

Systems Operation

Connection Diagrams: SR4 and SR4B Generators, Voltage Regulators, Options



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SR4 and SR4B Generators for All Engines

Except SR4B for 3500 Engines

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SR4B Generators for 3500 Engines

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Systems Operation Section

SR4 and SR4B Generators for All Engines Except SR4B for 3500 Engines

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General Information (All Except SR4B for 3500 Engines)

SMCS Code: 4450

Introduction

The diagrams that follow apply to the SR4 Generators and the SR4B Generators (except for the SR4B used with 3500 Engines).

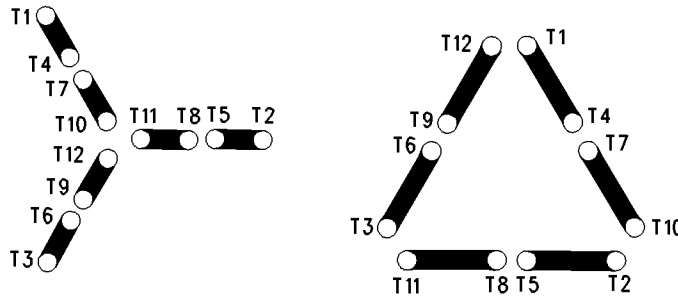
Note: Diagrams for the SR4B used with 3500 Engines appear later in this manual.

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Main Stator and Voltage Sensing Lead Connections (All Except SR4B for 3500 Engines)

SMCS Code: 4453

12 Lead, Wye and Delta Connection



WYE CONNECTION					REGULATOR SENSING			
VOLTAGE	L1 U	L2 V	L3 W	N	TIE TOGETHER			
LOW	(T1,T7)	(T2,T8)	(T3,T9)	(T4,T5,T6 T10,T11,T12)		20	22	24
HIGH	T1	T2	T3	(T10,T11,T12)	(T4,T7)	(T5,T8)	(T6,T9)	T9 17 T8

DELTA CONNECTION				REGULATOR SENSING		
L1 U	L2 V	L3 W	TIE TOGETHER			
(T1,T12)	(T2,T10)	(T3,T11)	(T4,T7)	(T5,T8)	(T6,T9)	T1 T2 T3

Illustration 1

g00700302

10 Lead Wye Connection

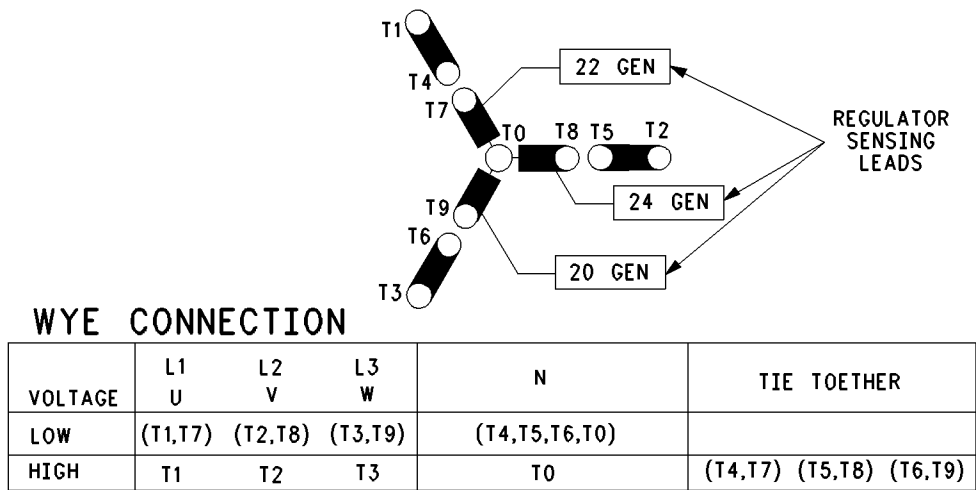


Illustration 2

g00700304

6 Lead Wye Connection

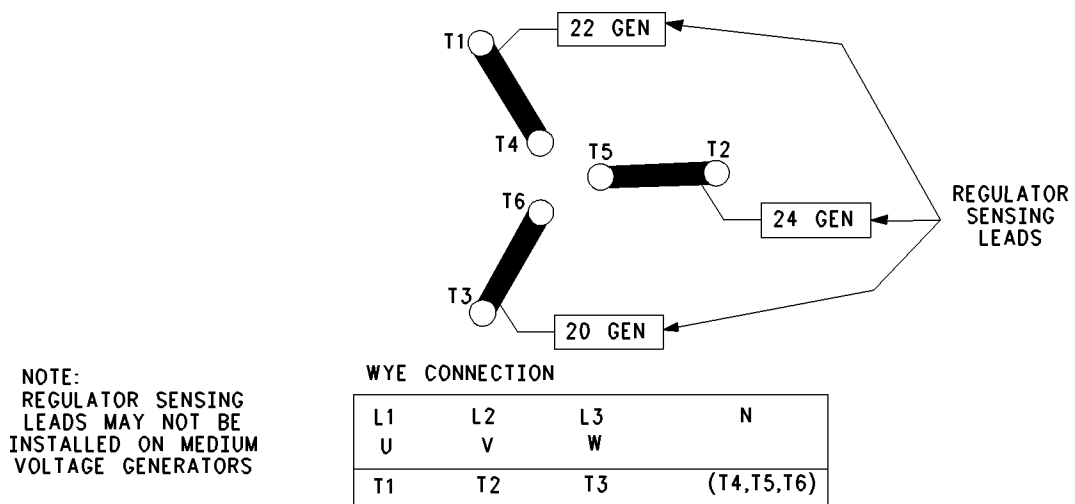
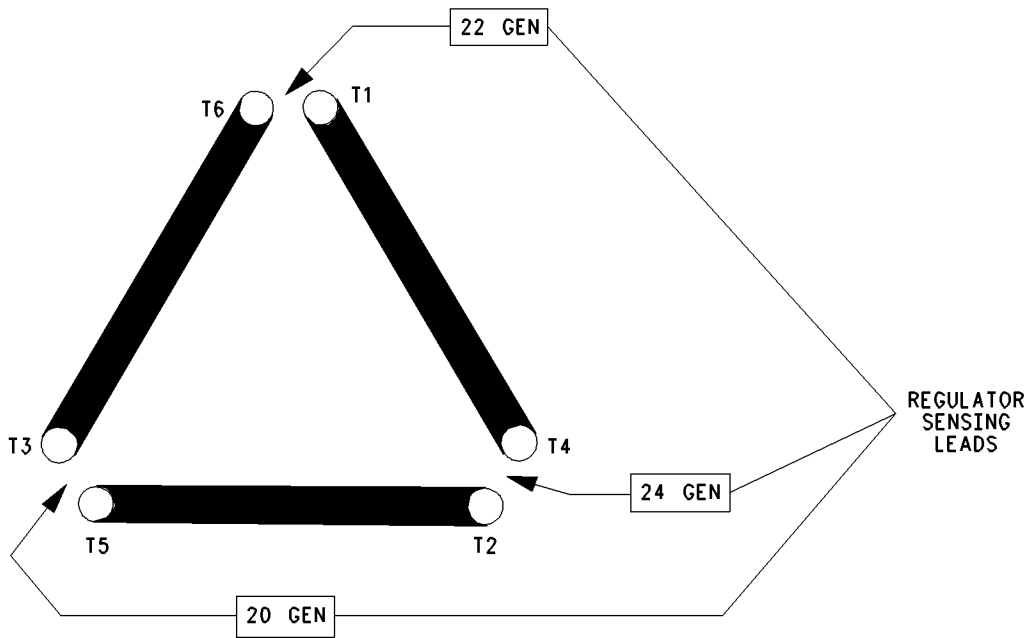


Illustration 3

g00700317

6 Lead Delta Connection



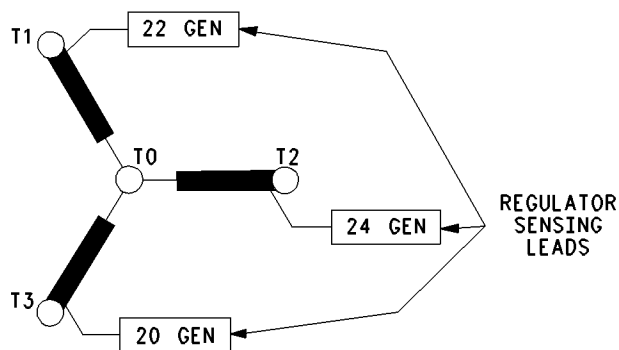
DELTA CONNECTION			REGULATOR SENSING		
L1 U	L2 V	L3 W	20	22	24
(T1,T6)	(T2,T4)	(T3,T5)	T3	T1	T2

NOTE:
REGULATOR SENSING
LEADS MAY NOT BE
INSTALLED ON MEDIUM
VOLTAGE GENERATORS

Illustration 4

g00700323

4 Lead Wye Connection



NOTE:
REGULATOR SENSING
LEADS MAY NOT BE
INSTALLED ON MEDIUM
VOLTAGE GENERATORS

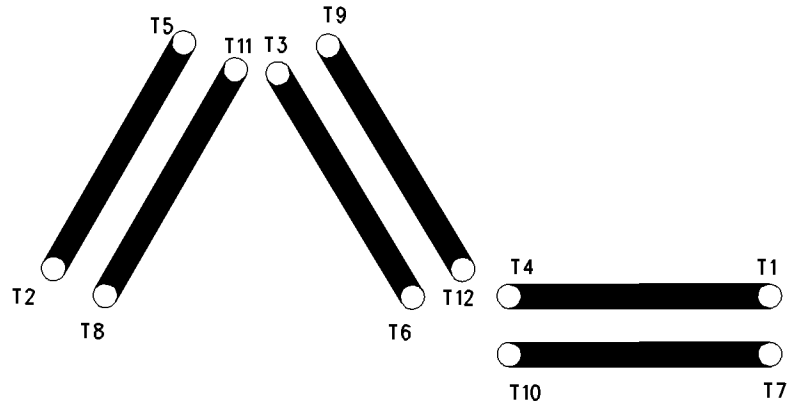
WYE CONNECTION

L1	L2	L3	N
U	V	W	
T1	T2	T3	T0

Illustration 5

g00700333

12 Lead, Single Phase Connection



GENERATOR CONNECTION			CONNECT TOGETHER	REG SENSE LEADS	
L1 U	L2 V	N W		20	24
(T2,T8)	(T1,T7)	(T4,T6,T10,T12)	(T3,T5,T9,T11)	T2	T1

NOTE: FOR PARRALLEL OPERATION, T8 LEAD GOES THROUGH WINDOW OF DROOP TRANSFORMER

WITH VR-3 VOLTAGE REGULATOR, CONNECT JUMPER WIRE BETWEEN VOLTAGE REGULATOR TERMINALS 20 AND 28.

WITH VR-4 VOLTAGE REGULATOR, JUMPER WIRE IS NOT REQUIRED.

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Main Revolving Field Connections (All Except SR4B for 3500 Engines)

SMCS Code: 4457

Diode Block

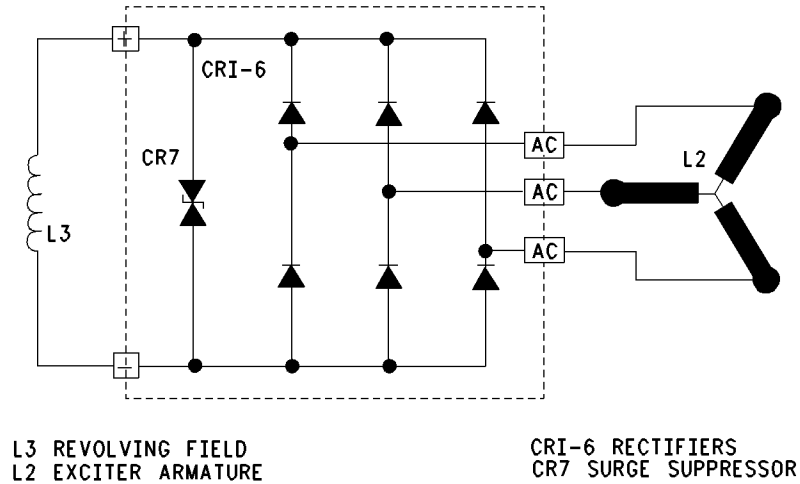


Illustration 7

g00700353

Diode Block and Surge Suppressor

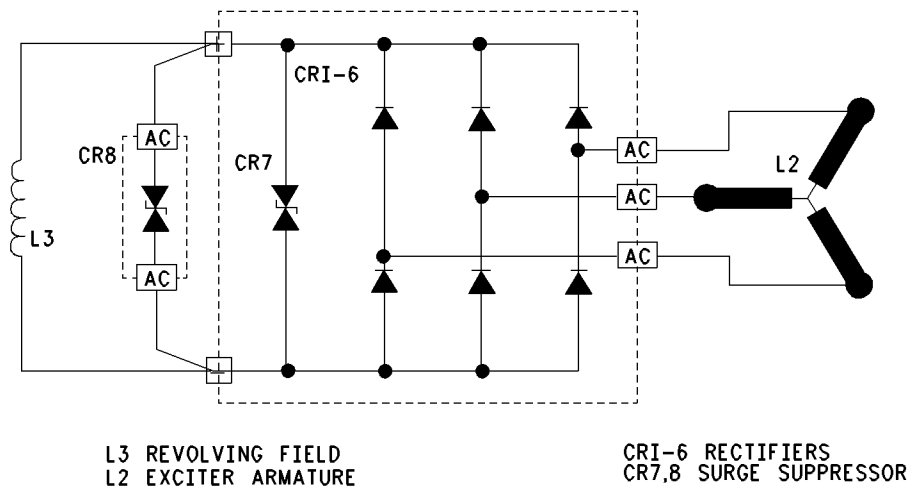


Illustration 8

g00703882

Two Diode Blocks and Surge Suppressor

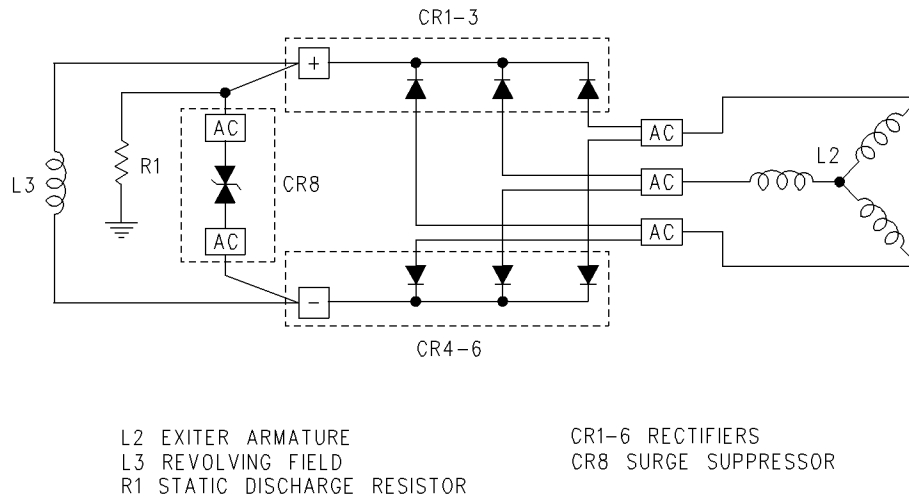


Illustration 9

g00695807

Three Diode Blocks and Surge Suppressor

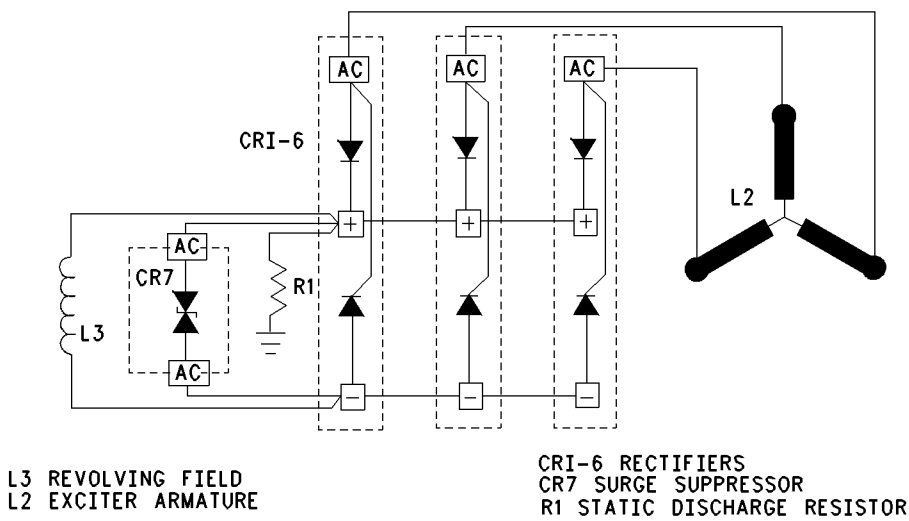


Illustration 10

g00700361

Six Diodes and Two Surge Suppressors

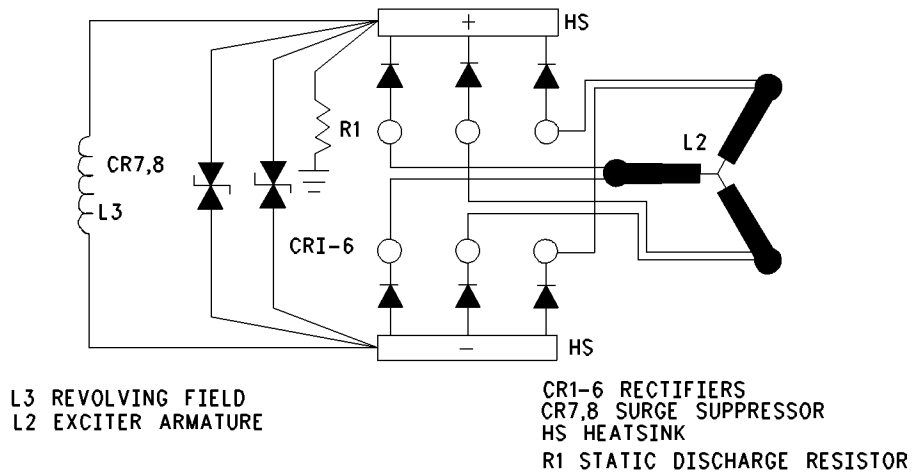


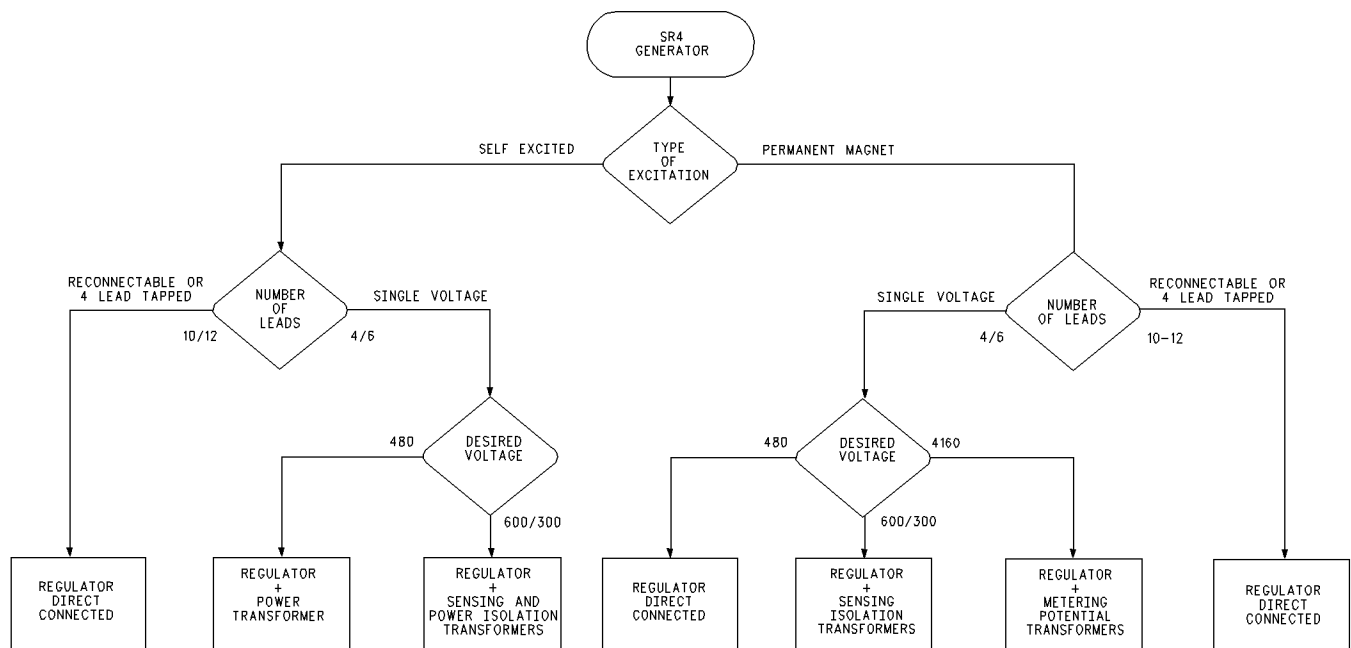
Illustration 11

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Selection Guide for Voltage Regulator (All Except SR4B for 3500 Engines)

SMCS Code: 4467



NOTE: VOLTAGES SHOWN ARE 60 Hz EQUIVALENTS

Illustration 12

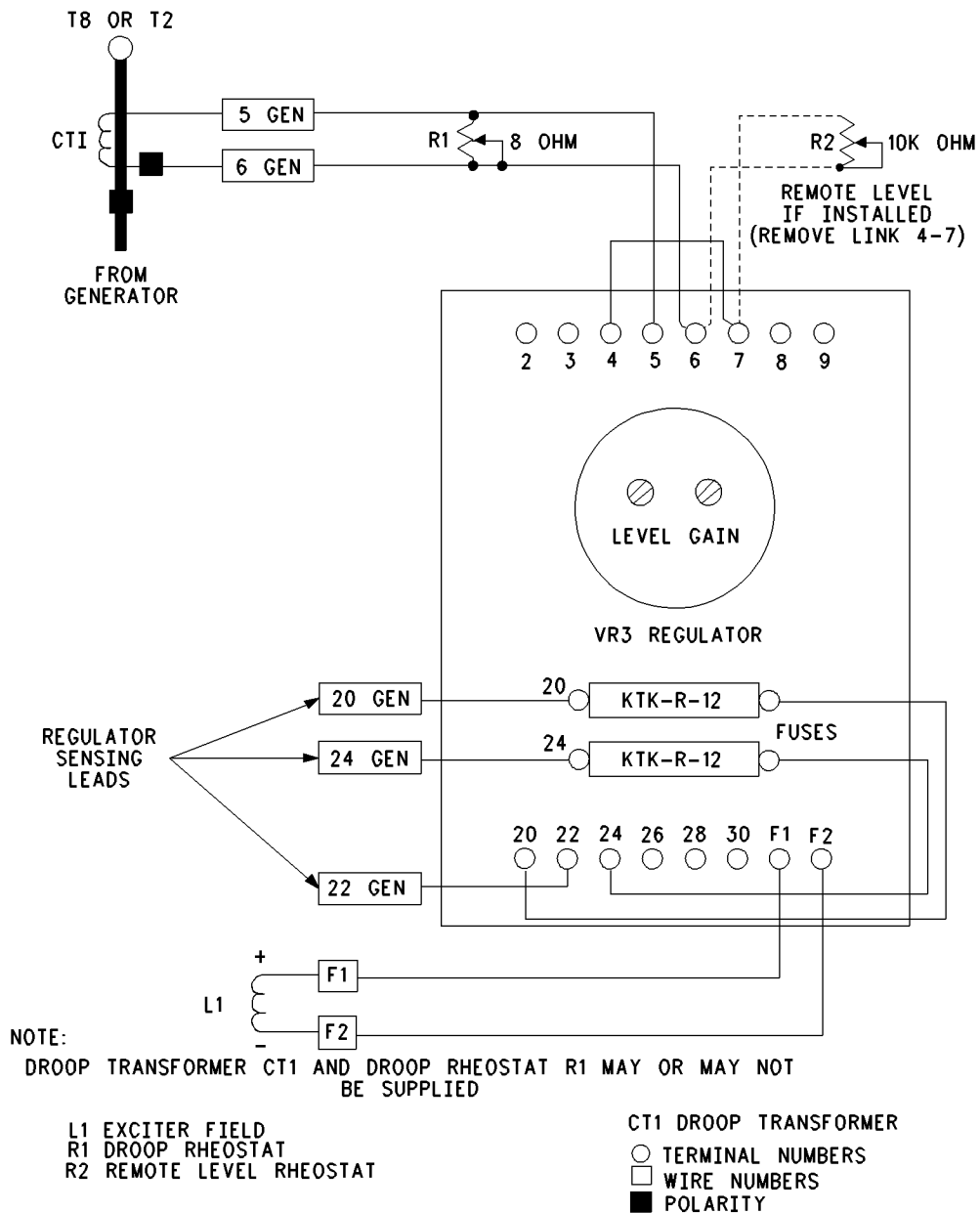
g00703951

i01330211

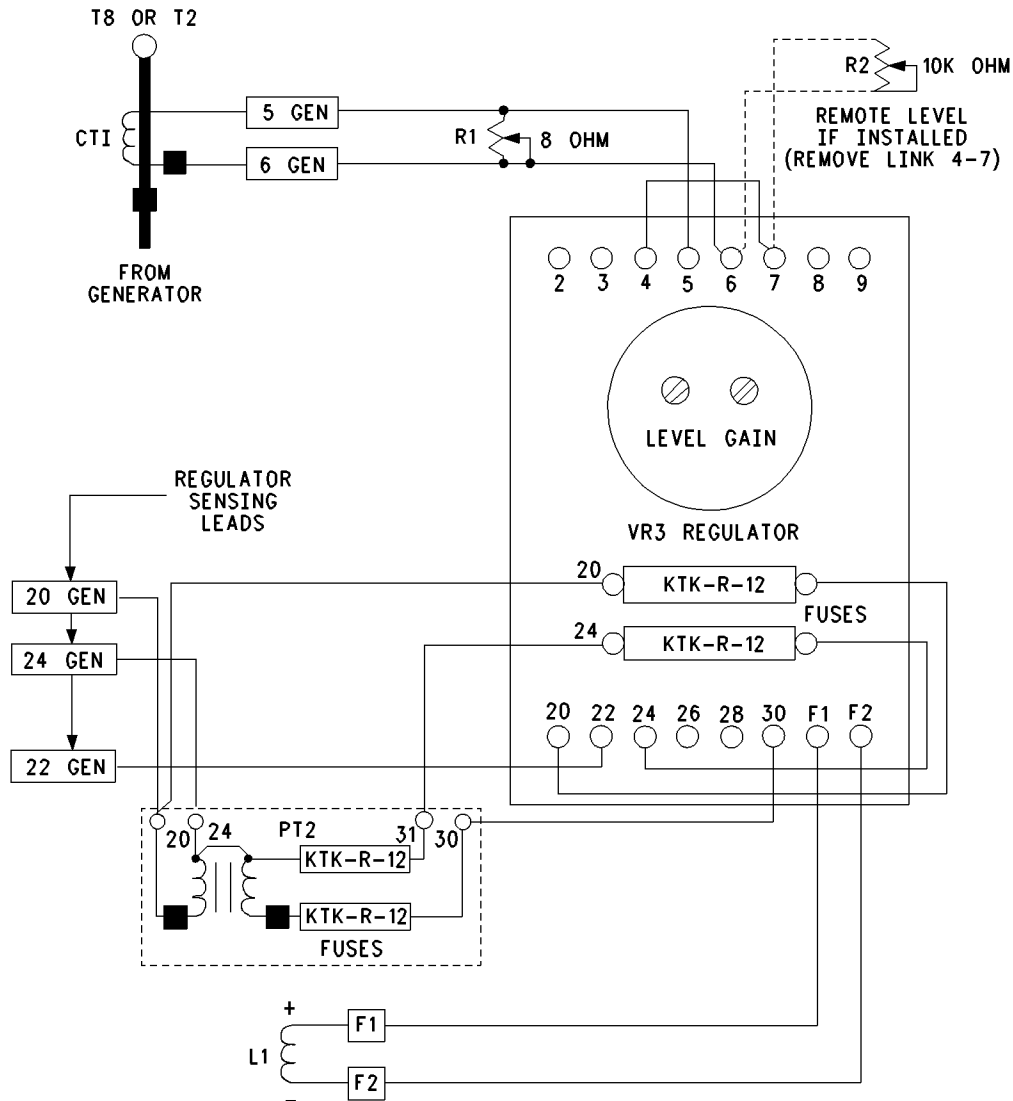
VR3 Voltage Regulator Connections (All Except SR4B for 3500 Engines)

SMCS Code: 4467

Self Excited with Direct Connection to Generator



Self Excited with Power Transformer 4/6 Lead Generator

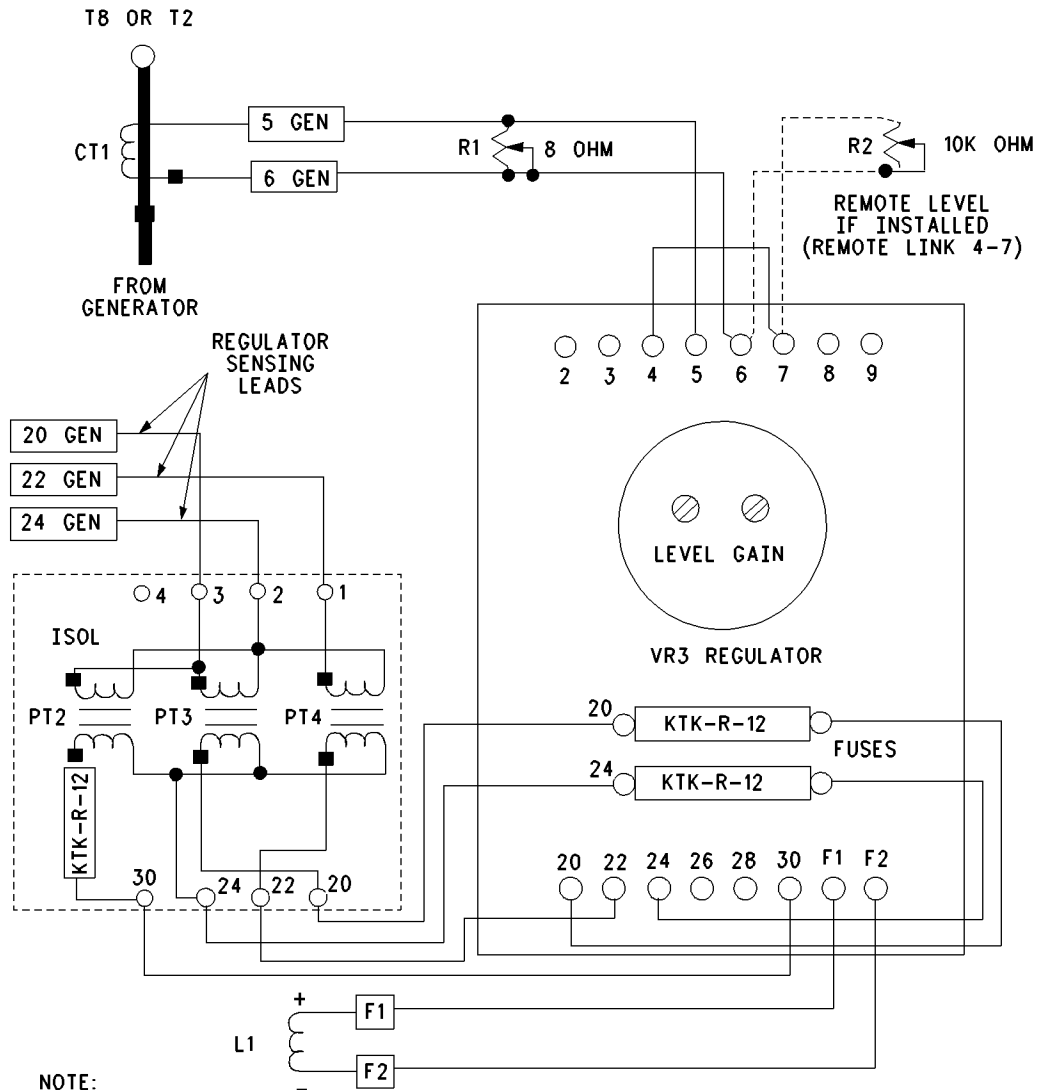


NOTE:
DROOP TRANSFORMER CT1 AND DROOP RHEOSTAT R1 MAY OR MAY NOT
BE SUPPLIED

L1 EXCITER FIELD
R1 DROOP RHEOSTAT
R2 REMOTE LEVEL RHEOSTAT
CT1 DROOP TRANSFORMER

PT2 POWER TRANSFORMER
○ TERMINAL NUMBERS
□ WIRE NUMBERS
■ POLARITY

Self Excited with Power and Sensing Isolation Transformer

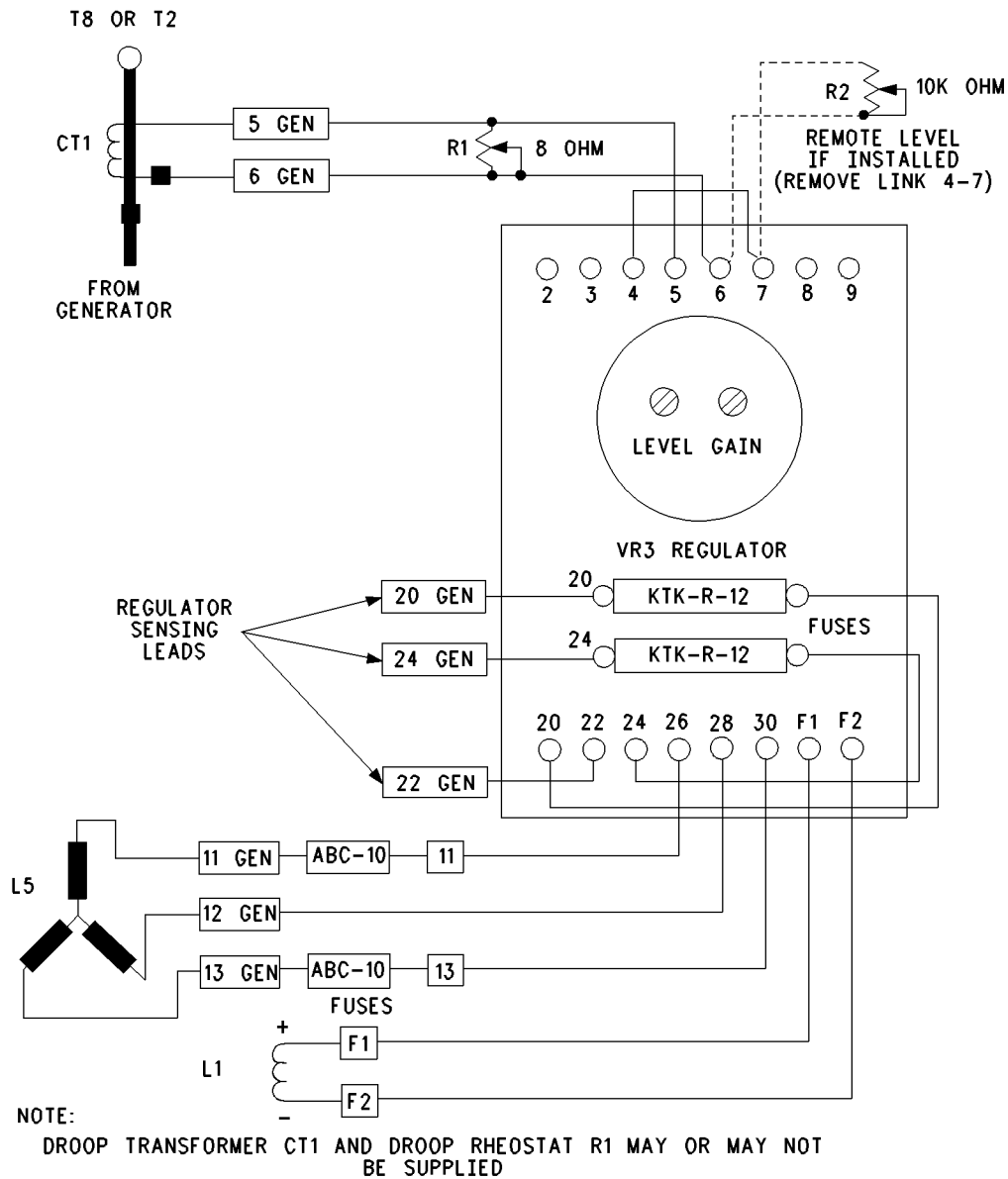


NOTE:
DROOP TRANSFORMER CT1 AND DROOP RHEOSTAT R1 MAY OR MAY NOT BE SUPPLIED

L1 EXCITER FIELD
R1 DROOP RHEOSTAT
R2 REMOTE LEVEL RHEOSTAT
ISOL ISOLATION TRANSFORMER

CT1 DROOP TRANSFORMER
PT2 POWER TRANSFORMER
PT3,PT4 SENSING TRANSFORMER
○ TERMINAL NUMBERS
□ WIRE NUMBERS
■ POLARITY

Permanent Magnet Excitation with Direct Connection to Generator



L1 EXCITER FIELD
L5 P.M. EXCITER STATOR
R1 DROOP RHEOSTAT
R2 REMOTE LEVEL RHEOSTAT

CT1 DROOP TRANSFORMER
○ TERMINAL NUMBERS
□ WIRE NUMBERS
■ POLARITY

Illustration 16

Permanent Magnet Excitation with Connections to Metering Potential Transformers

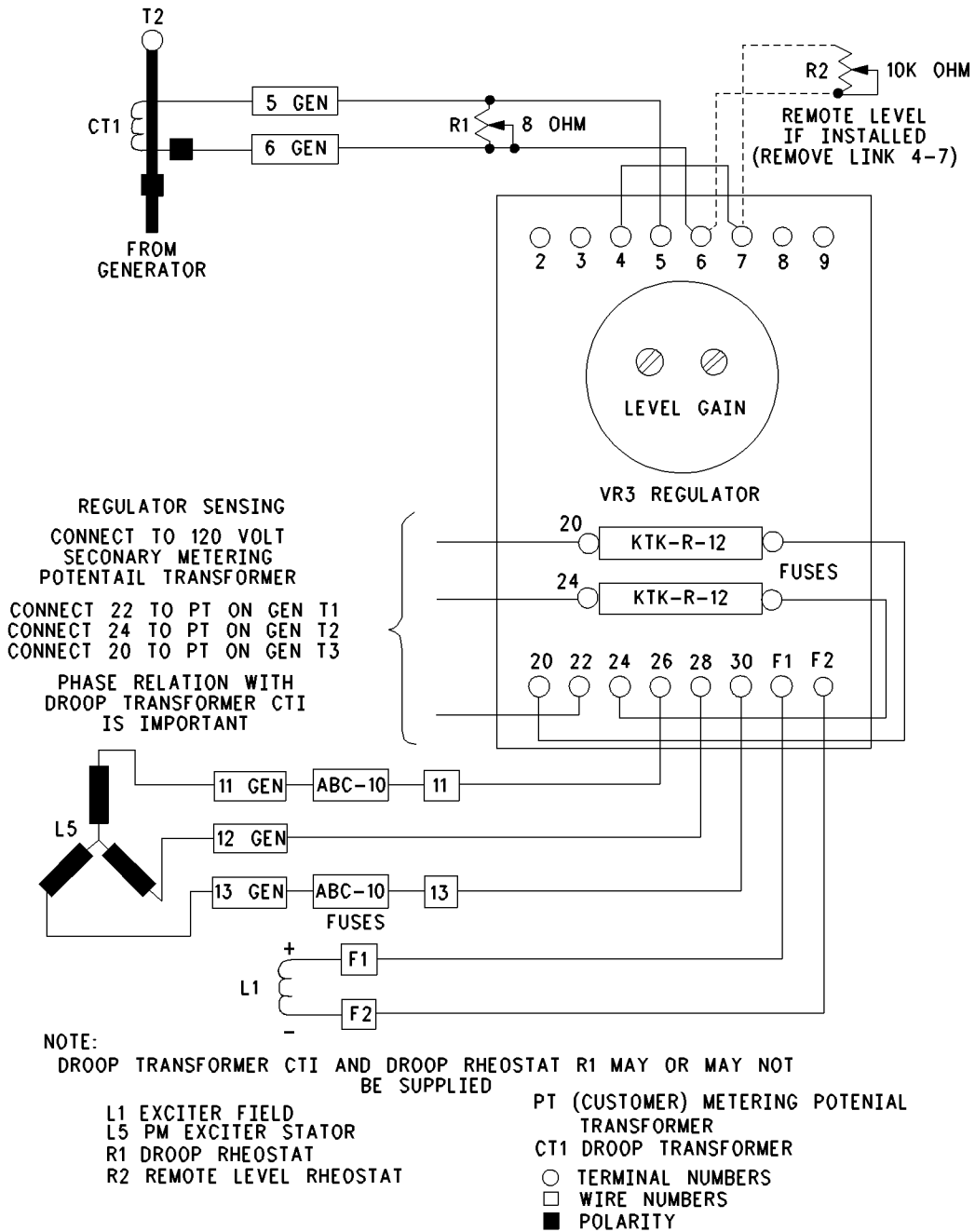


Illustration 17

Permanent Magnet Excitation with Connections to an Isolation Transformer

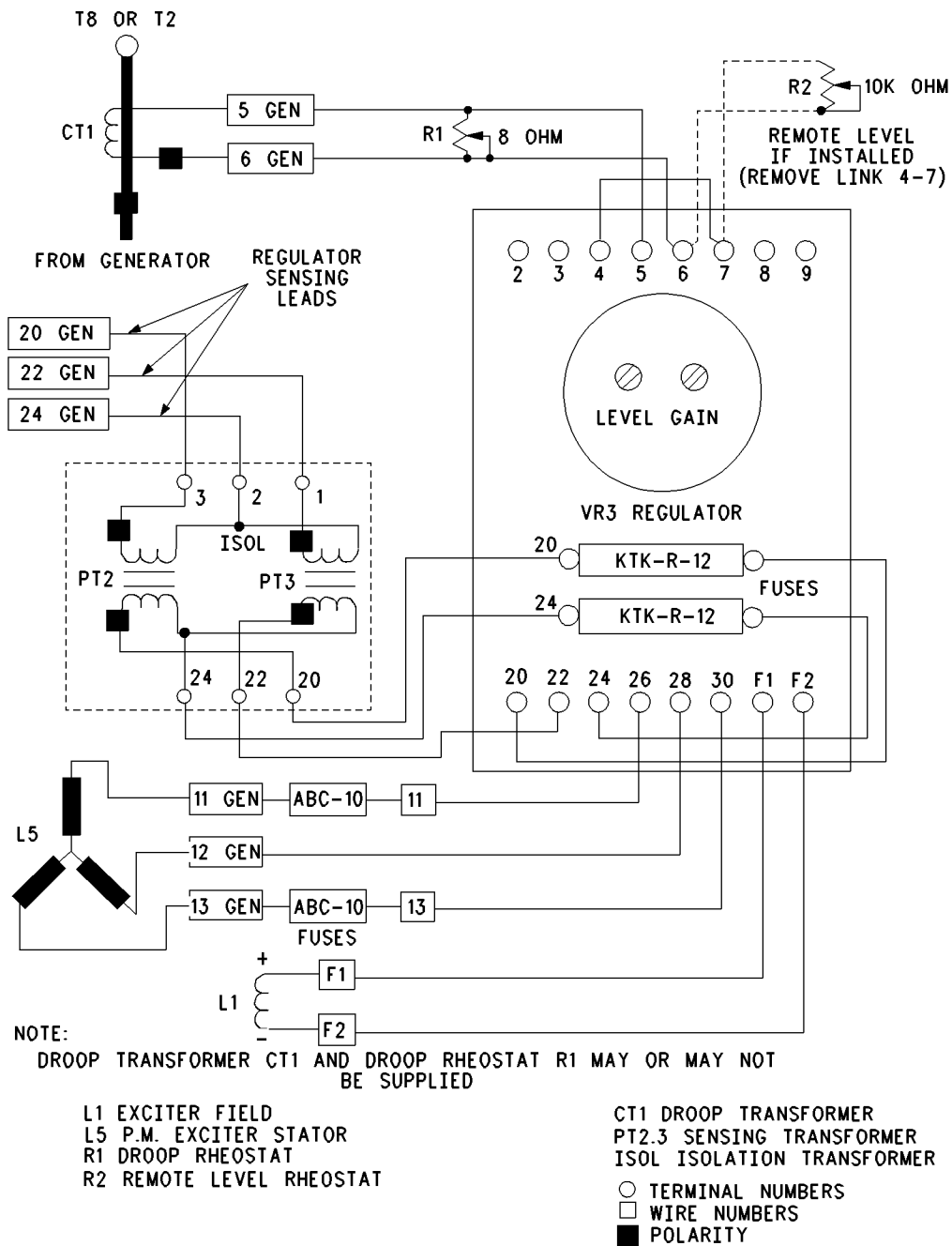


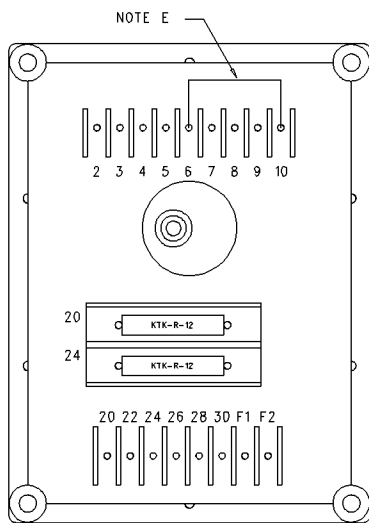
Illustration 18

i01314685

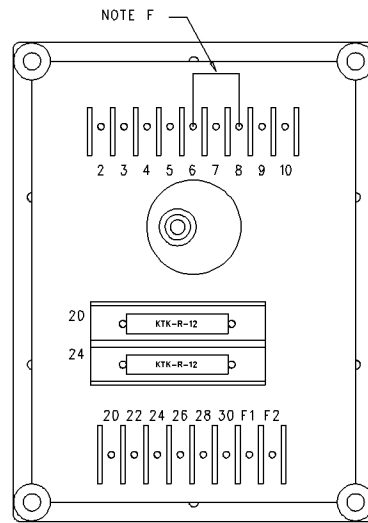
VR3F Voltage Regulator Connections (All Except SR4B for 3500 Engines)

SMCS Code: 4467

Knee Frequency and Underfrequency Selection



NOTE E: INSTALL JUMPER FOR 60 HZ OPERATION; REMOVE FOR 50 HZ OPERATION.



NOTE F: INSTALL JUMPER FOR 1:1 V/HZ SLOPE; REMOVE FOR 2:1 V/HZ UNDERFREQUENCY SLOPE.

Illustration 19

g00695812

The physical differences between the VR3 and the VR3F are minor. The hole for Gain adjustment is eliminated and another terminal is added to the upper row (terminal 10) on the VR3F.

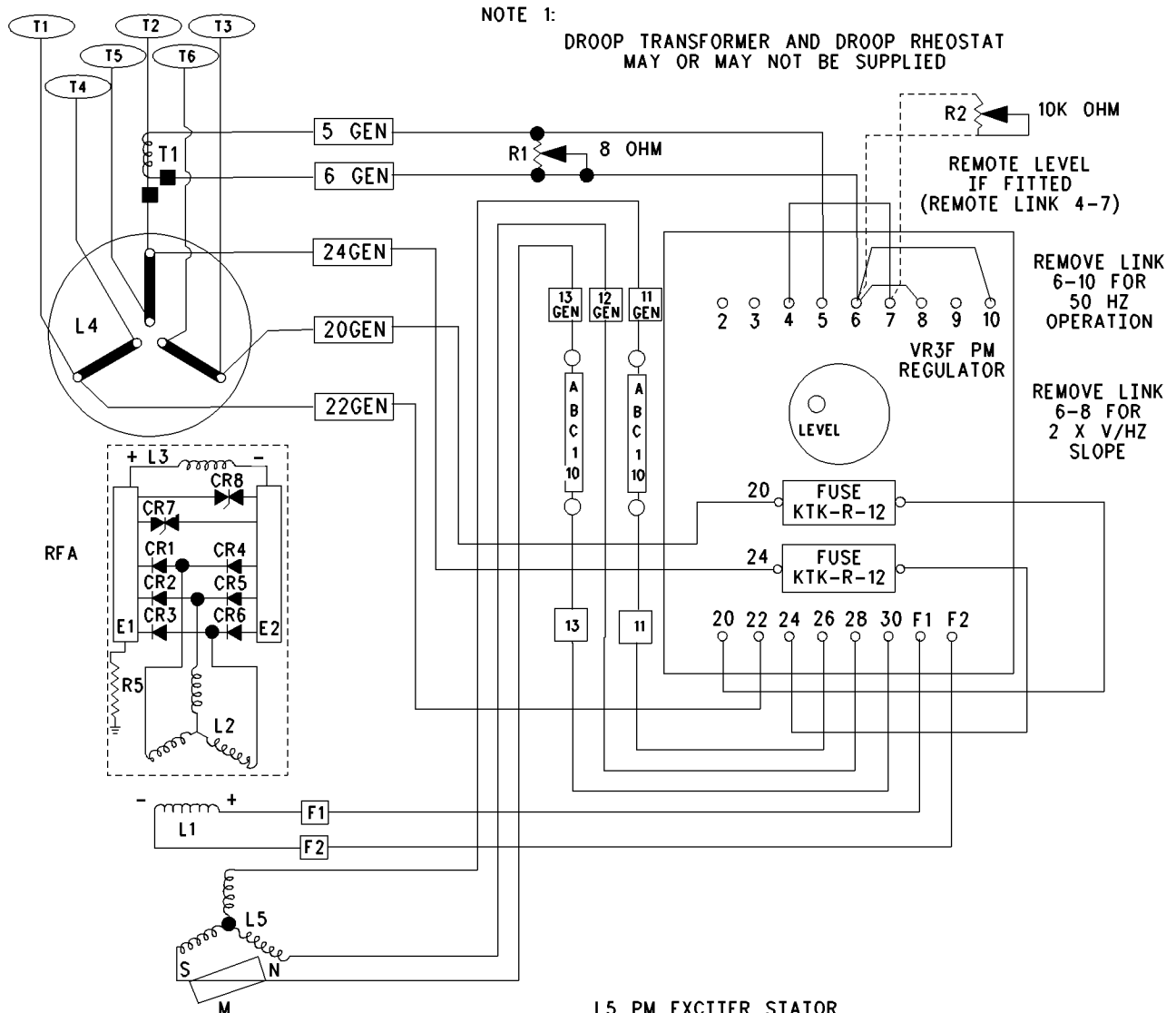
All VR3F connections to the generator or external options are identical to the VR3. The additional wiring for the VR3F is shown in the previous diagram.

The following information is applicable to both VR3F designs: Self-Excited and Permanent Magnet Excited.

- In order to determine the knee frequency, install a jumper from terminal 6 to terminal 10 on the regulator if the generator is operating at 60 Hz. If the generator is operating at 50 Hz, remove the jumper.

- In order to determine the underfrequency slope selection, install a jumper from terminal 6 to terminal 8 on the regulator if a 1:1 Volts/Hertz underfrequency slope is desired. remove the jumper if a 2:1 Volts/Hertz underfrequency slope is needed.

Typical Permanent Magnet Excited VR3F



NOTE 1:

DROOP TRANSFORMER AND DROOP RHEOSTAT
MAY OR MAY NOT BE SUPPLIED

REMOTE LEVEL
IF FITTED
(REMOTE LINK 4-7)

REMOVE LINK
6-10 FOR
50 HZ
OPERATION

REMOVE LINK
6-8 FOR
2 X V/HZ
SLOPE

- CR1-6 ROTATING RECTIFIERS
- CR7,8 SURGE SUPPRESSION DIODES
- E1 POSITIVE HEAT SINK
- E2 NEGATIVE HEAT SINK
- L1 EXCITER FIELD (STATOR)
- L2 EXCITER ARMATURE (ROTOR)
- L3 ROTATING FIELD (MAIN ROTOR)
- L4 STATOR (MAIN STATOR)
- POLARITY MARKING

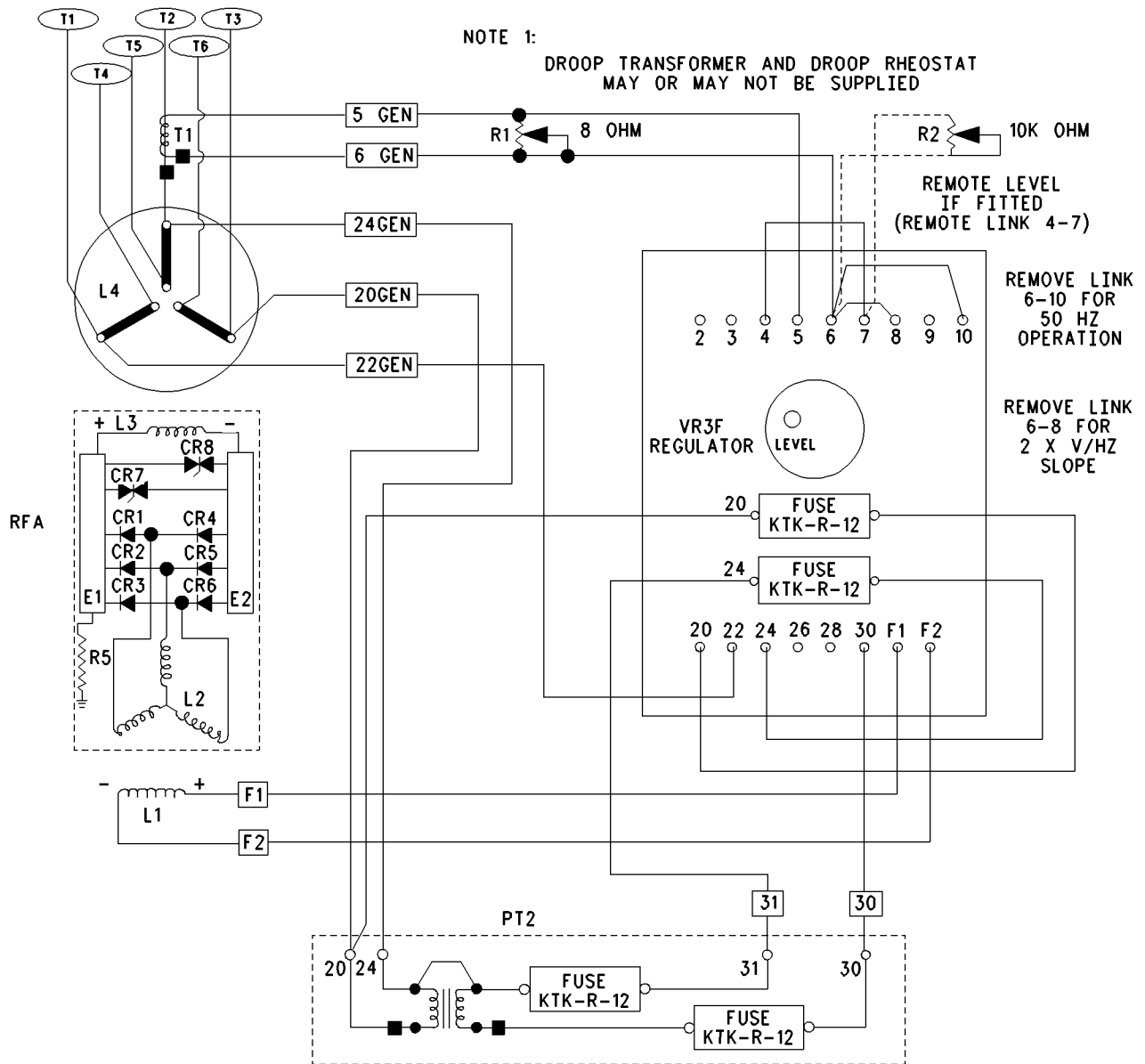
- L5 PM EXCITER STATOR
- M ROTATING PERMANENT MAGNET
- R1 VOLTAGE DROOP RHEOSTAT (SEE NOTE 1)
- R2 REMOTE LEVEL RHEOSTAT
- R5 SUPPRESSION RESISTOR
- RFA REVOLVING FIELD ASS'Y
- T1 VOLTAGE DROOP TRANSFORMER (SEE NOTE 1)
- PT2 POWER TRANSFORMER ASSEMBLY
- TERMINAL BOARD NUMBER
- WIRE NUMBER

SR-4 GENERATOR SCHEMATIC (4/6 LEAD. PERMANENT MAGNET EXCITED W/ 2 PM FUSES)

NOTE: GENERATOR STATOR LEADS TERMINALS T4, T5, AND T6 CAN BE CONNECTED
TO FORM THE NEUTRAL LEAD (T0) ON SIX LEAD GENERATORS.

NOTE:

Typical Self Excited VR3F



CR1-6 ROTATING RECTIFIERS
CR7,8 SURGE SUPPRESSION DIODES
E1 POSITIVE HEAT SINK
E2 NEGATIVE HEAT SINK
L1 EXCITER FIELD
L2 EXCITER ARMATURE
L3 ROTATING FIELD
L4 STATOR
■ POLARITY MARKING

R1 VOLTAGE DROOP RHEOSTAT (SEE NOTE 1)
R2 REMOTE LEVEL RHEOSTAT
R5 SUPPRESSION RESISTOR
RFA REVOLVING FIELD ASS'Y
T1 VOLTAGE DROOP TRANSFORMER (SEE NOTE 1)
PT2 POWER TRANSFORMER ASSEMBLY
○ TERMINAL BOARD NUMBER
□ WIRE NUMBER

SR-4 GENERATOR SCHEMATIC (4/6 LEAD. SELF-EXCITED W/POWER TRANSFORMER)

NOTE: GENERATOR STATOR LEADS TERMINALS T4, T5, AND T6 WILL BE INTERNALLY
CONNECTED TO FORM THE NEUTRAL LEAD (T0) ON FOUR LEAD GENERATORS.

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VR4 Voltage Regulator Connections (All Except SR4B for 3500 Engines)

SMCS Code: 4467

Self Excited with Direct Connection to Generator

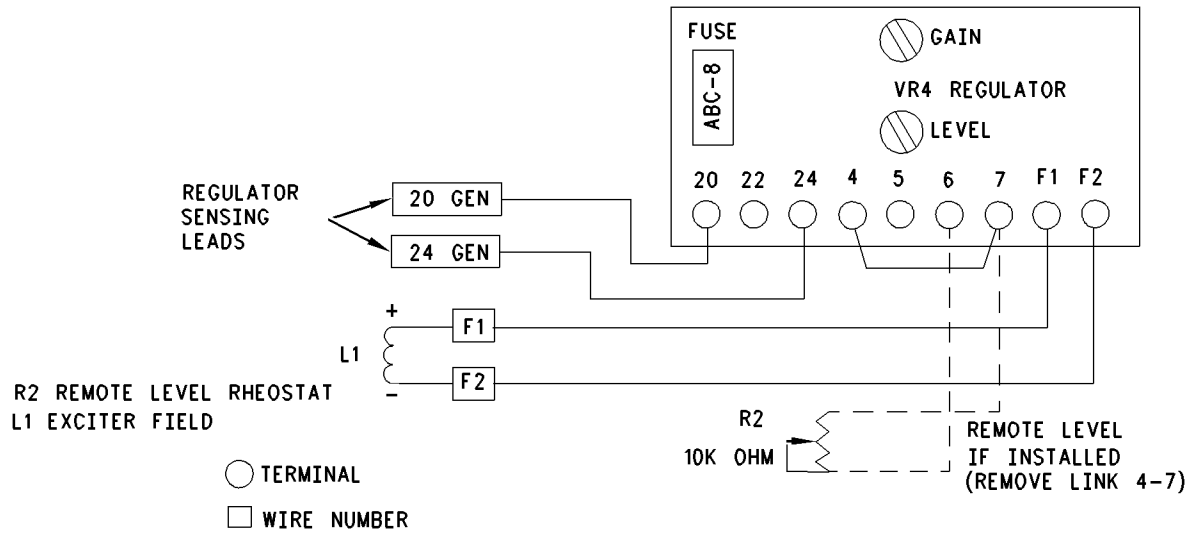


Illustration 22

g00702155

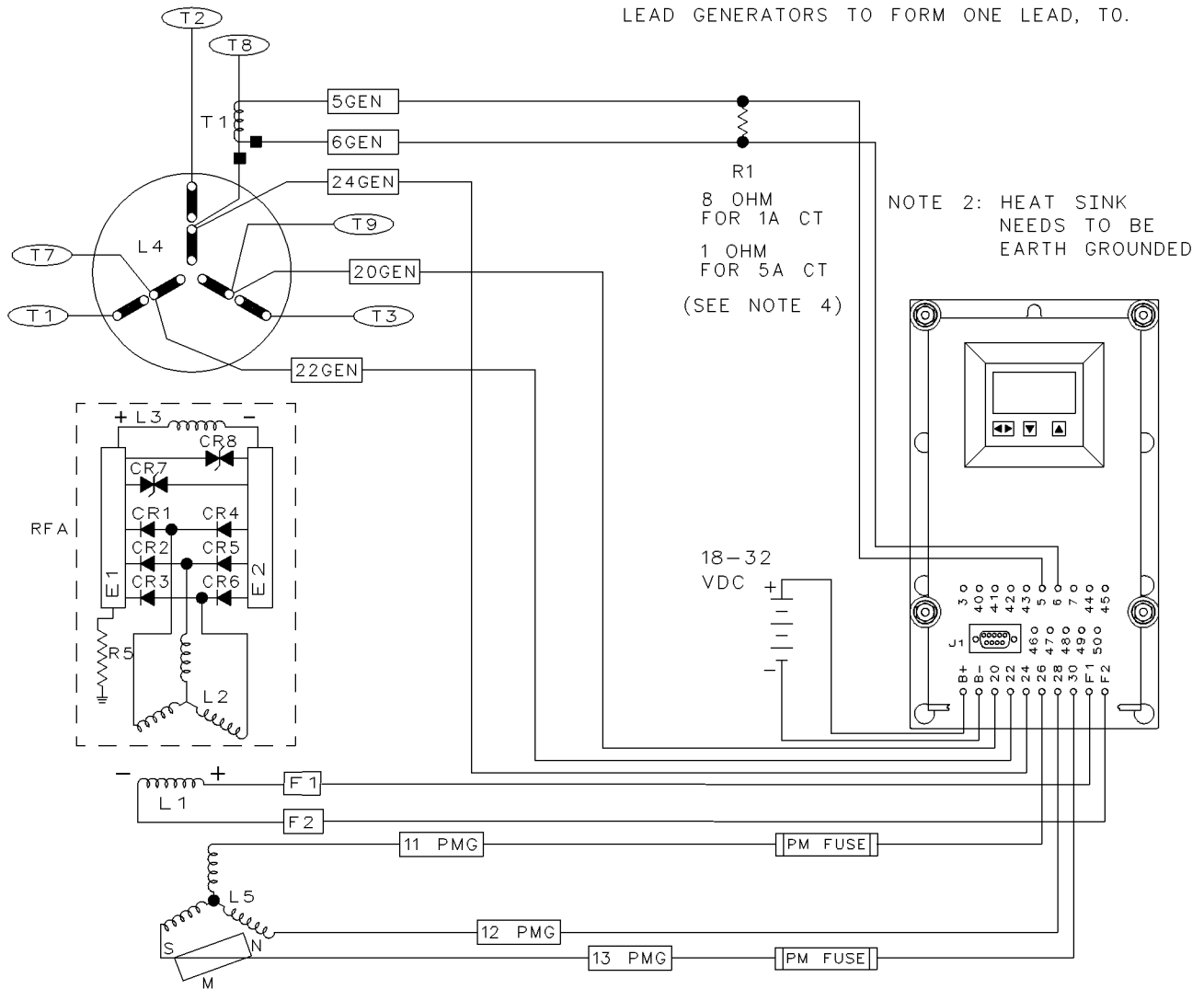
i01314468

Digital Voltage Regulator Connections (All Except SR4B for 3500 Engines)

SMCS Code: 4467

10/12 Lead with Direct Connection to Generator

NOTE 1: GENERATOR STATOR LEADS T10, T11, & T12 WILL BE INTERNALLY CONNECTED ON 10 LEAD GENERATORS TO FORM ONE LEAD, T0.



NOTE 2: HEAT SINK NEEDS TO BE EARTH GROUNDED

CR1-6 ROTATING RECTIFIERS
 CR7,8 SURGE SUPPRESSION DIODES
 E1 POSITIVE HEAT SINK
 E2 NEGATIVE HEAT SINK
 L1 EXCITOR FIELD (STATOR)
 L2 EXCITOR ARMATURE (ROTOR)
 L3 REVOLVING FIELD (MAIN ROTOR)
 L4 MAIN STATOR
 L5 PM EXCITOR STATOR

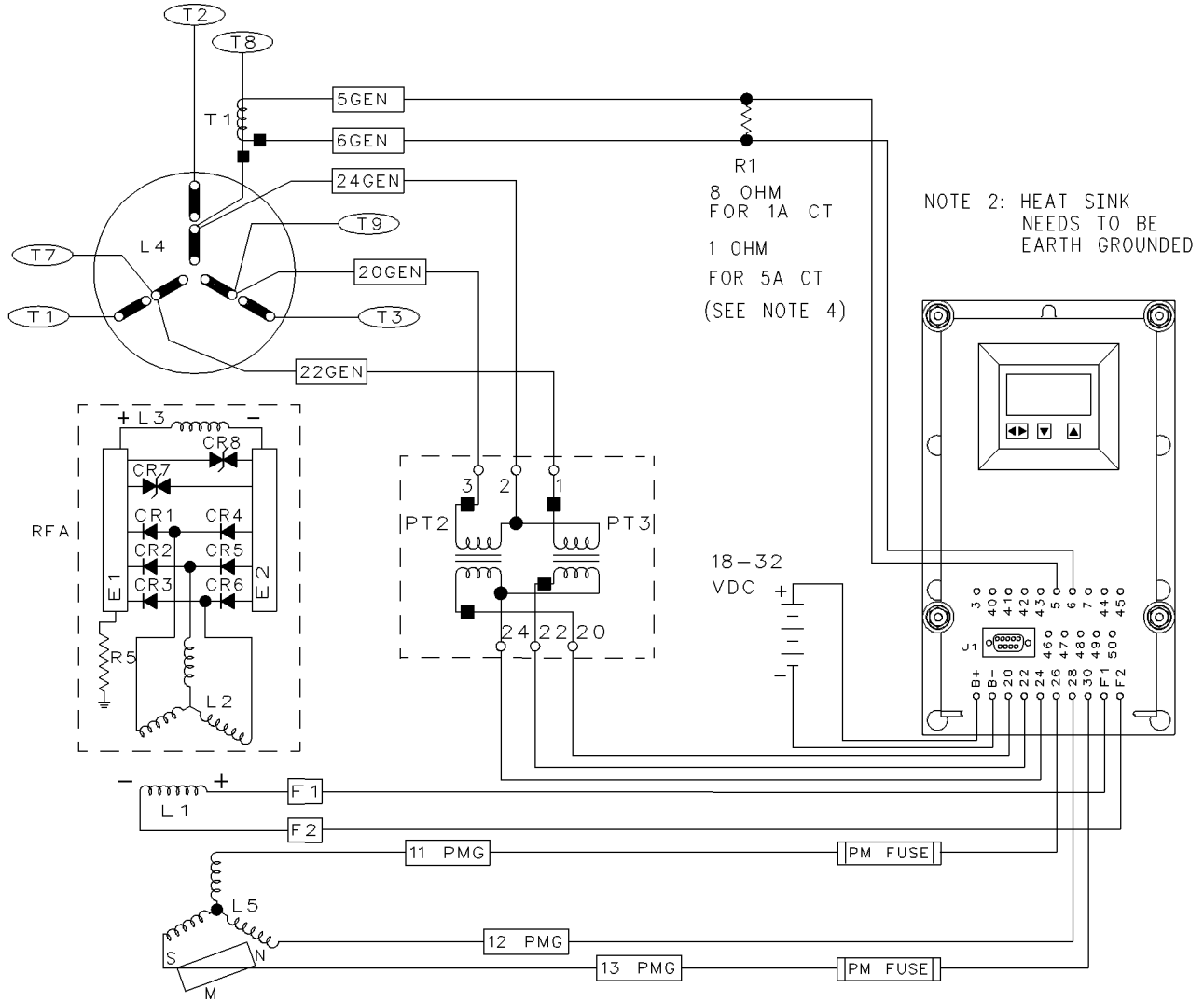
M ROTATING PERMANENT MAGNET
 R1 VOLTAGE DROOP BURDEN RESISTOR (SEE NOTE 3)
 R5 SUPPRESSION RESISTOR
 RFA REVOLVING FIELD ASS'Y
 T1 VOLTAGE DROOP TRANSFORMER (SEE NOTE 3)
 □ WIRE NUMBER
 ○ TERMINAL BOARD NUMBER
 ■ POLARITY MARKING

NOTE 3: DROOP TRANSFORMER AND DROOP BURDEN RESISTOR MAY OR MAY NOT BE SUPPLIED

NOTE 4: R1 TO BE MOUNTED WITHIN 3 METERS (10 FEET) OF THE REGULATOR

10/12 Lead with Sensing Isolation Transformer

NOTE 1: GENERATOR STATOR LEADS T10, T11, & T12 WILL BE INTERNALLY CONNECTED ON 10 LEAD GENERATORS TO FORM ONE LEAD, T0.



NOTE 2: HEAT SINK NEEDS TO BE EARTH GROUNDED

R1
8 OHM
FOR 1A CT
1 OHM
FOR 5A CT
(SEE NOTE 4)

- CR1-6 ROTATING RECTIFIERS
- CR7,8 SURGE SUPPRESSION DIODES
- E1 POSITIVE HEAT SINK
- E2 NEGATIVE HEAT SINK
- L1 EXCITOR FIELD (STATOR)
- L2 EXCITER ARMATURE(ROTOR)
- L3 REVOLVING FIELD(MAIN ROTOR)
- L4 MAIN STATOR
- L5 PM EXCITOR STATOR

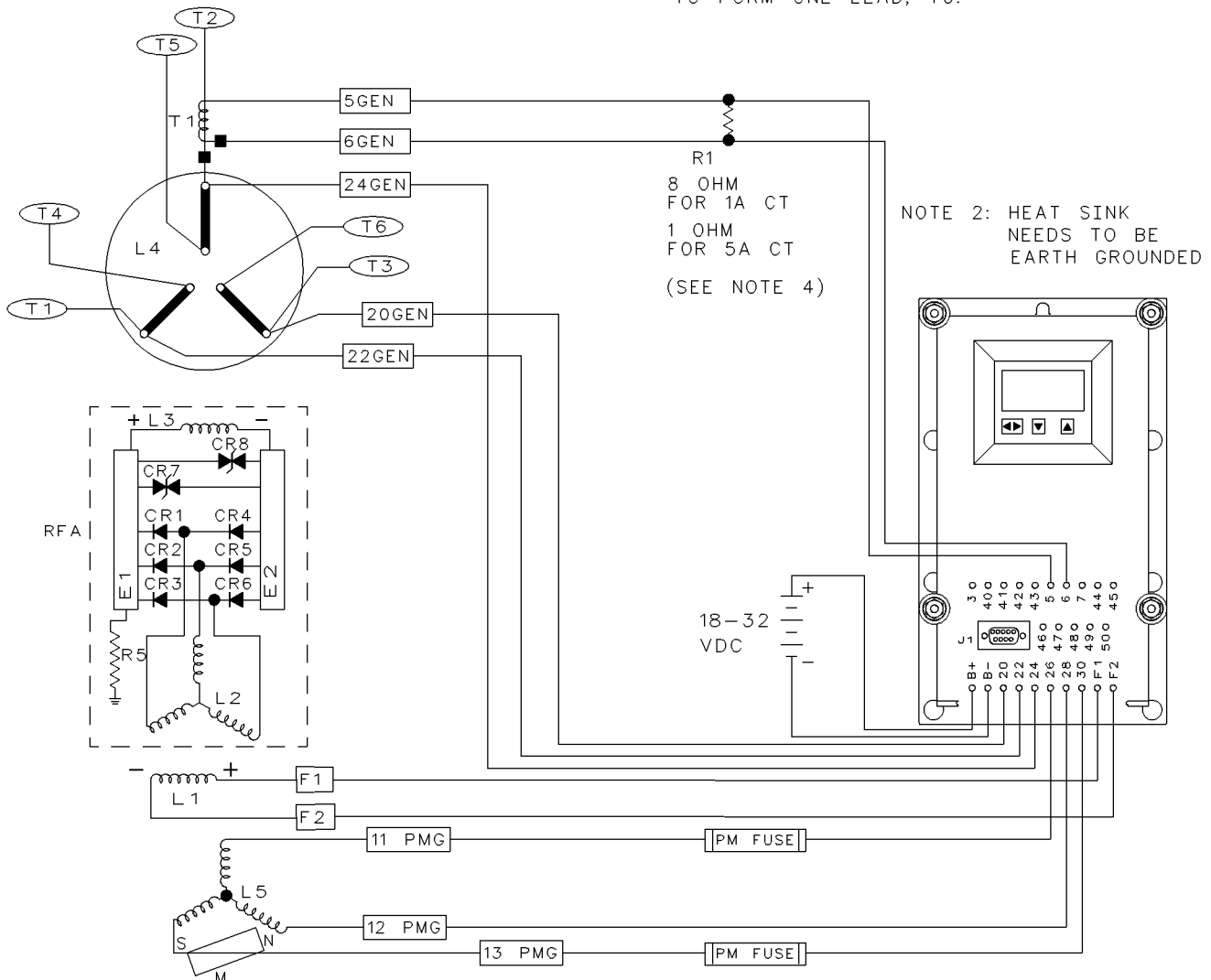
- M ROTATING PERMANENT MAGNET
- R1 VOLTAGE DROOP BURDEN RESISTOR (SEE NOTE 3)
- R5 SUPPRESSION RESISTOR
- RFA REVOLVING FIELD ASS'Y
- T1 VOLTAGE DROOP TRANSFORMER (SEE NOTE 3)
- PT2, PT3 SENSING ISOLATION TRANSFORMERS
- WIRE NUMBER
- TERMINAL BOARD NUMBER
- POLARITY MARKING

NOTE 3: DROOP TRANSFORMER AND DROOP BURDEN RESISTOR MAY OR MAY NOT BE SUPPLIED

NOTE 4: R1 TO BE MOUNTED WITHIN 3 METERS (10 FEET) OF THE REGULATOR

4/6 Lead with Direct Connection to Generator

NOTE 1: GENERATOR STATOR LEADS T4, T5, & T6 WILL BE CONNECTED ON 4 LEAD GENERATORS TO FORM ONE LEAD, T0.



NOTE 2: HEAT SINK NEEDS TO BE EARTH GROUND

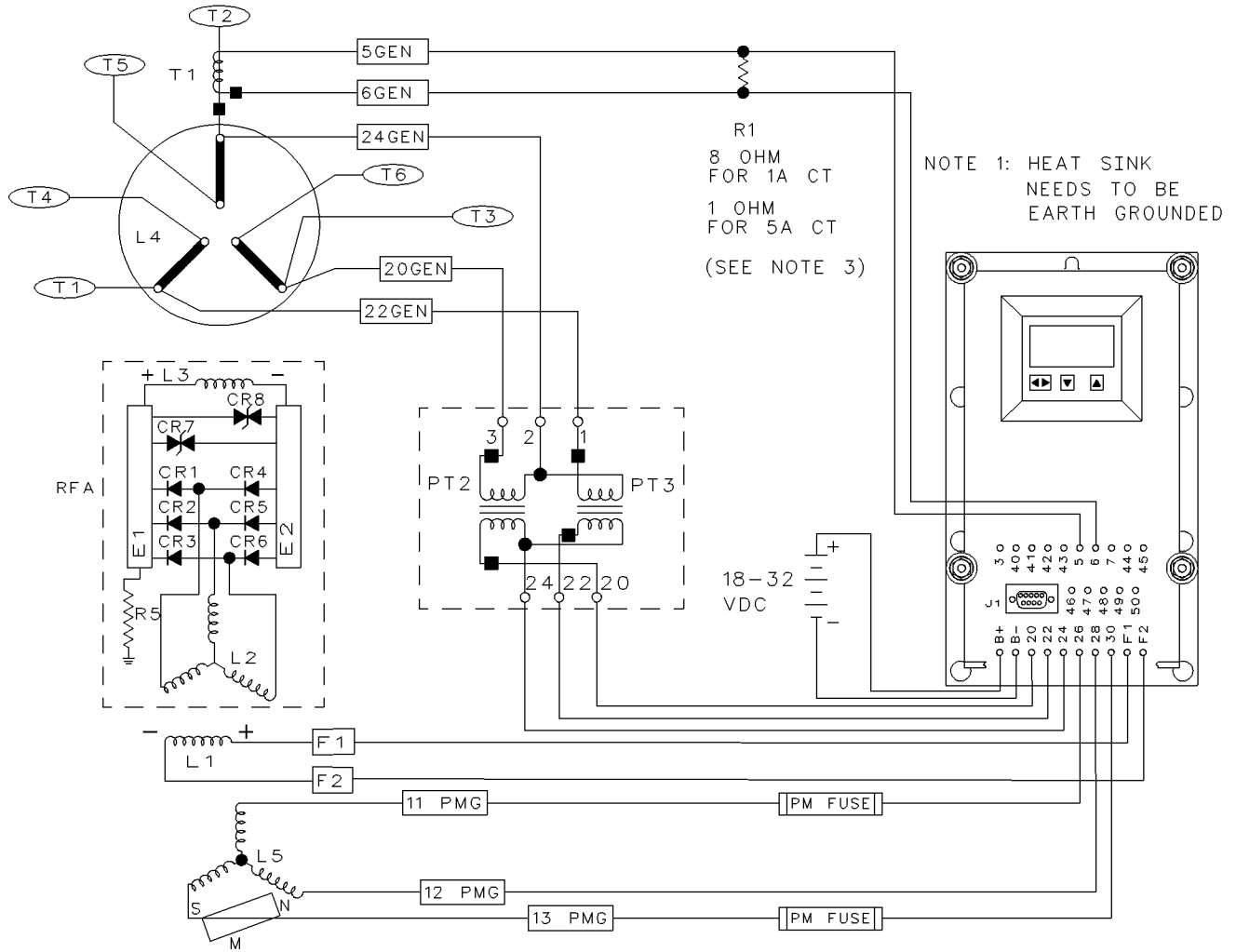
CR1-6 ROTATING RECTIFIERS
 CR7,8 SURGE SUPPRESSION DIODES
 E1 POSITIVE HEAT SINK
 E2 NEGATIVE HEAT SINK
 L1 EXCITER FIELD (STATOR)
 L2 EXCITER ARMATURE(ROTOR)
 L3 REVOLVING FIELD(MAIN ROTOR)
 L4 MAIN STATOR
 L5 PM EXCITER STATOR

M ROTATING PERMANENT MAGNET
 R1 VOLTAGE DROOP BURDEN RESISTOR (SEE NOTE 3)
 R5 SUPPRESSION RESISTOR
 RFA REVOLVING FIELD ASS'Y
 T1 VOLTAGE DROOP TRANSFORMER (SEE NOTE 3)
 □ WIRE NUMBER
 ○ TERMINAL BOARD NUMBER
 ■ POLARITY MARKING

NOTE 3: DROOP TRANSFORMER AND DROOP BURDEN RESISTOR MAY OR MAY NOT BE SUPPLIED

NOTE 4: R1 TO BE MOUNTED WITHIN 3 METERS (10 FEET) OF THE REGULATOR

4/6 Lead with Sensing Isolation Transformer



CR1-6 ROTATING RECTIFIERS
 CR7,8 SURGE SUPPRESSION DIODES
 E1 POSITIVE HEAT SINK
 E2 NEGATIVE HEAT SINK
 L2 EXCITER ARMATURE(ROTOR)
 L3 REVOLVING FIELD(MAIN ROTOR)
 L4 MAIN STATOR

PT2, PT3 SENSING/ISOLATION TRANSFORMERS
 M ROTATING PERMANENT MAGNET
 R1 VOLTAGE DROOP BURDEN RESISTOR (SEE NOTE 2)
 R5 SUPPRESSION RESISTOR
 RFA REVOLVING FIELD ASS'Y
 T1 VOLTAGE DROOP TRANSFORMER (SEE NOTE 2)
 □ WIRE NUMBER
 ○ TERMINAL BOARD NUMBER
 ■ POLARITY MARKING

NOTE 2: DROOP TRANSFORMER AND DROOP BURDEN RESISTOR MAY OR MAY NOT BE SUPPLIED

NOTE 3: R1 TO BE MOUNTED WITHIN 3 METERS (10 FEET) OF THE REGULATOR

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Options (All Except SR4B for 3500 Engines)

SMCS Code: 4450

Manual Control with Self Excitation

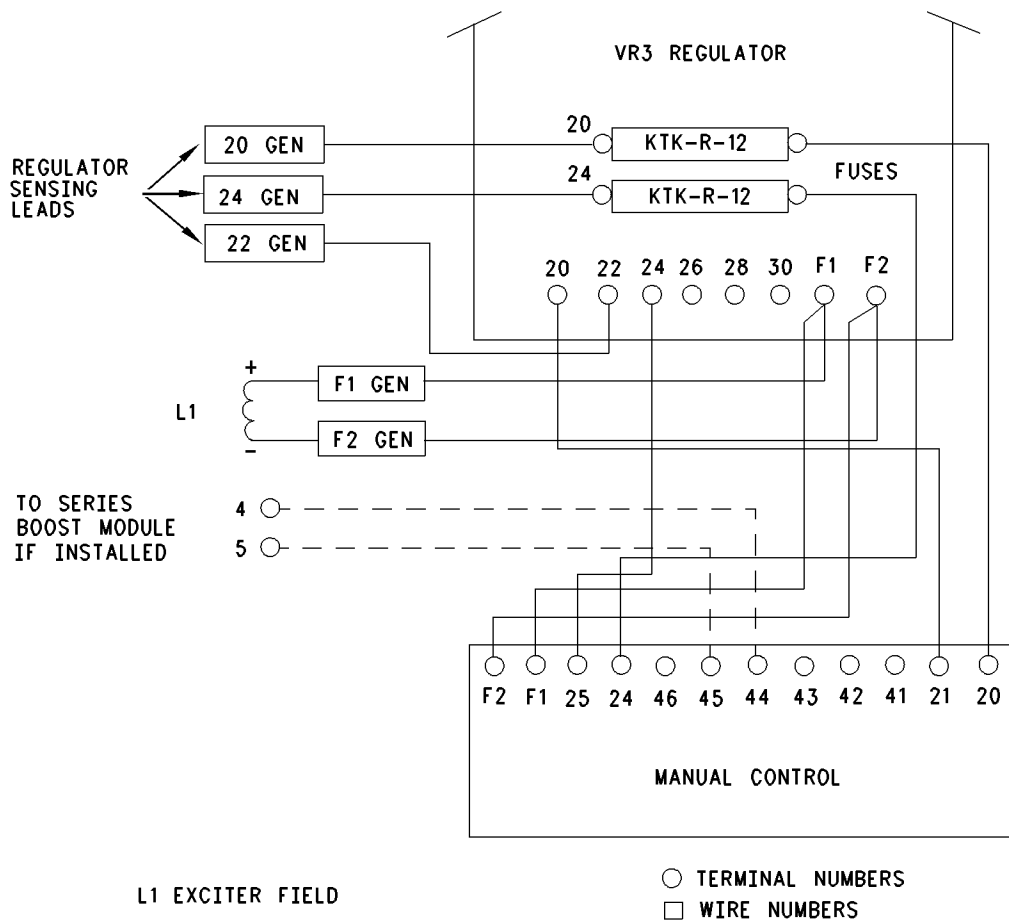


Illustration 27

g00702017

Manual Control with Power Transformer

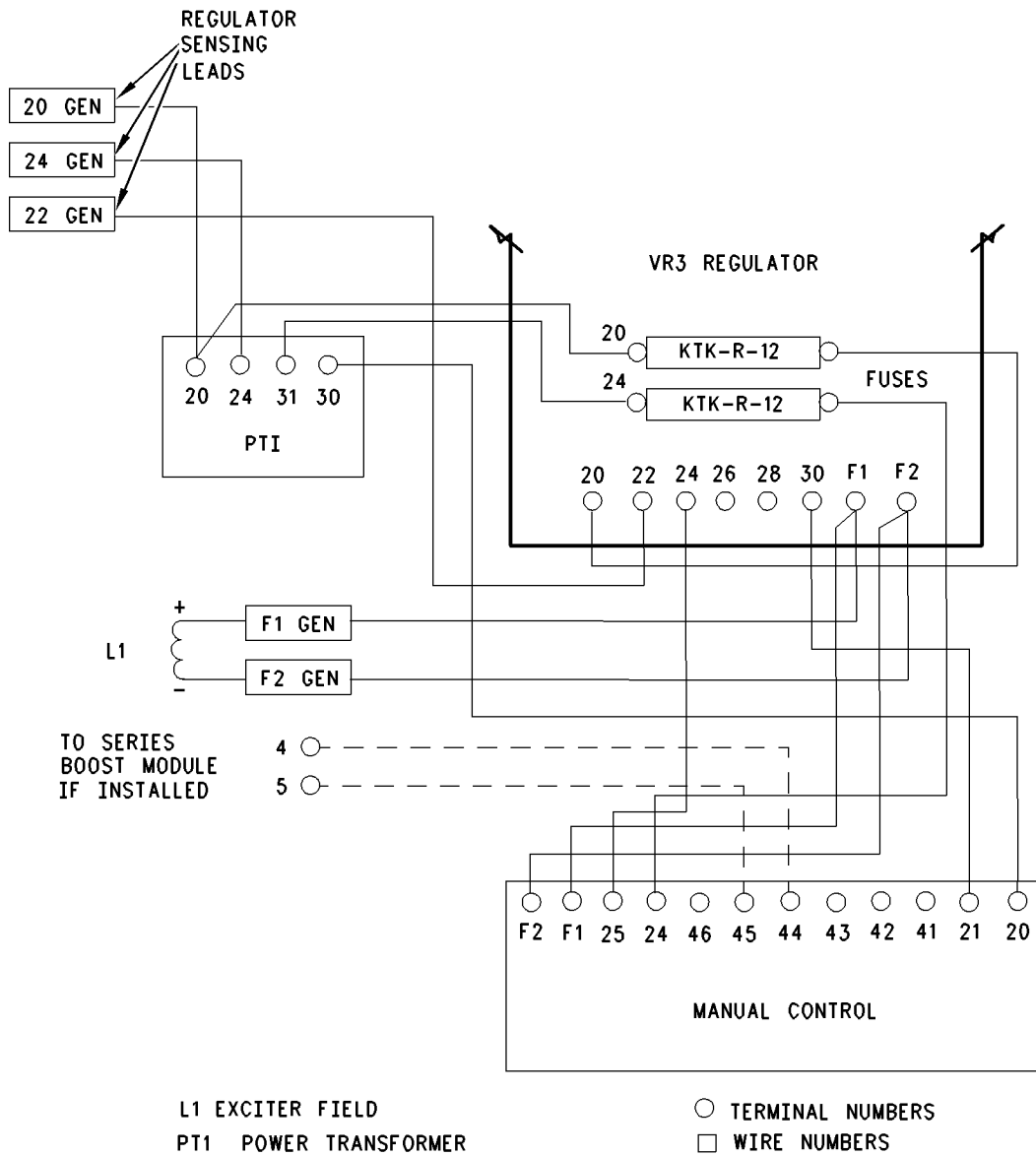


Illustration 28

Manual Control with Permanent Magnet Exciter

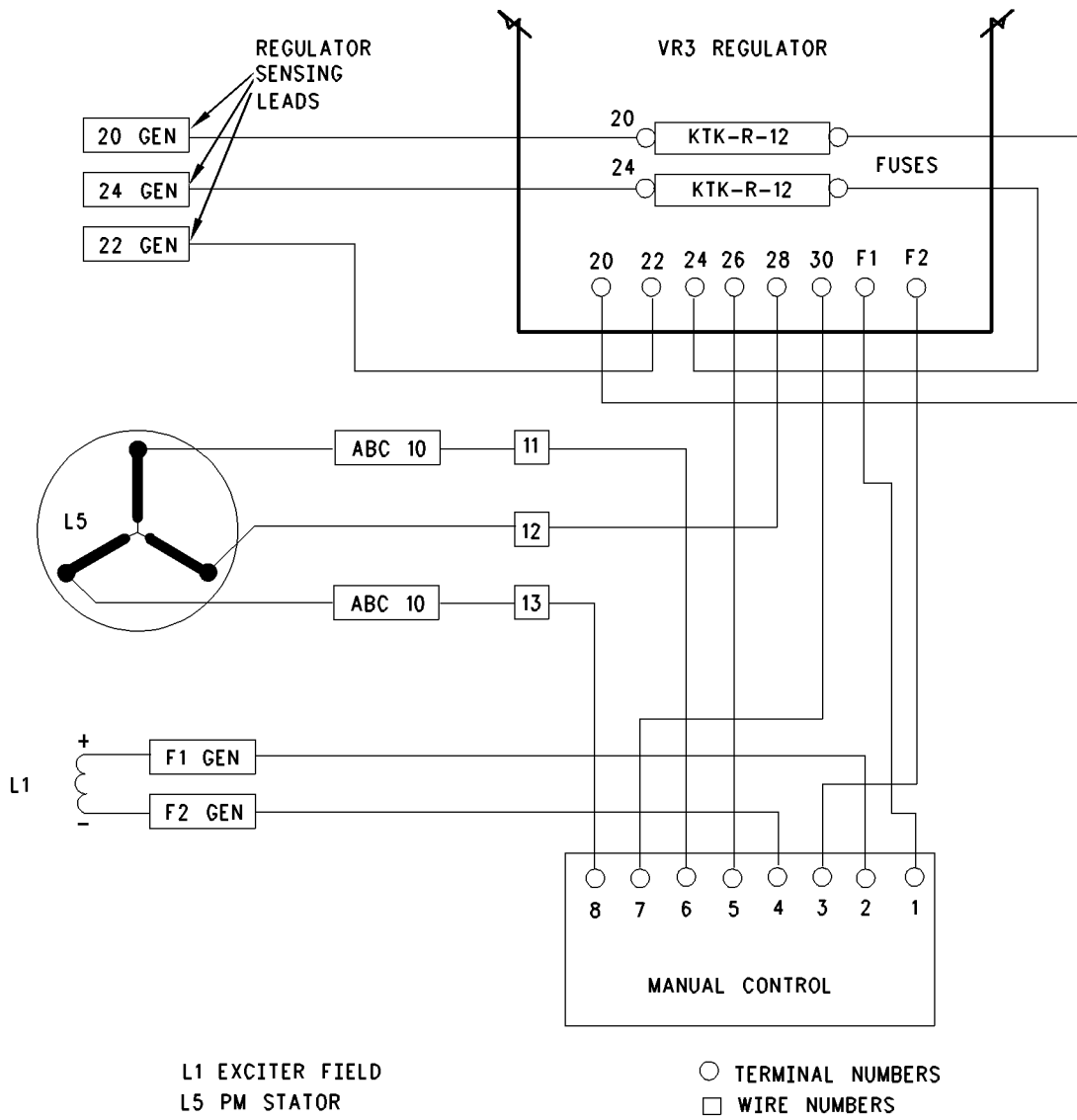
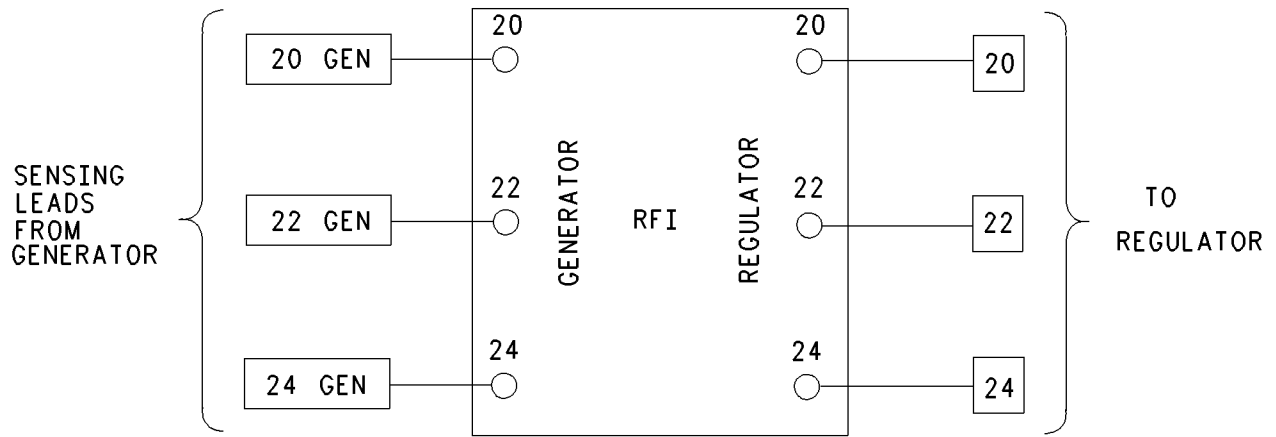


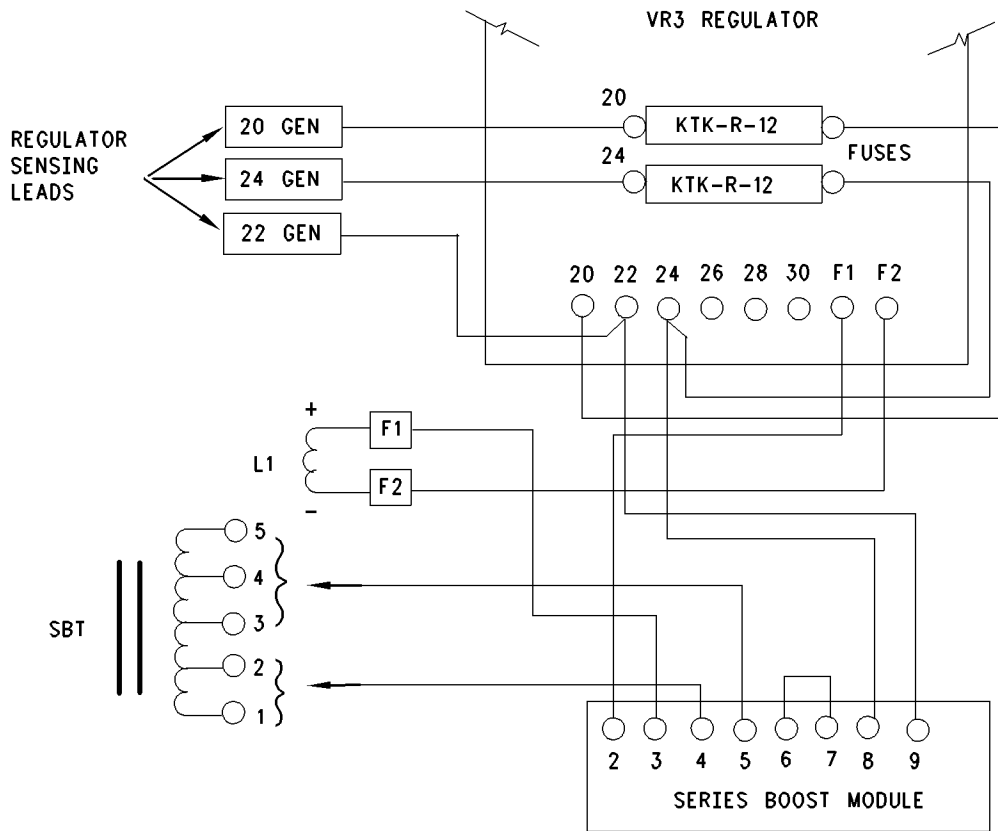
Illustration 29

Radio Interference Filter



RFI RADIO INTERFERENCE SUPPRESSOR

Series Boost with VR3 Voltage Regulator

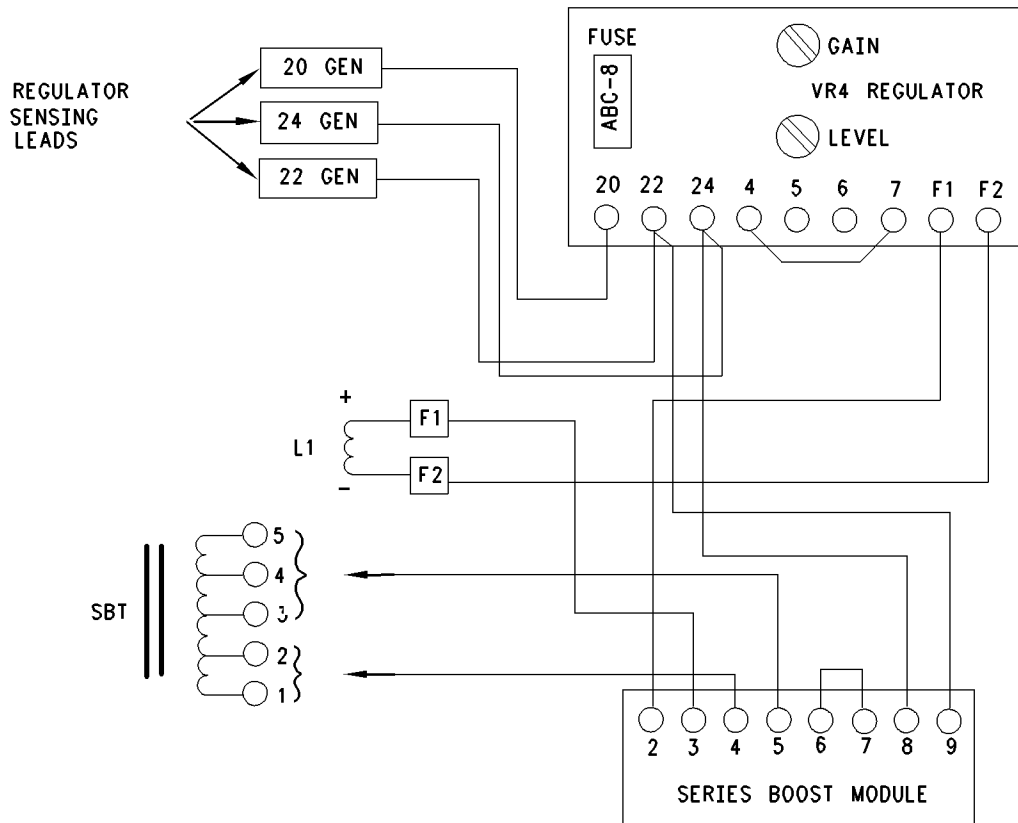


NOTE:
REMOVE LINK 6-7 FOR 50 HZ OPERATION

L1 EXCITER FIELD
SBT SERIES BOOST TRANSFORMER

○ TERMINAL NUMBERS
□ WIRE NUMBERS

Series Boost with VR4 Voltage Regulator

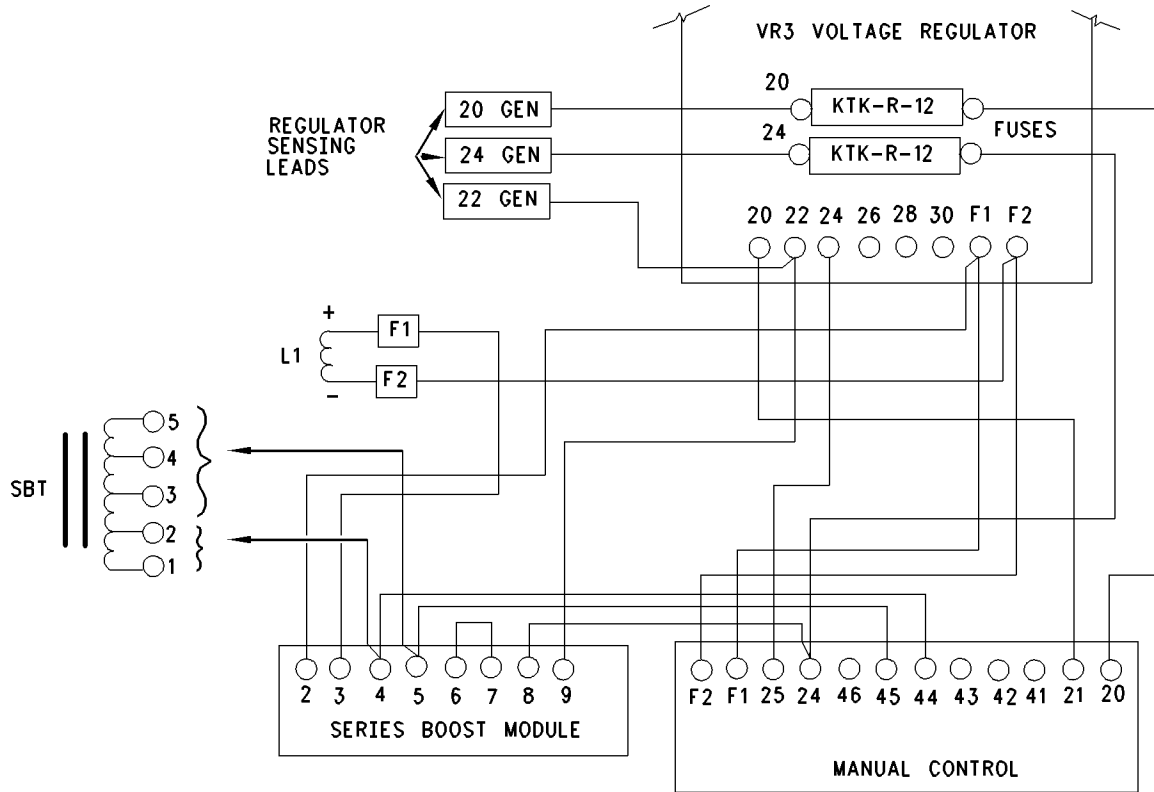


NOTE:
REMOVE LINK 6-7 FOR 50 HZ OPERATION

L1 EXCITER FIELD
SBT SERIES BOOST TRANSFORMER

○ TERMINAL NUMBERS
□ WIRE NUMBERS

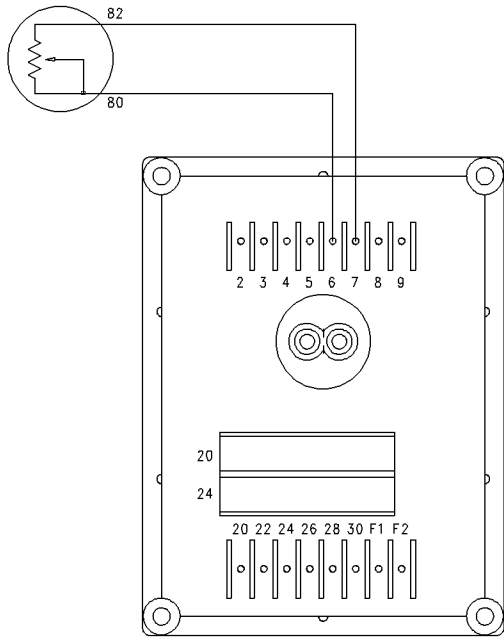
Manual Control and Series Boost with Self Excitor



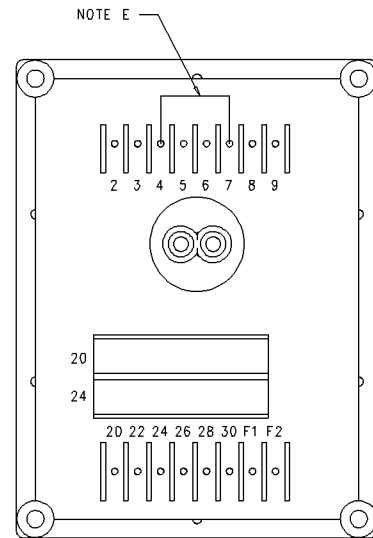
NOTE:
REMOVE LINK 6-7 FOR 50 HZ OPERATION
L1 EXCITER FIELD
SBT SERIES BOOST TRANSFORMER

○ TERMINAL NUMBERS
□ WIRE NUMBERS

Remote Voltage Adjust Rheostat Connections



CONNECTION WHEN REMOTE VOLTAGE
ADJUST RHEOSTAT IS PROVIDED



CONNECTION WITH NO REMOTE
VOLTAGE ADJUST RHEOSTAT

NOTE E: JUMPER MUST BE INSTALLED IF REMOTE VOLTAGE ADJUST RHEOSTAT IS NOT PROVIDED.

Digital Voltage Regulator with Manual Control

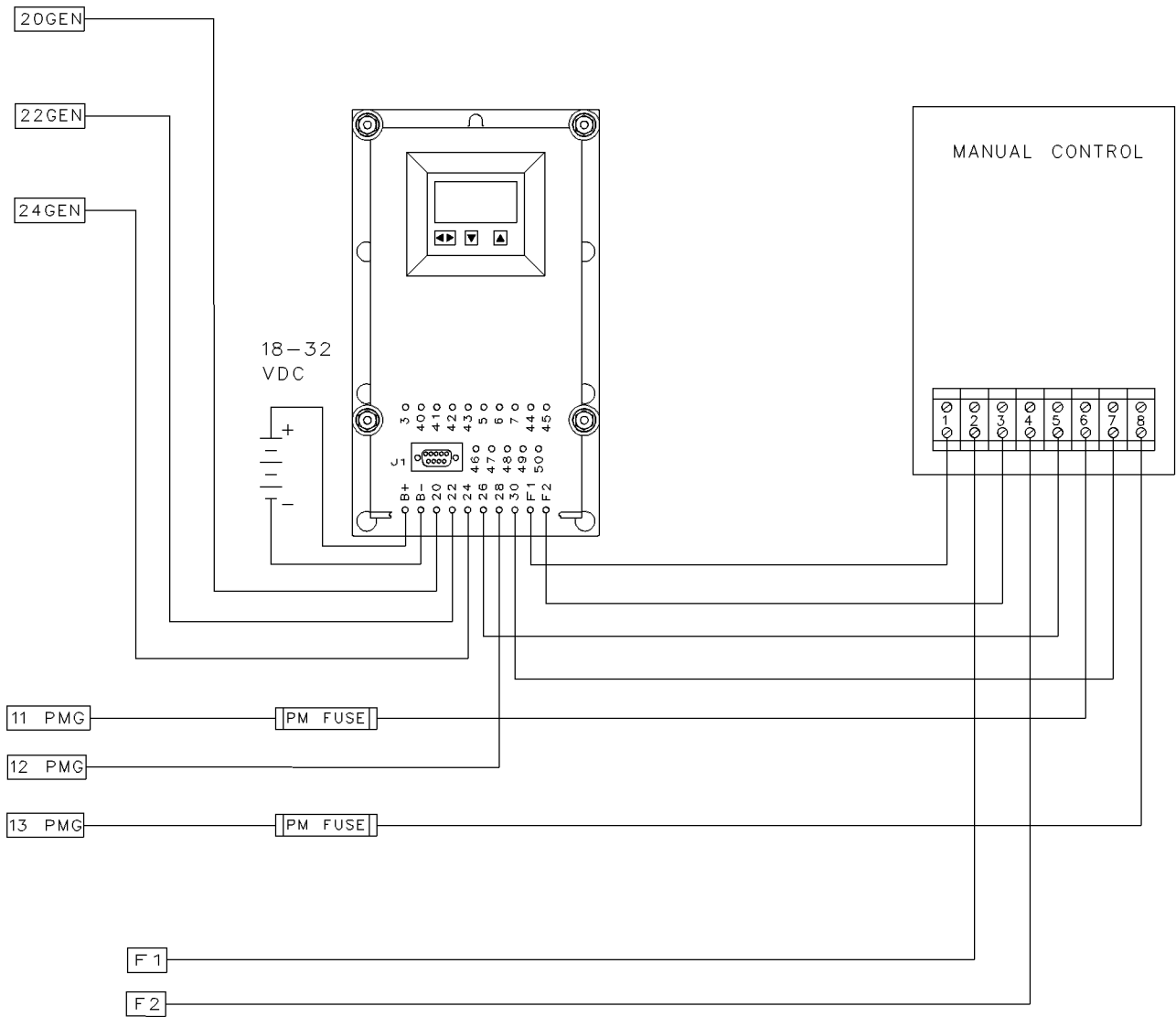
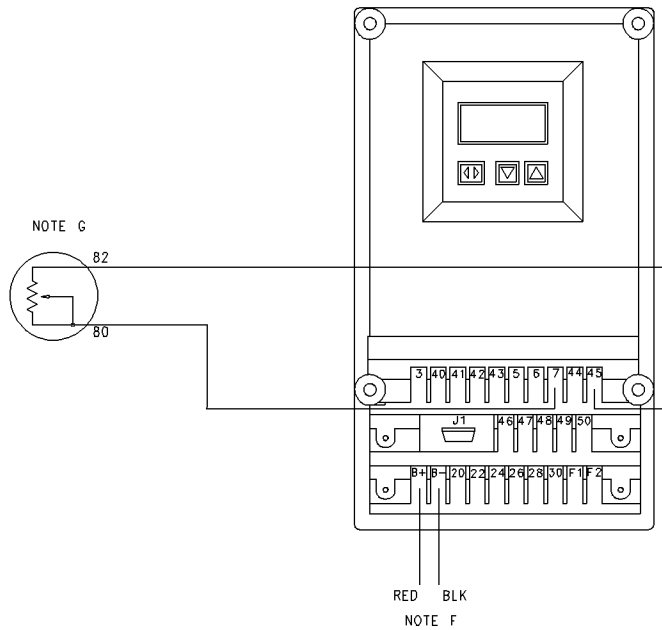


Illustration 35

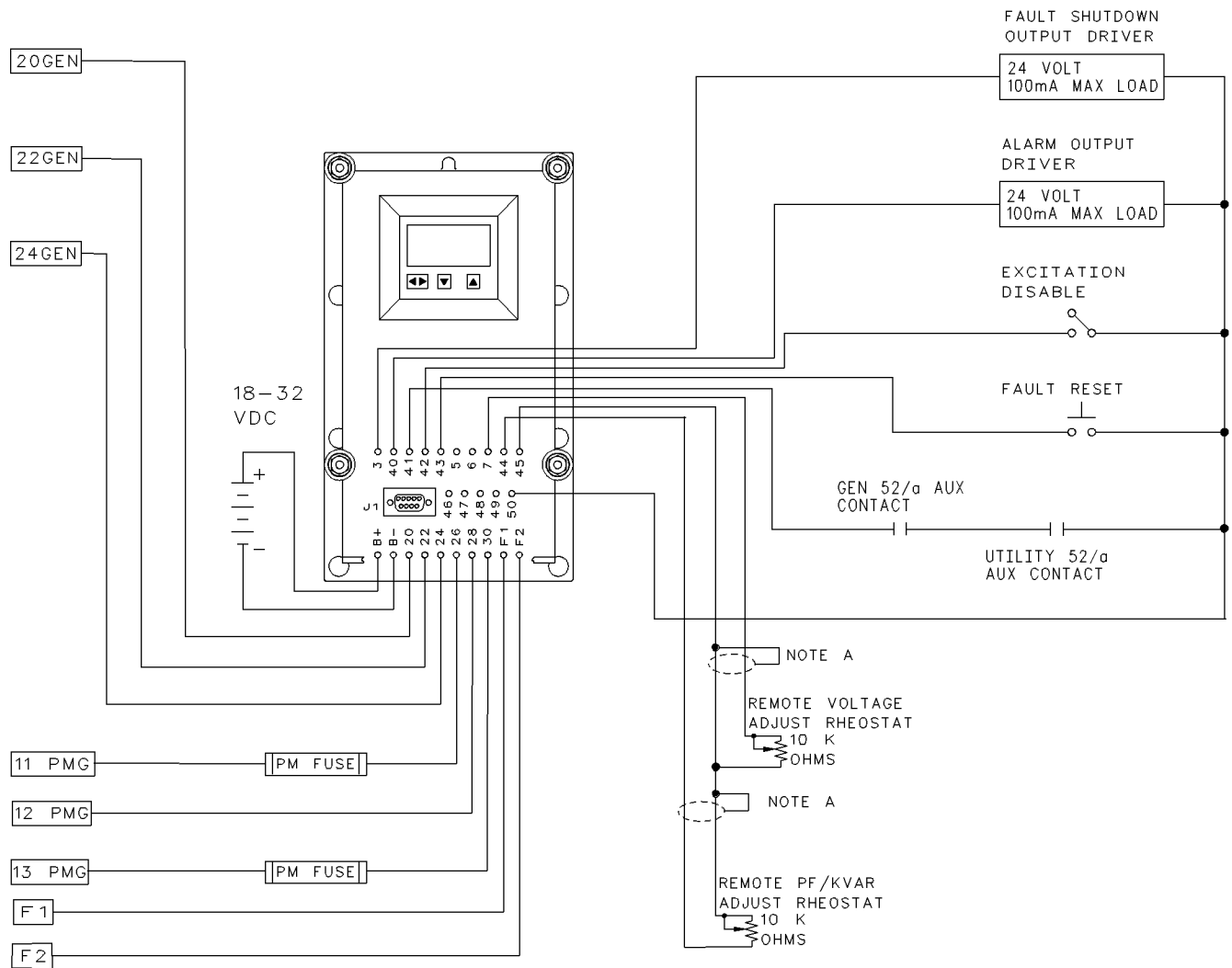
Digital Voltage Regulator with Remote Voltage Adjust Rheostat



NOTE F: IF EMCP EXISTS, HARNESS AS. 128-0830 IS REQUIRED TO PROVIDE POWER. IF NO EMCP IS PRESENT, MATCH WIRE IDENTITIES USING P3FD-T152 FOR B+ AND P6FD-T102 FOR B- ON GAS ENGINES. DIESEL ENGINES USE 40KJKL198 FOR B+ AND 40LJKL199 FOR B-. IF NO EMCP AND NO WIRING HARNESS IS PROVIDED USE 130-3592 HARNESS FOR DIGITAL VOLTAGE REGULATOR BATTERY POWER.

NOTE G: OPTIONAL REMOTE VOLTAGE ADJUST RHEOSTAT IS LOCATED IN THE CONTROL PANEL, IF PROVIDED.

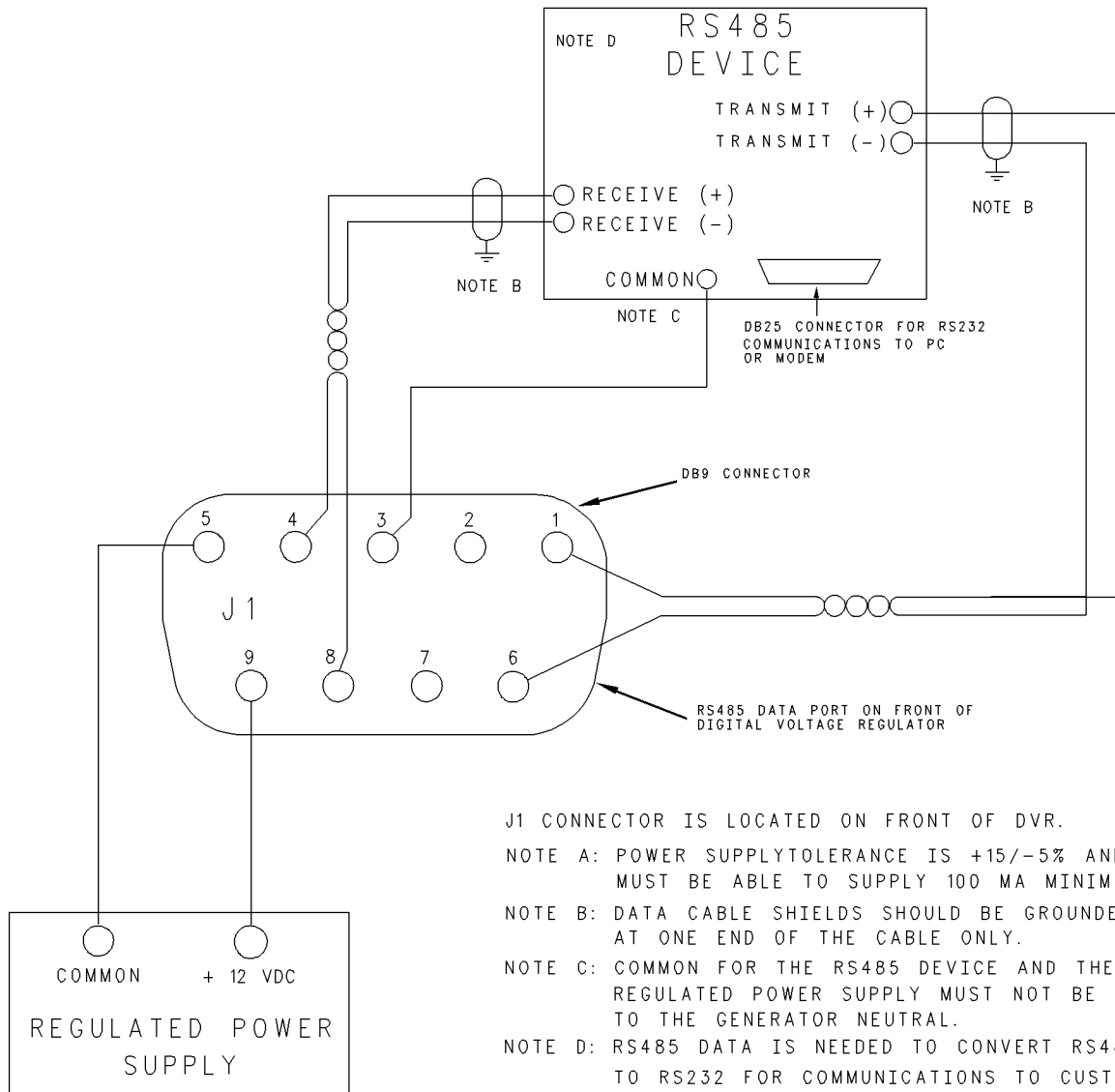
Digital Voltage Regulator Customer Options



NOTE A: CONNECT SHIELD DRAIN WIRE(S) TO TERMINAL 45. INSULATE SHIELD DRAIN WIRE(S) AT RHEOSTAT END. DO NOT CONNECT SHIELD DRAIN WIRE(S) TO CHASSIS GROUND.

Illustration 37

Digital Voltage Regulator Remote Communications Connections

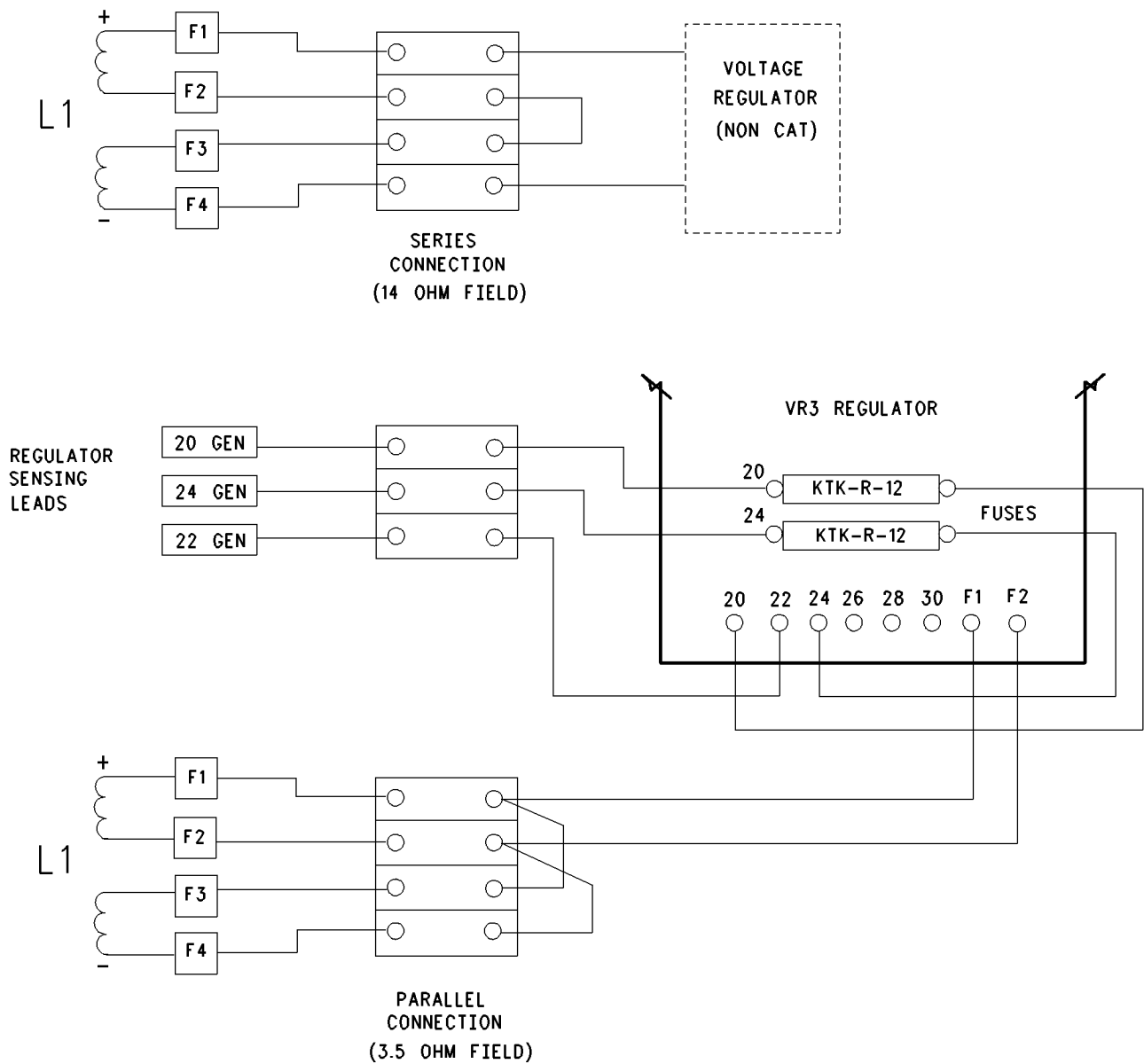


i01320364

Oil Field Generator Connections (SR4)

SMCS Code: 4450

Excitor Field Connection (Series or Parallel) and Voltage Sensing Leads



SR4B Generators for 3500 Engines

i01318012

General Information (SR4B for 3500 Engines)

SMCS Code: 4450

Introduction

The Diagrams that follow apply to the SR4B Generators used with 3500 Engines.

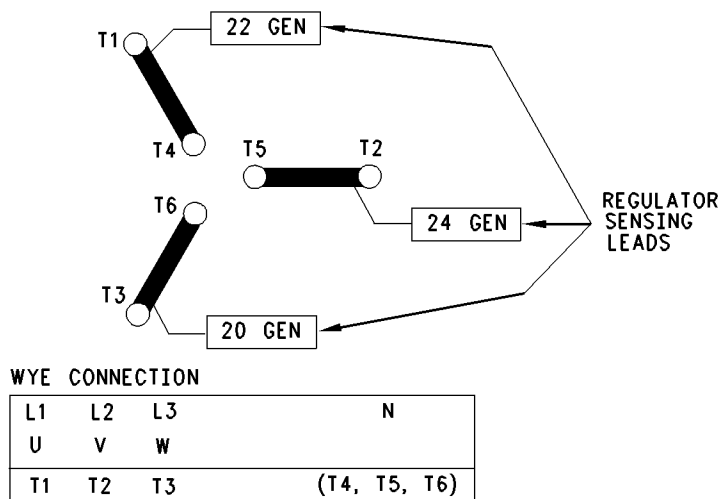
Note: Diagrams for the SR4 and other SR4B Generators appear at the beginning of this manual.

i01320334

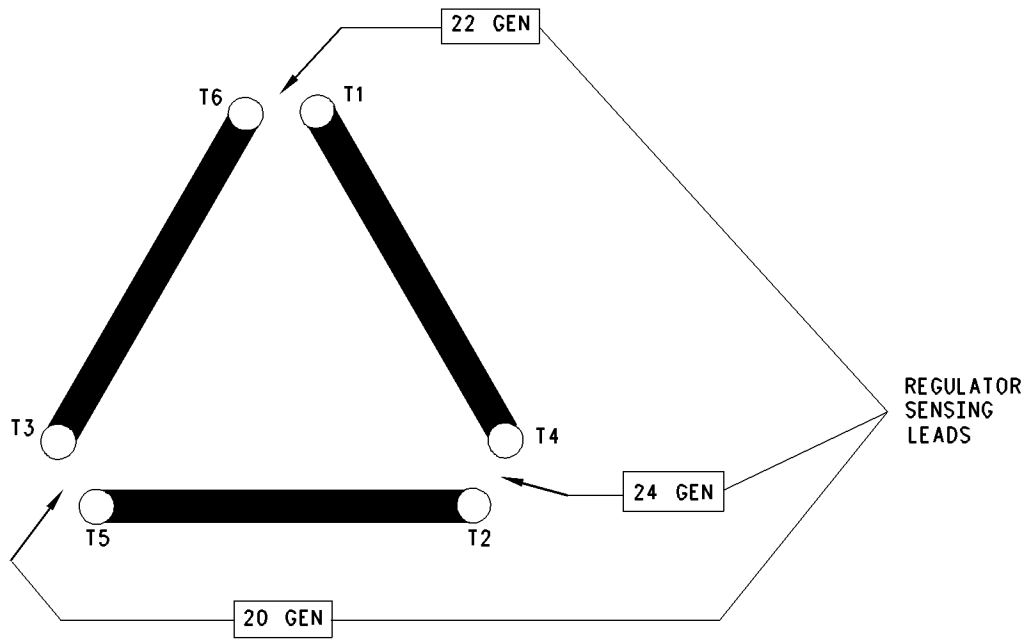
Main Stator and Voltage Sensing Lead Connections (SR4B for 3500 Engines)

SMCS Code: 4453

6 Lead Wye Connection



6 Lead Delta Connection



DELTA CONNECTION			REGULATOR SENSING		
L1 U	L2 V	L3 W	20	22	24
(T1, T6)	(T2, T4)	(T3, T5)	T3	T1	T2

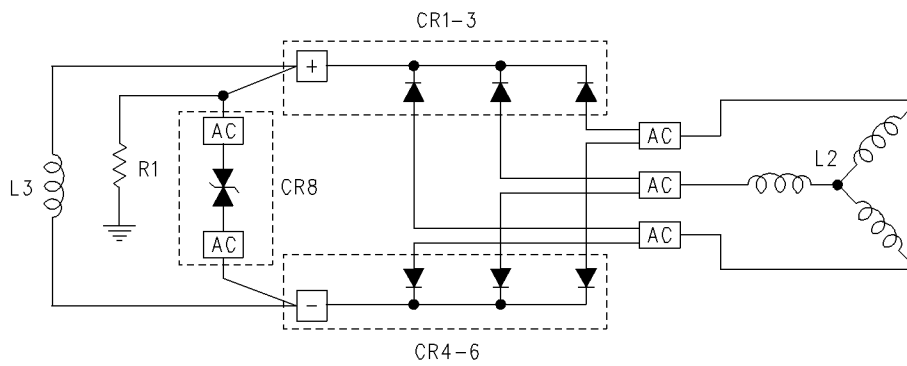
Illustration 41

i01314709

Main Revolving Field Connections (SR4B for 3500 Engines)

SMCS Code: 4457

Two Diode Blocks and Surge Suppressor



L2 EXITER ARMATURE
L3 REVOLVING FIELD
R1 STATIC DISCHARGE RESISTOR

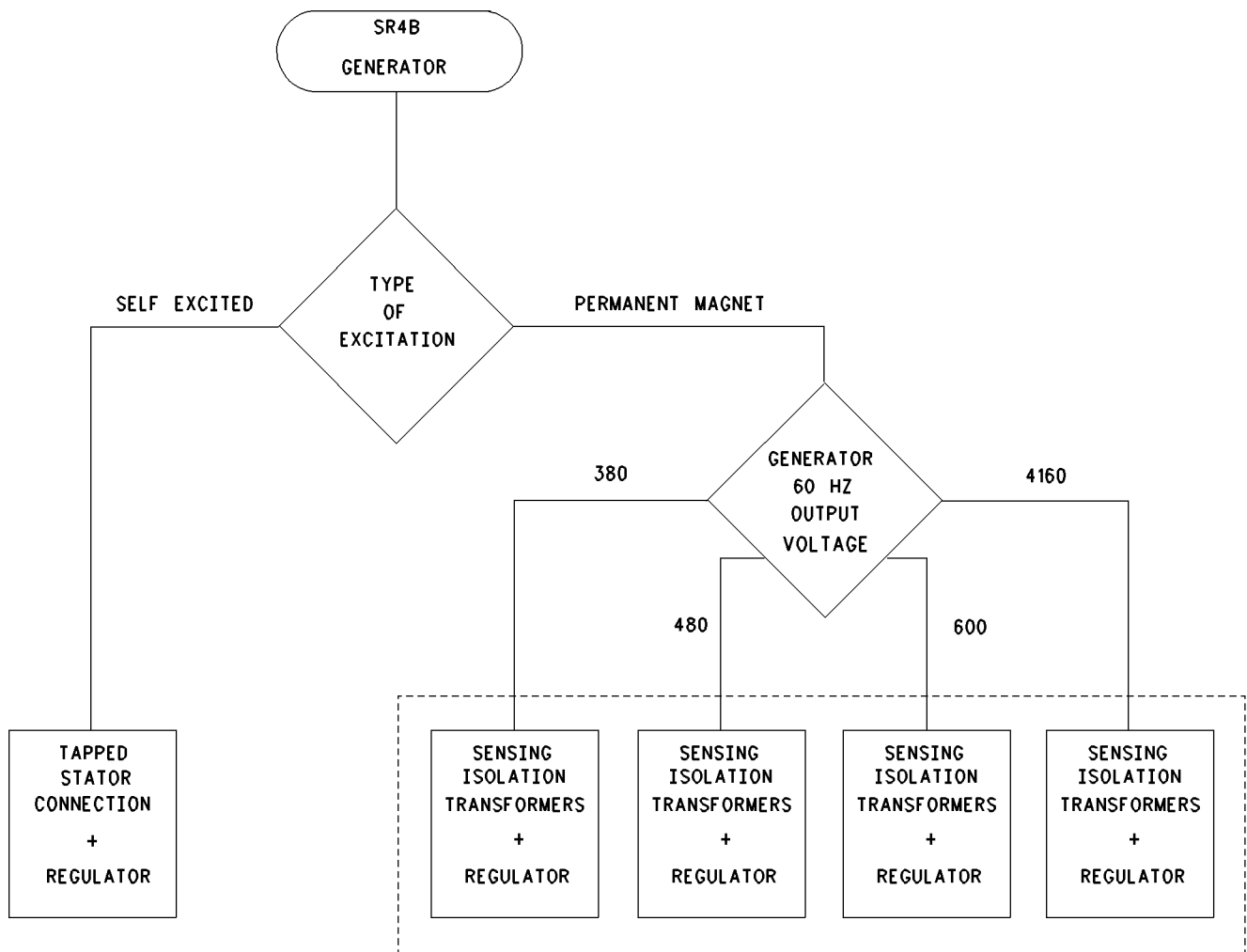
CR1-6 RECTIFIERS
CR8 SURGE SUPPRESSOR

i01327215

Selection Guide for Voltage Regulator (SR4B for 3500 Engines)

SMCS Code: 4467

Selection Chart for SR4B Voltage Regulator



NOTE: VOLTAGES SHOWN ARE 60 Hz EQUIVALENTS

Illustration 43

g00702273

i01314726

VR3 Voltage Regulator Connections (SR4B for 3500 Engines)

SMCS Code: 4467

Self Excited with Direct Connection to Generator

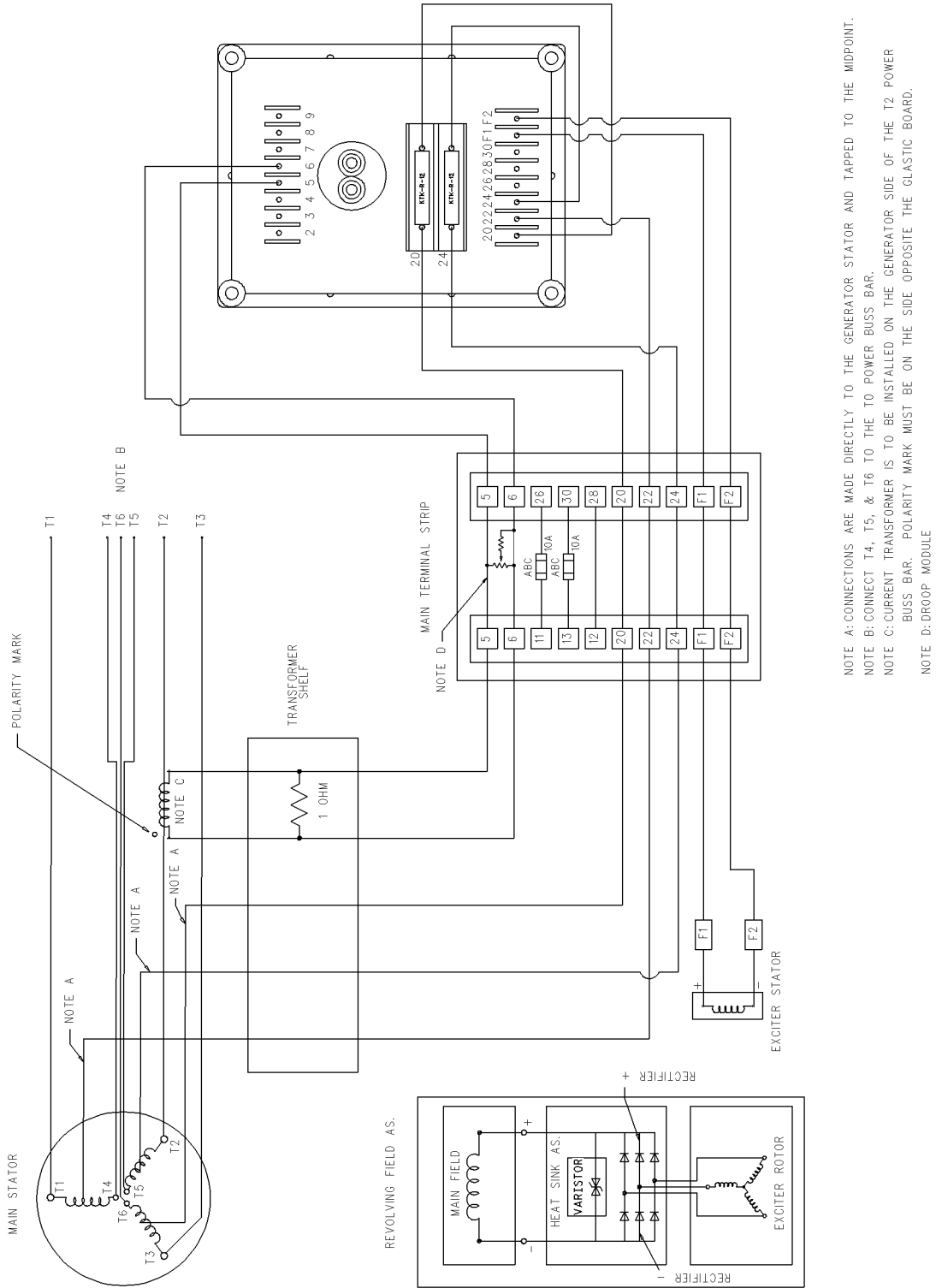


Illustration 44

Permanent Magnet Excitation with Connections to an Isolation Transformer

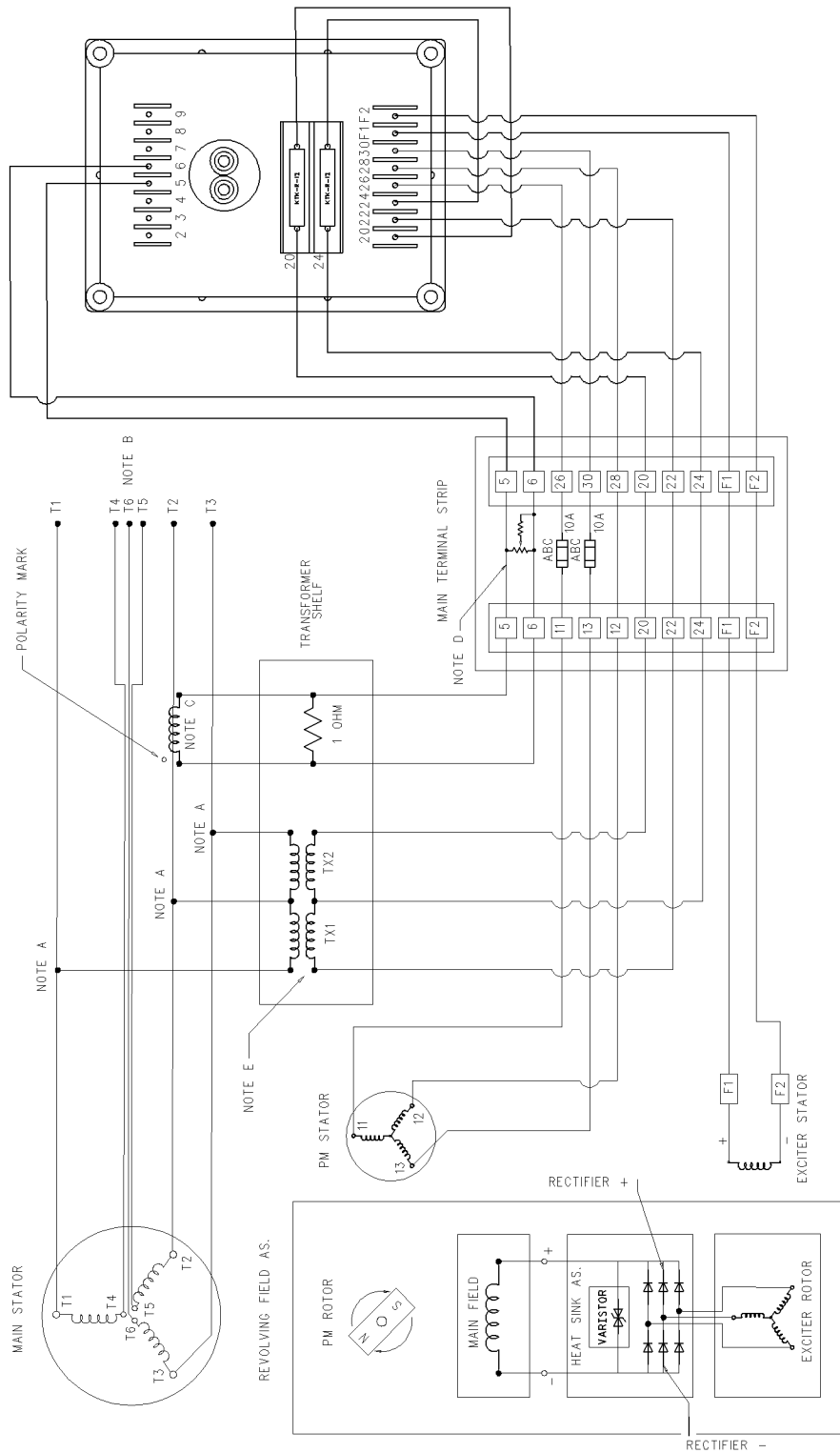


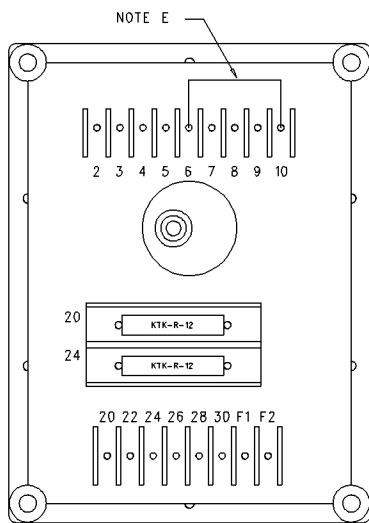
Illustration 45

i01314367

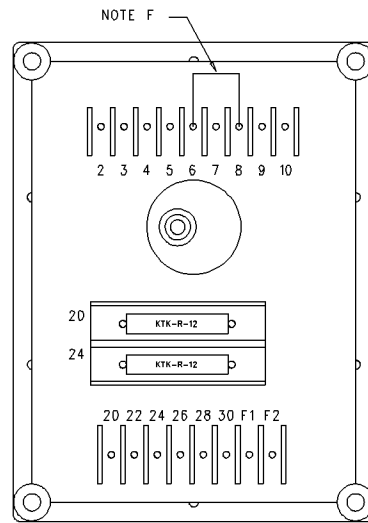
VR3F Voltage Regulator Connections (SR4B for 3500 Engines)

SMCS Code: 4467

Knee Frequency Selection and Underfrequency Slope Selection



NOTE E: INSTALL JUMPER FOR 60 HZ OPERATION; REMOVE FOR 50 HZ OPERATION.



NOTE F: INSTALL JUMPER FOR 1:1 V/HZ SLOPE; REMOVE FOR 2:1 V/HZ UNDERFREQUENCY SLOPE.

Self Excited with Direct Connection to Generator

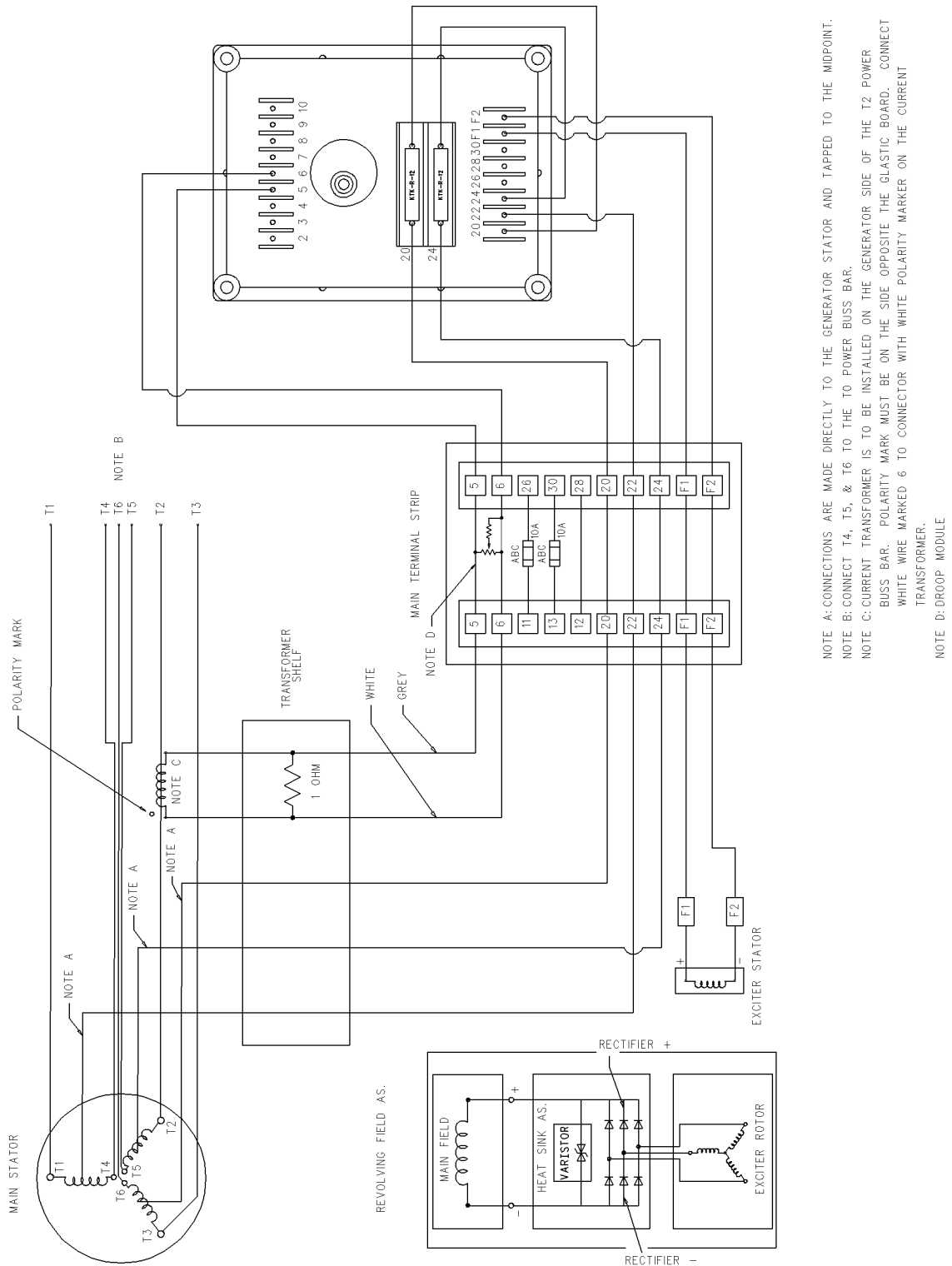
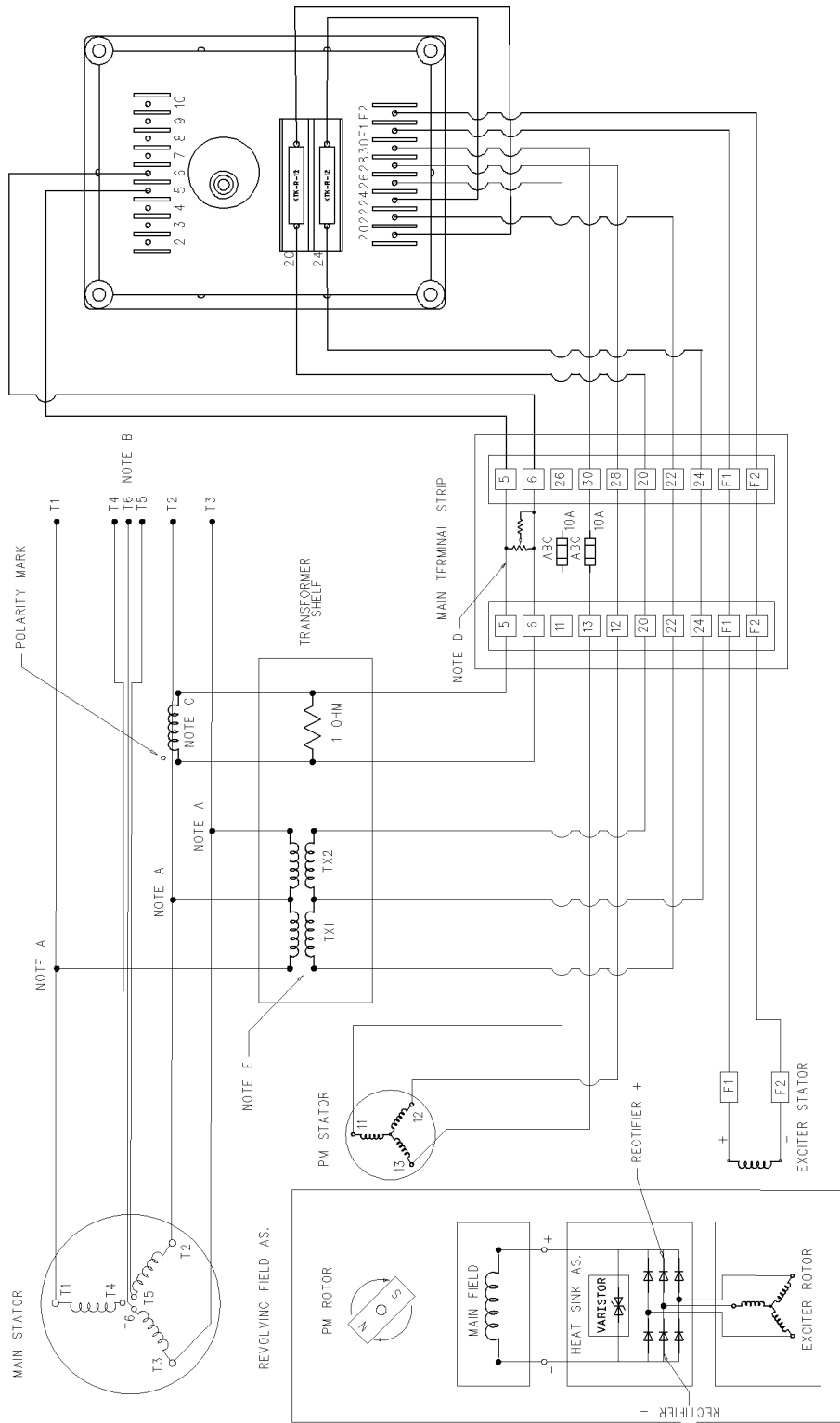


Illustration 47

Permanent Magnet Excitation with Connections to Isolation Transformers



- NOTE A: CONNECTIONS ARE MADE DIRECTLY TO THE GENERATOR SIDE OF THE POWER BUSS BARS
- NOTE B: CONNECT T4, T5, & T6 TO THE T0 POWER BUSS BAR
- NOTE C: CURRENT TRANSFORMER IS TO BE INSTALLED ON THE GENERATOR SIDE OF THE T2 POWER BUSS BAR. POLARITY MARK MUST BE ON THE SIDE OPPOSITE THE GLASTIC BOARD.
- NOTE D: DROOP MODULE
- NOTE E: SENSING TRANSFORMERS (TX1, TX2) HAVE UNIQUE WIRE COLORS AND LABELS. SEE INDIVIDUAL TRANSFORMER DRAWINGS FOR DETAILS.

Illustration 48

i01314775

Digital Voltage Regulator Connections (SR4B for 3500 Engines)

SMCS Code: 4467

Permanent Magnet Excitation with Connections to Isolation Transformers

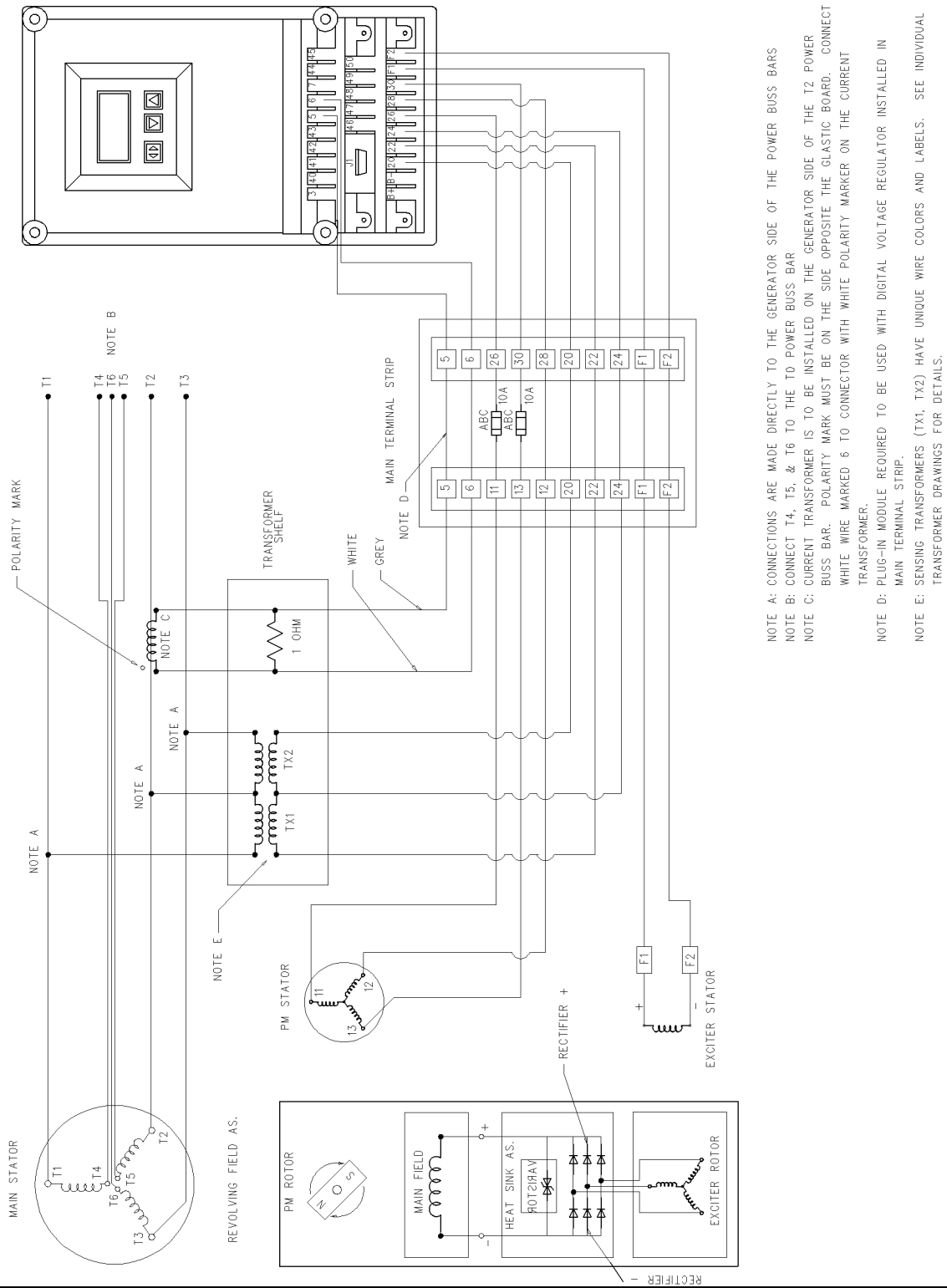


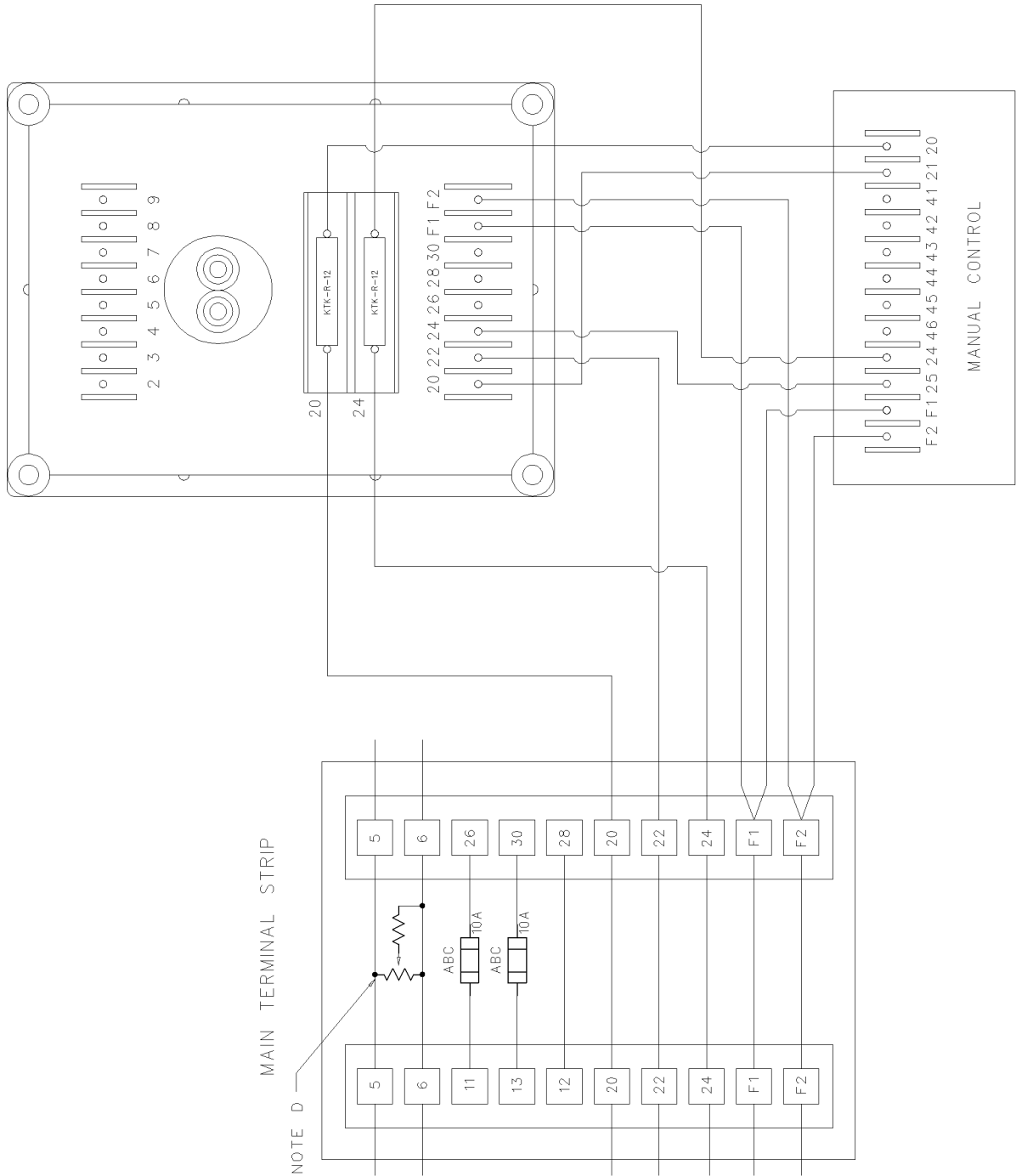
Illustration 49

i01314806

Options (SR4B for 3500 Engines)

SMCS Code: 4450

VR3 with Manual Voltage Control and Self Excitation



NOTE D: DROOP MODULE.

Illustration 50

VR3 Manual Control with Permanent Magnet Excitation

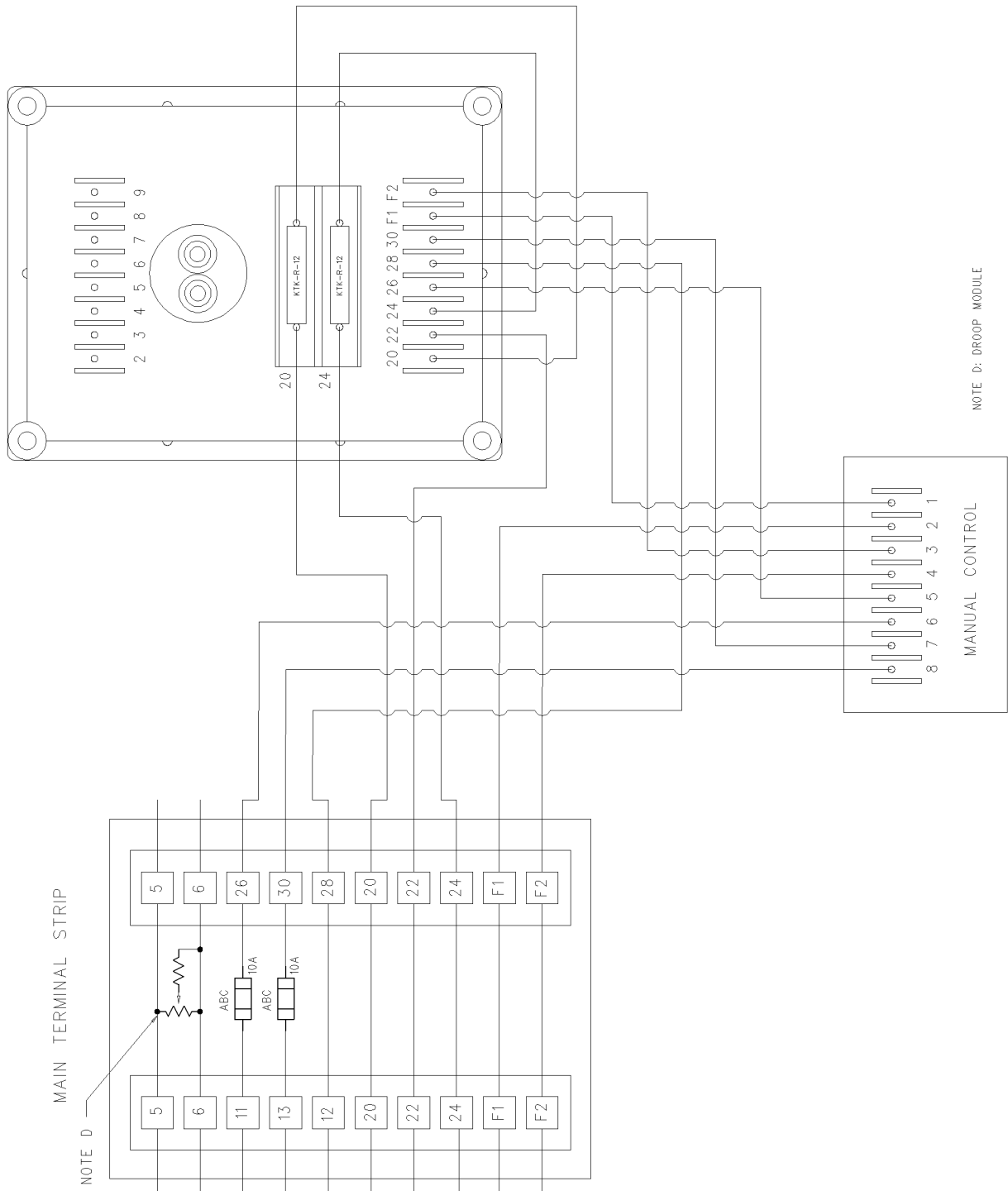


Illustration 51

VR3 with Radio Interference Filter with Self Excitation

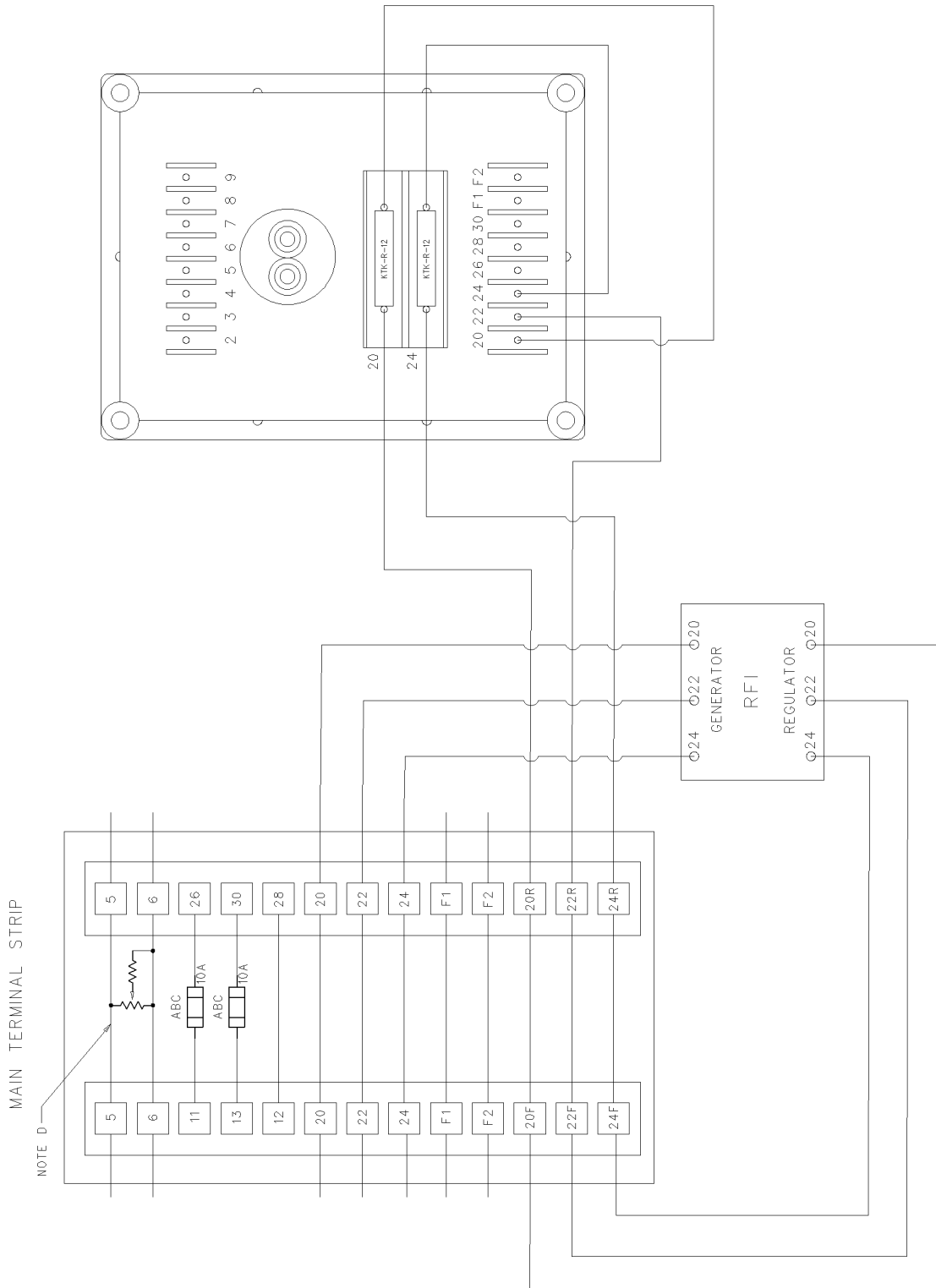
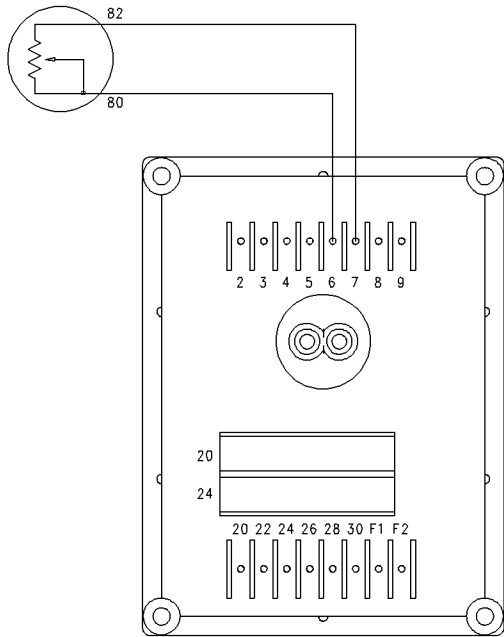
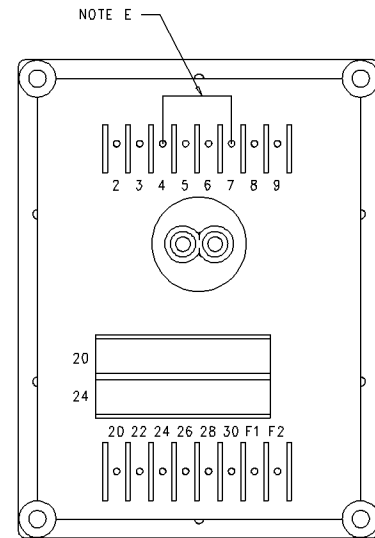


Illustration 52

Remote Voltage Adjust Rheostat Connections



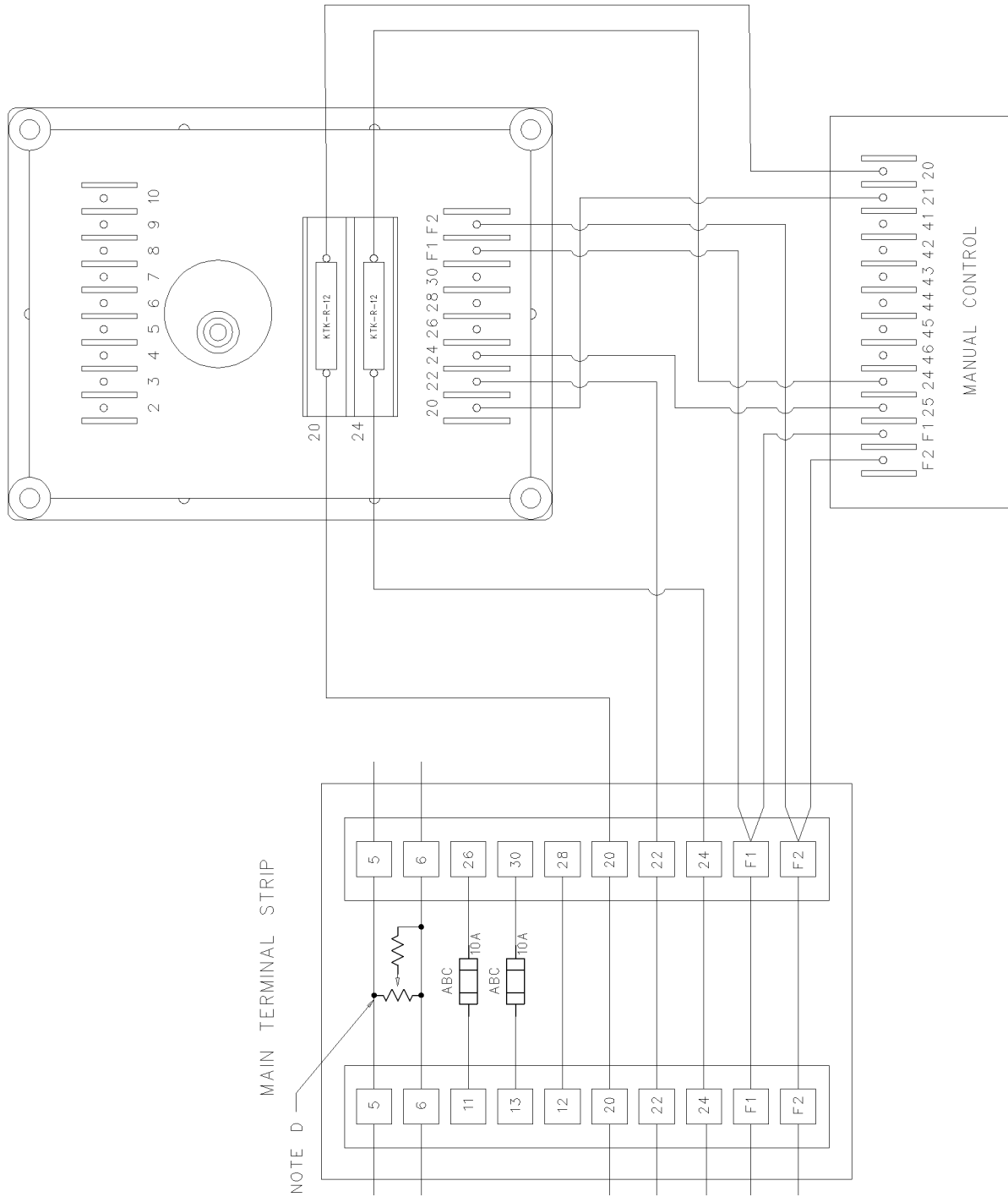
CONNECTION WHEN REMOTE VOLTAGE
ADJUST RHEOSTAT IS PROVIDED



CONNECTION WITH NO REMOTE
VOLTAGE ADJUST RHEOSTAT

NOTE E: JUMPER MUST BE INSTALLED IF REMOTE VOLTAGE ADJUST RHEOSTAT IS NOT PROVIDED.

VR3F with Manual Voltage Control and Self Excitation



NOTE D: DROOP MODULE

VR3F with Manual Control and Permanent Magnet Excitation

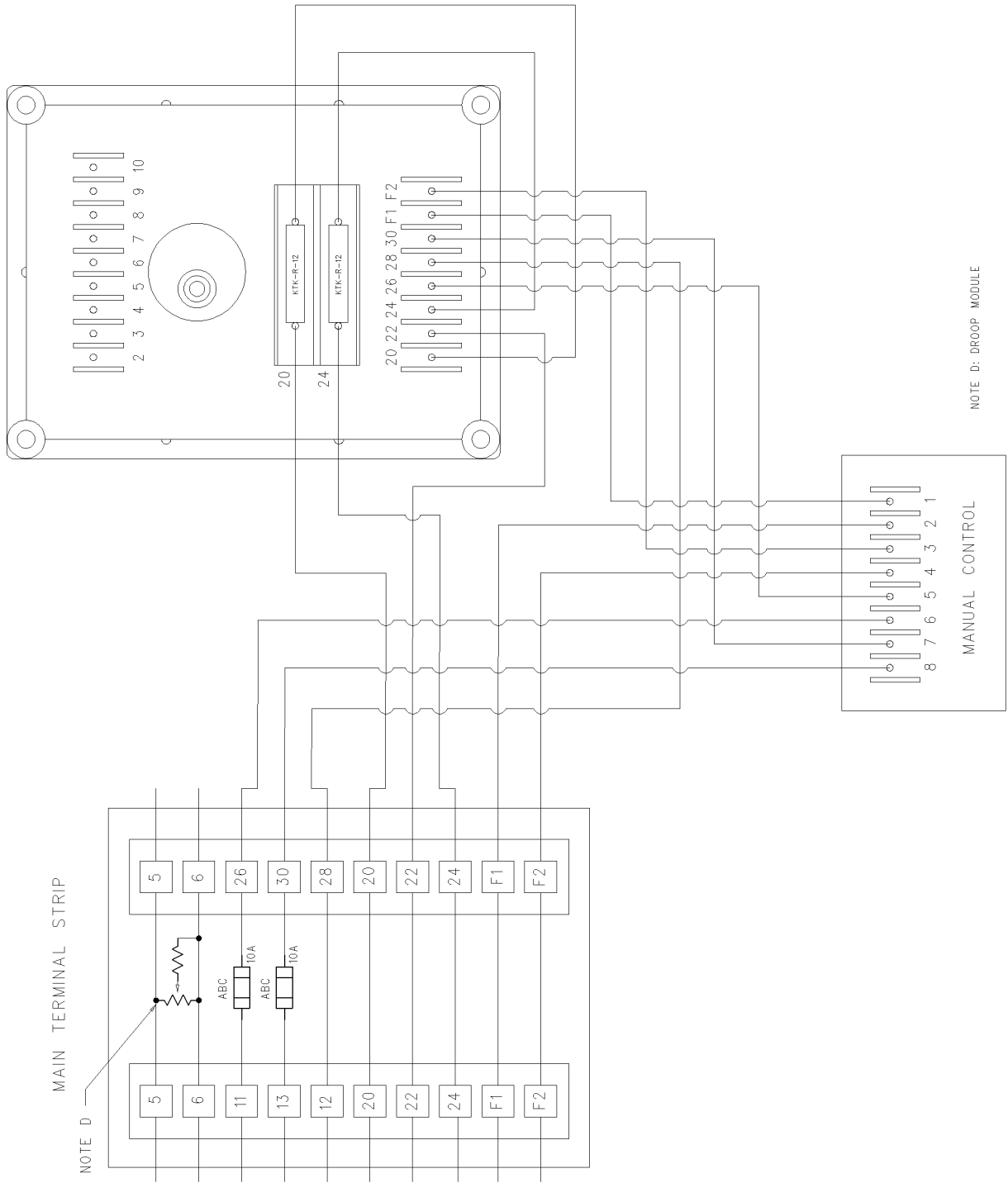


Illustration 56

VR3F with Radio Interference Filter and Self Excitation

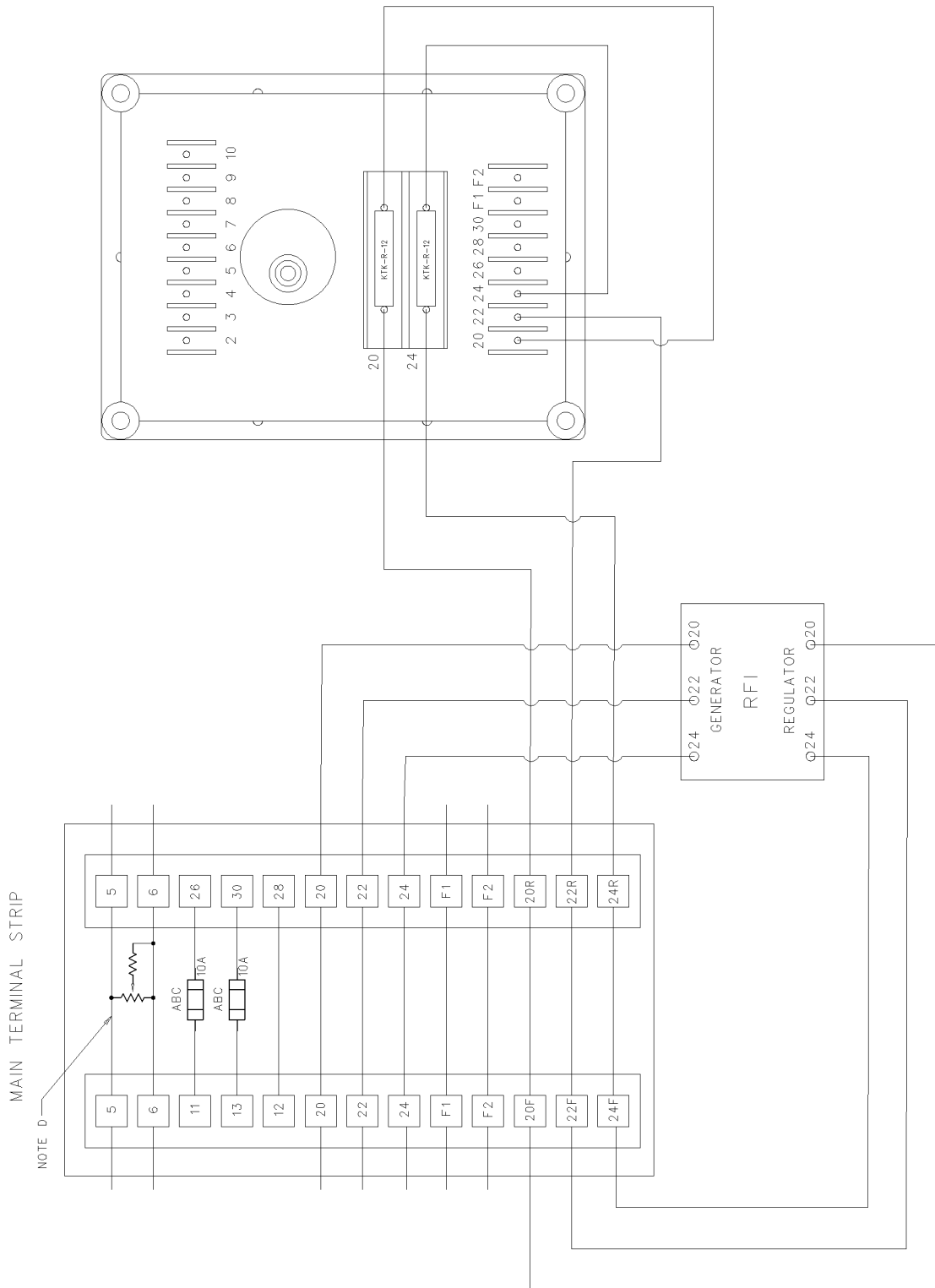
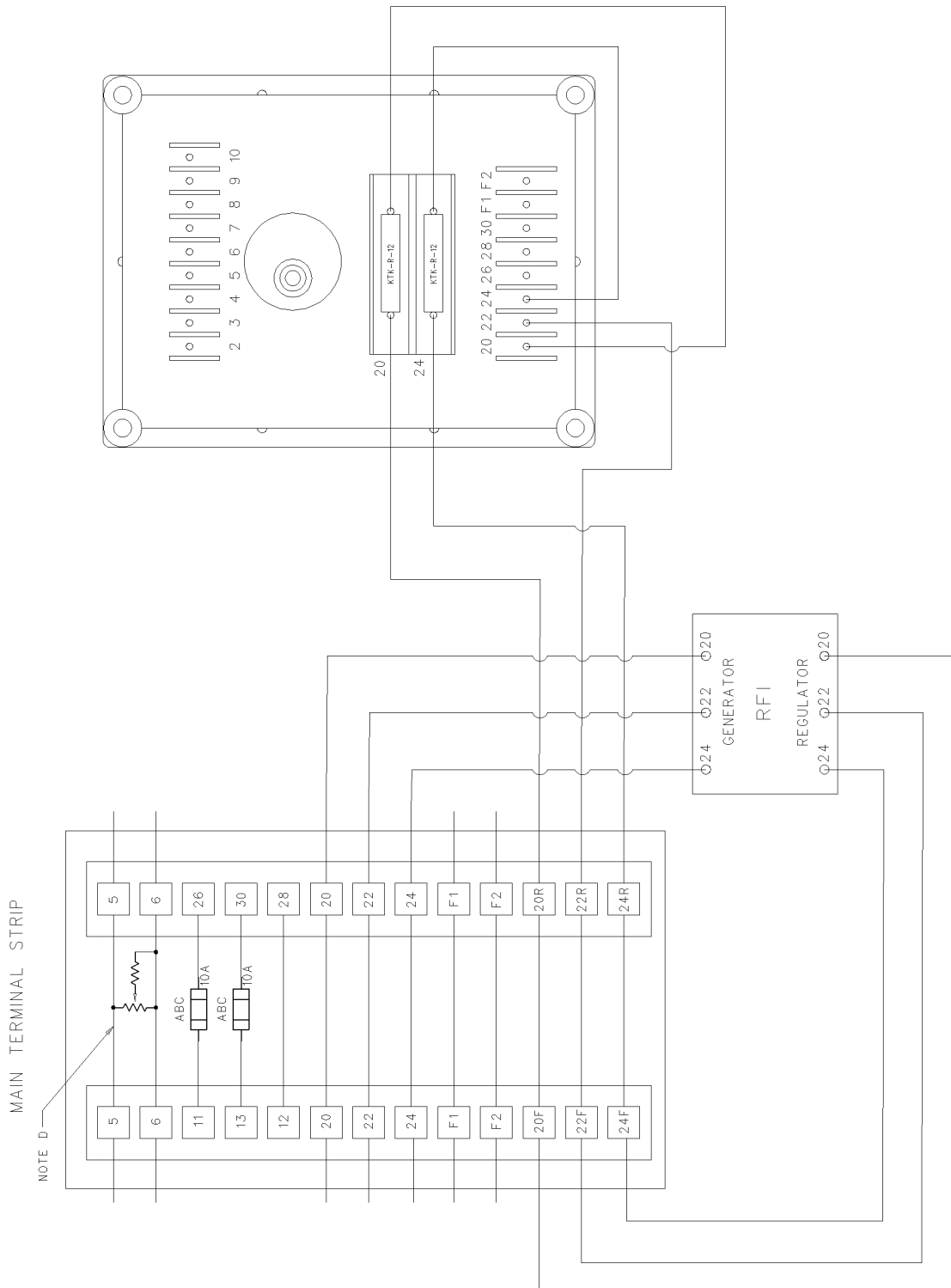


Illustration 57

VR3F with Radio Interference Filter and Permanent Magnet Excitation



NOTE D: DROOP MODULE

Illustration 58

Digital Voltage Regulator with Manual Control

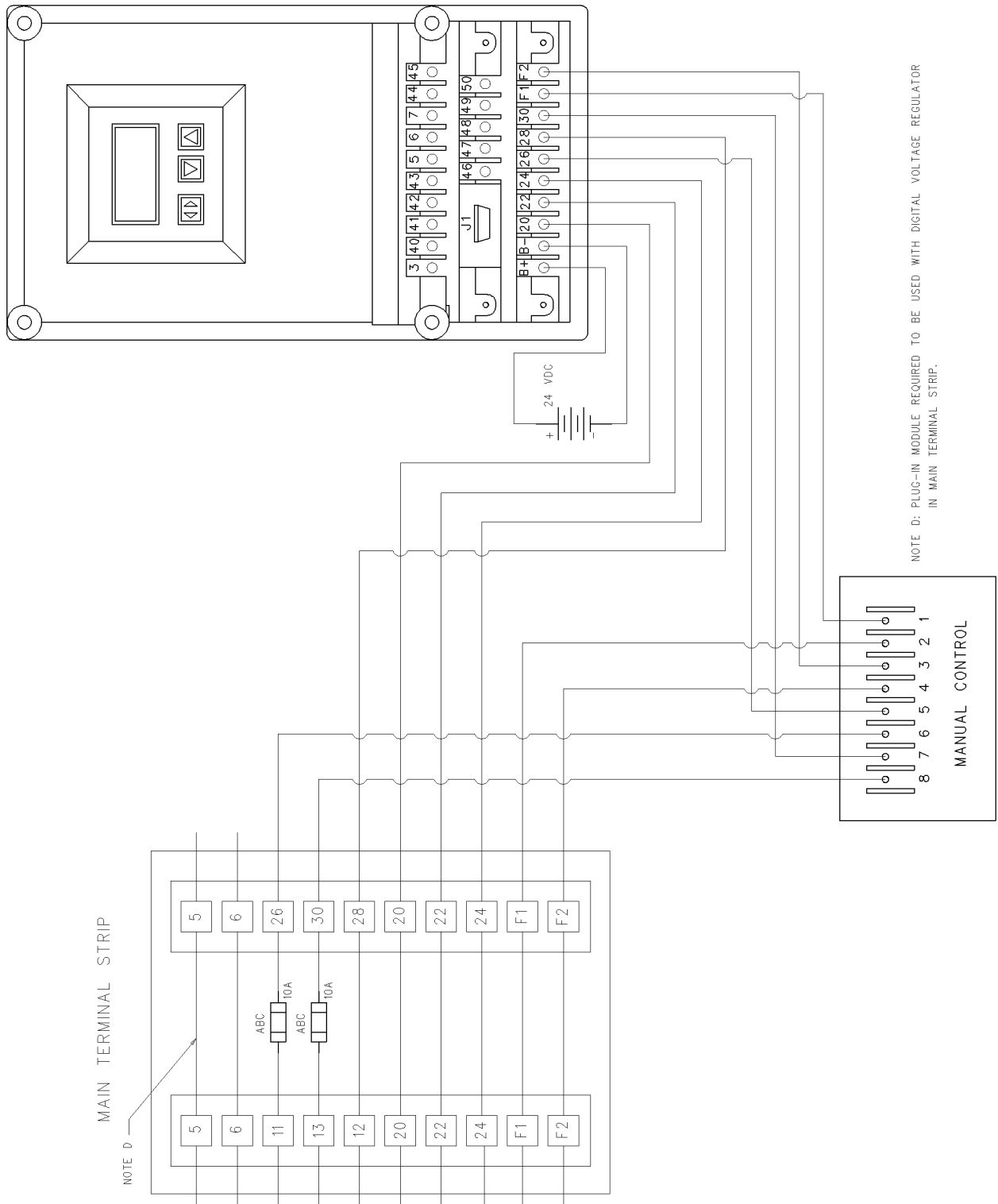
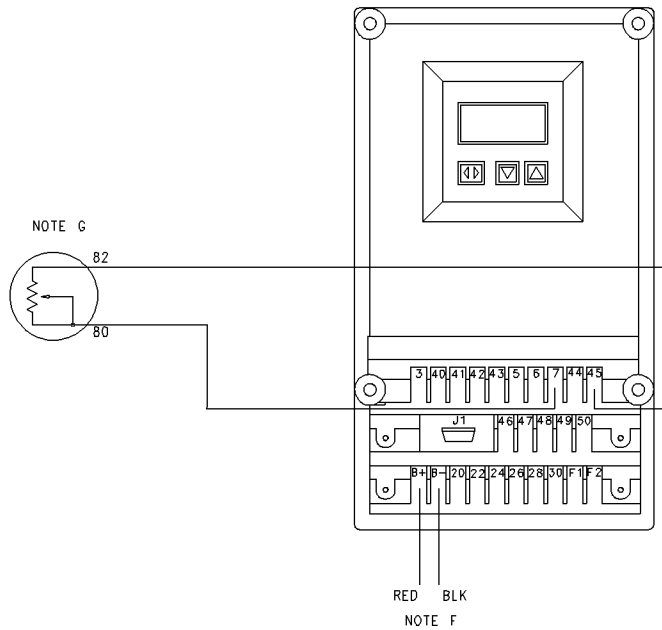


Illustration 59

Digital Voltage Regulator with Remote VAR

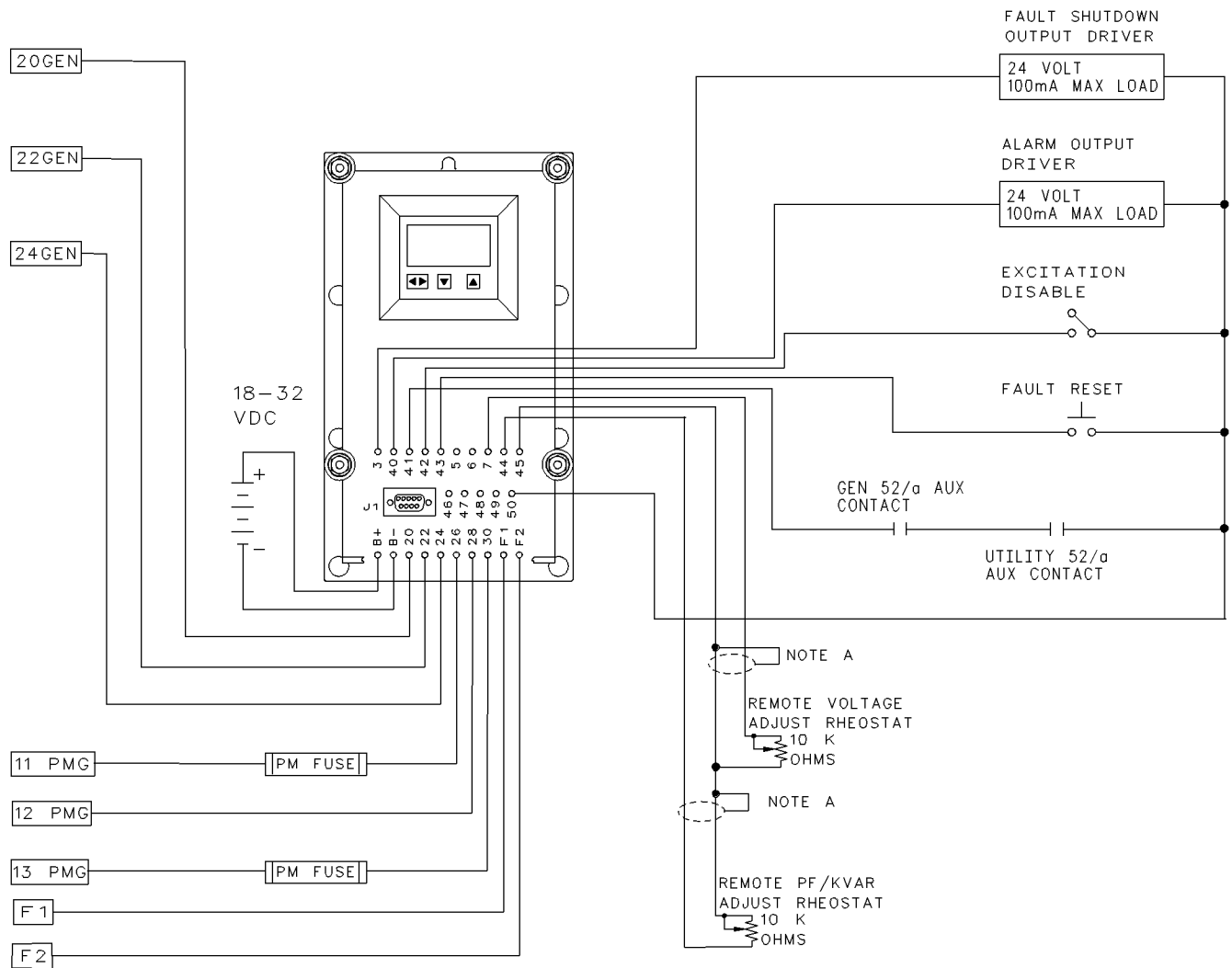


NOTE F: IF EMCP EXISTS, HARNESS AS. 128-0830 IS REQUIRED TO PROVIDE POWER. IF NO EMCP IS PRESENT, MATCH WIRE IDENTITIES USING P3F0-T152 FOR B+ AND P6F0-T102 FOR B- ON GAS ENGINES. DIESEL ENGINES USE 40KJKL198 FOR B+ AND 40LJKL199 FOR B-. IF NO EMCP AND NO WIRING HARNESS IS PROVIDED USE 130-3592 HARNESS FOR DIGITAL VOLTAGE REGULATOR BATTERY POWER.

NOTE G: OPTIONAL REMOTE VOLTAGE ADJUST RHEOSTAT IS LOCATED IN THE CONTROL PANEL, IF PROVIDED.

Illustration 60

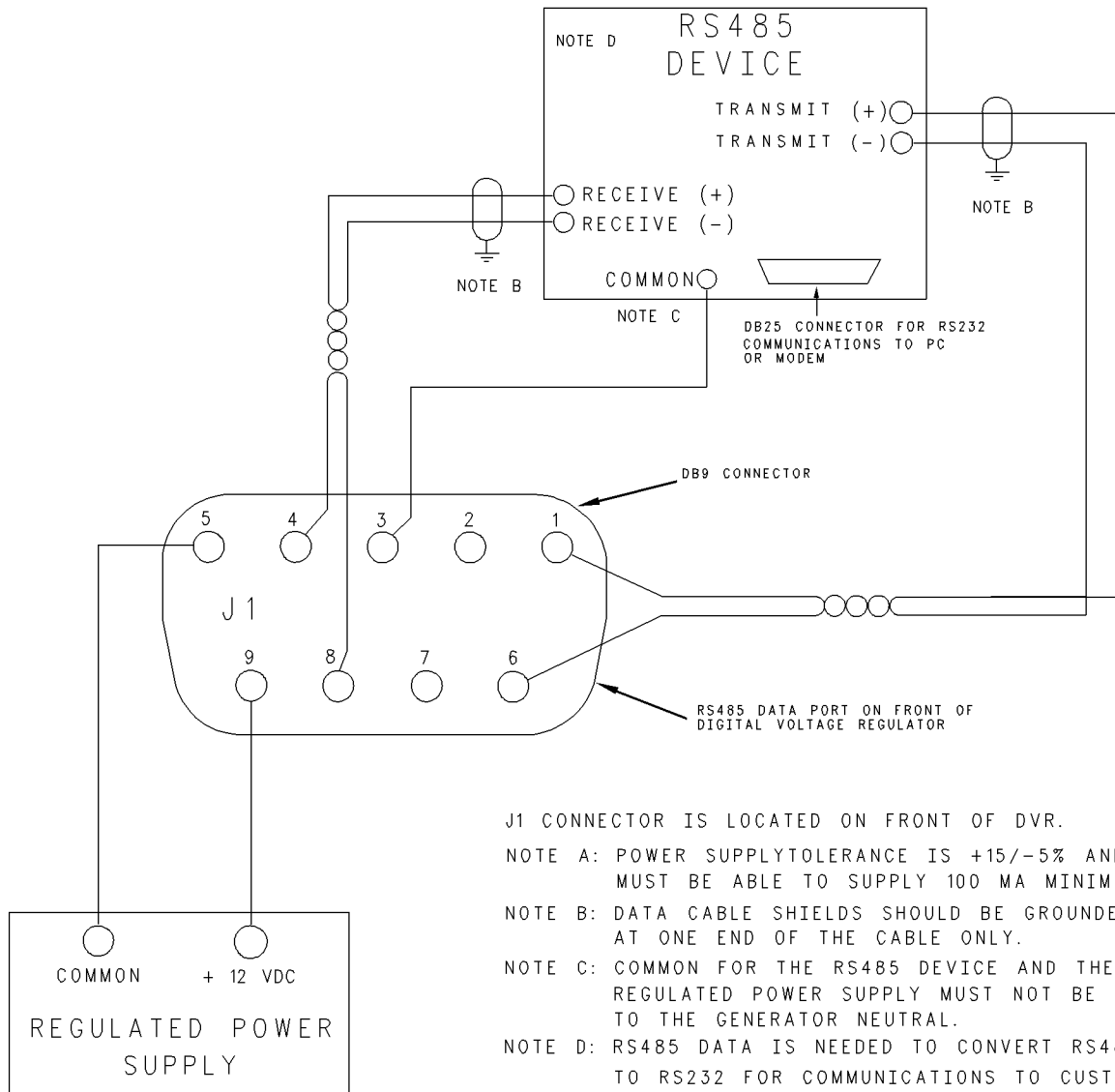
Digital voltage Regulator Customer Options



NOTE A: CONNECT SHIELD DRAIN WIRE(S) TO TERMINAL 45. INSULATE SHIELD DRAIN WIRE(S) AT RHEOSTAT END. DO NOT CONNECT SHIELD DRAIN WIRE(S) TO CHASSIS GROUND.

Illustration 61

Digital Voltage Regulator Remote Communications Connections



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