

S-14930

MAINTENANCE INSTRUCTIONS

OBSERVE OPERATING INSTRUCTIONS IN ENGINE MANUAL. BLOW OUT WELDERS AND CONTROLS WITH AIR HOSE AT LEAST ONCE EVERY TWO MONTHS—ONCE EVERY WEEK IN DIRTY LOCATIONS. BRUSHES SHOULD BE REPLACED BEFORE THE PISTONS ARE WITHIN .12 INCH OF THE COMMUTATOR OR BEFORE THE LIMIT OF SPRING TRAVEL IS REACHED. REPLACE WITH THE SAME KIND OF BRUSHES AS WERE ORIGINALLY FURNISHED. SAND IN BRUSHES ACCORDING TO INSTRUCTIONS IN THE INSTRUCTION MANUALS.

BALL BEARINGS SHOULD NOT BE GREASED MORE THAN ONCE A YEAR UNDER NORMAL SERVICE. USE TYPE RECOMMENDED IN THE INSTRUCTION MANUAL. MOST BEARING FAILURES ARE CAUSED BY ALLOWING DIRT TO BE FORCED INTO THE BEARING WITH THE GREASE, OR USE OF IMPROPER KIND OF GREASE.

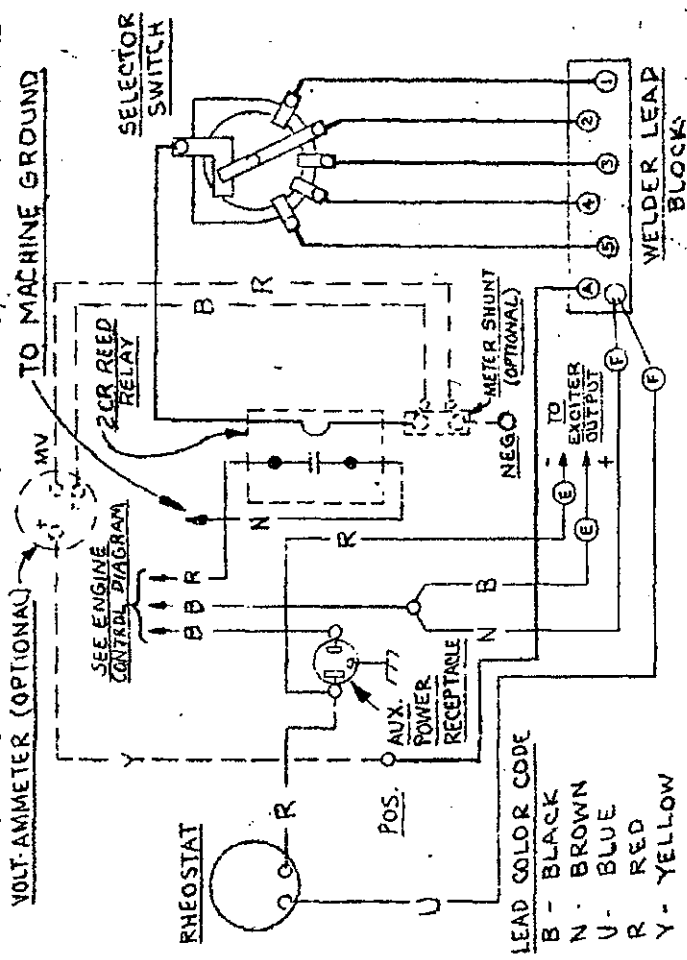
DO NOT OVERPACK WITH GREASE

COMMUTATOR MAY BE CLEANED WITH FINE SANDPAPER WHILE THE MACHINE IS RUNNING TO REMOVE ANY GREASE OR DIRT THAT HAS ACCUMULATED.

DO NOT USE EMERY CLOTH

KEEP GROUND AND ELECTRODE CONNECTIONS TIGHT.

A.N.S.I. ELECTRICAL SYMBOLS PER E-1537



THE LINCOLN® ELECTRIC CO. CLEVELAND, OHIO, U.S.A.

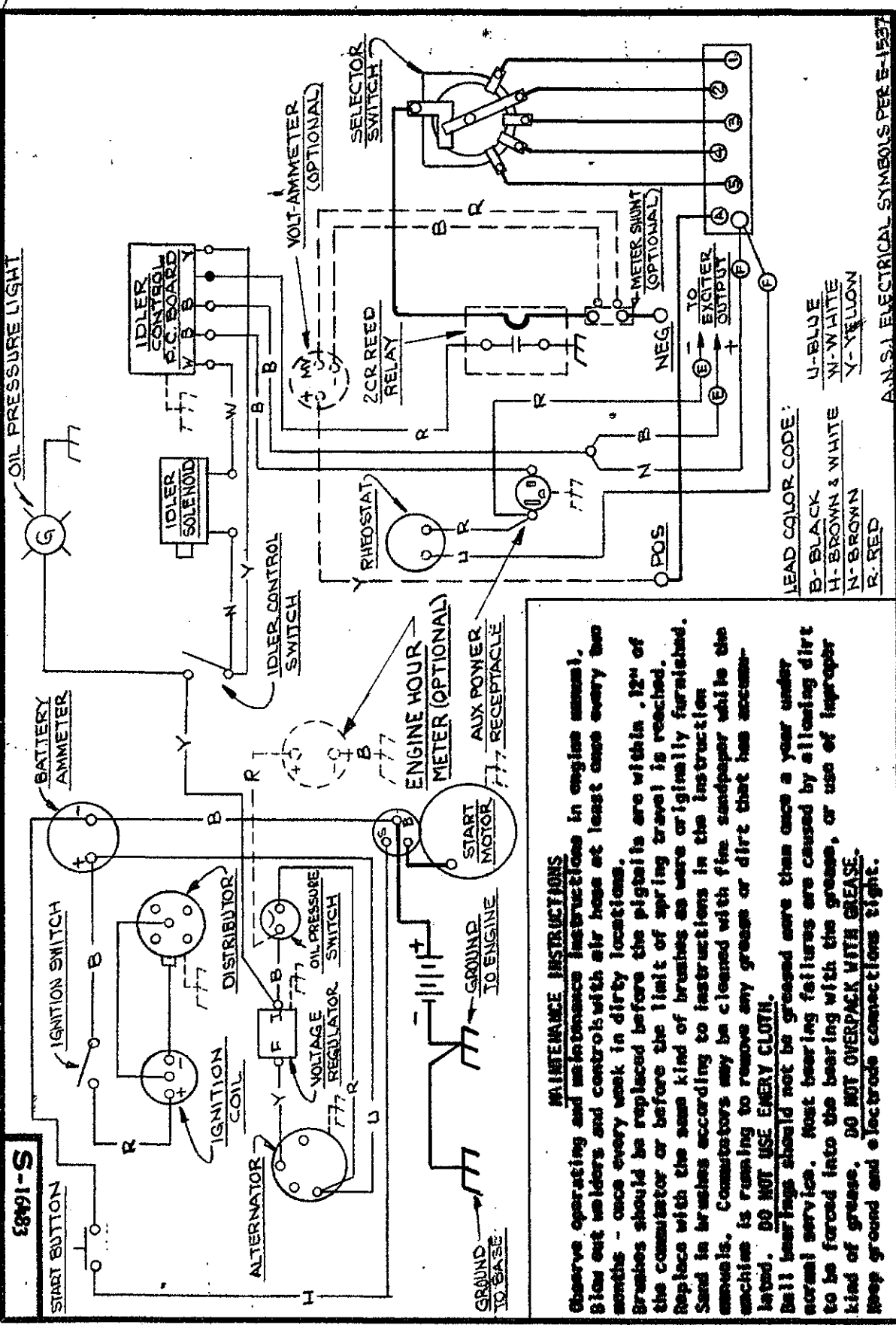
S-14930

PRINT ABOVE TO 4.50 X 10.50 SIZE

UNLESS OTHERWISE SPECIFIED TOLERANCE
 ON 2 PLACE DECIMALS IS ± .02
 ON 3 PLACE DECIMALS IS ± .002
 ON ALL ANGLES IS ± .5 OF A DEGREE
 MATERIAL TOLERANCE ("M") TO AGREE
 WITH PUBLISHED STANDARDS

THE LINCOLN ELECTRIC CO.
 CLEVELAND, OHIO U.S.A.
 DATE 4-25-80 SCALE

TYPE L-200 FJW-FDW ENGINE WELDER (WITH AND WITHOUT METER)
 SUBJECT WELDER CONTROL DIAGRAM
 SHEET NO. S-14930



UNLESS OTHERWISE SPECIFIED TOLERANCE		Ch'ge. Sht. No.
ON HOLE SIZES PER E-2056	6-23-78	
ON 2 PLACE DECIMALS IS ± .02	1-12-79	6
ON 3 PLACE DECIMALS IS ± .002	2-24-79	
ON ALL ANGLES IS ± .5 OF A DEGREE	11-30-79	K
MATERIAL TOLERANCE ("Y") TO AGREE WITH PUBLISHED STANDARDS.	12-7-79	

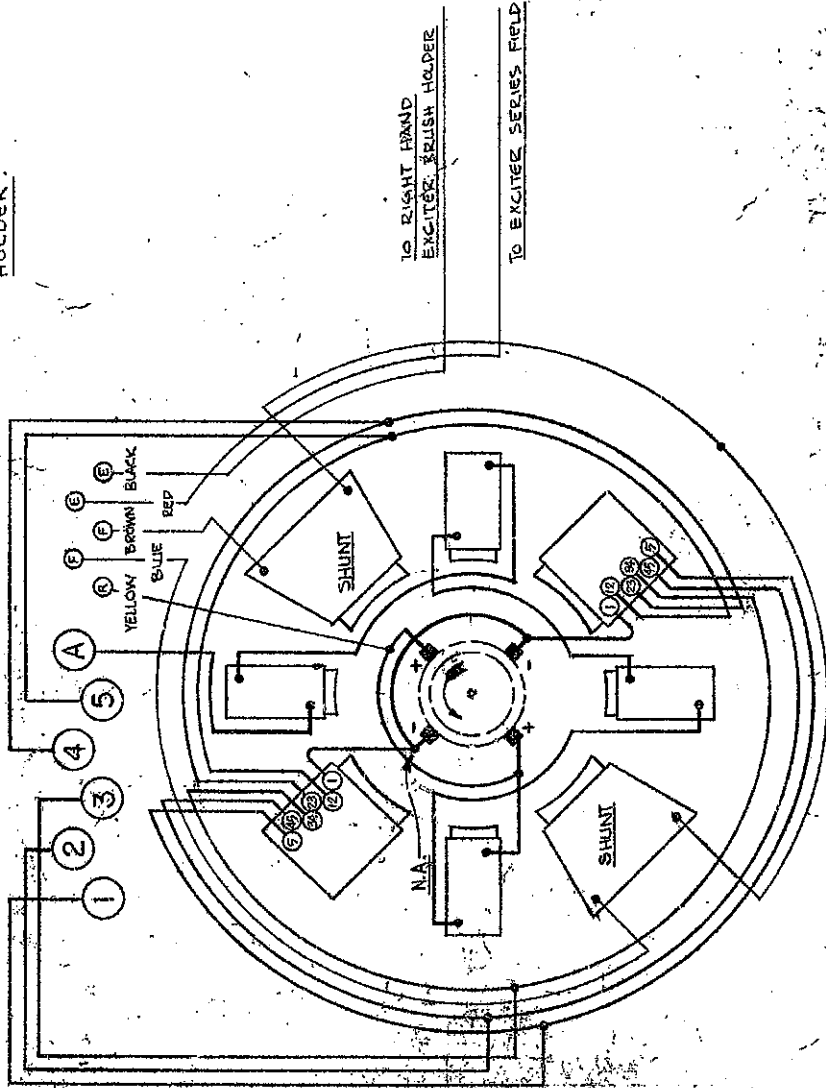
THE LINCOLN ELECTRIC CO. EQUIP. TYPE	SA-200 Engine Motor
CLEVELAND, OHIO U.S.A.	Wiring Diagram (Batt. 1 gm.)
SCALE	
DR LJP	DATE 12-21-78
CHK	SUPD/G S-17-78
SHT. NO. S-16483	

MAINTENANCE INSTRUCTIONS

Observe operating and maintenance instructions in engine manual. Blow out intakes and controls with air hose at least once every two months - once every week in dirty locations. Brushes should be replaced before the pigtail is within .12" of the commutator or before the limit of spring travel is reached. Replace with the same kind of brushes as were originally furnished. Sand in brushes according to instructions in the instruction manual. Commutators may be cleaned with fine sandpaper while the machine is running to remove any grease or dirt that has accumulated. **DO NOT USE EMERY CLOTH.** Ball bearings should not be greased more than once a year under normal service. Most bearing failures are caused by allowing dirt to be forced into the bearing with the grease, or use of improper kind of grease. **DO NOT OVERPACK WITH GREASE.** Keep ground and electrode connections tight.



N.A. WHEN OPTIONAL CV ADAPTER IS INSTALLED, THE THERMOSTAT IS CONNECTED TO THIS BRUSH HOLDER.



SPUNTER COUNTERCLOCKWISE ROTATION

NOTE: (R) LEAD USED ONLY ON UNITS WITH VARIATION HOLDER

UNLESS OTHERWISE SPECIFIED, TOLERANCE IS AS SHOWN. DIMENSIONS ARE IN INCHES. DIMENSIONS IN PARENTHESIS ARE FOR REFERENCE ONLY. DIMENSIONS IN PARENTHESIS ARE FOR REFERENCE ONLY. DIMENSIONS IN PARENTHESIS ARE FOR REFERENCE ONLY.

1	2	3	4	5	A	B	C	D	E

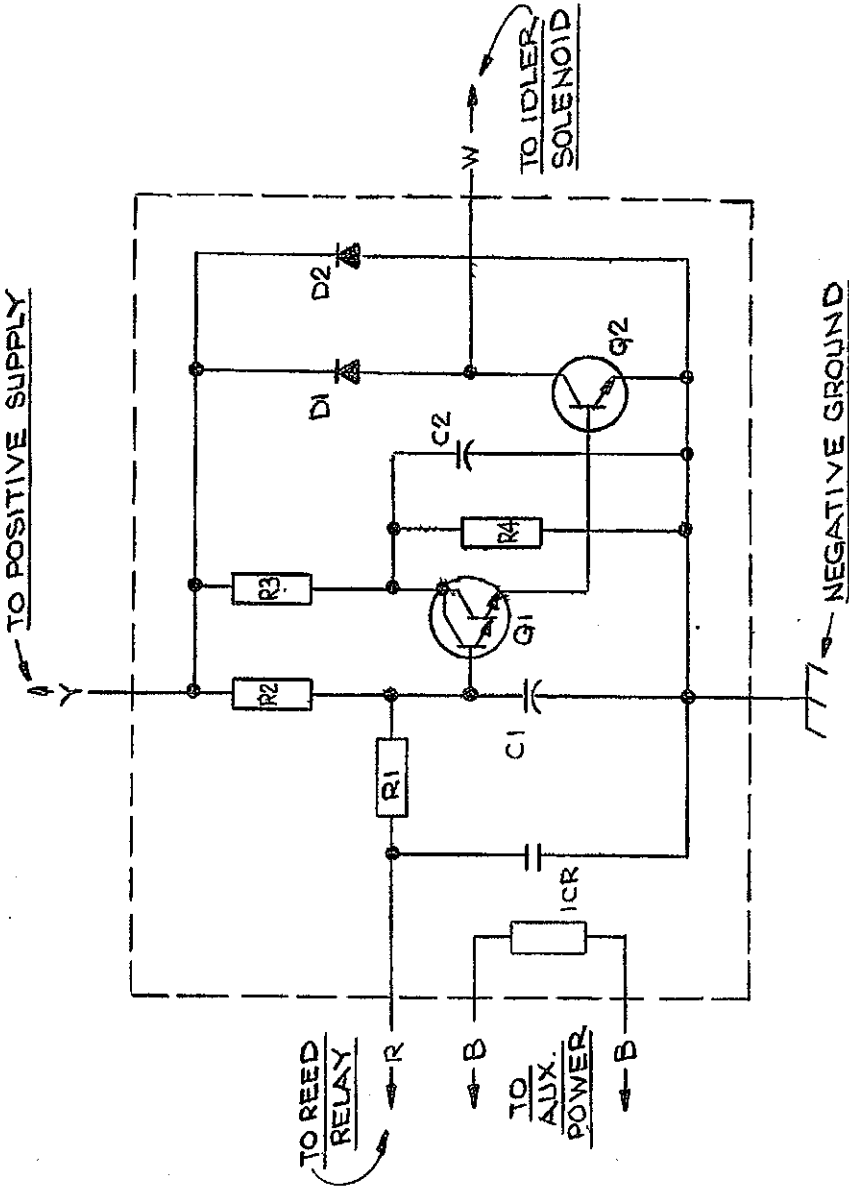
62191-S

LEGEND

C1	200 MFD
C2	.22 MFD
R1	47 Ω
R2	270KΩ
R3	220 Ω
R4	150 Ω
D1	1 AMP.
D2	1 AMP.
Q1	.5AMP., 30VOLT
Q2	3 AMP., 80 VOLT
ICR	REED RELAY

LEAD COLOR CODE

B	BLACK
Y	YELLOW
R	RED
W	WHITE



ELECTRICAL SYMBOLS PER E-1937

UNLESS OTHERWISE SPECIFIED TOLERANCE	Dr. Ge. Sht. No.
ON HOLE SIZES PER E-2056	3-18-77
ON 2 PLACE DECIMALS IS ± .02	3-31-78 E
ON 3 PLACE DECIMALS IS ± .002	12-0-82 G
ON ALL ANGLES IS ± .5 OF A DEGREE	9-21-84 F
MATERIAL TOLERANCE (47) TO AGREE WITH PUBLISHED STANDARDS.	

THE LINCOLN ELECTRIC CO. EQUIP. SA-280+250 ENGINE WELDER	DATE 12-1-76	CHK \$	SUP'S DRG (S-14931)	SHT. S-16129
CLEVELAND, OHIO U.S.A.	SCALE			NO.

1-ENR	1-INSPECTOR	1-DEPT 1	1-BAY 3ET	1-DEPT 10	1-BAY 2IL		

MANUFACTURING SPECIFICATION

COMPOUND EXCITER CONNECTIONS FOR COUNTER CLOCKWISE ROTATION FACING THE EXCITER COMMUTATOR

*** Series Field**

T1 connect to T11.
 T2 connect to the left hand exciter brush holder.
 T12 bring out a lead through the lower or left hand lead block hole "E" and connect to the reversing switch or to power plug receptacle as shown in the control box diagram.

Bring out a lead from the right hand exciter brush holder through the top or right hand lead block hole "E" and to the reversing switch or power plug receptacle as shown in the control box diagram.

COIL with tags T1, T2, T3, T4 goes on the left hand pole piece. COIL with tags T11, T12, T13, T14 goes on the right hand pole piece.

*** Shunt Field**

T3 connect to T13.
 T4 connect to left hand exciter brush holder.
 T14 connect to the right hand exciter brush holder.

Leads for Accessory Drive or Power Plug

See control box diagram for connection when power plug is in right hand side of control box. (Standard for "L" & "R" control). Where power plug is in such a place that it is best to connect the leads at the exciter, connect the power plug leads to T12 and to the right hand exciter brush holder.

When using this diagram on N.G. set bring out and tag #1 and #2 as above.

For F162-FVM with power plug on panel, connect one side of receptacle to R.H. brush holder, and the other side of receptacle to exciter lead T12 at rheostat terminal.

* Should be soldered.

THE LINCOLN ELECTRIC CO.
 Cleveland, Ohio, U.S.A.
 J. Z.
 10-28-89
 18-12-49
 Cap+ 10-12-51P

AUSTRALIA 7-61 CANADA 7-62 FRANCE 8-66

To be filed in STANDARD BOOK of documents to whom issued. Last not be removed by anyone other than the Engineer in Charge. Any deviation from these instructions can be authorized only by written permission from Engineer in Charge.