Russian Motorcycle Brakes
Part III: New Brembo Disc Brakes

(See also Part I: Brembo Disc Brakes)

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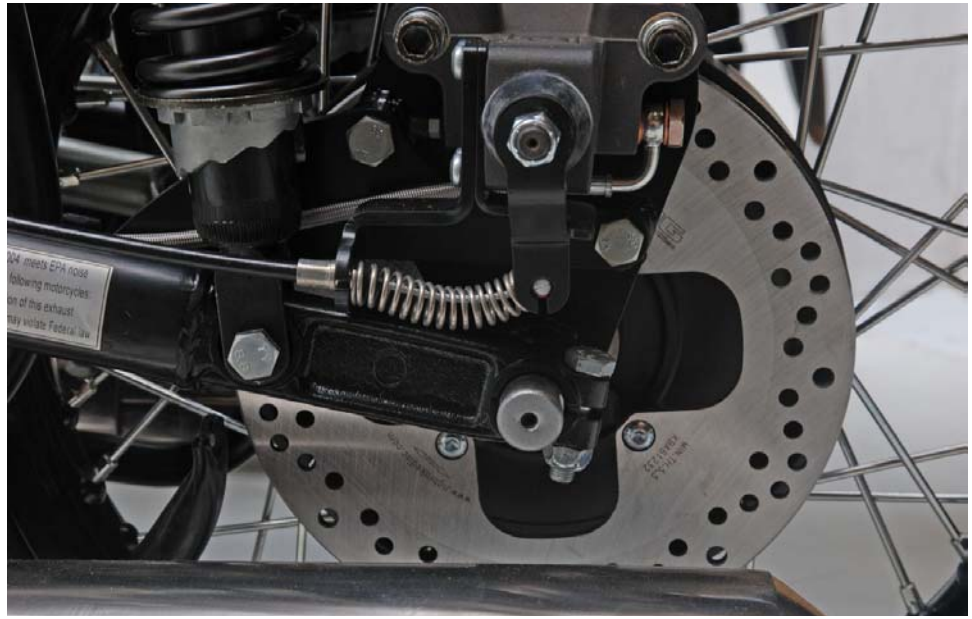
2014 Ural Motorcycles: First Look

- *Since 2003, Ural Has Utilized Brembo Hydraulic Disc Brakes on Front Wheel, with Drum Brakes on Rear and Sidecar Wheels*
  - *Drum Brakes Required Rider to Apply More Force to Brake Pedal*
  - *Required More Frequent Maintenance and Adjustment*
- *April 2014: Ural Factory Delivered Sidecars with Disc Brakes on All 3 Wheels*
  - *To Facilitate New Rear Braking System, Ural Redesigned Wheel Hubs, Utilizing Standard Sealed Bearings and New Dust Seals*
  - *Exchanged Cast Drive Splines in Rear Hubs for Hardened, Bolt-On Spline Flanges*
  - *Front Brake: 295mm NG Floating-Disc (Rotor) with Four-Piston, Fixed Brembo Opposed Caliper*
  - *Rear Brake: 256mm NG Fixed-Disc with HB (Hayes Brakes) Integrated, Big-Bore, Single-Piston, Floating Caliper*
    - *Caliper Also Incorporates Mechanical Parking Brake*
    - *Parking Brake Actuation Lever Redesigned and Conveniently Located to Simplify Rider Operation*
  - *Sidecar Brake: 245mm NG Floating-Disc Pinched by Two-Piston, Fixed Brembo Caliper*
  - *Both Rear Calipers Operated by Their Own Brembo Master Cylinders*
- *New System Provides Dramatically Increased Stopping Power, While Requiring Less Rider Effort*
- *Having Three Individual Braking Systems Provides for Highest Level of Redundancy and Ability to Precisely Tune the Entire System*

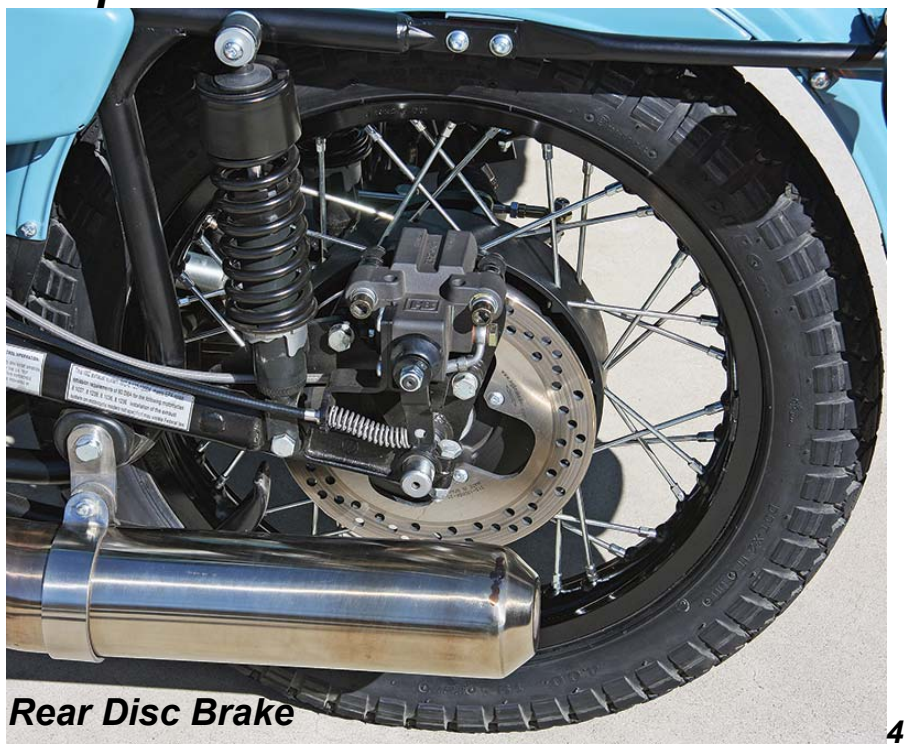
2014: Disc Brakes to Three Wheels



Brembo Disc Brakes Added to Rear and Sidecar Wheels

- Introduction of Disc Brakes Allowed Ural to Develop New Final Drive Housing
  - Lighter and Universal Across Entire Model Line
- Disc Brakes Replace Drums on Both Rear and Sidecar Wheels
- Big-bore, Single-Piston Caliper from Hayes Brake in Wisconsin Also Serves as the Parking Brake
- Wheels: All Spoked Aluminum, 2.5" x 19"
- Improved Stopping Power
  - With Old Drum on Rear and Sidecar Wheels, Brake Pedal Travel Required One to Bury Their Shin in the Right Intake Manifold before Bike Would Begin to Slow
  - Once Properly Adjusted, New Disc Brakes on Those Wheels Only Require Slight Pedal Pressure to Apply Fully and Have Much Better Feel
  - Still Need to Use Them in Combination with Front Disc to Stop the Bike Quickly
  - Large Brembo, Opposed 4-piston Caliper Up Front Still Does Most of the Work

Front Disc Brake


Rear Disc Brake

Brembo Disc Brakes Added to Rear and Sidecar Wheels

Front Brake Reaction Link

- ***Front Brake Reaction Link on Leading Link Forks Now Made by FRAP (Italy) and Utilizes Higher-Quality Ball Joints of Increased Strength***

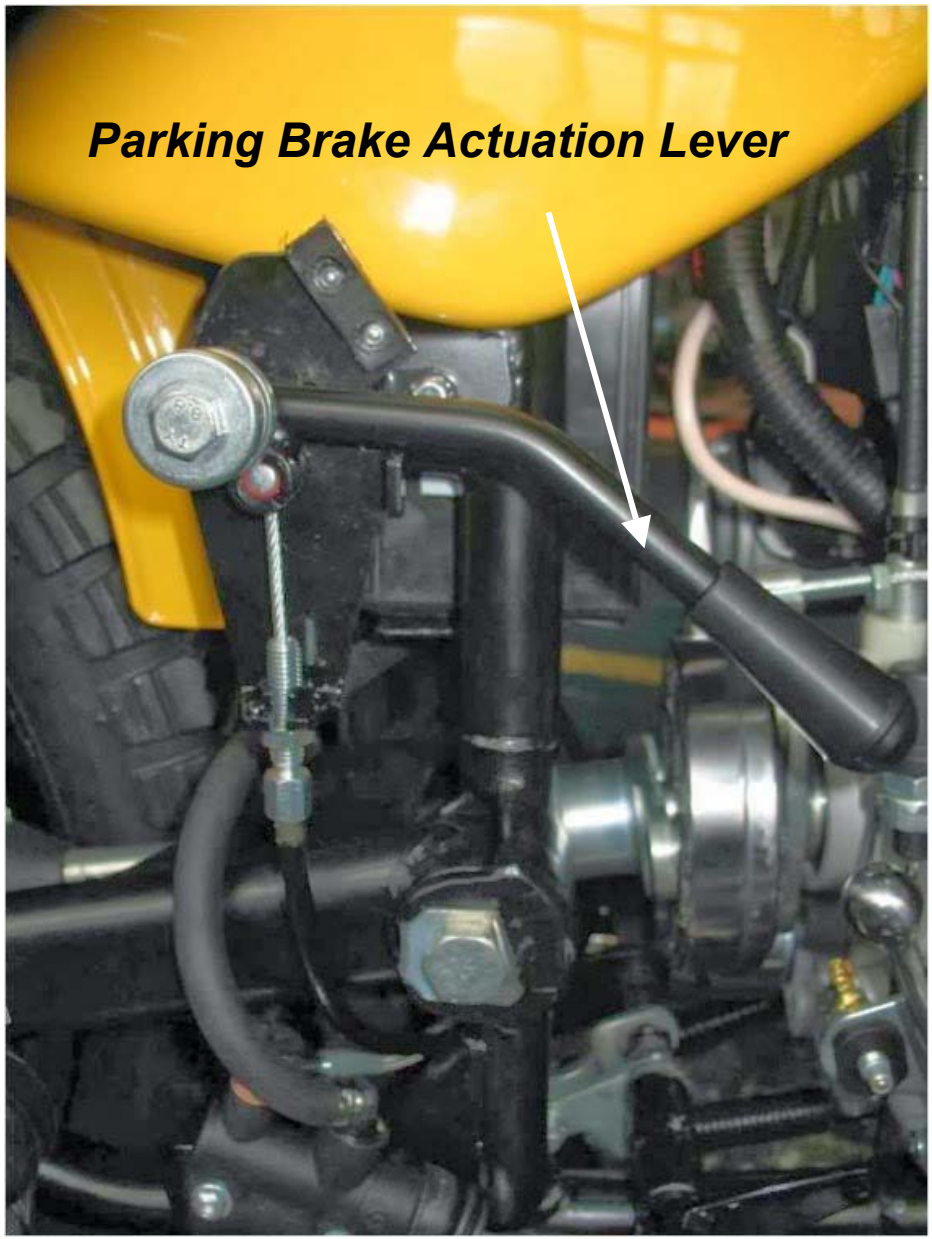
Rear and Sidecar Disc Brakes

Rear Disc (hydraulic + mechanical) Hayes Brakes with Single-Piston Floating Caliper and Integrated Parking Brake

Brembo Disc Brake with 2-Piston Caliper and NG Floating Disc

Parking Brake Now a Comfortable Grip

- *Parking Brake Actuation Lever Redesigned and Conveniently Located to Simplify Rider Operation*



Detachable Slotted Hub for Drive Wheels

- *2014: Rear Hubs No Longer Utilize Cast-In Drive Splines*
- *Now Equipped with Replaceable, Hardened, Bolt-On Spline Flanges*
- *Rear Wheel Hubs No Longer Replaced Due to Worn Drive Splines*

Cast Aluminum Hubs with Steel Sleeve Bearings and Plastic Protective Cover

- To Facilitate New Rear Braking System, Ural Redesigned Wheel Hubs, Utilizing Standard Sealed Bearings and New Dust Seals
  - New Rear Aluminum-Cast Hub with Pressed-In Steel Sleeve and Plastic Protective Cover
  - New Front / Sidecar Aluminum-Cast Hubs with Pressed-In Steel Sleeves
  - Removable Splined Flange for Rear and Sidecar Wheel for 2WD Models
  - Wheel Bearing Installed with Circlips and Protected with Extra Seal