






SETTING UP THE MODEL 210B-2 SRA



SAFETY PRECAUTIONS FOR THE MODEL 210B-2 SRA

-  **System Under Pressure:** Shut off air supply and disconnect air hose before disassembling or disconnecting parts.
-  **Flying Debris:** During boring, chips may be ejected. Stay behind control panel and wear safety glasses to prevent eye injury.
-  **Pinch Points:** Keep hand clear of carriage assembly. Hands or fingers caught between carriage and frame may be seriously injured.
-  **Moving Parts:** When moving drill unit, use carriage lock to prevent assembly from sliding onto hands or fingers.
-  **Heavy Load:** Use handles to reposition the drill unit. Weight of the drill unit may cause back strain if improperly lifted.

SAFETY PRECAUTIONS FOR THE MODEL 210B-2 SRA (continued)



Loud Noise: Wear ear protection to prevent eardrum damage from air compressor.



Dust: Wear a dust protection mask to protect from concrete dust.



High Pressure: High pressure from the air compressor can damage the drill, and can void the warranty.



Lifting The Drill Unit: when using a lifting device to pick up the drill unit, use a strap or chain which is rated for the proper weight, and attach to the lifting bale on the drill unit. Be sure carriage lock is in place.

SET UP FOR THE MODEL 210B-2 SRA

- Always keep the lever on the drill motor shown at right in line with the drill motor.



- If the lever is in the position shown at right, the air will be shut off from the drill motor and will not run.



ATTACHING THE HOSE THE DRILL UNIT

- The Model 210B-2 SRA comes with 20' of the 1 ¼" ID hose. If you are going to add more hose, do not use hose that is smaller in diameter.
- Make sure all safety precautions are followed with the hose and all hose connections.
- **IMPORTANT: AIR COMPRESSOR MUST MAINTAIN 120 PSI WHILE ALL DRILLS ARE DRILLING**

INSTALLING THE DRILL BITS



System Under Pressure: Shut off air supply and disconnect air hose before disassembling or disconnecting parts.

(to remove pressure from system, have air supply disconnected from drill unit, and turn the power switches to the "On" position)

- **IMPORTANT:** The chuck size of the drill bits must match the chuck size of the drill. Look for the decal on the side of the drill motor to confirm the chuck size. Most E-Z Drill models come standard with 7/8" x 3 1/4" chuck. However, a 7/8" x 4 1/4" chuck and 1" x 4 1/4" chuck are available on request.
- All 210 series E-Z Drill models use 6" of the usable length of the bit (i.e. a 24" bit will drill up to 18" deep; an 18" bits will drill up to 12" deep).



INSTALLING THE DRILL BITS

- **IMPORTANT:** You must have the correct bit guide bushing to match the bit you will be using:

For drilling a:

5/8" diameter hole, use 1108 MCP

3/4" diameter hole, use 1109 MCP

7/8" diameter hole, use 1110 MCP

1" diameter hole, use 1111 MCP

1 1/8" or larger diameter hole, use 1112 MCP

- Part numbers above will fit bits with either 7/8" x 3 1/4" or 7/8" x 4 1/4" chucks. For 1" x 4 1/4" chucks, see parts book.



INSTALLING THE DRILL BITS

- To install a drill bit, loosen the swivel bolt until you can swing it out away from the lower bit guide.
- NOTE: You can use the wrenches provided found next to the mast.



INSTALLING THE DRILL BITS

- Open the retainer latch on the drill motor.



Pinch point



INSTALLING THE DRILL BITS

- Place the bit into the chuck and close the latch.



Pinch point



INSTALLING THE DRILL BITS

- You may have to adjust the return stop rod so that the end of the bits clears the bit guide.



INSTALLING THE DRILL BITS

- To adjust the stop rods, use the wrenches provided to loosen the stop rod nuts. Move the stop rod in the direction needed to the required location and re-tighten the nuts.



INSTALLING THE DRILL BITS

- If you are using 2-piece H-thread bits, you may also have to adjust the stop rod bolts.



INSTALLING THE DRILL BITS

- Place the proper bushing into the bit guide; one half in the upper bit guide and one half in the lower bit guide. Close bit guide, swing the swivel bolt back onto the bit guide, and tighten.
- Repeat for the other drill system.



ADJUSTING THE DRILL SPACING

- **IMPORTANT:** Regardless of the spacing, always keep the drill systems centered with the mainframe so that the entire unit remains balanced.
- **NOTE:** You can adjust the spacing with the drill systems in the horizontal or vertical position.



ADJUSTING THE DRILL SPACING

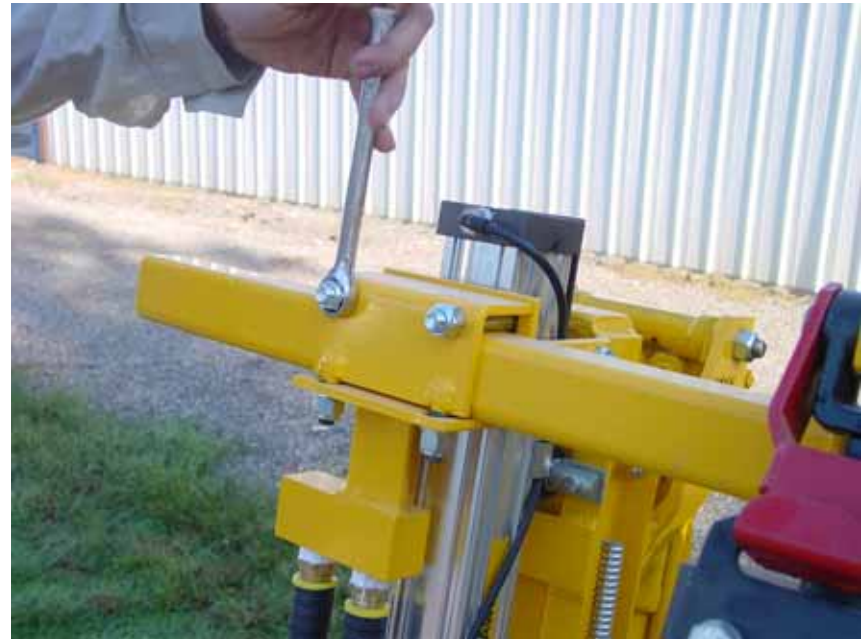
- To slide a drill system one way or the other to reach the required drill spacing, you must first loosen the 5" frame clamps on each end of the feed bar. Loosen all four 1/2" lock nuts on each frame clamp until you can slide the feed bar.



Pinch point



Heavy load



ADJUSTING THE DRILL SPACING

- To get the proper spacing, measure from one side of the feed bar to the same place on the adjacent feed bar.



ADJUSTING THE DRILL SPACING

- Be sure to measure from both ends of the feed bar to insure the drill systems are parallel to each other.
- After moving the proper distance, re-tighten all on the frame clamps.



Heavy load



ADJUSTING THE HEIGHT OF THE DRILL SYSTEMS

- Adjusting the height of the drill systems is done by turning the mast screw jack assembly located at the top of the mast. Before turning the screw jack, you must first loosen the four $\frac{1}{2}$ " x $1 \frac{1}{2}$ " bolts at the base of the mast.



ADJUSTING THE HEIGHT OF THE DRILL SYSTEMS

- Use a 1 1/2" wrench (preferably a socket wrench) to turn either of the nuts at the top of the mast (the two screw jacks are connected with a chain, so it does not matter which one you use to make the adjustment). As soon as you have adjusted the mast to the required height, re-tighten the four bolts at the base of the mast.
- NOTE: It is easier to turn the screw jack when the drills are in the vertical position, but you will need to lower the drills into the horizontal position to check for proper height.



Activating this control will cause the drill system lower down to the horizontal position. Make sure everyone is clear of the drill unit before lowering the drill system



LEVELING THE DRILL SYSTEMS

IMPORTANT: BEFORE LEVELING THE DRILL SYSTEMS, CONFIRM THE ANGLE REQUIRED. MANY TIMES THE DRILL SYSTEMS ARE NOT BE “LEVEL WITH THE WORLD”, THEY SHOULD BE SET TO DRILL PARALLEL WITH THE TOP OF THE CONCRETE SLAB INTO WHICH YOU ARE DRILLING.

LEVELING THE DRILL SYSTEMS

- First loosen the two ½” bolts on the Auto Adjust Outside Slide.



LEVELING THE DRILL SYSTEMS

- Then turn the nut on the Auto Align Screw Jack Assembly until you reach the desired angle.
- Then re-tighten the two ½” bolts



LEVELING THE DRILL SYSTEMS

- Placing a 4' level across the tool bars, then placing it on the concrete slab will show if the drills are going to drill parallel to the top of the concrete slab.

LEVELING THE DRILL SYSTEMS

NOTE: THIS ADJUSTMENT WILL BE REQUIRED ANYTIME YOU HAVE BEEN DRILLING HORIZONTAL HOLES, AND WANT ADJUST TO DRILL STRAIGHT VERTICAL HOLES, OR VICE VERSA.

SETTING THE DRILL DEPTH

- To adjust the drills to drill to the desired depth, make sure all other adjustments have been made and the air supply is connected to the drill. Maneuver the drill to the edge of the concrete slab (first see Operating Instructions on driving and positioning the drill).



Heavy Load: Use handles to reposition the drill unit. Weight of the drill unit may cause back strain if improperly lifted.



SETTING THE DRILL DEPTH

- Unlock the red safety latch on the Raise & Lower Cylinders, and all of the individual carriage locks.



Pinch Points: Keep hand clear of carriage assembly and Raise & Lower Cylinder. Hands or fingers caught between moving parts of the frame may be seriously injured.



SETTING THE DRILL DEPTH

- Place the “Raise & Lower” valve into the “LOWER” position. The drill systems will now lower into the horizontal position.



Activating this control will cause the drill system lower down to the horizontal position. Make sure everyone is clear of the drill unit before lowering the drill system



SETTING THE DRILL DEPTH

- Place the “auto-align” switch to the “DOWN” position.
- If the 6” stop rods are not touching the surface of the concrete, place the Auto-Align switch to “UP” position and maneuver the drill until they do.



SETTING THE DRILL DEPTH

- Place the feed lever into the “IN” position. The drill will move forward until the bits contact the concrete slab.



SETTING THE DRILL DEPTH

- Measure the distance from the head of the stop rod to the rubber stop pad. If this is not the required drill distance, use the wrenches provided to loosen the stop rod nuts.



SETTING THE DRILL DEPTH

- After loosening the stop rod nuts, move the stop rod closer or farther away from the stop pad in order to get it the correct distance. Then re-tighten the nuts.
- Repeat steps for the other drill.
- After you drill a set of holes, measure the actual holes drilled to confirm the proper drill depth. You may have to make another small adjustment.



CHECKING THE OILER

⚠ WARNING

DO NOT REMOVE CAP UNDER PRESSURE !

(to remove pressure from system, have air supply disconnected from drill unit, and turn the Power switches to the "On" position)

- Fill the oil reservoir daily with the recommended rock drill oil (do not use oil that is too light, such as Marvel Mystery Oil, automatic transmission fluid, air tool oil, etc.). Running the oil tank dry can cause damage the drill motors, and requires that you bleed any air out of the oiler and oil lines.
- (See "Recommended Specifications for Rock Drill Lubricant")



RECOMMENDED SPECIFICATIONS FOR ROCK DRILL LUBRICANT

The use of synthetic oils is NOT RECOMMENDED due to possible damage to seals, "O" rings, hoses, blades, and polycarbonate oiler/filter bowls. Use only a non-detergent, Class 2, pneumatic lubricating oil (viscosity 100-200 S.S.U. @ 100° F and minimum aniline point of 200°F); which contains no synthetic additives; and which is compatible with Buna-N, Neoprene, Urethane, Silicone, and Hytrel components.

Consistency shall be such that the oil will adhere readily to metallic surfaces under extreme pressure conditions that exist in a rock drill.

Flash, Cleveland open cup.....	380°F Min.	(a)
Carbon Residue.....	0-30% Max.	
Viscosity at Atmospheric Temperature		
Below 20°F.....	SAE #10	
20° to 40°F.....	SAE #20	
40° to 80°F.....	SAE #30	
80° to 110°F.....	SAE #40	
Above 100°F.....	SAE #50	
Mineral Activity.....	None	
Free Fatty Acid (as Oleic %).....	0.40% Max.	
ASTM Steam Emulsion No.....	600 Max.	(b)
Metallic Soaps.....	None	
Pour Point F.....	+10 Max.	(c)
Film Strength PSI		
Almen Test.....	12,000	(d)
Weeks Test.....	8,000	(d)

(a) Where lower than normal viscosity oil is used at extreme low temperature, 350°F flash point permissible.

(b) 1200+ desired where moisture is a major factor. Operator must compensate for foaming when filling the lubricator.

(c) For below normal atmospheric temperature operation, lower pour test product may be required.

(d) Desired values, not minimum. Rock drill oils must have appreciably greater load carrying ability than straight mineral oils of like viscosity. High film strength is required by the heavy rotational loads present in drilling conditions. Additives which impart extreme pressure characteristics to the oil must be non-corrosive to the drill mechanism.