

# **PARTS MANUAL**

**Model**

**EY20**

**ENGINE**

PUB-EP5705A  
Rev. 03/00

# **Robin America, Inc.**

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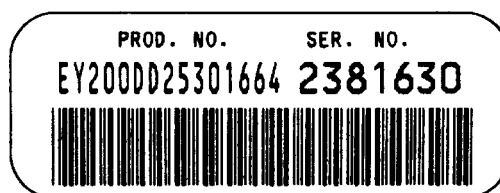
## HOW TO USE THIS MANUAL

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.

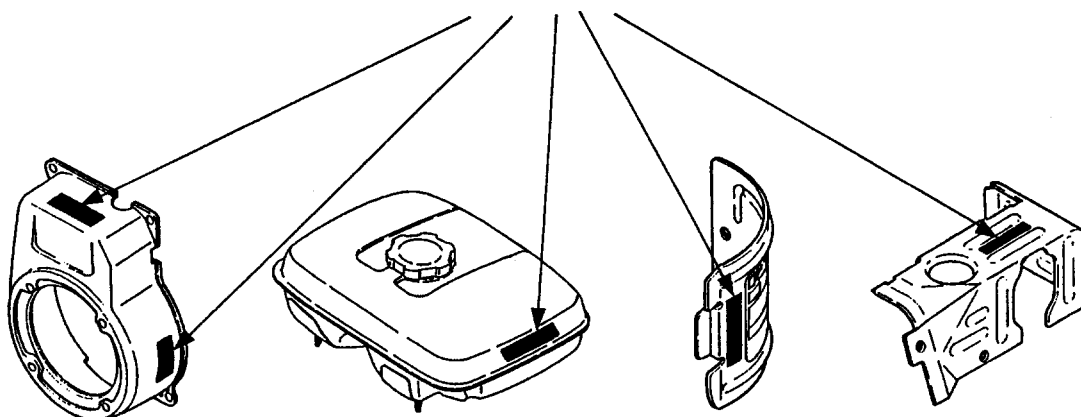
In order to identify the correct service part number, it is important to confirm the specification and code numbers for your engine. The specification and code number together are known as the PRODUCT NUMBER.

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

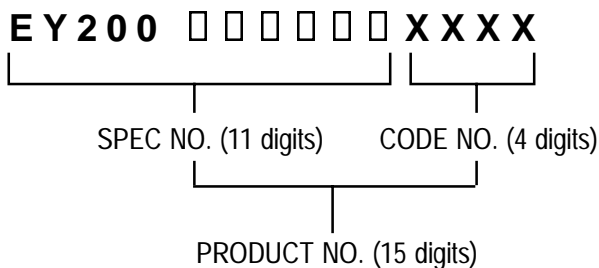
### PRODUCT NUMBER LABEL



### PRODUCT NUMBER LABEL LOCATIONS



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:



# MANUAL LAYOUT

**1** — SECTION 6    **FUEL GROUP**

**2** — FIG. 600

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**1** — SECTION 6    **FUEL GROUP**

REF.	PART NO.	DESCRIPTION	QTY.	REMARKS	FROM-TO	FIG.
10	267-60103-01	FUEL TANK CP	1	YD, YS TYPE, BLACK	2101 -	600
3	267-60101-01	FUEL TANK CP	1	YELLOW	- 2100	600
27	073-20039-00	LABEL, WARNING	1	YD, YS TYPE		600
30	043-04300-15	FUEL TANK CAP CP	1			600
5	31	267-95201-03	1	YD, YS TYPE		600
40	064-13600-10	FUEL FILTER	1			600
50	064-20021-01	FUEL STRAINER AY	1			600
-1	064-20002-20	FILTER	1			600
-2	064-20002-30	GASKET	1			600
-3	064-20019-10	CUP	1			600
-4	064-20003-20	NUT	1			600

1. SECTION NAME      Parts are broadly classified according to their functions. Refer to the Group Index (table of contents) for respective section name.
2. FIG. No.            The FIG. number indexes the reference and part numbers to the illustration. Figure numbers that vary only in the tens place (i.e.: 700 and 710) are in a group of the same section (i.e.: Electrical Device Group).
3. REF. No.            The Reference number identifies the part illustration with the corresponding part number in the part list.
4. SUBASSEMBLY      SUBASSEMBLY parts of part assembly are listed below the assembly part. The subassembly part reference number is indicated by the number led by "-" such as "-1", "-2".
5. PART NUMBER      It is the number assigned for sales unit. Use the PART No. when making an order.
6. DESCRIPTION      It is designation of the part.
7. QTY.                Quantity of each part used for each product.
8. REMARKS            This gives a distinctive feature and/or a supplementary comment for the type, the specification, and the part concerned. It also shows part number(s) interchangeable for the part.
9. FROM-TO            This section shows the CODE No. to indicate the history of progress in which improved parts have been introduced in the product. The FROM-TO CODE No. helps to identify PART No. being employed in the product concerned. See the examples below:
  - The part is used in the product irrespective of CODE No.
  - 2101-                    The part is used in the products with CODE No. of 2101 and after this number.
  - 2100                    The part is used in the products with CODE No. of 2100 and before this number.

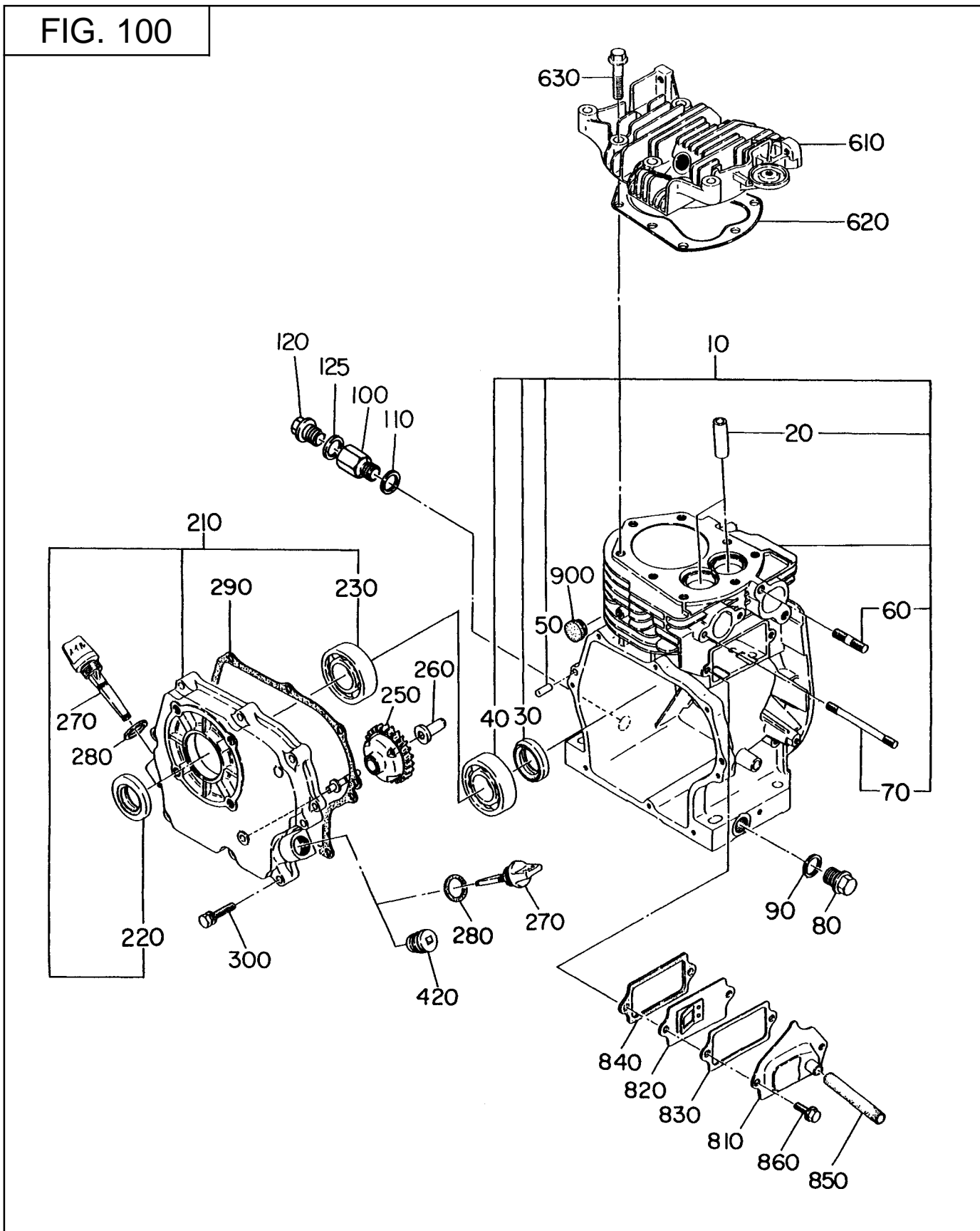
# GROUP INDEX

Group Name	Page
CRANKCASE GROUP .....	6
CRANKSHAFT GROUP .....	8
INTAKE and EXHAUST GROUP .....	10
GOVERNOR GROUP .....	14
COOLING and STARTING GROUP .....	18
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CARBURETOR GROUP .....	24
ELECTRIC DEVICE GROUP .....	26
OIL SENSOR .....	30
6:1 REDUCTION .....	34

INDEX OF DESCRIPTION SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AY .....	ASSEMBLY	P= .....	PITCH (in mm)
CP .....	COMPLETE	P.T.O. (PTO) .....	POWER TAKE OFF
EX .....	EXPORT (from Japan)	REF. ....	REFERENCE
FIG. ....	FIGURE	R.H. (RH) .....	RIGHT HAND SIDE
FR. ....	FRONT	RR. ....	REAR
" .....	INCH	STD. ....	STANDARD
INCL. ....	INCLUDE	SW .....	SWITCH
~L .....	LITER	T= .....	THICKNESS (in mm)
L= .....	LENGTH (in. mm)	UN .....	UNIT
L.H. (LH) .....	LEFT-HAND SIDE	U.S. ....	UNDER SIZE
MECH .....	MECHANICAL	~V .....	VOLTAGE
NO (NON) .....	NONE	~W .....	WATT
OPT. ....	OPTIONAL	W/ .....	WITH
O.S. ....	OVER SIZE	W/O .....	WITHOUT

SECTION 1 CRANKCASE GROUP

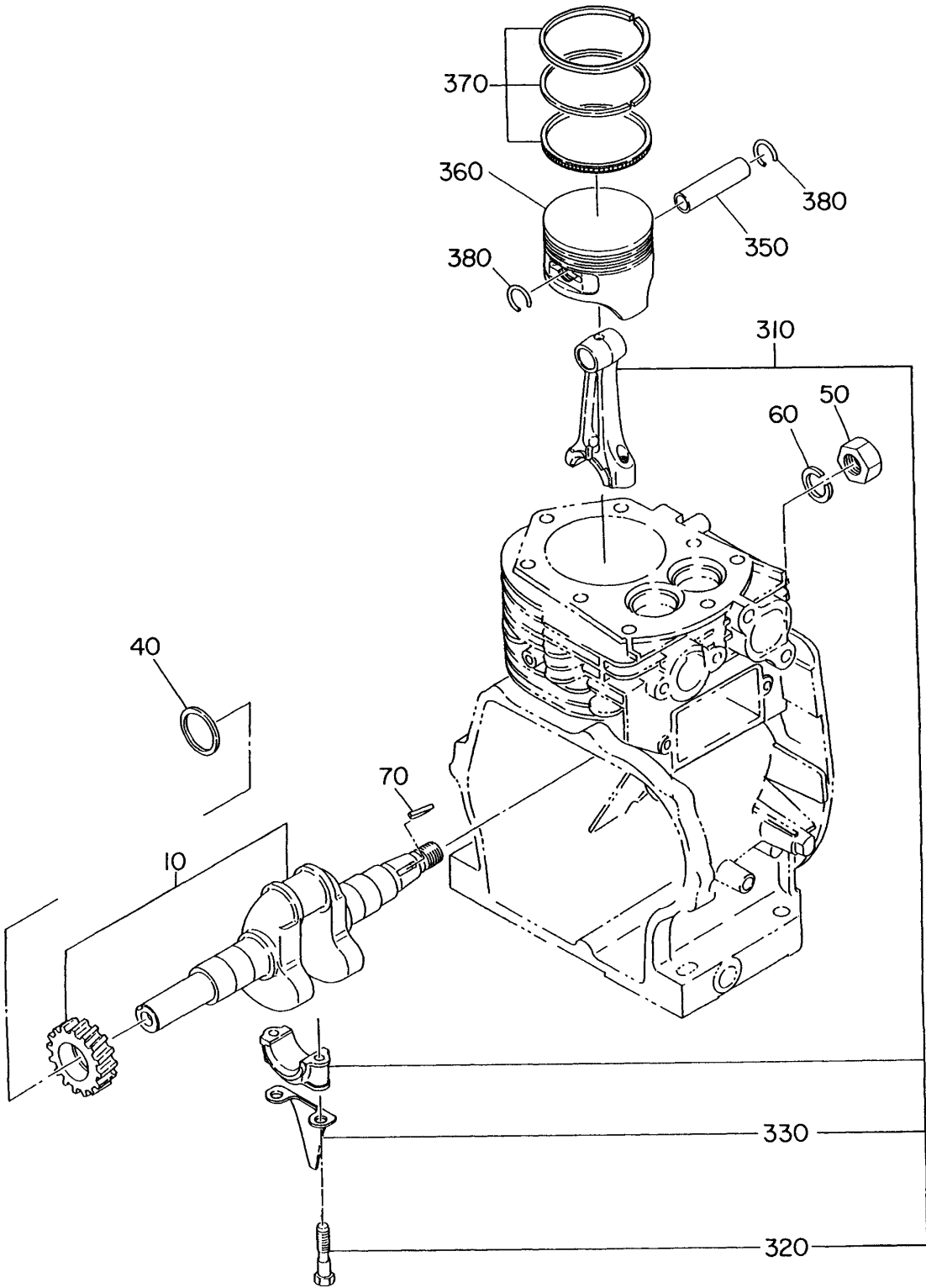
FIG. 100





SECTION 2 CRANKSHAFT GROUP

FIG. 200



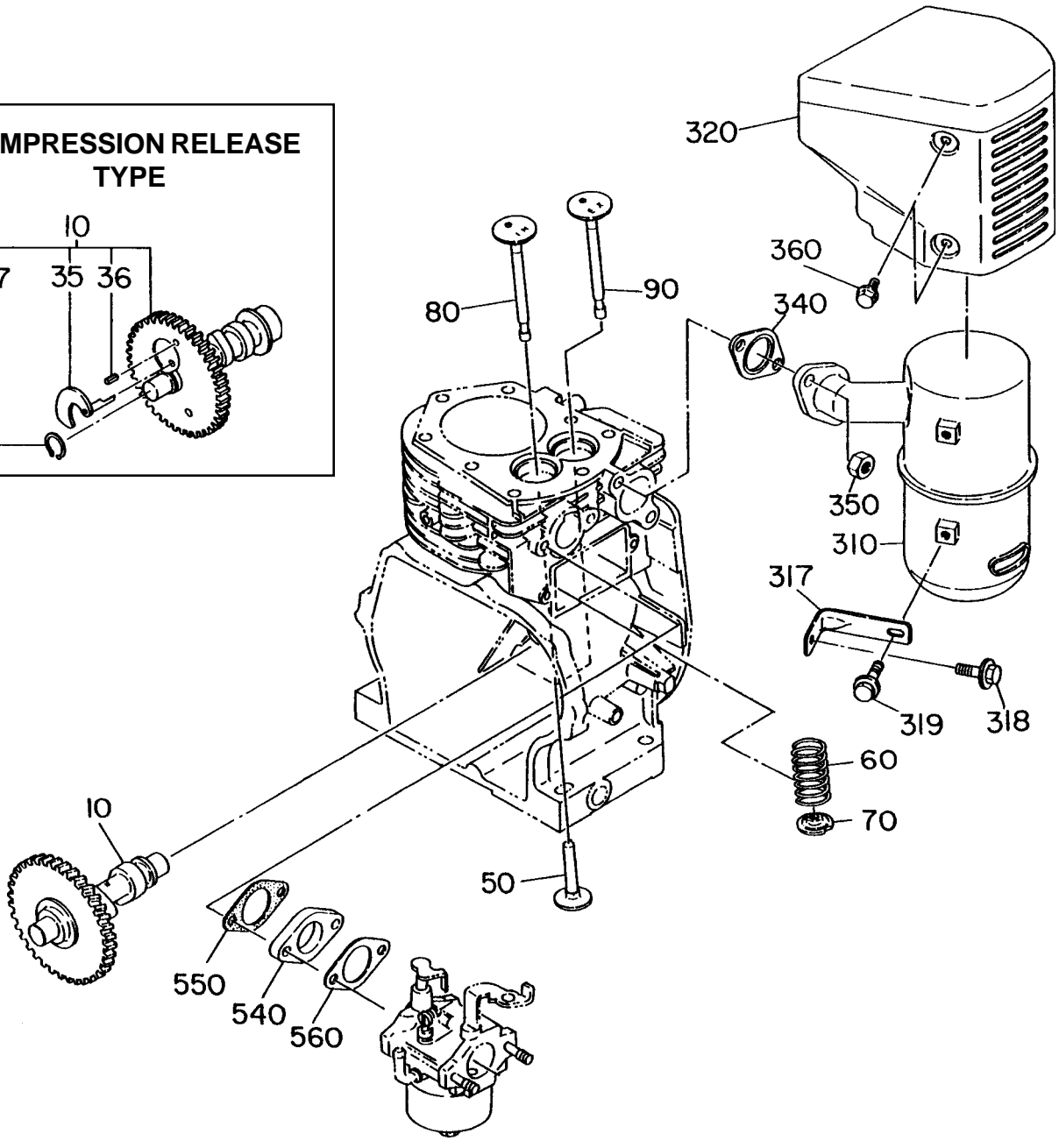
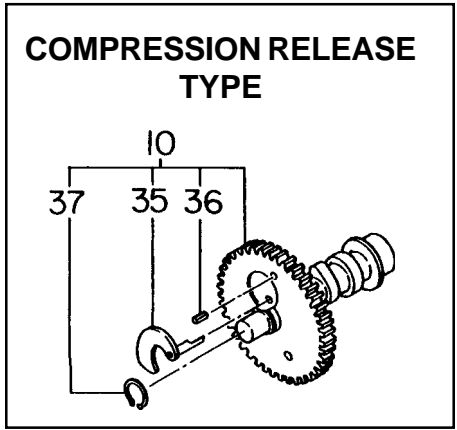


**SECTION 2      CRANKSHAFT GROUP**

REF.	PART NO.	DESCRIPTION	QTY.	REMARKS	FROM-TO	FIG.
10	227-20905-01	CRANKSHAFT, compl.	1	3/4" key - 5/16 tap		200
	227-20904-01	CRANKSHAFT, compl.	1	3/4" key - 3/8 tap		200
	227-21002-01	CRANKSHAFT, compl.	1	SAE Pump		200
	227-21202-01	CRANKSHAFT, compl.	1	SAE Taper		200
	227-20203-01	CRANKSHAFT, compl.	1	Metric Keyed, 20mm		200
	227-20302-01	CRANKSHAFT, compl.	1	Metric Pump		200
	227-20702-01	CRANKSHAFT, compl.	1	Metric Taper		200
40	023-02501-10	SPACER, T = 0.6	1	Select one piece only		200
	023-02501-20	SPACER, T = 0.8	1	Select one piece only		200
	023-02501-30	SPACER, T = 1.0	1	Select one piece only		200
50	002-18140-00	NUT	1			200
60	003-20140-00	SPRING WASHER	1			200
70	032-30300-10	WOODRUFF KEY	1			200
310	227-22501-10	CONNECTING ROD AY	1			200
320	227-23001-13	CONNECTING ROD BOLT	2			200
330	227-23101-03	OIL SCRAPER	1			200
350	214-23301-13	PISTON PIN	1			200
360	227-23401-03	PISTON	1	STD		200
	227-23402-03	PISTON	1	0.25 Oversize		200
	227-23403-03	PISTON	1	0.50 Oversize		200
370	227-23511-07	PISTON RING SET	1	STD		200
	227-23512-07	PISTON RING SET	1	0.25 Oversize		200
	227-23513-07	PISTON RING SET	1	0.50 Oversize		200
380	056-51400-10	CLIP	2			200

SECTION 3 INTAKE and EXHAUST GROUP

FIG. 300



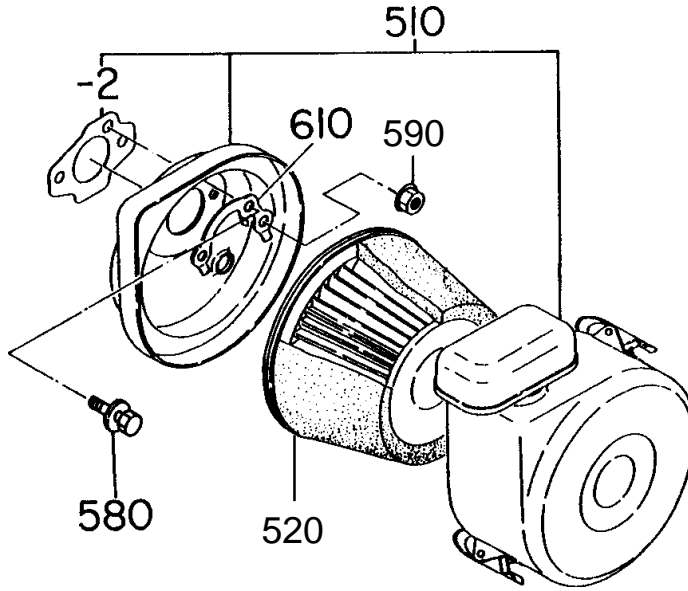
### SECTION 3 INTAKE and EXHAUST GROUP

REF.	PART NO.	DESCRIPTION	QTY.	REMARKS	FROM-TO	FIG.
10	227-31901-21	CAMSHAFT	1			300
	227-31702-11	CAMSHAFT	1	Compression Release Type		300
35	227-36405-03	RELEASE LEVER	1	Compression Release Type		300
36	005-19041-00	SPRING PIN	1	Compression Release Type		300
37	003-15220-00	SNAP RING, outer	1	Compression Release Type		300
50	227-33301-03	TAPPET	2			300
60	227-33601-03	VALVE SPRING	2			300
70	227-33701-03	SPRING RETAINER	2			300
80	227-33401-03	INTAKE VALVE	1			300
90	227-33501-13	EXHAUST VALVE	1			300
310	227-30101-01	MUFFLER, compl.	1	Standard, 6" tall		300
	227-30203-01	MUFFLER, compl.	1	Low Noise, 8 3/4" tall		300
317	227-37001-01	MUFFLER BRACKET	1	Low Noise only		300
318	011-00600-20	FLANGE BOLT	1			300
319	011-00600-10	FLANGE BOLT	1			300
320	227-34201-11	MUFFLER COVER, compl.	1	Standard, 5 1/8" tall		300
	227-34210-21	MUFFLER COVER, compl.	1	Low Noise, 6 3/4" tall		300
340	214-35201-11	GASKET, exhaust	1			300
350	002-19080-00	NUT	2			300
360	011-00600-10	FLANGE BOLT	4			300
540	227-32901-13	INSULATOR	1			300
550	227-35901-03	GASKET, insulator	1			300
560	227-35904-03	GASKET 2, insulator	1			300

**SECTION 3 INTAKE and EXHAUST GROUP**

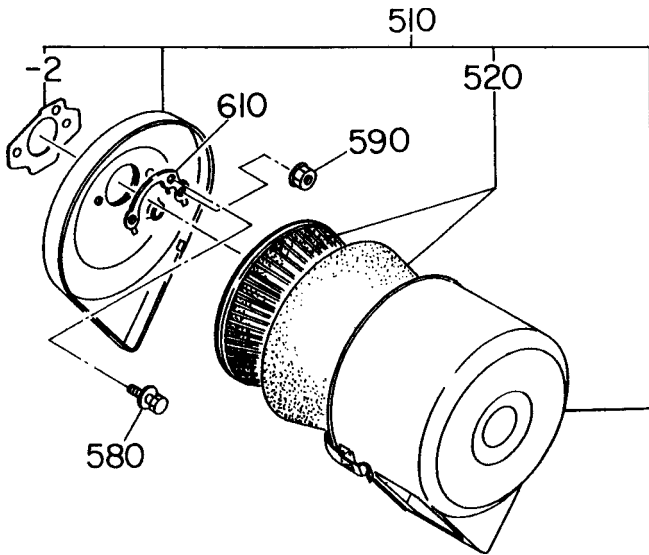
**FIG. 310**

**Premium - Top Inlet Cyclone**



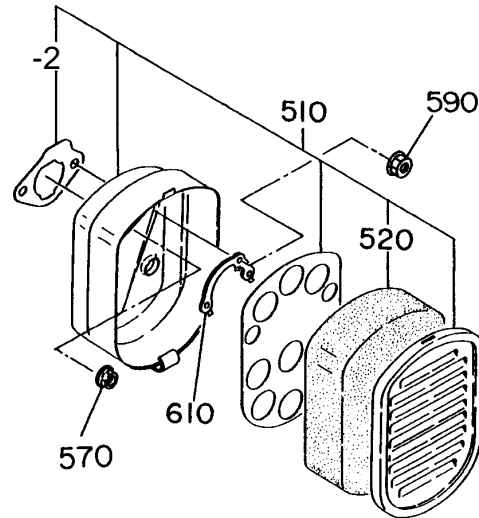
**A**

**B Standard - Cyclone**



**B**

**C Foam Element**



**C**

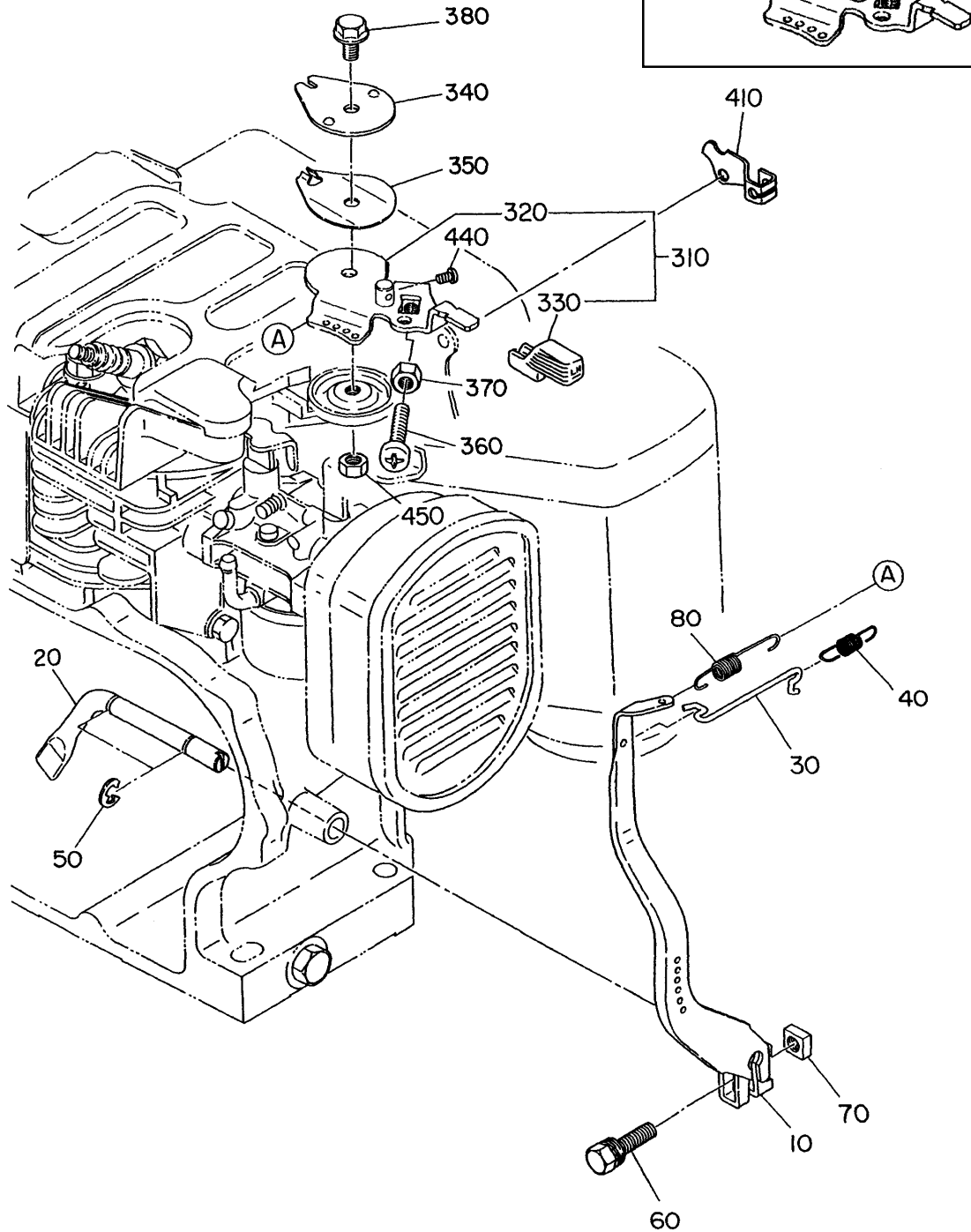


SECTION 4 GOVERNOR GROUP

FIG. 400

MANUAL WITH UPPER REMOTE CABLE CONTROL

MANUAL CONTROL ONLY

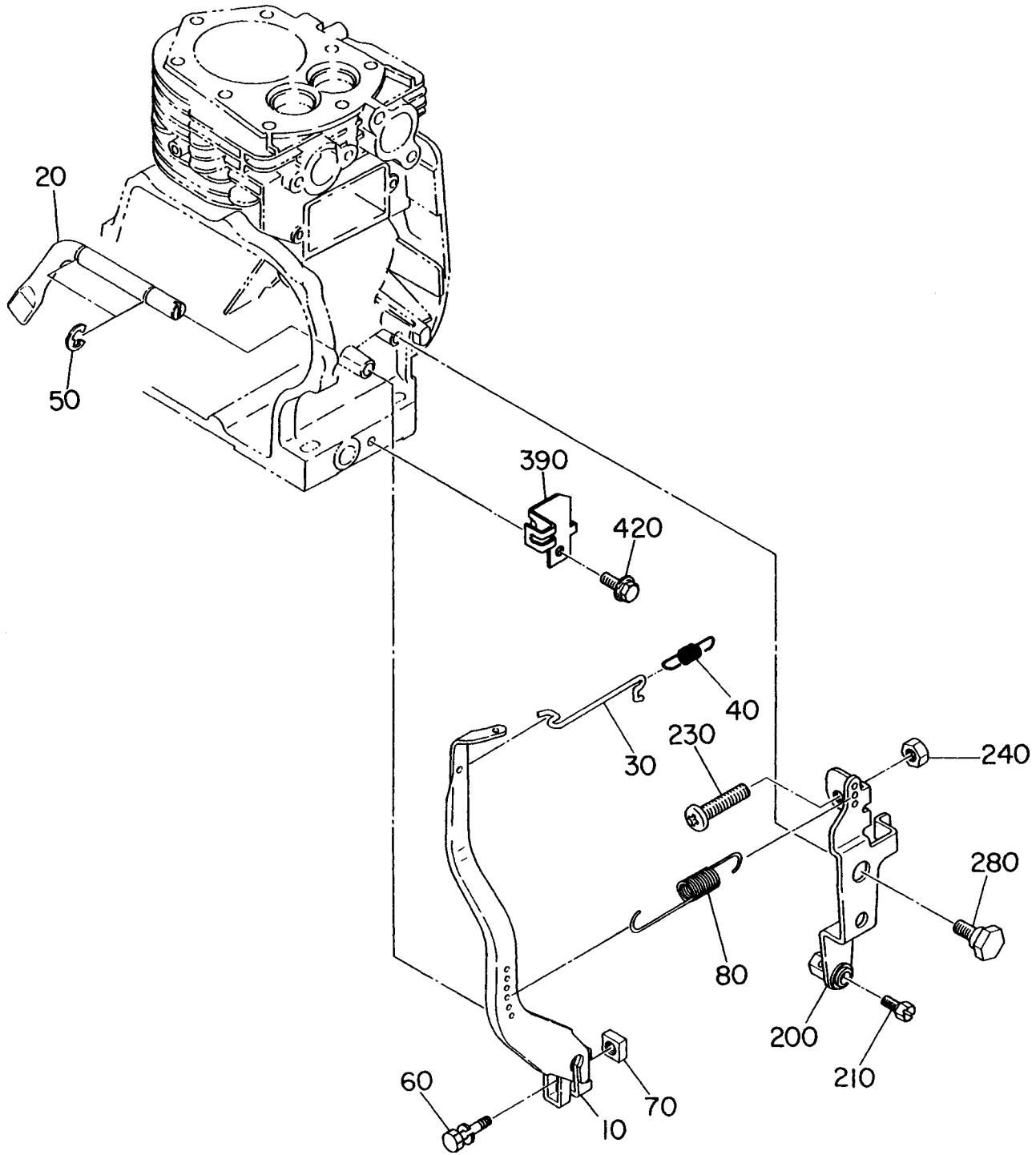


**SECTION 4      GOVERNOR GROUP**

REF.	PART NO.	DESCRIPTION	QTY.	REMARKS	FROM-TO	FIG.
10	227-42301-11	GOVERNOR LEVER, compl.	1			400
20	227-42201-03	GOVERNOR SHAFT	1			400
30	227-42701-01	GOVERNOR ROD	1			400
40	227-42801-01	ROD SPRING, compl.	1			400
50	003-13060-00	CLIP	2			400
60	004-35062-50	BOLT and WASHER AY	1			400
70	018-60600-20	NUT	1			400
80	227-42501-13	GOVERNOR SPRING	1			400
310	227-43302-20	SPEED CONTROL AY	1			400
320	227-43302-01	SPEED CONTROL	1			400
	227-43301-01	SPEED CONTROL	1	Manual Control Only		400
330	227-43601-03	KNOB	1			400
340	227-43501-13	STOP PLATE	1			400
350	227-45002-03	SPRING WASHER	1			400
360	004-31063-00	SCREW	1			400
370	002-27060-00	NUT	1			400
380	011-00600-50	FLANGE BOLT	1			400
410	227-44203-13	WIRE BRACKET	1			400
440	004-31040-80	SCREW	1			400
450	002-27060-00	NUT	1			400

FIG. 410

LOWER REMOTE CABLE CONTROL



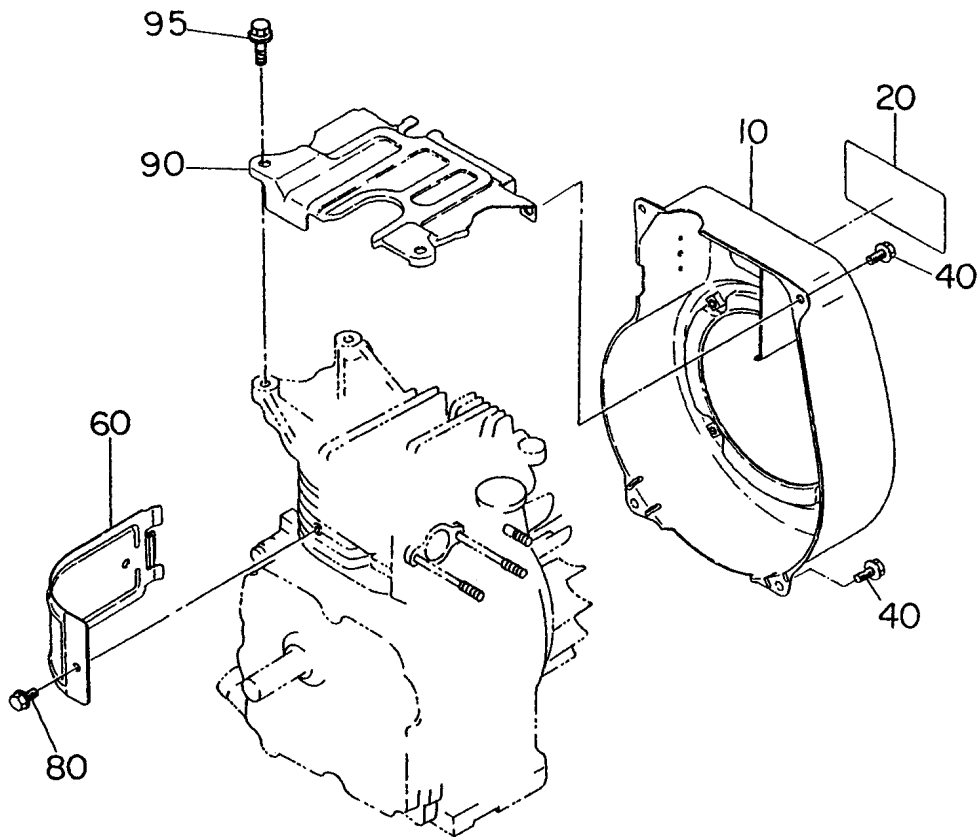


**SECTION 4 GOVERNOR GROUP**

<b>REF.</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY.</b>	<b>REMARKS</b>	<b>FROM-TO</b>	<b>FIG.</b>
10	227-42301-11	GOVERNOR LEVER, compl.	1			410
20	227-42201-03	GOVERNOR SHAFT	1			410
30	227-42701-01	GOVERNOR ROD	1			410
40	227-42801-01	ROD SPRING	1			410
50	003-13060-00	CLIP	2			410
60	001-14062-50	BOLT and WASHER AY	1			410
70	018-60600-20	NUT	1			410
80	226-42503-03	GOVERNOR SPRING	1			410
200	226-43301-20	SPEED CONTROL AY	1			410
210	011-60400-10	BOLT	1			410
230	004-31053-00	SCREW	1			410
240	002-17050-00	NUT	1			410
280	226-43101-01	LINK PIVOT	1			410
390	226-44201-13	WIRE BRACKET	1			410
420	011-00600-30	FLANGE BOLT	1			410

SECTION 5 COOLING and STARTING GROUP

FIG. 500

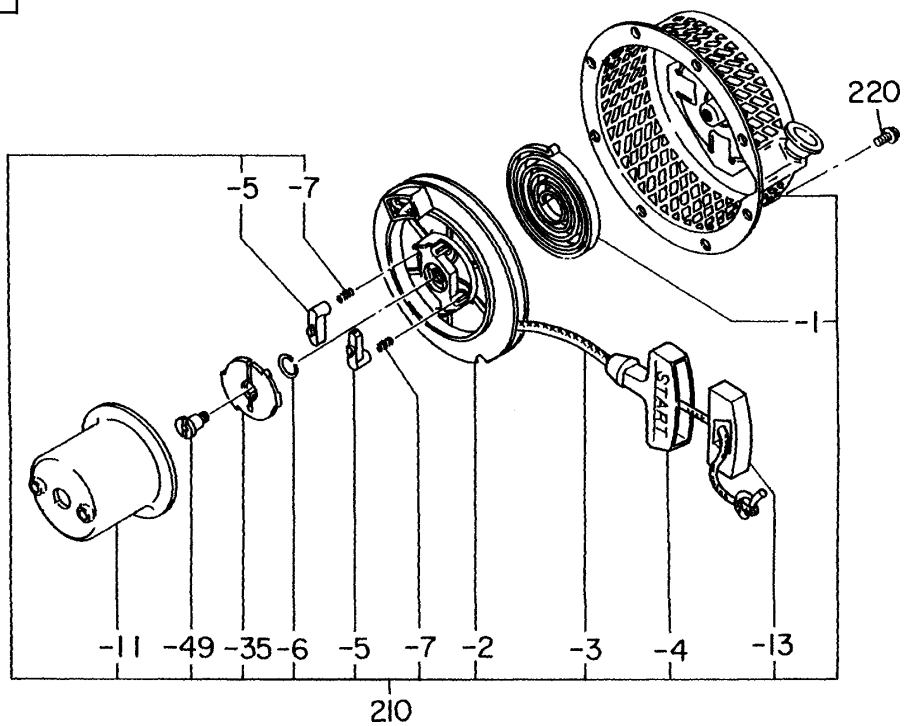




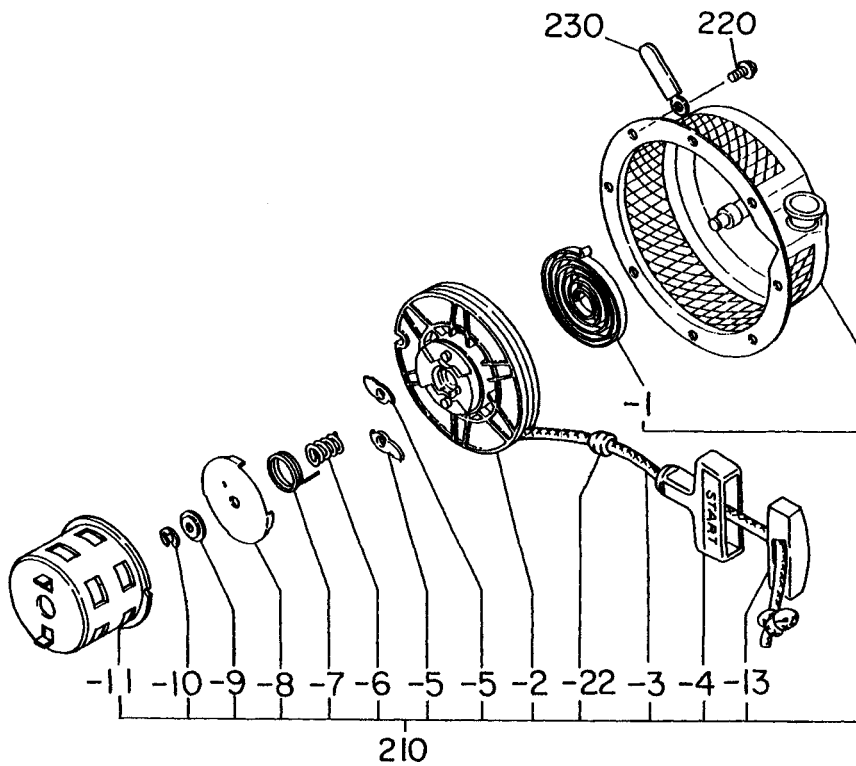
SECTION 5 COOLING and STARTING GROUP

FIG. 510

NEW STYLE



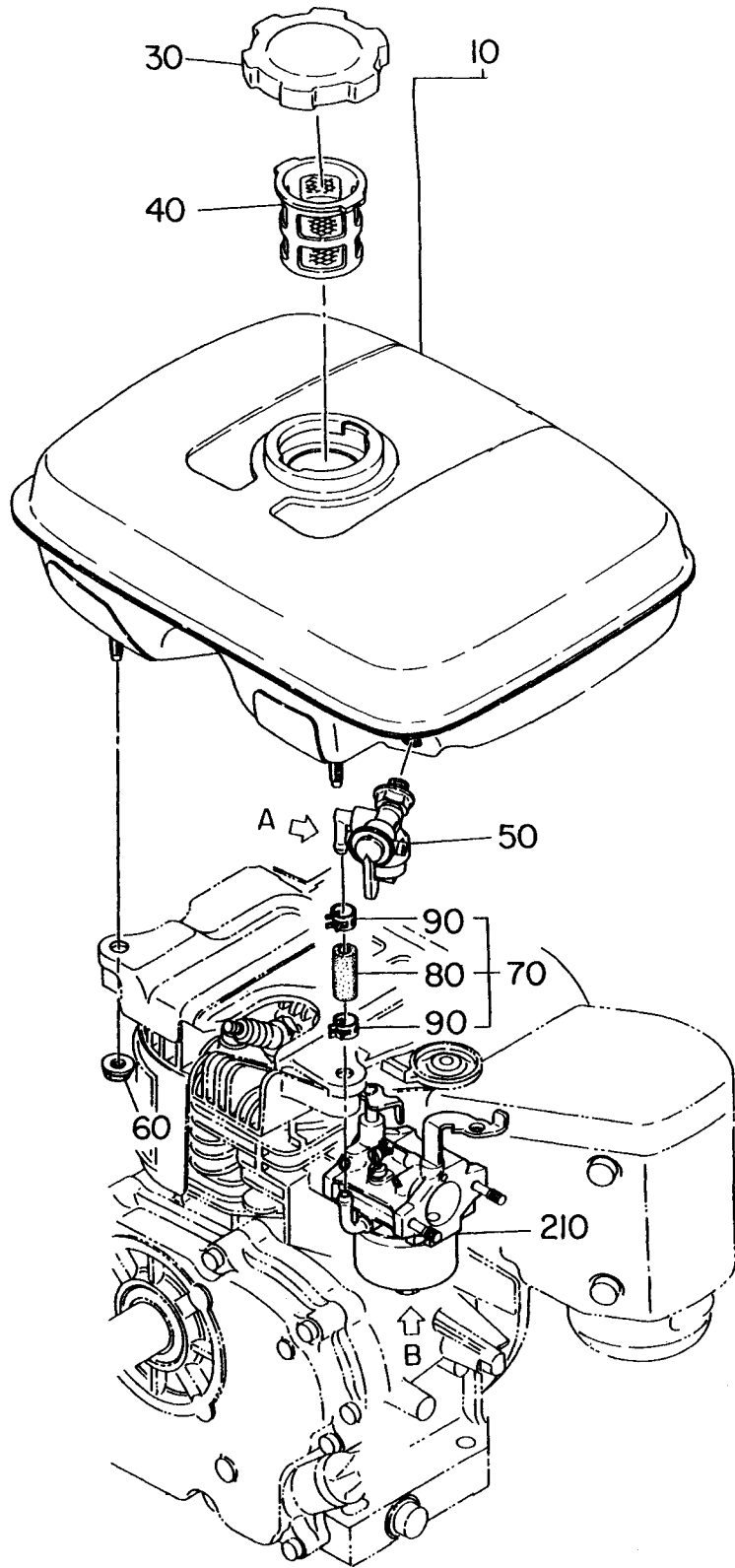
OLD STYLE



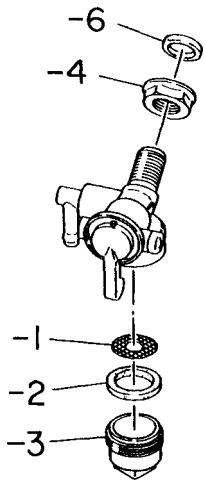


SECTION 6 FUEL, LUBRICANT GROUP

FIG. 600



DETAIL A

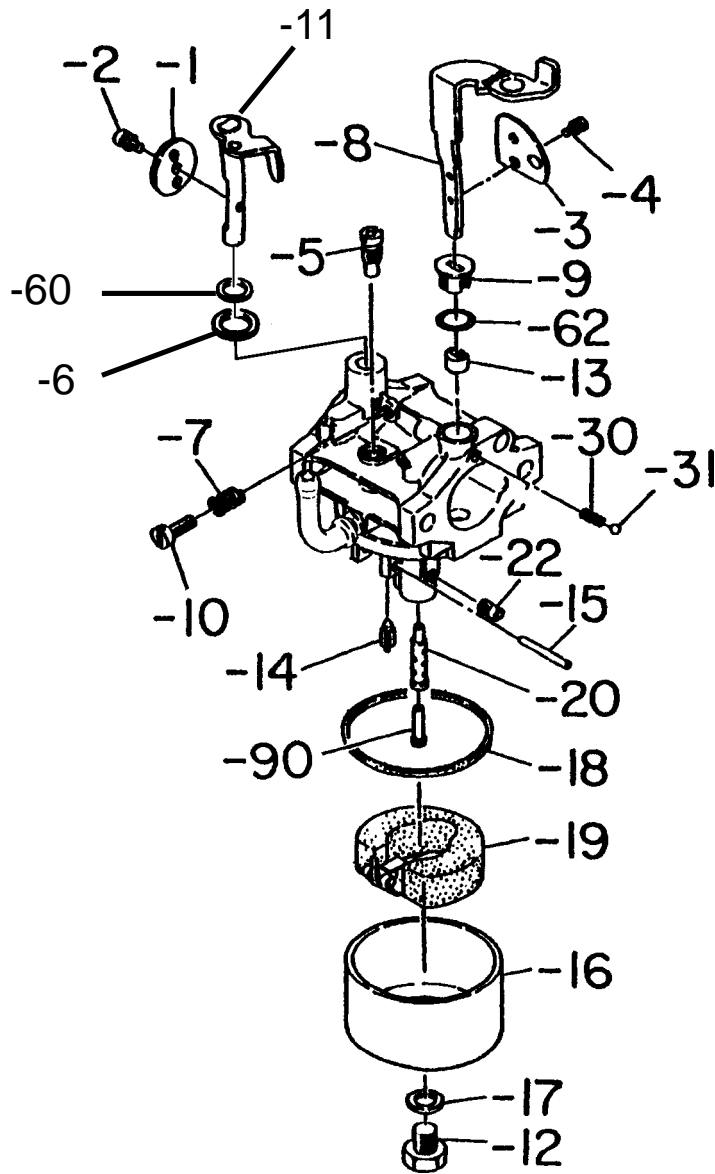


**SECTION 6 FUEL, LUBRICANT GROUP**

<b>REF.</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY.</b>	<b>REMARKS</b>	<b>FROM-TO</b>	<b>FIG.</b>
10	227-60251-11	FUEL TANK, compl.	1	Ø 10 mm outlet, Black		600
	227-60211-21	FUEL TANK, compl.	1	Ø 10 mm outlet, Orange		600
	227-60201-11	FUEL TANK, compl.	1	Ø 10 mm outlet, Yellow		600
30	043-04300-15	FUEL TANK CAP, compl.	1			600
40	064-13600-10	FUEL FILTER	1			600
50	064-20064-00	FUEL STRAINER	1	Ø 10mm threads		600
	064-20042-00	FUEL STRAINER	1	Ø 8mm threads		600
-1	064-20064-20	FILTER	1			600
-2	064-20064-10	PACKING	1			600
-3	064-20042-10	CUP, strainer	1			600
-4	064-20064-30	NUT	1			600
-6	064-20064-40	PACKING	1			600
60	002-38060-00	FLANGE NUT	2			600
70	227-62640-01	FUEL PIPE, compl.	1			600
80	085-10600-00	RUBBER PIPE	1			600
90	056-11100-20	HOSE CLAMP	2			600

SECTION 6 FUEL, LUBRICATION GROUP

FIG. 610



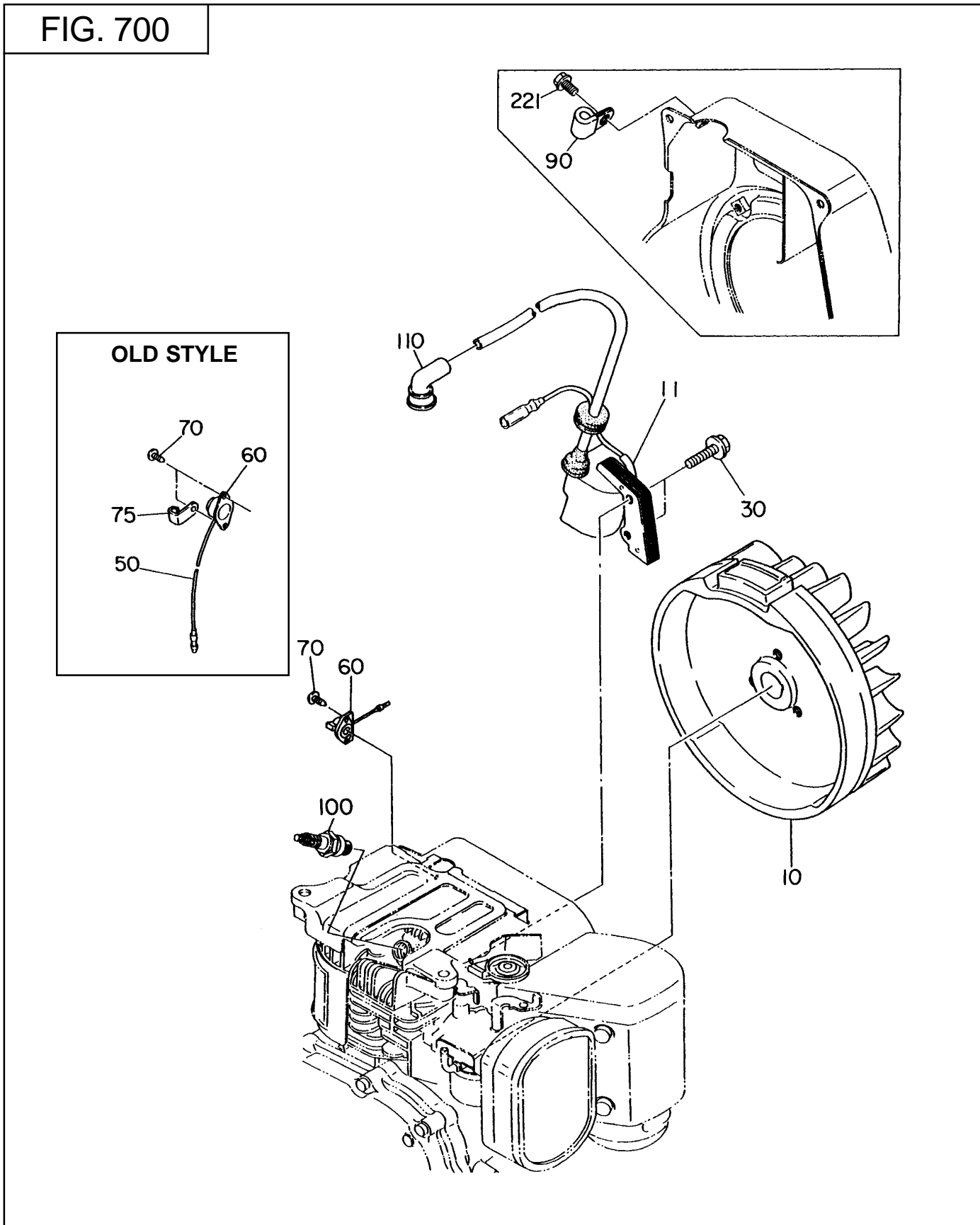


**SECTION 6 FUEL, LUBRIACTION GROUP**

REF.	PART NO.	DESCRIPTION	QTY.	REMARKS	FROM-TO	FIG.
210	227-62450-10	CARBURETOR	1	Includes items -1 thru -90		610
-1	220-62535-08	THROTTLE VALVE	1			610
-2	209-62351-08	SCREW	1			610
-3	227-62526-08	CHOKE VALVE	1			610
-4	237-62451-08	SCREW	2			610
-5	209-62420-08	PILOT JET	1			610
-6	156-62351-08	PACKING, throttle shaft	1			610
-7	209-62445-08	SPRING	1			610
-8	226-62520-18	SHAFT AY, choke	1			610
-9	226-62551-08	RING	1			610
-10	209-62352-08	SCREW	1			610
-11	226-62532-08	SHAFT AY, throttle	1			610
-12	227-62451-08	BOLT	1			610
-13	226-62550-08	RING	1			610
-14	226-62502-08	NEEDLE VALVE AY	1			610
-15	214-62515-08	PIN	1			610
-16	227-62558-08	FLAOT CHAMBER BODY	1			610
-17	214-62450-08	PACKING	1			610
-18	214-62540-08	CHAMBER PACKING	1			610
-19	226-62506-08	FLOAT AY	1			610
-20	227-62442-08	MAIN NOZZLE	1			610
-22	227-62407-08	MAIN JET ( 75)	1			610
-30	209-62446-08	CHOKE SPRING	1			610
-31	209-62353-08	STEEL BALL	1			610
-60	106-62392-18	SEAL	1			610
-62	227-62559-08	SEAL	1			610
-90	227-62441-08	NOZZLE	1			610

SECTION 7 ELECTRIC DEVICE GROUP

FIG. 700

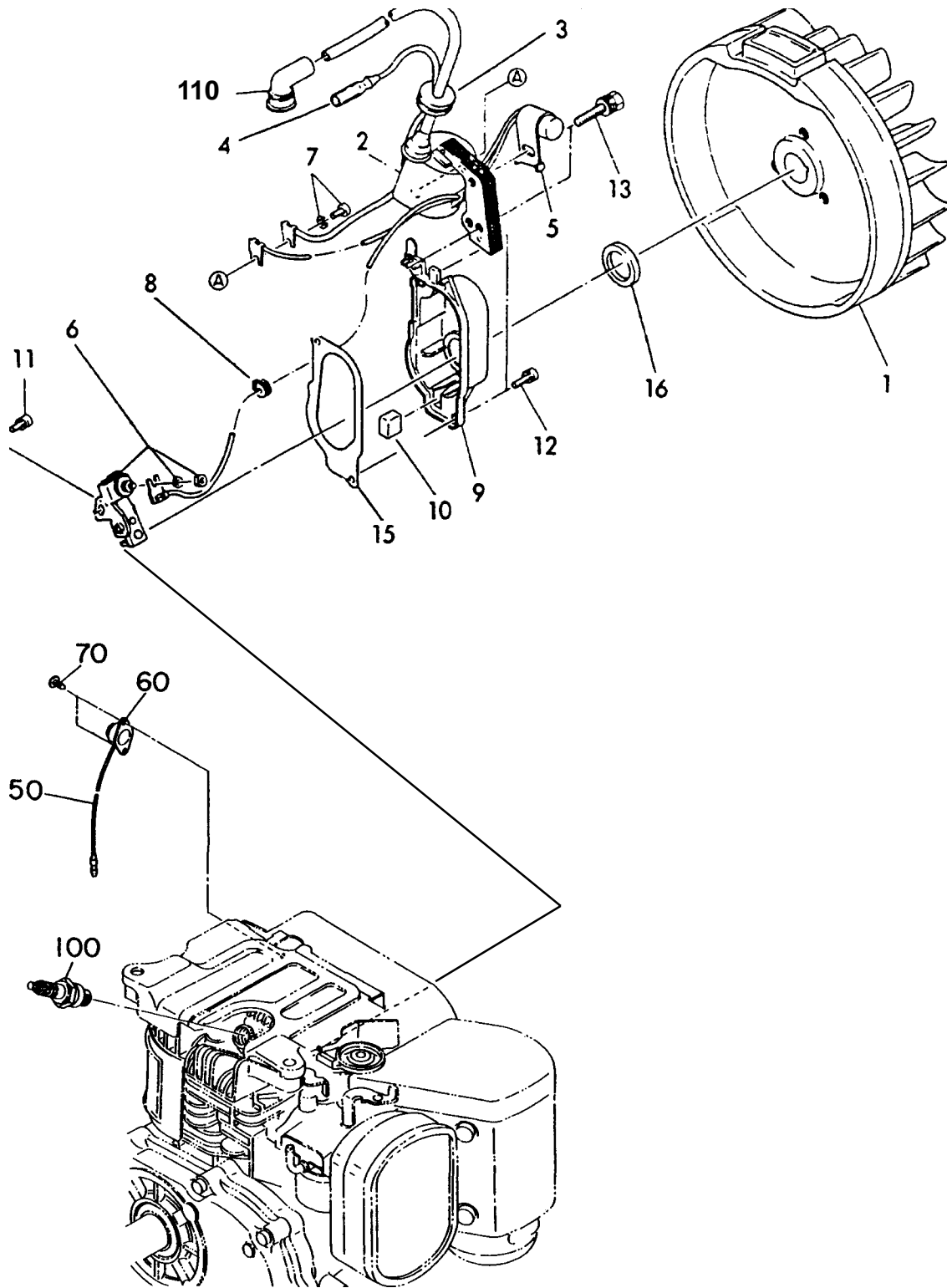




SECTION 7 ELECTRIC DEVICES GROUP

FIG. 710

POINTS and CONDENSER - OLD STYLE



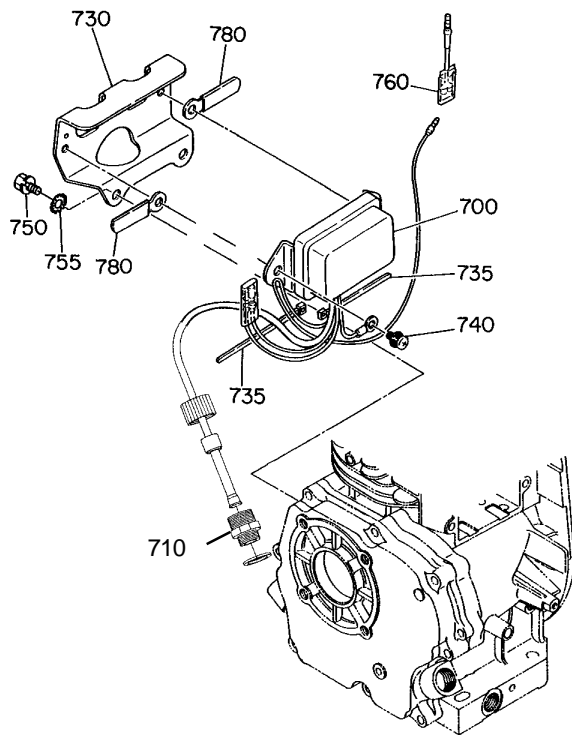
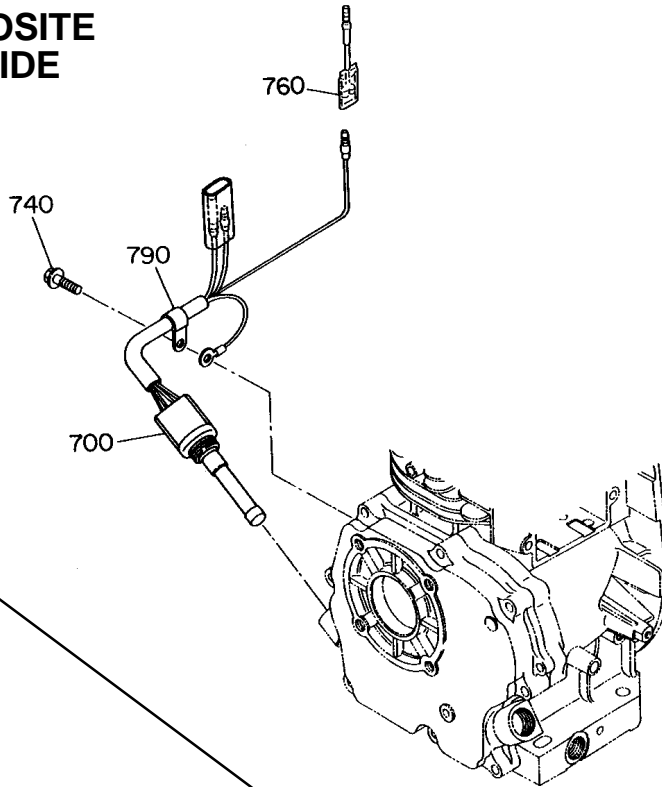
**SECTION 7 ELECTRIC DEVICE GROUP**

REF.	PART NO.	DESCRIPTION	QTY.	REMARKS	FROM-TO	FIG.
1	227-70121-08	FLYWHEEL	1			710
2	227-70132-08	IGNITION COIL	1			710
3	226-70245-08	GROMMET	1			710
4	226-70235-08	WIRE AY	1			710
5	227-70210-58	CONDENSER	1			710
6	220-70215-08	CONTACT BREAKER	1			710
7	227-70260-08	SCREW and WASHER	1			710
8	226-75001-03	GROMMET	1			710
9	226-70220-08	POINT COVER	1	Includes item 10		710
10	***	OIL FELT, breaker	1			710
11	***	SCREW and WASHER AY	1			710
12	***	SCREW and WASHER	2			710
13	011-00601-21	FLANGE BOLT	2			710
15	227-75003-03	GASKET, point cover	1			710
16	227-75004-03	SEAL, point cover	1			710
50	207-73102-21	WIRE 2, compl.	1	Old Style only		710
60	066-00003-71	SWITCH AY	1	New Style		710
	066-20000-11	STOP BUTTON	1	Obsolete, use 066-00003-71		710
70	015-00400-50	TAPPING SCREW	2			710
100	065-01410-30	SPARK PLUG	1			710
110	065-50000-51	SPARK PLUG CAP	1			710
*	226-70101-17	POINTS and CONDENSER KIT	1	Includes items 5, 6 and 7		710
***	226-70102-07	HARDWARE KIT	1	Includes items 9, 10, 11 and 12		710

\*\*\*Items without part numbers are only available when purchased in the Hardware Kit, 226-70102-07.

FIG. 730

**NEW STYLE - OPPOSITE  
CARBURETOR SIDE**



**OLD STYLE - OPPOSITE  
CARBURETOR SIDE**



FIG. 740

OLD STYLE - CARBURETOR SIDE

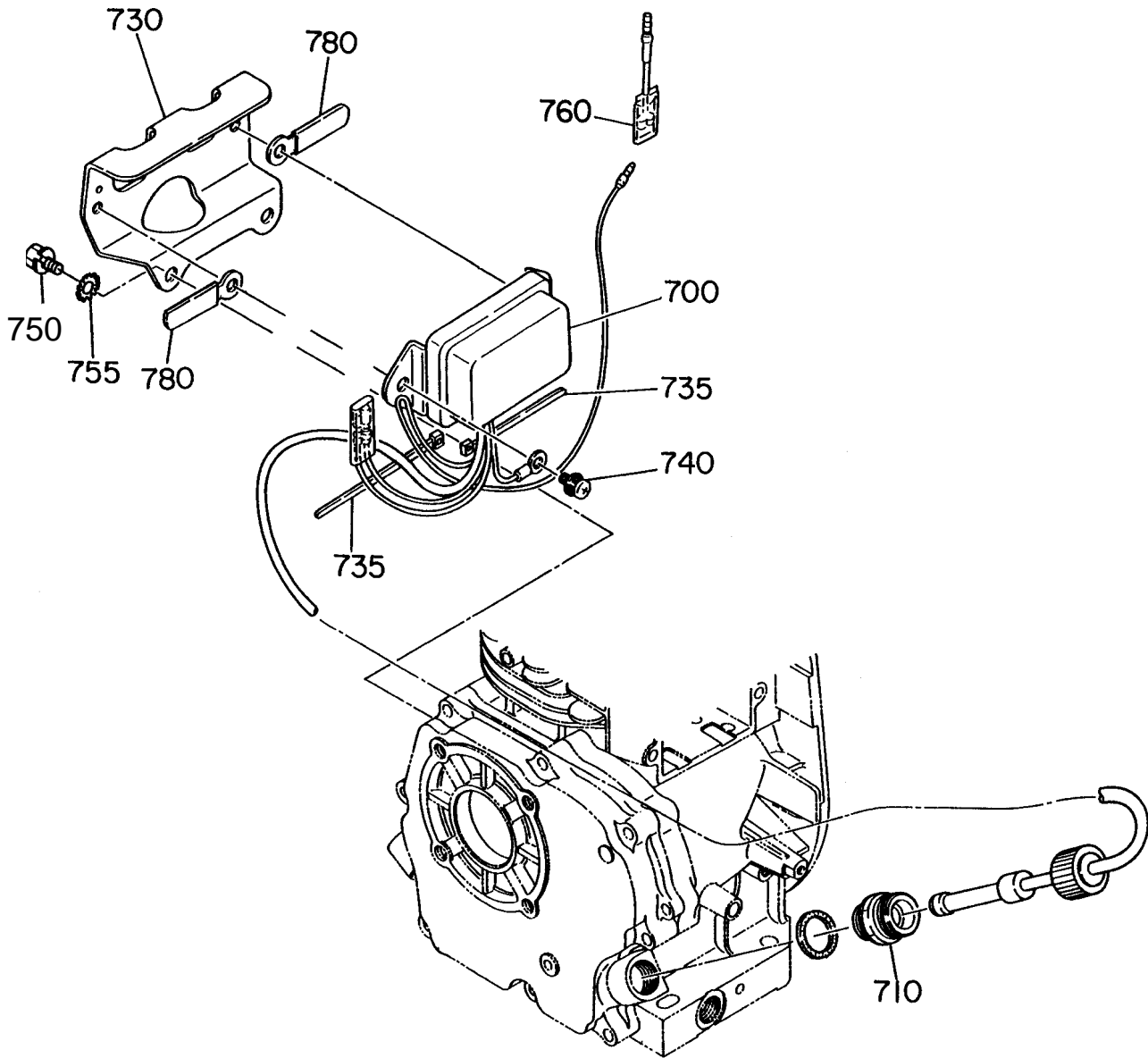
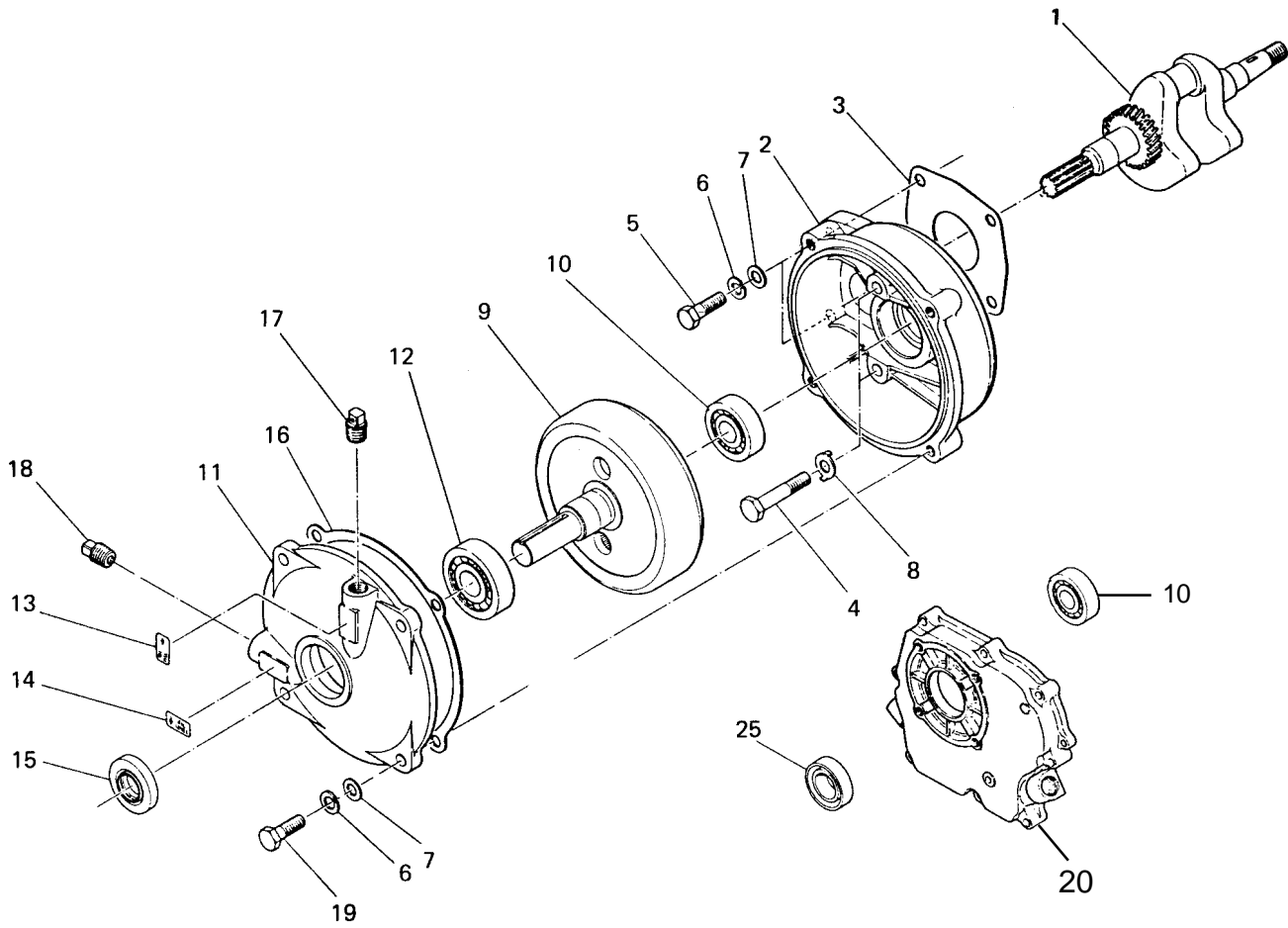






FIG. 800





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