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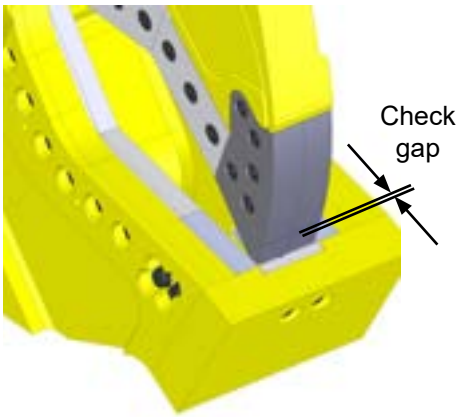
Maintenance Minute

GXT Piercing Tip Installation

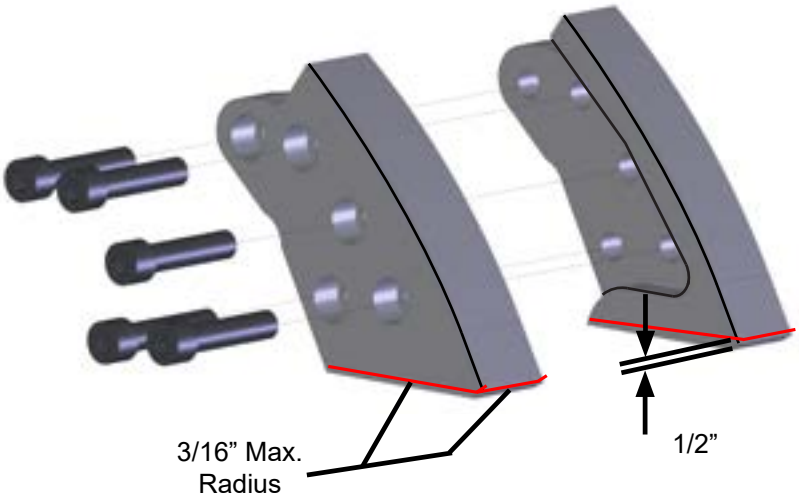
Piercing blade maintenance is crucial to productivity and safe shear operation. An improper blade gap may cause material jamming and/or blade breakage.

Use the following procedure to check for wear.



1. Slowly close jaws until the piercing blades are flush with the top edge of the razor blade.
2. Check gap with a tape measure. Acceptable gap is 5/8”.
3. Check the condition of the piercing blades with a straight edge or square.
4. Check the profile along the blades.

5. Badly worn blades must be replaced. However, slightly worn blades may be squared up with a grinder and a square. This may be repeated until a maximum of 1/2” of material is removed from the lower piercing edge.



6. Typical use requires blade replacement at approximately 200 hours; heavy piercing requires replacement at approximately 40 hours. These are general guidelines only. Replace blades based on wear not hours of operation.

7. Width of blades, top to bottom, may taper 0.060” (2 mm) total. Bottom edges may be worn to a maximum radius of 3/16”.

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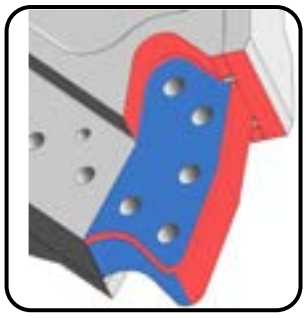
Piercing blades must fit tightly in some areas while having clearance in others. Piercing blades are made from the same material as the cutting blades to withstand the friction caused by piercing hard materials.

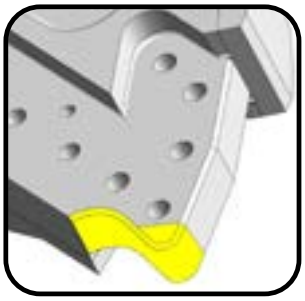
Areas Highlighted in Blue require contact fit to the upper jaw and tang to prevent shattering.

Areas Highlighted in Red require an air gap, and blades may occasionally need to be ground down to provide clearance.

Piercing blade contact with the clearance areas (red) can cause abnormal stress in the blade. This may cause the piercing and/or guide blades to crack, break or shatter.

When necessary, build up the front lower edge of the tang (areas highlighted in yellow), following the procedures in the GXT Safety and Operator's Manual. After welding, surfaces should be squared with a grinder and finished with a file and a machinist's straight edge.



It is critical that the piercing blade pocket and tang surfaces are straight and true, without dings, deformations, high or low spots, or areas that are worn away.

Piercing blade bolts must not make hard contact with the bolt holes in the upper tang. In rare cases, it has been noted that improper alignment of piercing blade bolt holes and the bolt holes in the tang can cause the piercing blades to break through the bolt holes.

When installing the piercing blades, the bolts must be freely installed by hand, not with an air impact wrench.

The bolts may start freely, but when the bolt shank, which is larger in diameter than the threads, enters the hole in the tang, the interference can cause side loading to the piercing blades. This can cause the tips to break as they try to force the holes apart, or it may force the tips to seat improperly on the tang which can also cause tip failure. This is not a common issue, but one that should be noted as part of routine tip maintenance to prevent unnecessary costs and downtime. If this situation is encountered, contact the Genesis Parts or Service departments for further instructions.

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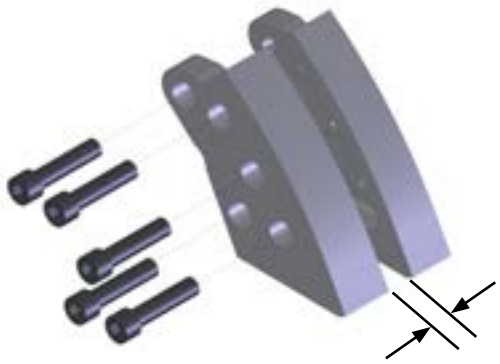
Replacement

1. Remove blades using an air-impact wrench or breaker bar and multiplier.
2. Remove dust and debris from blade seats; wipe down with a rag and solvent.
3. Lightly file deformities from blade seat edges. Do not sand or grind face of blade seats.
4. Install new, clean blades. Lubricate the threaded holes in the blade and on the bottom of the bolt head where it will contact the blade.
5. Snug lubricated blade bolts by hand to hold them in place; push blades up and into the upper and rear surfaces of the seats.
6. Torque bolts to 1/3 of the final torque value.
7. Check for firm contact against blade seats.
8. With a feeler gauge, confirm there is a gap where the blades meet. Gap width by model is shown below the graphic to the right. A very narrow gap may be confirmed by shining a flashlight from below the blades and seeing light pass through. If the gap exceeds the specified limit, call the Genesis Service Department. If no gap exists, remove blades, lightly grind facing surfaces and repeat steps 5-8.



GXT 115 - 2055: 0.002” - 0.010”

GXT 2555: 0.030” - 0.035”

9. Torque bolts to 2/3 final value, and then to final value, using a cross bolt pattern.

NOTICE

Piercing blade bolts must be lubricated and torqued as specified in the Genesis Fastener Manual.

Correct clamping force is required to keep tips from moving on their seats. Over-tightening can cause bolt shanks to stretch, losing their clamping force. Loose bolts will cause the seating areas to erode.

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