



Assembly & Instruction Manual

22 TON AIR/ HYDRAULIC SERVICE JACK

Model 3159



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THANK YOU FOR BUYING CUMMINS INDUSTRIAL TOOLS
Your new Hydraulic Service Jack has been engineered and manufactured to Cummins tools high standards for dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble-free performance.

CAUTION: Carefully read through this entire operator's manual before using your new machine.

Pay close attention to the Rules for Safe Operation, Warnings, and Cautions. If you use your machine properly and only for what it is intended, you will enjoy years of safe, reliable service.

SAVE THIS MANUAL FOR FUTURE REFERENCE



WARNING

To reduce risk of injury, everyone using, installing, repairing, maintaining, changing accessories on, or working near this tool must read and understand these instructions before performing any such task.

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You can purchase additional
items at www.cumminstools.com

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
6. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
7. **Use eye protection.** Always wear ANSI approved impact safety glasses underneath a full face shield during use. Also, wear heavy duty work gloves.
8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
9. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. The handles must be kept clean, dry, and free from oil and grease at all times.
10. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before starting work.
11. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
12. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for cracks or chips in the taps and dies. Any part that is damaged should be replaced.
13. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Cummins Industrial Tools.
14. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
15. **The flutes on these tools are sharp and may cut you.** Handle with care.
16. **Do not use any high-speed means, such as a lathe or drill press, to cut threads with these Taps and Dies.** High-speed use may overheat the tool, causing loss of heat-treatment and premature failure. Use of high-speed means will void the warranty.
17. **Taps and Dies are heat-treated, and not designed to be sharpened.** After considerable use, corrosion, or high-speed use these tools may lose their cutting edge. They will then be less effective and may break. Replacement Taps and Dies are available from Cummins Industrial Tools.

Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Specifications

ITEM	DESCRIPTION
Capacity	22 tons maximum
Height Movement	8-7/8 inch (minimum) 17-5/16 inch (maximum)
Ram	2.1 inch diameter, 4-3/4 inch length
Air Inlet Fitting	1/4 inch NPT
Weight:	72 lbs.
Wheel diameter	8"
Air Hose	3/8 inch (O.D.) x 48 inches long with crimped hose fittings
Air Pressure	120-200PSI

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with the manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

- 1. Do not overload this equipment.** Know the weight of the item being lifted.
- 2. Use Jack for lifting only.** Do not use this equipment for any other purpose. Immediately after lifting, support the load with appropriate supporting equipment.
- 3. Place Jack correctly.** Only use this equipment on a surface that is stable, level, clean and dry, and capable of sustaining the load.
- 4. Stabilize load.** Ensure that the load remains stable at all times. Do not move load while on the Jack.
- 5. Vehicle lifting.** When lifting a vehicle, apply the emergency brake, and block all wheels.
- 6. Keep work area clean.** Cluttered areas invite injuries.
- 7. Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrical powered tools in the presence of flammable gases or liquids.
- 8. Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
- 9. Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
- 10. Do not force tool.** It will do the job better and more safer at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.

11. Use the right tool for the job. Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. Do not use a tool for a purpose for which it was not intended.

12. Dress properly. Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.

13. Use eye and ear protection. Always wear ANSI approved impact safety goggles. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.

14. Do not overreach. Keep proper footing and balance at all times. Do not reach over or across running machines.

15. Maintain tools with care. Keep tools sharp and clean for better and safer Performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.

16. remove adjusting keys and wrenches. Check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.

17. Stay alert. Watch what you are doing, use common sense. Do not operate any tool when you are tired.

18. Check for damaged parts. Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.

19. Replacement parts and accessories. When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool.

20. Do not operate tool if under the influence of alcohol or drugs. Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

Warning: the warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Operation

Lifting

1. Install the handle assembly well according to assembly drawing.
2. Turn the handwheel 26 clockwise until snug.
3. Adjust the handle angle degree as needed. place the jack into position under the load.

Caution: follow all Safety and Precautions listed on pages 1 and 2.

4. Adjust the Extension Screw (P19.1) as needed.
Turn Counterclockwise to raise. Clockwise to lower.
5. Connect the air supply hose lock fitting into the Air inlet Fitting. The Lever (A28) should be off (not in the locked position).
6. Press the Lever (A28) to the on position and lock using the lock Lever (A27). This provides a continuous air supply to the Air Motor (48).
7. Raise the Jack by alternately lifting and lowering the Handle assembly.

Lowering

Caution: Avoid rapid descent of the load. Turn the Release Valve slowly.

1. Release the lock Lever (A27) to stop air flow to the Air Motor (48).

2. Remove air supply hose from the Air inlet Fitting.
3. Slowly and carefully lower the load by turning the handwheel counterclockwise in extremely small increments using only the Handle assembly (never your hand).
4. Lower the Extension Screw (P19.1) as needed by turning clockwise.
5. Remove the Jack.

Maintenance

General Care

1. Periodically lubricate the joints and Extension Screw (P19.1) with a light oil as needed.
2. Clean the outside of the Jack with a dry, clean cloth.
3. If the Jack is exposed to moisture, wipe dry with a clean cloth and lubricate as noted above.
4. Store Jack with Extension Screw (P19.1) and Ram (P19) fully collapsed.

Purging Air from the Hydraulic System

Air bubbles can become trapped inside the hydraulic system thereby reducing the efficiency of the Jack. Purge the air from the system if lift efficiency drops.

1. Turn the handwheel 1-1/2 turns counterclockwise.
2. Remove the oil Filler Plug (P22) on the side of the Jack Reservoir (P21) by gently pulling.
3. Connect the air supply hose lock fitting into the air inlet fitting open the air valve and work for a moment to purge the air from the hydraulic system.
4. Turn the handwheel clockwise until snug.
5. Top off Jack reservoir (P21) as described below.
6. Replace the Filler Plug (P22).

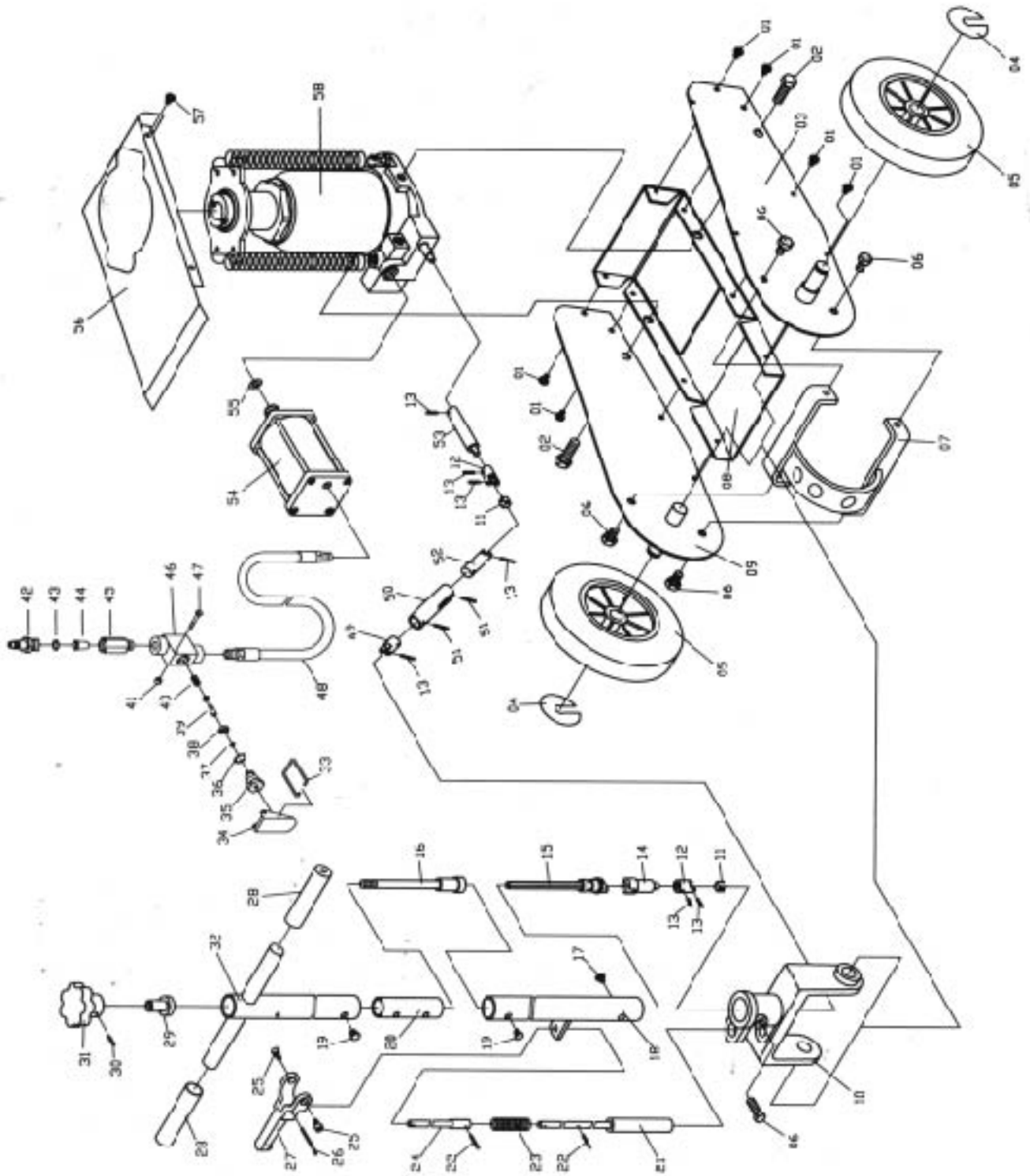
Oil Replacement

1. Place Jack in an upright position.
2. Completely lower the Ram (P19).
3. Remove the Filler Plug (P22).
4. Fill with High-quality hydraulic jack oil to the lower rim of the fill hole.
5. Purge air from the hydraulic system as previously described.
6. Top off with more hydraulic oil.
7. Replace Filler Plug (P22).

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Assembly Drawing



NO.	DESCRIPTION	QTY	NO.	DESCRIPTION	QTY	NO.	DESCRIPTION	QTY
1	BOLT	8	21	SLOTTED PIN	1	41	NUT	1
2	BOLT	2	22	PIN	2	42	HOSE CONNECTOR	1
3	RIGHT SIDE PLATE	1	23	SRPING	1	43	"O"-RING	1
4	CIRCLIP	2	24	TIE ROD-3	1	44	AIR FILTER	1
5	WHEEL	2	25	SCREW	2	45	SCREW	1
6	BOLT	4	26	PIN	1	46	VALVE BODY	1
7	ADJUSTABLE FRAME	1	27	PULLING HANDLE	1	47	SCREW	1
8	BASE PLATE	1	28	HANDLE SLEEVE	2	48	AIR HOSE	1
9	LEFT SIDE PLATE	1	29	SCREW	1	49	CADAN JOINT-3	1
10	HANDLE SOCKET	1	30	PIN	1	50	CARDAN JOINT-4	1
11	CARDAN JOINT-1	2	31	HANDWHEEL	1	51	PIN	2
12	CARDAN JOINT-2	2	32	HANDLE-2	1	52	CARDAN JOINT-5	1
13	PIN	7	33	LOCK LEVER	1	53	EXTENSION ROD	1
14	CONNECTOR	1	34	LEVER	1	54	AIR MOTOR	1
15	TIE ROD-1	1	35	NUT	1	55	WASHER	1
16	TIE ROD-2	1	36	"O"-RING	1	56	PLATE	1
17	SCREW	1	37	"O"-RING	1	57	BOLT	4
18	HANDLE-1	1	38	PACKING	1	58	PUMP	1
19	SCREW	2	39	THROTTLE	1			
20	HANDLE CONNECTOR	1	40	SPRING	1			