



Parts Manual

Mfg. No: 866018
SP43W, B&S Brush Cutter (2010)

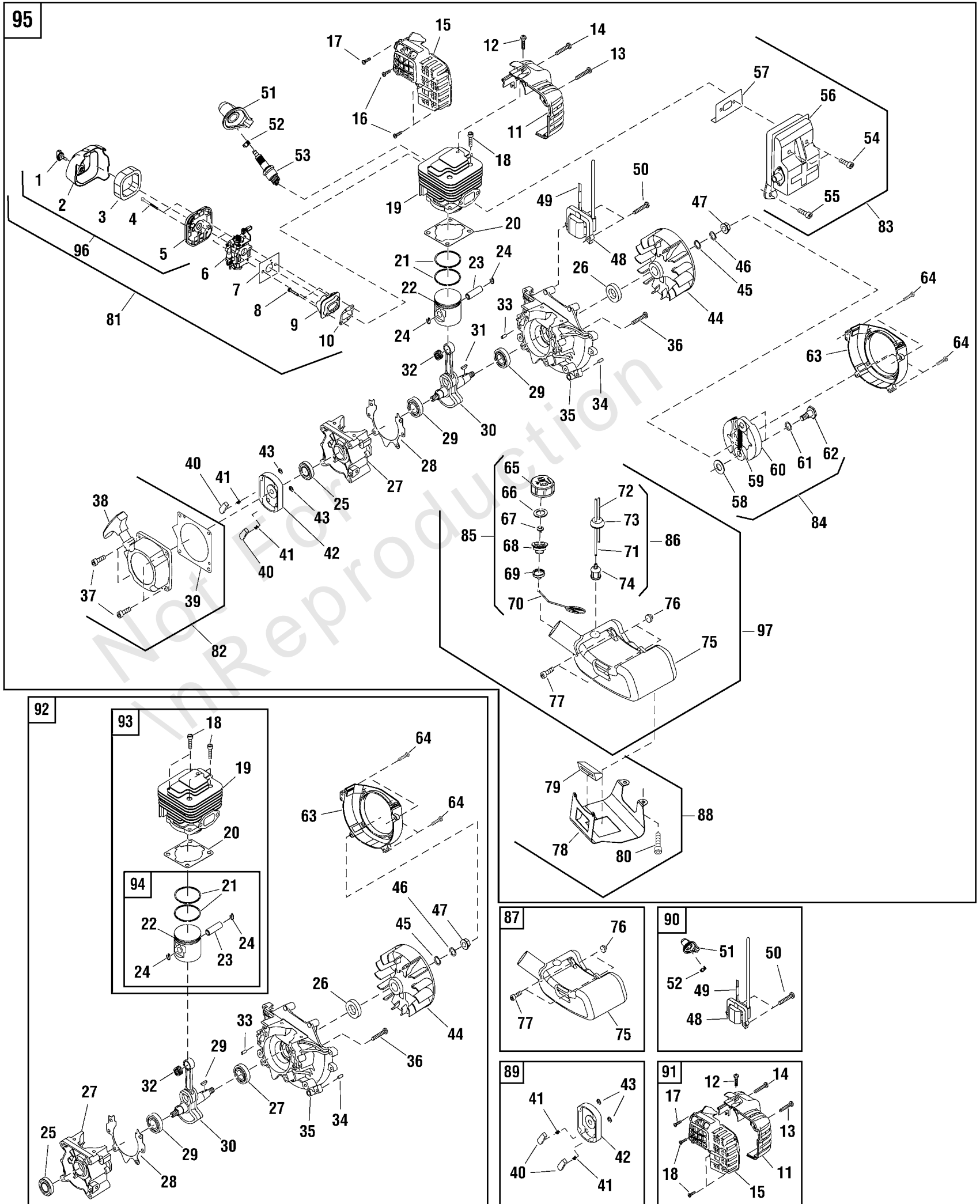
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Not For
In Reproduction

Engine Group - SP43W (702109)

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 866018



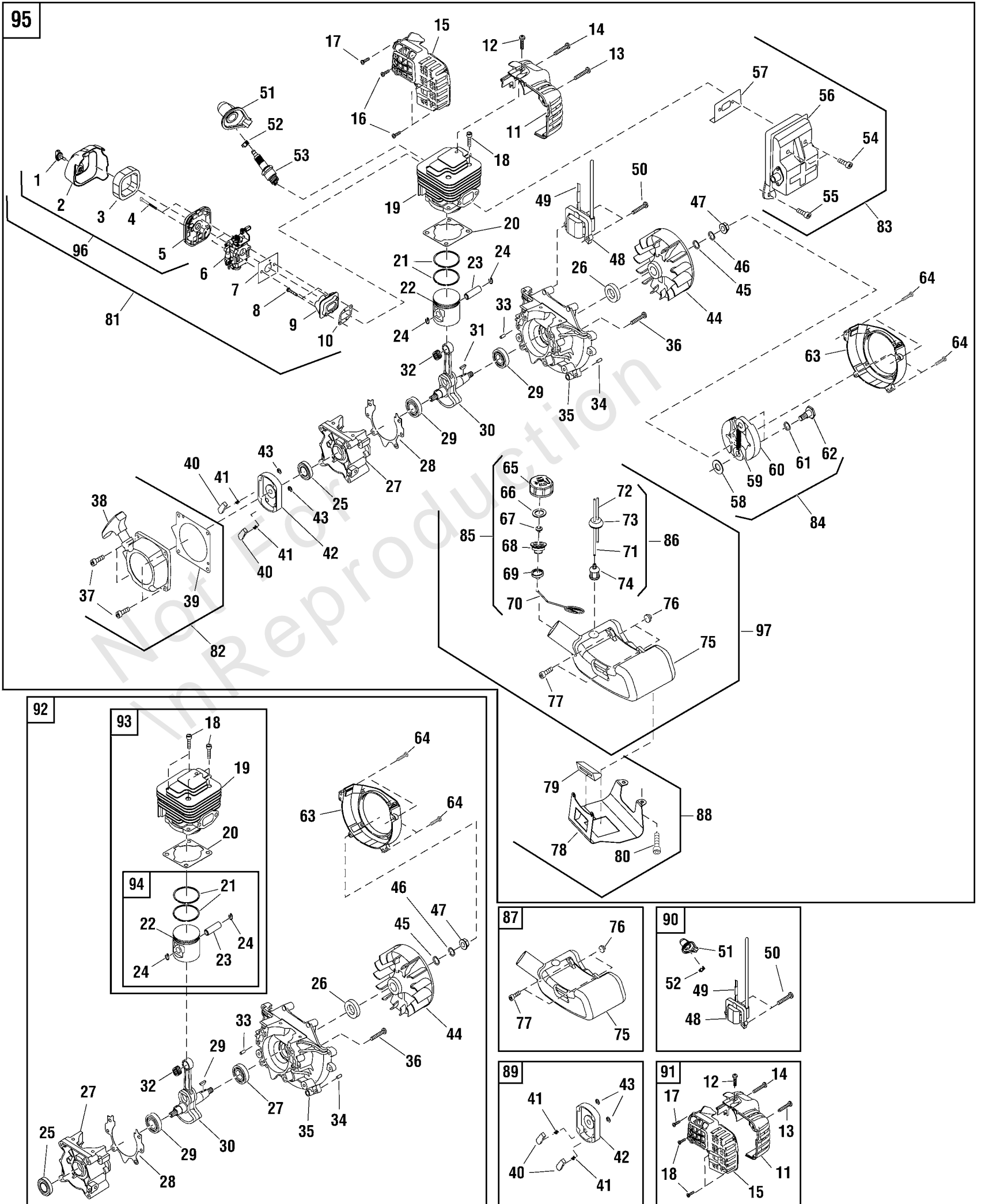
Engine Group - SP43W (702109)

REF NO	PART NO	QTY	DESCRIPTION
1	700804	1	SCREW
2	700904	1	COVER, Cleaner, Outer
3	700317	1	FILTER
4	702045	2	BOLT, M5 x 55
5	700806	1	COVER, Cleaner, Inner
6	700905	1	CARBURETOR
7	700849	1	GASKET, Carburetor
8	701850	2	BOLT, M5 x 25
9	700848	1	ADMITTING PIPE
10	700847	1	GASKET, Admitting Pipe
11	700907	1	SHROUD, Front
12	-----	1	BOLT, M5 x 16 -(Not a serviceable part, order kit Ref. No. 91)
13	-----	1	BOLT, M5 x 12 -(Not a serviceable part, order kit Ref. No. 91)
14	-----	1	BOLT, M5 x 12 -(Not a serviceable part, order kit Ref. No. 91)
15	700908	1	SHROUD, Rear
16	700764	3	SCREW, Self Tapping, ST5 x 20
17	700924	1	SCREW, Self Tapping, ST4.2 x 25
18	700374	4	BOLT, M5 x 20
19	702052	1	CYLINDER HEAD
20	700853	1	GASKET, Cylinder Head
21	700857	2	PISOTN RING
22	700858	1	PISTON
23	700856	1	PIN, Piston
24	700912	2	RING, Pin Retain
25	700345	1	OIL SEAL, 11.7 x 22 x 7
26	700864	1	OIL SEAL, 30 x 14.7 x 7
27	702039	1	CRANK CASE, Rear
28	700866	1	GASKET, Crank Case
29	700865	2	BEARING, 6201/P6
30	700861	1	CRANK SHAFT
31	700341	1	KEY, 3 x 5 x 13
32	700860	1	NEEDLE BEARING
33	700885	1	PIN, Cylindrical, B5 x 12
34	700386	1	PIN, Cylindrical, B4 x 10
35	702040	1	CRANK CASE, Front
36	-----	1	BOLT M5 x 30 -(Not a serviceable part, order kit Ref. No. 92)
37	-----	4	BOLT, M5 x 20 -(Not a serviceable part, order kit Ref. No. 82)
38	700809	1	KIT, Shroud Assembly
39	700329	1	PAD, Starter
40	-----	2	CINCH, Starter -(Not a serviceable part, order kit Ref. No. 89)
41	-----	2	SPRING, Starter -(Not a serviceable part, order kit Ref. No. 89)
42	-----	1	STARTER BOX -(Not a serviceable part, order kit Ref. No. 89)
43	-----	2	RING, Retainer -(Not a serviceable part, order kit Ref. No. 89)
44	702054	1	FLY WHEEL
45	700380	1	WASHER, Flat, 8

Engine Group - SP43W (702109)

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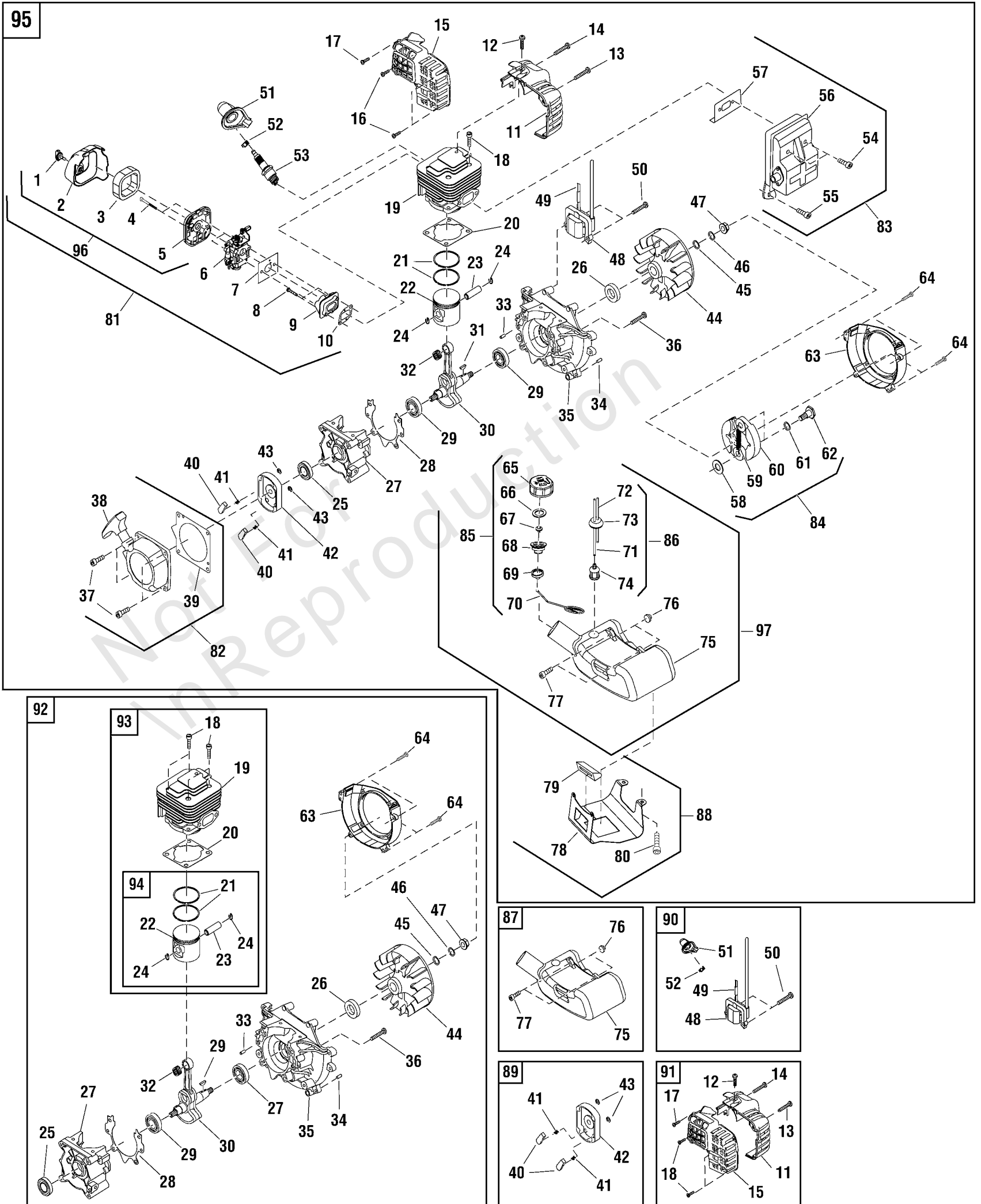
Engine Group - SP43W (702109)

REF NO	PART NO	QTY	DESCRIPTION
46	700379	1	WASHER, Spring, 8
47	700378	1	NUT, Hex, M8
48	700871	1	MAGNETO COIL
49	700827	1	CORD, Magneto
50	-----	2	BOLT M5 x 20 -(Not a serviceable part, order kit Ref. No. 90)
51	700352	1	BOOT, Spark Plug
52	700351	1	CLIP, Spark Plug
53	700360	1	SPARK PLUG
54	702032	2	BOLT M6 x 5-10.9
55	-----	1	BOLT, M5 x 12 -(Not a serviceable part, order kit Ref. No. 83)
56	700918	1	MUFFLER
57	700874	1	GASKET, Muffler
58	700383	2	WASHER, B
59	700364	1	SPRING, Clutch
60	700365	1	EXPANDER, Complete
61	700382	2	WASHER, Wave
62	700767	2	SCREW, Shaft
63	702041	1	COVER, Fan
64	701850	4	BOLT, M5 x 25
65	-----	1	LID, Fuel Tank -(Not a serviceable part, order kit Ref. No. 85)
66	-----	1	GASKET -(Not a serviceable part, order kit Ref. No. 85)
67	-----	1	INLET -(Not a serviceable part, order kit Ref. No. 85)
68	-----	1	LID, Fuel Tank, Inner -(Not a serviceable part, order kit Ref. No. 85)
69	-----	1	COVER, End -(Not a serviceable part, order kit Ref. No. 85)
70	-----	1	CHAIN, Fuel Cap -(Not a serviceable part, order kit Ref. No. 85)
71	-----	1	PIPE, Fuel -(Not a serviceable part, order kit Ref. No. 86)
72	-----	1	PIPE, Soft PVC -(Not a serviceable part, order kit Ref. No. 86)
73	-----	1	PLUG, Fuel Line -(Not a serviceable part, order kit Ref. No. 86)
74	701666	1	FILTER, Fuel
75	702048	1	FUEL TANK
76	700388	2	PLUG, Rubber
77	-----	2	BOLT, M5 x 16 -(Not a serviceable part, order kit Ref. No. 87)
78	700880	1	BRACKET, Tank
79	700390	1	COVER, Rubber
80	-----	2	BOLT, M5 x 16 -(Not a serviceable part, order kit Ref. No. 88)
81	702110	1	KIT, Air Cleaner & Carburetor -(Includes Ref. Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9 & 10)
82	701912	1	KIT, Starter Assembly -(Includes Ref. Nos. 37, 38 & 39)
83	702031	1	KIT, Muffler Assembly -(Includes Ref. Nos. 54, 55, 56 & 57)
84	701916	1	KIT, Expander Assembly -(Includes Ref. Nos. 58, 59, 60, 61 & 62)

Engine Group - SP43W (702109)

Note: Unless noted otherwise, use the standard torque specifications

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Engine Group - SP43W (702109)

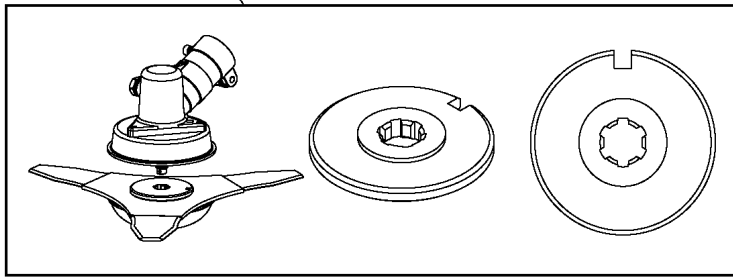
REF NO	PART NO	QTY	DESCRIPTION
85	701467	1	KIT, Fuel Cap Assembly -(Includes Ref. Nos. 65, 66, 67, 68, 69 & 70)
86	702046	1	KIT, Fuel Line Assembly -(Includes Ref. Nos. 71, 72, 73 & 74)
87	702047	1	KIT, Fuel Tank Assembly -(Includes Ref. Nos. 75, 76 & 77)
88	702049	1	KIT, Tank Bracket Assembly -(Includes Ref. Nos. 78, 79 & 80)
89	700330	1	KIT, Start Reel Assembly -(Includes Ref. Nos. 40, 41, 42 & 43)
90	702050	1	KIT, Magneto Assembly -(Includes Ref. Nos. 48, 49, 50, 51 & 52)
91	702035	1	KIT, Shroud Assembly -(Includes Ref. Nos. 11, 12, 13, 14, 15, 16 & 17)
92	702051	1	KIT, Cylinder Assembly -(Includes Ref. Nos. 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 44, 45, 46, 47, 63, 64 & 93)
93	702037	1	KIT, Cylinder Head Assembly -(Includes Ref. Nos. 18, 19, 20 & 94)
94	702038	1	KIT, Piston Assembly -(Includes Ref. Nos. 21, 22, 23 & 24)
95	702109	1	KIT, Engine, Complete
96	702416	1	KIT, Air Cleaner -(Includes Ref. Nos. 1, 2, 3, 4 & 5)
97	702417	1	KIT, Fuel Tank & Cap -(Includes Ref. Nos. 85, 86 & 87)

Gearbox & Blade Service Parts

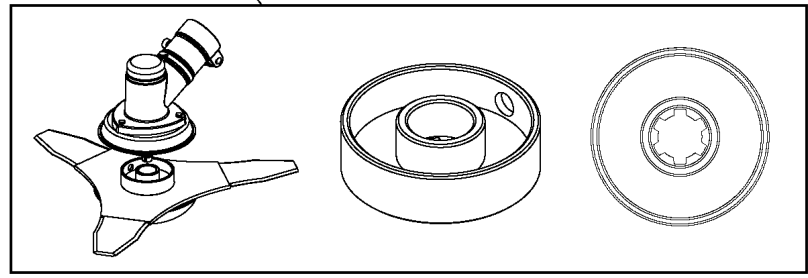
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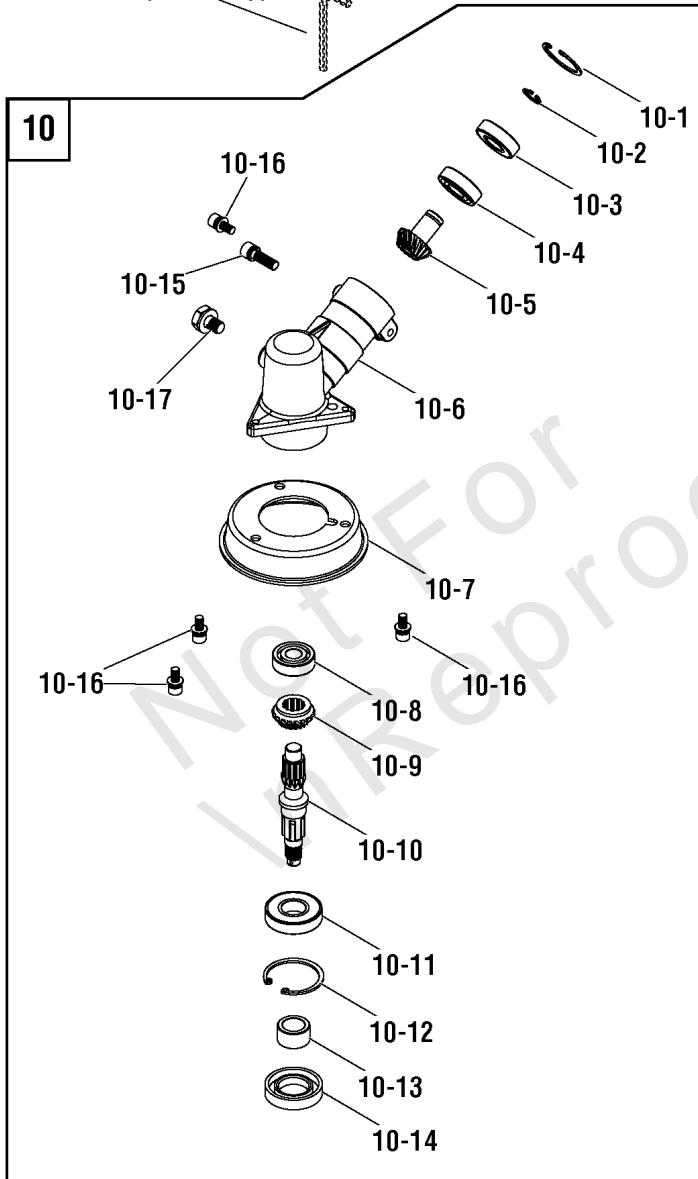
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Top Tool Hole



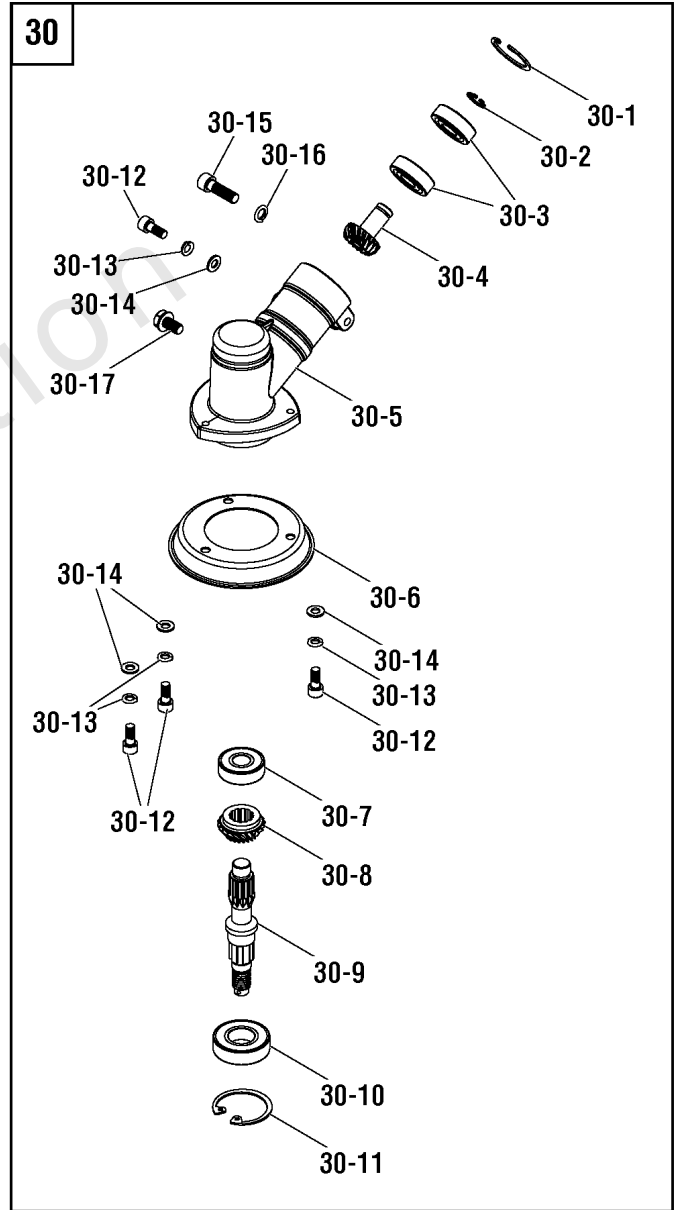
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Side Tool Hole



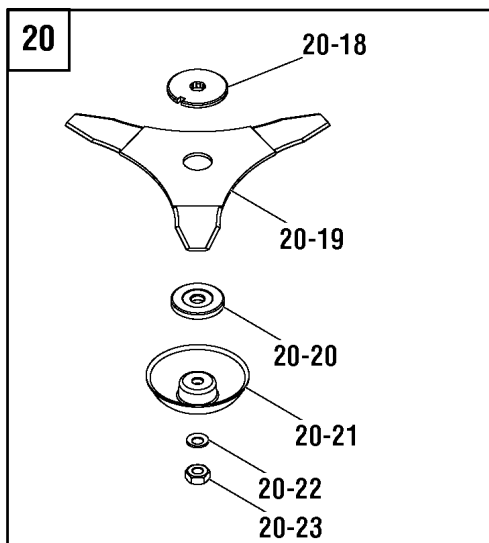
Tool (Ref. Only)



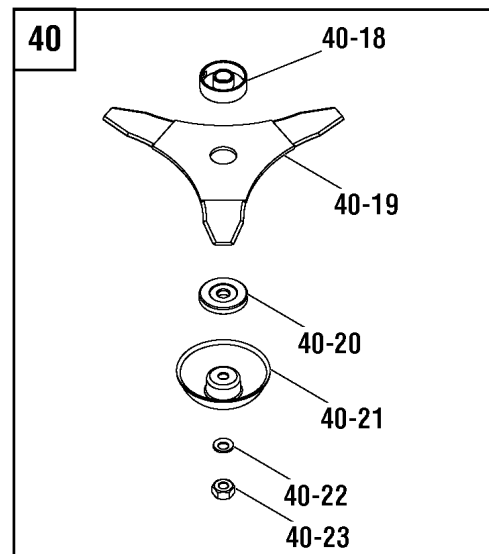
Tool (Ref. Only)



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Gearbox & Blade Service Parts

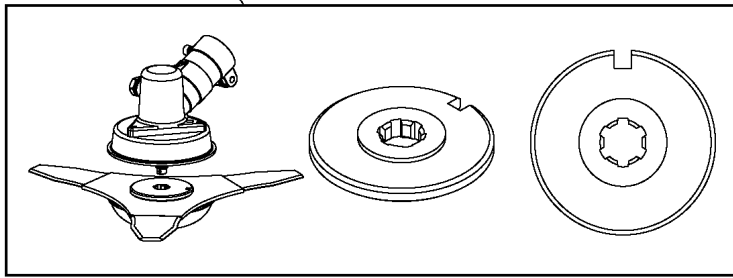
REF NO	PART NO	QTY	DESCRIPTION
10	702079	1	KIT, GEARBOX (Top lock hole) -(Includes Ref. Nos. 10-1, 10-2, 10-3, 10-4, 10-5, 10-6, 10-7, 10-8, 10-9, 10-10, 10-11, 10-12, 10-13, 10-14, 10-15, 10-16 & 10-17)
10-1	-----	1	RING, Stop, 18 -(Not a serviceable part. Order Kit Ref. No 10)
10-2	-----	1	RING, Stop, 12 -(Not a serviceable part. Order Kit Ref. No 10)
10-3	-----	1	BEARING, 6001-2RS/P6 -(Not a serviceable part. Order Kit Ref. No 10)
10-4	-----	1	BEARING, 6001/P6 -(Not a serviceable part. Order Kit Ref. No 10)
10-5	702071	1	PINION
10-6	-----	1	GEARBOX -(Not a serviceable part. Order Kit Ref. No 10)
10-7	700769	1	COVER, Blade
10-8	-----	1	BEARING, 6000/P6 -(Not a serviceable part. Order Kit Ref. No 10)
10-9	702072	1	GEAR
10-10	702073	1	SHAFT, Spline
10-11	-----	1	BEARING, 6202-2RS/P6 -(Not a serviceable part. Order Kit Ref. No 10)
10-12	-----	1	RING, Stop, 35 -(Not a serviceable part. Order Kit Ref. No 10)
10-13	700770	1	SEAL, Oil
10-14	700771	1	SLEEVE, Spline
10-15	-----	1	BOLT, M6 x 20 -(Not a serviceable part. Order Kit Ref. No 10)
10-16	-----	4	BOLT, M5 x 12 -(Not a serviceable part. Order Kit Ref. No 10)
10-17	701971	1	BOLT, M8 x 12
20	702105	1	KIT, BLADE -(Includes Ref. Nos. 20-18, 20-19, 20-20, 20-21, 20-22 & 20-23)
20-18	700772	1	GASKET, Spline
20-19	701891	1	BLADE
20-20	700841	1	HOLDER
20-21	701901	1	PROTECTOR, Blade
20-22	700773	1	WASHER, Wave, 10
20-23	700397	1	NUT
30	702422	1	KIT, GEARBOX (Side lock hole) -(Includes Ref. Nos. 30-1, 30-2, 30-3, 30-4, 30-5, 30-6, 30-7, 30-8, 30-9, 30-10, 30-11, 30-12, 30-13, 30-14, 30-15, 30-16 & 30-17)
30-1	-----	1	RING, Stop, 26 -(Not a serviceable part. Order Kit Ref. No 30)
30-2	-----	1	RING, Stop, 10 -(Not a serviceable part. Order Kit Ref. No 30)
30-3	-----	2	BEARING, 6000/P6 -(Not a serviceable part. Order Kit Ref. No 30)
30-4	702423	1	PINION
30-5	-----	1	GEAR BOX -(Not a serviceable part. Order Kit Ref. No 30)
30-6	700393	1	COVER, Blade
30-7	-----	1	BEARING, 6000/P6 -(Not a serviceable part. Order Kit Ref. No 30)
30-8	702424	1	GEAR
30-9	702425	1	SHAFT, Spline
30-10	-----	1	BEARING, 6202-2RS/P6 -(Not a serviceable part. Order Kit Ref. No 30)

Gearbox & Blade Service Parts

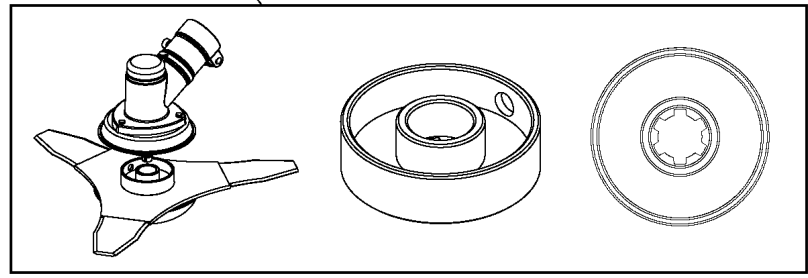
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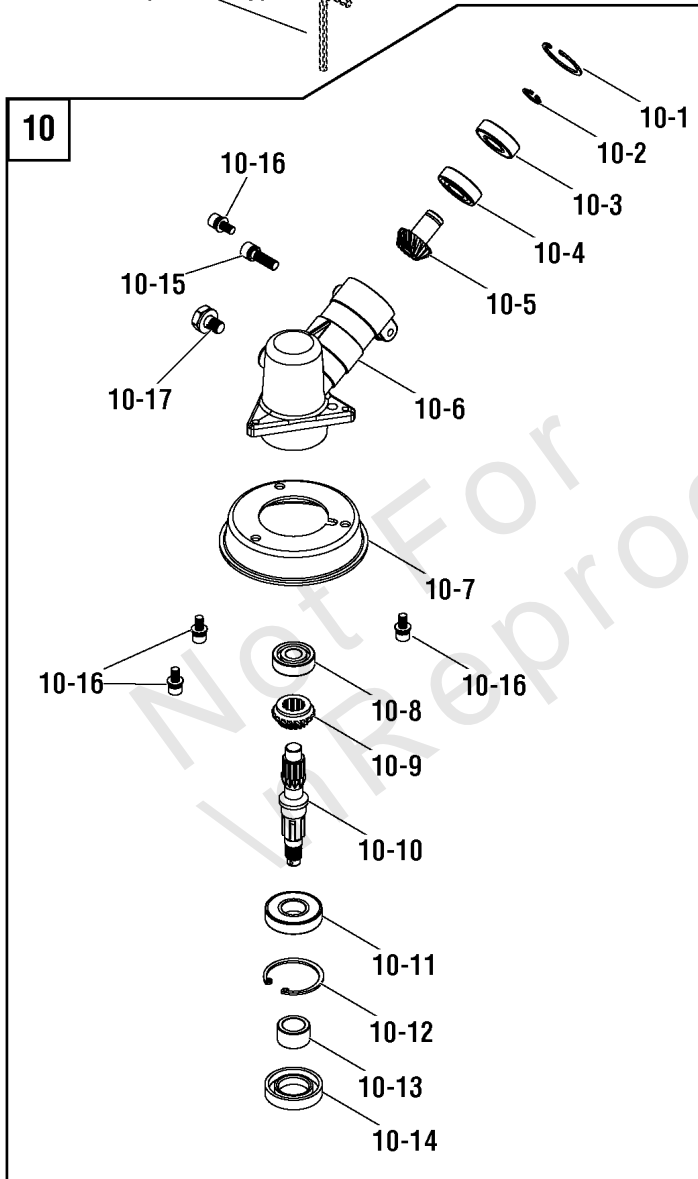
Detail Ref. No. 20-18
Top Tool Hole



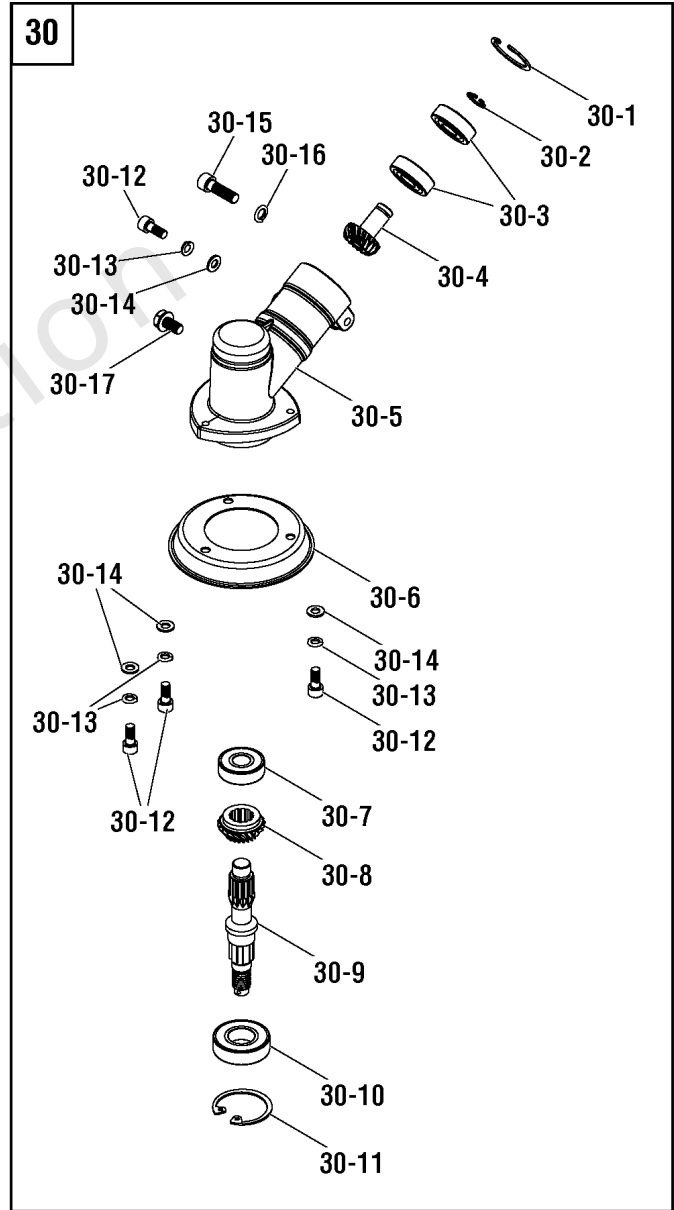
Detail Ref. No. 40-18
Side Tool Hole



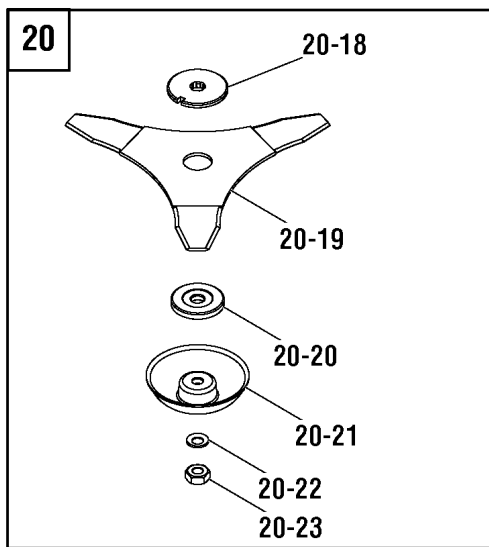
Tool (Ref. Only)



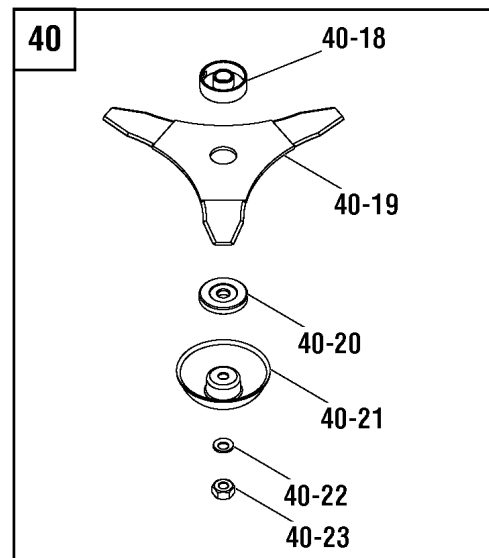
Tool (Ref. Only)



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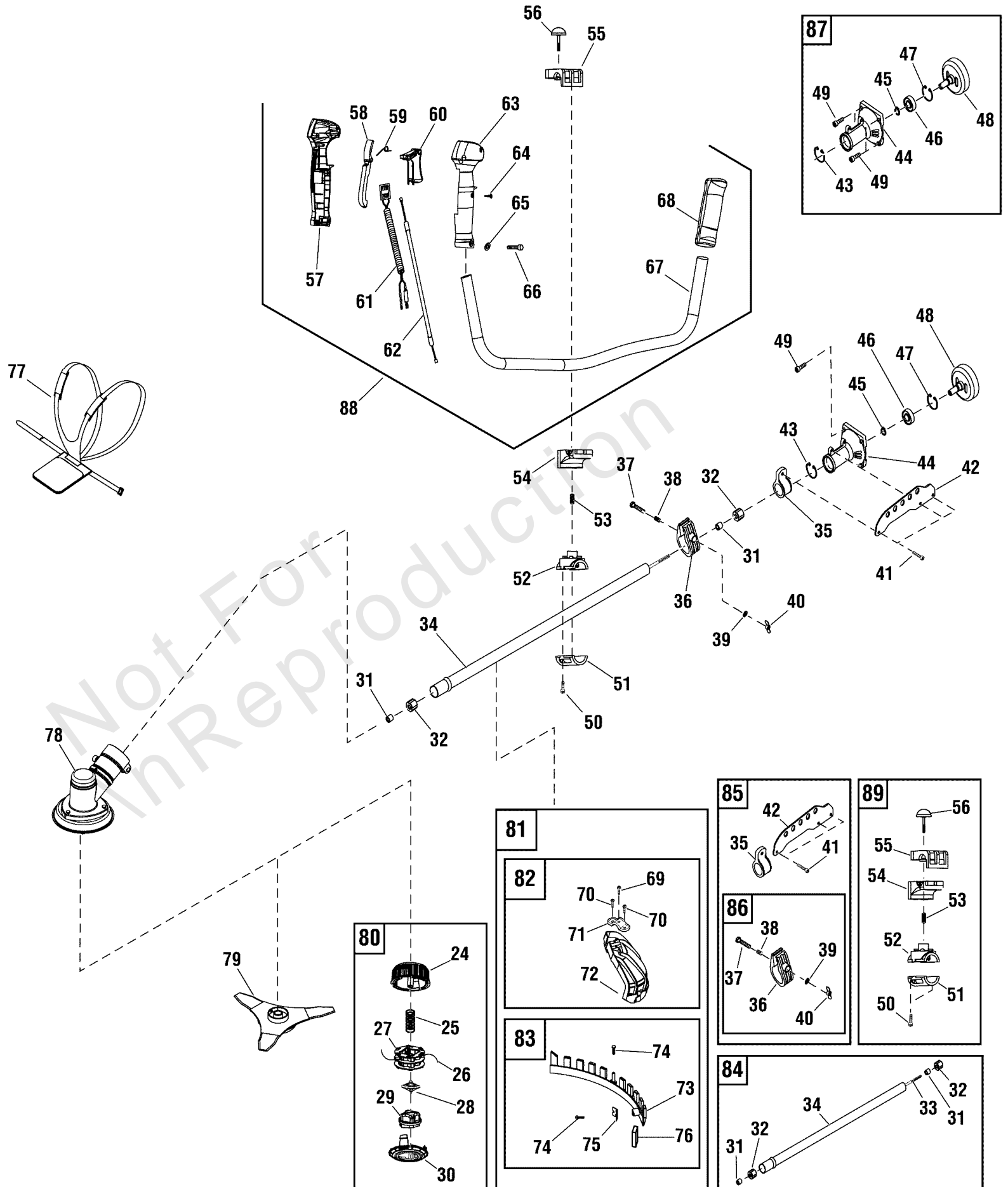
Gearbox & Blade Service Parts

REF NO	PART NO	QTY	DESCRIPTION
30-11	-----	1	RING, Stop, 32 -(Not a serviceable part. Order Kit Ref. No 30)
30-12	700399	4	BOLT, M5 x 12
30-13	700400	4	WASHER, Spring, 5
30-14	700401	4	WASHER, Flat, 5
30-15	700402	1	BOLT, M6 x 20 -(Not a serviceable part. Order Kit Ref. No 30)
30-16	700403	1	WASHER, Spring, 6 -(Not a serviceable part. Order Kit Ref. No 30)
30-17	700404	1	BOLT
40	702428	1	KIT, BLADE -(Includes Ref. Nos. 40-18, 40-19, 40-20, 40-21, 40-22 & 40-23)
40-18	700395	1	GASKET, Spline
40-19	701891	1	BLADE
40-20	700841	1	HOLDER
40-21	701901	1	PROTECTOR, Blade
40-22	700773	1	WASHER, Wave, 10
40-23	700397	1	NUT

Shaft Group (866014_866018)

Note: Unless noted otherwise, use the standard torque specifications

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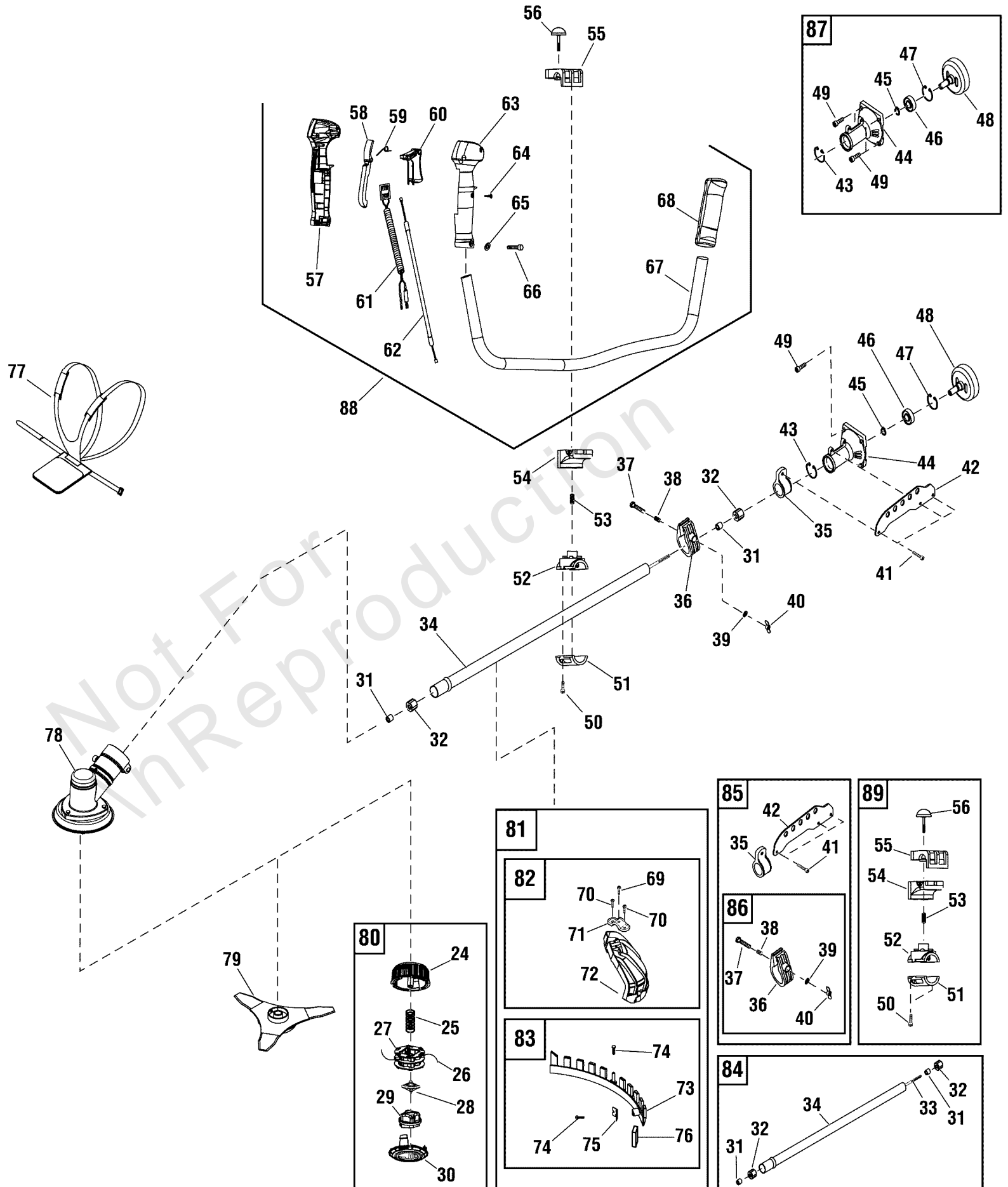
Shaft Group (866014_866018)

REF NO	PART NO	QTY	DESCRIPTION
24	-----	1	BOX, Bump Head -(Not a serviceable part. Order Kit Ref. No 80)
25	-----	1	SPRING, Bump Head -(Not a serviceable part. Order Kit Ref. No 80)
26	-----	1	ROPE, Flexible -(Not a serviceable part. Order Kit Ref. No 80)
27	-----	1	SEAT, Flexible Rope -(Not a serviceable part. Order Kit Ref. No 80)
28	-----	1	COVER, Flexible Rope -(Not a serviceable part. Order Kit Ref. No 80)
29	-----	1	BUMP HEAD -(Not a serviceable part. Order Kit Ref. No 80)
30	-----	1	COVER, Bump Head -(Not a serviceable part. Order Kit Ref. No 80)
31	700407	2	BEARING, Oil
32	700406	2	RUBBER COVER, Bearing Oil
33	702429	1	DRIVE SHAFT
34	702427	1	SHAFT, Straight
35	700420	1	RING, Hang
36	-----	1	RING, Limit -(Not a serviceable part. Order Kit Ref. No 86)
37	-----	1	BOLT, M6 x 45 -(Not a serviceable part. Order Kit Ref. No 86)
38	-----	1	SPRING -(Not a serviceable part. Order Kit Ref. No 86)
39	-----	1	WASHER, Flat, 6 -(Not a serviceable part. Order Kit Ref. No 86)
40	-----	1	NUT, M6 -(Not a serviceable part. Order Kit Ref. No 86)
41	702108	3	BOLT, M6 x 16
42	700421	1	HANDLE, Hang
43	-----	1	RING, Stop, 37 -(Not a serviceable part. Order Kit Ref. No 87)
44	-----	1	CASE, Clutch -(Not a serviceable part. Order Kit Ref. No 87)
45	-----	1	RING, Stop, 15 -(Not a serviceable part. Order Kit Ref. No 87)
46	-----	1	BEARING, 6202-2RZ/P6 -(Not a serviceable part. Order Kit Ref. No 87)
47	-----	1	RING, Stop, 35 -(Not a serviceable part. Order Kit Ref. No 87)
48	701471	1	CLUTCH DRUM, Complete
49	-----	4	BOLT, M6 x 20 -(Not a serviceable part. Order Kit Ref. No 87)
50	-----	2	BOLT, M5 x 16 -(Not a serviceable part. Order Kit Ref. No 89)
51	700798	1	BRACKET, Shaft, Lower
52	700799	1	BRACKET, Shaft, Upper
53	700839	1	SPRING
54	700800	1	BRACKET, Handle, Lower
55	700801	1	BRACKET, Handle, Upper
56	702441	1	BOLT, With Knob, Red
57	700779	1	COVER, Handle, Control Switch, LH
58	700788	1	HANDLE, Self Lock
59	700787	1	SPRING, Torsion
60	700786	1	LEVEL, Throttle
61	700780	1	STOP BUTTON, Complete

Shaft Group (866014_866018)

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Shaft Group (866014_866018)

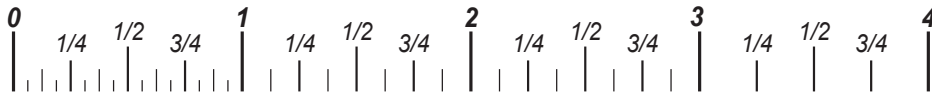
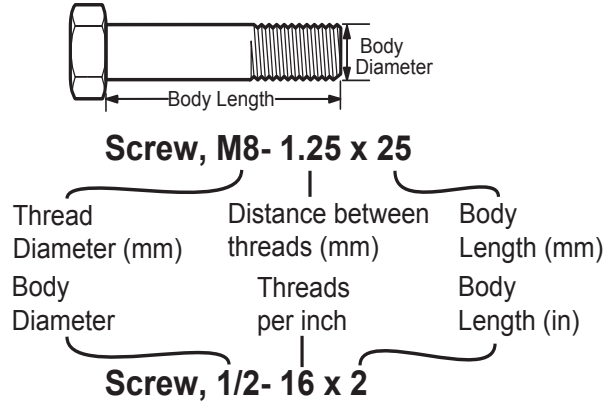
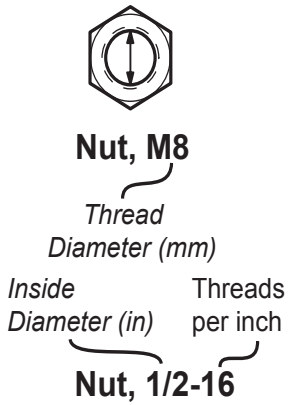
REF NO	PART NO	QTY	DESCRIPTION
62	700781	1	CABLE, Complete
63	700785	1	COVER, Handle, Control Switch, RH
64	700784	1	SCREW, Self Tapping, M3.5 x 13
65	700783	1	WASHER, Flat, 5
66	700782	1	SCREW, M5 x 30
67	700833	1	HANDLE
68	700834	1	COVER, Handle
69	700792	1	BOLT, M5 x 10
70	700791	2	BOLT, M5 x 12
71	700793	1	HOLDER, Safety Guard
72	700794	1	SAFTEY GUARD
73	700796	1	SECURING SADDLE
74	700795	2	SCREW, Self Tapping, ST4.2 x 16
75	700427	1	BLADE
76	700428	1	COVER, Blade
77	700797	1	SHOULDER BELT
78	-----	1	KIT, Gear Box -(See Gearbox & Blade Service Parts)
79	-----	1	KIT, Blade -(See Gearbox & Blade Service Parts)
80	700437	1	KIT, Bump Head -(Includes Ref. Nos. 24, 25, 26, 27, 28, 29 & 30)
81	701925	1	KIT, Guard Assembly -(Includes Ref. Nos. 82 & 83)
82	701926	1	KIT, Blade Guard -(Includes Ref. Nos. 69, 70, 71 & 72)
83	701927	1	KIT, Securing Saddle -(Includes Ref. Nos. 73, 74, 75 & 76)
84	702426	1	KIT, Drive Shaft -(Includes Ref. Nos. 31, 32, 33 & 34)
85	702075	1	KIT, Hang Handle -(Includes Ref. Nos. 36, 41, 42 & 86)
86	702076	1	KIT, Limit Ring Assembly -(Includes Ref. Nos. 36, 37, 38, 39 & 40)
87	701931	1	KIT, Clutch Assembly -(Includes Ref. Nos. 43, 44, 45, 46, 47, 48 & 49)
88	702077	1	KIT, Handle Assembly -(Includes Ref. Nos. 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67 & 68)
89	702439	1	KIT, Handle Bracket Assembly -(Includes Ref. Nos. 50, 51, 52, 53, 54, 55 & 56)

Hardware Identification & Torque Specifications

Torque Specification Chart								
FOR STANDARD METRIC MACHINE HARDWARE (Tolerance ± 20%)								
Property Class	5.6		8.8		10.9		12.9	
	Class 5.6		Class 8.8		Class 10.9		Class 12.9	
Size Of Hardware	in/lbs		in/lbs		in/lbs		in/lbs	
	ft/lbs	Nm.	ft/lbs	Nm.	ft/lbs	Nm.	ft/lbs	Nm.
M3	5.88	.56	13.44	1.28	19.2	1.80	22.92	2.15
M4	13.44	1.28	30.72	2.90	43.44	4.10	52.56	4.95
M5	26.4	2.50	60.96	5.75	5.97	8.10	7.15	9.7
M6	44.64	4.3	7.3	9.9	10.3	14	12.1	16.5
M7	5.2	7.1	12.1	16.5	16.9	23	19.9	27
M8	7.7	10.5	17.7	24	25	34	29	40
M10	15	21	35	48	50	67	59	81
M12	26	36	61	83	86.2	117	103	140
M14	42	58	101	132	136	185	162	220
M16	64	88	147	200	210	285	250	340
M18	89	121	202	275	287	390	346	470
M20	126	171	290	390	405	550	486	660
M22	169	230	390	530	559	745	656	890
M24	217	295	497	375	708	960	840	1140
M27	320	435	733	995	1032	1400	1239	1680
M30	435	590	995	1350	1401	1900	1681	2280
M33	590	800	1349	1830	1902	2580	2278	3090
M36	759	1030	1740	2360	2441	3310	2935	3980
M39	988	1340	2249	3050	3163	4290	3798	5150

Torque Specification Chart						
FOR STANDARD MACHINE HARDWARE (Tolerance ± 20%)						
Hardware Grade	No Marks		SAE Grade 5		SAE Grade 8	
	SAE Grade 2		SAE Grade 5		SAE Grade 8	
Size Of Hardware	in/lbs		in/lbs		in/lbs	
	ft/lbs	Nm.	ft/lbs	Nm.	ft/lbs	Nm.
8-32	19	2.1	30	3.4	41	4.6
8-36	20	2.3	31	3.5	43	4.9
10-24	27	3.1	43	4.9	60	6.8
10-32	31	3.5	49	5.5	68	7.7
1/4-20	66	7.6	8	10.9	12	16.3
1/4-28	76	8.6	10	13.6	14	19.0
5/16-18	11	15.0	17	23.1	25	34.0
5/16-24	12	16.3	19	25.8	29	34.0
3/8-16	20	27.2	30	40.8	45	61.2
3/8-24	23	31.3	35	47.6	50	68.0
7/16-14	30	40.8	50	68.0	70	95.2
7/16-20	35	47.6	55	74.8	80	108.8
1/2-13	50	68.0	75	102.0	110	149.6
1/2-20	55	74.8	90	122.4	120	163.2
9/16-12	65	88.4	110	149.6	150	204.0
9/16-18	75	102.0	120	163.2	170	231.2
5/8-11	90	122.4	150	204.0	220	299.2
5/8-18	100	136	180	244.8	240	326.4
3/4-10	160	217.6	260	353.6	386	525.0
3/4-16	180	244.8	300	408.0	420	571.2
7/8-9	140	190.4	400	544.0	600	816.0
7/8-14	155	210.8	440	598.4	660	897.6
1-8	220	299.2	580	788.8	900	1,244.0
1-12	240	326.4	640	870.4	1,000	1,360.0

The guides and ruler furnished below are designed to help you select the appropriate hardware.



Standard Hardware Sizing

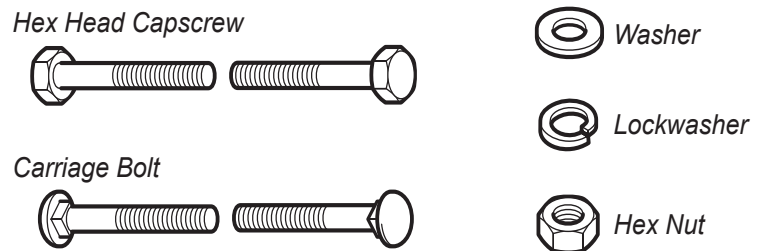
When a washer or nut is identified as 1/2" (M8), this is the *Nominal size*, meaning the *inside diameter* is 1/2 inch (8mm metric thread diameter); if a second number is present it represents the *threads per inch* (distance between threads).

When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw, 2 inches (50mm).

NOTES

- These torque values are to be used for all hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
- Recommended seating torque values for locknuts:
 - for prevailing torque locknuts - use 65% of grade 5 torques.
 - for flange whizlock nuts and screws - use 135% of grade 5 torques.
- Unless otherwise noted on assembly drawings, all torque values must meet this specification.

Common Hardware Types



Wrench & Fastener Size Guide

1/4" Bolt or Nut Wrench—7/16"	5/16" Bolt or Nut Wrench—1/2"	3/8" Bolt or Nut Wrench—9/16"	7/16" Bolt or Nut Wrench (Bolt)—5/8" Wrench (Nut)—11/16"	1/2" Bolt or Nut Wrench—3/4"
M6 Bolt or Nut Wrench—10mm	M8 Bolt or Nut Wrench—13mm	M10 Bolt or Nut Wrench—17mm	M12 Bolt or Nut Wrench—19mm	M14 Bolt or Nut Wrench—22mm

