Wiring Diagrams

Residential Generator Sets
Commercial Generator Sets

Models:

15/30RES/RESL
15/30RYG

Controllers:
Advanced Digital Control ADC 2100

ISO 9001
KOHLER POWER SYSTEMS
NATIONALLY REGISTERED

KOHLER®
Power Systems

TP-6437 3/15d

Introduction

This manual provides wiring diagrams for the model 15/30RES/RESL and 15/30RYG generator sets equipped with the Advanced Digital Control (ADC 2100).

Information in this publication represents data available at the time of print. Kohler Co. reserves the right to change this publication and the products represented without notice and without any obligation or liability whatsoever.

Service Assistance

For professional advice on generator set power requirements and conscientious service, please contact your nearest Kohler distributor or dealer.

- Consult the Yellow Pages under the heading Generators—Electric.
- Visit the Kohler Power Systems website at KOHLERPower.com.
- Look at the labels and stickers on your Kohler product or review the appropriate literature or documents included with the product.
- Call toll free in the US and Canada 1-800-544-2444.
- Outside the US and Canada, call the nearest regional office.

Headquarters Europe, Middle East, Africa (EMEA)
Kohler Power Systems Netherlands B.V.
Kristallaan 1
4761 ZC Zevenbergen
The Netherlands
Phone: (31) 168 331630
Fax: (31) 168 331631

Asia Pacific
Power Systems Asia Pacific Regional Office
Singapore, Republic of Singapore
Phone: (65) 6264-6422
Fax: (65) 6264-6455

China
North China Regional Office, Beijing
Phone: (86) 10 6518 7950
(86) 10 6518 7951
(86) 10 6518 7952
Fax: (86) 10 6518 7955

East China Regional Office, Shanghai
Phone: (86) 21 6288 0500
Fax: (86) 21 6288 0550

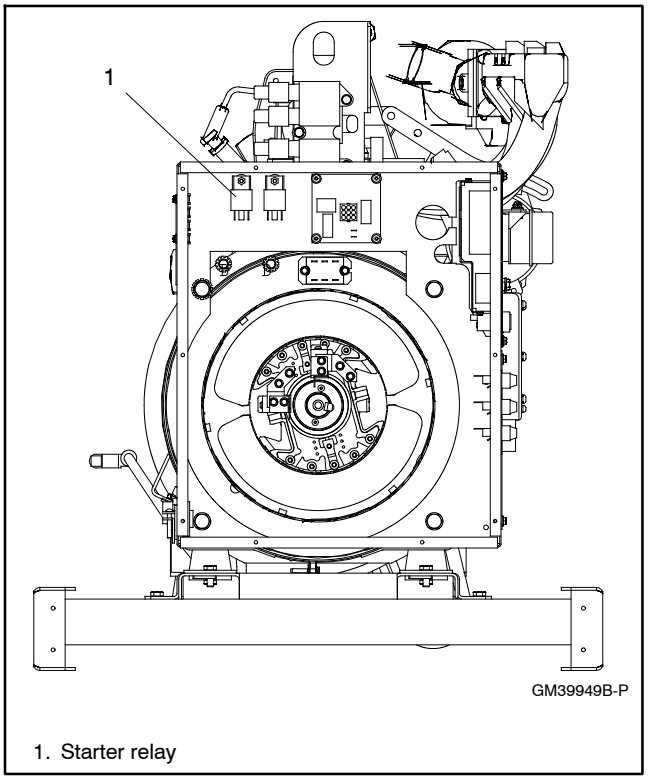
India, Bangladesh, Sri Lanka
India Regional Office
Bangalore, India
Phone: (91) 80 3366208
(91) 80 3366231
Fax: (91) 80 3315972

Japan, Korea
North Asia Regional Office
Tokyo, Japan
Phone: (813) 3440-4515
Fax: (813) 3440-2727

Latin America
Latin America Regional Office
Lakeland, Florida, USA
Phone: (863) 619-7568
Fax: (863) 701-7131

Wiring Diagrams

Use the Wiring Diagram Cross-Reference chart to determine the wiring diagram version number for a given model number and spec number. Then find that version number on the Wiring Diagram Reference chart to determine the wiring diagram numbers for your unit.



1. Starter relay

Figure 1 Starter Relay Locations

Wiring Diagram Cross-Reference

Generator Set Model No.	Hz	Generator Set Spec No.	Version No.
15RES	60	GM32850-GA5	1
	60	GM39949-GA5	2
	60	GM39949-GA11	3
	60	GM39949-GA15	4 or 5
	60	GM39949-GA20	6
15RESL	60	GM39949-SA1	3
	60	GM39949-SA4	6
15RYG	60	GM32850-GA1	1
	60	GM32850-GA3	1
	60	GM39949-GA1	2
	60	GM39949-GA3	2
	60	GM39949-GA7	3
	60	GM39949-GA9	3
	60	GM39949-GA13	4 or 5
	60	GM39949-GA21	6
30RES	60	GM32850-GA6	1
	60	GM39949-GA6	2
	60	GM39949-GA12	3
	60	GM39949-GA16	4 or 5
	60	GM39949-GA18	5
	60	GM39949-GA19	6
	60	GM39949-GA22	6
	60	GM39949-GA24	6
30RESL	60	GM39949-SA2	3
	60	GM39949-SA3	5
	60	GM39949-SA5	6
30RYG	50/60	GM32850-GA2	1
	50/60	GM32850-GA4	1
	50/60	GM39949-GA2	2
	50/60	GM39949-GA4	2
	50/60	GM39949-GA8	3
	50/60	GM39949-GA10	3
	50/60	GM39949-GA14	4 or 5
	50/60	GM39949-GA17	5
	50/60	GM39949-GA23	6

Version 1 uses separate generator set and engine harnesses. Subsequent specifications use the integrated generator set-engine harness.

Version 4 uses Bosch or Tyco starter relays. See Figure 1 for relay location.

Version 5 uses Song Chuan starter relays with internal diodes. See Figure 1 for relay location.

Wiring Diagram Reference

Description	Version 1	Page
Point-to-Point Wiring Diagram		
Sheet 1	GM28747A-H	21
Sheet 2	GM28747B-H	22
Schematic Diagram		
Sheet 1	ADV-6846A-D	9
Sheet 2	ADV-6846B-D	10
Engine Harness Connections	GM34393-E	24
4-Lead, Single-Phase Voltage Connection	ADV-5875A-H	7
12-Lead, Single-Phase, Three-Phase Voltage Connection	ADV-5875B-H	8
Accessory Connections	GM33846-D	23

Description	Version 2	Page
Point-to-Point Wiring Diagram		
Sheet 1	GM36189A-B	25
Sheet 2	GM36189B-B	26
Schematic Diagram		
Sheet 1	ADV-6959A-B	11
Sheet 2	ADV-6959B-B	12
4-Lead, Single-Phase Voltage Connection	ADV-5875A-H	7
12-Lead, Single-Phase, Three-Phase Voltage Connection	ADV-5875B-H	8
Accessory Connections	GM33846-D	23

Description	Version 3	Page
Point-to-Point Wiring Diagram		
Sheet 1	GM36189A-F	27
Sheet 2	GM36189B-F	28
Schematic Diagram		
Sheet 1	ADV-6959A-F	13
Sheet 2	ADV-6959B-F	14
4-Lead, Single-Phase Voltage Connection	ADV-5875A-H	7
12-Lead, Single-Phase, Three-Phase Voltage Connection	ADV-5875B-H	8
Accessory Connections	GM33846-D	23

Description	Version 4	Page
Point-to-Point Wiring Diagram		
Sheet 1	GM36189A-K	29
Sheet 2	GM36189B-K	30
Schematic Diagram		
Sheet 1	ADV-6959A-J	15
Sheet 2	ADV-6959B-J	16
4-Lead, Single-Phase Voltage Connection	ADV-5875A-H	7
12-Lead, Single-Phase, Three-Phase Voltage Connection	ADV-5875B-H	8
Accessory Connections	GM40726-B	31

Description	Version 5	Page
Point-to-Point Wiring Diagram		
Sheet 1	GM50548A-	32
Sheet 2	GM50548B-	33
Schematic Diagram		
Sheet 1	ADV-7287A-	17
Sheet 2	ADV-7287B-	18
4-Lead, Single-Phase Voltage Connection	ADV-5875A-H	7
12-Lead, Single-Phase, Three-Phase Voltage Connection	ADV-5875B-H	8
Accessory Connections	GM40726-B	31

Description	Version 6	Page
Point-to-Point Wiring Diagram		
Sheet 1	GM50548A-E	34
Sheet 2	GM50548B-E	35
Schematic Diagram		
Sheet 1	ADV-7287A-D	19
Sheet 2	ADV-7287B-D	20
4-Lead, Single-Phase Voltage Connection	ADV-5875A-H	7
12-Lead, Single-Phase, Three-Phase Voltage Connection	ADV-5875B-H	8
Accessory Connections	GM40726-B	31

Version 1 uses separate generator set and engine harnesses. Subsequent specifications use the integrated generator set-engine harness.

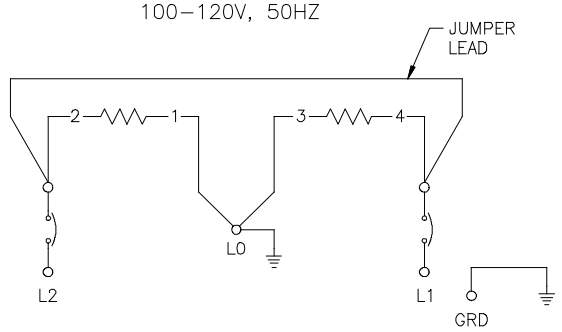
Version 4 uses Bosch or Tyco starter relays. See Figure 1 for relay location.

Version 5 uses Song Chuan starter relays with internal diodes. See Figure 1 for relay location.

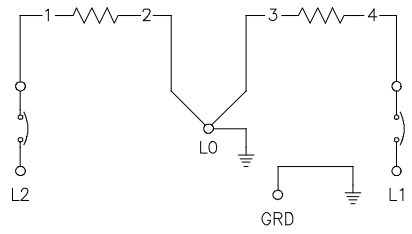
Notes

REV	DATE	REVISION	BY	M Z
H	9-24-06	THIS SHEET ADDED [77613]	CRS	

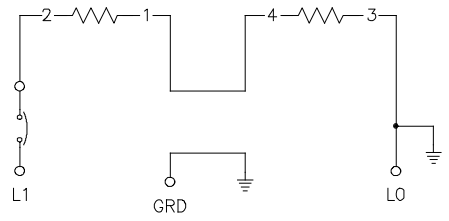
100-120V, 60HZ
100-120V, 50HZ



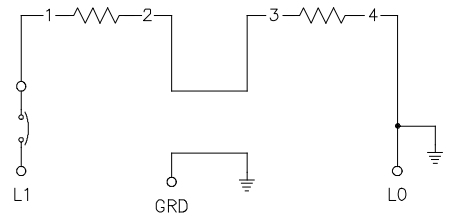
100-120/200-240V, 60HZ
100-120/200-240V, 50HZ

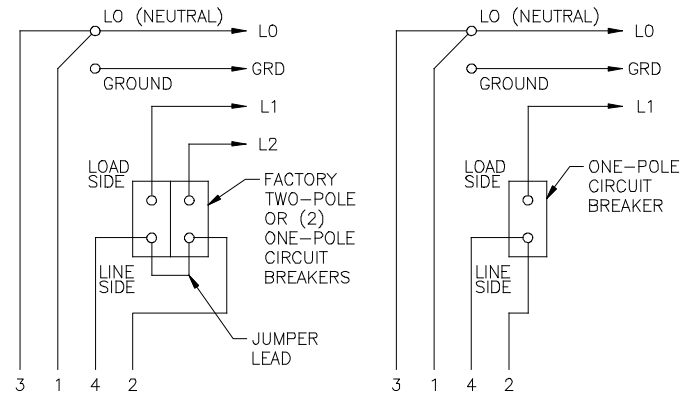


220-240V, 50HZ

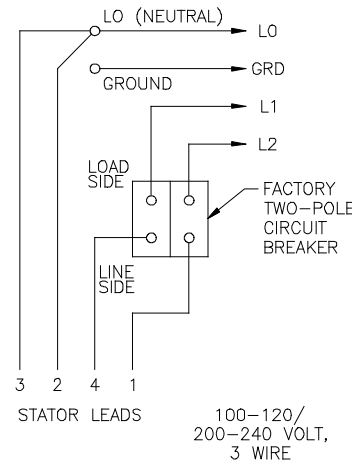


220-240V, 50HZ

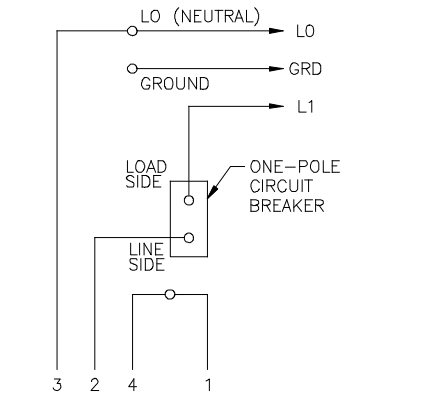




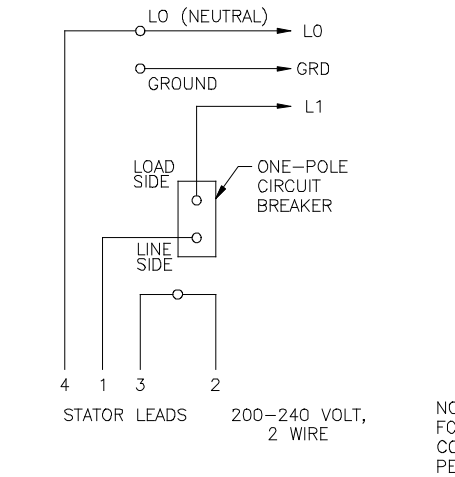
PB3, PB5 OR ADC2100 REGULATORS



PB3, PB5, ADC2100, PERMANENT MAGNET (PM) AND WOUND FIELD (WF) REGULATORS



NON-ADC2100 REGULATORS



ADC2100 REGULATORS

SINGLE PHASE
4 LEAD ALTERNATORS

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 ANGLES ± 1/2° .XX ± .030 SURFACE FINISH .X ± .060 √ MAX. FRACTIONS ±

APPROVALS		DATE
DRAWN	CRS	9-25-06
CHECKED	TLK	9-25-06
APPROVED	TLK	9-25-06

TITLE: DIAGRAM, RECONNECTABLE

SCALE: / / / | CAD NO. ADV5875A.DWG | SHEET 1-4

PLOTTED | PART NO. ADV-5875 | D

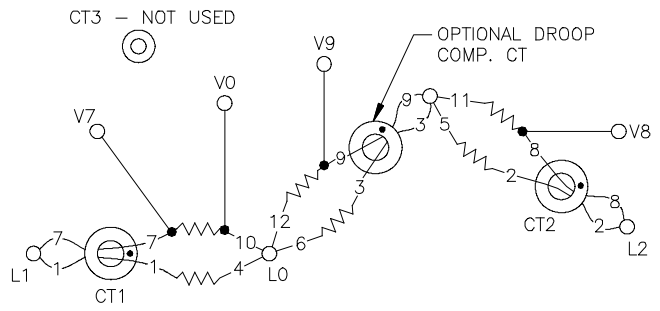
Voltage Connection Diagram, Single-Phase, ADV-5875A-H

REV	DATE	REVISION	BY	M F
E	5-27-04	(A-1,-2) SHEET 1-3 WAS 1-2, 20-60 KW WOUND EXCITER FIELD		
		ALTERNATORS ADDED TO DRAWING DESCRIPTION; (A & C-2,-3,-4)		
		TB3 WAS TB2 (6 PLACES); & SEE SHEETS 2 & 3 [71832]	DFS	
F	9-2-04	SEE SHEET 2 OF 3. [72955]	RAC	
G	12-12-05	(A-2) 10-20 KW ADDED, SEE SHEET 3 [76798]	SAM	
H	9-25-06	(A-1) SHEET 2 OF 4 WAS 1 OF 3 [77613]	CRS	

12 LEAD ALTERNATOR, 3 WIRE, SINGLE PHASE

60 HZ: 100/200V
60 HZ: 120/240V
50 HZ: 100/200V
50 HZ: 110/220V

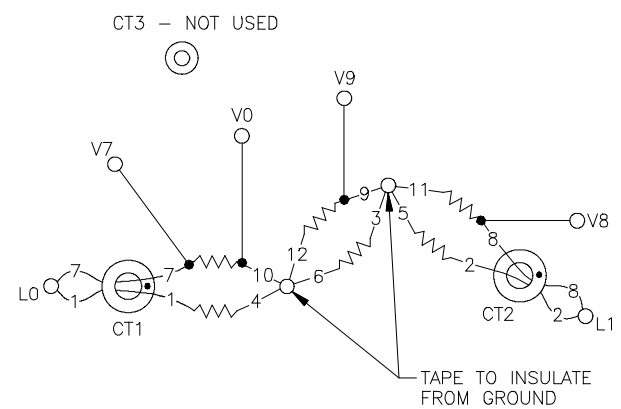
SOME SETS NOT RATED FOR SINGLE PHASE – SEE MANUALS



TB3 UP V7 LO — METER SCALE, LAMP JUMPER

12 LEAD ALTERNATOR, 3 WIRE, SINGLE PHASE

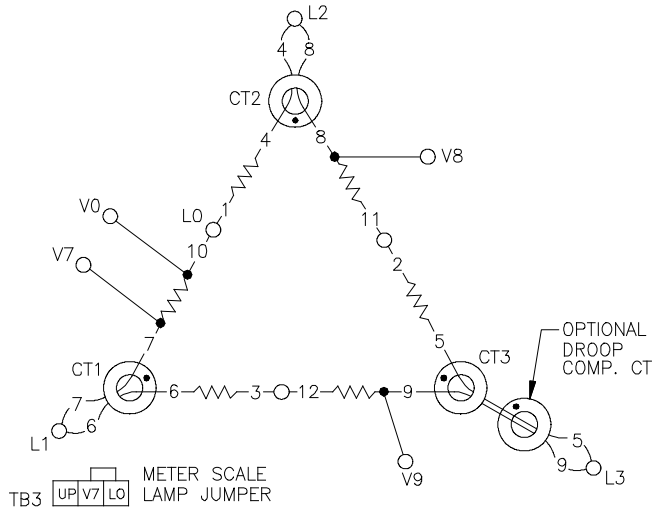
60 HZ: 240V
50 HZ: 220V
(MARINE ONLY)



TB3 UP V7 LO — METER SCALE, LAMP JUMPER

12 LEAD ALTERNATOR, 4 WIRE, DELTA

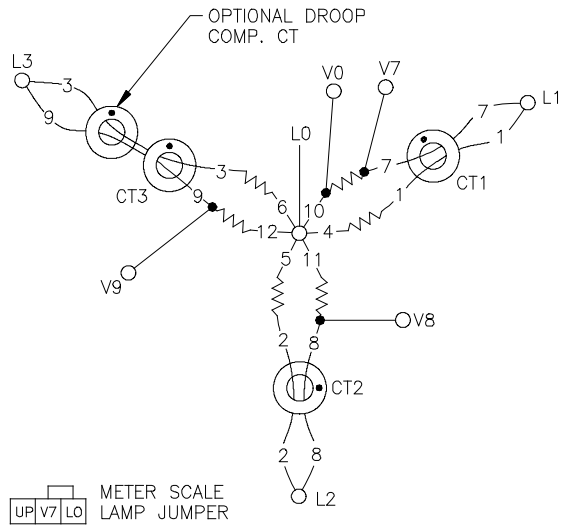
60 HZ: 120/240V
50 HZ: 110/220V



TB3 UP V7 LO — METER SCALE, LAMP JUMPER

12 LEAD ALTERNATOR, 4 WIRE, LOW WYE

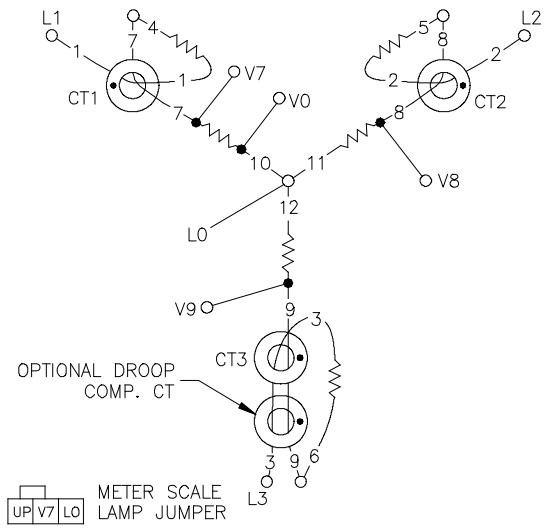
60 HZ: 120/208V
60 HZ: 127/220V
60 HZ: 139/240V
50 HZ: 110/190V
50 HZ: 115/200V
50 HZ: 120/208V



TB3 UP V7 LO — METER SCALE, LAMP JUMPER

12 LEAD ALTERNATOR, 4 WIRE, HI WYE

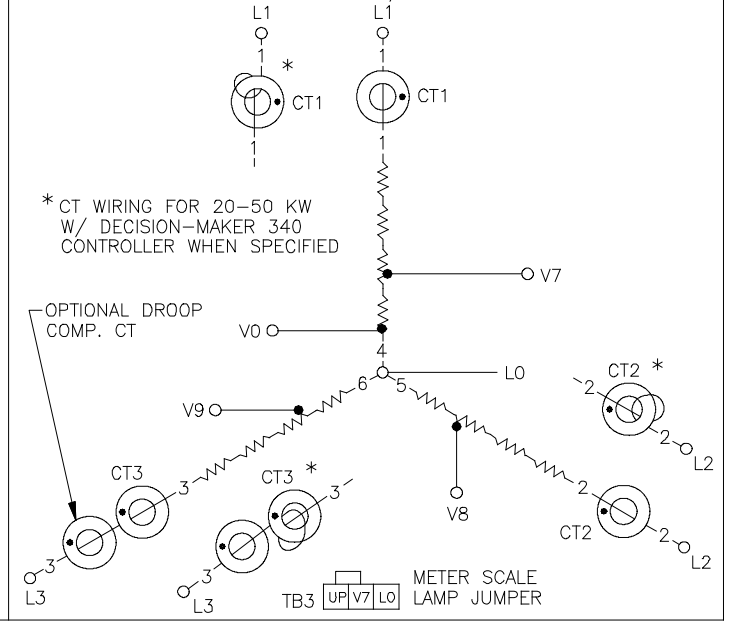
60 HZ: 220/380V
60 HZ: 240/416V
60 HZ: 277/480V
50 HZ: 220/380V
50 HZ: 230/400V
50 HZ: 240/416V



TB3 UP V7 LO — METER SCALE, LAMP JUMPER

6 LEAD ALTERNATOR, 4 WIRE, WYE

60 HZ: 347/600V



TB3 UP V7 LO — METER SCALE, LAMP JUMPER

NOTES:
CURRENT TRANSFORMER DOT OR "H1" TOWARD GENERATOR.
CURRENT TRANSFORMERS NOT USED ON ALL SETS.

PHASE ROTATION

A	B	C
L1	L2	L3

3 PHASE
FRII ALTERNATORS,
20-60KW WOUND EXCITER FIELD ALTERNATORS,
AND 10-20KW SMALL STANDBY

UNLESS OTHERWISE SPECIFIED –
1) DIMENSIONS ARE IN INCHES
2) TOLERANCES ARE:
.XXX± .010 ANGLES± 1/2°
.XX ± .030 SURFACE FINISH
.X ± .060 √ MAX.
FRACTIONS ±

APPROVALS		DATE
DRAWN	DFS	7-28-92
CHECKED	TLK	6-23-99
APPROVED	JMH	6-25-99

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

TITLE: DIAGRAM, RECONNECTABLE

SCALE	CAD NO.	SHEET
NONE	ADV5875B.DWG	2-4
PLOTTED	DWG. NO.	
	ADV-5875	C G

Voltage Connection Diagram, Single-Phase, Three-Phase, ADV-5875B-H

REV	DATE	REVISION	BY	M F
C	9-27-04	(C & D-3,-4) PINOUTS REVISED ON CONNECTORS P27, P28		
		P29 & P30, LEAD 13 MOVED FROM P30-E TO P29-H; (A-2)		
		EXCITER FIELD CONNECTIONS REPLACED WITH BRUSH HOLDER		
		CONNECTIONS [73416]	DFS	
D	11-8-04	(C-1,-2) QCON10, QCON11, QCON12, QCON13 & P31 ADDED [73730]	DFS	

LEGEND

BCA – BATTERY CHARGING ALTERNATOR
CB(#) – CIRCUIT BREAKER
CTS – COOLANT TEMPERATURE SENDER
D(#) – DIODE
ETS – EXHAUST TEMPERATURE SENDER
F(#) – FUSE
FP – FUEL PUMP
FS – FUEL SOLENOID
INSUL(#) – INSULINK
LWP – LOW SEA WATER PRESSURE SWITCH
OPS – OIL PRESSURE SENDER
P(#) – PLUG
QCON(#) – QUICK CONNECT
RIB – RELAY INTERFACE BOARD
SCR – SILICON CONTROLLED RECTIFIER
SM – STARTER MOTOR
SS – STARTER SOLENOID
⏚ – ENGINE BLOCK GROUND

P7 CONNECTIONS	
MODE	P7 JUMPER
LOW POWER	JUMPER 2 TO 3
CONTINUOUS POWER	JUMPER 1 TO 2

GM 1.6 L
ADC2100 CONTROLLER
W/ E-CONTROLLS

UNLESS OTHERWISE SPECIFIED – DIMENSIONS ARE IN INCHES – TOLERANCES ARE: .XXX ± .010, .XX ± .030, .X ± .090, FRACTIONS ± 1/32, ANGLES ± 1/2, SURFACE FINISH MAX.

APPROVALS		DATE
DRAWN	DFS	3-5-04
CHECKED	JS	3-8-04
APPROVED	JS	3-8-04

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
THIS DRAWING, IN DESIGN AND DETAIL, IS KOHLER CO. PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH KOHLER CO. WORK. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L
SCALE: / / / | CAD NO.: ADV6846A.DWG | SHEET: 1-2
PLOTTED: | PRN. NO.: ADV-6846 | D

Schematic Diagram, Sheet 1, ADV-6846A-D

REV	DATE	REVISION	BY	M F
C	9-27-04	SEE SHEET 1 [73416]	DFS	
D	11-8-04	SEE SHEET 1 [73730]	DFS	

ADC 2100 CONTROLLER

P1 CONNECTIONS
P1-1 STARTER RELAY OUT
P1-2 SIGNAL TO AIR HEATER/RELAY COIL (-)
P1-3 COMMON FAULT
P1-4 GOVERNOR 1B
P1-5 GOVERNOR 1A
P1-6 GOVERNOR 2A
P1-7 GOVERNOR 2B
P1-8 COOLANT TEMP SENSOR HIGH
P1-9 COOLANT TEMP SENSOR LOW
P1-10 EXTERNAL CAN H
P1-11 EXTERNAL CAN L
P1-12 AUX SHUTDOWN
P1-13 FUEL RELAY OUT
P1-14 TACH OUT
P1-15 OIL PRESSURE SWITCH
P1-16 GROUND
P1-17 VR SENSOR LOW
P1-18 GROUND
P1-19 PRESSURE SENSOR GROUND
P1-20 GROUND
P1-21 GROUND
P1-22 GROUND
P1-23 GROUND
P1-24 VBAT (+)
P1-25 REMOTE START/STOP 1
P1-26 REMOTE START/STOP 2
P1-27 GROUND
P1-28 COOLANT LEVEL/LOSS HIGH
P1-29 VR SENSOR HIGH
P1-30 PRESSURE SENSOR SOURCE
P1-31 PRESSURE SENSOR SIGNAL
P1-32 GROUND
P1-33 VBAT ON
P1-34 GROUND
P1-35 RS232 TXD

P5 CONNECTIONS
P5-1 N/C
P5-2 RS232 RXD
P5-3 RS232 TXD
P5-4 N/C
P5-5 GROUND
P5-6 N/C
P5-7 N/C
P5-8 N/C
P5-9 N/C

P7 CONNECTIONS
P7-1 N/C
P7-2 CONTINUOUS POWER MODE SELECT
P7-3 GROUND

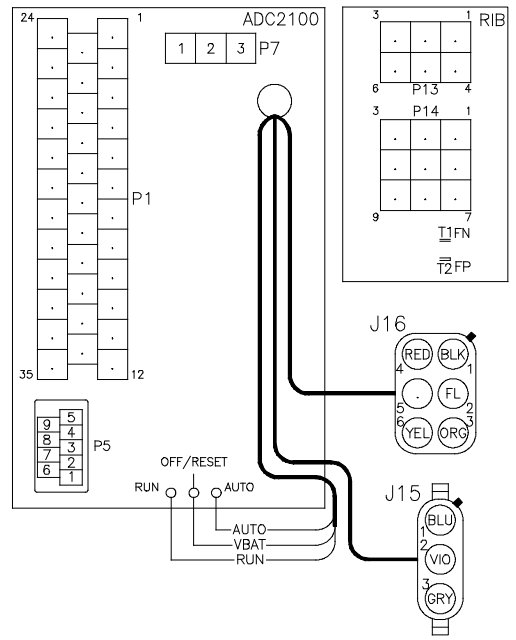
J16 CONNECTIONS
P16-1 FIELD DRIVE PLUS (G)
P16-2 FLASH RELAY OUT
P16-3 AUX WINDING INPUT (55)
P16-4 FIELD DRIVE MINUS (F+)
P16-5 N/C
P16-6 AUX WINDING INPUT (66)

J15 CONNECTIONS
J15-1 AC INPUT (V7/11)
J15-2 AC INPUT (V9)
J15-3 AC INPUT (V8/44)

RELAY INTERFACE BOARD

P13 CONNECTIONS
P13-1 RUN RELAY COMMON
P13-2 COMMON FAULT COMMON
P13-3 COMMON FAULT NC
P13-4 RUN RELAY NO
P13-5 RUN RELAY NC
P13-6 COMMON FAULT NO

P14 CONNECTIONS
P14-1 FUEL/AUX RUN RELAY CONTROL
P14-2 COMMON FAULT RELAY CONTROL
P14-3 STARTER RELAY CONTROL
P14-4 IGNITION NEGATIVE
P14-5 FLASH RELAY CONTROL
P14-6 VBAT
P14-7 FUEL (70A)
P14-8 GROUND
P14-9 STARTER (71A)



GM 1.6 L
ADC2100 CONTROLLER
W/ E-CONTROLS

UNLESS OTHERWISE SPECIFIED — 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 ANGLES ± 1/2° .XX ± .030 SURFACE FINISH 125 MAX. .X ± .060 FRACTIONS ±

APPROVALS	DATE
DRAWN DFS	3-5-04
CHECKED JS	3-8-04
APPROVED JS	3-8-04

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L
SCALE: / / / CAD NO. ADV6846B.DWG SHEET 2-2
PLOTTED DWG. NO. ADV-6846 D

Schematic Diagram, Sheet 2, ADV-6846B-D

REV	DATE	REVISION	BY	W F
A	3-29-05	(C-1,-3) P8, P13, P23, P12, P11, P9 & P24 PIN FUNCTIONS		
		ADDED; (C-1) P24-A WAS P15-1, P24-B WAS P15-2,		
		P24-C WAS P15-3; (A-3) LEAD 228 TO P9-A WAS LEAD 227		
		LEAD 227 TO P9-B WAS LEAD 228 [74689]	DFS	
B	4-14-05	(D-4) INSUL2 ADDED; (C & D-3) FUSE LEADS RENAMED: "F7" WAS		
		"70A" & "72"; (B & C-1) "F6" WAS "P", "F6A" WAS "RED" & "PF",		
		"F5" WAS "70A", "F5A" WAS "86", "F4" WAS "70A" & "F4A" WAS		
		"PF6"; (A-2) OIL PRESSURE P10-29 WAS P10-37 [74877]	DFS	

FUEL SELECT

STANDBY	
L.P.	DISCONNECTED
NG	CONNECTED
MOBILE & MARINE	
GAS	DISCONNECTED
L.P.	DISCONNECTED

LEGEND

BCA – BATTERY CHARGING ALTERNATOR
CB(#) – CIRCUIT BREAKER
CLINK – COMMUNICATIONS LINK
CPS – CRANK POSITION SENSOR
CS – CRANK SOLENOID
CTS – COOLANT TEMPERATURE SENDER
D(#) – DIODE
ECM – ENGINE CONTROL MODULE
ETS – EXHAUST TEMPERATURE SWITCH
F(#) – FUSE
FP – FUEL PUMP
HCT – HIGH COOLANT TEMPERATURE SENSOR
IGNC – IGNITION COIL
INSUL(#) – INSULINK
K5 – AUXILIARY RUN RELAY
K10 – IGNITION/AUXILIARY RUN RELAY
LOP – LOW OIL PRESSURE SWITCH
LWP – LOW SEA WATER PRESSURE SWITCH
MAP – MAP SENSOR
OPS – OIL PRESSURE SENSOR
OS – OXYGEN SENSOR
P(#) – PLUG
QCON(#) – QUICK CONNECT
RIB – RELAY INTERFACE BOARD
SCR – SILICON CONTROLLED RECTIFIER
SM – STARTER MOTOR
SS – STARTER SOLENOID
TBS – THROTTLE BODY SENSOR
⏚ – ENGINE BLOCK GROUND

GM 1.6L
W/ E-CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 ANGLES ± 1/2° .XX ± .030 SURFACE FINISH .X ± .060 MAX. FRACTIONS ±		KOHLER CO. POWER SYSTEMS, KOHLER, WI 53044 U.S.A. THIS DRAWING, IN DESIGN AND DETAIL, IS KOHLER CO. PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH KOHLER CO. WORK. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.	
APPROVALS	DATE	TITLE	DIAGRAM, SCHEMATIC GM 1.6 L
DRAWN DFS	2-15-05	SCALE / / /	DWG NO. ADV6959A.DWG SHEET 1-2
CHECKED JS	2-16-05	PLOTTED	ENGR. NO. ADV-6959 D
APPROVED JS	2-16-05		

Schematic Diagram, Sheet 1, ADV-6959A-B

REV	DATE	REVISION	BY	M F
–	2–15–05	NEW DRAWING [72311]	DFS	
A	3–29–05	SEE SHEET 1 [74689]	DFS	
B	4–14–05	SEE SHEET 1 [74877]	DFS	

ADC 2100 CONTROLLER

P1 CONNECTIONS
P1–1 STARTER RELAY OUT
P1–2 SIGNAL TO AIR HEATER/RELAY COIL (–)
P1–3 COMMON FAULT
P1–4 GOVERNOR 1B
P1–5 GOVERNOR 1A
P1–6 GOVERNOR 2A
P1–7 GOVERNOR 2B
P1–8 COOLANT TEMP SENSOR HIGH
P1–9 COOLANT TEMP SENSOR LOW
P1–10 EXTERNAL CAN H
P1–11 EXTERNAL CAN L
P1–12 AUX SHUTDOWN
P1–13 FUEL RELAY OUT
P1–14 TACH OUT
P1–15 OIL PRESSURE SWITCH
P1–16 GROUND
P1–17 VR SENSOR LOW
P1–18 GROUND
P1–19 PRESSURE SENSOR GROUND
P1–20 GROUND
P1–21 GROUND
P1–22 GROUND
P1–23 GROUND
P1–24 VBAT (+)
P1–25 REMOTE START/STOP 1
P1–26 REMOTE START/STOP 2
P1–27 GROUND
P1–28 COOLANT LEVEL/LOSS HIGH
P1–29 VR SENSOR HIGH
P1–30 PRESSURE SENSOR SOURCE
P1–31 PRESSURE SENSOR SIGNAL
P1–32 GROUND
P1–33 VBAT ON
P1–34 GROUND
P1–35 RS232 TXD

P5 CONNECTIONS
P5–1 N/C
P5–2 RS232 RXD
P5–3 RS232 TXD
P5–4 N/C
P5–5 GROUND
P5–6 N/C
P5–7 N/C
P5–8 N/C
P5–9 N/C

P7 CONNECTIONS
P7–1 N/C
P7–2 CONTINUOUS POWER MODE SELECT
P7–3 GROUND

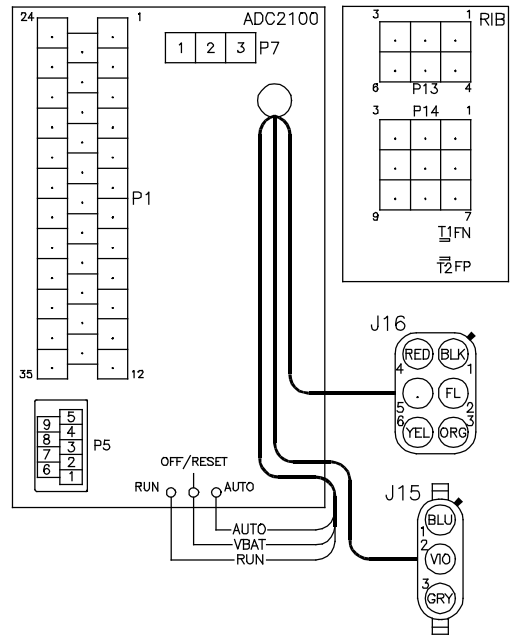
J16 CONNECTIONS
P16–1 FIELD DRIVE PLUS (G)
P16–2 FLASH RELAY OUT
P16–3 AUX WINDING INPUT (55)
P16–4 FIELD DRIVE MINUS (F+)
P16–5 N/C
P16–6 AUX WINDING INPUT (66)

J15 CONNECTIONS
J15–1 AC INPUT (V7/11)
J15–2 AC INPUT (V9)
J15–3 AC INPUT (V8/44)

RELAY INTERFACE BOARD

P13 CONNECTIONS
P13–1 RUN RELAY COMMON
P13–2 COMMON FAULT COMMON
P13–3 COMMON FAULT NC
P13–4 RUN RELAY NO
P13–5 RUN RELAY NC
P13–6 COMMON FAULT NO

P14 CONNECTIONS
P14–1 FUEL/AUX RUN RELAY CONTROL
P14–2 COMMON FAULT RELAY CONTROL
P14–3 STARTER RELAY CONTROL
P14–4 IGNITION NEGATIVE
P14–5 FLASH RELAY CONTROL
P14–6 VBAT
P14–7 FUEL (70A)
P14–8 GROUND
P14–9 STARTER (71A)



GM 1.6L
W/ E–CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 ANGLES ± 1/2° .XX ± .030 SURFACE FINISH 125 MAX. .X ± .060 FRACTIONS ±

APPROVALS	DATE
DRAWN DFS	2–15–05
CHECKED JS	2–16–05
APPROVED JS	2–16–05

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L

SCALE: / / / CAD NO. ADV6959B.DWG SHEET 2–2
PLOTTED PART NO. ADV–6959 D

Schematic Diagram, Sheet 2, ADV-6959B-B

REV	DATE	REVISION	BY	M F
C	6-10-05	(D-3) P6 (FP STANDBY) REMOVED, FP, QCON12 & QCON13		
		ADDED [75301]	DFS	
D	9-14-05	(C-3) 248 (P10-48) ADDED; (D-4) SPEED SELECT CHART		
		ADDED [75966]	JS	
E	10-27-05	(B-1) FP VIEW UPDATED; (D-7) D3 ADDED (D-8) F6A		
		CONNECTION UPDATED [76348]	CRS	
F	12-16-05	(C-4) EXCITER FIELD ADDED [76906]	CRS	

SPEED SELECT

SPEED	LEAD 83	LEAD 248 STANDBY ONLY
1800	CONNECTED	DISCONNECTED
3000	DISCONNECTED	CONNECTED
3600	DISCONNECTED	DISCONNECTED

FUEL SELECT

STANDBY	
L.P.	DISCONNECTED
NG	CONNECTED
MOBILE & MARINE	
GAS	DISCONNECTED
L.P.	DISCONNECTED

LEGEND

BCA – BATTERY CHARGING ALTERNATOR
CB(#) – CIRCUIT BREAKER
CLINK – COMMUNICATIONS LINK
CPS – CRANK POSITION SENSOR
CS – CRANK SOLENOID
CTS – COOLANT TEMPERATURE SENDER
D(#) – DIODE
ECM – ENGINE CONTROL MODULE
ETS – EXHAUST TEMPERATURE SWITCH
F(#) – FUSE
FP – FUEL PUMP
HCT – HIGH COOLANT TEMPERATURE SENSOR
IGNC – IGNITION COIL
INSUL(#) – INSULINK
K5 – AUXILIARY RUN RELAY
K10 – IGNITION/AUXILIARY RUN RELAY
LOP – LOW OIL PRESSURE SWITCH
LWP – LOW SEA WATER PRESSURE SWITCH
MAP – MAP SENSOR
OPS – OIL PRESSURE SENSOR
OS – OXYGEN SENSOR
P(#) – PLUG
QCON(#) – QUICK CONNECT
RIB – RELAY INTERFACE BOARD
SCR – SILICON CONTROLLED RECTIFIER
SM – STARTER MOTOR
SS – STARTER SOLENOID
TBS – THROTTLE BODY SENSOR
⏚ – ENGINE BLOCK GROUND

P7 CONNECTIONS	
MODE	P7 JUMPER
LOW POWER	JUMPER 2 TO 3
CONTINUOUS POWER	JUMPER 1 TO 2

GM 1.6L
W/ E-CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 ANGLES ± 1/2° .XX ± .030 .X ± .060 FRACTIONS ± SURFACE FINISH MAX.

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
THIS DRAWING, IN DESIGN AND DETAIL, IS KOHLER CO. PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH KOHLER CO. WORK. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.

APPROVALS	DATE
DRAWN DFS	2-15-05
CHECKED JS	2-16-05
APPROVED JS	2-16-05

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L
SCALE / / / CAD WA. ADV6959A.DWG SHEET 1-2
PLOTTED DWG. NO. ADV-6959 D

Schematic Diagram, Sheet 1, ADV-6959A-F

REV	DATE	REVISION	BY	M/E
–	2–15–05	NEW DRAWING [72311]	DFS	
A	3–29–05	SEE SHEET 1 [74689]	DFS	
B	4–14–05	SEE SHEET 1 [74877]	DFS	
C	6–10–05	SEE SHEET 1 [75301]	DFS	
D	9–14–05	SEE SHEET 1 [75966]	JS	
E	10–27–05	SEE SHEET 1 [76348]	CRS	
F	12–22–05	SEE SHEET 1 [76906]	CRS	

ADC 2100 CONTROLLER

P1 CONNECTIONS
P1–1 STARTER RELAY OUT
P1–2 SIGNAL TO AIR HEATER/RELAY COIL (–)
P1–3 COMMON FAULT
P1–4 GOVERNOR 1B
P1–5 GOVERNOR 1A
P1–6 GOVERNOR 2A
P1–7 GOVERNOR 2B
P1–8 COOLANT TEMP SENSOR HIGH
P1–9 COOLANT TEMP SENSOR LOW
P1–10 EXTERNAL CAN H
P1–11 EXTERNAL CAN L
P1–12 AUX SHUTDOWN
P1–13 FUEL RELAY OUT
P1–14 TACH OUT
P1–15 OIL PRESSURE SWITCH
P1–16 GROUND
P1–17 VR SENSOR LOW
P1–18 GROUND
P1–19 PRESSURE SENSOR GROUND
P1–20 GROUND
P1–21 GROUND
P1–22 GROUND
P1–23 GROUND
P1–24 VBAT (+)
P1–25 REMOTE START/STOP 1
P1–26 REMOTE START/STOP 2
P1–27 GROUND
P1–28 COOLANT LEVEL/LOSS HIGH
P1–29 VR SENSOR HIGH
P1–30 PRESSURE SENSOR SOURCE
P1–31 PRESSURE SENSOR SIGNAL
P1–32 GROUND
P1–33 VBAT ON
P1–34 GROUND
P1–35 RS232 TXD

P5 CONNECTIONS
P5–1 N/C
P5–2 RS232 RXD
P5–3 RS232 TXD
P5–4 N/C
P5–5 GROUND
P5–6 N/C
P5–7 N/C
P5–8 N/C
P5–9 N/C

P7 CONNECTIONS
P7–1 N/C
P7–2 CONTINUOUS POWER MODE SELECT
P7–3 GROUND

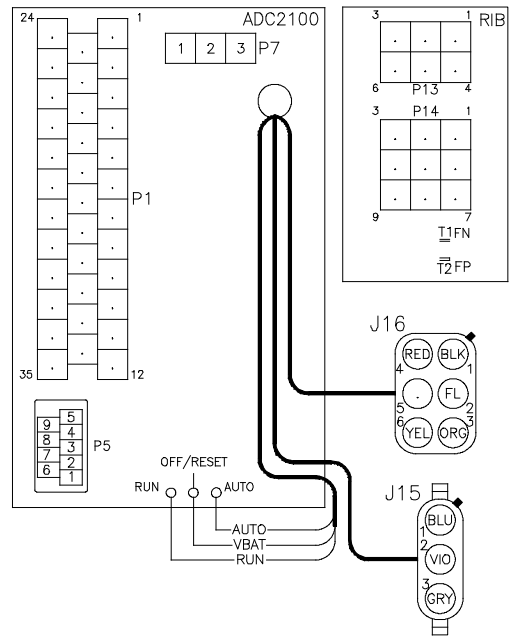
J16 CONNECTIONS
P16–1 FIELD DRIVE PLUS (G)
P16–2 FLASH RELAY OUT
P16–3 AUX WINDING INPUT (55)
P16–4 FIELD DRIVE MINUS (F+)
P16–5 N/C
P16–6 AUX WINDING INPUT (66)

J15 CONNECTIONS
J15–1 AC INPUT (V7/11)
J15–2 AC INPUT (V9)
J15–3 AC INPUT (V8/44)

RELAY INTERFACE BOARD

P13 CONNECTIONS
P13–1 RUN RELAY COMMON
P13–2 COMMON FAULT COMMON
P13–3 COMMON FAULT NC
P13–4 RUN RELAY NO
P13–5 RUN RELAY NC
P13–6 COMMON FAULT NO

P14 CONNECTIONS
P14–1 FUEL/AUX RUN RELAY CONTROL
P14–2 COMMON FAULT RELAY CONTROL
P14–3 STARTER RELAY CONTROL
P14–4 IGNITION NEGATIVE
P14–5 FLASH RELAY CONTROL
P14–6 VBAT
P14–7 FUEL (70A)
P14–8 GROUND
P14–9 STARTER (71A)



GM 1.6L
W/ E–CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 .XX ± .030 .X ± .060 FRACTIONS ± ANGLES ± 1/2° SURFACE FINISH 125 MAX.

APPROVALS	DATE
DRAWN DFS	2–15–05
CHECKED JS	2–16–05
APPROVED JS	2–16–05

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L
SCALE: / / / CAD NO. ADV6959B.DWG SHEET 2–2
PLOTTED DWG NO. ADV–6959 D

Schematic Diagram, Sheet 2, ADV-6959B-F

REV	DATE	REVISION	BY	M F
F	12–16–05	(C–4) EXCITER FIELD ADDED [76906]	CRS	
G	7–5–06	(D–3) DIAGNOSTIC (P20) ADDED; (D–4) INSUL14 ADDED		
		[77688]	CRS	
H	9–7–06	(C–3) P6–3 CONNECTION, 85A LEAD& P10–15 CONNECTION		
		ADDED [78567]	CRS	
J	10–2–06	(C–3) FSO WAS FP [79260]	CRS	

SPEED SELECT

SPEED	LEAD 83	LEAD 248 STANDBY ONLY
1800	CONNECTED	DISCONNECTED
3000	DISCONNECTED	CONNECTED
3600	DISCONNECTED	DISCONNECTED

FUEL SELECT

STANDBY	
L.P.	DISCONNECTED
NG	CONNECTED
MOBILE & MARINE	
GAS	DISCONNECTED
L.P.	DISCONNECTED

P7 CONNECTIONS

MODE	P7 JUMPER
LOW POWER	JUMPER 2 TO 3
CONTINUOUS POWER	JUMPER 1 TO 2

LEGEND

BCA – BATTERY CHARGING ALTERNATOR
CB(#) – CIRCUIT BREAKER
CLINK – COMMUNICATIONS LINK
CPS – CRANK POSITION SENSOR
CS – CRANK SOLENOID
CTS – COOLANT TEMPERATURE SENDER
D(#) – DIODE
ECM – ENGINE CONTROL MODULE
ETS – EXHAUST TEMPERATURE SWITCH
F(#) – FUSE
FP – FUEL PUMP
FSO – FUEL SHUT OFF
HCT – HIGH COOLANT TEMPERATURE SENSOR
IGNC – IGNITION COIL
INSUL(#) – INSULINK
K5 – AUXILIARY RUN RELAY
K10 – IGNITION/AUXILIARY RUN RELAY
LOP – LOW OIL PRESSURE SWITCH
LWP – LOW SEA WATER PRESSURE SWITCH
MAP – MAP SENSOR
OPS – OIL PRESSURE SENSOR
OS – OXYGEN SENSOR
P(#) – PLUG
QCON(#) – QUICK CONNECT
RIB – RELAY INTERFACE BOARD
SCR – SILICON CONTROLLED RECTIFIER
SM – STARTER MOTOR
SS – STARTER SOLENOID
TBS – THROTTLE BODY SENSOR
⏚ – ENGINE BLOCK GROUND

GM 1.6L
W/ E–CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010, .XX ± .030, .X ± .060, FRACTIONS ± 1/32, ANGLES ± 1/2°, SURFACE FINISH 125 MAX.

APPROVALS	DATE
DRAWN DFS	2–15–05
CHECKED JS	2–16–05
APPROVED JS	2–16–05

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L
SCALE / / / | CAD WA. ADV6959A.DWG | SHEET 1–2
PLOTTED | DWG. NO. ADV–6959 | D

Schematic Diagram, Sheet 1, ADV-6959A-J

REV	DATE	REVISION	BY	M'F
D	9-14-05	SEE SHEET 1 [75966]	JS	
E	10-27-05	SEE SHEET 1 [76348]	CRS	
F	12-22-05	SEE SHEET 1 [76906]	CRS	
G	7-5-06	SEE SHEET 1 [77688]	CRS	
H	9-7-06	SEE SHEET 1 [78567]	CRS	
J	10-2-06	SEE SHEET 1 [79260]	CRS	

ADC 2100 CONTROLLER

P1 CONNECTIONS
P1-1 STARTER RELAY OUT
P1-2 SIGNAL TO AIR HEATER/RELAY COIL (-)
P1-3 COMMON FAULT
P1-4 GOVERNOR 1B
P1-5 GOVERNOR 1A
P1-6 GOVERNOR 2A
P1-7 GOVERNOR 2B
P1-8 COOLANT TEMP SENSOR HIGH
P1-9 COOLANT TEMP SENSOR LOW
P1-10 EXTERNAL CAN H
P1-11 EXTERNAL CAN L
P1-12 AUX SHUTDOWN
P1-13 FUEL RELAY OUT
P1-14 TACH OUT
P1-15 OIL PRESSURE SWITCH
P1-16 GROUND
P1-17 VR SENSOR LOW
P1-18 GROUND
P1-19 PRESSURE SENSOR GROUND
P1-20 GROUND
P1-21 GROUND
P1-22 GROUND
P1-23 GROUND
P1-24 VBAT (+)
P1-25 REMOTE START/STOP 1
P1-26 REMOTE START/STOP 2
P1-27 GROUND
P1-28 COOLANT LEVEL/LOSS HIGH
P1-29 VR SENSOR HIGH
P1-30 PRESSURE SENSOR SOURCE
P1-31 PRESSURE SENSOR SIGNAL
P1-32 GROUND
P1-33 VBAT ON
P1-34 GROUND
P1-35 RS232 TXD

P5 CONNECTIONS
P5-1 N/C
P5-2 RS232 RXD
P5-3 RS232 TXD
P5-4 N/C
P5-5 GROUND
P5-6 N/C
P5-7 N/C
P5-8 N/C
P5-9 N/C

P7 CONNECTIONS
P7-1 N/C
P7-2 CONTINUOUS POWER MODE SELECT
P7-3 GROUND

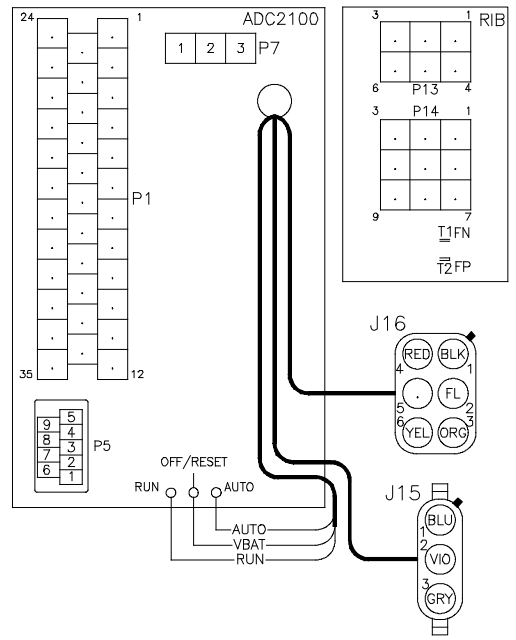
J16 CONNECTIONS
P16-1 FIELD DRIVE PLUS (G)
P16-2 FLASH RELAY OUT
P16-3 AUX WINDING INPUT (55)
P16-4 FIELD DRIVE MINUS (F+)
P16-5 N/C
P16-6 AUX WINDING INPUT (66)

J15 CONNECTIONS
J15-1 AC INPUT (V7/11)
J15-2 AC INPUT (V9)
J15-3 AC INPUT (V8/44)

RELAY INTERFACE BOARD

P13 CONNECTIONS
P13-1 RUN RELAY COMMON
P13-2 COMMON FAULT COMMON
P13-3 COMMON FAULT NC
P13-4 RUN RELAY NO
P13-5 RUN RELAY NC
P13-6 COMMON FAULT NO

P14 CONNECTIONS
P14-1 FUEL/AUX RUN RELAY CONTROL
P14-2 COMMON FAULT RELAY CONTROL
P14-3 STARTER RELAY CONTROL
P14-4 IGNITION NEGATIVE
P14-5 FLASH RELAY CONTROL
P14-6 VBAT
P14-7 FUEL (70A)
P14-8 GROUND
P14-9 STARTER (71A)



GM 1.6L
W/ E-CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010, .XX ± .030, .X ± .060, FRACTIONS ±, ANGLES ± 1/2°, SURFACE FINISH √ MAX.

APPROVALS	DATE
DRAWN DFS	2-15-05
CHECKED JS	2-16-05
APPROVED JS	2-16-05

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L
SCALE: / / / CAD NO. ADV6959B.DWG SHEET 2-2
PLOTTED PARA. NO. ADV-6959 D

Schematic Diagram, Sheet 2, ADV-6959B-J

REV	DATE	REVISION	BY	V F
–	9–11–06	NEW DRAWING [79090]	CRS	

SPEED	LEAD 83	LEAD 248 STANDBY ONLY
1800	CONNECTED	DISCONNECTED
3000	DISCONNECTED	CONNECTED
3600	DISCONNECTED	DISCONNECTED

STANDBY	
L.P.	DISCONNECTED
NG	CONNECTED
MOBILE & MARINE	
GAS	DISCONNECTED
L.P.	DISCONNECTED

P7 CONNECTIONS	
MODE	P7 JUMPER
LOW POWER	JUMPER 2 TO 3
CONTINUOUS POWER	JUMPER 1 TO 2

LEGEND

BCA – BATTERY CHARGING ALTERNATOR
CB(#) – CIRCUIT BREAKER
CLINK – COMMUNICATIONS LINK
CPS – CRANK POSITION SENSOR
CS – CRANK SOLENOID
CTS – COOLANT TEMPERATURE SENDER
D(#) – DIODE
ECM – ENGINE CONTROL MODULE
ETS – EXHAUST TEMPERATURE SWITCH
F(#) – FUSE
FP – FUEL PUMP
HCT – HIGH COOLANT TEMPERATURE SENSOR
IGNC – IGNITION COIL
INSUL(#) – INSULINK
K5 – AUXILIARY RUN RELAY
K10 – IGNITION/AUXILIARY RUN RELAY
LOP – LOW OIL PRESSURE SWITCH
LWP – LOW SEA WATER PRESSURE SWITCH
MAP – MAP SENSOR
OPS – OIL PRESSURE SENSOR
OS – OXYGEN SENSOR
P(#) – PLUG
QCON(#) – QUICK CONNECT
RIB – RELAY INTERFACE BOARD
SCR – SILICON CONTROLLED RECTIFIER
SM – STARTER MOTOR
SS – STARTER SOLENOID
TBS – THROTTLE BODY SENSOR
⏚ – ENGINE BLOCK GROUND

GM 1.6L
W/ E–CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 ANGLES ± 1/2° .XX ± .030 SURFACE FINISH .X ± .060 MAX. FRACTIONS ±

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
THIS DRAWING, IN DESIGN AND DETAIL, IS KOHLER CO. PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH KOHLER CO. WORK. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.

APPROVALS	DATE
DRAWN CRS	9–11–06
CHECKED BAK	9–11–06
APPROVED BAK	9–11–06

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L
SCALE / / / CAD WA. ADV7287A.DWG SHEET 1–2
PLOTTED DWG. NO. ADV7287 D

Schematic Diagram, Sheet 1, ADV-7287A-

REV	DATE	REVISION	BY	APP'D
–	9–11–06	NEW DRAWING [79090]	CRS	

ADC 2100 CONTROLLER

P1 CONNECTIONS
P1–1 STARTER RELAY OUT
P1–2 SIGNAL TO AIR HEATER/RELAY COIL (–)
P1–3 COMMON FAULT
P1–4 GOVERNOR 1B
P1–5 GOVERNOR 1A
P1–6 GOVERNOR 2A
P1–7 GOVERNOR 2B
P1–8 COOLANT TEMP SENSOR HIGH
P1–9 COOLANT TEMP SENSOR LOW
P1–10 EXTERNAL CAN H
P1–11 EXTERNAL CAN L
P1–12 AUX SHUTDOWN
P1–13 FUEL RELAY OUT
P1–14 TACH OUT
P1–15 OIL PRESSURE SWITCH
P1–16 GROUND
P1–17 VR SENSOR LOW
P1–18 GROUND
P1–19 PRESSURE SENSOR GROUND
P1–20 GROUND
P1–21 GROUND
P1–22 GROUND
P1–23 GROUND
P1–24 VBAT (+)
P1–25 REMOTE START/STOP 1
P1–26 REMOTE START/STOP 2
P1–27 GROUND
P1–28 COOLANT LEVEL/LOSS HIGH
P1–29 VR SENSOR HIGH
P1–30 PRESSURE SENSOR SOURCE
P1–31 PRESSURE SENSOR SIGNAL
P1–32 GROUND
P1–33 VBAT ON
P1–34 GROUND
P1–35 RS232 TXD

P5 CONNECTIONS
P5–1 N/C
P5–2 RS232 RXD
P5–3 RS232 TXD
P5–4 N/C
P5–5 GROUND
P5–6 N/C
P5–7 N/C
P5–8 N/C
P5–9 N/C

P7 CONNECTIONS
P7–1 N/C
P7–2 CONTINUOUS POWER MODE SELECT
P7–3 GROUND

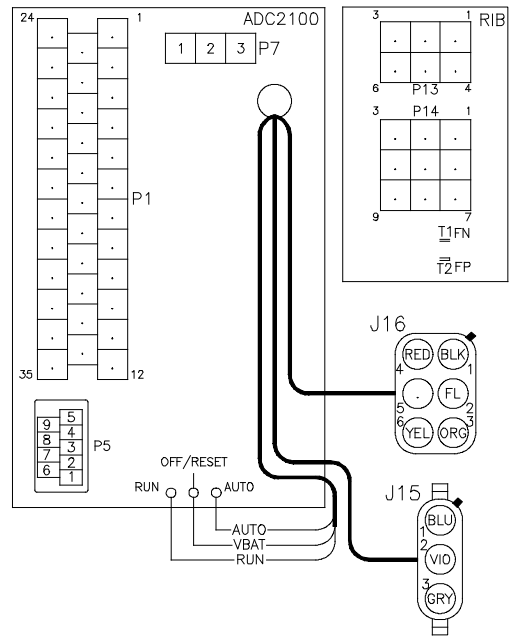
J16 CONNECTIONS
P16–1 FIELD DRIVE PLUS (G)
P16–2 FLASH RELAY OUT
P16–3 AUX WINDING INPUT (55)
P16–4 FIELD DRIVE MINUS (F+)
P16–5 N/C
P16–6 AUX WINDING INPUT (66)

J15 CONNECTIONS
J15–1 AC INPUT (V7/11)
J15–2 AC INPUT (V9)
J15–3 AC INPUT (V8/44)

RELAY INTERFACE BOARD

P13 CONNECTIONS
P13–1 RUN RELAY COMMON
P13–2 COMMON FAULT COMMON
P13–3 COMMON FAULT NC
P13–4 RUN RELAY NO
P13–5 RUN RELAY NC
P13–6 COMMON FAULT NO

P14 CONNECTIONS
P14–1 FUEL/AUX RUN RELAY CONTROL
P14–2 COMMON FAULT RELAY CONTROL
P14–3 STARTER RELAY CONTROL
P14–4 IGNITION NEGATIVE
P14–5 FLASH RELAY CONTROL
P14–6 VBAT
P14–7 FUEL (70A)
P14–8 GROUND
P14–9 STARTER (71A)



GM 1.6L
W/ E-CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 .XX ± .030 .X ± .060 FRACTIONS ± ANGLES ± 1/2 SURFACE FINISH 125 MAX.

APPROVALS	DATE
DRAWN CRS	9–11–06
CHECKED BAK	9–11–06
APPROVED BAK	9–11–06

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L

SCALE: / / / CAD NO. ADV7287B.DWG SHEET 2–2
PLOTTED DWG. NO. ADV–7287 D

Schematic Diagram, Sheet 2, ADV-7287B-

REV	DATE	REVISION	BY	MFG
–	9–11–06	NEW DRAWING [70090]	CRS	
A	7–16–08	UPDATED TO MATCH WIRING DIAGRAM & HARNESS [85928]	CRS	
B	10–24–08	(C–8) OIL LEVEL MAINTAINER ADDED [88164]	CRS	
C	4–21–09	(D–2,–3) ECM P10–23 WAS P10–20 [87396]	DFS	
D	7–13–09	(C–8) OIL LEVEL MAINTAINER REMOVED [87590]	CRS	

SPEED	LEAD 83	LEAD 248 STANDBY ONLY
1800	CONNECTED	DISCONNECTED
3000	DISCONNECTED	CONNECTED
3600	DISCONNECTED	DISCONNECTED

SPEED SELECT

STANDBY	
L.P.	DISCONNECTED
NG	CONNECTED
MOBILE & MARINE	
GAS	DISCONNECTED
L.P.	DISCONNECTED

FUEL SELECT

LEGEND

BCA – BATTERY CHARGING ALTERNATOR
CB(#) – CIRCUIT BREAKER
CLINK – COMMUNICATIONS LINK
CPS – CRANK POSITION SENSOR
CS – CRANK SOLENOID
CTS – COOLANT TEMPERATURE SENDER
D(#) – DIODE
ECM – ENGINE CONTROL MODULE
ETS – EXHAUST TEMPERATURE SWITCH
F(#) – FUSE
FP – FUEL PUMP
FS – FUEL SOLENOID
HCT – HIGH COOLANT TEMPERATURE SENSOR
IGNC – IGNITION COIL
INSUL(#) – INSULINK
K5 – AUXILIARY RUN RELAY
K10 – IGNITION/AUXILIARY RUN RELAY
LOP – LOW OIL PRESSURE SWITCH
LWP – LOW SEA WATER PRESSURE SWITCH
MAP – MAP SENSOR
OPS – OIL PRESSURE SENSOR
OS – OXYGEN SENSOR
P(#) – PLUG
QCON(#) – QUICK CONNECT
RIB – RELAY INTERFACE BOARD
SCR – SILICON CONTROLLED RECTIFIER
SM – STARTER MOTOR
SS – STARTER SOLENOID
TBS – THROTTLE BODY SENSOR
⏚ – ENGINE BLOCK GROUND

P7 CONNECTIONS	
MODE	P7 JUMPER
LOW POWER	JUMPER 2 TO 3
CONTINUOUS POWER	JUMPER 1 TO 2

GM 1.6L
W/ E-CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

DIAGRAM, SCHEMATIC
GM 1.6 L

ADV7287A.DWG | ADV7287 | D

Schematic Diagram, Sheet 1, ADV-7287A-D

REV	DATE	REVISION	BY	APP'D
–	9-11-08	NEW DRAWING [79090]	CRS	
A	7-16-08	SEE SHEET 1 [85928]	CRS	
B	10-24-08	SEE SHEET 1 [86164]	CRS	
C	4-21-09	SEE SHEET 1 [87306]	DFS	
D	7-13-09	SEE SHEET 1 [87590]	CRS	

ADC 2100 CONTROLLER

P1 CONNECTIONS
P1–1 STARTER RELAY OUT
P1–2 SIGNAL TO AIR HEATER/RELAY COIL (–)
P1–3 COMMON FAULT
P1–4 GOVERNOR 1B
P1–5 GOVERNOR 1A
P1–6 GOVERNOR 2A
P1–7 GOVERNOR 2B
P1–8 COOLANT TEMP SENSOR HIGH
P1–9 COOLANT TEMP SENSOR LOW
P1–10 EXTERNAL CAN H
P1–11 EXTERNAL CAN L
P1–12 AUX SHUTDOWN
P1–13 FUEL RELAY OUT
P1–14 TACH OUT
P1–15 OIL PRESSURE SWITCH
P1–16 GROUND
P1–17 VR SENSOR LOW
P1–18 GROUND
P1–19 PRESSURE SENSOR GROUND
P1–20 GROUND
P1–21 GROUND
P1–22 GROUND
P1–23 GROUND
P1–24 VBAT (+)
P1–25 REMOTE START/STOP 1
P1–26 REMOTE START/STOP 2
P1–27 GROUND
P1–28 COOLANT LEVEL/LOSS HIGH
P1–29 VR SENSOR HIGH
P1–30 PRESSURE SENSOR SOURCE
P1–31 PRESSURE SENSOR SIGNAL
P1–32 GROUND
P1–33 VBAT ON
P1–34 GROUND
P1–35 RS232 TXD

P5 CONNECTIONS
P5–1 N/C
P5–2 RS232 RXD
P5–3 RS232 TXD
P5–4 N/C
P5–5 GROUND
P5–6 N/C
P5–7 N/C
P5–8 N/C
P5–9 N/C

P7 CONNECTIONS
P7–1 N/C
P7–2 CONTINUOUS POWER MODE SELECT
P7–3 GROUND

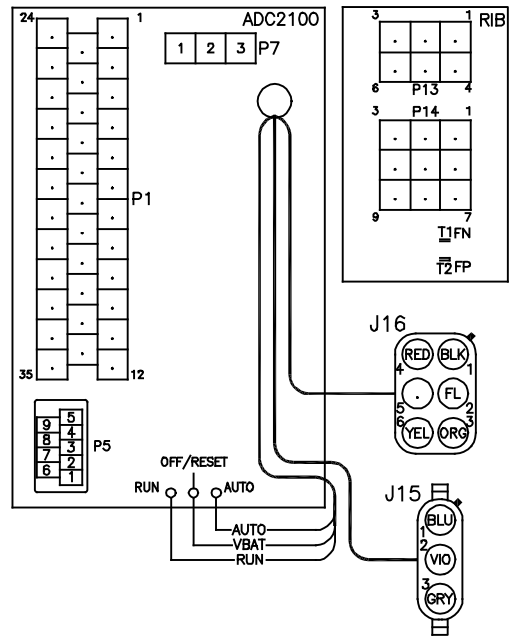
J16 CONNECTIONS
P16–1 FIELD DRIVE PLUS (G)
P16–2 FLASH RELAY OUT
P16–3 AUX WINDING INPUT (55)
P16–4 FIELD DRIVE MINUS (F+)
P16–5 N/C
P16–6 AUX WINDING INPUT (66)

J15 CONNECTIONS
J15–1 AC INPUT (V7/11)
J15–2 AC INPUT (V9)
J15–3 AC INPUT (V8/44)

RELAY INTERFACE BOARD

P13 CONNECTIONS
P13–1 RUN RELAY COMMON
P13–2 COMMON FAULT COMMON
P13–3 COMMON FAULT NC
P13–4 RUN RELAY NO
P13–5 RUN RELAY NC
P13–6 COMMON FAULT NO

P14 CONNECTIONS
P14–1 FUEL/AUX RUN RELAY CONTROL
P14–2 COMMON FAULT RELAY CONTROL
P14–3 STARTER RELAY CONTROL
P14–4 IGNITION NEGATIVE
P14–5 FLASH RELAY CONTROL
P14–6 VBAT
P14–7 FUEL (70A)
P14–8 GROUND
P14–9 STARTER (71A)



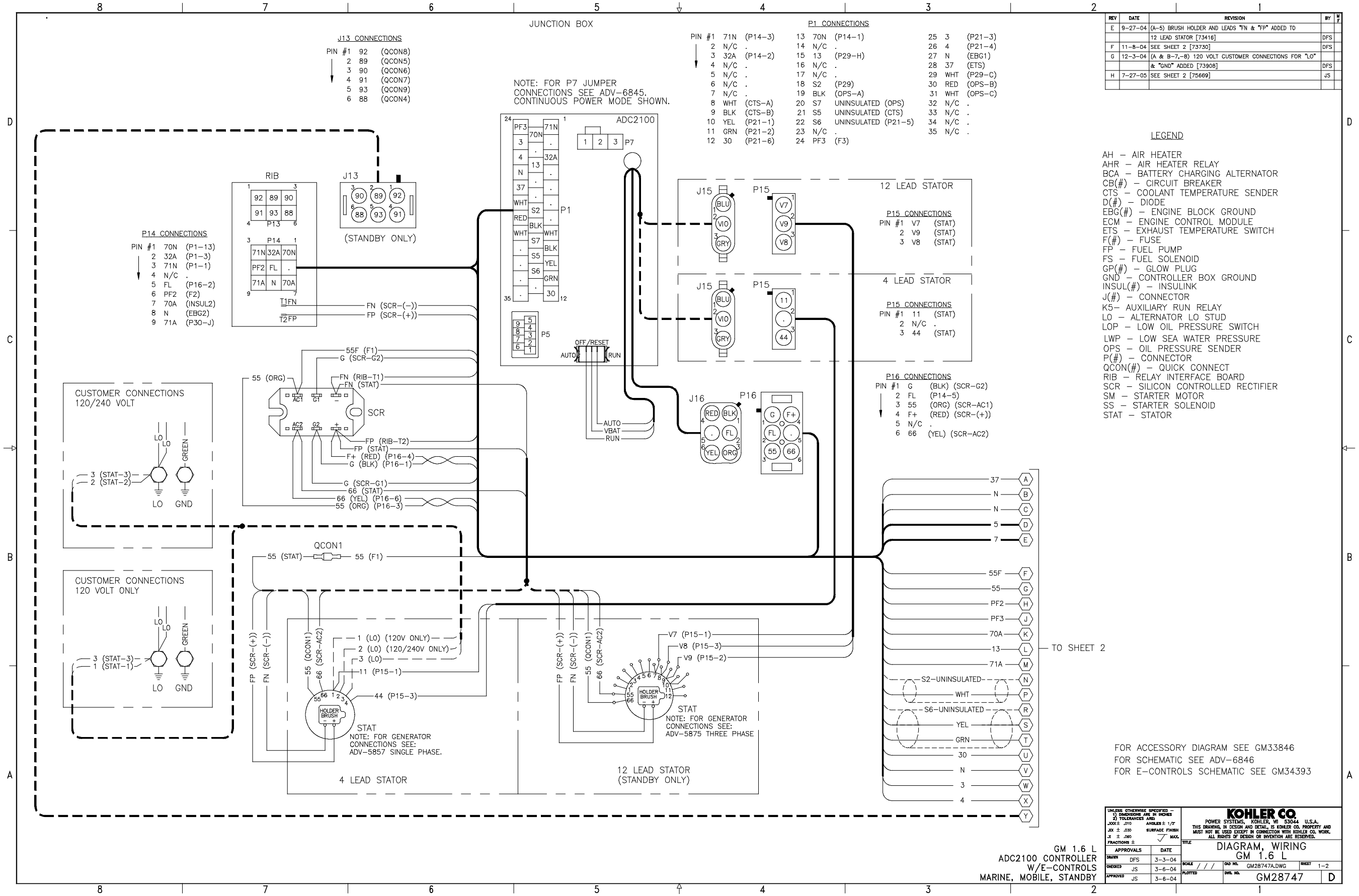
GM 1.6L
W/ E-CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

APPROVALS	DATE
DRAWN CRS	9-11-08
CHECKED BAK	9-11-08
APPROVED BAK	9-11-08

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.
THIS DRAWING, IN DESIGN AND DETAIL, IS KOHLER CO. PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH KOHLER CO. WORK. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED.

TITLE: DIAGRAM, SCHEMATIC GM 1.6 L
SCALE: /// | DWG NO. ADV7287B.DWG | SHEET 2–2
PLOTTED | PUB. NO. ADV–7287 | D

Schematic Diagram, Sheet 2, ADV-7287B-D



REV	DATE	REVISION	BY	M F
E	9–27–04	(A–5) BRUSH HOLDER AND LEADS "FN & "FP" ADDED TO		
		12 LEAD STATOR [73416]	DFS	
F	11–8–04	SEE SHEET 2 [73730]	DFS	
G	12–3–04	(A & B–7,–8) 120 VOLT CUSTOMER CONNECTIONS FOR "LO"		
		& "GND" ADDED [73908]	DFS	
H	7–27–05	SEE SHEET 2 [75669]	JS	

LEGEND

AH – AIR HEATER
AHR – AIR HEATER RELAY
BCA – BATTERY CHARGING ALTERNATOR
CB(#) – CIRCUIT BREAKER
CTS – COOLANT TEMPERATURE SENDER
D(#) – DIODE
EBG(#) – ENGINE BLOCK GROUND
ECM – ENGINE CONTROL MODULE
ETS – EXHAUST TEMPERATURE SWITCH
F(#) – FUSE
FP – FUEL PUMP
FS – FUEL SOLENOID
GP(#) – GLOW PLUG
GND – CONTROLLER BOX GROUND
INSUL(#) – INSULINK
J(#) – CONNECTOR
K5– AUXILIARY RUN RELAY
LO – ALTERNATOR LO STUD
LOP – LOW OIL PRESSURE SWITCH
LWP – LOW SEA WATER PRESSURE
OPS – OIL PRESSURE SENDER
P(#) – CONNECTOR
QCON(#) – QUICK CONNECT
RIB – RELAY INTERFACE BOARD
SCR – SILICON CONTROLLED RECTIFIER
SM – STARTER MOTOR
SS – STARTER SOLENOID
STAT – STATOR

Wiring Diagram, Sheet 1, GM28747A-H

REV	DATE	REVISION	BY	M F
E	9-27-04	SEE SHEET 1 [73416]	DFS	
F	11-8-04	QCON10, QCON11, QCON12, QCON13, P31 & CORRESPONDING		
		PT. TO PT. CONNECTIONS ADDED [73730]	DFS	
G	12-3-04	SEE SHEET 1 [73908]	DFS	
H	7-27-05	(B-1,2,3) CUT WIRE NOTE AND ECM VIEW ADDED [75669]	JS	

ENGINE

A — 37 — 37 (P1-28)

B — N — N (P1-27) — EBG1 — N — EBG2 — LWP — 87 — ETS

C — N — N (P14-8) — N (P21-9)

D — 5 — 5 (P1) — P5A (BLK, WHT; B A) — CTS

P5A CONNECTIONS
PIN #1 WHT (P1-8)
2 BLK (P1-9)

P7A (A BLK, RED B, WHT C) — OPS (OPTIONAL)

P7A CONNECTIONS
PIN A BLK (P1-19)
B RED (P1-30)
C WHT (P1-31)

E — 7 — 7 (P1)

FP — 86 (P28-D), N2 (P28-E)

FS — J22 (N1, 85) — P22 (N1, 85)

P22 CONNECTIONS
PIN 1 N1 (TO P27-F)
2 85 (TO P27-D)

BCA — RED — 12P (F3), 12P (F2) — SS, SM — BATTERY (+ −)

F — 55F

G — 55 — 55 (QCON1) — F1 10A — 55F (SCR-AC1)

TO SHEET 1

H — PF2 — PF2 (P14-6) — F2 10A — 12P (SS)

J — PF3 — PF3 (P1-24) — F3 10A — 12P (SS)

PF3 (P21-8)

70A (P30-A) — INSUL1 — 70A — QCON2 — (FUEL SELECT- SEE CHART) — QCON3 — 65 (P29-D)

70A — 83 (P29-E) — INSUL2 — 70A (P21-7)

K — 70A — 70A (P14-7)

(SUPPLIED WITH ENGINE)

ECM (E-CONTROLS)

J30 (K J H G F / A B C D E) — J29 (H G F E / A B C D) — J28 (F E D / A B C) — J27 (E F G H / D C B A)

P30 (70A, 71A) — P29 (WHT, 65, 13, 83) — P28 (A B C, N2, 86) — P27 (D C B A, 85, 600, 85A, N1)

L — 13
M — 71A
N — S2-UNINSULATED — WHT
P —
R — S6-UNINSULATED
S — YEL
T — GRN
U — 30
V — N
W — 3
X — 4
Y

P30 CONNECTIONS
PIN #A 70A (INSUL1)
B N/C .
C N/C .
D N/C .
E N/C .
F N/C .
G N/C .
H N/C .
J 71A (P14-9)
K N/C .

P29 CONNECTIONS
PIN #A N/C .
B N/C .
C WHT (P1-29)
D 65 (QCON3)
E 83 (INSUL2)
F N/C .
G N/C .
H 13 (P1-15)

P28 CONNECTIONS
PIN #A N/C .
B N/C .
C N/C .
D 86 (FP)
E N2 (FP)
F N/C .

P27 CONNECTIONS
PIN #A 600 (QCON12)
B N/C .
C N/C .
D 85 (P22-2)
E 85A (QCON10)
F N1 (P22-1)
G N/C .
H N/C .

P21 (1 YEL, 2 GRN, 3, 4, 5 S6, 6 30, 7 70A, 8 PF3, 9 N, 10, 11, 12) — (CUSTOMER INTERFACE CONNECTION)

P21 CONNECTIONS
PIN #1 YEL (TO P1-10)
2 GRN (TO P1-11)
3 3 (TO P1-25)
4 4 (TO P1-26)
5 S6 (TO P1-22)
6 30 (TO P1-12)
7 70A (INSUL2)
8 PF3 (F3)
9 N (EBG2)
10 N/C .
11 N/C .
12 N/C .

QCON10 — 85A (P27-E) — (TAPE WHEN NOT USED)

QCON12 — 600 (P27-A) — (TAPE WHEN NOT USED)

QCON11 — 85A

QCON13 — 600

P31 (B A; 85A, 600) — (MOBILE ONLY)

P31 CONNECTIONS
PIN #A 600 (QCON13)
B 85A (QCON11)

FUEL SELECT

STANDBY	
L.P.	DISCONNECTED
NG	CONNECTED
MOBILE & MARINE	
GAS	DISCONNECTED
L.P.	DISCONNECTED

NOTE: GENERATOR SETS WITH V1.18 OR GREATER: REMOVE 1" SECTION OF THE GREY/ORANGE WIRE GOING INTO PIN #9 OF THE ECM MAIN CONNECTOR ON THE E-CONTROLS ENGINE WIRING HARNESS.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 — 15 16 17 18 19 20 21 22 23 24 25 26 27 28
29 30 31 32 33 34 35 36 37 38 39 40 41 42 — 43 44 45 46 47 48 49 50 51 52 53 54 55 56

ECM

QCON4 — 88 (J13-6)
QCON5 — 89 (J13-2)
QCON6 — 90 (J13-3)
QCON7 — 91 (J13-4)
QCON8 — 92 (J13-1)
QCON9 — 93 (J13-5)

CUSTOMER CONNECTIONS
COMMON FAULT/ RUN RELAY
(OPTION AVAILABLE W/ STANDBY ONLY)

GM 1.6 L
ADC2100 CONTROLLER
W/E-CONTROLS
MARINE, MOBILE, STANDBY

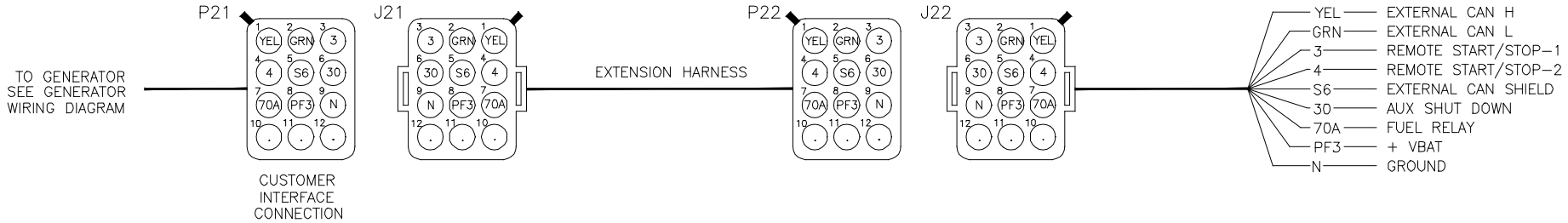
UNLESS OTHERWISE SPECIFIED –
1) DIMENSIONS ARE IN INCHES
2) TOLERANCES ARE:
.XXX ± .010 ANGLES ± 1/2°
.XX ± .030 SURFACE FINISH
.X ± .060 √ MAX.
FRACTIONS ±

APPROVALS	DATE
DRAWN DFS	3-3-04
CHECKED JS	3-6-04
APPROVED JS	3-6-04

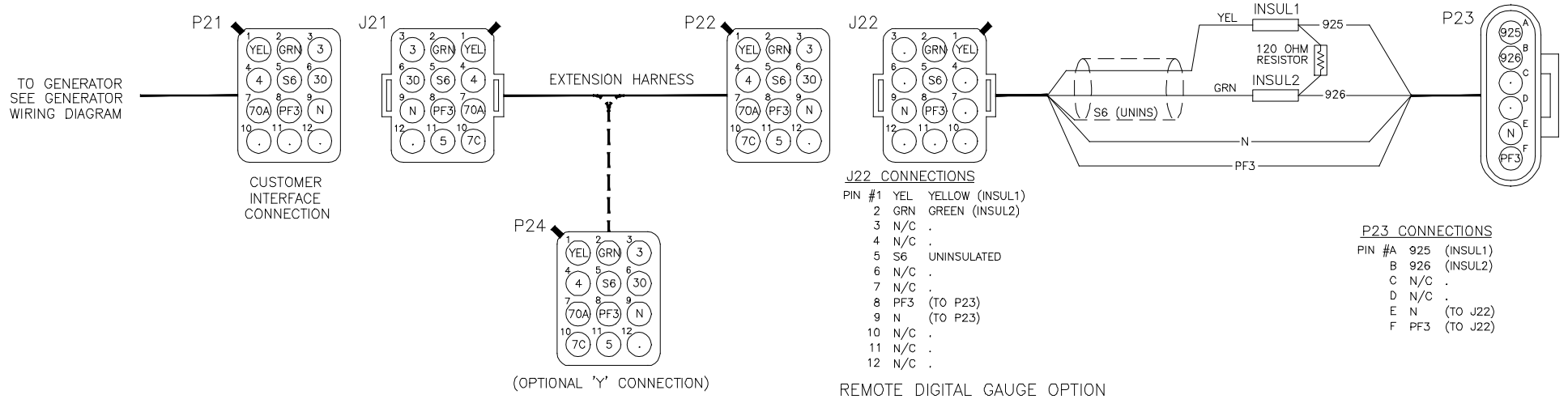
TITLE: DIAGRAM, WIRING GM 1.6 L
SCALE / / / CAD NO. GM28747B.DWG SHEET 2-2
PLOTTED DWG. NO. GM28747 D

Wiring Diagram, Sheet 2, GM28747B-H

REV	DATE	REVISION	BY	M F
–	1-20-04	NEW DRAWING [70483]	DFS	
A	4-19-04	(C-3,-4) 120 OHM RESISTOR & CORRESPONDING CONNECTIONS		
		ADDED TO REMOTE DIGITAL GAUGE OPTION [72128]	DFS	
B	5-17-06	(C-6) EXTENSION HARNESS VIEW UPDATED [78059]	CRS	
C	10-2-06	(C-2,5) 927 LEAD & INSUL3 REMOVED [79359]	CRS	
D	2-15-11	(A-1) TITLE BLOCK UPDATED [91056]	CRS	



FULL FEATURE CUSTOMER INTERFACE CONNECTION (HARNESS, PIGTAIL)



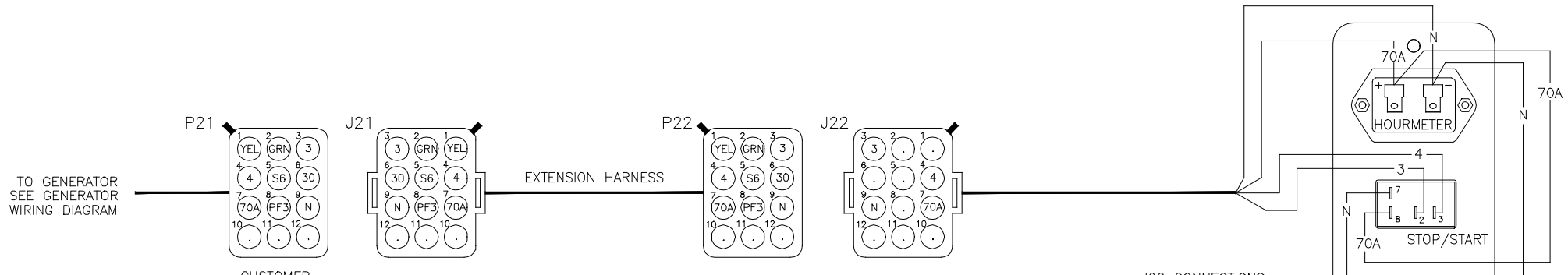
J22 CONNECTIONS

PIN #1	YEL	YELLOW (INSUL1)
2	GRN	GREEN (INSUL2)
3	N/C	.
4	N/C	.
5	S6	UNINSULATED
6	N/C	.
7	N/C	.
8	PF3	(TO P23)
9	N	(TO P23)
10	N/C	.
11	N/C	.
12	N/C	.

P23 CONNECTIONS

PIN #A	925	(INSUL1)
B	926	(INSUL2)
C	N/C	.
D	N/C	.
E	N	(TO J22)
F	PF3	(TO J22)

REMOTE DIGITAL GAUGE OPTION



J22 CONNECTIONS

PIN #1	N/C	.
2	N/C	.
3	3	(STOP/START-2)
4	4	(STOP/START-3)
5	N/C	.
6	N/C	.
7	70A	(STOP/START-8)
8	N/C	.
9	N	(STOP/START-7)
10	N/C	.
11	N/C	.
12	N/C	.

REMOTE START PANEL OPTION

DIGITAIL GAUGE, EXTENSION, PIGTAIL AND REMOTE CONTROL PANEL OPTIONS

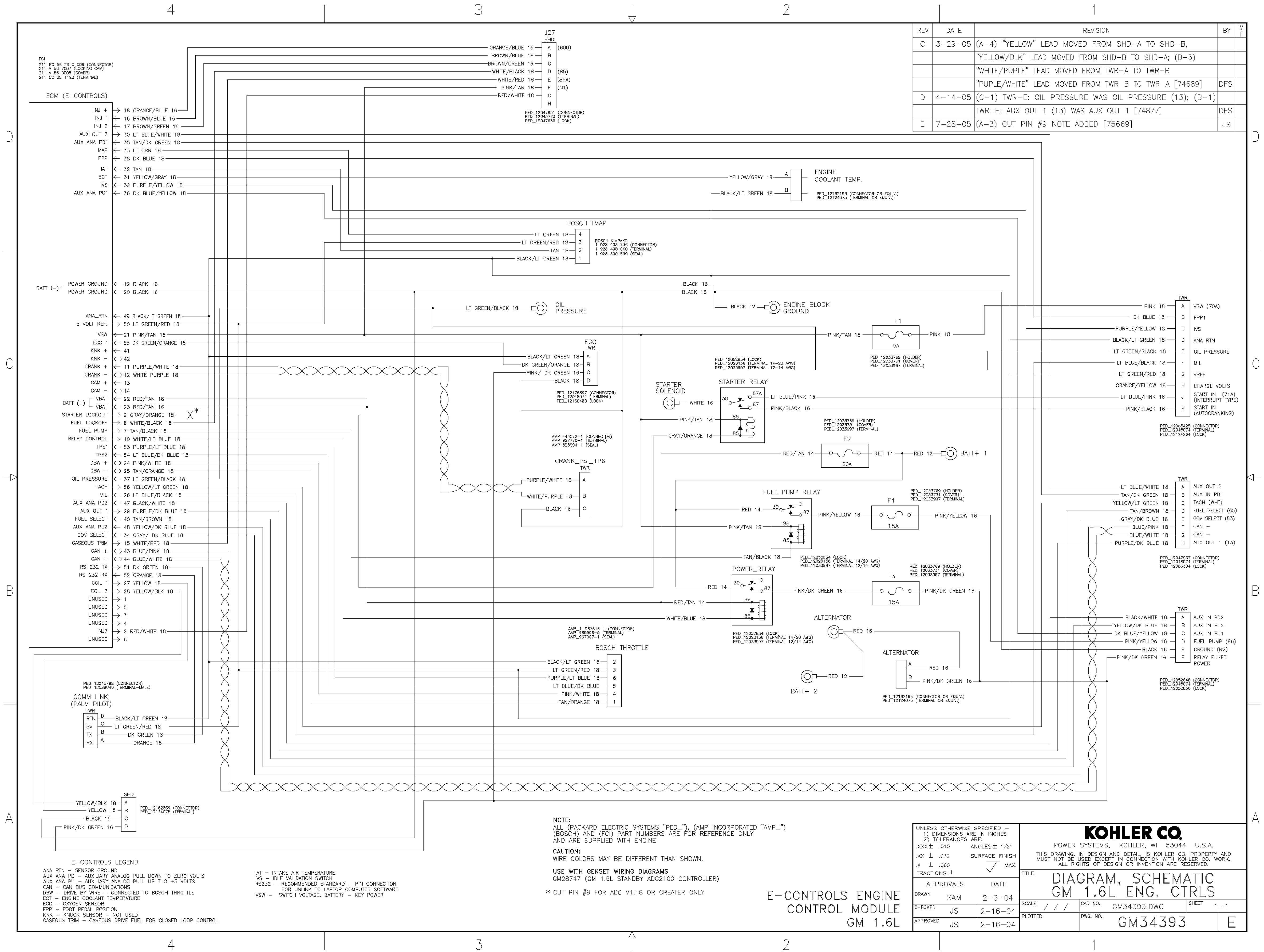
UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 ANGLES ± 1/2° .XX ± .030 SURFACE FINISH .X ± .060 125 MAX. FRACTIONS ±

APPROVALS	DATE
DRAWN DFS	1-20-04
CHECKED JS	1-22-04
APPROVED JS	1-22-04

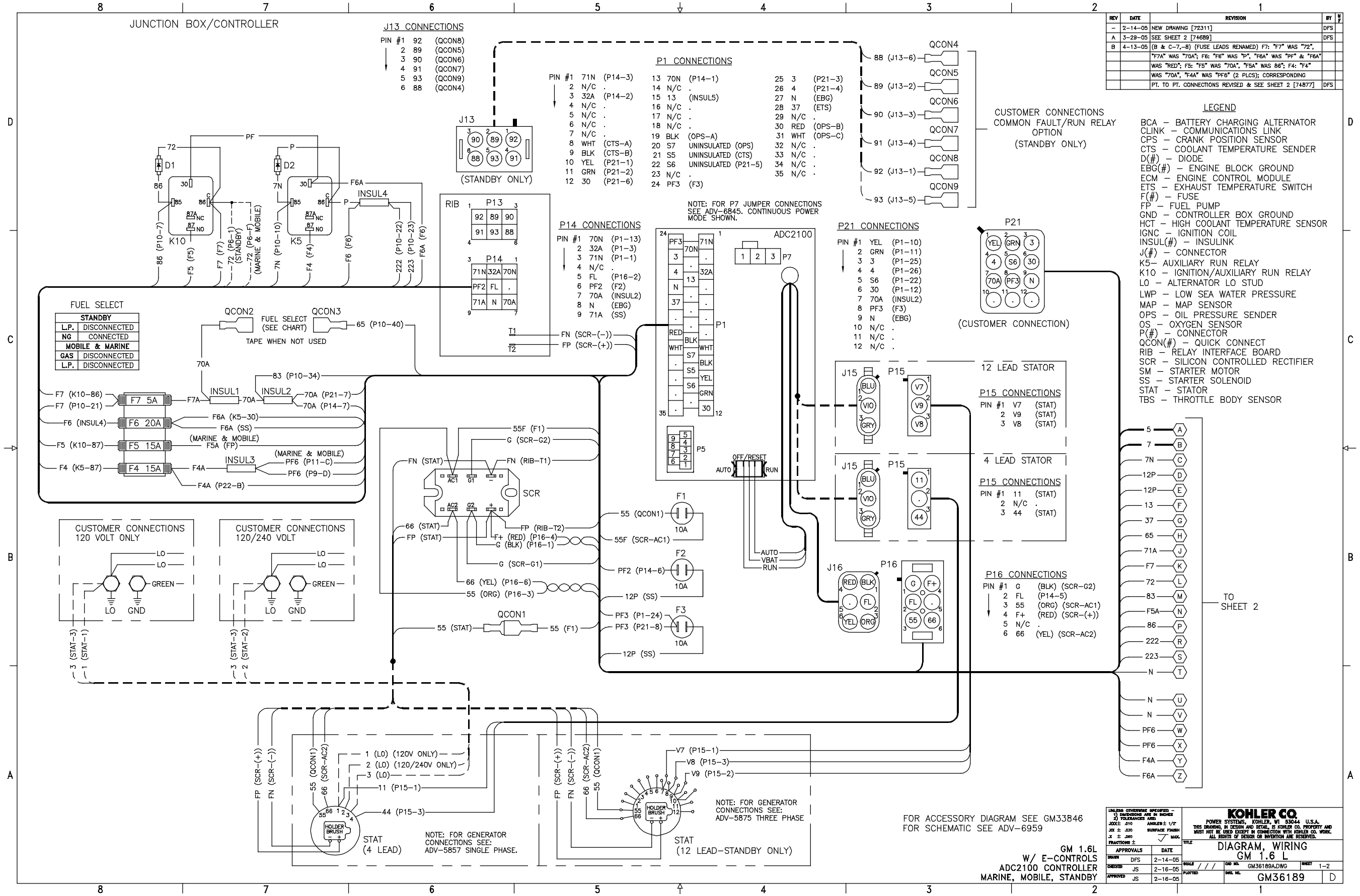
TITLE: DIAGRAM, ACCESSORY INTERCONNECTION

SCALE / / / | SHEET 1-1 | CAD NO. | PLOTTED | DWG NO. GM33846 | D

Accessory Interconnection Diagram, GM33846-D



Engine Schematic Diagram, GM34393-E



Wiring Diagram, Sheet 1, GM36189A-B

REV	DATE	REVISION	BY	M/F
A	3-29-05	(A-2 & C-4,-5) P9-A: 228 (P10-27) WAS 227 (P10-27),		
		P9-B: 227 (P10-28) WAS 228 (P10-28); (B-2,-3 & C-1)		
		P24: PINS A,B,C WAS PINS 1,2,3 & CORRESPONDING PT. TO PT.		
		CONNECTIONS REVISED; (D-2) LEAD "71A" TO SS CONNECTION		
		LOCATION REVISED [74689]	DFS	
B	4-13-05	(D-4) FP: "F5A" WAS "86"; (D-2) SS: "F6A" WAS "RED"; (B-2)		
		P10-21: "F7" WAS "72"; (A-1 THRU -8) FUEL INJECTOR, FUEL		
		SOLENOID & FUEL TRIM WIRING ADDED & SEE SHEET 1 [74877]	DFS	

ENGINE

INSUL5 INSUL6 INSUL7 INSUL8

13 (P10-29) 13 (P17-1) 13 (P1-15) 249 (P23-D) 249 (P10-49) 249 (P11-A) 249 (P8-B) 249 (P12-2) 249 (P13-1) 7 (P23-C) 7 (P13-3) 7 (P12-3) 7 (P10-50)

FP (MARINE & MOBILE): F5A (F5), N2 (GND)

37 (P1-28) N (EBG) 87 LWP ETS

P22 CONNECTIONS
PIN #A RED (BCA–BAT)
B F4A (F4)

P22 (A, B, RED, F4A)

BCA (RED, F4A) J22 BAT — RED — RED (P22-A)

71A (P14-9)
F6A (F6)
12P (F3)
12P (F2)

SS SM BATTERY

N2 (FP) (MARINE & MOBILE) (P11-D) (P10-19) (P10-20) (P21-9) (P14-B) (P1-27) (P24-C) (P9-C) — EBG

TO SHEET 1

A 5
B 7
C 7N
D 12P
E 12P
F 13
G 37
H 65
J 71A
K F7
L 72
M 83
N F5A
P 86
R 222
S 223
T N
U N
V N
W PF6
X PF6
Y F4A
Z F6A

P5A CONNECTIONS
PIN A WHT (P1–8)
B BLK (P1–9)

P5A (BLK, WHT, B, A) — 5 (P1) — CTS (OPTIONAL)

P6 CONNECTIONS
PIN #A 218 (P10–18)
B 216 (P10–16)
C 217 (P10–17)
D 73 (P10–8)
E N/C .
F 72 (K10–86)
G N/C .
H N/C .

P6 (218, 216, 217, 73, 72) — FP (MARINE & MOBILE)

P6 CONNECTIONS
PIN #1 72 (K10–86)
2 73 (P10–8)

P6 (72, 73) — FP (STANDBY)

P7A CONNECTIONS
PIN A BLK (P1–19)
B RED (P1–30)
C WHT (P1–31)

P7A (BLK, RED, WHT) — 7 (P1) — OPS (OPTIONAL) (MARINE & MOBILE)

P8 (35, 249) — HCT

P8 CONNECTIONS
PIN A 35 (P10–31)
B 249 (INSUL7)

P9 (227, 228, N, PF6) — IGNC

P9 CONNECTIONS
PIN #A 228 (P10–27)
B 227 (P10–28)
C N (EBG)
D PF6 (INSUL3)

P11 (249, PF6, 77A, N) — OS (MARINE & MOBILE)

P11 CONNECTIONS
PIN #A 249 (INSUL6)
B 77A (P10–55)
C PF6 (INSUL3)
4 N (EBG)

P12 (225, 224, 249, 254, 7, 253) — TBS

P12 CONNECTIONS
PIN #1 225 (P10–25)
2 249 (INSUL7)
3 7 (INSUL8)
4 224 (P10–24)
5 254 (P10–54)
6 253 (P10–53)

P13 (249, 232, 7, 233) — MAP

P13 CONNECTIONS
PIN #1 249 (INSUL7)
2 232 (P10–32)
3 7 (INSUL8)
4 233 (P10–33)

P17 (13) — OPS

P17 CONNECTION
PIN #1 13 (INSUL5)

P23 (252, 251, 249, 7) — CLINK

P23 CONNECTIONS
PIN #A 252 (P10–52)
B 251 (P10–51)
C 7 (INSUL8)
D 249 (INSUL6)

P24 (BLK, RED, N) — CPS

P24 CONNECTIONS
PIN #A BLK (P10–11)
B RED (P10–12)
C N (EBG)

P10

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
·	·	·	·	·	·	·	86	73	·	7N	BLK	RED	·	·	·	216	217	218	N	N	F7	222	223	224	225	·	227	228
13	·	35	232	233	83	·	·	·	·	·	·	65	·	·	·	·	·	·	249	7	251	252	253	254	77A	·		
29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56

ECM

P10 CONNECTIONS

PIN #1	N/C .	19	N (EBG)	38	N/C .
2	N/C .	20	N (EBG)	39	N/C .
3	N/C .	21	F7 (F7)	40	65 (QCON3)
4	N/C .	22	222 (INSUL4)	41	N/C .
5	N/C .	23	223 (INSUL4)	42	N/C .
6	N/C .	24	224 (P12-4)	43	N/C .
7	86 (K10–85)	25	225 (P12-1)	44	N/C .
8	73 (P6–D) (MARINE & MOBILE)	26	N/C .	45	N/C .
	(P6–2) (STANDBY)	27	228 (P9-A)	46	N/C .
9	N/C .	28	227 (P9-B)	47	N/C .
10	7N (K5–85)	29	13 (INSUL5)	48	N/C .
11	BLK (P24-A)	30	N/C .	49	249 (INSUL6)
12	RED (P24-B)	31	35 (P8-A)	50	7 (INSUL8)
13	N/C .	32	232 (P13-2)	51	251 (P23-B)
14	N/C .	33	233 (P13-4)	52	252 (P23-A)
15	N/C .	34	83 (INSUL2)	53	253 (P12-6)
16	216 (P6-B) (MARINE & MOBILE)	35	N/C .	54	254 (P12-5)
17	217 (P6-C) (MARINE & MOBILE)	36	N/C .	55	77A (P11-B)
18	218 (P6-A) (MARINE & MOBILE)	37	N/C .	56	N/C .

P30 CONNECTIONS
PIN #A 218 (INSUL10)
B 216 (INSUL9)
C 217 (INSUL13)
D N/C .
E N/C .
F N/C .
G N/C .
H N/C .

P30 (D, C, B, A; 217, 216, 218; E, F, G, H)

P31 CONNECTIONS
PIN #A 218 (INSUL10)
B 216 (INSUL9)

P31 (B 216, 218 A)

P32 CONNECTIONS
PIN #A 218 (INSUL11)
B 217 (INSUL13)

P32 (B 217, 218 A)

P33 CONNECTIONS
PIN #A 218 (INSUL12)
B 217 (INSUL13)

P33 (B 217, 218 A)

P34 CONNECTIONS
PIN #A 218 (INSUL12)
B 216 (INSUL9)

P34 (B 216, 218 A)

FUEL INJECTOR HARNESS (MARINE & MOBILE)

216 (P30-B) 216 (P31-B) 216 (P34-B) 218 (P30-A) 218 (P31-A) 218 (P32-A) 218 (P33-A) 216 (P34-A) 217 (P30-C) 217 (P33-B) 217 (P32-B)

INSUL9 INSUL10 INSUL11 INSUL12 INSUL13

P35 CONNECTIONS
PIN #A N/C .
B N/C .
C N/C .
D 85 (P36–2)
E N/C .
F N1 (P36–1)
G N/C .
H N/C .

P35 (D, C, B, A; 85, N1; E, F, G, H)

FUEL SOLENOID HARNESS (MOBILE L.P. ONLY)

P36 (N1, 85)

P36 CONNECTIONS
PIN #1 N1 (P35–F)
2 85 (P35–D)

P37 (B, A; 85A, 600)

P37 CONNECTIONS
PIN #A 600 (QCON4)
B 85A (QCON5)

QCON4 — 600
QCON5 — 85A

FUEL TRIM HARNESS (MOBILE L.P. ONLY)

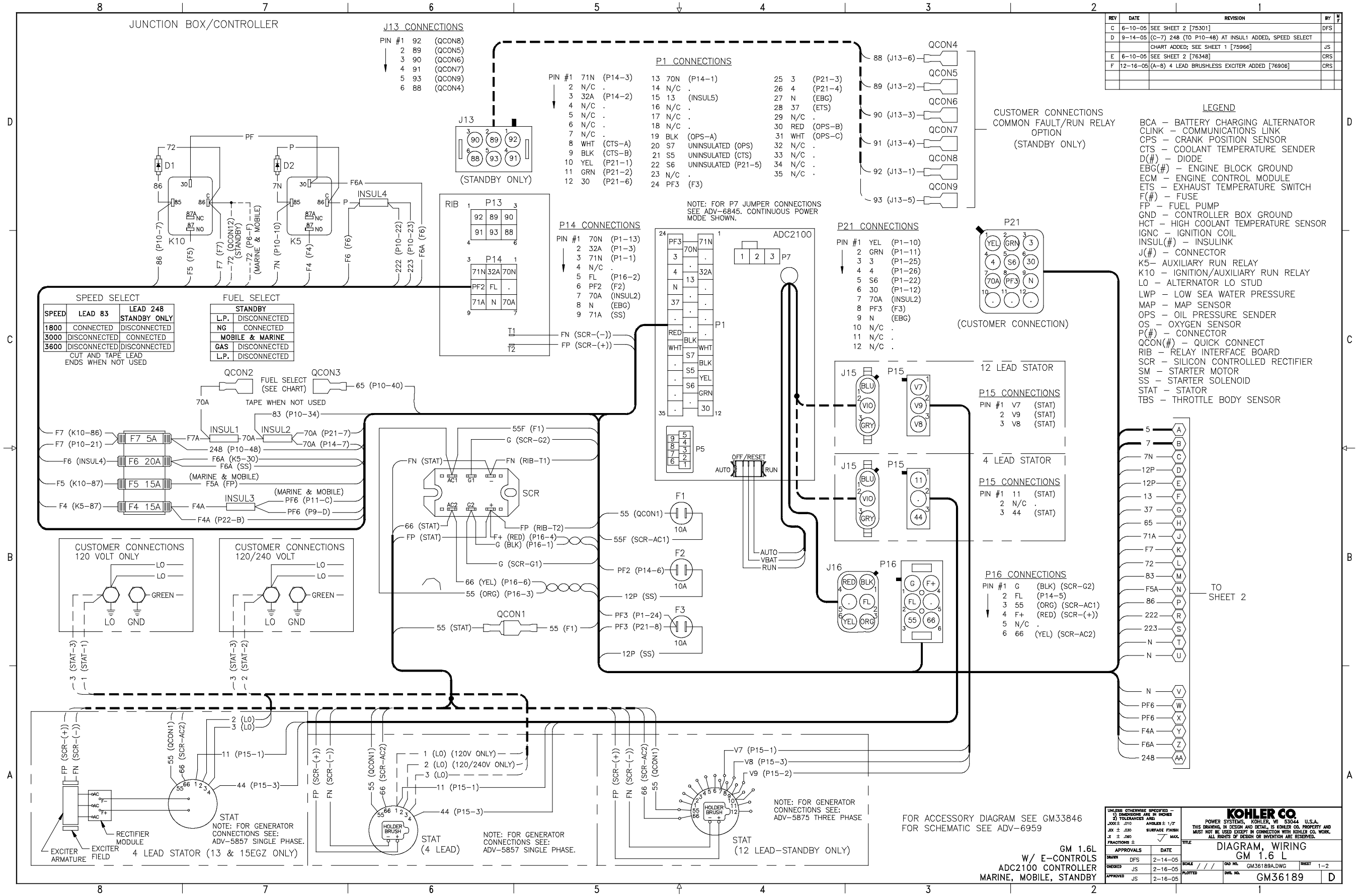
GM 1.6L
W/ E-CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

UNLESS OTHERWISE SPECIFIED — 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 ANGLES ± 1/2° .XX ± .030 .X ± .060 FRACTIONS ± SURFACE FINISH MAX.

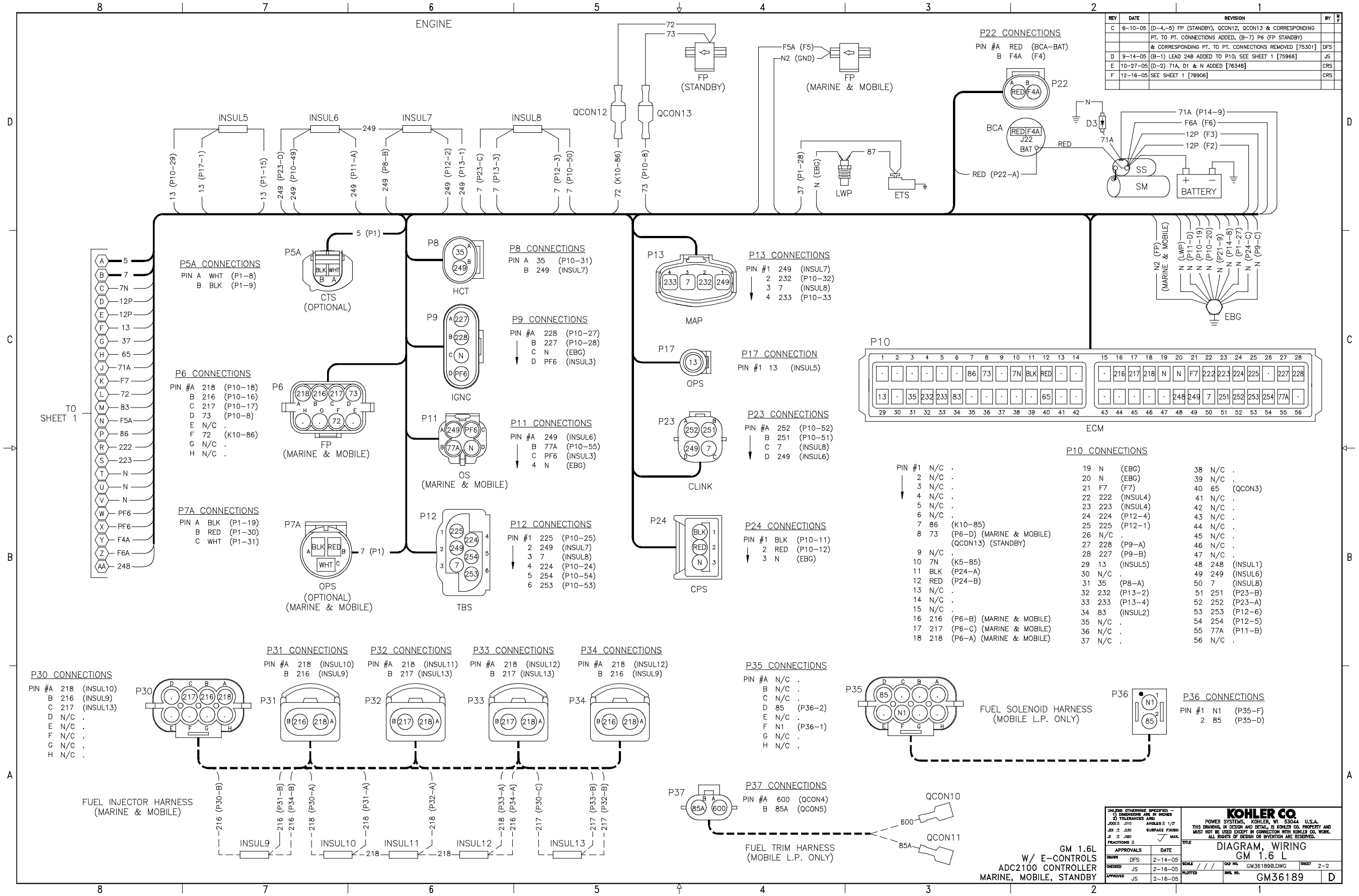
APPROVALS	DATE
DRAWN DFS	2-14-05
CHECKED JS	2-16-05
APPROVED JS	2-16-05

TITLE: DIAGRAM, WIRING GM 1.6 L
SCALE / / / CAD DWG. GM36189B.DWG SHEET 2-2
PLOTTED DWG. NO. GM36189 D

Wiring Diagram, Sheet 2, GM36189B-B



Wiring Diagram, Sheet 1, GM36189A-F



Wiring Diagram, Sheet 2, GM36189B-F

REV	DATE	REVISION	BY	M/T
F	12-16-05	(A-8) 4 LEAD BRUSHLESS EXCITER ADDED [76906]	CRS	
G	3-13-06	(A-1) "FOR ACCESSORY" NOTE UPDATED [77233]	CRS	
H	7-5-06	SEE SHEET 2 [77688]	CRS	
J	9-7-06	SEE SHEET 2 [78567]	CRS	
K	10-2-06	(D-8) K10: (MARINE AND MOBILE) NOTE ADDED TO F5 SEE		
		SHEET 2 [79260]	CRS	

JUNCTION BOX/CONTROLLER

J13 CONNECTIONS
PIN #1 92 (QCON8)
2 89 (QCON5)
3 90 (QCON6)
4 91 (QCON7)
5 93 (QCON9)
6 88 (QCON4)

P1 CONNECTIONS
PIN #1 71N (P14-3)
2 N/C .
3 32A (P14-2)
4 N/C .
5 N/C .
6 N/C .
7 N/C .
8 WHT (CTS-A)
9 BLK (CTS-B)
10 YEL (P21-1)
11 GRN (P21-2)
12 30 (P21-6)
13 70N (P14-1)
14 N/C .
15 13 (INSUL5)
16 N/C .
17 N/C .
18 N/C .
19 BLK (OPS-A)
20 S7 UNINSULATED (OPS)
21 S5 UNINSULATED (CTS)
22 S6 UNINSULATED (P21-5)
23 N/C .
24 PF3 (F3)
25 3 (P21-3)
26 4 (P21-4)
27 N (EBG)
28 37 (ETS)
29 N/C .
30 RED (OPS-B)
31 WHT (OPS-C)
32 N/C .
33 N/C .
34 N/C .
35 N/C .

NOTE: FOR P7 JUMPER CONNECTIONS SEE ADV-6845. CONTINUOUS POWER MODE SHOWN.

QCON4 88 (J13-6)
QCON5 89 (J13-2)
QCON6 90 (J13-3)
QCON7 91 (J13-4)
QCON8 92 (J13-1)
QCON9 93 (J13-5)

CUSTOMER CONNECTIONS
COMMON FAULT/RUN RELAY OPTION
(STANDBY ONLY)

LEGEND
BCA – BATTERY CHARGING ALTERNATOR
CLINK – COMMUNICATIONS LINK
CPS – CRANK POSITION SENSOR
CTS – COOLANT TEMPERATURE SENDER
D(#) – DIODE
EBG(#) – ENGINE BLOCK GROUND
ECM – ENGINE CONTROL MODULE
ETS – EXHAUST TEMPERATURE SWITCH
F(#) – FUSE
FP – FUEL PUMP
FSO – FUEL SHUT OFF
GND – CONTROLLER BOX GROUND
HCT – HIGH COOLANT TEMPERATURE SENSOR
IGNC – IGNITION COIL
INSUL(#) – INSULINK
J(#) – CONNECTOR
K5– AUXILIARY RUN RELAY
K10 – IGNITION/AUXILIARY RUN RELAY
LO – ALTERNATOR LO STUD
LWP – LOW SEA WATER PRESSURE
MAP – MAP SENSOR
OPS – OIL PRESSURE SENDER
OS – OXYGEN SENSOR
P(#) – CONNECTOR
QCON(#) – QUICK CONNECT
RIB – RELAY INTERFACE BOARD
SCR – SILICON CONTROLLED RECTIFIER
SM – STARTER MOTOR
SS – STARTER SOLENOID
STAT – STATOR
TBS – THROTTLE BODY SENSOR

P14 CONNECTIONS
PIN #1 70N (P1-13)
2 32A (P1-3)
3 71N (P1-1)
4 N/C .
5 FL (P16-2)
6 PF2 (F2)
7 70A (INSUL2)
8 N (EBG)
9 71A (SS)

P21 CONNECTIONS
PIN #1 YEL (P1-10)
2 GRN (P1-11)
3 3 (P1-25)
4 4 (P1-26)
5 S6 (P1-22)
6 30 (P1-12)
7 70A (INSUL14)
8 PF3 (F3)
9 N (EBG)
10 N/C .
11 N/C .
12 N/C .

P21 (CUSTOMER CONNECTION)

SPEED SELECT

SPEED	LEAD 83	LEAD 248 STANDBY ONLY
1800	CONNECTED	DISCONNECTED
3000	DISCONNECTED	CONNECTED
3600	DISCONNECTED	DISCONNECTED

CUT AND TAPE LEAD ENDS WHEN NOT USED

FUEL SELECT

STANDBY	
L.P.	DISCONNECTED
NG	CONNECTED
MOBILE & MARINE	
GAS	DISCONNECTED
L.P.	DISCONNECTED

12 LEAD STATOR
P15 CONNECTIONS
PIN #1 V7 (STAT)
2 V9 (STAT)
3 V8 (STAT)

4 LEAD STATOR
P15 CONNECTIONS
PIN #1 11 (STAT)
2 N/C .
3 44 (STAT)

P16 CONNECTIONS
PIN #1 G (BLK) (SCR-G2)
2 FL (P14-5)
3 55 (ORG) (SCR-AC1)
4 F+ (RED) (SCR-(+))
5 N/C .
6 66 (YEL) (SCR-AC2)

TO SHEET 2

CUSTOMER CONNECTIONS 120 VOLT ONLY
CUSTOMER CONNECTIONS 120/240 VOLT

FOR ACCESSORY DIAGRAM SEE GM33846 (MARINE ONLY) OR GM40726 (MOBILE, STANDBY)
FOR SCHEMATIC SEE ADV-6959

STAT NOTE: FOR GENERATOR CONNECTIONS SEE: ADV-5857 SINGLE PHASE.
4 LEAD STATOR (13 & 15EGZ ONLY)
STAT (4 LEAD) NOTE: FOR GENERATOR CONNECTIONS SEE: ADV-5857 SINGLE PHASE.
STAT (12 LEAD–STANDBY ONLY) NOTE: FOR GENERATOR CONNECTIONS SEE: ADV-5875 THREE PHASE

GM 1.6L
W/ E-CONTROLS
ADC2100 CONTROLLER
MARINE, MOBILE, STANDBY

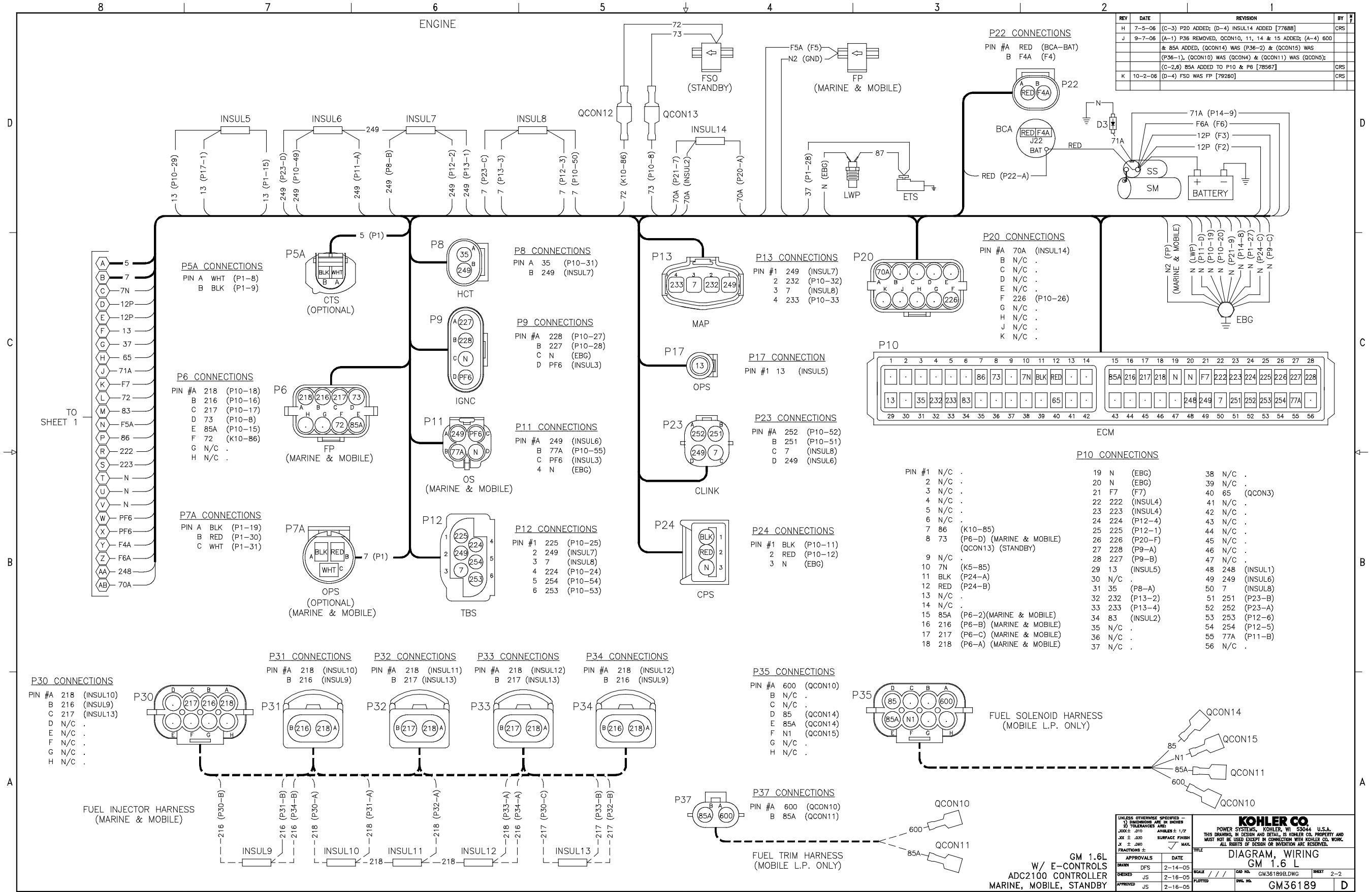
UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 .XX ± .030 .X ± .060 FRACTIONS ± ANGLES ± 1/2° SURFACE FINISH MAX.

APPROVALS	DATE
DRAWN DFS	2-14-05
CHECKED JS	2-16-05
APPROVED JS	2-16-05

KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

TITLE: DIAGRAM, WIRING GM 1.6 L
SCALE: /// CAD NO. GM36189A.DWG SHEET 1–2
PLOTTED DWG. NO. GM36189 D

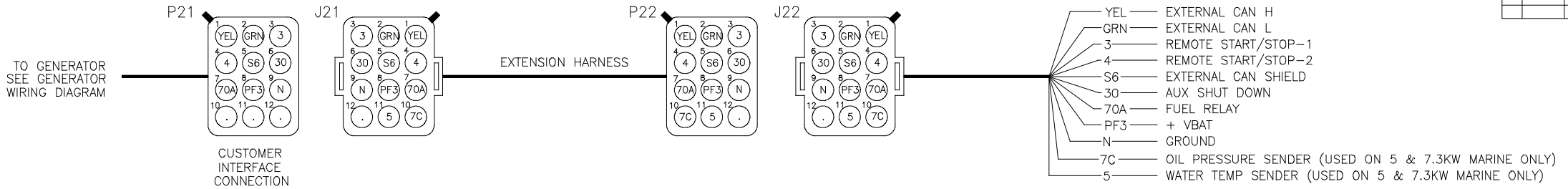
Wiring Diagram, Sheet 1, GM36189A-K



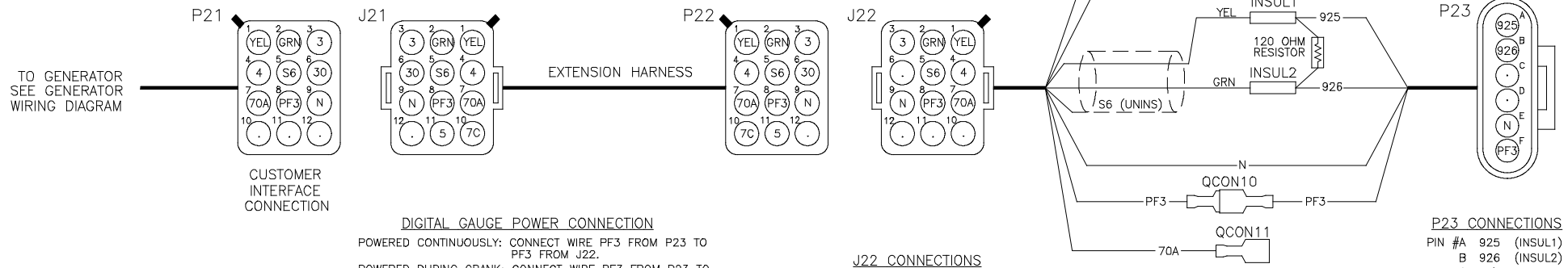
REV	DATE	REVISION	BY
H	7–5–06	(C–3) P20 ADDED; (D–4) INSUL14 ADDED [77688]	CRS
J	9–7–06	(A–1) P36 REMOVED, QCON10, 11, 14 & 15 ADDED; (A–4) 600 & 85A ADDED, (QCON14) WAS (P36–2) & (QCON15) WAS (P36–1), (QCON10) WAS (QCON4) & (QCON11) WAS (QCON5);	
		(C–2,6) 85A ADDED TO P10 & P6 [78567]	CRS
K	10–2–06	(D–4) FSO WAS FP [79260]	CRS

Wiring Diagram, Sheet 2, GM36189B-K

REV	DATE	REVISION	BY	M F
–	3-14-06	NEW DRAWING [77233]	DFS	
A	8-3-06	5 & 7C LEADS ADDED TO EXTENSION HARNESS VIEWS [78374]	CRS	
B	10-2-06	(C-2,5) 927 LEAD & INSUL3 REMOVED [79359]	CRS	



FULL FEATURE CUSTOMER INTERFACE CONNECTION (HARNESS, PIGTAIL)



DIGITAL GAUGE POWER CONNECTION

POWERED CONTINUOUSLY: CONNECT WIRE PF3 FROM P23 TO PF3 FROM J22.

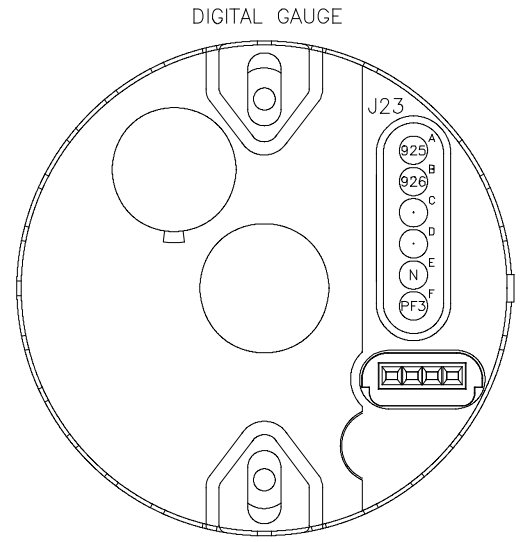
POWERED DURING CRANK & RUN ONLY: CONNECT WIRE PF3 FROM P23 TO WIRE 70A FROM J22.

J22 CONNECTIONS

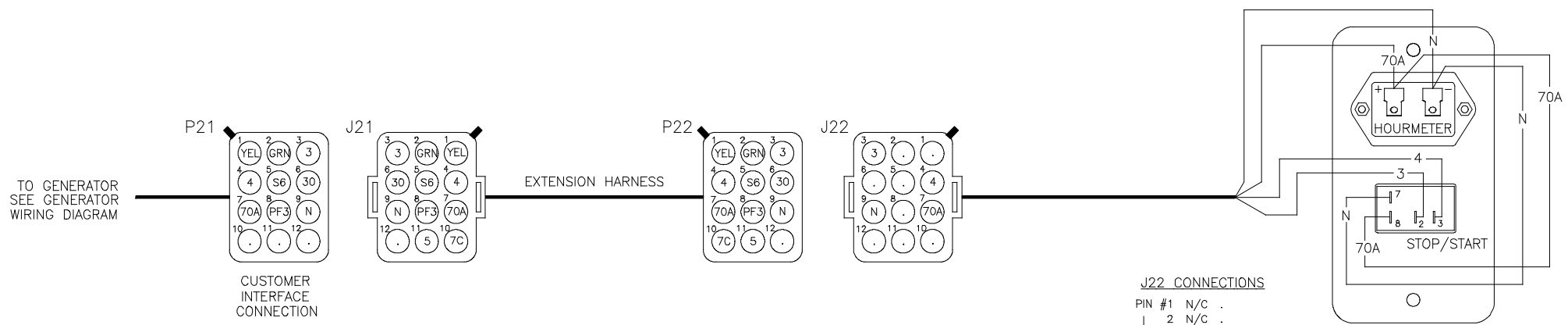
PIN			
1	YEL	YELLOW (INSUL1)	
2	GRN	GREEN (INSUL2)	
3	3	(QCON12)	
4	4	(QCON13)	
5	S6	UNINSULATED	
6	N/C	.	
7	70A	(QCON11)	
8	PF3	(QCON10)	
9	N	(TO P23)	
10	N/C	.	
11	N/C	.	
12	N/C	.	

P23 CONNECTIONS

PIN		
A	925	(INSUL1)
B	926	(INSUL2)
C	N/C	.
D	N/C	.
E	N	(TO J22)
F	PF3	(QCON10)



REMOTE DIGITAL GAUGE OPTION



J22 CONNECTIONS

PIN		
1	N/C	.
2	N/C	.
3	3	(STOP/START-2)
4	4	(STOP/START-3)
5	N/C	.
6	N/C	.
7	70A	(STOP/START-8)
8	N/C	.
9	N	(STOP/START-7)
10	N/C	.
11	N/C	.
12	N/C	.

REMOTE START PANEL OPTION

ADC2100 MOBILE/STANDBY
DIGITAIL GAUGE, EXTENSION, PIGTAIL
AND REMOTE CONTROL PANEL OPTIONS

UNLESS OTHERWISE SPECIFIED – 1) DIMENSIONS ARE IN INCHES 2) TOLERANCES ARE: .XXX ± .010 ANGLES ± 1/2° .XX ± .030 SURFACE FINISH .X ± .060 FRACTIONS ± 1/64 MAX.

APPROVALS		DATE
DRAWN	CRS	3-14-06
CHECKED	JS	3-14-06
APPROVED	JS	3-14-06

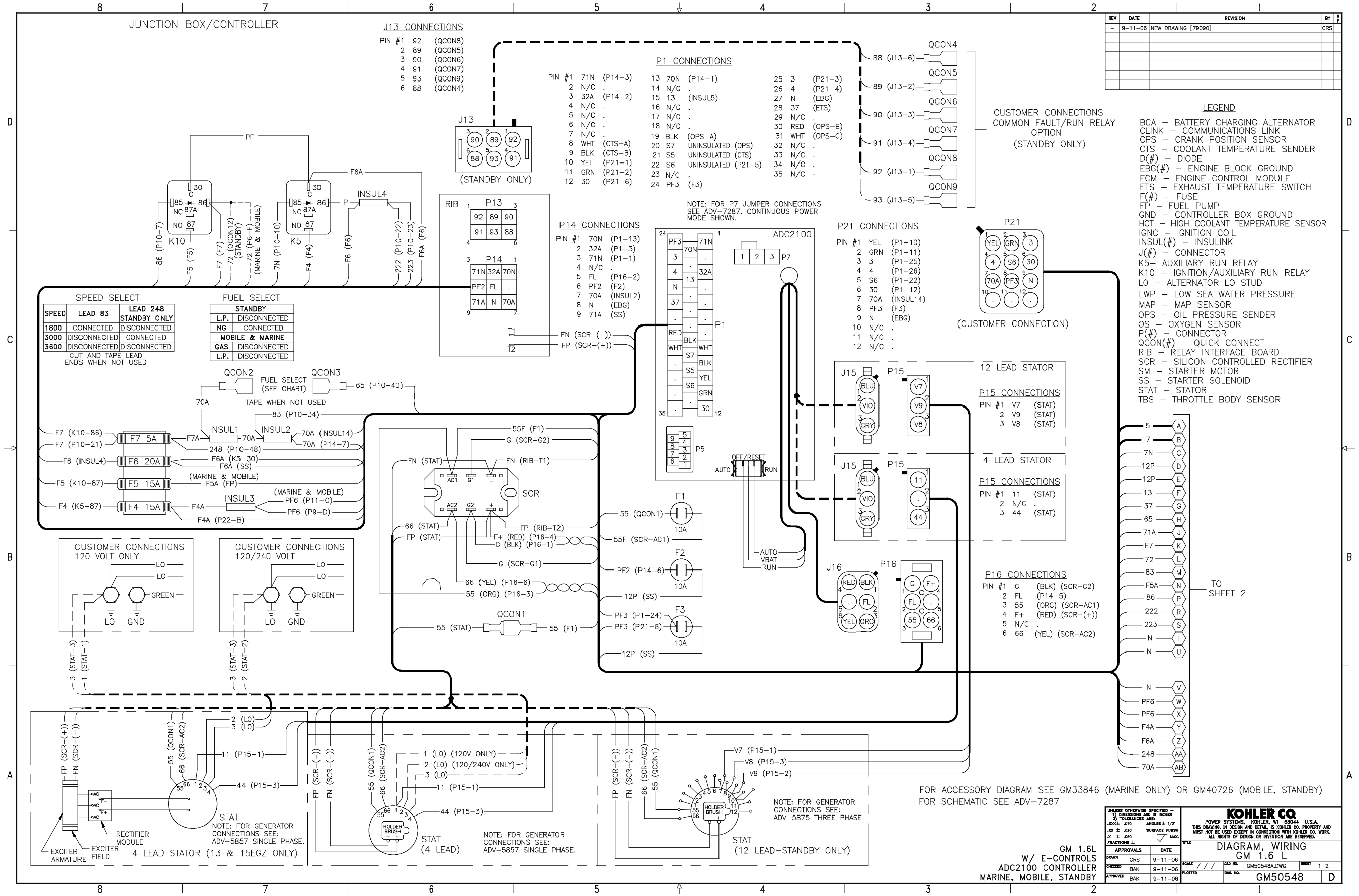
KOHLER CO.
POWER SYSTEMS, KOHLER, WI 53044 U.S.A.

TITLE: DIAGRAM, ACCESSORY INTERCONNECTION

SCALE: / / / CAD NO. GM40726.DWG SHEET 1-1

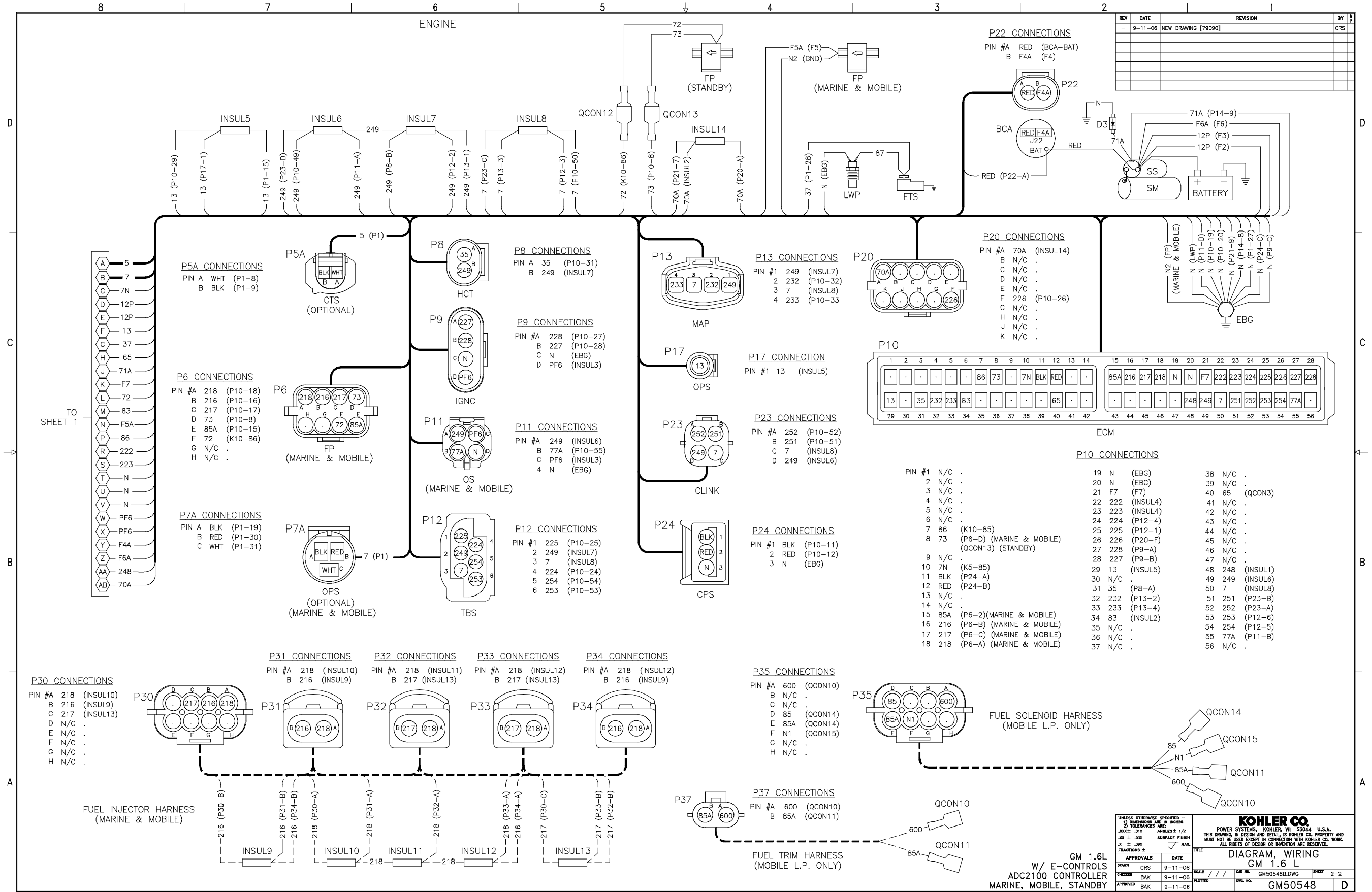
PLOTTED: PRL NO. GM40726 D

Accessory Diagram, GM40726-B



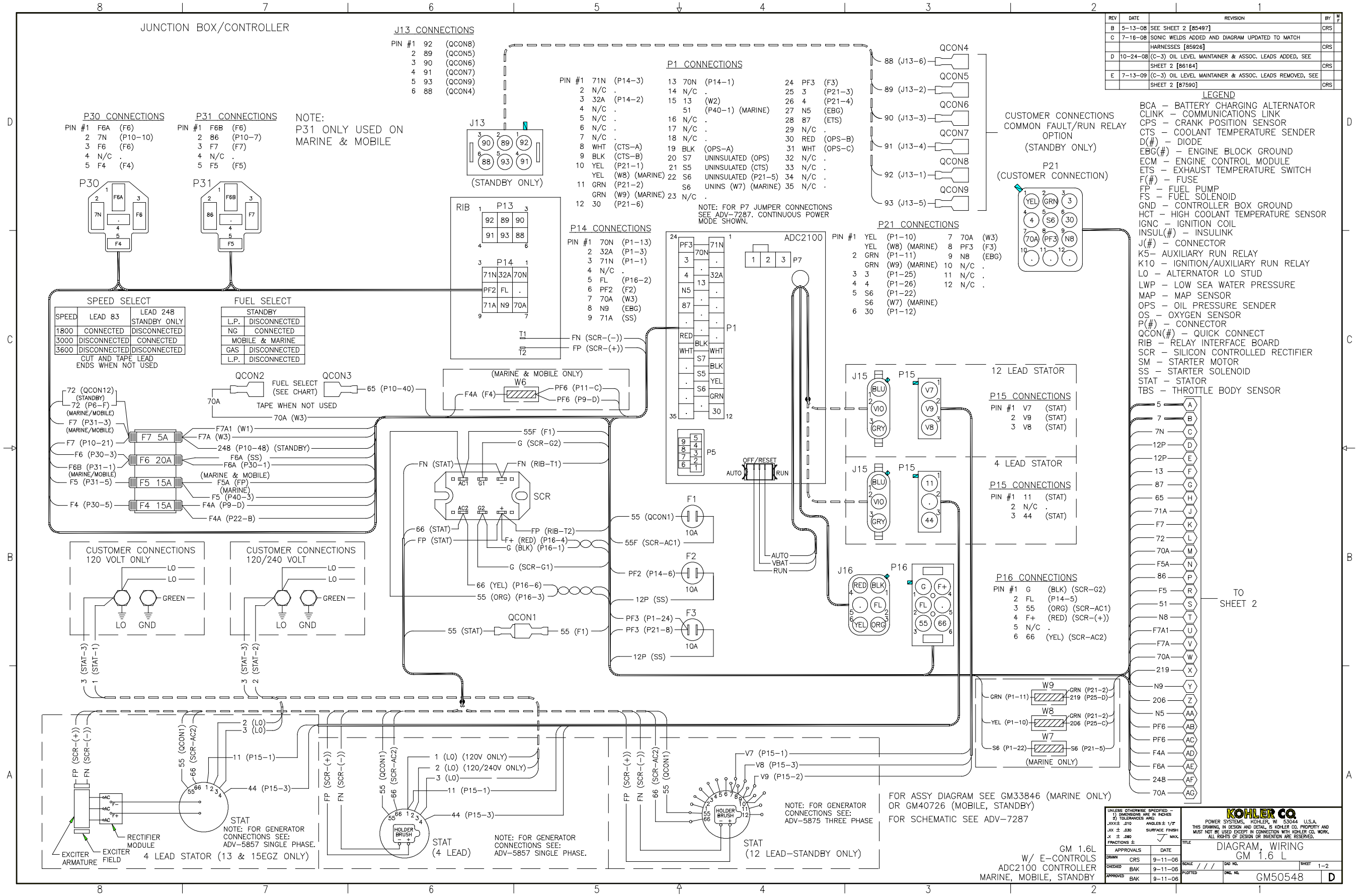
REV	DATE	REVISION	BY	M/F
–	9–11–06	NEW DRAWING [79090]	CRS	

Schematic Diagram, Sheet 1, GM50548A-

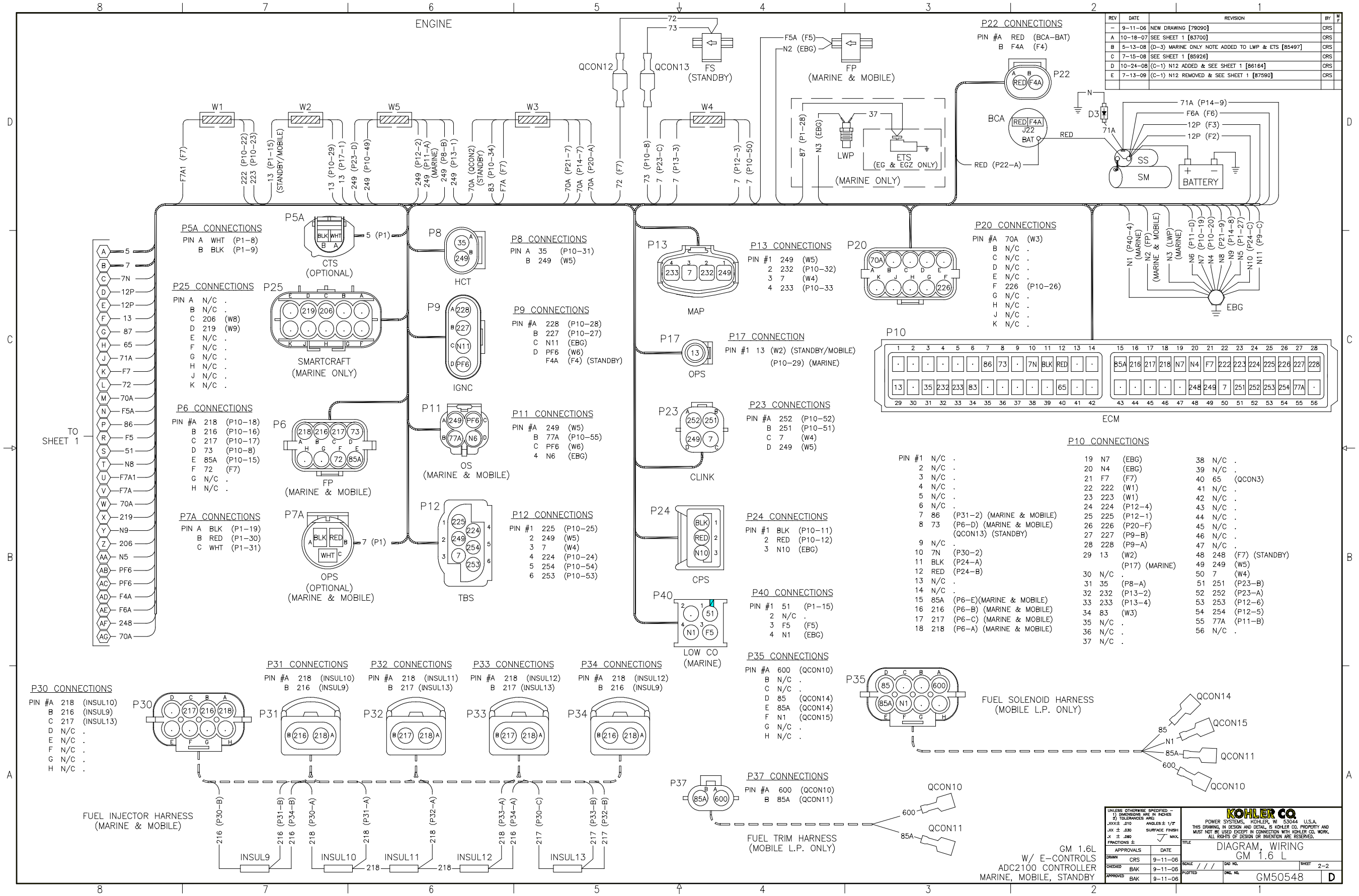


Schematic Diagram, Sheet 2, GM50548B-

REV	DATE	REVISION	BY	M F
B	5-13-08	SEE SHEET 2 [85497]	CRS	
C	7-16-08	SONIC WELDS ADDED AND DIAGRAM UPDATED TO MATCH HARNESSES [85926]	CRS	
D	10-24-08	(C-3) OIL LEVEL MAINTAINER & ASSOC. LEADS ADDED, SEE SHEET 2 [86164]	CRS	
E	7-13-09	(C-3) OIL LEVEL MAINTAINER & ASSOC. LEADS REMOVED, SEE SHEET 2 [87590]	CRS	



Schematic Diagram, Sheet 1, GM50548-E



Schematic Diagram, Sheet 2, GM50548-E

Notes

KOHLER®
Power Systems

KOHLER CO. Kohler, Wisconsin 53044
Phone 920-457-4441, Fax 920-459-1646

Kohler Power Systems
Asia Pacific Headquarters
7 Jurong Pier Road
Singapore 619159
Phone (65) 6264-6422, Fax (65) 6264-6455

For the nearest KOHLER authorized installation, service, and sales dealer in the US and Canada:
Call 1-800-544-2444 or visit KOHLERPower.com

TP-6437 3/15d