



SUBMERSIBLE MOTOR 9 STEP LEAD INSTALLATION PROCEDURE

A motor lead assembly should never be reused. A new lead assembly should be used whenever one is removed from the motor, because rubber set and possible damage from removal may prevent proper sealing of the old lead.

- 1 **Read this entire procedure first.** You are going to assemble the lead to the motor without the pump on the motor.
- 2 Inspect the lead and motor socket to assure they are free of damage. The mating area must be clean and free of moisture.
- 3 The rubber lead bushing is coated with a silicone grease and is covered with a plastic bag. The silicone grease is required for proper sealing of the bushing. DO NOT remove this grease from the rubber bushing.
- 4 Stainless steel jam nuts are shipped with a small bag of 'white' non conductive anti galling agent (Loctite 567 or similar). This is different than the silicone grease and must be applied to the threads of the stainless steel jam nut. If it is not, the threads will be damaged and cause premature motor failure. (EXCEPTION: Super Stainless 4-inch motors do not require the anti-galling agent.)
- 5 Align and support a portion of the lead cable behind the lead connector with the motor socket. This is most easily done vertically, but can be accomplished horizontally. The object is to relieve the weight of the cable from affecting the alignment of the bushing. It has been our experience that if this is not done the weight of the lead can apply enough unnoticed side force to misalign the bushing.
- 6 Align the key on the lead connector with the motor socket and insert the bushing. Use a slight side movement (not a twist) and firm hand pressure to place the bushing. Make sure the bushing has been inserted for its full length. This procedure is very important. Just tightening the jam nut on the bushing will not correctly align or place the bushing. This is the main cause of field installation problems.
- 7 Start the jam nut with your fingers and tighten finger tight. Be careful not to cross thread this connection. If a stainless steel jam nut is used, make sure the anti-galling agent has been applied.
- 8 Finish tightening the jam nut to the torque indicated below. This will supply the correct compression to complete the sealing process. (IMPORTANT: either too much or too little torque may cause premature motor failure.)
- 9 Check insulation resistance from leads to ground before power is applied to verify the integrity of the system.

1 st check	before motor installed in well/bore...	minimum should be 20,000,000 ohms or 20 megohms.
2 nd check	motor in the well/bore	minimum should be 2,000,000 ohms or 2 megohms.

JAM NUT TIGHTENING TORQUE

4" MOTORS	20 – 27 Nm (15 to 20 LB-FT)
6" MOTORS	68 – 81 Nm (50 to 60 LB-FT)
8" MOTORS with 1-3/16" to 1-5/8" Jam Nut	68 – 81 Nm (50 to 60 LB-FT)

8" MOTORS with 4 Screw Clamp Plate;

Apply increasing torque to the screws equally in a criss-cross pattern until 9.0 to 10.2 Nm (80 to 90 in-lb) is reached. The task is to lower the plate in a level manner until full tightening torque is reached.

CAUTION: Jam Nut tightening torques recommended for field assembly are shown. Rubber compression set within the first few hours after assembly may reduce the jam nut torque. This is a normal condition which does not indicate reduced seal effectiveness. Retightening is not required but is permissible and recommended if original torque was questionable.

CAUTION: Lead assemblies on submersible motors are suitable for use in water and may overheat and cause failure if operated in air.

WARNING: Serious or fatal electrical shock may result from failure to connect the motor, control enclosures, metal plumbing and all other metal near the motor cable, to the power supply ground terminal using wire no smaller than motor cable wires. To reduce risk of electrical shock, disconnect power before working on or around the water system. Do not use motor in swimming areas.