



## Technical Service Brochure

### Service Plans and Extended Warranties

GE Zenith has been in the controls industry since 1923. The knowledge that a reliable emergency power system starts with quality has driven GE Zenith to produce products worthy of the most extensive warranty in the industry.

GE Zenith’s further commitment to your emergency power system reliability has also driven us to make available many factory outlined and managed services. These services are designed to help the end user maintain and operate GE Zenith products.

This brochure outlines our available service plans. A quote on any of these services is available by filling out the *Service Quote Request* on the back page.

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#### Energy Commander Paralleling Switchgear

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# GE Zenith Transfer Switch

## Level I – Preventive Maintenance Service

## Level II – Preventive Maintenance Contract

### Preventive Maintenance Service Level I

#### Overview

The **Level I** transfer switch preventive maintenance service is a check-up plan. A factory trained field engineer will clean, inspect and test GE Zenith transfer switch(es) to verify proper operation.

#### Inspection

- Torque main lug connections
- Check and adjust all voltage sensors as necessary
- Check and adjust all accessories to customer specifications
- Inspect main contacts
- Check integrity of electrical hardware of control panel
- Perform millivolt drop test
- Test all light bulbs and replace if necessary
- Inspect all mechanical interlocks
- Inspect all electrical interlocks
- Lubricate necessary moving parts
- Inspect all limit switches
- Visual inspection of enclosure
- Check engine start contacts and connections
- Exercise gen-set
- Check voltage and frequency of generator output
- Complete No Load test and/or Load test

#### Also

Service report will include:

- Recorded values of all measurements taken, voltage, amperage, frequency and millivolt
- Any adjustments made will be noted
- Recommendations relative to repairs or upgrades

#### Additional Benefits

- 15% discount on any parts purchased and installed during inspection
- 10% discount on any labor used to perform repairs during inspection visit
- Six month parts and labor warranty on any repairs performed

### Preventive Maintenance Contract Level II

#### Overview

The **Level II** transfer switch preventive maintenance contract is a combination one year agreement and a check up plan. A factory trained field engineer will clean, inspect and test GE Zenith transfer switch(es) to verify proper operation. Level II includes a discount agreement on parts and labor.

#### Inspection

- Torque main lug connections
- Check and adjust all voltage sensors as necessary
- Check and adjust all accessories to customer specifications
- Inspect main contacts
- Check integrity of electrical hardware of control panel
- Perform millivolt drop test
- Test all light bulbs and replace if necessary
- Inspect all mechanical interlocks
- Inspect all electrical interlocks
- Lubricate necessary moving parts
- Inspect all limit switches
- Visual inspection of enclosure
- Check engine start contacts and connections
- Exercise gen-set
- Check voltage and frequency of generator output
- Complete No Load test and/or Load test

#### Also

Service report will include:

- Recorded values of all measurements taken, voltage, amperage, frequency and millivolt
- Any adjustments made will be noted
- Recommendations relative to repairs or upgrades
- All past reports submitted (*upon request*) for complete history of unit

#### Additional Benefits

- Special contract labor rates
- 15% discount on any parts purchased within one year
- Six month parts and labor warranty on any repairs performed
- One year service agreement

# GE Zenith Energy Commander Paralleling Switchgear

Level I – Preventive Maintenance Service

Level II – Preventive Maintenance Contract

## Preventive Maintenance Service Level I

### Overview

The **Level I** paralleling switchgear preventive maintenance service is a check up plan. A factory trained field engineer will clean, inspect and test GE Zenith paralleling switchgear and verify proper operation.

### Mechanical Inspection

- Visually inspect switchgear for damage
- Test keyed interlock systems for proper function
- Verify breakers trip and reset, clean and lubricate
- Tighten bus bar connections and/or verify connections with a millivolt drop test
- Inspect for proper grounding

### Electrical Inspection

- Test all lights and fuses
- Verify all meters are functional
- Check all pre-alarms and shut down functions
- Verify and set generator voltage and frequency
- Electrically operate breakers
- Test PLC battery

### Complete System Test

- Run complete system test in Auto and Manual Mode and verify proper operation of:
  - Load add sequence
  - Load shed sequence
  - Automatic synchronizer and synchronizing circuits
  - Load sharing controls
  - Governor control
  - Automatic stop-start module
  - Automatic generator loading control
  - Import/export controller

### Also

- Field report including recommendations and observations
- 15% discount on any parts purchased and installed during inspection
- 10% discount on labor used to perform repairs during inspection
- Six month parts and labor warranty on any repairs performed

## Preventive Maintenance Contract Level II

### Overview

The **Level II** paralleling switchgear preventive maintenance contract is a combination check up plan and one year agreement. A factory trained field engineer will clean, inspect and test GE Zenith paralleling switchgear and verify proper operation. Also a year long discount agreement on parts and labor is included.

### Mechanical Inspection

- Visually inspect switchgear for damage
- Test keyed interlock systems for proper function
- Verify breakers trip and reset
- Tighten bus bar connections and/or verify connections with a millivolt drop test
- Inspect for proper grounding

### Electrical Inspection

- Test all lights and fuses
- Verify all meters are functional
- Check all pre-alarms and shutdown functions
- Verify and set generator voltage and frequency
- Electrically operate breakers
- Test PLC battery

### Complete System Test

- Run complete system test in Auto and Manual Mode and verify proper operation of:
  - Load add sequence
  - Load shed sequence
  - Automatic synchronizer and synchronizing circuits
  - Load sharing controls
  - Governor control
  - Automatic stop-start module
  - Automatic generator loading control
  - Import/export controller

### Also

- Field report including recommendations and observations
- All past reports submitted upon request for a complete history of system
- Special contract labor rates
- 15% discount on any parts purchased within one year
- Six month parts and labor warranty on any repairs performed
- One year service agreement

### Note:

*Breaker preventive maintenance and calibration service for breakers and protective relays is not included in this service but may be obtained as a separate item through GE Zenith.*

# GE Zenith Energy Commander Paralleling Switchgear

## Start-Up Service, On-Site Training and Extended Service Options

### Note:

It is important that when using site equipment for training that the session be scheduled at a time when use of the equipment, including generator operation and power transfer/service interruptions, are acceptable.

### Warranty Limitation:

An extended service agreement must be purchased within the original warranty period.

Limitations apply and are detailed in GE Zenith's Limited Warranty — Extended Service Coverage Guide O-5034.

Extended service options are also available for GE Zenith transfer switches. Consult your local representative or the GE Zenith factory for further information.

## Start-Up Service

### Overview

The paralleling switchgear **Start-Up Service** is a recommended way to verify installation and operation of a unit prior to placing it into service and is normally provided (*unless otherwise specified*) with the purchase of a domestic GE Zenith paralleling switchgear system. This service provides a factory trained field engineer to verify switchgear operation. It also includes a fundamental review to enable facility personnel to operate the system.

### Installation Inspection

- Visually verify proper installation of system
- Verify that all auxiliary contacts are connected properly
- Check engine start connections
- Verify all cabled or bused connections are proper
- Check interconnections between switchgear and generator
- Inspect for proper grounding

### Electrical Inspection

- Test all lights and fuses
- Verify all meters are functional
- Check all pre-alarms and shutdown functions
- Check for proper phase rotation
- Adjust generator voltage and frequency

### Complete System Test

- Run complete system test in Auto and Manual Mode and verify proper operation of:
  - Load add sequence
  - Load shed sequence
  - Automatic synchronizer and synchronizing circuits
  - Governor control
  - Automatic stop-start module
  - Automatic generator loading control
  - Load sharing controls
  - PLC functions
  - Communication links

## On-Site Training

### Overview

The paralleling switchgear **On-Site Training** service is offered in order to educate electrical maintenance personnel to utilize and operate installed GE Zenith equipment. A factory trained field engineer will instruct facility personnel utilizing demonstrations and applicable literature.

### Instruction

- Review of switchgear operation
- Function of major components
- Explain nomenclature associated with operating equipment
- Demonstrate how to test system with and without load transfer
- Explain all custom features; intent and operation
- Communication and display devices (*if applicable*)

### Also

- Instruction will include applicable literature (*up to ten sets included - additional sets may be quoted*)
- Class size can be as many as ten people
- Class duration to be up to six hours
- Special extended training is available — consult with the GE Zenith Technical Services Department for how we can meet your needs

## Extended Service Options

### Overview

The paralleling switchgear **Extended Service Option** is an excellent way to minimize unexpected maintenance costs. The extended warranty coupled with GE Zenith maintenance contract Level II can keep a system in peak operating condition and reduce maintenance costs.

### Coverage

The Extended Service Option covers inoperative parts and standard labor for repair.

### Duration

The length of the extended service options can be one to four additional years.

### Note:

It is important that when using site equipment for training that the session be scheduled at a time when use of the equipment, including generator operation and power transfer/service interruptions, are acceptable.

## Start-Up Service

### Overview

The transfer switch **Start-Up Service** is the recommended way to verify installation and operation of a unit prior to placing it into service. A factory trained field engineer will verify that the unit is installed and operating properly. A functional review will be given which will enable facility personnel to operate and utilize equipment.

### Inspection

- Verify that all cabled connections are on the proper terminals and torqued to the proper specs
- Inspect unit for installation debris which may impede the unit from functioning properly
- Check that phase rotation of both sources match
- Inspect that all auxiliary contacts and customer accessories are connected properly
- Adjust all factory installed options to customer specifications (*in phase monitor, elevator contacts, exerciser clock, etc.*)
- Check engine start contact connections
- Check and adjust all timers to customer specs
- Visual inspection of enclosure
- Exercise gen-set
- Check voltage and frequency of generator output
- Complete No Load test and/or Load test

### Also

- Review basic operation of unit with facility personnel (*max. 4 persons for 30 minutes*). Review includes:
  - How to set timers
  - How to test unit
  - How to bypass unit (*if applicable*)
  - How to perform a load test
  - Explain all features and answer questions
- Inspection report will be issued with recommendations
- 5% discount on any non-warranty parts purchased and installed during inspection (*modifications and retrofits*)
- 10% discount on any labor used to perform modifications during inspection visit

## On-Site Training

### Overview

The transfer switch **On-Site Training** service is offered in order to educate electrical maintenance personnel to utilize and operate installed GE Zenith equipment. A factory trained field engineer will instruct facility personnel utilizing demonstrations and applicable literature.

### Instruction

- Complete review of transfer switch operation
- Function of major components
- Explain nomenclature associated with operating equipment
- Demonstrate how to read and adjust timers and other customer settings
- Demonstrate how to test system with and without load transfer
- Explain intent and operation of customer features
- Demonstrate bypassing feature (*if applicable*)
- Demonstrate closed and open transition (*as applicable*)

### Also

- Instruction will include applicable literature (*up to ten sets included - additional sets may be quoted*)
- Class size can be as many as ten people
- Class duration to be up to six hours

# Service Quote Request

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Which service interests you? \_\_\_\_\_

List the serial number(s) of the product(s) involved: \_\_\_\_\_

What is the complete address of the facility? \_\_\_\_\_

Name and phone number of facility contact: \_\_\_\_\_

Where should the quote be sent and to whom? \_\_\_\_\_

Name of the person who filled out this form? \_\_\_\_\_

**Mail, fax or e-mail completed form to:**

**GE Zenith Controls**  
**ATTN: Technical Services Department**  
830 West 40<sup>th</sup> Street, Chicago, IL 60609 USA  
Phone: 773 299-6600, Fax: 630 850-6899  
[www.zenithcontrols.com](http://www.zenithcontrols.com)



**GE Zenith Controls**