

Setra and Safety



by Larry Plachno
Photos courtesy of Setra

In recent years Setra coaches have increasingly been connected with safety. Whether because of German engineering or just company policy, Setras come equipped with a substantial number of standard or optional safety features. These cover a very wide range of systems and devices from tire monitoring to cornering lights to the front collision guard structure.

Many years ago I was involved in a discussion with several “old timers” in the bus industry. The topic revolved around how you can differentiate your bus company from the competition since buses were so very much alike. The first things that frequently make them different to the passengers are the exterior paint and any special features.

One of the senior members of the group ventured the comment that coach manufacturers have pretty much the same problem. Coaches are essentially the same in length and width, and they all have an engine, a transmission, axles, tires, seats and windows. While you might claim that manufacturers can differentiate themselves

through support, service and parts, what about the vehicles themselves?

In recent years it has been obvious that one way that Setra differentiates itself from other coach brands is a great deal of concentration on safety. Some people might attribute this to a background in German engineering while others see it as a theme that the Setra people intentionally infuse into their product line. As time goes on, more and more people are connecting Setra coaches with safety features.

Today, when you buy a new Comfort-Class S 407 or a TopClass S 417 coach from Setra, you will get as many as 16 specific safety features if you include some options. The Setra people classify their safety features

in two categories. They list eight different items under Active Safety Features and another eight items under Passive Safety Features. Here is a list of what is included.

Active Safety Items

1. First on the list of Active Safety Items is the new Driver’s Boom Microphone. Mounted to the driver’s seat, the boom microphone has a flexible extension with a 90-degree range of motion that can be adjusted to suit individual driver preference. This replaces a hand-held microphone and hence reduces driver distractions while allowing the driver to keep both hands on the wheel and focus on the road while still communicating with the passengers.

2. Audio and video controls are now mounted directly on the steering wheel of the TopClass S 417. This puts them immediately in front of the driver and eliminates the need to reach to a control panel while driving. On most coaches, the entertainment controls are on a side panel that often require a driver to stretch and reach while driving. Putting these controls in the steering wheel minimizes driver distractions and reaching while going down the road.

3. The new Setra TopClass S 417 now has a Rain Sensor mounted to the windshield that activates the windshield wipers when rain is detected. In addition, there is a Light Sensor that monitors exterior lighting and turns on the headlights and exterior lighting when called for. Both of these features eliminate the need for the driver to reach to the panel while driving. They also eliminate any problem caused by driver error or memory failure.

4. If you have ever had to make a turn at night into a road that is not fully lighted, you will appreciate Setra’s Front Cornering Lights on the TopClass S 417. Located below the headlights and pointed to the side, the cornering lights come on automatically on the appropriate side when the driver engages the turn signal. The cornering light provides some welcome illumination as you drive around the corner since your headlights are pointed ahead. Once the turn signal goes off – either manually or by being cancelled by turning the steering wheel – the cornering light will turn off.

5. Setra coaches now have Knorr disc brakes on all six wheels. While a major advantage is improved braking for the driver, service is also a big factor here. The disc brakes are easier to check and service during preventive maintenance. There is also a visual indication on the driver instrument panel showing brake pad wear and replacement requirements.

6. If you spend a lot of time driving hills and mountains, you will like the new Combined Engine and Transmission Retarder. Setra integrates the Jake Brake on its Mer-



The Setra cornering lights are combined with the fog light system. They come on automatically when turning to give the driver some welcome illumination as the coach comes around a corner.



Drivers of the Setra S 417 will now find audio and video controls mounted on the steering wheel. This arrangement improves safety by eliminating the need for the driver to stretch and reach while driving.

cedes-Benz OM 471 engine with the retarder/intarder on the Allison B 500 transmission. The result is a powerful downhill braking system that substantially improves safety by reducing brake pad wear and reducing the need to use service brakes.

7. Operators who regularly deal with bad weather will really appreciate Setra's Heated Windshields and Mirrors. Heating grids are incorporated into both the left and right windshields. This prevents fogging while reducing the possibility of ice and snow sticking to the windshields. Upper rear view mirrors are also heated and remotely powered. In addition to the regular defroster output, the heated windshields act as an additional defroster source in keeping the windshields clear and improving driver visibility.

8. While many of us dread driving through fog, Setras now have Fog Lamps both front and rear to improve safety. One safety feature is that the fog lamps in front improve the driver's visibility in fog and in low light conditions. However, the front fog lamps and the right rear tail light illumination also improve safety by making your coach more visible to approaching cars and trucks.

Passive Safety Items

1. A noteworthy feature on new Setra coaches is the Front Collision Guard. This structure is located around the spare tire behind the front bumper and is designed to absorb forces in a frontal impact. One major advantage of the Front Collision Guard is that it prevents automobiles from running under the coach in a head-on collision. A second advantage is that the structural members crumble in the event of a major frontal impact, thus minimizing the forces and trauma transmitted to the coach and passengers.

2. An interesting feature found on Setra coaches is the Driver Platform Collision protection. The area around the driver's seat

including the steering column is designed as a single rigid structure. In the event of a major frontal collision, this area will slide backward and thus minimize the impact on the driver.

3. Standard equipment on both Setra ComfortClass S 407 and TopClass S 417 coaches now includes three-point seat belts. Integrated into the seats, these belts use an exclusive Setra design and incorporate both a lap and shoulder belt. In addition to offering greater passenger safety, these belts will make your coaches more "saleable" to your customers.

4. Both Setra models now offer Engine Compartment Fire Detection as standard

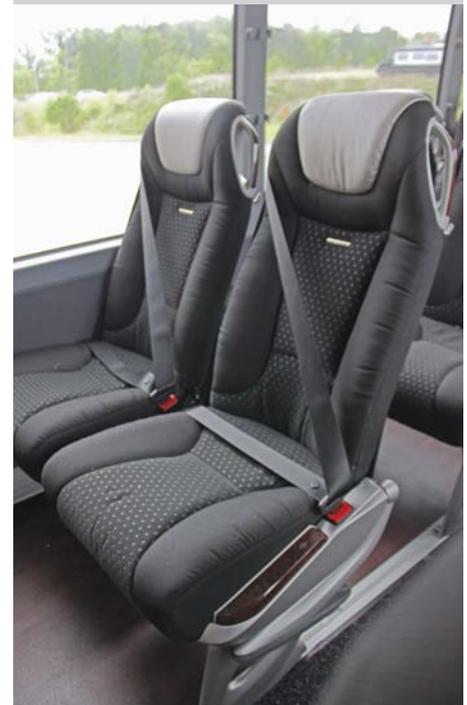
The driver's area now features a boom microphone on a flexible extension replacing the hand-held microphone. This area also has a collision protection feature that slides the driver back in a front collision.



equipment. Sensors are mounted in the engine compartment and constantly monitor conditions. If they detect any kind of thermal event, they activate an early warning to the driver on the dash display. This gives the driver an opportunity to remove the coach from the road while still maintaining total control.

5. An option highly regarded by your editor is Setra's Tire Pressure Monitoring System. The system constantly monitors tire pressure and communicates this information to the driver via a dash display. The advantages are many. One is that by keeping tire pressures where they belong, you

Standard equipment on both the ComfortClass S 407 and the TopClass S 417 models are three-point seat belts. They are integrated into the seats and include both a lap belt as well as a shoulder belt.





Optionally available from Setra is the Tire Pressure Monitoring System. A display on the dash eliminates the need for taking tire pressures with a gauge and hence makes monitoring tires much easier for your drivers.



The rear-facing lavatory reduces the risk of injury in the event of a braking situation or emergency deceleration.

will improve fuel economy and reduce tire wear. Next, this provides a warning to the driver in the event of a leak or tire failure while going down the road.

One of the biggest advantages of this system is that it permits monitoring tire pressures without the need to get down into the mud with a tire gauge. Hence, it is much more likely that drivers will actually check tire pressures before they leave the yard. Not to be discounted is that fact this system eliminates potential valve sticking problems when checking tire pressures manually with a tire gauge.

6. Three different but related electronic safety features are standard equipment on all Setra coaches. These include Automatic Traction Control (ATC), the Anti-Lock Braking System (ABS) and the Electronic Stability Program (ESP). Traction control prevents wheels from slipping and spinning on ice and other road conditions where traction is minimal. The anti-lock braking system pulses the brakes when they are in danger of locking up and sliding. Electronic stability regulates braking force, reduces engine speed and monitors lateral acceleration to maintain control, particularly on long curves and expressway exits. All of these systems allow the driver to remain safely in control of the coach in unusual situations.

7. The Automatic Tire Chains are a great option if you find a need to drive on snow or icy conditions. Chains are attached to a disk mounted on the rear axle. When activated by the driver, they spin by using wheel rotation and the chains pass under the drive tires as they drive down the road. A major advantage of this system is that it

is easily engaged or disengaged when desired.

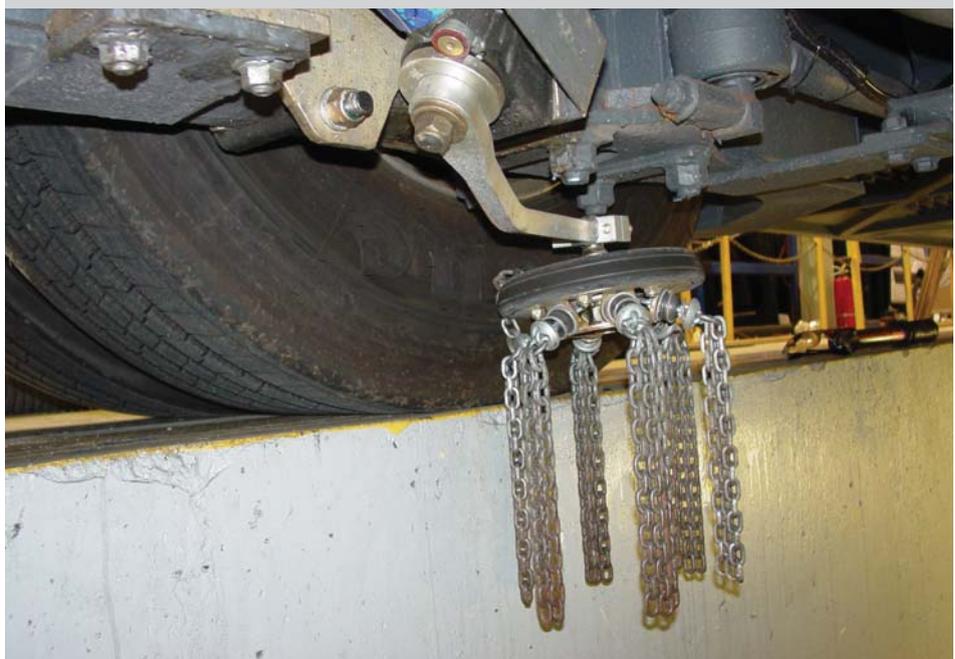
8. The last of the passive safety items is the Rear Facing Lavatory. With the lavatory in the restroom facing the rear, the occupant has their back to a wall in the event of a hard braking situation or emergency deceleration. This reduces the risk of injury to any occupant in the restroom.

All of this goes to show that the people from Setra have gone out of their way to add

numerous safety features, devices and systems to their ComfortClass S 407 and Top-Class S 417 models. For additional information on any of these items, contact your Setra representative.

MCI is proud to welcome the Setra S 417 and Setra S 407 to its model line-up with the acquisition of the distribution rights for Setra in the United States and Canada. Operators can now count on MCI's parts, service centers and 24-hour Emergency Roadside Assistance to meet your MCI and Setra needs. □

Also optionally available are Automatic Tire Chains. Attached to a disk and mounted on the rear axle, the chains spin and pass under the drive tires when in operation. This provides welcome traction on ice and snow.





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