APPENDIX D
CVS Emissions Test Data

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	8/13/81	ENG FAM	04E2MCR2	CURB WT	NA
TIME	1100	CID	231	INERTIA	3625
TEST #	13011	TRANS	AUTO	ARHP	11.3
TEST SE	CVS II	CARB	1X2V	IRHP	9.7
VEHICLE	CHEVY	CAT	NA	FUEL	GASOLINE
MODEL	MALIBU	A/C	YES	DYNO	516
YEAR	1980	ODO	NA	EAC	1
VIN	1W19AAR432293	TECHN	LF	DRIVER	DC

PURPOSE...CVS II C/S ARB1!

COLD TRANSIENT

CVS REVS	11908	VMIX	2710.6	ROLL CTS	8262	MILES	3.5435
TEMP ADB	76	TEMP AWB	68	REL HUM	67%	BARO	29.917
DELTA P	66.0	CVS PRES	54.5	NOX CF	1.0757	Vo	.28391

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.200	HC PPM	146.400	HC GRAMS	6.314
CO PPM	3.425	CO PPM	533.650	CO GRAMS	47.419
NOx PPM	.500	NOx PPM	69.800	NOx GRAMS	10.952
CO2 %	.043	CO2 %	1.382	CO2 GRAMS	1889.112

COLD STABILIZED

CVS REVS	20040	VMIX	4561.7	ROLL CTS	9050	MILES	3.8815
TEMP ADB	76	TEMP AWB	68	REL HUM	67%	BARO	29.917
DELTA P	66.0	CVS PRES	54.5	NOX CF	1.0757	Vo	.28391

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.300	HC PPM	19.300	HC GRAMS	1.137
CO PPM	.318	CO PPM	118.091	CO GRAMS	17.716
NOx PPM	.500	NOx PPM	4.300	NOx GRAMS	1.018
CO2 %	.035	CO2 %	.819	CO2 GRAMS	1858.992

HOT TRANSIENT

CVS REVS	11678	VMIX	2659.3	ROLL CTS	8307	MILES	3.5628
TEMP ADB	80.0	TEMP AWB	69.0	REL HUM	58%	BARO	29.927
DELTA P	66.0	CVS PRES	54.5	NOX CF	1.0695	Vo	.28391

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.700	HC PPM	28.300	HC GRAMS	1.082
CO PPM	.019	CO PPM	167.072	CO GRAMS	14.650
NOx PPM	.200	NOx PPM	16.000	NOx GRAMS	2.436
CO2 %	.038	CO2 %	1.197	CO2 GRAMS	1603.572

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.601	6.247	.957	482.158

URBAN CYCLE FUEL ECONOMY
17.962 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	8/22/81	ENG FAM	04E2MCRZ	CURB WT	NA
TIME	0830 HRS	CID	231	INERTIA	3625
TEST #	13070	TRANS	AUTO	ARHP	11.3
TEST SE	CVS II	CARB	1X2V	IRHP	9.77
VEHICLE	CHEVY	CAT	Y	FUEL	GASOLINE
MODEL	MALIBU	A/C	Y	DYNO	516
YEAR	1980	ODO	10752	EAC	1
VIN	1W19AAAR432293	TECHN	BB	DRIVER	DDG

PURPOSE...!

COLD TRANSIENT

TECH COMMENTS!

CVS REVS	12575	VMIX	2866.1	ROLL CTS	8417	MILES	3.61
TEMP ADB	78	TEMP AWB	66	REL HUM	53	BARO	29.95
DELTA P	65.8	CVS PRES	54.6	NOX CF	1.0034	Vo	.28399

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.700	HC PPM	227.400	HC GRAMS	10.279
CO PPM	8.656	CO PPM	696.432	CO GRAMS	65.079
NOx PPM	.600	NOx PPM	56.600	NOx GRAMS	8.732
CO2 %	.046	CO2 %	1.335	CO2 GRAMS	1923.314

COLD STABILIZED

TECH COMMENTS!

CVS REVS	20065	VMIX	4573.2	ROLL CTS	9167	MILES	3.9316
TEMP ADB	78	TEMP AWB	66	REL HUM	53	BARO	29.95
DELTA P	65.8	CVS PRES	54.6	NOX CF	1.0034	Vo	.28399

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.000	HC PPM	32.900	HC GRAMS	1.966
CO PPM	7.793	CO PPM	166.832	CO GRAMS	24.052
NOx PPM	.300	NOx PPM	4.300	NOx GRAMS	.998
CO2 %	.048	CO2 %	.807	CO2 GRAMS	1806.553

HOT TRANSIENT

TECH COMMENTS!

CVS REVS	11842	VMIX	2699.0	ROLL CTS	8353	MILES	3.5825
TEMP ADB	78	TEMP AWB	66	REL HUM	53	BARO	29.95
DELTA P	65.8	CVS PRES	54.6	NOX CF	1.0034	Vo	.28399

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.400	HC PPM	54.000	HC GRAMS	2.123
CO PPM	5.996	CO PPM	222.948	CO GRAMS	19.354
NOx PPM	.300	NOx PPM	15.500	NOx GRAMS	2.233
CO2 %	.046	CO2 %	1.180	CO2 GRAMS	1592.607

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
1.009	8.380	.800	470.547

URBAN CYCLE FUEL ECONOMY
18.219 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	8/25/81	ENG FAM	04E2MCRZ	CURB WT	CAT? NA
TIME	00815	CID	231	INERTIA	3625
TEST #	13080	TRANS	AUTO	ARHP	11.3
TEST SE	CVS II	CARB	1X2V	IRHP	9.7
VEHICLE	CHEV.	CAT	NA	FUEL	GASOLINE
MODEL	MALIBU	A/C	11.3	DYNO	516
YEAR	1980	ODO	10773	EAC	2
VIN	1W19AAR432293	TECHN	LF	DRIVER	DG

PURPOSE...CVSII COLD START ARB1!

COLD TRANSIENT

TECH COMMENTS!

CVS REVS	10232	VMIX	2776.9	ROLL CTS	8389	MILES	3.598
TEMP ADB	78.0	TEMP AWB	68.0	REL HUM	60%	BARO	29.888
DELTA P	15.6	CVS PRES	10.1	NOX CF	1.0551	Vo	.30080

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.000	HC PPM	102.900	HC GRAMS	4.303
CO PPM	4.971	CO PPM	322.171	CO GRAMS	29.092
NOx PPM	.200	NOx PPM	46.100	NOx GRAMS	7.287
CO2 %	.041	CO2 %	1.446	CO2 GRAMS	2029.469

COLD STABILIZED

TECH COMMENTS!

CVS REVS	16911	VMIX	4583.1	ROLL CTS	9098	MILES	3.902
TEMP ADB	78.0	TEMP AWB	68.0	REL HUM	60%	BARO	29.88
DELTA P	16.0	CVS PRES	10.2	NOX CF	1.0552	Vo	.30054

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.000	HC PPM	14.000	HC GRAMS	.557
CO PPM	2.336	CO PPM	63.145	CO GRAMS	9.211
NOx PPM	.200	NOx PPM	4.800	NOx GRAMS	1.208
CO2 %	.039	CO2 %	.846	CO2 GRAMS	1921.909

HOT TRANSIENT

TECH COMMENTSINNITIAAL COLD START 3 STTALLS!

CVS REVS	9898	VMIX	2682.5	ROLL CTS	8421	MILES	3.6117
TEMP ADB	78.0	TEMP AWB	68.0	REL HUM	60%	BARO	29.88
DELTA P	16.0	CVS PRES	10.2	NOX CF	1.0552	Vo	.30054

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.500	HC PPM	20.000	HC GRAMS	.617
CO PPM	2.457	CO PPM	76.264	CO GRAMS	6.547
NOx PPM	.200	NOx PPM	16.900	NOx GRAMS	2.563
CO2 %	.039	CO2 %	1.198	CO2 GRAMS	1616.821

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.367	3.390	.772	494.967

URBAN CYCLE FUEL ECONOMY
17.691 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	09/22/81	ENG FAM	BCR22V2HUS	CURB WT	NNA
TIME	1150	CID	SOHC	INERTIA	2875
TEST #	13217	TRANS	AUTO	ARHP	6.8
TEST SE	CVS II	CARB	1X2V	IRHP	3.4
VEHICLE	DODGE	CAT	YES	FUEL	GASOLINE
MODEL	ARIES K	A/C	NO	DYNO	288
YEAR	1981	ODO	NA	EAC	1
VIN	112152	TECHN	DC	DRIVER	DG

PURPOSE...CVS II C/S BASELINE! (ARB PROGRAM VEHICLE NO. 3)

COLD TRANSIENT

TECH COMMENTS!							
CVS REVS	11889	VMIX	2624.3	ROLL CTS	8338	MILES	3.5761
TEMP ADB	78.0	TEMP AWB	67.0	REL HUM	57%	BARO	29.90
DELTA P	66.0	CVS PRES	54.6	NOX CF	1.0324	Vo	.27557

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.400	HC PPM	113.400	HC GRAMS	4.647
CO PPM	.019	CO PPM	488.853	CO GRAMS	42.298
NOx PPM	.400	NOx PPM	28.500	NOx GRAMS	4.128
CO2 %	.040	CO2 %	1.061	CO2 GRAMS	1393.358

COLD STABILIZED

TECH COMMENTS!							
CVS REVS	20088	VMIX	4434.1	ROLL CTS	8967	MILES	3.8459
TEMP ADB	78.0	TEMP AWB	67.0	REL HUM	57%	BARO	29.90
DELTA P	66.0	CVS PRES	54.6	NOX CF	1.0324	Vo	.27557

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.400	HC PPM	26.100	HC GRAMS	1.589
CO PPM	.022	CO PPM	75.366	CO GRAMS	11.014
NOx PPM	.200	NOx PPM	8.300	NOx GRAMS	2.011
CO2 %	.038	CO2 %	.737	CO2 GRAMS	1612.961

HOT TRANSIENT

TECH COMMENTS!							
CVS REVS	11700	VMIX	2582.5	ROLL CTS	8233	MILES	3.531
TEMP ADB	78.0	TEMP AWB	67.0	REL HUM	57%	BARO	29.90
DELTA P	66.0	CVS PRES	54.6	NOX CF	1.0324	Vo	.27557

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.900	HC PPM	92.800	HC GRAMS	3.721
CO PPM	.032	CO PPM	218.428	CO GRAMS	18.601
NOx PPM	.300	NOx PPM	19.000	NOx GRAMS	2.703
CO2 %	.038	CO2 %	.909	CO2 GRAMS	1170.805

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.771	5.381	.720	389.308

URBAN CYCLE FUEL ECONOMY
22.166 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	09/25/81	ENG FAM	BCR22V2HU8	CURB WT	NA
TIME	1000	CID	2.2L	INERTIA	2875
TEST #	13233	TRANS	AUTO	ARHP	7.5
TEST SE	CVS II	CARB	1X2V	IRHP	4.1
VEHICLE	DODGE	CAT	YES	FUEL	GASOLINE
MODEL	ARIES K	A/C	YES	DYNO	288
YEAR	1981	ODO	17025	EAC	1
VIN	145205	TECHN	LF	DRIVER	MZ

PURPOSE...CVS II C/S BASELINE! ARB #4

COLD TRANSIENT

TECH COMMENTS!

CVS REVS	11773	VMIX	2614.2	ROLL CTS	8578	MILES	3.679
TEMP ADB	70.0	TEMP AWB	62.0	REL HUM	64%	BARO	30.01
DELTA P	66.0	CVS PRES	54.0	NOX CF	.97559	Vo	.27557

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.000	HC PPM	185.400	HC GRAMS	7.683
CO PPM	.019	CO PPM	821.108	CO GRAMS	70.773
NOx PPM	.300	NOx PPM	32.300	NOx GRAMS	4.424
CO2 %	.038	CO2 %	1.197	CO2 GRAMS	1576.679

COLD STABILIZED

TECH COMMENTS!

CVS REVS	19940	VMIX	4427.6	ROLL CTS	9330	MILES	4.0015
TEMP ADB	70.0	TEMP AWB	62.0	REL HUM	64%	BARO	30.01
DELTA P	66.0	CVS PRES	54.0	NOX CF	.97559	Vo	.27557

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.100	HC PPM	14.800	HC GRAMS	.655
CO PPM	.032	CO PPM	161.644	CO GRAMS	23.601
NOx PPM	.300	NOx PPM	7.500	NOx GRAMS	1.688
CO2 %	.038	CO2 %	.793	CO2 GRAMS	1740.093

HOT TRANSIENT

TECH COMMENTS!

CVS REVS	11586	VMIX	2572.6	ROLL CTS	8605	MILES	3.6906
TEMP ADB	70.0	TEMP AWB	62.0	REL HUM	64%	BARO	30.01
DELTA P	66.0	CVS PRES	54.0	NOX CF	.97559	Vo	.27557

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	20.500	HC PPM	40.700	HC GRAMS	.916
CO PPM	26.012	CO PPM	201.860	CO GRAMS	15.090
NOx PPM	.300	NOx PPM	22.100	NOx GRAMS	2.966
CO2 %	.054	CO2 %	1.038	CO2 GRAMS	1318.253

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.583	8.147	.687	412.301

URBAN CYCLE FUEL ECONOMY
20.778 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	10/2/81	ENG FAM	BCR22V2HU8	CURB WT	NA
TIME	1100	CID	2.2L	INERTIA	2875
TEST #	13267	TRANS	AUTO	ARHP	7.5
TEST SE	CVS II	CARB	1X2V	IRHP	4.1
VEHICLE	DODGE	CAT	NA	FUEL	GASOLINE
MODEL	ARIES	A/C	YES	DYNO	288
YEAR	1981	ODO	17081	EAC	2
VIN	145205	TECHN	LF	DRIVER	MZ

PURPOSE...CVSII C/S ARB#4!

COLD TRANSIENT

TECH COMMENTS!

CVS REVS	11741	VMIX	2590.3	ROLL CTS	8373	MILES	3.5911
TEMP ADB	74.0	TEMP AWB	64.0	REL HUM	58.0%	BARO	29.909
DELTA P	66.5	CVS PRES	54.5	NOX CF	.98873	Vo	.27525

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.900	HC PPM	55.500	HC GRAMS	2.197
CO PPM	1.224	CO PPM	470.766	CO GRAMS	40.109
NOx PPM	.400	NOx PPM	30.300	NOx GRAMS	4.152
CO2 %	.039	CO2 %	1.180	CO2 GRAMS	1537.175

COLD STABILIZED

TECH COMMENTS!

CVS REVS	20106	VMIX	4435.8	ROLL CTS	9116	MILES	3.9098
TEMP ADB	74.0	TEMP AWB	64.0	REL HUM	58%	BARO	29.909
DELTA P	66.5	CVS PRES	54.5	NOX CF	.98873	Vo	.27525

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.600	HC PPM	9.900	HC GRAMS	.402
CO PPM	.609	CO PPM	18.744	CO GRAMS	2.657
NOx PPM	.400	NOx PPM	7.100	NOx GRAMS	1.596
CO2 %	.037	CO2 %	.751	CO2 GRAMS	1646.913

HOT TRANSIENT

TECH COMMENTS!

CVS REVS	11779	VMIX	2607.8	ROLL CTS	8418	MILES	3.6104
TEMP ADB	76.0	TEMP AWB	65.0	REL HUM	56%	BARO	30.00
DELTA P	66.5	CVS PRES	54.5	NOX CF	.99878	Vo	.27525

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.500	HC PPM	18.000	HC GRAMS	.628
CO PPM	.359	CO PPM	71.667	CO GRAMS	6.133
NOx PPM	.400	NOx PPM	18.100	NOx GRAMS	2.501
CO2 %	.041	CO2 %	.999	CO2 GRAMS	1299.145

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.227	3.115	.640	405.808

URBAN CYCLE FUEL ECONOMY
21.562 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	8/13/81	ENG FAM	04E2MCR2	CURB WT	NA
TIME	1100	CID	231	INERTIA	3625
TEST #	13011	TRANS	AUTO	ARHP	11.3
TEST SE	CVS II	CARB	1X2V	IRHP	9.7
VEHICLE	CHEVY	CAT	NA	FUEL	GASOLINE
MODEL	MALIBU	A/C	YES	DYNO	516
YEAR	1980	ODO	NA	EAC	1
VIN	1W19AAR432293	TECHN	LF	DRIVER	DC

PURPOSE...CVS II C/S ARB1!

COLD TRANSIENT

CVS REVS	11908	VMIX	2710.6	ROLL CTS	8262	MILES	3.5435
TEMP ADB	76	TEMP AWB	68	REL HUM	67%	BARO	29.917
DELTA P	66.0	CVS PRES	54.5	NOX CF	1.0757	Vo	.28391

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.200	HC PPM	146.400	HC GRAMS	6.314
CO PPM	3.425	CO PPM	533.650	CO GRAMS	47.419
NOx PPM	.500	NOx PPM	69.800	NOx GRAMS	10.952
CO2 %	.043	CO2 %	1.382	CO2 GRAMS	1889.112

COLD STABILIZED

CVS REVS	20040	VMIX	4561.7	ROLL CTS	9050	MILES	3.8815
TEMP ADB	76	TEMP AWB	68	REL HUM	67%	BARO	29.917
DELTA P	66.0	CVS PRES	54.5	NOX CF	1.0757	Vo	.28391

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.300	HC PPM	19.300	HC GRAMS	1.137
CO PPM	.318	CO PPM	118.091	CO GRAMS	17.716
NOx PPM	.500	NOx PPM	4.300	NOx GRAMS	1.018
CO2 %	.035	CO2 %	.819	CO2 GRAMS	1858.992

HOT TRANSIENT

CVS REVS	11678	VMIX	2659.3	ROLL CTS	8307	MILES	3.5628
TEMP ADB	80.0	TEMP AWB	69.0	REL HUM	58%	BARO	29.927
DELTA P	66.0	CVS PRES	54.5	NOX CF	1.0695	Vo	.28391

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.700	HC PPM	28.300	HC GRAMS	1.082
CO PPM	.019	CO PPM	167.072	CO GRAMS	14.650
NOx PPM	.200	NOx PPM	16.000	NOx GRAMS	2.436
CO2 %	.038	CO2 %	1.197	CO2 GRAMS	1603.572

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.601	6.247	.957	482.158

URBAN CYCLE FUEL ECONOMY
17.962 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	10/1/81	ENG FAM	BV2TT95	CURB WT	NA
TIME	01400	CID	5.8L	INERTIA	4500
TEST #	13262	TRANS	A	ARHP	13.1
TEST SE	CVS II	CARB	1X2V	IRHP	~~11.1~~
VEHICLE	FORD	CAT	Y	FUEL	GASOLINE
MODEL	COUNTRY SQ. WG.	A/C	Y	DYNO	288
YEAR	1979	ODO	27693	EAC	2
VIN	F9J76H124278F	TECHN	LF	DRIVER	MZ

WAS SET TO 10.2

PURPOSE...ARB#5 BASELINE! WITH TUNE UP SPECS CHECKED INCLUDES COMP TEST

COLD TRANSIENT

TECH COMMENTS NONE!

CVS REVS	11708	VMIX	2588.1	ROLL CTS	8293	MILES	3.5568
TEMP ADB	74	TEMP AWB	65	REL HUM	62	BARO	29.96
DELTA P	66.5	CVS PRES	54.5	NOX CF	1.0120	Vo	.27525

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.400	HC PPM	213.000	HC GRAMS	8.809
CO PPM	1.224	CO PPM	846.704	CO GRAMS	72.161
NOx PPM	.600	NOx PPM	189.600	NOx GRAMS	26.825
CO2 %	.046	CO2 %	1.996	CO2 GRAMS	2627.069

COLD STABILIZED

TECH COMMENTS NONE!

CVS REVS	20078	VMIX	4438.3	ROLL CTS	8991	MILES	3.8561
TEMP ADB	74	TEMP AWB	65	REL HUM	62	BARO	29.96
DELTA P	66.5	CVS PRES	54.5	NOX CF	1.0120	Vo	.27525

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.500	HC PPM	27.200	HC GRAMS	1.609
CO PPM	.484	CO PPM	8.556	CO GRAMS	1.187
NOx PPM	.200	NOx PPM	23.300	NOx GRAMS	5.624
CO2 %	.044	CO2 %	1.222	CO2 GRAMS	2721.772

HOT TRANSIENT

TECH COMMENTS NONE!

CVS REVS	11751	VMIX	2597.5	ROLL CTS	8331	MILES	3.5731
TEMP ADB	74.0	TEMP AWB	65.0	REL HUM	62%	BARO	29.959
DELTA P	66.5	CVS PRES	54.5	NOX CF	1.0120	Vo	.27525

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.500	HC PPM	47.400	HC GRAMS	1.845
CO PPM	1.224	CO PPM	133.587	CO GRAMS	11.349
NOx PPM	.300	NOx PPM	122.100	NOx GRAMS	17.347
CO2 %	.063	CO2 %	1.773	CO2 GRAMS	2313.874

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.868	5.212	3.644	696.591

URBAN CYCLE FUEL ECONOMY
12.538 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	10/5/81	ENG FAM	BV2TT95	CURB WT	NA
TIME	0930 HRS	CID	5.8L	INERTIA	4500
TEST #	13275	TRANS	AUTO	ARHP	13.1
TEST SE	CVS II	CARB	1X2V	IRHP	10.2
VEHICLE	FORD	CAT	NA	FUEL	GASOLINE
MODEL	WAGON	A/C	YES	DYNO	288
YEAR	1979	ODO	27730	EAC	2
VIN	F9J76H124278F	TECHN	DC	DRIVER	MZ

PURPOSE...CVSII, ARSB#5 NEW EGR POSITION SENSOR

COLD TRANSIENT

TECH COMMENTS!

CVS REVS	11680	VMIX	2582.7	ROLL CTS	8313	MILES	3.5654
TEMP ADB	68	TEMP AWB	60	REL HUM	63%	BARO	29.98
DELTA P	66.2	CVS PRES	54.9	NOX CF	.95121	Vo	.27544

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.100	HC PPM	144.000	HC GRAMS	5.890
CO PPM	3.098	CO PPM	788.794	CO GRAMS	66.945
NOx PPM	.600	NOx PPM	204.600	NOx GRAMS	27.156
CO2 %	.046	CO2 %	1.938	CO2 GRAMS	2543.798

COLD STABILIZED

TECH COMMENTS!

CVS REVS	20080	VMIX	4440.2	ROLL CTS	9020	MILES	3.8686
TEMP ADB	68.0	TEMP AWB	60.0	REL HUM	63%	BARO	29.98
DELTA P	66.2	CVS PRES	54.9	NOX CF	.95121	Vo	.27544

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.000	HC PPM	32.000	HC GRAMS	1.990
CO PPM	2.336	CO PPM	16.471	CO GRAMS	2.099
NOx PPM	.900	NOx PPM	30.000	NOx GRAMS	6.675
CO2 %	.046	CO2 %	1.189	CO2 GRAMS	2641.936

HOT TRANSIENT

TECH COMMENTS!

CVS REVS	11806	VMIX	2610.6	ROLL CTS	8365	MILES	3.5877
TEMP ADB	68.0	TEMP AWB	60.0	REL HUM	63%	BARO	29.98
DELTA P	66.2	CVS PRES	54.9	NOX CF	.95121	Vo	.27544

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.900	HC PPM	42.800	HC GRAMS	1.679
CO PPM	1.354	CO PPM	53.553	CO GRAMS	4.507
NOx PPM	.600	NOx PPM	61.500	NOx GRAMS	8.200
CO2 %	.044	CO2 %	1.677	CO2 GRAMS	2218.068

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.735	4.492	3.092	671.442

URBAN CYCLE FUEL ECONOMY
13.03 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	10/12/81	ENG FAM	B62TT95	CURB WT	NA
TIME	00900	CID	5.8	INERTIA	4500
TEST #	13304	TRANS	AUTO	ARHP	13.2
TEST SE	CVS II	CARB	1X2V	IRHP	10.2
VEHICLE	FORD	CAT	NO	FUEL	GASOLINE
MODEL	COUNTRY SQ.	A/C	YES	DYNO	288
YEAR	1979	ODO	27753	EAC	1
VIN	F9J76H124278F	TECHN	LF	DRIVER	MZ

PURPOSE...CVSI CS ARB#5! NEW ECU OLD CALIBRATOR D9A2-12A650-B

COLD TRANSIENT

TECH COMMENTS!

CVS REVS	11778	VMIX	2567.5	ROLL CTS	8323	MILES	3.5696
TEMP ADB	68	TEMP AWB	58	REL HUM	55	BARO	29.995
DELTA P	69.4	CVS PRES	57.5	NOX CF	.91729	Vo	.27341

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.900	HC PPM	204.000	HC GRAMS	8.413
CO PPM	.019	CO PPM	1003.914	CO GRAMS	84.985
NOx PPM	.900	NOx PPM	180.900	NOx GRAMS	22.977
CO2 %	.035	CO2 %	1.825	CO2 GRAMS	2390.274

COLD STABILIZED

TECH COMMENTS!

CVS REVS	20000	VMIX	4359.9	ROLL CTS	9020	MILES	3.8686
TEMP ADB	68	TEMP AWB	58	REL HUM	55	BARO	29.995
DELTA P	69.4	CVS PRES	57.5	NOX CF	.91729	Vo	.27341

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.100	HC PPM	31.500	HC GRAMS	1.975
CO PPM	.141	CO PPM	9.951	CO GRAMS	1.411
NOx PPM	2.400	NOx PPM	21.000	NOx GRAMS	4.073
CO2 %	.040	CO2 %	1.139	CO2 GRAMS	2491.454

HOT TRANSIENT

TECH COMMENTS!

CVS REVS	11757	VMIX	2563.0	ROLL CTS	8360	MILES	3.5855
TEMP ADB	73.0	TEMP AWB	66.0	REL HUM	69%	BARO	29.995
DELTA P	69.4	CVS PRES	57.5	NOX CF	1.0413	Vo	.27341

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.700	HC PPM	43.100	HC GRAMS	1.667
CO PPM	.022	CO PPM	40.709	CO GRAMS	3.438
NOx PPM	.600	NOx PPM	51.600	NOx GRAMS	7.382
CO2 %	.038	CO2 %	1.623	CO2 GRAMS	2112.612

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.878	5.359	2.438	634.245

URBAN CYCLE FUEL ECONOMY
13.744 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATA MEASURED IN EXACT ACCORDANCE WIT 40 CFR 85.075 - 9 THRU 2.

DATE	10/17/81	ENG FAM	BV2TT95	CURB WT	NA
TIME	01050	CID	5.8L	INERTIA	4500
TEST #	13343	TRANS	AUTO	ARHP	13.1
TEST SE	CVS II	CARB	1X2V	IRHP	10.2
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	COUNTRY SQ.	A/C	YES	DYNO	288
YEAR	1979	ODO	22830	EDC	
VIN	F9J76H124278F	TECHN	CF	DRIVER	MZ

PURPOSE...CVSII COLD START ARB#5! NOW CALIBRATOR D9AZ-12A649B

COLD TRANSIENT

TECH COMMENTS...!!

CVS REVS	11727	VMIX	2519.6	ROLL CTS	8352
TEMP ADB	72.0	TEMP AWB	55.0	REL HUM	32%
DELTA P	73.5	CVS PRES	61.5	NOX CF	.84783

MILES	3.5821
BARO	30.164
Vo	.27080

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.800	HC PPM	155.100	HC GRAMS	6.212
CO PPM	1.125	CO PPM	815.408	CO GRAMS	67.659
NOx PPM	.900	NOx PPM	183.300	NOx GRAMS	21.118
CO2 %	.044	CO2 %	1.782	CO2 GRAMS	2279.452

COLD STABILIZED

TECH COMMENTS...!!

CVS REVS	20026	VMIX	4302.8	ROLL CTS	9105
TEMP ADB	72.0	TEMP AWB	55.0	REL HUM	32%
DELTA P	73.5	CVS PRES	61.5	NOX CF	.84783

MILES	3.905
BARO	30.164
Vo	.27080

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.900	HC PPM	26.900	HC GRAMS	1.574
CO PPM	1.022	CO PPM	8.154	CO GRAMS	1.029
NOx PPM	.900	NOx PPM	24.600	NOx GRAMS	4.697
CO2 %	.044	CO2 %	1.107	CO2 GRAMS	2379.138

HOT TRANSIENT

TECH COMMENTS...!!

CVS REVS	11688	VMIX	2511.3	ROLL CTS	8341
TEMP ADB	72.0	TEMP AWB	55.0	REL HUM	32%
DELTA P	73.5	CVS PRES	61.5	NOX CF	.84783

MILES	3.5774
BARO	30.164
Vo	.27080

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.000	HC PPM	40.000	HC GRAMS	1.495
CO PPM	.019	CO PPM	35.907	CO GRAMS	2.974
NOx PPM	.600	NOx PPM	59.400	NOx GRAMS	6.788
CO2 %	.041	CO2 %	1.588	CO2 GRAMS	2020.854

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS	CARBON MONOXIDE	OXIDES OF NITROGEN	CARBON DIOXIDE
GMS/MI	GMS/MI	GMS/MI	GMS/MI
.681	4.250	2.357	602.734

URBAN CYCLE FUEL ECONOMY
14.505 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

IN EXACT ACCORDANCE WITH 40 CFR 85.075-9 THRU 27 IEI

DATE	10/19/81	ENG FAM	BV2TT95	CURB WT	NA
TIME	1100	CID	5.8	INERTIA	4500
TEST #	13349	TRANS	AUTO	ARHP	13.1
TEST SE	CVS II	CARB	1X2V	IRHP	10.2
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	WAGON	A/C	YES	DYNO	516
YEAR	1979	ODO	NA	EAC	2
VIN	F9J76H124278F	TECHN	BC	DRIVER	MZ

PURPOSE...CVSII C/S, ARB #5! NEW SENSOR AIR DIVERT E0A2-9D474-B NEW MAP SENSOR — NEW AIR CLEANER E1AZ-12A680-A TEMP SWITCH D9AZ-9E601A

COLD TRANSIENT

TECH COMMENTS...!

CVS REVS	9902	VMIX	2667.6	ROLL CTS	8367	MILES	3.5885
TEMP ADB	82	TEMP AWB	64	REL HUM	27%	BARO	29.99
DELTA P	19.5	CVS PRES	11.0	NOX CF	.87129	Vo	.29823

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	11.000	HC PPM	135.000	HC GRAMS	5.467
CO PPM	9.643	CO PPM	557.019	CO GRAMS	48.259
NOx PPM	1.200	NOx PPM	147.600	NOx GRAMS	18.450
CO2 %	.052	CO2 %	1.762	CO2 GRAMS	2375.145

COLD STABILIZED

TECH COMMENTS...!!

CVS REVS	17293	VMIX	4658.8	ROLL CTS	9059	MILES	3.8853
TEMP ADB	82	TEMP AWB	64	REL HUM	27%	BARO	29.99
DELTA P	19.5	CVS PRES	11.0	NOX CF	.87129	Vo	.29823

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	11.000	HC PPM	33.200	HC GRAMS	1.754
CO PPM	.234	CO PPM	11.668	CO GRAMS	1.759
NOx PPM	.600	NOx PPM	17.700	NOx GRAMS	3.769
CO2 %	.046	CO2 %	1.036	CO2 GRAMS	2401.611

HOT TRANSIENT

TECH COMMENTS...!

CVS REVS	9923	VMIX	2673.3	ROLL CTS	8317	MILES	3.5671
TEMP ADB	82	TEMP AWB	64	REL HUM	27%	BARO	29.99
DELTA P	19.5	CVS PRES	11.0	NOX CF	.87129	Vo	.29823

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.000	HC PPM	63.500	HC GRAMS	2.501
CO PPM	1.224	CO PPM	231.484	CO GRAMS	20.307
NOx PPM	.600	NOx PPM	44.100	NOx GRAMS	5.496
CO2 %	.052	CO2 %	1.485	CO2 GRAMS	1994.168

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.741	4.568	1.988	611.066

URBAN CYCLE FUEL ECONOMY
14.294 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	10-20-81	ENG FAM	BV2TT95	CURB WT	NA
TIME	1630	CID	5.8	INERTIA	4500
TEST #	13357	TRANS	AUTO	ARHP	13.1
TEST SE	CVS II	CARB	1X2V	IRHP	10.2
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	WAGON	A/C	YES	DYNO	288
YEAR	1979	ODO	NA	EAC	2
VIN	F9J76H124278F	TECHN	BC	DRIVER	MZ

PURPOSE...ARB#5@! ENGINE COOLANT SWITCH REPLACE D9AY-12A648-A

COLD TRANSIENT

TECH COMMENTS...!!

CVS REVS	11782	VMIX	2515.0	ROLL CTS	8297	MILES	3.5585
TEMP ADB	77	TEMP AWB	66	REL HUM	56	BARO	30.06
DELTA P	73.8	CVS PRES	62.1	NOX CF	1.0102	Vo	.27061

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.000	HC PPM	165.000	HC GRAMS	6.672
CO PPM	1.224	CO PPM	756.780	CO GRAMS	62.668
NOx PPM	.300	NOx PPM	159.900	NOx GRAMS	21.969
CO2 %	.041	CO2 %	1.920	CO2 GRAMS	2458.412

COLD STABILIZED

TECH COMMENTS...!!STALL IN BAG 2!

CVS REVS	20001	VMIX	4269.5	ROLL CTS	8989	MILES	3.8553
TEMP ADB	77	TEMP AWB	66	REL HUM	56	BARO	30.06
DELTA P	73.8	CVS PRES	62.1	NOX CF	1.0102	Vo	.27061

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.900	HC PPM	30.500	HC GRAMS	1.879
CO PPM	.609	CO PPM	32.723	CO GRAMS	4.528
NOx PPM	1.100	NOx PPM	21.500	NOx GRAMS	4.789
CO2 %	.041	CO2 %	1.244	CO2 GRAMS	2669.751

HOT TRANSIENT

TECH COMMENTS...!!

CVS REVS	11849	VMIX	2529.3	ROLL CTS	8312	MILES	3.5649
TEMP ADB	77	TEMP AWB	66	REL HUM	56	BARO	30.06
DELTA P	73.8	CVS PRES	62.1	NOX CF	1.0102	Vo	.27061

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.200	HC PPM	65.800	HC GRAMS	2.603
CO PPM	1.224	CO PPM	239.325	CO GRAMS	19.870
NOx PPM	.900	NOx PPM	52.000	NOx GRAMS	7.088
CO2 %	.041	CO2 %	1.769	CO2 GRAMS	2273.093

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.840	5.770	2.464	677.114

URBAN CYCLE FUEL ECONOMY
12.878 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATA MEASURED IN EXACT ACCORDANCE WITH 40 CFR 86-075 - 9 THRU 27

DATE	10/21/81	ENG FAM	BV2TT95	CURB WT	NA
TIME	01053	CID	5.8L	INERTIA	4500
TEST #	13360	TRANS	AUTO	ARHP	13.1
TEST SE	CVS II	CARB	1X2V	IRHP	10.2
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	COUNTRY SQ.	A/C	YES	DYNO	288
YEAR	1979	ODO	NA	EAC	1
VIN	F9J76H124278F	TECHN	LF	DRIVER	MZ

PURPOSE...CVSII COLD START! RESET CARB PER FORD MANUAL NEW O_2 SENSOR D9FZ-9F472-A

COLD TRANSIENT

TECH COMMENTS...!

CVS REVS	11831	VMIX	2530.6	ROLL CTS	8315	MILES	3.5662
TEMP ADB	73.0	TEMP AWB	63.0	REL HUM	58%	BARO	30.119
DELTA P	73.8	CVS PRES	62.2	NOX CF	.97540	Vo	.27061

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.400	HC PPM	159.000	HC GRAMS	6.377
CO PPM	.019	CO PPM	646.102	CO GRAMS	53.909
NOx PPM	.300	NOx PPM	101.700	NOx GRAMS	13.561
CO2 %	.038	CO2 %	1.691	CO2 GRAMS	2175.090

COLD STABILIZED

TECH COMMENTS...1 STALL 1ST. BAG!

CVS REVS	20008	VMIX	4279.7	ROLL CTS	9072	MILES	3.8909
TEMP ADB	73.0	TEMP AWB	63.0	REL HUM	58%	BARO	30.119
DELTA P	73.8	CVS PRES	62.2	NOX CF	.97540	Vo	.27061

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.700	HC PPM	22.200	HC GRAMS	1.248
CO PPM	.032	CO PPM	4.567	CO GRAMS	.648
NOx PPM	.600	NOx PPM	20.100	NOx GRAMS	4.419
CO2 %	.041	CO2 %	1.029	CO2 GRAMS	2199.806

HOT TRANSIENT

TECH COMMENTS...!

CVS REVS	11678	VMIX	2497.9	ROLL CTS	8310	MILES	3.5641
TEMP ADB	73.0	TEMP AWB	63.0	REL HUM	58%	BARO	30.119
DELTA P	73.8	CVS PRES	62.2	NOX CF	.97540	Vo	.27061

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.100	HC PPM	54.100	HC GRAMS	2.058
CO PPM	.032	CO PPM	136.610	CO GRAMS	11.253
NOx PPM	.300	NOx PPM	48.300	NOx GRAMS	6.338
CO2 %	.041	CO2 %	1.495	CO2 GRAMS	1889.669

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.692	4.056	1.859	564.943

URBAN CYCLE FUEL ECONOMY
15.468 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	10/22/81	ENG FAM	BV2TT95	CURB WT	NA
TIME	1037	CID	5.8	INERTIA	4500
TEST #	13370	TRANS	AUTO	ARHP	13.1
TEST SE	CVS II	CARB	1X2V	IRHP	10.2
VEHICLE	FORD	CAT	NA	FUEL	GASOLINE
MODEL	COUNTRY SQUIRE	A/C	YES	DYNO	288
YEAR	1979	ODO	27889	EAC	1
VIN	9J76H124278	TECHN	LF	DRIVER	MZ

PURPOSE...CVSII C/S ARB#5!

COLD TRANSIENT

TECH COMMENTS...!

CVS REVS	11699	VMIX	2503.5	ROLL CTS	8277
TEMP ADB	68.0	TEMP AWB	60.0	REL HUM	63.0%
DELTA P	74.0	CVS PRES	62.5	NOX CF	.94952

MILES	3.5499				
BARO	30.165				
Vo	.27048				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.900	HC PPM	117.600	HC GRAMS	4.452
CO PPM	1.125	CO PPM	620.534	CO GRAMS	51.139
NOx PPM	.600	NOx PPM	87.000	NOx GRAMS	11.133
CO2 %	.066	CO2 %	1.561	CO2 GRAMS	1951.288

COLD STABILIZED

TECH COMMENTS...!

CVS REVS	20071	VMIX	4295.2	ROLL CTS	8069
TEMP ADB	68.0	TEMP AWB	60.0	REL HUM	63.0%
DELTA P	74.0	CVS PRES	62.5	NOX CF	.94952

MILES	3.8896				
BARO	30.165				
Vo	.27048				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.300	HC PPM	32.900	HC GRAMS	1.703
CO PPM	2.081	CO PPM	5.996	CO GRAMS	.576
NOx PPM	.600	NOx PPM	17.400	NOx GRAMS	3.720
CO2 %	.058	CO2 %	.978	CO2 GRAMS	2058.759

PRELIMINARY DATA
NOT IN EXACT ACCORDANCE WITH
40 CFR 85.075 - SUBPART 27

HOT TRANSIENT

TECH COMMENTS...!

CVS REVS	11702	VMIX	2504.2	ROLL CTS	8298
TEMP ADB	68.0	TEMP AWB	60.0	REL HUM	63.0
DELTA P	74.0	CVS PRES	62.5	NOX CF	.94952

MILES	3.5589				
BARO	30.165				
Vo	.27048				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.800	HC PPM	47.500	HC GRAMS	1.656
CO PPM	2.789	CO PPM	118.538	CO GRAMS	9.580
NOx PPM	.300	NOx PPM	39.300	NOx GRAMS	5.026
CO2 %	.055	CO2 %	1.374	CO2 GRAMS	1720.225

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	~~CARBON DIOXIDE~~ GMS/MI
.612	3.764	1.527	520.949

URBAN CYCLE FUEL ECONOMY
16.776 MILES PER GALLON

7/23/82 LLM

INVALIDATED – Suspected Exhaust Collection Leak

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	10/13/81	ENG FAM	02X2NC	CURB WT	NA
TIME	0945	CID	2.5L	INERTIA	2875
TEST #	13311	TRANS	AUTO	ARHP	7.3
TEST SE	CVS II	CARB	1X2V	IRHP	4.2
VEHICLE	BUICK	CAT	NA	FUEL	GASOLINE
MODEL	SKYLARK	A/C	YES	DYNO	288
YEAR	1980	ODO	22104	EAC	1
VIN	4C375AW287214	TECHN	LF	DRIVER	MZ

PURPOSE...CVS II C/S BASELINE #6 ARB AUDIT!

COLD TRANSIENT

CVS REVS	11697	VMIX	2525.2	ROLL CTS	8359
TEMP ADB	70.0	TEMP AWB	57.0	REL HUM	44.0%
DELTA P	71.4	CVS PRES	59.8	NOX CF	.88600
MILES	3.5851				
BARO	30.035				
Vo	.27214				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.500	HC PPM	74.600	HC GRAMS	2.944
CO PPM	.019	CO PPM	496.375	CO GRAMS	41.328
NOx PPM	.200	NOx PPM	71.800	NOx GRAMS	8.678
CO2 %	.035	CO2 %	1.135	CO2 GRAMS	1444.251

COLD STABILIZED

CVS REVS	20044	VMIX	4327.3	ROLL CTS	9087
TEMP ADB	70.0	TEMP AWB	57.0	REL HUM	44.0%
DELTA P	71.4	CVS PRES	59.8	NOX CF	.88600
MILES	3.8973				
BARO	30.035				
Vo	.27214				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.600	HC PPM	6.700	HC GRAMS	.232
CO PPM	.008	CO PPM	54.746	CO GRAMS	7.811
NOx PPM	.200	NOx PPM	17.100	NOx GRAMS	3.511
CO2 %	.038	CO2 %	.707	CO2 GRAMS	1505.162

HOT TRANSIENT

CVS REVS	11720	VMIX	2531.7	ROLL CTS	8388
TEMP ADB	73.0	TEMP AWB	58.0	REL HUM	40.0
DELTA P	71.4	CVS PRES	59.8	NOX CF	.88701
MILES	3.5975				
BARO	30.050				
Vo	.27214				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.400	HC PPM	12.200	HC GRAMS	.373
CO PPM	.032	CO PPM	122.120	CO GRAMS	10.196
NOx PPM	.200	NOx PPM	34.200	NOx GRAMS	4.137
CO2 %	.038	CO2 %	.944	CO2 GRAMS	1192.250

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.228	4.191	1.281	374.622

URBAN CYCLE FUEL ECONOMY
23.227 MILES PER GALLON

DATA MEASURED
IN EXACT ACCORDANCE WIT
40 CFR 85.075 - 9 THRU 2
OEI

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATA MEASURED IN EXACT ACCORDANCE WITH 40 CFR 85.075 - 9 THRU 27 OEI

DATE	10/17/81	ENG FAM	02X2NC	CURB WT	NA
TIME	01200	CID	2.5L	INERTIA	2875
TEST #	13344	TRANS	AUTO	ARHP	7.3
TEST SE	CVS II	CARB	1X2V	IRHP	4.2
VEHICLE	BUICK	CAT	NO	FUEL	GASOLINE
MODEL	SKYLARK LMT	A/C	YES	DYNO	288
YEAR	1980	ODO	22104	EAC	1
VIN	4C375AW287214	TECHN	LF	DRIVER	MZ

PURPOSE...CVSII COLD START ARB#6 AUDIT!

COLD TRANSIENT

TECH COMMENTS...!

CVS REVS	11710	VMIX 2515.8	ROLL CTS	8161	MILES 3.5002
TEMP ADB	76.0	TEMP AWB 55.0	REL HUM	23%	BARO 30.144
DELTA P	73.2	CVS PRES 61.5	NOX CF	.826200	Vo .27099

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.900	HC PPM	72.900	HC GRAMS	2.849
CO PPM	.019	CO PPM	517.051	CO GRAMS	42.689
NOx PPM	.600	NOx PPM	71.800	NOx GRAMS	8.021
CO2 %	.044	CO2 %	1.138	CO2 GRAMS	1432.740

COLD STABILIZED

TECH COMMENTS...!

CVS REVS	20037	VMIX 4304.8	ROLL CTS	8896	MILES 3.8154
TEMP ADB	76.0	TEMP AWB 55.0	REL HUM	23%	BARO 30.144
DELTA P	73.2	CVS PRES 61.5	NOX CF	.826200	Vo .27099

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.300	HC PPM	7.500	HC GRAMS	.241
CO PPM	.271	CO PPM	36.781	CO GRAMS	5.184
NOx PPM	.500	NOx PPM	19.600	NOx GRAMS	3.684
CO2 %	.044	CO2 %	.732	CO2 GRAMS	1542.862

HOT TRANSIENT

TECH COMMENTS...!

CVS REVS	11702	VMIX 2514.1	ROLL CTS	8160	MILES 3.4997
TEMP ADB	76.0	TEMP AWB 55.0	REL HUM	23%	BARO 30.144
DELTA P	73.2	CVS PRES 61.5	NOX CF	.826200	Vo .27099

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.300	HC PPM	14.500	HC GRAMS	.431
CO PPM	.032	CO PPM	116.753	CO GRAMS	3.680
NOx PPM	.300	NOx PPM	37.400	NOx GRAMS	4.176
CO2 %	.041	CO2 %	.966	CO2 GRAMS	1210.324

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.284	3.983	1.300	389.316

URBAN CYCLE FUEL ECONOMY
22.384 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATA MEASURED IN EXACT ACCORDANCE WITH 40 CFR 85.075 - 9 THRU 27

DATE	10-20-81	ENG FAM	02X2NC	CURB WT	NA
TIME	1530	CID	2.5L	INERTIA	2875
TEST #	13356	TRANS	A	ARHP	7.3
TEST SE	CVS II	CARB	1X2V	IRHP	4.2
VEHICLE	BUICK	CAT	Y	FUEL	GASOLIN
MODEL	SKYLARK	A/C	Y	DYNO	288
YEAR	80	ODO	22104	EAC	2
VIN	4C375AW287214	TECHN	BC	DRIVER	DG

PURPOSE...ARB#6!

COLD TRANSIENT

TECH COMMENTS...!

CVS REVS	11730	VMIX	2500.7	ROLL CTS	8482	MILES	3.6378
TEMP ADB	80	TEMP AWB	65	REL HUM	44	BARO	30.01
DELTA P	73.4	CVS PRES	62.2	NOX CF	.96318	Vo	.27086

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	1.800	HC PPM	87.000	HC GRAMS	3.486
CO PPM	1.224	CO PPM	645.338	CO GRAMS	53.115
NOx PPM	.900	NOx PPM	64.400	NOx GRAMS	8.295
CO2 %	.041	CO2 %	1.228	CO2 GRAMS	1544.208

COLD STABILIZED

TECH COMMENTS...!

CVS REVS	20065	VMIX	4277.6	ROLL CTS	9221	MILES	3.9548
TEMP ADB	80	TEMP AWB	65	REL HUM	44	BARO	30.01
DELTA P	73.4	CVS PRES	62.2	NOX CF	.96318	Vo	.27086

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.500	HC PPM	5.800	HC GRAMS	.175
CO PPM	.982	CO PPM	25.450	CO GRAMS	3.459
NOx PPM	.400	NOx PPM	17.600	NOx GRAMS	3.843
CO2 %	.041	CO2 %	.791	CO2 GRAMS	1668.583

HOT TRANSIENT

TECH COMMENTS...!

CVS REVS	11736	VMIX	2501.9	ROLL CTS	8444	MILES	3.6215
TEMP ADB	80	TEMP AWB	65	REL HUM	44	BARO	30.01
DELTA P	73.4	CVS PRES	62.2	NOX CF	.96318	Vo	.27086

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	3.100	HC PPM	11.000	HC GRAMS	.332
CO PPM	.016	CO PPM	91.718	CO GRAMS	7.567
NOx PPM	.100	NOx PPM	33.200	NOx GRAMS	4.321
CO2 %	.041	CO2 %	1.051	CO2 GRAMS	1313.673

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.245	4.036	1.301	406.330

URBAN CYCLE FUEL ECONOMY
21.456 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	10/22/81	ENG FAM	02X2NC	CURB WT	NA
TIME	1305	CID	2.5L	INERTIA	2875
TEST #	13378	TRANS	AAUTO	ARHP	7.3
TEST SE	CVS II	CARB	1X2V	IRHP	4.2
VEHICLE	BUICK	CAT	NA	FUEL	GASOLINE
MODEL	SKYLARK	A/C	YES	DYNO	288
YEAR	1980	ODO	22104	EAC	1
VIN	4C3775AW287214	TECHN	DC	DRIVER	BB

PURPOSE...CVS II C/S!

COLD TRANSIENT

TECH COMMENTS...!

CVS REVS	11650	VMIX	2473.1	ROLL CTS	8439
TEMP ADB	74.0	TEMP AWB	64.0	REL HUM	58%
DELTA P	74.8	CVS PRES	63.2	NOX CF	.98703

MILES	3.6194
BARO	30.06
Vo	.26997

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.600	HC PPM	69.000	HC GRAMS	2.539
CO PPM	1.125	CO PPM	520.351	CO GRAMS	42.344
NOx PPM	.200	NOx PPM	43.300	NOx GRAMS	5.700
CO2 %	.052	CO2 %	.907	CO2 GRAMS	1100.930

COLD STABILIZED

TECH COMMENTS...!

CVS REVS	19942	VMIX	4228.4	ROLL CTS	8419
TEMP ADB	74.6	TEMP AWB	64.0	REL HUM	58%
DELTA P	74.8	CVS PRES	63.2	NOX CF	.99428

MILES	3.9445
BARO	30.03
Vo	.26997

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.600	HC PPM	2.500	HC GRAMS	.150
CO PPM	.458	CO PPM	59.257	CO GRAMS	3.460
NOx PPM	.100	NOx PPM	23.700	NOx GRAMS	3.097
CO2 %	.049	CO2 %	.565	CO2 GRAMS	1134.571

PRELIMINARY DATA
NOT IN EXACT ACCORDANCE WITH
40 CFR 85.075-9 THRU 27

HOT TRANSIENT

TECH COMMENTS...!

CVS REVS	11645	VMIX	2472.1	ROLL CTS	8416
TEMP ADB	74.6	TEMP AWB	64.0	REL HUM	58%
DELTA P	74.8	CVS PRES	63.2	NOX CF	.99393

MILES	3.6095
BARO	30.06
Vo	.26997

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.500	HC PPM	16.000	HC GRAMS	.398
CO PPM	1.018	CO PPM	80.277	CO GRAMS	6.464
NOx PPM	.100	NOx PPM	29.700	NOx GRAMS	3.939
CO2 %	.049	CO2 %	.757	CO2 GRAMS	911.320

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.194	3.354	1.031	281.465

URBAN CYCLE FUEL ECONOMY
30.872 MILES PER GALLON

7/23/82 LLH

INVALIDATED - Suspected Exhaust Collection Leak

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATA MEASURED IN ACCORDANCE WITH 40 CFR 85.075

DATE	10-26-81	ENG FAM	OUCP	CURB WT	NA
TIME	249P	CID	86.4CID	INERTIA	2250
TEST #	13388	TRANS	4S	ARHP	9.7
TEST SE	CVS II	CARB	1X2V	IRHP	8.4
VEHICLE	MAZDA	CAT	NA	FUEL	GASOLINE
MODEL	GLC	A/C	N	DYNO	516
YEAR	80	ODO	31703	EAC	2
VIN	FA4US640670	TECHN	BB	DRIVER	MZ

PURPOSE...ARB#7
!

COLD TRANSIENT

TECH COMMENTS...!

CVS REVS	9896	VMIX	2647.9	ROLL CTS	8380	MILES	3.5941
TEMP ADB	70	TEMP AWB	60	REL HUM	56	BARO	30.07
DELTA P	21.3	CVS PRES	13.2	NOX CF	.93711	Vo	.29705

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.000	HC PPM	162.000	HC GRAMS	6.644
CO PPM	.703	CO PPM	1330.688	CO GRAMS	116.231
NOx PPM	.300	NOx PPM	33.000	NOx GRAMS	4.397
CO2 %	.044	CO2 %	.824	CO2 GRAMS	1075.506

COLD STABILIZED

TECH COMMENTS...!

CVS REVS	16857	VMIX	4510.6	ROLL CTS	9138	MILES	3.9192
TEMP ADB	75	TEMP AWB	62	REL HUM	48	BARO	30.07
DELTA P	21.3	CVS PRES	13.2	NOX CF	.94087	Vo	.29705

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.700	HC PPM	56.000	HC GRAMS	3.581
CO PPM	4.035	CO PPM	333.551	CO GRAMS	49.028
NOx PPM	.200	NOx PPM	8.400	NOx GRAMS	1.886
CO2 %	.044	CO2 %	.517	CO2 GRAMS	1111.361

HOT TRANSIENT

TECH COMMENTS...!

CVS REVS	9779	VMIX	2623.3	ROLL CTS	8365	MILES	3.5877
TEMP ADB	75	TEMP AWB	62	REL HUM	48	BARO	30.07
DELTA P	21.3	CVS PRES	12.2	NOX CF	.94087	Vo	.29705

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.200	HC PPM	82.200	HC GRAMS	3.230
CO PPM	5.907	CO PPM	469.919	CO GRAMS	40.162
NOx PPM	.300	NOx PPM	27.200	NOx GRAMS	3.598
CO2 %	.041	CO2 %	.717	CO2 GRAMS	921.716

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
1.102	16.232	.776	279.532

URBAN CYCLE FUEL ECONOMY
28.752 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	11/3/81	ENG FAM	4CYL	CURB WT	NA
TIME	1528	CID	86.4 CID	INERTIA	2250
TEST #	13436	TRANS	4SPD	ARHP	9.7
TEST SE	CVS II	CARB	1X2V	IRHP	7.3
VEHICLE	MAZADA	CAT	NA	FUEL	GASOLINE
MODEL	GLC	A/C	YES	DYNO	516
YEAR	1980	ODO	31703	EAC	2
VIN	FA4US-640670	TECHN	DC	DRIVER	MZ

PURPOSE...ARB #7!

COLD TRANSIENT

TECH COMMENTS...!!

CVS REVS	9850	VMIX 2592.1	ROLL CTS	8400	MILES 3.6027
TEMP ADB	76.0	TEMP AWB 62.0	REL HUM	45%	BARO 29.90
DELTA P	23.5	CVS PRES 15.5	NOX CF	.93439	Vo .29560

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.500	HC PPM	180.000	HC GRAMS	7.318
CO PPM	68.019	CO PPM	1111.5	CO GRAMS	89.487
NOx PPM	.400	NOx PPM	31.400	NOx GRAMS	4.043
CO2 %	.067	CO2 %	.86	CO2 GRAMS	673.102

5000 ppm Scale

PRELIMINARY DATA NOT IN EXACT ACCORDANCE WITH 40 CFR 85.075 - 9 THRU 27

COLD TRANSIENT

TECH COMMENTS...!

CVS REVS	16799	VMIX 4420.9	ROLL CTS	9197	MILES 3.9445
TEMP ADB	76.0	TEMP AWB 62.0	REL HUM	45%	BARO 29.90
DELTA P	23.5	CVS PRES 15.5	NOX CF	.93439	Vo .29560

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.700	HC PPM	68.200	HC GRAMS	4.255
CO PPM	10.576	CO PPM	351.788	CO GRAMS	49.804
NOx PPM	.400	NOx PPM	6.700	NOx GRAMS	1.413
CO2 %	.067	CO2 %	.565	CO2 GRAMS	1146.954

HOT TRANSIENT

TECH COMMENTS...!

CVS REVS	9754	VMIX 2570.2	ROLL CTS	8371	MILES 3.5902
TEMP ADB	76.0	TEMP AWB 62.0	REL HUM	45%	BARO 29.90
DELTA P	23.5	CVS PRES 15.0	NOX CF	.93439	Vo .29560

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.000	HC PPM	99.000	HC GRAMS	3.800
CO PPM	59.949	CO PPM	480.908	CO GRAMS	35.982
NOx PPM	.400	NOx PPM	25.500	NOx GRAMS	3.267
CO2 %	.063	CO2 %	.759	CO2 GRAMS	932.920

5000 ppm Scale

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
1.268	14.428	.665	261.022

URBAN CYCLE FUEL ECONOMY
30.833 MILES PER GALLON

7/23/82 LLM
5000 ppm Co Scale
NOT ACCURATE AT LOW END. Otherwise OK.

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATA MEASURED IN ACCORDANCE WITH 40 CFR 85.075 - 9 THRU 27

DATE	11/6/81	ENG FAM	NA	CURB WT	NA
TIME	1015	CID	86.4 CI	INERTIA	2250
TEST #	13465	TRANS	4 SPD	ARHP	9.7
TEST SE	CVS II	CARB	1X2V	IRHP	8.4
VEHICLE	MAZDA	CAT	NA	FUEL	GASOLIN
MODEL	GLC	A/C	YES	DYNO	516
YEAR	1980	ODO	31703	EAC	2
VIN	FA4US640670	TECHN	BC	DRIVER	DC

PURPOSE...CVSII C/S ARB#7!

COLD TRANSIENT

BAG 1!

TECH COMMENTS...	VMIX 2582.2	ROLL CTS 8320	MILES 3.5684		
CVS REVS 9773	TEMP AWB 62	REL HUM 57.0%	BARO 30.154		
TEMP ADB 72	CVS PRES 16.5	NOX CF .95955	Vo .29494		
DELTA P 24.5					

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.600	HC PPM	150.000	HC GRAMS	6.066
CO PPM	9.643	CO PPM	851.638	CO GRAMS	71.743
NOx PPM	.800	NOx PPM	38.600	NOx GRAMS	5.080
CO2 %	.048	CO2 %	.837	CO2 GRAMS	1061.551

COLD STABILIZED

BAG #2!

TECH COMMENTS...	VMIX 4442.9	ROLL CTS 9152	MILES 3.9252		
CVS REVS 16815	TEMP AWB 62	REL HUM 57.0%	BARO 30.154		
TEMP ADB 72	CVS PRES 16.5	NOX CF .95955	Vo .29494		
DELTA P 24.5					

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.500	HC PPM	61.700	HC GRAMS	3.886
CO PPM	7.776	CO PPM	321.412	CO GRAMS	45.991
NOx PPM	.800	NOx PPM	7.400	NOx GRAMS	1.531
CO2 %	.050	CO2 %	.537	CO2 GRAMS	1126.622

HOT TRANSIENT

BAG #3@!

TECH COMMENTS...	VMIX 2571.9	ROLL CTS 8244	MILES 3.5358		
CVS REVS 9734	TEMP AWB 62	REL HUM 57.0%	BARO 30.154		
TEMP ADB 72	CVS PRES 16.5	NOX CF .95955	Vo .29494		
DELTA P 24.5					

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.500	HC PPM	90.600	HC GRAMS	3.508
CO PPM	6.842	CO PPM	462.344	CO GRAMS	38.659
NOx PPM	.700	NOx PPM	24.800	NOx GRAMS	3.226
CO2 %	.052	CO2 %	.733	CO2 GRAMS	911.431

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
1.136	13.227	.743	281.282

URBAN CYCLE FUEL ECONOMY
29.022 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	11/9/81	ENG FAM	OHC 4	CURB WT	NA
TIME	1407	CID	96.4	INERTIA	2250
TEST #	13475	TRANS	4SPD	ARHP	9.7
TEST SE	CVS I	CARB	1V2V	IRHP	8.4
VEHICLE	MAZDA	CAT	NA	FUEL	GASOLINE
MODEL	GLC	A/C	YES	DYNO	516
YEAR	1980	CDC	NA	EAC	4
VIN	FA4US-640670	TECHN	DC	DRIVER	LS

PURPOSE...CVS I PRETEST!

HOT TRANSIENT

TECH COMMENTS...

CVS REVS	9805	VMIX	3650.2	ROLL CTS	8371	MILES	3.5902
TEMP ADB	75.0	TEMP AWB	62.0	REL HUM	48%	BARO	30.16
DELTA P	25.0	CVS FREQ	16.5	NOX CF	.94009	Vo	.30165

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.000	HC PPM	10.700	HC GRAMS	.220
CO PPM	1.203	CO PPM	22.691	CO GRAMS	1.884
NOx PPM	.500	NOx PPM	10.000	NOx GRAMS	1.286
CO2 %	.081	CO2 %	.855	CO2 GRAMS	1070.968

HOT STABILIZED

TECH COMMENTS...

CVS REVS	17031	VMIX	4603.3	ROLL CTS	9028	MILES	3.872
TEMP ADB	75.0	TEMP AWB	62.0	REL HUM	48%	BARO	30.16
DELTA P	25.0	CVS FREQ	16.5	NOX CF	.94009	Vo	.30165

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.500	HC PPM	9.200	HC GRAMS	.298
CO PPM	1.203	CO PPM	16.453	CO GRAMS	2.323
NOx PPM	.500	NOx PPM	4.000	NOx GRAMS	.826
CO2 %	.073	CO2 %	.650	CO2 GRAMS	1386.484

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.069	.563	.283	329.313

URBAN CYCLE FUEL ECONOMY
26.648 MILES PER GALLON

DATA MEASURED
IN ACCORDANCE WITH
40 CFR 85.075 - 9 THRU 27
OE!

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATA MEASURED IN ACCORDANCE WITH 40 CFR 85.075 - 9 THRU 27

DATE	11/10/81	ENG FAM	OHC 4	CURB WT	NA
TIME	0825	CID	86.4	INERTIA	2250
TEST #	13477	TRANS	4SPD	ARHP	9.7
TEST SE	CVS II	CARB	1X2V	IRHP	8.4
VEHICLE	MAZDA	CAT	NA	FUEL	GASOLINE
MODEL	GLC	A/C	YES	DYNO	516
YEAR	1980	CID	31821	EAC	-
VIN	FA4US-640670	TECHN	DC	DRIVER	LS

PURPOSE...CVS II C/S FTP!

COLD TRANSIENT

TECH COMMENTS...

CVS REVS	11456	VMIX 3031.5	ROLL CTS 8389	MILES	3.598
TEMP ADB	70.0	TEMP AWB 62.0	REL HUM 84%	BARO	30.23
DELTA P	25.0	CVS PRES 16.5	NOX CF 1.0825	Vo	.29461

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.500	HC PPM	32.100	HC GRAMS	1.242
CO PPM	1.224	CO PPM	189.181	CO GRAMS	18.794
NOx PPM	.700	NOx PPM	35.000	NOx GRAMS	6.105
CO2 %	.046	CO2 %	.881	CO2 GRAMS	1318.197

COLD STABILIZED

TECH COMMENTS...

CVS REVS	15184	VMIX 4018.0	ROLL CTS 9020	MILES	3.8686
TEMP ADB	70.0	TEMP AWB 62.0	REL HUM 84%	BARO	30.23
DELTA P	25.0	CVS PRES 16.5	NOX CF 1.0825	Vo	.29461

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.000	HC PPM	10.000	HC GRAMS	.280
CO PPM	3.905	CO PPM	18.025	CO GRAMS	1.893
NOx PPM	.400	NOx PPM	6.500	NOx GRAMS	1.441
CO2 %	.063	CO2 %	.603	CO2 GRAMS	1130.260

HOT TRANSIENT

TECH COMMENTS...

CVS REVS	9693	VMIX 2504.9	ROLL CTS 8042	MILES	3.5778
TEMP ADB	70.0	TEMP AWB 62.0	REL HUM 84%	BARO	30.23
DELTA P	25.0	CVS PRES 16.5	NOX CF 1.0825	Vo	.29461

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.700	HC PPM	14.000	HC GRAMS	.362
CO PPM	4.857	CO PPM	27.016	CO GRAMS	1.900
NOx PPM	.200	NOx PPM	27.000	NOx GRAMS	4.032
CO2 %	.063	CO2 %	.854	CO2 GRAMS	1057.140

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.137	1.488	.853	308.465

URBAN CYCLE FUEL ECONOMY
18.304 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATA CHECKED BY: _____ REASON _____
OK ___ NG ___

DATE	11/12/81	ENG FAM	BMT142BCS	CURB WT	NA
TIME	1110	CID	366.0 CID	INERTIA	2250
TEST #	13496	TRANS	4SPD	ARHP	7.4
TEST SE	CVS II	CARB	1M2V	IRHP	6.1
VEHICLE	PLYMOUTH	CAT	NA	FUEL	GASOLINE
MODEL	CHAMP	A/C	NO	DYNO	516
YEAR	1981	ODO	NA	ERC	2
VIN	JP3BE3422BU500969	TECHN	LS	DRIVER	MZ

PURPOSE...CVS II C/S BASELINE!

COLD TRANSIENT

CVS REVS	9873	VMIX	2592.4	ROLL CTS	8428	MILES	3.6147
TEMP ADB	70.0	TEMP AWB	61.0	REL HUM	60%	BARO	30.08
DELTA P	25.0	CVS FRES	17.5	NOX CF	.95555	Vo	.29461

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	11.000	HC PPM	408.000	HC GRAMS	16.846
CO PPM	7.397	CO PPM	2773.573	CO GRAMS	236.490
NOx PPM	.400	NOx PPM	30.200	NOx GRAMS	4.082
CO2 %	.046	CO2 %	.829	CO2 GRAMS	1058.415

COLD STABILIZED

CVS REVS	16913	VMIX	4441.0	ROLL CTS	9276	MILES	3.9784
TEMP ADB	70.0	TEMP AWB	61.0	REL HUM	60%	BARO	30.08
DELTA P	25.0	CVS FRES	17.5	NOX CF	.95555	Vo	.29461

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.000	HC PPM	16.000	HC GRAMS	.672
CO PPM	3.064	CO PPM	21.582	CO GRAMS	2.728
NOx PPM	.300	NOx PPM	8.000	NOx GRAMS	1.772
CO2 %	.059	CO2 %	.515	CO2 GRAMS	1054.943

HOT TRANSIENT

CVS REVS	9854	VMIX	2587.4	ROLL CTS	8467	MILES	3.6314
TEMP ADB	70.0	TEMP AWB	61.0	REL HUM	60%	BARO	30.08
DELTA P	25.0	CVS FRES	17.5	NOX CF	.95555	Vo	.29461

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.500	HC PPM	22.600	HC GRAMS	.735
CO PPM	2.213	CO PPM	69.226	CO GRAMS	5.727
NOx PPM	.400	NOx PPM	30.600	NOx GRAMS	4.047
CO2 %	.059	CO2 %	.754	CO2 GRAMS	937.144

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
1.096	14.163	.762	268.882

URBAN CYCLE FUEL ECONOMY
30.111 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	12/23/81	ENG FAM	2.3 AA	CURB WT	NA
TIME	0950	CID	2.3L	INERTIA	3125
TEST #	13969	TRANS	AUTO	ARHP	11.1
TEST SE	CVS II	CARB	1X2V	IRHP	9.6
VEHICLE	FORD	CAT	NA	FUEL	GASOLINE
MODEL	GRANADA	A/C	YES	DYNO	516
YEAR	1981	ODO	3741	EAC	2
VIN	1FABP27AXBG1211097	TECHN	DC	DRIVER	MZ

PURPOSE...ARB #11!

DATA CHECKED

COLD TRANSIENT

TECH COMMENTS..LONG CRANK!

CVS REVS	9870	VMIX 2507.2	ROLL CTS	8422	MILES 3.6121
TEMP ADB	70.0	TEMP AWB 54.0	REL HUM	33%	BARO 30.17
DELTA P	32.5	CVS PRES 25.0	NOX CF	.84328	Vo .28967

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.800	HC PPM	69.200	HC GRAMS	2.588
CO PPM	3.077	CO PPM	348.865	CO GRAMS	28.618
NOx PPM	.500	NOx PPM	56.000	NOx GRAMS	6.368
CO2 %	.063	CO2 %	1.600	CO2 GRAMS	2008.301

COLD STABILIZED

TECH COMMENTS..!

CVS REVS	16840	VMIX 4279.2	ROLL CTS	9187	MILES 3.9402
TEMP ADB	75.0	TEMP AWB 56.0	REL HUM	28%	BARO 30.18
DELTA P	32.5	CVS PRES 25.0	NOX CF	.84377	Vo .28967

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.200	HC PPM	11.800	HC GRAMS	.484
CO PPM	4.375	CO PPM	11.590	CO GRAMS	1.058
NOx PPM	.400	NOx PPM	12.900	NOx GRAMS	2.449
CO2 %	.039	CO2 %	.871	CO2 GRAMS	1850.433

HOT TRANSIENT

TECH COMMENTS..!

CVS REVS	9888	VMIX 2512.6	ROLL CTS	8395	MILES 3.6005
TEMP ADB	74.0	TEMP AWB 56.0	REL HUM	30%	BARO 30.18
DELTA P	32.5	CVS PRES 25.0	NOX CF	.84813	Vo .28967

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.800	HC PPM	16.400	HC GRAMS	.457
CO PPM	3.338	CO PPM	38.845	CO GRAMS	2.367
NOx PPM	.400	NOx PPM	32.700	NOx GRAMS	3.732
CO2 %	.039	CO2 %	1.270	CO2 GRAMS	1608.621

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.246	1.395	.969	481.182

URBAN CYCLE FUEL ECONOMY
18.287 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	12/30/81	ENG FAM	2.3AX	CURB WT	NA
TIME	1328	CID	2.3L	INERTIA	3125
TEST #	13997	TRANS	AUTO	ARHP	11.1
TEST SE	CVS II	CARB	1X2V	IRHP	9.6
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	GRANADA	A/C	YES	DYNO	516
YEAR	1981	ODO	9759	EAC	2
VIN	1FABP27AXBG1211097	TECHN	LS	DRIVER	JD

PURPOSE...ARB #11!

DATA CHECKED BY: OK X NG REASON

COLD TRANSIENT

TECH COMMENTS..!

CVS REVS	9960	VMIX	2517.7	ROLL CTS	8376
TEMP ADB	73.0	TEMP AWB	63.0	REL HUM	58%
DELTA P	32.0	CVS PRES	25.0	NOX CF	.97666

MILES	3.5924				
BARO	30.00				
Vo	.29000				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.000	HC PPM	55.400	HC GRAMS	2.095
CO PPM	.012	CO PPM	219.450	CO GRAMS	18.215
NOx PPM	.800	NOx PPM	49.000	NOx GRAMS	6.431
CO2 %	.050	CO2 %	1.567	CO2 GRAMS	1987.497

COLD STABILIZED

TECH COMMENTS..!

CVS REVS	16794	VMIX	4243.8	ROLL CTS	9159
TEMP ADB	76.0	TEMP AWB	64.0	REL HUM	52%
DELTA P	32.0	CVS PRES	25.0	NOX CF	.97408

MILES	3.9282				
BARO	29.99				
Vo	.29000				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.800	HC PPM	13.200	HC GRAMS	.474
CO PPM	15.481	CO PPM	27.689	CO GRAMS	1.848
NOx PPM	.500	NOx PPM	9.800	NOx GRAMS	2.089
CO2 %	.046	CO2 %	.862	CO2 GRAMS	1802.634

HOT TRANSIENT

TECH COMMENTS..!

CVS REVS	9944	VMIX	2512.8	ROLL CTS	8350
TEMP ADB	76.0	TEMP AWB	64.0	REL HUM	52%
DELTA P	32.0	CVS PRES	25.0	NOX CF	.97408

MILES	3.5812				
BARO	29.99				
Vo	.29000				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.800	HC PPM	20.000	HC GRAMS	.531
CO PPM	9.433	CO PPM	50.046	CO GRAMS	3.439
NOx PPM	.700	NOx PPM	28.100	NOx GRAMS	3.641
CO2 %	.048	CO2 %	1.274	CO2 GRAMS	1603.582

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.223	1.549	.922	475.265

URBAN CYCLE FUEL ECONOMY
18.543 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	12/24/81	ENG FAM	37CL	CURB WT	NA
TIME	0815	CID	97CID	INERTIA	2375
TEST #	13971	TRANS	5SPD	ARHP	7.7
TEST SE	CVS II	CARB	FI	IRHP	4.7
VEHICLE	VW	CAT	NO	FUEL	GASOLINE
MODEL	JETTA	A/C	NO	DYNO	288
YEAR	1980	ODO	28291	EAC	1
VIN	16A0395752	TECHN	LS	DRIVER	LF

PURPOSE...ARB 12!

DATA CHECKED BY:

COLD TRANSIENT

TECH COMMENTS..!

CVS REVS	11723	VMIX	2549.9	ROLL CTS	8251	MILES	3.5388
TEMP ADB	73.0	TEMP AWB	54.0	REL HUM	22%	BARO	30.23
DELTA P	71.8	CVS PRES	59.5	NOX CF	.81298	Vo	.27188

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	20.700	HC PPM	79.500	HC GRAMS	2.513
CO PPM	6.904	CO PPM	296.177	CO GRAMS	24.363
NOx PPM	.400	NOx PPM	53.500	NOx GRAMS	5.965
CO2 %	.052	CO2 %	.967	CO2 GRAMS	1214.028

COLD STABILIZED

TECH COMMENTS..!

CVS REVS	20035	VMIX	4350.1	ROLL CTS	9003	MILES	3.8613
TEMP ADB	75.0	TEMP AWB	54.0	REL HUM	22%	BARO	30.23
DELTA P	72.2	CVS PRES	59.8	NOX CF	.81869	Vo	.27188

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	16.300	HC PPM	15.600	HC GRAMS	.011
CO PPM	10.274	CO PPM	55.704	CO GRAMS	6.594
NOx PPM	.300	NOx PPM	20.100	NOx GRAMS	3.822
CO2 %	.052	CO2 %	.706	CO2 GRAMS	1481.644

HOT TRANSIENT

TECH COMMENTS..!

CVS REVS	11702	VMIX	2548.0	ROLL CTS	8235	MILES	3.5319
TEMP ADB	78.0	TEMP AWB	55.0	REL HUM	19%	BARO	30.25
DELTA P	71.8	CVS PRES	59.4	NOX CF	.81462	Vo	.27188

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	14.800	HC PPM	23.200	HC GRAMS	.390
CO PPM	10.381	CO PPM	99.973	CO GRAMS	7.584
NOx PPM	.700	NOx PPM	46.000	NOx GRAMS	5.097
CO2 %	.052	CO2 %	.876	CO2 GRAMS	1092.177

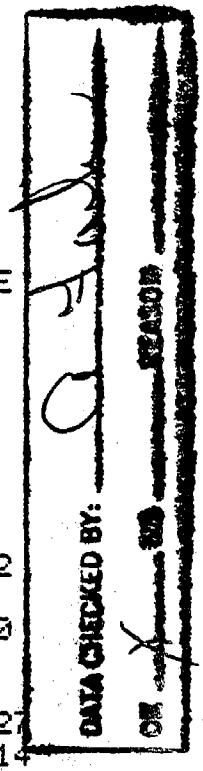
WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.177	2.892	1.256	355.074

URBAN CYCLE FUEL ECONOMY
24.63 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA



DATE	12/31/81	ENG FAM	37CL	CURB WT	NA
TIME	0908	CID	97CID	INERTIA	2375
TEST #	14005	TRANS	5SPD	ARHP	7.7
TEST SE	CVS II	CARB	FI	IRHP	3.9
VEHICLE	VW	CAT	NA	FUEL	GASOLINE
MODEL	JETTA	A/C	NA	DYNO	288
YEAR	1980	ODO	NA	EAC	1
VIN	16A0395752	TECHN	LF	DRIVER	MZ

PURPOSE...ARB 12!

COLD TRANSIENT

TECH COMMENTS..!

CVS REVS	11671	VMIX	2547.7	ROLL CTS	8301
TEMP ADB	74.0	TEMP AWB	62.0	REL HUM	51%
DELTA P	69.1	CVS PRES	57.2	NOX CF	.94878

MILES	3.5602				
BARO	29.99				
Vo	.27360				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.600	HC PPM	73.500	HC GRAMS	2.727
CO PPM	.318	CO PPM	314.758	CO GRAMS	26.414
NOx PPM	.300	NOx PPM	47.200	NOx GRAMS	6.143
CO2 %	.046	CO2 %	.992	CO2 GRAMS	1254.642

COLD STABILIZED

TECH COMMENTS..!

CVS REVS	20046	VMIX	4375.9	ROLL CTS	9056
TEMP ADB	74.0	TEMP AWB	62.0	REL HUM	51%
DELTA P	69.1	CVS PRES	57.2	NOX CF	.94878

MILES	3.884				
BARO	29.99				
Vo	.27360				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.700	HC PPM	10.100	HC GRAMS	.132
CO PPM	.022	CO PPM	38.180	CO GRAMS	5.505
NOx PPM	.300	NOx PPM	12.600	NOx GRAMS	2.769
CO2 %	.046	CO2 %	.701	CO2 GRAMS	1491.321

HOT TRANSIENT

TECH COMMENTS..!

CVS REVS	11699	VMIX	2565.7	ROLL CTS	8308
TEMP ADB	76.0	TEMP AWB	62.0	REL HUM	45%
DELTA P	69.1	CVS PRES	57.2	NOX CF	.93265

MILES	3.5632				
BARO	30.110				
Vo	.27360				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.500	HC PPM	16.500	HC GRAMS	.358
CO PPM	.022	CO PPM	68.661	CO GRAMS	5.806
NOx PPM	.100	NOx PPM	40.900	NOx GRAMS	5.288
CO2 %	.038	CO2 %	.875	CO2 GRAMS	1117.623

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.202	2.709	1.131	358.292

URBAN CYCLE FUEL ECONOMY
24.426 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	1/18/82	ENG FAM	01Y4MCRZ	CURB WT	NA
TIME	1347	CID	5.0L	INERTIA	4000
TEST #	14097	TRANS	AUTO	ARHP	10.3
TEST SE	CVS II	CARB	1X4V	IRHP	8.5
VEHICLE	CHEVOLET	CAT	YES	FUEL	GASOLINE
MODEL	CAPRICE	A/C	YES	DYNO	516
YEAR	1980	ODO	10507	EAC	2
VIN	1N47HAC128271	TECHN	LF	CVS #	2
DRIVER	MZ				

PURPOSE...ARB #13!

DATA CHECKED BY:

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	108						
CVS REVS	9885	VMIX	2703.7	ROLL CTS	6346	MILES	3.5795
TEMP ADB	71.0	TEMP AWB	58.0	REL HUM	45%	BARO	30.054
DELTA P	19.0	CVS PRES	10.5	NOX CF	.89630	Vo	.29856

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.100	HC PPM	210.900	HC GRAMS	9.004
CO PPM	.940	CO PPM	1520.300	CO GRAMS	135.594
NOx PPM	.300	NOx PPM	49.500	NOx GRAMS	6.463
CO2 %	.044	CO2 %	1.724	CO2 GRAMS	2364.919

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	108						
CVS REVS	16951	VMIX	4618.5	ROLL CTS	9224	MILES	3.9561
TEMP ADB	71.0	TEMP AWB	58.0	REL HUM	45%	BARO	30.045
DELTA P	19.0	CVS PRES	10.5	NOX CF	.89636	Vo	.29856

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.500	HC PPM	14.500	HC GRAMS	.505
CO PPM	.012	CO PPM	181.911	CO GRAMS	27.698
NOx PPM	.000	NOx PPM	15.900	NOx GRAMS	3.565
CO2 %	.048	CO2 %	1.094	CO2 GRAMS	2515.745

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	108						
CVS REVS	9856	VMIX	2677.0	ROLL CTS	8392	MILES	3.5392
TEMP ADB	79.0	TEMP AWB	60.0	REL HUM	32%	BARO	30.057
DELTA P	19.0	CVS PRES	10.5	NOX CF	.88289	Vo	.29856

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.000	HC PPM	22.200	HC GRAMS	.657
CO PPM	.624	CO PPM	178.849	CO GRAMS	15.736
NOx PPM	.000	NOx PPM	39.300	NOx GRAMS	5.030
CO2 %	.044	CO2 %	1.399	CO2 GRAMS	1887.278

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.629	12.584	1.220	610.633

URBAN CYCLE FUEL ECONOMY
14.027 MILES PER GALLON

OLSON ENGINEERING INC.

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATA CHECKED BY: _____ OK _____ NG _____ REASON _____

DATE	2-1-82	ENG FAM	V8	CURB WT	NA
TIME	1552	CID	5.0L	INERTIA	4000
TEST #	14213	TRANS	AUTO	ARHP	10.3
TEST SE	505	CARB	1X4V	IRHP	8.5
VEHICLE	CHEVROLET	CAT	YES	FUEL	GASOLINE
MODEL	CAPRICE	A/C	YES	DYNO	516
YEAR	1980	ODO	10667	EAC	
VIN	1N47HAC128271	TECHN	LS	CVS #	
DRIVER	PM				

PURPOSE...!

505 TRANSIENT

TECH COMMENTS..!

CVS TEMP	106						
CVS REVS	9842	VMIX	2687.0	ROLL CTS	8086	MILES	3.468
TEMP ADB	74.0	TEMP AWB	58.0	REL HUM	37%	BARO	30.104
DELTA P	19.0	CVS PRES	10.5	NOX CF	.87902	Vo	.29858

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	11.800	HC PPM	11.600	HC GRAMS	.036
CO PPM	2.092	CO PPM	21.596	CO GRAMS	1.744
NOx PPM	.300	NOx PPM	9.000	NOx GRAMS	1.116
CO2 %	.052	CO2 %	1.168	CO2 GRAMS	1561.321

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.010	.502	.321	450.201

URBAN CYCLE FUEL ECONOMY
19.669 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	2-2-82	ENG FAM	01Y4MCRZ	CURB WT	?
TIME	953	CID	5.0L	INERTIA	4000
TEST #	14118	TRANS	A	ARHP	10.3
TEST SE	CVS II	CARB	1V4V	IRHP	8.5
VEHICLE	CHEV	CAT	Y	FUEL	GASOLINE
MODEL	CAPRCE	A/C	Y	DYNO	516
YEAR	80	ODO	10694	EAC	2
VIN	1N47AC1282271	TECHN	LF	CVS #	2
DRIVER	MZ				

PURPOSE...ARB#13

COLD TRANSIENT

TECH COMMENTS..!
CVS TEMP 109

CVS REVS	9848	VMIX	2684.3	ROLL CTS	8481
TEMP ADB	72	TEMP AWB	54	REL HUM	29
DELTA P	18.3	CVS PRES	10.2	NOX CF	.83616

MILES	3.611				
BARO	30.18				
Vo	.2986				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.300	HC PPM	184.700	HC GRAMS	4.237
CO PPM	2.463	CO PPM	554.811	CO GRAMS	57.765
NOx PPM	.100	NOx PPM	21.983	NOx GRAMS	2.639
CO2 %	.358	CO2 %	1.735	CO2 GRAMS	2354.179

COLD STABILIZED

TECH COMMENTS..!
CVS TEMP 109

CVS REVS	16845	VMIX	4591.6	ROLL CTS	9136
TEMP ADB	72	TEMP AWB	54	REL HUM	29
DELTA P	18.9	CVS PRES	10.2	NOX CF	.83616

MILES	3.9183				
BARO	30.184				
Vo	.29863				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.600	HC PPM	8.900	HC GRAMS	.142
CO PPM	2.923	CO PPM	32.049	CO GRAMS	4.444
NOx PPM	.000	NOx PPM	3.700	NOx GRAMS	.769
CO2 %	.050	CO2 %	1.051	CO2 GRAMS	2392.010

HOT TRANSIENT

TECH COMMENTS..!
CVS TEMP 109

CVS REVS	9863	VMIX	2689.8	ROLL CTS	8061
TEMP ADB	75	TEMP AWB	54	REL HUM	22
DELTA P	18.9	CVS PRES	10.2	NOX CF	.81681

MILES	3.5859				
BARO	30.190				
Vo	.29863				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.400	HC PPM	10.700	HC GRAMS	.481
CO PPM	2.404	CO PPM	59.300	CO GRAMS	5.111
NOx PPM	.000	NOx PPM	3.300	NOx GRAMS	1.109
CO2 %	.052	CO2 %	1.364	CO2 GRAMS	1836.454

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.257	4.284	.337	392.250

URBAN CYCLE FUEL ECONOMY
14.787 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	3-15-82	ENG FAM	4V	CURB WT	NA
TIME	0958	CID	2.3L	INERTIA	3125
TEST #	14467	TRANS	4SPD	ARHP	9.4
TEST SE	CVS II	CARB	1X2V	IRHP	7.9
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	MUSTANG	A/C	YES	DYNO	516
YEAR	1980	ODO	26136	EAC	2
VIN	FORO2A157498F	TECHN	LS	CVS #	2
DRIVER	PM				

DATA CHECKED BY: _____ REASON _____

OK ___ NG ___

PURPOSE...ARB #14!

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	100						
CVS REVS	9829	VMIX	2706.5	ROLL CTS	8225	MILES	3.5276
TEMP ADB	75.0	TEMP AWB	60.0	REL HUM	41%	BARO	29.969
DELTA P	18.2	CVS PRES	10.2	NOX CF	.90517	Vo	.29909

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.400	HC PPM	204.900	HC GRAMS	8.847
CO PPM	19.344	CO PPM	2451.721	CO GRAMS	220.289
NOx PPM	.000	NOx PPM	8.400	NOx GRAMS	1.114
CO2 %	.056	CO2 %	1.416	CO2 GRAMS	1918.530

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	107						
CVS REVS	16919	VMIX	4602.1	ROLL CTS	9060	MILES	3.8857
TEMP ADB	74.0	TEMP AWB	60.0	REL HUM	44%	BARO	29.974
DELTA P	18.2	CVS PRES	10.2	NOX CF	.91296	Vo	.29909

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.800	HC PPM	38.800	HC GRAMS	2.511
CO PPM	.068	CO PPM	450.742	CO GRAMS	68.402
NOx PPM	.600	NOx PPM	5.100	NOx GRAMS	1.033
CO2 %	.049	CO2 %	.908	CO2 GRAMS	2057.060

HOT TRANSIENT

TECH COMMENTS..MISSED SIFTHIFT AT 405SEC.!

CVS TEMP	108						
CVS REVS	9826	VMIX	2668.0	ROLL CTS	8249	MILES	3.5379
TEMP ADB	77.0	TEMP AWB	61.0	REL HUM	39%	BARO	29.974
DELTA P	18.2	CVS PRES	10.2	NOX CF	.90862	Vo	.29909

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.600	HC PPM	73.100	HC GRAMS	2.924
CO PPM	1.753	CO PPM	982.815	CO GRAMS	86.315
NOx PPM	.000	NOx PPM	8.700	NOx GRAMS	1.142
CO2 %	.043	CO2 %	1.154	CO2 GRAMS	1543.090

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
1.075	28.618	.291	506.999

URBAN CYCLE FUEL ECONOMY
15.973 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	3-19-82	ENG FAM	4V	CURB WT	NA
TIME	0837	CID	2.3L	INERTIA	3125
TEST #	14492	TRANS	4SPD	ARHP	9.4
TEST SE	CVS II	CARB	1X2V	IRHP	7.9
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	MUSTANG	A/C	YES	DYNO	516
YEAR	1980	ODO	26152	EAC	2
VIN	F0R02A157498F	TECHN	LS	CVS #	2
DRIVER	PM				

PURPOSE...ARB #14!

DATA CHECKED BY: [signature] OK NG REASON

COLD TRANSIENT

TECH COMMENTS..LONG CRANK 7SEC.!

CVS TEMP	109						
CVS REVS	10170	VMIX	2775.4	ROLL CTS	8458	MILES	3.6275
TEMP ADB	74.0	TEMP AWB	58.0	REL HUM	37%	BARO	30.284
DELTA P	19.0	CVS PRES	11.0	NOX CF	.87803	Vo	.29856

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.100	HC PPM	126.600	HC GRAMS	5.408
CO PPM	4.123	CO PPM	604.915	CO GRAMS	55.014
NOx PPM	.600	NOx PPM	24.900	NOx GRAMS	3.215
CO2 %	.073	CO2 %	1.305	CO2 GRAMS	1783.720

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	108						
CVS REVS	16869	VMIX	4610.6	ROLL CTS	9377	MILES	4.0217
TEMP ADB	78.0	TEMP AWB	60.0	REL HUM	34%	BARO	30.277
DELTA P	19.0	CVS PRES	11.0	NOX CF	.88648	Vo	.29856

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.000	HC PPM	31.000	HC GRAMS	1.701
CO PPM	3.500	CO PPM	97.456	CO GRAMS	14.317
NOx PPM	.400	NOx PPM	10.900	NOx GRAMS	2.330
CO2 %	.073	CO2 %	.870	CO2 GRAMS	1918.254

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	106						
CVS REVS	9870	VMIX	2707.1	ROLL CTS	8411	MILES	3.6074
TEMP ADB	75.0	TEMP AWB	58.0	REL HUM	34%	BARO	30.277
DELTA P	19.0	CVS PRES	11.0	NOX CF	.86988	Vo	.29856

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.200	HC PPM	43.600	HC GRAMS	1.554
CO PPM	.068	CO PPM	180.733	CO GRAMS	16.137
NOx PPM	.300	NOx PPM	24.100	NOx GRAMS	3.038
CO2 %	.060	CO2 %	1.091	CO2 GRAMS	1454.134

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.643	6.176	.712	460.091

URBAN CYCLE FUEL ECONOMY
18.801 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	3-26-82	ENG FAM	4V	CURB WT	NA
TIME	0812	CID	2.3L	INERTIA	3125
TEST #	14540	TRANS	4SPD	ARHP	9.4
TEST SE	CVS II	CARB	1M2V	IRHP	7.9
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	MUSTANG	A/C	YES	DYNO	516
YEAR	1980	ODO	26420	EAC	2
VIN	F0R02A157436F	TECHN	LS	CVS #	2
DRIVER	PM				

PURPOSE...ARB#14!

DATA CHECKED BY: _____ OK ___Y___ NG _____ REASON _____

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	103				
CVS REVS	9849	VMIX 2690.1	ROLL CTS 8319	MILES	3.5679
TEMP ADB	76.0	TEMP AWB 62.0	REL HUM 45%	BARO	29.999
DELTA P	19.0	CVS PRES 11.0	NOX CF .93356	Vo	.29856

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.500	HC PPM	72.300	HC GRAMS	2.880
CO PPM	4.123	CO PPM	566.248	CO GRAMS	49.895
NOx PPM	.600	NOx PPM	21.000	NOx GRAMS	2.783
CO2 %	.098	CO2 %	1.316	CO2 GRAMS	1713.608

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	106				
CVS REVS	16910	VMIX 4595.9	ROLL CTS 9176	MILES	3.9355
TEMP ADB	78.0	TEMP AWB 63.0	REL HUM 43%	BARO	30.009
DELTA P	19.0	CVS PRES 11.0	NOX CF .93876	Vo	.29856

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.900	HC PPM	24.000	HC GRAMS	1.386
CO PPM	3.981	CO PPM	69.228	CO GRAMS	9.925
NOx PPM	.100	NOx PPM	8.800	NOx GRAMS	2.834
CO2 %	.085	CO2 %	.844	CO2 GRAMS	1820.643

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	104				
CVS REVS	9958	VMIX 2716.3	ROLL CTS 8408	MILES	3.6061
TEMP ADB	78.0	TEMP AWB 64.0	REL HUM 46%	BARO	30.012
DELTA P	19.0	CVS PRES 11.0	NOX CF .95701	Vo	.29856

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.000	HC PPM	42.500	HC GRAMS	1.600
CO PPM	2.027	CO PPM	129.594	CO GRAMS	11.409
NOx PPM	.600	NOx PPM	22.100	NOx GRAMS	3.834
CO2 %	.085	CO2 %	1.091	CO2 GRAMS	1426.927

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.470	5.036	.659	447.935

URBAN CYCLE FUEL ECONOMY
19.397 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	4-7-82	ENG FAM	BNS1.5V2	CURB WT	NA
TIME	1443	CID	90.8CID	INERTIA	2250
TEST #	14633	TRANS	4SPD	ARHP	10.5
TEST SE	CVS II	CARB	1X2V	IRHP	6.4
VEHICLE	DATSUN	CAT	YES	FUEL	GASOLINE
MODEL	310	A/C	YES	DYNO	288
YEAR	1981	ODO	18645	EAC	1
VIN	JN1PN0656BM018283	TECHN	LF	CVS #	1
DRIVER	MZ				

PURPOSE...ARB #15!

DATA CHECKED BY: _____ REASON _____ OK NG

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	102				
CVS REVS	11741	VMIX 2596.3	ROLL CTS	8253	MILES 3.5396
TEMP ADB	74	TEMP AWB 56	REL HUM	30%	BARO 30.079
DELTA P	70.0	CVS PRES 58.1	NOX CF	.84855	Vo .27303

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.400	HC PPM	59.400	HC GRAMS	2.304
CO PPM	.019	CO PPM	375.060	CO GRAMS	32.107
NOx PPM	.300	NOx PPM	40.000	NOx GRAMS	4.739
CO2 %	.016	CO2 %	.842	CO2 GRAMS	1112.950

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	102				
CVS REVS	20069	VMIX 4437.9	ROLL CTS	8956	MILES 3.8411
TEMP ADB	74	TEMP AWB 56	REL HUM	30%	BARO 30.079
DELTA P	70.0	CVS PRES 58.1	NOX CF	.84855	Vo .27303

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.100	HC PPM	10.700	HC GRAMS	.419
CO PPM	1.671	CO PPM	9.520	CO GRAMS	1.157
NOx PPM	.100	NOx PPM	14.600	NOx GRAMS	2.958
CO2 %	.016	CO2 %	.501	CO2 GRAMS	1117.254

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	104				
CVS REVS	11743	VMIX 2586.5	ROLL CTS	8240	MILES 3.534
TEMP ADB	68.0	TEMP AWB 53.0	REL HUM	35%	BARO 30.069
DELTA P	70.0	CVS PRES 58.1	NOX CF	.84264	Vo .27303

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.200	HC PPM	15.100	HC GRAMS	.470
CO PPM	.260	CO PPM	40.124	CO GRAMS	3.400
NOx PPM	.200	NOx PPM	29.200	NOx GRAMS	3.424
CO2 %	.016	CO2 %	.733	CO2 GRAMS	963.627

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.227	2.290	.941	290.754

URBAN CYCLE FUEL ECONOMY
30.064 MILES PER GALLON

DATA CHECKED BY: REASON
OK NG

DATE	4/20/82	ENG FAM	BNS1.5V2	DURB WT	NA
TIME	01005	CID	90.8	INERTIA	2250
TEST #	14729	TRANS	4SPD	SBHP	13.5
TEST SE	CVS II	CARB	1X2V	IRHP	9.4
VEHICLE	DATSUN GX	CAT	YES	FUEL	GASOLINE
MODEL	310	A/C	YES	DYNO	388
YEAR	1981	ODO	18668	BAC	1
VIN	JN1PN06S6BM018283	TECHN	LF	CVS #	1
PROJ #	79801	DRIVER	MZ		

PURPOSE...CVSII COLD START ARB 15 AFTER CAL.!

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP 103					
CVS REVS 11739	VMIX 2570.3	ROLL CTS 8340		MILES	3.5782
TEMP ADB 93.0	TEMP AWB 66.0	REL HUM 40%		BARO	29.090
DELTA P 70.1	CVS PRES 58.4	NOX CF	.96468	Vo	.27296

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	10.500	HC PPM	65.100	HC GRAMS	2.320
CO PPM	1.718	CO PPM	312.203	CO GRAMS	26.322
NOx PPM	.300	NOx PPM	29.000	NOx GRAMS	3.857
CO2 %	.043	CO2 %	.302	CO2 GRAMS	1148.522

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP 103					
CVS REVS 20154	VMIX 4412.9	ROLL CTS 9891		MILES	3.899
TEMP ADB 83.0	TEMP AWB 66.0	REL HUM 40%		BARO	29.899
DELTA P 70.1	CVS PRES 58.4	NOX CF	.96468	Vo	.27296

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	11.500	HC PPM	16.800	HC GRAMS	.413
CO PPM	3.013	CO PPM	30.273	CO GRAMS	3.985
NOx PPM	.600	NOx PPM	10.200	NOx GRAMS	2.219
CO2 %	.044	CO2 %	.597	CO2 GRAMS	1268.163

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP 103					
CVS REVS 11717	VMIX 2585.1	ROLL CTS 8364		MILES	3.5872
TEMP ADB 82.0	TEMP AWB 67.0	REL HUM 46%		BARO	30.094
DELTA P 70.1	CVS PRES 58.4	NOX CF	.99764	Vo	.27296

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.800	HC PPM	20.000	HC GRAMS	.455
CO PPM	.740	CO PPM	54.998	CO GRAMS	4.629
NOx PPM	.500	NOx PPM	22.000	NOx GRAMS	3.007
CO2 %	.041	CO2 %	.301	CO2 GRAMS	1021.527

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS	CARBON MONOXIDE	OXIDES OF NITROGEN	CARBON DIOXIDE
GMS/MI	GMS/MI	GMS/MI	GMS/MI
.224	2.397	.747	313.364

URBAN CYCLE FUEL ECONOMY
27.916 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	4/12/82	ENG FAM	4.2/5.0BJC	CURB WT	NA
TIME	0830	CID	302	INERTIA	3625
TEST #	14656	TRANS	AUTO	ARHP	10.6
TEST SE	CVS II	CARB	1X2	IRHP	7.2
VEHICLE	MERCURY	CAT	YES	FUEL	GASOLINE
MODEL	COUGAR	A/C	YES	DYNO	288
YEAR	1980	ODO	26215	EAC	1
VIN	F0H93F610303F	TECHN	LF	CVS #	1
DRIVER	MZ				

DATA CHECKED BY:

PURPOSE...CVSII COLD START ARB#16!

COLD TRANSIENT

TECH COMMENTS..LONG CRANK AT START!

CVS TEMP	103				
CVS REVS	11908	VMIX 2637.2	ROLL CTS	8274	MILES 3.5486
TEMP ADB	72.0	TEMP AWB 62.0	REL HUM	57%	BARO 30.219
DELTA P	70.3	CVS PRES 58.6	NOX CF	.95892	Vo .27284

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.200	HC PPM	100.200	HC GRAMS	4.043
CO PPM	5.161	CO PPM	160.137	CO GRAMS	13.530
NOx PPM	.200	NOx PPM	41.900	NOx GRAMS	5.714
CO2 %	.044	CO2 %	1.616	CO2 GRAMS	2157.176

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	103				
CVS REVS	20061	VMIX 4442.8	ROLL CTS	9012	MILES 3.8652
TEMP ADB	72	TEMP AWB 62	REL HUM	57%	BARO 30.219
DELTA P	70.3	CVS PRES 58.6	NOX CF	.95892	Vo .27284

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.700	HC PPM	26.200	HC GRAMS	1.448
CO PPM	3.061	CO PPM	25.451	CO GRAMS	3.310
NOx PPM	.300	NOx PPM	17.700	NOx GRAMS	4.019
CO2 %	.054	CO2 %	.925	CO2 GRAMS	2015.300

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	103				
CVS REVS	11765	VMIX 2605.5	ROLL CTS	8270	MILES 3.5469
TEMP ADB	73	TEMP AWB 53	REL HUM	58%	BARO 30.219
DELTA P	70.3	CVS PRES 58.6	NOX CF	.97436	Vo .27284

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.000	HC PPM	61.800	HC GRAMS	2.398
CO PPM	1.375	CO PPM	274.790	CO GRAMS	23.499
NOx PPM	.600	NOx PPM	36.600	NOx GRAMS	4.957
CO2 %	.044	CO2 %	1.247	CO2 GRAMS	1630.686

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.614	3.038	1.254	522.383

URBAN CYCLE FUEL ECONOMY
16.766 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	4-16-82	ENG FAM	4.2/5.0BJC	CURB WT	NA
TIME	0823	CID	302CID	INERTIA	3625
TEST #	14701	TRANS	AUTO	ARHP	10.6
TEST SE	CVS II	CARB	1X2V	IRHP	9.0
VEHICLE	MERCURY	CAT	YES	FUEL	GASOLINE
MODEL	COUGARXR7	A/C	YES	DYNO	516
YEAR	1980	ODO	26236	ERC	2
VIN	F0H93F610303F	TECHN	LS	CVS #	2
DRIVER	JD				

PURPOSE...ARB #16 SECOND TEST AFTER CALIBRATION CHECK!

DATA CHECKED BY: _____ REASON _____
OK ___ NG ___

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	9908	VMIX 2683.2	ROLL CTS 8431	MILES	3.616
TEMP ADB	80	TEMP AWB 62	REL HUM 35%	BARO	30.096
DELTA P	19.8	CVS PRES 11.5	NOX CF .90578	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	11.100	HC PPM	62.400	HC GRAMS	2.308
CO PPM	1.328	CO PPM	174.604	CO GRAMS	15.343
NOx PPM	.300	NOx PPM	34.000	NOx GRAMS	4.440
CO2 %	.063	CO2 %	1.647	CO2 GRAMS	2215.255

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	16899	VMIX 4571.0	ROLL CTS 9369	MILES	4.0183
TEMP ADB	85	TEMP AWB 64	REL HUM 31%	BARO	30.096
DELTA P	20.0	CVS PRES 11.6	NOX CF .91395	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	10.200	HC PPM	32.400	HC GRAMS	1.713
CO PPM	1.917	CO PPM	28.967	CO GRAMS	4.098
NOx PPM	.500	NOx PPM	24.300	NOx GRAMS	5.393
CO2 %	.068	CO2 %	.983	CO2 GRAMS	2180.298

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	9832	VMIX 2662.6	ROLL CTS 8449	MILES	3.6237
TEMP ADB	78	TEMP AWB 62	REL HUM 40%	BARO	30.096
DELTA P	19.8	CVS PRES 11.5	NOX CF .92054	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	11.200	HC PPM	53.000	HC GRAMS	2.302
CO PPM	.068	CO PPM	289.828	CO GRAMS	25.449
NOx PPM	.500	NOx PPM	37.600	NOx GRAMS	4.931
CO2 %	.073	CO2 %	1.335	CO2 GRAMS	1753.283

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.526	3.299	1.324	540.957

URBAN CYCLE FUEL ECONOMY
18.134 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	4-16-82	ENG FAM	04E2MCRZ	CURB WT	NA
TIME	0945	CID	3.8L	INERTIA	3625
TEST #	14704	TRANS	AUTO	ARHP	11.6
TEST SE	CVS II	CARB	1X2V	IRHP	10.0
VEHICLE	OLDSMOBILE	CAT	YES	FUEL	GASOLINE
MODEL	CUTLASS LS	A/C	YES	DYNO	516
YEAR	1980	ODO	16986	EAC	2
VIN	3R69AAM536472	TECHN	LS	CVS #	2
DRIVER	JD				

DATA CHECKED BY: _____ REASON _____

PURPOSE...ARB #17 BASELINE!

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	9891	VMIX 2679.8	ROLL CTS	8413	MILES 3.6082
TEMP ADB	80	TEMP AWB 63	REL HUM	38%	BARO 30.109
DELTA P	19.8	CVS PRES 11.5	NOX CF	.92374	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	10.500	HC PPM	85.200	HC GRAMS	3.321
CO PPM	1.328	CO PPM	509.586	CO GRAMS	44.920
NOx PPM	.600	NOx PPM	82.800	NOx GRAMS	11.030
CO2 %	.100	CO2 %	1.508	CO2 GRAMS	1971.651

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	16834	VMIX 4560.9	ROLL CTS	9377	MILES 4.0217
TEMP ADB	80	TEMP AWB 62	REL HUM	35%	BARO 30.109
DELTA P	19.8	CVS PRES 11.5	NOX CF	.90569	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.600	HC PPM	13.600	HC GRAMS	.345
CO PPM	2.163	CO PPM	101.333	CO GRAMS	14.934
NOx PPM	.700	NOx PPM	13.800	NOx GRAMS	2.941
CO2 %	.085	CO2 %	.877	CO2 GRAMS	1885.968

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	9848	VMIX 2668.2	ROLL CTS	8428	MILES 3.6147
TEMP ADB	82	TEMP AWB 62	REL HUM	31%	BARO 30.109
DELTA P	19.8	CVS PRES 11.5	NOX CF	.89448	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	10.200	HC PPM	19.300	HC GRAMS	.438
CO PPM	2.027	CO PPM	146.659	CO GRAMS	12.740
NOx PPM	.300	NOx PPM	28.400	NOx GRAMS	3.635
CO2 %	.078	CO2 %	1.260	CO2 GRAMS	1645.231

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.265	5.438	1.278	480.966

URBAN CYCLE FUEL ECONOMY
18.091 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	4-23-82	ENG FAM	04E2MCRZ	CURB WT	NA
TIME	1404	CID	3.8L	INERTIA	3625
TEST #	14765	TRANS	AUTO	ARHP	11.6
TEST SE	CVS II	CARB	1X2V	IRHP	10.0
VEHICLE	OLDSMOBILE	CAT	YES	FUEL	GASOLINE
MODEL	CUTLASS LS	A/C	YES	DYNO	516
YEAR	1980	ODO	17022	EAC	2
VIN	3R69AAM536472	TECHN	LS	CVS #	2
PROJ #	79801	DRIVER	PM		

PURPOSE...ARB #17 CVS2 C/S!

DATA CHECKED BY: _____ REASON _____ OK ___ NO ___

COLD TRANSIENT

TECH COMMENTS..STALL AT 165 SEC!

CVS TEMP	107						
CVS REVS	10171	VMIX	2759.4	ROLL CTS	8393	MILES	3.5997
TEMP ADB	75	TEMP AWB	60	REL HUM	41%	BARO	30.097
DELTA P	19.8	CVS PRES	11.5	NOX CF	.90430	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.100	HC PPM	119.700	HC GRAMS	5.069
CO PPM	.068	CO PPM	686.275	CO GRAMS	62.443
NOx PPM	.000	NOx PPM	69.000	NOx GRAMS	9.325
CO2 %	.043	CO2 %	1.428	CO2 GRAMS	1988.703

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	108						
CVS REVS	16823	VMIX	4556.1	ROLL CTS	9365	MILES	4.0166
TEMP ADB	76	TEMP AWB	61	REL HUM	42%	BARO	30.097
DELTA P	19.8	CVS PRES	11.5	NOX CF	.91657	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.900	HC PPM	9.900	HC GRAMS	.255
CO PPM	4.934	CO PPM	80.132	CO GRAMS	11.341
NOx PPM	.100	NOx PPM	10.700	NOx GRAMS	2.398
CO2 %	.038	CO2 %	.824	CO2 GRAMS	1861.917

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	108						
CVS REVS	9946	VMIX	2691.3	ROLL CTS	8350	MILES	3.5812
TEMP ADB	75	TEMP AWB	62	REL HUM	48%	BARO	30.094
DELTA P	19.8	CVS PRES	11.8	NOX CF	.94066	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.700	HC PPM	13.700	HC GRAMS	.333
CO PPM	.068	CO PPM	114.923	CO GRAMS	10.203
NOx PPM	.000	NOx PPM	24.800	NOx GRAMS	3.400
CO2 %	.033	CO2 %	1.174	CO2 GRAMS	1596.430

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.345	5.786	1.097	476.875

URBAN CYCLE FUEL ECONOMY
18.214 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	4-16-82	ENG FAM	BNS2.2T2AC2	CURB WT	NA
TIME	1353	CID	133.4CID	INERTIA	2875
TEST #	14709	TRANS	5SPD	ARHP	13.0
TEST SE	CVS II	CARB	1X2V	IRHP	11.2
VEHICLE	DATSUN	CAT	YES	FUEL	GASOLINE
MODEL	KING CAB	A/C	YES	DYNO	516
YEAR	1981	ODO	6625	EAC	2
VIN	001398	TECHN	LS	CVS #	2
PROJ #	79801	DRIVER	JD		

PURPOSE...ARB #10 BASELINE!

DATA CHECKED BY: _____ OK ___ NG ___ REASON _____

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	109				
CVS REVS	9919	VMIX 3682.9	ROLL CTS	8309	MILES 3.5636
TEMP ADB	75	TEMP AWB 60	REL HUM	41%	BARO 30.092
DELTA P	19.5	CVS PRES 11.5	NOX CF	.90434	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	11.400	HC PPM	66.300	HC GRAMS	2.452
CO PPM	.068	CO PPM	435.798	CO GRAMS	38.554
NOx PPM	.100	NOx PPM	32.700	NOx GRAMS	4.285
CO2 %	.043	CO2 %	1.215	CO2 GRAMS	1635.670

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	16870	VMIX 4564.6	ROLL CTS	9333	MILES 4.0026
TEMP ADB	80	TEMP AWB 62	REL HUM	35%	BARO 30.092
DELTA P	19.8	CVS PRES 11.8	NOX CF	.90581	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.900	HC PPM	19.900	HC GRAMS	.792
CO PPM	1.299	CO PPM	59.597	CO GRAMS	8.786
NOx PPM	.100	NOx PPM	7.200	NOx GRAMS	1.591
CO2 %	.036	CO2 %	.844	CO2 GRAMS	1917.783

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	107				
CVS REVS	9845	VMIX 2668.5	ROLL CTS	8506	MILES 3.6481
TEMP ADB	81	TEMP AWB 63	REL HUM	36%	BARO 30.092
DELTA P	19.8	CVS PRES 11.8	NOX CF	.91091	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.800	HC PPM	25.100	HC GRAMS	.703
CO PPM	.068	CO PPM	56.085	CO GRAMS	4.939
NOx PPM	.000	NOx PPM	26.100	NOx GRAMS	3.466
CO2 %	.038	CO2 %	1.134	CO2 GRAMS	1521.211

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.295	3.700	.719	458.084

URBAN CYCLE FUEL ECONOMY
19.084 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	4-28-82	ENG FAM	03J4PCZ	CURB WT	NA
TIME	0822	CID	5.7L	INERTIA	4250
TEST #	14799	TRANS	AUTO	ARHP	12.2
TEST SE	CVS II	CARB	1X2V	IRHP	10.3
VEHICLE	OLDSMOBILE	CAT	YES	FUEL	GASOLINE
MODEL	DELTA 88	A/C	YES	DYNO	516
YEAR	1980	ODO	22960	EAC	2
VIN	3Y69RAY102918	TECHN	LS	CVS #	2
PROJ #	79801	DRIVER	PM		

PURPOSE...CVS 2 C/S ARB #19 BASELINE!

QUALITY AUDIT BY _____ DATE 4/28/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	9956	VMIX 2696.3	ROLL CTS	8350	MILES 3.5812
TEMP ADB	70	TEMP AWB 60	REL HUM	56%	BARO 30.097
DELTA P	19.8	CVS PRES 11.5	NOX CF	.93689	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.600	HC PPM	201.600	HC GRAMS	8.507
CO PPM	3.424	CO PPM	809.425	CO GRAMS	71.691
NOx PPM	.200	NOx PPM	36.800	NOx GRAMS	5.011
CO2 %	.039	CO2 %	1.606	CO2 GRAMS	2198.269

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	107				
CVS REVS	16873	VMIX 4574.2	ROLL CTS	9155	MILES 3.9265
TEMP ADB	72	TEMP AWB 60	REL HUM	50%	BARO 30.097
DELTA P	19.8	CVS PRES 11.8	NOX CF	.92571	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.800	HC PPM	24.100	HC GRAMS	1.259
CO PPM	.068	CO PPM	145.167	CO GRAMS	21.902
NOx PPM	.100	NOx PPM	13.800	NOx GRAMS	3.143
CO2 %	.043	CO2 %	.951	CO2 GRAMS	2162.072

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	9904	VMIX 2680.5	ROLL CTS	8360	MILES 3.5855
TEMP ADB	70	TEMP AWB 60	REL HUM	56%	BARO 30.10
DELTA P	19.8	CVS PRES 11.8	NOX CF	.93686	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.600	HC PPM	37.400	HC GRAMS	1.339
CO PPM	2.027	CO PPM	173.077	CO GRAMS	15.135
NOx PPM	.100	NOx PPM	27.700	NOx GRAMS	3.755
CO2 %	.039	CO2 %	1.377	CO2 GRAMS	1865.981

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.756	8.169	.990	555.365

URBAN CYCLE FUEL ECONOMY
15.547 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	5/3/82	ENG FAM	03J4PCZ	CURB WT	NA
TIME	01642	CID	5.7L	INERTIA	4250
TEST #	14849	TRANS	A	ARHP	12.2
TEST SE	CVS II	CARB	1X2V	IRHP	10.3
VEHICLE	OLDSMOBILE	CAT	YES	FUEL	GASOLINE
MODEL	DELTA88	A/C	YES	DYNO	516
YEAR	1980	ODO	22980	EAC	2
VIN	3Y69RAY102918	TECHN	LS	CVS #	2
PROJ #	79801	DRIVER	MZ		

PURPOSE...CVSII COLD STARET ARB#19!

QUALITY AUDIT
BY _____ DATE 5/4/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	108						
CVS REVS	9876	VMIX	2659.7	ROLL CTS	8352	MILES	3.5821
TEMP ADB	76.0	TEMP AWB	63.0	REL HUM	49%	BARO	29.956
DELTA P	19.8	CVS PRES	11.8	NOX CF	.95663	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.000	HC PPM	98.100	HC GRAMS	4.034
CO PPM	1.328	CO PPM	686.275	CO GRAMS	60.080
NOx PPM	.000	NOx PPM	36.000	NOx GRAMS	4.961
CO2 %	.038	CO2 %	1.679	CO2 GRAMS	2270.195

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	108						
CVS REVS	16867	VMIX	4542.5	ROLL CTS	9171	MILES	3.9333
TEMP ADB	76	TEMP AWB	63	REL HUM	49%	BARO	29.956
DELTA P	19.8	CVS PRES	11.8	NOX CF	.95663	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.700	HC PPM	23.200	HC GRAMS	1.329
CO PPM	.629	CO PPM	170.028	CO GRAMS	25.377
NOx PPM	.500	NOx PPM	10.100	NOx GRAMS	2.268
CO2 %	.041	CO2 %	.979	CO2 GRAMS	2217.115

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	110						
CVS REVS	9883	VMIX	2652.3	ROLL CTS	8376	MILES	3.5924
TEMP ADB	76	TEMP AWB	62	REL HUM	45%	BARO	29.956
DELTA P	19.8	CVS PRES	11.8	NOX CF	.93392	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.600	HC PPM	41.200	HC GRAMS	1.567
CO PPM	1.328	CO PPM	234.250	CO GRAMS	20.380
NOx PPM	.000	NOx PPM	27.300	NOx GRAMS	3.662
CO2 %	.038	CO2 %	1.393	CO2 GRAMS	1868.814

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.526	8.353	.862	566.187

URBAN CYCLE FUEL ECONOMY
15.269 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	5/14/82	ENG FAM	4CYL	CURB WT	NA
TIME	0845	CID	151CID	INERTIA	2875
TEST #	14981	TRANS	A	ARHP	7.3
TEST SE	CVS II	CARB	1X2V	IRHP	3.4
VEHICLE	CHEVROLET	CAT	YES	FUEL	GASOLINE
MODEL	CITATON	A/C	YES	DYNO	288
YEAR	1980	ODO	28085	EAC	1
VIN	1H115A6258387	TECHN	LF	CVS #	1
PROJ #	79801	DRIVER	MZ		

PURPOSE...CVSII C/S ARB BASELINE!

QUALITY AUDIT BY [signature] DATE 5/14/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	110				
CVS REVS	11736	VMIX 2562.0	ROLL CTS	8350	MILES 3.5812
TEMP ADB	84.0	TEMP AWB 64.0	REL HUM	33%	BARO 30.054
DELTA P	69.4	CVS PRES 57.8	NOX CF	.92122	Vo .27341

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	17.400	HC PPM	88.800	HC GRAMS	3.052
CO PPM	14.530	CO PPM	729.847	CO GRAMS	60.534
NOx PPM	.689	NOx PPM	65.995	NOx GRAMS	8.355
CO2 %	.049	CO2 %	1.117	CO2 GRAMS	1424.449

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	110				
CVS REVS	20109	VMIX 4389.9	ROLL CTS	9128	MILES 3.9149
TEMP ADB	84.0	TEMP AWB 64.0	REL HUM	33%	BARO 30.054
DELTA P	69.4	CVS PRES 57.8	NOX CF	.92122	Vo .27341

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	17.300	HC PPM	21.500	HC GRAMS	.373
CO PPM	14.384	CO PPM	108.723	CO GRAMS	13.775
NOx PPM	.985	NOx PPM	17.434	NOx GRAMS	3.615
CO2 %	.047	CO2 %	.766	CO2 GRAMS	1642.196

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	110				
CVS REVS	11763	VMIX 2567.4	ROLL CTS	8388	MILES 3.5975
TEMP ADB	86.0	TEMP AWB 66.0	REL HUM	34%	BARO 30.049
DELTA P	69.4	CVS PRES 57.8	NOX CF	.94408	Vo .27341

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	16.900	HC PPM	29.100	HC GRAMS	.567
CO PPM	14.384	CO PPM	244.660	CO GRAMS	19.588
NOx PPM	.788	NOx PPM	34.770	NOx GRAMS	4.469
CO2 %	.053	CO2 %	1.023	CO2 GRAMS	1295.828

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.367	6.791	1.299	398.817

URBAN CYCLE FUEL ECONOMY
21.610 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	5/20/82	ENG FAM	2X2NC	CURB WT	NA
TIME	01121	CID	2.3L	INERTIA	2875
TEST #	15042	TRANS	A	ARHP	7.3
TEST SE	CVS II	CARB	1X2V	IRHP	3.4
VEHICLE	CHEVROLET	CAT	YES	FUEL	GASOLINE
MODEL	CITATION	A/C	YES	DYNO	288
YEAR	1980	ODO	028107	EAC	1
VIN	1H115A6255357	TECHN	LF	CVS #	1
PROJ #	79801	DRIVER	PM		

PURPOSE...CVSII COLD START ARB#20!

QUALITY AUDIT
BY _____ DATE 5/20/82

COLD TRANSIENT

TECH COMMENTS..!
CVS TEMP 109

CVS REVS	11763	VMIX	2575.9	ROLL CTS	8284
TEMP ADB	76.0	TEMP AWB	63.0	REL HUM	49%
DELTA P	69.0	CVS PRES	57.6	NOX CF	.95574

MILES	3.5529
BARO	30.050
Vo	.27366

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.700	HC PPM	84.600	HC GRAMS	3.339
CO PPM	.574	CO PPM	908.206	CO GRAMS	77.088
NOx PPM	.394	NOx PPM	49.348	NOx GRAMS	6.532
CO2 %	.038	CO2 %	1.057	CO2 GRAMS	1364.486

COLD STABILIZED

TECH COMMENTS..!
CVS TEMP 109

CVS REVS	20037	VMIX	4387.8	ROLL CTS	8949
TEMP ADB	76.0	TEMP AWB	63.0	REL HUM	49%
DELTA P	69.0	CVS PRES	57.6	NOX CF	.95574

MILES	3.8381
BARO	30.050
Vo	.27366

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.500	HC PPM	14.000	HC GRAMS	.630
CO PPM	3.747	CO PPM	233.409	CO GRAMS	33.254
NOx PPM	.197	NOx PPM	12.411	NOx GRAMS	2.776
CO2 %	.035	CO2 %	.714	CO2 GRAMS	1548.340

HOT TRANSIENT

TECH COMMENTS..!
CVS TEMP 112

CVS REVS	11710	VMIX	2551.1	ROLL CTS	8302
TEMP ADB	76.0	TEMP AWB	63.0	REL HUM	49%
DELTA P	69.0	CVS PRES	57.6	NOX CF	.95572

MILES	3.5606
BARO	30.052
Vo	.27366

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.100	HC PPM	20.800	HC GRAMS	.630
CO PPM	.003	CO PPM	290.268	CO GRAMS	24.414
NOx PPM	.098	NOx PPM	30.141	NOx GRAMS	3.968
CO2 %	.035	CO2 %	.926	CO2 GRAMS	1181.098

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.328	10.860	1.061	379.727

URBAN CYCLE FUEL ECONOMY
22.299 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	6-4-82	ENG FAM	2X2NC	CURB WT	NA
TIME	0805	CID	2.3L	INERTIA	2875
TEST #	15125	TRANS	AUTO	ARHP	7.3
TEST SE	CVS II	CARB	1X2V	IRHP	3.4
VEHICLE	CHEV.	CAT	YES	FUEL	GASOLINE
MODEL	CITATION	A/C	YES	DYNO	288
YEAR	1980	ODO	28210	EAC	1
VIN	1H115A6255357	TECHN	LF	CVS #	1
PROJ #	~~79001~~ A961	DRIVER	MZ		

PURPOSE...CVS II C/S ARB#20!

QUALITY AUDIT
BY _____ DATE 6/4/82

COLD TRANSIENT

TECH COMMENTS..LONG CRANK 3 STALLS BEFORE FRIRST ACCEL!

CVS TEMP	109				
CVS REVS	12675	VMIX	2771.4	ROLL CTS	8371
TEMP ADB	74	TEMP AWB	64	REL HUM	58%
DELTA P	69.4	CVS PRES	58.0	NOX CF	.98699

MILES	3.5902				
BARO	30.064				
Vo	.27341				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.000	HC PPM	214.500	HC GRAMS	9.335
CO PPM	9.825	CO PPM	632.362	CO GRAMS	56.962
NOx PPM	.392	NOx PPM	38.612	NOx GRAMS	5.667
CO2 %	.017	CO2 %	1.083	CO2 GRAMS	1533.024

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	109				
CVS REVS	20069	VMIX	4388.1	ROLL CTS	9095
TEMP ADB	74	TEMP AWB	64	REL HUM	58%
DELTA P	69.4	CVS PRES	58.0	NOX CF	.98699

MILES	3.9008				
BARO	30.064				
Vo	.27341				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.500	HC PPM	13.900	HC GRAMS	.358
CO PPM	7.147	CO PPM	120.093	CO GRAMS	16.406
NOx PPM	.294	NOx PPM	6.762	NOx GRAMS	1.521
CO2 %	.022	CO2 %	.833	CO2 GRAMS	1848.408

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	110				
CVS REVS	11744	VMIX	2563.3	ROLL CTS	8379
TEMP ADB	78	TEMP AWB	64	REL HUM	46%
DELTA P	69.4	CVS PRES	58.0	NOX CF	.95652

MILES	3.5937				
BARO	30.064				
Vo	.27341				

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	14.100	HC PPM	23.200	HC GRAMS	.428
CO PPM	4.501	CO PPM	197.688	CO GRAMS	16.357
NOx PPM	.098	NOx PPM	18.914	NOx GRAMS	2.499
CO2 %	.019	CO2 %	1.058	CO2 GRAMS	1383.563

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.616	6.702	.718	439.906

URBAN CYCLE FUEL ECONOMY
19.609 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	5/19/82	ENG FAM	02X2NC	CURB WT	NA
TIME	01047	CID	2.5L	INERTIA	2875
TEST #	15027	TRANS	AA	ARHP	7.3
TEST SE	CVS II	CARB	1X2V	IRHP	3.4
VEHICLE	OLDSMOBILE	CAT	YES	FUEL	GASOLINE
MODEL	OMEGA	A/C	YES	DYNO	288
YEAR	1980	ODO	30997	EAC	1
VIN	3B695AW198518	TECHN	LF	CVS #	1
PROJ #	79801	DRIVER	MZ		

PURPOSE...CVSII COLD START ARB #21!

QUALITY AUDIT
BY _____ DATE 5/19/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	110						
CVS REVS	11770	VMIX	2568.0	ROLL CTS	8403	MILES	3.604
TEMP ADB	76.0	TEMP AWB	61.0	REL HUM	42%	BARO	29.980
DELTA P	68.9	CVS PRES	57.4	NOX CF	.91744	Vo	.27373

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.300	HC PPM	111.600	HC GRAMS	4.440
CO PPM	13.479	CO PPM	1331.802	CO GRAMS	111.728
NOx PPM	.197	NOx PPM	51.712	NOx GRAMS	6.575
CO2 %	.032	CO2 %	1.118	CO2 GRAMS	1450.189

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	110						
CVS REVS	20069	VMIX	4378.7	ROLL CTS	9164	MILES	3.9303
TEMP ADB	76.0	TEMP AWB	61.0	REL HUM	42%	BARO	29.980
DELTA P	68.9	CVS PRES	57.4	NOX CF	.91744	Vo	.27373

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.500	HC PPM	23.700	HC GRAMS	1.324
CO PPM	1.115	CO PPM	360.879	CO GRAMS	51.948
NOx PPM	.098	NOx PPM	8.471	NOx GRAMS	1.822
CO2 %	.026	CO2 %	.733	CO2 GRAMS	1607.588

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	110						
CVS REVS	11751	VMIX	2563.9	ROLL CTS	8402	MILES	3.6035
TEMP ADB	78.0	TEMP AWB	62.0	REL HUM	40%	BARO	29.980
DELTA P	68.9	CVS PRES	57.4	NOX CF	.92142	Vo	.27373

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.700	HC PPM	43.400	HC GRAMS	1.636
CO PPM	13.587	CO PPM	708.622	CO GRAMS	58.847
NOx PPM	.098	NOx PPM	33.884	NOx GRAMS	4.323
CO2 %	.028	CO2 %	1.029	CO2 GRAMS	1334.096

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.553	17.723	.944	397.072

URBAN CYCLE FUEL ECONOMY
20.791 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	5/24/82	ENG FAM	02X2NC	CURB WT	--
TIME	1600	CID	2.5L	INERTIA	2875
TEST #	15070	TRANS	AUTO	ARHP	7.3
TEST SE	CVS II	CARB	1X2V	IRHP	3.4
VEHICLE	OLDSMOBILE	CAT	YES	FUEL	GASOLINE
MODEL	OMEGA	A/C	YES	DYNO	288
YEAR	80	ODO	31022	EAC	1
VIN	3B695AW198518	TECHN	LF	CVS #	1
PROJ #	79801	DRIVER	MZ		

PURPOSE...CVSII C/S ARB #21 2ND TEST!

QUALITY AUDIT
BY _____ DATE 5/25/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	109						
CVS REVS	10970	VMIX	2398.7	ROLL CTS	8253	MILES	3.5396
TEMP ADB	74.0	TEMP AWB	64.0	REL HUM	58%	BARO	29.999
DELTA P	68.9	CVS PRES	57.5	NOX CF	.98772	Vo	.27373

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.800	HC PPM	117.900	HC GRAMS	4.342
CO PPM	13.479	CO PPM	1308.481	CO GRAMS	102.523
NOx PPM	.197	NOx PPM	50.333	NOx GRAMS	6.436
CO2 %	.026	CO2 %	1.167	CO2 GRAMS	1422.254

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	109						
CVS REVS	20078	VMIX	4390.4	ROLL CTS	9026	MILES	3.8712
TEMP ADB	74.0	TEMP AWB	64.0	REL HUM	58%	BARO	29.999
DELTA P	68.9	CVS PRES	57.5	NOX CF	.98772	Vo	.27373

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.100	HC PPM	12.300	HC GRAMS	.469
CO PPM	.740	CO PPM	111.333	CO GRAMS	16.014
NOx PPM	.295	NOx PPM	11.130	NOx GRAMS	2.548
CO2 %	.020	CO2 %	.768	CO2 GRAMS	1703.987

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	110						
CVS REVS	11739	VMIX	2551.0	ROLL CTS	8334	MILES	3.5744
TEMP ADB	79	TEMP AWB	66	REL HUM	50%	BARO	29.884
DELTA P	68.9	CVS PRES	57.5	NOX CF	.99518	Vo	.27373

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.400	HC PPM	21.300	HC GRAMS	.680
CO PPM	13.389	CO PPM	227.149	CO GRAMS	18.069
NOx PPM	.197	NOx PPM	30.929	NOx GRAMS	4.227
CO2 %	.020	CO2 %	1.055	CO2 GRAMS	1370.774

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.366	9.474	1.039	416.771

URBAN CYCLE FUEL ECONOMY
20.496 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	5-21-82	ENG FAM	128.3	CURB WT	NA
TIME	1115	CID	2.7L	INERTIA	3500
TEST #	15052	TRANS	4SPD	ARHP	11.6
TEST SE	CVS II	CARB	FI	IRHP	10.0
VEHICLE	BMW	CAT	YES	FUEL	GASOLINE
MODEL	528I	A/C	YES	DYNO	516
YEAR	1979	ODO	43152	EAC	2
VIN	WBA39910005333391	TECHN	LS	CVS #	2
PROJ #	79801	DRIVER	DC		

PURPOSE...CVS2 C/S, ARB#22 BASELINE!

QUALITY AUDIT
BY _____ DATE 5/21/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	106						
CVS REVS	9799	VMIX	2653.7	ROLL CTS	8232	MILES	3.5306
TEMP ADB	78	TEMP AWB	66	REL HUM	53%	BARO	30.015
DELTA P	19.8	CVS PRES	11.8	NOX CF	1.0026	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.400	HC PPM	141.600	HC GRAMS	5.812
CO PPM	8.317	CO PPM	525.631	CO GRAMS	45.341
NOx PPM	.492	NOx PPM	72.397	NOx GRAMS	10.370
CO2 %	.029	CO2 %	1.405	CO2 GRAMS	1898.045

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	106						
CVS REVS	16891	VMIX	4574.3	ROLL CTS	9073	MILES	3.8913
TEMP ADB	78	TEMP AWB	66	REL HUM	53%	BARO	30.015
DELTA P	19.8	CVS PRES	11.8	NOX CF	1.0026	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.200	HC PPM	18.100	HC GRAMS	.713
CO PPM	6.457	CO PPM	80.132	CO GRAMS	11.180
NOx PPM	.197	NOx PPM	25.314	NOx GRAMS	6.242
CO2 %	.041	CO2 %	.945	CO2 GRAMS	2150.891

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	108						
CVS REVS	9867	VMIX	2662.7	ROLL CTS	8277	MILES	3.5499
TEMP ADB	74	TEMP AWB	64	REL HUM	58%	BARO	30.015
DELTA P	19.8	CVS PRES	11.8	NOX CF	.98754	Vo	.29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.900	HC PPM	28.800	HC GRAMS	.940
CO PPM	.629	CO PPM	140.699	CO GRAMS	12.301
NOx PPM	.098	NOx PPM	54.569	NOx GRAMS	7.758
CO2 %	.026	CO2 %	1.211	CO2 GRAMS	1639.542

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.504	5.070	2.034	524.898

URBAN CYCLE FUEL ECONOMY
16.598 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	5/27/82	ENG FAM	128.3	CURB WT	--
TIME	1306	CID	2.7L	INERTIA	3500
TEST #	15091	TRANS	4SPD	ARHP	11.6
TEST SE	CVS II	CARB	FI	IRHP	8.6
VEHICLE	BMW	CAT	YES	FUEL	GASOLINE
MODEL	528I	A/C	YES	DYNO	288
YEAR	79	ODO	43164	EAC	1
VIN	WBA39910005333391	TECHN	LS	CVS #	1
PROJ #	79801	DRIVER	MZ		

PURPOSE...CVS II C/S ARB #22!

QUALITY AUDIT
BY _____ DATE 5/28/82

COLD TRANSIENT

TECH COMMENTS..!
CVS TEMP 110

CVS REVS	11732	VMIX	2562.4	ROLL CTS	8382
TEMP ADB	71	TEMP AWB	61	REL HUM	57%
DELTA P	68.6	CVS PRES	57.4	NOX CF	.95151

MILES	3.595
BARO	29.989
Vo	.27392

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.700	HC PPM	151.800	HC GRAMS	6.140
CO PPM	.003	CO PPM	448.718	CO GRAMS	37.909
NOx PPM	.394	NOx PPM	54.470	NOx GRAMS	7.146
CO2 %	.020	CO2 %	1.475	CO2 GRAMS	1936.335

COLD STABILIZED

TECH COMMENTS..!
CVS TEMP 110

CVS REVS	20067	VMIX	4382.9	ROLL CTS	9163
TEMP ADB	71	TEMP AWB	61	REL HUM	57%
DELTA P	68.6	CVS PRES	57.4	NOX CF	.95151

MILES	3.9299
BARO	29.989
Vo	.27392

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.400	HC PPM	13.900	HC GRAMS	.570
CO PPM	.259	CO PPM	31.278	CO GRAMS	4.485
NOx PPM	.394	NOx PPM	26.693	NOx GRAMS	5.946
CO2 %	.009	CO2 %	.970	CO2 GRAMS	2185.293

HOT TRANSIENT

TECH COMMENTS..!
CVS TEMP 112

CVS REVS	11749	VMIX	2557.9	ROLL CTS	8451
TEMP ADB	73	TEMP AWB	62	REL HUM	54
DELTA P	68.6	CVS PRES	57.3	NOX CF	.95531

MILES	3.6245
BARO	29.989
Vo	.27392

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.700	HC PPM	29.500	HC GRAMS	1.016
CO PPM	.023	CO PPM	98.267	CO GRAMS	8.289
NOx PPM	.591	NOx PPM	49.742	NOx GRAMS	6.512
CO2 %	.016	CO2 %	1.231	CO2 GRAMS	1613.703

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.502	3.382	1.688	522.118

URBAN CYCLE FUEL ECONOMY
16.769 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	6-4-82	ENG FAM	128.3	CURB WT	NA
TIME	0804	CID	2.7L	INERTIA	3500
TEST #	15126	TRANS	4SPD	ARHP	11.6
TEST SE	CVS II	CARB	FI	IRHP	9.8
VEHICLE	BMW	CAT	YES	FUEL	GASOLINE
MODEL	528I	A/C	YES	DYNO	516
YEAR	1979	ODO	43227	EAC	2
VIN	WBA39910005333391	TECHN	LS	CVS #	2
PROJ #	79801	DRIVER	JD		

PURPOSE...CVS II C/S!

QUALITY AUDIT BY _____ DATE 6/4/82

COLD TRANSIENT

TECH COMMENTS..ARB #22!

CVS TEMP	106				
CVS REVS	9954	VMIX 2697.6	ROLL CTS	8447	MILES 3.6228
TEMP ADB	73	TEMP AWB 62	REL HUM	54%	BARO 30.064
DELTA P	20.0	CVS PRES 12.0	NOX CF	.95460	Vo .29791

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.100	HC PPM	146.400	HC GRAMS	6.134
CO PPM	10.019	CO PPM	513.234	CO GRAMS	44.862
NOx PPM	.098	NOx PPM	76.048	NOx GRAMS	10.594
CO2 %	.019	CO2 %	1.516	CO2 GRAMS	2096.705

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	16812	VMIX 4540.2	ROLL CTS	9175	MILES 3.9351
TEMP ADB	73	TEMP AWB 62	REL HUM	54%	BARO 30.064
DELTA P	20.0	CVS PRES 12.0	NOX CF	.95460	Vo .29791

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	9.500	HC PPM	19.600	HC GRAMS	.799
CO PPM	10.374	CO PPM	74.521	CO GRAMS	9.712
NOx PPM	.196	NOx PPM	29.400	NOx GRAMS	6.858
CO2 %	.024	CO2 %	.945	CO2 GRAMS	2172.221

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	9850	VMIX 2660.0	ROLL CTS	8327	MILES 3.5714
TEMP ADB	76	TEMP AWB 64	REL HUM	52%	BARO 30.064
DELTA P	20.0	CVS PRES 12.0	NOX CF	.97331	Vo .29791

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	10.900	HC PPM	49.800	HC GRAMS	1.734
CO PPM	6.659	CO PPM	160.010	CO GRAMS	13.504
NOx PPM	.196	NOx PPM	61.152	NOx GRAMS	8.550
CO2 %	.024	CO2 %	1.248	CO2 GRAMS	1692.307

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.587	4.874	2.163	536.406

URBAN CYCLE FUEL ECONOMY
16.249 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	6-11-82	ENG FAM	NA	CURB WT	NA
TIME	0957	CID	5.0L	INERTIA	3625
TEST #	15176	TRANS	AUTO	ARHP	10.6
TEST SE	CVS II	CARB	1X2V	IRHP	8.6
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	T-BIRD	A/C	YES	DYNO	516
YEAR	1980	ODO	25430	EAC	2
VIN	F0G87F103240F	TECHN	LS	CVS #	2
PROJ #	4261	DRIVER	JD		

PURPOSE...CVS II C/S ARB#23!

QUALITY AUDIT BY _____ DATE 6/14/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	9913	VMIX 2674.6	ROLL CTS	8375	MILES 3.5919
TEMP ADB	70	TEMP AWB 60	REL HUM	56%	BARO 30.009
DELTA P	19.8	CVS PRES 11.8	NOX CF	.93763	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.400	HC PPM	66.300	HC GRAMS	2.692
CO PPM	3.304	CO PPM	405.220	CO GRAMS	35.482
NOx PPM	.196	NOx PPM	27.440	NOx GRAMS	3.704
CO2 %	.029	CO2 %	1.833	CO2 GRAMS	2507.634

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	16883	VMIX 4555.1	ROLL CTS	8963	MILES 3.8441
TEMP ADB	74	TEMP AWB 62	REL HUM	51%	BARO 30.009
DELTA P	19.8	CVS PRES 11.8	NOX CF	.94861	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	5.100	HC PPM	34.300	HC GRAMS	2.199
CO PPM	4.220	CO PPM	49.539	CO GRAMS	6.852
NOx PPM	.000	NOx PPM	8.232	NOx GRAMS	1.926
CO2 %	.036	CO2 %	.976	CO2 GRAMS	2225.725

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	108				
CVS REVS	9859	VMIX 2660.0	ROLL CTS	8371	MILES 3.5902
TEMP ADB	80	TEMP AWB 64	REL HUM	41%	BARO 30.009
DELTA P	19.8	CVS PRES 11.8	NOX CF	.94344	Vo .29804

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	4.700	HC PPM	72.500	HC GRAMS	2.967
CO PPM	2.634	CO PPM	414.941	CO GRAMS	36.185
NOx PPM	.000	NOx PPM	18.914	NOx GRAMS	2.570
CO2 %	.036	CO2 %	1.444	CO2 GRAMS	1947.674

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.679	5.747	.670	593.686

URBAN CYCLE FUEL ECONOMY
14.666 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	6/22/82	ENG FAM	V8	CURB WT	NA
TIME	01120	CID	5.0L	INERTIA	3625
TEST #	15240	TRANS	AUTO	ARHP	10.6
TEST SE	CVS II	CARB	1X2V	IRHP	7.2
VEHICLE	FORD	CAT	YES	FUEL	GASOLINE
MODEL	TUNDERBIRD	A/C	YES	DYNO	288
YEAR	1980	ODO	25475	ERC	1
VIN	F0G87F103240F	TECHN	LF	CVS #	1
PROJ #	4261	DRIVER	MZ		

PURPOSE...CVS II C/S FTP!

QUALITY AUDIT
BY _____ DATE 6/22/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	110				
CVS REVS	11777	VMIX 2576.1	ROLL CTS 8366	MILES	3.5881
TEMP ADB	72.0	TEMP AWB 63.0	REL HUM 61%	BARO	30.059
DELTA P	69.0	CVS PRES 57.5	NOX CF .98140	Vo	.27366

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.800	HC PPM	65.100	HC GRAMS	2.455
CO PPM	.003	CO PPM	281.638	CO GRAMS	23.920
NOx PPM	.392	NOx PPM	23.226	NOx GRAMS	3.134
CO2 %	.027	CO2 %	1.807	CO2 GRAMS	2383.063

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	110				
CVS REVS	20104	VMIX 4396.7	ROLL CTS 9079	MILES	3.8939
TEMP ADB	72.0	TEMP AWB 63.0	REL HUM 61%	BARO	30.054
DELTA P	69.0	CVS PRES 57.5	NOX CF .98145	Vo	.27366

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.200	HC PPM	34.600	HC GRAMS	2.072
CO PPM	.637	CO PPM	29.770	CO GRAMS	4.230
NOx PPM	.196	NOx PPM	8.232	NOx GRAMS	1.881
CO2 %	.027	CO2 %	1.000	CO2 GRAMS	2224.191

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	110				
CVS REVS	11769	VMIX 2574.3	ROLL CTS 8399	MILES	3.6022
TEMP ADB	72.0	TEMP AWB 63.0	REL HUM 61%	BARO	30.059
DELTA P	69.0	CVS PRES 57.5	NOX CF .98140	Vo	.27366

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.500	HC PPM	67.700	HC GRAMS	2.602
CO PPM	.009	CO PPM	380.408	CO GRAMS	32.280
NOx PPM	.098	NOx PPM	17.444	NOx GRAMS	2.374
CO2 %	.023	CO2 %	1.389	CO2 GRAMS	1826.858

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.615	4.395	.611	372.781

URBAN CYCLE FUEL ECONOMY
15.252 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	6-29-82	ENG FAM	960JOC	CURB WT	NA
TIME	830A	CID	5.7L	INERTIA	4500
TEST #	~~15728~~ 15278	TRANS	A	ARHP	13.2
TEST SE	CVS II	CARB	FI	IRHP	11.2
VEHICLE	CAD	CAT	Y	FUEL	GASOLINE
MODEL	SEV	A/C	Y	DYNO	516
YEAR	79	ODO	31761	EAC	2
VIN	6S69B99489602	TECHN	BB	CVS #	2
PROJ #	4261	DRIVER	JD		

PURPOSE...*ARB24!

QUALITY AUDIT
BY QE DATE 6/30/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP 107					
CVS REVS 9893	VMIX 2670.4	ROLL CTS 8402		MILES	3.6035
TEMP ADB 77	TEMP AWB 67	REL HUM 50		BARO	29.930
DELTA P 19.5	CVS PRES 11.5	NOX CF	.97285	Vo	.29817

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.800	HC PPM	205.200	HC GRAMS	8.661
CO PPM	.558	CO PPM	2294.054	CO GRAMS	202.022
NOx PPM	.294	NOx PPM	74.970	NOx GRAMS	10.513
CO2 %	.038	CO2 %	1.850	CO2 GRAMS	2517.083

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP 107					
CVS REVS 16910	VMIX 4564.5	ROLL CTS 9235		MILES	3.9608
TEMP ADB 77	TEMP AWB 67	REL HUM 50		BARO	29.930
DELTA P 19.5	CVS PRES 11.5	NOX CF	.97285	Vo	.29817

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	8.500	HC PPM	27.500	HC GRAMS	1.477
CO PPM	.045	CO PPM	250.664	CO GRAMS	37.729
NOx PPM	.294	NOx PPM	27.734	NOx GRAMS	6.606
CO2 %	.036	CO2 %	1.263	CO2 GRAMS	2913.356

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP 109					
CVS REVS 9925	VMIX 2668.1	ROLL CTS 8408		MILES	3.6061
TEMP ADB 82	TEMP AWB 66	REL HUM 43		BARO	29.942
DELTA P 19.6	CVS PRES 11.8	NOX CF	.97668	Vo	.29817

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.200	HC PPM	34.600	HC GRAMS	1.231
CO PPM	.045	CO PPM	220.581	CO GRAMS	19.407
NOx PPM	.196	NOx PPM	54.684	NOx GRAMS	7.693
CO2 %	.031	CO2 %	1.593	CO2 GRAMS	2165.545

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.780	17.930	2.050	691.268

URBAN CYCLE FUEL ECONOMY
12.288 MILES PER GALLON

AUTOMOTIVE RESEARCH CENTER
HUNTINGTON BEACH CALIFORNIA

DATE	7/8/82	ENG FAM	960JOUC	CURB WT	NA
TIME	0827	CID	5.7L	INERTIA	4500
TEST #	15333	TRANS	A	ARHP	13.2
TEST SE	'S II	CARB	FI	IRHP	9.4
VEHICLE	CADILLAC	CAT	YES	FUEL	GASOLINE
MODEL	SEVILLE	A/C	YES	DYNO	288
YEAR	1979	ODO	31793	EAC	1
VIN	6S69B99489602	TECHN	LF	CVS #	1
PROJ #	4261	DRIVER	MZ		

PURPOSE...CVSII C/S ARB #24!

QUALITY AUDIT BY QE DATE 7/8/82

COLD TRANSIENT

TECH COMMENTS..!

CVS TEMP	107				
CVS REVS	11742	VMIX 2521.4	ROLL CTS 8284	MILES	3.5529
TEMP ADB	77.0	TEMP AWB 66.0	REL HUM 56%	BARO	30.075
DELTA P	79.0	CVS PRES 57.8	NOX CF 1.0100	Vo	.26730

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	6.600	HC PPM	159.900	HC GRAMS	6.353
CO PPM	13.389	CO PPM	1192.089	CO GRAMS	98.155
NOx PPM	.000	NOx PPM	44.688	NOx GRAMS	6.164
CO2 %	.030	CO2 %	1.879	CO2 GRAMS	2423.742

COLD STABILIZED

TECH COMMENTS..!

CVS TEMP	107				
CVS REVS	20067	VMIX 4309.1	ROLL CTS 9034	MILES	3.8746
TEMP ADB	77.0	TEMP AWB 66.0	REL HUM 56%	BARO	30.075
DELTA P	79.0	CVS PRES 57.8	NOX CF 1.0100	Vo	.26730

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.600	HC PPM	48.500	HC GRAMS	2.930
CO PPM	.740	CO PPM	381.026	CO GRAMS	54.038
NOx PPM	.098	NOx PPM	8.330	NOx GRAMS	1.942
CO2 %	.030	CO2 %	1.270	CO2 GRAMS	2776.419

HOT TRANSIENT

TECH COMMENTS..!

CVS TEMP	110				
CVS REVS	11747	VMIX 2508.2	ROLL CTS 8325	MILES	3.5705
TEMP ADB	81.0	TEMP AWB 68.0	REL HUM 45%	BARO	30.065
DELTA P	79.0	CVS PRES 57.8	NOX CF .97961	Vo	.26730

AMBIENT BAG		SAMPLE BAG		MASS DATA	
HC PPM	7.000	HC PPM	46.400	HC GRAMS	1.649
CO PPM	13.389	CO PPM	261.020	CO GRAMS	20.614
NOx PPM	.098	NOx PPM	34.594	NOx GRAMS	4.592
CO2 %	.027	CO2 %	1.616	CO2 GRAMS	2071.463

WEIGHTED MASS EMISSIONS SUMMARY

HYDROCARBONS GMS/MI	CARBON MONOXIDE GMS/MI	OXIDES OF NITROGEN GMS/MI	CARBON DIOXIDE GMS/MI
.887	14.520	.969	672.171

URBAN CYCLE FUEL ECONOMY
12.713 MILES PER GALLON

APPENDIX E
Converter Efficiency Test Data

CONVERTER EFFICIENCY TEST
DATA SUMMARY

VEH. NO.	TEST DATE	GAS	IDLE BEFORE	IDLE AFTER	IDLE % EFF.	40 MPH IHP	40 MPH BEFORE	40 MPH AFTER	40 MPH % EFF.	50 MPH IHP	50 MPH BEFORE	50 MPH AFTER	50 MPH % EFF.
4	09/30/81 Front	HC	*(3000)	1860	>38	4.1	*(3000)	450	>85	4.1	*(3000)	285	>90
						10.0	*(3000)	405	>87	10.0	*(3000)	390	>87
		CO	*(2%)	1.8	>10	4.1	0.610	0.072	88	4.1	0.542	0.041	92
						10.0	0.033	0.007	79	10.0	0.542	0.047	91
		NOx	11.7	13.3	(14)	4.1	54.5	25.0	54	4.1	150.0	25.3	83
						10.0	239.5	25.1	90	10.0	476.9	2.8	99
	Rear	HC	1860	486	74	4.1	450	225	50	4.1	285	156	45
						10.0	405	360	11	10.0	390	186	52
		CO	1.8	0.005	100	4.1	0.072	0.060	17	4.1	0.041	0.029	29
						10.0	0.007	0.006	14	10.0	0.047	0.021	55
		NOx	13.3	12.5	6	4.1	25.3	14.1	44	4.1	25.3	25.0	1
						10.0	25.1	25.1	0	10.0	11.0	2.8	75
5	10/16/81 Left	HC	*(3000)	1200	>60	11.3	*(3000)	800	>73	11.3	*(3000)	900	70
						18.1	*(3000)	700	>77	18.1	*(3000)	600	80
		CO	0.812	0.029	96	11.3	0.340	0.384	(13)	11.3	0.355	0.011	97
						18.1	0.333	0.002	99	18.1	0.355	0.002	99
		NOx	40	10	75	11.3	385	135	65	11.3	*(500)	210	>58
						18.1	*(500)	285	>43	18.1	*(500)	350	>30
	Right	HC	*(3000)	1500	>50	11.3	*(3000)	750	>75	11.3	*(3000)	750	>75
						18.1	*(3000)	800	>73	18.1	*(3000)	600	>80
		CO	0.892	0.029	97	11.3	0.526	0.010	98	11.3	0.283	0.027	90
						18.1	0.407	0.002	99	18.1	0.326	0.003	99
		NOx	85	10	88	11.3	425	215	49	11.3	*(500)	380	>24
						18.1	*(500)	285	>43	18.1	+1250	1175	6

NOTES: HC and NOx shown in ppm, CO in %. For % EFF, ( ) indicates increase through catalyst.
+ Switched to 2500 ppm range.
* Off Scale

CONVERTER EFFICIENCY TEST
DATA SUMMARY

VEH. NO.	TEST DATE	GAS	IDLE BEFORE	IDLE AFTER	IDLE % EFF.	40 MPH IHP	40 MPH BEFORE	40 MPH AFTER	40 MPH % EFF.	50 MPH IHP	50 MPH BEFORE	50 MPH AFTER	50 MPH % EFF.
6	10/16/81	HC	1830	360	80	4.2	2100	240	89	4.2	2070	240	88
						6.9	2130	234	89	6.9	2010	204	90
		CO	0.493	0.011	98	4.2	0.664	0.012	98	4.2	0.773	0.010	99
						6.9	0.680	0.010	99	6.9	0.645	0.010	98
		NOx	155	100	35	4.2	*(2500)	750	>70	4.2	1500	1125	25
						6.9	1075	575	47	6.9	1825	1325	27
7	10/30/81	HC	*(3000)	1200	>60	9.7	*(3000)	2700	>10	9.7	*(3000)	*(3000)	-
						10.0	*(3000)	2500	>17	10.0	*(3000)	*(3000)	-
		CO	0.627	0.035	94	9.7	1.888	0.629	67	9.7	1.577	0.773	49
						10.0	*(2%)	0.682	>66	10.0	1.562	0.680	43
		NOx	**				**				**		
13	01/28/82	HC	1500	315	79	8.5	*(3000)	300	>90	8.5	*(3000)	390	>87
						20.0	*(3000)	300	>90	20.0	*(3000)	275	>91
		CO	1.106	0.009	99	8.5	0.851	0.009	99	8.5	0.578	0.000	100
						20.0	0.977	0.004	100	20.0	0.490	0.015	97
		NOx	23	32	(39)	8.5	250	184	26	8.5	300	238	21
						20.0	279	204	27	20.0	940	451	52
	02/01/82	HC	1230	135	89	8.5	1020	96	91	8.5	1020	90	91
						20.0	1110	75	93	20.0	1080	57	95
		CO	0.180	0.013	93	8.5	0.331	0.010	97	8.5	0.315	0.009	97
						20.0	0.369	0.007	98	20.0	0.254	0.005	98
		NOx	974.6	109.0	89	8.5	191.5	137.3	28	8.5	265.4	171.5	35
						20.0	**	**		20.0	**	**	

* Off Scale

CONVERTER EFFICIENCY TEST
DATA SUMMARY

VEH. NO.	TEST DATE	GAS	IDLE BEFORE	IDLE AFTER	IDLE % EFF.	40 MPH IHP	40 MPH BEFORE	40 MPH AFTER	40 MPH % EFF.	50 MPH IHP	50 MPH BEFORE	50 MPH AFTER	50 MPH % EFF.
14	03/24/82	HC	930	144	85	7.9	2150	210	90	7.9	1950	210	89
						10.0	2250	160	93	10.0	1800	180	90
		CO	3.426	0.789	77	7.9	3.426	0.183	95	7.9	2.247	0.210	91
						10.0	2.062	0.161	92	10.0	2.516	0.156	94
		NOx	13	3.2	75	7.9	475	159	67	7.9	290	133	54
						10.0	421	57	86	10.0	475	159	67
15	04/20/82	HC	*(3000)	210	>93	6.4	2190	210	90	6.4	1500	150	90
						10.0	2040	150	93	10.0	1260	120	90
		CO	1.106	0.098	91	6.4	2.247	0.119	95	6.4	0.490	0.087	82
						10.0	2.169	0.046	98	10.0	0.292	0.035	88
		NOx	2.1	2.1	0	6.4	24.4	19.9	18	6.4	67.8	58.2	14
						10.0	42.8	22.1	48	10.0	110.2	89.9	18
16	04/19/82 L. Front	HC	2100	240	89	9.0	2040	200	90	9.0	2190	210	90
						20.0	2610	550	79	20.0	2325	390	83
		CO	1.028	0.548	47	9.0	0.237	0.098	59	9.0	0.264	0.156	41
						20.0	0.938	0.525	44	20.0	0.578	0.685	(19)
		NOx	16.5	3.2	81	9.0	25.5	18.7	27	9.0	37.0	21.0	43
						20.0	28.9	4.3	85	20.0	93.7	32.4	65
	R. Front	HC	*(3000)	*(3000)	-	9.0	2190	260	88	9.0	2160	330	85
						20.0	2310	330	86	20.0	2070	395	81
		CO	2.223	1.817	18	9.0	0.215	0.124	42	9.0	0.432	0.264	39
						20.0	0.478	0.264	45	20.0	0.444	0.275	38
		NOx	3.2	3.2	0	9.0	22.1	21.0	5	9.0	35.8	12.0	66
						20.0	31.2	13.1	58	20.0	93.7	34.7	63

* Off Scale
** Analyzer Problem - Data Invalid

CONVERTER EFFICIENCY TEST
DATA SUMMARY

VEH. NO.	TEST DATE	GAS	IDLE BEFORE	IDLE AFTER	IDLE % EFF.	40 MPH IHP	40 MPH BEFORE	40 MPH AFTER	40 MPH % EFF.	50 MPH IHP	50 MPH BEFORE	50 MPH AFTER	50 MPH % EFF.
16	04/19/82 Center	HC	*(3000)	*(3000)	-	9.0	210	240	(14)	9.0	200	140	30
						20.0	180	120	33	20.0	345	150	57
		CO	2.116	1.972	7	9.0	0.103	0.129	(25)	9.0	0.264	0.103	61
						20.0	0.129	0.156	(21)	20.0	0.114	0.087	24
		NOx	3.2	3.2	0	9.0	10.9	9.8	10	9.0	8.7	9.8	(13)
						20.0	8.7	10.9	(25)	20.0	26.7	33.5	(25)
17	04/19/82	HC	*(3000)	150	>95	10.0	2340	120	95	10.0	2070	90	96
						20.0	2040	100	95	20.0	1800	75	96
		CO	0.264	0.072	73	10.0	0.673	0.108	84	10.0	0.432	0.098	77
						20.0	0.820	0.114	86	20.0	0.667	0.119	82
		NOx	7.6	3.2	58	10.0	57.0	2.1	96	10.0	93.7	4.3	95
						20.0	93.7	3.2	97	20.0	236.9	33.5	86
19	05/03/82	HC	2040	150	93	10.3	1500	147	90	10.3	1620	160	90
						20.0	1620	155	90	20.0	1620	144	91
		CO	0.945	0.151	84	10.3	0.548	0.183	67	10.3	0.490	0.234	52
						20.0	0.490	0.183	63	20.0	0.525	0.183	65
		NOx	**				**				**		
20	05/20/82	HC	1350	150	89	3.4	1260	135	89	3.4	1230	150	88
						10.0	1230	100	92	10.0	1140	90	92
		CO	0.721	0.199	72	3.4	0.851	0.210	75	3.4	0.838	0.156	81
						10.0	0.740	0.199	73	10.0	0.789	0.177	78
		NOx	81.2	42.8	47	3.4	1198.0	337.6	72	3.4	421.8	172.7	59
						10.0	404.5	137.5	66	10.0	1320.2	475.4	64

* Off Scale

CONVERTER EFFICIENCY TEST
DATA SUMMARY

VEH. NO.	TEST DATE	GAS	IDLE				40 MPH				50 MPH			
			BEFORE	AFTER	% EFF.	IHP	BEFORE	AFTER	% EFF.	IHP	BEFORE	AFTER	% EFF.
21	05/25/82	HC	1320	90	93	3.4	1140	85	93	3.4	960	90	91
						10.0	1050	70	93	10.0	960	60	94
		CO	0.685	0.264	61	3.4	0.851	0.264	69	3.4	0.913	0.210	77
						10.0	0.727	0.210	71	10.0	0.789	0.210	73
		NOx	132	16	88	3.4	439	84	81	3.4	759	285	62
						10.0	781	225	71	10.0	1394	693	50
22	06/01/82	HC	1470	156	89	8.6	2160	126	94	8.6	2010	125	94
						15.0	2070	150	93	15.0	2040	120	94
		CO	0.789	0.161	80	8.6	0.584	0.188	68	8.6	0.807	0.167	79
						15.0	0.673	0.156	77	15.0	0.851	0.172	80
		NOx	46.5	27.5	41	8.6	1227	650	47	8.6	1627	421	74
						15.0	1595	1139	29	15.0	1779	321	82
24	07/01/82	HC	870	90	90	11.2	855	90	89	11.2	900	90	90
						20.0	930	90	90	20.0	810	66	92
		CO	0.548	0.030	95	11.2	0.376	0.051	86	11.2	0.381	0.077	80
						20.0	0.320	0.040	88	20.0	0.381	0.098	74
		NOx	57.0	22.1	61	11.2	59.4	23.3	61	11.2	457.3	152.2	67
						20.0	137.5	54.6	60	20.0	1002.7	337.6	66

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