

# ECAS: Electronically Controlled Air Suspension

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## for Bus, Coach and Motor Home



MAPLE



BUS STOP

# A NEW "LEVEL" OF RIDE PERFORMANCE

Meritor WABCO's electronically controlled air suspension (ECAS) system provides a new level of ride performance for buses, coaches and motor homes. ECAS enhances the vehicle's air suspension by automatically maintaining the vehicle's optimum height and level as road and vehicle characteristics change. In addition to an enhanced ride, ECAS offers ride height control and kneeling functions with rapid response times.

ECAS benefits include:

- Enhanced ride, handling and control
- Reduced vibration and wear on the driveline
- Ease of entrance and exiting for passenger
- Allows vehicle access to normally inaccessible areas
- Reduced air consumption
- Level vehicle body, even with uneven weight distribution
- Makes vehicle more adaptable to road environment

## THE ECAS SYSTEM

### ELECTRONIC HEIGHT CONTROL AND LEVELING FUNCTION:

The height sensors constantly measure the distance between the axles and the vehicle body sending the data to the electronic control unit (ECU). The data will change whenever the vehicle is loaded or unloaded. These changes are registered by the ECU, which through the use of a solenoid valve will automatically adjust the suspension air bags to ensure proper ride height level, enhancing ride, handling and control.

### KNEELING FUNCTION:

When stationary, the vehicle can be raised and lowered to facilitate the passengers' entry and exit – all at the press of a button. Meritor WABCO's modular solenoid valve system does not require extra valves for kneeling, offering rapid response times and simplified installation and maintenance.

### HIGH RIDE FUNCTION:

Allows the driver to raise the vehicle in driving conditions where sharp break overs (e.g., railroad tracks) or steep road angles (e.g., driveways, entrance ramps) occur. This will prevent the vehicle from bottoming out. A limited height feature prevents the driver from overinflating the suspension air bags when adjusting vehicle height.

### LOW RIDE FUNCTION:

Allows the driver to lower the vehicle for access to areas where low overhangs and canopies exist.

### DOOR AND TRANSMISSION INTERLOCK:

Built-in passenger safety feature requiring the door to be shut, parking brake applied and vehicle in neutral prior to kneeling.

### SIMPLE DIAGNOSTICS:

Your choice of two simple, user-friendly methods:

- Standard blink code
- PC-based diagnostics



# SYSTEM COMPONENTS



## **ELECTRONIC CONTROL UNIT (ECU):**

- State-of-the-art electronics function as the “brain” of the ECAS
- Compact design
- Receives driver input from control panel
- Controls solenoid valve to ensure proper vehicle height
- Constantly monitors system performance



## **SOLENOID VALVE:**

- Modular system that reduces pneumatic piping required
- Reduces leveling response times to seconds
- Less hardware and fewer leak points
- Minimal space requirements



## **HEIGHT SENSORS:**

- Three-sensor system
- Maintains level vehicle body under every vehicle load



# THE MERITOR WABCO ADVANTAGE

Throughout North America, Meritor WABCO provides a full range of systems and components to improve safety, efficiency, and ultimately your bottom line.



## BRAKING SYSTEMS

Meritor WABCO, along with Meritor, offers the most complete braking system package available for commercial vehicle operators in North America.

- Compressors
- Air dryers
- Brake control valves
- Hydraulic anti-lock braking systems (ABS)
- Pneumatic anti-lock braking systems (ABS)
- Electronic braking systems (EBS)
- Automatic slack adjusters
- Air cam, wedge, and disc brakes
- Hydraulic disc and drum brakes
- Friction materials
- Hubs, drums, and rotors
- Auxiliary retarders/exhaust pressure modulators (EPM)



## SUSPENSION CONTROL SYSTEMS

Meritor WABCO provides high quality, proven suspension control systems you can count on.

- Electronically controlled air suspension (ECAS)
- Cab and chassis leveling valves
- Suspension control valves — including lift axle and height control valves



## SERVICE AND SUPPORT

Meritor WABCO is here to support you with an entire spectrum of programs.

- Sales and service professionals located throughout North America
- Spec'ing and troubleshooting assistance
- Training programs tailored to your needs
- Full range of support materials
- Information-on-demand 24 hours a day via automated "QuikFacts" (800-366-0765)
- Website for easy access to support materials — visit us at [www.meritorauto.com](http://www.meritorauto.com)
- Toll-free support line (800-535-5560) to assist you with all of your service and support needs

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Meritor WABCO components are integral members of **Drivetrain Plus™ by Meritor**, the industry's most complete drivetrain. For more information, call **800-535-5560**.

**MERITOR WABCO**  
Vehicle Control Systems

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