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Aerospace Group
Conveyance Systems Division
Carter® Brand Ground Fueling Equipment

IN47076

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Applicable additional manuals:

SM61524

SM60554

Installation Instructions

**Carter Brand Hydrant Valve Model 61524 or 60554
Into 12 Inch Avery Hardoll Pits With 3 Inch ANSI Intermediary Flanges**

Part Number 47076

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Installation Instructions

Eaton's Carter brand Hydrant Valves into 12" Avery Hardoll Pits with 3 Inch ANSI Intermediary Flanges

1.0 INTRODUCTION

This manual furnishes detailed instructions covering the installation of either a Carter brand Model 61524DN, EN, 60554DN or EN Hydrant Valve into an Avery Hardoll pit with a 3 inch ANSI intermediary flange. It should be used with Kit KD47076. Related

service manuals covering the hydrant valves that are being installed are available from your local Carter brand distributor.

60554 Hydrant Valve - SM60554

61524 Hydrant Valve - SM61524

2.0 EQUIPMENT DESCRIPTION

2.1 DESCRIPTION

Carter brand hydrant valves 61524DN, EN, 60554DN or EN all have 4 inch ANSI inlet flanges and include a set of parts designed to mate this inlet flange with the existing 3 inch ANSI intermediary flange found in 12 inch Avery Hardoll pits. The mating parts include a spool adapter (3 x 4 inch) and two wedge shaped spacers for use in leveling the spool in pits that have experienced pipe movement such that the pipe outlet is no longer level with the ground. Also included in the kit of parts are the four bolts used to

mount the spool to the 3 inch ANSI pit flange, several O-rings, a gasket and studs, nuts and washers needed to install the hydrant valve to the 4 inch flange of the spool adapter.

2.2 INSTALLATION KIT, KD47076

In addition to this manual a minimum of one kit, KD47076 is recommended for use to assist in installing the spool adapter and other parts of the inlet. One KD47076 is included with each order of either 61524DN or 60554DN Hydrants. If additional kits are desired they can be purchased from your local Carter brand distributor.

3.0 INSTALLATION

3.1 Remove the old valve from the pit being sure to remove all parts down to the 3" intermediary flange. This flange should be permanently affixed to the inlet piping. Clean this flange to remove all traces of dirt or pieces of gasket. Check the flange for the presence of a groove for an o-ring seal of approximately 2.75 inches (70 mm) diameter. If such a groove is present a replacement o-ring is provided with the Adapter Assembly, 47076 or 47077. If no such groove is present, the gasket as provided will be used to seal between the wedge shaped spacer and the intermediary flange. (One, either the o-ring or the gasket will be discarded).

level, continue on to paragraph 3.5. If it is not level, continue on to paragraph 3.4. See Step 1 figure.

3.2 Install the eight studs furnished into the threaded holes in the large end flange of the spool adapter. The studs should be installed until the entering end is approximately flush with the lower surface of the flange.

3.4 Refer to Step 2 figure. Install the four 8" long studs from KD47076 by hand into the four mounting holes in the intermediary flange. These are used as a guide only and need not be installed more than three or four turns each. Place the O-ring (MS29513-237) in the groove in the intermediary flange (if groove is present). If there is no groove, place the gasket onto the flange over the four studs. If the hydrant valve to be installed is a 61524DN or EN 4 x 2½ inch unit, the two wedge shaped spacers provided will be the same. If the unit to be installed is a 60554DN or EN 4 x 4" unit, one wedge shaped spacer will be thicker than the other. Refer to Step 3 figure.

3.3 Place a leveling device on the intermediary flange and check to see if it is level. If it is

One wedge shaped spacer (the thin one on the 60554DN or EN) will be placed onto the gasket or o-ring with the grooved side upwards. Insert the O-ring (MS29513-232) into the groove. The second spacer will be

placed on top of the first with the grooved side upwards. Note: If the spacers are of different thickness, as in the installation of the 60554 Hydrant, always place the thicker spacer on top. Put the level onto the top of the upper spacer (leave the o-ring out of the groove on the top spacer for the time being). See Step 4 figure. Rotate one or both of the spacers until the top surface is level. Remove the level, insert the second O-ring (MS29513-232) into the groove. Skip to paragraph 3.6.

- 3.5 If the intermediary flange of the pit is level, the two wedged shaped spacers will be installed such that the thick edge of one is opposite the thin edge of the other to keep the flange level. Install the four eight inch long studs into the intermediary flange finger tight (three or four turns is sufficient). The O-ring (MS29513-237) will be placed in the groove in the intermediary flange (or the gasket whichever is needed). The smaller O-ring (MS29513-232) will be installed in one spacer groove and the spacer is placed onto the flange with the smooth side down against the o-ring or gasket. The second wedged shaped spacer is placed such that the upper surface is level. Install the second O-ring (MS29513-232) into the groove. Note: If the spacers are of different thickness, as in the installation of the 60554 Hydrant, always place the thicker spacer on top.
- 3.6 Refer to Step 5 figure. Install the Spool Adapter onto the four studs. Remove one of the studs and replace with one of the four mounting Bolts (GF16997-171) and Washers (5712-403-63) provided. Use the long Adapter (Allen Key) (220347), contained in KD47076, to run the Bolt down part way. Do not tighten at this time. Repeat with the other three Bolts, removing each stud in turn. Tighten one Bolt until it

seats only. Tighten the other three until they seat only. Looking at the four bolt pattern, number (mentally) them 1, 2, 3 and 4 in a clockwise fashion. Torque number 1 to 80 ft-lb (11 kg-m) followed by number 3, 2 and 4 in that order. Repeat the torquing to 110 ± 10 ft-lb (15.2 ± 1.4 kg-m) in the same pattern, then check the torque to the same value in the bolt order 1, 2, 3 and 4.

After the bolts are torqued, use the leveling device to insure the upper surface of the adapter is level. Make necessary adjustments as necessary.

- 3.7 Install the largest O-ring (MS29513-246) into the groove in the Spool Adapter.

Note: The installation so far should be "off-center" with respect to the inside diameter of the pit. The Hydrant Valve should be oriented during installation such that the pilot valve (lanyard attached) is located away from the off-set to assure the maximum amount of room for operation.

Install the Hydrant Valve, taking into account the off-set discussed above, onto the unit and install the eight Washers (GF960-1016) and Nuts (82156) hand tight. Using a crowfoot type open end wrench, tighten all nuts to seat them in place. Mentally number the eight nuts 1 through 8 clockwise. Tighten number one to 80 ft-lb (11 kg-m) followed by numbers 5, 3, 7, 2, 6, 4 and 8. Then torque to 110 ± 10 ft-lb (15.2 ± 1.4 kg-m) in the same pattern, then check the torque to the same value in the bolt order 1 thru 8 sequentially.

- 3.8 Once the hydrant valves are installed the units can be removed from the pit by removing the eight nuts and the Spool Adapters can be left in the pit. The O-ring (MS29513-246) should be replaced each time the valves are removed.

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