OPERATION & MAINTENANCE MANUAL

JONES®

Triton® Wet Barrel Ductile Iron Fire Hydrants

TABLE OF CONTENTS PAGE

Mueller Co.

Reliable Connections™

International Division
6125 Preservation Drive, Suite 200
Chattanooga, TN 37416 USA
Phone: +1.423.490.9555
UK Office: +44 1438 487410
Singapore Office: +65 6816 3088
Dubai Office: +971 4 214 6640
www.mueller-international.com
international@muellercompany.com

The following guidelines conform to AWWA M17, standard for the Installation, Field Testing, and Maintenance of Fire Hydrants, except as modified.

GENERAL INSPECTION

Inspection

Prior to installation, hydrants must be inspected at the time of delivery to ensure there is no damage related to shipping and handling. Upon delivery, verify compliance with required specifications to include:

- Correct model hydrant
- Correct operating nut size and shape on stem & cap
- Correct size outlet nozzles
- Correct inlet flange bolt pattern

The hydrant will arrive with each valve in the closed position. Each valve stem should be cycled from closed to full open and back to closed to ensure no damage occurred during shipment. If the stem is difficult to operate, repairs are needed. All external bolts and nuts should be tight.

Each hydrant is shipped with an inlet flange cover in place. If this cover is damaged or has been removed, visually inspect the inside of the hydrant from the inlet flange to ensure no foreign material or debris has entered the hydrant Recover the inlet flange until time of installation.

All inspected hydrants that will not be immediately installed should have valves closed, nozzle caps secured, and inlet covered.

INSTALLATION

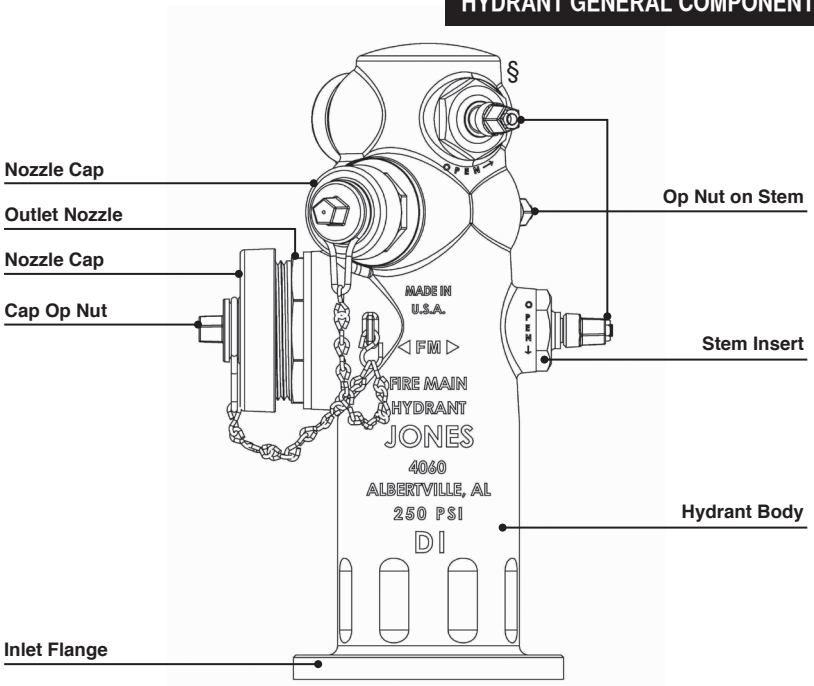
Proper installation and selection of the hydrant location will ensure many years of service with minimal maintenance.

A primary consideration to prevent damage to the hydrant while in service is locating the hydrant to avoid impact by vehicles and roadway equipment. Where a code or Municipal specification for curb set-back is not present, the recommended curb set-back (AWWA M17) is 2 ft minimum from the face of the curb to the nearest point on the hydrant. In rural areas where no curb is present, use a larger set-back, ensuring the hydrant is accessible to firefighting equipment. When installing a Jones Tell-Tail™ break check traffic valve, a concrete thrust collar with minimal dimensions of 2 feet diameter and 6 inches thick must be installed at the ground bury line to absorb the potential shock of a traffic impact. Poor loadbearing soil conditions may warrant a larger thrust collar. The inlet main should be supported by firm footings to ensure settling or sinking of the hydrant does not occur.

Connect the hydrant to a water main intended to provide adequate fire hydrant flow volume. Refer to AWWA C600, “Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances”, and local fire codes for fire authority requirements. Always ensure an isolation valve is located between the hydrant and the main to permit the water supply to be cut-off for maintenance.

Install the hydrant as plumb (vertical) as possible, allowing adequate clearance at the ground bury line to access flange bolts. The pumper outlet nozzle should face the curb without obstructions by light poles, signs, benches or other obstacles that may prevent direct access to the pumper nozzle from the street. Additionally, there should be no obstructions that prevent quick access and operation of nozzle caps and stems.

HYDRANT GENERAL COMPONENTS



J4060 Ductile Iron Hydrant

INSTALLATION (continued)

Following installation, the hydrant should be flushed to remove any foreign material and disinfectant chemicals. When closing the valves of newly installed hydrants, watch for debris or objects that may become wedged in the valve opening.

Also after installation of the hydrant, ensure all caps are tight enough to prevent removal by hand and the auxiliary valve is in the full open position. Initiate a record of the hydrant to include the following essential information: location of hydrant, location of auxiliary valve, date of installation, type & model hydrant, size of nozzle outlet & op nuts and, if available, flow data.

TESTING

Pressure Testing at Main Line Pressure

The following procedure is for pressure testing a hydrant for leaks at line pressure following maintenance repairs or the installation of a new hydrant.

1. With the auxiliary valve closed, remove the top nozzle cap and slightly open the top valve.

2. Slowly open the auxiliary valve and allow any air in the system to escape from the top nozzle valve opening.

3. After all the air has escaped from the hydrant (evidenced by water coming out of the top nozzle outlet), close the top outlet valve and completely open the auxiliary valve.

⚠ CAUTION: Trapped air in a water system can become compressed and present a safety hazard.

4. With all caps removed and the hydrant pressurized to line pressure, visually inspect for leaks at the flange joint, outlet nozzles, valve discs, and stem inserts around the stem.

NOTE: Before leaving the factory, all hydrants are pressure tested at 500psig (standard model) or 700psig (HP model).

5. If leaks are observed, repair or replace faulty component and re-test to ensure hydrant is leak free.

Testing at Pressures Above Main Line Pressure

The following procedure is for pressure testing a hydrant above line pressure. This test may be performed to verify that hydrant is leak free at the rated working pressure (i.e., 250 or 350psig).

1. With all nozzle caps removed, connect a water pressure test pump to a lower outlet nozzle.

2. Ensure there is no trapped air in the hydrant by slightly opening top valve. Close valve after all air has escaped and only water comes out of top nozzle outlet.

3. Close the auxiliary valve to isolate hydrant and open the hydrant outlet valve connected to the test pump.

4. Following the pump manufacture's directions, pump to the required test pressure.

⚠ CAUTION: Trapped air in a water system can become compressed and present a safety hazard.

5. With all caps removed, and the hydrant pressurized, visually inspect for leaks at the flange joint, outlet nozzles, valve disc's, and stem inserts around the stem

NOTE: Before leaving the factory, all hydrants are pressure tested at 500psig (standard model) or 700psig (HP model).

6. If leaks are observed, repair or replace faulty component and re-test to ensure hydrant is leak free.

7. Close outlet valve at test pump and open auxiliary valve to return hydrant to service.

ROUTINE MAINTENANCE

To ensure the hydrant is in proper working condition when needed, a routine inspection and maintenance program should be implemented and followed. Hydrants should be inspected and exercised at least annually. A record should be kept on the performance of routine maintenance, findings during inspection, and recommended actions. Flow measurements should be periodically recorded for each hydrant (refer to AWWA M17 for flow measurement procedures). Inspection and maintenance crew should carry spare parts such as chains and caps to perform simple repairs. Local fire code and fire authority guidelines should be followed at all times. The following guidelines should be carried out by authorized and trained personnel.

1. With caps removed, visually inspect hydrant inlet flange joint, outlet nozzles, valve seats, and stem inserts for leaks. If leaks are present, attempt to correct the leak by tightening the component. If leak is not resolved, mark hydrant for follow-up repairs.

2. Inspect cap chains and cap rings for binding. Cap rings should rotate freely.

3. Inspect outlet nozzle threads for damage or foreign material buildup. If needed, clean threads and recoat with a non-toxic, anti-seize lubricant. Clean cap threads and ensure cap vent hole is open.

4. Note any paint condition that may require follow-up coating. For ductile iron hydrants, there should be no bare metal exposed.

5. Close auxiliary valve to isolate hydrant.

6. With hydrant isolated from line pressure, fully open and close each valve two times, or until valve stem moves freely. The valve stem and mating components are made of corrosion resistant material. Some hard water conditions will cause deposits to accumulate. Exercising the stem will clear the deposit.

7. Visually inspect the valve disc from the outlet nozzle opening. The disc material should not be indented by the seat more than 1/8". If damage has occured to the disc or excessive indention is observed, mark hydrant for follow-up repairs.

8. Close all hydrant valves, leaving the top outlet valve slightly open to allow air to vent when water is restored to the hydrant.

9. Slowly open the auxiliary valve.

10. When all air has evacuated the hydrant (evidenced by water coming out of the outlet nozzle), close the hydrant outlet valve.

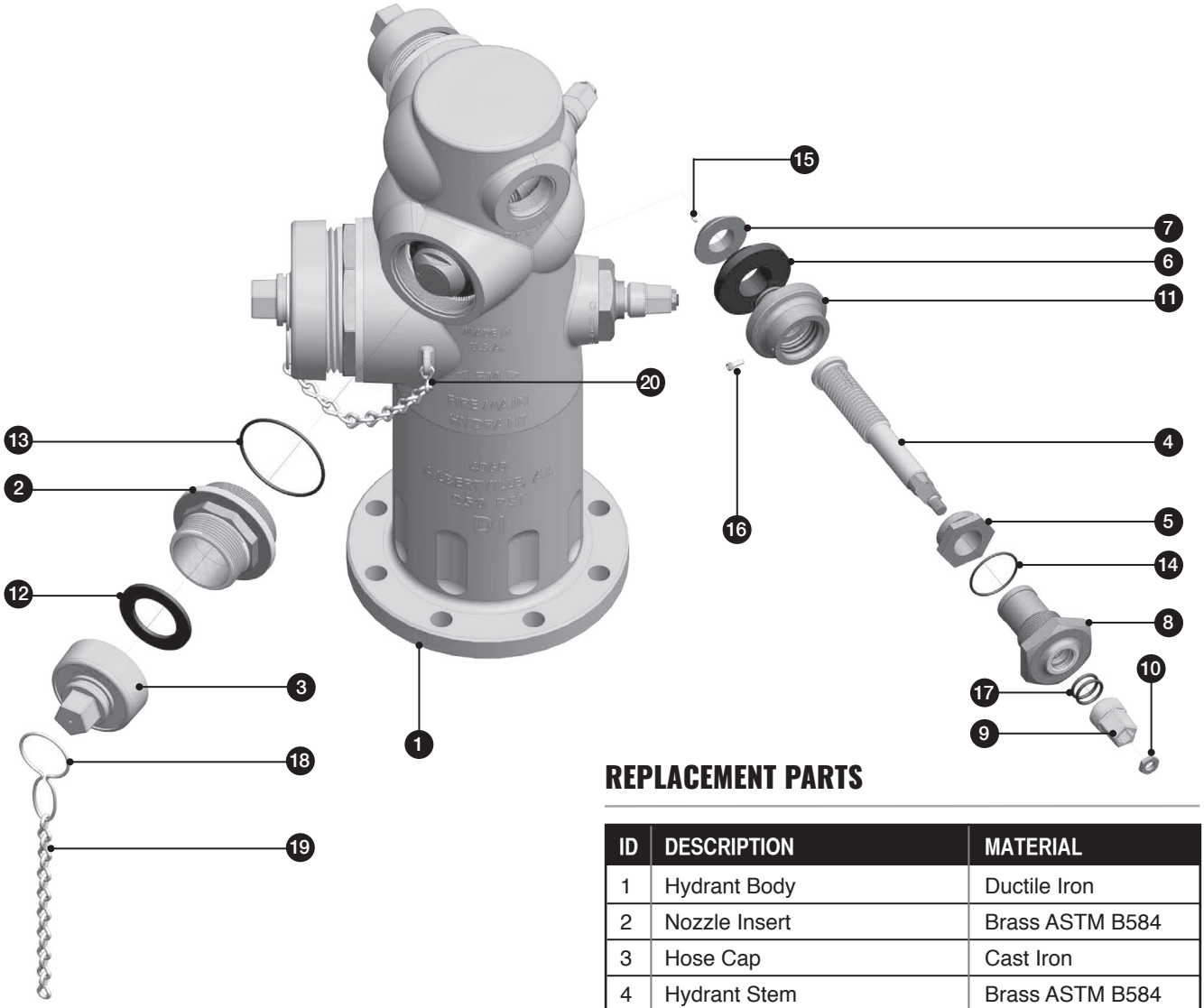
11. Attach a short length of hose to allow water to run onto the street, or attach a diffuser nozzle. Operate hydrant valve through one full cycle. Repeat for each outlet nozzle. Use caution to avoid soil erosion.

12. Close each valve and tighten each nozzle cap so that the caps may not be removed by hand.

13. Ensure the auxiliary valve is fully opened.

14. Record inspection and required follow-up actions (if needed).

15. Return hydrant to service.



REPLACEMENT PARTS

ID	DESCRIPTION	MATERIAL
1	Hydrant Body	Ductile Iron
2	Nozzle Insert	Brass ASTM B584
3	Hose Cap	Cast Iron
4	Hydrant Stem	Brass ASTM B584
5	Stem Locknut	Brass ASTM B584
6	Beveled Hydrant Disc	BUNA-N
7	Hydrant Disc Locknut	Brass ASTM B584
8	Stem Insert	Brass ASTM B584
9	Pent Nut	Brass ASTM B584
10	Pent Nut Retainer	Brass ASTM B62
11	Hydrant Disc Holder	Brass ASTM B584
12	Nozzle Gasket	Neoprene
13	Nozzle Insert O-Ring	BUNA-N
14	Stem Insert O-Rings	BUNA-N
15	Locknut Retainer Pin	Stainless Steel
16	Stem Locknut Retainer Screw	Stainless Steel
17	Stem Seal O-Rings	BUNA-N Rubber
18	Chain Ring	Steel
19	Chain	Steel
20	S-Hook	Steel

Notes

Notes

Mueller Co.
Reliable Connections®

International Division
6125 Preservation Drive, Suite 200
Chattanooga, TN 37416 USA
Phone: +1.423.490.9555

UK Office: +44 1438 487410
Singapore Office: +65 6816 3088
Dubai Office: +971 4 214 6640

www.mueller-international.com
international@muellercompany.com

Form 13222 - 03/17