

## Toyota Lift Truck Masts

The SAS continuously monitors the lift truck's lateral stability and risk for lateral overturn. When these conditions are detected, the SAS engages a mechanism called the "swing lock cylinder" which stabilizes the rear axle. This action transforms the stability footprint of the truck from that of a triangle shape to that of a rectangle shape. A rectangular footprint enhances the lateral stability of the truck. Another component of the SAS is the "active control rear stabilizer", also known as the "active mast function controller". This component too adds to the stability of the vehicle, besides helping to prevent accidents and injuries to the operator and others.

The first trucks to have the SAS system built into them were the 7-series internal combustion models. Now, SAS is a de facto component that goes into the design of all of Toyota's internal combustion models, including the new 8-series. Today, there are more than 100,000 SAS-equipped lift trucks in the field which have undergone more than 450 million hours of operation thus far. The company provides training to the operators working on the SAS-equipped trucks. Combined with the safety technology, the training has resulted in a reduction of overturn fatalities by 13.6% from the time SAS was introduced. Further, statistical analysis reveals that accidents caused due to overturn, collision, loss of control and falls from the truck have seen a sharp reduction by 35.5% throughout the industry in the same period.