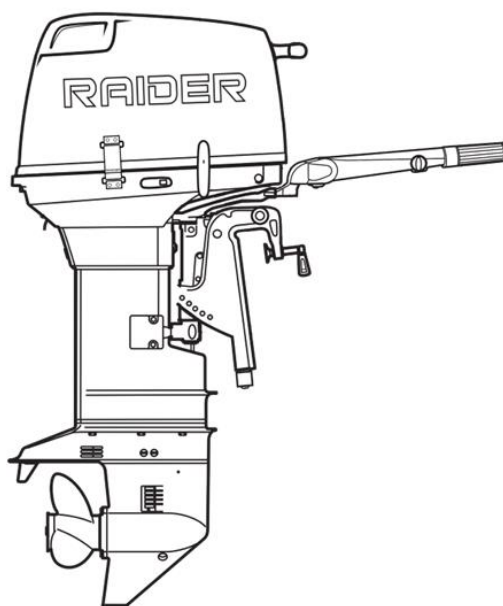


2022

PARTS & ASSEMBLY CATALOG

RAIDER MODEL 55 SUBMERSIBLE /
MULTI-FUEL OUTBOARD MOTOR
PART NO.
R50-ES-003



RAIDER PARTS AND ASSEMBLY CATALOG NO. R50-ES-003.V1
INSTRUCTIONS FOR ORDER OF MODEL 50 ENGINE PARTS
"SHOP MANUAL"



RAIDER Outboards Inc.
1885 ARMSTRONG DRIVE
TITUSVILLE, FL 32780

RAIDER

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RAIDER Outboards

MULTI-FUEL SUBMERSIBLE ELECTRIC START OUTBOARD ENGINES

WHO WE ARE

Raider Outboards, Inc. is a US-owned and operated company located in the Space Port Commerce Park, near Kennedy Space Center in Central Florida. Raider designs and produces a line of military grade submersible outboard motors associated parts, and accessory systems primarily for the Department of Defense, government agencies, and partner nations. Our motors incorporate specific features that include but are not limited to fully submersible, air deployable and droppable from fixed and rotary-wing aircraft, and Multi-Fuel capable. These engines and related production support directly provide the unique capability and versatility that today's warfighters require to execute assigned mission sets.

WHAT WE ARE ABOUT

We specialize in designing and manufacturing military-grade submersible outboard motors, parts, and accessories for the United States Department of Defense, with a focus on meeting the needs of the United States Special Operations Command. Our select motors are fully submersible and can be air-deployed and dropped from both fixed and rotary-wing aircraft, making them highly versatile and adaptable for any mission, ensuring that they can perform in any environment. Our line of motors and production support play a critical role in providing the unique capabilities and flexibility that today's warfighters require to carry out their missions successfully.

We are committed to manufacturing not just outboard motors, but rather life support systems for our nation's defense personnel and first responders. Each component of our motor is meticulously crafted with precision and purpose, for any malfunction could potentially result in loss of life. Our mission is to furnish the finest equipment and service to our brave men and women, allowing them to operate at peak readiness and accomplish their missions with success and safety.

OUR MISSION

Raider Outboards aims to offer the most dependable, high-end military grade engines and equipment together with expert hands-on instruction and technical assistance. While honoring those who protect, defend, and support our communities, our nation, and our partners across the world, we strive to be the industry leader in submersible outboard motors.

THANK YOU!

As the President of Raider Outboards to express my deep gratitude and admiration for your service and sacrifice in protecting our country's freedom. As a company that manufactures military-grade outboard motors for the Department of Defense, government agencies, and partner nations, we are honored to provide you with equipment that can support your missions.

At Raider Outboards, we understand that your missions require the very best equipment, and we take great care in designing and manufacturing our products to meet your needs. Our outboard motors are built with the highest quality materials and undergo rigorous testing to ensure their durability and reliability in extreme conditions. We know that you depend on our products to accomplish your mission and come home safely to your loved ones.

It is a great privilege to provide you with the tools you need to protect our country and defend freedom. We are committed to continuing to improve our products and support your missions. We understand that every mission is critical and that our products play a crucial role in helping you accomplish them.

Once again, on behalf of the entire Raider Outboards team, I want to express our sincere appreciation for your service and sacrifice. We are proud to support you, and we wish you all the best as you continue to serve our great country.

Sincerely,



George Woodruff
President
Raider Outboards Inc.
george@raideroutboards.com
321-567-2309

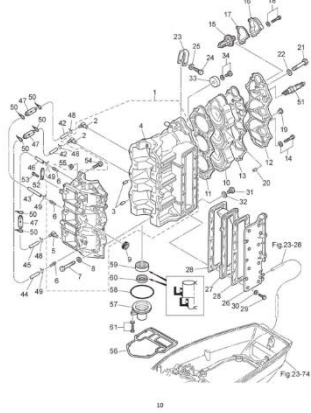
A handwritten signature in black ink that reads "George Woodruff". The signature is fluid and cursive, written over a light blue background.

RAIDER Outboards

HOW TO USE THIS PARTS CATALOG

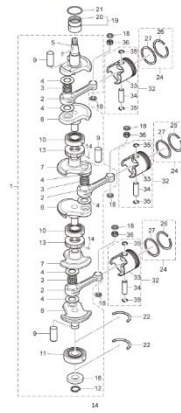
1. This parts catalog provides information available as of the end of June 2022.
2. Please keep the parts Catalog updated each time when receiving a Service Bulletin describing an addition, deletion and or change of parts.
3. Actual shapes of parts may be different from the illustrations shown in this Parts Catalog because they are described only as a guide for searching parts.
4. Given mark in (*) to a part number shows assembly or kit part.
5. Given mark in (**) to a part number shows modifications made to part.
6. Request for quotes may be sent to sales@raideroutboards.com or you may call 321-383-9585 ext 217 to make the requests. Quotes are typically valid for up to ninety days (90) and extensions may be provided on a case-by-case basis upon request.
7. For technical questions concerning parts or motors please contact techsupport@raideroutboards.com or you may call 321-383-9585 ext 210.

Fig. 1 Cylinder • Crank Case



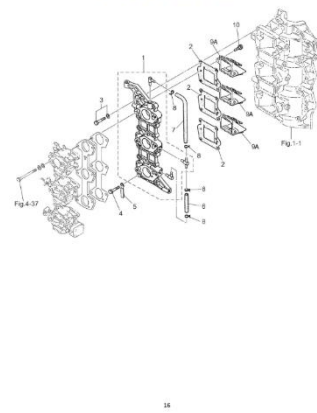
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Fig. 2 Piston • Crank Shaft



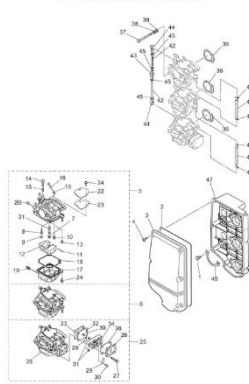
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Fig. 3 Intake Manifold • Reed Valve



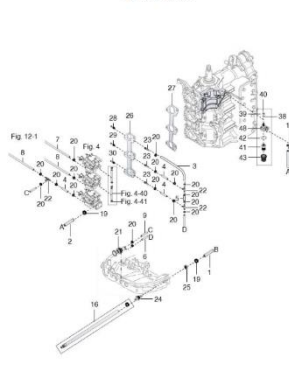
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Fig. 4 Intake Silencer • Carburetor



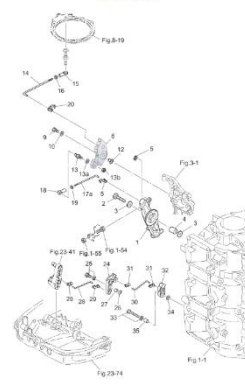
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Fig. 5 Fuel System



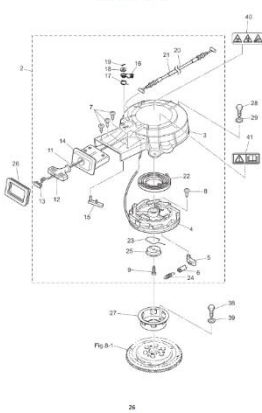
22

Fig. 6 Throttle



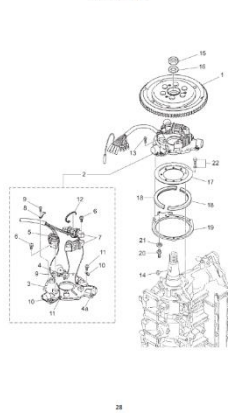
24

Fig. 7 Recoil Starter



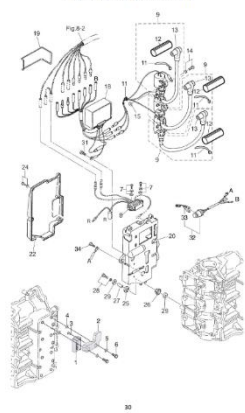
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Fig. 8 Magneto



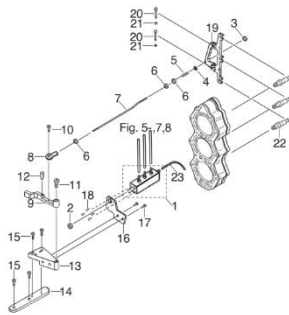
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Fig. 10 Electric Parts (C.D. Unit)



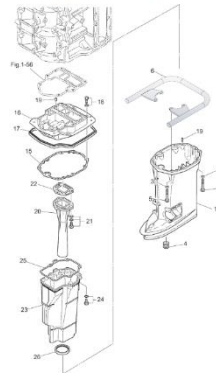
30

Fig. 12 Dewatering System



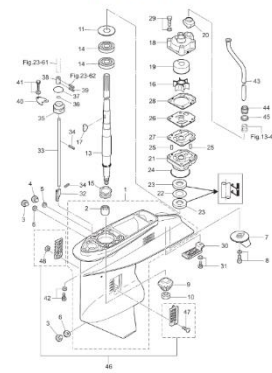
32

Fig. 13 Drive Shaft Housing



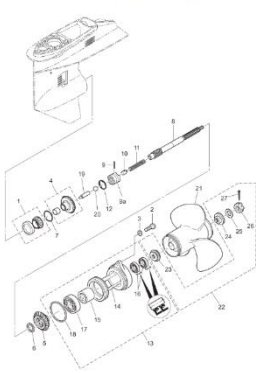
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Fig. 14 Gear Case (Drive Shaft)



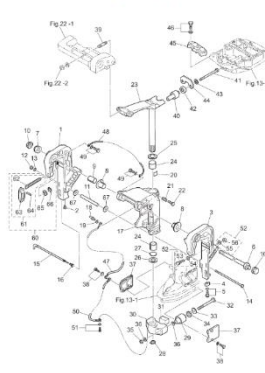
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Fig. 15 Gear Case (Propeller Shaft)



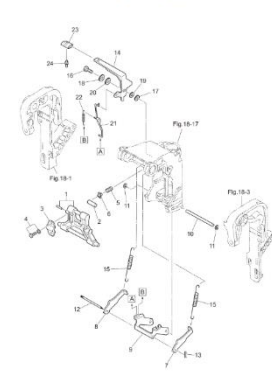
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Fig. 18 Bracket (Manual Tilt)



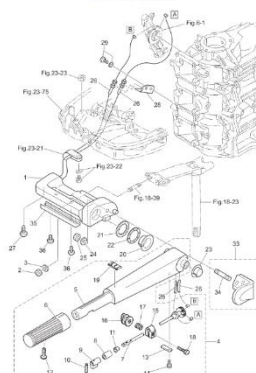
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Fig. 19 Manual Tilt



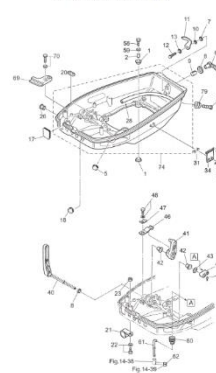
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Fig. 22 Tiller Handle



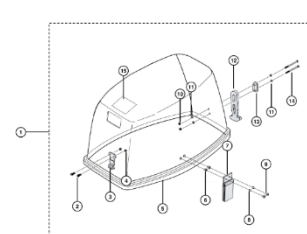
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Fig. 23 Bottom Cowl • Shift



50

Fig. 24 Top Cowl



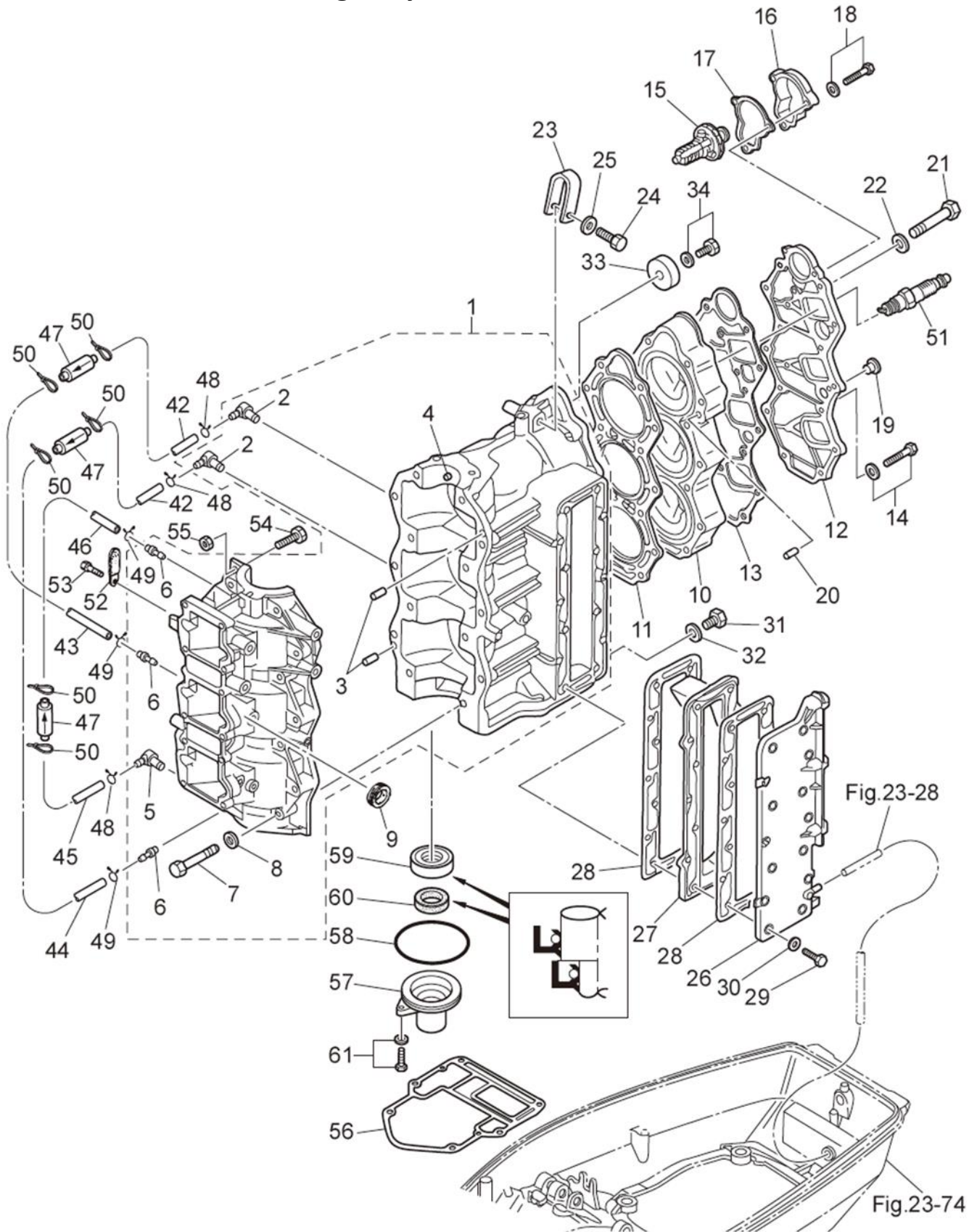
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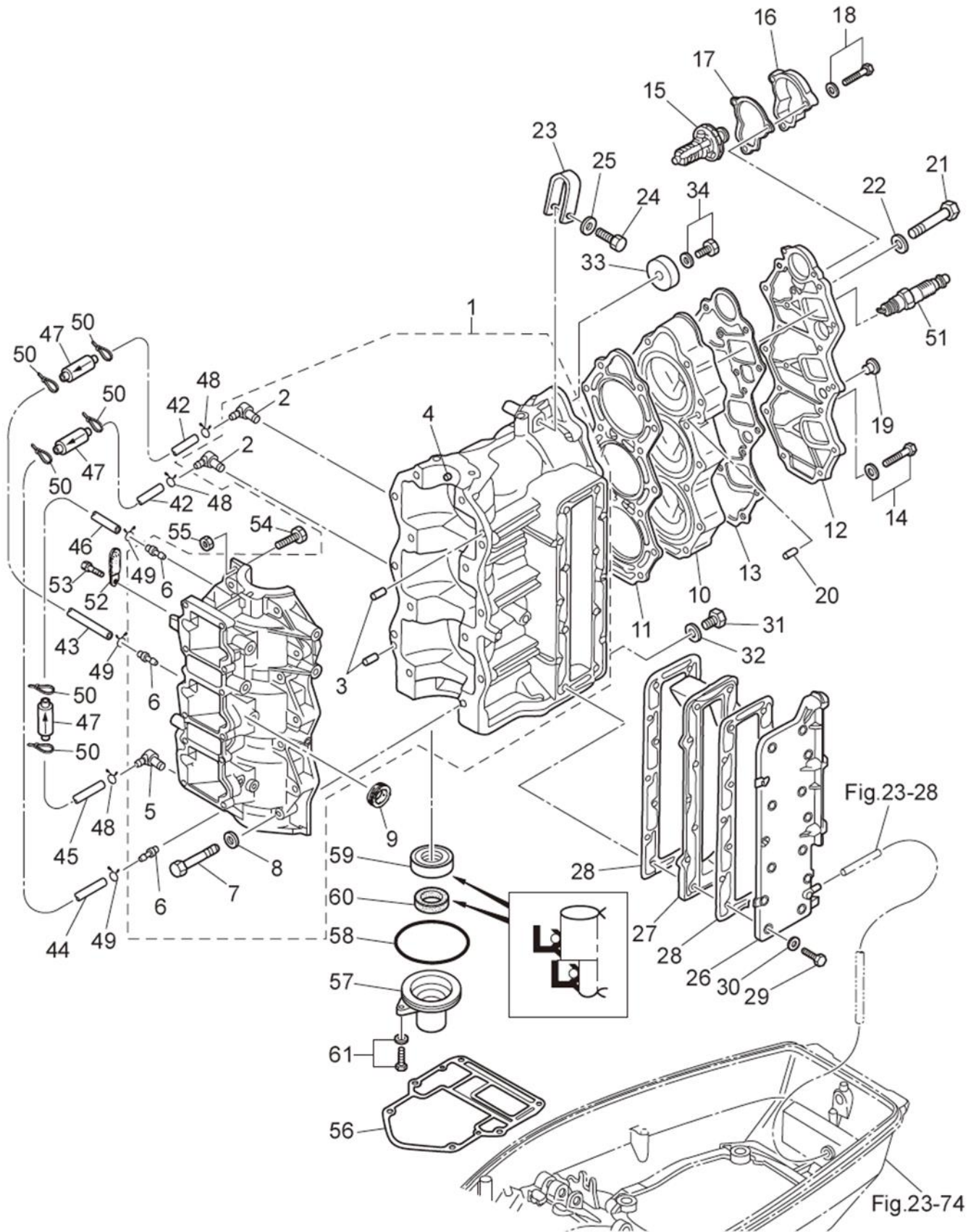
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Fig. 1 Cylinder • Crank Case



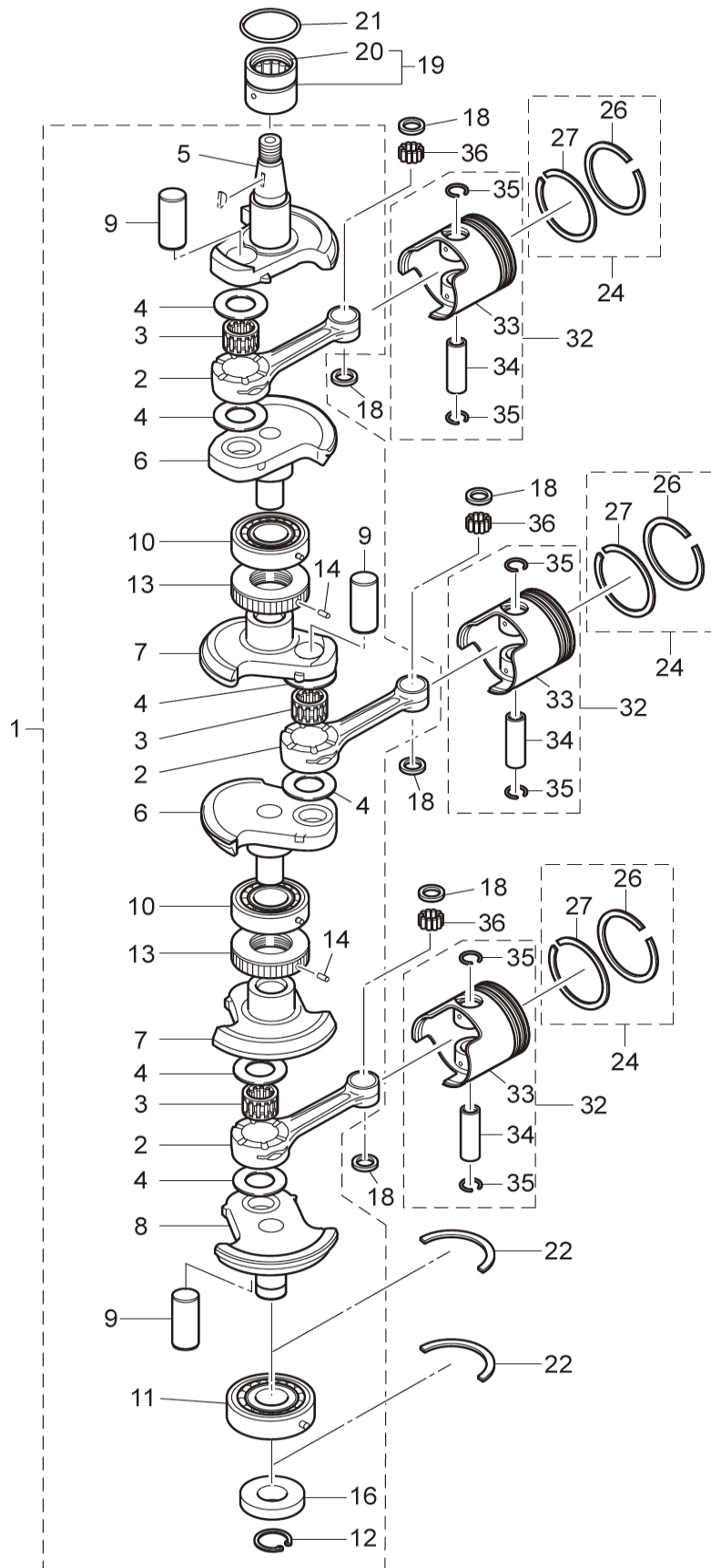
Ref No.	Part No.	Description	Qty	Remarks
1-1	R500101	Cyl Block & Crankcase Assy**	1	Modified
1-2	R500102	* Nipple 5-4-5	2	
1-3	R500103	* Dowel Pin 6-12	2	
1-4	R500104	* Dowel Pin	1	
1-5	R500105	* Nipple 5-4-5	1	
1-6	R500106	* Nipple 5.5-5	3	
1-7	R500107	* Cylinder Head Bolt	14	
1-8	R500108	* Washer	14	
1-9	R500109	Grommet 25-5	1	
1-10	R500110	Cylinder Head	1	
1-11	R500111	Cylinder Head Gasket	1	
1-12	R500112	Cylinder Head Cover	1	
1-13	R500113	Cylinder Head Cover Gasket	1	Water Jacket, Gasket
1-14	R500114	Cylinder Head Cover, Bolt & Washer	4	
1-15	R500115	Thermostat	1	
1-16	R500116	Thermostat Cap	1	
1-17	R500117	Thermostat Cap Gasket	1	
1-18	R500118	Bolt	3	
1-19	R500119	Plug	1	
1-20	R500120	Dowel Pin 6-12	2	
1-21	R500121	Cylinder Head Bolt	14	
1-22	R500125	Washer, Cylinder Head Bolt	14	
1-23	R500123	Hanger	1	
1-24	R500124	Cylinder Head Bolt (Hanger)	1	
1-25	R500125	Washer	1	
1-26	R500126	Exhaust Cover (Outer)	1	
1-27	R500127	Exhaust Cover (Inner)	1	
1-28	R500128	Exhaust Cover Gasket	2	
1-29	R500129	Exhaust Cover Bolt	14	
1-30	R500130	Washer, Exhaust Cover	14	
1-31	R500131	Bolt	1	
1-32	R500132	Gasket 8.1-15-1	1	
1-33	R500133	Anode	1	
1-34	R500134	Bolt	1	
1-42	R500142	Hose	2	
1-43	R500143	Hose	1	
1-44	R500144	Hose	1	
1-45	R500145	Hose	1	
1-46	R500146	Hose	1	
1-47	R500147	Check Valve	3	
1-48	R500148	Clip	3	
1-49	R500149	Clip	3	
1-50	R500150	Band 104	6	
1-51	R500151	Spark Plug	3	
1-52	R500152	Clamp 6.5-47.5p	1	
1-53	R500153	Bolt & Washer	1	
1-54	R500154	Bolt	1	
1-55	R500155	Nut	1	
1-56	R500156	Engine Basement Gasket	1	

Fig. 1 Cylinder • Crank Case



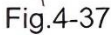
Ref No.	Part No.	Description	Qty	Remarks
1-57	R500157	Crankcase Head	1	
1-58	R500158	O-Ring 1.7-59	1	
1-59	R500159	Oil Seal 25-40-8	1	
1-60	R500160	Oil Seal 16-28-7	1	
1-61	R500161	Bolt & Washer	2	

Fig. 2 Piston • Crank Shaft



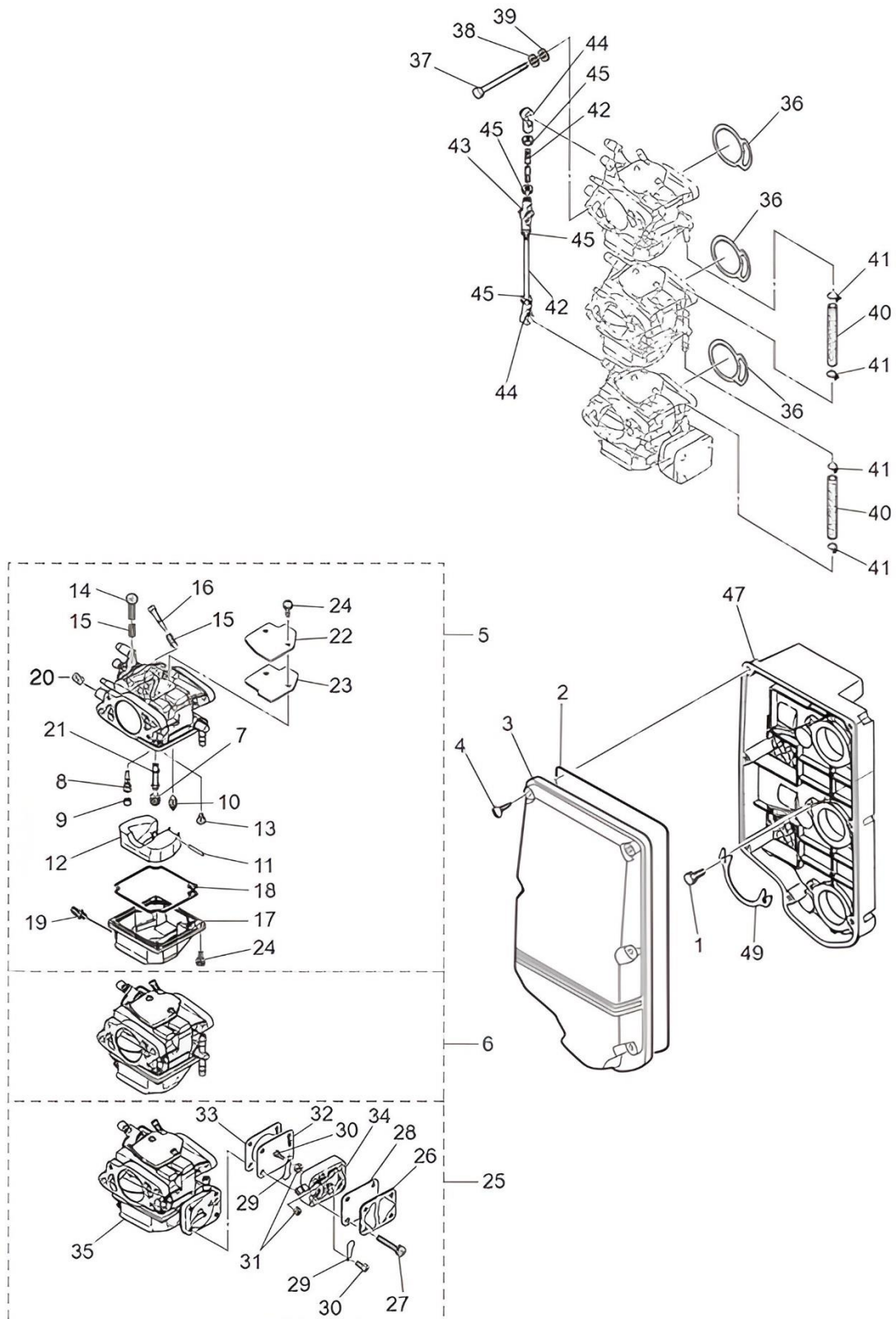
Ref No.	Part No.	Description	Qty	Remarks
2-1	R500201	Crankshaft Assy	1	
2-2	R500202	* Connecting Rod	3	
2-3	R500203	* Roller Bearing 25-32-20	3	
2-4	R500204	* Big End Bearing Washer	6	
2-5	R500205	* Crankshaft A	1	
2-6	R500206	* Crankshaft B	2	
2-7	R500207	* Crankshaft C	2	
2-8	R500208	* Crankshaft D	1	
2-9	R500209	* Crank Pin	3	
2-10	R500210	* Main Bearing 6305r	2	
2-11	R500211	* Main Bearing 6305	1	
2-12	R500212	* C-Ring D=25	1	
2-13	R500213	* Labyrinth Packing	2	
2-14	R500214	* Spring Pin 3-8	2	
2-16	R500216	* Spacer 25.2-34-1.6	1	
2-18	R500218	Small End Bearing Washer 17.6-22.4-4.45	6	
2-19	R500219	Main Bearing, Upper	1	
2-20	R500220	* Oil Seal 32-42-6	1	
2-21	R500221	O-Ring 2.4-39.7	1	
2-22	R500222	Thrust Plate	2	
2-24	R500224	Piston Ring Set	3	
2-26	R500226	* Piston Ring	1	
2-27	R500227	* Piston Ring	1	
2-32	R500232	Piston Repair Kit STD	3	
2-33	R500233	* Piston	1	
2-34	R500234	* Piston Pin	1	
2-35	R500235	* Piston Pin Clip	2	
2-36	R500236	Needle Roller Set	3	

Fig. 3 Intake Manifold • Reed Valve



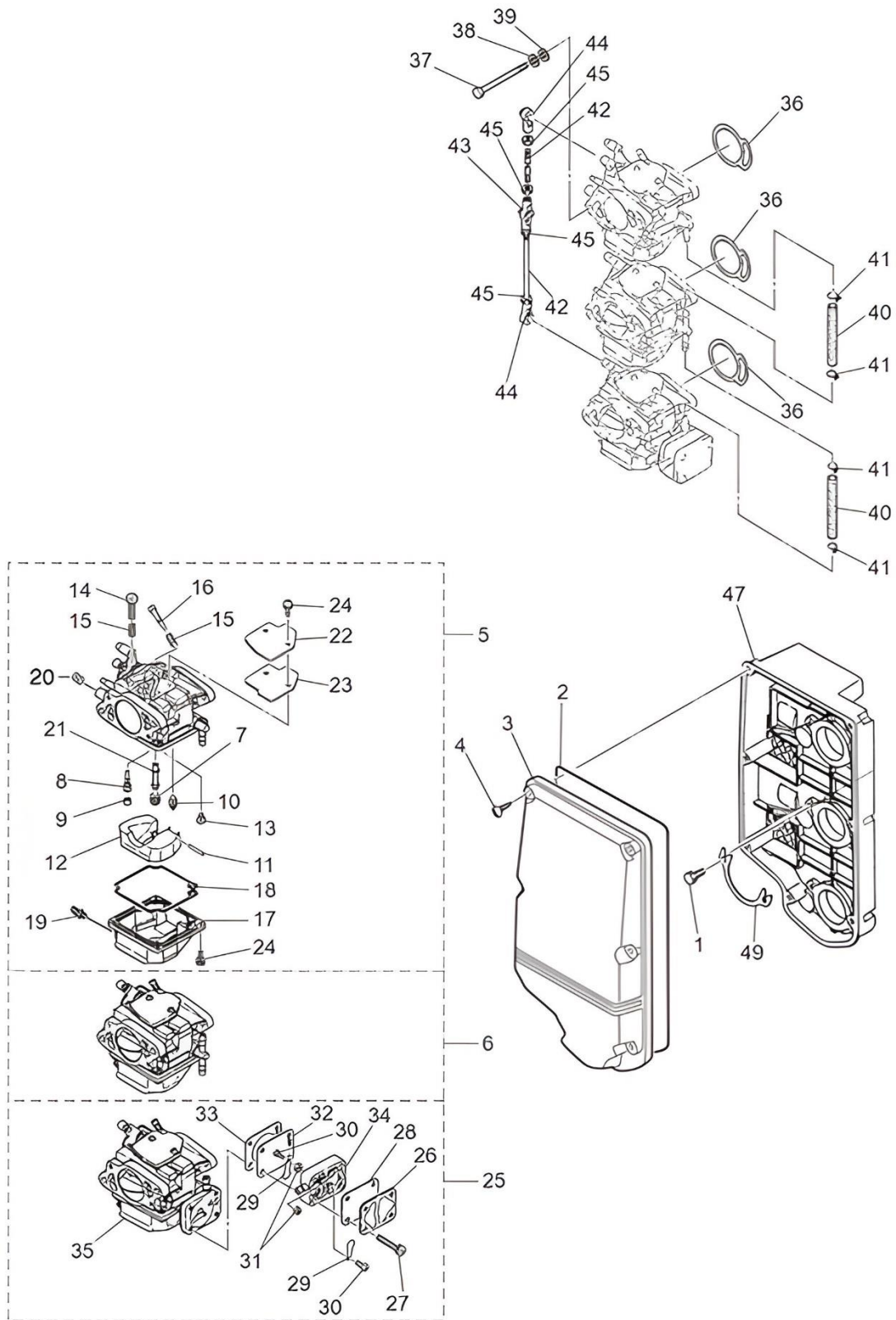
Ref No.	Part No.	Description	Qty	Remarks
3-1	R500301	Intake Manifold Assy	1	
3-2	R500302	Intake Manifold Gasket	3	
3-3	R500303	Bolt, Intake Manifold	11	
3-4	R500304	Bolt, Intake Manifold	1	
3-5	R500305	Clamp 6.5-47-5P	1	
3-6	R500306	Fuel Hose 5mm (3/16")	1	
3-7	R500307	Fuel Hose 5mm (3/16")	1	
3-8	R500308	Clip, Fuel Hose	4	
3-9A	R500309-A1	Reed Valve ASSY M50	3	
3-10	R5000310	Screw, Reed Cage	6	

Fig. 4 Intake Silencer • Carburetor



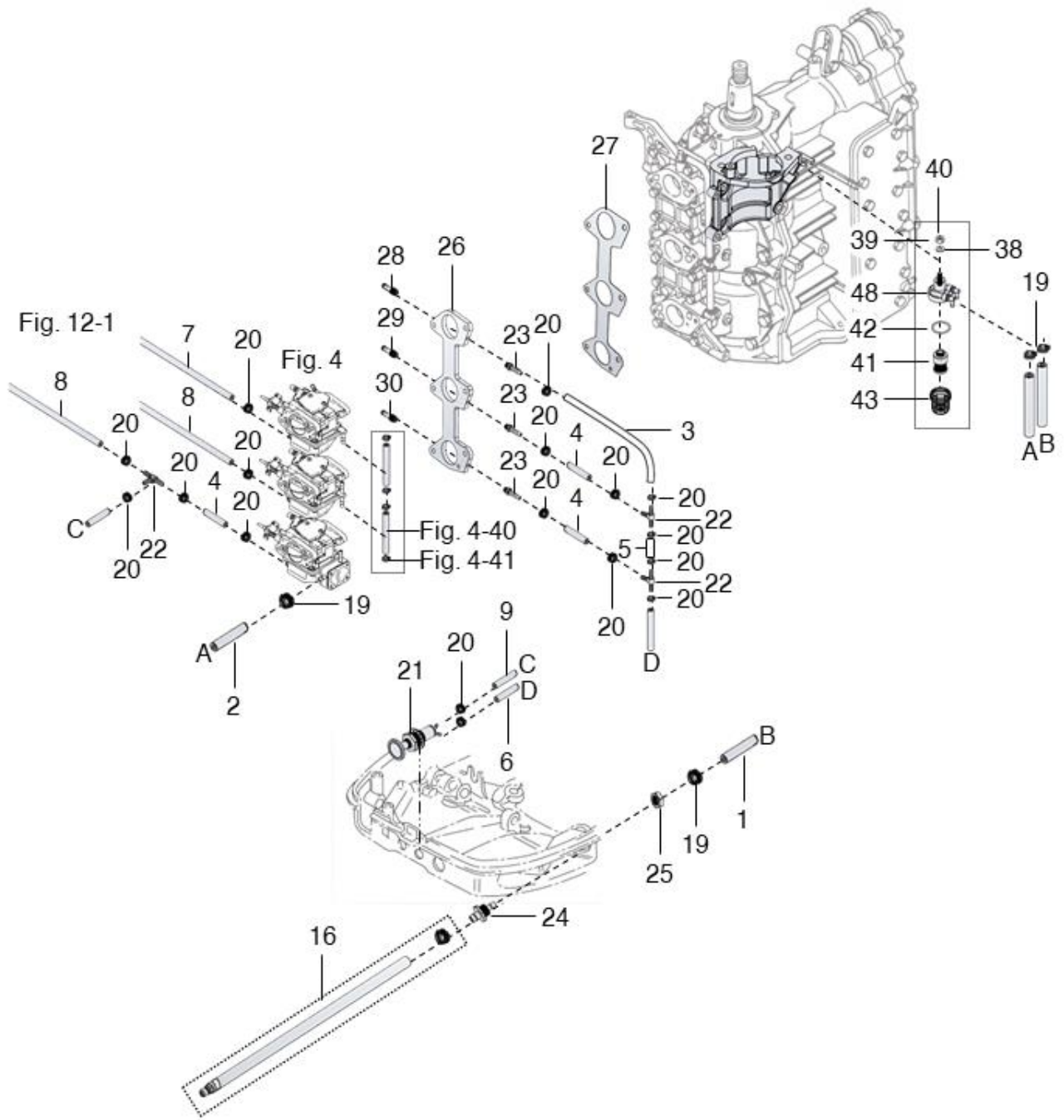
Ref No.	Part No.	Description	Qty	Remarks
4-1	R500401	Bolt 5-16, Lock Plate	6	
4-2	R500402	Gasket, Intake Silencer (AIS)**	1	
4-3	R500403	Intake Silencer Cover (AIS)**	1	
4-4	R500404	Tapping Screw 5-30 (AIS)	7	
4-5	R500405	Carburetor Assy, Upper (U)**	1	
4-6	R500406	Carburetor Assy, Middle (M)**	1	
4-7	R500407	*Main Jet (#138)	1	
4-8	R500408	*Slow Jet (#80)	1	
4-9	R500409	*Plug	1	
4-10	R500410	*Float Valve	1	
4-11	R500411	*Float Arm Pin	1	
4-12	R500412	*Float	1	
4-13	R500413	*Screw	1	
4-14	R500414	*Stop Screw	1	
4-15	R500415	*Spring	1	
4-16	R500416	*Adjust Screw (Pilot)	1	
4-17	R500417	*Float Chamber ASSY (U/M)	2	
4-18	R500418	*Float Chamber Gasket	3	
4-19	R500419	Float Chamber, Hose Fitting	3	
4-20	R500420	*Choke Hole Seal	3	
4-21	R500421	*Main Nozzle	1	
4-22	R500422	*Carburetor Cover Plate	1	
4-23	R500423	*Carburetor Cover Plate Gasket	1	
4-24	R500424	*Screw	6	
4-25	R500425	Carburetor ASSY, Lower (L)**	1	
4-26	R500426	Pump Cover	1	
4-27	R500427	Pre-Coated Screw	4	
4-28	R500428	Fuel Pump Cover Gasket	1	
4-29	R500429	Check Valve	2	
4-30	R500430	Screw	2	
4-31	R500431	Nut	2	
4-32	R500432	Fuel Pump Diaphragm	1	
4-33	R500433	Fuel Pump Body Gasket	1	
4-34	R500434	Fuel Pump Body	1	
4-35	R500435	Lower Float Chamber (L)**	1	
4-36	R500436	Carburetor Gasket	3	
4-37	R500437	Bolt	6	
4-38	R500438	Spring Washer M6-12-1.7	6	
4-39	R500439	Washer M6-13-.1	6	
4-40	R500440	Carburetor Tower Hose	2	
4-41	R500441	Retention Band, Fuel Line	4	

Fig. 4 Intake Silencer • Carburetor



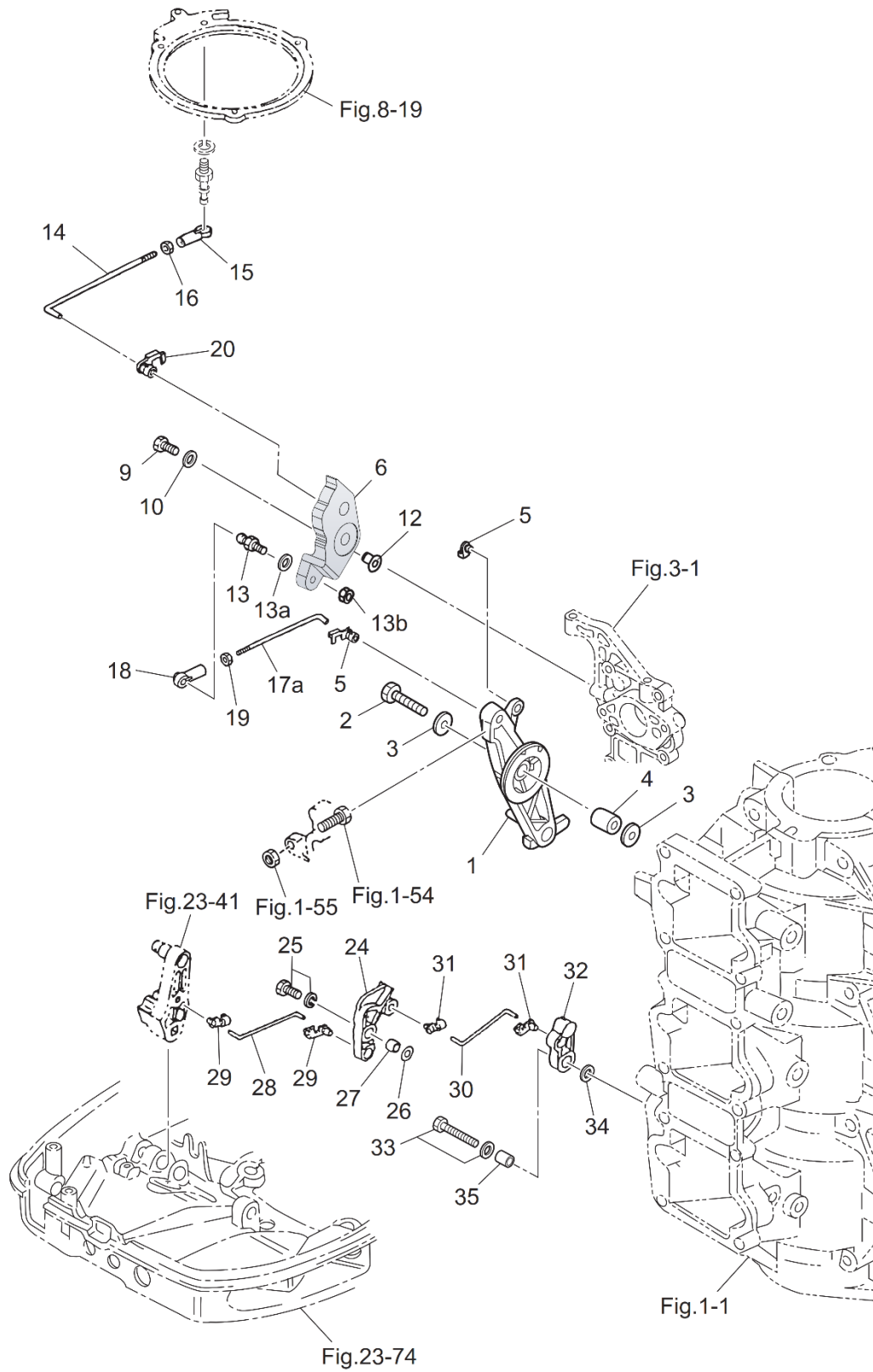
Ref No.	Part No.	Description	Qty	Remarks
4-42	R500442	Rod 5-68	2	
4-43	R500443	Ball Joint Connector (Cap B)	1	
4-44	R500444	Ball Joint Connector (Cap C)	2	
4-45	R500445	Nut, Synch Rod	4	
4-47	R500447	Intake Silencer**	1	
4-49	R500449	Intake Silencer Lock Plate (AIS)	3	

Fig 5. Fuel System



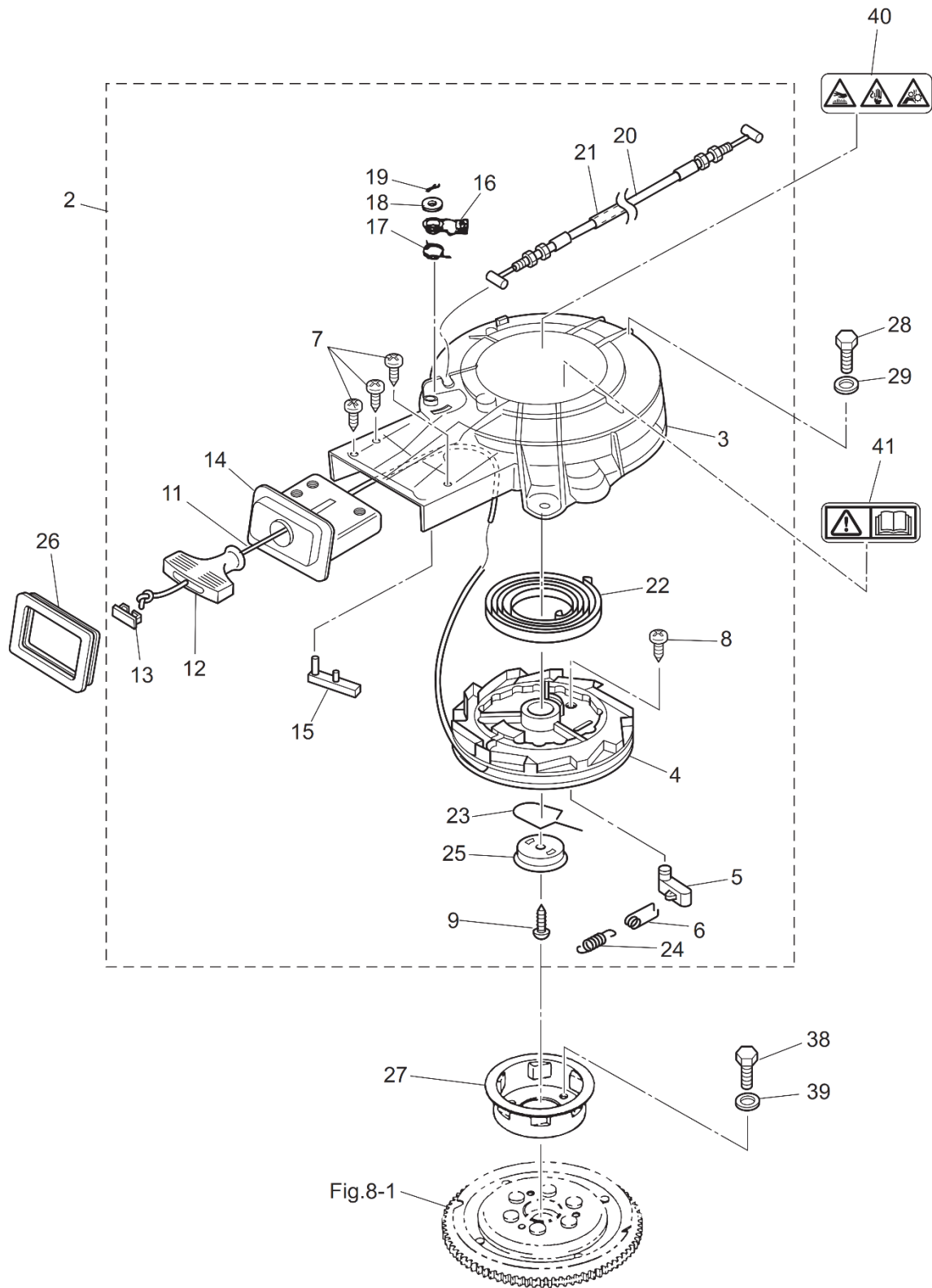
Ref No.	Part No.	Description	Qty	Remarks
5-1	R550501	1/4"12" P2FF in	1	
5-2	R550502	1/4"21.5" FF out 2FP in	1	
5-3	R550503	1/8"4.5" BF out 2HFP U	1	
5-4	R550504	1/8"1.5" BF out 2HFP M/L and LC Drain 2BF	3	
5-5	R550505	1/8"3" LBTF2UBTF	1	
5-6	R550506	1/8"6.5"Primer 2 LBTF	1	
5-7	R550507	1/8"16" UC2DVA	1	
5-8	R550508	1/8"15" LC BTF MC2DVA	2	
5-9	R550509	1/8"5" Drain Primer 2 BTF	1	
5-16	R550516	18" Fuel Dongle (Parker) ASSY	1	
5-19	R500519	Hose Clamp	4	
5-20	R500520	Retention Band, Fuel Line	18	
5-21	R500521	Fuel Primer Plunger Pump	1	
5-22	R500522	T-Hose Fitting 1/8" ID	3	
5-23	R500523	Float Chamber, Hose Fitting	3	
5-24	R500524	Fuel Dongle, Adapter (Comes with 5-25)	1	
5-25	R500525	Fuel Dongle, Adapter, Nut (Sold with 5-24)	1	
5-26	R500526	Heavy Fuel Plate	1	
5-27	R500527	Heavy Fuel Plate, Gasket	1	
5-28	R500528	HFP, LC JET	1	
5-29	R500529	HFP, MC JET	1	
5-30	R500530	HFP, UC JET	1	
5-38	R500538	*FF, Washer	2	
5-39	R500539	*FF, Nut	1	
5-40	R500540	Fuel Filter ASSY	1	
5-41	R500541	*Filter Element W/O-Ring (13-17-2)	1	
5-42	R500542	*O-Ring, Cup ALT	1	
5-43	R500543	*Fuel Filter Cup (Fuel Bowl)	1	
5-48	R500548	*Fuel Filter Cap	1	

Fig. 6 Throttle



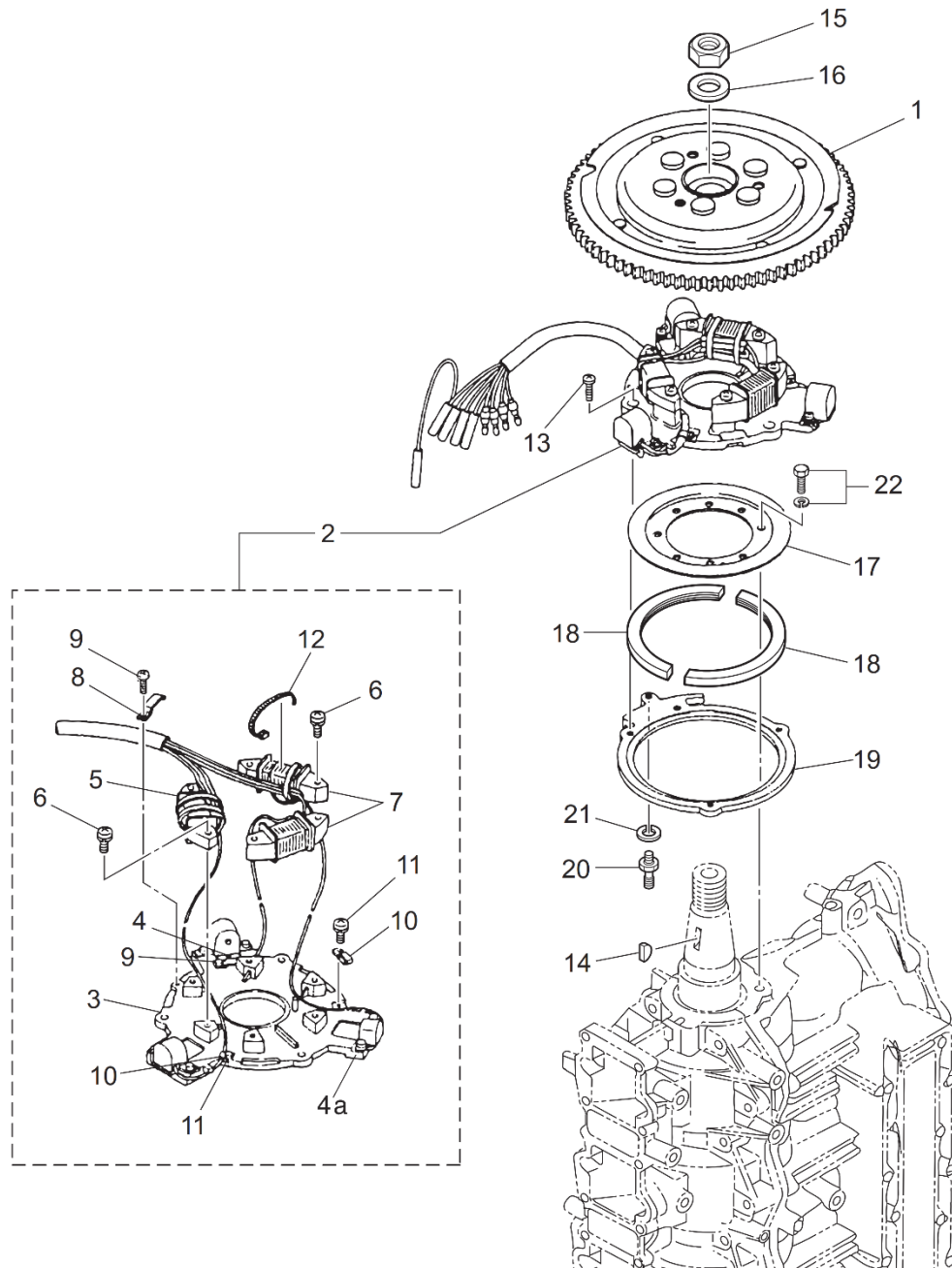
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6-1	R500601	Advancer Arm	1	
6-2	R500602	Bolt	1	
6-3	R500603	Washer 6.5-21-1	2	
6-4	R500604	Collar 6.2-12-17	1	
6-5	R500605	Rod Snap 5-3	2	
6-6	R500606A	Throttle Cam	1	
6-9	R500609	Bolt	1	
6-10	R500610	Washer 6.5-21-1	1	
6-12	R500612	Collar 9.1-12-10.8	1	
6-13	R500613	Ball Joint B	1	
6-13a	R500613A	Washer 6.5-21-1 (10 Multiple)	1	
6-13b	R500613B	Nut	1	
6-14	R500614	Rod	1	
6-15	R500615	Ball Joint Connector, Cap C	1	
6-16	R500616	Nut	1	
6-17	R500617	Throttle Rod, L-Link 5-90	1	
6-18	R500618	Ball Joint Connector, Cap C	1	
6-19	R500619	Nut	1	
6-20	R500620	Rod Snap 5-3	1	
6-24	R500624	Throttle Limiter Arm	1	
6-25	R500625	Bolt & Washer	1	
6-26	R500626	Washer 6.5-21-1	1	
6-27	R500627	Collar 6.2-9-9.3	1	
6-28	R500628	Throttle Limiter Rod 3.5-56	1	
6-29	R500629	Rod Snap 3.5-4	1	
6-30	R500630	Link 40/50	1	
6-31	R500631	Rod Snap 3.5-4	1	
6-32	R500632	Starter Lock Arm	1	
6-33	R500633	Bolt	1	
6-34	R500634	Washer	1	
6-35	R500635	Collar 6.2-9-9.3	1	

Fig. 7 Recoil Starter



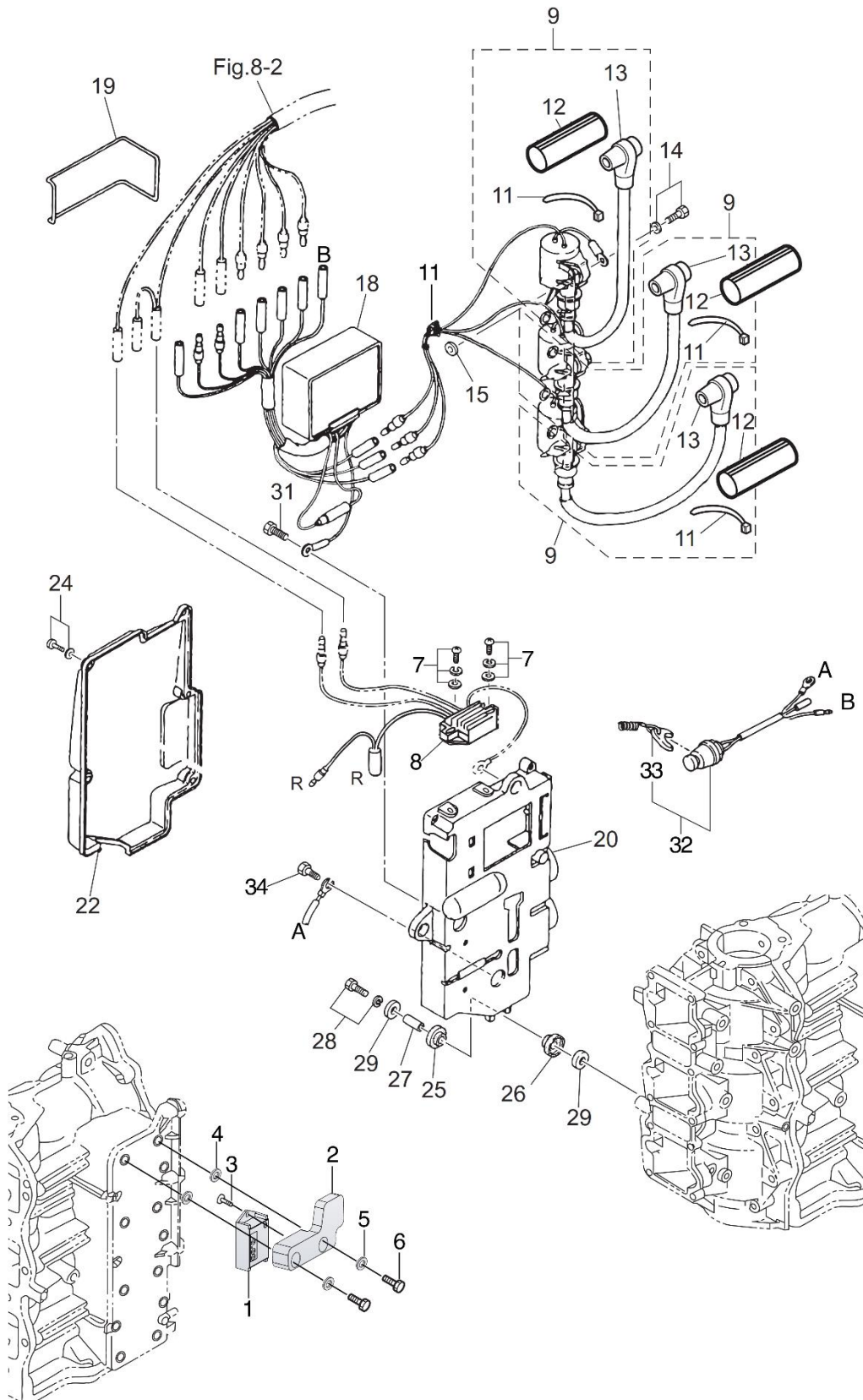
Ref No.	Part No.	Description	Qty	Remarks
7-2	R550702	Recoil Starter ASSY	1	
7-3	R500703	* Starter Case	1	
7-4	R500704	* Reel Assy	1	
7-5	R500705	* Ratchet	1	
7-6	R500706	* Return Spring	1	
7-7	R500707	* Tapping Screw	3	
7-8	R500708	* Tapping Screw 6-25	1	
7-9	R500709	* Tapping Screw	1	
7-11	R500711	* Starter Rope	1	
7-12	R500712	* Starter Handle	1	
7-13	R500713	* Rope Anchor	1	
7-14	R500714	* Rope Guide	1	
7-15	R550715	* Starter Lock Pin	1	
7-16	R500716	* Starter Lock Cam	1	
7-17	R500717	* Starter Lock Spring	1	
7-18	R500718	* Washer	1	
7-19	R500719	* Split Pin	1	
7-20	R500720	* Starter Lock Wire	1	
7-21	R500721	* Pipe	1	
7-22	R500722	* Starter Spring	1	
7-23	R500723	* Friction Spring	1	
7-24	R500724	* Return Spring	1	
7-25	R500725	* Friction Plate	1	
7-26	R500726	Starter Seal	1	
7-27	R500727	Starter Pulley	1	
7-28	R500728	Pre-Coated Bolt 6-20	3	
7-29	R500729	Washer 6-16-1.5	3	
7-38	R500738	Bolt	3	
7-39	R500739	Washer	3	
7-40	R500740	Caution Decal	1	
7-41	R500741	Caution Decal	1	

Fig. 8 Magneto



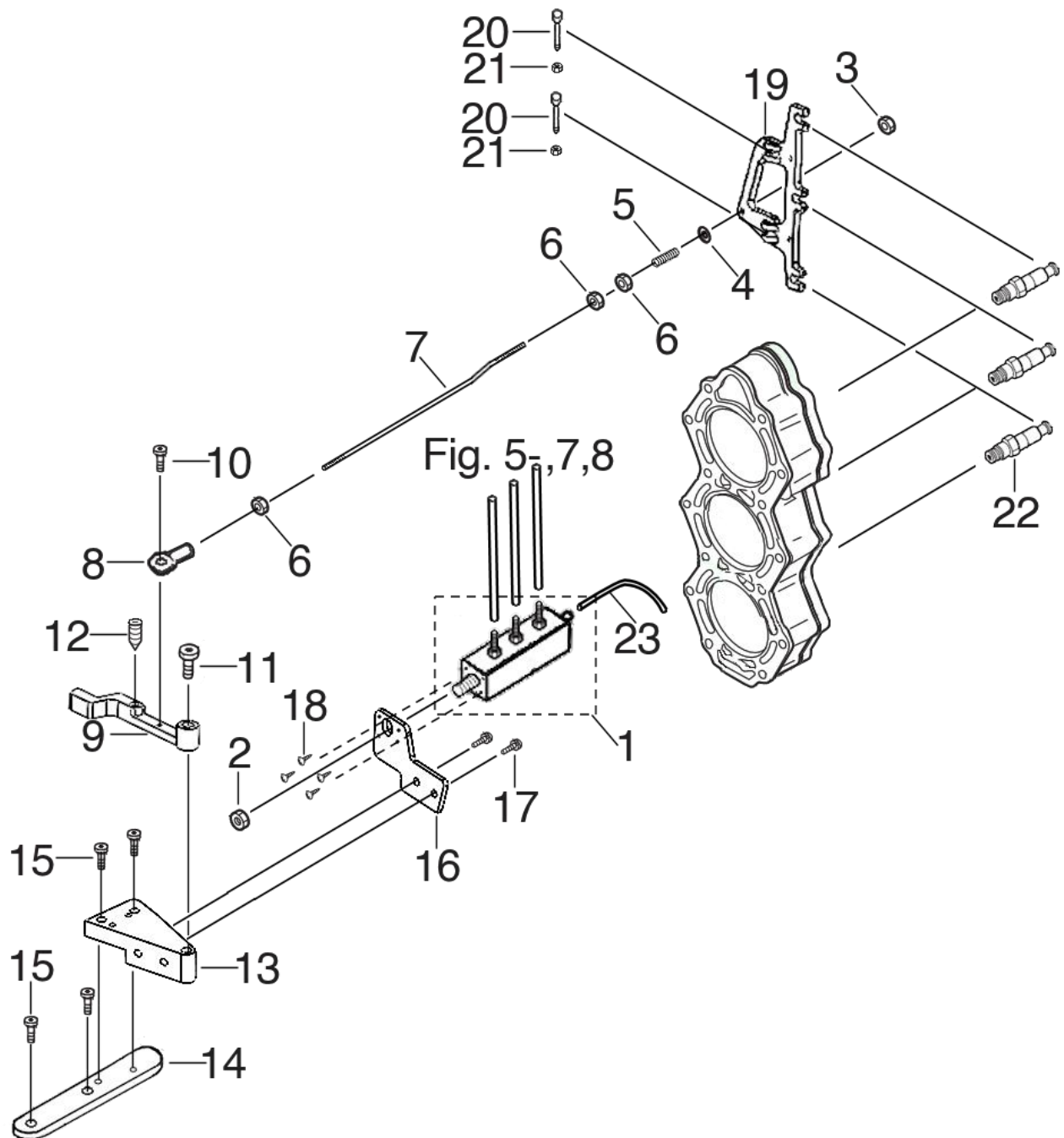
Ref No.	Part No.	Description	Qty	Remarks
8-1	R500801	Flywheel W/Ring Gear	1	
8-2	R500802	Coil Plate Assy W/Alternator	1	
8-3	R500803	* Pulser Coil & Plate Assy	1	
8-4	R500804	* Pulser Holder	1	
8-4A	R500804A	* Pulser Screw	6	
8-5	R500805	* Exciter Coil	1	
8-6	R500806	* Screw	6	
8-7	R500807	* Alternator Assy	1	
8-8	R500808	* Holder Magnet	1	
8-9	R500809	* Screw	2	
8-10	R500810	* Clamp	2	
8-11	R500811	* Screw	2	
8-12	R500812	* Band	3	
8-13	R500813	Screw, Coil Plate	3	
8-14	R500814	Key 19-7-5, Flywheel	1	
8-15	R500815	Nut 18-P1.5, Flywheel	1	
8-16	R500816	Washer 19-34-3, Flywheel	1	
8-17	R500817	Guide Plate	1	
8-18	R500818	Guide Plate Cover	1	
8-19	R500819	Setting Ring	1	
8-20	R500820	Ball Joint	1	
8-21	R500821	Spring Washer, Setting Ring Bolt	1	
8-22	R500822	Bolt, Setting Ring	3	

Fig. 10 Electric Parts (C.D. Unit)



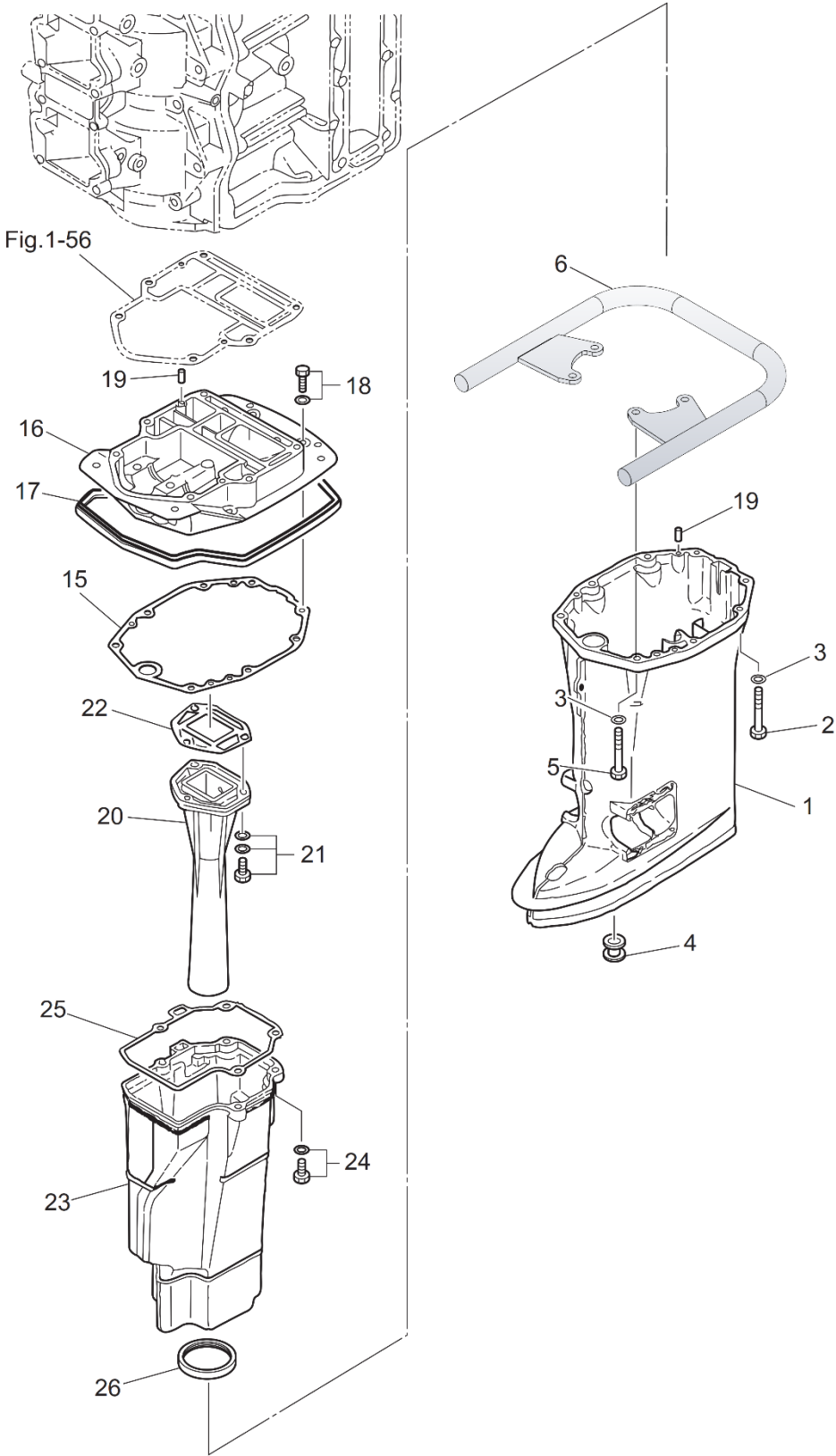
Ref No.	Part No.	Description	Qty	Remarks
10-1	R501001	Tach/Hour Meter	1	
10-2	R501002	Coil Guard, Bracket	1	
10-3	R501003	Screw, Tach/Hour Meter	1	
10-4	R501004	Washer, Coil Guard Inner	2	
10-5	R501005	Lock Washer, Coil Guard Outer	2	
10-6	R501006	Bolt, Coil Guard	2	
10-7	R501007	Screw Rectifier	2	
10-8	R501008	Rectifier Complete	1	
10-9	R501009	Ignition Coil ASSY**	3	
10-11	R501011	*Retention Band	4	
10-12	R501012	*2" Boot Extension	1	
10-13	R501013	*Plug Cap	1	
10-14	R501014	Bolt & Washer, Ignition Coil	3	
10-15	R501015	Gasket 6.2-11-1, Ignition Coil	3	
10-18	R501018	CD Ignition Unit C.D.I.	1	
10-19	R501019	O-Ring 3.1-94.4, C.D.I. Unit Retention	1	
10-20	R501020	Electrical Box**	1	
10-21	R501021	Fuse 20 AMP	1	
10-22	R501022	Cover, Electrical Box**	1	
10-24	R501024	Screw, Cover, Electrical Box	5	
10-25	R501025	Mount 8.5-14-2.5	3	
10-26	R501026	Rubber Mount 8.5-14-2.5	3	
10-27	R501027	Spacer 6.2-9-15.7	3	
10-28	R501028	Bolt & Washer	3	
10-29	R501029	Washer 6.5-21-1	6	
10-31	R501031	Bolt	2	
10-32	R501032	Stop Switch ASSY	1	
10-33	R501033	*Stop Switch Lanyard ASSY	1	
10-34	R501034	Bolt	1	

Fig. 12 Dewatering System



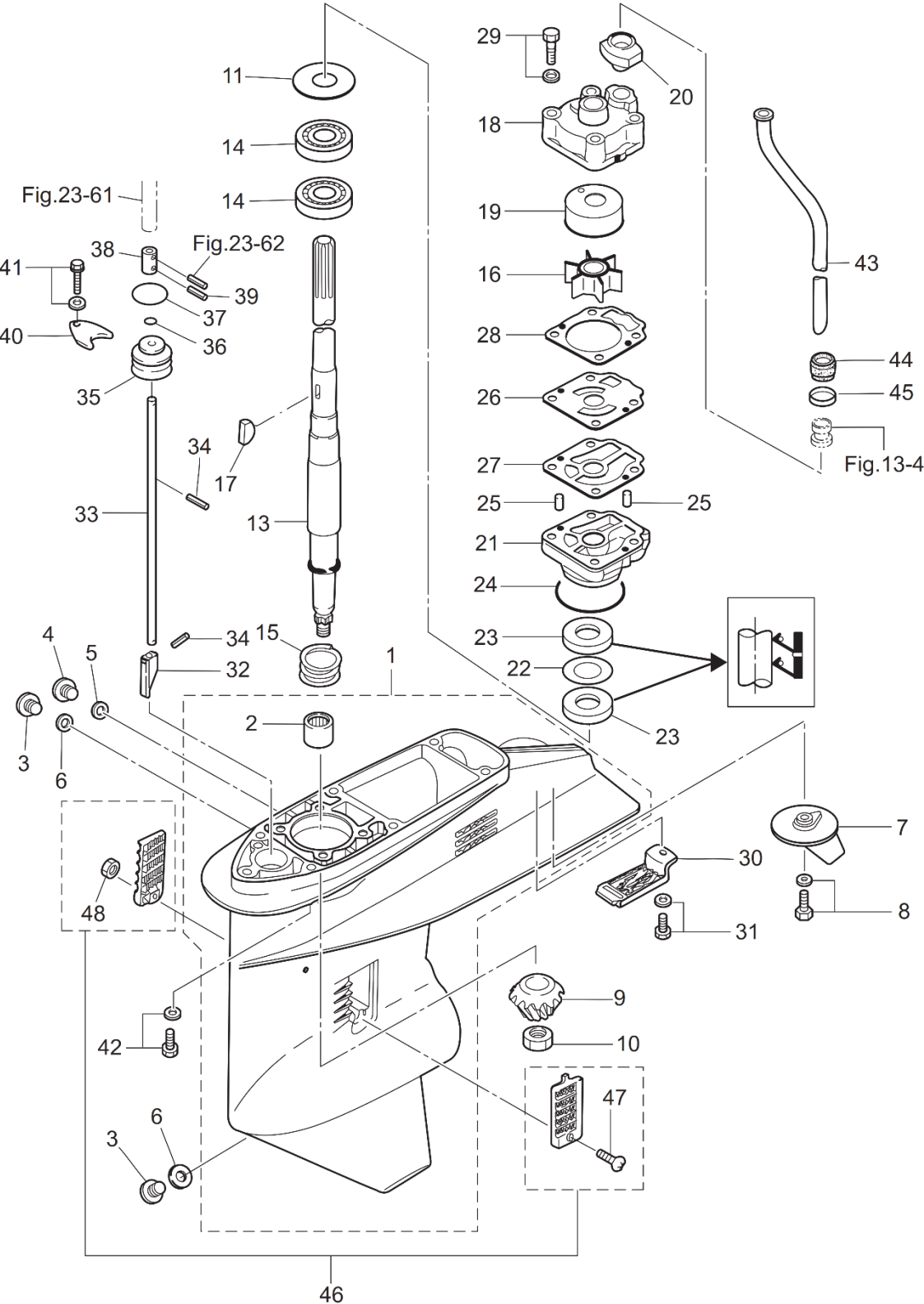
Ref No.	Part No.	Description	Qty	Remarks
12-1	R501201	Dewatering Valve ASSY (DV)	1	
12-2	R501202	Locknut, Plunger	1	
12-3A	R501203A	Dewatering Rod ASSY (DR)	1	
12-3	R501203	*(DR) Nylon-Insert Locknut	1	
12-4	R501204	*(DR) Washer	1	
12-5	R501205	*(DR) Compression Spring	1	
12-6	R501206	*(DR) Hex Nut	3	
12-7	R501207	*(DR) Rod	1	
12-8	R501208	*(DR) Ball Joint	1	
12-9	R501209	Dewatering Lever (DL)	1	
12-10	R501210	(DL) Shoulder Bolt (Rod End)	1	
12-11	R501211	(DL) Shoulder Bolt (Lever)	1	
12-12	R501212	(DL) Spring Ball Nose Plunger	1	
12-13	R501213	Dewatering Lever Bracket (DLB)	1	
12-14	R501214	Dewatering Adapter Plate (DAP)	1	
12-15	R501215	(DAP/DLB) Socket Head Screw	4	
12-16	R501216	Dewatering Valve Holder Bracket (DVB)	1	
12-17	R501217	(DVB) Socket Head Screw	2	
12-18	R501218	(DVB) Hex Flat Screw, 90° Cntrsnc	4	
12-19	R501219	Dewatering Fingers (DF)	1	
12-20	R501220	(DF) Shoulder Bolt	2	
12-21	R501221	(DF) Nylon-Insert Locknut	2	
12-22	R501222	Decompression Valve	3	
12-23	R501223	Hose, Drain Line (yellow)	1	

Fig. 13 Drive Shaft Housing



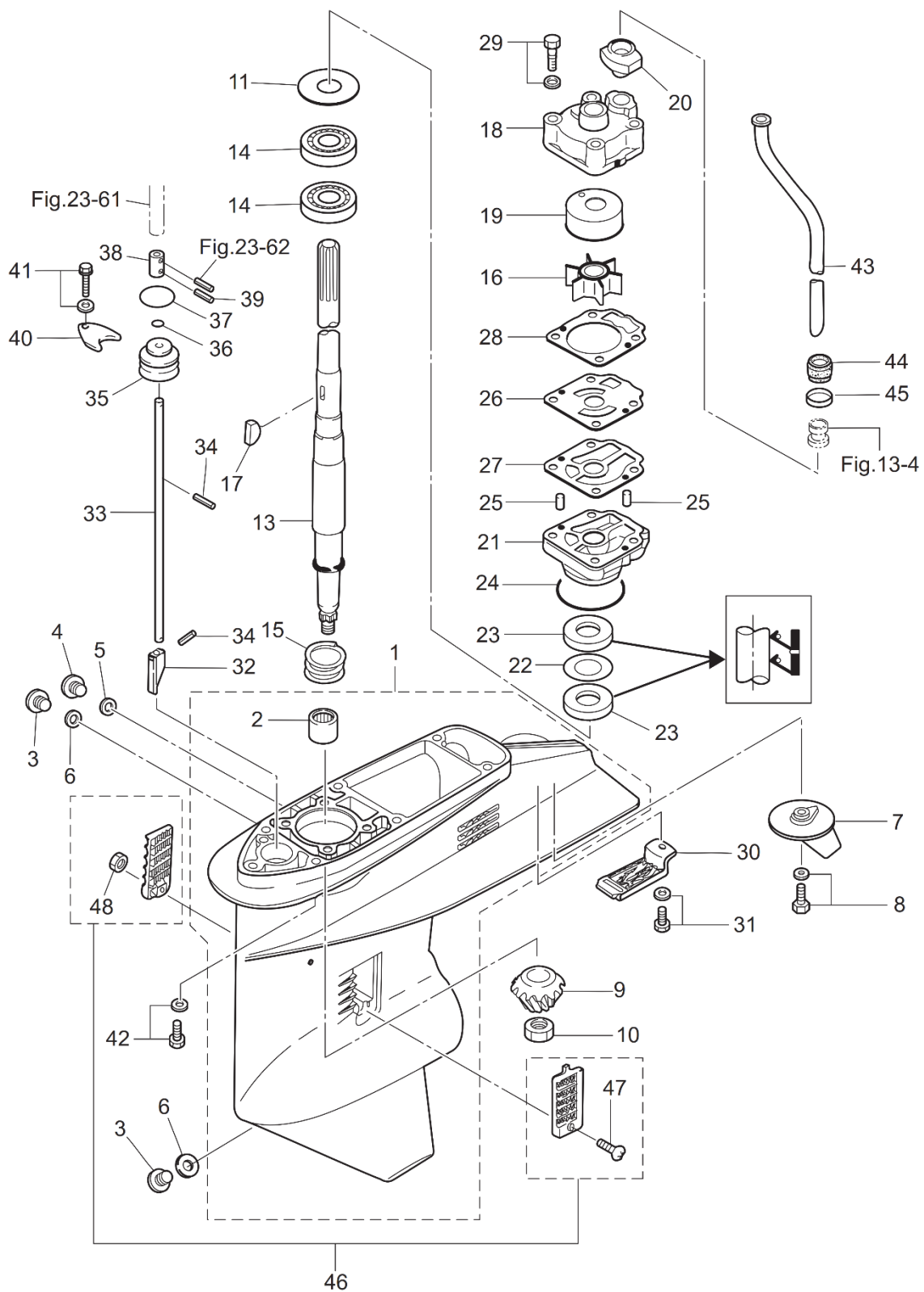
Ref No.	Part No.	Description	Qty	Remarks
13-1	R501301	Drive Shaft Housing (L)	1	
13-2	R501302	Bolt, Powerhead	2	
13-3	R501303	Washer	6	
13-4	R501304	Water Pipe Auxiliary Mount	4	
13-5	R501305	Bolt, Powerhead	4	
13-6	R501306	Rear Carry Grab Rail	1	
13-15	R501315	Drive Shaft Housing Gasket	1	
13-16	R501316	Engine Basement	1	
13-17	R501317	Engine Basement Seal L=805	1	
13-18	R501318	Bolt&Washer	4	
13-19	R501319	Dowel Pin 6-12	4	
13-20	R501320A	Exhaust Pipe	1	
13-21	R501321	Bolt 8-30	4	
13-22	R501322	Exhaust Pipe Gasket	1	
13-23	R501323	Exhaust Housing	1	
13-24	R501324	Bolt 8-30	4	
13-25	R501325	Exhaust Housing Gasket	1	
13-26	R501326	Grommet	1	

Fig 14. Gear Case (Drive Shaft)



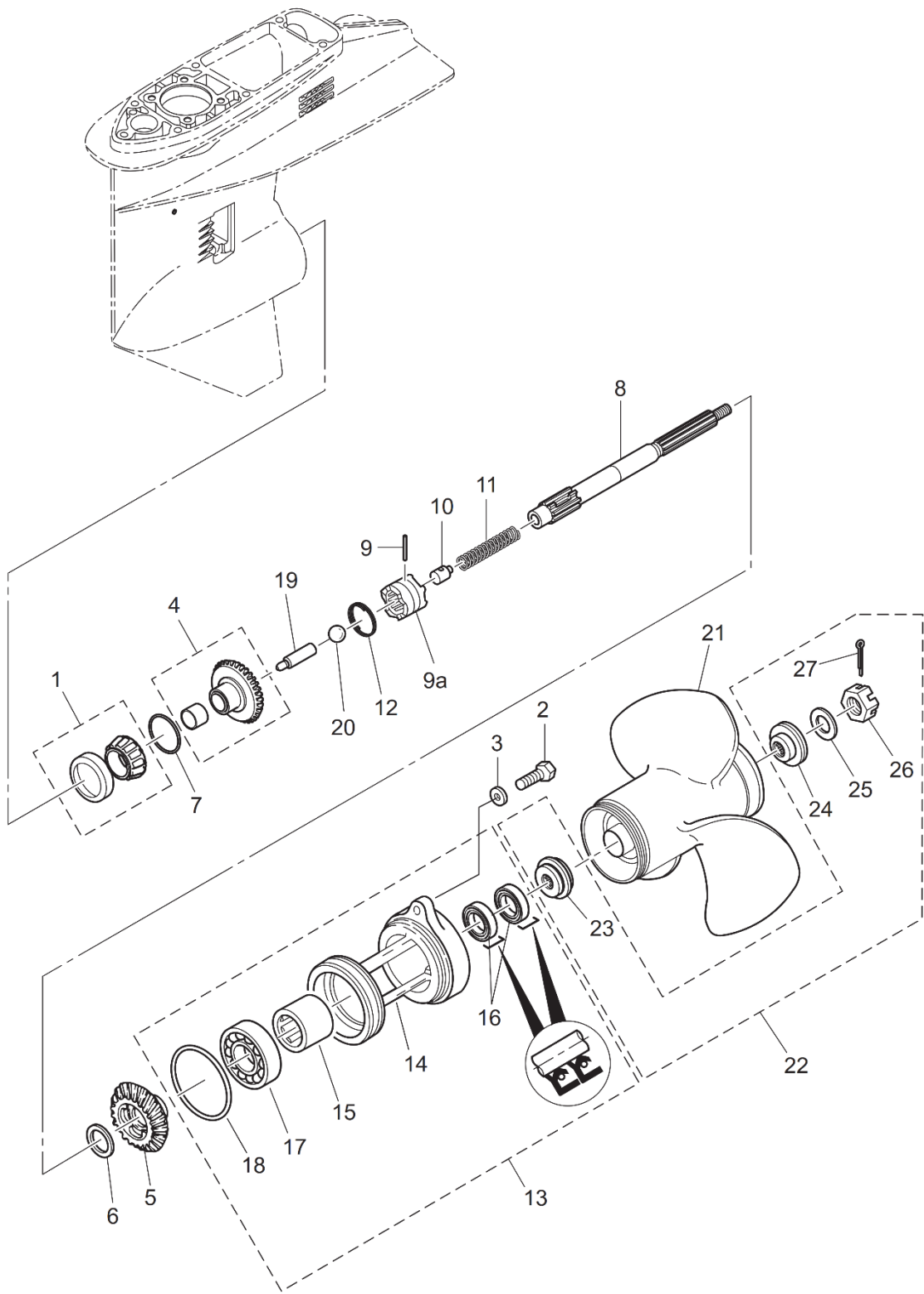
Ref No.	Part No.	Description	Qty	Remarks
14-1	R501401	Gear Case ASSY	1	
14-2	R501402	Roller Bearing 22-30-20	1	
14-3	R501403	Plug, Oil Fill/Drain 8-8	2	
14-4	R501404	Plug, Water M10p1.25	1	
14-5	R501405	Gasket, Water Plug 10.1-15-1	1	
14-6	R501406	Gasket 8.1-15-1	2	
14-7	R501407	Trim Tab	1	
14-8	R501408	Bolt&Washer, Trim Tab	1	
14-9	R501409	Bevel Gear B, Drive Shaft	1	
14-10	R501410	Nut, Bevel Gear	1	
14-11	R501411	Shim Kit	1	
14-13	R501413	Drive Shaft (L)	1	
14-14	R501414	Ball Bearing 6304	2	
14-15	R501415	Drive Shaft Spring	1	
14-16	R501416	Water Pump Impeller	1	
14-17	R501417	Key 20-4.6-2	1	
14-18	R501418	Pump Case (Upper)	1	
14-19	R501419	Pump Case Liner	1	
14-20	R501420	Water Pipe Seal (Lower)	1	
14-21	R501421	Pump Case Assy (Lower)	1	
14-22	R501422	Shim 32.9-26-0.5	1	
14-23	R501423	Oil Seal 17-33-6	2	
14-24	R501424	O-Ring 3.2-47	1	
14-25	R501425	Dowel Pin 4-10	2	
14-26	R501426	Water Pump Guide Plate	1	
14-27	R501427	Gasket, Guide Plate	1	
14-28	R501428	Gasket, Pump Case	1	
14-29	R501429	Bolt&Washer, Water Pump	4	
14-30	R501430	Sub-Water Inlet Strainer	1	
14-31	R501431	Bolt&Washer	1	
14-32	R501432	Clutch Cam	1	
14-33	R501433	Cam Rod (L)	1	
14-34	R501434	Spring Pin 3-12	2	
14-35	R501435	Cam Rod Bushing	1	
14-36	R501436	O-Ring 2.4-5.8	1	
14-37	R501437	O-Ring 3.5-21.7	1	
14-38	R501438	Shift Rod Joint	1	
14-39	R501439	Spring Pin 3-12	1	
14-40	R501440	Stopper	1	
14-41	R501441	Bolt&Washer	1	
14-42	R501442	Bolt&Washer	6	

Fig. 14 Gear Case (Drive Shaft)



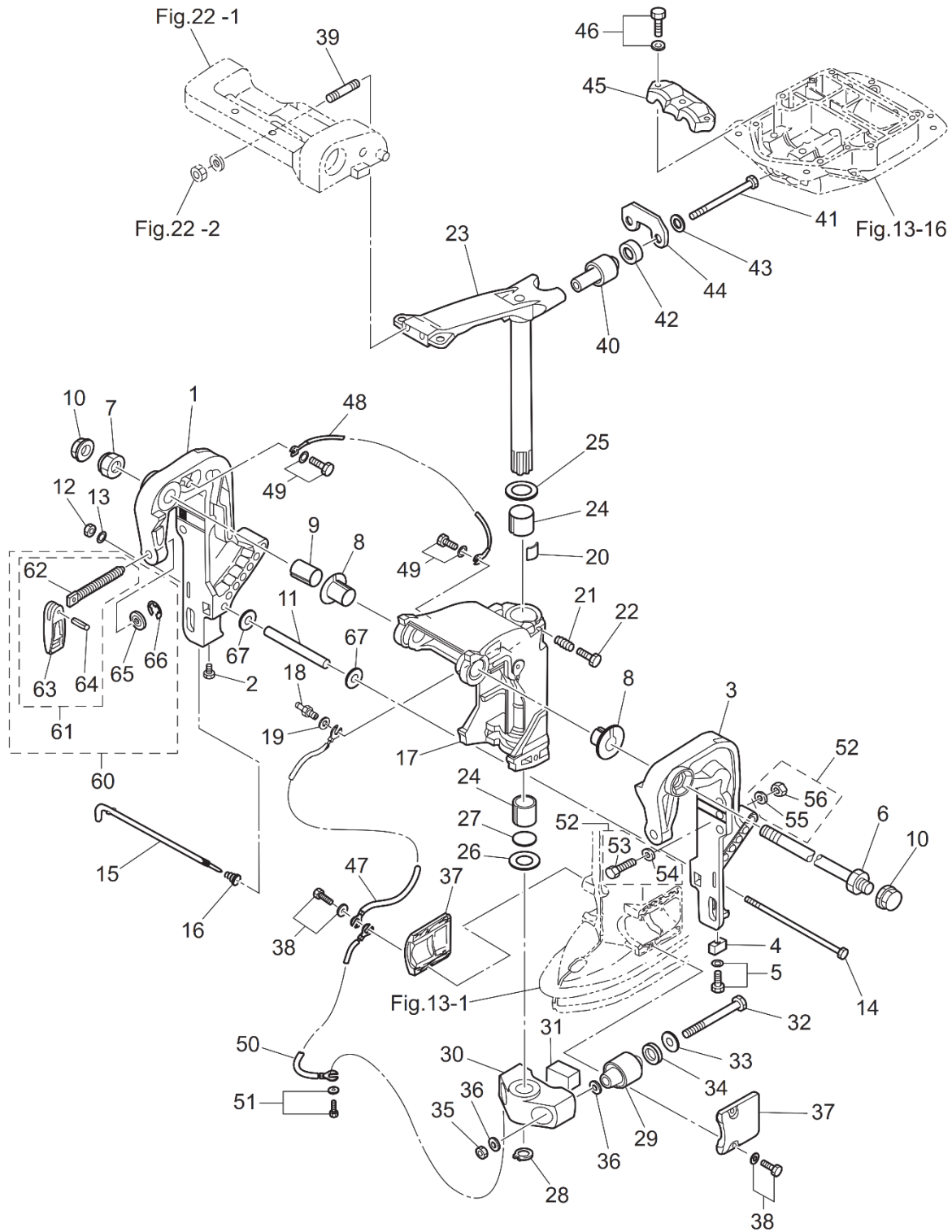
Ref No.	Part No.	Description	Qty	Remarks
14-43	R501443	Water Pipe (L)	1	
14-44	R501444	Water Pipe Seal (Upper)	1	
14-45	R501445	Collar 18-20-4.5	1	
14-46	R501446	Water Strainer Set	1	
14-47	R501447	* Screw	1	
14-48	R501448	* Nylon Nut 4-P0.7	1	
14-49	R501449	Water Pump Repair KIT	0	
14-50	R501450	Lower Unit ASSY	0	

Fig. 15 Gear Case (Propeller Shaft)



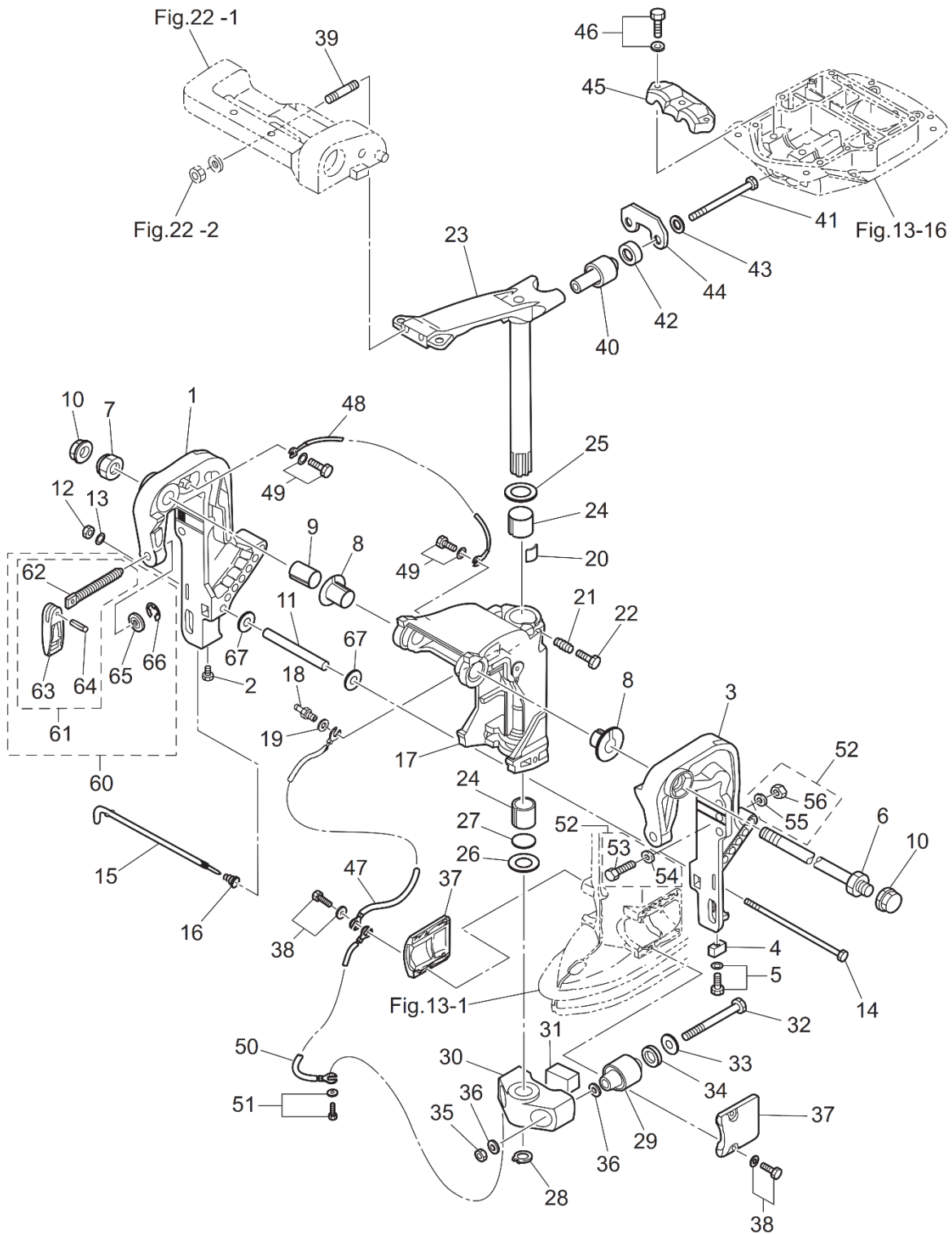
Ref No.	Part No.	Description	Qty	Remarks
15-1	R501501	Tapered Roller Bearing 32007	1	
15-2	R501502	Pre-Coated Bolt 6-25	2	
15-3	R501503	Washer	2	
15-4	R501504	Bevel Gear Assy (A)	1	
15-5	R501505	Bevel Gear C	1	
15-6	R501506	Washer 22.1-28-3	1	
15-7	R501507	Shim Kit	1	
15-8	R501508	Propeller Shaft	1	
15-9	R501509	Clutch Pin	1	
15-9A	R501509A	Clutch	1	
15-10	R501510	Spring Retainer	1	
15-11	R501511	Spring	1	
15-12	R501512	Snap	1	
15-13	R501513	Propeller Shaft Housing Assy	1	
15-14	R501514	* Propeller Shaft Housing	1	
15-15	R501515	* Roller Bearing 22-30-30	1	
15-16	R501516	* Oil Seal 22-37-8	2	
15-17	R501517	* Ball Bearing 6007	1	
15-18	R501518	* O-Ring 3.5-69.4	1	
15-19	R501519	Push Rod	1	
15-20	R501520	Ball 3/8	1	
15-21	R501521-11	Propeller Assy (11) [Load Prop/Working Prop]	1	
15-22	R501522	Propeller Hardware Kit	1	
15-23	R501523	* Thrust Holder	1	
15-24	R501524	* Stopper	1	
15-25	R501525	* Washer 17-40-3	1	
15-26	R501526	* Propeller Nut M16p1.5	1	
15-27	R501527	* Split Pin 3-25	1	

Fig. 18 Bracket (Manual Tilt)



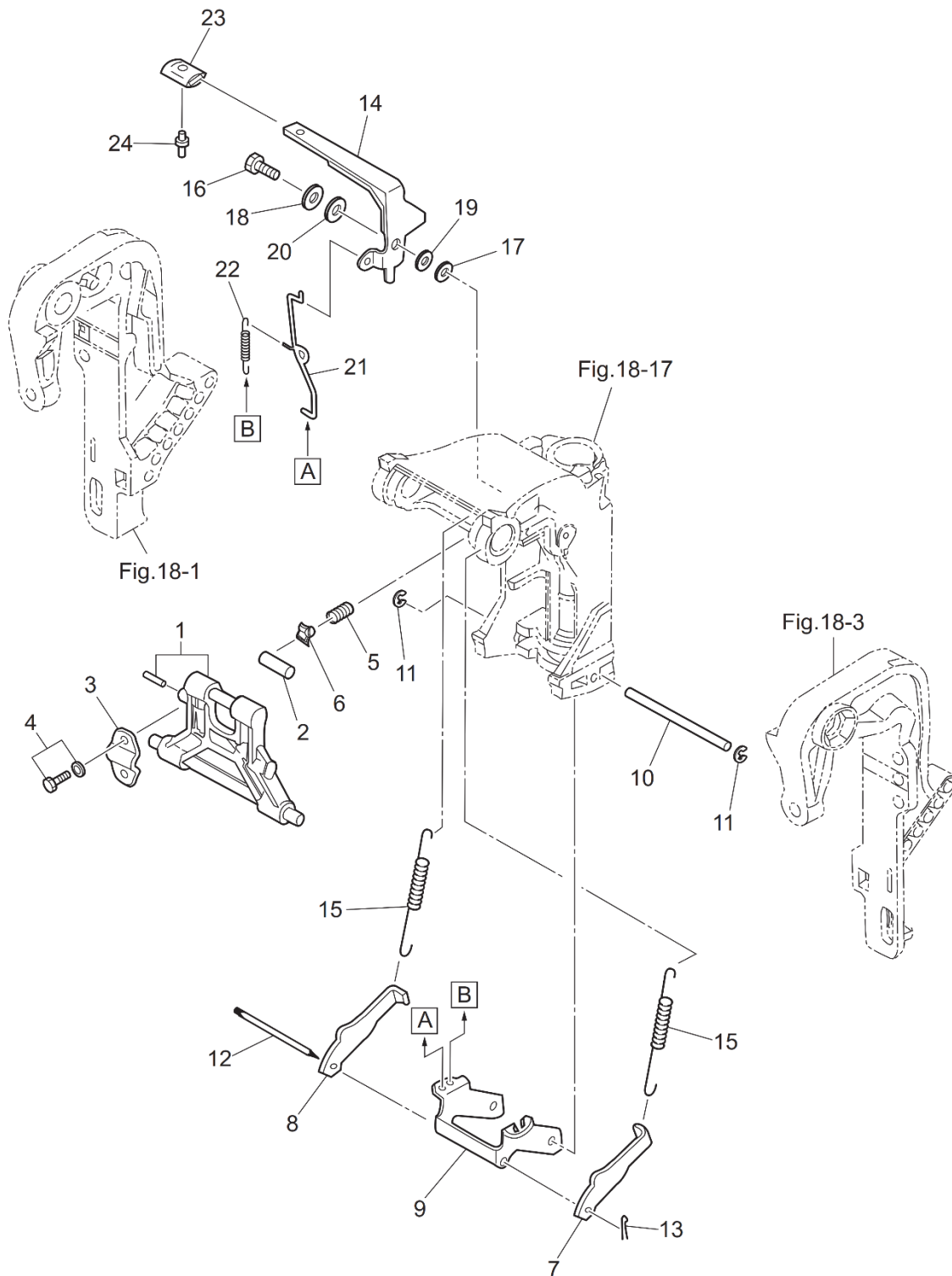
Ref No.	Part No.	Description	Qty	Remarks
18-1	R501801	Clamp Bracket (R)	1	
18-2	R501802	Bolt	1	
18-3	R501803	Clamp Bracket (L)	1	
18-4	R501804	Anode	1	
18-5	R501805	Bolt	1	
18-6	R501806	Swivel Bracket Shaft Assy	1	
18-7	R501807	Nylon Nut 7/8-14	1	
18-8	R501808	Bushing	2	
18-9	R501809	Bushing 22-25-35.5	1	
18-10	R551810	Cap Nut	2	
18-11	R501811	Distance Piece 9.4-13.8-116	1	
18-12	R501812	Nut	1	
18-13	R501813	Washer	1	
18-14	R501814	Bolt 8-170	1	
18-15	R501815	Thrust Rod	1	
18-16	R501816	Thrust Rod Spring	1	
18-17	R501817	Swivel Bracket	1	
18-18	R501818	Grease Fitting	1	
18-19	R501819	Washer	1	
18-20	R501820	Friction Piece	1	
18-21	R501821	Friction Spring	1	
18-22	R501822	Bolt	1	
18-23	R501823	Steering Shaft Assy	1	
18-24	R501824	Bushing 26-32	2	
18-25	R501825	Thrust Plate (Upper) 27-50-1	1	
18-26	R501826	Thrust Plate (Lower) 26.5-46-1	1	
18-27	R501827	O-Ring 3.5-25.7	1	
18-28	R501828	C-RING D=25	1	
18-29	R501829	Rubber Mount (Lower)	2	
18-30	R501830	Mount Bracket	1	
18-31	R501831	Damper (Lower)	1	
18-32	R501832	Bolt 12-114.5	2	
18-33	R501833	Washer 13-34-3	2	
18-34	R501834	Damper 21-36-5	2	
18-35	R501835	Nylon Nut 12-P1.75	2	
18-36	R501836	Washer	4	
18-37	R501837	Mount Holding Plate (Lower)	2	
18-38	R501838	Bolt	4	
18-39	R501839	Stud 10-50 P1.25	2	
18-40	R501840	Rubber Mount (Upper)	2	
18-41	R551841	Bolt 3/8-100	2	

Fig. 18 Bracket (Manual Tilt)



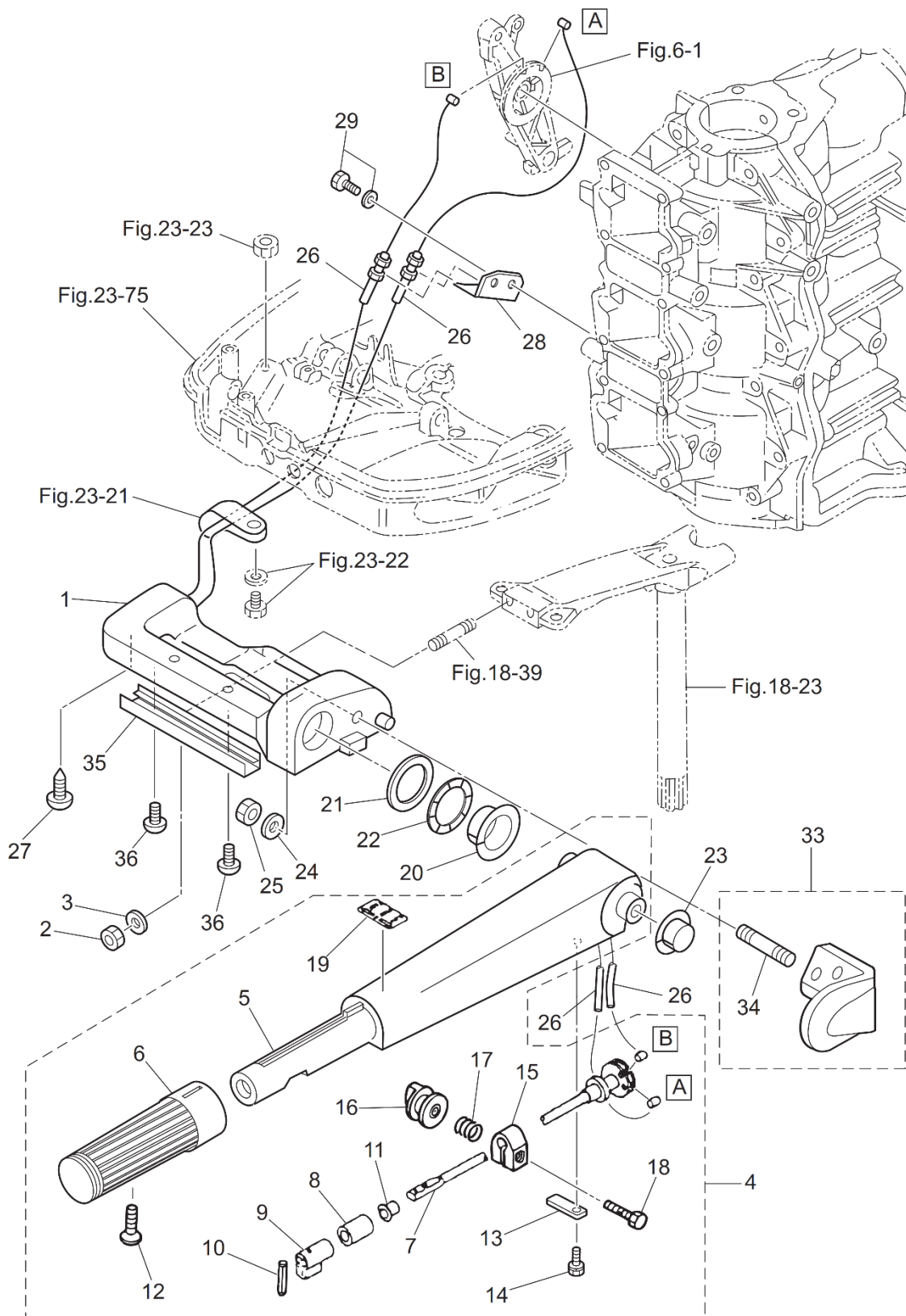
Ref No.	Part No.	Description	Qty	Remarks
18-42	R501842	Damper (Upper)	2	
18-43	R551843	Washer 10-29-3	2	
18-44	R501844	Lock Plate	1	
18-45	R501845	Mount Holding Plate (Upper)	1	
18-46	R501846	Bolt	3	
18-47	R501847	Ground L=210	1	
18-48	R501848	Ground L=130	1	
18-49	R501849	Bolt	2	
18-50	R501850	Ground L=110	1	
18-51	R501851	Bolt	1	
18-52	R501852	Rigging Bolt Set	1	
18-53	R501853	* Bolt 12-105 P1.25	4	
18-54	R501854	* Washer 13-34-3	4	
18-55	R501855	* Washer	4	
18-56	R501856	* Nut 12-P1.25	4	
18-60	R551860	Clamp Scrw KIT	2	
18-61	R551861	Clamp Screw ASSY	2	
18-62	R501862	*Clamp Screw	1	
18-63	R551863	*Clamp Screw Handle	1	
18-64	R501864	*Shoulder Bolt, Handle	1	
18-65	R501865	Clamp Screw Pad	1	
18-66	R501866	Shoulder Bolt, Clamp Screw Pad	1	
18-67	R501867	Washer	2	
18-68	R501869	Stern Bracket Wire Cable Safety Lanyard	1	

Fig. 19 Manual Tilt



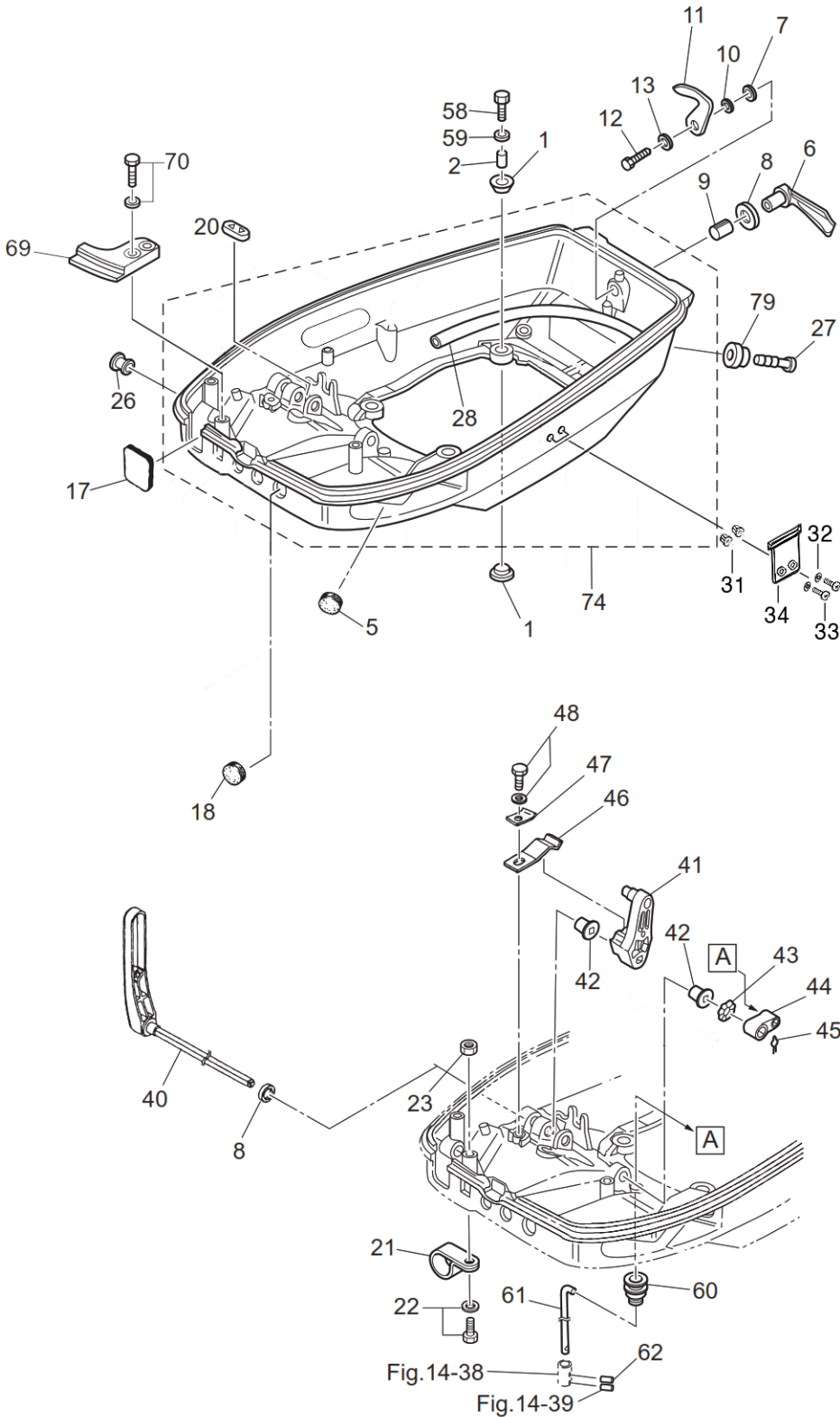
Ref No.	Part No.	Description	Qty	Remarks
19-1	R501901	Tilt Stopper Assy	1	
19-2	R501902	Bushing 10.2-12-29.5	1	
19-3	R501903	Setting Plate	1	
19-4	R501904	Bolt	2	
19-5	R501905	Friction Spring	1	
19-6	R501906	Setting Piece	1	
19-7	R501907	Reverse Lock (L)	1	
19-8	R501908	Reverse Lock (R)	1	
19-9	R501909	Reverse Lock Arm	1	
19-10	R501910	Reverse Lock Shaft	1	
19-11	R501911	E-RING D=6	2	
19-12	R501912	Reverse Lock Rod	1	
19-13	R501913	Split Pin 2-12	1	
19-14	R501914	Tilt Stopper Lever	1	
19-15	R501915	Reverse Lock Spring (L)	2	
19-16	R501916	Shoulder Bolt 6-8	1	
19-17	R501917	Washer 6-16-1.5	1	
19-18	R501918	Washer	1	
19-19	R501919	Bushing 8.1-20	1	
19-20	R501920	Washer 8.5-18-1.6	1	
19-21	R501921	Link B	1	
19-22	R501922	Spring B	1	
19-23	R501923	Reverse Lock Lever Grip	1	
19-24	R501924	Stopper	1	

Fig. 22 Tiller Handle



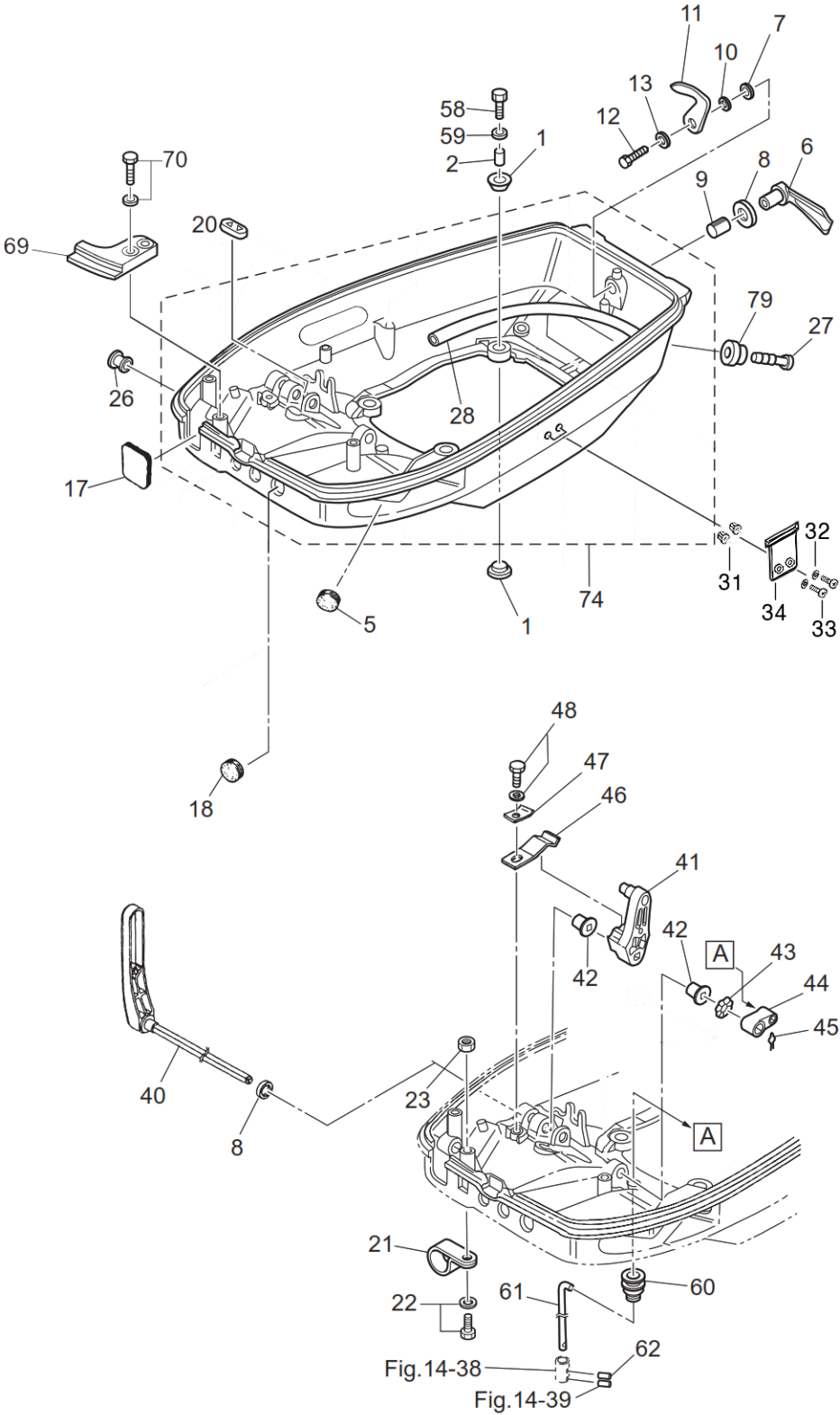
Ref No.	Part No.	Description	Qty	Remarks
22-1	R502201	Front Grab Handle	1	
22-2	R502202	Nylon Nut 10-P1.25	2	
22-3	R502203	Washer	2	
22-4	R502204	Tiller Handle Assy	1	
22-5	R502205	* Tiller Handle	1	
22-6	R502206	* Grip	1	
22-7	R502207	* Throttle Shaft	1	
22-8	R502208	* Throttle Shaft Damper A	1	
22-9	R502209	* Spacer A	1	
22-10	R502210	* Spring Pin 3-10	1	
22-11	R502211	* Bushing 8.4-10-11	1	
22-12	R502212	* Screw	1	
22-13	R502213	* Throttle Shaft Support	1	
22-14	R502214	* Bolt&Washer	1	
22-15	R502215	* Friction Piece	1	
22-16	R502216	* Adjusting Nut	1	
22-17	R502217	* Spring	1	
22-18	R502218	* Bolt	1	
22-19	R502219	* Throttle Decal	1	
22-20	R502220	Bushing A	1	
22-21	R502221	Washer 30-45-1	1	
22-22	R502222	Wave Washer 30-45-1.2	1	
22-23	R502223	Bushing B	1	
22-24	R502224	Washer	1	
22-25	R502225	Nut 10-P1.5	1	
22-26	R552226	Throttle Wire	2	
22-27	R552227	Clip	1	
22-28	R502228	Throttle Wire Bracket	1	
22-29	R502229	Bolt	2	
22-33	R502233	Tiller Handle Holder Assy	1	
22-34	R502234	Stud	1	

Fig. 23 Bottom Cowl • Shift



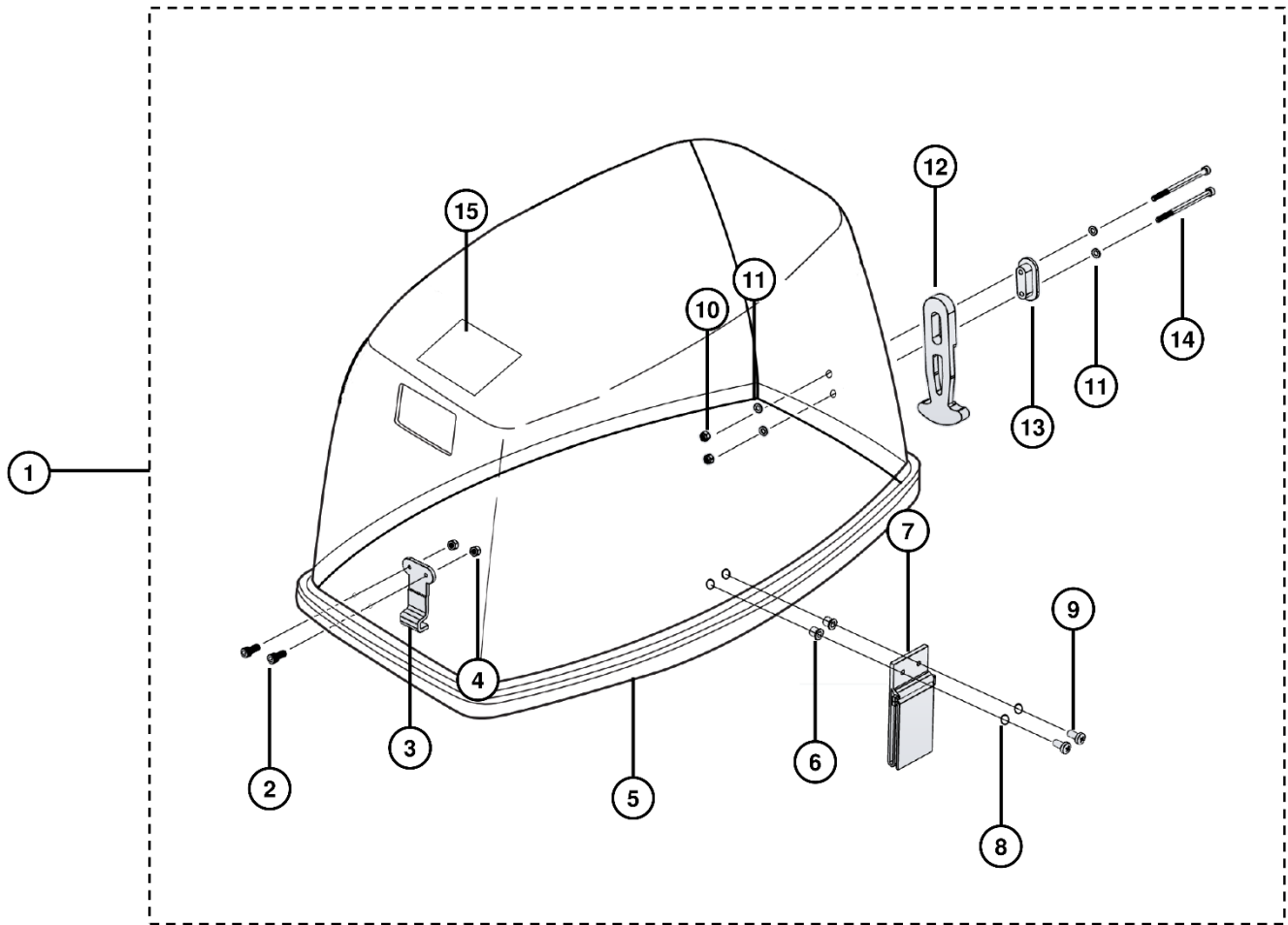
Ref No.	Part No.	Description	Qty	Remarks
23-1	R502301	Mount 8.5-14-2.5	8	
23-2	R502302	Spacer 6.2-9-15.7	4	
23-4	R552304	Bushing	1	
23-5	R502305	Grommet 17- 2.7	2	
23-6	R502306	Hook Lever	1	
23-7	R502307	Washer 14-22-1	1	
23-8	R502308	Seal Ring 13.8-22-3.7	2	
23-9	R502309	Hook Lever Bushing	1	
23-10	R502310	Wave Washer D=14	1	
23-11	R502311	Cover Hook	1	
23-12	R502312	Bolt	1	
23-13	R502313	Washer 6-16-1.5	1	
23-17	R552317	Grommet	1	
23-18	R552318	Grommet	1	
23-20	R502320	Grommet 30-12-2.5	1	
23-21	R502321	Clamp 6.5-14l	1	
23-22	R502322	Bolt	1	
23-23	R502323	Nut	1	
23-26	R502326	Grommet 16-17.5	1	
23-27	R502327	Nipple 6-8-11	1	
23-28	R502328	HOSE (5mm) (3/16')	1	
23-31	R502331	Rivet Nut	4	
23-32	R502332	Retainer	4	
23-33	R502333	Screw, Pan Head Phillips	4	
23-34	R502334	Cowling Strap (Upr/Lwr)	2	
23-40	R552340	Shift Lever	1	
23-41	R502341	Shift Arm	1	
23-42	R502342	Bushing	2	
23-43	R502343	Wave Washer D=12	1	
23-44	R502344	Shift Rod Lever	1	
23-45	R502345	Snap Retainer	1	
23-46	R502346	Shift Detent Spring	1	
23-47	R552347	Shift Detent Supporter	1	
23-48	R552348	Bolt&Washer	1	
23-54	R502354	Hook	1	
23-55	R502355	Bushing	1	
23-56	R502356	Washer	2	
23-57	R502357	Bolt	1	
23-58	R502358	Bolt	4	
23-59	R502359	Washer 6.5-21-1	4	
23-60	R502360	Grommet 17-3	1	

Fig. 23 Bottom Cowl • Shift



Ref No.	Part No.	Description	Qty	Remarks
23-61	R502361	Shift Rod	1	
23-62	R502362	Spring Pin 3-12	1	
23-69	R552369	Clamp	1	
23-70	R502370	Bolt	1	
23-74	R552374	Lower Motor Cowling	1	
23-79	R502379	Grommet 10.7-3.5	1	

Fig. 24 Top Cowl



Ref No.	Part No.	Description	Qty	Remarks
24-1	R552401	Top Cowling ASSY	1	
24-2	R552402	Cap Head Screw	2	
24-3	R552403	Front Hook	1	
24-4	R552404	Lock Nut	2	
24-5	R552405	Cowling Seal	1	
24-6	R552406	Rivet Nut	8	
24-7	R552407	*Cowling Strap (Upr/Lwr)	2	
24-8	R552408	Retainers	4	
24-9	R552409	Pan Head Phillips Screw	4	
24-10	R552410	Nylon-Insert Locknut	2	
24-11	R552411	Washer	4	
24-12	R552412	Flex Latch	1	
24-13	R552413	Screw Retainer	1	
24-14	R552414	Socket Head Screw	2	
24-15	R552415	Dewatering Instructions Decal	1	
24-30	R552430	Plug	4	

Motor Support KIT

Provides users with the required 2-Stroke Motor Oil for the prescribed motor break-in period, fuel line ASSY, mixing cup, motor flushing attachment, Salt-Away corrosion preventative and Fogging Oil for long term storage.

Part No. R508803 R50-ES-003 Motor Support KIT RAIDER 55HP

Ref No.	Part No.	Description	Qty	Remarks
-	R660302	10' Fuel Line with Primer Bulb ASSY	1	Parker Fittings
-	R660417	1 gal TC-W3 2-Cycle Synthetic Marine Oil	2	
-	R660421	Ratio Rite Perfect Gas - Oil Mixture - CUP	1	
-	R660150	Universal Motor Flusher	1	
-	R660406	Fogging Oil 12 oz	1	
-	R660423	Salt-Away 32 oz Concentrate w/mixing unit KIT	1	



R660302



R660417



R660421



R660150



R660406



R660423

Ready Service/Spare Parts KIT

This KIT supports one (1) motor and includes parts that may be required to complete the yearly/100 hour prescribed routine maintenance actions in support of motor operations.

Part No. R502500 Ready Service/Spare Parts KIT

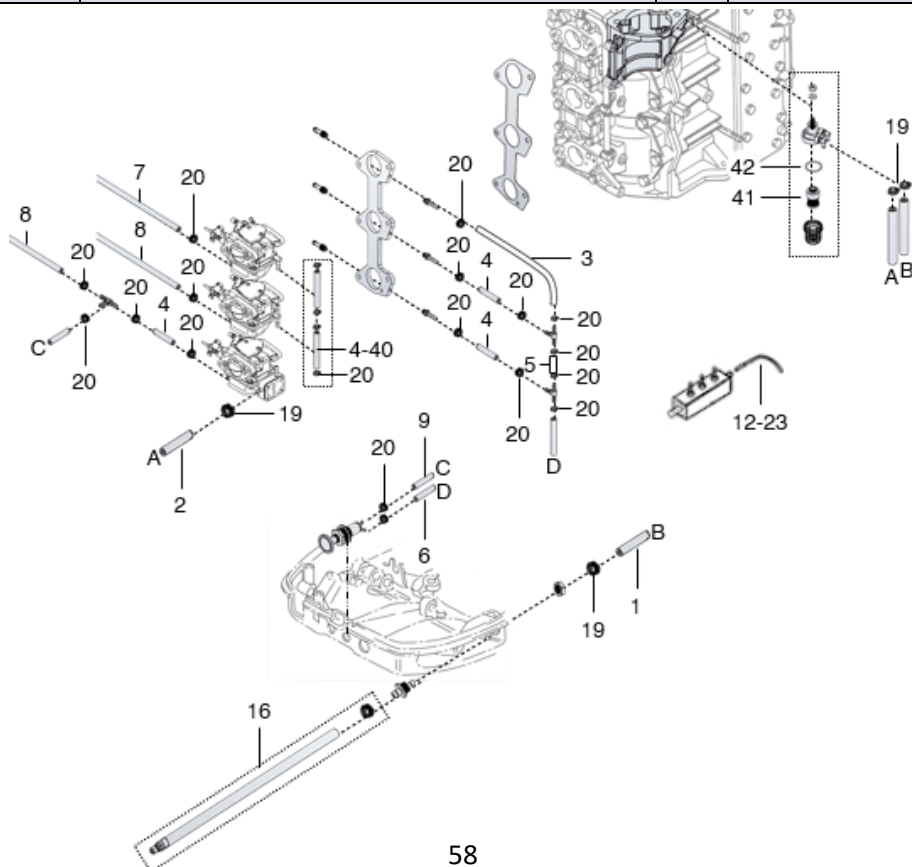
Ref No.	Part No.	Description	Qty	Remarks
1-15	R500115	Thermostat	1	
1-17	R500117	Thermostat Gasket	1	
1-33	R500133	Anode (Power Head)	1	
1-51	R500151	Spark Plug	3	
5-27	R500527	Heavy Fuel Plate Gasket	1	
5-40	R500540	Fuel Filter ASSY	1	
5-43	R500543	Fuel Filter Element W/O-Ring	2	
5-95	R550595	Fuel Line Replacement KIT	1	
7-11	R500711	Starter Rope	1	
10-21	R501021	Fuse, 20 AMP	4	
14-6	R501406	Gasket, Oil Fill/Drain	10	
14-7	R501407	Anode (Trim Tab)	1	
14-16	R501416	Water Pump, Impeller	2	
14-39	R501439	Spring Pin	10	
15-21	R501521-11	Propeller Assy (11) [Load Prop]	1	
15-27	R501527	Propeller Hardware KIT	1	
15-27	R501527	Propeller, Split Pin	10	
18-4	R501804	Anode (Stern Bracket)	1	
18-15	R501815	Thrust Rod	1	
18-16	R501816	Thrust Rod, Spring	1	
22-26	R502226	Throttle Cables	2	
10-33	R501033	*Stop Switch Lanyard ASSY	1	
88-1	R508801	Model 50 Carburetor Rebuild KIT	1	
88-2	R508802	Model 50 Water Pump Replacement KIT	1	
88-4	R508807	Cowling Strap Replacement KIT	1	

Fuel Line Replacement KIT

The KIT supports one (1) motor and includes various lengths of fuel line, hose clamps, and a fuel filter to be used for routine service actions or total fuel line replacement.

Part No. R550595 Fuel Line Replacement KIT

Ref No.	Part No.	Description	Qty	Remarks
5-1	R550501	1/4"12" P2FF in	1	
5-2	R550502	1/4"21.5" FF out 2FP in	1	
5-3	R550503	1/8"4.5" BF out 2HFP U	1	
5-4	R550504	1/8"1.5" BF out 2HFP M/L and LC Drain 2BF	3	
5-5	R550505	1/8"3" LBTF2UBTF	1	
5-6	R550506	1/8"6.5"Primer 2 LBTF	1	
5-7	R550507	1/8"16" UC2DVA	1	
5-8	R550508	1/8"15" LC BTF MC2DVA	2	
5-9	R550509	1/8"5" Drain Primer 2 BTF	1	
5-16	R550516	18" Fuel Dongle (Parker) ASSY	1	
5-19	R500519	Hose Clamp	8	
5-20	R500520	Retention Band, Fuel Line	100	
5-41	R500541	*Filter Element W/O-Ring (13-17-2)	1	
5-42	R500542	*O-Ring, Cup ALT (MMC 9262K447)	1	
4-40	R500440	Hose, Fuel Line ID 5.0mm, OD 11.0mm	2	Carburetor Tower
12-23	R501223	Hose, Drain Line (yellow)	1	



Carburetor Rebuild KIT

Part No. R558801 Carburetor Rebuild KIT

Ref No.	Part No.	Description	Qty	Remarks
4-36	R500436	*Carburetor Gasket	3	
4-09	R500409	*Plug	3	
4-10	R500410	*Float Valve	3	
4-11	R500411	*Float Arm Pin	3	
4-12	R500412	*Float	3	
4-18	R500418	*Float Chamber Gasket	3	
4-22	R500422	*Carburetor Cover	3	
4-23	R500423	*Carburetor Cover Gasket	3	
4-24	R500424	*Screw	18	
4-17	R500417	*Float Chamber Assembly	2	
4-28	R500428	*Fuel Pump Cover Gasket	1	
4-34	R500434	*Pump Body	1	
4-33	R500433	*Pump Body Gasket	1	
4-32	R500432	*Pump Diaphragm	1	

Water Pump Replacement KIT

Part No. R508802 Water Pump Replacement KIT

Ref No.	Part No.	Description	Qty	Remarks
14-16	R501416	*Water Pump Impeller	1	
14-17	R501417	*Key 20-4.6-2	1	
14-19	R501419	*Pump Case Liner	1	
14-26	R501426	*Water Pump Guide Plate	1	
14-27	R501427	*Guide Plate Gasket	1	
14-28	R501428	*Pump Case Gasket	1	
14-29	R501429	*Bolt	4	
14-18	R501418	*Pump Case (UPPER)	1	
14-20	R501420	*Rubber Seal (Water Pipe)	1	
14-21	R501421	*Pump Case (LOWER)	1	
14-24	R501424	*Water Pump, O-Ring	1	
14-25	R501425	*Dowel Pin	2	
14-34	R501434	*Spring Pin	1	

	RAIDER R50-ES-003 (Model M55) NSN 2805-01-697-7842	
Engine Type	<i>55 Horsepower/2-Stroke</i>	
Primary Fuel	<i>Gasoline</i>	
Weight	<i>165 lbs.</i>	
Overall length	<i>45.1 Inches (1145mm)</i>	
Overall width	<i>13 inches (330.2mm)</i>	
Overall height	<i>55.6 Inches (1413mm)</i>	
Transom length	<i>21.7 Inches (550mm)</i>	
Starting System	<i>Pull Start</i>	
Intake System	<i>NA Carbureted</i>	
Exhaust System	<i>Through Hub</i>	
Lubrication System	<i>TCW-3 50:1 Fuel Oil Mix</i>	
Cooling System	<i>Raw Water</i>	
Dewatering System	<i>Manual Valve Actuated</i>	
Gearing	<i>12:23/1.92</i>	
Gear Oil	<i>API GL5 SAE 80W-90</i>	
Submergibility	<i>65 feet</i>	
Air Drop	<i>Fixed Wing and Rotary Aircraft</i>	
Fuel	<i>Gasoline</i>	



