



HITACHI

Fall 2015

GEH Nuclear PARTS e-Newsletter

At GEH, we believe that customers determine our success. In other words, we will only be successful if our customers achieve their goals. To this end, our top priority is creating simple, efficient solutions that meet customer needs, which may entail an activity as straightforward as expediting a replacement part to meet an outage need, or may be as involved as simplifying a process or system to make it easier to do business with GEH. One example may be found in the area of equipment obsolescence, which is a growing concern for many utilities. In response to this customer need, we have taken a more proactive approach to managing obsolescence within the GE product lines. One important step was the addition of an Obsolescence Project Manager, Denise Teets, to the GEH team. She is dedicated to identifying obsolescence issues, prioritizing them based on customer input and driving obsolescence solutions. In addition, GEH now offers several solutions designed to mitigate obsolescence, such as [Engineering Services](#), for obsolete part identification and resolution, Expanded Exchange Services Program (EESP), under which GEH manages obsolescence by guaranteeing part availability, and Shared Solutions that enable customers to share both solutions and the associated development costs through the BWR Owners' Group. Recent obsolescence solutions now available to customers include [Dry Type Transformers](#) and EntelliGuard Trip Units, and more are on the way – please see the [Electrical Product Updates](#) in this e-Newsletter. For more information about GEH's approach to obsolescence, or to share specific obsolescence-related requests, please contact Denise Teets at denise.teets@ge.com.

Safety First: Tips for the Nuclear Workplace

Leaders demonstrate commitment to supporting a safety conscious work environment through careful decisions and behaviors. Executive and senior managers are the leading advocates of nuclear safety and demonstrate their commitment both in word and action. The nuclear safety message is communicated frequently and consistently, occasionally as a stand-alone theme. Leaders throughout the nuclear organization set an example for safety. Managers ensure production requirements are established, communicated and put into practice in a manner that reinforces nuclear safety.

Enhanced Performance: Technical Solutions to Your Parts Issues

Dry Type Transformer Replacement

To enable safe and efficient operations, it is important for utilities to periodically review and assess lifespans of critical equipment and associated components. One such example is dry type transformers, many of which were originally installed in nuclear sites between the late 1960s and early 1980s. Technical experts have identified electrical substation dry type transformers installed during this timeframe to be at high risk of failure as they reach their maximum life expectancy of 30 to 40 years.

In the latter years of a dry type transformer's useful life, the paper insulation weakens from heat exposure and moisture buildup, resulting in deterioration and risk of failure. Utilities are advised to examine their installed base and consider replacement or procurement of spare transformers to eliminate or minimize the risk of lost production time caused by transformer failure.

GEH works closely with its supply base to provide dry type transformers with a typical cycle time of about 20 weeks. Please contact your Customer Account Leader for more information, or send RFQs to nuclearparts@ge.com

Continued...

Your GEH PARTS Customer Account Leader is:



Tina Davis
tina.davis@ge.com
 910-819-1977

Jump To:

Enhanced Performance
[Dry Type Transformers](#)

Best Practices
[Contact Functionality Testing](#)
[GEH Electrical Product Updates and Availability](#)

New and Improved
[Engineering Services](#)

Working Together
[Remote Uncoupling Tool](#)



[Click here to see the Dry Type Transformer Fact Sheet](#)

Best Practices: Tools You Can Use

Contact Functionality Testing - SIL #676

GEH recently published SIL #676, entitled "Contact Functionality Testing of GE SB Control and Transfer Switches and HEA Relays." Over the past several years, several GE SB series switches and HEA relays have failed customers' incoming inspections for exceeding contact resistance per EPRI guidelines. The referenced SIL clarifies GEH's position on testing these switches and relays for contact resistance, and it outlines the recommended continuity test for validating functionality of GE SB Control and Transfer Switches and HEA relays. For technical assistance or questions, please contact David Donovan at david.donovan1@ge.com

GEH Electrical Product Updates and Availability

In mid-July the GEH PARTS Electrical team issued a product update, as some of our product offerings are being transferred to new manufacturers, resulting in delayed availability. GEH is diligently striving to ensure these products are produced with the highest quality in a timely manner. The link to the right contains more detail for each impacted product, including status/availability and whether GEH is currently accepting RFQs.

GEH is also excited to announce a special offer on some previously obsoleted GE Molded Case Circuit Breakers (MCCBs), as we obtained some new breakers from GE's final manufacturing overrun. The part numbers and available inventory are listed in the link on the right. These MCCBs are in demand, so please send RFQs to nuclearparts@ge.com as soon as possible.

New and Improved: Product and Services Success Stories

Engineering Services

Need a quote for an obsolete part? No problem. The GEH PARTS Electrical and Electronics teams now offer a service called Engineering Services. Following issuance of an RFQ for an obsolete part, a customer can expect to receive an Engineering Services proposal within weeks, rather than receiving a no bid or experiencing a lengthy waiting period while GEH searches for a solution. If the customer elects to proceed with the Engineering Service, GEH will dedicate itself to finding a replacement part with the same form, fit and function as the original part. Once a solution is identified and the customer procures the replacement part, GEH will provide an equivalency evaluation and associated documentation. Typically, the price of the replacement part will be discounted to help offset the cost of the Engineering Service.

For more information about Engineering Services, please contact your Customer Account Leader or send your RFQ to nuclearparts@ge.com

Meet the Team: Patrick Downey

Patrick Downey currently handles quoting for our Mechanical team as a GEH PARTS Program Manager, but he has been a valued member of the GE/GEH family for over 38 years! Patrick started his career at GE Nuclear in San Jose, CA in the manufacturing function, and then he moved into a quality role. Next, he spent a year in Materials Services working at each of the following sites: River Bend, Nine Mile Point 2, and Vogtle 2.

Following that assignment, Patrick spent 10 years at Peach Bottom, also in Materials Services, before transferring to Vineland, NJ and ultimately to Wilmington, NC, where he worked in Sourcing prior to taking on his current role. If you have any questions regarding GEH Mechanical parts, you may want to start by asking Patrick...

He can be reached at (910) 819-6675 or patrick.downey@ge.com

Continued...

[Click here to read more about Contact Functionality Testing](#)



[Click here to read more about GEH Electrical Product Updates](#)



[Click here to contact Patrick Downey](#)

Working Together: How GEH Can Help

GEH Remote Uncoupling Tool

GE Hitachi Nuclear Energy's most recent addition to our automated tool offering is the Remote Uncoupling Tool, a device designed to provide BWR plants a simplified method to uncouple Control Rod Drive Mechanisms from Control Rod Blades while reducing radiation exposure.

The advanced technology of the tool permits technicians to perform uncoupling services in conjunction with additional work activities in the Under Vessel environment. The Remote Uncoupling Tool can save up to 60% of the accumulated radiation exposure as compared to historic performance of similar scope.

The tool has both wired and wireless communication capabilities, as well as a speedy installation time of 2 minutes or less. Additionally, the on-board battery is capable of performing more than 30 insert/retractions.

For more information about the Remote Uncoupling Tool or other GEH Under Vessel product line offerings, please contact your Customer Account Leader.

Ask the Expert – Frequently Asked Questions:

If you have any questions about any of the programs or information above, or if you have suggestions for future e-Newsletter content, please call 1-800-425-8108 during EST working hours, or e-mail nuclearparts@ge.com

GEH Resources:

- GEH Energy Technical Training:
<http://www.geenergylearningcenter.com>
- Boiling Water Reactors Owners Group (BWROG):
http://site.ge-energy.com/prod_serv/products/nuclear/en/bwr_owners_group/index.htm
- GEH Press Releases / Newsroom:
http://www.ge-energy.com/about/press_releases.jsp
- GE Social Media Subscriptions -LinkedIn, Facebook, YouTube:
http://www.ge-energy.com/about/websites_and_social_media.jsp
- Follow GE Hitachi (@gehuclear) on Twitter:
<http://www.twitter.com/gehuclear>

Have questions / comments / suggestions?

E-mail nuclearparts@ge.com or call 1-800-425-8108 during business hours.

We are interested in hearing your thoughts about this e-Newsletter.

To provide e-Newsletter feedback, please use the survey link found below:

<http://supportcentral.ge.com/esurvey/takesurvey.asp?p=17778&d=3748712>



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3901 Castle Hayne Road • Wilmington, NC 28402-2819 • United States

1-800-425-8108

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Click here to see the Remote Uncoupling Tool Fact sheet



GEH PARTS – Electrical
Dry Type Transformers (GE Rome)

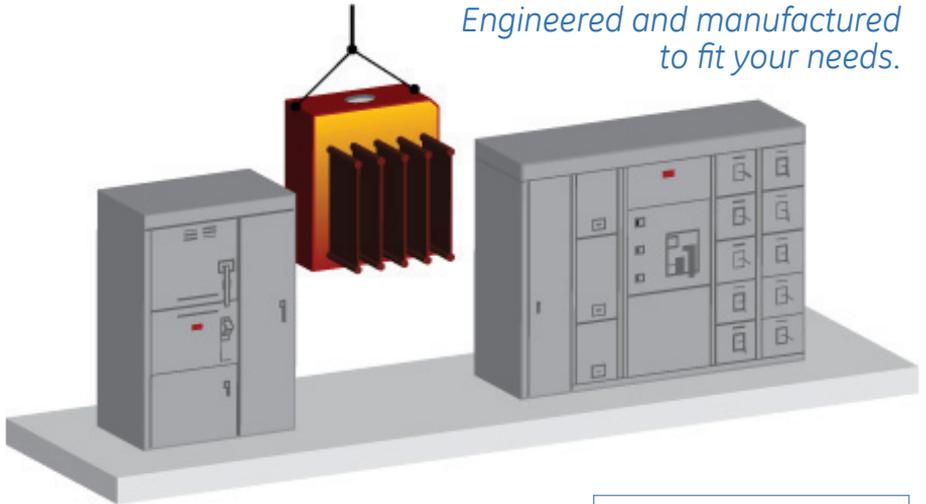
fact sheet

Why be concerned?

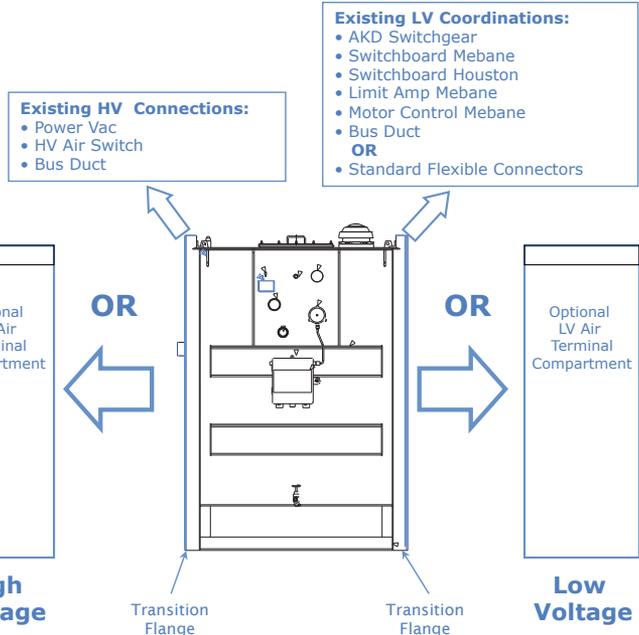
Electrical Engineers and Transformer Specialists within the industry agree that the base of electrical substation transformers installed in the 1950s through the early 1980s are now at risk of failure as they reach the end of their designed lives. These transformers include liquid filled, gas filled and dry type designs, with the latter being the primary type installed in nuclear facilities. The capacity of these transformers ranges from 500kVA through 3,000kVA, having a primary side of 15KV and a load side of 480V or 208V.

The major transformer manufacturers performed accelerated life cycle testing to determine how the electrical design and insulation material would react over time. These tests determined that the paper insulation system would eventually lose its integrity due to exposure to moisture and heat, limiting the designed life expectancy of dry type transformers to 30-40 years.

Engineered and manufactured to fit your needs.



It is imperative that utilities review their installed base to identify transformers that are reaching end of life and are at risk of failure. A plan for replacement or procurement of spares should then be established. The cost of not taking action could be lost production due to transformer failure, which would likely be much greater than the cost of a replacement transformer. Normal cycle time, including requesting a quotation, placing an order and shipping a replacement transformer, is approximately 20 weeks.¹



LV Flexible Connectors



GE Hitachi has access to the complete technical records on all units designed and manufactured by GE Rome from 1953-1997



GE Rome replacement units:

- Retrofits/replacements for Secondary Substation Transformers manufactured by GE Rome
- Designed and tested to meet the latest ANSI C57.12.90 and 2010 Department of Energy Efficiency Requirements
- Have the same ratings as the original GE Rome units
- Meet the critical mechanical dimensions and electrical connections on the HV and LV sides, including LV Flexible Connectors to match LV Terminations on LV Equipment

Routine tests on each unit include:

- Resistance Measurements
- Ratio Tests
- Polarity and Phase Relation Test
- No Load Losses
- Exciting Current
- Impedance and Load Losses
- Applied and Induced Potential
- Quality Control Impulse Test

Available optional tests:

- Temperature Test
- Impulse Test
- Other as required by customer

We strongly suggest that utilities contact the original manufacturer for transformer replacement. It is critical that the replacement unit be an electrical duplicate with a physical design that matches the existing footprint and electrical connection points that match/mate with existing HV and LV equipment.

Information needed for quotation:

- Serial Number of GE Rome Transformer to be replaced
- Current customer specifications that are applicable
- Plans for replacing the existing HV Load Interrupter Switch
- Plans for replacing the existing HV and/or LV Air Filled Terminal Compartment

GE Hitachi Transformer Contacts:

Rick Sanderson (910) 819-1766 richard.sanderson@ge.com
Keith Picard (215) 256-3217 keith.picard@ge.com
Randy Webb (910) 819-3602 randy.webb@ge.com

For additional information on Dry Type Transformers, or any other Electrical Parts need, please contact GEH PARTS at:

1-800-425-8108

nuclearparts@ge.com

or visit us at www.ge.com/nuclear

1. From an Industry white paper, authored by Jim Greer and Ed Mathis. Contact your GEH PARTS representative to receive a copy of the complete white paper.

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Contact Functionality Testing of GE SB Control and Transfer Switches and HEA Relays

SIL No. 676
Revision 0

May 18, 2015

Introduction

The purpose of this SIL is to inform plants of the appropriate methodology to determine adequate contact functionality of GE SB Control and Transfer Switches, which includes SBM, SB-1, SB-9, and SB-10 series switches, and GE HEA Multicontact Auxiliary Relays. The SB series switches are rotary, cam-operated, compact positive acting switches for control and transfer service on panels and switchboards of 600 volts and under. HEA relays are built from parts of the SB-1 switch and have an equivalent contact section.

Over the past several years at nuclear utilities in the United States, several GE SB series switches and HEA relays failed customer incoming inspections for exceeding contact resistance as specified in EPRI guidelines. GE Hitachi Nuclear Energy (GEH) provides the following information with regard to the proper determination of functionality of the SB series of switches and HEA relays.

Discussion

Various industry guidelines exist for measuring contact resistance. EPRI, in particular, specifies a typical contact resistance value of <0.1 Ohm for Control and Transfer Switches. This value is consistent with various published recommendations across the industry. However, these publications also indicate that these recommended numbers are not intended to verify the manufacturer's design. They further note that when performing such a contact resistance test, it is necessary to compare the results to the criteria set by the manufacturer.

For GE SB series switches and HEA relays, the design definition is that of a cam-operated device having two contacts per stage that provide electrical continuity in an electrical circuit. The electrical test for continuity is a test which checks that current flows in an electrical circuit when the switch contacts are closed. Due to the conditions in which the switches are designed to function, contact resistance is not a meaningful parameter of this design, and the manufacturer does not provide any numerical value or tolerance for contact resistance in GET-6169 "Selection and Application Guide for Control and Transfer Switches," GEH-2038 "SBM Instruction Book," or GEH-2058L "HEA61/62 Instruction Booklet." Therefore, GEH does not utilize the measurement of contact resistance as a means to determine the contact functionality of GE SB Control and Transfer Switches and HEA Multicontact Auxiliary Relays.

GEH also does not recommend ascertaining contact resistance or contact continuity using a resistance meter. Any attempt to use such resistance meter readings will likely produce variable and misleading results.

For both safety and non-safety SB series switches and HEA relays, the only parameter given by GEH for satisfactory performance of contact closure is continuity. Furthermore, to ascertain continuity, confirmation of the contact state as open or closed is performed by

GEH using an indicating light or continuity tester (light or buzzer) across the contact terminals. Contact state shall be a discrete (Go/No Go) result, i.e., open or closed.

In addition, confirmation of contacts properly mating is performed by inspection of the coined surfaces for irregularities and misalignment, with a minimum contact overlap of 50%.

GEH internal records, SILs, Part 21 Evaluations, Operating Experience, and an NRC database review indicates that there have been no failures of breakers to close due to SB series contact switches or HEA relays failing to perform their required function as a result of high contact resistance, although some failed contacts have had high resistance. Application of the measurements of contact resistance during incoming inspections should not be the criterion for acceptance of the SB control and transfer switches or HEA relays.

Should customers desire to document a contact resistance value, the method that is recommended is to use a test circuit that includes a DC source connected to a known resistance load through the switch's closed contacts, and to measure the voltage drop across the closed contacts. However, GEH provides no specified value or prediction of how much this voltage drop will be, and therefore cannot disposition any switches based on contact resistance test results. It is expected that anywhere the switch is applied, contact resistance will not affect circuit performance or render the circuit inoperable.

Recommended Actions

GEH recommends plants consider the following recommendation:

For GE SB series switches (SBM, SB-1, SB-9, and SB-10) and HEA relays, that only a contact continuity test be performed to validate switch/relay performance. Confirmation of the contact state as either open or closed should be performed using an indicating light or continuity tester (light or buzzer) across the contact terminals. Contact state will be a discrete Go/No Go value.

To receive additional information on this subject, or for assistance in implementing a recommendation, please contact your local GE Hitachi Nuclear Energy (GEH) Representative.

The condition under which GEH issues SILs is stated in SIL No. 001, Revision 6, the provisions of which are incorporated into this SIL by reference.

Product Reference

Various applications on plant systems.

Issued by:

Dale E. Porter
Program Manager
Service Information Communications
GE Hitachi Nuclear Energy
3901 Castle Hayne Road
Wilmington NC 28402

Product Availability Update

Family	Part Number	Status	RFQs Being Accepted ?	Price and Lead Provided?
Medium Voltage Breakers	Magneblast	Parts still available	Yes	Yes
	Magneblast	Non-Asbestos Arc Chute will not be developed by GEH	No	No
	Replacement	Breaker replacement being researched	No	No
Low Voltage Breakers	AK/AKR	Breakers available in very limited quantities	Yes	Yes
	AK/AKR	Parts transferring to new manufacturer	Yes	Yes
	Entelliguard R	GEH considering qualification of breaker to replace AK/AKR	No	No
	Entelliguard TU	Trip unit fully qualified and available - mild environment	Yes	Yes
Molded Case Circuit Breakers	Spectra	Non-safety available now	Yes	Yes
	Spectra	Safety-related expected availability 4Q15 for all listed below	Yes, Starting 4Q	Yes, Starting 4Q
	Old TEB	Still in temporary production. To be replaced by Spectra E frame.	Yes, old or non-safety Spectra	Yes, old or non-safety Spectra
	Old TED, THED	Still in temporary production. To be replaced by Spectra E frame.	Yes, old or non-safety Spectra	Yes, old or non-safety Spectra
	Old TEC	AC Obsolete. Replacement is Spectra E frame, AC only.	Yes, AC no safety only	Yes, AC no safety only
		DC Obsolete. Replacement being researched by GEH.	No	No
	OLD TFJ	Obsolete. Replacement is Spectra F frame	Yes, non-safety Spectra	Yes, non-safety Spectra
	Old TFK	Obsolete. Replacement is Spectra F frame	Yes, non-safety Spectra	Yes, non-safety Spectra
	Old THFK	Obsolete. Replacement is Spectra F frame	Yes, non-safety Spectra	Yes, non-safety Spectra
	Old TJJ	Still in temporary production. To be replaced by Spectra G frame	Yes, old or non-safety Spectra	Yes, old or non-safety Spectra
	Old TJK	Still in temporary production. To be replaced by Spectra G frame	Yes, old or non-safety Spectra	Yes, old or non-safety Spectra
	Old THJK	Still in temporary production. To be replaced by Spectra G frame	Yes, old or non-safety Spectra	Yes, old or non-safety Spectra
	Old TKM	Obsolete. Replacement is Spectra K frame	Yes, old or non-safety Spectra	Yes, old or non-safety Spectra
	Old THKM	Obsolete. Replacement is Spectra K frame	Yes, old or non-safety Spectra	Yes, old or non-safety Spectra
105X Aux Contacts	105X100M	Available for purchase 3Q15	Yes	Yes
or GEH DJ188C8872Pxxx	105X100N	Available for purchase 3Q15	Yes	Yes
	105X100P	Available for purchase 3Q15	Yes	Yes
	105X200M	Available for purchase 3Q15	Yes	Yes
	105X200N	Available for purchase 3Q15	Yes	Yes
	105X1200P	Available for purchase 3Q15	Yes	Yes
	105X300N	Available for purchase 3Q15	Yes	Yes
	105X300P	Available for purchase 3Q15	Yes	Yes
CR124 Relays	CR124C028	Available for purchase 4Q15	Yes	Yes, Starting 4Q
Non-Compensated Standard Trip	CR124C078	Available for purchase 4Q15	Yes	Yes, Starting 4Q
	CR124D028	Available for purchase 4Q15	Yes	Yes, Starting 4Q
	CR124D078	Available for purchase 4Q15	Yes	Yes, Starting 4Q
	CR124E028	Available for purchase 4Q15	Yes	Yes, Starting 4Q
	CR124E078	Available for purchase 4Q15	Yes	Yes, Starting 4Q
	CR124F028	Available for purchase 4Q15	Yes	Yes, Starting 4Q
	CR124F078	Available for purchase 4Q15	Yes	Yes, Starting 4Q
	CR124G011	Available for purchase 4Q15	Yes	Yes, Starting 4Q
	CR124G019	Available for purchase 4Q15	Yes	Yes, Starting 4Q

Continued...

Product Availability Update (Continued)

Family	Part Number	Status	RFQs Being Accepted ?	Price and Lead Provided?
CR124 Relays	CR124K078	Obsolete with no current replacement.	N/A	N/A
Non-Compensated Quick Trip	CR124K0178	Obsolete with no current replacement.	N/A	N/A
	CR124L078	Obsolete with no current replacement.	N/A	N/A
	CR124L0178	Obsolete with no current replacement.	N/A	N/A
	CR124M078	Obsolete with no current replacement.	N/A	N/A
	CR124M0178	Obsolete with no current replacement.	N/A	N/A
	CR124N078	Obsolete with no current replacement.	N/A	N/A
	CR124N0178	Obsolete with no current replacement.	N/A	N/A
	CR124P078	Obsolete with no current replacement.	N/A	N/A
	CR124P0178	Obsolete with no current replacement.	N/A	N/A
CR124 Relays	CR124K028	Obsolete with no current replacement.	N/A	N/A
Ambient Compensated	CR124K0128	Obsolete with no current replacement.	N/A	N/A
	CR124L028	Obsolete with no current replacement.	N/A	N/A
	CR124L0128	Obsolete with no current replacement.	N/A	N/A
	CR124M028	Obsolete with no current replacement.	N/A	N/A
	CR124M0128	Obsolete with no current replacement.	N/A	N/A
	CR124N028	Obsolete with no current replacement.	N/A	N/A
	CR124N0128	Obsolete with no current replacement.	N/A	N/A
	CR124P028	Obsolete with no current replacement.	N/A	N/A
	CR124P0128	Obsolete with no current replacement.	N/A	N/A
CR120 Relays	CR120A	Available for purchase 3Q15	Yes	Yes
	CR120AD	Available for purchase 3Q15	Yes	Yes
	CR120B	Available for purchase 3Q15	Yes	Yes
	CR120BC	Available for purchase 3Q15	Yes	Yes
	CR120BD	Available for purchase 3Q15	Yes	Yes
	CR120BL	Available for purchase 3Q15	Yes	Yes
	CR120BP	Available for purchase 3Q15	Yes	Yes
	CR120C	Available for purchase 3Q15	Yes	Yes
CR120K Relays	CR120K	Update available in 4Q	Update available in 4Q	
CR2940 Switches	CR2940U	Available for purchase 3Q15.	Yes	Yes
		CR2940US, UN models will remain obsolete.	No	No
	CR2940W	Available for purchase 3Q15	Yes	Yes
	CR2940Y	Available for purchase 3Q15	Yes	Yes
CR151 Mounting Kits and Blocks	CR151A	Available for purchase 3Q15	Yes	Yes
	CR151C	Available for purchase 3Q15	Yes	Yes
CR2810 Relays	CR2810A14	Available for purchase 3Q15	Yes	Yes
CR115 Relays	CR115A	Available for purchase 3Q15	Yes	Yes
	CR115B	Available for purchase 3Q15	Yes	Yes
	CR115E	Available for purchase 3Q15	Yes	Yes
CR9500 Solenoids	CR9500A	Available for purchase 3Q15	Yes	Yes
	CR9500B	Available for purchase 3Q15	Yes	Yes
	CR9500C	Available for purchase 3Q15	Yes	Yes
CR9503 Solenoids	CR9503 (AC Only)	Available for purchase 3Q15	Yes	Yes
DS303 Contactors	DS303	Available for purchase 4Q15	Yes	Yes
Replacement for IC 2800				
Undervoltage Release (UVR)	TFKUYA7	Available for purchase 4Q15	No	No
For EPA Breakers				

If you have any questions about any of this information, please contact me or the Electrical Product Line Leader, Rick Sanderson at richard.sanderson@ge.com. Please submit RFQs to nuclearparts@ge.com.

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Special Offer on Obsolete GE MCCBS

As you are aware, most of GE's Molded Case Circuit Breaker (MCCB) product line has been obsoleted over the last several years. As a result, GE Hitachi (GEH) has received numerous RFQs that we could not fulfill. Recently, GEH was able to procure remaining GE inventory of some MCCBs, in limited quantities. Due to the popularity and reliability of these legacy MCCBs, we are offering them in advance of the Spectra RMS breaker replacements that will be available from GEH later in 2015. The following list indicates the part numbers and quantities of product that we purchased.

- These devices are calibrated to GE's time current curves.
- They are available for safety or non-safety purchase.
- The numbers shown represent the inventory available and once depleted will no longer be available.
- These will be sold on a first come, first served basis.
- No quantity discounts will be provided.
- No replacement or repairs will be available for these units.

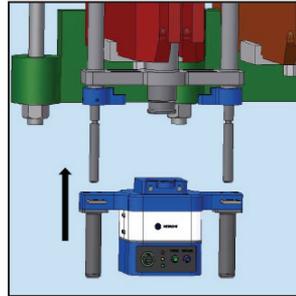
Part #	QTY	Description
TFK236125WL	5	F225 LINE, TFK Type: Interchangeable Trip; 3 Pole; 600 VAC / 250 VDC; 125 Amps; Adjustable Trip Range = 600-1250Amps; Includes Line & Load Lugs
TFK236200WL	1	F225 LINE, TFK Type: Interchangeable Trip; 3 Pole; 600 VAC / 250 VDC; 200 Amps; Adjustable Trip Range = 900 - 2000 Amps; Includes Line & Load Lugs
THFK236200	1	F225 LINE, THFK Type: Interchangeable Trip; 3 Pole; 600 VAC / 250 VDC; Hi-Break; 200 Amps; Adjustable Trip Range = 900 - 2000 Amps; Includes Load Lugs Only
TFJ236125WL	25	F225 LINE, TFJ Type: Non-Interchangeable Trip; 3 Pole; 600 VAC; 125 Amps; Adjustable Trip Range = 600 - 1250 Amps; Includes Line and Load Lugs
TFJ236150WL	25	F225 LINE, TFJ Type: Non-Interchangeable Trip; 3 poles; 600 VAC; 150 Amps; Adjustable Trip Range 700 - 1500 Amps; Includes line and load lugs
TFJ236175WL	25	F225 LINE, TFJ Type: Non-Interchangeable Trip; 3 Poles; 600 VAC Max; 175 Amps; Adjustable Trip Range = 800-1750 Amps; Includes Line & Load Lugs
TFJ236200WL	25	F225 LINE, TFJ Type: Non-Interchangeable Trip; 3 Poles; 600 VAC Max; 200 Amps; Adjustable Trip Range = 900-2000 Amps; Includes Line & Load Lugs
TFJ236250WL	25	F225 LINE, TFJ Type: Non-Interchangeable Trip; 3 Poles; 600 VAC Max; 250 Amps; Adjustable Trip Range = 1000-2250 Amps; Includes Line & Load Lugs
TFJ236100WL	20	F225 LINE, TFJ Type: Non-Interchangeable Trip; 3 Poles; 600 VAC Max; 100 Amps; Adjustable Trip Range = 600-1250 Amps; Includes Line & Load Lugs
THFK236225	2	F225 LINE, THFK Type: Interchangeable Trip; 3 Pole; 600 VAC / 250 VDC; Hi-Break; 225 Amps; Adjustable Trip Range = 1000-2250 Amps; Includes Load Lugs Only
TFJ224125	4	F225 LINE, TFJ Type: Non-Interchangeable Trip; 2 Poles; 480 VAC Max; 125 Amps; Adjustable Trip Range = 600-1250 Amps; Includes Load Lugs Only
TFJ226Y225	20	F225 LINE, TFJ Type: 2 Pole; 600 VAC; 225 Amps; 18K IC
TFJ236225WL	25	F225 LINE, TFJ Type: Non-Interchangeable Trip; 3 Poles; 600 VAC Max; 225 Amps; Adjustable Trip Range = 1000-2250 Amps; Includes Line & Load Lugs

It is unlikely that we will find these quantities again, so please submit your RFQs to nuclearparts@ge.com and place your orders as soon as possible. If you have questions, please contact me or Keith at Keith.picard@ge.com or 215-256-3217.

GEH Field Services – Outage Services Remote Uncoupling Tool

fact sheet

The Remote Uncoupling Tool is designed to provide BWR plants the ability to uncouple Control Rod Drive Mechanisms from Control Rod Blades from below vessel while minimizing the amount of radiation workers are exposed to as compared to historic uncoupling activities from below the vessel. The Remote Uncoupling Tool is another example of the many remote and automated tooling offerings from GE Hitachi Nuclear Energy.



By providing for a low dose alternative to uncoupling from the Refuel Floor, the Remote Uncoupling Tool is intended to help reduce Refuel Floor critical path impact and to help minimize radiation exposure. Through advanced sensor and remote activation technology, it is designed to permit technicians to perform uncoupling with no one present in the UV area, after the initial installation of the toolset. The Remote Uncoupling Tool has been shown to save up to 60% of the accumulated radiation exposure as compared to historic performance of similar scope.

Benefits

Designed to:

- Eliminate deferral of uncoupling to Refuel Floor
- Reduce dose associated with uncoupling by as much as 60%
- Allow for parallel work activities in the UV environment during uncoupling
- Allow uncoupling to be performed with Support Grid Plates installed further decreasing area radiation levels



Features

- Wireless and wired communication capabilities
- On-tool and remote indication of Uncoupling Status
- On board battery capable of performing 30 plus insert/retractions
- Can be installed at a given location in two minutes or less

To find out more about our Under Vessel Product Line contact your GE Hitachi Nuclear Energy sales representative or visit us at www.ge.com/nuclear



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