

III. Check and adjust the front wheel main pin backward tilting angle, main pin interior falling-in angle, wheel camber angle as well as the wheel toe-in and steering angle

Specifications: The requirements for the front wheel positioning are as follows:

Main pin backward tilting angle	$3^{\circ}.15^1 \pm 30^1$
Front wheel camber angle	$[465]:1^{\circ} \pm 30^1$
Single front wheel toe-in angle	$10^1 \pm 10^1$
Steering angle	Inner side : $35^0 \pm 4^{\circ}$ Outer side : $31^0 \pm 4$

Note: The backward tilting angle is adjusted before adjusting the camber angle and the toe-in angle.

1、 Main pin backward tilting angle

This angle is assured by way of the designed configuration, which makes the operational adjustments unnecessary.

The impacts of backward tilting angle

The major function of the backward tilting angle is to keep the car moving in the straightly forward direction. If the backward tilting angle is positive, the inner side of the car will be lowered when the front wheel turns in directions, which results in the uprising of the chassis. That will increase the loads onto the knuckles. If the backward tiling angles of the two wheels are identical, the car will be back to the straightforward direction after turning the directions. The increase of the positive backward tilting angle will increase the stability of the steering wheel, but the turning forces will be increased as well. The decrease of the positive backward tilting angle will reduce the stability of the steering wheel but the turning forces will become reduced. The extent of the backward tiling angles will not have impacts upon the tears and wears of the tires. They are used to stabilize the driving directions and ensure the automatic returning to the straightforward direction after turning. If the car is equipped with the traditional mechanic steering devices, the backward tilting angle will be very small or even tending to be in the negative, which makes the turning of direction easier. If the car is equipped with the dynamic steering device, the backward tiling angle is generally set to be relatively large positive angle, which allows the driver to feel the turning of directions. The increase of the positive backward tiling angle will increase the forces for turning, and increase the stability in straightforward movement of the car.

2、 Camber angle

Under normal circumstances, the camber angle does not have to be adjusted after the car is equipped with the independent suspension system and wheel knuckles. In the case that the wheel camber angle is detected to have bias from the allowances due to some reasons,