EQUINOX

G-NAIL QUICK TIPS

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G-NAIL *QUICK TIPS – overall kit layout*

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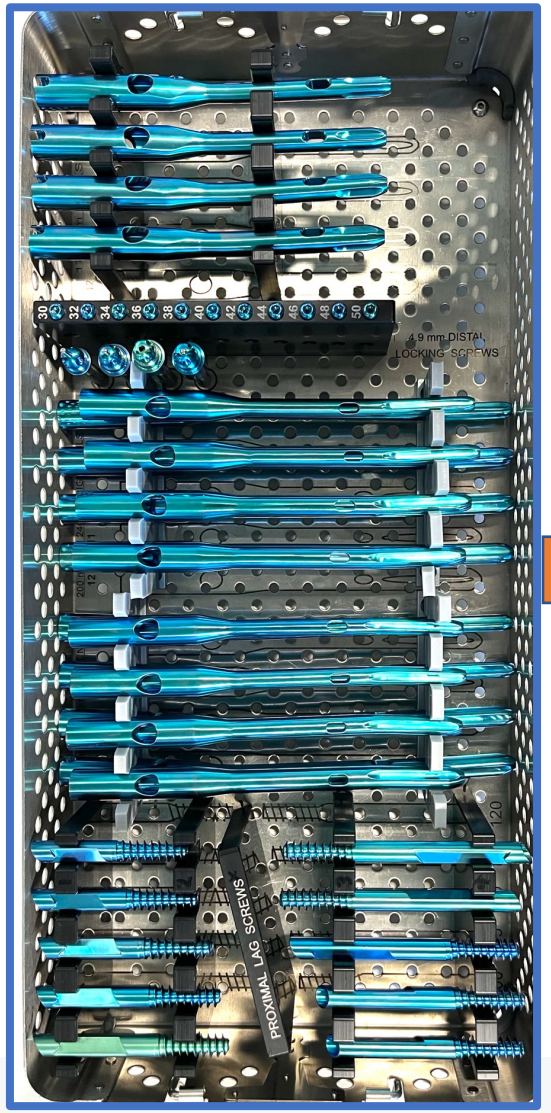
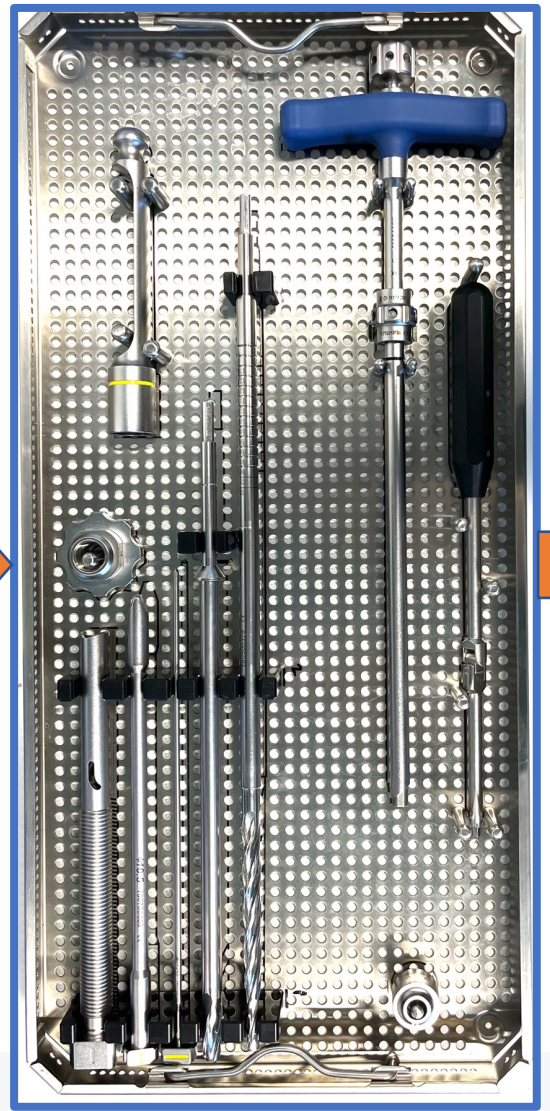
1. Nail selection

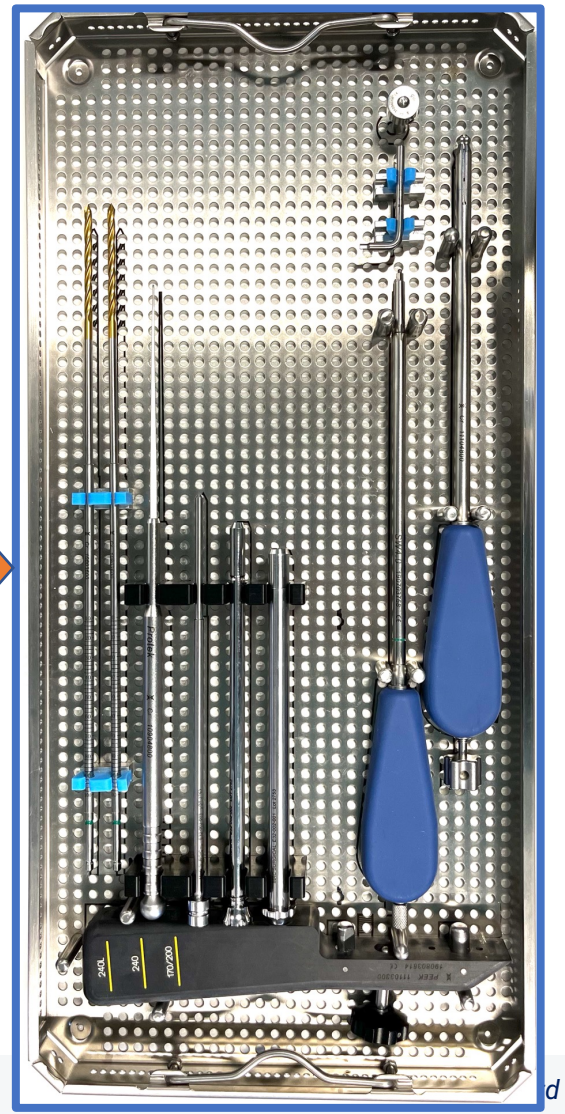


2. Nail Assembly & Insertion

3. Femoral Neck Screw Insertion



4. Distal Locking Screw Insertion



G-NAIL *QUICK TIPS*

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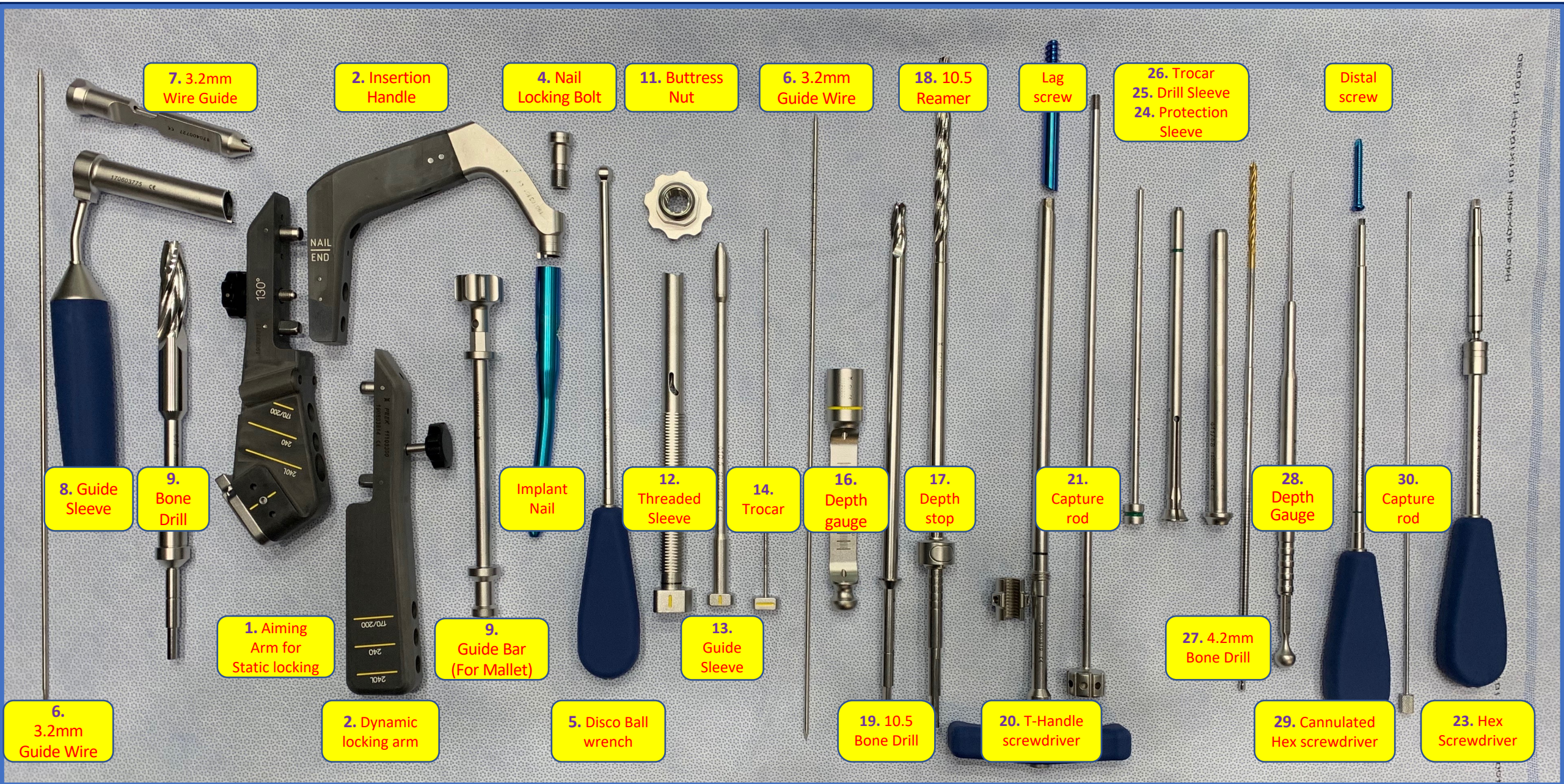


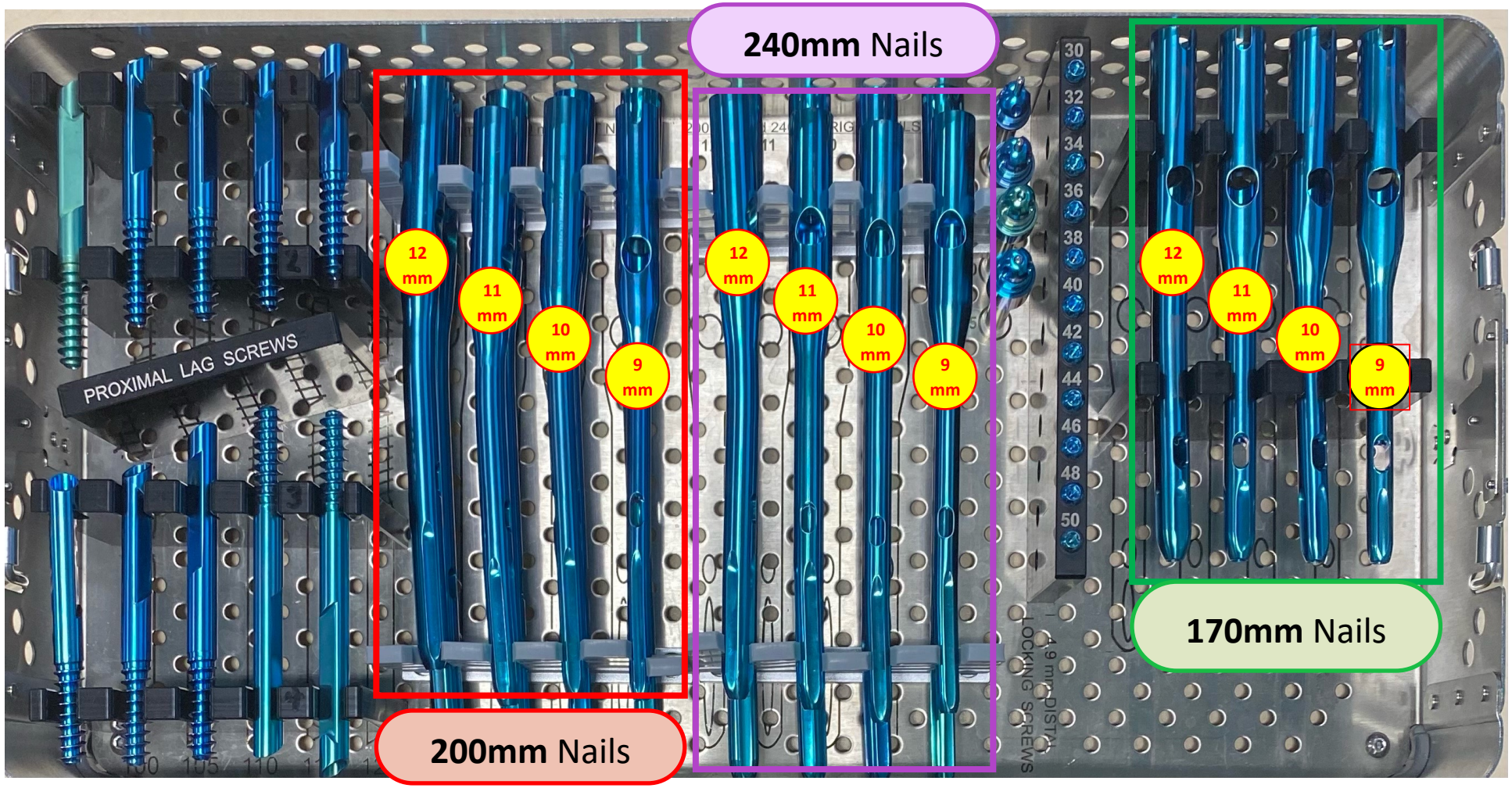
1. G-NAIL: NAIL SELECTION – Implant tray (tray 5) required

Steps 1. Surgeon will view X-ray to determine nail length and diameter.

Diameter Guide*:

- Female: 9mm, 10mm
- Male: 11mm, 12mm

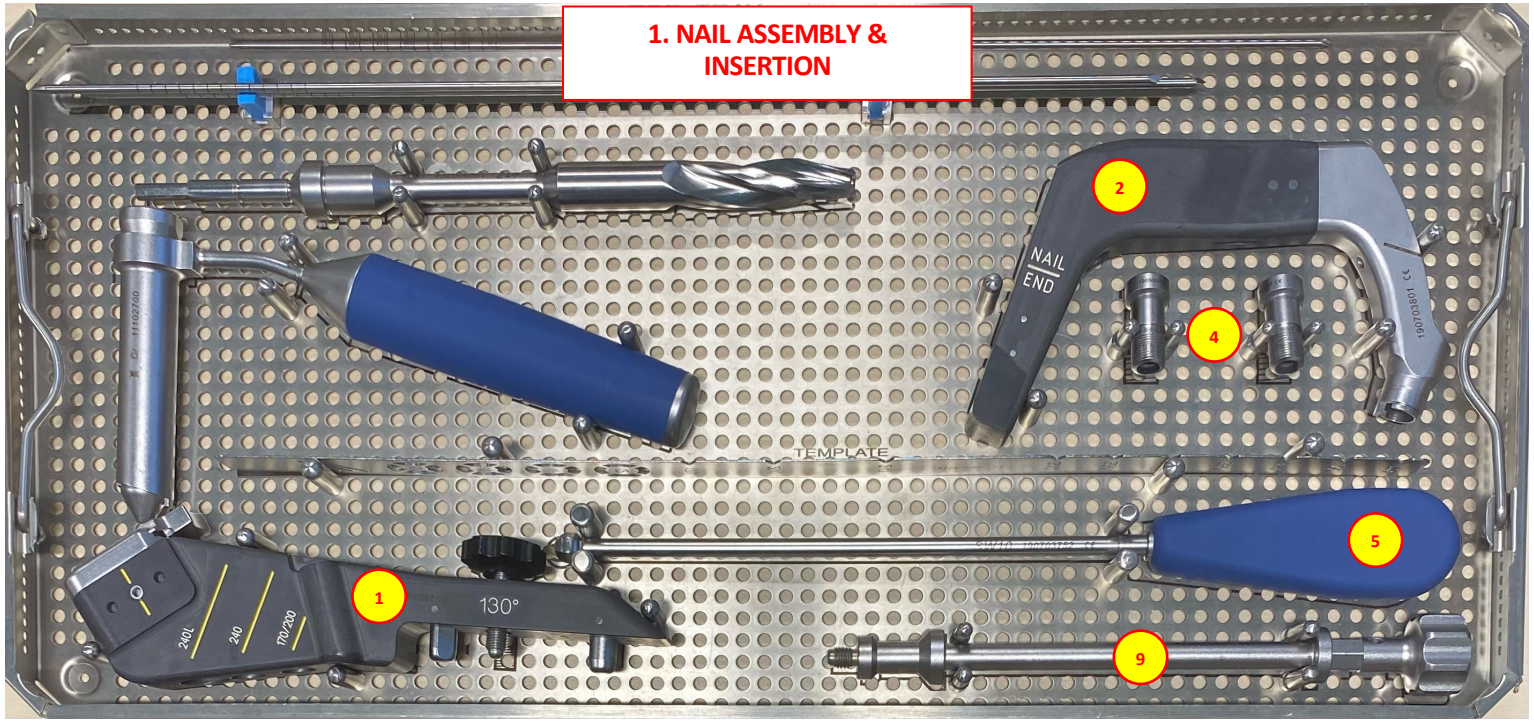
*approximation only.



2. G-NAIL: PREPARATION – Tray 1 & 5 required

Used:

- **(1)** Aiming arm (Static)
- **(2)** Insertion handle
- **(3)** G-Nail (Tray 5)
- **(4)** Locking bolt
- **(5)** Disco Ball wrench
- **(9)** Guide Bar (optional)

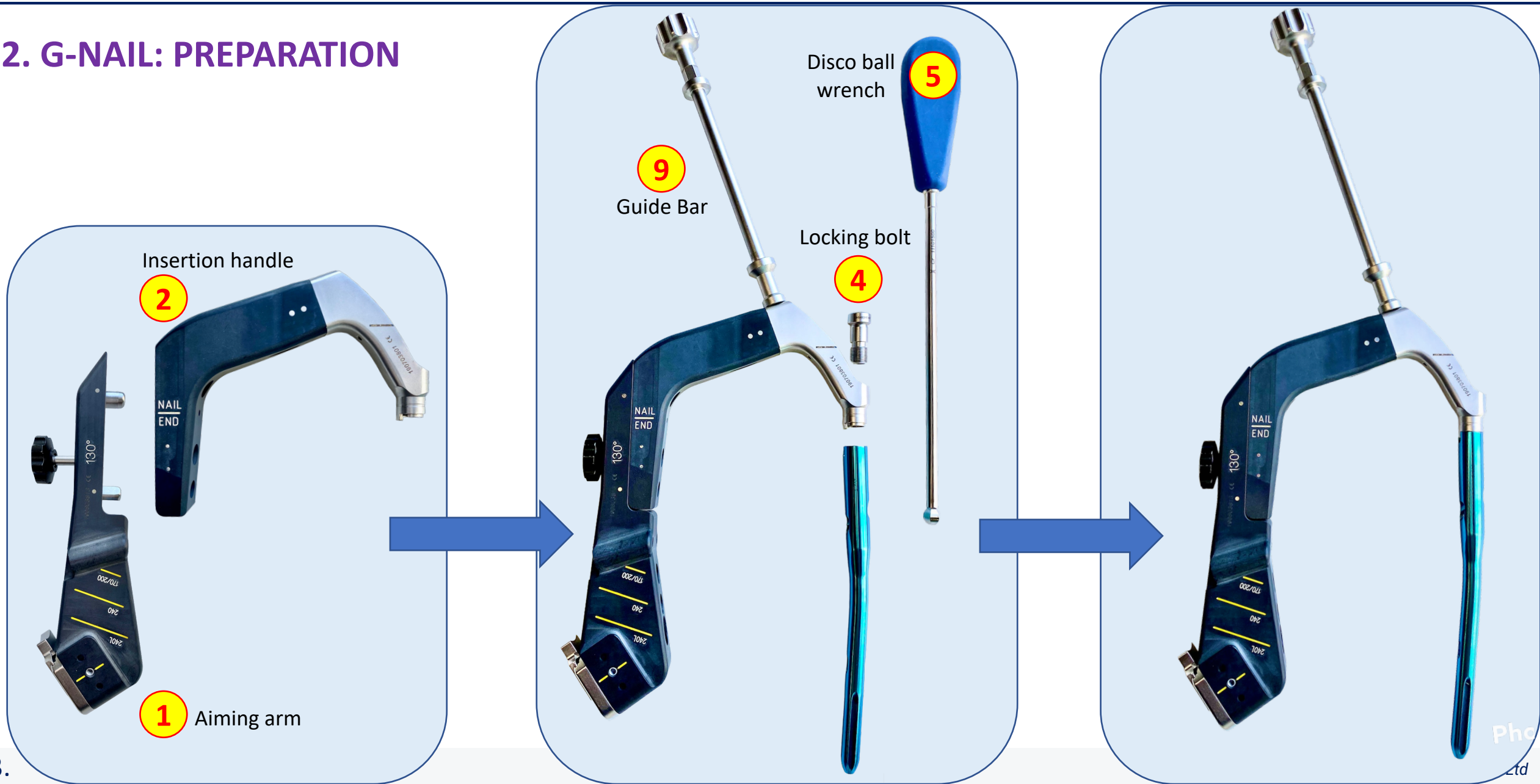


Steps:

1. Connect the Aiming Arm **No. 1**. and Insertion Handle **No. 2.** Guide Bar **No. 9** may be attached to the top of the insertion handle at this time, if required – especially for tough bone.
2. Align the Aiming Arm tooth into the G-Nail notch.
3. Use the Locking Bolt **No. 4** to secure the top of the nail to the aiming arm, tightening with the Disco Ball Wrench **No. 5**

G-NAIL *QUICK TIPS - Procedure*

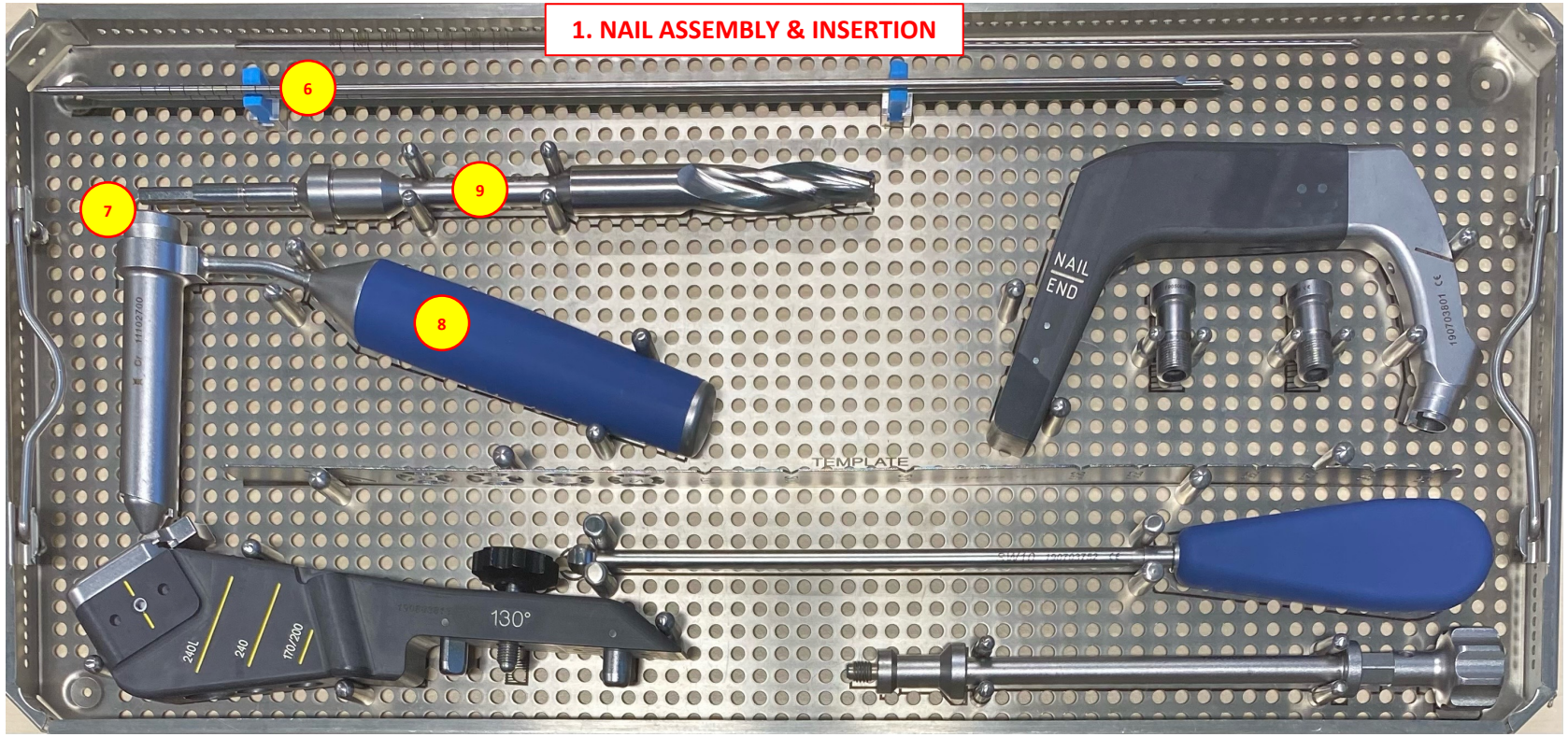
2. G-NAIL: PREPARATION



3. G-NAIL: DRILLING & NAIL INSERTION – Tray 1 required

Used:
- **(6)** 3.2mm Guide Wire
- **(7)** Wire Guide (optional)
- **(8)** Guide Sleeve
- **(9)** 17 Cannulated Bone Drill

* Chuck Attachment Required



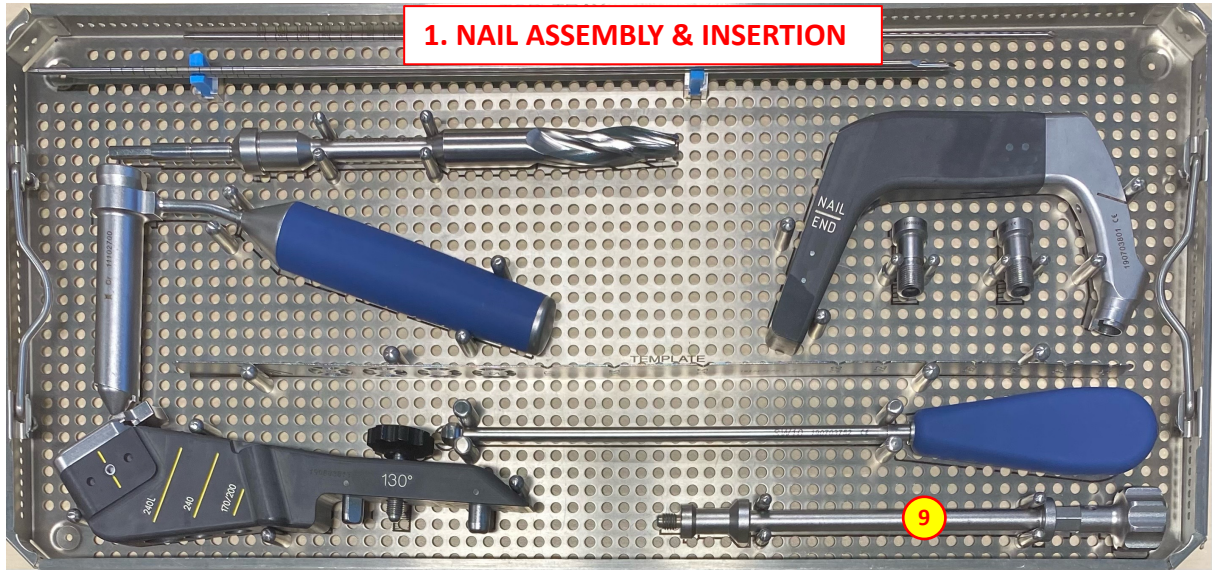
Steps:

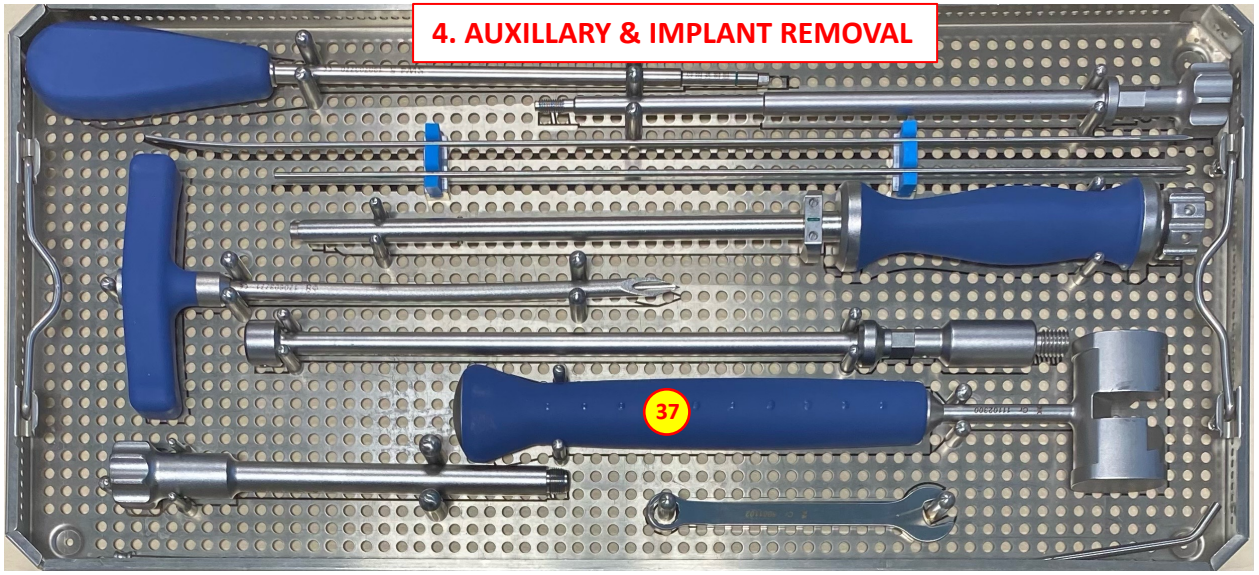
1. The 3.2mm Guide Wire **No. 6** is inserted through the top of the greater trochanter (Wire Guide optional)
2. 17mm Cannulated Bone Drill **No. 9** is inserted over the guide wire, through the Drill Guide **No. 8** and used to drill into the cancellous bone.

4. G-NAIL: INSERTION – Tray 1 required

Used: **(9)** Guide Bar

(37) Mallet (Hospitals should have a single wrapped mallet, if not, use mallet from Tray 4)





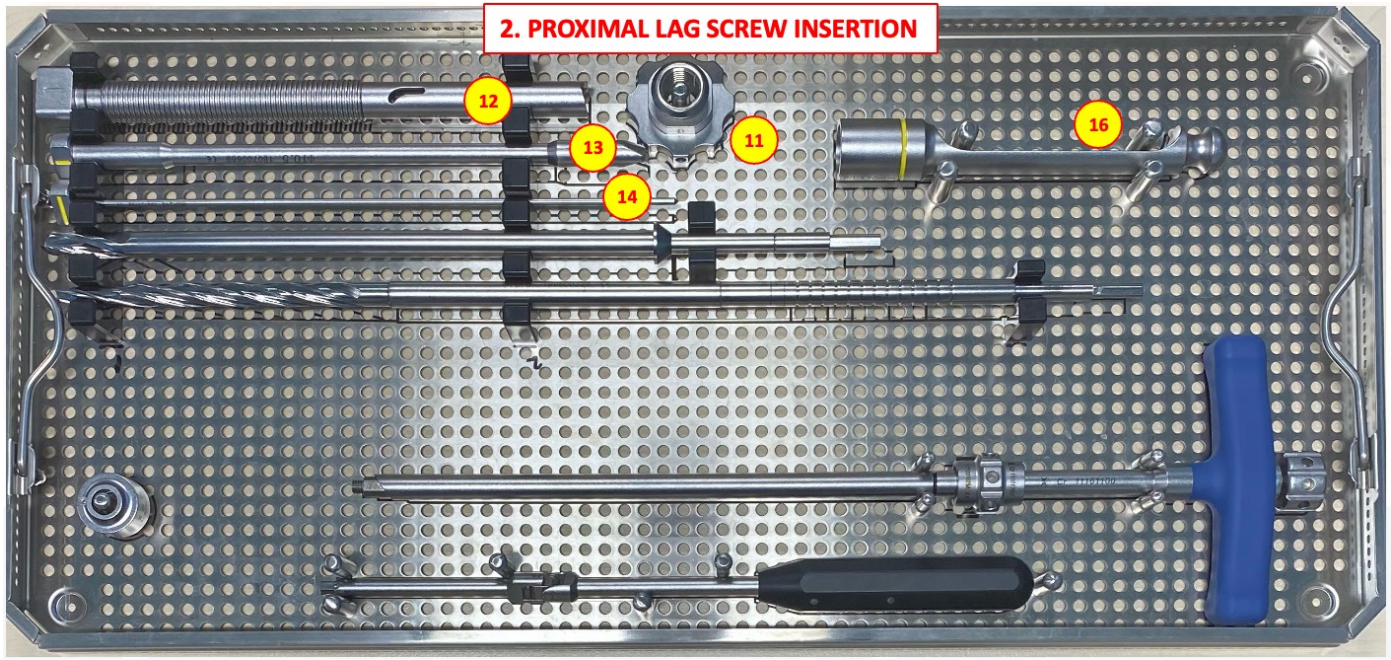
Steps:

1. Insert the G-Nail into the pre-drilled space
2. Guide Bar **No. 9** and Mallet **No. 37** may be needed to penetrate tough bone.
3. Guide bar **No. 9** removed if used.

5. LAG SCREW: PREP – Tray 1 & 2 required

Used:

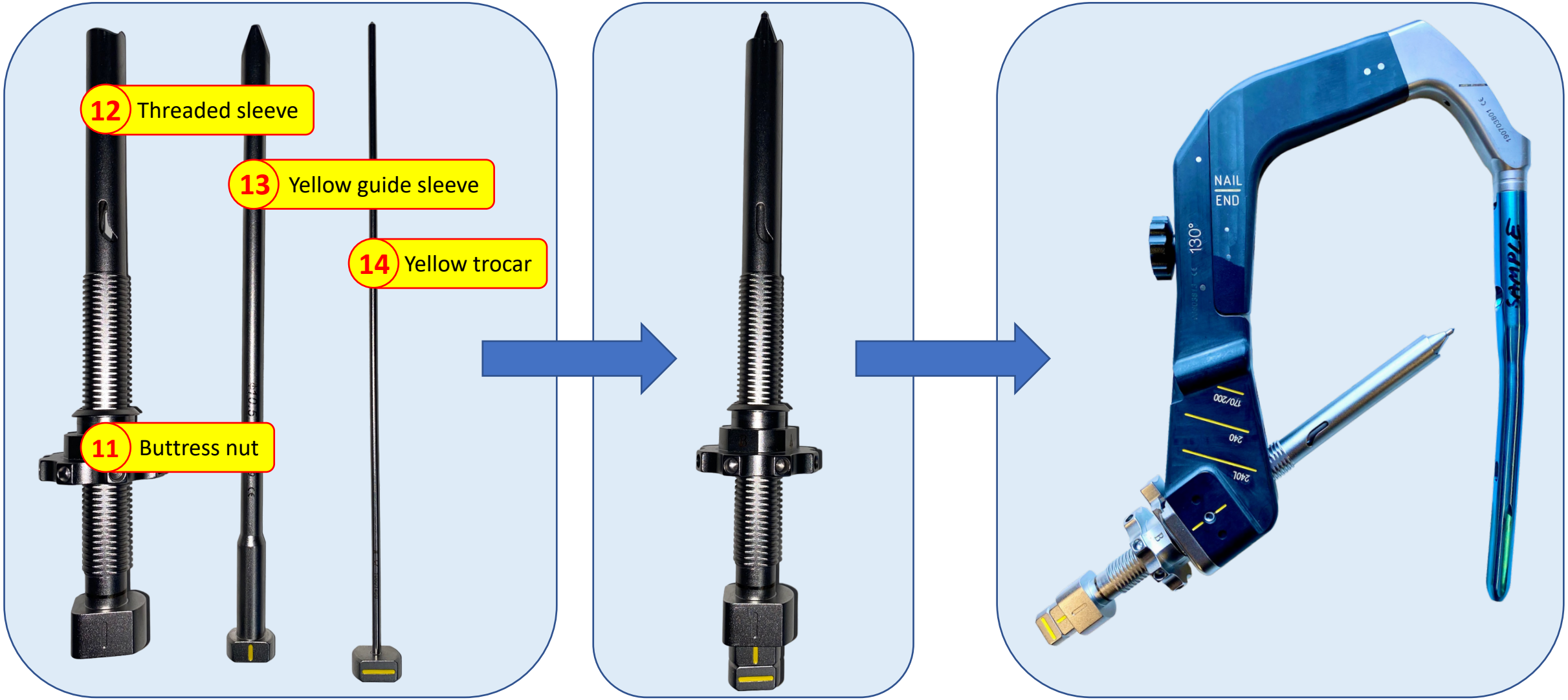
- **(11)** Buttress Nut
- **(12)** Threaded Sleeve
- **(13)** Yellow Guide Sleeve
- **(14)** Yellow Trocar
- **(6)** 3.2mm Guide Wire (Tray 1)
- **(16)** Cannulated Depth Gauge



Steps:

1. Screw the Buttress Nut **No. 11** onto the Threaded Sleeve **No. 12,** progress approximately 2/3 of the way down (**reverse thread**)
2. Insert Yellow Trocar **No. 14** into Yellow Guide Sleeve **No. 13** and then the combined construct into the Threaded Sleeve **No. 12**. The construct is then placed through the femoral neck aiming guide of the Aiming Arm **No. 1**.
3. The Mallet impacts the construct to puncture the lateral cortex of the proximal femur before the Yellow Trocar **No. 14** is removed.
4. The 3.2mm guide wire **No. 6** is inserted 10mm from the articular surface and then the yellow Guide Sleeve **No. 13** is removed and the Threaded Sleeve **No. 12** progressed onto the lateral cortex wall.
5. The Cannulated Depth Gauge **No. 16** then determines the length of lag screw required with the yellow ringed end placed over the end of the threaded sleeve.

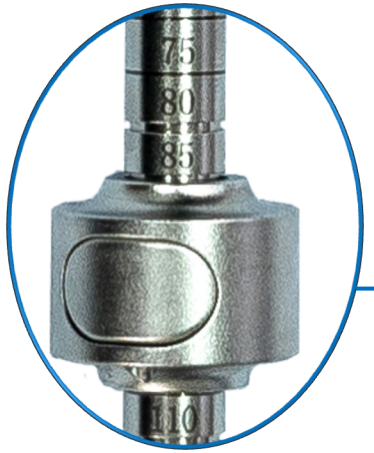
5. LAG SCREW: PREP – Tray 1 & 2 required



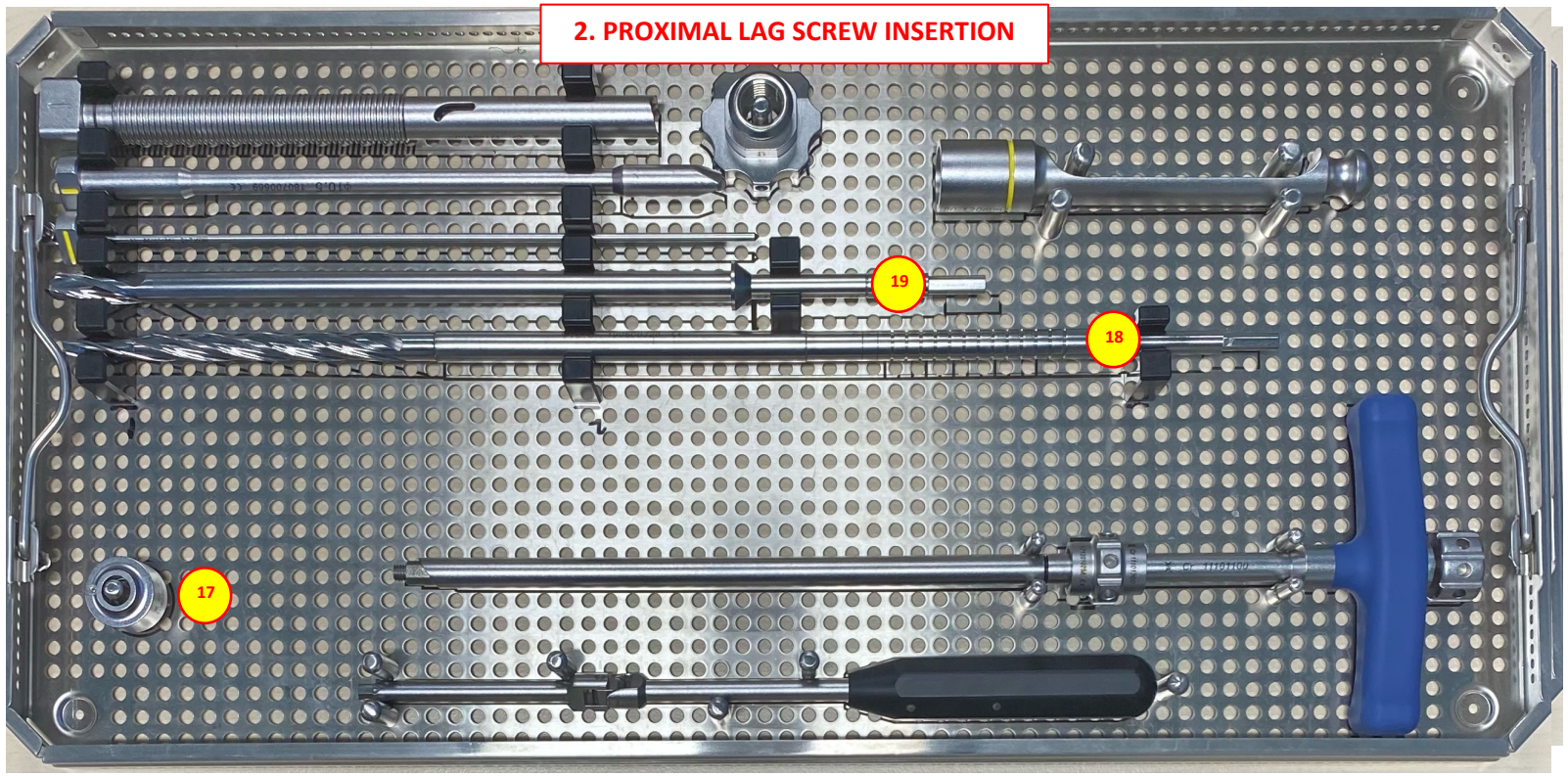
6. LAG SCREW: DRILLING – Tray 2 required

Used:
- **(17)** Depth Stop
- **(18)** 10.5mm Reamer
- **(19)** 10.5mm Bone Drill

Patient side → Desired depth should be readable



Surgeon side



Steps:

1. Depth Stop **No. 17** is calibrated according to the measured length (length shown on the **PATIENT SIDE – 85mm in this example**).
2. 10.5mm Bone Drill **No. 19** is progressed over the guide wire to penetrate the cortical bone of the lateral cortex, **if required**, and then removed.
3. 10.5mm Reamer **No. 18** is progressed over guide wire to drill for Lag Screw insertion.

7.1. LAG SCREW: INSERTION – Tray 2 required

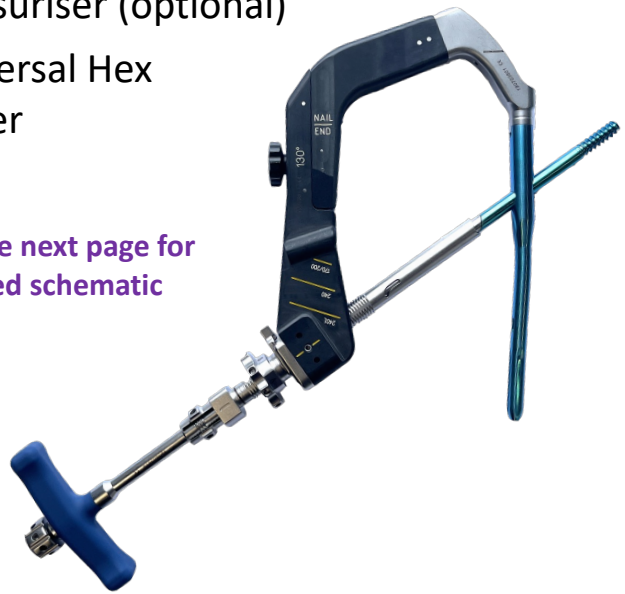
Used:

(20) T Handle Screwdriver

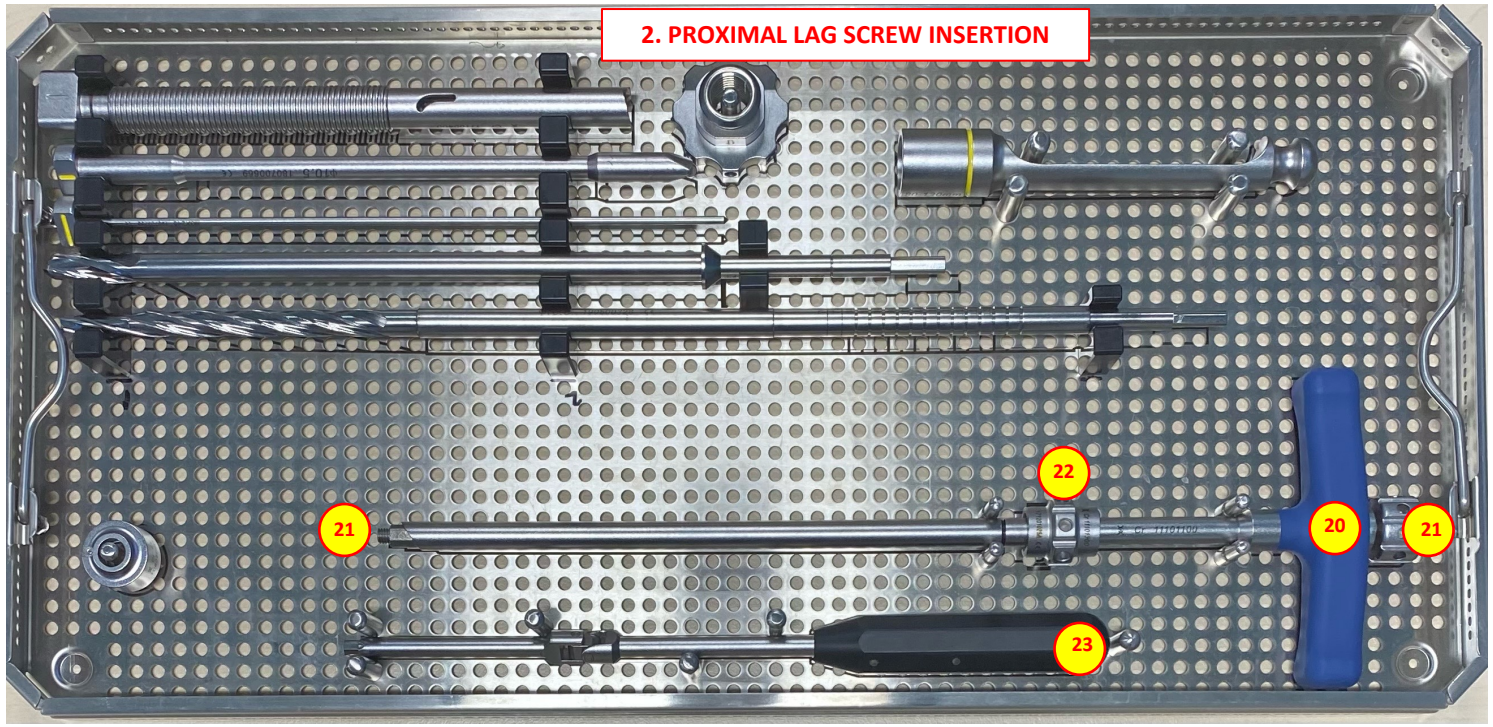
(21) Capture Rod

(22) Pressuriser (optional)

(23) Universal Hex Screwdriver



* See the next page for a detailed schematic

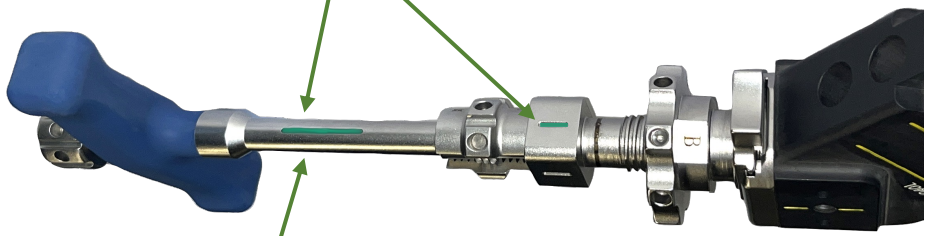


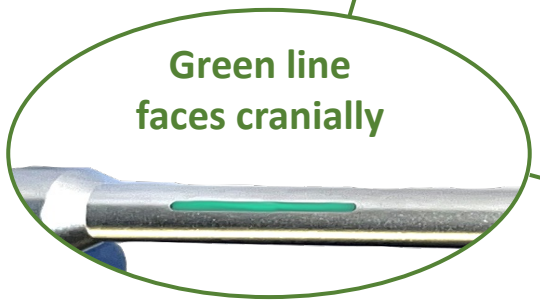
Steps:

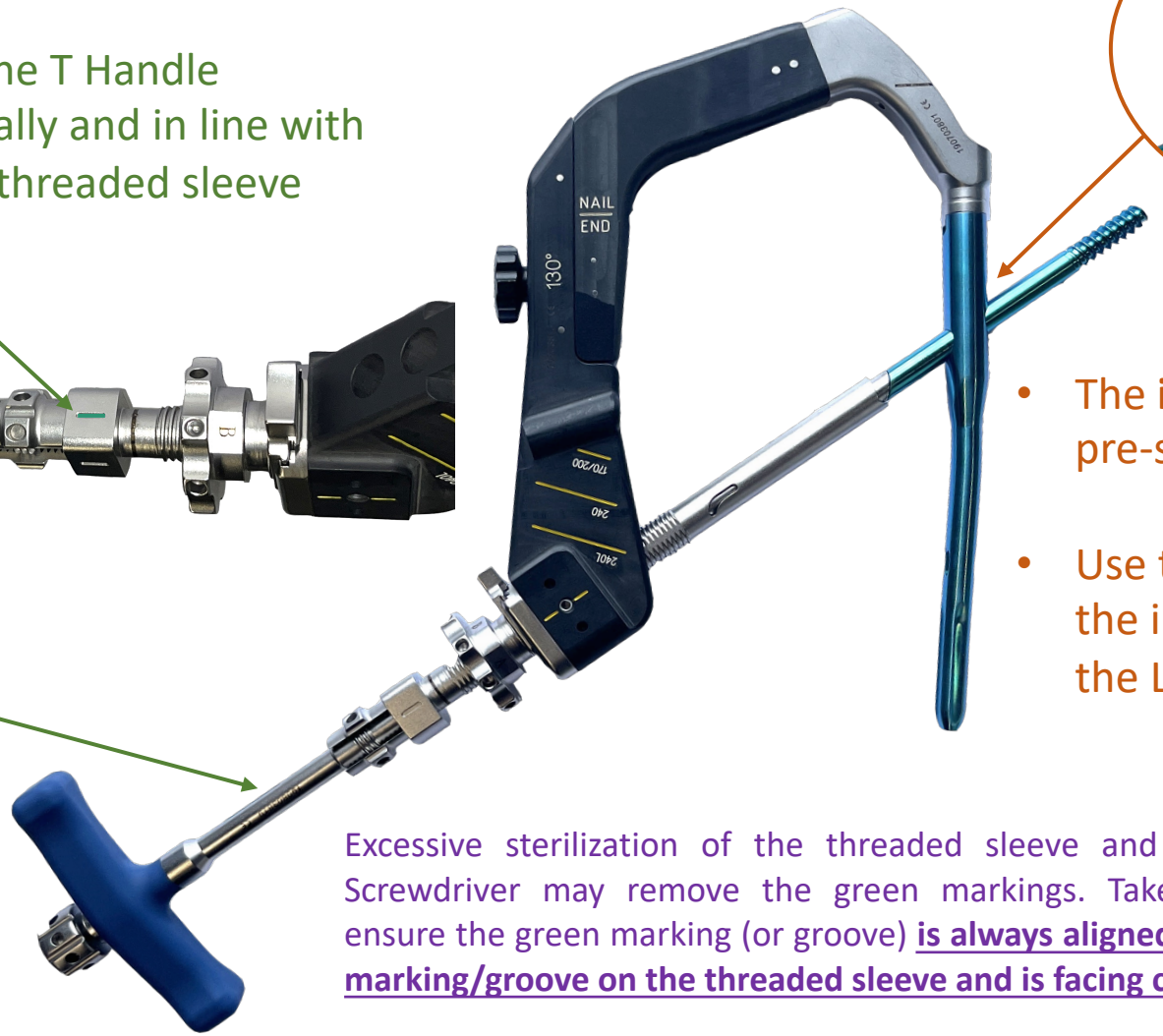
1. Insert Capture Rod **No. 21** into T-handle **No. 20**.
2. Screw Capture Rod into Lag Screw to create stable construct and hand to Surgeon.
3. Pressuriser **No. 22** (Optional when interfragmentary compression of the fracture fragments is required. The Pressuriser is screwed onto the T-Handle shaft and screwed clockwise).
4. Ensure the green line on the T Handle Screwdriver is facing **cranially** and in line with the **green markings** when fully inserted.
5. Universal Screwdriver **No. 23** to engage the internal locking mechanism that locks the Lag Screw to the G-Nail. The Surgeon may perform one quarter turn back to generate micromotion of the lag screw.

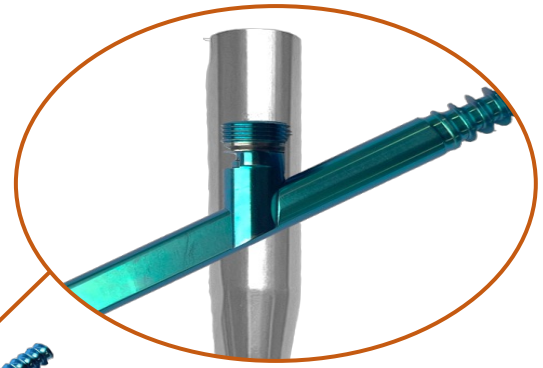
7.2. LAG SCREW: INSERTION – Tray 2 required

Ensure the green line on the T Handle Screwdriver is facing cranially and in line with the green marking on the threaded sleeve when fully inserted.









- The **internal locking mechanism** comes pre-screwed into the G-Nail.
- Use the Universal Screwdriver to engage the internal locking mechanism and lock the Lag Screw to the G-Nail.

Excessive sterilization of the threaded sleeve and T-Handle Screwdriver may remove the green markings. Take care to ensure the green marking (or groove) **is always aligned with the marking/groove on the threaded sleeve and is facing cranially**.

8. DISTAL LOCKING SCREW: DRILLING – Tray 3 required

Used:

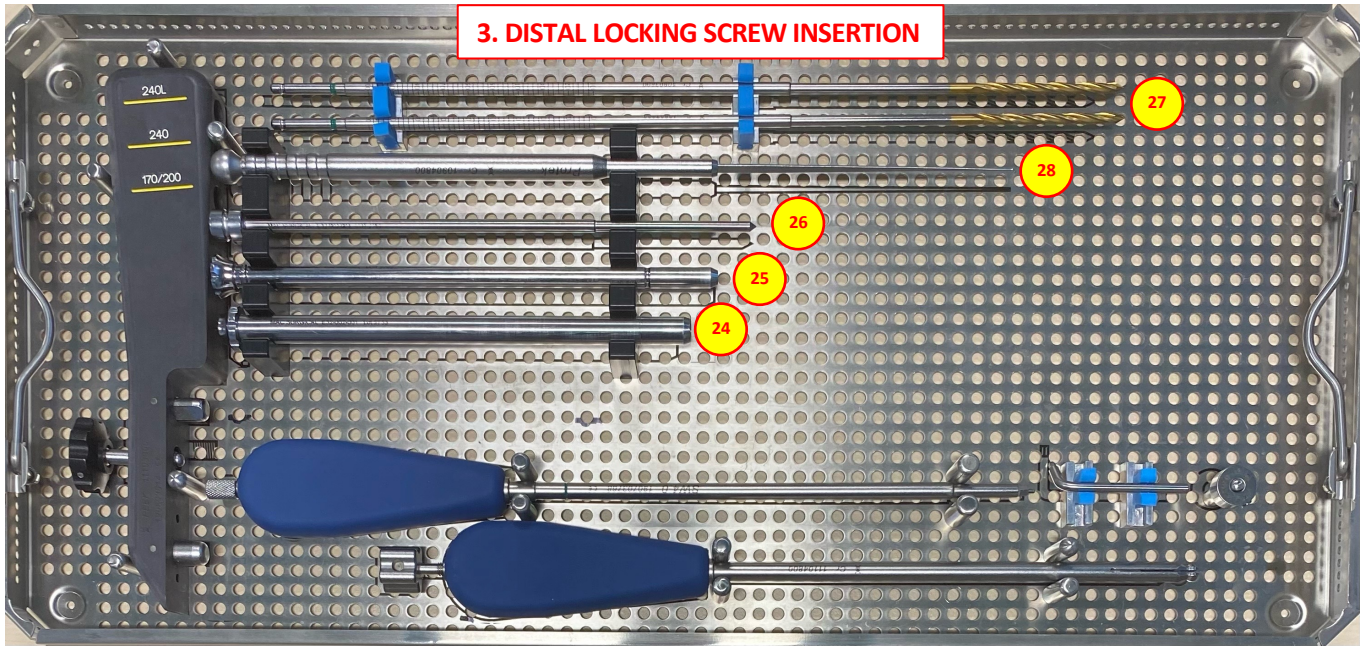
(24) Protection Sleeve

(25) Green Drill Sleeve

(26) Green Trocar

(27) 4.2mm Bone drill (calibrated depth gauge)

(28) Depth gauge (optional)



Steps:

1. Insert Green Trocar **No. 26** into Green Drill Sleeve **No. 25** and then the combined construct into the Protection Sleeve **No. 24** and thread through the aiming arm.
2. The Green Trocar **No. 26** is then impacted with the mallet to puncture the lateral cortex of the femur and is then removed with the Green Drill Sleeve **No. 25**.
3. 4.2mm Bone Drill **No. 27** measures the length of the Distal Locking Screw. The drill is QC, so no chuck is required.
4. Depth Gauge **No. 28** (optional).

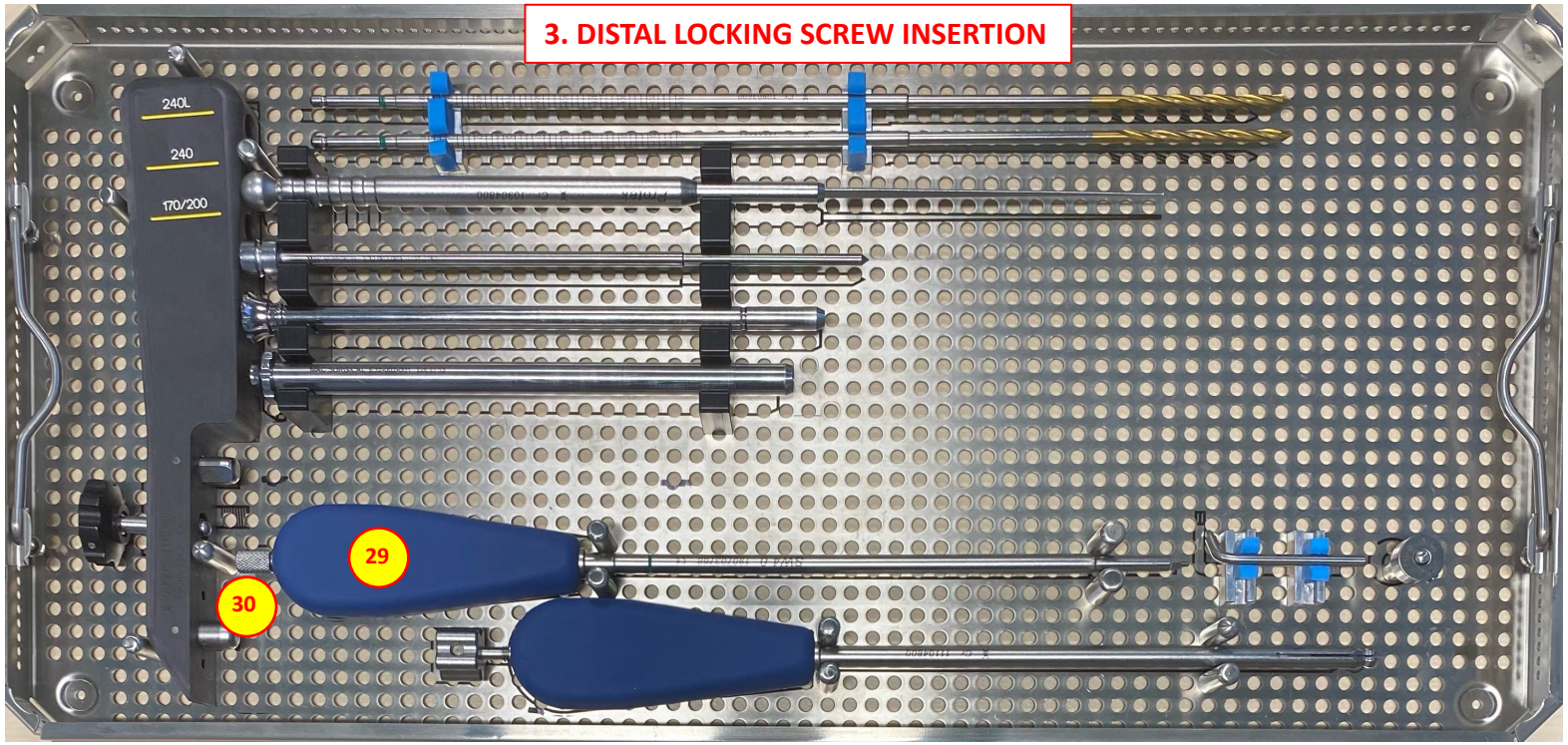
9. DISTAL LOCKING SCREW: INSERTION – Tray 3 & 5 required

Used:

(29) 4.0mm Green Cannulated Hex Screwdriver

(30) Capture rod

(31) Distal locking screw (Tray 5)



Steps:

1. Capture Rod **No. 30** is inserted into the 4.0mm Green Cannulated Hex Screwdriver **No. 29.**
2. Attach Capture Rod **No. 30** firmly to the head of the Distal Locking Screw.
3. Hand to the surgeon who will thread this through the Aiming Arm and secure.

10. NAIL REMOVAL– Auxillary & Implant Removal Tray required

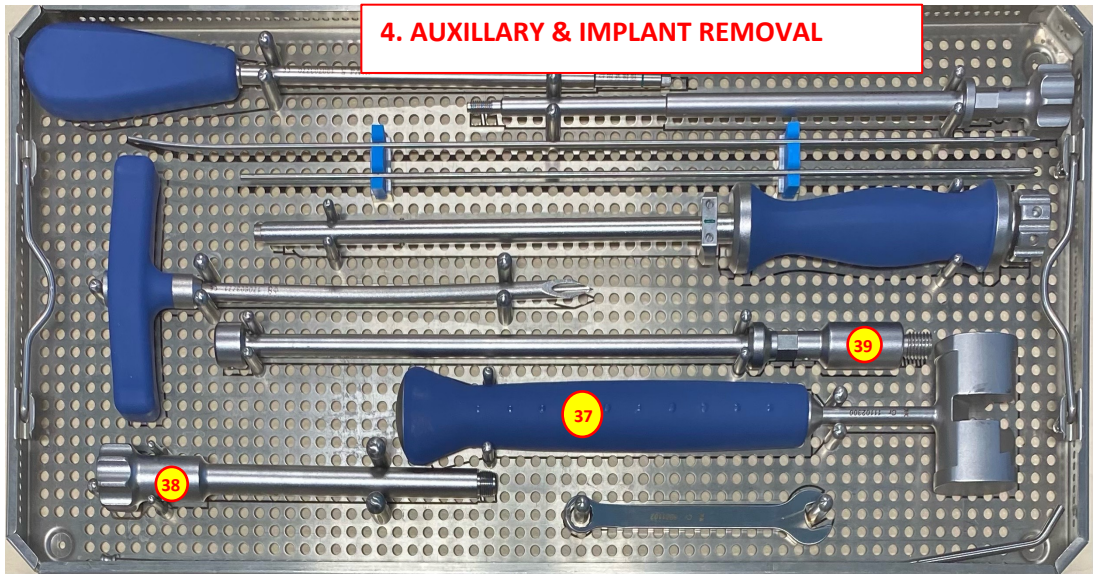
Used:

- **(29)** 4.0mm Green Cannulated Hex Screwdriver
- **(30)** Capture rod
- **(23)** Universal Hex Screwdriver
- **(20)** T Handle Screwdriver
- **(21)** Capture Rod
- **(38)** Nail Extraction Sleeve
- **(39)** Guide Rod
- **(37)** Mallet

4.0 Green Cannulated Hex Screwdriver & Capture Rod

Universal 4.5 Hex Screwdriver

T Handle Screwdriver & Capture Rod

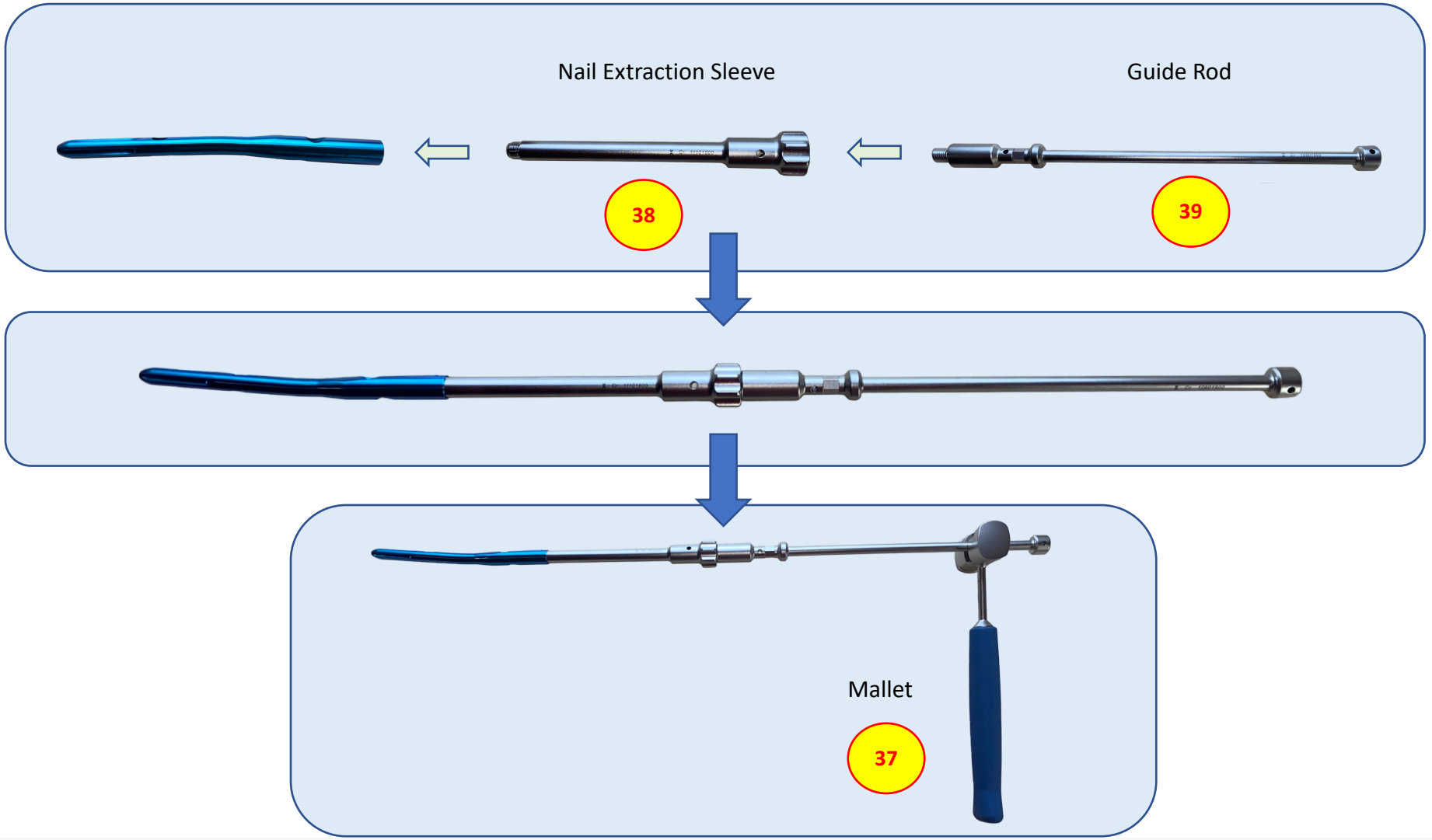


Steps:

1. **Distal Locking Screw Removal**: Capture Rod **No. 30** is inserted into the 4.0mm Green Cannulated Hex Screwdriver **No. 29.** and the locking screw is extracted.
2. **Lag Screw Removal**: The Universal 4.5 Hex Screwdriver **No. 23** is used to unscrew the set screw first. Capture Rod **No.21** is inserted into the The T Handle Screwdriver **No. 20** and the lag screw is extracted.
3. **Nail Removal**: The Nail Extraction Sleeve **No. 38** is attached to the proximal end of the nail and a Guide Rod **No. 39** is then attached to the Nail Extraction sleeve. A Mallet **No. 37** is then used to extract the nail. (attachments shown in the next page)

*Please note that **No. 29, 30, 23, 20 & 21** are all left loose on the Auxillary Tray and do not have a proper laser engraved spot.*

10. NAIL REMOVAL– Auxillary &Implant Removal Tray required



Explanation – *ABCD* Markings on the Buttress Nut

The four letters, A, B, C and D serve the following function:

- Indicates the correct direction of turning
  - Turning from A to D, advances the trocar onto the proximal cortex (clockwise)
- Provides a measure of the amount of advancement
  - One full revolution (360^0) = 2.0mm of compression
  - 90^0 turn eg. from A to B = 0.5mm of compression
  - 1800 turn eg. A to C = 1.0mm of compression.