

The definition of “Single Suspension and Double Suspension Gallops”

I bought a great book on Canine Structure and Gaits called, “K-9 Structure & Terminology”, by Edward M. Gilbert, Jr. & Thelma R. Brown.

Chapter 2 is on “Dog Gaits”. There is a lot of great information in this book on comparing structure for speed, structure for pulling, and how structure affects endurance, and etc.

“The word “suspension” means “airborne.” In the single suspension gallop cycle the dog is airborne once; in the double suspension gallop the dog is airborne twice.

The definition of “Single Suspension Gallop” :

“The single suspension gallop is a four-time gait; the dog’s weight is supported by the feet in this unsymmetrical sequence: RF, LF, RH, LF. Suspension occurs just after taking off from the left forefoot. In this gait each forefoot must be lifted from the ground before the corresponding hind foot can be set down. If the timing is wrong, the hind foot will hit the corresponding front foot.”

The definition of “Double Suspension Gallop” :

“The double suspension gallop is also a four-time gait, but the weight of the dog is not supported by the feet in the sequence as the previously described. Suspension occurs (1) just after taking off from the LF and (2) just after taking off from the RF. *This is the only gait in which the dog is fully extended.* The forelegs are fully extended forward and the hind legs are fully extended to the rear. Also in this gait the dog’s back folds and attains maximum overreach; this is, the hind feet extend in front of the forefeet and the forefeet extend behind the hind feet. When the feet pass one another, the forefeet are *inside* the hind feet. Dog’s use their backs to attain speed. The most flexible spot is over the loin area and the tuck-up allow folding of the under part of the body. The hind legs overreach on the outside of the forelegs. The ability to flex the back from a straight position to a well-arched position is essential for fast dogs; a permanent arch is not flexible and therefore a serious fault. The double suspension gallop is a leaping gait; first the hind legs propel the dog into the air, then the forelegs take their turn. The engines are required: the muscles in the shoulder, the muscles in the “ham” and the muscles in the back. Although animals can run faster using this gait, endurance is sacrificed. Sighthounds and some cats can quickly overtake prey, but if the run is long, the prey escapes. Short-legged dogs as well as some short-legged mammals (the weasel in particular) often use this gait. Double suspension running dogs that have arched backs that will not flatten or flat backs that will not arch have serious faults.”

The book describes that these faults mean that dog’s with too much permanent arch or permanent flat back will be limited on their reach and maximum speeds.

The book has illustrations of a Salukis and Whippet in a Double suspension and is it easy to see a full stop running graphic.

I hope this helps. I have enjoyed this book.

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