

AIR TOOLS CARPENTER

21° PLASTIC COLLATED FULL HEAD FRAMING NAILER



Model No. CFRN9021-B

IMPORTANT:
Please read this manual carefully before
using this product, and save it for reference.

**INSTRUCTION
MANUAL**

Contact us

 info@carpenterpowertools.com

 Carpenter Power Tools
359 Hood Rd. Suite #230
Jasper, GA. 30143

 1-888-666-1887

 <http://www.carpenterpowertools.com>

TABLE OF CONTENTS

TECHNICAL SPECIFICATIONS	4
SAFETY GUIDELINES	5
KEY PARTS DIAGRAM	8
TECHNICAL INFORMATION	9
TYPES OF NAILS	10
OPERATING INSTRUCTIONS	11
TROUBLESHOOTING	14
EXPLODED VIEW	16
PARTS LIST	17

TECHNICAL SPECIFICATIONS

Net Weight	8.93 lbs/ 4.05 kg
Dimensions	20-9/10"(H) x 4 - 1/5"(W) x 14 - 1/5"(L) (530x106x360mm)
Load Capacity	2 Strips X 30 Pcs Each (60 Pcs Total)
Operating Pressure	70-115 psi (4.8 - 7.9bar)
Fastener Details	21° Plastic Collated Full Head Nails
Driving Power	1050 in./lbs at 90 psi
Air Consumption	0.075ft ³ (1.5lit)/cycle at 90 psi

CFM: CUBIC FEET PER MINUTE REFERS TO THE VOLUMETRIC FLOW OF AIR. THIS INFORMATION IS USED TO DETERMINE THE PROPER COMPRESSOR TO SUIT YOUR NEEDS.
NPT: National Pipe Thread.

SAFETY GUIDELINES

This manual contains information that relates to PROTECTING PERSONAL SAFETY and PREVENTING EQUIPMENT PROBLEMS. It is very important to read this manual carefully and understand it thoroughly before using the product. The symbols listed below are used to indicate this information.



DANGER!

Potential hazard that could result in serious personal injury including possible death.



WARNING!

Potential hazard that could result in serious personal injury to the tool user or others in the work area.



CAUTION!

Potential hazard that could result in damage to the tool or property.

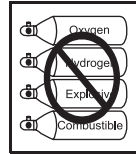
PERSONAL SAFETY

These precautions are intended for the personal safety of the user and others working with the user. Please take time to read and understand them.

Make sure you read and understand this manual before using this tool. Make sure other users read and understand this manual before they use the tool.

SAFETY GUIDELINES

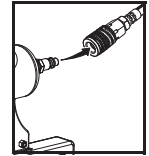
- **DANGER!** Potential hazard that could result in serious personal injury including possible death.
- Do not use oxygen or any other combustible or bottled gas to power air-powered tools. Failure to observe this warning can cause explosion and serious personal injury or death.
- Do not use this tool in the presence of flammable liquids, dust or gases. Sparks that are created during use may ignite these materials.
- Use only compressed air to power air-powered tools. Use an approved air hose with a minimum length of 25' (7.6 m).
- Do not allow inexperienced or untrained individuals to operate any air-powered tool.
- Keep hands and other parts of the body away from the Outlet (Firing Head) during use.
- Nails or objects in the workpiece can cause serious injury if they are deflected by the workpiece.
- Keep children away from the work area. Do not allow children to handle power tools.
- Never point nailer toward yourself or anyone else.
- Always assume the nailer contains fasteners. Never point the nailer toward yourself or anyone else, whether it contains fasteners or not. If fasteners are mistakenly driven, it can lead to severe injuries. Never engage in horseplay with the nailer. Respect the nailer as a dangerous working implement.



CAUTION!

Potential hazard that could result in damage to the tool or property.

- Disconnect the tool from the air supply and turn off the compressor before performing any maintenance, when the tool is not in use, when it is being handed to another person, when it is left unattended, or when loading and changing nails. Failure to comply may result in injury or damage to equipment.
- Do not exceed the maximum or minimum pressures. Operating the tool at the wrong pressure (too low or too high) will cause excessive noise or rapid wear.
- Use only Non-Detergent Air Tool Lubricating Oil for this tool.
- Near and below freezing, moisture in the air line may freeze and prevent tool operation. Do not store in a cold weather environment to prevent frost or ice formation. Frost and Ice on the tools operating valves and mechanisms could cause tool failure.



NOTE: Some commercial air line drying liquids are harmful to "O" rings and seals—Do not use these low temperature air dryers without checking compatibility.

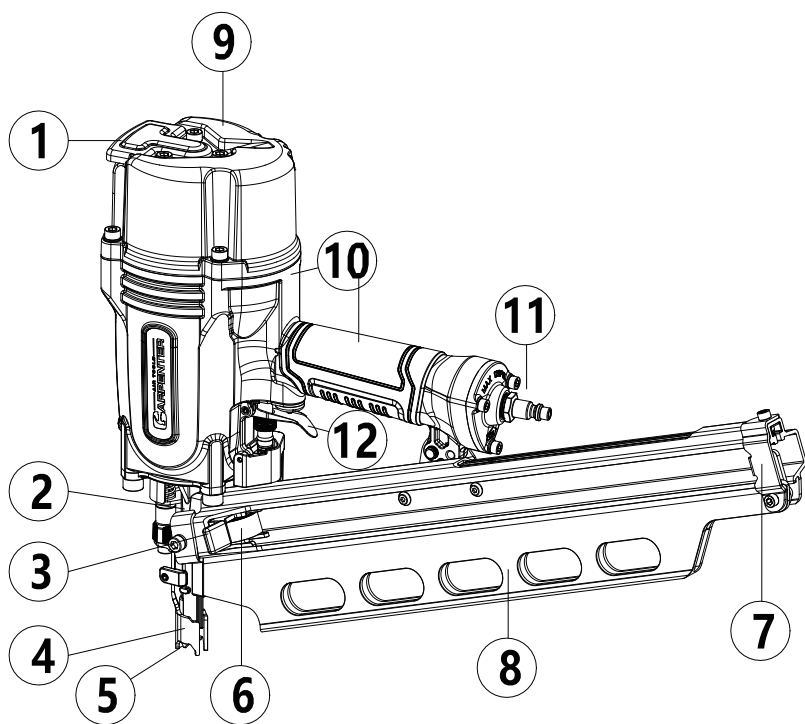
WARNING!

Potential hazard that could result in serious personal injury to the tool user or others in the work area.

- Always wear eye and hearing protection when using the air compressor. Failure to do so may result in sight or hearing loss.
- Do not overload the tool. Allow the tool to operate at its optimum speed for maximum efficiency.
- Do not point the tool towards yourself or other people, even when the tool has stopped. Keep hands, feet, and all other parts of the body clear from work area.
- Do not attempt to clear nailer jams while the air hose is connected.
- Do not keep the trigger or the Push Lever pressed while loading nails.



No.	Description	No.	Description
①	Exhaust Cover	⑦	Nail Stopper
②	Nose	⑧	Magazine
③	Feeder	⑨	Air Deflector
④	Push Lever	⑩	Gun Body
⑤	Outlet (Firing Head)	⑪	Air Plug
⑥	Ribbon Spring	⑫	Trigger



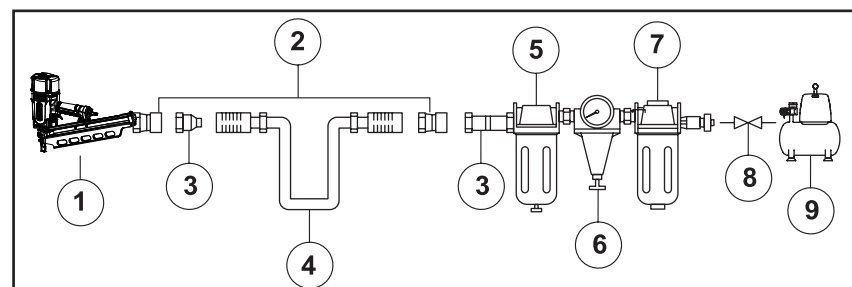
Compatible compressors

GUIDELINES FOR PROPER USE AND OPERATION

Be sure to use a proper air compressor with CARPENTER Air Tools. The compressor should be able to supply a minimal air delivery of 6.3 CFM @ 90 PSI to ensure the compressor can run continuously with the CARPENTER 21° Plastic Collated Full Head Framing Nailer.

General use

The CARPENTER 21° Plastic Collated Full Head Framing Nailer drives 2" to 3-1/2" Plastic Collated full head framing nails. The newly redesigned head guard allows for a faster and easier disassembly process, saving you valuable time during tool maintenance. The CFRN9021 is lightweight making it easy to use all day, while still providing the power of bulkier, heavier nailers. A selective actuation switch adds the convenience of being able to quickly change between bump or sequential operation and the tool-less depth adjustment of drive eliminates the need to adjust the pressure at the compressor. The simple two-step loading makes fastener replenishment quick and easy, reducing downtime.



No.	Description	No.	Description
1	21° Plastic Collated Full Head Framing Nailer	6	Regulator
2	Quick connector	7	Filter
3	Quick coupler	8	Cut-off valve
4	Air hose	9	Air compressor

5 Lubricator

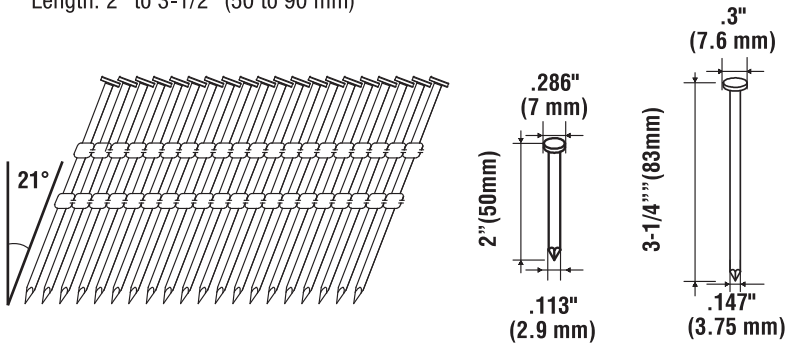
- It is recommended that a filter-regulator-lubricator be used and be located as close to the tool as possible.
- If a filter-regulator-lubricator is not installed, place up to 6 drops of compressor oil into the air inlet plug before each use.
- If a filter-regulator-lubricator is installed, keep the air filter clean. A dirty filter will reduce the air pressure to the tool, which will cause a reduction in power, efficiency, and general performance.
- Verify that all of the connections in the air supply system are sealed in order to prevent air leakage.

Read and follow all the safety instructions at the beginning of this manual and inspect the air-powered nailer prior to each use in order to ensure that the proper power source is being used and verify that the tool is in proper working order.

This CARPENTER 21° Framing Nailer drives 21° Plastic Collated Full Head Framing Nails.

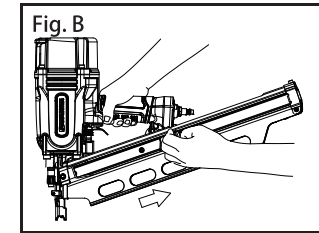
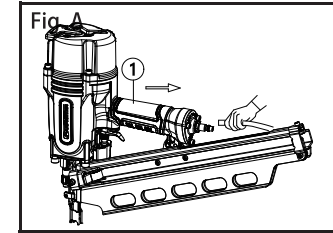
ACCEPTABLE NAILS

Length: 2" to 3-1/2" (50 to 90 mm)



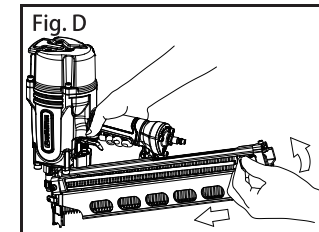
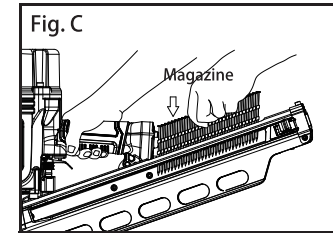
Loading nails

1. Disconnect the tool (1) from the air supply (2) (Fig. A).



2. Pull the Feeder Slide to the rear of the magazine until locked (Fig. B).

3. Insert nail strip into the top side of the magazine (Fig. C).
4. Slide the nail strip forward in the magazine (Fig. C).



5. Pull the nail feeder (Fig. B) back and unlock the nail feeder to slide the nail strips firmly against the nose (Fig. D).

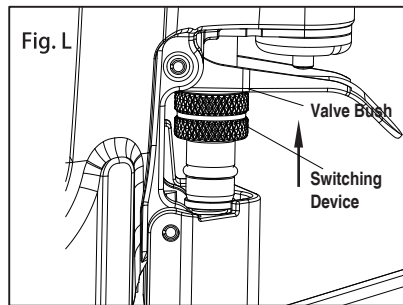


DANGER!

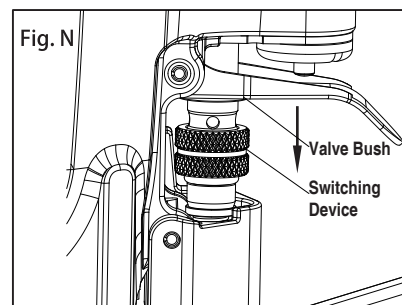
- Do not drive nails on top of other nails or with nailer at too steep an angle. Nails can ricochet and seriously injure someone.
- In order to avoid double firing or unwanted ejection of a nail due to bouncing of the nailer, do not push nailer on workpiece to avoid recoil. Recoil is necessary for proper operation of the nailer.
- Do not drive nails from both sides of a wall at the same time. Nails can be driven into and through the wall and hit a person on the opposite side.
- Never drive nails into thin boards or near corners and edges of workpiece.

The installed Dual Mode Switch to easily change SEQUENTIAL (single shot) and BUMP FIRING (Contact Firing) modes is useful for quickly changing between optional firing modes. Sequential firing mode is best for accurate nail placement and Bump Firing mode is best where speed is necessary.

NOTE: Information contained in this manual is designed to assist you in the safe operation of your tool. Some illustrations in this Manual may show details of attachments that differ from those on your own tool.



**SINGLE ACTUATION
MECHANISM**
(Switching device:
upward position)



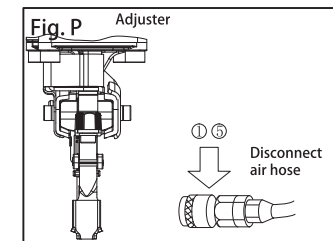
**CONTACT ACTUATION
MECHANISM**
(Switching device:
downward position)

Adjusting the nailing depth

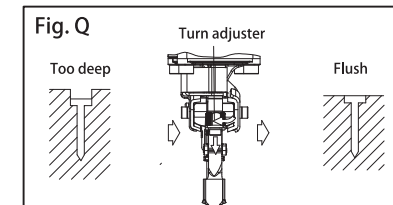
To assure that each nail penetrates to the same depth, be sure that:

- ① The air pressure to the nailer remains constant (regulator is installed and working properly).
- ② If nails are driven too deep or too shallow into the workpiece, adjust the nailing depth using the following instructions.

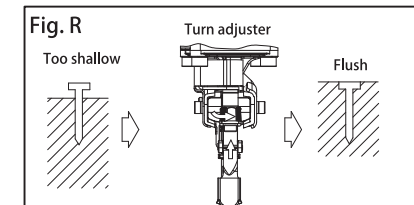
1 Disconnect air hose from nailer (Fig. P).



2a. If the nails are driven too deep, pull the adjuster downward and turn clockwise (Fig. Q).



2b. If the nails are driven too shallow, pull the adjuster downward and turn counter-clockwise (Fig. R).



When the adjuster is released it will spring back up and can be set with a click at each 1/4 rotation. The adjuster changes the nailing depth approximately 0.25 mm per 1/4 rotation.

3. Connect the air hose. ALWAYS WEAR EYE PROTECTION.

4. If additional adjustments are necessary, DISCONNECT AIR HOSE FROM NAILER and repeat step 2.

Troubleshooting

The following chart lists common issues and solutions. Please read it carefully and follow all instructions carefully.

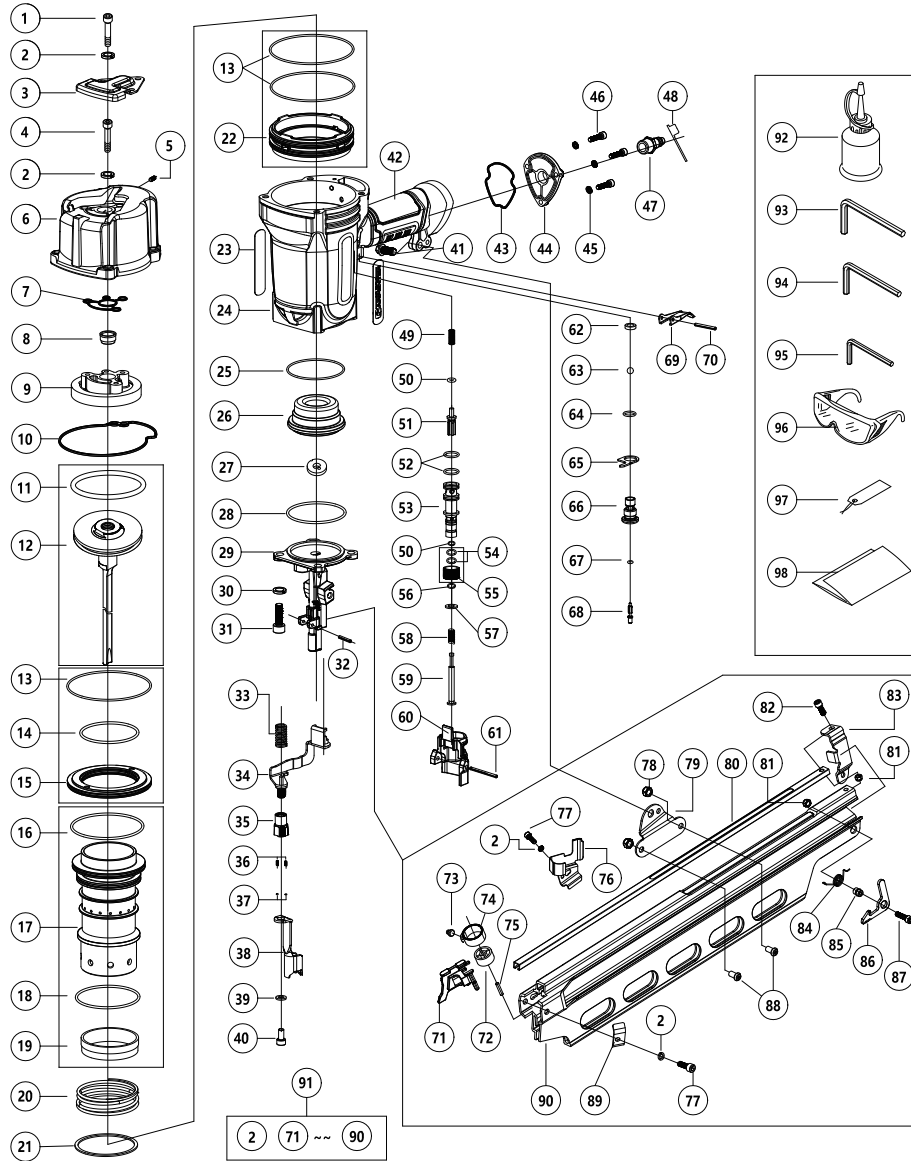
Disconnect the tool from the air supply before making any adjustments.

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
Air leakage at the top of the tool or in the trigger area.	<ol style="list-style-type: none"> O-rings in the trigger valve are damaged. The trigger valve heads are damaged. Trigger valve stem, seal, or O-rings are damaged. 	<ol style="list-style-type: none"> Inspect and replace the O-ring. Inspect and replace trigger valve heads. Inspect and replace the trigger valve stem, seal, or O-ring. <p>Have the tool serviced by a qualified service technician.</p>
Air leakage near the bottom of the tool.	<ol style="list-style-type: none"> The screws are loose. The O-rings or the bumper are worn or damaged. 	<ol style="list-style-type: none"> Tighten the screws. Inspect and replace the O-rings or the bumper. <p>Have the tool serviced by a qualified service technician.</p>
Air leakage between the bottom and the cylinder cap.	<ol style="list-style-type: none"> The screws are loose. The O-rings or the seals are worn or damaged. 	<ol style="list-style-type: none"> Tighten the screws. Inspect and replace the O-rings or the seals. <p>Have the tool serviced by a qualified service technician.</p>
The nails are being driven too deep.	<ol style="list-style-type: none"> The bumper is worn. The air pressure is too high. The depth adjustment knob is not adjusted properly. 	<ol style="list-style-type: none"> Replace the bumper. Adjust the air pressure. Adjust the depth setting by turning the depth adjustment knob counter-clockwise (see section "Adjusting nail depth" for more detailed instructions).

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
The tool does not operate properly, it does not drive the nails or operates sluggishly.	<ol style="list-style-type: none"> The air supply is inadequate. Lubrication is inadequate. The O-rings or seals are worn or damaged. The exhaust deflector in the cylinder head is blocked. 	<ol style="list-style-type: none"> Verify that the air supply is adequate. Pour up to 6 drops of oil into the air inlet. Inspect and replace O-rings or seals. Replace the damaged internal parts. <p>Have the tool serviced by a qualified service technician.</p>
The tool skips nails.	<ol style="list-style-type: none"> The bumper is worn or the spring is damaged. There is dirt in the front plate. Nails cannot move freely in the magazine due to dirt or wear. The O-ring on the piston is worn or dry or lubrication is insufficient. The cylinder cover seal is leaking. 	<ol style="list-style-type: none"> Replace the bumper or spring. Clean the drive channel on the front plate. Clean the magazine. Replace the O-ring. Replace the sealing washer. <p>Have the tool serviced by a qualified service technician.</p>
The tool jams.	<ol style="list-style-type: none"> Improper nails are used, or nails are damaged. The driver guide is damaged or worn. The magazine screw is loose. There is dirt in magazine. 	<ol style="list-style-type: none"> Use proper nails. (see section "Clearing a jammed nail.") Inspect and replace the driver. Tighten the magazine. Open and clean the magazine.
Air exhaust is being directed towards the operator.	The direction of the exhaust deflector requires adjustment.	Direct the exhaust deflector away from the operator.

Revised: December,9th 2020

EXPLODED VIEW



PARTS LIST

No.	Description	Qty.
1	Hex bolt M6x45	3
2	Vibrate washer 6	9
3	Exhaust deflector	1
4	Hex bolt M6x30	4
5	Hex bolt M5x10	1
6	Cylinder head cap	1
7	Hd. Piston Vlv. gasket	1
8	Seal	1
9	Head valve piston	1
10	Head cap	1
11	O-ring II 50X3.55	1
12	Piston-driver	1
13	O-ring II 92.5x2	3
14	O-ring 62.8X2.65	1
15	Support collar upper	1
16	O-ring 79.3X2.5	1
17	Cylinder	1
18	O-ring 69.3X2.5	1
19	Sealing ring	1
20	Compression spring	1
21	Lining ring	1
22	Support collar lower	1
23	Label	1
24	Tool body	1
25	O-ring 63.6X2.5	1
26	Bumper	1
27	Air seal	1
28	O-ring 62x1.8	1
29	Drive guide	1
30	Spring Washer 8	4
31	Hex bolt M8X25	4
32	Spring pin (4x20)	1
33	Compression spring	1
34	Safety	1
35	Depth control	1
36	Compression spring	2
37	Steel ball	2
38	safety tip	1
39	washer	1
40	Hex bolt M6X10	1
41	Hex bolt M8X16	1
42	Handle grip	1
43	End cover gasket	1
44	End cover	1
45	Vibrate washer 5	3
46	Hex bolt M5X20	3
47	Air inlet plug 3/8"	1
48	protective sleeve	1
49	Compression spring	1

No.	Description	Qty.
50	O-ring 4.5x1.8	2
51	Triger plunger	1
52	O-ring 11.2x1.5	2
53	valve bushing	1
54	O-ring 9x1.8	2
55	pin	1
56	O-ring 6.1x1.8	1
57	Rod Spring	1
58	Washer	1
59	Rod	1
60	guide seat	1
61	Spring pin 3x45	1
62	Rectangular gasket	1
63	Globe	1
64	O-ring 11.8x1.5	1
65	Trigger valve plate	1
66	Trigger valve bushing	1
67	O-ring 2.8*1.8	1
68	Trigger valve plunger	1
69	Trigger body	1
70	Spring pin 3x30	1
71	Nail pusher	1
72	Spring roller	1
73	located pin	1
74	Ribbon spring	1
75	Pin (4*20)	1
76	protection block	1
77	Hex bolt M6X16	2
78	Screw nut M6	2
79	Fix	1
80	Article guide pin	1
81	Screw nut M5 (Black)	3
82	Hex bolt M5X12	1
83	baffle	1
84	Torsion spring	1
85	pin bush	1
86	Hook stop lever	1
87	Hex bolt M5X30	1
88	Hex bolt M6X14	2
89	Magazine front guard	1
90	Magzine	1
91	Magzine Assembly	1
92	Oil pot	1
93	Hex wrench M8/6mm	1
94	Hex wrench M6/5mm	1
95	Hex wrench M5/4mm	1
96	Safety glasses	1
97	hang tag	1
98	Manual	1