



**150 RPM  
PNEUMATIC HAND TAPPER**

***Read carefully and follow all safety rules and operating instructions before first use of this product.***

## DESCRIPTION

Palmgren Pneumatic Hand Tapper has a die cast aluminum body with textured finish and taps holes from #10 to 7/16" diameter. Tool uses a system of quick change/quick release tap holders with clutches. Exhaust is directed away from the operator. The Pneumatic Hand Tapper is an excellent tool for tapping beams, blocks and other large castings.

## UNPACKING

Check for shipping damage. If damage has occurred, a claim must be filed with carrier immediately. Check for completeness. Immediately report missing parts to dealer.

### SPECIFICATIONS

Tap capacity .....	#10-7/16"
RPM .....	150
Spindle .....	B12
Operating pressure .....	70-100 PSI
CFM @ 90PSI .....	.27
Min. hose size .....	3/8"
Quick connect stud .....	1/4" NPT
Length .....	9 5/8"
Height .....	7 5/16"
Width .....	1 13/16"
Weight .....	4.0 lbs

**NOTE:** Minimum required air compressor size for this tool is 3HP.

## SAFETY RULES

**WARNING:** For your own safety, read all of the instructions and precautions before operating tool.

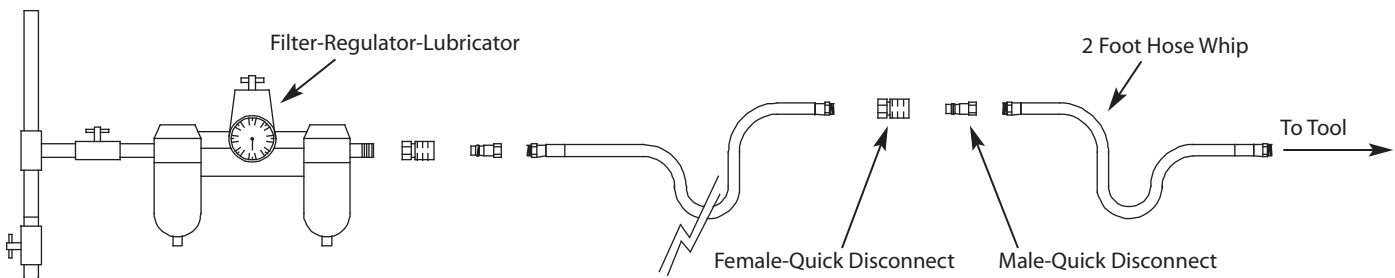
**CAUTION:** Always follow proper operating procedures as defined in this manual even if you are familiar with use of this or similar tools. Remember that being careless for even a fraction of a second can result in severe personal injury.

**WARNING:** Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks and cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures vary, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area and work with approved safety equipment. Always wear **OSHA/NIOSH** approved, properly fitting face mask or respirator when using such tools.

- Read Operating Instructions. Become familiar with all the instructions and warnings before operating this tool.



**Figure 1 – Air Supply Line**

- Wear safety glasses complying with United States ANSI Z87.1. Everyday glasses have only impact resistant lenses. They are **NOT** safety glasses.
- Hearing protection should be used when the noise level exposure equals or exceeds an 8 hour time-weighted average sound level of 85dBA. If you are unable to determine your noise level exposure, the use of hearing protection is recommended.
- Avoid prolonged exposure to vibration. Pneumatic tools can vibrate during use. Prolonged exposure to vibration or very repetitive hand and arm movements can cause injury. Discontinue the use of any tool if you experience tingling, numbness, discomfort or pain in your hands or arms. Consult your physician before resuming use of tool.
- Use only recommended tap holders (See Accessories, page 7).
- Do not use oxygen, combustible gas or high pressure compressed gas as the air supply for the tool.
- Do not use this tool in potentially explosive atmospheres.

## OPERATION

Refer to Figures 1, 2 and 3.

### AIR SUPPLY LINE

Refer to Figure 1.

**WARNING:** Always disconnect tool from air supply when servicing or adjusting tool and when tool is not in use.

- The air tool operates on compressed air at pressures from 70 to 100 PSI.
- Never exceed maximum pressure.
- Air operated tools require clean, dry, lubricated, compressed air to ensure top performance, low maintenance and long life.
- Dirt and abrasive materials present in all air lines will damage tool O-rings, valves and cylinders.
- Moisture will reduce tool performance and life if not removed from compressed air.
- A filter-regulator-lubricator system is required and should be located as close to tool as possible (see Figure 1). A distance of less than 15 feet is recommended.
- Keep air filter clean. A dirty filter will reduce the air pressure to the tool causing a reduction in power and efficiency.
- The air supply system must be able to provide air pressure of 70 to 100 pounds per square inch at the tool.
- The lubricator should be filled with a non-detergent air tool oil.
- All hoses and pipes in the air supply system must be clean and free of moisture and foreign particles.
- The air pressure should be properly regulated.
- Different workpiece materials and different tap sizes will require different operating pressure.
- Be sure all connections in air supply system are sealed to prevent air loss.

## OPERATION (CONTINUED)

### ASSEMBLY

Refer to Figures 2 and 3.

- Slide grip (Fig. 3, Ref. No. 5) over the chuck and onto the barrel (Figure 3, Ref. No. 7).
- Position grip at 90° to the left of body and tighten grip in position by turning handle clockwise. (Position grip to the right if you are left handed.)
- Slide tap into tap holder (not included) until tap locks in place. Tap can be removed by simultaneously depressing flange and pulling out tap.
- Insert tap holder with tap into chuck (Fig. 3, Ref. No. 1). Pull back chuck sleeve, insert tap holder with tabs aligned to slots in chuck sleeve, and then release sleeve.

### OPERATING PROCEDURE

Refer to Figure 3.

- Bring the hand tapper with tap to the hole to be tapped.
- Place the tip of the tap on the hole and depress the operating lever (Ref. No. 33) to forward (F). The tap will self-center and begin cutting. Let the tapper guide the tap into the hole.
- The speed is controlled by the amount the lever is depressed. However, this will also reduce the power.
- The greatest potential for tap breakage is tipping the tool to one side. To prevent this from happening, hold the grip with your left hand and your left elbow against or supported on the workpiece. Use the right hand to pull the lever. This will greatly reduce the chance of tap breakage. (Reverse the above instructions if you are left handed.)
- After tapping to the required depth, press lever to reverse (R). The tap will reverse out from the hole.
- If the tap holder "clicks" or "ratchets", the tap holder clutch torsion needs to be adjusted.

### ADJUST TAP HOLDER CLUTCH

Refer to Figure 2:

- Remove the snap ring from the groove of the tap holder.
- Turn the notched nut clockwise to increase torsion, counter-clockwise to decrease torsion.
- Replace snap ring into the groove of the tap holder.
- Consult machinery reference books or your machine tool dealer for information concerning tap lubricant types, tapping speeds and tap types.

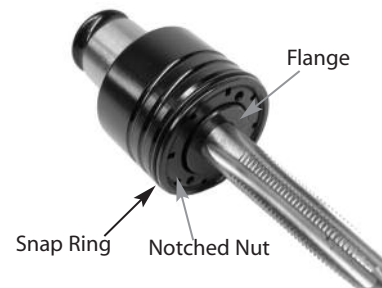


Figure 2

### OPERATING PRESSURE

- Use only enough air pressure to perform the operation. Air pressure in excess of that which is required will make the operation inefficient and may cause premature wear or damage to the tool.
- Maximum air pressure is 100 PSI.

## MAINTENANCE

Lubricate tool daily with quality air tool oil. If no air line lubricator is used, place five to six drops of oil into inlet cap (Ref. No. 29) of tool every day.

## TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Tool runs slowly or will not operate	<ol style="list-style-type: none"> <li>1. Grit in tool</li> <li>2. No oil in tool</li> <li>3. Low air pressure</li> <li>4. Air hose leaks</li> <li>5. Pressure drops</li> <li>6. Excessive pressure drop</li> <li>7. Worn vanes in motor</li> <li>8. Worn bearing in motor</li> </ol>	<ol style="list-style-type: none"> <li>1. Flush the tool with air tool oil</li> <li>2. Lubricate the tool according to the lubrication instructions in this manual</li> <li>3. Adjust regulator in air system to 90 PSI</li> <li>4. Tighten and seal hose fittings</li> <li>5. Shorten length of hose; long runs may require a hose with an I.D. of 1/2" or larger</li> <li>6. Air compressor not large enough; must be at least 3HP</li> <li>7. Replace vanes</li> <li>8. Replace bearings</li> </ol>
Moisture blowing out of tool exhaust	Water in air compressor tank	Drain tank (See air compressor manual)
Tool operates rapidly but will not tap	Damage to gears	Inspect and replace any damaged gears
Tool leaks air	<ol style="list-style-type: none"> <li>1. Damaged or worn trigger valve</li> <li>2. Damaged or worn O-rings</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and replace trigger valve (Ref. Nos. 30, 31 and 32)</li> <li>2. Check and replace o-rings (Ref. Nos. 6 and 25)</li> </ol>
Clutch slips and tap will not turn	<ol style="list-style-type: none"> <li>1. Tapholder clutch torsion needs to be adjusted</li> <li>2. No tap lubrication</li> <li>3. Dull tap</li> <li>4. Hole and tap misaligned</li> <li>5. Hole diameter too small</li> <li>6. Wrong tap for workpiece material</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust tap holder clutch torsion</li> <li>2. Apply lubrication to tap</li> <li>3. Replace tap</li> <li>4. Reposition hand tapper</li> <li>5. Enlarge hole</li> <li>6. Replace tap</li> </ol>

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# NOTES

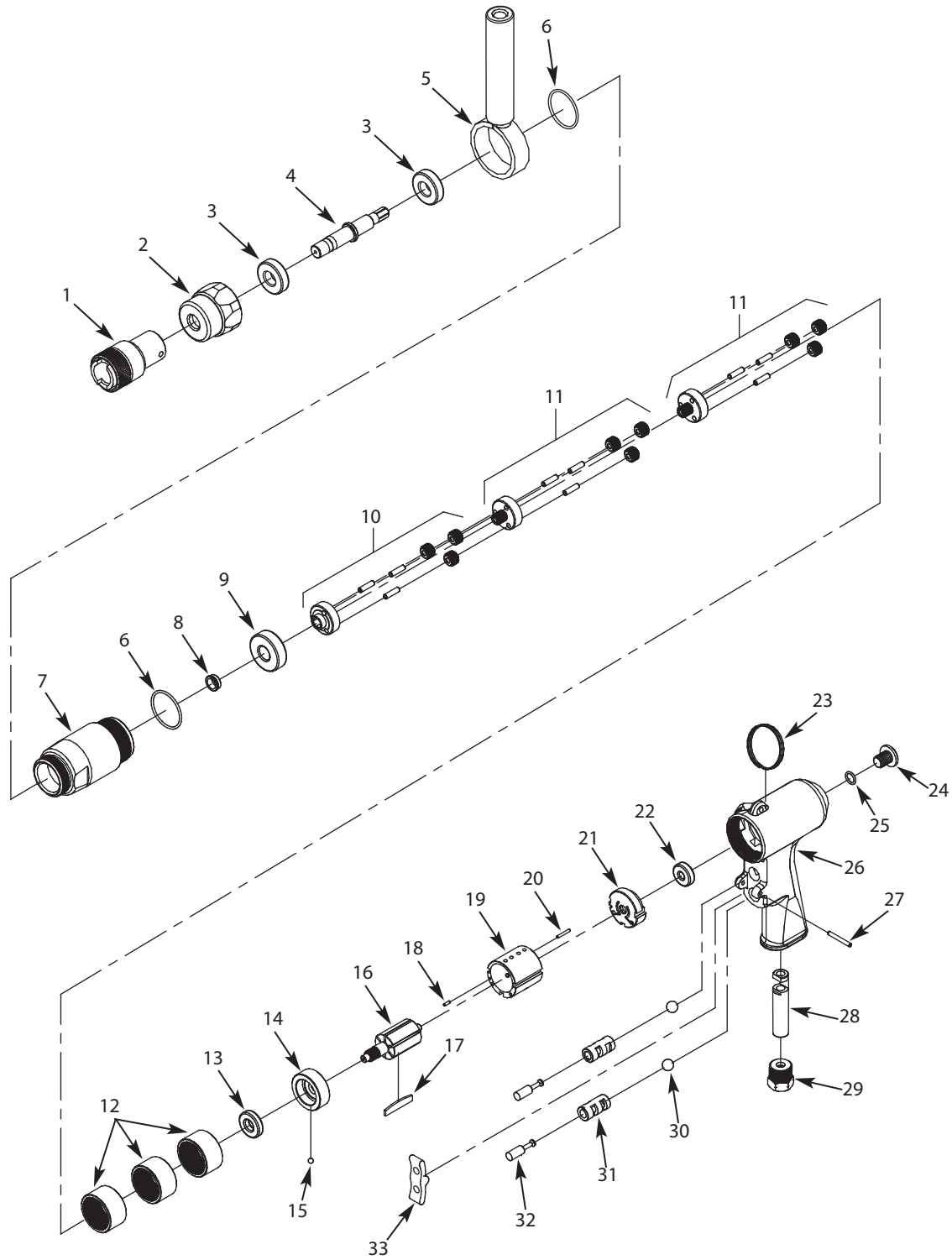


Figure 3 – Repair Parts Illustration for Pneumatic Hand Tapper 150 RPM

## REPLACEMENT PARTS LIST FOR HAND TAPPER 150 RPM

Ref. No.	Description	Part No.	Quantity
1	Chuck	31287.00	1
2	Nose	31288.00	1
3	6001ZZ Ball bearing	21116.00	2
4	Driver shaft	31289.00	1
5	Grip	31290.00	1
6	29.87 x 1.8mm O-Ring	31291.00	2
7	Barrel	31292.00	1
8	Bushing	31293.00	1
9	6201ZZ Ball bearing	00520.00	1
10	Carrier assembly	31294.00	1
11	Planetary gear assembly	31295.00	2
12	Ring gear	31297.00	3
13	R6ZZ Ball bearing	31298.00	1
14	Front plate	31299.00	1
15	4mm Steel ball	09346.00	1
16	Rotor	31300.00	1
17	Vane (set of 6)	31301.00	1
18	2 x 6mm Dowel pin	31302.00	1
19	Cylinder	31303.00	1
20	2 x 14mm Dowel pin	31304.00	1
21	Rear plate	31305.00	1
22	626ZZ Ball bearing	03649.00	1
23	Hook	31306.00	1
24	Screw	31307.00	1
25	8 x 1.5mm O-Ring	31308.00	1
26	Body	†	1
27	3 x 24mm Spring pin	08082.00	1
28	Air hose	31309.00	1
29	Air inlet	31310.00	1
30	9mm Plastic ball	31311.00	2
31	Valve body	31312.00	2
32	Valve plunger	31313.00	2
33	Switch lever	31314.00	1
	Operator's Manual	32722.09	1
<b>Recommended Accessories</b>			
Δ	#10 Tap holder with clutch	80502	1
Δ	#12 Tap holder with clutch	80503	1
Δ	1/4" Tap holder with clutch	80504	1
Δ	5/16" Tap holder with clutch	80505	1
Δ	3/8" Tap holder with clutch	80506	1
Δ	3/8" Drill chuck	80515	1

(\*) Standard hardware item, available locally.

(†) Not available as repair part.

(Δ) Not shown

## WARRANTY

Palmgren warrants their products to be free of defects in material or workmanship. This warranty does not cover defects due directly or indirectly to misuse, abuse, normal wear and tear, failure to properly maintain the product, heated, ground or otherwise altered, or used for a purpose other than that for which it was intended. The warranty does not cover expendable and/or wear parts (i.e. v-belts, coated screws, abrasives), damage to tools arising from alteration, abuse or use other than their intended purpose, packing and freight. The duration of this warranty is expressly limited to one year parts and labor, unless otherwise noted below beginning from the date of delivery to the original user. The Palmgren products carry the following warranties on parts with a 1 year warranty on labor:

- USA Machine vises – Lifetime
- IQ Machine vises – Lifetime
- Bench vises – Lifetime
- Positioning tables – Lifetime
- Bench grinders & buffers – 3 years
- Tapping machines – 2 years
- Drilling machines – 2 years
- Finishing machines – 2 years
- Band saws – 2 years
- Work stands – 2 years
- Arbor presses – 2 years
- Metal forming equipment – 2 years
- Accessories – 1 year

The obligation of Palmgren is limited solely to the repair or replacement, at our option, at its factory or authorized repair agent of any part that should prove deficient. Purchaser must lubricate and maintain the product under normal operating conditions at all times. Prior to operation become familiar with product and the included materials, i.e. warnings, cautions and manuals. **Failure to follow these instructions will void the warranty.**

This warranty is the purchaser's exclusive remedy against Palmgren for any deficiency in its products. Under no circumstances is Palmgren liable for any direct, indirect, incidental, special or consequential damages including lost profits in any way related to the use or inability to use our products. This warranty gives you specific legal rights which may vary from state to state.

### SERVICE & REPAIR

1. If a Palmgren product requires a repair or warranty service **DO NOT** return the product to the place of purchase.
2. All warranty related work must be evaluated and approved by Palmgren.
3. Prior to returning any item the user must obtain factory approval and a valid RGA number.
4. For instructions and RGA number call toll free (800) 827-3398.