



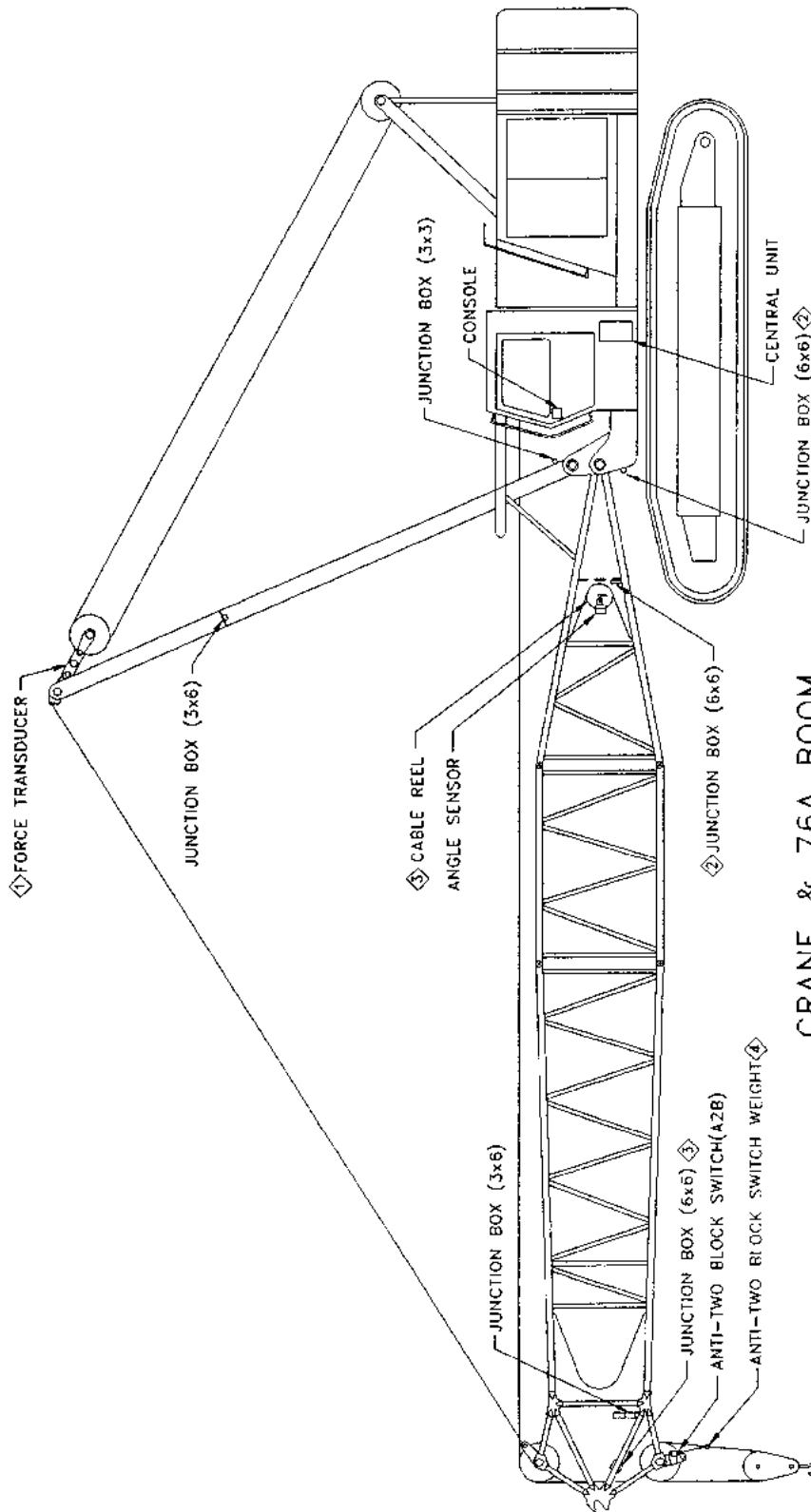
**GROVE<sup>®</sup>**  
**CRANE**

**A GROVE WORLDWIDE COMPANY**

**PARTS AND  
INSTALLATION  
MANUAL**

**HL150T&C  
76A BOOM OPTION  
LMI SYSTEM**





**CRANE & 76A BOOM**

**INSTALLATION OF LMI COMPONENTS**

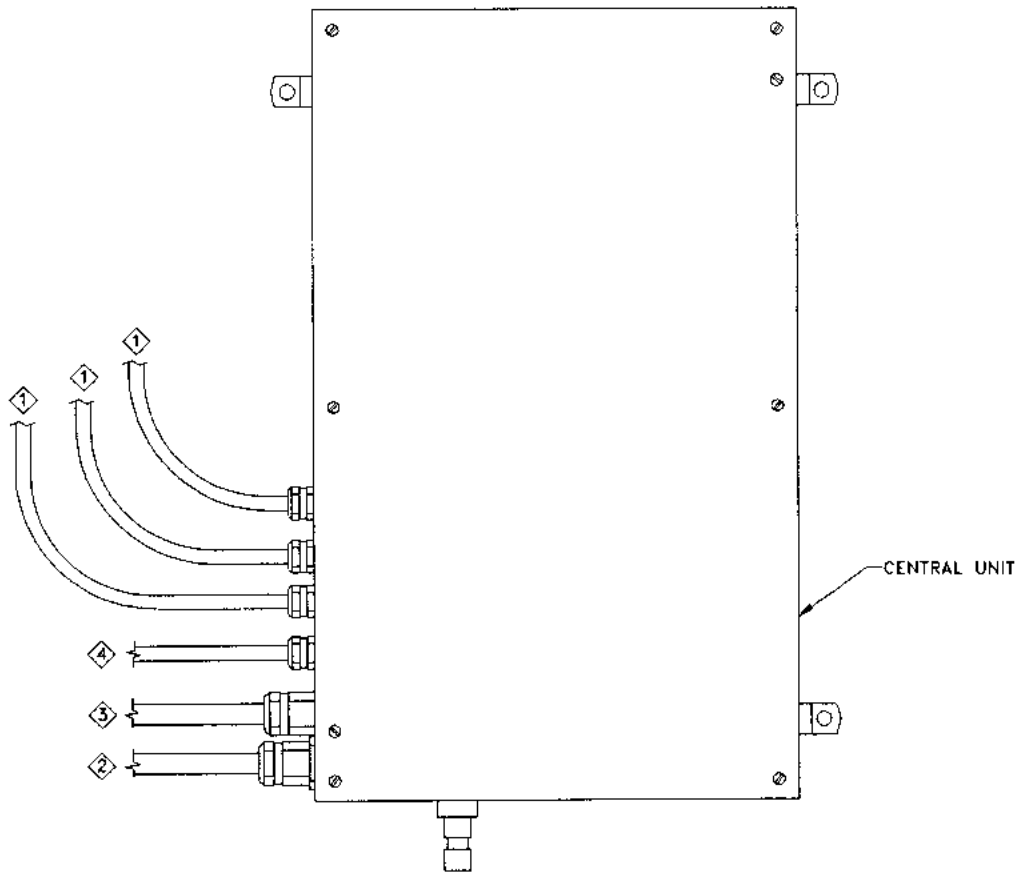
**NOTES:**

ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 755G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS, TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.

- A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
- B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
- C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

FOR ELECTRICAL CONNECTIONS, REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.

- ① ALLOW AMPLE CABLE LOOP TO COVER ALL MAST ANGLES.
- ② TO CONNECT MAIN BOOM TO SUPER-STRUCTURE, SCREW CABLE WITH PLUG ORIGINATING FROM (6 x 6) JUNCTION BOX BENEATH CABLE REEL TO RECEPTACLE ON (6 x 6) JUNCTION BOX.
- ③ TO CONNECT CABLE REEL TO MAIN BOOM NOSE; UNROLL CABLE FROM CABLE REEL AND SCREW PLUG INTO RECEPTACLE ON (6 x 6) JUNCTION BOX ON MAIN BOOM NOSE.
- ④ REFER TO OPERATOR'S HANDBOOK FOR PROPER USE OF A2B SWITCH WEIGHT AND RETAINER FLAG.



**DETAIL A**  
(SUPER-STRUCTURE)

**NOTES:**

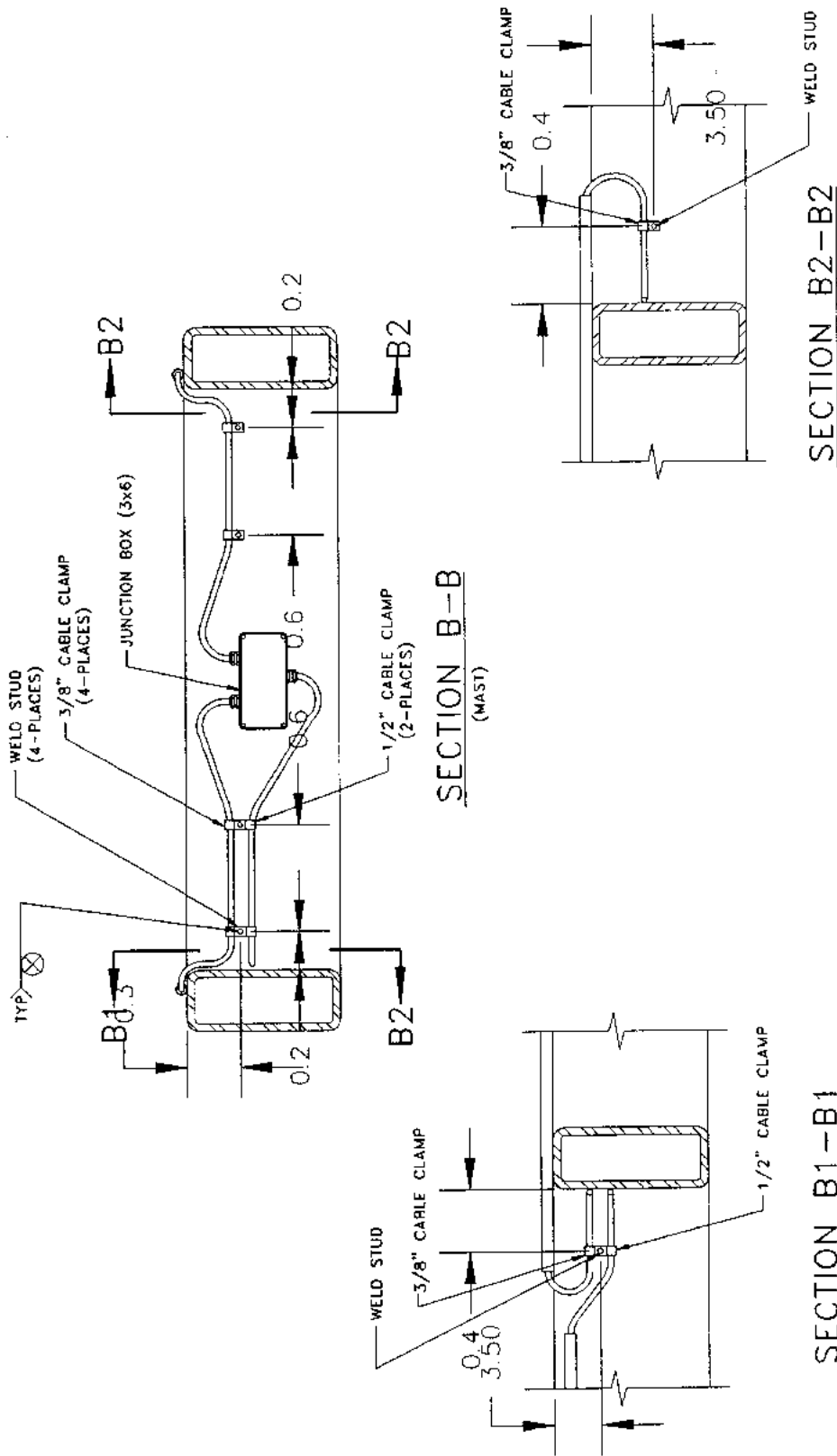
ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS, TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.

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- B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
- C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

FOR ELECTRICAL CONNECTIONS REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.

REFER TO SUPER-STRUCTURE COMPONENT KIT FOR INSTALLATION HARDWARE.

- ① REFER TO GROVE ELECTRICAL SCHEMATIC FOR WIRING DETAIL.
- ② WIRE TO CONSOLE IN CAB.
- ③ WIRE TO (6 x 6) JUNCTION BOX ON SUPER-STRUCTURE.
- ④ WIRE TO (3 x 3) JUNCTION BOX ON MAST.

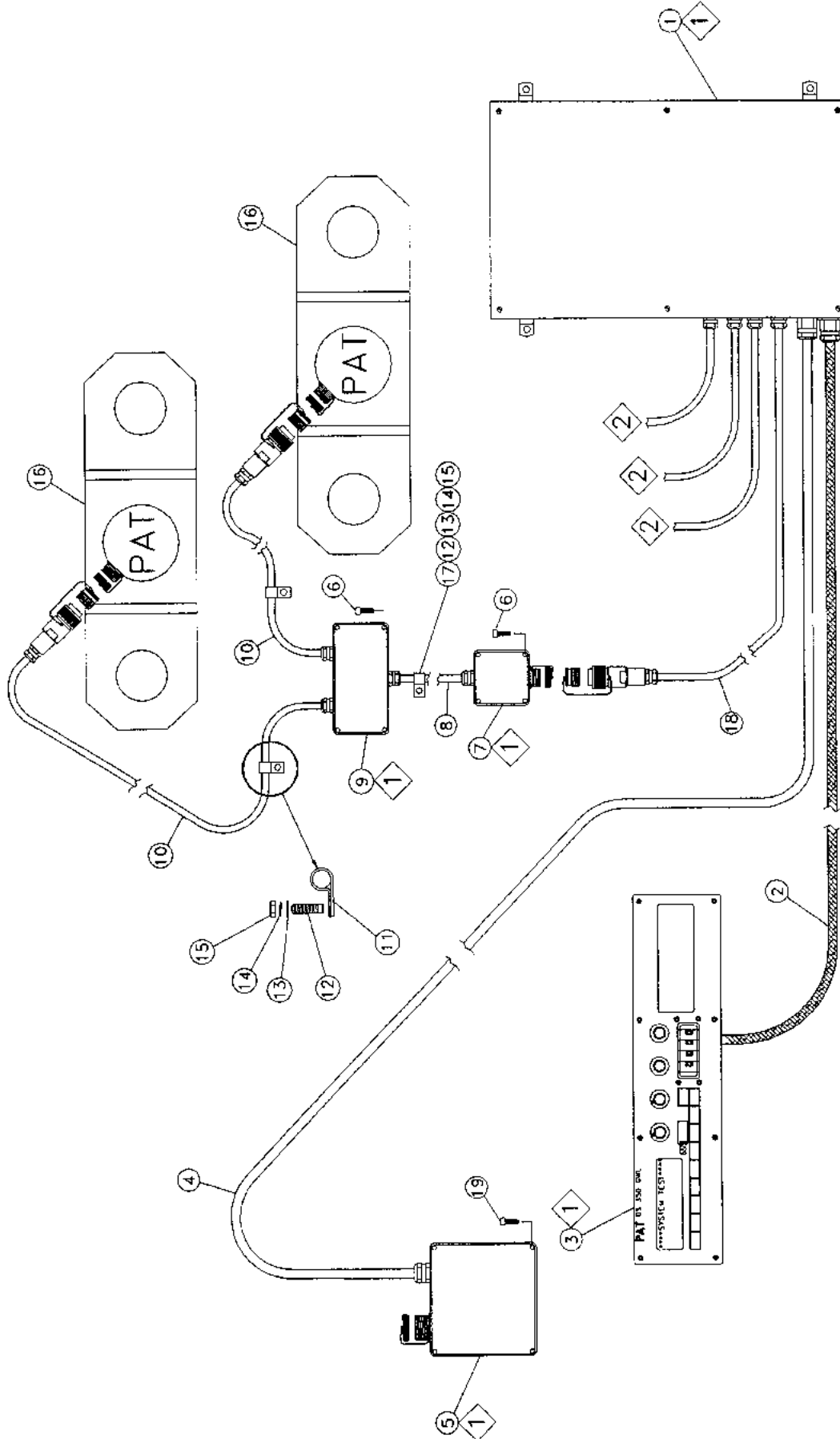


NOTES:

- A. ADD DIELECTRIC LUBRICANT (e.g., NYGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS AND ELECTRICAL CONNECTORS. TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.
- B. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
- C. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
- D. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

ALL DIMENSIONS IN INCHES TO CENTER LINE OF WELD STUDS.  
 FOR ELECTRICAL CONNECTIONS REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.  
 REFER TO SUPER-STRUCTURE COMPONENT KIT FOR INSTALLATION HARDWARE.

INSTALLATION  
 LMI COMPONENTS



NOTES:

① SEE PART BREAKDOWN DWG. FOR PARTS DETAIL.

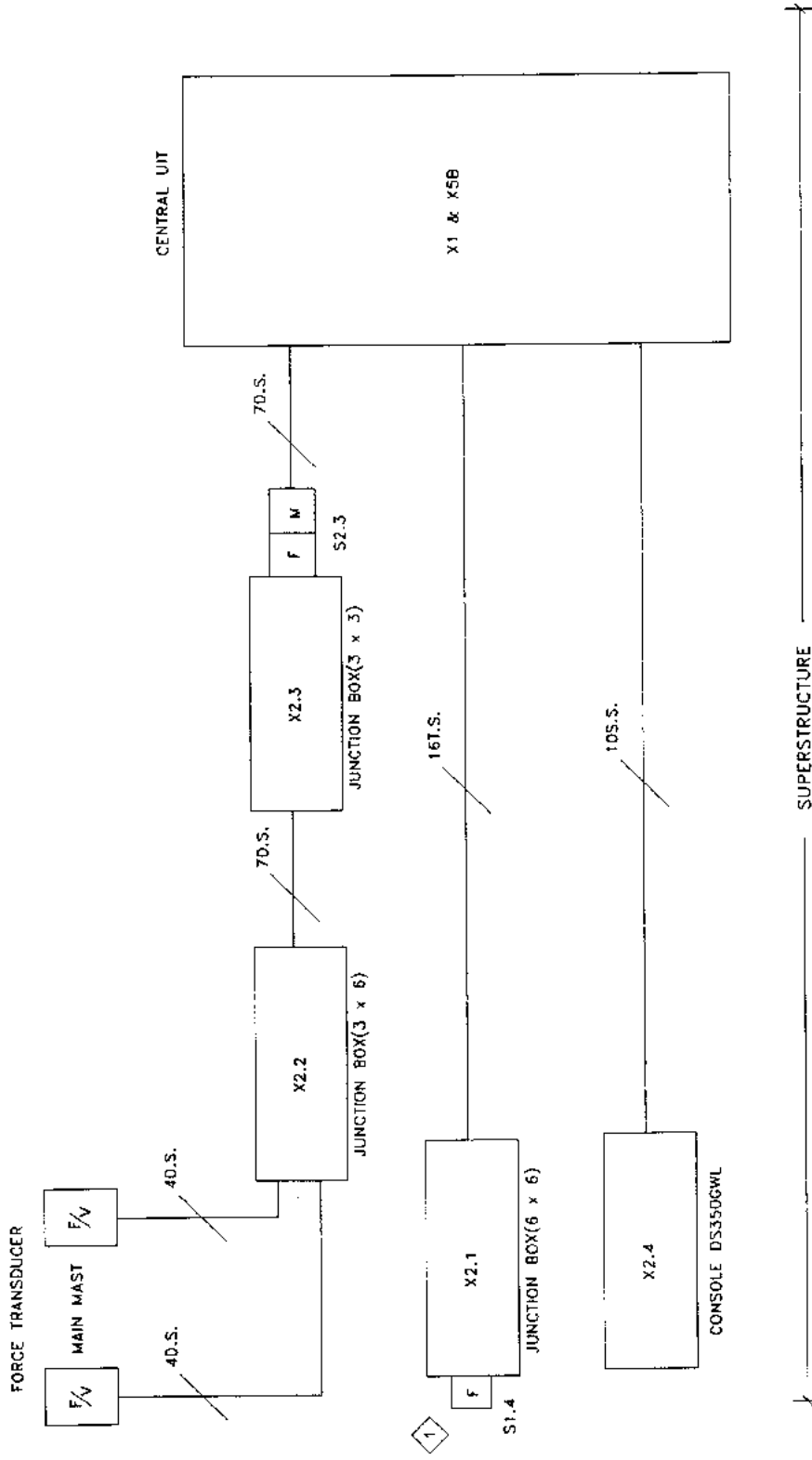
② REFER TO GROVE ELECTRICAL SCHEMATIC FOR WIRING DETAIL.

# SUPERSTRUCTURE INSTALLATION

# GROUE

NO.	PART NO.	QTY DESCRIPTION	NO.	PART NO.	QTY DESCRIPTION
1 +	9-333-102631	1 CENTRAL UNIT ASSEMBLY			
2	9-333-102579	1 CABLE, 10 X 0.5 S.S. 20' <MUST CUT TO LENGTH>			
3 +	9-333-102632	1 CONSOLE, ASSEMBLY			
4	9-333-102578	1 CABLE, 16 X 0.5 T.S. 15' <MUST CUT TO LENGTH>			
5 +	9-333-102580	1 JUNCTION BOX ASSEMBLY <6 X 6>			
6	9-333-102581	8 SCREW			
7 +	9-333-102582	1 JUNCTION BOX ASSEMBLY <3 X 3>			
8	9-333-101746	1 CABLE, ELEC. 7 X 0.5 D.S. 20'			
9 +	9-333-102583	1 JUNCTION BOX ASSEMBLY <3 X 6>			
10	9-333-101483	2 CABLE, ELEC. 4 COND. D.S. 4 PIN FEMALE PLUG			
11	9-333-102584	6 CLAMP, CABLE 3/8"			
12	7-866-142140	9 STUD 1/4"-20 X 7/8"			
13	7-450-140141	9 WASHER 1/4" NARROW			
14	7-450-140050	9 LOCKWASHER 1/4" REG			
15	7-660-140000	9 NUT, HEX 1/4"-20 NC - GRD R			
16	9-333-101787	2 FORCE TRANSDUCER <50 TON>			
17	7-300-000101	3 CLAMP 1/2"			
18	9-333-102585	1 CABLE ASSEMBLY, 7 COND. D.S. 7 PIN FEMALE PLUG			
19	9-333-102586	4 SCREW			

+ SEE FURTHER BREAKDOWN THIS GROUP



NOTES

[ F ] = FEMALE CONNECTOR

[ M ] = MALE CONNECTOR

[ 1 ] = CONNECTS TO CABLE FROM MAIN BOOM

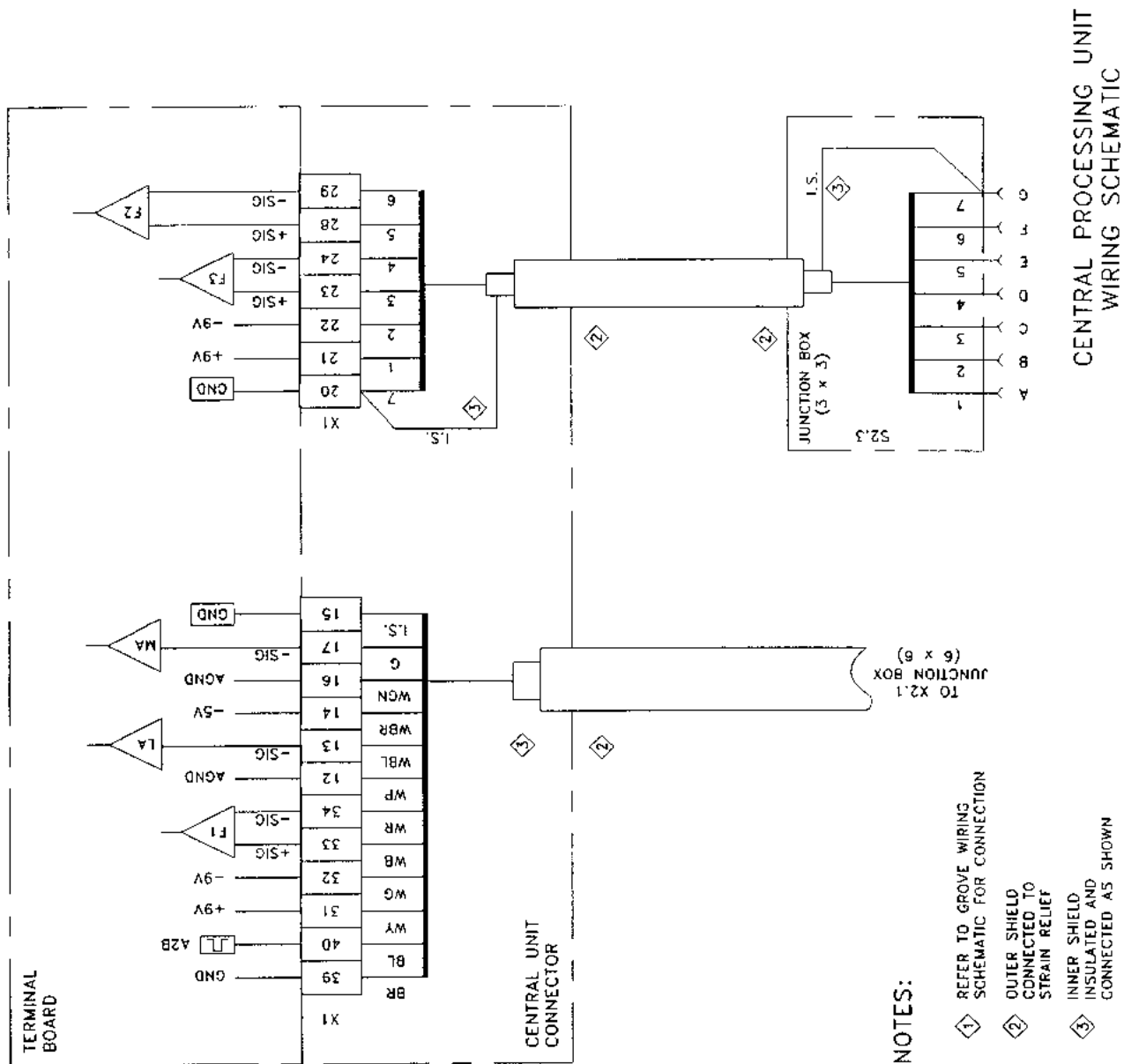
SS = SINGLE SHIELDED CABLE

DS = DOUBLE SHIELDED CABLE

TS = TRIPLE SHIELDED CABLE

CONNECTOR LOCATION

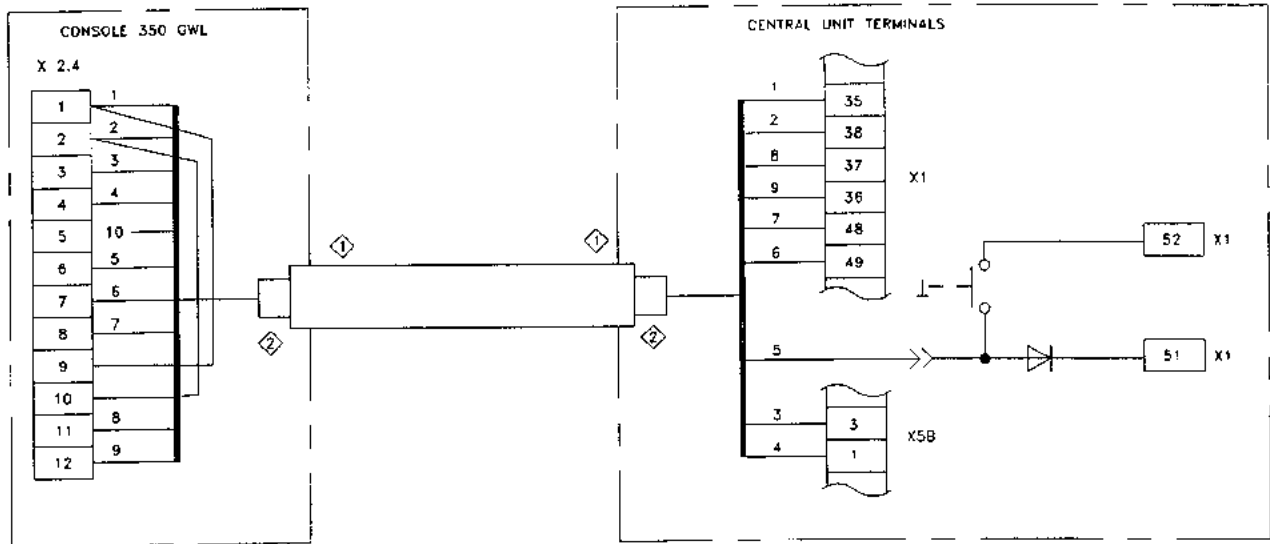




CENTRAL PROCESSING UNIT  
WIRING SCHEMATIC

- NOTES:**
- ① REFER TO GROVE WIRING SCHEMATIC FOR CONNECTION
  - ② OUTER SHIELD CONNECTED TO STRAIN RELIEF
  - ③ INNER SHIELD INSULATED AND CONNECTED AS SHOWN

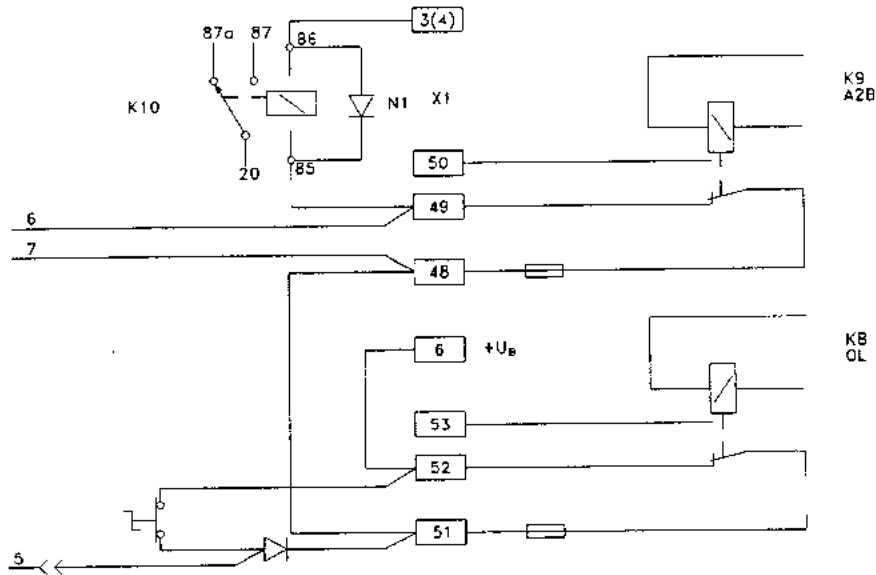
CODE	COLOR
BR	BROWN
BL	BLACK
WY	WHITE/YELLOW
WC	WHITE/GRAY
WB	WHITE/BLUE
WR	WHITE/RED
WP	WHITE/PINK
WBL	WHITE/BLACK
WBR	WHITE/BROWN
P	PINK
W	WHITE
GN	GREEN
R	RED
B	BLUE
R	RED
WGN	WHITE/GREEN
G	GRAY
I.S.	INNER SHIELD



NOTES:

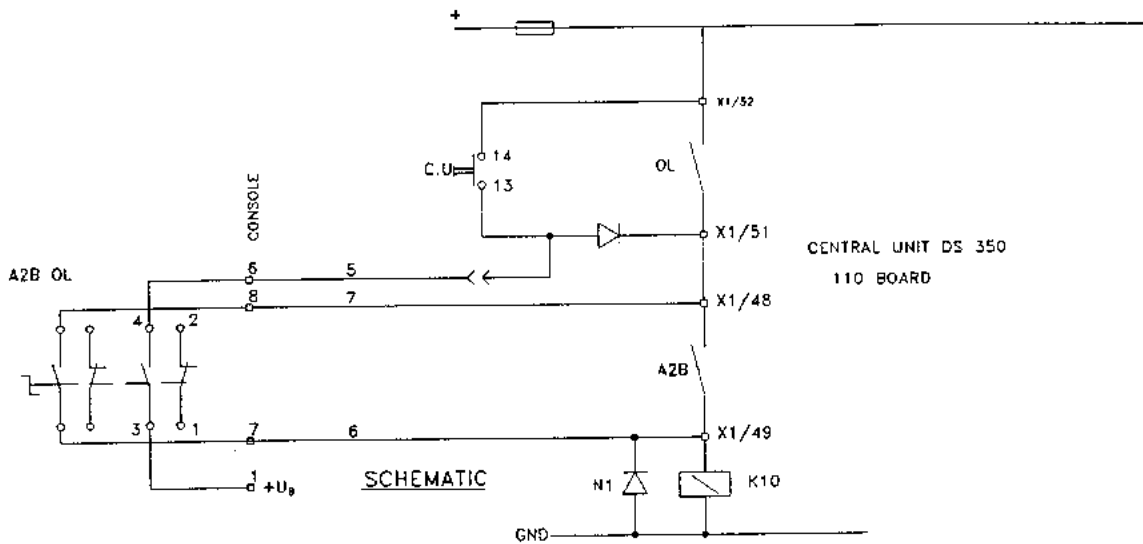
- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF
- ② INNER SHIELD CUT AND INSULATED ON BOTH ENDS

CENTRAL PROCESSING UNIT  
TO CONSOLE  
WIRING SCHEMATIC



WIRING DIAGRAM

BY-PASS SWITCH CONNECTION



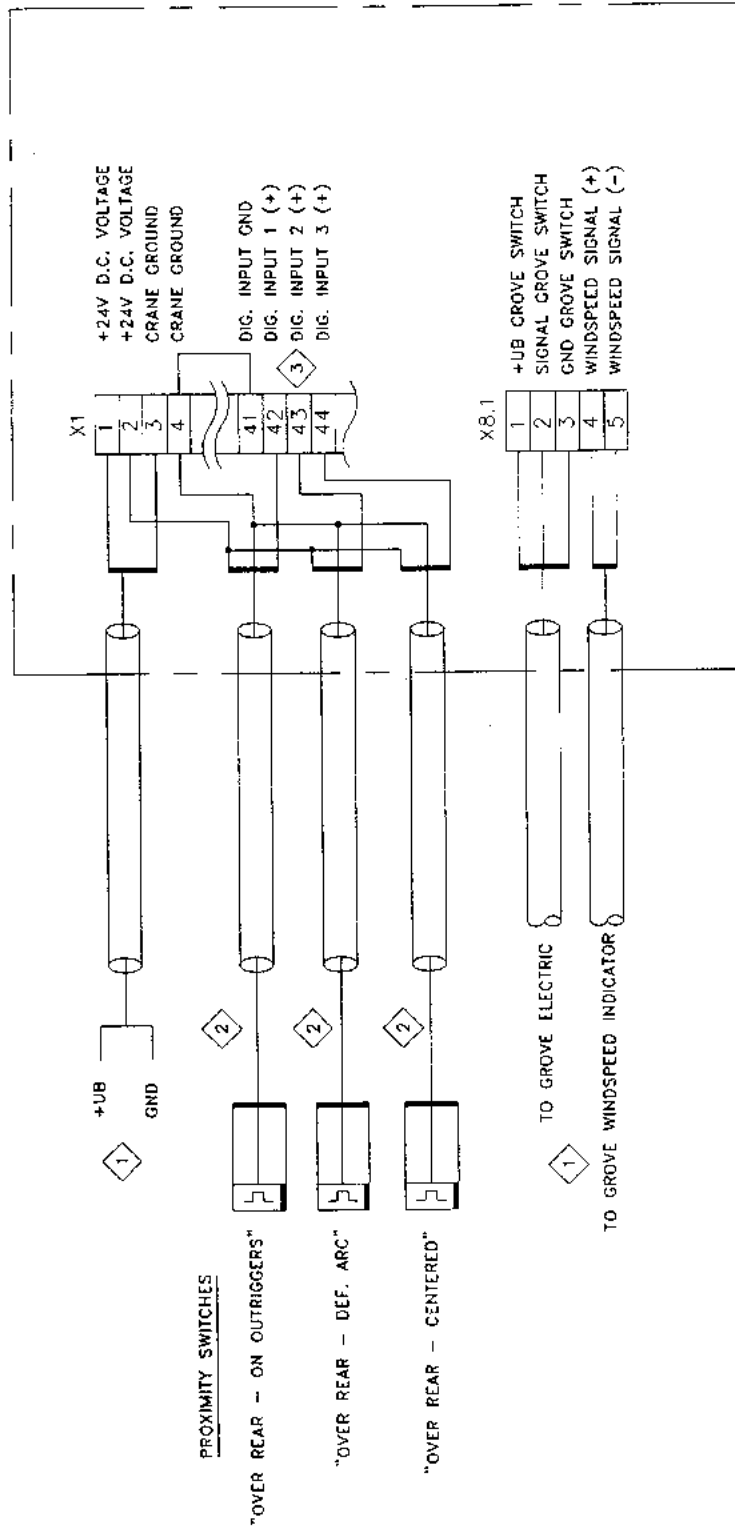
SCHEMATIC

CENTRAL UNIT DS 350  
110 BOARD

NOTES:

- A2B = ANTI-TWO BLOCK
- OL = OVER/LOAD

BY-PASS SWITCH SCHEMATIC



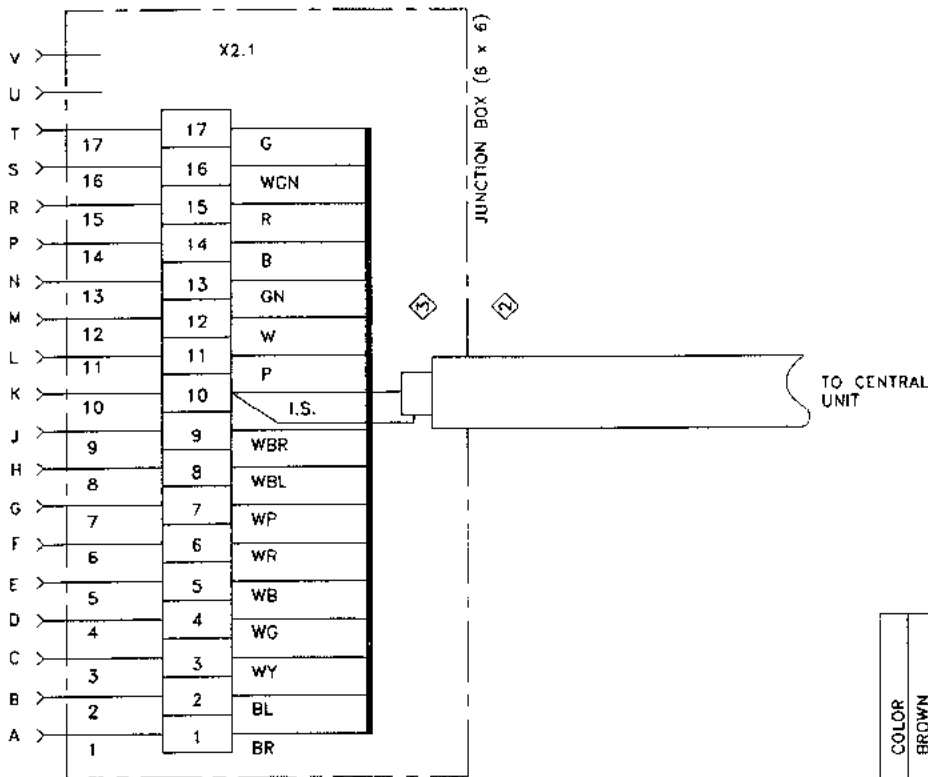
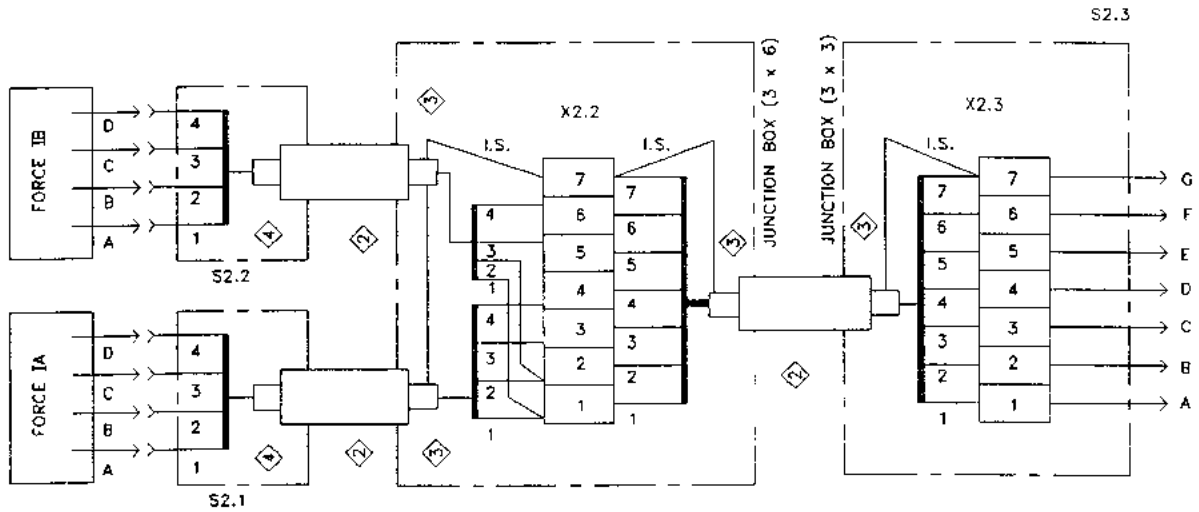
CENTRAL UNIT DS350GWL

CRANE ELECTRIC, INTERFACE

NOTES

- 1 REFER TO GROVE SCHEMATICS AND DOCUMENTATION
- 2 FOR HOIST ONLY! NOT USED FOR HL150C
- 3 CONNECTED FOR HL150T ONLY! NOT CONNECTED FOR HL150C

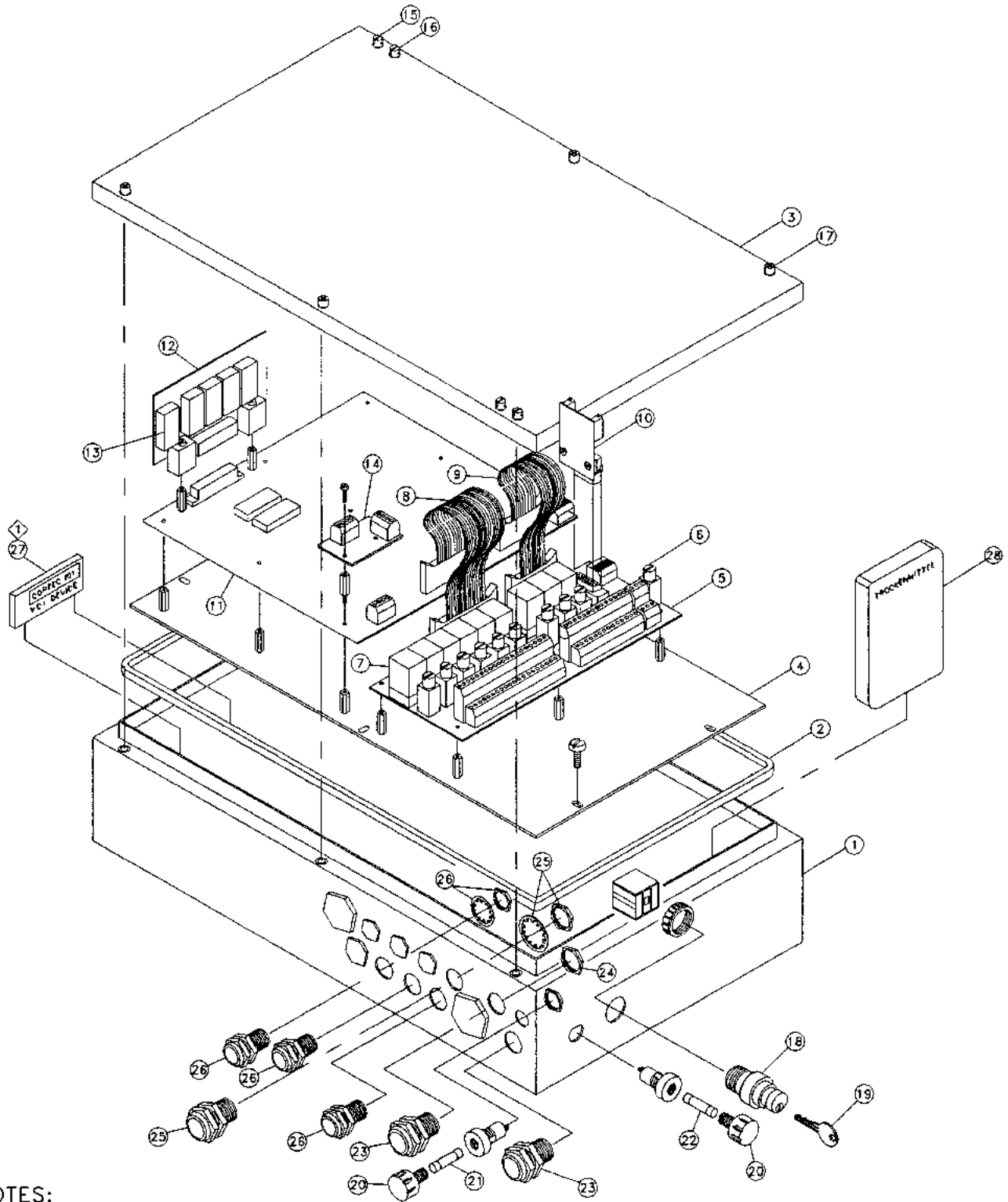
MAIN MAST



NOTES:

- ② OUTER SHIELD CONNECTED TO STRAIN RELIEF
- ③ INNER SHIELD INSULATED AND CONNECTED AS SHOWN
- ④ INNER SHIELD CUT AND INSULATED

CODE	COLOR
BR	BROWN
BL	BLACK
WY	WHITE\YELLOW
WG	WHITE\GRAY
WB	WHITE\BLUE
WR	WHITE\RED
WP	WHITE\PINK
WBL	WHITE\BLACK
WBR	WHITE\BROWN
P	PINK
W	WHITE
GN	GREEN
B	BLUE
R	RED
WGN	WHITE\GREEN
G	GRAY
I.S.	INNER SHIELD



**NOTES:**

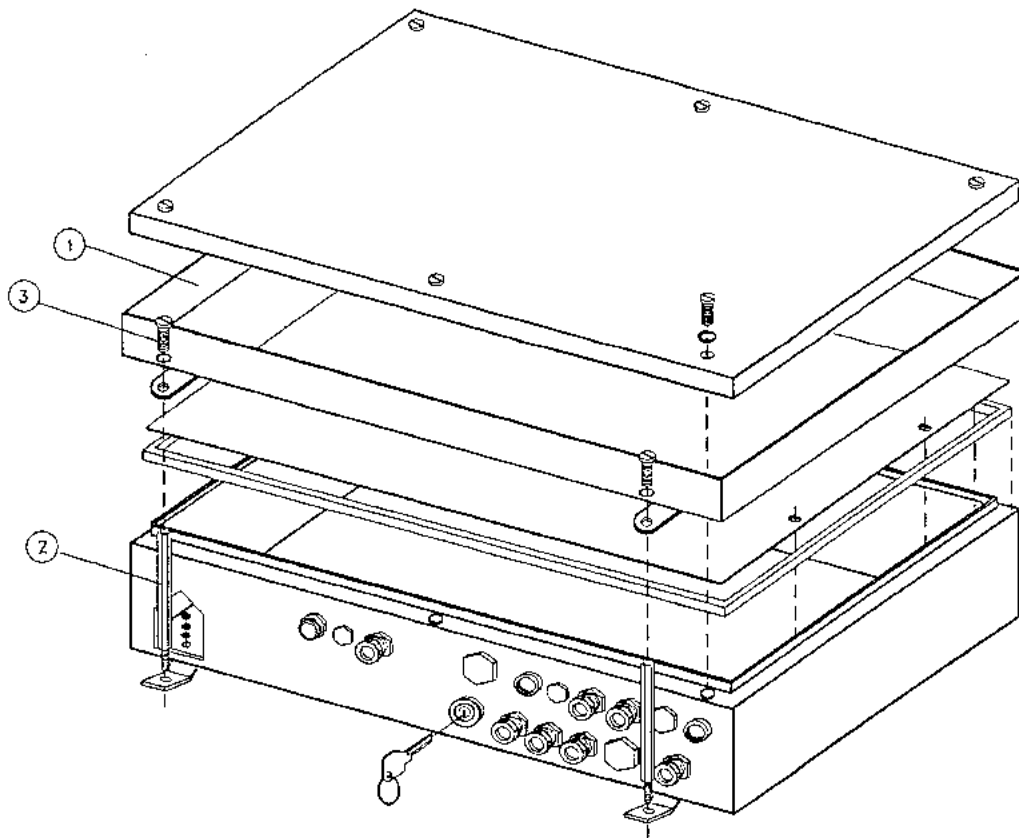
SEE PAGE 6 FOR BILL OF MATERIAL.

- ① PEEL OFF PROTECTIVE PAPER FROM SELFADHESIVE ON BACK OF DEVICE. ADHERE TO INSIDE WALL OF ENCLOSURE.

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102631		COMPLETE ASSY				
1	9-333-101662	1	HOUSING				
2	9-333-101591	1	SEAL, COVER				
3	9-333-101589	1	COVER				
4	9-333-102083	1	PLATE, MOUNTING				
5	9-333-102587	1	BOARD, CONNECTION				
6	9-333-102089	1	FUSE, 4 AMP				
7	9-333-101596	9	RELAY				
8	9-333-101595	1	CABLE, CONNECTING 40 CORE				
9	9-333-101594	1	CABLE, CONNECTING 26 CORE				
10	9-333-102588	1	BOARD, AMPLIFIER				
11	9-333-102589	1	BOARD, MAIN				
12	9-333-102590	1	BOARD, MEMORY				
13	9-333-102088	9	FUSE, 2 AMP				
14	9-333-102288	1	BOARD, INTERFACE				
15	9-333-102380	2	SCREW #5 X 30 W/HOLE				
16	9-333-102381	2	SCREW #5 X 10 W/HOLE				
17	9-333-102379	4	SCREW #5 X 30 W/O HOLE				
18	9-333-101981	1	SWITCH, BYPASS				
19	9-333-101982	1	KEY				
20	9-333-101666	2	HOLDER, FUSE				
21	9-333-101667	1	FUSE, AMP 2				
22	7-482-000019	1	FUSE, 10 AMP				
23	9-333-101735	2	STRAIN RELIEF GREY - WHITE INSERT PG13.5				
24	9-333-101547	2	LOCKOUT PG 13.5				
25	9-333-102444	1	STRAIN RELIEF RED INSERT - PG11 W/OUT ADD WASHER				
26	9-333-101599	3	STRAIN RELIEF GREEN INSERT - PG11				
27	7-296-000004	1	INHIBITOR, CORROSION				
28	9-333-101918	1	DESSICANT PACK				

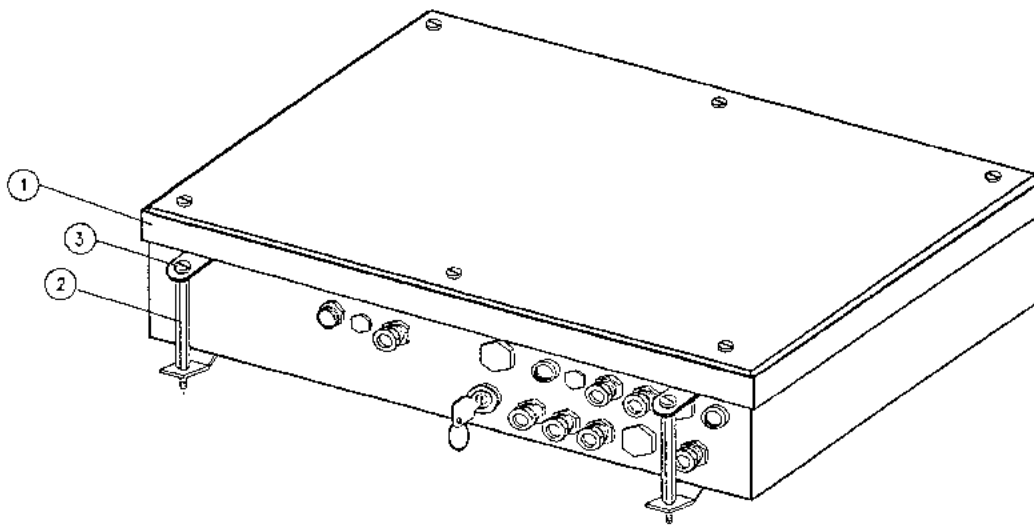
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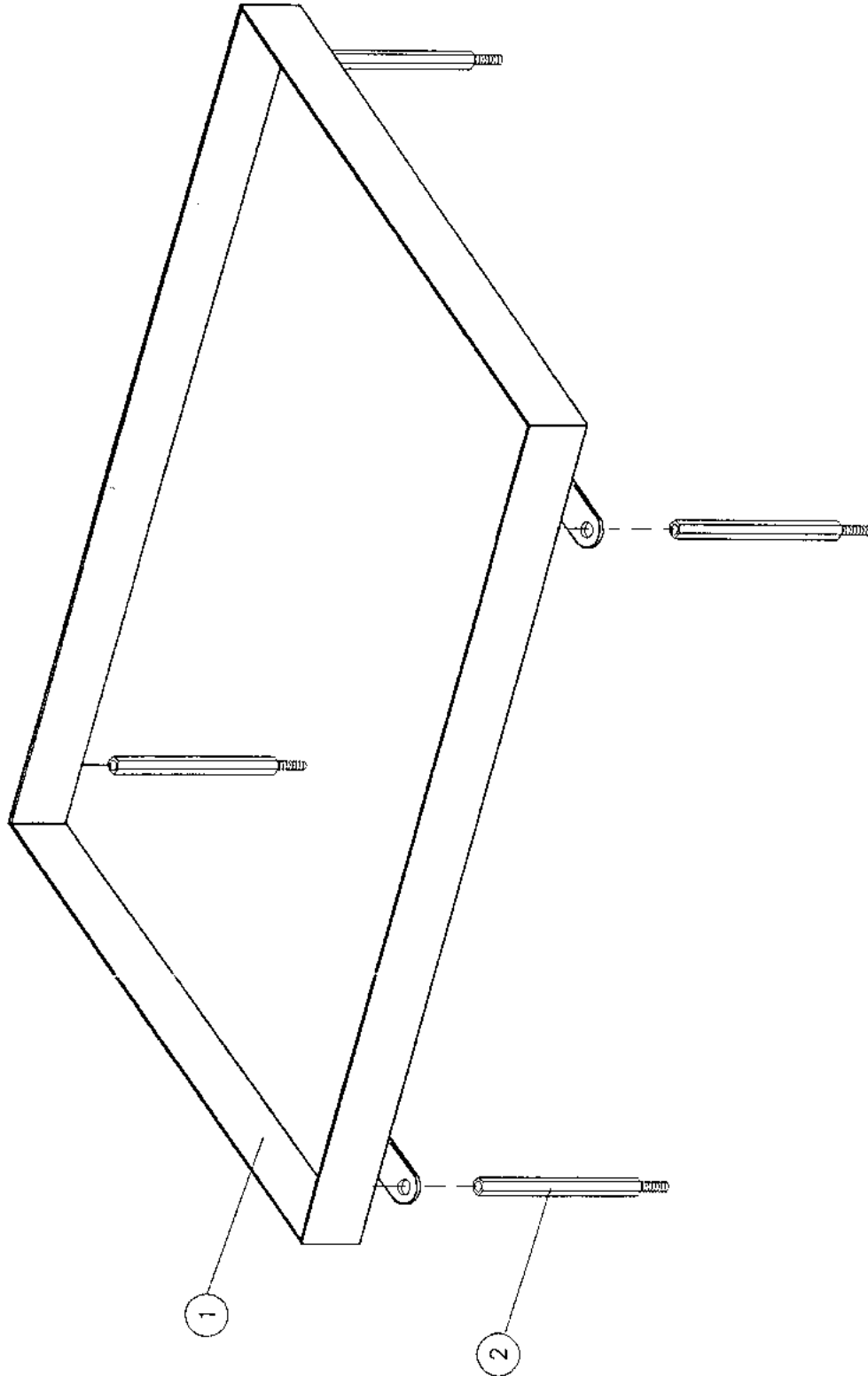




### WATER DEFLECTION FRAME INSTALLATION

1. REMOVE EXISTING MOUNTING HARDWARE SCREWS (3) AND REPLACE THEM WITH THE REQUIRED STAND-OFFS (2) TO FIT YOUR APPLICATION.
2. PLACE THE WATER DEFLECTION FRAME (1) ATOP THE STAND-OFFS AND SECURE THE FRAME WITH THE MOUNTING SCREWS (3) REMOVED PREVIOUSLY.
3. ENSURE THAT THE WATER DEFLECTION FRAME (1) SURROUNDS THE SEAL WHERE THE CENTRAL UNIT COVER MEETS THE HOUSING.



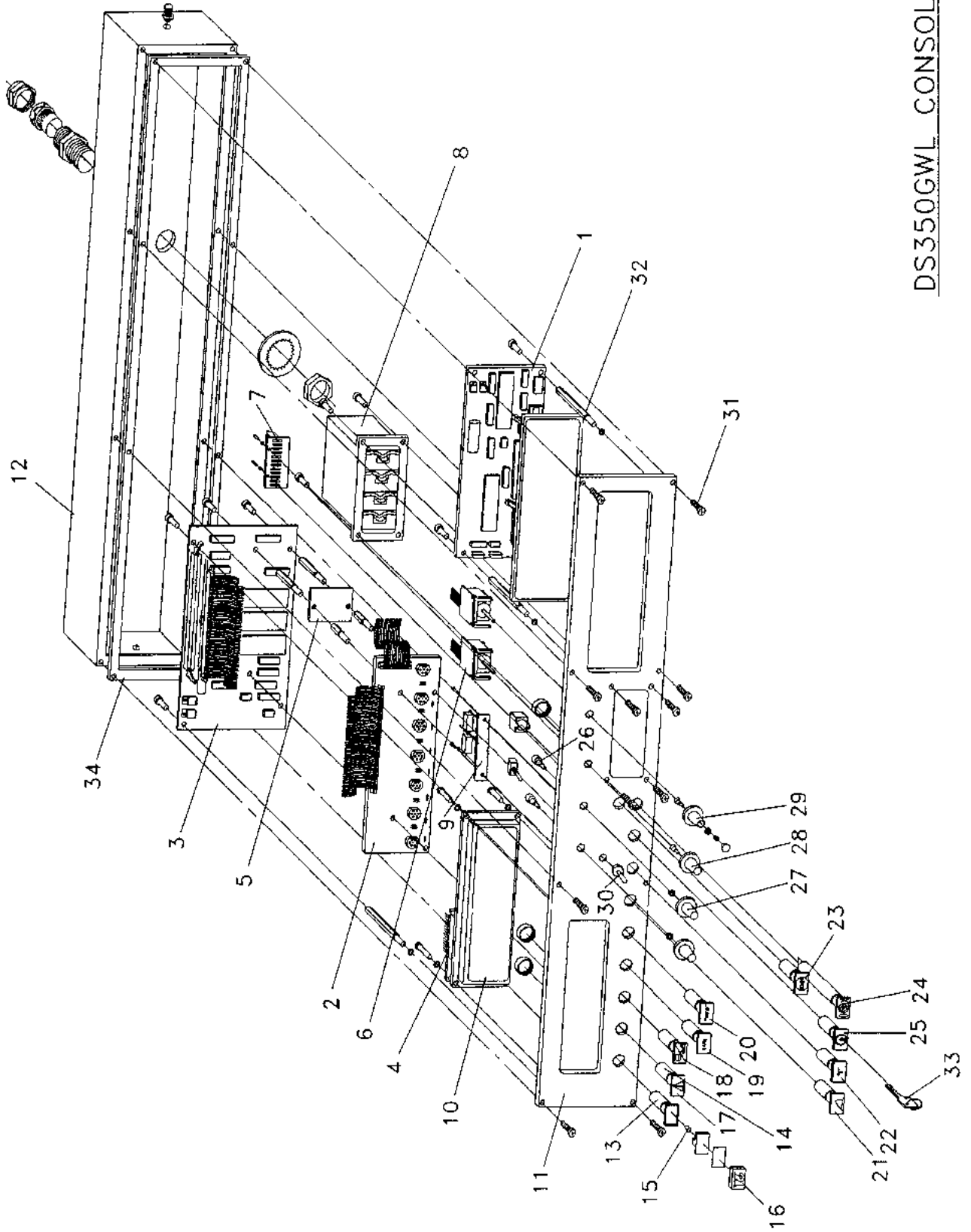


WATER DEFLECTION  
FRAME ASSY

# WATER DEFLECTION FRAME INSTALLATION

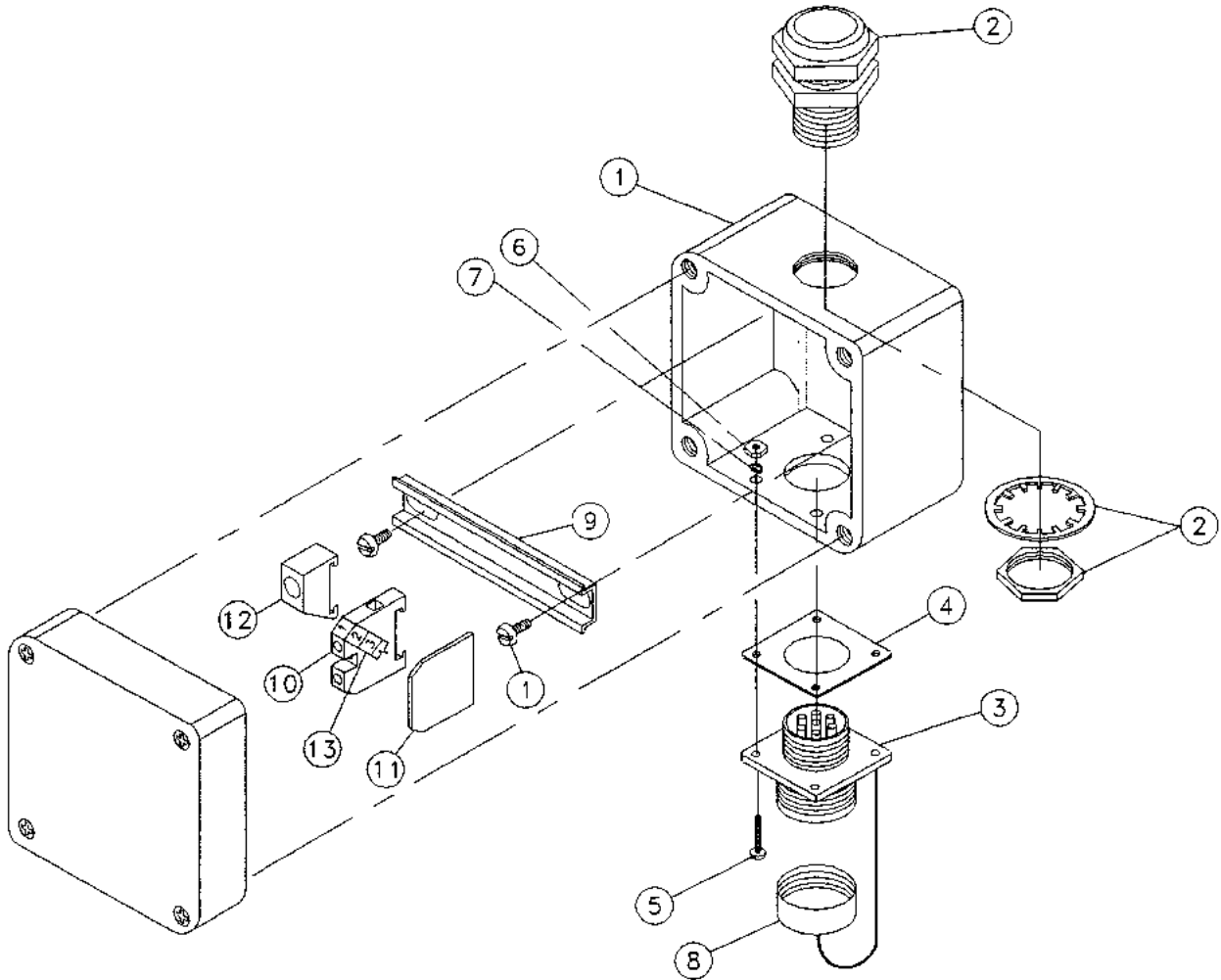
# GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	3-486-0-00379		COMPLETE ASSY				
1	9-333-102576	1	FRAME				
2	9-333-102627	1	HARDWARE, FRAME MOUNTING				

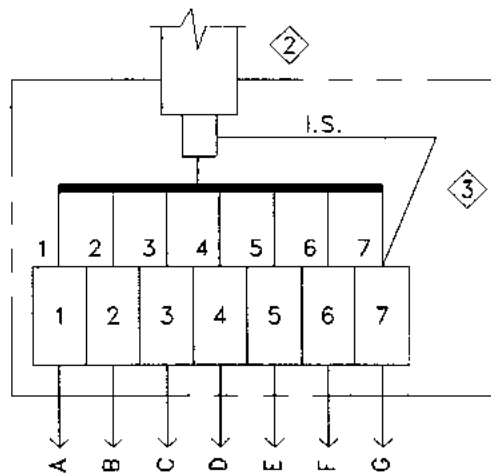


DS350GWL CONSOLE

NO.	PART NO.	QTY DESCRIPTION	NO.	PART NO.	QTY DESCRIPTION
	9-333-102632	COMPLETE ASSY			
1	9-333-102771	1 PROCESSOR BOARD, DATA DISPLAY (AEG)			
2	9-333-102772	1 TERMINAL BOARD, DOT MATRIX DISPLAY			
3	9-333-102189	1 BOARD, COMPUTER			
4	9-333-102774	1 DISPLAY ADAPTER, DOT MATRIX			
5	9-333-102775	1 ADAPTER, BY-PASS ELECTRONIC			
6	9-333-102776	1 REEVING SWITCH MODULE, W/ MOUNTING			
7	9-333-102079	1 STRIP, TERMINAL			
8	9-333-102777	1 THUMBWHEEL SWITCH ASS'Y, W/ SCREWS			
9	9-333-102778	1 ILLUMINATION VOLTAGE DIVIDER, 12/24 VOLT			
10	9-333-102779	1 DOT MATRIX, LCD ASS'Y			
11	9-333-102780	1 FRONTFACE, W/ GLASS			
12	9-333-102781	1 ENCLOSURE, COMPLETE			
13	9-333-102782	3 INDICATOR LIGHT BASE			
14	9-333-102783	5 INDICATOR, PUSH BUTTON BASE			
15	9-333-102073	8 BULB			
16	9-333-101682	1 CAP, YELLOW			
17	9-333-101681	1 CAP, RED			
18	9-333-101676	1 CAP, RED			
19	9-333-102127	1 CAP, YELLOW			
20	9-333-101678	1 CAP, ORANGE			
21	9-333-101679	1 CAP, ORANGE			
22	9-333-101680	1 CAP, GREEN			
23	9-333-102784	1 LENS, RED BY-PASS WARNING			
24	9-333-102125	1 BUZZER			
25	9-333-102785	1 BY-PASS KEYSWITCH ASS'Y			
26	9-333-102786	1 ROTARY SWITCH FOR GEAR, DATA SELECTION			
27	9-333-102787	1 KNOB, SCALE (POINTER) HOIST ROPE MODEL			
28	9-333-102078	1 KNOB			
29	9-333-101997	1 KNOB			
30	9-333-102167	1 SWITCH			
31	9-333-102788	8 MOUNTING SCREWS, FRONTFACE			
32	9-333-102789	1 MOUNTING SCREW SET, INTERNAL COMPONENTS			
33	9-333-101691	1 KEY, CONSOLE			
34	9-333-102713	1 GASKET			



EXPLODED VIEW



WIRING DETAIL

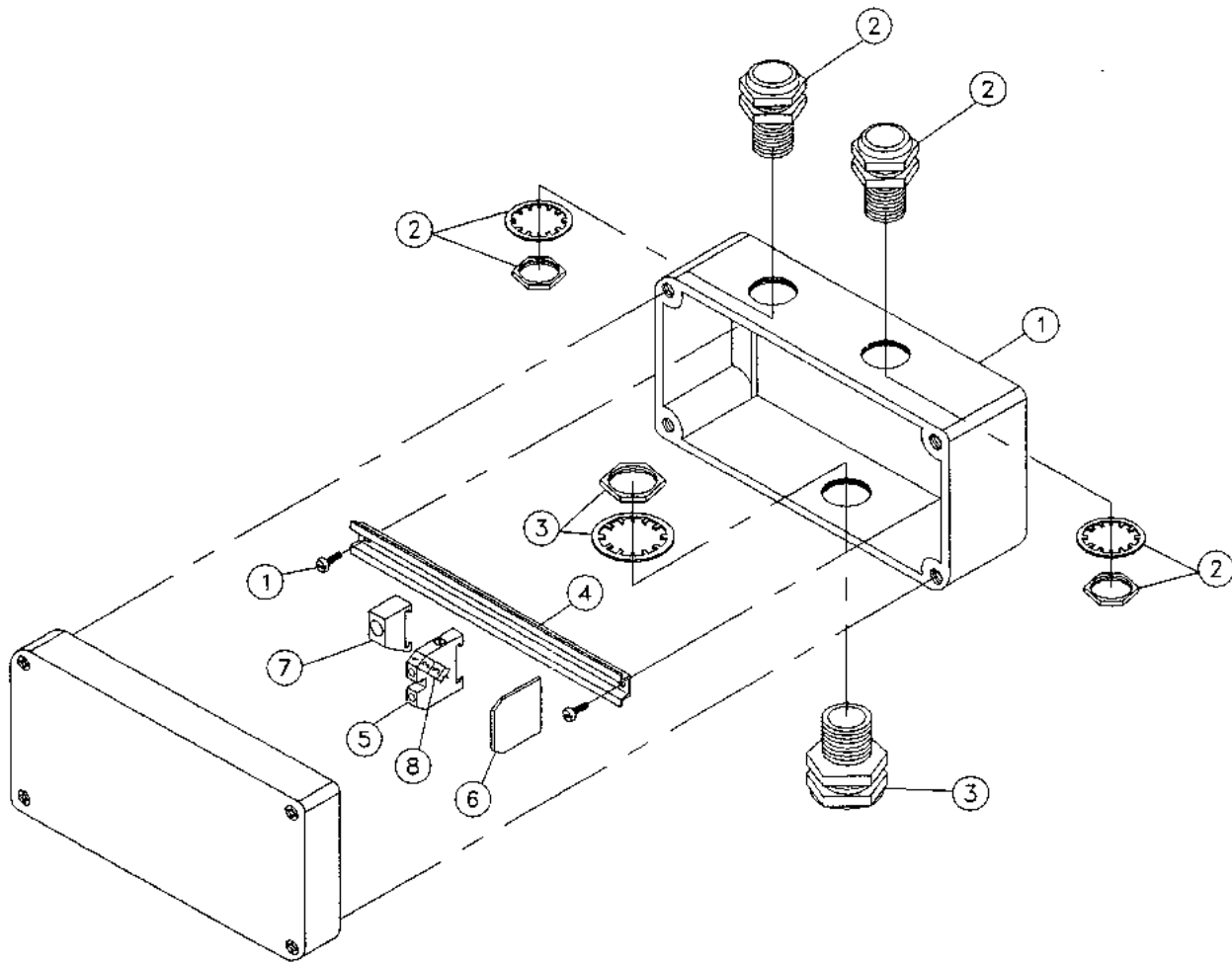
NOTES:

- ◇ 2 OUTER SHIELD CONNECTED TO STRAIN RELIEF INSERT.
- ◇ 3 INNER SHIELD INSULATED AND CONNECTED AS SHOWN.

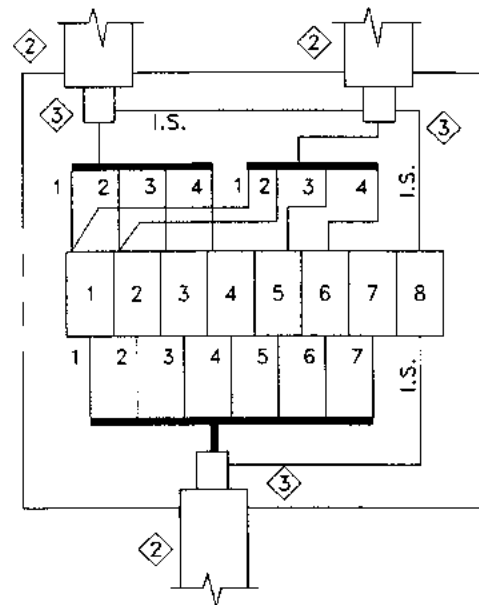
JUNCTION BOX ASSEMBLY (3 X 3)

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102582		COMPLETE ASSY				
1	9-333-102591	1	BOX, HAMMOND				
2	9-333-101579	1	STRAIN RELIEF PG13.5				
3	9-333-102704	1	CANNON CONNECTOR, 7-PIN MALE RECEPTACLE				
4	9-333-102482	1	GASNET				
5	9-333-102265	4	SCREEN 4-40 X 1/2"				
6	9-333-102480	4	NUT #4				
7	9-333-102266	4	LOCKWASHER #4				
8	9-333-102268	1	CAP. DUST				
9	9-333-102662	1	MOUNTING RAIL, TERMINAL STRIP				
10	9-333-102663	7	BLOCK, TERMINAL STRIP				
11	9-333-102664	1	END PLATE, TERMINAL STRIP				
12	9-333-102665	1	END BRACKET, TERMINAL STRIP				
13	9-333-102666	1	TACS, TERMINAL STRIP				



EXPLODE VIEW



WIRING DETAIL

NOTES:

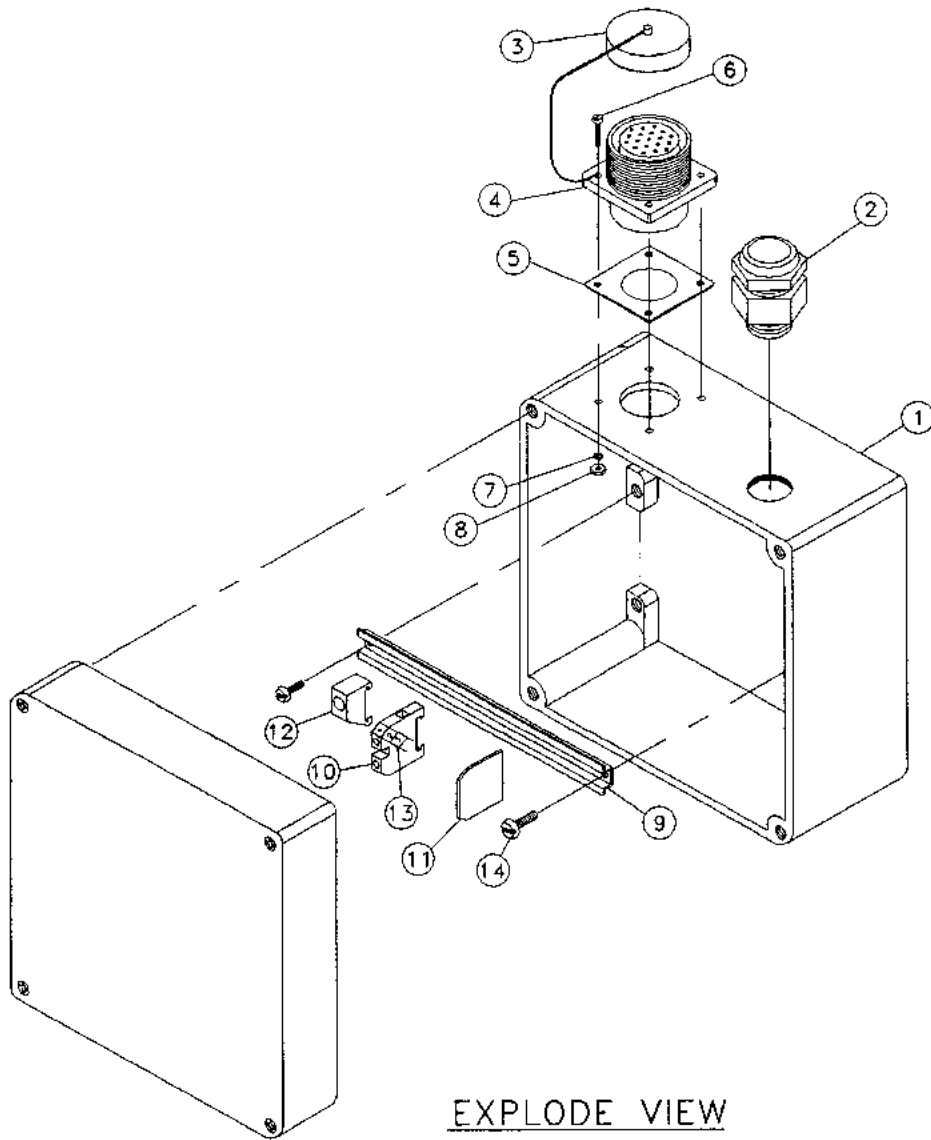
- ② OUTER SHIELD CONNECTED TO STRAIN RELIEF INSERT.
- ③ INNER SHIELD INSULATED AND CONNECTED AS SHOWN.



JUNCTION BOX ASSEMBLY (3 X 6)

GROVE

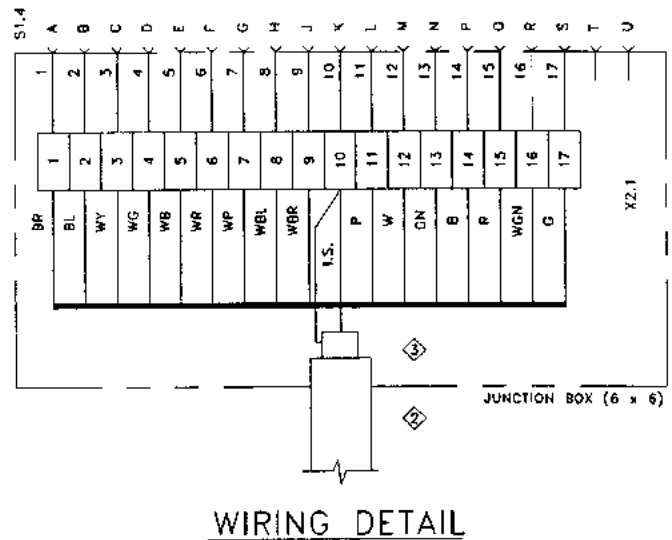
NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102583		COMPLETE ASSY				
1	9-333-102592	1	BOX, HAMMOND				
2	9-333-101599	2	STRAIN RELIEF GREEN INSERT - PG11				
3	9-333-101579	1	STRAIN RELIEF PG13.5				
4	9-333-102667	1	MOUNTING RAIL, TERMINAL STRIP				
5	9-333-102663	8	BLOCK, TERMINAL STRIP				
6	9-333-102664	1	END PLATE, TERMINAL STRIP				
7	9-333-102665	1	END BRACKET, TERMINAL STRIP				
8	9-333-102666	1	TAGS, TERMINAL STRIP				



EXPLODE VIEW

NOTES:

- ② OUTER SHIELD CONNECTED TO STRAIN RELIEF
- ③ INNER SHIELD INSULATED AND CONNECTED AS SHOWN



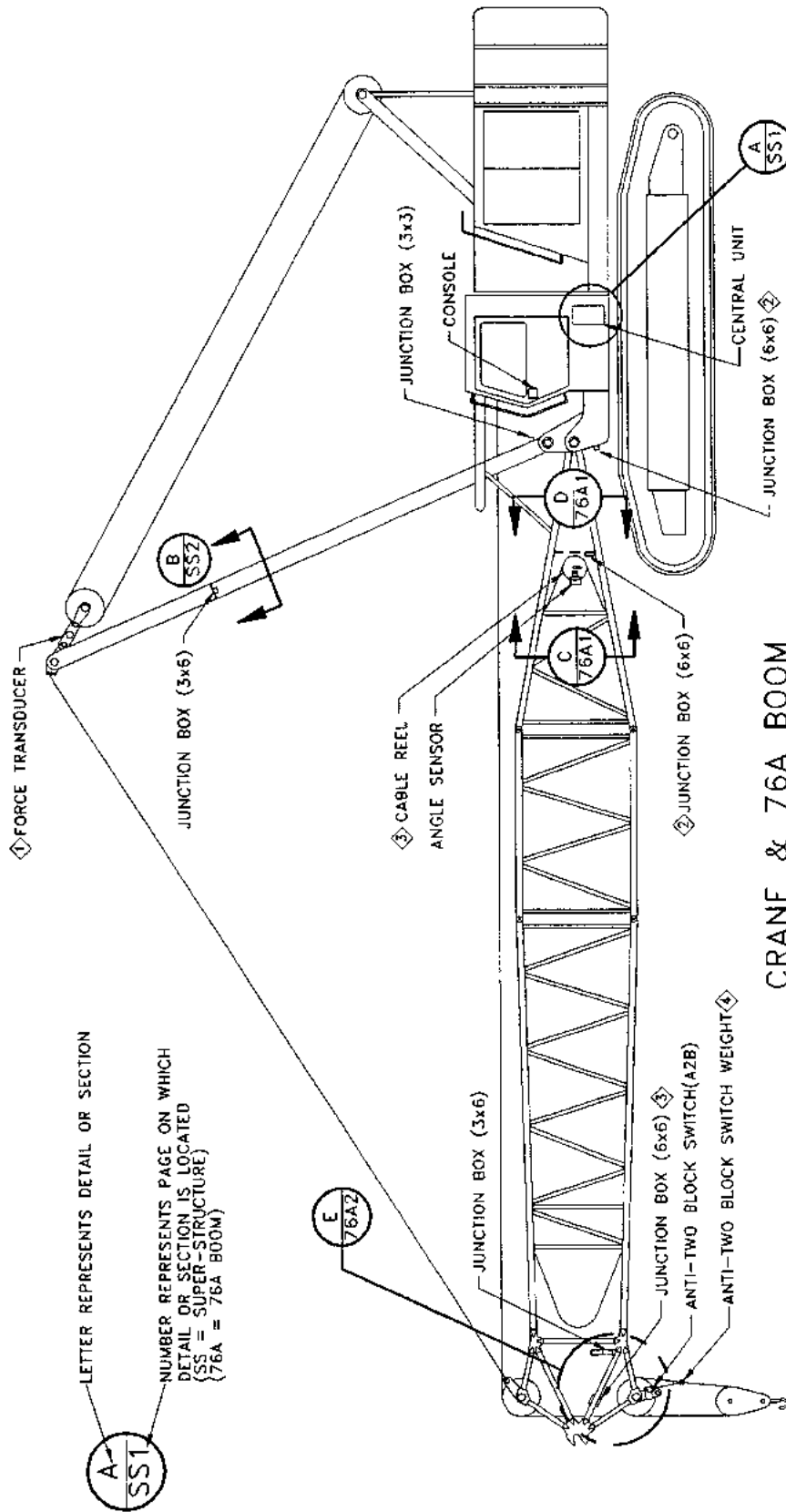
WIRING DETAIL

# JUNCTION BOX ASSEMBLY (6 X 6)

# GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102580		COMPLETE ASSY				
1	9-333-102345	1	HOUSING				
2	9-333-101735	1	STRAIN RELIEF				
			GREY - WHITE INSERT PG13.5				
3	9-333-102268	1	CAP. DUST				
4	9-333-102645	1	CONNECTOR, CADDON, 19-PIN MALE RECEPTACLE				
5	9-333-102668	1	GASKET				
6	9-333-102669	4	SCREW #4				
7	9-333-102266	4	LOCKWASHER #4				
8	9-333-102480	4	NUT #4				
9	9-333-102670	1	MOUNTING RAIL, TERMINAL STRIP				
10	9-333-102683	17	BLOCK, TERMINAL STRIP				
11	9-333-102664	1	END PLATE, TERMINAL STRIP				
12	9-333-102665	1	END BRACKET, TERMINAL STRIP				
13	9-333-102666	1	TAGS, TERMINAL STRIP				
14	9-333-102671	2	SCREW, 6MM X 8MM				

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**CRANE & 76A BOOM**

**INSTALLATION OF LMI COMPONENTS**

**NOTES:**

ADD DIELECTRIC LUBRICANT (e.g. MYGOGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS. TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.

A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.

B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.

C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

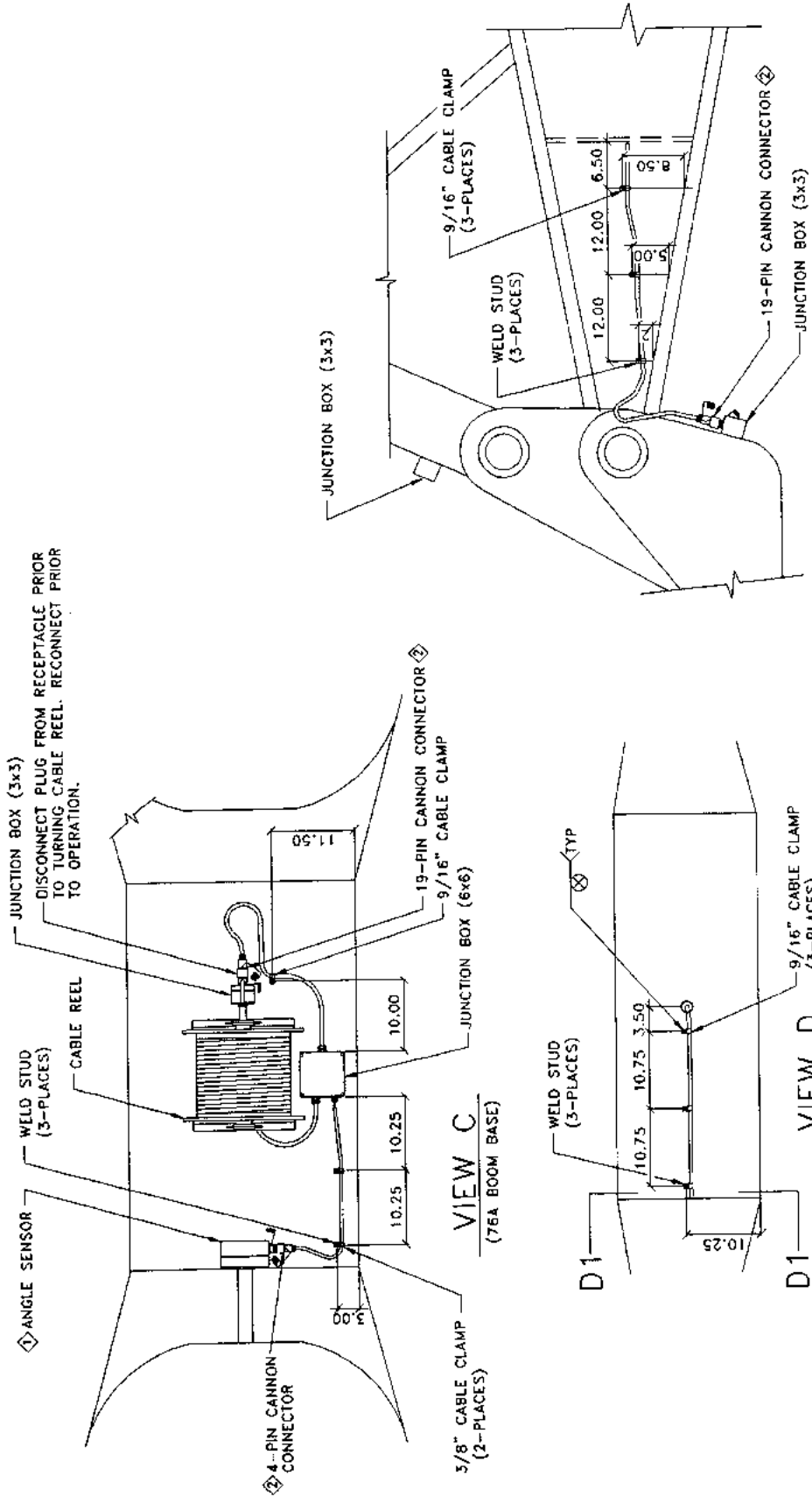
FOR ELECTRICAL CONNECTIONS REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.

1. ALLOW AMPLE CABLE LOOP TO COVER ALL MAST ANGLES.

2. TO CONNECT MAIN BOOM TO SUPER-STRUCTURE: SCREW CABLE WITH PLUG ORIGINATING FROM (6 x 6) JUNCTION BOX BENEATH CABLE REEL TO RECEPTACLE ON (6 x 6) JUNCTION BOX.

3. TO CONNECT CABLE REEL TO MAIN BOOM NOSE: UNROLL CABLE FROM CABLE REEL AND SCREW PLUG INTO RECEPTACLE ON (6 x 6) JUNCTION BOX ON MAIN BOOM NOSE.

4. REFER TO OPERATOR'S HANDBOOK FOR PROPER USE OF A28 SWITCH WEIGHT AND RETAINER FLAG.



SECTION D1-D1

NOTES:

ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS, TO IMPROVE PROTECTION AGAINST CORROSION AND MAL-FUNCTION DUE TO CONDENSATION.

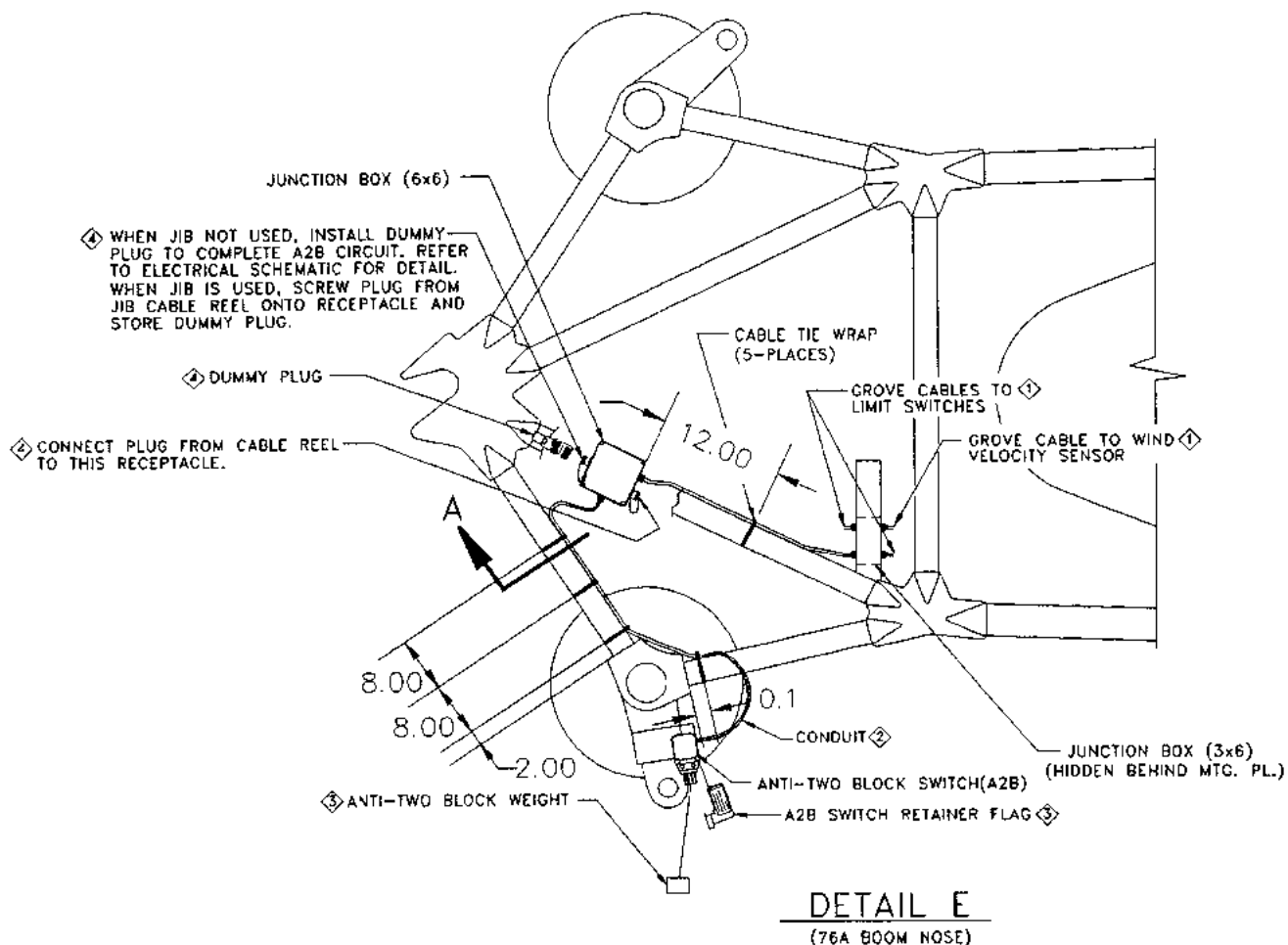
- A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
- B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
- C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

ALL DIMENSIONS IN INCHES TO CENTER LINE OF WELD STUDS.

FOR ELECTRICAL CONNECTIONS REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.

REFER TO 76A BOOM COMPONENT KIT FOR INSTALLATION HARDWARE.

- ① INITIAL MECHANICAL ADJUSTMENT OF ANGLE SENSOR SHOULD BE ALIGNED TO CENTER LINE OF BOOM SECTION.
- ② INSTALL DUST COVERS WHEN PLUG AND RECEPTACLE ARE DISCONNECTED.



NOTES:

ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS, TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.

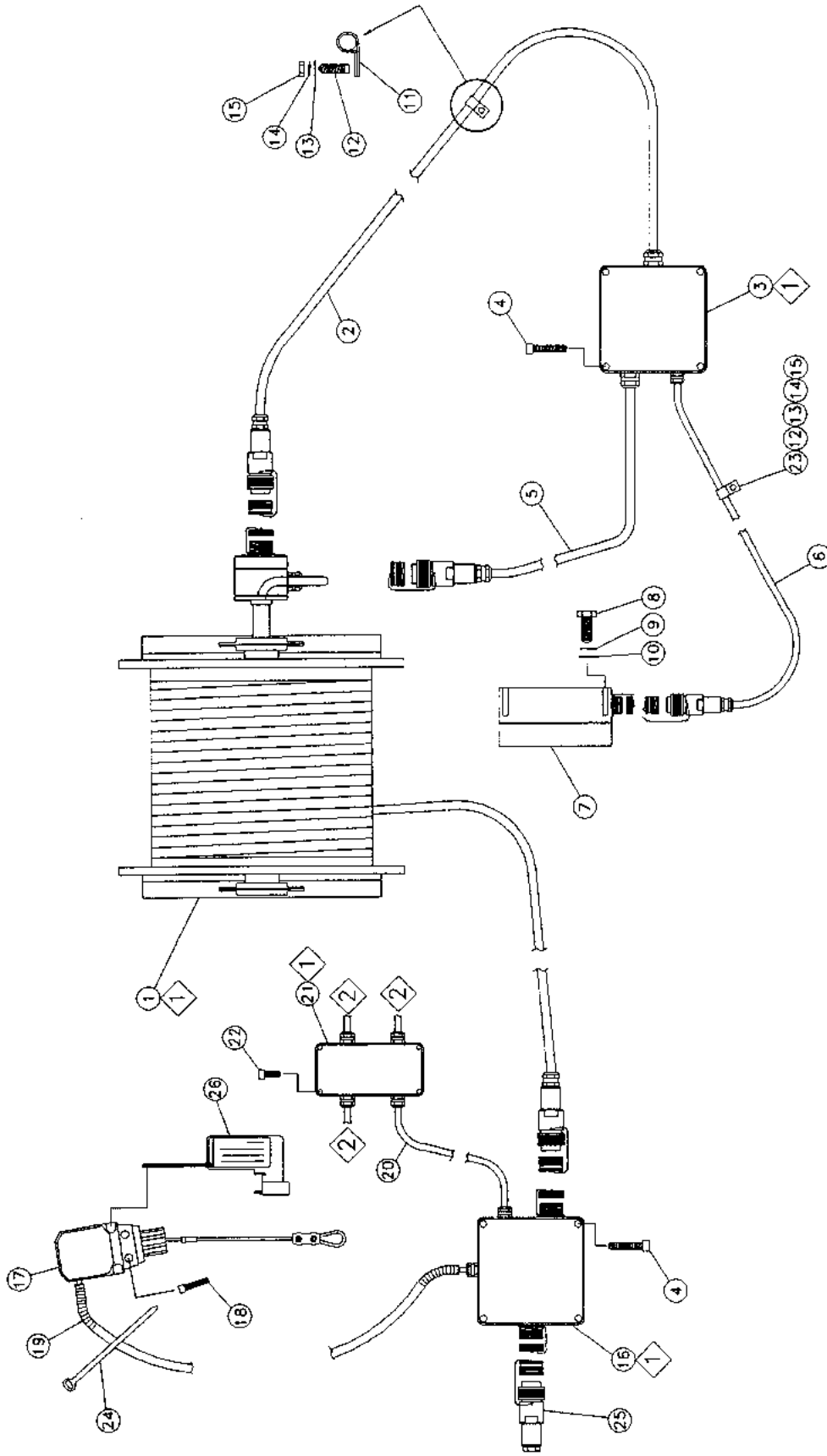
- A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
- B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
- C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

ALL DIMENSIONS IN INCHES TO APPROX. LOCATION OF CABLE TIE WRAPS.

FOR ELECTRICAL CONNECTIONS REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.

REFER TO 76A BOOM COMPONENT KIT FOR INSTALLATION HARDWARE.

- ① REFER TO GROVE ELECTRICAL SCHEMATIC FOR WIRING DETAIL.
- ② ALLOW AMPLE CABLE AND CONDUIT LOOP TO COMPENSATE FOR ROTATION OF A2B SWITCH.
- ③ REFER TO OPERATOR'S HANDBOOK FOR PROPER USE OF A2B SWITCH WEIGHT AND RETAINER FLAG.
- ④ INSTALL DUST COVERS WHEN PLUG AND RECEPTACLE ARE DISCONNECTED.



NOTES:

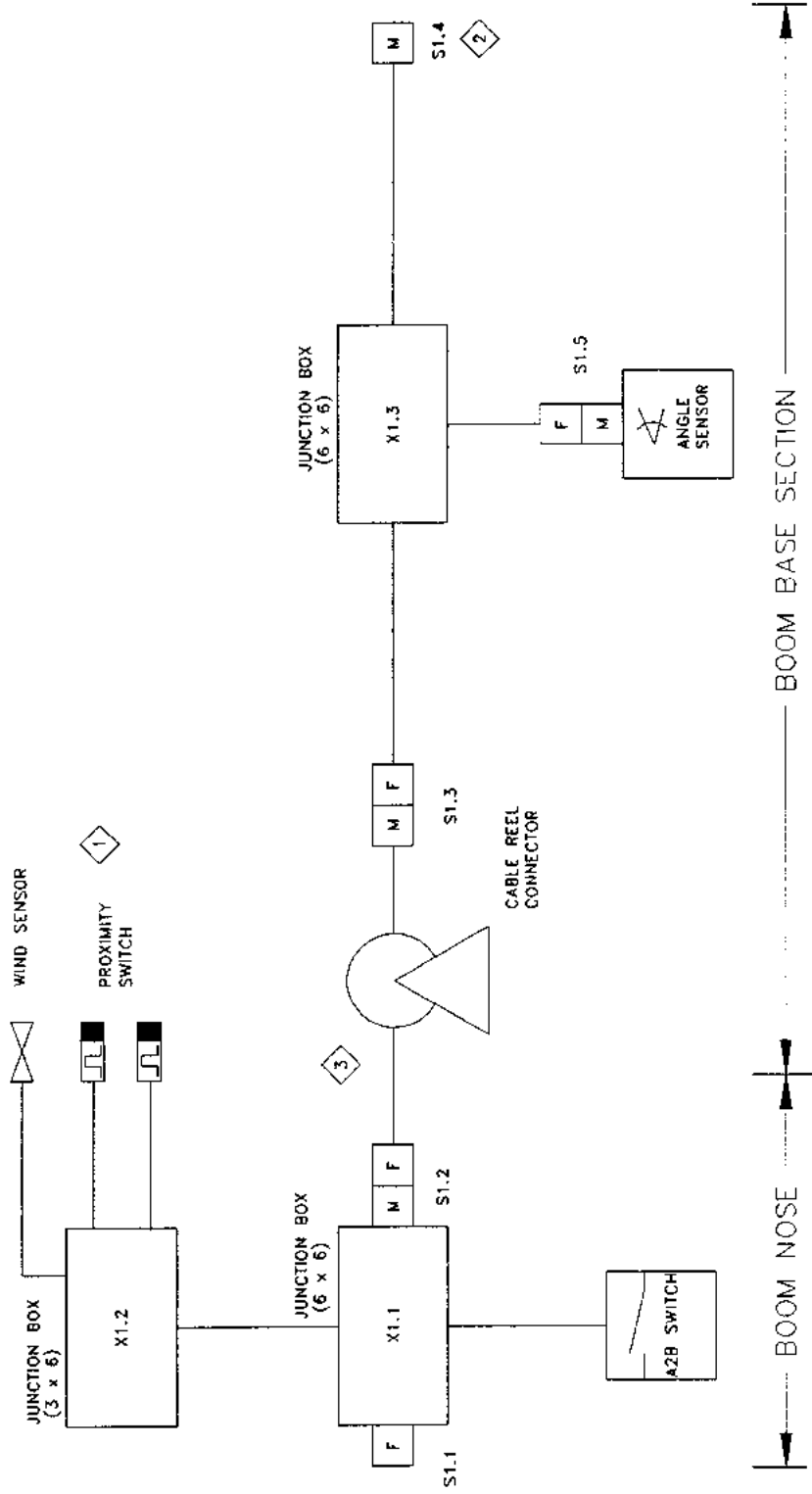
1 SEE PART BREAKDOWN DWG.  
FOR PARTS DETAIL

2 REFER TO GROVE ELECTRICAL SCHEMATIC FOR  
WIRING DETAIL.



NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
1 +	9-333-102594	1	CABLE REEL ASSEMBLY				
2	9-333-102595	1	CABLE ASS'Y. 14 COND. D. S.				
3 +	9-333-102596	1	JUNCTION BOX ASSEMBLY (6 X 6)				
4	9-333-102586	8	SCREW				
5	9-333-102597	1	CABLE ASS'Y. 16 COND				
6	9-333-102598	1	CABLE ASS'Y. 4 COND. D. S.				
7	9-333-101784	1	SENSOR. ANGLE				
8	9-333-102599	4	SCREW. 8MM X 20MM				
9	9-333-101960	4	LOCKWASHER 8MM				
10	9-333-101581	4	FLATWASHER 8MM				
11	9-333-101839	7	CLAMP 7/16"				
12	7-866-142140	4	STUD 1/4"-20 X 7/8"				
13	7-950-140141	4	WASHER 1/4" NARROW				
14	7-950-140050	4	LOCKWASHER 1/4" REG				
15	7-660-140000	4	NUT. HEX 1/4"-20 NC - GRD A				
16 +	9-333-102600	1	JUNCTION BOX ASSEMBLY				
17	9-333-102230	1	SWITCH. 8-2B WITH RETAINER CRIMP				
18	7-110-151205	2	CAPSCREW 5/16" - 18 NC X 1 1/2"				
19	9-333-102235	1	CONDUIT 10 FEET (MUST CUT TO LENGTH)				
20	9-333-101747	1	CABLE. ELEC. 7 X 0.5 D. S.				
21 +	9-333-102601	1	JUNCTION BOX ASSEMBLY (3 X 6)				
22	9-333-102581	4	SCREW				
23	9-333-102584	2	CLAMP. CABLE 3/8"				
24	7-850-000102	5	STRAP 1/4" X 12"				
25	9-333-102602	1	CONNECTOR ASSEMBLY				
26 +	9-333-102633	1	82B RETAINER FLAG ASSEMBLY				

+ SEE FURTHER BREAKDOWN THIS GROUP



NOTES

F = FEMALE CONNECTOR

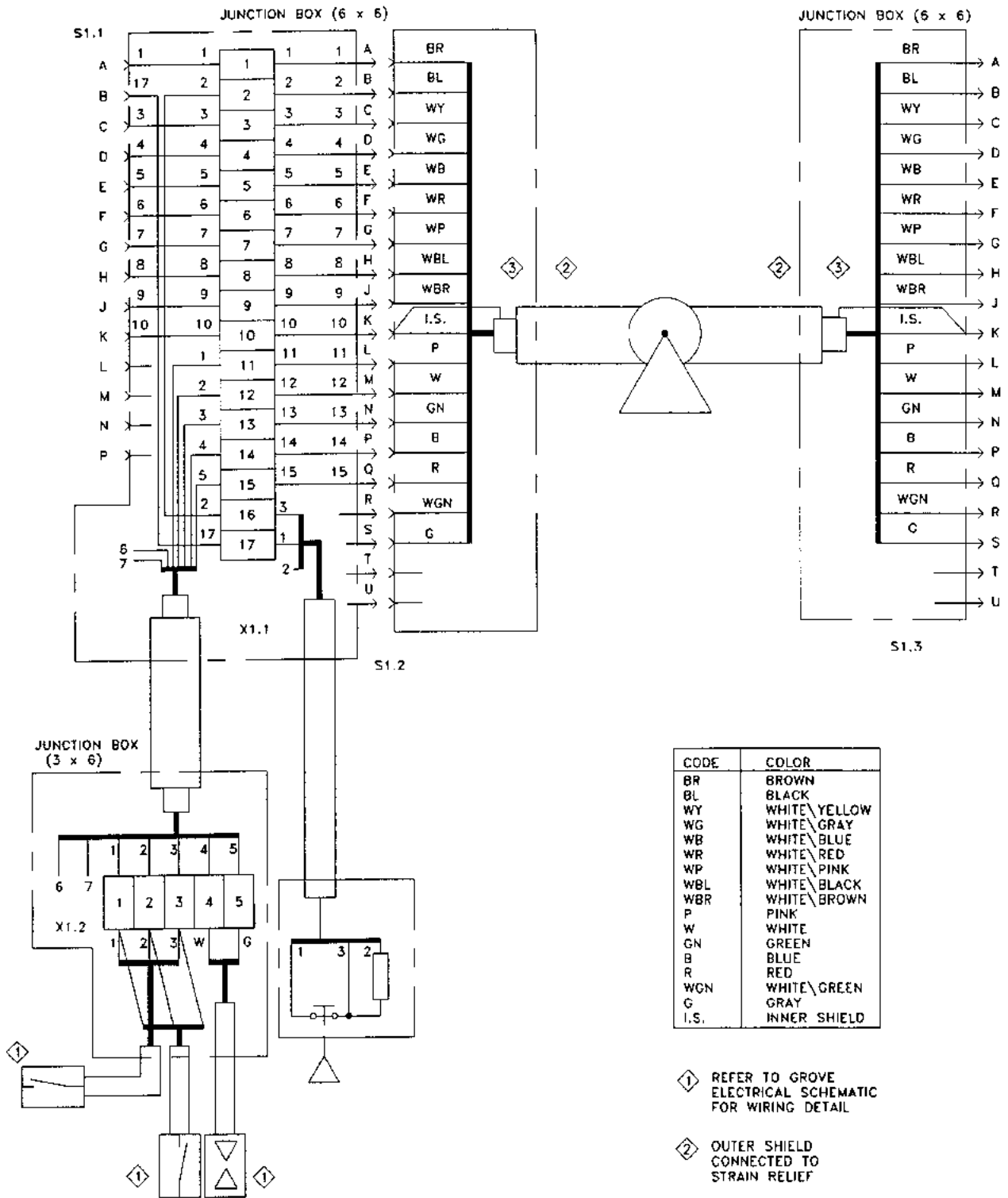
M = MALE CONNECTOR

1 REFER TO GROVE SCHEMATICS AND DOCUMENTATION

2 CONNECTS TO JUNCTION BOX ON SUPERSTRUCTURE

3 EXTEND CABLE TO DESIRED LENGTH

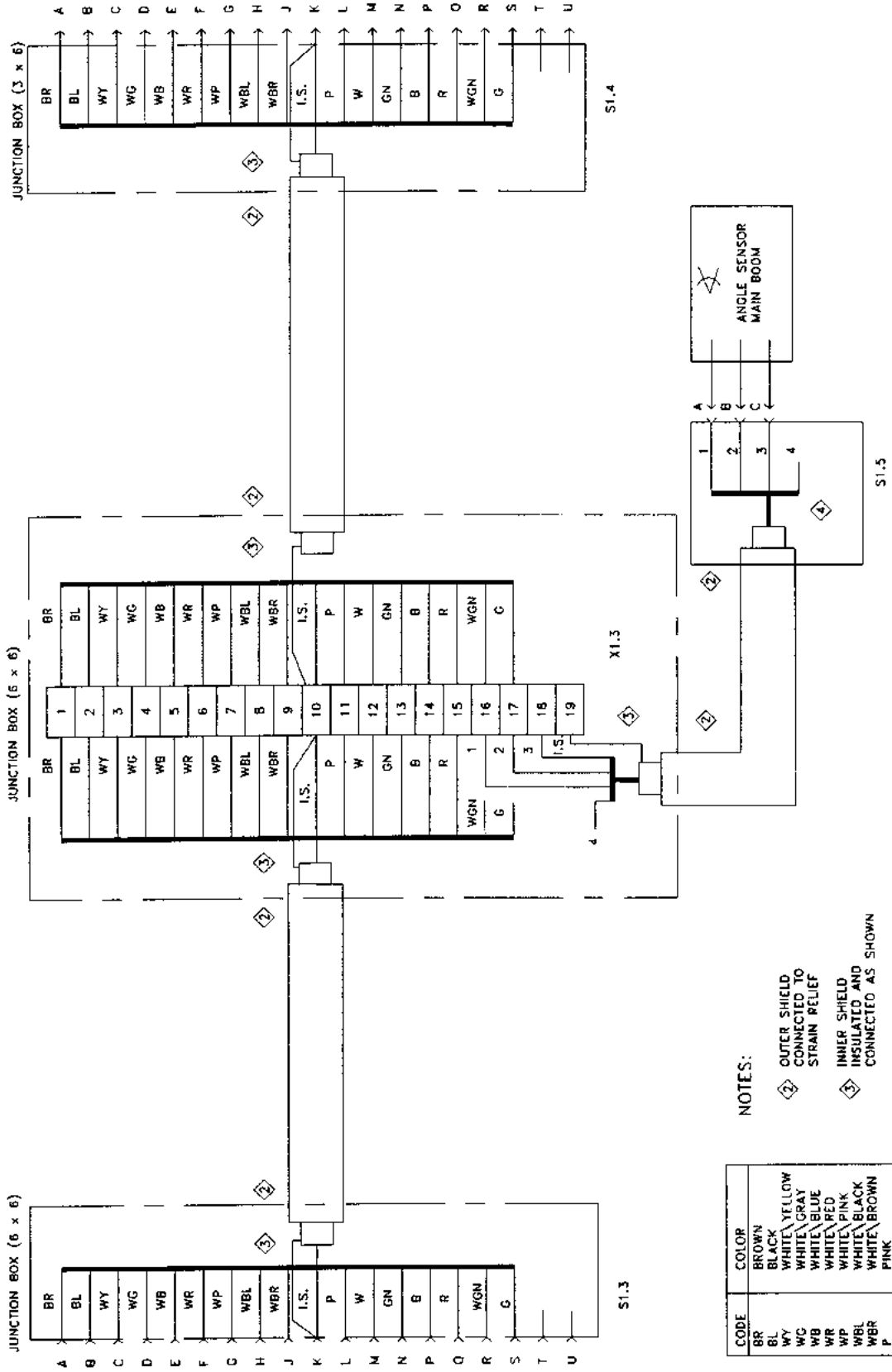
CONNECTOR LOCATION



CODE	COLOR
BR	BROWN
BL	BLACK
WY	WHITE \ YELLOW
WG	WHITE \ GRAY
WB	WHITE \ BLUE
WR	WHITE \ RED
WP	WHITE \ PINK
WBL	WHITE \ BLACK
WBR	WHITE \ BROWN
P	PINK
W	WHITE
GN	GREEN
B	BLUE
R	RED
WGN	WHITE \ GREEN
G	GRAY
I.S.	INNER SHIELD

- ① REFER TO GROVE ELECTRICAL SCHEMATIC FOR WIRING DETAIL
- ② OUTER SHIELD CONNECTED TO STRAIN RELIEF
- ③ INNER SHIELD INSULATED AND CONNECTED AS SHOWN

WIRING SCHEMATIC

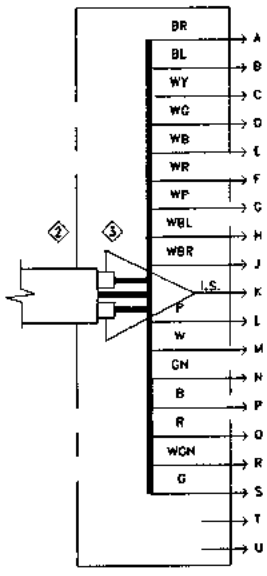
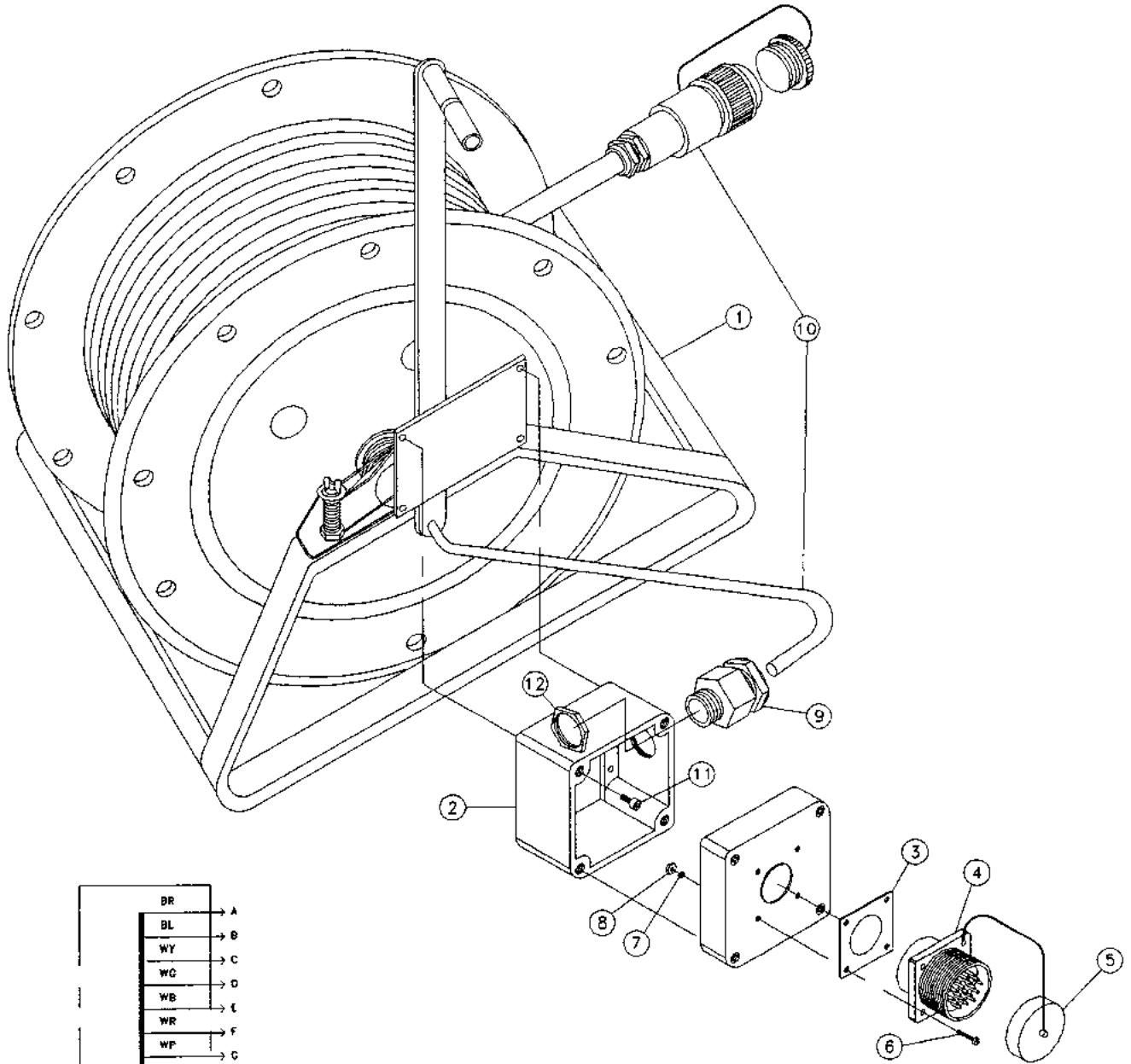


- NOTES:**
- ② OUTER SHIELD CONNECTED TO STRAIN RELIEF
  - ③ INNER SHIELD INSULATED, AND CONNECTED AS SHOWN
  - ④ INNER SHIELD CUT AND INSULATED

CODE	COLOR
BR	BROWN
BL	BLACK
WY	WHITE/YELLOW
WC	WHITE/GRAY
WB	WHITE/BLUE
WR	WHITE/RED
WP	WHITE/PINK
WBL	WHITE/BLACK
WBR	WHITE/BROWN
P	PINK
W	WHITE
GN	GREEN
B	BLUE
R	RED
WGN	WHITE/GREEN
C	GRAY
I.S.	INNER SHIELD

WIRING SCHEMATIC

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SI.3  
WIRING DETAIL

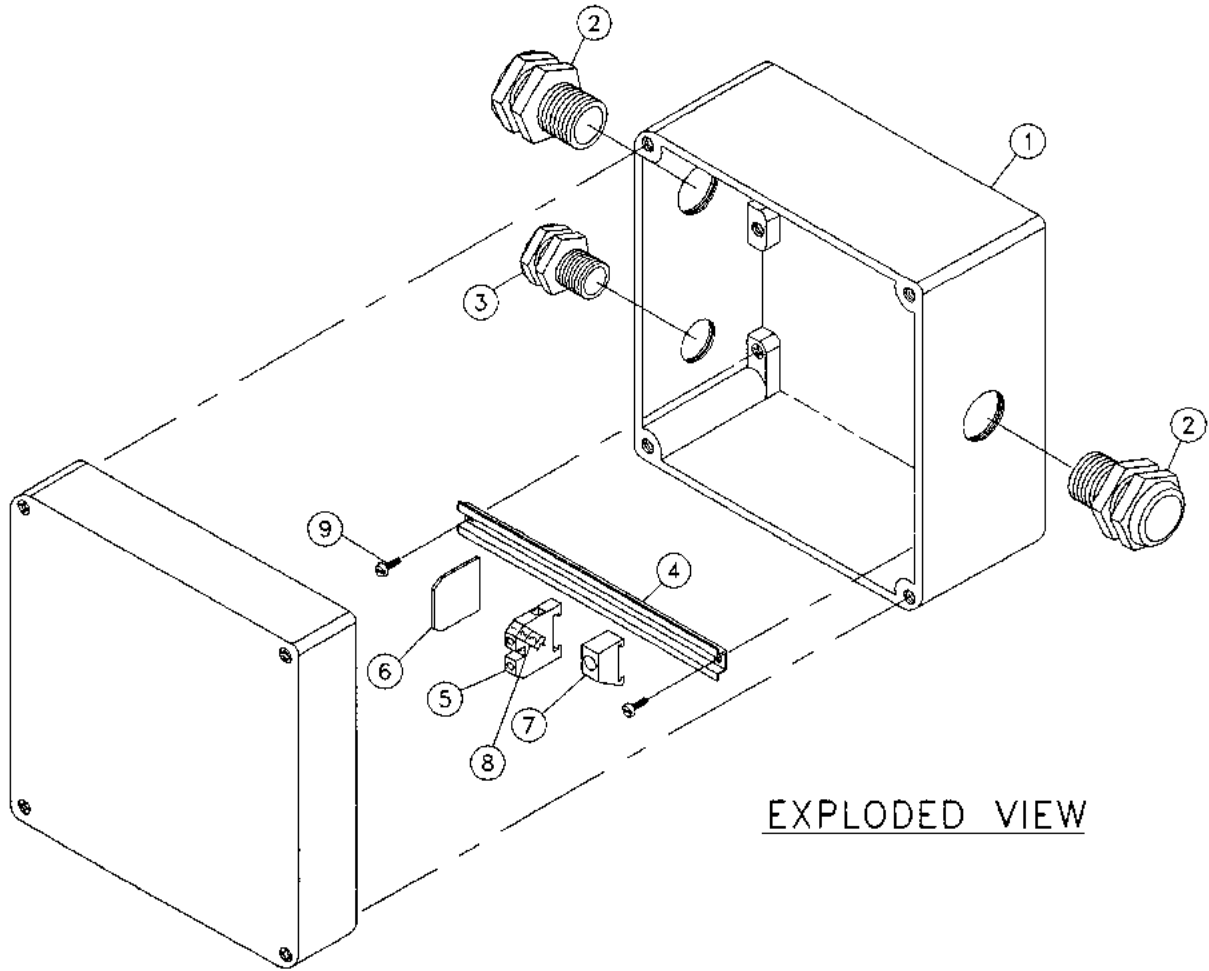
NOTES:

- ② OUTER SHIELD CONNECTED TO STRAIN RELIEF INSERT.
- ③ INNER SHIELD INSULATED AND CONNECTED AS SHOWN.

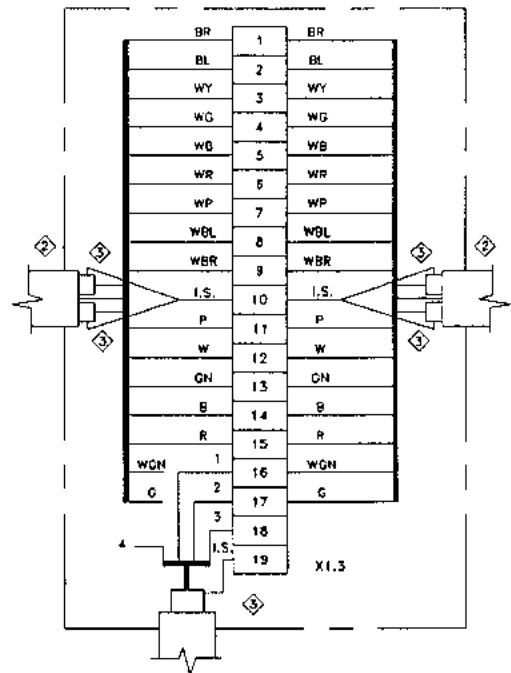
## CABLE REEL ASSEMBLY

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102594		COMPLETE ASSY				
1	9-333-102108	1	CABLE REEL ASSEMBLY				
2	9-333-102591	1	BOX, HAMMOND				
3	9-333-102668	1	GASKET				
4	9-333-102645	1	CONNECTOR, CANNON, 19-PIN MALE RECEPTACLE				
5	9-333-102268	1	CAP, DUST				
6	9-333-102669	4	SCREW #4				
7	9-333-102266	4	LOCKWASHER #4				
8	9-333-102480	4	NUT #4				
9	9-333-101735	1	STRAIN RELIEF GREY - WHITE INSERT PG13.5				
10	9-333-102603	1	CABLE ASSEMBLY				
11	9-333-102604	4	SCREW				
12	9-333-102605	1	NUT				



EXPLODED VIEW



WIRING DETAIL

NOTES:

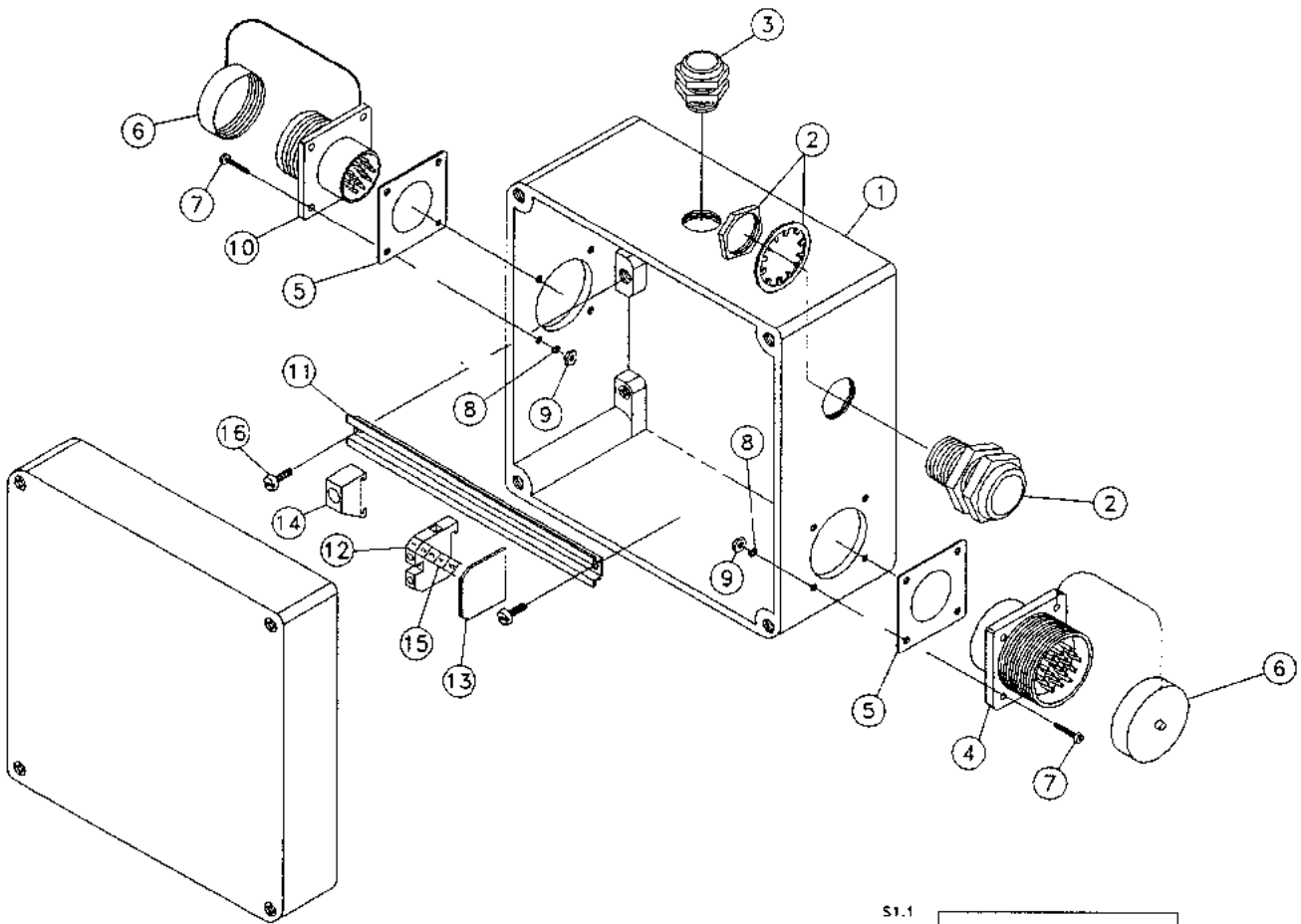
- ② OUTER SHIELD CONNECTED TO STRAIN RELIEF
- ③ INNER SHIELD INSULATED AND CONNECTED AS SHOWN



# JUNCTION BOX ASSEMBLY (6 X 6)

# GROVE

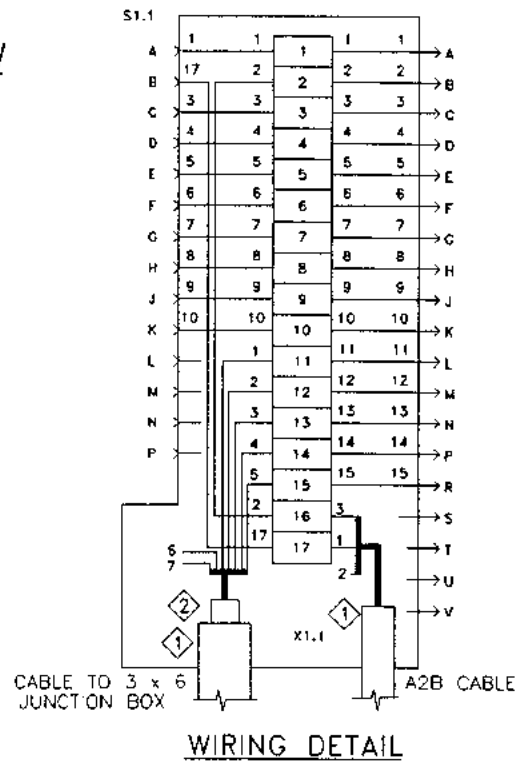
NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102596		COMPLETE ASSY				
1	9-333-102345	1	HOUSING				
2	9-333-101735	2	STRAIN RELIEF GREY - WHITE INSERT PG13.5				
3	9-333-102672	1	STRAIN RELIEF				
4	9-333-102673	1	MOUNTING RAIL, TERMINAL STRIP				
5	9-333-102663	19	BLOCK, TERMINAL STRIP				
6	9-333-102664	1	END PLATE, TERMINAL STRIP				
7	9-333-102665	1	END BRACKET, TERMINAL STRIP				
8	9-333-102666	1	TAGS, TERMINAL STRIP				
9	9-333-002671	2	SCREW, 6MM X 6MM				



EXPLODED VIEW

NOTES:

- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF
- ② INNER SHIELD TO BE CUT AND INSULATED

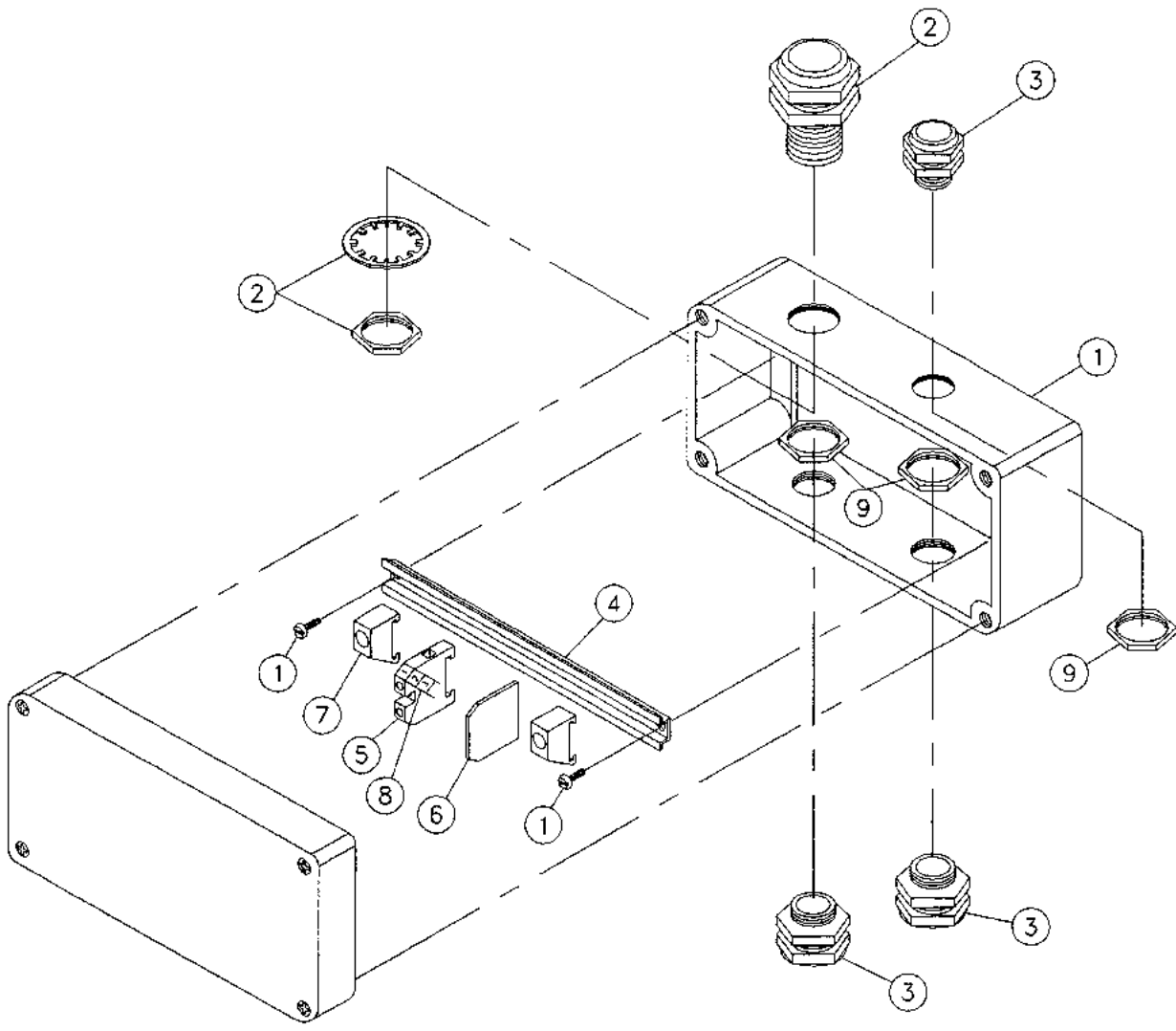


WIRING DETAIL

JUNCTION BOX ASSEMBLY (6 X 6)

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102600		COMPLETE ASSY				
1	9-333-102345	1	HOUSING				
2	9-333-101579	1	STRAIN RELIEF PG13.5				
3	9-333-102674	1	STRAIN RELIEF, PG9				
4	9-333-102645	1	CONNECTOR, CANADA, 19-PIN MALE RECEPTACLE				
5	9-333-102668	2	GASKET				
6	9-333-102268	2	CAP, DUST				
7	9-333-102669	8	SCREW #4				
8	9-333-102266	8	LOCKWASHER #4				
9	9-333-102480	8	NUT #4				
10	9-333-102675	1	CANADA CONNECTOR				
11	9-333-102670	1	MOUNTING RAIL, TERMINAL STRIP				
12	9-333-102663	17	BLOCK, TERMINAL STRIP				
13	9-333-102664	1	END PLATE, TERMINAL STRIP				
14	9-333-102665	1	END BRACKET, TERMINAL STRIP				
15	9-333-102666	1	TAGS, TERMINAL STRIP				
16	9-333-102671	2	SCREW, 6MM X 8MM				

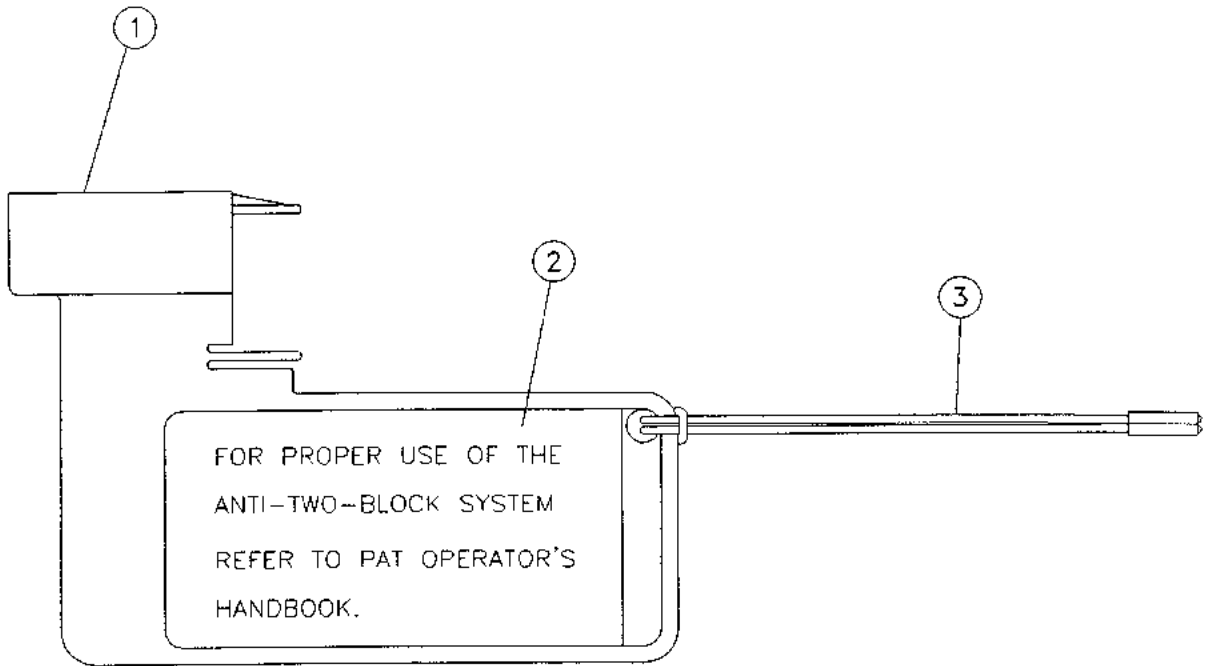


EXPLODED VIEW

JUNCTION BOX ASSEMBLY (3 X 6)

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102601		COMPLETE ASSY				
1	9-333-102592	1	BOX, HAMMOND				
2	9-333-101579	1	STRAIN RELIEF PG13.5				
3	9-333-102674	3	STRAIN RELIEF, PG9				
4	9-333-102667	1	MOUNTING RAIL, TERMINAL STRIP				
5	9-333-102663	5	BLOCK, TERMINAL STRIP				
6	9-333-102664	1	END PLATE, TERMINAL STRIP				
7	9-333-102665	2	END BRACKET, TERMINAL STRIP				
8	9-333-102666	1	TAGS, TERMINAL STRIP				
9	9-333-101984	3	LOCKOUT PG9				



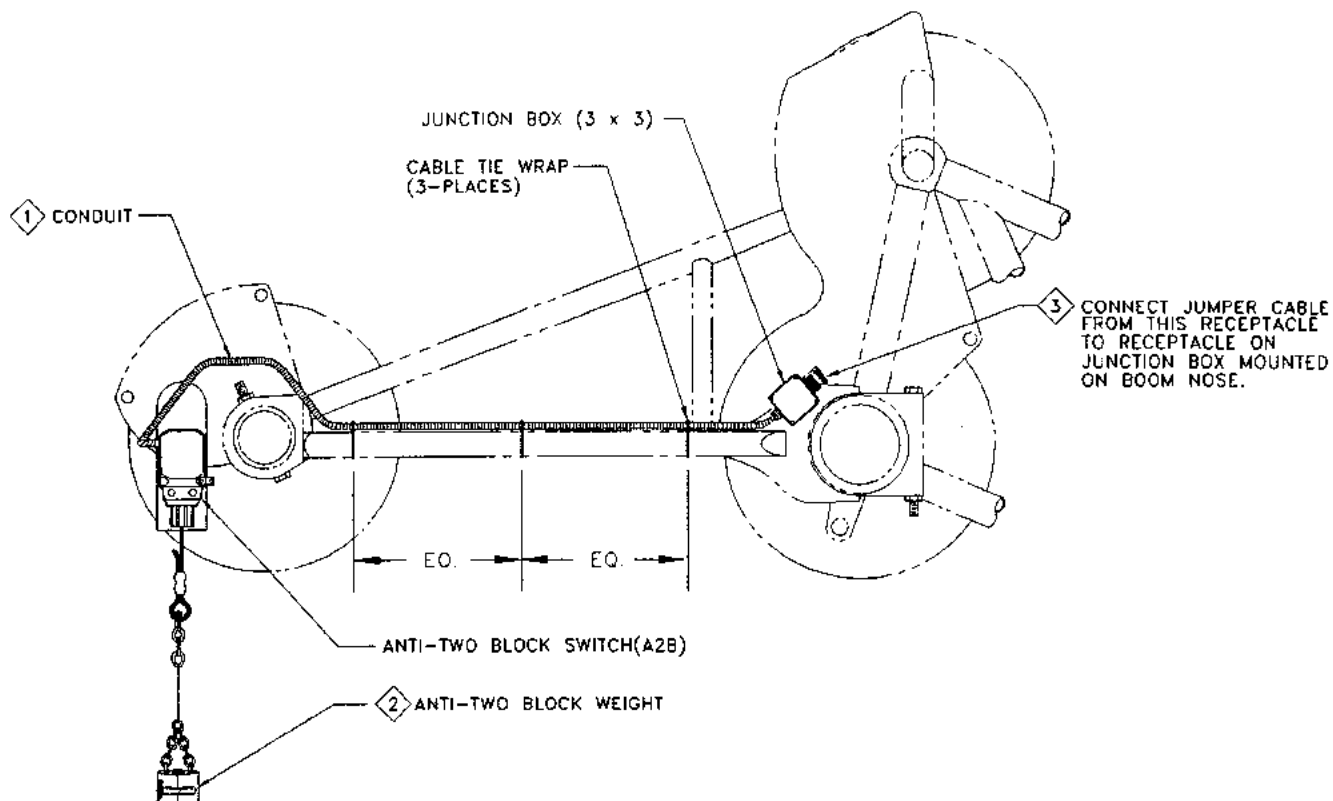
## A2B RETAINER FLAG ASSEMBLY

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102633		COMPLETE ASSY				
1	9-333-102373	1	FLAG, RETAINER				
2	9-333-102618	1	DECAL, A2B				
3	9-333-102232	1	LANYARD				

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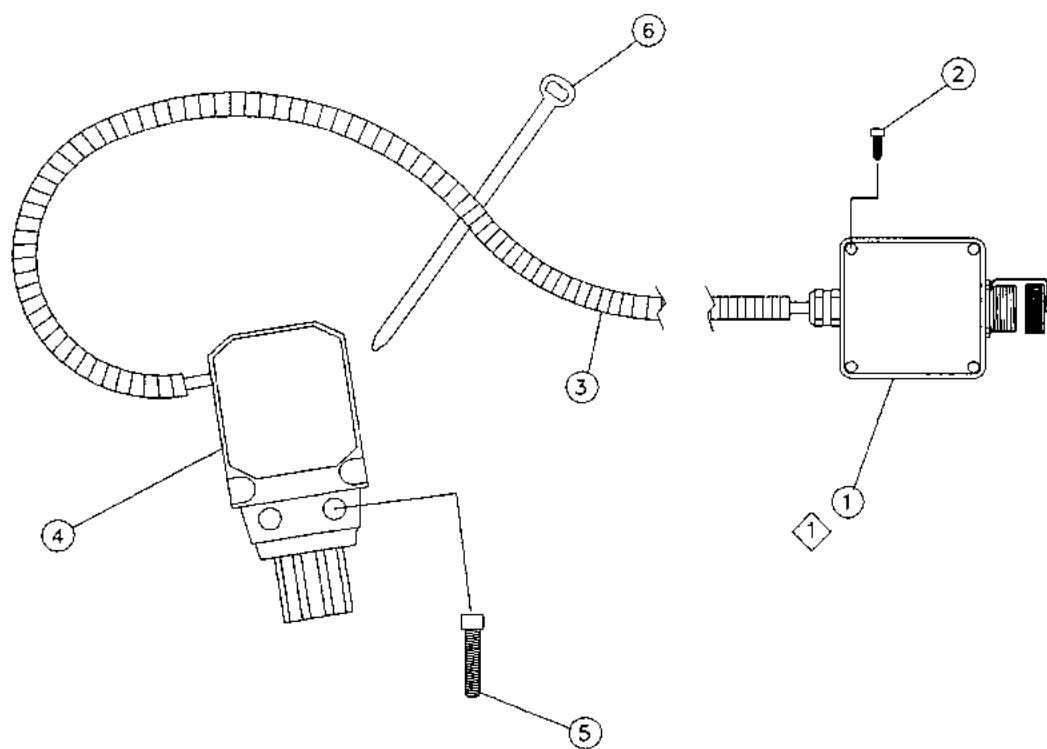
NOTES:

ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS, TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.

- A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
- B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
- C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

- ① CUT A2B SWITCH CABLE AND CONDUIT TO DESIRED LENGTH.
- ② REFER TO OPERATOR'S HANDBOOK FOR PROPER USE OF THE A2B SWITCH WEIGHT.
- ③ INSTALL DUST COVERS WHEN PLUG AND RECEPTACLE ARE DISCONNECTED.

AUXILIARY BOOM NOSE INSTALLATION

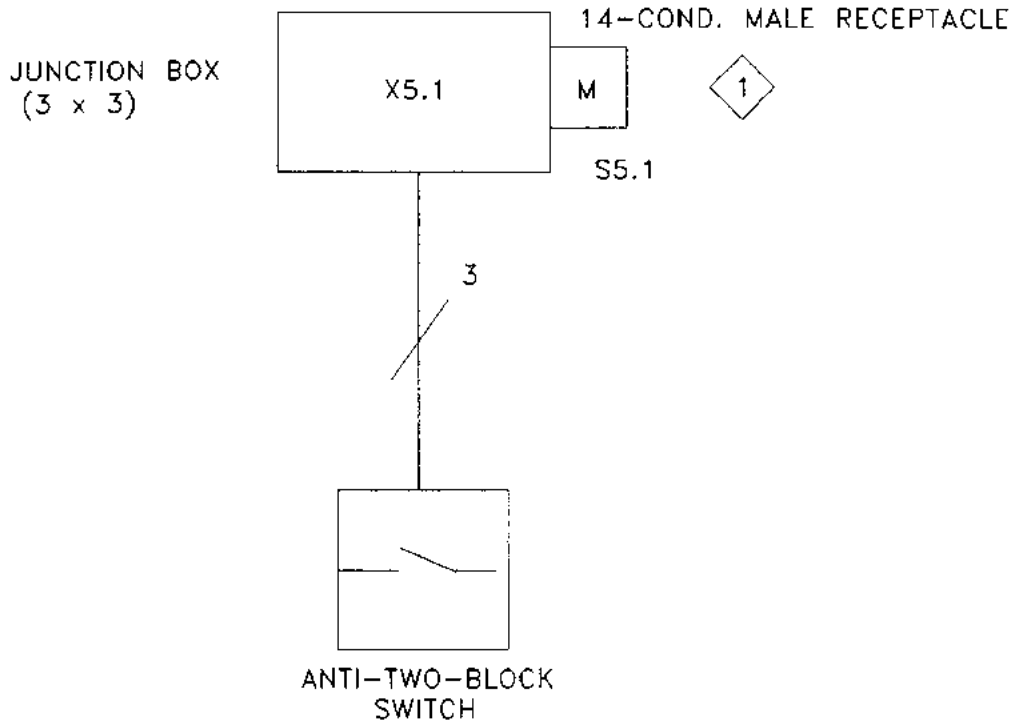


NOTES:




◇ 1 SEE PART BREAKDOWN DWG.  
FOR PARTS DETAIL

NO.	PART NO.	QTY DESCRIPTION	NO.	PART NO.	QTY DESCRIPTION
1 +	9-333-102606	1 JUNCTION BOX ASSEMBLY (3 X 3)			
2	9-333-102581	4 SCREW			
3	9-333-102235	1 CONDUIT 10 FEET (MUST CUT TO LENGTH)			
4	9-333-102238	1 SWITCH, R2B W/O CRIMP			
5	7-110-151205	2 CAPSCREW 5/16" - 18 NC X 1 1/2"			
6	7-850-000102	3 STRAP 1/4" X 12"			

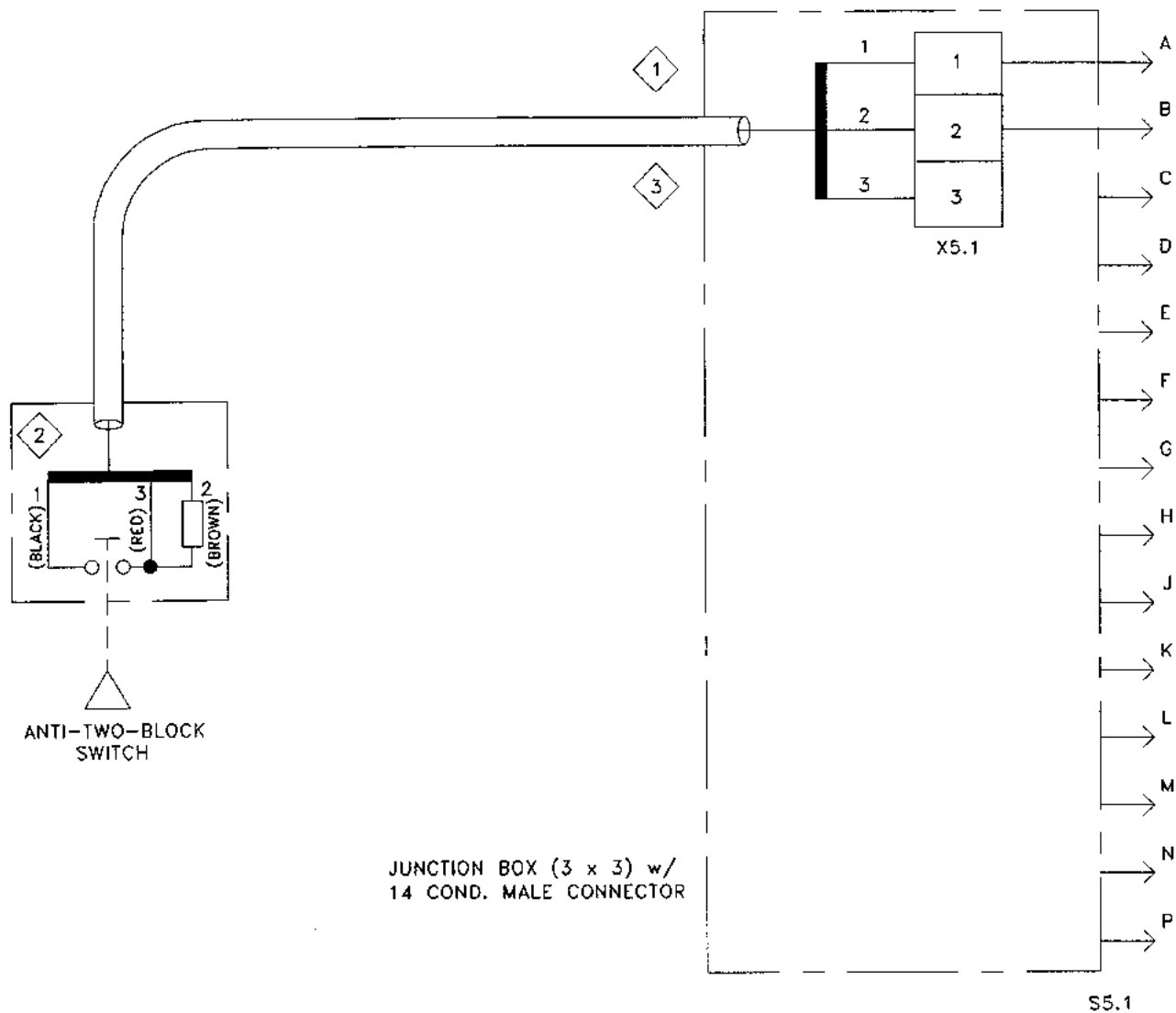
+ SEE FURTHER BREAKDOWN THIS GROUP



NOTES

-  = FEMALE CONNECTOR
-  = MALE CONNECTOR
-  USE JUMPER CABLE TO CONNECT CIRCUIT TO THE MAIN BOOM NOSE JUNCTION BOX
- SS = SINGLE SHIELDED CABLE
- DS = DOUBLE SHIELDED CABLE

CONNECTOR LOCATION

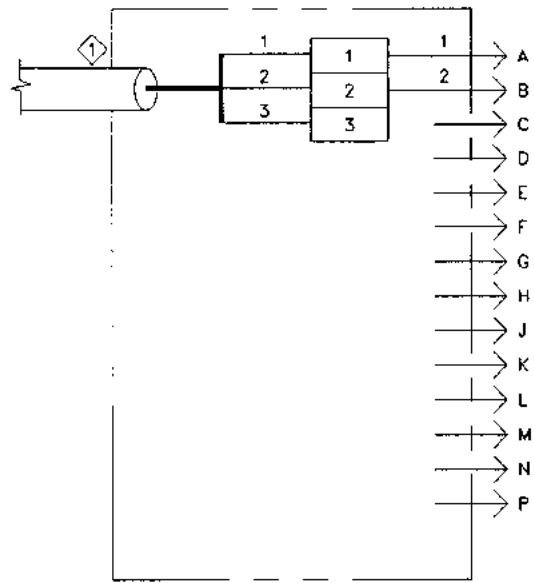
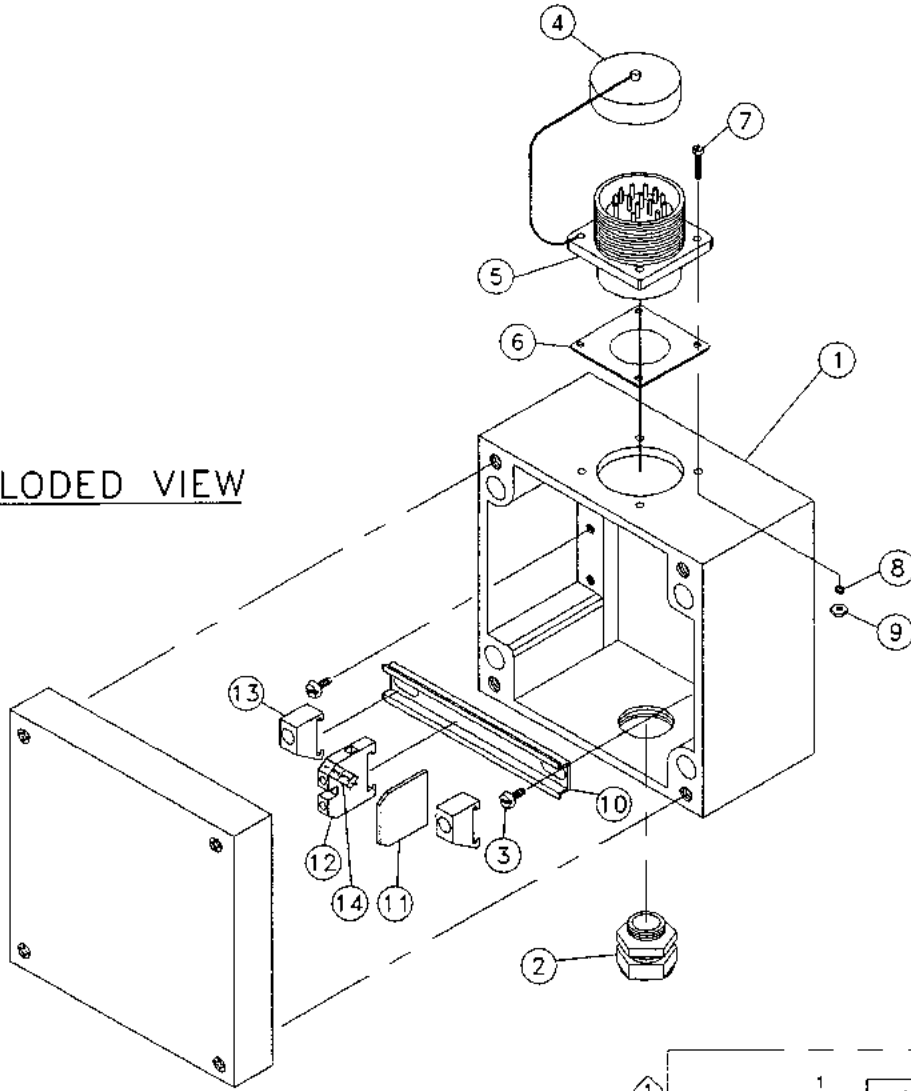


**NOTES**

- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF.
- ② POTTED - NO ACCESS TO SWITCH ELEMENT - PREWIRED
- ③ USE JUMPER CABLE TO CONNECT CIRCUIT TO THE MAIN BOOM NOSE JUNCTION BOX

WIRING SCHEMATIC

EXPLODED VIEW



WIRING DETAIL

NOTES:

- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF CONNECTOR

JUNCTION BOX ASSEMBLY (3 X 3)

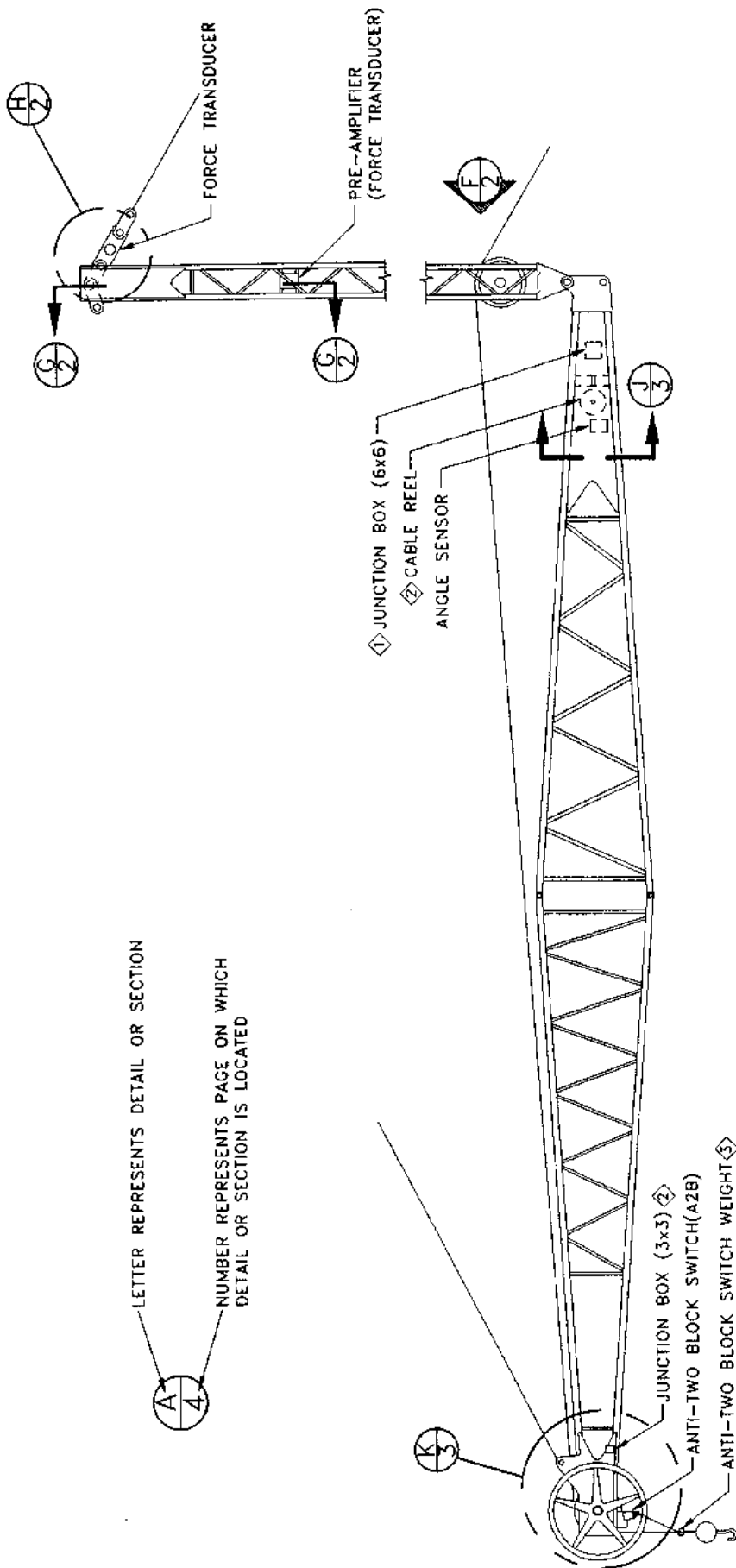
GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102606		COMPLETE ASSY				
1	9-333-102591	1	BOX, HAMMOAD				
2	9-333-102674	1	STRAIN RELIEF, PG9				
3	9-333-102671	1	SCREW, 6MM X 6MM				
4	9-333-102268	1	CAP, DUST				
5	9-333-102676	1	CANNON CONNECTOR				
6	9-333-102668	1	GASKET				
7	9-333-102669	4	SCREW M4				
8	9-333-102266	4	LOCKWASHER M4				
9	9-333-102480	4	NUT M4				
10	9-333-102677	1	MOUNTING RAIL, TERMINAL STRIP				
11	9-333-102663	1	BLOCK, TERMINAL STRIP				
12	9-333-102664	3	END PLATE, TERMINAL STRIP				
13	9-333-102665	2	END BRACKET, TERMINAL STRIP				
14	9-333-102666	1	TAGS, TERMINAL STRIP				

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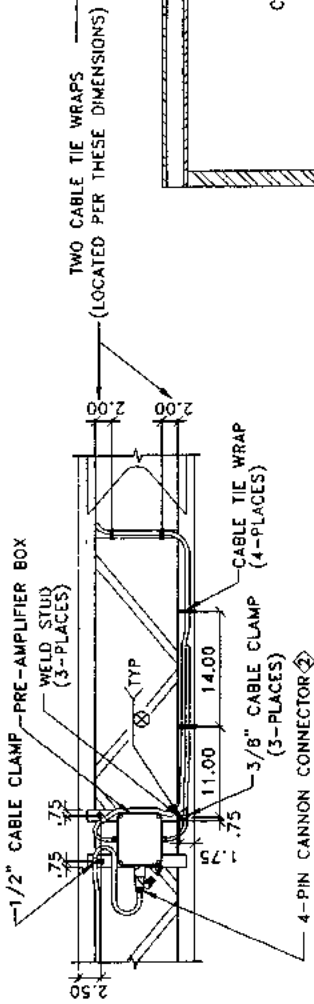
LETTER REPRESENTS DETAIL OR SECTION  
 NUMBER REPRESENTS PAGE ON WHICH  
 DETAIL OR SECTION IS LOCATED



**46A LUFFING JIB & MAST**

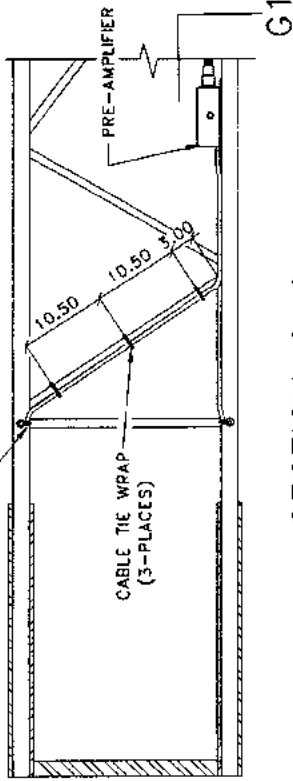
**NOTES:**

- ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS, TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.
  - A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
  - B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
  - C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.
- FOR ELECTRICAL CONNECTIONS, REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.
  - ① TO CONNECT 46A JIB BASE TO 76A BOOM NOSE; INSTALL JUMPER CABLE FROM RECEPTACLE ON (6 x 6) JUNCTION BOX ON 46A JIB BASE, TO RECEPTACLE ON (6 x 6) JUNCTION BOX ON 76A BOOM NOSE.
  - ② TO CONNECT CABLE REEL TO JIB BOOM NOSE; UNROLL CABLE FROM CABLE REEL AND SCREW PLUG INTO RECEPTACLE ON (3 x 3) JUNCTION BOX ON JIB NOSE.
  - ③ REFER TO OPERATOR'S HANDBOOK FOR PROPER USE OF A2B SWITCH WEIGHT.

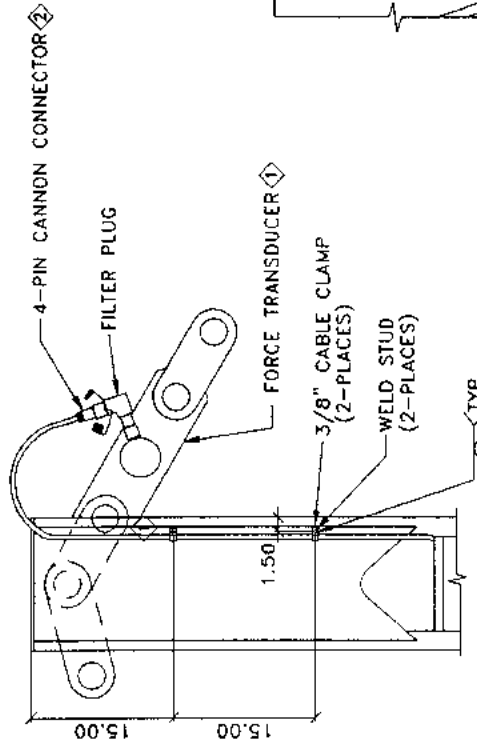


SECTION G1

TWO CABLE TIE WRAPS  
(LOCATED PER THESE DIMENSIONS)



SECTION G-G  
(46A LUFFING JIB MAST)

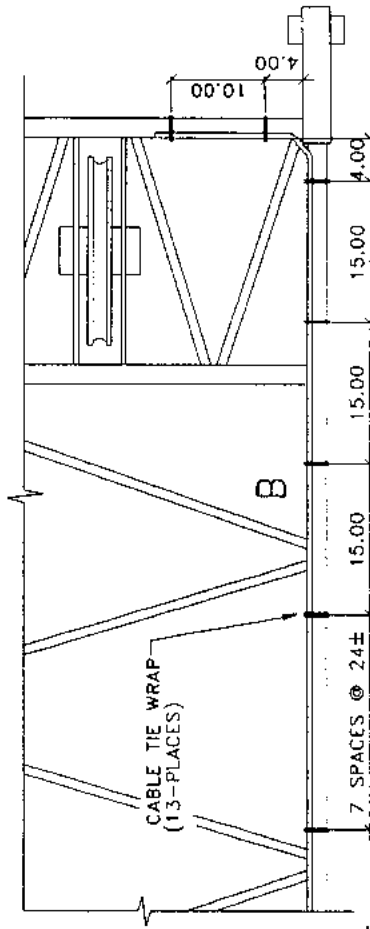


DETAIL H

(TYP. THIS SIDE & OPPOSITE SIDE)  
(46A LUFFING JIB MAST)

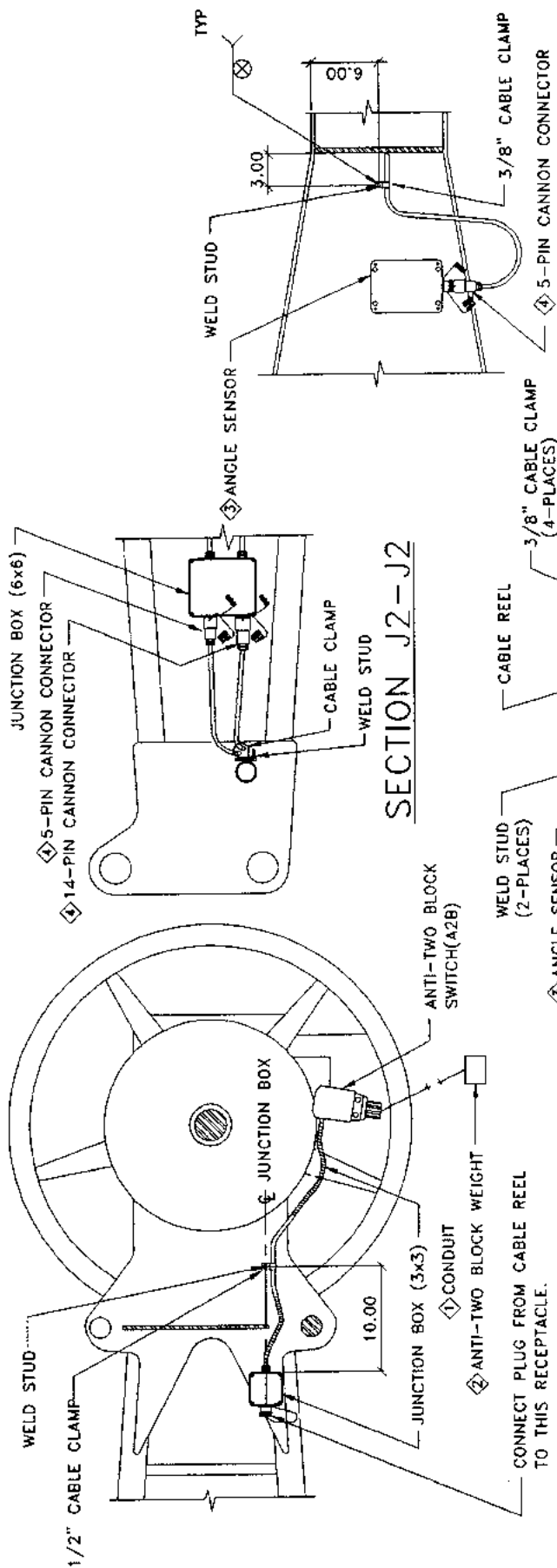
NOTES:

- A. ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS. TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.
  - B. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
  - C. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
  - D. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.
- ALL DIMENSIONS IN INCHES TO CENTER LINE OF WELD STUDS, OR APPROX. LOCATION OF CABLE TIE WRAPS.
- FOR ELECTRICAL CONNECTIONS REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.
- REFER TO 46A BOOM COMPONENT KIT FOR INSTALLATION HARDWARE.
- ① ALLOW AMPLE CABLE LOOP TO COVER ALL ALL MAST ANGLES.
  - ② INSTALL DUST COVERS WHEN PLUG AND RECEPTACLE ARE DISCONNECTED.



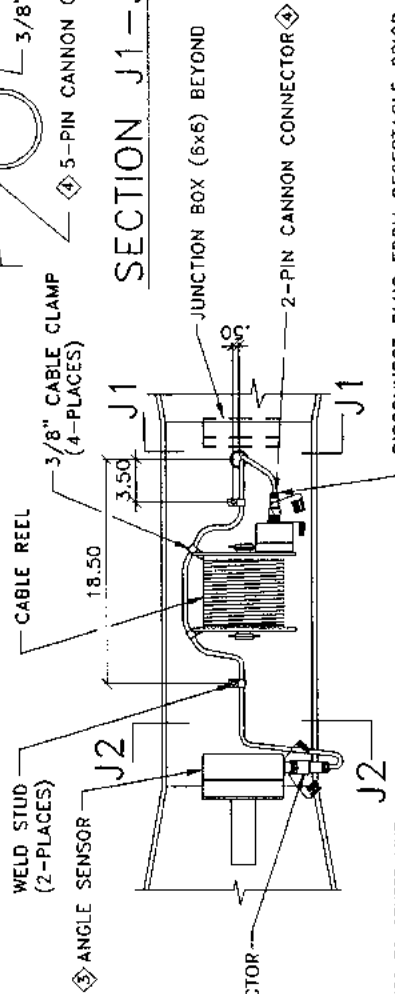
DETAIL F  
(46A LUFFING JIB MAST)

LMI COMPONENT INSTALLATION



SECTION J2-J2

SECTION J1-J1



VIEW J

(46A LUFFING JIB BASE)

DETAIL K

(SECTION THRU 46A LUFFING JIB NOSE)

NOTES:

ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS. TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.

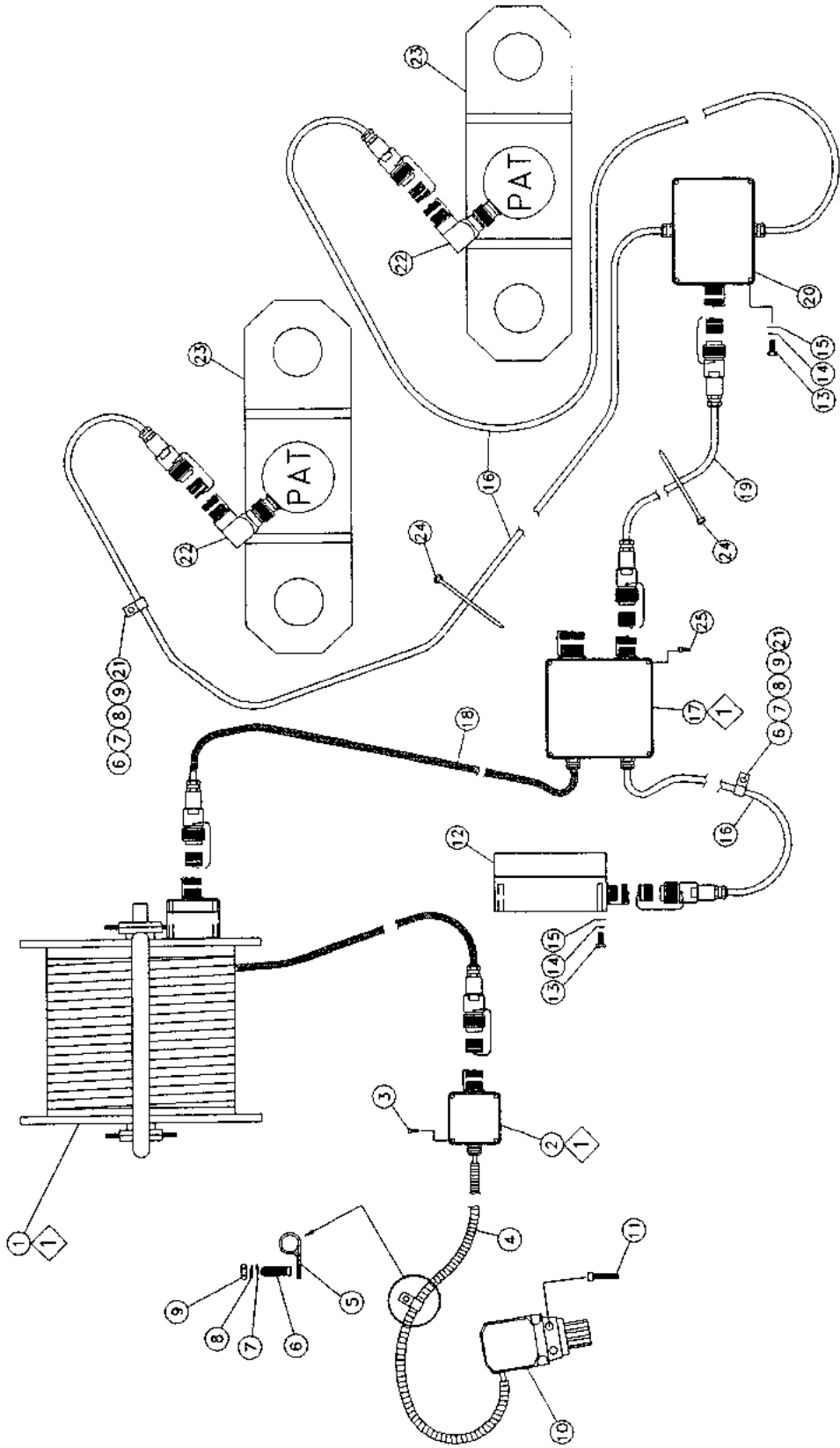
- A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
- B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
- C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

ALL DIMENSIONS IN INCHES TO CENTER LINE OF WELD STUDS.  
FOR ELECTRICAL CONNECTIONS REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.

REFER TO 46A BOOM COMPONENT KIT FOR INSTALLATION HARDWARE.

- 1. ALLOW AMPLE CABLE AND CONDUIT LOOP TO COMPENSATE FOR ROTATION OF A2B SWITCH.
- 2. REFER TO OPERATOR'S HANDBOOK FOR PROPER USE OF A2B SWITCH WEIGHT.
- 3. INITIAL MECHANICAL ADJUSTMENT OF ANGLE SENSOR SHOULD BE ALIGNED TO CENTER LINE OF BOOM SECTION.
- 4. INSTALL DUST COVERS WHEN PLUG AND RECEPTACLE ARE DISCONNECTED.

DISCONNECT PLUG FROM RECEPTACLE PRIOR TO TURNING CABLE REEL. RECONNECT PRIOR TO OPERATION.

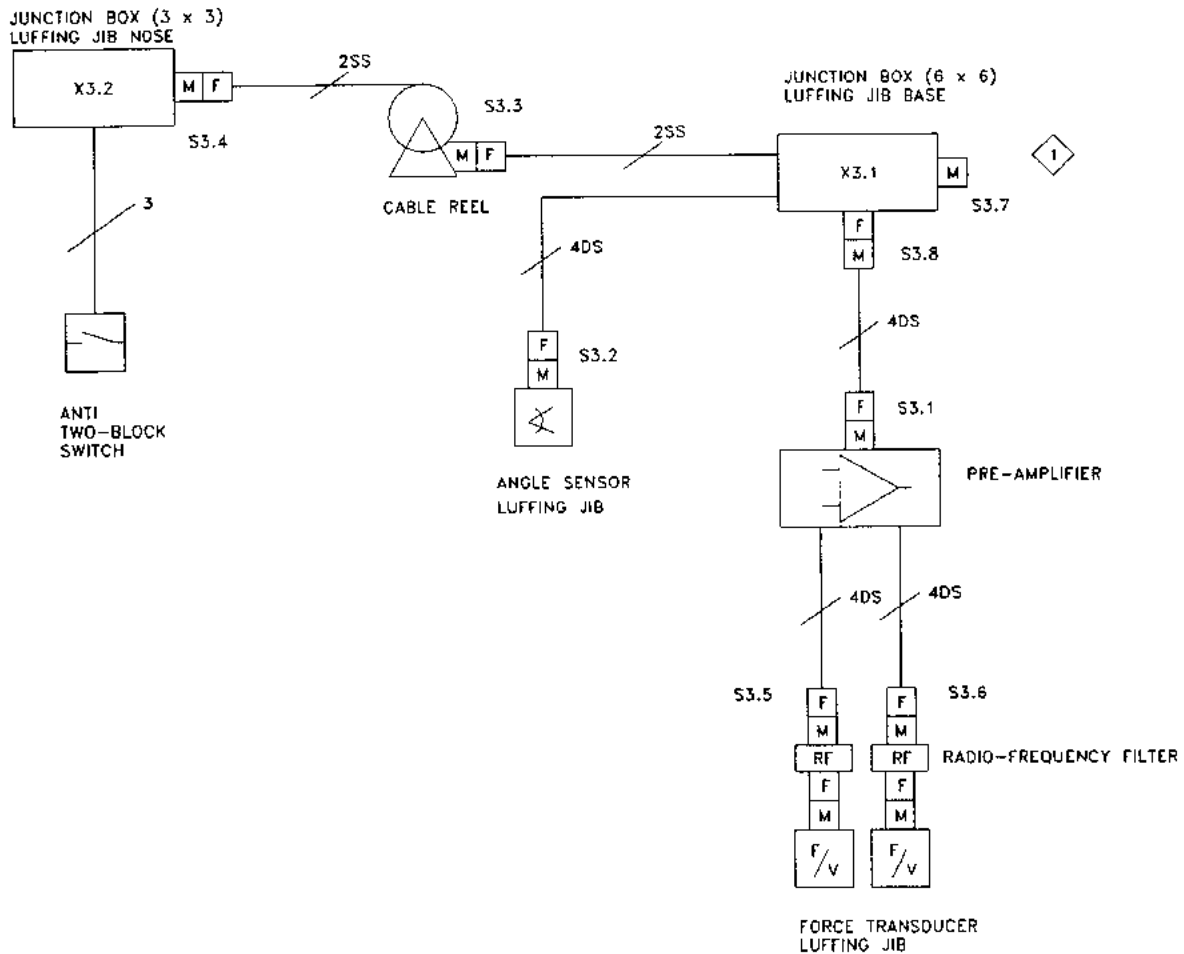


NOTES:

1 SEE PART BREAKDOWN DWG.  
FOR PARTS DETAIL

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
1 +	9-333-102593	1	CABLE REEL ASSEMBLY				
2 +	9-333-102607	1	JUNCTION BOX ASSEMBLY (3 X 3)				
3	9-333-101581	4	FLATWASHER 8MM				
4	9-333-102235	1	CONDUIT 10 FEET (MUST CUT TO LENGTH)				
5	7-300-000101	2	CLAMP 1/2"				
6	7-866-142140	11	STUD 1/4"-20 X 7/8"				
7	7-950-140141	11	WASHER 1/4" NARROW				
8	7-950-140050	11	LOCKWASHER 1/4" REG				
9	7-660-140000	11	NUT, HEX 1/4"-20 NC - GRD A				
10	9-333-102238	1	SWITCH, R2B W/O CRIMP				
11	7-110-151205	2	CAPSCREW 5/16" - 18 NC X 1 1/2"				
12	9-333-101784	1	SENSOR, ANGLE				
13	9-333-102599	8	SCREW, 8MM X 20MM				
14	9-333-101960	8	LOCKWASHER 8MM				
15	9-333-101581	8	FLATWASHER 8MM				
16	9-333-102608	3	CABLE ASS'Y, 4 COND. D. S.				
17 +	9-333-102609	1	JUNCTION BOX ASSEMBLY (6 X 6)				
18	9-333-102610	1	CABLE ASS'Y, 2 COND. S. S.				
19	9-333-102611	1	CABLE ASS'Y, 7 COND. D. S.				
20	9-333-102219	1	PREAMPLIFIER				
21	9-333-102584	12	CLAMP, CABLE 3/8"				
22	9-333-101837	2	PLUG, FILTER				
23	9-333-102044	2	FORCE TRANSDUCER				
24	7-850-000102	22	STRAP 1/4" X 12"				
25	9-333-102586	4	SCREW				

+ SEE FURTHER BREAKDOWN THIS GROUP



## NOTES

M = MALE CONNECTOR

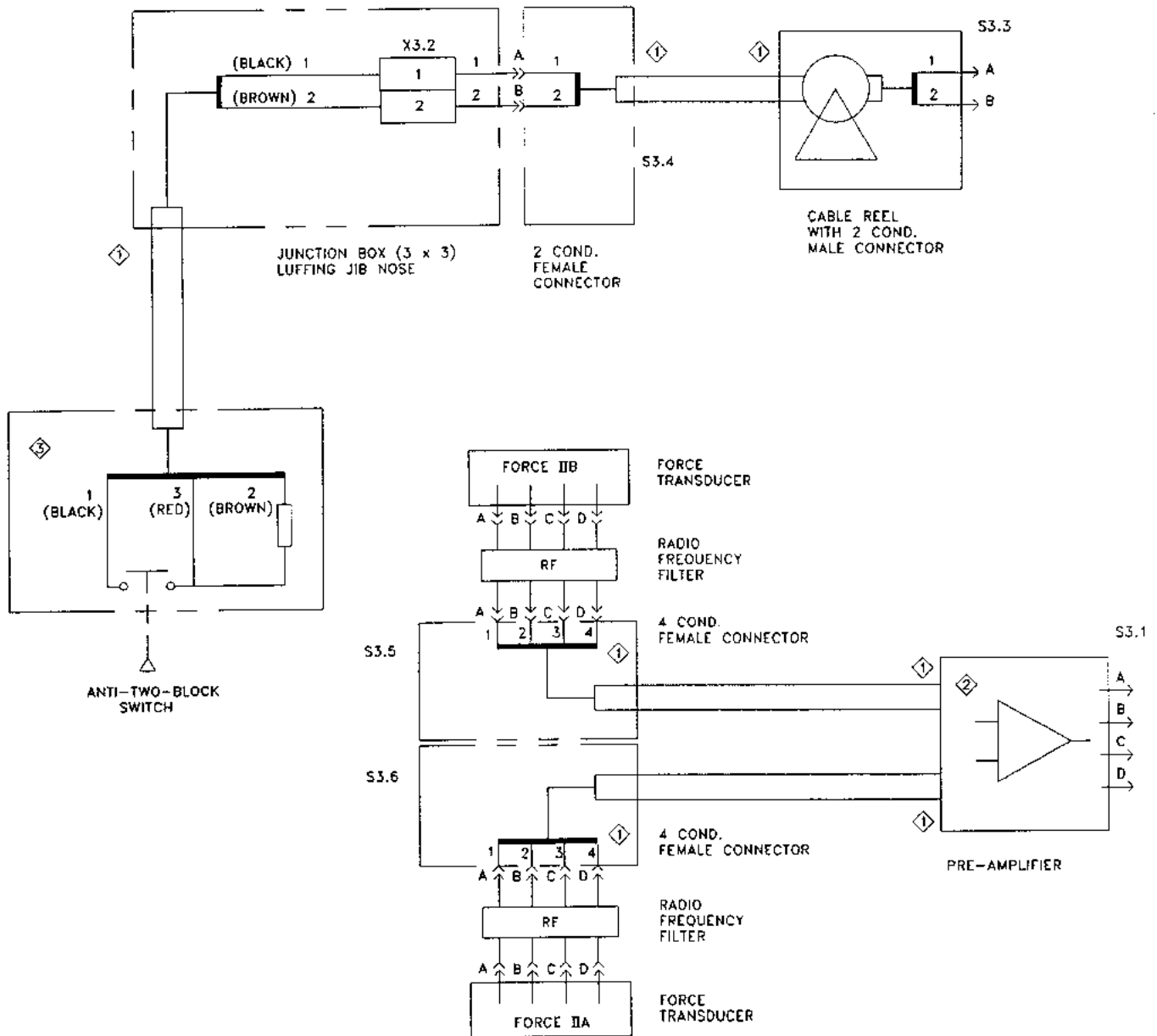
F = FEMALE CONNECTOR

1 USE JUMPER CABLE TO  
CONNECT CIRCUIT TO THE  
MAIN BOOM NOSE JUNCTION  
BOX.

SS = SINGLE SHIELDED CABLE

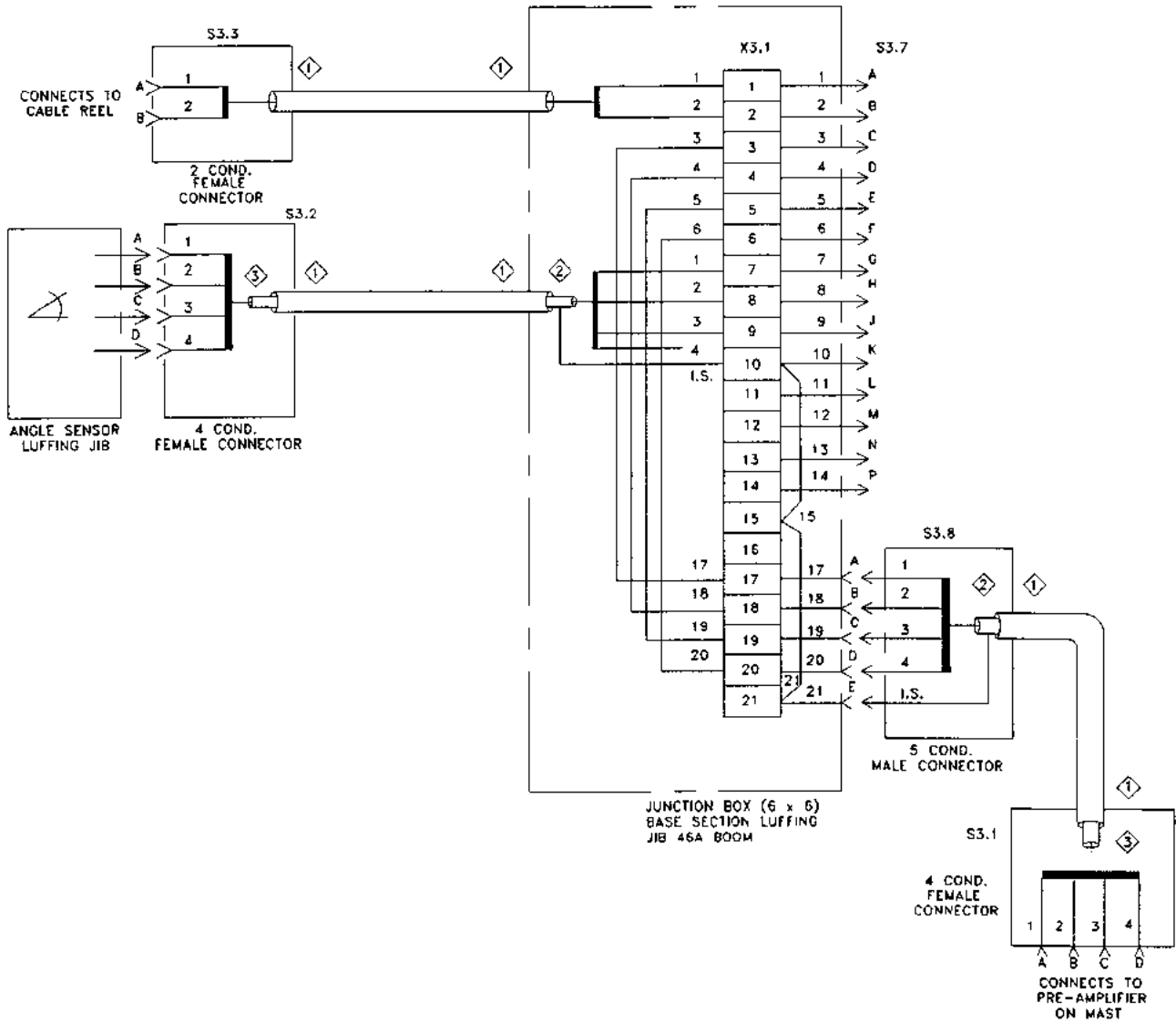
DS = DOUBLE SHIELDED CABLE

CONNECTOR LOCATION



**NOTES**

- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF INSERT
- ② PREWIRED BY PAT -NON SERVICEABLE ITEM-
- ③ POTTED- NO ACCESS TO SWITCH ELEMENT- PREWIRED



**NOTES:**

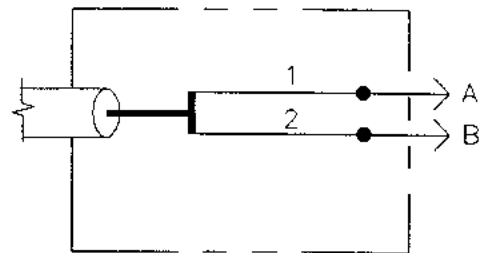
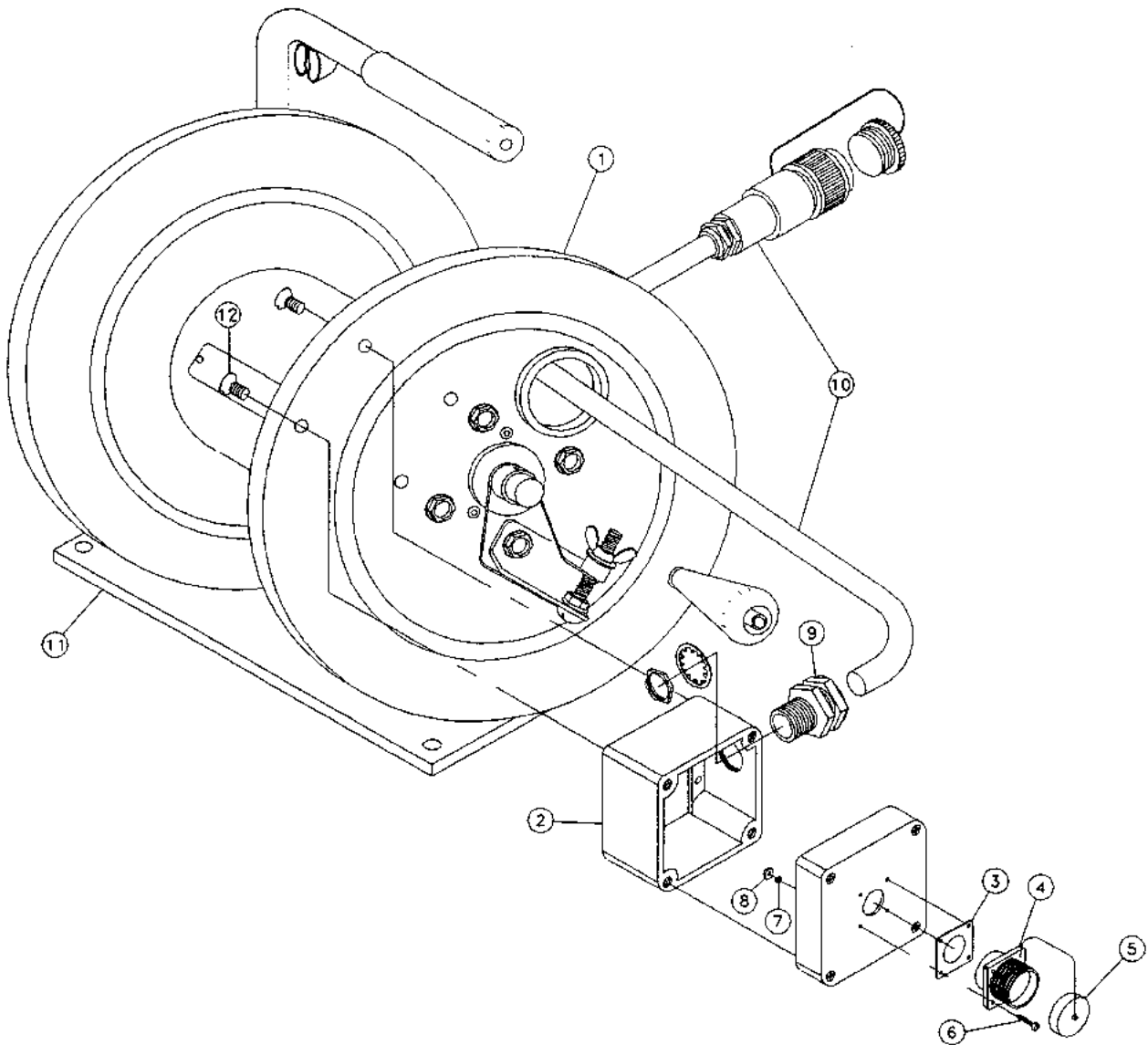
- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF CONNECTOR
- ② INNER SHIELD INSULATED AND CONNECTED AS SHOWN
- ③ INNER SHIELD CUT AND INSULATED

CODE	COLOR
BR	BROWN
BL	BLACK
WY	WHITE\YELLOW
WG	WHITE\GRAY
WB	WHITE\BLUE
WR	WHITE\RED
WP	WHITE\PINK
WBL	WHITE\BLACK
WBR	WHITE\BROWN
P	PINK
W	WHITE
GN	GREEN
B	BLUE
R	RED
WGN	WHITE\GREEN
G	GRAY
I.S.	INNER SHIELD

**WIRING SCHEMATIC**



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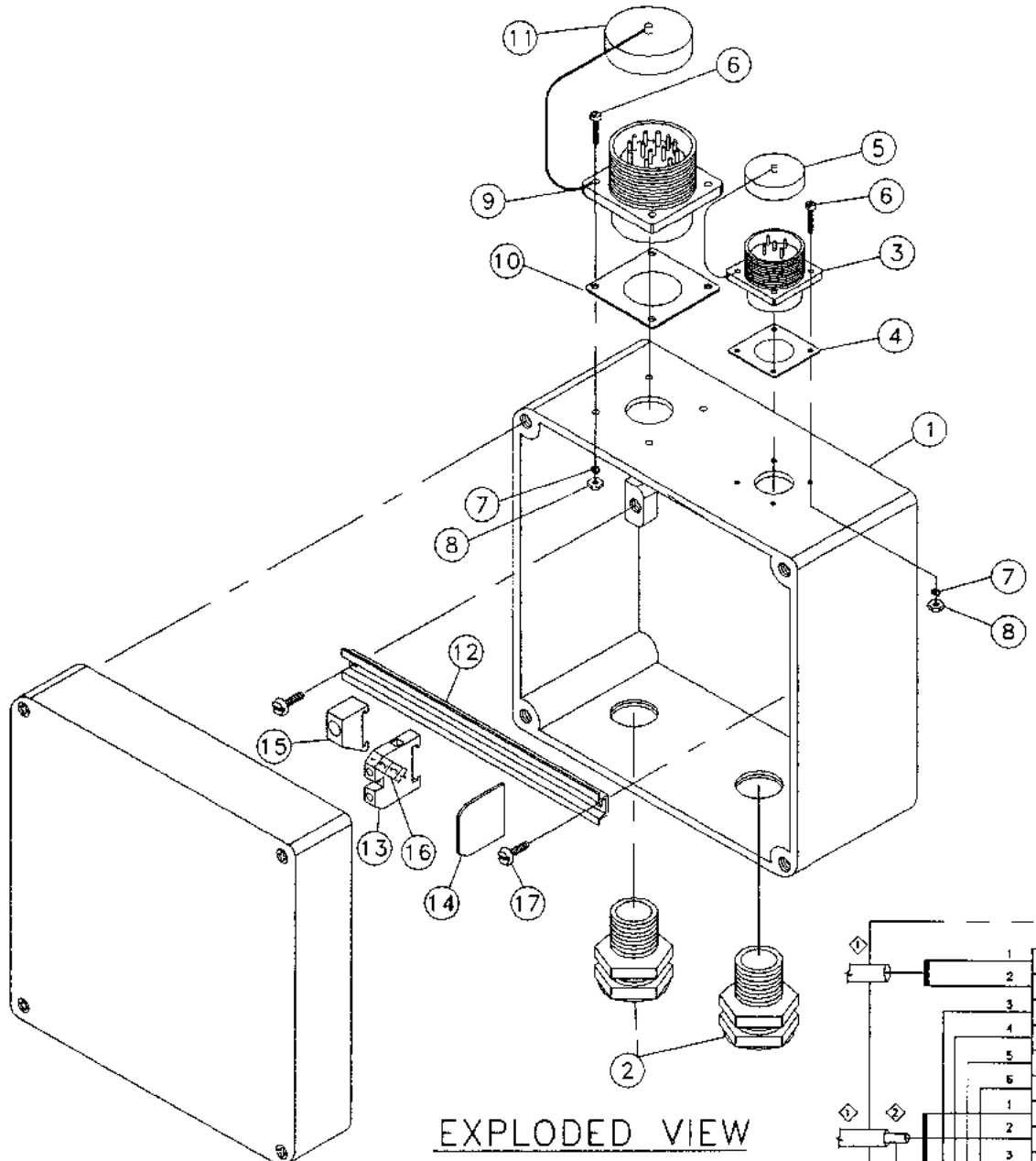


WIRING DETAIL

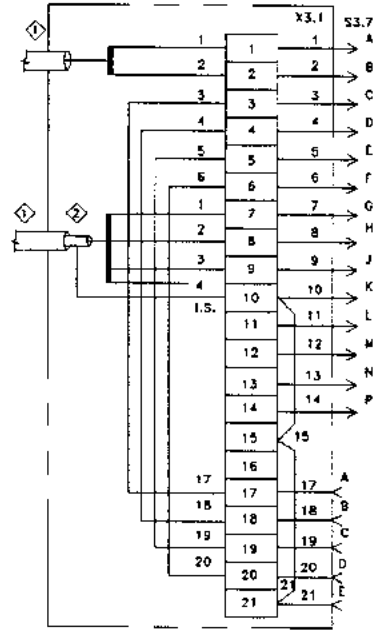
NOTES:

- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF INSERT.

NO.	PART NO.	QTY DESCRIPTION	NO.	PART NO.	QTY DESCRIPTION
	9-333-102593	COMPLETE ASSY			
1	9-333-102029	1 REEL, CABLE			
2	9-333-102591	1 BOX, HAMMOCK			
3	9-333-102482	1 GASNET			
4	9-333-102678	1 CANNON CONNECTOR			
5	9-333-102612	1 DUST COVER			
6	9-333-102669	4 SCREW #4			
7	9-333-102266	4 LOCKWASHER #4			
8	9-333-102480	4 NUT #4			
9	9-333-101599	1 STRAIN RELIEF GREEN INSERT - PG11			
10	9-333-102613	1 CABLE ASSEMBLY			
11	9-333-102679	1 BRACKET, MOUNTING			
12	9-333-102614	4 SCREW			



EXPLODED VIEW



WIRING DETAIL

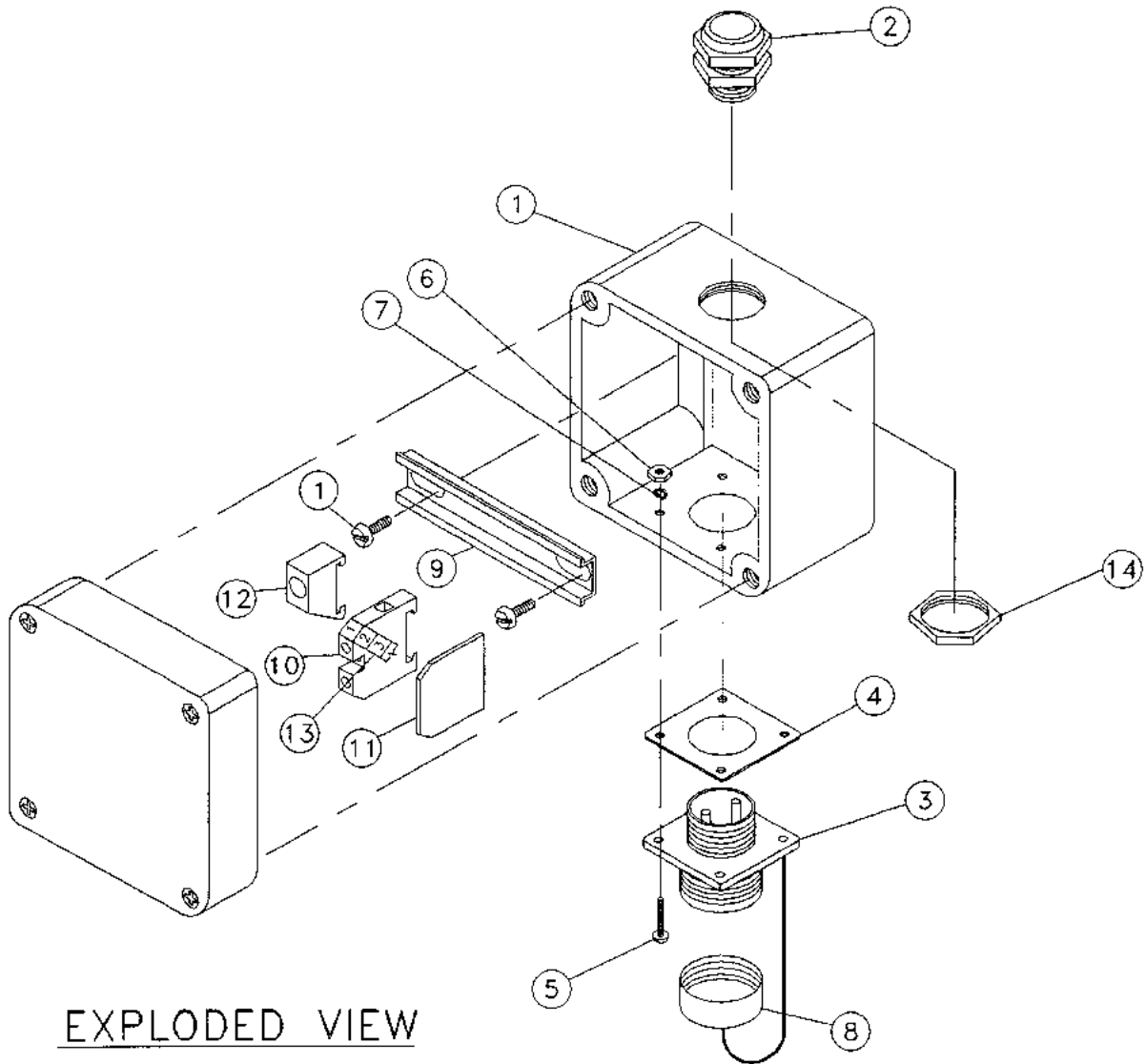
NOTES:

- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF CONNECTOR
- ② INNER SHIELD INSULATED AND CONNECTED AS SHOWN

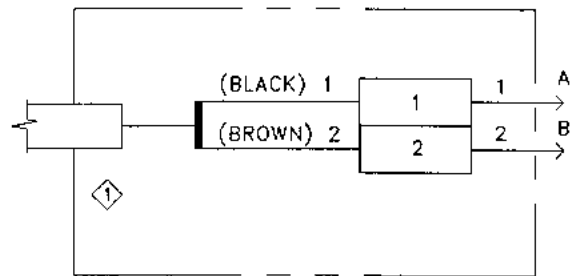
# JUNCTION BOX ASSEMBLY (6 X 6)

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102609		COMPLETE ASSY				
1	9-333-102345	1	HOUSING				
2	9-333-101599	2	STRAIN RELIEF GREEN INSERT - PG11				
3	9-333-102680	1	CANNON CONNECTOR				
4	9-333-102482	1	GASKET				
5	9-333-102612	1	DUST COVER				
6	9-333-102669	8	SCREW #4				
7	9-333-102266	8	LOCKWASHER #4				
8	9-333-102480	8	NUT #4				
9	9-333-102676	1	CANNON CONNECTOR				
10	9-333-102668	1	GASKET				
11	9-333-102268	1	CAP, DUST				
12	9-333-102670	1	MOUNTING RAIL, TERMINAL STRIP				
13	9-333-102663	21	BLOCK, TERMINAL STRIP				
14	9-333-102664	1	END PLATE, TERMINAL STRIP				
15	9-333-102665	1	END BRACKET, TERMINAL STRIP				
16	9-333-102666	1	TAGS, TERMINAL STRIP				
17	9-333-102671	2	SCREW, 6MM X 8MM				



EXPLODED VIEW



WIRING DETAIL

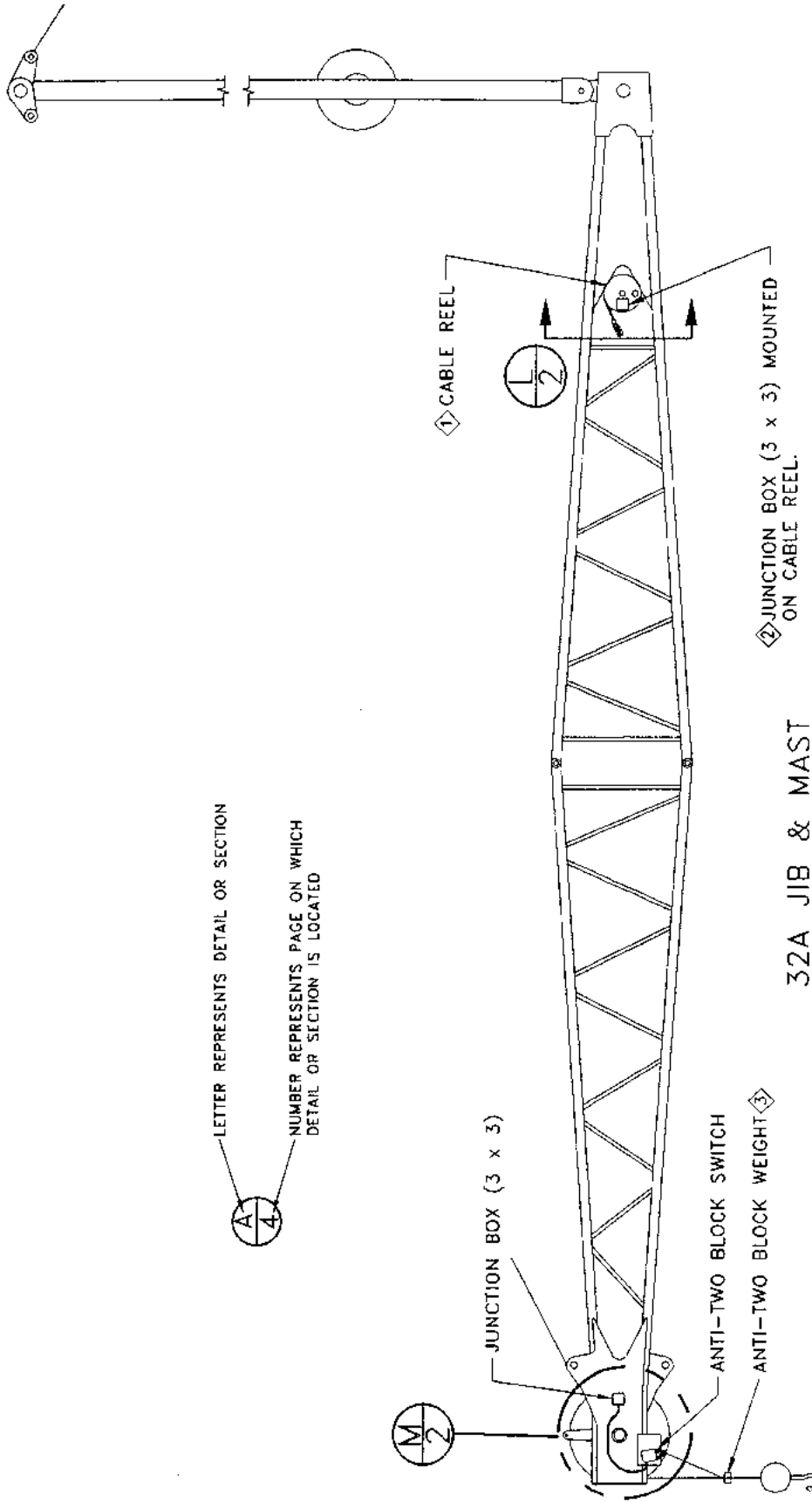
NOTES:

- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF INSERT.

JUNCTION BOX ASSEMBLY (3 X 3)

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102607		COMPLETE ASSY				
1	9-333-102591	1	BOX, HAMMOND				
2	9-333-102674	1	STRAIN RELIEF, PG9				
3	9-333-102676	1	CANNON CONNECTOR				
4	9-333-102482	1	GASKET				
5	9-333-102669	4	SCREW #4				
6	9-333-102266	4	LOCKWASHER #4				
7	9-333-102480	4	NUT #4				
8	9-333-102612	1	DUST COVER				
9	9-333-102662	1	MOUNTING RAIL, TERMINAL STRIP				
10	9-333-102663	2	BLOCK, TERMINAL STRIP				
11	9-333-102664	1	END PLATE, TERMINAL STRIP				
12	9-333-102665	1	END BRACKET, TERMINAL STRIP				
13	9-333-102666	1	TAGS, TERMINAL STRIP				
14	9-333-101984	1	LOCKNUT PG9				



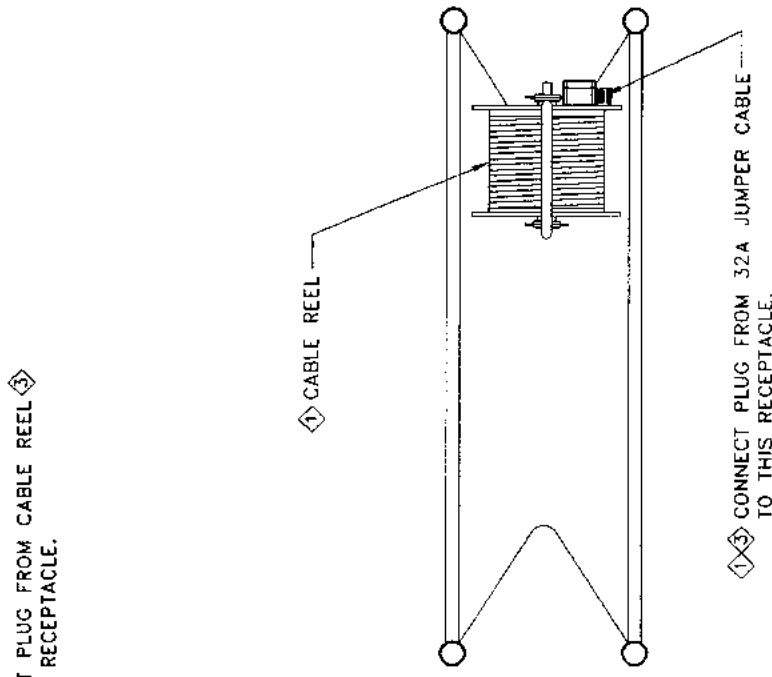
LETTER REPRESENTS DETAIL OR SECTION  
 NUMBER REPRESENTS PAGE ON WHICH  
 DETAIL OR SECTION IS LOCATED

32A JIB & MAST

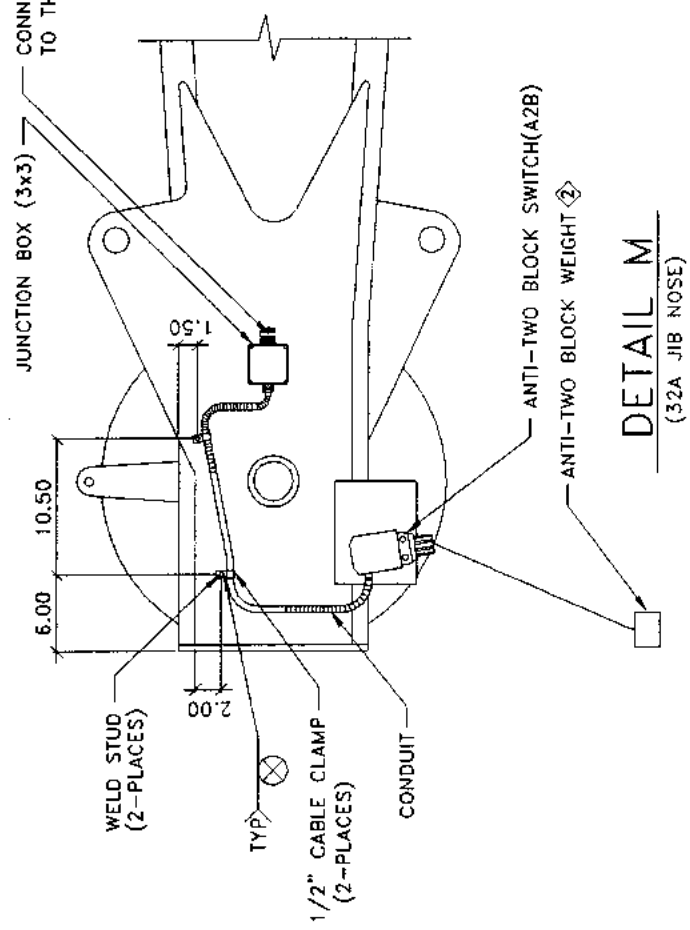
NOTES:

- ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 758G) TO INSIDE OF RECEPTORS, PLUGS, AND ELECTRICAL CONNECTORS, TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.
  - A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
  - B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
  - C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SOUZZEED OUT.
- FOR ELECTRICAL CONNECTIONS REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.
- 1 TO CONNECT CABLE REEL TO JIB NOSE; UNROLL CABLE FROM CABLE REEL AND SCREW PLUG INTO RECEPTACLE ON (3 x 3) JUNCTION BOX ON JIB NOSE.
  - 2 TO CONNECT 32A JIB TO 76A BOOM NOSE; INSTALL 32A JIB JUMPER CABLE FROM RECEPTACLE ON (3 x 3) JUNCTION BOX ON 32A JIB CABLE REEL TO RECEPTACLE ON (6 x 6) JUNCTION BOX ON 76A BOOM NOSE.
  - 3 REFER TO OPERATOR'S HANDBOOK FOR PROPER USE OF A28 SWITCH WEIGHT.





**SECTION L**  
(32A JIB BASE)



**DETAIL M**  
(32A JIB NOSE)

ALL DIMENSIONS IN INCHES TO CENTER LINE OF WELD STUDS.

FOR ELECTRICAL CONNECTIONS REFER TO THE WIRING SCHEMATIC IN THIS PARTS AND INSTALLATION MANUAL.

REFER TO 32A BOOM COMPONENT KIT FOR INSTALLATION HARDWARE.

① TO CONNECT 32A JIB BASE TO 76A BOOM NOSE; INSTALL 32A JUMPER CABLE FROM (3 x 3) JUNCTION BOX ON CABLE REEL TO RECEPTACLE ON (6 x 6) JUNCTION BOX ON 76A BOOM NOSE.

② REFER TO OPERATOR'S HANDBOOK FOR PROPER USE OF A2B SWITCH WEIGHT.

③ INSTALL DUST COVERS WHEN PLUG AND RECEPTACLE ARE DISCONNECTED.

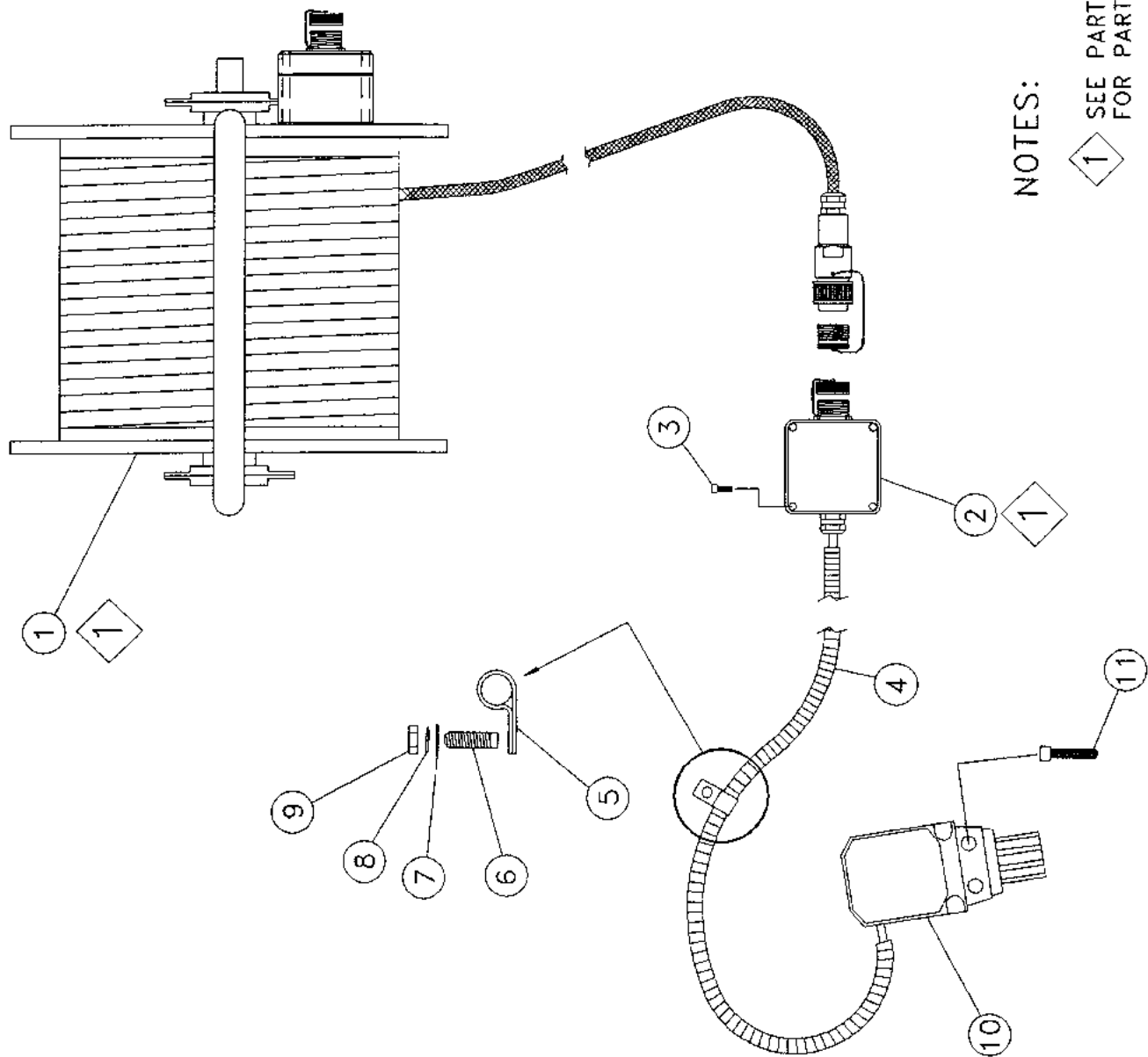
**NOTES:**

ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 7596) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS, TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.

A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.

B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.

C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

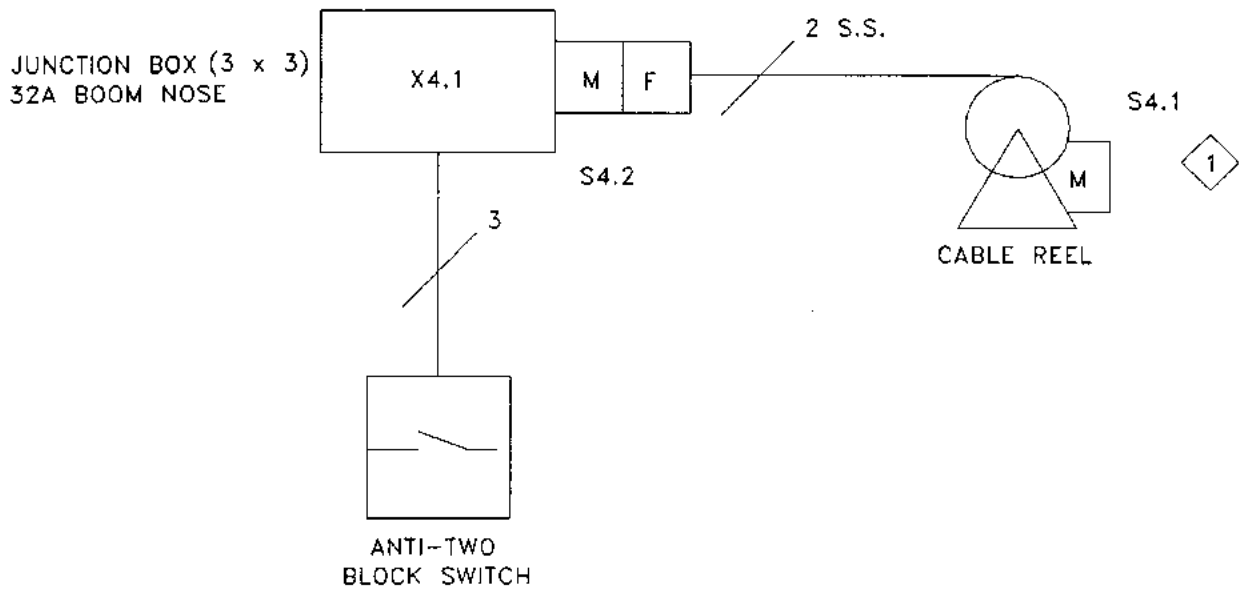


NOTES:

- 1 SEE PART BREAKDOWN DWG. FOR PARTS DETAIL

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
1	9-333-102703	1	CABLE REEL ASSEMBLY				
2	9-333-102607	1	JUNCTION BOX ASSEMBLY (3 X 3)				
3	9-333-102581	4	SCREEN				
4	9-333-102235	1	CONDUIT 10 FEET (MUST CUT TO LENGTH)				
5	7-300-000101	2	CLAMP 1/2"				
6	7-866-142140	2	STUD 1/4"-20 X 1/8"				
7	7-450-140141	2	WASHER 1/4" HARBOW				
8	7-450-140050	2	LOCKWASHER 1/4" REG				
9	7-660-140000	2	NUT, HEX 1/4"-20 NC - GRB A				
10	9-333-102238	1	SWITCH, B2B MPO GRIP				
11	7-110-151205	2	CAPSCREEN 5/16" - 18 NC X 1 1/2"				

+ SEE FURTHER BREAKDOWN THIS GROUP



NOTES



= FEMALE CONNECTOR



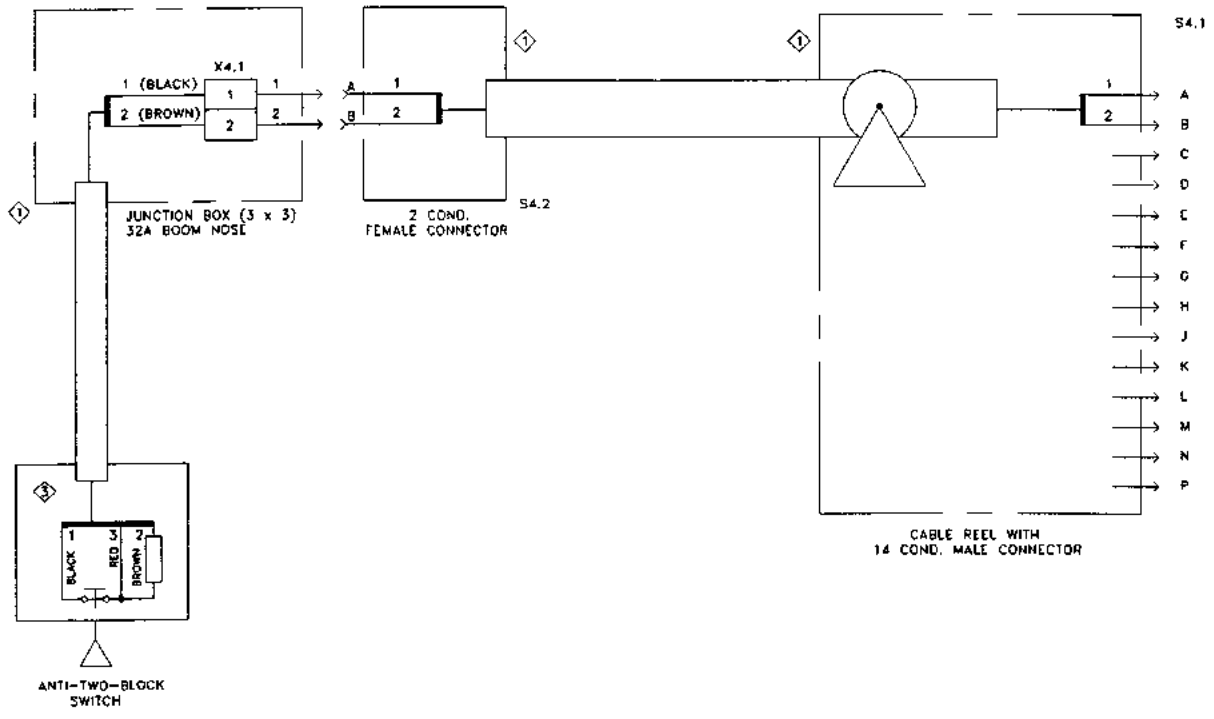
= MALE CONNECTOR



USE JUMPER CABLE TO CONNECT  
CONNECT CIRCUIT TO THE MAIN  
BOOM NOSE JUNCTION BOX

SS = SINGLE SHIELDED CABLE  
DS = DOUBLE SHIELDED CABLE  
TS = TRIPLE SHIELDED CABLE

CONNECTOR LOCATION

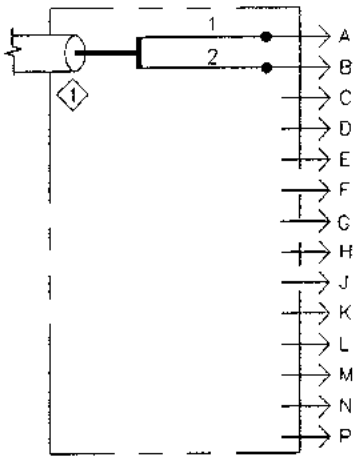
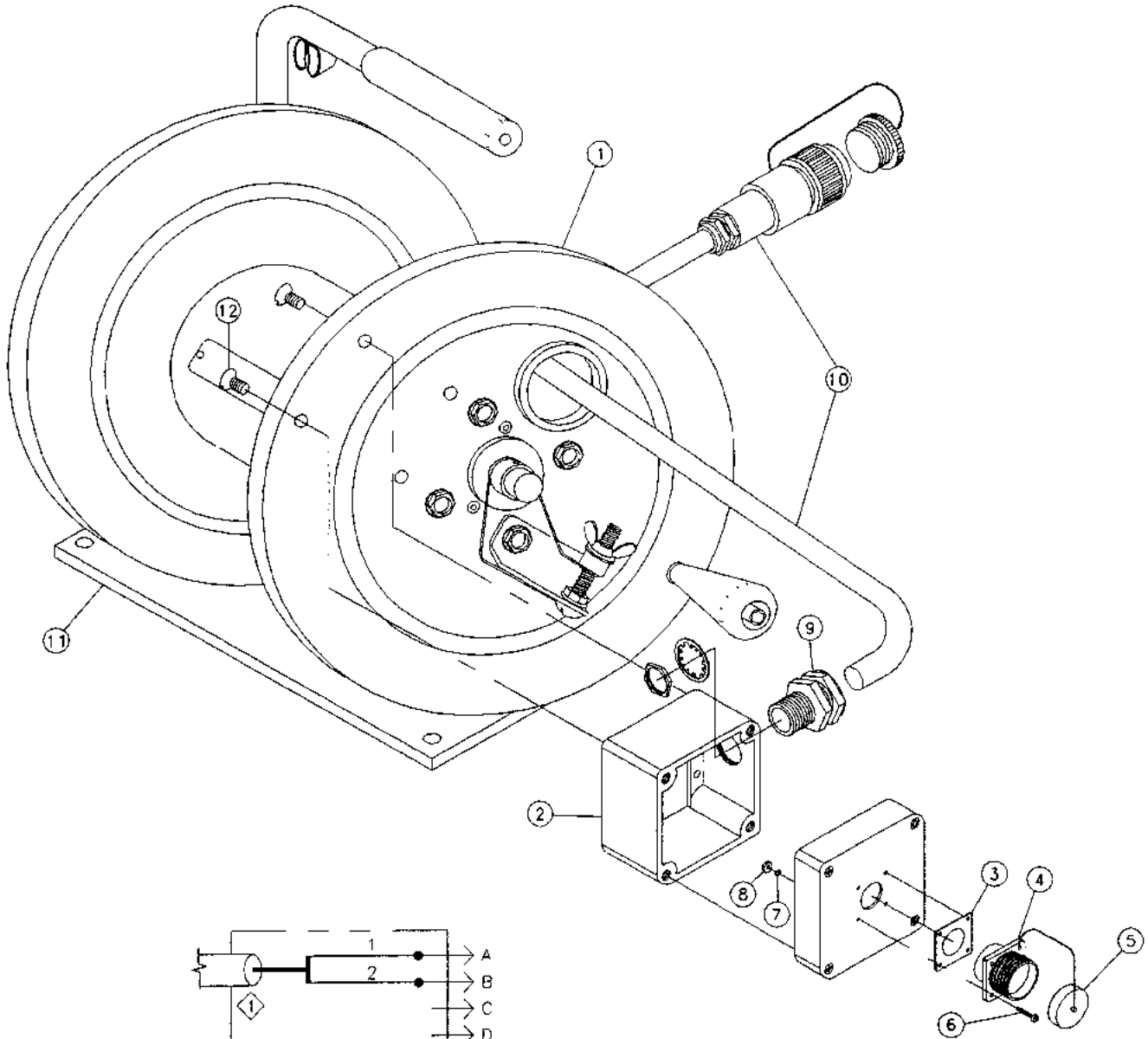


NOTES:

- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF INSERT
- ② POTTED - NO ACCESS TO SWITCH ELEMENT - PREWIRED

CODE	COLOR
BR	BROWN
BL	BLACK
WY	WHITE \ YELLOW
WG	WHITE \ GRAY
WB	WHITE \ BLUE
WR	WHITE \ RED
WP	WHITE \ PINK
WBL	WHITE \ BLACK
WBR	WHITE \ BROWN
P	PINK
W	WHITE
GN	GREEN
B	BLUE
R	RED
WGN	WHITE \ GREEN
C	GRAY
I.S.	INNER SHIELD

WIRING SCHEMATIC



WIRING DETAIL

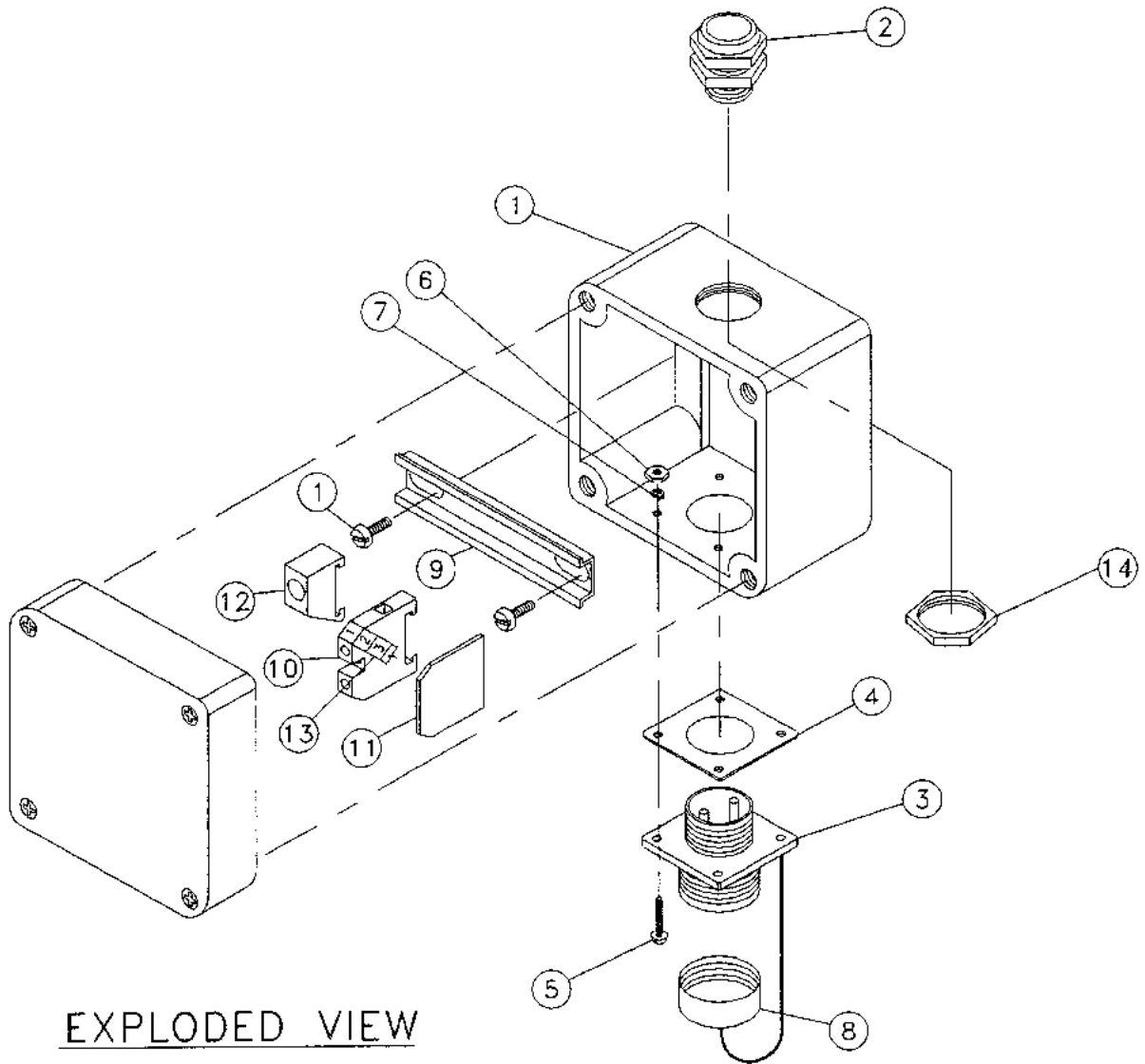
NOTES:

- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF INSERT.

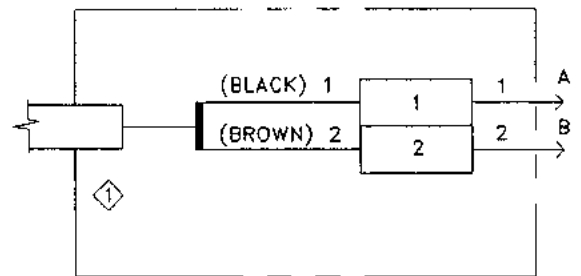
## CABLE REEL ASSEMBLY

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102703		COMPLETE ASSY				
1	9-333-102029	1	REEL, CABLE				
2	9-333-102591	1	BOX, HAMMOND				
3	9-333-102482	1	GASKET				
4	9-333-102678	1	CANNON CONNECTOR				
5	9-333-102612	1	DUST COVER				
6	9-333-102669	4	SCREW #4				
7	9-333-102266	4	LOCKWASHER #4				
8	9-333-102480	4	NUT #4				
9	9-333-101599	1	STRAIN RELIEF GREEN INSERT - PG11				
10	9-333-102613	1	CABLE ASSEMBLY				
11	9-333-102679	1	BRACKET, MOUNTING				
12	9-333-102614	4	SCREW				



EXPLODED VIEW



WIRING DETAIL

NOTES:

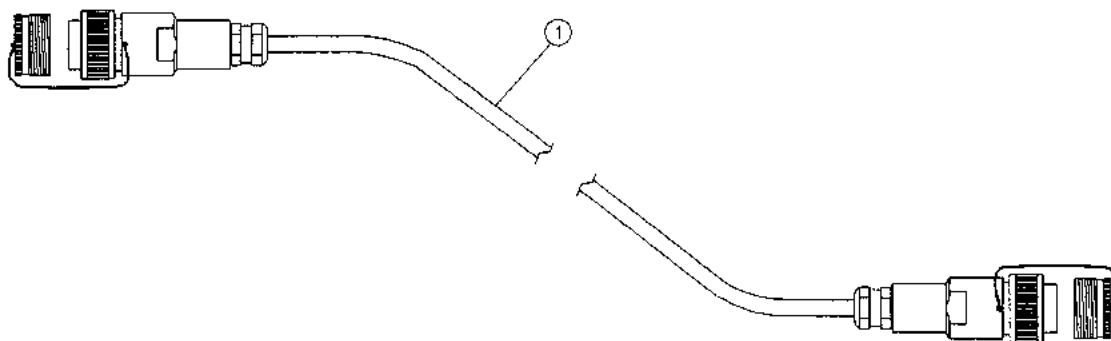
- ① OUTER SHIELD CONNECTED TO STRAIN RELIEF INSERT.



# JUNCTION BOX ASSEMBLY (3 X 3)

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102607		COMPLETE ASSY				
1	9-333-102591	1	BOX, HAMMOND				
2	9-333-102674	1	STRAIN RELIEF, PC9				
3	9-333-102678	1	CARDON CONNECTOR				
4	9-333-102482	1	GASKET				
5	9-333-102669	4	SCREW #4				
6	9-333-102266	4	LOCKWASHER #4				
7	9-333-102480	4	NUT #4				
8	9-333-102612	1	DUST COVER				
9	9-333-102662	1	MOUNTING RAIL, TERMINAL STRIP				
10	9-333-102663	2	BLOCK, TERMINAL STRIP				
11	9-333-102664	1	END PLATE, TERMINAL STRIP				
12	9-333-102665	1	END BRACKET, TERMINAL STRIP				
13	9-333-102666	1	TAGS, TERMINAL STRIP				
14	9-333-101984	1	LOCKOUT PC9				



## NOTES:

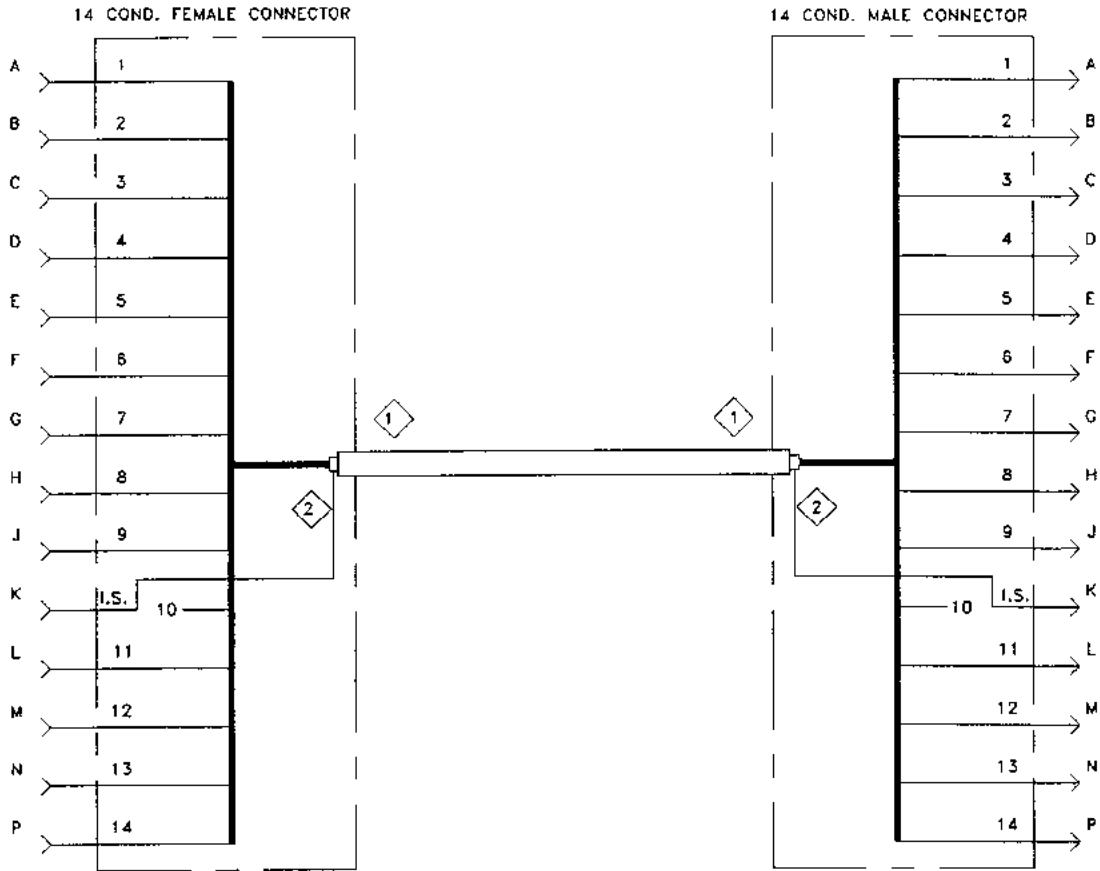
ADD DIELECTRIC LUBRICANT (e.g. NYOGEL 759G) TO INSIDE OF RECEPTACLES, PLUGS, AND ELECTRICAL CONNECTORS, TO IMPROVE PROTECTION AGAINST CORROSION AND MALFUNCTION DUE TO CONDENSATION.

- A. CLEAN ELECTRICAL CONTACTS AND CONNECTORS OF ALL FOREIGN MATERIAL SUCH AS GREASE, OIL, AND DIRT BEFORE APPLYING LUBRICANT.
- B. APPLY A GENEROUS AMOUNT OF LUBRICANT ON THE ELECTRICAL CONTACTS AND CONNECTORS BEFORE MOUNTING.
- C. AFTER MATING CONTACTS AND CONNECTORS, CLEAN OFF THE EXCESS SQUEEZED OUT.

CABLE ASSEMBLY - JUMPER 14 COND. MALE & FEMALE

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
	9-333-102616		COMPLETE ASSY				
1	9-333-102616	1	CABLE ASSEMBLY - JUMPER 14 COND. MALE + FEMALE				



## NOTES



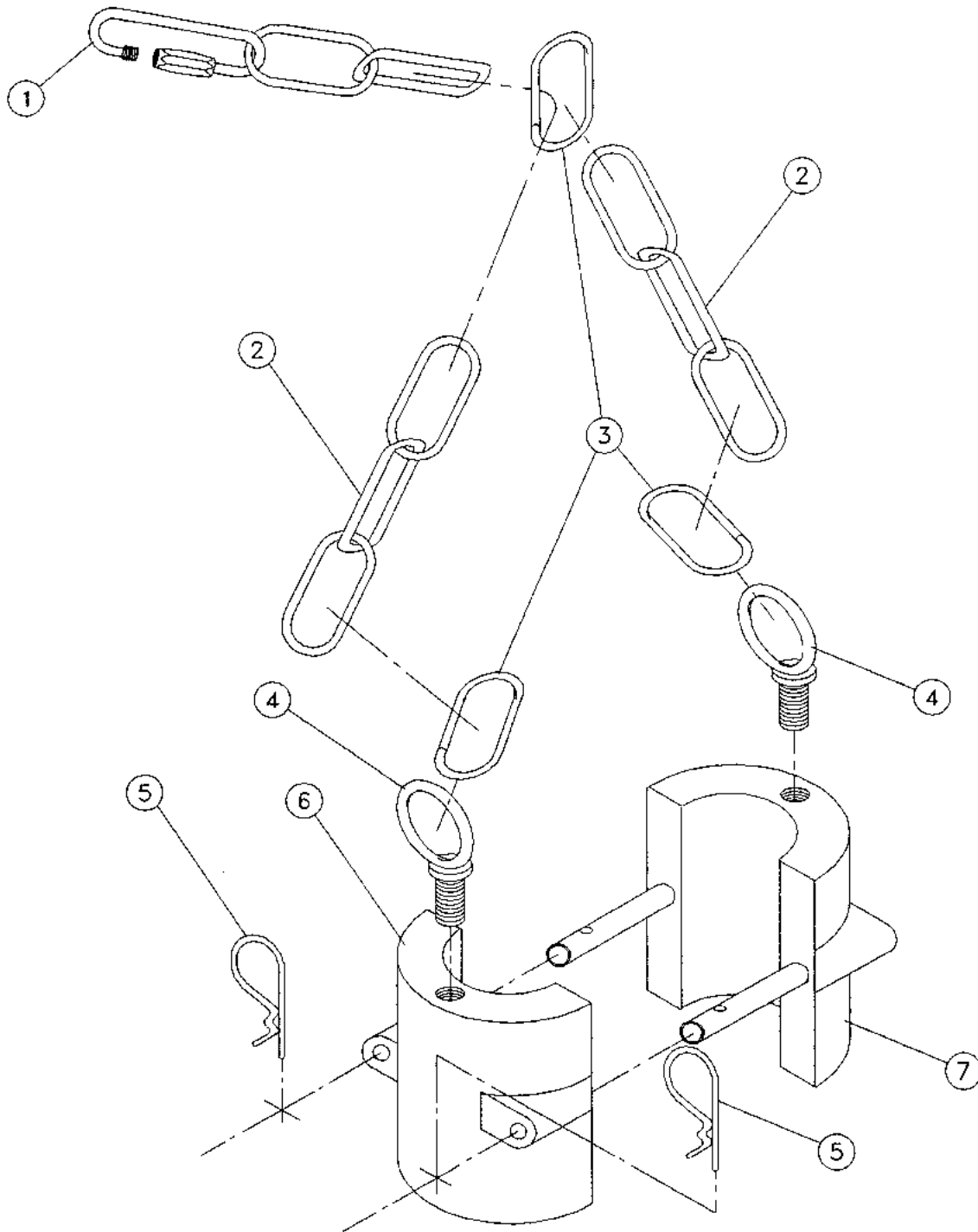
OUTER SHIELD CONNECTED TO STRAIN RELIEF.



INNER SHIELD INSULATED AND CONNECTED AS SHOWN.

WIRING SCHEMATIC

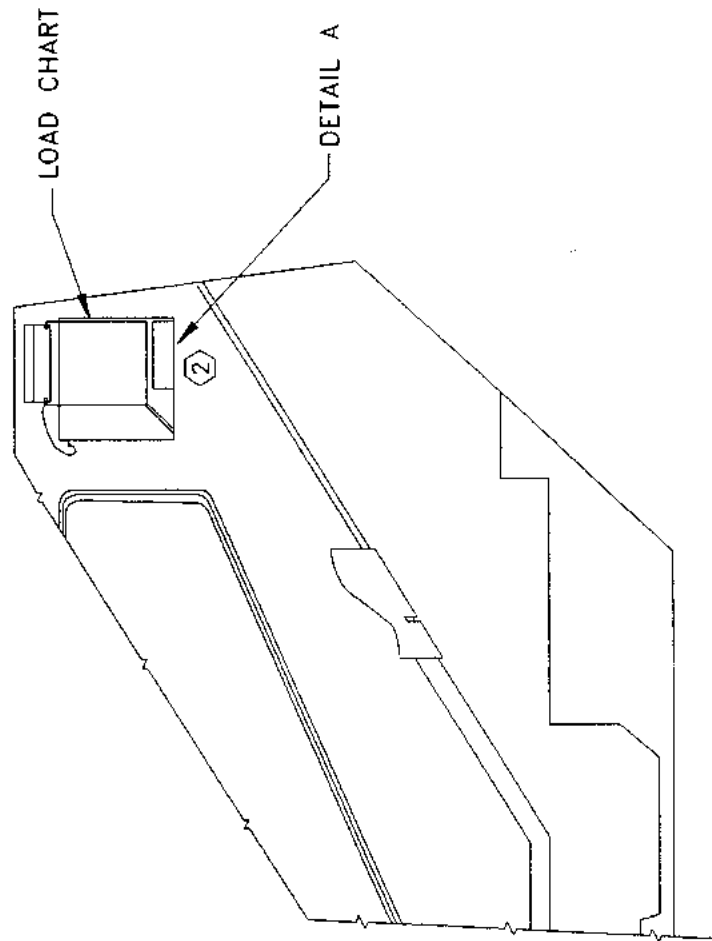
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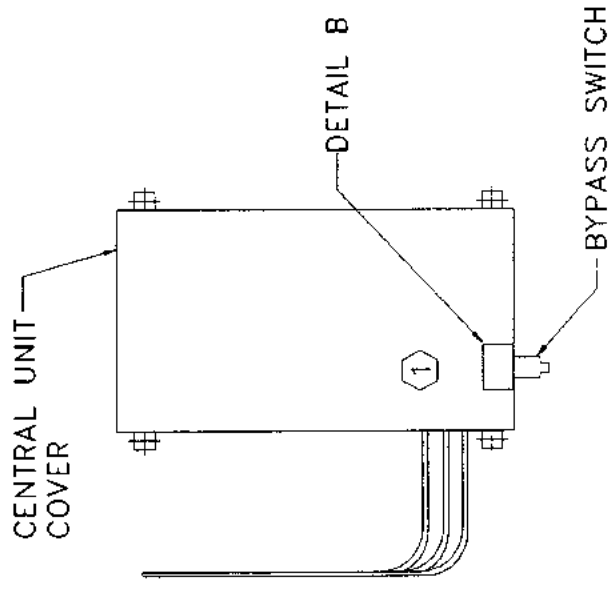
NO.	PART NO.	QTY DESCRIPTION	NO.	PART NO.	QTY DESCRIPTION
	3-486-0-00212	COMPLETE ASSY			
1	9-333-101840	1 CLEVIS			
2	9-333-101921	1 CHAIN ASSY			
3	9-333-101922	3 CLAMP, CHAIN			
4	9-333-101923	2 EYEBOLT			
5	9-333-101916	2 PIN, COTTER			
6	9-333-101924	1 WEIGHT, FEMALE			
7	9-333-101925	1 WEIGHT, MALE			

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PARTIAL VIEW R.H. SIDE CAB-INSIDE



LMI-CENTRAL UNIT

NOTES:

- ① TO BE INSTALLED CLOSEST TO BYPASS SWITCH.
- ② TO BE INSTALLED ON THE BOTTOM RIGHT HAND CORNER OF THE LOAD CHART HOLDER.

DECAL INSTALLATION LOCATION

DETAIL B

1



# WARNING

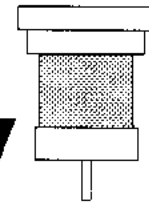
## LMI LOCKOUT/OVERRIDE

This switch overrides the LMI lockout feature and must be used with utmost caution.

REFERENCE: PAT Operator's Manual

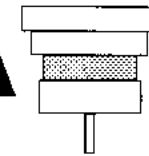
024-000-120-017

OUT



NORMAL  
OPERATION

IN



L/O  
OVERRIDE

THIS MACHINE IS EQUIPPED WITH A DS 350 SERIES LOAD MOMENT INDICATING SYSTEM MANUFACTURED BY PIETZSCH AUTOMATISIERUNGSTECHNIK GMBH, GERMANY. THE LOAD MOMENT SYSTEM COMPLIES WITH SAE J159, APR 85. STUDY PAT OPERATOR'S MANUAL CAREFULLY BEFORE OPERATING THIS CRANE.

024-000-120-017


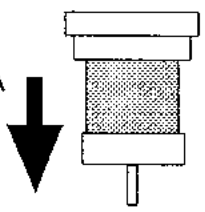
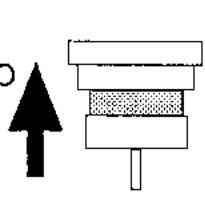
2

DETAIL A

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
1	9-333-102121	1	DECAL - BYPASS SWITCH ENGLISH				
2	9-333-102120	1	DECAL - SRE INFO DS350G ENGLISH				

DETAIL B

1

 <h2 style="margin: 0;">ADVERTENCIA</h2>	<p>AFUERA</p>  <p>SERVICIO NORMAL</p>
<p><b>PUENTEADO DE BLOQUEO IMC</b></p> <p>Este interruptor puentea la función de bloqueo del IMC y deberá utilizarse sólo con la máxima prudencia.</p> <p>Referencia: Manual de Servicio PAT</p>	<p>ADENTRO</p>  <p>PUENTEADO DE BLOQUEO</p>

Esta grúa está equipada con un sistema indicador del momento de carga de la serie DS 350 fabricada por la casa PIETZSCH Automatisierungstechnik GmbH, RFA. El sistema indicador del momento de carga cumple con las exigencias de SAE J159 de abril de 1985. Se le ruega leer cuidadosamente el manual de servicio PAT antes de manejar la grúa.

2

DETAIL A

DECAL - LMI (SPANISH)

GROVE

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
1	9-333-102276	1	DECAL - BYPASS SWITCH SPANISH				
2	9-333-102487	1	DECAL - SAE INFO DS350G SPANISH				

DETAIL B

1



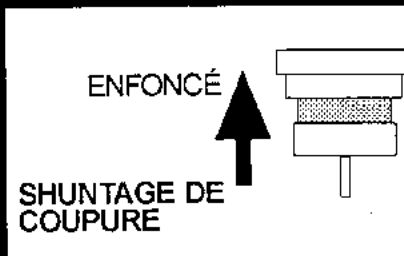
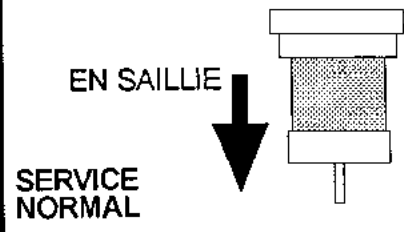
# AVERTISSEMENT

## SHUNTAGE DE COUPURE CEC

Cet interrupteur shunte la fonction de coupure du CEC et ne doit être utilisé qu'avec une extrême prudence.

Référence: Mode d'Emploi PAT

024-000-120-024



Votre grue est équipée d'un système contrôleur d'état de charge de la série DS 350 fabriquée par l'Ets. PIETZSCH Automatisierungstechnik GmbH, RFA. Le système contrôleur d'état de charge répond aux exigences de SAE J159, avril 1985. Veuillez lire soigneusement le mode d'emploi PAT avant d'exploiter votre grue.

2

DETAIL A

NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
1	9-333-102277	1	DECAL - BY PASS SWITCH FRENCH				
2	9-333-102488	1	DECAL - SAE INFO DS350G FRENCH				

DETAIL B

1



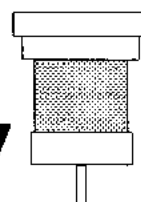
# WARNUNG

## ÜBERBRÜCKUNG DER LMB-ABSCHALTUNG

Dieser Schalter überbrückt die Abschaltfunktion der LMB und darf nur mit äußerster Vorsicht benutzt werden.

Siehe PAT-Bedienungshandbuch

NICHT  
GEDRÜCKT



NORMAL-  
BETRIEB

GEDRÜCKT



LMB-ABSCHALTUNG  
GEBRÜCKT

Dieser Kran ist mit einem Lastmomentbegrenzungssystem der Serie DS 350 der Fa. PIETZSCH Automatisierungstechnik GmbH, BRD, ausgerüstet. Das Lastmomentbegrenzungssystem entspricht SAEJ159 vom April 1985. Bitte lesen Sie das Bedienungshandbuch der Fa. PAT sorgfältig durch, bevor Sie den Kran in Betrieb setzen.

024-000-120-028

2

DETAIL A



NO.	PART NO.	QTY	DESCRIPTION	NO.	PART NO.	QTY	DESCRIPTION
1	9-333-102278	1	DECAL - BY PASS SWITCH GERMAN				
2	9-333-102489	1	DECAL - SAE INFO DS350G GERMAN				