



# **Robin 3K Power Sprayer**

Model RS301

Model RS401

INSTRUCTION MANUAL



**FUJIROBIN INDUSTRIES LTD.**  
Tokyo-Japan

## INTRODUCTION

We thank you for your buying ROBIN 3K POWER SPRAYER.

This manual provides instructions for your efficient and trouble-free operation.

Please read this manual to the end carefully enough to help your operation.

ROBIN 3K POWER SPRAYER is a light, small and economical product which combines easy operation of a manual sprayer with performance of a semi-fixed type power sprayer.

If you have any question, please consult your distributor.

## FEATURES

- (1) The engine's output is a size larger than RS03/04, so can provide easy and best performance.
- (2) Despite handy type, a lubrication-free special rotary pump enables high-pressure spraying operation, so the machine can make a long and wide range spraying as a semi-fixed type power sprayer.
- (3) Special mechanical seal is used for pump shaft sealing device. The seal has a good chemical resistance and durability so that any agricultural chemical can be used with safety.
- (4) There is an automatic device to prevent the pump's no-load operation when there remains little quantity of chemical.
- (5) A double strainer and an original stirring device keep the chemical direction constant, preventing damage from agricultural chemicals.

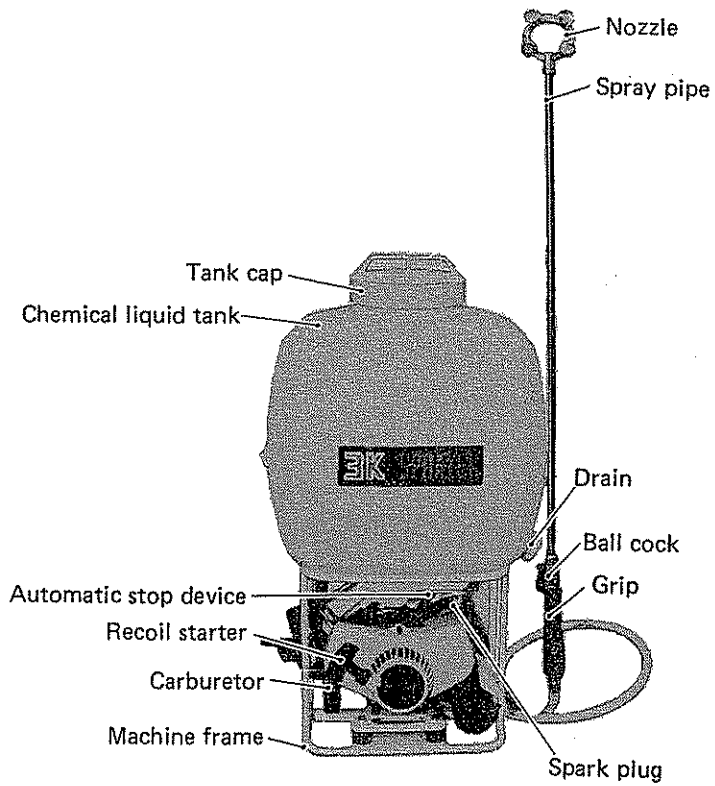
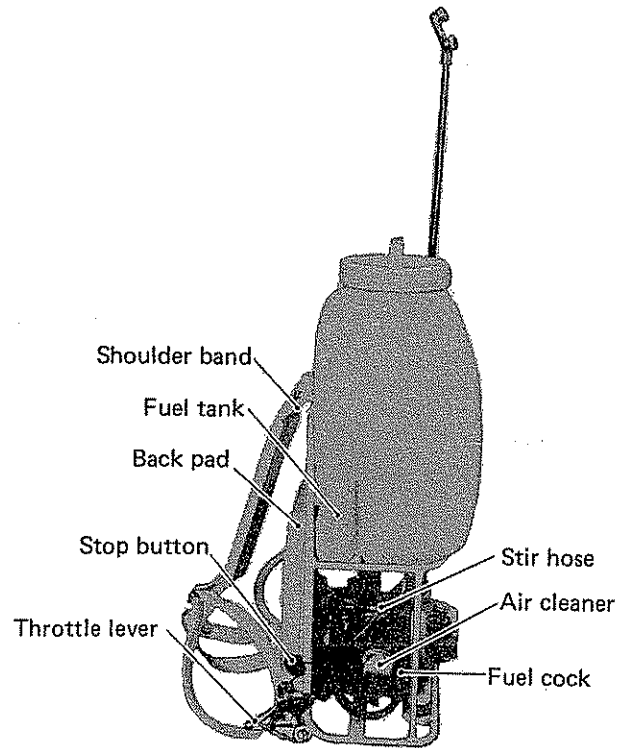
## SPECIFICATIONS

Type of agricultural machine		Power sprayer (hanging type)	
Model		Robin RS301	Robin RS401
Nickname		3K Power Sprayer	
Dry weight kg		8.5	8.5
Dimensions (L x W x H)mm		285 x 400 x 685	285 x 400 x 685
Pump	Type	Special rotary type	
	Spray performance Pressure x Flow kg/cm <sup>2</sup> x ℓ/min.	14 x 2  (with 4 spout annular head)	20 x 3
Chemical liquid tank capacity ℓ		22	
Engine	Name	EC 03ER (RS 301)	EC 04ER (RS 401)
	Total displacement (cc)	34.4	40.2
	Fuel	Mixed gasoline (mixing ratio: 20~25: 1)	
	Fuel tank capacity	1.1	
	Starting system	Recoil starter	
	Spark plug	NGK B7 HS	
Standard equipments		Spray hose (1.2 m)/ 4 spout annular head Spray pipe/Grip/Ball cock	
Accessories		Tool kit/Fuel mixer/Instruction manual	

Note: Specifications may be modified without notice.

PART NAME

RS301/401



(Photo 1)

## ASSEMBLY

Unpack and fit nozzle and other parts as shown in Photo 1.

## PREPARATION FOR OPERATION

- (1) Put fuel into fuel tank.
  - \* Use mixed gasoline.
  - Automobile gasoline: Two-stroke oil = 20~25 : 1
  - \* Always use fuel filter when filling the tank.
  - \* For initial twenty hours of use, use mixed gasoline with mixing ratio of 20 : 1.
- (2) Put chemical liquid into chemical liquid tank.
  - \* Use only wettable agent or emulsion. Always use strainer when filling the tank.
  - \* When mixing chemicals in the tank, put water and then chemicals into the tank.
- (3) After ensuring that chemical liquid flows out from nozzle by opening ball cock to remove air, close the cock.

**WARNING!** WHEN MIXING GASOLINE WITH TWO CYCLE ENGINE OIL, USE ONLY GASOLINE WHICH CONTAINS **NO** ETHANOL OR METHANOL (TYPES OF ALCOHOL), THIS WILL HELP TO AVOID POSSIBLE DAMAGE TO ENGINE FUEL LINES AND OTHER ENGINE PARTS.

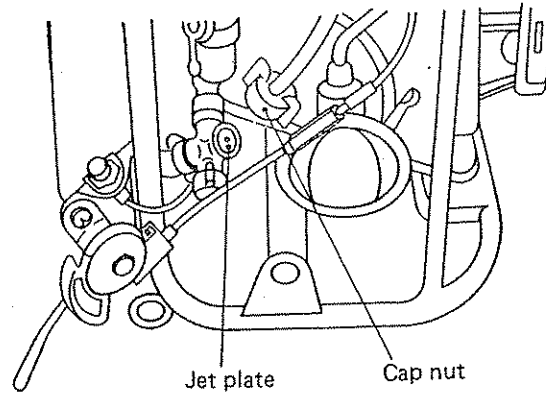
**WARNING!**

**WARNING!**

## STIRRING

Chemical liquid is always stirred during operation by jetting the liquid from pump. If not, let out chemical liquid from drain and remove cap nut to clean jet plate.

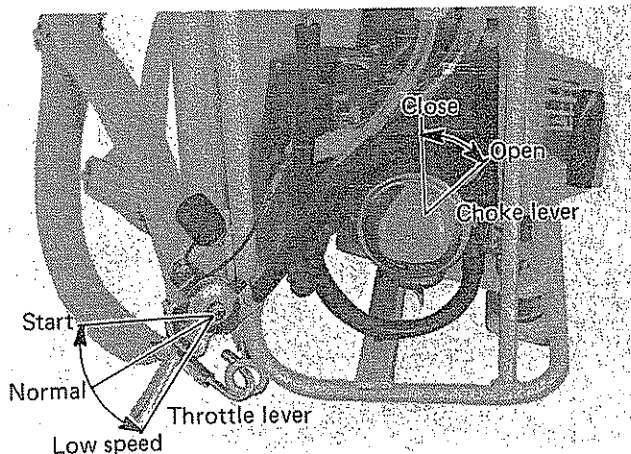
- \* When cleaning jet plate, do not miss it. (Fig. 1)
- For reassembling, fit jet plate securely.



(Fig. 1)

## STARTING THE ENGINE (Photo 2)

- (1) Open fuel cock.
- (2) Close choke lever
  - \* When the engine is hot, open the lever partly or fully according to its temperature.
- (3) Pull up throttle lever fully.
- (4) Pull recoil starter strongly by right hand, holding the machine by left hand and its frame by left foot.
  - \* When the engine shows a sign of starting, open choke lever fully.
- (5) As soon as the engine starts, open choke lever fully.
- (6) Pull down throttle lever to allow the engine to warm up for one or two minutes in summer or two or three minutes in winter.



(Photo 2)

## SPRAYING

- (1) Carry the machine on your back without inclining it too much.  
Adjust shoulder band to fit the machine well to your back.
- (2) Pull up throttle lever.
- (3) Open ball cock for spraying.

## SUPPLYING CHEMICAL LIQUID

When chemical liquid becomes insufficient, the engine is stopped by automatic stop device.  
Close ball cock and put chemical liquid into chemical liquid tank.

## STOPPING THE OPERATION

- (1) Close ball cock.
- (2) Pull down throttle lever.
- (3) Push stop button.
- (4) Remove the machine from your back and close fuel cock.  
After operation, be sure to spray clean water by three or four times and let out residual liquid from nozzle and drain.

## CAUTIONS

- (1) Cleaning strainer  
There is a strainer at the bottom of chemical liquid tank. After letting out chemical liquid from drain, pull it out for cleaning every day after use.
- (2) Cleaning air cleaner  
The dirtier air cleaner is, the more fuel is consumed. Every fifty hours, remove air cleaner and clean it in gasoline or petroleum. Before fitting, remove oil content for it.
- (4) After use, be sure to spray clean water for cleaning. (If not, adhering chemical liquid may reduce the life of mechanical seal.)
- (5) Before starting, be sure to put chemical liquid into tank. (If not, mechanical seal may be damaged by seizure.)
- (6) For storage in winter, remove blind plug from tank. (Freezing may damage pump, joints and other parts.)

## STORAGE

In order to use the machine for many years, store the machine in a dry and well-ventilated place according to the following instructions:

- (1) Let out all fuel from fuel tank and fuel cock.
- (2) Clean chemical liquid tank with clean water and let out the water from it. Let out all water from pump by removing blind plug. (Fig.1) Especially in winter, if water remains in pump, it may be frozen to break hose joint, etc.. Store the machine without fitting blind plug in pump.
- (3) Remove strainer for cleaning.
- (4) After removing spark plug, let fall several drops of mobile oil in it. Before fitting it, pull starter rope lightly.
- (5) Pull starter rope until you feel the heaviest pull (at the top dead center of piston).
- (6) Wash air cleaner in gasoline or petroleum.
- (7) Check the machine for loosened bolts and nuts and other troubles.
- (8) Pull up throttle lever fully.
- (9) After removing ball cock, nozzle and other parts, clean and dry them. Then put them in a packing box together with the machine for storage.

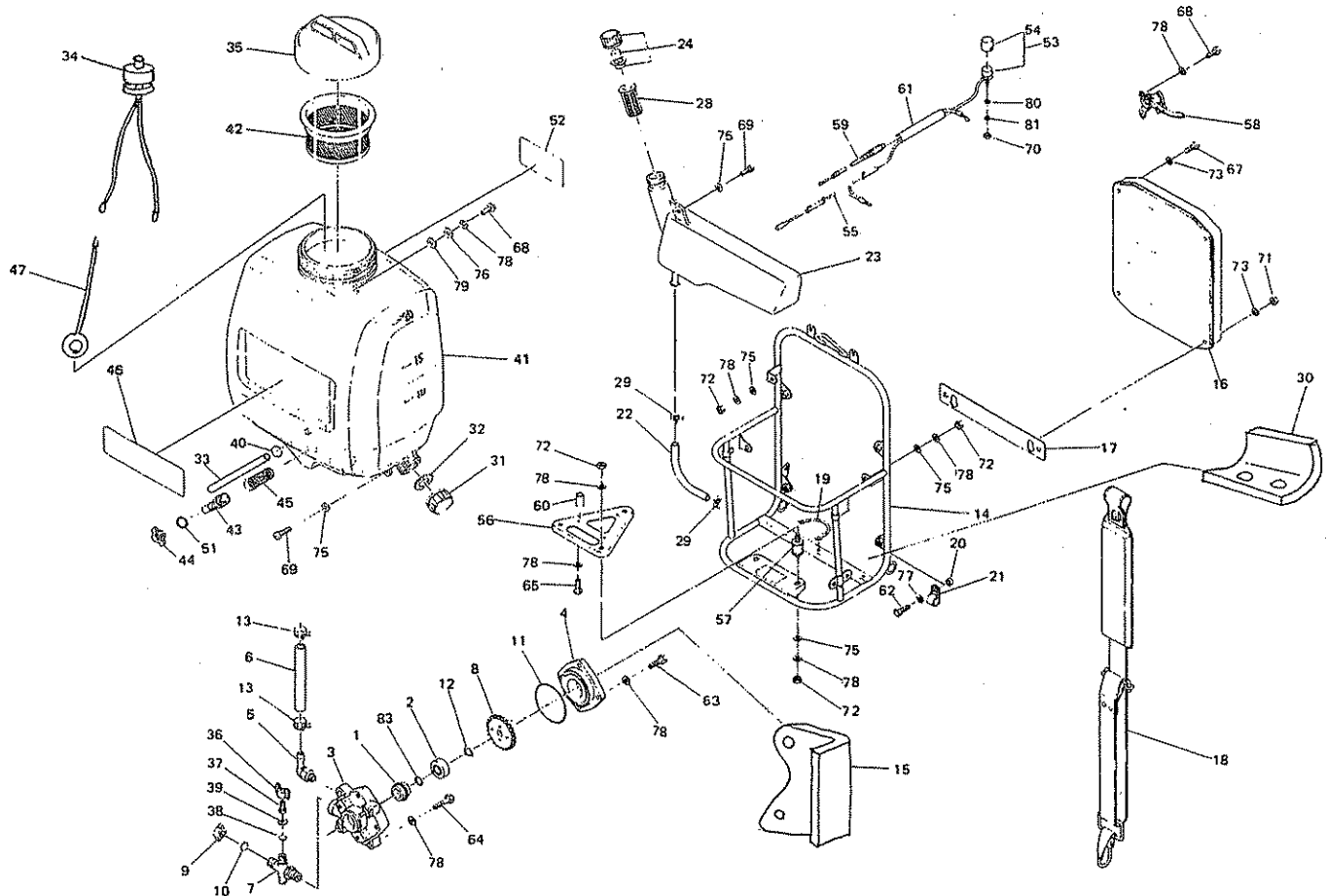
## MAINTENANCE

This machine is made by using all our techniques. If you read this instruction manual carefully, it seldom gets out of order. If it should get out of order, consult your distributor.

## TIPS FOR LONG LIFE OPERATION

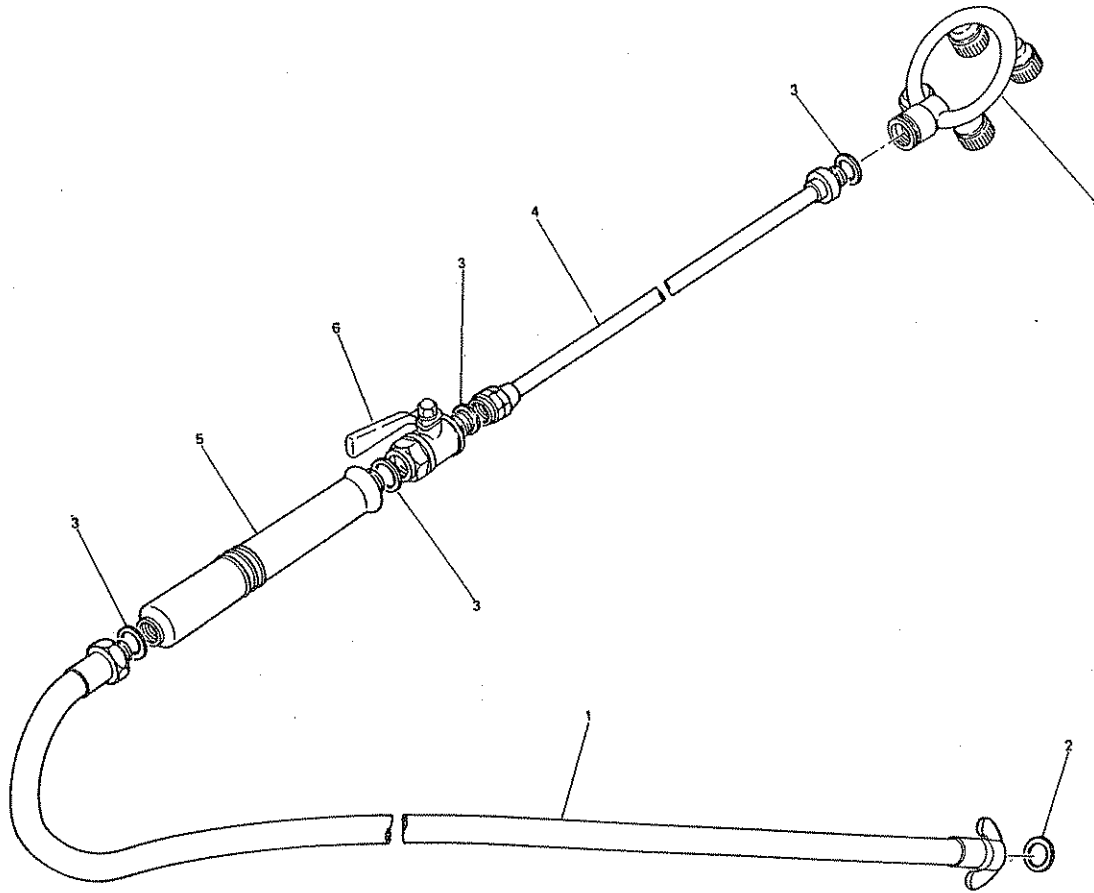
For safe operation, special attention should be paid to the following points:

- (1) After cooling the engine enough, supply fuel.
- (2) Before starting the operation, check the machine for loosened screws, leak of chemical liquid and other troubles.
- (3) When you find any trouble during operation, stop the engine immediately. After complete check and maintenance, restart the engine.



### RS301/401 PARTS LIST MACHINE BODY

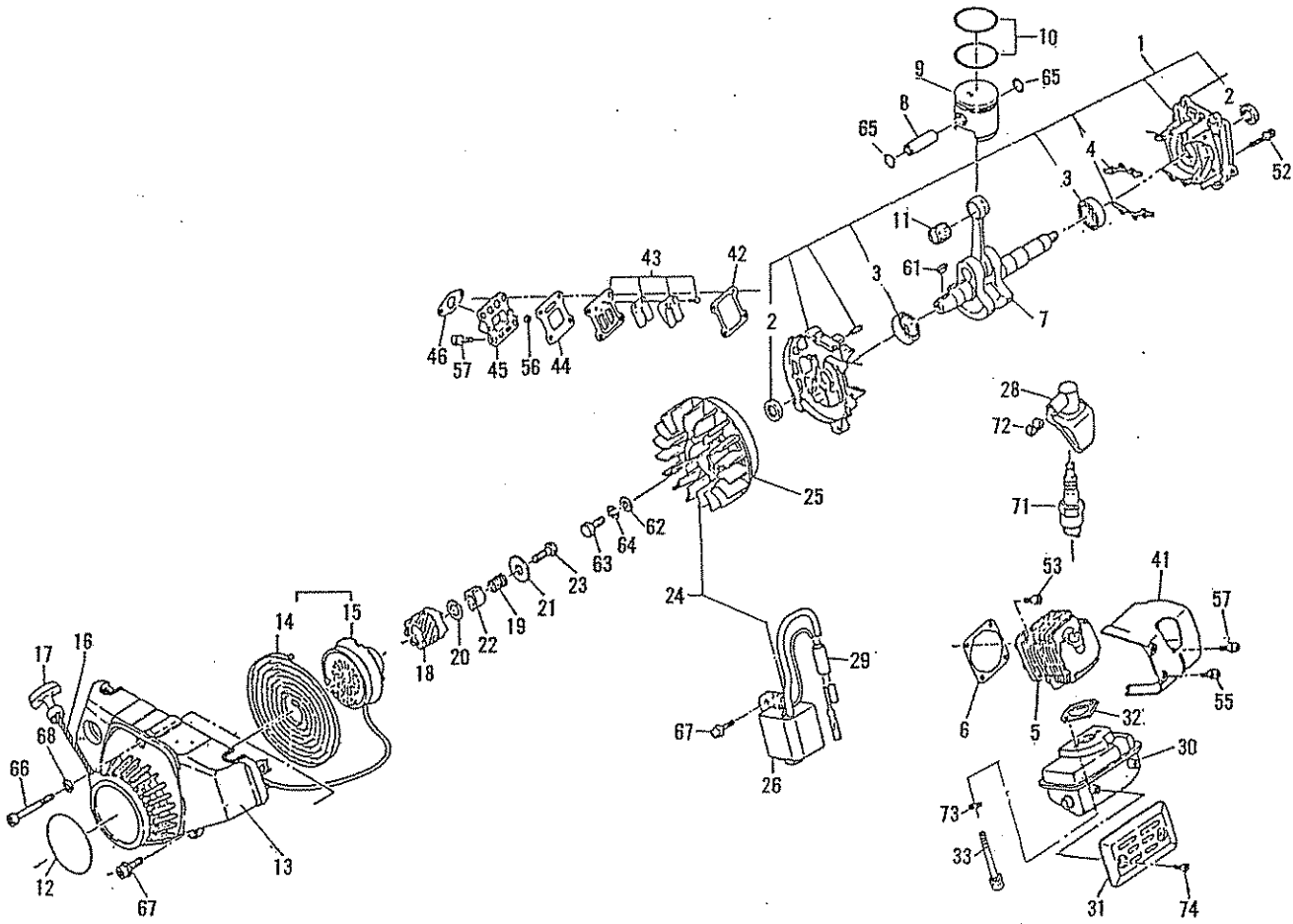
KEY No.	PART No.	QTY.	DESCRIPTION	KEY No.	PART No.	QTY.	DESCRIPTION
1	692 10010 00-1	1	Mechanical seal	41	692 45000 01-1	1	Tank
2	697 10010 01	1	Holder compl.	42	697 40060 00	1	Strainer, tank
3	691 15005 00	1	Case #RS301	43	698 65021 00	1	Joint
3	697 15008 00	1	Case #RS401	44	697 45006 00	1	Nut, suction
4	697 15009 00	1	Cover	45	697 40070 00	1	Strainer, suction
5	691 15000 00	1	Joint, suction	46	0736 00987 2	1	Label
6	691 15001 00	1	Hose, suction	47	682 80110 00	1	Wire compl.
7	691 15003 00	1	Joint, hose	51	691 45000 00	1	O-Ring joint
8	697 15010 00	1	Impeller	52	629 95005 00	1	Label, caution
9	697 25002 00	1	Plug, blind	53	0662 00981 0	1	Stop switch
10	697 25001 00	1	Gasket, blind	54	698 55021 00	1	Cap, guard
11	00626 2067 1	1	O-Ring	55	691 80020 01	1	Wire, joint compl.
12	0306 11999 0	1	Snap ring, outer	56	691 25000 00	1	Frame, engine
13	0561 14998 0	1	Hose clamp	57	690 80020 00	3	Damper compl.
14	691 20050 00	1	Frame compl.	58	691 80010 00	1	Control lever
15	691 25003 00	1	Plate 1	59	697 85000 00-1	1	Control cable
16	691 20040 00	1	Cushion	60	0230 06998 0	3	Spacer
17	697 15007 00	1	Plate 3	61	691 85001 00	1	Tube
18	670 90090 00	1	Band set	62	0100 05999 0	1	Bolt
19	691 25002 00	1	Wire, esrth	63	0100 06991 0	4	Bolt
20	640 45035 00	1	Spacer	64	0100 06992 0	4	Bolt
21	0561 15999 2	1	Hose clamp	65	0100 06993 0	3	Bolt
22	691 55000 00	1	Tube, fuel	67	0140 05998 0	4	Screw
23	697 55000 00	1	Tank	68	0140 06995 0	5	Screw
24	691 50010 00	1	Cap, tank	69	0140 06996 0	4	Screw
28	0641 27999 0	1	Filter, fuel	70	0170 04999 0	2	Nut
29	0561 13998 2	2	Hose clamp	71	0170 05998 0	1	Nut
30	691 25004 00	1	Plate 2	72	0170 06999 0	3	Nut
31	693 45006 00	1	Cap, blind	73	0200 05997 0	4	Washer
32	691 45002 00	1	Gasket, cap	75	0200 06993 0	7	Washer
33	690 45001 00	1	Hose, stir	76	0200 06994 0	4	Washer
34	691 45003 01	1	Float switch compl.	77	0203 05999 0	1	Spring washer
35	697 40010 00	1	Cap, tank compl.	78	0203 06998 0	23	Spring washer
36	697 15000 00	1	Nut, sack	81	00320 0400 0	2	Spring washer
37	697 15001 00	1	Nipple, stir	83	00626 1009 1	1	O-Ring
38	697 15002 00	1	Plate, stir				
39	697 15003 00	1	Gasket, stir				
40	697 15005 00	1	Wire				



### RS301/401 PARTS LIST STANDARD EQUIPMENT

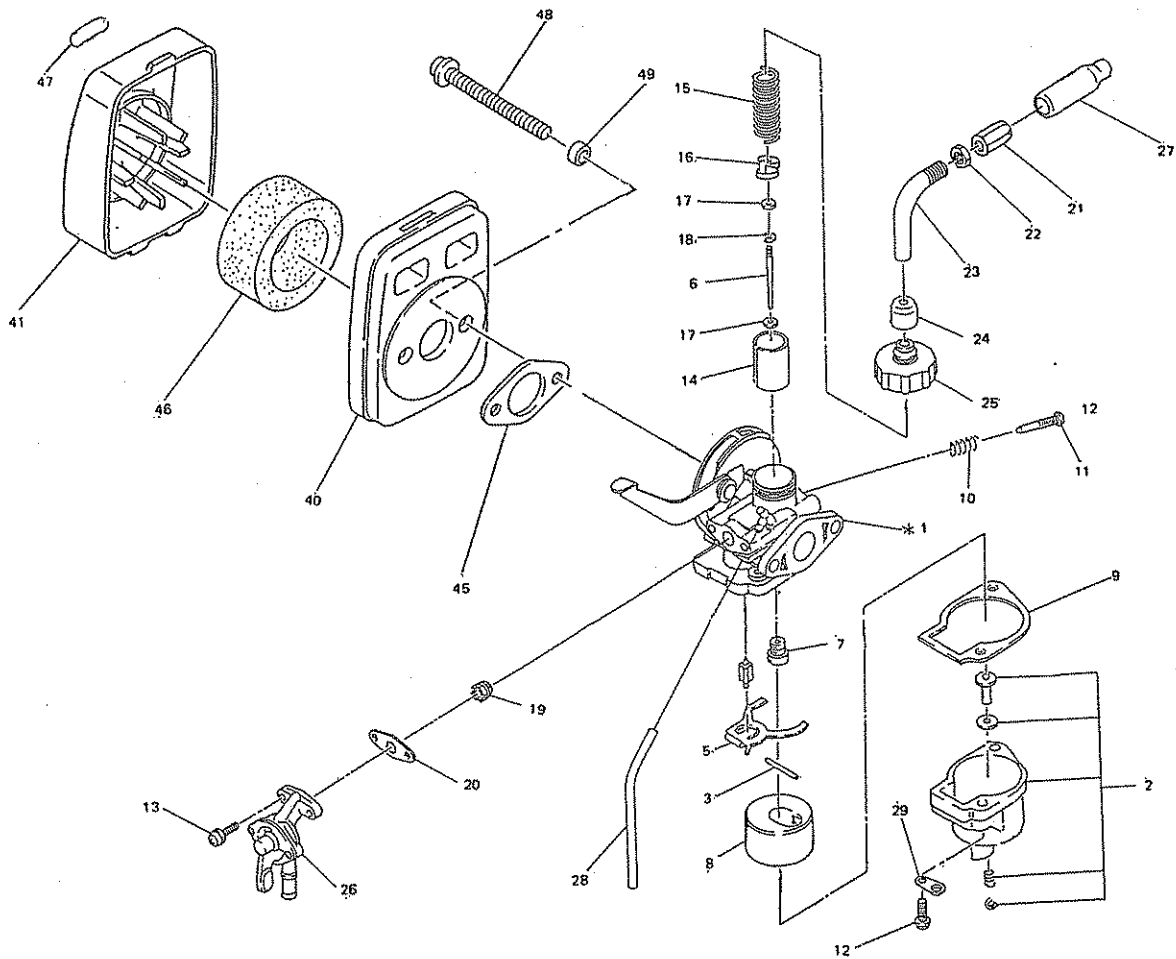
KEY No.	PART No.	QTY.		DESCRIPTION
		RS301	RS401	
1	RS03-033A	1	1	Spray hose compl.
2	RS03-033A~⑥	1	1	Packing (inner)
3	RS03-033A~⑦	4	4	Packing (outer)
4	RS03-316A	1	1	Spray pipe (incl.3)
5	RS03-352/1	1	1	Grip (incl.3)
6	RS03-0910A	1	1	Ball cock compl. (incl.3)
7	PS03-315	1	1	4 spout annular head





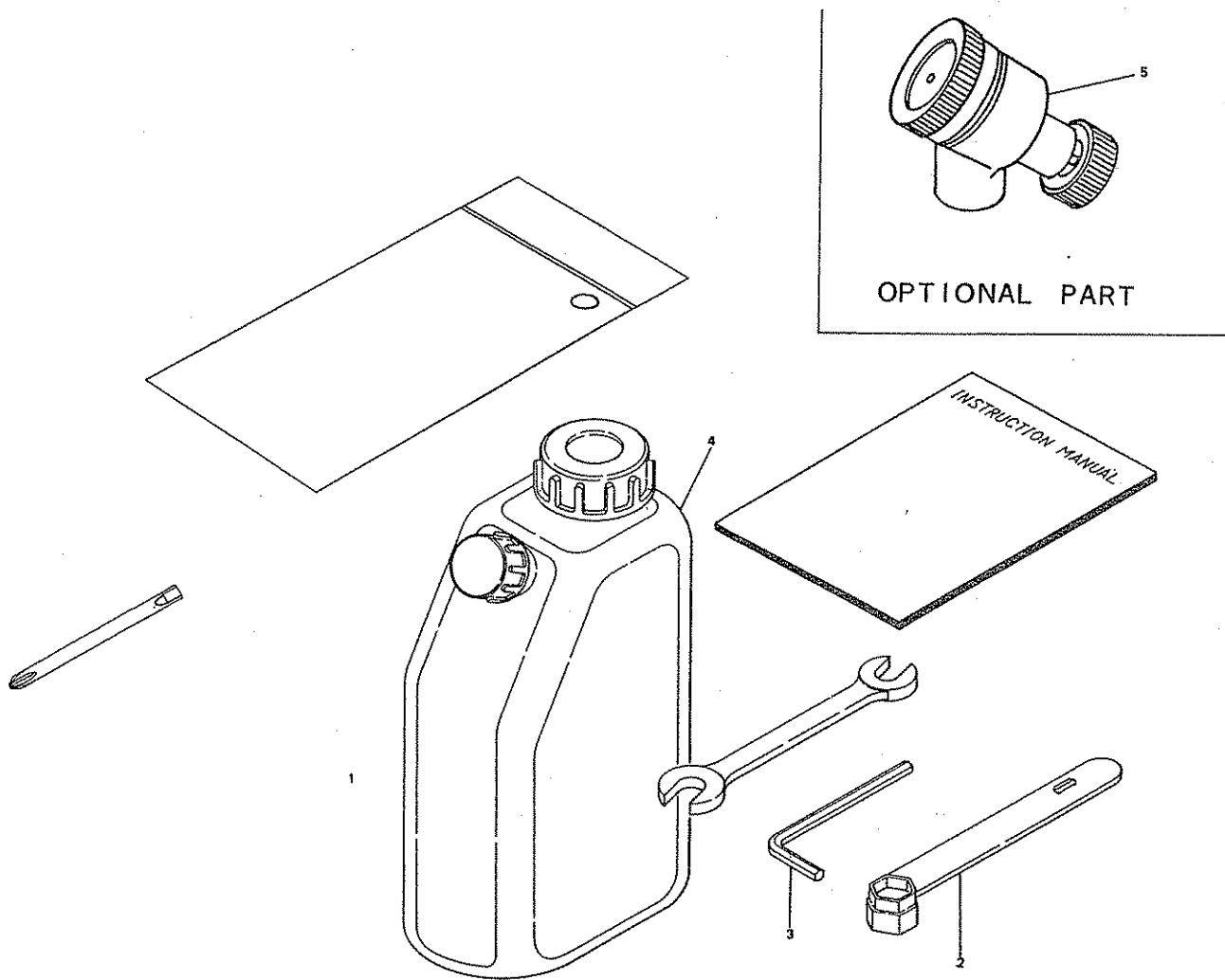
**RS301/401 PARTS LIST ENGINE BODY**

KEY	PART	QTY.	DESCRIPTION	KEY	PART	QTY.	DESCRIPTION
No.	No.			No.	No.		
1	541 10050 00	1	Crankcase (incl. 2-4, 52)	26	541 70030 21	1	Coil, ignition #RS301
2	0440 15997 1	2	Oil seal (TC15257)	26	541 70030 21	1	Coil, ignition #RS401
3	0600 15988 0	2	Ball bearing (6202C3)	28	541 75000 00	1	Plug cap
4	541 15012 00	1	Gasket, crankcase	29	541 75003 00-1	1	Tube
5	532 15001 00-1	1	Cylinder #RS301	30	532 30050 00-1	1	Muffler, exhaust
5	541 15009 00-1	1	Cylinder #RS401	31	540 35024 00	1	Cover, muffler
6	541 15005 00	1	Gasket, cylinder	32	530 35007 00	1	Gasket, insulator
7	541 20050 00	1	Crankshaft compl.	33	0119 06983 0	2	Socket head bolt
8	541 25003 00	1	Pin, piston	41	541 55003 00	1	Cover, cylinder
9	532 25000 00	1	Piston #RS301	42	541 35028 00	1	Gasket lead valve
9	541 25008 00	1	Piston #RS401	43	541 30070 00-1	1	Valve, lead ass'y
10	532 25001 00	2	Ring, piston #RS301	44	541 35012 00-1	1	Gasket, insulator
10	540 25006 00	2	Ring, piston #RS401	45	541 35011 00-1	1	Insulator
11	541 25013 00	1	Needle bearing	46	541 65013 00	1	Gasket, carburetor
12	693 95012 00	1	Label model #RS301	52	0119 05994 0	4	Bolt (M5*30)
12	691 95017 00	1	Label model #RS401	53	0119 06999 0	4	Bolt (M6*18)
13	541 50040 00-1	1	Starter, rewind (incl. 14-23)	55	00437 0514 0	1	Screw ass'y (M5*14)
13	541 50010 00-1	1	Starter, rewind (incl. 14-23)	56	00217 0500 0	2	Nut (M5)
14	541 50010 30	1	Spiral spring	57	00437 0520 0	3	Screw ass'y (M5*20)
15	541 50010 10	1	Reel	61	00532 0310 1	1	Woodruff key
16	541 50011 40	1	Starter rope	62	0269 0800 20	1	Washer
17	530 50021 10	1	Starter knob	63	00167 0616 0	1	Bolt
18	541 50010 20	1	Ratchet	64	00320 0600 0	1	Spring washer
19	541 50010 50	1	Friction spring	65	0565 09999 0	2	Clip
20	541 50012 20	1	Thrust washer	66	0119 05981 0	1	Socket head bolt
21	541 50010 60	1	Washer	67	0119 05979 0	4	Socket head bolt
22	541 50010 40	1	Ratchet guide	68	00310 0500 0	1	Washer
23	524 50010 10	1	Screw	71	0100 06993 0	1	Bolt
24	541 70030 01	1	Flywheel magneto #RS301 (incl. 25-29)	73	0140 05998 0	2	Screw
24	532 70020 01	1	Flywheel magneto #RS401 (incl. 25-29)	74	0140 06995 0	2	Screw
25	541 70030 11	1	Flywheel #RS301				
25	541 70010 10-1	1	Flywheel #RS401				



### RS301/401 PARTS LIST CARBURETOR & AIR CLEANER

KEY No	PART No	QTY.		DESCRIPTION	KEY No	PART No	QTY.		DESCRIPTION
		RS301	RS401				RS301	RS401	
* 1	532 60110 00	1	1	Carburetor (incl. 2-29)	27	541 60010 10	1	1	Cap
2	532 60010 10	1	1	Float body ass'y	28	541 60160 40	1	1	Tube
3	530 60091 60	1	1	Straight pin	29	541 60160 30	1	1	Plate
4	530 60091 50	1	1	Needle ass'y	40	541 35039 00	1	1	Case, air cleaner
5	530 60092 30	1	1	Float arm	41	541 35035 02	1	1	Cover, air cleaner
6	532 60120 10	1	1	Jet needle	45	541 35031 00	1	1	Gasket, air cleaner
7	530 60180 20	1	1	Main jet	46	541 35009 00	1	1	Element
8	530 60090 20	1	1	Float	47	0736 36998 0	1	1	Label
9	530 60092 20	1	1	Gasket	48	00434 0514 0	4	4	Screw ass'y
10	541 60011 10	1	1	Spring	49	0230 05999 0	2	2	Spacer
11	541 60010 60	1	1	Adjust screw					
12	530 60095 10	2	2	Screw					
13	804 60015 30	2	2	Screw					
14	541 60080 21	1	1	Piston valve					
15	530 60092 40	1	1	Spring					
16	530 60091 20	1	1	Spring plate					
17	541 60010 40	2	2	Packing					
18	530 60094 50	1	1	Clip					
19	541 60011 30	1	1	Filter					
20	530 60092 10	1	1	Gasket					
21	530 60093 10	1	1	Cable adjuster					
22	530 60094 60	1	1	Nut					
23	530 60093 40	1	1	Cable guide					
24	530 60092 50	1	1	Cap					
25	530 60092 60	1	1	Mixing cap					
26	532 60010 50	1	1	Cock body ass'y					



### RS301/401 PARTS LIST ACCESSORY

KEY	PART	QTY.		DESCRIPTION
		RS301	RS401	
1	RS03D-0910A	1	1	Tools kit (incl. 2,3)
2	0713 21995 1	1	1	Box wrench
3	0717 04999 0	1	1	Wrench, socket head (For M5)
4	EC03-049A	1	1	Fuel mixer
	RS03-318	1	1	Universal spray unit (medium size) (option)