



Instructions for Applying

NANRIC Mega Ultimates™

This glue on mechanical aid is designed with similar priorities to the NANRIC Modified Ultimate. Advancements in design offer improved benefits and options over the NANRIC Modified Ultimate. Applying this device as an emergency aid for acute laminitis can greatly reduce or prevent displacement (rotation and/or sinking) of the coffin bone.

The digit is suspended within the capsule by the DDFT and opposing laminae anchor. Therefore, the laminae and solar corium vessels are naturally compromised to some degree when the suspension components are loaded. When acute laminitis occurs the damaging effects of laminitis are exacerbated by the imbalanced force between the DDFT and failing laminae. Mechanically aiding blood flow to compromised components and protecting the strategic laminae anchor is the first step to enhancing the healing environment. Time is of the essence. For the best results, always consider acute laminitis an emergency, regardless of how quickly the horse responds to medication. Extensive venogram studies reveal patency of compromised vessels remarkably improves when the tendon tension is significantly reduced. Efficient damage assessment is paramount for treatment decisions.

Low beam X-rays (just above the positioning block) are indicated to determine Sole Depth (SD) and Palmar Angle (PA). This information is paramount for proper trim and placement of the Ultimate and optimum mechanical benefits. **When x-rays are not immediately available apply the Ultimate then follow-up with x rays ASAP to make appropriate trim adjustments. Note:** As a rule, radiographic evidence to confirm laminitis is not evident the first few days to weeks following the first signs of lameness. Do not wait to see rotation before being proactive as the most responsive window is at the time of onset. The baseline values are invaluable.

Venograms reveal remarkable vascular compromise, days to weeks before radiographic evidence of laminitis can be detected, and they are the platinum damage indicator. They provide invaluable **damage assessment** and a means to closely monitor the response to emergency treatment. Note: The venogram procedure is technique sensitive and accurate interpretation requires good working knowledge of the healthy foot as well as pathological ranges.

A DDF tenotomy with derotation shoeing may be indicated later in the syndrome. This procedure is done with high scale damaged cases when the vascular pattern continues in a downward spiral despite the efforts of efficient emergency mechanical treatment. It is important to continually monitor the vascular response. Obtaining this valuable information days to weeks prior to the horse developing deteriorating clinical signs can be a game changer.

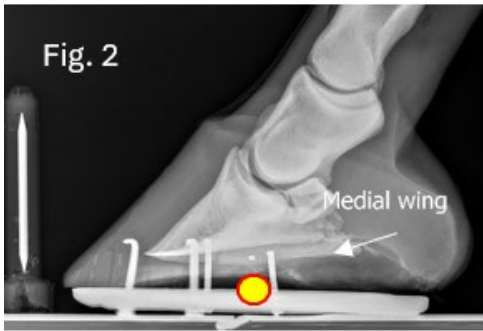
Basic application goals for the acute case:

Figure 1.



- A. Zero to 5 degrees capsule PA
- B. 20 degrees ground PA
- C. 5 to 10 degrees additional rocker
- D. 20 mm of sole depth

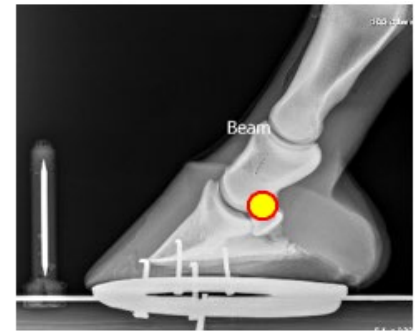
Base line low beam x-rays provide valuable information that is paramount for efficient emergency mechanical treatment. (EMT) Figs. 2, A, B, C



Low beam reveals 1 branch of the shoe and sole depth.



The higher beam fails to reveal the sole depth.



Beam/corony band obscures most of the sole.

Properly applying either the NANRIC Modified or Mega Ultimate can lower the pain response, reduce the damaging effect of the DDFT and facilitate the x-ray exam.

Application Instructions (Glue on Method): Fast set composites

Fitting the shoe and attachments:

Using x-ray information, trim the foot to the desired capsule PA, when it is greater than 5 degrees. The goal is to trim the heel in a parallel plane with the palmar wings and leave 20 to 25 mm space between the rim and load surface of the shoe when possible. See fig 1. When presented with a **negative PA foot**, heel mass will be much less than sole depth under the apex of P3. Excess sole mass in the toe area can often be trimmed to 15 mm depth, aiding the ideal alignment. See fig 3.



A. The ground PA is less than 10 degrees and should be adjusted to 18 to 20.

B. This negative PA has min heel mass and requires a zero-capsule trim.

C. The higher PA in this gr 3 club foot requires palmar wing realignment with the load surface to gain optimum benefits.

Remove excessive flares and roughen the area to be glued with a rasp.

Attach the Bubble using the 1 ¼ inch drywall screws.

Apply the shoe and observe the space between the frog and ultimate and choose the most appropriate of 3 frog inserts. A slightly thicker insert than the gap is preferred. Take x-rays to confirm the mechanical plan was met. Adjust as indicated.

Remove the Ultimate and apply a small amount of NANRIC Advance Cushion support that adequately fills the cup of the foot. Do not over fill the void between the sole and Ultimate.

Add the 1/8 inch felt moisture barrier. The screw provided for the frog insert secures the felt.

The 1/2 inch #8 pan head screws provided can be used to provide a tighter cuff fit in the front half of the hoof when indicated. Avoid over tightening and placing the screws behind the widest point of the foot. See Fig 1.

Inject NANRIC Mega Bond or a similar **fast set** adhesive through the holes in the cuff, avoid over filling and quickly wipe off excess glue. Allow a few minutes to cure before moving the horse.

Exceptions

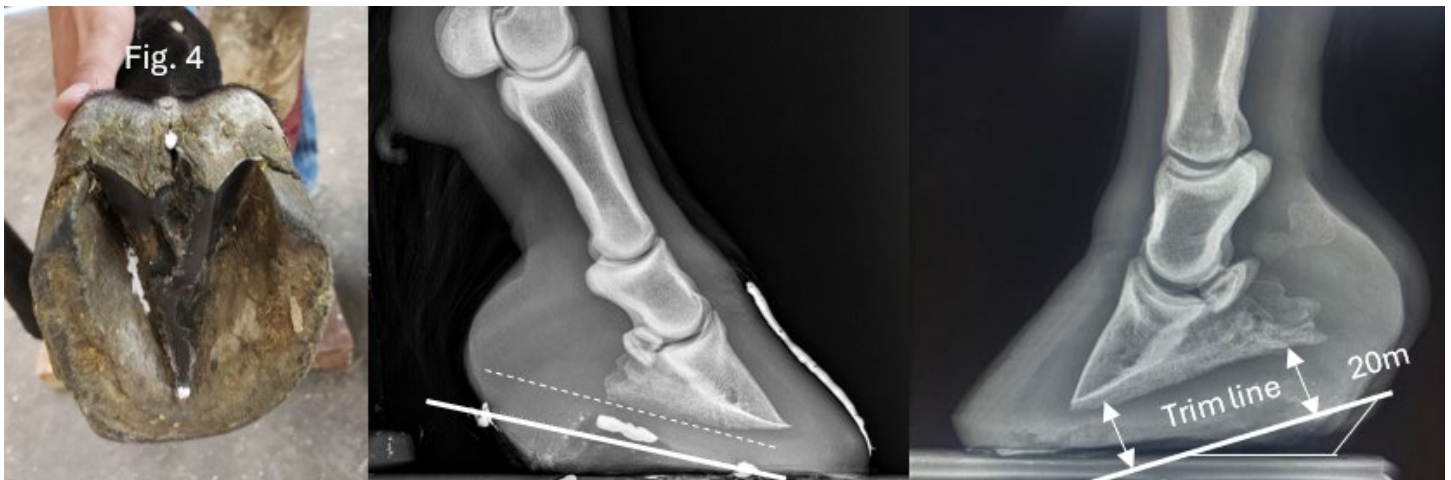
If the ground PA is less than the desired 20 degrees, the bubble can be moved back a couple of notches. This will increase the PA 3 to 5 degrees to further enhance the mechanical benefits.

If the negative PA foot has a crushed heel that prevents trimming to a zero capsule PA and maintaining optimum sole mass is necessary, insert the 3.5- or 7-degree wedge between the bubble and ultimate to achieve the desired 20-degree ground PA.

Chronic cases with rotation and acute laminitis in club feet

Derotation (realignment of the palmar surface) is indicated when the capsule PA is greater than 5 degrees. Realigning the load surface parallel to the wings of P3 optimizes the mechanical benefits.

With adequate mass, rasp the heel in the identical plane of the palmar rim. Using x-rays as a blueprint guide is paramount for best results.



External landmarks that help the farrier visualize the palmar angle (PA) A dot of radiopaque paste on the apex and at the skin frog junction. Also, a line of paste in the flat area of the sulcus offers a visual perspective of the PA. Note the trim line and the value of the Xray information.

When there is not enough foot mass to achieve zero PA choose the appropriate toe lift (sizes 1-4 included) to realign the wings with the load surface of the heel. The number 3 and 4 lift normally require the toe of the cuff cut down to the level of the lift. This allows the excessively long toe to extend out over the lift increasing the ground PA. The 3.5- and 7-degree extra wedge can be inserted between the bubble and cuff further increasing the ground PA to 20 degrees. Keep the basic mechanical requirements foremost in mind. The mega package offers unlimited mechanical benefits.

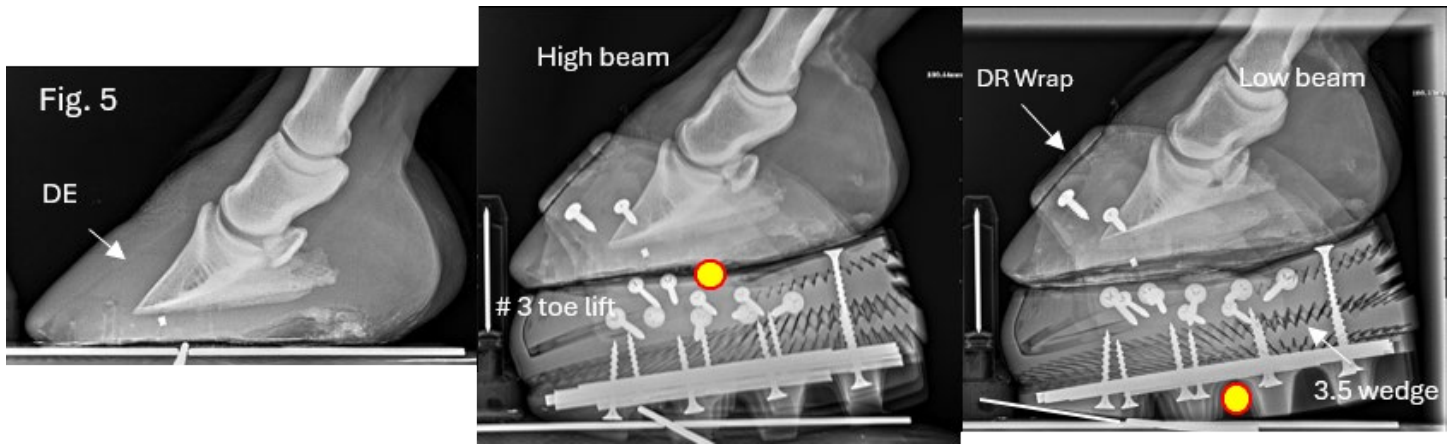


Fig 5: Typical chronic case large L zone, shallow, sole requires toe lift and 3.5 wedge to achieve zero capsule and 20-degree ground PA.

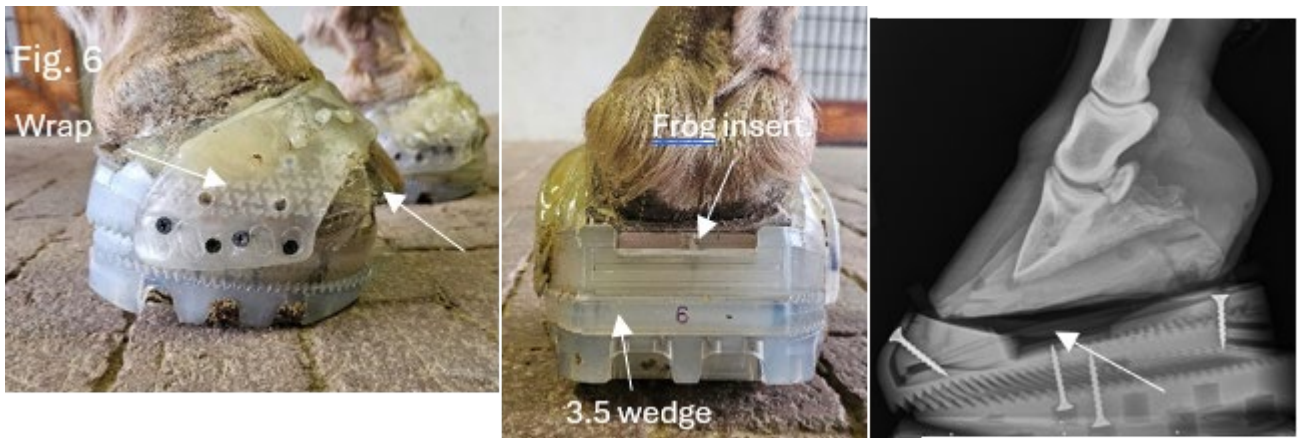


Fig 6: The air space under the realigned PA must be filled in with Cushion support and the felt pad to prevent the composite from going under the sole.

This typical mechanical set up normally requires reset in 6 to 8 weeks. Slow growth response can often go 8 to 10 weeks. When this level of mechanics improves the patency of the vascular supply to vital horn and sole it is not unusual to have 15 to 20 mm of new sole at the end of first application.

Once the Mega is set up to the specific requirements using x-rays as your guiding star, you can start the attachment process, see instructions above.

Strict stall rest while wearing the Mega Ultimate The fragile laminae needs bed rest.



Chronic case had been traditionally shod.

Presented for reset 13 weeks later. Note trim line.

Reset with smaller toe lift with 25 mm of sole.

Important Note: When resetting the Mega Ultimate, do not set the foot down without putting the shoe back on. Setting the foot down without a shoe will re-engage the DDF and can harm the horse.

When to start weaning down high-level mechanics

Low level insult cases can respond favorably with efficient emergency medical and mechanical treatment and the mildest case requires 45 to 60 days for full recovery. However, a thorough evaluation is indicated as the pain scale and or level of soundness are not dependable damage indicators. They should be sound 5 to 10 days once anti-inflammatory medication has been discontinued. Comparative radiographs should reveal soft tissue parameters have not been altered by the ill effects of laminitis relative to the initial exam.

Ten to fifteen mm of new hoof and sole growth in the first 6 weeks is an indication of healthy circulation to the vital growth centers. Give it time to heal.

Remove the bubble, start hand walking and grazing and be alert to the slightest level of discomfort and an increased pulse.

Remove the Ultimate cuff 6 to 8 weeks. X-ray information can help your farrier with the trim as there will be a ton of growth if all is well and the goal is to leave min 15 to 18 mm of sole and a slightly positive PA. Calibrate for magnification to assure most accurate measurements.

Acute, Mid-level insult

- The initial venogram will reveal remarkable vascular alterations. Scout x-rays will not reveal current alterations for several days to weeks. Monitor both throughout the first 30 days after fitting them with the Mega Ultimate.
- Remarkable vascular alterations can require months of stall rest when growth rate is slow to get started and venogram evidence indicates slow circumflex recovery.
- Reset Ultimates every 6 to 10 weeks with x-ray information relative to hoof and sole growth.

Wean down mechanics once the new healthy horn has replaced the upper 2/3 to 3/4 of the capsule. The Mega Rocker or similar mechanical shoe offers 12-to-15-degree ground PA. Reset it a couple times then wean down to a full rocker or similar shoe offering 6-to-10-degree PA. **Do not be in a hurry to reduce**



the mechanics, monitor the overall health of the foot and response to chosen treatment.

Note: the upper scale of the mid-level case may have vascular damage that exceeds the benefits of the Mega Ultimate. They will have very slow if any horn and sole growth in the first 30 to 45 days. This is your first clue that the vascular supply has not adequately recovered. A few cases will finally start growing sole 60 days from onset however soft tissue and bone alterations will often be advanced due to cumulative vascular compromise and abscessing. A realignment trim, pathological shoe (Tenotomy rail) and DDF tenotomy are often the best options to enhance the optimum healing environment.

Acute, High-Level Insult, Extensive Lesion Intensity

Typical of metritis, dystocia, post colic, toxic feed or hay, Potomac fever, pneumonia, Salmonella to mention a few.

- Immediate emergency response is required.

- Mega Ultimates, radiographs and **venograms** are urgent along with appropriate medical treatment day one.
- Monitor the vascular response to chosen treatment every 3 to 5 days. Be alert to no improvement or deteriorating vascular patterns the first 3 days from onset. Immediate tenotomy may offer hope and a quality life.

Product Features and accessories:

- A taller, flexible cuff that adjusts from a 45 up to a 60-degree hoof angle and pre-drilled port holes for injecting composite.
- Ribbed parts offer easy ground PA adjustment.
- Breakover bubble that offers a variety of positions to accommodate desired mechanics.
- 3.5-degree wedges to be used as a 3.5 or a 7-degree wedge.
- Frog pressure inserts available in 3 thicknesses.
- Toe props are available in 4 thicknesses.
- Hardware for attaching various parts and #8 half inch pan head screws to use in the cuff.
- 1/8 inch felt inserts for moisture barrier.
- DR8 or DR10 wraps for derotations when cutting the cuff is required.
- Tenotomy heel extension.

Mega Ultimate Basic Kit:

- 1 Pair of Cuffs
- 1 Pair of Bubbles
- 1 Pair of frog inserts of each thickness.
- 1 pair of felt inserts.

Derotation full kit

- 1 pair of cuffs
- 1 pair of Bubbles
- 1 pair of frog inserts of each thickness (3 pair total)
- 1 pair of toe lifts in each thickness (4 pair total)
- 3.5 wedge (2 pair total to be used as 3.5- or 7-degree wedges)
- Felt inserts 1/8 inch thick.
- Hardware for assembling
- #8, 1/2 inch pan head screws

Mega Ultimate Complete kit:

- 1 pair of cuffs
- 1 pair of Bubbles
- 1 pair of frog inserts of each thickness (3 pair total)
- 1 pair of toe lifts in each thickness (4 pair total)
- 3.5 wedge (2 pair total to be used as 3.5- or 7-degree wedges)
- Felt inserts 1/8 inch thick.
- Tenotomy heel extension
- DR8 or DR10 wrap (depending on size of cuff)
- 1/8 inch felt insert.
- Hardware for assembling

- #8, ½ inch pan head screws

Recommended items not provided with kits.

- Mega Bond and dispensing gun (The NANRIC Mega Bond uses the same gun and tips as Vettec, Hoof-tite and other 200cc cartridges)
- Advance Cushion support or NANRIC Soft Pad

Mega, Derotation and tenotomy accessories that can be purchased separately:

- Additional or replacement toe lifts can be purchased in individual pairs of each size.
- Additional 3.5-degree wedges
- DR8 and DR10 Wraps to be used when the toe of cuff is cut out down to toe lift.
- Additional hardware can be sent upon request.
- **Heel extensions** and attachment screws attached to the back of the Ultimate can replace the tenotomy rail for the derotated case that requires a tenotomy.

Application Methods:

1. NANRIC Mega Bond is the most straightforward and common method for applying the NANRIC Mega Ultimate. Other fast set composites can work well.
2. Casting method with a piece of ½ felt over the heel bulb is an option for specific cases. Reset and recast in 6 weeks to avoid casting issues.



Post application Lateral x-rays are paramount to reveal the important soft tissue parameters that establish reference points for comparative exams. These x-rays will show the HL-zone, sole depth under the apex, palmer angle, symmetrical or asymmetrical coffin bone, palmar rim and or coffin joint. It is important that a minimum 20-degree ground PA has been established and several degrees of air space under the toe. This offers further self-adjusting mechanics.

For step-by-step video instructions, scan the QR code or click the link below.



[Mega Ultimate Instructions](#)