

TONE® HAND SHEAR WRENCH



INSTRUCTION MANUAL No.1310

MODEL	S-20HA S-24HA
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CAUTION

Read and fully understand all the instructions before use.
Keep this manual in designated place for easy and quick reference.
The model mentioned on this manual is designed for use outside of Japan.

Warranty shall be void if above mentioned model is used in Japan.

TONE CO., LTD.

INTRODUCTION

Thank you for purchasing HAND SHEAR WRENCH.

- Upon receipt, check and confirm the following:
 - Check any transport damages.
 - Check for any loose or lost screws and bolts.
 - Check the model as per order.
 - Check all the accessories are contained. (see page 12)

If any problems are found, contact your distributor.

- Read this instruction manual carefully before use.
Full understanding of manual is essential to prevent personal injury or malfunction.
- Keep this manual in a bag attached to the back of metal case lid for easy and quick reference.
- If manual or warning label is lost or becomes illegible, or if additional manual is required, contact your distributor.

If you have any questions about the products or the contents of this instruction manual, contact your distributor.

- This manual is only applicable to outside of Japan.

SAFETY INSTRUCTIONS

This manual specifies three (3) basic safety instructions:



■ Instructions are classified by degree of risk and described as follows:



Danger is used to indicate threatening dangerous or unsafe practices which could imminently result in severe personal injury or death in the worst case.



Warning is used to indicate hazardous or unsafe practices which could result in severe personal injury or death in the worst occasion.



Caution is used to indicate hazardous or unsafe practices which could result in personal injury or product or property damage.



Even if the risk is classified as  , risk could become more serious result depending on conditions. Make sure to follow all instructions when using.

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1. APPLICATION

- HAND SHEAR WRENCH is a manual operated wrench for tightening Tension Control Bolts/Nuts.

2. PRECAUTIONS FOR USE

- To prevent accident, personal injury and etc, read and follow all instructions listed below.

WARNING

- **Beware of fall down accident when working at a high place.**

- Wear safely belt.
- Provide safety net or canvas as safeguarding against falling items.
- Confirm that no one is underneath the working site before operation.
- Stop operation when physically or mentally tired.

Failure to follow these instructions may result in fall down accident.

- **Avoid overloading.**

- Use hand shear wrench and its accessories within the rated specification.
Overloading of the wrench and its accessories may result in damage of the wrench or its accessories; or accident or personal injury.

- **Properly install the socket as described in this manual.**

Incomplete installation may result in accident and personal injury.
See “CHANGING SOCKETS” on page 8 and 9.



WARNING

- **Do not disassemble or modify hand shear wrench.**

Disassembly or modification made by unauthorized personnel may result in malfunction or personal injury.

Disassembly & Re-assembly work is permitted for following expendables:
Inner Socket, Outer Socket and Set Screws.

Contact your distributor for repair and overhaul service.

- **Store wrench in the metal case and keep it in the designated place when not in use.**

- Store the wrench in lockable dry location to keep any unauthorized personnel away.

Failure to follow this instruction may result in malfunction or accident.

- **Contact your distributor for repair service.**

Repair work should only be done by a qualified serviceman. Repair work done by an inexperienced person may cause accident, injury or malfunction.

- **Check the following items before operation.**

Check for any deformation, crack or damage on wrench body.

Do not use wrench if any problem is found on items listed above.

Make sure that socket assembly is correctly installed on the wrench.

Make sure that set screws are securely fastened.

Loose installation may result in accident and personal injury.

 **CAUTION**

● **Keep work area clean.**

Cluttered areas and benches invite accidents.

● **Keep children away.**

Do not let children touch hand shear wrench.

All visitors should be kept away from work area.

● **Secure work area.**

Keep body stance balanced and firm.

Keep work area well lit.

● **Use suitable model for each application.**

Do not use wrench beyond its capacity.

Do not use wrench for purposes not intended.

● **Dress properly.**

Always wear gloves and non-slip safety shoes when operating outdoor.

Always wear safety helmet.

● **Use genuine accessories or attachments manufactured by
Maeda Metal Industries, Ltd.**

● **Keep wrench clean.**

Keep hand shear wrench handle away from heat, oil and grease.

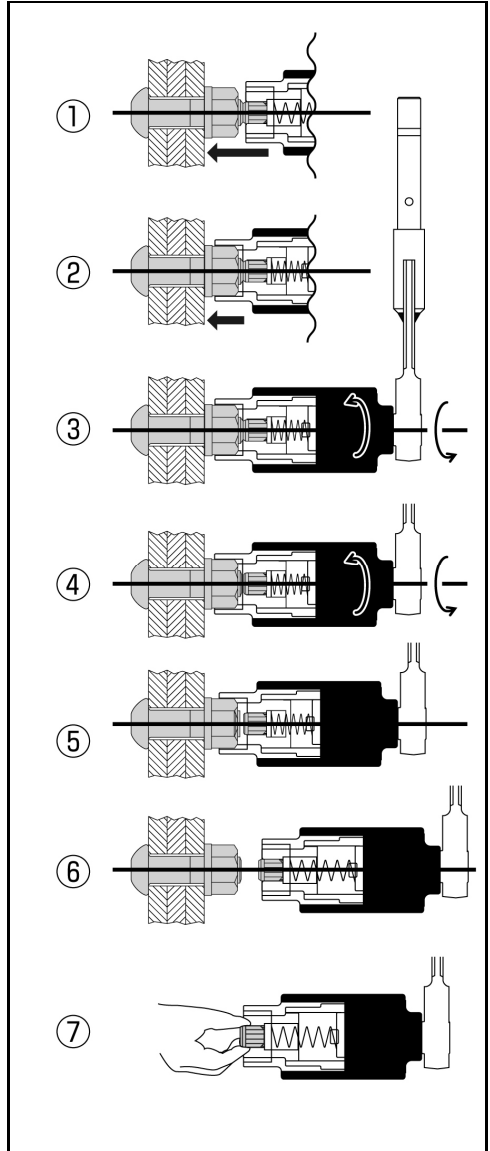
3. OPERATING PROCEDURE

Snug tight of the bolt/nut is required before using hand shear wrench.

- (1) Slide inner socket over the bolt pintail.
- (2) Slide outer socket over the nut.
- (3) Tighten the nut by turning ratchet handle.
- (4) Rotating speed gradually slows down as the tightening proceeds.
- (5) Then bolt pintail shears off when designated torque is reached.
- (6) When tightening is completed, remove hand shear wrench from bolt/nut assembly. Sheared-off bolt pintail remains in inner socket.
- (7) Remove bolt pintail by fingers.

IMPORTANT

- (8) Even after bolt pintail is sheared off, supplemental torque must be added on the bolts by using manual torque wrenches.



CAUTION

VERY IMPORTANT!

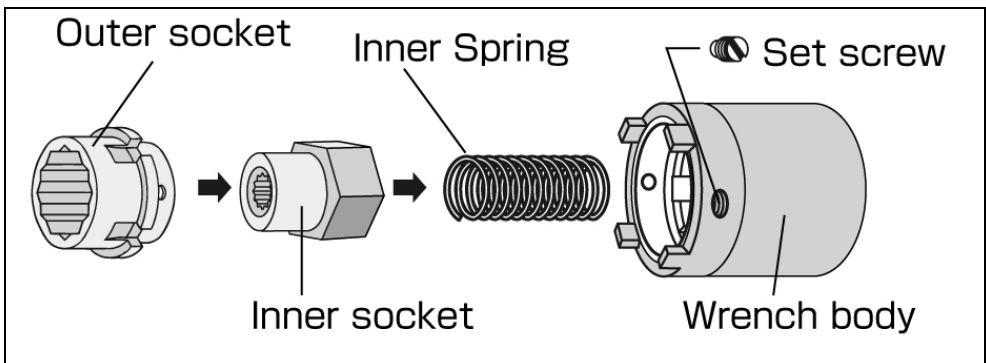
Due to relation of the planetary-gear-system and the ratchet-input-hand-force, there is efficiency loss exist on the torque applied on the bolts even bolt pintail is visually twisted off. This loss of efficiency also entails shortage of tension required on the bolts. Thus, in order to get the proper tension on the bolts and to finish installation, supplemental torque must be added on the bolts by using manual torque wrenches.

WARNING

- **Keep others a safe distance from work area.**
- Do not throw pintail away. Collect pintail in designate bag during operation.
Failure to follow this instruction may result in accident and personal injury.

4. CHANGING SOCKETS

- (1) Remove inner & outer socket assembly from wrench body by unscrewing set screws. Do not remove set screws completely from wrench body.

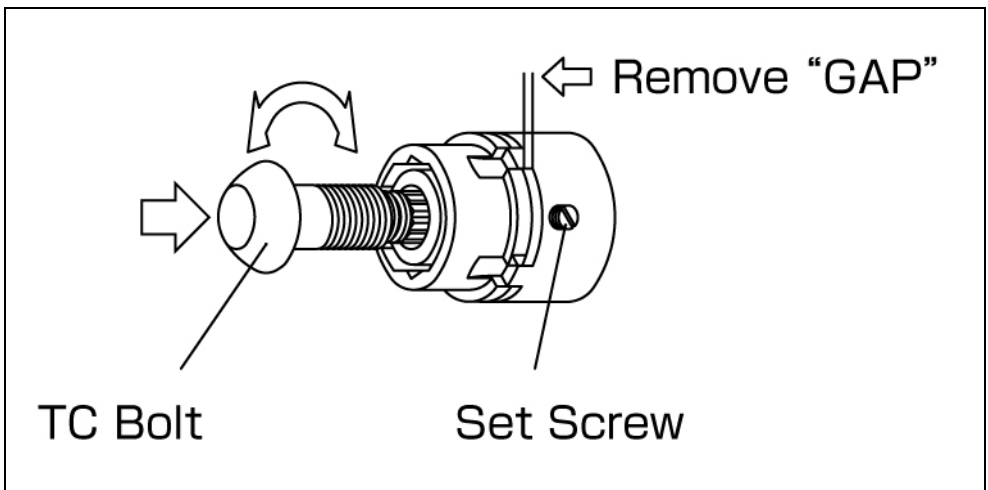


- (2) Select adequate inner & outer socket assembly of the bolts being tightened.
i.e. Use genuine 5/8" inner & outer socket assembly for tightening 5/8" TC bolt/nut assembly.
- (3) Place inner socket spring and inner socket in the wrench body and then slide outer socket over the inner socket.
- (4) Remove the gap between socket assembly and wrench body.
The gap can be removed by turning & pushing down screwdriver or TC bolt into the inner socket. Fasten the set screws only after gap is completely removed.

 **WARNING**

- **There should be no gap between the socket assembly and the wrench body.**

The gap invites accident or breakage of the sockets or the wrench body.



5. INSPECTION & MAINTENANCE

- (1) Clean dust and debris from the sockets periodically.
- (2) Use only a damp cloth to clean your wrench and sockets since certain cleaning agents and solvents are harmful to those parts. Some of these include: benzene, thinner, gasoline and etc.
- (3) Store hand shear wrench in the metal case after operation and keep it dry.
- (4) Overhaul must be carried out every **6 months** or **30,000 tightening**, whichever comes first. Contact your distributor for overhaul.

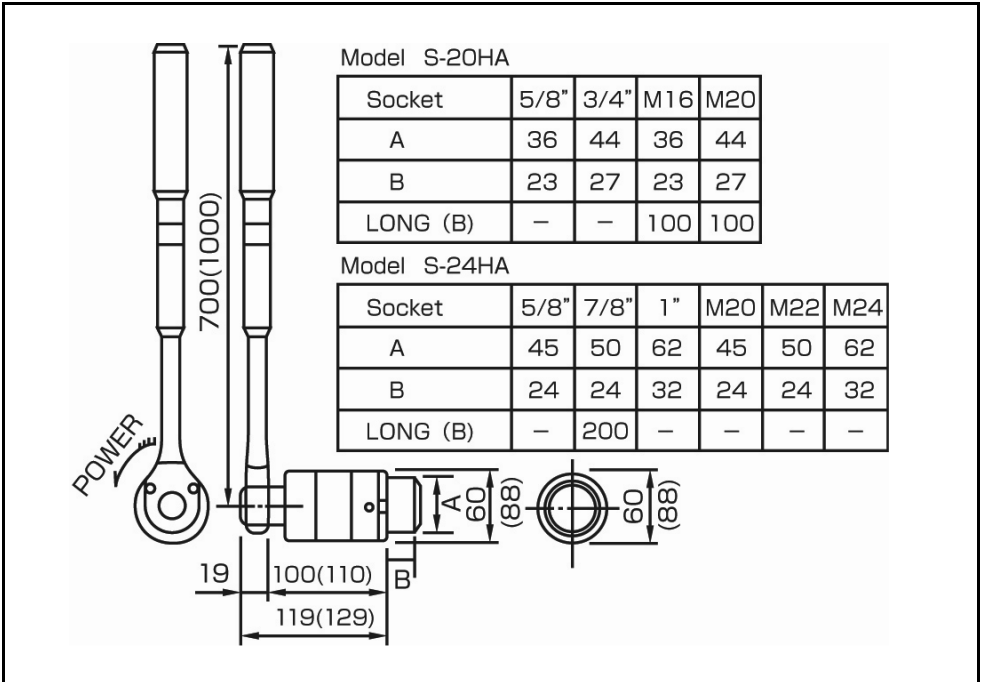
6. FEATURES

- Fit in confine space where electric shear wrench cannot be reached.
- No electric power is required.

7. SPECIFICATIONS

MODEL	S-20HA	S-24HA
Wrench Body Weight	4.1kg	6.3kg
Adaptable Bolt Diameter	5/8", 3/4" M16, M20	3/4", 7/8", 1" M20, M22, M24

- Wrench weight excludes sockets and ratchet handle.



- Dimensions for S-24HA indicate in ().

8. ACCESSORIES

MODEL	ACCESSORIES	Q'TY
S-20HA	○ Inner Socket	1
	○ Outer Socket	1
S-24HA	○ Inner Socket Spring	1
	○ Screwdriver (-)	1
	○ Spanner	1
	○ Instruction Manual	1
	○ Metal Case	1

9. AFTER SALES SERVICE

- Please contact your distributor for details of available services.
- Please provide model, serial number, date of purchase and details of failure when contacting your distributor.



CAUTION

- Do not use hand shear wrench when malfunction, deficiency in wrench performance, personal injury or property loss is foreseen.



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● Specifications and the design are subject to change without notice. ●

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