



Light-Duty Vehicle Operator Survey: Summary of April 1996 Data Collection Period

Introduction

The primary objective of the light-duty vehicle operator survey is to collect performance and driveability data on alternative fuel vehicles (AFVs) and comparable gasoline vehicles. The data are collected through telephone surveys, which are conducted by Dwigths Energydata for the U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL). Four survey rounds are planned this year—each will be conducted during a different season to capture any seasonal differences. This summarizes the second survey, which was conducted during the spring. Dwigths Energydata supplied the data to NREL, where the information was analyzed.

Data were collected on compressed natural gas (CNG) vehicles, flexible-fuel ethanol (E85) vehicles, and flexible-fuel methanol (M85) vehicles, along with gasoline control vehicles from the original equipment manufacturers (OEM). Data were also collected from gasoline vehicles that have been converted to operate on CNG (most are bi-fuel after conversion). The survey was conducted with federal government fleet managers and drivers who operate AFVs or gasoline vehicles as a regular part of their work assignments in various cities and states across the country. Most of the AFVs and gasoline vehicles are leased from the General Services Administration (GSA), except for the vehicles converted to operate on CNG. The converted vehicles evaluated in this survey were owned by the federal agency that operates the vehicles.

Fleet managers surveyed were selected randomly from a fleet contact list provided by GSA. All the fleet managers in the GSA contact list had AFVs in their fleet. Contacts at fleets operating CNG conversions were randomly selected from sites involved in the DOE/NREL vehicle conversion project. Drivers surveyed were randomly selected from a contact list developed by contacting fleet managers from the GSA and CNG conversion fleet manager lists. The drivers contacted are not necessarily associated with the fleet managers who participated in the survey during this period. Although fleet managers and drivers were contacted randomly, we did focus on conducting surveys with operators located in areas of the country where alternative fuels were available. A summary of the fleet and driver survey results is provided in the sections that follow.

NREL is a national laboratory of the U.S. Department of Energy (DOE). This survey was conducted for DOE by NREL's Center for Transportation Technologies and Systems.

Fleet Manager Survey Results

The fleet manager survey was designed to obtain perspectives on AFV performance and maintenance compared to that of similar gasoline-fueled vehicles. During this survey period, fleet managers in 18 different states were contacted. Each fleet manager was asked to identify the primary alternative fuel used by AFVs in his fleet. Several fleet managers operate more than one model of AFV, or operate vehicles on more than one alternative fuel. The 75 fleet managers contacted were categorized as follows:

Primary alternative fuel	Number of fleet managers	Fleet managers who operate more than one vehicle model on primary alternative fuel	Fleet managers who operate vehicles on other alternative fuels
CNG-OEM ¹	23	2	2 (M85)
CNG-QVM ²	1	1	-
CNG-CON ³	4	2	-
E85	24	2	3 (CNG, M85)
M85	23	2	1 (CNG)
Total	75	7	6

¹ Original equipment manufacturer

² Qualified vehicle modifier

³ Aftermarket conversion

There are three principal types of AFVs available to fleet managers: OEM vehicles, qualified vehicle modifier (QVM) vehicles, and aftermarket conversions (CON). The OEM vehicles are designed and built by the OEMs (such as Chrysler, Ford, or General Motors). All of the alcohol-fueled vehicles and some CNG vehicles fall into this category. OEM AFVs are designed with the engine, suspension, and chassis upgrades to result in optimum performance and durability. These vehicles have single comprehensive warranties that cover all components, including those that are specific to alternative fuels.

The QVM vehicles are similar to the OEMs except the manufacturer has joined with a “qualified” conversion company to complete the final assembly that enables the vehicle to operate on an alternative fuel. QVMs generally have the same upgrades to the engine and chassis as the OEMs, meet the same safety and emissions standards, and offer a single comprehensive warranty. The QVMs, which are currently available in CNG and LPG models, may be dedicated or bi-fuel, depending on owner preference.

Aftermarket conversions are conversions of gasoline vehicles by an independent company after the vehicle has been purchased. The converted vehicles do not have the engine and chassis upgrades offered in the OEM and QVM vehicles. The conversion company generally provides a separate warranty from the OEM and the OEM warranty will not cover problems or damages resulting from installation or operation of the vehicle on the alternative fuel. Available aftermarket conversions enable operation on CNG or LPG, and may be bi-fuel or dedicated, depending on owner preference. CNG-fueled vehicles are identified as OEM, QVM, or CON where appropriate throughout the remainder of this summary.

The number of vehicles in the fleets represented by these fleet managers is summarized in the following table:

Fleet size (number of vehicles)	Fleets (total LDVs)		Total AFVs in all fleets	
	No.	%	No.	%
10 or less	40	53.3	66	88
11 to 50	19	25.3	5	7
51 to 100	2	2.7	4	5
101 to 200	4	5.4	0	0
more than 200	10	13.3	0	0

When asked if drivers of their fleet vehicles specifically requested AFVs, fleet managers provided the following information:

Response	Fleet managers responding this way	
	No.	%
Don't want AFV	14	19
Want AFV	10	13
Neutral	47	63
Have not noticed	4	5

When asked why drivers of their fleet vehicles wanted, didn't want, or were neutral about the AFVs, three responses were common: (1) lack of vehicle range, (2) lack of vehicle choice (driver take vehicle assigned), and (3) lack of convenient refueling or no alternative fuel available (most common for alcohol-fueled vehicles).

Fleet managers were asked if drivers of their fleet vehicles tend to report more vehicle performance complaints about AFVs or gasoline vehicles. Forty-two (56%) of the 75 fleet managers indicated that the number of performance complaints was equal between AFVs and gasoline vehicles, and 16 (21%) reported that the AFVs received more complaints. When asked about the types of complaints they had received from their AFV drivers over the last month, fleet managers reported the following:

Complaints about AFVs	Fleet managers who received complaints		Fleet managers without complaints	
	No.	%	No.	%
Lack of power	1	1.3	74	98.7
Check engine light on	1	1.3	74	98.7

Fleet managers were also asked about driver reports of stalling after starting or in traffic, poor idle quality, hard starting, hesitation, and engine ping in AFVs, but none reported receiving any of these complaints.

The fleet managers were next asked about their AFV fueling practices. Thirty-four (45%) of the 75 fleet managers reported that there was *not* an alternative fuel station reasonably close to them, and eight (11%) of the 75 reported that alternative fuel stations were hard to find (i.e., there are not enough stations). When asked if the AFVs in their fleet were usually fueled with an alternative fuel or gasoline, the following information was obtained:

Fuel usually used in AFVs	All fleet managers responding this way		Responses of fleet managers whose primary AFV type is:									
			CNG						E85		M85	
	OEM		QVM		CON							
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Alternative fuel	48	64	23	100	1	100	4	100	12	50	8	35
Gasoline	26	35	0	0	0	0	0	0	12	50	14	61
Don't know	1	1	0	0	0	0	0	0	0	0	1	4
Total	75	100	23	100	1	100	4	100	24	100	23	100

The CNG OEM vehicles were operated 100% of the time on CNG, because they are dedicated vehicles. It is, however, interesting to note that fleets operating other types of CNG-fueled vehicles also tended to fuel them most of the time with CNG. The alcohol flexible-fuel vehicles (E85 and M85) appear much more likely to be operated on gasoline, as more than 50% of the fleet managers with flexible-fuel vehicles indicated that their vehicles were usually operated on gasoline.

Finally, fleet managers were asked questions related to vehicle maintenance. Most of the fleet managers (96%) indicated that no different or additional scheduled maintenance was required on the AFVs. The only feedback related to regular or scheduled maintenance was that M85 and E85 vehicles required more frequent oil changes and used a special oil. The fleet managers were also asked about the frequency and types of unscheduled maintenance. Again, the majority (96%) experienced no difference in the types or frequency of unscheduled maintenance for AFVs. Only 4% (three fleet managers) reported differences in the frequency and types of unscheduled repairs. The three managers indicating differences in unscheduled maintenance all operated AFVs fueled with CNG.

The last maintenance question addressed AFV versus gasoline vehicle downtime. Ninety-two percent of the respondents indicated that the vehicle downtime is about the same for AFV and gasoline vehicles in their fleet (all reported an average of less than one day per month). Of the 8% who indicated that downtime differed, five out of six reported more downtime associated with AFVs.

Driver Survey Results

The driver surveys concentrate on the operator's subjective assessment of performance of different AFVs compared to similar gasoline vehicles. The drivers were asked several questions to determine how much driving they do at work and whether they could identify the vehicle they operate at work as an AFV. The goal was to survey 50 drivers of each of the following types of AFVs fueled with each of the following fuels: CNG-OEM/QVM, CNG conversions, E85 flexible-fuel, and M85 flexible-fuel, as well as 50 drivers of similar gasoline vehicles.

Vehicle and Driver Information

The following table summarizes the number of drivers surveyed by vehicle type:

Vehicle type	Number of drivers surveyed	% of driver surveys
CNG-OEM	45	18
CNG-QVM	5	2
CNG-CON	50	20
E85	50	20
Gasoline	50	20
M85	50	20
Total	250	100

During this survey period, CNG-fueled vehicles fell into two primary categories, OEMs and CONs. The OEM vehicles were further categorized as OEM and QVM (described in the fleet manager section). The results of the CNG vehicle driver surveys are presented as OEM, QVM, and CON throughout this section. The vehicles included in the survey, including their locations, are summarized in Appendix A.

Nearly all drivers (98%) indicated they are assigned the vehicles they drive, and have no choice of vehicle. The amount of time the drivers had driven their vehicles, as well as their driving characteristics are indicated below:

Time driven	Drivers		Miles driven in typical week	Drivers		Highway driving (%)	Drivers	
	No.	%		No.	%		No.	%
6 months or less	11	4.4	less than 25	40	16.0	less than 10	72	28.8
6 months to 1 year	62	24.8	26 to 50	50	20.0	11 to 25	36	14.4
1 to 2 years	126	50.4	51 to 100	54	21.6	26 to 50	28	11.2
2 to 3 years	44	17.6	101 to 200	37	14.8	51 to 75	62	24.8
more than 3 years	7	2.8	more than 200	69	27.6	76 to 100	52	20.8

Refueling Information

Ninety-two percent of the drivers in the survey indicated that they refueled their own vehicles. AFV drivers were asked what percent of the time they used alternative fuel in the vehicles, and their answers are summarized in the following table:

Percentage of time alternative fuel used	Drivers of vehicles fueled by:									
	CNG						Ethanol		Methanol	
	OEM		QVM		CON					
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
none (gasoline only)	-	-	0	0	2	4	0	0	1	2
5 to 25	-	-	0	0	3	6	7	14	17	34
26 to 50	-	-	3	60	10	20	10	20	9	18
51 to 75	-	-	1	20	4	8	10	20	4	8
76 to 100	45	100	1	20	31	62	23	46	19	38

The CNG vehicles operating on CNG less than 100% of the time are all bi-fuel vehicles. The results indicate that nearly all the flexible-fuel alcohol and bi-fuel CNG vehicles are operated at least part of the time (>25%) on gasoline. Drivers of M85 flexible-fuel vehicles were most likely to use gasoline instead of M85 in their vehicles. When asked whether an alternative fuel station was within a reasonable distance from where most of their driving was done, about 63% of the drivers responded “yes.” Most of the drivers (74%) indicated a fueling station had to be less than a half mile away to be convenient. Nearly all drivers (~99%) of alternative fuel vehicles indicated fueling

had to be within 2 miles to be convenient. The following table summarizes responses from drivers of AFVs regarding some attributes of alternative fuel refueling stations:

Fueling Station Attribute	Acceptable		Marginal		Not Acceptable		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Accessibility	186	97	6	3	0	0	192	100
Hours of operation	184	96	7	5	1	0.5	192	100
Ease of filling compared to gasoline	188	87	3	1.5	1	0.5	192	100

The majority (96%) of drivers had no personal concerns about refueling their AFV. Those not providing a response to this question generally operated their vehicle only on gasoline or did not refuel their vehicle themselves.

Vehicle Performance Information

Drivers were asked to provide an overall evaluation of how their vehicles perform. The results are tabulated below:

Vehicle performance rating	Drivers of vehicles fueled by:													
	All		CNG						E85		Gasoline		M85	
			OEM		QVM		CON							
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Excellent	48	19	12	27	0	0	1	2	13	26	12	24	10	20
Very good	153	61	21	47	3	60	38	76	34	68	32	64	25	50
Average	30	12	5	11	0	0	6	12	3	6	4	8	12	24
Fair	12	5	5	11	1	20	2	4	0	0	2	4	2	4
Poor	7	3	2	4	1	20	3	6	0	0	0	0	1	2

Drivers generally rated all the vehicle types as average or better. Vehicles receiving the lowest ratings tended to be AFVs operating on CNG. When drivers were asked how an AFV compares to similar gasoline vehicles, or vice versa, the following information was obtained:

Vehicle comparison	AFV driver (AFV compared to gasoline)		Gasoline vehicle driver (gasoline compared to AFV)	
	No.	%	No.	%
Better	8	4.1	4	29
About the same	142	72.4	10	71
Not as well	46	23.5	0	0

The majority (>76%) of AFV drivers said their vehicles were no different from, or compare favorably to, gasoline vehicles. Nearly 70% of AFV drivers who reported vehicle performance as worse than gasoline vehicles operated CNG-fueled vehicles. When asked why they felt the AFVs performed worse, limited vehicle range and lack of power were the most common responses. It is important to note that a large number of the gasoline vehicle drivers surveyed (72% or 36 of 50) did not provide an answer to this question. In general, the non-responding drivers of AFVs had only driven their vehicle on gasoline and the non-responding gasoline drivers had never driven an AFV, so these drivers felt they had no basis for comparison.

Next, drivers were asked whether they had experienced any performance-related problems with their vehicle over the last month. The “yes” responses are summarized below:

Performance problem	Number of reports from drivers of vehicles fueled by:					
	CNG			E85	Gasoline	M85
	OEM	QVM	CON			
Hard to start	1	-	1	-	-	1
Stalled after starting	1	-	-	-	-	1
Stalled in traffic	1	-	-	-	-	-
Poor idle	-	1	1	-	-	-
Hesitation	-	-	-	-	2	-
Lack of power	1	-	-	-	1	2
Engine ping	1	-	-	1	-	-
Check engine light on	-	-	-	-	1	-
Total	5	1	2	1	4	4

Overall, few problems were reported, and the results show alternative fuel vehicle drivers reporting similar numbers of complaints as gasoline-fueled vehicles. The exceptions were E85 vehicle drivers, who reported fewer problems than gasoline vehicle drivers.

Next, drivers were asked to rate the acceleration of their vehicles. The following table summarizes the responses:

Vehicle acceleration rating	Drivers of vehicles fueled by:													
	All		CNG						E85		Gasoline		M85	
			OEM		QVM		CON							
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Excellent	16	6.4	3	7	0	0	0	0	6	12	2	4	5	10
Very good	118	47.6	26	58	2	40	19	40	31	62	25	50	15	30
Average	88	35.5	12	26	2	40	17	35	12	24	21	42	24	48
Fair	19	7.7	3	7	0	0	10	21	1	2	1	2	4	8
Poor	7	2.8	1	2	1	20	2	4	0	0	1	2	2	4

Relatively few drivers rated their vehicle acceleration as poor, but only the ethanol flexible-fueled vehicles received no poor ratings.

The final performance question asked of drivers was how satisfied they were with the vehicle range on a tank of fuel. The results are tabulated below:

Vehicle range rating	Drivers of vehicles fueled by:													
	All		CNG						E85		Gasoline		M85	
			OEM		QVM		CON							
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Acceptable	191	77	15	33	5	100	30	63	44	88	50	100	47	94
Marginal	49	20	23	51	0	0	17	35	6	12	0	0	3	6
Not acceptable	8	3	7	16	0	0	1	2	0	0	0	0	0	0

In general, drivers of CNG-fueled vehicles were the least satisfied with the driving range, with 67% of the CNG-OEM vehicle drivers rating range as marginal or not acceptable. All drivers of gasoline vehicles were satisfied with their driving range.

Drivers were asked what their overall satisfaction level was with the vehicle they drive at work. They were asked to think about performance, convenience, and any other factors that influenced them while driving. Their answers are summarized below:

Overall vehicle satisfaction level	Drivers of vehicles fueled by:													
	All		CNG						E85		Gasoline		M85	
			OEM		QVM		CON							
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Very satisfied	65	26.2	11	24	0	0	4	8.2	16	32	24	48	10	20
Leaning toward satisfied	133	53.4	22	49	3	60	35	71.4	30	60	20	40	23	46
Neutral	30	12	2	4.5	1	20	4	8.2	4	8	4	8	15	30
Leaning toward dissatisfied	15	6	8	18	1	20	3	6.1	0	0	2	4	1	2
Dissatisfied	6	2.4	2	4.5	0	0	3	6.1	0	0	0	0	1	2

The majority (~80%) of drivers were satisfied or very satisfied overall with their vehicle. The majority of dissatisfied drivers (17 out of 21) operated CNG-fueled vehicles.

After providing their satisfaction rating the drivers were asked what influenced them most in making this evaluation. The most common response was that the vehicle performs well. Some drivers of AFVs also indicated that their vehicles perform well or perform like gasoline vehicles. The most common negative responses were associated with poor mileage or range of the CNG-OEM vehicles and not enough refueling stations for all AFVs. When asked if they had any other comments about their vehicles, some drivers of the alcohol flexible-fuel vehicles commented that alcohol fuel was not available in their areas for them to use, and some drivers of CNG vehicles again complained about the lack of vehicle range.

The AFV drivers were asked if they would recommend a vehicle that operates on an alternative fuel to somebody else. The results are summarized below:

Recommend AFV	Drivers of vehicles fueled by:											
	All AFVs		CNG						E85		M85	
			OEM		QVM		CON					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	146	74	27	61	4	80	35	73	48	96	32	65
No	50	26	17	39	1	20	13	27	2	4	17	35

Seventy-four percent of the AFV drivers would recommend an AFV to other drivers. Drivers of AFVs who would not recommend them to others were asked to identify the single most important reason they would not recommend AFVs. The most common answer from drivers of CNG-fueled vehicles was lack of vehicle range. Many drivers of alcohol-fueled vehicles indicated they could not recommend AFVs until more fueling stations are available.

Summary

The second quarter survey round was completed with responses from 75 fleet managers and 250 drivers of federal fleet vehicles. The major survey findings were:

From fleet managers:

- Lack of range and convenient refueling facilities are the most common reasons fleet managers cite for their vehicle drivers not wanting AFVs.
- More than 50% of fleet managers indicated they received the same number of performance complaints about AFVs and gasoline vehicles.
- Sixty-four percent reported their AFVs usually refueled with alternative fuel.
- Nearly all fleet managers (96%) reported no difference in types or frequency of unscheduled maintenance.

From drivers:

- Most CNG conversions (70%), and 44% of alcohol-fueled vehicles are operated more than 50% of the time on gasoline.
- More than 60% of AFV drivers indicated an alternative fuel station was within a reasonable distance. Seventy-four percent of drivers indicated ½ mile as a reasonable distance, and 99% indicated refueling had to be within 2 miles to be convenient.

- Eighty percent of AFV and gasoline drivers rated overall vehicle performance as very good or excellent. Nearly all vehicles receiving poor performance ratings were CNG-fueled.
- Performance complaints were low overall.
- Vehicle range was reported as marginal or not acceptable by 84% of CNG-OEM drivers and 47% of CNG-CON drivers. Most drivers of alcohol-fueled vehicles (91%), all drivers of CNG-QVMs, and all drivers of gasoline-fueled vehicles were satisfied with their vehicle range.
- Eighty percent of drivers were generally satisfied with their vehicle. Nearly all dissatisfied drivers operated CNG-fueled vehicles.
- Seventy-four percent of AFV drivers would recommend AFVs to others. The most common reasons to *not* recommend AFVs were lack of refueling stations, and lack of range for CNG-fueled vehicles.

E85	Ford Taurus	1994	Indianapolis	IN
E85	Chevy Lumina	1995	Indianapolis	IN
E85	Ford Taurus	1993	Indianapolis	IN
E85	Ford Taurus	1995	Indianapolis	IN
Vehicle Fuel	MODEL	YEAR	CITY	ST
E85	Ford Taurus	1995	St Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Ford Taurus	1995	St. Louis	MO
E85	Chevy Lumina	1995	Brooking	SD
E85	Chevy Lumina	1994	Pierre	SD
E85	Chevy Lumina	1993	Pierre	SD
E85	Ford Taurus	1995	Merrifield	VA
E85	Chevy Lumina	1993	Madison	WI
E85	Chevy Lumina	1994	Madison	WI
E85	Chevy Lumina	1994	Madison	WI
E85	Ford Taurus	1995	Madison	WI
GAS	Ford Taurus	1995	Alameda	CA
GAS	Dodge Ram Van	1992	Putman	CA
GAS	Ford Taurus	1995	San Jose	CA
GAS	Ford Taurus	1993	Brush	CO
GAS	Dodge Spirit	1993	Colorado Springs	CO
GAS	Dodge Caravan	1992	Golden	CO
GAS	Dodge Caravan	1992	Golden	CO
GAS	Ford Taurus	1994	Winterlock	CT
GAS	Chevy Lumina	1994	Washington	DC
GAS	Chevy Lumina	1995	Washington	DC
GAS	Chevy Lumina	1994	Washington	DC
GAS	Ford Taurus	1994	Washington	DC
GAS	Ford Taurus	1994	Washington	DC
GAS	Dodge Caravan	1992	Tucker	GA
GAS	Dodge Caravan	1994	Des Moines	IA
GAS	Dodge Intrepid	1995	Argonne	IL
GAS	Ford Taurus	1995	Chicago	IL
GAS	Dodge Ram pickup	1992	Chicago	IL
GAS	Ford Taurus	1996	Chicago	IL
GAS	Ford Taurus	1994	Des Plaines	IL
GAS	Ford Taurus	1994	Des Plaines	IL
GAS	Ford Taurus	1994	Schiller Park	IL
GAS	Ford Taurus	1994	Scott AFB	IL
GAS	Dodge Spirit	1993	Baltimore	MD
GAS	Dodge Ram Van	1989	Baltimore	MD
GAS	Dodge Spirit	1993	Elkton	MD
GAS	Chevy Lumina	1994	Ft. George G. Meade	MD
GAS	Dodge Spirit	1993	Rockville	MD
GAS	Chevy Corsica	1995	Detroit	MI
GAS	Dodge Spirit	1993	Florissant	MO
GAS	Chevy Corsica	1995	Kansas City	MO
GAS	Ford Taurus	1994	Kansas City	MO
GAS	Ford Taurus	1993	Kansas City	MO
GAS	Dodge Caravan	1994	St. Louis	MO
GAS	Chevy C1500 Pickup	1992	St. Louis	MO
GAS	Ford Taurus	1993	Billings	MT
GAS	Dodge Ram Pickup	1991	Billings	MT
GAS	Ford F150 Pickup	1995	Billings	MT
GAS	Ford Pickup	1996	Helena	MT
GAS	Chevy 3/4T Pickup	1995	Helena	MT
GAS	Dodge Pickup	1992	Omaha	NE

GAS	Dodge Spirit	1993	Brooklyn	NY
GAS	Dodge Caravan	1992	Philadelphia	PA
GAS	Dodge Ram Van	1994	Amarillo	TX
GAS	Dodge Caravan	1992	Amarillo	TX
Vehicle Fuel	MODEL	YEAR	CITY	ST
GAS	Dodge Ram Van	1991	Dallas	TX
GAS	Ford Aerostar Van	1995	Dallas	TX
GAS	Dodge Spirit	1994	Crystal City	VA
GAS	Dodge Spirit	1994	Fort Belvoir	VA
GAS	Dodge Spirit	1993	Fort Belvoir	VA
M85	Dodge Spirit	1994	Burbank	CA
M85	Dodge Spirit	1994	Burbank	CA
M85	Ford Taurus	1995	Burbank	CA
M85	Dodge Spirit	1995	El Segundo	CA
M85	Dodge Spirit	1993	Fresno	CA
M85	Dodge Spirit	1993	Fresno	CA
M85	Dodge Spirit	1993	Fresno	CA
M85	Dodge Spirit	1993	San Diego	CA
M85	Dodge Spirit	1993	Aurora	CO
M85	Ford Econoline	1993	Denver	CO
M85	Dodge Spirit	1993	Denver	CO
M85	Dodge Spirit	1994	Denver	CO
M85	Dodge Spirit	1993	Denver	CO
M85	Dodge Spirit	1993	Denver	CO
M85	Dodge Spirit	1993	Denver	CO
M85	Ford Taurus	1994	Denver	CO
M85	Dodge Spirit	1994	Golden	CO
M85	Dodge Spirit	1994	Golden	CO
M85	Dodge Spirit	1993	Lakewood	CO
M85	Dodge Spirit	1993	Lakewood	CO
M85	Ford Taurus	1993	Lakewood	CO
M85	Dodge Spirit	1993	Washington	DC
M85	Dodge Spirit	1993	Washington	DC
M85	Dodge Spirit	1993	Washington	DC
M85	Dodge Spirit	1993	Atlanta	GA
M85	Dodge Spirit	1993	Argonne	IL
M85	Dodge Spirit	1993	Argonne	IL
M85	Dodge Spirit	1993	Argonne	IL
M85	Ford Taurus	1995	Argonne	IL
M85	Dodge Spirit	1994	Argonne	IL
M85	Ford Taurus	1995	Argonne	IL
M85	Dodge Spirit	1993	Argonne	IL
M85	Ford Taurus	1994	Argonne	IL
M85	Ford Taurus	1994	Argonne	IL
M85	Chevy Lumina	1994	Argonne	IL
M85	Dodge Spirit	1995	Argonne	IL
M85	Dodge Spirit	1993	Chicago	IL
M85	Dodge Spirit	1993	Chicago	IL
M85	Dodge Spirit	1993	Chicago	IL
M85	Dodge Spirit	1993	Chicago	IL
M85	Dodge Spirit	1993	Chicago	IL
M85	Dodge Spirit	1993	Chicago	IL
M85	Dodge Spirit	1993	Chicago	IL
M85	Ford Taurus	1995	Indianapolis	IN
M85	Dodge Spirit	1993	Landover	MD
M85	Dodge Spirit	1993	Ann Arbor	MI
M85	Dodge Spirit	1993	Detroit	MI
M85	Dodge Spirit	1993	Troy	MI
M85	Dodge Spirit	1993	St Louis	MO
M85	Dodge Spirit	1993	St. Louis	MO
M85	Dodge Spirit	1993	Philadelphia	PA
M85	Dodge Spirit	1993	Philadelphia	PA