

TABLE III.E-3 -- TRANSIENT PM EMISSIONS FOR A PROTOTYPE NR DIESEL ENGINE WITH A CDPF**EPA Prototype Tier 3 DDE-4045 (108hp, 4.5l)**

Test Cycle	PM [g/bhp-hr]		Reduction
	Engine Out	w/ CDPF	%
Proposed Nonroad Transient Cycle (NRTC)	0.143	0.013	91%
Proposed Constant Speed Variable Load Cycle (CSVL)	0.218	0.018	92%
On-Highway U.S. FTP Transient Cycle (FTP)	0.185	0.023	88%
Agricultural Tractor Cycle (AGT)	0.134	0.008	94%
Backhoe Loader Cycle (BHL)	0.396	0.021	95%
Crawler Tractor Dozer Cycle (CRT)	0.314	0.008	97%
Composite Excavator Duty Cycle (CEX)	0.176	0.009	95%
Skid Steer Loader Typical No. 1 (SST)	0.288	0.012	96%
Skid Steer Loader Typical No. 2 (SS2)	0.641	0.013	98%
Skid Steer Loader Highly Transient Speed (SSS)	0.298	0.011	96%
Skid Steer Loader Highly Transient Torque (SSQ)	0.536	0.014	97%
Arc Welder Typical No.1 (AWT)	0.290	0.018	94%
Arc Welder Typical No.2 (AW2)	0.349	0.019	95%
Arc Welder Highly Transient Speed (AWS)	0.274	0.019	93%
Rubber-Tired Loader Typical No.1 (RTL)	0.761	0.014	98%
Rubber-Tired Loader Typical No.2 (RT2)	0.603	0.012	98%
Rubber-Tired Loader Highly Transient Speed (RTS)	0.721	0.010	99%
Rubber-Tired Loader Highly Transient Torque (RTQ)	0.725	0.009	99%

As with the results from the Caterpillar engine, the two low-load (10 percent load) steady-state emissions points have some of the highest brake

specific emission rates. These rates are not high enough, however, to preclude compliance with the steady-state emission cycle, are not within the

proposed NTE zone, and still show substantial PM reduction levels.

TABLE III.E-4 -- STEADY-STATE PM EMISSIONS FOR A PROTOTYPE NR DIESEL ENGINE W/CDPF**EPA Prototype Tier 3 DDE-4045 (108hp, 4.5l)**

Engine Speed	Engine Load	PM [g/bhp-hr]		Reduction
%	%	Engine Out	w/ CDPF	%
100	100	0.178	0.012	93%
100	75	0.116	0.006	95%
100	50	0.126	0.006	96%
100	25	0.218	0.013	94%
100	10	0.470	0.029	94%
60	100	0.045	0.007	84%
60	75	0.062	0.014	78%
60	50	0.090	0.009	90%
60	25	0.146	0.019	87%
60	10	0.258	0.046	82%
91	82	0.094	0.004	95%
80	63	0.099	0.006	94%
63	40	0.136	0.011	92%
0	0	--	--	--
	ISO C1 Composite	0.129	0.010	92%