Appendix 1

Test Fuel Properties

DIXIE SERVICES INCORPORATED
POST OFFICE BOX 451 GALENA PARK, TEXAS 77547
713 672 1819 FACSIMILE 713 672 1604

CERTIFICATE OF ANALYSIS

Number: 93770

Client: The Adept Group, Inc.
1575 Westwood Boulevard, Suite 200
Los Angeles, California 90024

Date: May 4, 1998

Attention: Alex Spataru

Sample: Liquified petroleum gas, submitted 4-15-98
Origin: Aeriform
Marks: Listed below

Cyl. #RC5193, 19.99 % n-Butane, 3.83 % Propylene, 76.18 % Propane

D 2598	Vapor pressure, 100 °F, (calc.)	149 psig
D 3246	Sulfur	<1 ppm
		<0.1 grains/100 ft^3
UOP 619	Fluoride	0.1 ppm
D 1837	Volatile residue,	
	Temperature @ 95 % evaporation	+19.3 °F
D 2158	Residual matter	
	Residue on evaporation	<0.05 mL
	Oil stain	Pass (0.3 mL)
D 1838	Copper corrosion	1A
D 2713	Moisture	Pass

		Volume %
D 2163	Ethane	0.04
	Propane	76.12
	Propylene	3.71
	Isobutane	0.18
	n-Butane	19.95

Cyl. #5600011, 5.02 % n-Butane, 10.02 % Propylene, 84.96 % Propane

D 2598	Vapor pressure, 100 °F, (calc.)	172 psig
D 3246	Sulfur	<1 ppm
		<0.1 grains/100 ft^3
UOP 619	Fluoride	0.6 ppm

The information contained herein is based on information supplied and accepted on samples submitted and obtained by the [illegible] which may or may not be [illegible] organization or individual, and accepted in accordance with [illegible] which may be obtained by the Client. No representations or warranties either express or implied, or merchantability, fitness for any particular use, or of any other nature are made hereunder with respect to the information herein provided. Dixie Services disclaims any and all liability for damages or injury which result from the use of the information contained herein. Nor does anything contained herein imply or constitute a guarantee, warranty or representation by Dixie Services with respect to the accuracy of the information, the results, products or [illegible] or their suitability for use for any specific purpose. This document is intended for the sole use of the client and may not be reproduced except in full without the written approval of Dixie Services.

D 1837	Volatile residue,	
	Temperature @ 95 % evaporation	-29.0 °F
D 2158	Residual matter	
	Residue on evaporation	<0.05 mL
	Oil stain	Pass (0.3 mL)
D 1838	Copper corrosion	1A
D 2713	Moisture	Pass

		Volume %
D 2163	Ethane	0.05
	Propane	85.26
	Propylene	9.58
	Isobutane	0.24
	n-Butane	4.87

Cyl. #5600902, 1.913 % n-Butane, 3.839 % Propylene, 94.248 % Propane

D 2598	Vapor pressure, 100 °F, (calc.)	174 psig
D 3246	Sulfur	<1 ppm
		<0.1 grains/100 ft^3
UOP 619	Fluoride	<0.1 ppm
D 1837	Volatile residue,	
	Temperature @ 95 % evaporation	-38.9 °F
D 2158	Residual matter	
	Residue on evaporation	<0.05 mL
	Oil stain	Pass (0.3 mL)
D 1838	Copper corrosion	1A
D 2713	Moisture	Pass

		Volume %
D 2163	Ethane	0.02
	Propane	94.05
	Propylene	3.73
	Isobutane	0.29
	n-Butane	1.91

Cyl. #PHS2706, 10.01 % n-Butane, 10.02 % Propylene, 79.97 % Propane

D 2598	Vapor pressure, 100 °F, (calc.)	165 psig
D 3246	Sulfur	<1 ppm
		<0.1 grains/100 ft^3
UOP 619	Fluoride	0.9 ppm
D 1837	Volatile residue,	
	Temperature @ 95 % evaporation	-6.7 °F

D 2158	Residual matter	
	Residue on evaporation	<0.05 mL
	Oil stain	Pass (0.3 mL)
D 1838	Copper corrosion	1A
D 2713	Moisture	Pass
		Volume %
D 2163	Ethane	0.04
	Propane	80.02
	Propylene	9.79
	Isobutane	0.17
	n-Butane	9.98

Cyl. #5600066. 5.0069 % n-Butane, 15.01 % Propylene, 79.984 % Propane

D 2598	Vapor pressure, 100 °F, (calc.)	174 psig
D 3246	Sulfur	<1 ppm
		<0.1 grains/100 ft^3
UOP 619	Fluoride	0.2 ppm
D 1837	Volatile residue,	
	Temperature @ 95 % evaporation	-30.0 °F
D 2158	Residual matter	
	Residue on evaporation	<0.05 mL
	Oil stain	Pass (0.3 mL)
D 1838	Copper corrosion	1A
D 2713	Moisture	Pass
		Volume %
D 2163	Ethane	0.05
	Propane	80.23
	Propylene	14.60
	Isobutane	0.15
	n-Butane	4.97

Cyl. #5600234, 1.908 % n-Butane, 3.835 % Propylene 94.257 % Propane

D 2598	Vapor pressure, 100 °F, (calc.)	174 psig
D 3246	Sulfur	<1 ppm
		<0.1 grains/100 ft^3
UOP 619	Fluoride	0.1 ppm
D 1837	Volatile residue,	
	Temperature @ 95 % evaporation	-38.2 °F
D 2158	Residual matter	
	Residue on evaporation	<0.05 mL
	Oil stain	Pass (0.3 mL)

D 1838	Copper corrosion	1A
D 2713	Moisture	Pass

		Volume %
D 2163	Ethane	0.02
	Propane	94.07
	Propylene	3.72
	Isobutane	0.29
	n-Butane	1.90

Dixie Services Incorporated.

John C. Powers

JCP/mf

Certificate of Analysis

PHILLIPS CHEMICAL COMPANY
A DIVISION OF PHILLIPS PETROLEUM COMPANY

SPECIALTY CHEMICALS
P.O. BOX 968
BORGER, TX 79008-0968

CUSTOMER : ADEPT

BLEND NO.: 24-A-07-98 REQUISITION: 483581

CYLINDER NO.: CS-175712 QUANTITY: 102.86 LBS.

BLEND PRESSURE: 122.027

COMPONENTS	REQUESTED COMPOSITION L.VOL. %	REQUESTED COMPOSITION MOL%	GRAVIMETRIC COMPOSITION WT%	GRAVIMETRIC COMPOSITION L.VOL%
PROPANE	85	04.92	84.17	85.04
N-BUTANE	5	4.36	5.60	5.00
PROPYLENE	10	10.72	10.14	9.96
TOTAL	100	100.00	100.00	100.00

ALL BLENDS ARE REPORTED IN GRAVIMETRIC ANALYSIS
WITH CHROMATOGRAPHIC VERIFICATION.

SCALES CERTIFIED WITH WEIGHTS TRACEABLE TO N.I.S.T. STNADARDS.

DCD:7-24-98

Certificate of Analysis

PHILLIPS CHEMICAL COMPANY
A DIVISION OF PHILLIPS PETROLEUM COMPANY

SPECIALTY CHEMICALS
P.O. BOX 968
BORGER, TX 79008-0968

CUSTOMER : ADEPT

BLEND NO.: 24-C-7-98 REQUISITION:

CYLINDER NO.: CS-173849 QUANTITY: 102.86 LBS.

BLEND PRESSURE: 128.104

COMPONENTS	REQUESTED COMPOSITION L.VOL %	REQUESTED COMPOSITION MOL%	GRAVIMETRIC COMPOSITION WT%	GRAVIMETRIC COMPOSITION L.VOL%
PROPANE	77	75.98	76.43	77.08
N-BUTANE	1.6	1.38	1.83	1.60
PROPYLENE	21.4	22.64	21.74	21.32
TOTAL	100	100.00	100.00	100.00

ALL BLENDS ARE REPORTED IN GRAVIMETRIC ANALYSIS
WITH CHROMATOGRAPHIC VERIFICATION.

SCALES CERTIFIED WITH WEIGHTS TRACEABLE TO N.I.S.T. STANDARDS.

DGD:7-31-98

Appendix 2

Test Parameters

Test Parameters

Project Number:	2L9801
Test Cell Number:	1
Test Engineer:	Manfred Ochsner, MSCD
Project Engineer:	Tony Brasil, SSD
Tests:	20 FTPs with speciation for HC and Carbonyls double bags for HC speciation
Fuel:	6 LPG fuels, fueling off-board
Vehicle:	Bi-fuel Ford F-150, ETW 5500 lbs.
LPG Capacity:	30 gallons
Certification:	98 MY, MDV 2, 49 state engine family WFMXT05.45BF
CVS:	350 cfm with heated mixing tee
Ballast:	none required
Target Coeff.:	a=52.99, b=0, c=0.03855
Coast Down:	16.02 sec. (twin roll dyno)
Horsepower:	15.6 (twin roll dyno)
Prep:	double LA 4 cycle
AC Load:	10% added to c-term
Tire Pressure:	35 psi for single roll dyno
Canister Volume:	2.8 liter, purge off-board after each test because on-board purge algorithm is disabled.
Gasoline Capacity:	25 gallons, drain gasoline tank before first test

Note: LPG must be supplied to engine in liquid form but since bottles feed from the bottom there should be no problem.

Appendix 3

Test Schedule

Test Schedule

Test #	Fuel	Test Date	Test Status	Notes
1C1	Base Fuel	5/27/98	Invalid	Wrong dyno. coefficient
1C2	Base Fuel	5/28/98	Invalid	Wrong dyno. coefficient
1C3	Test Fuel 1	5/29/98	Invalid	Wrong dyno. coefficient
1C4	Test Fuel 1	6/2/98	Invalid	Wrong dyno. coefficient
1C5	Test Fuel 2	6/3/98	Invalid	Wrong dyno. coefficient
1C6	Test Fuel 2	6/4/98	Invalid	Wrong dyno. coefficient
1C7	Test Fuel 3	6/5/98	Invalid	Wrong dyno. coefficient
1C8	Base Fuel	6/16/98	OK	
1C9	Base Fuel	6/17/98	OK	
1C10	Test Fuel 1	6/23/98	Abort	Power out
1C10	Test Fuel 1	7/1/98	OK	
1C11	Test Fuel 2	7/2/98	OK	
1C12	Test Fuel 2	7/3/98	OK	
1C13	Test Fuel 1	7/7/98	OK	
1C14	Test Fuel 3	7/14/98	Abort	Computer failure
1C14	Test Fuel 3	7/15/98	OK	
1C15	Test Fuel 3	7/16/98	OK	
1C16	Test Fuel 4	7/17/98	Cancelled	
1C16	Test Fuel 4	7/24/98	OK	
1C17	Test Fuel 4	7/28/98	OK	
1C18	Base Fuel	7/30/98	OK	
1C19	Base Fuel	7/31/98	Abort	
1C19	Base Fuel	8/5/98	OK	
1C20	Test Fuel 1*	8/12/98	OK	
1C21	Test Fuel 3	8/26/98	OK	
1C22	Test Fuel 4	8/27/98	OK	
1C23	Test Fuel 5	8/28/98	OK	
1C24	Test Fuel 5	9/4/98	OK	
1C25	Base Fuel	9/16/98	OK	
1C26	Base Fuel	9/23/98	OK	
1C27	Test Fuel 5	9/25/98	OK	

* From second batch of fuel.

Appendix 4

Emissions Test Results

Emissions Test Results

Ford F-150 Bi-Fuel Pickup

Test Date	Fuel ID	Odometer miles	THC g/mi	CO g/mi	NOx g/mi	NMOG g/mi	Ozone g/mi	CO2 g/mi	Fuel Econ. mpg
6/16/98	Base	6699	0.057	2.064	0.031	0.036	0.047	540	10.6
6/17/98	Base	6739	0.047	1.714	0.028	0.029	0.037	544	10.6
7/30/98	Base	7197	0.045	1.114	0.055	0.033	0.040	554	10.4
8/5/98	Base	7278	0.053	2.071	0.045	0.034	0.043	564	10.2
9/16/98	Base	7533	0.066	3.105	0.045	0.044	0.073	555	10.3
9/23/98	Base	7572	0.061	2.101	0.034	0.041	0.049	551	10.4
	Average		**0.055**	**2.028**	**0.040**	**0.035**	**0.048**	**551**	**10.4**
7/1/98	Fuel 1	6821	0.047	1.324	0.044	0.032	0.047	556	10.4
7/7/98	Fuel 1	6936	0.049	2.340	0.033	0.026	0.040	561	10.3
8/12/98	Fuel 1	7329	0.054	2.465	0.035	0.045	0.061	554	10.5
	Average		**0.050**	**2.043**	**0.037**	**0.035**	**0.050**	**557**	**10.4**
7/2/98	Fuel 2	6861	0.060	2.002	0.048	0.041	0.062	557	10.4
7/3/98	Fuel 2	6904	0.054	2.148	0.038	0.036	0.073	557	10.4
	Average		**0.057**	**2.075**	**0.043**	**0.038**	**0.068**	**557**	**10.4**
7/15/98	Fuel 3	7012	0.045	0.994	0.048	0.030	0.047	556	10.5
7/16/98	Fuel 3	7052	0.060	1.990	0.044	0.040	0.059	556	10.5
8/26/98	Fuel 3	7370	0.051	1.751	0.060	0.035	0.057	566	10.3
	Average		**0.052**	**1.578**	**0.051**	**0.035**	**0.054**	**559**	**10.4**
7/24/98	Fuel 4	7116	0.080	3.507	0.044	0.053	0.074	556	10.6
7/28/98	Fuel 4	7157	0.064	2.603	0.021	0.042	0.063	556	10.6
8/27/98	Fuel 4	7411	0.066	2.214	0.056	0.047	0.063	553	10.7
	Average		**0.070**	**2.775**	**0.040**	**0.047**	**0.067**	**555**	**10.6**
8/28/98	Fuel 5	7451	0.046	3.014	0.040	0.034	0.059	552	10.5
9/4/98	Fuel 5	7492	0.031	1.143	0.066	0.027	0.059	546	10.7
9/25/98	Fuel 5	7613	0.048	2.256	0.042	0.039	0.062	548	10.6
	Average		**0.042**	**2.138**	**0.050**	**0.033**	**0.060**	**549**	**10.6**

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 8 Cert. Fuel

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	8	**MVDAS Test ID.**	9801615
Test Type	FTP	**Make**	FORD
Test Date	06/16/98	**Model**	P/UF-150SUPC
Fuel Code	70	**Odometer**	6699
Fuel Type	Cert. Fuel		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.110	0.026	0.087	2.169	565.450	0.107	10.142
PHASE 2	0.043	0.025	0.020	2.426	557.485	0.005	10.282
PHASE 3	0.042	0.021	0.023	1.303	489.267	0.023	11.747
WEIGHTED	0.057	0.024	0.035	2.064	540.399	0.031	10.615

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	85.34	5.36	90.86	140.07	1.54
PHASE 2	20.82	0.46	21.55	27.87	1.29
PHASE 3	23.31	0.19	23.65	14.81	0.63
WEIGHTED	34.87	1.36	36.45	47.48	1.30

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 9 Cert. Fuel

Project No.	2L9801		
Proj. Veh. No.	1	MVDAS Veh. ID.	6820
Proj. Test No.	9	MVDAS Test ID.	9801627
Test Type	FTP	Make	FORD
Test Date	06/17/98	Model	P/UF-150SUPC
Fuel Code	70	Odometer	6739
Fuel Type	Cert. Fuel		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.098	0.025	0.076	2.259	586.390	0.087	10.123
PHASE 2	0.031	0.021	0.012	1.960	560.111	0.008	10.248
PHASE 3	0.040	0.017	0.024	0.839	495.345	0.021	11.620
WEIGHTED	0.047	0.021	0.028	1.714	543.634	0.028	10.564

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	72.78	6.12	78.94	119.56	1.51
PHASE 2	11.06	0.08	11.29	15.40	1.36
PHASE 3	23.88	0.12	24.10	17.24	0.72
WEIGHTED	27.35	1.34	28.81	37.46	1.30

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 10 Fuel 1

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	10	**MVDAS Test ID.**	9801799
Test Type	FTP	**Make**	FORD
Test Date	07/01/98	**Model**	P/UF-150SUPC
Fuel Code	71	**Odometer**	6821
Fuel Type	Fuel 1		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.129	0.024	0.107	1.844	574.322	0.107	10.084
PHASE 2	0.021	0.017	0.006	1.341	578.205	0.030	10.036
PHASE 3	0.035	0.016	0.020	0.897	501.820	0.024	11.572
WEIGHTED	0.047	0.018	0.031	1.324	556.422	0.044	10.426

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	102.47	5.81	108.28	183.35	1.69
PHASE 2	7.61	0.16	7.76	10.28	1.32
PHASE 3	21.71	0.28	21.98	15.00	0.68
WEIGHTED	31.14	1.35	32.49	47.44	1.46

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 11 Fuel 2

Project No.	2L9801		
Proj. Veh. No.	1	MVDAS Veh. ID.	6820
Proj. Test No.	11	MVDAS Test ID.	9801803
Test Type	FTP	Make	FORD
Test Date	07/02/98	Model	P/UF-150SUPC
Fuel Code	72	Odometer	6861
Fuel Type	Fuel 2		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.120	0.023	0.099	1.688	572.621	0.099	10.162
PHASE 2	0.041	0.025	0.019	2.276	578.907	0.027	10.040
PHASE 3	0.050	0.023	0.029	1.722	502.967	0.048	11.564
WEIGHTED	0.060	0.024	0.038	2.002	556.707	0.048	10.446

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	99.33	6.24	105.57	202.06	1.91
PHASE 2	19.33	0.47	19.80	27.89	1.41
PHASE 3	32.09	0.53	32.61	20.99	0.64
WEIGHTED	39.43	1.63	41.06	61.82	1.51

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 12 Fuel 2

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	12	**MVDAS Test ID.**	9801820
Test Type	FTP	**Make**	FORD
Test Date	07/03/98	**Model**	P/UF-150SUPC
Fuel Code	72	**Odometer**	6904
Fuel Type	Fuel 2		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.128	0.028	0.103	2.240	577.362	0.139	10.063
PHASE 2	0.029	0.023	0.008	2.148	575.076	0.016	10.111
PHASE 3	0.046	0.024	0.025	2.078	506.207	0.005	11.478
WEIGHTED	0.054	0.024	0.032	2.148	556.570	0.038	10.443

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	105.31	6.58	111.89	287.77	2.57
PHASE 2	9.81	0.17	9.98	14.29	1.43
PHASE 3	27.05	0.37	27.42	22.53	0.82
WEIGHTED	34.37	1.54	35.91	73.22	2.04

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 13 Fuel 1

Project No.	2L9801		
Proj. Veh. No.	1	MVDAS Veh. ID.	6820
Proj. Test No.	13	MVDAS Test ID.	9801857
Test Type	FTP	Make	FORD
Test Date	07/07/98	Model	P/UF-150SUPC
Fuel Code	71	Odometer	6936
Fuel Type	Fuel 1		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.108	0.022	0.086	1.839	577.680	0.071	10.027
PHASE 2	0.028	0.024	0.006	2.258	580.377	0.024	9.973
PHASE 3	0.045	0.024	0.023	2.873	512.747	0.020	11.257
WEIGHTED	0.049	0.024	0.028	2.340	561.245	0.033	10.307

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	76.49	4.06	80.63	155.28	1.93
PHASE 2	7.34	0.12	7.55	7.95	1.05
PHASE 3	18.72	0.52	19.24	14.51	0.75
WEIGHTED	24.80	1.02	25.88	40.26	1.56

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 14 Fuel 3

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	14	**MVDAS Test ID.**	9801954
Test Type	FTP	**Make**	FORD
Test Date	07/15/98	**Model**	P/UF-150SUPC
Fuel Code	73	**Odometer**	7012
Fuel Type	Fuel 3		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.122	0.025	0.099	1.837	572.068	0.086	10.191
PHASE 2	0.017	0.021	0.000	0.863	577.422	0.038	10.129
PHASE 3	0.037	0.014	0.025	0.603	502.860	0.036	11.634
WEIGHTED	0.045	0.020	0.027	0.994	555.838	0.048	10.516

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	95.85	4.79	100.77	182.95	1.82
PHASE 2	4.48	0.18	4.97	9.13	1.84
PHASE 3	22.74	0.46	23.44	15.11	0.64
WEIGHTED	28.44	1.21	29.91	46.82	1.57

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 15 Fuel 3

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	15	**MVDAS Test ID.**	9801980
Test Type	FTP	**Make**	FORD
Test Date	07/16/98	**Model**	P/UF-160SUPC
Fuel Code	73	**Odometer**	7052
Fuel Type	Fuel 3		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.111	0.026	0.086	2.033	577.313	0.081	10.094
PHASE 2	0.048	0.028	0.023	2.429	576.332	0.023	10.103
PHASE 3	0.045	0.018	0.028	1.129	502.656	0.057	11.620
WEIGHTED	0.060	0.025	0.038	1.990	556.315	0.044	10.476

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	87.55	3.70	91.25	170.22	1.87
PHASE 2	24.01	0.42	24.42	36.53	1.50
PHASE 3	29.08	0.48	29.56	19.57	0.66
WEIGHTED	38.55	1.08	39.62	59.28	1.50

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 16 Fuel 4

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	16	**MVDAS Test ID.**	9802004
Test Type	FTP	**Make**	FORD
Test Date	07/24/98	**Model**	P/UF-150SUPC
Fuel Code	74	**Odometer**	7116
Fuel Type	Fuel 4		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.139	0.033	0.109	2.960	580.158	0.137	10.156
PHASE 2	0.067	0.034	0.036	4.130	573.742	0.005	10.240
PHASE 3	0.060	0.028	0.034	2.743	504.691	0.046	11.673
WEIGHTED	0.080	0.032	0.050	3.507	556.139	0.044	10.578

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	113.02	4.04	117.05	189.25	1.62
PHASE 2	37.24	0.26	37.49	51.80	1.38
PHASE 3	34.93	0.44	35.37	30.17	0.85
WEIGHTED	52.31	1.02	53.33	74.21	1.39

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 17 Fuel 4

Project No.	2L9801		
Proj. Veh. No.	1	MVDAS Veh. ID.	6820
Proj. Test No.	17	MVDAS Test ID.	9802113
Test Type	FTP	Make	FORD
Test Date	07/28/98	Model	P/UF-150SUPC
Fuel Code	74	Odometer	7157
Fuel Type	Fuel 4		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.139	0.034	0.108	3.175	573.159	0.079	10.273
PHASE 2	0.036	0.026	0.013	2.604	575.509	0.003	10.253
PHASE 3	0.060	0.028	0.034	2.187	505.849	0.010	11.667
WEIGHTED	0.064	0.028	0.038	2.603	555.868	0.021	10.611

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	115.53	3.76	119.29	197.15	1.65
PHASE 2	17.26	0.14	17.40	28.10	1.62
PHASE 3	29.72	0.45	30.17	27.15	0.90
WEIGHTED	41.09	0.95	42.04	62.78	1.49

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 18 Cert. Fuel

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	18	**MVDAS Test ID.**	9802145
Test Type	FTP	**Make**	FORD
Test Date	07/30/98	**Model**	P/UF-150SUPC
Fuel Code	70	**Odometer**	7197
Fuel Type	Cert. Fuel		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.112	0.023	0.091	1.775	573.202	0.090	10.016
PHASE 2	0.021	0.014	0.008	1.143	574.840	0.029	10.010
PHASE 3	0.041	0.013	0.028	0.560	499.964	0.078	11.523
WEIGHTED	0.045	0.016	0.031	1.114	553.902	0.055	10.386

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	85.35	3.32	88.67	140.12	1.58
PHASE 2	10.50	0.28	11.01	12.75	1.16
PHASE 3	31.62	0.13	31.75	17.52	0.55
WEIGHTED	31.86	0.80	32.78	40.26	1.23

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 19 Cert. Fuel

Project No.	2L9801		
Proj. Veh. No.	1	MVDAS Veh. ID.	6820
Proj. Test No.	19	MVDAS Test ID.	9802169
Test Type	FTP	Make	FORD
Test Date	08/05/98	Model	P/UF-150SUPC
Fuel Code	70	Odometer	7278
Fuel Type	Cert. Fuel		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.117	0.026	0.093	2.144	573.040	0.080	10.009
PHASE 2	0.028	0.020	0.010	2.031	586.468	0.016	9.788
PHASE 3	0.051	0.022	0.031	2.090	513.573	0.072	11.166
WEIGHTED	0.053	0.021	0.033	2.071	563.673	0.045	10.180

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	94.55	3.94	98.48	147.71	1.50
PHASE 2	10.72	0.28	11.00	13.41	1.22
PHASE 3	29.18	0.19	29.37	20.23	0.69
WEIGHTED	33.17	0.99	34.16	43.04	1.26

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 20 Fuel 1 New Batch

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	20	**MVDAS Test ID.**	9802285
Test Type	FTP	**Make**	FORD
Test Date	08/12/98	**Model**	P/UF-150SUPC
Fuel Code	76	**Odometer**	7329
Fuel Type	Fuel 1 New Batch		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.139	0.029	0.118	3.194	575.276	0.084	10.051
PHASE 2	0.025	0.021	0.009	2.356	570.551	0.006	10.162
PHASE 3	0.046	0.024	0.028	2.123	505.843	0.052	11.459
WEIGHTED	0.054	0.023	0.037	2.465	553.796	0.035	10.463

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	139.69	4.36	144.05	221.72	1.54
PHASE 2	11.34	0.15	11.49	15.11	1.32
PHASE 3	34.94	1.23	36.17	29.48	0.82
WEIGHTED	44.31	1.05	45.36	61.39	1.35

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 21 Fuel 3

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	21	**MVDAS Test ID.**	9802446
Test Type	FTP	**Make**	FORD
Test Date	08/26/98	**Model**	P/UF-150SUPC
Fuel Code	73	**Odometer**	7370
Fuel Type	Fuel 3		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.135	0.022	0.115	1.628	584.332	0.118	9.983
PHASE 2	0.023	0.018	0.006	1.830	586.497	0.042	9.946
PHASE 3	0.040	0.020	0.022	1.695	513.392	0.052	11.358
WEIGHTED	0.051	0.019	0.033	1.751	565.985	0.060	10.306

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	117.02	4.08	121.27	212.65	1.75
PHASE 2	7.10	0.41	7.77	13.70	1.76
PHASE 3	22.24	0.11	22.49	23.00	1.02
WEIGHTED	33.99	1.03	35.22	57.12	1.62

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 22 Fuel 4

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	22	**MVDAS Test ID.**	9802468
Test Type	FTP	**Make**	FORD
Test Date	08/27/98	**Model**	P/UF-150SUPC
Fuel Code	74	**Odometer**	7411
Fuel Type	Fuel 4		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.154	0.029	0.128	2.454	574.297	0.085	10.272
PHASE 2	0.037	0.023	0.016	2.314	570.736	0.023	10.346
PHASE 3	0.053	0.024	0.031	1.845	504.252	0.097	11.716
WEIGHTED	0.066	0.025	0.043	2.214	553.173	0.056	10.674

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	131.81	3.88	135.81	201.93	1.49
PHASE 2	17.62	0.32	18.15	28.27	1.56
PHASE 3	32.95	0.05	33.14	24.54	0.74
WEIGHTED	45.52	0.98	46.68	63.26	1.36

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 23 Fuel 5

Project No.	2L9801		
Proj. Veh. No.	1	MVDAS Veh. ID.	6820
Proj. Test No.	23	MVDAS Test ID.	9802475
Test Type	FTP	Make	FORD
Test Date	08/28/98	Model	P/UF-150SUPC
Fuel Code	75	Odometer	7451
Fuel Type	Fuel 5		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.093	0.023	0.076	2.734	574.385	0.114	10.110
PHASE 2	0.034	0.028	0.013	3.762	569.536	0.005	10.170
PHASE 3	0.034	0.021	0.018	1.814	502.791	0.051	11.574
WEIGHTED	0.046	0.025	0.027	3.014	552.216	0.040	10.507

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	86.11	4.19	90.31	202.24	2.24
PHASE 2	17.07	0.18	17.25	24.72	1.43
PHASE 3	23.06	0.15	23.21	15.38	0.66
WEIGHTED	33.01	0.97	33.98	58.78	1.73

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 24 Fuel 5

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	24	**MVDAS Test ID.**	9802559
Test Type	FTP	**Make**	FORD
Test Date	09/04/98	**Model**	P/UF-150SUPC
Fuel Code	75	**Odometer**	7492
Fuel Type	Fuel 5		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.091	0.020	0.076	1.537	572.164	0.137	10.183
PHASE 2	0.015	0.015	0.004	1.129	560.135	0.045	10.416
PHASE 3	0.016	0.012	0.007	0.871	499.117	0.052	11.695
WEIGHTED	0.031	0.015	0.020	1.143	545.858	0.066	10.687

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	88.87	4.72	93.59	228.99	2.45
PHASE 2	8.55	0.42	9.06	16.40	1.81
PHASE 3	11.27	0.28	11.64	10.92	0.94
WEIGHTED	25.97	1.28	27.31	59.01	2.16

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 25 Cert. Fuel

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	25	**MVDAS Test ID.**	9802678
Test Type	FTP	**Make**	FORD
Test Date	09/16/98	**Model**	P/UF-150SUPC
Fuel Code	70	**Odometer**	7533
Fuel Type	Cert. Fuel		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.135	0.030	0.107	2.987	575.448	0.122	9.944
PHASE 2	0.053	0.031	0.024	3.876	570.920	0.004	10.002
PHASE 3	0.039	0.025	0.016	1.739	508.031	0.066	11.299
WEIGHTED	0.066	0.029	0.039	3.105	554.585	0.045	10.315

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	104.91	3.43	108.49	151.23	1.39
PHASE 2	32.31	0.19	32.64	71.28	2.18
PHASE 3	16.98	0.13	17.15	15.86	0.92
WEIGHTED	43.14	0.83	44.08	72.60	1.65

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 26 Cert. Fuel

Project No.	2L9801		
Proj. Veh. No.	1	**MVDAS Veh. ID.**	6820
Proj. Test No.	26	**MVDAS Test ID.**	9802772
Test Type	FTP	**Make**	FORD
Test Date	09/23/98	**Model**	P/UF-150SUPC
Fuel Code	70	**Odometer**	7572
Fuel Type	Cert. Fuel		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.141	0.026	0.117	2.338	565.002	0.112	10.144
PHASE 2	0.030	0.022	0.010	2.110	573.274	0.003	10.010
PHASE 3	0.057	0.026	0.034	1.905	497.648	0.033	11.527
WEIGHTED	0.061	0.024	0.039	2.101	550.738	0.034	10.416

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	118.49	4.45	122.94	169.29	1.38
PHASE 2	11.31	0.12	11.43	12.62	1.10
PHASE 3	34.22	0.14	34.36	25.07	0.73
WEIGHTED	39.89	1.02	40.91	48.60	1.19

LPG FUEL EVALUATION TEST SUMMARY
Vehicle 1 Test 27 Fuel 5

Project No.	2L9801		
Proj. Veh. No.	1	MVDAS Veh. ID.	6820
Proj. Test No.	27	MVDAS Test ID.	9802793
Test Type	FTP	Make	FORD
Test Date	09/25/98	Model	P/UF-150SUPC
Fuel Code	75	Odometer	7613
Fuel Type	Fuel 5		

TEST CELL (DYNO) DATA SUMMARY, G/MI

	THC	CH4	DYNO NMHC	CO	CO2	NOX	MPG
PHASE 1	0.124	0.023	0.106	2.208	557.156	0.097	10.434
PHASE 2	0.022	0.020	0.007	2.556	571.196	0.004	10.175
PHASE 3	0.038	0.021	0.023	1.727	496.909	0.073	11.713
WEIGHTED	0.048	0.021	0.032	2.256	547.900	0.042	10.612

SPECIATION AND REACTIVITY (GC) DATA SUMMARY, MG/MI

	GC NMHC	CARBONYLS	TOTAL NMOG	TOTAL REACTIVITY (OZONE)	SPECIFIC REACTIVITY OZONE/NMOG
PHASE 1	115.70	6.30	122.00	234.13	1.92
PHASE 2	11.32	0.11	11.44	15.78	1.38
PHASE 3	26.76	0.17	26.93	18.47	0.69
WEIGHTED	37.20	1.41	38.61	61.76	1.60