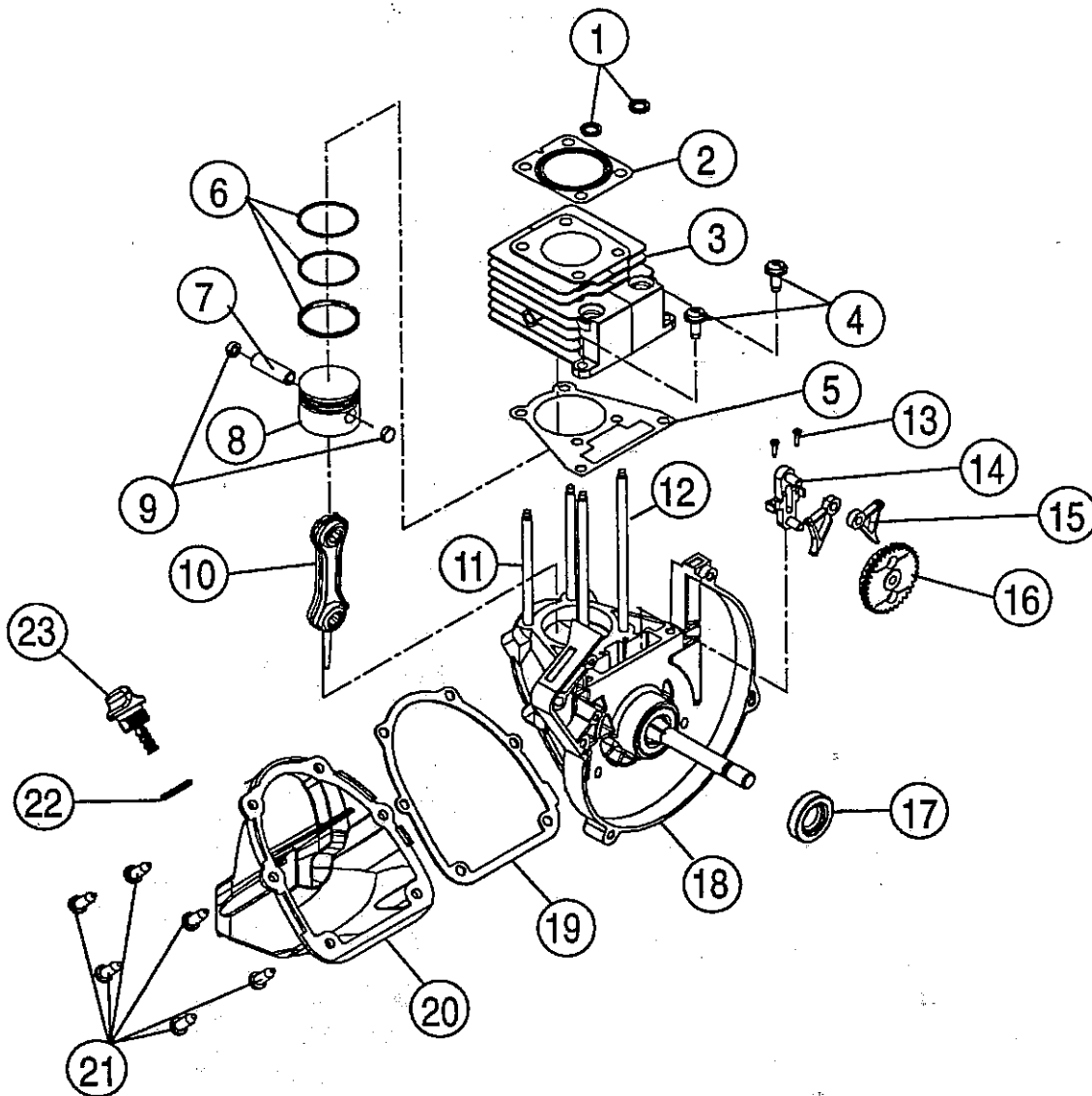


**CYLINDER & CRANKCASE ASSEMBLY MODEL 690**  
 (Serial no. 403026296 and greater)

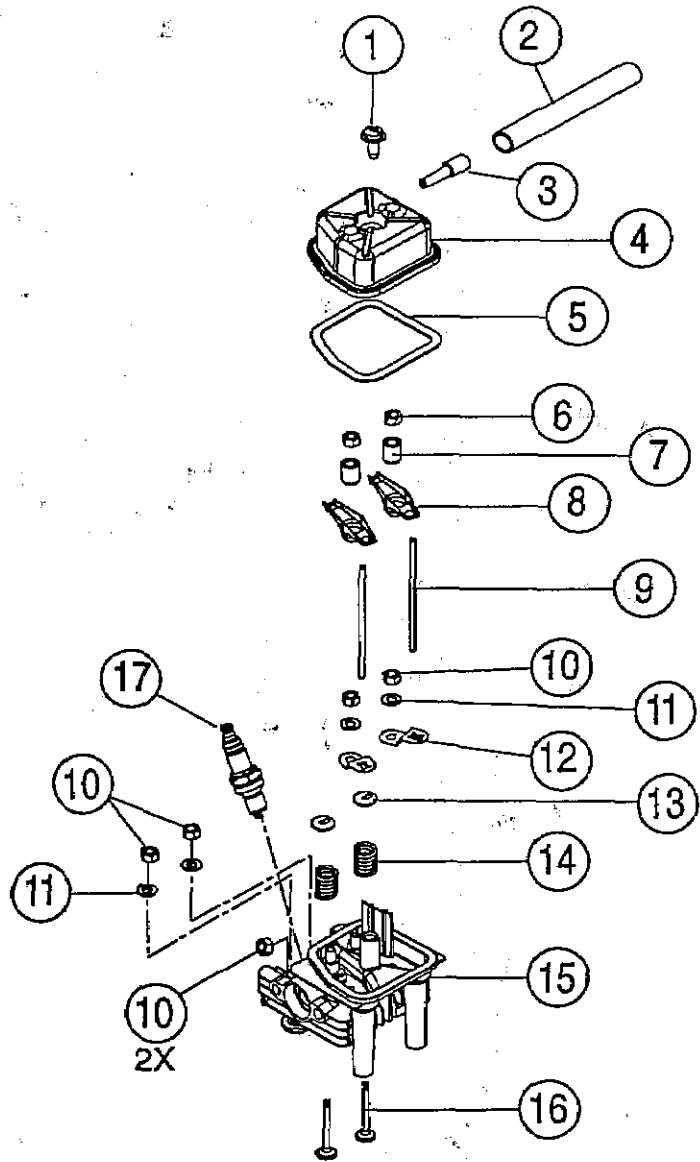


Item	Part No.	Description	Item	Part No.	Description
1	181000	O-Ring, Push Rod Tube	15	181014	Follower, Cam
2	181001	Gasket, Cylinder Head	16	181015	Cam Gear
3	181002	Cylinder	17	181016	Seal
4	181003	Screw, M5 X 18.7mm	18	181017	Crankcase W/Power Shaft (includes items 11, 12 & 17)
5	181004	Gasket, Cylinder	19	181018	Gasket, Oil Pan
6	181005	Piston Ring Set	20	181019	Pan, Oil
7	181006	Pin, Wrist	21	181020	Screw, M5 X 15.8mm (6 required)
8	181007	Piston	22	181021	O-Ring
9	181008	Button, Wrist Pin	23	181022	Plug, Oil Fill (includes item 22)
10	181009	Rod, Connecting	*	181023	Piston and Rod Assembly (items 6-10)
11	181010	Cylinder Stud (83.5mm)	*	181024	Engine Gasket Kit
12	181011	Cylinder Stud (115.5mm)			
13	181012	Screw, Cam Bracket			
14	181013	Bracket, Cam			
			*		not shown

**CYLINDER HEAD ASSEMBLY - MODEL 990r**

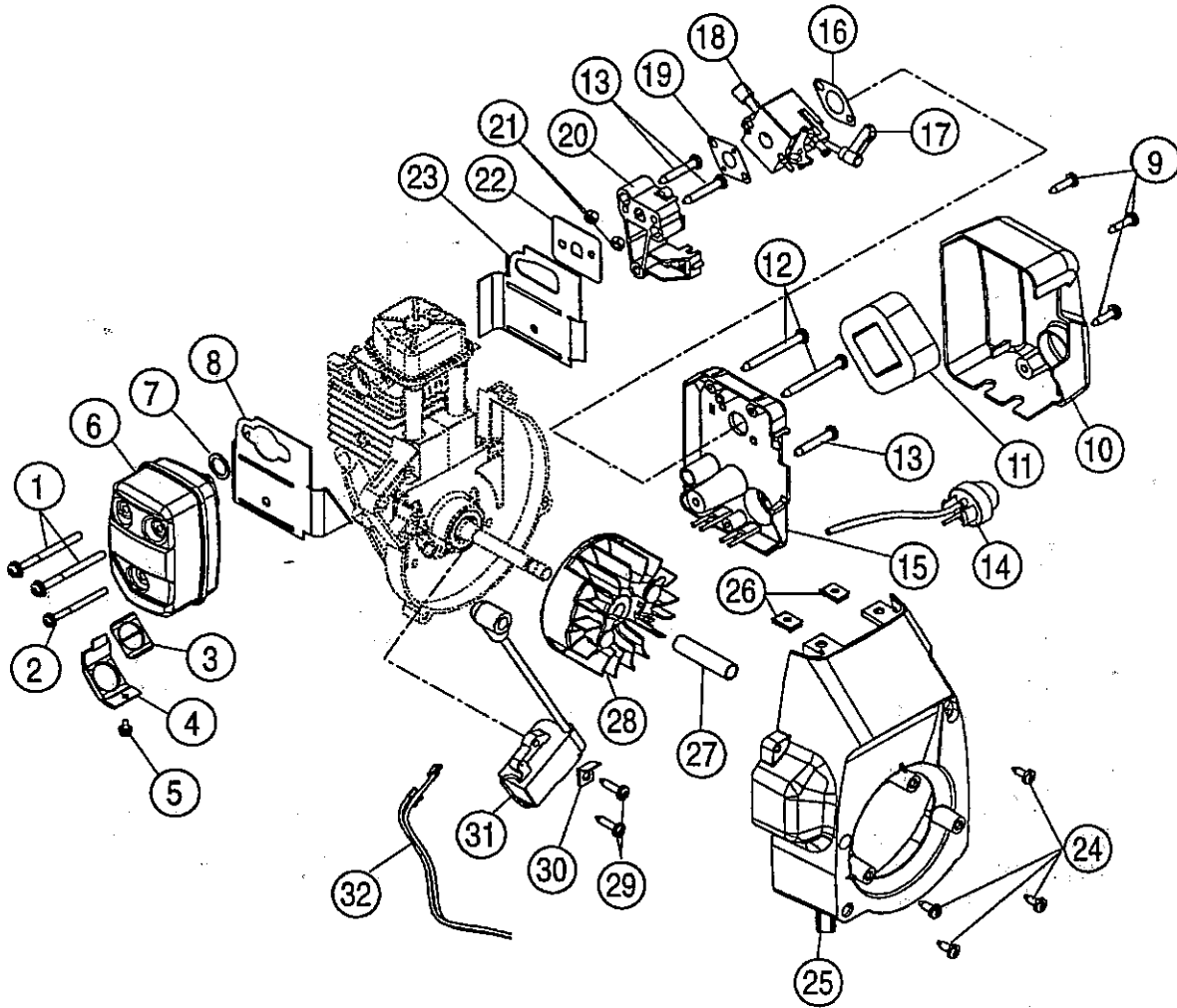
(Serial no. 403026296 and greater)

Item	Part No.	Description
1	181025	Screw, Valve Cover
2	181026	Hose, Breather
3	181027	Breather Assembly
4	181028	Cover, Valve
5	181029	Gasket, Valve Cover
6	181030	Nut, Rocker Adjusting
7	181031	Pivot, Rocker Arm
8	181032	Arm, Rocker
9	181033	Rod, Push
10	181034	Nut, Hex 5M
11	181035	Washer
12	181036	Guide, Push Rod
13	181037	Retainer, Valve Spring
14	181038	Spring, Valve
15	181039	Head, Cylinder
16	181040	Valve
17	180852	Spark Plug
*	181041	Cylinder Head Assembly (items 13-16)
*	181042	Short Block Assembly (all items from pages 2 & 3)
*		not shown



# CARBURETOR & MUFFLER ASSEMBLY MODEL 9961-4983

(Serial no. 403026296 and greater)



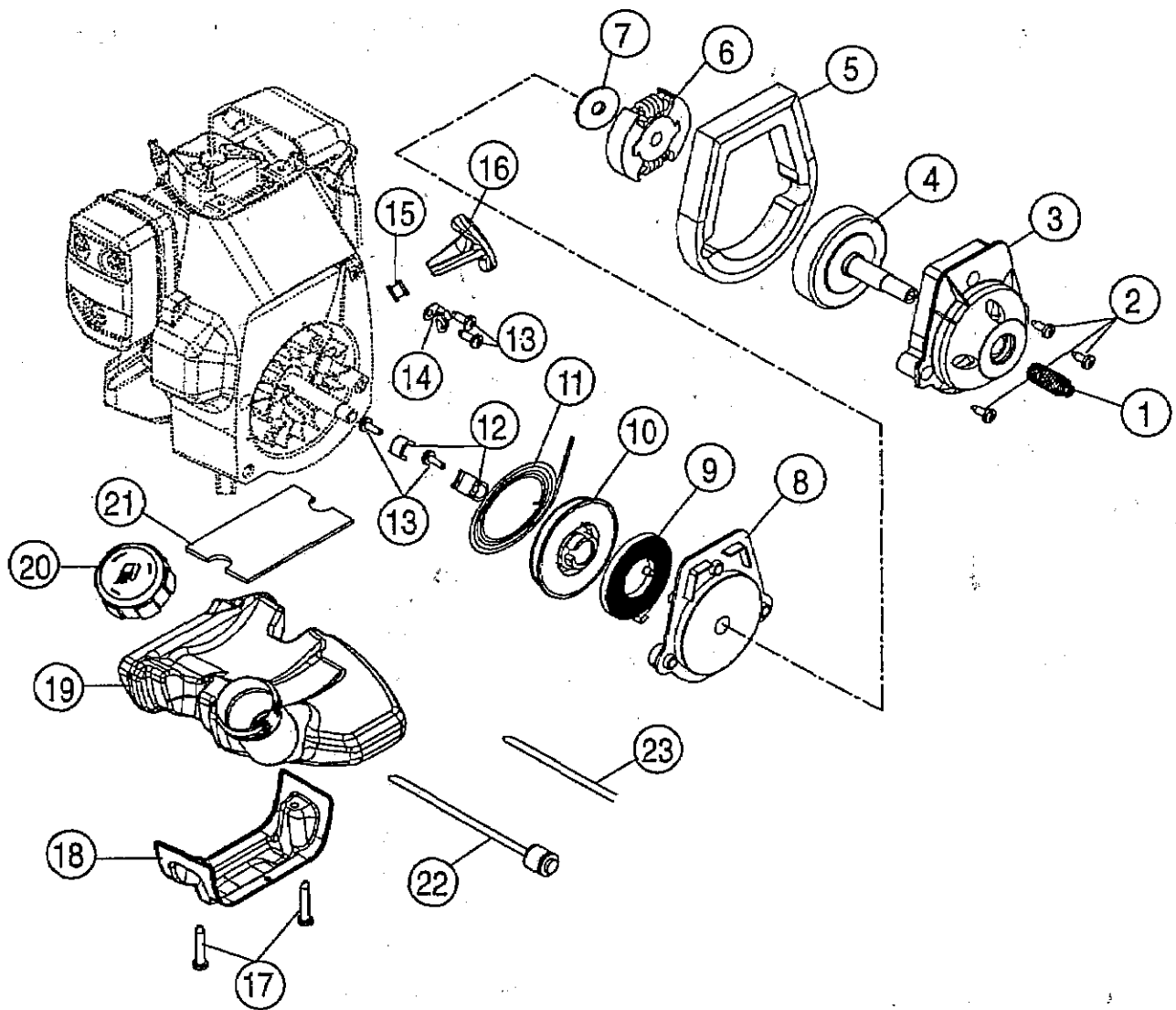
Item	Part No.	Description
1	181043	Screw, Muffler Mounting
2	181044	Screw, Muffler Mounting
3	180890	Screen, Spark Arrestor
4	181045	Cover, Screen
5	181046	Screw, Screen Cover
6	181047	Muffler (includes items 1-5 & 7)
7	181048	Gasket, Muffler
8	181049	Baffle, Muffler
9	181050	Screw, Air Filter Cover
10	181051	Cover, Air Filter
11	180350	Filter, Air
12	181052	Screw, Air Filter Base (52.5mm)
13	181053	Screw, M5 X 29mm
14	181054	Primer and Line Assembly
15	181055	Base, Air Filter
16	181056	Gasket
17	181057	Lever, Choke
18	181058	Carburetor W/Choke Lever
19	181059	Gasket

Item	Part No.	Description
20	181060	Insulator, Carb Mount
21	181034	Nut, Hex 5M
22	181061	Gasket, Intake
23	181062	Baffle, Intake
24	181003	Screw, M5 X 18.7mm
25	181063	Housing, Fan
26	181064	Nut, Tinnerman
27	181065	Spacer
28	153624	Flywheel
29	181066	Screw, Module
30	611063	Tab, Ground
31	181067	Module, Ignition
32	181094	Lead, Wire 18" (2 required)
*	610676	Key, Flywheel
*	180142	Flywheel Starter Pawl Repair Kit
*	181068	O.E.M. Carburetor Repair Kit
*	181069	Gasket-Diaphragm Repair Kit
*		not shown

**CLUTCH, STARTER MODULE & FUEL TANK ASSEMBLIES -**

**MODEL 990r**

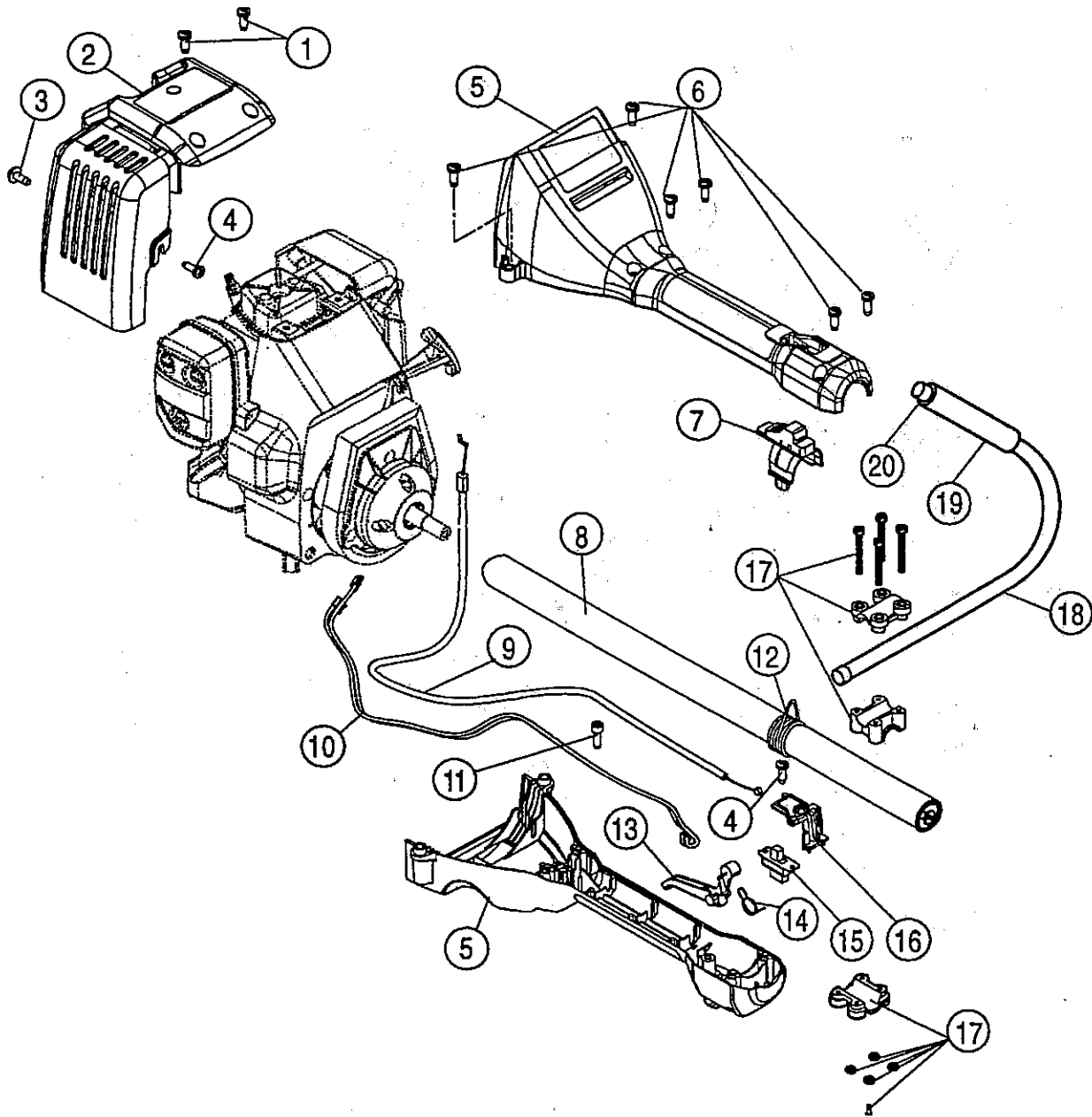
(Serial no. 403026296 and greater)



Item	Part No.	Description
1	612468	Spring, Compression (970r and 990r only)
2	181070	Screw, M5 X 32mm
3	181071	Housing, Clutch
4	180232	Drum, Clutch
*	181102	Clutch Housing Assembly W/Drum (items 3 & 4)
5	181072	Isolator
6	181073	Clutch
7	181074	Washer, Clutch
*	181087	Starter Module Assembly (items 8-13, 15 & 16)
8	181075	Housing, Starter
9	613102	Spring, Starter
10	180535	Pulley, Starter
11	613103	Rope, Starter

Item	Part No.	Description
12	181076	Retainer, Starter Pulley
13	181077	Screw, M4 X 12.7mm
14	181078	Retainer, Rope Guide
15	611061	Guide, Rope
16	181079	Handle, Starter
17	181080	Screw, Fuel Tank Bracket
18	181081	Bracket, Fuel Tank
19	181082	Tank, Fuel (includes items 20, 22 & 23)
20	181083	Cap, Fuel
21	181084	Pad, Fuel Tank
22	181085	Fuel Line Assembly W/Filter
23	181086	Line, Fuel Return

\* not shown



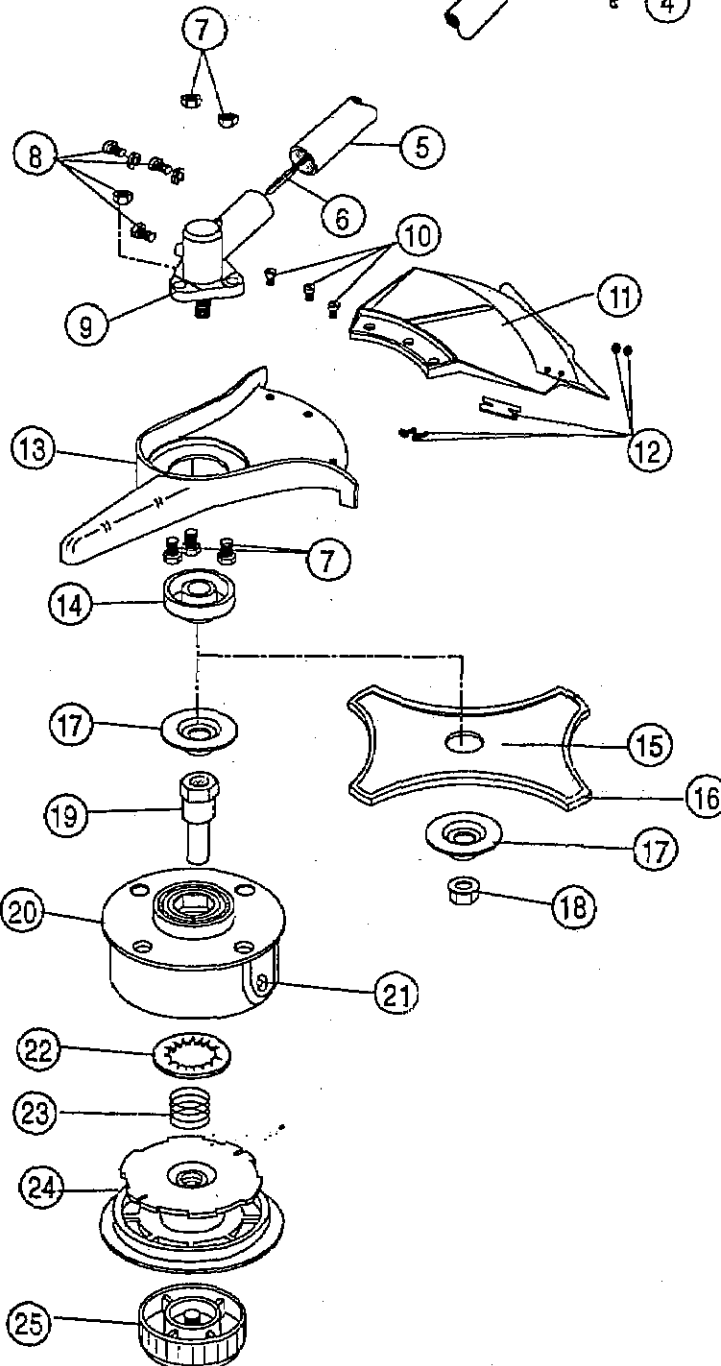
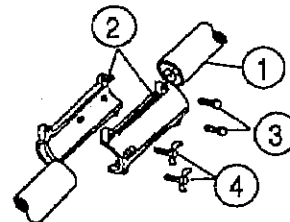
Item	Part No.	Description
1	181020	Screw, M5 X 15.8mm
2	181088	Cover, Engine
3	181089	Screw, M5 X 15.78mm SEMS
4	181104	Screw, Engine Cover
5	181090	Handle, Assembly
6	181070	Screw, M5 X 32mm
7	181091	Slide, Switch
8	181092	Housing, Upper Drive (970r and 990r only)
8	181105	Housing, Upper Drive (960r only)
9	181093	Cable, Throttle
10	181094	Lead, Wire 18" (2 required)

Item	Part No.	Description
11	181095	Screw, Anti-Rotation
12	610327	Clip, Shoulder Strap
13	181096	Trigger
14	610314	Spring
15	181097	Switch
16	181098	Retainer, Switch & Trigger
17	683295	Handle Bracket Assembly
18	181099	J-Handle Assembly (items 19 & 20)
19	612831	Grip
20	612021	Tube Closure
*	181103	Decal Kit

\* not shown

**LOWER BOOM & CUTTING HEAD ASSEMBLY - MODEL 990f**

(Serial no. 403026296 and greater)



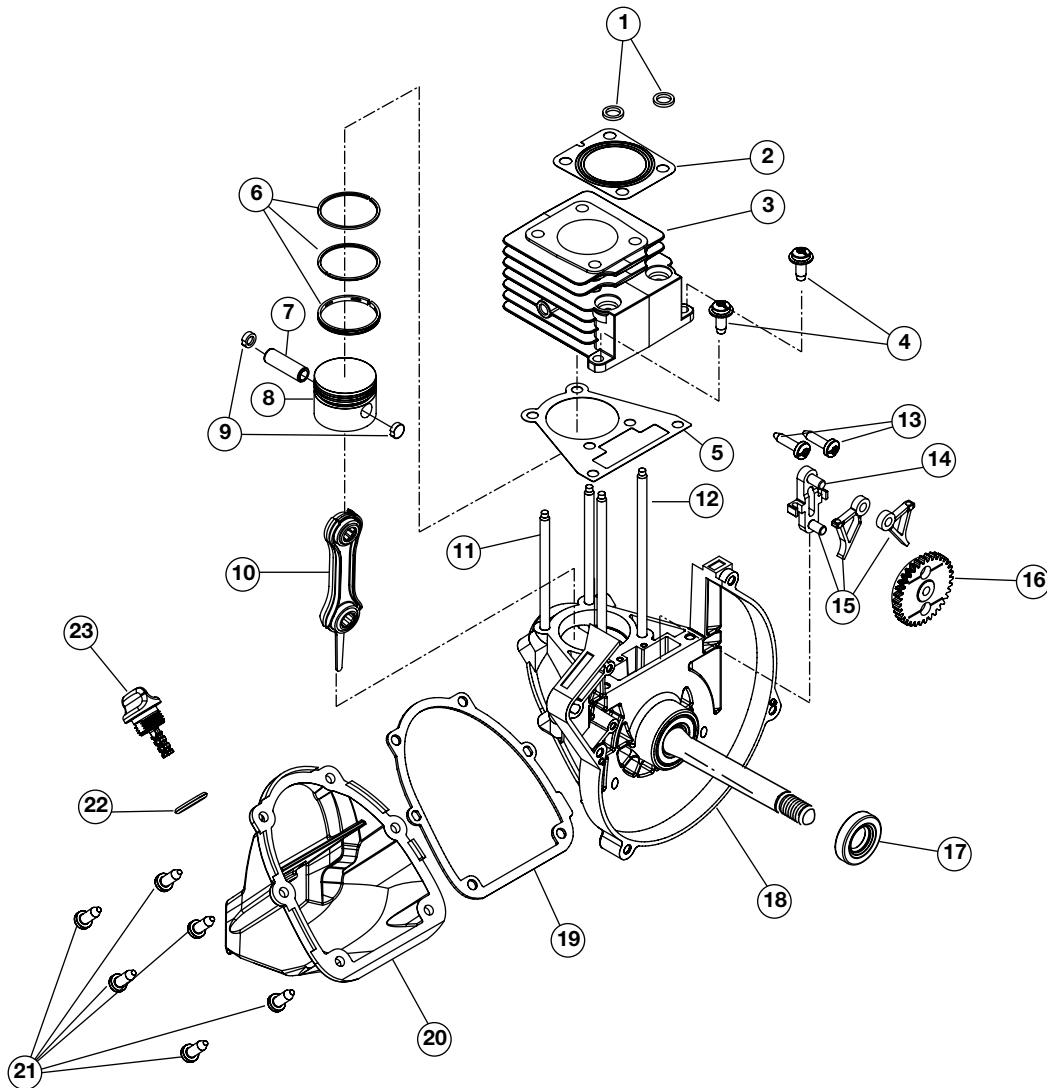
Item	Part No.	Description
1	181092	Housing, Upper Drive
2	683605	Split Boom Coupling Set
3	683606	Screw, Coupling Set
4	683607	Screw, Wing (qty 2)
5	180804	Housing, Lower Drive
6	613300	Shaft, Flexible Drive
7	147539	Hardware, Brush Blade Guard Mounting
8	147677	Mounting Hardware & Grease Plug Assembly
9	147488	Gearbox (items 8, 14, 17 and 18)
10	683304	Screw, Guard Mounting
11	180387	Guard, Cutting Head
12	682061	Blade Assembly
13	147492	Guard Mount
14	147489	Driver
15	145873	Blade, Brush (includes item 16)
16	147670	Cover, Blade
17	147490	Washer, Retainer
18	147491	Nut, Lock
19	612483	Shaft, Spool
20	147494	Spool, Outer W/Eyelet
21	145566	Eyelet
22	612026	Retainer
23	610636	Spring
24	147495	Reel, Inner
25	180814	Bump Head Knob Assembly
*	147299	Locking Rod Tool
*	682075	Shoulder Strap Assembly

**Optional Accessories**

- \* 180120 Monoflail Cutting Line (50 ft)
- \* 147345 Spool and Line Assembly (40 ft)
- \* 147498 Complete Head Assembly (items 19-25)
- \* 180014 Blade Retaining Kit (items 17 and 18)
- \* 181100 Oil, SAE 30 100ml Bottle
- \* 181101 Spout, Oil Fill
- \* not shown

**CYLINDER & CRANKCASE ASSEMBLY - MODEL 990r**

(Serial No. 611000001 and greater)



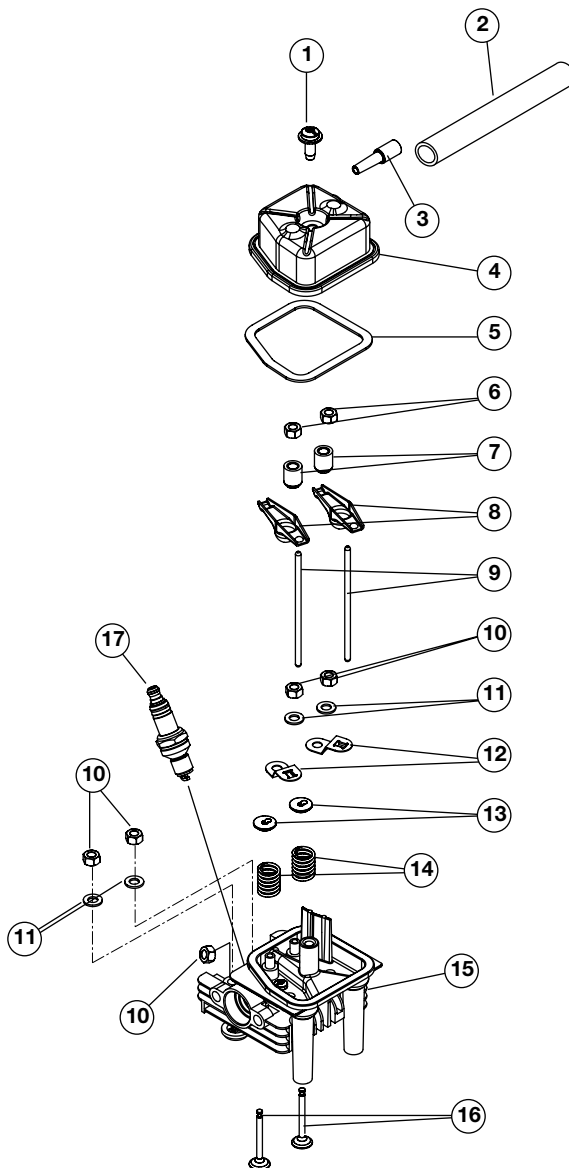
Item	Part No.	Description
1	181000	O-Ring
2	181001	Cylinder Head Gasket
3	181002	Cylinder
4	181003	Screw, (M5 X 18.7mm)
5	181004	Cylinder Gasket
6	181005	Piston Ring Set
7	181006	Wrist Pin
8	181007	Piston
9	181008	Wrist Pin Button
10	181009	Connecting Rod
11	181010	Cylinder Stud (83.5mm)
12	181011	Cylinder Stud (115.5mm)
13	181012	Cam Bracket Screw
14	181013	Cam Bracket
15	181014	Cam Follower

Item	Part No.	Description
16	181015	Cam Gear
17	181016	Seal
18	181017	Crankcase W/Power Shaft (includes items 11, 12 & 17)
19	181018	Oil Pan Gasket
20	181019	Oil Pan
21	181020	Screw (M5 X 15.8mm)
22	181021	O-Ring
23	181022	Oil Fill Plug (includes item 22)
*	181023	Piston and Rod Assembly (items 6-10)
*	181024	Engine Gasket Kit
*		not shown

**CYLINDER HEAD ASSEMBLY - MODEL 990r**

(Serial No. 611000001 and greater)

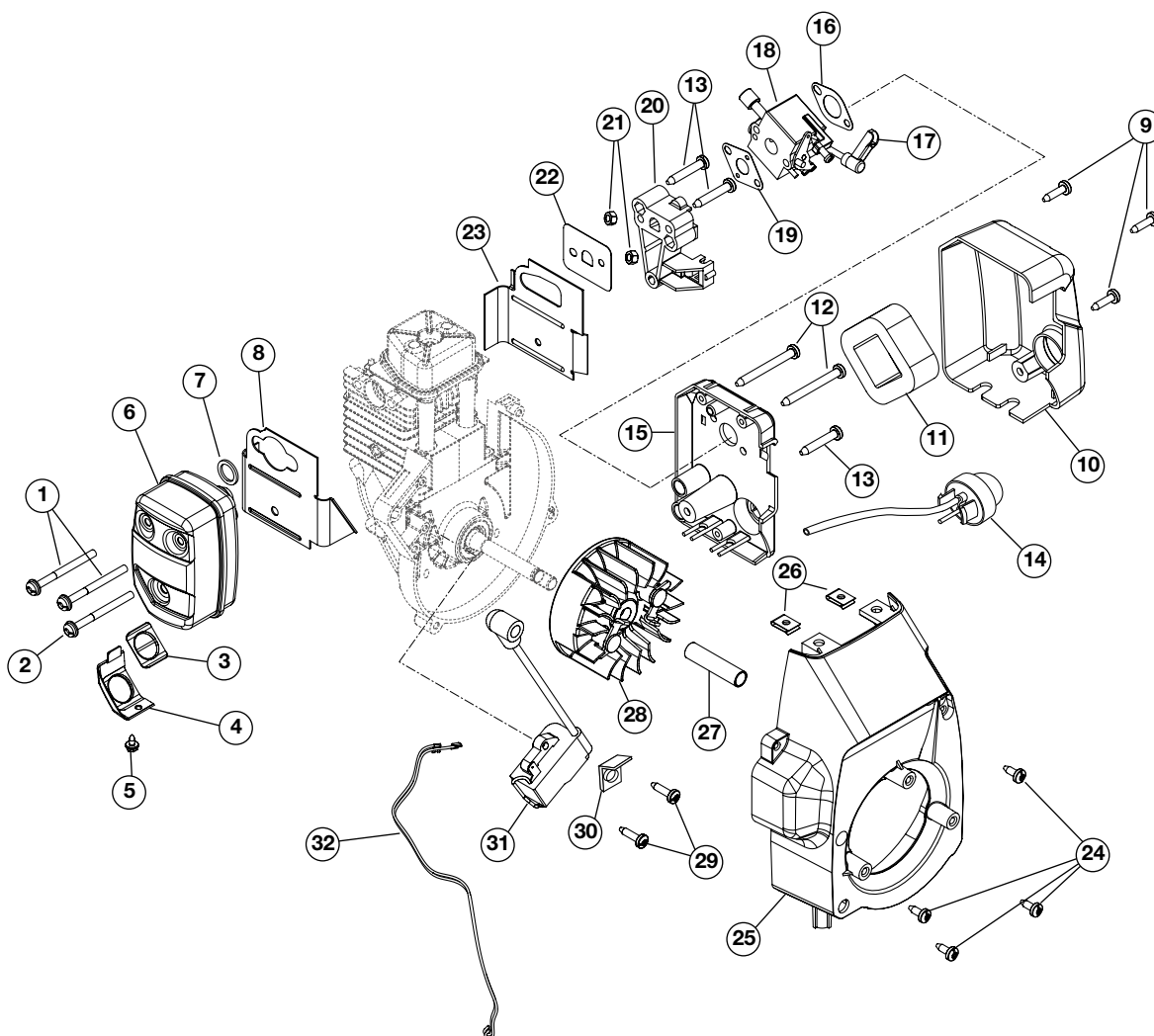
Item	Part No.	Description
1	181025	Valve Cover Screw
2	181026	Breather Hose
3	181027	Breather Assembly
4	181028	Valve Cover
5	181029	Valve Cover Gasket
6	181030	Rocker Adjusting Nut
7	181031	Rocker Arm Pivot
8	181032	Rocker Arm
9	181033	Push Rod
10	181034	Hex Nut
11	181035	Washer
12	181036	Push Rod Guide
13	181037	Valve Spring Retainer
14	181038	Valve Spring
15	181039	Cylinder Head
16	181040	Valve
17	180852	Spark Plug
*	181041	Cylinder Head Assembly (items 13-16)
*	181042	Short Block Assembly (all items from pages 2 & 3)
*		not shown





**CARBURETOR & MUFFLER ASSEMBLIES - MODEL 990r**

(Serial No. 611000001 and greater)



Item	Part No.	Description
1	181043	Muffler Mounting Screw(2 required)
2	181044	Muffler Mounting Screw
3	180890	Spark Arrestor Screen
4	181045	Screen Cover
5	181046	Screen Cover Screw
6	181047	Muffler (items 1-7)
7	181048	Muffler Gasket
8	181049	Muffler Baffle
9	181050	Air Filter Cover Screw
10	181051	Air Filter Cover
11	180350	Air Filter
12	181052	Air Filter Base Screw (52.5mm)
13	181053	Screw (M5 X 29mm)
14	181054	Primer and Line Assembly
15	181055	Air Filter Base
16	181056	Gasket
17	181057	Choke Lever
18	181058	Carburetor W/Choke Lever (includes limiter caps)
19	181059	Gasket

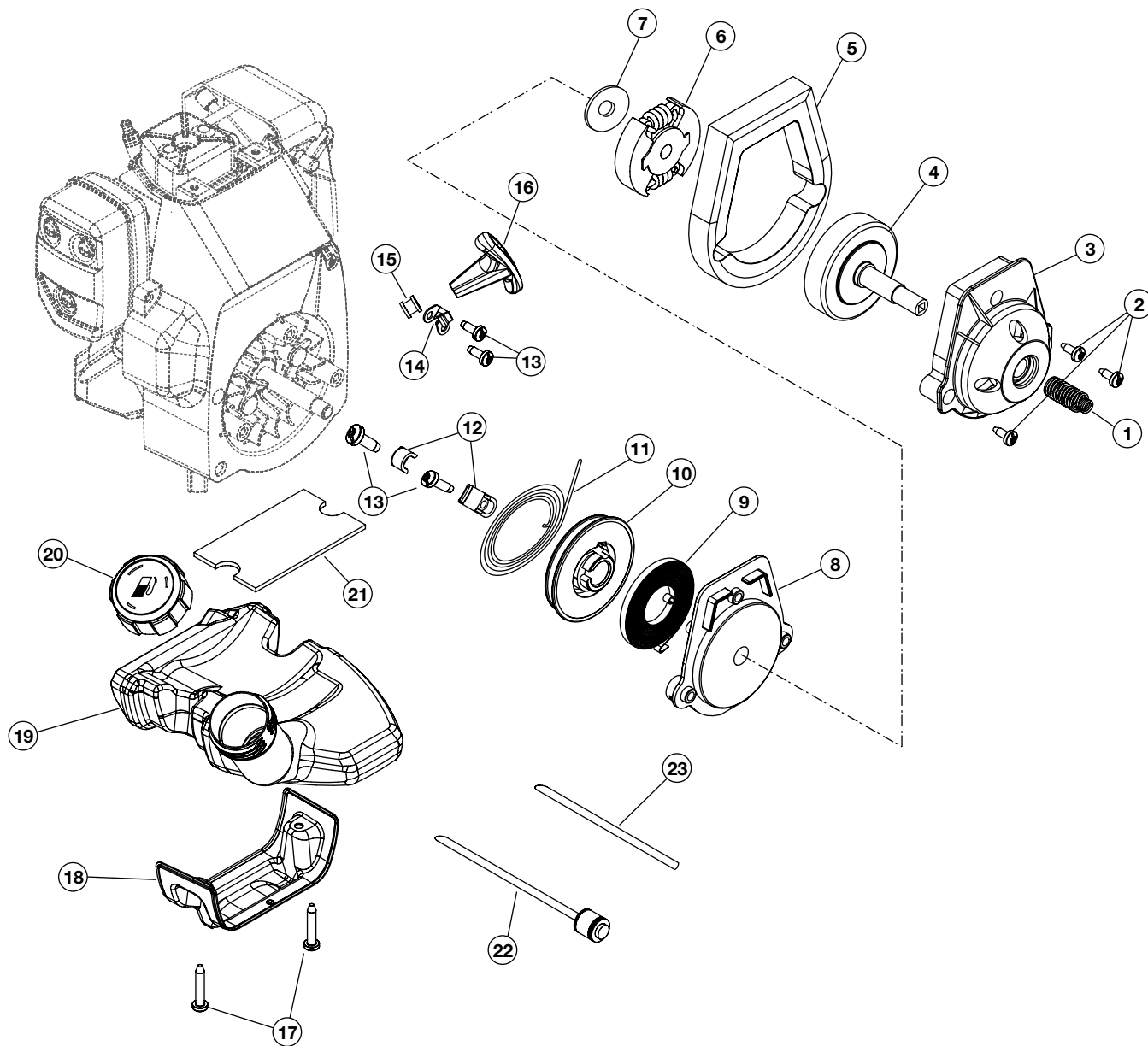
Item	Part No.	Description
20	181060	Carb Mount Insulator
21	181034	Hex Nut
22	181061	Intake Gasket
23	181062	Intake Baffle
24	181003	Screw (M5 X 18.7mm)
25	181063	Fan Housing
26	181064	Tinnerman Nut
27	181065	Spacer
28	180929	Flywheel
29	181066	Module Screw
30	611063	Ground Tab
31	181067	Ignition Module
32	181094	18" Lead Wire Set
*	610676	Flywheel Key
*	180142	Flywheel Starter Pawl Repair Kit
*	181068	O.E.M. Carburetor Repair Kit
*	181069	Gasket-Diaphragm Repair Kit
*	180986	Carburetor Limiter Cap Set (Walbro)
*	181562	Carburetor Limiter Cap Set (Zama)

\* not shown

**CLUTCH, STARTER MODULE & FUEL TANK ASSEMBLIES -**

**MODEL 990r**

(Serial No. 61100001 and greater)



**Item Part No. Description**

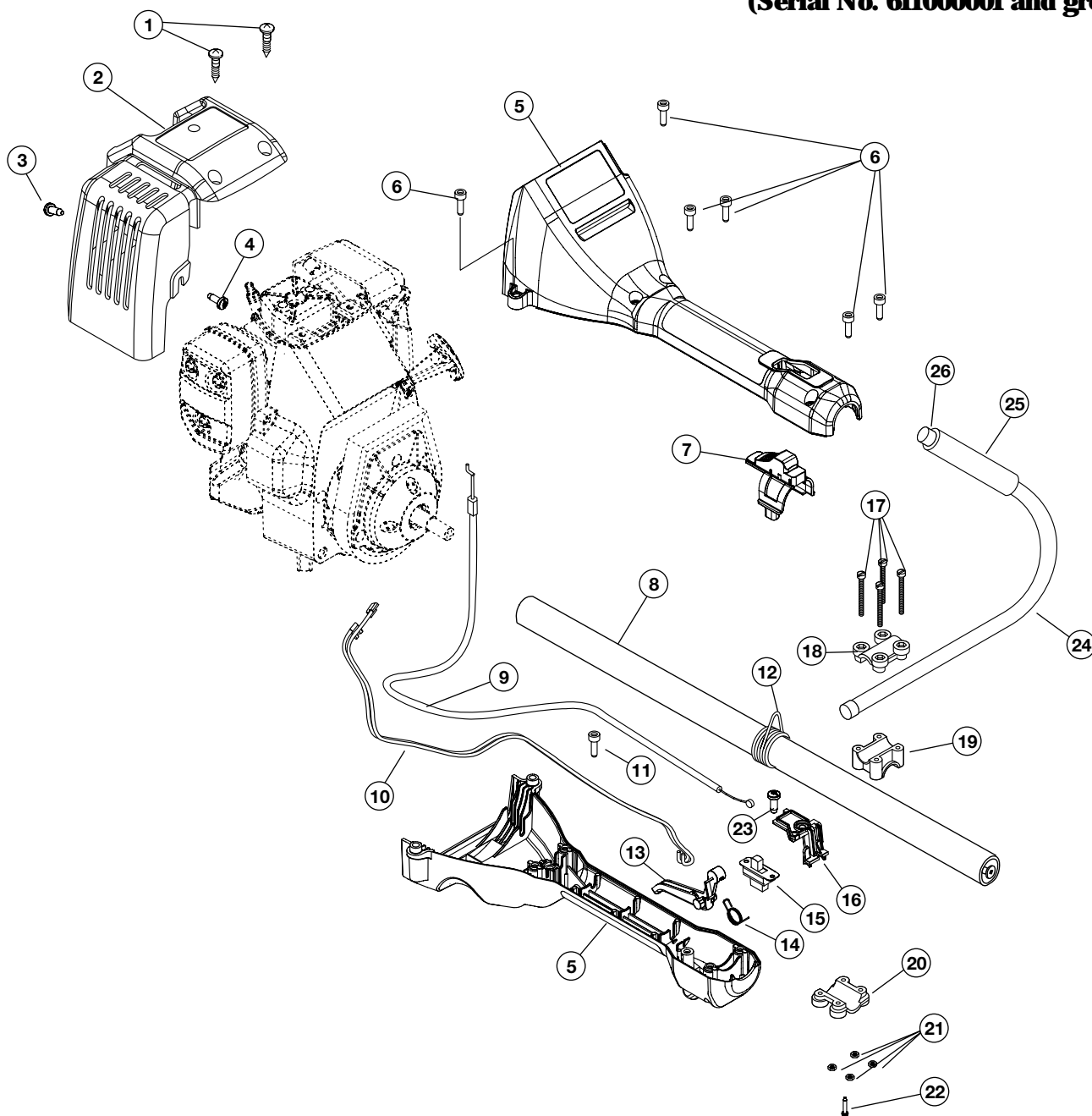
1	612468	Compression Spring
2	181070	Screw (M5 X 32mm)
3	181071	Clutch Housing
4	180232	Clutch Drum
5	181072	Isolator
6	181837	Clutch
7	181074	Clutch Washer
8	181075	Starter Housing
9	613102	Starter Spring
10	180535	Starter Pulley
11	613103	Starter Rope
12	181076	Starter Pulley Retainer
13	181077	Screw (M4 X 12.7mm)
14	181078	Rope Guide Retainer
15	611061	Rope Guide

**Item Part No. Description**

16	181079	Starter Handle
17	181080	Fuel Tank Bracket Screw
18	181081	Fuel Tank Bracket
19	181082	Fuel Tank (includes items 20, 22 & 23)
20	181083	Fuel Cap
21	181084	Fuel Tank Pad
22	181085	Fuel Line Assembly W/Filter
23	181086	Fuel Return Line
*	181102	Clutch Housing Assembly W/Drum (items 3 & 4)
*	181087	Starter Module Assembly (items 8-13, 15 & 16)
*		not shown

**HANDLE & UPPER BOOM ASSEMBLY - MODEL 990r**

(Serial No. 61100001 and greater)



**Item Part No. Description**

1	181020	Screw (M5 X 15.8mm)
2	181088	Engine Cover
3	181089	Screw (M5 X 15.78mm)
4	181104	Engine Cover Screw
5	181090	Handle Assembly
6	181070	Screw (M5 X 32mm)
7	181091	Switch Slide
8	181092	Upper Drive Housing Assembly with Shaft
9	181093	Throttle Cable
10	181094	18" Lead Wire Set
11	181095	Anti-Rotation Screw
12	610327	Shoulder Strap Clip
13	181096	Trigger
14	610314	Spring
15	181097	Switch

**Item Part No. Description**

16	181098	Switch & Trigger Retainer
17	181811	Screw
18	181812	Upper Handle Clamp
19	181813	Middle Handle Clamp
20	181814	Lower Handle Clamp
21	181815	Nut
22	145569	Anti-Rotation Screw
23	181077	Retainer Screw
24	181099	J-Handle Assembly (items 25 & 26)
25	612831	Grip
26	612021	Tube Closure
*	683295	Handle Bracket Assembly
*		not shown

**BOOM AND TRIMMER PARTS - MODEL 990r**

**(Serial No. 611000001 and greater)**

Item	Part No.	Description
1	181092	Upper Drive Shaft and Housing Assembly
2	181616	Click-Link System (includes 3 & 4)
3	181617	Bolt
4	181618	Adjustment Knob
5	180804	Lower Drive Shaft Housing
6	613300	Flexible Drive Shaft
7	147539	Guard Mounting Hardware
8	147677	Mounting Hardware & Grease Plug Assembly
9	147488	Gearbox (items 8, 14, 17 and 18)
10	683304	Guard Mounting Screws
11	180387	Guard & Blade Assembly (includes 12)
12	682061	Blade Assembly
13	147492	Guard Mount
14	147489	Driver
15	145873	Brush Blade with Cover
16	613231	Blade Cover
17	147490	Blade Retainer Washer
18	147491	Lock Nut
19	612483	Spool Shaft
20	683301	Outer Spool and Eyelet Assembly
21	612026	Retainer
22	610636	Spring
23	147495	Inner Reel
24	180814	Bump Head Knob Assembly
*	613226	Locking Rod Tool
*	682075	Shoulder Strap Assembly

**Optional Accessories**

- \* 180120 Cutting Line (50 ft)
- \* 147345 Spool and Line Assembly (40 ft)
- \* 147498 Complete Cutting Head Assembly (items 19-24)
- \* 180014 Blade Retaining Kit (items 17 and 18)
- \* 181100 SAE 30 Oil (48 100ml Bottles)
- \* 181101 Oil Fill Spout
- \* not shown

