

# 2002 TH!NK *neighbor*

## Index of Key Features

					Performance/Handling	Comfort/Convenience	
					Safety/Security	Design/Styling	
					Quality/Reliability/Durability		
					Purchase Motivator	Feature	Find It on Page
			●		3-mph Bumpers	13	
			●	●	Aluminum Space Frame	14, 16	
●				●	Batteries	6, 8, 9, 16, 17	
			●		Brakes	12	
	●				Cargo Area	10, 11	
●					Drive Mode Selector	8	
●					Electric Motor	8	
			●	●	Exterior Body Panels	14, 16	
			●		Exterior Design	14, 15	
	●				Floor Mats	11	
	●				Front Tow Hook	11	
					Glossary of Terms	23, 24, 25	
	●				Heater/Defogger	10	
	●				Interior Storage	10, 11	
			●		Lighting	12	
	●				Mirrors	10	
	●				Odometer	11	
	●				Option Packages	5	
●					Regenerative Braking System	8	
			●		Safety Belts	12, 13	
	●				Seating	10, 11	
	●				Speedometer	11	
●					Transmission	8, 9	
	●				Windshield Wiper/Washer	11	

**This page is about:**

- Key Reasons to Buy
- Target Customers
- What Is THINK Mobility?
- THINK Mission Statement

# 2002 TH!NK *neighbor*

## TH!NK Brand Message

TH!NK *neighbor* is a stylish yet practical on-road vehicle designed to be fun to drive, cool to own and environmentally responsible. It is a dependable battery electric low-speed vehicle (LSV) offering many of the comforts and conveniences of traditional vehicles in an environmentally responsible manner.

### Key Reasons to Buy...

TH!NK *neighbor* provides personal transportation in centralized areas such as planned communities, resorts, campuses, golf courses, parks and military bases. As a low-speed vehicle, it has several advantages over golf carts and industrial vehicles:

- Performance (greater power and top speed)
- Safety features (meets FMVSS standards)
- Functionality (street legal and able to move from site to site)

### TH!NK *neighbor* Target Customers

#### Retail

The primary retail customers are baby boomers making the transition from work to a leisure lifestyle. TH!NK *neighbor* is ideal for running local errands, short trips and playing golf. Target customers include:

- Suburban families who are early adopters of new technology and trends, technology-aware and status-conscious, ages 35–65 with increasing disposable income
- Retirees and other residents of planned communities
- People who are:
  - Forward-thinking — they have a personal leadership attitude
  - Fun, social and enthusiastic — they have a positive outlook on life
  - Rebel conformists — they like belonging to a community and value the rules all should live by, however they like pushing the limits to express individuality and style

#### Commercial

TH!NK *neighbor*'s primary commercial use is as a utility vehicle for light-duty transportation of people and cargo. Target customers include:

- Municipal and public safety offices
- Federal, state and local government agencies
- Military bases
- University campuses
- National, state and local parks
- Airport complexes
- Business campuses
- Resorts, amusement parks and recreation destinations

#### What Is TH!NK Mobility?

- A wholly owned enterprise of Ford Motor Company
- Provider of environmentally responsible transportation (zero emissions vehicles)
- Incubator of fun and innovative products that exceed customer expectations
- Way to generate zero emissions vehicle (ZEV) credits for Ford and to help Ford achieve ZEV goals in California, New York, Massachusetts and Vermont
- Learn more at [www.thinkmobility.com](http://www.thinkmobility.com)

#### TH!NK Mission Statement

To deliver TH!NK *neighbor* and TH!NK *city* volume required to support Ford Motor Company ZEV strategy.

Leverage the TH!NK brand to strengthen Ford Motor Company's environmental reputation, generating goodwill for the company, our vehicle brands and our dealer partners.

To optimize impact on shareholder value.

## Development Team Perspective

*"TH!NK neighbor is the perfect choice for customers who need mobility within a relatively small geographic area, such as a suburban community, gated community, resort or commercial complex. In addition, TH!NK neighbor provides the added bonus of being an environmentally responsible zero emissions vehicle."*

Rob Stevens  
President of TH!NK Mobility

# 2002 TH!NK neighbor Model Lineup

## TH!NK neighbor 4-passenger

### TH!NK neighbor 2-passenger



<b>Performance/Handling</b>	72-volt electric motor (5000 watts DC)	Rear bench seat and underseat storage
	Six 12-volt lead-acid batteries	Two rear grab handles
	Single gear ratio transmission	
	Regenerative braking	
	Rear-wheel drive	
	Four-wheel independent suspension	
	Hydraulic drum brakes	
25-mph top speed		
Keyed Drive mode selector switch		
<b>Comfort/Convenience</b>	Two front cup holders	Two rear cup holders
	On-board charger	
	Adjustable driver's seat	
	Optional AM/FM stereo/CD player (late availability)	
	Lockable glove compartment	
	Trunk with lockable decklid	
	Floor mats	
	Windshield wiper/washer	
	Energy-level indicator	
	Odometer with trip odometer	
	Speed indicator	
Horn		
Floor drain holes		
<b>Safety/Security</b>	AS-1 safety glass windshield	
	3-point safety belts (front)	3-point safety belts (front and rear)
	Front head restraints	Front and rear head restraints
	Hazard flashers	
	Parking brake	
	Park brake minder	
	Headlamps, taillamps and brake lamps	
	Turn signal indicators	
	LATCH (Lower Anchors and Tethers for CHildren) (Family Package)	
	Audible reverse warning and reverse lamps	
	Center high-mounted stoplamp	
25-ft. charge cord with GFCI (Ground Fault Circuit Interrupt) protection		
<b>Design/Styling</b>	Molded-in color body panels	
	Three exterior color choices	
	High-profile roofline	
	Front and rear 3-mph impact bumpers	
<b>Quality/Reliability/Durability</b>	Aluminum space frame	
	Scratch-resistant exterior body panels	
	UV-stable exterior body panels	

# 2002 TH!NK *neighbor* Option Packages

## OPTION PACKAGES

This page is about:

Family

Sport

### Family Package

- Expanded trunk space with lockable doors
  - Passenger-side exterior mirror
  - LATCH (Lower Anchors and Tethers for CHildren) child safety seat system (front passenger seat)
  - Cooler/storage solution
  - 12-volt power point
- 

### Sport Package

- Golf bag rack and platform assembly
- Sweater basket (2-passenger) or sweater net (4-passenger)
- Sand/seed bottle
- Scorecard and pencil holder
- Golf ball and tee holder
- Cooler/storage solution
- Golf ball and club washer
- Additional cup holders

TRIM

# 2002 TH!NK *neighbor*

## What's Important

### WHAT'S IMPORTANT

This page is about:

- Overview
- Instant Impact
- The Whole Story

## The Community Leader: Performance, Versatility and Style

THINK *neighbor* is a stylish and dependable battery electric low-speed vehicle (LSV) that features many of the same comforts and conveniences of traditional vehicles.

### Instant Impact

You gotta hook 'em and you don't have much time. Those first few seconds after meeting a customer are crucial. If you don't connect immediately, they won't stick around for more. So get out a stopwatch because here are some of the most important THINK *neighbor* vehicle features to present in those first precious 30 seconds:

- 72-volt air-cooled electric motor
- Zero emissions electric power
- 25-mph top speed
- 4- to 8-hour charging time with on-board charger
- Regenerative braking
- Four-wheel hydraulic drum brakes
- Dual forward-speed modes
- Front bucket high-back seats with integrated head restraints
- Available heater/defogger (late availability)
- Available AM/FM stereo/CD player (late availability)
- 2-passenger and 4-passenger body styles
- Three available series: Basic, Sport and Family
- 3-point safety belt restraint system
- AS-1 safety glass windshield
- Automotive lighting package



## Now Tell Them the Whole Story

Use the THINK *neighbor* information in this Source Book to enhance your sales presentations. Pay particular attention to those key features that address the specific needs of each of your customers.

<b>Performance/Handling</b>	<ul style="list-style-type: none"> <li>• 72-volt air-cooled electric motor</li> <li>• 2-stage helical transmission</li> <li>• Dual forward-speed modes</li> <li>• Regenerative braking</li> <li>• 12-volt deep-cycle lead-acid batteries</li> <li>• Four-wheel independent suspension</li> <li>• Rear-wheel drive</li> </ul>
<b>Comfort/Convenience</b>	<ul style="list-style-type: none"> <li>• Adjustable driver's seat</li> <li>• Front bucket high-back seats with integrated head restraints</li> <li>• Available heater/defogger (late availability)</li> <li>• Available AM/FM stereo/CD player (late availability)</li> <li>• Lockable interior storage and decklid</li> <li>• Floor drain holes</li> </ul>
<b>Safety/Security</b>	<ul style="list-style-type: none"> <li>• Four-wheel hydraulic drum brakes</li> <li>• Automotive Lighting Package: headlamps, taillamps, brake lamps and turn signals</li> <li>• 3-point safety belts in the front and rear</li> <li>• AS-1 safety glass windshield</li> <li>• Audible reverse warning</li> <li>• Rearview and sideview mirrors</li> </ul>
<b>Design/Styling</b>	<ul style="list-style-type: none"> <li>• High-profile roofline</li> <li>• Family and Sport Packages</li> </ul>
<b>Quality/Reliability/ Durability</b>	<ul style="list-style-type: none"> <li>• Aluminum space frame</li> <li>• Thermoplastic body panels</li> <li>• 3-mph front and rear bumpers</li> <li>• 3-year warranty on body/chassis components</li> <li>• 1-year/full-coverage warranty on batteries with prorated coverage for 2 additional years</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Recyclability</li> <li>• Low emissions vehicle</li> </ul>

**This page is about:**

- Maintenance-free Batteries
- Car Cover
- Manual Sunroof with Vent
- AM/FM Stereo/CD Player
- Weather Enclosures
- Wheels

# 2002 TH!NK *neighbor*

## Stand-alone Options

### Key Features

**Maintenance-free Batteries**

- Sealed gel batteries require no maintenance from the owner
- Maintenance-free option may have greatest appeal for retail customer
- Fleet buyers will appreciate saving on labor costs with maintenance-free batteries

**Car Cover**

- Vehicle cover drapes over TH!NK *neighbor*
- The cover is held in place by elastic
- The cover can be locked using a cable and lock

**Manual Sunroof with Vent**

- Optional on Family and Sport models
- Improves ventilation efficiency
- Gives the feel of open-air driving

**AM/FM Stereo/CD Player**

- Late availability
- Allows listening enjoyment wherever you go

**Soft Side Rear Weather Enclosures with Rear Closeout**

- Weather enclosures are designed to help shield driver, passengers and the vehicle's interior from inclement weather
- Separate enclosures are provided for the front and rear of the vehicle
- Enclosures are installed through the vehicle's roof rail and snap closed at the base of the opening

**Wheels**

- Narrow steel wheel (12" x 4") with 145 R12 C narrow tires
- Wide steel wheel (12" x 7") with 21" x 8.5" — 12" wide tire
- Wide aluminum wheel (12" x 7") with 21" x 8.5" — 12" wide tire

# 2002 TH!NK *neighbor* Competition

## COMPETITION

This page is about:

Competitive Overview

Key Competitors and How They're Positioned

Competitive Strengths

## TH!NK *neighbor*: Innovative Community Transportation

Customers don't have to sacrifice performance, versatility and safety in a zero-emissions low-speed vehicle (LSV) like TH!NK *neighbor*. Much more than a golf cart, TH!NK *neighbor* has surprising safety and performance that people with active, community-based lifestyles will appreciate.

This section will give you feature information detailing what this vehicle offers within a competitive framework. You'll also want to utilize the 2002 Competitive Comparisons for specific head-to-head feature comparison information.

### Customer Snapshot

- The primary retail customers are retirees and suburban families who are early adopters of new technology and trends
- The primary commercial customers are government agencies, military bases, parks, campuses, resorts and airport complexes. It would be used as a utility vehicle for light-duty transportation of people and cargo

### Key Competitors and How They're Positioned

#### Low-speed Passenger Vehicles

- DaimlerChrysler Global Electric Motors (GEM)
- Western Golf Cars
- Dynasty Motors
- GM, Honda, Murray, ZAP and EV Global Motors are expected to introduce models
- Lido by EV Global

#### Utility Vehicles

- DaimlerChrysler GEM — 2-passenger short and long bed
- E-Z-GO Workhorse
- Taylor-Dunn
- Club Car carry-all long bed

#### Golf Carts

- E-Z-GO
- Club Car
- Yamaha

### TH!NK *neighbor* Competitive Strengths — An Overview

#### TH!NK *neighbor* 2-passenger Sport Package vs. GEM E825

- Four-wheel independent suspension. GEM only has an independent front suspension
- Neighbor has safety features such as hazard flashers, center high-mounted stoplamp, reverse lamps and a license plate lamp. GEM does not
- GEM is front-wheel drive, so steering could be affected when the regenerative braking is active
- Neighbor has standard 3-mph front and rear bumpers. GEM only offers a front bumper as an accessory

#### TH!NK *neighbor* 2-passenger Sport Package vs. E-Z-GO Freedom Golf Cart

- Neighbor has a more powerful 72-volt DC electrical motor vs. a 36-volt DC electrical motor on E-Z-GO
- Fully independent suspension vs. the non-independent suspension on E-Z-GO
- Neighbor has an AS-1 safety glass windshield, headlamps, a third high-mounted stoplamp and three-point safety belts. E-Z-GO lacks these features
- Neighbor has an energy level indicator to keep track of battery power. E-Z-GO does not offer this feature

#### TH!NK *neighbor* 2-passenger Sport Package vs. Club Car PowerDrive Plus

- Neighbor has a more powerful 72-volt DC electrical motor vs. a 48-volt DC electrical motor on Club Car
- Neighbor has an AS-1 safety glass windshield, headlamps, a third high-mounted stoplamp and 3-point safety belts. Club Car lacks these features
- Neighbor has an energy level indicator to keep track of battery power. Club Car does not offer this feature
- Club Car has a top speed of only 15 mph. Neighbor has a top speed of 25 mph

#### TH!NK *neighbor* 4-passenger Family Package vs. GEM E825/4

- Neighbor has a standard expandable trunk. GEM offers a trunk-like Swivelpak as an accessory
- Neighbor has four-wheel independent suspension. GEM only has an independent front suspension
- GEM is front-wheel drive, so steering could be affected when the regenerative braking is active
- Neighbor has a 12-volt power point. GEM offers a power point as an extra-cost accessory

**This page is about:**

- Electric Motor
- Helical Transmission
- Regenerative Braking System
- Lead-acid Batteries
- Independent Suspension
- Dual Forward-speed Modes

# 2002 TH!NK *neighbor*

## Performance/Handling

### Key Features

**72-volt Air-cooled Electric Motor** — produces 65 lb.-ft. of torque from a standing start

**2-stage Helical Transmission** — single-ratio (10.35:1) gearbox

**Regenerative Braking System** — provides on-board battery charging while coasting down steep grades

**12-volt Lead-acid Batteries** — six standard “flooded” or water-filled batteries add up to a 72-volt powerplant

**Four-wheel Independent Suspension** — helps absorb irregularities on street or turf for a smooth, comfortable ride

**Dual Forward-speed Modes** — keyed drive mode selector allows choice of Drive (25 mph maximum) or Turf (15 mph maximum), especially useful on speed-restricted golf courses



### Regenerative Braking System Specifics

- Regenerative braking uses the vehicle's forward motion to generate electricity and partially recharge the batteries for a slight increase in driving range
- The motor controller feeds power back to the batteries when the driver's foot is off the accelerator and the vehicle is coasting, such as when the vehicle is going downhill
- Through the motor controller and the shunt motor, the regenerative braking system also gives TH!NK *neighbor* more power going up hills as well
- The regenerative braking system works when the vehicle is traveling at least 18 mph or when the batteries are less than 80 percent charged to capacity

### Electric Motor Specifics

- 5,000-watt DC electric motor
- Approximate 30-mile range at a constant 25 mph
- Electric motor provides instantaneous peak torque from a standing start to provide optimum off-the-line performance

### Engineering Insights

- Accessory power for features such as lights and safety systems runs off a 12-volt system. A DC converter changes the 72-volt power from the motor to the 12-volt accessory system
- TH!NK *neighbor* has two DC converters. One is dedicated to the accessory power outlet and the other operates lights, wipers and safety systems. This helps prevent the key electrical systems from shutting down if the customer puts a high-powered device in the accessory power outlet

### Presentation Tip

Tell customers never to press the accelerator while turning the Drive mode selector switch key from the OFF position to one of the driving modes. They should keep the brake pedal firmly pressed until ready to drive the vehicle in the selected mode.

# 2002 TH!NK *neighbor*

## Performance/Handling

### PERFORMANCE/HANDLING

This page is about:

- Transmission
- Suspension
- Features and Benefits
- Lead-acid Batteries

### Transmission Specifics

- Fixed-ratio single-speed transmission
- Gear ratio is set at a constant 10.35:1

### Suspension Specifics

- Fully independent four-wheel suspension
- Front suspension uses a Short- and Long-Arm (SLA) design with coil-over shock absorbers for a combination of precise steering and a comfortable ride
- Rear suspension uses semi-trailing arms and coil-over shock absorbers that improve ride and stability, especially on uneven terrain

### Additional Features

Feature	Benefit
Turning Diameter	2-passenger models have a 21-foot turning diameter, 4-passenger models have a 24-foot turning diameter
30% Grade Capacity	TH!NK <i>neighbor</i> is designed to climb a 30% grade when loaded to its full Gross Vehicle Weight (GVW)
On-board Charger	Includes 120-volt plug and 25-foot cord with Ground Fault Circuit Interrupter (GFCI) protection

### Lead-acid Battery Specifics

- Standard battery is the conventional water-filled type, requiring the owner to top off the batteries with distilled water or demineralized water at monthly intervals
- A warning light on the instrument panel tells the owner when it is time to check the batteries
- All six batteries are located under the seats for easy access during maintenance
- 6- to 8-hour recharge from a standard 110-volt system
- A battery level indicator light on the instrument panel shows the power level remaining in the batteries
  - Five bars are illuminated when the batteries are fully charged
  - When no bars are illuminated, the batteries have been discharged to the point where further operation of the vehicle will reduce battery life
- The number of illuminated bars indicates the level of battery charge from full capacity
- After a partial charge, the level may read higher than it actually is. After driving a few miles, the battery gauge will settle to an accurate reading
- Usage determines how frequently the batteries have to be replaced
- In general, the batteries can take 300–350 charge/discharge cycles before the recharging capacity deteriorates significantly. This is roughly equivalent to 3–5 years

**This page is about:**

- Adjustable Driver's Seat
- Bucket Seats
- Cargo Area
- Floor Drain Holes
- Heater/Defogger
- Storage Specifics

# 2002 TH!NK *neighbor*

## Comfort/Convenience

### Key Features

- Adjustable Driver's Seat** — adjusts forward and back with a lever located at the front of the seat cushion
- Front Bucket High-back Seats** — include integrated head restraints
- Lockable Interior Storage** — glove compartment
- Cargo Area** — has a lockable and removable decklid. Large enough to hold the bases of two tournament-size golf bags
- Floor Drain Holes** — for easy clean-out
- Available Heater/Defogger** — helps keep the interior comfortable in cool weather (late availability)
- Mirrors** — the driver's-side fold-away manual mirror helps provide sideview visibility, while an interior mirror gives a view of the rear



### Storage Specifics

- Standard trunk includes a lockable and removable decklid
- Glove compartment provides lockable interior storage
- The ignition key opens both the trunk and the glove compartment
- Available trunk expander is a locking storage area that inserts into the trunk to increase storage area
- Trunk expander will hold two paper grocery bags in the bottom with three plastic bags hung from hooks mounted inside the trunk expander
- Two shelves on the right and left of the main storage area may be used to hold other items
- Trunk volume is approximately 1.51 cu. ft. in 2-passenger models and 4-passenger models

### Additional Features

Feature	Benefit
Grab Handles	Help provide easy entry and exit from the vehicle
Windshield Wiper/Washer	Single-speed, helps provide good visibility in inclement weather
Cup Holders	Two in front and two in the rear, accessible from inside and outside the vehicle
Optional Sunroof with Vent	Located in the roof panel to increase airflow to the driver and front passenger
Floor Mats	Help make it easier to keep the interior clean
Front Tow Hook	Provides an easy attachment point for pulling the vehicle

#### Seating Specifics

- Head restraints on the front and rear seats are fixed and cannot be adjusted or removed
- The rear seat is not adjustable. The cushion lifts up to access the rear-seat storage compartment
- Always make sure the rear seat cushion is locked down before operating the vehicle

#### Instrument Panel Specifics

- Backlit for nighttime viewing
- Speedometer
- State of charge (flashing warning light when power supply is 20 percent of charge)
- Odometer with trip odometer
- Reverse warning chime
- Parking brake warning chime
- Turn signals with audible indicator
- Safety belt warning light
- Parking brake, water and service warning lights

#### Option Package Specifics

##### Family Package

- Expanded trunk space with lockable doors
- Passenger-side exterior mirror
- LATCH (Lower Anchors and Tethers for CHildren)
- Cooler/storage solution
- 12-volt power point

##### Sport Package

- Golf bag rack and platform assembly
- Sweater basket or net
- Sand/seed bottle
- Scorecard and pencil holder
- Golf ball and tee holder
- Cooler/storage solution
- Golf ball and club washer

## SAFETY/SECURITY

### This page is about:

- Hydraulic Drum Brakes
- Lighting Package
- Safety Belts
- Parking Brake Minder
- Safety Glass Windshield
- Audible Reverse Warning
- Anti-rollaway Mode

# 2002 TH!NK *neighbor* Safety/Security

## Key Features

**Four-wheel Hydraulic Drum Brakes** — the dual-circuit brake system means that if there is a brake system fluid leak or failure, half of the brake system is still working, however stopping distances will be greatly increased

**Automotive Lighting Package** — headlamps, taillamps, brake lamps, license plate lamp, center high-mounted stop-lamp, reverse lamps and turn signals provide visibility to other vehicles on the road

**3-point Front and Rear Safety Belts** — manual adjustable lap/shoulder restraints in all seating positions. Passenger positions include child safety seat retention retractors

**Parking Brake Minder** — if the Drive mode selector switch is turned to the Off position, the parking brake minder will sound for 10 seconds if the parking brake is not set

**AS-1 Safety Glass Windshield** — tinted with solar band. Helps TH!NK *neighbor* meet Federal Motor Vehicle Safety Standards (FMVSS) 500 safety regulations

**Audible Reverse Warning** — chime sounds to notify vehicles and pedestrians that the TH!NK *neighbor* is backing up

**Anti-rollaway Mode** — if the key is left in one of the drive mode positions and the driver forgets to set the parking brake, the vehicle will use power to hold the vehicle in place and limit the speed of free rolling to about 1 mph



## Engineering Insights

- TH!NK *neighbor* was put through the so-called “moose test” maneuver designed to test the responsiveness and stability of cars and trucks. The test simulates an emergency avoidance maneuver in which the driver must abruptly steer away from an obstacle in the road, and then return to the intended path
- Mounting the batteries under the front seats lowers the vehicle’s center of gravity, for better handling in turns. Some other low-speed electric vehicles put the batteries behind the front bodywork, where they are more susceptible to damage
- TH!NK *neighbor* was tested upside-down to make sure the batteries stay in place under extraordinary conditions



# 2002 THINK *neighbor* Safety/Security

This page is about:

- Safety Belts
- LSV Safety
- Features and Benefits
- LATCH

## Safety Specifics

### A Closer Look: Safety Belts

- The front passenger safety belt has two types of locking modes
- The vehicle-sensitive mode allows free shoulder belt length adjustment and locks in response to vehicle movement
- The Automatic mode allows the installation of a child safety seat
- A cinch tongue allows the lap portion of the safety belt to become shorter, but locks the webbing in place to restrict it from becoming longer



### A Closer Look: LSV Safety

THINK *neighbor* exceeds the government safety requirements for low-speed vehicles (LSV). THINK *neighbor* is required to meet the following Federal Motor Vehicle Safety Standard (FMVSS) 500 safety regulations in order to be street legal on public roads with posted speed limits of 35 mph or less:

- 25-mph top speed
- 3-point safety belts
- AS-1 safety glass windshield
- Exterior mirror
- Headlamps, brake lamps, turn signals and reflex reflectors
- Parking brake



## Additional Features

Feature	Benefit
3-mph Front and Rear Bumpers	Help protect the vehicle from serious damage in minor impacts
On-board Charger	Environmentally sealed to help reduce the risk of shock
Hazard Flashers	Should be used in an emergency to warn traffic of a vehicle breakdown

### Child Safety Specifics: LATCH

THINK *neighbor* supplies the LATCH child safety seat system in models with the Family Package. LATCH provides a uniform method for securing a child safety seat in a vehicle.

- The system incorporates:
  - Rigid metal anchor bars built into the vehicle that are located where the seatback meets the seat cushion
  - A top tether anchor located behind the top of the seatback at the right front passenger's seat position
- The child safety seat attaches to the lower anchors by means of flexible tethers or rigid bars that are part of LATCH-compatible child safety seats
- A top tether strap is then attached to the top of the child safety seat
- LATCH provides the top tether anchor. The customer needs to use the tether strap provided by the child safety seat manufacturer to secure the seat. The vehicle does not provide the tether strap, only the top tether anchor
- The vehicle safety belt is not required when using the LATCH system
- LATCH is located in the right front passenger's seating position

## DESIGN/STYLING

This page is about:

- Roofline
- Aluminum Space Frame
- Body Panels
- Exterior Colors
- Two Body Styles

# 2002 TH!NK *neighbor* Design/Styling

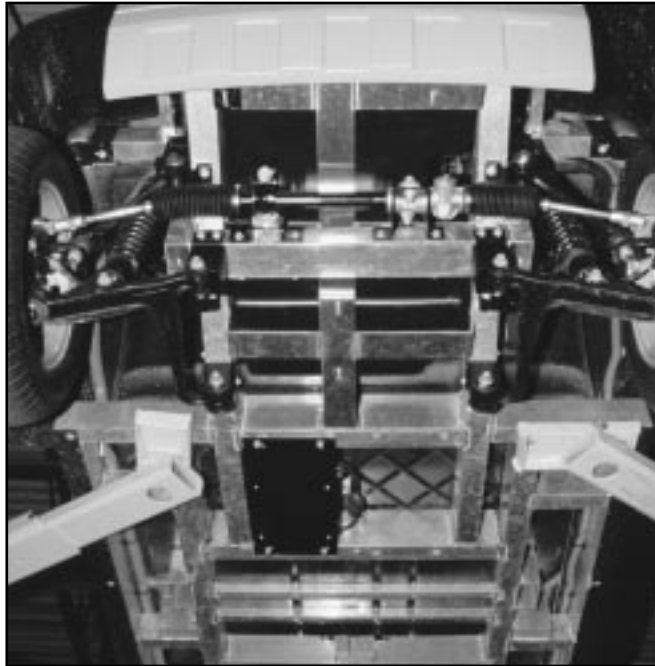
## Key Features

**High-profile Roofline** — helps make TH!NK *neighbor* more visible to other vehicles

**Aluminum Space Frame** — keeps its good looks longer because aluminum resists rust

**Thermoplastic Body Panels** — modular and easily molded into a variety of colors; rustproof and scratch-resistant

**Exterior Colors** — three exterior colors are available: Snow White, Midnight Blue and Forest Green



**Two Body Styles** — unique 2-passenger and 4-passenger body styles available



## A Closer Look: Domestic Uses

**Share this info with customers who want to know more:**

"The TH!NK *neighbor* can be thought of as a porch on wheels. It allows you to interact with people as you run the various errands of daily life or visit friends in your community. It's about operating at a different pace of life — a domestic pace."

Mike Ellis, TH!NK *neighbor* Chief Designer

### Engineering Insights

TH!NK *neighbor* was unveiled as a concept vehicle at the 2000 North American International Auto Show in Detroit. Designers then made a few modifications to bring the concept up to production standards.

- The vertically curved windshield and the extruded aluminum space frame build on the curving themes of the concept vehicle. The surface shape of the upper frame rails is softened by the use of compound curves to look more inviting and playful
- TH!NK *neighbor* benefits from quality automotive components — such as the steering wheel (from the European Ford Ka) and safety belt assemblies, which provide safety and ergonomics that exceed other low-speed vehicles (LSV) on the market

- The 4-passenger seating configuration assures that rear passengers don't face away from front-seat passengers, as in some other LSV designs
- "(The concept vehicle) was a very playful design. We retained much of that optimism while trying to communicate that this vehicle is serious about safety and performance."  
— Mike Ellis, TH!NK *neighbor* Chief Designer

### Design Specifics

- Neighbor's open architecture offers protection from the wind and elements without creating a cocoon around the occupants
- Deliberate use of similar materials and finishes helps to blur the distinction between the interior and exterior
- Advanced construction technologies, such as thermal forming and extrusion of key components, provide high-quality, consistent finishes
- Curved surfaces, including an arc-shaped windshield and complex curves on the extruded aluminum frame, reinforce the design's optimistic attitude
- Exterior color options and the ability to customize allow owners to express their individuality

# 2002 TH!NK *neighbor* Quality/Reliability/Durability

**This page is about:**

- Aluminum Space Frame
- Body Panels
- Warranty
- Delivery, Parts and Service

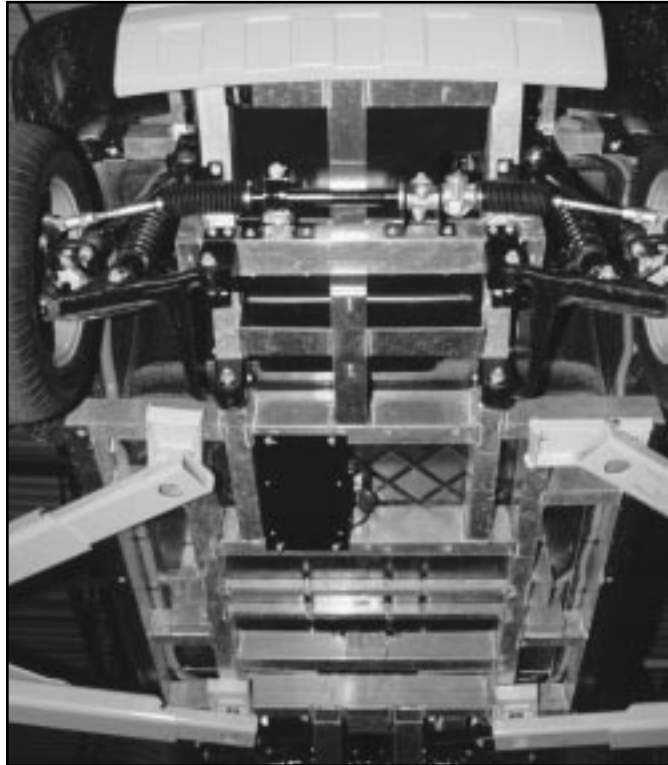
## Key Features

**Aluminum Space Frame** —  
resists rust for long-  
term durability

**Thermoplastic Body Panels** —  
modular and easily molded  
into a variety of colors; rust-  
proof and scratch-resistant

**Warranty** — 3-year bumper-  
to-bumper coverage, including  
powertrain and body/chassis  
components. 1-year/full-  
coverage warranty  
for the batteries with the  
second and third years'  
coverage prorated

**Delivery, Parts and Service** —  
designed to exceed customer  
expectations in service and  
delivery while keeping dealer  
investment to a minimum



### **A Closer Look: Batteries**

**Share this info with customers who want to know more:**

The six 12-volt lead-acid batteries are packaged to reduce rattles and isolate sound. They are banded together in the underseat battery compartment. However, they are easy to remove separately for maintenance or replacement. The front-seat bottoms are removable to provide easy access to the batteries. A manual cutoff switch in the battery compartment completely disconnects the batteries from the vehicle's electrical system for maintenance.

# 2002 TH!NK *neighbor*

## Quality/Reliability/Durability

QUALITY/RELIABILITY/DURABILITY

This page is about:

Engineering Insights  
Delivery, Parts and Service  
Durability Testing

### Engineering Insights

- Quality and safety are built into the TH!NK *neighbor* design. The charger is environmentally sealed, and all the connectors and battery terminals are sealed to help reduce the risk of electrical shock when washing the vehicle. This is one feature your customers won't find on some competitive models
- TH!NK *neighbor* has two DC converters to operate the vehicle's 12-volt electrical equipment, not just one. One DC converter is dedicated to the accessory socket (Family Package only) and the other operates the lights, windshield wipers and vehicle safety systems. By using a separate converter for the accessory socket, TH!NK engineers reduced the risk of accidentally shorting out the entire electrical system, and shutting down key electrical safety features in the process
- The 12-volt wiring system is indicated with black tape and is convolute. TH!NK *neighbor* has two 72-volt wiring systems, both of which are marked with orange tape and are convolute to indicate potentially lethal voltage (required for anything over 50 volts). One is a low-current control system and the other is the high-current main battery power

### Delivery, Parts and Service Specifics

- Provide mobile service and/or pickup and drop-off of customer vehicles
- Deliver all TH!NK vehicles to a customer's doorstep in showroom condition, ready to drive (licensed and insured)
- No minimum parts stocking
- Parts shipments will be the same as Ford systems

### Durability Testing Specifics

- TH!NK *neighbor* was tested against its competitors through Ford Motor Company's durability route at the Michigan Proving Grounds. Corrosion resistance was tested at the company's rugged Arizona Proving Grounds
- The results from these rigorous testing programs allow TH!NK *neighbor* to offer a 3-year/unlimited mileage warranty on nearly all components. The batteries are fully covered for one year, and then pro-rated over the second and third years of the warranty
- The vehicle is expected to have an average life of 10 years or 25,000 miles
- "We've done a 10,000-mile testing cycle," said Chief Program Engineer Daron Topouzian. "That's a lot of 30-mile trips. We really put the TH!NK *neighbor* through more rough driving than we ever expect our customers to experience."

**This page is about:**

- Zero Emissions Mandate
- Consumer Tax Incentives
- Build Information
- Recyclability
- Green Facts

# 2002 TH!NK *neighbor* Environment

## The Environmentally Responsible Transportation Alternative

*TH!NK neighbor runs on battery electric power, so it produces no emissions to pollute the air. Your environmentally conscious customers will be proud to own a technologically innovative vehicle like TH!NK neighbor.*

### The Zero Emissions Mandate

- 10 percent of passenger cars and light-duty trucks weighing less than 3750 lbs. GVW manufactured and delivered for sale in the 2003 model year must meet zero emissions in California, New York, Vermont and Massachusetts
  - A minimum of 4 percent true zero emissions vehicles (ZEV) — electric or fuel cell vehicles — are required
  - Up to 6 percent can be partial ZEV
  - The 10 percent requirement is ongoing after 2003
  - There is a fine of \$5,000 per vehicle against each vehicle that results in non-compliance with the mandate

### Consumer Tax Incentives

Most consumers who purchase a TH!NK *neighbor* will be eligible for a federal income tax credit of 10 percent of the MSRP. Other customer purchase incentives vary widely from state to state. Ford is continuing to work with federal, state and local governments to pass laws granting purchase incentives.

### Build Information

TH!NK *neighbor* will be assembled at the Detroit Chassis Plant, operated by Tru-Mack Assembly LLC, in the city of Detroit's Renaissance Zone, an area designated for targeted employment. The plant has built a reputation for flexibility in developing new and unique products on short timetables.

### Recyclability

TH!NK *neighbor* is over 95 percent recyclable by weight.

### Green Facts

Ford Motor Company has positioned itself as a leader in creating vehicles that are environmentally responsible. Throughout this Source Book, refer to "Green Facts" for interesting Ford environmental information to share with your customers.

- Smog causes 10 to 20 percent of all summertime respiratory-related hospital visits in the northeastern U.S., as well as significant temporary decreases in lung capacity for 15 to 20 percent in some healthy adults
- In 1997, traffic congestion caused travelers in 68 major urban areas:
  - 4.3 billion hours of delay
  - 6.6 billion gallons of wasted fuel
- Congested driving conditions mean less efficient vehicle operation, which wastes fuel. Drivers in 35 urban areas around the U.S. purchase the equivalent of four extra tanks of fuel per year due to congestion, or almost enough to fill a 50-gallon drum annually
- More than half of Americans live within 5 miles of their jobs
- In 1999, Ford Motor Company, in partnership with Baker Electromotive, received the single largest vehicle order in U.S. history from the U.S. Postal Service for 500 electric mail delivery vehicles and an option for 5,500 more
- In 1998, El Paso, Texas, became the first U.S. city to meet the federal Department of Energy's 100 percent Alternative Fuel Vehicle (AFV) challenge
- Los Angeles International Airport intends to make half of its ground transportation fleet AFV by 2003
- 65 electric charging stations exist or are being built in the San Francisco area. The Sacramento area counts more than 100

*Our Environmental Pledge*

*Ford Motor Company is dedicated to providing ingenious environmental solutions that will position us as a leader in the automotive industry of the 21st century.*

*Our actions will demonstrate that we care about preserving the environment for future generations.*





# 2002 TH!NK *neighbor*

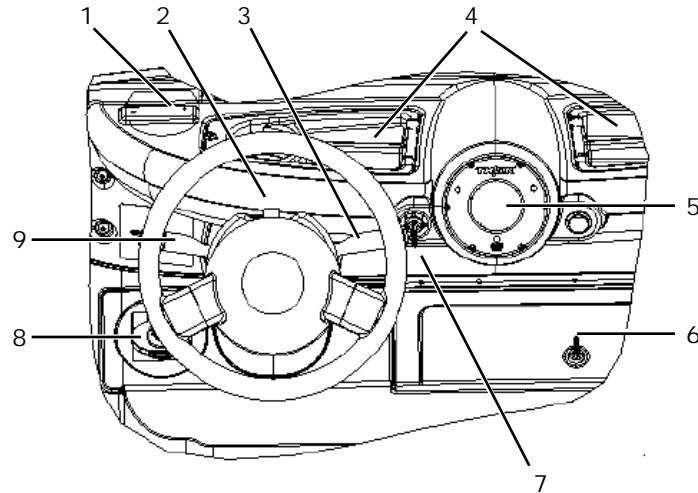
## Instrument Features

### INSTRUMENT FEATURES

This page is about:

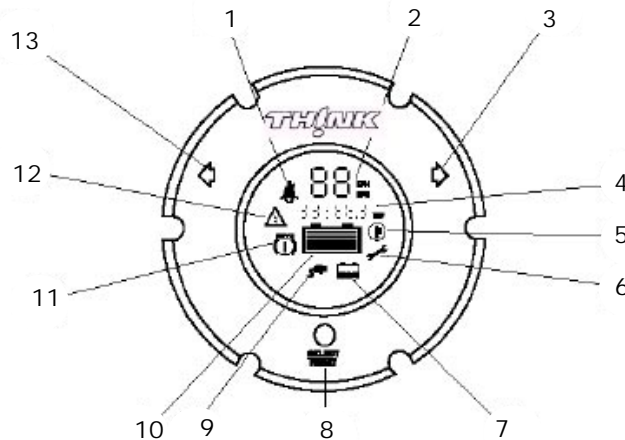
- Instrument Panel
- Instrument Cluster

### Instrument Panel



- |  |                               |   |
|--|-------------------------------|---|
| 1. VIN label                             | 4. Storage trays              | 7. Mode select key                        |
| 2. Hazard flasher switch                 | 5. Instrument cluster         | 8. Battery charger inlet access           |
| 3. Windshield wiper/washer control stalk | 6. Lockable glove compartment | 9. Turn signal and headlamp control stalk |

### Instrument Cluster






- |  |                                     |                                      |
|--|-------------------------------------|--------------------------------------|
| 1. Fasten safety belt warning light            | 6. Service required indicator light | 11. Parking brake indicator          |
| 2. Speedometer                                 | 7. Battery water reminder indicator | 12. Electrical leakage warning light |
| 3. Right turn signal indicator                 | 8. System select/reset button       | 13. Left turn signal indicator       |
| 4. Odometer/trip odometer                      | 9. Battery charging indicator       |                                      |
| 5. Drive system over-temperature warning light | 10. Battery level indicator         |                                      |

## WHEELS

This page is about:

- 12" Stamped Steel – Narrow
- 12" Stamped Steel – Wide
- 12" Cast Aluminum – Wide

# 2002 TH!NK *neighbor* Wheels

Wheel	Neighbor
<p>12" Stamped Steel (12" x 4") which requires 145 R12 C Narrow Tires</p> 	Standard
<p>12" Stamped Steel (12" x 7") which requires 21" x 8.5" — 12" Wide Tires</p> 	Optional Standard (Sport Package)
<p>12" Cast Aluminum (12" x 7") which requires 21" x 8.5" — 12" Wide Tires</p> 	Optional

# 2002 TH!NK *neighbor* Seats

## SEATS

This page is about:

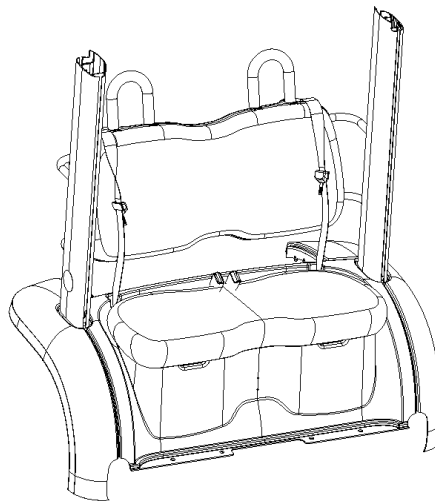
- Standard Seat
- LATCH High-back Bucket Seat
- Rear Bench Seat



Standard Seat  
Vinyl Seats – Water-resistant



Optional Seat  
LATCH High-back Bucket Seat  
Vinyl Seats – Water-resistant



Rear Bench Seat  
(4-passenger only)  
Vinyl Seats – Water-resistant

# 2002 TH!NK *neighbor*

## Key Specifications<sup>(1)</sup>

Model	2-passenger	4-passenger
Wheelbase	68.0	78.0
Overall Length	104.0	114.0
Overall Height	69.0	69.0
Overall Width	58.1	58.1
Tread Width (Front/Rear)	50.2/50.2	50.2/50.2
Curb Weight (lbs.)	980	1180

Front/Rear Seating		
Capacity	2	4
Head Room (Front/Rear)	40.5	40.5/39.8
Leg Room (Front/Rear)	37.5	37.5/34.3

Passenger/Luggage Capacity		
Gross Vehicle Weight Rating (GVWR) (lbs.)	1580	2280
Max. Payload Capacity (lbs.)	600	1000
Liftover Height	25	25
Trunk Volume (cu. ft.)	1.51	1.51
Expanded Trunk Volume (cu. ft.)	6.23	6.23
Trunk Volume with Expander (Family Package only) (cu. ft.)	7.74	7.74

Powertrain	
Motor	350-amp, 72-volt, (5,000 watts DC) 4-horsepower cooled electric shunt motor with regenerative braking
Transmission	2-stage transmission with integral differential, 10.30:1 ratio
Batteries	Six 12-volt deep-cycle lead-acid (std.) Six 12-volt maintenance-free gel cell (opt.)
Battery Charger	On-board 72-volt/10-amp, 120-volt Alternating Current (AC) plug-in with 20-foot Ground Fault Circuit Interrupter (GFCI) charge cord
Speed	Drive mode: 25 mph Turf mode: 15 mph
Reverse	8 mph
Acceleration	0–20 mph in 5 seconds
Range	Up to 30 miles
Torque (lb.-ft. @ rpm)	65 @ 1100

Chassis, Body and Frame	
Body Material	External UV-stable polymers
Internal	Impact-resistant structural composite
Frame	Aluminum
Seating	Front — individual bucket Rear — one-piece bench (4-passenger only)
Tires	Street — 145/80R12 Turf/Street — 21 x 8.5 - 12
Wheels	Steel (std.) Aluminum alloy (opt.)

Suspension	
Front	Independent upper and lower control arm, coil-over shock absorbers
Rear	Independent rear trailing arm, coil-over shock absorbers

Steering	
Type	Single-reduction rack-and-pinion
Turning Circle (ft.)	21.0                      24.0

Brakes	
Type	4-wheel hydraulic drum Parking brake — hand-actuated automotive style with audible reminder system

(1) Based on official MVMA Passenger Vehicle Specifications. Dimensions and capacities are in inches unless otherwise specified.

### **110V**

110 volts. The power rating of a standard electrical outlet.

### **2-Stage Helical Transmission**

Highly efficient differential assembly. Ratio specifically designed to maximize silent operation while offering superior hill-climbing ability.

### **Amp Hours**

The flow of electricity equal to one ampere for one hour. Commonly used to rate the capacity of batteries.

### **Amps**

The measure of the number of electrons flowing past a given point in an electrical conductor in a given amount of time; this is the electrical current.

### **Battery Pack**

Any electrical energy storage device consisting of any number of individual battery modules which is used to propel electric or hybrid electric vehicles.

### **Beep**

An audible sound that is heard when the TH!NK *neighbor* is put in Reverse.

### **CARB**

California Air Resources Board is the governing body that oversees legislation to reduce vehicle emissions levels in California.

### **Clean Air Act of 1970**

Was enacted to regulate motor vehicle pollution.

### **CO (Carbon Monoxide)**

Carbon monoxide is a product of incomplete combustion and occurs when carbon in the fuel is partially oxidized rather than fully oxidized to carbon dioxide.

### **DC Converter**

An electronic power supply that takes high-voltage DC power from batteries and provides an isolated 12-volt output to power standard accessories.

### **Drive Mode**

The Drive mode will provide maximum performance from the TH!NK *neighbor* on paved paths and roadways.

### **EV**

Electric Vehicle — any vehicle which operates solely by use of a battery or battery pack.

### **Evaporative Emissions**

Hydrocarbon pollutants also escape into the air through fuel evaporation. With today's efficient exhaust emissions controls and today's gasoline formulations, evaporative losses can account for a majority of the total hydrocarbon pollution from current model cars on hot days when ozone levels are highest.

# 2002 TH!NK *neighbor*

## Glossary of Terms

### **GEM**

The acronym stands for Global Electric Motors, the company that originally manufactured the electric vehicle by the same name. The company was later purchased by DaimlerChrysler who now markets the GEM in the low-speed electric vehicle market.

### **GFCI**

Ground Fault Circuit Interrupter

### **HC (Hydrocarbon)**

Hydrocarbon emissions result when fuel molecules in the engine do not burn or burn only partially. Hydrocarbons react in the presence of nitrogen oxides and sunlight to form ground-level ozone, a major component of smog. It is our most widespread and intractable urban air pollution problem.

### **Helical Gears**

Helical gearsets run on non-intersecting, parallel shafts. Instead of being parallel to the shaft axis (as with spur gears), the teeth of a helical gear spiral around the gear's shaft axis. Placing the gear teeth on this kind of angle increases the amount of tooth surface in contact during operation. This allows for transmission of a higher load with a given size of gearset relative to spur gears. Use of the helix angle also creates end-thrust forces which attempt to push the gears away from each other axially. These forces must be allowed for in any gearset design.

### **Lead-acid**

A conventional battery used in electric vehicles which requires "topping off" at monthly intervals. A warning light will come on when the battery needs servicing or replacing.

### **LEV**

Low emissions vehicle — any vehicle certified to reduce emissions of hydrocarbons by 70 percent.

### **Low-speed Vehicle (LSV)**

Low-speed vehicles are designed for on-road use and are regulated by the National Highway Traffic Safety Administration (NHTSA). They must be electrically powered, have a top speed of 25 mph and offer safety equipment including safety belts, safety glass windshield, headlamps, taillamps and turn signals. Most states allow LSVs to operate on public roads where posted speed limits do not exceed 35 mph.

### **National Low Emissions Vehicle Program**

A voluntary program designed by the EPA to reduce smog and other pollution from new motor vehicles across the country. The regulations allow manufacturers to commit to meet tailpipe standards for cars and light-duty trucks that are more stringent than EPA can mandate.

### **NOx (Nitrogen Oxides)**

Under the high pressure and temperature conditions in an engine, nitrogen and oxygen atoms in the air react to form various nitrogen oxides collectively known as NOx. Nitrogen oxides, like hydrogen, are precursors to the formation of ozone.

### **Regenerative Braking System**

The Regenerative Braking System (RBS) is designed to utilize the vehicle's forward motion to generate electricity and to partially recharge the batteries for a nominal increase in driving range. It works when the accelerator is not applied. As the vehicle coasts, it will turn the electric motor to use as a generator producing a small amount of electricity which will partially recharge the batteries.

### **SME**

Subject Matter Expert — an individual with extensive knowledge on a particular subject.

### **Source Book**

Approved Ford Motor Company resource that details all product features of the TH!NK *neighbor*.

### **Sport Package**

Accessory package that can be added to the base TH!NK *neighbor*. Features of this package include items to meet the golf enthusiast's needs. Items that may be included, but are not limited to:

- Golf ball and tee holder
- Scorecard and pencil holder
- Cooler attachment and storage
- Golf bag rack
- Sweater basket or net

### **Stand-alone**

Accessory items not included in a package that can be purchased separately.

### **Tax Credit**

An income tax credit that reduces the actual tax to pay.

### **TH!NK *city***

A fun and innovative 2-seat battery electric vehicle. The TH!NK *city* is a socially and environmentally responsible solution for short-trip mobility. It is designed for use in a wide range of personal and professional applications including commuting, car sharing, as well as for service in the commercial and government sectors. It has a 57-mile range and a top speed of 64 mph.

### **TH!NK *neighbor***

A stylish and dependable battery electric low-speed vehicle offering many of the comforts and conveniences of traditional vehicles while supporting an eco-conscious environment. The TH!NK *neighbor* is designed to enhance personal mobility in centralized areas such as planned communities, resorts, campuses, parks and military bases.

### **TLEV**

Transitional low emissions vehicle — any vehicle certified to reduce the emissions of hydrocarbons by 50 percent.

### **Turf Mode**

The Turf mode is used to provide safe handling characteristics of the vehicle when driving on grass, sand, dirt, gravel or pathways with loose surfaces.

### **ULEV**

Ultra low emissions vehicle — any vehicle certified to reduce the emissions of hydrocarbons by 85 percent.

### **Watt**

A unit of electric power equal to a current of one ampere flowing across an electrical circuit with a potential of one volt. A kilowatt is a unit of power equal to 1,000 watts.

# 2002 TH!NK *neighbor*

## *Glossary of Terms*

### ***www.thinkmobility.com***

The official Ford sponsored Web site that provides information on the TH!NK product line.

### **ZEV**

Zero emissions vehicle — any vehicle which is certified to produce zero emissions of any criteria pollutants under any and all possible operational modes and conditions.

### **ZEV Mandate**

Any state regulation or other law that imposes obligations on auto manufacturers to produce, deliver for sale, or sell a certain number or percentage of ZEVs.