

OWNER'S Manual

100 and 200 Amp "Y" Type

TRANSFER SWITCHES

Models 9489-0, 9490-0 & 9491-0

GENERAC
CORPORATION

SAFETY RULES

READ THE FOLLOWING INFORMATION CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THIS EQUIPMENT. ALSO READ THE INSTRUCTIONS AND INFORMATION ON TAGS, DECALS AND LABELS THAT MIGHT BE AFFIXED TO THE TRANSFER SWITCH. REPLACE ANY DECAL OR LABEL THAT IS NO LONGER LEGIBLE.

DANGER! CONNECTION OF A GENERATOR TO AN ELECTRICAL SYSTEM NORMALLY SUPPLIED BY AN ELECTRIC UTILITY SHALL BE BY MEANS OF A DOUBLE THROW SWITCH (such as Generac "Y" or "V" type transfer switches) SO AS TO ISOLATE THE ELECTRIC SYSTEM FROM UTILITY DISTRIBUTION SYSTEM WHEN THE GENERATOR IS OPERATING (NEC 701). FAILURE TO ISOLATE ELECTRIC SYSTEM BY THESE MEANS RESULTS IN DAMAGE TO GENERATOR AND MAY RESULT IN INJURY OR DEATH TO UTILITY WORKERS DUE TO BACKFEED OF ELECTRICAL ENERGY.

Generac cannot possibly anticipate every possible circumstance that might involve a hazard. The warnings in this Manual and on tags and decals affixed to the equipment are, therefore, not all-inclusive. If you use a procedure, work method or operating technique not specifically recommended by Generac, you must satisfy yourself it is safe for you and others.

1. Any AC generator that is used for backup power if a NORMAL (Utility) power source failure occurs, must be isolated from the NORMAL power source by means of an approved transfer switch. Failure to properly isolate the NORMAL and STANDBY power sources from each other may result in injury or death to electric utility workers, due to backfeed of electrical energy.
2. Improper or unauthorized installation, operation, service or repair of this equipment is extremely dangerous and may result in death, serious personal injury, or damage to equipment and/or personal property.
3. Extremely high and dangerous power voltages are present inside an installed transfer switch. Any contact with high voltage terminals, contacts or wires will result in extremely hazardous, and possibly LETHAL, electrical shock. **DO NOT WORK ON THE TRANSFER SWITCH UNTIL ALL POWER VOLTAGE SUPPLIES TO THE SWITCH HAVE BEEN POSITIVELY TURNED OFF.**
4. Competent, qualified personnel should install, operate and service this equipment. Adhere strictly to local, state and national electrical and building codes. When using this equipment, comply with regulations established by the National Electric Code (NEC) Occupational Safety and Health Administration (OSHA).
5. Never handle any kind of electrical device while standing in water, while barefoot, or while hands or feet are wet. Dangerous electrical shock will result.
6. Because jewelry conducts electricity, wearing it may cause dangerous electrical shock. Remove all jewelry (such as rings, watches, bracelets, etc.) before working on this equipment.
7. If you must work on this equipment while standing on metal or concrete, place insulative mats over a dry wood platform. Work on this equipment only while standing on such insulative mats.
8. Never work on this equipment while physically or mentally fatigued.
9. Keep the transfer switch enclosure door closed and locked at all times. Only qualified personnel should be permitted access to the switch interior.
10. In case of accident caused by electrical shock, shut down the source of electrical power at once. If you cannot do this, free victim from the live conductor, but **AVOID DIRECT CONTACT WITH VICTIM.** Use a dry board, dry rope, or other non-conducting implement to free the victim from the live conductor. If the victim is unconscious, apply cardio-pulmonary resuscitation (CPR) and get medical help.
11. When an automatic transfer switch is installed for a standby generator set, the generator engine may crank and start at any time without warning. To avoid possible injury that might be caused by such sudden startups, the system's automatic start circuit must be disabled before working on or around the generator transfer switch. Always set that Manual-Off-Auto switch to its OFF position before working on the equipment. Then place a "DO NOT OPERATE" tag on the transfer switch and on the generator.

Throughout this Owner's Manual, the words "DANGER" and "CAUTION" are used to alert the operator to special instructions. These warnings concern a particular service or operation that might be hazardous if performed incorrectly or carelessly. Observe them carefully. These safety messages alone cannot eliminate the hazards that they signal. Strict attention to these special instructions plus common sense operation are major ways to prevent accidents.

The following definitions apply to DANGER, CAUTION and NOTE blocks found throughout this Manual:

DANGER: After this heading you will find instructions for installing, operating servicing and handling that, if not strictly adhered to, can result in personal injury or death.

CAUTION! After this heading you will find instructions for installing operating servicing and handling that, if not strictly adhered to, can result in damage to equipment.

NOTE: After this heading you will find explanatory statements that need special emphasis.

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GENERAL INFORMATION

This Owner's Manual has been prepared especially for the purpose of familiarizing personnel with the design, application, installation, operation and servicing of the applicable equipment. Read the manual carefully and comply with all instructions. This will help to prevent accidents or damage to equipment that might otherwise be caused by carelessness, incorrect application, or improper procedures.

Every effort has been expended to make sure that the contents of this manual are both accurate and current. Generac, however, reserves the right to change, alter or otherwise improve the product at any time without prior notice.

EQUIPMENT DESCRIPTION

These transfer switches are designed is used for transferring critical electrical loads from a NORMAL (utility) power source to a STANDBY (emergency generator) power source. Such a transfer of loads occurs automatically when the NORMAL power source fails or is subsequently reduced and the STANDBY source voltage and frequency have reached an acceptable level. The transfer switch prevents electrical feedback between two different power sources (such as the NORMAL and STANDBY sources) and, for that reason, codes require it in all standby electric system installations. All three switches are UL Listed and CSA Certified.

Once the transfer is completed, the STANDBY power source then powers electrical loads connected to the transfer switch. When NORMAL source voltage above an acceptable (preset) level has been restored, circuit board action in the pre-packaged control panel initiates re-transfer back to NORMAL power source. After this re-transfer, the circuit board signals to open the start circuit to the generator, which shuts down the engine. The circuit board is then "armed" and ready for the next drop in NORMAL source voltage.

NOTE: Keep in mind the pre-packaged transfer switch is without any kind of electronic controls. It receives signals solely from circuit boards contained in the pre-packaged control panel.

TRANSFER SWITCH DATA PLATE

Affixed permanently to the transfer switch door is a DATA PLATE. Use the transfer switch only within the specific limits shown on the DATA PLATE and on other decals and labels that may be affixed to the switch. This prevents damage to equipment, possible injury to personnel, and provides long and trouble-free life for the equipment.

When requesting information or ordering parts for this equipment, make sure to include all information from the DATA PLATE.

TRANSFER SWITCH ENCLOSURE

The standard switch enclosure is a National Electrical Manufacturer's Association (NEMA) 1 type. NEMA 1 type enclosures primarily provide protection against contact with the enclosed equipment and against a limited amount of falling dirt.

Other enclosures are available.

SAFE USE OF TRANSFER SWITCH

Before installing, operating or servicing this equipment, read the SAFETY RULES (inside front cover) carefully. Comply strictly with all SAFETY RULES to prevent accidents and/or damage to the equipment. Generac recommends you make a copy of SAFETY RULES and post them near the transfer switch. Also, be sure to read all instructions and information you may find on tags, labels and decals affixed to the equipment.

Two publications that outline the safe use of transfer switches are the following:

- National Electric Code
- UL 1008, STANDARD FOR SAFETY-AUTOMATIC TRANSFER SWITCHES

INSTALLATION

This equipment has been wired and tested at the factory. Installing the switch includes these procedures:

- Mounting the enclosure and transfer switch.
- Connecting power source and load leads.
- Connecting control wiring.
- Connecting any auxiliary contacts (if needed)
- Installing/connecting any options and accessories.
- Testing functions.

UNPACKING

Carefully unpack the transfer switch. Inspect closely for any damage that might have occurred during shipment. The purchaser must file with the carrier any claims for loss or damage incurred while in transit.

Check that all packing material is completely removed from the switch prior to installation. Attach lifting devices only to the transfer switch mounting holes or brackets. **DO NOT LIFT THE SWITCH AT ANY OTHER POINT.**

MOUNTING

Transfer switch components are mounted in a standard NEMA 1-type enclosure (Figure 1). Other options are available such as NEMA 34 and NEMA 12.

CAUTION: Handle transfer switches carefully when installing. Do not drop the switch. Protect the switch against impact at all times, and against construction grit and metal chips. Never install a transfer switch that has been damaged.

Install the transfer switch as close as possible to electrical loads that you are connecting to it. Mount switch vertically to a rigid supporting structure. To prevent switch distortion, level all mounting points. If necessary, use washers behind mounting holes to level the unit.

CONNECTING POWER SOURCE AND LOAD LINES

DANGER: MAKE SURE TO TURN OFF BOTH THE NORMAL (UTILITY) AND STANDBY (GENERATOR) POWER SUPPLIES BEFORE TRYING TO CONNECT POWER SOURCE AND LOAD LINES TO THE TRANSFER SWITCH. SUPPLY VOLTAGES ARE EXTREMELY HIGH AND DANGEROUS. CONTACT WITH SUCH HIGH VOLTAGE POWER SUPPLY LINES CAUSES EXTREMELY HAZARDOUS, POSSIBLY LETHAL, ELECTRICAL SHOCK.

Wiring diagrams and electrical schematics are provided in this manual. Power source and load connections are made at a transfer mechanism, inside the switch enclosure.

2-Pole Mechanism: This switch (Figure 2 on Page 4) is used with a single phase system, when the single phase NEUTRAL line is to be connected to a Neutral Lug and is not to be switched.

3-Pole Mechanisms: This switch (Figure 3 on Page 4) is also used with a single phase system, when the single phase NEUTRAL line is to be connected to a Neutral Lug and is not to be switched.

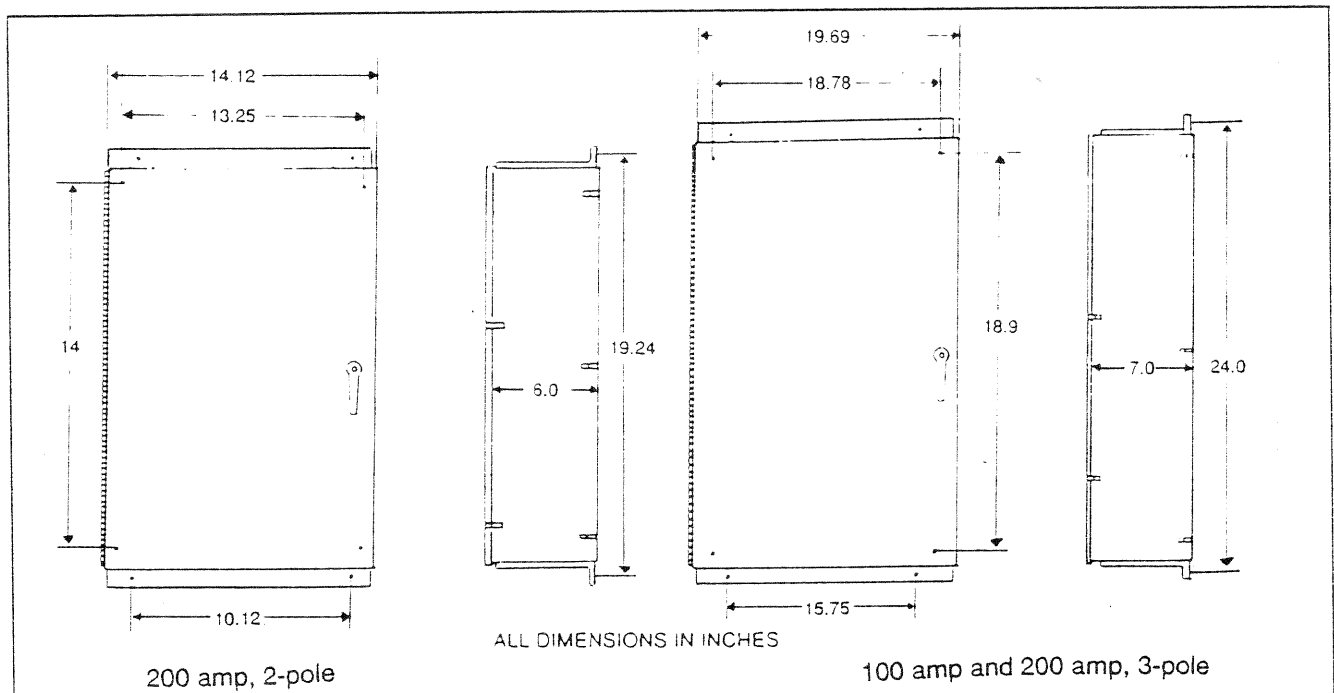


Figure 1 — Mounting Dimensions for Enclosures

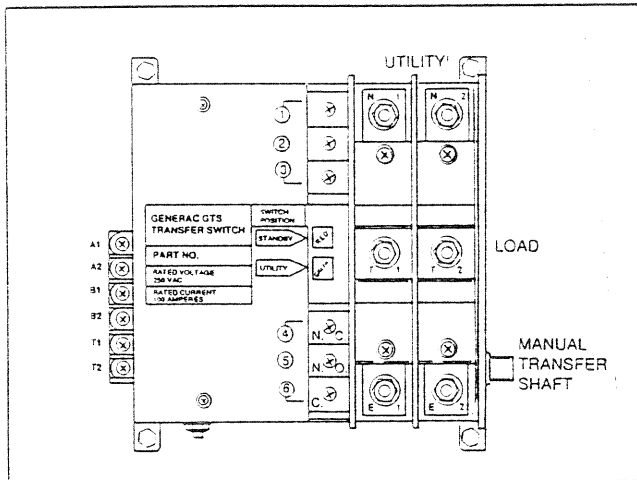


Figure 2 — 200 Amp 2-Pole Transfer Mechanism

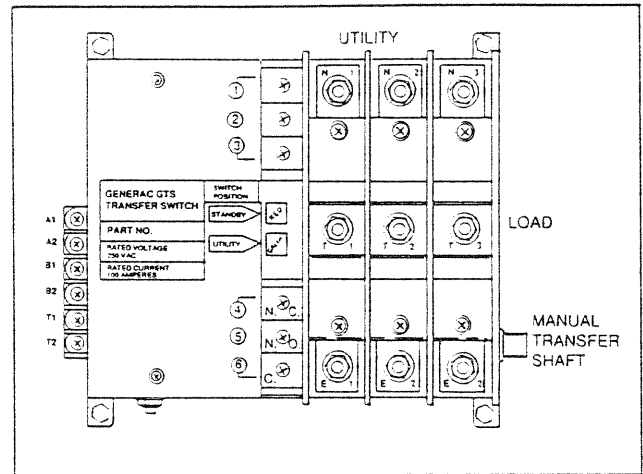


Figure 3 — 3-Pole Transfer Mechanism

Solderless, screw-type terminal lugs are standard. Conductor sizes must be adequate to handle the maximum current to which they will be subjected. The installation must comply fully with all applicable codes, standards and regulations.

Before connecting wiring cables to terminals, remove any surface oxides from the cable ends with wire brush. If ALUMINUM conductors are used, apply joint compound to conductors. After tightening terminal lugs, carefully wipe away any excess joint compound.

All power cables should enter the switch next to transfer mechanism terminals. Standard terminal lugs on the transfer mechanism are solderless, screw-type.

Connect power source load conductors to clearly marked transfer mechanism terminal lugs as follows (Figure 4):

1. Connect NORMAL (utility) power source cables to switch terminals N1, N2, N3, etc.
2. Connect STANDBY source power cables to transfer switch terminals E1, E2, E3, etc.

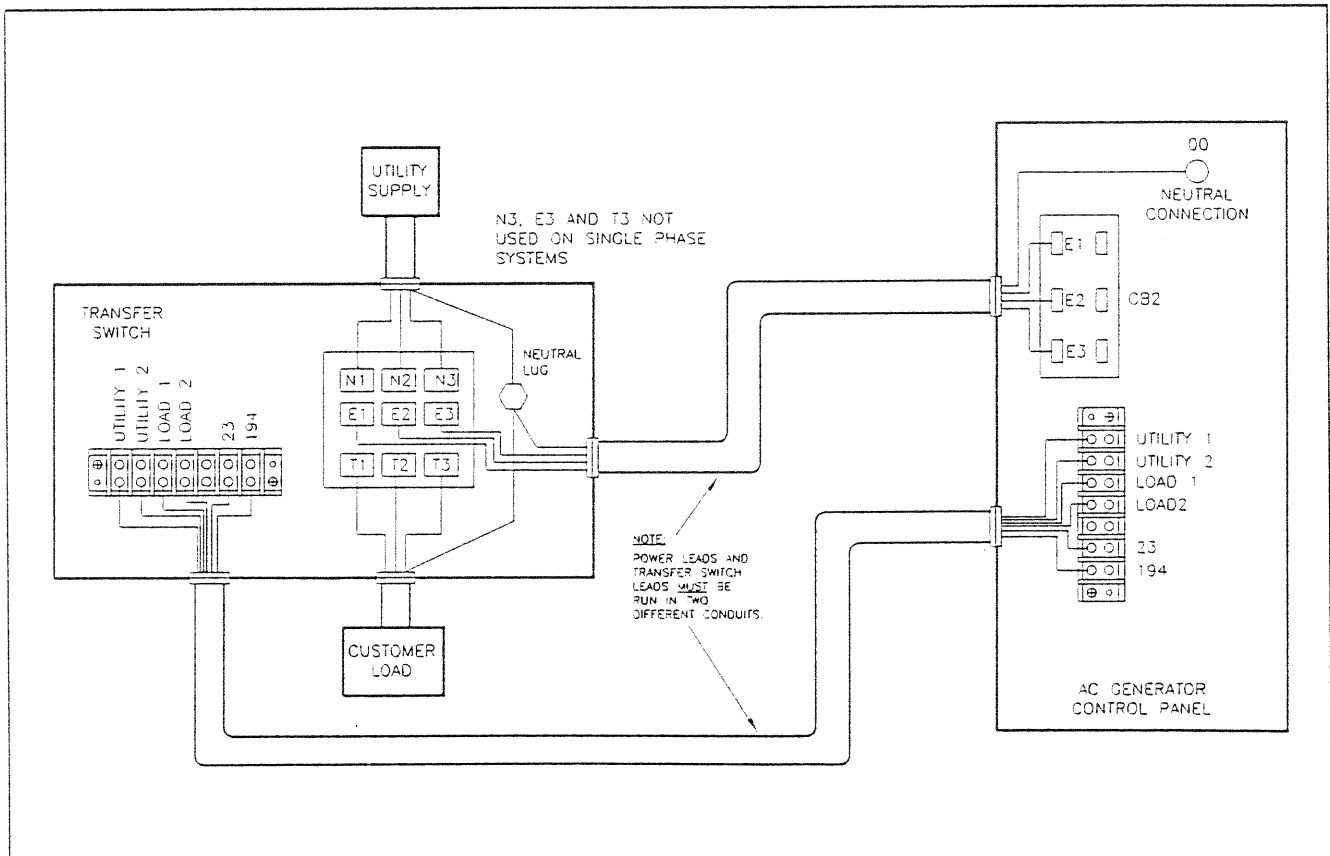


Figure 4 — Transfer Switch Interconnections (Drw. #79963)

3. Connect customer LOAD leads to switch terminals T1, T2, T3, etc.

Conductors must be properly supported, be of approved insulative qualities, be protected by approved conduit, and be of the correct wire gauge size in accordance with applicable codes.

Tighten terminal lugs to the following torques:

OUTSIDE LUGS: 110-115 INCH-POUNDS
INSIDE LUGS: 80-85 INCH-POUNDS

Make sure to maintain the proper electrical 1/2-inch clearance between live metal parts and the grounded metal.

CONNECTING START CIRCUIT WIRES

Control system interconnections (Figure 5) consist of UTILITY 1 and 2, LOAD 1 and 2; and leads 23 and 194. Control system interconnection leads must be run in a conduit that is separate from the a-c power lead. Recommended wire gauge sizes for this wiring depends on the length of the wire, as recommended below:

MAXIMUM WIRE LENGTH	RECOMMENDED WIRE SIZE
460 feet (140m)	No. 18 AWG.
730 feet (223m)	No. 16 AWG.
1,160 feet (354m)	No. 14 AWG.

NOTE: The preceding start circuit connections apply to the standard 2-wire start system only. Your transfer switch may be equipped with a 3-wire connection system.

AUXILIARY CONTACTS

If desired, you can access a set of Auxiliary Contacts on the Transfer Switch to operate customer accessories, remote advisory lights, or remote annunciator devices. A suitable power source must be connected to the COMMON (C) terminal. The contacts labeled 1, 2 and 3 (Figure 5) are connected at the factory for operation of transfer switch advisory lights. Contacts 4, 5 and 6 are available for customer use.

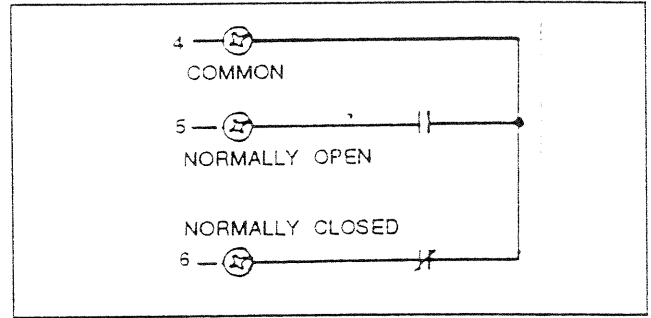


Figure 5 — Auxiliary Contacts Schematic

Auxiliary contacts are rated 15 amperes at 125, 250 or 480 volts AC; 0.5 ampere at 125 volts DC; 0.25 ampere at 250 volts DC. DO NOT EXCEED THE RATED VOLTAGE AND CURRENT OF THE CONTACTS. Contact operation is shown in the following chart:

	Switch Position	
	Utility	Standby
Common (4) to Normally Closed (6)	Closed	Open
Common (4) to Normally Open (5)	Open	Closed

OPTIONAL ACCESSORIES

Note any optional accessories that may be installed on the transfer switch or are to be installed in the standby electric system in conjunction with the switch. Complete the necessary connections for these accessories.

FUNCTIONAL TESTS & ADJUSTMENTS

Following transfer switch installation and interconnection, inspect the entire installation carefully. A competent, qualified electrician should make the inspection.

The installation should comply strictly with all applicable codes, standards, laws and regulations. All electrical connections must be correct and in compliance with applicable codes and standards.

Make sure the standby generator is ready. This includes checking engine oil level, coolant level, fuel supply, batteries and other items specified in the OWNER'S MANUAL for specific generators.

Complete all functional tests as outlined in the FUNCTIONAL TESTS section. Do this before placing the transfer switch into service.

FUNCTIONAL TESTS

Following transfer switch installation, the entire standby electric system should be inspected and tested. Have all necessary adjustments completed at this time. Functional tests of the transfer switch include these tests: (a) Manual Operation, (b) Voltage Checks and (c) Electric Operation.

CAUTION! To avoid damaging the transfer switch, perform functional tests in the exact order given.

Before proceeding with functional tests, read and be sure you understand all instructions in this section. Also, read the instructions and information on tags and decals affixed to the transfer switch. Note any options and accessories that might be installed or provided with the switch and review their operation.

DANGER! DO NOT ATTEMPT MANUAL OPERATION OF THE TRANSFER SWITCH UNTIL AFTER ALL POWER VOLTAGE SUPPLIES TO THE SWITCH HAVE BEEN TURNED OFF. FAILURE TO TURN OFF POWER VOLTAGE SUPPLIES MAY RESULT IN DANGEROUS AND POSSIBLE FATAL ELECTRICAL SHOCK.

MANUAL OPERATION

These pre-packaged transfer switches have the "Y" type of transfer mechanism.

Instructions for "Y" Type Transfer Switches: A manual handle was shipped with the transfer switch. Test manual operation as follows:

1. Check that the generator's Manual-Off-Auto switch has been set to OFF position.
2. Attach the square opening of the manual handle over the square shaft at lower right corner of transfer mechanism.
3. Move the manual handle UP (Figure 6A). When movement stops at NEUTRAL (Figure 6B), return handle to its original position and actuate again (Figure 6C).
4. Observe the changeover display on transfer mechanism as follows:
 - If utility arrow is aligned with GREEN band, load is connected to UTILITY (normal) power source.
 - If STANDBY arrow is aligned with GREEN band, LOAD is connected to STANDBY (emergency) source.
5. Repeat steps 3 and 4 several times, being sure the switch main contacts actuate normally to all positions.
6. When certain that switch operates normally, actuate main contacts to their UTILITY (normal) source.

NOTE: LOAD must be connected to UTILITY source before proceeding. That is, the GREEN BAND must be next to the UTILITY arrow and the RED band must be next to the STANDBY arrow.

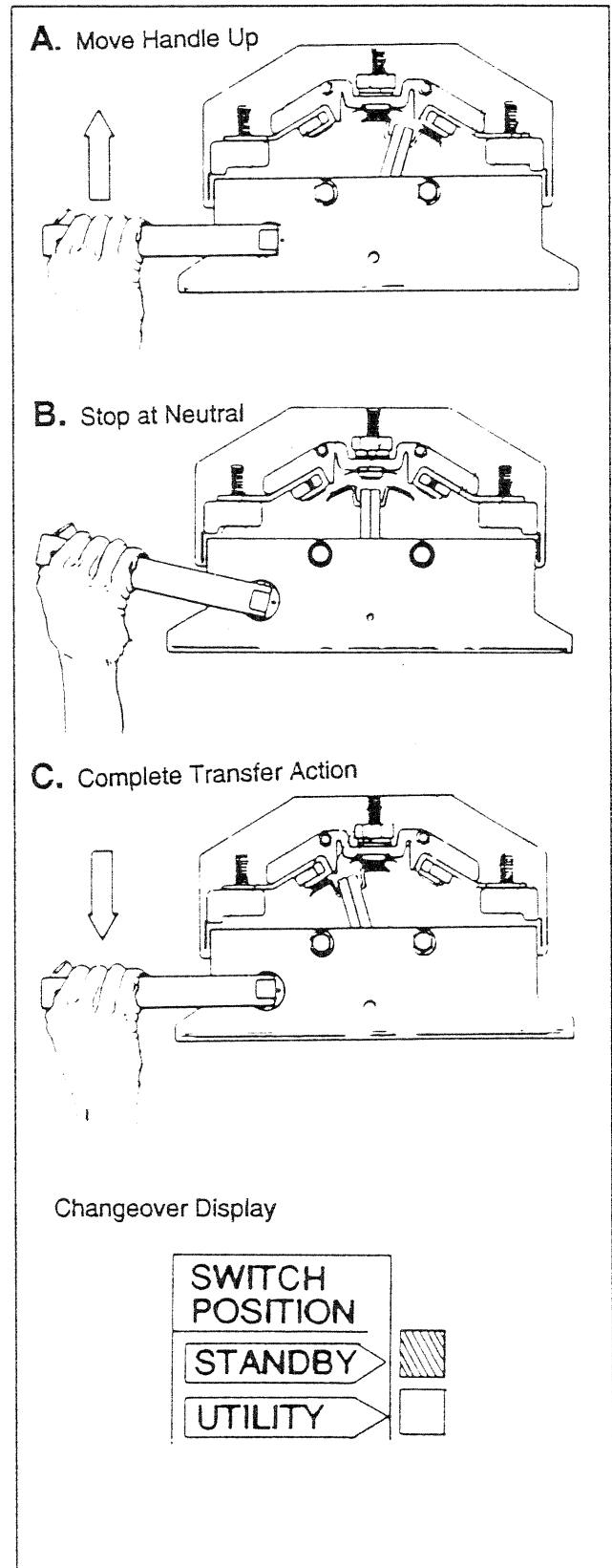


Figure 6 — Transfer Switch Operation ("Y" Type)

TRANSFER SWITCH VOLTAGE CHECKS

1. Turn ON the UTILITY power supply to the transfer switch with whatever means provided (such as the UTILITY main line circuit breaker).

DANGER! PROCEED WITH CAUTION. THE TRANSFER SWITCH IS NOW ELECTRICALLY HOT. CONTACT WITH LIVE TERMINALS RESULTS IN EXTREMELY HAZARDOUS AND POSSIBLY FATAL ELECTRICAL SHOCK.

2. With an accurate AC voltmeter, check for correct voltage across terminal lugs N1 and N2; N1 to NEUTRAL; and finally N2 to NEUTRAL (Figure 5 on Page 9).
3. When certain that UTILITY supply voltage is correct and compatible with transfer switch ratings, turn OFF the UTILITY supply to the transfer switch.
4. On the generator panel, set the Manual-Off-Auto switch to MANUAL position. The generator should crank and start.
5. Let the generator stabilize and warm up at no-load for at least five minutes.
6. Set the generator's main circuit breaker (CB1) to its ON or CLOSED position.

DANGER! PROCEED WITH CAUTION. GENERATOR OUTPUT VOLTAGE IS NOW BEING DELIVERED TO TRANSFER SWITCH TERMINALS. CONTACT WITH LIVE TERMINALS RESULTS IN EXTREMELY DANGEROUS AND POSSIBLY FATAL ELECTRICAL SHOCK.

7. With an accurate AC voltmeter and frequency meter, check the no-load, voltage and frequency meter at transfer switch terminal lugs E1, E2 and NEUTRAL. Readings should be as follows:
 - a. Frequency 61-63 Hz
 - b. Terminals E1 and E2 242-253 volts
 - c. Terminal E1 to Neutral 121-126 volts
 - d. Terminal E2 to Neutral 121-126 volts
8. Set the generator's main circuit breaker (CB1) to its OFF or OPEN position.
9. To shut down the generator, set its Manual-Off-Auto switch to OFF position.

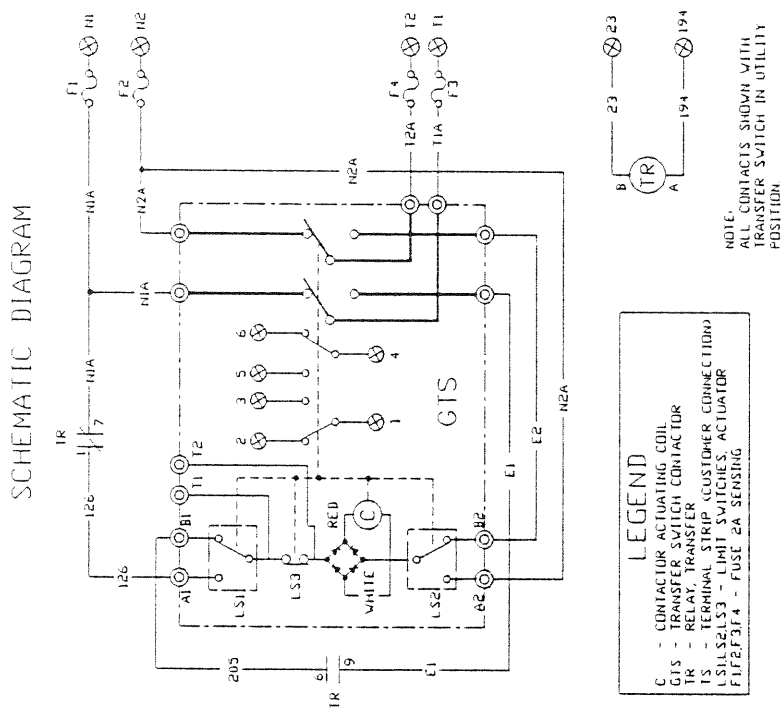
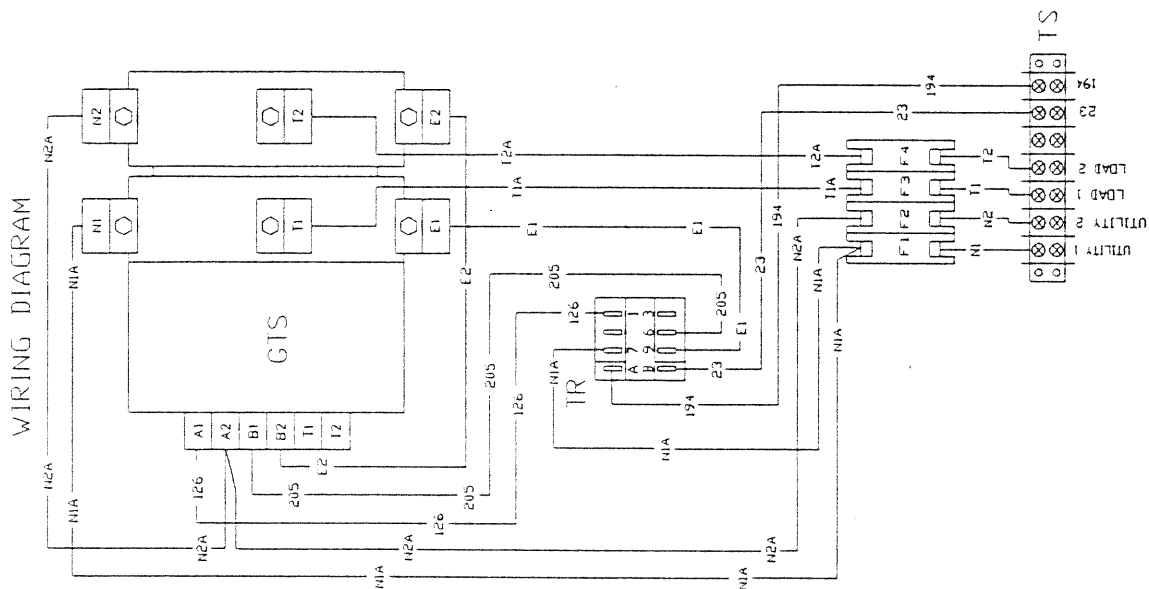
NOTE: Do NOT proceed until generator AC output voltage and frequency are correct and within stated limits. If the no-load voltage is correct but no-load frequency is incorrect, the engine governed speed probably requires adjustment. If no-load frequency is correct but voltage is not, the voltage regulator may require adjustment.

GENERATOR TESTS UNDER LOAD

1. Set the generator's main circuit breaker to its OFF or OPEN position.
2. Manually actuate the transfer switch main contacts to their STANDBY position.
3. To start the generator, set the Manual-Off-Auto switch to MANUAL. When engine starts, let it stabilize for a few minutes.
4. Turn the generator's main circuit breaker to its ON or CLOSED position. The generator now powers all LOAD circuits. Check generator operation under load as follows:
 - Turn ON electrical loads to the full rated wattage/ampere capacity of the generator. DO NOT OVERLOAD.
 - With maximum rated load applied, check voltage and frequency across transfer switch terminals E1 and E2. Voltage should be greater than 230 volts; frequency should be greater than 58 Hz.
 - Let the generator run under rated load for at least 30 minutes. With unit running, listen for unusual noises, vibration, overheating, etc., that might indicate a problem.
5. When checkout under load is complete, set main circuit breaker of the generator to its OFF or OPEN position.
6. Let the generator run at no-load for several minutes. Then, shut down by setting the Manual-Off-Auto switch to its OFF position.
7. With the manual transfer handle, move the switch's main contacts back to their utility position, i.e., load connected to utility power supply. Handle and operating lever of transfer switch should be in down position.
8. Turn on the utility power supply to transfer switch, using whatever means provided (such as a utility main line circuit breaker). The utility power source now powers the loads.
9. Set the generator's Manual-Off-Auto switch to its AUTO position. The system is now set for fully automatic operation.

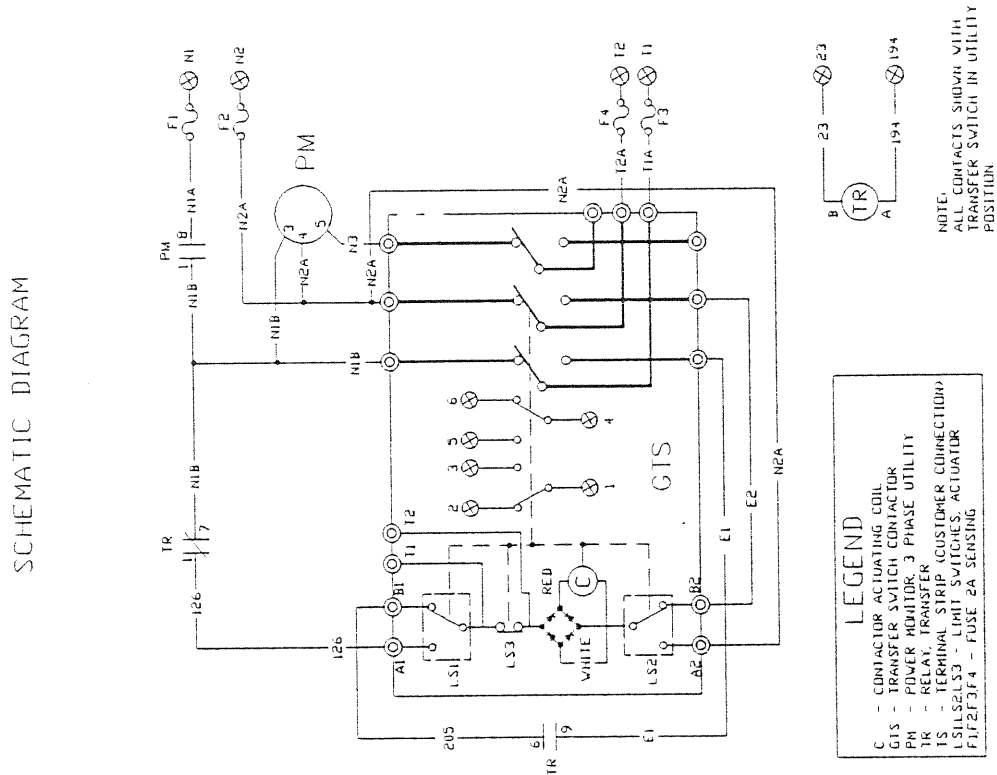
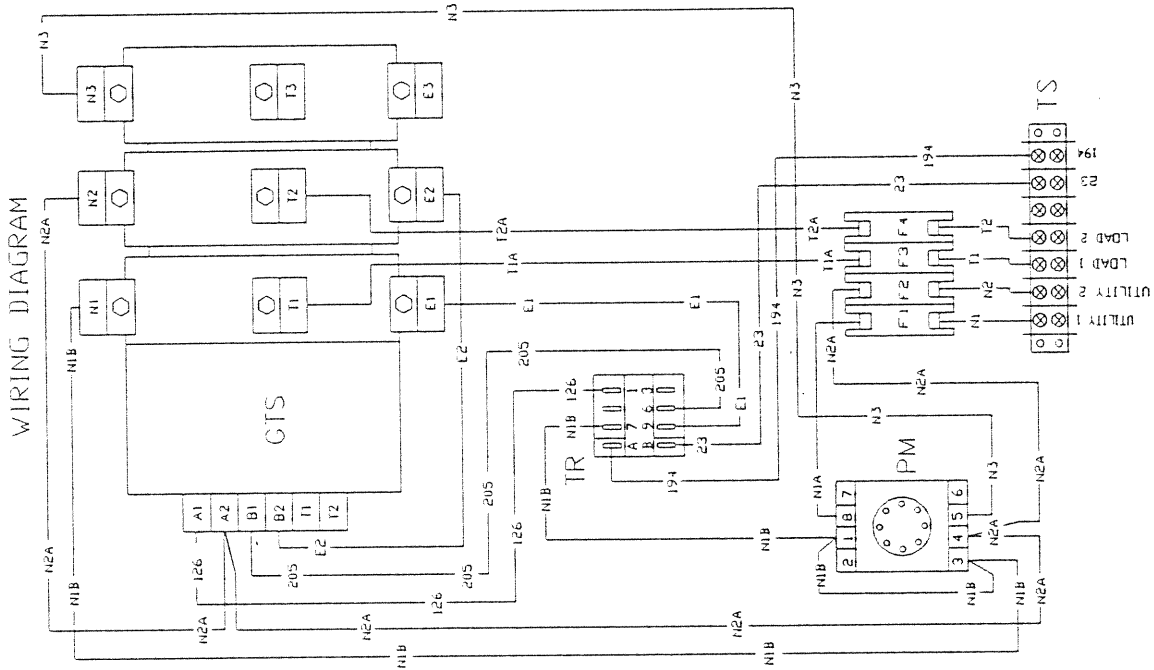
SCHEMATIC & WIRING DIAGRAM — 200 Amp, 2-pole switch

Drawing No. 86161



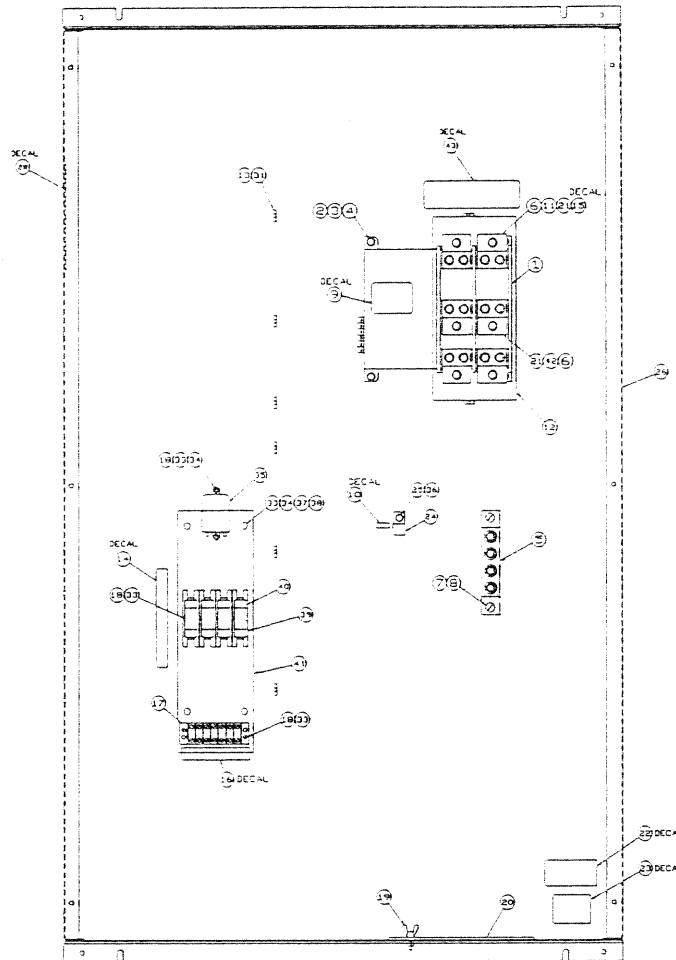
SCHEMATIC & WIRING DIAGRAM — 100 & 200 Amp, 3-pole switches

Drawing No. 86160



EXPLODED VIEW — TRANSFER SWITCH: 200-amp, 2-pole

Drawing No. 86152

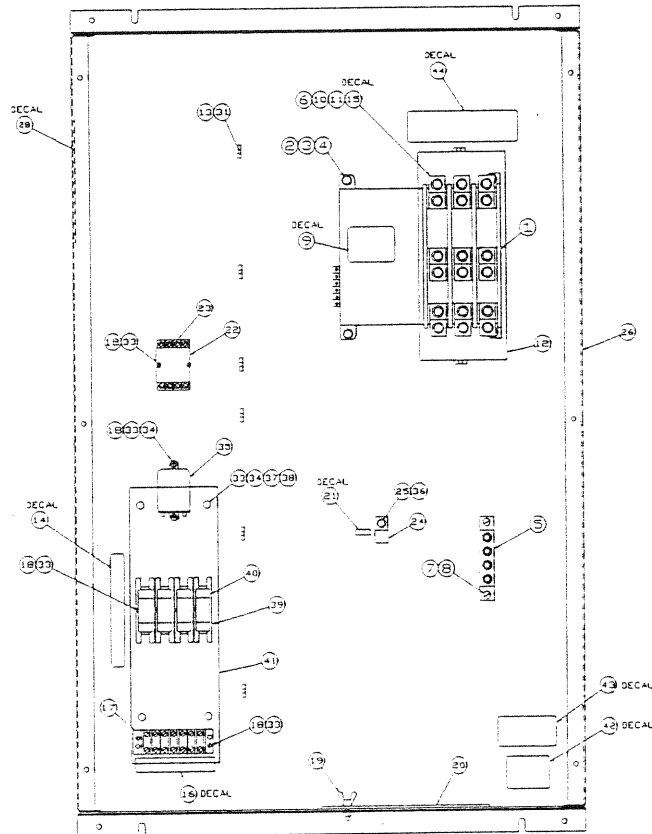


ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	62677	1	Transfer Switch,	23	81221	1	UL Nameplate
2	52618	4	M5-0.8 x 12mm Capscrew	24	57329	1	Grounding Lug
3	49226	4	M5 Lock Washer	25	24526	1	5/16"-18 x 3/4" Screw
4	23897	4	M5 Flat Washer	26	86158	1	Enclosure
5	63657	1	Neutral Lug	27*	86305	1	Enclosure Cover
6	67989	12	Locking Flange Nut	28	79959	1	UL Information Decal
7	22678	1cc	Loc-Tite (Type "A")	29*	86155B	1	Wire Harness Assembly
8	36951	2	1/4"-20 x 3/4" Screw	30**	69254	6	Crimptite Screw
9	86403A	1	Switch Rating Decal	31	28739	4	Tie Wrap
10	67210A	1	Ground Decal	32	77228	1	Enclosure Type Decal
11	62704	4	Solderless Lug	33	22264	12	No. 8 Lock Washer
12	64308	1	Transfer Switch Cover	34	38150	6	No. 8 Flat Washer
13	63378	8	Tie-Wrap Hold Down	35	63617	1	10 amp, 12 volt DC Relay
14	74991	1	Manual Operations Decal	36	22129	1	5/16" Lock Washer
15	83792	1	Terminal Identification Decal	37	79846	4	Hex Standoff (stainless steel)
16	74978	1	Terminal Strip Decal	38	22471	4	No. 8-32 Hex Nut
17	47822	1	Terminal Strip	39	73591	4	Fuse Holder
18	36919	8	No. 8-32 x 5/8" Screw	40	73590	4	2 amp, 600 volt Fuse
19	64113	1	Wing Stud	41	79840	1	Relay & Terminal Block Cover
20	63321	1	Transfer Switch Handle	42	62702	2	Solderless Lug
21	26902	6	No. 8-32 x 1/4" Screw	43	64510	1	Terminal Note Decal
22	83736	1	CSA GTS Decal	44	86157	1	Transfer Switch Decal

* NOT SHOWN

EXPLODED VIEW — TRANSFER SWITCH: 100 amp, 3-pole

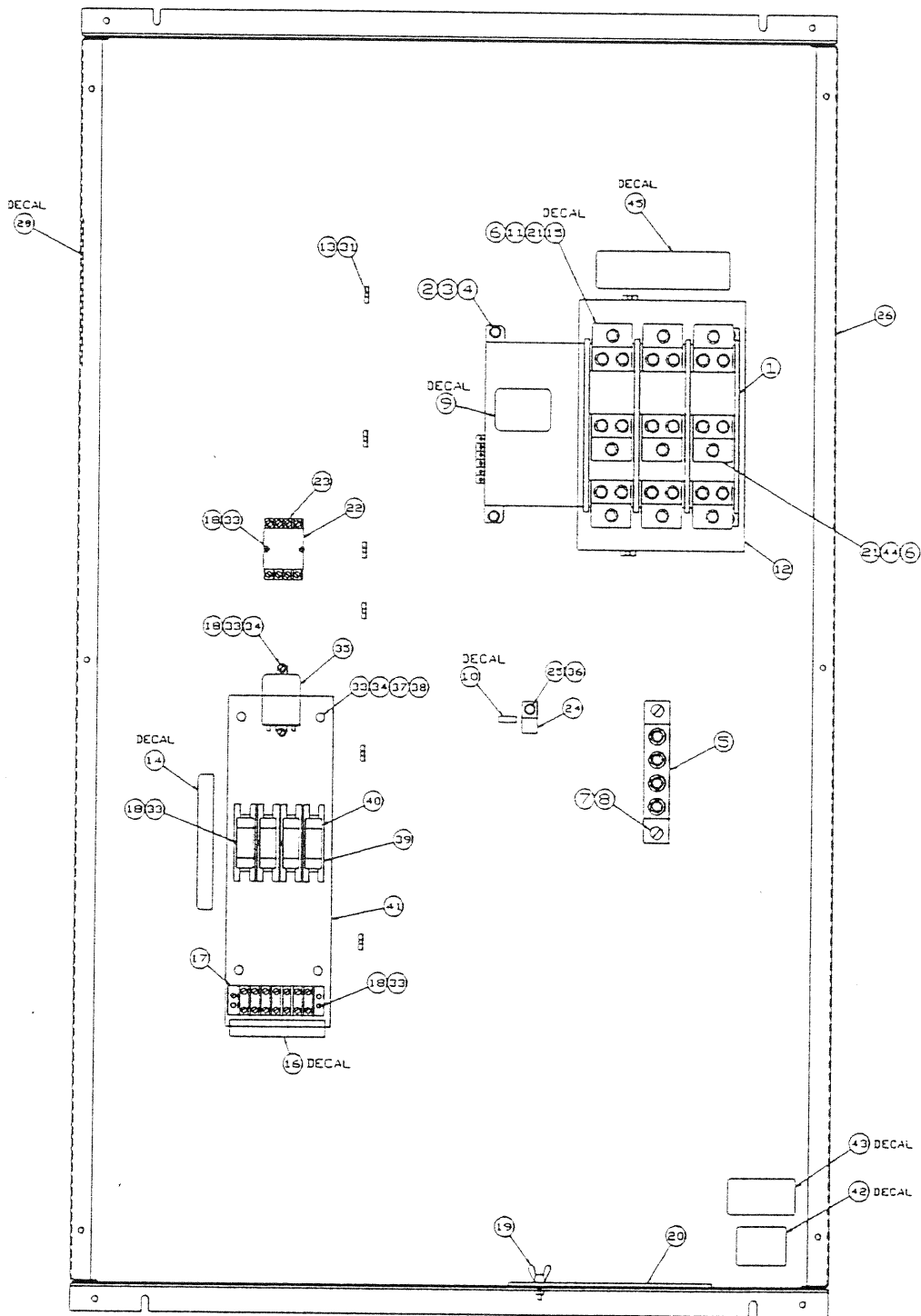
Drawing No. 86151



ITEM	PART NO.	QTY.	DESCRIPTION	ITEM	PART NO.	QTY.	DESCRIPTION
1	62642	1	Transfer Switch,	24	57329	1	Grounding Lug
2	52618	4	M5-0.8 x 12mm Capscrew	25	24526	1	5/16"-18 x 3/4" Screw
3	49226	4	M5 Lock Washer	26	86154	1	Enclosure
4	23897	4	M5 Flat Washer	27*	86306	1	Enclosure Cover
5	63384	1	Neutral Lug	28	79959	1	UL Information Decal
6	67989	12	Locking Flange Nut	29*	86155	1	Wire Harness Assembly
7	22678	1cc	Loc-Tite (Type "A")	30*	69254	6	Crimptite Screw
8	36935	2	1/4"-20 x 3/4" Screw	31	28739	4	Tie Wrap
9	86403	1	Switch Rating Decal	32	77228	1	Enclosure Type Decal
10	63552	9	Anti-Rotation Device	33	22264	12	No. 8 Lock Washer
11	62684	9	Solderless Lug	34	38150	6	No. 8 Flat Washer
12	64109B	1	Transfer Switch Cover	35	63617	1	10 amp, 12 volt DC Relay
13	63378	8	Tie-Wrap Hold Down	36	22129	1	5/16" Lock Washer
14	74991	1	Manual Operations Decal	37	79846	4	Hex Standoff (stainless steel)
15	83792	1	Terminal Identification Decal	38	22471	4	No. 8-32 Hex Nut
16	74978	1	Terminal Strip Decal	39	73591	4	Fuse Holder
17	47822	1	Terminal Strip	40	73590	4	2 amp, 600 volt Fuse
18	36919	8	No. 8-32 x 5/8" Screw	41	79840	1	Relay & Terminal Block Cover
19	64113	1	Wing Stud	42	81221	1	UL Nameplate
20	63321	1	Transfer Switch Handle	43	83736	1	CSA GTS Decal
21	67210A	1	Ground Decal	44	64510	1	Terminal Note Decal
22	63306	1	3-phase Power Monitor	45	86157	1	Transfer Switch Decal
23	66972	1	Relay Octal Socket				* NOT SHOWN

EXPLODED VIEW – TRANSFER SWITCH: 200 amp, 3-pole

Drawing No. 86153



REPAIR PARTS – TRANSFER SWITCH: 200 amp, 3-pole

Drawing No. 86153

ITEM	PART NO.	QTY.	DESCRIPTION
1	64198	1	Transfer Switch,
2	52618	4	M5-0.8 x 12mm Capscrew
3	49226	4	M5 Lock Washer
4	23897	4	M5 Flat Washer
5	63657	1	Neutral Lug
6	67989	18	Locking Flange Nut
7	22678	1cc	Loc-Tite (Type "A")
8	36951	2	1/4"-20 x 3/4" Screw
9	86403B	1	Switch Rating Decal
10	67210A	1	Ground Decal
11	62704	4	Solderless Lug
12	64308	1	Transfer Switch Cover
13	63378	8	Tie-Wrap Hold Down
14	74991	1	Manual Operations Decal
15	83792	1	Terminal Identification Decal
16	74978	1	Terminal Strip Decal
17	47822	1	Terminal Strip
18	36919	10	No. 8-32 x 5/8" Screw
19	64113	1	Wing Stud
20	63321	1	Transfer Switch Handle
21	26902	7	No. 8-32 x 1/4" Screw
22	63306	1	3-phase Power Monitor
23	66972	1	Relay Octal Socket
24	57329	1	Grounding Lug
25	24526	1	5/16"-18 x 3/4" Screw
26	86158	1	Enclosure
27*	86305	1	Enclosure Cover
28	79959	1	UL Information Decal
29*	86155A	1	Wire Harness Assembly
30*	69254	6	Crimptite Screw
31	28739	38	Tie Wrap
32	77228	1	Enclosure Type Decal
33	22264	14	No. 8 Lock Washer
34	38150	6	No. 8 Flat Washer
35	63617	1	10 amp, 12 volt DC Relay
36	22129	1	5/16" Lock Washer
37	79846	4	Hex Standoff (stainless steel)
38	22471	4	No. 8-32 Hex Nut
39	73591	4	Fuse Holder
40	73590	4	2 amp, 600 volt Fuse
41	79840	1	Relay & Terminal Block Cover
42	81221	1	UL Nameplate
43	83736	1	CSA GTS Decal
44	62702	2	Solderless Lug
45	64510	1	Terminal Note Decal
46	86157	1	Transfer Switch Decal

* NOT SHOWN

**STANDARD ONE YEAR LIMITED WARRANTY
FOR GENERAC TRANSFER SWITCHES**

For a period of one (1) year from the date of original sale, Generac will at its option repair or replace any part which, upon examination by Generac, is found to be defective under normal use and service. Any equipment which the buyer claims to be defective must be examined by Generac's nearest authorized warranty service facility. All transportation costs under warranty, including return to the factory, are to be borne by the buyer and pre-paid.

WARRANTY SCHEDULE

YEAR ONE – 100% coverage of on-site labor and parts listed

TRANSFER SYSTEM – All Components.

All warranty expense allowances are subject to the conditions defined in the PUBLISHED GENERAC POLICIES AND PROCEDURES MANUAL.

* Rental units and demonstrators are warranted for 90 days. Rental units and demonstrators which are resold are not covered under Generac warranty.

This warranty shall not apply to normal wear and tear, costs of maintenance or to any equipment which has been subject to improper or unauthorized installation, misuse, negligence, accident, overloading, overspeeding, or improper maintenance, repair or storage, which, in Generac's judgement, adversely affects the equipment's performance. Any damage in transit shall be the buyer's responsibility.

This warranty is effective for all products manufactured after October, 1984, and supersedes all prior warranties of Generac. THIS WARRANTY IS IN PLACE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. SPECIFICALLY, GENERAC MAKES NO OTHER WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. GENERAC'S ONLY LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF PARTS AS STATED ABOVE. IN NO EVENT SHALL GENERAC BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF SUCH DAMAGES ARE A DIRECT RESULT OF GENERAC'S NEGLIGENCE. Buyer agrees to make no claims against Generac based on negligence.

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