Wheel alignment training stand

Wheel alignment training stand is specially designed to demonstrate the vehicle chassis structure and wheel alignment procedures.

McPherson-type front suspension and multi-link rear suspension is integrated in a training stand. Wheel alignment training stand is a great educational tool that allows students to introduce the different types of automobile chassis, study suspension components and angles modification, perform various measurements and other diagnostic procedures. Using this training stand it is very easy to teach several students at once, because all suspension components are visible from all sides. Suspension geometry adjustments are performed like in a real automobile – using screws and tools.

Order Nr. MSVAZ 1

Technical specifications and functions

Main functions:

Wheel alignment training stand consists of McPherson-type front suspension and multi-link rear suspension.
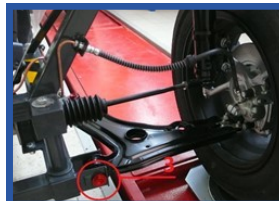McPherson-type front suspension has 8 adjustment points that allows:

1) To adjust camber, steering axis inclination (SAI) and caster angles by sliding shock absorber upper mount

2) To adjust camber at 2 points

3) To adjust camber, caster and SAI angles by turning front eccentric bolt on the front lever

4) To adjust caster angle by turning rear eccentric bolt on the front lever. By turning the front and rear eccentric bolts it is possible to adjust camber

5) To adjust Toe by the steering tie rod

6) To adjust camber angle by sliding the wheel with unscrewed lower link on the front lever. Steering axis inclination is also changing

7) Caster angle and automobile base can be adjusted by loosening the subframe and sliding it along the length. Camber angle and steering axis (SAI) of the vehicle can be adjusted by sliding subframe sideways

8) Steering wheel lock bolt allows to capture the steering wheel and the steering column in order to keep the steering wheel in a stable position


Adjustment points:

The rear multi-link suspension has 3 adjustment points, that allows:

1)   To adjust Toe angles (alignment) by adjusting lower rod;
2)   To adjust camber angles (alignment) by adjusting the eccentric bolts on the upper lever;
3)   To adjust the longitudinal position (Wheel base) of the wheel by adjusting the front rod of the rear suspension;

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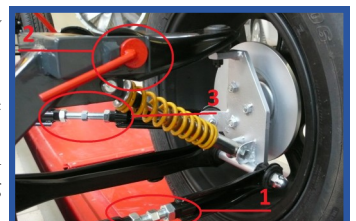
Wheel alignment training stand

Diagnostic and measurement

* With wheel aligner for suspension geometry adjustment it is possible to demonstrate for students these measurements and settings:

•   Wheelbase distances and diagonals
•   Axis shift in relation to one another
•   Scrub radius
•   Caster trail
•   Steering axis inclination (SAI)
•   Tread width
•   Wheel base length
•   Front and rear axle wheel set back
•   Ride height (zero ride height)
•   Central line position
•   Traction line operation, thrust angle
•   Toe difference angle
•   Turning radius (Rolling radius)
•   Other

* Depending on wheel aligner software and hardware possibilities

Wheel alignment training stand is designed for making a demonstrations of the suspension angles by using all types and technology of wheel aligners:

•   3D Technology Wheel Aligner
•   CCD Technology Wheel Aligner
•   Mechanical Wheel Aligner (Rulers, ropes, lasers and etc.)

The best and most suitable wheel aligner is with 3D technology.

The car lift is not necessary for training and demonstration, because an open construction of the training stand allows to see and perform various measurements from all sides.

Other

•   Wheel alignment training stand can be easily folded and placed so that it take up minimal space for storage and transportation;
•   The front axle has a hydraulic brakes;
•   The rear axle wheels are blocked by locking bolts;

Dimensions (approx.: height x length x width)

•   Fully spread base 110 x 310 x 170 cm
•   Folded for storage 110 x 165 x 170 (Standing stand on the wheels)
•   Folded for storage 165 x 110 x 170 (Upright stand)
•   Nett weight approx. 195 Kg
•   Made in Lithuania
•   CE certificate

Optional accessories

•   Wheel aligner
•   4 post lift for wheel alignment
•   Scissor lift for wheel alignment

Automotive functional models