

MOVEMENT - Discussed Standard of the Breed

By Lic. Carlos Navarro (International All Breed Judge) - Mexico

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Burning des Princes d'Aragone

We have invited the International All Breed Judge Mr. Carlos Navarro to speak to us about what in his point of view should be the correct Rottweiler movement. Mr. Carlos Navarro is a German Shepherd breeder and he has full recognition on behalf of the Mexican Kennel Club (FCI) for his knowledge of movement. Let us take our time reading this as this is a valuable contribution to us towards movement from a technical as well as morphological point of view:

The association of dogs with man dates to approximately more than 10,000 years during which all this time the dog has fulfilled its purpose as a companion, servant and ally to man. Today, dogs are evaluated for their beauty or by the company they offer us. There are also some breeds who continue to perform a utilitarian function with man. The basis of this function is the temperament of those breeds, their desire to serve and develop that function for which they were created.

But the dog, as a working animal, develops the functions for which it was created and is determined by its structure. Breeders have always molded their animals in order to fulfill their zootechnic functions by selecting those morphological characteristics which best serve specific tasks. Today, most of the breeds have the characteristics which we can observe, thanks to the fact that their ancestors were selected based on their usefulness to man. For example, let us consider the Greyhound: years ago, breeders decided to make a selection for the purpose of creating fast animals. For this reason, they bred a dog with open angulations at the shoulders, straight pasterns, rounded croup, pronounced tuck up and an arched back. All of these qualities lead them to develop what we now see as a Greyhound. By using this selection process through the centuries, it has led us to obtain an ample range of functions and an immense variety of breeds with unique characteristics. Terriers with their short legs in order to go to ground, sporting dogs with rough coats in order to enter water and, of course, the absolute efficiency of a trotter by excellence, the ROTTWEILER.

As a trotter, the Rottweiler must cover many miles every day, apart from possessing intelligence, character, strength, temperament, resistance and the capacity to be trained. Because of that resistance, and the Rottweiler's powerful and efficient trot, is the reason that all of these aspects of the breeds structure are primarily guided to produce a trot in which it covers as much ground as possible with the least amount of effort. This is the great secret of movement in the Rottweiler breed, to cover as much ground as possible in the least time possible. Any dog, no matter what the breed, should possess a sound structure, whether they are used as a faithful companion, working dogs or show dogs. For example, in international sports, such as Schutzhund, French Ring and other types of guard dog and obedience training, we need to have physically as well as mentally sound dogs. All of these activities demand that the dog have the ability to jump and the capacity to run at high speeds. They should possess the anatomical characteristics necessary to do its job, whichever this may be, no matter what the breed is.

In dog show activities, there is room for all Rottweilers without distinguishing between the owners or handler's personal likes, or those bred for work or dogs with exceptional conformation for the show ring. For which there is room for each dog to develop its function in the different worlds; working, training, companion and show. In which it is the breeders' and judges' responsibilities to maintain breeding in optimum condition, since in this circle are those of us which are the guardians of the Rottweiler breed. Always keeping in mind the importance of the preservation of the characteristics for which the breed was developed with sound animals, of good character and temperament.



Indios dell Antico Guerriero



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Movement Evaluation

In my job, I have learned that what is perceived as something beautiful and pleasant to the eye, should also be well-constructed inside. For the Rottweiler, as well as all resistance athletes, efficiency is the primary purpose. Engineers define efficiency as the production of the desired results with: the least effort and the least expense or waste. As an example, we take the efficiency of a car's energy, which is to minimize the consumption of gasoline, maximizing the distance

covered. If we could somehow develop a machine in which we could the exact amount of energy this consumes, we would be perfectly efficient. Unfortunately, man has not created a machine that is capable of converting all the energy that is fed to it into perfect efficiency, the energy is consumed by the machine itself, friction, excess heat and unusable movement. The same thing occurs with biological machines in creatures like humans, cats, and dogs. Animals consume energy in the form of food and convert it into work, especially in locomotion, but this process is far from perfect, a great amount of energy is wasted, since the efficiency of our biological machines depends on structure, distance and speed.



Dinastiya Yugry Elza

The best pace for traveling long distances is the trot. Walking is too slow and galloping consumed too much energy. That is why dogs are evaluated trotting in order to see their efficiency covering distances. Only animals with good structures are able to reach a high grade of efficiency, converting a large amount of the energy that the muscles produce into movement. This is why dogs of a lower structural quality waste a lot of energy due to their bad structure. Over many years, there have been large investments of money and investigation into the study of conformation, movement and locomotion in horses, and it had been thought to use these studies applying them to dogs. Today, with the help of xrays and the elevated technology, we now realize that we can use horses much more as a contrast than as a comparison, since horses and dogs are very different creatures.

Now let us talk about Rottweiler structure so that we can understand its movement better:

Hindquarters

All movement begins with the action of the hindquarters, depositing all the weight of the body on one of the posterior legs, initiating the gait with the anterior leg of the opposite side and then the anterior leg of the same side followed by the posterior leg of the opposite side. The energy travels from the hock to the tibia, from the femur to the croup; the pelvic bone directs and converts the vertical energy into horizontal to the back and forequarters. This is why good hindquarter function is a crucial factor to good movement. The rear leg moves under the body until it reaches the center of gravity, the pads touch the floor and retract towards the rear until they are in line with the pelvic articulation; up to this point the leg only absorbs the weight and speed of the dog, which we call the negative phase of movement, until the dog takes the second step which we call the positive phase. The leg imprints the force which is needed to take the second step, which ends up in the complete extension of the dog.

The hindquarters are composed of four main bones:

- The pelvis
- The femur
- The tibia
- The hock

The individual analysis of these components will help us discover how the dog efficiently converts this power into movement.

The Pelvis

The pelvis is one of the main components in a dog's skeleton. It is what we know as the croup, and this is the part that we anatomically see on the outside which includes the pelvis, the muscle that covers the pelvis and the placement of the tail. This is why it is important that we know the standards for the breeds and the zoo technical function for which they were created. As you may notice, the Rottweilers are animals which, according to their standard, should be excellent trotters. We should not expect them to also be good high speed runners. A low set croup is for animals which are meant to run at high speeds, this will allow them to bring their hindquarters under them when they gallop and jump; those same dogs at a trot will show us very little drive in their follow thru kick, being that they are animals who were made for galloping.

The Femur

Let us continue with the next bone. The femur is a rounded bone which connects at the top with the pelvis and at the bottom with the tibia, the femur's head is the pole that connects with the acetabulum at the pelvis and its bad function, placement or wearing out is called hip dysplasia. During locomotion, the femur rotates in order to send the hindquarter movement to the spine. Actually, the femur is a rotational bone. It is very important that the tibia and the croup maintain a parallel position (approximately) at the moment at which the hindquarters push the body this will also depend upon the good functioning of the femur. When we say that the lines are parallel we mean that the bones are found on the same angle.

The Tibia

The tibia is the bone which is most responsible for determining a dog's hindquarter angulations, and this subsequently determines the position of the hindquarter bones. A dog's angulations are determined by three angles. One, where the pelvis joins the femur, another where the femur joins the tibia and the last where the tibia joins the hock. Measuring the angulations is not as easy as measuring the hindquarter angles, these vary depending on the dog's stance and will be either more open or more closed. Only dogs correctly angulated are capable of moving correctly.

The Hock and Metatarsus

The last portion of the hindquarters is the hock, which is made up of a number of small bones, the hock and the metatarsus; like the tibia the hock should not be very long.

Forequarters

The first bone in the forequarter formation is the scapula. Just like in humans, this bone is flat and very mobile and it should have a 90 degree angle with the humerus in order to facilitate good movement. While, in movement, it should be perpendicular to the ground, the reach of a dog is in relation to the position of the scapula when the dog is stacked, but it also has a lot to do with the flexibility of the muscles. In a dog such as the Rottweiler which was made for trotting, it is ideal for the scapulas to be well laid back. The correct angulation for the scapula is 45 degrees. It is also determined by the muscles that cover it, which need to be strong and tight.

The Humerus

The scapula articulates with the humerus, so the humerus must generally be longer or of the same length as the scapula in order to obtain correct movement, as opposed to what would be obtained with a short humerus.



Ivo vom Schwaiger Wappen

The Humerus and Forearm

The humerus connects with the radius and forearm, which are the lower part of the forequarters which we know as the upper arm. These two bones are parallel to one another. A trotting dog needs to have certain proportions in order to obtain a correct trot. Feet which are too long result in sending the center of gravity upward and reduces stability. Feet which are too short obtain poor reach and require more steps in order to cover the same amount of ground.

The Pasterns and Feet

The pasterns are a complicated structure made up of numerous bones. The way in which they are formed determines the orientation of the feet. If we stand with our feet slightly apart in a natural way, in an east west position with our center of gravity, it gives us balance while standing, but when moving we tend to turn our toes in towards our center of gravity and the faster we run we have a greater tendency to move our feet towards a central line. Dogs do more or less the same when standing as well as moving, especially dogs that were made for trotting. Some dogs, like the Rottweiler, have an angle in the pastern, which helps as a shock absorber with each step. The lack of this angulation in these dogs gives us what we call a pounding gait.

The Pastern

The strength in the pastern is the result of good and tight ligaments between the metatarsus and the metacarpus. As opposed to the structure of animals made for trotting, here we have an example of dogs made for running. They have less angulations in the shoulders as well as the pasterns. With broader shoulders and straighter pasterns, the straighter pasterns allow them to return the legs faster to be able to gallop faster this contributes to the speed of the animal. The narrowness in chest reduces the wearing out of the forequarters, thus allowing the dog a freer movement, producing tremendous acceleration and velocity.

The Topline

Between the forequarters and hindquarters is the spine or topline which starts at the first vertebrae behind the skull and ends with the last vertebrae of the tail. This has the function of joining the front with the rear and it has the most important role in order to obtain good movement. Right behind the skull, we have seven strong and square cervical vertebrae. The first helps the head move up and down and the second turns the head. They connect with 13 thoracic vertebrae and subsequently with 7 lumbar vertebrae. The

next component is the sacrum, whose function is to connect to the pelvis, the part that is most important to us for movement is the center. The energy which is derived in the hindquarters is transmitted toward the front through this central part of the torso, if this part is sound, this will make the difference between a dog that moves well and one that moves excellently.

The Thoracic Region

Dog's scapulas are joined to the second and third thoracic vertebrae, only by muscles and connecting tissue (there is no union with bones between shoulders and torso). Through strong unions with the ribs and the vertebrae, they are joined by muscles and ligaments to the rest of the body, whose function is retractable in order to facilitate locomotion and it gives strength to the bones. The height of the protuberances of the vertebrae is also for the height of the dog, which contributes to good movement as well.

Starting at the eleventh thoracic vertebrae and back are the spines of the vertebrae which are facing backwards; these are orientated towards the muscles which run from the spine to the hindquarters, which help retract the muscles and bones from the hindquarters towards the front. The eleventh thoracic vertebrae is the first vertebrae that the hindquarters throw forward and not to the back, which is where we can detect a dip in dog's backs, especially when they are older dogs. The thoracic vertebrae are stabilized by the ribs. There is the same amount of even numbers of ribs as that of thoracic vertebrae, and 9 originate on either side of the vertebrae which connect to the sternum through cartilage. The next 4 pairs do not connect to the sternum, they are called floating ribs and they contribute in holding the position of the forequarters and subsequently the position of the front legs.

The Lumbar Region

The lumbar region is more massive than the thoracic region, the lumbar region does not have ribs in order to create the stability that the thoracic region enjoys, all the strains that the dog has in this region must be absorbed only by the spine; it is the most fragile part of the back. In order to compensate for this, Mother Nature has given them three supports: the first is equipped with bone formations called transversal processes, which are there so that strong muscles can adhere which help the rotation of the back from one side to the other when the dog is moving. The second is the formation of the region as such, let us take a look at an example: if you try to construct a bridge with only two pillars and without a support in the middle, the most efficient thing would be that they had the shape of a slight arc, this curvature gives it a natural strength, because this way the weight will divide to the extremities of the bridge, this will make the topline stronger and will help the animal have a healthier life.

Between the well-developed and well-conditioned muscles, the topline consists of internal ligaments among the protuberances of the vertebrae. This is in order to keep the back firm and strong during continuous movement of the animal, especially while galloping, these are apart from the long ligaments that originate at the skull, which run down the whole topline of the back giving it strength and stability.

'PERFECTION DOES NOT LIE WITHIN EXAGGERATION'

