HORSE identification in south africa

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Background:

A standard horse identification system was developed by the Equine Research Centre on behalf of the National Horseracing Authority in 2000 as a result of the poor quality of passports of Thoroughbred horses in particular and sport horses in SA in general. This coincided with the decision to microchip all registered Thoroughbreds and upgrade horse identification guidelines in the country. The system was based on the FEI guidelines with a few minor differences. This was done to allow the use of the same system for both FEI passports, all documents that require the completion of a horse identification section and the NHA passports and foal identification forms.

Pages I – VI describe and give examples of the differences between the NHA and FEI system of horse identification. The FEI system (with red ink) must be used when completing FEI passports and the NHA system (black ink only) can be used for all other horse identification documents.
Standard Thoroughbred Identification compared to the FEI recommendations (some minor differences and important points):

1. Identification of horses for FEI passports is usually done on adult horses by authorized veterinarians and no markings should therefore, be indistinct or need to be checked at a later stage as one may expect when identifying foals.
2. The horse must be clean, stand squarely on a halter and have all other items of tack and bandages removed.
3. Identification documents may be completed in either English or French.
4. Description of Gender for FEI passports includes only the terms; MARE, STALLION or GELDING (adult horses identified). No abbreviations and if an animal is identified as a CRYPTORCHID this must be noted in the passport, BUT EXAMINE CAREFULLY.
5. Latest FEI guidelines on identification require the height measurement in CENTIMETERS. This must be done very accurately particularly in ponies. The FEI definition of pony is “a small horse whose height at the withers, having been measured on a smooth level surface, does not exceed 148 cm without shoes or 149 cm with shoes.
6. Colour:
   The 1st paragraph under the heading colour in the FEI rulebook on horse ID states that the definition of colour differs according to country!
   Not only this, but colour definition is also influenced by breed rules and personal opinion.
   The Horse Identification system developed in SA with the National Horseracing Authority includes a colour definition based mainly on genetic colour principles in horses. It would be acceptable when applied to most breeds of horses and should be acceptable for use in FEI passports since it is a lot more comprehensive and defined than the FEI colour definitions. Fortunately, most colours cannot be confused and can be safely classified within the broad colour group.
7. Markings are described in terms of the anatomical positions.
8. The description in both systems must be done in such a way that it creates a mental image of the horse’s appearance and must describe all the features shown on the diagram. Use the notes as a guideline.
   What the description must NOT be:
   - Kronkels met sokkies.
   - As shown.
   - Socks and stockings.
   - Bay with four black socks!!
9. The most important difference between the NHA national standard system and the FEI system is that all WHITE on the horse is done in red ink and all other markings are done in black ink, but the description and diagrammatic representation of the markings is similar.
Examples of FEI passport diagrams – compare the SA Standard System:

- Mixed star above median whorl at upper eye level
- Star above median whorl at upper eye level
- Whorl to right of median above upper eye level with elongated star to left of whorl and mixed stripe ending above the muzzle
Median whorl in star and connected stripe ending above the muzzle and feint snip between the nostrils.

Median whorl on bridge of nose with upward feather in blaze bordered at upper eye level and partially fleshmark snip touching the right nostril.
Diagram of paint horse with white hatched – note the white hairs in the mane
Note
- the ticking in the flanks
- the ermine markings above the coronet on the right hind
- the white in the hooves
- the large fleshmark on the muzzle and fleshmark on the lower lip
INTRODUCTION

A standardised system of horse identification should be used by veterinarians and other interested parties for the correct completion of identification forms included in passports, insurance forms, health certificates and other certificates. Some of these documents will travel with the horse at all times and could cause serious complications if not done professionally and properly. The primary objective of any identification system is to unalterably determine the individual horse's identity in such a way that it can be identified by anyone at any time and to ensure that it cannot be mistaken for, or substituted, for another horse. The purpose of this document is to assist in the identification of the Thoroughbred horse in particular and in other horse breeds in general. Please note that other rules may apply when completing identification forms for breeds other than Thoroughbreds or when FEI registration is required. Always refer to the relevant authorities.

A good identification system is important for the following reasons:

- Control of movement of horses both nationally and internationally.
- Decreases the possibility of fraud in the racing, breeding, selling and showing of horses.
- Control of infectious diseases (ties up with movement control).
- Improves confidence in stud books (animals are in fact who they claim to be).
- Insurance of valuable animals.

There are various methods of identification that can be incorporated into an identification system:

METHODS OF IDENTIFICATION

1 THE PICTURE ID

Advantages

- If a standard system is used it will lead to a quick and easy visual identification that includes all the physical characteristics of the horse.
- It is not an invasive procedure.
- The procedure requires no special equipment.

Disadvantages

- A standard reference format is required. Persons completing the identification forms need to be familiar with the standard system in order to prevent errors in identification and reduce the incidence of incomplete forms.
- Favourable environmental factors, such as bright light and a clean horse, are required for accurate identification.
- It is time consuming.
- A horse’s appearance can change during the course of its lifetime, particularly if the identification is done when it is still a foal.
2 PHOTOGRAPHS

Advantages

• A basic overview of an animal's appearance is immediately available.

Disadvantages

• Taking good photographs requires the right equipment, lighting and skill.
• Certain physical characteristics such as dental irregularities, eye colour, tattoos and
whorls may not be clearly visible on a general photograph.
• Horses that look alike will be difficult, or even impossible, to differentiate from a
photograph.

3 MICROCHIPS

Advantages

• Cannot be removed without the formation of scar tissue.
• Cannot be easily altered.
• Does not change the appearance of the horse.

Disadvantages

• Must be properly controlled and performed by registered veterinarians in order to avoid
double or faulty administration.
• Requires special apparatus to read the microchips
• Reading cannot be done from a distance.
• Chips must be manufactured by a single company in order to avoid replication of
numbers.
• The procedure is invasive and may lead to complications if not done steriley.

4 CHESTNUTS

Advantages

• Each horse has a unique set of chestnuts.
• Missing or vestigial chestnuts are rare and must be noted.
• Chestnuts do not change in size or shape as the animal ages.

Disadvantages

• Studies have shown that chestnuts can be surgically altered.
• Hand drawings, as done in Europe, are not sufficiently accurate, but may have an
application in grey horses or in horses with “no white markings”.
• Photography and analysis of chestnuts requires skill and special equipment.

5 FREEZE BRANDING AND MARKING

Advantages

• Is considered painless and non-traumatic for the horse, as the low temperature
anaesthetises the area during the procedure.
If done correctly, is easily readable even from a distance, making it a good management aid.
- Cannot be removed.
- If the angle marking system is used, it is practically unalterable.

**Disadvantages**
- To be nationally applicable, a controlled and unalterable system such as the angle marking system must be used.
- Freeze brands and marks may not be acceptable for showing and dressage purposes.

### 6 HOT BRANDING

**Advantages**
- None.

**Disadvantages**
- Painful and ugly if not done properly. Only used as specific stud and breed symbols and not applicable to a national identification system.

### 7 TATTOOING

**Advantages**
- None.

**Disadvantages**
- Fades.
- Difficult to read.
- Can be removed.

### 8 BLOOD AND DNA TYPING

**Advantages**
- Excellent and specific.
- Used for parentage verification.

**Disadvantages**
- Takes time. It is used as a back-up system, and for parentage verification.
- Costs involved.
FEATURES OF A GOOD ID SYSTEM

- Include a simple yet complete representation of the animal’s physical characteristics.
- Include secondary elements to support the primary identification method, such as blood and DNA typing, microchipping or branding.
- All the elements of an identification system must lend themselves to computerisation and data retrieval at a central point.
- Individual passports containing all the relevant information concerning an animal should accompany that animal at all times.
- Any national system must be internationally recognised and accepted.

IDENTIFYING HORSES

The following are guidelines for the completion of Thoroughbred identification forms.

1. Left and right always refer to the left and right side of the horse when standing behind the horse and looking towards it. The terms near and off side are not acceptable. Left and right may be abbreviated to Lt and Rt respectively.

2. The description comprises 2 parts: (1) the diagrammatic illustration and (2) the narrative.

3. Each marking indicated on the graphics must be accompanied by a description in the narrative. It is recommended that one starts with the drawing and then completes the narrative, ensuring that all details on the drawing are described. Each view, i.e. left, right, front and hind view, must be completed. It is further recommended that the same person that does the picture should also write the description in order to avoid misinterpretation of the markings on the illustration.

4. Start the drawing on the left or right sides, indicating all limb markings as they occur on the animal. Also indicate the positions of the crest whorls.

    The front view is next. Draw in the position of the frontal whorl, followed by the facial markings. Any whorls occurring on the ventral neck, under the forelock (other than the common forelock whorl) as well as any white markings on the limbs or hooves not visible from the side. Facial markings must be drawn carefully, taking the relationships of other facial features into account, in order to judge the size and shape of the markings correctly. Always check the upper and lower lip for markings.

    Finally view the animal from behind, indicate any white markings on the limbs not visible from the front or side views, such as white heels, as well as whorls on the buttocks or behind the cannon bones.

5. Markings are described in relation to their position on the body. Anatomical terms must be used, terms such as ankles, socks and stockings are to be avoided.

6. The horse should be described as it is at the time of identification. The phrases “markings indistinct” or “check” can be added to the narrative in certain cases.

7. Any outstanding or rare characteristics must be noted.

8. All horses to be identified must be clean and suitably restrained. One should allow enough time per horse to do the identification thoroughly.
9. Make sure that markings are indicated on the correct legs and on the correct side of the diagram.

10. Many breeds have specific colours and markings unique to that breed, or have a specific way in which that particular breed society wishes to have their breed described. These defined rules need to be adhered to when completing an identification form for a particular breed. The basic rules, however, apply to all horses. The colours given in the following text are the only colour terms used to describe the Thoroughbred and, therefore, the only colours accepted in the space provided for colour on the identification form. Any shades or variations of the basic colour must be given in the description of the body.

11. The idea, when compiling an identification document for a horse, is to make the animal easily identifiable by anyone, and to make it distinguishable from all other horses of similar appearance. Therefore, horses without clear markings such as plain colours and grey need to be described in detail, whereas less detail may be required for clearly marked animals. Certain features that must be described on each animal include, gender, colour, all white markings, the frontal whorl, the crest whorls, the ventral neck whorl if present, as well as all permanent scars and brands.

12. All identification documents must be completed in English.

GENDER

Gender will be one of the following

- Colt (male horse under 5 years of age)
- Filly (female horse under 5 years of age)
- Stallion (uncastrated male horse 5 years and over)
- Mare (female horse 5 years and over)
- Gelding (castrated male horse of any age)

BASE COAT COLOUR

Bay, chestnut and black are the basic colours. These colours can vary over a range of shades and can include other features, such as sooty and mealy, which are modifications within the basic group. Bay horses are the most common. White, as it occurs in roan, grey and paint horses, or ticking, flecking, spotting, head and leg markings, is simply superimposed on a base colour. This concept simplifies identification of the colours and patterns.

1 BAY (B)

This is probably the most common colour occurring in the Thoroughbred.

The distinguishing feature of this coat colour is the presence of black points i.e. mane, tail, points of the ears and legs. The coat can vary in shade from tan, to brown, to a bright auburn, to a dark red shade.
Black shading, caused by the presence of black hairs among a lighter base coat, is a common modification of the bay colour, although it can occur in other colours as well. In bays it usually occurs on the topline, i.e. neck, withers, shoulders, back, hips and rump, or it can be widespread covering almost the entire body. This colouration is known as sooty or shaded, and can vary from minimal to extensive. An extensively shaded horse can appear almost black.

Bay foals are simply described as bay when they have the red shaded coat with the characteristic black points. Foals with dark, obvious shading over the body are described as dark bays. Once an animal has reached yearling stage and the true coat colour becomes apparent, the bay group must be divided into further, more specific, subgroups. These are:

- The bright bay, if no black shading occurs on a red coloured coat.
- The brown bay, if the coat has a tan rather than a red colour.
- The dark bay, if the animal is heavily shaded with some base coat still showing.
- Brown, when the animal appears black with only a hint of red or tan in the flanks, behind the elbows, between the hind legs, around the eyes and on the muzzle. Brown is not considered to be a separate colour since it is genetically part of the bay group. One should be careful when distinguishing dark bay and brown.

If one wants to be more specific, the bright or brown bay that has some shading may be described as a shaded bay, but the degree of shading need not be specified as it may change seasonally or when the condition of the animal changes. When one is unsure, simply describing such an animal as bay, will suffice.

2 BLACK (BL)

Black is the only pigment found throughout the body. The entire coat, with the exception of any white markings, is black. True black is very rare in the Thoroughbred but does occur. Many Thoroughbreds that are described as black are in fact dark bay or brown.

3 CHESTNUT (CH)

The coat has a uniformly red appearance, varying from dark red to brownish red to yellow red. One need not differentiate between the shades. The mane and tail are either the same colour as the body, darker (but the legs are never black) or lighter. Certain chestnuts may have light manes and tails, known as flaxen. Sooty or shaded variations of chestnut also occur but in these animals the black tends to be more evenly distributed over the body giving a dark red to black appearance. These horses are described as liver chestnut. A very dark liver chestnut can be differentiated from a bay by the absence of black at the points, especially when examining the backs of the pasterns.

4 GREY (GR)

The coat is a combination of black and white and other coloured hairs. The skin is black. As the horse ages, the number of white hairs increase and distinct markings tend to fade. The grey gene is dominant and removes colour from any horse that inherits it, no matter what the base colour.

Greying in foals can often be seen on the face, around the eyes, muzzle and tips of the ears. If unsure, the identifier should give the colour on the foal identification document as grey or bay, grey or black or grey or chestnut and the term, “confirm” should be written in the description of the body. The parent colour is an important clue since a grey foal must have at least one grey parent.
All horses, but especially greys, should be described “as is” at the time of identification. Many, but not all greys, will eventually be completely “white”. It is for this reason that the description of the whorls and other features, such as fleshmarks and hoof colour, becomes important, as any white markings may completely disappear in time. The speed at which greying takes place varies between horses and also between breeds.

In greys, all whorls must be described as well as hoof colour. Indistinct markings need not be described if the limits cannot be identified, but should be mentioned, and the term “indistinct” added since a white limb at an early age can be identified by the presence of a white hoof later.

The colour roan is not allowed in the Thoroughbred, and therefore all Thoroughbreds with coats of mixed white and other coloured hair must be described as grey. Heavy flecking or ticking patterns can occur in Thoroughbreds, giving them the appearance of a roan in certain rare cases. They are described as heavily flecked, as having white hairs distributed throughout the coat, or as showing extensive roaning, but not as roan.

A flea-bitten grey has numerous spots of brown or black hair throughout the coat (this must be specified as lightly to heavily flea-bitten). Grey can vary from light (mostly white hairs) to dark (mostly black hairs) or dappled (circular areas of mostly black hair). Some greys lack dapples and these are referred to as iron grey. Some greys develop from a chestnut base and the transitional phase is a reddish brown as opposed to an actual grey. This brown colouration can also be seen in the flecks of some flea-bitten greys. These horses are described as rose grey.

NON THOROUGHBRED COLOURS:

5 ROAN

The coat consists of a mixture of white and other hairs. Horses are either born with this colour, or become roan when the foal coat is shed, and do not progress as do grey horses. Therefore, the age of an animal could help in classifying it into either the roan or grey group.

Roan is a rare colour in most breeds as opposed to grey. Young roan horses can be mistaken for greys. Roans are rarely dappled. The head, mane, tail and lower legs are darker than the body. A consistent feature of the roan is that it changes with the season. These horses are lightest in spring, medium shades in summer and darkest in winter. Unlike greys they tend to become darker with age. Dark spots appearing on roan horses are referred to as corn spots. Certain leopard complex patterns also appear roan, specifically the varnish roan.

Red / Strawberry Roan
The coat is a mixture of red and white hairs. The mane, tail and legs usually correspond to the base colour i.e. chestnut.

Blue Roan
The coat is a mixture of black and white hairs. The colour will vary according to the exact ratio of black and white hairs. The mane, tail and legs are usually black.

Bay Roan
The base colour is bay. The mane, tail and legs are black as for the bay.

6 DUN

The dun horse always has a dorsal stripe (list) and may have zebra stripes on the legs and a transverse stripe over the withers (withers stripe) with dark points. Dun is the diluted form of the usual darker shade.
Red Dun
Various shades of red, the points and primitive marks are darker red.

Blue Dun / Grullo
The coat is diluted black. The mane and tail are black.

Yellow / Buckskin Dun
The coat is yellow. The mane and tail are black.

7 PALOMINO
The coat varies from a dark gold, to golden yellow or cream. The mane and tail are lighter than the body but not necessarily white. The legs are light, as opposed to buckskins in which they are black. Black shading may be present in the body, mane and tail and these are described as sooty or shaded palominos. Some palominos may have a lot of black hairs mixed into the mane and tail. The skin is pigmented. Isabelos are the very palest palomino shades and have amber eyes and dark cream bodies.

8 CREAM
The coat is cream with an unpigmented skin and blue eyes. Cremello or cream and albino horses are very similar with only a slight creamy shading differentiating them. Genetically, however, these two colours differ from each other.

9 WHITE
A true white is white over the entire body with pink (unpigmented) skin and white hair. All points are white. This colour may be caused by either the white gene or by certain paint combinations. Old grey horses may appear white, but can, however, be distinguished by the black pigment in their skin. They are never referred to as white.

10 BUCKSKIN
Describes a bay horse with the red pigment diluted to yellow. Nonlinebacked yellow with black points. It is important to differentiate between the dun, which has primitive markings, and the buckskin, which has none. Buckskins can vary in shade from golden to light. Some buckskins can have darker shading on the body and are described as sooty or shaded buckskins.

11 PAINT HORSES
These horses have large, irregular patches of white on the body. The terms piebald (black and white spotted) and skewbald (white and any other colour except black, e.g. chestnut, bay or roan) are used in Britain to describe such coat patterns. The American system however, is more descriptive, and is therefore preferred. In this system the base coat colour is given first, followed by the white pattern superimposed on it. In cases where the paint pattern cannot be identified, one may simply state the base colour followed by paint, e.g. chestnut paint.

Paint horses can be divided into 2 main pattern groups known as tobiano and overo according to the distribution pattern of the white.

The distribution of white on paint horses should be indicated on the diagram in black outline and black hatching. White in the mane and tail must be indicated by black lines on the diagram. Extensive white marks need not be described in the narrative, as simply giving the base coat colour and general distribution pattern of the white (tobiano or overo) is sufficient ("as indicated" can be written). However, a single or a few characteristic marks, such as
occur on the belly of some minimally marked horses, must be described. Any minimally marked horse with high leg white that either extends up the legs in strips or points or mottles at the edges of the white and large white facial markings should be examined for further evidence of painting.

(a) **Tobiano**

This is by far the most common paint pattern.

- These animals generally have white feet and leg markings. Generally all 4 legs will be white.
- The white on the body generally crosses the topline at some point between the ears and the tail.
- The white patches are vertical in character, and are usually regular and distinct.
- Occasionally tobiano horses have only minimal body markings but extensive white markings on the legs. Since it is rare to find commonly marked horses with extensive leg markings but no head markings, one could differentiate a darker tobiano on this basis.
- Head markings can resemble those of a solid coloured horse.
- Darker spots of body colour within the white are known as **ink spots**.

(b) **Overo**

This group includes 3 patterns; frame, sabino and splashed white. For the sake of general identification exact classification of these groups is unnecessary and all non-tobianos can be described as overo.

**Frame**

- The legs are either dark or have common white markings. Generally at least one, but usually all legs will be dark.
- The head is usually extensively marked with white (white face, bald face or bonnet).
- White patches occur on the sides of the body (horizontal arrangement) and rarely reach the topline. White markings usually have an irregular, splashy appearance.
- A pigmented lip on an otherwise white head is also characteristic.
- The tail is usually one colour.

**Sabino**

Horses with high leg white, often up to and over the knees and hocks, as well as extensively marked faces (white faces) fall into this category. The edges of these markings are generally broken, mottled or roaned, as are any white body markings that may occur.

**Splashed White**

The legs and ventral body are white as is the head, which is extensively marked with white. Unlike the sabino, the edges of the markings are crisp.

(c) **Tobero / Tovero**

Is the progeny of a tobiano and an overo, and displays both colour patterns.

12 **SPOTS: THE LEOPARD COMPLEX**

Spotting can be found in any coat colour. Important features that occur in most of these horses and which help to classify them into the spotted group include; striped hooves, mottled skin and white sclera. As in the paint group, these colours consist of a base colour with a spotting pattern superimposed on it. Any dark spots appearing on these horses are known as leopard spots.
Individual spots must not be drawn in on the identification document, unless only a few distinctive ones occur. If these spots form stripes or dark patches these may be drawn for identification purposes. In spotted animals the base colour must be given as well as the spotting pattern superimposed on this. Other distinctive features, including whorls, white sclera, striped hooves, mottled muzzles and other, need to be indicated and described. On some of these animals the spotting pattern can change with age.

Coat patterns include:
- Leopard spotted
- Near leopard
- Few spot leopard
- Blanket
- Blanket spotted
- Snowflake
- Varnish roan or Marble
- Frosted

**FOAL COLOURS**

The foal coat is generally paler than the adult colour. This is especially true of the point colour. One should be careful when describing this colour as the pale hairs are usually shed, revealing black or red. White markings on foals, especially on the legs may be indistinct as a result of the paleness of the foal coat, and if one is unsure of the extent of the marking the terms “indistinct” or “check” must be added. A narrow border of red or black around the coronet can often be used as an indication of the absence of a white limb marking. Identifying whorls in foals may also be difficult to identify as a result of the foal coat and if crest whorls cannot be found, later confirmation of the whorl pattern should be done. Please note the description of bay and grey foals earlier. Final confirmation of the markings should only be done once the foal coat is shed.

**YEAR OF BIRTH**

Always give year of birth and not age. If this is estimated, it must be stated. While ageing the horse one should also note any dental abnormalities and tattoos.

**HEIGHT**

Height is the measurement in inches / centimeters from the ground to the top of the withers, with the animal standing on level ground without shoes. The total height is given in inches / centimeters and hands. Each hand is equivalent to 4 inches / 10 centimeters. Foals and yearlings are obviously not included.

**DISTINCTIVE MARKINGS**

**WHORLS**

These are changes in the hair pattern. The exact number and location of the whorls helps in identification, as they are an individual characteristic, and do not change as the horse ages, cannot be altered without detection and cannot be clipped out. They are indicated with a black x on the diagram. Feathered and linear whorls are indicated by, wavy or straight lines.
Frontal Whorls

Median whorl at upper eye level

Median whorl at eye level

Median whorl above eye level

Median whorl at lower eye level

Median whorl below eye level
Two diagonal whorls  
Rt above and Lt at eye level

Two vertical whorls  
One above and one below eye level

Few white hairs to Rt  
above upper eye level  
whorl to Lt of median

Two horizontal whorls
respectively, drawn from the x in the direction of the feathering. Both the presence and absence of whorls can aid in the identification of an individual animal.

- Whorls on the head and crest (specifically the frontal and crest whorls) must always be shown. If these are absent this must be noted, but this is extremely rare.

- The frontal whorls must be described in terms of their relation to the white markings, if present and in relation to eye level and the median line of the head.

- Neck and crest whorls are described by dividing the neck into three sections: high crest, mid crest and low crest and describing their position in relation to these divisions.

- some crest whorls are very high on the crest, almost at the poll and behind the ears, and it may be necessary to look under the strap of the headcollar to find them. These are referred to as poll whorls.

- Whorls on the side of the neck, not bordering the crest, are described as neck and not crest whorls. These may be described as being on the upper or lower half of the neck near the head, crest, shoulder or jugular groove.
Forearm whorl

Girth whorl

Body whorl

Flank whorl

Buttock whorl

Whorl behind hind cannon
• If the horse has no distinctive markings or is a transitional grey horse, it becomes necessary to show all whorls on the limbs and body.

• Whorls are described as:

  1. **Simple whorl** or **whorl** (simple circular hair pattern). Clockwise or anticlockwise need not be specified.

  2. **Feathered** whorl (whorl with a feathered hair pattern extending from it).

  3. Feathered whorls can have different shapes and these may be described as circular, linear, broad, curved, upward, downward, short, long or irregular.

  4. Linear whorl (a simple crest of hair not necessarily associated with a simple whorl).

  5. Irregular whorl or whorl pattern (if more than one whorl forms part of a definite hair pattern). This often occurs on the ventral neck and front of the chest. When such a pattern is present, the outline of the pattern must be drawn on the diagram. It can then be described as a **whorl pattern** and the position at which it occurs given.

• The relationship of 2 whorls that are in close proximity, or their relation to other markings, should be given, e.g. vertical, horizontal, diagonal, joined by a feather or joined by two linear or diagonal feathers.
• Feathering in the flanks and pectoral regions (unless in an uncommon position) is not a useful distinguishing feature and need not be shown. The forelock whorl need also not be shown unless more than one forelock whorl is present or they are feathered. Abdominal whorls need not be shown. If in doubt, however, rather include all whorls.

• It is not sufficient to only indicate whorls on the diagram and state “as indicated” in the narrative. All whorls need to be described fully. Whorls are named according to the anatomical position at which they occur.

• Prominent whorls must be described in all cases. In grey animals and those with no white markings whorls that are harder to spot such as throat and mandibular whorls should also be given.

• The commonly occurring whorl on the ventral aspect of the neck is often missed and must be given in all cases. It must be fully described in the narrative and its position indicated as “ventral neck whorl”.

• If the same whorl occurs on both sides of the horse this may be indicated by the term bilateral or given as left and right, e.g. left and right jugular whorls.

![Diagram of horse with numbered whorls]

1  Face whorl  
2  Cheek whorl  
3  Mandibular whorl  
4  Throat whorl  
5  Jugular whorl  
6  Feathered ventral neck whorl  
7  Left chest whorl

**WHITE MARKINGS**

White marks must be described in terms of their position and characteristics. When describing white marks on the head, right refers to the right side of the horse and left to the left side of the horse. All white marks are indicated in black on the diagram. White marks on the head and legs of commonly marked horses should be outlined and hatched. White marks on paint horses are also outlined and hatched to show which parts are white. The limits of head and body markings can be given as, in front, behind, dorsal or above, and ventral, distal or below.
White marks can be:

- **Regular** or **irregular**. Always use anatomical features such as eyes and nasal bones as guidelines to indicate the extent of white markings.

- **Mixed** with coat hair or **mottled** (larger flecks of white, often at the edges of extensive limb markings). These are indicated by hatching. Do not outline the hatched area in such cases.

- **Pigmented** or **unpigmented**. Unpigmented areas must be indicated, by filling in the outline of the white mark that is unpigmented. Such marks are referred to as **fleshmarks**. These may be **mottled**.

- A white mark may be **bordered** in one of two ways. When dark skin shows through the white hairs, forming a shadow impression around the white mark. This usually occurs around fleshmarks. Or a mixed border when white hairs are mixed with coat hair. This usually occurs around facial and leg markings that are not fleshmarks. Bordering is indicated by double lines.

### HEAD MARKINGS

#### 1 Star

Any white mark on the **forehead** (defined as the area above a line connecting both eyes) except those consisting of only a few white hairs, which should rather be described as a **mixed white patch** or a **few white hairs**. If two white marks are present on the forehead, the largest of these is referred to as a **star** and the other as a **white patch**, with its position described in relation to the star.

The **shape** must be described and can be **diamond shaped**, **oval**, **narrow**, **horizontal**, **vertical**, **pointed**, **triangular**, **crescent shaped**, and other, or **mixed** (if coat colour is mixed with white hairs throughout). A star can be **small**, **medium** or **large**. Medium need not be written as such stars are simply referred to as stars. **Facial flecking** or **ticking** describes mixed white hairs scattered over the face.

The position of the star needs to be described in terms of its relation to the upper or lower eye level, right or left, eyes, ears, forelock, and so on, if it is not centrally located on the forehead.

#### 2 Stripe

A white mark found **below eye level** and above the level of the muzzle. The width of a stripe does not exceed the flat surface of the nasal bone. Where the star and stripe are combined, they should be described as a **“star and connected stripe”** or if separate only as a **“star and stripe”**. A stripe that is not continuous should be described as a **“broken stripe”**. The termination and / or starting point, if not joined to a star (pointed or blunt or tapering and anatomical position), the **width** (broad or narrow), and any **variation in direction** (curved left or...
right) must be given. A stripe that contains white and coat hairs must be described as a mixed stripe. A few white hairs or patch of mixed hair on the site of a stripe should be described as such, and not as a stripe.

3 **Blaze**

A white marking found below eye level and above the level of the muzzle, and extending beyond the nasal bones (broader than a stripe). The termination and any variation in direction must be described as above. Dark marks within a white mark, as found in black and bay horses and chestnut marks in chestnuts, are outlined in black. These must be described as dark or chestnut in the narrative.

4 **Snip**

White markings situated between or in the region of the nostrils (below the line dividing the muzzle from the face on the anatomical diagram) which may enter one or both nostrils. These, as well as other small white facial markings must be described in terms of their location (e.g. in relation to the nostrils), size (large or small), shape (round, elongated, narrow, broad or irregular) and intensity (feint or fleshmark). A snip can be described as touching, extending into or covering the nostril.

If the snip is joined to a stripe or blaze proximally, it must be described as a “stripe or blaze ending in snip” or as a “stripe or blaze and connected snip”.

Pigmented spots or areas within fleshmarks must be described.

4 **White Face**

Where the white covers the front of the face (extending to, but not including the eyes) and extends laterally toward the mouth. This term may only be used when a horse has this particular marking, in other words, a very large star (the whole forehead) combined with a broad blaze and white muzzle. All other extensive facial markings need to be fully described. It will not be incorrect to describe such a marking in detail instead of referring to it as a white face.

5 **Bald Face**

White marking that covers the forehead and extends laterally to include the eyes (one or both, specify right or left) and the front of the face as for the white face.

6 **White muzzle**

A white mark or fleshmark, including the whole nose and mouth region.

7 **Patch**

Any separate white mark or fleshmark, found on the upper or lower lip, or chin.

- **Upper lip** - white marking (patch) or fleshmark on the upper lip. It should be specified whether a white mark on the lip covers the whole, or only a part of the lip. If the lip is only partially covered one must specify whether the marking is in front, on the left or on the right.

- **Lower lip** - white marking or fleshmark on the lower lip.

- **Chin** - white marking or fleshmark below the lower lip.
Upper eye level whorl left of crescent-shaped star

Eye level whorl to left of median on left border of large irregular star

Two horizontal whorls at upper eye level. Left in mixed star

Upper eye level whorl in star and connected stripe to middle of the face
Median whorl above eye level in star and connected blaze with mixed border ending in fleshmark snip including left nostril

Upper eye level whorl in star and connected broad stripe ending in bordered fleshmark snip between nostrils

Two vertical whorls. One in star and one at distal border of star. Narrow mixed stripe and large feint snip touching the right nostril medially.

Upper eye level whorl to right of median in round star and broken narrow stripe above the muzzle. Mixed white patch on right of bridge of nose
Bald face including the left eye. Pigment spot over left nostril. Median whorl at eye level and right forelock whorl. Stripe from middle of the face ending in white muzzle.

White face or large star and connected blaze ending in white muzzle with dark spot in blaze and pigment spot below right nostril. Broad diagonal stripe in the middle of the face and ticking above.
LIMB MARKINGS

- The upper limits of the white markings must be defined in terms of anatomical location.

- Right and left are determined by the identifier standing behind the horse, i.e. the right and left side of the horse.

- The terms inside and outside, in front and behind are used to describe the extent of the markings on the limbs. This is especially important when the white marking does not extend to the same height all the way around the limb.

- If the white hair is mixed with normal hair in all or part of the limb marking, it must be described as mixed, while larger markings resembling flecking on the body can be described as mottled, and the area involved specified.

- If the mark is solid but separate, it can be described as a white patch and the area involved specified.

- A limb with no white markings and a black hoof is described as nil. Hoof colour must be specified if the hoof is any colour except black.

- White heels (Heel white) must be described and the heel involved specified (outside or inside or both).

- Ermine are small black marks that occur on a white coronet, usually in black and bay horses. They should be outlined in black on the diagram. Chestnut horses may have red spots on the white leg markings, and these are described as chestnut spots and also indicated with black on the diagram. In some cases ermine markings form a continuous band around the coronet. These may be described as “an ermine band around the coronet”.

- Coronet is a solid white marking involving the whole of the coronet above the hoof. A few white hairs, or a patch of hairs above the hoof is not described as a coronet but is given as a white patch or a mixed patch or spot on the coronary band, and the position specified as in front, outside or inside. A coronet may be described as being interrupted when it does not extend all the way around a limb.

- Pastern describes a white marking that extends from the top of the hoof to the bottom of the fetlock. It can be described as being a half pastern or pastern.
Nil

1 White patch on the front of the coronet and indistinctly striped hoof
2 Coronet with ermines and distinctly striped hoof

Limb markings

Pastern

1 Half fetlock
2 Fetlock
1 Half cannon
2 Quarter cannon

Full cannon and white hoof

Bordered quarter cannon

Fetlock in front to half cannon behind and ermine band around the coronet

1 Inside heel white
2 Both heels white
- **Fetlock** describes a white mark that extends from the hoof to the top of the fetlock joint. A white mark that only covers half or part, of the fetlock is described as a **half fetlock or a partial fetlock**.

- **Cannon** markings are described as being **quarter, half, three quarter or full**, depending on where the mark **ends on the cannon bone**.

- If the **hock** or **knee** (carpus) is covered, it should be described as such.

- When only a portion of the white mark extends into an area on one side of the leg or when only a narrow strip extends up the leg, it must be described fully, e.g. a **fetlock outside extending to the half cannon inside as a narrow pointed strip**

- When a limb marking is not visible from one side of the limb, as indicated by an absence of markings on the diagram, this must be described in the narrative.

- If white extends further up the legs, the anatomical area in which it terminates must be given (to gaskin, forearm or stifle).

- **Hoof pigmentation** should be noted if not black. In other words, black hooves need not be described except in foals in which limb markings are given as “indistinct”. Hooves can be **striped, black or white** (not light). When a white or striped hoof is present with no white in the leg, or a black hoof with a white leg marking, this must be noted and investigated, as these are rare. Striped hooves without white limb markings should prompt investigation of the coronary band and heels as these often have indistinct markings in such cases. White in the hooves is indicated on the diagram with **black shading ▼**. Striped hooves are indicated by hatching, except when the stripes are characteristic, in which case the black areas are left **unshaded** and the white areas are **shaded**.

**BODY MARKINGS**

- All white and any other markings e.g. permanent scars, saddle, girth marks and brand marks must be indicated.

- Large white patches on the body should be **outlined and hatched** to differentiate them from any other colour. This is especially important in the paint horse breeds.
• White hair in the mane and tail should be indicated by black lines. These also need to be described in the narrative.

• White hair or grey-ticked areas are indicated by short lines in black. White spots are outlined in black.

• Dark patches or spots are outlined in black and left unhatched. The nature of these markings must always be described in the narrative.

• **Scars** are indicated by black arrows pointing to their position (→).

![Diagram of horse with markings](image)

• **Brand marks** (defined as hot brands, freeze brands or tattooing in the narrative) are drawn in black on the diagram. They are described as comprehensively as possible including any symbols, letters or numbers. If they cannot be described, they are considered to be scars and indicated as such.

• Any non-white stripes are indicated by black lines e.g. a **withers stripe** which is a band across the withers, or **zebra marks** which are dark or black stripes on the limbs, neck or quarters.

• A black dorsal line extending from withers to tail is described as a **list** in the narrative.

• Any patterns, flecking, ticking, frosting or spots need to be described in terms of anatomical distribution, outline (regular, irregular), appearance (feint, heavily or lightly) and extent (small, medium, large, extensive).

• Missing or vestigial chestnuts must be noted. In other countries the chestnuts are drawn on the identification document for all grey horses and horses with “no white markings”.

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**Note:** The image contains a diagram of a horse with various markings indicated, including white patches, freezing brands, and other distinctive features commonly used in horse identification.
OTHER MARKINGS AND PECULIARITIES

When an animal has a specific feature that is characteristic and can be used to identify that animal, this must be noted. When, however, an animal has prominent white markings and other identifiable characteristics, unnecessary detail can be avoided in the description. Certain horses such as plain bays and chestnuts as well as greys can become difficult to distinguish from other similar looking animals and in such cases all characteristics must be described in detail.

- **Patch** describes areas of white or dark hair amongst an otherwise lighter coloured coat. The colour, shape, position and extent should be described. **Blood marks** are red patches found on greys. **Liver marks** are darker patches found on chestnuts or bays (dark coloured horses).

- **Flecking** describes small collections of white hairs occurring in any part of the body. The degree of flecking must be described as "lightly flecked" or "heavily flecked".

- **Ticking** or **roaning** describes individual white hairs scattered throughout the coat or occurring in specific areas such as the flanks. White hairs in the tail of some horses are a variation of ticking and can be described as **highlights**.

- **Spots** are small circular collections of hair differing from the general body colour. Dark spots are referred to as **ink spots** (in paint horses when they occur in the white areas). **Bend Or spots** are dark spots of varying size that occur on chestnut horses. **Birdcatcher spots** are small white spots occurring in certain horses to a greater or lesser degree. Simply describing patches or spots as dark or white is, however, sufficient.

- **Superior prognathism (parrot mouth)** is a projection of the upper jaw.

- **Inferior prognathism** is a projection of the lower jaw.

- **Other dental irregularities** (broken teeth, protruding teeth, worn or missing teeth).

- **Healed fractures** which leave visible deformities.
• **Lop or nicked ears.**

• **Loss of an eye.**

• **Blue, amber or heterochromic (mixed iris) eyes.**

• **White sclera** is prominent white surrounding the iris in some horses.

• **Prophets thumb print** (Δ) is a muscular depression seen on the neck, the breast or on the point of the shoulder (dimples).

• **Dappling,** usually occurs in horses in good nutritional and physical condition. It describes darker areas of the coat with lighter centres, or rarely, lighter areas with darker centers (reverse dappling). Although it is often transient it could be included in the narrative.

• Another modification that can occur in bays and other colours is known as **mealy.** This is the presence of definite paler areas on the lower belly, behind the elbows, in the flanks, around the eyes and on the muzzle. This modification, if present and useful as an aid to identification of the animal, can be mentioned in the description of the body.

• **Conformational characteristics** need not be mentioned, especially in foals where changes may still take place. Severe, and permanent abnormalities in adult animals should be mentioned, as these form part of the animal’s general physical appearance, and will help to identify and distinguish it from other similar looking animals. These include such characteristics as roach and sway backs and limb deviations. Some horses have distinctive facial profiles such as roman noses or dished faces. These need only be mentioned if this occurs in a breed in which it is not usually found and in cases where it will help in distinguishing a particular horse from others of its type. Prominent extensions of the facial bones which often occur above the eyes, between the eyes or on the upper half of the nasal bones must be mentioned.

• **Dimples** or muscular depressions (other than prophet’s thumb prints) are sometimes seen in various places on certain horses and need to be mentioned in the narrative.

**CLUES TO MARKINGS THAT HAVE BEEN ALTERED**

• White leg and black hoof (and vice versa).
• Colour of hair root differs to that of the tips.
• Hair growth direction changes in brands.
• Black skin under a white mark.
• White skin under a black mark.
DESCRIPTIONS SHOULD BE DONE IN THE FOLLOWING ORDER

1. Breed
2. Gender
3. Base coat colour
4. Year of birth (age)
5. Height (if an adult)
6. Head
   - White markings
   - Whorls
   - Eyes, ears, nostrils, any peculiarities
   - Teeth and dental peculiarities, tattoos
7. Each limb as dictated by the identification form
   - White markings from each angle
   - Dark markings
   - Hooves
   - Whorls
   - Scars
   - Deformities (in exceptional cases)
   - Absent chestnuts
8. Neck and body
   - White and dark markings, including mane and tail
   - Whorls
   - Scars and brands
   - Other; dimples and deformities
LIST OF DESCRIPTIVE TERMINOLOGY
(to be used as a guide)

WHITE MARKS / PATCHES OF ANY COLOUR

- Regular, irregular, bordered, mixed, mottled, small, large, fleshmark, feint.


- Horizontal, vertical, curved left or right, narrow, broad, pointed, blunt, tapering to, linear, elongated, compressed, deviating left or right.

- Higher, lower, below, under, above, outside, inside, central, in front, behind, right, left, medial to, lateral to, lower than, higher than, except, extending to / into, touching, adjoining, bordering on, between, ending in, covering, joined to, ventral, distal, single, several, encircling, contained in, beginning from, partially.

- Tan, mealy, or shaded.

- Broken, interrupted, connected to, ending as.

- Anatomical areas as given.

- Terms as given, for various specific features e.g. amber eye.

GUIDELINES

Use the following order as a guideline to describe markings or features:

1. Size
2. Shape
3. Appearance
4. Colour
5. What
6. Position
7. Relation to other anatomical features (e.g. small round feint snip between nostrils)
Points of a horse

- Forehead
- Bridge of nose
- Muzzle
- Chin
- Jugular groove
- Crest
- Neck
- Shoulder
- Withers
- Back
- Rump
- Tail root
- Body
- Thigh
- Buttock
- Gaskin
- Hock
- Throat
- Face
- Cheek
- Throat
- Chest
- Point of shoulder
- Forearm
- Elbow
- Abdomen
- Flank
- Stifle
- Cannon
- Fetlock
- Coronet
- Hoof
- Pastern
- Point of shoulder
Points of the head

- Median line
- Forelock
- Forehead
- Upper eye level
- Eye level
- Lower eye level
- Face / Bridge of nose
- Muzzle
- Nostril
- Upper lip
- Lower lip
- Chin
COLOUR PHOTOGRAPHS
Bright Bay.

Brown Bay

Dark Bay

Shaded Bay

Brown
Black

Chestnut

Liver Chestnut

Chestnut with flaxen mane and tail.
Bay foal going grey.

Light Grey

Rose Grey

Flea-bitten Grey

Dark Dapple Grey
Roan

Red / Strawberry Roan

Bay Roan with two Grey companions.

Dun

List and Zebra stripes on a Dun.

Buckskin

Buckskin
Palomino

Paint

Chestnut Paint

Black Paint

Leopard Complex

Black Leopard Spotted

Varnish Roan
**Limb Markings**

Irregular fetlock with ermine and striped hoof. The hoof may be marked as indistinctly striped because the stripes are not clearly visible beneath the mud.

- Chestnut spots
- Distinctly striped hoof.
- Half cannon with mixed border and white hoof.

**Head Markings**

- Feint snip touching the Lt nostril.
- Round star and mixed white patch above Lt eye.
Star and broad stripe starting at the middle of the face and ending in a fleshmark snip touching both nostrils medially.

Star and connected bordered forked blaze with large chestnut spot below eye level.

White face

Bald face
**Eye Colour**

- **White sclera**
- **Blue eye**
- **Heterochromic eye**
- **Amber eye**

**Whorls**

- Round Feathered Whorl
- Cheek Whorl
- Ventral Neck Whorl
- Two Vertical Whorls joined by Feathering
Other Markings

Extensive ticking or roaning.

Extensive spotting and dappling

Bend Or spots

Birdcatcher spots

Highlights

Extensive flecking from withers to tail root

Prophet’s Thumb Print
REFERENCES


3. FEI Identification of Horses. 3rd Edition 1997 Printed in Switzerland for the FEI.


