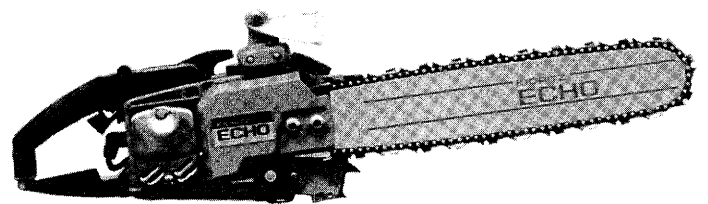


**ECHO**<sup>®</sup>



# **OPERATOR'S MANUAL**

## **ECHO CHAIN SAW CS-452VL**

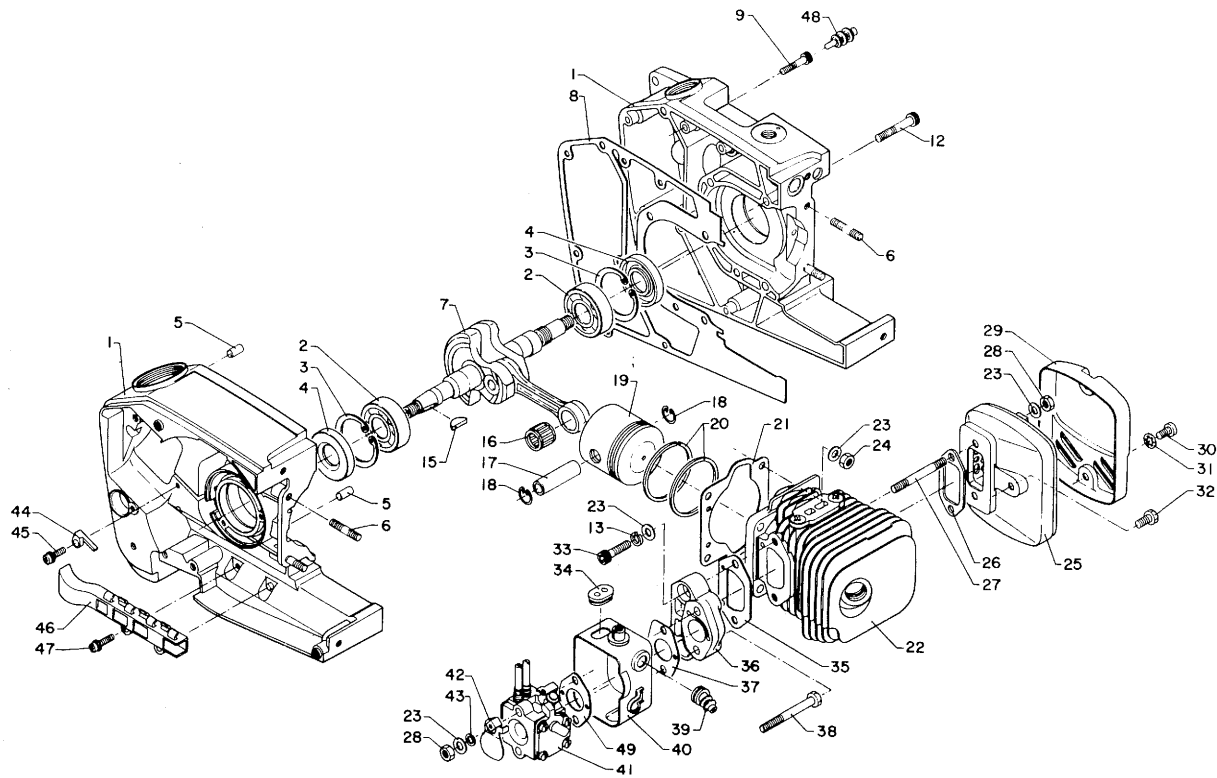
### **CAUTION**

Read Rules for Safe Operation  
and Instructions Carefully

5

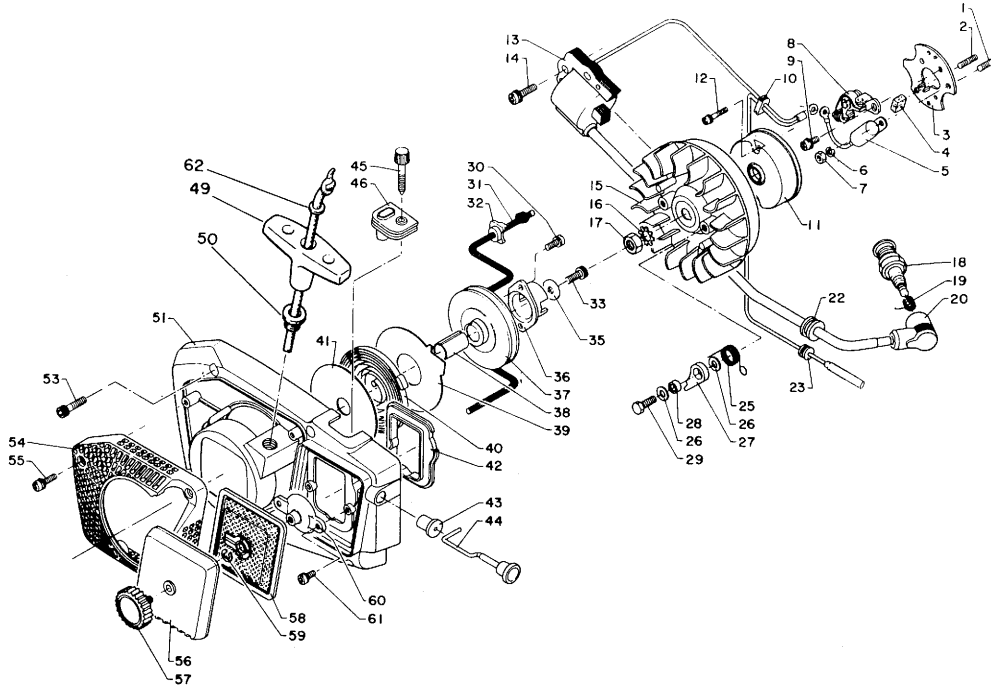
898 571-1013 7

Model CS-452VL (1) Engine



Key No.	Part No.	Q'ty	Part Name	Key No.	Part No.	Q'ty	Part Name		
1 -	1	100 200-1013 2	1	Crankcase set	1 -	30	900 220-0501 6	2	Screw
	2	900 810-0620 2	2	Ball bearing	31	900 610-0000 5	2	Washer (TWA-5)	
	3	900 702-0003 5	2	Circlip (CR-35)	32	900 100-0501 0	1	Bolt 5x10	
	4	100 213-0283 0	2	Oilseal (ISM 15356)	33	900 105-0502 0	2	Bolt 5x20	
	5	100 215-0283 0	2	Knock pin	34	129 010-0343 0	1	Grommet	
6	100 214-0083 0	4	Cylinder stud	35	130 010-0343 2	1	Carburetor packing (A)		
7	100 100-0343 0	1	Crankshaft	36	130 005-0343 4	1	Carburetor bed		
8	100 242-1013 0	1	Crankcase packing	37	130 016-0343 1	1	Carburetor packing (B)		
9	900 162-0402 0	8	Bolt 4x20	38	130 021-0343 0	2	Carburetor bolt		
12	900 162-0503 0	4	Bolt 5x30	39	178 210-0343 0	1	Rubber bush		
15	100 142-0031 0	1	Key (M)	40	130 306-0343 1	1	Carburetor case		
16	100 012-1233 0	1	Roller bearing	41	123 000-1013 0	1	Carburetor		
17	100 013-0343 0	1	Piston pin	42	178 515-0343 0	1	Choke shutter		
18	100 015-0012 0	2	End ring	43	178 516-0083 0	1	Washer		
19	100 010-1013 0	1	Piston	44	159 112-1013 0	1	Clip		
20	<del>100 010-1233 0</del>	2	Piston ring	45	900 242-0401 0	1	Screw		
21	101 010-0343 1	1	Cylinder packing	46	159 105-1013 1	1	Cord guide		
22	101 000-1013 0	1	Cylinder (ass'y)	47	900 242-0401 4	1	Screw		
23	900 600-0000 5	2	Washer	48	100 278-1013 0	4	Dust proof plug		
24	900 500-0000 5	4	Nut	49	130 022-1013 1	1	Carburetor packing (C)		
25	145 605-0343 2	1	Muffler (ass'y)	<p>Note: As for spark arrester muffler, refer to page 20.</p>					
26	145 510-0343 1	1	Muffler gasket						
27	101 025-0343 0	2	Muffler stud						
28	433 020-0083 0	4	Lock nut						
29	145 613-0343 1	1	Muffler lid						

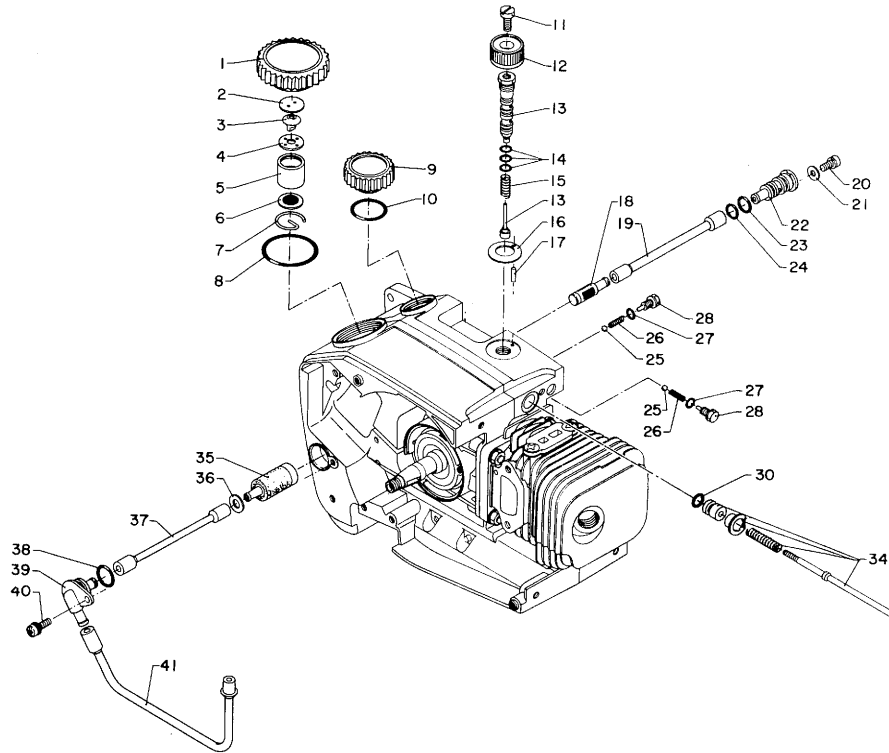
Model CS-452VL (2) Starter and Magneto



Key No.	Part No.	Q'ty	Part Name	Key No.	Part No.	Q'ty	Part Name	
2 -	156 000-1013 1	1	Magneto ass'y	2 -	31	177 226-0283 0	1	Starter rope
1	100 262-0343 0	1	Stud bolt, (L)	32	177 246-0283 2	1	Starter clip	
2	100 257-0343 0	1	Stud bolt, (S)	33	900 242-0501 4	1	Screw 5 x 14	
3	156 132-1013 1	1	Stator plate	35	177 214-0283 0	1	Washer	
4	156 134-1013 0	1	Oiler	36	177 243-0283 3	1	Pawlcatcher	
5	156 127-1013 0	1	Condenser	37	177 215-0283 4	1	Recoil drum	
6	900 605-0000 4	2	Spring washer	38	177 216-0283 2	1	Bushing	
7	900 500-0000 4	2	Nut	39	177 242-0343 0	1	Side plate (B)	
8	-156 101-1013 1	1	Contact point	40	177 220-0283 4	1	Rewind spring	
9	900 242-0400 8	1	Screw	41	177 221-0283 0	1	Side plate (A)	
10	156 114-1013 0	1	Rubber bush (B)	42	130 320-0343 1	1	Carburetor cover packing	
11	154 112-0343 2	1	Breaker cover	43	178 810-0343 0	1	Rubber bushing	
12	900 242-0301 8	2	Screw	44	178 501-0343 1	1	Choke rod	
13	156 126-1013 0	1	Ignition coil	45	178 007-0343 0	1	Idling set screw	
14	900 242-0502 0	2	Screw	46	178 212-0343 0	1	Grommet	
15	156 200-1013 0	1	Flywheel	49	177 228-1233 0	1	Starter grip	
16	900 611-0000 8	1	Lock washer (TWB-8)	50	177 227-0023 0	1	Rope guide	
17	900 500-0000 8	1	Nut	51	101 507-1013 0	1	Fan cover	
18	159 010-0033 0	1	Spark plug (BM-6A)	53	900 162-0502 0	4	Bolt 5x20	
(*18)	159 010-1013 0	1	Spark plug (BMR-6A)	54	100 616-1013 0	1	Dust filter	
19	159 011-0343 2	1	Spark plug connector	55	900 242-0401 2	3	Screw	
20	159 012-0343 3	1	Spark plug cap	56	130 313-0343 0	1	Air cleaner cover	
22	154 110-0343 0	1	Rubber bush	57	130 406-1023 0	1	Thumb bolt	
23	154 111-0343 0	1	Rubber bush	58	130 305-0343 0	1	Air cleaner	
25	177 234-0283 1	2	Ratchet spring	59	900 700-0000 4	1	E-ring	
26	900 600-0000 5	4	Washer	60	130 405-0343 0	1	Cleaner set plate	
27	177 218-0283 0	2	Ratchet	61	900 242-0400 8	2	Screw	
28	177 217-0343 0	2	Ratchet spacer		177 200-1013 0	1	Starter ass'y	
29	900 100-0501 8	2	Bolt 5x18	62	177 229-1433 0	1	Spacer	
30	900 241-0401 0	2	Screw					

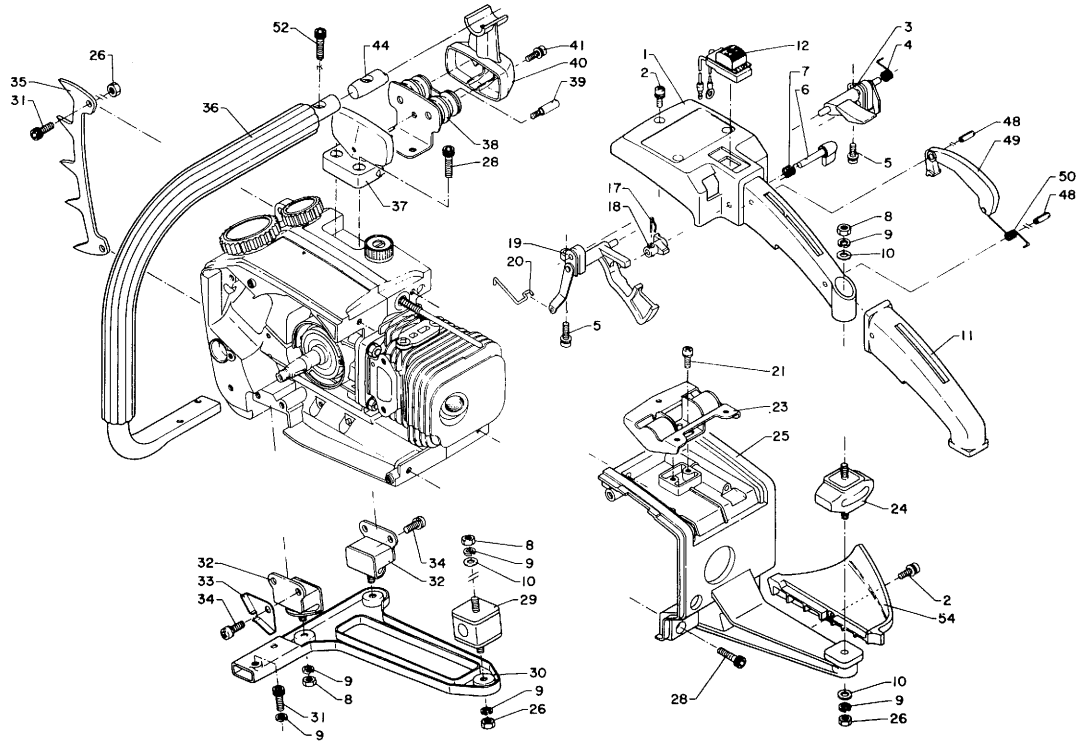
Remarks:

(\*18) Anti Radio Interference spark plug (option part)



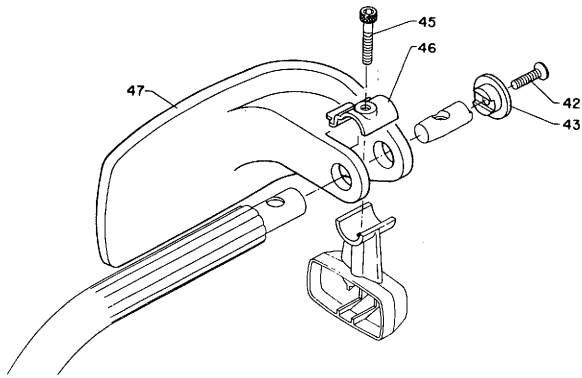
Key No.	Part No.	Q'ty	Part Name	Key No.	Part No.	Q'ty	Part Name
3 -	1	1	Fuel tank cap ass'y	3 -	26	3	Valve spring
	2	1	Spacer		27	2	O-ring
	3	1	Check valve		28	2	Oil pump adapter
	4	1	Check valve holder		30	1	O-ring (P-6)
	5	1	Supporter, tank cap spacer		34	1	Pump rod ass'y
	6	1	Filter		35	1	Fuel strainer
	7	1	Clip		36	1	Washer
	8	1	O-ring (P-29)		37	1	Fuel pipe (inner)
	9	1	Oil tank cap		38	1	O-ring (P-12)
	10	1	O-ring		39	1	Fuel pipe connector
11	1	Screw	40	1	Screw		
12	1	Dial	41	1	Fuel pipe (outer)		
13	1	Auto oiler ass'y	Remarks: Key No. 3-1 Comprising Key No. 2 ~ 8				
14	3	O-ring (S-5)					
15	1	Auto oiler spring					
16	1	Flat spring					
17	1	Needle roller					
18	1	Oil strainer					
19	1	Oil inner pipe					
20	1	Screw					
21	1	Washer					
22	1	Oil pipe connector					
23	1	O-ring (P-9)					
24	1	O-ring (P-8)					
25	3	Ball valve					

Model CS-452VL (4) Handle



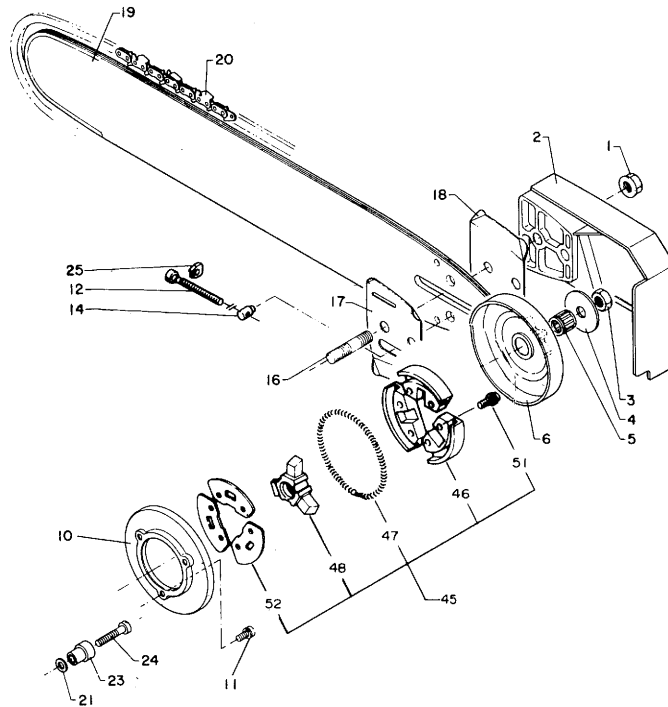
Key No.	Part No.	Q'ty	Part Name	Key No.	Part No.	Q'ty	Part Name		
4 -	1	351 110-1103 0	1	Right handle	4 -	32	351 607-0343 0	2	Cushion rubber (L-L)
	2	900 242-0401 4	3	Screw	33	100 276-1013 0	1	Wind proof plate	
	3	707 005-0343 0	1	Push lever	34	900 241-0501 2	4	Screw	
	4	707 017-0343 0	1	Spring, push lever	35	880 210-0343 0	1	Spike bumper	
	5	900 242-0401 4	2	Screw	36	351 606-1013 1	1	Left handle	
6	178 008-0343 0	1	Lock lever	37	351 631-1013 0	1	Cushion rubber holder		
7	178 013-0343 0	1	Throttle spring	38	351 605-1013 0	1	Cushion rubber (L-U)		
8	900 500-0000 5	3	Nut	39	351 637-1013 0	1	Stopper		
9	900 605-0000 5	4	Spring washer 5	40	351 614-1013 0	1	Left handle supporter		
10	900 600-0000 5	2	Washer	41	900 242-0401 0	2	Screw		
11	351 111-1103 0	1	Right handle rubber	44	351 617-1053 1	1	Handle spacer		
12	163 400-1233 0	1	Stop switch	48	900 340-4001 3	2	Spring pin		
17	178 045-1063 0	1	Lock pin	49	178 090-1103 1	1	Safety lock		
18	178 012-1103 0	1	Throttle lock	50	178 091-1053 1	1	Safety lock spring		
19	178 005-1103 0	1	Throttle trigger	52	900 162-0502 5	1	Bolt 5x25		
20	178 011-0343 0	1	Throttle connecting rod	54	351 133-1013 0	1	Hand guard		
21	900 241-0501 2	1	Screw						
23	351 105-1013 0	1	Cushion rubber (F-L)						
24	351 107-0343 0	1	Cushion rubber (R-L)						
25	101 514-1013 0	1	Cylinder cover						
26	433 022-0283 0	1	Lock nut						
28	900 162-0502 0	6	Bolt 5x20						
29	351 609-0343 0	1	Cushion rubber (L-L)						
30	351 613-0343 1	1	Left handle supporter (L)						
31	900 105-0501 2	1	Bolt 5x12						

Model CS-452VL (4) Handle (Hand guard)



Key No.	Part No.	Q'ty	Part Name
4 - 42	900 214-0502 0	1	Screw
43	351 833-1013 0	1	Hand guard holder
45	900 162-0503 0	1	Bolt 5x30
46	351 834-1013 0	1	Hand guard stopper
47	351 826-1013 0	1	Hand guard

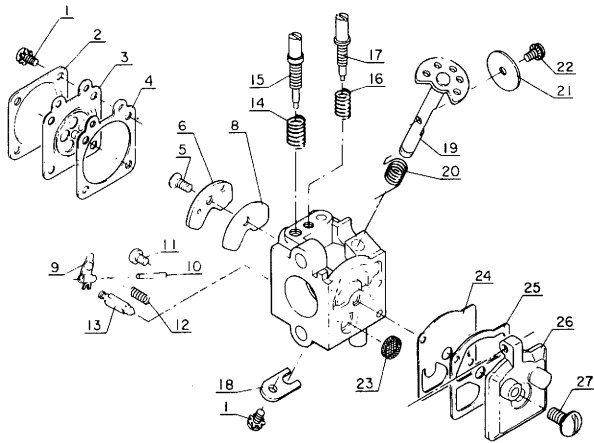
(5) Clutch and Guide bar



Key No.	Part No.	Q'ty	Part Name	Key No.	Part No.	Q'ty	Part Name	
5 -	1	433 019-1233 0	2	Flange nut	5 - 11	900 220-0401 0	3	Screw
	2	433 010-0343 1	1	Guide bar cover	12	433 016-1103 1	1	Adjusting screw
	3	100 129-0343 0	1	Locknut (L-h)	14	433 014-0283 0	1	Tensioner
	4	175 015-0343 0	1	Clutch washer	16	433 011-1233 0	2	Stud bolt
	5	100 012-1233 0	1	Roller bearing	17	433 013-1233 1	1	Side plate (inner)
6	175 005-1433 0	1	Clutch case	18	433 012-1233 1	1	Side plate (outer)	
45	175 000-1613 0	1	Clutch ass'y	19	430 211-1013 0	1	Guide bar (40M50)	
46	-175 002-1613 0	1 set	Shoe	20	431 011-1013 0	1	Chain (72LP-60E)	
47	-175 018-1613 0	1	Spring	21	900 600-0000 5	1	Washer	
48	-175 016-1613 0	1	Hub	23	433 006-1283 0	1	Chain catcher	
51	-900 238-0400 8	6	Screw	24	900 220-0502 5	1	Screw	
52	-175 019-1613 0	3	Plate, side	25	433 028-1103 0	1	Clip	
10	100 618-0343 1	1	Dust seal plate					

Remarks: Key No. 19,20 (optional)

Model CS-452VL (6) Carburetor

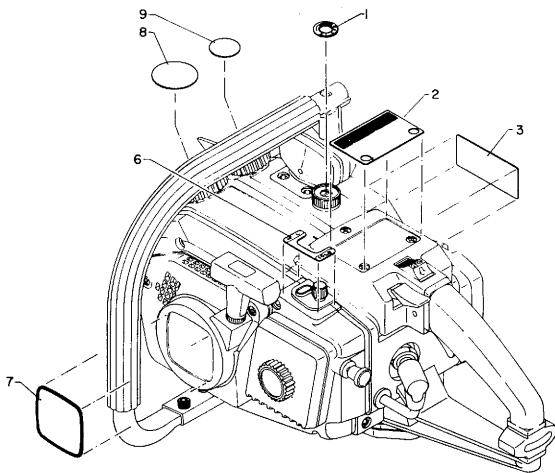


Key No.	Part No.	Q'ty	Part Name
6 -	123 000-1013 0	1	Carburetor ass'y
1	123 130-0296 0	5	Screw
2	123 142-0393 0	1	Metering diaphragm cover
3	123 141-0393 0	1	Metering diaphragm
4	123 140-0393 0	1	Metering diaphragm gasket

Key No.	Part No.	Q'ty	Part Name
5	123 167-0523 0	1	Circuit plate screw
6	123 166-1053 0	1	Circuit plate
8	123 164-1053 0	1	Circuit plate gasket
9	123 123-0393 0	1	Metering lever
10	123 138-0393 0	1	Metering lever pin
11	123 139-0393 0	1	Metering lever pin screw
12	123 122-0653 0	1	Metering lever spring
13	123 137-0426 0	1	Inlet needle valve
14	123 119-0393 0	1	H.S. adjust spring
15	123 120-1013 0	1	High speed needle
16	123 121-0393 0	1	Idle needle adjust spring
17	123 118-1013 0	1	Idle needle
18	123 127-0393 0	1	Throttle shaft clip
19	123 117-1013 0	1	Throttle shaft
20	123 113-1013 0	1	Throttle return spring
21	123 116-1013 0	1	Throttle valve
22	123 114-0393 0	1	Shutter screw
23	123 126-0393 0	1	Inlet screen
24	123 112-0393 0	1	Pump diaphragm
25	123 125-0393 0	1	Pump gasket
26	123 124-1013 0	1	Pump cover
27	123 110-0393 0	1	Pump cover screw

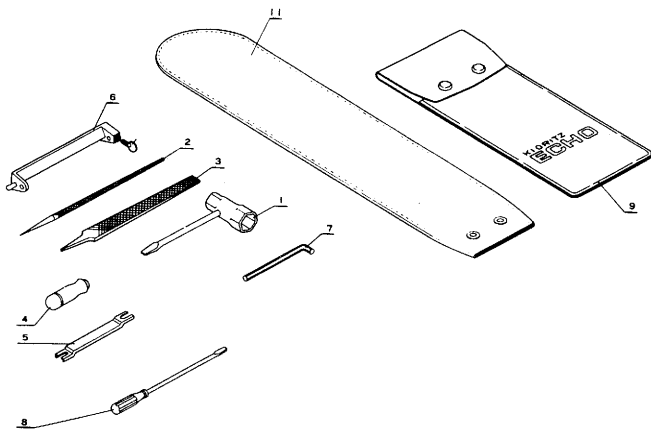
Part No.	Part Name	Key No.
123 103-1013 0	Kit, diaphragm/gasket	3. 4. 8. 24. 25
123 102-1013 0	Kit, Kwik repair	3. 4. 8-10. 12. 13. 22-25.

(7) Model plate



Key No.	Part No.	Q'ty	Part Name
7 - 1	890 022-0343 0	1	Oil label
2	890 151-1013 1	1	Caution label
3	890 118-3503 0	1	"ECHO" Name plate
6	890 041-0343 0	1	Fuel adjust label
7	890 012-1013 2	1	Name plate
8	890 154-1273 0	1	Fuel label
9	890 153-1143 0	1	Oil label

(8) Tools

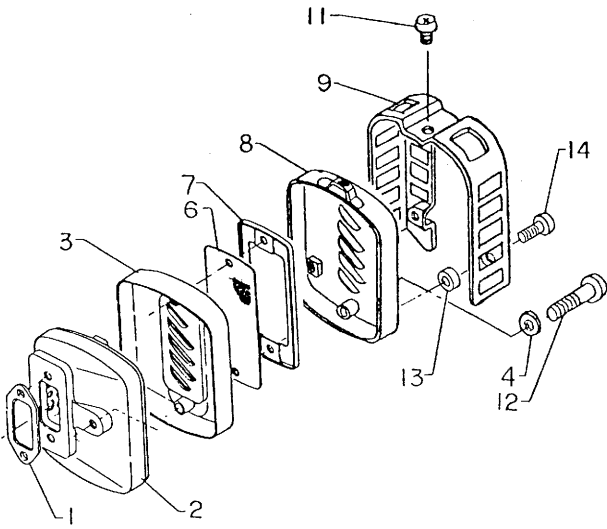


Key No.	Part No.	Q'ty	Part Name
8 -	896 000-1013 0	1	Tool set
1	895 410-0283 0	1	Wrench 13x19
2	897 510-0023 0	1	Round file
3	897 511-0023 0	1	Flat file
4	897 512-0023 0	1	File grip
5	897 514-0023 1	1	Depth gauge
6	897 600-0033 0	1	File holder
7	895 610-0013 0	1	L-wrench (4mm)
8	895 811-0013 0	1	Screw driver (125mm)
9	898 510-0283 0	1	Tool bag
11	898 513-1013 0	1	Chain cover

Remarks:

\* Key No. 1.7.8.9.10. are standard tools supplied with the chain saw.  
Others are optional parts, to be supplied on special order.

Model CS-452VL (9) Spark arrester muffler



Key No.	Part No.	Q'ty	Part Name
9- 1	145 510-0343 1	1	Muffler gasket
	145 605-0343 2	1	Muffler body
	145 861-0343 0	1	Muffler lid
	900 610-0000 5	2	Lockwasher 5
	145 862-0343 1	1	Screen
	<hr/>		
7	145 863-0343 1	1	Screen holder
8	145 908-1013 0	1	Muffler lid (B)
9	145 871-1013 0	1	Muffler cover
11	900 241-0400 6	1	Screw 4×6
12	145 868-1063 0	2	Screw
<hr/>			
13	145 877-1013 0	2	Spacer
14	900 242-0401 0	2	Screw 4×10

145 803-1013 0 SAM assembly consists of 1 thru 4 and 6 thru 14.

Remarks: Key No. 9-1 and 9-2 are same as the parts, Key No. 1-26 and 1-25, illustrated page 14.





**KIORITZ CORPORATION**

7-2, SUEHIROCHO 1-CHOME, OHME, TOKYO 198, JAPAN  
PHONE: 0428-32-6118, FAX: 0428-32-6145, TELEX: 2852070 KIORIT J

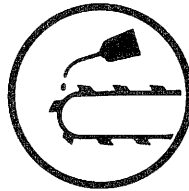
**ECHO**<sup>®</sup>

CAP INDICATION

Fuel/oil tanks are indicated by the following illustrations on the caps.



FUEL TANK CAP



OIL TANK CAP