TECHNICAL SERVICES BULLETIN	Matched Mounting	1/28/03

Proper tire and wheel assembly balancing is important from a vehicle safety standpoint. In high-speed driving, improperly balanced tire/wheel assemblies will cause a vehicle to lose stability and not operate in a safe and comfortable manner. Improperly balanced tire/wheel assemblies also cause abnormal tread wear patterns.

To facilitate proper balancing, Yokohama places red and yellow marks on the sidewalls of its tires to enable the best possible match-mounting of the tire/wheel assembly. There are two methods of match-mounting Yokohama tires to wheel assemblies using these red or yellow marks:

- **Uniformity (red mark)**
- **Weight (yellow mark)**

Uniformity Method

When performing uniformity match-mounting, the red mark on the tire, indicating the point of maximum radial force variation, should be aligned with the wheel assembly's point of minimum radial run-out, which is generally indicated by a colored mark or a notch somewhere on the wheel assembly (consult manufacturer for details). Radial force variation is the fluctuation in the force that appears in the rotating axis of a tire when a specific load is applied and the tire rotated at a specific speed. It is necessary to minimize radial force variation to ensure trouble-free installation and operation. Not all wheel assemblies indicate the point of minimum radial run-out, rendering uniformity match-mounting sometimes impossible. If the point of minimum radial run-out is not indicated on a wheel assembly, the weight method of match-mounting should be used instead.

Weight Method

When performing weight match-mounting, the yellow mark on the tire, indicating the point of lightest weight, should be aligned with the valve stem on the wheel assembly, which represents the heaviest weight point of the wheel assembly. After match-mounting by either of the above methods, the tire/wheel assembly can be balanced.

For additional information on matched mounting and proper tire mounting and installation procedures contact the Rubber Manufacturers Association. RMA publications can be obtained directly by calling (202)682-4800, or by accessing their web site at www.rma.org/. Ask for "Care & Service of Automobile and Light Truck Tires" publication.

Warning: Improper mounting, under inflation, overloading or tire damage may result in tire failure, which may lead to serious injury. Tire and rim sizes must correspond for proper fit and application. Never exceed 40 psi to seat beads.

Warning: Tire changing can be dangerous, and should be done only by trained persons using proper tools and procedures established by the Rubber Manufacturers Association. Failure to comply with proper procedures may result in incorrect positioning of the tire, tube or wheel assembly, causing the assembly to burst with explosive force sufficient to cause serious physical injury or death. Never mount or use damaged tires, tubes or wheel assemblies.