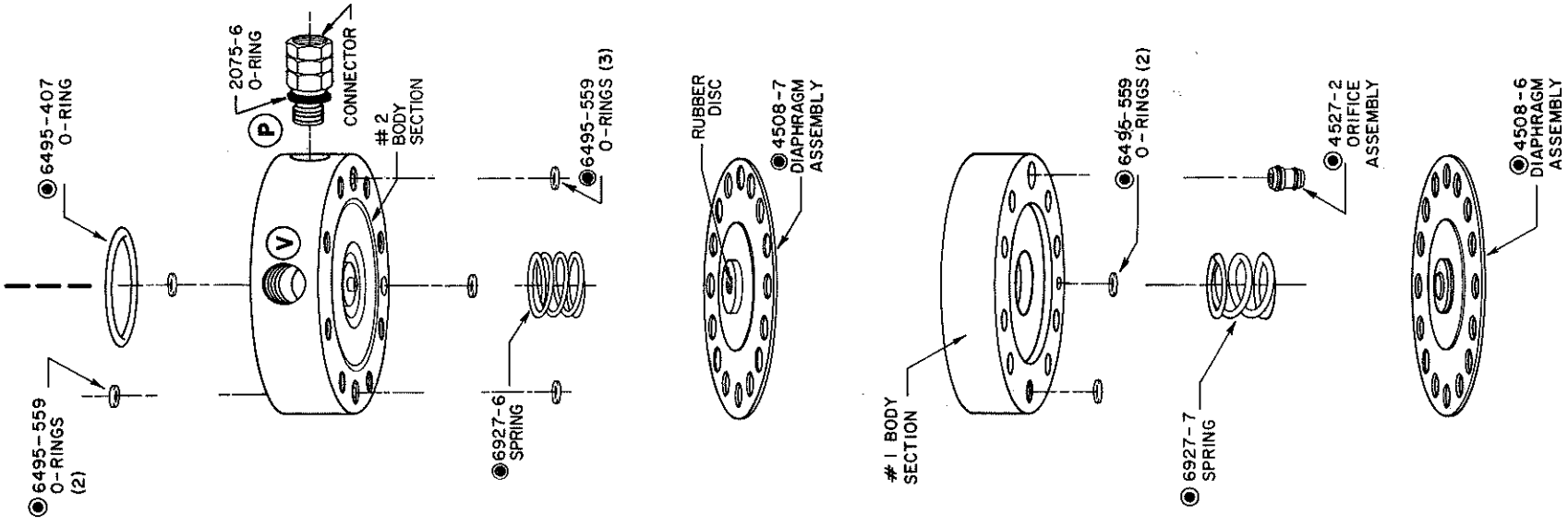


UNIT IS EQUIPPED WITH EITHER THE SAFEGARD OR OUTLET CONNECTION PLATE.



**SERVICING CONTROL SECTION**

SERVICE KIT #7334-9 IS REQUIRED. REPLACE ALL APPLICABLE PARTS WITH REPLACEMENTS (KIT CONTAINS THOSE PARTS MARKED WITH (C)). ALL OTHER PARTS MUST BE ORDERED SEPARATELY WHEN REPLACEMENT IS REQUIRED.

SERVICE PRECAUTIONS - CLEAN PORTS, VALVE SEAT AND AIR PASSAGES USING SOLVENT OR DETERGENT AND WATER. DRY WITH CLEAN COMPRESSED AIR.

OPTIONAL (NOT RECOMMENDED AS PART OF NORMAL SERVICE) - USING A WRENCH, UNTHREAD CONNECTOR FROM BODY SECTION #2. REMOVE O-RING FROM CONNECTOR.

**ASSEMBLY**

PLACE UNIT SO BODY SECTION #2 IS FACING UP. ALIGNING MARK (REFER TO "PRELIMINARY SERVICE INSTRUCTIONS") SHOULD BE ALIGNED TO REAR OF BODY SECTION. "GUIDE RODS" SHOULD BE THREADED INTO OPPOSING HOLES IN BOLT CIRCLE, SEE FIGURE A.

SUBASSEMBLY - (IF CONNECTOR WAS REMOVED) LUBRICATE O-RING (#2075-6) AND INSTALL ONTO END OF CONNECTOR. THREAD CONNECTOR INTO BODY SECTION #2 UNTIL SNUG AGAINST SURFACE.

- 1 PLACE 3 SMALL O-RINGS (#6495-559) INTO RECESSED POCKETS IN BOLT CIRCLE OF BODY SECTION #2. TO ENSURE THAT O-RINGS STAY IN PLACE, DO NOT TIP UNIT UNTIL ASSEMBLY IS COMPLETE.
- 2 INSERT BACK PRESSURE SPRING (#6927-6), THE LIGHTER OF THE SPRINGS, SO IT SEATS OVER THE CENTER PROTRUSION OF BODY SECTION #2.
- 3 POSITION DIAPHRAGM ASSEMBLY (#4508-7), WITH RUBBER DISC IN CENTER FACING DOWN, OVER SPRING. CHECK ASSEMBLY BY DEPRESSING CENTER OF DIAPHRAGM. DIAPHRAGM SHOULD SPRING BACK UP - IF NOT, REPLACE SPRING (#6927-6).
- 4 PLACE BODY SECTION #1 WITH SIDE HAVING RECESSED POCKET FACING UP. INSPECT ORIFICE ASSEMBLY (#4527-2) FOR ANY NICKS OR CUTS ON THE O-RINGS. REPLACE O-RINGS IF NECESSARY. CAREFULLY GREASE O-RINGS LIGHTLY WITH SILICONE-BASED LUBRICANT - AVOID PLUGGING ORIFICES.
- 5 INSTALL ORIFICE ASSEMBLY INTO THE DEEPER OF THE THREE RECESSED POCKETS IN BOLT CIRCLE OF BODY SECTION #1. LARGER DIAMETER END OF ORIFICE ASSEMBLY SEATS INTO THE POCKET. INSTALL 2 SMALL O-RINGS (#6495-559) INTO REMAINING POCKETS.
- 6 POSITION BODY SECTION #1 OVER DIAPHRAGM ASSEMBLY INSTALLED IN BODY SECTION #2 (CHECK THAT ALIGNING MARKS ARE CENTERED IN REAR) ORIFICE ASSEMBLY SHOULD BE VISIBLE IN BOLT CIRCLE.
- 7 POSITION DIFFERENTIAL SPRING (#6927-7), HEAVIER OF THE TWO SPRINGS, IN CENTER POCKET OF BODY SECTION #1. POSITION DIAPHRAGM ASSEMBLY (#4508-6) OVER SPRING WITH FLAT HEAD OF RIVET FACE UP.

- 6 REMOVE BACK PRESSURE DIAPHRAGM ASSEMBLY (#4508-7) AND SPRING. REMOVE 3 SMALL O-RINGS IN BOLT CIRCLE OF BODY SECTION #2.
- 5 SEPARATE BODY SECTION #1 FROM BODY SECTION #2 (AS IN STEP 2).
- 4 REMOVE DIFFERENTIAL DIAPHRAGM ASSEMBLY (#4508-6) AND SPRING FROM BODY SECTION #1. REMOVE 2 SMALL O-RINGS FROM BOLT CIRCLE. GENTLY GRIP AND UNSEAT ORIFICE ASSEMBLY BY ROTATING AND PULLING (SMALL PLIERS MAY BE REQUIRED, BUT USE ONLY LIGHT TO MODERATE PRESSURE SO AS TO PROTECT DELICATE JEWEL WITHIN ORIFICE ASSEMBLY).

DISASSEMBLY (CONTINUED)

ASSEMBLY (CONTINUED)

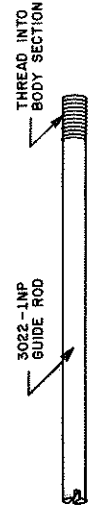
<b>SERVICE DRAWING --- ASSEMBLY AND DISASSEMBLY INSTRUCTIONS</b>			
<b>MODEL 860</b>			
<b>SAFEGARD SENSOR CONTROL OR SENSOR CONTROL ( WITHOUT SAFEGARD )</b>			
A	4-1-82	RELEASED	
		<b>King Engineering Corporation</b> Box 1228, Ann Arbor, MI 48106-1228 (734) 662-5691 Fax: (734) 662-6652	
		K-2000-1-860	REV. A
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**VENT GENERATOR REPLACEMENT**

ORDER REPLACEMENT KIT 7878-20. LOCATED WITHIN THE INLET DOME THIS ASSEMBLY WILL RARELY NEED SERVICING. IF REPLACEMENT IS REQUIRED - LOOSEN SET SCREW LOCATED ON SIDE OF INLET DOME AND PUSH ASSEMBLY OUT. ACCESS PASSAGE ON BOTTOM OF INLET DOME WILL ACCEPT SMALL DIAMETER HEX KEY (USED TO LOOSEN SET SCREW).

- REMOVE INTEGRAL VALVE FROM INLET DOME USING THE VALVE TOOL SUPPLIED IN THE REPLACEMENT VALVE KIT (#3257-1) CONTAINED IN SERVICE KIT #7334-9.

- SEPARATE BODY SECTION #1 FROM INLET DOME - IF REQUIRED, GENTLY TAP THE SEAM WITH A MALLETT UNTIL SEPARATION OCCURS. WHEN SEPARATED, SLIDE INLET DOME OFF THE "GUIDE RODS" (CAUTION - DO NOT LOSE OR DAMAGE FLOW CONTROL ORIFICE LOCATED IN BOLT CIRCLE OF BODY SECTION #1).

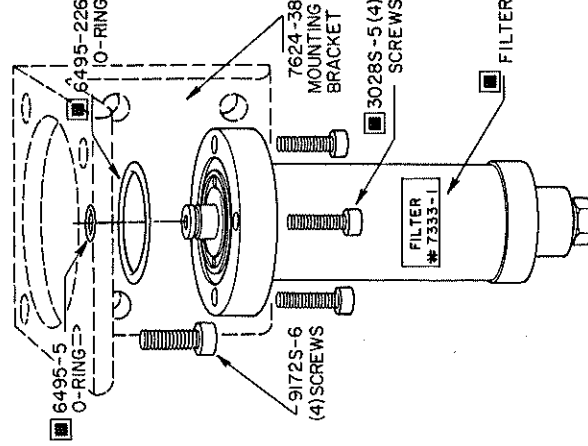


- REMOVE 2 OPPOSING SCREWS FROM THE 8 COUNTERSUNK SOCKET-HEAD CAP SCREWS (#9172S-16) ON THE INLET DOME. REPLACE WITH "GUIDE RODS" (FIGURE A) SUPPLIED WITH SERVICE KIT #7334-9 AND HAND-TIGHTEN. REMOVE 6 REMAINING CAP SCREWS.

IF MOUNTING BRACKET IS ATTACHED TO UNIT, REMOVE 4 SOCKET-HEAD CAP SCREWS AND DETACH FILTER. POSITION UNIT WITH INLET DOME FACING UP.

**DISASSEMBLY****FILTER REPLACEMENT**

- MAKE SURE THERE IS NO DIRT WHERE FILTER PLUGS INTO INLET DOME.
- TAKE NEW O-RINGS FROM SERVICE KIT (#7333-10) AND LIGHTLY GREASE WITH SILICONE-BASED LUBRICANT.
- SLIP SMALL O-RING (#6495-5) OVER PROTRUDING TIP OF FILTER AND INSERT LARGE O-RING (#6495-226) INTO GROOVE OF RING.
- GENTLY INSERT BY TWISTING UPWARD BEING SURE LARGE O-RING REMAINS IN GROOVE.
- ALIGN SCREW HOLES (WITH LABEL IN FRONT), INSERT AND TIGHTEN SOCKET-HEAD CAP SCREWS (#3028S-5) WITH MEDIUM TORQUE.

**SERVICING FILTER SECTION**

REQUIRES FILTER REPLACEMENT KIT #7333-10. REPLACE ALL APPLICABLE PARTS WITH REPLACEMENTS FROM KIT (INDICATED BY ■). UNDER NORMAL CONDITIONS REPLACEMENT IS RECOMMENDED EVERY 12 MONTHS.

**REMOVAL**

REMOVE 4 SOCKET-HEAD CAP SCREWS (#3028S-5) AND REMOVE FILTER BY TWISTING OUTWARD.

**PRELIMINARY SERVICE INSTRUCTIONS**

IT IS RECOMMENDED THAT A CLEAN AND DRY WORK STATION BE AVAILABLE FOR SERVICING THE UNIT (NOTE - FILTER REPLACEMENT MAY BE ACCOMPLISHED AT THE MOUNTING LOCATION). SOCKET-HEAD SCREW WRENCHES (ALLEN TYPE) OF THE FOLLOWING SIZES ARE REQUIRED - 3/16", 5/32", 5/64" AND 9/64". A MALLETT AND SMALL WEDGE MAY BE NECESSARY TO SEPARATE SOME BODY SECTIONS.

DO NOT USE PROBES OR WIRE BRUSHES TO CLEAN INTERNAL SURFACES. EXERCISE CAUTION WHEN USING PLIERS TO REMOVE FLOW CONTROL ORIFICES. ORIFICE CONTAINS DELICATE JEWEL WHICH MAY BE DAMAGED BY EXCESSIVE FORCE. ALSO, INSPECT O-RINGS UPON REMOVAL IF THEY ARE TO BE USED AGAIN.

SENSOR CONTROL UNIT CONTAINS MANY SMALL PARTS, OF WHICH PROPER INSTALLATION IS NECESSARY FOR ACCURATE OPERATION. "ALIGNING MARKS" ARE PROVIDED (SEE FIGURE AT RIGHT) FOR CORRECT ORIENTATION OF BODY SECTIONS DURING ASSEMBLY. FOLLOW INSTRUCTIONS CAREFULLY.

**BEFORE ANY SERVICE IS STARTED**

- TURN OFF AIR SUPPLY TO SENSOR CONTROL UNIT.
- FOR EASE OF RE-INSTALLATION LABEL INDIVIDUAL TUBES WITH CORRESPONDING PORT CONNECTION LETTER (DISCONNECT ALL TUBES AT SENSOR CONTROL UNIT).
- SEPARATE SENSOR CONTROL UNIT FROM MOUNTING BRACKET BY REMOVING THE 4 SOCKET-HEAD CAP SCREWS LOCATED ON THE UNDERSIDE OF THE MOUNTING BRACKET. (THIS STEP IS NOT REQUIRED FOR FILTER REPLACEMENT.)

**SERVICE DRAWING - - - ASSEMBLY AND DISASSEMBLY INSTRUCTIONS**

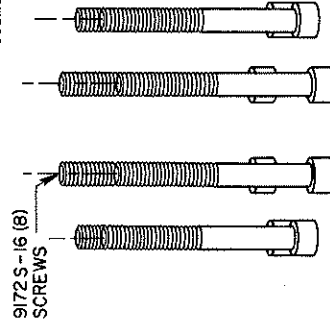
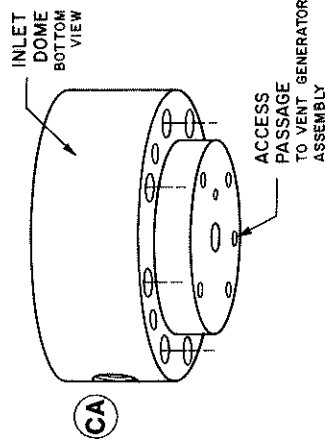
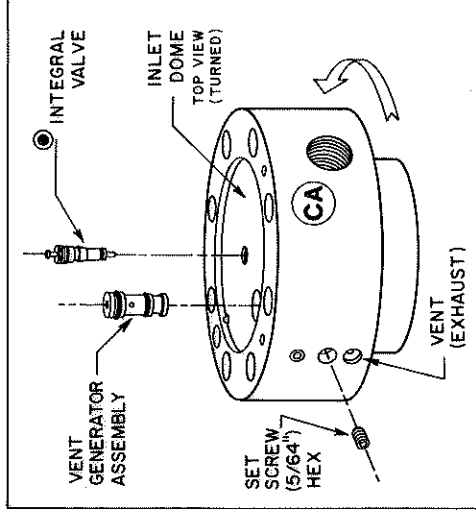
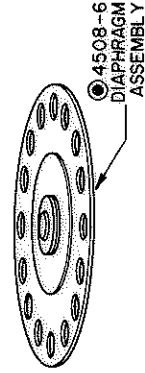
MODEL 860  
SAFEGARD SENSOR CONTROL OR  
SENSOR CONTROL ( WITHOUT SAFEGARD )

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- INSTALL INTEGRAL VALVE INTO INLET DOME. (VALVE TOOL IS SUPPLIED IN REPLACEMENT KIT.) DO NOT OVERTIGHTEN VALVE OR IT MAY MALFUNCTION DURING USE.

**SUBASSEMBLY (VENT GENERATOR)**

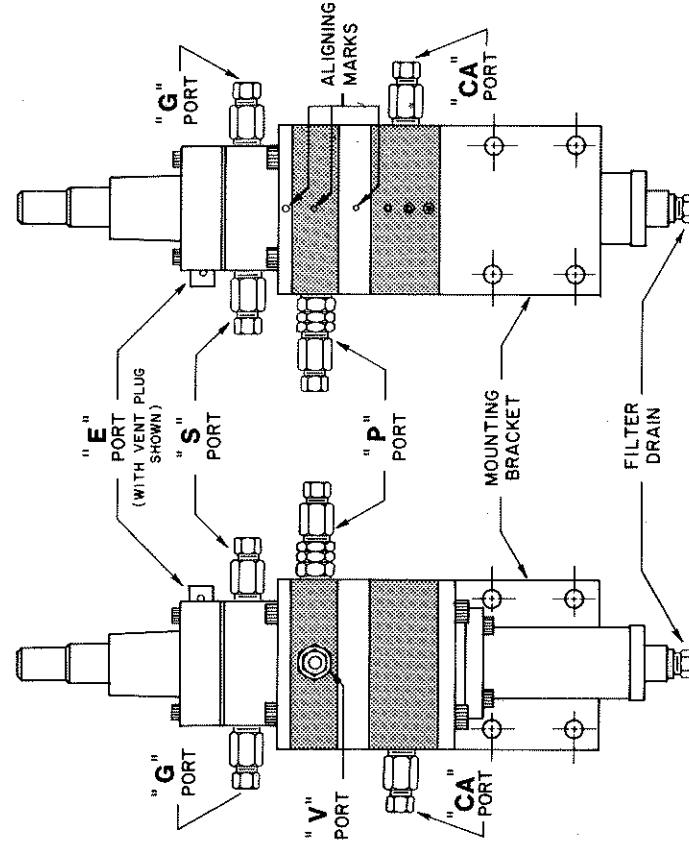
IF VENT GENERATOR ASSEMBLY WAS REMOVED OR REPLACED - LIGHTLY GREASE O-RINGS ON ASSEMBLY AND INSERT INTO POCKET ON INLET DOME. MAKE SURE VENT GENERATOR IS FULLY SEATED IN POCKET BEFORE TIGHTENING SET SCREW.

- SLIDE INLET DOME, VALVE SIDE DOWN, OVER "GUIDE RODS" AND POSITION AT OP DIAPHRAGM ASSEMBLY. CHECK THAT ALIGNING MARKS ARE CENTERED IN REAR.

- INSERT 6 OF THE SOCKET-HEAD CAP SCREWS (#9172S-16) INTO BOLT CIRCLE. USING A SEQUENCE OF EVERY OTHER SCREW, PROCEED AROUND CIRCLE AND HAND-TIGHTEN SCREWS. BE CERTAIN ALIGNING MARKS ARE CENTERED.

- REMOVE THE "GUIDE RODS" AND INSTALL THE 2 REMAINING CAP SCREWS. USING A SEQUENCE OF EVERY OTHER SCREW, PROCEED AROUND BOLT CIRCLE AND TIGHTEN ALL SCREWS USING MEDIUM TORQUE.

ALTERNATING LIGHT AND DARK AREAS REPRESENT BODY SECTIONS SHOWN IN EXPLODED ASSEMBLY / DISASSEMBLY ILLUSTRATION.



FRONT VIEW

REAR VIEW