

Coolant Filtration Equipment

Dedicated instruction manual

To users

Thank you for purchasing TERAL Coolant Filtration Equipment.

To use the product correctly and safely, ensure to read thoroughly the instruction manual supplied with the coolant and this dedicated instruction manual, and fully understand the instructions before carrying out operation, inspection or maintenance of the equipment.

For your safety, strictly observe all warnings on the labels affixed to the unit as well as those in the dedicated instruction manual.

Be sure to keep this manual at hand so that it can be consulted anytime you carry out operation, inspection or maintenance of this unit.

For contractors who carry out equipment work:

Please be sure to deliver this manual to user(s) who will carry out operation, inspection or maintenance of the coolant filtration equipment.

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1. Explanation of warning terms and graphic symbols

This dedicated instruction manual divides warning terms into four categories according to the level of hazard (the extent of damage/losses and the urgency). In addition, the types of user instructions are indicated with graphic symbols.

This manual uses the following signs. Fully understand these terms and symbols and then carefully read this manual.

■ Explanation of the warning terms

Warning Term	Meaning
 Danger	Indicates an imminently hazardous situation. Failure to observe this will result in death or serious injury.
 Warning	Indicates a potentially hazardous situation. Failure to observe this will result in death or serious injury.
 Caution	Indicates a potentially hazardous situation. Failure to observe this will result in minor or moderate injury or property damage.
Note	Indicates information that should be particularly noted or emphasized.

■ Explanation of the graphic symbols

				
Don'ts	Do not touch	Do not disassemble	Do not touch with wet hand	Do not expose to water

These graphic symbols indicate prohibited actions (that must not be done).				
				
Do's				

				
Caution	Electric shock hazard	Rotation hazard	Hot surface	

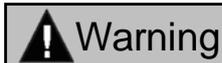
These graphic symbols indicate hazards.				

* Special expertise is required for the work (disassembly, repair, etc.) described in this dedicated instruction manual. Only persons that have expertise may use these procedures. Otherwise, an accident or a failure of the equipment may occur.

2. Chain adjustment procedure

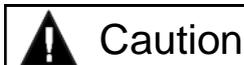
This procedure is described specifically for coolant equipment including a conveyor. If any slack in the chain for the conveyor is found (by a visual check from the access door, or an unusual noise arising from the gears, etc.), adjust it in accordance with the following instructions described below.

- (1) Turn off the power supply of the coolant equipment.



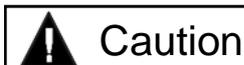
Before starting the work, be sure to turn off the main power supply of the coolant equipment. Otherwise, you may be caught in the chain when the conveyor is operated.

- (2) Loosen the lock nut "①."
- (3) Retighten the tension adjustment screw "②."

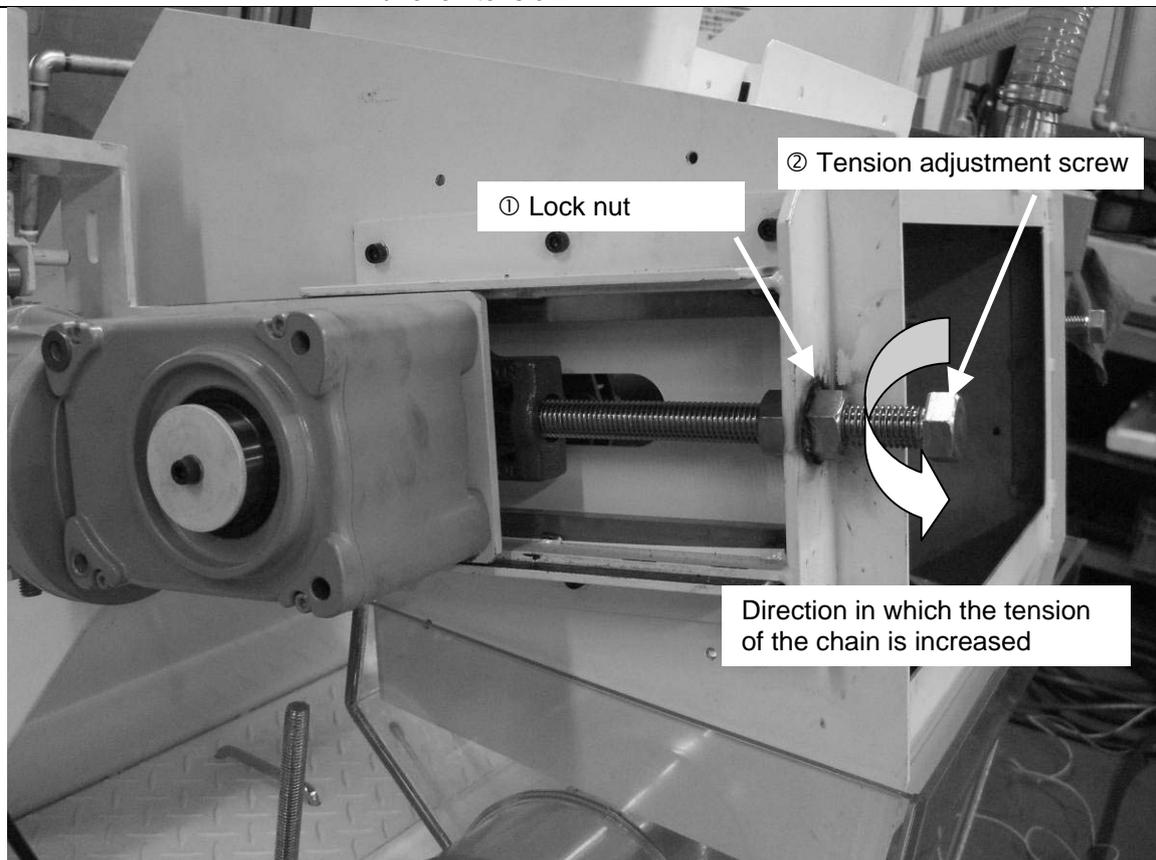


Avoid excessively retightening it. Otherwise, the product may fail or be damaged.

- (4) After adjusting the tension, tighten the lock nut "①."
- (5) Turn on the power supply of the coolant equipment.
- (6) Make a test run, and check the chain for looseness and unusual noise. If it is determined to be abnormal, readjust the tension.



There are two tension adjustment devices on the right and left sides. Adjust it equally on the right and left sides in order to avoid uneven tension.

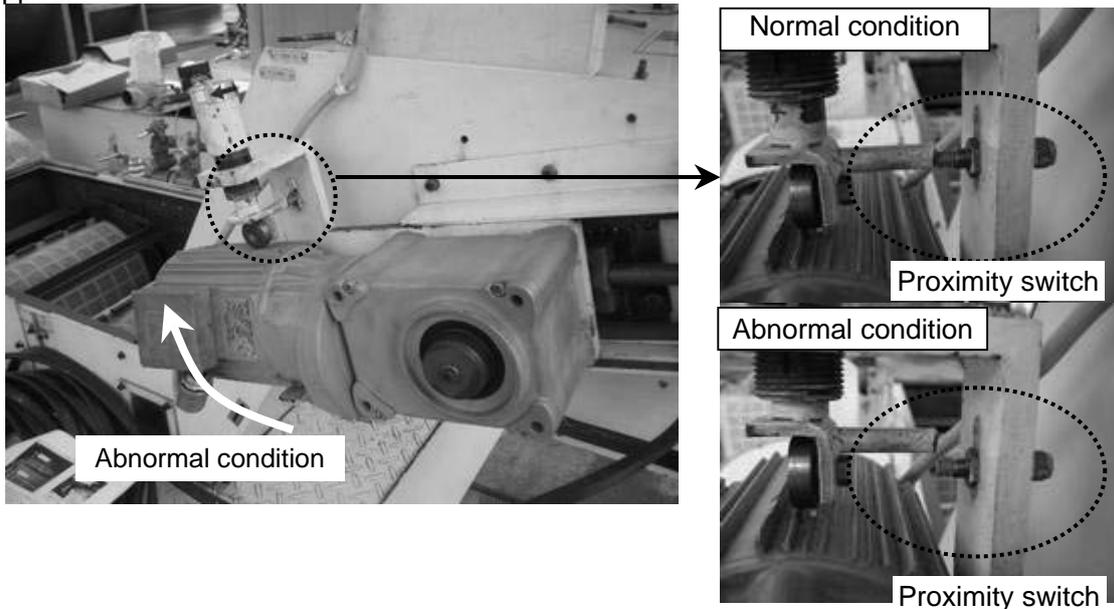


3. Torque limiter (conveyor rotation detection) adjustment procedure

This procedure is described specifically for coolant equipment including a conveyor (with an electric motor) with a torque limiter.

3.1 Description of the mechanism

When the torque of the conveyor exceeds the lock torque value, the reduction gear is moved around its main shaft in the direction opposite to the rotation direction of the conveyor. (Only for normal rotation)
 When the contact of the proximity switch is separated, a rotation error is detected, and the conveyor is stopped.



Caution ⚠️ If the tension of the chain is not appropriate, the rotation is not smooth, and a rotation error of the conveyor may be detected.

3.2 How to set the the lock torque

The torque limiter was appropriately adjusted before shipment from our factory. However, the set torque value of the torque limiter can be changed by adjusting the torque adjustment screw.

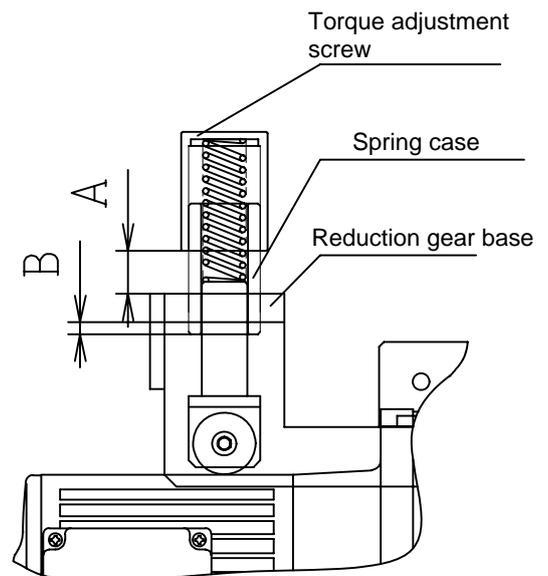
[Typical setting]

- Dimension A: 15 [mm]
- Dimension B: 5 [mm]

→ Set torque of the torque limiter: 97.1 [N·m]

- A: From the end face of the torque adjustment screw to the end face of the reduction gear base
- B: From the end face of the spring case to the end face of the reduction gear base

The set vale shown above may vary depending on the equipment specifications.



Caution ⚠️ Avoid needlessly changing the set torque value. Otherwise, no error can be appropriately detected, resulting in damage to the conveyor or an accident.

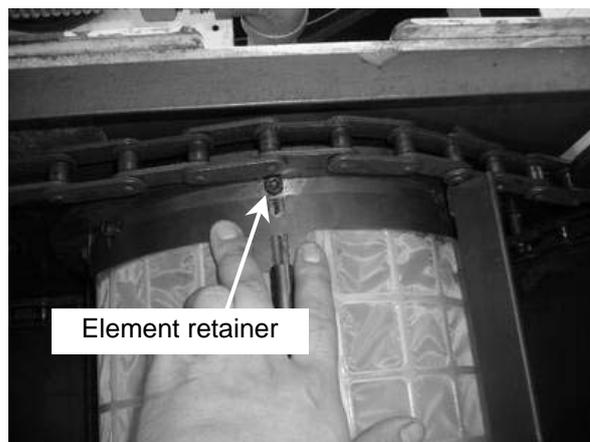
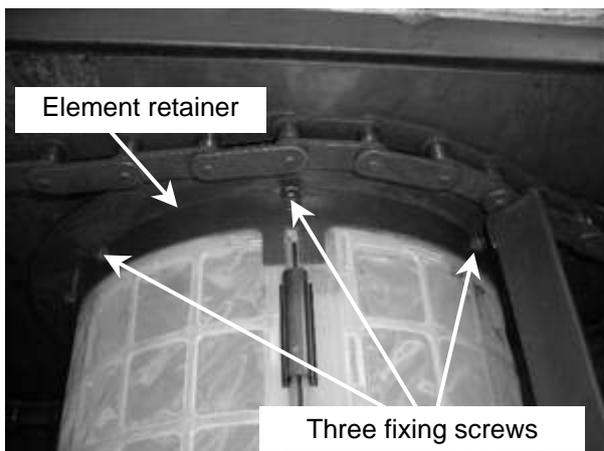
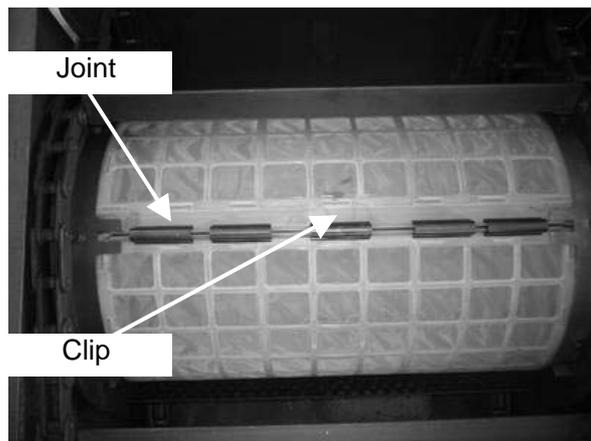
4. Drum filter (drum mesh) replacement procedure

This procedure is described specifically for coolant equipment including a drum filter.

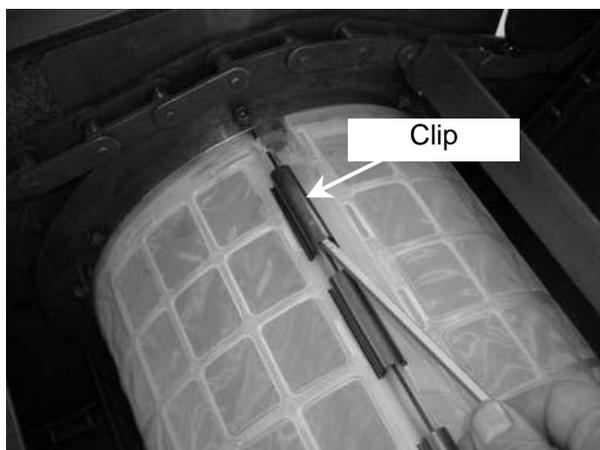
- (1) Stop the conveyor such a way that the "joint" of the drum filter is located at the top of the drum.

 Warning		Before starting the work, be sure to turn off the main power supply of the coolant equipment. Otherwise, you may be caught in the chain when the conveyor is operated.
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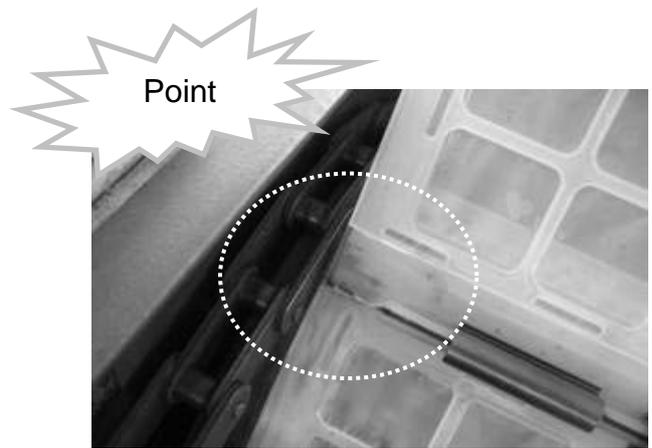
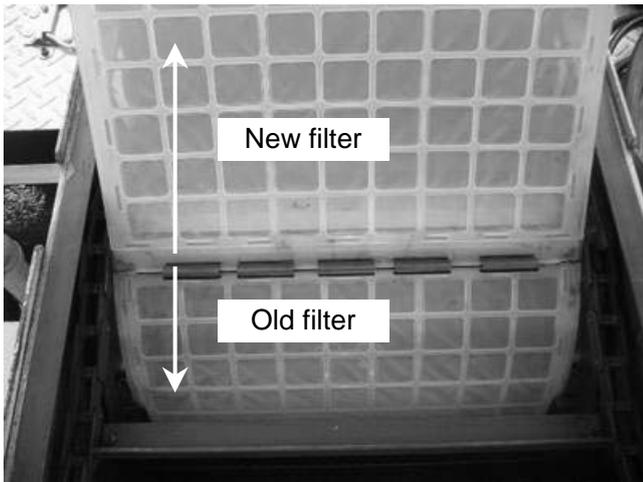
- (2) Before replacing the drum filter, remove foreign bodies (chips) from the mesh and the scraper on the top face of the drum with a waste cloth or the like so that they will not enter into the clean tank.
- (3) Using a hexagonal wrench (5 mm), loose the "fixing screws for the element retainer" to remove the "element retainer."
(It is not necessary to remove the fixing screws.)



- (4) Remove the "clips" for fixing the filter.

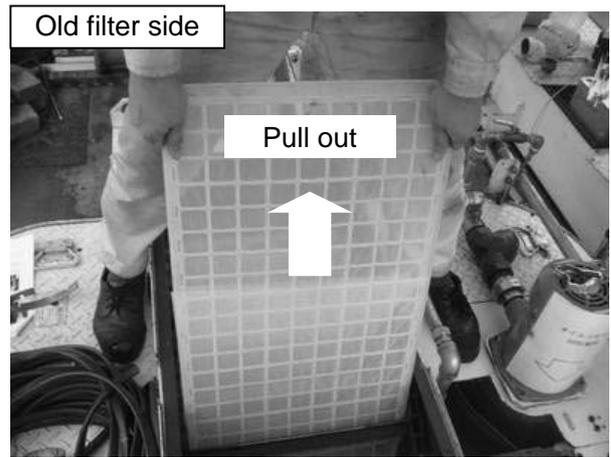
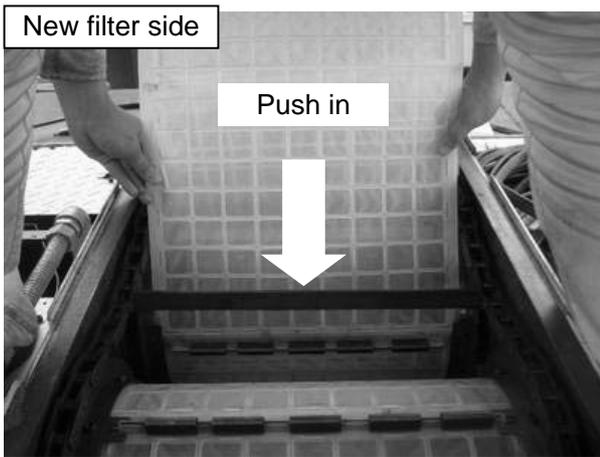


(5) Using the clips, connect a new filter to the old one.



Ensure that there is no level difference at the "joint" between the new and old filters.

(6) Push the new filter into the drum to install it.
(Pull the old filter out on the opposite side.)
Push it evenly on the right and left sides.
If it is difficult to push the new filter in, gradually push it in while moving it in and out.



(7) Remove the clips that connect the new filter to the old filter, and attach the clips to the "joint" of the new filter.

(8) Install the "element retainer," and tighten the "fixing screws for the element retainer."

When the above work is completed, the drum filter replacement work is completed.



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