REPAIR GUIDANCE: BX1200 & BX650 MOTOR/SHAFT REPLACEMENT

For repairs in the field, most customers order a new Motor with Balanced Teflon-Coated Shaft already attached. This is easier and more reliable than just replacing the Motor or the Shaft separately. Referring to the Exploded Views of the BX1200 or BX650 (Page 6 & 7) and to the photo pages that follow, use the procedure shown below. **Important: When ordering, specify pump material of construction (CPVC is gray in color; polypropylene is white; PVDF/Kynar is also white but weighs considerably more than polypro). Shaft thread size is 1/4 inch for CPVC and stainless-steel pumps and 3/8 inch for polypropylene and PVDF/Kynar.**

DISASSEMBLY

See Fig. 1 for Suggested Tools and Fig. 2 for Parts Identification.

1. Spin blue Drip Cover counterclockwise to remove from top of Motor.

2. Stand Pump upside down on table, so that Motor is supporting pump. *Suggestion: To make a motor stand to support the pump, drill a 1-inch-diameter (25-mm-diameter) hole in a piece of wood 3-1/2 x 3-1/2 x 2 inches thick (89 mm x 89 mm x 50 mm thick), as shown in Fig. 1.*

If you have a stainless-steel Flo King pump, skip Step 3 below and see special instructions on Page 3.

3. Use a flathead screwdriver to carefully pry out Flow Plate. See Figs. 3 and 4. (Note: On CPVC pumps, Flow Plate is lightly attached using CPVC cement. On polypropylene and PVDF/Kynar pumps, Flow Plate is lightly spot-welded. Both should pop out fairly easily, but try not to break! In general, it is a good idea to have a backup Flow Plate available in case one breaks.)

4. Use needlenose pliers to grip Shaft between Spacers that separate Motor from Pump/Motor Base (Fig. 5). While still gripping Shaft with pliers, use other hand to remove Impeller by turning Impeller CLOCKWISE (left-hand threads). Important: This is the opposite direction normally used to loosen a threaded part. Remove Impeller (Fig. 6). *Note: To better grip Shaft, use special needlenose pliers with NOTCHES, available from Flo King (Fig. 1).*

5. Use Phillips-head screwdriver to remove the two Pump/Motor Base Screws (Fig. 7).

6. Lift Base/Body/Housing assembly to separate from Motor and Shaft (Fig. 8).

REASSEMBLY

1. To install new Motor/Shaft Assembly, stand Motor upside down and remove the two Phillips-head screws from Spacers (Fig. 9).

2. Lower Base/Body/Housing Assembly over Shaft (Fig. 10).

3. Looking down into Impeller Housing, make sure Shaft is centered, as shown in Fig. 11.* When Shaft is positioned as shown, reinstall the two Phillips-head screws through the Pump/Motor Base and Spacers (Fig. 12).

4. Use needlenose pliers to grip Shaft between Spacers that separate Motor from Pump/Motor Base (Fig. 13). While still gripping Shaft with pliers, install Impeller by turning Impeller COUNTER-CLOCKWISE (left-hand threads). Important: This is the opposite direction normally used to tighten a threaded part.

5. As shown in Fig. 14, use a lightweight hammer to tap Flow Plate into original position. *(Stainless-steel pumps do not have Flow Plate.)* Then plug pump into electrical outlet and test. *(Note: If pump rattles, Shaft may need to be balanced!)* If pump runs smoothly and does not rattle, turn pump off. Then (Fig. 15) use a couple drops of CPVC cement to hold CPVC Flow Plate in place and allow to dry overnight. Or, if polypropylene or PVDF/Kynar, position Flow Plate in place and lightly spot weld. Tip: For a simple spot weld, use a long metal object like an ice pick, as shown in Fig. 16. Torch one end of ice pick for a few seconds and then touch hot end to polypro or PVDF/Kynar Flow Plate to "spot weld" onto pump (Fig. 17).

** Exception: For BX1200-16, Shaft should be positioned slightly off-center, away from Pump Discharge Port, or further "north" of Shaft location shown in Fig. 11.*

BX1200 & BX650 MOTOR SHAFT REPLACEMENT: DISASSEMBLY

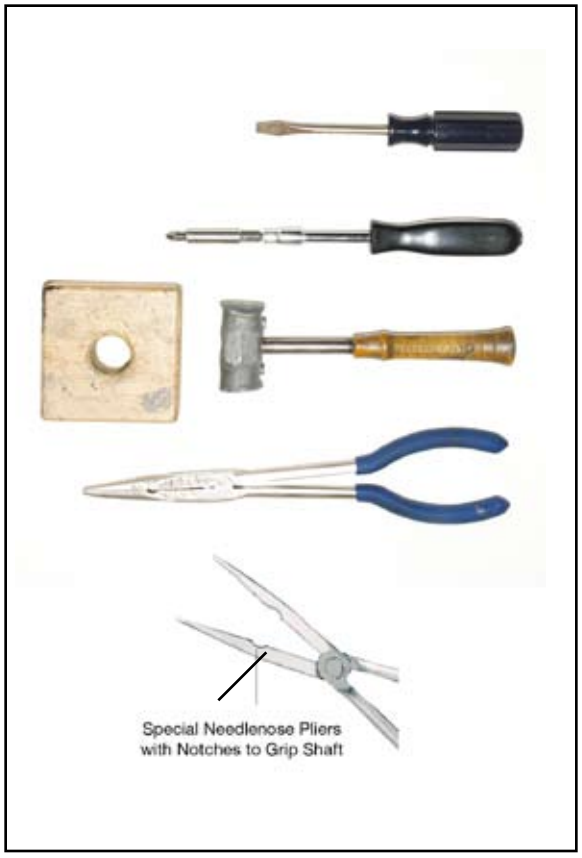


Fig. 1—Suggested tools.

Fig. 2—Parts identification.

Fig. 3—Pry out Flow Plate. Be careful not to break!

Fig. 4—Remove Flow Plate and put aside for reassembly later.

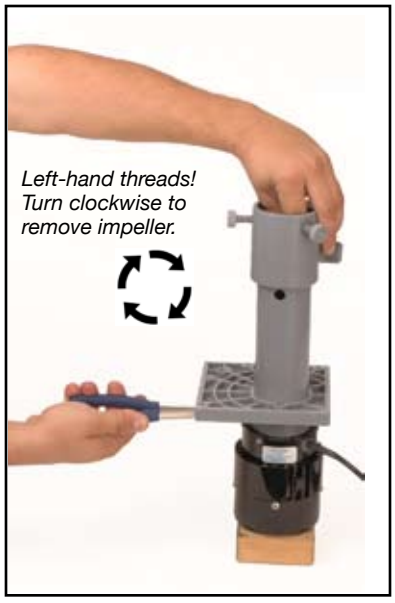


Fig. 5—Grip shaft with pliers. Turn impeller clockwise with hand.

BX1200 & BX650 MOTOR SHAFT REPLACEMENT: DISASSEMBLY (continued)

Fig. 6—Remove Impeller from Shaft and put aside for reassembly later.

Fig. 7—Remove screws from Pump/Motor Base.

Fig. 8—Remove Base/Body/Housing Assembly.

STAINLESS STEEL BX1200: SPECIAL INSTRUCTIONS

The stainless steel BX1200 differs a little from those made of plastic, so some slightly different instructions apply.

After removing the Drip Cover, stand pump upside down on table.

Use a 3/32-inch Allen wrench to loosen the three 10-32 set screws on the Impeller Housing. Then twist and turn the Impeller Housing to remove it. It may be necessary to tap the Impeller Housing with a rubber mallet.

Now go back to Page 1 and proceed with Disassembly Step 4.

Note that the stainless-steel unit does not have a Flow Plate like other BX1200s.

When reassembling, note that placement of Super Slinger is different on stainless-steel model (see photo at right) than on plastic models (Page 4).

REPAIR GUIDANCE: BX1200 & BX650 MOTOR/SHAFT REASSEMBLY

Fig. 9—Use Phillips-head screwdriver to remove two screws from Spacers.

Fig. 10—Place Base/Body/Housing Assembly over Shaft.

Fig. 11—Looking down into Impeller Housing, make sure Shaft is approximately centered in hole, as shown.

Fig. 12—Re-install screws through Pump/Motor Base and Spacers.

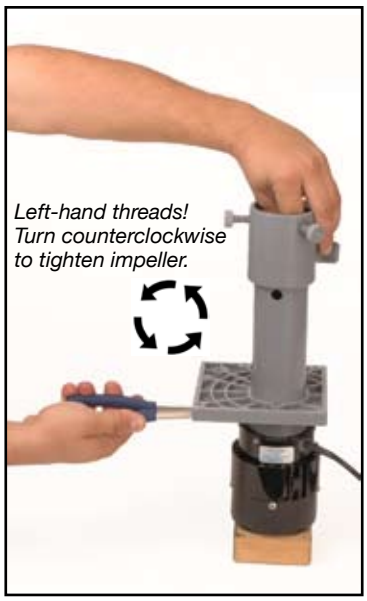


Fig. 13—Use needlenose pliers to hold Shaft. Turn Impeller counterclockwise to tighten.

Fig. 14—Reinstall Flow Plate by lightly tapping with hammer. Then test pump.

REPAIR GUIDANCE: BX1200 & BX650 MOTOR/SHAFT REASSEMBLY

➤ To Secure CPVC Flow Plate

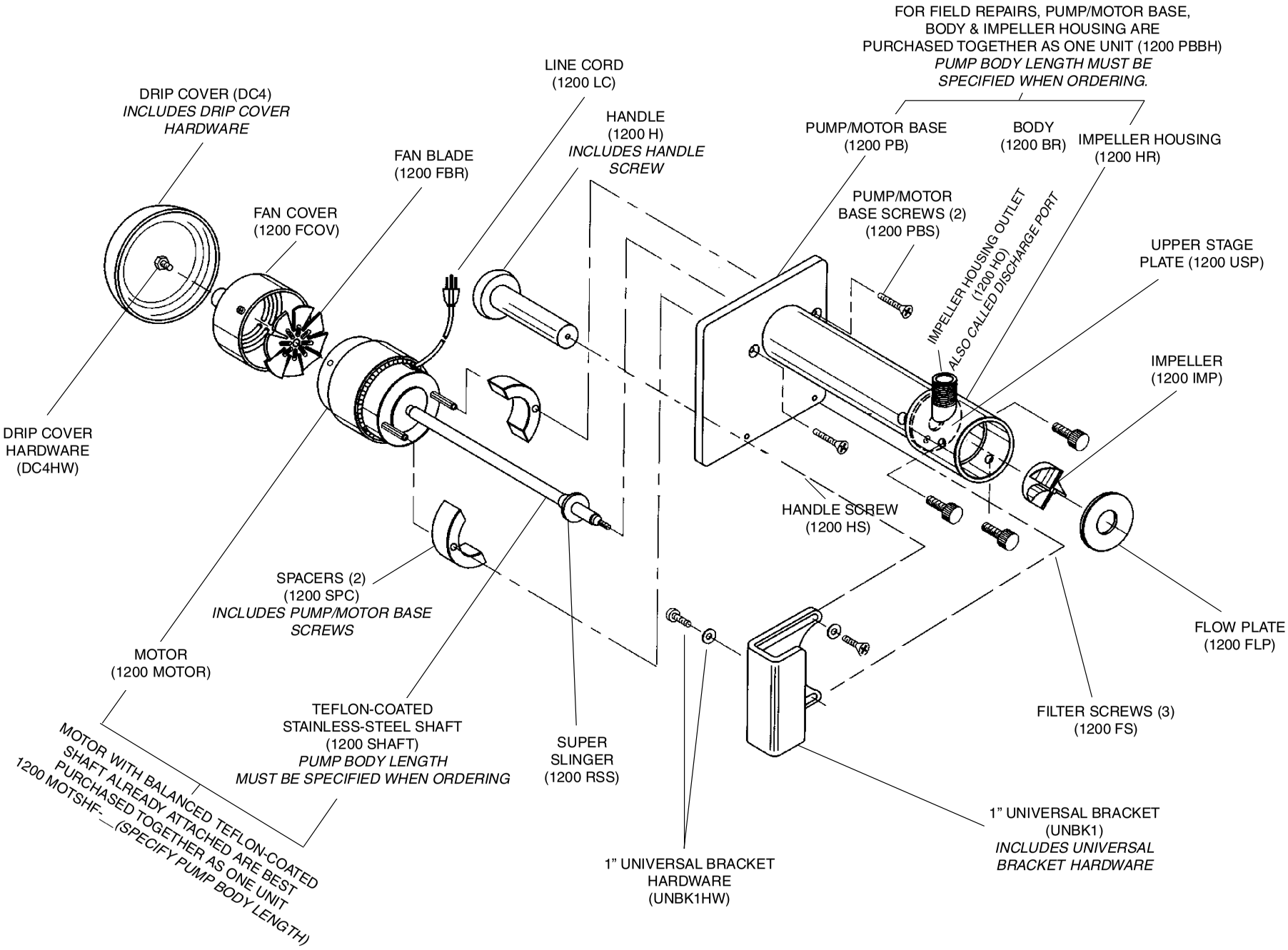
Fig. 15—If pump runs smoothly, reinstall Flow Plate. If you have a CPVC pump (gray in color), use syringe to apply a few drops of CPVC cement around top of Flow Plate. Allow to dry overnight before using pump.

➤ To Secure Polypropylene or PVDF (Kynar) Flow Plate

Fig. 16—Use torch to heat one end of ice pick or similar metal object.

Fig. 17—Touch hot end of object to three locations shown above. This will "weld" Flow Plate onto pump body.

FLO KING BX1200 EXPLODED VIEW



FLO KING BX650 EXPLODED VIEW