Manual

Pneumatic Hog-Ring

WARNING **HR760**

Before operating this pneumatic hog-ring, all operators should study this manual to understand and follow the safety warnings and instructions. Keep these instructions with the tool for future reference. If you have any question to contact your distributor.

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Tool specifications

Dimensions(length＊height＊width):

Long nose: 359 MM＊220 MM＊89 MM

Middle nose : 351 MM＊220 MM＊89 MM

Short nose : 336 MM＊220 MM＊89 MM

Weight(without C-Rings):

Long nose: : 1490 g

Middle nose : 1380 g

Short nose : 1350 g

Air inlet.....1/4"NPT

Compressed air:

Maximum permissible operating pressure...8KG/CM^2 (110PSI)

Recommended operating pressure .....5-7 KG/CM^2 (70-100PSI)

Air consumption .....0.112M^3 (3.96 ft^3)

Air pressure 7KG/CM^2 with 100 rings per minute

Staple's size 15G100

Staple's capacity .....100 PCS

Safety instruction

DANGER

1.Read this manual and understand all safety instructions before operation the tool. If you have any questions, please contact our authorized representatives.

2.Never allow to use type of flammable gases oxygen as a power source for the tool. Use filtered, lubricated, regulated compressed air only.

3.Never use gasoline or other flammable liquids to clean the tool. Vapors in the tool will ignite by a spark and cause the tool to explode.

4.Do not exceed maximum permissible operating pressure of the tool (8 kg/cM^2)

5.Disconnect the tool from air supply before cleaning jams, servicing, adjusting, and during non-operation.

WARNING

6.Do not pull the trigger when carrying or holding the tool. Never carry the tool by the hose or pull the hose to move the tool.

7.At the workplace, always wear the protective equipment such as safety glasses, hearing protection and head protection.

8.Do not use a check valve or any other fitting which allows air to remain in the tool.

9.Do not place your hand or any part of your body in the staple clinching area or adjustment window of the tool when connecting or disconnecting air supply.

10.Never point any operational driving tool at yourself or at any other person.

LUBRICATION AND MAINTENANCE

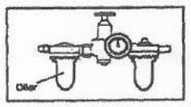
NOTE

Your tool requires lubrication before you use it for the first time.

Disconnect the air supply from the tool before lubricating.

Turn the tool so the inlet is facing up and put one drop of high speed spindle oil, UNOCAL RX22, OR 3-IN-1 oil into air inlet. Never use detergent oil additives. Operate the tool briefly after adding oil.

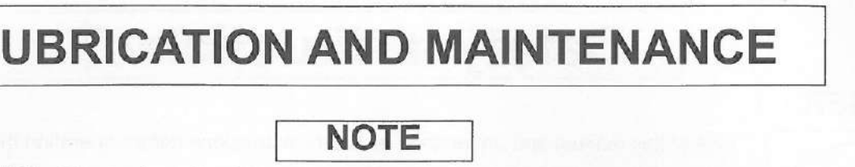
Wipe off excessive oil at the exhaust, excessive oil will damage o-rings of tool. If oil is used in-line feed. Manual lubrication through the air inlet is not required on a daily basis.

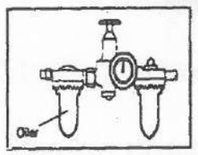


AIR SUPPLY AND CONNECTIONS

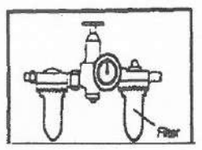
NOTE

The following illustration shows the correct mode of connection to the air supply system which will increase the efficiency and useful life of the tool.





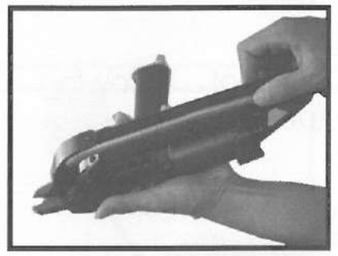
Many air tool users find it convenient to use oil to help provide oil circulation through tool and increase the efficiency and useful life of the tool. Check oil level in the oil daily.



Any air tool user fined it convenient to use a filter to remove liquid impurities which can rust or wear internal parts of the tool. A filter also increase the efficiency and useful of the tool. The filter must be checked on a daily basis and if necessary drained.

Loading the tool

Disconnect the air supply.



Insert a stick of appropriate c-rings into the magazine body(035) from back. Let the stick slide forward to the front of the magazine body(035).

Pull pusher (034) back and up to against the end of stick.

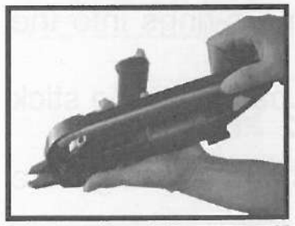
Operating the tool

WARNING

Protect your eyes and ears. Wear safety glasses with side shields. Wear hearing protection. Employers and users are responsible for ensuring the user or anyone near the tool wear this safety protection.

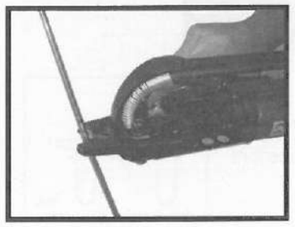
WARNING

To prevent accidental injuries: Never, place a hand or any other part of body in clinching area. Never point tool toward anyone else. Never engage in horseplay. Always handle the tool with care. Never pull trigger unless tool is in working.



Insert c-rings into your tool following the instructions of loading the tool.

Connect the air supply.



Free shooting first. (The first shooting will push the c-ring to the front position of clinchers.) Put the target into clinchers then shooting.

Note

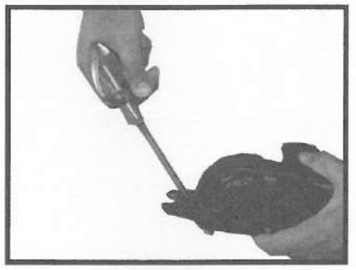
Check if target is closed by C-ring appropriately.

Cleaning the tool

DANGER

Never use gasoline or other flammable liquids to clean the tool. Vapors in the tool will ignite by a spark and cause the tool to explode and result in death or serious personal injury.

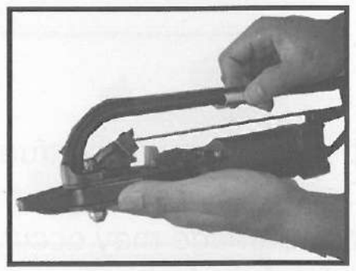
1. Disconnect the air supply from the tool.



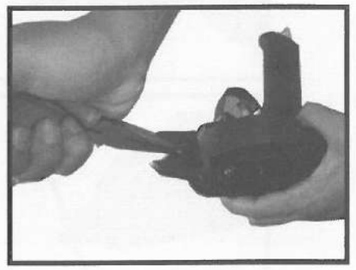
2. Remove tar buildup with kerosene #2 fuel oil or diesel fuel. Do not allow solvent to get into the cylinder or damage may occur. Dry off the tool completely before use.

Clearing a jam from the tool

Disconnect the air supply.

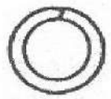
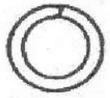


Move out remnant c-rings from magazine body(035).



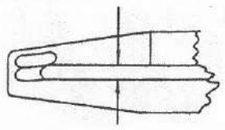
Clearing jam by pliers.

Trouble shooting

Problem	Cause	Solution
Inside diameter of ring too large after clinching 	Latch (014) worn	Replace latch (014)
	Wrong latch used (014) (too short)	Verify and replace latch (014)
	Latch spring broken (016)	Replace latch spring (016)
	Wrong piston rod (026) (too short)	Verify and replace piston rod (026)
	Low power: 1. Air pressure set too low 2. Air leaks in supply hose 3. Air leak in tool	Verify pressure: 1.Check air pressure setting (Operator Manual) 2.Replace air supply hose 3.See page 15 and 16
	Wrong clinchers used (021、022)	Verify and replace clinchers (021、022)
	Worn clinchers (021、022) (helix, cam surface, bolt holes, clincher bushings (013))	Replace clinchers (021、022) or clinchers bushing (013)
	Worn rollers (025)	Replace rollers (025)
	Wrong rollers (025) (too small)	Verify and replace rollers (025)
Inside diameter of ring too large after clinching 	Defective rings: 1. Wire too hard 2. Rough surface 3. Cut-off burrs	Return sample of rings to your distributor to be tested

Problem	Cause	Solution
Inside diameter of ring too small after clinching	Wrong clinchers (021、022)	Verify and replace clinchers (021、022)
	Clinchers stops worn or polished off (021、022)	Replace clinchers (021、022)
Ring points not entering opposite clincher (021、022)	Tip of clinchers (021、022) broken off	Replace clinchers (021、022)
	Mismatched clinchers (021、022): clinchers (021、022) should be replaced only in pairs	Verify and replace clinchers (021、022)
	Defective rings: 1. Points not equal 2. Ring not symmetrical 3. Cut-off Burrs	Return sample of rings to your distributor to be tested
	Helix in clinchers (021、022) worn so that it does not properly guide the ring point into the rotating helix in opposite clincher	Replace clinchers (021、022)
	Rings only curling in one clincher (021、022)	Replace clinchers (021、022)。
Ring tear drops instead of forming 	Latch (014) worn	Replace latch (014)
	Wrong latch (014) (too short)	Verify and replace latch (014)
	Latch spring (016) bent or broken (latch spring (016) must hold latch (014) tightly against end of side plate (015) and against clinchers (021、022))	Replace latch spring (016)

Problem	Cause	Solution
	Feeder blade (023) 1. Wrong feeder blade (023) (too short) 2. Modified by customer 3. Worn (rounded on leading edge)	Feeder blade (023) 1.Verify and replace 2.Do not modify parts 3.Replace feeder blade (023)
	Wrong or worn side plate (015)	Replace side plate (015)
	Defective rings 1. Burrs 2. Twisted 3. Not symmetrical	Return sample of rings to your distributor to be tested

Problem	Cause	Solution
Rings jam	Magazine body(035) 1. Damaged or bent (changes position of magazine shoe (027)	Magazine body(035) 1.Replace magazine (035)
	2. The gap between magazine shoe(027) and clinchers(021,022) is too big.(Ring passes under magazine shoe (027) without raising magazine shoe(027); ring out of control.)	2.Replace magazine shoe (027)
	3. The gap between magazine shoe(027) and clinchers(021,022) is too small. (Ring must be forced under magazine shoe (027) which "bottom out" and may deflect magazine body (035) itself	3.Replace magazine body(035)
	4. Worn magazine shoe (027)	4. Replace magazine shoe (027)
	5. Loose or lost magazine screw (512) (magazine body(035) is not supported properly)	5.Tighten or replace screw (512)
	Spring (032) loose	Adjust spring (032)
Ring groove 	Feeder blade(023) 1. Worn(holes, leading edge, length, thickness) 2. Broken 3. Bent	Feeder blade(023) 1.Replace feeder blade (023) 2. Replace feeder blade (023) 3. Replace feeder blade (023)
	Ring groove in clinchers (021、022)worn	Ring groove in clinchers (021、022)worn

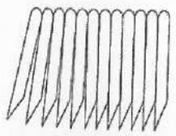
Problem	Cause	Solution
Rings jam	Defective rings 1. Burrs 2. Rings skewed on stick 3. Rings out of line on stick 4. Rings twisted 5. Rings not symmetrical 6. Rings strip flare at the ends	Return sample of rings to your distributor to be tested
	Wrong wire gauge for model of tool	Verify wire size 1. 16GAGE Φ1.6mm 2. 15GAGE Φ1.8mm
Rings don't feed down magazine (035)	Spring (032) 1. Spring (032) too loose 2. Spring (032) broken	Spring (032) 1. Adjust spring (032) 2. Replace spring (032)
	Damaged or bent magazine body(035)	Replace magazine body (035)
	Defective rings 1.Burrs 2.Rings skewed on stick 3.Rings out of line on stick 4.Rings twisted 5.Rings not symmetrical 6.Rings strip flare at the ends	Return sample of rings to your distributor to be tested

Problem	Cause	Solution
Ring spitting	Air pressure too high	Verify proper air pressure
	Spring (032) too loose	Adjust spring (032)
	Magazine body(035) 1. Damaged or bent (change position of magazine shoe (027)) 2. The gap between magazine shoe(027) and clinchers(021,022) Is too big.(Ring passes under shoe without raising shoe; ring out of control.) 3. The gap between magazine shoe(027) and clinchers(021,022) is too small. (Ring must be forced under magazine shoe (027) which "bottoms out" and may deflect magazine body(035) itself. This may produce snapping or clicking noise as ring is fed from magazine body(035).) 4. Worn magazine shoe (027) or magazine shoe groove (035) worn	Magazine body(035) 1. Replace magazine body(035) 2. Replace magazine shoe (027) 3. Replace magazine shoe (027) 4. Replace shoe (027) or magazine body(035)
	Worn clinchers (021、022)	Replace clinchers (021、022) Replace only in sets
	One (or both) clinchers (021、022)rubbing side plate (015). Clinchers must move freely; the ring should have equal force on it as it leaves the magazine shoe (027). If one clincher(021 or 022) is hard to move, the ring will contact it first, causing the ring to rotate and spin out of control.	Adjust clinchers (021、022)

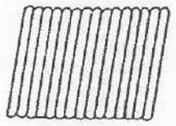
Problem	Cause	Solution
Ring spitting	Build up of material in clinchers (021、022) helix, (when using plated, aluminum or plastic coated rings)	Remove build up of material
Snapping noise as ring is being fed from magazine	Defective rings 1.Burr on outside curve of ring 2.Rings skewed on stick 3.Rings out of line on stick 4.Rings twisted opposite to clincher helix 5.Rings not symmetrical 6.Rings strip flare at the ends 7.Wrong wire gauge for model of tool	Return sample of rings to your distributor to be tested
Snapping noise as ring is being fed from magazine	The gap between magazine shoe(027) and clinchers(021,022) is too small. (Ring is being forced under the magazine shoe (027) that has "bottomed out" and is deflecting the magazine body(035)	Replace magazine body(035)。
	Rings of wrong wire gauge used in tool (too large)	Verify rings and use correct rings for the given tool
Leaking when no fighting	Worn O-ring (506)	Replace O-ring (506)
	Worn O-ring (504)	Replace O-ring (504)
	Worn O-ring (502)	Replace O-ring (502)
	Worn packing (002)	Replace packing (002)
Leaking when fighting	Worn O-ring (506)	Replace O-ring (506)
	Worn O-ring (504)	Replace O-ring (504)

Problem	Cause	Solution
	Worn O-ring (502)	Replace O-ring (502)
	Worn O-ring (525)	Replace O-ring (525)

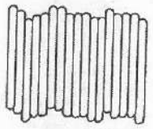
The tool is designed to operate with rings manufactured within standard tolerances. As can be seen in the preceding pages, visibly defective rings can be the cause of many ring-forming troubles.



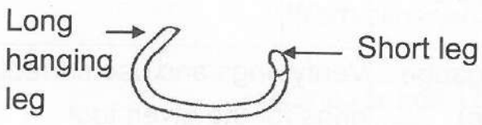
Flared ring in a strip



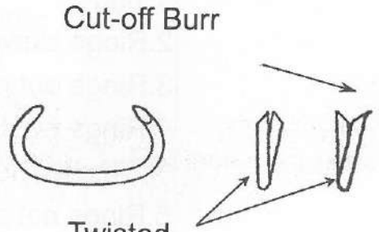
Rings skewed on a strip

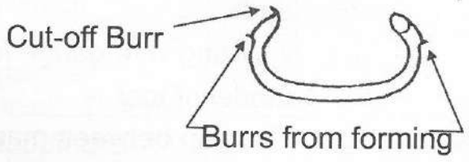


Rings out of line on a strip

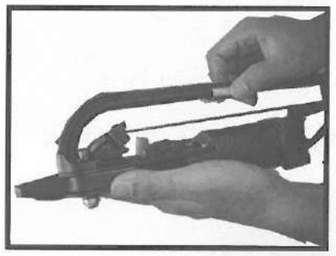


Unsymmetrical

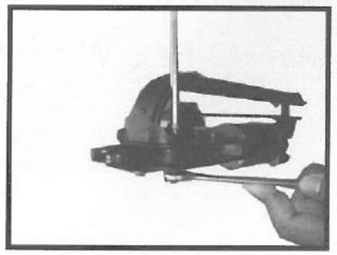




Replace clinchers

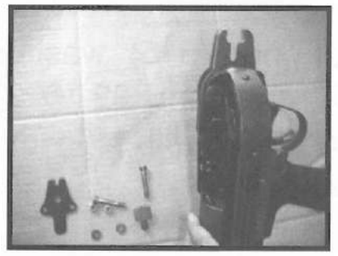


Disconnect the air supply and move out remnant c-rings from magazine body (035).



Loosen Screw (516) and nut (515) with M5 Hex. Wrench key and M10 spanner.

Take away screw(516), nut (515), washer (017), lash spring (016), clinchers (021,022) and bushings (013).

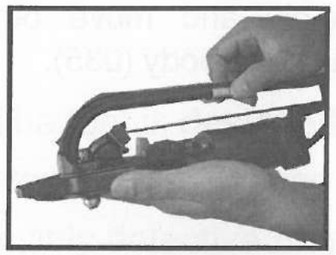


Replace new clinchers (021,022) and bushings (013).

Note

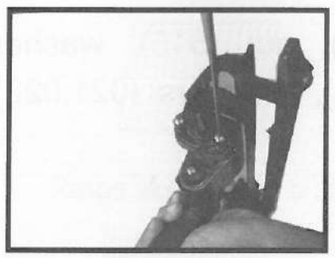
Clinchers (021,022) and bushings (013) should be replaced only in pairs.

Replace Blade

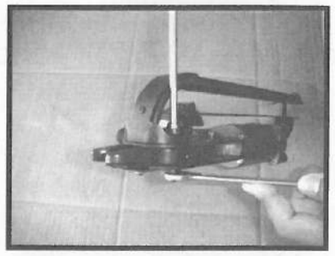


Disconnect the air supply and move out remnant c-rings from magazine body (035).

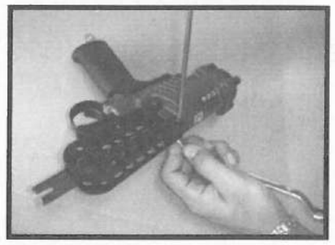
Take away Screw (512) with M3 Hex. Wrench key.



Take away screw (501), cap (001) and packing (002) with M3 Hex. Wrench key.



Take away screw (516), nut (515) washer (017), latch spring (016), clinchers (021,022) magazine (035), and latch (014) with M5 Hex. Wrench key and M10 Spanner.

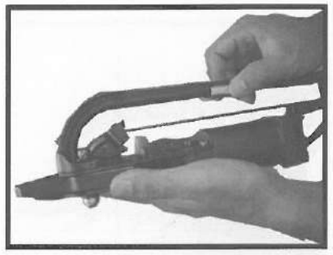


Take away screw (523), nut (514) and side plates (015) with M4 Hex. Wrench key and M8 Spanner.

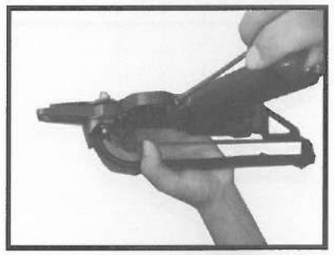
Take away pin (024), roller (025) and blade (023).

Replace blade (023).

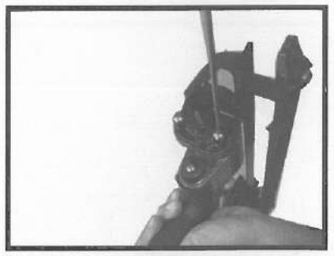
Replace piston's O-ring



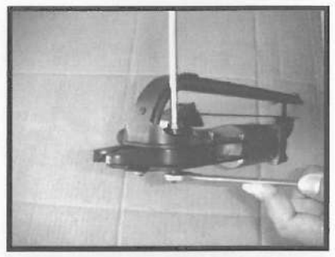
Disconnect the air supply and move out remnant c-rings from magazine body(035).



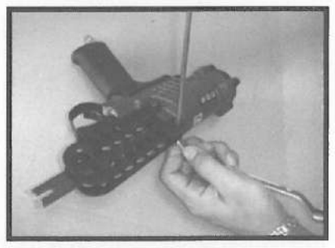
Take away Screw (512) with M3 Hex. Wrench key.



Take away screw (501), cap (001) and packing (002) with M3 Hex. Wrench key.



Take away screw (516), nut (515) washer (017), latch spring (016), clinchers (021,022), magazine body(035), and latch (014) with M5 Hex. Wrench key and M10 Spanner.



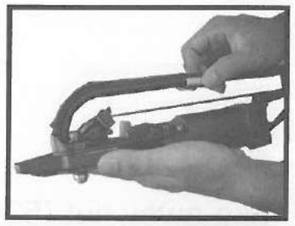
Take away screw (523), nut (514) and side plates (015) with M4 Hex. Wrench key and M8 Spanner.

Take away pin (024), roller (025) and blade (023).

Push piston rod (026) up. Take away nut (524) with M10 Spanner and pliers. Then, take away toothed lock washer-external (527), washer (038), piston (003) and piston rod (026).

Replace piston's O-ring (502).

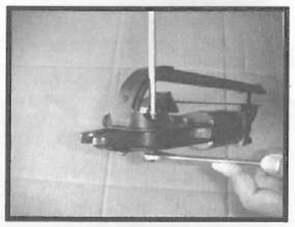
Replace valve's O-ring



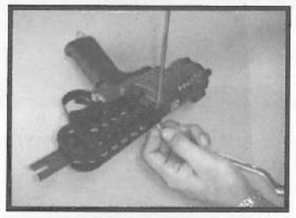
Disconnect the air supply and move out remnant c-rings from magazine body(035).

Take away Screw (512) with M3 Hex. Wrench key.

Take away screw (501), cap (001) and packing (002) with M3 Hex. Wrench key.

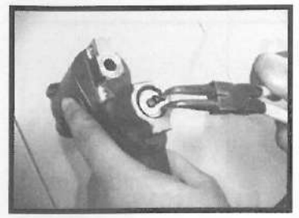


Take away screw (516), nut (515) washer (017), latch spring (016), clinchers (021,022), magazine body(035), and latch (014) with M5 Hex. Wrench key and M10 Spanner.

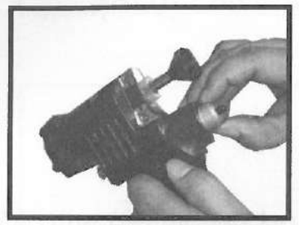


Take away screw (523), nut (514) and side plates (015) with M4 Hex. Wrench key and M8 Spanner.

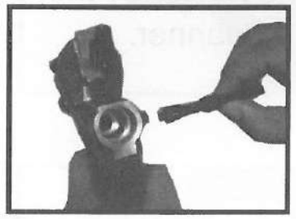
Take away pin (024), roller (025) and blade (023)



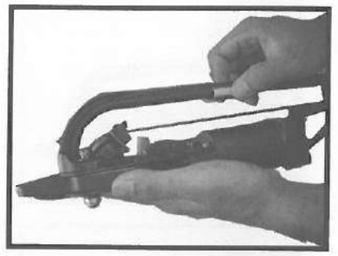
Take away C-Ring(530), front valve seat(019) and valve(020) with pliers.



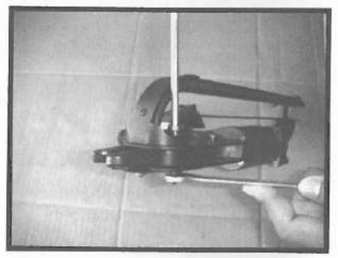
Replace O-ring (506)



Replace pusher spring

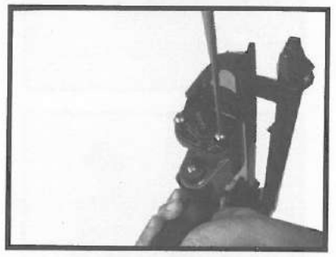


Disconnect the air supply and move out remnant c-rings from magazine (035).



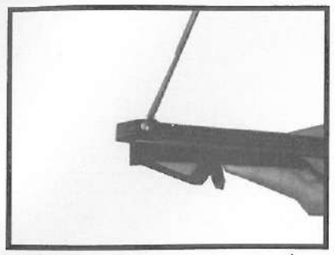
Take away screw (516) and nut (515) with M5 Hex. Wrench key and M10 Spanner.

Take away screw (516), nut (515), washer (017), latch spring (016), clinchers (021,022) and bushing (013).

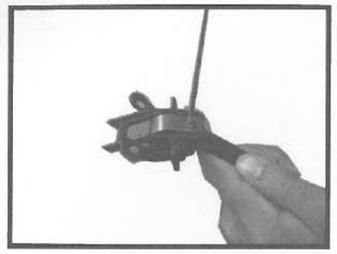


Take away screws (501) with M3Hex. Wrench key.

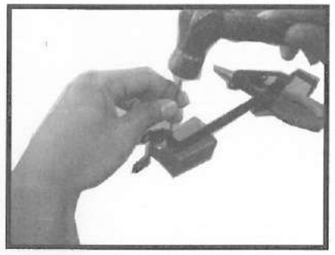
Take away magazine(035).



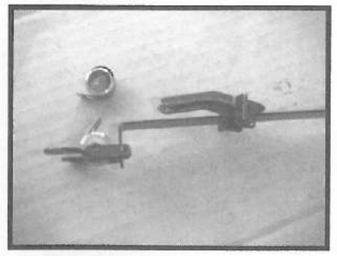
Take away screw (512) with M3 Hex. Wrench key.



Take away screw (518) with M2.5 Hex. Wrench key.



Take away two spring pins (517) withΦ2.3mm rod and hammer.



Replace pusher spring (032).