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> DNM USD-6S DH MTB Inverted Fork Instruction Manual

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Model: USD-6S

1. PRODUCT OVERVIEW

The DNM USD-6S is an inverted suspension fork designed for Downhill (DH) and All-Mountain (AM) mountain biking. It features a robust construction with 160mm travel, suitable for 27.5-inch and 29-inch wheel sizes. This fork incorporates a 3-system damping mechanism, offering comprehensive adjustments for air pressure, rebound, compression, and a lock-out function.

Key features include an AL-7075 thru-axle design for the down tube, an AL-7075 steerer tube, and AL-6061 forging for the drop out and crown materials. The inner tubes are 35mm AL-7075, and outer tubes are 42mm AL-6061. It is compatible with disc brakes only (post mount).





Figure 1: Front view of the DNM USD-6S inverted fork, showcasing its overall structure and design.

2. INSTALLATION AND SETUP

2.1 Unpacking and Inspection

- Carefully remove the fork from its packaging.
- Inspect the fork for any signs of shipping damage. If damage is found, do not proceed with installation and contact your retailer.
- Verify all components are present: 1 pc /pack (fork).

2.2 Steerer Tube Preparation

- Measure and cut the steerer tube to the appropriate length for your bicycle frame and stem setup. Ensure sufficient length for proper stem clamping.
- Install a star nut or compression plug into the steerer tube according to the manufacturer's instructions for your headset system.

2.3 Fork Installation into Frame

- Install the fork into the bicycle frame's head tube, ensuring proper headset bearing placement.
- Install the stem and handlebars, tightening all bolts to the manufacturer's recommended torque specifications.

2.4 Wheel and Brake Installation

- Install your front wheel onto the 15mm thru-axle. Ensure the wheel is properly seated in the dropouts.
- Secure the 15mm thru-axle.
- Mount your disc brake caliper to the post mount tabs on the fork. Align the caliper and tighten bolts to manufacturer specifications.



Figure 2: Detail of the lower fork, illustrating the 15mm thru-axle and post mount for disc brakes.

3. ADJUSTMENTS AND OPERATION

The DNM USD-6S fork offers several adjustments to fine-tune its performance to your riding style and terrain.

3.1 Air Pressure Adjustment

The fork uses an air spring. Air pressure determines the fork's sag and initial firmness. Refer to the manufacturer's recommended air pressure chart (if available) or use a shock pump to set the pressure based on rider weight and preference. Adjustments are typically made via a Schrader valve located on the top cap of one of the fork legs.

3.2 Rebound Adjustment

Rebound controls the speed at which the fork extends after compression. A red knob typically controls this adjustment. Turning the knob clockwise generally slows down the rebound (slower return), while turning it counter-clockwise speeds it up (faster return). Adjust to prevent the fork from packing down on successive bumps or feeling too bouncy.



Figure 3: Upper fork crown with visible rebound (red) and compression (black) adjustment knobs.

3.3 Compression Adjustment

Compression damping controls how quickly the fork compresses when hitting bumps. This fork features a compression adjustment, often indicated by a blue or black knob. Turning it clockwise increases compression damping, making the fork feel firmer and less prone to diving. Turning it counter-clockwise decreases damping, making the fork more supple.

3.4 Lock-out Function

The lock-out feature stiffens the fork, reducing or eliminating suspension movement. This is useful for climbing or riding on smooth terrain to improve pedaling efficiency. Engage the lock-out by turning the designated lever or knob (often blue) fully clockwise. Disengage by turning it counter-clockwise.

4. MAINTENANCE

Regular maintenance is crucial for the longevity and optimal performance of your DNM USD-6S fork. Due to the specialized nature of suspension components, it is recommended that complex service be performed by a qualified bicycle mechanic.

4.1 After Each Ride

- Clean the outer surfaces of the fork, especially the inner tubes (stanchions), with a soft cloth and mild soap and water. Rinse thoroughly and dry.
- Inspect the stanchions for any scratches or damage.
- Check for any oil leaks around the seals.

4.2 Monthly / Every 20-30 Hours of Riding

- Check all bolts (axle, brake caliper, crown bolts) for proper torque.
- Inspect the fork for any play or looseness in the bushings.
- Verify air pressure and adjust if necessary.

4.3 Annual / Every 100 Hours of Riding

A full service, including oil change and seal replacement, is recommended annually or after approximately 100 hours of riding, whichever comes first. This service should be performed by a professional mechanic or an authorized service center. Note that specific service information for this model may be limited, as mentioned in user feedback.





Figure 4: Side view of the fork, useful for inspecting stanchions and seals during maintenance.

5. TROUBLESHOOTING

This section addresses common issues you might encounter with your suspension fork. For problems not listed here or if solutions do not resolve the issue, consult a professional bicycle mechanic.

5.1 Fork Feels Too Stiff or Too Soft

- **Cause:** Incorrect air pressure.
- **Solution:** Check and adjust air pressure using a shock pump. Increase pressure for a stiffer feel, decrease for a softer feel.

5.2 Fork Not Returning Properly (Packing Down)

- **Cause:** Rebound damping set too slow.
- **Solution:** Decrease rebound damping (turn red knob counter-clockwise) to allow the fork to extend faster.

5.3 Fork Feels Too Bouncy or Harsh

- **Cause:** Rebound damping set too fast or compression damping set too low.
- **Solution:** Increase rebound damping (turn red knob clockwise) or increase compression damping (turn black/blue knob clockwise).

5.4 Oil Leaks Around Seals

- **Cause:** Worn or damaged seals.
- **Solution:** Minor weeping can be normal. Significant leaks require seal replacement. This is a job for a qualified mechanic.

6. TECHNICAL SPECIFICATIONS

Feature	Specification
Model	USD-6S
Damping System	3-system
Wheel Size Compatibility	27.5 inch / 29 inch
Travel	160 mm (6.3 inch)
Adjustments	Air, Rebound, Compression, Lock-out
Down Tube	15mm Axle x 100mm Thru-axle Design AL-7075
Steerer Tube	28.6 mm (1-1/8 inch) AL-7075
Drop out/Crown Material	Forging, AL-6061
Outer Tube Diameter	42 mm / AL-6061
Inner Tube Diameter	35mm / AL-7075
Features	Inverted fork design
Compatible Brakes	Disc brakes only (Post mount)
Riding Style	TRAIL / AM
Weight	Approx. 4.43 kg (4560 Grams)
Manufacturing Origin	Made in Taiwan

7. WARRANTY AND SUPPORT

7.1 Warranty Information

This DNM USD-6S fork comes with a 1-year warranty from the date of purchase. This warranty covers manufacturing defects in materials and workmanship. It does not cover damage resulting from improper installation, misuse, neglect, accidents, or normal wear and tear. Please retain your proof of purchase for warranty claims.

7.2 Customer Support

For technical assistance, warranty claims, or service inquiries, please contact your retailer or the official DNM customer support channels. When contacting support, please have your product model (USD-6S) and proof of purchase available.

