

## Series 1510 Based Mounted Centrifugal Pump Kits

### IMPORTANT

The Series 1510 pump kits are to be assembled by qualified personnel only. Any questions regarding the assembly procedure should be referred to the Bell & Gossett Service Manager.



**WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Impeller cap screws and washers are furnished with the kit. All other fasteners and shims must be furnished by assembler. (Refer to Fastener Chart for proper sizing of cap screws, nuts and washers.)

1. Mount volute to base, adding a minimum of .025" in shims between volute and base. Use 4 cap screws, 4 lock washers, 4 flat washers and risers when applicable.
2. Assemble volute cover plate to small bearing assembly (1" shaft) with 4 cap screws. On large bearing assembly (1 1/4" shaft), use 8 cap screws.
3. Press seal insert in volute cover plate. Push pump shaft forward from rear of bearing assembly to take up end play. Moisten the inner diameter of seal assembly with soapy water, maintaining forward pressure on the shaft, and press seal firmly in place. Carbon seal face must be tight against ceramic insert. Apply small end of tapered spring on seal.
4. Make certain that impeller has been properly cut to size for required GPM and feet of head and balanced. Slide impeller onto bearing assembly shaft until it bottoms against the shaft shoulder. Fasten impeller using one cap screw, one internal lock washer and one large impeller washer. Make certain that cap screw is tightened to 18-20 foot pounds on small bearing assembly (1" shaft) and 40-44 foot pounds on the large bearing assembly (1 1/4" shaft).
5. Mount bearing assembly, impeller, volute gasket and cover plate to volute.
6. Add foot support to base and bearing frame using 4 cap screws, 4 lock washers, 4 flat washers and 4 nuts. In some instances, the nuts will be welded direct to the base cross member.
7. Mount saddle to base with 4 cap screws, 4 lock washers, 8 flat washers and 4 nuts.

8. Mount motor to saddle using 4 cap screws, 4 lock washers, 8 flat washers and 4 nuts.
9. Apply pump coupler half to pump shaft and motor coupler half to motor shaft. Tighten one coupler half in its final position and add coupler sleeve. If using a two piece sleeve, hang the wire ring loosely in the groove next to the teeth. Slide the loose flange tightly up against the sleeve and back off 1/8" for axial clearance. Tighten the loose flange to the shaft.

Check vertical and horizontal misalignment by using a straight edge scale or piece of bar stock with the center notched to provide clearance for the raised portion of the coupler sleeve. For 3500 rpm operation, it will be necessary to check the angular misalignment by using a dial indicator or micrometer calipers. Measure the gap at intervals around the periphery of the coupling to determine minimum and maximum gap. The difference between these two values should be as close to zero as possible.

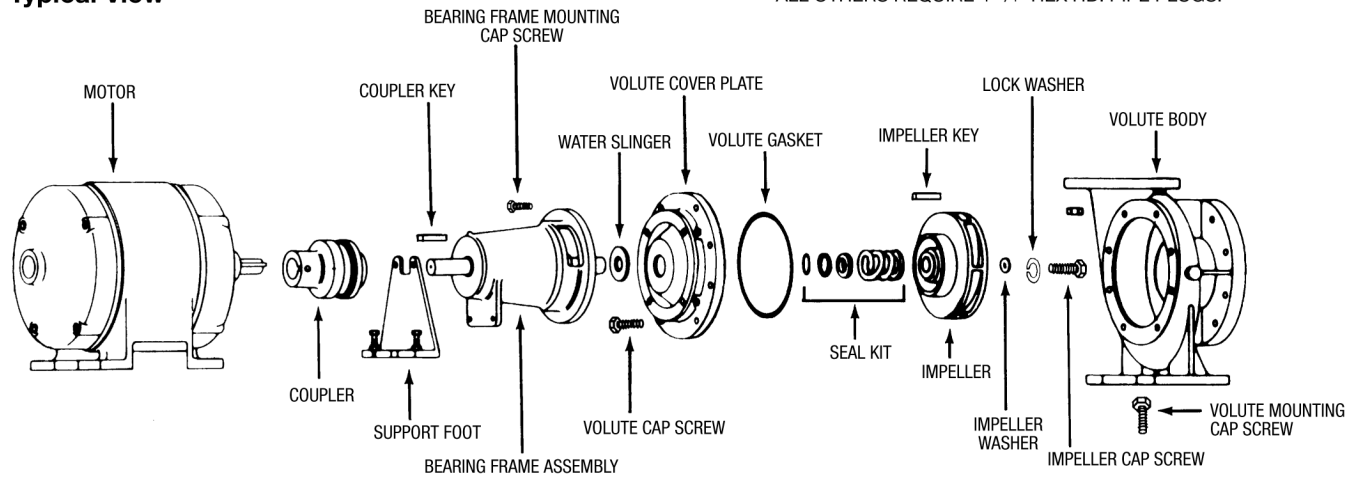
If the angular alignment was adjusted, it will be necessary to recheck the vertical and horizontal misalignment again.

If using a two piece sleeve, force the wire ring into its groove in the center of the sleeve. The use of a blunt screw driver may be necessary.

10. Apply coupler guard using 4 cap screws, 4 lock washers and 4 nuts.
11. Recheck all exposed nuts and cap screws for tightness.
12. Complete all name plate data and affix to base.
13. Complete and return Pump Kit Data Card to the Customer Service Dept., Bell & Gossett, 8200 N. Austin Ave., Morton Grove, IL 60053.
14. Affix installation and service instructions (P81673).
15. Make certain complete unit is properly lubricated.

# EXPLODED VIEW

## Typical View



**NOTE:** 1<sup>1</sup>/<sub>4</sub>" and 1<sup>1</sup>/<sub>2</sub>" VOLUTES REQUIRE 4-<sup>1</sup>/<sub>8</sub>" HEX HD. PIPE PLUGS.  
ALL OTHERS REQUIRE 4-<sup>1</sup>/<sub>4</sub>" HEX HD. PIPE PLUGS.

### FASTENER CHART

VOLUTE TO BASE	
PUMP SIZE	FASTENERS
1 <sup>1</sup> / <sub>4</sub> AC thru 3AC Fr #143T thru 215T 4AC thru 4BC FR #143T thru 256T	4- <sup>7</sup> / <sub>16</sub> x 1 <sup>3</sup> / <sub>4</sub> Cap Screw 4- <sup>7</sup> / <sub>16</sub> Washer 4- <sup>7</sup> / <sub>16</sub> Lock Washer
1 <sup>1</sup> / <sub>4</sub> AC thru 3AC Fr #254T thru 256T	4- <sup>7</sup> / <sub>16</sub> x 3 Cap Screw 4- <sup>7</sup> / <sub>16</sub> Washer 4- <sup>7</sup> / <sub>16</sub> Lock Washer
3E thru 5E and 5BC thru 4GB All Frames	4- <sup>1</sup> / <sub>2</sub> x 2 Cap Screw 4- <sup>1</sup> / <sub>2</sub> Nut 4- <sup>1</sup> / <sub>2</sub> Washer 4- <sup>1</sup> / <sub>2</sub> Lock Washer
5G, 6G and 6E All Frames	4- <sup>5</sup> / <sub>8</sub> x 2 <sup>1</sup> / <sub>2</sub> Cap Screw 4- <sup>5</sup> / <sub>8</sub> Nut 4- <sup>5</sup> / <sub>8</sub> Washer 4- <sup>5</sup> / <sub>8</sub> Lock Washer
COVER PLATE TO VOLUTE	
A Size Pumps B Size Pumps G and E Size Pumps	8- <sup>3</sup> / <sub>8</sub> x <sup>7</sup> / <sub>8</sub> } Cap Screws 12- <sup>7</sup> / <sub>16</sub> x 1 } 16- <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>4</sub> }
BEARING FRAME TO COVER PLATE	
Small Frame Large Frame	4- <sup>3</sup> / <sub>8</sub> x 1 } Cap Screws 8- <sup>3</sup> / <sub>8</sub> x 1 <sup>1</sup> / <sub>4</sub> }
SUPPORT FOOT	
All Sizes	4- <sup>7</sup> / <sub>16</sub> x 1 Cap Screw
SADDLE TO BASE	
1 <sup>1</sup> / <sub>4</sub> AB thru 4BC Fr #143T-256T	4- <sup>3</sup> / <sub>8</sub> x 1 Cap Screw 4- <sup>3</sup> / <sub>8</sub> Nut 8- <sup>3</sup> / <sub>8</sub> Washer 4- <sup>3</sup> / <sub>8</sub> Lock Washer
3E thru 5E and 5BC thru 4GB All Frames	4- <sup>1</sup> / <sub>2</sub> x 1 <sup>1</sup> / <sub>2</sub> Cap Screw 4- <sup>1</sup> / <sub>2</sub> Nut 8- <sup>1</sup> / <sub>2</sub> Washer 4- <sup>1</sup> / <sub>2</sub> Lock Washer
5G, 6G and 6E All Frames	4- <sup>5</sup> / <sub>8</sub> x 1 <sup>1</sup> / <sub>2</sub> Cap Screw 4- <sup>5</sup> / <sub>8</sub> Nut 8- <sup>5</sup> / <sub>8</sub> Washer 4- <sup>5</sup> / <sub>8</sub> Lock Washer

MOTOR TO SADDLE	
FRAME SIZE	FASTENERS
56 143T, 145T	4- <sup>5</sup> / <sub>16</sub> x 1 <sup>1</sup> / <sub>4</sub> Cap Screw 4- <sup>5</sup> / <sub>16</sub> Nut 8- <sup>5</sup> / <sub>16</sub> Washer 4- <sup>5</sup> / <sub>16</sub> Lock Washer
182T, 184T	4- <sup>3</sup> / <sub>8</sub> x 1 <sup>1</sup> / <sub>2</sub> Cap Screw 4- <sup>3</sup> / <sub>8</sub> Nut 8- <sup>3</sup> / <sub>8</sub> Washer 4- <sup>3</sup> / <sub>8</sub> Lock Washer
213T, 215T	4- <sup>3</sup> / <sub>8</sub> x 2 Cap Screw 4- <sup>3</sup> / <sub>8</sub> Nut 8- <sup>3</sup> / <sub>8</sub> Washer 4- <sup>3</sup> / <sub>8</sub> Lock Washer
254T, 256T 284T, 286T	4- <sup>7</sup> / <sub>16</sub> x 2 Cap Screw 4- <sup>7</sup> / <sub>16</sub> Nut 8- <sup>7</sup> / <sub>16</sub> Washer 4- <sup>7</sup> / <sub>16</sub> Lock Washer
324T, 326T 364T, 365T	4- <sup>1</sup> / <sub>2</sub> x 2 <sup>1</sup> / <sub>4</sub> Cap Screw 4- <sup>1</sup> / <sub>2</sub> Nut 8- <sup>1</sup> / <sub>2</sub> Washer 4- <sup>1</sup> / <sub>2</sub> Lock Washer
404TS	4- <sup>5</sup> / <sub>8</sub> x 2 <sup>3</sup> / <sub>4</sub> Cap Screw 4- <sup>5</sup> / <sub>8</sub> Nut 8- <sup>5</sup> / <sub>8</sub> Washer 4- <sup>5</sup> / <sub>8</sub> Lock Washer



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