Use of Snow Chains

The use of tire snow chains and the criteria for when to apply them varies widely throughout the county. Improperly applied snow chains have caused significant damage to the apparatus and delayed the response of units. This memorandum is intended to provide guidance on the use of snow chains during various types of inclement weather.

In general there are two types of chains in use in the county:

1. **Permanently installed "On-Spot" chains**.
2. **Standard removable tire chains**.

"On-Spot" chains are typically not installed on 4x4 or brush truck vehicles.

If conditions deteriorate to the point where even 4x4 vehicles require chains to safely operate most manufacturers and off-road forums recommend installing chains on front AND rear axles. The vehicle manufacturer's guidelines should be followed in all circumstances and should be consulted BEFORE the winter season arrives to determine the suitability of tire chains and types of chains recommended. In addition to the vehicle manufacturer, the tire manufacturer should also be consulted to ensure the tires are compatible with snow chains.

Removable **standard tire chains** must be applied so that they are well distributed around the tire and fit snuggly. Unfortunately, standard tire chains can be very damaging if they come loose. Units utilizing standard tire chains should carry lengths of coat hanger wire or mechanic's wire (available in the shop) to secure broken sections in the event of a failure. **Plastic cable ties will not work.** In some cases, if the broken section cannot be secured, the entire chain may have to be removed before a unit can continue.

The following guidelines were developed for apparatus equipped with On-Spot chains and may offer some guidance for application on 4x4 vehicles**:**

Less than 6 inches of snow on the ground or predicted: Typically, all-wheel drive units can operate without chains in these conditions. Guidance for other apparatus is to use "On-Spot" chains in these conditions.

6 inches of snow on the ground with more falling or forecasted: All-wheel drive units may continue to operate adequately without chains, however personnel need to continue to assess conditions and be ready to adapt. The key concern is typically when snow depths begin to reach the undercarriage of the vehicle and cause "uplift" that breaks traction for the tires. Other apparatus are directed to use standard tire chains in these conditions.

In all cases, it is wise to carry scoop and spoon shovels on the unit if possible. These shovels will allow for quicker digging through plow banks and packed drifts that would bend or break normal snow shovels.

Ice: All-wheel drive units may offer no distinct advantage over other apparatus in these conditions. These conditions may be the most likely to require tire chains for all-wheel drive units. Recognize that ice is by far the most dangerous road surface. Allow several times your normal stopping distance and reduce speeds dramatically prior to entering turns. Carry sand, absorbent, or ice melt to improve traction in small work areas and to aid you if you get stuck. **Pay close attention to other vehicles moving in your proximity**.

All personnel must monitor the condition of the roadways in their response area for changes throughout their shift, and report these changes to the on-duty station officer. This monitoring must include getting up periodically at night. All personnel should realize that changes in road conditions may force them to apply and remove chains more than once in their shift. **Authority for applying chains will rest with the on-duty station officer** unless orders are received from a higher authority. When the station officer makes the determination that chains are needed he or she will notify the on-duty Battalion Chief and the LFRD representative.

As a general rule **units running with standard tire chains should not be on the Interstate Highways** because they cannot exceed 25 mph. Driving at 25 mph on the Interstates produces one hazard, while driving at higher speeds with the chains on produces another. For this reason, the on-duty station officers and battalion chiefs should consider using one type of chained vehicle to access patients and remove them to cleared roads where they can be transferred to an unchained unit for transport. Notify ECC of your intended strategy.