Caterpillar C13 Test Criteria

500 hour – Steady State Test Cycle

Test Pass/Fail Criteria:

- No Loss of Oil Consumption Control <20% or lower? (based on average of EOT vs SOT)
- Last 150 hours stable Oil Consumption
- No stuck rings/Loss of ring side clearance




CATERPILLAR®

Caterpillar C13 Mini-matrix Test Status

- C13 Test engines installed – 13
- C13 Test engines Completed to date - 20
- Six test Mini-matrix with:
  - ULSDF, No CCV, Same Conditions,
  - Close tolerance Production Liners, Piston and Rings supplied to all labs
  - New Low Ref Oil
  - New High Ref Oil
- Complete tests by end Dec '04




Caterpillar C13 Test Update

6 more C13 tests running/planned –

- 3 Low Ref
- 3 High Ref oils

One High Ref test showed low loss of oil consumption at 300 hrs.

Two Low Ref tests showed loss oil consumption control.




Caterpillar C13 Test Update

No CCV, ULSDF Tests

Oil	Test Hours	Oil Cons Inc
Ref Oil #A	200	11.0
Ref Oil #A	350	37.4
Ref Oil #A		
Ref Oil #D	300	10.1
Ref Oil #D		
Ref Oil #D		




Cat Single vs Multi- Cylinder

- 1P and C13 needed for PC-10
- 1K/1N supportable but not at expense of 1P
- 1P covers 1K/1N due to greater severity (Afton, Oronite data confirm this)




Cat Single vs Multi- Cylinder Avg. Temperatures (°C)

	TL	TG	2L	2G	3L	3G	Oil
1N	365	310	260	230	150	130	107
1P	283	231	171	154	142	148	130
C13	237	184	148	132	127	124	105