APT Pneumatic Torque Wrench Operation Manual

Readtheinstructions,warnings, and cautionsthoroughlybeforeusingthetools
and keep it well for future reference.

TheGAW
industries

TABLE OF CONTENTS

◆ General Instructions

APT Pneumatic Torque Wrenches are reversible, non-impacting, torque controlled tightening tools and must always be operated with the following：

➢ Clean dry air supply (Suggested air input pressure at 8 bar)

➢ Cage assembly with lubricator and regulator

➢ Impact sockets with locking pin and O-ring

➢ Proper reaction arm with retaining ring

◆ Assembly

1、 Use 1/2” airline to connect the Air Inlet (Position A in below picture) and outlet side of FRL on cage assembly. (Take note of the air direction on the FRL)

2、 Use 1/2” airline to connect the Air Input and inlet side of FRL on cage assembly. (Take note of the air direction on the FRL)

3、 Check oil level in lubricator and fill to correct level.

4、 Assemble Reaction Arm (Position B in below picture) on Outside Hex (Position C in below picture), and fixed with retaining ring.

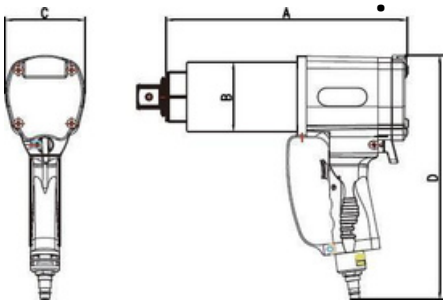
APT Pneumatic Torque Wrench (Note: Only APT 34 has Safety Switch)

Note: Do not operate the tool before reading these instructions, if breakdown, malfunction or damage occurs, do not attempt to repair, please contact us immediately.

WARNING: Always check all air hoses connections before the air supply is activated

WARNING: Always keep hands clear of the reaction arm when the tool is in use or serious injury could result.

✓ When the tool is in operation the reaction arm rotates in the opposite direction to the output square drive and must be allowed to rest squarely against a solid object or surface adjacent to the bolt to be tightened.



❖APT tool includes a standard reaction arm. The special reaction arm can be custom-made.

◆ Air Pressure Regulating

Each APT Series Pneumatic Torque Wrench has a cage assembly, the air input pressure can be adjusted by the Regulator on the cage assembly, picture as below：

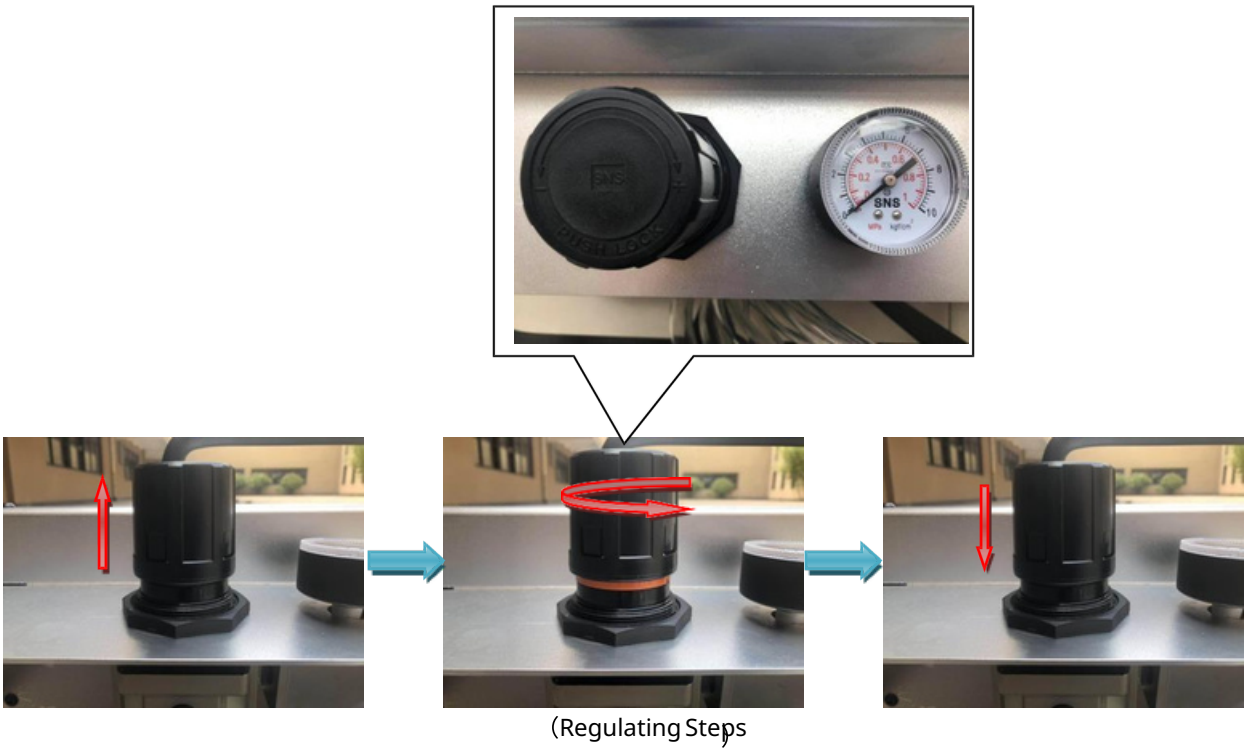
Regulator
(Note：Thetools must always be running when setting air pressure)

Air Pressure Gauge (bar)

FRL

Air Hoses

Regulating air supply pressure according to the arrow marks on regulator. Pull up the cover of regulator and rotate clockwise to increase the air supply, counter-clockwise to decrease the air supply,press down the cover of regulator to lock the pressure. Steps as follow:



(Regulating Steps)

Note:

- The torque Wrench should run freely while setting the torque. The direction is not important.
- The water tank from the filter outlet should be emptied periodically. The drain filter is accessible from the bottom of the FRL unit
- Ensure a sufficient compressor capacity in terms of volume and pressure.

◆ Setting Torque

Every APT torque wrench is supplied with a torque chart which relates torque output to air pressure.

Set the torque as follows:

1. Find “L” and “R” marks on both sides of handle, set the Direction Switch to “R” when tightening the bolt and nut.
2. Keep pressing Safety Switch, and pull the Operate Trigger, the wrench starts to work. (Only APT34 model has Safety Switch, other models only need to pull the Operate Trigger)
3. Establish the air pressure required using the torque chart provided with the tool.
4. Adjust the regulator until the correct pressure is shown on the gauge.

Note:The wrench must be free running while adjusting the air pressure.

NOTE:

- Exceeding the maximum air pressure will overload the wrench and may cause serious damage.
- WhenlooseningtheTorquewrenchfromtheboltconnections, the direction switch must be set to “L”. Then the maximum torque need to be chosen

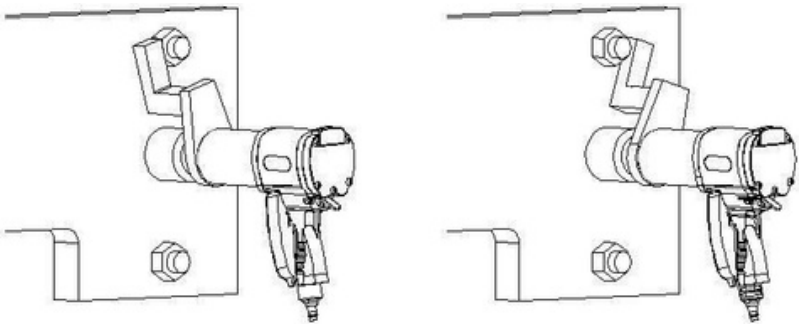
◆ Operating Steps

1. Fit the Reaction Arm on torque wrench with retaining ring.
2. Fit the wrench with the correct size impact socket to suit the bolt to be tightened.
3. Check that the Direction Switch is set correctly.
4. Rotate the handle to a convenient position relative to the reaction arm.
5. Fit the tool onto the bolt to be tightened with the reaction arm adjacent to the reaction point.
6. Keep pressing the Safety Switch, then pull the Operating Trigger partially to bring the reaction arm into contact with the reaction point.
7. Fully depress Operate Trigger and keep fully depressed until wrench stalls. If the Operate Trigger is released before the wrench stalls, full torque will not be applied to the bolt.
8. Release Operate Trigger and remove the tool from bolt.

Movement of Reaction Arm

Installing the reaction arm

Ensure the reaction arm and retaining ring are installed securely to hold the reaction arm in place. Make sure the reaction arm is in contact with a solid reaction point before you operate the tool. When the tool is in operation the reaction arm rotates in the opposite direction to the output square drive and must be allowed to rest squarely against a solid object or surface adjacent to the bolt to be tightened (Figure 6.1).



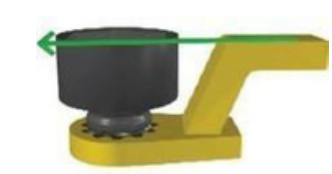
Counter-clockwise operation Clockwise Operation

Figure ٦.١

WARNING: In use, this tool must be supported at all times in order to prevent unexpected release in the event of a fastener or component failure!

Reaction Arm height

Ensure the height of the socket is even with the height of the reaction arm as seen below in Figure 6.2,the height of the socket cannot be shorter or higher than the height of the reaction arm as seen below in Figure 6.3 and 6.4



✓

Figure 6.2

✗

Figure 6.3

✗

Figure 6.4

Reaction Arm foot

Ensure the foot of the reaction arm aligns with the length of the nut as seen in Figure 6.5, the length of the foot cannot be shorter or longer than the nut as seen in Figure 6.6 and 6.7

Figure 6.5

Figure 6.6

Figure 6.7

Reaction point:

Ensure the reaction arm reacts off the middle of the foot as seen in Figure 6.8, Do not react off the heel of the reaction foot as seen in Figure 6.9

Figure 6.8

Figure 6.9

WARNING: Always Keep your hand and body parts clear of the reaction arm and barrel when the tool is in operation (Figure 6.10)

Figure 6.10

Note: Improper reaction arm will void warranty and can cause premature tool failure.

Safety

APT series tools use pressurized air to develop very large forces to tighten and loosen threaded fasteners. For your safety and that of others, warning labels and attention labels are prominently attached to the carrying cages, reaction accessories, and tools.

NOTE: Make sure you observe the directions on the warning labels at all times.

TheGAW Tools have been designed with safety in mind however, as with all tools you must observe all general workshop safety practices, and specifically the following:

- Before using your new tool, get familiar with all its accessories and how they work.
- Always wear safety goggles when the tool is in operation.
- Make sure the reaction arm is in contact with a solid contact point before you operate the tool.
- Keep your body parts clear of the reaction arm and the contact point.
- Set your air pressure while the tool is running.
- Refer to the enclosed torque chart to set the correct air pressure regulator setting for a
- required torque.
- Never exceed the maximum air pressure shown on the torque chart.
- Always use the regulator and oiler that is supplied. Failure to do this voids the warranty and can place you in danger.
- Be sure to use a minimum 1/2” airline to the cage assembly as this will allow for adequate airflow.
- Make sure the reaction arm snap ring is securely in place to hold the reaction arm or blank in place.

TheGAW tools are safe and reliable. Not following precautions and instructions outlined here can result in injury to you and your fellow workers TheGAW is not responsible for any such injury.

NOTES:

All TheGAW products are guaranteed against defects in workmanship andmaterials for as long as you own them. Under this guarantee, free repair or replacement will be made to your satisfaction.

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