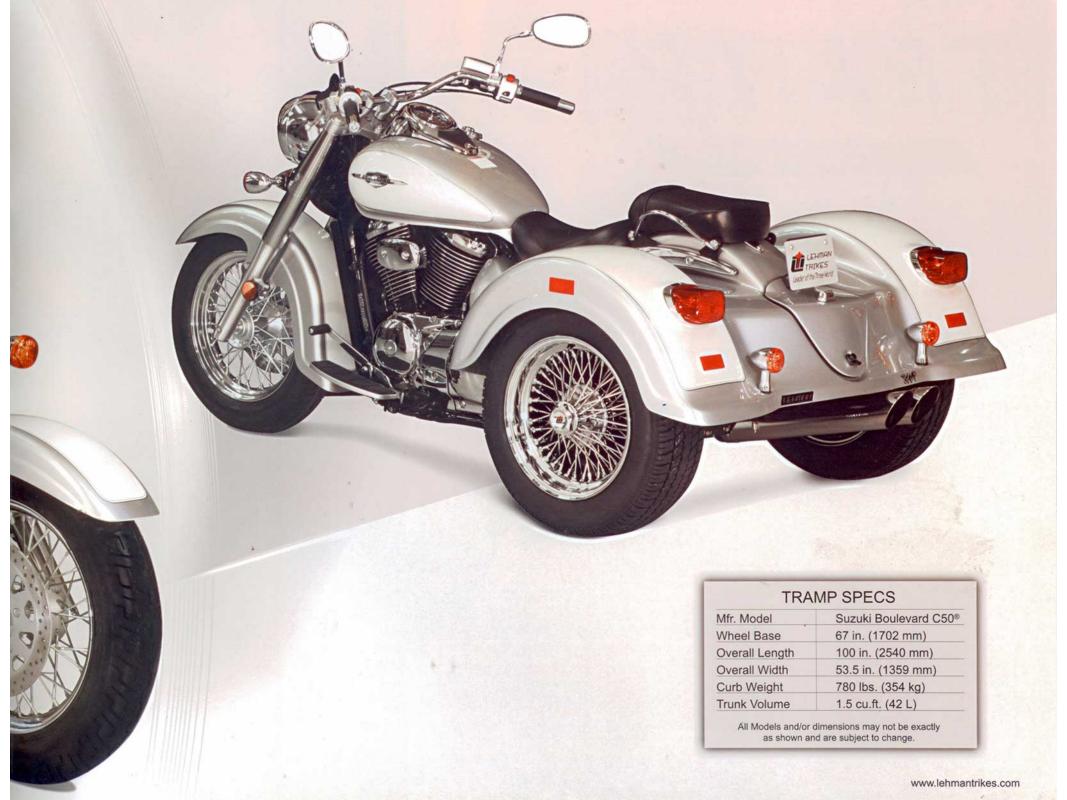
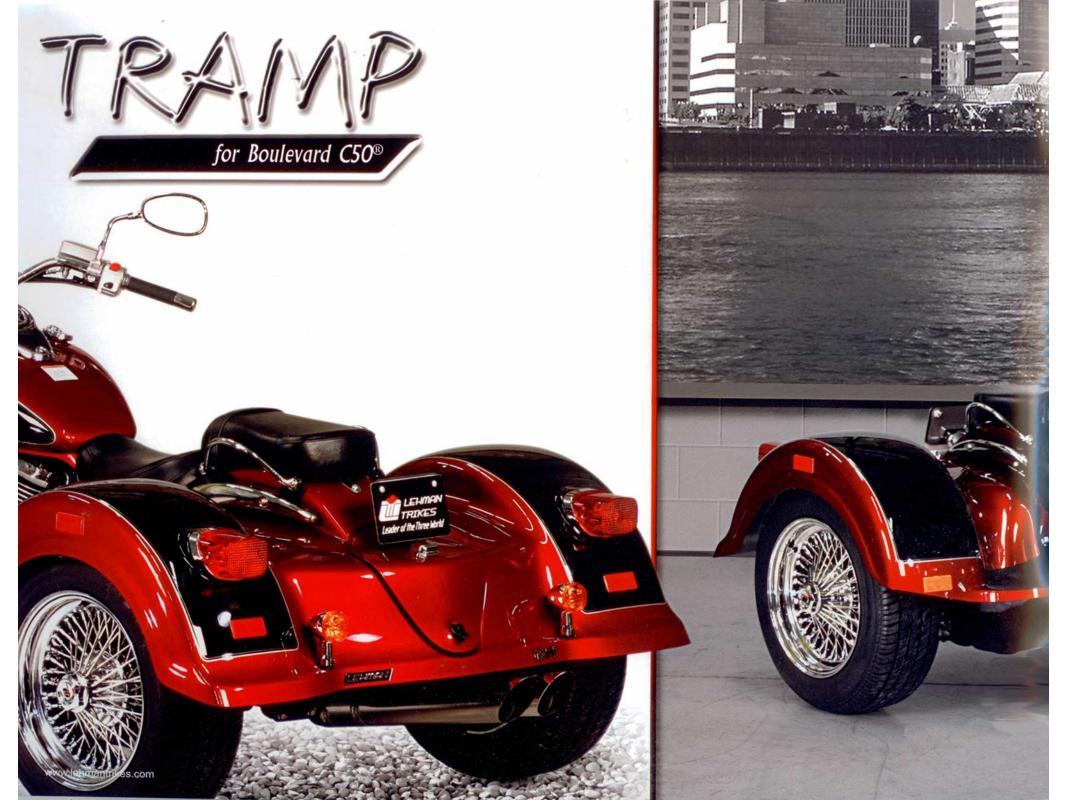


Leader of the Three World













# for Boulevard C90®







## SUSPENSION Trike There

#### Trike Suspension and Swingarm Dynamics

There are basically two common suspension systems currently in use on trikes today. They can be identified as either "independent" or "solid axle." Both systems each have their own unique advantages and disadvantages.

#### **Independent Suspension**

These systems allow each rear wheel to travel through its range of motion independently of the other wheel. This occurs as the vehicle travels over rough surfaces and while cornering.

The primary advantage is increased ride compliance over obstacles and rough surfaces. The level of ride compliance may be affected by suspension geometry, loading, components, use of restrictive anti-sway mechanisms, and other factors.

The significant disadvantage to independent suspension is decreased cornering stability. This is most commonly referred to as body roll or sway. The ability of the suspension to move independently also allows compression at the outer wheel and extension at the inner wheel.

Centrifugal force causes the vehicle's center of gravity to shift toward the outside of a corner – which can be felt by the rider as the motorcycle wants to lean opposite the direction the trike is being steered. We all know that a motorcycle wants to travel in the direction that it is Jeaning. So essentially the trike rider is forcing the vehicle in a

direction opposite the lean angle. As speed increases, cornering becomes more uncomfortable. This design is more effective for an automobile where there are two wheels up front to help stabilize the vehicle.

#### Solid Axle Suspension

This remains the most popular design used for a trike application. With this design, cornering performance takes priority over ride compliance. However, the final result is still dependent upon suspension geometry, loading, suspension components, and most importantly swingarm design.

Again, there are additional factors that can affect performance as well.

#### Lehman "No-Lean" Advantage

The Lehman "No-Lean" philosophy begins with a solid, one-piece swingarm that is designed to be the most sturdy and inflexible in the industry. What this does is minimize the trike's ability to sway or roll to the outside of a corner. The noticeable benefits are increased stability and easier steering, especially at highway speeds. This is our simple "No-Lean" philosophy that is responsible for the best handling trikes for over 20 years!

## LEHMAN

## "MOEEEAN" SUSPENSION

### What is "No-Lean" suspension?

The single greatest factor that determines how a trike performs is swingarm design. No other single component has such an impact on handling and ride quality. "No-Lean" refers to the Lehman proprietary design, which minimizes flex in the swingarm and rear-end system. This design features a differential rear-end with internal solid axles. The Lehman swingarm is a one-piece reinforced design, specially constructed to reduce the effects of sway and body roll.

#### Why should the swingarm be so rigid?

Performance. The way to maximize stability and improve handling is to use the most rigid one-piece swingarm possible. Using a rigid swingarm ensures that while cornering, all three wheels remain firmly planted on the ground, while the center of gravity stays where it belongs – centered between the rear wheels no matter how the vehicle is maneuvered. Flex within the swingarm would cause the trike to lean resulting in decreased stability and heavier steering.

## How does "No-Lean" suspension compare to independent suspension systems?

"No-Lean" is the exact opposite of independent suspension.
Independent platforms are designed to allow shock compression on one side of the trike while allowing extension on the opposite side. For this reason, body roll or "sway" must be expected. Body roll shifts the center of gravity to the outside wheel in curves and creates a less stable condition. To compensate for this, the rider must slow down. A trike with independent suspension will allow the center of gravity to shift from side to side. This effect increases with speed while cornering which makes the vehicle feel unstable. The addition of anti-sway devices simply limits this tendency by restricting some of the independent movement, which also limits the smooth ride benefits.

#### Conclusion:

Lehman "No-Lean" Trike - the most stable and best handling motorcycle-trike conversion.



## LEHMAN TRIKES

#### ONE COMPANY ONE VISION ONE MISSION

Everyone dreams of turning their passion into a successful business. John Lehman's love of motorcycles provided him the opportunity to do just that. John's wife, Linda was not comfortable riding a motorcycle with one of their two small children on the back. John envisioned building a three-wheeled motorcycle that would provide Linda comfort, stability, and a sense of well-being.

Determined to bring his vision to fruition, John bought a 1981

Honda® CB900 around which he would construct the forerunner of today's modern three-wheeled motorcycle (trike). Using his garage as a workshop, a 7.5 inch Chevrolet Vega differential and fabricated metal body, "Number 1," the first modern trike was created. Production began with a few employees and a small space. Orders for trikes poured in as people saw Lehman's trikes at motorcycle events, and word spread. In 1993, John's long-time friend, Larry Strilchuk became John's partner in Lehman Trikes, Inc.

Lehman Trikes has grown into a publicly traded company and is known as "The Leader of the Three World". We now have two facilities; our original location in Westlock, Alberta, Canada and the second facility in Spearfish, South Dakota which opened in January 2004.

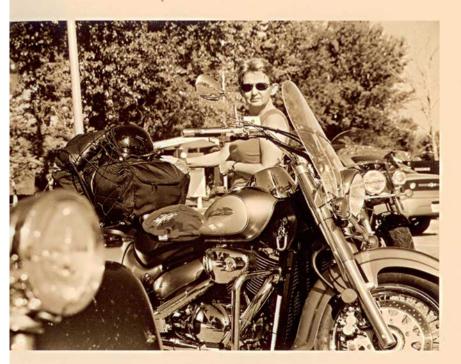
We have experienced enormous demand for our products in recent years, in response to an exploding trike market. Our hard-earned growth and success is in part, a result of our industry "firsts" and "leadership" which include:

- · Original "No-Lean" Suspension
- · 3-Year Unlimited Mileage Warranty
- · Original Equipment Manufacturer (OEM) Relationships
- · Financing / Floor Planning
- · Factory Sponsored Trike Owners' Group
- · Good-turn Trike
- · DOT, MOT, TUV, JWL Compliance
- Exclusive Insurance with Industry Partners

Lehman Trikes continues to be a genuine success story. Our contemporary designs, introduction of bold new products, expanding OEM relationships, comprehensive dealer network, and exceptional customer service contributed to our successes of the past, and will lead to even greater successes in the future. These qualities have created an environment where Lehman Trikes is the benchmark by which all other trikes are measured.

Your Lehman Trike will provide you with "the ride of your life." You and your trike will stand out in the crowd, whether you take to the road riding the switch backs of the "Dragon Tail" in North Carolina, running the "Badlands" of South Dakota, getting your trike blessed at the "Blessing of the Bikes" at Daytona, or just cruising the neighborhood. Regardless of the place, time, or environment, our customers ride in comfort and style. You are invited to join our Lehman family of trike owners.

COMMITTED TO OUR CUSTOMERS, PRODUCTS & THE INDUSTRY





www.lehmantrikes.com

# EXCLUSIVE TO LE

Owning a Lehman trike is an exhilarating experience exceeded only by riding one. Riding down the highway, wind in your face, you are filled with pride; pride in owning and riding your Lehman trike.

Pride is being a member of the only factory sponsored trike owners group, a part of the Lehman family. We are proud of our Pride Members! We also take pride in our products; we take pride in our family; e.g., owners, dealers, staff, and suppliers. We take pride in the numerous services offered to our owners' group through our customer support services.

Riding your Lehman trike through the Florida Keys, the Rockies, or around town, you know that you never will be the same. Riding a Lehman trike truly is an incredible life changing experience. Welcome to our Lehman family!

