

PARTS MANUAL

Model

EH64 Engine

Welder Application
(Onan Performer OHV220)

PUB-EP220W
Rev. 10/03

Robin
SUBARU

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HOW TO USE THIS MANUAL

Robin engines are identified by MODEL, SPECIFICATION, and CODE NUMBER. For each model there may be many different versions called specifications. Each specification will be unique in some way. The difference may only be the paint color or it may have a different type of PTO or some other significant difference.

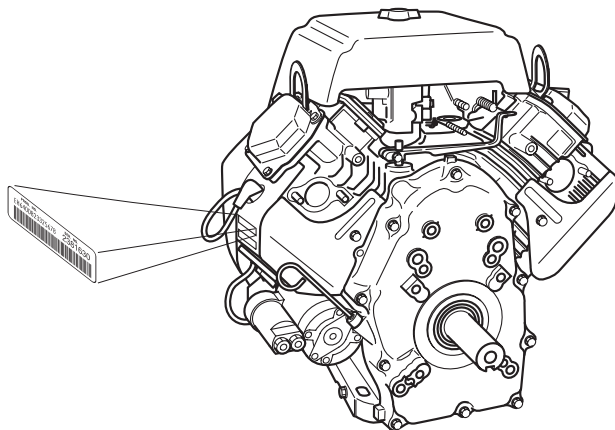
In order to identify the correct service part number, it is important to confirm the specification and code numbers for your engine. The specification and code number together are known as the PRODUCT NUMBER.

All Robin 4 cycle engines have a Product Number label similar to the label illustrated below.

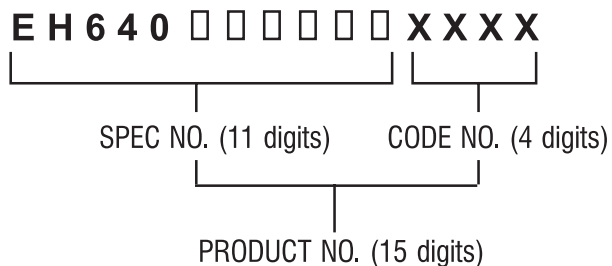
PRODUCT NUMBER LABEL



PRODUCT NUMBER LABEL LOCATION



The Product Number Label has a 15 digit alphanumeric string that consists of the SPECIFICATION (SPEC) number (11 digits) and the CODE number (4 digits). Please note the illustration below:



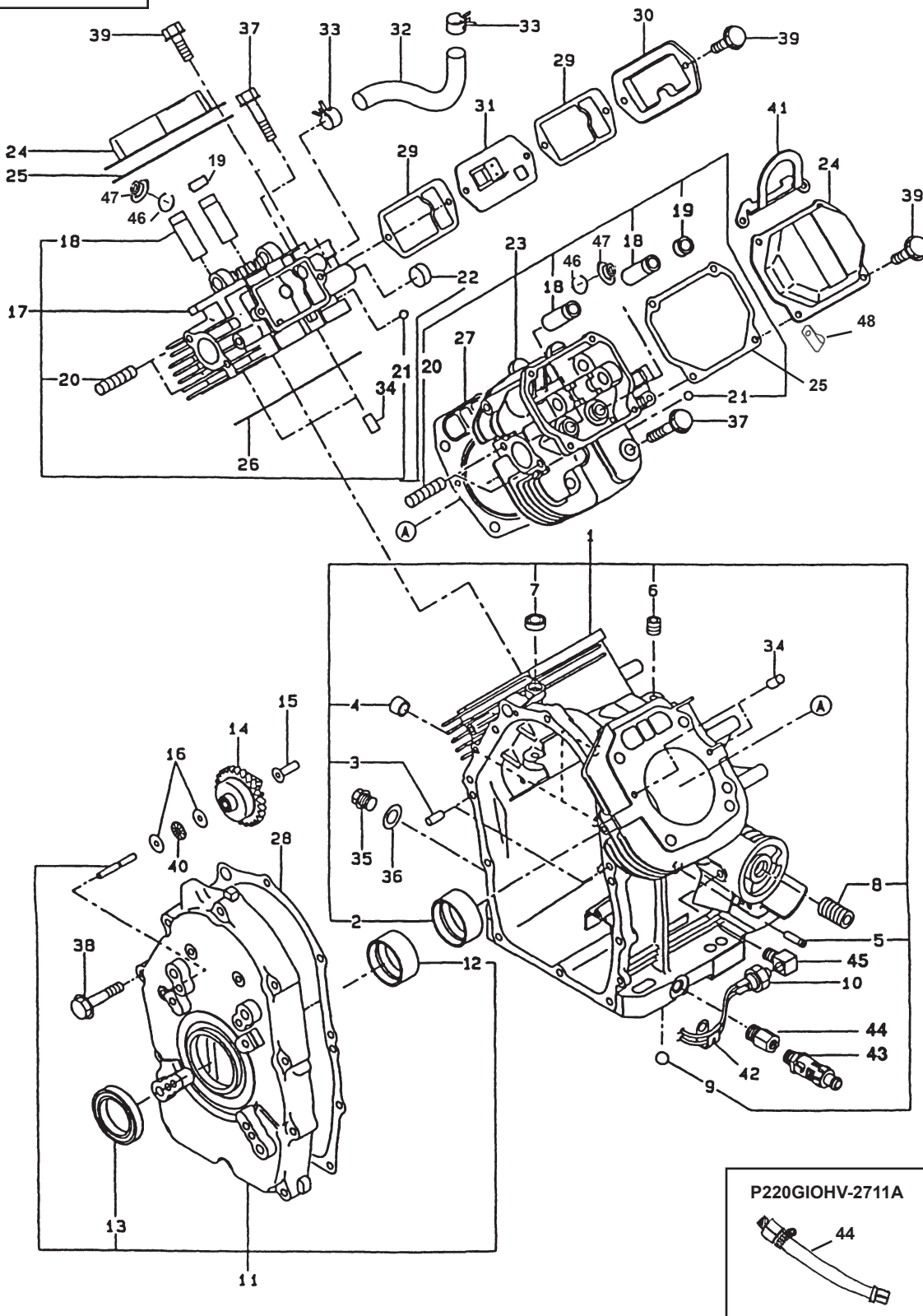
GROUP INDEX

Group Name	Page
CRANKCASE GROUP	6
CRANKSHAFT GROUP	10
INTAKE and EXHAUST GROUP	12
GOVERNOR GROUP	14
COOLING and STARTING GROUP	16
FUEL, LUBRICANT GROUP	18
CARBURETOR	20
FLYWHEEL and STARTER GROUP	22
STARTER COMPONENTS	24
APPENDIX A - Cylinder head & Valve guide change	26
APPENDIX B - Governor spring and rod positions	27

DESCRIPTION	ROBIN Engine Specification	ONAN Engine Specification
MILLER HOBART	EH650DB2322	P220GIOHV-786A
MILLER BOBCAT	EH650DB2341	P220GIOHV-2252A
MILLER TRAILBLAZER	EH650DB2390	P220GIOHV-2711A
LINCOLN ELECTRIC	EH650DB2332	P220GIOHV-1145A

SECTION 1 CRANKCASE GROUP

FIG. 100



SECTION 1 CRANKCASE GROUP

REF	ROBIN PART NUMBER	DESCRIPTION	QTY	REMARKS	ONAN PN
1	263-10102-B1	CRANCASE CP	1		187-6000
2	263-15802-03	MAIN BEARING	1	STD	
2	263-15803-03	MAIN BEARING	1	0.25mm Undersized	
2	263-15804-03	MAIN BEARING	1	0.50mm Undersized	
3	X31-00800-80	DOWEL PIN	2		
4	142-55601-03	PIPE	2		187-6003
5	159-65401-03	PIPE, PULSE	1		
6	263-15911-A1	BLIND PLUG	1		
7	044-00800-10	OIL SEAL	1		187-6006
8	263-15901-03	UNION	1		187-6007
9	045-01200-10	STEEL BALL	1		187-6008
10	263-76001-A1	OIL PRESSURE SWITCH	1		187-6170
11	263-11103-C0	MAIN BEARING COVER, AY	1		
12	263-15802-03	MAIN BEARING	1	STD	
12	263-15803-03	MAIN BEARING	1	0.25mm Undersized	
12	263-15804-03	MAIN BEARING	1	0.50mm Undersized	
13	044-04200-30	OIL SEAL	1		187-6172
14	263-45001-B1	GOVERNOR GEAR, CP	1		
15	263-41901-03	GOVERNOR SLEEVE	1		187-6011
16	263-46214-A3	WASHER	2		187-6012
17	263-13001-21	CYLINDER HEAD 1, CP	1	See Appendix A	187-6013
18	263-14211-03	VALVE GUIDE	4		187-6014
19	132-07AA0-50	INTAKE VALVE SEAL	2		187-6015
20	010-50802-90	STUD, intake/exhaust	8		187-6016
21	045-00600-10	STEEL BALL	2		187-6017
22	263-16201-03	PLUG	1		187-6018
23	263-13101-21	CYLINDER HEAD 2, CP	1	See Appendix A	187-6019
24	246-15501-01	ROCKER COVER, CP	2		187-6020
25	246-16002-13	ROCKER COVER GASKET	2		187-6021
26	263-15001-13	GASKET 1, CYLINDER HEAD	1		187-6022
27	263-15101-13	GASKET 2, CYLINDER HEAD	1		187-6023
28	263-16001-A3	MAIN BEARING COVER GASKET	1		187-6024
29	263-16006-03	BREATHER PLATE GASKET	2		187-6025
30	263-14301-03	BREATHER COVER	1		187-6026
31	263-14401-01	BREATHER PLATE GASKET	1		187-6027
32	263-18001-03	RUBBER PIPE	1		187-6028
33	263-68511-03	HOSE CLAMP	2		187-6029
34	031-00600-20	DOWEL PIN	4		187-6030
35	040-11400-30	PLUG	1		187-6031
36	021-11400-20	GASKET	1		187-6032
37	011-01000-30	FLANGE BOLT	8		187-6033
38	011-00802-20	FANGE BOLT	10		187-6034
39	011-00600-30	FLANGE BOLT	10		187-6035
40	263-46215-A3	THRUST BEARING	1		187-6036
41	263-19001-A3	LIFTING HOOK	2		187-6037
42	214-79006-01	CLAMP	1		187-6038

SECTION 1 CRANKCASE GROUP

FIG. 100

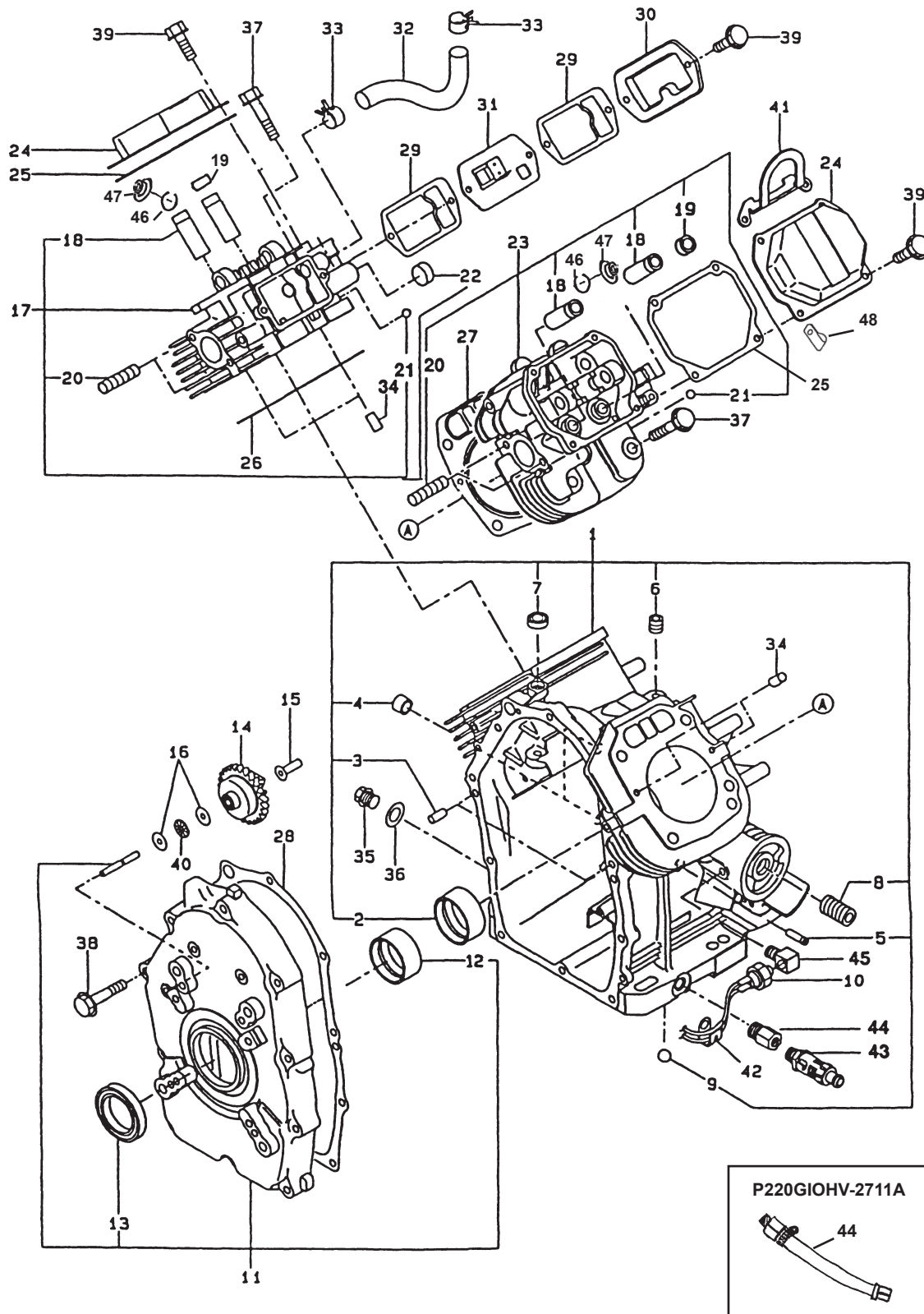
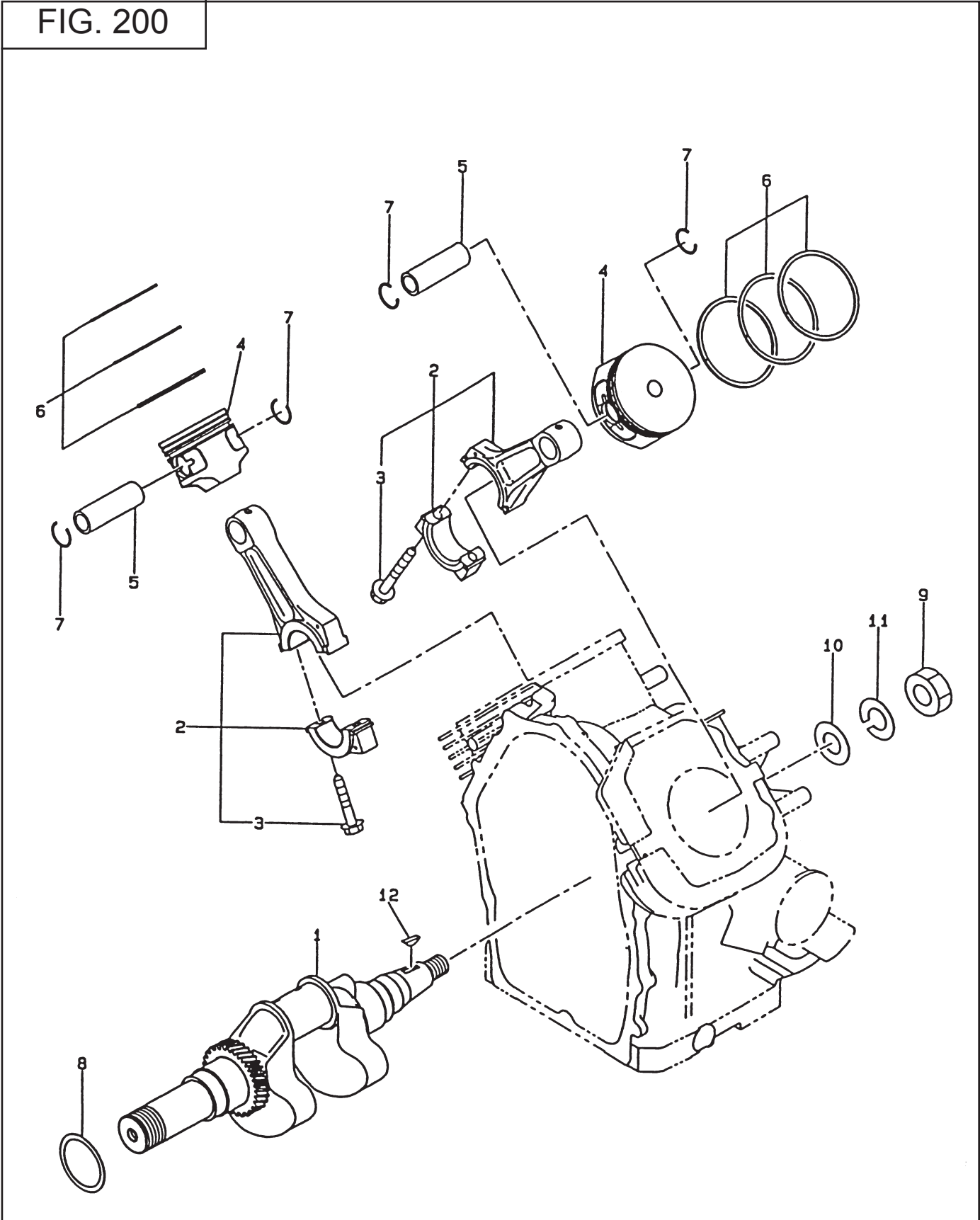
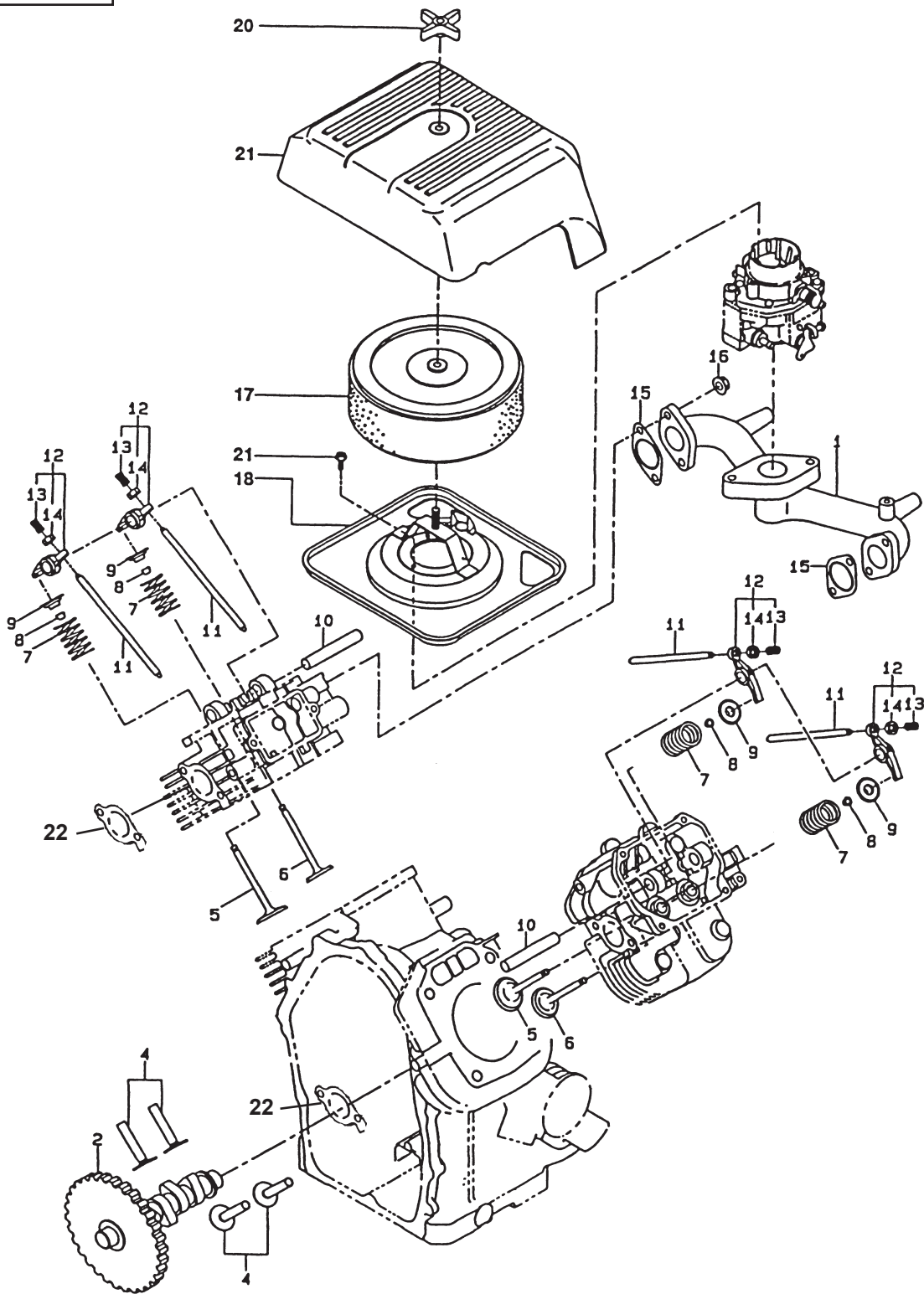


FIG. 200



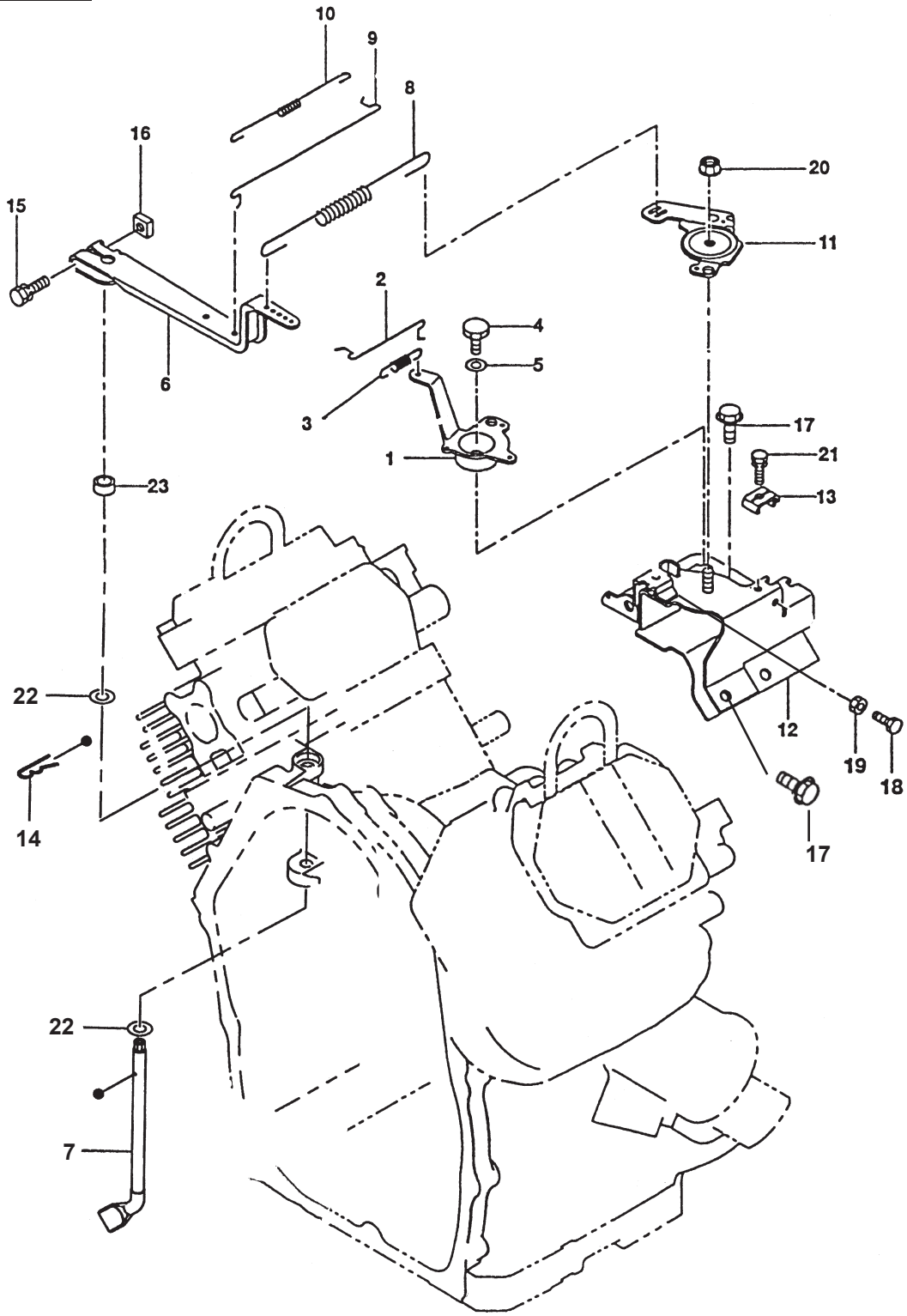
SECTION 3 INTAKE and EXHAUST GROUP

FIG. 300



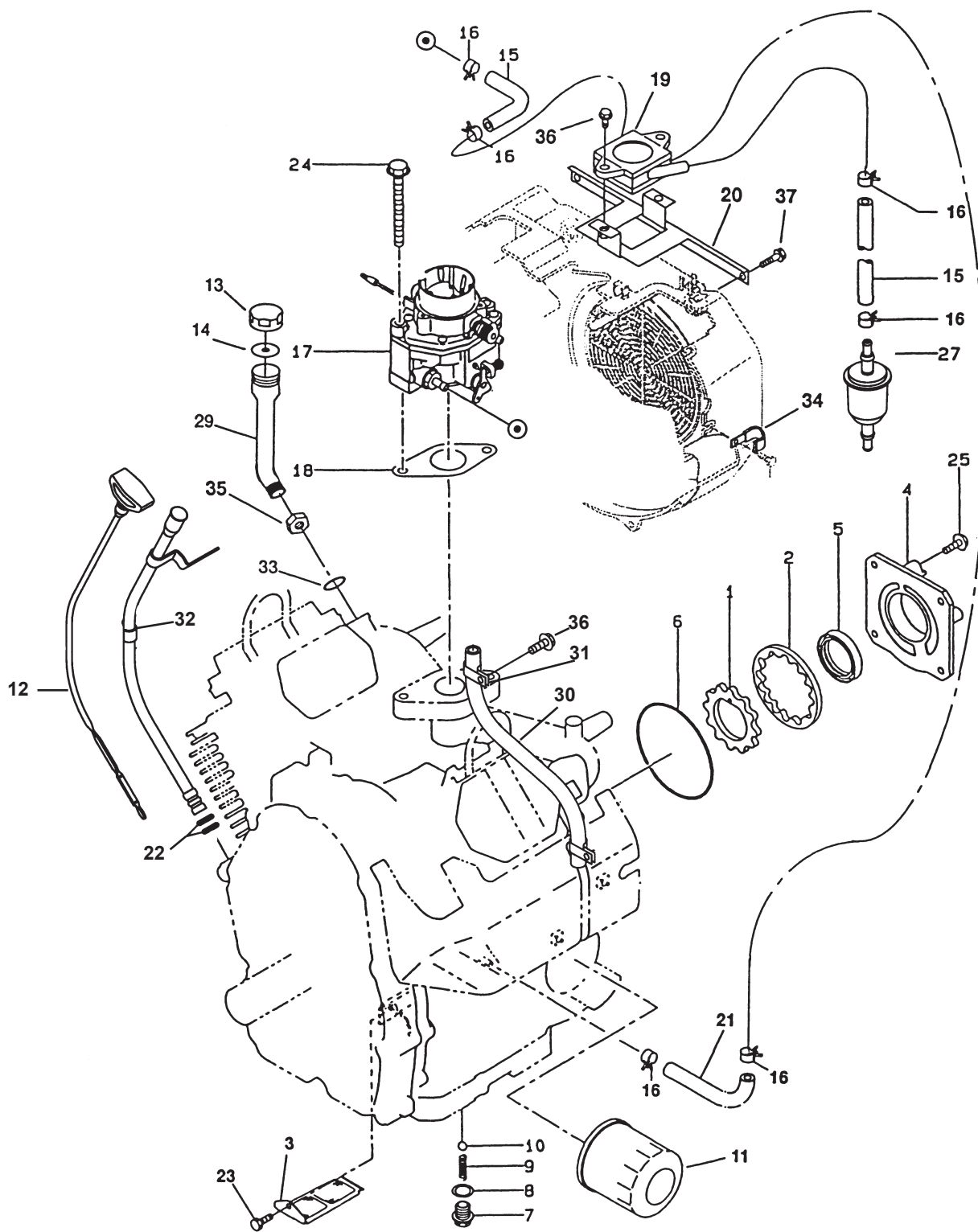
SECTION 4 GOVERNOR GROUP

FIG. 400



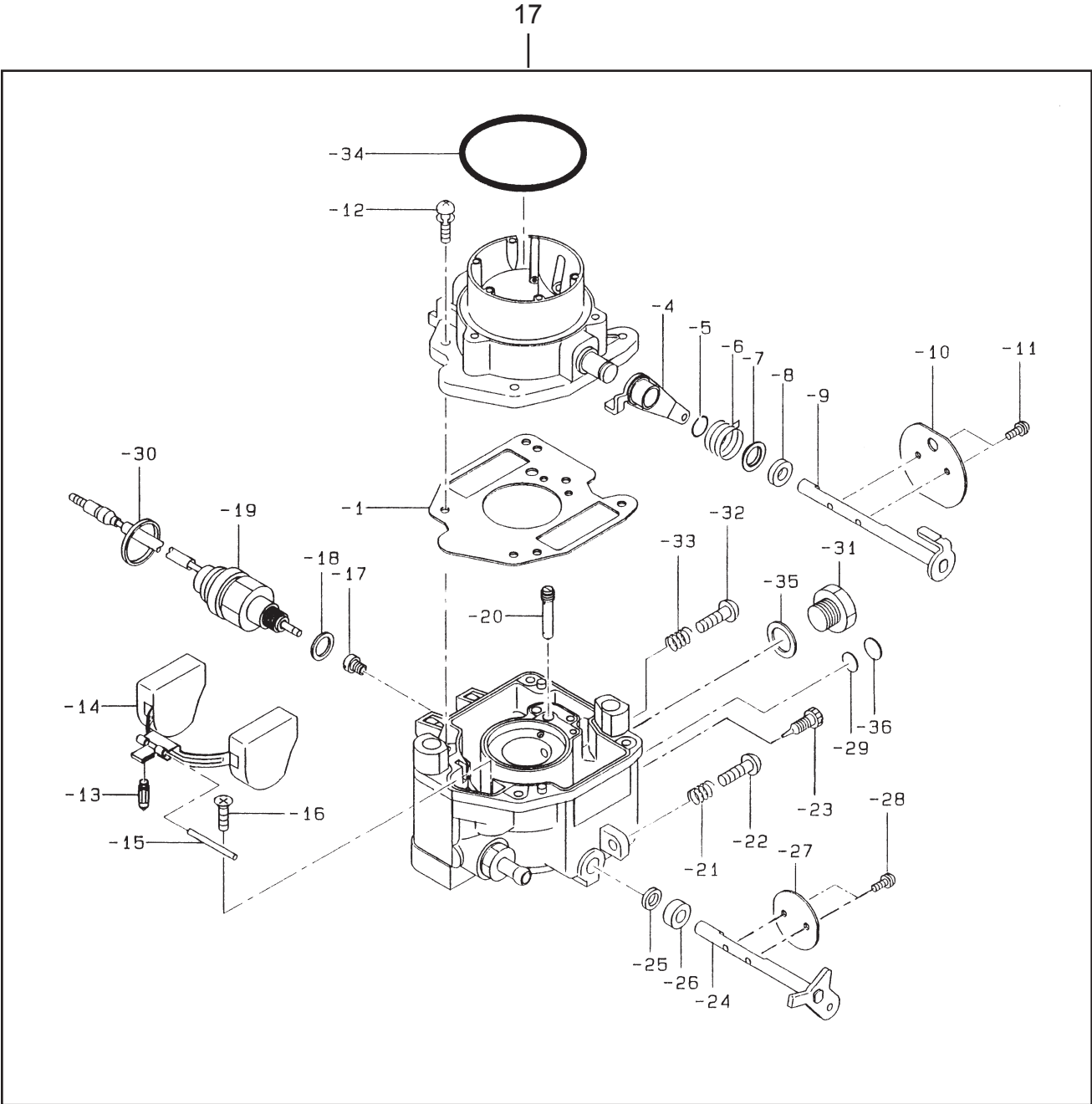
SECTION 6 FUEL and LUBRICANT GROUP

FIG. 600



SECTION 6 FUEL and LUBRICANT GROUP

FIG. 610



SECTION 7 FLYWHEEL and STARTER GROUP

FIG. 700

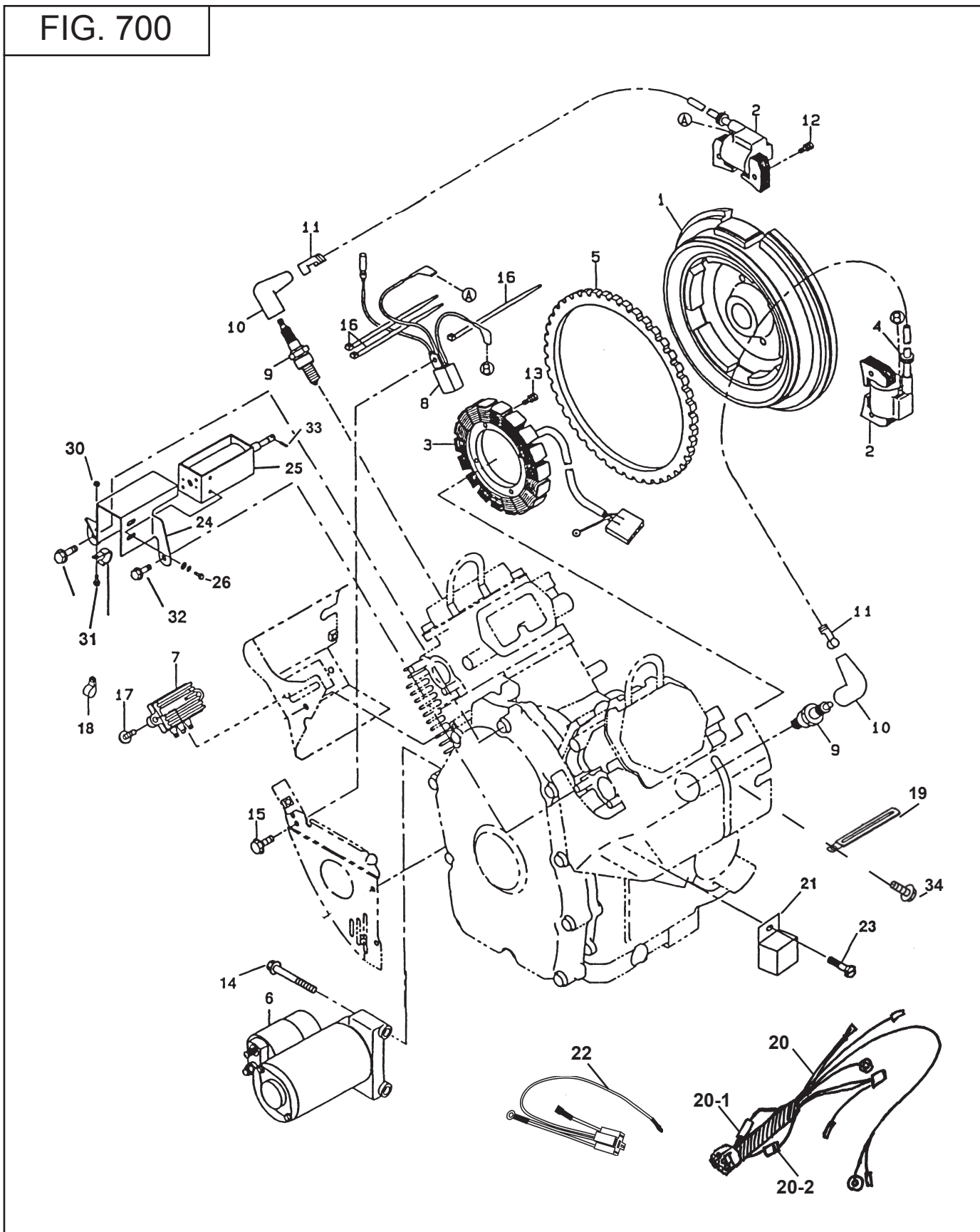
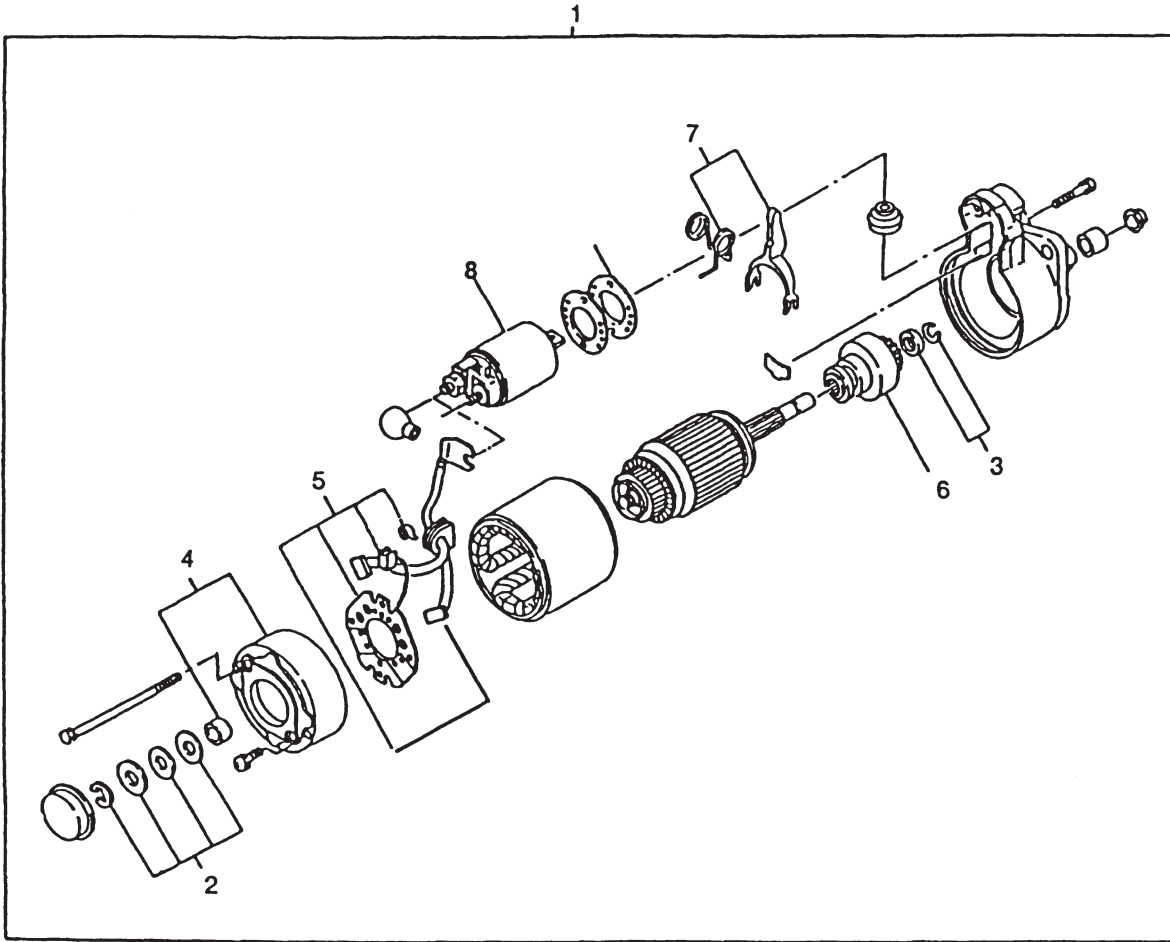


FIG. 800



APPENDIX A

CYLINDER HEAD DESIGN CHANGE - VALVE GUIDE CHANGE

Design Change - February 2003

The cylinder head design was changed in February 2003. The change effected the head design around the exhaust valve guide, valve guides and the exhaust valve retention design.

Valve Guide Change

A groove was added 8.5mm below the top of the valve guide to accept a "C" clip to retain the exhaust valve guide position.

Exhaust Valve Guide Retention

A valve retainer plate was added to the exhaust valve guide to prevent the guide from moving from its original position.

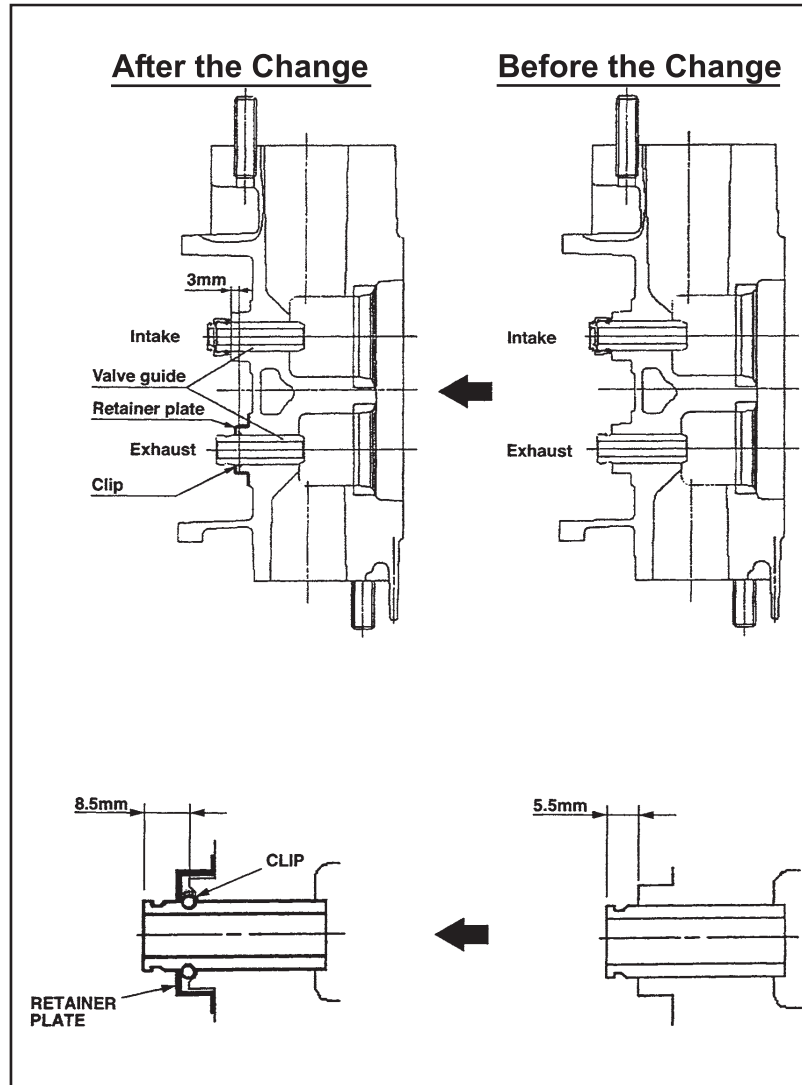
Cylinder Head Machining Change

The raised area around the exhaust valve guide was changed to lower the rise by 3mm and to add a bevel to accommodate the "C" clip.

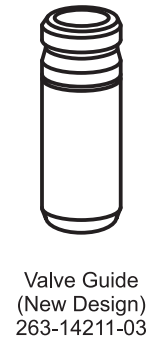
Service Note

Servicing Valve Guides on Original Design Heads

The valve guides may be replaced on the original head designs. However, the exhaust valve retention plate can not be used. The "C" clip may be placed on the top groove. A machine shop may also add knurling to the valve guide external surface to prevent guide movement.



New Valve Guide Parts



APPENDIX B

GOVERNOR SPRING AND ROD POSITIONS

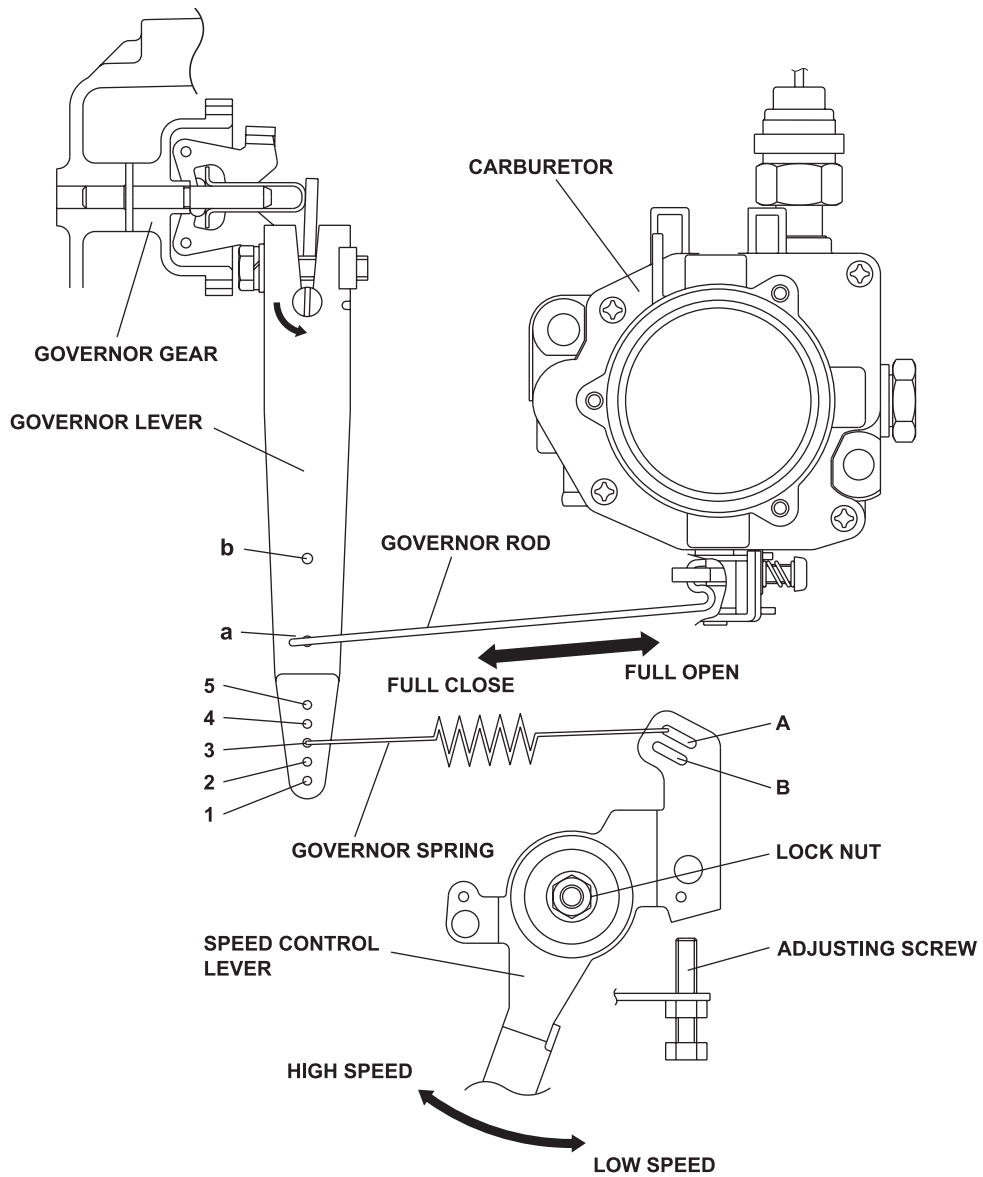


Fig. 5-45

WELDER	ROBIN SPEC.	ONAN SPEC.	GOVERNOR ROD POSITION	GOVERNOR SPRING POSITION
MILLER HOBART	EH650DB2322	P220GIOHV-786A	b	A - 5
MILLER BOBCAT	EH650DB2341	P220GIOHV-2252A	b	A - 1
MILLER TRAILBLAZER	EH650DB2390	P220IOHV-2711A	b	A - 1
LINCOLN ELECTRIC	EH650DB2332	P220IOHV-1145A	b	A - 5

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