

SAFETY INSTRUCTIONS

ReliaGear® SB Switchboard



<p>ar</p> <p>تحذير: جهد كهربائي خطير! راجع تعليمات التشغيل. افصل الكهرباء وقم بتأمينها قبل العمل في هذا الجهاز. تنبيه! يجب عدم التركيب إلا من خلال شخص على دراية بمجال التقنية الكهربائية.</p>	<p>it</p> <p>Attenzione: Tensione pericolosa! Fare riferimento alle istruzioni per l'uso. Prima di intervenire su questo dispositivo, scollegare e isolare tutte le fonti di alimentazione. Attenzione! L'installazione deve essere eseguita esclusivamente da un installatore qualificato.</p>
<p>bg</p> <p>Предупреждение: Опасно напрежение! Вижте инструкциите за работа. Изключете и блокирайте захранването преди да работите с устройството. Внимание! Да се монтира само от експерт електротехник.</p>	<p>lt</p> <p>Įspėjimas: Pavojainga įtampa! Žr. naudojimo instrukcijas. Atjunkite ir laikinai užblokuokite maitinimą prieš dirbdami su šiuo įrenginiu. Dėmesio! Įrengti gali tik asmuo, turintis elektrotechnikos patirties.</p>
<p>cs</p> <p>Varování: Nebezpečné napětí! Viz návod k obsluze. Před zahájením prací na tomto zařízení odpojte a uzamkněte napájení. Pozor! Toto zařízení smí instalovat pouze osoba s elektrotechnickou odborností.</p>	<p>lv</p> <p>Bīdīnājums: Bīstams spriegums! Skatiet darba norādījumus. Pirms sākat darbu ar šo ierīci, atvienojiet un bloķējiet strāvas padevi. Uzmanību! Uzstādīšanu drīkst veikt tikai persona ar zināšanām par elektrotehniku.</p>
<p>da</p> <p>Advarsel: Farlig elektrisk spænding! Se installationsinstruktioner. Frakobl enheden, og afbryd strømforsyningen, før du arbejder med denne enhed. Giv agt! Installation må kun foretages af personer med elektroteknisk ekspertise.</p>	<p>nl</p> <p>Waarschuwing: Gevaarlijke spanning! Raadpleeg de installatie-instructies. Koppel dit apparaat los van de stroomvoorziening voordat u werkzaamheden uitvoert. Let op! Installatie mag alleen worden uitgevoerd door een monteur met elektrotechnische expertise.</p>
<p>de</p> <p>Warnung: Gefährliche Spannung! Siehe Installationsanleitung. Vor dem Arbeiten Gerät ausschalten und von der Spannungsversorgung trennen. Achtung! Installation nur durch elektrotechnische Fachkraft.</p>	<p>no</p> <p>Advarsel: Farlig spenning! Se i bruksanvisningen. Koble fra og steng av strømmen før du arbeider på denne enheten. Forsiktig! Montering skal kun utføres av kvalifiserte personer med elektrokompetanse.</p>
<p>el</p> <p>Προειδοποίηση: Επικίνδυνη τάση! Ανατρέξτε στις οδηγίες λειτουργίας. Αποσυνδέστε και απομονώστε την παροχή ισχύος προτού ξεκινήσετε τις εργασίες σε αυτήν τη συσκευή. Προσοχή! Η εγκατάσταση πρέπει να γίνεται μόνο από αδειούχο ηλεκτρολόγο εγκαταστάτη.</p>	<p>pl</p> <p>Ostrzeżenie: Niebezpieczne napięcie! Patrz: instrukcja instalacji. Przed rozpoczęciem wykonywania pracy z tym urządzeniem odłącz i zablokuj zasilanie. Uwaga! Montaż może wykonywać wyłącznie osoba posiadająca doświadczenie elektrotechniczne.</p>
<p>en</p> <p>Warning: Hazardous voltage! Refer to installation instructions. Disconnect and lock out power before working on this device. Attention! Installation by person with electrotechnical expertise only.</p>	<p>pt</p> <p>Aviso: Tensão perigosa! Consulte as instruções de instalação. Desconecte e desligue a energia elétrica antes de trabalhar nesse dispositivo. Atenção! A instalação deve ser feita apenas por uma pessoa com especialidade eletrotécnica.</p>
<p>es</p> <p>Advertencia: ¡Tensión peligrosa! Consulte las instrucciones de instalación. Antes de trabajar con este dispositivo, desconecte y bloquee la corriente. ¡Atención! La instalación debe ser realizada únicamente por un técnico electricista.</p>	<p>ro</p> <p>Avertisment: Tensiune electrică periculoasă! Consultați instrucțiunile de utilizare. Deconectați și închideți sursa de energie înainte de a lucra cu acest dispozitiv. Atenție! Instalarea trebuie realizată doar de către o persoană cu expertiză electrotehnică.</p>
<p>et</p> <p>Hoiatus: Elektrilöögi oht! Lisateavet vaadake kasutusjuhendist. Enne selle seadmega töötamist ühendage lahti ja lukustage toide. Tähelepanu! Seadet tohib paigaldada ainult elektrotehnilise kogemusega isik.</p>	<p>ru</p> <p>Предупреждение: Опасное электрическое напряжение! Обратитесь к инструкциям по монтажу. Отключите электропитание и обеспечьте безопасность перед началом работ. Внимание! Монтаж должен выполняться только специалистом по электротехническим работам.</p>
<p>fi</p> <p>Varoitus: Vaarallinen jännite! Katso asennusohje. atkaise virta ja estä virran kytkeneminen lukituksen avulla ennen töiden aloittamista. Huomio! Asennuksen saa suorittaa vain henkilö, jolla on kokemusta sähkötekniikasta.</p>	<p>sk</p> <p>Výstraha: Nebezpečné napätie! Pozrite si návod na použitie. Pred začatím prác na tomto zariadení odpojte a zablokujte napájanie. Pozor! Inštaláciu smie vykonávať len osoba s odbornými znalosťami v oblasti elektrotechniky.</p>
<p>fr</p> <p>Avertissement: Tension dangereuse! Consultez les consignes d'installation. Débranchez et verrouillez l'alimentation électrique avant d'entreprendre des travaux sur cet appareil. Attention! L'installation doit être effectuée uniquement par une personne ayant une expertise en électrotechnique.</p>	<p>sl</p> <p>Opozorilo: Nevarna napetost! Glejte navodila za uporabo. Pred delom na tej napravi izklopite in zaklenite električno napajanje. Pozor! Namestitev sme izvesti samo elektrotehnični strokovnjak.</p>
<p>hr</p> <p>Upozorenje: Opasan napon! Pogledajte upute za ugradnju. Odspojite i isključite struju prije rada na ovom uređaju. Pažnja! Ugradnja je dopuštena samo osobama stručnim u području elektrotehnike.</p>	<p>sv</p> <p>Varning: Livsfarlig spänning! Se i bruksanvisningen. Frånkoppla och blockera anläggning eller en anläggningsdel innan arbete utförs. Obs! Får endast installeras av behörig elektriker.</p>
<p>hu</p> <p>Figyelmeztetés: Veszélyes feszültség! Lásd a használati utasítást. Válassza le és zárja ki az áramellátást, mielőtt a berendezésen dolgozni kezd. Figyelem! Az üzembe helyezés csak elektrotechnikai szakértelemmel rendelkező személy végezheti el.</p>	<p>tr</p> <p>Uyarı: Tehlikeli gerilim! Montaj talimatlarına bakın. Bu cihaz üzerinde çalışmadan önce elektriği kesin ve kilitleyin. Dikkat! Yalnızca elektroteknik uzmanlığı sahip kişiler tarafından kurulabilir.</p>
<p>zh</p> <p>警告：高压危险！请参见操作手册。操作本设备前请断开并锁定电源。注意！安装仅限专业电工人员。</p>	<p>zh</p> <p>警告：高压危险！请参见操作手册。操作本设备前请断开并锁定电源。注意！安装仅限专业电工人员。</p>

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Target Audience

This document is intended for ABB customers and for professional recyclers.

Packaging

You can recycle all packing materials. To avoid pollution caused by unnecessary transportation, the factory does not take back packages. Contact your local ABB office for package recycling instructions if needed. ABB recommends package recycling as it preserves raw materials and reduces waste being landfilled.

Product manuals and sales brochures

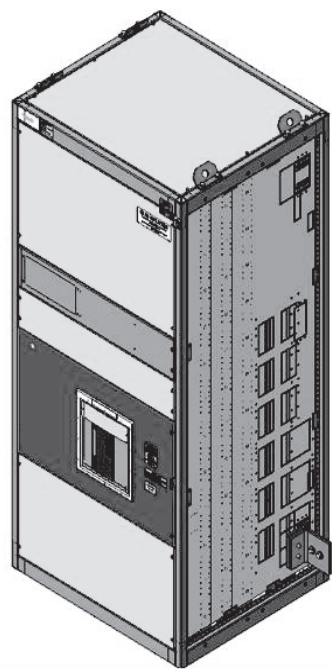
To save natural resources and reduce paper waste, all product manuals are available in ABB Library and on the Internet.

Disposal

The main parts of the switchboard can be recycled to preserve natural resources and energy. Product parts and materials should be dismantled and separated. Generally all metals, such as steel, aluminium, copper and its alloys, and precious metals can be recycled as material. Plastics, rubber, cardboard and other packaging material can be used in energy recovery.

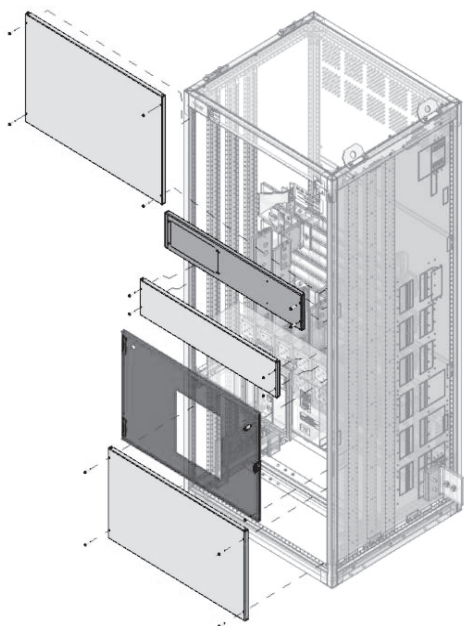
To aid recycling, plastic parts are marked with an appropriate identification code. Contact your local ABB distributor for further information on environmental aspects. End of life treatment must follow international and national regulations.

Main Dismantling Instructions.
ReliaGear® SB Switchboard Individually Mounted Breaker Sections.



Outline:

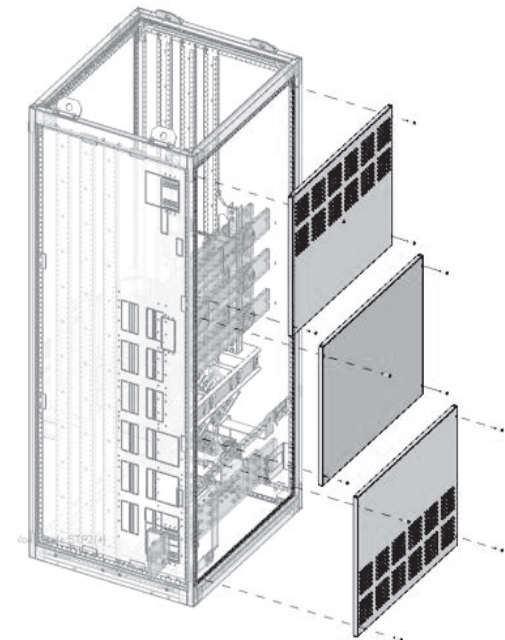
- 1. Cover and Barrier removal.
- 2. Neutral and ground bus bar removal.
- 3. Lug strap, run back, and riser removal.
- 4. Horizontal main bus removal.
- 5. Breaker removal.
- 6. Frame removal.

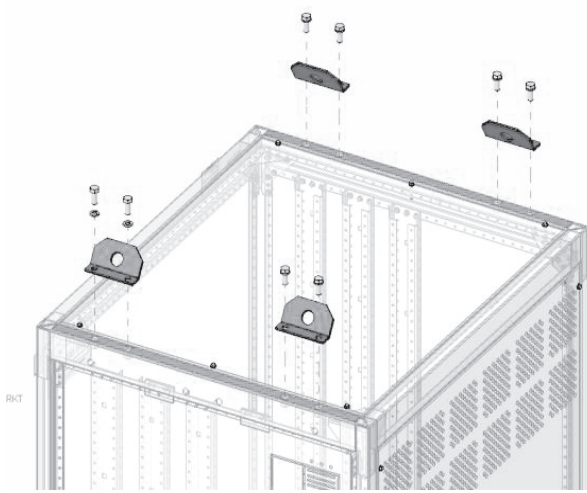


1. Remove all the covers from the switchboard by removing the screws located at the sides of each cover.

Note: To remove the panel door, it is necessary to remove the hinges of each door as needed.

Parts	Category	Materials
Hardware	Metal	Steel
Front/Rear/ Side Covers	Metal	Steel

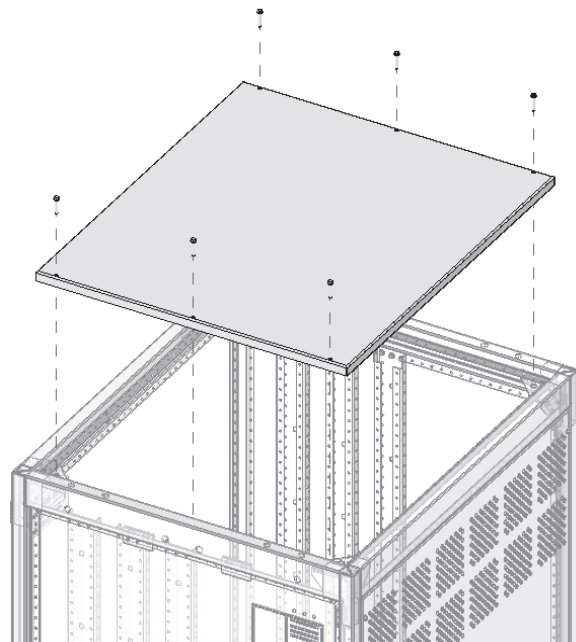




- Remove the 4 lifting brackets by removing the 2 bolts for each.

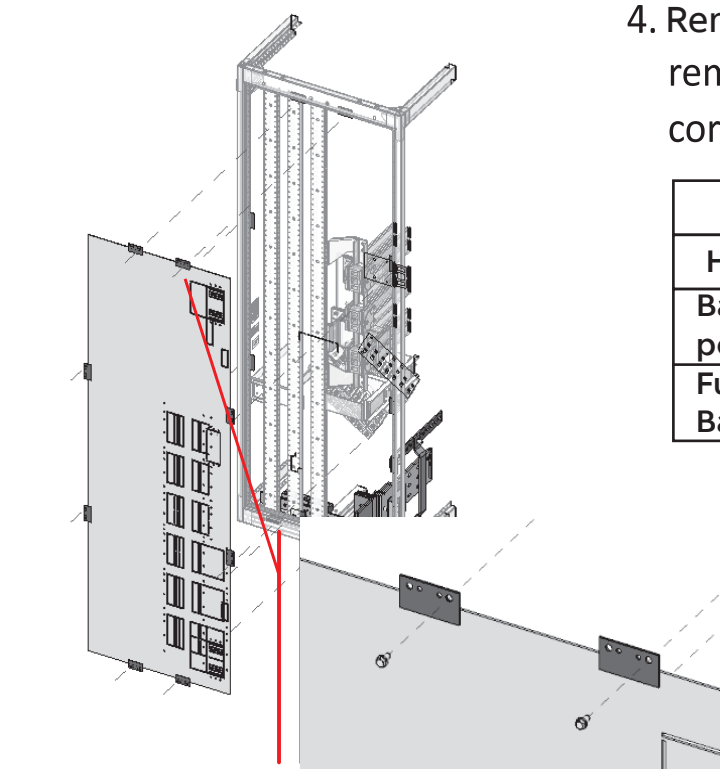
Parts	Category	Materials
Hardware	Metal	Steel
Lifting Brackets	Metal	Steel

Note: Roof is hidden for clarity.



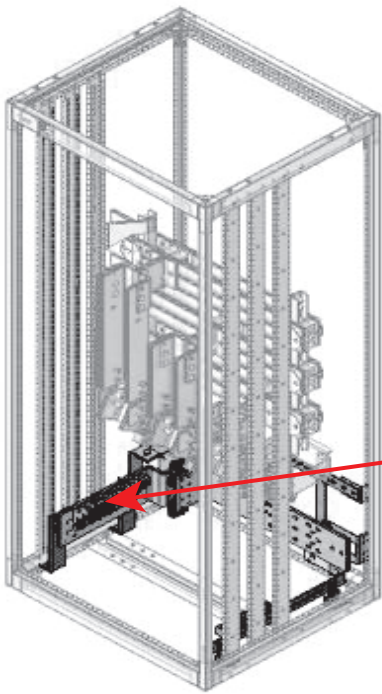
- Remove the 6 screws located at the sides of the Top Cover and Remove.

Parts	Category	Materials
Hardware	Metal	Steel
Top Cover	Metal	Steel



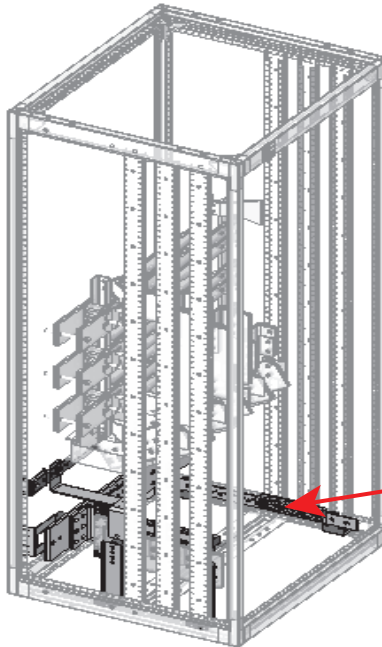
- Remove the full height barriers as needed by removing the screws and brackets located at the corner post and depth posts

Parts	Category	Materials
Hardware	Metal	Steel
Barrier Supports	Metal	Steel
Full Height Barrier	Plastic	Glass Reinforced Polyester



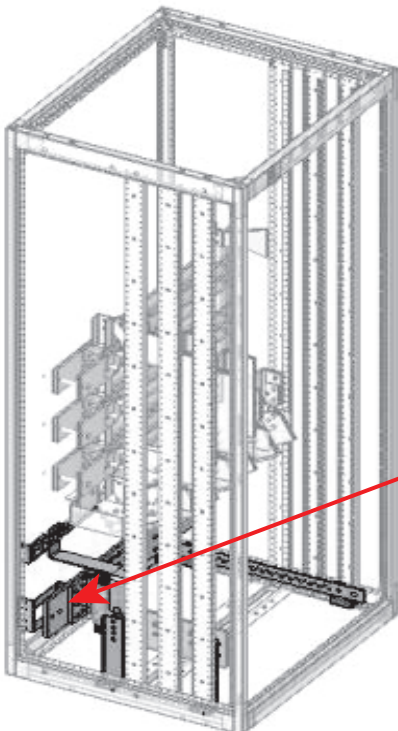
5. Remove the lugs mounted on auxiliary neutral assembly by removing the hardware for each.

Parts	Category	Materials
Hardware	Metal	Steel
Lugs	Metal	Copper/ Aluminum



6. Remove the lugs mounted on the auxiliary ground by removing the hardware for each.

Parts	Category	Materials
Hardware	Metal	Steel
Lugs	Metal	Copper/ Aluminum



7. Remove the auxiliary neutral by first removing the bolts connecting the bar to the rear horizontal neutral.

Parts	Category	Materials
Hardware	Metal	Steel
Neutral Bus Bars	Metal	Copper/ Aluminum

8. Continue by removing the mounting hardware attached to the brackets , remove the bonding jumper (if applicable) by removing the bolts on each end , remove the neutral bus bars, and lastly remove the mounting brackets attached to the depth post.

Parts	Category	Materials
Hardware	Metal	Steel
Ground Bus Bars	Metal	Copper/ Aluminum
Ground Bus Bars	Metal	Copper/ Aluminum
Brackets	Metal	Steel

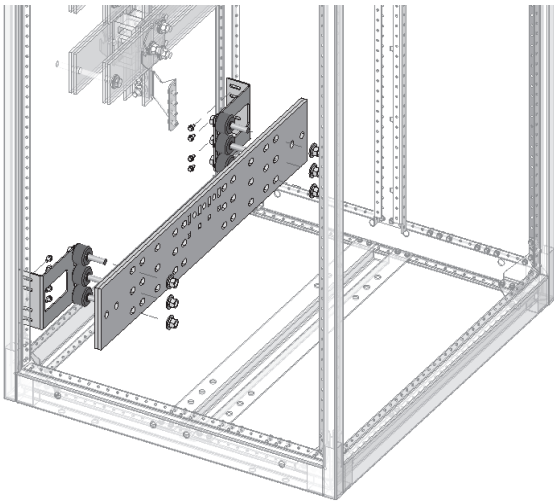
9. Remove the auxiliary ground by first removing the bolts between the bar and the brackets (1), continue by removing the screws connecting the brackets to the depth post (2) and finally remove the riser by removing the rear bolts (3)

Parts	Category	Materials
Hardware	Metal	Steel
Ground Bus Bars	Metal	Copper/ Aluminum
Ground Bus Bars	Metal	Copper/ Aluminum
Brackets	Metal	Steel

Note: Corner posts are hidden for clarity

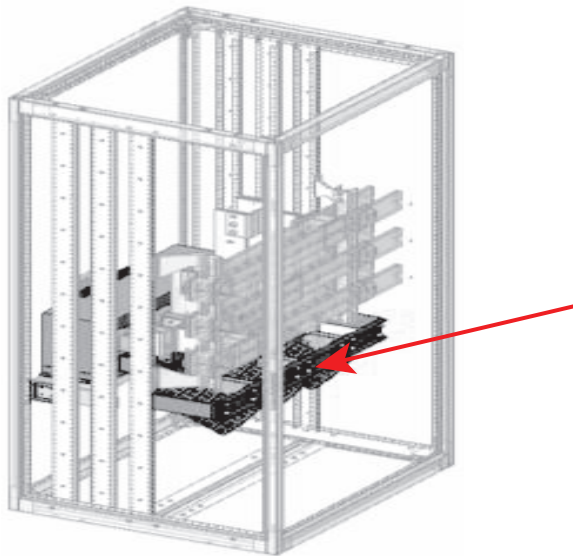
10. Remove the horizontal ground bar by removing the bolts at each end of the bar and continue with by removing screws connecting the brackets to the corner posts.

Parts	Category	Materials
Hardware	Metal	Steel
Ground Bus Bars	Metal	Copper/ Aluminum
Brackets	Metal	Steel



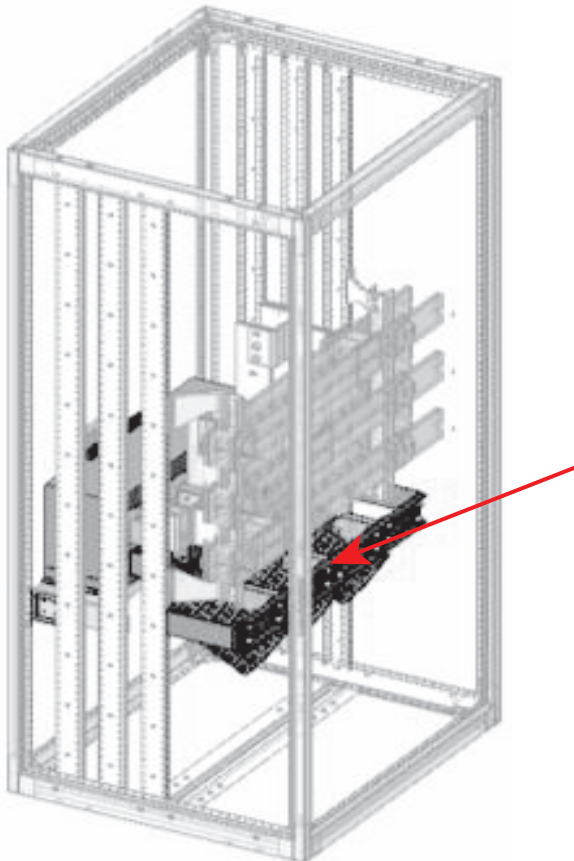
11. Remove the rear horizontal neutral by removing the hardware located at each end of the neutral bar, then remove the screws and brackets attached to the corner posts.

Parts	Category	Materials
Hardware	Metal	Steel
Neutral Bus Bars	Metal	Copper/ Aluminum
Brackets	Metal	Steel



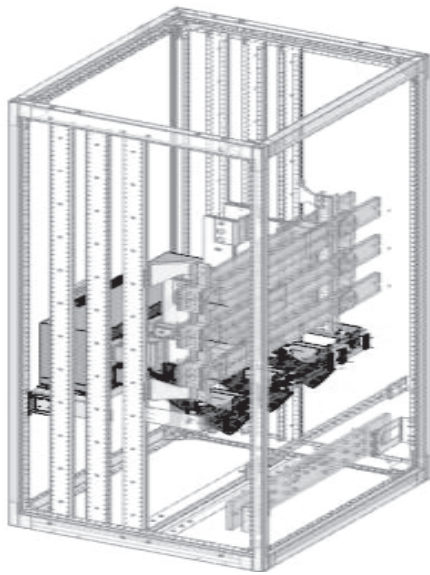
12. If applicable, begin removal of the lug strap assembly by first removing all the lugs mounted to the bus bars

Parts	Category	Materials
Hardware	Metal	Steel
Lugs	Metal	Copper/ Aluminum



13. Remove the hardware connecting the rear mounting brackets to each lug strap (1), remove hardware and the red insulator ("C" shape) from the brackets attached to the stringers (2), lastly remove rear mounting the brackets from each lug strap (3).

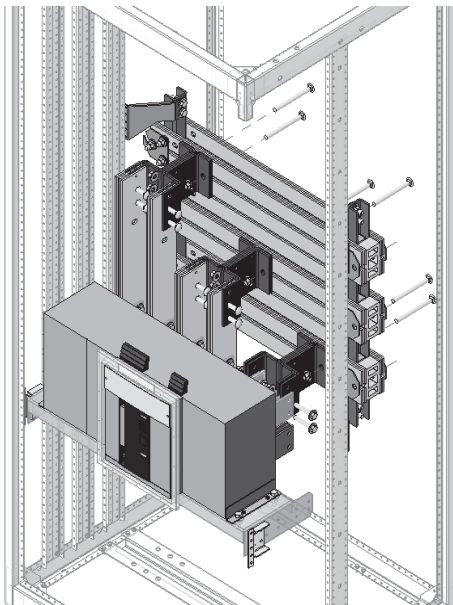
Parts	Category	Materials
Hardware	Metal	Steel
Mounting Brackets	Metal	Steel
Bracing	Plastic	Glass Reinforced Polyester
Mounting Brackets	Metal	Steel



14. Remove the lug strap hardware at each breaker terminal starting from phase “A”, followed by phase “B”, and then phase “C”.

Parts	Category	Materials
Hardware	Metal	Steel
Lugsstrap Bus Bars	Metal	Copper/ Aluminum

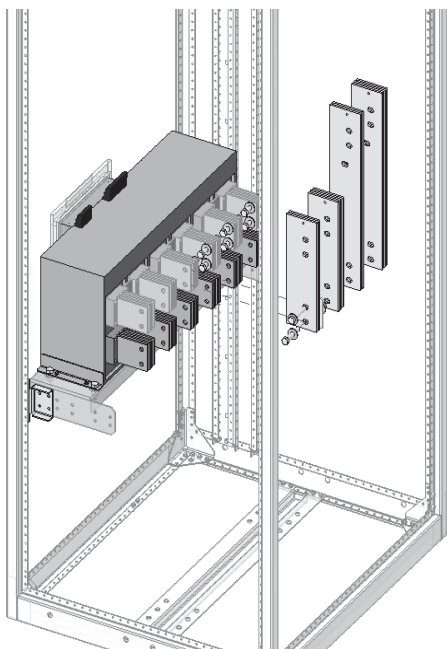
Note: Main Bus and surrounding components are hidden for clarity



15. Remove the run-backs by first removing the hardware connecting the bus bars to the main bus followed by the hardware connecting to the risers.

Parts	Category	Materials
Hardware	Metal	Steel
Run Back Bus Bars	Metal	Copper/ Aluminum

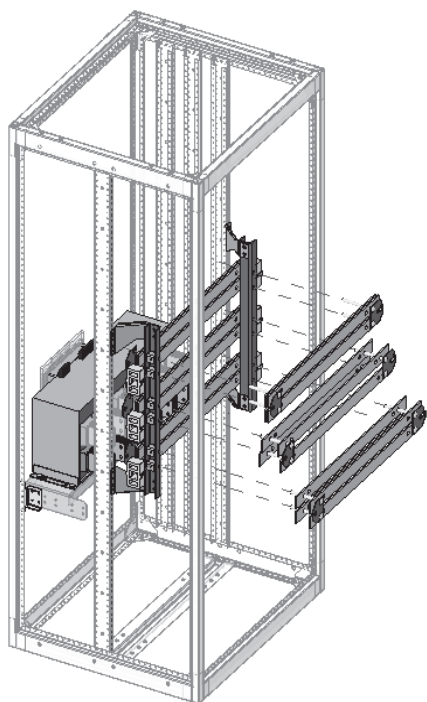
Note: Corner post hidden for clarity



16. Remove the hardware and risers at each breaker terminal.

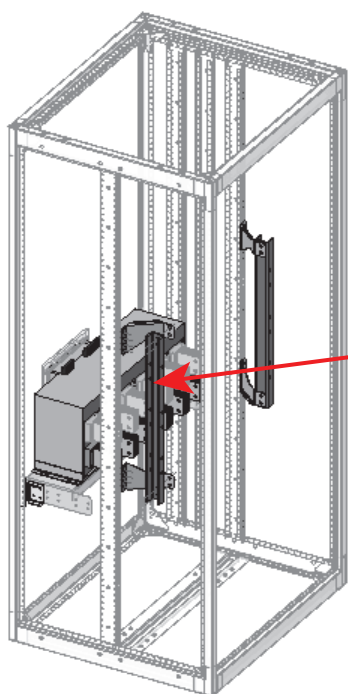
Parts	Category	Materials
Hardware	Metal	Steel
Riser Bus Bars	Metal	Copper/ Aluminum

Note: Main bus hidden for clarity



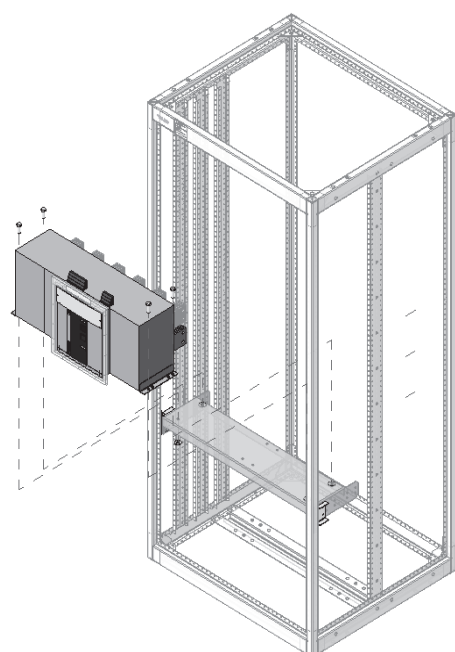
17. Disassemble the main horizontal bus starting from the top. Remove the hardware at each side for each set of laminations and then remove the bus bars. Continue with the remaining phases.

Parts	Category	Materials
Hardware	Metal	Steel
Main BusBars	Metal	Copper
Brackets	Metal	Steel/ Aluminum
Spacers	Metal	Copper/ Aluminum



18. Remove the main bus bracing by first removing the 4 bolts for each brace and then remove the screws from the four brackets attached to the stringers or corner posts.

Parts	Category	Materials
Hardware	Metal	Steel
Vertical-Bracing	Plastic	Glass Reinforced Polyester
Brackets	Metal	Steel

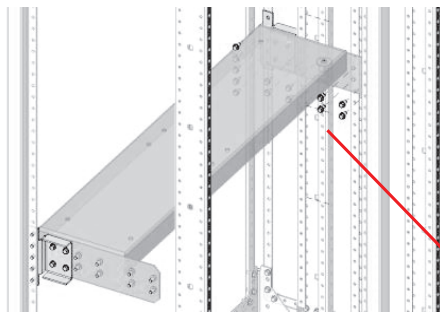


19. Remove the breaker from the baseplate by first removing the hardware at each side of the breaker.

Parts	Category	Materials
Hardware	Metal	Steel
Circuit-Breaker	Electrical	Copper/Aluminum/Steel/ Plastic

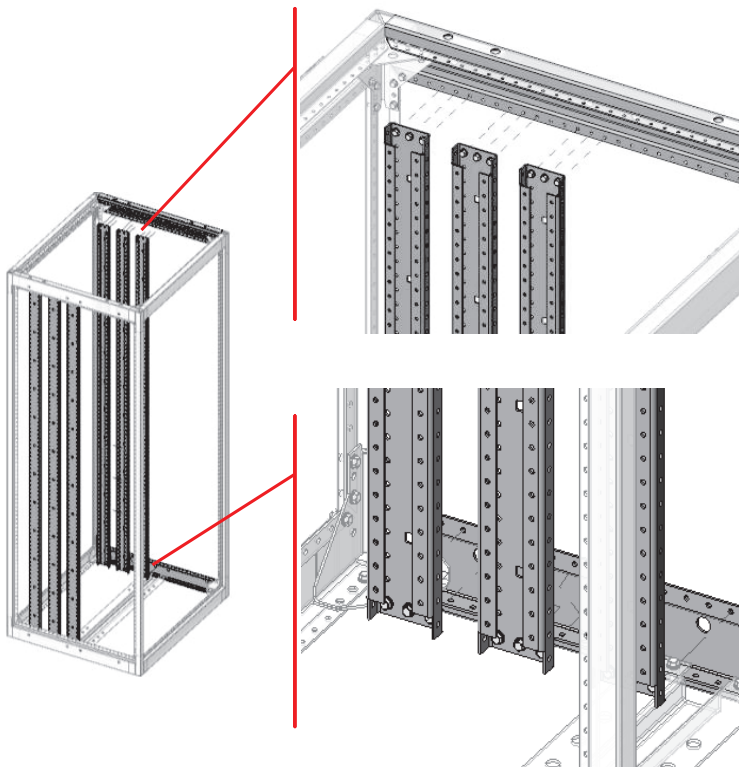
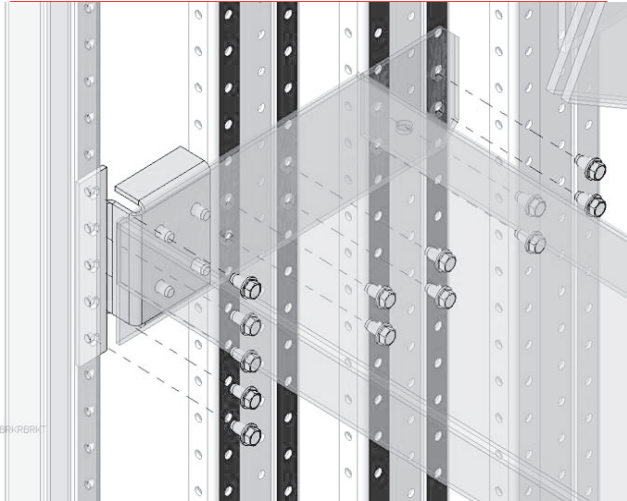
Note:

A Crane, hoist etc. should be used to secure the breaker during removal



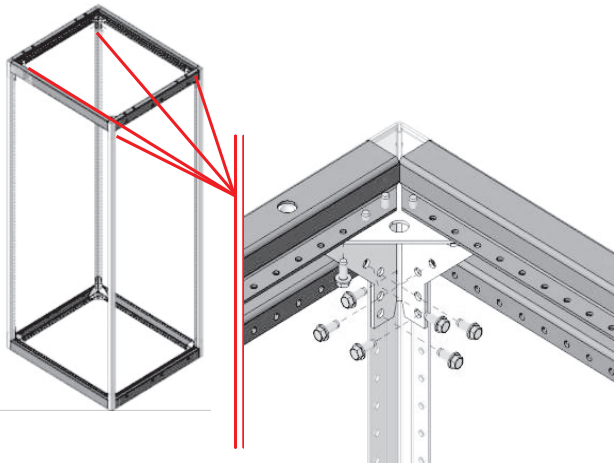
20. Remove the breaker base plate by removing all the hardware connecting it to the side brackets and stringers. Then remove the side brackets attached to each corner post.

Parts	Category	Materials
Hardware	Metal	Steel
MountingPlate	Metal	Steel
Side Brackets	Metal	Steel



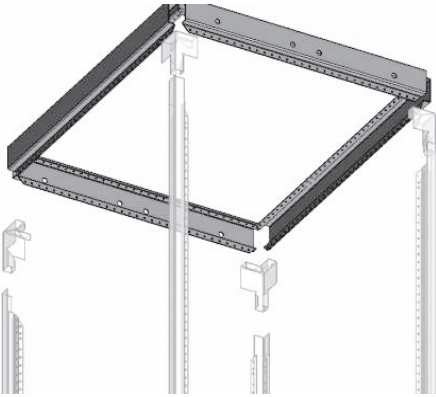
21. Remove each stringer by removing the 6 screws attaching it to the depth posts (3 at the top and 3 at the bottom).

Parts	Category	Materials
Hardware	Metal	Steel
Stringers	Metal	Steel



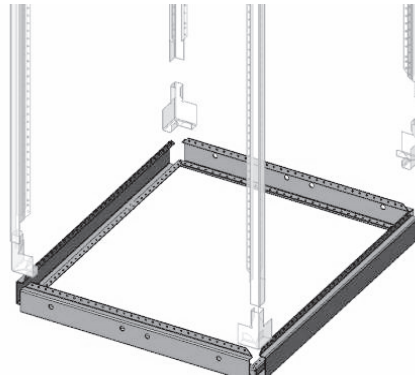
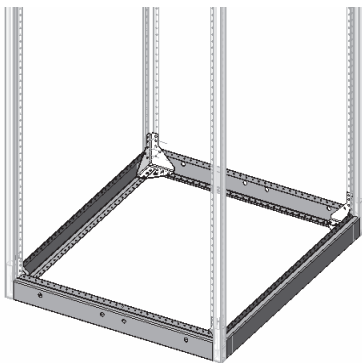
22. Remove the hardware and 4 gussets located in each top corner of the section.

Parts	Category	Materials
Hardware	Metal	Steel
Gussets	Metal	Steel



23. Remove the top portion of the enclosure by sliding upwards. Pull apart the assembly to separate the width and depth posts.

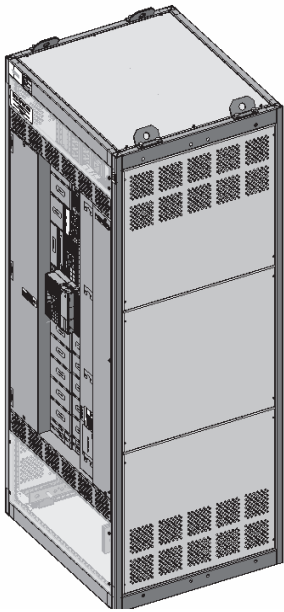
Parts	Category	Materials
Hardware	Metal	Steel
Gussets	Metal	Steel
Posts	Metal	Steel



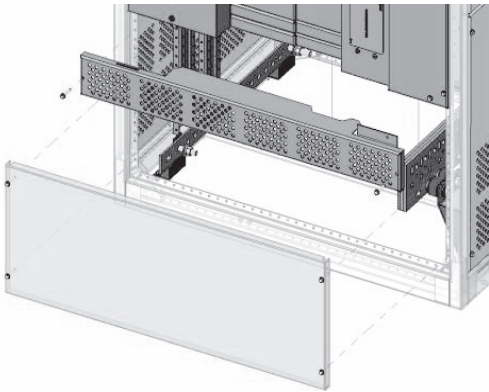
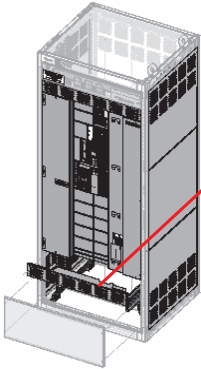
24. Remove each corner post and pull apart the remaining assembly to separate the width and depth posts.

Parts	Category	Materials
Hardware	Metal	Steel
Gussets	Metal	Steel
Posts	Metal	Steel

Distribution Dismantling Instructions
ReliaGear Switchboard Distribution Sections.

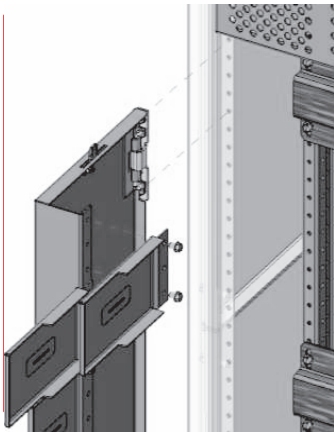
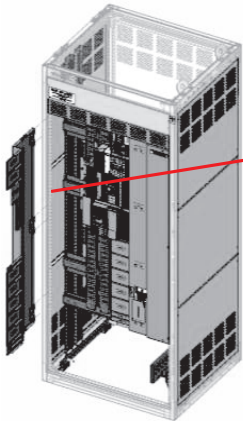


- Outline:
- 1. Cover and Barrier removal.
 - 2. Blanks, filler, and breaker removal.
 - 3. Strap/Run back and panelboard interior removal.
 - 4. Neutral and ground bus bar removal.
 - 5. Horizontal main bus removal.
 - 6. Frame removal.

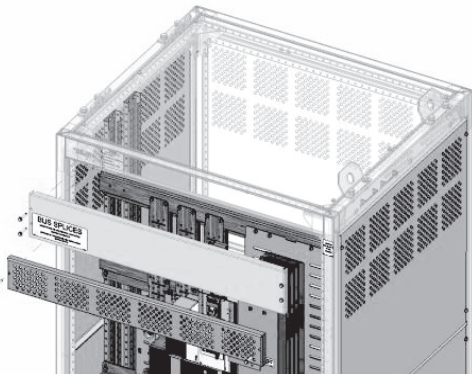
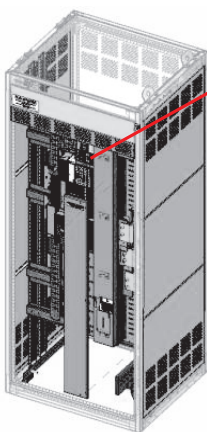


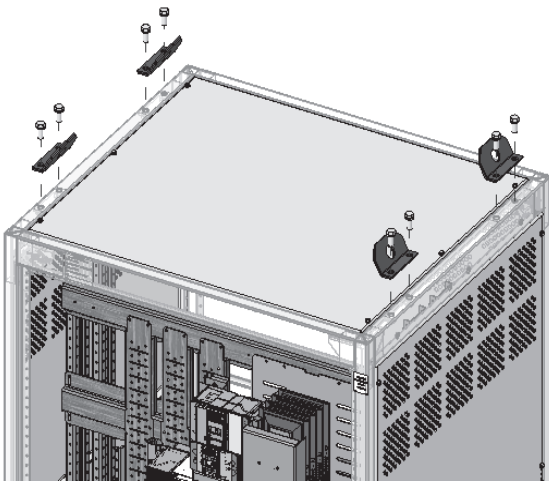
1. Remove all the covers from the switchboard by removing the screws located at the sides of each cover.

Parts	Category	Materials
Hardware	Metal	Steel
Front/Rear /SideCovers	Metal	Steel



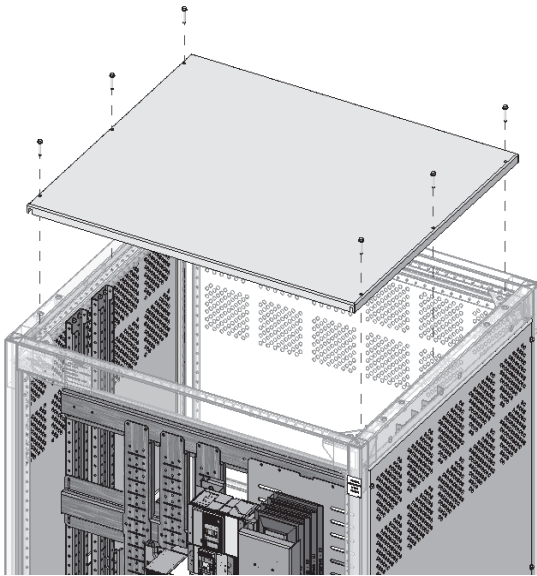
Note: To remove the panel door, it is necessary to remove the hinges of each door as needed.





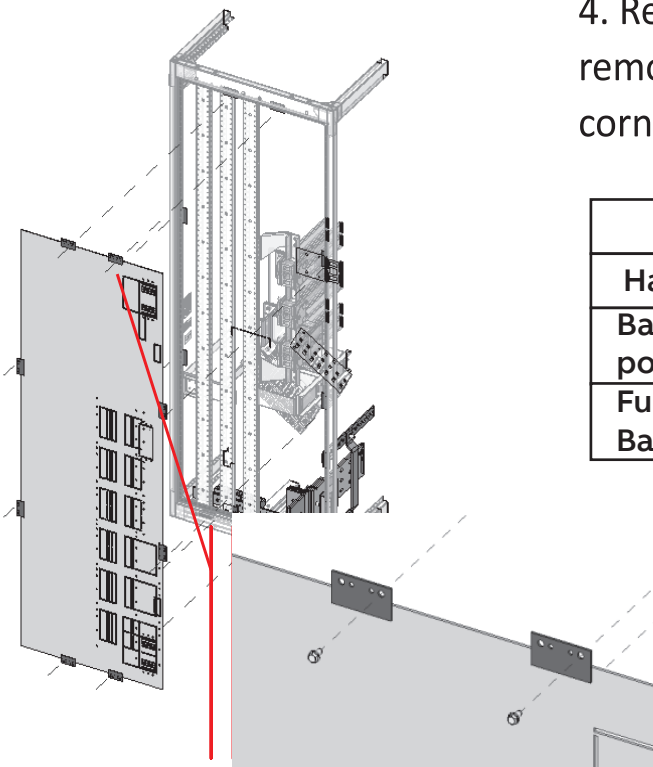
2. Remove the 4 lifting brackets by removing the 2 bolts for each.

Parts	Category	Materials
Hardware	Metal	Steel
Lifting Brackets	Metal	Steel



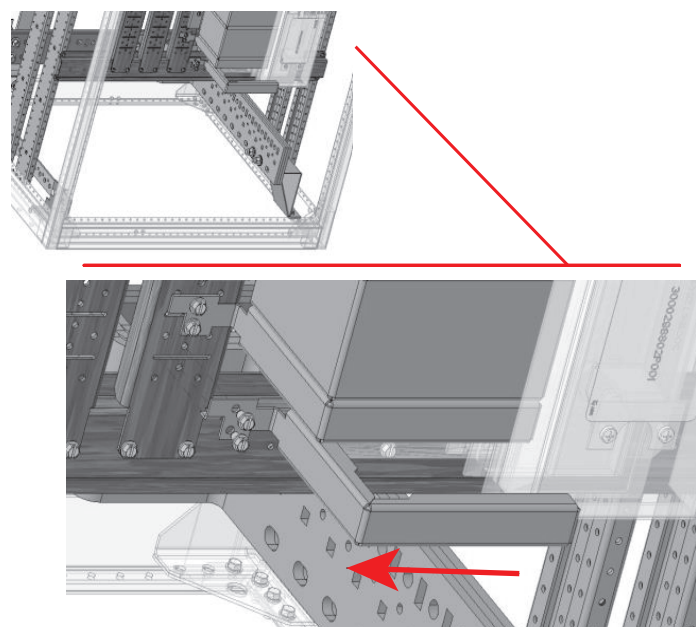
3. Remove the 6 screws located at the sides of the top cover and remove the top cover.

Parts	Category	Materials
Hardware	Metal	Steel
Top Cover	Metal	Steel



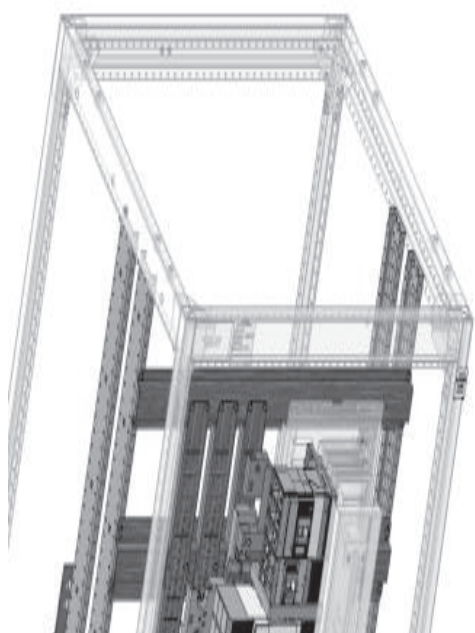
4. Remove the full height barriers as needed by removing the screws and brackets located at the corner and depth posts.

Parts	Category	Materials
Hardware	Metal	Steel
Barrier Supports	Metal	Steel
Full Height Barrier	Plastic	Glass Reinforced Polyester



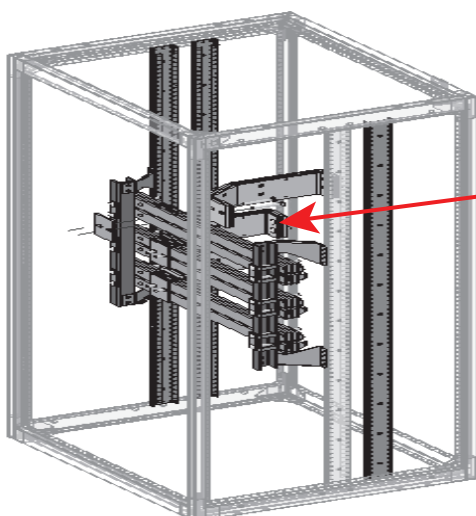
5. Remove all the fillers/blanks located between breakers by removing the screws attached to the panelboard interior frame and sliding in the opposite direction from the panelboard interior.

Parts	Category	Materials
Hardware	Metal	Steel
Blanks/Fillers	Metal	Steel



6. Remove all the breakers by removing the screws attached to the panelboard interior frame and sliding in the opposite direction from the panelboard interior.

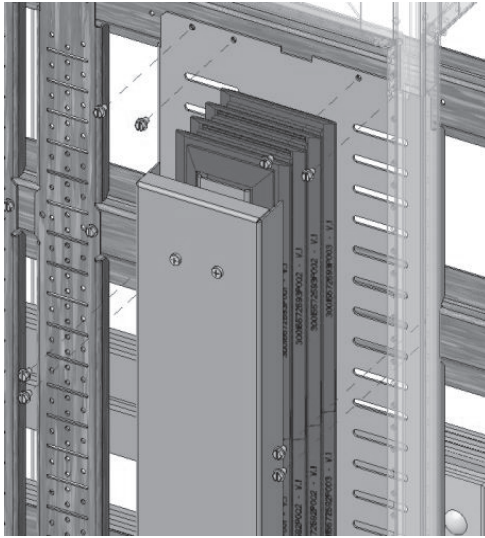
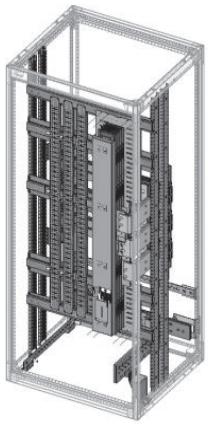
Parts	Category	Materials
Hardware	Metal	Steel
Circuit Breakers	Electrical	Copper/Steel Aluminum/ Plastic



Note: Assemblies are hidden for clarity.

Parts	Category	Materials
Hardware	Metal	Steel
Run Back Bus Bars	Metal	Copper/ Aluminum

7. Remove the straps/run-backs by first removing the bolts attaching the components to the main bus and then the bolts attaching the parts to the panelboard interior.

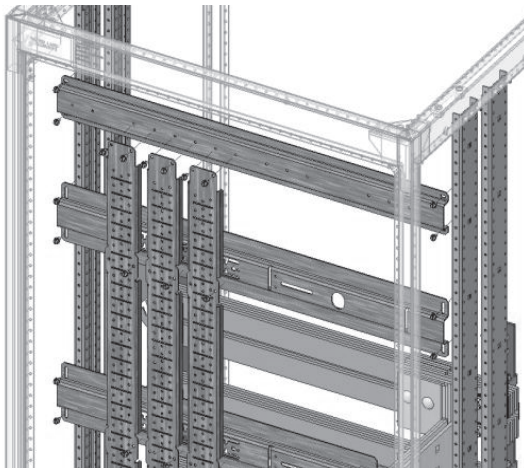
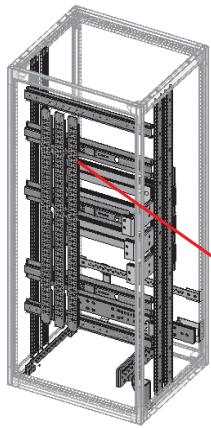


8. Remove the panelboard interior by supporting its weight and removing the screws connecting it to the horizontal frame rails.

Parts	Category	Materials
Hardware	Metal	Steel
Panelboard Interior	Electrical	Copper/Steel Aluminum/ Plastic

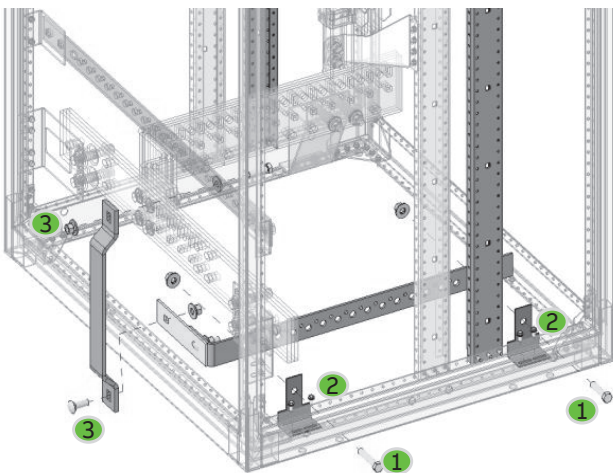
Note:

A Crane, hoist etc. should be used to secure the panelboard interior during removal.



9. Remove the panelboard frame by first removing the vertical rails attached to the horizontal rails and continue with the horizontal rails attached to the stringers.

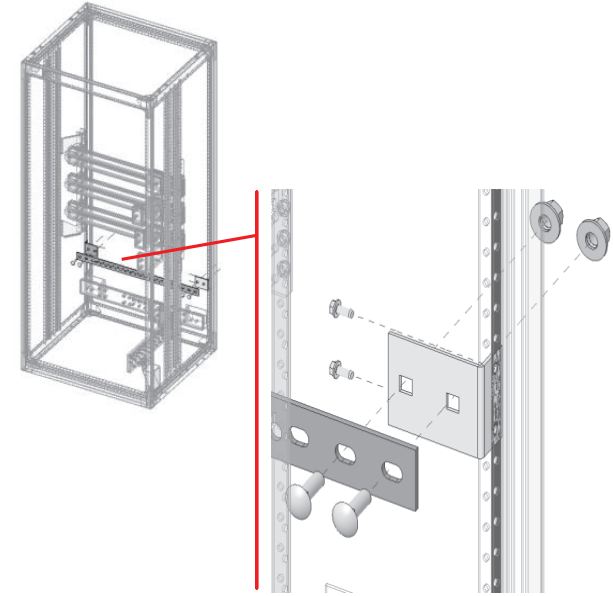
Parts	Category	Materials
Hardware	Metal	Steel
Frame Rails	Metal	Steel



Note: Remove lugs as needed (The quantity of lugs depends on configuration).

10. Remove the auxiliary ground by first removing the bolts between the bar and the brackets (1), continue by removing the screws connecting the brackets to the depth post (2) and finally remove the riser by removing the rear bolts (3).

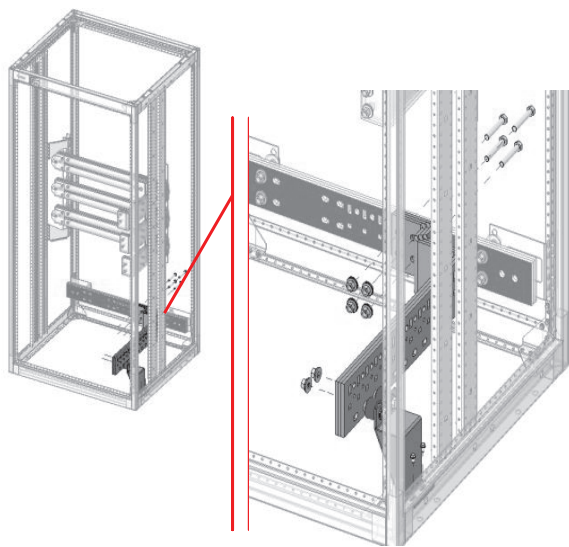
Parts	Category	Materials
Hardware	Metal	Steel
Ground Bus Bars	Metal	Copper/ Aluminum
Ground Bus Bars	Metal	Copper/ Aluminum
Brackets	Metal	Steel



11. Remove the horizontal ground bar by removing the bolts at each end of the bar and continue with by removing screws connecting the brackets to the corner posts.

Parts	Category	Materials
Hardware	Metal	Steel
Bonding Jumper	Metal	Copper/ Aluminum
Brackets	Metal	Steel
Neutral Bus Bars	Metal	Copper/ Aluminum

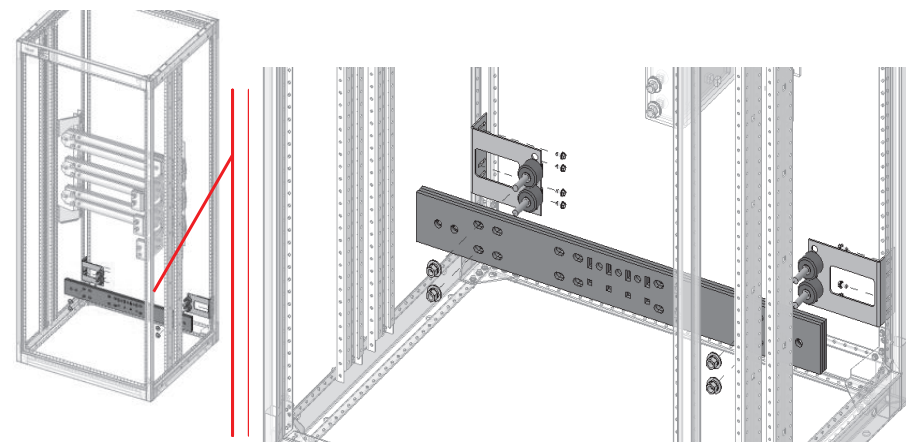
Note: Remove lugs as needed (The quantity of lugs depends on configuration).



12. Remove the auxiliary neutral by first removing the bolts connecting the bar to the rear horizontal neutral and then the bolts connecting the bar to the mounting bracket. Lastly, remove the brackets and hardware attached to the depth post.

Parts	Category	Materials
Hardware	Metal	Steel
Neutral Bus Bars	Metal	Copper/ Aluminum

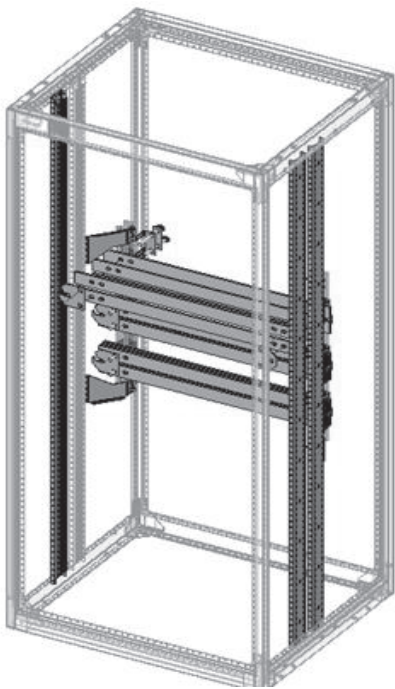
Note: Remove lugs as needed (The quantity of lugs depends on configuration).



Note: Remove lugs as needed (The quantity of lugs depends on configuration).

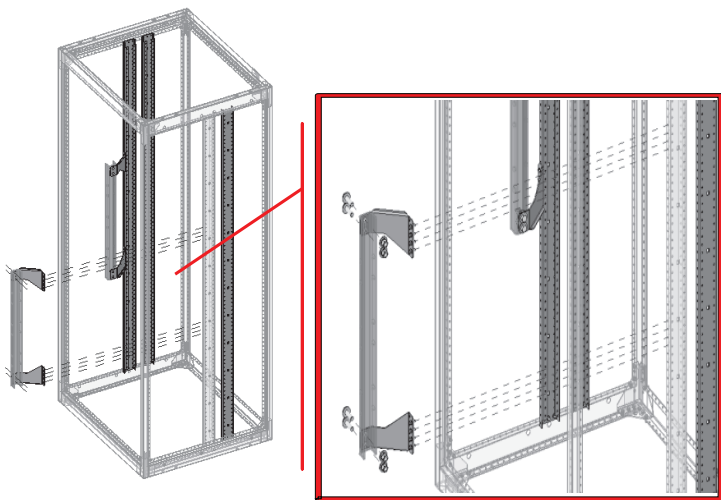
13. Remove the rear horizontal neutral by removing the hardware located at each end of the neutral bar, then remove the screws and brackets attached to the corner posts.

Parts	Category	Materials
Hardware	Metal	Steel
Neutral Bus Bars	Metal	Copper/ Aluminum
Brackets	Metal	Steel



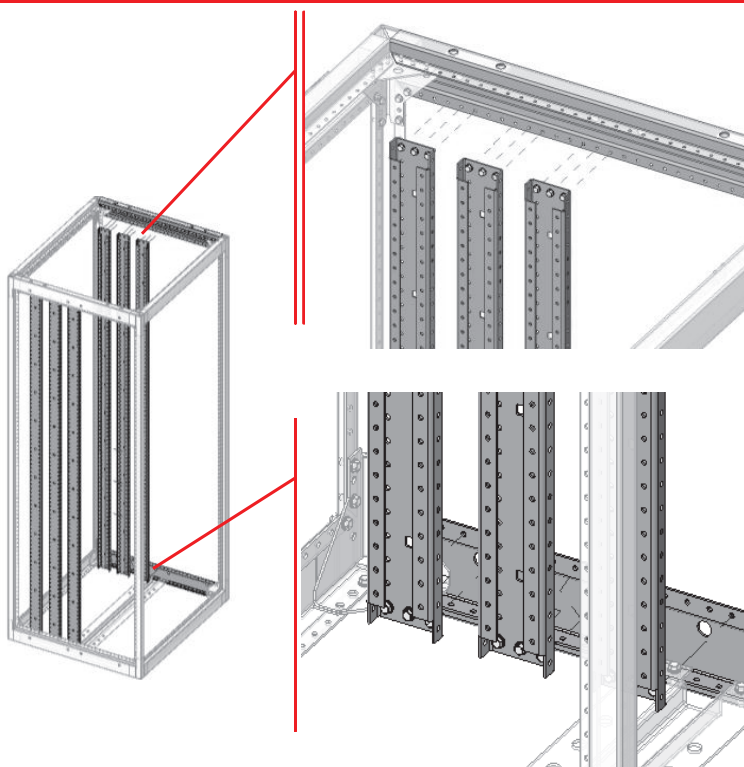
14. Disassemble the main horizontal bus starting from the top. Remove the hardware at each side for each set of laminations and then remove the bus bars. Continue with the remaining phases.

Parts	Category	Materials
Hardware	Metal	Steel
Main Busbars	Metal	Copper
Brackets	Metal	Steel/Aluminum



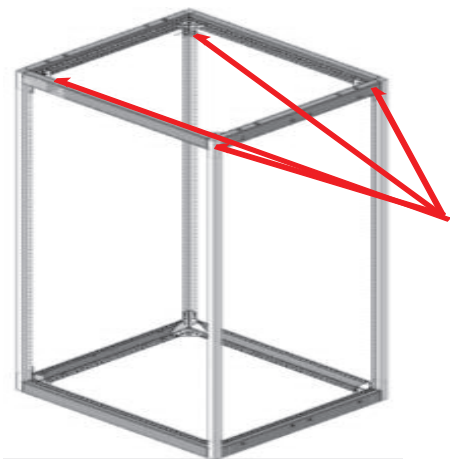
15. Remove the main bus bracing by first removing the 4 bolts for each brace and then remove the screws from the four brackets attached to the stringers or corner posts.

Parts	Category	Materials
Hardware	Metal	Steel
Vertical-Bracing	Plastic	Glass Reinforced Polyester
Brackets	Metal	Steel



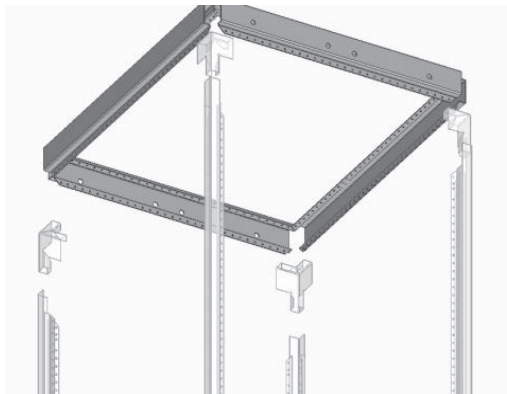
16. Remove each stringer by removing the 6 screws attaching it to the depth posts (3 at the top and 3 at the bottom).

Parts	Category	Materials
Hardware	Metal	Steel
Stringers	Metal	Steel



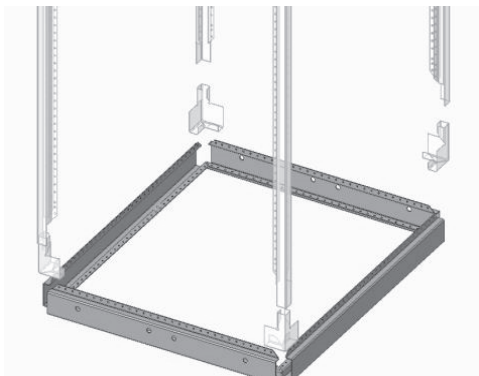
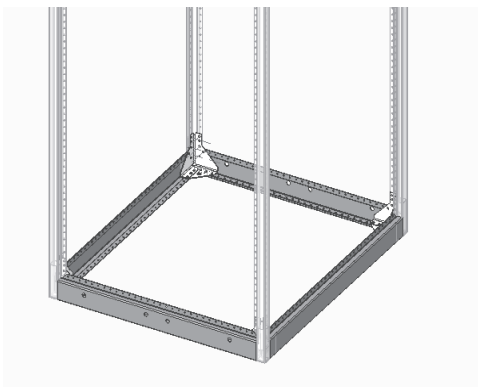
17. Remove the hardware and 4 gussets located in each top corner of the section.

Parts	Category	Materials
Hardware	Metal	Steel
Gussets	Metal	Steel



18. Remove the top portion of the enclosure by sliding upwards. Pull apart the assembly to separate the width and depth posts.

Parts	Category	Materials
Hardware	Metal	Steel
Gussets	Metal	Steel
Posts	Metal	Steel



19. Remove each corner post and pull apart the remaining assembly to separate the width and depth posts.

Parts	Category	Materials
Hardware	Metal	Steel
Gussets	Metal	Steel
Posts	Metal	Steel