



Thermal Imaging Report

Zulu



*Thermal Imaging completed by
a Certified Thermographer
Authorized with the EquineIR™
Network.*



*Interpretative results
completed by Licensed
Veterinarians in contract with
Integrated Equine Infrared.*



Thermal Communications

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October 14, 2013

John Loubser
15 Sword Dancer Close, Noordhoek
Cape Town, 7985

Dear John Loubser:

EquineIR was recently requested to perform a full body thermal imaging scan of: **Zulu**

The following photo report was completed by your EquineIR™ Certified Thermographer and all interpretative results were channeled through interpretir.com and subsequently formulated and input by a licensed veterinary team member with Integrated Equine Infrared.

The interpretation is intended to aid your regularly-licensed veterinarian in providing a diagnostic or treatment protocol. All follow-up testing and treatments should be conducted and administered by your primary veterinarian. The interpretation provided is based solely on the conditions at the time of survey and the thermal images included in this report. Thermography is a diagnostic tool that measures heat emitted from the surface of the patient. The thermal imaging camera converts infrared energy into a visible image. Emitted heat is related to circulation; as such, the thermal camera can help detect areas of inflammation as well as decreased circulation. Thermal symmetry is key, so we compare one anatomic area with the same area on the other side. The EquineIR™ report is prepared in this manner. It should be understood that correct patient preparation and environment are vital to a successful survey. Your EquineIR™ technician is also a Certified Infrared Thermographer and has been trained in the proper use and the proven techniques of thermal imaging as it is used with horses. However there are certain situations which may reduce the quality of the survey including the improper preparation of the horse prior to technician's arrival. The interpreting veterinarians who review the imagery base their findings and recommendations on information provided, so it is critical that proper care be taken in the preparation process to ensure success.

Thermal imaging is a physiologic modality and should not be relied upon as the sole diagnostic tool. A complete clinical examination by your licensed veterinarian is always recommended for the best diagnosis and follow-up treatment. This Report is not a definitive diagnosis of any illness or disease. It is intended for use only by licensed veterinary professionals to evaluate patient health, diagnose medical conditions, and provide treatment. It is not to be used by individuals for self-diagnosis or self-evaluation, nor for the diagnosis or evaluation of other non-qualified personnel. This report does not replace, nor is intended to replace a complete clinical evaluation by your licensed veterinarian. Under no circumstances will EquineIR™, Integrated Equine Infrared or its affiliates be held responsible for illness, injury, or death to the patient as a result of the information contained herein. This report does not replace, nor is intended to replace a complete clinical evaluation by your licensed veterinarian.

Your EquineIR™ Technician looks forward to working with you in the future. If you would like to set up an ongoing maintenance imaging program for your horse(s), we can arrange this at discounted rates along with multiple horse discounts. Please call our office with any questions as we would love to assist you in your success.

Sincerely,



Dinah Curling,
Certified Infrared Thermographer - Infraspexion Institute

EQUINE CLIENT INFORMATION

CLIENT NAME: John Loubser
MAILING ADDRESS: 15 Sword Dancer Close, Noordhoek, Cape Town, 7985
CLIENT EMAIL: deecamp@global.co.za
CLIENT PHONE: 082 855 8660

HORSES NAME: Zulu
IMAGE DATE: 9 October 2013
IMAGING TIME: 09h35

HORSE AGE: 10 yrs
HORSE BREED: Cape Boerperd
HORSE PRIMARY USE: Recreational Hacking / Trail Riding

SURVEY INFORMATION

THERMOGRAPHER: Dinah Curling
INFRARED CERTIFICATION #: 8341
INFRARED CAMERA MODEL: Flir T335 **CAMERA SERIAL NUMBER:** 48803379
NUMBER OF THERMAL IMAGES SUBMITTED: 30

WEATHER: Sunny with a light intermittent breeze
APPROXIMATE TEMPERATURE: 20 °C
IMAGING LOCATION: Covered area

EXERCISED PRIOR: Yes **HOW LONG:** 20 mins **WHEN:** 8h40 – 9h00
TYPE OF EXERCISE: Free lunge in walk and trot and a very light canter.

BOOTS OR WRAPS ON HORSE? Yes, within 12 hours **HOURS SINCE:** 1

FLYSPRAY OR LINIMENTS APPLIED WITHIN 24 HOURS: No

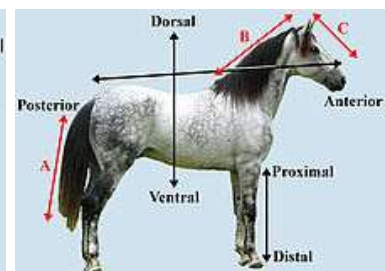
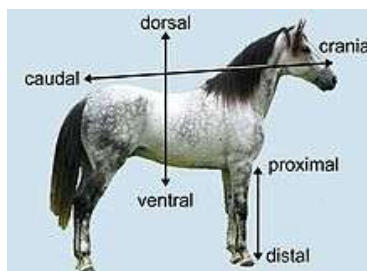
REASON FOR SCAN or HISTORY RECEIVED: General evaluation but there is concern about horses back and saddle. There is a slight irregularity in his trot gait which has been identified. Brushing boots used on hind legs during exercise as horse brushes. Removed 20 minutes before imaging started.

INTERPRETATION INFORMATION (Completed by Veterinarian)

INTERPRETATION TYPE: Full Enhanced Survey

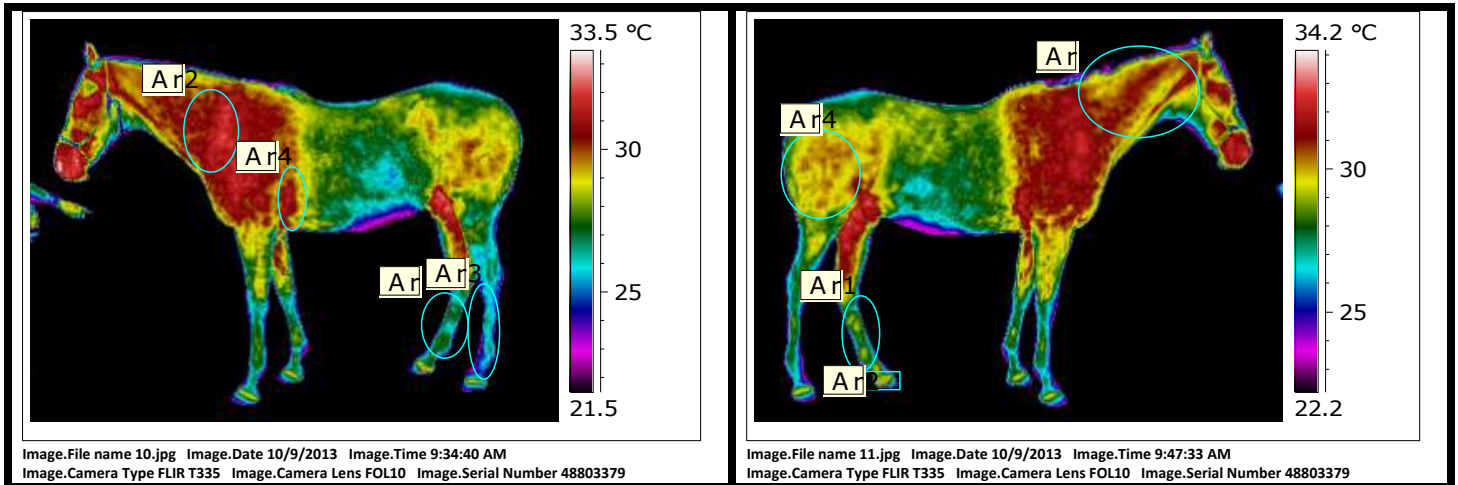
DATE OF INTERPRETATION: 10/14/2013

REVIEWING VETERINARIAN: Dr. Debra K Tibbitts

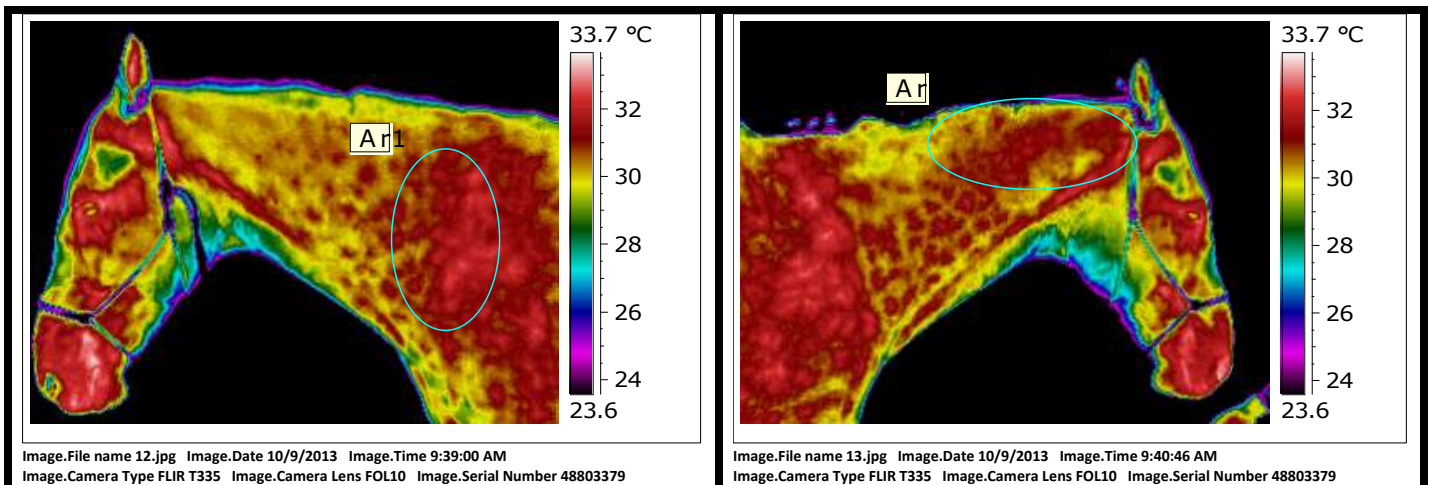


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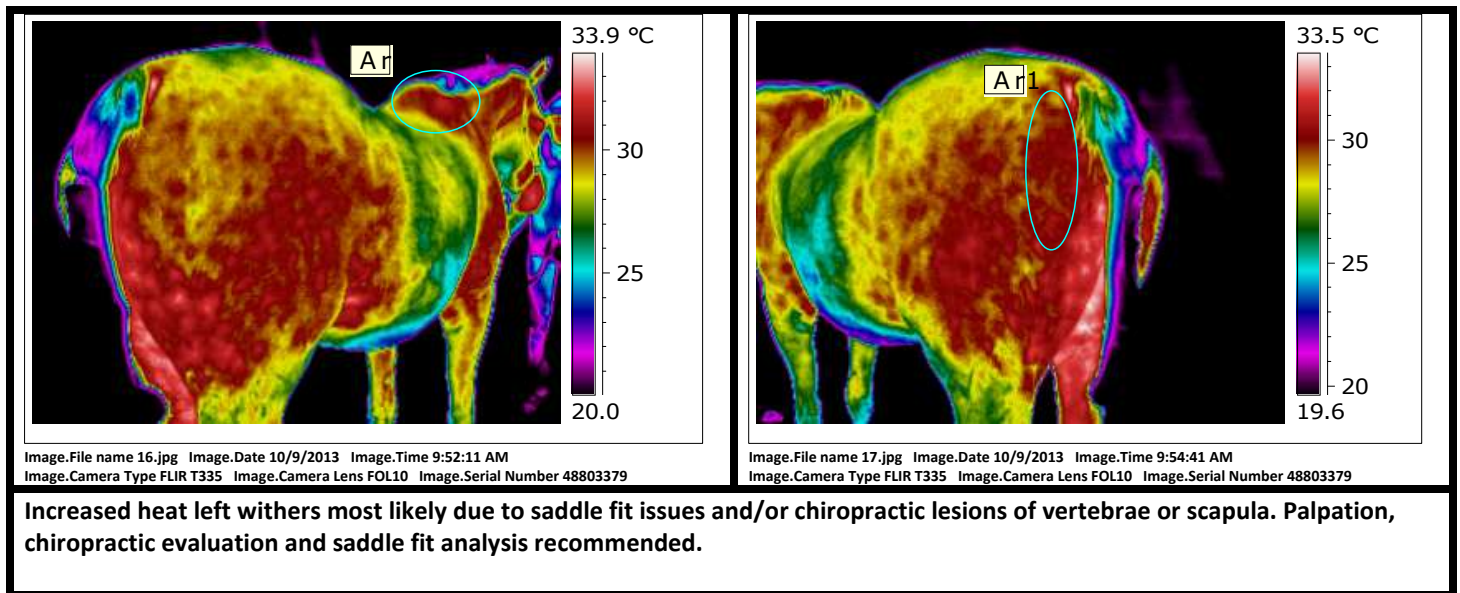
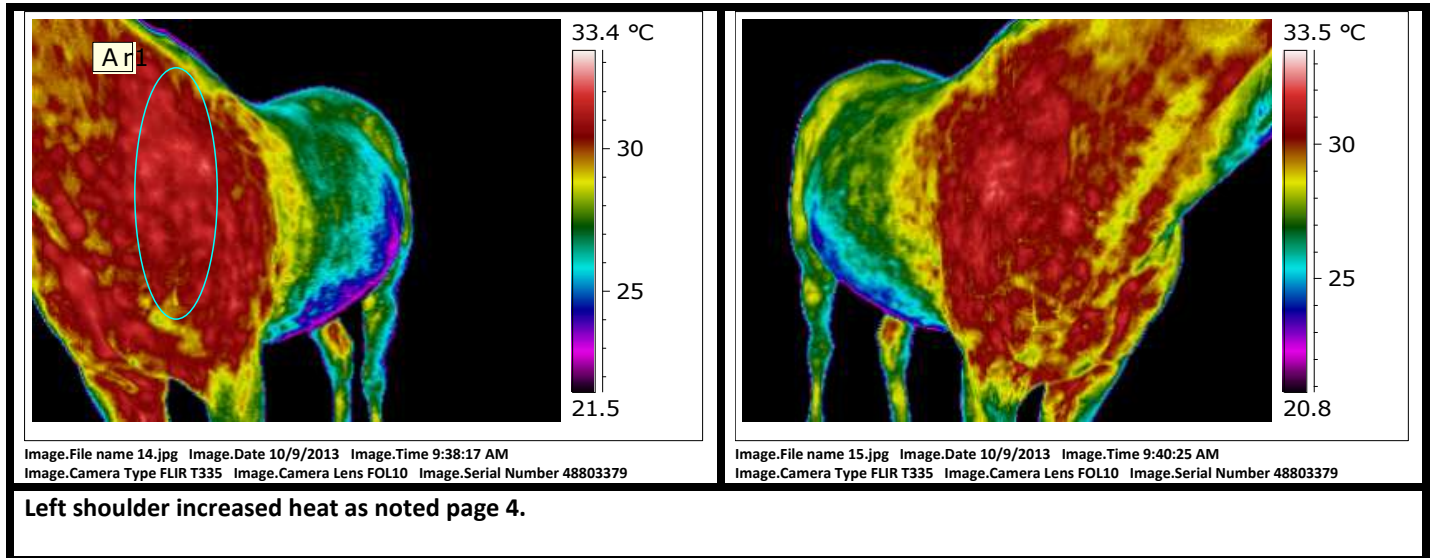
Some asymmetry seen on lateral views. There is greater heat in the left lower cervical/shoulder area, right mid to upper cervical area, right thigh, left hind medial cannon and lateral. Decreased heat right hind lateral cannon/fetlock/pastern. Left hind may have circulatory disturbance from old injury causing decreased heat laterally or off-loading of the left hind limb. Inflammation may be the source of the increased heat in the medial left hind cannon and hoof. Palpation of the left shoulder/lower cervical area and right mid to upper cervical area recommended checking for pain/stiffness/inflammation and range of motion. Left girth area increased heat. Palpation recommended.



Left shoulder and right mid to upper cervical areas increased heat as noted above.

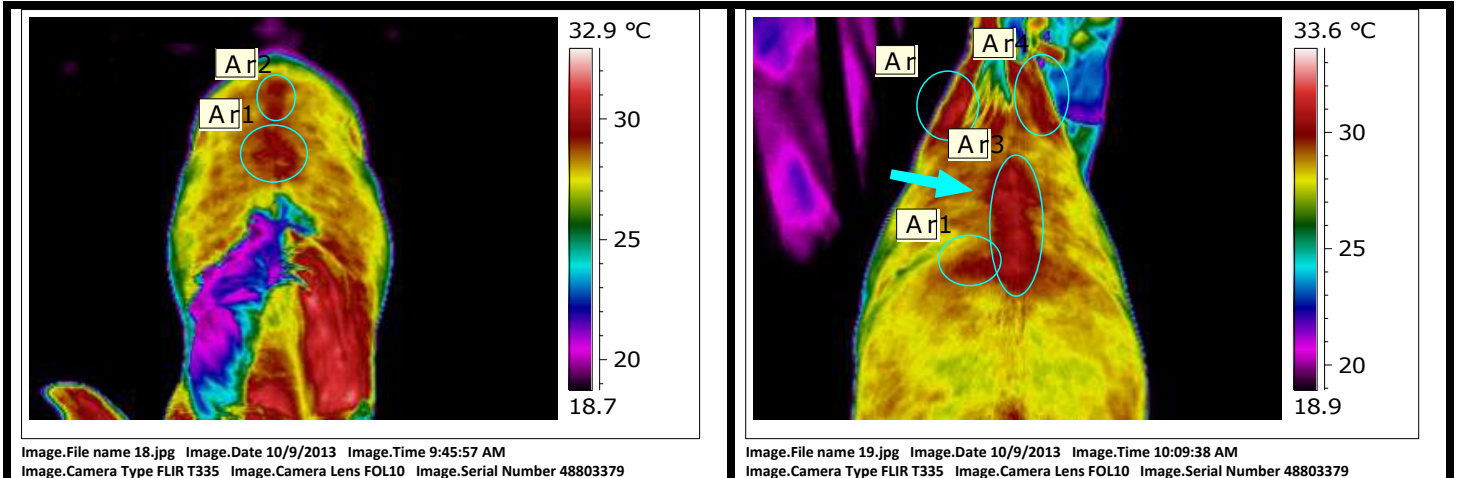
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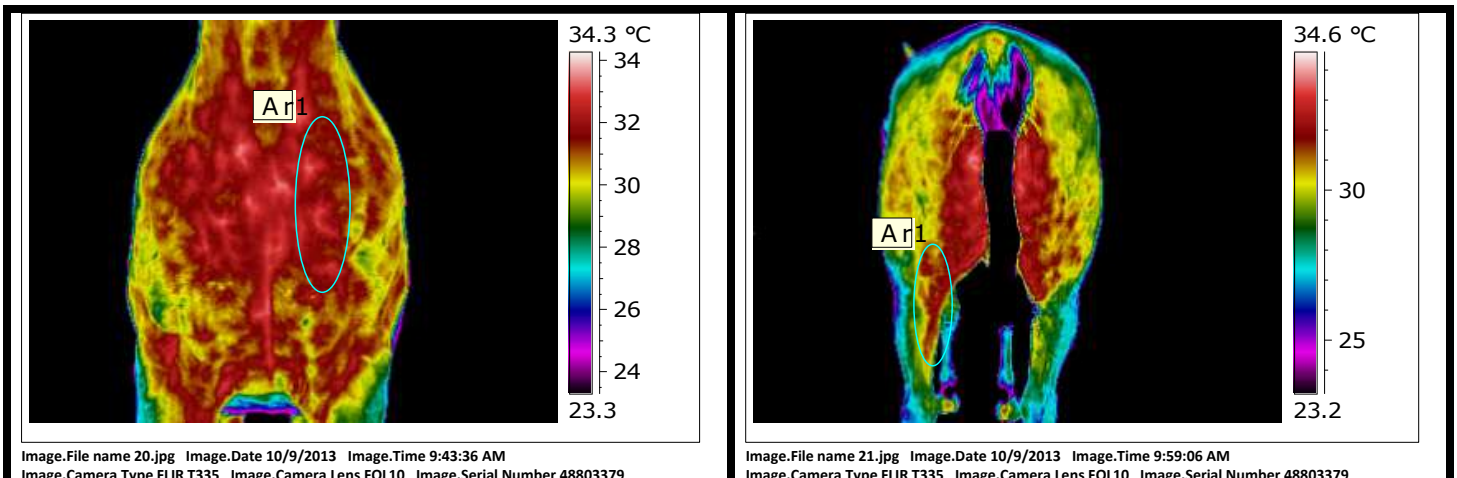


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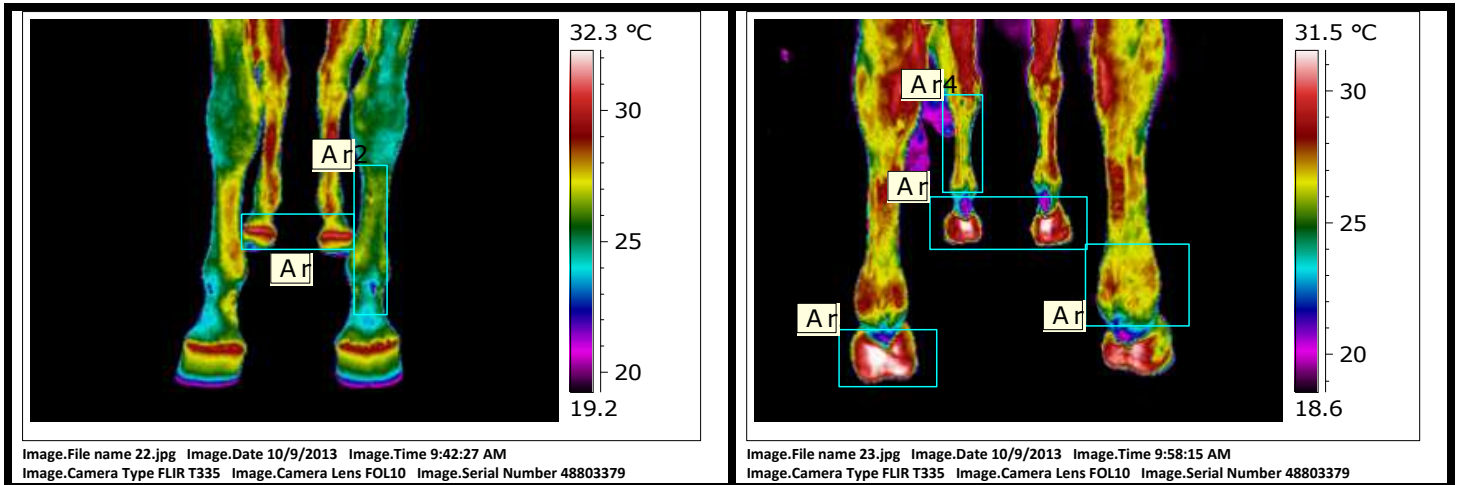
Increased heat withers, thoracolumbar spine left sacro-iliac area. Palpation, motion palpation and saddle fit analysis recommended checking for inflammation, pain, proper mobility. Saddle fit issues, chiropractic fixations/rotations, kissing spines may be present.



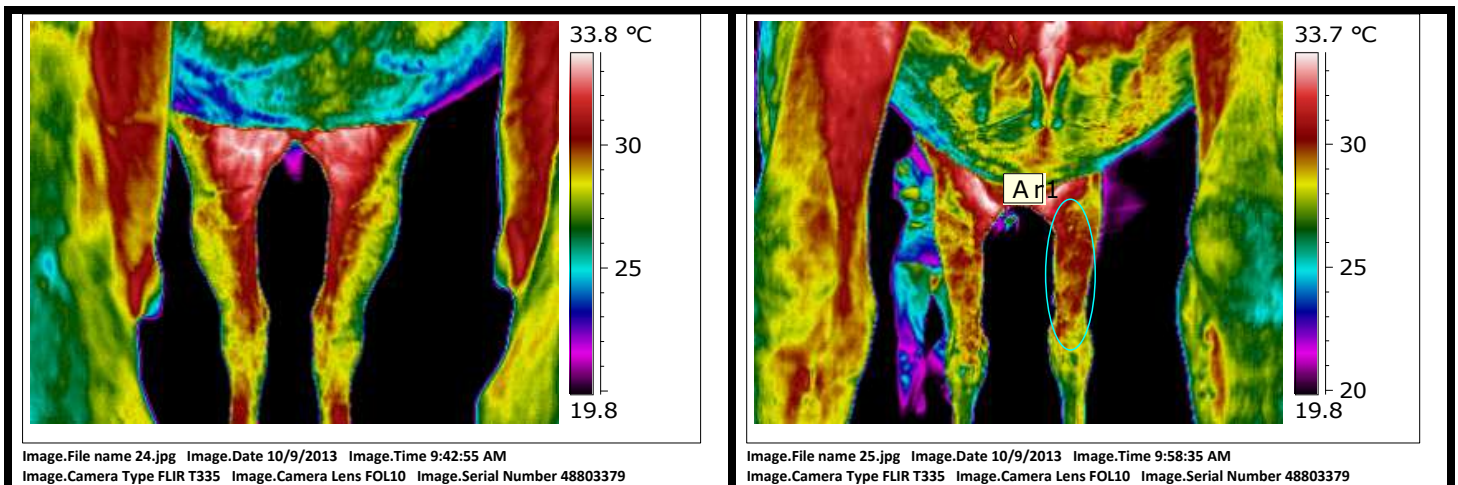
Left upper chest increased heat, left gaskin increased heat, left thigh slight greater heat than right. Uneven limb loading may be the cause of both but palpation is recommended to rule out primary inflammation.

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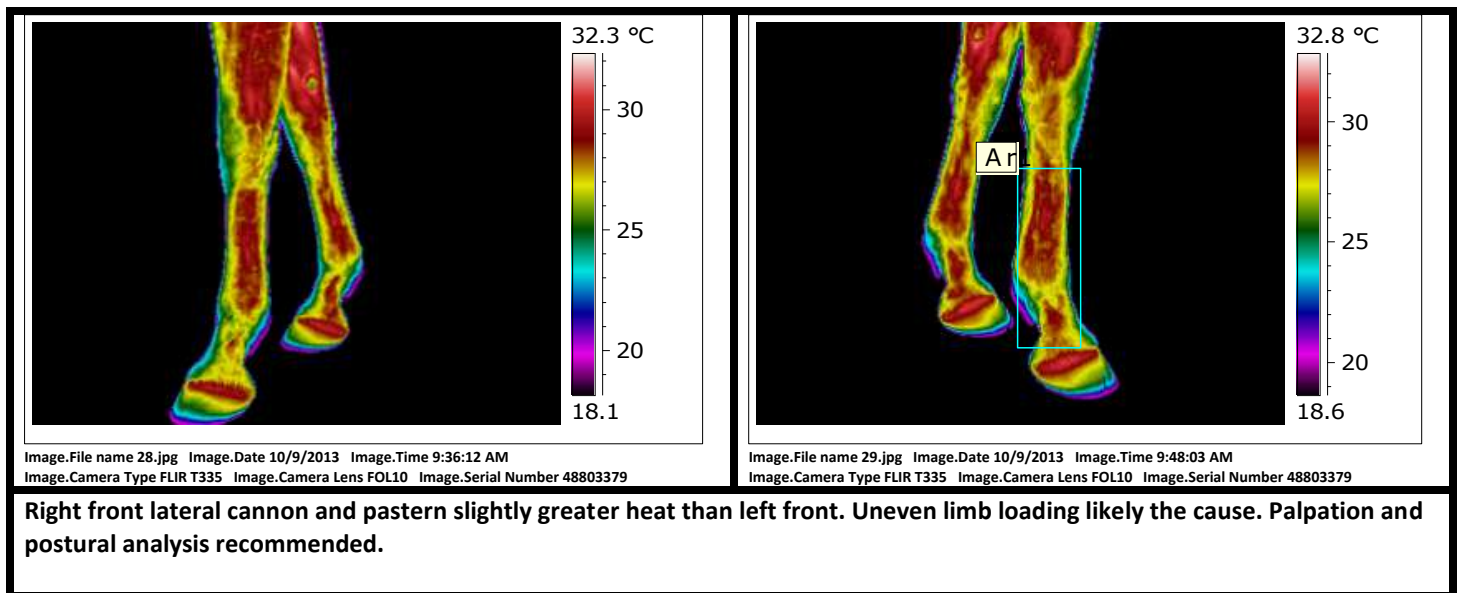
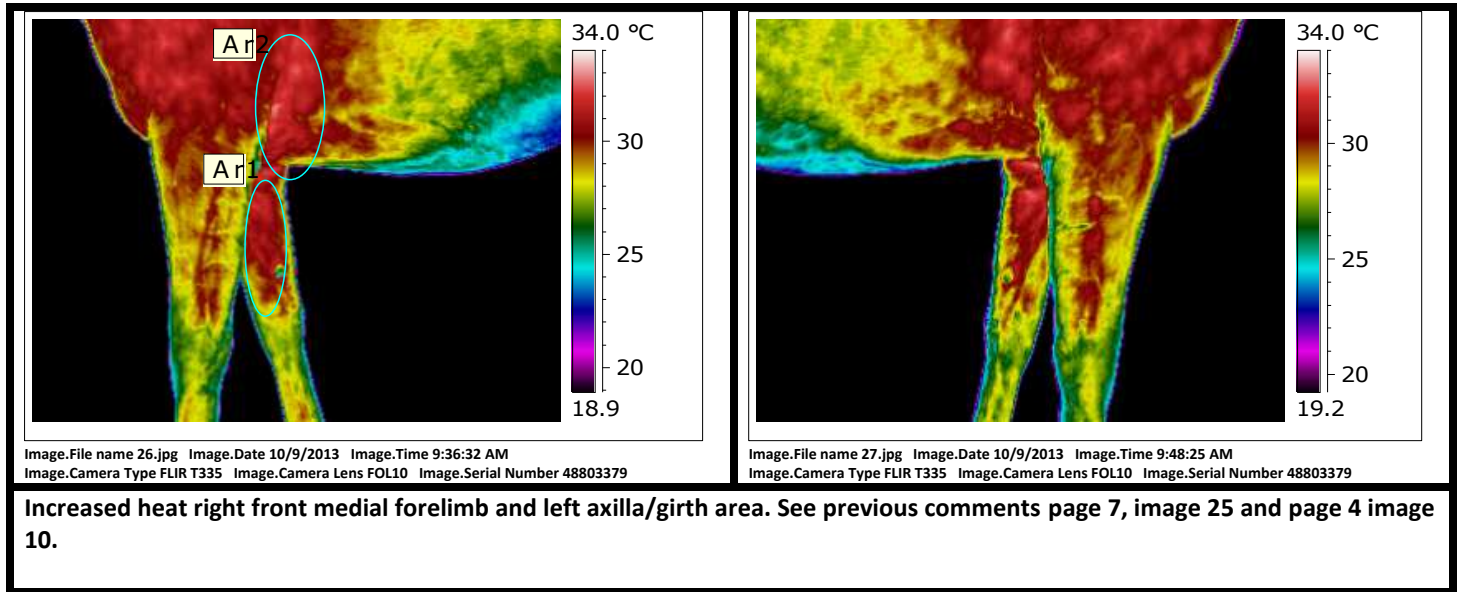
Increased heat and uneven pressure along the coronary band of both hind feet. Increased heat both front heels and left hind heel. Right hind fetlock is enlarged but has decreased heat versus the left possibly due to off-loading of the LH limb or circulatory disturbance in the left hind. The asymmetry in the hind heels is strongly suggestive of off-loading of the right hind limb. The left front cannon has decreased heat versus the right possibly due to off-loading.



Asymmetry in front limbs with Right front having greater heat than the left, again possibly due to off-loading of the left front or primary inflammation of the right front. Local palpation checking for inflammation/pain/stiffness and gait analysis recommended.

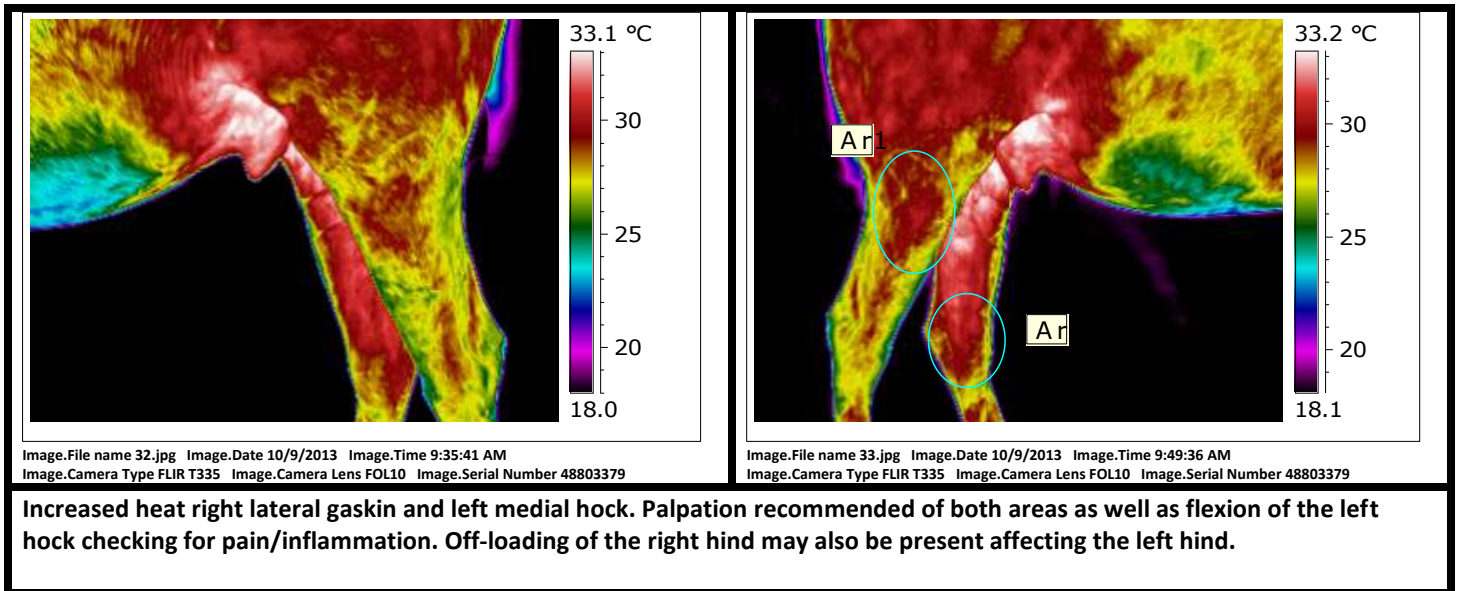
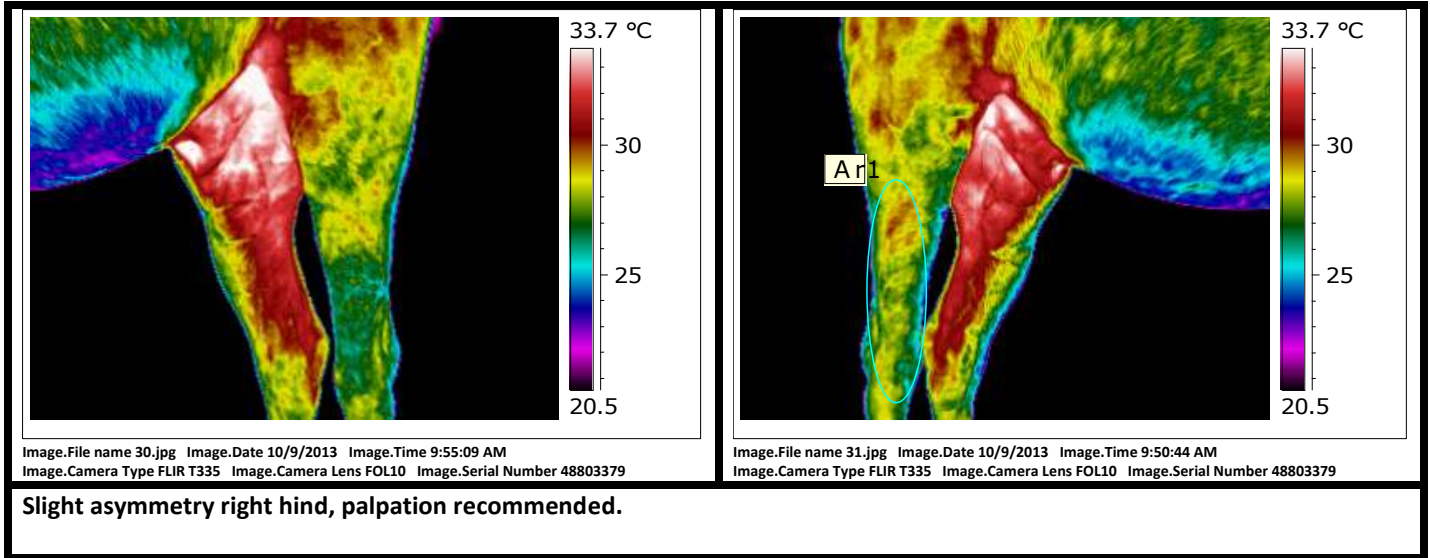
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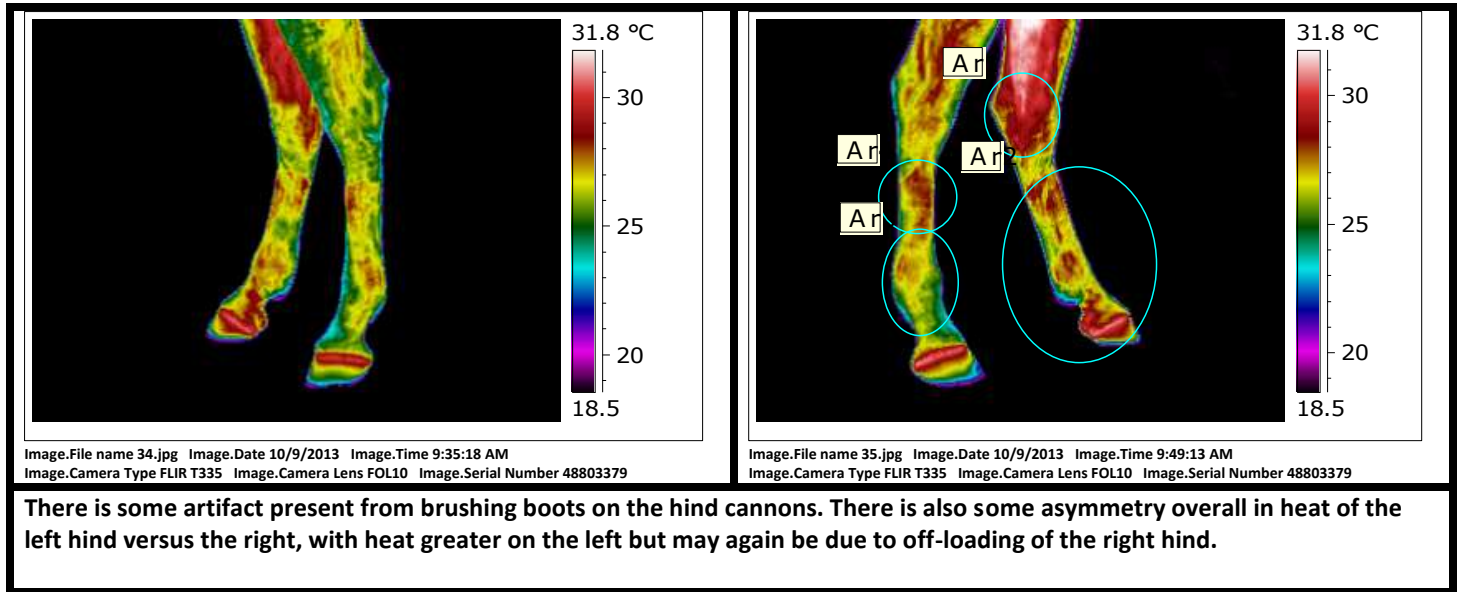
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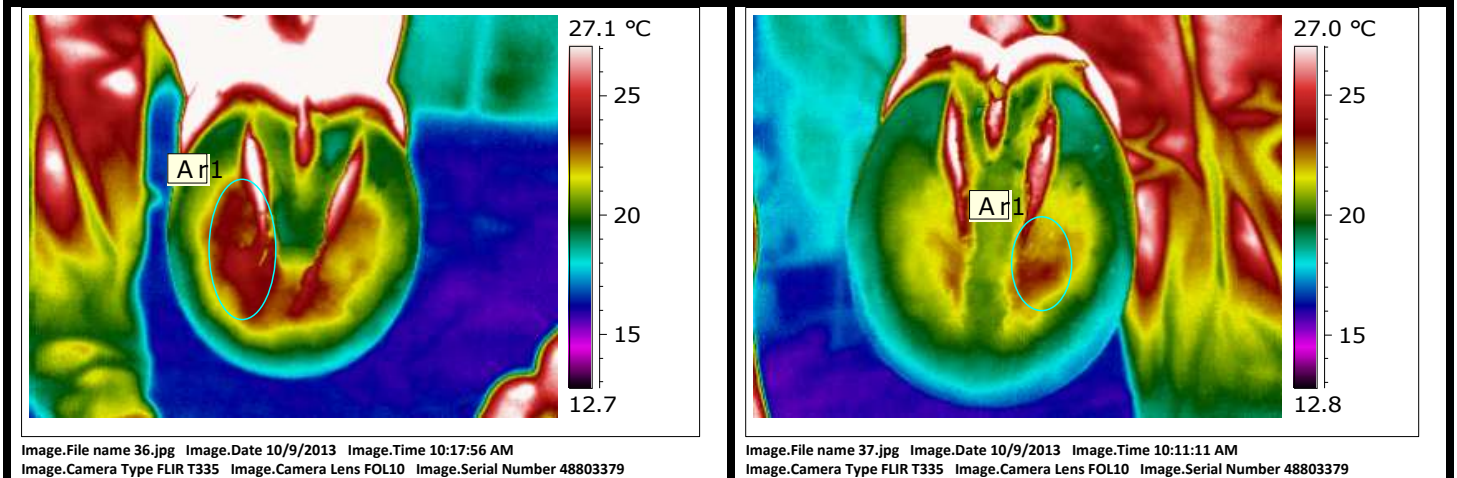
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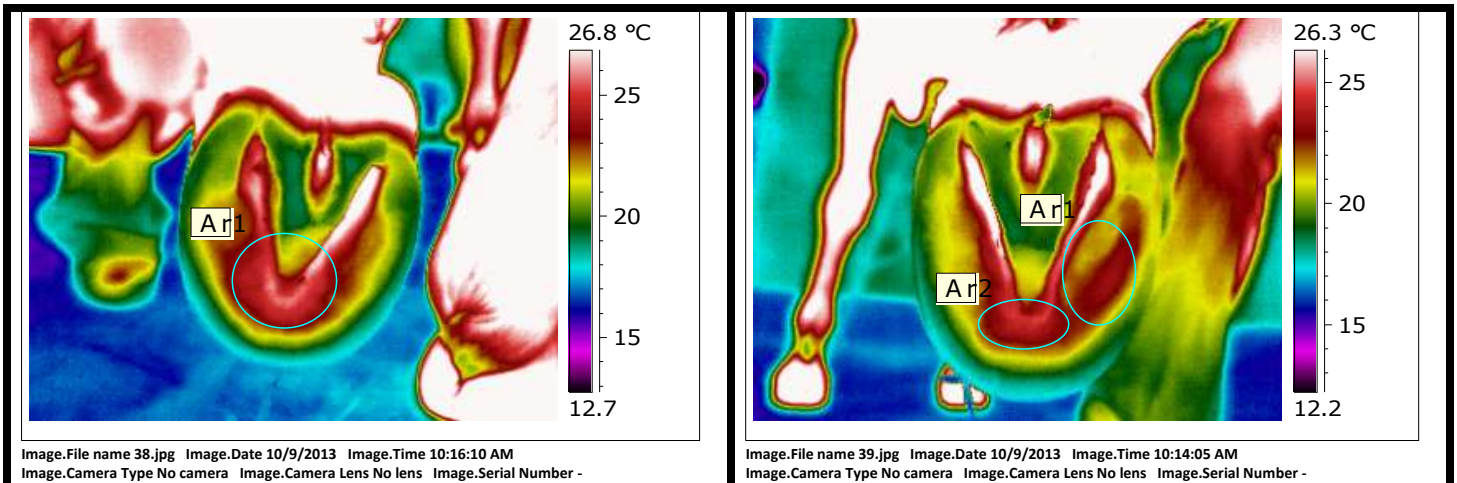


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Asymmetry in both front feet with heat greater lateral quarter than medial. This may be due to uneven loading of the limb or imbalances in the feet or local inflammation. Right front foot appears contracted in the heels and the heels uneven. Difficult to discern if it is conformation/injury or hoof imbalances. Thorough visual evaluation, hoof tester analysis and postural analysis recommended.



Asymmetry in the hind feet with heat greater at the toes and the right hind the lateral quarter. There appears to also be uneven pressure at the heels. Hoof imbalances or uneven limb loading present. Thorough visual evaluation, gait analysis and postural analysis recommended.

SUMMARY AND RECOMMENDATIONS: Zulu is a nice looking horse in fine condition, but there are some areas of concern based on his thermal images.

It is noted in Zulu's history that he has an old injury in the right hind fetlock. This appears to be causing some issues, both locally and with uneven loading of his other limbs. There is a combination of decreased circulation in the lower right hind limb and increased heat in the left hind limb which likely is due to off-loading of the right hind. Palpation and further evaluation of the left sacroiliac area, gaskin and hock are still recommended to rule out primary musculoskeletal inflammation.

Left shoulder, lower cervical region and chest have greater heat than the right. There is increased heat at the mid and upper cervical areas on the right side. Thorough palpation and motion palpation recommended ruling out chiropractic issues. The left girth area also has increased heat which could be tack-related or muscular – palpation recommended.

Increased heat along the withers and thoracolumbar spine suggest possible saddle fit issues and/or chiropractic fixations/rotations. Saddle fit analysis and thorough veterinary chiropractic evaluation recommended. There is also an area in the thoracolumbar spine that should be evaluated for kissing spines.

There appears to be asymmetry in the front limbs also with overall the right front limb having greater heat than the left due to possible off-loading. Thorough gait and postural analysis recommended.

The feet have uneven heat/pressure in the soles and at the heels. There is increased heat at the heels except for the right hind – due to off-loading of the right hind. Thorough visual evaluation, postural analysis, gait analysis and hoof tester evaluation recommended.

Thank You!

Reviewing Veterinarian: Debra K Tibbitts, DVM, CVCP, EDO, CVA, CIT

