

# SPINNER II<sup>®</sup>

OIL CLEANING CENTRIFUGE

**Model 60 SE**

2 gpm at 60 psig  
600 cc Dirt Capacity

Installation Instructions

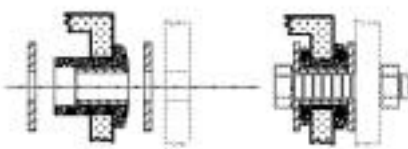
Parts List

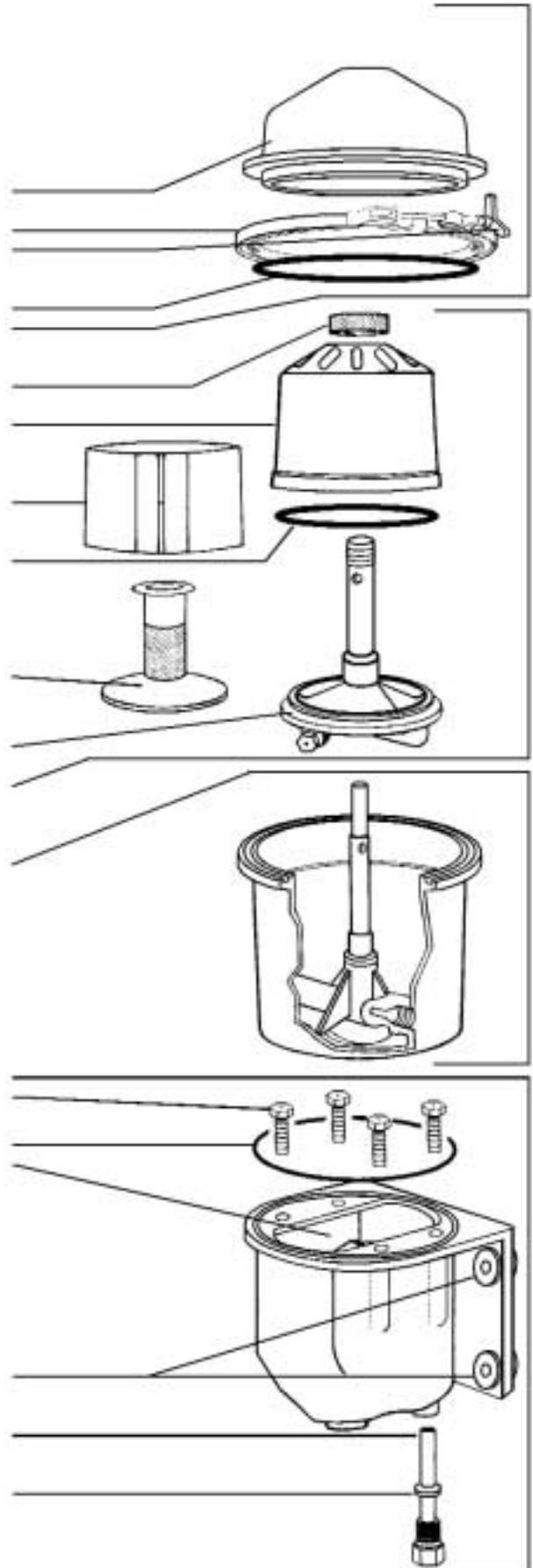
Service Instructions





# Model 60 SE Parts List

Item	Description	Part number
Only items shown with part numbers are available. <b>Bold denotes assembly</b>		
	<b>Centrifuge, Spinner II/Model 60 SE complete</b> .....	<b>71229</b>
	<b>Service kit, clean bowl (1 each items c, l and n)</b> .....	<b>71429</b>
<b>a</b>	Cover .....	71267
<b>b</b>	<b>Clamp, cover to base</b> .....	<b>71266</b>
	Tee bolt and knob clamp .....	71270
● <b>c</b>	Seal-cover, nitrile .....	71240
	<b>Cover assembly</b> .....	<b>71290</b>
<b>h</b>	Nut-centrifuge bowl .....	70667
<b>k</b>	Bowl-centrifuge .....	70668
● <b>l</b>	Insert, paper-centrifuge bowl (pkg. of 50) .....	70669
● <b>n</b>	Seal-centrifuge bowl, nitrile .....	70671
<b>m</b>	Baffle/screen-centrifuge .....	70670
<b>s</b>	Body-centrifuge turbine .....	71464
<b>d</b>	<b>Centrifuge turbine assembly</b> .....	<b>70666</b>
	(includes items <b>h, k, l, m, n</b> and <b>s</b> )	
<b>e</b>	<b>Housing assembly</b> .....	<b>71291</b>
<b>g</b>	<b>Control mechanism assembly</b> .....	<b>70675</b>
	Screw, hex head cap-control mechanism .....	70673
	M10 x 35mm (available locally)	
■ <b>f</b>	Seal-control mechanism (Viton®) .....	70996
	<b>Repair kit-control float mechanism</b> .....	<b>71445</b>
		
<b>p</b>	<b>Kit-isolator, noise, with washers (set of 4)</b> .....	<b>71173</b>
	(3/8-in. grade 5 bolts and nuts not supplied)	
■ <b>q</b>	<b>Cartridge-air valve assembly (includes item r)</b> .....	<b>70938</b>
	(optional assembly for turbo air supply - 72137)	
<b>r</b>	Seal-air valve cartridge, Viton .....	70966

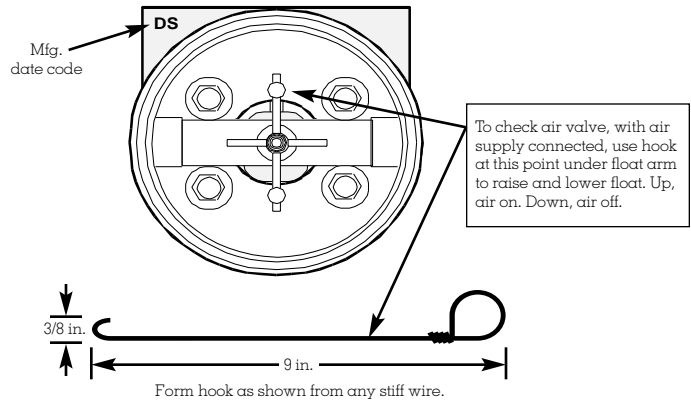


**Service Cycle** ● Whenever bowl is cleaned or replaced.  
 ■ At unit rebuild or when required.

### Refer to Parts List illustration

1. Shut off engine and allow centrifuge turbine assembly (d) to come to a complete stop.
2. Loosen handle on clamp (b), disengage tee bolt and remove cover (a), using coin in gap to separate cover from housing.
3. Partially withdraw centrifuge turbine assembly (d) from the housing (e) and allow oil to drain from nozzles (o) before removing completely. Hold the centrifuge turbine assembly in one hand and loosen knurled bowl nut (h) several turns until the face of the nut projects beyond the bronze bushing face. Carefully separate centrifuge bowl (k) from turbine body (s) by striking the face of the nut (h) with the palm of one hand while holding the bowl in the other. *Do not strike the nut or the bushing with or against a hard surface or damage will result.* Finish removing the nut and then remove the bowl and baffle/screen (m).
4. Simply replace the dirty centrifuge bowl with a new one or carefully remove the dirt cake from the bowl (k) using a wooden spatula or other non-damaging tool. Wipe out bowl with solvent. *Note:* To save time in cleaning, an optional die-cut Bristol paper insert (l) is available as a service part and may be installed to allow the compressed cake to be removed quickly.
5. Wash and clean baffle/screen (m) and turbine body (s), removing and discarding black Nitrile bowl seal (n).
6. Inspect top and bottom bushings of centrifuge turbine body (s). Replace turbine assembly if bushings show severe wear. Reassemble: Place baffle/screen (m) over stem of turbine body and seat evenly over shoulder on base. Install bowl seal (n) in recess in outer edge of turbine base. Slide a new centrifuge bowl (k) over stem and seat uniformly over bowl seal. Install and tighten knurled bowl nut (h) securely, *using finger pressure only.*
7. Inspect housing assembly (e) paying special attention to journal areas of spindle. Replace housing if damaged.

### Top view with centrifuge removed



8. Clean and inspect cover (a). Always remove the old cover seal (c), clean the groove in the housing and mating surface of the cover and replace with a new black Nitrile seal.
9. Check control mechanism (g) — see diagram above.
10. Install centrifuge turbine assembly (d) on spindle. Be sure it rotates freely. Replace cover (a), position clamp (b) uniformly over cover and housing flanges, and tighten clamp handle securely *by hand pressure only.*
11. With the engine running, check all connections and joints for leaks.

## Trouble-Shooting

### Centrifuge removes too little dirt

#### Check for Proper Operation

Warm up engine and then bring engine to normal speed for one minute and immediately shut it down. If the Spinner II unit is working correctly the turbine can be heard spinning. As with any high-speed device, it may go through momentary periods of vibration as it passes through critical speeds while slowing to a stop. This is normal. If the turbine is not spinning or if vibration is severe or continuous at all speeds, an error may have been made in assembly. Repeat steps 1 to 10, paying special attention to the proper seating of baffle/screen (m), the bowl seal (n) (Step 6) and the control mechanism (Step 9). If vibration persists, substitute a different centrifuge turbine assembly (d).

If the turbine is spinning properly, the centrifuge is doing its job of removing harmful abrasive dirt regardless of the amount of deposit found in the bowl. The visible deposit is largely soot and its thickness will vary from 1/8-in. to completely full depending on oil type, oil change interval, engine type and condition, and operating conditions. Oil additive package design will affect soot size and thus the amount of carbon and soot collected in the bowl.

### Control air valve problems

**Float valve flows air constantly or not at all, up or down.**

**Air tank bleeds down overnight.**

#### Check Valve (Step 9)

Most air control problems can be repaired without dismounting the centrifuge by renewing the air valve cartridge (q), making certain that air valve cartridge seal Part 70966 (r) is in place. A cartridge installed without the seal will be damaged and will leak continuously. If the float mechanism is worn or broken, the centrifuge must be disassembled and repaired with control float mechanism repair kit Part 71445. Instructions are contained in the kit. *Caution:* The valve cores in the air valve cartridge are special, low operating force-type with Viton seals to withstand hot oil. *Do not substitute tire valve cores — replace the entire cartridge.*

### Oil leaks

#### Cover Seal

Remove cover (a) and cover seal (c). Clean seal grooves in housing and mating surface on cover. Install a new cover seal (b) in the housing groove, replace cover (a), position clamp (b) uniformly over cover and housing flanges, and tighten clamp handle securely *by hand pressure only.*

#### Body to Control Mechanism Seal

Remove cover and centrifuge turbine assembly. Remove control mechanism by loosening four cap screws. Discard seal (f) and clean groove and mating surfaces. Replace seal with a new one and retighten cap screws alternately to 35 lb-ft torque. It is possible to rotate the body 180° if it is necessary to locate the oil inlet port on the left side. Replace the seal and retighten bolts. Continue from Step 3 above.

#### Oil Line Connections

Disconnect leaking hose and remove hose adapter from port. Clean threads in port and on adapter, and inspect for damage. Reinstall adapter using a good liquid thread sealant. Reconnect hose.

## Sales and Service

# SPINNER II®

## PRODUCTS



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