

Parts Manual
45-8213EN
PL30-1212
12/17/2015

DOTCO®

12-12 Series Right Angle Grinder, Sander, and Router



For additional product information visit our website at <http://www.apextoolgroup.com>

Dotco®
Nomenclature

	12	X	1	2	XX	-	XX	XX	XX	OH
<u>Product Classification</u> 12 = Ergo Grinder/Sander										
<u>Throttle Type</u> L = Locking Lever S = Locking Lever (same configuration as "L")										
<u>Motor Size</u> 1 = 0.3 Horsepower										
<u>Tool Style</u> 2 = Right Angle										
<u>Speed Options (RPM)</u> Front Exhaust Rear Exhaust 00 = 12,000 80 = 12,000 01 = 20,000 81 = 20,000										
<u>Primary Termination Code</u> 27 = 3/8"-24 External Thread Spindle (Type 1 Cutoff Wheels) 32 = 1/4"-28 Internal Thread Spindle 34 = 5/16"-24 Internal Thread Spindle 35 = 3/8"-24 Internal Thread Spindle 36 = 300 Series, 1/4" (3 piece) Collet 45 = 1/4" Universal Collet Spindle										
<u>Extended Termination Code</u> B1 = Belt Sander (1/4" x 12") B2 = Belt Sander (1/2" x 12") B3 = Belt Sander (1/2" x 24") B4 = Belt Sander (1" x 12") B5 = Belt Sander (1" x 24") RT = Router										
<u>Options</u> Optinal Collets LH = Left Hand Rotation Motor										
<u>Overhose Option (extra cost)</u> OH = Exhaust Overhose (Rear exhaust models only)										

The original language of this manual is English.

Product Safety Information:

Intended Use:

This pneumatic material removal tool is to be used only for removing material by utilizing appropriate abrasive wheels, rotary files or other material removal cutting devices.

For product safety information and requirements for grinding without a wheel guard refer to Apex Tool Group, LLC or Apex Tool Group GmbH & Co. OHG documents:

- GS-2007, General Safety Pneumatic Grinders
- CE-2012, General Safety Sanders
- CE-2013, General Safety Material Removal Tools



This product must not be modified in any manner unless approved in writing by Apex Tool Group, LLC or Apex Tool Group GmbH & Co. OHG. All safety devices must be properly installed and maintained in good working order.

EC Declaration of Conformity:

We affirm that this machine is in accordance with the following EC regulations (2006/42/EC). Applied harmonized standards are ISO 12100:2010-11.

The name, job function and address of the person authorized to compile the technical file.

Mr. Vishnu Irigireddy
Director of Global R&D- Mechanical Engineering
Apex Tool Group
670 Industrial Drive
Lexington, SC 29072

I. V. Vishnu Varadhan

Signature: Vishnu Irigireddy
Date: December 17, 2015

Noise and Vibration:

- 12L12 Series Noise Level: ≤ 83 dB(A)
- 12S12 Series Noise Level: ≤ 83 dB(A)
- 12L12 Series Vibration Level: < 2.5 m/s²
- 12S12 Series Vibration Level: < 2.5 m/s²

Air Line Lubrication:

Use Apex Tool Group, LLC or Apex Tool Group GmbH & Co. OHG's lightweight air tool oil 500021 (available in quantities shown in the following chart) or an SAE-5 lightweight spindle oil.

Part No.	Packaged	Designation
540397	1 Quart (0.94 liter)	Airlube 10W/NR-420LB DR
533485	1 US Gallon (3.78 liter)	Airlube 10W/NR-420LB DR

Grease:

Part No.	Packaged	Designation
45-0980	2 oz. (0.06 kg)	Angle Head: Moly-XL SAE 250
540395	2 oz. (0.06 kg)	Planetary: Magnalube-G
513156	16 oz. (0.45 kg)	Planetary: Magnalube-G

Air Supply Line:

Parameter	Description
Air Hose	Minimum inside diameter: 1/4" (6,4 mm) Maximum length: 8.0' (2,4 m)
Air Pressure	Recommended: 90 psi (620 kPa)
Compressed air	Air quality according to ISO 8573-1, quality class 2.4.3 The compressed air must be clean and dry.

Service and Repair:

Tool service and repair should be performed by an authorized Apex Tool Group, LLC or Apex Tool Group GmbH & Co. OHG Center. Refer to the last page of this manual for locations.

Disposal:



Observe local disposal guidelines for all components of this tool and its packaging.

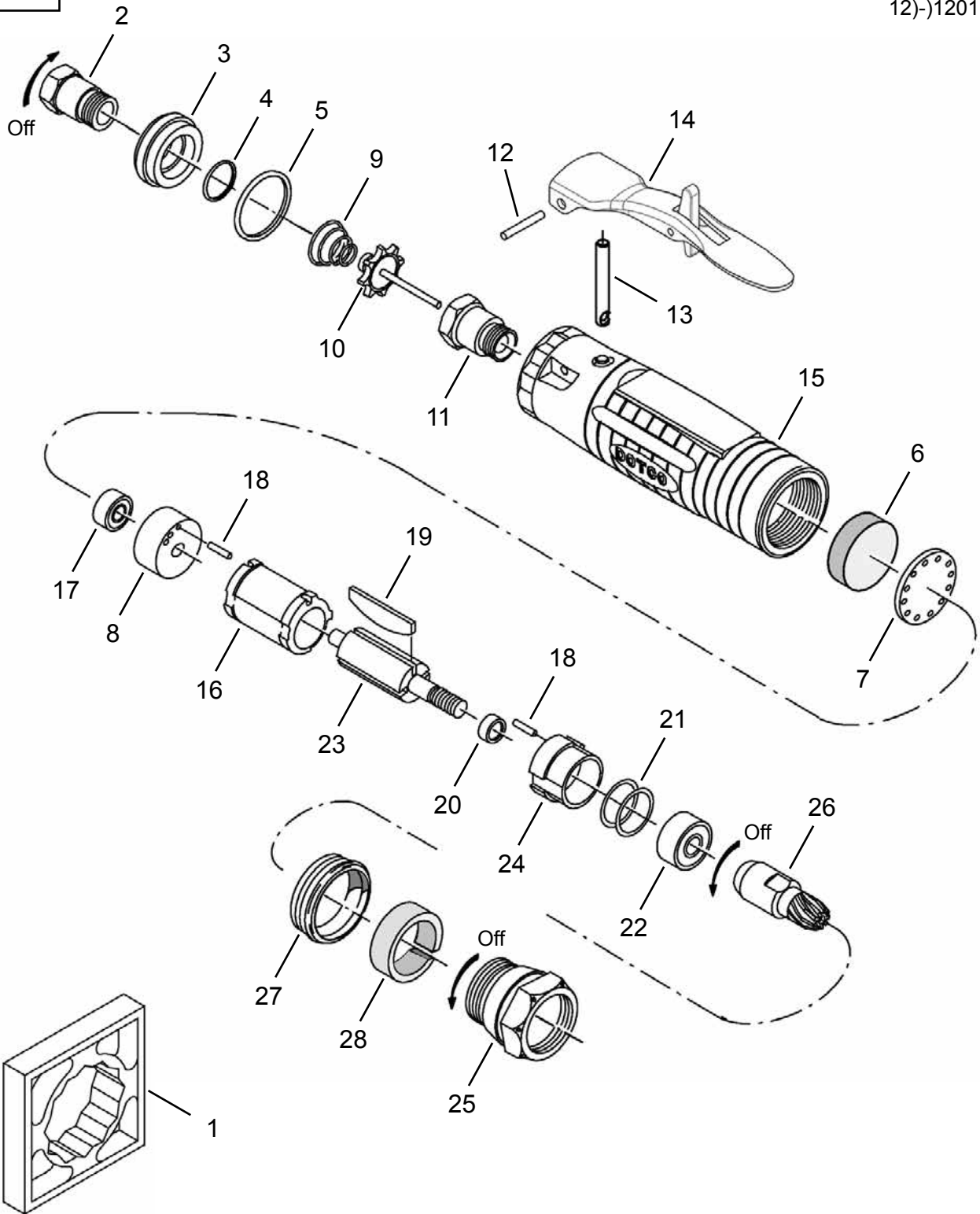
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Dotco®
Front Exhaust Motor Assembly

Models
12(-)1200
12(-)1201

“A”



Front Exhaust Motor Assembly

Illustration "A" - Front Exhaust Models

Ref	Number	#	X	EN	
				Description	
1	14-0851	1		Housing Wrench	
2	01-2505	1	1	Inlet Adapter	
3	01-2506	1		Exhaust Plug	
4	2965	1	3	O-Ring	
5	3036PT	1	3	O-Ring	
6	01-1046	1	3	Filter Disc	
7	01-1016	1		Filter Retainer	
8	1003PT	1		Rear Plate (includes 1 Ref.18) - Right Hand Rotation Models	
	2157PT	1		Rear Plate (includes 1 Ref.18) - Left Hand Rotation Models - Code "LH"	
9	01-2519	1	3	Valve Spring	
10	01-2518	1	1	Valve	
11	01-2504	1		Valve Seat	
12	1042	1	1	Lever Pin	
13	01-1017	1		Push Rod	
14	01-1267	1	1	Lock-Off Lever Assembly	
15	01-1001	1		Motor Housing	
16	1002PT	1		Cylinder	
17	504PT	1	2	Ball Bearing	
18	1041	2	4	Pin	
19	1006PT	4	12	Rotor Blade	
	04-0031	1		Rotor Blade Kit (50 Blades)	
20	1017PT	1		Spacer	
21	1355	1	1	Shim Packet	
22	538PT	1	2	Ball Bearing	
23	1005S	1		Rotor	
24	1064PT	1		Front Plate (includes 1 Ref. 18) - Right Hand Rotation Models	
	1896PT	1		Front Plate (includes 1 Ref. 18) - Left Hand Rotation Models - Code "LH"	
25	01-1043	1		Lock Ring	
26	Table "A"	1	1	Pinion Gear	
27	01-1045	1		Lock Ring Sleeve	
28	01-1021	1	3	Muffler Felt	

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

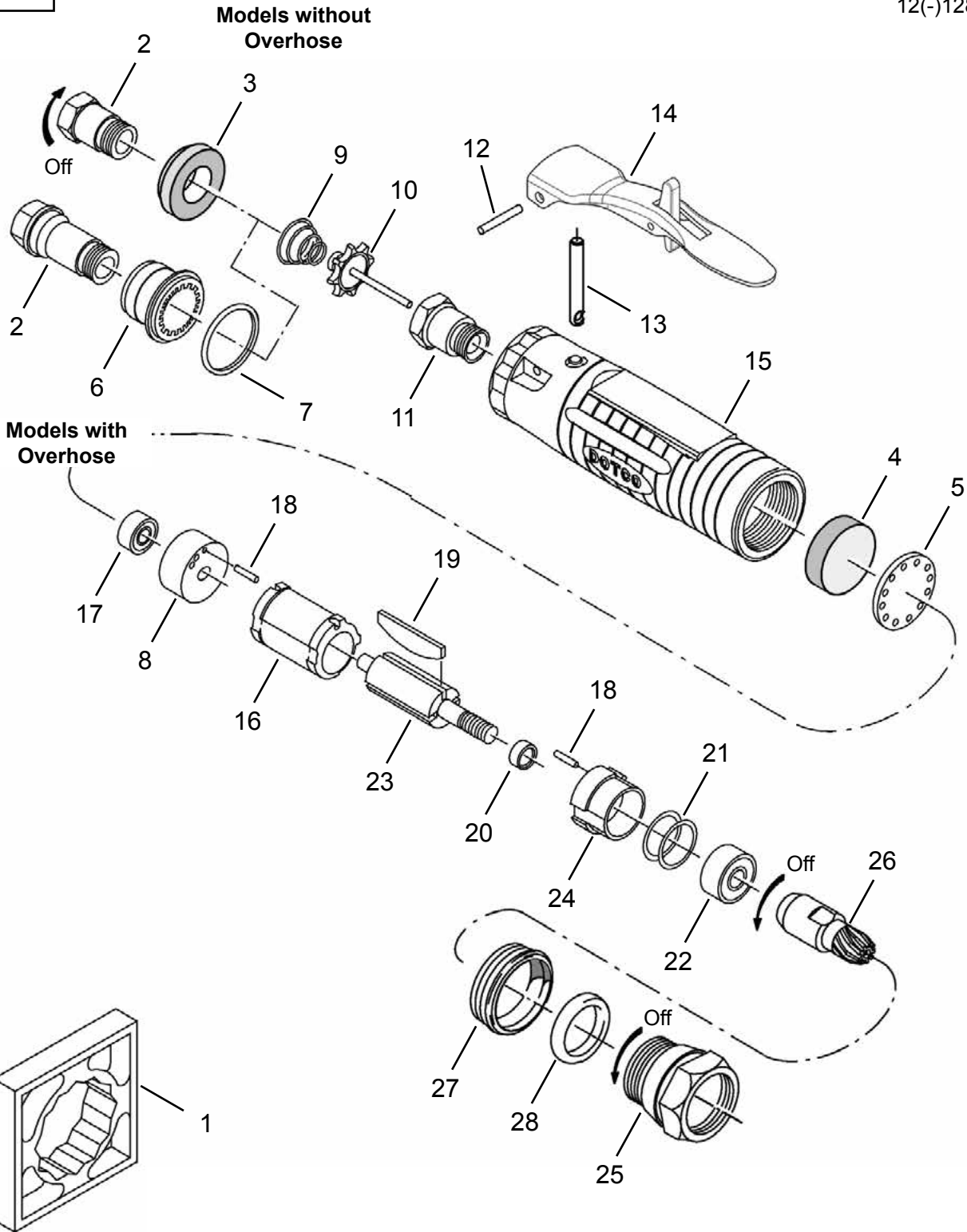
Table "A"

Ref.	Description	#	12(-)1200	#	12(-)1201
26	Pinion	1	03-1066	1	1187

Dotco®
Rear Exhaust Motor Assembly

“B”

Models
12(-)1280
12(-)1281



Rear Exhaust Motor Assembly

Illustration "B" - Rear Exhaust Models

Ref	Number	#	X	EN	
				Description	
1	14-0851	1		Housing Wrench	
2	01-2505	1	1	Inlet Adapter (without Overhose)	
	01-1031	1	1	Inlet Adapter (Overhose Models)	
3	01-2520	1	1	Diffuser	
4	01-1046	1	3	Filter Disc	
5	01-1016	1		Filter Retainer	
6	01-1032	1	1	Muffler (Overhose Models)	
7	3036PT	1	3	O-Ring (Overhose Models)	
8	1003PT	1		Rear Plate (includes 1 Ref.18)	
9	01-2519	1	K2	Valve Spring	
10	01-2518	1	1	Valve	
11	01-2504	1		Valve Seat	
12	1042	1	1	Lever Pin	
13	01-1017	1		Push Rod	
14	01-1267	1	1	Lock-Off Lever Assembly	
15	01-1001	1		Motor Housing	
16	1002PT	1		Cylinder	
17	504PT	1	K2	Ball Bearing	
18	1041	2	K2	Pin	
19	1006PT	4	K2	Rotor Blade	
	04-0031	1		Rotor Blade Kit (50 Blades)	
20	1017PT	1		Spacer	
21	1355	1	K2	Shim Packet	
22	538PT	1	K2	Ball Bearing	
23	1005S	1		Rotor	
24	1064PT	1		Front Plate (includes Ref. 18, qty. 1)	
25	01-1044	1		Lock Ring	
26	Table "B"	1	1	Pinion Gear	
27	01-1045	1		Lock Ring Sleeve	
28	01-1025	1	3	Seal	

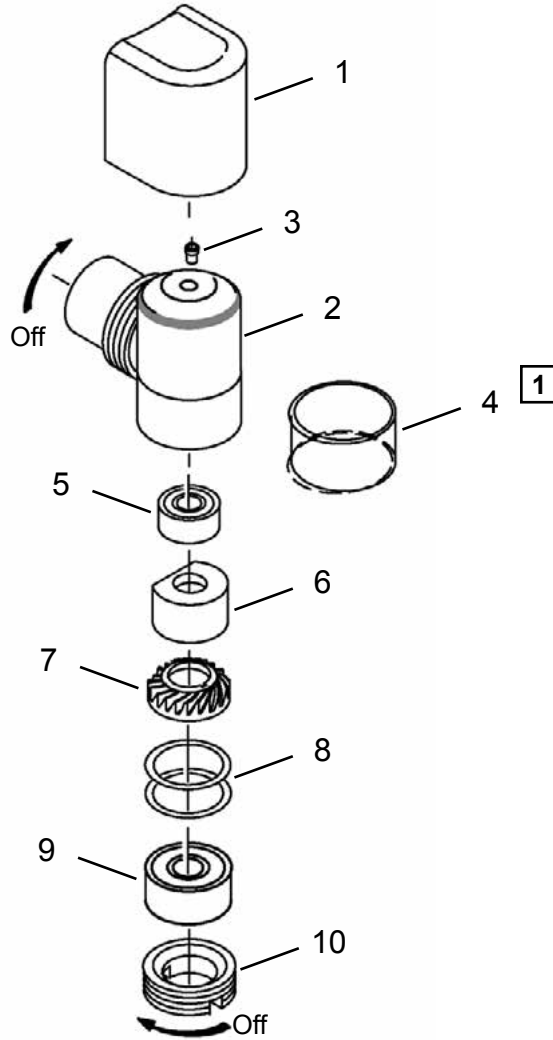
(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Table "B"

Ref.	Description	#	12(-)1280	#	12(-)1281
26	Pinion	1	03-1066	1	1187

“C”



1 Service Note: Replacement rings are .050" undersize and must be expanded using service tool # 45-1020 to slip onto angle housing.

Illustration "C" - Angle Head

Ref	Number	#	X	EN
				Description
1	01-1048	1	1	Angle Head Cover
2	1024PT	1		Angle Housing (includes Ref. 3, 4)
3	1463PT	1	1	Grease Fitting
4	1356PT	1	2	Wear Ring
5	504PT	1	2	Ball Bearing
6	1755PT	1	1	Lube Disc
7	Table "C"	1	1	Bevel Gear
8	1355	1	1	Shim Packet
9	538PT	1	2	Ball Bearing
10	1025PT	1		Lock Ring
--	45-0980	1	2	Gear Lube (not shown)
--	45-1982	1		Grease Gun (not shown)

(#) Quantity

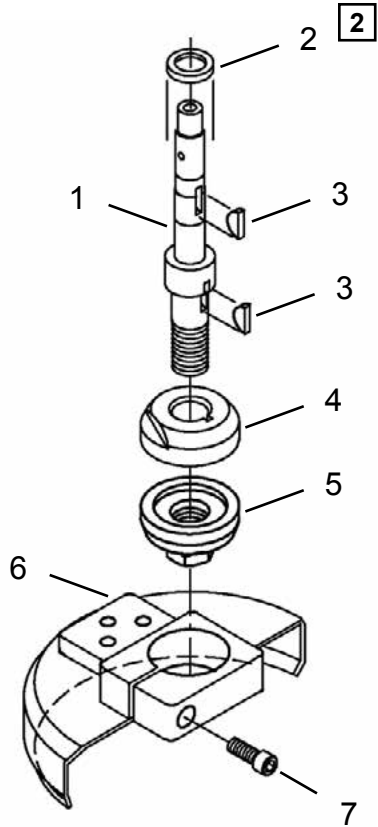
(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Table "C"

Ref.	Description	#	12(-)1200	#	12(-)1201
			12(-)1280		12(-)1281
7	Bevel Gear	1	03-1067	1	1188PT

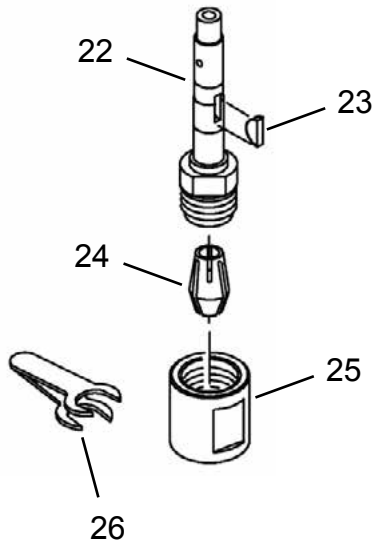
“D”

Termination 27
3/8"-24 External Thread

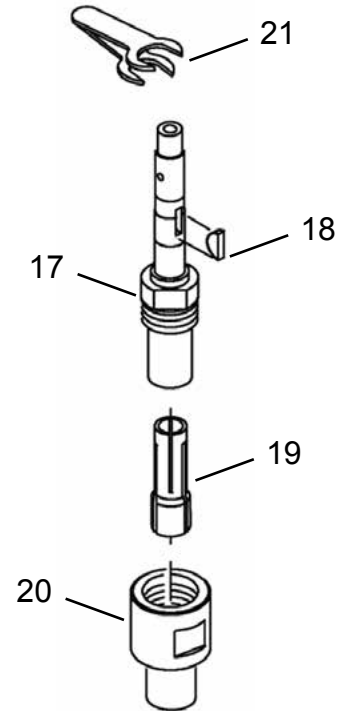


2 Countersink towards spindle shoulder.

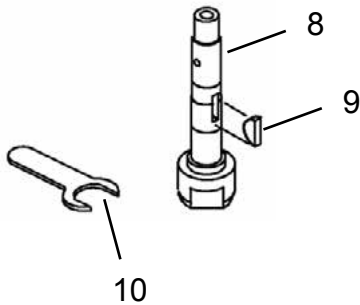
Termination 45
Universal Collet



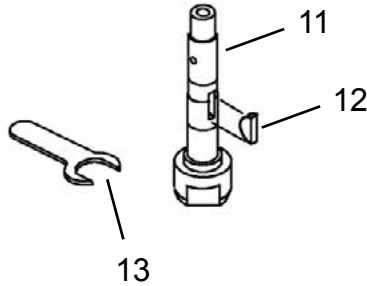
Termination 36
Series 300 Collet



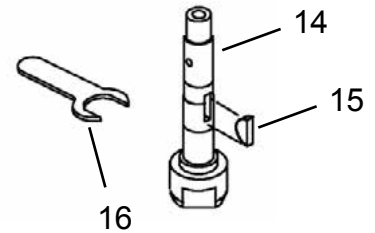
Termination 32
1/4"-28 Internal Thread



Termination 34
5/16"-24 Internal Thread



Termination 35
3/8"-24 Internal Thread



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Primary Terminations

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Illustration "D"

Ref	Number	#	X	EN
				Description
Termination 27 - 3/8"-24 External Thread Spindle				
1	1402PT	1		Spindle (includes Ref. 2)
2	7792	1	1	Spacer
3	1062PT	2	6	Woodruff Key
4	14-1174	1		Flange
5	14-1175	1		Flange
6	14-1258	1		Wheel Guard (includes Ref. 7)
7	14-1518	1	2	Cap Screw
--	14-0186	1		3/16" Wrench (not shown)
--	14-0809	1		9/16" Wrench (not shown)
--	14-0812	1		3/4" Wrench (not shown)
Termination 32 - 1/4"-28 Internal Thread Spindle				
8	1069	1		Spindle
9	1062PT	1	3	Woodruff Key
10	14-0807	1		7/16" Wrench
Termination 34 - 5/16"-24 Internal Thread Spindle				
11	1284	1		Spindle
12	1062PT	1	3	Woodruff Key
13	14-0807	1		7/16" Wrench
Termination 35 - 3/8"-24 Internal Thread Spindle				
14	1250PT	1		Spindle
15	1062PT	1	3	Woodruff Key
16	14-0807	1		7/16" Wrench
Termination 36 - 300 Series, 1/4" (3 piece) Collet				
17	1029PT	1		Spindle
18	1062PT	1	3	Woodruff Key
19	Table "D1"	1		Collet (1/4")
20	208196PT	1		Nosepiece
21	14-0807	1		7/16" Wrench
	14-0811	1		11/16" Wrench
Termination 45 - Universal Collet				
22	7814S	1		Spindle
23	1062PT	1	3	Woodruff Key
24	Table "D2"	1		Collet (1/4")
25	7815	1		Collet Nut
26	14-0807	1		7/16" Wrench
	14-0811	1		11/16" Wrench

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Table "D1"

300 Series Optional Collets					
Part No.	Arbor Size	Part No.	Arbor Size	Part No.	Arbor Size
301PT	3/64"	305PT	5/32"	310PT	6mm
302PT	5/64"	306PT	3/16"		
303	3/32"	308PT *	1/4"		
304PT	1/8"	311	3mm		

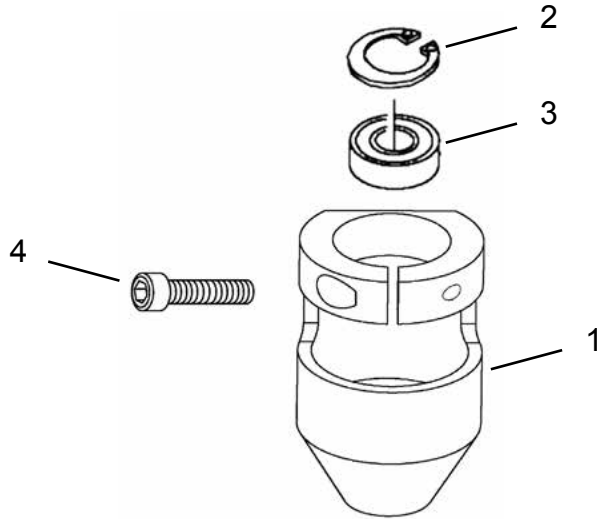
* Standard Collet

Table "D2"

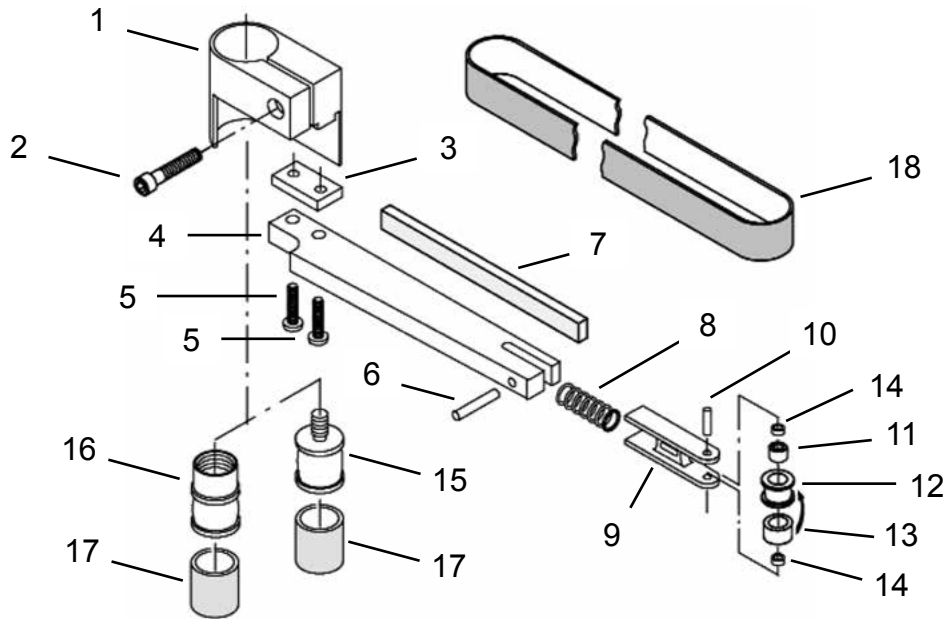
Universal Series Optional Collets					
Part No.	Arbor Size	Part No.	Arbor Size	Part No.	Arbor Size
7809	1/8"	7811	6mm		
7812	3/16"				
7808PT *	1/4"				
7810PT	3mm				

* Standard Collet

“E” Termination -RT (Router)



“F” Termination -B1 (1/4" x 12" Belt Sander)



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Extended Terminations

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Illustration "E" - Router Termination (36RT)

Ref	Number	#	X	EN
				Description
1	7197	1		Router Housing Assembly (includes Ref. 2-4)
2	1098	1	2	Retaining Ring
3	14-0508	1	2	Ball Bearing
4	14-1518	1	1	Screw (#8-32 x .75 SHCS)

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

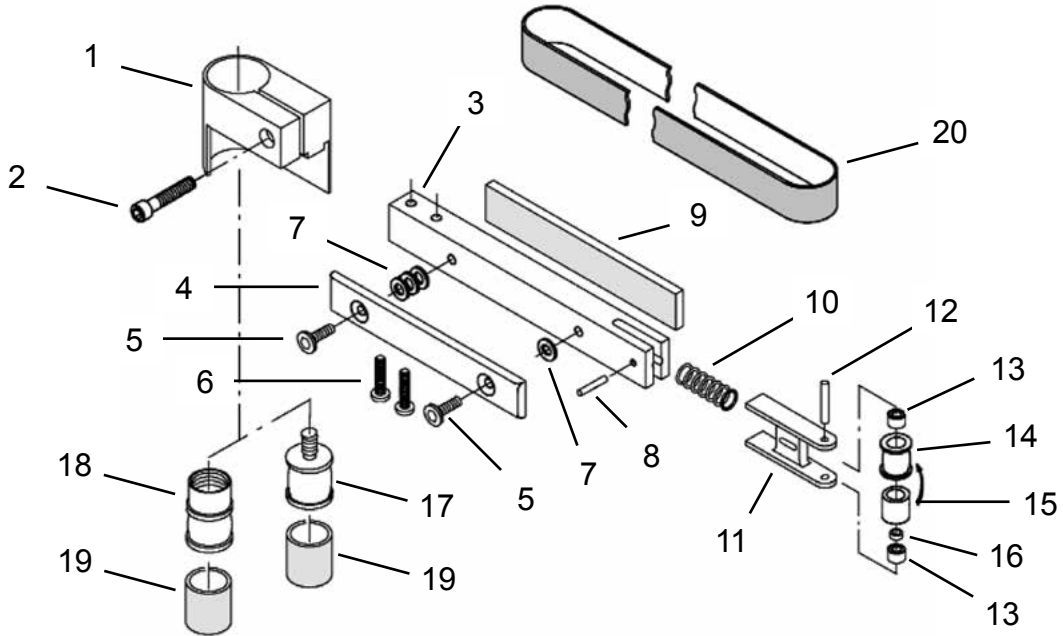
Illustration "F" - Belt Sander Termination B1

Ref	Number	#	X	EN
				Description
--	14-1638S	1		Belt Sander Assembly (includes Ref. 1-14)
1	14-1297	1		Guard
2	2826PT	1	1	Screw
3	14-1619	1		Spacer
4	14-1597	1		Boom
5	1900PT	2	4	Screw
6	1833PT	1		Pin
7	14-1343	1	1	Cushioned Platen
8	1904PT	1	2	Yoke Spring
9	14-1617	1		Yoke
10	1831PT	1	1	Yoke Pin
--	14-1602	1	1	Wheel Assembly (includes Ref. 11-13)
11	564PT	1	2	Ball Bearing
12	14-1604	1	1	Wheel (includes Ref. 13)
13	14-1616	1	3	Tire
14	14-1618	2		Spacer
15	14-1308	1	1	Drive Wheel (32B1 Termination) (includes Ref. 17)
16	14-1309	1	1	Drive Wheel (36B1 Termination) (includes Ref. 17)
17	14-1304	1	3	Tire
18	14-1591	1	6	Sanding Belt (80 Grit)
	14-1593	1	6	Sanding Belt (120 Grit)

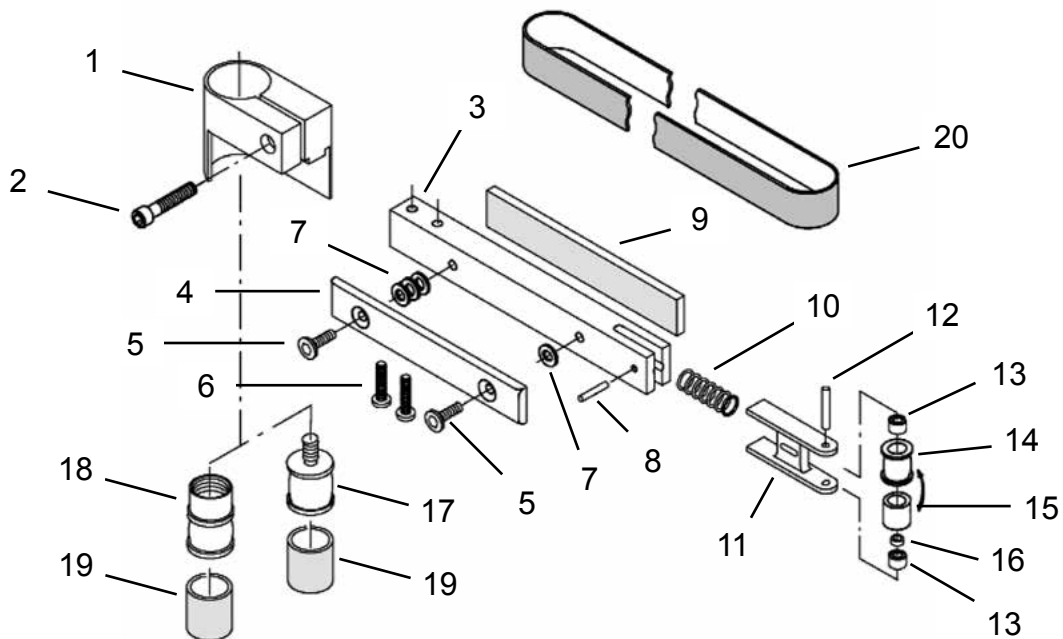
(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

“G” Termination -B2 (1/2” x 12” Belt Sander)



“H” Termination -B3 (1/2” x 24” Belt Sander)



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Illustration "G" - Belt Sander Termination B2

Ref	Number	#	X	EN
				Description
--	14-1301S	1		Belt Sander Assembly (includes Ref. 1-16)
1	14-1297	1		Guard
2	2826PT	1	1	Screw
3	14-1298	1		Boom
4	14-1293	1		Steel Platen
5	1902PT	2	4	Screw
6	1900PT	2	4	Screw
7	1901	4	12	Nylon Washer
8	1833PT	1		Pin
9	14-1338	1	1	Cushioned Platen
10	1904PT	1	2	Yoke Spring
11	14-1296	1		Yoke
12	1903PT	1	1	Yoke Pin
--	14-1311	1	1	Wheel Assembly (includes Ref. 13-16)
13	564PT	2	4	Ball Bearing
14	14-1312	1	1	Wheel (includes Ref. 15)
15	14-1305	1	3	Tire
16	1345PT	1		Spacer
17	14-1308	1	1	Drive Wheel (32B2 Termination) (includes Ref. 19)
18	14-1309	1	1	Drive Wheel (36B2 Termination) (includes Ref. 19)
19	14-1304	1	3	Tire
20	14-1348	1	6	Sanding Belt (80 Grit)
	14-1352	1	6	Sanding Belt (120 Grit)

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

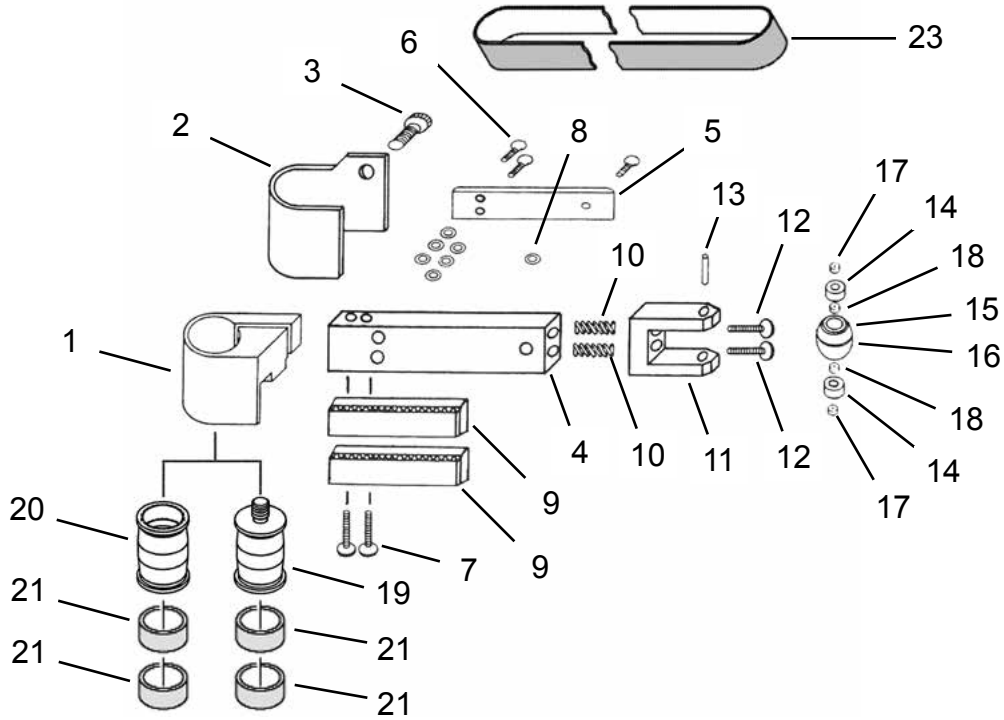
Illustration "H" - Belt Sander Termination B3

Ref	Number	#	X	EN
				Description
--	14-1318S	1		Belt Sander Assembly (includes Ref. 1-16)
1	14-1297	1		Guard
2	2826PT	1	1	Screw
3	14-1320	1		Boom
4	14-1314	1		Steel Platen
5	1902PT	2	4	Screw
6	1900PT	2	4	Screw
7	1901	4	12	Nylon Washer
8	1833PT	1		Pin
9	14-1341	1	1	Cushioned Platen
10	1904PT	1	2	Yoke Spring
11	14-1296	1		Yoke
12	1903PT	1	1	Yoke Pin
--	14-1311	1	1	Wheel Assembly (includes Ref. 13-16)
13	564PT	2	4	Ball Bearing
14	14-1312	1	1	Wheel (includes Ref. 15)
15	14-1305	1	3	Tire
16	1345PT	1		Spacer
17	14-1308	1	1	Drive Wheel (32B3 Termination) (includes Ref. 19)
18	14-1309	1	1	Drive Wheel (36B3 Termination) (includes Ref. 19)
19	14-1304	1	3	Tire
20	14-1368	1	6	Sanding Belt (80 Grit)
	14-1372	1	6	Sanding Belt (120 Grit)

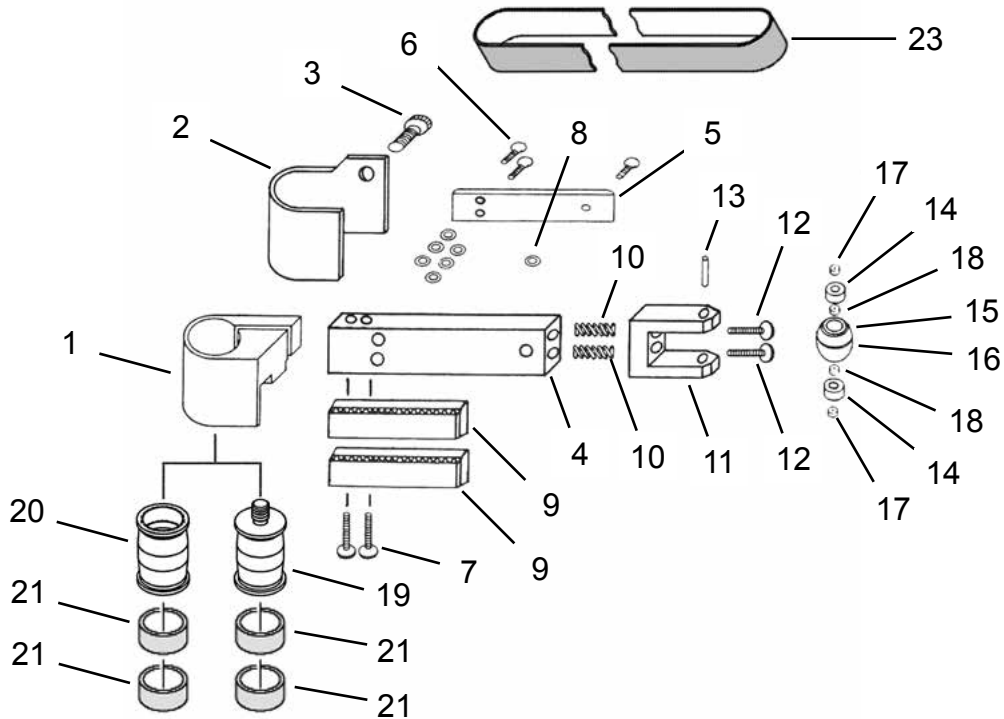
(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

“I” Termination -B4 (1" x 12" Belt Sander)



“J” Termination -B5 (1" x 24" Belt Sander)



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Illustration "I" - Belt Sander Termination B4

Ref	Number	#	X	EN
				Description
--	14-1463	1		Belt Sander Assembly (32B4 Termination) (includes Ref. 1-22)
--	14-1473	1		Belt Sander Assembly (36B4 Termination) (includes Ref. 1-22)
1	14-1356	1		Guard
2	14-1471	1		Guard
3	14-1498	1	1	Screw
4	14-1464	1		Boom
5	14-1466	1		Steel Platen
6	1902PT	3	6	Screw
7	7731	2	4	Screw
8	1901	7	14	Nylon Washer
9	14-1338	2	2	Cushioned Platen
10	14-1478	2	4	Yoke Spring
11	14-1465	1		Yoke
12	2193PT	2	4	Yoke Screw
13	14-3036	1	1	Yoke Pin
--	14-1472	1	1	Wheel Assembly (includes Ref. 14-18)
14	564PT	2	4	Ball Bearing
15	14-1469	1	1	Wheel (includes Ref. 16)
16	14-1305	2	6	Tire
17	14-1467	2		Spacer
18	1345PT	2		Spacer
19	14-1468	1	1	Drive Wheel (32B4 Termination) (includes Ref. 21)
20	14-1470	1	1	Drive Wheel (36B4 Termination) (includes Ref. 21)
21	14-1304	2	6	Tire
22	14-0184PT	1		Wrench (1/8") (not shown)
23	14-1583	1	6	Sanding Belt (80 Grit)
	14-1585	1	6	Sanding Belt (120 Grit)

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)

Illustration "J" - Belt Sander Termination B5

Ref	Number	#	X	EN
				Description
--	14-1603	1		Belt Sander Assembly (32B5 Termination) (includes Ref. 1-22)
--	14-1613	1		Belt Sander Assembly (36B5 Termination) (includes Ref. 1-22)
1	14-1356	1		Guard
2	14-1471	1		Guard
3	14-1498	1	1	Screw
4	14-1614	1		Boom
5	14-1615	1		Steel Platen
6	1902PT	3	6	Screw
7	7731	2	4	Screw
8	1901	7	14	Nylon Washer
9	14-1341	2	2	Cushioned Platen
10	14-1478	2	4	Yoke Spring
11	14-1465	1		Yoke
12	2193PT	2	4	Yoke Screw
13	14-3036	1	1	Yoke Pin
--	14-1472	1	1	Wheel Assembly (includes Ref. 14-18)
14	564PT	2	4	Ball Bearing
15	14-1469	1	1	Wheel (includes Ref. 16)
16	14-1305	2	6	Tire
17	14-1467	2		Spacer
18	1345PT	2		Spacer
19	14-1468	1	1	Drive Wheel (32B5 Termination) (includes Ref. 21)
20	14-1470	1	1	Drive Wheel (36B5 Termination) (includes Ref. 21)
21	14-1304	2	6	Tire
22	14-0184PT	1		Wrench (1/8") (not shown)
23	14-1643	1	6	Sanding Belt (80 Grit)
	14-1645	1	6	Sanding Belt (120 Grit)

(#) Quantity

(X) Recommended Spare Parts (quantity shown based on 1-5 tools in operation)