AVAILABLE ATTACHMENTS & ACCESSORIES

Accessories

99944200002	i-Start Kit
99946400020	Power Pruner 5© Oarnge Extension

Attachments

99946400040	Hedger Accessory
99946400050	Power Pruner Circle Saw Accessory
99946400060	Hedge Clipper Attachment
99946400065	Articulating Hedge Clipper Attachment

Guide Bars

1080373301	Guide Bar - 8"
1100373901	Guide Bar - 10" -- Narrow
1101373901	Guide Bar - 10" -- Regular
1102373901	Guide Bar - 10" -- Intenz
1120374401	Guide Bar - 12" -- Narrow
1121374401	Guide Bar - 12" -- Regular
1122374401	Guide Bar - 10" -- Intenz

Sawing Chains

1907039	Chain - 10" (90SQ-39C) -- Narrow
1907044	Chain - 12" (90SGQ-44C) -- Narrow
1917033	Chain - 8" (91VSQ-33C)
1917039	Chain - 10" (91VSQ-39C)
1917044	Chain - 12" (91VSQ-44C)

Maintenance and Repair Kits

90090	Driveshaft and Rear Handle Assembly

RePower Kits

90008	Filter Kit
90010	Cap/Vent Kit
90069	Fuel Line Kit
90104	Fuel System Kit

PARTS CATALOG

PPT-231 POWER PRUNER

22.8cc

MODEL: SERIAL NUMBERS

PPT-231: S/N 02001001 - 02999999

ECHO, INCORPORATED

400 Oakwood Road Lake Zurich, Illinois 60047 USA

WWW.ECHO-USA.COM

99922203306_231/02

REVISED 06/21/06

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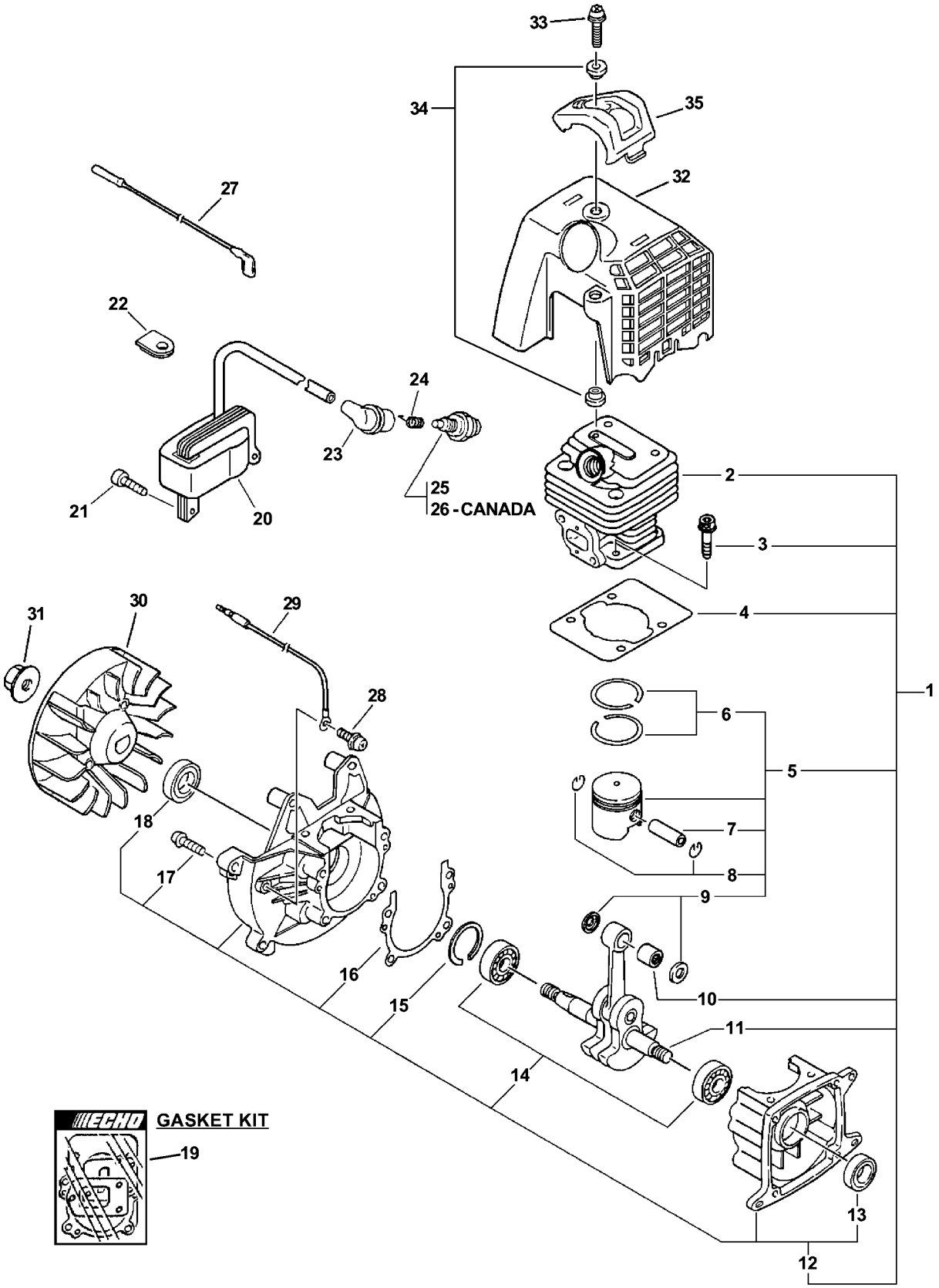
Click Any Diagram Desciption Below To Veiw That Diagram.

PPT-231 S/N 02001001 - 02999999

Engine, Short Block, Ignition, Cylinder Cover....4
Fancase, Clutch, Fuel System, Starter....6
Intake, Exhaust....8
Carburetor - RB-K57B....10
Driveshaft, Connector....12
Main Pipe, Throttle Cable, Stop Switch S/N: 02001001-02001182....14
Main Pipe, Throttle Cable, Stop Switch S/N: 02001183-02999999....16
Upper Pipe, Upper Drive Shaft....18
Gear Case, Bar, Chain....20

Part Number Index....22
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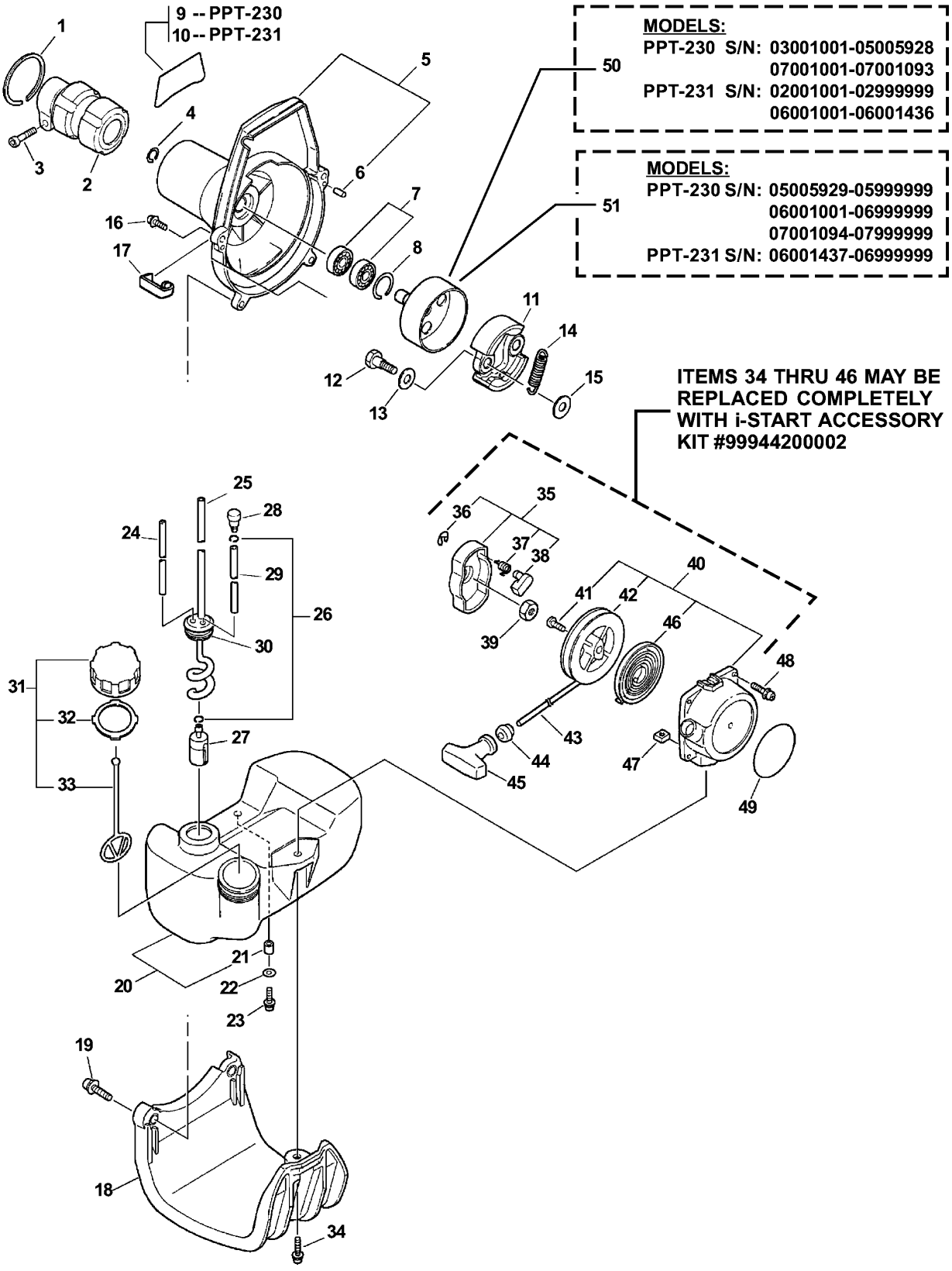
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GASKET KIT
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ITEM	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	SB1045	1	SHORT BLOCK	INCLUDES ITEMS 2-18
2	A130000074	1	CYLINDER	
3	90016205022	4	BOLT 5X22	
4	V100000010	1	GASKET, CYLINDER***1***	
5	P021000930	1	PISTON KIT	INCLUDES ITEMS 6-9
6	A101000000	2	RING, PISTON	
7	10001311520	1	PIN, PISTON	
8	10001504630	2	CIRCLIP, PISTON PIN	
9	10001411520	2	SPACER, PISTON PIN	
10	V553000010	1	BEARING, NEEDLE	
11	A011000042	1	CRANKSHAFT ASY	
12	P021000940	1	CRANKCASE KIT	INCLUDES ITEMS 13-18
13	10021305530	1	OIL SEAL	
14	90080036001	2	BEARING, BALL	
15	90070200028	1	CIRCLIP 28	
16	10024255930	1	GASKET, CRANKCASE***1***	
17	90016205025	4	BOLT 5X25	
18	10021228230	1	OIL SEAL	
19	P021002351	1	GASKET KIT	
20	A411000010	1	COIL, IGNITION	
21	90016205016	2	BOLT 5X16	
22	15611240630	1	GROMMET	
23	15901203433	1	CAP, SPARK PLUG	
24	15901103432	1	TERMINAL, SPARK PLUG CAP	
25	99944500071	1	SPARK PLUG -- BPM-7Y	
26	15901010230	1	SPARK PLUG -- BPMR-7A	CANADA MODELS
27	16201056430	1	LEAD, GROUND	
28	90024205010	1	SCREW 5X10	
29	16201452930	1	LEAD, GROUND	
30	A409000020	1	FLYWHEEL	
31	90051500008	1	FLANGE NUT 8	
32	A160000060	1	COVER, CYLINDER	
33	9111005016	1	BOLT 5X16	
34	V353000020	1	COLLAR 5	
35	A162000000	1	GUARD, TOP	

Footnotes

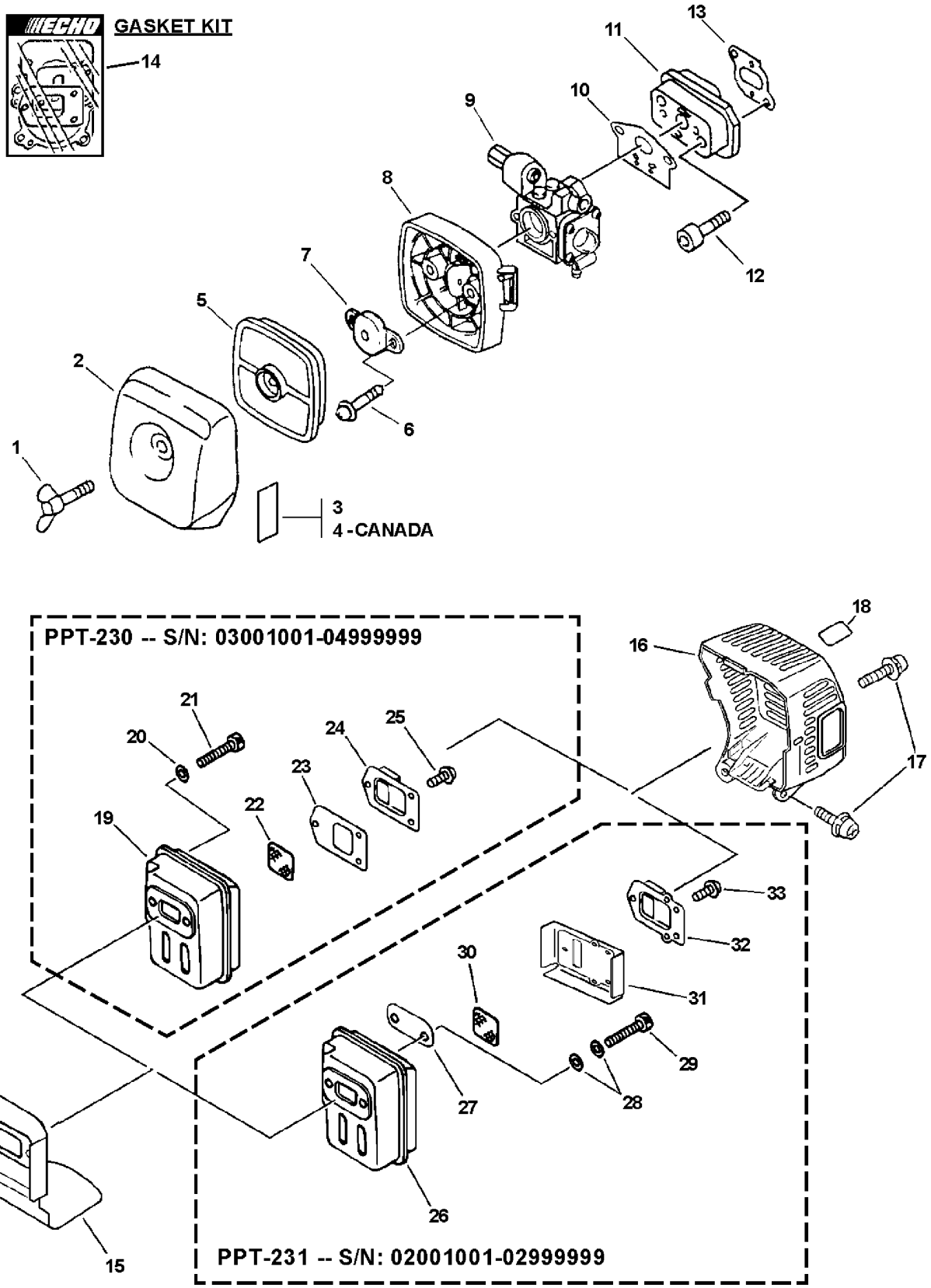
1: Also Included In GASKET KIT


9 -- PPT-230
10 -- PPT-231
MODELS:
PPT-230 S/N: 03001001-05005928
07001001-07001093
PPT-231 S/N: 02001001-02999999
06001001-06001436
MODELS:
PPT-230 S/N: 05005929-05999999
06001001-06999999
07001094-07999999
PPT-231 S/N: 06001437-06999999
ITEMS 34 THRU 46 MAY BE REPLACED COMPLETELY WITH i-START ACCESSORY KIT #99944200002

ITEM	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	90070200042	1	CIRCLIP 42	
2	61092255931	1	FIXTURE, MAIN PIPE	
3	90016205028	1	BOLT 5X28	
4	90070100012	1	CIRCLIP 12	
5	A172000120	1	COVER, FAN	INCLUDES ITEM 6
6	10021503930	2	DOWEL PIN	
7	90080796001	2	BEARING, BALL 6001	
8	90070200028	1	CIRCLIP 28	
9	X503000980	1	LABEL, MODEL -- PPT-230	
10	X503001680	1	LABEL, MODEL -- PPT-231	
11	A553000010	2	SHOE, CLUTCH	
12	17504656030	2	SHAFT, CLUTCH	
13	17504956030	2	WAVE, WASHER	
14	V451000090	1	SPRING, CLUTCH	
15	17504805530	2	WASHER	
16	90016205018	2	BOLT 5X18	
17	17811106230	1	CLIP	
18	30511057733	1	STAND	
19	90016205022	2	BOLT 5X22	
20	A350000111	1	TANK, FUEL	INCLUDES ITEM 21
21	13104528230	2	SPACER	
22	90060300005	2	WASHER 5	
23	90016205016	2	BOLT 5X16	
24	13201256030	1	PIPE, RETURN - 3X6X80mm***1***	
25	13201052030	1	PIPE, FUEL - 3X6X170mm***2***	
26	13201326630	2	CLIP	
27	13120519830	1	FILTER, FUEL	
28	A356000030	1	VALVE, CHECK	
29	V471000110	1	PIPE, VENT - 3X6X115mm***2***	
30	13211555930	1	GROMMET, FUEL	
31	13100455530	1	FUEL TANK CAP ASY	INCLUDES ITEM 32-33
32	13101655830	1	GASKET, FUEL CAP	
33	13105156030	1	CONNECTOR, FUEL CAP	
34	90024405020	1	SCREW	
35	17720240630	1	STARTER PAWL ASY	INCLUDES ITEMS 36-38
36	90070000004	1	E-RING 4	
37	17723440630	1	SPRING, RETURN	
38	17721840630	1	PAWL, STARTER	
39	90050200008	1	NUT 8	
40	17720055931	1	STARTER ASY	INCLUDES ITEMS 41-46
41	17723644330	1	SCREW	
42	17721540630	1	DRUM, STARTER	
43	17722603930	1	ROPE,STARTER-3.5X850mm***3***	
44	17722742030	1	GUIDE, ROPE	
45	17722827030	1	GRIP, STARTER	
46	17722040630	1	SPRING, REWIND	
47	90056500005	1	NUT	
48	9112604012	4	BOLT 4X12	
49	X502000190	1	LABEL, ECHO	
50	A556000030	1	DRUM, CLUTCH	
51	A556000280	1	DRUM, CLUTCH	

Footnotes

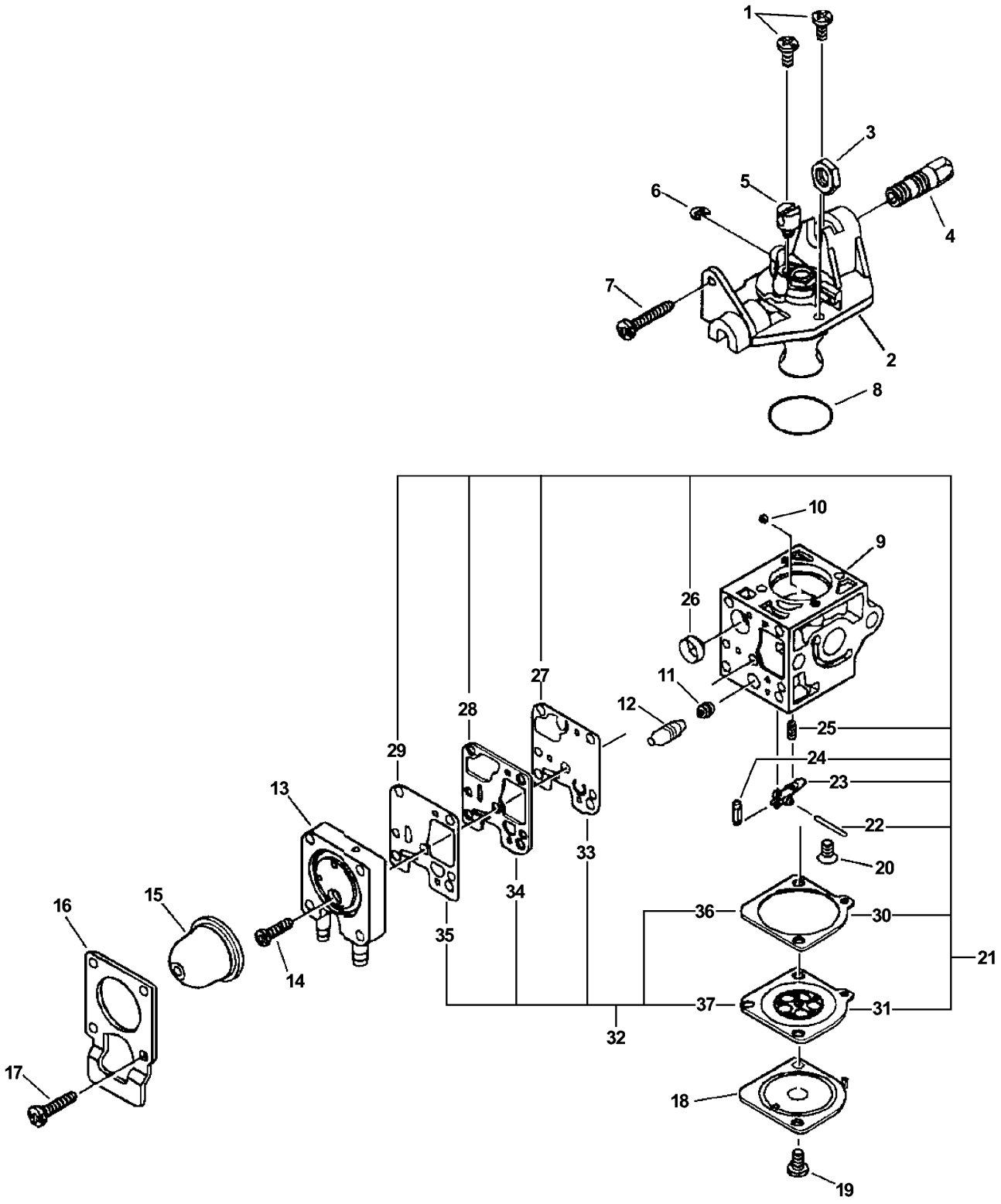
1: BULK OPTION: 90017
2: BULK OPTION: 90015
3: BULK OPTION: 99944445000


GASKET KIT
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PPT-230 -- S/N: 03001001-04999999
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PPT-231 -- S/N: 02001001-02999999

ITEM	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	21041752730	1	BOLT, WING	
2	13031305863	1	LID, AIR CLEANER	
3	89012152730	1	LABEL, CHOKE	
4	89033252730	1	LABEL, CHOKE	CANADA MODELS
5	13031054130	1	FILTER, AIR	
6	90024205060	2	SCREW 5X60	
7	12901152730	1	PLATE, PREVENT	
8	P021004480	1	CASE, AIR CLEANER	
9	A021000061	1	CARBURETOR -- RB-K57B	
10	13001013410	1	GASKET, INTAKE***1***	
11	13001756431	1	INSULATOR	
12	90016205025	2	BOLT 5X25	
13	13001055930	1	GASKET, INTAKE***1***	
14	P021002351	1	GASKET KIT	
15	V104000061	1	SHIELD, EXHAUST***1***	
16	A320000001	1	COVER, MUFFLER	
17	90010605012	2	BOLT 5X12	
18	89016006361	1	LABEL, HOT	
19	14580642030	1	MUFFLER	
20	90060000005	2	WASHER 5	
21	90010505055	2	BOLT 5X55	
22	14586240630	1	SCREEN, MUFFLER	
23	V104000002	1	GASKET, EXHAUST***1***	
24	A313000160	1	GUIDE, EXHAUST	
25	9136704010	3	SCREW	
26	A300000141	1	MUFFLER	
27	V150000371	1	PLATE, EYE	
28	V347000000	4	WASHER, CONICAL	
29	90010505055	2	BOLT 5X55	
30	14586240630	1	SCREEN, MUFFLER	
31	V104000360	1	GASKET, EXHAUST	
32	A313000130	1	GUIDE, EXHAUST	
33	136704010	5	SCREW	

Footnotes

1: Also Included In GASKET KIT

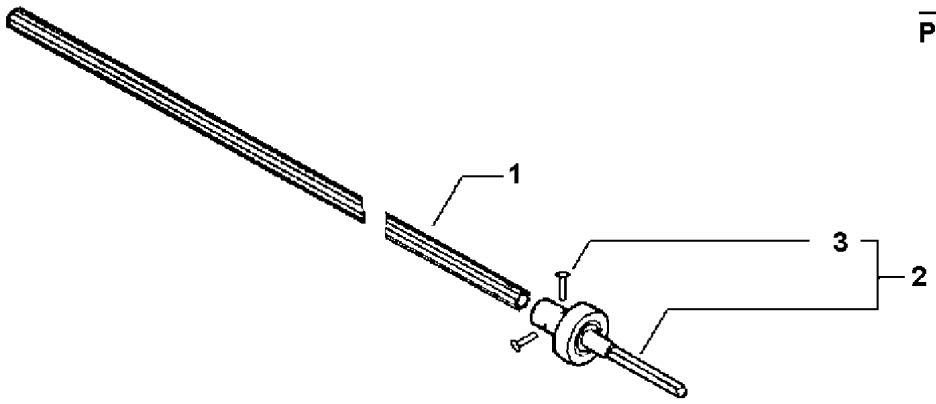

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ITEM	PART NUMBER	QTY	DESCRIPTION	REMARKS
	A021000062	1	CARBURETOR -- RB-K57B	
1	12534413931	2	SCREW, ROTOR COVER ASY	
2	P005000360	1	ROTOR COVER ASY	
3	P005000120	1	NUT, CABLE	
4	P005000110	1	SCREW, ADJUST	
5	P005000180	1	SWIVEL	
6	P005000190	1	E-RING	
7	P005000100	1	SCREW, THROTTLE ADJUST	
8	P005000280	1	O-RING	
9	----------	1	BODY, CARBURETOR***1***	
10	P005000290	1	ROLLER, GUIDE	
11	P005000380	1	JET	
12	P005000370	1	PLUG KIT	
13	P005000240	1	PRIMER BASE ASY	
14	P005000270	1	SCREW, PRIMER BASE ASY	
15	12538108660	1	PUMP, PRIMING	
16	P005000250	1	RETAINER, PRIMING PUMP	
17	P005000260	4	SCREW, PRIMING PUMP RETAINER	
18	12534252130	1	COVER, DIAPHRAGM	
19	12534452130	2	SCREW, DIAPHRAGM COVER	
20	P005000020	1	SCREW, METERING LEVER PIN	
21	P005000350	1	REPAIR KIT	INCLUDES ITEMS 22-31
22	----------	1	PIN, METERING LEVER	
23	----------	1	LEVER, METERING	
24	----------	1	VALVE, INLET NEEDLE	
25	----------	1	SPRING, METERING LEVER	
26	----------	1	STRAINER	
27	----------	1	DIAPHRAGM, PUMP	
28	----------	1	GASKET, PUMP	
29	----------	1	SURGE, DIAPHRAGM	
30	----------	1	GASKET, METERING	
31	----------	1	DIAPHRAGM, METERING	
32	P005000340	1	DIAPHRAGM/GASKET KIT	INCLUDES ITEMS 33-37
33	----------	1	DIAPHRAGM, PUMP	
34	----------	1	GASKET, PUMP	
35	----------	1	SURGE, DIAPHRAGM	
36	----------	1	GASKET, METERING	
37	----------	1	DIAPHRAGM, METERING	

Footnotes

1: NOT AVAILABLE SEPARATELY

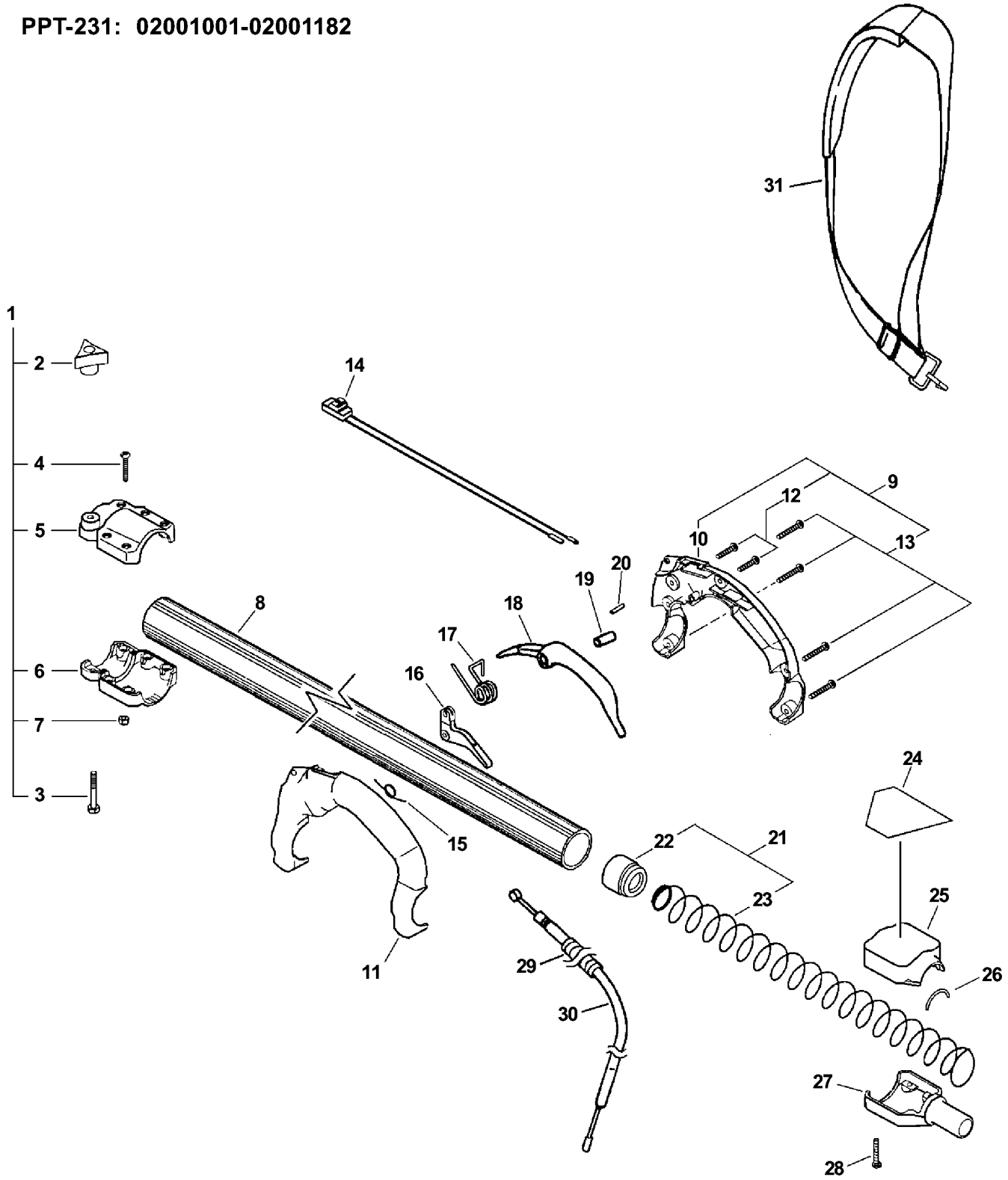
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06001001-06001436



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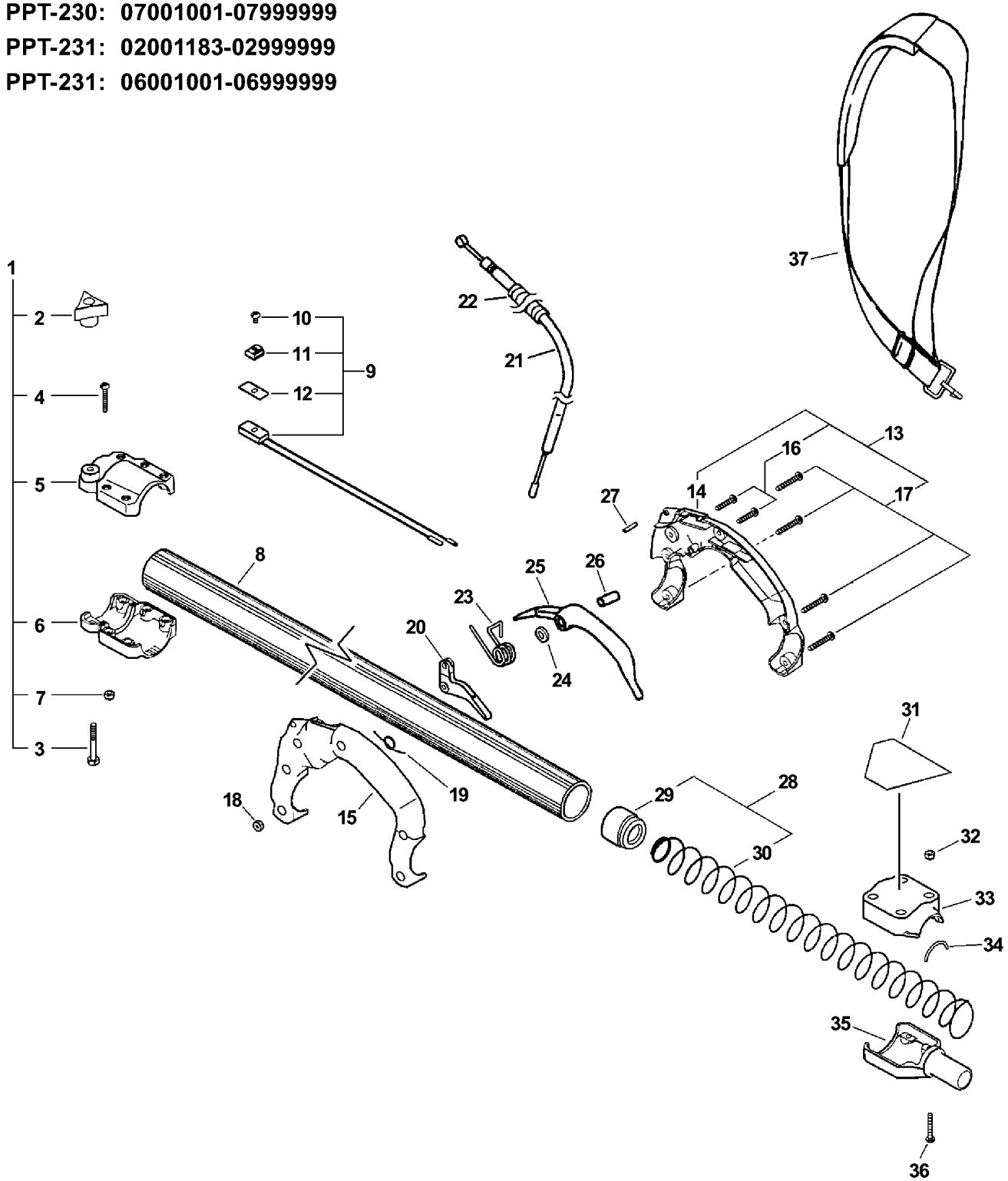
ITEM	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	C504000260	1	DRIVESHAFT	
2	P021006340	1	SHAFT CONNECTOR KIT	INCLUDES ITEM 3; SEE SB 04-22
3	V620000000	2	PIN	

PPT-230: 03001001-03002773
PPT-231: 02001001-02001182

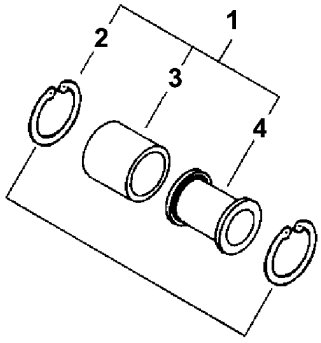


ITEM	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	61029522360	1	COMPRESSION CLAMP ASY	INCLUDES ITEMS 2-7
2	13040622360	1	KNOB, FASTNER	INCLUDES ITEM 3
3	V204000090	1	SCREW	
4	90005300400	5	SCREW	
5	61028222460	1	COLLAR, MAIN PIPE - UPPER	
6	61028222360	1	COLLAR, MAIN PIPE - LOWER	
7	90003150100	5	LOCKNUT	
8	61022224660	1	PIPE, MAIN	
9	35110022360	1	REAR HANDLE ASY	INCLUDES ITEMS 10-13
10	35110122561	1	HANDLE, REAR - LEFT	
11	35111022562	1	HANDLE, REAR - RIGHT	
12	90005300300	2	SCREW	
13	90005300400	4	SCREW	
14	16340049330	1	SWITCH, IGNITION	
15	17804322360	1	SPRING, THROTTLE TRIGGER	
16	17801022560	1	TRIGGER, THROTTLE	
17	17804322560	1	SPRING, THROTTLE TRIGGER LOCKOUT	
18	17809022560	1	LOCKOUT, THROTTLE CONTROL	
19	61085022560	1	COLLAR 5	
20	88996022660	1	STRAIGHT PIN 3	
21	43330722460	1	FLOATING BUSHING ASY	INCLUDES ITEMS 22-23
22	43334522660	1	BUSHING, FLOATING	
23	10494022560	1	SPRING, FLOATING BUSHING	
24	89016022660	1	LABEL, CAUTION	
25	61081022360	1	CAP, LOWER SHAFT TUBE ADAPTER	
26	10491022460	1	O-RING(HALF)	
27	C510000001	1	ADAPTER, LOWER SHAFT TUBE	
28	90005300400	4	SCREW	
29	V475001290	1	TUBE	
30	V430000720	1	CABLE, THROTTLE	
31	30100022060	1	SHOULDER HARNESS ASY	

PPT-230: 03002774-05999999
PPT-230: 06001001-06999999
PPT-230: 07001001-07999999
PPT-231: 02001183-02999999
PPT-231: 06001001-06999999



ITEM	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	61029522360	1	COMPRESSION CLAMP ASY	INCLUDES ITEMS 2-7
2	13040622360	1	KNOB, FASTNER	INCLUDES ITEM 3
3	V204000090	1	SCREW	
4	90005300400	5	SCREW	
5	61028222460	1	COLLAR, MAIN PIPE - UPPER	
6	61028222360	1	COLLAR, MAIN PIPE - LOWER	
7	90003150100	5	LOCKNUT	
8	61022224660	1	PIPE, MAIN	
9	A440000280	1	SWITCH, IGNITION	INCLUDES ITEMS 10-12
10	9154503010	1	SCREW 3X10	
11	16341049231	1	KNOB, SWITCH	
12	89015712330	1	COVER, SWITCH	
13	35110022362	1	REAR HANDLE ASY	INCLUDES ITEMS 14-18
14	C410000090	1	HANDLE, REAR - LEFT	
15	35111022562	1	HANDLE, REAR - RIGHT	
16	90005300400	2	SCREW	
17	90005300500	4	SCREW	
18	90003150100	6	LOCKNUT	
19	17804322360	1	SPRING, THROTTLE TRIGGER	
20	17801022560	1	TRIGGER,THROTTLE	
21	V430000720	1	CABLE, THROTTLE	
22	V475001290	1	TUBE	
23	17804322562	1	SPRING, THROTTLE TRIGGER LOCKOUT	
24	90060300005	1	WASHER	
25	17809022560	1	LOCKOUT, THROTTLE CONTROL	
26	61085022560	1	COLLAR 5	
27	88996022660	1	STRAIGHT PIN 3	
28	43330722460	1	FLOATING BUSHING ASY	INCLUDES ITEMS 29-30
29	43334522660	1	BUSHING, FLOATING	
30	10494022560	1	SPRING, FLOATING BUSHING	
31	89016022660	1	LABEL, CAUTION	
32	90003150100	4	LOCKNUT	
33	C525000000	1	CAP, LOWER SHAFT TUBE ADAPTER	
34	10491022460	1	O-RING(HALF)	
35	C510000060	1	ADAPTER, LOWER SHAFT TUBE	
36	90005300500	4	SCREW	
37	30100022060	1	SHOULDER HARNESS ASY	



ONE (1) ASSEMBLY REQUIRED:

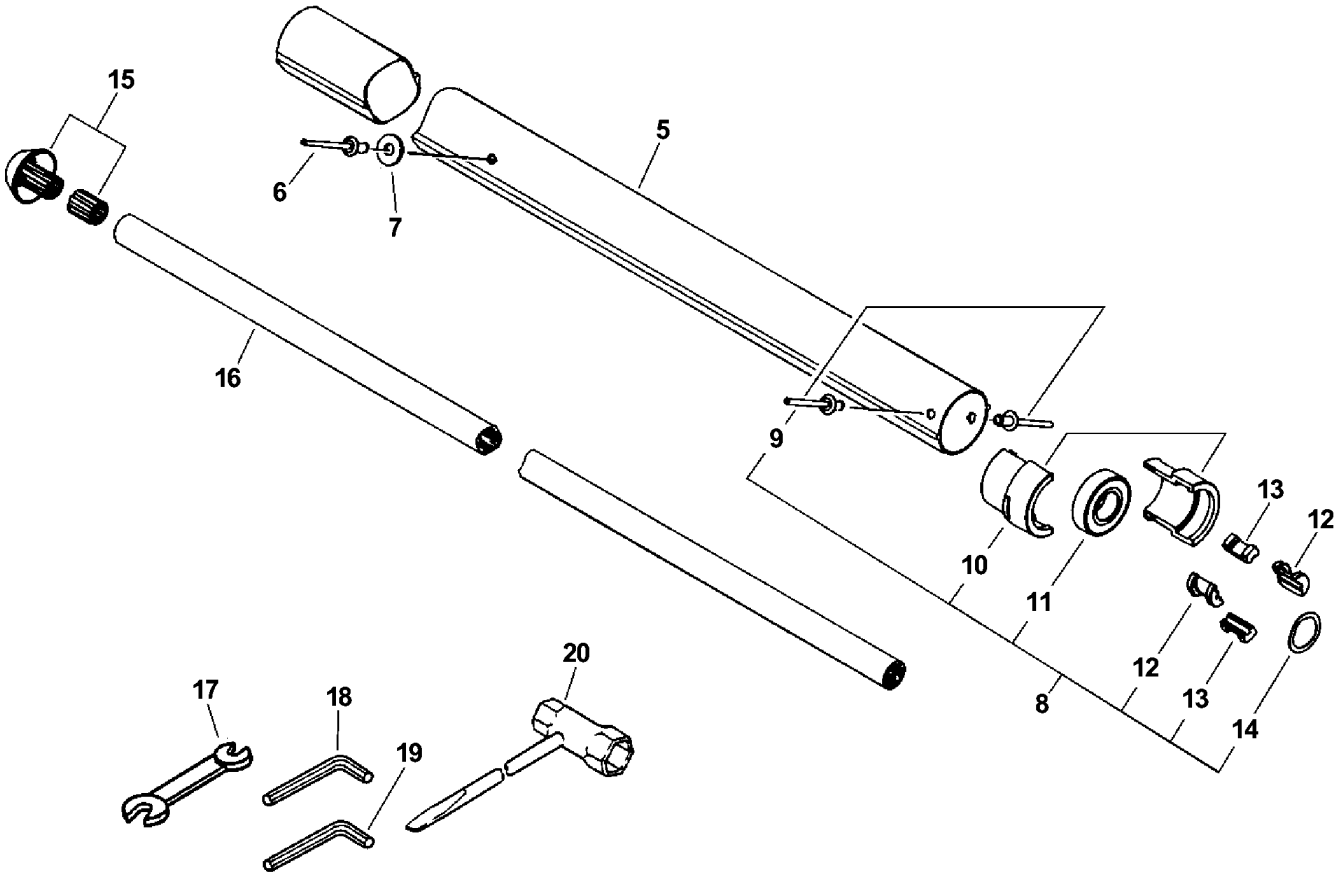
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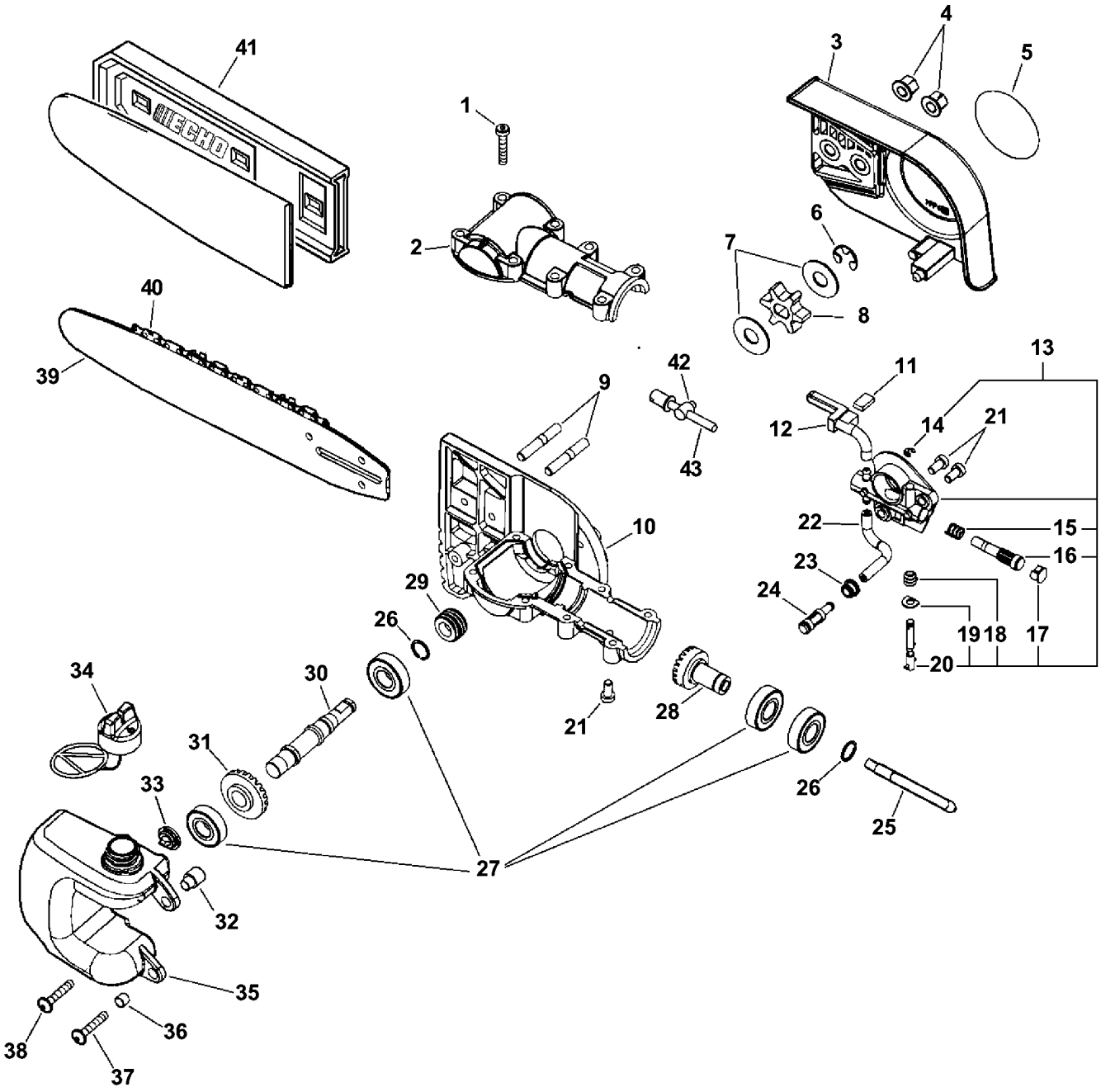
TWO (2) ASSEMBLIES REQUIRED:

PPT-230 S/N: 06001001-06999999
07001401-07999999

PPT-231 S/N: 06001650-06999999



ITEM	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	43330822360	1	UPPER DRIVESHAFT GUIDE ASY	INCLUDES ITEMS 2-4 (SEE DIAGRAM)
2	61033522460	2	RING, RETAINING	
3	10429322360	1	PAD, FOAM	
4	43334522361	1	GUIDE, SHAFT	
5	61021022361	1	SHAFT, UPPER	
6	89001122460	1	RIVET, ALUMINUM	
7	40011122360	1	WASHER, FLAT 5	
8	61010522360	1	BEARING HOLDER ASY	INCLUDES ITEMS 9-14
9	89001122360	2	RIVET, STEEL	
10	61011122360	2	HOLDER, BEARING	
11	90080206002	1	BEARING, BALL	
12	43334522560	2	HOLDER, INNER BEARING - LARGE	
13	43334522460	2	HOLDER, INNER BEARING - SMALL	
14	17812922360	1	WASHER, WAVE	
15	61029822360	1	ADAPTER, DRIVESHAFT - UPPER	
16	61001122360	1	DRIVESHAFT - UPPER	
17	89511200330	1	SPANNER, 8X10	
18	89561203430	1	L-WRENCH - 3mm	
19	89561000130	1	L-WRENCH - 4mm	
20	89541039130	1	WRENCH W/SCREWDRIVER	


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ITEM	PART NUMBER	QTY	DESCRIPTION	REMARKS
1	V253000000	8	SCREW 5	
2	C531000030	1	CASE, GEAR - UPPER	
3	C300000001	1	GUARD, SPROCKET	
4	43301903933	2	FLANGE NUT 6	
5	89011849130	1	LABEL, ECHO	
6	V583000010	1	RING, RETAINING	
7	17501439130	2	WASHER, CLUTCH	
8	C580000070	1	SPROCKET, DRIVE	
9	V224000000	2	STUD BOLT 6	
10	C531000040	1	CASE, GEAR - LOWER	
11	43724439130	1	PAD, FORM	
12	V470000180	1	PIPE, OIL APPLICATOR	
13	43700239130	1	AUTO-OILER ASY	INCLUDES ITEMS 14-20
14	12312715030	1	RING	
15	43701938330	1	SPRING	
16	43702437330	1	PLUNGER	
17	43706237330	1	CAP, OIL PUMP	
18	43701537330	1	SPRING	
19	43702937330	1	WASHER	
20	43701639130	1	NEEDLE, ADJUST	
21	V253000010	3	SCREW 5X10	
22	13011014330	1	PIPE, IMPULSE	
23	13211501461	1	GROMMET, FUEL	
24	43620502832	1	FILTER, OIL	
25	61002522360	1	CONNECTOR, SHAFT	
26	90070600012	2	CIRCLIP 12	
27	9404206001	4	BEARING BALL	
28	V651000041	1	GEAR, BEVEL	
29	43706338330	1	GEAR, WORM	
30	C534000020	1	SHAFT, GEAR	
31	61031122061	1	GEAR, BEVEL	
32	V354000010	1	COLLAR 6	
33	13131406320	1	VALVE, CHECK	
34	P021000950	1	OIL CAP ASY	
35	C200000000	1	TANK, OIL	
36	13104528230	2	COLLAR 6	
37	V253000030	2	SCREW 5X16	
38	V253000020	1	SCREW 5X16	
39	1102373901	1	GUIDE BAR - 10" INTENZ -- REGULAR	
40	1917039	1	CHAIN - 10" (91-VS) -- REGULAR	
41	X490000060	1	COVER, GUIDE BAR	
42	43301403931	1	TENSIONER***1***	
43	43301639131	1	BOLT, TENSIONER***1***	

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1: FOR USE WITH STANDARD GUIDE BAR (INTENZ GUIDE BAR NOT USED)

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