

## E85 Pump Locations in Tucson

**Arizona Petroleum, 1015 S. Cherry**

Accessible from East 22nd Street

**FastLane Chevron, 1999 E. Ajo Way**

On the northeast corner of South Kino Parkway

**Loma Catalina Mart, 2075 W. Ruthrauff**

On the east side of North La Cholla Boulevard

**Quik Mart, 10265 E. Irvington Road**

At South Houghton Road

**Quick Pic, 2710 N. First Avenue**

On the southeast corner of East Glenn Street

**Quick Pic, 8601 E. Golf Links**

At South Pantano Parkway

**Shell, C & T Oil Co., 1701 N. Alvernon**

At East Pima Street

### Southern Arizona

**Chevron, 12030 N. Dove Mountain Blvd**

In Marana, just north of West Tangerine Road

**Puchi's Quick Stop, 483 Grand Avenue**

In Nogales, Arizona

**Super Stop, 795 W. Via Rancho Sahuarita**

In Sahuarita, at Exit 75 off of I-19

### Maricopa and Pinal Counties

**Western States, 450 S. 15th Avenue, Phoenix**

**Apache Sands, 7602 E. Main Street, Mesa**

**Ludwig Service, 510 S. Arizona Blvd., Coolidge**

**Discovery Fuels, 295 S. Arizona Blvd. Coolidge**

**Chevron, 9080 W. Olive Avenue, Peoria**

### Yavapai County

**Pacific Pride, 900 E. Road 4 North**

In Chino Valley, off of AZ-89

### Yuma County

**Dateland Travel Center, I-8 @ MileMarker 67**

Dateland, Arizona

## **Pima Association of Governments**

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# Ethanol



## Frequently Asked Questions

### See inside for Flex-fuel Vehicle Listing



### Tucson Regional Coalition

a deployment activity within the  
U.S. Department of Energy's  
FreedomCar and Vehicle Technologies (FCVT) pro-

The mission of the Clean Cities Program is to advance the nation's economic, environmental, and energy security by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption. Clean Cities carries out this mission through a network of more than 90 volunteer coalitions, which develop public/private partnerships to promote alternative fuels and vehicles, fuel blends, fuel economy, hybrid vehicles, and idle reduction.

Find this on our website at [www.PAGnet.org](http://www.PAGnet.org)

# Frequently Asked Questions

## What is ethanol?

Ethanol (ethyl alcohol, grain alcohol, EtOH) is a clear, colorless liquid. In dilute aqueous solution, it has a somewhat sweet flavor, but in more concentrated solutions it has a burning taste. Ethanol (CH<sub>3</sub>CH<sub>2</sub>OH) is made up of a group of chemical compounds whose molecules contain a hydroxyl group, -OH, bonded to a carbon atom. Ethanol made from cellulosic biomass materials instead of traditional feedstocks (starch crops) is called bio-ethanol.

## What are ethanol blends?

While pure ethanol is rarely used for transportation fuel, there are several ethanol-gasoline blends in use today. E85 is a blend of 85 percent denatured ethanol and 15 percent gasoline. In certain areas, higher percentages of gasoline will be added to E-85 during the winter to ensure that vehicles are able to start at very cold temperatures. E85 cannot be used in a conventional, gasoline-only engine but can be used in fuel vehicles (FFVs). Another common mix is E10, a blend of 10 percent ethanol and 90 percent gasoline. E10 is available in many areas across the United States and can be used in any gasoline vehicle manufactured after 1980.

## What is a Flex Fuel Vehicle?

An FFV, as its name implies, has the flexibility of running on more than one type of fuel. FFVs can be fueled with unleaded gasoline, E85, or any combination of the two. Like conventional gasoline vehicles, FFVs have a single fuel tank, fuel system, and engine. They are available in a wide range of models such as sedans, pickups, and minivans.

## How are FFVs identified?

A look inside the fuel door quickly identifies FFVs. Since September 2006, the Energy Policy Act of 2005 requires auto manufacturers to place a label inside the FFV fuel compartment that states the vehicle can run on either E85 or gasoline. Flexible-fuel capability also is outlined in the owner's manual and encoded in the vehicle identification number, or VIN. To help determine if an older vehicle is E85 compatible, visit the National Ethanol Vehicle Coalition Web page on flexible fuel vehicles at [www.e85fuel.com/e85101/flexfuelvehicles.php](http://www.e85fuel.com/e85101/flexfuelvehicles.php).

## Does E85 affect vehicle performance?

FFVs operating on E85 generally handle and perform just as well as when fueled with gasoline. Sensors in the FFV system automatically prompt adjustments for fuel composition, so emissions

and standard performance areas such as power and acceleration are not significantly affected by E85. One difference between E85 and gasoline, however, is fuel economy. Ethanol contains less energy per gallon, which translates into a reduction in fuel economy compared to gasoline. No matter what type of fuel is used, however, fuel mileage is affected by driving habits, weather, ethanol blend in the tank, and other factors. Standard testing results for fuel economy of FFVs and their gasoline counterparts are posted on the combined EPA and U.S. Department of Energy Web site at [www.fueleconomy.gov](http://www.fueleconomy.gov).

## What are the costs and benefits of using E85?

Special features enabling vehicles to run on E85 can add a minimal cost to their purchase price. Often these features are standard or even offered as a no-cost option. Because they have a solid performance history, manufacturers provide standard warranties for FFVs equal to those for gasoline vehicles at no additional charge. Fuel, however, may be a cost factor. To compare the price of fueling with E85 vs. gasoline, use the AFDC's Flexible Fuel Vehicle Cost Calculator at [www.eere.energy.gov/fleetguide/cost\\_anal.php?0/E85\\*Flex\\*Fuel](http://www.eere.energy.gov/fleetguide/cost_anal.php?0/E85*Flex*Fuel). Even though FFV fuel economy when operating on E85 is less than conventional fuel, E85 provides reductions in life-cycle greenhouse gas emissions because of its renewable source component.

# Listing of flex-fuel vehicles by year, from 1998-2009

## Flex Fuel Vehicles

## E85

Make	Model	Years																
		99	08	07	06	05	04	03	02	01	00	99	98					
Chrysler	Chrysler Aspen	X	X	X														
	Chrysler Sebring Convertible	X	X					X										
	Chrysler Sebring Sedan	X	X	X	X			X										
	Chrysler Town & Country	X	X					X	X						X	X	X	
	Chrysler/Plymouth Voyager	X	X					X	X						X	X	X	
	Dodge Avenger	X	X															
	Dodge Caravan			X	X			X	X						X	X	X	X
	Dodge Caravan Cargo			X				X										
	Dodge Grand Caravan	X	X	X	X			X	X						X	X	X	X
	Dodge Stratus				X	X												
	Dodge Dakota	X	X	X														
	Dodge Durango	X	X	X	X													
	Dodge Ram 1500 series	X	X	X	X	X												
	Jeep Grand Cherokee	X	X	X														
	Jeep Commander	X	X	X														
	Ford Crown Victoria	X	X	X	X													
	Ford E-Series Commercial Van, 4.6L and 5.4L	X																
Ford Expedition	X																	
Ford Explorer (4-door)					X	X												
Ford Explorer Sport Trac					X	X												
Ford F-150	X	X	X	X														
Ford Ranger pickup 4WD and 2WD																X	X	
Ford Supercab Ranger pickup 2WD																		
Ford Taurus Sedan & Wagon				X														
Lincoln Navigator	X																	
Lincoln Town Car	X		X															
Mercury Grand Marquis	X	X	X															
Mercury Mountaineer					X	X												
Mercury Sable															X	X		
Buick Lucerne	X																	
Buick Terraza			X															
cadillac Escalade, ESV and EXT	X																	
Chevrolet Avalanche	X	X	X	X														
Chevrolet Express	X	X	X															
Chevrolet HHR, 2.2L and 2.4L	X																	
Chevrolet Impala 3.5L	X	X	X	X														
Chevrolet Impala 3.9L, and 3.5L Police	X	X																
Chevrolet Monte Carlo			X	X														
Chevrolet S-10 Pickup																		
Chevrolet Silverado, 2WD & 4WD in	X	X	X	X	X													
Chevrolet Silverado, 2WD & 4WD in	X	X																
Chevrolet Suburban	X	X	X	X	X													
Chevrolet Tahoe, 6.2L	X																	
Chevrolet Tahoe, 5.3L	X	X	X	X														
Chevrolet Tahoe Police Package	X	X	X	X	X													
Chevrolet Uplander		X	X															
GMC Savana	X	X	X															
GMC Sierra pickup 2WD & 4WD, 5.3L	X	X	X	X	X													
GMC Sierra Denali 2WD & 4WD 6.2L	X																	
GMC Sonoma															X	X		
GMC Yukon and XL	X	X	X	X	X													
GMC Yukon Denali and XL Denali	X																	
Hummer H2	X																	
Pontiac Montana		X	X															
Saturn Relay			X															
Armada	X	X	X															
Titan	X	X	X	X														
C230 Sedan			X															
C240 Luxury Sedan and Wagon					X													
C300 Luxury and Sport	X	X																
C320 Sedan, Sport Sedan & Wagon					X	X												
Hombre pickup																		
B3000 pickups																		
Sequoia	X																	
Tundra	X	X																