

How to Use This Guide

Many IHI Connectors brand lugs allow UL and CSA supported field modification of mounting holes to increase hole diameter, move location of mounting holes, or put in custom holes. This guide has been provided by the manufacturer to help identify customization options and instruct the customer in modifying their own connectors under UL and CSA guidelines.

Lugs that allow one or more of these modifications or customizations will be identified on the online product page with the icon in **Figure 1** and one of the following phrases:

DIY Mounting Holes™

DIY Drill Your Own™ Mounting Holes

Before using this guide, you must know the Category Number (Cat No.) and Style Number (Style No.) of the lug you would like to modify. These numbers can be found on the product information page at your site of purchase as well as on the product's mechanical print, unique to each part. If you have ordered your connectors online, the Cat. No and Style No. can also be found in your order confirmation email.



Figure 1.

Page one of this guide is the manufacturer provided general guidelines for drilling and modifying mounting holes and examples of modifications. Pages two and three are for drilling a volt tap hole when permitted. The rest of the guide is the UL ILL-1 / CSA rated guide chart fig. 32

Refer to UL ILL-1 / CSA rated guide chart fig. 32 for max and min bolt hole dia, number of bolt holes, if oval slots permitted and any voltage tap holes and additional location holes permitted. Must conform to keep ratings based on catalog number.

Understanding the UL ILL-1 / CSA rated guide chart fig. 32

E129884 VOLUME 2 ZMVV LISTED CONNECTORS WITH MOUNTING HOLE SIZE RANGES									
TABLE OF PERMITTED MOUNTING BOLT HOLE SIZE RANGE AND QUANTITY OF BOLT AND LOCATION HOLES									
				INCHES		OPTION	OPTION	OPTION	OPTION
SEC No.	Ill. No.	CAT No.	STYLE No.	MTG. HOLE RANGE	QTY	THREADED	NON-ROUND	REPEAT / POLE	LOCATION or VOLT TAP HOLE(S)
		1.	2.	3.	4.	5.	6.	7.	8.

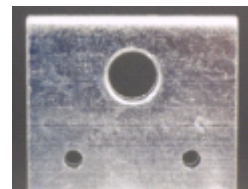
Figure 2. "UL ILL-1 Heading"

MC200116 REPORT 1243943 LIST OF MOUNTING HOLE SIZE RANGES									
TABLE OF PERMITTED MOUNTING BOLT HOLE SIZE RANGE AND QUANTITY OF BOLT AND LOCATION HOLES									
				INCHES		OPTION	OPTION	OPTION	OPTION
Report No.	Fig. No.	CAT No.	STYLE No.	MTG. HOLE RANGE	QTY	THREADED	NON-ROUND	REPEAT / POLE	LOCATION or VOLT TAP HOLE(S)
		1.	2.	3.	4.	5.	6.	7.	8.

Figure 3. "CSA rated guide chart fig. 32 Heading"

1. **CAT No.** The Category Number of the part you would like to modify.
2. **STYLE No.** The Style Number of the part you would like to modify.
3. **MTG. HOLE RANGE** The UL/CSA accepted mounting hole size range for each Category and Style No.
4. **QTY** The number of accepted mounting holes for each Category and Style No.
5. **THREADED** A "Y" indicates that threaded mounting holes are permitted; a blank indicates that threaded mounting holes are not permitted
6. **NON-ROUNDED** A "Y" indicates an out of round, oval or elongated hole is permitted; a blank indicates that only round holes are permitted
7. **REPEAT/POLE** A "Y" indicates that in the case of multi-hole lugs with repeated poles or pole sets, the mounting hole may be repeated also; a blank indicates no repetition patterns are permitted
8. **or VOLT TAP HOLE(S)** A "Y" indicates that a small hole or tapped hole may be machined into a place where extra material allows to accommodate a screw for connecting a voltage tap signal wire or thermocouple wire; a blank indicates that no such holes have been permitted. Guidelines for drilling a volt tap hole are on page 2-3.

SHEET METAL POINT
DRILL RECOMMENDED
FOR DRILLING MOUNTING
HOLES. USE MASKING
TAPE TO KEEP TIN
PLATED SURFACE FROM
BEING SCRATCHED



EXAMPLE OF ADDITIONAL
HOLE(S) FOR LOCATION
OR TURN PREVENT
WHERE PERMITTED (SEE
UL/CSA OPTIONS CHART



EXAMPLE OF ADDITIONAL THREADED
VOLTAGE TAP MONITORING HOLE
WHERE PERMITTED
PLACE IN THICK SECTIONS ONLY LIKE
CORNERS OR PASSIVE SECTION LIKE
MOUNTING TANG SEE UL/CSA

OPTIONS CHART

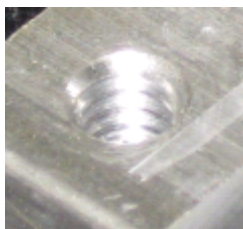


EXAMPLE OF DUAL MOUNTING
HOLES FOR TURN PREVENT
WHERE PERMITTED. SEE UL/CSA

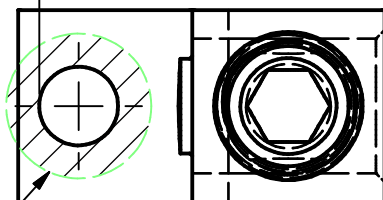
OPTIONS CHART

Cat. No	A Min. Dimn. Inch	A Min. Dimn. mm
S6	0.090	2.29
S4	0.090	2.29
S6-3	0.070	1.78
S6-4	0.070	1.78
S4-3	0.080	2.03
S2	0.100	2.54
S1/0 2S1/0	0.100	2.54
S2/0 2S2/0	0.100	2.54
S250 2S250	0.110	2.79
S300	0.110	2.79
S350 2S350	0.110	2.79
S500	0.135	3.43
2S500	0.125	3.18
S600 2S600	0.157	3.99
S750	0.157	3.99
S800	0.157	3.99
2S750	0.157	3.99

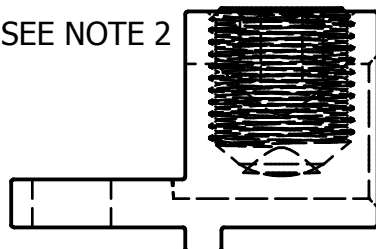
EXAMPLE OF THREADED
MTG. HOLE. WHERE
PERMITTED. CLASS 2B
THREAD REQUIRED. USER
SHALL TEST THAT
STRENGTH MEETS GRADE 2
BOLT TORQUES
<http://www.ihiconnectors.com/Bolting-Listed-Lugs.htm>



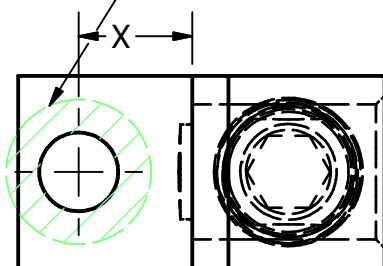
← A (SEE CHART TOP RIGHT)



SEE NOTE 2



SEE NOTE 2



IF TURN PREVENT RIB FEATURE IS USED, CONTROL
DISTANCE 'X' FROM HOLE TO RIB TO MATCH THE MATING
TAB

CUSTOMER GUIDE FOR FIELD DRILLING MOUNTING HOLE(S) IN IHI S & 2S RANGE BLANK TANG LUGS A BLANK TANG LUG MAY BE DRILLED OR AN EXISTING FACTORY MTG. HOLE MAY BE MADE LARGER (SEE CAT.NO. FOR DETAILS)

1. PROTECT SCREW AND WIRE HOLE FROM CHIPS AND OIL DURING DRILLING PROCESS!
2. NEVER REMOVE ANY PLATING FROM THE CONTACT FACE(S) MARKED WITH HATCHING. PLATING IS CRITICAL FOR THE CONTACT ZONE WITH MATING BUS BAR WHICH IS PRIMARILY THE MATING AREA UNDER & AROUND THE BOLT HEAD ZONE! USE MASKING TAPE TO PROTECT TIN PLATING.
3. REFER TO UL ILL-1 / CSA RATED GUIDE CHART FIG. 32 FOR MAX AND MIN BOLT HOLE DIA, NUMBER OF BOLT HOLES, IF OVAL SLOTS PERMITTED AND ANY VOLTAGE TAP HOLES AND ADDITIONAL LOCATION HOLES PERMITTED. MUST CONFORM TO KEEP RATINGS BASED ON CATALOG NUMBER.
4. MIN END WALL DIMENSION 'A' SEE TABLE. ANY QUESTIONS CALL IHI BEFORE PROCEEDING.
5. UL/CSA Conditions of acceptability for field modifications: All catalog numbers may be shipped with blank tang (no mounting holes) or later field modification by user. Alternatively, existing mounting holes in the tang may be field modified by user (increase size). The manufacturer shall provide, in the unit container, the installation instructions specifying the maximum and minimum hole size ranges and quantity of holes, and locations, as listed in the current Certified catalog number file information. UL see ILL-1 and for CSA see Figure 32 for more details.

NOTES: 1. INSIDE OF BOLT HOLES, LOCATION HOLES, AND TEST HOLES NEED NOT BE PLATED

2. UN AND METRIC BOLT SIZE EQUIVALENTS (REFERENCE)

#6	#8	#10	1/4	5/16	3/8	7/16	1/2	9/16	5/8
M3,5	M4	M5	M6	M8	M10	M11	M12	M14	M16

3. CLEARANCE HOLES ON STANDARD BOLT SIZES ARE LARGER THAN THE NOMINAL BOLT DIAMETER

EXAMPLE OF OVAL OR
SLOTTED HOLE(S) WIDTH
OF SLOT MAY NOT EXCEED
MAXIMUM HOLE DIA IN
UL/CSA OPTIONS CHART



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CLEVELAND, OHIO, AND MAY NOT BE DUPLICATED,
USED FOR THE BASIS OF DESIGN OR
MANUFACTURE WITHOUT THE WRITTEN
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INC., CLEVELAND, OHIO.

GENERAL TOLERANCES
±.015 (±0,39)

MATERIAL:
6061-T6 ALUM.

FINISH:
TIN PLATED

IHI CONNECTORS INTERNATIONAL
HYDRAULICS, INC.

TITLE: BLANK LUG DRILLING

DRILL or ENLARGE MOUNTING HOLE

SIZE: A	DRAWN BY: cridley	DWG NO.: DRILL-GUIDE	REV: 0
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DATE: 1-3-2018	Mfgs. Instructions
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Instructions for M3 screw and ring lug #14 / 2,5mm² wire tap for qualified electricians only.



Scope

IHI S series and 2S series lugs

See suggested locations by part number

Single Barrel Lugs

S250 0.906" wide and wider parts

Double and multiple barrel lugs

2S1/0 and wider parts

1. Mark the hole location carefully observing the minimum wall distances
2. Use a center punch indentation to ensure drill does not wander



3. Use 2.75mm diameter HSS twist drill to create a vertical hole at the desired location 8.0 mm deep

No lubricant is needed

4. Blow off chips



5. Use the M3 x 8mm Trilobe self forming screw to tap the thread to full depth of the screw

(Screw: M3 thread, pitch 0.5, X 8mm long zinc chromate plated steel trilobe self-thread forming machine screw with 5mm A/F hexagon head)

6. Remove the M3 screw.

7. Take the Panduit crimp ring lug PM2-3R-C and crimp the wire using the Panduit crimp tool CT-1570 per manufacturer instructions.



8. Affix the ring lug securely to the IHI lug using the M3 x 8mm screw and 10-12 in lbs seating torque.

The IHI wire binding screw may be fully seated or removed to facilitate the clearances needed.



9. Where the screw to wall distance is appropriate the ring lug may be inverted to use the edge wall of the IHI lug as a turn prevent wall against the front end of the crimp tube - see picture left

10. Check the crimp lug for secureness and alignment and if any changes to the pole to pole or pole to ground creepage spacing is needed

11. Ensure that the voltage tap wire is properly strain relieved and also its total length and routing comply with all relevant standards including high voltage creepage, voltage isolation, fusing and all other safety compliance from your AHJ's.



LORI SILVIS
INTERNATIONAL HYDRAULICS INC
7638 SAINT CLAIR AVE
MENTOR OH 44060-5236

Date: 2018/09/22
Subscriber: 108791001
PartySite: 57697
File No: E129884
Project No: 4788633717
PD No: 18M34869
Type: R
PO Number: JS62872236

Subject: **Procedure And/Or Report Material**

The following material resulting from the investigation under the above numbers is enclosed.

Issue

<u>Date</u>	<u>Vol</u>	<u>Sec</u>	<u>Pages</u>	<u>Revised Date</u>
	2		Revised Section General Page(s) 3	2018/09/20
	2		Revised Section Gen Illustrations 1	2018/09/20
1999/09/13	2	2	Cert of Compliance	
1999/09/13	2	2	Revised Description Page(s) 1,2	2018/09/20
1999/09/13	2	2	New Illustration(s) 4A,4B	2018/09/20
1999/09/13	2	2	New Test Record 16	2018/09/20

Inspections at your plant will be conducted under the supervision of THOMAS MALAGISI, AREA MANAGER, UL INSPECTION CENTER ADIRONDACK-POCONO, UL LLC, PO BOX 506, MANLIUS, NY, United States, 13104., PHONE: 315-751-3026, FAX: 315-513-7533, EMAIL: THOMAS.MALAGISI@UL.COM

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

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NBK File

5. All catalog numbers may be shipped with blank mounting hole locations (no mounting holes) for later field modification by user. Alternatively, existing mounting holes may be field modified by user (increase size).

The manufacturer shall provide, in the unit container, the installation instructions specifying the maximum and minimum hole size ranges and quantity of holes, and locations, as listed in the current catalog number file information. See ILL. 1 for more details.

*

E129884 VOLUME 2 ZMVV LISTED CONNECTORS WITH MOUNTING HOLE SIZE RANGES									
TABLE OF PERMITTED MOUNTING BOLT HOLE SIZE RANGE AND QUANTITY OF BOLT AND LOCATION HOLES									
SEC No.	Ill. No.	CAT No.	STYLE No.	INCHES MTG. HOLE RANGE	QTY	OPTION THREADED	OPTION NON-ROUND	OPTION REPEAT / POLE	OPTION LOCATION or VOLT TAP HOLE(S)
1	1	S6	ALL	0.13 - 5/16 BOLT	1-2	Y	Y		
1	1A	S6-3	ALL	#10 - 1/2 BOLT	1-4	Y	Y		Y
1	1B	S6-4	1	.133 - 3/8 BOLT	1-2 OR 1 PER 8 WIRE HOLES	Y	Y	Y	Y
1	1B	S6-4	2	.133 - 5/16	1-2 OR 1 PER 8 WIRE HOLES	Y	Y	Y	Y
1	1B	S6-4	3	.133 - 3/8 BOLT	1-2 OR 1 PER 8 WIRE HOLES	Y	Y	Y	Y
1	11	S4	ALL	3/16 - 9/32	1	Y	Y		
1	13	S4A1	ALL	1/4 - 5/16 BOLT	1				
1	11A	S4-3	ALL	#10 - 1/2 BOLT	1 - 4	Y	Y		Y
1	12	S4A2	ALL	1/4 - 5/16 BOLT	1				
1	2	S2	ALL	9/64 - 5/16 BOLT	1 - 2	Y	Y	Y	Y
1	3	S1/0	1 - 3	1/4 - 13/32	1		Y		Y
1	3	S1/0	4 - 5	13/64 - 13/32	2		Y		Y
1	3	S1/0	6	13/64 - 13/32	1-2		Y		Y
1	3	S1/0	7	11/64 - 5/16 BOLT	2-3		Y		Y
1	4	S2/0	ALL	#10- 17/32	1 - 2	Y	Y		
4	1	S2/0-3	ALL	1/4 - 29/64	1				Y
4	1	S2/0-3	ALL	AND #10	1	Y			Y
1	5	S250	1 - 2	13/64 - 17/32	1	Y	Y		Y
1	5	S250	3	13/64 - 17/32	1 - 2	Y	Y		Y
1	5	S250	4 - 5	13/64 - 17/32	0 - 2	Y	Y		Y
1	5	S250	6	11/64 - 13/64 &/OR	2 - 4	Y	Y		Y
1	5	S250	6	1/4 - 3/8	1 - 2	Y	Y		Y
1	5A	S250N	1 - 2	13/64 - 17/32	1	Y	Y		Y
1	5A	S250N	3	13/64 - 17/32	1 - 2	Y	Y		Y
1	5A	S250N	4 - 5	13/64 - 17/32	0 - 2	Y	Y		Y
1	5A	S250N	6	11/64 - 13/64 &/OR	2 - 4	Y	Y		Y
1	5A	S250N	6	1/4 - 3/8 BOLT	1 - 2	Y	Y		Y
4	2	S250-3	ALL	13/64 - 17/32	1		Y		Y
4	2	S250-3	ALL	AND OPT. 3/16 MAX	0 - 5		Y		Y
4	3	S250-4	ALL	13/64 - 17/32	1		Y		
4	3	S250-4	ALL	AND OPT. 3/16 MAX	0 - 2		Y		
1	6	S300	ALL	1/4 - 17/32	1 - 2	Y	Y		Y
1	6A	S300N	ALL	1/4 - 17/32	1 - 2	Y	Y		Y

C182121058

SEC No.	Ill. No.	CAT No.	STYLE No.	INCHES MTG. HOLE RANGE	QTY	OPTION THREADED	OPTION NON- ROUND	OPTION REPEAT / POLE	OPTION LOCATION or VOLT TAP HOLE(S)
1	7	S350	1	17/64 - 9/16 BOLT	1	Y	Y		Y
1	7	S350	2	17/64 - 9/16 BOLT OR	1	Y	Y		Y
1	7	S350	2	3/16 - 3/8 BOLT	2	Y	Y		Y
1	7	S350	3 - 4	1/4 - 9/16 BOLT	1 - 2	Y	Y		Y
1	8	S500	1 - 4	3/8 - 5/8 BOLT	1	Y	Y		Y
1	8	S500	1 - 4	OR 1/4 BOLT	2	Y	Y		Y
1	8	S500	5 - 6	3/8 - 5/8 BOLT	1 - 2	Y	Y		Y
1	8	S500	5 - 6	OR 1/4 BOLT	2	Y	Y		Y
1	8B	S500N	1 - 4	3/8 - 5/8 BOLT	1	Y	Y		Y
1	8B	S500N	1 - 4	OR 1/4 BOLT	2	Y	Y		Y
1	8B	S500N	5 - 6	3/8 - 5/8 BOLT	1 - 2	Y	Y		Y
1	8B	S500N	5 - 6	OR 1/4 BOLT	2	Y	Y		Y
1	9	S600	1 - 2	3/8 - 5/8 BOLT OR	1	Y	Y		Y
1	9	S600	1 - 2	1/4 BOLTS	2	Y	Y		Y
1	9	S600	3	3/8 - 5/8 BOLT &	1 - 2	Y	Y		Y
1	9	S600	3	1/4 BOLTS	0 - 2	Y	Y		Y
1	9	S600	4	5/16 - 5/8 BOLT &	1 - 2	Y	Y		Y
1	9	S600	4	1/4 BOLTS	0 - 2	Y	Y		Y
1	9B	S600N	1 - 2	3/8 - 5/8 BOLT OR	1	Y	Y		Y
1	9B	S600N	1 - 2	1/4 BOLTS	2	Y	Y		Y
1	9B	S600N	3	3/8 - 5/8 BOLT &	1 - 2	Y	Y		Y
1	9B	S600N	3	1/4 BOLTS	0 - 2	Y	Y		Y
1	9B	S600N	4	5/16 - 5/8 BOLT &	1 - 2	Y	Y		Y
1	9B	S600N	4	1/4 BOLTS	0 - 2	Y	Y		Y
1	14	S750	ALL	3/8 - 5/8 BOLT	1		Y		
1	10	S800	1 - 2	9/16 - 21/32	1	Y	Y		Y
1	10	S800	3	9/16 - 21/32	1 - 2	Y	Y		Y
1	10	S800	4	9/16 - 21/32	1 - 4	Y	Y		Y
2	1	2S1/0	ALL	1/4 - 7/16 BOLT	1	Y	Y		Y
2	2	2S2/0	1	1/4 - 7/16 OR	1	Y	Y	Y	Y
2	2	2S2/0	1	1/4 - 5/16 BOLT	1 - 2	Y	Y	Y	Y
2	2	2S2/0	2 - 6	1/4 - 7/16 BOLT	1 - 2	Y	Y	Y	Y

C182121058

SEC No.	Ill. No.	CAT No.	STYLE No.	INCHES MTG. HOLE RANGE	QTY	OPTION THREADED	OPTION NON- ROUND	OPTION REPEAT / POLE	OPTION LOCATION or VOLT TAP HOLE(S)
2	3	2S250	1	3/8 - 11/16 BOLT OR 2 1/4 BOLTS	1	Y	Y	Y	Y
2	3	2S250	2 - 3	3/8 - 11/16 BOLT	1 - 2	Y	Y	Y	Y
2	3	2S250	2 - 3	3/8 - 11/16 BOLT & (0- 2) 1/4 BOLTS	1 - 2	Y	Y	Y	Y
2	3	2S250	4	3/8 - 11/16 BOLTS & OPT 3/8 - 7/16 BOLTS & (0-2) 1/4 BOLTS	1 - 2	Y	Y	Y	Y
2	4	2S350	ALL	3/8 - 5/8 BOLT	1 - 2	Y	Y	Y	Y
2	4	2S350	ALL	11/64 - 3/8 BOLT	1 - 4	Y	Y	Y	Y
2	4A	2SL350	ALL	3/8-5/8 11/64-1/2 BOLT	1-2 3-4	Y	Y	Y	Y
2	4B	2SL500	ALL	3/8-5/8 11/64-1/2 BOLT	1-2 3-4	Y	Y	Y	Y
2	7	2S500	ALL	1/2 BOLT AND	1 - 2	Y	Y		
				OPT. #10 BOLT	0 - 2	Y	Y		
2	5	2S600	1 - 3	3/8 - 5/8 BOLT OR	1	Y	Y	Y	Y
2	5	2S600	1 - 3	1/4 - 9/16 BOLT	2	Y	Y	Y	Y
2	5	2S600	4	3/8 - 5/8 BOLT	1 - 4	Y	Y	Y	Y
2	5	2S600	5	3/8 - 5/8 BOLT OR	1 - 2	Y	Y	Y	Y
2	5	2S600	5	11/64 - 1/2 BOLT	2 - 4	Y	Y	Y	Y
2	6	2S750	ALL	5/16 - 5/8 BOLT	1 - 4	Y	Y	Y	Y
NOTES: 1. INSIDE OF BOLT HOLES, LOCATION HOLES, AND TEST HOLES NEED NOT BE PLATED									
2. UN AND METRIC BOLT SIZE EQUIVALENTS (REFERENCE)									
#6	#8	#10	1/4	5/16	3/8	7/16	1/2	9/16	5/8
M3,5	M4	M5	M6	M8	M10	M11	M12	M14	M16
3. CLEARANCE HOLES ON STANDARD BOLT SIZES ARE LARGER THAN THE NOMINAL BOLT DIAMETER									

Conditions of Acceptability

1. All catalog numbers may be shipped with blank tang (no mounting holes) for later field modification by user. Alternatively, existing mounting holes on the tang may be field modified by user (increase size). The manufacturer shall provide, in the unit container, the installation instructions specifying the maximum and minimum hole size ranges and quantity of holes, and locations, as listed in the current Certified catalog number file information. See Figure 32 for more details.

MC200116 REPORT 1243943 LIST OF MOUNTING HOLE SIZE RANGES									
TABLE OF PERMITTED MOUNTING BOLT HOLE SIZE RANGE AND QUANTITY OF BOLT AND LOCATION HOLES									
				INCHES		OPTION	OPTION	OPTION	OPTION
Report No.	Fig. No.	CAT No.	STYLE No.	MTG. HOLE RANGE	QTY	THREADED	NON-ROUND	REPEAT / POLE	LOCATION or VOLT TAP HOLE(S)
1243943	1	S6	ALL	0.13 - 5/16 BOLT	1-2	Y	Y		
1243943	2	S6-3	ALL	#10 - 1/2 BOLT	1-4	Y	Y		Y
1243943	27	S6-4	1	.133 - 3/8 BOLT	1-2 OR 1 PER 8 WIRE HOLES	Y	Y	Y	Y
1243943	27	S6-4	2	.133 - 5/16	1-2 OR 1 PER 8 WIRE HOLES	Y	Y	Y	Y
1243943	27	S6-4	3	.133 - 3/8 BOLT	1-2 OR 1 PER 8 WIRE HOLES	Y	Y	Y	Y
1243943	23	S4	ALL	3/16 - 9/32	1	Y	Y		
1243943	24	S4A1	ALL	1/4 - 5/16 BOLT	1				
1243943	26	S4-3	ALL	#10 - 1/2 BOLT	1 - 4	Y	Y		Y
1243943	25	S4A2	ALL	1/4 - 5/16 BOLT	1				
1243943	3	S2	ALL	9/64 - 5/16 BOLT	1 - 2	Y	Y	Y	Y
1243943	4	S1/0	1 - 3	1/4 - 13/32	1		Y		Y
1243943	4	S1/0	4 - 5	13/64 - 13/32	2		Y		Y
1243943	4	S1/0	6	13/64 - 13/32	1-2		Y		Y
1243943	4	S1/0	7	11/64 - 5/16 BOLT	2-3		Y		Y
1243943	5	S2/0	ALL	#10- 17/32	1 - 2	Y	Y		
1243943	6	S2/0-3	ALL	1/4 - 29/64	1				Y
1243943	6	S2/0-3	ALL	AND #10	1	Y			Y
1243943	7	S250	1 - 2	13/64 - 17/32	1	Y	Y		Y
1243943	7	S250	3	13/64 - 17/32	1 - 2	Y	Y		Y
1243943	7	S250	4 - 5	13/64 - 17/32	0 - 2	Y	Y		Y
1243943	7	S250	6	11/64 - 13/64 &/OR	2 - 4	Y	Y		Y
1243943	7	S250	6	1/4 - 3/8	1 - 2	Y	Y		Y
1233943	28	S250N	1 - 2	13/64 - 17/32	1	Y	Y		Y
1243943	28	S250N	3	13/64 - 17/32	1 - 2	Y	Y		Y
1243943	28	S250N	4 - 5	13/64 - 17/32	0 - 2	Y	Y		Y
1243943	28	S250N	6	11/64 - 13/64 &/OR	2 - 4	Y	Y		Y
1243943	28	S250N	6	1/4 - 3/8 BOLT	1 - 2	Y	Y		Y
1243943	8	S250-3	ALL	13/64 - 17/32	1		Y		Y
1243943	8	S250-3	ALL	AND OPT. 3/16 MAX	0 - 5		Y		Y
1243943	9	S250-4	ALL	13/64 - 17/32	1		Y		
1243943	9	S250-4	ALL	AND OPT. 3/16 MAX	0 - 2		Y		
1243943	10	S300	ALL	1/4 - 17/32	1 - 2	Y	Y		Y
12433943	29	S300N	ALL	1/4 - 17/32	1 - 2	Y	Y		Y

				INCHES		OPTION	OPTION	OPTION	OPTION
Report No.	Fig. No.	CAT No.	STYLE No.	MTG. HOLE RANGE	QTY	THREADED	NON-ROUND	REPEAT / POLE	LOCATION or VOLT TAP HOLE(S)
1243943	11	S350	1	17/64 - 9/16 BOLT	1	Y	Y		Y
1243943	11	S350	2	17/64 - 9/16 BOLT OR	1	Y	Y		Y
1243943	11	S350	2	3/16 - 3/8 BOLT	2	Y	Y		Y
1243943	11	S350	3 - 4	1/4 - 9/16 BOLT	1 - 2	Y	Y		Y
1243943	12	S500	1 - 4	3/8 - 5/8 BOLT	1	Y	Y		Y
1243943	12	S500	1-4	OR 1/4 BOLT	2	Y	Y		Y
1243943	12, 13	S500	5 - 6	3/8 - 5/8 BOLT	1 - 2	Y	Y		Y
1243943	12, 13	S500	5 - 6	OR 1/4 BOLT	2	Y	Y		Y
1243943	30	S500N	1 - 4	3/8 - 5/8 BOLT	1	Y	Y		Y
1243943	30	S500N	1-4	OR 1/4 BOLT	2	Y	Y		Y
1243943	30	S500N	5 - 6	3/8 - 5/8 BOLT	1 - 2	Y	Y		Y
1243943	30	S500N	5 - 6	OR 1/4 BOLT	2	Y	Y		Y
1243943	14	S600	1 - 2	3/8 - 5/8 BOLT OR	1	Y	Y		Y
1243943	14	S600	1 - 2	1/4 BOLTS	2	Y	Y		Y
1243943	14	S600	3	3/8 - 5/8 BOLT &	1 - 2	Y	Y		Y
1243943	14	S600	3	1/4 BOLTS	0-2	Y	Y		Y
1243943	14	S600	4	5/16 - 5/8 BOLT &	1-2	Y	Y		Y
1243943	14	S600	4	1/4 BOLTS	0-2	Y	Y		Y
1243943	31	S600N	1 - 2	3/8 - 5/8 BOLT OR	1	Y	Y		Y
1243943	31	S600N	1 - 2	1/4 BOLTS	2	Y	Y		Y
1233943	31	S600N	3	3/8 - 5/8 BOLT &	1 - 2	Y	Y		Y
1243943	31	S600N	3	1/4 BOLTS	0-2	Y	Y		Y
1243943	31	S600N	4	5/16 - 5/8 BOLT &	1-2	Y	Y		Y
1243943	31	S600N	4	1/4 BOLTS	0-2	Y	Y		Y
					1		Y		
1243943	16	S800	1 - 2	9/16 - 21/32	1	Y	Y		Y
1243943	16	S800	3	9/16 - 21/32	1 - 2	Y	Y		Y
1243943	16	S800	4	9/16 - 21/32	1 - 4	Y	Y		Y
1233943	17	2S1/0	ALL	1/4 - 7/16 BOLT	1	Y	Y		Y
1243943	18	2S2/0	1	1/4 - 7/16 OR	1	Y	Y	Y	Y
1243943	18	2S2/0	1	1/4 - 5/16 BOLT	1 - 2	Y	Y	Y	Y
1243943	18	2S2/0	2 - 6	1/4 - 7/16 BOLT	1 - 2	Y	Y	Y	Y

[illegible]