



## DESCRIPTION OF INVENTION

The Motorcycle Innovation Pty Ltd (MCI) Triangulated Steering and Suspension System (TS<sup>3</sup>) addresses a comprehensive range of safety and performance issues that are inherent in the antiquated and flawed telescopic fork steering system currently used on 90% of the world's motorcycles.

### The Core Innovation:

*A patentable design which reduces load transfer and resonant oscillation harmonics from the front end of the motorcycle to its COG (centre of gravity), and reduces the considerable front end biased weight, detrimental to in-line performance.*

It removes the unpredictable, inconsistent and dangerous flexibility and instability intrinsic in forked steering and suspension in motorcycles, and is capable of carrying loads many hundreds of times its own engineered weight. This creates easier and safer handling while improving fuel efficiency all the while retaining an accepted classical motorcycle 'look'.

The core Innovation of the MCI TS<sup>3</sup> design overcomes **ALL** the limitations of previous telescopic forks *and* current hub-centre designs; producing a more compliant and safer front end.

Separates steering from suspension;

1. Reduces stress and shock loads and shortens their path from wheel to chassis centre of gravity.
2. Eliminates potentially destructive oscillation harmonics.
3. Eliminates high stress loads on the hub-centre king-pin.
4. Eliminates cornering and lean clearance issues.
5. Eliminates horizontal and lateral flex under braking unless designed into the unit.
6. Lightweight chassis lowers centre of gravity for greater stability.
7. Delivers easier and safer handling in cornering and braking.
8. Delivers consistent steering geometry through suspension travel.
9. Totally triangulated and rigid system removes unpredictable and dangerous flexibility in steering.
10. Delivers totally adjustable dive/anti dive, and rake and trail geometry capabilities, to accommodate varied road conditions, rider styles and skill levels.

Significantly, the TS<sup>3</sup> retains a classical motorcycle shape and appearance – not seen on other alternate front end motorcycles - critical to rider and commercial acceptance.