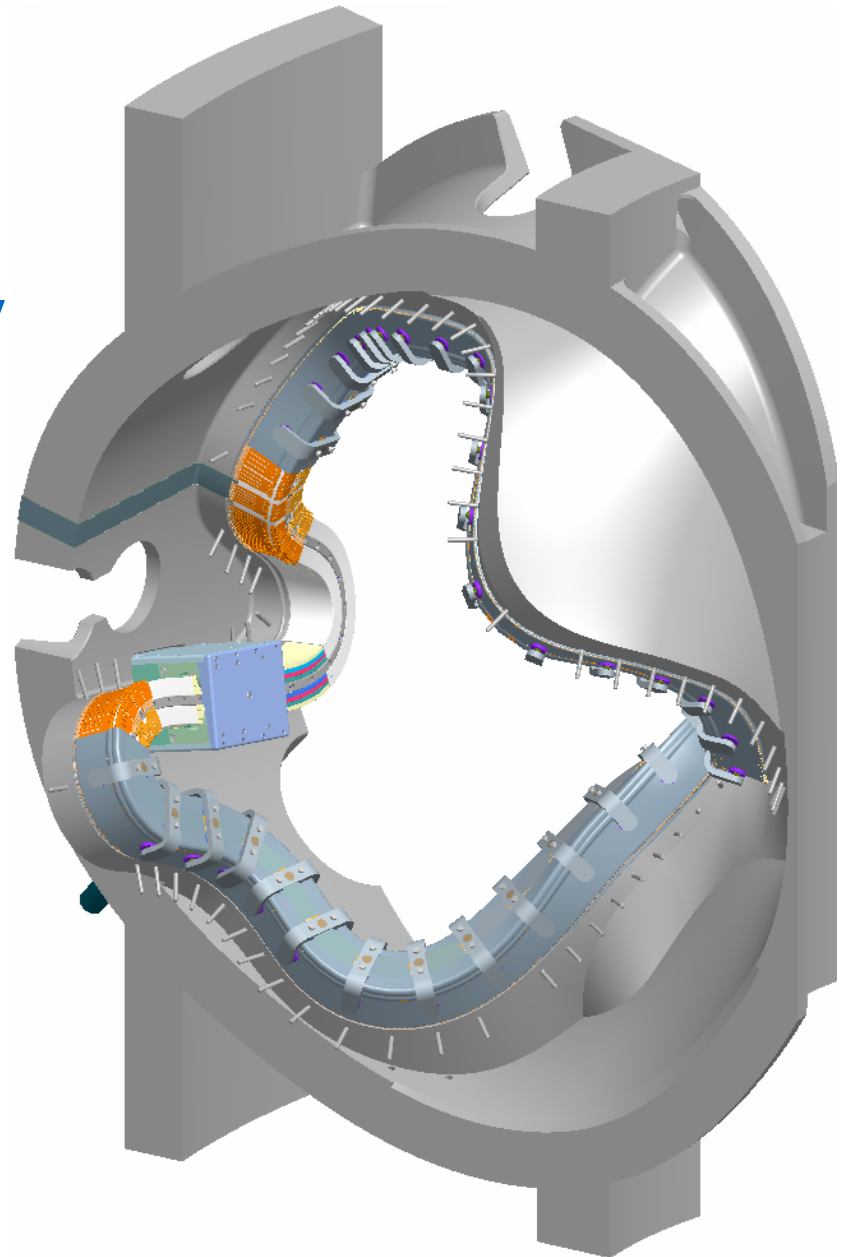


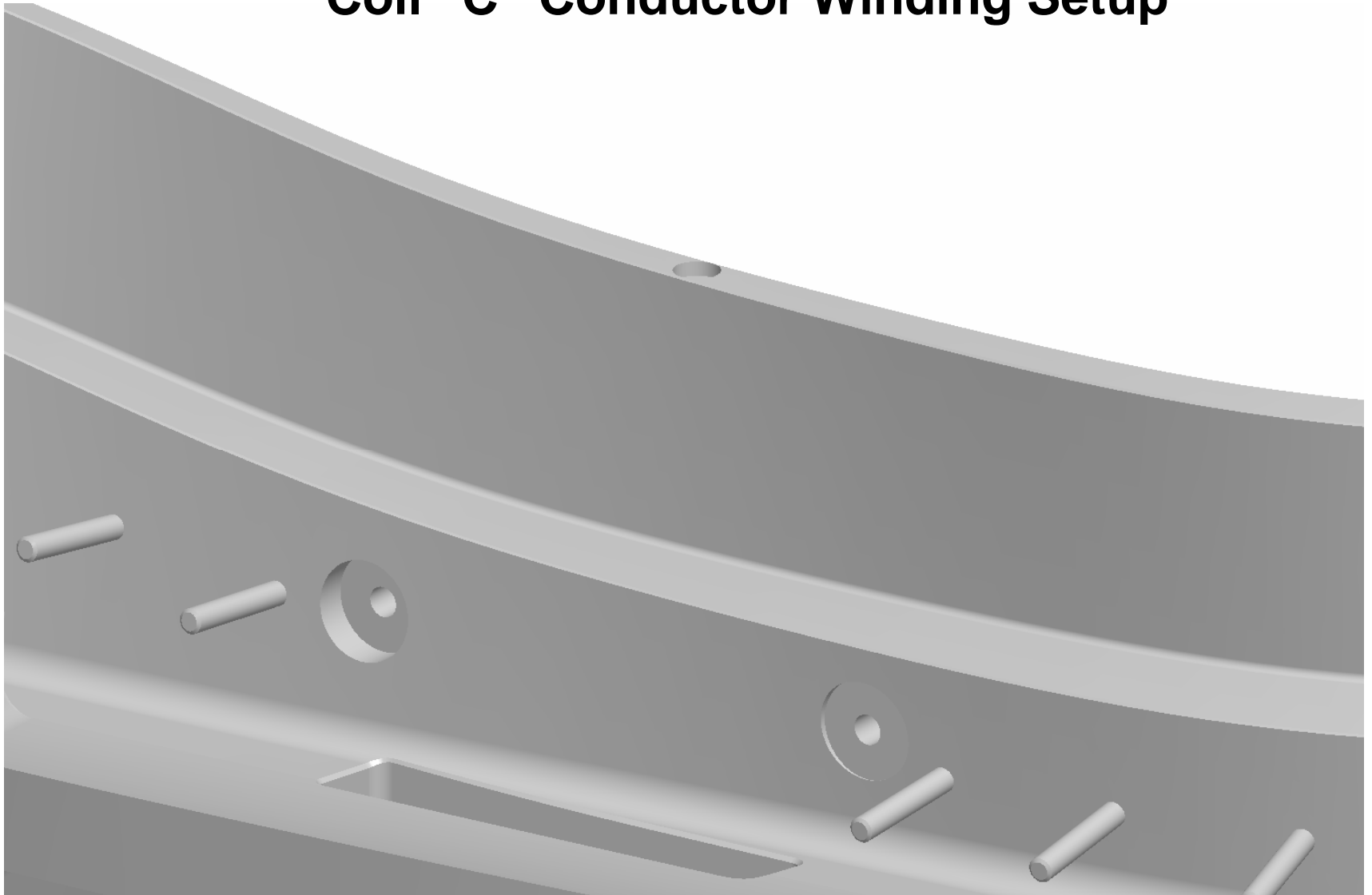
Modular Coil Type C Assembly

Winding Process

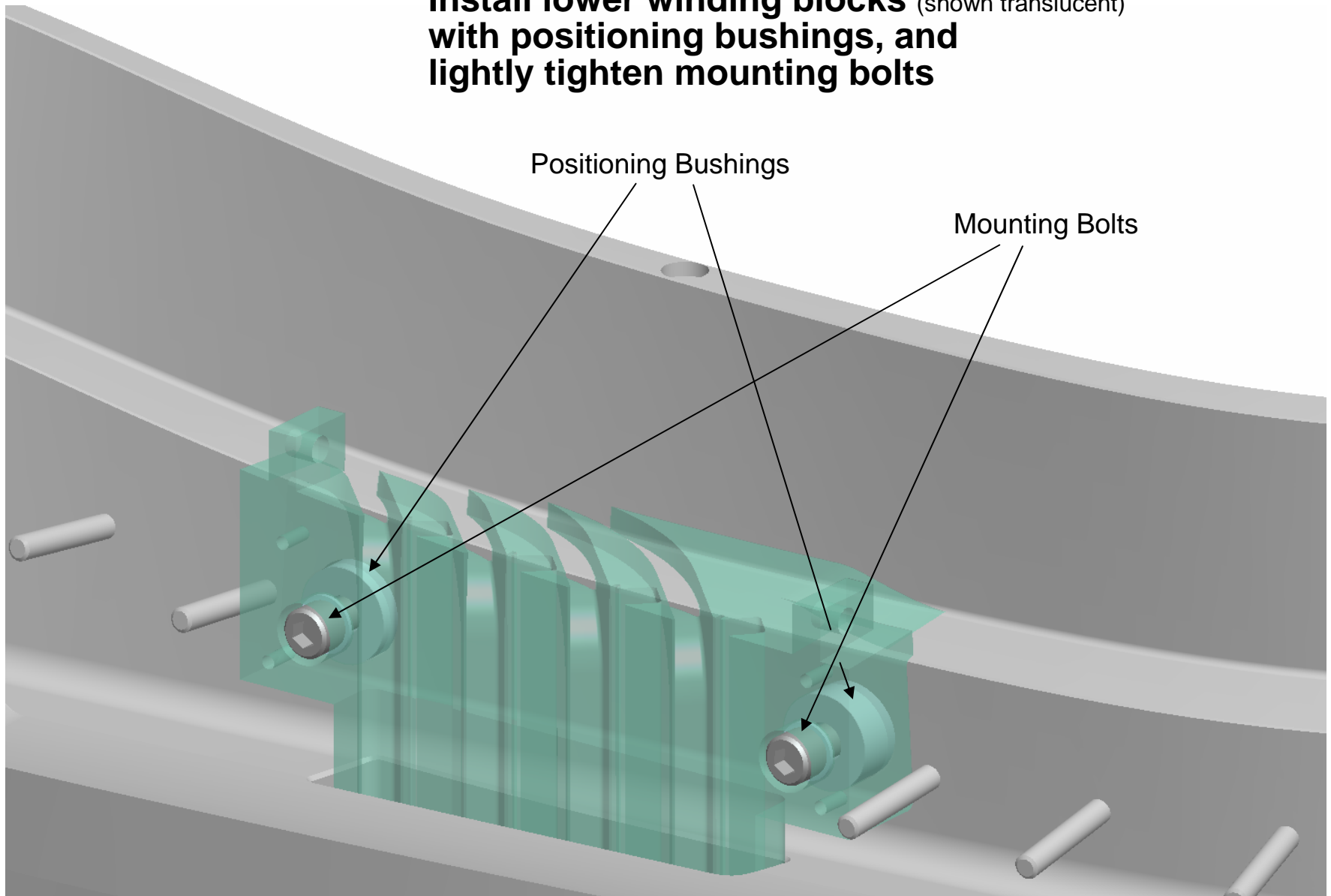
P. Fogarty, D. Williamson, B. Nelson
M. Cole, G. Lovett, T. Hargrove

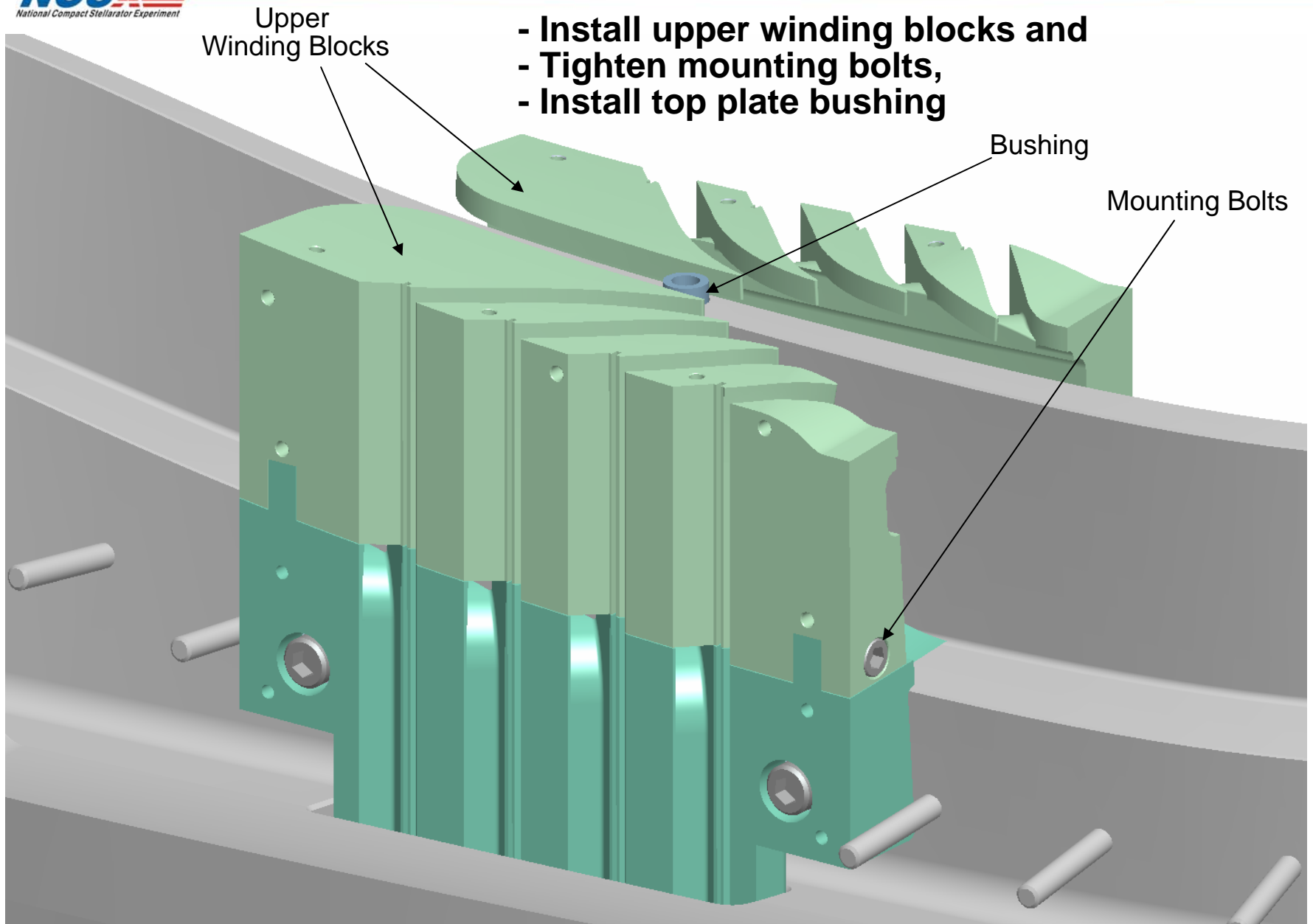


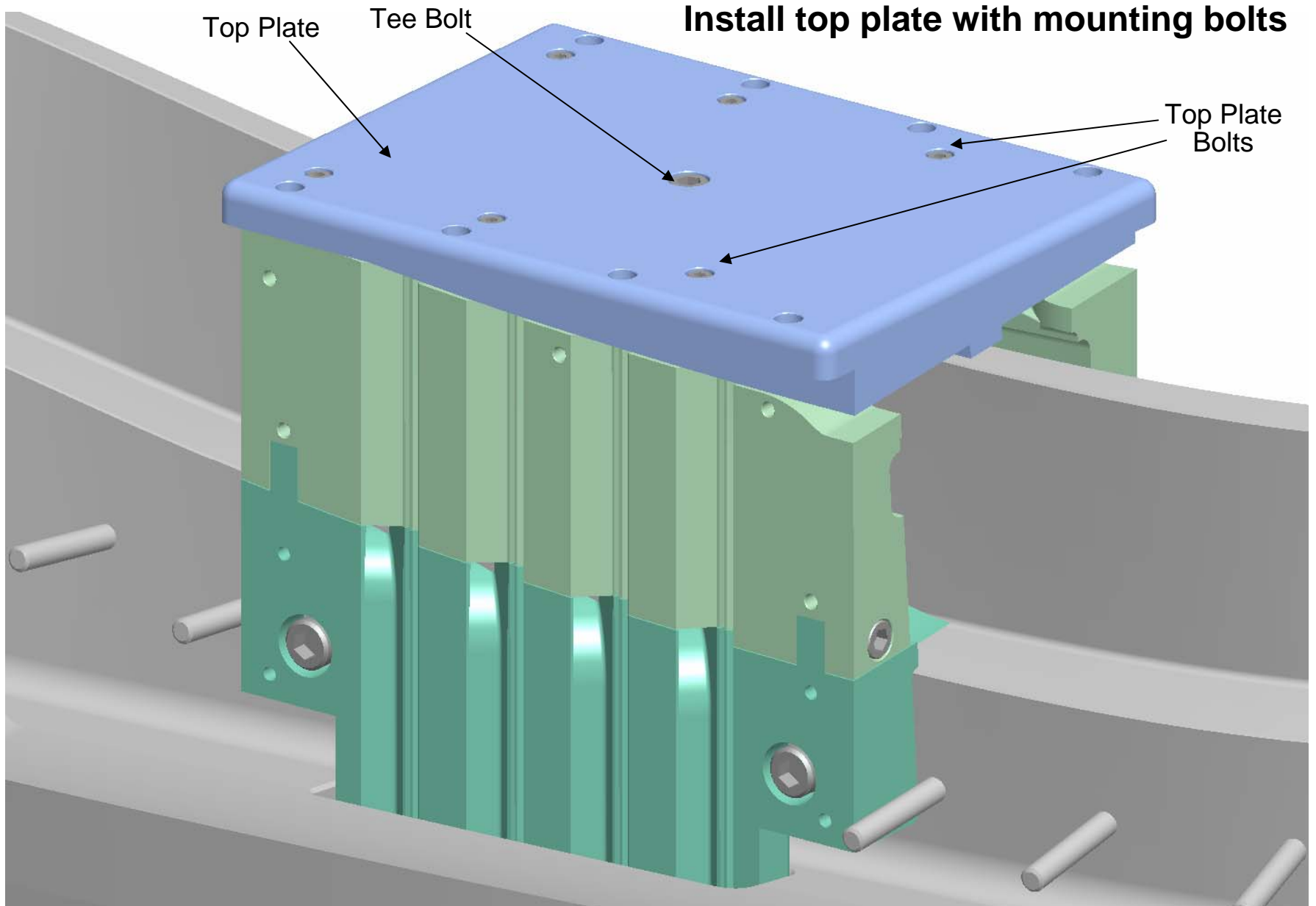
Coil "C" Conductor Winding Setup



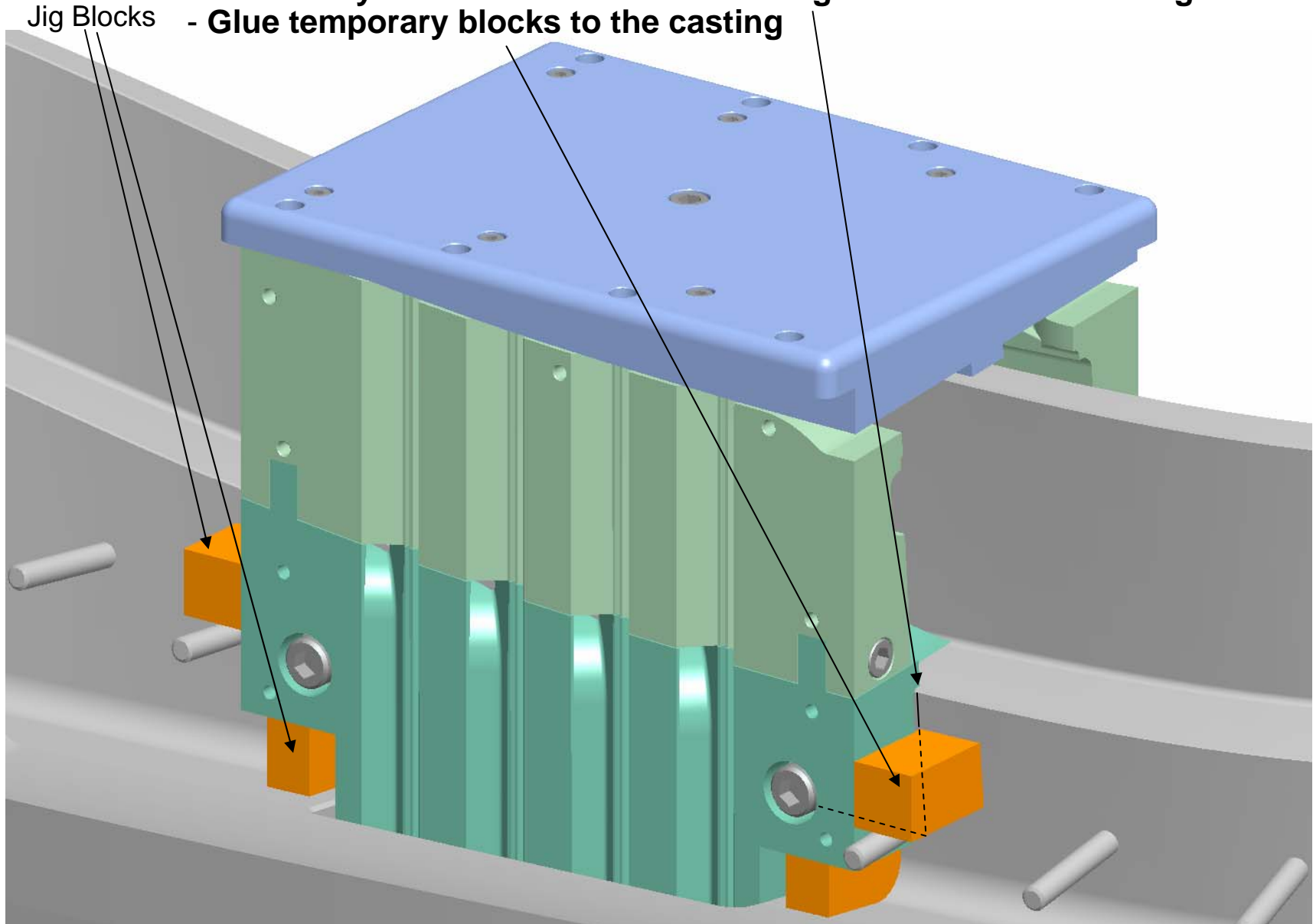
Install lower winding blocks (shown translucent) with positioning bushings, and lightly tighten mounting bolts



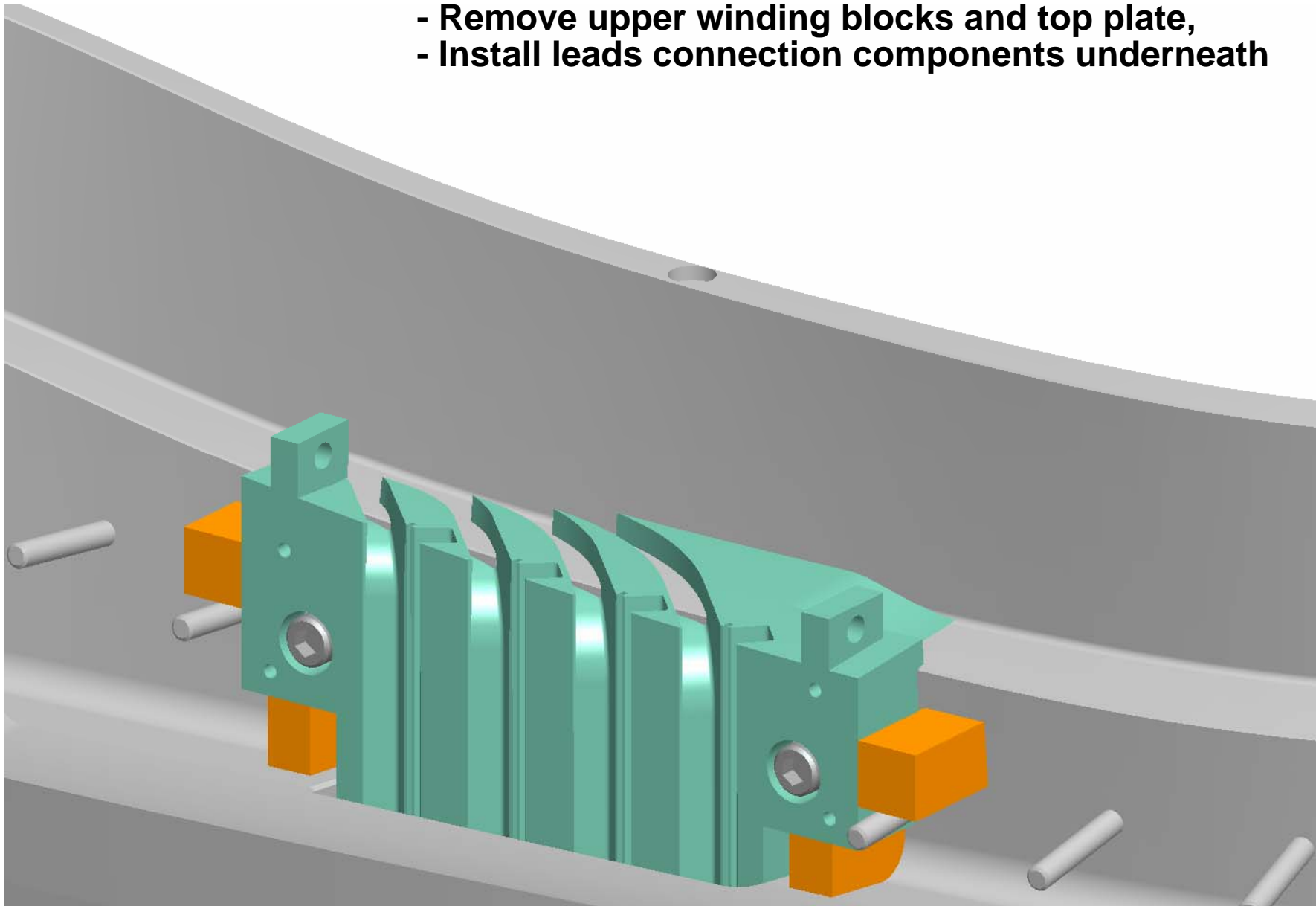




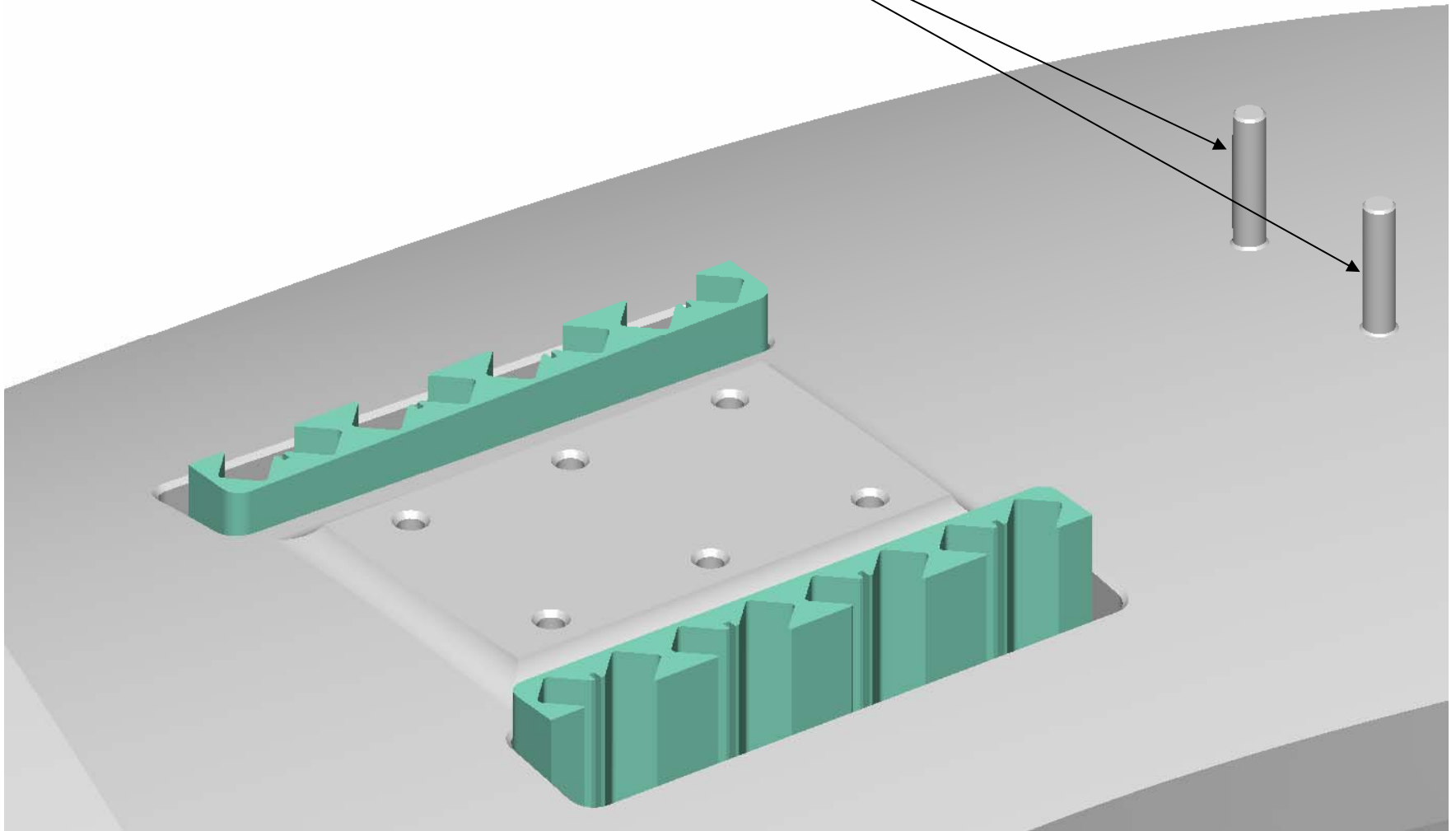
- Accurately mark the sides & bottom edges of the lower winding blocks
- Glue temporary blocks to the casting



- Remove upper winding blocks and top plate,
- Install leads connection components underneath

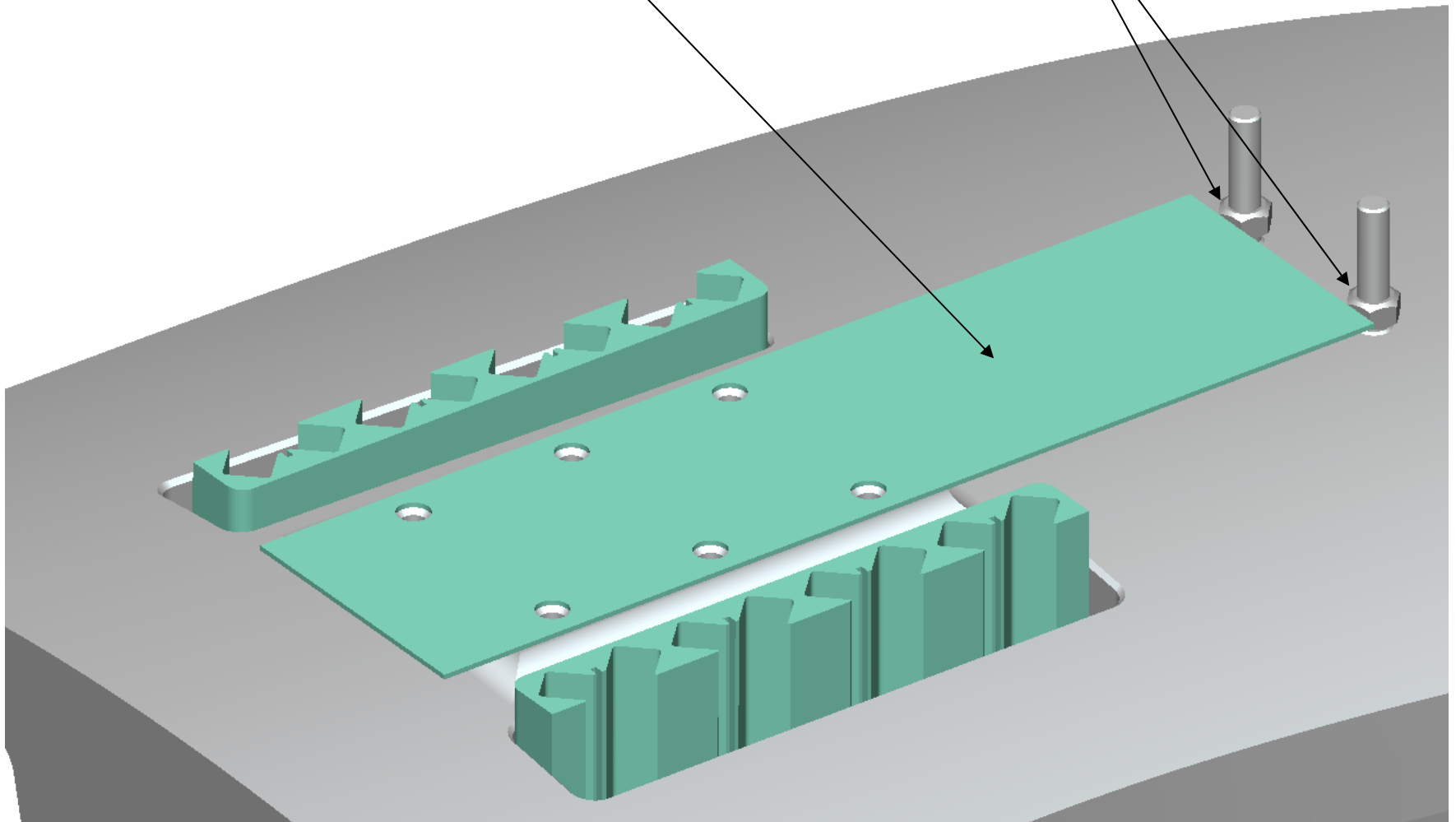


Shoot two studs into shell for base plate support

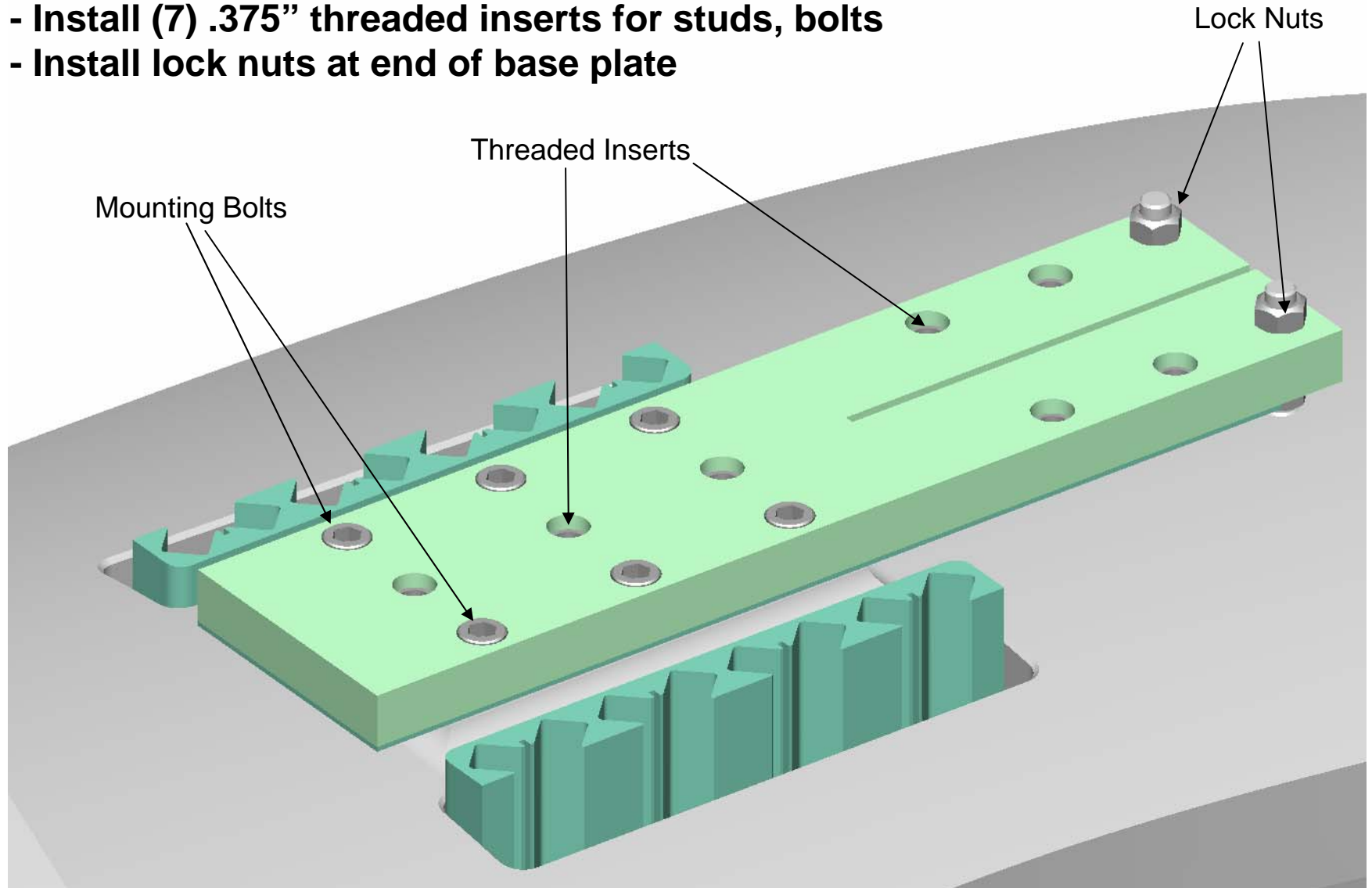


Install .0625" thick
electrical insulator sheet

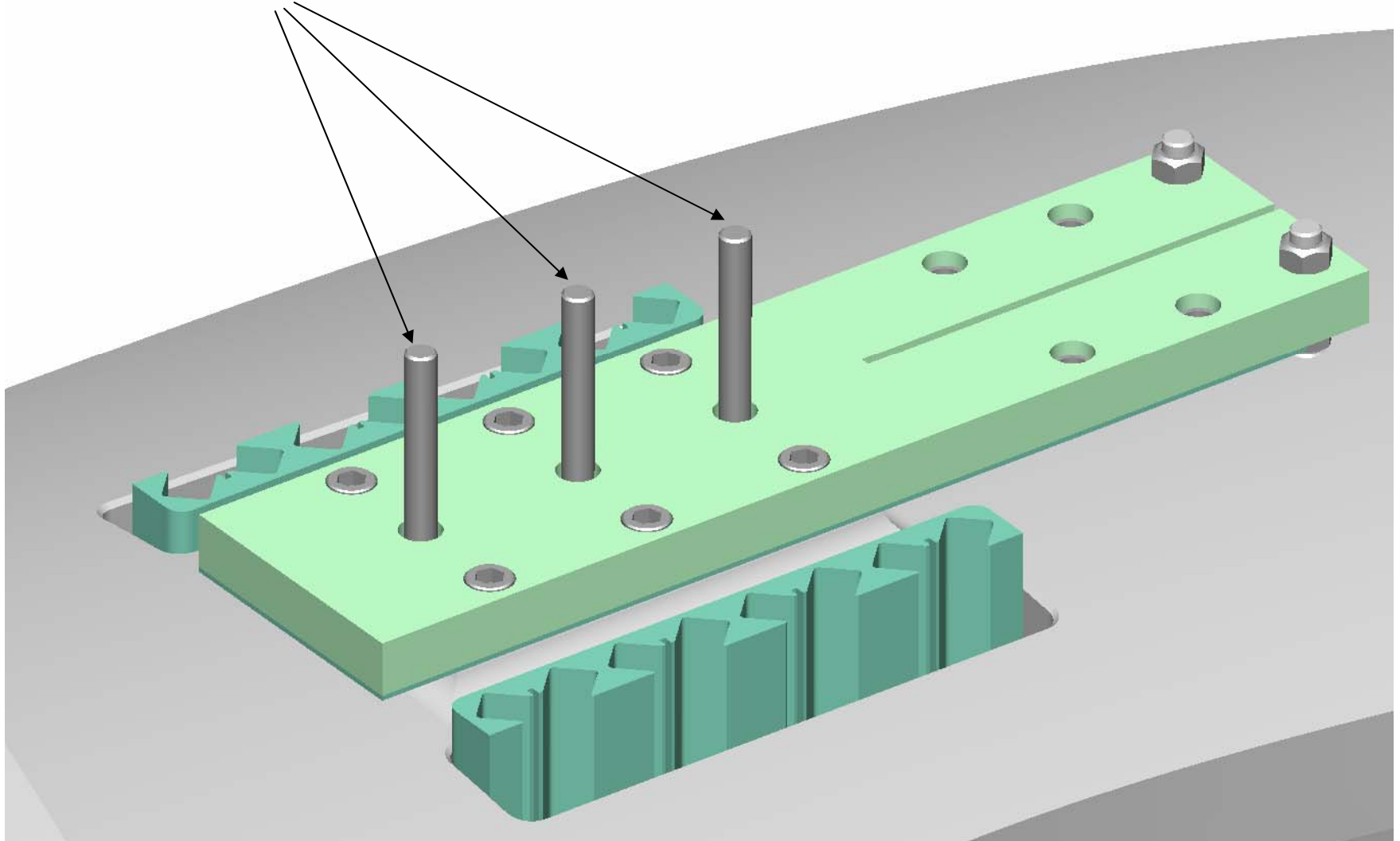
Install .375"
height adjustment
nuts



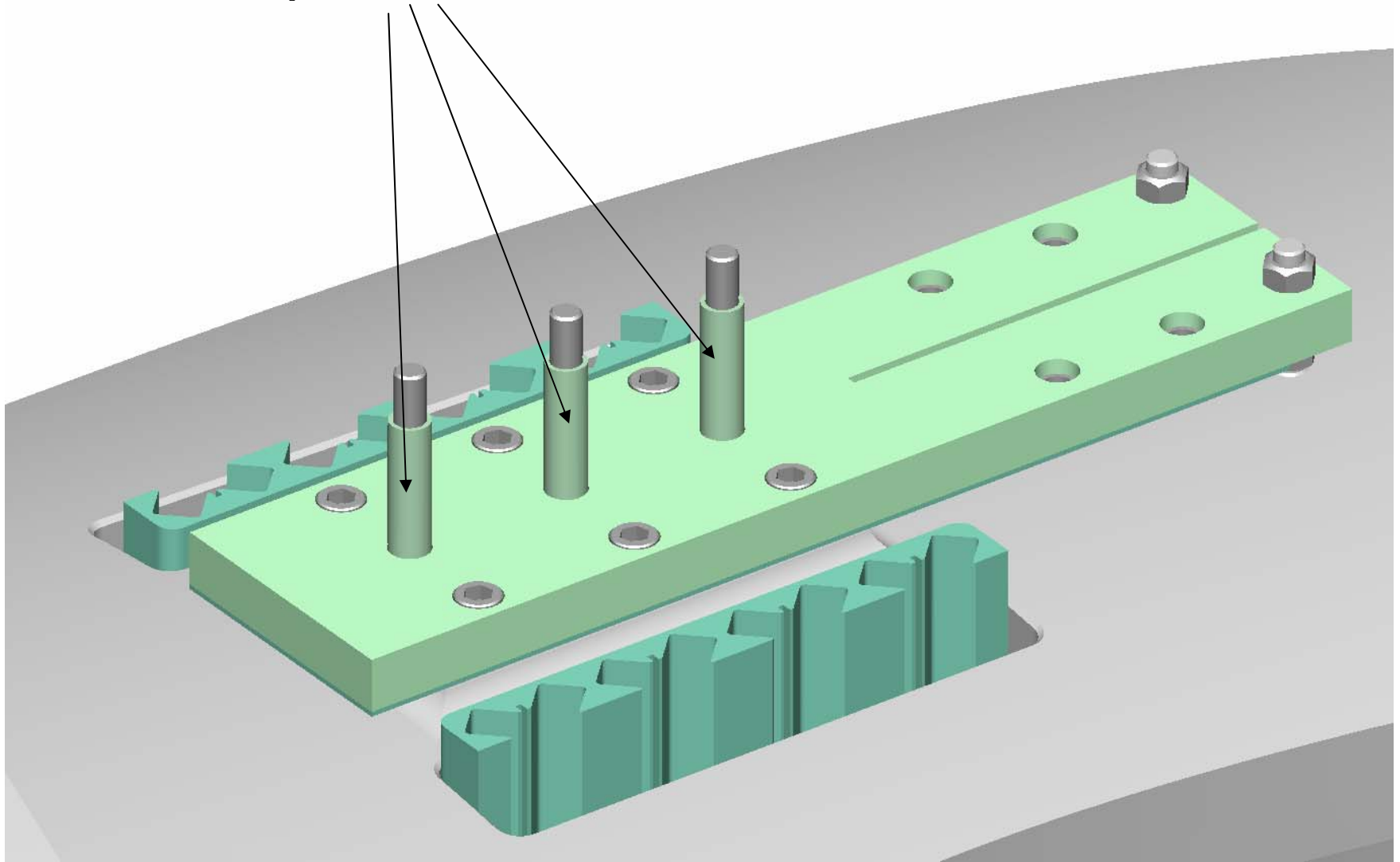
- Install base plate with (6) .375" mounting bolts
- Install (7) .375" threaded inserts for studs, bolts
- Install lock nuts at end of base plate



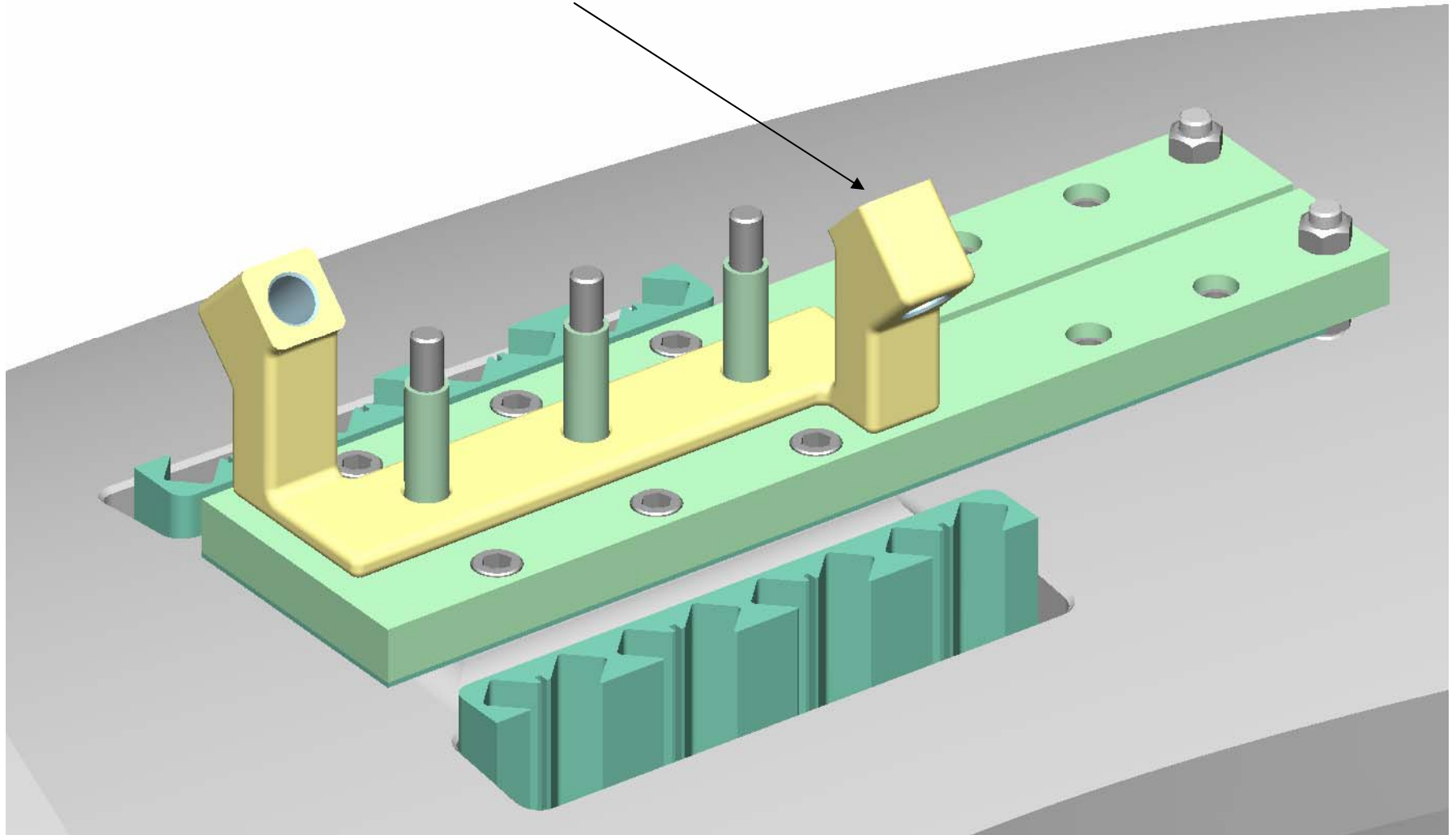
Install (3) .375" mounting studs



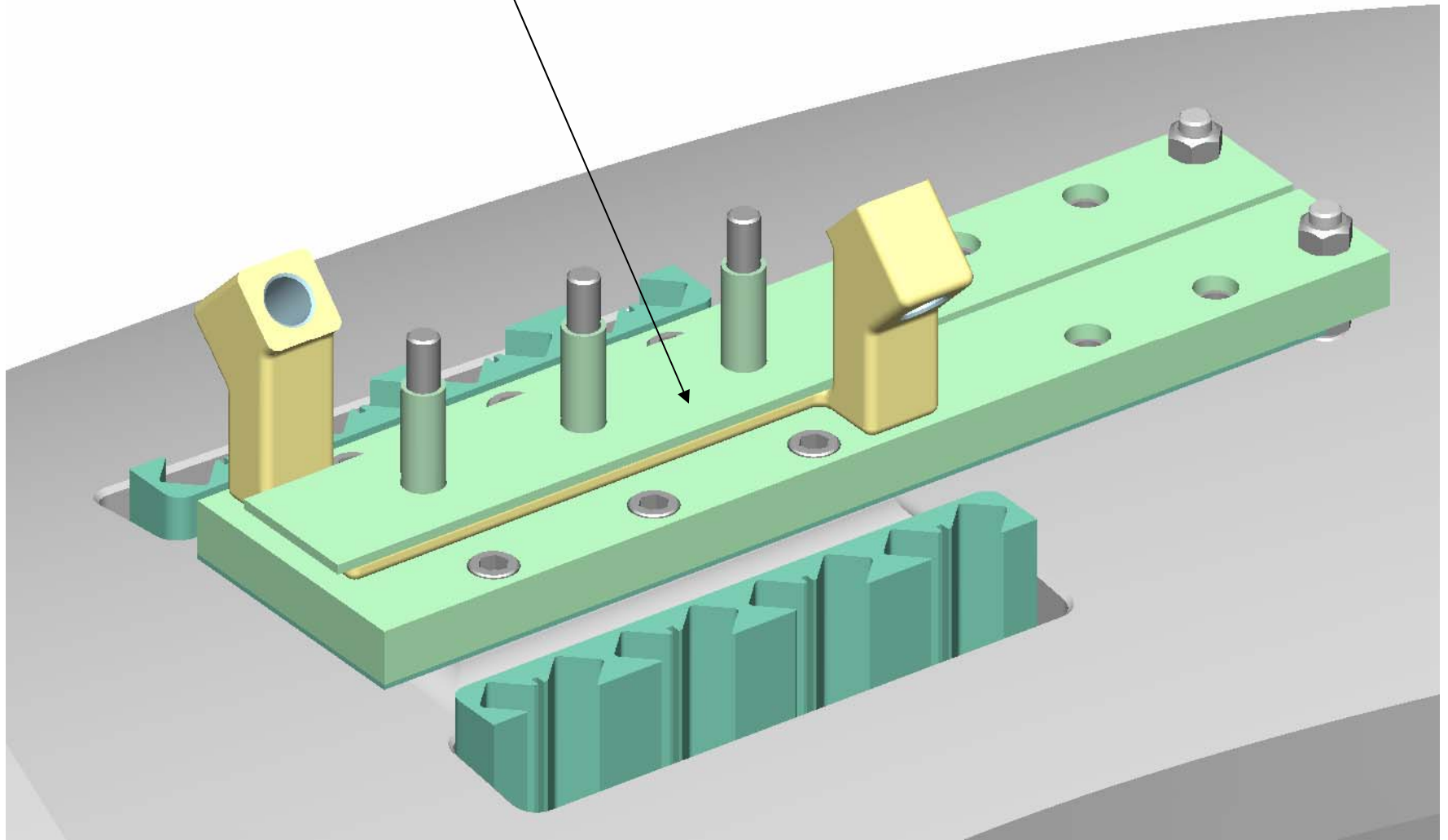
**Install insulating sleeves over studs
and push into recessed holes**



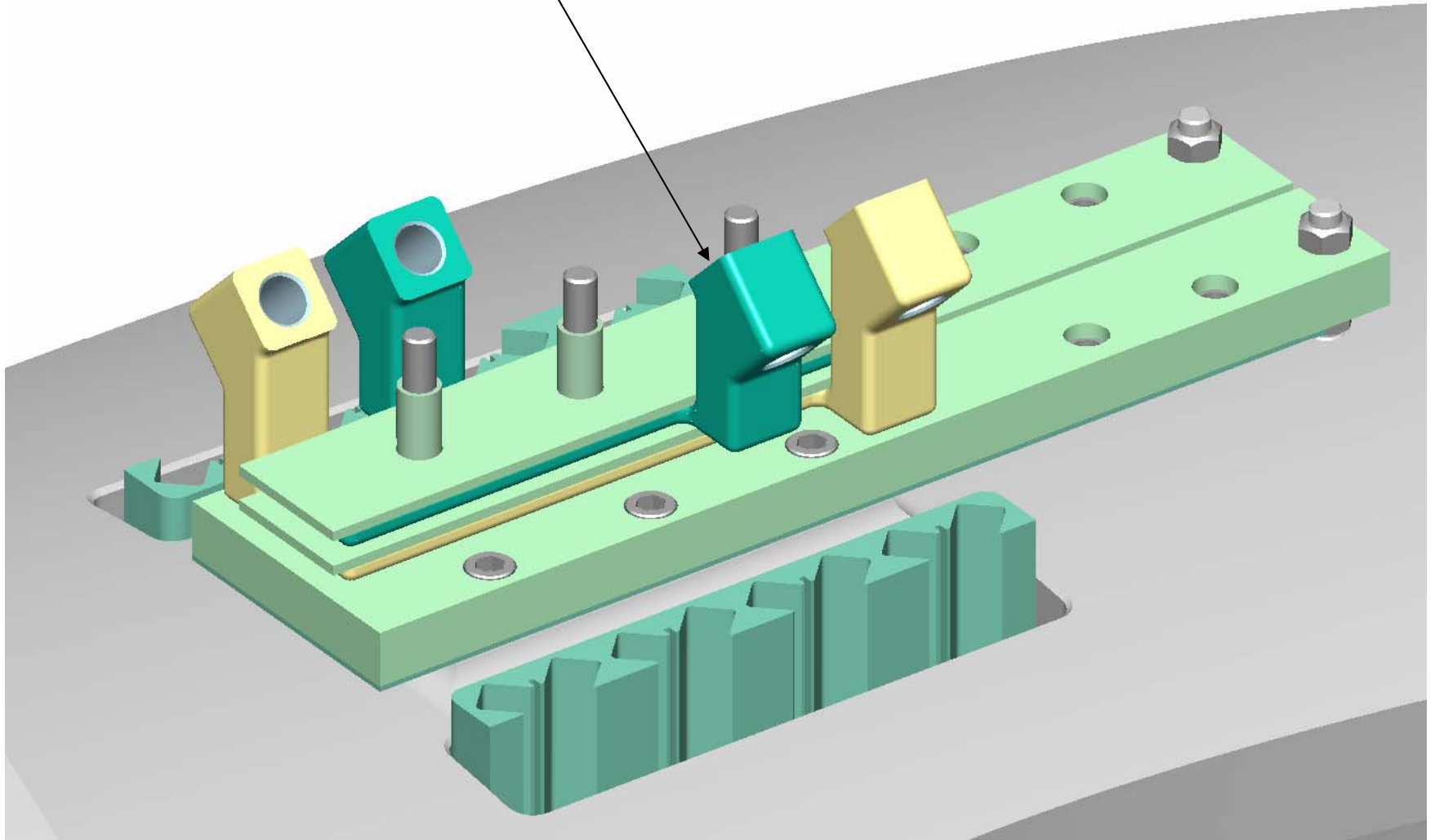
Install jumper -1



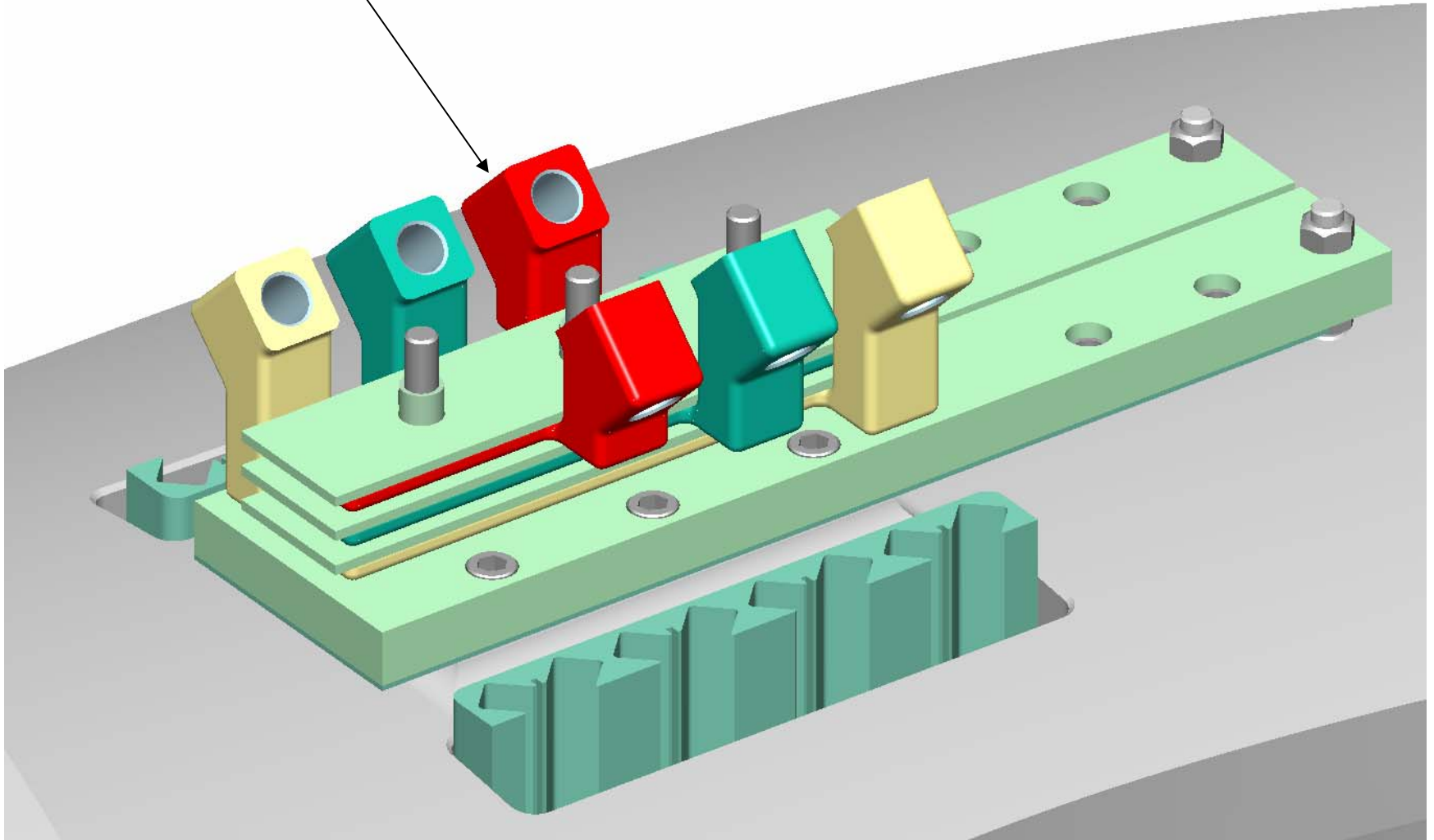
Install .125" thick insulator plate



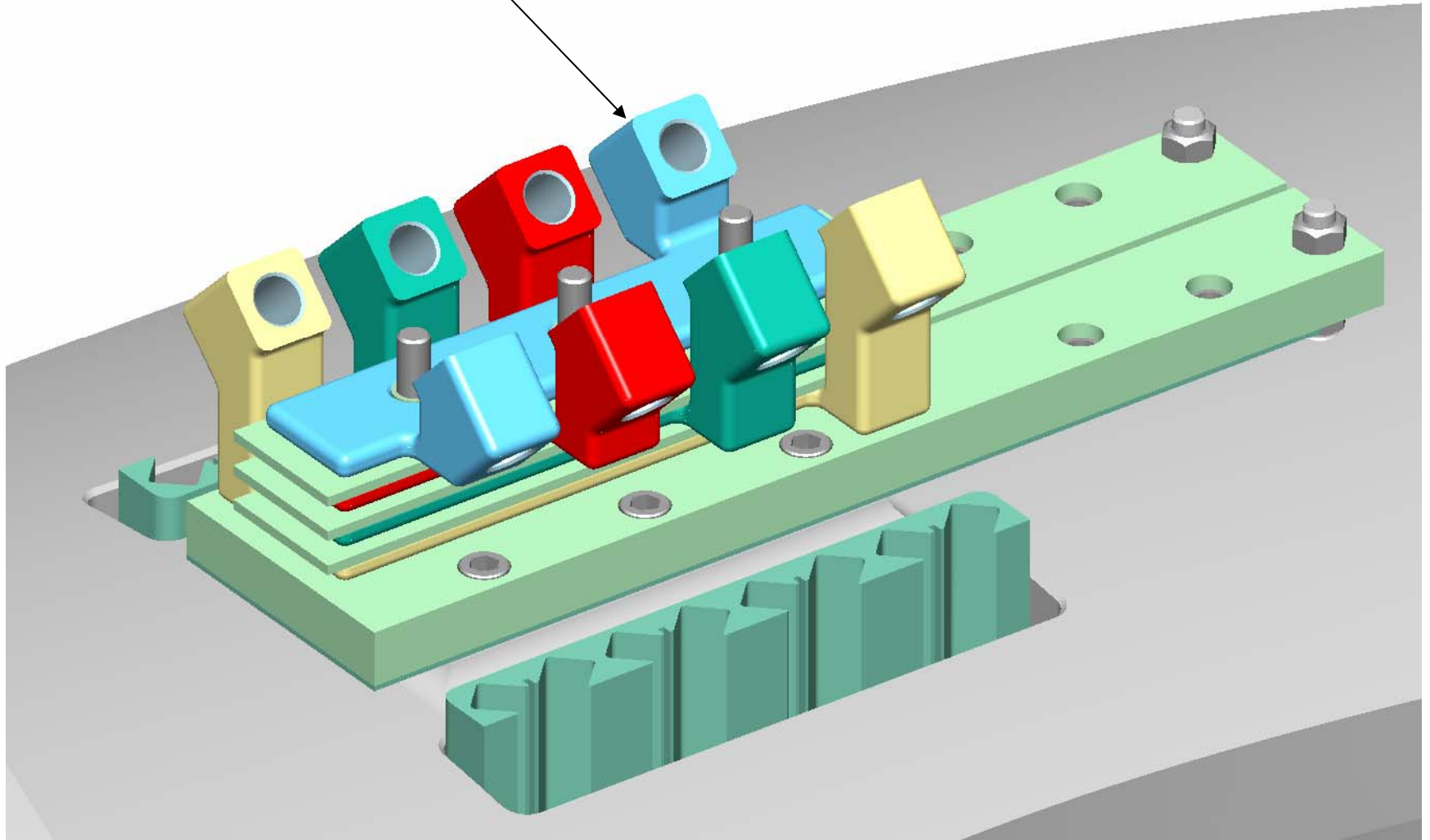
Install jumper - 2 and insulator plate



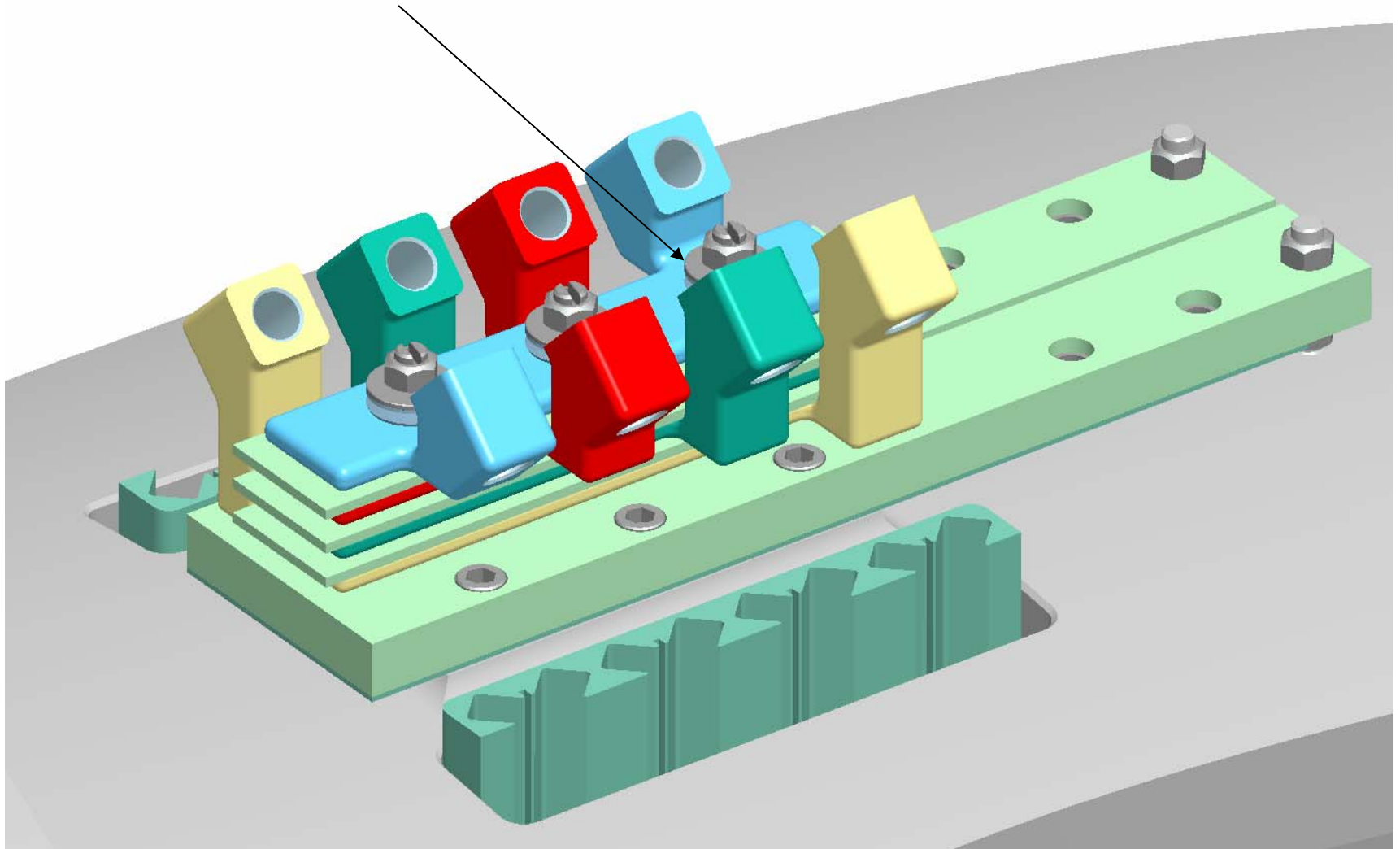
Install jumper - 3, and insulator plate



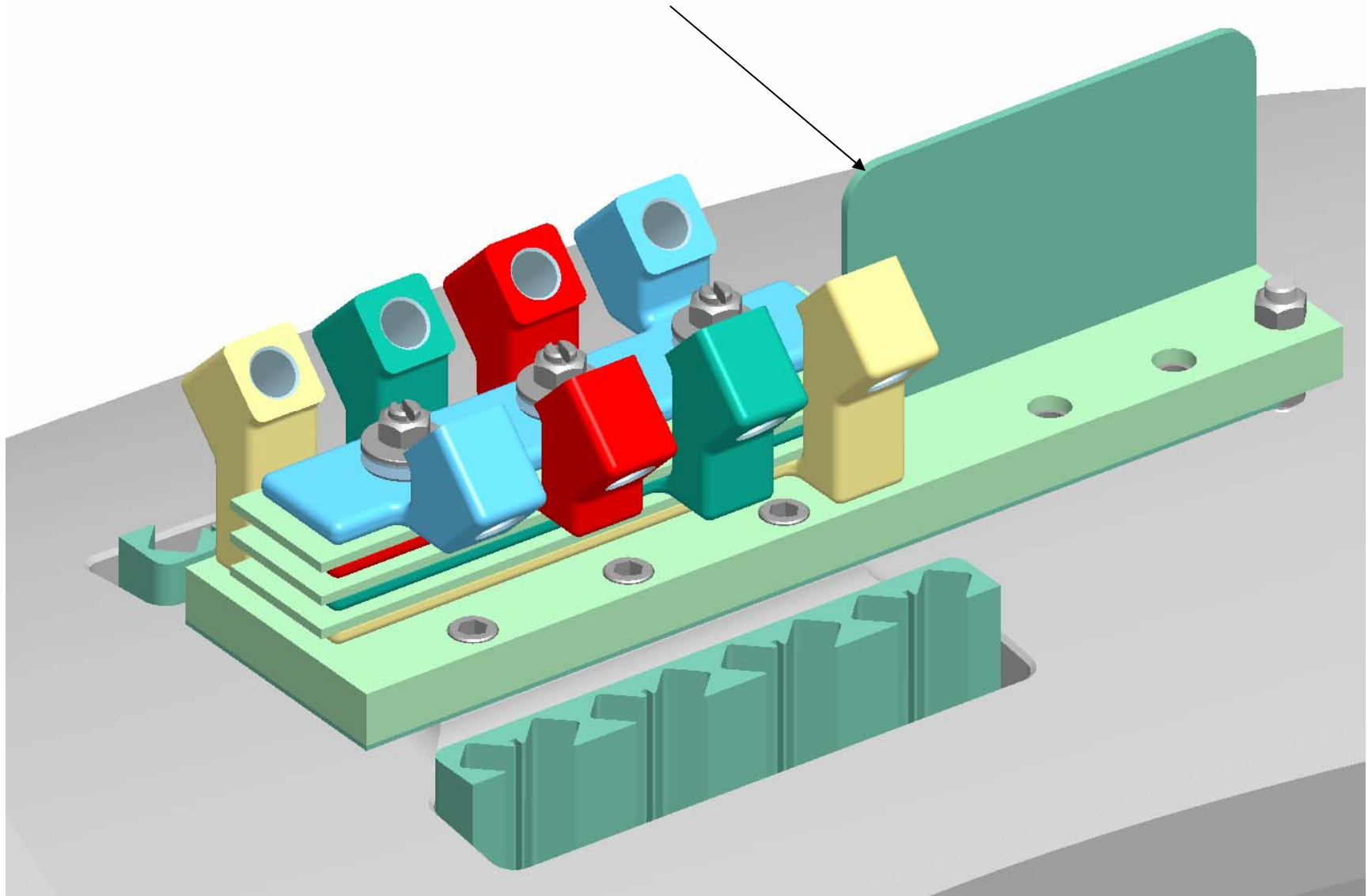
Install jumper - 4



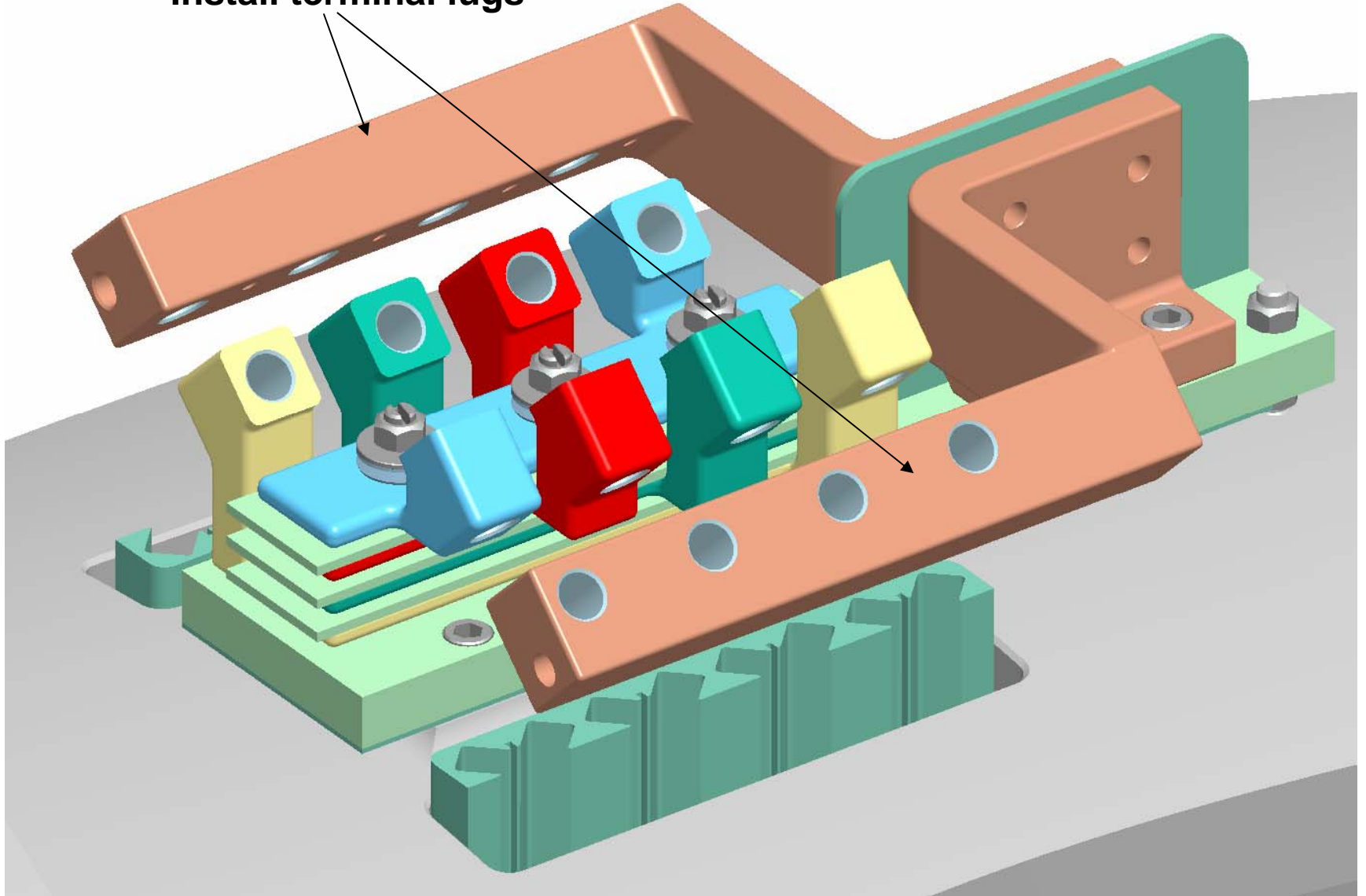
Install (2) bellville washers, (1) flat washer, and (1) nut (each stud)



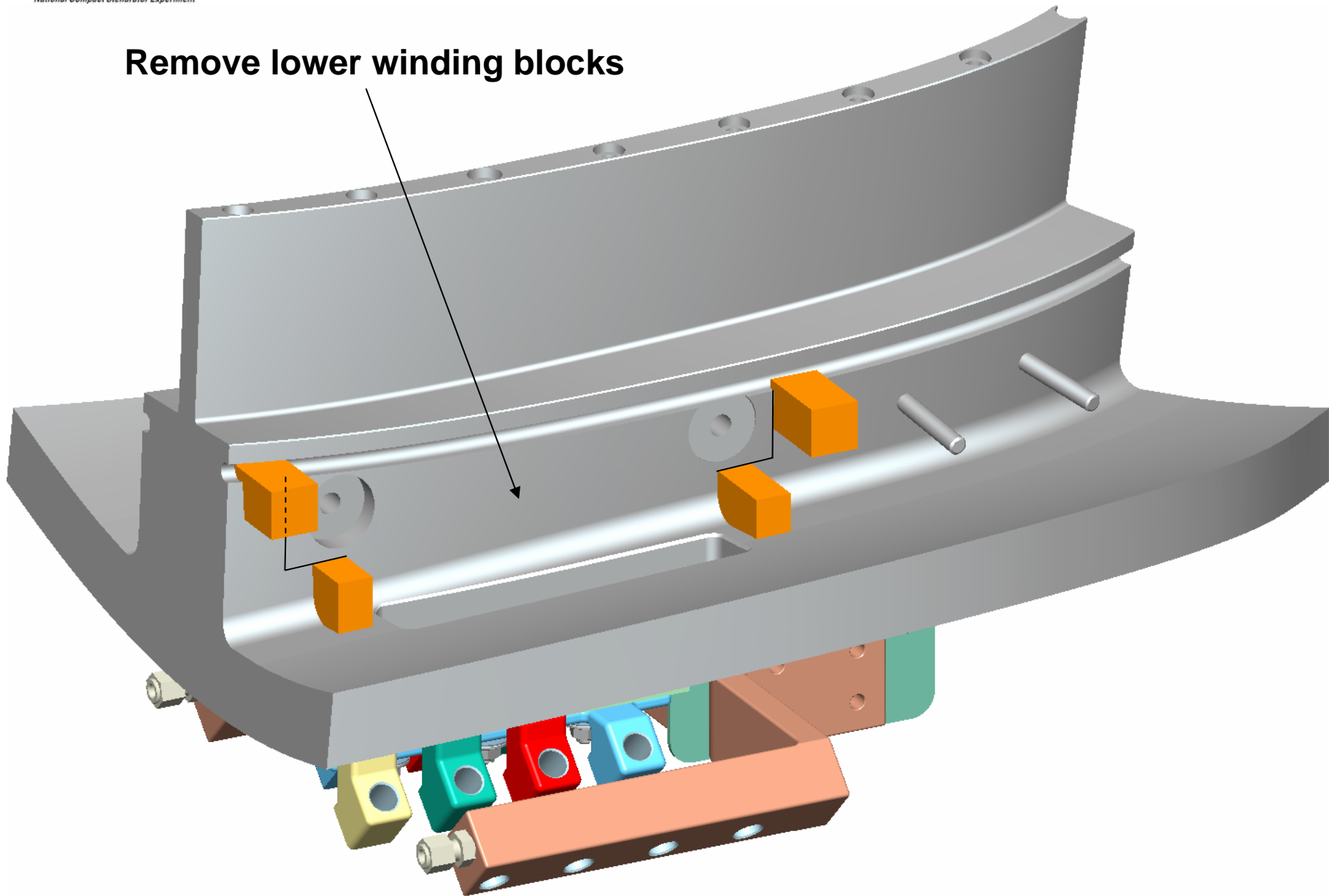
Install insulator divider plate for terminal lugs

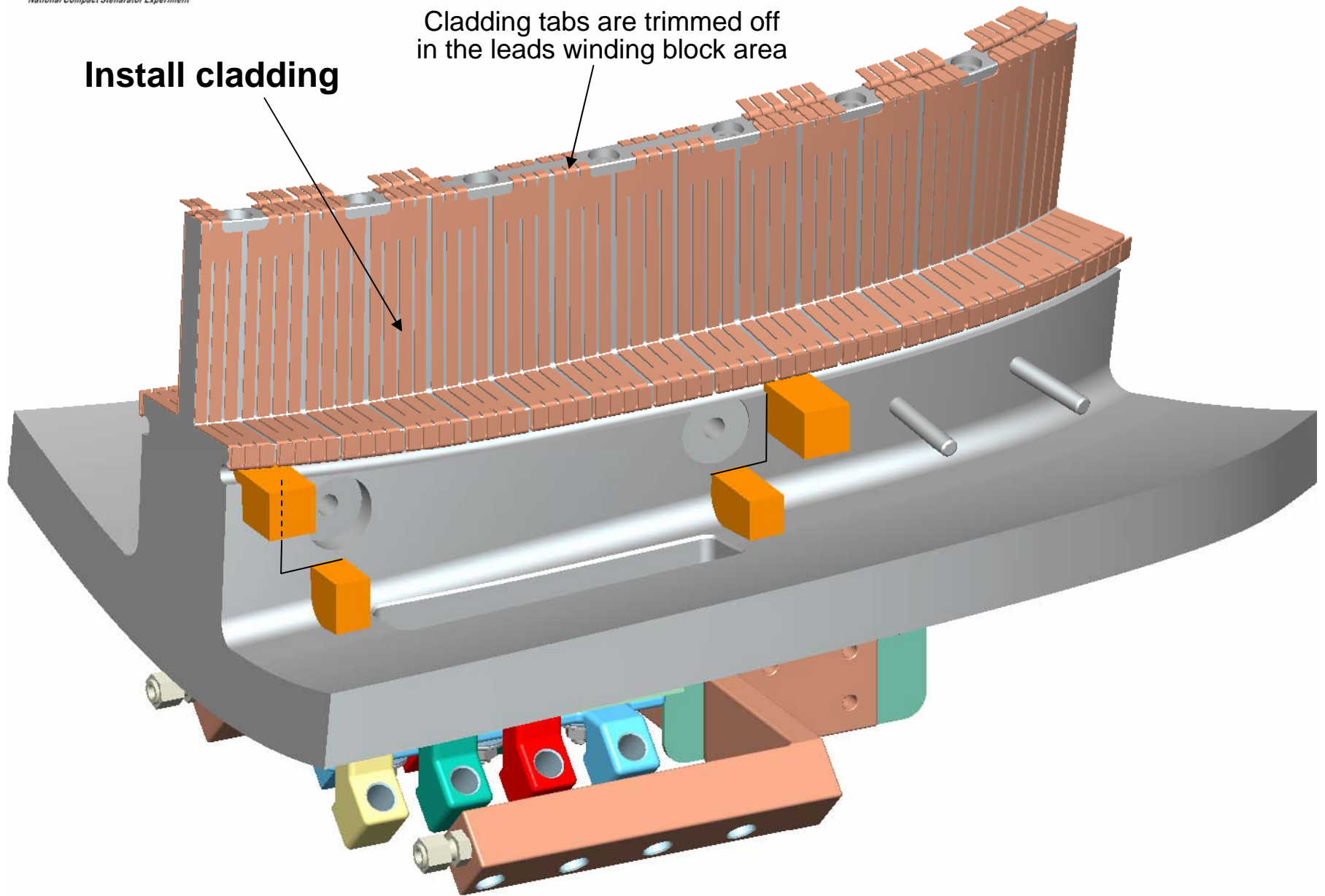


Install terminal lugs

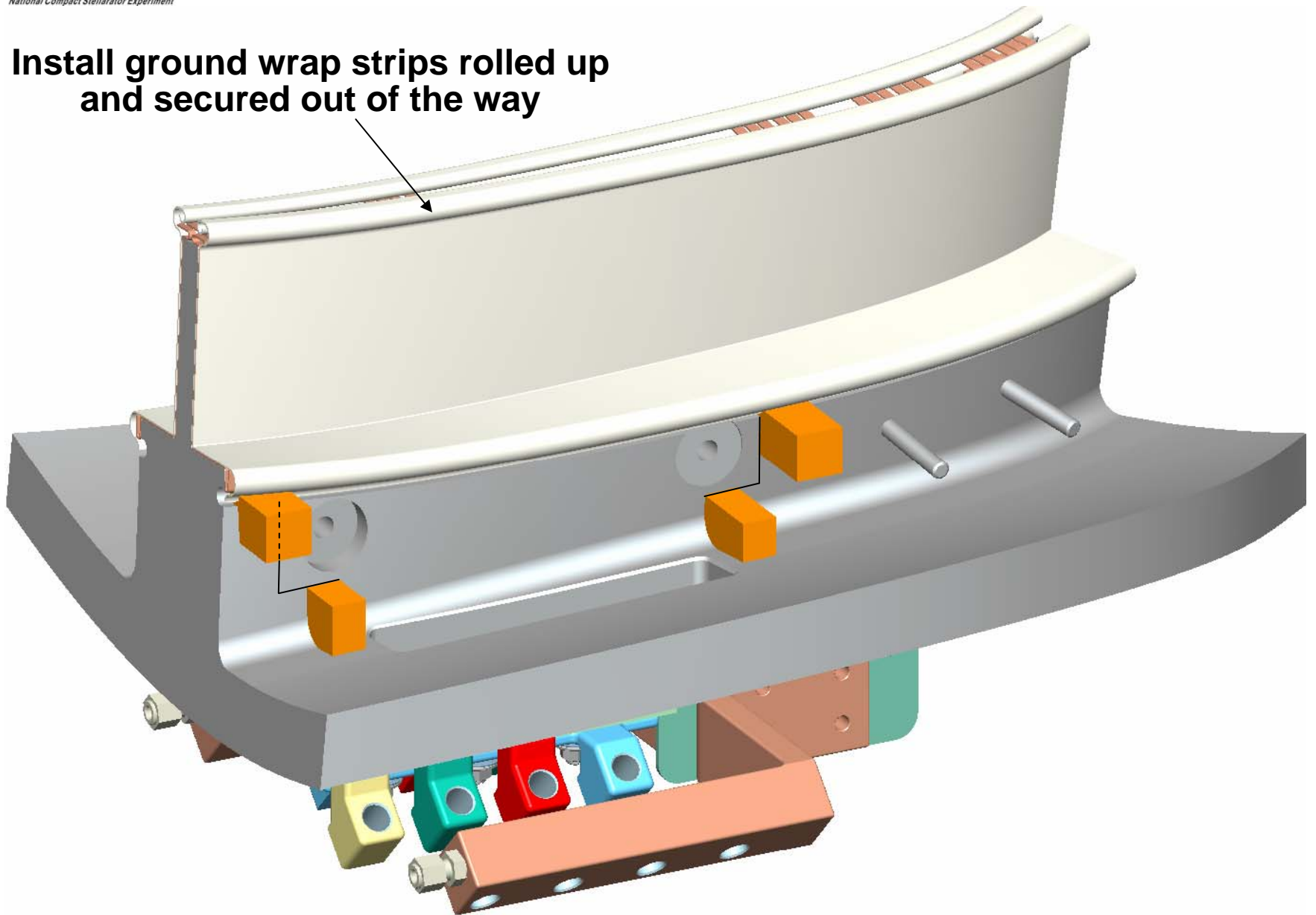


Remove lower winding blocks

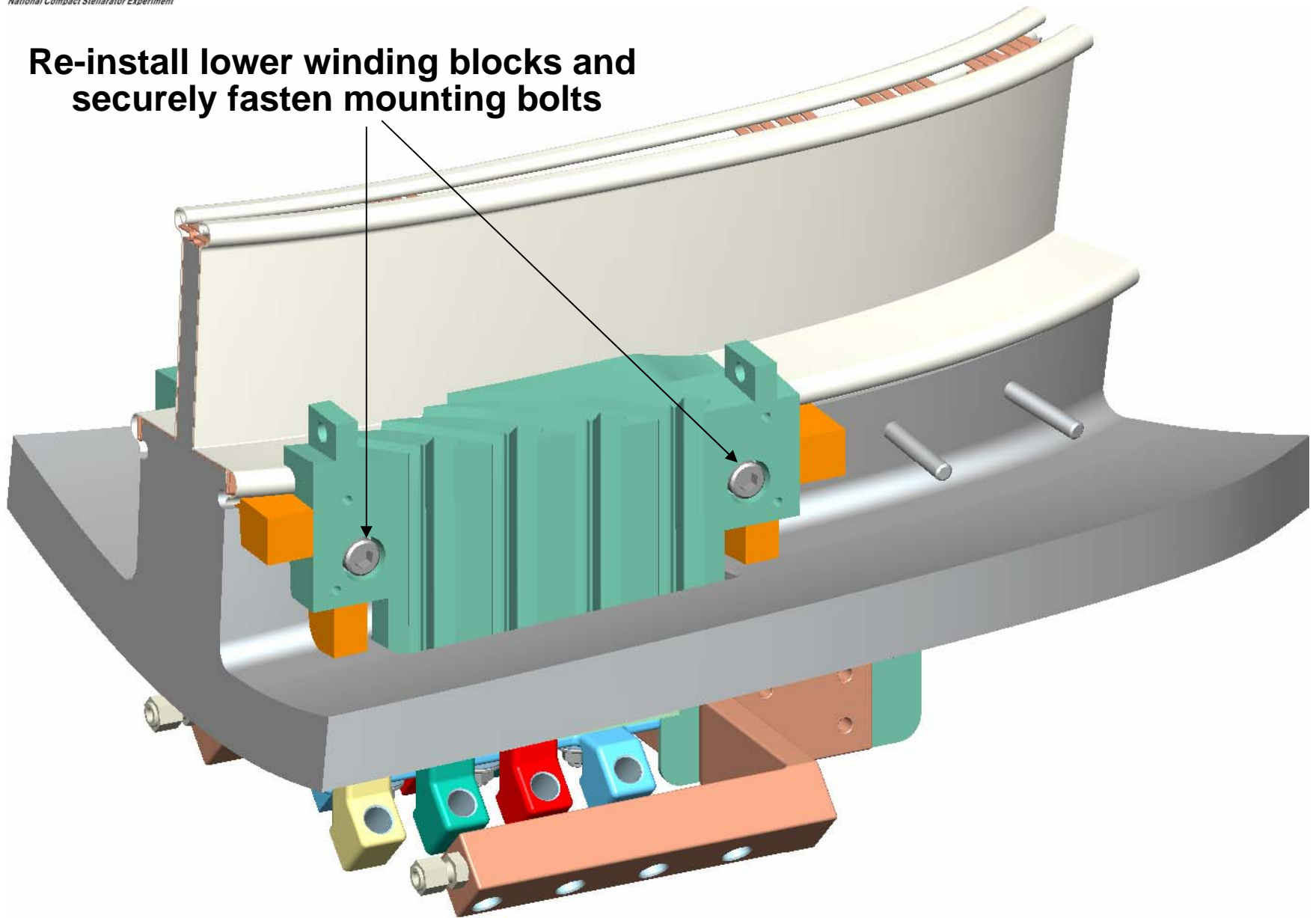




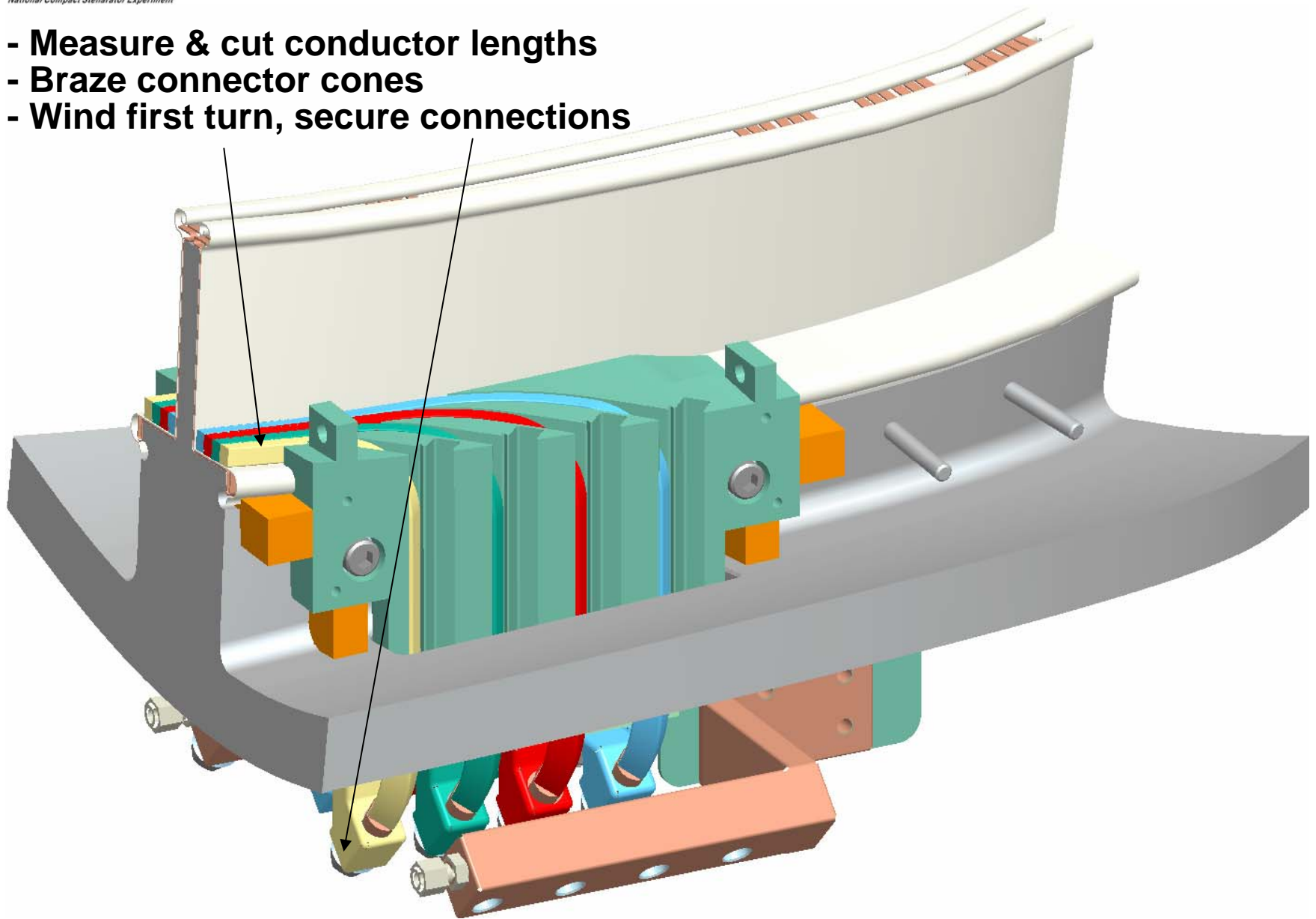
**Install ground wrap strips rolled up
and secured out of the way**



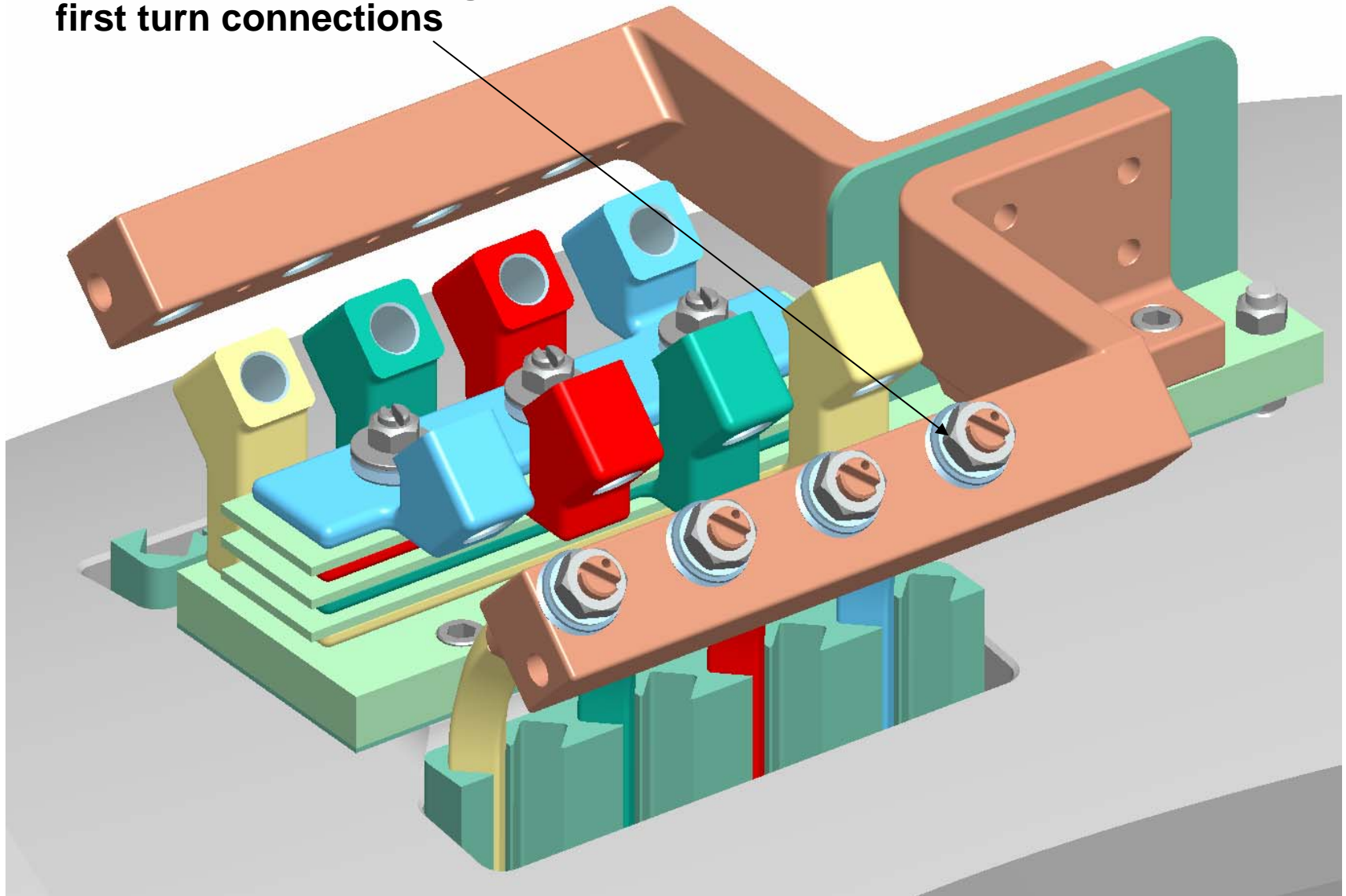
**Re-install lower winding blocks and
securely fasten mounting bolts**



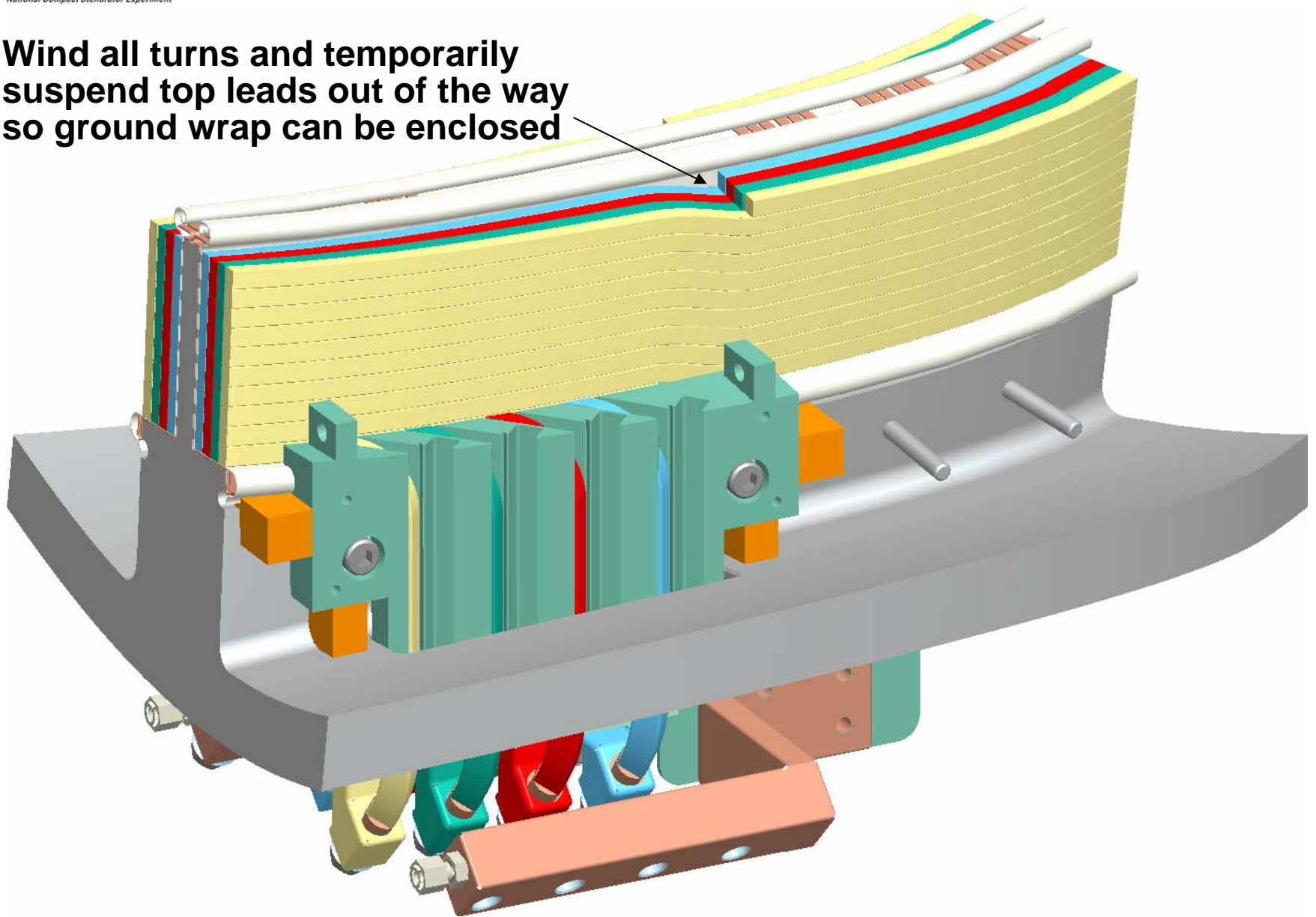
- Measure & cut conductor lengths
- Braze connector cones
- Wind first turn, secure connections



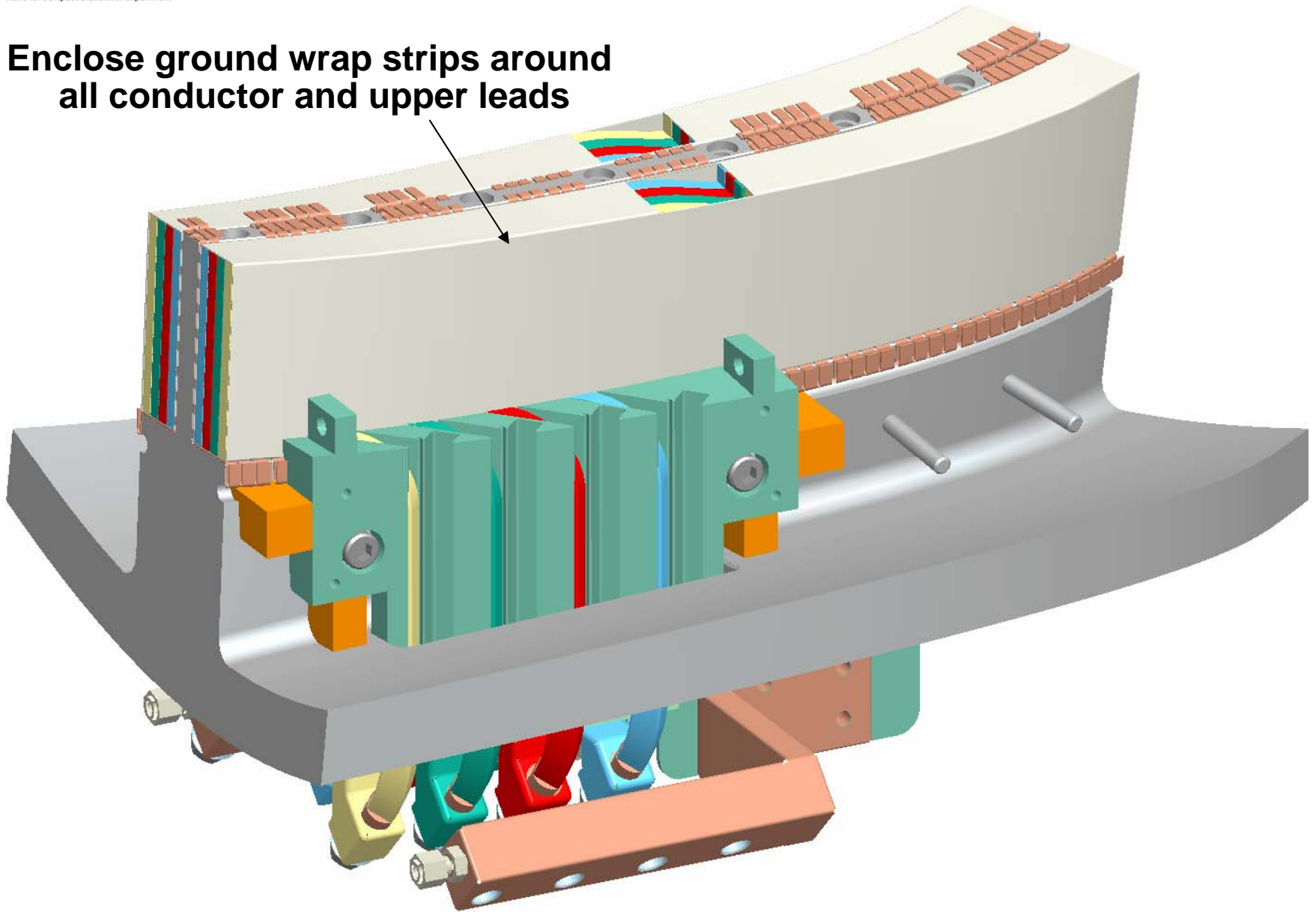
**Underneath view showing
first turn connections**



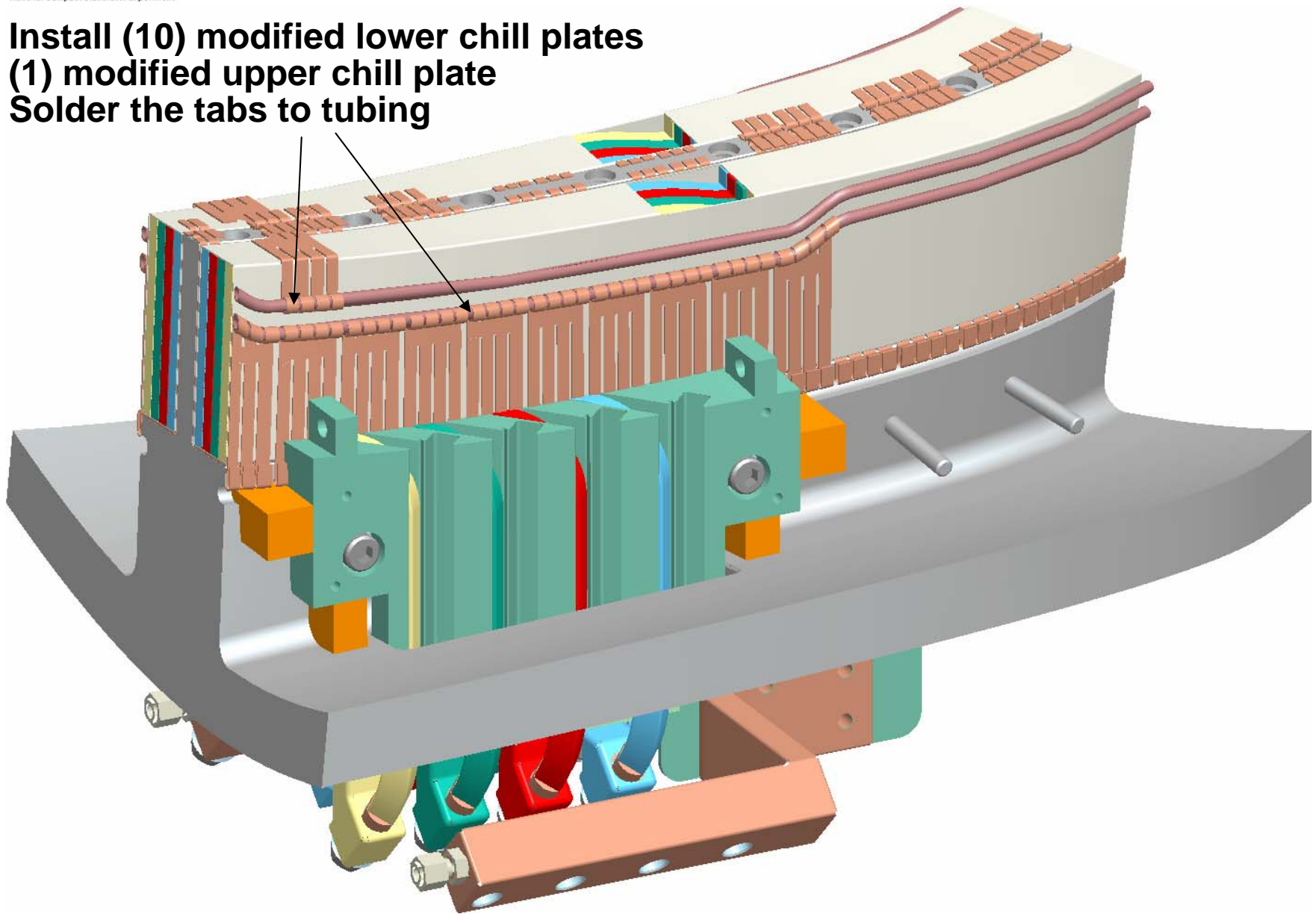
**Wind all turns and temporarily
suspend top leads out of the way
so ground wrap can be enclosed**



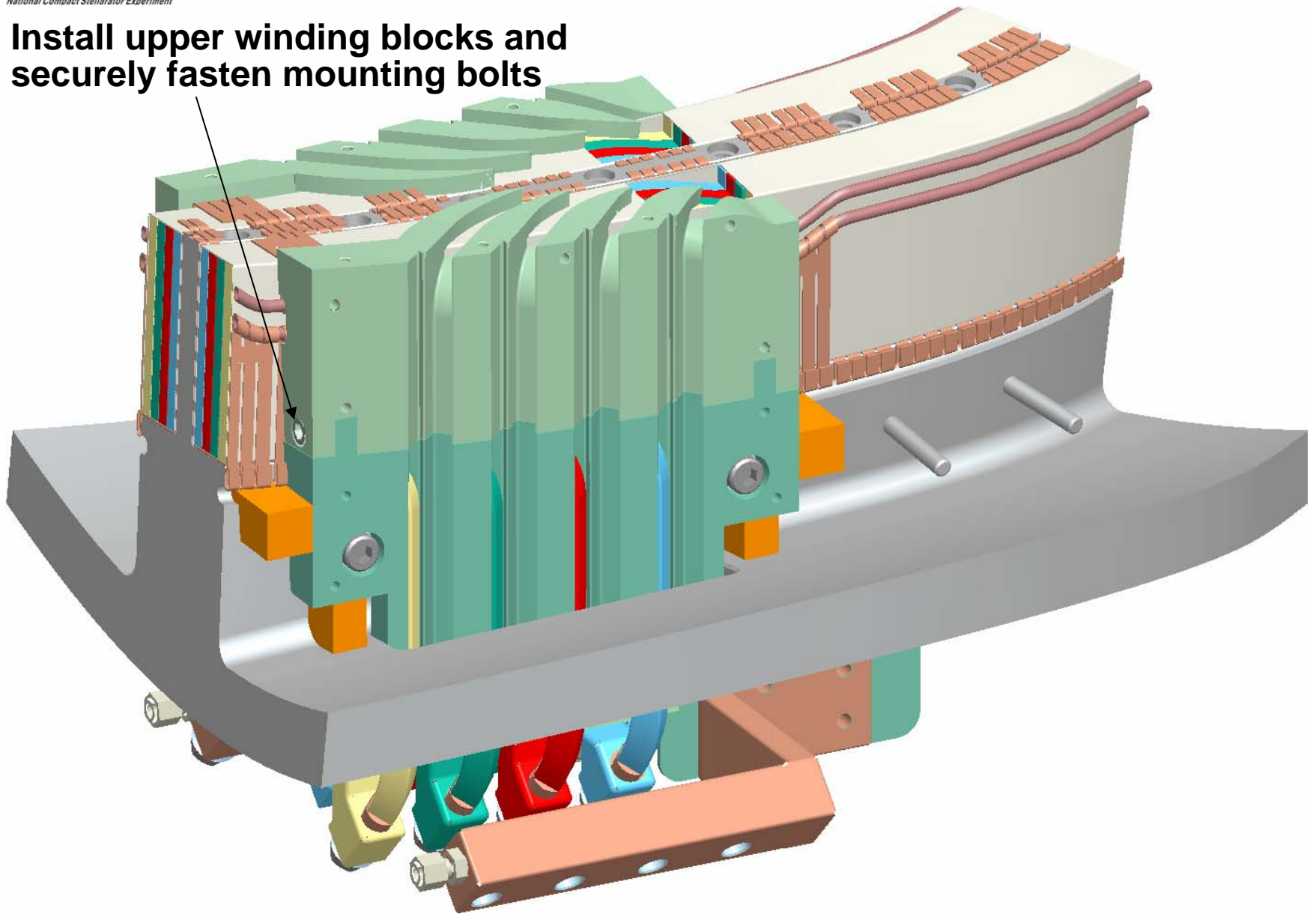
**Enclose ground wrap strips around
all conductor and upper leads**



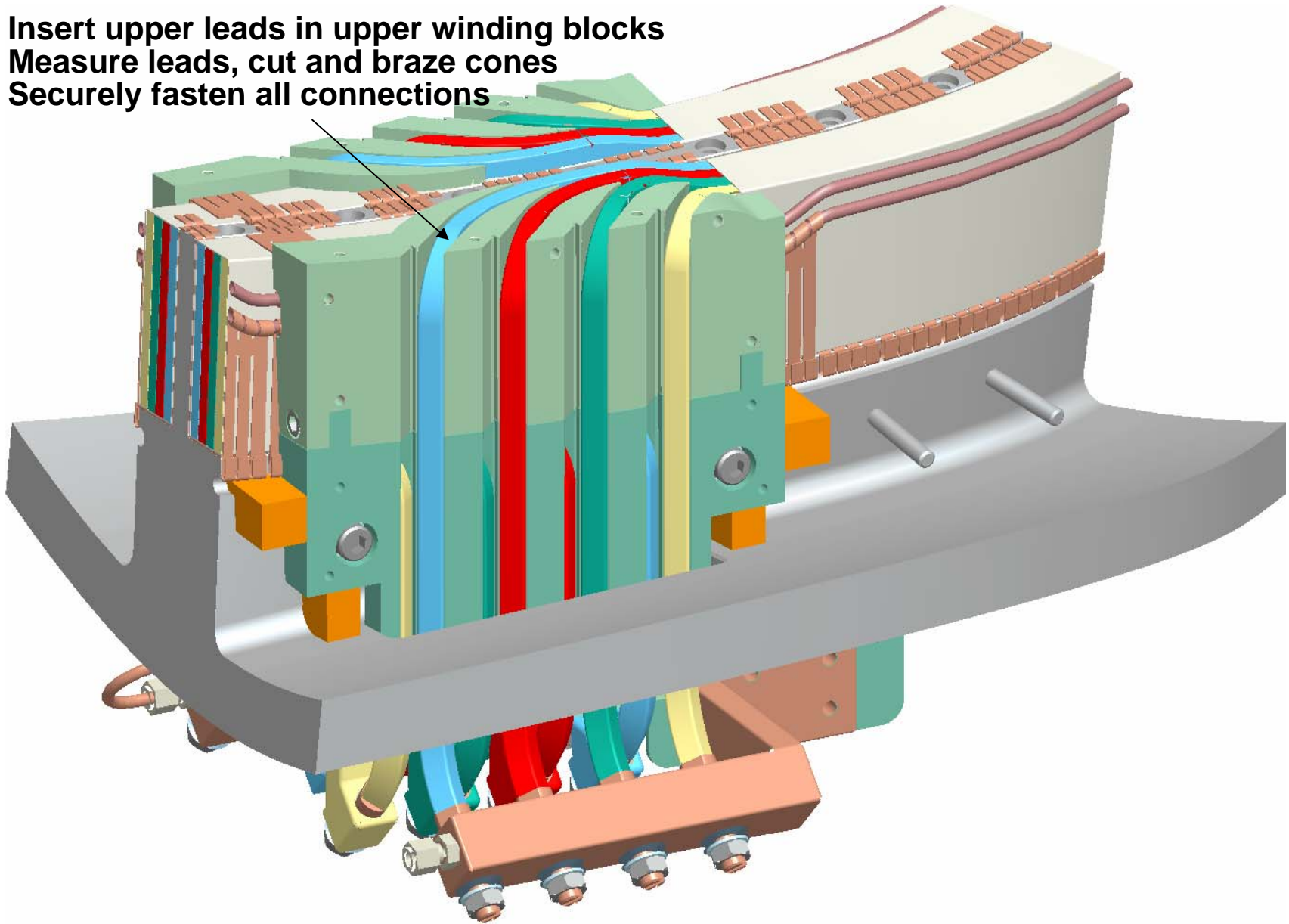
**Install (10) modified lower chill plates
(1) modified upper chill plate
Solder the tabs to tubing**



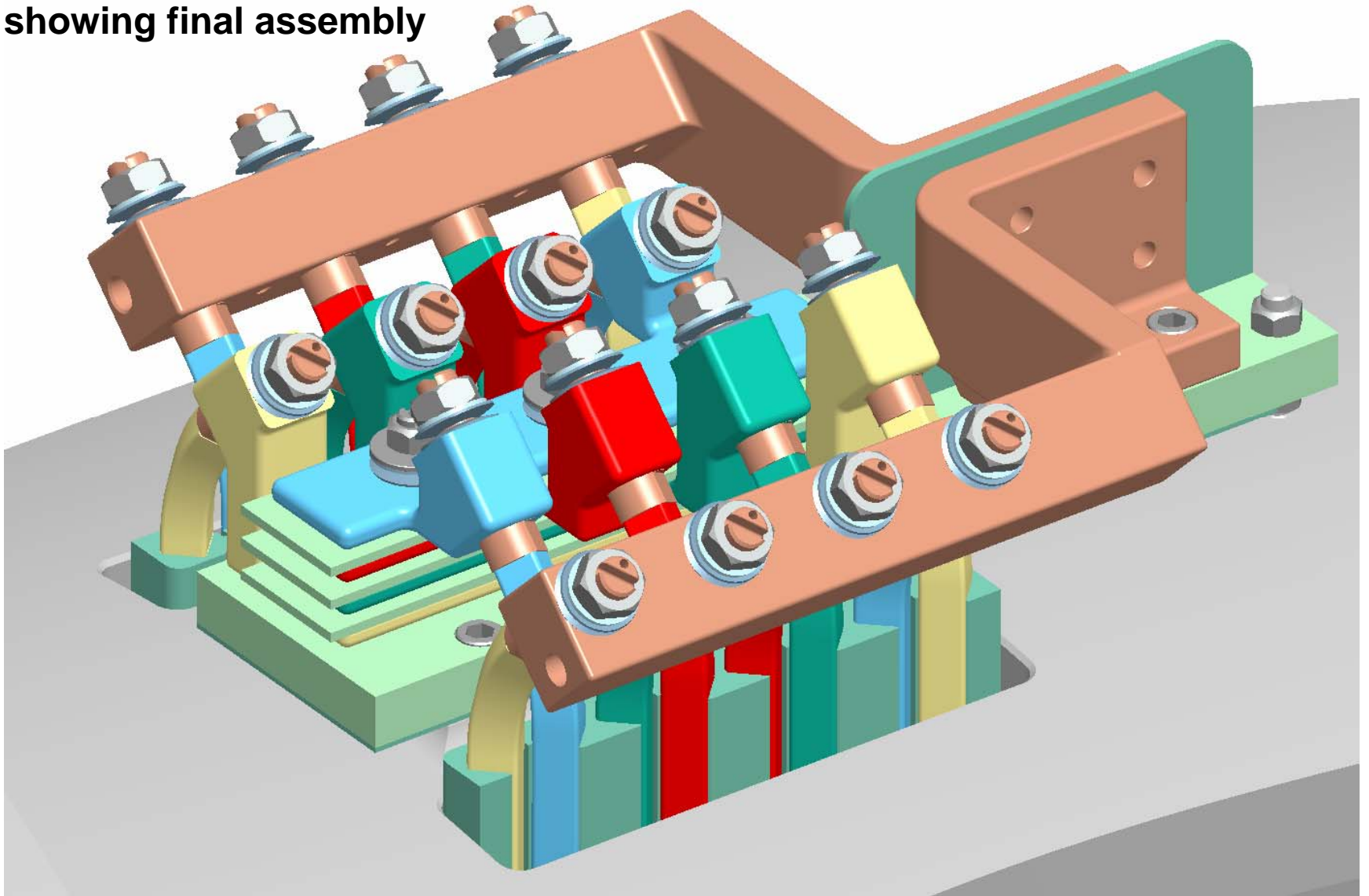
**Install upper winding blocks and
securely fasten mounting bolts**



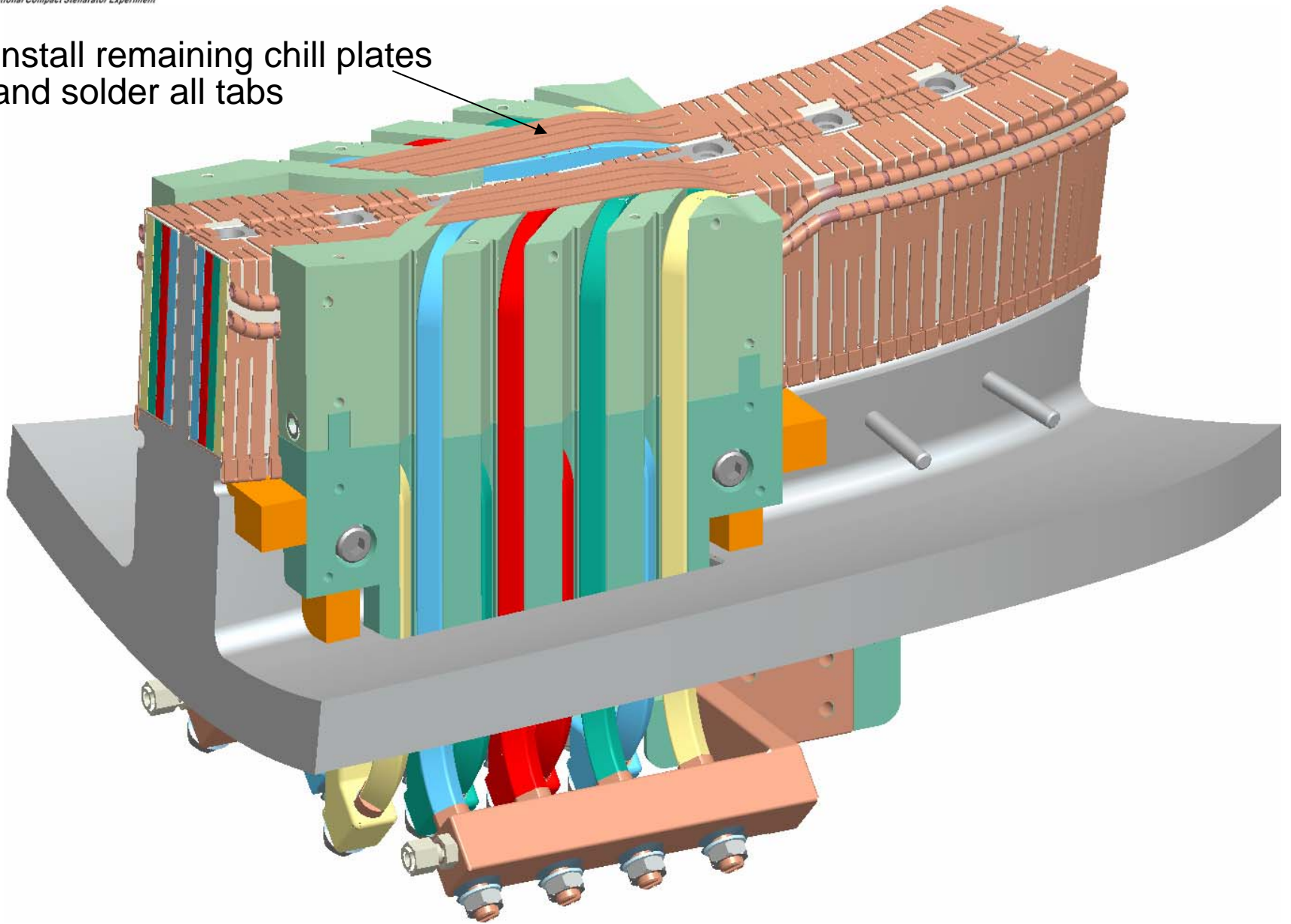
- Insert upper leads in upper winding blocks
- Measure leads, cut and braze cones
- Securely fasten all connections



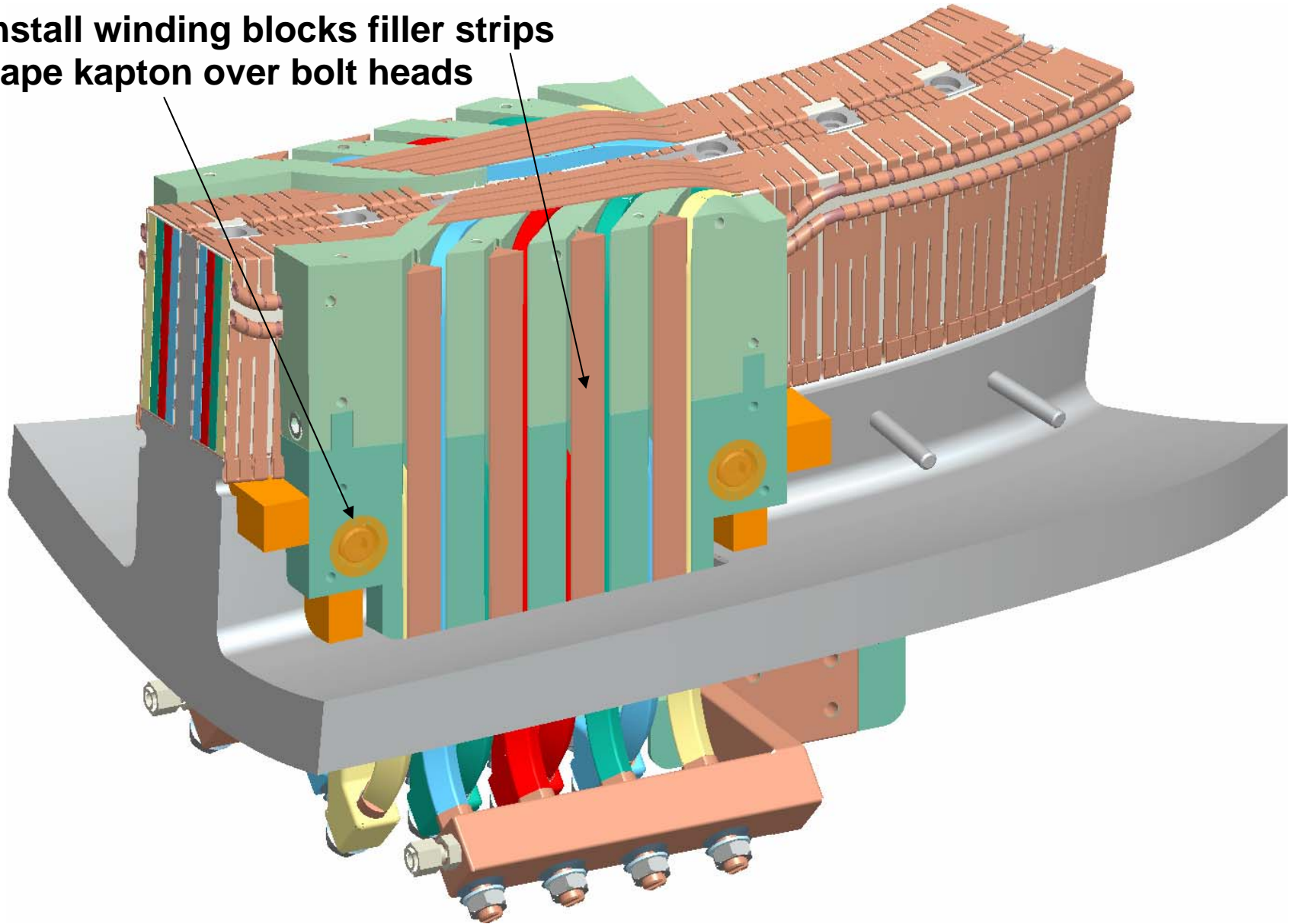
Underneath view showing final assembly



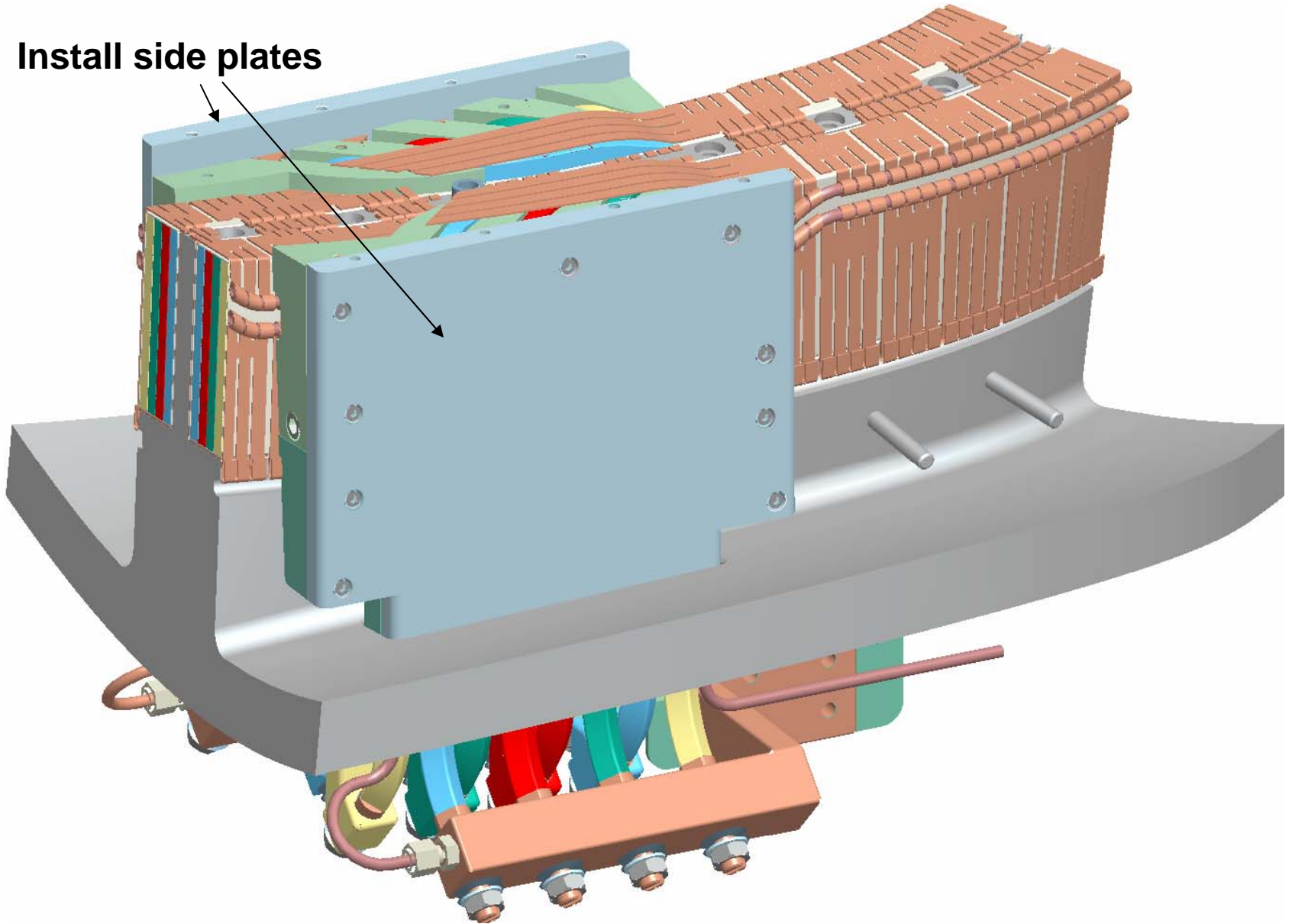
Install remaining chill plates
and solder all tabs



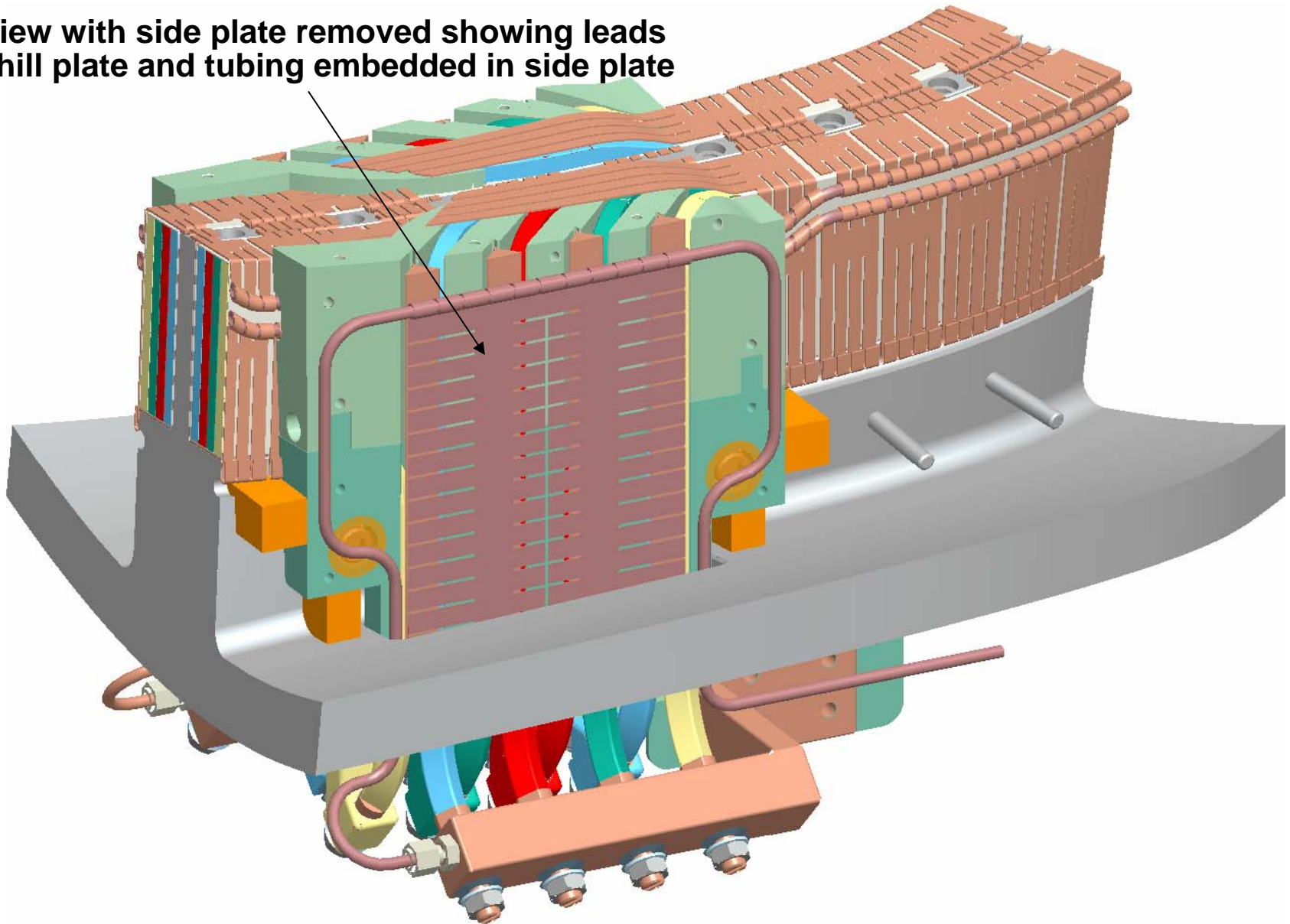
Install winding blocks filler strips
Tape kapton over bolt heads



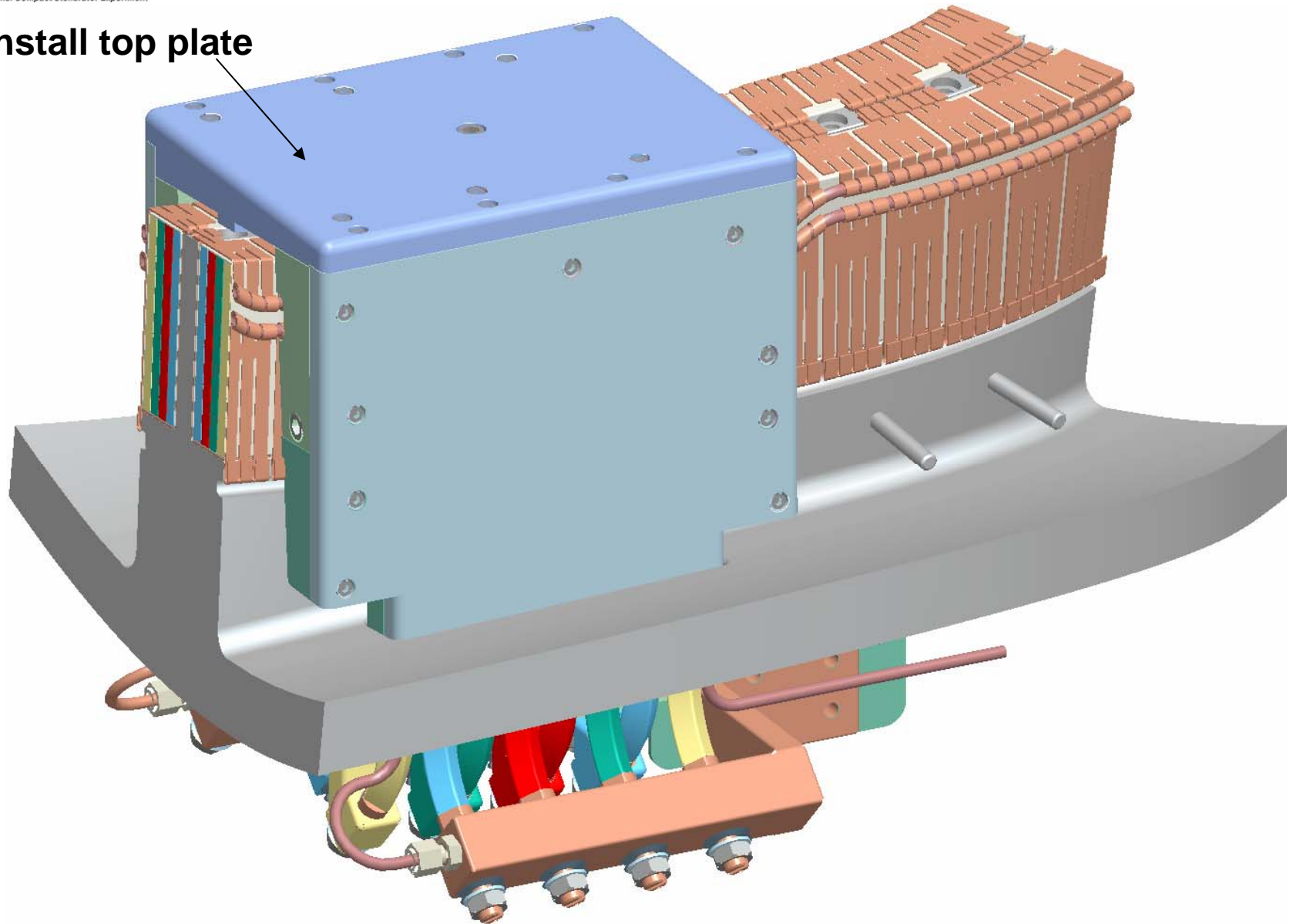
Install side plates

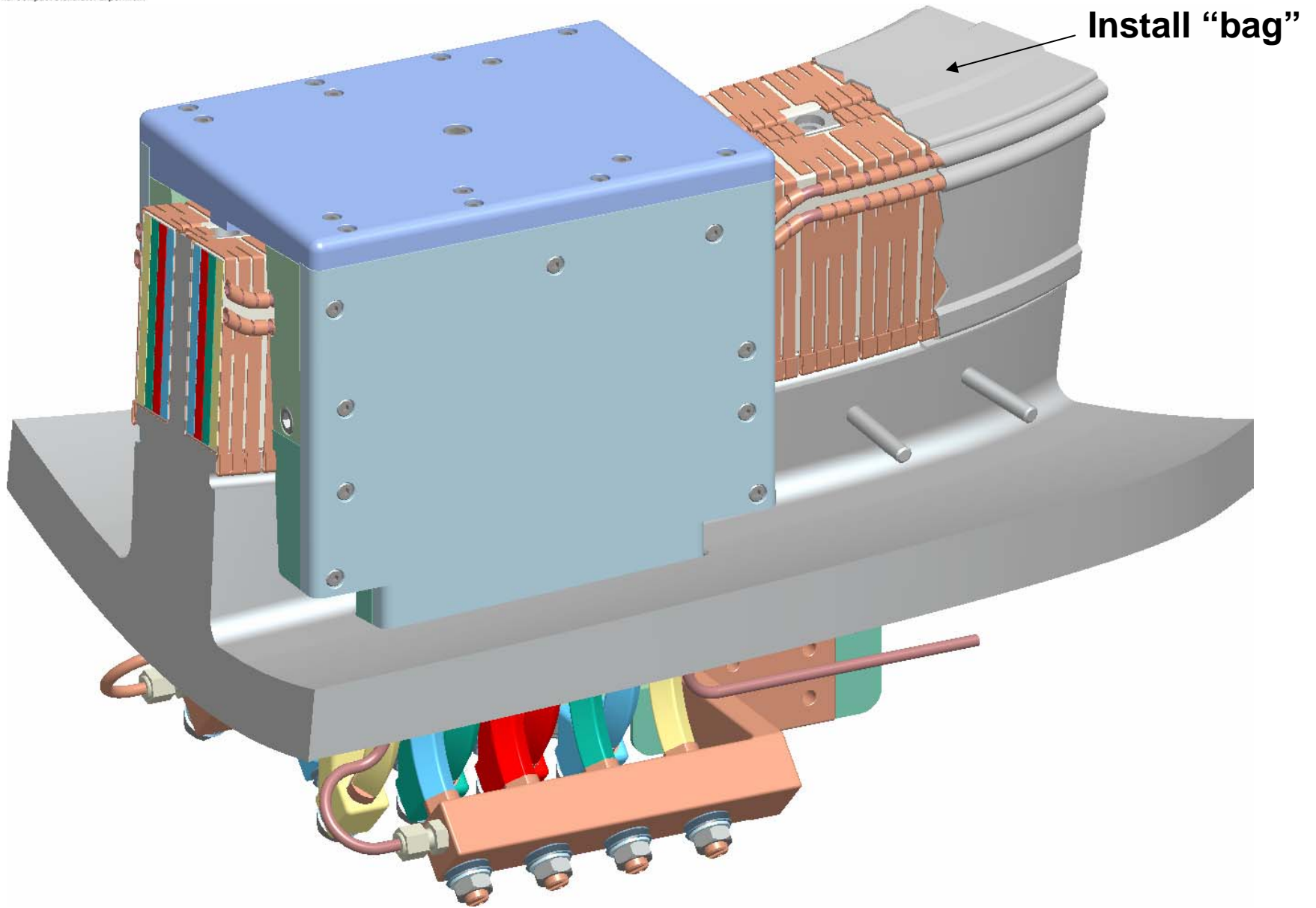


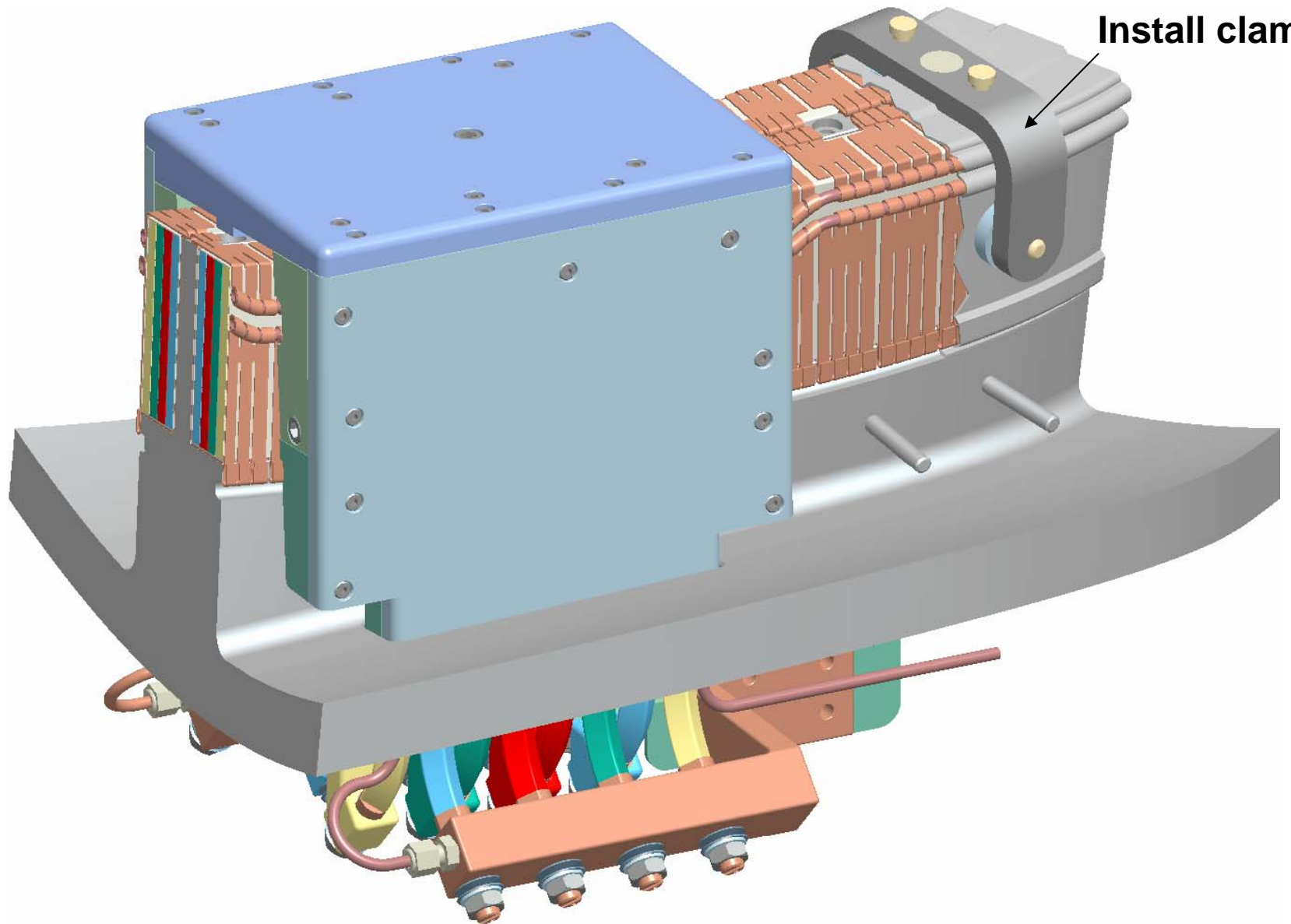
**View with side plate removed showing leads
chill plate and tubing embedded in side plate**



Install top plate

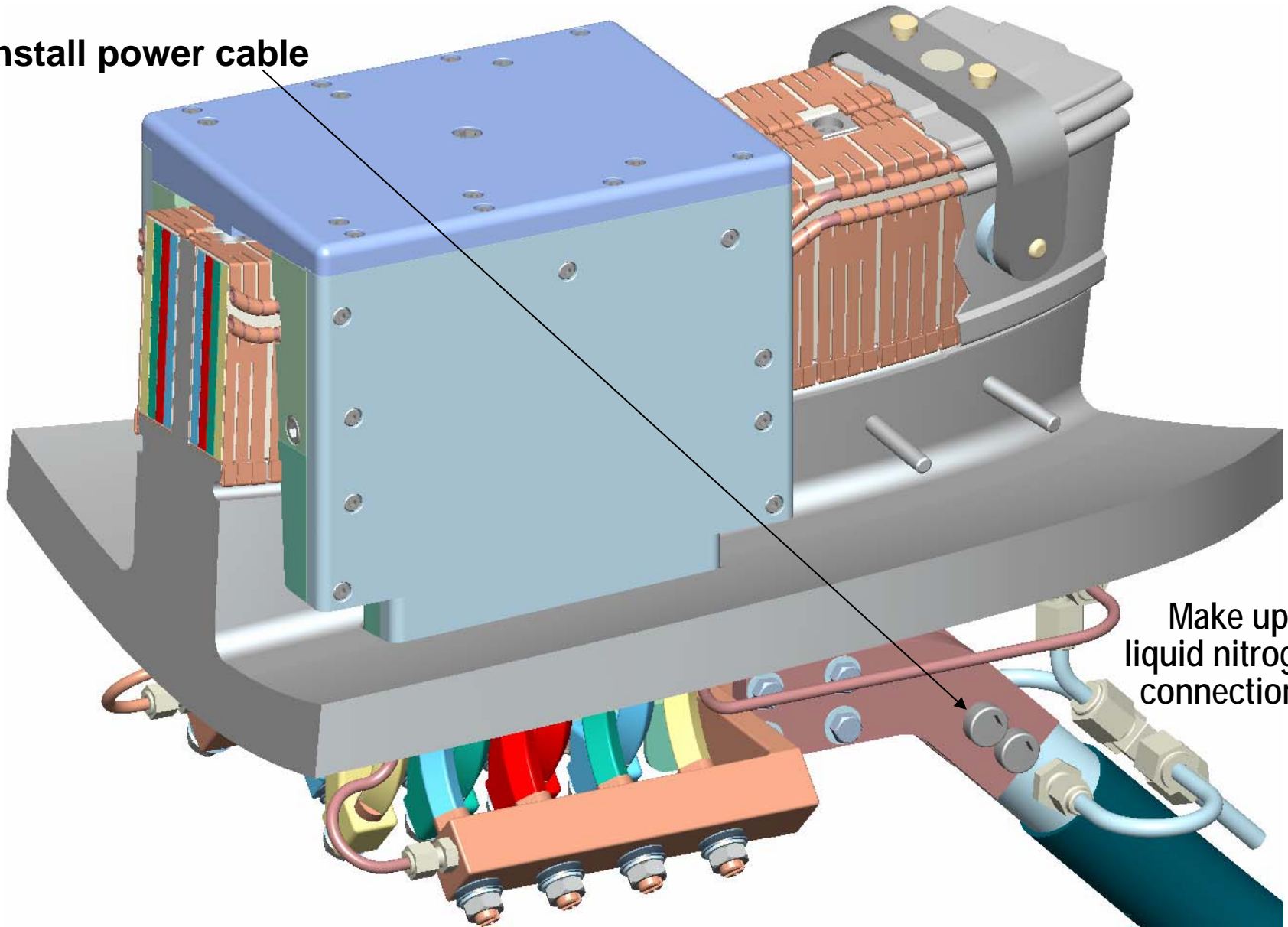






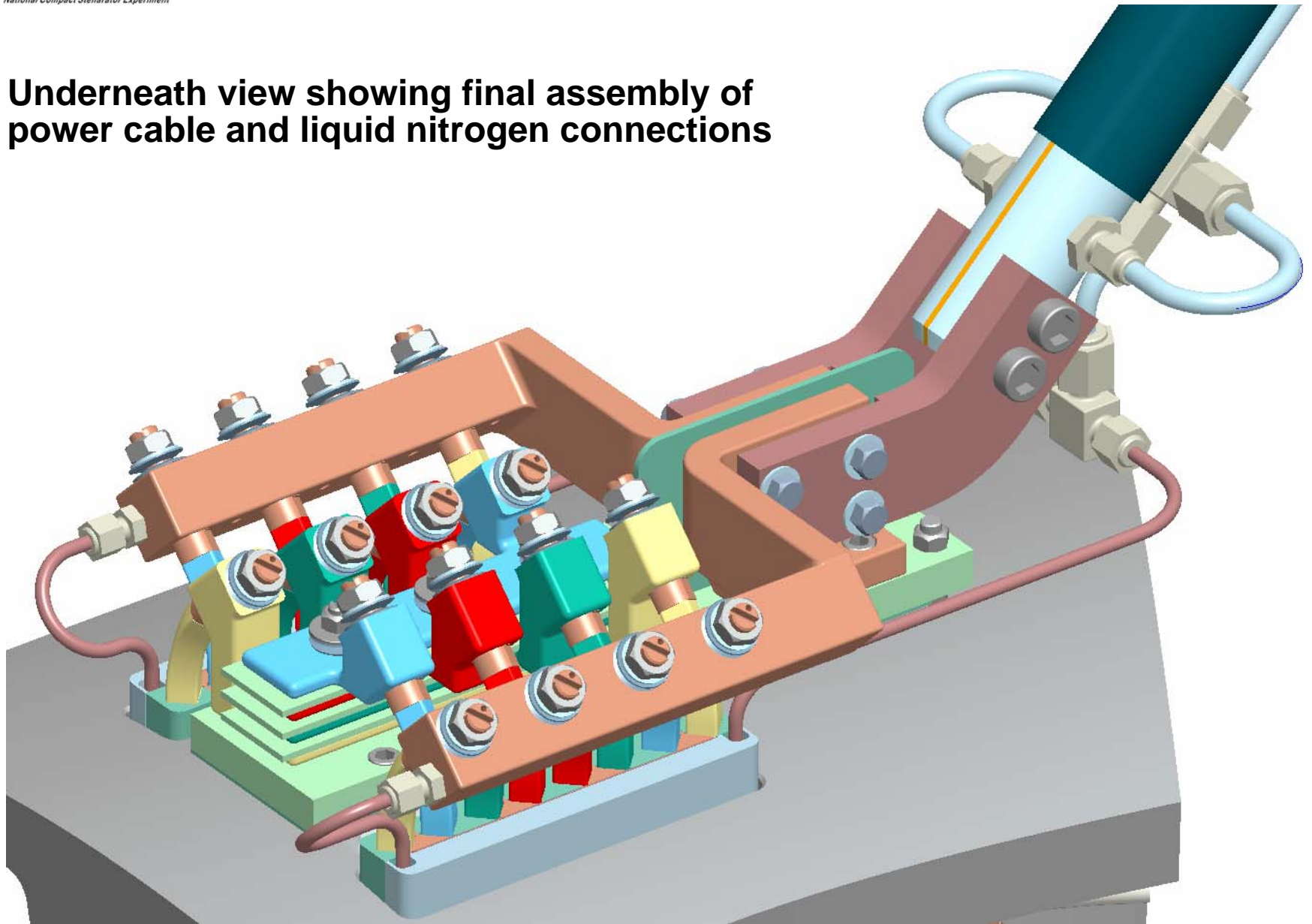
Install clamps

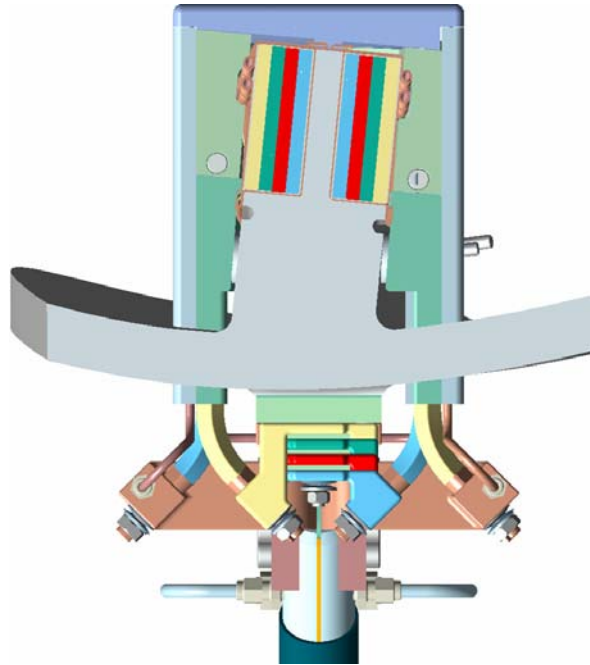
Install power cable



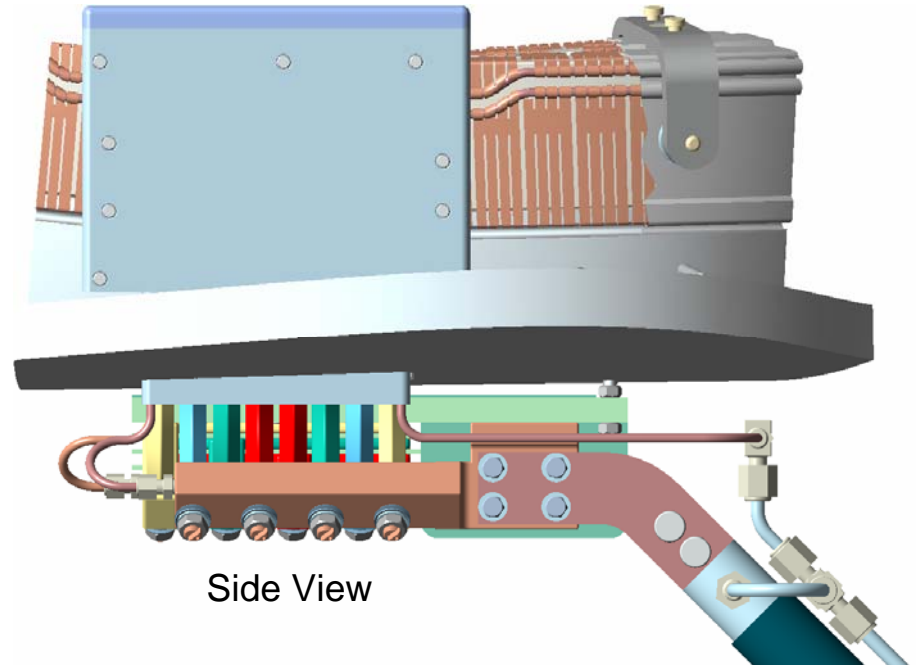
**Make up
liquid nitrogen
connections**

Underneath view showing final assembly of power cable and liquid nitrogen connections

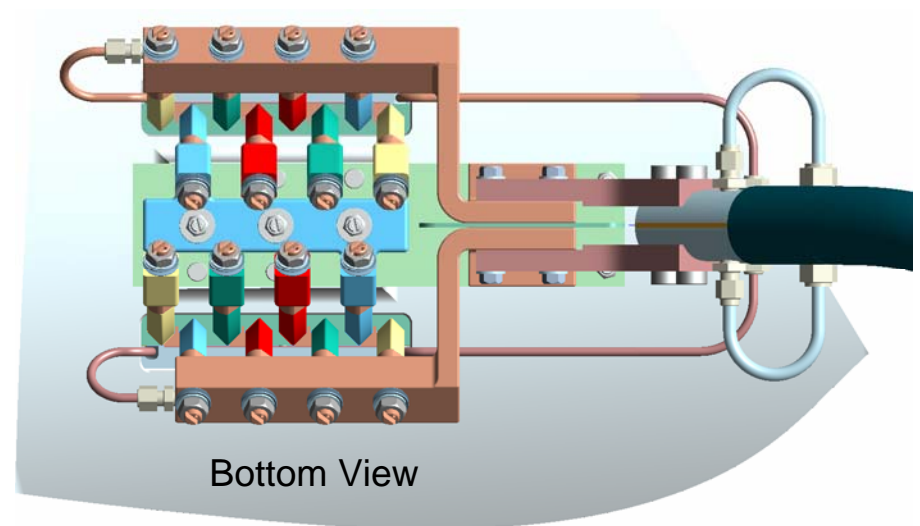




End View



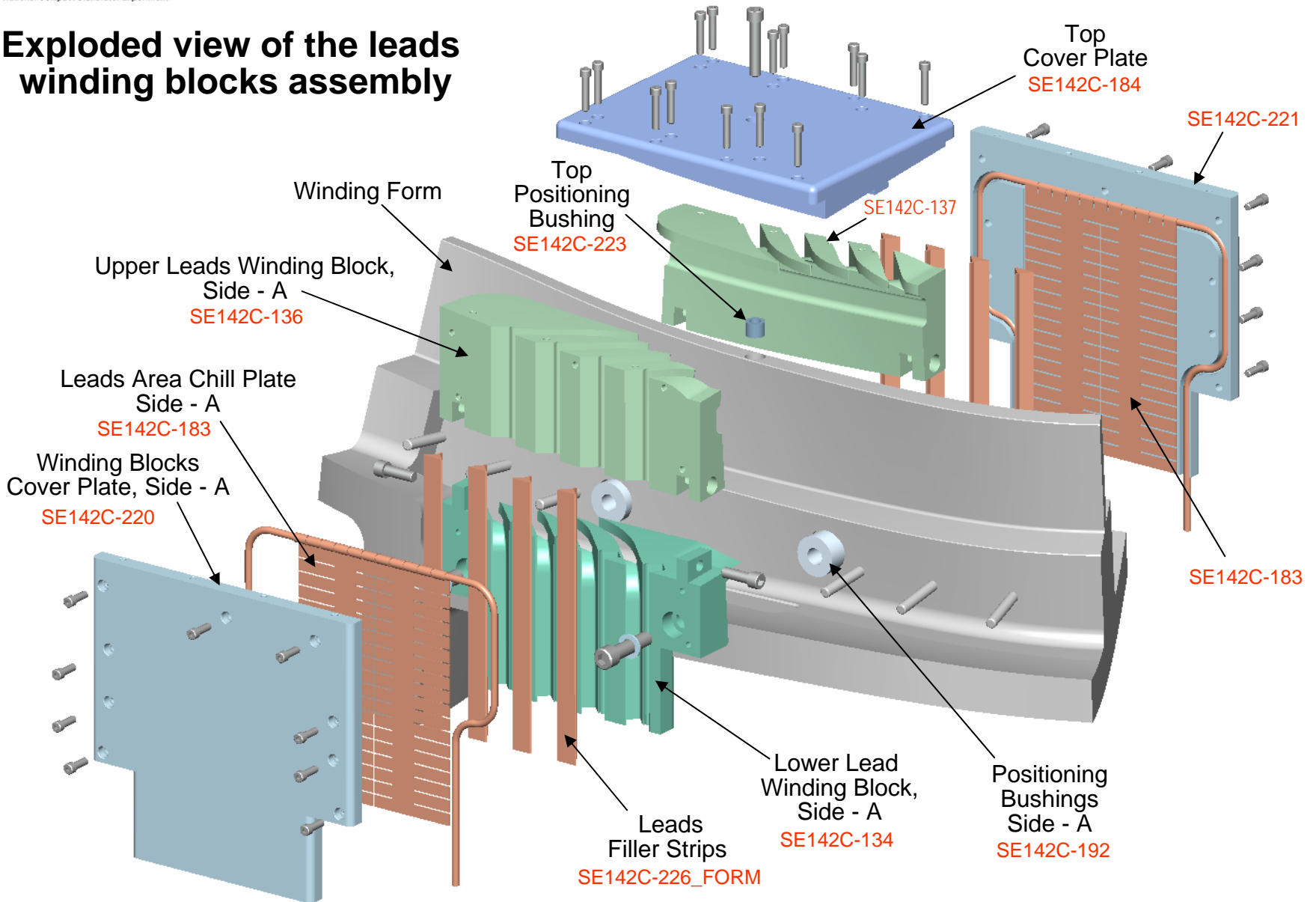
Side View



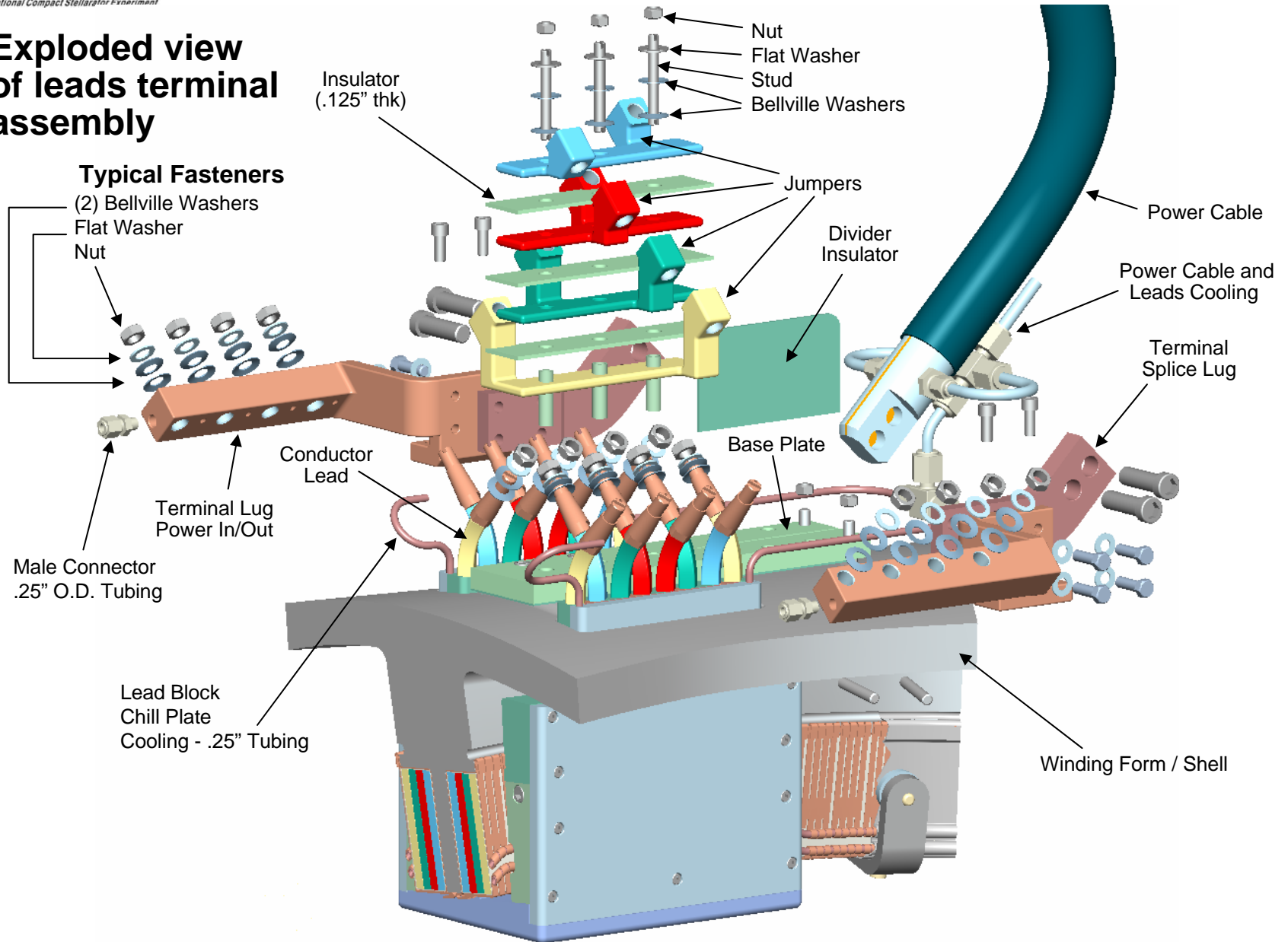
Bottom View

**3 views of the leads
winding blocks assembly**

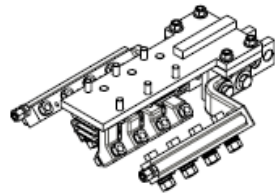
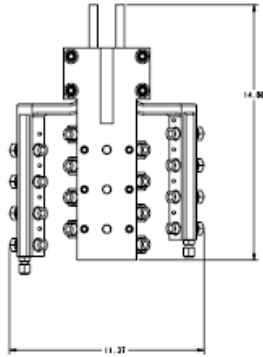
Exploded view of the leads winding blocks assembly



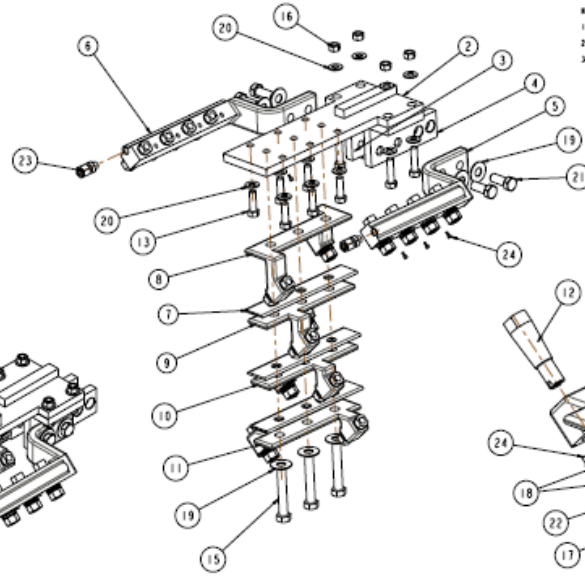
Exploded view of leads terminal assembly



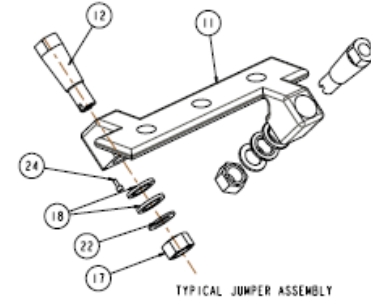
SE-142C-050



ISOMETRIC VIEW
SCALE 0.500



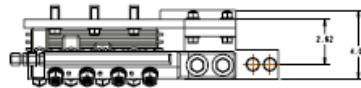
EXPLODED ISOMETRIC VIEW
SCALE 0.500



TYPICAL JUMPER ASSEMBLY
SCALE 1.000



①
SCALE 0.500



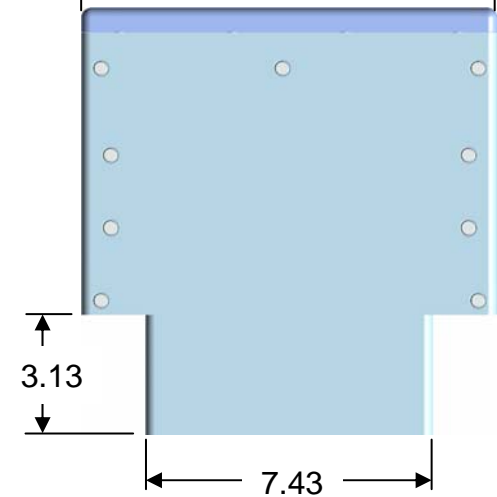
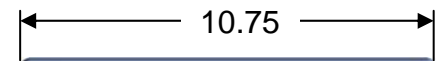
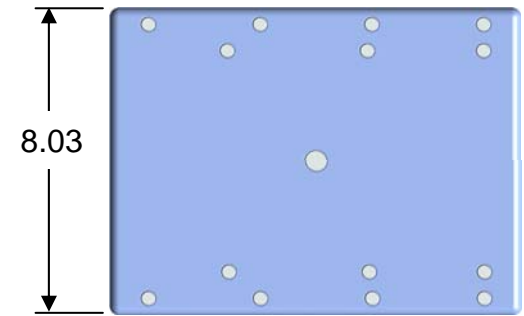
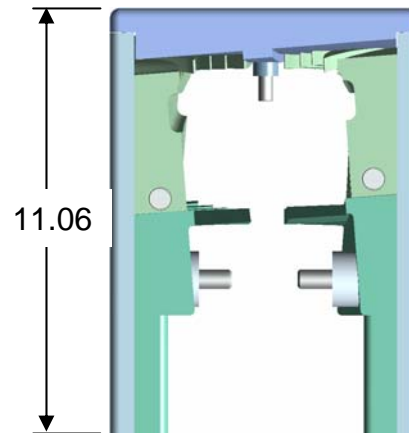
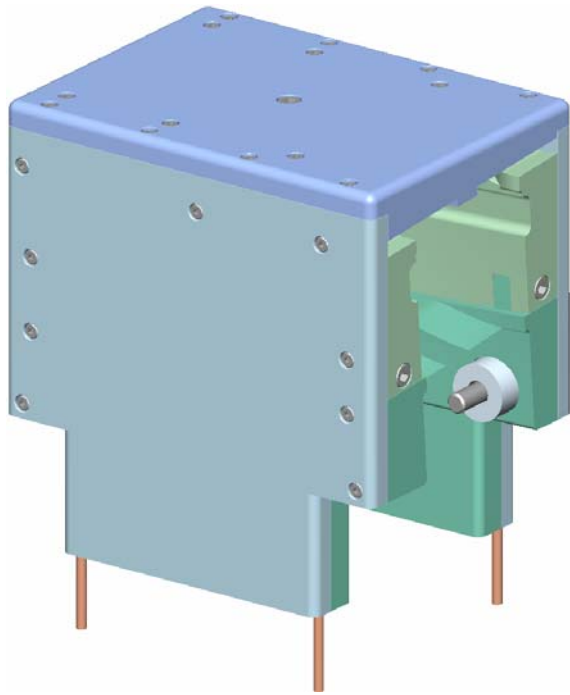
- NOTES:
1. INTERPRET DIMENSIONS AND TOLERANCES FOR ANSI Y14.5M
2. DIMENSIONS ARE IN INCHES
3. DIMENSIONS APPLY AT ROOM TEMPERATURE, OPERATING TEMP OF K.

QTY	PART OR IDENTIFYING NO	DESCRIPTION	MATERIAL	SPECIFICATION	REF
22	SE142C-007	4.400 IN BODY	STN STL		24
2	SE142C-008	WHL CONNECTION			23
18	SE142C-003	50 IN DIA 304 SST TYP FLAT W/SLIP			22
4	SE142C-004	100 IN DIA 1.110 IN DIA W/SLIP			21
18	SE142C-005	40 IN DIA 304 SST TYP FLAT W/SLIP			20
12	SE142C-006	W/SLIP 304 SST 1.110 IN DIA 1.110 IN DIA			19
20	SE142C-009	100 IN DIA 304 SST W/SLIP TYP W/SLIP	INCONEL 718		18
18	SE142C-010	100 IN DIA 304 SST W/SLIP TYP W/SLIP	STN STL		17
4	SE142C-011	200 IN DIA 304 SST W/SLIP TYP W/SLIP	STN STL		16
2	SE142C-012	100 IN DIA 1.110 IN DIA W/SLIP	STN STL		15
4	SE142C-013	200 IN DIA 1.110 IN DIA W/SLIP	STN STL		14
2	SE142C-014	200 IN DIA 1.110 IN DIA W/SLIP	STN STL		13
18	SE142C-015	100 IN DIA 304 SST W/SLIP TYP W/SLIP	STN STL		12
12	SE142C-016	TYP "C" JUMPER A			11
12	SE142C-017	TYP "C" JUMPER B			10
4	SE142C-018	TYP "C" JUMPER C			9
4	SE142C-019	TYP "C" JUMPER D			8
2	SE142C-020	TYP "C" JUMPER E			7
2	SE142C-021	TYP "C" JUMPER F			6
2	SE142C-022	TYP "C" JUMPER G			5
2	SE142C-023	TYP "C" JUMPER H			4
2	SE142C-024	TYP "C" JUMPER I			3
2	SE142C-025	TYP "C" JUMPER J			2
2	SE142C-026	TYP "C" JUMPER K			1
2	SE142C-027	TYP "C" JUMPER L			0
2	SE142C-028	TYP "C" JUMPER M			-1
2	SE142C-029	TYP "C" JUMPER N			-2
2	SE142C-030	TYP "C" JUMPER O			-3
2	SE142C-031	TYP "C" JUMPER P			-4
2	SE142C-032	TYP "C" JUMPER Q			-5
2	SE142C-033	TYP "C" JUMPER R			-6
2	SE142C-034	TYP "C" JUMPER S			-7
2	SE142C-035	TYP "C" JUMPER T			-8
2	SE142C-036	TYP "C" JUMPER U			-9
2	SE142C-037	TYP "C" JUMPER V			-10
2	SE142C-038	TYP "C" JUMPER W			-11
2	SE142C-039	TYP "C" JUMPER X			-12
2	SE142C-040	TYP "C" JUMPER Y			-13
2	SE142C-041	TYP "C" JUMPER Z			-14
2	SE142C-042	TYP "C" JUMPER AA			-15
2	SE142C-043	TYP "C" JUMPER AB			-16
2	SE142C-044	TYP "C" JUMPER AC			-17
2	SE142C-045	TYP "C" JUMPER AD			-18
2	SE142C-046	TYP "C" JUMPER AE			-19
2	SE142C-047	TYP "C" JUMPER AF			-20
2	SE142C-048	TYP "C" JUMPER AG			-21
2	SE142C-049	TYP "C" JUMPER AH			-22
2	SE142C-050	TYP "C" JUMPER AI			-23
2	SE142C-051	TYP "C" JUMPER AJ			-24
2	SE142C-052	TYP "C" JUMPER AK			-25
2	SE142C-053	TYP "C" JUMPER AL			-26
2	SE142C-054	TYP "C" JUMPER AM			-27
2	SE142C-055	TYP "C" JUMPER AN			-28
2	SE142C-056	TYP "C" JUMPER AO			-29
2	SE142C-057	TYP "C" JUMPER AP			-30
2	SE142C-058	TYP "C" JUMPER AQ			-31
2	SE142C-059	TYP "C" JUMPER AR			-32
2	SE142C-060	TYP "C" JUMPER AS			-33
2	SE142C-061	TYP "C" JUMPER AT			-34
2	SE142C-062	TYP "C" JUMPER AU			-35
2	SE142C-063	TYP "C" JUMPER AV			-36
2	SE142C-064	TYP "C" JUMPER AW			-37
2	SE142C-065	TYP "C" JUMPER AX			-38
2	SE142C-066	TYP "C" JUMPER AY			-39
2	SE142C-067	TYP "C" JUMPER AZ			-40
2	SE142C-068	TYP "C" JUMPER BA			-41
2	SE142C-069	TYP "C" JUMPER BB			-42
2	SE142C-070	TYP "C" JUMPER BC			-43
2	SE142C-071	TYP "C" JUMPER BD			-44
2	SE142C-072	TYP "C" JUMPER BE			-45
2	SE142C-073	TYP "C" JUMPER BF			-46
2	SE142C-074	TYP "C" JUMPER BG			-47
2	SE142C-075	TYP "C" JUMPER BH			-48
2	SE142C-076	TYP "C" JUMPER BI			-49
2	SE142C-077	TYP "C" JUMPER BJ			-50
2	SE142C-078	TYP "C" JUMPER BK			-51
2	SE142C-079	TYP "C" JUMPER BL			-52
2	SE142C-080	TYP "C" JUMPER BM			-53
2	SE142C-081	TYP "C" JUMPER BN			-54
2	SE142C-082	TYP "C" JUMPER BO			-55
2	SE142C-083	TYP "C" JUMPER BP			-56
2	SE142C-084	TYP "C" JUMPER BQ			-57
2	SE142C-085	TYP "C" JUMPER BR			-58
2	SE142C-086	TYP "C" JUMPER BS			-59
2	SE142C-087	TYP "C" JUMPER BT			-60
2	SE142C-088	TYP "C" JUMPER BU			-61
2	SE142C-089	TYP "C" JUMPER BV			-62
2	SE142C-090	TYP "C" JUMPER BV			-63
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2	SE142C-112	TYP "C" JUMPER BV			-85
2	SE142C-113	TYP "C" JUMPER BV			-86
2	SE142C-114	TYP "C" JUMPER BV			-87
2	SE142C-115	TYP "C" JUMPER BV			-88
2	SE142C-116	TYP "C" JUMPER BV			-89
2	SE142C-117	TYP "C" JUMPER BV			-90
2	SE142C-118	TYP "C" JUMPER BV			-91
2	SE142C-119	TYP "C" JUMPER BV			-92
2	SE142C-120	TYP "C" JUMPER BV			-93
2	SE142C-121	TYP "C" JUMPER BV			-94
2	SE142C-122	TYP "C" JUMPER BV			-95
2	SE142C-123	TYP "C" JUMPER BV			-96
2	SE142C-124	TYP "C" JUMPER BV			-97
2	SE142C-125	TYP "C" JUMPER BV			-98
2	SE142C-126	TYP "C" JUMPER BV			-99
2	SE142C-127	TYP "C" JUMPER BV			-100

THIS DRAWING PRODUCED BY PRO-ENGINEER

REV	DESCRIPTION	BY	DATE	APP'D	DATE	SCALE	NOTES	REV	DESCRIPTION	BY	DATE	APP'D	DATE
1	ISSUED FOR FABRICATION							1	ISSUED FOR FABRICATION				

Views of the leads winding blocks assembly



Side – A, Lower Winding Block

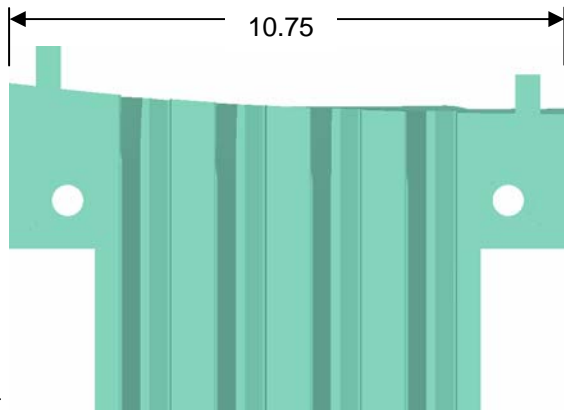
Side – A Dwg # SE142C-134

Side – B Dwg # SE142C-135



Top View

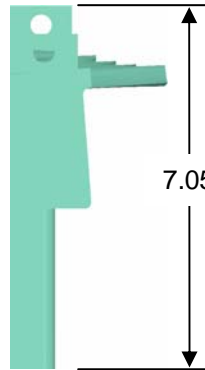
10.75



Side View



Left View



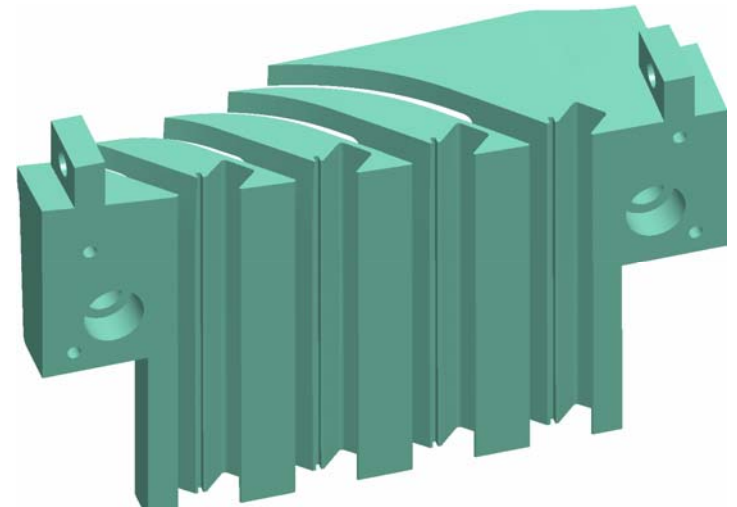
Right View

7.05

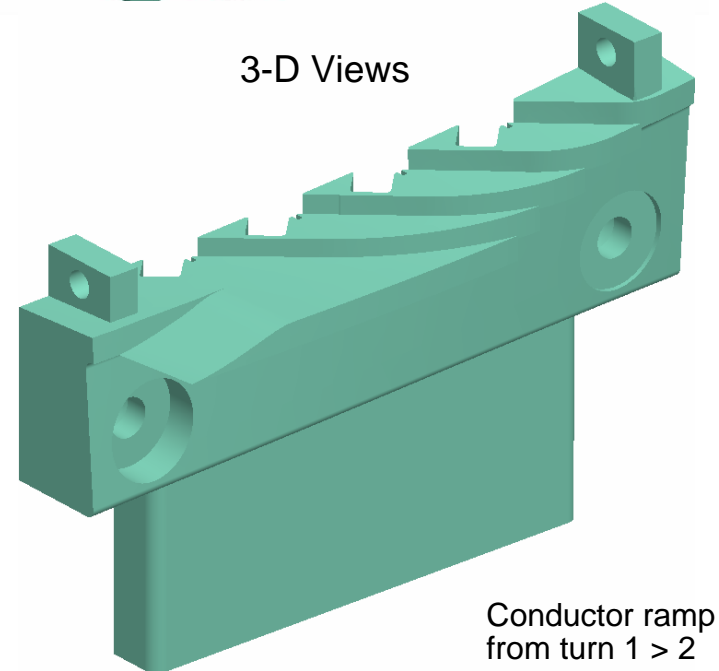


3.01

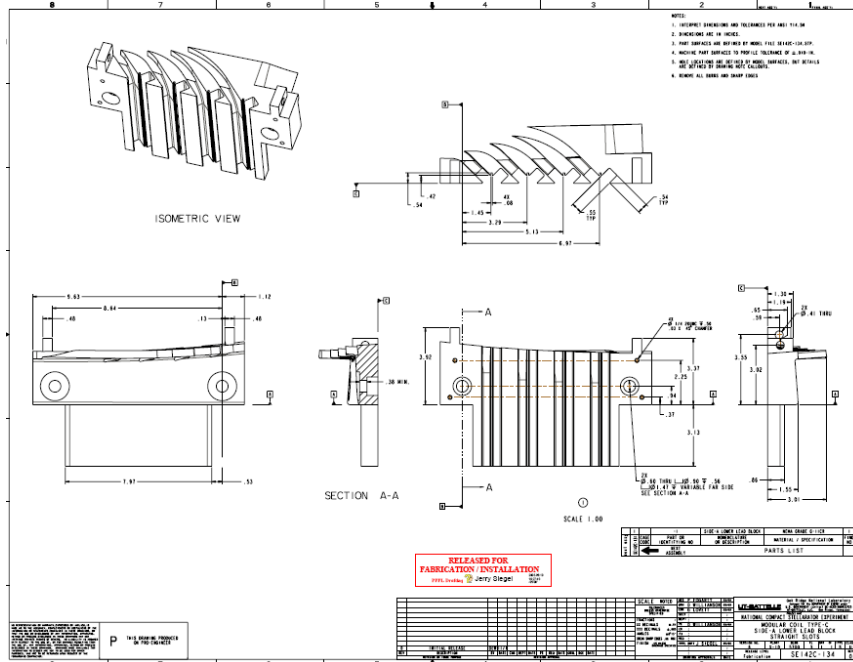
Bottom View



3-D Views



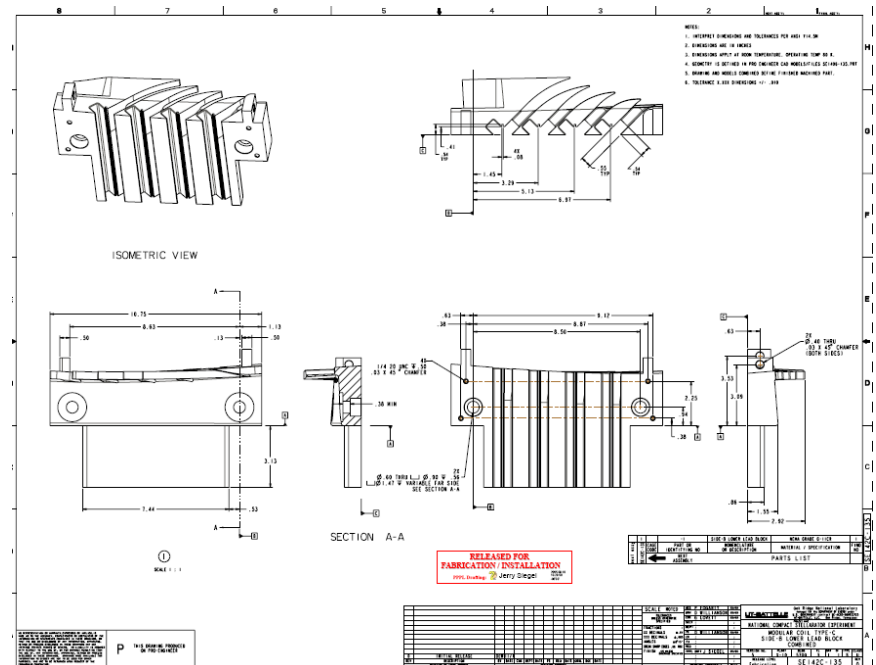
Conductor ramp
from turn 1 > 2



SE-142C-134

Lower Winding Blocks

SE-142C-135

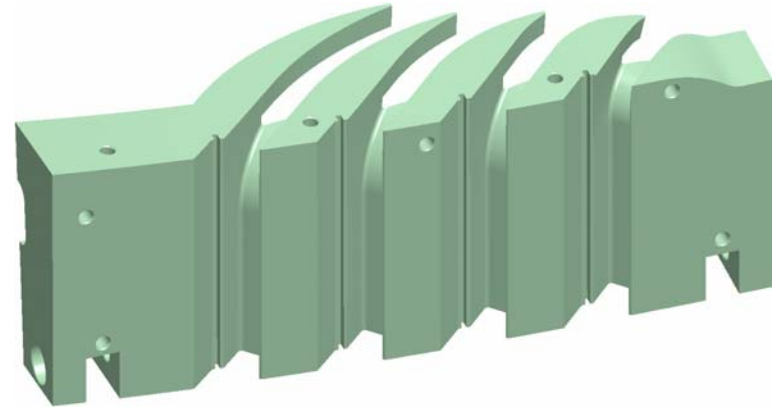


Side – A, Upper Winding Block

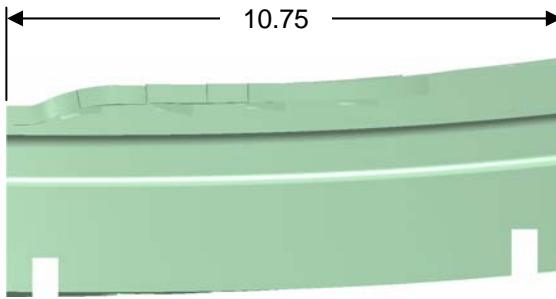
Side – A Dwg # SE142C-136

Side – B Dwg # SE142C-137

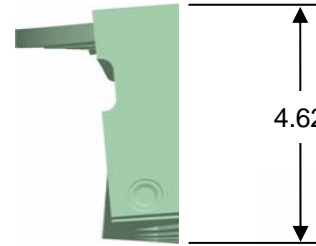
Top View



Left View



Side View

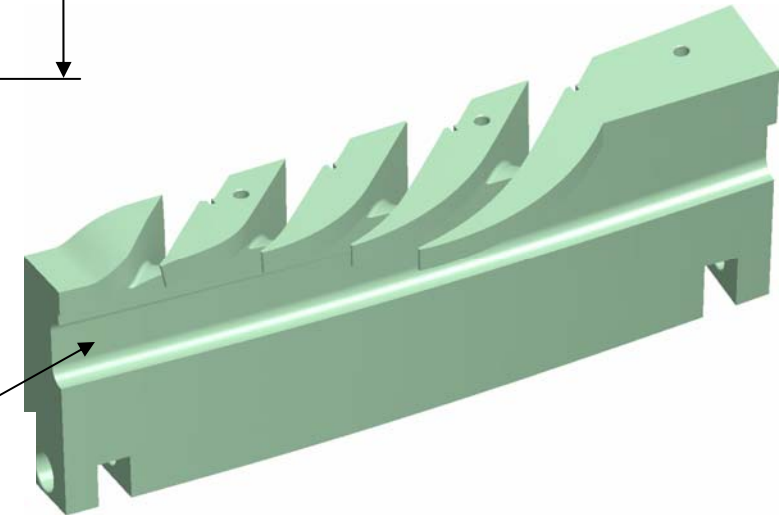


Right View

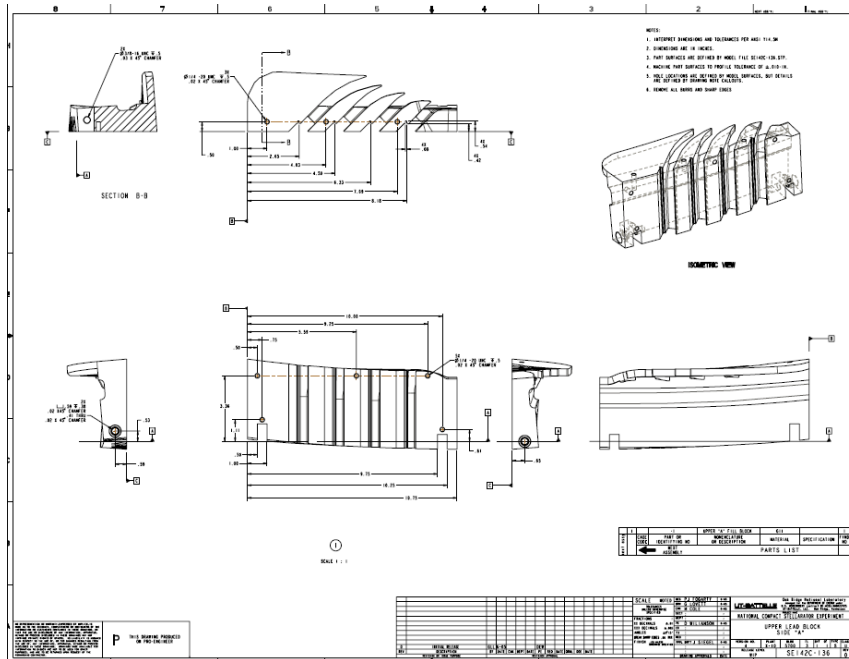
3-D Views



Bottom View



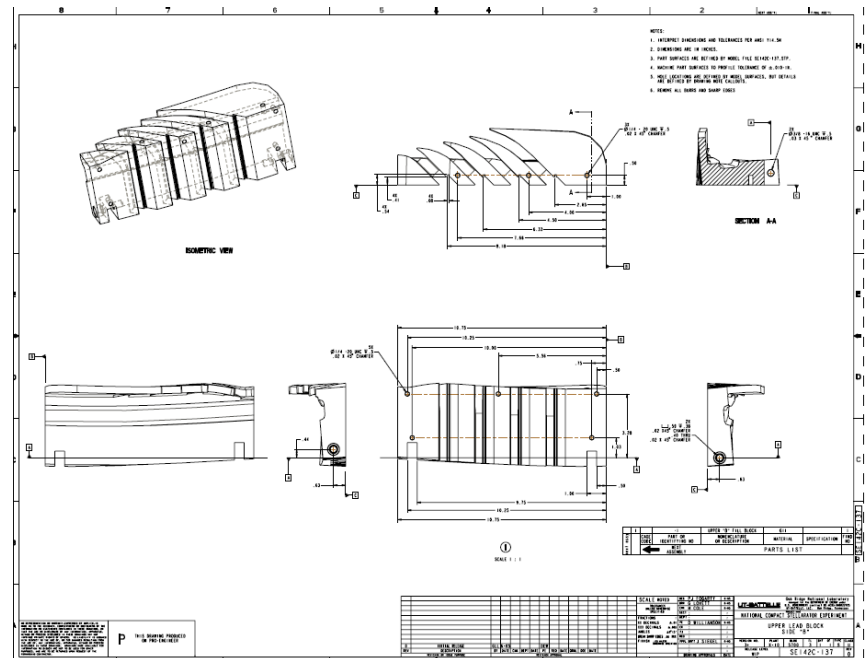
Groove for
chill plates tubing



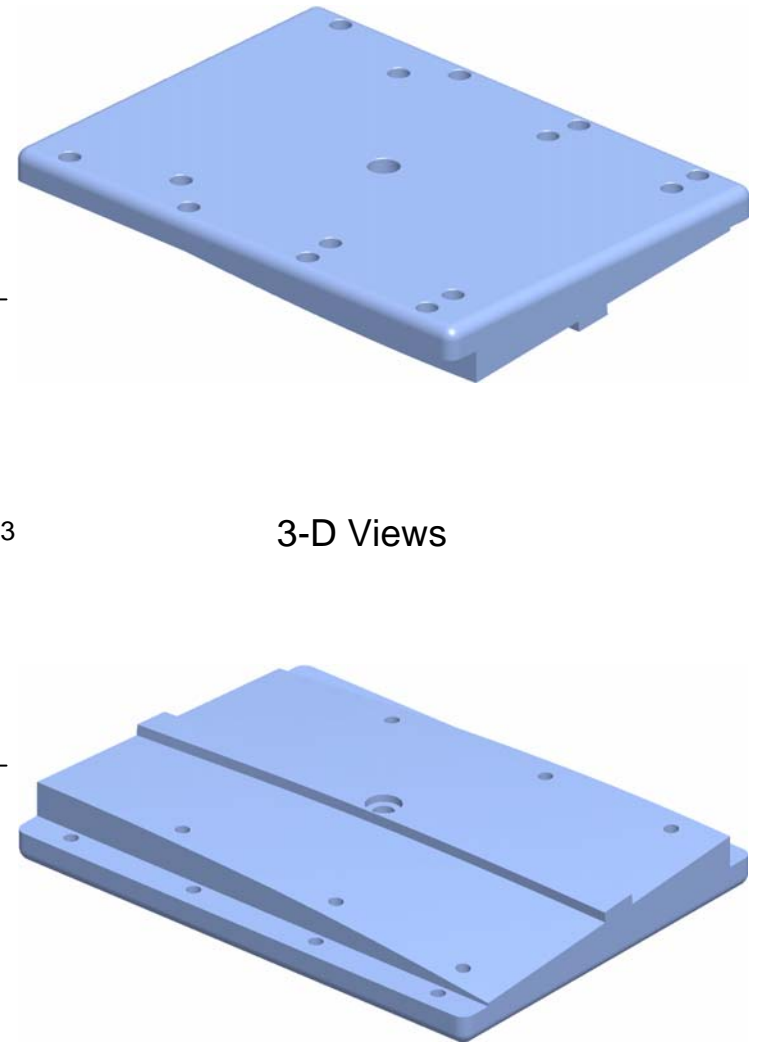
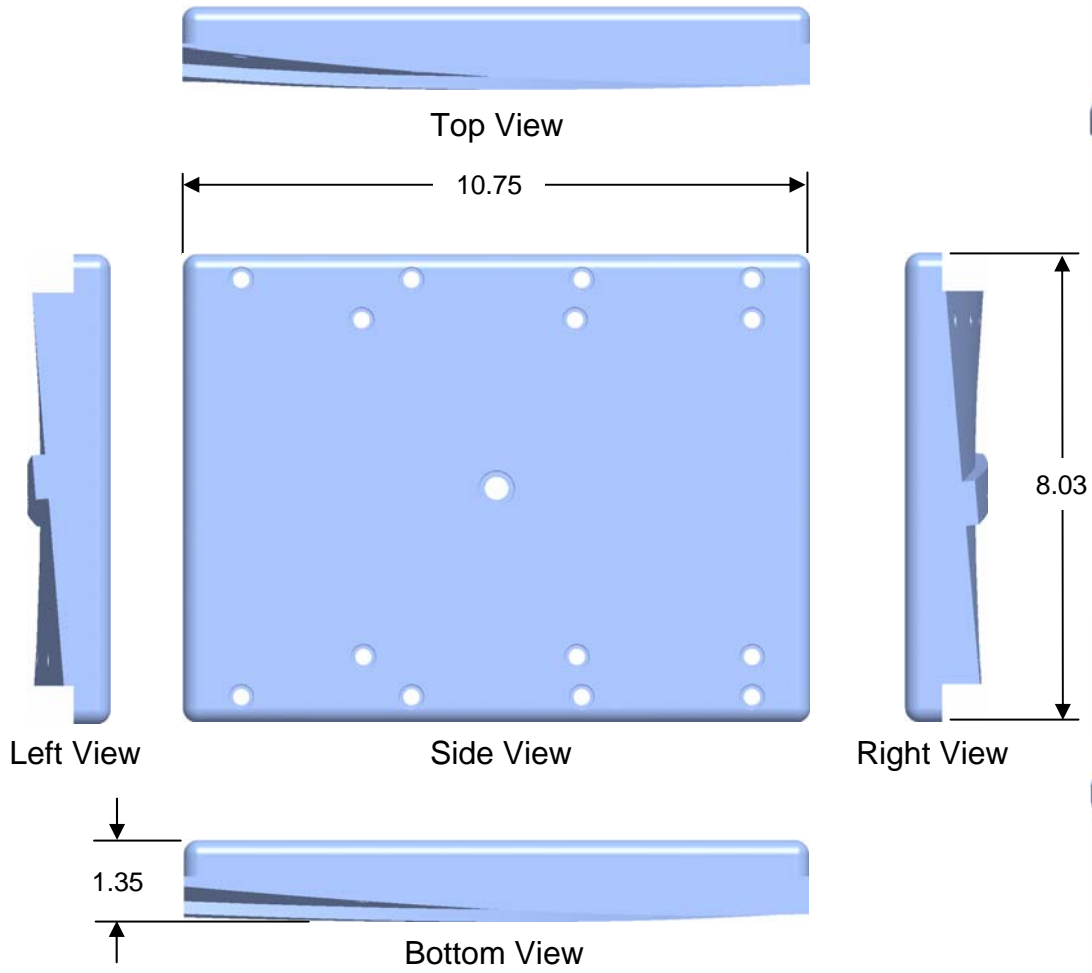
SE-142C-136

Upper Winding Blocks

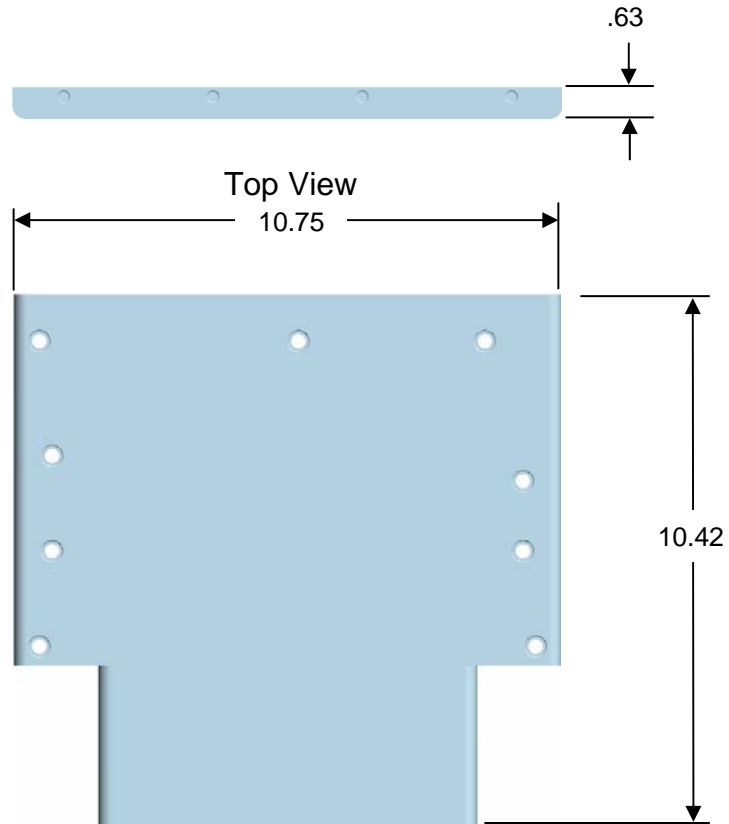
SE-142C-137



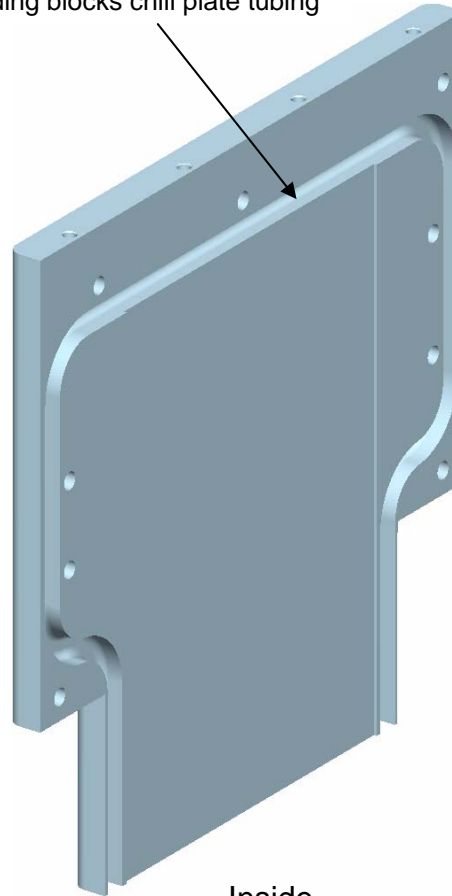
Top Plate



Side Plate

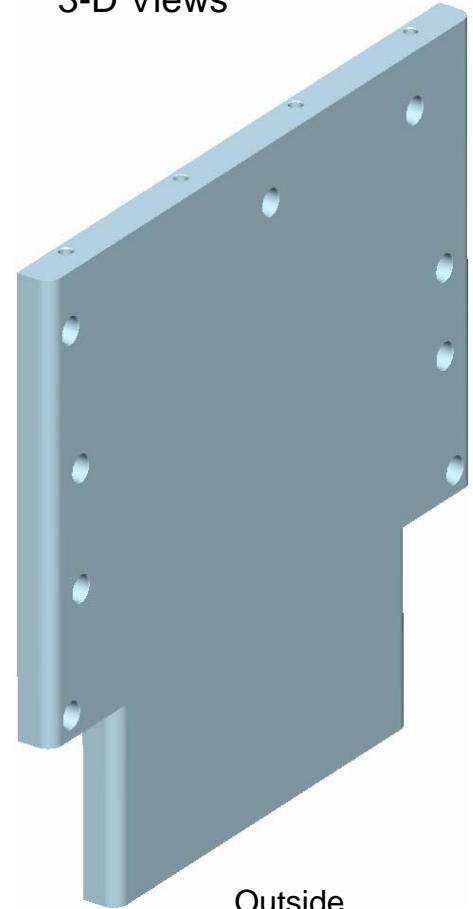


Recessed groove for winding blocks chill plate tubing



Inside

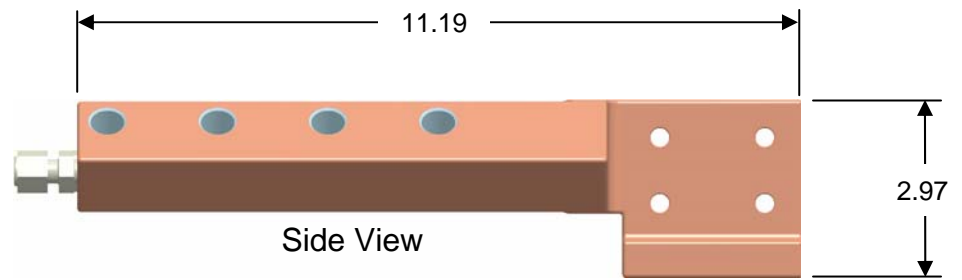
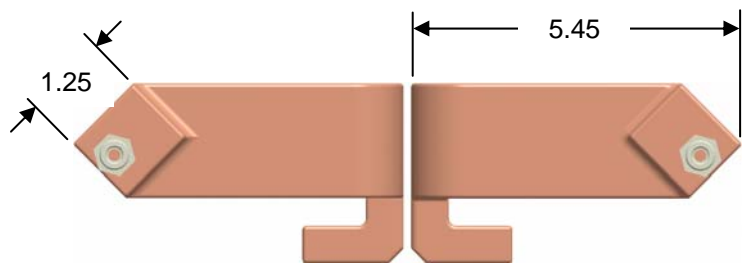
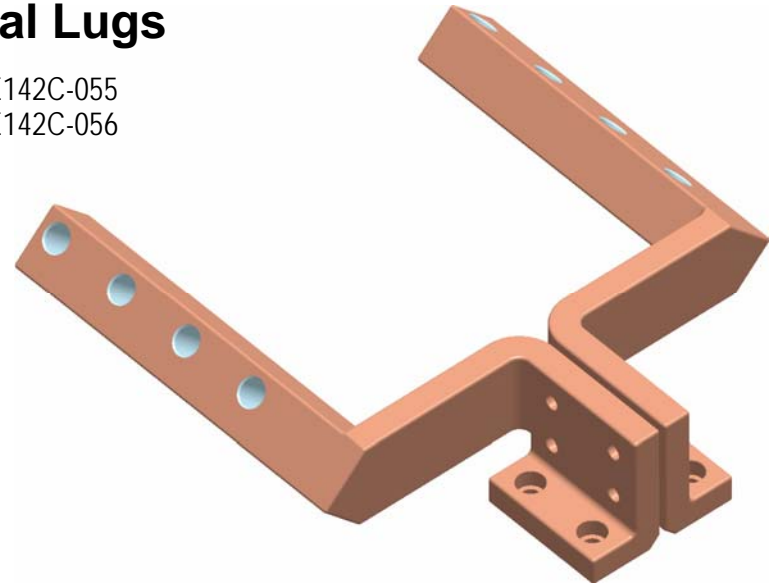
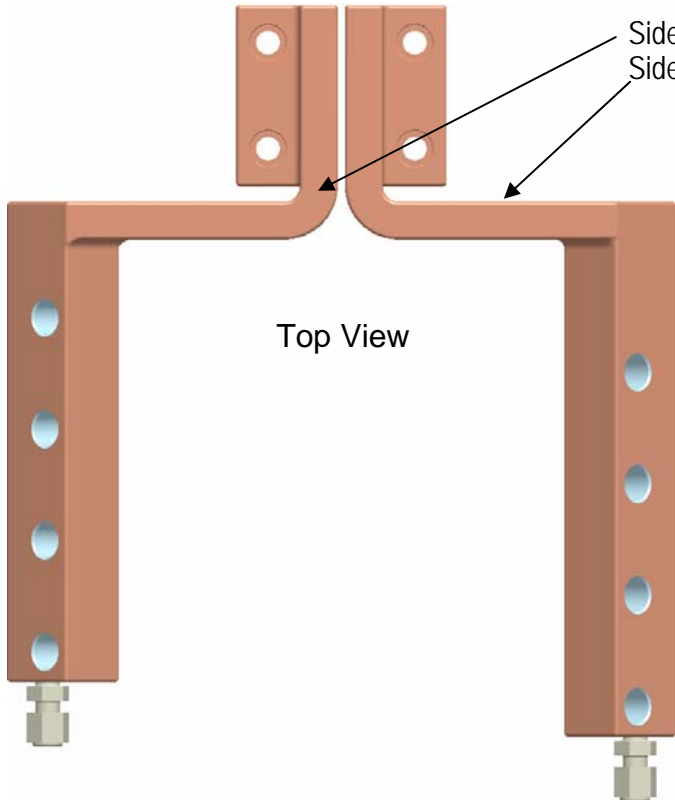
3-D Views

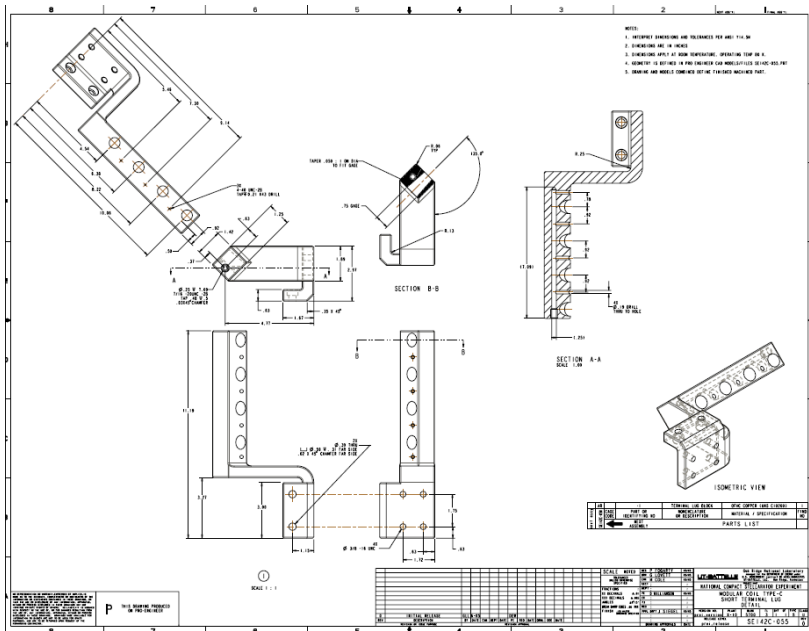


Outside

Terminal Lugs

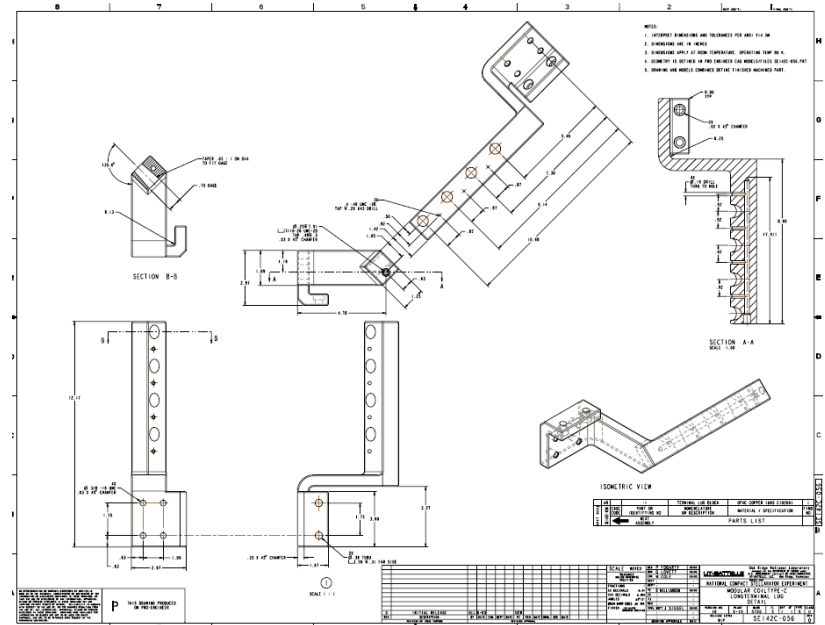
Side - A Dwg # SE142C-055
Side - B Dwg # SE142C-056





Terminal Lugs

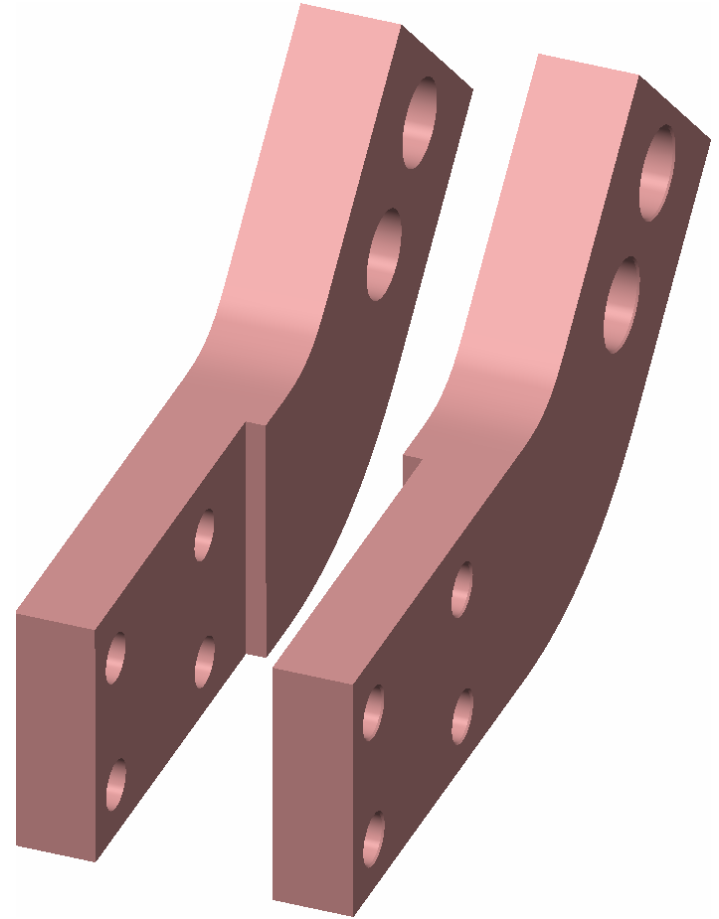
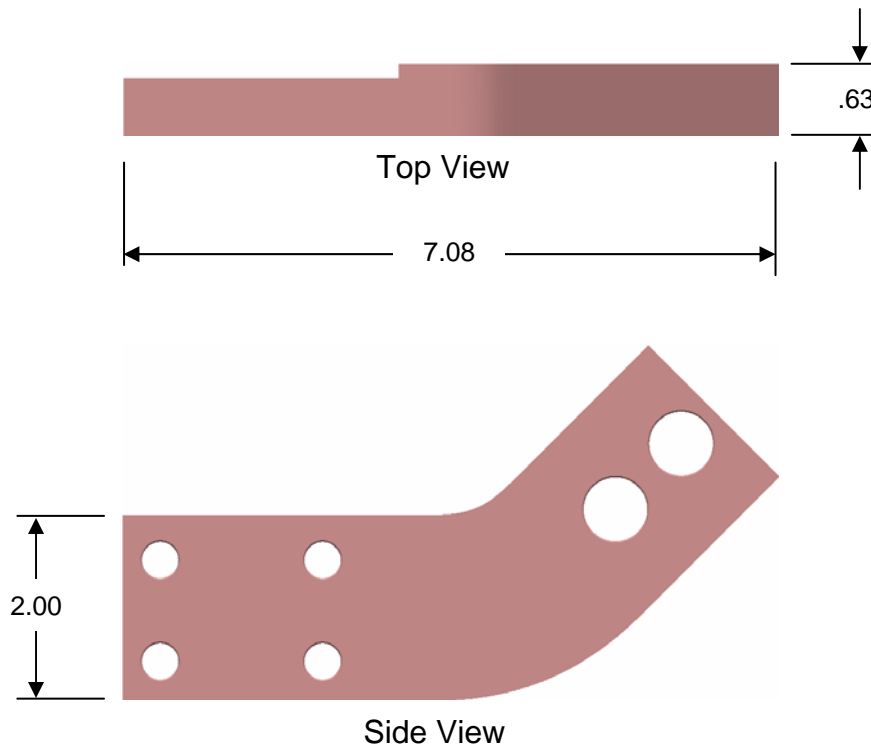
SE-142C-056



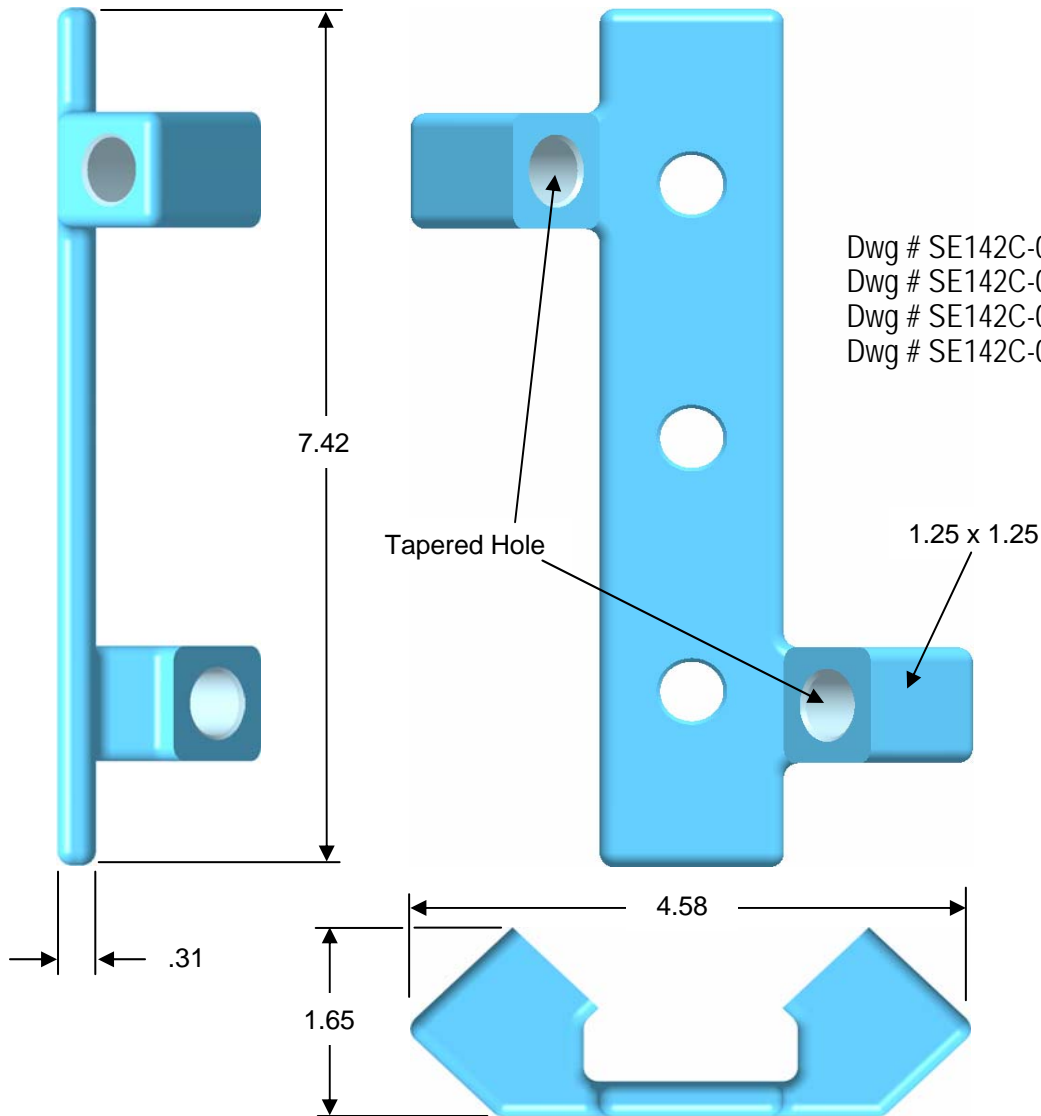
Terminal Splice Lugs

Side - A Dwg # SE142C-263

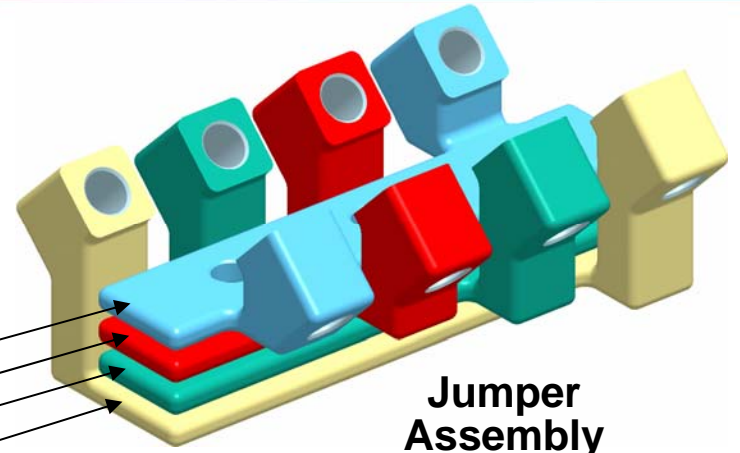
Side - B Dwg # SE142C-264



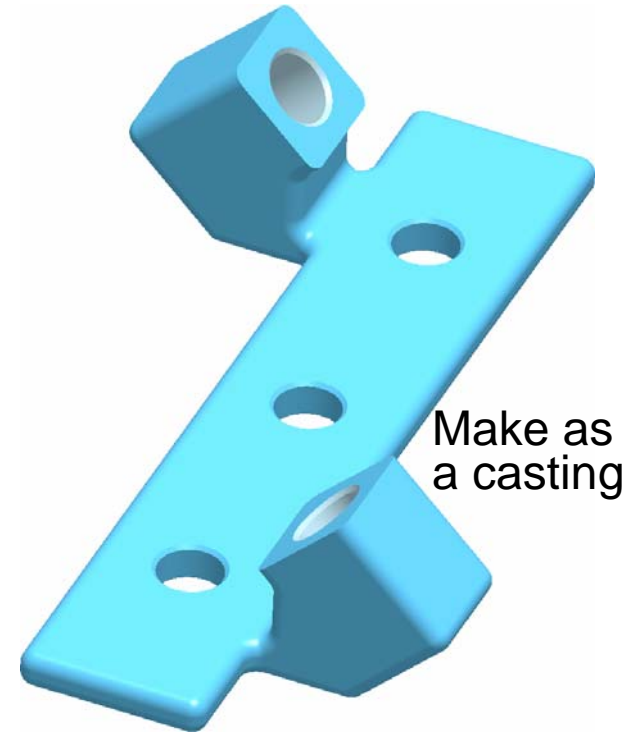
Jumper - 4



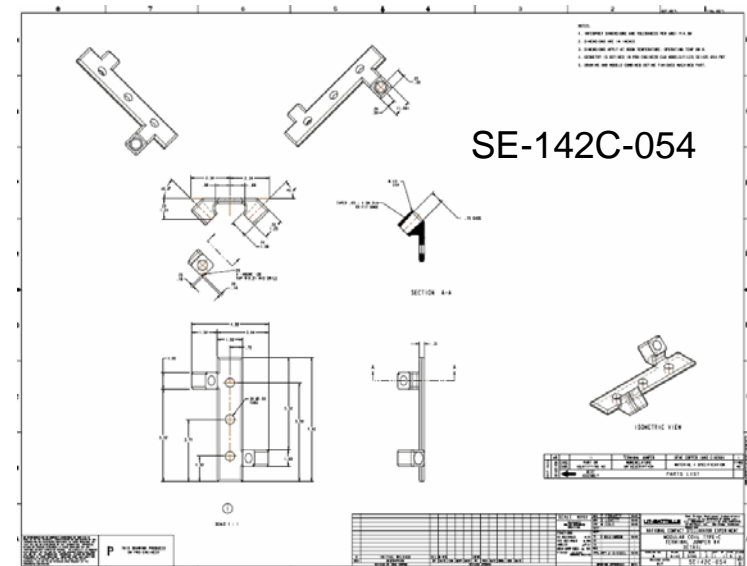
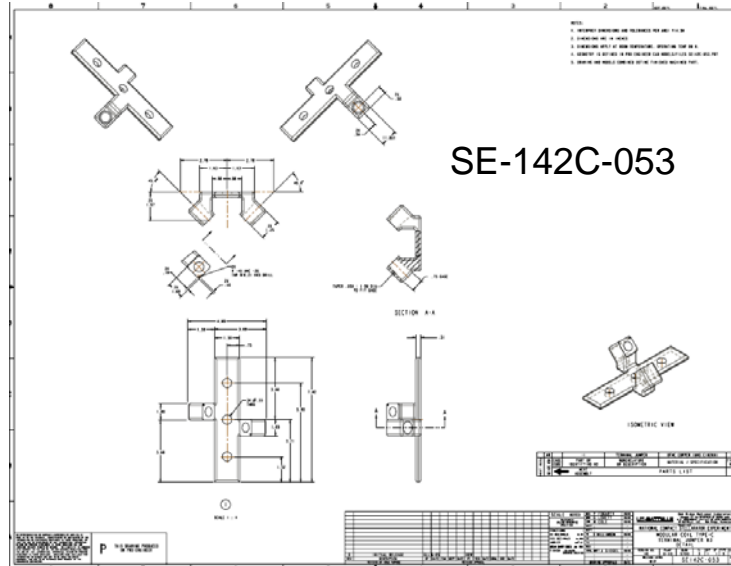
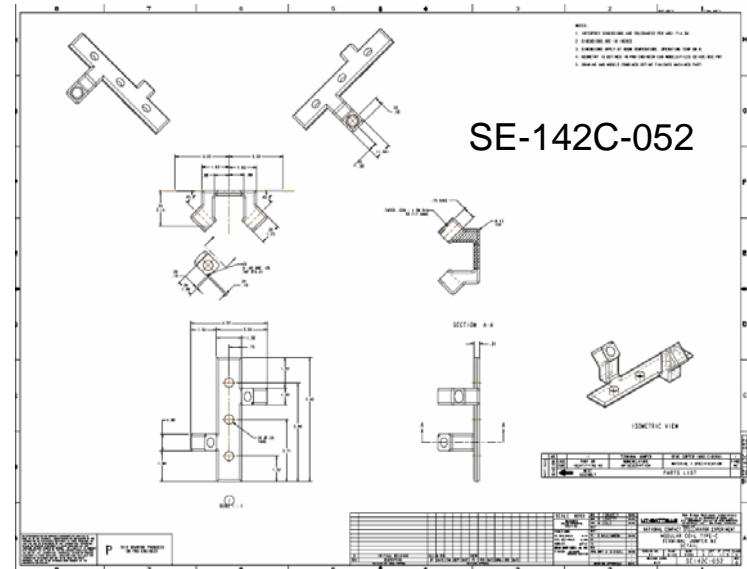
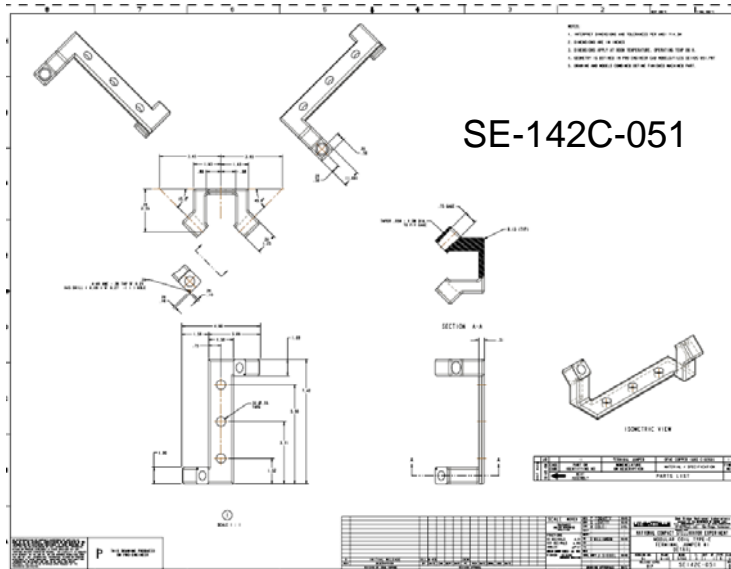
- Dwg # SE142C-054
- Dwg # SE142C-053
- Dwg # SE142C-052
- Dwg # SE142C-051



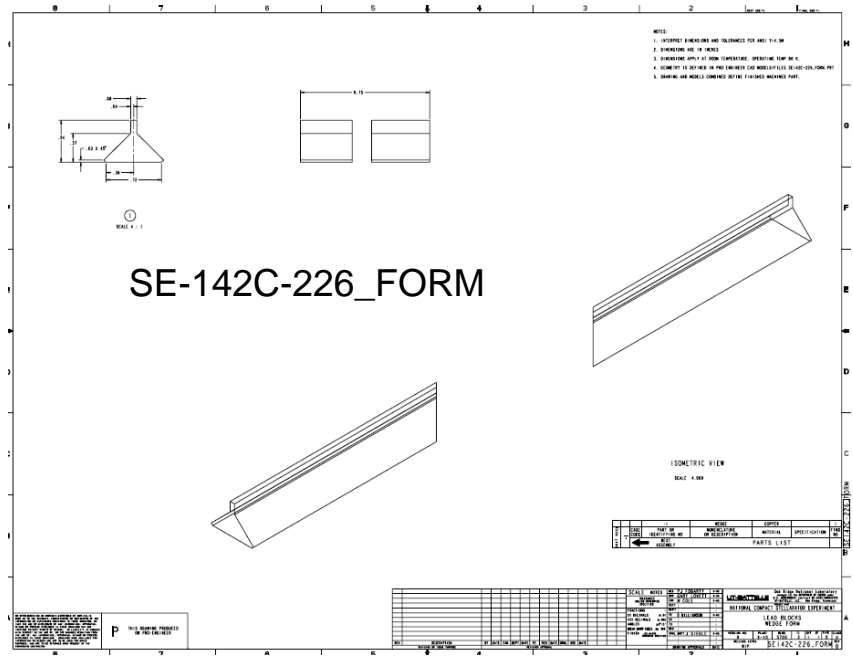
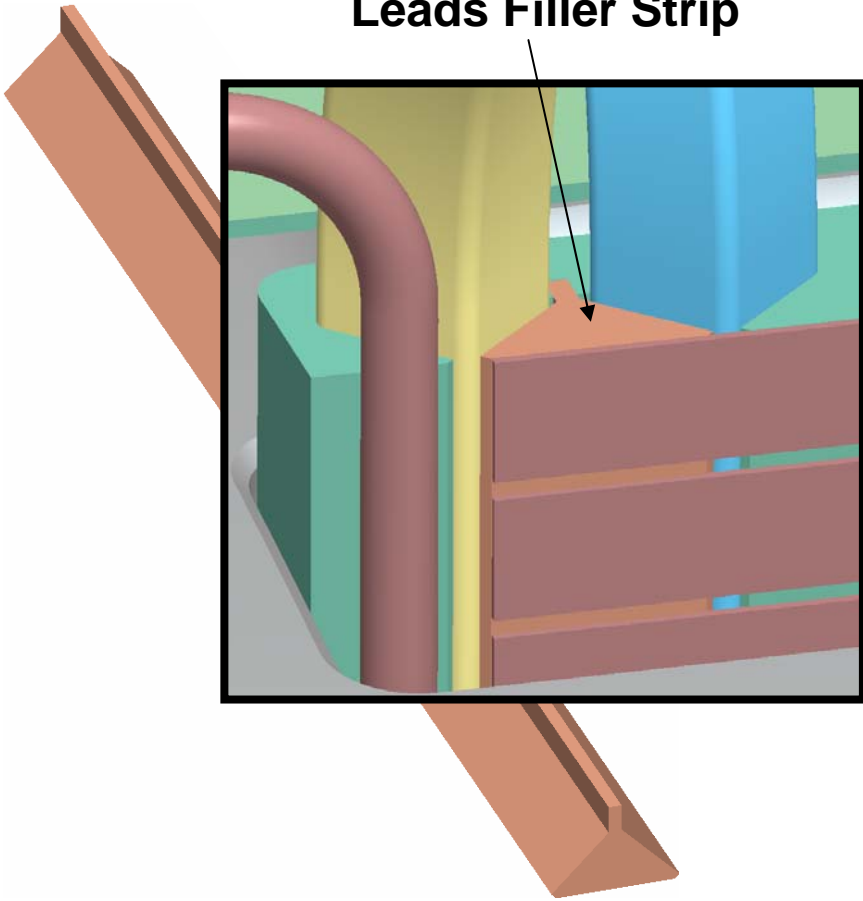
Jumper Assembly



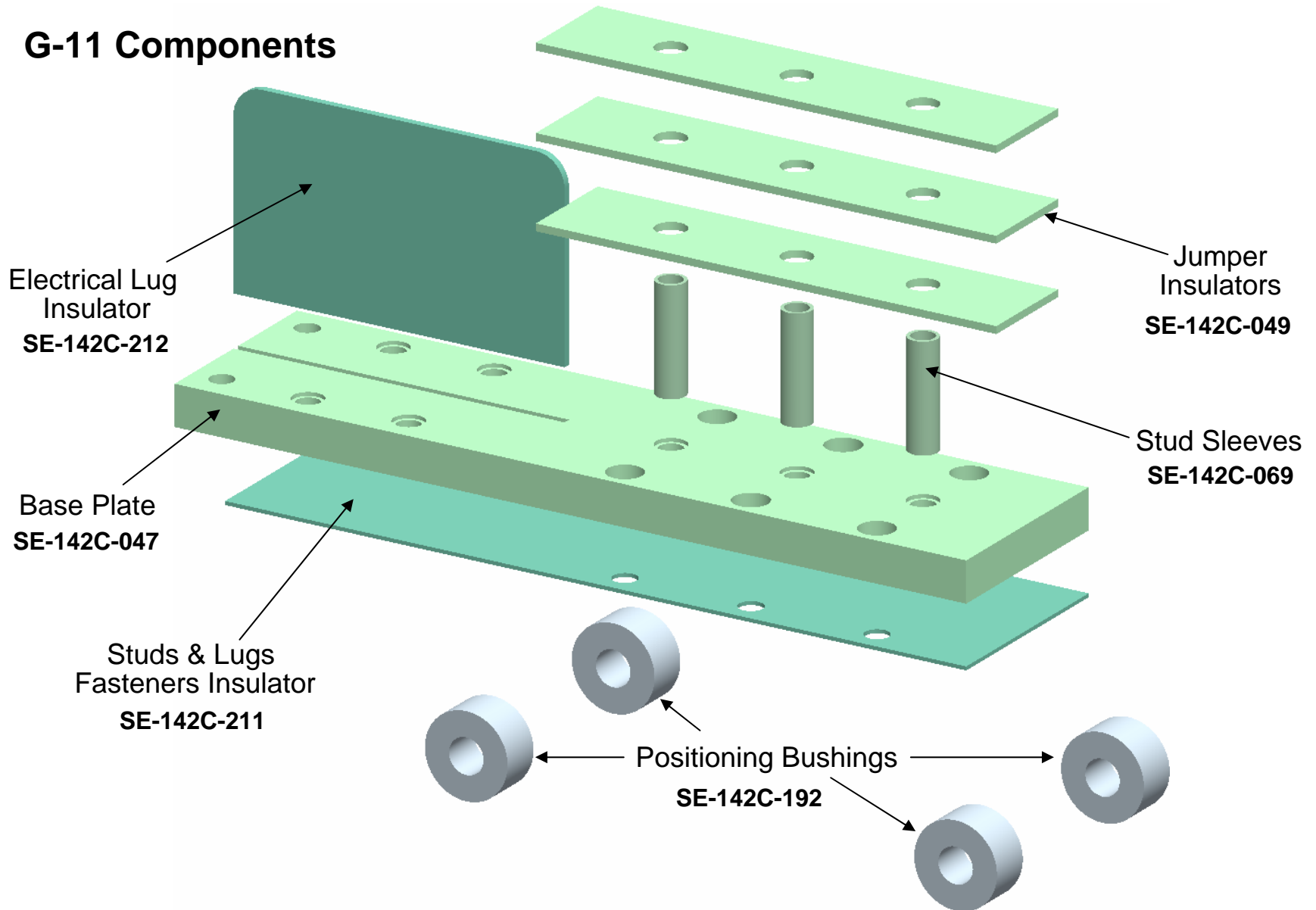
Terminal Jumpers



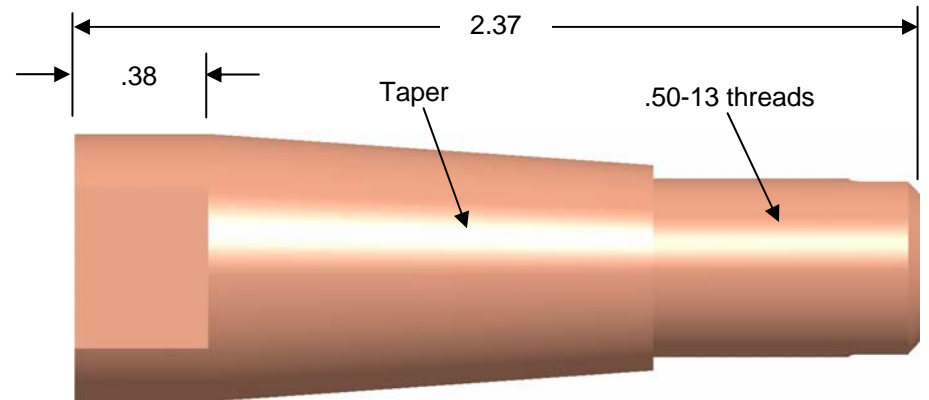
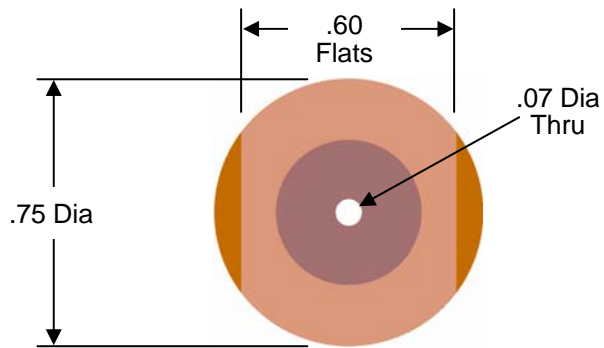
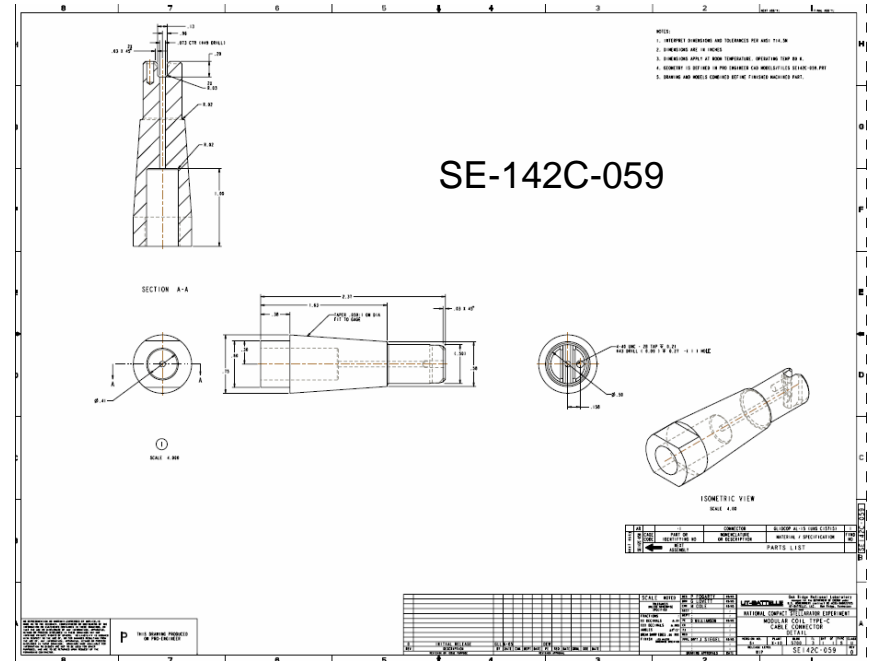
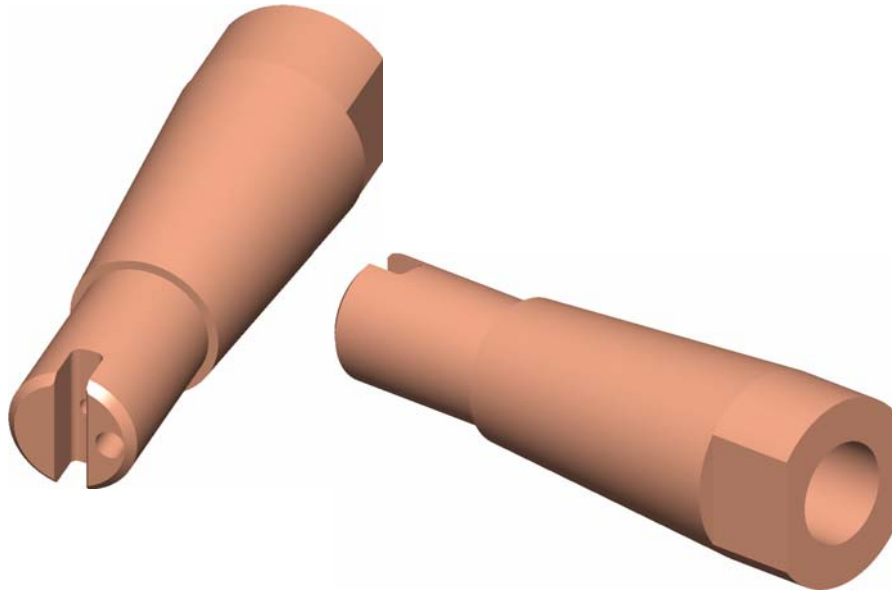
Leads Filler Strip



G-11 Components



Conductor Lead Nosecone



Da END