

IM133-B

May 10, 1957
SAE-300
F-226
Continental
1367; 1368

INSTRUCTION MANUAL IM-133-B

for

TYPE SAE-300

POWERED by the CONTINENTAL F-226 ENGINE

MODELS S-7079 and S-7079-SM

CODE

1367

1368

PARTS LIST FOR WELDER AND ENGINE

THE LINCOLN ELECTRIC COMPANY

Cleveland 17, Ohio

May 10, 1957

This manual covers equipment which is obsolete and no longer in production by The Lincoln Electric Co. Specifications and availability of optional features may have changed.

IA-a CYLINDER & CRANKCASE

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
F600A-620I-A	1	Cylinder and Crankcase Assembly (Stripped)
		Composed of:
		*Not Serviced Separately
		Cylinder and Crankcase
*	1	F600A-620
	1	F600B-378
	1	F600B-338
	1	F600B-336
	1	F600B-339
	1	F600B-339
*	1	F600G-336
*	1	F600G-335
*	2	F600G-325
*	2	F600G-326
*	1	F600G-327
*	1	F600G-328
	1	F600G-206
	1	F600G-207
	1	D600G-217
	1	F600G-208
	1	F400K-210
	12	F600I-235
	6	F600A-245
	1	10EL-227
	1	14HC-215
	2	F600B-242
	5	F600B-247
	1	D600B-305
	1	D600B-217
	6	X-3555
	2	X-3511
	2	X-4038
	2	X-1952
	5	X-19002
	1	X-19004-C
	2	X-19003
	33	X-19889
	1	X-4023
	8	X-4266
	3	X-19006
	2	X-4200
	8	3X-B2B-110
	2	X-100
	5	X-2202
	1	X-2236
	3	X-137-A
*	1	E-600A-215
	4	X-13012

1A-a CYLINDER & CRANKCASE (Continued)

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
F600A-620I-C	1	Cylinder and Crankcase Assembly (with Pistons & Rings) Composed of: 1 F600A-620I-A Cylinder & Crankcase Assy. 6 F600A-467I-E Piston Assembly 6 F600A-26I Ring 6 F600A-262 Ring 6 F600A-260 Ring 6 F600A-360 Ring
F600A-620I-I	1	Cylinder and Crankcase Assembly (With Complete Valve Mechanism) Composed of: 1 F600A-620I-C Cylinder & Crankcase Assy. 6 F600I-229 Valves 6 F600I-238 Valves 12 F600I-232 Springs 12 F600I-234 Retainers 12 I25I-207 Locks 12 Y400I-2IIO Tappet Assembly

1A-b CRANKSHAFT BEARING CAPS

F600B-378	1	Cap, Bearing, Crankshaft (Front)
F600B-338	1	Cap, Bearing, Crankshaft (Intermediate Front)
F600G-336	1	Cap, Bearing, Crankshaft (Intermediate Rear)
F600B-339	1	Cap, Bearing, Crankshaft (Rear)
F600B-247	5	Dowel, Crankshaft Bearing Cap to Cylinder
F600B-242	2	Dowel, Crankshaft Bearing Cap to Cylinder(Front)
I4HC-2I5	1	Dowel, Ring, Crankshaft Bearing Cap to Cylinder
X-3555	6	Screw, Crankshaft Bearing Cap to Cylinder
X-35II	2	Screw, Crankshaft Bearing Cap to Cylinder
3X-B2B-IIO	8	Washer, Plain, Crankshaft Bearing Cap to Cylinder Screw I/2
6SH-I00	3	Wire, Lock, Crankshaft Bearing Cap to Cylinder Screw (Front, Intermediate Rear) No. 19 x 10
X-I333-B	1	Wire, Lock, Crankshaft Bearing Cap to Cylinder Screw (Rear-Intermediate)

1A-c FILLER BLOCKS

D600B-340	1	Block, Filler (Front)
X-3I64	2	Screw, Filler Block to Crankcase (Front)
X-297-A	2	Washer, Lock, Filler Block to Crankcase Screw 5/16
D600B-2I4	1	Cork, Filler Block to Oil Pan (Front)
D600B-406	1	Block, Filler (Rear)
X-2958	2	Screw, Filler Block to Crankcase (Rear)
X-297-A	2	Washer, Lock, Filler Block to Crankcase Screw 5/16
D600B-2I4	1	Cork, Filler Block to Oil Pan (Rear)
D600B-2I7	2	Cork, Filler Block to Crankshaft (Rear)
D600B-305	1	Guard, Oil, Crankshaft Bearing (Rear)

1A-d HOLE COVERS & PLUGS

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
16EB-202	1	Cover, Fuel Pump Hole
X-1952	2	Stud, Fuel Pump Hole Cover to Cylinder
X-1801-E	2	Nut, Fuel Pump Hole Cover to Cylinder Stud
X-202	2	Washer, Lock, Fuel Pump Hole Cover to Cylinder Stud
16EV-201	1	Gasket, Fuel Pump Hole Cover to Cylinder
X-3236	2	Screw, Plugging Air Cleaner Stud Hole
X-14192	2	Washer, Copper, Air Cleaner Stud Hole Plugging Screw
6AB-107	3	Screw, Plugging, Generator Bracket Stud Hole
X-14134	3	Washer, Copper, Generator Bracket Stud Hole Plugging Screw
X-2236	1	Plug, Hubbard, Camshaft Bushing (Rear)
X-2207	5	Plug, Special, Cylinder Core Hole
X-137-A	2	Plug, Pipe, Crankcase Oil Header 1/4 (Countersunk-Special)

1B-a END PLATE (Rear)

L-2678-I	1	Plate, End (Rear) (No Auxiliary Generator)
F600B-200	2	Screw, Dowel, End Plate to Crankcase
S-8190	2	Gussets
T-8838	2	Speed Nut
T-8833-I	3	Screw, End Plate to Engine

1B-b STARTER HOLE COVER

S-8188	1	Starter Hole Cover
S-7438	1	Starter Spacer
3/8-16	2	Screw, Hex Head Cap, 1/2" long
E-106-A-4	2	Lockwasher

2A-a CYLINDER HEAD

F226A-411	1	Head, Cylinder
X-19889	33	Stud, Cylinder Head to Cylinder
3X-X-18231	31	Nut, Cylinder Head to Cylinder Stud
3X-UB-110	32	Washer, Plain, Cylinder Head to Cylinder Stud
X-14189	1	Washer, Plain, Cylinder Head to Cylinder Stud
F600A-536	1	Gasket, Cylinder Head to Cylinder

2A-b CYLINDER HEAD PLUGS

6AB-107	1	Screw, Plugging, Distributor Adapter Stud Hole
X-14134	1	Washer, Copper, Distributor Adapter Stud Hole Plugging Screw
C143M-202	1	Plug, Special, Distributor Drive Hole
X-101-B	1	Plug, Pipe, Cylinder Head Thermometer Hole 1/2 (Countersunk)

3A-a CRANKSHAFT

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
F600C-606	1	Crankshaft
F600C-214	1	Plate, Thrust, Crankshaft
D600C-206	1	Spacer, Crankshaft, Thrust Plate
F600C-216	1	Washer, Thrust, Crankshaft (Rear)
F600C-220	1	Washer, Thrust, Crankshaft (Front)
IOEC-204	4	Shim, Thrust, Crankshaft .002
IOEC-205	7	Shim, Thrust, Crankshaft .008
A600C-204	1	Thrower, Oil, Crankshaft
F600-O-206	1	Jaw, Starting, Crankshaft
F600-O-205	1	Washer, Crankshaft Starting Jaw to Crankshaft

3A-b CRANKSHAFT BEARINGS

F600G-336I	1	Bearing, Main, Crankshaft (Front-Upper and Lower)
F600G-325I	1	Bearing, Main, Crankshaft (Intermediate Front-Upper and Lower)
F600G-325I	1	Bearing, Main, Crankshaft (Intermediate Rear - Upper and Lower)
F600G-327I	1	Bearing, Main, Crankshaft (Rear--Upper and Lower)

4A-a CONNECTING RODS

F226D-4007	3	Rod Assembly, Connecting (Cylinder 1-3-5) Composed of: *Not Serviced Separately
		* 1 F226D-4000 Rod and Cap
		2 F600G-355 Bearings
		1 F400G-211 Bushing
		2 C600D-206 Bolts
		2 X-18188 Nuts
F226D-300I	3	Rod Assembly, Connecting (Cylinder 2-4-6) Composed of: *Not Serviced Separately
		* 1 F226D-3000 Rod and Cap
		2 F600G-354 Bearings
		1 F400G-211 Bushing
		2 C600D-206 Bolts
		2 X-18188 Nuts
C60D-206	12	Bolt, Connecting Rod
X-18188	12	Nut, Connecting Rod Bolt
X-60I	12	Pin, Cotter, Connecting Rod Bolt

4A-b CONNECTING ROD BEARINGS

F600G-355	6	Bearing, Connecting Rod (1-3-5 Connecting Rods)
F600G-354	6	Bearing, Connecting Rod (2-4-6 Connecting Rods)

5A-a PISTONS

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
F600A-4671-A	6	Piston Assembly (Complete) Composed of: 1 F600A-467 Piston 1 W5A-202 Pin 2 X-7011 Rings 1 F600A-261 Ring 1 F600A-262 Ring 1 F600A-260 Ring 1 F600A-360 Ring
F600A-4671-E	6	Piston Assembly Composed of: 1 F600A-467 Piston 1 W5A-202 Pin 2 X-7011 Rings
F600A-4671-ESF	6	Piston Assembly (Semi-Finished) Composed of: 1 F600A-467-SF Piston 1 W5A-202 Pin 2 X-7011 Rings
F600A-467	6	Piston
F600A-467-SF	6	Piston (Semi-Finished)

5A-b PISTON RINGS

F600A-261	6	Ring, Piston (Top Groove) Plain
F600A-262	6	Ring, Piston (Second Groove) Taper Face
F600A-260	6	Ring, Piston (Bottom Groove) Hi F Super Drain Oil
F600A-360	6	Ring, Piston (Third Groove) Super Compression

5A-c PISTON PINS

W5A-202	6	Pin, Piston
X-7011	12	Ring, Retaining, Piston Pin
F400G-211	6	Bushing, Piston Pin

6A-a CAMSHAFT

F6001-412	1	Camshaft
D6001-259	1	Plate, Thrust, Camshaft
X-3362	1	Screw, Camshaft Thrust Plate to Crankcase
X-270	1	Washer, Lock, Camshaft Thrust Plate to Crankcase Screw
X-19003	2	Stud, Camshaft Thrust Plate to Crankcase
X-1802-G	2	Nut, Camshaft Thrust Plate to Crankcase Stud
X-203	2	Washer, Lock, Camshaft Thrust Plate to Crankcase Stud

6A-b CAMSHAFT BUSHINGS

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
F600G-295	1	Bushing, Camshaft (Front)
F600G-207	1	Bushing, Camshaft (Intermediate Front)
D600G-217	1	Bushing, Camshaft (Intermediate Rear)
F600G-208	1	Bushing, Camshaft (Rear)

6A-c TIMING GEARS

F400H-310	1	Gear, Timing Crankshaft
X-506	1	Key, Camshaft Timing Gear to Camshaft (Woodruff No.6)
X-18156	1	Nut, Camshaft Timing Gear to Camshaft
PYC-202	1	Lock, Nut, Camshaft Timing Gear to Camshaft Nut
D600H-300	1	Gear, Timing, Crankshaft
X-511	1	Key, Crankshaft Timing Gear to Crankshaft (Woodruff No. 15)
F600L-203	1	Plate, Oiler, Timing Gear

7A-a GEAR COVER

F600B-4163	1	Cover Assembly, Gear Composed of:	*Not Serviced Separately
		* 1 F600B-416	Cover
		1 A600L-202	Seal
8TC-200	1	Dowel, Ring, Gear Cover to Crankcase	
X-3295	1	Screw, Gear Cover to Cylinder	
X-203	1	Washer, Lock, Gear Cover to Cylinder	
X-3368	1	Screw, Gear Cover to Crankcase (at Ring Dowel)	
B2K-134	1	Washer, Plain, Gear Cover to Crankcase Screw	
X-3295	1	Screw, Gear Cover to Filler Block	
X-3299	3	Screw, Gear Cover to Filler Block	
X-14134	2	Washer, Lock, Gear Cover to Filler Block Screw (Upper Holes)	
X-203	2	Washer, Copper, Gear Cover to Filler Block Screw (Lower Holes)	
D600B-221	1	Screw, Dowel, Gear Cover to End Plate	
X-1803-H	1	Nut, Gear Cover to End Plate Dowel Screw	
B2K-134	1	Washer, Plain, Gear Cover to End Plate Dowel Screw	
X-4200	2	Stud, Gear Cover to Cylinder (Upper Holes)	
X-1802-G	2	Nut, Gear Cover to Cylinder Stud	
X-203	2	Washer, Lock, Gear Cover to Cylinder Stud	
F600B-357	1	Gasket, Gear Cover to End Plate	
A600L-202	1	Seal, Oil, Crankshaft Bearing (Front)	

7A-b CRANKCASE END PLATE (FRONT)

F600B-356	1	Plate, End, Crankcase (Front)
D600B-203	1	Dowel, Crankcase End Plate to Crankcase
NL-194	1	Screw, Crankcase End Plate Cylinder

7A-b CRANKCASE END PLATE - FRONT (Continued)

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
X-203	1	Washer, Lock, Crankcase End Plate to Cylinder Screw
D600B-339	1	Gasket, Crankcase End Plate to Crankcase

8A-a VALVES AND ASSOCIATED PARTS

F6001-229	6	Valve, Intake
F6001-238	6	Valve, Exhaust
* F600A-255	6	Inserts, Valve Seat (Exhaust) .010 oversize
F6001-235	12	Guide, Valve Stem
F6001-232	12	Spring, Valve (Intake and Exhaust)
F6001-234	12	Retainer, Valve Spring
I25I-207	12	Lock, Retainer, Valve Spring

8A-b VALVE TAPPETS

Y4001-2110	12	Tappet Assembly, Valve Composed of: 1 Y4001-211 Tappet 1 Y4001-213 Screw 1 Y4001-212 Nut
Y4001-211	12	Tappet, Valve
Y4001-213	12	Screw, Adjusting, Valve Tappet
Y4001-212	12	Nut, Lock, Valve Tappet, Adjusting Screw

9A-b VALVE TAPPET CHAMBER COVER

F600A-3670	1	Cover Assembly, Valve Tappet Chamber Composed of: *Not Serviced Separately * 1 F600A-366 Cover * 1 F600A-274 Tube * 1 F600A-275 Baffle
X-4023	1	Stud, Valve Tappet Chamber Cover to Cylinder
X-4038	2	Stud, Valve Tappet Chamber Cover to Cylinder
8FA-208	3	Nut, Valve Tappet Chamber Cover to Cylinder Stud
X-334	3	Gasket, Valve Tappet Chamber Cover to Cylinder Stud
F600A-369	1	Gasket, Valve Tappet Chamber Cover to Cylinder

10A-a OIL PAN

D600B-4010	1	Pan Assembly, Oil Composed of: *Not Serviced Separately * 1 D600B-401 Pan * 4 C400B-233 Reinforcements * 2 D600B-349 Reinforcements * 2 C600B-301 Baffles
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10A-a OIL PAN (Continued)

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
D600B-4010	1	Pan Assembly, Oil Composed of: *Not Serviced Separately
		* 1 F600B-317 Boss
		1 W4B-108 Gasket
		1 W4B-109 Plug
X-3896	18	Screw and Lockwasher Assembly, Oil Pan to Crankcase
		Composed of:
		1 X-3182 Screw
		1 X-202 Washer
D600B-402	2	Gasket, Oil Pan
W4B-109	1	Plug, Drain, Oil Pan
W4B-108	1	Gasket, Oil Pan Drain Plug

11A-a OIL PUMP

D600L-4027	1	Pump Assembly, Oil Composed of:
		1 D600L-4020 Body Assembly
		1 17EL-2001 Cover Assembly
		1 D600L-2120 Screen Assembly
		1 17EL-300 Frame
		1 F218L-204 Shaft
		1 F600H-205 Gear
		1 D600H-216 Gear
		1 F600H-2070 Gear Assembly
		1 BUL-212 Stud
		1 D600L-204 Ring
		1 C400L-228 Spacer
		1 C400L-231 Gasket
		1 17EL-204 Gasket
		6 X-3056 Screws
		6 X-201 Washers
		1 6UH-101 Pin
		1 X-584 Key
D600L-4020	1	Body Assembly, Oil Pump Composed of: *Not Serviced Separately
		* 1 D600L-402 Body
		1 D600G-274 Bushing
X-19004-C	1	Stud Oil Pump Body to Bearing Cap
X-1802-G	1	Nut, Oil Pump Body to Bearing Cap Stud
X-203	1	Washer, Lock, Oil Pump Body to Bearing Cap Stud
F218L-204	1	Shaft, Drive, Oil Pump
D600L-204	1	Ring, Snap, Oil Pump Drive Shaft
F400L-210	1	Bushing, Oil Pump Drive Shaft (in Crankcase)
D600G-274	1	Bushing, Oil Pump Drive Shaft (in Pump Body)
F600H-205	1	Gear, Drive Oil Pump (at Crankshaft)
6UH-101	1	Pin, Oil Pump Drive Gear to Shaft

I1A-a OIL PUMP (Continued)

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
D600H-216	1	Gear, Driver, Oil Pump
X-584	1	Key, Oil Pump Driver Gear to Shaft (Woodruff No. 3)
F600H-2070	1	Gear Assembly, Idler, Oil Pump Composed of: *Not Serviced Separately
		* 1 F600H-207 Gear
		1 F600G-204q Bushing
8UL-212	1	Stud, Oil Pump Idler Gear
F600G-204	1	Bushing, Oil Pump Idler Gear
17EL-2001	1	Cover Assembly, Oil Pump Composed of: *Not Serviced Separately
		* 1 17EL-200 Cover
		* 1 10EL-204 Tube
X-3056	2	Screw, Oil Pump Cover to Body
X-201	2	Washer, Lock, Oil Pump Cover to Body Screw
C400L-231	1	Gasket, Oil Pump Cover to Body
17EL-300	1	Frame, Oil Pump Strainer Screen
X-3056	4	Screw, Oil Pump Strainer Screen Frame to Cover
X-201	4	Washer, Lock, Oil Pump Strainer Screen Frame to Cover
17EL-204	1	Gasket, Oil Pump Strainer Screen Frame to Cover
C400L-228	1	Spacer, Oil Pump Strainer Screen Frame to Cover
D600L-2120	1	Screen Assembly, Strainer, Oil Pump Composed of: *Not Serviced Separately
		* 1 D600L-212 Screen
		* 1 6VB-119 Wire

I3A-a OIL FILLER

D600L-2270	1	Cap Assembly, Oil Filter Composed of: *Not Serviced Separately
		* 1 D600L-227 Cap
		* 1 D600L-228 Baffle
		* 1 C400L-242 Seal
		* 2 X-14175 Washers
X-12210	1	Nipple, Close, Oil Filler

I3A-b OIL GAUGE ROD

D600L-2170	1	Rod Assembly, Oil Gauge Composed of: *Not Serviced Separately
		* 1 D600L-217 Rod
		* 1 K404L-209 Cover
		1 K404L-210 Felt
K404L-210		Felt, Oil Gauge Rod Cover
10EL-227		Support, Oil Gauge Rod

13A-d OIL PRESSURE RELIEF VALVE

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
15SL-211	1	Valve, Relief, Oil Pressure
F400L-223	1	Spring, Oil Pressure Relief Valve
W5L-213	1	Washer, Adjusting, Oil Pressure Relief Valve
41AL-200		(Used as Required)
41AL-200	1	Plug, Oil Pressure Relief Valve
X-365	1	Gasket, Oil Pressure Relief Valve Plug

13B-a OIL TUBES AND CONNECTIONS

X-8016-9	2	Hose Assembly, Oil Filter
X-12014	2	Elbow, Oil Filter Hose (90°)
X-12166	1	Bushing, Reducing, Oil Filter Inlet Tube to Crankcase
X-5291	1	Ell, Street, Oil Pressure Gauge Tube to Crankcase

14A-a OIL FILTER

FI40L-402	1	Filter Assembly (Fram No. F3)
X-4125	2	Stud, Oil Filter to Cylinder Head
X-1801-E	2	Nut, Oil Filter to Cylinder Head Stud
X-202-B	2	Washer, Lock, Oil Filter to Cylinder Head Stud
B2K-134	2	Washer, Plain, Oil Filter to Cylinder Head Stud
FI40L-225		Element, Oil Filter

14A-b AIR FILTER

M-6984-1	1	Air Filter and Bracket Assembly
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17A-a FLYWHEEL

F226C-4130	1	Flywheel Assembly	
		Composed of:	*Not Serviced Separately
		* 1 F226C-413	Flywheel
		1 8FC-304	Gear
22AC-202	6	Bolt, Flywheel to Crankshaft	
X-18237	6	Nut, Flywheel to Crankshaft Bolt	
1420	6	Washer, Lock, Flywheel to Crankshaft Bolt (Shakeproof)	
T-8906	4	Stud, Coupling	

17A-b RING GEAR

8FC-304	1	Gear, Ring, Flywheel
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19B-a ENGINE LIFTING EQUIPMENT

F226A-204	2	Eye, Lifting, Engine
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19B-b STARTING CRANK

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
S-7430	1	Starting Crank

20A-a MANIFOLD ASSEMBLY

F600E-5071	1	Manifold Assembly, Intake and Exhaust Composed of:
	1	F600E-407 Manifold
	1	F226F-302 Manifold
	1	F600E-210 Sector
	1	F600E-208 Valve
	1	F600E-213 Shaft
	2	F600G-200 Bushings
	1	F600E-212 Gasket
	1	X-3009 Screw
	4	X-4275 Studs
	1	X-19871 Stud
	1	X-1800-C Nut
	1	X-1896 Nut
	4	6EE-100 Nuts
	4	UB-110 Washers
	1	A70K-222 Washer
	1	X-100 Plug
	1	X-110 Plug
	1	YL-118 Plug
	1	F600E-211 Key

20A-b INTAKE MANIFOLD

F226F-302	1	Manifold, Intake
X-100	1	Plug, Pipe, Intake Manifold 1/8 Ext. Head
X-110	1	Plug, Pipe, Intake Manifold (3/8 Countersunk)

20A-c EXHAUST MANIFOLD

F600E-507	1	Manifold, Exhaust
16SE-203	6	Crab, Exhaust and Intake Manifold
X-4266	8	Stud, Exhaust and Intake Manifold to Cylinder
X-19006	3	Stud, Exhaust and Intake Manifold to Cylinder
6EE-100	11	Nut, Exhaust and Intake Manifold to Cylinder Stud (Brass)
X-1375	2	Washer, Plain, Exhaust and Intake Manifold to Cylinder Stud (End Studs)
X-14131	3	Washer, Plain, Exhaust and Intake Manifold to Cylinder Stud (Center Studs)
X-4275	4	Stud, Exhaust to Intake Manifold
6 EE-100	4	Nut, Exhaust to Intake Manifold Stud (Brass)
UB-110	4	Washer, Plain, Exhaust to Intake Manifold Stud

20A-c EXHAUST MANIFOLD (Continued)

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
F600E-212	1	Gasket, Exhaust to Intake Manifold
F600E-300	1	Gasket, Exhaust and Intake Manifold to Cylinder
6YL-118	1	Plug, Pipe, Exhaust Manifold
S-7348	1	Exhaust Pipe Assembly

20A-d HEAT CONTROLS

F600E-208	1	Valve, Exhaust Manifold Heat Control
F600E-213	1	Shaft, Exhaust Manifold Heat Control Valve
F600G-200	2	Bushing, Exhaust Manifold Heat Control Valve Shaft
F600E-210	1	Sector, Exhaust Manifold Heat Control Valve
X-3009	1	Screw, Exhaust Manifold Heat Control Valve Sector Clamp
X-1896	1	Nut, Exhaust Manifold Heat Control Valve Sector Clamp Screw
X-19871	1	Stud, Exhaust Manifold Heat Control Valve Sector to Manifold
X-1800-C	1	Nut, Exhaust Manifold Heat Control Valve Sector to Manifold
A70K-222	1	Washer, Plain, Exhaust Manifold Heat Control Valve Sector to Manifold Stud
F600E-211	1	Key, Exhaust Manifold Heat Control Valve Sector to Shaft

21A-a CARBURETOR

M-7033	1	Carburetor (see 3408 pages 1-2 for component parts)
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21A-b VALVE BOX

S-7528	1	Valve Box Assembly Composed of:
	1	M-6809 Valve Box
	1	T-9095 Shaft
	1	T-9094 Lever
	1	No. 1 Groove Pin
	1	S-7078 Butterfly
	2	8-32 Screws, Round Head 5/16" long
	2	T-9093 Lockwashers
	1	T-9092 Bumper Spring
	1	T-9091 Screw, Bumper Spring
	1	3/8-24 Nut, Hex Head Jam
S-8178	1	Tube, Valve Box to Manifold
S-7531	2	Male Elbow
T-8606	1	Drain Pipe
3/8 ST'd.	2	Street Ell

21A-b VALVE BOX Continued

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
T-9165	2	Stud, Box to Carburetor
3/8"-16	2	Nut, Hex
T-9183	2	Washer
S-7526	2	Gasket

21A-c CARBURETOR CONTROLS

S-2567	1	Throttle Spring
S-7525	1	Choke Rod Assembly
T-7894-3	1	Throttle Spring Rod

24A-a GAS TANK

L-2643	1	Gas Tank Assembly
S-8000	1	Filler Pipe Cap
S-6185	1	Gas Strainer
		Including:
	1	S-6185-1 Glass Bowl
	1	S-6185-2 Screen
	1	S-6185-3 Gasket

24A-b LINES AND FITTINGS

S-4893-3	1	Gas Line
T-8644	1	Connector
T-4169	1	Clamp
10-24	1	Screw 1/2" long
10-24	1	Nut
E-106-A-1	1	Lockwasher
T-9060	1	Clamp Washer
T-8645	1	Elbow

25A-a GOVERNOR

F226S-4080	1	Governor Assembly (Monarch No. 5CM-A1004)
X-3283	1	Screw, Governor to Gear Cover (Upper)
X-318	1	Gasket, Governor to Gear Cover Screw
X-3295	1	Screw, Governor to Gear Cover (Lower)
X-203	1	Washer, Lock, Governor to Gear Cover Screw
F400S-200	1	Gasket, Governor to Gear Cover
F400S-201	1	Plate, Governor Flange
F400S-202	1	Gasket, Governor Flange Plate
F600H-219	1	Gear, Governor

25A-b GOVERNOR CONTROLS

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
T-9113	1	Governor Rod
T-8624	2	Ball Sockets
1/4-28	4	Hex Nuts
E-106-A-2	2	Lockwashers

26A-a WATER PUMP

F400K-40410	1	Pump Assembly, Water (Complete)
		Composed of:
	1	F400K-404 Body
	1	Y400K-3351 Support Assembly
	1	F162K-232 Hub
	1	12AK-203 Flange
	1	Y400K-332 Impeller
	1	A244K-206 Shaft
	1	Y400K-3330 Seal Assembly
	2	X-13073 Bearings
	1	Y400K-236 Spacer
	1	F600K-272 Ring
	1	F600K-273 Retainer
	1	Y400K-234 Gasket
	1	X-3054-C Screw
	1	F600K-266 Screw
	1	X-1800-C Screw
	2	JS-108 Screws
	3	X-19098 Studs
	3	X-18158 Nuts
	1	X-18053-B Nut
	3	X-297 Washers
	1	X-270 Washer
	2	X-201 Washers
	1	X-599-D Key
	2	8UK-205 Locks
	1	X-102 Plug
	1	X-940 Fitting
F400K-404	1	Body, Water Pump
X-3939	3	Screw, Water Pump Body to Cylinder
X-3063	1	Screw, Water Pump Body to Cylinder
X-203	3	Washer, Lock, Water Pump Body to Cylinder Screw
X-14134	1	Washer, Copper, Water Pump Body to Cylinder Screw (Lower Center)
F400K-340	1	Gasket, Water Pump to Cylinder
X-102	1	Plug, Pipe, Water Pump Body
X-940	1	Fitting, Grease, Water Pump Body
Y400K-3351	1	Support Assembly, Water Pump Drive Shaft
		Composed of: *Not Serviced Separately
	1	Y400K-335 Support
	1	D600G-283 Bushing

26A-a WATER PUMP Continued

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
X-19098	3	Stud, Water Pump Drive Shaft Support to Body
X-18158	3	Nut, Water Pump Drive Shaft Support to Body Stud
X-297	3	Washer, Lock, Water Pump Drive Shaft Support to Body Stud
Y400K-234	1	Gasket, Water Pump Drive Shaft Support to Body
Y400K-332	1	Impeller, Water Pump
X-3054-C	1	Screw, Set, Water Pump Impeller to Shaft
A244K-206	1	Shaft, Drive Water Pump
Y400K-3330	1	Seal, Assembly, Water Pump
D600G-283	1	Bushing, Water Pump Drive Shaft (In Support)
X-13073	2	Bearing, Ball, Water Pump Drive Shaft
Y400K-236	1	Spacer, Water Pump Bearing (Between Bearings)
F600K-272	1	Ring, Snap, Retaining, Water Pump Bearing
F600K-273	1	Retainer, Water Pump Bearing Retaining Snap Ring to Shaft
F600K-266	1	Screw, Set, Water Pump Bearing
X-1800-C	1	Nut, Lock, Water Pump Bearing Set Screw

27A-b FAN HUB

F162K-232	1	Hub, Fan
X-599-D	1	Key, Fan Hub to Water Pump Shaft (Woodruff No.5)
X-18053-B	1	Nut, Fan Hub to Water Pump Shaft
X-270	1	Washer, Lock, Fan Hub to Water Pump Shaft
12AK-203	1	Flange, Adjusting, Fan Belt
JS-108	2	Screws, Fan Belt Adjusting Flange to Fan Hub
X-201	2	Washer, Lock, Fan Belt Adjusting Flange to Fan Hub
8UK-205	2	Lock, Nut, Fan Belt Adjusting Flange to Fan Hub

27A-d FAN DRIVE PULLEY & BELT

F140K-302	1	Pulley, Fan Drive (On Crankshaft)
C400K-218	1	Key, Fan Drive Pulley to Crankshaft
C400K-217	1	Plug, Keyway, Fan Drive Pulley
D600K-232	1	Seal, Fan Drive Pulley
S-8075	1	Belt (Hand-Start)
S-8074	1	Belt (Battery-Start)

27A-e FAN

M-7035	1	Fan Blade Assembly
5/16-18	4	Hex Head Cap Screw 3/4" long
E-106-A-3	4	Lockwasher

28A-a CYLINDER WATER CONNECTIONS

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
F600K-385	1	Elbow, Outlet, Cylinder Water
X-4106	2	Stud, Cylinder Water Outlet Elbow to Head
X-1801-E	2	Nut, Cylinder Water Outlet Elbow to Head Stud
X-202	2	Washer, Lock, Cylinder Water Outlet Elbow to Head Stud
C400K-215	1	Gasket, Cylinder Water Outlet Elbow to Head
X-101	1	Plug, Pipe, Cylinder Water Outlet Elbow (1/4 Ext. Head)
X-1015	1	Cock, Drain, Cylinder Water

28A-b THERMOSTAT

F218K-304	1	Thermostat
F218K-202	1	Adapter, Thermostat

28A-c WATER TUBES & CONNECTIONS

F226K-2360	1	Tube Assembly, Water Pump to Cylinder Outlet Elbow Composed of: *Not Serviced Separately * 1 F226K-236 Tube * 2 X-5074 Nuts
X-5309	1	Fitting, Straight, Water Pump to Outlet Elbow Tube
X-5306	1	Elbow, Cylinder Water Outlet Elbow to Tube
X-12428	1	Bushing, Reducing, Cylinder Water Outlet Elbow

29A-a RADIATOR

T-9185	1	Radiator
1/2-20	2	Hex Nuts
E-106-A-5	2	Lockwasher
1-3/8" O.D.	2	Washer
1/8" x 1"	1	Anti-Squeak Hood Ledge, 28" long
S-8351	1	Radiator Cap

29A-b HOSE & CLAMPS

M-6993	1	Top Hose
T-9003	1	Hose Bushing (Rad. End)
T-9168	1	Hose Bushing (Eng. End)
T-9138	1	Hose Clamp (Top)
T-9139	1	Hose Clamp (Top)
M-6591	1	Lower Hose
S-7464-2	1	Lower Hose Pipe
T-9184	1	Hose (Lower, 2" long)
T-8917	3	Lower Hose Clamp
T-10004	1	Lower Hose Clamp

30A-a MAGNETO & SWITCH

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
F600M-240	1	Magneto (Fairbanks FMH6B 25°) (For Parts See Instructions 2822C)
X-3299	1	Screw, Magneto to Gear Cover (Lower)
X-226	1	Washer, Lock, Magneto to Gear Cover Screw (Lower)
F400M-210	1	Washer, Plain, Magneto to Gear Cover Screw (Lower)
F140M-232	1	Gasket, Magneto to Spacer
F600M-225	1	Spacer, Magneto to Gear Cover
F140M-232	1	Gasket, Magneto Spacer to Gear Cover
S-8020	1	Ground Switch
T-9061	1	Ground Switch Plate

30A-d SPARK PLUGS

S-8159	6	Plug, Spark (Champion No. 8 Com H)
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32A-a IGNITION WIRES (SECONDARY CIRCUIT)

S-7518-5	1	Wire, Ignition (Magneto to Cylinder No. 1)
S-7518-12	1	Wire, Ignition (Magneto to Cylinder No. 2)
S-7518-8	1	Wire, Ignition (Magneto to Cylinder No. 3)
S-7518-8	1	Wire, Ignition (Magneto to Cylinder No. 4)
HW300-38	1	Wire, Ignition (Magneto to Cylinder No. 5)
HW300-45	1	Wire, Ignition (Magneto to Cylinder No. 6)
21RM-216	2	Grommet, Ignition Cable
Y91M-200	2	Bracket, Ignition Cable Grommet Support
Y91M-246	6	Nipple, Rubber, Ignition Wires (at Magneto)
F186M-4010	1	Tube Assembly, Ignition Cable
		Composed of: *Not Serviced Separately
		* 1 F186M-401 Tube
		* 1 F186M-204 Bracket
		* 1 F186M-205 Bracket

33A-a ENGINE REGULATOR

		Composed of:	For Parts List See IM-117
L-2299	1	Engine Regulator	
S-8205-1	1	Air Line	
T-9076	1	Air Line Connector	
T-9116	1	Compression Elbow (at Manifold)	
T-9115	1	Tube Nut (at Manifold)	

34A-a BASE

L-2679	1	Complete Base Assembly
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34A-b ROOF & DOORS

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
M-6466	1	Rear Door Support Assembly
M-6491	1	Rear Door Assembly
L-2505	1	Roof
M-6527	4	Side Door Assembly
S-4828-A	8	Hood Fastener With Drive Screws
T-8818	2	Roof Hook, Short

35B-b INSTRUMENTS

F162L-215	1	Gauge, Oil Pressure (60 lb. Rochester)
S-7514	1	Ammeter (Battery Start Only)
M-6955	1	Ammeter Panel (Battery Start Only)

39A-a NAME PLATES & DECALS

M-5249-1	1	"Lincoln" Decal
T-8293	1	Welder Name Plate (Specity Code & Serial Number)

40A-a COUPLING & FAN

M-6729	1	Welder Fan
E-262-12	1	Key
SL-9627	1	Coupling Assembly (Includes)
T-9049	4	Outer Locking Clips
T-9048	4	Inner Locking Clips
T-8833-2	8	Screw, Disc to Hub
T-8833-1	8	Screw, Disc to Flywheel

41A-a GENERATOR

M-6528-2	1	Generator Frame and Connecting Ring Assembly
T-5163	4	Main Pole Pieces
FKL-405-D	2	# Shunt Coils
FKL-120-D	2	# Series Coils
S-4584	4	# Interpole Coils and Pieces
S-4584-1	4	Interpole Coil
S-4573-B	4	Pole Piece

41A-b ARMATURE

L-2667-3	1	Wound Armature
		Composed of:
	1	FKL 37.4H # Set Armature Coils
	1	M-6979-1 Commutator
	1	M-7016 Shaft
	1	S-6447-1 Lamination Assembly
310	1	Bearing

Codes 1367 and 1368.

42A-a EXCITER

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
FDW-24.26A	1	#Exciter Armature Complete
T-5345	1	Sleeve Collar
T-6625-1	1	Exciter Jam Nut
FDW-5E	1 pr.	#Field Coils
T-3980-1	2	Pole Pieces
5/16"-18	4	Hex Head Cap Screws, 1" long

42A-b BRACKET & ROCKER

M-5585	1	Bracket, Exciter
1/2"-13	4	Screw, 1-3/4" long
S-5960	1	Rocker
5/16"-18	1	Round Head Screw, 2" long
E-106-A-2	1	Lockwasher
L-2594	1	End Shell
1/4"-20	2	Screws, 1/2" long, Thread Cutting No. 1

43A-a BRUSHHOLDERS

S-6531-A	2	Exciter Brushholder
T-6887	2	Spring
M-6964-10A	4	Generator Brushholder
		Composed of: (Each)
		1 M-6963-6 Stud
		1 S-6916-2 Retainer
		1 M-6303-4 Plate
		2 T-8495 Spring & Clip Ass'y.
		1 T-1450 Insulating Tube
		2 T-4479 Insulating Washer
		1 T-2414 Washer, Plain (Small hole)
		1 T-9020 Washer, Plain (Large hole)
		1 5/16-18 Rd.Hd.Machine Screw 1/2" long
		2 T-10107-1 1/4-20x3/8" Sems Rd.Hd.Machine Screw
		1 T-10106-1 3/8-16x3/4" Sems Hex Hd.Cap Screw
		1 E-106-A4 Lockwasher
		1 M-6304-2B Retainer Ass'y.
		1 5/16-18" Hex Hd.Cap Screw 1/2" long

43A-b BRUSHES

T-344	8	Generator Brush
T-6968	2	Exciter Brush

44A-a OUTPUT STUDS

T-6931-2	2	Studs
1/2"-13	6	Hex Jam Nut

Codes 1367 and 1368.

44A-a OUTPUT STUDS - Continued

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
T-2719	4	Insulating Washer
1-1/8" O.D.	4	Washer
T-4122	2	Insulating Bushing
E-106-A-5	2	Lockwasher
T-3960	2	Wing Nuts
T-3962	1	"To Work" Marker
T-3961	1	"Electrode" Marker
T-8973	4	Rivet

45A-a DUST CAPS

S-7800	1	Inner Dust Cap
S-7799	1	Outer Dust Cap
5/16"-18	4	Hex Head Cap Screw, 3-1/2" long
T-3633-11	2	Gasket
T-7599-1	1	Grease Pipe
1/8" St'd.	1	Pipe Cap

50A-a CONTROL BOX & MAIN PARTS

G-604-P	1	Control Box Complete with Controls (includes entire Section 50)
L-2375-A	1	Case
L-2294	1	Case Sub Panel
S-7588-1	1	Receptacle
S-7587-1	1	Plug
L-2036-A	1	Reactor
M-5090-C	1	Rheostat
M-6252	1	Reversing Switch
S-6828	1	Reversing Switch Bracket
T-8280	1	Resistance Tube and Mt'g. Washer
10-24	1	Stove Bolt, 4-1/2" long
E-106-A-1	1	Lockwasher

50A-b HANDLES & DIAL PLATES

S-8158	1	Rheostat Handle
T-5418	1	Reversing Switch Handle
S-7995-3	1	Reactor Handle Assembly*
1/4"-20	1	Set Screw, Dog-Point, 1/4" long
M-5735	1	Rheostat Dial Plate
S-6824	1	Reversing Switch Plate
M-6484	1	Reactor Dial Plate
T-8973	4	Hollow Rivet

*Also order Instructions S-6328

50A-c REACTOR BRUSHHOLDER

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
M-6277	1	Brushholder Assembly Composed of:
		1 M-6264 Brushholder
		2 5/16"-18 Screw (Clamp to Shaft)
		4 T-7494 Contacts
		4 10-24 Screw, 3/8" long
		4 E-106-A-1 Lockwasher
		4 T-6985 Coil Spring
		1 T-8219 Insulating Tube
		1 T-8218 Shaft
S-7297	1	Reactor Spring Clip
T-6367	1	Washer
T-8236	1	Spring

50A-d REACTOR BRUSHHOLDER STUD

T-7852	1	Stud Assembly Composed of:
		1 T-9107 Stud
		1 T-7850 Bracket
		1 T-7849 Fibre Stop
		1 T-5411 Fibre Bushing
		2 T-2719 Insulating Washer
		1 1-1/16" O.D. Plain Washer
		1 E-106-A-5 Lockwasher
		1 1/2"-13 Hex Jam Nut
		1 T-8485 Plain Washer

51A-a BATTERY START*

M-7039	1	Complete Kit with Instructions to Convert from "Crank-Start" to "Battery-Start"
		Composed of:
		1 T-8622 Push Button
		1 S-8074 Fan Belt
		1 S-7429 Battery Clamp
		1 M-6532 Battery Hanger
		1 Battery
		M-6583-1 Export
		M-6583-2 Domestic
		1 S-7514 Ammeter
		1 M-6955 Ammeter Panel
		1 M-6589 Starter
		1 M-6961 Generator
		1 S-8071 Generator Adj. Strap
		1 S-8140 Generator Mt'g. Bracket

51A-a BATTERY START* - Continued

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
M-7039	1	Complete Kit with Instructions to Convert from "Crank-Start" to "Battery Start" Composed of: 1 M-7041-3 Wiring Harness 1 S-8002 Ground Strap 1 S-5938-P Lead (Negative to Start) 1 S-7916-19 Lead (Generator to Ammeter) Plus All Necessary Screws, Nuts and Washers

52A-a ANTI-FROST KIT

T-9047	1	"Anti-Frost" Kit with instructions.
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SERVICE

The Lincoln Electric Company has Authorized Field Service Shops in all industrial centers in the United States, Canada, Cuba, and Hawaii. These shops stock GENUINE Lincoln Replacement Parts and have Factory Trained Men to service your welder. They also offer Preventive Service and Welder Rental to "Keep Them Welding". The Lincoln FSS Exchange Plans, extended only through the FSS, give you factory built and guaranteed STATORS, ARMATURES and other parts at material savings over rewinding.

HOW TO ORDER REPLACEMENT PARTS

In ordering replacement parts, refer to the parts list on the preceding pages to get correct part name and number. From the name plate of the welder, get the serial number, code number, and name or model. Order parts directly from your nearest Authorized Field Service Shop, Lincoln Representative, or write the service department located at the factory in Cleveland. All Authorized Field Service Shops and branch offices can quote current prices for these replacement parts. (The "Lincoln Service Directory" listing these shops geographically is available on request.)

- BUY ONLY GENUINE LINCOLN REPLACEMENT PARTS -

GUARANTEED

The Lincoln Electric Company, the Seller, warrants all new equipment except engines and accessories thereon against defects in workmanship and material for a period of one year from date of shipment, provided the equipment has been properly cared for, and operated under normal conditions. Engines and engine accessories are warranted free from defects for a period of ninety days from the date of shipment.

If the Buyer gives the Seller written notice of any defects in equipment or electrode within any period of warranty and the Seller's inspection confirms the existence of such defects, then the Seller shall correct the defect or defects at its option, either by repair or replacement F. O. B. its own factory or other place as designated by the Seller.

No expense, liability or responsibility will be assumed by the Seller for repairs made outside of the Seller's factory without written authority from the Seller.

The Seller shall not be liable for any consequential damages in case of any failure to meet the conditions of any warranty. The liability of the Seller arising out of the supplying of said equipment or electrode or its use by the Buyer, whether on warranties or otherwise, shall not in any case exceed the cost of correcting defects in the equipment or replacing defective electrode in accordance with the above guarantee. Upon the expiration of any period of warranty, all such liability shall terminate.

The foregoing guarantees and remedies are exclusive and there are no other guarantees or warranties either expressed or implied.