



National Vacuum Equipment



CHANGING GEAR CASE OIL ON NVE BLOWER PRO PAKS

MAINTENANCE MANUAL

800-253-5500 | www.natvac.com

SAFETY INSTRUCTIONS

DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING





Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

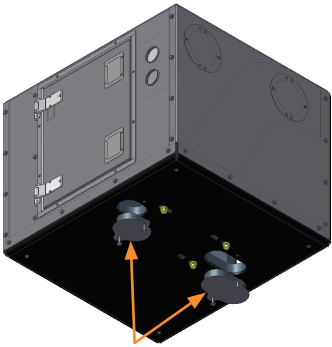
NOTICE

Indicates a hazardous situation which can cause damage to machine, personal property, and/or the environment, or cause the equipment to operate improperly.

 	<div> DANGER</div> <p>Lock out equipment before beginning any maintenance procedure. Rotating equipment can cause entanglement, injury and/or death.</p> <p>Allow all system components to cool below 100 °F before beginning any maintenance procedure. Severe burns are possible.</p> <p>Safely remove all pressure/vacuum from the system before beginning any maintenance procedure. Injury/death can occur.</p>
	<div> WARNING</div> <p>Ensure system is free of vacuum and pressure before beginning any maintenance.</p> <p>Allow blower and system components to cool below 100 °F before beginning any maintenance.</p>
	<div> WARNING</div> <p>Before performing inspection operators must wear PPE including, but not limited to, eye and hearing protection as noises levels can exceed 85 dB.</p>
	<div>NOTICE</div> <p>Only properly trained personnel should service systems containing NVE components.</p>

- 1. Position truck / unit on a level surface.
- 2. Remove the two panel covers on the bottom of the package stand. This gives access to the blower oil sump drain plugs. (7/16" Wrench or socket).

[SEE FIGURE 1]



REMOVE PANEL COVERS [FIGURE 1]

- 3. Open door to package and vent both oil sumps. The drive end vent is opened with a petcock, while the non-drive vent requires a plug be taken out. (9/16" Allen head).

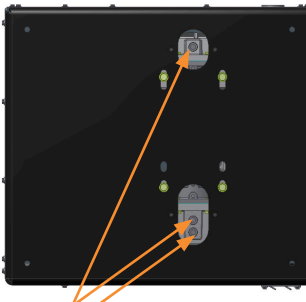
[SEE FIGURE 2]



REMOVE THIS PLUG [FIGURE 2]

- 4. Obtain an oil catch pan and place under drain plugs. Remove drain plugs one at a time and drain the sumps completely of oil. Remove both drive end drain plugs as one is magnetic and needs to be cleaned. (9/16" Allen head)


[SEE FIGURE 3]



REMOVE PANEL COVERS [FIGURE 3]

NOTICE

The condition of the oil excessive metallic presence can signal internal blower issues.
Contact NVE if this occurs.



NOTICE

Dispose of used oil according to local and EPA regulations in an environmentally friendly manner.

CHANGING GEAR CASE OIL ON NVE BLOWER PRO PACKAGES

NVE

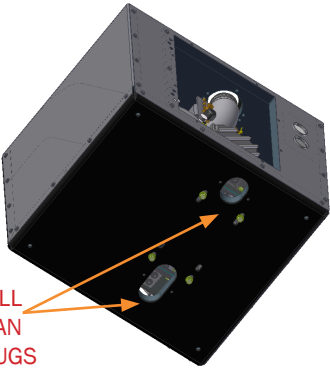
6.
- Once all gear case oil has drained, reinstall the drain plugs. A sealant is recommended but ensure none is allowed into the sump.

*Use caution if using teflon tape.

[SEE FIGURE 4]

5.
- Obtain proper type & quantity of gear lube according to the tables below:

REINSTALL
ALL CLEAN
DRAIN PLUGS



[FIGURE 4]

TABLE 1: RECOMMENDED OIL TYPES

Ambient Temp °F (°C)	Recommended Oils for Blowers (Synthetic Only)			
	Type	Viscosity	Pour Point	Color
Above 90°F (32°C)	Summit Syngear Sh-7320	ISO 320	-40 (-40)	Clear
	Mobile SHC 632		-40 (-40)	Orange
32° to 90° (0° to 32°)	Summit Syngear Sh-7220	ISO 220	-45 (-43)	Clear
	Mobile SHC 630		-41 (-42)	Orange
0° to 32° (-18° to 0°)	Summit Syngear Sh-7150	ISO 150	-60 (-51)	Clear
	Mobile SHC 629		-45 (-43)	Orange
Below 0° (-18°)	Summit Syngear Sh-7100	ISO 100	-60 (-51)	Clear
	Mobile SHC 627		-45 (-43)	Orange

*Ambient temp is the temperature of the space where the blower is located or enclosed

TABLE 2: BLOWER OIL CAPACITIES

Size	Blower Oil Capacity - DO NOT OVERFILL		
	Drive Side Oz (Liters)	Non-Drive Side Oz (Liters)	Total
4307 4310	18 (.53)	8 (.24)	26 (.77)

- Excessive or insufficient gear lube levels can cause catastrophic blower failure.
- Blower oil capacities do not account for fill lines / external sighteyes if present (actual quantities may vary slightly - oil should be centered in the sighteyes).

14. Unhook drive end fill line from holder and carefully pull outside the door (do not apply too much pulling force as this can kink the line and cause a restriction). Remove the plastic cap from the line.

[SEE FIGURE 5]

REMOVE
CAP



[FIGURE 5]

15. After ensuring the petcock vent is still open, insert a funnel into the open fill line fitting and slowly pour required oil into sump (see table above for approximates) do not fill too fast as this can cause fill line to vapor-lock fill to mid-point of sighteye it takes fluid time to travel into sump, so allow oil to drain and settle in sump before adding more.

[SEE FIGURE 6]

POUR SLOWLY

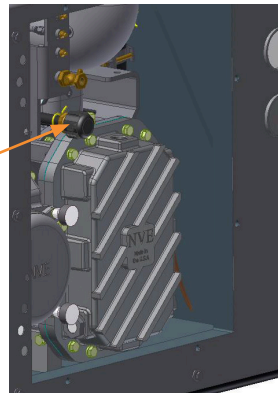


[FIGURE 6]

16. After verifying drive end gear case oil is at appropriate level, replace cap on the fill line and hook line back on clamp. Leave vent petcock open for now.

[SEE FIGURE 7]

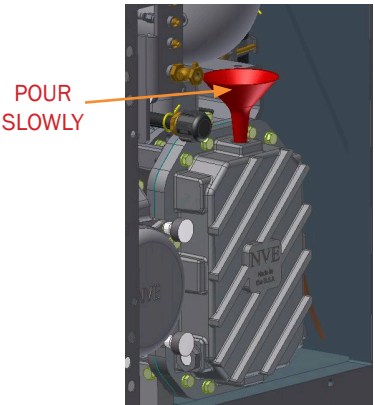
REPLACE CAP &
REPLACE LINE IN
HOLDER



[FIGURE 7]

17. Insert a funnel into the non-drive oil sump fill hole and slowly pour required oil quantity into sump. It helps to hold the funnel up slightly so air can vent. Fill to mid-point of sighteye. It takes fluid time to travel into sump, so allow oil to drain and settle in sump before adding more.

[SEE FIGURE 8]

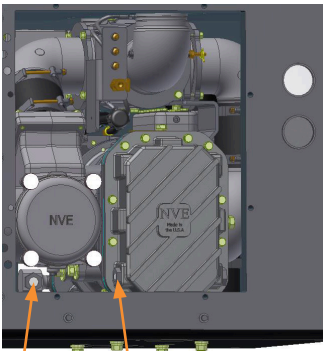


[FIGURE 8]

18. Remove funnel and allow unit to sit for several minutes this allows the oil to drain into the sump in order to get accurate readings in the sighteyes.

19. Verify oil level is at mid-point of both sighteyes (unit must be level) add / drain oil if necessary using aforementioned procedure.

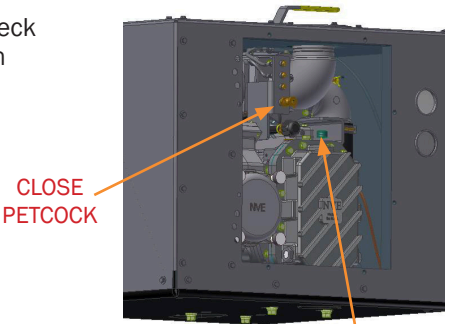
[SEE FIGURE 9]



[FIGURE 9]

20. Once oil is within specifications, the vent petcock must be closed and the non-drive vent plug must be replaced. Be sure petcock is closed and vent plug replaced before operating machine. Check for any leaks through the open panel covers. Replace panel covers under package.

[SEE FIGURE 10]



[FIGURE 10]

REPLACE PANELS →

REPLACE PLUG



National Vacuum Equipment

P.O. Box 685
Traverse City, MI 49685 USA

231.941.0215 Phone
231.941.2354 Fax

sales@natvac.com | www.natvac.com | 800.253.5500