NOVA PUMPS

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Nova Pumps Seal Kit Replacement Guide

It is strongly recommended that the tank is emptied and the pump is flushed with water before dismantling. For safety reasons gloves must be worn during the seal kit replacement procedure.

Before dismantling the pump, mark all components in their fitted positions for reassembly.

Recommended tools and equipment

All models

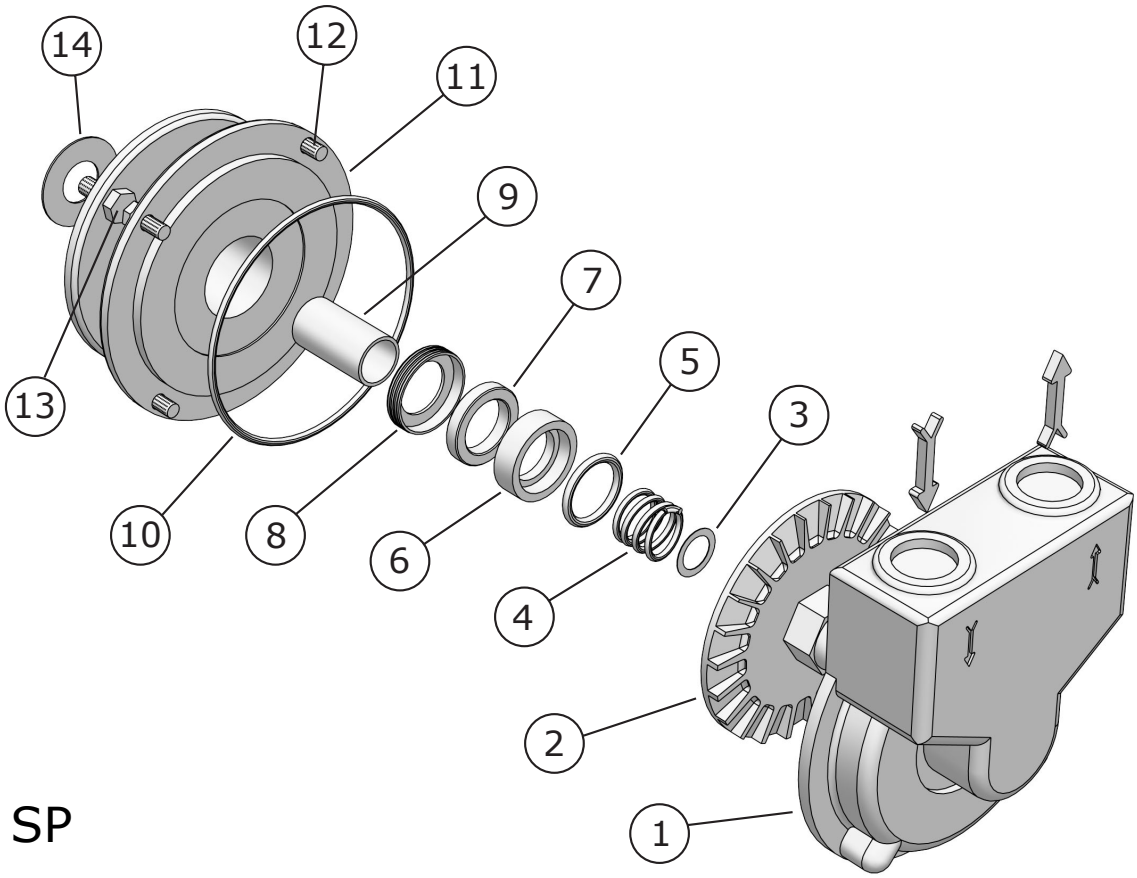
- Adjustable wrench spanner
- 7/16” spanner
- 10mm spanner
- Flathead screwdriver
- Hammer
- Grease
- Wet and dry fine emery paper
- Cloth

Additional tools for petrol engine models

- 13/16” spark plug spanner
- 1/2” spanner
- Pipe wrench

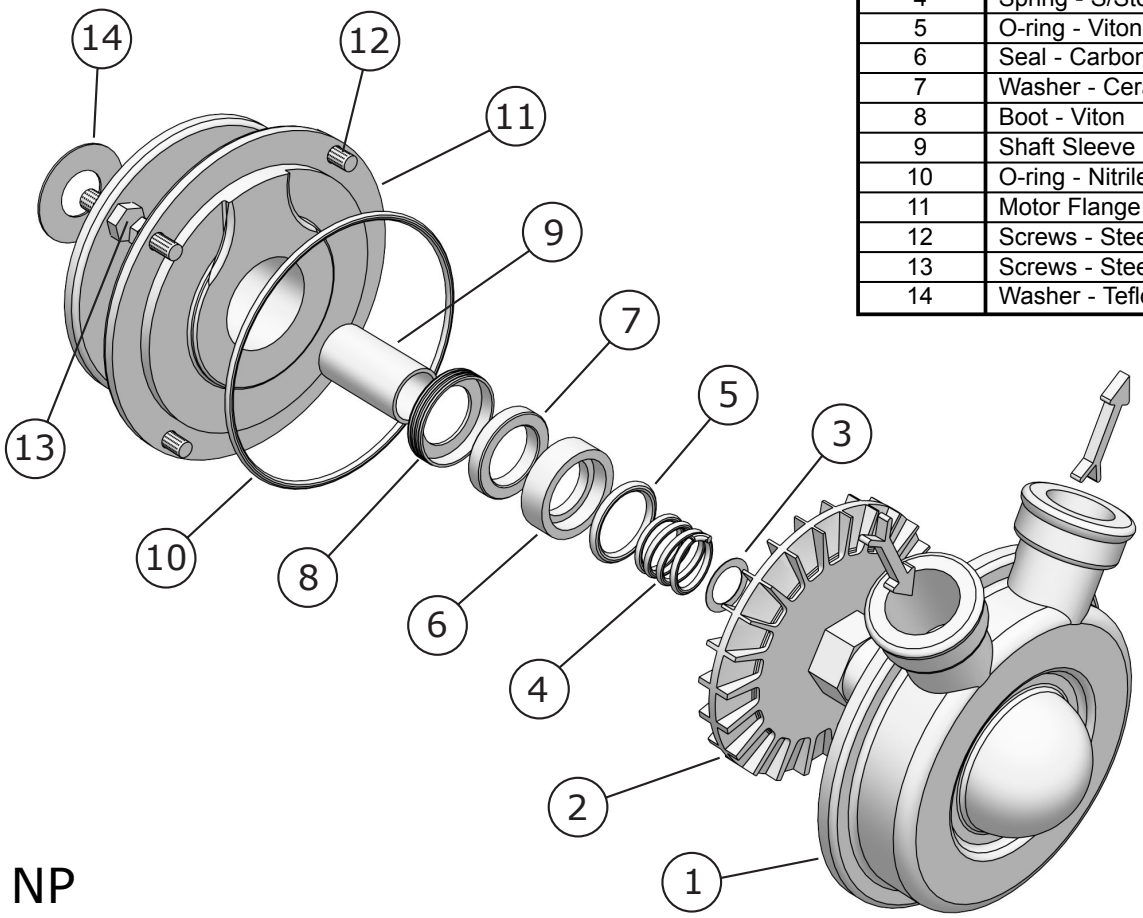
Additional tools for electric motor models

- Phillips/star head screwdriver
- 13mm spanner



NOVA SP

POSITION NUMBER	DESCRIPTION
1	Pump Body - Bronze
2	Impeller - Bronze
3	Shim - Brass
4	Spring - S/Steel
5	O-ring - Viton
6	Seal - Carbon
7	Washer - Ceramic/SiC
8	Boot - Viton
9	Shaft Sleeve - S/Steel
10	O-ring - Nitrile
11	Motor Flange - Bronze
12	Screws - Steel
13	Screws - Steel
14	Washer - Teflon



NOVA NP

Steps for replacement of seal kit

Dismantling of pump

1. Petrol engine models - using the 13/16” spark plug spanner, remove the spark plug. Using the 10mm spanner, remove the recoil starter to expose the recoil hub.
   Electric motor models - use the Phillips/star head screwdriver to remove the fan cover.

2. Using the 7/16” spanner, remove the four pump body screws (position 12). Using the hammer from behind the pump body (position 1), tap loose and remove the pump body exposing the impeller (position 2).

3. Petrol engine models - use the pipe wrench to secure the recoil hub, taking care not to damage the recoil hub.
   Electric motor models - use the 10mm spanner to secure the rear of the shaft.

4. Using the adjustable wrench spanner on the hex nut of the impeller, turn the impeller anti-clockwise then remove it from the shaft. Remove any shim or shims (position 3) fitted between the shaft and the impeller and retain for reassembly.

5. Petrol engine models - use the 1/2” spanner. Electric motor models - use the 13mm spanner. Remove the four motor flange screws (position 13). Using the Flathead Screwdriver gently remove the motor flange (position 11) from the motor. For Nova NP models remove any shim or shims fitted between the motor flange and the motor and retain for reassembly.

6. Place the motor flange, impeller side down, on a bench. Place the spark plug spanner or a screwdriver in the central hole against the rear of the Viton boot (position 8) and tap gently with a hammer to remove both the Viton boot and the Ceramic/SiC washer (position 7). Remove and discard all seal components.

7. Use a cloth to thoroughly clean all pump components. Use wet and dry emery paper to polish the motor flange bore and then lubricate with grease.

Reassembly of pump and new seal components

8. Place the motor flange, impeller side up, on a bench. Place the Ceramic/SiC washer with the Viton boot, polished side facing up, in the motor flange bore and push firmly into position against the shoulder. Use a cloth to remove any excess grease from the bore and Ceramic/SiC washer.

9. Use a cloth and wet and dry emery paper to clean and polish the motor shaft.

10. Place motor flange against the motor in its original position with the drain hole pointing in a downward direction, do not dislodge the Ceramic/SiC washer and Viton boot from their positions. Replace any shim or shims between the motor and the motor flange. Replace the screws connecting the motor flange to the motor and tighten evenly.

11. Ensure surfaces of the Carbon seal (position 6) and the Ceramic/SiC washer are clean and free of foreign materials. With the polished surface facing inwards, place the Carbon seal on the motor shaft and push into position against the Ceramic/SiC washer.

12. Place the Viton O-ring (position 5) on the motor shaft behind the Carbon seal and push the O-ring into the recess of the Carbon seal taking care not to damage the O-ring.

13. Replace the shim or shims removed during step 4 on the motor shaft.

14. Ensure the spring (position 4) is fitted to the impeller with the spring locater in position in the impeller locating hole.

15. Petrol engine models - use the pipe wrench to secure the recoil hub, taking care not to damage the recoil hub.
Electric motor models - use the 10mm spanner to secure the rear of the shaft.

16. Place the impeller on the shaft. Using the adjustable wrench spanner on the hex nut of the impeller, turn the impeller clockwise and tighten firmly. The impeller should just touch the motor flange and rotate freely when turned.

17. Place the Nitrile O-ring (position 10) around the motor flange.

18. Replace the pump body in its original position on the motor flange and replace and tighten the pump body screws. For Nova NP models the motor flange bridge must align with the pump body bridge.

19. Petrol engine models - replace the spark plug and recoil starter.
Electric motor models - replace the fan cover.

20. The Nova Pump is now ready for use. Refer to the Nova Pumps Start Up Instructions before operation.

Nova Pumps Start Up Instructions

1. Fill pump body with water (Nova SP Models Only).

2. Connect suction hose from pump inlet (marked with arrow) to supply tank outlet. The suction hose must be of non-collapsible, reinforced construction with a minimum inside diameter of 19mm. Ensure all suction hose connections are airtight otherwise performance may be affected. Keep suction hose as short as possible and avoid unnecessary bends.

3. Connect pressure spray hose from pump outlet (marked with arrow) to spray equipment. Ensure all pressure spray hose connections are airtight otherwise performance may be affected.

4. Connect hose from bypass ball valve to supply tank.

5. Fill supply tank with spraying liquid. (Nova NP Model only - ensure fluid level in supply tank is above highest point of suction hose).

6. Open the bypass ball valve completely, run the pump at slow speed and allow the pump to prime itself (removing air from the system).

7. The unit is now ready for on-going use. Set the bypass ball valve open halfway, this will ensure the mechanical seal is lubricated at all times.