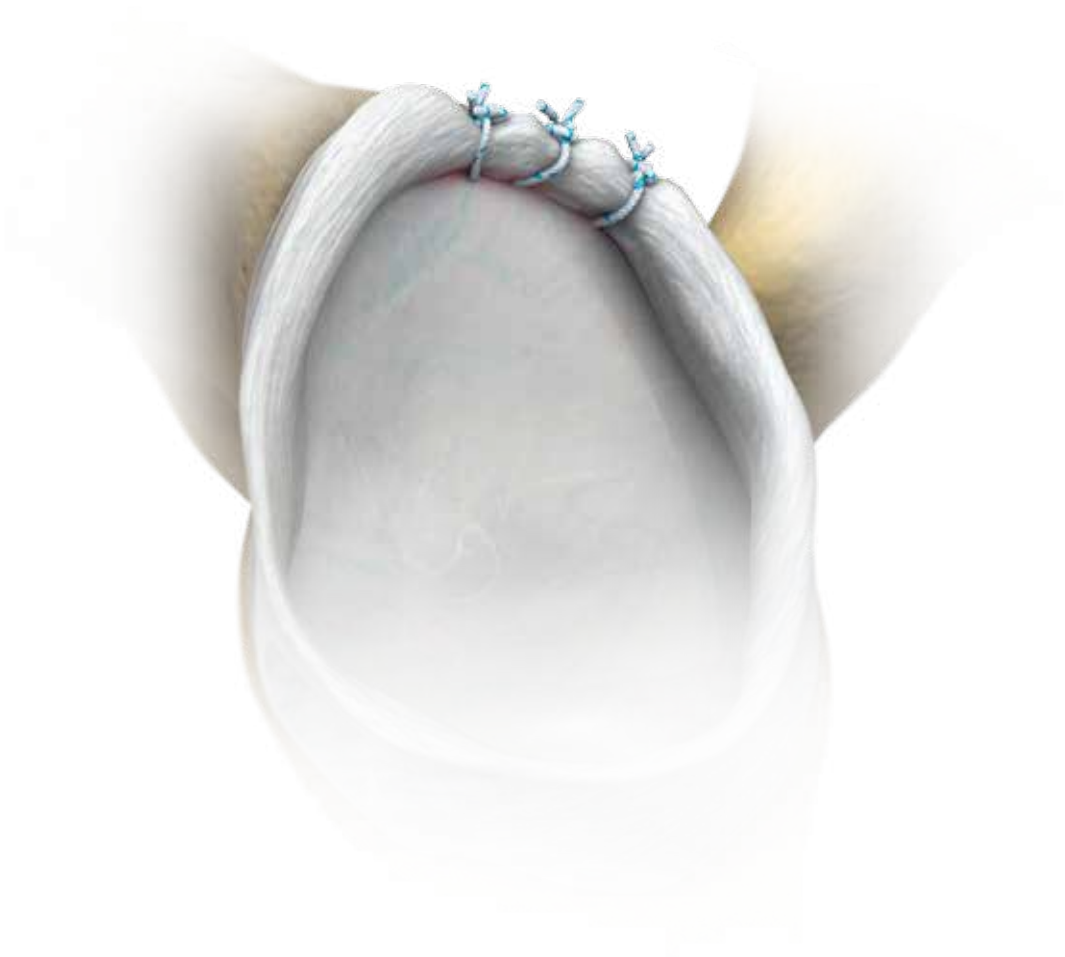
Low Profile/ Trans-Cuff SLAP Repair

with the JuggerKnot® Soft Anchor-1.4/1.5 mm
with Percutaneous Instrumentation

Surgical Technique
by Shabi Kahn, M.D.



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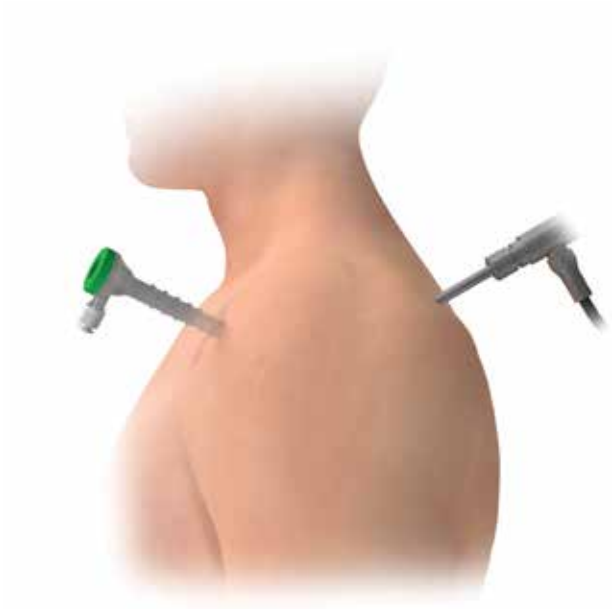

Figure 1

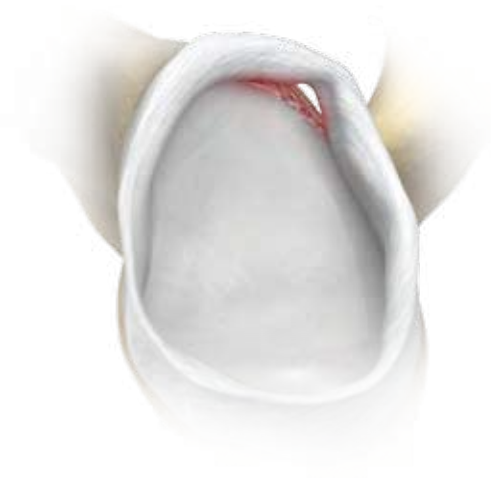

Figure 2

Patient Positioning and Portal Placement

Place the patient in either the beach chair or lateral decubitous position depending upon surgeon preference (Figure 1). Insert a 30˚ arthroscope through the posterior portal. Carefully assess all anatomy including any associated chondral, rotator cuff and biceps abnormality. Place a 7 mm AquaLoc® cannula appropriately through the rotator interval either from an outside in or inside out technique.

Identify the labral tear. The tear will either be posterior only, anterior only, or anterior to posterior (Figure 2).

This material represents the surgical technique utilized by Shabi Kahn, MD. Zimmer Biomet does not practice medicine. The treating surgeon is responsible for determining the appropriate treatment, technique(s), and product(s) for each individual patient.

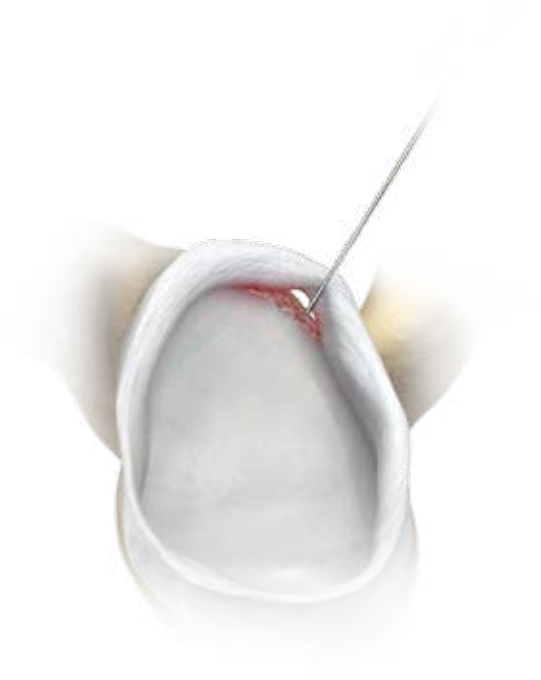

Figure 3

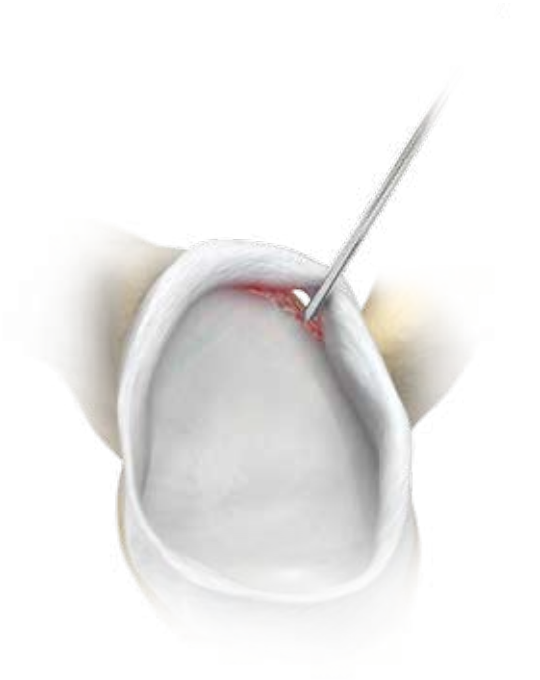

Figure 4

Prepare the Surface

Utilize either a rasp or a curved shaver through the anterior portal to prepare the bone bed until bleeding cortical bone is identified at the repair site.

Placement of Percutaneous Guide

To repair the superior labral tear, create a transcutaneous portal and incision to place the JuggerKnot percutaneous guide. To identify the appropriate angle, utilize a spinal needle through an anterolateral percutaneous area, adjacent to the anterolateral acromion (Figure 3). Visualize the needle intra-articularly to allow a trans-cuff angle into the appropriate glenoid bed. Place a small stab incision, smaller than a portal incision, through the skin at the location of the spinal needle.

Insert the rigid trocar for the percutaneous guide through the skin incision at the same angle as previously identified by the spinal needle (Figure 4).

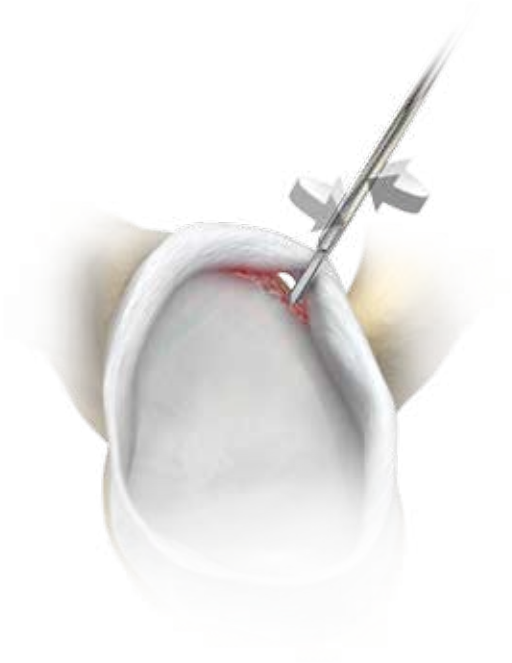

Figure 5

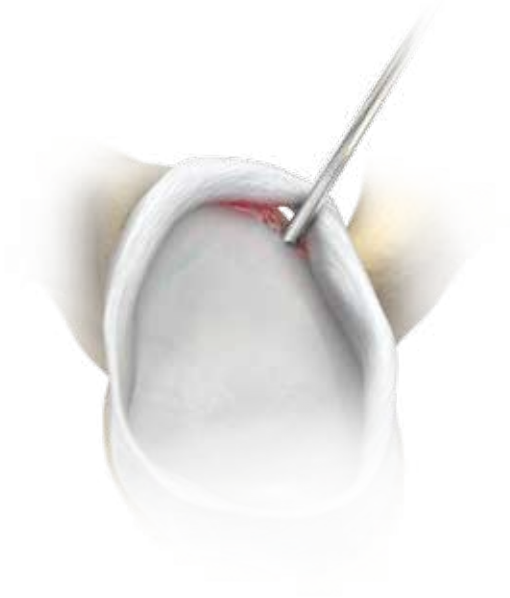

Figure 6

Placement of Percutaneous Guide (cont.)

Insert the percutaneous guide over the rigid trocar. Utilize a rotating motion back and forth to penetrate through both subcutaneous tissue and particularly rotator cuff tendon into the intra-articular space (Figure 5). Remove the rigid trocar.

Place the guide on the prepared superior glenoid area (Figure 6).

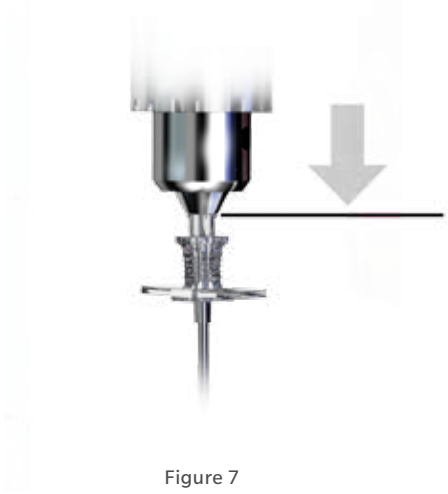

Figure 7

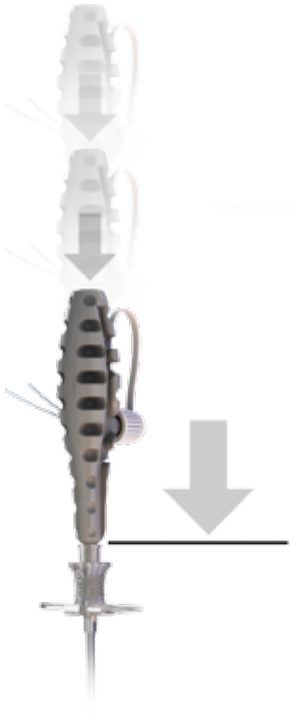

Figure 8

Pilot Hole and Anchor Placement

Chuck the drill bit to the proximal laser etch line. Advance the drill under power until the drill bottoms out on the top of the guide (Figure 7). Remove the drill. Utilize a 1.5 mm drill if a JuggerKnot 1.5 mm is selected.

Note: Be sure to maintain the precise position of the guide, including the angle, over the drill hole.

Insert the JuggerKnot 1.4 mm or 1.5 mm anchor through the guide until seated at the entry of the pilot hole. Utilize a small mallet to insert the JuggerKnot anchor in the bone. Advance the inserter until it bottoms out on the top of the guide handle (Figure 8).

Note: If utilizing a JuggerKnot 1.5 mm anchor, a very firm/tight fit will be experienced in passing the anchor through the percutaneous guide.

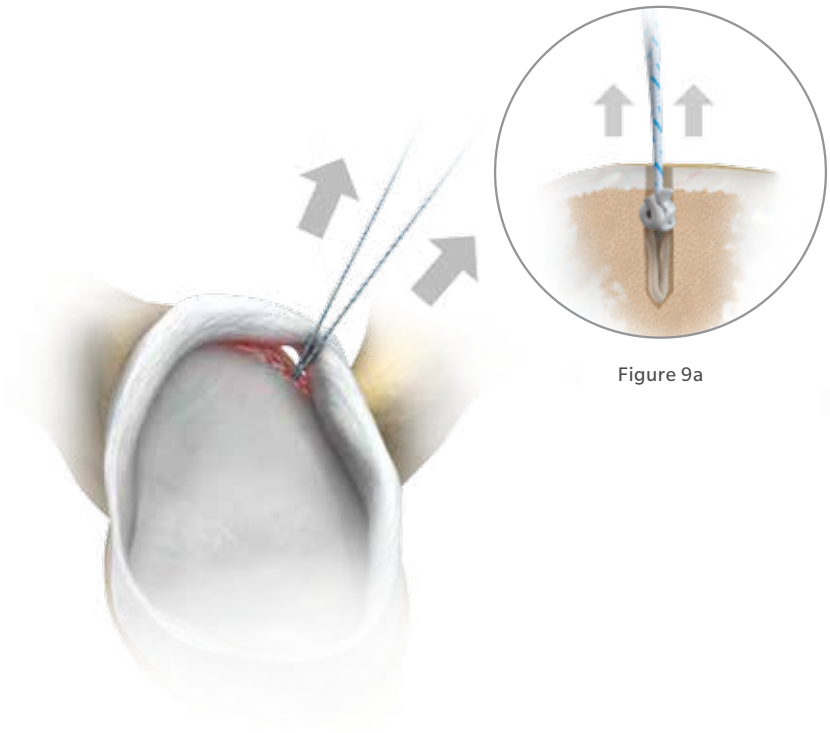

Figure 9a

Figure 9

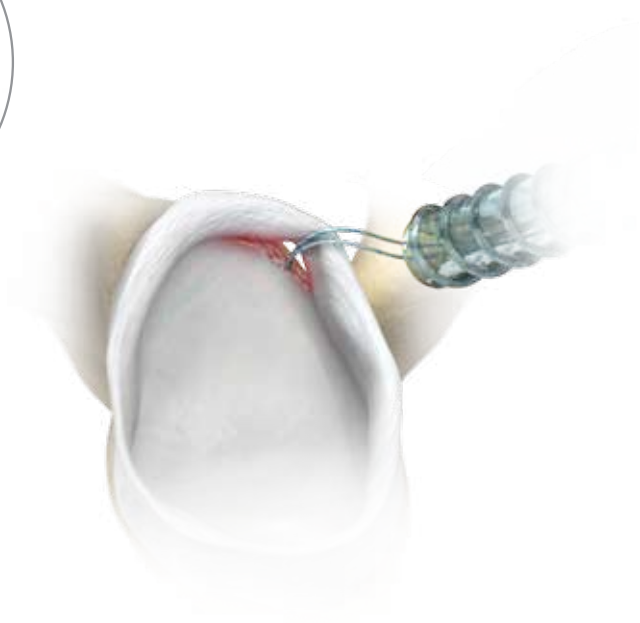

Figure 10

Anchor Deployment

Unscrew the white luer-lock cap to release the sutures from the inserter. Remove the inserter by pulling straight back on the inserter handle. Remove the guide and seat the anchor by lightly pulling back on both sutures exiting through the skin (Figure 9 & 9a). Check to verify the sutures slide within the anchor.

Suture Retrieval

Through the posterior portal utilize a suture grasper to retrieve both limbs of the suture (Figure 10).

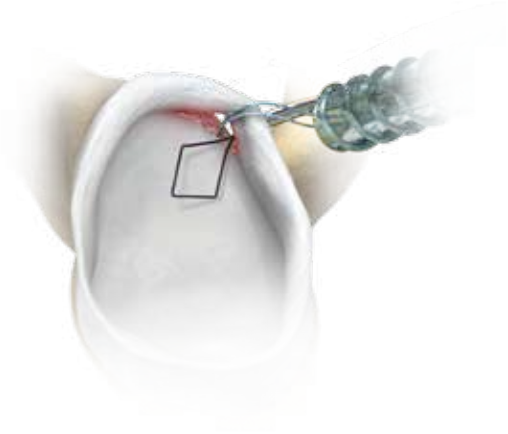

Figure 11

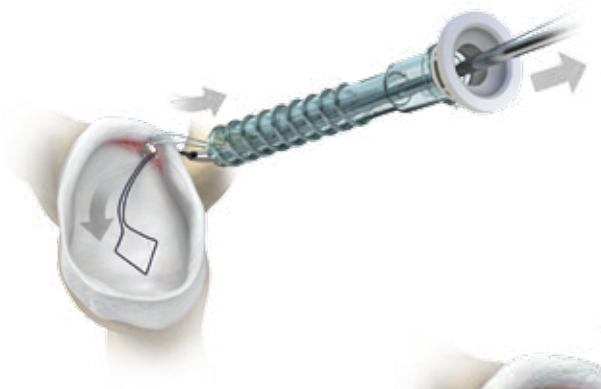

Figure 12

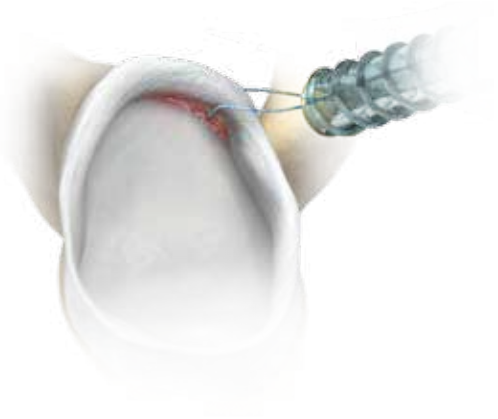

Figure 13

Suture Retrieval (cont.)

Next, insert an angled 90˚ Up suture retriever through the posterior portal. Penetrate the superior portion of the labrum downward and advance the Nitinol wire into the joint (Figure 11).

Continue to advance as much of the Nitinol wire into the joint as possible. Slowly remove the suture retriever from the joint while simultaneously continuing to advance the Nitinol wire. Take care to ensure that the opening of the wire does not retreat through the tissue* (Figure 12).

Through the posterior portal retrieve the wire using a suture grasper. Pass one strand of the MaxBraid™ suture through the wire loop and pull the Nitinol wire to pass the suture (Figure 13).

Note: Due to this tear being posterior, the scope has been moved to the anterior portal to allow for easier knot tying through the posterior portal.

* A two portal suture shuttle technique can also be used with the creation of an additional portal.

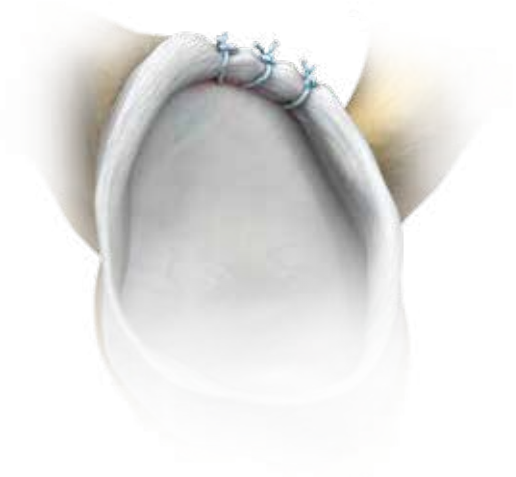

Figure 14

Knot Tying

Posterior/Superior Repair

For posterior/superior labral repairs, retrieve the sutures either anteriorly or posteriorly. If the decision is made to tie a knot posteriorly, insert the arthroscope through the cannula anteriorly and place a separate cannula from an outside in technique using the same standard posterior portal. Retrieve both sutures through either cannula with the opposite cannula acting as the looking portal. Use a standard knot-tying technique to secure the labrum. Cut the remaining suture tails with a Slotted MaxCutter™. Fixation is complete.

Anterior/Superior Repair

Utilize a standard knot-tying technique with the cannula above the biceps to place the appropriate knot. Cut the remaining suture tails with a Slotted MaxCutter (Figure 14). Fixation is complete.

Ordering Information

Implants

Part Number	Description
912030	1.4 mm JuggerKnot Single Loaded
912010	1.4 mm JuggerKnot Package of 10
912031	1.5 mm JuggerKnot Single Loaded
912015	1.5 mm JuggerKnot Package of 10

Instrumentation

Part Number	Description
912140C	1.4 mm JuggerKnot Curved Guide Disposable Kit with Centering Sleeve
912141C	1.5 mm JuggerKnot Curved Guide Disposable Kit with Centering Sleeve
912040P	1.4/1.5 mm JuggerKnot Percutaneous Kit

INDICATIONS FOR USE

The JuggerKnot Soft Anchors are intended to be used for soft tissue to bone fixation for the following indications:

Shoulder
Bankart lesion repair
SLAP lesion repair
Acromio-clavicular repair
Capsular shift/capsulolabral reconstruction
Deltoid repair
Rotator cuff tear repair
Biceps tenodesis

Foot and Ankle
Medial/lateral repair and reconstruction
Mid-and forefoot repair
Hallux valgus reconstruction
Metatarsal ligament/tendon repair or reconstruction
Achilles tendon repair

Elbow
Ulnar or radial collateral ligament reconstruction
Lateral epicondylitis repair
Biceps tendon reattachment

Knee
Extra-capsular repair: MCL, LCL, and posterior oblique ligament
Iliotibial band tenodesis
Patellar tendon repair
VMO advancement
Joint capsule closure

Hand and Wrist
Collateral ligament repair
Scapholunate ligament reconstruction
Tendon transfers in phalanx
Volar plate reconstruction

Hip
Acetabular labral repair

CONTRAINDICATIONS

1. Infection.
2. Patient conditions including blood supply limitations and insufficient quantity or quality of bone or soft tissue.
3. Patients with mental or neurologic conditions who are unwilling or incapable of following postoperative care instructions or patients who are otherwise unwilling or incapable of doing so.
4. Foreign body sensitivity. Where material sensitivity is suspected, testing is to be completed prior to implantation of the device.

Notes

Notes

Check for country product clearances and reference product specific instructions for use. For complete product information, including indications, contraindications, warnings, precautions, and potential adverse effects, see the package insert and Zimmer Biomet's website.

This technique was prepared in conjunction with a licensed health care professional. Zimmer Biomet does not practice medicine and does not recommend any particular orthopedic implant or surgical technique for use on a specific patient. The surgeon is responsible for determining the appropriate device(s) and technique(s) for each individual patient.

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