

Inspection for wear - Icelock® Ratchet series

Inspection for wear:

1. Remove the Lock from the socket
(remove Release Mechanism and Funnel)
2. Use compressed air to blow out lint and other particles
3. Inspect the Lock under lighting, paying special attention to:
Inside the Lock, Guide Plate and Locking Plate
4. Inspect Attachment Pin, focus on 5 proximal ratchet rows
(run fingernail over surface, should feel smooth)

NOTE: Insert the Release Mechanism in bottom of lock to more easily visualize internal parts of lock

Acceptable wear:

Small indents and shiny surface on material (not roughened)

Unacceptable wear

Material removed in area of contact with the pin

Large indents, scratches or gouges

Roughened surfaces

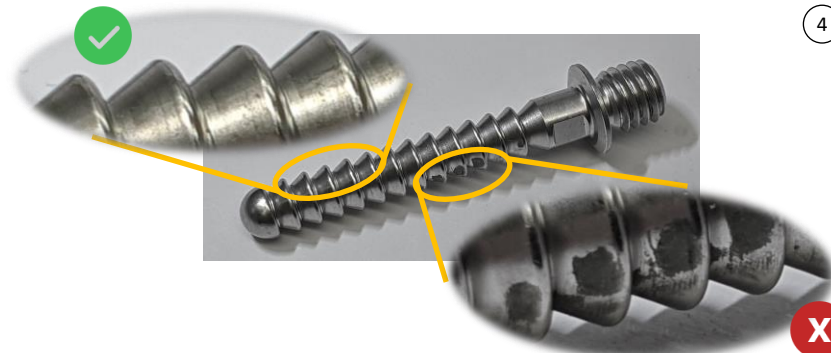
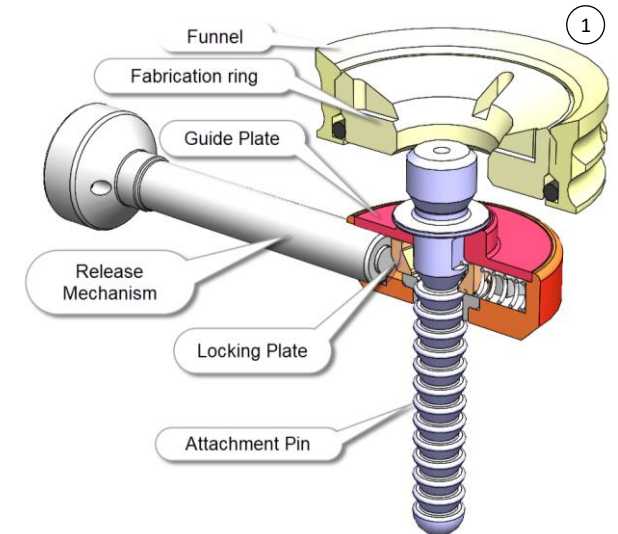
NOTE: Only part of the pin may show wear, indicating also wear on the locking mechanism.

Irrespective of one part showing wear, Lock and Attachment pin must be replaced.

Wear on **Guide Plate** is usually concentrated but can be oriented differently from the guide plate. Wear would be identified as material removal with deep scratches visible (see red area on image 2).

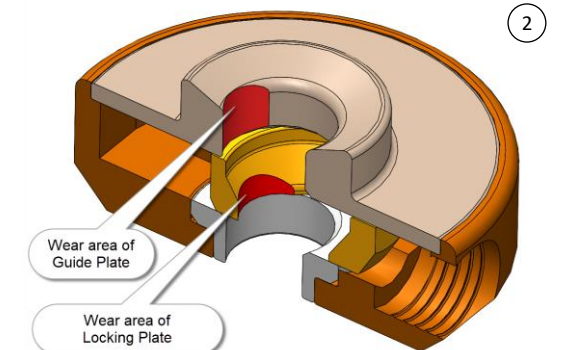
Wear on **Locking Plate** is mostly concentrated in one location and wear can be seen by material being removed and scratches are visible (see red area on image 2).

Shiny surface, being different from other similar surfaces is usually acceptable as this is normal to see with steel parts rubbing against each other. Indents, scratches and gouges of darker color may be sign of early wear through steel outer protective layer which can escalate into higher degree of wear.



Assistive tools:

- Directional light or other good lighting
- Compressed Air for cleaning
- Magnifying glass for inspection or mobile phone with camera to zoom in on areas



General Considerations

About Wear: Wear is normal to some degree in Icelock Ratchet but can be a sign of issues related to donning of the prosthesis and/or general compromised socket fit. A high degree of wear can become hazardous and indications of such must be looked out for during regular patient consultation.

Assistive Tools: Inserting the release mechanism in the bottom of the lock may help to visualize wear. Good directional lighting is important for visualization by using light reflection from surfaces at different angles. Guide Plate and Locking Plate holes are supposed to be round. Mobile phone can be an effective way to take photo of area of interest and zoom in on.

Indications for premature wear:

- Clicking noise coming from the socket
- User indicating looseness of socket
- Indications of socket not fitting well, user unable to fully don the socket
- If user may have older liner used as a spare (may have worn pin)
- User suggesting issues with donning the socket

Troubleshooting and causes of Lock wear

One sided wear on guide plate

- Review patient donning method to secure good central position of Attachment Pin.
- Make sure the Lock is positioned in the socket to allow the patient to achieve central engagement with the Attachment Pin

Attachment pin shows high wear proximally

- Patient may not be well supported in distal part of socket, causing pistoning along with side to side movement.
- Patient may not be using volume socks appropriately
- Attachment Pin may be from other manufacturer than Össur.

Attachment Pin shows wear at 2nd to 5th rows from proximal end of Attachment Pin

- Patient may be having volume changes which causes Attachment Pin not being pre-tensioned in the lock at all times.
- Patient may not be donning fully the socket adequately which may be as a result of socket fit issues.

Locking Plate is worn but limited wear observed on Attachment Pin

- Patient may have alternative liner with worn pin
- Previous Attachment Pin in liner may have been worn, starting wear on the lock

Attachment Pin



Locking Plate



Guide Plate

