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INS.2.3.3

RIPMET Weld-on Nose WN

Installation procedure

DISCLAIMER

Liability: To ensure the correct use and handling of the MTG products without risk, please carefully read the corresponding service instructions set out on the MTG website. MTG will not be held liable for damages, loss, injury, or death arising from incorrect use or failure to heed the provisions of this guide. Similarly, MTG will not be held liable for damages caused due to the faulty installation or handling of its products. MTG likewise declines all liability for recommendations related to the use or handling of MTG products set out in documents not expressly authorized by MTG.

1. SAFETY

The practices described in this manual can be taken as guidelines for operating safely in many conditions and in addition to the safety standards that are current and enforceable in your area or region.

Your safety and the safety of third parties is the result of putting into practice your knowledge of the correct operational procedures.

Attention, when performing the work described in these instructions, always work safely and use the personal protection elements required to minimize or avoid injury. Always wear:

HARD HAT | SAFETY GLASSES | EAR PROTECTION | STEEL TOED BOOTS | PROTECTION GLOVES

To avoid eye injury, always wear safety goggles or a protective mask when using any equipment, hammer or similar tool. When equipment is under pressure or when objects are struck, chips or other debris can be thrown out. Make sure no one gets hurt by the debris that is fired before applying pressure or hitting an object. Wear eye protection that complies with ANSI Z87.1 and OSHA standards. Also wear hearing protection and gloves.

Lifting a heavy object can cause serious or fatal injury. DO NOT exceed the maximum rated capacity of lifting and positioning devices: Stay away from the area under a suspended load.

Make sure that the chain is not damaged and that the load is always balanced.

LIFTING LUG

2. WELDING

Following is a quick reference on consumables that can be used to weld MTG products. For a complete reference on welding procedures, refer to the document entitled "General welding recommendations".

WELDING UNALLOYED FILLER CONSUMABLES

PROCESS	EN CLASS	AWS CLASS
SMAW	EN ISO 2560-S E42X	E70X ACCORDING TO A5.1 OR EQUIVALENT UNDER A5.5
GMAW	EN ISO 14341-A G42X	E70C-X ACCORDING TO A5.18 OR EQUIVALENT UNDER A5.28
	EN ISO 14341-A G46X	E70S-X ACCORDING TO A5.18 OR EQUIVALENT UNDER A5.28
FCAW	EN ISO 16834-A T42X	E7XT-X ACCORDING TO A5.20 OR EQUIVALENT UNDER A5.29

WELDING AUSTENITIC STAINLESS FILLER CONSUMABLES

PROCESS	AWS CLASS
SMAW	E307-X ACCORDING TO A5.4
GMAW	ER307T-X ACCORDING TO A5.22
	ER307 ACCORDING TO A5.9
FCAW	307-X ACCORDING TO A5.22

NOTE: "X" MAY STAND FOR ONE OR SEVERAL CHARACTERS

3. SPECIFIC WELDING RECOMMENDATIONS

Tubular thread (Flux Core) **should be used with certified low hydrogen content.**

Recommended maximum diameter: 2.4 mm / 0.09 inches. Manufacturer recommendations should be followed:

Tubular thread recommended:

- **ASME/AWS: E 70 T1** (Rutile type tubular thread)
- **ASME/AWS: E 70 T5** (Basic tubular thread with high mechanical properties)
- **DIN: SG B1 C 5254** (DIN 85591 standard)

Gas mixture Ar + 25% CO2 should be used. You should specify that you cannot have any humidity. Maximum recommended flow would be 16.52 l/m.

4. IMPORTANT

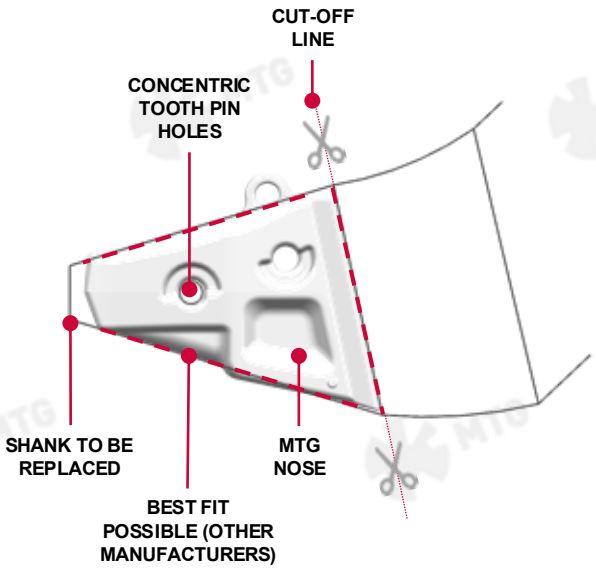
Please read the entire document before starting any operation as there may be some steps that require prior checks/operations.

5. INSTALLATION PROCEDURE

5.1 WELDING PREPARATION WHEN THE ORIGINAL NOSE IS MAINTAINED

5.1.1 Place the MTG Systems RipMet nose on the shank in the same original position. Tooth pin holes must match when replacing a CAT* nose. For other manufacturers, find the best fit possible between nose profiles.

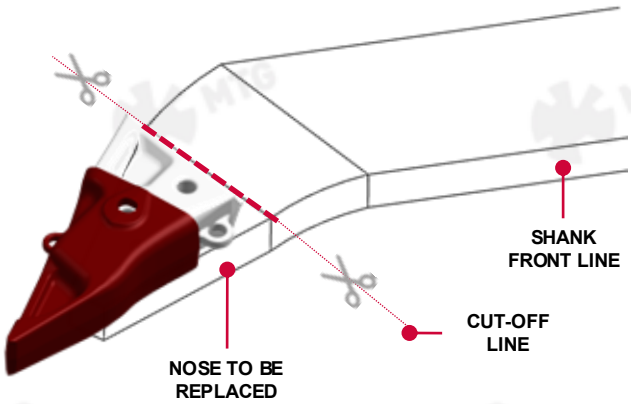
5.1.2 Draw the resulting cut-off line on the shank.

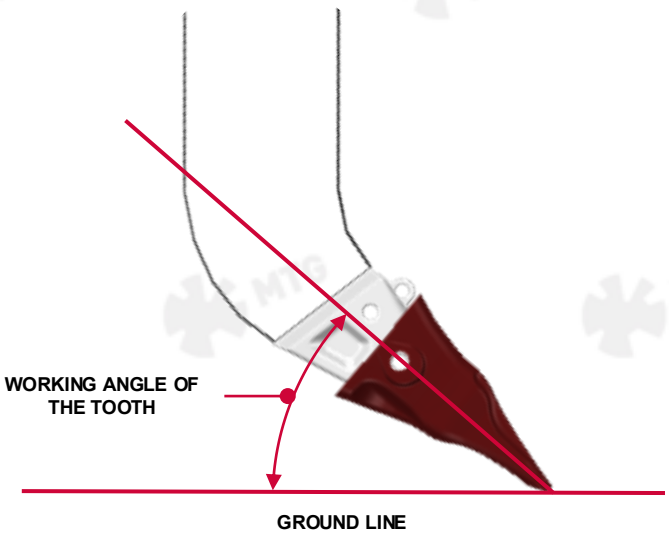


5.1.3 Preheat the area to be cut to a temperature between 175ºC and 200ºC (347ºF and 392ºF) and cut through the line. Without allowing the parts cooling down, perform the welding chamfer similar to that of the MTG Systems RipMet nose.

5.2 WELDING PREPARATION WHEN THE ORIGINAL NOSE/ ADAPTER IS NOT MAINTAINED

5.2.1 Place the tooth/nose set on the shank, set the desired working angle for the tooth and mark the cutting line. MTG Systems RipMet allows a working tooth angle of between 45º and 60º.
A 45-degree angle, or one close to it, is recommended for loose or medium compacted materials, such as sand, gravel, clay, silt.
Conversely, a 60-degree angle, or one close to it, is recommended for highly compacted materials or soft rock, such as cemented gravel, very stiff clays, or soft limestone.

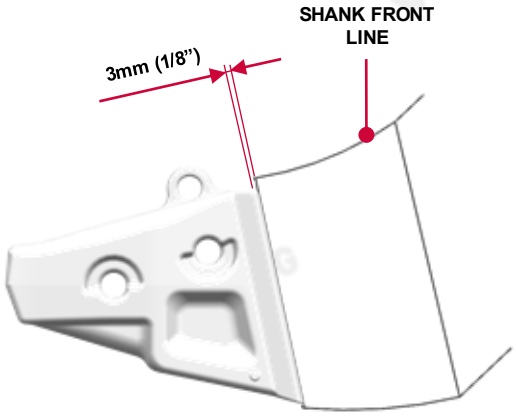




5.2.2 In the same way as in the previous case, Preheat the area to be cut to a temperature between 175ºC and 200ºC (347ºF and 392ºF) and cut through the line. Without allowing the parts cooling down, perform the welding chamfer similar to that of the MTG Systems RipMet nose.

5.3 NOSE WELDING

5.3.1 Place the nose close to the shank. There must be a distance of 3mm / 0.12 inches between the nose and the shank. If the welding groove lengths are slightly different, the front line of the chank must be flush with the RipMet nose.

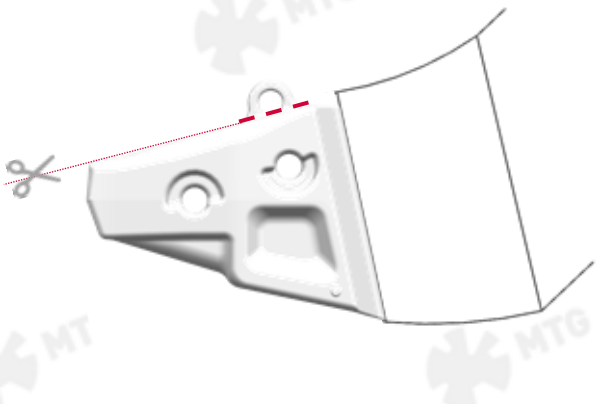


5.3.2 Preheat nose and shank to a temperature between 175ºC and 200ºC (347ºF and 392ºF) at a distance of 100mm (4") around the area to be welded.

5.3.3 Weld alternatively on both sides to correct deformities. Grinding should be performed longitudinally to the shank using a fine-grain grinding wheel to avoid scratches in the transversal direction of the shank.

5.3.4 At the welding ends, leave a small welding over-thickness and perform grinding so that we obtain a smooth flat surface.

5.3.5 If necessary, once the welding process has been completed, take advantage of that the assembly is still hot to cut the lifting lug of the nose that can bother in the case of installing protectors.

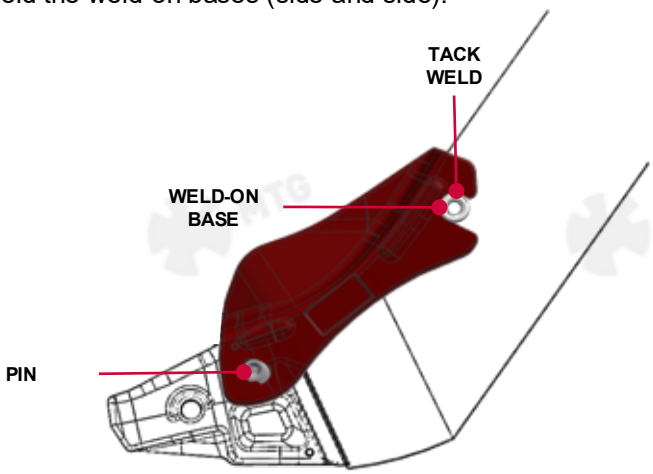


5.3.6 Proceed with the visual inspection and dye penetrant or magnetic particles.

5.4 PLACEMENT OF THE SHROUD WELD-ON BASES (IF PROCEED)

5.4.1 Insert the retainer into its housing in the nose. Next, place the shroud with its pin and fix the position of the shroud by turning the pin clockwise. Finally, place the weld-on bases at both sides.

5.4.2 Preheat the shank in the area where the bases are located (side and side) to a temperature between 175ºC and 200ºC (347ºF and 392ºF) at a distance of 100mm (4”) around the area to be welded and tack weld the weld-on bases (side and side).



5.4.3 Remove the shroud and finish welding, both inside and outside the base. The weld groove of the weld-on bases must be completely filled, not exceeding 3.2mm (1/8”) above them. The weld on the outside of the base should be flush with the base. Ensure a flat contact of the base with the lateral of the shank at all time and that the welding process complies with what is specified in the document entitled: “General welding recommendations”.

5.4.4 Once the welding of both bases (interior and exterior) is completed, proceed with the inspection of the welding.

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Service Instructions

The latest welding recommendations and assembly / disassembly instructions can be found online:
www.mtgcorp.com/manuals

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