

TABLE 2.—EMISSIONS CHANGES FROM TEST ENGINES

Test Engine	Configuration			Per cent PM change	Per cent NO _x change	Test/dyno
	B20	CAT	Timing retard			
1977 6V71N MUI	✓	✓	None	– 41	+3	Engine.
1988 6V92TA DDEC II	✓	✓	4°	– 24.5	– 28	Engine.
1988 6V92TA DDEC II	✓	✓	None	– 45	+6	Chassis.
1988 6V92TA DDEC II	✓	✓	1°	– 40	– 2	
1988 6V92TA DDEC II	✓	✓	None	– 40	+4	
1988 6V92TA DDEC II	✓	✓	1.5°	– 27	– 5	

TABLE 3.—APPLICABLE ENGINES AND PM REDUCTION

Engine model	Model year	Configuration and per Cent PM Reduction	
		B20 + cat	B20, cat + retard
6V92TA MUI	79–87	41.1	24.5
6V92TA MUI	88–89	41.1	24.5
6V92TA DDEC I	86–87	45.0	40.0
6V92TA DDEC II	88–91	45.0	40.0
6V92TA DDEC II	92–93	45.0	40.0
6V71N MUI	73–87	41.1	24.5
6V71N MUI	88–89	41.1	24.5
6V71T MUI	85–86	41.1	24.5
8V71N MUI	73–84	41.1	24.5
6L71TA MUI	90	41.1	24.5
6L71TA MUI	88–89	41.1	24.5
6L71TA DDEC	90–91	45.0	40.0

TABLE 4.—PM CERTIFICATION LEVELS

Engine model	Model year	Equipment Configuration	
		B20 + cat	B20, cat + retard
6V92TA MUI	79–87	0.29	0.38
6V92TA MUI	88–89	0.17	0.23
6V92TA DDEC I	86–87	0.17	0.18
6V92TA DDEC II	88–91	0.17	0.19
6V92TA DDEC II	92–93	0.14	0.15
6V71N MUI	73–87	0.29	0.38
6V71N MUI	88–89	0.29	0.38
6V71T MUI	85–86	0.29	0.38
8V71N MUI	73–84	0.29	0.38
6L71TA MUI	90	0.34	0.44
6L71TA MUI	88–89	0.18	0.23
6L71TA DDEC	90–91	0.17	0.18

Section 85.1406(a) of the program regulations state “The test results must demonstrate that the retrofit/rebuild equipment * * * will not cause the urban bus engine to fail to meet any applicable Federal emission requirements set for that engine in the applicable portions of 40 CFR part 86 * * *”. TRT’s emission test data indicate that both configurations of the candidate equipment reduce hydrocarbon (HC) and carbon monoxide (CO), when compared with baseline (pre-retrofit) emissions. There is, however, potential for concern with regard to NO_x emissions from other

engines with which the candidate equipment might be certified, because an increase of three percent was measured for the MUI test engine when equipped with the B20-catalyst configuration without fuel injection retard, and six percent for the electronically-timed DDEC II test engine. Because test data is not available on all engines for which certification of the equipment is sought, TRT performed analyses to determine whether such increases would indicate that other engines exceed applicable NO_x standards. The analysis, in general, applies each of the measured increases

to the NO_x certification levels established by the engine manufacturer for engines tested under the Agency’s new engine certification program. (New engine certification testing results are reported yearly by the Agency in its “Federal Certification Test Results”.) Three percent increase in NO_x is evaluated for engines equipped with MUI, and six percent increase is evaluated for engines equipped with electronically-timed injection. The increased NO_x level is compared with the relevant standard for the particular engine. TRT’s analyses is in the public docket, and discussed below.