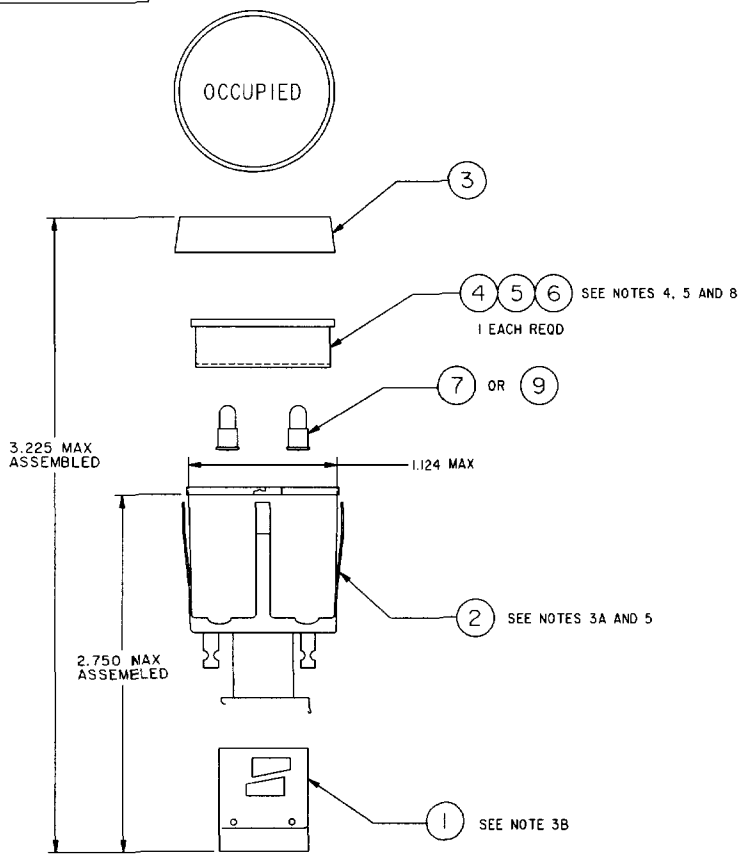
NOTES:

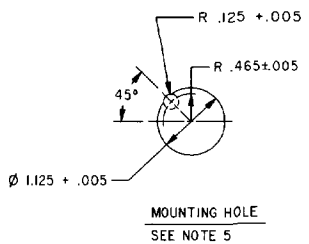
1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH APPLICABLE STANDARDS LISTED IN MIL-STD-100.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ☐ REMOVE BURRS ☐ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX.
   - ☐ 125√ ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ☐ ANSI Y14.5-DATED 1973 APPLIES
   - ☐ FED-STD-H28 APPLIES
3. SPECIFICATIONS:
   A. OPERATOR-INDICATOR HOUSING WITH 2 LAMP SOCKETS, 28 VDC WITH 4 FLEXING SPRING LEAVES.
   B. SWITCH MODULE, SINGLE-POLE, MOMENTARY ACTION, TOUCH-FEEDBACK TYPE, SILVER CONTACTS (30 VDC), 1 SPDT CIRCUIT.
4. 3-PIECE SCREEN INCLUDES COLORLESS CAP, IMPRINTED INSERT AND COLORED BASE.
5. HOUSING AND 3-PIECE SCREEN ARE KEYED TO INSURE PROPER TEXT ORIENTATION. (TEXT TO BE UPRIGHT WHEN SWITCH IS INSTALLED IN MOUNTING HOLE AS SHOWN).
6. IDENTIFICATION OF THE SUGGESTED ITEMS HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY.
7. UNLESS OTHERWISE INSTRUCTED, WHEN PACKAGING THIS FOR DELIVERY TO THE GOVERNMENT AS A CONTRACT LINE ITEM, USE SPI P5-19-9713.
8. ITEMS 5 AND 6 IDENTICAL EXCEPT TEXT.

| SUGGESTED SOURCE OF SUPPLY | |
|---|---|
| CAGE CODE | NAME AND ADDRESS |
| 91929 | MICRO SWITCH<br>DIVISION OF HONEYWELL<br>19481 VALLEY FORGE CORP CENTER<br>P.O. BOX 916<br>VALLEY FORGE, PA 19481 |

FOR QUALITY ASSURANCE PROVISIONS SEE QAP 5-19-9713

| REVISIONS | | | |
|---|---|---|---|
| LTR | DESCRIPTION | DATE (YR-MO-DA) | APPROVED |
| - | INITIAL RELEASE WITH NOR S4L3017-0004, 94-03-21 INC | 96-01-18 | BBS |
| A | NOR Z01-0140-0001, 97-01-13 | 97-11-12 | BBS |




## VENDOR ITEM DRAWING

*-ALTERNATES

| QTY REQD | DWG SIZE | DRAWING OR PART NO. | NOMENCLATURE OR MATERIAL | SPECIFICATION | ITEM NO. |
|---|---|---|---|---|---|
| 2* | | 2E1 | LAMP, INCANDESCENT, CAGE CODE 91929 | | 9 |
| 1 | D | 5-19-9714 | INSTRUCTION SHEET, PUSHBUTTON SWITCH | | 8 |
| 2* | | M6363/8-7 | LAMP, INCANDESCENT, SINGLE CONTACT, MIDGET FLANGED BASE, T-1-3/4 BULB | MIL-L-6363/8 | 7 |
| 1 | | 2J10-L | 3-PIECE SCREEN, BASE COLOR RED, TEXT ON INSERT: MASK CAGE CODE 91929, SEE NOTES 4, 5 AND 8 | | 6 |
| 1 | | 2J10-L | 3-PIECE SCREEN, BASE COLOR RED, TEXT ON INSERT: LOW PRESSURE CAGE CODE 91929, SEE NOTES 4, 5 AND 8 | | 5 |
| 1 | | 2J11-L | 3-PIECE SCREEN, BASE COLOR YELLOW, TEXT ON INSERT: OCCUPIED CAGE CODE 91929, SEE NOTES 4 AND 5 | | 4 |
| 1 | | 2K1 | GUARD RING, COLOR RED, CAGE CODE 91929 | | 3 |
| 1 | | 2M5 | HOUSING, OPERATOR-INDICATOR, CAGE CODE 91929, SEE NOTES 3A AND 5 | | 2 |
| 1 | | 2D100 | SWITCH MODULE, CAGE CODE 91929, SEE NOTE 3B | | 1 |

PARTS LIST

| APPLICATION | |
|---|---|
| DWG SIZE | NEXT ASSY |
| D | 5-19-9721 |

| END ITEM CODE NO. | | | | |
|---|---|---|---|---|
| Z02 | Z20 | 980 | E15 | E10 |
| Z14 | Z21 | E12 | E13 | E16 |
| | Z01 | E11 | R93 | Y13 |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ±.04
3 PLACE DECIMALS ±.010
ANGLES ±0°30'
MATERIAL

ORIGINAL DATE (YR-MO-DA) 96-01-18
DRAWN BY C.E.DORAN
CHECKED BBS
SUBMITTED CHARLES E. DORAN
DESIGN APPROVAL
DRAWING APPROVAL BRENDA B. STAMPS
CONTRACT NO.

U.S. ARMY CHEMICAL AND BIOLOGICAL DEFENSE AGENCY
EDGEWOOD RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5423

# KIT, SWITCH, INDICATOR, PUSHBUTTON

| SIZE | CAGE CODE | DWG NO. |
|---|---|---|
| D | 81361 | 5-19-9713 |

SCALE NONE SHEET 1 OF 1

DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE. DISTRIBUTION IS UNLIMITED.

NOTES:

1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH APPLICABLE STANDARDS LISTED IN DRD-STD-100.
2. THE FOLLOWING ARE MANDATORY UNLESS INDICATED BY ☒
   - ☐ REQUIRE BURRS ☐ BREAK SHARP EDGES .005 MAX
   - ☐ FILLETS R .005 MAX.
   - ☐ 125/ ALL SURF. EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ☐ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ☐ ANSI Y14.5-1973/ISO APPLIES
   - ☐ PDD-STD-100 APPLIES
3. MATERIAL:
   PAPER, WHITE, TYPE II, SPEC UU-P-121.
4. PRINTING SHALL BE BLOCK LETTERS, .10 INCH HIGH, USING INK, BLACK PER MIL-I-36067I.
5. PAGE 2 TO BE PRINTED ON BACK OF PAGE 1:
   PAGE 4 TO BE PRINTED ON BACK OF PAGE 3.

11.0

## INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR HONEYWELL SERIES 2M PUSHBUTTON SWITCHES AND INDICATORS

SECTION 1 - SCOPE

1.1 THIS INSTRUCTION SHEET CONTAINS PROCEDURES, METHODS AND FORMATS FOR INSTALLATION AND MAINTENANCE OF THE HONEYWELL SERIES 2M PUSHBUTTON SWITCHES AND INDICATORS.

1.2 THE INSTALLATION AND MAINTENANCE REQUIREMENTS STATED OR REFERENCED IN THIS INSTRUCTION SHEET ARE THE MINIMUM ACCEPTABLE STANDARDS.

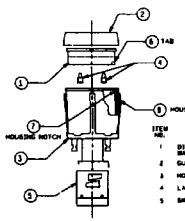
1.3 THESE PROCEDURES ARE FOR INSTALLATION/MAINTENANCE OF THE PUSHBUTTON SWITCHES AND INDICATORS FOR THE MODULAR COLLECTIVE PROTECTION EQUIPMENT. HERE THE HONEYWELL SERIES 2M SWITCHES AND INDICATORS ARE THE REPLACEMENT FOR THE A-NOTE-1 SWITCH/BULBS OR TYPE 44 SEALED ILLUMINATED PUSHBUTTON SWITCHES. THESE INSTRUCTIONS SHALL TAKE PRECEDENCE OVER ALL OTHER DOCUMENTS PERTINENT TO THE INSTALLATION MAINTENANCE OF THE AFFECTED INDICATORS.

SECTION 2 - SAFETY

2.1 PROPER CARE SHOULD BE TAKEN TO AVOID DROPPING PUSHBUTTON SWITCH AND INDICATOR. IF ANY SWITCH/INDICATOR IS DROPPED, IT SHALL BE INSPECTED PRIOR TO INSTALLATION FOR ANY DAMAGE.

SECTION 3 - PUSHBUTTON SWITCH AND INDICATOR INSTRUCTIONS

3.1 - COMPONENT PART LIST.




| ITEM NO. | DESCRIPTION | QTY |
|---|---|---|
| 1 | DISPLAY SCREEN (LOW PRESSURE, MASK, OCCUPIED) | 3 |
| 2 | GUARD RING | 1 |
| 3 | HOUSING | 1 |
| 4 | LAMP, INCANDESCENT | 3 |
| 5 | SWITCH MODULE | 1 |

1 OVER

R.5

3.2 ASSEMBLE PUSHBUTTON SWITCH AND INDICATOR.

1. PLACE INCANDESCENT LAMPS (ITEM 4) IN THE HOUSING LAMP SOCKETS AND PRESS THEM SECURELY IN THE HOUSING LAMP SOCKETS.
2. SELECT THE APPROPRIATE DISPLAY SCREEN. ALIGN THE DISPLAY SCREEN TAB (ITEM 6) WITH HOUSING NOTCH (ITEM 7) AND HOUSING TAB (ITEM 8). PRESS DISPLAY SCREEN (ITEM 1) INTO HOUSING (ITEM 3) TO SECURE.
3. ATTACH THE GUARD RING (ITEM 2) TO THE HOUSING (ITEM 3) BY TURN-TO-LOCK ACTION.
4. ATTACH THE SWITCH MODULE (ITEM 5) TO THE HOUSING (ITEM 3) BY A SNAP-ON ACTION.

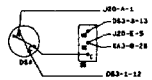
3.3 REMOVAL OF LICON TYPE 44 SEALED ILLUMINATED PUSHBUTTON SWITCH.

1. REFER TO TM3-4240-302-308P-3, PAGE 2-73 FOR PROTECTIVE ENTRANCE CONTROL MODULE, P/N ES-18-6357, NSN 4240-01-048-2803.
2. REFER TO TM3-4240-302-308P-4, PAGE 2-27 FOR PROTECTIVE ENTRANCE CONTROL MODULE, P/N ES-18-6641, NSN 4240-01-113-8898.
3. REFER TO TM3-4240-302-308P-1, PAGE 2-65 FOR COMPARTMENT CONTROL MODULE, P/N ES-18-6378, NSN 4240-01-057-3376.
4. REFER TO TM3-4240-302-308P-2, PAGE 2-47 FOR CONTROL MODULE, P/N ES-18-8806, NSN 4240-01-138-2804.

3.4 INSTALLATION OF HONEYWELL SERIES 2M PUSHBUTTON SWITCH AND INDICATOR.

1. INSERT ASSEMBLED SWITCH/INDICATOR IN PANEL.
2. ALIGN THE LEGEND ON DISPLAY SCREEN (ITEM 1) OF ASSEMBLED SWITCH/INDICATOR PARALLEL TO THE TOP/BOTTOM EDGE OF THE BEZELL.
3. PRESS THE GUARD RING (ITEM 2) UNTIL THE SWITCH/INDICATOR SECURES IN PANEL.

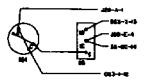
3.5 WIRING CONNECTION FOR PROTECTIVE ENTRANCE CONTROL MODULE, P/N ES-18-6357, NSN 4240-01-048-2803.




S-18-9721-1 WHEN "OCCUPIED" SCREEN

2

3.6 WIRING CONNECTION FOR PROTECTIVE ENTRANCE CONTROL MODULE, P/N ES-18-6641, NSN 4240-01-113-8898.

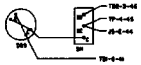



S-18-9721-2 WHEN "LOW PRESSURE" SCREEN

3.7 WIRING CONNECTION FOR CONTROL MODULE, P/N ES-18-8806, NSN 4240-01-138-2804.

S-18-9721-1 WHEN "OCCUPIED" SCREEN

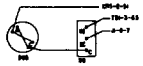
S-18-9721-3 WHEN "BANK" SCREEN



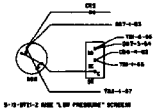

S-18-9721-2 WHEN "LOW PRESSURE" SCREEN

3 OVER

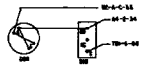
3.8 WIRING CONNECTION FOR COMPARTMENT CONTROL MODULE, P/N ES-18-6378, NSN 4240-01-057-3376.




S-18-9721-1 WHEN "OCCUPIED" SCREEN




S-18-9721-2 WHEN "LOW PRESSURE" SCREEN




S-18-9721-3 WHEN "BANK" SCREEN

4

DISTRIBUTION STATEMENT A:
APPROVED FOR PUBLIC RELEASE.
DISTRIBUTION IS UNLIMITED.

| REVISIONS | | | |
|---|---|---|---|
| LTR | DESCRIPTION | DATE YR-MO-DAY | APPROVED |
| | | | |

| REV LTR | DATE | REF REV |
|---|---|---|
| D | 5-19-9713 | |

| | | | | |
|---|---|---|---|---|
| Z02 | Z14 | Z20 | Z21 | Z01 |
| B10 | E12 | E11 | E15 | E13 |
| R59 | E10 | E16 | Y13 | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
.X ±0.02 .XX ±.005
.XXX ±.001 ANGLES ±1° 30'

MATERIAL
SEE NOTE 3

96-01-18
C.E.DORAN

U.S. ARMY CHEMICAL AND BIOLOGICAL DEFENSE AGENCY
EARTHING RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
ABERDEEN PROVING GROUND, MARYLAND 21010-5423

INSTRUCTION SHEET, PUSHBUTTON SWITCH

SIZE E | CAGE CODE 81361 | DWG NO. 5-9-9714

SCALE NONE | SHEET 1

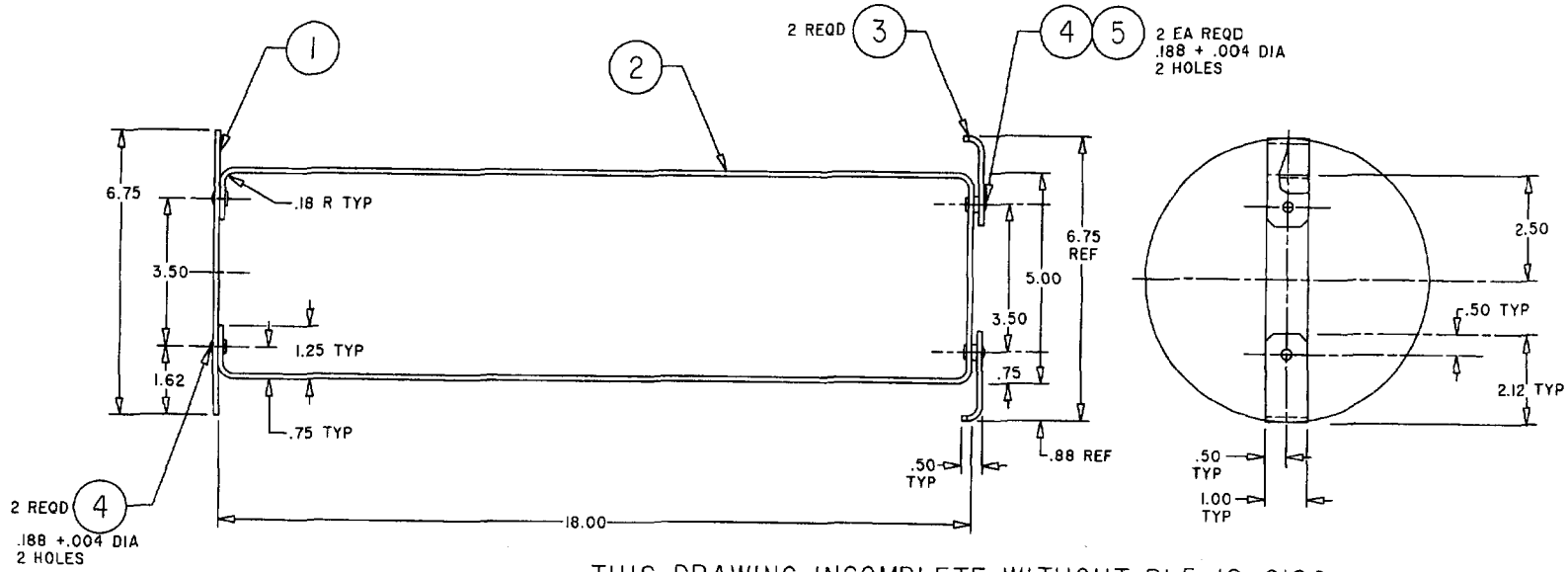
DATA_PRINTED:0.10.0PM Sheet 8 DATE : 96-01-18 10 H17 :22 BY: DORAN

NOTES:

1. THIS DRAWING SHALL BE INTERPRETED IN ACCORDANCE WITH APPLICABLE STANDARDS LISTED IN DOD-STD-100.
2. THE FOLLOWING ARE MANDATORY WHEN INDICATED BY ■
   - ■ REMOVE BURRS ■ BREAK SHARP EDGES .010 MAX
   - ☐ FILLETS R .010 MAX
   - ☐ 125√ ALL OVER, EXCEPT AS NOTED
   - ☐ DIMENSIONS APPLY AFTER PLATING
   - ■ TOLERANCES ON STOCK MATERIAL SIZES, SHALL BE AS SPECIFIED IN APPLICABLE SPECIFICATIONS.
   - ☐ ANSI Y14.5-DATED APPLIES
   - ☐ FED-STD-H28 APPLIES
3. SURFACE TREATMENT FINISH NO. 7.2.2, (COLOR: GREEN NO. 34094 OF FED-STD-595) OF MIL-STD-171 PRIOR TO ASSEMBLY.
4. UNLESS OTHERWISE INSTRUCTED, WHEN PACKAGING THIS PART FOR DELIVERY TO THE GOVERNMENT AS A CONTRACT LINE ITEM, USE SPI P5-19-6180.

FOR QUALITY ASSURANCE PROVISIONS
SEE QAP 5-19-6180

| REVISIONS | | | |
|---|---|---|---|
| LTR | DESCRIPTION | DATE (YR-MO-DA) | APPROVED |
| G | REPLACES C5-19-6180 REV F DATED 87-08-07 NOR SOL3024-0017, 90-08-08 | 91-03-21 | BBH/JGS |
| H | NOR SOL3051-0011, 90-11-26 | 91-05-17 | BBH/JGS |
| J | NOR S2L3047-0001, 92-09-04 | 96-07-29 | [illegible] |




THIS DRAWING INCOMPLETE WITHOUT PL5-19-6180

| QTY REQD | DWG SIZE | DRAWING OR PART NO. | NOMENCLATURE OR MATERIAL | SPECIFICATION | ITEM NO. |
|---|---|---|---|---|---|

PARTS LIST

DISTRIBUTION STATEMENT X. DISTRIBUTION AUTHORIZED TO U.S. GOVERNMENT AGENCIES AND PRIVATE INDIVIDUALS OR ENTERPRISES ELIGIBLE TO OBTAIN EXPORT-CONTROLLED TECHNICAL DATA IN ACCORDANCE WITH DOD DIRECTIVE 5230.25. DETERMINATION MADE 09/04/92. CONTROLLING DOD OFFICE IS TECH DIR, U.S. ARMY, EDGEWOOD RESEARCH, DEVELOPMENT AND ENGINEERING CENTER, ATTN: SCBRD-EN(RI), ROCK ISLAND, IL 61299-7410.

WARNING: THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C. SEC 2751 etseq.) OR THE EXPORT ADMINISTRATION ACT OF 1979 AS AMENDED, (TITLE 50, U.S.C., APP 2401 et seq.) VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH THE PROVISIONS OF DOD DIRECTIVE 5230.25.

| APPLICATION | | | APPLICATION | | |
|---|---|---|---|---|---|
| DWG SIZE | NEXT ASSY | | DWG SIZE | NEXT ASSY | |
| | PL5-19-6707 | | E | E5-19-6373 | |
| | PL5-19-6865 | | E | E5-19-6374 | |
| | | | E | E5-19-6375 | |
| | | | E | E5-19-6201 | |
| | | | | PL5-19-6704 | |
| | | | | PL5-19-6705 | |
| END ITEM CODE NO. | | | END ITEM CODE NO. | | |
| | | | 980 | Y13 | R93 |
| | | | Y01 | Y04 | |
| | | | Y02 | Z20 | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ±.04
3 PLACE DECIMALS ±.010
ANGLES ± 0° 30'

MATERIAL

ORIGINAL DATE (YR-MO-DA): 5 APR 1972
DRAWN BY: DJE
CHECKER: CCM
SUBMITTED: G. MACAULEY
DESIGN APPROVAL: ZURAW JZ
DRAWING APPROVAL: A R HERWIG
CONTRACT NO.:

U.S. ARMY ARMAMENT, MUNITIONS & CHEMICAL COMMAND
CHEMICAL RESEARCH, DEVELOPMENT AND ENGINEERING CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5423

HOLDER, AIR DUCT

| SIZE | CAGE CODE | DWG NO. |
|---|---|---|
| C | 81361 | C5-19-6180 |

SCALE 1/2 SHEET

DATA.PARTS.5.19.6180 DRAW 11 DATE: 96-07-25 17:44:05 BY: KARE INHA

## REVISIONS

| LTR | DESCRIPTION | DATE (YR-MO-DA) | APPROVED |
|---|---|---|---|
| F | REPLACES PL5-19-6180 REV E DATED 15 APR 85 NOR 980-0076-0001, 96-08-20 | 00-05-10 | BBS |

## PARTS LIST

| QTY REQD | DWG SIZE | DRAWING OR PART NO. | NOMENCLATURE OR MATERIAL | | SPECIFICATION | ITEM NO. |
|---|---|---|---|---|---|---|
| | C | C5-19-6180 | HOLDER, AIR DUCT | | | |
| 1 | | -1 | PLATE, END | AL ALY SH, 5052-H32 OR | | |
| | | | | 5052-H34, .125 NOM STK THK | QQ-A-250/8 | 1 |
| 1 | | -2 | BODY | AL ALY SH, 5052-H32 OR | | |
| | | | | 5052-H34, .125 NOM STK THK | QQ-A-250/8 | 2 |
| 2 | | -3 | ARM | AL ALY SH, 5052-H32 OR | | |
| | | | | 5052-H34, .125 NOM STK THK | QQ-A-250/8 | 3 |
| 4 | | MS16535-343 | RIVET, TUBULAR, OVAL HD, .188 DIA X .344 LG | | | 4 |
| 2 | | MS51859-5 | WASHER, FLAT-PLASTIC, .218 I.D. | | | 5 |
| --- | | | ANODIC FILM | | MIL-A-8625 | 6 |

| APPLICATION | |
|---|---|
| DWG SIZE | NEXT ASSY |
| E | E5-19-6201 |
| E | E5-19-6373 |
| E | E5-19-6374 |
| E | E5-19-6375 |
| | PL5-19-6705 |
| | PL5-19-6707 |
| | PL5-19-6704 |
| | PL5-19-8931 |
| | PL5-19-6865 |

| EQUIPMENT CODE NO. | | |
|---|---|---|
| Y01 | 980 | R93 |
| Y02 | Y04 | |
| Y13 | Z20 | |

ORIGINAL DATE (YR-MO-DA): 72-04-05

DRAWN BY: DJE

CHECKER: CCM

SUBMITTED: GEORGE MACAULEY

DESIGN APPROVAL: ZURAW

DRAWING APPROVAL: ALBERT R. HERWIG

CONTRACT NO.

U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
EDGEWOOD CHEMICAL BIOLOGICAL CENTER
ABERDEEN PROVING GROUND, MARYLAND, 21010-5424

# HOLDER, AIRDUCT

| SIZE | CAGE CODE | DWG NO. |
|---|---|---|
| B | 81361 | PL5-19-6180 |

SHEET

=DATA.PARTS.PL5.19.6180 DRAW 1 DATE: 00-05-10 15:14:24 BY: JCREQUAR