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Aerospace Group
Conveyance Systems Division
Carter[®] Brand Ground Fueling Equipment

SM64220

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Applicable additional manuals:

None

Maintenance & Repair Manual

5-1/4" Inward Opening Vent

Model 64220

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**Maintenance, Overhaul & Test Instructions
Carter® Brand Model 64220 Inward Opening Vent**

1.0 INTRODUCTION

This manual furnishes detailed instructions covering the maintenance and overhaul of Eaton's Carter brand Model 64220 inward

opening vent and the various options listed in Section 3.0.

2.0 EQUIPMENT DESCRIPTION

Carter Model 64220 5-¼" inward opening vent is offered to meet the latest 406 and 407 Department of Transportation (DOT) requirements. By using an inward opening vent, the poppet will not come open under "roll over" situations, unlike the older outward opening vents.

The basic vent can be procured under model number 64220 with various options as noted in paragraph 3.0 and the figures at the end of this manual.

3.0 TABLE OF OPTIONS AND ORDERING INFORMATION

Model 64220 is available with various options as outline below.

OPTIONS TO BE ADDED TO 64220 5-¼" Vent – basic part number is an air operated, inward opening vent with standard TTMA mounting and includes Buna N seals, and an aluminum hood with two 3-½" victaulic opposed outlets for vapor recovery. Another standard feature is the capability of including an internal valve interlock. When plumbed using this feature, the internal valve will not open unless the vent opens.

OPTION D – Changes standard Buna N seals to Viton.

Example: 64220D - Inward opening vent with Viton seals in lieu of Buna N.

4.0 DISASSEMBLY

4.1 64220 5 ¼" Vent

4.1.1 Remove Screws (1-1) and Washers (1-2) and pull off Housing (1-3). It may be necessary to twist and pull as the housing is being removed.

4.1.2 Remove and discard O-Ring (1-4).

4.1.3 Remove Screws (1-5). Pull off Upper Vent Housing (1-6). Set the housing aside.

4.1.4 Remove and discard O-Ring (1-7).

4.1.5 Hold Screw (1-1) and poppet Retainer (1-24). Slowly remove one of these. The heavy spring will force the parts apart as they are being loosened, so use caution. Remove washer (1-2).

4.1.6 Remove Piston (1-10) and discard O-Ring (1-11). Remove and discard O-Ring (1-12)

4.1.7 Remove Poppet (1-14) and set it aside.

4.1.8 Remove Spring (1-15) and set it aside.

4.1.9 Pull Shaft (1-16) from unit.

4.1.10 Remove and discard remaining two O-rings (1-12) from the shaft.

4.1.11 It is not necessary to remove Screws (1-18) or Screen (1-21) unless damage is noted.

CAUTION
The vent spring has considerable force, so care must be exercised in following the next steps.

5.0 INSPECTION

It is recommended that O-rings (1-4), (1-12), (1-11) and (1-7) be discarded and replaced at each overhaul.

Inspect all metal parts for dings, gouges, abrasions, etc. Use 320 grit paper to smooth and remove sharp edges. Replace any part with damage exceeding 15% of local wall thickness. Use Alodine 1200 to touch up bared aluminum.

Inspect molded seal on Poppet (1-14) for any cuts or missing rubber sections. Check carefully

with a fingernail to be sure that the rubber is still resilient by depressing it about 1/32" and releasing it. If there is not an imprint left and the rubber returns to normal, it is fine to use again. If it does not return or is permanently marked by this action, replace the poppet.

Check the screen on the vent inlet for any damage and replace if necessary.

6.0 REASSEMBLY

Reassemble the parts in the reverse order of disassembly noting the following:

- 6.1 Make certain all components are clean and free from oil, grease, or any other corrosion resistant compound on all interior or exterior surfaces. Wash all parts with cleaning solvent, Federal Specification P-D-680, and dry thoroughly with a clean, lint-free cloth or compressed air.

WARNING

Use cleaning solvent in a well-ventilated area. Avoid breathing of fumes and excessive solvent contact with skin. Keep away from open flame.

- 6.2 Take caution in replacing parts joined by O-rings to prevent cutting them during assembly.
- 6.3 If the screen is removed from either vent, use Locktite #242 on the mounting screws to retain.

7.0 TEST

- 7.1 The following test procedures shall be accomplished after overhaul:

7.2 Test conditions

Test media shall be JP-8 MIL-T-83133, Jet A, odorless kerosene or Stoddard type solvent MIL-PRF-7024E Type II.

7.3 Functional Test

- 7.3.1 Apply air pressure of 18 psig to the vent actuation port (port closest to the mounting flange of the unit). The poppet should start to crack open.

- 7.3.2 Increase the pressure to 24 psi and the poppet should be fully open. To be sure it is open, increase pressure to 30 psi and observe the poppet. It should not move any further open. If it does then the spring is faulty.

8.0 ILLUSTRATED PARTS CATALOG

Table 1.0 tabulates the parts and sub-assemblies comprising the 64220 Vent. The item numbers of the table are keyed to the exploded views diagrammed in Figure 1.

Table 1.0
Ref. Figure 1

Fig.	Item	Part Number	Description	Units/ Assy	Option	Spares/10 Units/Yr
1	1	GF35307-306	Screw	5	All	-
	2	GF35333-40	Washer	6	All	-
	3	221841	Housing	1	All	-
	4	MS29513-149	O-Ring, Buna N	1	Basic	10
		M83248/1-149	O-Ring, Viton	1	D	10
	5	GF24693-C72	Screw	4	All	-
	6	221844	Upper Housing	1	All	-
	7	MS29513-161	O-Ring, Buna N	1	Basic	10
		M83248/1-161	O-Ring, Viton	1	D	10
	8 - 9	Left intentionally blank				
	10	221842	Piston	1	All	-
	11	MS29513-227	O-Ring, Buna N	2	Basic	10
		M83248/1-227	O-Ring, Viton	2	D	10
	12	MS29513-013	O-Ring, Buna N	3	Basic	30
		M83248/1-013	O-Ring, Viton	3	D	30
	14	47405-1	Poppet, Buna N	1	Basic	2
		47405-2	Poppet, Viton	1	D	2
	15	220700	Spring	1	All	-
	16	221843	Shaft	1	All	-
	17	221529	Lower Housing	1	All	-
	18	GF51957-13	Screw	2	All	-
	19	Left intentionally blank				
	20	#242	Locktite	A/R	All	-
	21	221533	Screen	1	All	-
	22	221805	Sensor & nuts	1	All	-
	23	RK 4.4T-8	Connector	1	All	-
	24	221806	Retainer, poppet	1	All	-

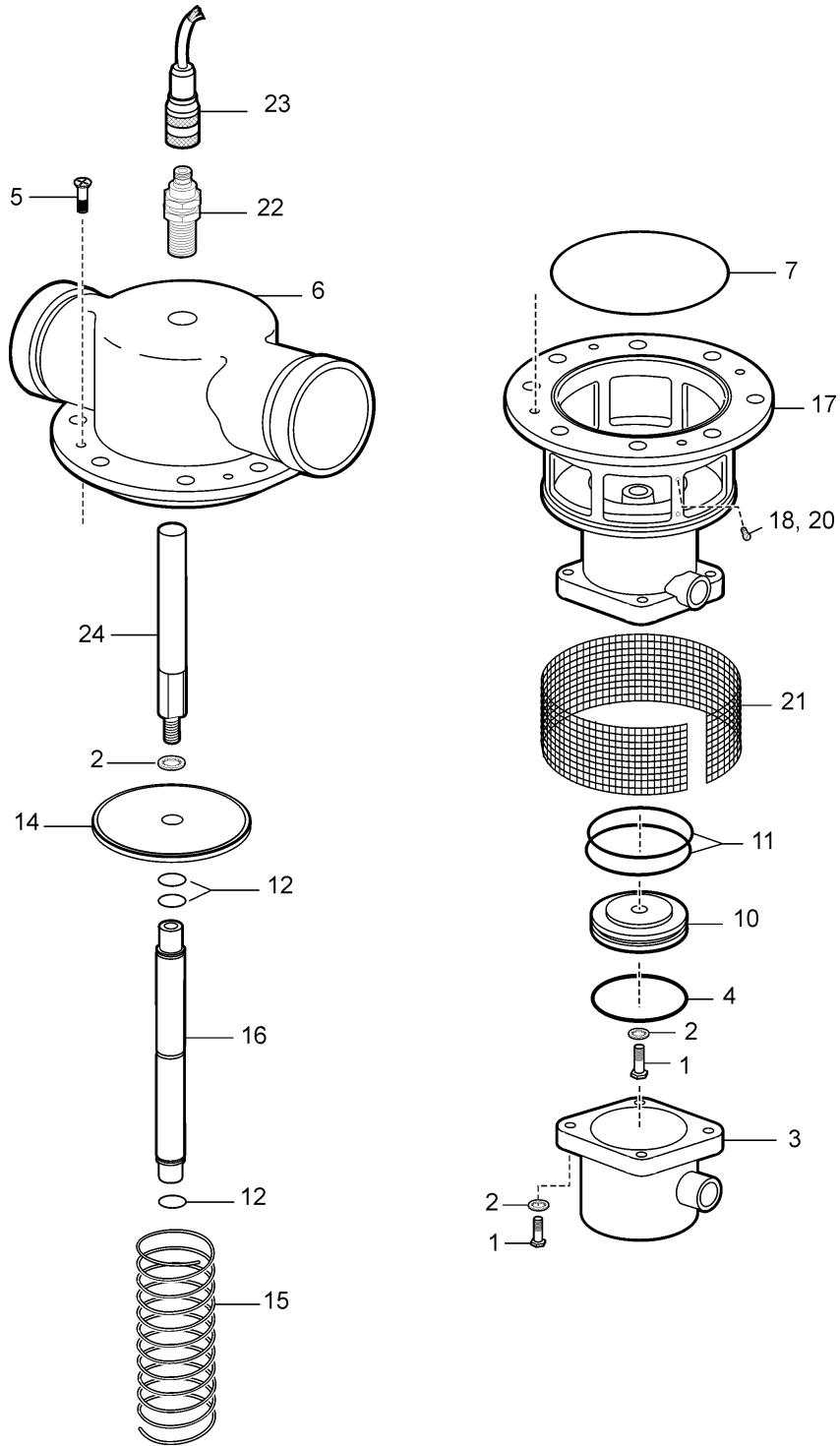


Figure 1
64220 5 1/4" Vent
Exploded View

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