

# GXT Mobile Shear Shear Jaw Armor<sup>®</sup>

### FIELD INSTALLATION MANUAL





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## NOMENCLATURE



# NOMENCLATURE

ITEM	QTY	DESCRIPTION
1	1	Plt Frmd Shear Jaw Armor <sup>®</sup> Lower Blade Side
2	1	Plt Frmd Shear Jaw Armor <sup>®</sup> Lower Guide Side
3	1	Plt Shear Jaw Armor <sup>®</sup> Chin Front
4	1	Plt Shear Jaw Armor <sup>®</sup> Chin Top
5	1	Plt Shear Jaw Armor <sup>®</sup> Guide Blade Seat
6	1	Plt Frmd Shear Jaw Armor <sup>®</sup> Upper

## PART NUMBERS



# PART NUMBERS

	PART NUMBER								
ITEM	GXT 115	GXT 225	GXT 335	GXT 445	GXT 555	GXT 665			
1	1107458	1105490	1106912	1106595	1106470	1105891			
2	1107459	1105491	1106913	1106596	1106471	1105892			
3	1107462	1105494	1106916	1106599	1106472	1105893			
4	1107461	1105493	1106915	1106598	1106473	1105894			
5	1107460	1105492	1106914	1106597	1106474	1105895			
6	1107457	1105490	1106017	1106600	1106475	SN6651002 & 6651003: 1105896			
0	5 1107457 1105489 1106917 1106600 1106475	SN6651001 & 6651004+: 1106502							

		PART NUMBER									
ITEM	GXT 775	GXT 995	GXT 1555	GXT 2055	GXT 2555						
1	1106699	1106791	1107046	1107221	1107750						
2	0 4400700 4400700		SN15551001, 15551002 & 15551004+: 1107047*	1107222	1107751						
	1106700	1106792	SN15551003: 1107646**	1107222	1107751						
3	1106701	1106793	1107048	1107223	1107752						
4	1106702	1106794	1107049	1107224	1107753						
5	1106703	1106795	1107050	1107225	1107754						
6	1106704	1106796	1107051	1107226	1107755						

\* PN 1107047 is 3/8" thick.

\*\*PN 1107646 is 1" thick.

# **GENERAL WELDING GUIDELINES**

When welding around blade seats or the piercing tip tang area, maintain the factory machined seat radius. If the rounded grooves are welded up, use a die grinder with a carbide tool to recut these areas to their original profile. Leaving a squared edge will eventually cause structural cracking. The radius provides a broader area to absorb structural stress.

### Welding Ground Clamp

Disconnect all battery ground cables or shut off master battery switch, if equipped. Failure to do so may cause excavator electrical problems, including permanent damage to onboard computer systems.

Connect ground clamp as close as possible to the area being welded without allowing current to pass through the pivot group, cylinder pin, cylinder, swivel, motor, gearbox or slewing ring.

If you are welding on the lower jaw, connect weld clamp to the lower. If you are welding on the upper jaw, connect to the upper but not to the cylinder clevis. If needed, weld a piece of steel to the area for the grounding clamp and cut the piece off when welding is completed.

### Welding Rules

Before you begin:

- Remove adjacent blades, as preheating and welding may cause blade damage.
- Wearing an approved respirator, grind the area to clean it, removing all existing hard-surfacing.
- Preheat area to 350° F (177° C). Maintain this temperature throughout the procedure. Do not exceed 450° F (232° C) interpass temperature.

During welding:

- Peen each weld pass to relieve stress and harden the welds.
- Do not undercut the ends of the welds.
- Do not start or stop welds directly above a bolt hole or in the apex of the jaw.

After welding maintenance is complete:

- Cover the area with a heat blanket and allow it to cool slowly, approximately eight hours.
- Do not put the shear into operation until the welds have been allowed to cool.

### Prepare the Surface

Remove all existing hard-surfacing from the upper and lower jaw areas to which the Jaw Armor is to be applied.

If required, build-up all areas of the upper and lower jaw parent material so they are flush with the top of the new blades.

The outer edge of these areas must be squared up The mating surfaces of the upper and lower jaws must also be built up to conform to the Jaw Armor profile.

## WELDING PRE-HEAT AND POST-HEAT

### Welding Pre-Heat

It is critical that the parent material be **pre-heated** to 350° F (177° C) before welding the Shear

Jaw Armor<sup>®</sup>. For good results, it is essential for the heating to be uniform around the joint area. The pre-heated area should extend a minimum of 6 inches in any direction away for the weld joint.

To ensure the proper temperature has been reached, using **Temperature Indicating Crayons** or an **Infrared Thermometer** is recommended.

### Welding Post-Heat

Post-heating is critical to relieve internal stress. It is important to slow



### Side View



ITEM	GXT 115	GXT 225	GXT 335	GXT 445	GXT 555	GXT 665
A	1/4"	1/4"	1/4"	1/4"	3/8	3/8
В	1/4"	1/4"	1/4"	3/8"	3/8	3/8
С	9/16"	9/16"	9/16"	5/8"	3/4	3/4
D	3/8"	3/8"	3/8"	3/8"	1/2	1/2
E	3/8"	3/8"	3/8"	3/8"	3/8	3/8
F	3/8"	3/8"	3/8"	3/8"	3/8	3/8

ITEM	GXT 775	GXT 995	GXT 1555	GXT 2055	GXT 2555
A	3/8"	3/8"	3/8"	3/8"	3/8"
В	3/8"	3/8"	1/2"	1/2"	1/2"
С	3/4"	11/16"	13/16"	13/16"	15/16"
D	1/2"	1/2"	1/2"	1/2"	1/2"
E	3/8"	1/2"	1/2"	1/2"	1/2"
F	3/8"	1/2"	1/2"	1/2"	1/2"

### **Front View**



**Note:** Extend welds 1.50" past the Shear Jaw Armor<sup>®</sup>. Then grind weld ends smooth and taper to parent metal. See Typical Extend Welds on page 12 page 17.

## PLUG WELDING GXT 1555, 2055 & 2555 ONLY



ITEM	GXT 115	GXT 225	GXT 335	GXT 445	GXT 555	GXT 665
A	1/4"	1/4"	1/4"	1/4"	3/8	3/8
В	1/4"	1/4"	1/4"	3/8"	3/8	3/8
С	9/16"	9/16"	9/16"	5/8"	3/4	3/4
D	3/8"	3/8"	3/8"	3/8"	1/2	1/2
E	3/8"	3/8"	3/8"	3/8"	3/8	3/8
F	3/8"	3/8"	3/8"	3/8"	3/8	3/8

ITEM	GXT 775	GXT 995	GXT 1555	GXT 2055	GXT 2555
A	3/8"	3/8"	3/8"	3/8"	3/8"
В	3/8"	3/8"	1/2"	1/2"	1/2"
С	3/4"	11/16"	13/16"	13/16"	15/16"
D	1/2"	1/2"	1/2"	1/2"	1/2"
E	3/8"	1/2"	1/2"	1/2"	1/2"
F	3/8"	1/2"	1/2"	1/2"	1/2"

### **Detail Views**



ITEM	GXT 115	GXT 225	GXT 335	GXT 445	GXT 555	GXT 665
A	1/4"	1/4"	1/4"	1/4"	3/8	3/8
В	1/4"	1/4"	1/4"	3/8"	3/8	3/8
С	9/16"	9/16"	9/16"	5/8"	3/4	3/4
D	3/8"	3/8"	3/8"	3/8"	1/2	1/2
E	3/8"	3/8"	3/8"	3/8"	3/8	3/8
F	3/8"	3/8"	3/8"	3/8"	3/8	3/8

ITEM	GXT 775	GXT 995	GXT 1555	GXT 2055	GXT 2555
A	3/8"	3/8"	3/8"	3/8"	3/8"
В	3/8"	3/8"	1/2"	1/2"	1/2"
С	3/4"	11/16"	13/16"	13/16"	15/16"
D	1/2"	1/2"	1/2"	1/2"	1/2"
E	3/8"	1/2"	1/2"	1/2"	1/2"
F	3/8"	1/2"	1/2"	1/2"	1/2"

## TYPICAL EXTEND WELDS

Extend welds 1.50" past the Shear Jaw Armor<sup>®</sup>. Then grind weld ends smooth and taper to parent metal.



### Chin Front and Chin Top

Place **Item 3** against the front of the chin while maintaining dimensions "F" and clamp in place. Center **Item 4** from side to side and maintain dimension "D". Use spacers if necessary to hold the dimension required between the plates to achieve the correct size welds.



### Lower Blade Side

Set **Item 1** onto the lower blade side, hold the offset dimension (*See Figure 18b*). Clamp down flush with the profile and tack weld into position.





### Lower Guide Side and Guide Blade Seat

Set **Item 2** onto the lower guide side and hold the offset dimension (*See Figure 19b*). Clamp down flush with the profile and tack weld into position. Set **Item 5** onto the guide blade seat and hold the offset dimension (*See Figures 19a and b*). Clamp down and tack weld into position.



### <u>Upper</u>

Place **Item 6** at the bottom of the upper jaw (*See Figure 20a*). Make sure the plate has the required width on all sides for the correct size weld. Clamp flush to the jaw profile and tack weld in place.



## NO WELD AREAS



## **ROUTINE MAINTENANCE**

At the 4- and 8-hour maintenance intervals it is important to check the Jaw Armor welds for cracking and wear. Any cracked or worn thin welds need to be addressed as soon as possible to keep the plates from being torn loose, bent or lost. Cracked or worn welds should be ground or arc gouged and re-welded using E7018 stick or equivalent wire. Follow all weld procedures and precautions found in your Genesis GXT Mobile Shear Safety & Operator's Manual.

Pay special attention to higher wear areas such as the top of the chin plate in front of the razor blade (*Figure 22a*), the area behind the piercing tips on the bottom of the upper jaw (*Figure 23a*) and the inside corner where Items 3 and 4 meet (*Figure 23b*), as these are areas where the welds are most subject to wear.

Contact the Genesis Service Department at 715-395-5252 with any questions.





## **ROUTINE MAINTENANCE**



Figure 23a



Figure 23b



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