GENESIS®
The Promise of Performance.

GXP Mobile Shear
Shear Jaw Armor®

FIELD INSTALLATION MANUAL

SHEAR JAW ARMOR®

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An NPK Company

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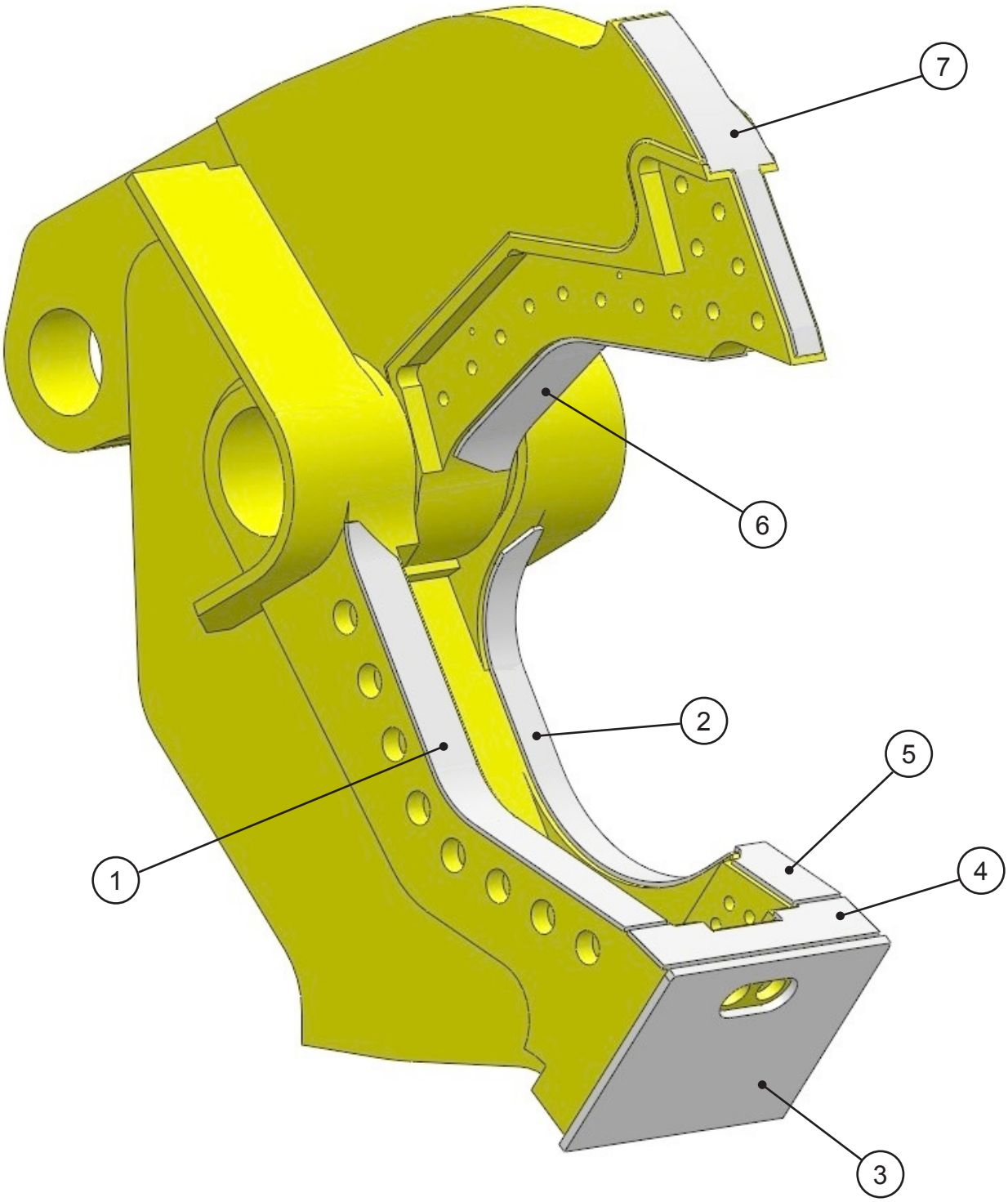
NOMENCLATURE



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NOMENCLATURE

ITEM	QTY	DESCRIPTION
1	1	Plt Frmd Shear Jaw Armor® Lower Blade Side
2	1	Plt Frmd Shear Jaw Armor® Lower Guide Side
3	1	Plt Shear Jaw Armor® Chin Front
4	1	Plt Shear Jaw Armor® Chin Top
5	1	Plt Shear Jaw Armor® Guide Blade Seat
6	1	Plt Frmd Shear Jaw Armor® Upper
7	1	Plt Frmd Shear Jaw Armor® Upper Front

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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.

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WELDING PRE-HEAT AND POST-HEAT

Welding Pre-Heat

It is critical that the parent material be **pre-heated** to 350º F (177º C) before welding the Shear Jaw Armor®. 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 the cooling process down as slowly as possible. A **weld blanket** works well. If not available, fiber-glass insulation wrapped generously around the weldment is a good substitute.

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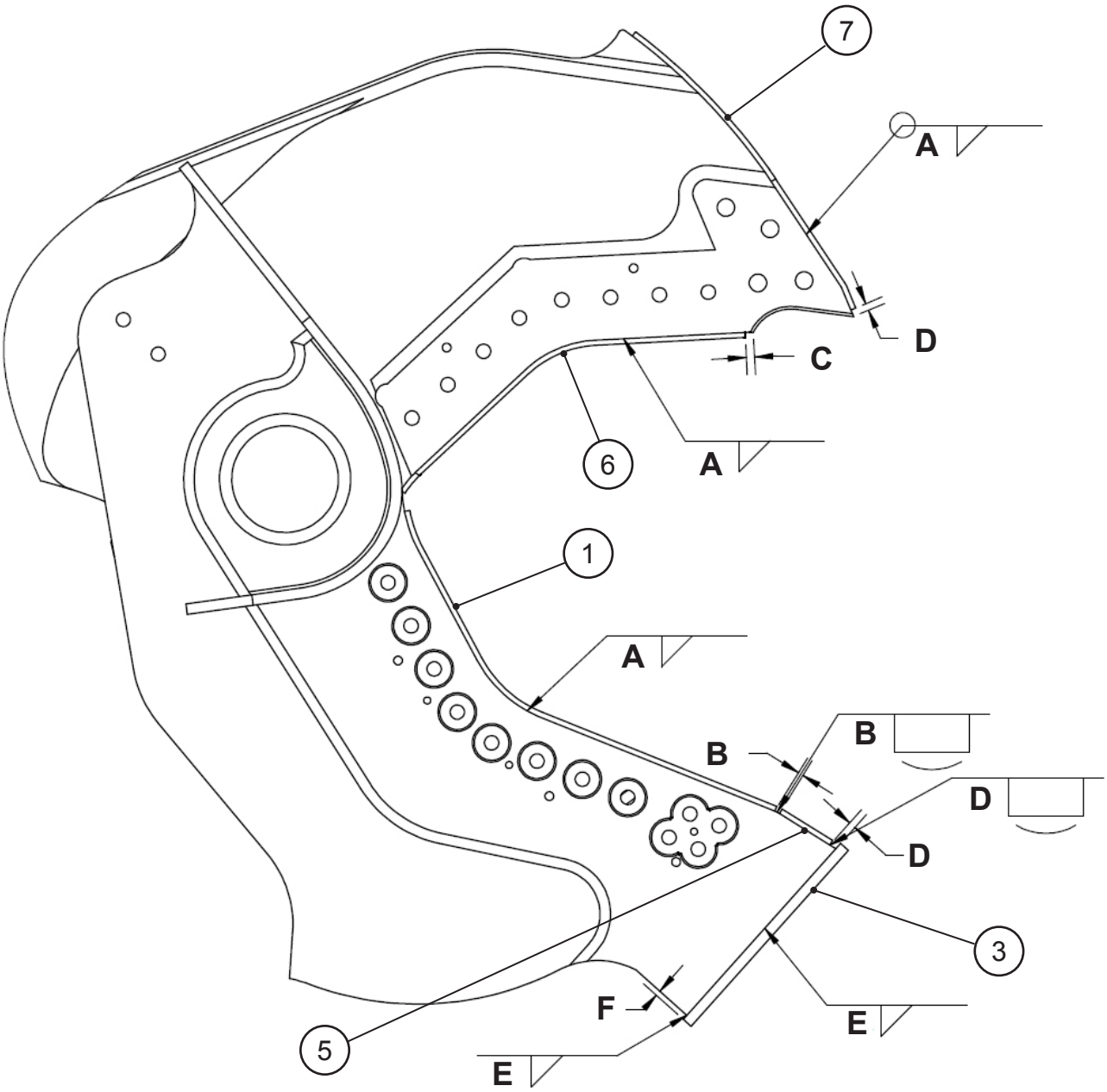
DIMENSION AND WELDING SIZE KEY SHEET

Side View



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DIMENSION AND WELDING SIZE KEY SHEET

ITEM	GXP 200	GXP 300	GXP 400	GXP 440	GXP 500	GXP 660
A	1/4”	1/4”	1/4”	3/8”	3/8”	3/8”
B	3/8”	3/8”	3/8”	3/8”	3/8”	3/8”
C	0.60”	0.60”	0.60”	0.60”	0.70”	0.71”
D	3/8”	3/8”	3/8”	1/2”	1/2”	1/2”
E	1/4”	3/8”	3/8”	3/8”	3/8”	3/8”
F	3/8”	3/8”	3/8”	3/8”	3/8”	3/8”

ITEM	GXP 700	GXP 990	GXP 1000	GXP 1200	GXP 1500	GXP 2500
A	3/8”	3/8”	3/8”	3/8”	3/8”	3/8”
B	3/8”	3/8”	3/8”	3/8”	3/8”	3/8”
C	0.70”	0.60”	0.70”	0.70”	0.71”	0.71”
D	1/2”	1/2”	1/2”	1/2”	1/2”	1/2”
E	3/8”	3/8”	3/8”	1/2”	1/2”	1/2”
F	3/8”	3/8”	3/8”	1/2”	1/2”	1/2”

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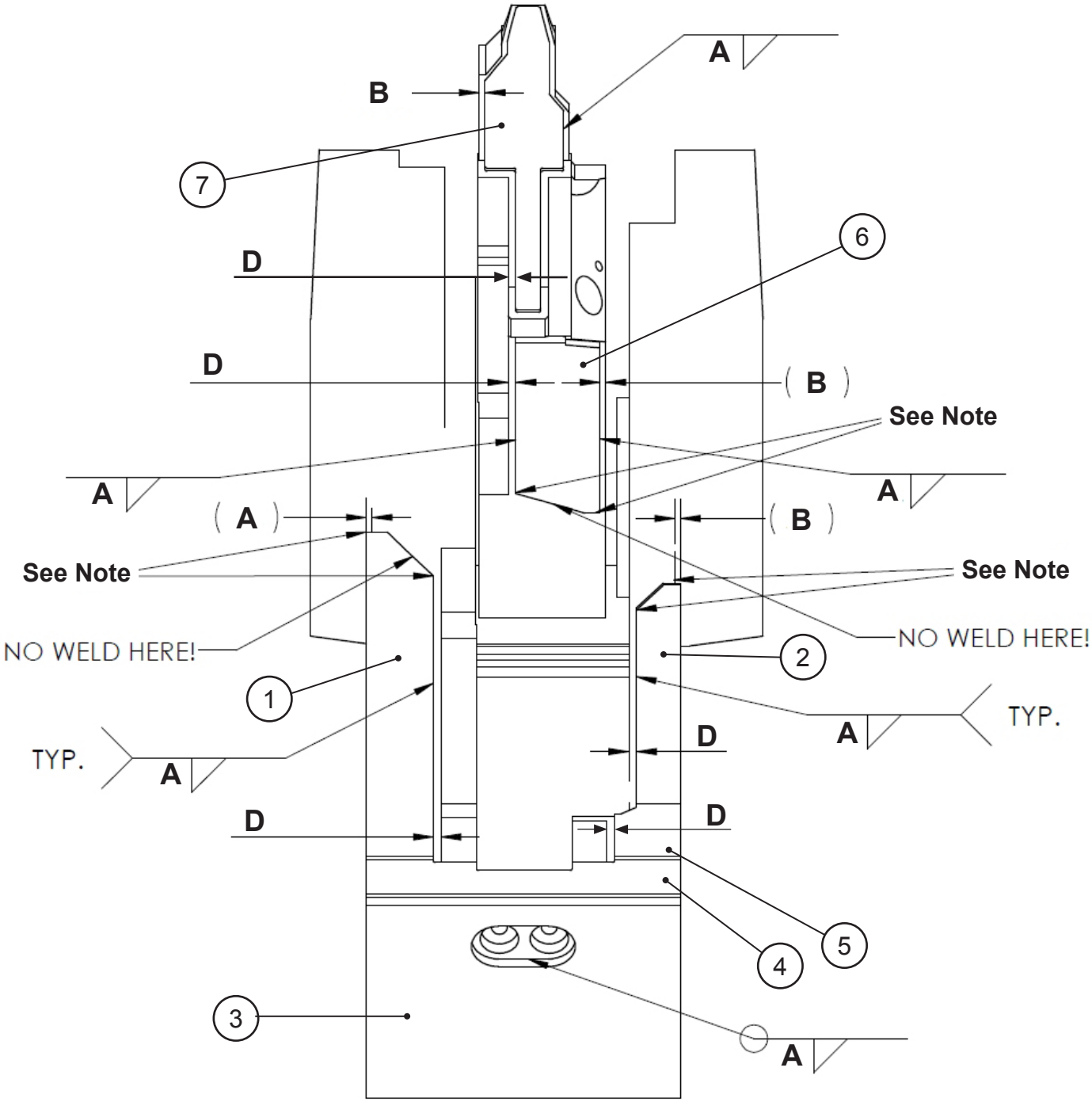
DIMENSION AND WELDING SIZE KEY SHEET

Front View



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DIMENSION AND WELDING SIZE KEY SHEET

ITEM	GXP 200	GXP 300	GXP 400	GXP 440	GXP 500	GXP 660
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F	3/8”	3/8”	3/8”	3/8”	3/8”	3/8”

ITEM	GXP 700	GXP 990	GXP 1000	GXP 1200	GXP 1500	GXP 2500
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E	3/8”	3/8”	3/8”	1/2”	1/2”	1/2”
F	3/8”	3/8”	3/8”	1/2”	1/2”	1/2”

Note: Extend welds 1.50” past the Shear Jaw Armor®. Then grind weld ends smooth, tapered to parent material.

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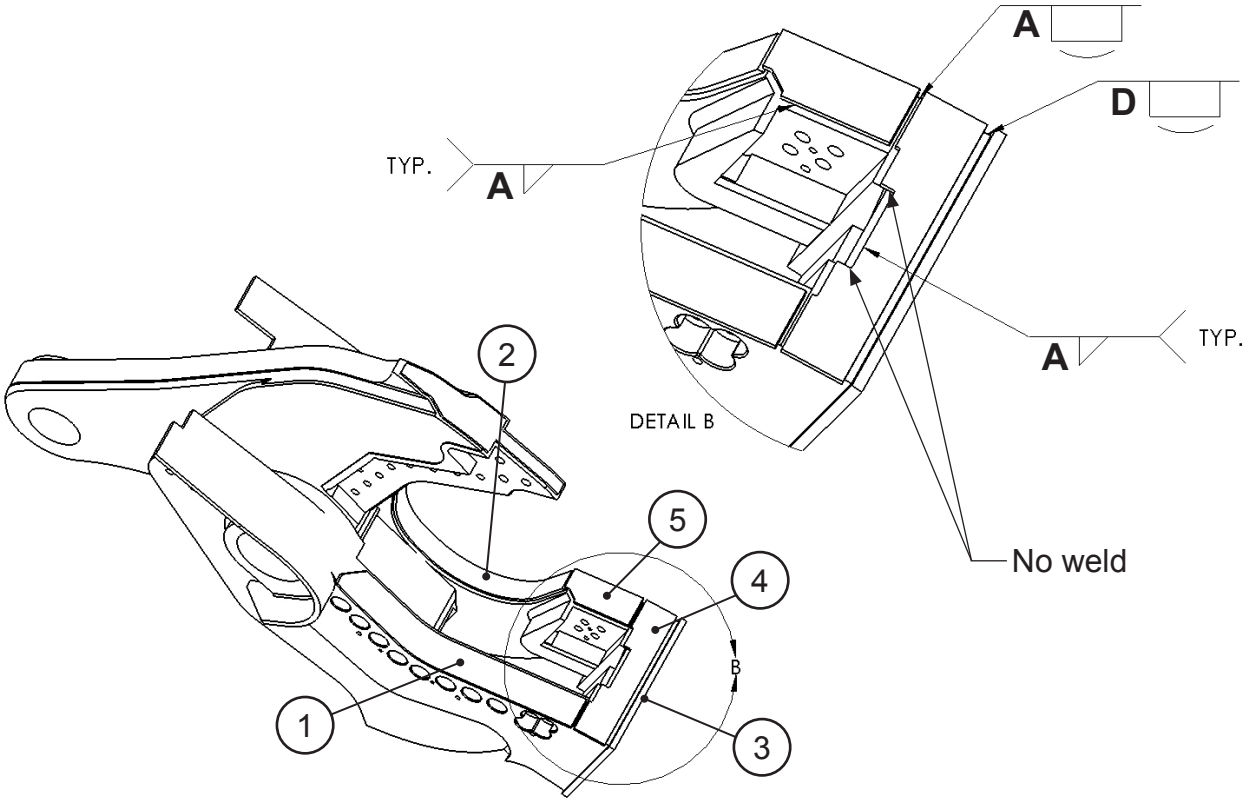
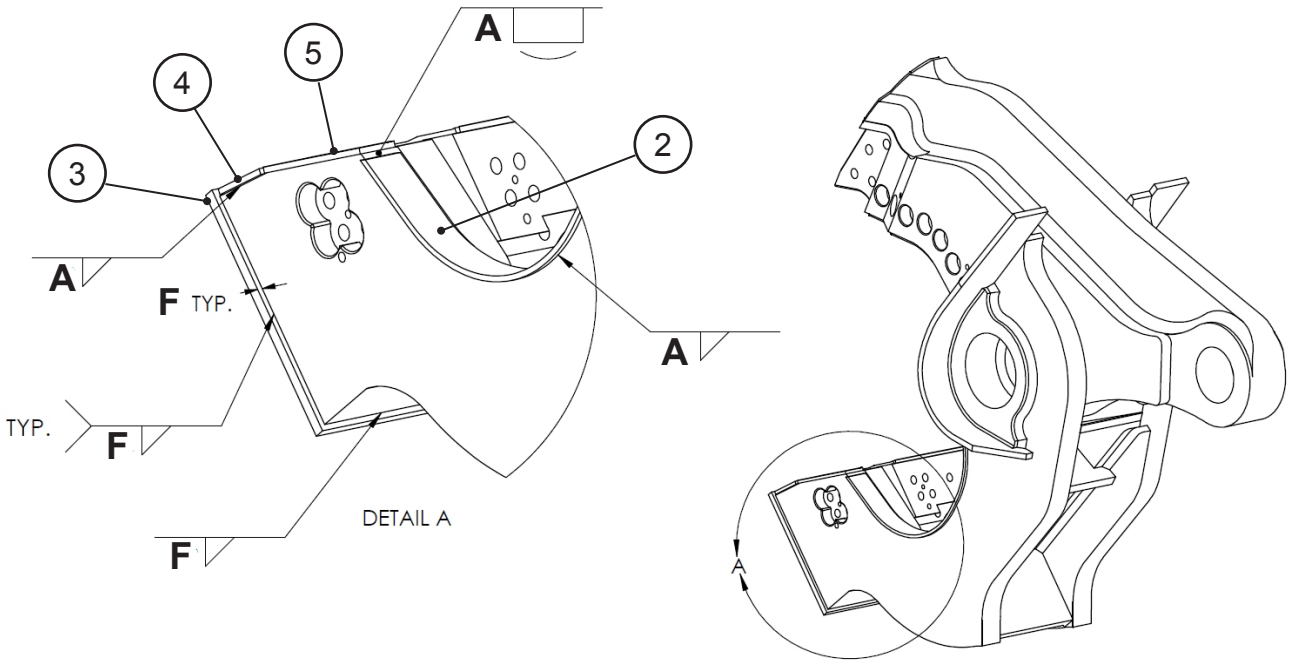
DIMENSION AND WELDING SIZE KEY SHEET

Detail Views





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DIMENSION AND WELDING SIZE KEY SHEET

ITEM	GXP 200	GXP 300	GXP 400	GXP 440	GXP 500	GXP 660
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ITEM	GXP 700	GXP 990	GXP 1000	GXP 1200	GXP 1500	GXP 2500
A	3/8”	3/8”	3/8”	3/8”	3/8”	3/8”
B	3/8”	3/8”	3/8”	3/8”	3/8”	3/8”
C	0.70”	0.60”	0.70”	0.70”	0.71”	0.71”
D	1/2”	1/2”	1/2”	1/2”	1/2”	1/2”
E	3/8”	3/8”	3/8”	1/2”	1/2”	1/2”
F	3/8”	3/8”	3/8”	1/2”	1/2”	1/2”

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SET-UP AND TACK PROCEDURE

Chin Front and Chin Top

Place **Item 3** against the front of the chin while maintaining dimensions “F” and clamp in place *(See Figures 14a, 15a & 15b)*. Center **Item 4** from side to side and maintain dimension “D”. Use spacers *(See Figure 15a)* if necessary to hold the dimension required between the plates to achieve the correct size welds *(See Figures 14a & 14b)*.

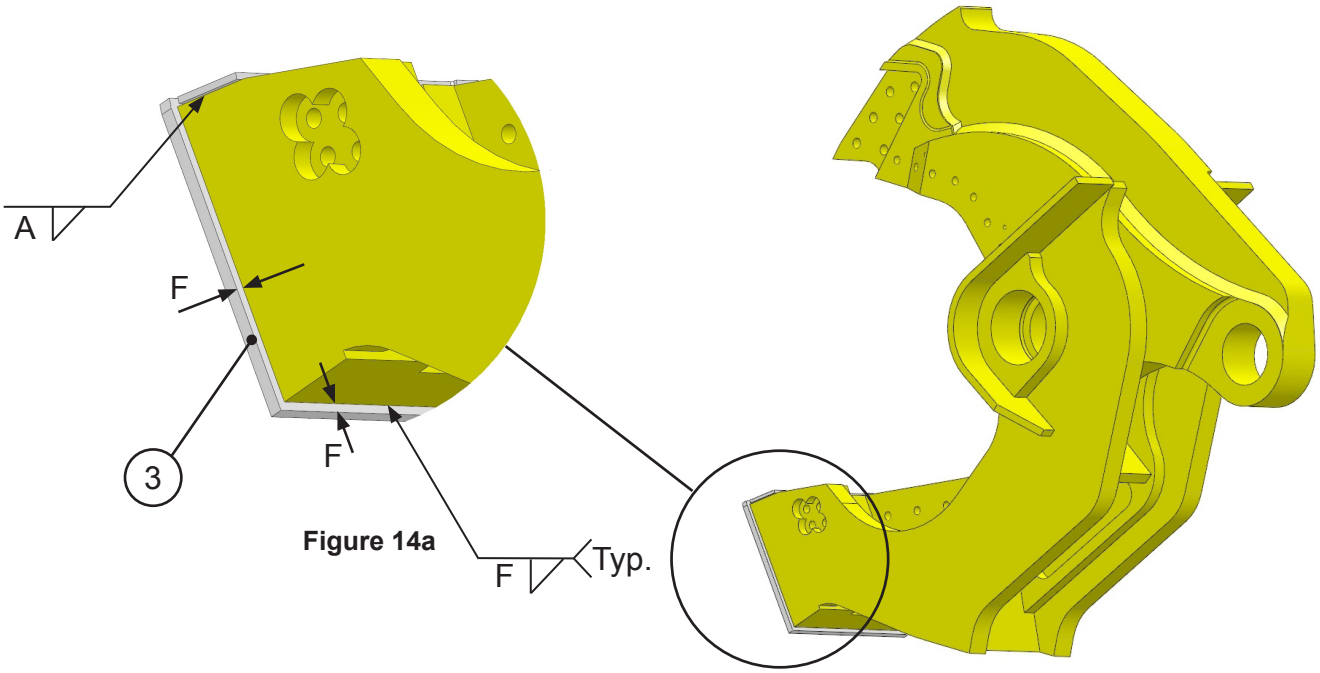

Figure 14a

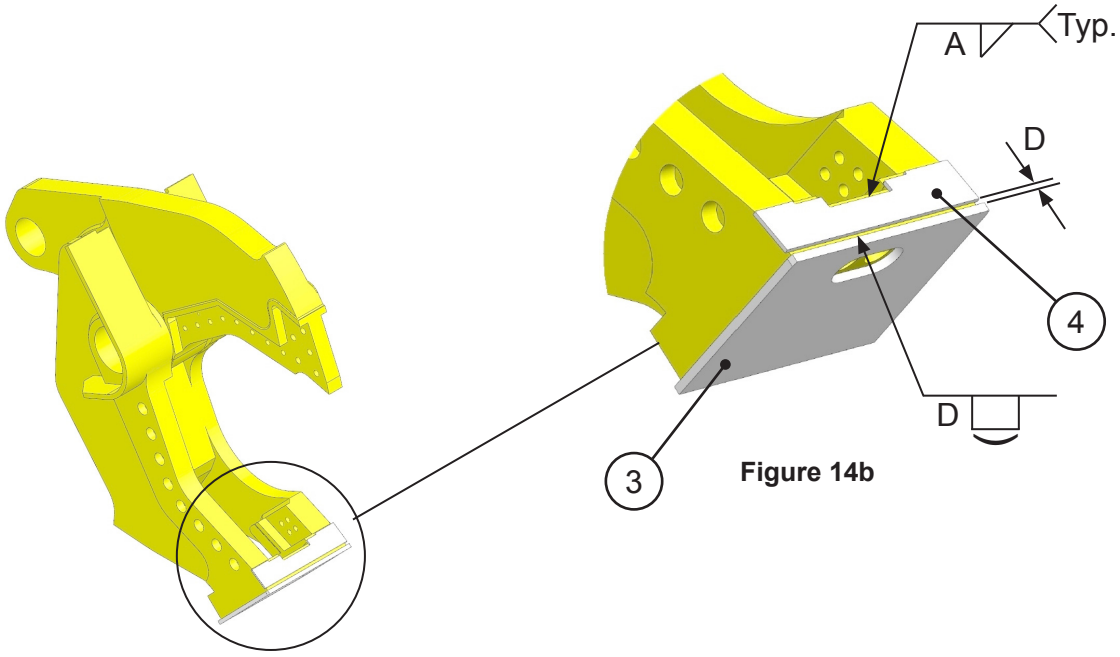

Figure 14b

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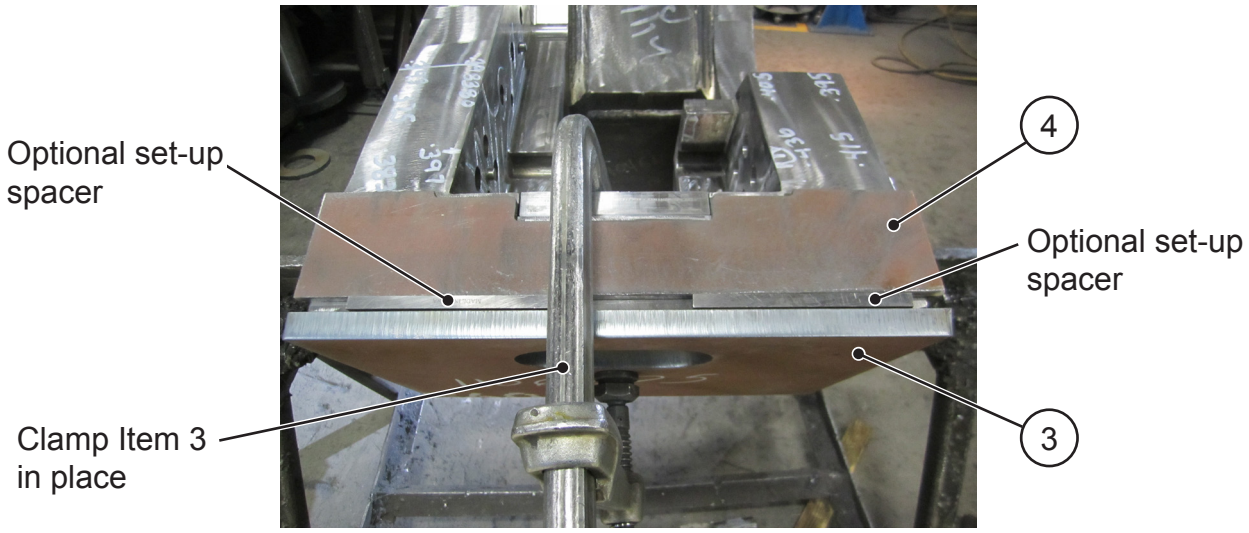

Figure 15a

Figure 15b

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SET-UP AND TACK PROCEDURE

Lower Blade Side

Set **Item 1** onto the lower blade side, hold the offset dimension *(See Figure 16d)*. Clamp down flush with the profile and tack weld into position.

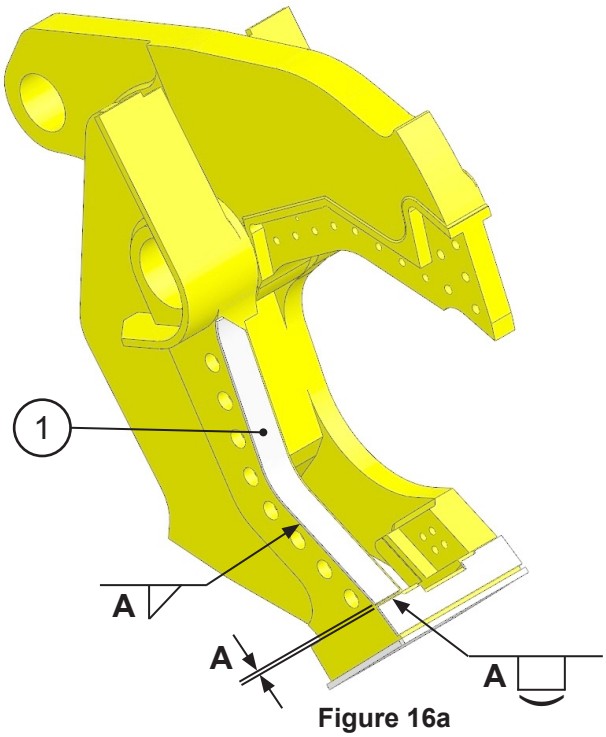

Figure 16a

Extend welds 1.50” past the Shear Jaw Armor®. Then grind weld ends smooth and taper to parent metal.

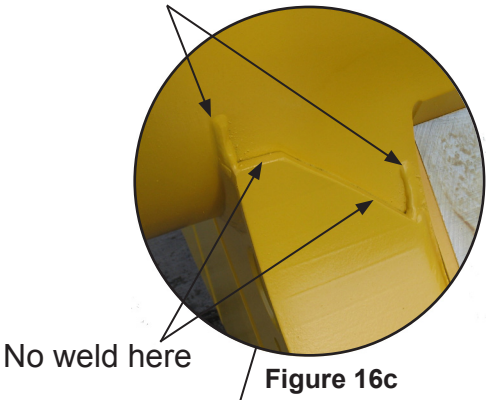

Figure 16c

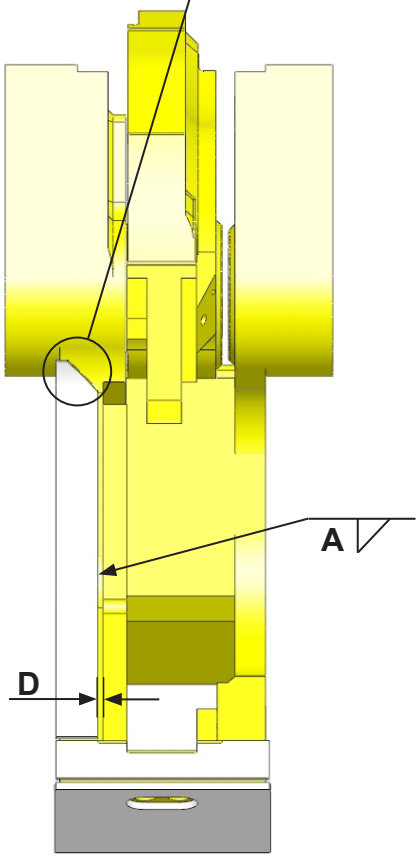

Figure 16b

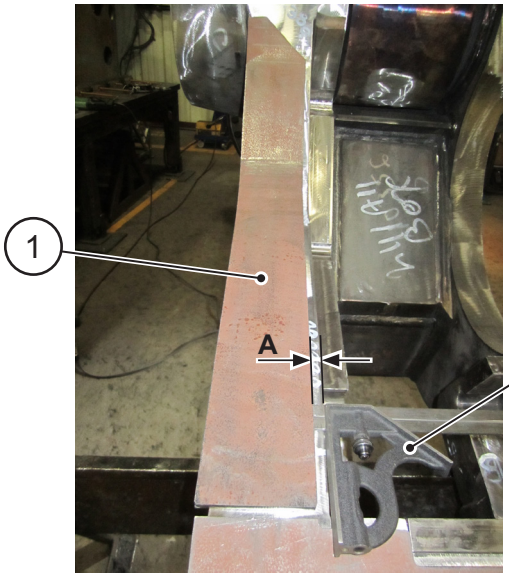

Figure 16d

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SET-UP AND TACK PROCEDURE

Lower Guide Side and Guide Blade Seat

Set **Item 2** onto the lower guide side and hold the offset dimension *(See Figure 17b)*. 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 17a and b).* Clamp down and tack weld into position.

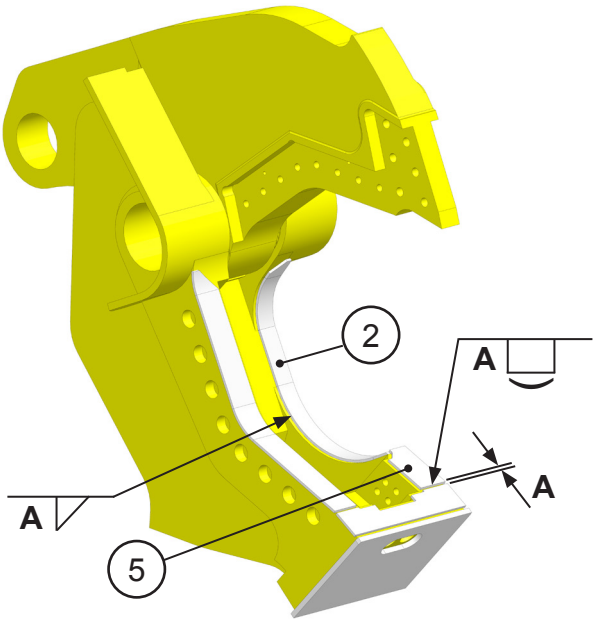

Figure 17a

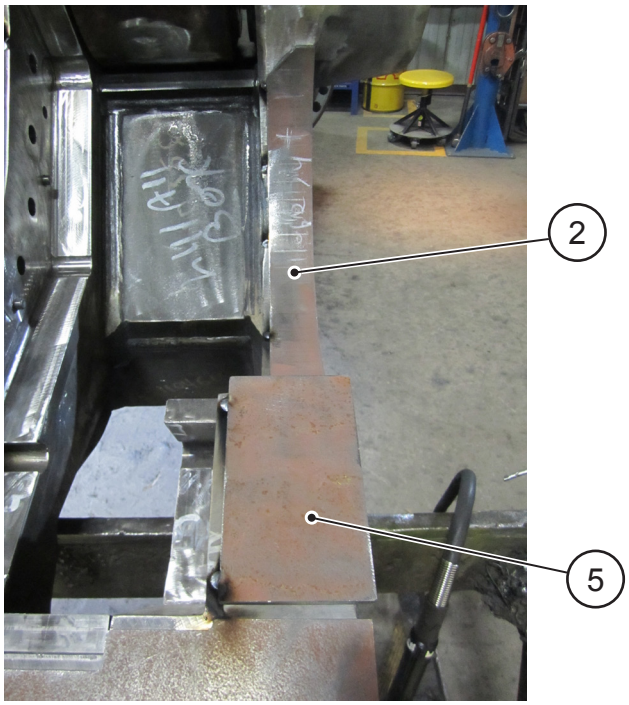

Figure 17d

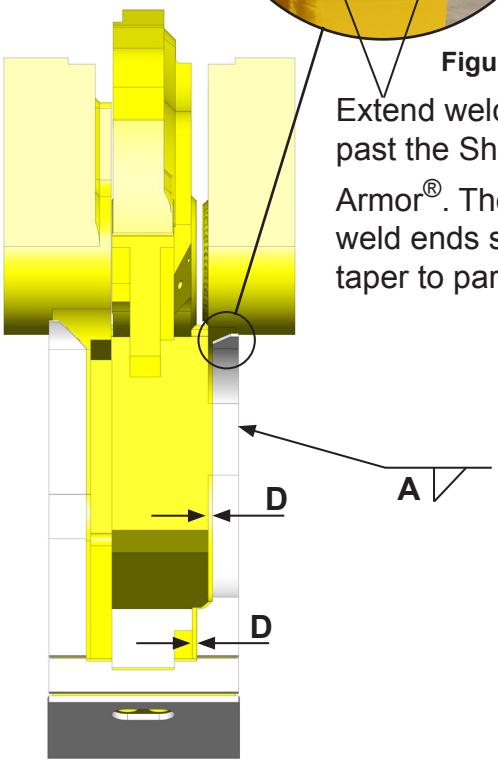

Figure 17b

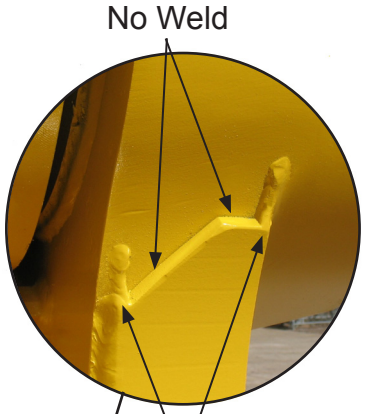

Figure 17c

Extend welds 1.50” past the Shear Jaw Armor®. Then grind weld ends smooth and taper to parent metal.

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SET-UP AND TACK PROCEDURE

Upper

Place **Item 6** at the bottom of the upper jaw *(See Figure 18a)*. 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.

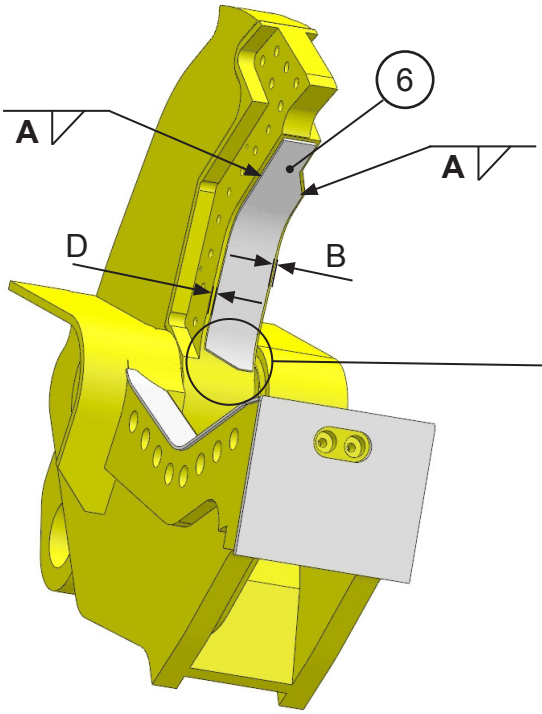

Figure 18a

Extend welds 1.50” past the Shear Jaw Armor®. Then grind weld ends smooth and taper to parent metal.

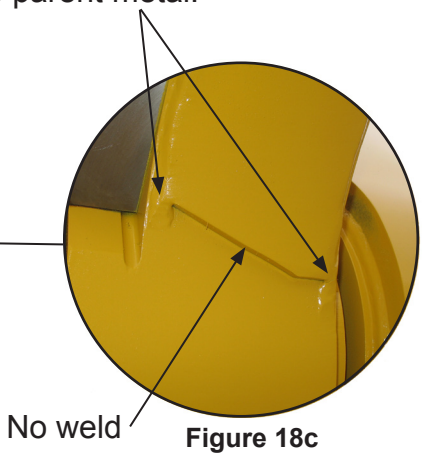

Figure 18c

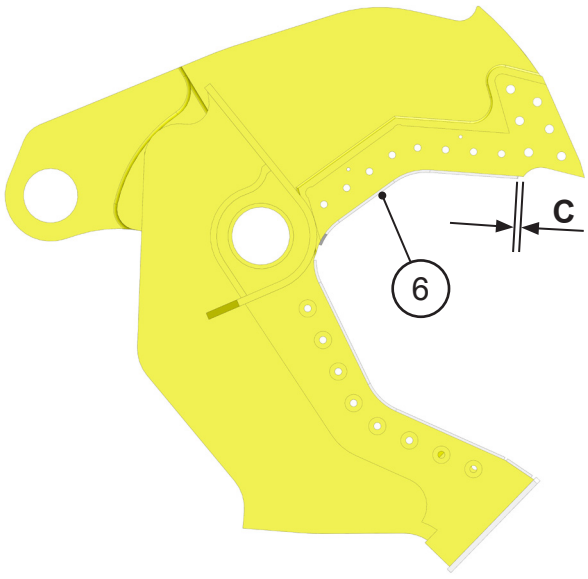

Figure 18b

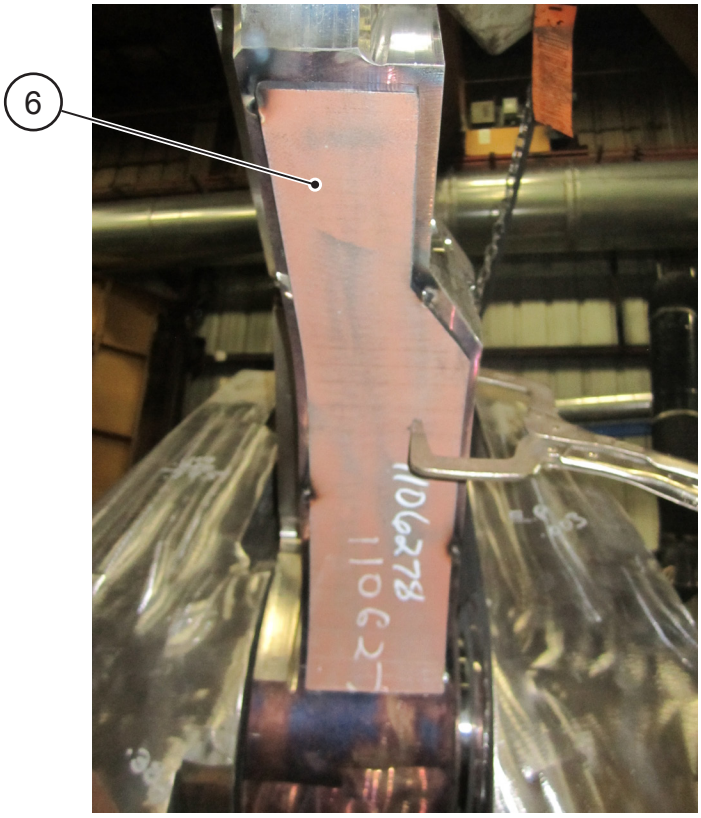

Figure 18d

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SET-UP AND TACK PROCEDURE

Upper Front

Place **Item 7** on the top of the upper jaw *(See Figure 19a & 19b)*. 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.

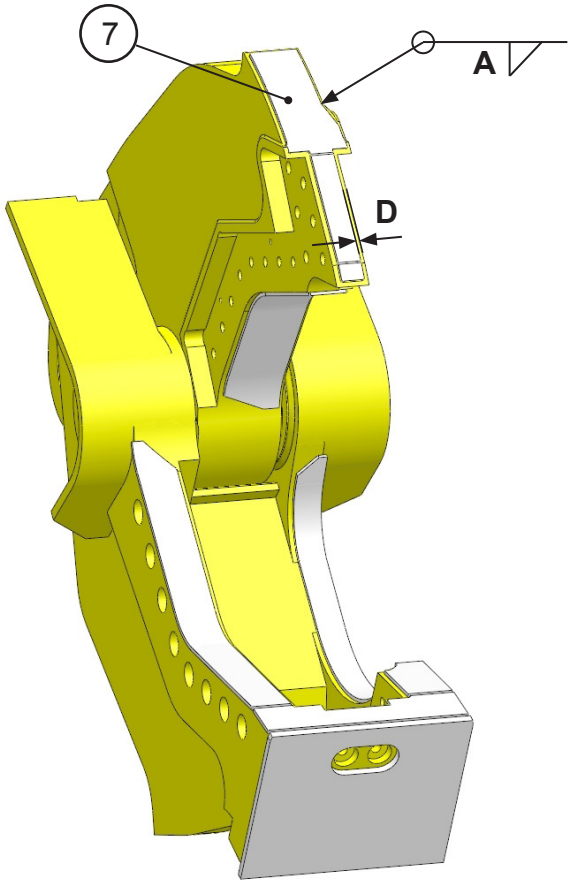

Figure 19a

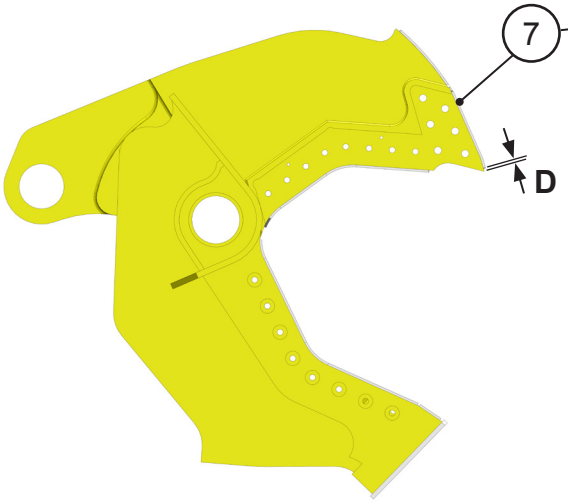

Figure 19b

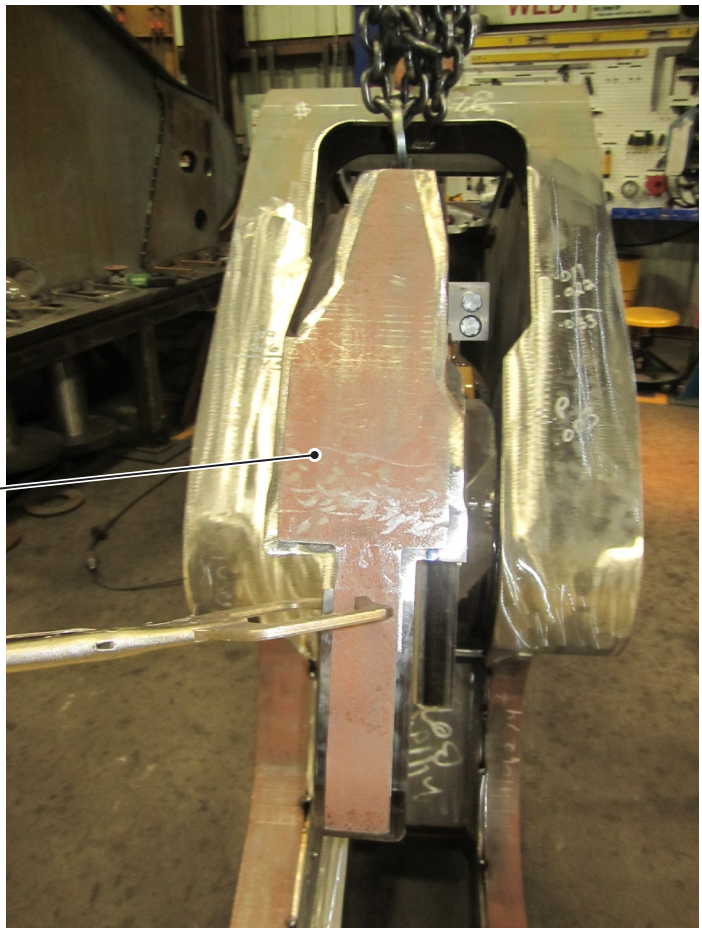

Figure 19c

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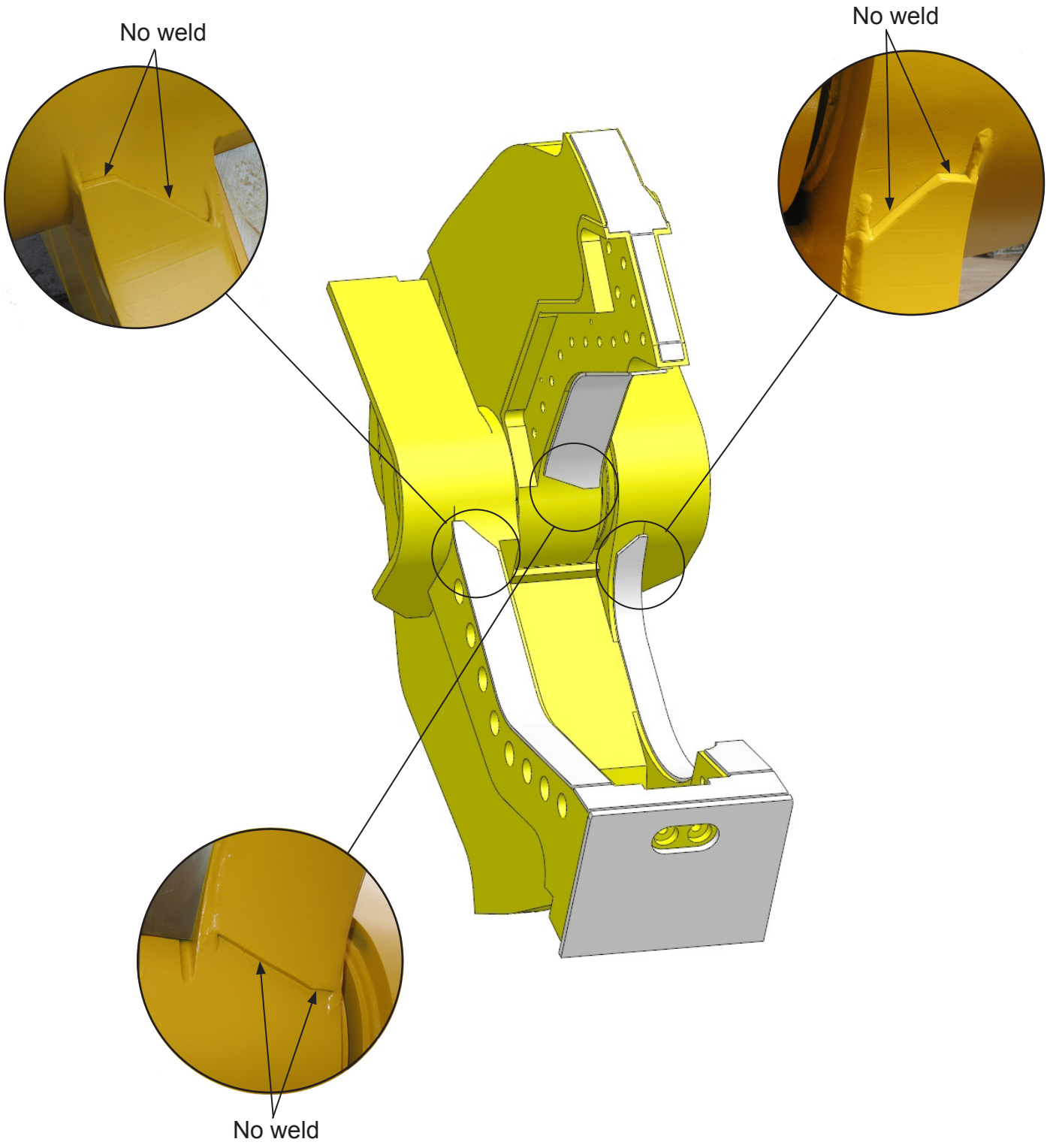
NO WELD AREAS



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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 GXP Mobile Shear Safety, Operator's and Parts 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 between the piercing tips on the front of the upper jaw *(Figure 22b)*, the area above the piercing tips on the front of the upper jaw *(Figure 22c)*, 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.

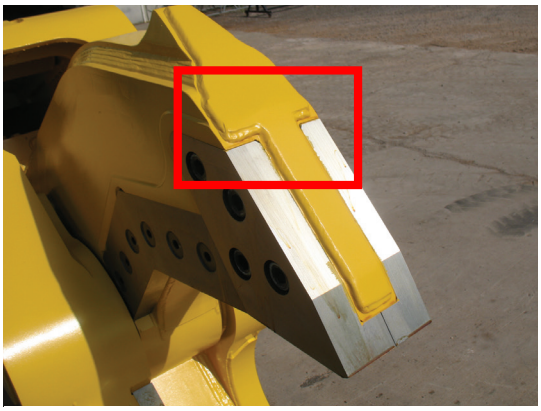

Figure 22c

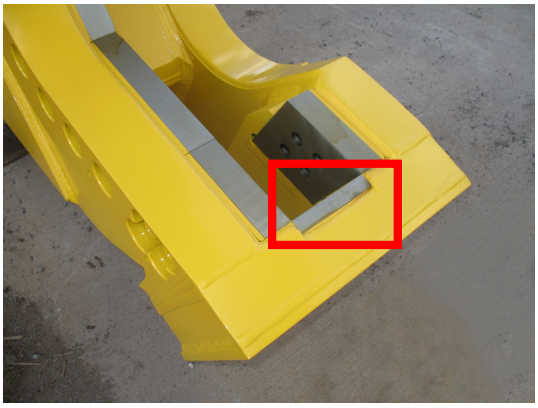

Figure 22a

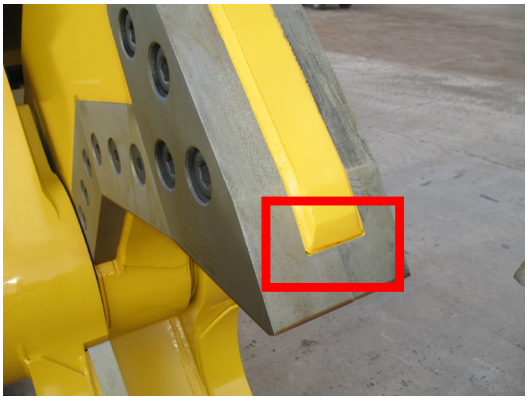

Figure 22b

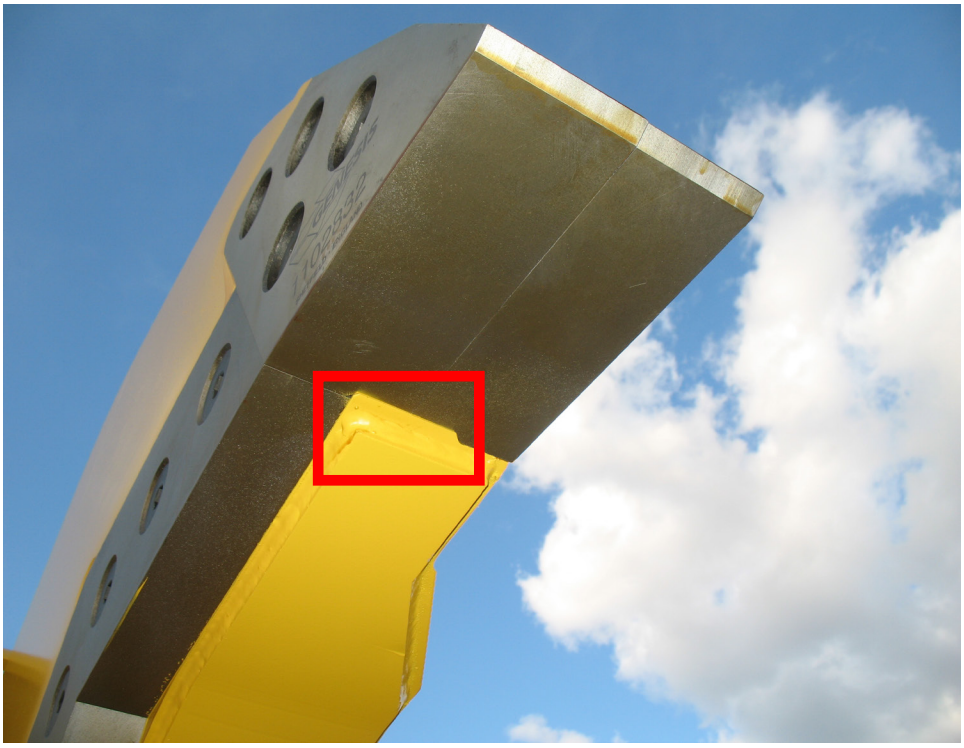

Figure 23a

Figure 23b

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