

S800H Pinion Replace Procedure

The S800H and S800H ENC operators have a unique pinion design. The pinion on the machine is designed to twist in a forced gate situation. This twisting is designed to protect the rest of the machine and lessen repair charges as well as limiting the time the gate is down. If you come across a site where the limits seem to be off and cannot adjust you might have a twisted pinion. Below are the steps for replacing the pinion along with the parts for both versions of the machine. After you replace the parts you re-install the machine, reprogram the board and check for proper operation, if done correctly there will be little chance the positive stops need to be adjusted. The parts needed and operator diagrams are at the end of the document.

- 1) First drop the machine and remove it from the box, inspect the pinion, the teeth should be straight, if your pinion is twisted you'll notice them twisted near the upper bushing or in strongly forced situations the pinion will be sheared off.

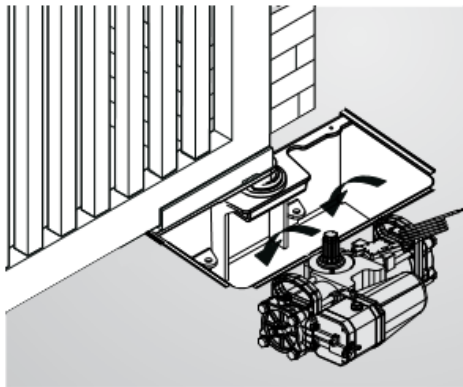
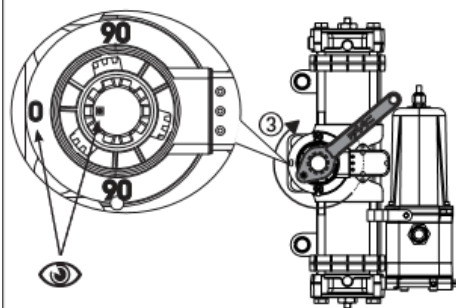


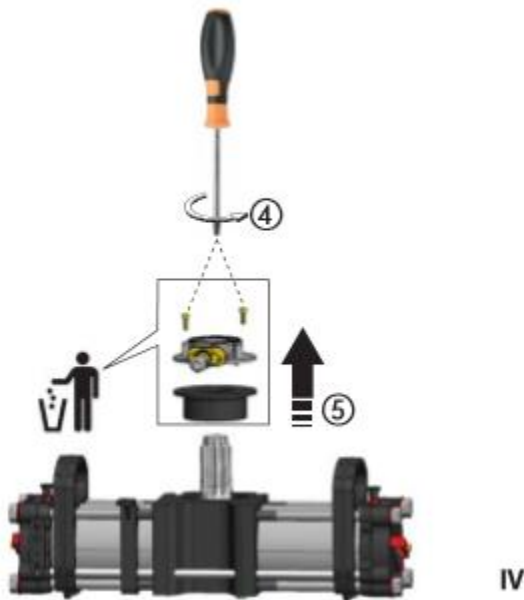
Fig.8

- 2) Rotate the machine to approximately the midpoint of travel – this is done easily by power the machine with 24 Vdc directly from batteries. If the pinion did not shear off you can use the dimple on the top of the pinion for reference a reference point of center.

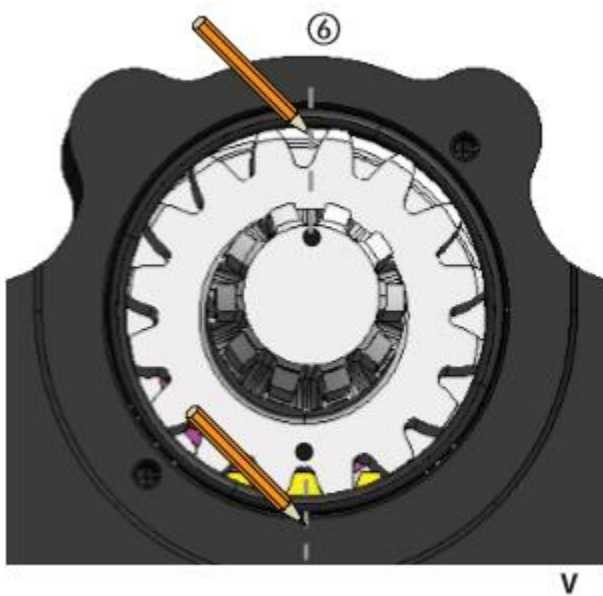


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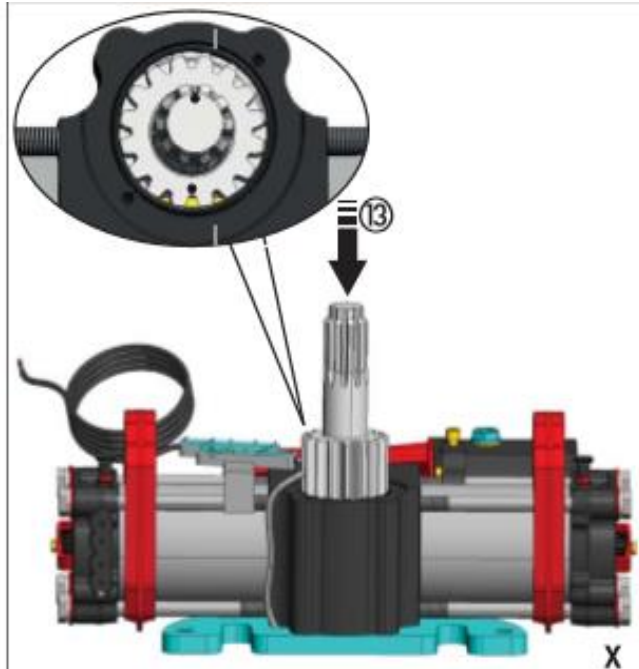
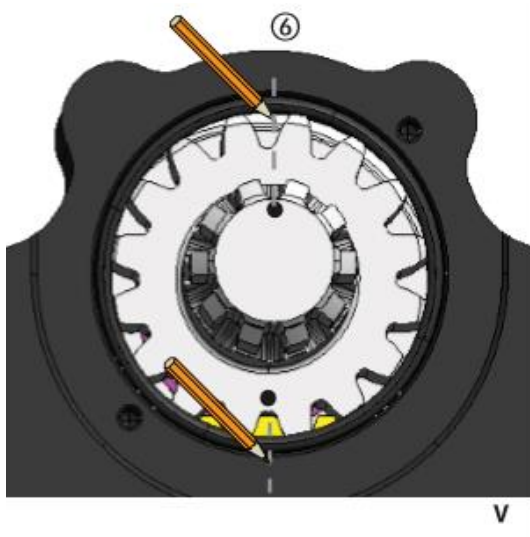
- 3) Next remove the two T20 bolts holding the upper bushing group and the pull the pinion out of the unit – if the pinion is sheared carefully remove the upper bushing group by inserting small screwdrivers between the upper bushing group and the body of the operator, then remove the pinion.



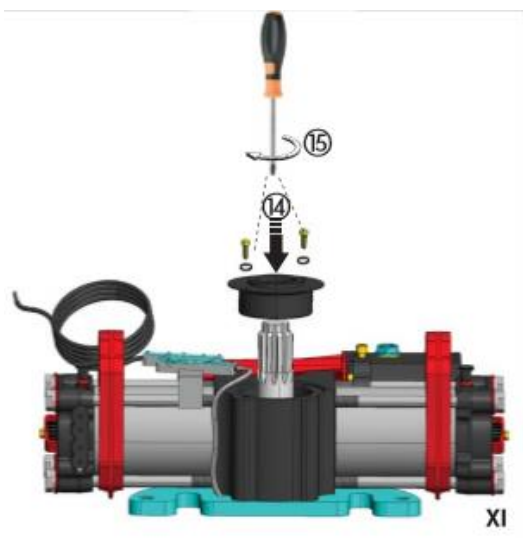
- 4) After the pinion has been removed locate the center point on the rack, there is an indexing mark or scratched line on the rack noting the center. You can power the machine off batteries to get the rack to the midpoint and locate the indexing mark. If the pinion has not sheared off you can get close to this point by referencing the dimple on the top of the pinion.



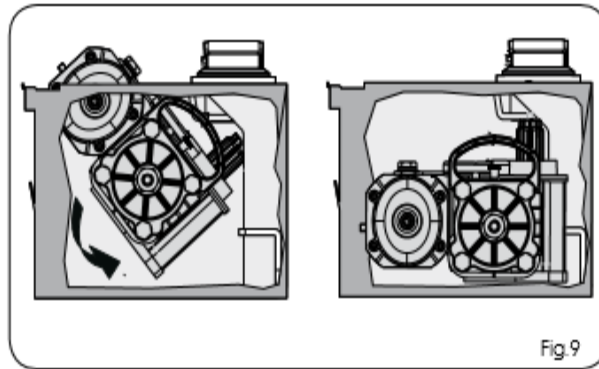
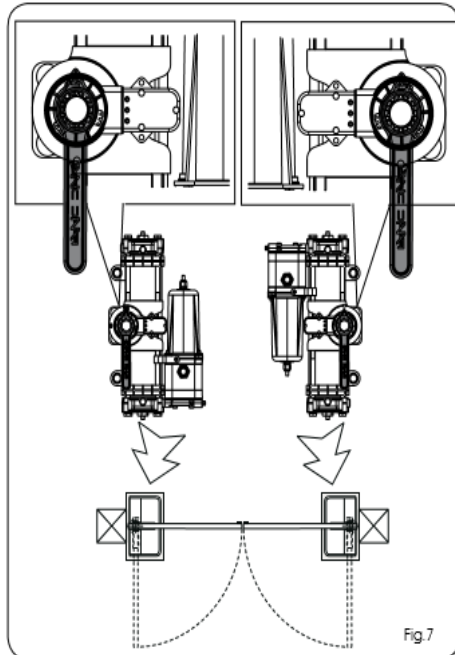
- 5) Once you've found and centered the rack grease the replacement pinion and drop it in lining the indexing mark on the rack up with the dimple on the lower teeth on the pinion as shown below



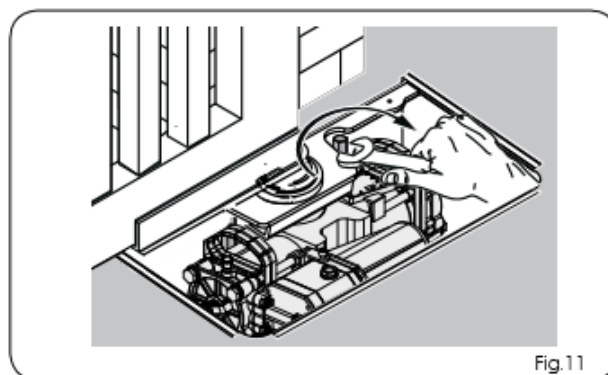
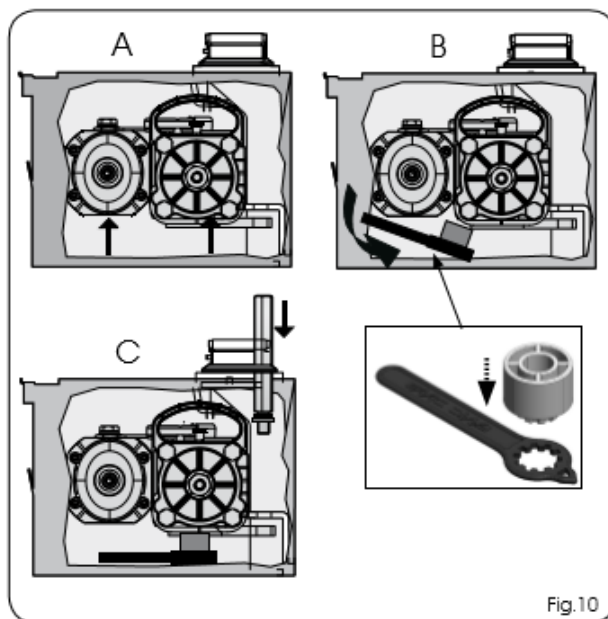
- 6) Now reinstall the upper bushing group making sure the o-ring is greased and the part is free from debris. Push it down by hand and then tighten the T20 screws. If you have an S800H, install the new encoder support group at this time, this part is not on the S800H ENC.



- 7) Power the machine off the batteries or use the plastic handle to rotate the machine open to 90 degrees and re-install the machine. Make sure to grease the pinion prior to installation. Refer to section 3 in the operator installation manual for further instructions on re-installation



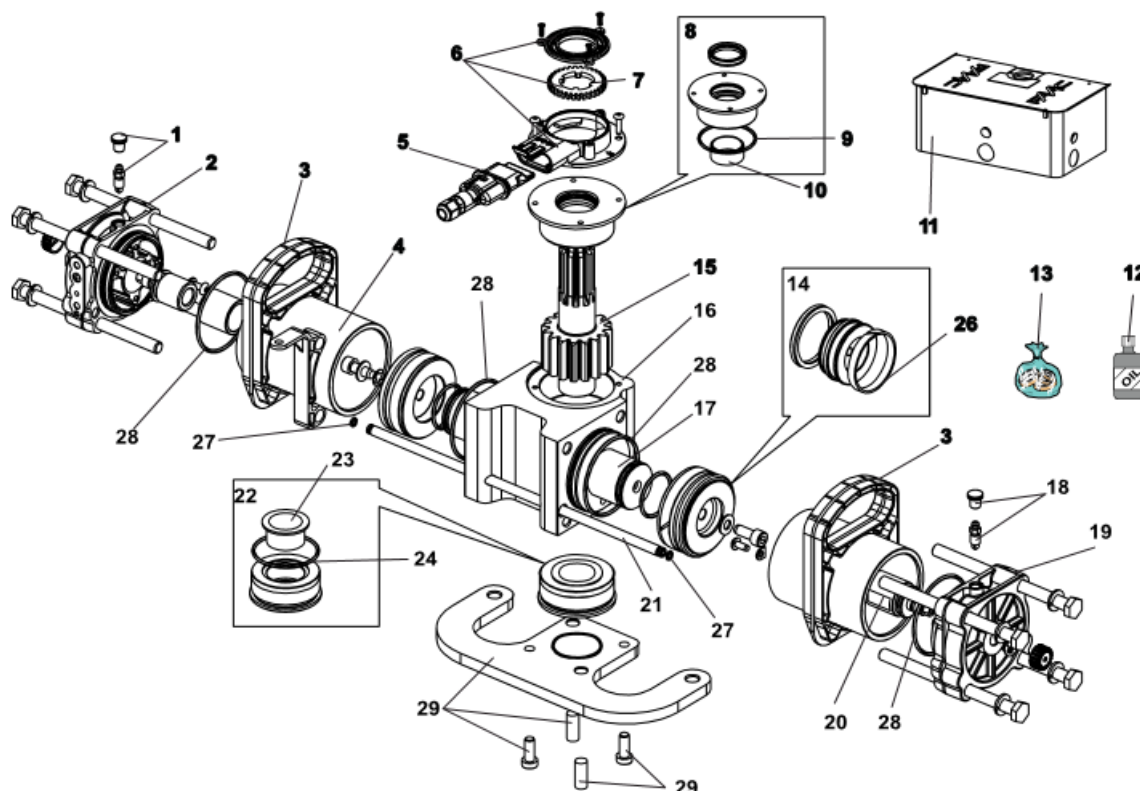
8)



- 9) Once the machine is re-installed manually release it and take it to the half way position, lock the machine and test to see if the lock valves are holding. If they are continue, if not pull the machine and send it to a repair center for repair *SBW units do not lock.
- 10) If the lock valves are holding manually release the machine and check if the open and closed stops are set correctly
 - a) Adjust as needed
 - b) If they seem far off you may have not aligned the pinion correctly with the rack and you will have to go back to that step
- 11) After the stops are set follow the instructions in section 6 of the E024U manual for Automatic or Manual time learning

S800H

Quantity	Part number	Description	Reference
1	63000005	Encoder support group	6
1	63000076	Upper bushing group	8 (not always required)
1	63000056	S800H Pinion	15



S800H ENC

Quantity	Part number	Description	Reference
1	63000558	S800H ENC Pinion	15

