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INS.3.2.2

PROMET II-Locking for Plate Lip Shrouds

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. IMPORTANT

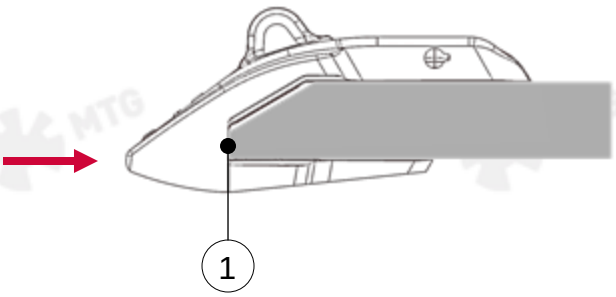
Please read the entire document before starting any operation as there may be some steps that may require previous checks/operations.

The images contained in this procedure may differ from the actual parts depending on the size being installed.

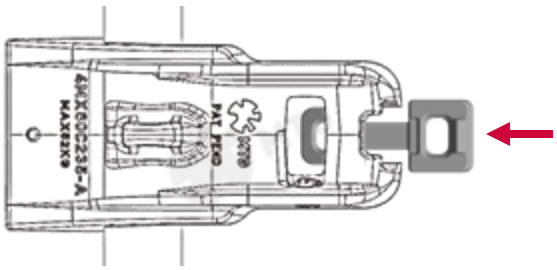
4. WELD-ON BASE INSTALLATION PROCEDURE

Prior to start the welding process, the correct placement of the weld-on base shall be ensured following the steps hereafter described:

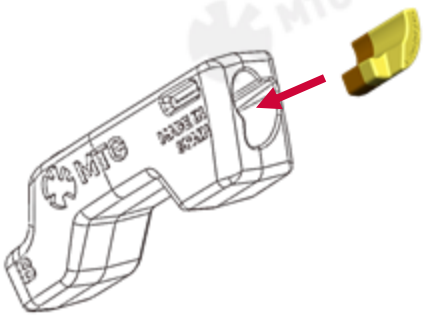
4.1 Place the shroud on the blade on its selected location. The shroud shall be in contact with blade´s blunt (1).



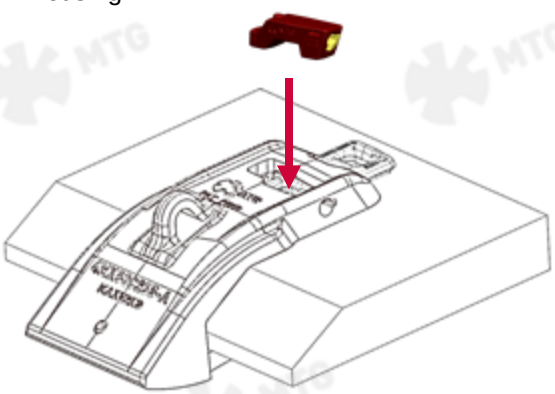
4.2 Slide the weld-on base from the back of the shroud as the picture shows. **Note:** Do not weld the base on this stage yet.



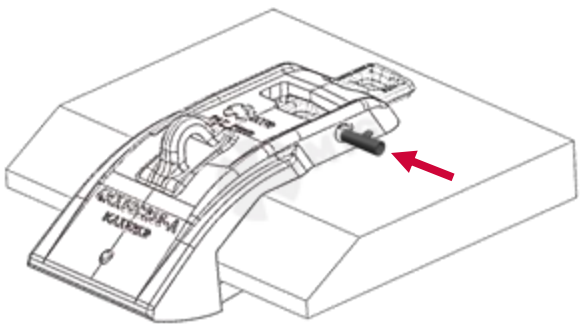
4.3 Insert the retainer inside the mechanical block.



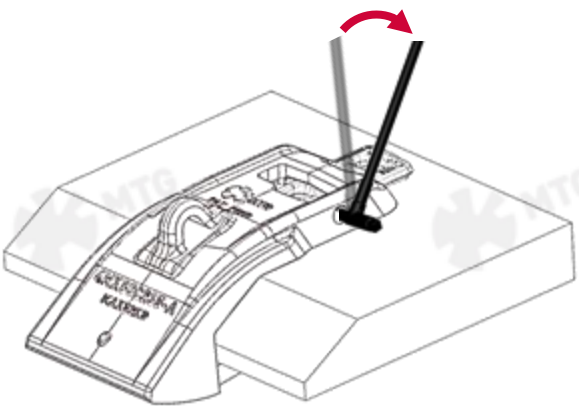
4.4 Insert the mechanical block with its correspondent retainer on the shroud housing.



4.5 Insert the pin through the side hole.

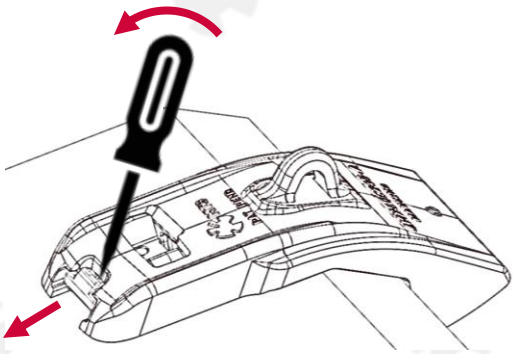


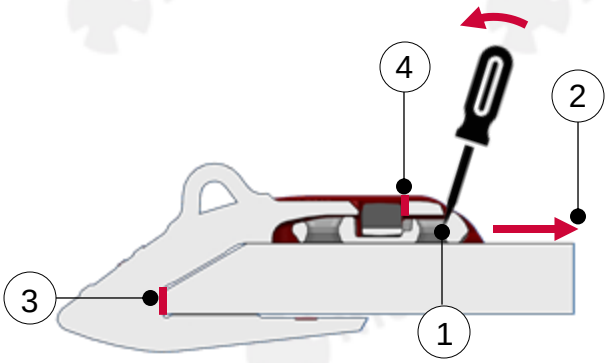
4.6 Turn the pin clockwise by means of the removal tool.



4.7 Insert a pry bar or similar between the shroud and the weld-on base at [1], then pull the base toward the back of the lip/bucket [2], being sure that the shroud maintains full contact with the front of the lip [3].

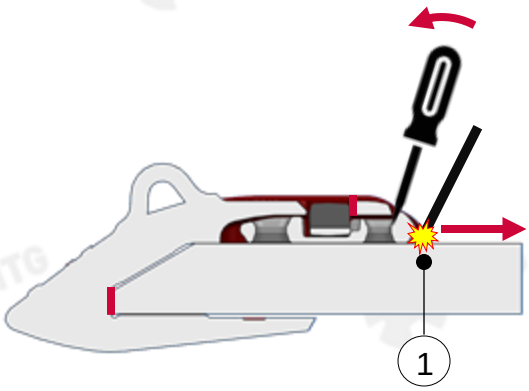
Make sure, that while pulling the weld-on base back, the protector is in contact with the blade´s blunt at [3] and the mechanical block at [4].





4.8 While pulling the weld-on base back with the pry bar, make a couple of tack welds [1] on the back of the weld-on base (visible groove at the outer part of the base).

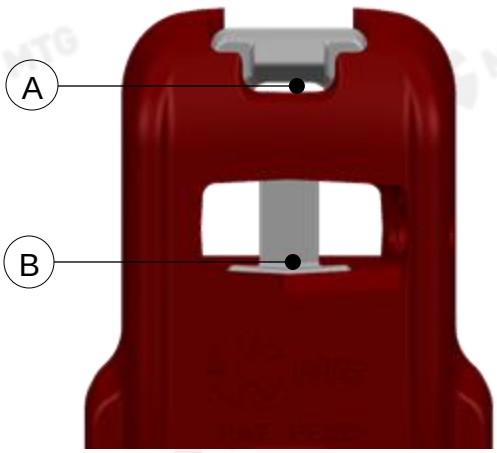
Important: Before any welding operation, the weld-on base and blade must be preheated to a temperature between 175ºC and 200ºC (347ºF and 392ºF) in an area of 100mm (4") around the area to be welded. The blade and base must also comply with the assembly conditions described in the document entitled: "General welding recommendations".



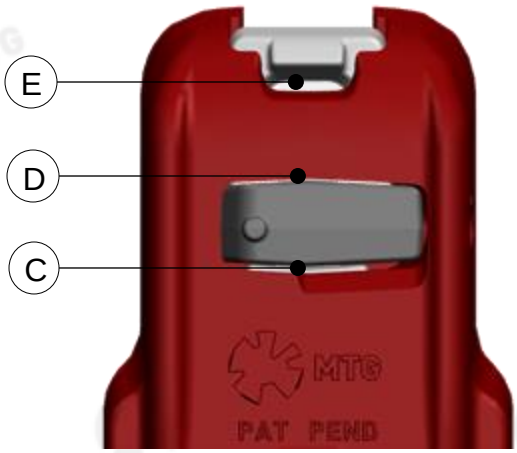
4.9 Prior to complete the welding of the weld-on base, the proper position of the base must be verified.

The following points should be checked:

a) In a proper assembly, there should be a gap between the shroud and the weld-on base flange.
b) In a correct assembly, the front of the weld-on base should be visible.
c) In a correct assembly, there must be a space between the protector and the mechanical block.
d) In a correct assembly, there must be no gap between the protector and the mechanical block.
e) In a correct assembly, the gap between the shroud and the flange of the weld-on base is the same in both cases, the assembly with the base and with all the components.

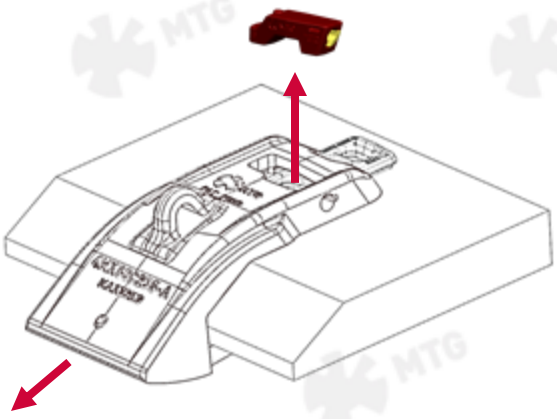


ASSY SHROUD + WELD-ON BASE

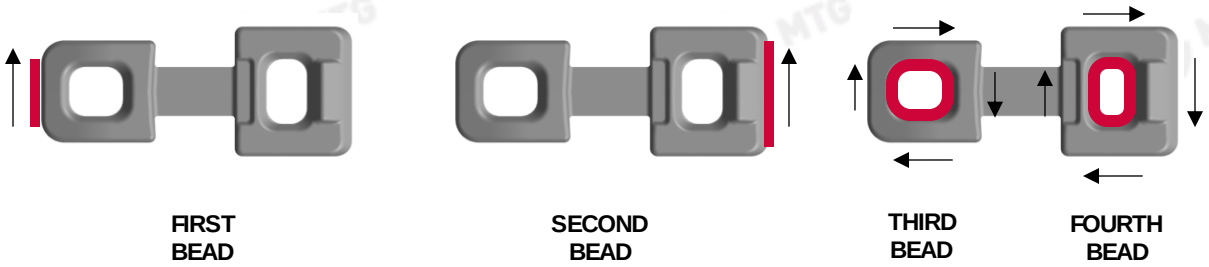


ASSY WITH ALL THE ITEMS

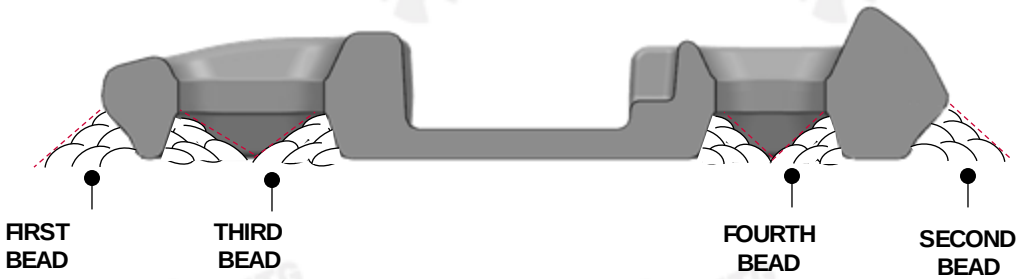
4.10 Remove the mechanical block and shroud.



4.11 Verify that the preheating temperatures are still within specs and reheat again if necessary. Then, carry out all the welding passes following the sequence shown in the figure. Make sure that the bottom surface of the weld-on base keeps contact with the lip throughout the entire welding process.



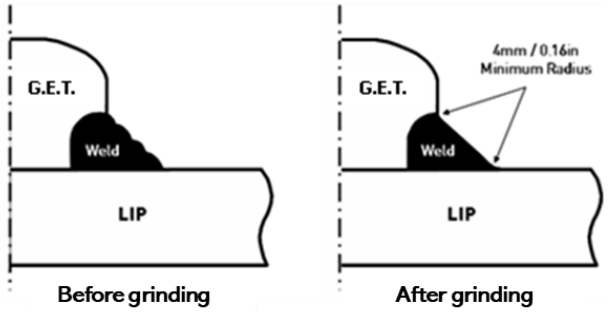
4.12 Welding beads must be continuous and must not exceed 3,2mm (1/8“) above the weld preparation chamfer.



4.13 All indicated welding grooves must be completely filled. Lack of welding can cause product failure.

4.14 Make sure that the welding technique complies with what is stated in the document entitled: "General welding recommendations".

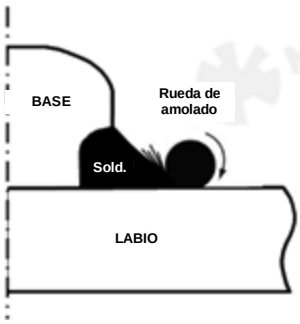
4.15 Grinding shall produce a smooth surface free of roughness and unevenness associated with the weld beads. The toes of the welds shall merge smoothly with the lip and the adapter with a minimum radius of 4mm - 5/32 in.



4.16 Grinding shall be done using high speed electric or pneumatic grinders with grinding wheels no larger than 50mm - 2 in. in diameter. **ANGLE HEAD OR DISK GRINDERS ARE NOT ALLOWED FOR THIS WORK.**

Grinding shall be done with the perimeter of the wheel and not the face. The grinding direction must be perpendicular to the toes of the welds as in the illustration.

Proper Grinding Directions:

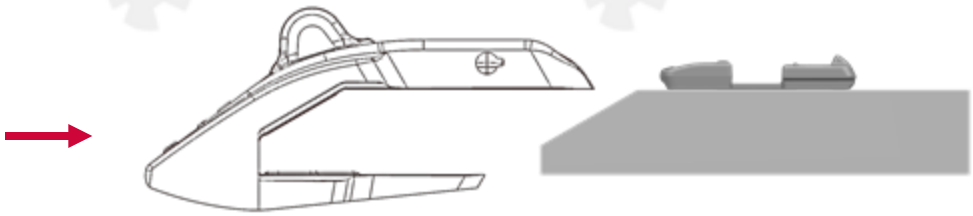


Grinding the radio at the toes of the welds is facilitated using cone-shaped grinding wheels. For final grinding, the abrasive may be no coarser than 24 Grit.

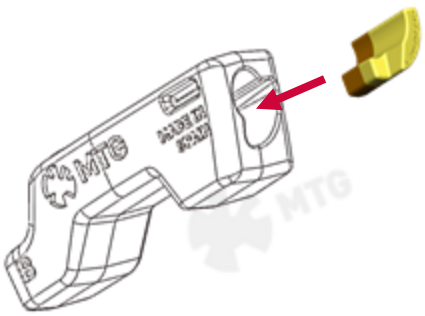
4.17 After completion of welding, all welds shall be subjected to visual and magnetic particle inspection, as described in the document “General welding recommendations”. Any detected welding crack must be cleaned and repaired.

5. SHROUD INSTALLATION PROCEDURE

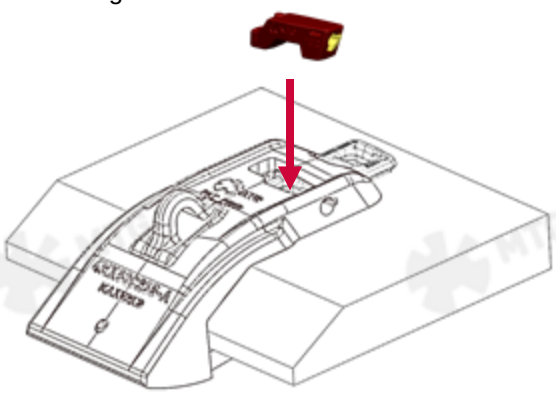
5.1 Fully introduce the shroud on its location by means of the weld-on base guides. The shroud shall be in contact with the blade´s blunt.



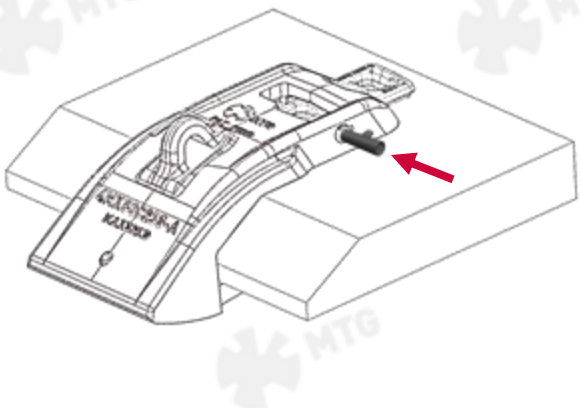
5.2 Insert the retainer inside the mechanical block.



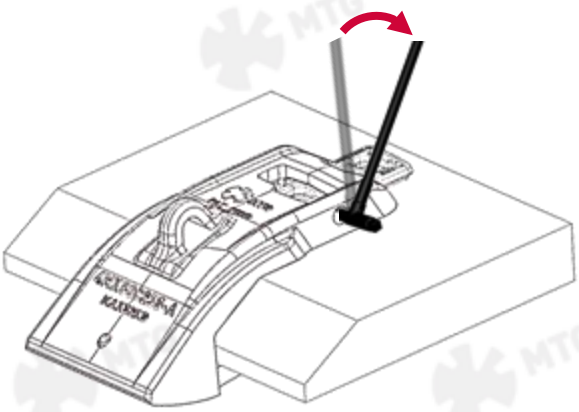
5.3 Insert the mechanical block with its correspondent retainer on the shroud housing.



5.4 Insert the pin through the side hole.

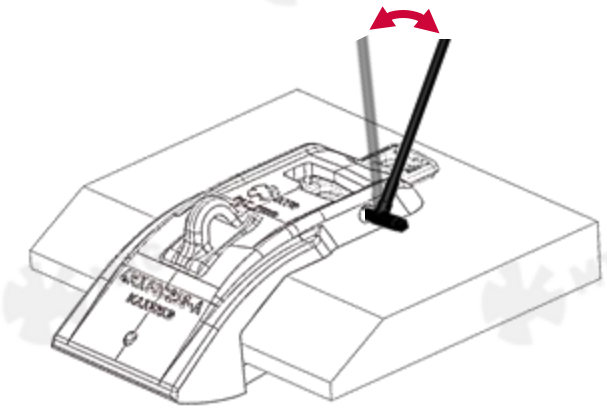


5.5 Turn the pin clockwise by means of the removal tool.

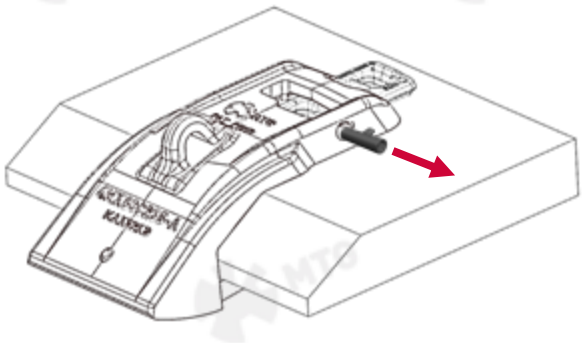


6. SHROUD REMOVAL PROCEDURE

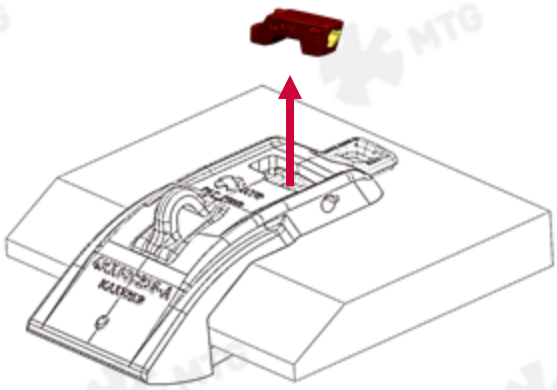
6.1 Clean the fines stuck inside the pin´s hole by means of a needle gun or similar. Then, extract the pin turning it counterclockwise with the removal tool.



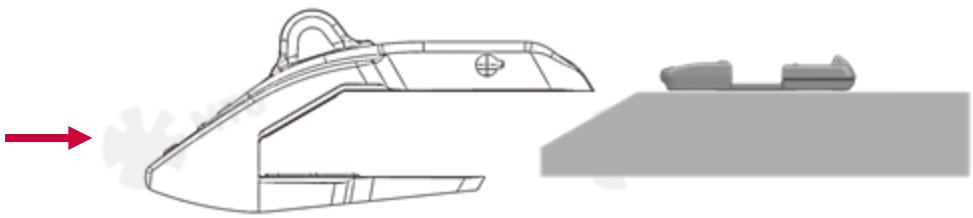
6.2 Extract the pin from its location.



6.3 Remove the mechanical block.



6.4 Weld a lifting lug to the shroud and use it to remove the shroud from the lip by using a crane.



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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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