



THERMAL TECH

Equine Thermal Imaging

Thermal Imaging Report Badger



*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 Tech
9545 Hw 11 W
Sulphur Springs, TX 75482
PH: 903-253-7307
E-Mail: randyphillips12@yahoo.com



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Sulphur Springs, TX 75482
PH: 903-253-7307
E-Mail: randyphillips12@yahoo.com

PATIENT: Badger

THERMOGRAPHY DATE: 8/14/13

IMAGING TIME: 7:30am

August 21, 2013

Terrie Knotts
2583 CR 233
Tyler, Texas 75705

Dear Terrie Knotts:

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

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 state-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 you 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. There are however 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 state-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 state-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.

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,

Randy Phillips

Randy Phillips, *Certified Infrared Thermographer*
Thermal Tech



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Sulphur Springs, TX 75482
 PH: 903-253-7307
 E-Mail: randyphillips12@yahoo.com

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EQUINE CLIENT INFORMATION

CLIENT NAME: Terrie Knotts
MAILING ADDRESS: 2583 CR 233, Tyler, Texas 75705
CLIENT EMAIL: TERRIEKNOTTS@yahoo.com
CLIENT PHONE: 903-530-6272

HORSE AGE: 10
HORSE BREED: QH
HORSE PRIMARY USE: Barrel Racing

SURVEY INFORMATION

THERMOGRAPHER: Randy Phillips
INFRARED CERTIFICATION #: 9210
INFRARED CAMERA MODEL: T420 **CAMERA SERIAL NUMBER:** 62102174
NUMBER OF THERMAL IMAGES SUBMITTED: 30

WEATHER: Very Humid, Pouring Rain, Very Dark Clouds
APPROXIMATE TEMPERATURE: 85 °F
IMAGING LOCATION: Covered area

EXERCISED PRIOR: Yes **HOW LONG:** 12 minutes to prevent sweating **WHEN:** 10 minutes prior to imaging
TYPE OF EXERCISE: lunged

BOOTS OR WRAPS ON HORSE? No **HOURS SINCE:** Not Applicable
FLYSPRAY OR LINIMENTS APPLIED WITHIN 24 HOURS: No

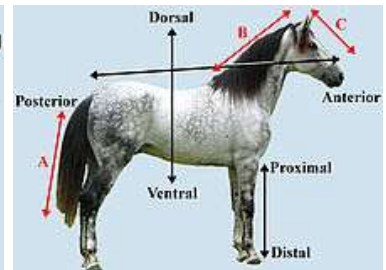
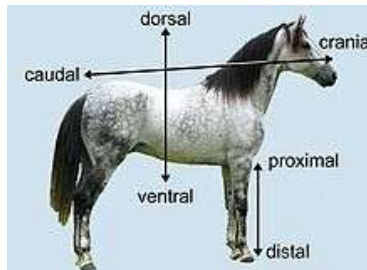
REASON FOR SCAN or HISTORY RECEIVED: Lameness in rear 2 year problem, injections, wrapping, previcox, joint sups, bute, last farrier visit Aug. 7th for trimming, farrier on 6 wk. cycle, Right rear fetlock outside hay wire cut, Last Vet visit July 30/13 for vacs.

INTERPRETATION INFORMATION (Completed by Veterinarian)

INTERPRETATION TYPE: Full Enhanced Survey

DATE OF INTERPRETATION: 8/21/2013

REVIEWING VETERINARIAN: Dr. Debra K Tibbitts





PATIENT: Badger

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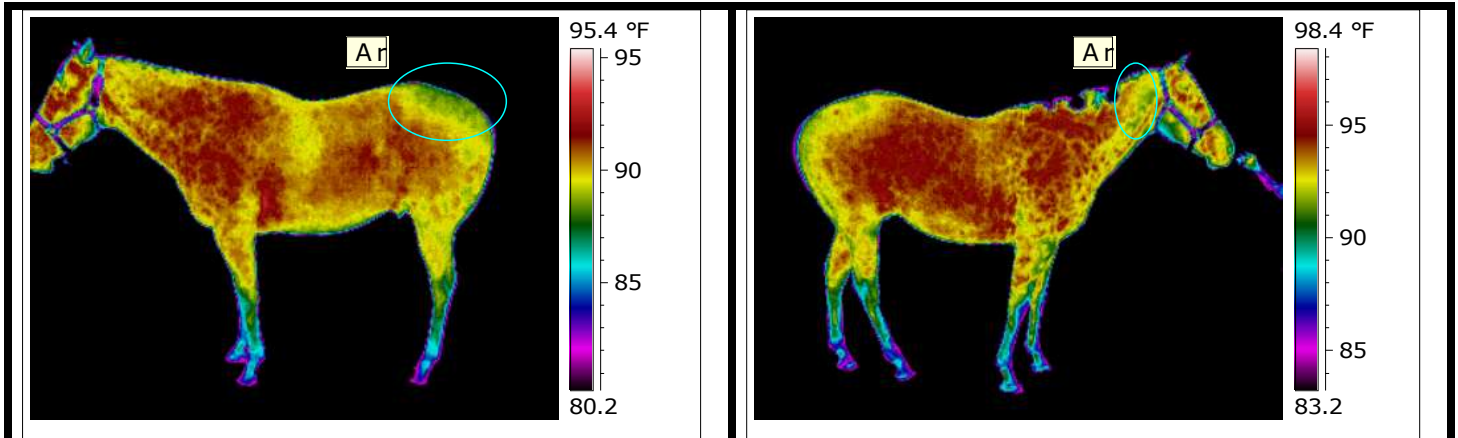


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Image.File name 11.jpg Image.Date 8/14/2013 Image.Time 7:30:04 AM
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Some asymmetry seen in the gluteal muscles and postural flank muscles. The left gluteals and flank have decreased heat versus the right likely indicating off-loading of the left hind limb. Horse is standing camped under, which if normal for him and not due to conformation, may indicate pain in the hocks or hips. Right upper cervical area also has decreased heat versus the right which may indicate circulatory disturbance from atlas/occiput/TMJ. Palpation of these areas recommended checking for heat and proper mobility.

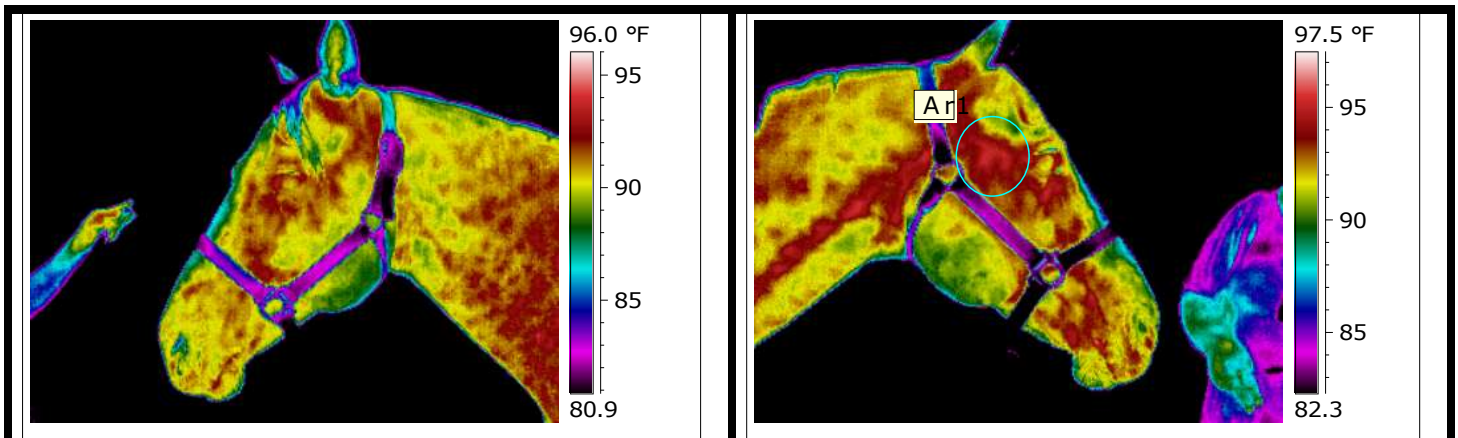


Image.File name 12.jpg Image.Date 8/14/2013 Image.Time 7:25:44 AM
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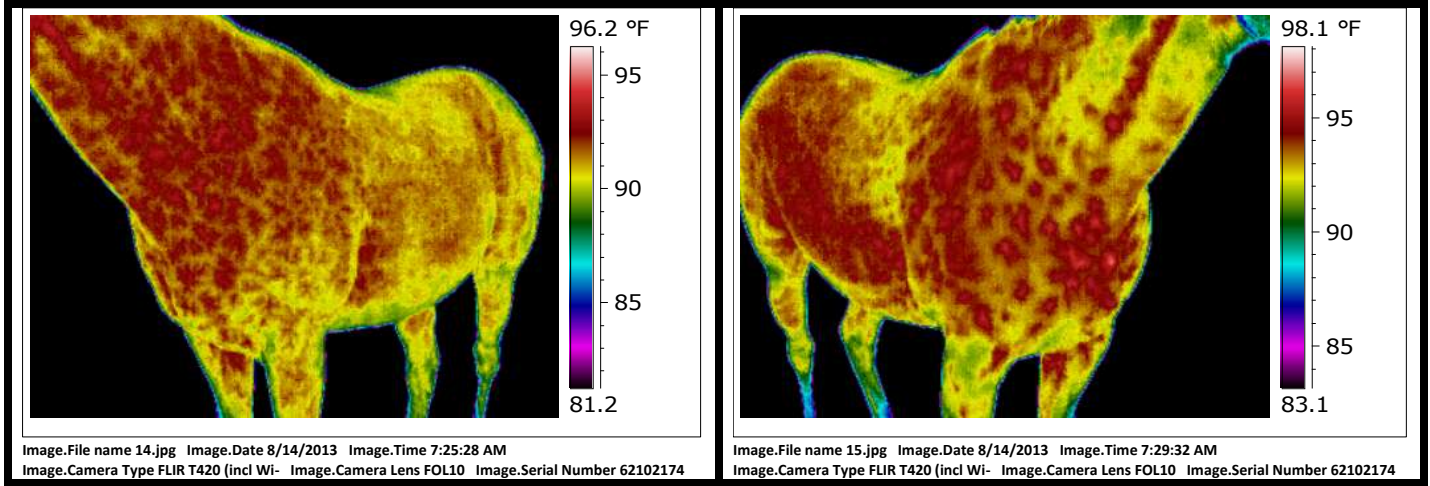
Asymmetry in the TMJ – heat greater on the right side. There may be primary inflammation in the TMJ or it could be secondary to dental issues. Palpation of TMJ and thorough oral exam with speculum recommended.



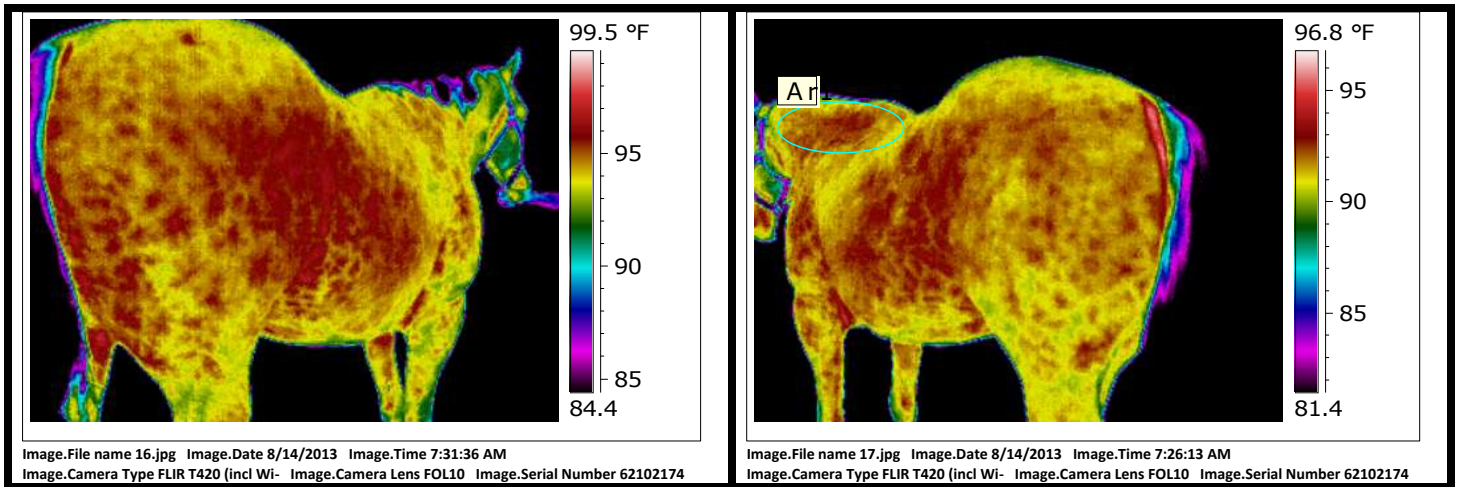
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No significant findings. There is some mild asymmetry but horse is also unweighting LH.



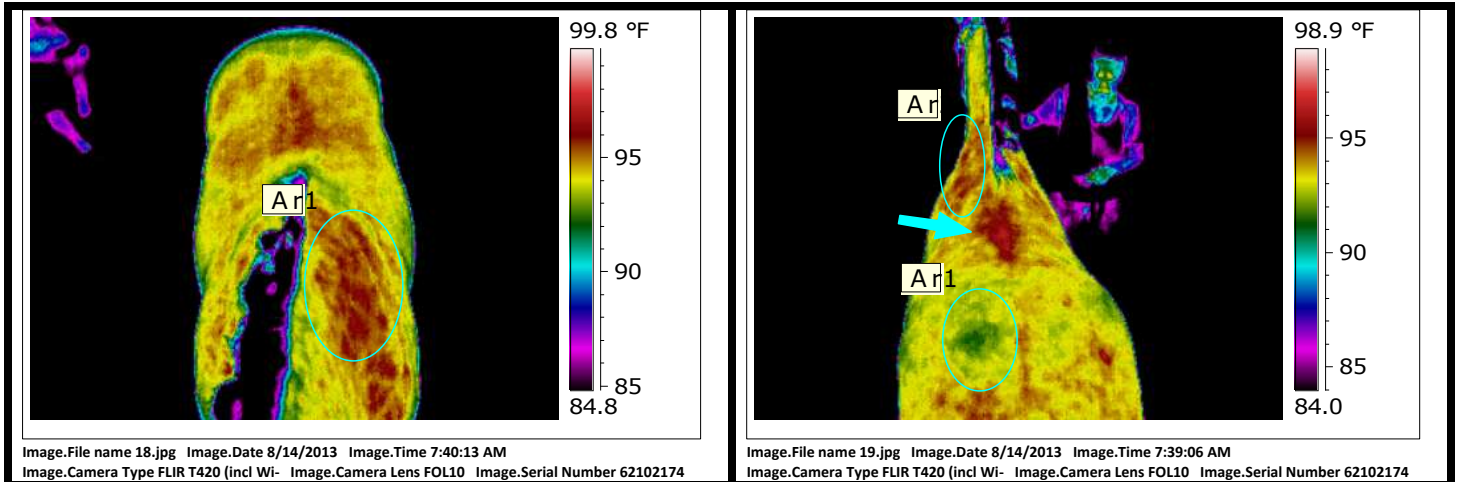
Slight asymmetry in wither area with heat greater on the left. Musculoskeletal inflammation, chiropractic rotations or saddle fit issues may be present.



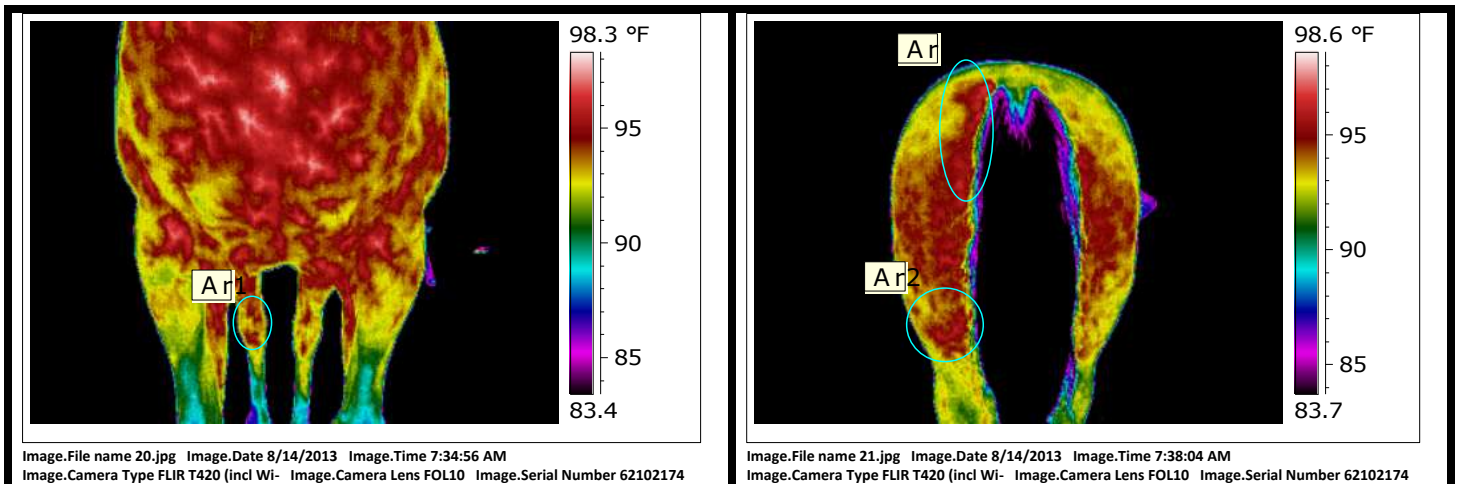
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Asymmetry seen in the left shoulder/wither area, left gluteal muscles. See previous comments page 4 image 10 and page 6 image 17. There is increased heat in the thoracolumbar spine, some of which may be due to conformation but with extension into the surrounding musculature there is indication of true inflammation. Chiropractic fixations/rotations and/or saddle fit issues may be the cause. Chiropractic evaluation and saddle fit analysis recommended for further evaluation.



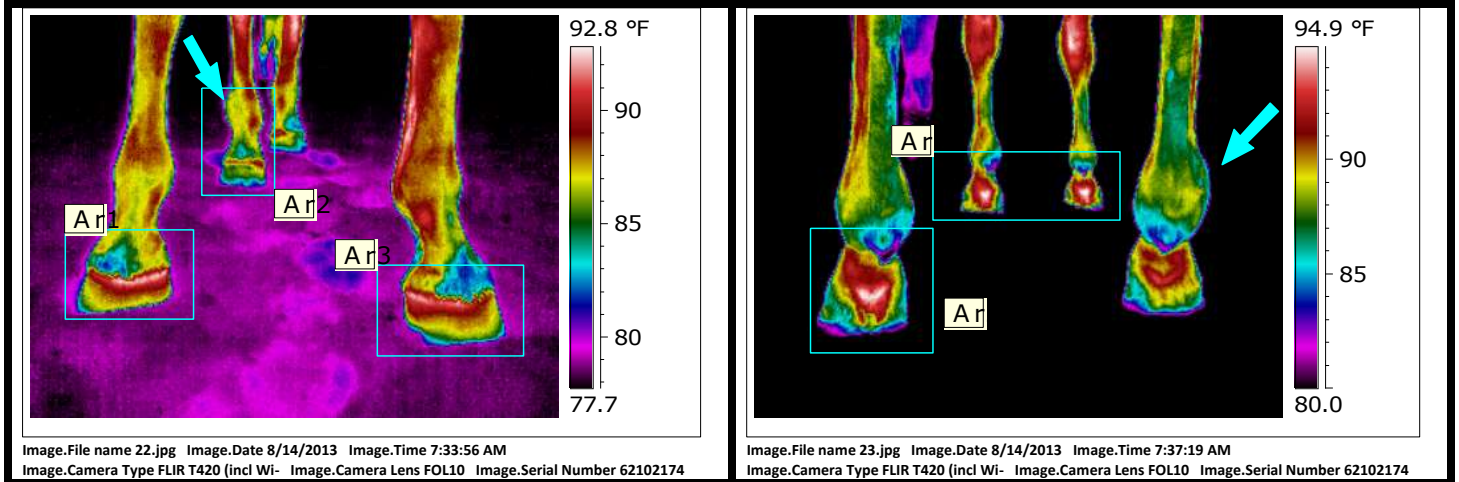
Asymmetry in the hocks and hamstrings with heat greater in the right hock and left semitendinosus/hamstrings. The hock may be due to off-loading of the left hind or true inflammation. Gait analysis and flexion testing recommended. The hamstring asymmetry may be due to primary inflammation of the muscles – palpation of the area recommended.



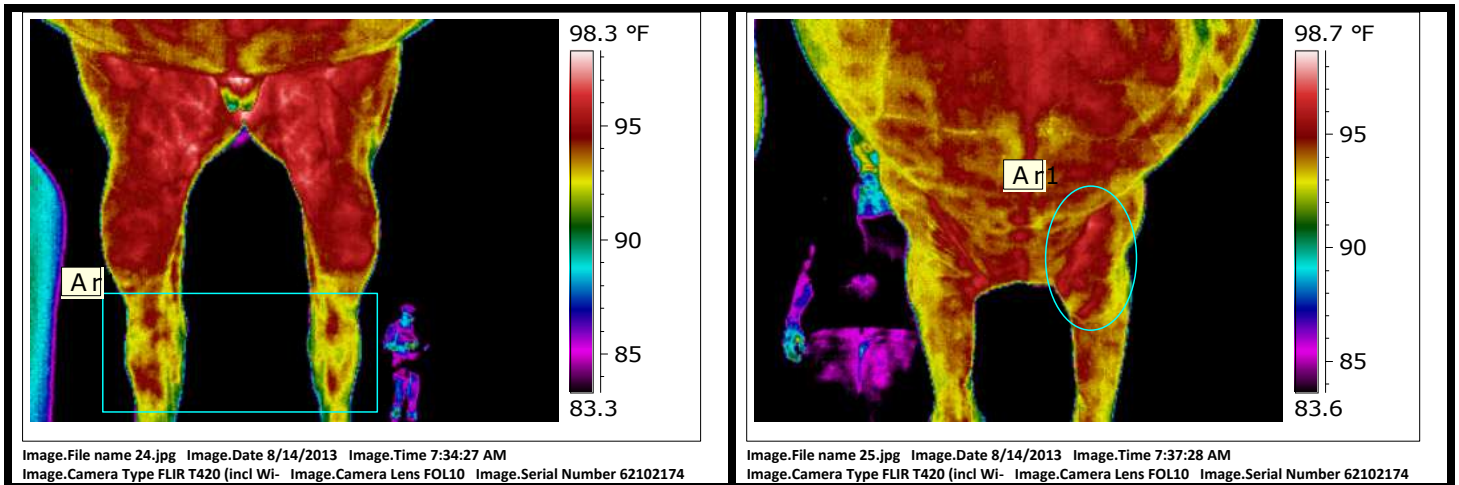
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Moisture artifact present on lower limbs/feet. There appears to be uneven pressure at the coronary band all four feet with pressure greater medially and toward heels. Front heels have increased heat and uneven pressure. Right fetlock has enlarged area which correlates with the history of the wire cut.



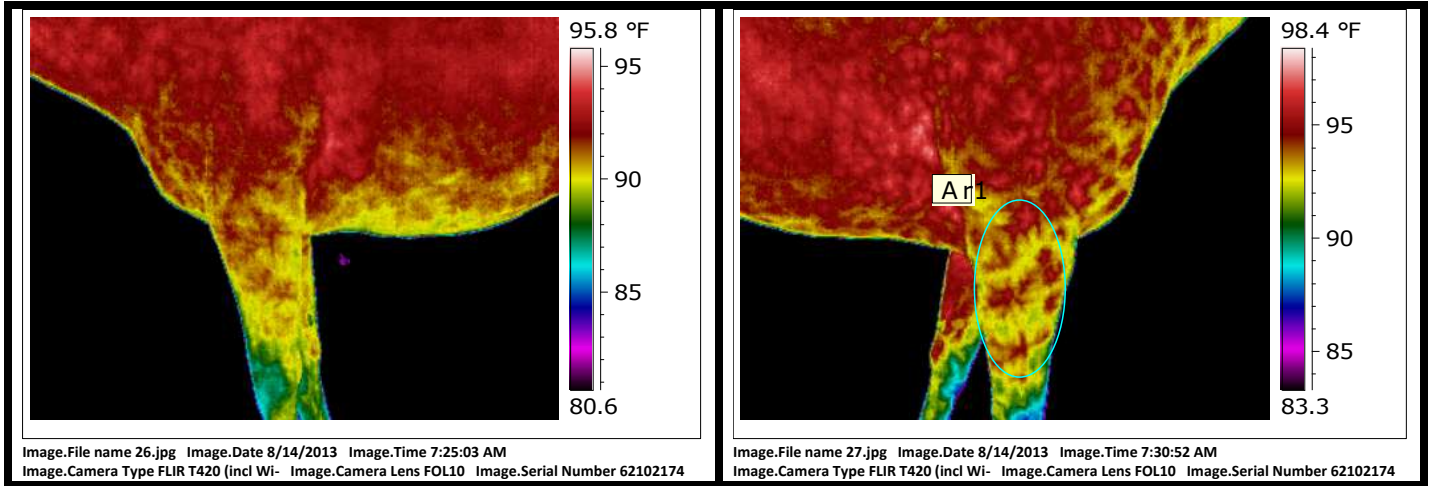
Asymmetry in hocks as seen previously. Off-loading of the left hind or primary inflammation in the hock may be the cause. The left hind thigh and gaskin appear slightly small than the right which would also correlate with off-loading of the left hind. Right forearm slightly greater heat than left – may be positional but may be due to uneven limb loading.



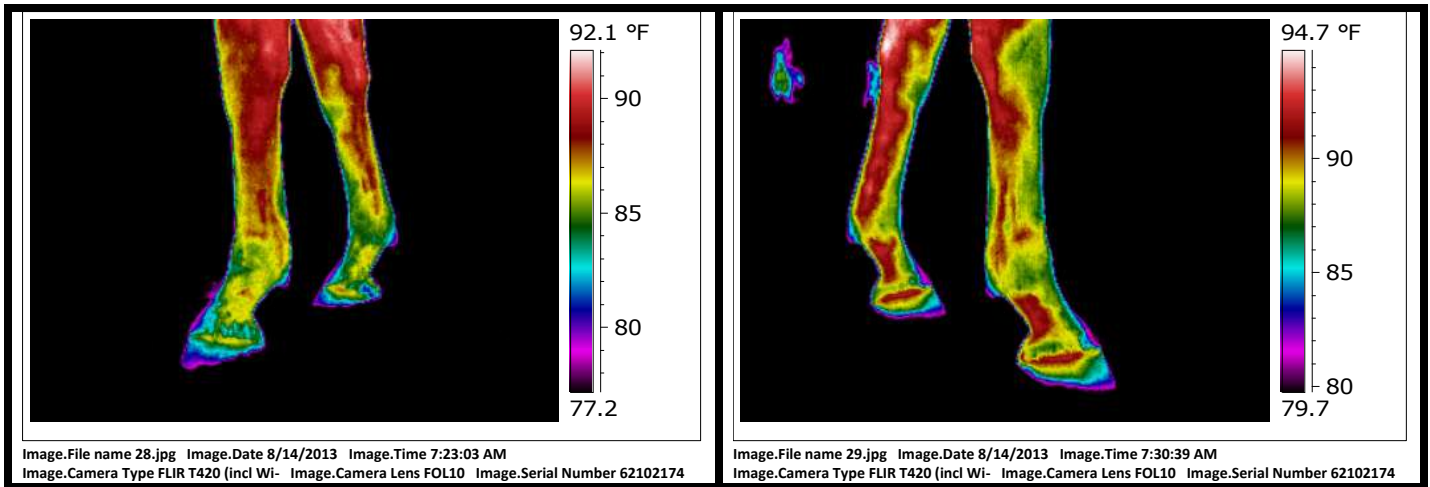
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Forearm asymmetry seen again as on page 7, images 24/25.



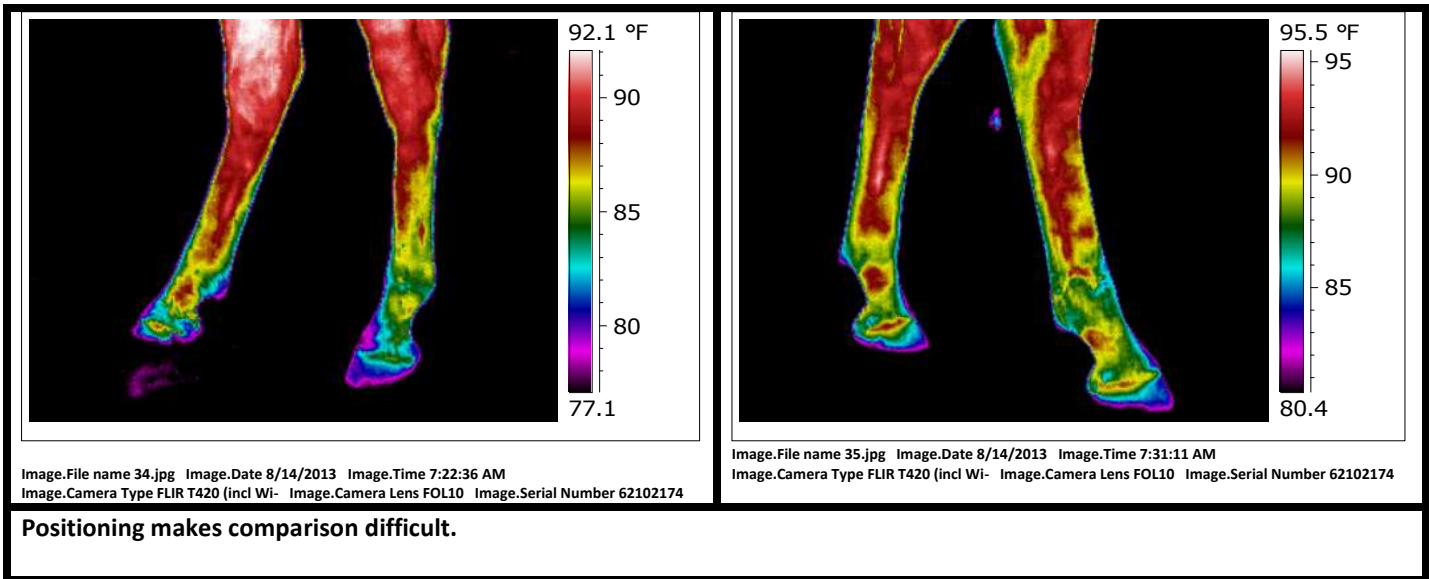
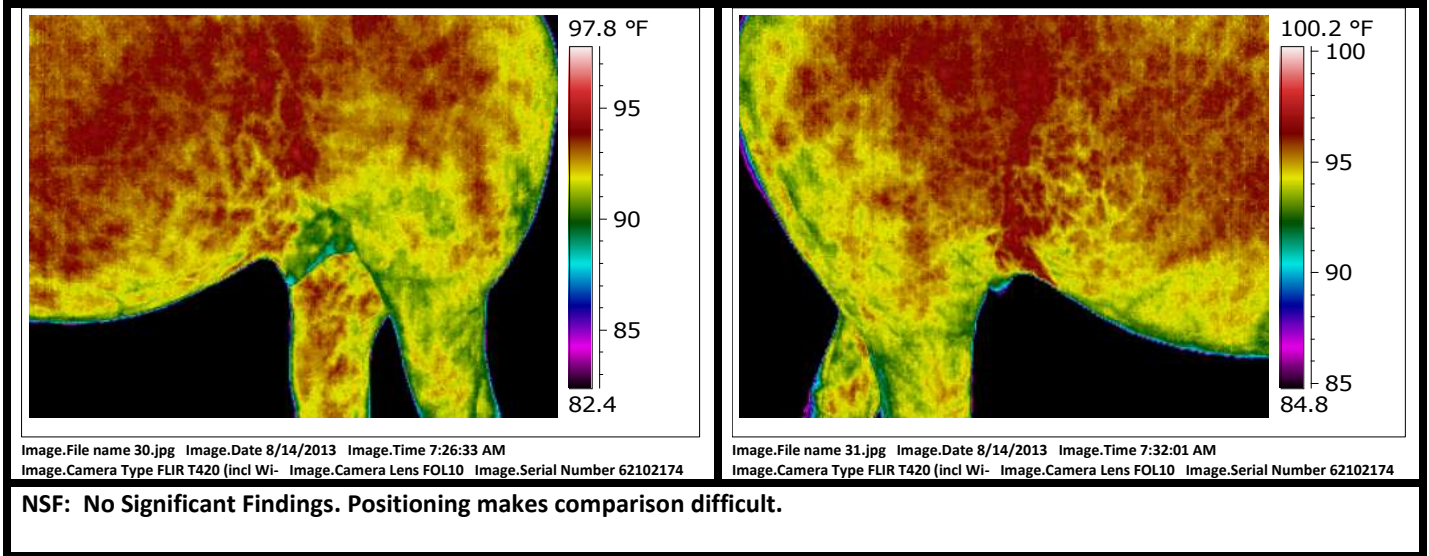
NSF: No Significant Findings



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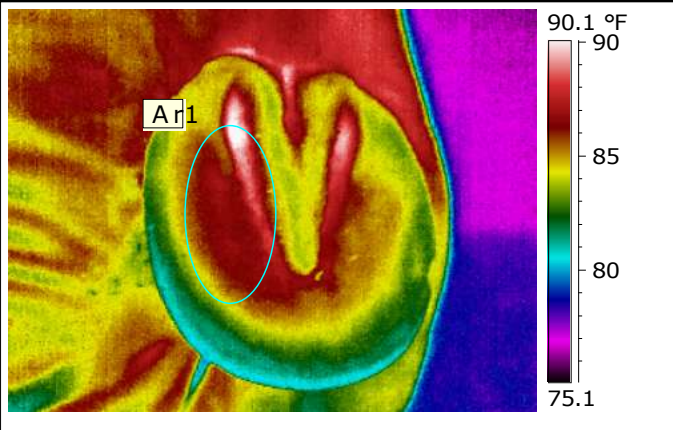


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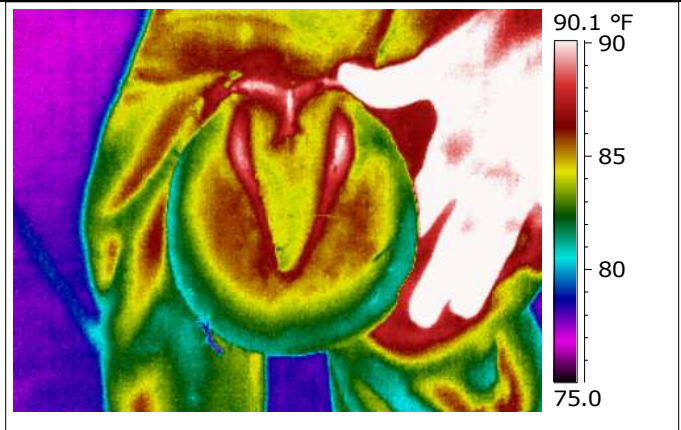


Image.File name 37.jpg Image.Date 8/14/2013 Image.Time 7:43:10 AM
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Left front uneven heat/pressure with heat greater in the lateral quarter. Hoof imbalances or uneven limb loading may be present.

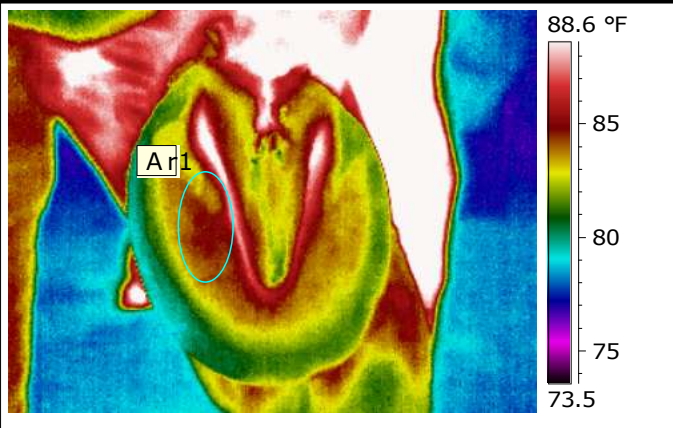


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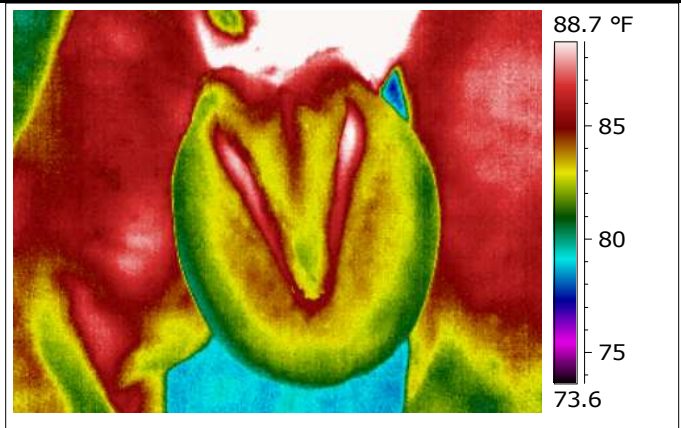


Image.File name 39.jpg Image.Date 8/14/2013 Image.Time 7:44:31 AM
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Focal area of increased heat/pressure lateral quarter maybe due to pressure or inflammation. Visual exam recommended and hoof tester evaluation.



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SUMMARY AND RECOMMENDATIONS: Badger is a handsome horse but has some areas of concern based on his thermal images.

Most of the digital images were very dark and there is some artifact due to environmental conditions. Comments are based on the images provided.

There are some consistencies in the images that should be investigated further. There is decreased heat in the left gluteal muscles. There is also decreased heat in the left hock with increased heat in the left semitendinosus muscles. These combine to indicate off-loading of the left hind limb with either secondary strain in the hamstrings or primary inflammation in the hamstrings causing off-loading. There is asymmetry in the hocks, with heat greater on the right which may be due to uneven limb loading or primary inflammation. Palpation of the hamstring area with concentration on dorsal and ventral insertions recommended along with flexion testing of the hock joints.

Decreased heat is seen at the level of the right atlas along with increased heat at the right TMJ. There may be a primary issue at the level of C0-C1 or it may be secondary to TMJ issues. Motion palpation of both joints recommended along with thorough oral speculum exam checking for dental issues.

There is some asymmetry in the wither and shoulder area with heat greater on the left. There is also increased heat in the thoracolumbar spine with extension into the paraspinal muscles. Palpation and motion palpation recommended checking for chiropractic lesions recommended. These can be primary or secondary to issues in the limbs. Saddle fit issues are also a possibility.

There is some asymmetry in the front limbs with heat greater on the right forelimb which may be due to uneven limb loading. Gait analysis recommended.

The left front foot has increased heat/pressure lateral quarter which may be due to uneven weighting of the foot from the limb or imbalances in the foot or inflammation in the foot. Left hind foot has slightly greater heat in the lateral quarter. Uneven limb loading or inflammation may be present. Visual exam, gait analysis and hoof tester evaluation recommended.

Thank You!

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

