

MINNICH

THE HORNET 36/40
OPERATOR/SERVICE MANUAL



MINNICH MANUFACTURING

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NOTICE

It is Minnich’s policy to constantly strive to improve our products. The information, specifications, and illustrations in this publication are based on the information in effect at the same time as approval for printing and publishing. Minnich therefore reserves the right to make changes in design and improvements whenever it is believed the efficiency of the machine which has been shipped or curring any obligation to incorporate such improvements in any machine which has been shipped or is in service. It is recommended that users contact Minnich or a Minnich Dealer for latest revisions.

NOTICE

See engine manual for information pertaining to the engine.

NOTICE

If there are any questions regarding the machine or its application which are not covered in this manual or in other literature accompanying this unit, please contact your Minnich Dealer or Minnich Manufacturing at 419-903-0010 or sales@minnich-mfg.com

⚠ WARNING

CALIFORNIA PROPOSITION 65

Engine exhaust and some of its constituents, and some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm. Some examples of these chemicals are:

Lead from lead-based paints.
Crystalline silica from bricks.
Arsenic and chromium from chemically treated lumbar.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: ALWAYS work in a well ventilated area, and work with improved safety equipment, such as dust masks that are specifically designed to filter out microscopic particles.

⚠ WARNING



SILICOSIS WARNING

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mist containing crystalline silica.

Silica is a basic components of sand, quarts, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory disease, including silicosis. In addition, California and some authorities have listed repairable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow the respiratory precautions mentioned above.

⚠ WARNING

RESPIRATORY HAZARDS



Grinding/cutting/drilling of masonry, concrete, metal and fumes containing chemicals known to cause serious or fatal injury or illness, such as respiratory disease, cancer, birth defects or other reproduction harm, if you are unfamiliar with the risks associated with the particular process and/or material being cut or the composition of the tool being used, review the material safety data sheet and/or consult your employer, the material manufacturer/supplier, governmental agencies such as OSHA and NIOSH and other sources on hazardous materials. California and some other authorities, for instance, have published lists of substances known to cause cancer, reproductive toxicity or other harmful effects.

Control dust, mist and fumes at the source where possible. In this regard use good work practices and follow the recommendations of the manufactures of suppliers, OSHA/NIOSH, and occupational and trade associations. Water should be used for dust suppression when wet cutting is feasible. When the hazards from inhalation of dust, mist and fumes cannot be eliminated, the operator and any bystanders should always wear a respirator approved by OSHA/NIOSH for the materials being used.

GENERAL SAFETY

Do not operate or service the equipment before reading the entire manual. Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the safety messages and operating instructions could result in injury to yourself and others.

This operation manual has been developed to provide complete instruction for the safe and efficient operation. Refer to the engine manufactures instructions for data relative to its safe operation. Before using, ensure that the operating individual has read and understood all instructions in the manual. The surrounding environment and you, could be damaged if you do not follow instructions.

SAFETY MESSAGES

The four safety messages shown below will inform you about potential hazards that could injure you or others. The safety messages specifically address the level of exposure to the operator and are preceded by one of four words: DANGER, WARNING, CAUTION or NOTICE.

DANGER

Indicates a hazardous situation which, if not avoided, WILL result in DEATH or SERIOUS INJURY

WARNING

Indicates a hazardous situation which, if not avoided, COULD result in DEATH or SERIOUS INJURY

CAUTION



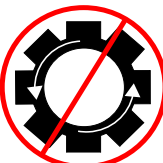
Indicates a hazardous situation which, if not avoided, COULD result in MINOR or MODERATE INJURY

NOTICE

Addresses practices not related to personal injury

SAFETY SYMBOLS

Potential hazards associated with the operation of this equipment will be referenced with hazards symbols which may appear throughout this manual in conjunction with safety messages.

| SYMBOL | SAFETY HAZARD |
|--|----------------------------|
|  | Lethal exhaust gas hazards |
|  | Explosive fuel hazards |
|  | Burn hazard |
|  | Factory Settings |

WARNING

DO NOT USE TOOL IF IT IS IN NEED OF SERVICE!

GENERAL SAFETY

⚠ CAUTION

Δ NEVER operate this equipment without proper protective clothing, shatter proof glasses, respirator protection, hearing protection, steel-toes boots and other protective devices required by the job or city and state regulations.



Δ Never operate this equipment when not feeling well due to fatigue, illness or when under medication.



Δ NEVER operate this equipment under the influence of drugs or alcohol.



Δ ALWAYS check the equipment for loosened threads or bolts before starting.

Δ NEVER operate around corrosive chemicals or water containing toxic substances. These fluids could create serious health and environmental hazards. Contact local authorities for assistance.

Δ DO NOT use the equipment for any purpose other than its intended purpose or applications.

NOTICE

Δ This equipment should only be operated by trained and qualified personnel 18 years of age and older.

Δ This equipment is for industrial use only. Whenever necessary, replace nameplate, operation and safety decals when they become difficult to read.

Δ Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modifications will void all warranties. Any modification which it could lead to change in the original characteristics of the machine should be

made only by the manufacturer who shall confirm that the machine is in comfortability with appropriate safety regulations.

Δ Never use accessories or attachments that are not recommended by Minnich for the equipment. Damage to the equipment and/or injury to user may result.

Δ Always know the location of the nearest fire extinguisher.



Δ ALWAYS know the location of the nearest first aid kit.



Δ ALWAYS know the location of the nearest phone or keep a phone on the job site. Also, know the phone numbers of the nearest ambulance, doctor and fire department. This information will be invaluable in the case of an emergency.



⚠ DANGER

Δ NEVER operate the equipment in an explosive atmosphere, near combustible materials, or near flammable or low flash point fluids. An explosion or fire could result causing severe bodily harm or even death.



⚠ WARNING

Δ NEVER disconnect any emergency or safety devices. These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death. Disconnection of any of these will void all warranties.

Δ NEVER operate equipment with the covers or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury. Wear clothing that will not likely become caught in the equipment or snag on any moving parts.

⚠ CAUTION

Δ ALWAYS be sure the operator is familiar with the proper safety precautions and operating techniques before using.

Δ NEVER leave the machine unattended.
Turn off when unattended

GENERAL SAFETY

- Δ DO NOT expose vibrator to rain.
- Δ DO NOT use vibrator motor in damp or wet locations without proper electrical circuits.
- Δ DO NOT immerse the motor part in concrete.
- Δ ALWAYS keep clear of rotating or moving parts while operating.
- Δ NEVER leave the machine unattended while running
- Δ ALWAYS disconnect the motor from the power source when not in use, before servicing, and when changing flexible shafting and vibrator heads.

- Δ Allow the machine to cool before servicing. Contact with hot components can cause serious burns.



- Δ Before Each use, ALWAYS check the motor to make certain that there are no damaged parts and that all parts function properly. If any damage or malfunctioning parts are found, have them repaired or replaced by an authorized service facility.

NOTICE

- Δ ALWAYS secure forms. Make sure the form work is well made and braced to withstand the stresses made by vibration.
- Δ ALWAYS keep vibrator motor clean for better and safer operation.
- Δ ALWAYS store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of reach of children and unauthorized personnel.
- Δ Use only factory authorized replacement parts.
- Δ Store idle vibrator motor. When not in use, motor should be stored in a dry, safe storage area.

ENVIRONMENTAL SAFETY/DECOMMISSIONING

NOTICE

- Δ DO NOT pour waste or oil directly into the ground, down a drain or into any water source.
- Δ Contact you country department of Public Works or recycling agency in your area and arrange for proper disposal of any electrical components, waste or oil associated with this equipment.



- Δ When the life cycle of this equipment is over, remove battery (if equip) and bring to appropriate facility for lead reclamation. Use safety precautions when handling batteries that contain sulfuric acid.
- Δ When the life cycle of this equipment is over, it is recommended that the unit frame and all other metal parts be sent to a recycling center.

Metal recycling involves the collection of metal from discarded products and its transformation into raw materials to use in many Manufacturing a new product.

Recyclers and manufactures alike promote the process of recycling center promotes energy cost savings.

NOTICE

Decommissioning is a controlled process used to safely retire a piece of equipment that is no longer serviceable. If the equipment poses an unacceptable and unrepairable safety risk due to wear or damage or is no longer cost effective to maintain (beyond life-cycle reliability) and is to be decommissioned (demolition and dismantlement), be sure to follow rules below.

- Δ ALWAYS observe all applicable compulsory regulations relevant to environmental protection, especially fuel storage, the handling of hazardous substances, and the wearing of protective clothing and equipment. Instruct the user as a necessary, or, as the user, request this information and training.

GENERAL SAFETY

- △ ALWAYS Dispose of hazardous waste properly. Examples of potentially hazardous waste include used motor oil, fuel, and fuel filters.
- △ DO NOT use food or plastic containers to dispose hazardous waste.
- △ DO NOT pour waste or oil directly onto the ground, down or drain or into any waste source.

NOTICE

- △ ALWAYS keep the machine in proper running condition.
- △ ALWAYS become familiar with the components of the machine before operation.
- △ Fix damage to machine and replace any broken parts immediately.
- △ ALWAYS store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children and unauthorized personnel.
- △ NEVER lubricate components or attempt service on a running machine

CAUTION

- △ NEVER tamper with the factory settings of the engine or engine governor. Damage to the engine or equipment can result in operation in speed ranges above the maximum allowability.



BEFORE CONNECTING THE AIR COMPRESSOR:

CAUTION

- △ Install the drill steel and bits into the drill motors and close the latch retainers and rod guides.
- △ Make sure that the air compressor is set at an operating pressure of not more than 120 PSIG (8Bar)
- △ Make sure air line is cleaned out and is of the proper size and pressure rating for the drill unit.
- △ Make sure the lubricator is filled with proper lubricant. See Minnich recommended lubricant below.

- △ Make sure all controls are in the "off" position and the lift lever (if so equipped) is in the "up" position.
- △ Make sure all lock pins are in their locked position.

WARNING

- △ NEVER attempt to loosen any compressed air hose that is pressurized.
- △ KEEP AWAY from all hot or spark generating objects, do not smoke when handling fuel.
- △ So as to facilitate shipment, new or repaired units are not lubricated before delivery to customers.
- △ DO NOT use hydrocarbons and especially do not use fuel oil for lubricating purposes.
- △ DO NOT OPERATE MACHINE WITHOUT GUARDS AND COVERS IN PLACE
- △ ALWAYS disconnect the air supply before changing steel or dismantling the tool for service or repair. For maximum safety we advise the installation of a shut-off valve at the end of the air line.
- △ NEVER operate the engine with heat shields or guards removed.
- △ DO NOT remove the engine oil drain plug while the engine is hot. Hot oil will gush out of the engine crankcase and severely scald any persons in the general area of the machine.



NOTICE

- Δ CLEAR AIR SUPPLY LINE: Before connecting vibrator, clear the compressed air supply line of possible impurities, contaminants and water.
- Δ LUBRICATE: Every day or every four hours of continuous service, pour a ½ teaspoon of non-detergent oil into the quick release coupling. NOTE: An optional oiler/strainer is available.

CONNECT/START

NOTICE

If the vibration intensity drops, check that the filters are not clogged or that hoses are not kinked.

STORAGE

NOTICE

To properly store unit after use, hang the vibrator with the head up and set the handle (variable control assembly) in the open position to permit the discharge of possible impurities, contaminants and water.

PLACEMENT AND CONSOLIDATION

NOTICE

The force exerted by an internal concrete vibrator is controlled by the weight and the speed at which the eccentric rotates. The centrifugal force exerted can be arrived at by various combinations of weight (size of eccentric weight) and the speed at which the weight rotates. For years the most favorable working speed for a vibrator was considered to be around 10,200 RPM (VPM) and consequently this figure is used in many vibrator comparisons. More recently, the optimum speed for compaction has been accepted as being between 7500 and 9000 RPM.

PERSONAL SAFETY

- Δ Stay alert, watch what you are doing, and use common sense when operating the machine.
- Δ DO NOT use the tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury or death.
- Δ Dress properly. DO NOT wear loose clothing or jewelry. Tie up long hair. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.
- Δ DO NOT overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control in unexpected situations.

SERVICE

- Δ Tool service must be preformed only by qualified repair personnel. Service or maintained preformed by unqualified personnel could result in injury or death
- Δ When servicing a tool, use only identical replacement parts. Use of unauthorized parts may create a risk of injury or death.

NOTICE

To find the latest revision of this publication, visit our website at: www.minnich-mfg.com

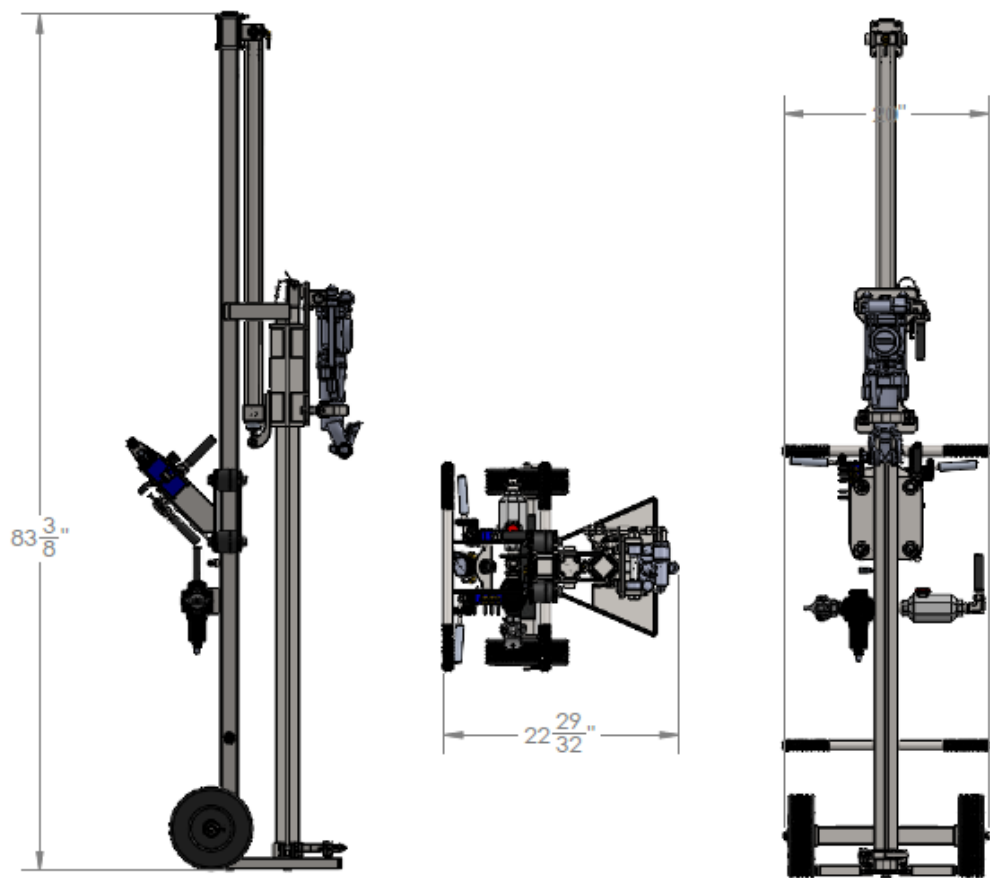
NOTICE

THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

NOTICE

Specifications and part numbers are subject to change without notice.

THE HORNET



MODEL

HORNET 36/40

| | |
|--------------------------------------|--------------------------------------|
| Drill Steel Shank | 7/8" x 3-1/4" (22.2mm x82.6mm) |
| Drill Steel Length (Under Collar) | 40" (101.6cm) SF 36" (91.4cm) STD |
| Maximum Drill Depth* | 36" (91.4cm) SF 32" (81.3cm) STD |
| SCFM Required | 90 (2.55 m3/min) |
| Weight (15lb (6.8kg) Hammer) | 95lbs (43.1kg) |
| Weight (30lb (13.6kg) Hammer) | 110lbs (49.9kg) |

HAMMER OPTIONS:

15LB (6.8KG) HAMMER: 5/8" - 1" (1.59CM - 2.54CM) HOLE DIAMETER
30LB (13.6KG) HAMMER: 5/8" - 1-5/8" (1.59CM - 4.13CM) HOLE DIAMETER
SPECIFICATIONS SHOWN ARE STANDARD. VARIATIONS TO THE STANDARD ARE AVAILABLE.

*BASED ON 2 PIECE STEEL AND BITS. WHIRLYBITS SHOULD BE 1" (2.5CM) LONGER FOR MAXIMUM DRILLING DEPTH.

SF = TAMCO SEIZE FREE BITS STD = STANDARD BITS

NOTICE

All safety labels on Minnich Manufacturing units have been carefully placed so they can be easily seen at all times. There are several different types of labels on the units. Always keep these warnings free of dirt, concrete, or anything else that restricts visibility. Never remove the labels for any reason. If the label on your machine become worn or in any way difficult to read, call our parts department for replacements.

A

WARNING

NOISE MAY DAMAGE HEARING
WEAR PROPER HEARING PROTECTION

FLYING PARTICLES MAY CAUSE EYE INJURIES
WEAR PROPER EYE PROTECTION

DUST CAN CAUSE INJURY TO YOUR HEALTH
IF VENTILATION IS INADEQUATE USE AN APPROVED RESPIRATOR

HIGH PRESSURE KEEP AWAY FROM LEAKS
BLEED DOWN BEFORE REMOVING LINES TO SERVICE

B

WARNING

PINCH POINT
KEEP AWAY

C

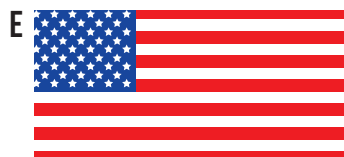
WARNING

BE SURE SUPPLY LINES ARE SECURE
DO NOT EXCEED 100 PSI (6.9 BAR)
OR DAMAGE TO MACHINE AND OR
BODILY HARM MAY RESULT 12287-1

D

WARNING

HIGH PRESSURE
BLEED AIR PRESSURE
BEFORE SERVING



M FEED PRESSURE

Recommended
Settings
4-7 PSI

H $\frac{7}{8}$ " **HEX** x 3 $\frac{1}{4}$ "

I

CAUTION

INSTALL LOCK PIN PRIOR TO
TRANSPORTING MACHINE 12287-7

J Drill **K** Feed

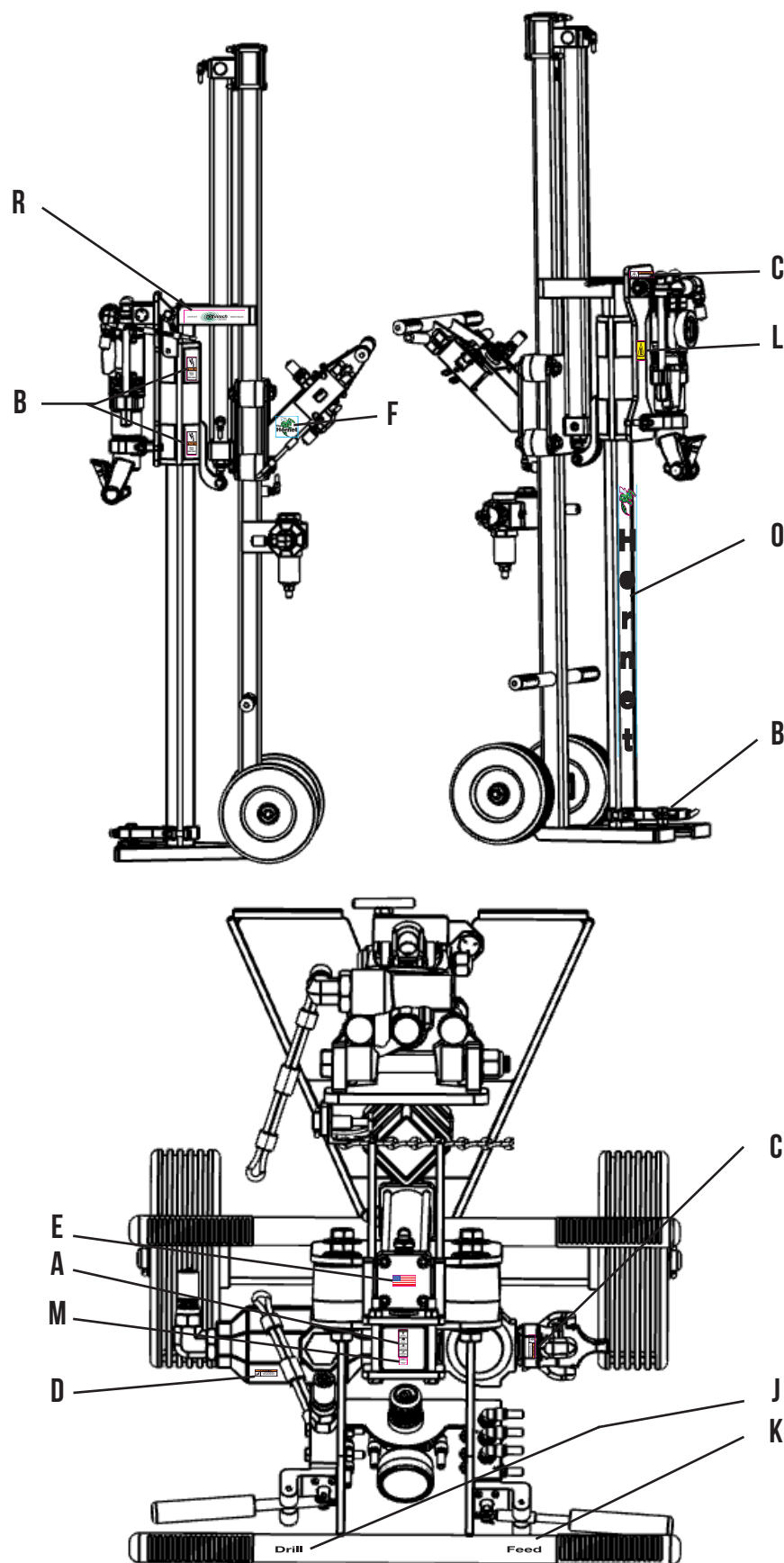


N PRIOR TO OPERATION

- Read and understand owners manual completely.
- Tighten all loose bolts, inspect all lines, pipes, and hoses for damage. Repair as necessary.
- Drill steel must not be binding in guide bearing. Make sure drill steel is straight, free of obstructions, and not binding in any way.
- Fill the oiler per manual. 12287-156



**H
O
r
n
e
t**



INSTALLATION

Shut off air pressure. Install in air line with air flow in direction of arrow on body.

RECOMMENDED SETTINGS

Regulator should read approximately between 4 and 7 PSI. Some adjustment may be necessary.

ADJUSTMENT

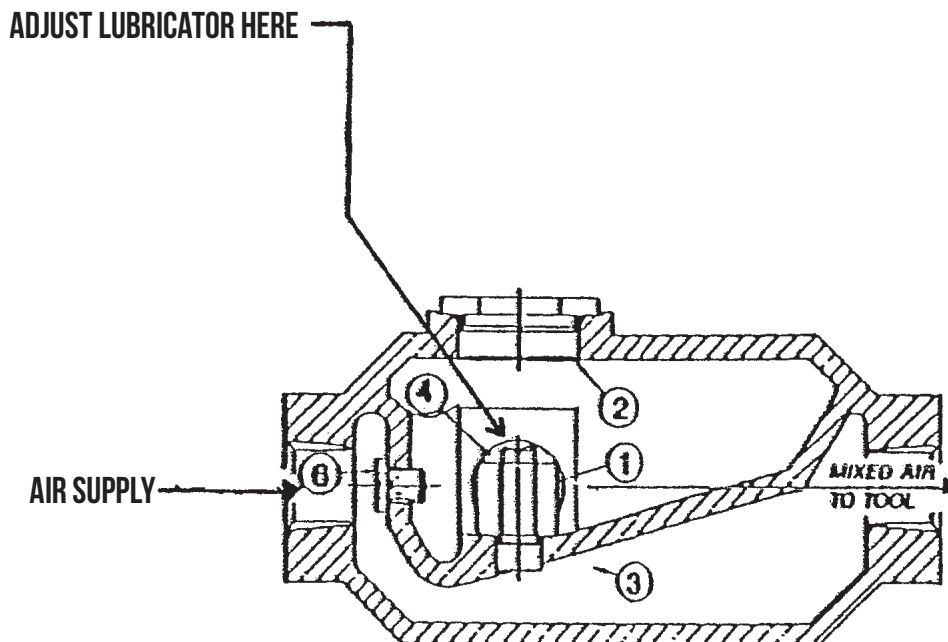
Turn adjustment screw clockwise to increase outlet pressure setting and counterclockwise to decrease outlet pressure setting. To reduce pressure, first reduce to a pressure less than that desired, then increase to the desired outlet pressure.

⚠ WARNING

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed on the product label.

LUBRICATOR IS SET AT 4.5 FROM FACTORY. DIFFERENT TEMPERATURES MAY AFFECT FLOW OR OIL. YOU MIGHT HAVE TO ADJUST LUBRICATOR ACCORDINGLY. BE SURE LUBRICATOR IS SET SO THAT YOU ALWAYS HAVE A LIGHT FILM OF OIL ON EXHAUST DEFLECTOR.

TO ADJUST LUBRICATOR, DISCONNECT AIR PRESSURE FROM DRILL UNIT. PUSH DOWN ON PRESSURE RELIEVING BUTTON ON FILL CAP. REMOVE FILL CAP. USING A SCREW DRIVER, ADJUST LUBRICATOR TO REQUIRED SETTING. TO INCREASE OIL, SET AT HIGHER NUMBER. TO DECREASE OIL, SET AT LOWER NUMBER.



- STEP 1** Be sure lubricator is full. See recommended oils below.
- STEP 2** Make sure slab wheels are square against face of slab.
- STEP 3** Using feed control valve, feed bit against slab.
- STEP 4** Using drill control valve, turn drill on and drill until the drill slider is against the stop clamp, which should be set for the required depth of hole.
- STEP 5** Once drill slider is against the stop clamp, leave the drill on and use the feed control valve to retract the drill from the hole. Note: If bit will not retract from hole, feed drill back into hole and retract drill again.

WARNING

DO NOT hit drill slider to retract the bit from the hole. This will damage the drill slider.



PROBLEM: DRILL DOES NOT RUN

CAUSE

REMEDY

DRILL NOT GETTING AIR

1. On Multi Drill units, switch airline with drill that is working properly. If drill now runs check the air control valve. If the valve works, check the drill.
2. Check clave on air compressor and drill unit to be certain they are completely open
3. Check compressor. It should have 100SCFM (47.20m³/sec.) per drill and 110PSI (7.6 BAR) at drill manifold when drilling with large drills.
4. Make certain all fittings are connected properly and not leaking.

COUPLING OR HOSE OBSTRUCTION Remove Obstruction

FAILURE IN THE ELECTRICAL CIRCUIT

Check switches, connections, coils, ground & voltage. If the power unit (backhoes, grader, ETC.) is being jump started, check the AMPS & voltage being jump supplied to coils from the battery, it may be too low.

FAILURE OF DRILL SOLENOID VALVE
(MULTI DRILL UNITS WITH REMOTE
ELECTRICAL CONTROLS)

Check valve - you should be able to feel the solenoid move when it is actuated. Make sure you have current to the solenoid coil. Replace the solenoid if there is no movement.

MECHANICAL FAILURE OF DRILL

Disassemble the drill & inspect for damaged parts.

TROUBLESHOOTING AIR DRILL

PROBLEM: DRILL RUNS SLOW OR DOES NOT DRILL EFFECTIVELY

| CAUSE | REMEDY |
|---|---|
| NOT ENOUGH AIR REACHING DRILL. IT SHOULD HAVE 100SCFM (47.2DM ³ /SEC.) PER DRILL AND 110 PSI (7.6 BAR) | On Multi Drill units. Turn off one or two drills. If the remaining drills pick up speed, check the air compressor. |
| RESTRICTION IN AIR LINE | A foreign object in the air line or possibly a reduction in the air line caused by a reducer fitting. |
| TOO SMALL AIR LINE | Following are supply line sizes for drilling: A-1 Single Drill 3/4" (19mm) A-2 Two Drills 1-1/4" (38.75mm) A-3& A-4 Three & four drills 1-1/2" (38.1mm) A-5 Five Drills 2" (50.8mm) |
| AIR PRESSURE TO CYLINDER "FEED-ING" DRILL INTO CONCRETE NOT ADJUSTED PROPERLY | Excessive pressure can cause drill to "bind up" in the hole. Pressure that is too low will not "feed" the drill into the concrete. The air pressure required varies with the drill model. Horizontal- all units with large drills use 22-26 PSI (1.5-1.8 bar). Drill units using the 15LB (6.8kg) class drill will use 16-20 PSI (1.1-1.4 Bar). Vertical - all drill units use 5-6 PSI (0.34-0.41 Bar). With the correct air pressure, the drill steel should have a slight rattle. |
| INSUFFICIENT AIR FLOW TO KEEP HOLE BLOWN CLEAN | Check for obstruction in the blow tube in the drill. |
| LUBRICATOR PUTTING OUT TOO MUCH OIL TO DRILL | If you notice more than a light film of oil on the air deflector on the bottom of the drill adjust the lubricator, make certain you are using the type of oil called for in the operation and maintenance manual. |
| MECHANICAL BLINDING OF DRILL CARRIER | Make sure the eight bearing pads are adjusted correctly. The square tube that the drill carrier slides on must be free of rust so that the carrier slides freely, drill steel must not be binding in the guide bearing. |
| BENT DRILL STEEL, WORN DRILL BIT OR DRILLING INTO REBAR | Replace the drill steel or bit. If drilling into rebar, move the drill. |
| USING 3 1/4" (8.25CM) SHANK DRILL STEEL IN 4 1/4" (10.8CM) SHANK CHUCK DRILL | The drill steel will rotate but it will not allow the drill piston to hammer properly, replace it with the correct 4 1/4" (10.8cm) drill steel. |

| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. | ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|--------------|---|-------|----------|--------------|---|--------|
| 1 | 000708-00004 | MODEL & SERIAL # NAME PLATE | 1 | 45 | 008479-00001 | TAB LOCK PIN | 1 |
| 2 | 001206-00003 | ISOLATOR | 4 | 46 | 010084-00000 | NON-SLIP TRACK ADHESIVE BLACK X 12.50" | 12.50" |
| 3 | 001810-00000 | LUBRICATOR | 1 | 47 | 010300-00000 | VALVE LEVER EXTENSION | 2 |
| 4 | 001811-00000 | COUPLING - HOSE 2 PRONG/MALE PIPE | 1 | 48 | 010829-00110 | MALE ELBOW - 1/4" TUBE TO MALE 1/4" NPT BRASS FITTING | 8 |
| 5 | 002304-00000 | 1/2" I.D. X 60.00" GENERAL PURPOSE HOSE | 60" | 49 | 010829-00111 | MALE ELBOW - 1/4" TUBE TO MALE 3/8" NPT BRASS FITTING | 2 |
| 6 | 002844-00010 | HEIGHT ADJUSTMENT CLAMP | 1 | 50 | 010831-00108 | MALE BRANCH TEE FITTING - 1/4" TUBE TO MALE 1/4" NPT TO 1/4" TUBE (BRASS) | 1 |
| 7 | 003016-00044 | HANDLE - GRIP | 4 | 51 | 010863-00000 | 1/4" NYLON TUBING X 144.00" | 144" |
| 8 | 003017-00019 | WHEEL | 2 | 52 | 010872-00001 | 1/2" EXPANDABLE SLEEVING X 24.00" | 24" |
| 9 | 003656-00000 | PRESSURE GAUGE | 1 | 53 | 011163-00010 | 12-12 SWIVEL NUT ADAPTER | 1 |
| 10 | 003820-00000 | SAFETY PIN & LANYARD | 1 | 54 | 011739-00004 | DRILL CARRIER BEARING | 8 |
| 11 | 004674-00000 | AXLE WASHER | 2 | 55 | 011879-00004 | MODIFICATION, 08-08 90 DEG EXT PIPE/ 37 DEG ELBOW | 1 |
| 12 | 005856-00000 | AIR HOSE COUPLING PLUG | 1 | 56 | 013036-00035 | 1.50" X 35.00" STROKE CYLINDER | 1 |
| 13 | 006007-00017 | 8-83 37 DEG. MALE PIPE CONNECTOR | 1 | 57 | 013052-00002 | AXLE | 1 |
| 14 | 006019-00017 | 08-08 90 DEG EXT PIPE/ 37 DEG ELBOW | 1 | 58 | 013057-00000 | REGULATOR | 1 |
| 15 | 006032-00002 | 08 37" FEM/SWIVEL BARBED HOSE END | 4 | 59 | 013057-00002 | REGULATOR PANEL NUT | 1 |
| 16 | 006036-2.000 | HHCS, 1/4-20 x 2 GR.5 | 2 | 60 | 013058-00000 | 2 POSITION SPRING RETURN VALVE | 1 |
| 17 | 006036-3.000 | HHCS, 1/4-20 x 3 GR.5 | 4 | 61 | 013059-00000 | VALVE | 1 |
| 18 | 006038-2.000 | HHCS, 3/8-16 x 2 GR.5 | 6 | 62 | 013065-00000 | ROD END, REWORKED | 1 |
| 19 | 006039-1.750 | HHCS, 7/16-14 x 1-3/4 GR.5 | 1 | 63 | 013089-00000 | AIR REGULATOR | 1 |
| 20 | 006040-0.875 | HHCS, 1/2-13 x 7/8 GR.5 | 8 | 64 | 013213-00005 | PRIMED MOUNTING PLATE | 1 |
| 21 | 006040-1.000 | HHCS, 1/2-13 x 1 GR.5 | 2 | 65 | 0A4336-00000 | WELDMENT, MOUNTING BRACKET CLAMP | 1 |
| 22 | 006040-1.250 | HHCS, 1/2-13 x 1-1/4 GR.5 | 1 | 66 | 0A8399-00037 | WELDMENT, DRILL CARRIER FOR 30# DRILL | 1 |
| 23 | 006042-6.500 | HHCS, 5/8-11 x 6-1/2 GR.5 | 1 | 67 | A10876-00000 | WELDMENT, UTILITY ROD GUIDE | 1 |
| 24 | 006070-00000 | 1/4"-20 HEX NUT | 2 | 68 | A11104-00100 | ASSEMBLY, 7/8" X 3-1/4" R0319 30# DRILL | 1 |
| 25 | 006107-00000 | FLAT WASHER, 3/8 SAE | 2 | 69 | A12246-00001 | WELDMENT, UTILITY ROD GUIDE BOLT | 1 |
| 26 | 006112-00000 | FLAT WASHER, 1/2 USS | 8 | 70 | A13047-00004 | WELDMENT, END BRACKET | 1 |
| 27 | 006115-00000 | FLAT WASHER, 5/8 SAE | 1 | 71 | A13056-00005 | WELDMENT, HANDLE | 1 |
| 28 | 006144-00000 | LOCKWASHER, #8 | 3 | 72 | A13212-00008 | WELDMENT, FRAME | 1 |
| 29 | 006147-00000 | 1/4" LOCKWASHER | 2 | 73 | A13214-00000 | WELDMENT, CYLINDER MOUNT | 1 |
| 30 | 006149-00000 | LOCKWASHER, 3/8 | 1 | 74 | A13237-00002 | WELDMENT, DRILL TRANSPORT BRACKET | 1 |
| 31 | 006151-00000 | LOCKWASHER, 1/2 | 10 | 75 | A13250-00000 | DECAL KIT FOR HORNET | 1 |
| 32 | 006174-1.000 | 1/8" x 1.00" COITER PIN | 2 | 76 | A13270-00004 | ASSEMBLY, SPRING WHIP CABLE | 2 |
| 33 | 006256-1.500 | RHMS, #8-32 X 1-1/2 SLOTTED | 3 | | | | |
| 34 | 006262-00001 | SCREW, DRIVE HD RD. #4 X 1/4" | 2 | | | | |
| 35 | 006296-00006 | 12-08 REDUCER PIPE BUSHING | 1 | | | | |
| 36 | 006402-00000 | 1/4"-20 NYLON LOCKNUT | 4 | | | | |
| 37 | 006404-00000 | 3/8"-16 NYLON LOCKNUT | 6 | | | | |
| 38 | 006405-00000 | 7/16"-14 NYLON LOCKNUT | 1 | | | | |
| 39 | 006406-00000 | 1/2"-13 LOCKNUT | 1 | | | | |
| 40 | 006408-00000 | 5/8"-11 HEX LOCKNUT | 1 | | | | |
| 41 | 006471-00004 | 1/2" HEX SOCKET PIPE PLUG | 1 | | | | |
| 42 | 006663-00000 | NUT, HEX #8-32 NC THREAD | 3 | | | | |
| 43 | 007282-00000 | #12 SINGLE JACK CHAIN X 7.50" | 7.50" | | | | |
| 44 | 008409-00001 | HINGE TAB | 1 | | | | |

NOT SHOWN:
A13250-00000 DECAL KIT FOR HORNET

| TOLERANCES | UNITED STATES | SI |
|---------------|---------------|---------------|
| ±.0005-1.000 | ±.0005-1.000 | ±.0005-1.000 |
| ±.0010-1.000 | ±.0010-1.000 | ±.0010-1.000 |
| ±.0020-1.000 | ±.0020-1.000 | ±.0020-1.000 |
| ±.0050-1.000 | ±.0050-1.000 | ±.0050-1.000 |
| ±.0100-1.000 | ±.0100-1.000 | ±.0100-1.000 |
| ±.0200-1.000 | ±.0200-1.000 | ±.0200-1.000 |
| ±.0500-1.000 | ±.0500-1.000 | ±.0500-1.000 |
| ±.1000-1.000 | ±.1000-1.000 | ±.1000-1.000 |
| ±.2000-1.000 | ±.2000-1.000 | ±.2000-1.000 |
| ±.5000-1.000 | ±.5000-1.000 | ±.5000-1.000 |
| ±1.0000-1.000 | ±1.0000-1.000 | ±1.0000-1.000 |

DO NOT SCALE DRAWING

TITLE: ASSEMBLY, 36/40 30# TOOL HORNET DRILL W/ISOLATED HANDLE ROUTING NO. DRAWING NUMBER: A13220-00061

MANUFACTURED BY: MANNESMANN CORP. INC. DRAWN BY: R.J.

CHECKED BY: AEB

APPROVED BY: AEB

DATE: 08/15/2022

REV. LEVEL: A

REVISIONS

| REV. | DESCRIPTION | DATE | APPROVED | ECR# |
|------|---|------------|----------|------------|
| A | HEIGHT ADJUSTMENT CLAMP IS NOW 002844-00010 | 08/09/2022 | RJ | 2022-00001 |

DETAIL A
SCALE 1:9

DETAIL B
SCALE 1:9

DETAIL C
SCALE 1:9

DETAIL D
SCALE 1:9

MANUFACTURING

DO NOT SCALE DRAWING

DATE: 08/15/2022

REV: LEVEL

A13220-00061

ASSEMBLY, 36/40 30# TOOL

HORNET DRILL W/ISOLATED HANDLE

ROUTING NO. DRAWING NUMBER:

A13220-00061

TOOLERAGE

DIFFERED HOLE SIZE

NOT SHOWN:
A13250-00000 DECAL KIT FOR HORNET

| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. | ITEM NO. | PART NUMBER | DESCRIPTION | QTY. | ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|--------------|-------------------------------------|------|----------|--------------|---|--------|----------|--------------|--|------|
| 1 | 000708-00004 | MODEL & SERIAL # NAME PLATE | 1 | 36 | 006147-00000 | 1/4" LOCKWASHER | 2 | 66 | 013052-00002 | AXLE | 1 |
| 2 | 001206-00003 | ISOLATOR | 4 | 37 | 006149-00000 | LOCKWASHER, 3/8 | 9 | 67 | 013057-00000 | REGULATOR | 1 |
| 3 | 001807-00000 | 3/8" AIR HOSE X 42.00" | 42" | 38 | 006151-00000 | LOCKWASHER, 1/2 | 10 | 68 | 013057-00002 | REGULATOR PANEL NUT | 1 |
| 4 | 001811-00000 | COUPLING - HOSE 2 PRONG/MALE PIPE | 1 | 39 | 006174-1.000 | 1/8" x 1.00" COTTER PIN | 2 | 69 | 013058-00000 | 2 POSITION SPRING RETURN VALVE | 1 |
| 5 | 001864-00000 | LUBRICATOR | 1 | 40 | 006256-1.500 | RHMS, #8-32 X 1-1/2 SLOTTED | 3 | 70 | 013059-00000 | VALVE | 1 |
| 6 | 002844-00010 | HEIGHT ADJUSTMENT CLAMP | 1 | 41 | 006262-00001 | SCREW, DRIVE HD RD. #4 X 1/4" | 2 | 71 | 013065-00000 | ROD END, REWORKED | 1 |
| 7 | 003016-00044 | HANDLE - GRIP | 4 | 42 | 006296-00005 | 12-06 REDUCER PIPE BUSHING | 1 | 72 | 013213-00005 | PRIMED MOUNTING PLATE | 1 |
| 8 | 003017-00019 | WHEEL | 2 | 43 | 006402-00000 | 1/4"-20 NYLOK LOCKNUT | 4 | 73 | 0A8399-00040 | WELDMENT, DRILL CARRIER FOR 50# DRILL ON UTILITY | 1 |
| 9 | 003656-00000 | PRESSURE GAUGE | 1 | 44 | 006404-00000 | 3/8"-16 NYLOK LOCKNUT | 11 | 74 | 0A9350-00000 | 7/8" X 4-1/4" CHUCK TOYO 50# AIR DRILL | 1 |
| 10 | 003820-00000 | SAFETY PIN & LANYARD | 1 | 45 | 006405-00000 | 7/16"-14 NYLOK LOCKNUT | 1 | 75 | 0A9383-00000 | WELDMENT, FRONT MOUNTING CLAMP | 2 |
| 11 | 003997-00000 | 3/4" I.D. X 60.00" HOSE | 60" | 46 | 006406-00000 | 1/2"-13 LOCKNUT | 1 | 76 | A10876-00000 | WELDMENT, UTILITY ROD GUIDE | 1 |
| 12 | 004674-00000 | AXLE WASHER | 2 | 47 | 006466-00010 | 12-12S PIPE NIPPLE | 1 | 77 | A12246-00001 | WELDMENT, UTILITY ROD GUIDE BOLT | 1 |
| 13 | 005856-00000 | AIR HOSE COUPLING PLUG | 1 | 48 | 006471-00004 | 1/2" HEX SOCKET PIPE PLUG | 1 | 78 | A13047-00004 | WELDMENT, END BRACKET | 1 |
| 14 | 006007-00019 | 8-12S 37 DEG. MALE PIPE CONNECTOR | 1 | 49 | 006653-00000 | NUT, HEX #8-32 NC THREAD | 3 | 79 | A13056-00005 | WELDMENT, HANDLE | 1 |
| 15 | 006015-00005 | 12-12S INTERNAL PIPE TEE | 1 | 50 | 007282-00000 | #12 SINGLE JACK CHAIN X 7.50" | 7.50" | 80 | A13212-00008 | WELDMENT, FRAME | 1 |
| 16 | 006019-00007 | 04-06 90 DEG EXT PIPE/ 37 DEG ELBOW | 3 | 51 | 007667-8.000 | 3/4"-16 X 8.00" GRADE 8 BOLT | 1 | 81 | A13214-00000 | WELDMENT, CYLINDER MOUNT | 1 |
| 17 | 006019-00011 | 06-06 90 DEG EXT PIPE/ 37 DEG ELBOW | 1 | 52 | 008409-00001 | HINGE TAB | 1 | 82 | A13237-00002 | WELDMENT, DRILL TRANSPORT BRACKET | 1 |
| 18 | 006019-00024 | 12-12 90 DEG EXT PIPE/ 37 DEG ELBOW | 1 | 53 | 008479-00001 | TAB LOCK PIN | 1 | 83 | A13250-00000 | DECAL KIT FOR HORNET | 1 |
| 19 | 006032-00005 | 06 37° FEM/SWIVEL BARBED HOSE END | 4 | 54 | 009626-00010 | AIR REGULATOR - PRESET 96 PSI | 1 | 84 | A13270-00004 | ASSEMBLY, SPRING WHIP CABLE | 2 |
| 20 | 006032-00006 | 12 37° FEM/SWIVEL BARBED HOSE | 4 | 55 | 010066-00003 | DRILL HANDLE BRACKET | 2 | | | | |
| 21 | 006036-2.000 | HHCS, 1/4-20 x 2 GR.5 | 2 | 56 | 010084-00000 | NON-SLIP TRACK ADHESIVE BLACK X 12.50" | 12.50" | | | | |
| 22 | 006036-3.000 | HHCS, 1/4-20 x 3 GR.5 | 4 | 57 | 010300-00000 | VALVE LEVER EXTENSION | 2 | | | | |
| 23 | 006038-1.000 | HHCS, 3/8-16 x 1 GR.5 | 1 | 58 | 010829-00110 | MALE ELBOW - 1/4" TUBE TO MALE 1/4" NPT BRASS FITTING | 7 | | | | |
| 24 | 006038-2.000 | HHCS, 3/8-16 x 2 GR.5 | 4 | 59 | 010829-00111 | MALE ELBOW - 1/4" TUBE TO MALE 3/8" NPT BRASS FITTING | 2 | | | | |
| 25 | 006038-2.500 | HHCS, 3/8-16 x 2-1/2 GR.5 | 2 | 60 | 010863-00000 | 1/4" NYLON TUBING X 110.00" | 110" | | | | |
| 26 | 006038-2.750 | HHCS, 3/8-16 x 2-3/4 GR.5 | 4 | 61 | 011163-00010 | 12-12 SWIVEL NUT ADAPTER | 1 | | | | |
| 27 | 006039-1.750 | HHCS, 7/16-14 x 1-3/4 GR.5 | 1 | 62 | 011739-00004 | DRILL CARRIER BEARING | 8 | | | | |
| 28 | 006040-0.875 | HHCS, 1/2-13 x 7/8 GR.5 | 8 | 63 | 011879-00006 | 08-12 90 DEG EXT PIPE/ 37 DEG ELBOW MODIFIED | 1 | | | | |
| 29 | 006040-1.000 | HHCS, 1/2-13 x 1 GR.5 | 2 | 64 | 012300-00000 | 3/4"-16 TORQUE LOCKNUT | 1 | | | | |
| 30 | 006040-1.250 | HHCS, 1/2-13 x 1-1/4 GR.5 | 1 | 65 | 013036-00035 | 1.50" X 35.00" STROKE CYLINDER | 1 | | | | |
| 31 | 006070-00000 | 1/4"-20 HEX NUT | 2 | | | | | | | | |
| 32 | 006107-00000 | FLAT WASHER, 3/8 SAE | 2 | | | | | | | | |
| 33 | 006112-00000 | FLAT WASHER, 1/2 USS | 8 | | | | | | | | |
| 34 | 006117-00000 | FLAT WASHER, 3/4 SAE | 1 | | | | | | | | |
| 35 | 006144-00000 | LOCKWASHER, #8 | 3 | | | | | | | | |

NOT SHOWN:
A13250-00000 DECAL KIT FOR HORNET

ITEM NO. 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84

PART NUMBER 013052-00002 013057-00000 013057-00002 013058-00000 013059-00000 013065-00000 013213-00005 0A8399-00040 0A9350-00000 0A9383-00000 A10876-00000 A12246-00001 A13047-00004 A13056-00005 A13212-00008 A13214-00000 A13237-00002 A13250-00000 A13270-00004

DESCRIPTION AXLE REGULATOR REGULATOR PANEL NUT 2 POSITION SPRING RETURN VALVE VALVE ROD END, REWORKED PRIMED MOUNTING PLATE WELDMENT, DRILL CARRIER FOR 50# DRILL ON UTILITY 7/8" X 4-1/4" CHUCK TOYO 50# AIR DRILL WELDMENT, FRONT MOUNTING CLAMP WELDMENT, UTILITY ROD GUIDE WELDMENT, UTILITY ROD GUIDE BOLT WELDMENT, END BRACKET WELDMENT, HANDLE WELDMENT, FRAME WELDMENT, CYLINDER MOUNT WELDMENT, DRILL TRANSPORT BRACKET DECAL KIT FOR HORNET ASSEMBLY, SPRING WHIP CABLE

QTY. 1 1 1 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1 2

ITEM NO. 56 57 58 59 60 61 62 63 64 65

PART NUMBER 010084-00000 010300-00000 010829-00110 010829-00111 010863-00000 011163-00010 011739-00004 011879-00006 012300-00000 013036-00035

DESCRIPTION NON-SLIP TRACK ADHESIVE BLACK X 12.50" VALVE LEVER EXTENSION MALE ELBOW - 1/4" TUBE TO MALE 1/4" NPT BRASS FITTING MALE ELBOW - 1/4" TUBE TO MALE 3/8" NPT BRASS FITTING 1/4" NYLON TUBING X 110.00" 12-12 SWIVEL NUT ADAPTER DRILL CARRIER BEARING 08-12 90 DEG EXT PIPE/ 37 DEG ELBOW MODIFIED 3/4"-16 TORQUE LOCKNUT 1.50" X 35.00" STROKE CYLINDER

QTY. 2 2 7 2 110" 1 8 1 1 1

ITEM NO. 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

PART NUMBER 006147-00000 006149-00000 006151-00000 006174-1.000 006256-1.500 006262-00001 006296-00005 006402-00000 006404-00000 006405-00000 006406-00000 006466-00010 006471-00004 006653-00000 007282-00000 007667-8.000 008409-00001 008479-00001 009626-00010 010066-00003 010084-00000 010300-00000 010829-00110 010829-00111 010863-00000 011163-00010 011739-00004 011879-00006 012300-00000 013036-00035

DESCRIPTION 1/4" LOCKWASHER LOCKWASHER, 3/8 LOCKWASHER, 1/2 1/8" x 1.00" COTTER PIN RHMS, #8-32 X 1-1/2 SLOTTED SCREW, DRIVE HD RD. #4 X 1/4" 12-06 REDUCER PIPE BUSHING 1/4"-20 NYLOK LOCKNUT 3/8"-16 NYLOK LOCKNUT 7/16"-14 NYLOK LOCKNUT 1/2"-13 LOCKNUT 12-12S PIPE NIPPLE 1/2" HEX SOCKET PIPE PLUG NUT, HEX #8-32 NC THREAD #12 SINGLE JACK CHAIN X 7.50" 3/4"-16 X 8.00" GRADE 8 BOLT HINGE TAB TAB LOCK PIN AIR REGULATOR - PRESET 96 PSI DRILL HANDLE BRACKET NON-SLIP TRACK ADHESIVE BLACK X 12.50" VALVE LEVER EXTENSION MALE ELBOW - 1/4" TUBE TO MALE 1/4" NPT BRASS FITTING MALE ELBOW - 1/4" TUBE TO MALE 3/8" NPT BRASS FITTING 1/4" NYLON TUBING X 110.00" 12-12 SWIVEL NUT ADAPTER DRILL CARRIER BEARING 08-12 90 DEG EXT PIPE/ 37 DEG ELBOW MODIFIED 3/4"-16 TORQUE LOCKNUT 1.50" X 35.00" STROKE CYLINDER

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ITEM NO. 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

PART NUMBER 006147-00000 006149-00000 006151-00000 006174-1.000 006256-1.500 006262-00001 006296-00005 006402-00000 006404-00000 006405-00000 006406-00000 006466-00010 006471-00004 006653-00000 007282-00000 007667-8.000 008409-00001 008479-00001 009626-00010 010066-00003 010084-00000 010300-00000 010829-00110 010829-00111 010863-00000 011163-00010 011739-00004 011879-00006 012300-00000 013036-00035

DESCRIPTION 1/4" LOCKWASHER LOCKWASHER, 3/8 LOCKWASHER, 1/2 1/8" x 1.00" COTTER PIN RHMS, #8-32 X 1-1/2 SLOTTED SCREW, DRIVE HD RD. #4 X 1/4" 12-06 REDUCER PIPE BUSHING 1/4"-20 NYLOK LOCKNUT 3/8"-16 NYLOK LOCKNUT 7/16"-14 NYLOK LOCKNUT 1/2"-13 LOCKNUT 12-12S PIPE NIPPLE 1/2" HEX SOCKET PIPE PLUG NUT, HEX #8-32 NC THREAD #12 SINGLE JACK CHAIN X 7.50" 3/4"-16 X 8.00" GRADE 8 BOLT HINGE TAB TAB LOCK PIN AIR REGULATOR - PRESET 96 PSI DRILL HANDLE BRACKET NON-SLIP TRACK ADHESIVE BLACK X 12.50" VALVE LEVER EXTENSION MALE ELBOW - 1/4" TUBE TO MALE 1/4" NPT BRASS FITTING MALE ELBOW - 1/4" TUBE TO MALE 3/8" NPT BRASS FITTING 1/4" NYLON TUBING X 110.00" 12-12 SWIVEL NUT ADAPTER DRILL CARRIER BEARING 08-12 90 DEG EXT PIPE/ 37 DEG ELBOW MODIFIED 3/4"-16 TORQUE LOCKNUT 1.50" X 35.00" STROKE CYLINDER

QTY. 2 9 10 2 3 2 1 4 11 1 1 3 7.50" 1 1 1 1 1 2 7 2 110" 1 8 1 1 1

ITEM NO. 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 6

REVISIONS

| REV. | DESCRIPTION | DATE | APPROVED | ECR# |
|------|---|------------|----------|------------|
| A | HEIGHT ADJUSTMENT CLAMP IS NOW 002844-00010 | 08/15/2022 | RJ | 2022-00001 |

MANUFACTURING

DO NOT SCALE DRAWING

DATE: 08/15/2022

REV. LEVEL: A

MANUFACTURING

DO NOT SCALE DRAWING

DATE: 08/15/2022

REV. LEVEL: A

TOLERANCES

| DIMENSION | TOLERANCE |
|--|-----------|
| 1.000 TO 1.125 | ± .0004 |
| 1.125 TO 1.250 | ± .0005 |
| 1.250 TO 1.500 | ± .0006 |
| 1.500 TO 1.750 | ± .0008 |
| 1.750 TO 2.000 | ± .0010 |
| 2.000 TO 2.500 | ± .0012 |
| 2.500 TO 3.000 | ± .0015 |
| 3.000 TO 4.000 | ± .0020 |
| 4.000 TO 5.000 | ± .0025 |
| 5.000 TO 6.000 | ± .0030 |
| 6.000 TO 8.000 | ± .0040 |
| 8.000 TO 10.000 | ± .0050 |
| 10.000 TO 12.000 | ± .0060 |
| 12.000 TO 15.000 | ± .0075 |
| 15.000 TO 20.000 | ± .0100 |
| 20.000 TO 25.000 | ± .0125 |
| 25.000 TO 30.000 | ± .0150 |
| 30.000 TO 40.000 | ± .0200 |
| 40.000 TO 50.000 | ± .0250 |
| 50.000 TO 60.000 | ± .0300 |
| 60.000 TO 80.000 | ± .0400 |
| 80.000 TO 100.000 | ± .0500 |
| 100.000 TO 120.000 | ± .0600 |
| 120.000 TO 150.000 | ± .0750 |
| 150.000 TO 200.000 | ± .0001 |
| 200.000 TO 250.000 | ± .0002 |
| 250.000 TO 300.000 | ± .0003 |
| 300.000 TO 400.000 | ± .0004 |
| 400.000 TO 500.000 | ± .0005 |
| 500.000 TO 600.000 | ± .0006 |
| 600.000 TO 800.000 | ± .0008 |
| 800.000 TO 1000.000 | ± .0010 |
| 1000.000 TO 1200.000 | ± .0012 |
| 1200.000 TO 1500.000 | ± .0015 |
| 1500.000 TO 2000.000 | ± .0020 |
| 2000.000 TO 2500.000 | ± .0025 |
| 2500.000 TO 3000.000 | ± .0030 |
| 3000.000 TO 4000.000 | ± .0040 |
| 4000.000 TO 5000.000 | ± .0050 |
| 5000.000 TO 6000.000 | ± .0060 |
| 6000.000 TO 8000.000 | ± .0080 |
| 8000.000 TO 10000.000 | ± .0100 |
| 10000.000 TO 12000.000 | ± .0125 |
| 12000.000 TO 15000.000 | ± .0150 |
| 15000.000 TO 20000.000 | ± .0200 |
| 20000.000 TO 25000.000 | ± .0250 |
| 25000.000 TO 30000.000 | ± .0300 |
| 30000.000 TO 40000.000 | ± .0400 |
| 40000.000 TO 50000.000 | ± .0500 |
| 50000.000 TO 60000.000 | ± .0600 |
| 60000.000 TO 80000.000 | ± .0800 |
| 80000.000 TO 100000.000 | ± .0001 |
| 100000.000 TO 120000.000 | ± .0002 |
| 120000.000 TO 150000.000 | ± .0003 |
| 150000.000 TO 200000.000 | ± .0004 |
| 200000.000 TO 250000.000 | ± .0005 |
| 250000.000 TO 300000.000 | ± .0006 |
| 300000.000 TO 400000.000 | ± .0008 |
| 400000.000 TO 500000.000 | ± .0010 |
| 500000.000 TO 600000.000 | ± .0012 |
| 600000.000 TO 800000.000 | ± .0015 |
| 800000.000 TO 1000000.000 | ± .0020 |
| 1000000.000 TO 1200000.000 | ± .0025 |
| 1200000.000 TO 1500000.000 | ± .0030 |
| 1500000.000 TO 2000000.000 | ± .0040 |
| 2000000.000 TO 2500000.000 | ± .0050 |
| 2500000.000 TO 3000000.000 | ± .0060 |
| 3000000.000 TO 4000000.000 | ± .0080 |
| 4000000.000 TO 5000000.000 | ± .0100 |
| 5000000.000 TO 6000000.000 | ± .0125 |
| 6000000.000 TO 8000000.000 | ± .0150 |
| 8000000.000 TO 10000000.000 | ± .0200 |
| 10000000.000 TO 12000000.000 | ± .0250 |
| 12000000.000 TO 15000000.000 | ± .0300 |
| 15000000.000 TO 20000000.000 | ± .0400 |
| 20000000.000 TO 25000000.000 | ± .0500 |
| 25000000.000 TO 30000000.000 | ± .0600 |
| 30000000.000 TO 40000000.000 | ± .0800 |
| 40000000.000 TO 50000000.000 | ± .0100 |
| 50000000.000 TO 60000000.000 | ± .0125 |
| 60000000.000 TO 80000000.000 | ± .0150 |
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| 100000000.000 TO 120000000.000 | ± .0250 |
| 120000000.000 TO 150000000.000 | ± .0300 |
| 150000000.000 TO 200000000.000 | ± .0400 |
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| 250000000.000 TO 300000000.000 | ± .0600 |
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| 400000000.000 TO 500000000.000 | ± .0100 |
| 500000000.000 TO 600000000.000 | ± .0125 |
| 600000000.000 TO 800000000.000 | ± .0150 |
| 800000000.000 TO 1000000000.000 | ± .0200 |
| 1000000000.000 TO 1200000000.000 | ± .0250 |
| 1200000000.000 TO 1500000000.000 | ± .0300 |
| 1500000000.000 TO 2000000000.000 | ± .0400 |
| 2000000000.000 TO 2500000000.000 | ± .0500 |
| 2500000000.000 TO 3000000000.000 | ± .0600 |
| 3000000000.000 TO 4000000000.000 | ± .0800 |
| 4000000000.000 TO 5000000000.000 | ± .0100 |
| 5000000000.000 TO 6000000000.000 | ± .0125 |
| 6000000000.000 TO 8000000000.000 | ± .0150 |
| 8000000000.000 TO 10000000000.000 | ± .0200 |
| 10000000000.000 TO 12000000000.000 | ± .0250 |
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| 20000000000.000 TO 25000000000.000 | ± .0500 |
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| 30000000000.000 TO 40000000000.000 | ± .0800 |
| 40000000000.000 TO 50000000000.000 | ± .0100 |
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| 5000000000000.000 TO 6000000000000.000 | ± .0125 |
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| 40000000000000.000 TO 50000000000000.000 | ± .0100 |
| 50000000000000.000 TO 60000000000000.000 | ± .0125 |
| 60000000000000.000 TO 80000000000000.000 | ± .0150 |
| 80000000000000.000 TO 100000000000000.000 | ± .0200 |
| 100000000000000.000 TO 120000000000000.000 | ± .0250 |
| 120000000000000.000 TO 150000000000000.000 | ± .0300 |
| 150000000000000.000 TO 200000000000000.000 | ± .0400 |
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| 400000000000000.000 TO 500000000000000.000 | ± .0100 |
| 500000000000000.000 TO 600000000000000.000 | ± .0125 |
| 600000000000000.000 TO 800000000000000.000 | ± .0150 |
| 800000000000000.000 TO 1000000000000000.000 | ± .0200 |
| 1000000000000000.000 TO 1200000000000000.000 | ± .0250 |
| 1200000000000000.000 TO 1500000000000000.000 | ± .0300 |
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| 3000000000000000.000 TO 4000000000000000.000 | ± .0800 |
| 4000000000000000.000 TO 5000000000000000.000 | ± .0100 |
| 5000000000000000.000 TO 6000000000000000.000 | ± .0125 |
| 6000000000000000.000 TO 8000000000000000.000 | ± .0150 |
| 8000000000000000.000 TO 10000000000000000.000 | ± .0200 |
| 10000000000000000.000 TO 12000000000000000.000 | ± .0250 |
| 12000000000000000.000 TO 15000000000000000.000 | ± .0300 |
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| 20000000000000000.000 TO 25000000000000000.000 | ± .0500 |
| 25000000000000000.000 TO 30000000000000000.000 | ± .0600 |
| 30000000000000000.000 TO 40000000000000000.000 | ± .0800 |
| 40000000000000000.000 TO 50000000000000000.000 | ± .0100 |
| 50000000000000000.000 TO 60000000000000000.000 | ± .0125 |
| 60000000000000000.000 TO 80000000000000000.000 | ± .0150 |
| 80000000000000000.000 TO 100000000000000000.000 | ± .0200 |
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| 250000000000000000.000 TO 300000000000000000.000 | ± .0600 |
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| 500000000000000000.000 TO 600000000000000000.000 | ± .0125 |
| 600000000000000000.000 TO 800000000000000000.000 | ± .0150 |
| 800000000000000000.000 TO 1000000000000000000.000 | ± .0200 |
| 1000000000000000000.000 TO 1200000000000000000.000 | ± .0250 |
| 1200000000000000000.000 TO 1500000000000000000.000 | ± .0300 |
| 1500000000000000000.000 TO 2000000000000000000.000 | ± .0400 |
| 2000000000000000000.000 TO 2500000000000000000.000 | ± .0500 |
| 2500000000000000000.000 TO 3000000000000000000.000 | ± .0600 |
| 3000000000000000000.000 TO 4000000000000000000.000 | ± .0800 |
| 4000000000000000000.000 TO 5000000000000000000.000 | ± .0100 |
| 5000000000000000000.000 TO 6000000000000000000.000 | ± .0125 |
| 6000000000000000000.000 TO 8000000000000000000.000 | ± .0150 |
| 8000000000000000000.000 TO 10000000000000000000.000 | ± .0200 |
| 10000000000000000000.000 TO 12000000000000000000.000 | ± .0250 |
| 12000000000000000000.000 TO 15000000000000000000.000 | ± .0300 |
| 15000000000000000000.000 TO 20000000000000000000.000 | ± .0400 |
| 20000000000000000000.000 TO 25000000000000000000.000 | ± .0500 |
| 25000000000000000000.000 TO 30000000000000000000.000 | ± .0600 |
| 30000000000000000000.000 TO 40000000000000000000.000 | ± .0800 |
| 40000000000000000000.000 TO 50000000000000000000.000 | ± .0100 |
| 50000000000000000000.000 TO 60000000000000000000.000 | ± .0125 |
| 60000000000000000000.000 TO 80000000000000000000.000 | ± .0150 |
| 80000000000000000000.000 TO 100000000000000000000.000 | ± .0200 |
| 100000000000000000000.000 TO 120000000000000000000.000 | ± .0250 |
| 120000000000000000000.000 TO 150000000000000000000.000 | ± .0300 |
| 150000000000000000000.000 TO 200000000000000000000.000 | ± .0400 |
| 200000000000000000000.000 TO 250000000000000000000.000 | ± .0500 |
| 250000000000000000000.000 TO 300000000000000000000.000 | ± .0600 |
| 300000000000000000000.000 TO 400000000000000000000.000 | ± .0800 |
| 400000000000000000000.000 TO 500000000000000000000.000 | ± .0100 |
| 500000000000000000000.000 TO 600000000000000000000.000 | ± .0125 |
| 600000000000000000000.000 TO 800000000000000000000.000 | ± .0150 |
| 800000000000000000000.000 TO 1000000000000000000000.000 | ± .0200 |
| 1000000000000000000000.000 TO 1200000000000000000000.000 | ± .0250 |
| 1200000000000000000000.000 TO 1500000000000000000000.000 | ± .0300 |
| 1500000000000000000000.000 TO 2000000000000000000000.000 | ± .0400 |
| 2000000000000000000000.000 TO 2500000000000000000000.000 | ± .0500 |
| 2500000000000000000000.000 TO 3000000000000000000000.000 | ± .0600 |
| 3000000000000000000000.000 TO 4000000000000000000000.000 | ± .0800 |
| 4000000000000000000000.000 TO 5000000000000000000000.000 | ± .0100 |
| 5000000000000000000000.000 TO 6000000000000000000000.000 | ± .0125 |
| 6000000000000000000000.000 TO 8000000000000000000000.000 | ± .0150 |
| 8000000000000000000000.000 TO 10000000000000000000000.000 | ± .0200 |
| 10000000000000000000000.000 TO 12000000000000000000000.000 | ± .0250 |
| 12000000000000000000000.000 TO 15000000000000000000000.000 | ± .0300 |
| 15000000000000000000000.000 TO 200000000000000 | |

30# (13.2KG) ROCK DRILL (011104-00000)

When ordering replacement parts you need to furnish the model and serial number of the drill tool.

SPECIFICATIONS

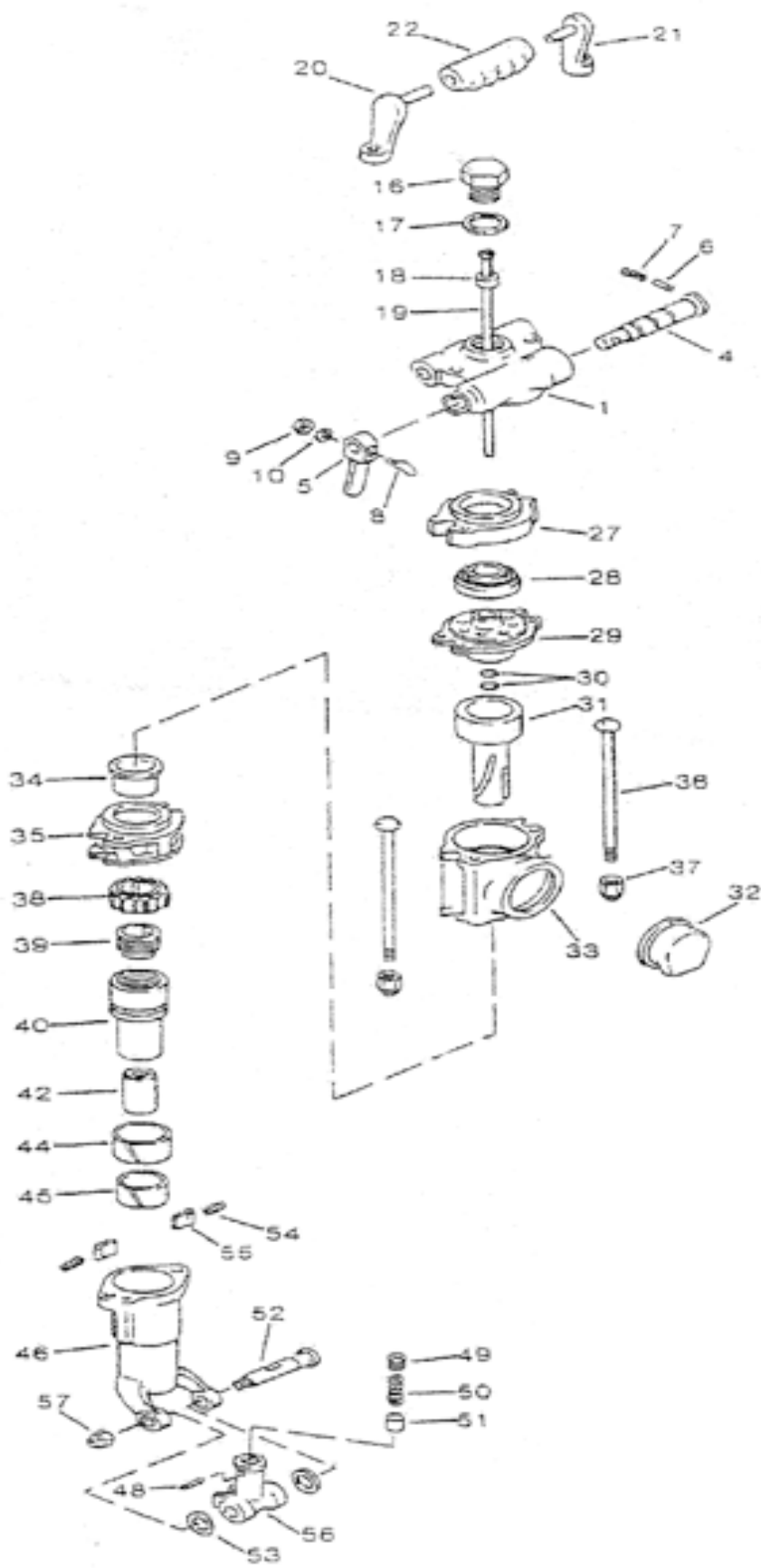
| | |
|------------------|---------------------------------|
| Net Weight | 29lbs. (13.2kg) |
| Blows Per Minute | 2700 |
| Chuck Size | 7/8" x 3 1/4" (22.2mm x 82.6mm) |
| Air Inlet (NPT) | 3/4" (19.1mm) |
| Air Consumption | 73cfm (2.12m ³ /min) |

| FIG. | PART # | DESCRIPTION | QTY |
|------|--------------|------------------------|-----|
| 1A | 011104-00001 | BACKHEAD ASSEMBLY | 1 |
| 1 | 011104-00002 | BACKHEAD | 1 |
| 4 | 011104-00003 | THROTTLE VALVE | 1 |
| 5 | 011104-00004 | THROTTLE VALVE HANDLE | 1 |
| 6 | 011104-00005 | THROTTLE VALVE PLUNGER | 1 |
| 7 | 011104-00006 | THROTTLE VALVE SPRING | 1 |
| 8 | 011104-00007 | THROTTLE VALVE BOLT | 1 |
| 9 | 011104-00008 | THROTTLE VALVE NUT | 1 |
| 10 | 011104-00009 | THROTTLE VALVE WASHER | 1 |
| 16A | 011104-00015 | BLOW TUBE ASSEMBLY | 1 |
| 16 | 011104-00016 | BLOW TUBE GLAND | 1 |
| 17 | 011104-00017 | BLOW TUBE GLAND GASKET | 1 |
| 18 | 011104-00018 | BLOW TUBE GASKET | 1 |
| 19 | 011104-00019 | BLOW TUBE | 1 |
| 20 | 011104-00020 | RIGHT GRIP SUPPORT | 1 |
| 21 | 011104-00021 | RIGHT GRIP SUPPORT | 1 |
| 22 | 011104-00022 | CENTER GRIP | 1 |
| 27A | 011104-00027 | VALVE ASSEMBLY | 1 |
| 27 | 011104-00028 | VALVE CHEST | 1 |
| 28 | 011104-00029 | VALVE | 1 |
| 29 | 011104-00030 | VALVE COVER | 1 |
| 30 | 011104-00031 | O-RING | 2 |
| 31 | 011104-00032 | PISTON | 1 |
| 32 | 011104-00033 | EXHAUST DEFLECTOR | 1 |

| FIG. | PART # | DESCRIPTION | QTY |
|------|--------------|---------------------------|-----|
| 33 | 011104-00034 | CYLINDER | 1 |
| 34 | 011104-00035 | FRONT WASHER BUSHING | 1 |
| 35 | 011104-00036 | FRONT WASHER | 1 |
| 36 | 011104-00037 | THROUGH BOLT | 2 |
| 37 | 011104-00038 | THROUGH BOLT NUT | 2 |
| 38 | 011104-00039 | RATCHET RING & RIFFLE NUT | 1 |
| 39 | 011104-00040 | SLEEVE NUT | 1 |
| 40 | 011104-00041 | ROTATION SLEEVE | 1 |
| 42 | 011104-00043 | SLEEVE BUSHING | 1 |
| 43A | 011104-00045 | FRONT HEAD ASSEMBLY | 1 |
| 44 | 011104-00046 | FRONT HEAD LINER II | 1 |
| 45 | 011104-00047 | FRONT HEAD LINER II | 1 |
| 46 | 011104-00048 | FRONT HEAD | 1 |
| 48 | 011104-00049 | STEEL HOLDER PIN | 1 |
| 49 | 011104-00050 | STEEL HOLDER SCREW | 1 |
| 50 | 011104-00051 | STEEL HOLDER SPRING | 1 |
| 51 | 011104-00052 | STEEL HOLDER PLUNGER | 1 |
| 52 | 011104-00053 | STEEL HOLDER BOLT | 1 |
| 53 | 011104-00054 | STEEL HOLDER PACKING | 2 |
| 54 | 011104-00055 | PAWL SPRING | 2 |
| 55 | 011104-00056 | ROTATION PAWL | 2 |
| 56 | 011104-00058 | STEEL HOLDER | 1 |
| 57 | 011104-00059 | NUT | 1 |
| NS | 011104-00061 | ADAPTER | 1 |

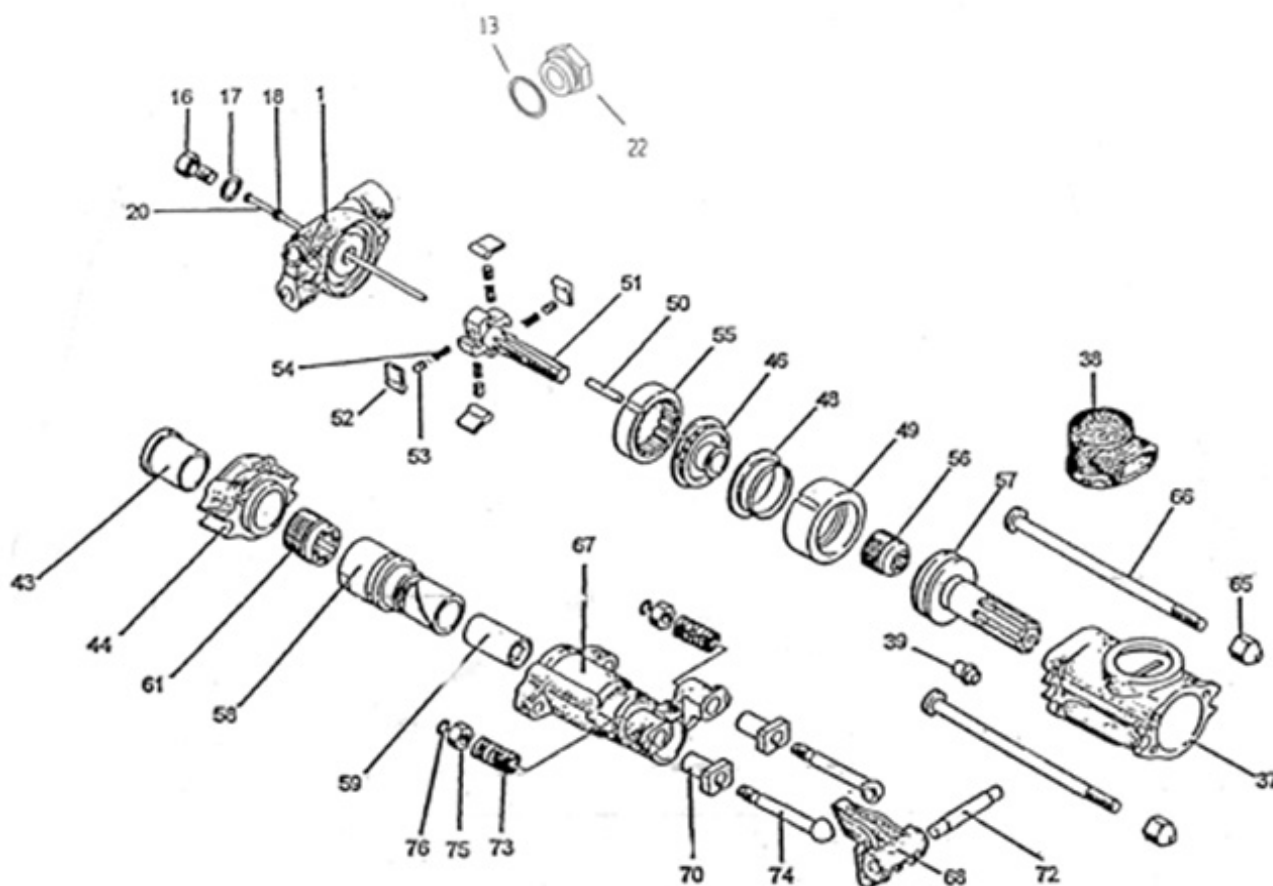
⚠ WARNING

Always disconnect the air supply before changing steel or dismantling the tool for service or repair. For maximum safety we advise the installation of a shut-off valve at the end of the air line.



50# (23KG) ROCK DRILL 0A9350-00000

WHEN ORDERING REPLACEMENT PARTS YOU NEED TO FURNISH THE MODEL AND SERIAL NUMBER OF THE DRILL TOOL



SPECIFICATIONS

| | |
|------------------|----------------------------------|
| Net Weight | 51lbs. (23kg) |
| Blows Per Minute | 2300 |
| Chuck Size | 7/8" X 4 1/4" (22.2mm X 107.9mm) |
| Air Inlet (NPT) | 3/4" (19.1mm) |
| Air Consumption | 92.2cfm (2.6m3/min) |

⚠ WARNING

Always disconnect the air supply before changing steel or dismantling the tool for service or repair. For maximum safety we advise the installation of a shut-off valve at the end of the air line.

| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|--------------|--|------|
| 1 | 009350-00001 | BACKHEAD ASSEMBLY | 1 |
| 13 | 009350-00013 | AIR CONNECTION WASHER | 1 |
| 16 | 009350-00016 | BLOW TUBE GLAND | 1 |
| 17 | 009350-00017 | TUBE GLAND GASKET | 1 |
| 18 | 009350-00018 | BLOW TUBE GASKET | 1 |
| 20 | 009350-00020 | BLOW TUBE | 1 |
| 22 | 009350-00022 | PLUG ADAPTER | 1 |
| 37 | 009350-00037 | CYLINDER | 1 |
| 38 | 009350-00038 | EXHAUST DEFLECTOR | 1 |
| 39 | 009350-00039 | BLOWING CONNECTION | 1 |
| 43 | 009350-00043 | FRONT WASHER BUSHING | 1 |
| 44 | 009350-00044 | FRONT WASHER | 1 |
| 46 | 009350-00046 | VALVE CHEST COVER | 1 |
| 48 | 009350-00048 | AUTOMATIC VALVE | 1 |
| 49 | 009350-00049 | VALVE CHEST | 1 |
| 50 | 009350-00050 | VALVE DOWEL PIN | 1 |
| 51 | 009350-00051 | RIFLE BAR | 1 |
| 52 | 009350-00052 | ROTATION PAWL | 4 |
| 53 | 009350-00053 | PAWL PLUNGER | 4 |
| 54 | 009350-00054 | PAWL SPRING | 4 |
| 55 | 009350-00055 | RATCHET RING | 1 |
| 56 | 009350-00056 | RIFLE NUT | 1 |
| 57 | 009350-00057 | PISTON | 1 |
| 58 | 009350-00058 | ROT. SLEEVE 1" X 4-1/4" (2.5cm X 10.8cm) | 1 |
| 59 | 009350-00059 | SLEEVE BSG 1" HEX. X 4-1/4" (2.5cm HEX X 10.8cm) | 1 |
| 59A | 009350-0059A | SLEEVE BSG 7/8" HEX. X 4-1/4" (2.2cm X 10.8cm) | 1 |
| 61 | 009350-00061 | SLEEVE NUT | 1 |
| 65 | 009350-00065 | SIDE ROD NUT | 2 |
| 66 | 009350-00066 | SIDE ROD | 2 |
| 67 | 009350-00067 | FRONTHEAD 1" X 4-1/4" (2.5cm X 10.8cm) | 1 |
| 68 | 009350-00068 | STEEL RET. 1" X 4-1/4" (2.5cm X 10.8cm) | 1 |
| 68A | 009350-0068A | STEEL RET. 7/8" X 4-1/4" (2.2CM X 10.8CM) | 1 |
| 70 | 009350-00070 | FRONTHEAD BSG. | 2 |
| 72 | 009350-00072 | STEEL RET. PIN | 1 |
| 73 | 009350-00073 | STEEL RET. SPRING | 2 |
| 74 | 009350-00074 | STEEL RET. BOLT | 2 |
| 75 | 009350-00075 | STEEL RET. NUT | 2 |
| 76 | 009350-00076 | RET. BOLT CLIP | 2 |



LIMITED WARRANTY, DISCLAIMER AND REMEDIES

Supplier warrants to Customer that the Services shall be provided in a workmanlike manner and that the Goods shall be free from defects in material and workmanship at the date of shipment from Supplier's facility. This warranty shall not run to any person other than Customer.

All claims under this warranty must be made in writing and delivered to Supplier prior to the expiration of one (1) year after the Goods have been delivered (or, if applicable, within one (1) year after the Services have been performed) or be forever barred. Supplier will repair or replace Goods or parts recognized and acknowledged by Supplier as being defective at the time of delivery without charge. However, Supplier will bill Customer for Goods and/or Services not covered by the warranty, including travel expenses incurred while performing warranty service calls. EQUIPMENT, COMPONENTS OR OTHER GOODS FURNISHED THAT ARE NOT MANUFACTURED BY SUPPLIER ARE ONLY COVERED TO THE EXTENT OF THE ORIGINAL MANUFACTURER'S WARRANTY, WHICH MAY VARY FROM THE ABOVE. Further, the above warranty shall not apply to any hardware or software that has been repaired or altered without Supplier's written permission by anyone other than Supplier's personnel. The foregoing states the sole and exclusive remedy for any breach of warranty or for any other claim based on any defect in, or nonperformance of, the Goods or Services, whether based upon contract, warranty, negligence, tort (including strict liability) or otherwise.

NO EXPRESS WARRANTIES AND NO IMPLIED WARRANTIES, WHETHER OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR WEAR CAPACITY, OR OTHERWISE, SHALL APPLY TO THE GOODS AND SERVICES. SUPPLIER SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER EXPRESS AND IMPLIED WARRANTIES. NO WAIVER, ALTERATION, ADDITION OR MODIFICATION OF THE FOREGOING SHALL BE VALID UNLESS MADE IN WRITING AND SIGNED BY AN EXECUTIVE OFFICER OF SUPPLIER. IN NO EVENT WILL SUPPLIER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

WHAT IS NOT COVERED

This Limited Warranty does not cover any damage, deterioration or malfunction resulting from normal wear or tear, or any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This Limited Warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Minnich to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product.

WHAT IS COVERED

This limited warranty ("Limited Warranty") covers manufacturing defects in materials and workmanship of a product.

WHO IS COVERED:

Only the original purchaser of this product is covered under this Limited Warranty. This Limited Warranty is not transferable to subsequent purchasers or owners of this product. The product must have been purchased directly from Minnich or from an authorized Minnich reseller.

ORDER VIA INTERNET!



Order Online:
<https://www.minnich-mfg.com/login>



- View parts
- Order Parts
- Print specific information
- If you don't have a login give us a call.

ORDER VIA PHONE!



Contact us at:
419-903-0010

SCAN FOR HELPFUL VIDEOS!



WE ACCEPT THE FOLLOWING CARDS!



NON-DEALER AND INTERNATIONAL CUSTOMERS:

Contact Minnich Manufacturing through the following number to locate a dealer near you.
(419-903-0010)

NOTICE

All orders are treated as Standard Orders and will ship the same day if received prior to 3PM EST