

# **Tanaka** Illustrated Parts Manual

Model Number:

**TBC-420PF**

**LOW EMISSION TRIMMER / BRUSH CUTTER**

P/N 29759

Rev 001

Date 5-14-08



**C.A.R.B. Tier II Certified!**



*Supplier To The Outdoor Power Equipment Industry*

ISM, Inc. • 1028 4<sup>th</sup> Street SW • Auburn, WA 98001 • Phone: (253) 333-1200 • Fax: (253) 333-1212



# PRODUCT INFORMATION

**TBC-420PF**  
Low Emission Trimmer / Brush Cutter

**30% More Fuel Efficient**

**Note:** This unit comes blade ready!

**C.A.R.B. Tier II  
CERTIFIED**



## Features / Benefits

**40cc, 2.2 hp low emission engine** provides outstanding performance while reducing emissions by 70 percent and **increasing** fuel efficiency by 30 percent.

**Increased fuel efficiency** saves up to \$150/yr in gas and oil costs, and increases productivity.

**BRAIN® automatic cutting head** comes with **33 ft** of .130 copolymer cutting line and is simple to disassemble. The BRAIN senses when more line is needed and always feeds out the perfect length.

**Bearing supported, solid steel drive shaft** provides smooth and efficient power transfer from the engine to the cutting head.

**1 / 2 / 5 Warranty Coverage** provides **One-Year** coverage for professionals, **Two-Year** Coverage for Homeowners, and **Five Years** on the Electronic Ignition Module.

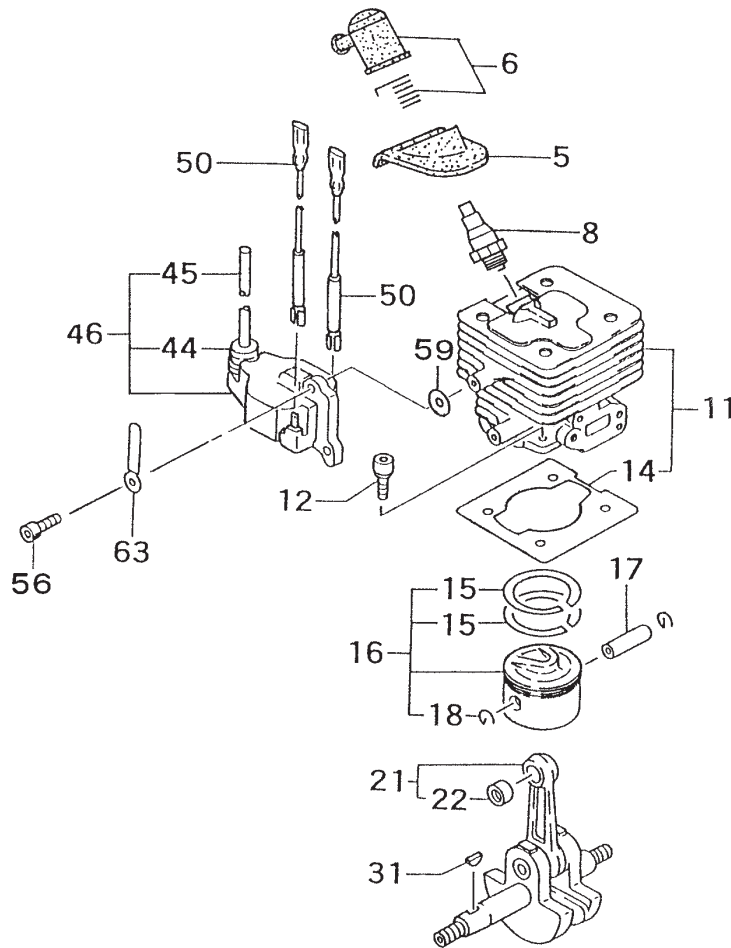
Specifications	
Engine Displacement cc (cu. in.)	40 (2.4)
Power (h.p.)	2.2
Cylinder	Chrome Plated, Stress Relieved
Carburetion	Walbro Diaphragm
Ignition System	Transistorized Electronic
Fuel Tank Capacity / fl. oz. (cc)	33.8 (1000)
Anti-Vibration	Engine Mount & Front Handle
Clutch System	Heavy-Duty Centrifugal
Shaft Support	5 Shaft Bearings
Drive System	7mm Solid Steel Shaft
Standard Cutting Head	BRAIN Automatic Feed (.130" Line)
Standard Cutting Blade	9" - 80 Tooth Saw Blade
Dry Weight / lbs. (kg) w/head	16.0 (7.3)

## Optional Accessories:

ORDER #	DESCRIPTION
746280	Aluminum fixed line head
746290	Aluminum manual feed head
746353	6" semi-auto head
746191	Single shoulder strap
746291	Deluxe shoulder harness
Varies	Assorted brush & weed blades
748502	Dual handle kit
TMC-200	Cultivator attachment
Varies	Copolymer Nylon Cutting Line
Varies	Perfect Mix 2-Cycle Engine Oil

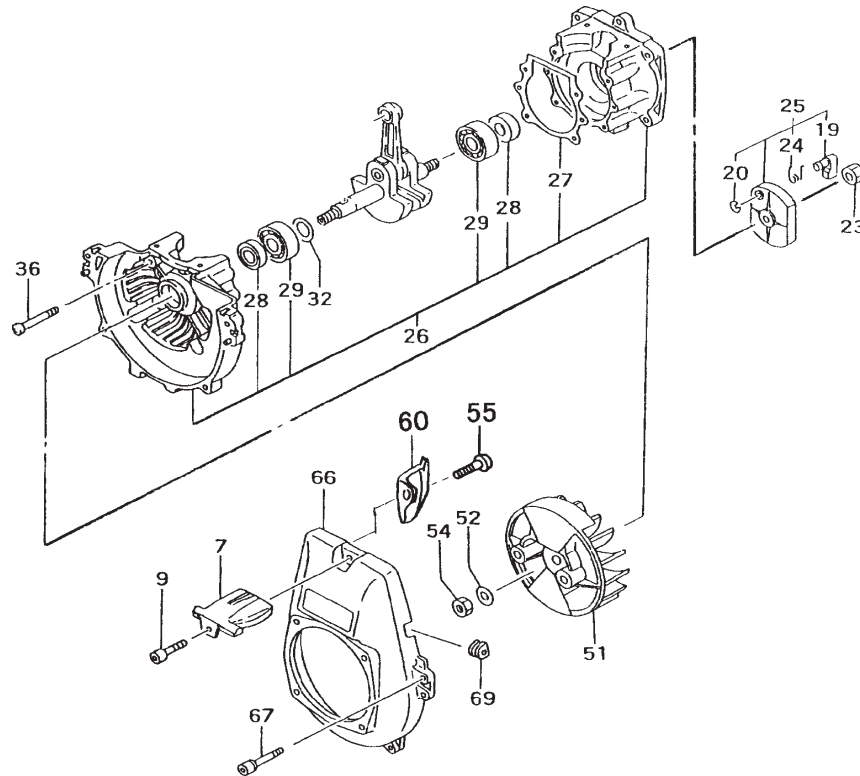
All data and specifications are subject to change without notice  
For more information, contact:

### CYLINDER, PISTON & CRANKSHAFT • FIGURE 1

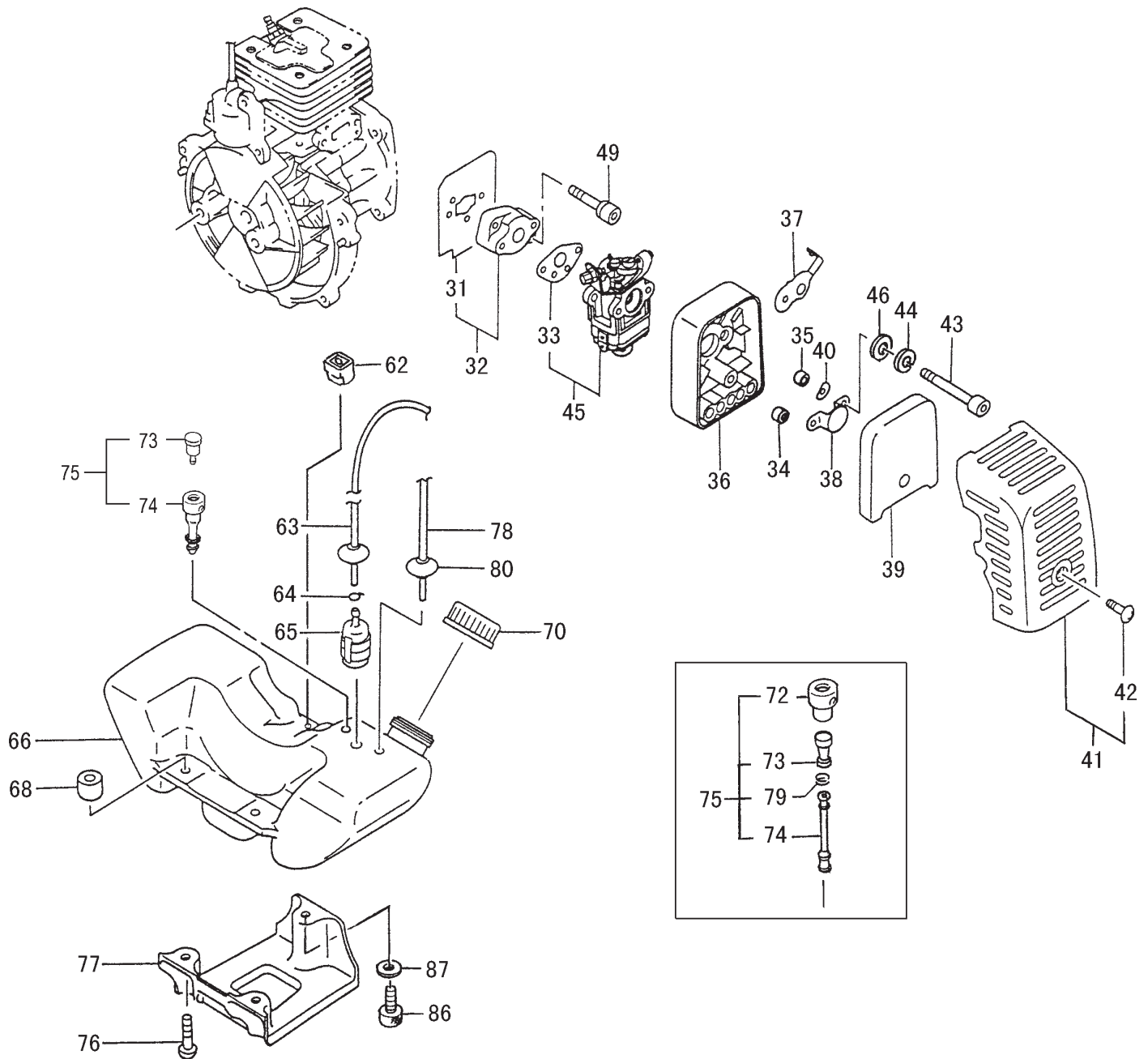


ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1-5	25504200200	COVER,SPARK PLUG,RUBBER	1	
1-6	15711666900	CAP,SPARK PLUG	1	
1-8	0181166021	PLUG.SPARK	1	
1-11	0010440590	SET,CYLINDER	1	Includes gasket
1-12	99461050204	BOLT,HEX,HOLE,5X20,S	4	
1-14	0170440020	GASKET,CYLINDER	1	
1-15	04104050200	RING,PISTON	2	
1-16	0300440090	PISTON SET	1	Includes rings and circlips
1-17	0370100020	PIN,PISTON	1	
1-18	03905004200	CIRCLIP,PISTON PIN	2	
1-21	0460440080	CRANKSHAFT	1	
1-22	99962101004	BEARING,NEEDLE,F1010B	1	
1-31	06802000200	KEY,WOODRUFF,3X13X5	1	
1-44	56020517200	CAP,RUBBER	1	
1-45	1782054322	CORD,HIGH TENSION	1	
1-46	1672054391	COIL,IGNITION	1	
1-50	1790007080	STOP CORD,220MM	2	
1-56	99416040183	SCREW 4X18/WS	2	U112141~ includes washers
1-63	19811600200	CLAMP,CORD	1	

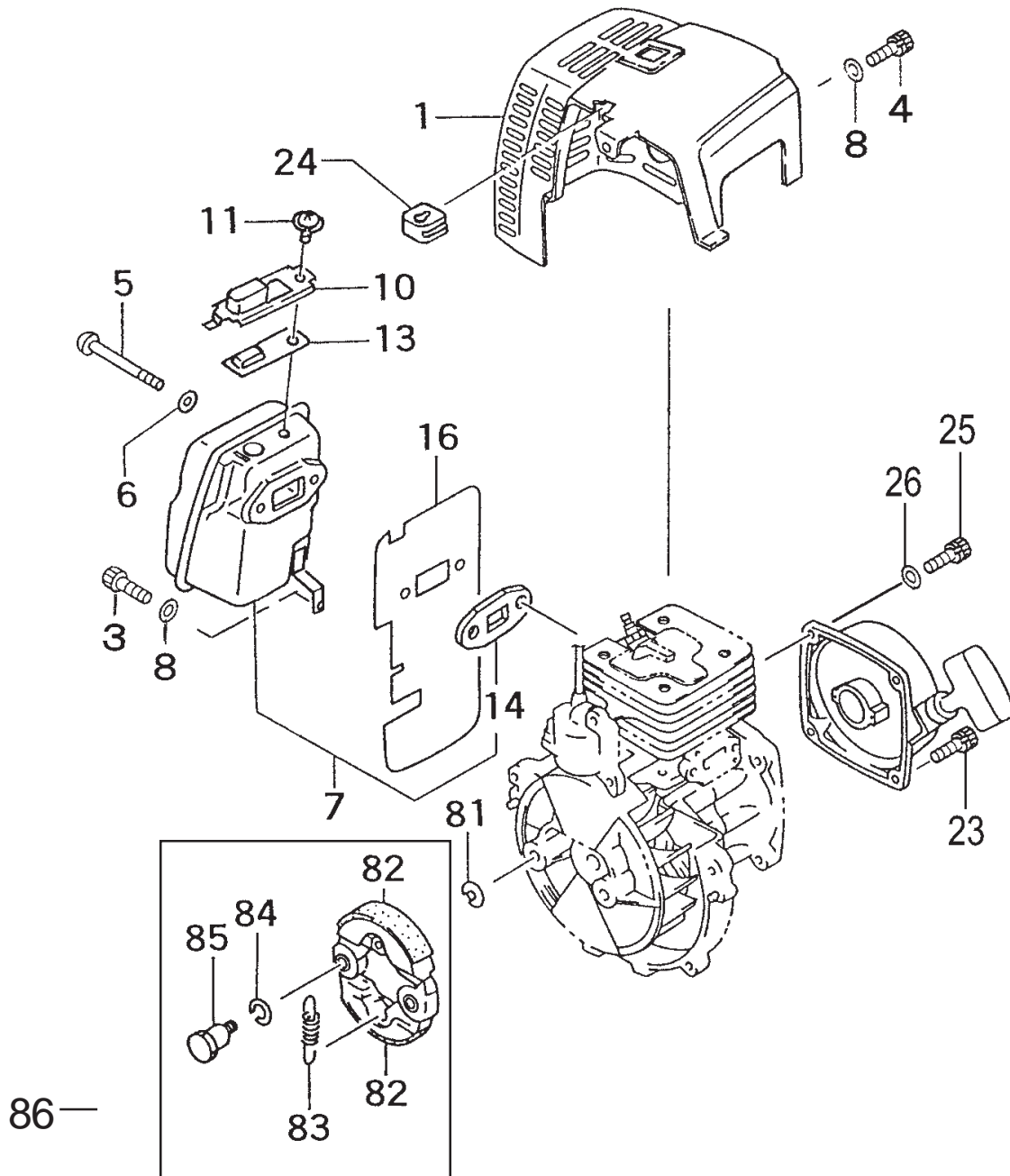
### CRANKCASE, FLYWHEEL & IGNITION • FIGURE 2



ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
2-7	2570440020	PROTECTOR	1	
2-9	99463050204	BOLT, HEX 5X20	1	
2-19	7880162V20	PAWL,STARTER	1	
2-20	99355050000	RING,STOP,5	1	
2-23	99111100013	NUT,10	1	
2-24	7900162V200	SPRING,PAWL,STARTER	1	
2-25	7980422090	PAWL,STARTER ASS'Y	1	
2-26	0720440090	CRANKCASE,ASSY	1	~U207604 - Incl gasket, seals and brgs
2-26	0720440091	CRANKCASE,ASSY	1	U207605~ Incl gasket, seals and brgs
2-27	0900440020	GASKET,CRANKCASE	1	
2-28	99966152511	SEAL,OIL,#VE15X25X7	2	
2-29	99961620200	BEARING,BALL,#6202	2	
2-32	07102007200	SHIM,15.2X20X.05	1	
2-32	07102007210	SHIM,15.2X20X.10	1	
2-32	07102007220	SHIM,15.2X20X.15	1	
2-32	07111600230	SHIM,16X21X.20	1	
2-32	07111600240	SHIM,16X21X.30	1	
2-36	99461050304	BOLT,HEX,5X30S	4	
2-51	1552053880	ROTOR,MAGNETO	1	
2-52	99201100011	WASHER,10	1	
2-54	99111100011	NUT,10	1	
2-55	99414050101	SCREW,S,5X10	1	U112141~
2-60	1320440020	DEFLECTOR,AIR	1	U112141~
2-66	1120440021	CASE,FAN	1	
2-67	99461050204	BOLT,HEX,HOLE,5X20,S	4	
2-69	20311660200	GROMMET,PRIMARY CORD	1	



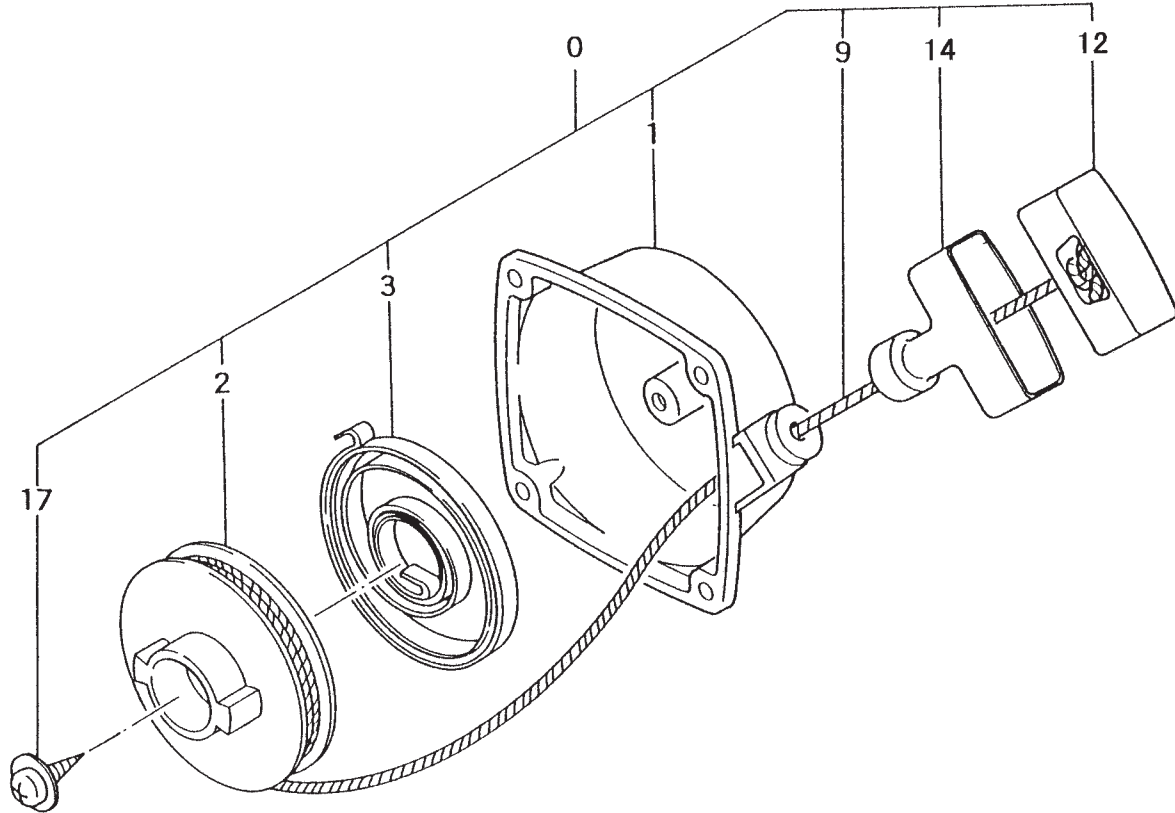
ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS	
3-31	4030430020	GASKET,INLET MANIFOLD	1	Includes gasket	
3-32	4040430090	SET,CARB INSULATOR	1		
3-33	4020430020	GASKET,CARBURETOR	1		
3-34	4530637C200	COLLAR	1		
3-35	4700138020	COLLAR	1		
3-36	4230138082	BODY,CLEANER	1		
3-37	5280138021	VALVE,CHOKE	1		
3-38	47601700200	BOARD,BLOW OVER CHECK	1		
3-39	4460138020	ELEMENT,CLEANER	1		
3-40	99204080030	WASHER,8	1		
3-41	4520138091	COVER,CLEANER,ASSY	1		
3-42	3800637C200	BOLT,CLEANER COVER	1		
3-43	99011050602	SCREW,5X60	2	Includes gasket	
3-44	99210050012	WASHER,S,5	2		
3-45	4550440090	SET,CARBURETOR	1		
3-46	78600601200	WASHER,RECOIL STARTER	2		
3-49	99464050254	BOLT,HEX HOLE,5X25WS	2		
3-62	6490168020	COLLAR,TANK FIXING	1		U207605~
3-63	22301251901	PIPE,FUEL,3X5X230	1	Before S/N ~D000000 After S/N D000001~	
3-64	68000731201	CLIP 6.3	1		
3-65	67501630900	FILTER,FUEL	1		
3-66	5910440021	TANK,FUEL,ORANGE	1		
3-66	5910440F20	TANK,FUEL,EVAPO	1		
3-68	6590430020	COLLAR,C	3		
3-70	5950656B90	CAP,FUEL BLACK,NON VENT	1		
3-72	5610007020	COVER,AIR VENT	1	~V244130	
3-73	6460661290	VALVE	1	~U207604 U207605~	
3-74	5650441020	PIPE,AIR VENT	1		
3-75	5640661190	VENT,AIR ASS'Y	1		
3-76	99463050204	BOLT, HEX 5X20	3		
3-76	99463050204	BOLT, HEX 5X20	2		
3-77	9400430020	STAND,ENGINE	1		
3-78	7000300508	PIPE,FUEL,3X5X85	1	~V244130	
3-79	68000206200	CLIP,5.5	1		
3-80	22206300200	GROMMET,FUEL PIPE	1		
3-86	99461050304	BOLT,HEX,5X30S	1		U207605~
3-87	99201050061	WASHER,5	1		U207605~



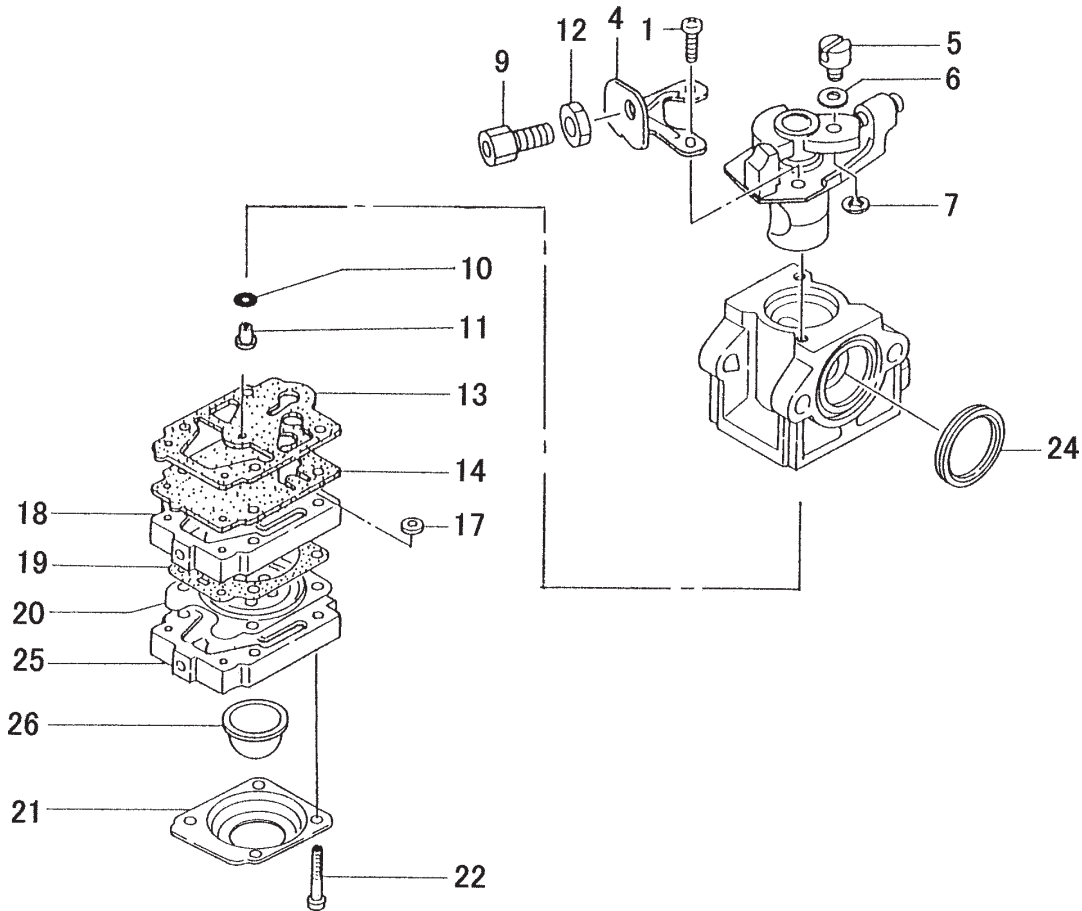
### MUFFLER, COVER & CLUTCH • FIGURE 4

ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
4-1	7380440A21	PROTECTOR,MUFFLER	1	
4-3	99461050124	BOLT,HEX,5X12S	1	
4-4	99461050164	BOLT,HEX,5X16,S	1	~U207604
4-5	99053060653	SCREW,HEX,6X65	2	
4-6	99201060011	WASHER,6	2	
4-7	7040440090	SET,MUFFLER	1	Includes gasket (#14), not heat shield (#16)
4-8	99201050061	WASHER,5	2	~U207604
4-8	99201050061	WASHER,5	1	U207605~
4-10	7210440020	PIPE,TAIL	1	
4-11	99434040081	SCREW,4X8/S	1	
4-13	7320440020	ARRESTER,SPARK	1	
4-14	73704230200	GASKET,MUFFLER	1	
4-16	1330440020	SHIELD,HEAT	1	
4-23	99463050204	BOLT, HEX 5X20	4	~U207604
4-23	99463050204	BOLT, HEX 5X20	3	U207605~
4-24	2030604A202	GROMMET	1	
4-25	99461050254	BOLT,HEX HOLE,5X25S	2	U207605~
4-26	99201050061	WASHER,5	2	U207605~
4-81	35910112203	WASHER,CLUTCH B	2	
4-82	2900420081	SHOE,CLUTCH	2	
4-83	34204200200	SPRING,CLUTCH	1	
4-84	99204100030	WASHER,WAVE,10	2	
4-85	35704201200	BOLT,CLUTCH STEP	2	



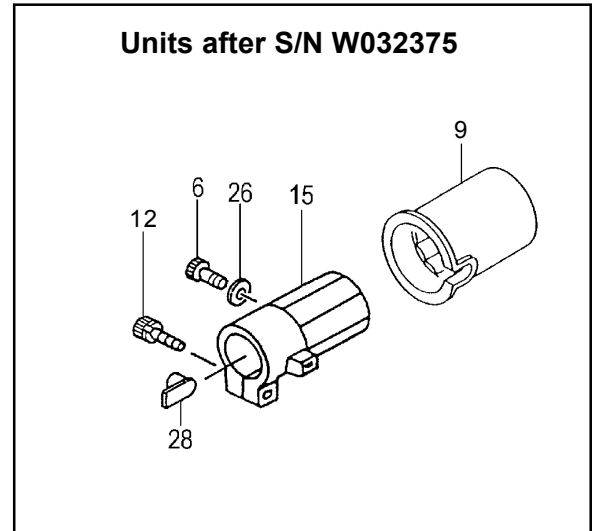
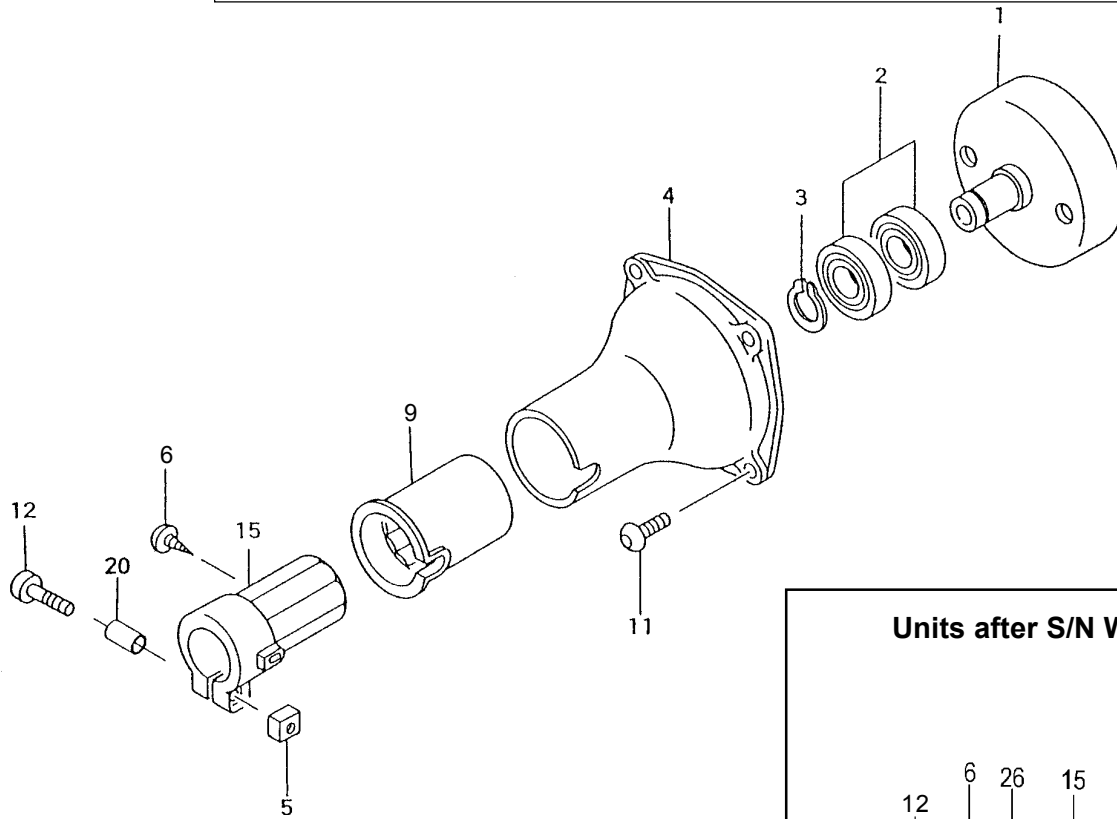


ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
5-0	7620422090	STARTER,RECOIL ASSY	1	
5-1	7720422080	BODY,RECOIL STARTER	1	
5-2	7690422020	REEL,STARTER ROPE	1	
5-3	7790422020	SPRING,RECOIL	1	
5-9	7830422020	ROPE,STARTER	1	
5-12	8350422020	CAP,HANDLE	1	
5-14	7850422020	HANDLE,STARTER	1	
5-17	8390422020	SCREW,SET	1	

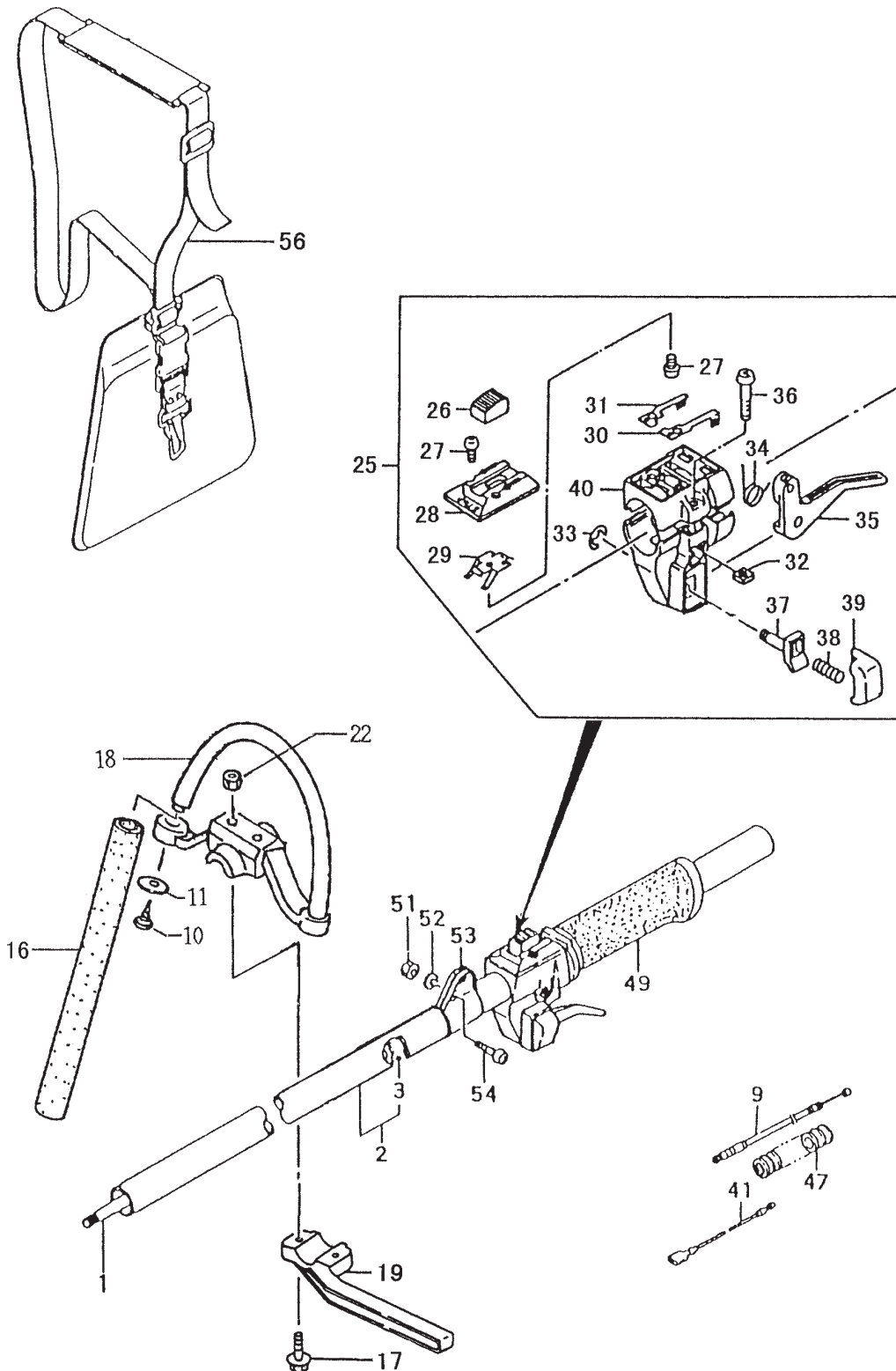


ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
6-0	4550440090	SET,CARBURETOR	1	Includes gasket
6-1	51425100200	SCREW,THROTTLE SET	1	
6-4	54425164200	STAY,ADJUST,CABLE	1	
6-5	53925120200	SWIVEL	1	
6-6	5492516520	WASHER,THRUST	1	
6-7	48925100200	RING,STOP	1	
6-9	61425137200	ADJUSTER,CABLE	1	
6-10	55025100200	O-RING	1	
6-11	5992001W440	MAIN JET #44	1	
6-12	99101060013	NUT,6	1	
6-13	~ ~ ~	GASKET,PUMP	1	~ Contained in Carb Repair Kit
6-14	~ ~ ~	DIAPHRAGM,PUMP	1	P/N 650-25124-900
6-17	57825007200	SCREEN,INLET	1	(Not available individually)
6-18	5752515380	BODY,PUMP	1	
6-19	~ ~ ~	GASKET,DIAPHRAGM	1	
6-20	~ ~ ~	DIAPHRAGM,METERING	1	
6-21	4762515120	COVER,DIAPHRAGM	1	
6-22	5482515120	SCREW,SET	4	
6-24	4310634C200	GASKET,CLEANER	1	
6-25	4422515180	PUMP,PRIMING	1	
6-26	44725108200	BULB,PRIMING	1	

### CLUTCH CASE • FIGURE 7

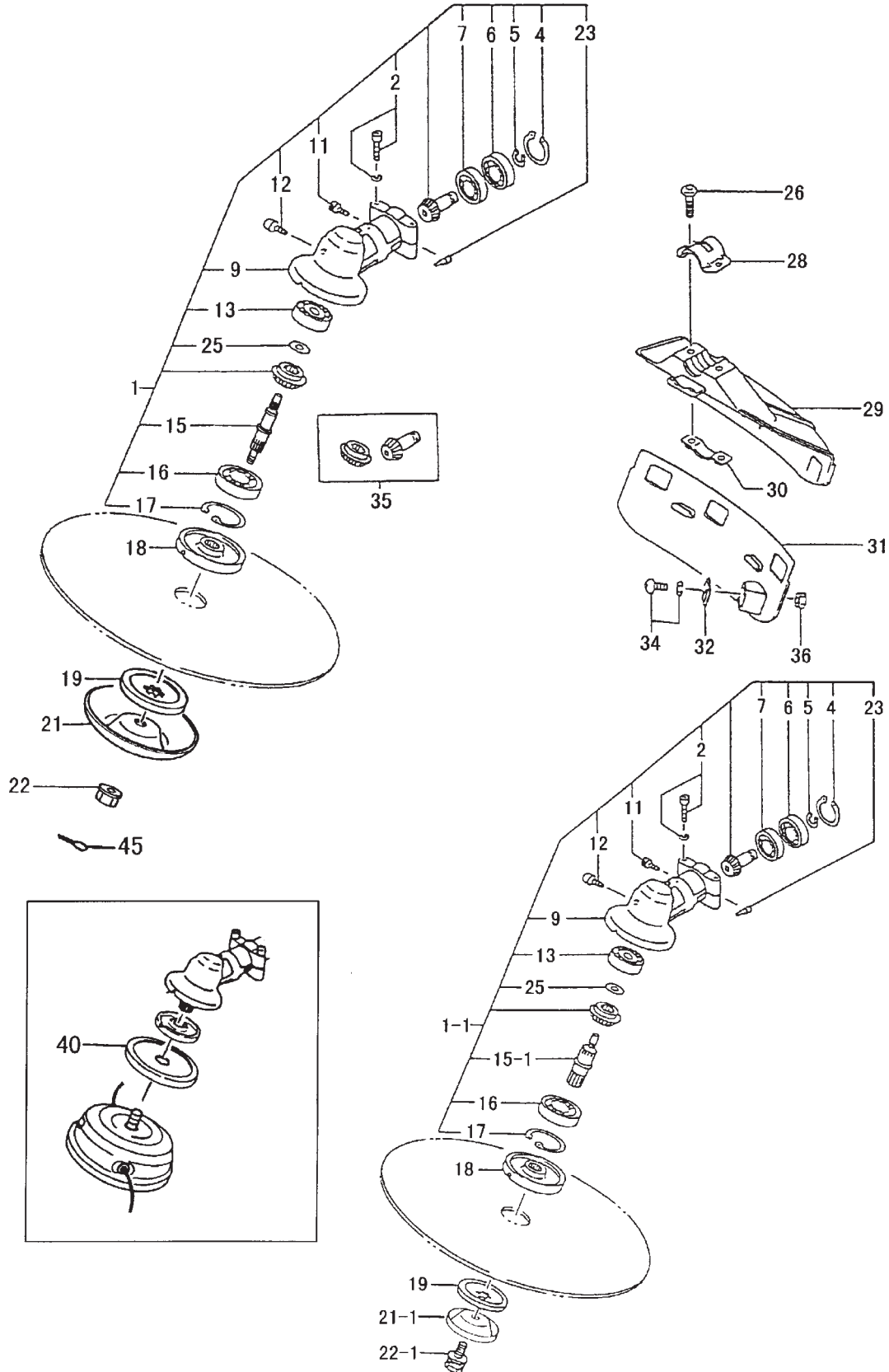


ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
7-1	2890430080	SHAFT,CLUTCH	1	
7-2	99961620202	BEARING,BALL,#6202Z	2	
7-3	99350015002	RING,STOP,C-15 EX	1	
7-4	3310430020	CASE,CLUTCH	1	
7-5	99191050001	NUT,5	1	S/N ~W032374
7-6	99074045164	SCREW,TAPPING 4.5x16	1	S/N ~W032374
7-6	99051050163	BOLT,HEX,5X16	1	S/N W032375~
7-9	5990430020	RUBBER,CUSHION	1	
7-11	99053060203	BOLT,HEX,6X20	4	
7-12	99054050253	BOLT,HEX 5x25	1	
7-15	3600430020	HOLDER,PIPE	1	S/N ~W032374
7-15	3600430021	HOLDER,PIPE	1	S/N W032375~
7-20	0960430020	COLLAR 6.3x18	1	S/N ~W032374
7-26	99201050061	WASHER,5	1	S/N W032375~
7-28	3610099020	HOLDER,PIPE	1	S/N W032375~



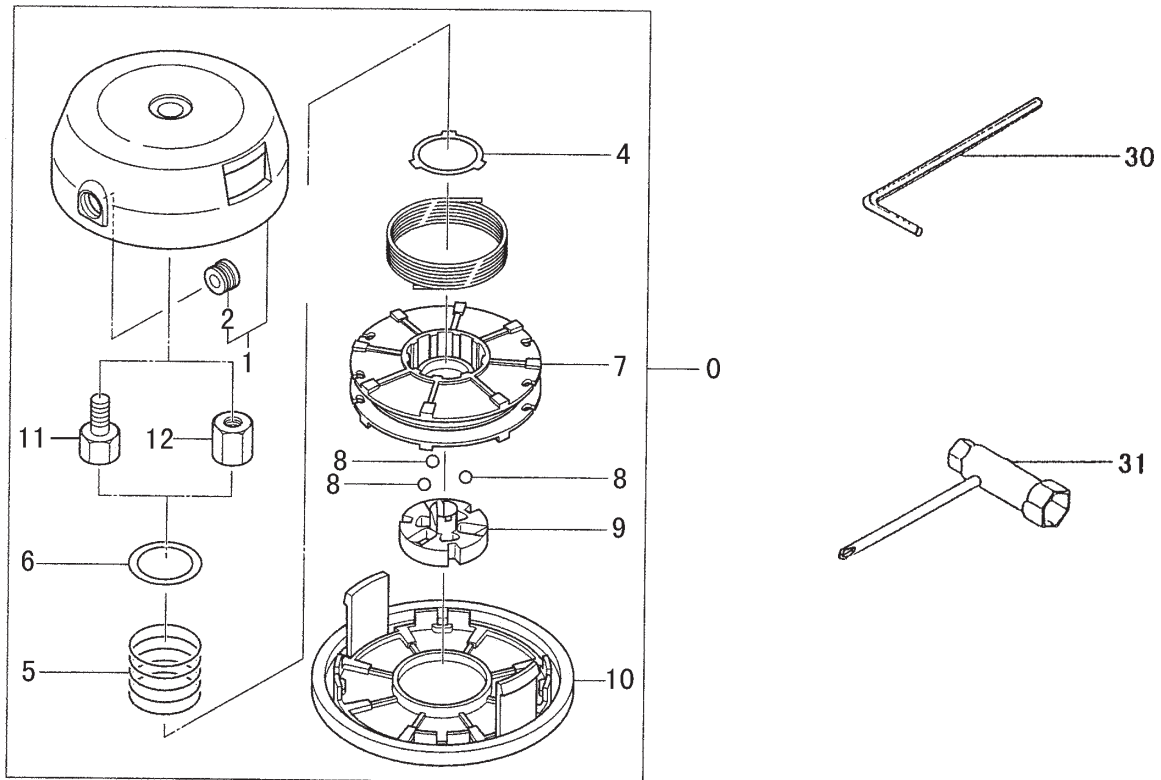
### THROTTLE LEVER, HANDLE, DRIVE SHAFT • FIGURE 8

ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
8-1	3433785020	SHAFT,DRIVE	1	
8-2	3413810080	PIPE,DRIVE SHAFT	1	~Y138700
8-2	3413785080	SHAFT,DRIVE	1	Y138701~
8-3	3473785090	BUSHING ASS'Y	5	
8-9	8853713480	WIRE,THROTTLE	1	
8-10	99311052012	SCREW,TAPPING 5X20	1	
8-11	36832350200	WASHER,BRAKE SHAFT	1	
8-16	5033738E20	GRIP,HANDLE	1	
8-17	99423060432	BOLT,6X43	2	
8-18	5003738E20	HANDLE,FRONT	1	
8-19	5203339820	BAR,BARRIER 26mm	1	
8-22	99101060041	NUT,6	2	
8-25	8703738F90	LEVER,THROTTLE ASS'Y	1	
8-26	1623710120	SWITCH,STOP	1	
8-27	99342030081	SCREW,TAPPING,3X8	3	
8-28	25937101200	BASE,STOP SWITCH	1	
8-29	26237101200	SPRING,STOP SWITCH	1	
8-30	17737101200	TERMINAL,EARTH B	1	
8-31	17637101200	TERMINAL,EARTH A	1	
8-32	3153334020	NUT,SPECIAL 5MM	2	
8-33	99355060001	RING,STOP,6	1	
8-34	83237101200	SPRING,RETURN	1	
8-35	88037101200	LEVER,THROTTLE	1	
8-36	99431050201	SCREW,5X20	2	
8-37	85337101200	SHAFT,LOCK BUTTON	1	
8-38	95837101200	SPRING,LOCK,BUTTON	1	
8-39	95637101200	BUTTON,LOCK	1	
8-40	2603334020	BODY,STOP BUTTON,B	1	
8-41	1783739480	CORD,STOP 430mm	2	
8-47	1640702101	TUBE,PROTECTION,7X210	1	
8-49	50437003200	GRIP,SHAFT	1	
8-51	99001050001	R-B 99101050001 NUT,5	1	
8-53	33533410200	R-B 33533682200 METAL	1	
8-54	99461050164	BOLT,HEX,5X16,S	1	
8-56	746291	SHOULDER HARNESS ASSY	1	



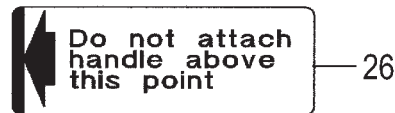
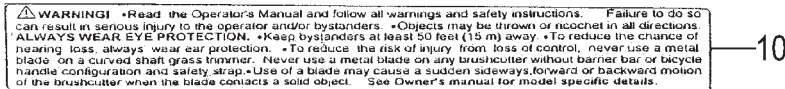
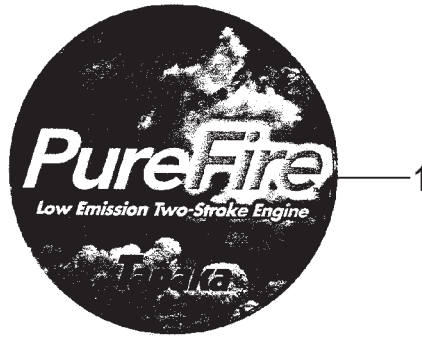
### GEAR CASE, SAFETY GUARD • FIGURE 9

ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
9-1-1	3003713490	CASE,GEAR ASS'Y	1	~U207604
9-1	3003758790	CASE,GEAR ASS'Y,(26mm)	1	U207605~
9-2	99461050254	BOLT,HEX HOLE,5X25S	2	
9-4	99351024002	RING,STOP,C-24,IN	1	
9-5	99350009002	RING,STOP,C9	1	
9-6	99961609002	BEARING,BALL,#609Z	1	
9-7	99961609000	BEARING,BALL,#609	1	
9-9	3003330B20	CASE,GEAR	1	
9-11	99051050103	BOLT,HEX.HOLE,5X10	1	
9-12	99423080100	BOLT,8X10	1	
9-13	99961628000	BEARING,BALL,#628	1	
9-15-1	3043713420	SHAFT,GEAR	1	~U207604
9-15	3043810020	SHAFT,GEAR	1	U207605~
9-16	99961620103	BEARING,BALL #6201D	1	
9-17	99351032002	RING,STOP,C-32 IN	1	
9-18	3103810020	HOLDER,CUTTER	1	
9-19	3113785020	CAP,CUTTER HOLDER	1	
9-21-1	31633410200	PROTECTOR,BOLT	1	~U207604
9-21	3083786120	COVER,BOLT PROTECTOR	1	U207605~
9-22-1	3123338620	BOLT,FIXING,L.H.,FLANGED	1	~U207604
9-22	3133833220	NUT,FIXING L.H.,10X1.25	1	U207605~
9-23	3243735020	WASHER,GEAR CASE	1	
9-25	0673713420	WASHER,SPECIAL	1	
9-26	99481060254	SCREW,HEX HOLE 6X25	2	
9-28	4423369921	BRACKET	1	
9-29	4413810020	COVER,SAFETY	1	~Y138700
9-29	4413738020	GUARD,SAFETY	1	Y138701~
9-30	4453738020	HOLDER,GUARD	1	
9-31	4473810020	COVER,GUARD	1	~Y138700
9-31	4473738020	EXTENSION,GUARD	1	Y138701~
9-32	7973738021	LIMITER,LINE	1	
9-34	99414050121	SCREW,S,5X12	1	
9-35	3013713400	SET,GEAR PINION	1	
9-36	99101050011	NUT,5	1	
9-40	3073810020	PROTECTOR,WINDING	1	
9-45	3273718090	PIN,COTTER 2X20 (10 PACK)	1	U207605~



ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
10-0	7833384090	HEAD,BRAIN,(TH-97L)	1	~U207604
10-0	7833384290	HEAD,BRAIN (TH-97LN)	1	U207605~
10-1	7863384090	BODY,TH-97L,LN	1	
10-2	7883367021	EYELET	2	
10-4	7853384020	BASE,ADJUSTMENT TH97L	1	
10-5	7933391020	SPRING,REEL,SILVER	1	
10-6	79233004200	WASHER,REEL	1	
10-7	7873384020	REEL,TH97L	1	
10-8	6733560020	BALL,STEEL	3	
10-9	7903381020	SLIDER,REEL	1	
10-10	7893384020	CAP,BODY,TH-97L	1	
10-11	3143367020	BOLT,8X1.25 LH GOLD	1	~U207604
10-12	31533970200	NUT,AQUA,10X1.25,LH	1	U207605~
10-30	81320000200	WRENCH,HEX,4	1	
10-31	8262000080	SPANNER,COMBI,17X19	1	





ITEM	PART NUMBER	DESCRIPTION	QTY	COMMENTS
11-1	9290440020	DECAL,SYMBOL(PF)	1	
11-2	9064810020	PLATE,NAME,TBC-420PF	1	
11-4	91505015200	DECAL,SYMBOL	1	V244131~
11-4	91505015200	DECAL,SYMBOL	1	~Y138700
11-5	95137503200	DECAL,PRO-FORCE B	1	~U207604
11-7	9293810020	DECAL,SYMBOL,PF	1	
11-10	9193782020	DECAL,CAUTION A	1	
11-18	9233728620	DECAL,LEVEL	1	
11-26	9233738F20	DECAL,LEVEL	1	