

Below are two distinct, professional step-by-step guides formatted for your website. The first is written explicitly for **Snap-on** diagnostic tablets, and the second is tailored for **Autel MaxiSYS / MaxiCOM** tools (the most popular alternative brand used in workshops).

Both guides address the fact that the [Machter aftermarket coupling](#) requires a memory reset rather than typing in a numerical factory code.

Guide 1: Initializing Machter Mazda AWD Couplings Using a Snap-on Scan Tool

When replacing the factory rear differential electronic coupling unit on a Mazda CX-3, CX-5, or CX-9 with a Machter aftermarket unit, **there is no physical calibration code to type into a scan tool.**

Because the Machter coupling is engineered as a high-quality aftermarket component, it uses a universal electrical resistance profile rather than a unique factory serial code. However, your Mazda's All-Wheel Drive (AWD) Control Module must still be forced to "learn" this new electrical footprint. Skipping this reset step can result in an AWD Malfunction dashboard light or cause the system to disable the rear wheels.

Follow this step-by-step guide using a **Snap-on Diagnostic Scan Tool** to properly initialize your new coupling.

Phase 1: Mechanical Installation & Inspection

1. Mechanically install the new Machter electronic coupling unit onto the rear differential housing according to standard factory repair procedures.
2. **CRITICAL:** Ensure the rear differential fluid is checked and filled to factory specifications using the correct gear oil (typically SAE 75W-90 or Mazda SG1 fluid). *Do not run the unit dry.*
3. Plug the vehicle's original AWD electrical wiring harness connector securely into the new Machter coupling plug.
4. Lower the vehicle safely to the ground. **Do not drive the vehicle yet.**

Phase 2: Snap-on Scan Tool Relearn Procedure

Note: Ensure your Snap-on scan tool is updated with software supporting 2016+ Mazda chassis systems.

1. **Connect the Tool:** Plug your Snap-on scanner into the vehicle's OBD-II port located under the driver-side dashboard.
2. **Turn Ignition On:** Turn the vehicle's ignition to the **ON** position (engine off, dashboard lights illuminated).
3. **Select Manual Vehicle ID:**
 - To unlock proprietary Mazda factory module menus, do **not** use "Automatic ID" or "Vehicle History."
 - From the main menu, select **Scanner > Mazda >** and manually input the specific **Year, Model, and Engine configuration.**
4. **Navigate to Functional Tests:**
 - Once the vehicle is identified, bypass the standard code-reading screen.
 - Go back to the main system selection screen and select **Functional Tests** (or *Service Resets & Relearns* depending on your software layout).
5. **Select the AWD System:** Under the system list, select **AWD (All-Wheel Drive Module)** or **4X4M**.
6. **Trigger the Relearn:** Look for and select one of the following commands:
 - **Coupling Initialization / Relearn**
 - **Reset Adaptive Values**
 - **AWD Disabled by Malfunction Counter Reset**
7. **Execute the Script:** Press the command to start the test. The scan tool will display a **14-second countdown** on the screen.
 - *What is happening:* During these 14 seconds, the car's computer sends a voltage down to the Machter coupling, measures its exact electrical resistance, and saves it as the new baseline configuration.
8. **Confirm Success:** Verify that the screen displays a **"Finished"** or **"Success"** prompt.

Phase 3: The Final Road Test Calibration

Once the scan tool procedure is successfully finished, the vehicle requires a quick mechanical confirmation drive to align the computer with the physical wheels.

1. Disconnect the Snap-on tool from the OBD-II port.
2. Start the engine. Ensure no AWD or Traction Control malfunction lights are illuminated on the dashboard.
3. Drive the vehicle out of the workshop bay onto a straight, flat road.
4. Accelerate the vehicle in a straight line up to a speed of **20 km/h to 30 km/h**.
 - *Why this is necessary:* This driving step allows the ABS wheel speed sensors to talk directly to the newly initialized AWD module. It verifies that the front and rear axles are rotating harmoniously with the new electronic clutch active.

5. Once complete, check the dashboard. If the cluster remains completely clear of warning lights, the adaptation is 100% complete and the vehicle is ready for the road!

Guide 2: Initializing Machter Mazda AWD Couplings Using an Autel Scan Tool

When replacing the factory rear differential electronic coupling unit on a Mazda CX-3, CX-5, or CX-9 with a Machter aftermarket unit, **there is no physical calibration code to type into a scan tool.**

Because the Machter coupling is engineered as a high-quality aftermarket component, it uses a universal electrical resistance profile rather than a unique factory serial code. However, your Mazda's All-Wheel Drive (AWD) Control Module must still be forced to "learn" this new electrical footprint. Skipping this reset step can result in an AWD Malfunction dashboard light or cause the system to disable the rear wheels.

Follow this step-by-step guide using an **Autel MaxiSYS / MaxiCOM Scan Tool** to properly initialize your new coupling.

Phase 1: Mechanical Installation & Inspection

1. Mechanically install the new Machter electronic coupling unit onto the rear differential housing according to standard factory repair procedures.
2. **CRITICAL:** Ensure the rear differential fluid is checked and filled to factory specifications using the correct gear oil (typically SAE 75W-90 or Mazda SG1 fluid). *Do not run the unit dry.*
3. Plug the vehicle's original AWD electrical wiring harness connector securely into the new Machter coupling plug.
4. Lower the vehicle safely to the ground. **Do not drive the vehicle yet.**

Phase 2: Autel Scan Tool Relearn Procedure

Note: This process applies to Autel MS906, MS908, MK808 series, and higher Android-based tablets.

1. **Connect the Tool:** Plug your Autel VCI dongle into the vehicle's OBD-II port and ensure your tablet is powered on and connected via Bluetooth.
2. **Turn Ignition On:** Turn the vehicle's ignition to the **ON** position (engine off, dashboard lights illuminated).
3. **Select Vehicle Diagnostics:**
 - On the Autel home screen, tap **Diagnostics**.
 - Select **Mazda**. We highly recommend bypassing *Auto-Scan* and selecting **Manual Selection** to ensure all background engineering sub-menus are fully unlocked.
 - Input the vehicle's exact **Year**, **Model**, and **Engine type**.
4. **Access the Special Functions Menu:**
 - Instead of doing an "All-System Auto Scan", tap **Control Unit** or **System Selection**.
 - Select **AWD (All-Wheel Drive Module)** or **RCM/4X4M** from the list.
 - Tap on **Special Functions** or **Hot Services**.
5. **Trigger the Relearn:** Look for and select the command named:
 - **Coupling Calibration Data Writing** (or *Reset Adaptive Values* depending on your Autel software generation).
6. **Execute the Command:** Follow the on-screen prompts. Because there is no mechanical code stamped on the Machter unit, when the software asks you to verify or input data, select **Execute / Reset** to clear out the old learned parameters.
7. **Confirm Reset:** The Autel tool will run an internal script, cycling the voltage to the rear differential harness. Wait for the loading bar to finish and ensure the screen displays **"Command Executed Successfully"** or **"Data Writing Complete"**.

Phase 3: The Final Road Test Calibration

Once the scan tool procedure is successfully finished, the vehicle requires a quick mechanical confirmation drive to align the computer with the physical wheels.

1. Disconnect the Autel VCI from the OBD-II port.
2. Start the engine. Ensure no AWD or Traction Control malfunction lights are illuminated on the dashboard.
3. Drive the vehicle out of the workshop bay onto a straight, flat road.
4. Accelerate the vehicle in a straight line up to a speed of **20 km/h to 30 km/h**.
 - *Why this is necessary:* This driving step allows the ABS wheel speed sensors to talk directly to the newly initialized AWD module. It verifies that the front and rear axles are rotating harmoniously with the new electronic clutch active.

5. Once complete, check the dashboard. If the cluster remains completely clear of warning lights, the adaptation is 100% complete and the vehicle is ready for the road!