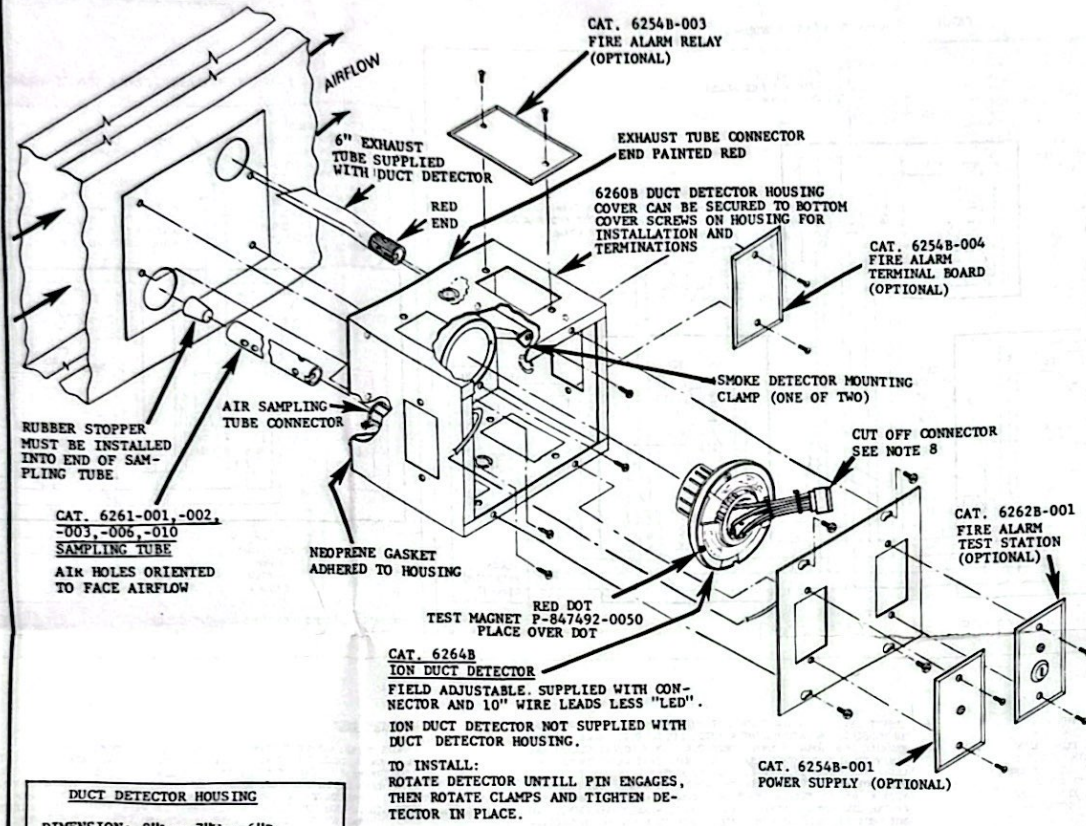


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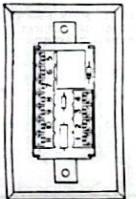
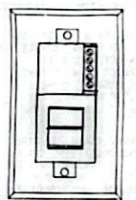
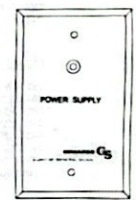


**DUCT DETECTOR HOUSING**  
 DIMENSION: 8"L x 7"W x 6"D  
 MATERIAL: 16 GAUGE C.R.S.  
 FINISH: PAINTED RED  
 KNOCKOUTS: COMBINATION 1/2"-3/4"

AIR SAMPLING TUBE CHART	
CAT. NO.	TUBE LENGTH
6261-001	8"
6261-002	2'
6261-003	3'-6"
6261-006	6'-6"
6261-010	10'

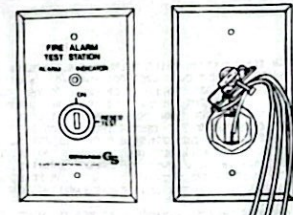
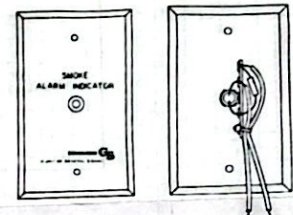
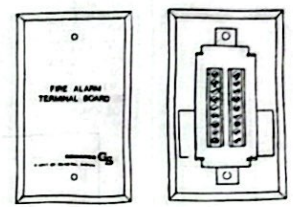
REPLACEMENT NUMBER FOR EXHAUST TUBE	
PART NUMBER	TUBE LENGTH
P-827661-0013-402	6"

**MODULE INFORMATION**  
 ALL OPTIONAL MODULES SHOWN ARE MOUNTED ON A SINGLE GANG STAINLESS STEEL PLATE AND MOUNTS TO DUCT HOUSING UNIT KNOCKOUTS (ANY OF EIGHT). OPTIONAL MODULES CAN BE MOUNTED REMOTELY.



**CAT. 6254B-001 POWER SUPPLY (OPTIONAL)**  
 TO BE USED FOR POWERING DUCT DETECTORS, USED FOR FIRE ALARM RELEASING DEVICE SERVICE.  
 POWERS UP TO 2 DETECTORS INCLUDING CAT. 6256B REMOTE LED AND CAT. 6254B -003 RELAY.  
 INPUT VOLTAGE: 120VAC  
 OPERATING VOLTAGE: 24VDC NOMINAL  
 CURRENT: 180mA MAX. OUTPUT  
 SHORT CIRCUIT CURRENT: 240mA  
 OPERATING TEMPERATURE: 32° - 100°F (0° - 38°C)

**CAT. 6254B-003 FIRE ALARM RELAY (OPTIONAL)**  
 CAN BE USED AS AUXILIARY FIRE ALARM CONTACTS ON AREA OR DUCT DETECTORS. ALARM RELAY IS ACTIVATED WHEN THE DETECTOR IS IN THE ALARM MODE. CONTACTS ARE 1 FORM C AND 1 FORM A RATED AT 5 AMPS, 28VDC OR 115VAC RESISTIVE. COIL CURRENT IS 24mA AT 24VDC. PACKAGE INCLUDES A 22K Ω RESISTOR.



**CAT. 6254B-004 FIRE ALARM TERMINAL BOARD (OPTIONAL)**  
 FOR USE WHERE WIRE NUT TERMINATIONS ARE NOT PERMITTED BY LOCAL CODE. ELECTRICAL RATING AT 5AMPS, 240V. ACCEPTS #14-#22 AWG WIRING SOLID OR STRANDED.

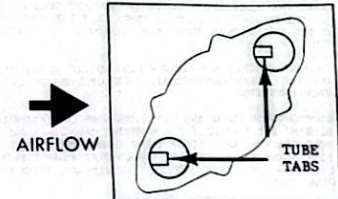
**CAT. 6256B SMOKE ALARM INDICATOR (OPTIONAL)**  
 FOR USE AS A REMOTE ALARM INDICATOR FOR DUCT DETECTORS.  
 ELECTRICAL RATING: 15mA AT 22VDC

**CAT. 6262B-001 FIRE ALARM TEST STATION (OPTIONAL)**  
 KEYSWITCH, WHEN TURNED TO "RESET/TEST" POSITION WILL "ALARM" DUCT DETECTOR, ALL LOCAL AND REMOTE ALARM INDICATORS AND/OR RELAYS CONNECTED TO THIS DUCT DETECTOR WILL BE ACTIVATED. A FIRE ALARM CONTROL PANEL WIRED TO THE DETECTOR OR RELAY CONTACTS WILL ALSO BE ACTIVATED.

STATION MAY ALSO BE USED AS A SELECTIVE RESET. IF A DETECTOR ALARMS, TURNING THE KEYSWITCH TO "RESET/TEST" POSITION AND THEN BACK TO "ON" WILL RESET THE DETECTOR. IF THE FIRE ALARM CONTROL PANEL IS ACTIVATED (IN THE ALARM MODE) THE CONTROL PANEL MUST BE RESET. KEY CANNOT BE REMOVED WHEN IN THE "RESET/TEST" POSITION.  
 ELECTRICAL RATING: 15mA AT 22VDC  
 SWITCH CONTACT: 100mA AT 24 VDC

**CAT. 6261-001, -002, -003, -006, -010 AIR SAMPLING TUBES (ONE REQUIRED)**

SEE TUBE CHART FOR LENGTH. A RUBBER STOPPER IS INCLUDED WITH EACH DUCT HOUSING THE TUBE TABS (VISIBLE FROM DETECTOR SIDE OF ENCLOSURE) MUST BE ORIENTED WITH AIRFLOW AS ILLUSTRATED.



REVISIONS				
REL.	REMARKS	DATE	CHKD.	APPRD.
1	RELEASED PER ECR 0180-226	4-15-84	[Signature]	[Signature]

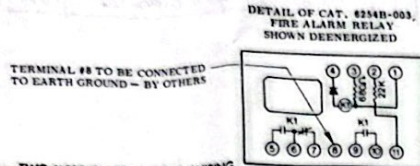


FIGURE 1. TWO-WIRE CLASS A OR B WIRING

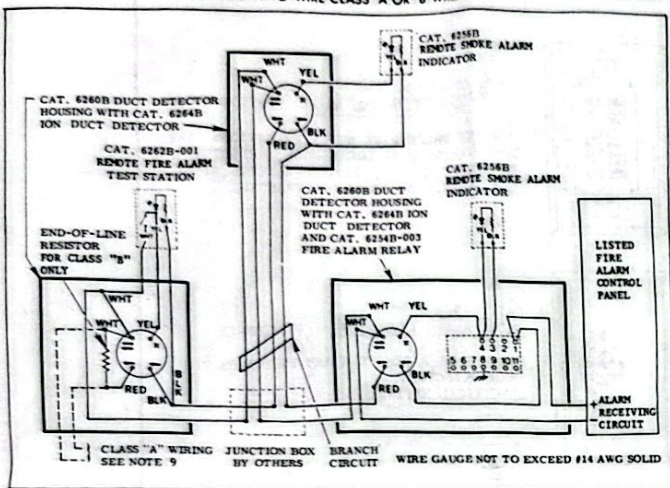


FIGURE 2 FOUR-WIRE CLASS B WIRING

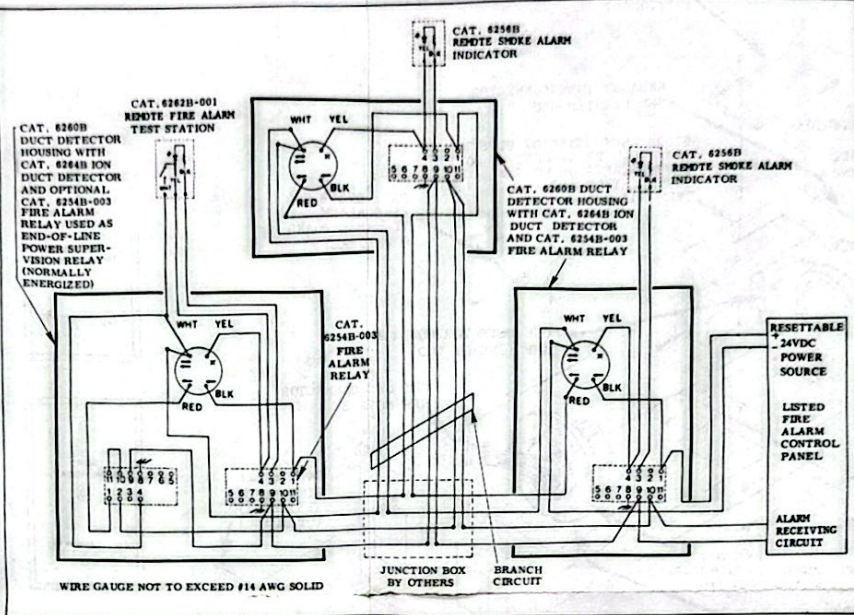
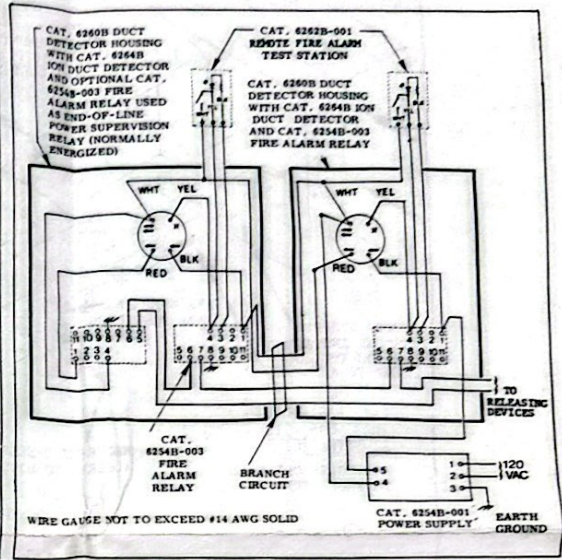


FIGURE 3. RELEASING DEVICE SERVICE WIRING



**DESCRIPTION**

**SENSITIVITY RANGE:** U.L. LISTED .661-1.221 OMS/FT., FACTORY SET 1.002 OMS/FT. NOMINAL.  
**AIR VELOCITY RANGE:** 400-6000FPM.  
**OPERATING VOLTAGE:** 19-24VDC, 22VDC NOMINAL.  
**DETECTOR CURRENT:** 30ma STANDBY 55ma ALARM, 200ma SURGE FOR 30sa.  
**REMOTE LED LAMP:** 15ma @ 22VDC  
**TEMPERATURE RANGE:** 32°-109°F (0°-38°C)  
**HUMIDITY RANGE:** 0-85% RELATIVE HUMIDITY  
**TESTING:** FOR FIELD TESTING USE P-847492-0050 TEST MAGNET.  
**MAX. NUMBER OF DETECTORS:** 50 6264B DETECTORS WITHOUT AUX. RELAY ON 2-WIRE CIRCUITS. NO ELECTRICAL LIMIT TO NUMBER OF DETECTORS ON 4-WIRE CIRCUIT. LIMIT ESTABLISHED BY WIRING REQUIREMENTS AND CAPACITY OF 24VDC POWER SUPPLY USED.

**LOCATION**

THE CAT. 6260B DUCT DETECTOR HOUSING MAY BE INSTALLED PER N.F.P.A. 90A IN A STANDARD DUCT WHERE THE AIR VELOCITY RANGE IS BETWEEN 400 AND 6000FPM. THE HOUSING IS USUALLY INSTALLED IN THE SUPPLY DUCT AFTER THE FILTERS AND IN THE RETURN AIR STREAM PRIOR TO EXHAUST FROM THE BUILDING OR BEING DILUTED BY OUTSIDE AIR. THE LOCAL AUTHORITY HAVING JURISDICTION SHOULD BE CONTACTED FOR ANY LOCAL REGULATIONS GOVERNING SITE SELECTION. IT IS PREFERRED TO INSTALL THE HOUSING IN A LENGTH OF STRAIGHT DUCT AT LEAST 3 FT FROM ANY BENDS.

DUCT DETECTORS ARE NOT INTENDED AS A SUBSTITUTE FOR OPEN AREA SMOKE DETECTORS.

SEE N.F.P.A. 72E STANDARD ON "AUTOMATIC FIRE DETECTORS" FOR INFORMATION ON APPLICATION, TESTING AND MAINTENANCE OF DUCT DETECTORS.

**INSTALLATION PROCEDURE**

- CAT. 6260B DUCT DETECTOR HOUSING INCLUDES THE EXHAUST TUBE, BUT DOES NOT INCLUDE THE CAT. 6264B DUCT DETECTOR OR THE CAT. 6261-001/002/003/006/010 DUCT AIR SAMPLING TUBES. THESE MUST BE ORDERED SEPARATELY.
- CHOOSE LOCATION FOR DUCT INSTALLATION AND APPLY THE ADDRESIVE MARKED DRILL TEMPLATE ON THE DUCT. DRILL OUT THE 4 MOUNTING HOLES AND THE TWO CLEARANCE HOLES FOR SAMPLING AND EXHAUST TUBES AS INDICATED ON THE TEMPLATE.

- IN THE UPSTREAM DRILL HOLE ON THE TEMPLATE INSERT THE AIR SAMPLING TUBE CAT. 6261-001/-002/-003/006/010. THE AIR SAMPLING TUBES SHOULD BE ORIENTED SO THAT THE AIR FLOWS INTO THE HOLES ALONG THE SIDE OF THE TUBE WHEN THE AIR SAMPLING TUBE IS LONGER THAN THE WIDTH OF THE DUCT, EITHER CUT THE END OF THE TUBE TO FIT INSIDE THE DUCT OR DRILL ANOTHER CLEARANCE HOLE IN THE OPPOSITE DUCT WALL AND ALLOW THE END OF THE TUBE TO PROTRUDE OUTSIDE THE DUCT. NO INLET HOLE SHOULD BE CUT OFF OR BE ALLOWED TO EXTEND OUTSIDE THE DUCT. SEAL ALL CLEARANCE HOLES WITH DUCT SEAL. THE RUBBER STOPPER MUST BE INSTALLED INTO THE END OF THE SAMPLING TUBE.
- OBSERVE THAT THE EXHAUST TUBE END IS COLOR CODED RED. THE COLOR OF THE TUBE END MUST MATCH THE RED COLOR ON THE TUBE CONNECTOR (RED FOR EXHAUST, UNPAINTED FOR SAMPLING). INSERT EXHAUST TUBE INTO ITS CONNECTOR. ORIENT THIS TUBE SUCH THAT THE SLANTED EDGE IS FACING DOWNSTREAM. THEN TIGHTEN SCREW ON CONNECTOR UNTIL TUBE IS HELD SECURE.
- BRING THE DUCT DETECTOR HOUSING CAT. 6260B UP TO THE AIR SAMPLING TUBE, KEEPING THE SAMPLING HOLES ORIENTED DIRECTLY INTO THE AIRFLOW. INSERT THE END OF THE TUBE INTO THE TUBE CONNECTOR, THEN TIGHTEN SCREW ON CONNECTOR UNTIL TUBE IS HELD SECURE.
- INSERT THE HOUSING CONTAINING BOTH TUBES INTO THE DUCT AND SECURE IT USING THE 4 (#8) SCREWS PROVIDED. EXAMINE THE TRANSPARENT DUCT CHAMBER INSIDE THE DUCT DETECTOR HOUSING TO VERIFY THAT THE COLOR CODED END OF THE EXHAUST TUBE IS COLOR MATCHED TO THE EXHAUST CONNECTOR. CHECK THAT THE TUBE TABS ON BOTH TUBES ARE ORIENTED WITH DUCT AIRFLOW. SEE ATTACHED ILLUSTRATION ON SHEET 2.
- INSTALL CONDUIT AND FIELD WIRING TO CAT. 6260B DUCT DETECTOR HOUSING LEAVE APPROXIMATELY 12" OF FIELD WIRING EXTENDING FROM CONNECTOR.
- END-CUTS ON FRONT AND SIDE PANELS OF CAT. 6260B DUCT DETECTOR HOUSING ARE AVAILABLE FOR MOUNTING CAT. 6254B-001 FIRE ALARM TEST STATION, CAT. 6254B SMOKE ALARM INDICATOR, CAT. 6254B-003 FIRE ALARM RELAY, CAT. 6254B-004 FIRE ALARM TERMINAL BOARD AND CAT. 6254B-001 POWER SUPPLY. SEE WIRING DIAGRAM FOR WIRING CONNECTIONS.
- INSERT CAT. 6264B ION DUCT DETECTOR INTO DUCT SMOKE CHAMBER IN HOUSING. ROTATE DETECTOR UNTIL PIN ON DUCT SMOKE CHAMBER ENGAGES INTO HOLE ON SMOKE DETECTOR. THEN ROTATE CLAMPS AND SCREW TIGHTEN DETECTOR IN PLACE. NOTE THAT DETECTOR HAS NO LED. ALL ALARM INDICATORS MUST BE EXTERNAL TO THE DUCT DETECTOR AS ILLUSTRATED IN THE WIRING DIAGRAM. CUT THE CONNECTOR OFF OF THE LEADS ON THE DETECTOR CLOSE TO THE BASE OF THE CONNECTOR. STRIP LEADS TO MAKE WIRE CONNECTIONS. DO NOT SHORTEN DUCT DETECTOR WIRE LEADS WHEN MAKING CONNECTIONS WITH 12" FIELD WIRING. LONG LEAD LENGTH TERMINATIONS WILL ENABLE THE DUCT DETECTOR TO BE REMOVED FROM THE DUCT HOUSING WITH THE TERMINATIONS INTACT. THIS WILL ENABLE THE DUCT DETECTOR TO BE REMOVED FOR PERIODIC CLEANING WITHOUT DISCONNECTING WIRING.
- FIGURE 1 SHOWS TYPICAL WIRING FOR 2 WIRE CLASS "B" INSTALLATION TO A FIRE ALARM CONTROL PANEL. FOR CLASS "A" WIRING CONNECT ONE WIRE MARKED IN/OUT AND WIRE MARKED OUT FROM THE LAST DETECTOR ON EACH ZONE TO ITS ASSOCIATED MODULE AT THE CONTROL PANEL. END-OF-LINE RESISTOR IS NOT REQUIRED IN CLASS "A" WIRING. SEE CUSTOMER DRAWING FOR THE PLUG-IN MODULE OR CONTROL PANEL BEING USED.
- WHEN INSTALLING DUCT DETECTORS IN A 4-WIRE CLASS "B" CIRCUIT USE BOTH AN END-OF-LINE RESISTOR (IN THE INITIATING CIRCUIT) AND A FIRE ALARM RELAY (CAT. 6254B-003) AS THE END-OF-LINE POWER SUPERVISION RELAY AT THE END OF THE POWER SUPPLY CIRCUIT AS SHOWN IN THE WIRING ILLUSTRATION. SEE FIGURE 2.

THE END-OF-LINE RESISTOR SHOULD BE LOCATED AFTER THE LAST DETECTOR IN SERIES WITH A NORMALLY OPEN (RELAY DENERGIIZED) CONTACT ON THE END OF LINE POWER SUPERVISION RELAY.

- FIGURE 3 SHOWS TYPICAL WIRING FOR RELEASING DEVICE SERVICE. RELEASING DEVICES CAN BE MOTOR CONTROL SHUT DOWN, DAMPER CLOSERS, DOOR RELEASES, ETC. NOTE THAT CONTACT RATINGS ARE 5 AMPS, 28VDC OR 115VAC RESISTIVE.

**OPERATION TEST**

REMOVE COVER, APPLY SYSTEM POWER TO DUCT DETECTOR. TEST DETECTOR BY LOCATING TEST MAGNET OVER THE RED DOT MARKED ON DUCT DETECTOR BASE. THE DETECTOR SHOULD ALARM WITHIN 5 SECONDS. RESET USING CAT. 6262B-001 FIRE ALARM TEST STATION OR THE CONTROL PANEL RESET. TURNING THE KEYSWITCH ON THE CAT. 6262B-001 FIRE ALARM TEST STATION TO THE "RESET/TEST" POSITION WILL RESET THAT DETECTOR ONLY. OPERATING THE CONTROL PANEL RESET AND THE 24V POWER RESET WILL RESET THE ENTIRE SYSTEM. THE DETECTOR HAS NO INTEGRAL ALARM LAMP.

THE FIRE ALARM STATION CAT. 6262B-001 IS ALSO USED TO GIVE VISUAL INDICATION OF ALARM.

**CLEANING AND MAINTENANCE**

PERIODICALLY, INSPECT THE TRANSPARENT DUCT SMOKE CHAMBER FOR SIGNS OF MOISTURE, INSECTS, DIRT, ETC. IF CLEANING IS REQUIRED, UNSCREW CLAMPS HOLDING THE DUCT DETECTOR THEN WITHDRAW THE DETECTOR FROM THE TRANSPARENT DUCT SMOKE CHAMBER. REMOVE THE GRILLE FROM THE DUCT DETECTOR USING CAT. 6259 REMOVAL TOOL OR SMALL BLADE SCREWDRIVER. VACUUM ANY DUST OR FOREIGN MATERIAL FROM DUCT DETECTOR GRILLE, ION CHAMBER, AND DUCT SMOKE CHAMBER. THEN REASSEMBLE AND INSTALL DETECTOR.

**CAUTION**

"FOR ALL TERMINALS, DO NOT USE LOOPED WIRE UNDER TERMINALS. BREAK WIRE KEN TO PROVIDE SUPERVISION OF CONNECTIONS."

UNLESS OTHERWISE SPECIFIED	DRPG. J.R.R. 12-5-83	EDWARDS G3 A UNIT OF GENERAL SIGNAL FARMINGTON CT 06032
DIMENSIONS ARE IN INCHES TOLERANCES: DEC ± .005 FRACTION ± .164" ANG. ± 1°	CHKD. [Signature] 1-12-84 ENGR. [Signature] 1-13-84 APPRD. [Signature] 1/10/84	
MATERIAL:	FIRST USED ON:	INSTALLATION INSTRUCTIONS CAT. 6260B DUCT DETECTOR HOUSING AND CAT. 6264B ION DUCT DETECTOR
FINISH:	REF.	DWG. NO. D-F-62608-2 SCALE [Signature] SHT. 1 OF 2