

SWEMS

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Suspension Wheel/Wing Energy Management System (SWEMS) restraints attached at multiple points to a car's chassis and suspension to minimize the possibility of wheel assemblies becoming detached during high-speed accidents.

The rear wing also has one or two restraints attached from the mainplane to a secure location on the transmission. With their high-tensile Zylon material and wound construction, each restraint has a break load of 100 kilonewtons (kN), which equals 22,480 pound-force. The Indy Racing League introduced SWEMS in 1999.

"We do have several on each wheel and two on each wing, so a single failure does not mean it is detrimental to the retention system," Indy Racing League director of engineering Jeff Horton said.

Visual inspection of the restraints is a part of the initial safety inspection on event weekends. If any of the four corners sustain an impact, the rulebook mandates changing the SWEMS on the affected corner.

