WHIPPET

2 Wheel Laser/Optical Aligner

USER MANUAL

Model No. CO2WLA

Made in
SHEFFIELD ENGLAND

Follow these steps prior to use

1. After opening your package, first remove the two M6 safety bolts from the bottom of the wheel hangers.

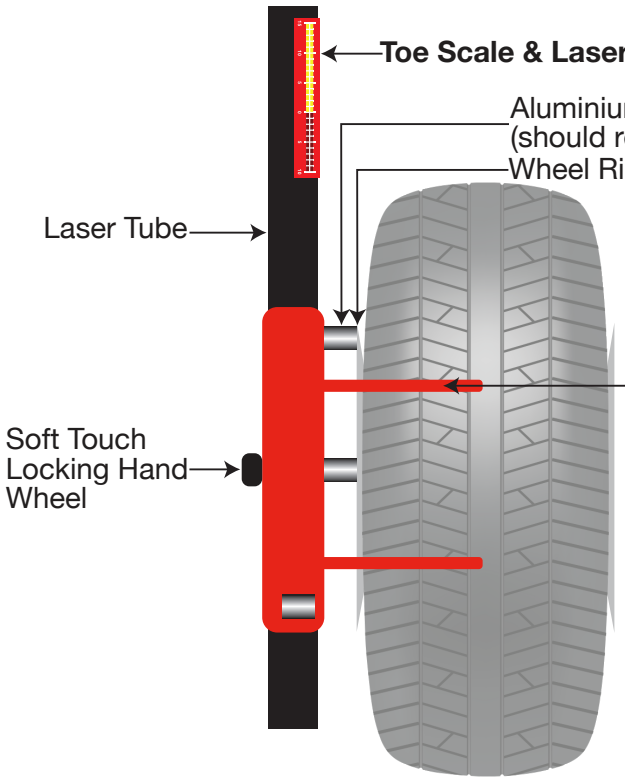
2. Unlock the soft touch hand wheels on both aligners, and the slide the wheel hangers down into the back plate. Relock the soft touch hand wheels and then refit the two M6 safety bolts.

3. Operating the switch. The switch is an on/off switch. When put on charge always turn it off.

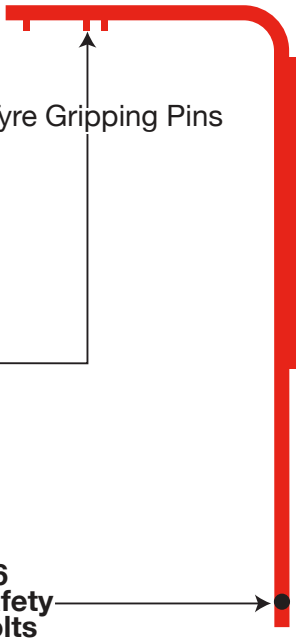
4. Hang the laser measuring head onto the tyre and touch the wheel rim with the three aluminium rim buttons. Set the spirit level. Take the mirror measuring head and carry out the procedure.

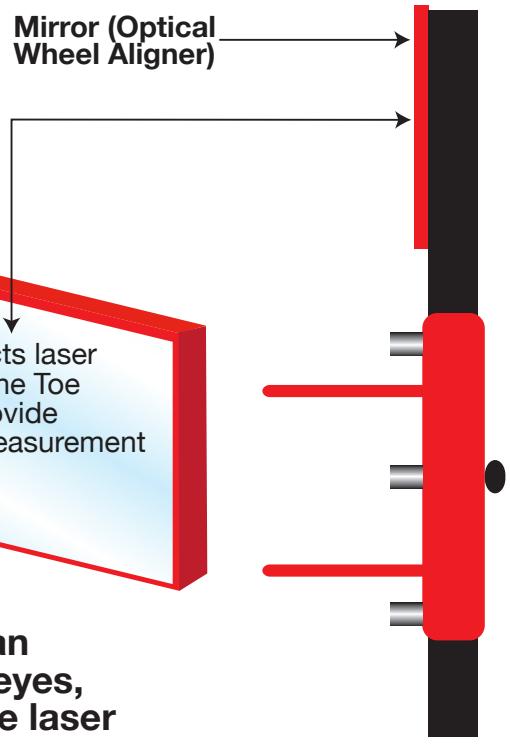
5. Switch on the laser and the toe reading is reflected to the opposite scale giving you your measurement.

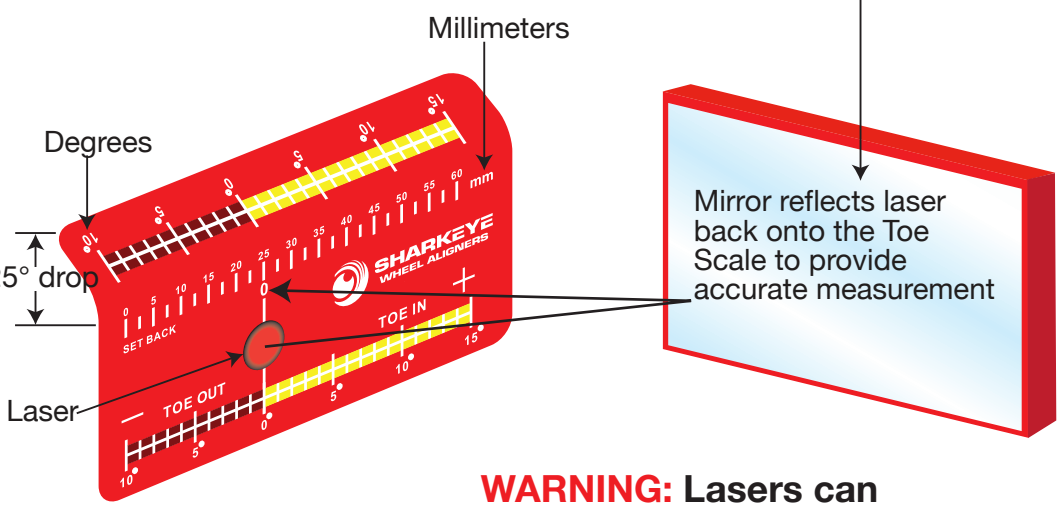
Wheel Aligner Overhead View



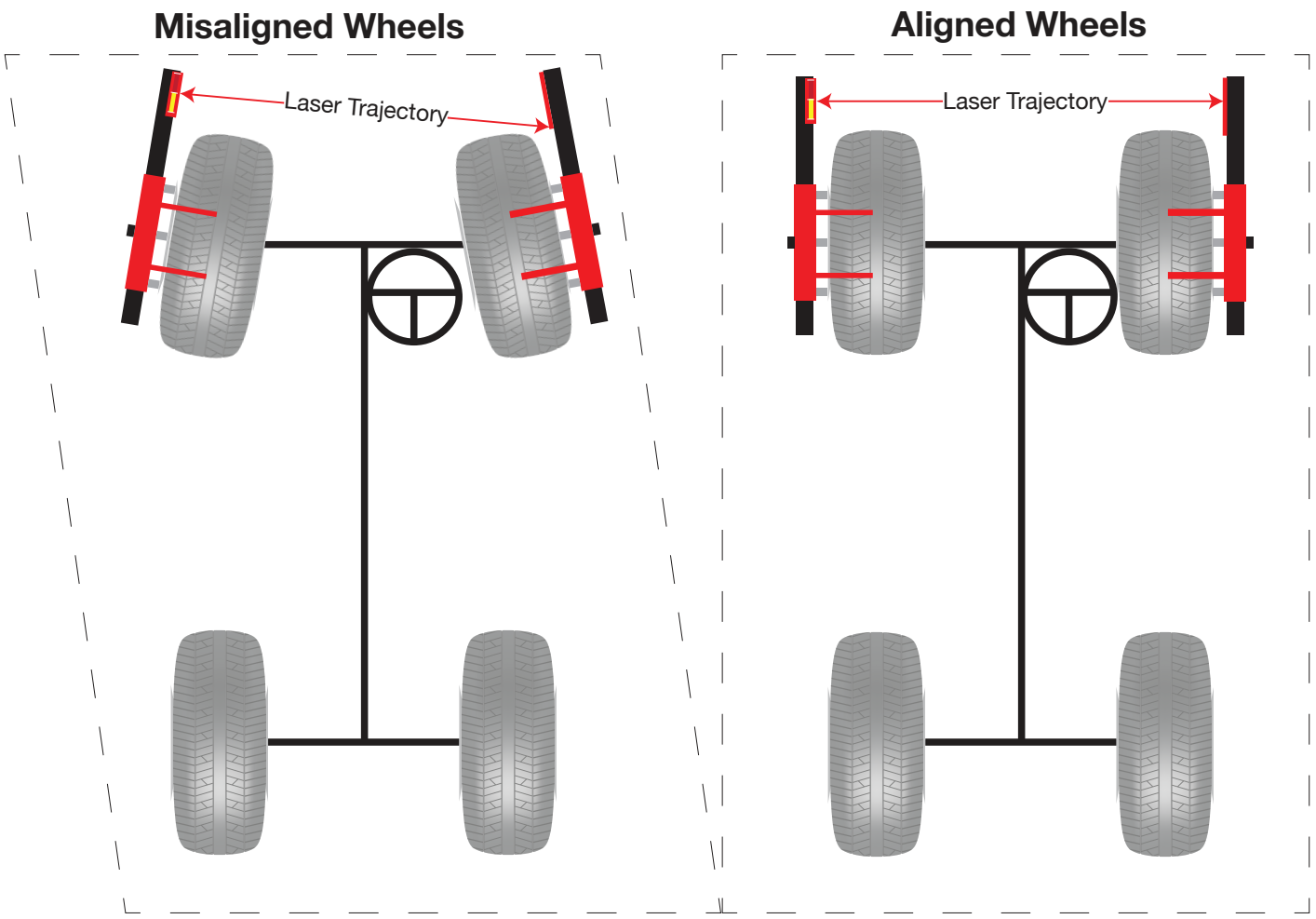
Wheel aligner Hanger Side View







WARNING: Lasers can seriously damage your eyes, never look directly into the laser



2-Wheel Laser Alignment In Brief

This 2-wheel only system is designed to measure total toe on a single axle without regard to the other vehicle axle (or axles). It cannot measure individual toe on each side. It uses a laser on one side, with a mirror on the opposing side, to reflect back to a total toe scale on the laser side.

This system does an excellent job of accurately setting total toe, but is unable to measure or correct individual side-to-side toe without a reference to the other axle (or axles).

Install the laser sensors as follows. When using the 2-wheel only system, whenever possible, the sensors should be placed on the vehicle with the toe scale and mirror ends pointing toward the front of the vehicle. This is regardless of which axle they are installed on. This allows the toe scales to be read in a normal manner. If vehicle clearance will not allow this on the rear axle, the sensors may be installed with the toe scale and mirror ends extending rearward away from the vehicle. In this case, the toe scale must be read in reverse. Indicated toe-in will actually be toe-out, and indicated toe-out will actually be toe-in, as the scale is being viewed in an opposite manner.

NOTE: *This is different than when using the 4-wheel system on the rear axle where the scales always extend out away from the vehicle and are read in reverse of what is indicated for toe-in and toe-out.*

The laser sensor hangs from the top of the tire's tread surface. When installing the laser sensor, adjust the position of the sensor so that the level vial has a centered bubble while at the same time positioning all three aluminum stand-off pins firmly against the wheel's edge.

The sensor should be exactly parallel with the tire sidewall. The two lower aluminum stand-off pins are for toe while the single upper pin is for camber.

Although not normally required, it may be helpful on some tire and wheel assemblies to use a "bungee" type rubber strap to keep the sensor firmly in position. Be careful not to over-tighten and distort the sensor body, just light pressure is all that is needed.

A Tip To Achieve Better Results Using 2-Wheel Only System

When using the 2-wheel only laser alignment system here is a TIP: To reference the other axle (or axles) tie a string snugly around the entire vehicle across the mid-point of all tires. This should locate the string at approximately wheel hub height.

The string can be used as a visual guide to determine if the front and rear tires are roughly parallel to each other by carefully determining how evenly the string touches or spaces away from the tire sidewalls. Turn the steering wheel back and forth to obtain even pressure and distance of the string from all tire sidewalls. It will not be as accurate as the SharkEye 4-wheel laser system, but when done properly it will perform an adequate job.

If the rear axle is to be adjusted, start in the rear first, if not skip ahead to the next paragraph. Place the sensors in position on the rear tires over the top of the string, leaving the string in position. Read the toe scale and adjust for proper total toe setting while maintaining even sidewall pressure and distance on the string to keep all tires parallel. This completes the rear axle adjustment.

Place the sensors on the front axle, leaving the string in position. Sit in the vehicle and visually center the steering wheel. It is helpful to start the engine on power steering equipped vehicles during this process. Once centered verify equal steering wheel play side to side and shut off the vehicle. If you have the steering wheel lock tool and the steering wheel level indicator tool now is a good time to install them. The steering wheel locking tool is very helpful, but not absolutely required. However, without the steering wheel locking tool, the job will require more frequent re-centering of the wheel during and after toe adjustments.

Visually inspect how the string contacts the front tire sidewalls. You will adjust the toe to specification while at the same time correcting and maintaining the front tires parallel to the rear tires using the string as a guide.

Vehicles with individual tie rods for each steerable wheel may require adjustment on one side more than the other. On single adjustable tie rod vehicles, you will adjust for total toe, and then if the vehicle has an adjustable drag-link use this to move the wheels into a parallel alignment with the rear axle while maintaining the steering wheel in the centered position.

After setting total toe on older single tie rod adjustment vehicles without an adjustable drag link, move the front wheels back and forth until even pressure and distance are applied to the string without regard to the steering wheel centering. Then remove the steering wheel and reinstall it in the centered position.

NOTE: *this will only work on older vehicles (primarily vehicles manufactured before 1980) with non-indexed steering shafts where the steering wheel attaches. Modern vehicles have indexed steering shafts allowing steering wheel installation in one position only.*

CAUTION: *Never remove a steering wheel that incorporates an airbag deployment system without following the vehicle manufacturer's instructions to deactivate the system or serious personal injury could result.*