

OFF CHARGED SPRING

SACE E30 20		1000VDC	1000VDC	1000VDC	1000VDC	
UN	(V)	230	415	440	520	600
UN	(A)	75	75	75	75	75
UN	(A)	75	75	75	75	75
UN	(A)	75	75	75	75	75

CB02

OFF

SACE F1000 10		1000VDC	1000VDC	1000VDC	1000VDC	
UN	(V)	230	415	440	520	600
UN	(A)	75	75	75	75	75
UN	(A)	75	75	75	75	75
UN	(A)	75	75	75	75	75

CB01

GEN 1

SCR 2

**DANGER**  
HIGH VOLTAGE

www.petrorigs.com

ALARM SILENCE GROUND DETECTION TEST



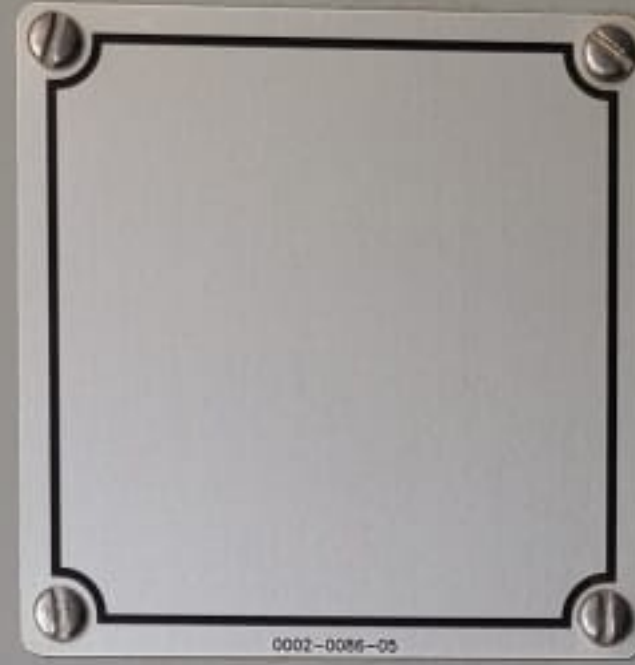
ENGINE CONTROL GEN RUN HOURS GEN ON LINE GEN SYNC

RUN OFF PUSH TO CLOSE

SPEED ADJUST

**NOV NATIONAL OILWELL VARCO**  
24-HOUR SERVICE: +1(713) 856 4138  
houston@nov.com

VOLTS ADJUST



[www.petrorigs.com](http://www.petrorigs.com)

**DANGER**  
**HIGH VOLTAGE**

A horizontal metal plate containing five control knobs. From left to right, they are labeled: A, B, C, ALARM SILENCE, and GROUND DETECTION TEST. The text 'GROUND FAULT INDICATORS' is centered below the first three knobs. A small identification number '0001-0354-440' is printed at the bottom center of the plate.

GROUND DETECTOR LAMPS	
NORMAL OPERATION	ALL DIM
	1 DIM

0786-97

**DANGER**  
HIGH VOLTAGE



GROUND FAULT  
A PHASE  
B PHASE  
C PHASE  
TEST

**DANGER**  
HIGH VOLTAGE

**DANGER**  
HIGH VOLTAGE

**DANGER**  
HIGH VOLTAGE

[www.petrorigs.com](http://www.petrorigs.com)

**NOV NATIONAL OILWELL VARCO**  
PLC CUBICLE

COMMUNICATION  
LINK 1 OK





[www.petrorigs.com](http://www.petrorigs.com)



SACE E3S 20		I <sub>n</sub> =2000A	U <sub>n</sub> =690V	I <sub>cu</sub> =75kA@1s		
U <sub>e</sub>	(V)	690	415	440	525	690
U <sub>sc</sub>	(kA)	75	75	75	75	75
I <sub>cs</sub>	(kA)	75	75	75	75	75
cat B		~ 50-60Hz				

[www.petrorigs.com](http://www.petrorigs.com)

GEN 2



SURGE  
PPRESSOR  
ON



[www.petrorigs.com](http://www.petrorigs.com)

ENGINE  
CONTROL  
RUN  
OFF

GEN  
RUN

HOURS  
443664  
NATIONAL OILWELL VARCO

GEN  
ON LINE

GEN  
SYNC  
PUSH TO CLOSE

**NOV** NATIONAL OILWELL VARCO  
24-HOUR SERVICE • 1 (713) 656 4128  
HoustonServiceDept@nov.com

SPEED ADJUST

VOLTS ADJUST

AC GENERATOR CONTROL

SACE PR125-P

**SACE E3**

YU 24 V

CHARGED SPRING

CB02

IEC 947-3 CEI EN 60947-3

**MS**

INTERRUTTORE DI MANOVRA-SEZIONATORE  
SWITCH-DISCONNECTOR  
LASTTRENNSCHALTER  
INTERRUPTEUR-SECTIONNEUR  
INTERRUPTOR DE MANIOBRA-SECCIONADOR

**ABB** **SACE E3**

YU 24 V

Push OFF Push ON

OFF DISCHARGED SPRING

SACE E3 MS 18 1800A Un-200V 3000V 20kA

YU 24 V

CB01

[www.petrorigs.com](http://www.petrorigs.com)

GEN 1

Four horizontal slots for indicator lights or switches.

SCR 2

**DANGER**  
HIGH VOLTAGE



POWER LIMIT

SCR 2 ON

**DANGER**  
HIGH VOLTAGE

DWA LOCKOUT DWB LOCKOUT

MP1 SPROCKET SLIP



GEN 2 OFF  
GEN 1

[www.petrorigs.com](http://www.petrorigs.com)







**Evolution Series E9000 Motor Control**

CAT. NO. 0C64X0780M04

DIAGRAM NO. 375B2504

AMPS SUPPLY 1200

SECT. 600

SECT.

480

VOLTS

3

PHASE

3

WIRE

60

HZ

www.petrorigs.com



LISTED

**MOTOR CONTROL CENTER**

SECTION 11

OF 12

NO. AN-9

PLANT

MM

BUS SHORT CIRCUIT RATING 65000 RMS  
SYMMETRICAL AMPERE 600 VOLTS MAXIMUM  
INSTALL ON CIRCUITS WITH AVAILABLE SHORT  
CIRCUIT CURRENTS GREATER THAN THE LOWEST  
SHORT CIRCUIT RATING OF ANY BUS INSTALLED UNDER



**DANGER**  
HIGH VOLTAGE

B  
GROUND FAULT INDICATORS

ALARM SILENCE

TEST

GROUND DETECTOR LAMPS	
NORMAL OPERATION	ALL DIM
AC GROUND	1 DIM 2 BRIGHT
DC GROUND	3 BRIGHT



GEN 1

**DANGER**  
HIGH VOLTAGE



ENGINE CONTROL

GEN RUN

GEN ON LINE

GEN SYNC

STOP

START

STOP

START

NATIONAL OILWELL VARCO

SPEED ADJUST

VOLTS ADJUST

AC GENERATOR CONTROL

www.petrogrigs.com

TEC 947-3  
CEI EN 60947-3  
MS  
INTERRUTTORE DI MANOVRA-SEZIONATORE  
SWITCH-DISCONNECTOR  
LASTTRENSCHALTER  
INTERRUPTEUR-SECTIONNEUR  
INTERRUPTOR DE MANIOBRA-SECCIONADOR

**ABB**  
SACE E3

YU 24 V

Push OFF Push ON

OFF DISCHARGED SPRING

SACE E3-MS 16		10000A	1000V	1000V	1000V
U <sub>N</sub>	(V)	10000	1000	1000	1000
I <sub>N</sub>	(A)	10000	1000	1000	1000
U <sub>g</sub>	(V)	AC-220	DC-250	DC-250	DC-250
U <sub>g</sub>	(V)	AC-220	DC-250	DC-250	DC-250

CB01

[www.petrorigs.com](http://www.petrorigs.com)

SCR 1

**DANGER**  
HIGH VOLTAGE

PERCENTAGE GROUND AMP

DC VOLTS

SCR 1 ON

**DANGER**  
HIGH VOLTAGE

GROUND FAULT INDICATORS

A B C

ALARM SILENCE

GROUND DETECTOR TEST

GROUND DETECTOR LAMP

ABB

Push OFF Push ON

1000 1500 2000

1000 1500 2000

1000 1500 2000

ABB

Push OFF Push ON

**DANGER**  
HIGH VOLTAGE

[www.petrorigs.com](http://www.petrorigs.com)

DAVLOP

"DANGER - HIGH VOLTAGE"  
UNINSULATED COMPONENTS CARRYING  
HIGH POTENTIAL AC AND DC CURRENTS  
INSIDE CABINET

PWM-CL

2486

Series E9000 Motor Control  
SECT. NO. SECT.  
PHASE WIRE 60 HZ  
UL US LISTED  
MOTOR CONTROL CENTER  
NO. OF 17 PLANT MM  
5500  
MADE IN MEXICO

09CC 60/3  
AGIT SUCTION  
TK #7,8,9  
P09CC



09DD SHALE



09EE SHALE SHALE #2



DRILL LINE SPOOL



09GG 30/3  
WIRELINE UNIT  
P09GG

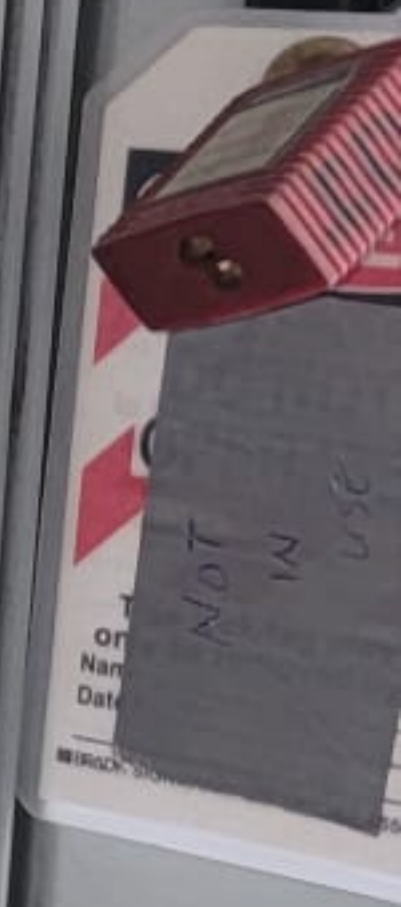


09HH DEGASSE



Evolution Series E9000 Motor Control  
CAT. NO. 0064070M04  
DIAGRAM NO. 07087504  
AMPS SUPPLY 1700 SECT. NO. SECT.  
400 VOLTS 3 PHASE 3 WIRE 60 HZ  
UL US LISTED  
MOTOR CONTROL CENTER  
SECTION 0 OF 17 PLANT MM  
NO. 000  
BUS SHORT CIRCUIT RATING 8000 RMS  
SYMMETRICAL AMPS 800 VOLTS MAXIMUM DO NOT  
INSTALL ON CIRCUITS WITH AVAILABLE SHORT  
CIRCUIT CURRENTS GREATER THAN THE LOWEST  
SHORT CIRCUIT RATING OF ANY INSTALLED UNIT  
#P2048142LSP4Z MONTERREY MEX. MADE IN MEX.

www.petrorigs.com



[www.petrorigs.com](http://www.petrorigs.com)



[www.petrorigs.com](http://www.petrorigs.com)

DANGER  
HIGH  
VOLTAGE



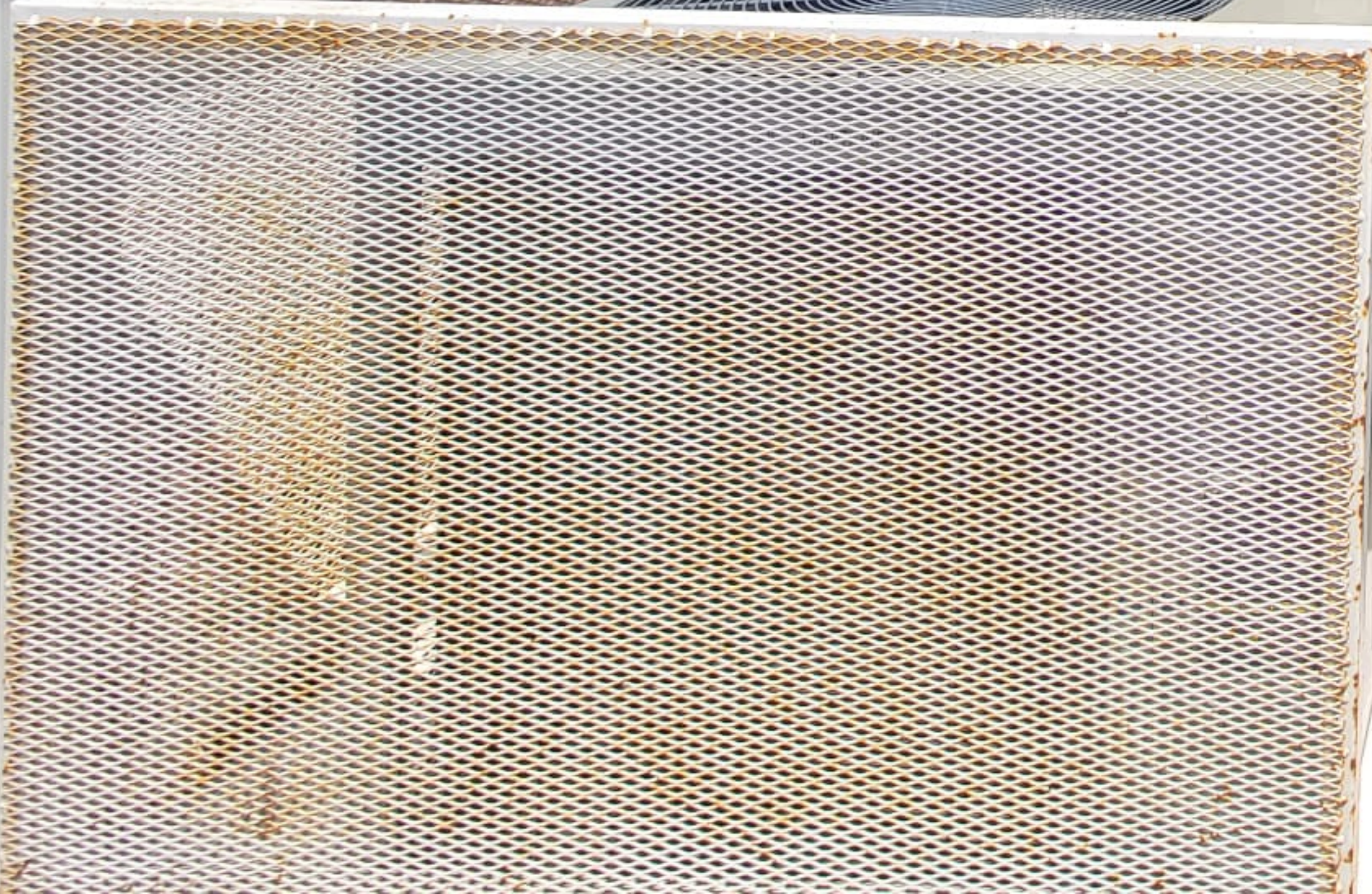
[www.petrorigs.com](http://www.petrorigs.com)

2-460  
NAB  
45-121610

HIGH VOLTAGE

58-121654

Keep  
Williston  
YARD





[www.petrorigs.com](http://www.petrorigs.com)

(6) (7)

46-21610

58-121654

HIGH VOLTAGE

Keep  
Williston  
YARD



[www.petrorigs.com](http://www.petrorigs.com)

**DANGER**  
HIGH VOLTAGE

**DANGER**  
HIGH VOLTAGE





[www.petrorigs.com](http://www.petrorigs.com)

**NOV NATIONAL OILWELL VARCO**  
**NABORS**

12/07 DATE	ROSS HILL SCR HOUSE	7195 JOB
<b>HOUSTON, TEXAS U.S.A.</b>		
24-HOUR SERVICE: +1 (281) 569-3050		

001-200-37-01

[www.petrorigs.com](http://www.petrorigs.com)

 **NABORS ELECTRICAL HOUSE**

---

 **KEEP DOOR CLOSED AT ALL TIMES**

 **AUTHORIZED PERSONNEL**

 **NO WATER**

**TOP DRIVE FEEDER**

FDR NO. 3	600VAC	1600 AAC
-----------	--------	----------

0001-0362-36

**ABB SACE PR121/P**  
N11782001A  
In=1600A

**ABB SACE E3**

T.U. Reset

Push OFF (Red) / Push ON (Green)

OFF / STOPPING

ABB logo and technical specifications are visible at the bottom of the unit.

[www.petrorigs.com](http://www.petrorigs.com)

# AC GENERATOR CONTROL

VOLTS 600

AMPS 1376

KVA 1950

HZ 60

KW 1102

TEMP. 50°

[www.petrorigs.com](http://www.petrorigs.com)

0001-0382-44

[www.petrorigs.com](http://www.petrorigs.com)

[www.petrorigs.com](http://www.petrorigs.com)





SACE E3S/MS 16		I <sub>n</sub> =1600A	U <sub>e</sub> =690V	I <sub>cu</sub> =75kA <sub>1s</sub>	
U <sub>e</sub>	(V)	400/415	690	230	500
I <sub>n</sub>	(A)	1600	1600	1600	1600
Cat.		AC - 23A	DC - 23A		
		~ 50-60Hz	IP 2P		

CB01

SCR 4

**DANGER**  
HIGH  
VOLTAGE

[www.petronigs.com](http://www.petronigs.com)



GEN  
LINE      GEN  
SYNC

SACE ESS 20	Up=2000A	Up=600V	Up=75kVA1s			
Un (V)	230	415	440	525	690	WIG 80047-E made in Italy by ABB SACE
In (kA)	75	75	75	75	75	
Is (kA)	75	75	75	75	75	
Col B	—	—	—	—	—	~ 50-60Hz

CB02

GEN 3

[www.petrorigs.com](http://www.petrorigs.com)



ENGINE GEN GEN ON LINE GEN BYNC



[www.petronigs.com](http://www.petronigs.com)

A horizontal control panel with three main sections:

- Left:** A red emergency stop button with a metal ring. Below it, the text "EMERGENCY STOP" and "LOCK OUT" is visible.
- Middle:** A yellow rectangular button. Below it, the text "MP2 SPROCKET SLIP" is visible.
- Right:** A red emergency stop button with a metal ring. Below it, the text "MP2 LOCKOUT SPROCKET SLIP RESET" is visible.

A safety lockout tag with a red padlock attached. The tag features a "DANGER" warning and the following text:

This energy source has been **LOCKED OUT**.  
Unauthorized removal of this lock/tag may result in immediate discharge.  
Remarks:



OFF

TYPE	NO.	DATE	BY	REMARKS

CB01

OCR 3

**DANGER**  
HIGH  
VOLTAGE

[www.petrorigs.com](http://www.petrorigs.com)



RT LOCKOUT

SPROCKET SLIP



GEN ON LINE

GEN SYNC

FAST TO CLOSE



GEN 2

www.petrorigs.com



NATIONAL OILWELL VARCO  
24-HOUR SERVICE: +1(713) 856 4128  
Email: service@nov.com

CHARACTERISTICS

CB01

SCR 2

**ANGER**  
HIGH VOLTAGE

POWER LIMIT

DC VOLTS 1000

SCR 2 ON

DC AMPERES 2000

**DANGER**  
HIGH VOLTAGE

www.petrorigs.com

DWA LOCKOUT    DWB LOCKOUT    MP1 SPROCKET SLIP    MP1 LOCKOUT/ SPROCKET SLIP RESET    SURGE SUPPRESSOR ON

GEN. 2    OFF    GEN. 3  
GEN. 1    GEN. 4

SYNCHRONIZING

ASSIGNMENT

SCR1	SCR2	SCR3	SCR4	OFF	SCR1	SCR2	SCR3	SCR4
DWB	MP1	MP2	DWA /RT		MP1	DWA /RT	DWB	MP2
MP1	DWA /RT	DWB	MP2		DWB	DWB	MP1	MP2
DWB	DWA /RT	—	MP2		DWB	DWA /RT	MP2	—
MP1	DWA /RT	DWB	MP3		MP1	DWA /RT	DWB	MP3
MP1	DWA /RT	MP2	MP3		MP3	—	MP2	DWA /RT
					MP1	DWA /RT	MP2	MP3

N/P No. 2

KILOWATTS 2000

KVAR 2000

ENGINE CONTROL

RUN OFF

GEN RUN

HOURS

SPEED ADJUST

NATIONAL OILWELL VANCE



[www.petrorigs.com](http://www.petrorigs.com)

