



16605651
Edition 2
May 2014

Air Percussive Rammer

Models 130A1M and 241A1M

Maintenance Information



Save These Instructions

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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).

Tools

Tool Number for Ordering	Tool Name for Ordering	Operation
K-27	Throttle Valve Cap Wrench	Installing or removing the Throttle Valve Cap (4) in the Head Block (1).
D32-26	Guide Retainer Wrench	Removing or installing the Guide Retainer (32) in the Barrel (24).
R000A2-228	Grease Gun	Lubrication.

Lubrication

Each time the Model 130A1M or 241A1M Sand Rammer is disassembled for maintenance, repair or replacement of parts, lubricate the tool as follows:

1. Inject approximately 1.5 cc of the recommended grease into the Grease Fitting.
2. Pour about 9 cc of the recommended grease into the air inlet and run the tool for about 15 seconds to thoroughly coat the parts.

3. For Model 241 only, remove the Oil Chamber Plug (26) and fill the oil chamber with 9 cc of **Ingersoll Rand** No. 10 Oil.

Disassembly

General Instructions

1. Always wear eye protection when operating or performing maintenance on this tool.
2. Do not disassemble the tool any further than necessary to replace or repair damaged parts.
3. 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.
4. 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.
5. Do not disassemble the Percussion Tool unless you have a complete set of new gaskets and O-rings for replacement.

Disassembly of the Throttle Assembly

For Model 130 only

1. Clamp the Head Block (1) in leather-covered or copper-covered vise jaws with the Throttle Lever (5) upward.
2. Drive the Throttle Lever Pin (11) out and remove the Throttle Lever.
3. Rotate the Block in the vise to gain access to the Throttle Valve Cap (4). Unscrew the Throttle Valve Cap and the Throttle Valve Spring (3).
4. Remove the throttle assembly.
5. While holding the Throttle Valve (6) securely, unscrew the Throttle Valve Face Cap Nut (10). Remove the Throttle Valve Face Cap (8), Throttle Valve Face (9), and the Throttle Valve Face Washer (7) from the Throttle Valve.
6. If required, press the Throttle Valve Bushing (2) from the Head Block.

For Model 241 only

1. Clamp the Head Block (20) 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).
12. If required, press the Throttle Valve Bushing (2) from the Throttle Handle Body.

Disassembly of the Exhaust Adapter

For Model 130 only

1. Unscrew the Pipe Coupling (22) and the Pipe Nipple (21).
2. Unscrew the Adapter Screw (20).
3. Remove the Piped-Away Exhaust Adapter (16) from the Head Block (1).
4. Remove the four Exhaust Silencers (19), three Adapter Baffles (18), and the Adapter Screen (17) from the Exhaust Adapter.

Disassembly of the Valve Box Assembly

For Model 130 only

1. Clamp the Barrel (24) in leather-covered or copper-covered vise jaws, Malleable Head (24) downward.
2. Unscrew the Head Block (1) from the Barrel.

- Remove the Valve Box Cap (12), the Valve (13), and the Valve Box (15).
- If required, remove the four Valve Box Dowels (14) from the Valve Box Cap.

Disassembly of the Head Block

For Model 241 only

- Clamp the Barrel (33) in leather-covered or copper-covered vise jaws with the Head Block (20) upward.
- Using a large wrench, unscrew the Head Block from the Barrel.
- Remove the Exhaust Deflector Assembly (46), Deflector Retainer Assembly (48), Exhaust Silencer (50) and Deflector Screen (51).
- Remove the Valve Box Cap (27), Valve (28), Valve Box Cap Dowel (30), Valve Box (29), and the Valve Box Dowels (31).
- Remove the Lubricator Valve Cap (25) and the Lubricator Valve Spring (24).
- Carefully push the Lubricator Valve (22) from the Head Block through the lubricator valve cap bore.
- 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

For both Models

- Clamp the shaft of the Piston (23, 43) in leather-covered or copper-covered vise jaws with the Malleable Butt (34, 45) downward.
- Using a large hammer, tap the Butt off the Piston.

For Model 130 only

- Clamp the Barrel (24) in leather-covered or copper-covered vise jaws with the Piston sideways.
- Pry the Guide Retainer Lock (33) from the groove in the Barrel.
- Unscrew the Guide Retainer (32).

For Model 241 only

- Loosen the Locking Nut (42A) and remove the Guide Retainer (41).
- Gently remove the Piston from the Barrel.

For both Models

- Gently pull the Piston to remove the Front Rod Seal (31, 40), the Piston Rod Guide (30, 38), the Rod Rear Seal (29, 37), and the Seal Support (28, 36) from the Barrel.
- Remove the Seal Support Gasket (27).

Assembly

General Instructions

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

Assembly of the Barrel

For Model 130 only

- Clamp the Barrel (24) in leather-covered or copper-covered vise jaws with the butt end upward.
- Place the Piston (23) into the Barrel, big end first.
- Carefully seat the Seal Support Gasket (27) in the groove in the Barrel.
- The Seal Support (28) inserted into the Barrel will retain the Seal Support Gasket.
- Place the Rod Rear Seal (29), small end first, into the Seal Support.
- With the cup end of the Piston Rod Guide (30) facing the butt end, slide the Piston Rod Guide down the bore until it seats in the Seal Support.
- Seat the Rod Front Seal (31) into the Piston Guide Rod.
- Retain the Rod Guide/Sealing Assemblies with the Guide Retainer (32).
- Snug the Guide Retainer until one of the slots in the Retainer aligns with one of the Guide Retainer Lock holes in the Barrel.
- Install the Guide Retainer Lock (33) into the groove in the Barrel and through the lock hole.

For Model 241 only

- If required, reinstall the Seal Support Gasket (34) into the groove in the Barrel (33).
- Place the Seal Support (36) on the Piston (43). Place the Rod Rear Seal (37) on the Seal Support.
- Follow the Rear Seal with the Piston Rod Guide (38). Place the Rod Front Seal (40) onto the Piston and into the Rod Guide.
- Place the Piston and the seal/support assembly into the Barrel.
- Secure the Piston with the Guide Retainer (41). Lock the Guide Retainer with the Locking Nut (42A).

Assembly of the Valve Box

For Model 130 only

- Clamp the Barrel (24) in leather-covered or copper-covered vise jaws with the butt end downward.
- Place the Valve Box (15) into the Barrel, large diameter down.
- Place the Valve (13) on the Valve Box.

- Place the four Valve Box Dowels (14) into the Valve Box through the Valve.
- Place the Valve Box Cap (12) on the Valve.
- Secure the valve assembly with the Head Block (1).

Assembly of the Exhaust Adapter

For Model 130 only

- Place the Adapter Screen (17) into the Piped-Away Exhaust Adapter (16).
- Ensuring that the holes in the Adapter Baffles (18), the Exhaust Silencers, the Adapter Screen, and the Exhaust Adapter align, alternately insert the Exhaust Silencers and Adapter Baffles into the Exhaust Adapter.
- While holding the exhaust assembly together, place it on the Head Block (1) and secure it with the Adapter Screws (20).
- Screw the Pipe Coupling (22) on the Pipe Nipple (21). Place the Pipe Nipple through the Exhaust Adapter and screw it into the Head Block.

Assembly of the Head Block

For Model 241 only

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

Assembly of the Throttle Valve

For Model 130 only

- If required, press the Throttle Valve Bushing (2) into the Head Block (1) being careful to align the timing marks on the Block.
- Clamp the Head Block in leather-covered or copper-covered vise jaws with the Throttle Valve Cap hole upward.
- Place the Throttle Valve Face Washer (7), the Throttle Valve Face (9) Throttle Valve Face Cap (8) onto the Throttle Valve (6). Secure the assembly with the Throttle Valve Face Cap Nut (10).

4. Place the throttle assembly into the Valve Block, throttle valve stem first.
5. Follow the throttle assembly with the Throttle Valve Spring (3) and secure it with the Throttle Valve Cap (4).
6. Turn the Head Block in the vise so that the Throttle Lever can be installed.
7. Place the Throttle Lever on the boss on the Head and secure it with the Throttle Lever Pin (11).

For Model 241 only

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.
5. Place the Retaining Screw Lock Washer (12) on the Throttle Valve (8).
6. Reinstall the Throttle Valve Face (9) and Throttle Valve Face

- 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.

Related Documentation

For additional information refer to:

Product Safety Information Manual 04581450.

Product Information Manual 03539574.

Parts Information Manual 16605644.

Manuals can be downloaded from ingersollrandproducts.com

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