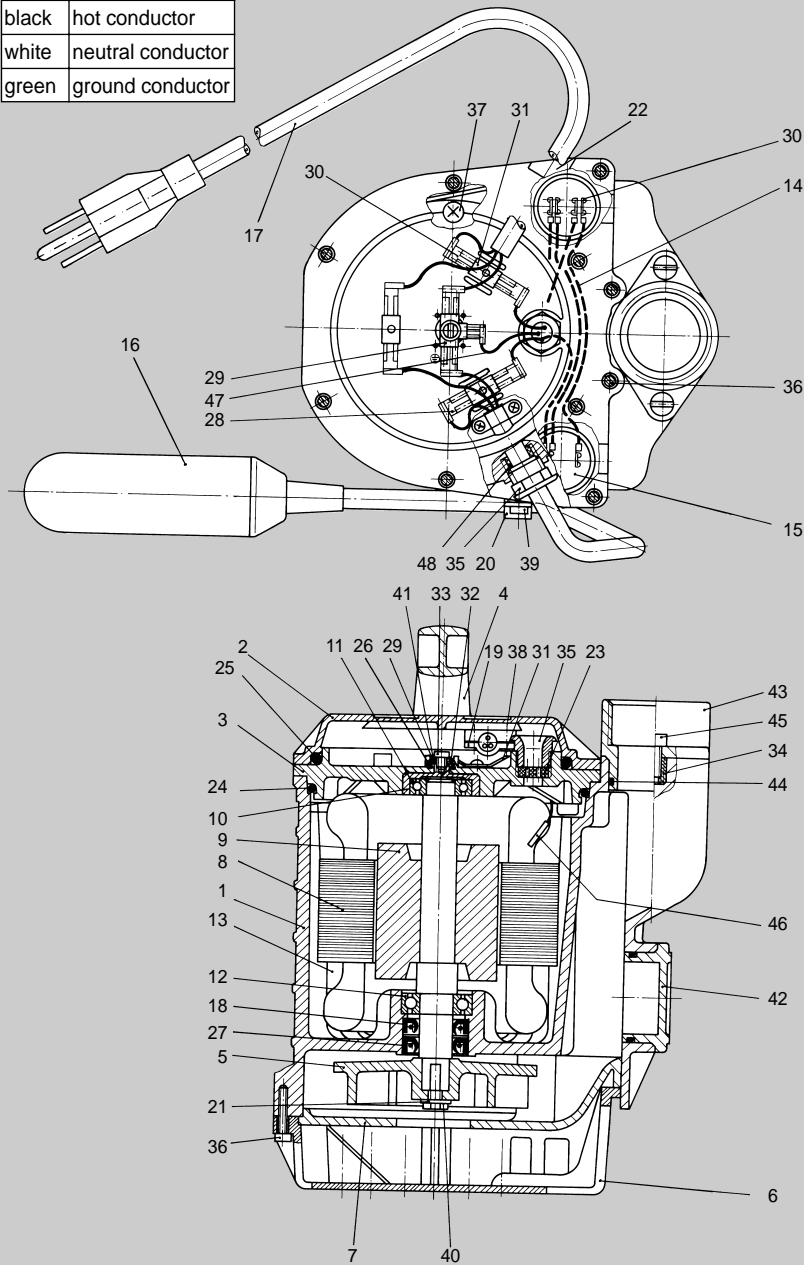


# Service Manual for GF 32-9, IGF 32-9 and TIGF 32-9



**PERFECTA PUMP™**  
*Electrical Submersible Pump*

| Power cable wire guide |                   |
|------------------------|-------------------|
| black                  | hot conductor     |
| white                  | neutral conductor |
| green                  | ground conductor  |



| Pos. | Part no. | Description                                    |
|------|----------|--|
| 21   | 099-084  | lock washer 6.4                                |
| 22   | 099-047  | Cable grommet for power cord                   |
| 22   | 099-047T | Cable grommet for power cord (TIGF 32-9NL)     |
| 23   | 099-016  | Sealing ring 14 x 5.5                          |
| 24   | 099-027  | O-ring 125 x 5                                 |
| 25   | 099-028  | O-ring 105 x 5                                 |
| 26   | 099-029  | O-ring 6 x 2                                   |
| 27   | 099-060  | Oil seal ring 15 x 30 x 7, Perbunan            |
| 27   | 099-062  | Oil seal ring 15 x 30 x 7, Viton               |
| 28   | 099-086  | Insulation cap                                 |
| 29   | 099-048  | Terminal, 3-prong                              |
| 30   | 099-049  | Terminal plug                                  |
| 31   | 099-061  | Terminal, 2-prong                              |
| 32   | 099-050  | Washer 4.0                                     |
| 33   | 099-051  | Screw 4 x 6                                    |
| 35   | 099-025  | Cable entry                                    |
| 36   | 099-054  | Screw 4.2 x 22                                 |
| 36   | 099-054T | Screw 4.2 x 22 (TIGF 32-9NL)                   |
| 37   | 099-055  | Screw 4.2 x 60/50                              |
| 38   | 099-056  | Screw 2.9 x 8                                  |
| 39   | 099-057  | Screw 2.9 x 12                                 |
| 40   | 099-058  | Screw 6 x 12                                   |
| 40   | 099-058T | Screw 6 x 12 (TIGF 32-9NL)                     |
| 41   | 099-053  | Washer 4.0                                     |
| 42   | 099-066  | Discharge cap                                  |
| 43   | 099-067  | 1 1/4" NPT discharge female flange             |
| 44   | 099-071  | O-ring 35 x 2.5                                |
| 45   | 099-082  | Screw 6 x 12                                   |
| 45   | 099-082b | Self tapping screw                             |
| 47   | 099-039  | Terminal wire                                  |
| 48   | 099-076  | Cable grommet for float switch                 |
|      | 099-030T | O-ring kit, pos. 24, 25, 44 (TIGF 32-9NL ONLY) |

| float switch wire guide |                   |
|-------------------------|-------------------|
| blue                    | hot conductor     |
| brown                   | neutral conductor |
| yellow/green            | ground conductor  |

### Parts list for the PERFECTA pump

| Pos. | Part no. | Description            | Pos. | Part no. | Description  |
|------|----------|------------------------|------|----------|--|
| 2    | 099-109  | Top cover (no level)   | 13   | 099-038  | Oil Tellus T-68  |
| 2    | 099-103  | Top cover (with level) |      |          | IMPORTANT - replacement oil must be same or equal as not to damage NORYL material. |
| 3    | 099-003  | Motor housing cover    | 15   | 099-151  | Run Capacitor  |
| 4    | 099-068  | Handle                 | 16   | 100-032  | Float switch   |
| 5    | 099-079  | Impeller               | 17   | 099-104  | Power cable  |
| 6    | 099-007  | Strainer               | 17   | 099-104T | Power cable (TIGF 32-9NL)  |
| 7    | 099-015  | Suction cover plate    | 18   | 099-062  | Oil seal ring 15 x 30 x 7, Viton   |
| 9    | 099-022  | Rotor (GF 32-9)        | 19   | 099-031  | Cable clamp  |
| 9    | 099-022T | Rotor (TIGF 32-9NL)    | 20   | 099-030  | Cable clamp for float switch   |
| 9    | 099-098  | Rotor (IGF 32-9)       |      |          |  |
| 11   | 099-036  | Ball bearing (upper)   |      |          |  |
| 12   | 099-037  | Ball bearing (lower)   |      |          |  |

**⚠ WARNING** **ALWAYS DISCONNECT PUMP FROM ELECTRICAL SOURCE BEFORE SERVICING!**  
**NOT FOR USE IN FLAMMABLE LIQUIDS!**  
**IMPORTANT: IN ANY CORROSIVE ENVIRONMENT, CONSULT FACTORY OR YOUR DISTRIBUTOR BEFORE INSTALLATION OR USE.**

**Trouble shooting**  
**Pump shuts off:**  
 Adjust float switch  
 Check impeller for free rotation and clogging  
 Check pump passage, hose or pipe for kink or clog.  
**Pump is heating up:**  
 Check impeller for free rotation  
 Check voltage

### Pump Performance Low:

Check for blockage  
Check impeller for excessive wear

### SERVICE:

#### Tool needed

Phillips screwdrivers (#1 and #2) vice grip, 10 mm wrench, ballbearing puller, and 17 mm wrench.

#### A. Disassembly of pump top.

(Check wires, rotor, stator, ball bearings and oil). Remove (pos 39) handle screws (pos 4). Remove handle. Remove (pos 37) top cover screws (pos 2) and open top cover. Disconnect wires, remove motor housing cover (pos 3). Inspect the quality of the oil. If milky or whitish in color, check seals and replace (both seals and oil) if necessary. To remove rotor, ball bearings and seals, follow steps described in B. Disassemble pump bottom before proceeding. Once impeller is off, pull out rotor. Inspect bearings, replace if necessary. Press out lip seals. Inspect and replace as necessary.

#### B. Disassembly of pump bottom

(strainer, suction cover, impeller) Remove strainer screws (pos 36), remove strainer (pos 6) and suction cover (pos 7). Hold impeller with vise grip and remove impeller screw (pos 40). Remove impeller (pos 5). Impeller vanes should have sharp edges to maximize performance. Replace impeller if vanes are rounded or dull.

Inspection of pump bottom parts.

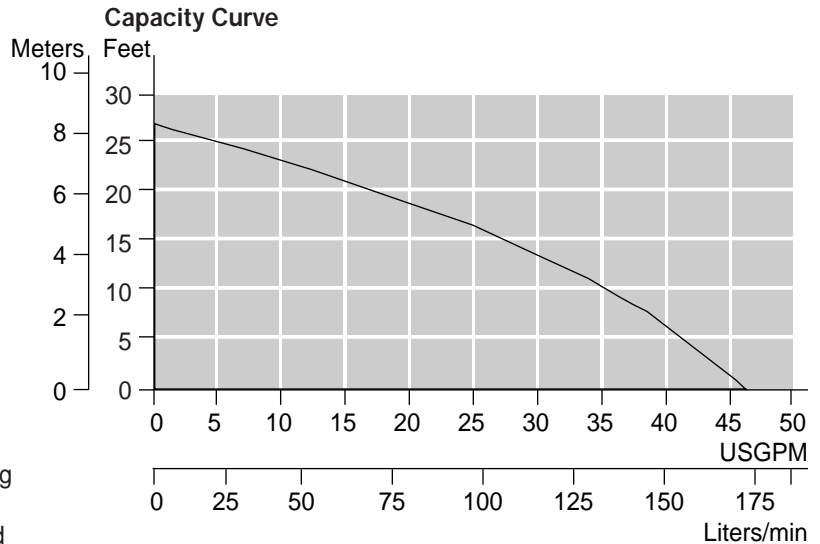
Look at lower lip seal parts (pos 27) for visible wear. If damaged or worn replace both lip seals. To replace lip seals, disassemble top portion of pump first and remove the oil (see A., disassembly of pump top).

**Note: Both seal openings should face down.**

#### C. Important Notes on Re-assembly of Pump

All O-rings should be lubricated with a silicone based grease, or lubricated with same oil as in motor, before assembly. Replace ball bearings to shaft. To re-install inner cover, lubricate bearing holder. Use a plastic or rubber mallet to lightly tap until cover is in place. It is important that the bearing is in the absolute center of the bearing holder when closing the top cover. If not centered, the shaft will not turn freely.

WEB ADDRESSES:  
<http://www.bjmc corp.com>  
<http://www.bjmpumps.com>  
<http://www.alltestpro.com>



### Technical data

#### GF 32-9

Pump Material: Noryl GTX 830, 304 S.S Rotor shaft and 316 S.S Hardware  
Seal System: 2 seals (1 viton, 1 perbunan)  
Motor Voltage: 115 V, 60 Hz, single-phase std  
Max. Power Consumption: 500 watt  
Motor horsepower: 0.4 HP  
Running amps: 4.5 amps  
Max. Submersion Depth: 33' (10 m) or limited to length of cable

Overall Dimensions: 7.2" (185 mm)  
Height Including Handle: 9.8" (250 mm)  
Weight: 13.5 lbs (6.2 kgs)  
Power Cord: 22' submersible  
Level Regulator: Automatic on/off mechanical float switch std  
Oilfilled Motor: Shell Tellus T68 or equal  
Thermal Breaker: Capacitor

#### IGF 32-9

Pump Material: Noryl GTX 830, 316 SS Shaft & Hardware  
Seal System: 2 viton seals  
All other components are the same as for GF 32-9. Please see above.

#### TIGF 32-9NL

Same as for IGF 32-9 except that all exposed metal parts made of titanium.

## WARRANTY REGISTRATION CARD

(Please Print Legibly)

Date Purchased \_\_\_\_\_ Model \_\_\_\_\_ Serial No. \_\_\_\_\_

Owner's Name \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Dealer's Name \_\_\_\_\_

Type of Operation:  Continuous  Intermittent

Application:  Mining  Const.  Industrial  Commercial  Rental

Other (Explain) \_\_\_\_\_ Temp°: \_\_\_\_\_

Pumping:  High/Silt Content  Corrosive Liquids  Clear Water

Signature of Owner: \_\_\_\_\_

Specify: \_\_\_\_\_

# BJM CORP.

123 Spencer Plains Rd. • P. O. BOX 1138  
Old Saybrook, CT 06475 • TEL. (860) 399-5937  
WEB ADDRESS: <http://www.bjmcorp.com>  
<http://www.bjmpumps.com>  
<http://www.alltestpro.com>

BJM Corp. warrants each new pump against defects in workmanship and material for the period of 90 DAYS. It will replace or repair for the original purchaser, any genuine parts found to be defective upon return to its factory at CT (or other place as designated by it), transportation prepaid by purchaser. The labor involved in replacing defective parts is not warrantable.

Other equipment and accessories are warranted only to the extent of the original manufacturer's warranty.

This warranty does not cover any pump which has been damaged due to careless handling, improper use or application, improper power supply, use in unsuitable liquids, or faulty installation. Alteration or repair by other than BJM Corp. (or designated service facility) voids this warranty.

BJM Corp. assumes no liability for damages, losses, inconveniences, direct, or consequential, any kind in respect to the use or operation of the pumps or any equipment or accessory used in connection herewith.

This warranty encompasses the entire understanding between the purchaser and BJM Corp. and no other person is authorized to extend or alter the terms of the warranty.

This warranty is effective only when the warranty certificate card is properly completed and returned to BJM Corp. at the time of purchase.

BJM Corp.

## KEEP FOR YOUR RECORDS

Date Purchased: \_\_\_\_\_

Model: \_\_\_\_\_ Serial No.: \_\_\_\_\_

Dealer Name: \_\_\_\_\_

# BJM CORP.

123 Spencer Plains Rd.  
P. O. BOX 1138  
Old Saybrook, CT 06475  
TEL. (860) 399-5937  
FAX (860) 399-7784

Please complete and  
send back to:

**BJM CORP.**