

Quick Reference Guide

Calibrating the Tire Clamps

For accurate measurements during the process of Wheel Alignment and ADAS calibration, the tire clamps need to be calibrated before use. However, deviations may still occur during the calibration for various reasons. Performing an accuracy check is required after calibrating the tire clamps. To perform the calibration and accuracy check, you will need an Autel Ultra series tablet, an IA900WA calibration frame, a set of wheel targets, and a calibration bar or a vehicle.



NOTE:

- Since the IA900WA calibration frame is compatible with MaxiSys Ultra ADAS, ADAS & MaxiSys Ultra, ADAS & MaxiSys 909, ADAS & MaxiSys 909EV, ADAS & MaxiSys 906 Pro, or ADAS & MaxiSys 909 Lite, you can use any of the tablets to perform calibration and accuracy check.
- 2. Before performing the calibration and accuracy check, ensure the tablet is bound to the IA900WA calibration frame and that the Wheel Alignment & ADAS Calibration functions are activated.

Calibrating the Tire Clamps



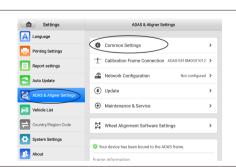


After the MaxiSys tablet is connected to the IA900WA via Wi-Fi, tap the **Settings** application on the MaxiSys menu screen.



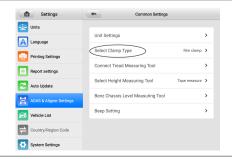
NOTE: You can refer to the Quick Reference Guide for the IA900WA to connect the tablet to the IA900WA via Wi-Fi.





Tap the ADAS & Aligner Settings option on the left column. Tap Common Settings to display the Common Settings screen.





Tap **Select Clamp Type** on the right of the screen to change the clamp type.



Select Tire Clamp on the right of the screen.



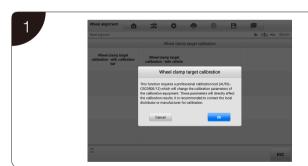
After selecting the clamp type, tap the **Back** button to return to the ADAS & Aligner Settings screen. Tap **Maintenance & Service** on the ADAS & Aligner Settings screen, then select **Wheel Clamp Target Calibration**.



There are two options for calibrating the tire clamps installed with targets:

- Calibrating with a calibration bar;
- Calibrating with a vehicle.

Calibrating with a Calibration Bar

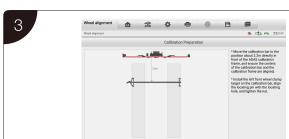


Prepare a calibration bar (AUTEL-CSC0500/12).

Select Wheel Clamp Target Calibration–with Calibration Bar. Read the notes and tap ${\sf OK}$.

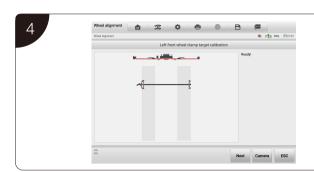


Select the left front tire clamp installed with target as an example.

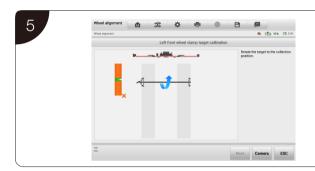


Next ESC

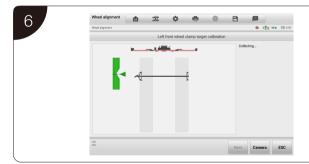
The tablet will automatically display the calibration preparations after you select the tire clamp and the target needed for calibration. Follow the on-screen guide. Move the calibration bar to a position about 87 inches directly in front of the IA900WA calibration frame, and ensure the centers of the calibration bar and the calibration frame are aligned. Then install the left front tire clamp with target on the calibration bar and align the locating pin with the locating hole. Tighten the nut.



When the distance between the calibration bar and the calibration frame is in the required range (87–94 inches), the centers of the calibration bar and the calibration frame are aligned, and the left front tire clamp with target is installed and tightened, tap **Next**. The tablet will indicate that everything is ready for the next step.



Follow the on-screen guide. Rotate the calibration bar so that the target is in the collection position.



When the arrows and the indicated block turn green, stop rotating the crossbar. The tablet will start collecting data automatically.



After collecting data, the tablet will display the calibration result automatically. If the screen displays $\ensuremath{ \odot}$, it indicates that the calibration is successful. You can tap **ESC** to exit the function. If the screen displays $\ensuremath{ \odot}$, it indicates the calibration has failed. You need to tap **Recalibrate** to perform the calibration again.

Since the calibration procedures are roughly the same, the calibration procedures for the remaining tire clamps and targets will not be repeated here. You can complete the calibration one by one in accordance with the on-screen guides.

Calibrating with a Vehicle



On the Wheel Clamp Target Calibration screen, select Wheel Clamp Target Calibration-with Vehicle.





Select the left front tire clamp installed with target as an example.





The tablet will automatically display the calibration preparations after you select the tire clamp and the target needed for calibration. Follow the on-screen guide. Center the steering wheel and lock it, place transmission in neutral, and release the parking brake. Then, install the left front tire clamp with target on the left front wheel and raise the front axle to allow the wheels to be adjusted freely.



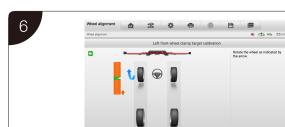


After the steps above are completed, tap **Next** to continue. Follow the on-screen guide. Place the calibration frame about 87 inches from the center of the front wheel and ensure that the centers of the calibration frame and the vehicle are aligned. Then press the **UP** and **DOWN** buttons on the back of the calibration frame to adjust the crossbar height so that the crossbar is roughly at the same height as the center of the left front wheel.





When the distance between the calibration frame and the front vehicle is in the required range (87–94 inches), the centers of the calibration frame and the vehicle are aligned, and the crossbar is adjusted to the required height, tap **Next**. Then the tablet will indicate that everything is ready for the next step.



Follow the on-screen guide. Turn the steering wheel so that the target is in the collection position.



Camera Cancel Next

Camera Cancel Next

When the arrows and the indicated block turn green, stop turning the steering wheel. The tablet will start collecting data automatically.



After collecting data, the tablet will display the calibration result automatically. If the screen displays \bigcirc , it indicates that the calibration is successful. You can tap **ESC** to exit the function. If the screen displays \bigcirc , it indicates the calibration has failed. You need to tap **Recalibrate** to perform the calibration again.

Since the calibration procedures are roughly the same, the calibration procedures for the remaining tire clamps and targets will not be repeated here. You can complete the calibration one by one in accordance with the on-screen guides.

Performing an Accuracy Check



Tap Maintenance & Service on the ADAS & Aligner Settings screen, then select Accuracy Check on the right of the screen.



There are two ways to check the accuracy:

- With a calibration bar;
- With a vehicle.

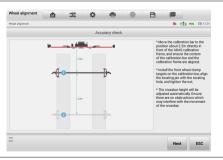
Checking with a Calibration Bar



Prepare a calibration bar (AUTEL-CSC0500/12).

Select Accuracy Check-with Calibration Bar. Read the notes and tap OK.





The tablet will display the preparations needed for performing an accuracy check with a calibration bar. Follow the on-screen guide. Move the calibration bar to a position about 87 inches directly in front of the calibration frame, and ensure the centers of the calibration bar and the calibration frame are aligned. Then, install the front tire clamps with targets on the calibration bar and align the locating pin with the locating hole. Tighten the nut.





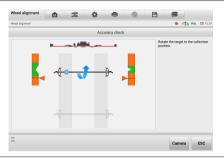
Next, move the calibration bar so that the values of "Offset," "L-Distance," "R-Distance," and "Distance Diff" are displayed in green.

4



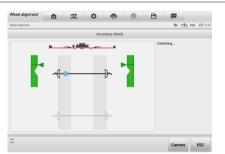
When all the above values are displayed in green, tap **Next**. The tablet will indicate that everything is ready for the next step.

5



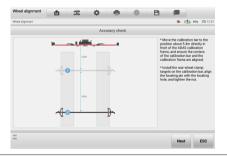
Follow the on-screen guide. Rotate the calibration bar so that the targets are in the collection position.

6



When the arrows and the indicated block turn green, stop rotating the calibration bar. The tablet will start collecting data automatically.

7



After collecting data, the tablet will automatically enter the next screen. Remove the front tire clamps with targets from the calibration bar. Follow the on-screen instructions and use the steps above to check the rear tire clamps with targets.

8



When the data of the rear tire clamps with targets is collected, the Result screen will appear. If the screen displays \odot , it indicates the accuracy check has passed. If the screen displays \odot , it indicates the accuracy check has failed. You will need to tap **Recheck** to perform the accuracy check again.

Checking with a Vehicle



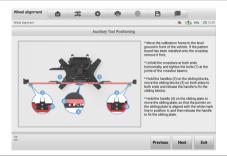
On the Accuracy Check screen, select Accuracy Check-with Vehicle.

2



Follow the on-screen instructions to adjust the vehicle and note the precautions you should be aware of during the operation.

3



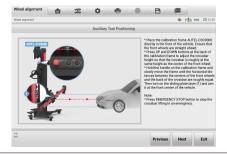
Follow the on-screen instructions to adjust the position of the sliding plate on the crossbar.

4



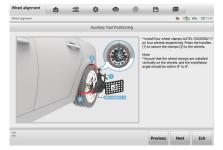
Adjust the fine-tuning mechanism as shown in the on-screen instructions.

5



Place the calibration frame directly in the front of the vehicle. Follow the on-screen instructions to adjust the calibration frame.





Follow the on-screen instructions to install the four tire clamps with targets onto the four wheels.





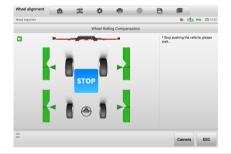
Push the vehicle as shown in the on-screen instructions (Forward — Backward — Forward) to perform the wheel rolling compensation test. Wait for the tablet to automatically advance to the next screen.





Place the calibration frame directly behind the vehicle. Follow the on-screen instructions to adjust the calibration frame.





Push the vehicle as shown in the on-screen instructions (Forward - Backward - Forward) to perform the wheel rolling compensation test. Wait for the tablet to automatically advance to the next screen.

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After performing the wheel rolling compensation test, the Result screen will display. If the screen displays \bigcirc , it indicates the accuracy check has passed. If the screen displays \bigcirc , it indicates the accuracy check has failed. You will need to tap **Recheck** to perform the accuracy check again.