16600421
Edition 2
May 2014

Air Percussive Tamper

341 and 441 Series

Maintenance Information

Save These Instructions

Ingersoll Rand

Product Safety Information

⚠ WARNING

- **Failure to observe the following warnings, and to avoid these potentially hazardous situations, could result in death or serious injury.**
- **Read and understand this and all other supplied manuals before installing, operating, repairing, maintaining, changing accessories on, or working near this product.**
- **Always wear eye protection when operating or performing maintenance on this tool. The grade of protection required should be assessed for each use and may include impact-resistant glasses with side shields, goggles, or a full face shield over those glasses.**
- **Always turn off the air supply, bleed the air pressure and disconnect the air supply hose when not in use, before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool or any accessory.**

Note: *When reading the instructions, refer to exploded diagrams in parts Information Manuals when applicable (see under Related Documentation for form numbers).*

NOTICE

After the first 24 hours of operation of a new Tamper, or one that has reassembled, retighten the Head Block (20) on the Barrel (33). Even though this connection is drawn extremely tight during assembly, the parts will usually seat during the first few hours of operation resulting in an ever so slight loosening of the valve parts and reduced performance. To tighten the connection, grip the flats on the Barrel in a rugged vise and draw the Head Block to approximately 500 ft-lb. (678 Nm) torque.

Lubrication

Each time the Model 341 and 441 Tampers are disassembled for maintenance, repair or replacement of parts, lubricate the tool as follows:

1. Work approximately 1.5 cc of **Ingersoll Rand** No. 28 Grease into the grease chamber by injecting through the Grease Fitting (35).
2. Remove the Oil Chamber Plug (26) and fill the oil chamber with 9 cc of **Ingersoll Rand** No. 10 Oil.

Disassembly

General Instructions

1. Do not disassemble the tool any further than necessary to replace or repair damaged parts.
2. Whenever grasping a tool or part in a vise, always use leather-covered or copper-covered vise jaws to protect the surface of the part and help prevent distortion. This is particularly true of threaded members and housings.
3. Do not remove any part which is a press fit in or on a subassembly unless the removal of that part is necessary for repairs or replacement.
4. Do not disassemble the tool unless you have a complete set of new gaskets and O-rings for replacement.

Disassembly of the Throttle Assembly

1. Clamp the Head Block (20) of the Percussion Tool in leather-covered or copper-covered vise jaws.
2. Loosen the Handle Locknut (18) and unscrew the Handle (17) from the Head Block.
3. Clamp the Handle in leather-covered or copper-covered vise jaws.
4. Unscrew the Throttle Handle Body (1) from the Handle. Remove the Screen Retaining Spring (15) and the Air Strainer Screen (16).
5. Clamp the Throttle Handle Body in leather-covered or copper-covered vise jaws Throttle Lever (6) upward.
6. Drive out the Throttle Lever Pin/Throttle Lever Stop Pin (7) and remove the Throttle Lever.
7. Unscrew the Street Elbow (5). Unscrew the Reducing Bushing (4).
8. Rotate the Throttle Handle Body in the vise to gain access to the Throttle Valve Cap (13).
9. Unscrew the Throttle Valve Cap and remove the Throttle Valve Spring (14).
10. Carefully drive the Throttle Valve (8) out of the Throttle Handle Body through the throttle valve cap bore.
11. Unscrew the Throttle Valve Face Retaining Screw (11) from the Throttle Valve. Remove the Throttle Valve Face Cap (10), the Throttle Valve Face (9), and the Retaining Screw Lock Washer (12).

NOTICE

In the following step, replacement of the Throttle Valve Bushing will require the use of a special, two-step reamer (Part No. 43505) to size the Bushing after it is pressed into the Throttle Handle Body. The reamer is a special order item from Ingersoll Rand.

12. If required, press the Throttle Valve Bushing (2) from the Throttle Handle Body.

Disassembly of the Head Block

1. Clamp the Barrel (33) in rugged vise jaws with the Head Block (20) upward.
2. Using a large wrench, unscrew the Head Block from the Barrel.
3. Remove the Exhaust Deflector Assembly (46), Deflector Retainer Assembly (48), Exhaust Silencer (50) and Deflector Screen (51).
4. Remove the Valve Box Cap (27), Valve (28), Valve Box Cap Dowel (30), Valve Box (29), and the Valve Box Dowels (31).
5. Remove the Lubricator Valve Cap (25) and the Lubricator Valve Spring (24).
6. Carefully push the Lubricator Valve (22) from the Head Block through the lubricator valve cap bore.
7. If required, remove the Lubricator Valve Face (23) from the Lubricator Valve and the Lubricator Valve Seal (21) from the Head Block.

Disassembly of the Barrel

1. Clamp the Piston (43) in leather-covered or copper-covered vise jaws with the Malleable Butt (45) downward.
2. Using a large hammer, tap the Butt off the Piston.
3. Rotate the Barrel in the vise, Butt end upward.
4. Loosen the Locking Nut (42A) and remove the Guide Retainer (41).
5. Gently remove the Piston from the Barrel.
6. Remove the Rod Front Seal (40), Piston Rod Guide (38), the Rod Rear Seal (37), and the Seal Support (36).
7. If required, remove the Seal Support Gasket (34) from the groove in the Barrel.

Assembly

General Instructions

1. Whenever grasping a tool or part in a vise, always use leather-covered or copper-covered vise jaws. Take extra care with threaded parts and housings.

Assembly of the Barrel

1. If required, reinstall the Seal Support Gasket (34) into the groove in the Barrel (33).
2. Place the Seal Support (36) on the Piston (43). Place the Rod Rear Seal (37) on the Seal Support.
3. Follow the Rear Seal with the Piston Rod Guide (38). Place the Rod Front Seal (40) onto the Piston and into the Rod Guide.
4. Place the Piston and the seal/support assembly into the Barrel.
5. Secure the Piston with the Guide Retainer (41).
6. Work the Piston back and forth in the Barrel and tighten the Guide Retainer until there is a slight drag on the rod.
7. Pump grease into the Grease Fitting (35) until it starts to ooze out between the piston rod and the Rod Front Seal.
8. Final adjustment cannot be made until the tool is fully assembled and ready for the air supply to be attached to the tool. When the tool is assembled to that point, proceed as follows:

NOTICE

Burned seal lips and early failure of the Seals will result if the following procedure is not followed when installing new Seals.

a. Start the Tamper and slowly tighten the Guide Retainer until the Piston speed decreases.
b. Continue running the Tamper until the speed returns to normal.
c. Tighten the Guide Retainer until the speed decreases again.
d. Continue running the Tamper until the speed returns to normal again.
e. Repeat this procedure until the Guide Retainer is drawn as tightly as possible.
f. Lock the Guide Retainer in position by tightening the Locking Nut (42A).

Assembly of the Head Block

1. Clamp the Barrel (33) in leather-covered or copper-covered vise jaws with the Butt (45) end down.
2. Install the Deflector Screen (51), Exhaust Silencer (50), Deflector Retainer Assembly (48) and Exhaust Deflector Assembly (46).
3. Carefully place the Valve Box Dowels (31) and the Valve Box (29) on the Barrel.
4. Place the Valve Box Cap Dowels (30) into the Valve Box. Place the Valve (28) and the Valve Box Cap (27) onto the Valve Box.
5. Secure the valve assembly with the Head Block (20). Tighten the Head Block to 500 ft-lb (678 Nm).
6. If required, replace the Lubricator Valve Seal (21) in the groove in the lubricator valve bore.
7. If required, replace the Lubricator Valve Face (23) onto the Lubricator Valve (22).
8. Carefully push the Lubricator Valve into the Head Block.
9. Place the Lubricator Valve Spring onto the Valve and secure the assembly with the Lubricator Valve Cap (25).

Assembly of the Throttle Handle

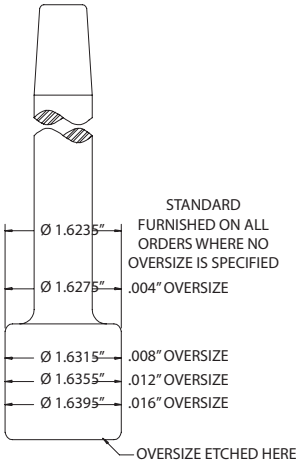
1. Clamp the Throttle Handle Body (1) in leather-covered or copper-covered vise jaws with the throttle lever boss upward.
2. Press in the Throttle Lever Pin/Throttle Lever Stop Pin (7) to secure the Throttle Lever (6).
3. Rotate the Throttle Handle Body in the vise.
4. If required, press the Throttle Valve Bushing (2) into the Throttle Handle Body and ream the Bushing with the two-step reamer (Part No. 43505).
5. Place the Retaining Screw Lock Washer (12) on the Throttle Valve (8).
6. Reinstall the Throttle Valve Face (9) and Throttle Valve Face

2. Always clean every part and wipe every part with a thin film of oil before installation.
3. Apply a film of O-ring lubricant to all O-rings before final assembly.

Cap (10) onto the Throttle Valve.

7. Secure the Throttle Valve Face Cap with the Throttle Valve Face Retaining Screw (11).
8. Carefully push the Throttle Valve into the Throttle Handle Body.
9. Place the Throttle Valve Spring (14), small end first, onto the Throttle Valve.
10. Secure the throttle assembly with the Throttle Valve Cap (13).
11. Screw the Reducing Bushing (4) into the Throttle Handle Body and the Street Elbow (5) into the Reducing Bushing.
12. Rotate the Throttle Handle Body in the vise, Elbow downward.
13. Place the Screen Retainer Spring (15) and the Air Strainer Screen (16), convex up, into the Throttle Handle Body.
14. Thread the Handle (17) into the Throttle Handle Body.
15. Run the Handle Locknut (18) to the end of the threads on the Handle.
16. Screw the Handle into the Barrel (20) and tighten the Handle Locknut against the Handle.
17. Place the Malleable Butt (45) onto the Piston (43) and rap the Butt with a large hammer to seat it.

Oversize Pistons



(Dwg. TPD1699)

Troubleshooting Guide

Trouble	Probable Cause	Solution
Sluggish operation	Dirt or oil gum accumulation on internal parts	Pour about 3 cc of a clean, suitable, cleaning solution into the air inlet and operate for 30 seconds. After flushing, pour about 3 cc of oil into the air inlet and operate the tool for 5 seconds to coat the internal parts with oil.
Loss of power	Worn Valve	Replace the Valve.
Loss of efficiency	Worn Piston and/or accessory	Replace Piston and or accessory.

Related Documentation

For additional information refer to:
Product Safety Information Manual 04581450.
Product Information Manual 03528676.
Parts Information Manual 16600413.

Manuals can be downloaded from ingersollrandproducts.com

Notes:

Notes:

Notes:

ingersollrandproducts.com