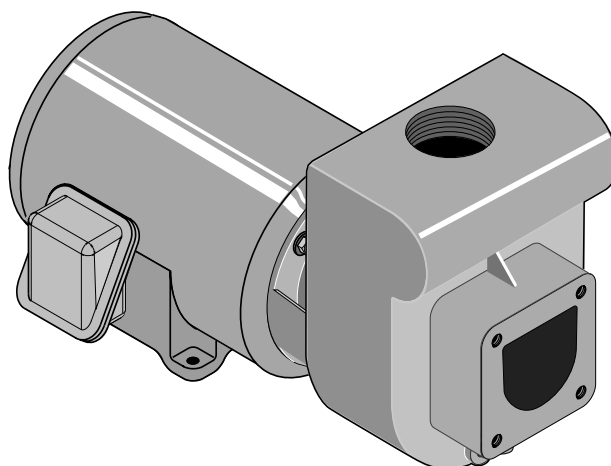


# STA-RITE®

## "D" SERIES CENTRIFUGAL PUMPS WITH TRAP FOR SWIMMING POOL USE

O W N E R ' S M A N U A L



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INSTALLATION, OPERATION & PARTS

### MODELS

H.P.	Phase	Medium Head Models	High Head Models	Medium Head Models	High Head Models
3	1	DMH-171	DHH-169	DM2H-110	DH2H-112
3	3	DMH3-171	DHH3-169	DM2H3-110	DH2H3-112
5	1	DMJ-111	DHJ-113	DM2J-111	DH2J-113
5	3	DMJ3-111	DHJ3-113	DM2J3-111	DH2J3-113

This manual should be furnished to the end user of this pump; its use will reduce service calls and chance of injury and will lengthen pump life.

#### Sta-Rite Pool/Spa Group

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S409 (Rev. 9/6/05)

# **'D' SERIES SELF-PRIMING CENTRIFUGAL PUMP and STRAINER**

To avoid unneeded service calls, prevent possible injuries, and get the most out of your pump, **READ THIS MANUAL CAREFULLY!**

The Sta-Rite 'D' Series Self-priming Centrifugal pump:

- Is designed for use with commercial swimming pools and spas.
- Is an excellent performer; durable, reliable.

## **Table of Contents**

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# IMPORTANT SAFETY INSTRUCTIONS

Always follow basic safety precautions with this equipment, including the following.

**▲ WARNING** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

**▲ CAUTION** This pump is for use with permanently installed pools and may also be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity.

## SAVE THESE INSTRUCTIONS

# READ AND FOLLOW SAFETY INSTRUCTIONS!

**▲** This is the safety alert symbol. When you see this symbol on your system or in this manual, look for one of the following signal words and be alert to the potential for personal injury.

**▲ DANGER** warns about hazards that **will** cause death, serious personal injury, or major property damage if ignored.

**▲ WARNING** warns about hazards that **can** cause death, serious personal injury, or major property damage if ignored.

**▲ CAUTION** warns about hazards that **will** or **can** cause minor personal injury or property damage if ignored.

**NOTICE** indicates special instructions not related to hazards.

**Carefully read and follow all safety instructions in this manual and on equipment.** Keep safety labels in good condition; replace if missing or damaged.

**▲ WARNING** **Incorrectly installed or tested equipment may fail, causing severe injury or property damage.**  
**Hazardous pressure** Read and follow instructions in owner's manual when installing and operating equipment. Have a trained pool professional perform all pressure tests.

1. Do not connect system to a high pressure or city water system.
2. Use equipment only in a pool or spa installation.
3. Install pump with at least 2 hydraulically balanced main drains equipped with correctly installed, screw-fastened, anti-entrapment certified covers. See Page 4.
4. Trapped air in system can cause explosion. **BE SURE** all air is out of system before operating or testing equipment.

### Before pressure testing, make the following safety checks:

- Check all clamps, bolts, lids, and system accessories before testing.
- Release all air in system before testing.
- Tighten Sta-Rite trap lids to 25 ft. lbs. (3.5 kg-m) torque for testing.
- Water pressure for test must be less than 25 PSI (7.5 kg/cm<sup>2</sup>).
- Water Temperature for test must be less than 100° F. (38° C).
- Limit test to 24 hours. After test, visually check system to be sure it is ready for operation. Remove trap lid and retighten hand tight only.

**NOTICE:** These parameters apply to Sta-Rite equipment only. For non-Sta-Rite equipment, consult manufacturer.

## UNCRATING AND INSPECTION

Handle with care.

Check items received against packing list to be sure that all equipment has been received.

Inspect for shipping damage. If found, file claim with carrier immediately.

### Cleanup

Clean up foundation and surrounding area. Remove all trash and other materials which will interfere with installation.

For easy assembly, make sure all threaded joints and mating surfaces are clean. If necessary, clean with wire brush and solvent.

**▲ WARNING** To reduce danger of explosion and fire, do not use gasoline as a cleaning solvent.

Remove all foreign material (packing, etc.) from pump and strainer.

**▲ WARNING** Fire and burn hazard. Modern motors run at high temperatures. To reduce the risk of fire, do not allow leaves, debris, or foreign matter to collect around the pump motor. To avoid burns when handling the motor, let it cool for 20 minutes before trying to work on it.

## INSTALLATION

**Only qualified, licensed personnel should install pump and wiring.**

Pump is designed for use in fresh water only.

### Foundation

#### Foundation must:

Be located away from corrosive or flammable liquids.

Have enough ventilation to maintain air temperature at less than the maximum ambient temperature rating (Max. Amb.) listed on the motor model plate. If this pump is installed in an enclosure/pump house, the enclosure must have adequate ventilation and air circulation to keep the temperature in the enclosure at or below the motor's rated ambient temperature whenever the pump is running.

Be Solid - Level - Rigid - Vibration free.

Be provided with necessary hold-down bolts, washers, and shims.

Allow pump inlet to be as close to water level as possible.

Use short, direct suction pipe (to reduce friction losses).

Maximum suction lift is 10' (3 m).

Allow for isolation valves in suction and discharge piping.

Have adequate floor drainage to prevent flooding.

Be protected from excess moisture.

Allow adequate access for servicing pump and piping.

## POOL PUMP SUCTION REQUIREMENTS

**▲ WARNING** Pump suction is hazardous and can trap and drown or disembowel bathers. Do not use or allow anyone else to use a pool, spa, or hot tub unless it has at least two suction outlets to each pump suction line (see "Outlets Per Pump," Page 5). Do not use or operate swimming pools, spas, or hot tubs if a suction outlet cover is missing, broken, or loose. Follow the guidelines below for a pump installation which minimizes risk to users of pools, spas, and hot tubs.

## Entrapment Protection

The pump suction system *must* provide protection against the hazard of suction entrapment or hair entrapment/entanglement.

## Suction Outlet Covers

All suction outlet covers must be maintained. They must be replaced if cracked, broken, or missing.

See Page 5 for outlet cover certification requirements.

All suction outlets must have correctly installed, screw-fastened covers in place.

## Outlets Per Pump

Provide at least two hydraulically balanced main drains, with covers (see Page 4), for each swimming pool pump suction line. The centers of the main drains (suction outlets) must be at least three feet apart.

The system must be built so that it cannot operate with the pump drawing water from only *one* main drain (that is, there must be at least two main drains connected to the pump whenever it is running). (See Figure 1). However, if two main drains run into a single suction line, the single suction line may be equipped with a valve which will shutoff *both* main drains from the pump (see Figure 1).

More than one pump can be connected to a single suction line as long as the requirements above are met.

## Water Velocity

If 100% of the pump's flow comes from the main drain system, the maximum water velocity in the pump suction hydraulic system must be seven feet per second or less even if one main drain (suction fitting) is completely blocked. The flow through the remaining main drain(s) must comply with the latest ASME/ANSI Specification for *Suction Fittings For Use in Swimming Pools, Spas, Hot Tubs, and Whirlpool Bathtub Applications*.

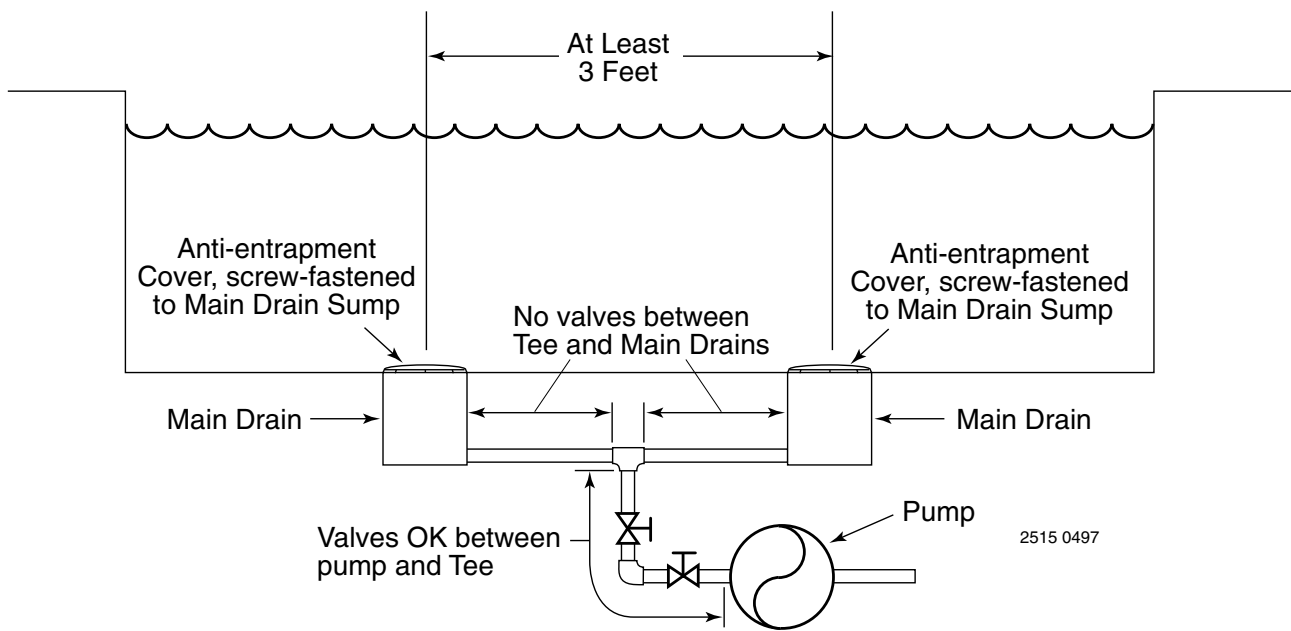


Figure 1 – Recommended pump suction layout.



## Piping – General

System piping must be at least equal to size of pump connections.

To prevent strain on the pump casing and foundation, pipe and fittings must be aligned to pump without forcing.

To avoid strains on the pump, support both suction and discharge pipes independently. Place these supports near the pump.

To avoid a strain left by a gap at the last connection, start all piping at the pump and run pipe **away** from the pump.

## Piping – Suction



**Risk of severe injury or drowning from hair or body entrapment. To reduce risk of entrapment against pump suction opening, connect pump to multiple drains and skimmers of non-entrapment design. See “Pool Pump Suction**

**Requirements,” Pages 4 and 5.**

**NOTICE:** If pump suction becomes clogged, pump will cavitate, damaging pump internal parts. Keep suction pipe clear of debris, dirt, etc.

**NOTICE:** To prevent flooding when removing pump for service, all flooded suction systems **must** have valves in suction and discharge pipes.

Never use a suction pipe smaller than the pump suction connection.

Use larger pipe as required to keep water velocity below 7 feet per second or local construction code limits, whichever is lower.

Suction pipe must rise continuously from source to pump. To avoid airlocking, do not allow high spots in pipe.

When using reducer to connect to pump flange, use an eccentric reducer with the straight side on top.

## Piping – Discharge

Maximum water velocity should be 10 feet per second. To minimize friction losses, make piping one size larger than pump openings.

Fittings restrict flow; for best performance use fewest possible fittings.

Avoid fittings which could cause an air trap.

Pool fittings must conform to International Association of Plumbing and Mechanical Officials (IAPMO) standards.

## Strainer



**Maximum hydrostatic test pressure is 25 PSI (172 kPa) water pressure. To avoid explosion hazard, DO NOT test strainer with air pressure.** Air pressure in strainer can blow cover off of

strainer body, which can cause severe or fatal injury. Open filter air release valve and release ALL air (wait for a steady stream of water from vent) before hydrostatically testing strainer.

To avoid breaking pump or putting unnecessary strains on pump or strainer body, support pipe independently of pump/strainer.

Center the strainer cover when installing it (especially when pressure testing).

When installing cover, clean O-Ring groove in strainer body, and lubricate with petroleum jelly as follows:

- A. O-Ring;
- B. Sealing surfaces of strainer cover and body;
- C. Threads and faces of wing nuts.

This will prevent corrosion, improve seal, and ease maintenance.

If strainer is installed backwards, debris will collect in suction pipe instead of in strainer basket. Install strainer with cast-on flow arrows pointing in direction of water flow.



## ELECTRICAL

**WARNING** Disconnect power at service panel before connecting motor.

- ⚠** Ground motor before connecting to electrical power supply.
- ⚠** Failure to ground motor can cause severe or fatal electrical shock hazard.
- ⚠** Do not ground to a gas supply line.
- ⚠** To avoid dangerous or fatal electrical shock, turn OFF power to motor before working on electrical connections.
- ⚠** Supply voltage must be within  $\pm 10\%$  of nameplate voltage. Incorrect voltage can cause fire or seriously damage motor and voids warranty. If in doubt consult a licensed electrician.
- ⚠** Use wire size specified in Wiring Chart. If possible, connect pump to a separate branch circuit with no other appliances on it.

Single phase motors come factory wired for 230 volt operation. Do not alter wiring in single phase motors. Match motor voltage to power supply voltage. Do not connect three phase motors to single phase power supply or single phase motors to three phase power supply.

All electrical wiring, grounding, and bonding must be done by a licensed electrical contractor who is familiar with commercial swimming pool installations and electrical codes and requirements. Wire sizing, wire type, branch circuit fuse protection, motor starter, control equipment, and related items must meet National Electrical Code and local code requirements.

### Wiring

1. Install, ground, wire and maintain this pump in accordance with your local electrical code and all other codes and ordinances that apply. Consult your local building inspector for local code information.
2. Ground the pump permanently using a wire of size and type specified by local or National Electrical Code.

**⚠ Do not ground to a gas supply line.**

3. Connect ground wire first. Connect to ground first, then to green grounding terminal provided (identified as GRD or  $\ominus$ ). Make ground connection to this terminal. Do not connect motor to electrical power supply until unit is permanently grounded; otherwise serious or fatal electrical shock hazard may be caused.
4. For best ground connection, connect ground wire to a grounded lead in the service panel.
5. Motors do not have internal overload protection; provide external overload protection in the power supply circuit.

Bond motor to pool structure according to local or National Electrical Code. Use a solid copper conductor, size No. 8 (6.0 mm<sup>2</sup>) AWG or larger.

**NOTICE:** Before using pump, check your motor nameplate for voltage. Your electric supply voltage and the stamped nameplate voltage **must agree**. Motors stamped 200 volts only or 230 volts only, **must be used with that voltage only**. Motors stamped with two voltages (for example 230/460 volts), may be used with either supply voltage. For these motors check connections against wiring diagram on motor nameplate and make any changes necessary to agree with your supply voltage. If in doubt, call a licensed electrician. Incorrect voltage will cause serious damage to the motor.

Some models are equipped with three phase motors. Three phase motors require magnetic starters.

**To check motors for proper rotation:** Remove the motor end cover. This exposes the motor shaft. If hook-up is correct, the shaft will rotate clockwise.

**Three Phase:** If rotation is not clockwise, reverse any two leads to the starter. The rotation will now be correct.

**Single Phase:** See wiring diagram on motor nameplate. BE SURE power is off to the motor when working on electrical connections.

**CAUTION** Burn Hazard. Motor normally operates at high temperature and will be too hot to touch. Before handling pump or motor, stop motor and allow it to cool for 20 minutes.

**TABLE I – ELECTRICAL DATA - FUSING AND WIRING REQUIREMENTS**

Model	Motor HP	Voltage/Hz/Phase	Max Load Amps	Branch Fuse Rating Amps*	Serv. to Motor - Dist. in Ft. (M)		
					0-100' (0-30M)	101-200' (30-60M)	201-300' (60-90M)
DMH-171, DHH-169	3	230/60/1	13.4	20	12(3)	12(3)	10(5.5)
DM2H-110, DH2H-112	3	200/60/1	17.2	25	10(5.5)	10(5.5)	10(5.5)
DM2H3-110, DH2H3-112	3	200/60/3	8.4	15	14(2)	14(2)	14(2)
DMH3-171, DHH3-169	3	230/460/60/3	8.6/4.3	15/15	14(2)/14(2)	14(2)/14(2)	14(2)/14(2)
DMJ-111, DHJ-113	5	230/60/1	22.0	30	10(5.5)	10(5.5)	8(8.4)
DM2J-111, DH2J-113	5	200/60/1	26.4	40	8(8.4)	8(8.4)	8(8.4)
DM2J3-114, DH2J3-113	5	200/60/3	13.8	20	12(3)	12(3)	12(3)
DMJ3-111, DHJ3-113	5	230/460/60/3	13.2/6.6	20/15	12(3)/14(2)	12(3)/14(2)	12(3)/14(2)

## OPERATION

**DANGER** Hazardous suction. Can trap hair or body parts, causing severe injury or death by drowning. Do not block pump or strainer suction with body. **Small children using pool must ALWAYS have close adult supervision!**

**WARNING** Do not run pump against closed discharge valve. To do so can boil water in pump body, and can cause severe burns to people working on pump.

**WARNING** Fire and burn hazard. Modern motors run at high temperatures. To reduce the risk of fire, do not allow leaves, debris, or foreign matter to collect around the pump motor. To avoid burns when handling the motor, let it cool for 20 minutes before trying to work on it. An automatic internal cutoff



switch protects the motor from heat damage during operation.

**⚠ CAUTION** NEVER run pump dry. Running pump dry may damage seals, causing leakage and flooding. Fill pump with water before starting motor.

**⚠** Before removing strainer cover:

1. STOP PUMP before proceeding.
2. CLOSE GATE VALVES in suction and discharge pipes.
3. RELEASE ALL PRESSURE from pump and piping system.

**⚠** After pressure test, release all pressure before removing strainer cover!

**NOTICE:** Provide adequate ventilation. Ambient air temperature should be 104°F (40°C) or less but above freezing at all times.

**NOTICE:** To prevent corrosion damage, store pool chemicals in another room away from pump.

## Priming Pump

**⚠ WARNING** Hazardous Pressure! Before removing strainer cover, open filter air release valve and release all pressure from system.

Open suction/discharge. In a flooded suction system, pump will prime. If pump is not in a flooded suction system, remove strainer cover; fill strainer and pump with water.

If necessary, use a wrench on flats when removing lock handles (Key No. 1, Page 15).

When installing cover, clean O-Ring sealing surface on strainer body, and lubricate with petroleum jelly as follows:

- A. O-Ring and Sealing surfaces of strainer cover and body;
- B. Threads and faces of lock handles.

This will prevent corrosion, improve seal, and ease maintenance.

Center strainer cover when installing it (especially when pressure testing).

Hand tighten lock handles. When tightening, alternate back and forth between handles to compress O-Ring evenly.

Maximum lock handle torque is 25 ft.-lbs. (3.5 kg.-m).

Start pump; it should prime now. Priming time will depend on vertical length of suction lift (10'/3m maximum) and horizontal length of suction pipe.

If pump does not prime, make sure that all valves are open, suction pipe end is under water and that there are no leaks in suction pipe. See Troubleshooting Guide, Page 13.

**NOTICE:** To avoid corrosion damage to pump and strainer, do not add chemicals to system anywhere on suction side of pump (including into skimmers). Do not pour chemicals into strainer. Follow chemical manufacturer's instructions when mixing or adding chemicals to system.

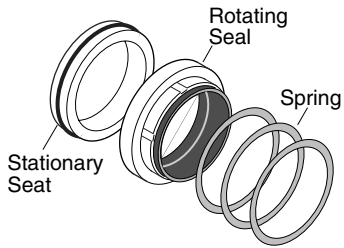


Figure 2

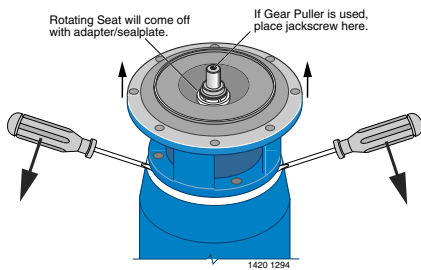


Figure 3

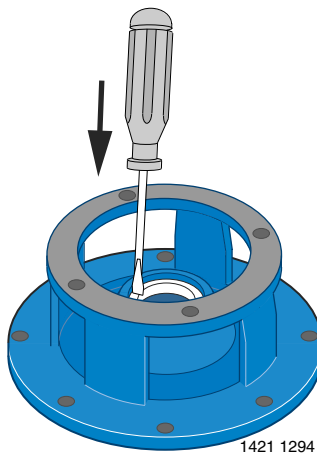


Figure 4

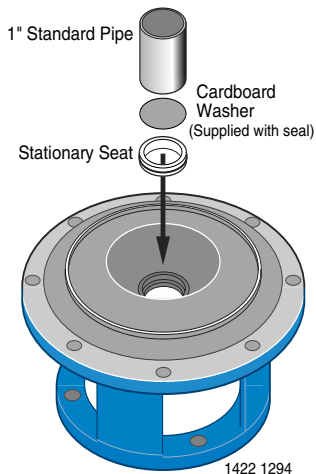


Figure 5

## 'D' SERIES COMMERCIAL POOL PUMP DISASSEMBLY/ ASSEMBLY

See Exploded View, Page 14.

### Shaft Seal Replacement

**NOTICE:** The highly polished and lapped faces of the seal are easily damaged. **Follow instructions and handle the seal with care.**



**Be sure unit is grounded and power disconnected before attempting any work on pump or motor.**

### Removal of Old Seal

Refer to Figure 2 for Mechanical Seal parts identification.

1. Disconnect all power to pump.
2. Close isolation valves to cut pump off from system.
3. Drain pump and strainer; be sure to vent pump.
4. Remove motor hold down bolts and bolts holding adapter/seal plate (Key No. 6, Page 14) to volute (Key No. 20). Slide motor, adapter/seal plate and impeller (Key No. 12) backward to clear volute.
5. Remove impeller screw and washer from end of shaft and slide impeller off of shaft.
6. Unbolt adapter/seal plate from motor.
7. Use two screwdrivers (Figure 3) or bearing puller to carefully separate motor from adapter/seal plate, bringing rotating half of seal (Key No. 10) off with adapter/seal plate. Shaft sleeve may come off with seal.
8. Use hammer, if necessary, to drive shaft sleeve out of seal. Clean up shaft sleeve with fine emery paper if necessary.
9. Place adapter/seal plate face down on bench and drive old stationary half of seal out of adapter/seal plate by carefully tapping with screwdriver and hammer (Figure 4).
10. Use a wire brush to thoroughly clean adapter/seal plate cavity. Be sure all dust and grime are out of seal cavity before installing new seal.

### Installing New Seal

1. **NOTICE:** Seal faces are highly polished and lapped. **Handle with care.** Any mar, nick or scratch on seal face will cause it to leak. **BE SURE** to install with polished faces toward each other.
2. Clean polished surface of ceramic seat with clean cloth.
3. Wet O-Ring around ceramic seat with liquid soap.
4. Press stationary (ceramic) half of seal into seal cavity firmly and squarely with thumb pressure. If it does not seat properly, remove and place seal face up on bench. Re-clean adapter/seal plate cavity. Seal should now seat correctly.
5. If seal does not seat after re-cleaning adapter/seal plate cavity, place a cardboard washer over polished face of seal and **carefully** press into place using a piece of 1" standard pipe as a press (Figure 5).

**NOTICE: BE SURE** you do not scratch seal face.

6. Dispose of cardboard washer and recheck seal face to be sure it is free of dirt, foreign particles, scratches and grease.
7. Inspect shaft and shaft sleeve to be sure they are clean.
8. Re-install O-Ring, shaft sleeve and slinger on shaft.

**NOTICE:** A small amount of grease or Never-Seez under shaft sleeve will help prevent shaft and sleeve from freezing together when pump is in service.

9. Remount adapter/seal plate to motor, being careful not to scratch seal face.
10. Apply liquid soap to inside diameter and outside face of rubber drive ring on rotating half of seal.
11. Slide seal assembly onto shaft sleeve (sealing face first) far enough so that seal spring is located on shaft sleeve.

**NOTICE:** Be careful not to nick carbon seal face when passing it over end of shaft sleeve.

12. Slide impeller and gasket (Key Nos. 12 and 11) onto shaft with key (Key No. 3) in position. Be sure to maintain proper order as shown on Page 14.
13. Install washer, gaskets and impeller screw (Key Nos. 14, 15, 16, and 17) on end of shaft and tighten screw until it is snug. This should locate seal in place and bring seal faces together.
14. Reinstall motor, adapter and impeller assembly on volute, using new gasket (Key No. 7).
15. Reinstall motor hold-down bolts.
16. Check all bolts for tightness.
17. Pumps below water level: Close drains; open isolation valves to fill pump. Pumps above water level: Fill strainer and prime pump. Open isolation valves if they were closed at disassembly.
18. When pump is full, close air vents (strainer top plug, filter air release valve, etc.).
19. Reconnect power to pump and system is ready for operation.

## **MAINTENANCE - Strainer**

**NOTICE:** Before removing strainer cover, close isolation valves and open air vents in system.

**NOTICE:** Do not allow strainer to freeze.

If system will be shut down for one day or more, drain strainer and system to prevent corrosion.

Remove cover to allow interior to dry out when storing for the season. When interior is dry, replace cover.

Remove drain plug when storing for season. Leave plug out until system is restarted the following season.

To remove strainer cover, unscrew lock handles. If necessary, use a wrench on flats when removing lock handles.

**NOTICE:** A clogged strainer basket will cause cavitation, which will damage strainer basket, impeller, and pump. Clean weekly or each time you vacuum pool, whichever comes first.

**NOTICE:** Strainer basket is a close fit in body of strainer. When cleaning basket, do not deform.

Hose basket out well.

DO NOT hammer on basket or otherwise mistreat it.

When installing cover, clean O-Ring sealing surface in strainer body.

To prevent corrosion, improve seal, and ease maintenance, lubricate O-Ring, sealing surfaces of strainer cover and body, and threads and faces of lock handles with petroleum jelly.

Center strainer cover when installing it (especially when pressure testing).

Hand tighten lock handles. When tightening, alternate back and forth between handles to compress O-Ring evenly.

Maximum lock handle torque is 25 ft.-lbs. (3.5 kg-m).

If possible, protect from weather at all times.

For storage of out door installation:

1. Drain system.
2. Dry as much as possible.
3. Lubricate with petroleum jelly.
4. Reassemble.
5. Leave drain plug out during storage.

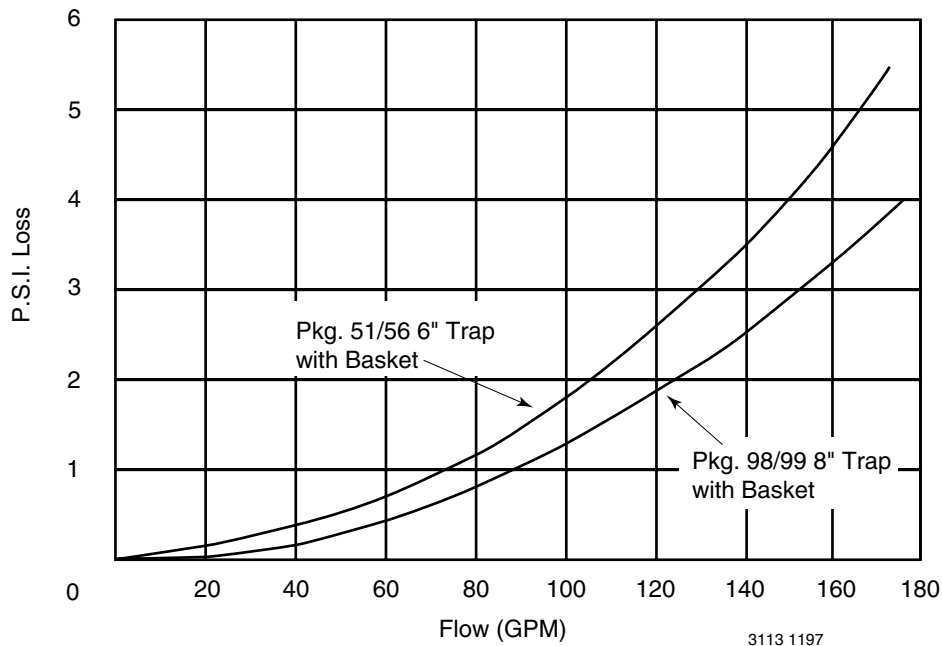


Figure 6 – Pressure drop curve for hair and lint strainers.

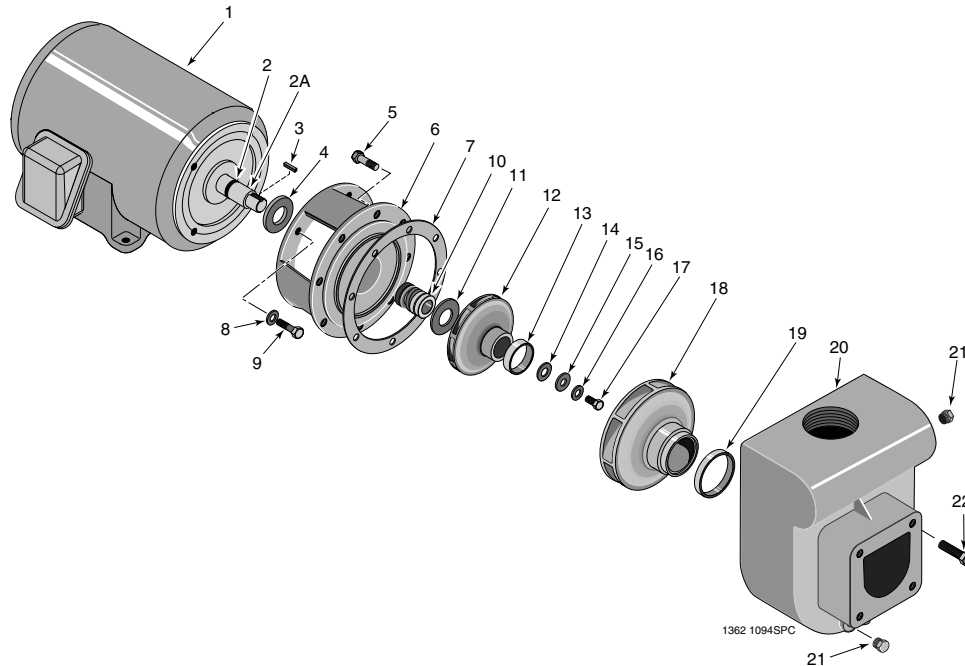
## TROUBLESHOOTING GUIDE

Read symptom describing problem below at left. Causes for problems (bottom) are keyed to numbers at right. Check pump for causes listed at right and correct those that apply.

**⚠ WARNING** Hazardous voltage. Can shock, burn or kill. Turn circuit breaker to "OFF" or remove fuses before servicing.

TROUBLE AND CAUSE	REMEDY
<b>FAILURE TO PUMP</b>	
1. Pump not properly primed.	1. Make sure pump volute, strainer, and suction line are full of water. See priming instructions. Tighten strainer cover.
<b>REDUCED CAPACITY AND/OR HEAD</b>	
1. Air pockets or leaks in suction line.	1. Check suction piping.
2. Clogged impeller or strainer basket.	2. Remove and clean.
<b>PUMP LOSES PRIME</b>	
1. Air leaks in suction line.	1. Check suction piping
2. Excessive suction lift and operating too near shut-off point.	2. Move pump nearer to water level.
3. Water level drops while pumping, uncovering suction piping.	3. Check water supply. Add length of pipe to suction to keep submerged end under water.
<b>MECHANICAL TROUBLES AND NOISE</b>	
1. Bent shaft and/or damaged bearings.	1. Take motor to authorized motor repair shop.
2. Suction and/or discharge piping not properly supported and anchored.	2. See that all piping is supported to relieve strain on pump assembly.

# 'D' Series Centrifugal Pumps – 3 and 5 HP



## REPAIR PARTS LIST

Key No.	Part Description	No. Used	3 HP	5 HP	3 HP	5 HP
			DMH-171 DMH3-171 DM2H-110 DM2H3-110	DMJ-111 DMJ3-111 DM2J-111 DM2J3-111	DHH-169 DHH3-169 DH2H-112 DH2H3-112	DHJ-113 DHJ3-113 DH2J-113 DH2J3-113
1	Motor - 60 Cycle - 230V, Single Phase	1	C218-177	C218-180	C218-177	C218-180
1	Motor - 60 Cycle - 230/460V, Three Phase	1	C218-179	C218-182	C218-179	C218-182
1	Motor - 60 Cycle - 200V, Single Phase	1	C218-191	C218-192	C218-191	C218-192
1	Motor - 60 Cycle - 200V, Three Phase	1	C218-178	C218-181	C218-178	C218-181
2	O-Ring	1	U9-265	U9-265	U9-265	U9-265
2A	Sleeve	1	C23-58	C23-58	C23-58	C23-58
3	Key - Square	1	U65-42A	U65-42A	U65-42A	U65-42A
4	Water Slinger - Single Phase	1	C69-15	C69-15	C69-15	C69-15
4	Water Slinger - 230/460V, Three Phase	1	C69-16	C69-15	C69-16	C69-15
4	Water Slinger - 200 V, Three Phase	1	C69-15	C69-15	C69-15	C69-15
5	Capscrew - 3/8 - 16 x 7/8" Lg.	8	U30-73ZP	U30-73ZP	U30-73ZP	U30-73ZP
6	Adapter	1	C2-66	C2-66	C2-66	C2-66
7	Gasket - Adapter	1	C20-46	C20-46	C20-46	C20-46
8	Lockwasher - 3/8"	4	U43-12ZP	U43-12ZP	U43-12ZP	U43-12ZP
9	Capscrew - 3/8 - 16 x 7/8" Lg.	4	U30-73ZP	U30-73ZP	U30-73ZP	U30-73ZP
10	Shaft Seal	1	U109-433SS	U109-433SS	U109-433SS	U109-433SS
11	Gasket - Seal	1	C20-101	C20-101	C20-101	C20-101
12	Impeller (-110, -113)	1	-	-	-	C5-249
12	Impeller (-171, -169, -112)	1	C5-246	-	C5-248	-
12	Impeller (-172)	1	-	C5-247	-	-
13	Wear Ring	1	J23-5	C23-14	J23-5	J23-5
14	Gasket - Impeller	1	C20-100	C20-100	C20-100	C20-100
15	Washer - Impeller	1	C43-45SS	C43-45SS	C43-45SS	C43-45SS
16	Gasket - Stat-O-Seal	1	C43-46	C43-46	C43-46	C43-46
17	Screw - Impeller - 3/8 - 16 x 3/4" Lg.	1	U30-72SS	U30-72SS	U30-72SS	U30-72SS
18	Volute Diffuser (w/Wear Ring, Key No. 13)	1	C101-126	C101-126B	C101-132	C101-132
19	Diffuser Ring	1	C21-2	C21-2	C21-2	C21-2
20	Pump Body	1	C76-12	C76-12C	C76-12B	C76-12
21	Pipe Plug - 1/4" NPT (+)	2	U78-57CT	U78-57CT	U78-57CT	U78-57CT
22	Capscrew - 5/16 - 18 x 3/4" Lg.	4	U30-60ZP	U30-60ZP	U30-60ZP	U30-60ZP
23	Pipe Plug - 1/4" NPT	1	U78-941ZPV	U78-941ZPV	U78-941ZPV	U78-941ZPV
•	Model Plate	1	U33-36	U33-36	U33-36	U33-36
•	Decal, Warning	1	U27-781	U27-781	U27-781	U27-781
•	Tag, No Motor Overload	1	U63-75	U63-75	U63-75	U63-75

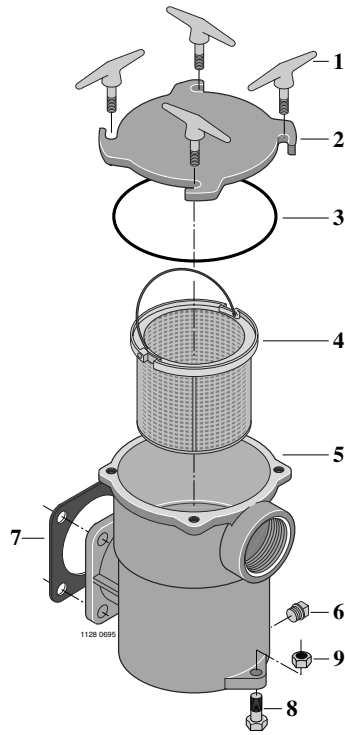
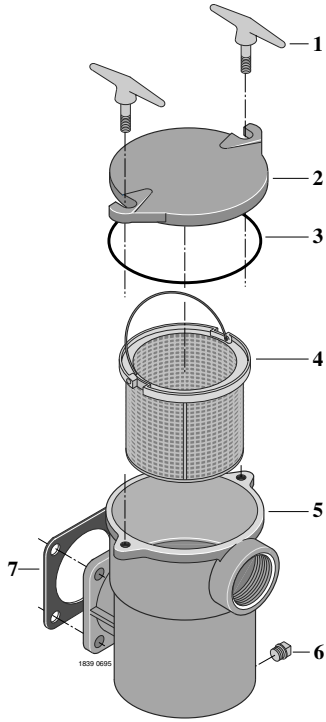
(†) Model Number DM2H3-171 uses Pipe Plug Part Number U78-57CT.

• Not illustrated.

# EXPLODED VIEWS

## 6" Hair and Lint Strainer

## 8" Hair and Lint Strainer



## HAIR AND LINT STRAINER REPAIR PARTS LIST

Key No.	Part Description	Pkg. 51 Pkg. 98 Cast Iron	Pkg. 56 Pkg. 99 Bronze
1*	Lock Handle	C154-18D	C154-18D
2	Cover - 6"	C3-30	C3-78DZZ
2	Cover - 8"	C3-105	C3-105D
3	O-Ring - 6"	U9-46	U9-46
3	O-Ring - 8"	U9-171	U9-171
4	Strainer Basket - 6"	C108-11P	C108-11P
4	Strainer Basket - 8"	16401-0030	16401-0030
5	Suction Strainer Body - 6"	C53-5B	C53-5D
5	Suction Strainer Body - 8"	C53-21	C53-21D
6	Pipe Plug 1/4"	U78-57DT	U78-57DT
7	Gasket, Flange	C20-19	C20-19
8	Capscrew, 3/8-16x1-3/4" (+)	U30-77SS	U30-77SS
9	Nut, Hex 3/8-16 (+)	U36-38ZP	U36-38ZP
•	Capscrew, 5/16-18x7/8"	U30-61C(4)	U30-61C(4)
	Suction Strainer Complete - 6"	Pkg. #51	Pkg. #56
	Suction Strainer Complete - 8"	Pkg. #98	Pkg. #99

Quantity 1 unless otherwise noted ( ).

• Not illustrated.

\* 6" has 2 each; 8" has 4 each.

(+) 8" only.

**NOTICE:** Strainers are not included with pumps.

## STA-RITE LIMITED WARRANTY

Pumps, filters, skimmers, underwater lights (excluding bulbs), accessories and fittings manufactured by Sta-Rite are warranted to be free of defects in material and/or workmanship for one (1) year from the original date of installation.

The foregoing warranties relate to the original consumer purchaser ("Purchaser") only. Sta-Rite Industries shall have the option to repair or replace the defective product, at its sole discretion. Purchasers must pay all labor and shipping charges necessary to replace the product covered by this warranty. Requests for warranty service must be made through the installing dealer. This warranty shall not apply to any product that has been subject to negligence, misapplication, improper installation or maintenance, or other circumstances which are not in Sta-Rite's direct control. Failure to have product installed by a professional in compliance with local codes will void any and all manufacturers warranty.

This warranty sets forth Sta-Rite's obligation and Purchaser's exclusive remedy for defective products.

STA-RITE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR CONTINGENT DAMAGES WHATSOEVER.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE DURATION OF THE APPLICABLE EXPRESS WARRANTIES PROVIDED HEREIN.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Supersedes all previous publications.

### Product Specific Warranties (from date of installation)

Product Family	Limited Warranty	Exceptions
Filters	1 Year	System 3 Tank Bodies - 10 Yrs
Filter Valves	1 Year	
Pumps	1 Year	
Heaters	2 Years	*Commercial Application - 1 Yr
Controls	1 Year	
Above Ground Systems	1 Year	
Lights and Niches	1 Year	Lamps and Bulbs - 90 Days
White Goods	1 Year	
Maintenance Equipment	90 Days	
Drainer/Utility Pumps	90 Days	
Replacement Parts	90 Days	
Cleaners: Lil Shark	1 Year	
Cleaners: Calypso	1 Year	
Cleaners: Pool Shark	2 Years	Footpad and Seal Flaps - 1 Yr
Cleaners: Great White	2 Years	

\* Commercial and multi-family application.

**Retain this warranty certificate in a safe and convenient location for your records.**

**For technical information about this product, contact the installer or call Sta-Rite at 262-728-9181.**

Visit [www.staritepool.com](http://www.staritepool.com)

- for more information about Sta-Rite products listed above
- to locate a Sta-Rite dealer near you

#### CREATE A RECORD OF YOUR WARRANTY AT STA-RITE:

- Complete a warranty registration at [www.staritepool.com](http://www.staritepool.com) by clicking on "Register Products" and selecting Sta-Rite Pool **OR**
- Complete bottom portion completely and mail within 10 days of installation to Sta-Rite, Attn.: Pool Warranty Dept., 293 Wright St., Delavan, WI 53115



## Warranty Registration Card

Name \_\_\_\_\_

New installation       Replacement

Address \_\_\_\_\_

Years pool has been in service    less than 1    1-3    3-5    5-10

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

**This product was purchased from:**

Installation (or Purchase) Date \_\_\_\_\_

Company name \_\_\_\_\_

Product Purchased \_\_\_\_\_

Address \_\_\_\_\_

Model Number \_\_\_\_\_

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