

HILTI

DX 860-ENP

Operating instructions

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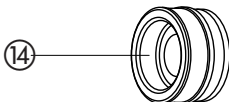
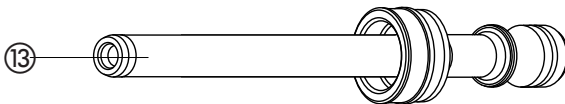
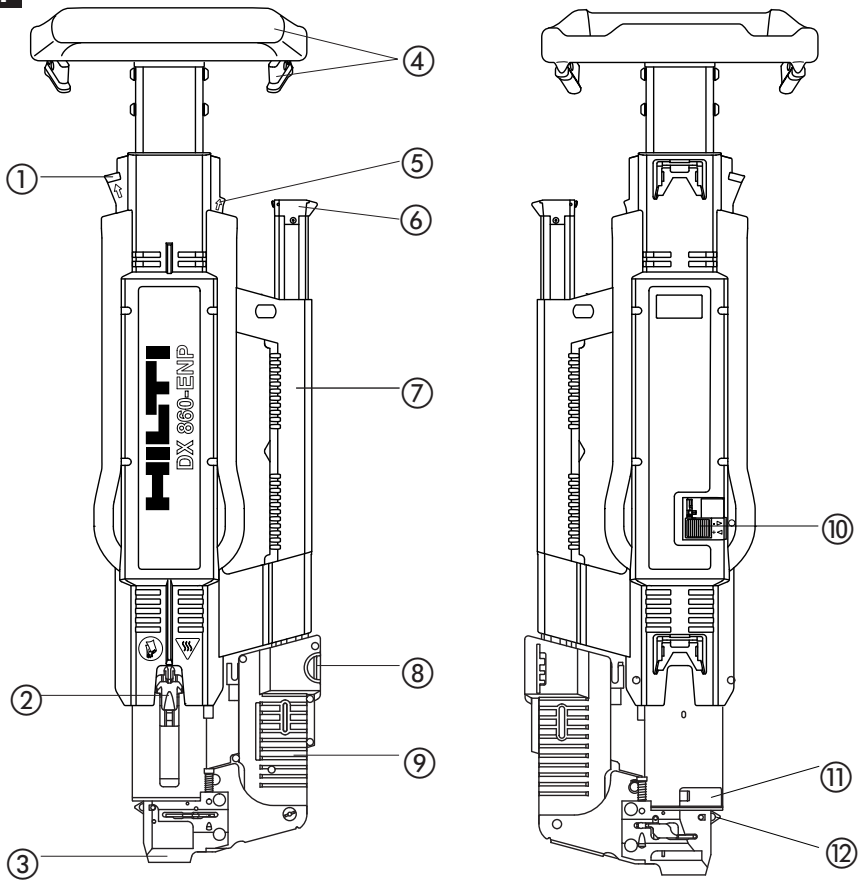
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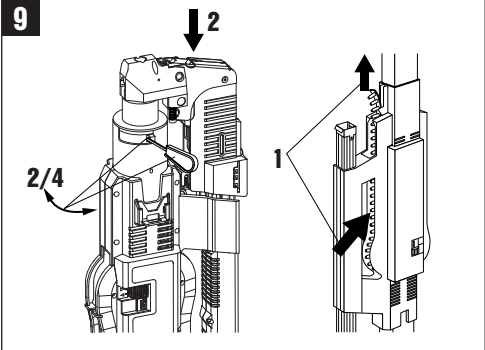
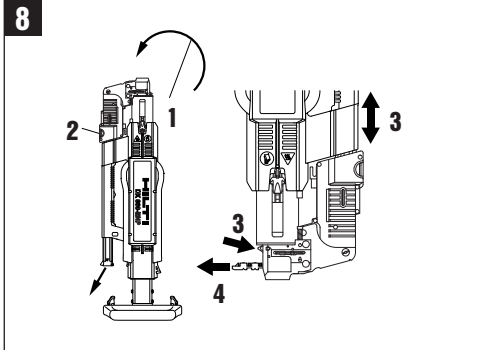
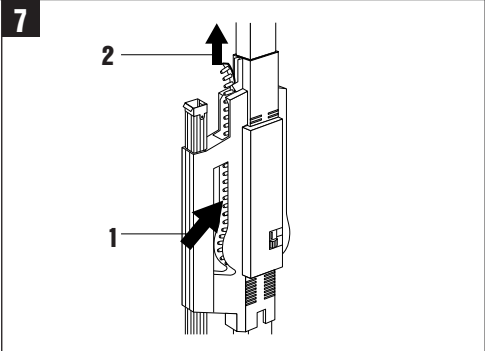
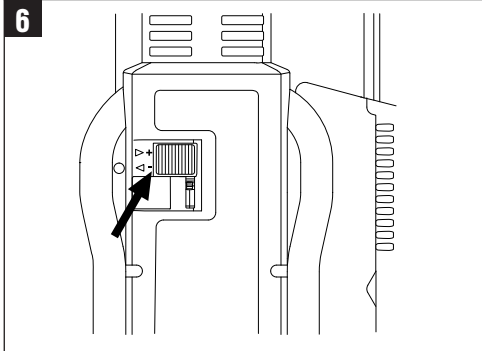
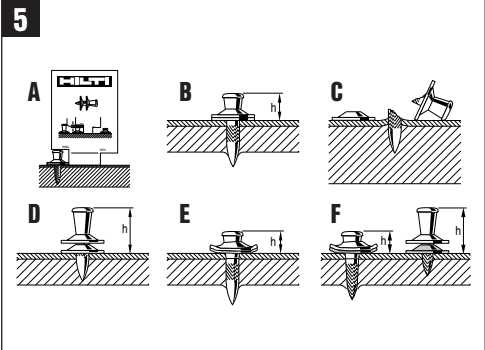
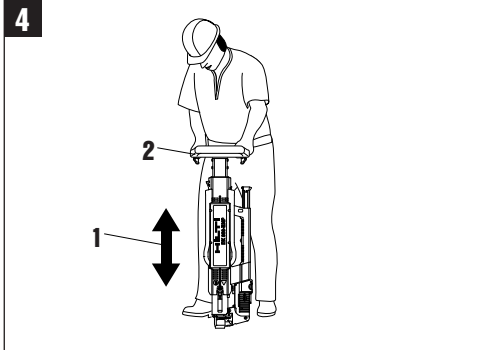
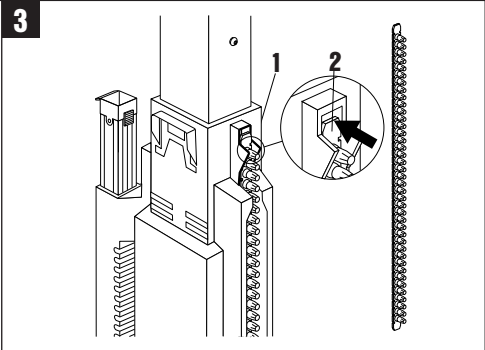
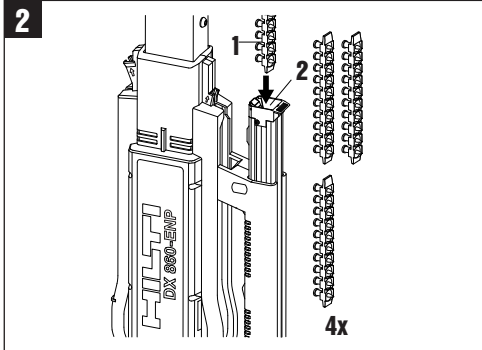
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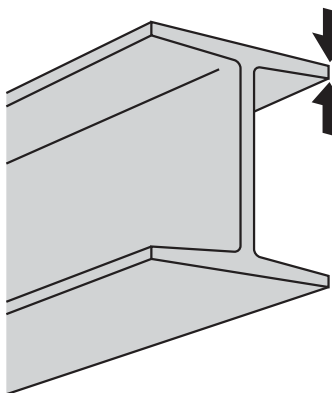
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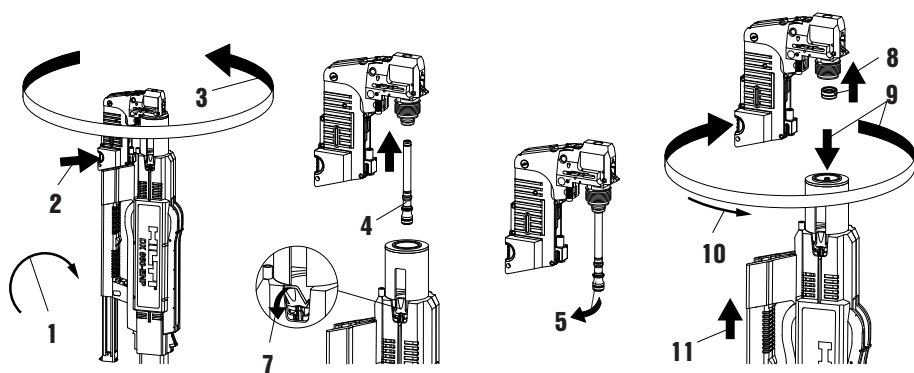
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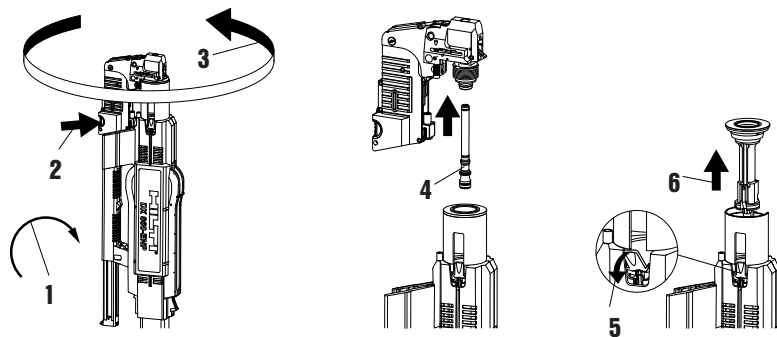
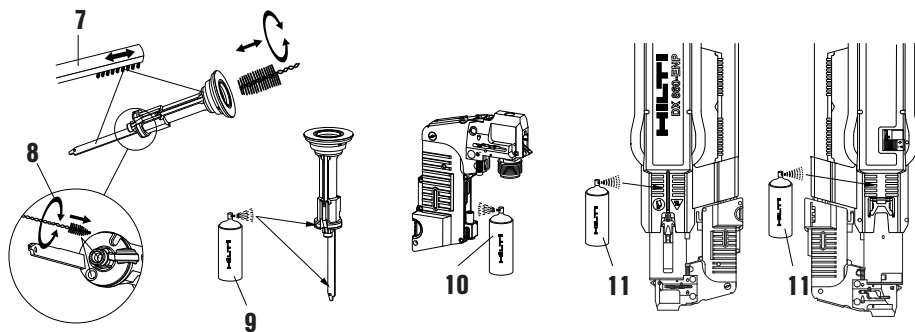
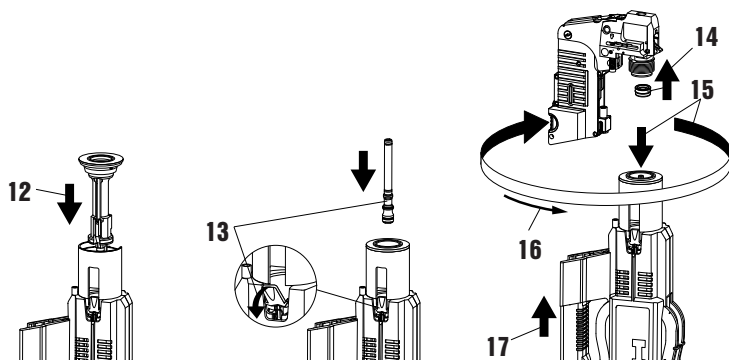
X-ENP



↑ Base material thickness (mm)

	Standard steel		High-strength steel	
20	4	red	4	black
15	3		3	
10	4	blue	4	red
8	3		3	
6	3		3	
	S 235, S275 E 36, ST 37, 340-470 N/mm ²		S 355, S275 E 42, ST 52, 490-630 N/mm ²	

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DX 860-ENP powder-actuated fastening tool

It is essential that the operating instructions are read before the tool is operated for the first time.

Always keep these operating instructions together with the tool.

Ensure that the operating instructions are with the tool when it is given to other persons.

Parts of the tool 1

DX 860-ENP powder-actuated fastening tool

- ① Cartridge loading channel
- ② Catch
- ③ Base plate
- ④ Grip and trigger mechanism
- ⑤ Cartridge strip exit point
- ⑥ Magazine
- ⑦ Carrying handle
- ⑧ Release button
- ⑨ Fastener transport system
- ⑩ Power regulation wheel
- ⑪ Rotating sleeve
- ⑫ Stop piece

Wearing parts

- ⑬ Piston with piston stopper
- ⑭ Piston stopper

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1. General information

1.1 Safety notices and their meaning

-WARNING-

Draws attention to a potentially dangerous situation that could lead to severe personal injury or death.

-CAUTION-

Draws attention to a potentially dangerous situation that could lead to minor personal injury or damage to the equipment or other property.

-NOTE-

Indicates instructions and other useful information. Not used to indicate potentially dangerous situations or situations where damage may occur.

1.2 Pictograms

Warning signs



General warning



Warning: explosive substance



Warning: hot surface

Obligation signs



Wear eye protection



Wear a hard hat



Wear ear protection



Wear protective gloves

Symbols



Read the operating instructions before use.

1 The numbers refer to the illustrations. The illustrations can be found on the fold-out cover pages. Keep these pages open while you read the operating instructions.

In these operating instructions, the designation “the tool” always refers to the DX 860-ENP.

Location of identification data on the tool

The type designation and serial number are printed on the type plate on the tool. Make a note of this information in your operating instructions and always refer to it when making an enquiry to your Hilti representative or service department.

Type: DX 860-ENP

Serial no.: _____

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2. Description

The tool is designed exclusively for use in steel roofing and composite decking applications for fastening trapezoidal profile metal sheets to steel substructures. The

fastening is achieved by driving special fasteners (steel nails) through the metal sheet and into the underlying steel substructure.

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3. Fasteners, consumables and accessories

3.1 Fasteners

Ordering designation	Comments
X-ENP-19 L15 MXR	10 nails per magazine strip

3.2 Cartridges

Ordering designation	Comments
6.8/18 M40 black	Magnum (=.27 CAL long, purple)
6.8/18 M40 red	Extra heavy (=.27 CAL long, red)
6.8/18 M40 blue	Heavy (=.27 CAL long, blue)

3.3 Wearing parts

Ordering designation	Comments
X-76-PS	Piston stopper
X-76-P-ENP	Piston

3.4 Accessories

Ordering designation	Comments
Cleaning set DX 76 / 860-ENP	Flat brush, 25 mm dia. round brush, 8 mm dia. round brush, scraper, cleaning cloth
I-VO 805 PS	Protective glasses, clear
I-VO 808 PS	Protective glasses, tinted
Ear protectors	Small
Hilti lubricant spray	

4. Technical data

Tool	DX 860-ENP powder-actuated fastening tool
Weight	12.02 kg (26.50 lbs)
Dimensions (L x W x H)	970 mm x 320 mm x 145 mm (38.2" x 12.6" x 5.7")
Magazine capacity	40 nails/40 cartridges
Contact movement	89 mm (3.5")
Contact pressure	approx. 360 N
Operating/ambient temp. range	-15 °C bis +50 °C (5 °F bis 122 °F)
Maximum fastener driving rate *	1000 per hour

* For trouble-free operation
Right of technical changes reserved.

5. Safety precautions

5.1 Basic safety instructions

In addition to the safety precautions listed in the individual sections of these operating instructions, the following points must be strictly observed at all times.

5.2 Use of the tool as directed

The tool is designed for professional use in construction and the associated trades for driving fasteners into steel.

5.3 Misuse of the tool



- Tampering with or modification of the tool is not permissible.
- Use of the tool in an explosive or inflammable atmosphere is not permissible unless it has been approved for this application.
- To avoid the risk of injury, use only genuine Hilti fasteners, cartridges, accessories and spare parts or those of equivalent quality.
- Observe the information printed in the operating instructions concerning operation, care and maintenance.
- Never point the tool at yourself or at any bystander.
- Never press the nosepiece of the tool against your hand or other part of your body (or other person's hand or parts of their body).
- Driving fasteners into materials other than steel is not permissible. Do not attempt to drive fasteners into other materials or into hardened or brittle steel, cast iron or spring steel.
- Pull the trigger only when the nosepiece of the tool is in contact with the work surface.
- Never redrive a fastener. This may cause the fastener to break or shatter.
- Do not drive fasteners into existing holes.
- Always observe the application guidelines.

5.4 State-of-the-art technology

- The tool is designed and built using state-of-the-art technology.

- The tool and its accessories may present hazards when used incorrectly by untrained personnel or when used other than as directed.

5.5 Take the necessary precautions at the workplace



- Ensure that the working area is well lit.
- Operate the tool only in well-ventilated working areas.
- The tool is for hand-held use only.
- Keep other persons away from the working area, especially children.
- Before driving fasteners, check that no one is present immediately behind or below the work surface.
- Keep the workplace tidy. Objects which could cause injury should be removed from the working area. Untidiness at the workplace can lead to accidents.
- Keep the grips of the tool clean, dry and free from oil and grease.

5.6 General safety precautions

- Use the right tool for the job. Do not use the tool for purposes for which it was not intended. Use the tool only as directed and when it is in faultless condition.
- Never leave a loaded tool unattended.
- Always remove all cartridges and fasteners from the tool before carrying out cleaning, servicing or maintenance and before storing the tool.
- Never pull the magazine back with the hand. Under certain circumstances, this could cock the tool, making it ready to fire. When the tool is ready to fire, a fastener could be driven inadvertently into a part of the body.
- When not in use, the tool must be unloaded and stored in a dry place where it is locked up or out of reach of children.
- Check that moving parts function correctly without sticking and that no parts are damaged. All parts must be fitted correctly and fulfill all conditions necessary for correct operation of the tool.

- Check the tool for possible damage. Protective devices and any parts that may have suffered slight damage should be checked for correct operation and functionality before further use. Damaged safety devices or other damaged parts must be replaced or repaired properly by an authorized repair workshop unless otherwise indicated in the operating instructions.
- Always hold the tool securely and at right angles to the working surface. This will reduce the risk of the fastener being deflected by the working surface.
- Never use a tool that is incomplete, damaged or malfunctioning.

5.7 Mechanical hazards



- Select the correct fastener guide, piston and fastener combination for the job on hand. Failure to use the correct combination of these items may result in damage to the tool and/or unsatisfactory fastening quality.
- Never use worn or damaged pistons and do not tamper with or modify the piston.
- Use only fasteners of a type approved for use with the tool.

5.8 Thermal hazards



- Allow the tool to cool down. Always wear gloves if the tool is dismantled for cleaning or maintenance before it has been allowed to cool down.
- Do not exceed the recommended fastener driving rate. The tool may otherwise overheat.
- The tool must be allowed to cool down if melting of the plastic cartridge strip is observed.
- Do not dismantle the tool while it is still hot. If this cannot be avoided, wear protective gloves when dismantling the tool.

5.9 Danger of explosion



- Use only cartridges of a type approved for use with the tool.
- Remove the cartridge strip from the tool carefully.
- If a cartridge fails to fire or misfires, always proceed as follows:
 1. Keep the tool pressed at right angles against the working surface for 30 seconds.
 2. If the cartridge still fails to fire, lift the tool away from the working surface, taking care to avoid pointing it at yourself or other persons.
 3. Load the next cartridge on the strip by cycling the tool. Use up the remaining cartridges on the strip and remove the used cartridge strip from the tool. The (partly) used cartridge strip must then be disposed of suitably in order to prevent further use or misuse of any unfired cartridges.
- Do not attempt to forcibly remove cartridges from the magazine strip or tool.
- Unused cartridges must be stored in a dry, high place, locked up or out of reach of children.

5.10 Requirements to be met by users

- The tool is intended for professional use.
- The tool may be operated, serviced and repaired only by authorized, trained personnel. This personnel must be informed of any special hazards that may be encountered.
- Always concentrate on your work. Proceed carefully and do not use the tool if your full attention is not on the job.
- Wear non-slip shoes when working outdoors.
- Avoid unfavorable body positions. Work from a secure stance and stay in balance at all times.
- Keep the arms flexed while using the tool (do not straighten the arms). If you experience pain or feel unwell, stop using the tool immediately.

5.11 Personal protective equipment

- The operator and other persons in the immediate vicinity must always wear suitable protective glasses, a hard hat, ear protectors and protective gloves while the tool is in use or when checking the tool in case of a malfunction.



6. Before use



6.1 Check the tool



- Check that no cartridge strip is loaded in the tool. If a cartridge strip is present in the tool, push it forward in the direction of cartridge transport until it can be


gripped at the cartridge exit opening and pulled out of the tool.

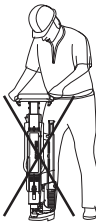
- Check all external parts of the tool for damage at regular intervals and check that all controls operate properly. Do not operate the tool when parts are damaged or when the controls do not function correctly. If necessary, have the tool repaired at a Hilti service centre.
- Check the piston stopper and piston for wear and ensure that the parts have been fitted correctly.

7. Operation



-WARNING-	
	<ul style="list-style-type: none"> ● Driving the fastener may cause flying fragments (i.e. fragments of the material fastened, the fastener or cartridge strip etc.). ● Flying fragments may injure parts of the body or the eyes. ● The operator and bystanders must wear protective glasses and a hard hat.
	

-CAUTION-	
	<ul style="list-style-type: none"> ● The fastener is driven by the energy released when a cartridge is fired. ● An excessively high noise level may damage the hearing. ● The operator and bystanders must wear ear protectors.

-WARNING-	
	<ul style="list-style-type: none"> ● Making the tool ready to fire by pressing it against a part of the body (e.g. the foot) is not permissible. ● This could cause a fastener to be driven into a part of the body. ● Never press the tool against a part of the body.

7.1 Using the tool

-NOTE-

Fastening instructions

These instructions must be observed at all times. For detailed information, please ask your local Hilti representative for a copy of the applicable technical guidelines or national technical regulations.

7.2 Driving fasteners

7.2.1 Loading MXR fastener strips **2**

1. Insert 4 fastener strips in the magazine from above.
2. Press the last fastener strip into the magazine as far as it will go.

7.2.2 Selecting the cartridge **10**

1. Determine the thickness of the material to be fastened and the strength of the supporting steel.
2. Select a suitable type of cartridge and power setting for normal steel or high-strength steel (according to cartridge recommendations).

7.2.3 Loading a strip of Hilti 6.8/18 M40 (= 27 CAL long) cartridges **3**

1. Slide the cartridge strip into the cartridge loading channel from above.
2. Press the cartridge strip into the cartridge loading channel until flush with the top edge of the channel.

7.2.4 Driving fasteners **4**

-CAUTION-

Never attempt to redrive a fastener that has already been driven. Use the tool only in an upright position with the tool nosepiece (fastener exit aperture) pointing downwards.

-WARNING-

Never point the tool toward other persons.

1. Press the tool against the work surface at right angles.
2. Drive the fastener by pressing the trigger on the hand grip.

7.2.5 Checking and adjusting fastener stand-off **5** **6 10**

Fastener stand-off (an indication of depth of penetration) can be adjusted by turning the power regulation wheel on the tool (6).

Setting 1 = minimum

Setting 4 = maximum

1. Check the fastener stand-off. (5A)
2. If a fastener is not driven deeply enough, driving power must be increased. Adjust the power regulation wheel to the next higher setting. (5D) If a fastener is driven too deeply, driving power must be decreased. (5E) Adjust the power regulation wheel to the next lower setting.
3. Drive a fastener.
4. Check the stand-off. (5A)
5. If the fastener is still not driven deeply enough or, respectively, is driven too deeply, steps 2 to 4 must be repeated until the correct depth is achieved. If necessary, use a cartridge with a higher or lower power rating.

7.3 Unloading the tool

7.3.1 Removing cartridges from the tool 7

-WARNING-

Do not attempt to forcibly remove cartridges from the cartridge strip or from the tool.

1. Push the cartridge strip into the tool at the cartridge loading channel, in the direction of cartridge transport, as far as it will go.
2. Pull the cartridge strip out of the tool at the cartridge strip exit aperture.

7.3.2 Removing fastener strips from the tool 8

-NOTE-

Check that the cartridge strip has been removed from the tool. If a cartridge strip is present in the tool, remove it by pulling it out of the tool by hand at the cartridge strip exit aperture.

1. Stand the tool upright on the grip (upside down).
2. Press the release button (red button) above the fastener magazine and allow the fastener strips to slide out of the magazine.
3. Press the stop piece and cycle the tool until the fastener strip projects from the tool.
4. While pressing the stop piece, pull the fastener strip from the tool.

7.4 Remediating malfunctions

7.4.1 If the tool misfires or a cartridge fails to fire, proceed as follows:

1. Press the tool fully against the work surface and pull the trigger.
2. If the cartridge still fails to fire, lift the tool away from the work surface. Do not point the tool toward yourself or other persons.
3. At the cartridge loading side, advance the cartridge strip by one cartridge by pushing the strip further into the tool or, alternatively, by pulling the strip through the tool by hand (by one cartridge) at the cartridge strip exit aperture.
4. Use up the remaining cartridges on the strip. Remove the used cartridge strip and dispose of it correctly to prevent possible misuse.

7.4.2 If the tool jams, proceed as follows 9

-WARNING-

Do not attempt to forcibly remove cartridges from the cartridge strip or from the tool.

1. Pull the cartridge strip out of the tool at the cartridge strip exit aperture.

-NOTE-

Turning the rotating sleeve releases the catch. It jumps open automatically and allows the tool to be opened.

2. Press the nosepiece of the tool in slightly and turn the rotating sleeve through 90° (use the accessory scraper as an aid if necessary).

3. Carry out the steps described at 8.2.1 or 8.2.2.
4. Turn the rotating sleeve subsequently back through 90° to its original position.

8. Care and maintenance


When this type of tool is used under normal operating conditions, dirt and residues build up inside it and functionally relevant parts are subject to wear. Regular inspections and maintenance are thus essential in order to ensure reliable operation.

Recommended interval for cleaning the tool and checking the condition of the piston and piston stopper:

- **At least daily when the tool is subjected to intensive use.**
- **After driving 5,000 fasteners, at the latest.**

-WARNING-

The tool must be unloaded before carrying out care and maintenance.

	<p style="text-align: center;">-CAUTION-</p> <ul style="list-style-type: none">● The tool may become hot during operation.● You could burn your hands.● Wear protective gloves before carrying out care and maintenance.
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8.1 Care of the tool

Clean the casing of the tool at regular intervals with a damp cloth.

-NOTE-

Do not use a spray or steam-cleaning system for cleaning. Never operate the tool when the ventilation slots are obstructed. Do not permit foreign objects to enter the interior of the tool.

8.2 Maintenance

Check all external parts of the tool for damage at regular intervals and check that all controls operate properly. Do not operate the tool when parts are damaged or when the controls do not operate properly. If necessary, have the tool repaired at a Hilti service centre.

Use the tool only with the recommended cartridges and power settings. Use of the wrong cartridges or use of excessively high power settings may lead to premature failure of parts of the tool.

-CAUTION- when cleaning:

Never use grease for the maintenance/lubrication of parts of the tool. This may lead to malfunctions. Use only Hilti lubricant spray or a product of comparable quality.

The residues deposited inside DX tools contain substances that may be injurious to your health:

- Do not inhale any dust or dirt while cleaning.

- Keep the dust or dirt away from foodstuffs.
- Wash your hands after cleaning the tool.

8.2.1 Checking and replacing the piston and piston stopper

-NOTE-

- If the tool is used incorrectly (e.g. no fastener loaded in the tool before firing or the fastener is driven into unsupported sheet metal), the piston may become jammed against the piston stopper. Should the piston and piston stopper become fully seized in this way, these parts have reached the end of their life. The tool cannot be cycled when in this status.
- The condition of the piston and piston stopper must be checked at regular intervals and at least daily.

-WARNING-

The tool must be unloaded.

1. Stand the tool on its grip (upside down).
2. Press the red button above the magazine and allow the fastener strips to slide out of the magazine.

-CAUTION-

Parts of the tool may become very hot after a period of use. Protective gloves must be worn if the following maintenance procedure is carried out before the tool has been allowed to cool down.

3. Unscrew the base plate with the fastener transport system in a counter-clockwise direction until it is released from the tool. Lift the base plate and fastener transport system away from the tool.
4. Pull the piston out of the piston guide.
5. Also pull the piston stopper out of the base plate (with the aid of the piston, if necessary).
6. Check the piston and piston stopper for damage. If signs of damage are found or the piston is jammed against the piston stopper, the piston and piston stopper must be replaced.

-NOTE-

Check the piston for straightness by rolling it on a smooth surface.

Never use a worn or damaged piston and do not tamper with or modify the piston in any way.

7. Pull out the catch before inserting the piston. Hold the catch in this position until the piston is fully inserted and its tip no longer projects from the tool.
8. Insert the piston stopper the right way round in the base plate (rubber part toward the front).
9. Press the base plate and the fastener transport system against the threaded section on the tool and rotate it in a clockwise direction until it is screwed on as far as it will go.
10. Turn the base plate with the fastener transport system back to its original position over the magazine.
11. Push the magazine back until it engages with the fastener transport system.

8.2.2 Cleaning the piston guide 12 13 14

-NOTE-

Check that no cartridges are present in the tool. If necessary, unload the tool as described at section 7.3.1.

1. Stand the tool on its grip (upside down).
2. Press the red button above the magazine and allow the fastener strips to slide out of the magazine.

-CAUTION-

Parts of the tool may become very hot after a period of use. Protective gloves must be worn if the following maintenance procedure is carried out before the tool has been allowed to cool down.

3. Unscrew the base plate with the fastener transport system in a counter-clockwise direction until it is released from the tool. Lift the base plate and fastener transport system away from the tool.
4. Pull the piston out of the piston guide.
5. Pull out the catch and hold it securely in this position.
6. Pull the piston guide upwards and out of the tool and then release the catch.
7. Use the large wire brush (accessory) to clean the outside and inside surfaces of the piston guide, including the threaded section.
8. Use the small round brush to clean the cartridge chamber and the adjacent bore for the power regulating pin.
9. Lubricate the slider and the piston guide collar with Hilti spray.

-NOTE-

Use of lubricants other than Hilti lubricant spray may cause damage to rubber parts of the tool, especially the piston stopper.

10. Lubricate the moving part of the fastener transport system with Hilti lubricant spray.
11. Lubricate the guide channels in the tool with Hilti lubricant (accessible through the ventilation slots).
12. Slide the piston guide into the tool from above until the catch engages.
13. Pull out the catch before inserting the piston. Hold the catch in this position until the piston is fully inserted and its tip no longer projects from the tool.
14. Press the base plate and the fastener transport system against the threaded section on the tool and rotate it on in a clockwise direction until it is screwed on as far as it will go.
15. Turn the base plate with the fastener transport system back to its original position over the magazine.
16. Push the magazine back until it engages with the fastener transport system.

8.3 Checking the tool after care and maintenance

After carrying out care and maintenance and before loading the cartridges, check that all safety devices have been fitted and that they function faultlessly.

-NOTE-

Use of lubricants other than Hilti lubricant spray may cause damage to rubber parts of the tool, especially the piston stopper.

9. Troubleshooting

-WARNING-

The tool must be unloaded before taking any steps to remedy faults.

Fault	Possible cause	Remedy
Cartridge is not transported.	Damaged cartridge strip.	Change the cartridge strip. (see 7.3.1 and 7.2.3)
	The tool is damaged.	Contact Hilti.
Cartridge strip cannot be removed from the tool.	The tool is damaged or has overheated due to an excessively high fastener driving rate.	Allow the tool to cool down and then try again to carefully remove the cartridge strip. If still not possible, contact Hilti. -NOTE- Do not attempt to forcibly remove cartridges from the strip or from the tool.
Cartridge doesn't fire.	Misfire.	See "Remedying malfunctions" (7.4).
	The tool needs to be cleaned.	Clean the tool.
	The base plate and fastener transport system section are not screwed on fully.	Screw the base plate and fastener transport system on fully.
	The tool is not pressed down fully.	Press the tool down fully before pulling the trigger.
	All cartridges on the strip have been used up.	Remove the cartridge strip and reload with a new strip.
	Fastener transport malfunction.	Check the movement of the fasteners; unload defective fasteners if necessary.
	A single cartridge is defective.	Advance the cartridge strip manually by one cartridge at the cartridge loading side by pushing it further into the tool and then use up the remaining cartridges.
	The tool or cartridges are defective.	Contact Hilti.
Fastener penetrates too deeply (inadequate fastener stand-off). 5E	Fastener missed the steel beam.	Mark the position of the beam. Drive another fastener into the beam.
	Power setting too high.	Reduce fastener driving power according to the recommendations for the cartridge 10 or use a less powerful cartridge.
	The piston is worn.	Replace the piston and piston stopper.
	The wrong piston has been fitted.	Check that the right combination of piston and fastener is used.
Fastener does not penetrate deeply enough (excessive fastener stand-off). 5D	Fastener driven into the rib of the beam.	Reposition the tool and drive another fastener.
	Different thickness and/or strength of supporting material.	Increase fastener driving power in accordance with recommendations 10 or use a more powerful cartridge.
	Fastener driving power is too low.	Increase fastener driving power in accordance with recommendations 10 or use a more powerful cartridge.
	The tool needs to be cleaned.	Clean the tool.
	The piston is broken.	Change the piston and piston stopper.
	The tool is damaged.	Contact Hilti.
	The wrong piston has been fitted.	Check that the right combination of piston and fastener is used.

Fastener stand-off varies considerably. 5F	Irregular driving power.	Clean the tool. Replace the wearing parts. Contact Hilti if irregular driving power is still experienced.
Shear breakage. 5C	Fastener driven into the rib of the beam.	Reposition the tool and drive another fastener.
	The supporting material is thicker and/or of higher strength.	Check that the recommended type of fastener is being used and then increase driving power in accordance with recommendations for the cartridge or, respectively, use a more powerful cartridge.
The tool remains compressed (does not extend when pressure is released).	The piston is jammed against the piston stopper.	Replace the piston and piston stopper. (7.4.2)
	The tool needs to be cleaned.	Clean the tool. (8.2.2)
	The cartridge strip has jammed, the tool has overheated.	Please refer to “Cartridge strip cannot be removed.” Do not exceed the maximum recommended fastener driving rate.
The tool cannot be fired.	Trigger pulled before the tool is fully pressed down.	Press the tool down fully and then pull the trigger.
	Fastener transport malfunction.	Load fastener strip (7.2.1) ; check that strip is free to move; remove any damaged or distorted fasteners (7.3.2) .
	The tool needs to be cleaned.	Clean the tool. (8.2.2)
	The base plate and fastener transport system are not screwed on fully.	Screw the base plate and fastener transport system on fully.
	The tool is damaged.	Contact Hilti.
No fastener is driven.	Fastener strip transport mechanism is defective.	Contact Hilti.
	No piston in the tool.	Fit the piston.
	The piston is broken.	Replace the piston and piston stopper.
	The base plate needs to be cleaned.	Use the brushes provided to clean the base plate and associated parts. Lubricate with Hilti spray.
	Fasteners are jammed in the base plate.	Remove the jammed fasteners. Avoid shear breakage (see above). Avoid missing the beam (driving the fastener into unsupported sheet metal); mark the position of the beams accurately if necessary.
The base plate cannot be screwed on to the tool fully.	The piston stopper has been inserted the wrong way round.	Unscrew and remove the base plate. Fit the piston stopper the right way round and screw on the base plate.
	The piston guide needs to be cleaned at the end of the threaded section.	Clean and lubricate the thread.
The piston cannot be fitted.	The tool, the piston guide in particular, needs to be cleaned.	Clean the piston guide and refit the piston.
The piston guide cannot be fitted.	The catch remains in the closed position.	Open the catch. (8.2.2)
	The piston guide is incorrectly positioned.	Position the piston guide correctly when inserting it. (8.2.2)
Stiff cycling action (high force required to press the tool down).	The tool needs to be cleaned.	Clean the piston guide. Check the piston for straightness. Clean the tool. (8.2.1 and 8.2.2)

If these measures fail to remedy the problem, please contact Hilti.

10. Disposal

Most of the materials from which Hilti powder-actuated tools are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, Hilti has already made arrangements for taking back your old powder-actuated tools for recycling. Please ask your Hilti customer service department or Hilti sales representative for further information. Should you wish to return the tool yourself to a disposal facility for recycling, proceed as follows: Dismantle the tool as far as possible without the need for special tools. National and international directives and regulations must be observed.

Separate the individual parts as follows:

Part/assembly	Main material	Recycling
Toolbox	Plastic	Plastics recycling
Outer casing	Plastic/synthetic rubber	Plastics recycling
Piston	Steel	Scrap metal
Piston stopper	Steel/plastic	Scrap metal
Screws, small parts	Steel	Scrap metal
Used/partly-used cartridge strips	Steel/plastic	In accordance with local regulations

11. Manufacturer's warranty – DX Tools

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid so long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti Operating Instructions, and the technical system is maintained. This means that only original Hilti consumables, components and spare parts, or other products of equivalent quality, may be used in the tool.

This warranty provides the free-of-charge repair or replacement of defective parts only over the entire lifespan of the tool. Parts requiring repair or replacement as a result of normal wear and tear are not covered by this warranty.

Additional claims are excluded, unless stringent national rules prohibit such exclusion. In particular, Hilti is not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the tool for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.

For repair or replacement, send tool or related parts immediately upon discovery of the defect to the address of the local Hilti marketing organization provided.

This constitutes Hilti's entire obligation with regard to warranty and supersedes all prior or contemporaneous comments and oral or written agreements concerning warranties.

Confirmation of CIP testing

The Hilti DX 860-ENP has been system and type tested. As a result, the tool bears the rectangular PTB approval mark showing approval number **S814**. Hilti thus guarantees compliance with the approved type. Unacceptable defects or deficiencies, etc. determined during use of the tool must be reported to the person responsible at the approval authority (PTB) and to the Office of the Permanent International Commission (C.I.P.).

12. Health and safety of the operator

12.1 Noise information

Powder-actuated fastening tool

Type	DX 860-ENP
Model	Series
Caliber	6.8/18 red
Power regulation	2
Application	Fastening to 8 mm steel (390 MPa) with X-ENP 19L15MX R

Declared measured values of noise characteristics according to 2006/42/EC Machinery Directive in conjunction with E DIN EN 15895

Noise (power) level:	$L_{WA, 1s}^1$	115 dB(A)
Emission noise-pressure level in the work station:	$L_{pA, 1s}^2$	104 dB(A)
Peak sound pressure emission level:	$L_{pC, peak}^3$	137 dB(C)

Operation and set-up conditions:

Set-up and operation of the pin driver in accordance with E DIN EN 15895-1 in the semi-anechoic test room of Müller-BBM GmbH. The ambient conditions in the test room conform to DIN EN ISO 3745.

Testing procedure:

Enveloping surface method in anechoic room on reflective surface area in accordance with E DIN EN 15895, DIN EN ISO 3745 and DIN EN ISO 11201.

NOTE: The noise emissions measured and the associated measurement uncertainty represent the upper limit for the noise values to be expected during the measurements.

Variations in operating conditions may cause deviations from these emission values.

¹ ± 2 dB (A)

² ± 2 dB (A)

³ ± 2 dB (C)

12.2 Vibration

Total vibration in accordance with 2006/42/EC does not exceed 2.5 m/s².

Further information about user health and safety can be found at www.hilti.com/hse.



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