

OPERATING MANUAL ROCK DRILLS

SRD 20, 30, 40, 50, 60 AND MODEL 75 ROCK DRILLS

OPERATING AIR PRESSURE

Air pressure should be between 85 to 90 psig (6 bar) at the tool for proper operation. Using the tools at higher pressure will increase vibration to the operator, decrease performance and output, and may cause premature damage to the tool and steel. It is important to note that using long lead hoses, manifolds and leaking and worn hose connections in the air line can cause a pressure drop. Use proper couplings and fittings and proper diameter hose for the type of tool being used. Consult factory for calculating pressure drop data.

COMPRESSOR

Use an air compressor with sufficient CFM delivery to operate the tool(s) at a pressure of 85 to 100 PSI (6 bar) maximum at the tool.
See individual specification chart for CFM requirements.

AIR HOSE CONNECTION

Always inspect air hoses, fittings and gaskets for cuts, abrasions and wear. Check that fittings, on the tool and on the hose, are secure. Be sure to use safety clips and whip check cables to secure the hose and couplings to help prevent hose whipping. Always clear hoses of debris and excess water before attaching them to the tool. We recommend installing all auxiliary safety devices, including whip checks, safety clips, excessive Flow Check Valves and be in compliance with OSHA 1926.302(b)(7) WEAR PROPER PERSONAL PROTECTION EQUIPMENT. Please read Sullivan-Palatek General Air Tool Safety brochure and consult Pneumatic Tool Safety Manual from the Association of Equipment Manufacturers at www.aem.org

RECOMMENDED LUBRICATION

Sullivan-Palatek Rock Drills require lubrication under all operating conditions. Oil carry-over from the compressor will not normally provide sufficient lubrication. The use of an external line lubricator at the end of a whip hose attached to the tool is recommended. P/N 05019902 0002 6' whip hose with Constant Feed 11oz. line oiler for proper operation. A slight mist of moisture/oil at the tool exhaust and on the shank of the steel, is a sign of adequate tool lubrication. The SRD 75, 60 and 20 have a built in oil reservoir which should carry 2 to 3 hours capacity when proper air pressure and viscosity oil is used. Always fill before using. The SRD 30, 50, 55 require in line CF oilers. Standard Rock Drill Oil of ISO VG 150 is recommended for normal ambient temperatures. Sullivan offers Bio Tool Oil for all their tools, ISO 150 is recommended for drills, it is American made from Soy and Canola beans, a renewable source, farm grown and formulated with Antiwear/EP, rust and oxidation inhibitors for superior protection of pneumatic tools. P/N SI9019 ISO 150 Bio Tool Oil, 1 gal. Since this internal device is venturi operated, pressure, temperature and oil viscosity can vary operation time. Grease should be applied to the shank of the steel to help prevent early wear.



**FOLLOW ALL SAFETY PRACTICES
USE PROPER LUBRICATION**



UNPACKING

1. Visually inspect the tool for any signs of damage during shipment.
2. The Serial Number is on the box and is stamped in the tool and on serial plate.
3. Keep a copy of the packing slip or invoice for proof of purchase date in the event of return or Warranty.

BEFORE START-UP AND BEFORE EACH USE

1. Check all threaded fasteners and fittings for tightness.
2. For first running and especially if the tool has been in stock for a lengthy time it is a good idea to put tool oil in the air inlet before operating the tool, connect hose to the tool and begin work. You must fill oil reservoir before using, no oil is shipped in tool.
3. Installing Steel
 - Be sure to use steel with same shank type as the tool.
 - Check steel shank for wear. A worn shank or an uneven top end may result in damage to the tool or steel breakage.
 - Check the cutting edge of bits for sharpness. Inspect steel for nicks or cracks which could cause breakage. Always use sharp, or properly sharpened steels, dull steel will transfer impact force to the tool causing damage to the tool and increased vibration to the operator.
4. Connecting the Air Hose.
 - Use only air hose with a rated capacity equal to a minimum of 150% of the air compressor and with couplings secured by approved clamps.
 - Always blow out hoses to clean and to remove any dirt, stones, water and oil before attaching to the tool.
 - Check rubber gaskets or washers in hose couplings for wear or cracks.
 - Always connect couplings properly and secure with approved safety clips and whip checks.
 - The use of suitable whip hose and oiler of proper length may decrease operator effort and prolong tool life.

STARTING & OPERATING

1. DO NOT run the tool without proper steel installed in the tool and the retainer locked in place. It's a good idea to put a little grease on steel shank before operation.
2. DO NOT run the tool without the drill bit firmly against the work surface.
3. DO NOT allow the tool to free run or dry fire, always keep tool on the work.
4. Always apply sufficient down pressure to keep the tool from bouncing or skipping. The proper amount of down pressure may vary depending on the material being worked and the diameter of drill bit being used. Different types of bits, whirly or cross bits work differently and with varying weight of tools, this requires skill and application knowledge.
5. DO NOT allow the tool to bounce as this may damage the tool and steel.

START CONTINUED:

1. When starting (collaring) the hole, hold the drill firmly against the work and use a steel short enough so the drill can be handled comfortably. Turn the throttle lever gradually and drill at a slow speed until the hole is collared. The drill should be kept at right angles to the work until the hole is collared, then repositioned for angle drilling.
2. Always apply sufficient down pressure to keep the tool from bouncing. The proper amount of down pressure will vary depending on the material being drilled and the size and depth of the hole. The correct amount of down pressure, for maximum drilling efficiency, can only be learned through experience, but generally speaking, is usually recognizable by the rhythmic sound of the exhaust and the free rotation of the drill steel. Insufficient pressure will cause the drill to bounce, which may result in damage to the tool and may crack carbide bit inserts while too much pressure will slow down the drill and may result in stuck steel.
3. Keep the drill, the steel, and the hole aligned. Misalignment will reduce drilling speed, cause unnecessary wear in the tool, and may result in steel breakage.
4. Keep the hole clean. Use the blow only function of the drill frequently to remove cuttings.
5. Use half throttle in broken or heterogeneous material.
6. Raise bit from bottom of hole and blow hole clean before removing bit and steel.

TIPS TO KEEP THE TOOL OPERATING EFFICIENTLY

1. Use only correct size steels with sharp bit, properly dressed edges.
2. Select a drill size most suited to the material and application needed.
3. Check shank for wear and be sure blow holes are clear.
4. ALWAYS start drills in low speeds and collar holes properly before switching to higher speeds.
5. Use proper down pressure to keep the cutting edge working into the material.

CARE AFTER EACH USE

1. Be sure to turn off compressor discharge valve and allow the downstream vent to release all air pressure from the hose before disconnecting air hoses. Re-check by teasing throttle on tool. Be sure not to allow dirt or water to enter air inlet of tool.
2. Pour a little recommended oil (1 ounce approximately) into the air inlet and tease throttle for a second before putting away, repeat 1. Re-check torque on siderod bolts for proper tightness, see service tips below.
3. Store tool well-oiled and upright in a safe dry place.

By following these suggestions, you can insure your tool will give you the type of service for which it was designed. If you have any questions concerning this information and the operation of your tool, please contact your Sullivan-Palatek Distributor or Sullivan-Palatek by email at info@palatek.com or Phone at 1 219 874 2497, 1 800 438 6203 or fax 1 219 872 5043.

QUICK SERVICE TIPS:

Siderod bolts; Tighten evenly by alternating bolts, be sure chucks rotates smoothly with-out interference.

Rifle bars and Rifle nuts; Internal inspections, check rifling for wear, rifle nuts usually wear faster than rifle bars.

ACCESSORIES:

See Accessory guide and price sheet for details.

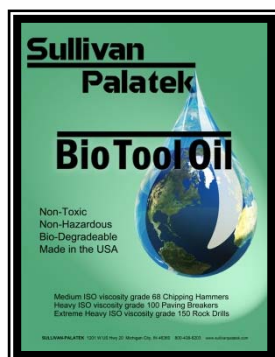
- 50' x 3/4" Hose with crimped on 2 lug fittings (250 psi rated yellow Novaflex)
- 6' 3/4" Whip Hose with 11oz. Constant Feed line oiler with 2 lug fittings.
- Hose Couplings:
- 2 lug x 3/4" FNPT for 185's and large tools.
- 2 lug x 3/4" MNPT for 375's
- Whip Check safety cables
- Gaskets for 2 lug fittings (bag of 50)
- H thread Drill steel, replaceable bits or whirly bits
- Wet drills and kits are available, consult factory.



LUBRICATION



Lubrication notes; Use ISO 150 weight Rock Drill oil in the tool oil reservoir or optional (some necessary) inline Constant Feed oiler.



Keep Rock Drills well-oiled with ISO 150 rock Drill oil, fill reservoir every few hours or for drills with out reservoir install a whip with constant feed inline oiler.

Sullivan-Palatek offers a Bio Tool Oil for all of its breakers, small demolition tools and Rock Drills. American made from Soy and Canola beans, a renewable source, farm grown and formulated with Antiwear/EP, rust and oxidation inhibitors for superior protection of pneumatic tools.



TROUBLE SHOOTING GUIDE

SRD 20, 30, 50, 55 and 60 LB CLASS ROCK DRILLS

FOLLOW ALL SAFETY PRECAUTIONS

USE PROPER LUBRICATION



TROUBLE	PROBABLE CAUSE	REMEDY
Will not start	Plugged exhaust ports; valve stuck with thick oil; drill flooded with oil; plugged airline filter, oiler or air passages caused by dirt or hose particles; stuck piston due to improper lubrication; side rod bolts tightened unevenly, causing binding.	Run drill with non-flammable cleaner like light oil and non-flammable cleaning fluid to flush. Dismantle drill and clean out all ports and passages; clean airline filters and strainers. If due to frozen piston, repair by using fine emery cloth. Replace deteriorated hose. Make sure drill is properly assembled and lubricated.
Drill loses power rapidly	Restriction in supply line; air hose too long or too small in diameter.	Check supply line for kinks or sharp bends. Keep hoses short as possible, and large enough for drill.
Drill lacks power	Low air pressure; short drill steel shank, 3 1/4" in 4 1/4 drill or short piston (because of wear or regrinding); plugged air passages or plugged air oilers; lack of proper oil.	Check shanks and piston. Check front head cushion. Check for plugged passages; clean oilers or strainers. Air pressure should be set at 80-90 psi at the drill. Check line oiler for proper rate of feed-steel shanks should be wet with oil.
Still does not rotate or shows weak rotation	Bad drilling ground; gravely, clay seams, bug holes, etc. Loss of bit gauge causing binding in hole. Worn rotation parts: rifle nut, rifle bar, pawls or ratchet ring, chuck, chuck nut, or any combination of the above.	Replace worn bits. Replace or repair any internal worn parts. Rifle nuts wear quicker than rifle bars.
Overheating	New machines may overheat at buffer ring.	Run new drills at less than full throttle until broken in; use plenty of the proper type of Rock Drill Oil. ISO 150 grade oil. S-P Bio Rock Drill Oil P/N SI9019 1 gal.
Overheating	Running on front head cushion: piston nothitting steel shank because of short (incorrect length) shank, or because machine not keeping feed up to work. Also caused by pulling steels at full throttle; wrong type of oil; hot air from compressor.	Keep machine feed up to work; don't use steels with short shanks. Use as little throttle as possible when pulling steels. Keep drill lubricated with correct oil, use a line oiler with each drill; check for presence of oil on steel shank while operating.
Low drilling speed	Cuttings are not being removed from hole; low air pressure; plugged drill steel or air tube; drill not aligned with hole, steel or bit binding in hole.	Use blow air frequently to keep hole clean, avoid crowding drill. Clean out drill steel or air tube. Check alignment while drilling to prevent binding and to avoid stuck steel. Adjust exhaust valve (on certain drill models)
Erratic or sluggish operation	Oil too heavy or flooded with oil, slowing down valve action; gummed oil or dirt in operating parts.	Use oil of proper viscosity for class of drill and operating temperature. Dismantle drill and clean out dirt and gummy residues. Service drill with clean oil. Protect drill from dirt when idle.
Stuck steel	Driving steel after bit is dull or has lost its gauge; crowding in soft formations; cuttings not being blown from hole; misalignment of steel with hole, causing binding.	Don't force a dull bit, always sharpen or use new bit. Use feed pressure cautiously in soft ground; blow the hole frequently. Keep steel and drill aligned with hole at all times.

Rapid wear of rifle nut and or rifle bar.	Most often caused by inadequate lubrication, with dirt a contributing factor.	Keep the machine clean and use sufficient oil of correct viscosity. Replace worn parts promptly.
Chipping or breakage of piston	Can be caused by bad shank which is too hard, rounded off allowing minimum contact with piston striking face. Also caused by worn chuck permitting steel to cock in chuck and piston strikes shank a glancing blow. Often caused by heat cracking due to faulty lubrication. Failure in neck of piston due to loss of front head cushion, piston striking buffer ring.	Take bad shanks out of service; one bad shank can ruin many pistons. Replace worn chucks; use wear gauge to determine when chuck should be replaced. Keep machine well lubricated with proper type of oil. Check cylinder piston and buffer ring for maximum wear tolerances. Check air pressure at drill, should be 80 to 90 psi.
Spalling of shank striking face	Too hard; usually caused by accumulation of water in bottom of quenching tank.	Drain off water in quenching tank or manifolds. Check tempering temperatures.
Bronze cuttings in working parts	Rifle bar flutings worn, cutting rifle nut. Side rods not tightened evenly, piston binding in chuck nut, rifle bar binding in rifle nut. Excessive wear due to insufficient lubrication.	Replace damaged parts. Keep side rods at even tension. Check functioning of line oiler. Steel shanks should be wet with oil at all times during operation.
Side rod breakage	Uneven tension on rods or loose rods. Loss of front head cushion allowing piston to strike buffer ring with hard impact.	Keep side rods tight and at even tension. Tighten rods alternately and evenly. Replace worn cylinder, piston, or buffer ring. Check air pressure.
Cracked or broken rifle nut and or chuck	Rifle nut loose in piston, chuck nut loose in chuck.	Replace damaged parts. Keep nuts tight against seat in piston or chuck.
Ratchet pawl breakage	Invariably caused by operator turning drill steel in wrong direction to free stuck steel.	Replace pawls, instruct operator with proper methods.
Broken or battered air or water tube	Shanks improperly punched; worn chucks which permit misalignment and chafing or bending of tube.	Check shank to be sure center hole is large enough and deep enough to accept tube. Replace worn chucks.
Freezing at exhaust ports	Excessive moisture in air supply, usually occurs in low ambient temperatures.	Install moisture traps in air lines or feed small amount of anti-freeze oil into air supply.
Fogging	Excessive moisture in air supply or over lubrication.	Blow out air lines, drain water from moisture traps, adjust line oiler for proper rate of feed.

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General Air Tool safety



1. Remember, Compressed Air can be Dangerous.
2. ALWAYS check that the compressor is set at the correct pressure. Construction Pneumatic tools are designed to work at 90 psi (100psi max)
3. Before use, ALWAYS be sure that the tools and hoses are in good condition, and that the couplings are properly secured.
4. Before connecting the air hose to the tool, ALWAYS safely blow out the hose, this will ensure there is no debris or water inside the hose.
5. Always utilize proper Personal Protection Gear: Gloves, Safety Glasses, Hard Hat, Ear Plugs, Protective Shoes or Boots.
6. We recommend installing all auxiliary safety devices, including whip checks, safety clips, excessive Flow Check Valves and be in compliance with OSHA 1926.302(b)(7)
7. Be sure tools receive proper lubrication and all steel is secured in tool, in good condition and always sharp.
8. DO NOT play with compressed air, and DO NOT use compressed air to blow dust off your clothes.
9. DO NOT use Diesel Fuel as a lubricant, cleaning or de-icing fluid.
10. Prolonged use of any vibrating tools can cause hand and arm damage, use them carefully and wisely.



A complete Pneumatic Tool Safety Manual is available from the Association of Equipment Manufacturers.

www.aem.org

**Sullivan
Palatek**

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PNEUMATIC TOOL WARRANTY

Warranty

SULLIVAN-PALATEK warrants that its tools, equipment and parts are free from defects in material and workmanship for a period of one year from the purchase date. SULLIVAN-PALATEK makes no other warranty expressed or implied. Warranty shall not be effective unless SULLIVAN-PALATEK receives the nonconforming product from the purchaser shipped freight prepaid, and received within the allowed time period. Warranty shall not apply to any SULLIVAN-PALATEK products which have been altered, modified or operated out of the working parameters for the products. SULLIVAN-PALATEK shall not in any event be liable for the cost of any special, indirect or consequential damages to anything or anyone. The purchaser's exclusive and sole remedy for breach of contract, luding breach of any expressed or implied warranty other than the above, shall be limited to repair, modification, or replacement, at the discretion of SULLIVAN-PALATEK, of the nonconforming product.

1. Prices listed within our latest published list are subject to change without notice.
2. Payment terms are net 30 days with proper credit substantiation and payment record.
3. Deliveries will be made per customer specifications, all shipments are F.O.B. factory.
4. Minimum orders of less than \$40.00 net will not be allowed discount.
5. Return of goods must be accompanied by a SULLIVAN-PALATEK authorization number and will be subject to a 15% restocking charge.
6. Ordering procedures require the use of SULLIVAN-PALATEK part numbers and tool models.

For questions or inquiries please contact the factory by phone or email

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