

MEROCA AO9-165 mm x 41 mm

MEROCA DNM AO-9 Air Suspension Shock Absorber User Manual

Model: AO-9 Series (AO9-165 x 41mm, AO9-190 x 56mm, AO9-210 x 65mm)

1. INTRODUCTION

The MEROCA DNM AO-9 Air Suspension Shock Absorber is engineered for mountain bikers seeking precision and control. Constructed from aerospace-grade 6061-T6 aluminum, this shock absorber features a fully adjustable air spring, allowing for customization of damping softness and hardness to suit various terrains and riding styles. Its lightweight design and robust construction ensure durability and enhanced performance on trails.

This manual provides essential information for the proper installation, operation, and maintenance of your DNM AO-9 shock absorber to ensure optimal performance and longevity.

2. SAFETY INFORMATION

- **Maximum Pressure:** Do not exceed 275 PSI (Pounds per Square Inch) when adjusting the air pressure. Over-pressurization can lead to damage or injury.
- **Pre-Ride Inspection:** Always check the shock absorber's seals and overall condition before each ride. Ensure there are no visible leaks or damage.
- **Professional Installation:** If you are unsure about the installation process, it is recommended to seek assistance from a qualified bicycle mechanic.
- **Proper Tools:** Use appropriate tools for installation and adjustment to prevent damage to the shock absorber or your bicycle.

3. WHAT'S IN THE BOX

Upon unpacking, please verify that all components are present:

- 1 x DNM AO-9 Air Rear Shock Absorber
- 2 x Sleeve Dimensions (Bushings)

4. SETUP AND INSTALLATION

Proper installation and initial setup are crucial for the performance of your DNM AO-9 shock absorber.

1. **Prepare for Installation:** Before installing, release any existing air pressure from the shock absorber.
2. **Mounting:** Install the shock absorber onto your bicycle frame. Ensure the fill stem is positioned for easy access to deflate or fill. The AO-9 is compatible with 210mm, 190mm, and 165mm frames, offering 65mm, 56mm, and 41mm travel options respectively.
3. **Air Pressure Adjustment:** The air pressure can be adjusted between 150-275 PSI. Begin by inflating the shock to a pressure slightly above your body weight (in pounds). For example, if you weigh 180 lbs, start with approximately 190-200 PSI. Fine-tune the pressure based on your riding style and terrain preferences.



Image: DNM AO-9 Shock Absorber showing key dimensions (12mm eyelet, 24mm x 8mm sleeves) and available lengths (165mm, 190mm, 210mm) with corresponding travel options (41mm, 56mm, 65mm).



Air pressure regulation

Adjust the softness and hardness of the shock absorber through the air chamber to adapt to different riding needs and road conditions



Image: Close-up of the DNM AO-9 shock absorber's air valve, highlighting the air pressure regulation mechanism for adjusting damping.

5. OPERATING INSTRUCTIONS

The DNM AO-9 is designed for responsive and controlled riding. Its key operational feature is the adjustable air pressure.

- **Adjusting for Terrain:** For smoother trails or climbing, you may prefer a higher air pressure for a firmer ride. For rougher, technical descents, a slightly lower pressure can provide more plushness and absorption.
- **On-the-Fly Adjustments:** The tool-free air valve allows for quick adjustments to air pressure during your ride, without the need for a separate pump. This enables you to fine-tune responsiveness as trail conditions change.
- **Progressive Damping:** The AO-9's progressive damping system helps filter out vibrations and isolates handlebar chatter, providing a smoother and more comfortable ride.

Shock return to "zero"

When facing various rugged and complex road conditions, the vibration will be filtered to play a good buffering role.

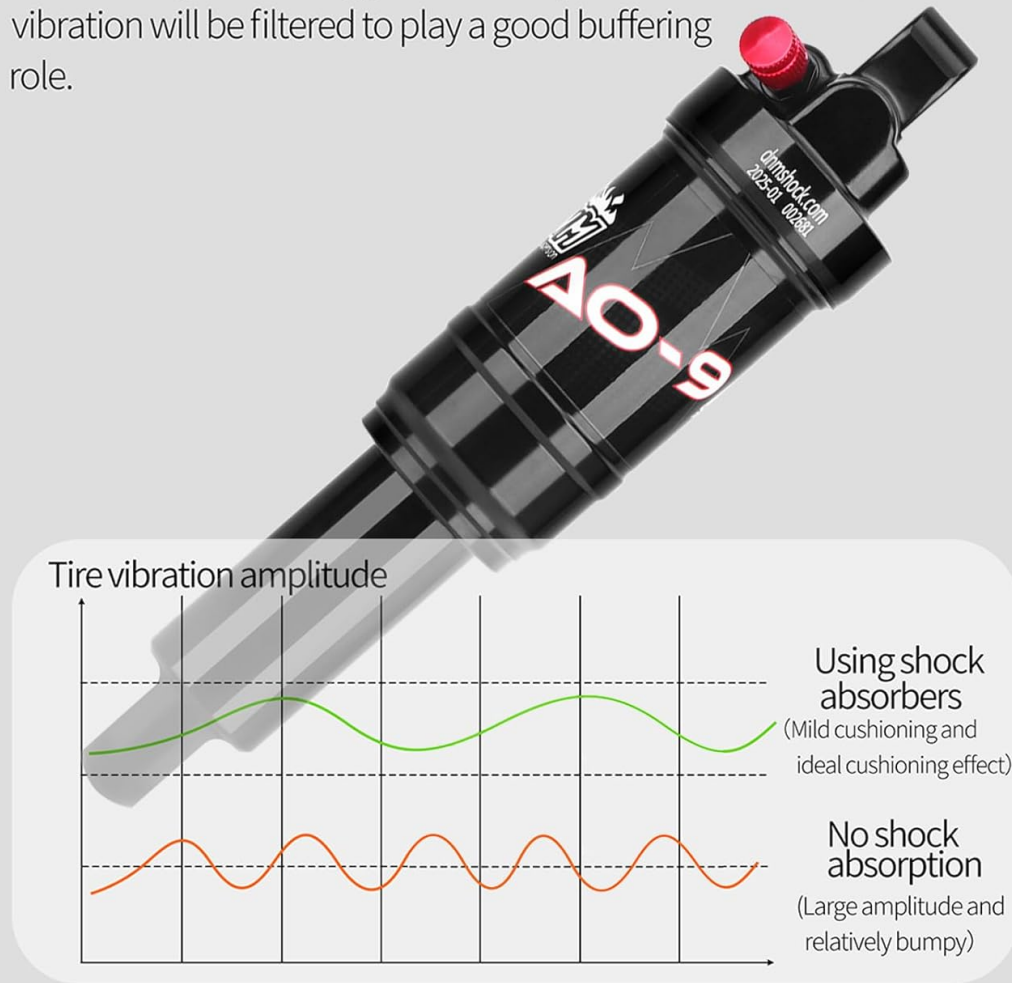


Image: Diagram illustrating the cushioning effect of the DNM AO-9 shock absorber, showing reduced tire vibration amplitude compared to a system without shock absorption.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your shock absorber.

- **Cleaning:** After each ride, especially in muddy or wet conditions, clean the shock absorber with mild soap and water. Avoid high-pressure washers directly on seals.
- **Seal Inspection:** Periodically inspect the triple-lip seals for any signs of wear, cracking, or leakage. The IP67-rated seals are designed to protect internals from dirt and moisture, but regular checks are important.
- **Lubrication:** Keep the exposed shaft clean and lightly lubricated with a suspension-specific lubricant to maintain smooth operation.
- **Air Pressure Check:** Check and adjust air pressure regularly, as slight pressure loss over time is normal.

7. TROUBLESHOOTING

If you encounter issues with your DNM AO-9 shock absorber, consider the following:

- **Loss of Air Pressure:**

- **Cause:** Worn or damaged seals, loose air valve cap.
- **Solution:** Inspect seals for damage and replace if necessary. Ensure the air valve cap is securely tightened.

- **Poor Damping Performance (Too Soft/Hard):**

- **Cause:** Incorrect air pressure setting.
- **Solution:** Adjust air pressure according to your weight and riding preferences (refer to Section 4).

- **Unusual Noises (Creaking/Squeaking):**

- **Cause:** Loose mounting bolts, lack of lubrication, internal issue.
- **Solution:** Check and tighten all mounting bolts. Clean and lubricate the shock shaft. If noise persists, professional inspection may be required.

8. SPECIFICATIONS

Key technical specifications for the DNM AO-9 Air Suspension Shock Absorber:

- **Brand:** MEROCA (Manufacturer: DNM)
- **Model:** DNM AO-9
- **Material:** Aerospace-Grade 6061-T6 Aluminum Alloy
- **Auto Part Position:** Rear
- **Style:** Performance, Off-Road
- **Vehicle Service Type:** Bike, MTB, Mountain Bike, E-Bike, Scooter
- **Adjustable Air Pressure:** 150-275 PSI
- **Waterproof & Dustproof Rating:** IP67 (Sealed design with triple-lip seals)
- **Item Weight:** Approximately 9.1 ounces (258g)

Available Lengths and Travel Options:

Length	Travel	Weight (Approx.)
210mm	65mm	225g
190mm	56mm	205g
165mm	41mm	192g

No fear of wind and rain

Stroke sealing ring, waterproof and dustproof, protects the inner pipe, and extends service life.



Air pressure regulation

American air nozzle, shock absorber factory air pressure is set at 150psi, and maximum air pressure is 275psi.



Brand: DNM

Name: Air pressure shock absorber

Material: Aluminum alloy

Model: AO-9

Length	210mm	190mm	165mm
Travel	65mm	56mm	41mm
Weight	225g	205g	192g

Image: Detailed specifications of the DNM AO-9 shock absorber, including brand, material, model, and a table showing length, travel, and weight for different variants.

9. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided with your purchase or contact the seller directly. For additional support or inquiries, you may visit the official MEROCA store:

[Visit the MEROCA Store on Amazon](#)