

PC-10 NCDT STATUS REPORT

**ASTM - HDEOCP MEETING
EMBASSY SUITES - O'HARE
MARCH 31, 2005**

EMA Request to Add Caterpillar 1P Test

- **No NCDT action since last HDEOCP Meeting**
- **Awaiting 1P Test at Afton on C-13 “Oil A”**
- **Awaiting 1P test data from Caterpillar on “Oil D”**
- **When received NCDT meeting will be called to review data and develop recommendation to API Lubricants Committee.**
- **If data received in time, objective is to present NCDT recommendation at May 10 API-LC Meeting**

PC-10 Engine Test Matrix

**Lab/Stand Selection & Funding Proposal
March 24, 2005**

PC-10 Engine Test Matrix

Lab / Stand / Funding Proposal

		Hardware Adjusted Test Costs			
	Lab	No.	Plan	Submitted	Prop. Adj.
C13	IND-1	2			
	IND-2	4			
	DEP-1	2			
	DEP-2	2			
	DEP-3	2			
	DEP-4	2			
	Sub-totals	14	1,330,000	1,369,920	1,348,719
ISB	IND-1	4			
	IND-2	2			
	DEP-4	2			
	Sub-totals	8	400,000	385,012	379,054
T-12	IND-1	2			
	IND-2	2			
	DEP-1	2			
	DEP-4	2			
	Sub-totals	8	600,000	632,008	622,227
Grand Total			2,330,000	2,386,940	2,350,000
Surplus / Shortage			20,000	-36,940	0

Discount on Test Costs (%)

vs. Submitted 1.42%

vs. Hardware Adj. 1.55%

Discount per Test (\$)

Average 1,231

Minimim 623

Maximim 1,627

• Objectives

- ❖ Allow all volunteer labs to participate
- ❖ Treat Ind. labs the same
- ❖ Minimize overall cost to meet budget

• Proposal Outcomes

- ❖ No labs excluded
- ❖ Each Ind. lab has 2 stands for 1 test; stands dropped using cost
- ❖ \$37K shortfall requires 1.5% test cost reduction
- ❖ Use cost to replace stands if necessary; would lead to increased shortfall (up to \$90K)

PC-10 Engine Test Matrix

Lab / Stand / Funding Proposal

		Hardware Adjusted Test Costs		
Lab	No.	Plan	Submitted	Prop. Adj.
C13	IND-1	4		
	IND-2	4		
	DEP-1	2		
	DEP-2	0		
	DEP-3	2		
	DEP-4	2		
	Sub-totals	14	1,330,000	1,391,170
ISB	IND-1	4		
	IND-2	2		
	DEP-4	2		
	Sub-totals	8	400,000	385,012
T-12	IND-1	2		
	IND-2	2		
	DEP-1	2		
	DEP-4	2		
	Sub-totals	8	600,000	632,008
Grand Total		2,330,000	2,408,190	2,350,000
Surplus / Shortage		20,000	-58,190	0

Alternate 1

- ❖ Replaces a dependent lab that may not be matrix ready
- ❖ Creates an imbalance between the two independent test labs
- ❖ Increases the funding short fall and proposed price adjustments

Discount on Test Costs (%)

vs. Submitted	2.22%
vs. Hardware Adj.	2.42%

Discount per Test (\$)

Average	1,940
Minimim	973
Maximim	2,540

PC-10 Engine Test Matrix

Lab / Stand / Funding Proposal

		Hardware Adjusted Test Costs			
	Lab	No.	Plan	Submitted	Prop. Adj.
C13	IND-1	4			
	IND-2	4			
	DEP-1	2			
	DEP-2	0			
	DEP-3	2			
	DEP-4	2			
	Sub-totals	14	1,330,000	1,391,170	1,339,937
ISB	IND-1	4			
	IND-2	4			
	DEP-4	0			
	Sub-totals	8	400,000	429,068	413,266
T-12	IND-1	4			
	IND-2	4			
	DEP-1	0			
	DEP-4	0			
	Sub-totals	8	600,000	619,616	596,797
Grand Total			2,330,000	2,439,854	2,350,000
Surplus / Shortage			20,000	-89,854	0

Alternate 2

- ❖ Assumes the questionable test lab will not be matrix ready
- ❖ Uses dependent labs only in the Cat C13 test; cuts 3 stands at 2 dependent labs
- ❖ Significant Increase in funding short fall and the proposed price adjustments

Discount on Test Costs (%)

vs. Submitted	3.38%
vs. Hardware Adj.	3.68%

Discount per Test (\$)

Average	2,995
Minimim	1,484
Maximim	3,872

PC-10 Engine Test Matrix

Lab / Stand / Funding Proposal

		Hardware Adjusted Test Costs			
	Lab	No.	Plan	Submitted	Prop. Adj.
C13	IND-1	2			
	IND-2	4			
	DEP-1	2			
	DEP-2	2			
	DEP-3	2			
	DEP-4	2			
	Sub-totals	14	1,330,000	1,369,920	1,355,758
ISB	IND-1	4			
	IND-2	2			
	DEP-4	2			
	Sub-totals	8	400,000	385,012	381,032
T-12	IND-1	4			
	IND-2	4			
	DEP-1	0			
	DEP-4	0			
	Sub-totals	8	600,000	619,616	613,210
Grand Total			2,330,000	2,374,548	2,350,000
Surplus / Shortage			20,000	-24,548	0

Alternate 3

- ❖ Assumes all labs will be matrix ready
- ❖ Eliminates dependent labs from the Mack T-12 matrix
- ❖ Balances independent labs based on test costs
- ❖ Lowest possible short fall and test cost adjustment

Discount on Test Costs (%)

vs. Submitted	0.95%
vs. Hardware Adj.	1.03%

Discount per Test (\$)

Average	818
Minimim	416
Maximim	1,087

PC-10 Engine Test Matrix

Lab / Stand / Funding -- Next Steps

- **NDCT recommend approach to assign matrix test stands**
 - ❖ **Prioritize the different options**
- **Obtain agreement from the test labs**
 - ❖ **Distribution of stands**
 - ❖ **Test cost adjustments**
- **Establish firm deadlines to confirm lab matrix readiness**
 - ❖ **To be judged by appropriate TF/SP**
 - ❖ **Fixed date or relative to HDEOCP test acceptance?**
- **Use output from above to finalize MOA**

Conference Call Decisions

- **NCDT recommends adoption of the laboratory / stand combinations of the basic proposal (Slide 2) provided all participating laboratories are declared ready by the involved Test Development Task Forces by April 15, 2005; with Alternate 1 (Slide 3) as a fall-back position if Dependent Laboratory 2 is not declared ready by this date.**
- **Bill Runkle will request DEOAP approval of this NCDT recommendation.**
- **Steve Kennedy will resolve test costs with the laboratories consistent with available funding and circulate revised proposals including final funding for presentation to the DEOAP.**
- **An ACC initiative to conduct additional testing beyond the PC-10 Matrix to develop Group III BOI data was discussed. This will be addressed by BOI/VGRA TF.**