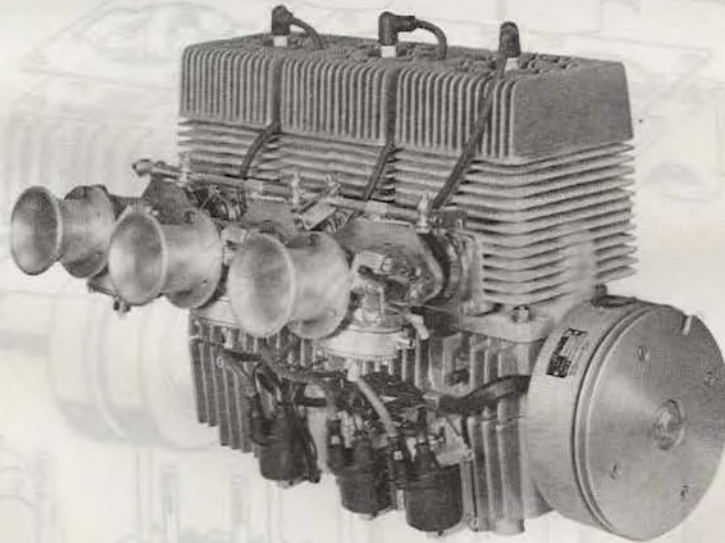





Spare Parts List

ISSUE MM-320-A

Model 230R Racing Engine



3 Cylinder — 793 cc

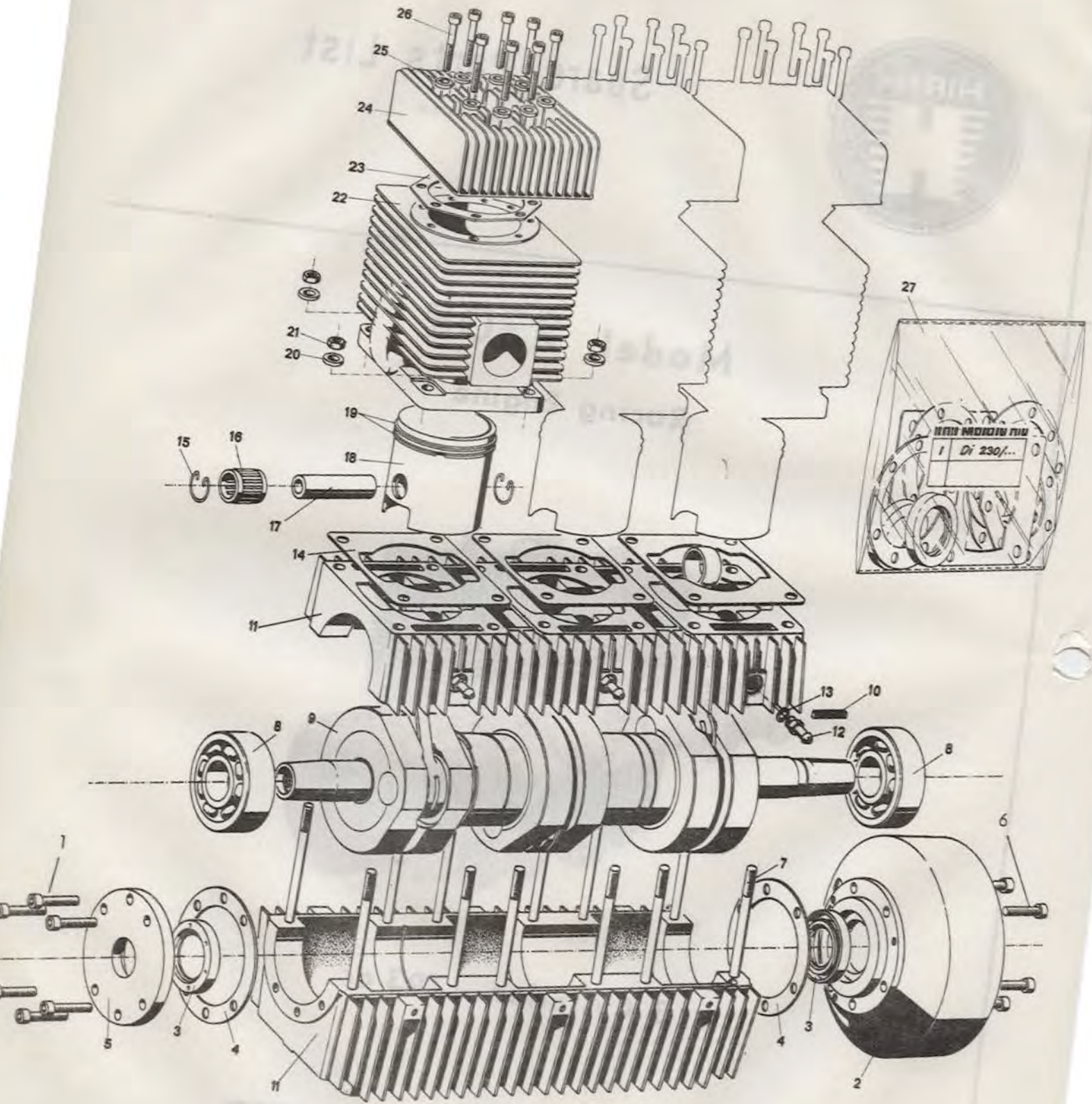
 **TELEDYNE WISCONSIN MOTOR**

MILWAUKEE, WISCONSIN 53246

SALES AND SERVICE REPRESENTATIVES FOR HIRTH ENGINES

Figure 216

MAIN ENGINE PARTS



216

SUPPLEMENT TO MODEL 230R PARTS LIST - ISSUE MM-320A

Please note the following changes to your 230R Parts list; also, it is suggested this sheet accompany all distribution of Issue MM-320A.

Page 2, Item 6, change to Part Number DIN6912M6X20
Page 4, Item 10, change to Part Number DIN127B6GL2
Page 4, Item 32, change to Part Number DIN84M5X10GLZ
Page 4, Item 33, change to Part Number DIN125B5.3GLZ
Page 4, Add Item 48 (rope) Part Number 235A2U

The following items apply to Model 231R - 3 cylinder - 650 CC. All other items listed above and in Issue MM-320A are common to both the 230R and 231R.

<u>Description</u>	<u>Part Number</u>	<u>Required</u>
Piston Pin Retainer	C18DIN73123	6
Piston Pin	014.36/4	3
Piston w/Pin and Rings	014.45	3
Piston Ring	014.45/1	6
Cylinder	232B1	3
Cylinder Head	232B2	3

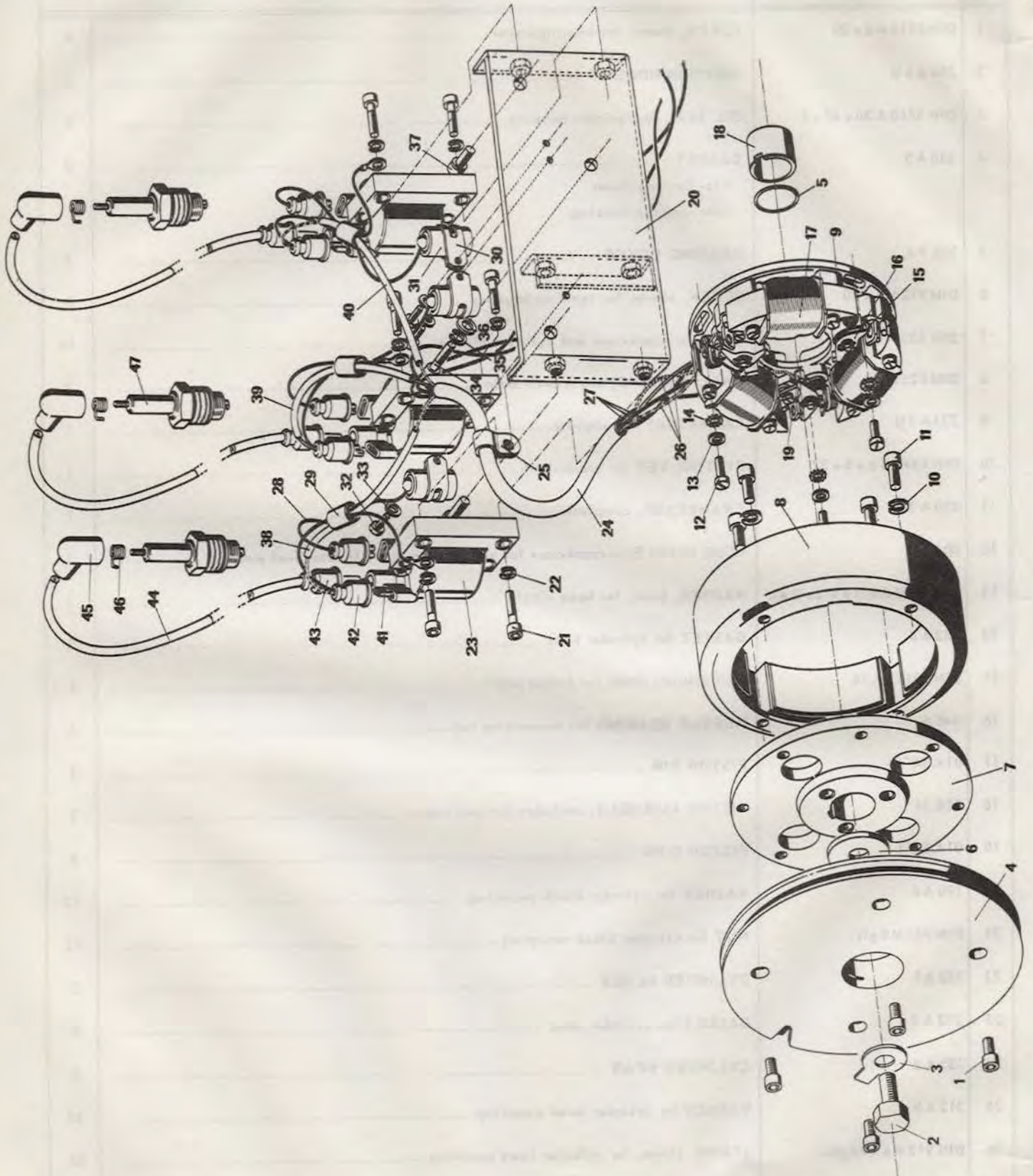
MAIN ENGINE PARTS
FOR MODEL 230R

Figure 216

Ref. No.	Part Number	Description	Qty.
1	DIN 6912 M 6 x 20	SCREW, ellern, for bearing cover	6
2	234 A 6 U	IGNITION HOUSING	1
3	DIN 3760 A 30 x 47 x 7	OIL SEAL for ignition housing	2
4	230 A 5	GASKET	2
		1-for bearing cover.	
		1-for ignition housing.	
5	230 A 4	BEARING COVER	1
6	DIN 912 M 6 x 20	SCREW, ellern, for ignition housing	6
7	DIN 835 M 8 x 85 glz.	STUD for crankcase and cylinder blocks	12
8	DIN 625 6306	BALL BEARING, crankshaft main	2
9	231 A 1 U	CRANKSHAFT, complete	1
10	DIN 6885 B 6 x 6 x 32	FITTING KEY for crankshaft	1
11	230 A 1 U	CRANKCASE, complete	1
12	50 K 4	HOSE NIPPLE in crankcase for vacuum line to carburetor fuel pump	3
13	DIN 7603 A 6.5 x 9.5 x 2 AL	WASHER, joint, for hose nipple	3
14	232 A 4	GASKET for cylinder base	3
15	DIN 73123 A 18	RETAINING RING for piston pin	6
16	046.6	NEEDLE BEARING for connecting rod	3
17	014.34/4	PISTON PIN	3
18	014.34	PISTON ASSEMBLY, includes pin and rings	3
19	014.34/1	PISTON RING	6
20	190 A 6	WASHER for cylinder block mounting	12
21	DIN 934 M 8 glz.	NUT for cylinder block mounting	12
22	232 A 1	CYLINDER BLOCK	3
23	232 A 5	GASKET for cylinder head	3
24	232 A 2	CYLINDER HEAD	3
25	212 A 5	WASHER for cylinder head mounting	24
26	DIN 912 M 6 x 40 glz.	SCREW, ellern, for cylinder head mounting	24
27	Di 230/1	GASKET SET	1

MAIN IGNITION PARTS

Figure 217



217

MAIN IGNITION PARTS

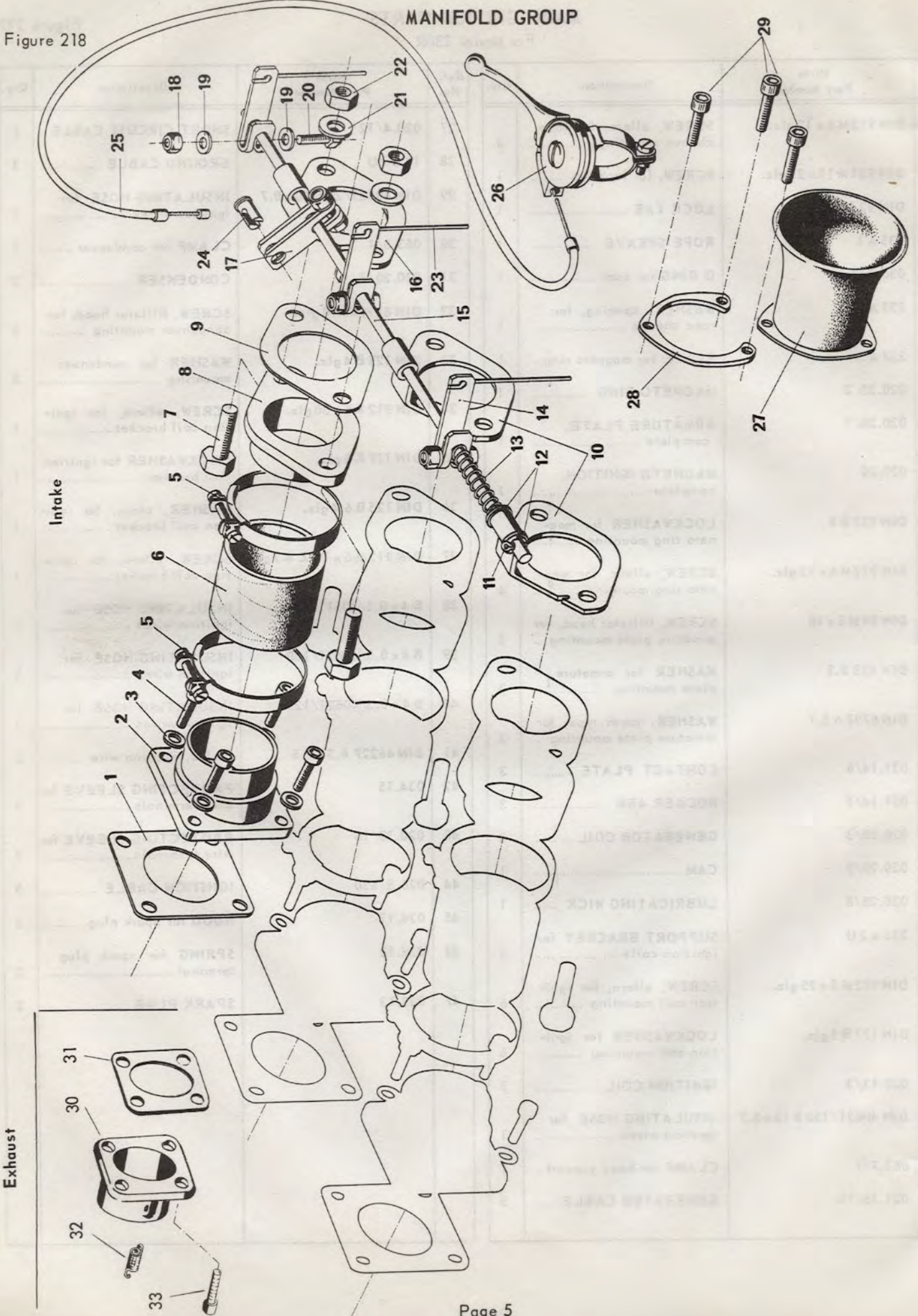
For Model 230R

Figure 217

Ref. No.	Hirth Part Number	Description	Qty.	Ref. No.	Hirth Part Number	Description	Qty.
1	DIN 912 M 6 x 12 glz.	SCREW, ellern, for rope sheave mounting	4	27	020.4/12	SHORT CIRCUIT CABLE	3
2	DIN 931 M 10 x 25 glz.	SCREW, for lock tab	1	28	14 B 2 U	GROUND CABLE	3
3	DIN 93 10.5 glz.	LOCK TAB	1	29	DIN 40621/20 B 10 x 0.7	INSULATING HOSE for ignition wires	3
4	235 A 1	ROPE SHEAVE	1	30	063.8/1	CLAMP for condenser	3
5	056.2/3	O RING for cam	1	31	020.20/7	CONDENSER	3
6	231 A 9	WASHER, spacing, for rope sheave	1	32	DIN 84 M 4 x 10 glz.	SCREW, fillister head, for condenser mounting	3
7	234 A 5	PLATE for magneto ring ..	1	33	DIN 125 B 4 glz.	WASHER for condenser mounting	3
8	020.20/2	MAGNETO RING	1	34	DIN 912 M 6 x 30 glz.	SCREW, ellern, for ignition coil bracket	1
9	020.20/1	ARMATURE PLATE, complete	1	35	DIN 127 B 6 glz.	LOCKWASHER for ignition coil bracket	1
8+9	020.20	MAGNETO IGNITION, complete	1	36	DIN 125 B 6.4 glz.	WASHER, plain, for ignition coil bracket	1
10	DIN 127 B 6	LOCKWASHER for magneto ring mounting	4	37	DIN 912 M 6 x 18 Z 4-1 glz.	SCREW, ellern, for ignition coil bracket	1
11	DIN 912 M 6 x 12 glz.	SCREW, ellern, for magneto ring mounting	4	38	B 4 x 0.5/40611/100	INSULATING HOSE for ignition wires	1
12	DIN 84 M 5 x 16	SCREW, fillister head, for armature plate mounting ..	3	39	B 4 x 0.5/40621/150	INSULATING HOSE for ignition wires	1
13	DIN 433 5.3	WASHER for armature plate mounting	3	40	B 4 x 0.5/40621/120	INSULATING HOSE for ignition wires	1
14	DIN 6797 A 5.1	WASHER, tooth type, for armature plate mounting ..	3	41	DIN 46227 6.3 x 2.5	PLUG, ignition wire	3
15	021.14/6	CONTACT PLATE	3	42	034.15	PROTECTING SLEEVE for wire terminals	3
16	021.14/5	ROCKER ARM	3	43	020.13/15	PROTECTING SLEEVE for wire terminals	3
17	020.20/3	GENERATOR COIL	3	44	026.5/550	IGNITION CABLE	3
18	020.20/9	CAM	1	45	024.11	HOOD for spark plug	3
19	020.20/8	LUBRICATING WICK	1	46	024.12	SPRING for spark plug terminal	3
20	234 A 2 U	SUPPORT BRACKET for ignition coils	1	47	023.13	SPARK PLUG	3
21	DIN 912 M 5 x 25 glz.	SCREW, ellern, for ignition coil mounting	6				
22	DIN 127 B 5 glz.	LOCKWASHER for ignition coil mounting	6				
23	020.13/3	IGNITION COIL	3				
24	DIN 40621/150 B 10 x 0.7	INSULATING HOSE for ignition wires	1				
25	063.7/1	CLAMP for hose support ..	1				
26	021.16/10	GENERATOR CABLE	3				

Figure 218

MANIFOLD GROUP



MANIFOLD GROUP
For Model 230R

Figure 218

Ref. No.	Hirth Part Number	Description	Qty.
1	237 A 12	GASKET for intake flange	3
2	237 A 1 U	INTAKE FLANGE	3
3	DIN 433 6.4 glz.	WASHER, plain, for mounting intake flange	12
4	DIN 912 M 6x20 glz.	SCREW, ellern, for mounting intake flange	12
5	063.1/10	HOSE CLAMP	6
6	DIN 73411 45x40	RUBBER HOSE for air connection	3
7	DIN 931 M 10x30 glz.	SCREW, hexagon, for mounting carburetor.....	6
8	237 A 3 U	FLANGE ASSEMBLY	3
9	237 A 13	GASKET for carburetor flange	3
10-20	237 A 14 U	CARBURETOR LINKAGE ASSEMBLY	1
10	237 A 7	CARBURETOR PLATE	2
11	DIN 94 3x15 glz.	COTTER PIN	1
12	DIN 433 8.4 glz.	WASHER, plain, for carburetor plate	2
13	237 A 16	SPRING, tension	1
14	237 A 17	LEVER, throttle	3
15	237 A 15	SHAFT, throttle	1
16	237 A 10	CARBURETOR PLATE	1
17	237 A 18	LEVER, throttle	1
18	DIN 985 M 6 glz.	NUT, hexagon, for throttle levers	4
19	DIN 125 6.4 glz.	WASHER, plain, for throttle levers	8
20	DIN 931 M 6x25 glz.	SCREW, hexagon, for throttle lever clamp.....	4
21	DIN 125 B 10.5 glz.	WASHER, plain, for carburetor mounting	6
22	DIN 934 M 10 glz.	NUT, hexagon, for carburetor mounting	6
23	237 A 19	CONTROL WIRE to carburetor	3
24	049.10/4	SOLDER NIPPLE for bowden control	1
25	17 M 1 U/750	BOWDEN CABLE	1
26	049.11	SPEED CONTROL LEVER	1
27	237 A 20	SUCTION FUNNEL	3
28	237 A 21	SUPPORT for suction funnel.....	3
29	051.6	SCREW, ellern, for suction funnel	9
30	238 A 1 U	EXHAUST FLANGE	3
31	238 A 4	GASKET for exhaust flange	3
32	238 A 5	SPRING, exhaust pipe retainer	6
33	DIN 912 M 6x25 glz.	SCREW, ellern, for mounting exhaust flange.....	12