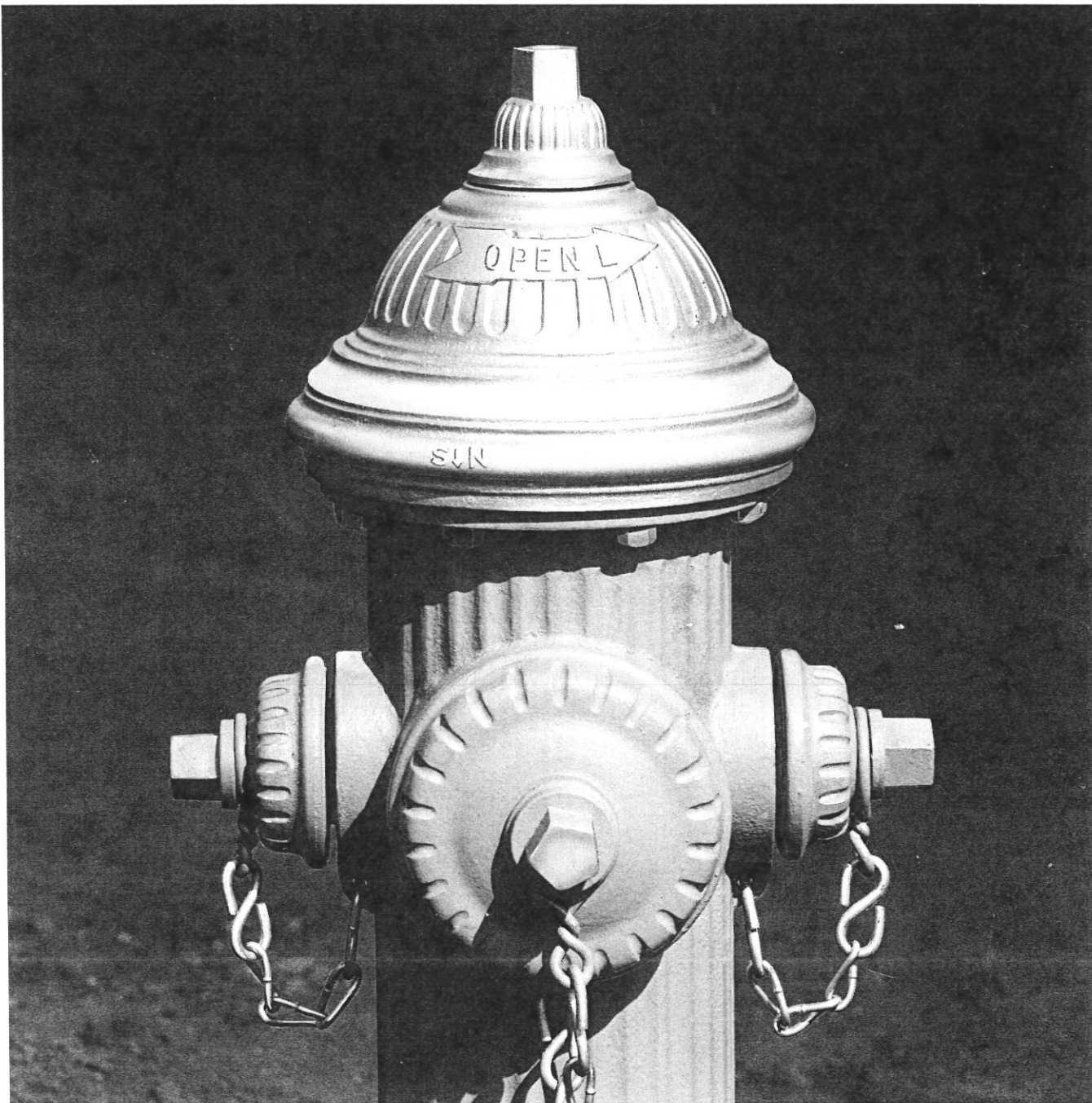


**SERIES H  
HYDRANT**



**U.S.  
PIPE**

**MAINTENANCE  
AND REPAIR  
MANUAL**

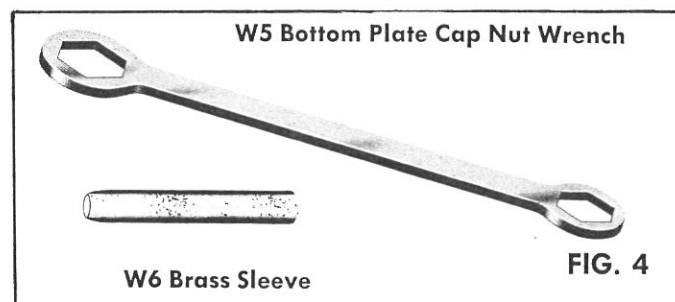
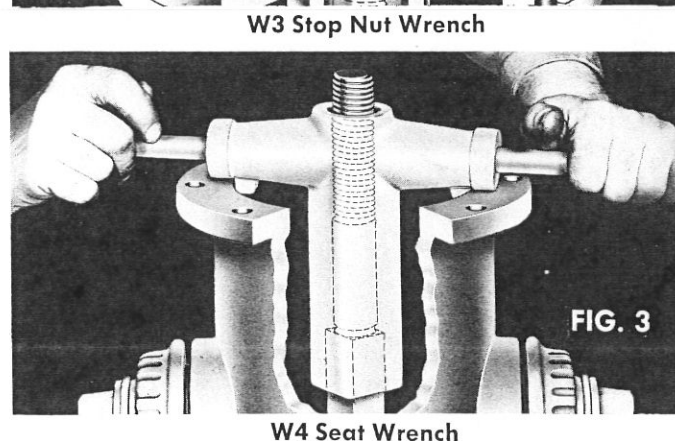
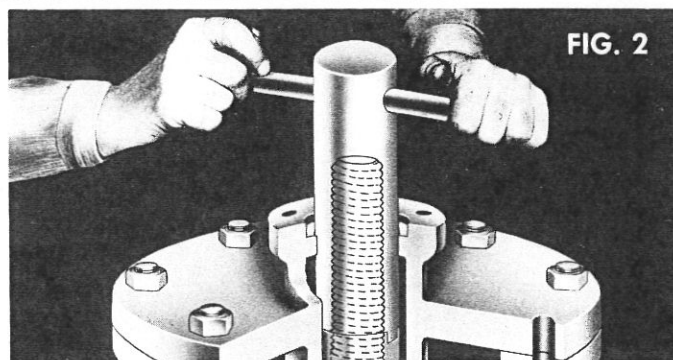
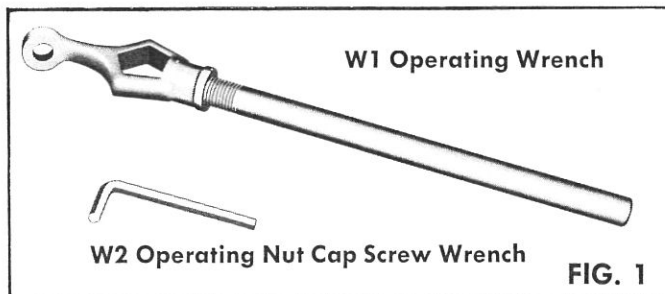
# INTRODUCTION

In the 1930's the A.P. Smith Company introduced the "H" series fire hydrant. Initially the hydrant was designated as the H-100 (4 5/8" V.O.) and the H-105 (5 1/4" V.O.). The original groundline traffic device featured breakable bolts. The hydrant was redesigned later to

utilize a breakable groundline coupling. This is the same design as manufactured today. The current designations are the H-200 (4 5/8 V.O.) and the H-205 (5 1/4 V.O.). This pamphlet will explain how to service and order parts for the H-200 or H-205 hydrants.

## DISASSEMBLY INSTRUCTIONS

1. Close the auxiliary gate valve or shut off the water in the line to the hydrant. Open the hydrant to relieve any internal pressure.
2. Take off operating nut, part H10, and bonnet, part H4, by removing operating nut cap screw, part H54, and the bonnet stud nut, part H36.
3. Remove the hold-down plate cap screws, part H28. Disengage the revolving nut, part H10A, together with the hold-down plate, part H19, as a unit from the valve rod thread by turning in the direction to open the hydrant.
4. Remove the bronze travel stop nut, part H18 (see Fig. 2). Rotate the wrench in the same direction as indicated by the arrow on the hydrant bonnet.
5. Position the brass sleeve (see Fig. 4-W6) on the threads on the valve rod upper section, part H25, to protect "O" rings from damage by stem threads; then take off the "O" ring seal plate, part H3, after removing the bolts and nuts, part H35.
6. Engage the seat wrench on the square at the top end of the valve rod, part H25 (see Fig. 3). Rotate the wrench left (counter-clockwise) to unscrew the hydrant valve assembly as a unit from the bronze subseat, part H9A. Only minimum torque applied to the seat wrench is required to disengage the seat threads. Remove the seat wrench from the valve rod and then lift the valve assembly out of the hydrant standpipe.
7. Carefully examine all parts which have been removed.
8. Replace all damaged parts. Before reinstalling the operating parts, carefully examine the plasticized rubber main valve, part H44, drain valve faces, part H13, valve seat "O" rings, part H45, and seal plate "O" rings, part H55.



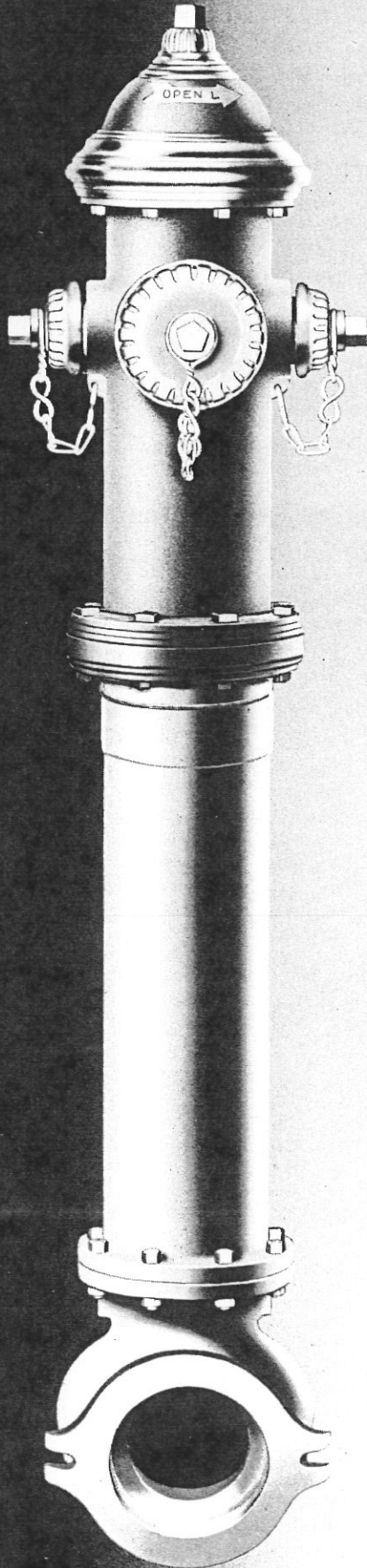
## REASSEMBLY INSTRUCTIONS

1. Before replacing the valve rod assembly, coat the seat ring threads with waterproof, graphite-type grease or other suitable lubricant. Position the valve seat ring, part H9, so it is in contact with the main valve, part H44. Lower the valve rod assembly into the standpipe. Engage the threads by hand rotation of the rod and then push the main rod down so that the valve is in the open position.
2. Using the seat wrench, thread the valve assembly into engagement with the hydrant sub-seat thread by turning the wrench right (clockwise) until the threads are fully engaged. The "O" rings automatically produce the pressure seal and only a light torque is required.
3. Position the brass sleeve (Fig. 4) on the threads on the valve rod upper section, part H25, to avoid damaging "O" rings. Then reposition the "O" ring seal plate, part H3, by carefully telescoping it over the brass sleeve. Install bolts and nuts, Part H35, and remove the brass sleeve, W6.
4. Engage the travel stop nut, part H18, with valve rod thread. Rotate the stop nut wrench until the stop nut seats on the valve rod shoulder. If necessary, add lubricant -- Exxon "Beacon 290" or equal.
5. Reassemble remaining parts by reversing the procedures described for their removal in points 3, 2, and 1.
6. With the nozzle caps attached, rotate the operating nut, part H10, until the hydrant valve is in the closed position. Open the auxiliary gate valve to supply water to the hydrant. Open the hydrant to check pressure tightness of assembled parts. Remove the the operating nut and observe the opening in the bronze revolving nut, part H10A, to determine if all seals are pressure tight. If so, attach the operating nut and close the hydrant. Check to be sure that water has completely drained from the hydrant standpipe.

## REPOSITIONING THE NOZZLES

1. Close the gate valve controlling the water flow to the hydrant. Remove one hose cap to make certain the hydrant is not pressurized.
2. Open the hydrant 2 to 3 turns.
3. Loosen part HR-33, standpipe bolts & nuts.
4. Rotate part HR-1, standpipe upper section, to desired position.
5. Retighten the bolts, close the hydrant and restore water flow by opening the gate valve. Replace the hose cap.

# HYDRANT PARTS LIST

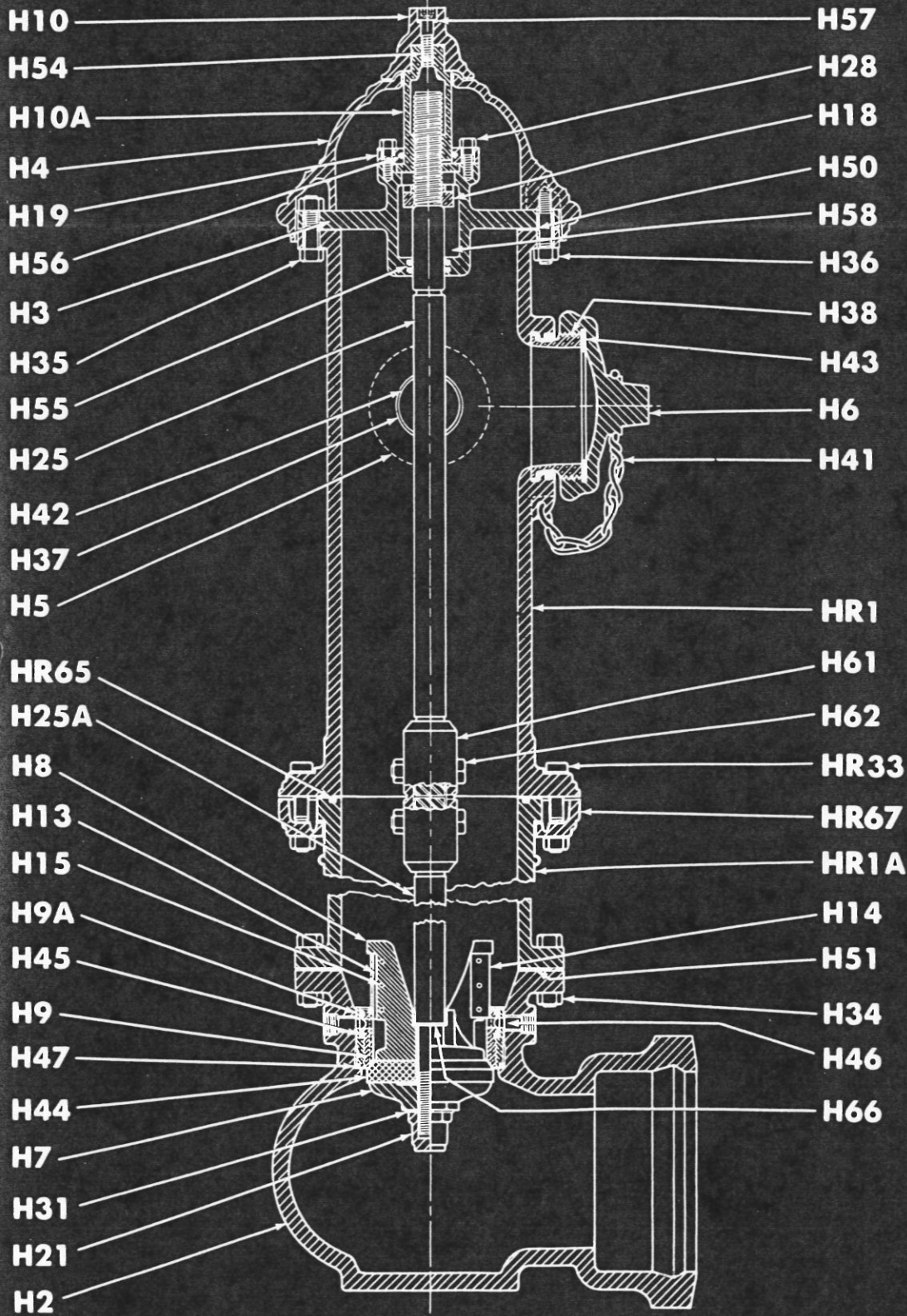


H200 — 4 1/2" V  
H205 — 5 1/2" V

PART NO.	NAME OF PART	NO. REQD.
HR1	STANDPIPE - UPPER SECTION	1
HR1A	STANDPIPE - LOWER SECTION	1
H2	ELBOW	1
H3	"O" RING SEAL PLATE	1
H4	BONNET	1
H5	2 1/2" HOSE NOZZLE CAP	*
H6	PUMPER NOZZLE CAP	*
H7	VALVE BOTTOM PLATE	1
H8	VALVE TOP PLATE	1
H9	VALVE SEAT RING	1
H9A	SUB-SEAT (PART OF H2)	1
H10	OPERATING NUT	1
H10A	REVOLVING NUT	1
H13	DRAIN VALVE FACE	2
H14	GUIDE PLATE	2
H15	DRAIN VALVE SCREW	6
H18	TRAVEL STOP NUT	1
H19	HOLD-DOWN PLATE	1
H21	VALVE ROD CAP NUT	1
H25	VALVE ROD UPPER SECTION	1
H25A	VALVE ROD LOWER SECTION	1
H28	HOLD DOWN PLATE CAP SCREW	4
H31	VALVE ROD BOTTOM GASKET	1
HR33	STANDPIPE BOLT AND NUT	8
H34	ELBOW BOLT AND NUT	8
H35	"O" RING SEAL PLATE BOLT AND NUT	7
H36	BONNET STUD AND NUT	1
H37	HOSE NOZZLE	*
H38	PUMPER NOZZLE	*
H41	CHAIN ASSEMBLY	*
H42	HOSE NOZZLE CAP GASKET	*
H43	PUMPER NOZZLE CAP GASKET	*
H44	VALVE	1
H45	VALVE SEAT "O" RING	2
H46	DRAIN HOLE LINER	2
H47	SUB-SEAT "O" RING GASKETS	2
H50	TOP FLANGE GASKET	1
H51	BOTTOM FLANGE GASKET	1
H54	OPERATING NUT CAP SCREW	1
H55	SEAL PLATE "O" RING	2
H56	HOLD-DOWN PLATE "O" RING	1
H57	OPERATING NUT CAP SCREW GASKET	1
H58	LUBRICANT	*
H61	VALVE ROD SAFETY COUPLING	1
H62	ROD COUPLING BOLT AND NUT	2
HR65	STANDPIPE RING GASKET	1
H66	VALVE TOP PLATE GASKET	1
HR67	STANDPIPE SAFETY FLANGE	1

\* AS REQUIRED

# HYDRANT PARTS LIST



## EXTENSIONS

FOR DETAIL OF STANDPIPE AND VALVE ROD EXTENSIONS REFER TO PAGE 5 .

## REPAIR KITS

FOR DETAIL OF GROUNDLINE SAFETY REPAIR KIT REFER TO PAGE 5 .

## SAFETY GROUND-LINE CONSTRUCTION

WHEN HYDRANT IS SHARPLY IMPACTED, AS BY A MOVING VEHICLE, BOTH THE STANDPIPE SAFETY FLANGE AND THE VALVE ROD SAFETY COUPLING BREAK CLEANLY.

## REPOSITIONING NOZZLES

THE STANDPIPE SAFETY FLANGE CONSTRUCTION PERMITS ROTATING THE NOZZLES TO ANY DESIRED POSITION.

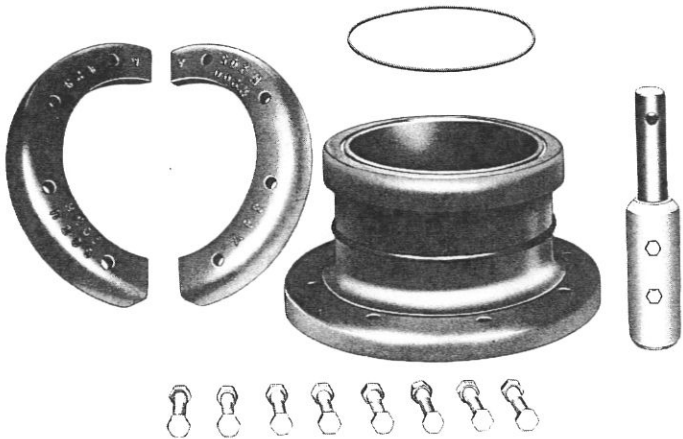
		H200	H205
HYDRANT SIZE	NOMINAL	4½"	5"
HYDRANT VALVE — DIAMETER OF VALVE OPENING	ACTUAL	4⅝"	5¼"
NOZZLES — DISTANCE GROUND LINE TO NOZZLE CENTER LINE		17¼"	17¼"
OPERATING NUT — DISTANCE GROUND LINE TO TOP OF NUT		32"	32"

## EXTENDING AN EXISTING HYDRANT

1. Close the gate valve controlling the water flow to the hydrant. Remove one hose cap to make certain the hydrant is not pressurized.
2. Disassemble the hydrant per the disassembly instructions on page 1.
3. Utilizing the proper length extension kit, bolt

the extension barrel and non-frangible barrel coupling to the existing lower barrel. Install the rod extension between the upper and lower main rod sections. Take care that the non-frangible rod coupling is on the bottom of the extension rod.

4. Reassemble the hydrant. Restore the water flow. Open the hydrant and check for leaks.



### EXTENSION SECTIONS FOR ROTARY HEAD H200 & H205 HYDRANTS

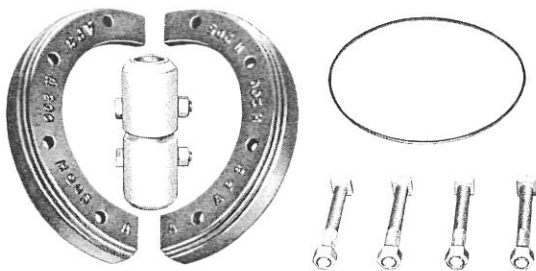
LENGTH	6"	12"	18"	24"	30"
KIT NO.	HE2-1	HE2-2	HE2-3	HE2-4	HE2-5

## REPAIRING A HYDRANT AFTER A TRAFFIC IMPACT

1. Close the gate valve controlling the water flow to the hydrant.
2. Disassemble the hydrant per the disassembly instructions on page 1.
3. Utilizing an HK2 repair kit (the same kit

works for H200 and H205) replace parts H61, HR65 and HR67 with the new parts in the kit.

4. Reassemble the hydrant. Restore the water flow. Open the hydrant and check for leaks.



KIT NO. HK2

### SAFETY REPAIR KITS FOR ROTARY HEAD H200 & H205 HYDRANTS