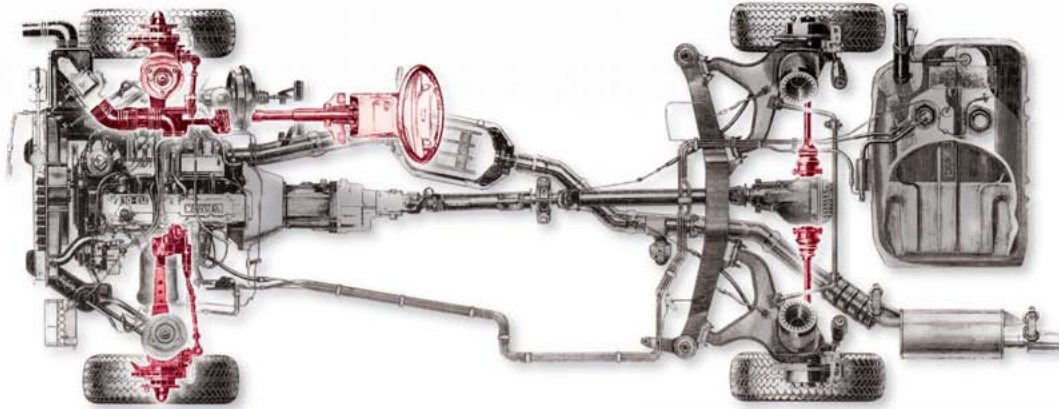


Steering System Mechanism

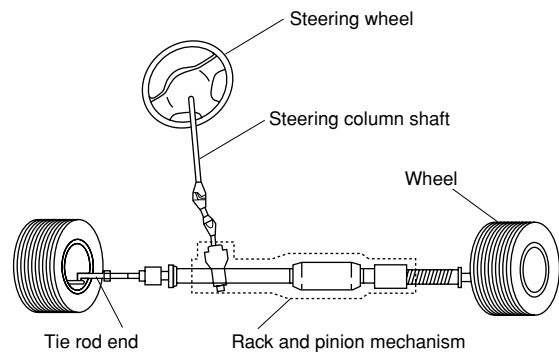


MECHANISM 1

Steering system makeup

By operating the steering wheel, the wheel direction is changed making the vehicle change direction. In other words, the steering system is a steering device. The fundamental mechanism allows the vehicle's direction to be changed when movement is transferred through the steering wheel gear box from the handle to the wheels.

There are many types of steering gear mechanisms available for steering systems. However, presently the main type is a combination of a rack and pinion gear. The rack gear connected at both ends by a tie rod is also known as the rack and pin method. However, because a large amount of power is required to change wheel direction, most vehicles now employ power steering mechanisms, which assist through hydraulics, and motorized mechanisms.



MECHANISM 2

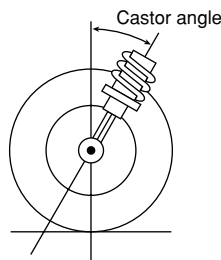
Wheel alignment

The wheels are fitted on a slight angle (not horizontal or square) to assist steering and drivability, and to keep the vehicle traveling in a straight line. This adjustment is called "wheel alignment" and is made up of 4 elements - caster, camber, toe, king-pin angle.

Castor

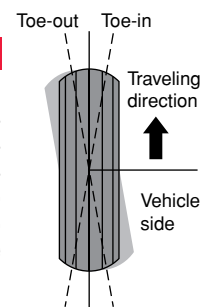
The front wheels are fitted off the axle on an angle, just as castors are fitted on the legs of chairs.

These are known as castors, by being set on an angle, help keep the vehicle in a constant aligned state.



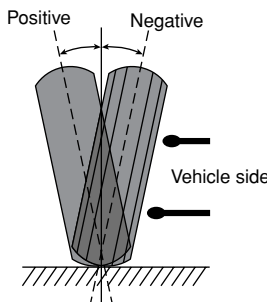
Toe

Looking at the wheel angle from above, toe-in is known as when the vehicle's tracking moves inwards, and toe-out is known as when the tracking moves outwards. When the camber is set to positive, the tendency for the wheels to head outwards will be eliminated and the vehicle's forward tracking will improve.



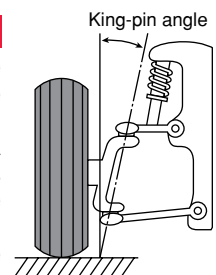
Camber

The angle seen from the front that is made from the perpendicular line opposed to the ground, and the wheel incline, is known as the camber angle. A negative camber is where the bottom is open, and a positive camber is where the top is open. This affects the vehicle's operation, stability and cornering when turning.



King-pin angle

When looking at the vehicle from the front, the king-pin axle faces towards the inside of the chassis leaning upwards. The angle that is perpendicular makes a line from the slant and the surface is known as the "king-pin angle". The angle that it is set to keeps the steering wheel in a straight position and also makes the steering return to the straight position after it has been turned.



TIE ROD LOCK NUT WRENCH

No.	D	T ₁	T ₂	T ₃	L	ℓ	⊞
AS701	66	15	10	17	220	95	5

Usage

- Tightening and loosening Tie-rod end lock nuts in automobiles (light to normal automobiles)
- Side slip work at times of inspection and tire replacement.
- Rack boots replacement work

Application

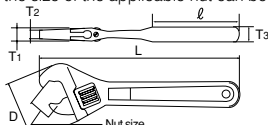
- Hexagonal, 2-faced 17~24mm width lock nuts for tie-rod ends (covers most domestically made light-normal sized automobiles).

Characteristics

- The wrench is designed to grip the angles of the nut firmly and can loosen or tighten nuts without slipping.
- Even when a large amount of force is applied, the user's hand will not slip and injuries will not occur thanks to the width of the grip.
- The length of the tools means it does not become obstructed when the vehicle's steering wheels are at full rotate.

This means that the operation can be carried out without removing the tires. (Photo 1)

- As their measurements are provided, the size of the applicable nut can be selected in advance.



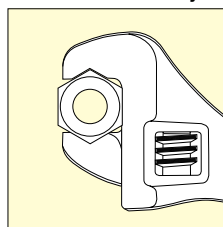
Tightening and loosening Tie-rod end lock nuts

1



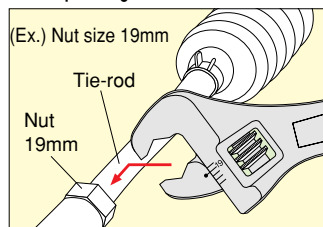
(Photo 1)

Holds the nut firmly



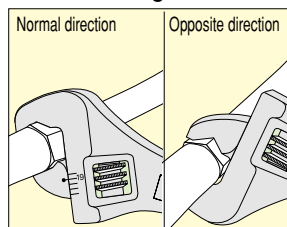
This wrench provides effective nut tightening / loosening without slippage. The shape of the wrench holds the angle of the nut.

The simple design of the set is ideal for nut



As the nut size has been set, it can be easily removed without obstructing the tie-rod.

The head is angled



As the head is angled it allows for both operating directions as required.

SIDE SLIP BOARD SET

No. ATG92	▼kg 31.5	⊞ 1(2 Cartons)
Side slip board	AG901	
Step Board	AG902	

●Side slip board

No. AG901	▼kg 21.5	⊞ 1
Main body	×1	
Slope for side slip board	×2	

●Step Board

No. AG902	▼kg 10	⊞ 1
Main body	×1	
Slope for side slip board	×2 Bolts with hexagonal holes (M5 ×10mm)×2	

Characteristics

- Easy use without the need for heavy setting.
- The small and light design allows easy maneuverability.
- A separate type is available for vehicles with wider chassis.
- As the length is short the tool can be set up in tight spaces.
- As the height is low (28mm), vehicles can move on and off easily with slope.
- The displayed value remains at the maximum value.
- The needle can reset back to 0 easily by hand.
- The display range is a wide scale 0-20mm/m for both IN/OUT and is capable of handling imported vehicles as well.



Example of use No. ATG92

Usage

- This is a tester that easily reads the amount the vehicle is pulling to the side (side slip), the vehicle's front wheel toe-in and the balance of the camber by simply passing the front wheels of the vehicle over the side-slip board.

Application

- Light vehicles to 2 ton class freight trucks
- Vehicles with tires that have a width of 280mm or less

Specs.

- * Weight measure on one side. The weight is shown within the brackets.

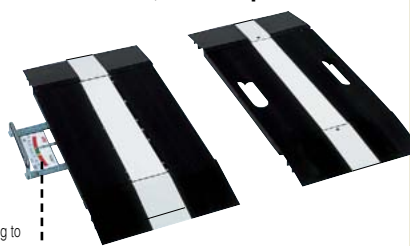
Wheel load tolerance*	750kg (Weight 1500kg)
Display range	Both IN · OUT measurements are 0 - 20 (mm/m) (Minimum increments of 1mm/m)
Display method	Analog, by needle (1)
Type	Left/Right separate

* This product is not a vehicle tester for fitness certificate checks.

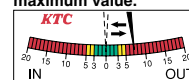
- * Replacement parts are available
- * Check with your dealer for details.

●SIDE SLIP BOARD SET

Easy checks before vehicle fitness certificate inspections. Fast check, Side slip

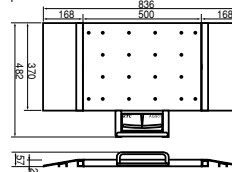


The displayed value remains at the maximum value.

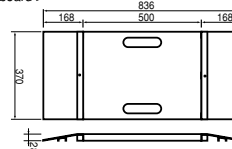


The needle can reset back to 0 easily by hand. The display range is a wide scale 0-20mm/m for both IN/OUT and is capable of handling imported vehicles as well.

< Side slip board >



< Step board >



- Make sure that all operators read the Owner's Operator Manual carefully before usage.
- Make sure that all operators are qualified to use this device. (A qualified vehicle maintenance technician or a holder of a special certificate applicable for work in this area.)
- Do not use for non-specified purposes.
- Do not disassemble or modify this product.
- * The AG902 (Step board) version does not have a side-slip display function attached. Use the ATG92 (Side slip board set) or the AG901 (Side slip board) x2 in combination with this product.

*Please check the merchandise inventory for a product that is marked by before placing an order.