

PARTS MANUAL

Model

PTD405T

Pump

PUB-PP1236
Rev. 12/99

FIG. 1 PUMP - PTD405T

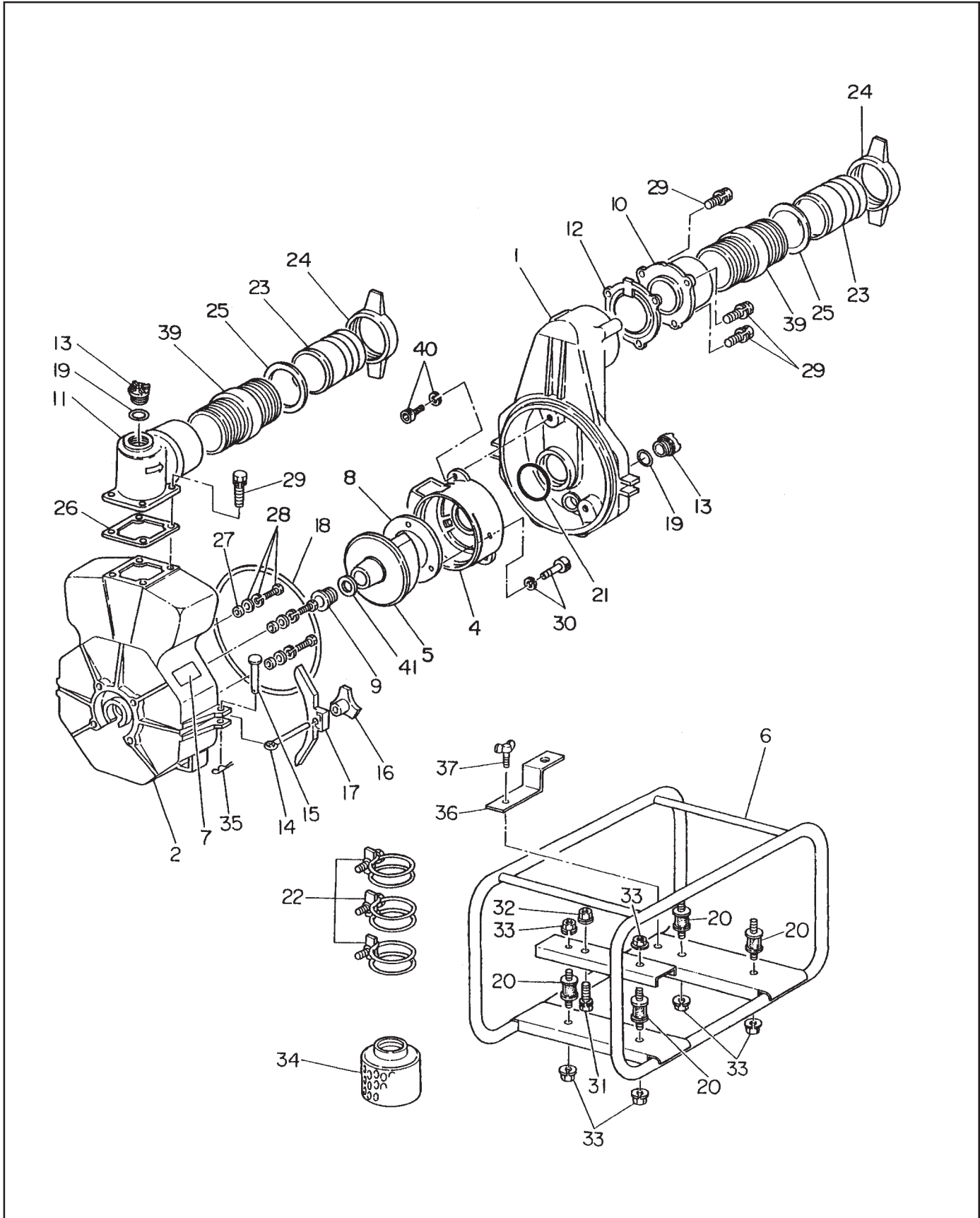


FIG. 1 PUMP - PTD405T

REF	PART NUMBER	DESCRIPTION	QTY	REMARKS
1	481-00000-74	CASING	1	
2	480-10210-02	CASING COVER	1	
4	481-00000-75	INNER CASING	1	
5	480-10210-04	IMPELLER	1	
6	481-00000-60	FRAME	1	
7	482-00216-03	LABEL, pump name	1	
8	480-10210-07	LINER	1	
9	480-08210-08	MECHANICAL SEAL	1	
10	481-00000-77	SUCTION FLANGE	1	
11	481-00000-78	DELIVERY FLANGE	1	
12	481-00000-79	CHECK VALVE	1	
13	480-08210-12	PLUG	2	
14	480-08210-13	COVER BOLT	2	
15	480-08210-14	RIVET	2	
16	480-08210-15	KNOB	2	
17	480-08210-16	CASING COVER HOLDER	2	
18	480-08210-17	PACKING, casing	1	
19	480-08210-18	"O" RING	2	
20	480-08210-19	CUSHION RUBBER	4	
21	480-10210-20	"O" RING, inner casing	1	
22	480-10010-28	HOSE BAND	3	
23	480-10010-18	NIPPLE (AL)	2	
24	481-00000-12	COUPLING HANDLE (AL NPT)	2	
25	480-10010-17	PACKING, nipple	2	
26	480-10010-20	PACKING, delivery flange	1	
27	480-10210-26	SEAL PACKING	4	
28	480-10210-27	BOLT and WASHER ASS'Y	4	
29	001-14103-00	BOLT and WASHER ASS'Y	7	
30	480-10210-29	SOCKET BOL (M6x20)	3	
31	001-14104-50	BOLT and WASHER ASS'Y (M10x50)	2	
32	002-38100-00	FLANGE NUT (M10)	2	
33	480-10010-24	NUT and WASHER ASS'Y (M8)	6	
34	480-10210-33	STRAINER	1	
35	480-08210-34	SPRING PIN	2	
36	480-05210-35	SUPPORT	1	
37	480-05210-36	WING BOLT (M6x15)	1	
39	481-00000-82	NIPPLE (NPTxNPT)	2	
40	480-08210-39	SOCKET BOLT (M8x30)	3	
41	480-10210-40	SHIM (Ø22.2 x 0.3mm)	1	select one piece only
41	480-10210-41	SHIM (Ø22.2 x 0.6mm)	1	select one piece only
41	480-10210-42	SHIM (Ø22.2 x 1.6mm)	1	select one piece only
41	480-10210-43	SHIM (Ø22.2 x 2.3mm)	1	select one piece only

FIG. 2 CRANKCASE - PTD405T

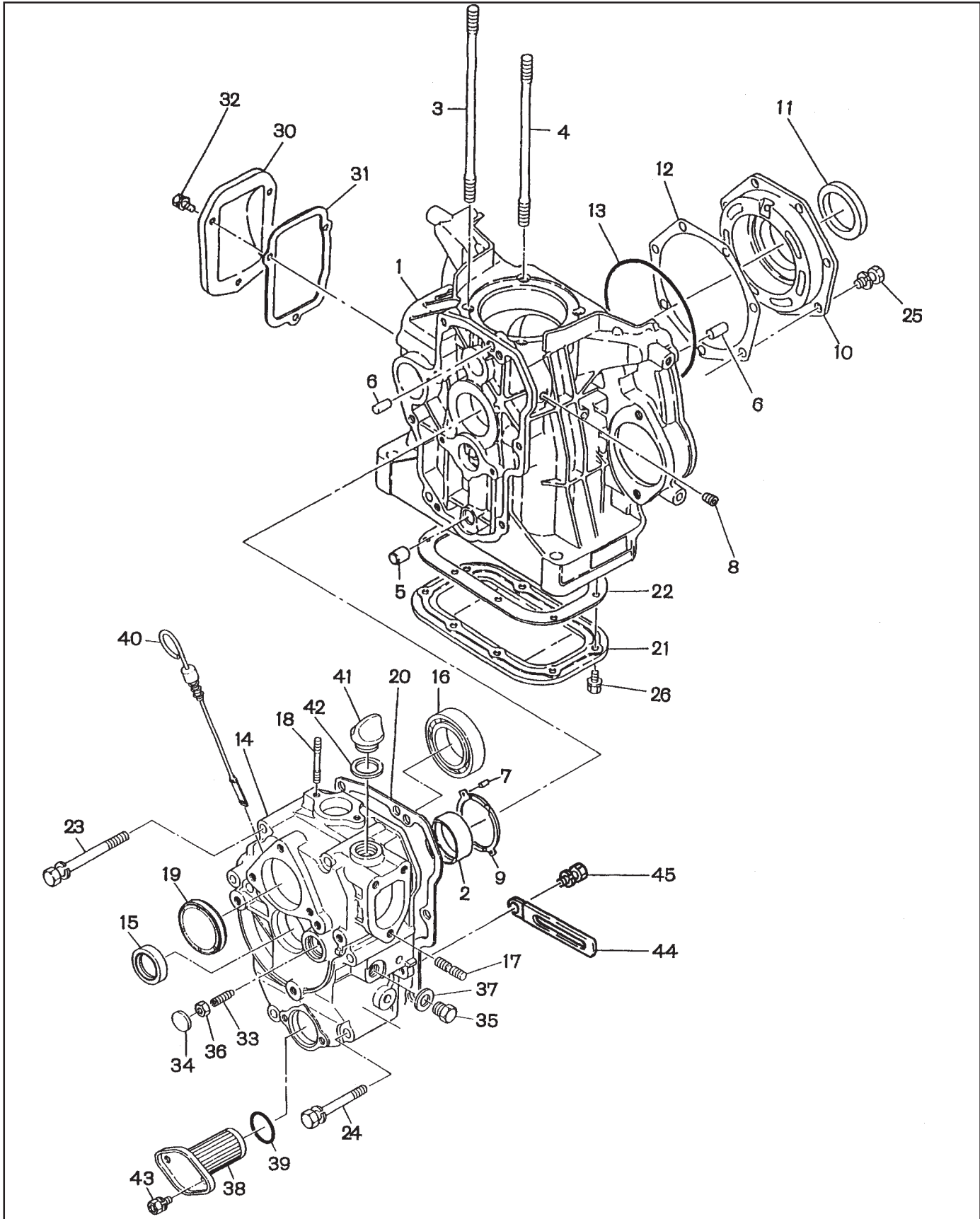


FIG. 2 CRANKCASE - PTD405T

REF	PART NUMBER	DESCRIPTION	QTY	REMARKS
*1	231-10107-11	CRANKCASE, compl.	1	Includes items 2 thru 8
2	228-15801-03	MAIN BEARING, STD	1	
2	228-15802-03	MAIN BEARING, under size 0.25mm	1	
2	228-15803-03	MAIN BEARING, under size 0.5mm	1	
3	231-16001-11	TENSION BOLT 1	2	
4	231-16002-11	TENSION BOLT 2	2	
5	228-15003-13	PIPE KNOCK	1	
6	005-26081-80	DOWEL PIN	4	
7	005-19250-60	SPRING PIN	2	
8	212-15008-13	BLIND PLUG	1	
9	228-15002-03	THRUST BEARING	1	
*10	231-11501-21	BEARING HOUSING	1	Includes item 11
11	044-04000-20	OIL SEAL (40x58x8)	1	
12	231-15004-03	GASKET, t=0.1	1	
12	231-15005-03	GASKET, t=0.2	1	
12	231-15006-03	GASKET, t=0.3	1	
13	231-15014-03	"O" RING, bearing housing	1	
*14	231-11701-01	GEAR CASE COVER, compl.	1	Includes items 14 thru 19
15	044-02200-50	OIL SEAL (22x35x7)	1	
16	060-03500-40	BALL BEARING (BB-6007C3)	1	
17	001-32083-51	STUD	3	
18	001-32064-50	STUD	2	
19	041-05000-11	BLIND PLATE	1	
20	231-15007-03	GASKET, case cover (t=0.5)	1	
21	231-11601-03	OIL PAN	1	
22	231-15034-03	GASKET, oil pan (t=1.5)	1	
23	001-13088-50	BOLT and WASHER ASS'Y	4	
24	001-13086-50	BOLT and WASHER ASS'Y	4	
25	001-13082-00	BOLT and WASHER ASS'Y	7	
26	980-05060-10	BOLT and WASHER ASS'Y	8	
30	228-26001-01	BALANCER COVER	1	
31	228-25004-03	GASKET, balancer cover	1	
32	980-05060-10	BOLT and WASHER ASS'Y	3	
33	014-90600-70	ADJUSTING SCREW	1	
34	041-12200-10	BLIND PLUG	1	
35	040-11200-30	PLUG	1	
36	002-18060-00	NUT	1	
37	003-70120-00	GASKET, aluminum	1	
38	228-64301-00	OIL FILTER ASS'Y	1	
39	024-03000-10	"O" RING	1	
40	228-63610-01	OIL GAUGE, compl.	1	
41	228-65003-03	PLUG	1	
42	021-32000-10	GASKET	1	
43	980-05060-10	BOLT and WASHER ASS'Y	2	

FIG. 2 CRANKCASE - PTD405T

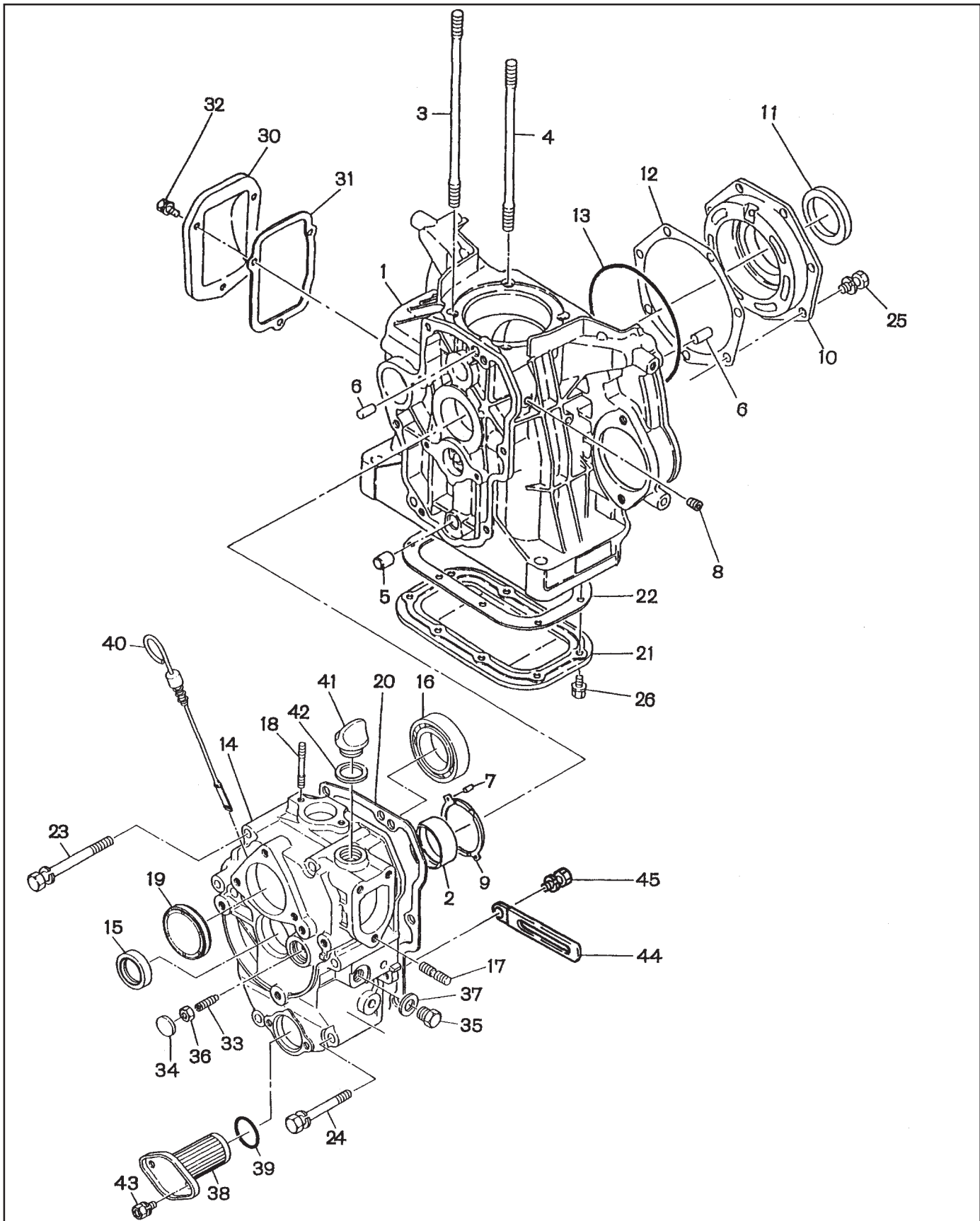


FIG. 3 CYLINDER and CYLINDER HEAD - PTD405T

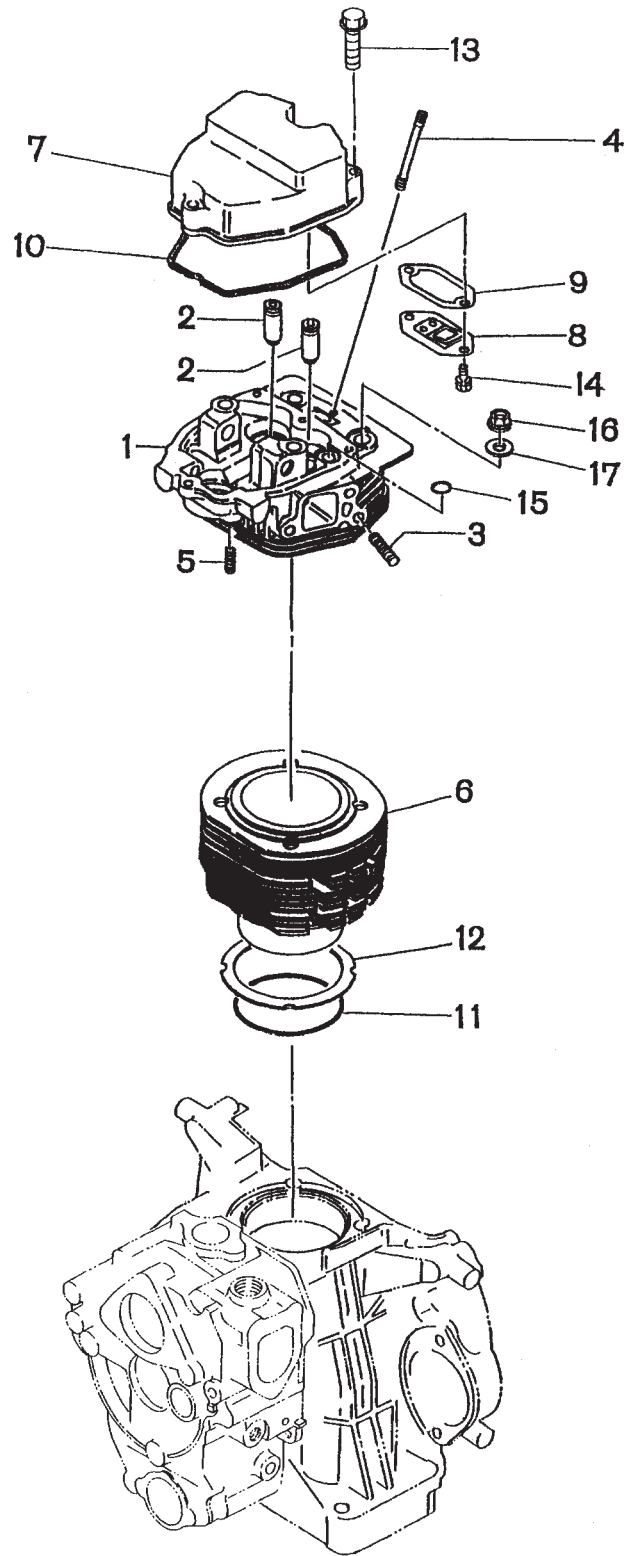


FIG. 3 CYLINDER and CYLINDER HEAD - PTD405T

REF	PART NUMBER	DESCRIPTION	QTY	REMARKS
*1	229-13110-21	CYLINDER HEAD, compl.	1	Includes items 2 thru 5
2	228-14204-03	VALVE GUIDE	2	
3	001-37082-01	STUD	4	
4	010-50601-50	STUD	2	
5	001-31062-51	STUD	2	
6	231-12401-02	CYLINDER UNIT	1	
7	228-17053-03	ROCKER COVER	1	
8	228-15303-01	BREATHER PLATE, compl.	1	
9	228-15009-23	GASKET, breather (t=2)	1	
10	228-15010-03	GASKET, rocker cover	1	
11	229-15011-03	“O” RING, cylinder	1	
12	229-15012-13	SPACER, cylinder (t=0.1)	1	
12	229-15013-13	SPACER, cylinder (t=0.2)	1	
13	001-13064-00	BOLT and WASHER ASS'Y	3	
14	980-05060-10	BOLT and WASHER ASS'Y	2	
15	024-01300-10	“O” RING	1	
16	018-01000-11	FLANGE NUT	4	
17	980-30110-70	WASHER	4	

FIG. 4 CRANKSHAFT and PISTON - PTD405T

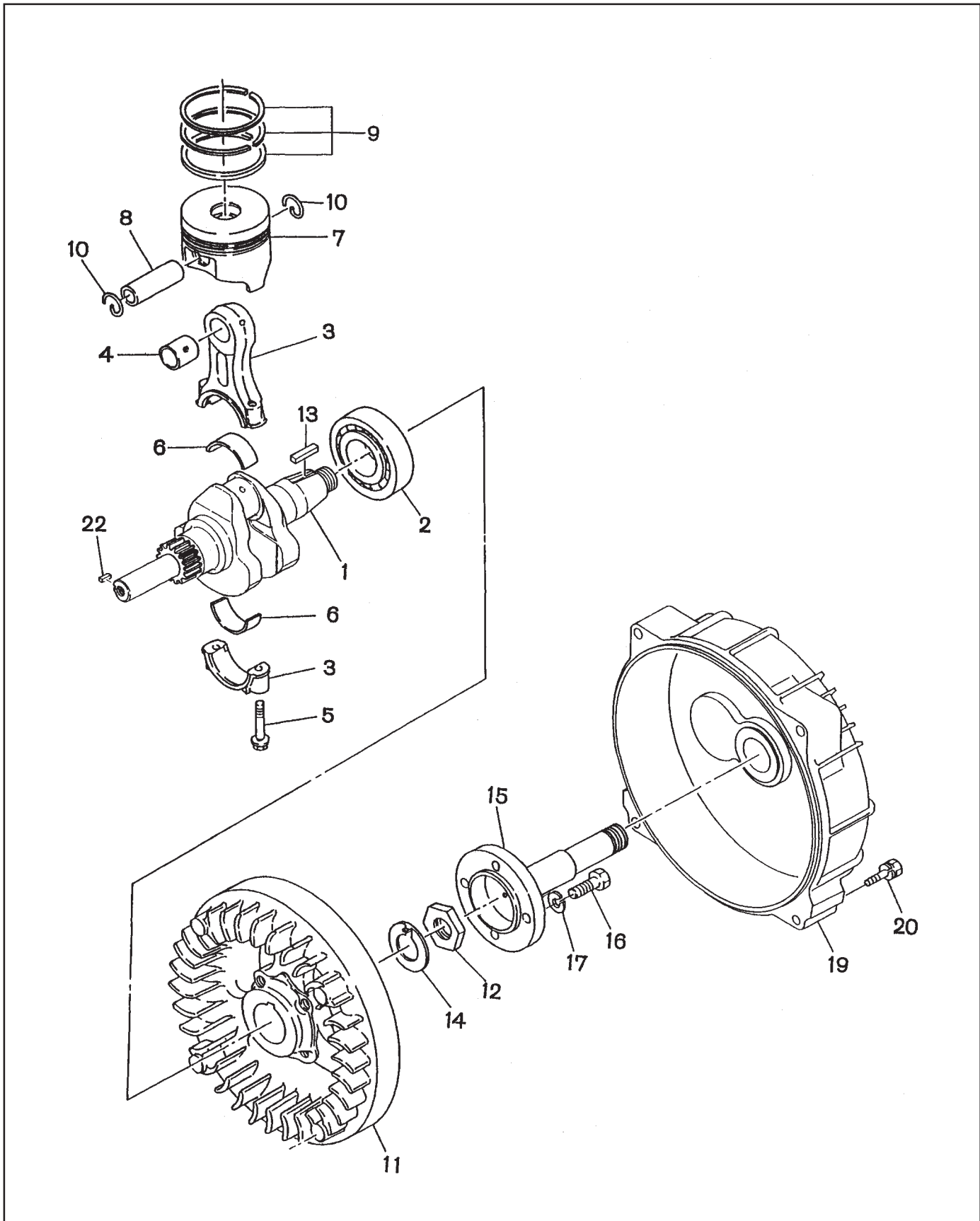


FIG. 4 CRANKSHAFT and PISTON - PTD405T

REF	PART NUMBER	DESCRIPTION	QTY	REMARKS
*1	262-20201-01	CRANKSHAFT, compl.	1	Includes item 2
2	060-04000-30	BALL BEARING (BB-6308C3)	1	
*3	231-22501-10	CONNECTING ROD ASS'Y	1	Includes items 4 and 5
4	228-22901-13	SMALL END BUSH	1	
5	231-23001-13	CONNECTING ROD BOLT	2	
6	228-22801-13	LARGE END BEARING, STD.	2	
6	228-22802-13	LARGE END BEARING, under size 0.25mm	2	
6	228-22803-13	LARGE END BEARING, under size 0.50mm	2	
7	231-23401-43	PISTON, STD.	1	
7	231-23402-43	PISTON, over size 0.25mm	1	
7	231-23403-43	PISTON, over size 0.50mm	1	
8	228-23301-03	PISTON PIN	1	
9	229-23501-27	PISTON RING SET, STD.	1	
9	229-23502-27	PISTON RING SET, over size 0.25mm	1	
9	229-23503-27	PISTON RING SET, over size 0.50mm	1	
10	056-52100-10	CLIP	2	
11	228-22401-23	FLYWHEEL	1	
12	017-32600-10	LOCK NUT	1	
13	005-30072-01	KEY	1	
14	020-52600-12	LOCK WASHER	1	
15	228-24408-03	DRIVING SHAFT	1	
16	001-67103-00	BOLT	4	
17	003-20100-00	SPRING WASHER	4	
19	228-17911-23	ADAPTER 3	1	
20	001-13086-00	BOLT and WASHER ASS'Y	4	
22	005-30040-81	KEY	1	

FIG. 5 CAMSHAFT - PTD405T

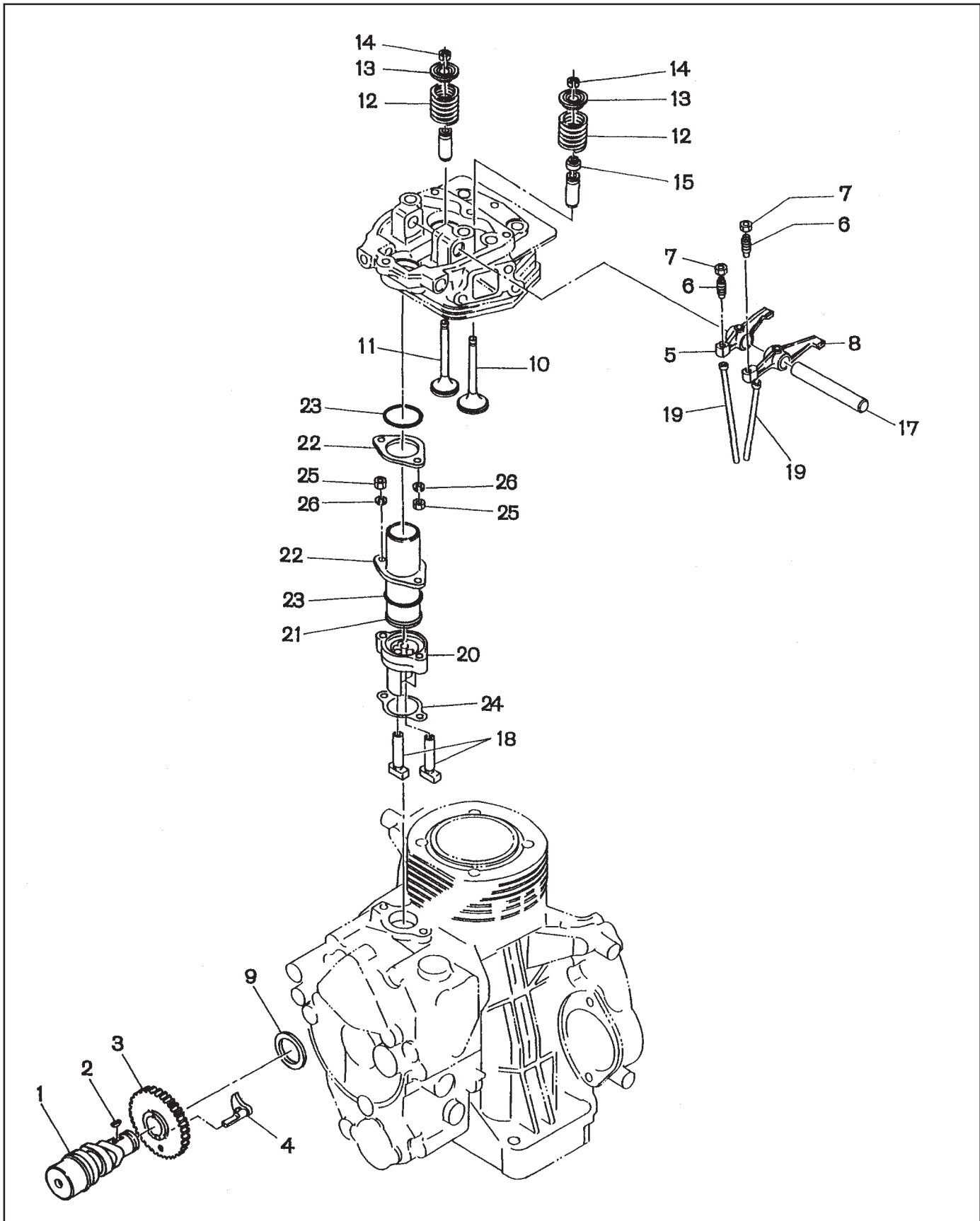


FIG. 5 CAMSHAFT - PTD405T

REF	PART NUMBER	DESCRIPTION	QTY	REMARKS
*1	228-31604-00	CAMSHAFT ASS'Y	1	Includes items 1 thru 3
1	228-31604-01	CAMSHAFT, compl.	1	
2	005-32042-01	WOODRUFF KEY	1	
3	228-33222-01	CAMSHAFT GEAR, compl.	1	
4	228-35561-03	RELEASE LEVER	1	
*5	228-36201-01	EXHAUST ROCKER ARM, compl.	1	Includes items 6 and 7
6	014-90600-80	ADJUSTING SCREW	2	
7	017-00600-80	NUT	2	
*8	228-36401-01	INTAKE ROCKER ARM, compl.	1	Includes items 6 and 7
9	023-02000-20	SPACER (t=0.8)	1	
9	023-02000-30	SPACER (t=1.0)	1	
9	023-02000-40	SPACER (t=1.2)	1	
10	228-33401-13	INTAKE VALVE	1	
11	228-33501-03	EXHAUST VALVE	1	
12	228-33601-03	VALVE SPRING	2	
13	228-33701-03	SPRING RETAINER	2	
14	228-33801-03	RETAINER LOCK	4	
15	228-35003-03	VALVE STEM SEAL	1	
17	228-35004-03	ROCKER SHAFT	1	
18	228-33301-03	TAPPET	2	
19	231-35005-03	PUSH ROD	2	
20	228-35701-13	TAPPET GUIDE	1	
21	231-35603-11	PUSH ROD SLEEVE	1	
22	228-35801-01	PLATE, push rod	2	
23	024-03200-70	"O" RING	2	
24	228-35013-03	GASKET, tappet guide	1	
25	002-18060-00	NUT	4	
26	003-20060-00	SPRING WASHER	4	

FIG. 6 MUFLER and AIR CLEANER - PTD405T

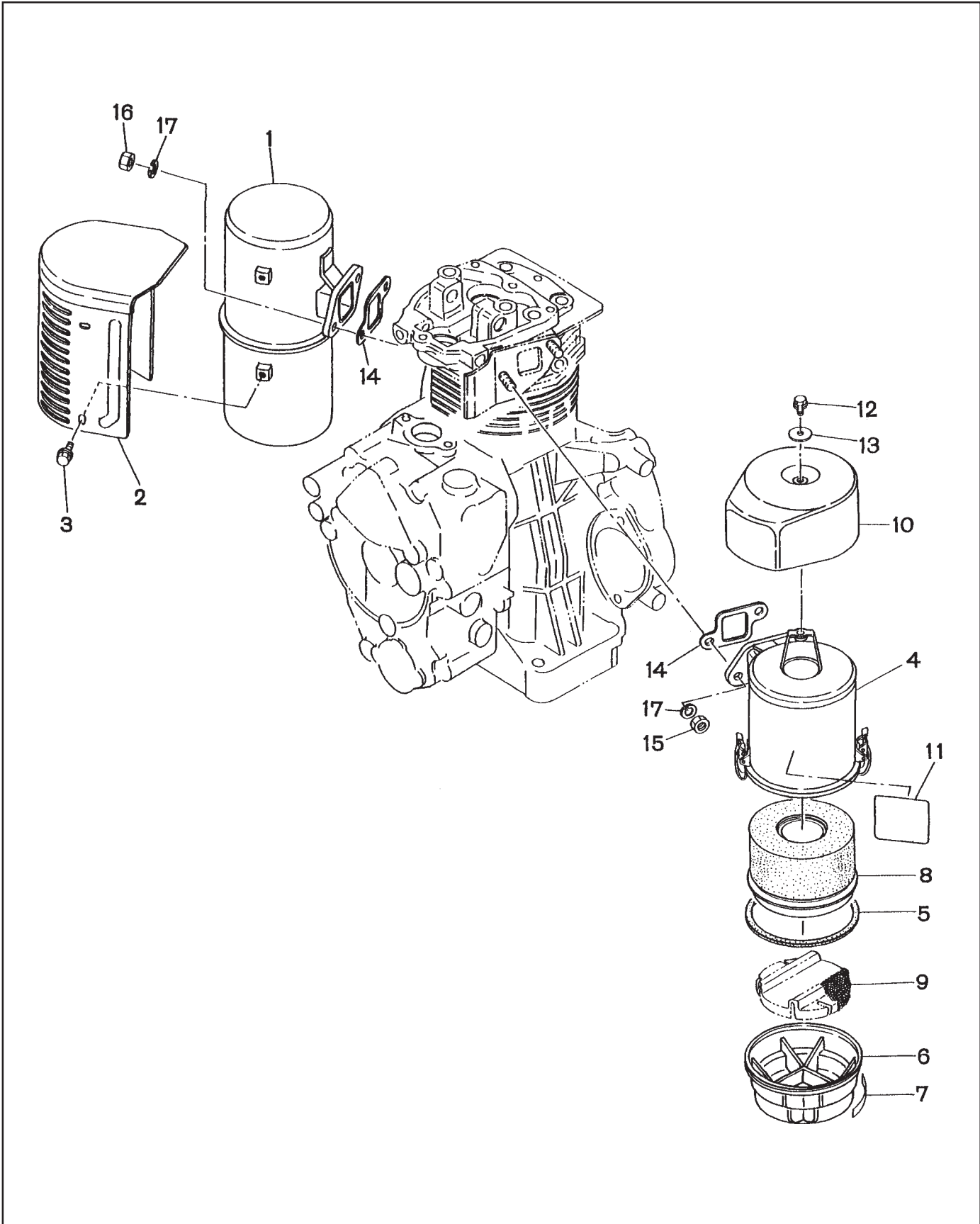


FIG. 7 GOVERNOR - PTD405T

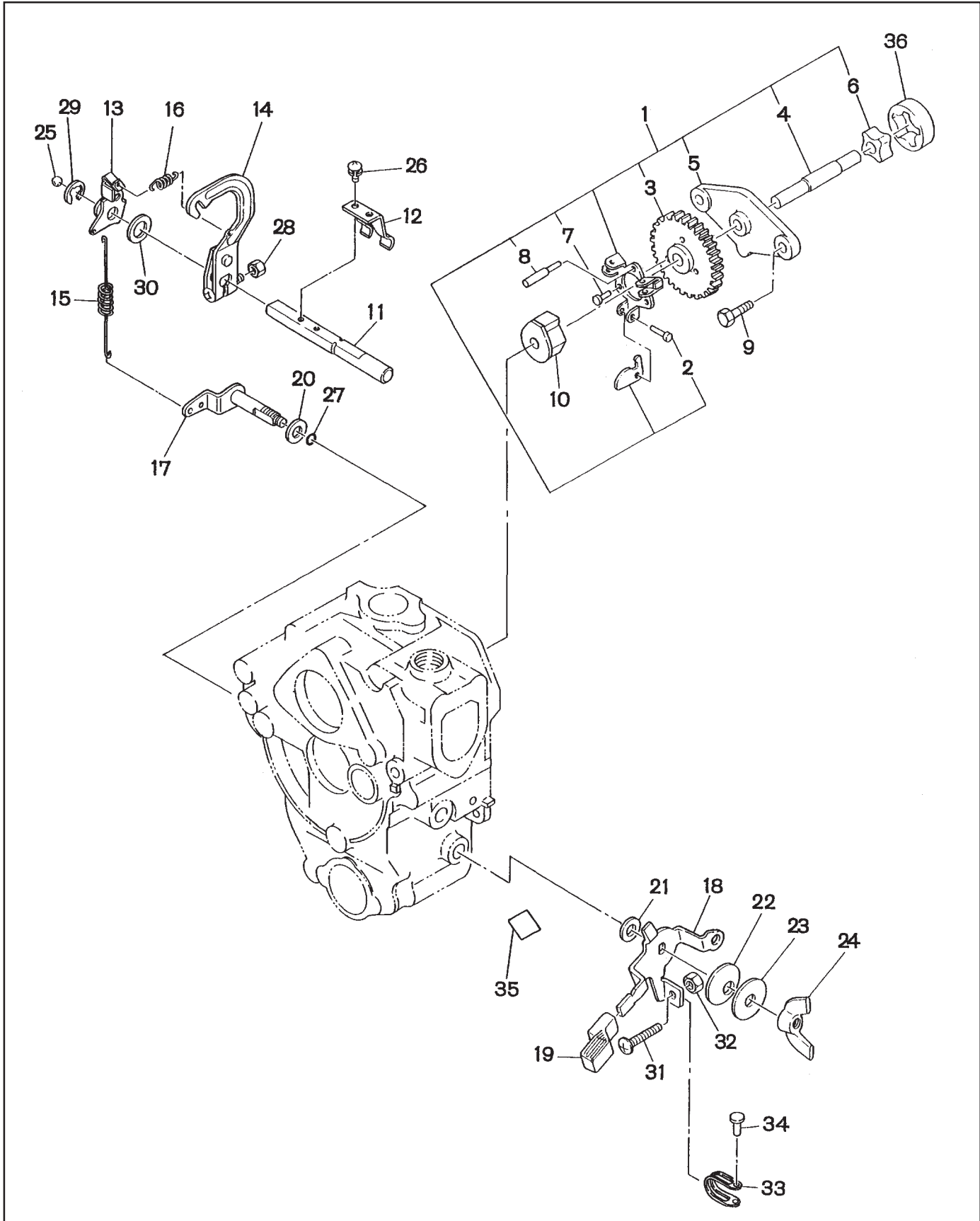


FIG. 7 GOVERNOR - PTD405T

REF	PART NUMBER	DESCRIPTION	QTY	REMARKS
*1	228-41701-30	GOVERNOR PLATE ASS'Y	1	Includes items 2 thru 8
3	228-45501-03	GOVERNOR GEAR	1	
4	228-66201-03	PUMP SHAFT	1	
5	228-66101-03	OIL PUMP COVER	1	
6	228-63901-03	OIL PUMP, inner	1	
7	033-00400-10	RIVET	2	
8	030-94000-70	LOCK PIN	1	
9	001-13062-00	BOLT and WASHER ASS'Y	2	
10	228-41910-01	GOVERNOR SLEEVE	1	
11	228-42201-03	GOVERNOR SHAFT	1	
12	228-42101-23	GOVERNOR YOKE	1	
13	228-42302-03	GOVERNOR LEVER 1	1	
14	228-42310-02	GOVERNOR LEVER 2 UNIT	1	
15	228-42501-23	GOVERNOR SPRING	1	
16	228-45001-33	START SPRING	1	
17	228-42904-02	CONTROL LINK UNIT	1	
18	231-43310-01	SPEED CONTROL 1, compl.	1	
19	228-45003-03	KNOB	1	
20	023-00800-10	SPACER	1	
21	021-70800-10	FRICTION WASHER	1	
22	020-00800-10	WASHER	1	
23	020-00800-50	WASHER	1	
24	017-90800-12	WING NUT	1	
25	045-00600-10	STEEL BALL	1	
26	004-35051-20	SCREW and WASHER ASS'Y	2	
27	006-26100-50	"O" RING	1	
28	002-18060-00	NUT	1	
29	003-13080-00	CLIP	1	
30	003-10100-00	WASHER	1	
31	004-31063-50	SCREW	1	
32	002-18060-00	NUT	1	
33	228-45004-03	LOCK PLATE	1	
34	033-00500-10	RIVET	1	
35	228-92104-03	LABEL, operation	1	
36	228-63902-03	OIL PUMP, outer	1	

FIG. 8 COOLING and STARTING - PTD405T

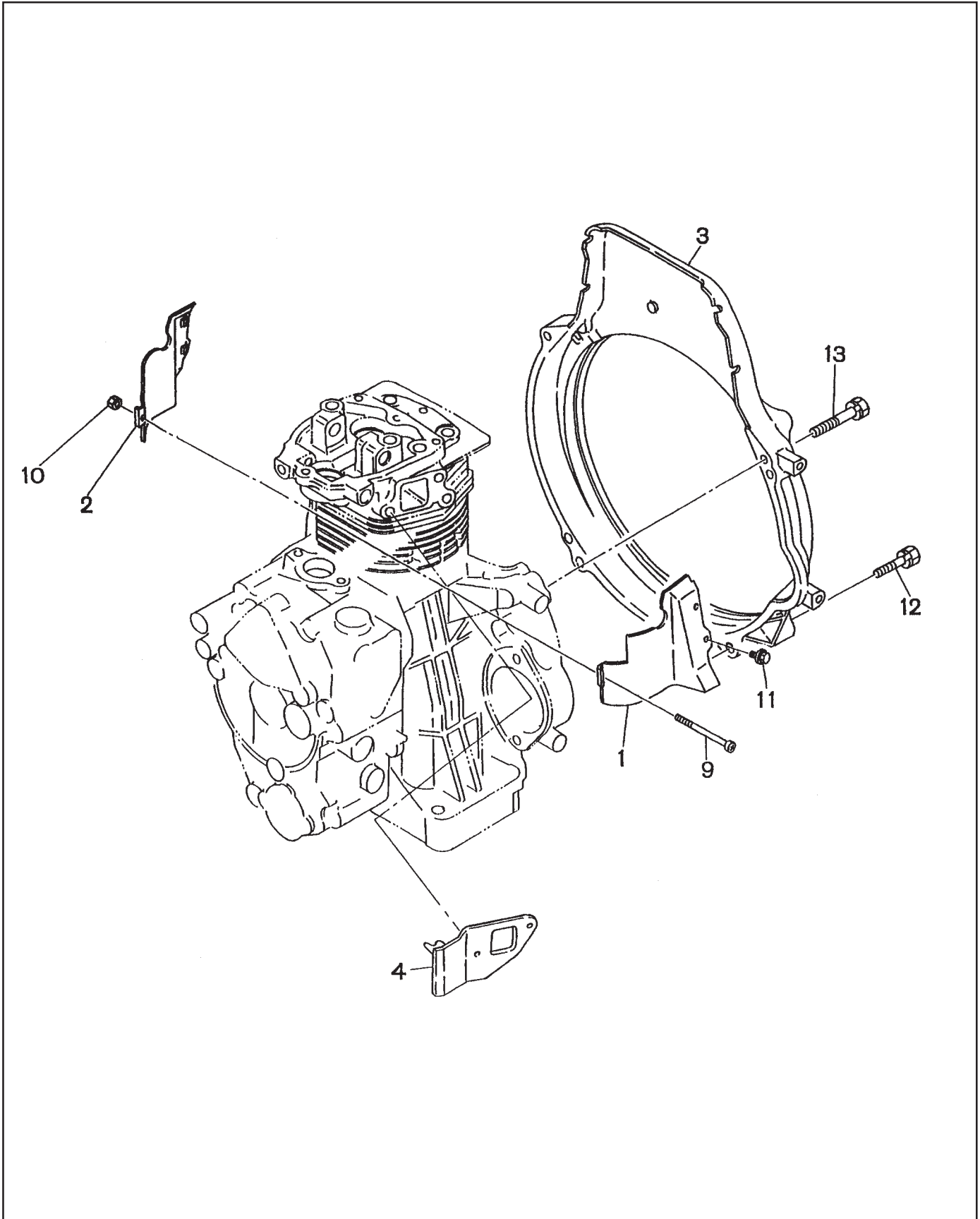


FIG. 9 RECOIL STARTER - PTD405T

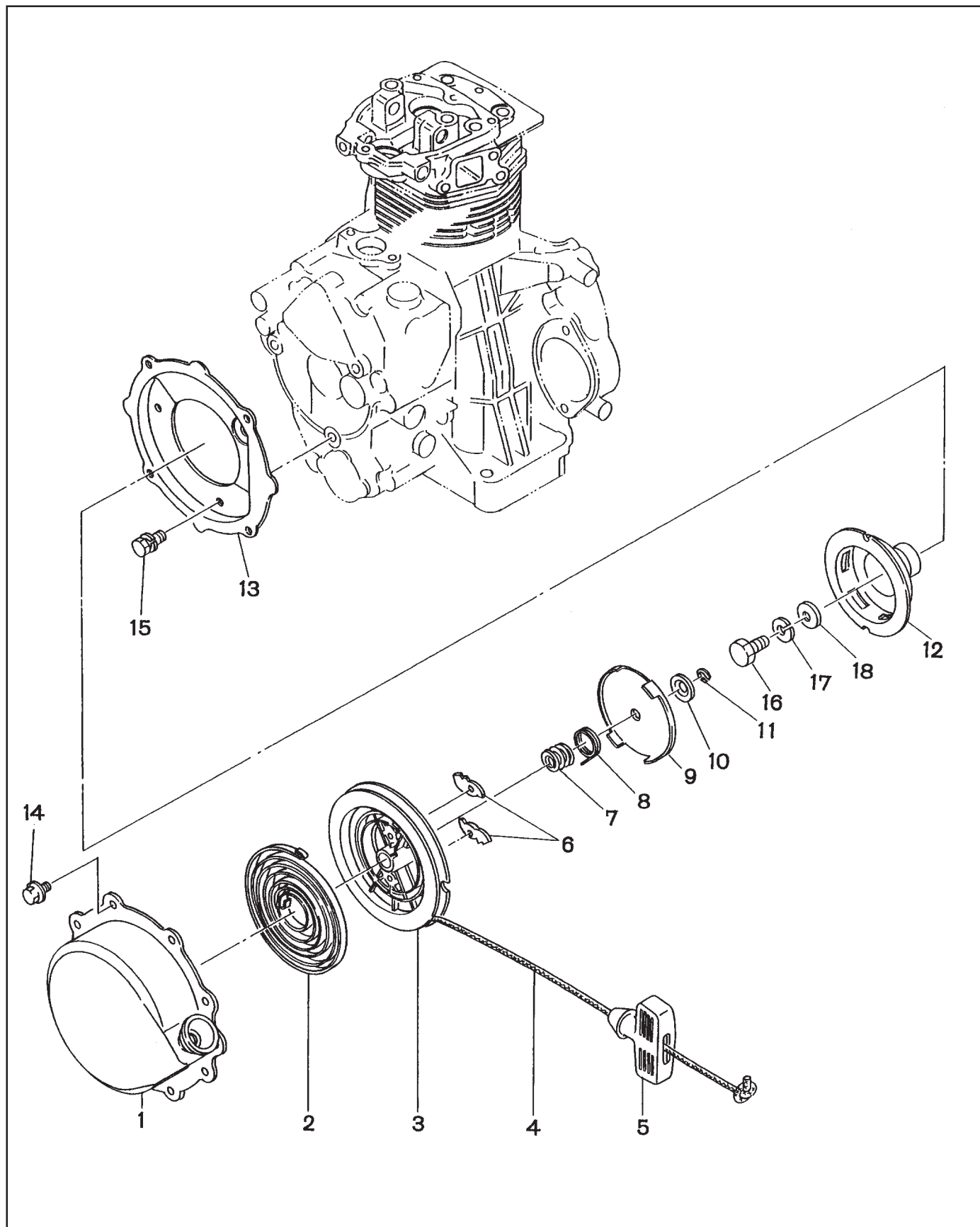


FIG. 10 FUEL TANK GROUP- PTD405T

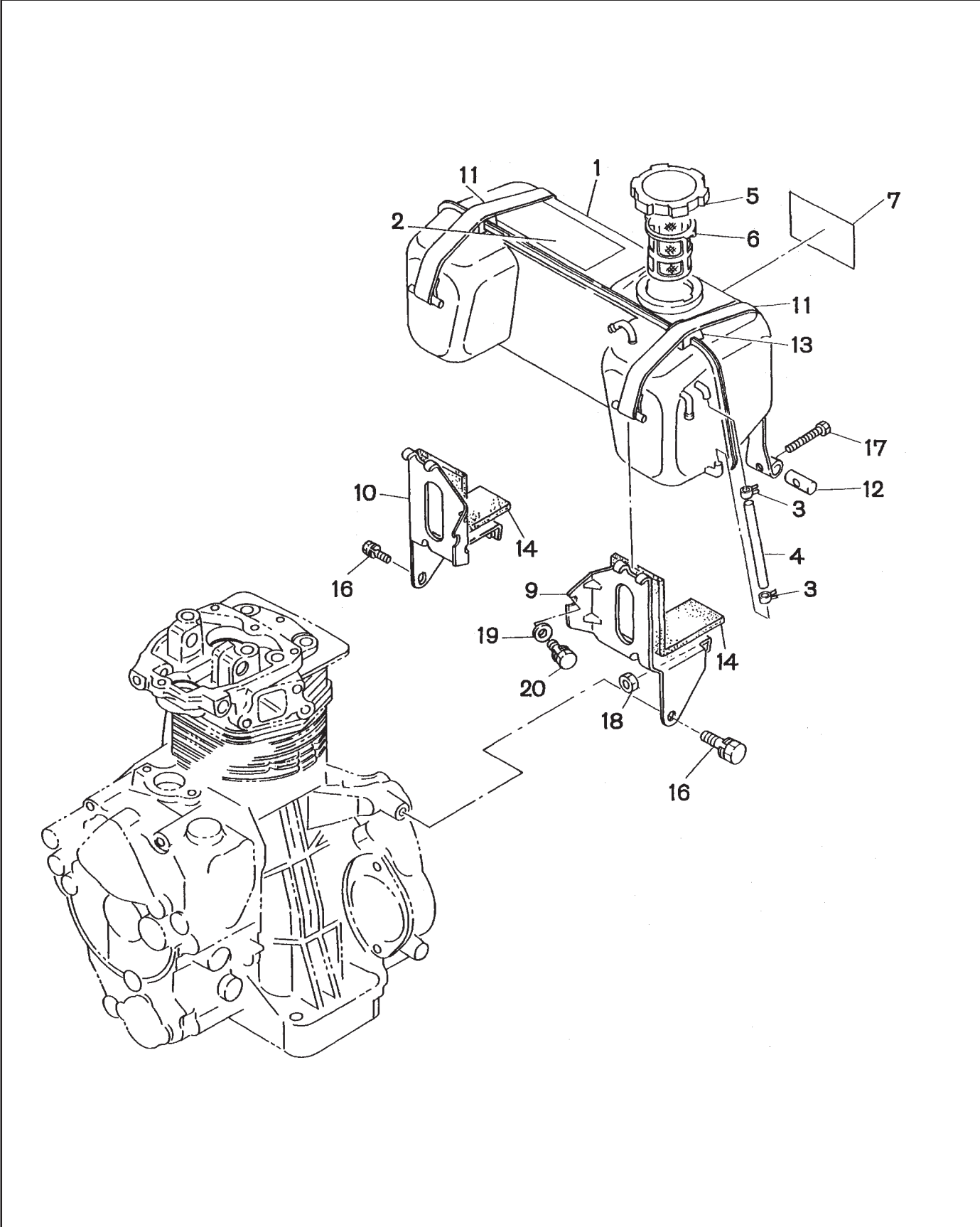


FIG. 10 FUEL TANK GROUP- PTD405T

REF	PART NUMBER	DESCRIPTION	QTY	REMARKS
* 1	228-60102-41	FUEL TANK, compl.	1	Includes item 2
2	228-91908-03	LABEL, instraction	1	
3	056-10800-10	HOSE CLAMP	2	
4	085-00500-00	VINYL PIPE (Ø5 x Ø8 x 120mm)	1	
5	043-04300-15	FUEL TANK CAP	1	
6	064-13600-10	FUEL FILTER	1	
7	231-91712-03	LABEL, trade mark	1	
9	231-61601-11	TANK BRACKET1, compl.	1	
10	231-61701-11	TANK BRACKET2, compl.	1	
11	228-65510-01	TANK BAND, compl.	2	
12	228-65601-11	PIN, tank band	2	
13	228-65001-13	BAND GUIDE	2	
14	228-65002-03	FELT	2	
16	001-13082-00	BOLT and WASHER ASS'Y	2	
17	001-66064-50	BOLT	2	
18	002-18060-00	NUT	2	
19	003-10080-00	WASHER	2	
20	001-13081-80	BOLT and WASHER ASS'Y	2	

FIG. 11 FUEL SYSTEM GROUP- PTD405T

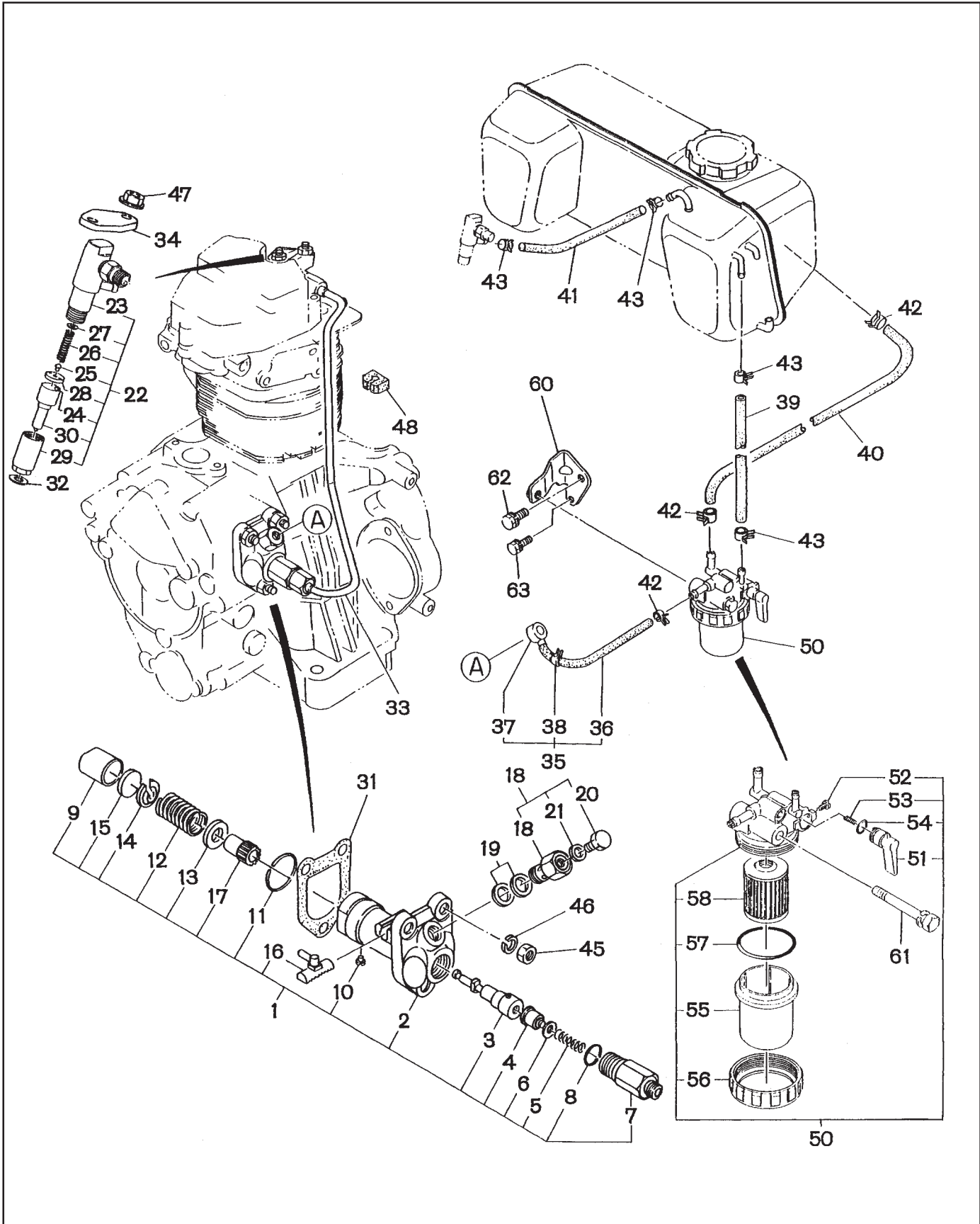


FIG. 11 FUEL SYSTEM GROUP- PTD405T

REF	PART NUMBER	DESCRIPTION	QTY	REMARKS
*1	228-63120-00	INJECTION PUMP ASS'Y	1	Includes items 2 thru 17
3	228-63102-08	PULUNGER ASS'Y	1	
4	228-63103-08	DELIVERY VALVE	1	
5	222-63104-08	SPRING, delivery valve	1	
6	222-63105-08	GASKET	1	
8	228-63105-08	"O" RING	1	
*18	228-66501-00	EYE BOLT ASS'Y	1	Includes items 18,20 and 21
18	228-63112-08	EYE BOLT	1	
19	228-66601-03	GASKET, pump	2	
20	228-63113-08	BOLT	1	
21	211-63212-08	GASKET	1	
*22	228-63201-10	NOZZLE ASS'Y	1	Includes items 23 thru 30
30	228-63211-08	NOZZLE	1	
31	228-65017-03	GASKET, pump (t=0.1)	1	
31	228-65022-03	GASKET, pump (t=0.2)	1	
31	228-65018-03	GASKET, pump (t=0.3)	1	
32	228-65004-03	GASKET, nozzle	1	
33	231-63301-01	INJECTION PIPE, compl.	1	
34	243-66001-01	BRACKET, nozzle 1	1	
*35	228-62610-01	FUEL PIPE 10, compl.	1	Includes items 36 thru 38
36	085-10600-00	RUBBER PIPE (Ø6 x Ø12 x 90mm)	1	
37	052-10500-12	BANJO	1	
38	056-11100-20	HOSE CLAMP	1	
39	085-14500-00	RUBBER PIPE (Ø4.5 x Ø9 x 90mm)	1	
40	085-10600-00	RUBBER PIPE (Ø6 x Ø12 x 260mm)	1	
41	085-14500-00	RUBBER PIPE (Ø4.5 x Ø9 x 260mm)	1	
42	056-11100-20	HOSE CLAMP	3	
43	056-10800-10	HOSE CLAMP	4	
45	002-18080-00	NUT	3	
46	003-20080-00	SPRING WASHER	3	
47	002-38060-00	FLANGE NUT	2	
48	222-65006-03	GROMMET	1	
*50	228-62106-10	FUEL FILTER ASS'Y	1	Includes items 50 thru 58
54	228-62106-08	"O" RING	1	
55	243-62101-08	CUP	1	
56	228-62108-08	RING NUT	1	
57	228-62109-08	"O" RING	1	
58	228-62110-08	ELEMENT	1	
60	228-67602-01	FUEL FILTER BRACKET, compl.	1	
61	001-13086-50	BOLT and WASHER ASS'Y	1	
62	001-13082-00	BOLT and WASHER ASS'Y	1	
63	001-13061-80	BOLT and WASHER ASS'Y	1	