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Foodservice  
Technologies

A BERKSHIRE HATHAWAY COMPANY

## TECHNICAL TIP

**Product:** Cornelius Viper

**Subject:** Critical Refrigeration System Component Change on 3 Barrel and 4 Barrel Viper Dispensers

**Date:** 02/03/2021

**Revised:** 04/22/2021

**Description of Potential Issue:** Installing incorrect component(s), type of refrigerant, or charge amount for a specific system.

**Serial Number Range Affected:** The new refrigeration components were implemented with serial number: 62E2022VP001

**Cause:** Compliance with EPA regulations

**Additional Info:** Cornelius 3 Barrel and 4 Barrel Viper compressor changed from a Copeland ZB-19 scroll compressor to a Copeland ZS-19 scroll compressor. The Copeland ZB-19 scroll compressor is 404A specific while the Copeland ZS-19 scroll compressor is compatible with 404A and 448A. The change from the ZB-19 compressor to the ZS-19 compressor required additional component changes as well as a different refrigerant charge amount. See matrix below detailing specific component change and refrigerant charge amount per specific system.

Link to access additional information:

<https://www.cornelius.com/wp-content/uploads/2021/02/Cornelius-3-Barrel-and-4-Barrel-Viper-Critical-Refrigeration-Changes-for-ZB-19-to-ZS-19-404A-and-448A.pdf>

**Conclusion:** All 3 Barrel and 4 Barrel Cornelius Vipers manufactured prior to the 22<sup>nd</sup> week of 2020 will utilize 404A refrigerant with the ZB-19 compressor and 404A compatible components. Cornelius 3 Barrel and 4 Barrel Vipers built the 22<sup>nd</sup> week of 2020 or after and shipped within the USA will utilize 404A refrigerant with the ZS-19 compressor and 404A compatible components. All Cornelius Vipers shipped to CAN will utilize the Copeland ZS-19 compressor with 448A refrigerant and 448A compatible components.

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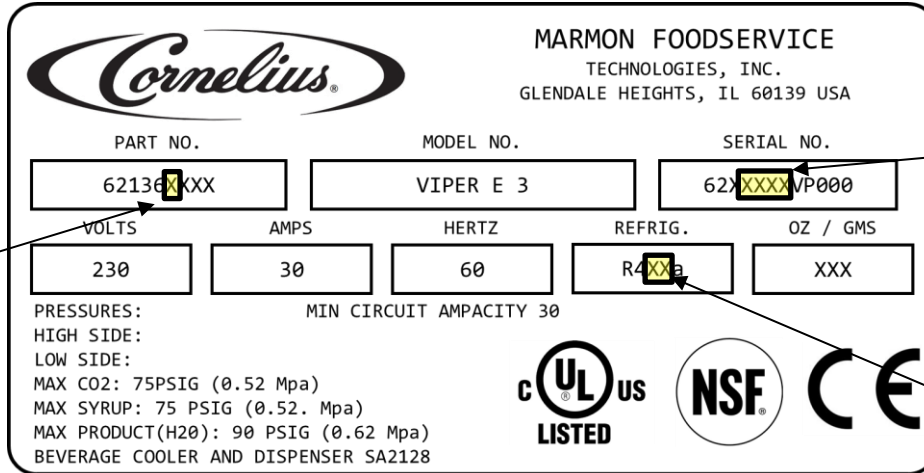
[www.cornelius.com](http://www.cornelius.com)



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**Viper 3 Barrel Critical REF Component Changes**



**Refrigerant Code**  
0 = R404a  
6 = R448a

**Date Code**  
2021 and lower  
2022 and higher

**Refrigerant**  
R404a  
R448a

Refrigerant	R404a	R404a	R448a
<b>Part No.</b>	621360XXX	621360XXX	621366XXX
<b>Serial Number Date Code</b>	2021 or earlier	2022 or later	n/a
<b>Compressor</b>	620607932	620070871	620070871
<b>Condenser</b>	620608016	620071625	620071625
<b>Fan</b>	629096902	620071572	620071572
<b>AEV</b>	620609156	620609156	620071188
<b>TXV</b>	n/a	n/a	620072074
<b>Thermostat Switch</b>	n/a	n/a	620072408
<b>Charge</b>	96 oz.	74.1 oz.	49.9 oz.

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**Viper 4 Barrel Critical REF Component Changes**

**MARMON FOODSERVICE**  
TECHNOLOGIES, INC.  
GLENDALE HEIGHTS, IL 60139 USA

PART NO.	MODEL NO.	SERIAL NO.
62146XXX	VIPER E 4	62XXXXP000
VOLTS	AMPS	HERTZ
230	30	60
		REFRIG.
		R4XXa
		OZ / GMS
		XXX

MIN CIRCUIT AMPACITY 30

PRESSURES:  
 HIGH SIDE:  
 LOW SIDE:  
 MAX CO2: 75PSIG (0.52 Mpa)  
 MAX SYRUP: 75 PSIG (0.52. Mpa)  
 MAX PRODUCT(H2O): 90 PSIG (0.62 Mpa)  
 BEVERAGE COOLER AND DISPENSER SA2128

Refrigerant Code  
0 = R404a  
6 = R448a

Date Code  
2021 and lower  
2022 and higher

Refrigerant  
R404a  
R448a

Refrigerant	R404a	R404a	R448a
<b>Part No.</b>	621460XXX	621460XXX	621466XXX
<b>Serial Number Date Code</b>	2021 or earlier	2022 or later	n/a
<b>Compressor</b>	620607932	620070871	620070871
<b>Condenser</b>	620608016	620071625	620071625
<b>Fan</b>	629096902	620071572	620071572
<b>AEV</b>	620609156	620609156	620071188
<b>TXV</b>	n/a	n/a	620072074
<b>Thermostat Switch</b>	n/a	n/a	620072408
<b>Charge</b>	108 oz.	81.1 oz.	63.5 oz.

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