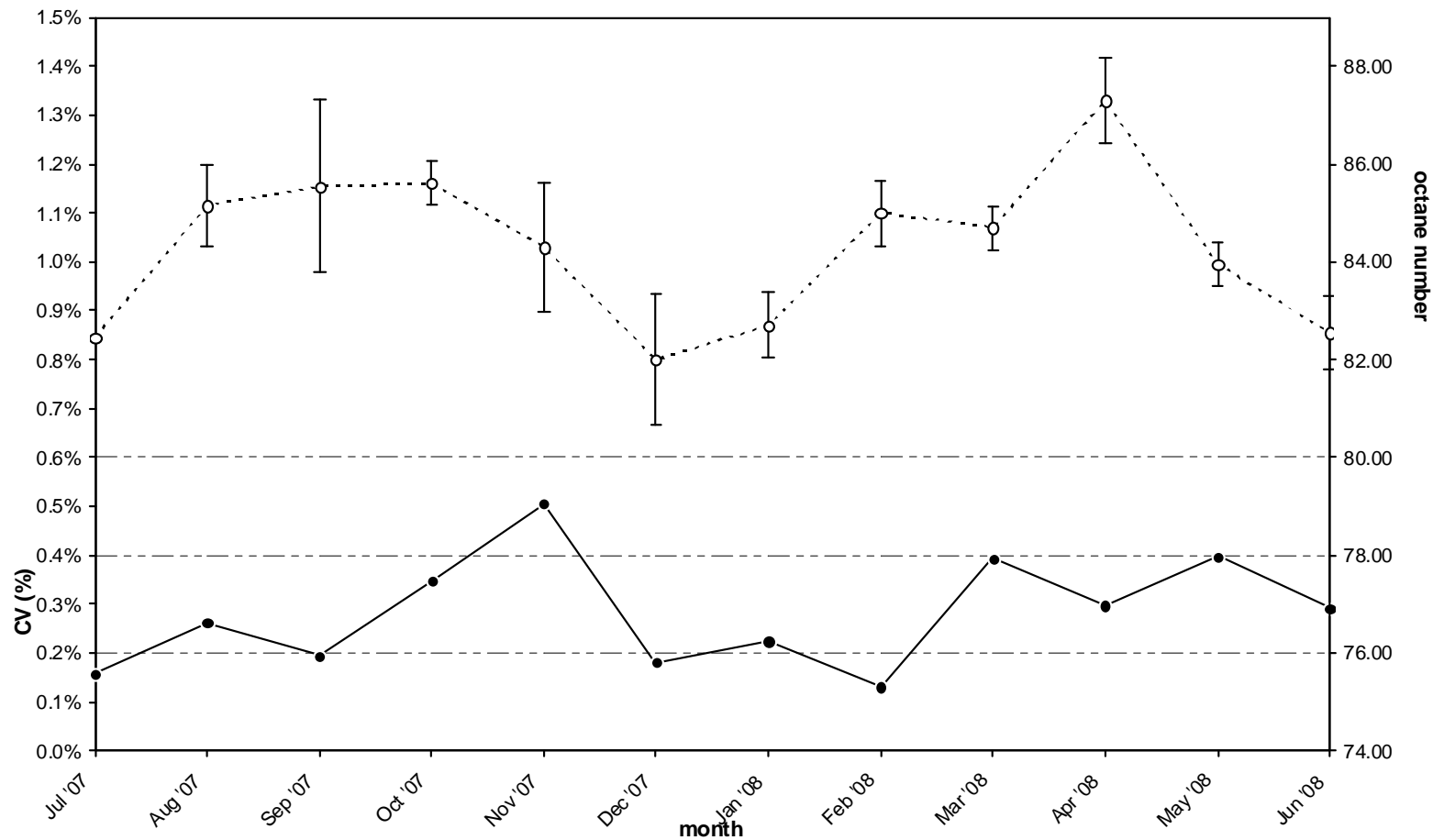
**Petrol - MON - BTSF Deviations from Specification
July '07 to June '08**

Participant	Jul '07	Aug '07	Sep '07	Oct '07	Nov '07	Dec '07	Jan '08	Feb '08	Mar '08	Apr '08	May '08	Jun '08
BP - Bulwer Isl - Engine No. 2	0.2	0.1	-0.3	-0.3	0.0	-0.1	0.1	0.0	0.1	0.0	-0.2	0.2
BP - Kwinana - Engine No. 2		-0.2		-0.1								
BP - Kwinana - Engine No. 5				0.0	-0.2	0.0	0.2		0.0	-0.1	0.0	0.0
Caltex - Kurnell - Engine No. 2	-0.1	-0.1	0.0	0.0	0.0						-0.1	
Caltex - Kurnell - Engine No. 3						0.1	-0.1	0.0				0.1
Caltex - Lytton - Engine No. 2		-0.2	-0.2	-0.3	0.1		0.1	-0.2	-0.2	0.0	0.0	0.1
Independent - Whangarei - Engine No. 1			-0.3	0.1		-0.3		0.0	-0.1	-0.2	-0.1	0.1
Independent - Whangarei - Engine No. 3	0.1				0.3							
Intertek - Melbourne	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mobil - Altona	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.2	-0.2	0.0	-0.1	0.0
Intertek - Clyde	0.2	-0.3	0.0	0.2	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.1

A2.3

Note: "BTSF Deviation" = "Actual/Resultant BTSF value" - "BTSF Specification"

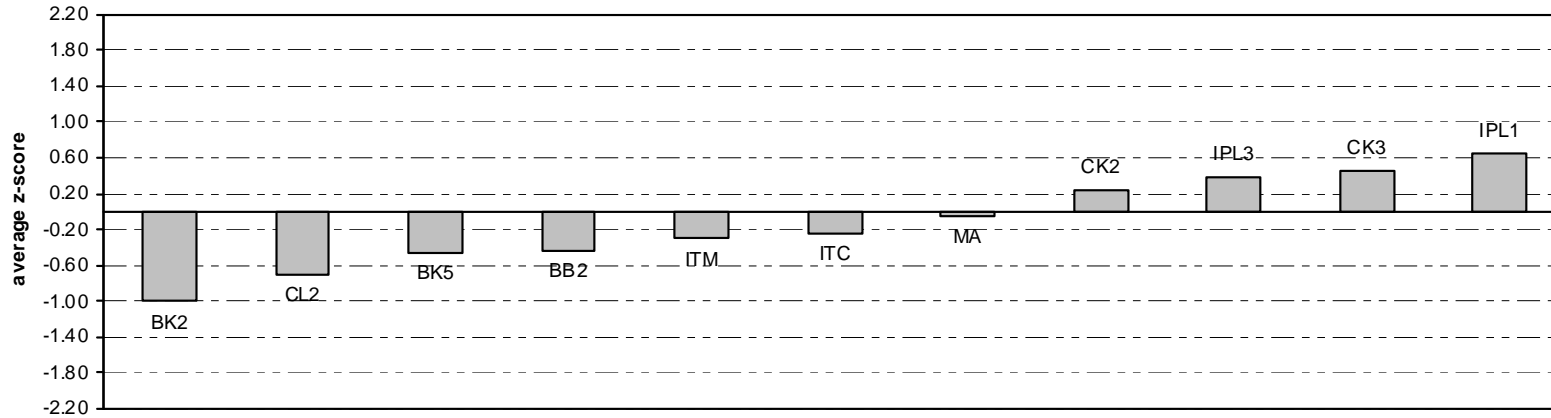
MON - July '07 to June '08
Monthly Consensus Medians and Coefficients of Variation



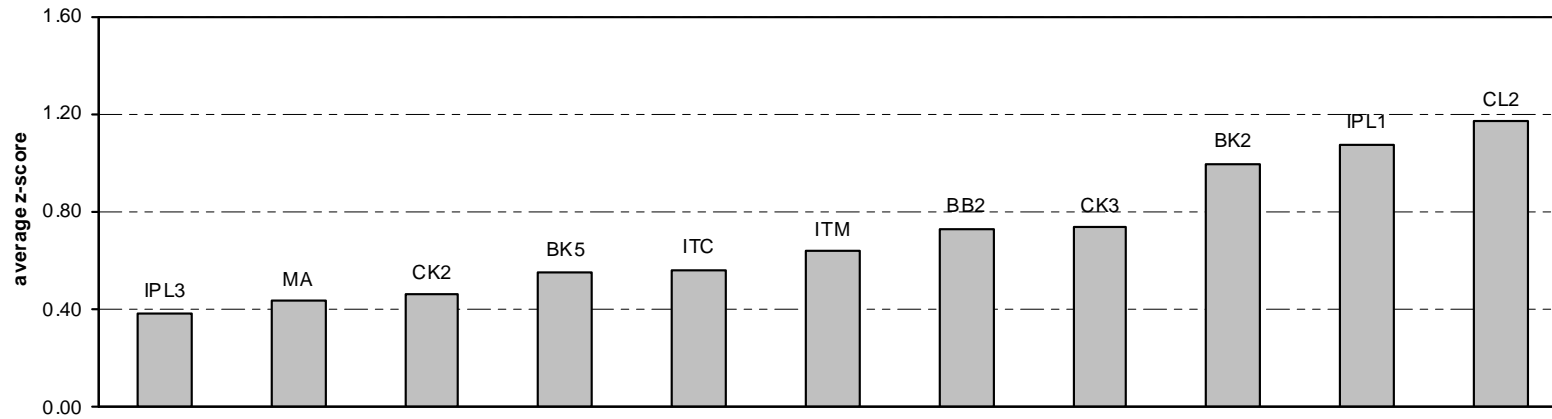
A2.4

Top: Monthly consensus medians (○) with associated error bars (± 3 normalised IQRs)
Bottom: Corresponding monthly CVs (●) as a percentage.

MON - Participant Average Z-Scores



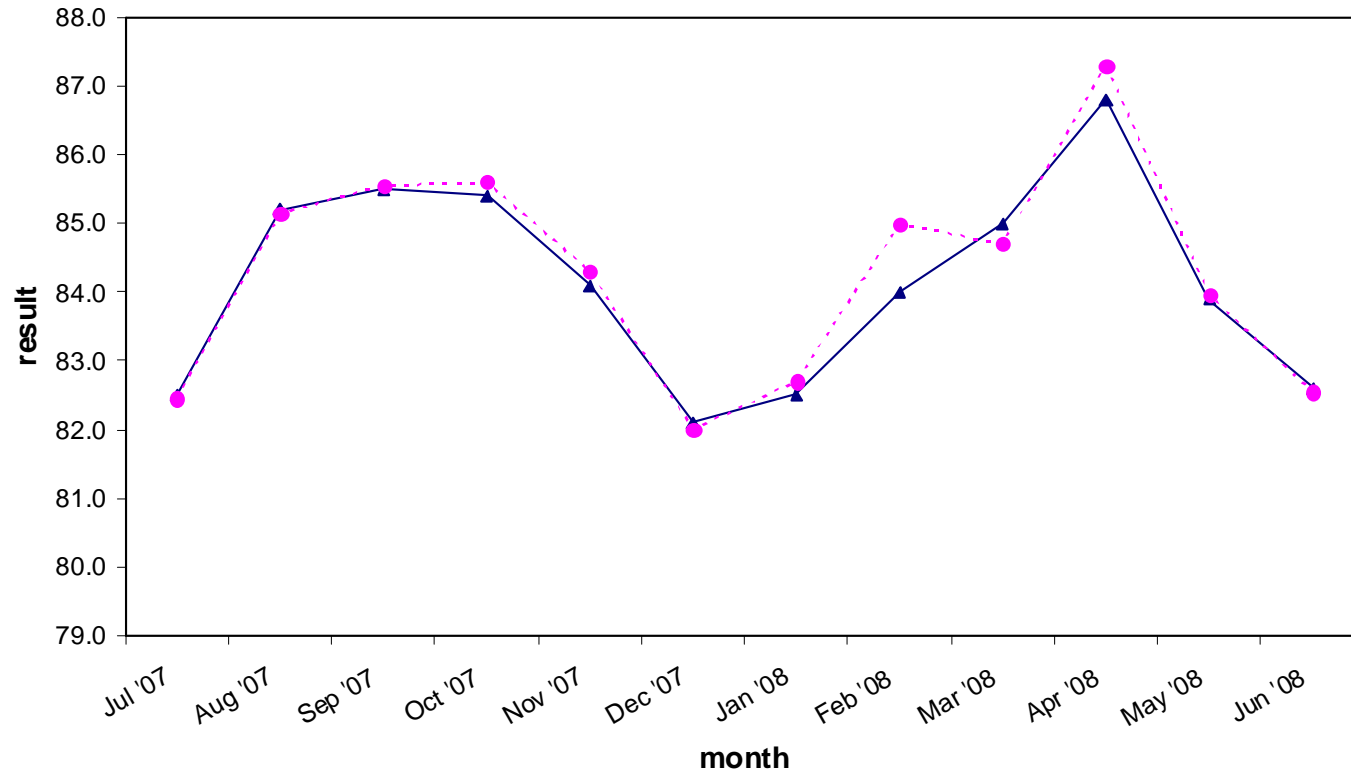
MON - Participant Average Absolute Z-Scores



A2.5

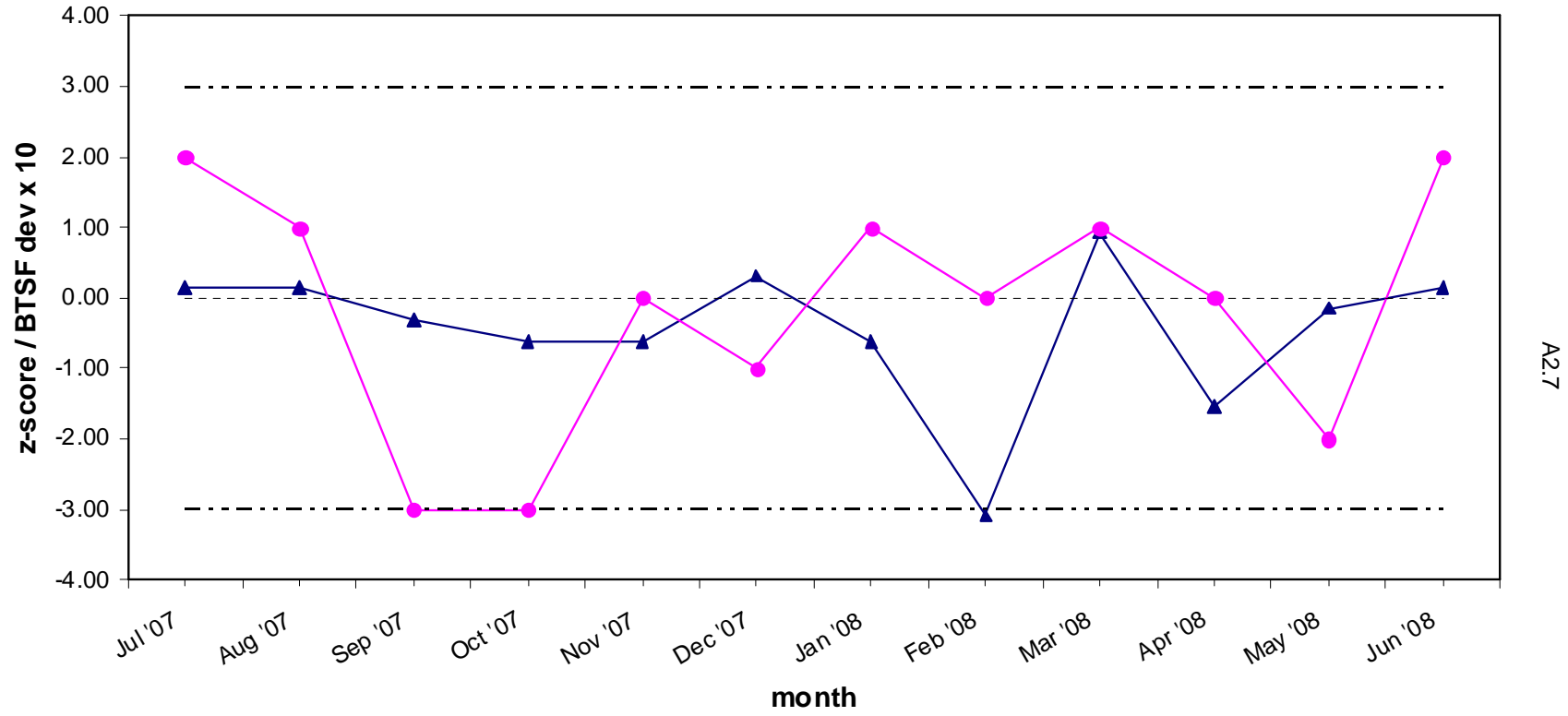
Average z-scores (top) and average absolute z-scores (bottom) shown for: BP - Bulwer Isl - No. 2 (BB2); BP - Kwinana - No. 2 (BK2); BP - Kwinana - No. 5 (BK5); Caltex - Kumell - No. 2 (CK2); Caltex - Kurnell - No.3 (CK3); Caltex - Lytton - No. 2 (CL2); Independent - Whangarei - Nos. 1, 2 & 3 (IPL1, IPL2 & IPL3); Intertek - Melbourne (ITM); Mobil - Altona (MA); Intertek - Clyde (ITC)

MON - BP - Bulwer Engine No. 2

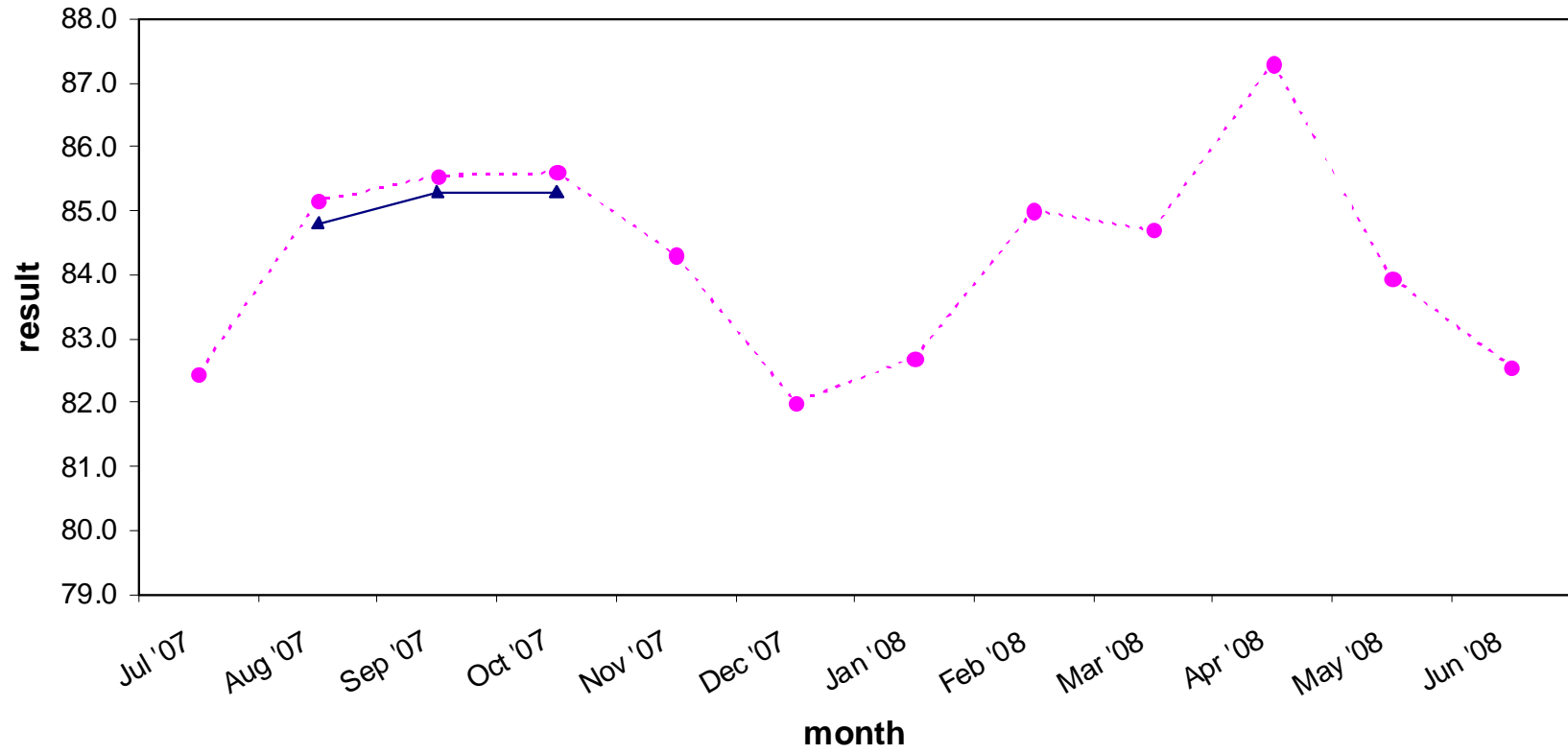


A2.6

MON - BP - Bulwer Engine No. 2

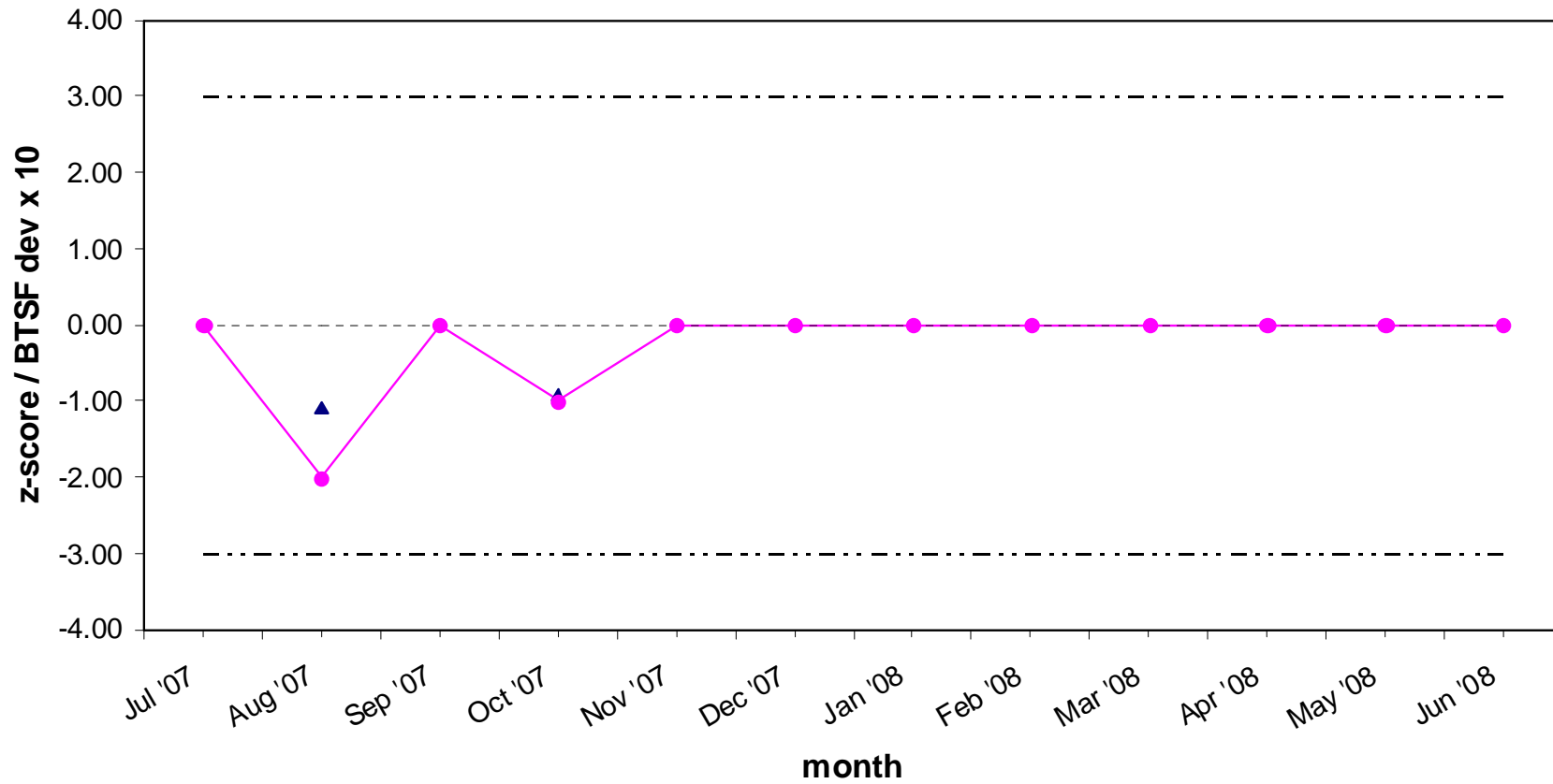


**MON - BP - Kwinana
Engine No. 2**



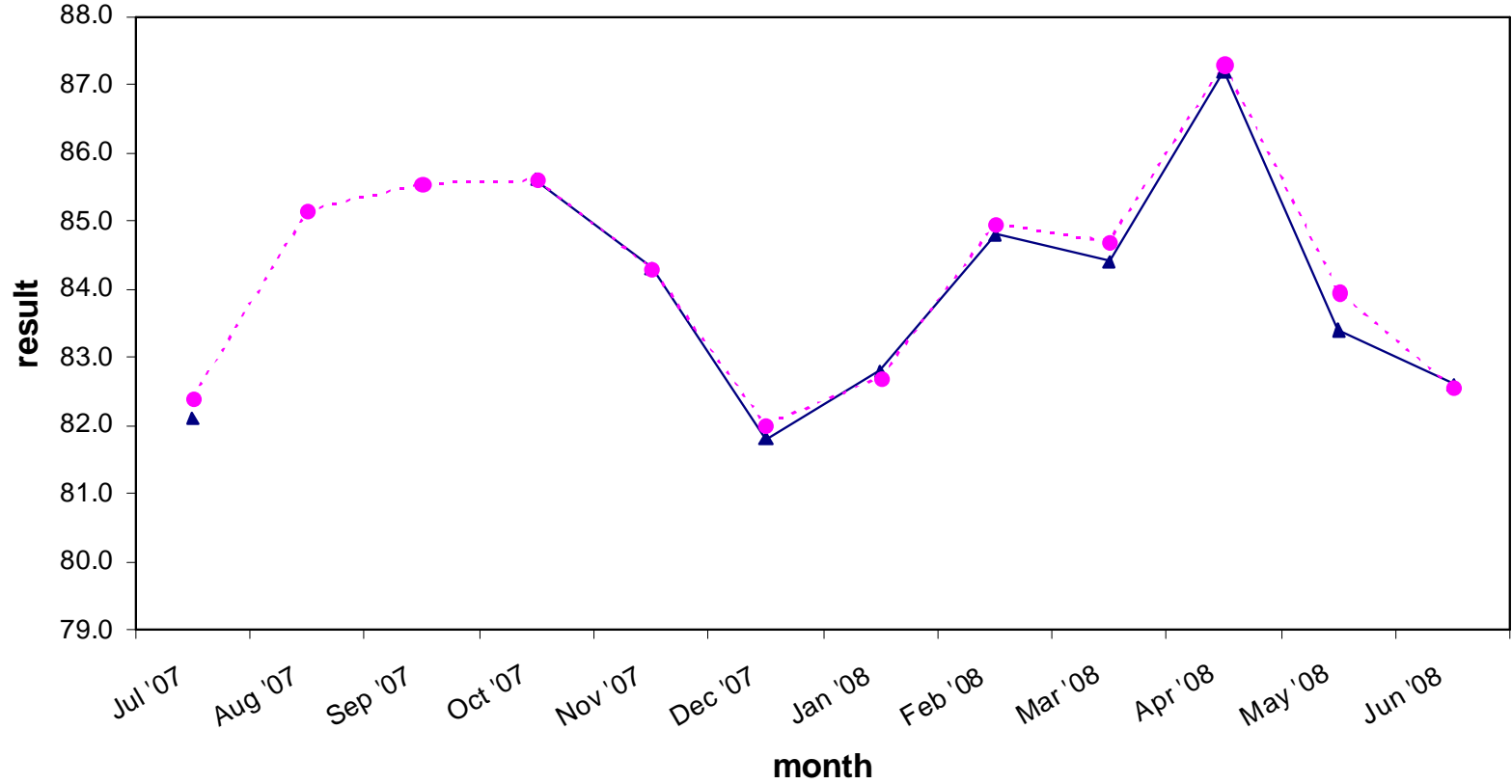
A2.8

MON - BP - Kwinana
Engine No. 2



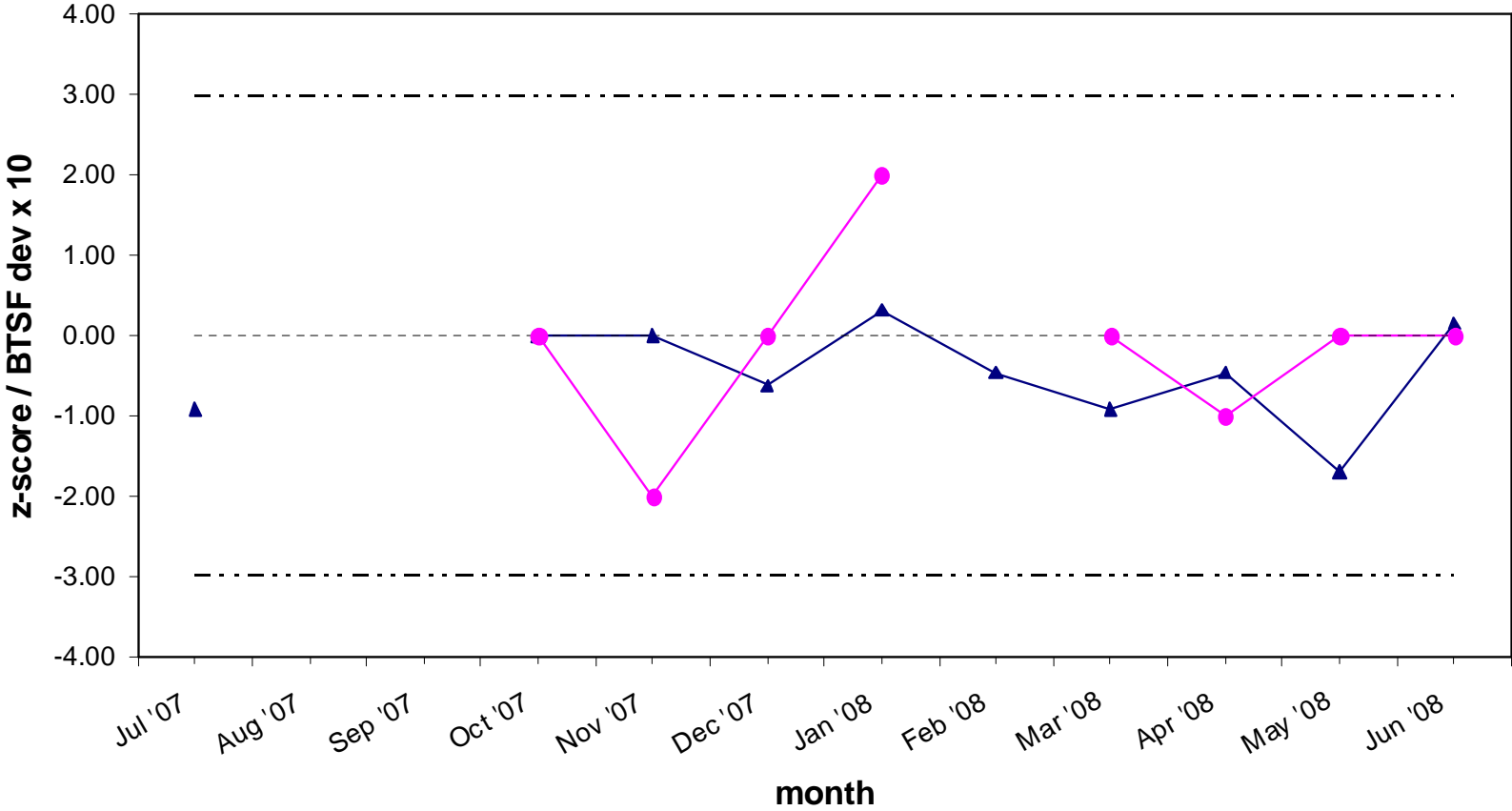
A2.9

**MON - BP - Kwinana
Engine No. 5**



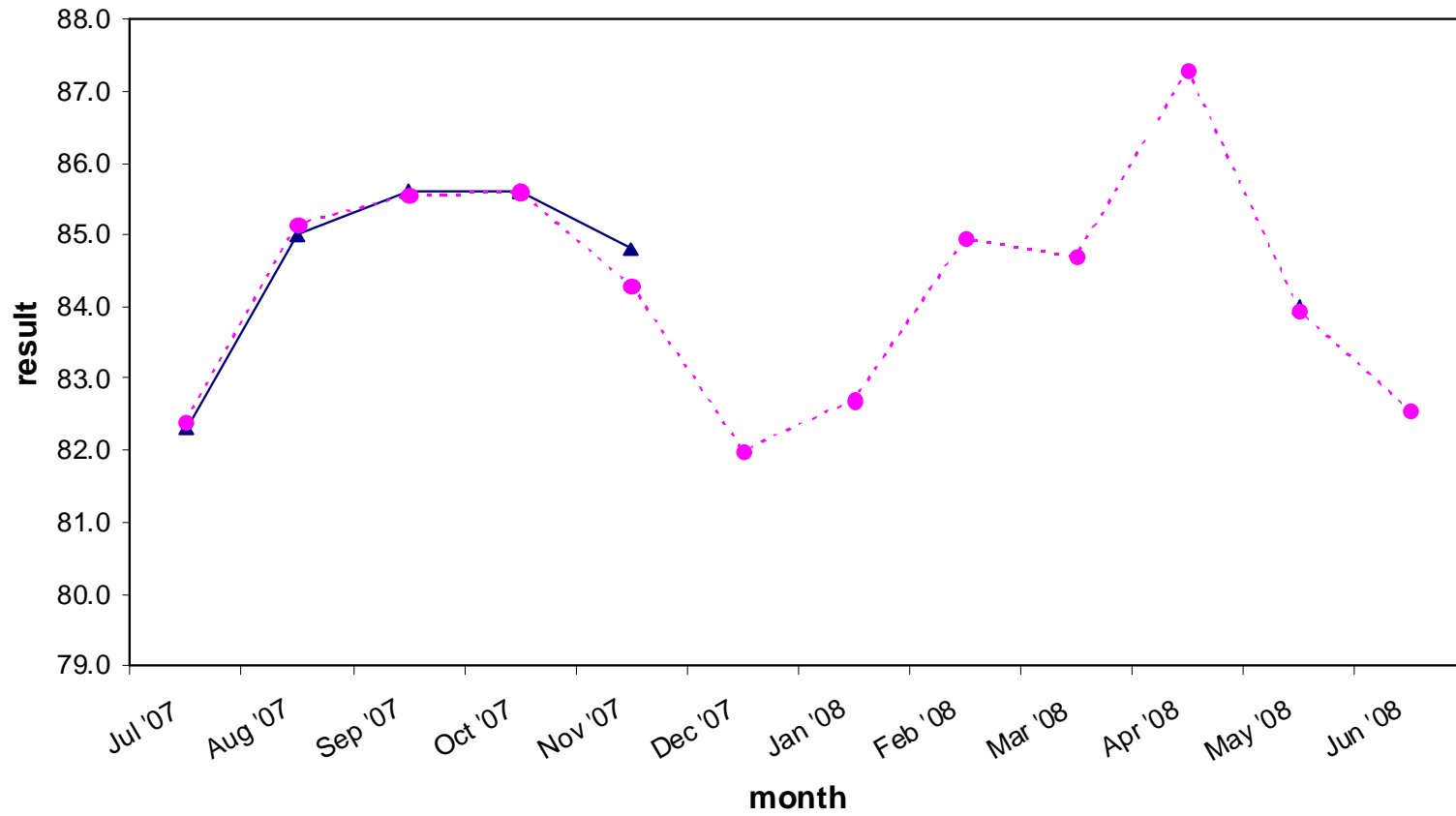
A2.10

**MON - BP - Kwinana
Engine No. 5**



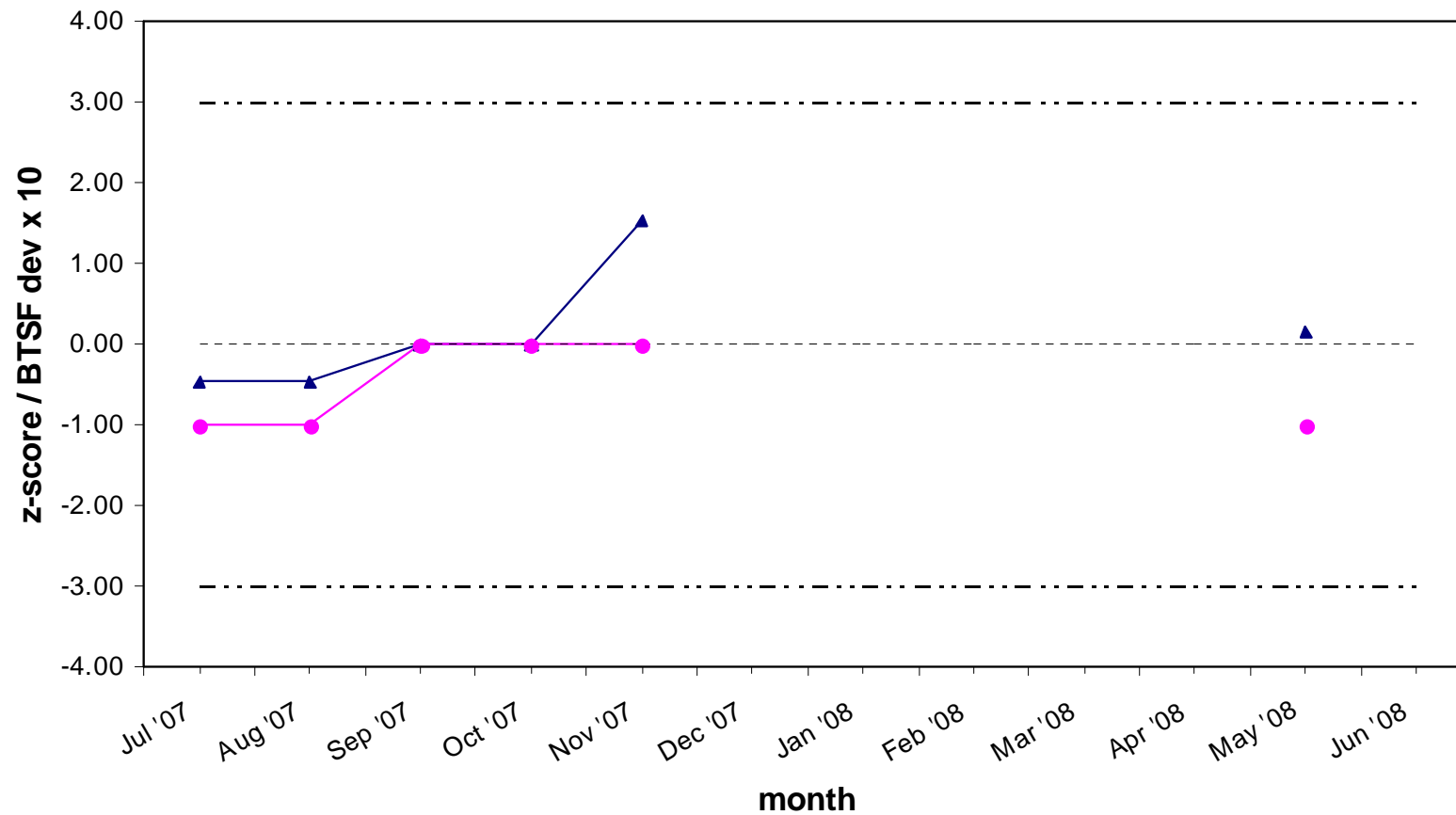
A2.11

**MON - Caltex - Kurnell
Engine No. 2**



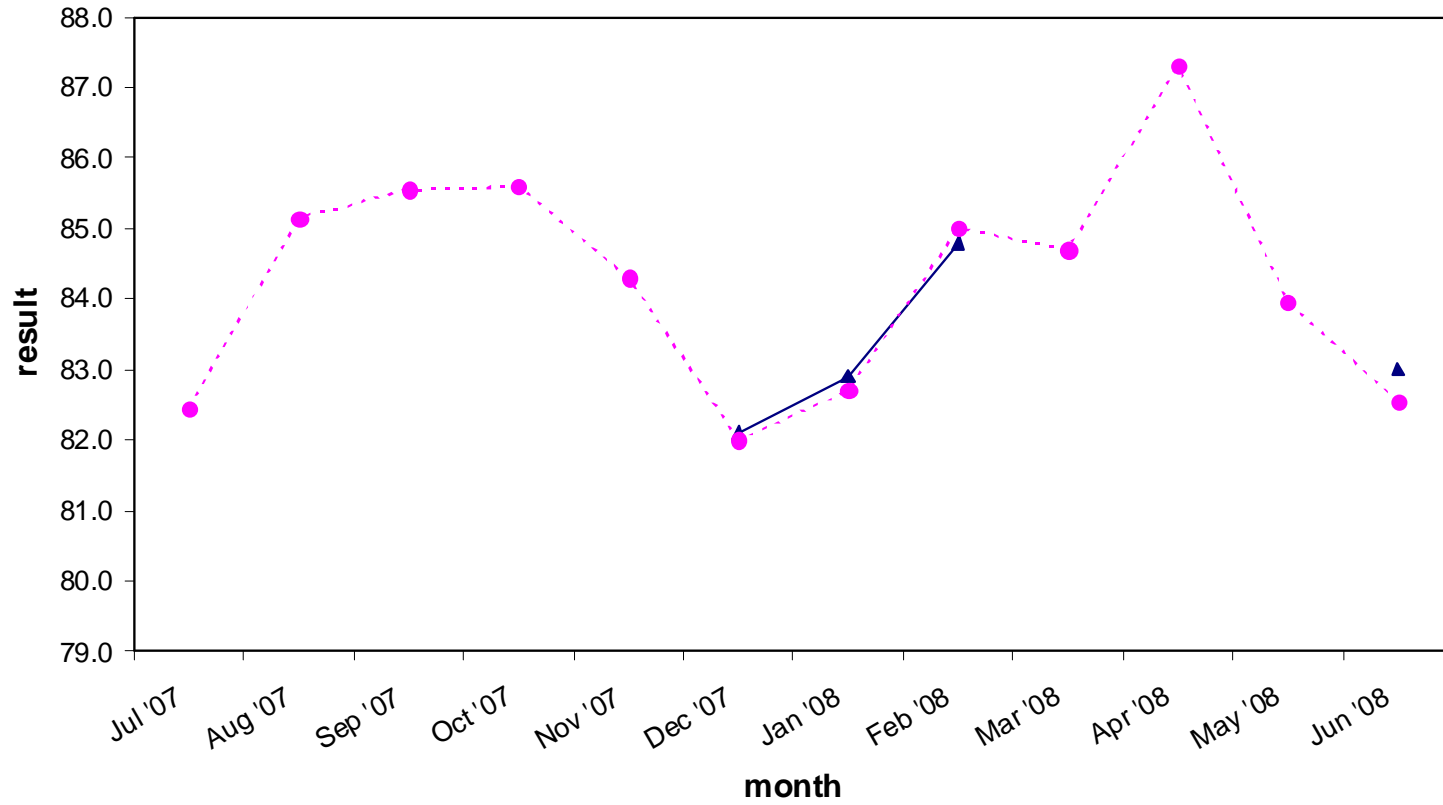
A2.12

MON - Caltex - Kurnell Engine No. 2



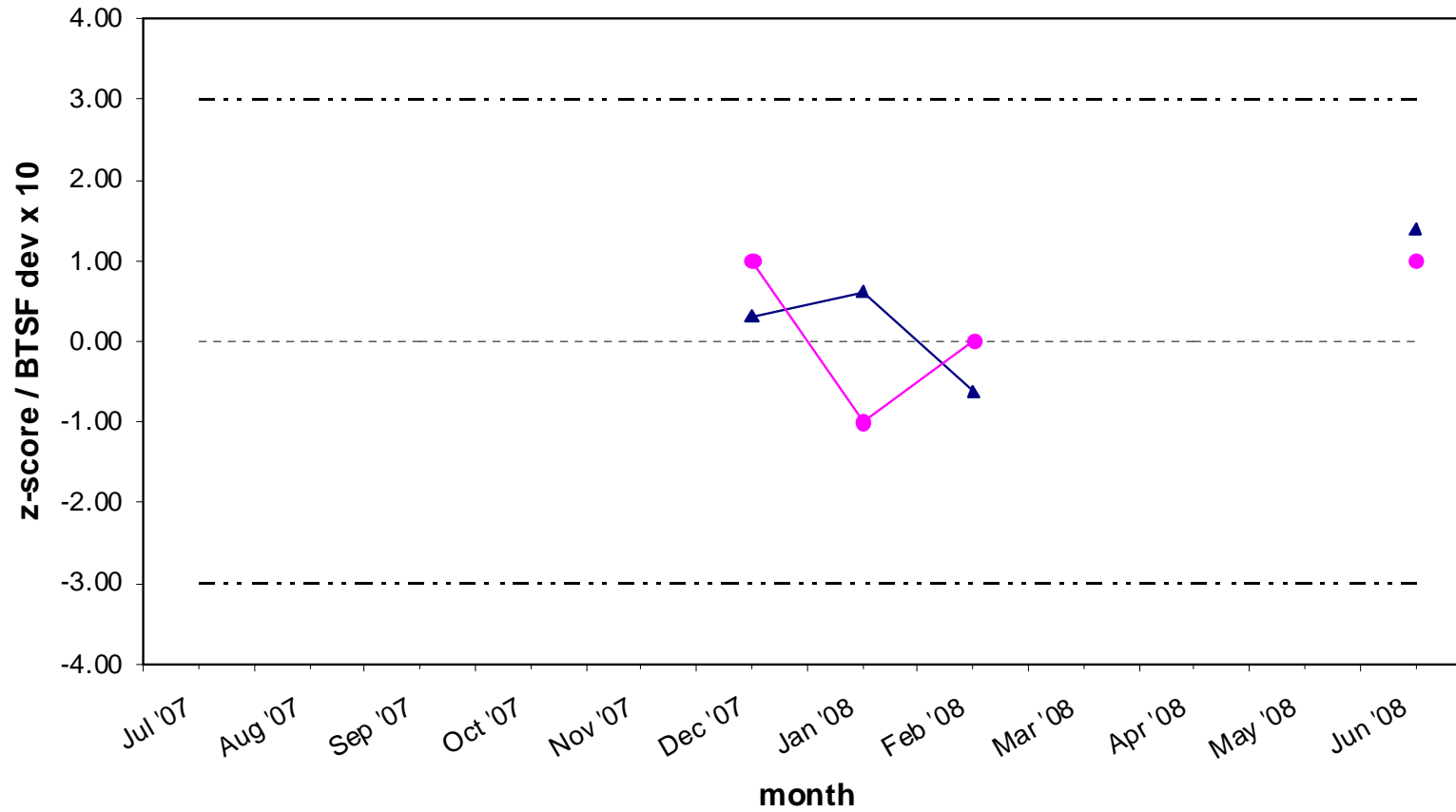
A2.13

**MON - Caltex - Kurnell
Engine No. 3**



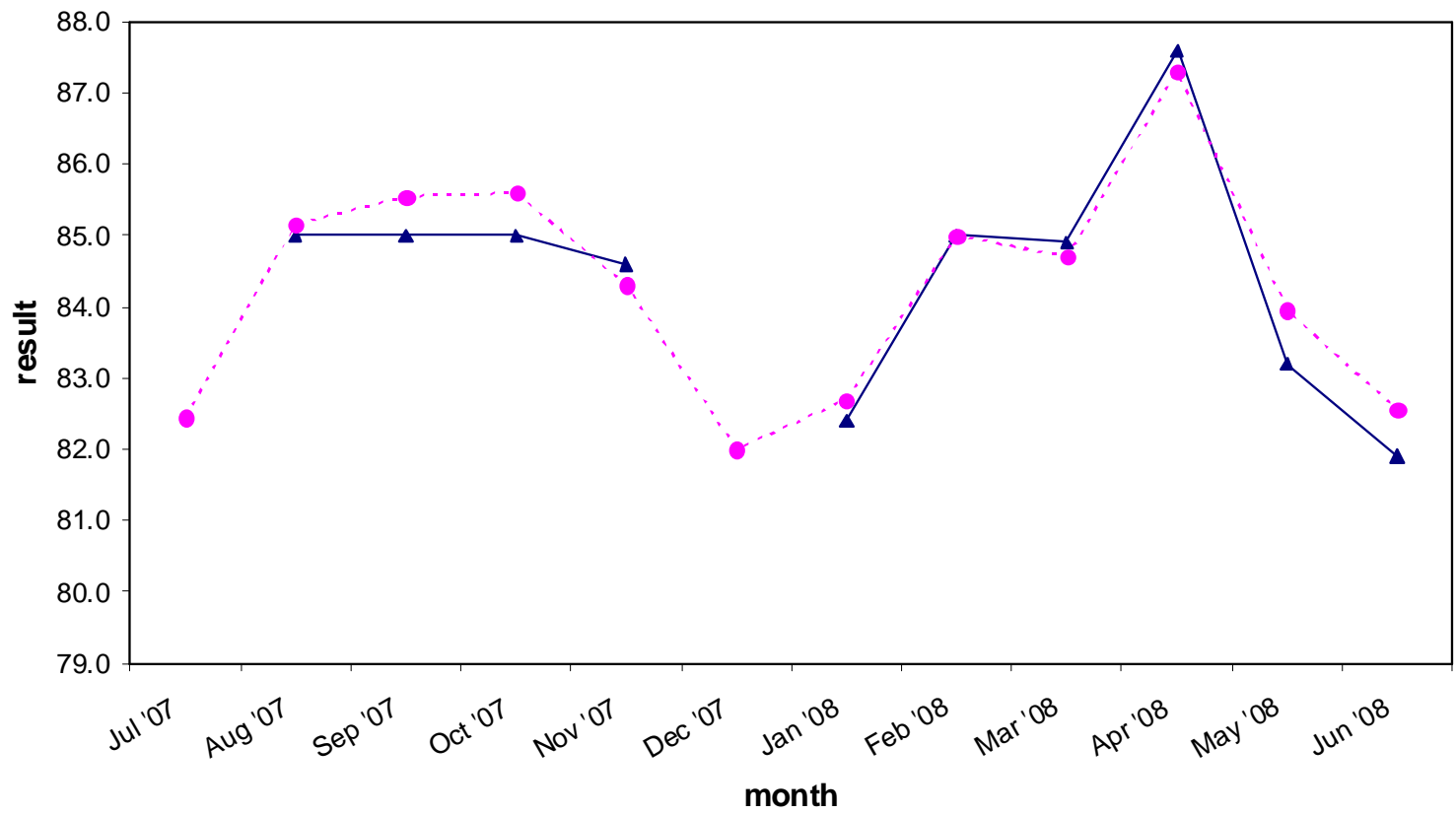
A2.14

**MON - Caltex - Kurnell
Engine No. 3**



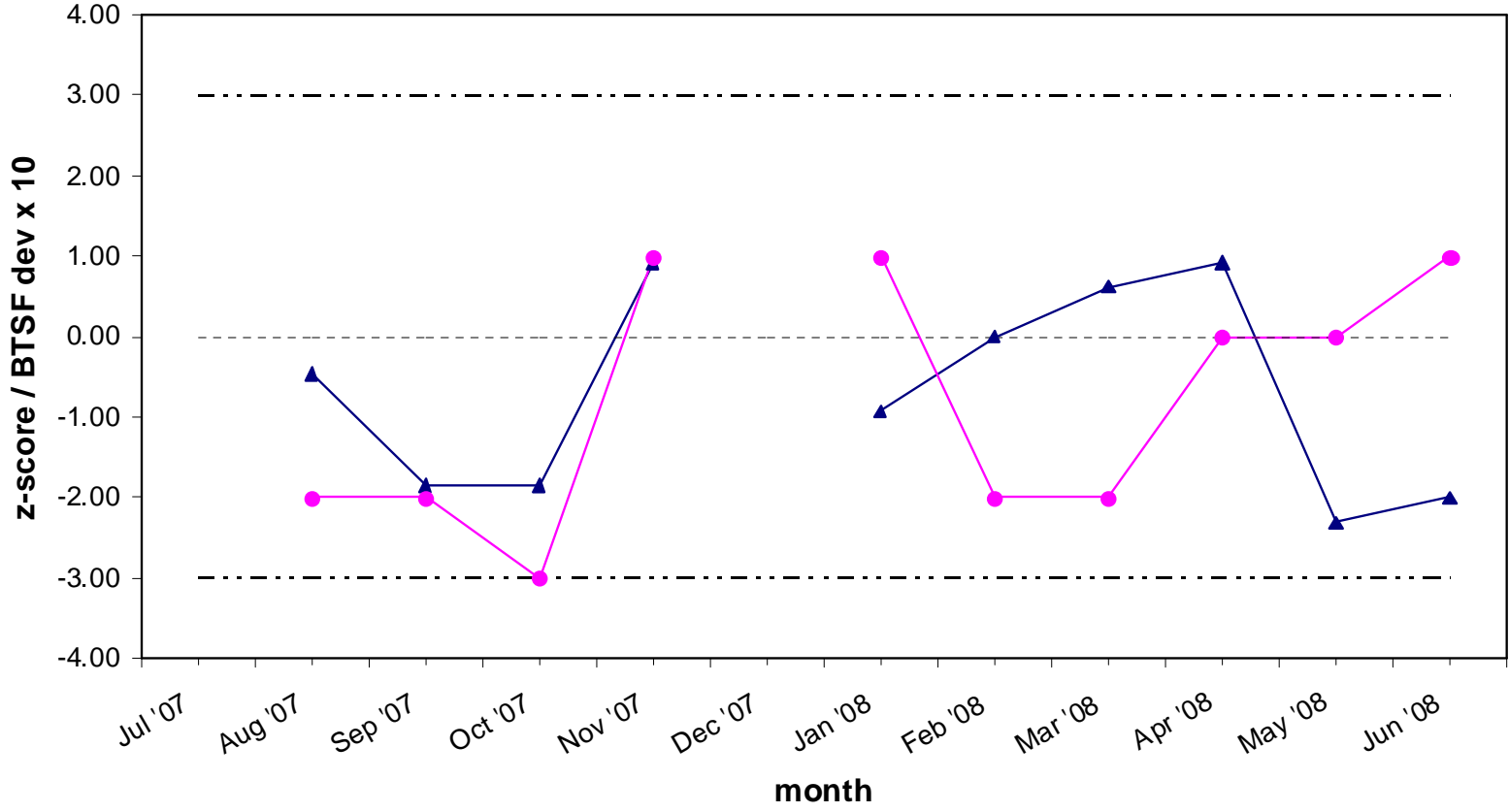
A2.15

MON - Caltex - Lytton Engine No. 2



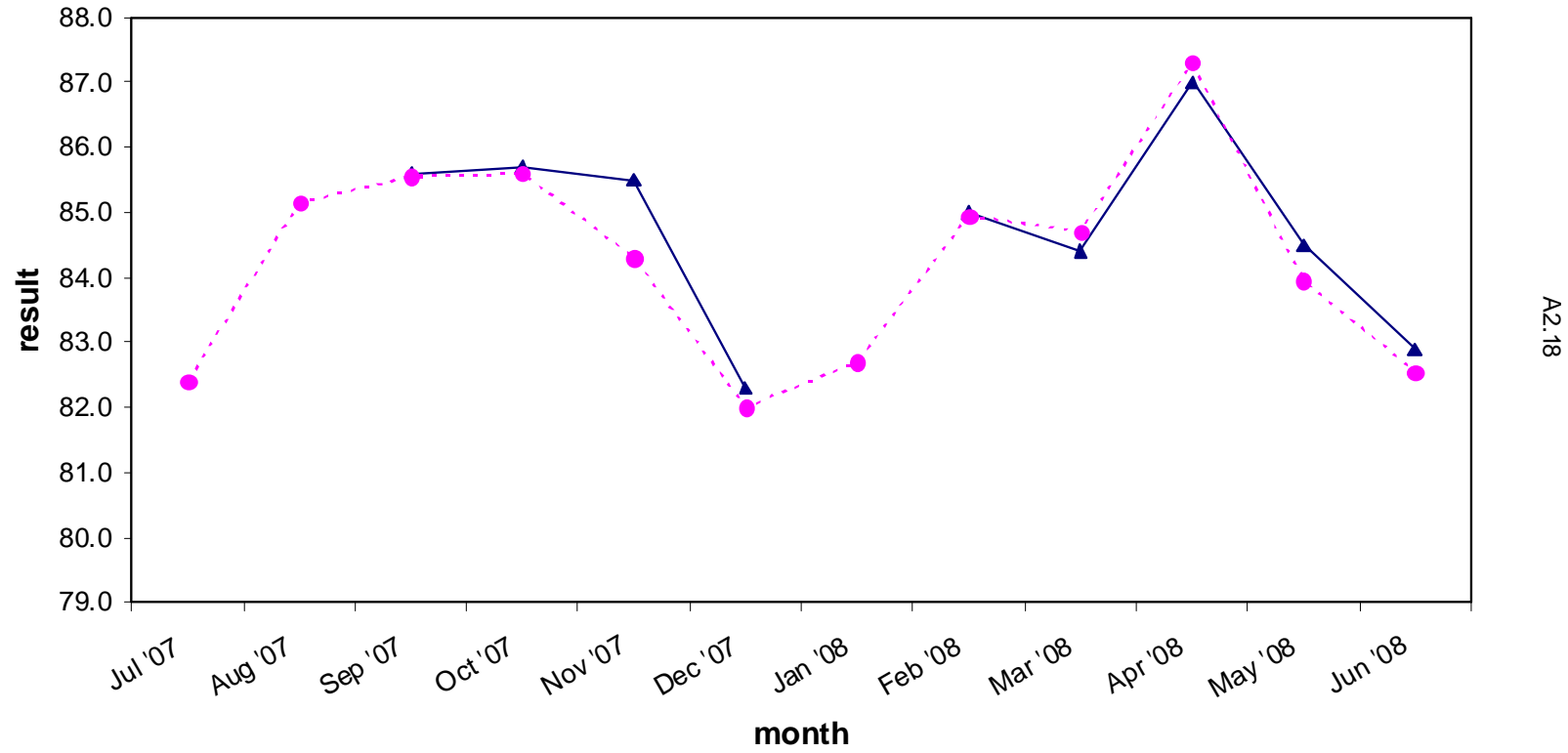
A2.16

**MON - Caltex - Lytton
Engine No. 2**



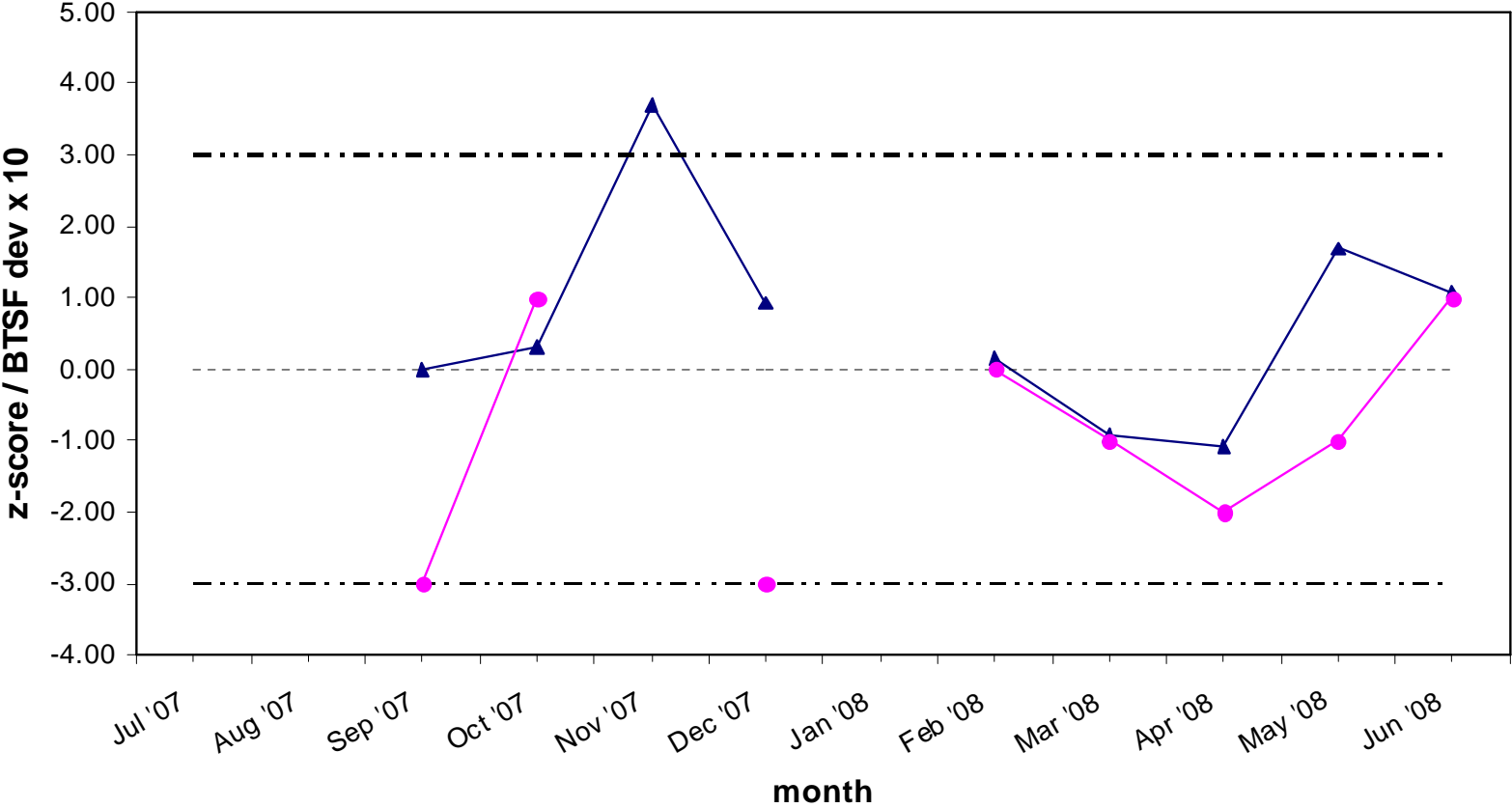
A2.17

MON - Independent - Whangarei Engine No. 1



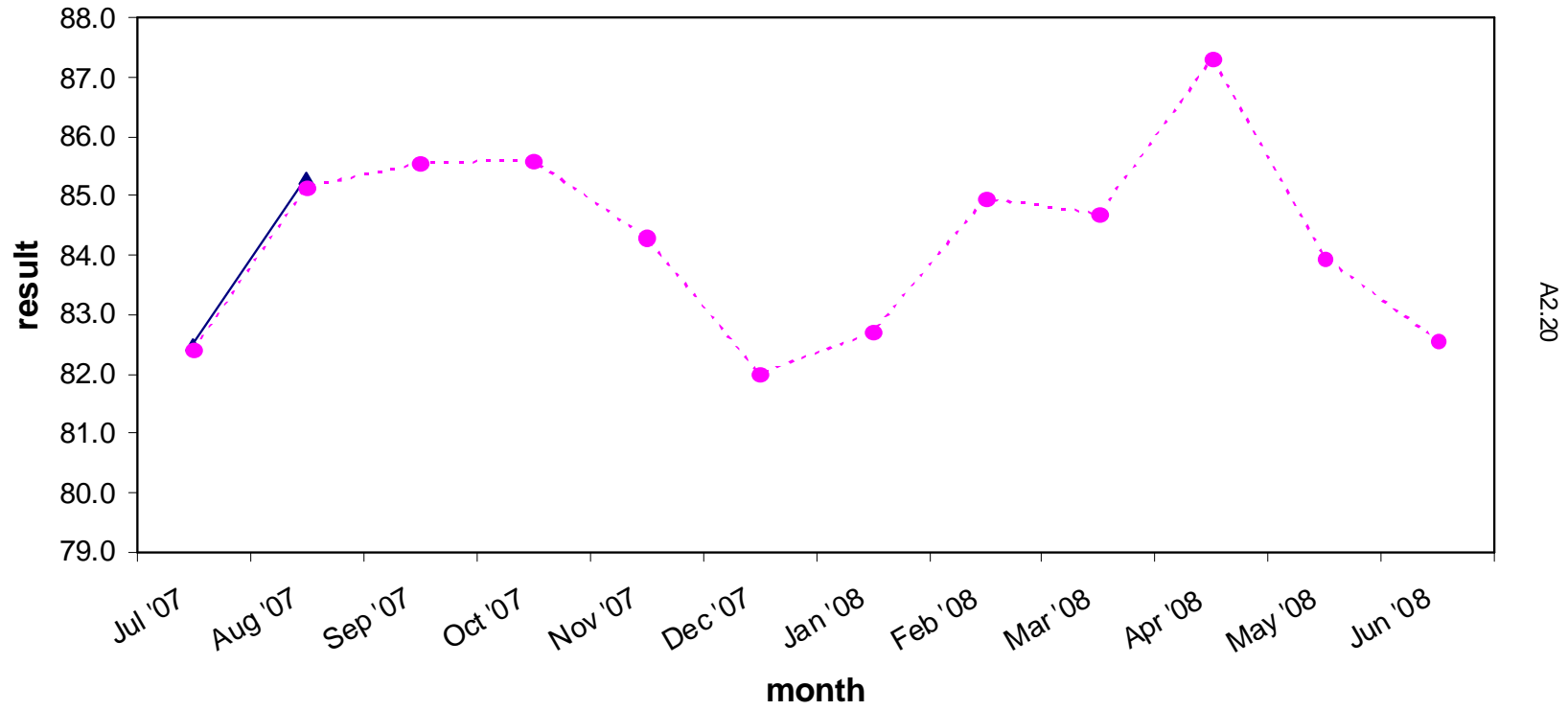
A2.18

**MON - Independent- Whangarei
Engine No. 1**



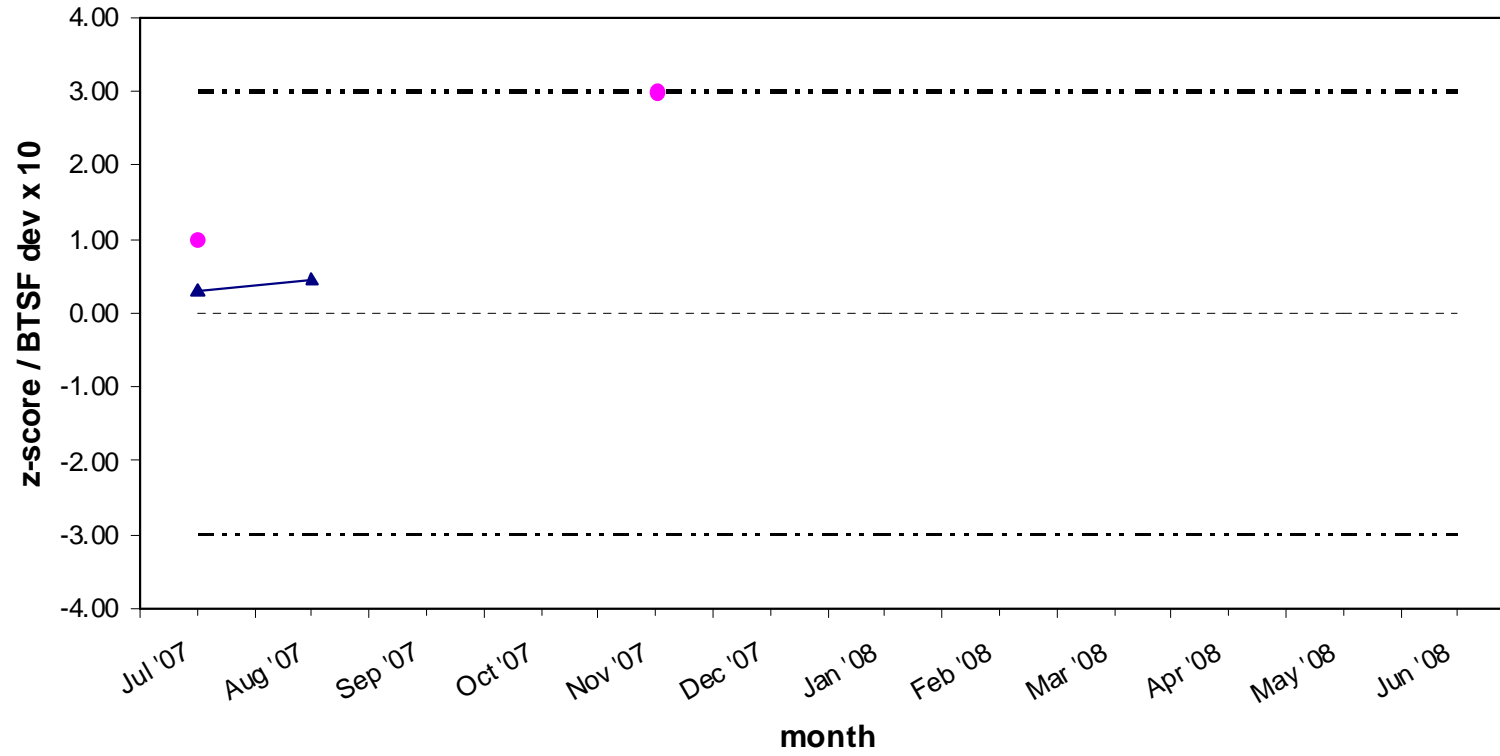
A2.19

MON - Independent - Whangarei Engine No. 3



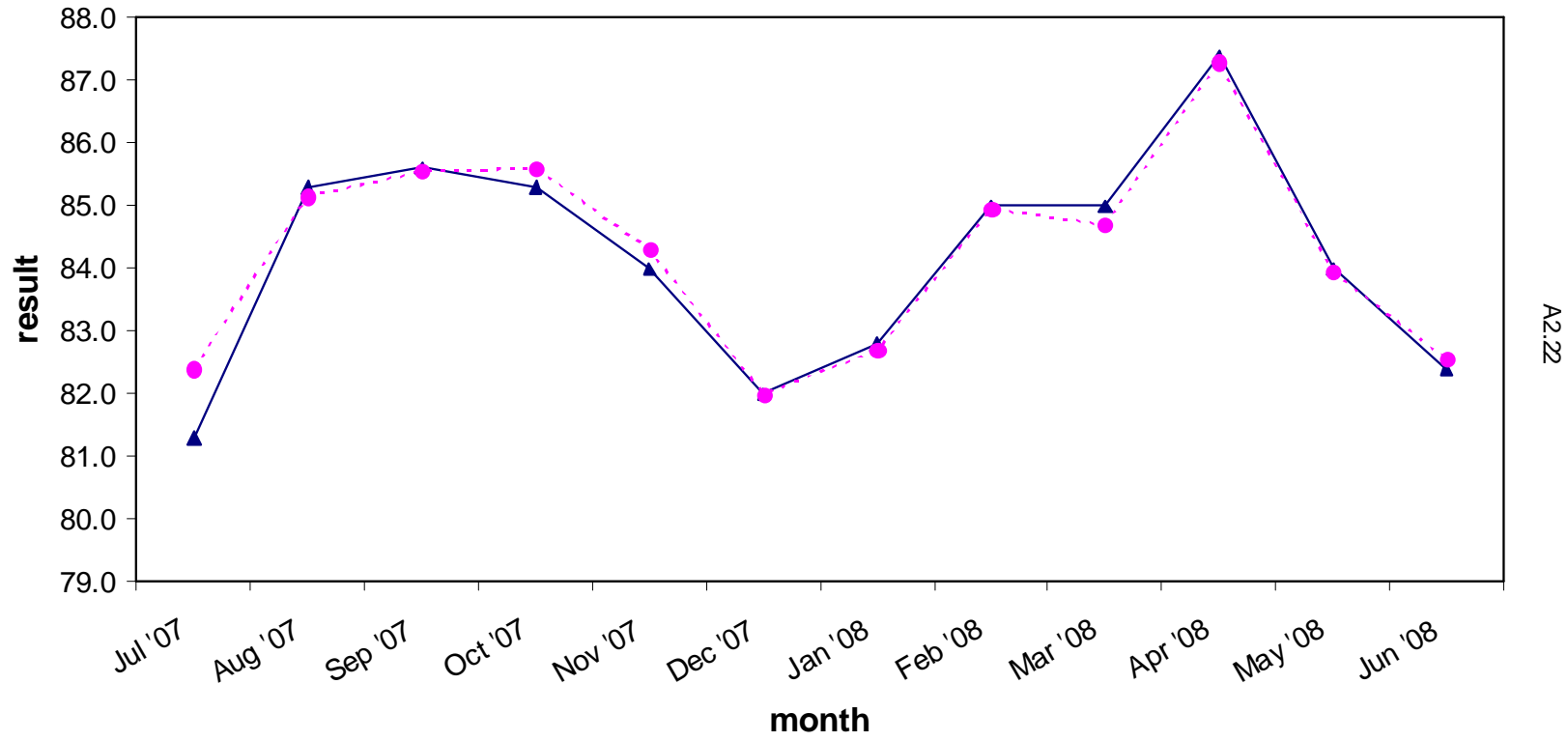
A2.20

**MON - Independent- Whangarei
Engine No. 3**



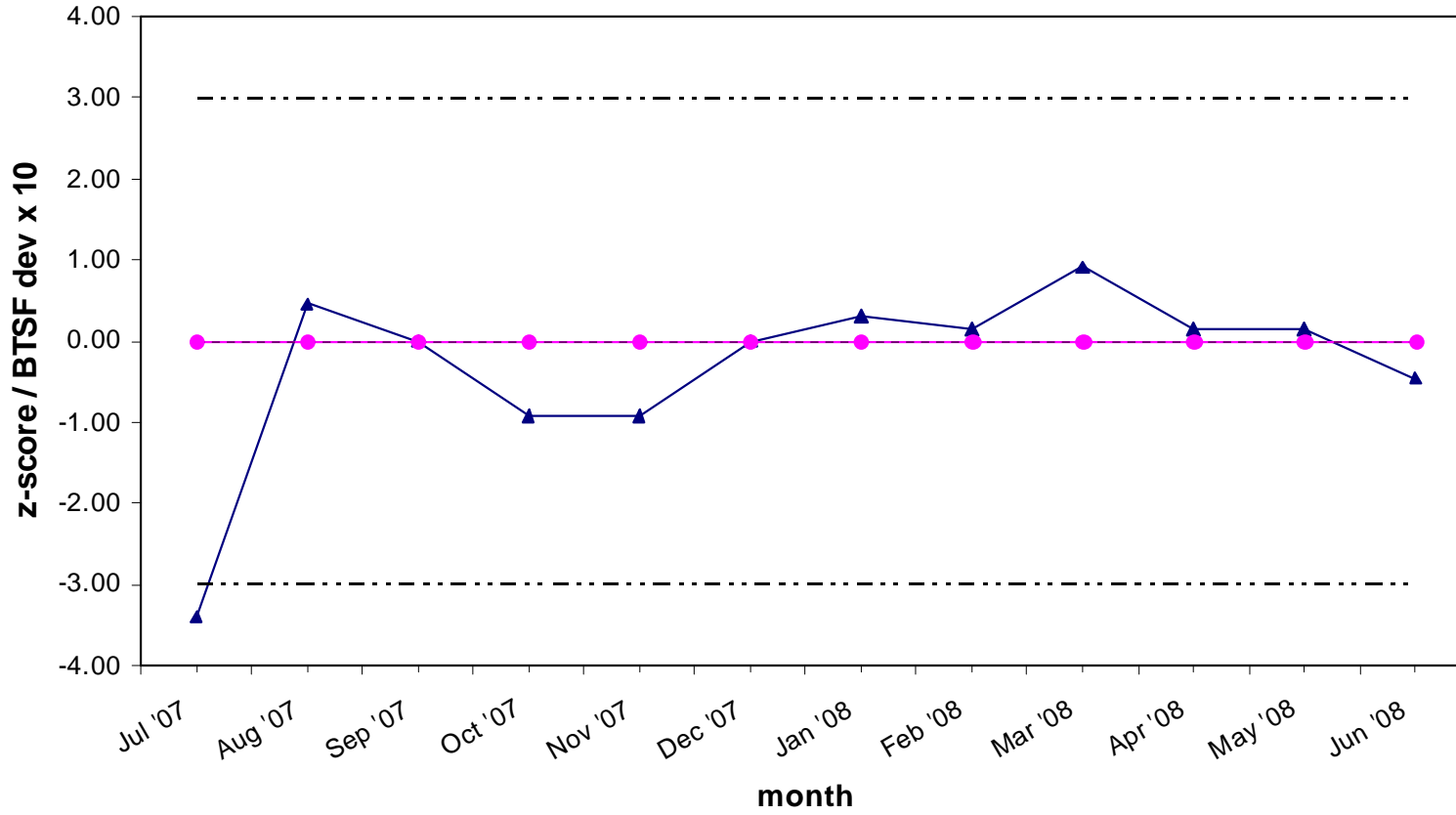
A2.21

MON - Intertek - Melbourne



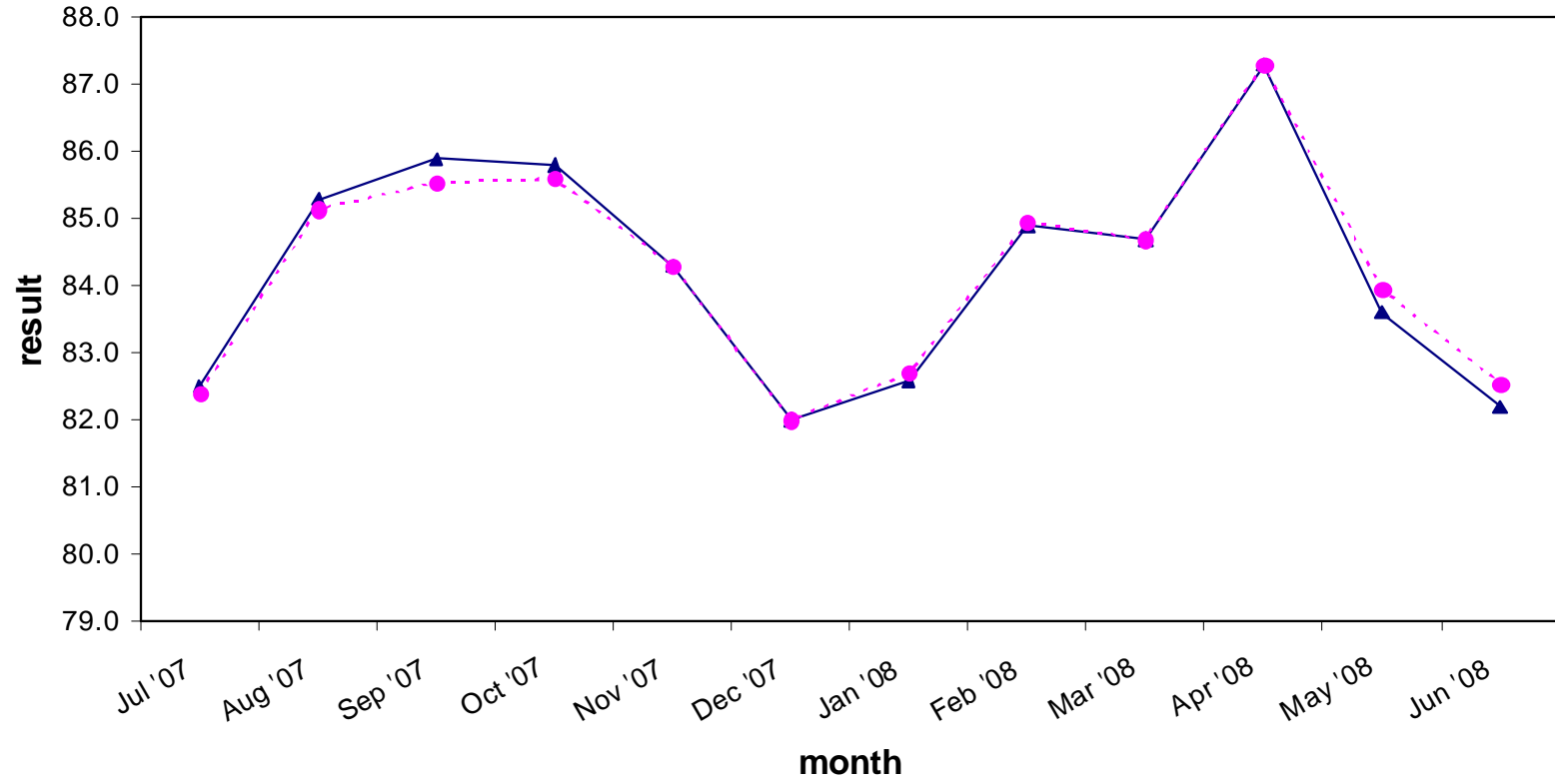
A2.22

MON - Intertek- Melbourne



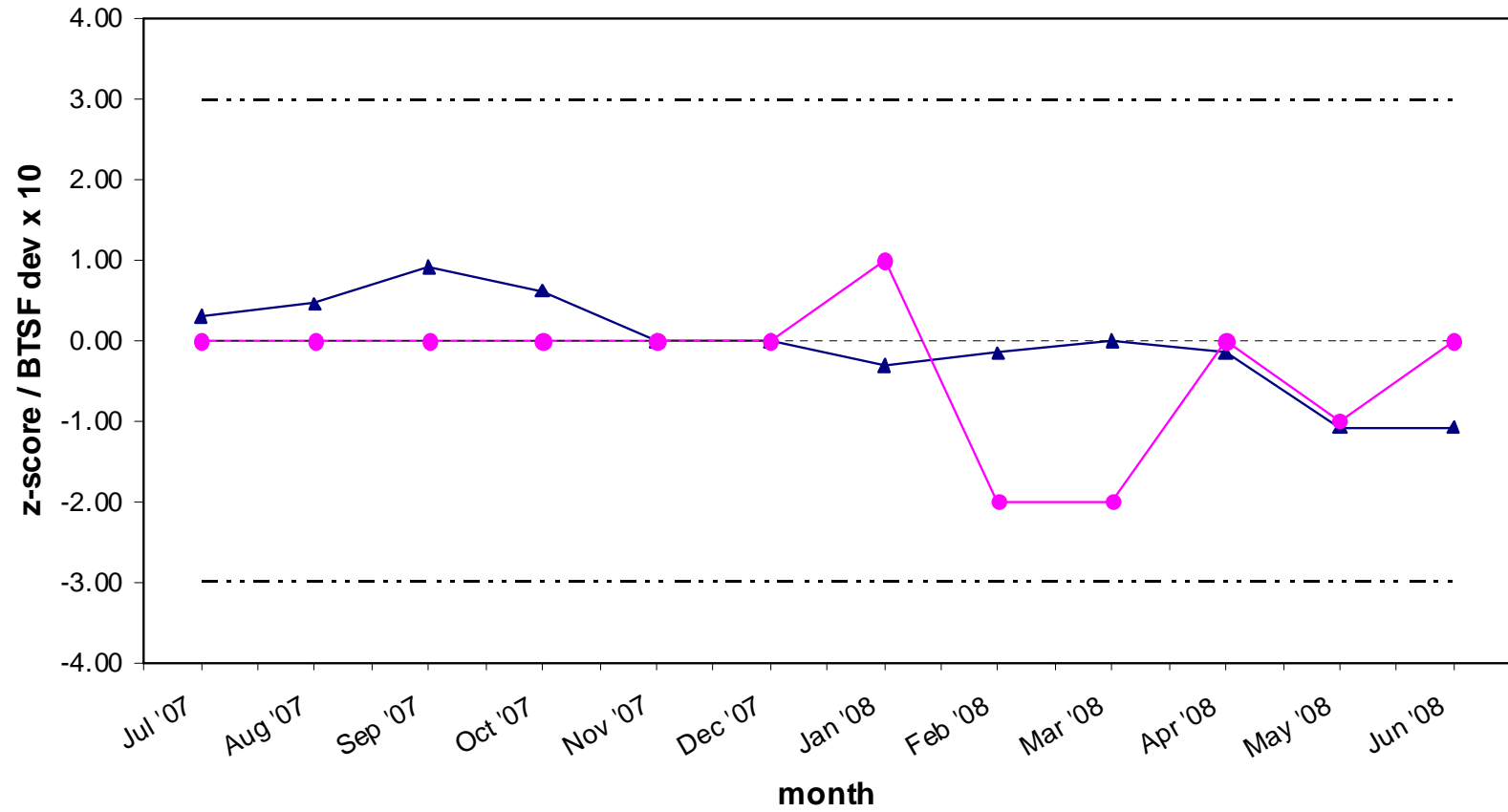
A2.23

MON - Mobil - Altona



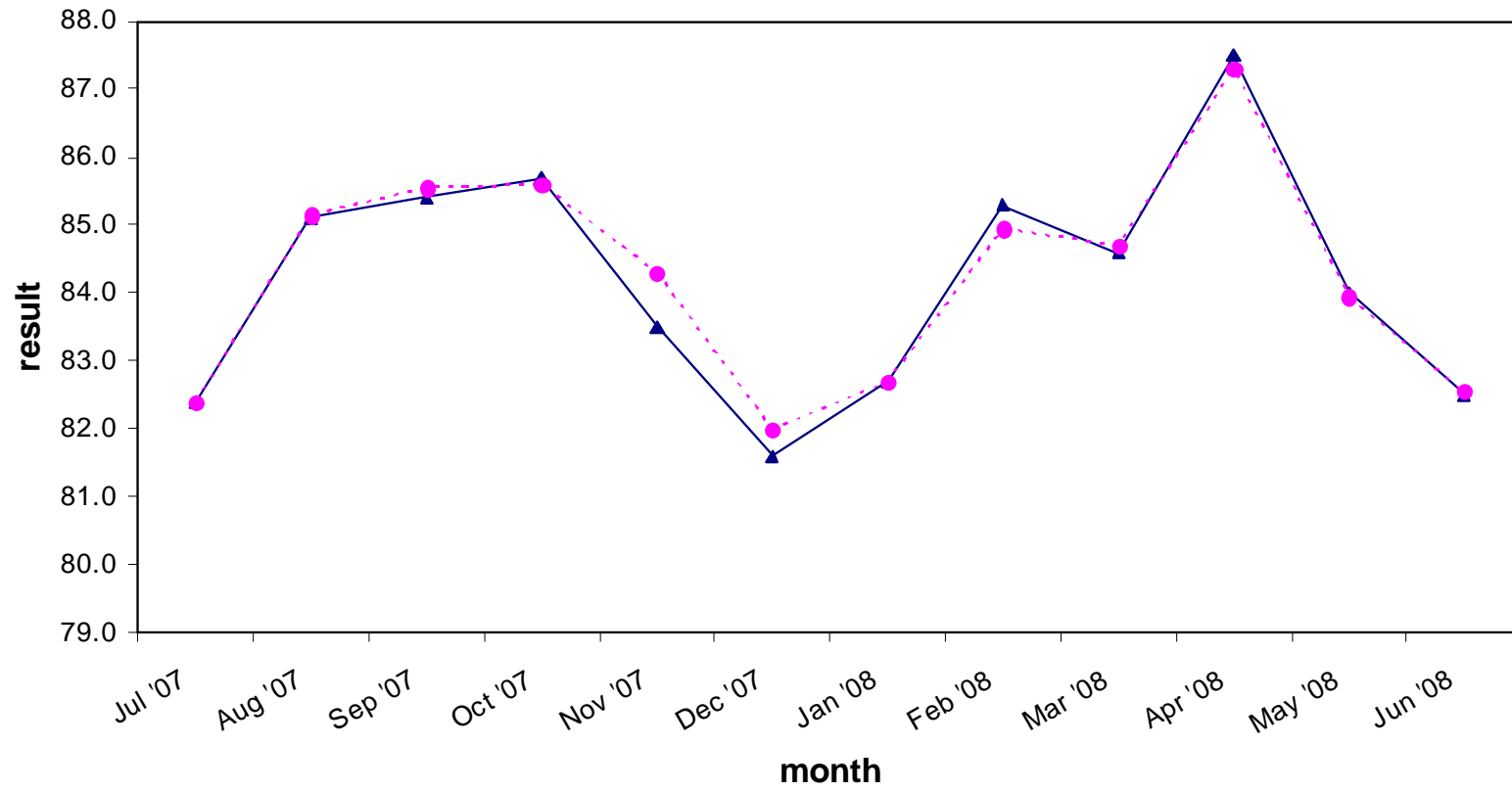
A2.24

MON - Mobil - Altona



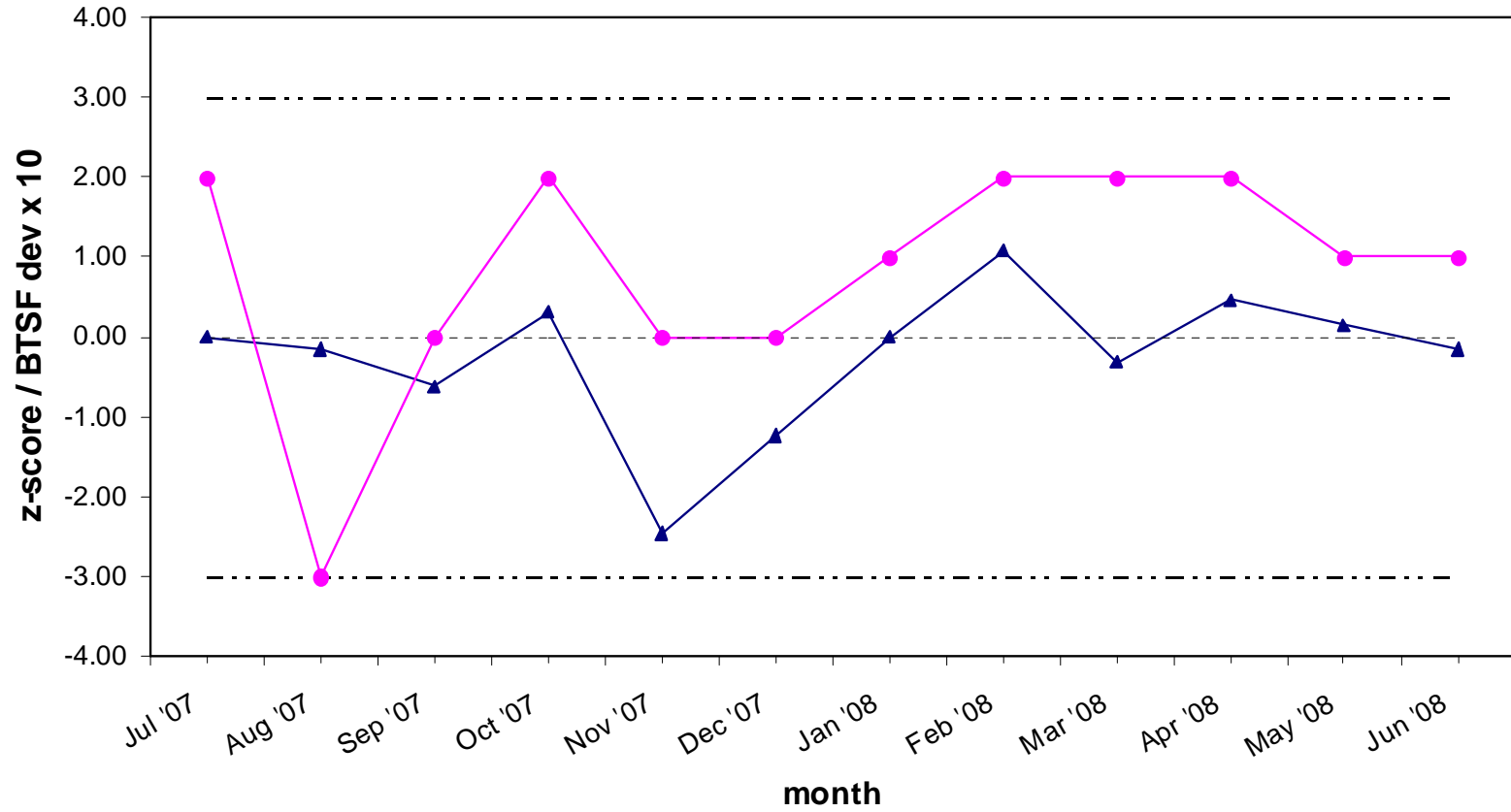
A2.25

MON - Intertek - Clyde



A2.26

MON - Intertek - Clyde



A2.27