Parts Manual
45-8439EN
PL31-14CF
01/31/2012

DOTCO®

14CF Series
Pistol Grip Drills



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

Dotco®
Nomenclature

14	C	F	S	XX	-	XX	NL

Tool Series
14 = Ergo Drill

Throttle Type
C = Throttle Actuated

Motor Size
F = 0.4 HP

Handle Style
S = Small Handle

Speed Options (RPM)
90 = 29,000
91 = 5,200
92 = 3,800
93 = 3,200
94 = 2,400
95 = 1,000
96 = 700
97 = 600

Termination Code
38 = 1/4" Jacobs Chuck (#1BA)
40 = No Chuck
42 = 1/4" Jacobs Chuck (#7BA)
43 = 3/8" Jacobs Chuck (#2BA)
47 = 3/8" Jacobs Chuck (#22BA)
51 = 3/8" Jacobs Chuck (#41BA)
53 = 1/2" Jacobs Chuck (#33B)
54 = 1/4" Internal Hex Slip Chuck
56 = Keyless Chuck

Blade Option (Extra Cost)
NL = Oil Less Blade

Tool Termination Numbers (-XX):

The 14CF series tool model numbers are not complete without your choice of a drill chuck or no chuck. Following is the termination number, built into the model number, which must be selected before a tool can be ordered.

(-XX)

Tool Termination Number	Chuck Part Number	Chuck Capacity	Thread Mount	Chuck Type	Includes Chuck Key Part #	External Chuck Sleeve
38	1005078	0 - 1/4"	3/8"-24	1 BA	1005079	Smooth
40	No Chuck	NA	3/8"-24	N/A	N/A	N/A
42	1001505	0 - 1/4"	3/8"-24	7 BA	1005023	Fluted
43	1004422PT	0 - 3/8"	3/8"-24	2 BA	K2	Fluted
47	863420PT	0 - 3/8"	3/8"-24	22 BA	KG	Fluted
51	1001252	0 - 3/8"	3/8"-24	41 BA	1006375	Smooth
53	1009726	5/64" - 1/2"	3/8"-24	33 BA	1005022	Fluted
56	1110945	0 - 3/8"	3/8"-24	N/A	N/A	N/A

Language Version:

This Parts Manual is the ***"Original Instructions"*** intended for all persons who will use or repair these tools.

Product Identification:

Refer to the "Model Nomenclature" page in this document.

Noise and Vibration:

Refer to documents CE-1006DC and CE-1006TD.

Intended Use:

These air powered drills are intended for light duty drilling applications Use only for their designated purpose. Do not use as a hammer, lever or other improper usage that can cause tool damage and operator injury.

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General Safety:

Refer to General Safety document, CE-2006 for general safety operating instructions for this equipment.

Lubrication:

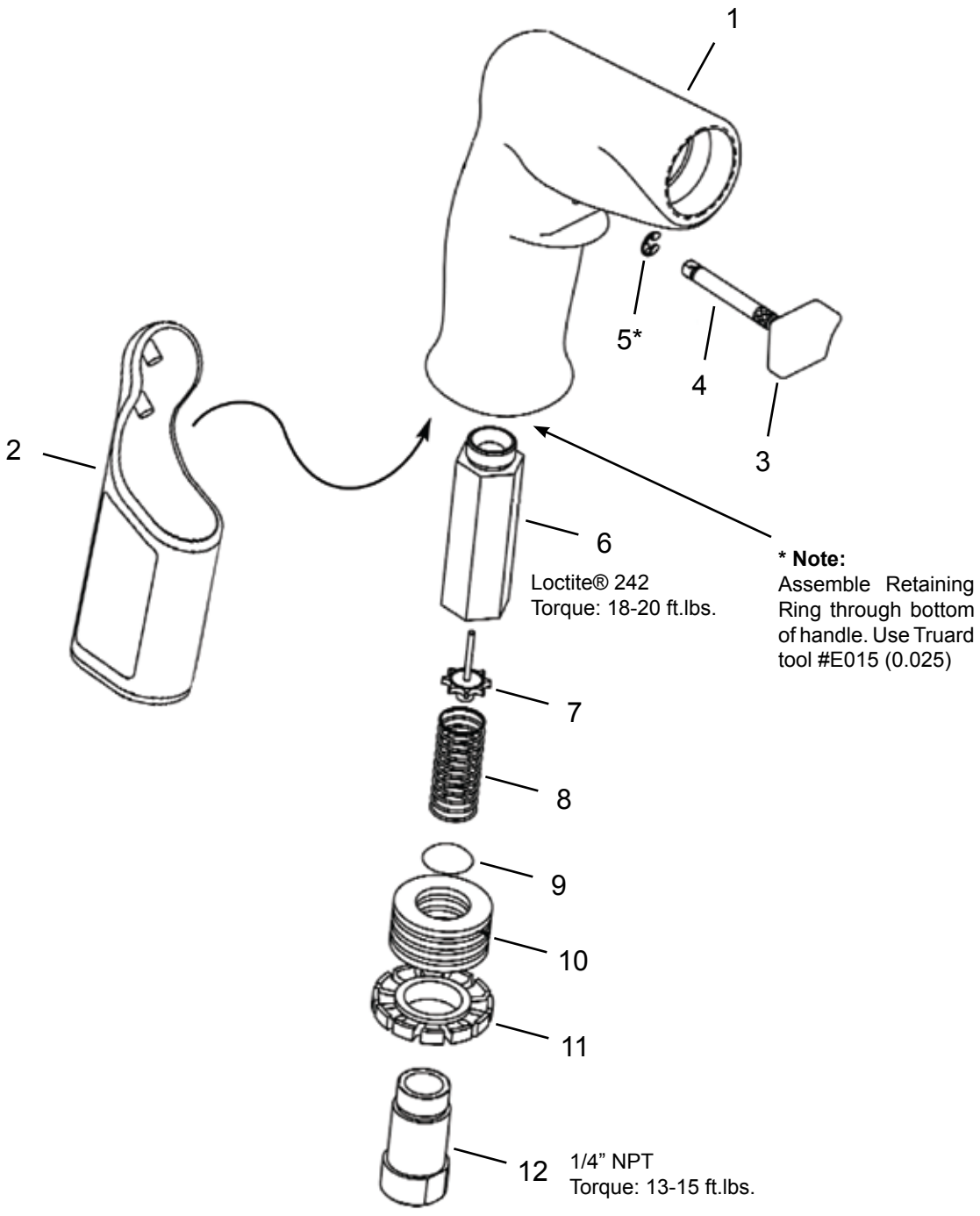
Refer to lubrication document, PL65-LUB, for general lubrication instructions.

Gearing: When the gearing is cleaned or replaced, apply a thin coat of Molykote grade G lubricant. Only a small amount is necessary. An 8 ounce tube (540394) is available from Apex Tool Group.

⚠ CAUTION **Do not use subsitutes for oil and grease. This could result in damage to the tool.**

Dotco®
Small Handle Assembly

"A"



Dotco®

Small Handle Assembly

Illustration "A"

Ref	Number	#	X	EN Description
1	01-1201	1		Pistol Grip Handle Assembly (includes Ref. 2-12)
2	01-1202	1	1	Handle Sleeve
3	1110038	1		Trigger
4	1110077	1		Trigger Push Rod
5	1012024	1	2	Retaining Ring
6	01-1203	1		Valve Housing
7	01-2518	1	1	Tip Valve
8	1110079	1	3	Valve Spring
9	1006577	1	3	Screen
10	1110134	4	12	Muffler
11	1110892	1		Muffler Diffuser
12	1110078	1		Hose Adapter

(#) Quantity
(X) Recommended Spare Parts

Dotco®
Motor Assembly

“B”

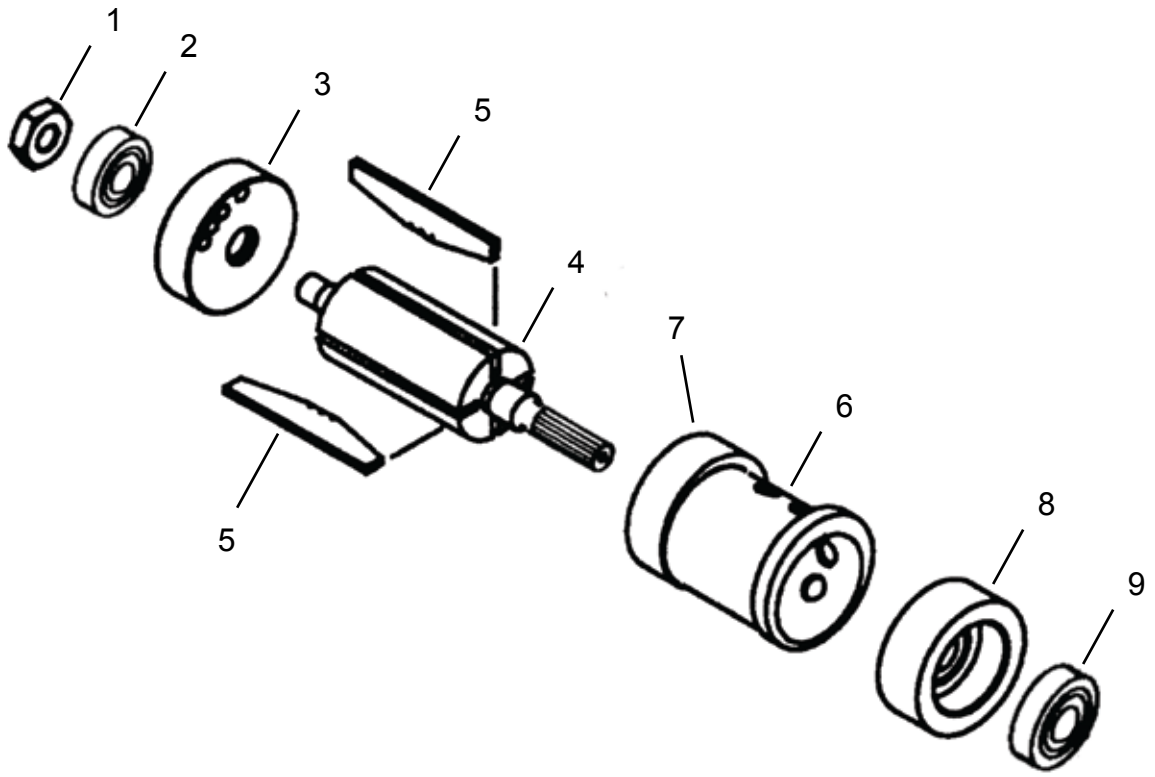


Illustration "B"

Ref	Number	#	X	EN Description
--	Table "B"	1		Motor Assembly
1	1012215	1	2	Rotor Nut
2	1009879	1	2	Ball Bearing
3	1110072	1		Rear Plate
4	Table "B"	1		Rotor
5	1008914 *	4	12	Rotor Blade
6	1017579	1		Cylinder (includes Ref. 7)
7	1017422	1		Cylinder Pin
8	1008916	1		Front Plate
9	1007537	1	2	Ball Bearing

(#) Quantity
(X) Recommended Spare Parts
* Note: Oil Less Blades - 1019725 (indicated by "NL" in model code)

Table "B"

Ref.	Description	Speed Code									
		#	0	#	1 & 5	#	2 & 6	#	3 & 7	#	4
--	Motor Assembly	1	1025618	1	1015872	1	1025554	1	1025552	1	1025556
4	Rotor	1	1110122 (9T)	1	1015872 (9T)	1	1017518 (7T)	1	1017517 (6T)	1	1017516 (5T)

(T) Teeth

Dotco®
Nose Assembly

"C" **1025595:** Nose Assembly

Models
14CFS90-XX

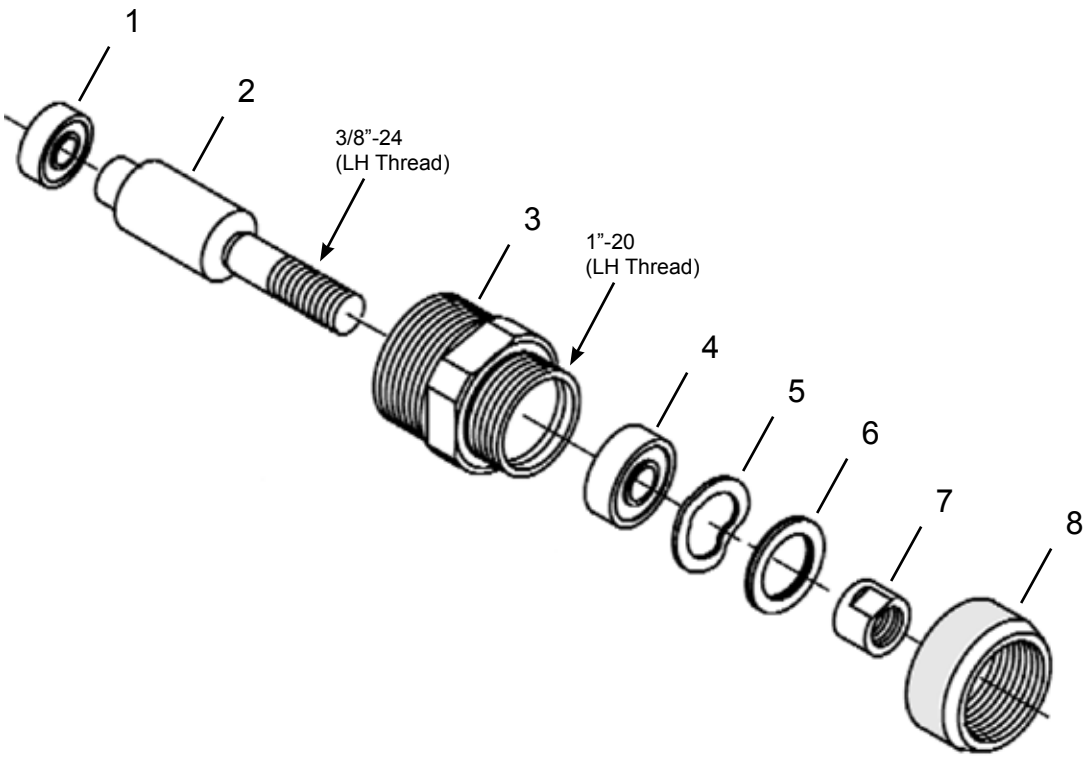


Illustration "C"

Ref	Number	#	X	EN Description
1	1005062	1	2	Ball Bearing
2	1110123	1		Spindle
3	1110119	1		Nose
4	1008854	1	2	Ball Bearing
5	1110127	1	1	Wave Washer
6	1008859	1	1	Retaining Ring
7	1110185	1	1	Spindle Nut
8	1110050	1		Thread Cover (not included in Nose Assembly)

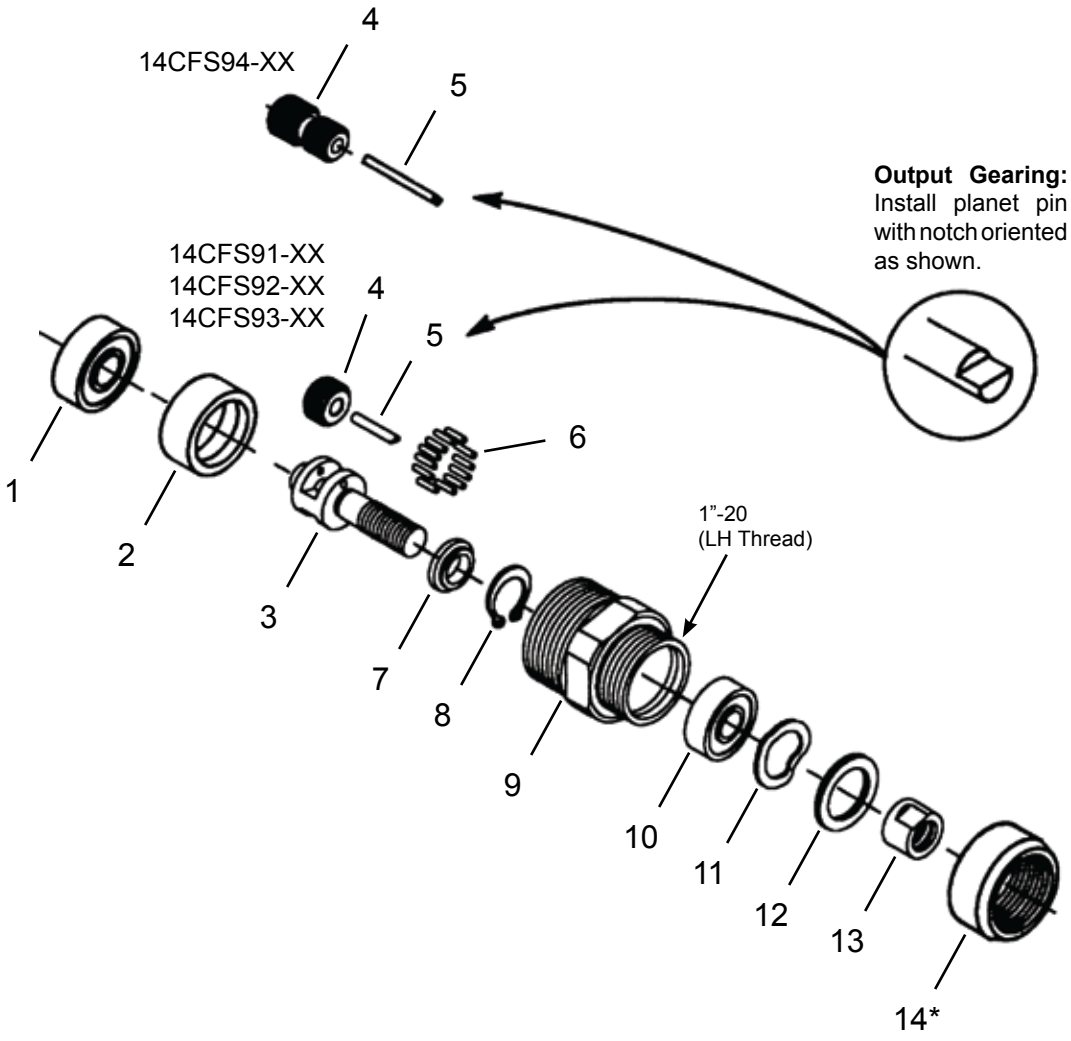
(#) Quantity
(X) Recommended Spare Parts

Dotco®
Single Stage Gearing

"D"

14CFS91-XX: 5,200 RPM
14CFS92-XX: 3,800 RPM
14CFS93-XX: 3,200 RPM
14CFS94-XX: 2,400 RPM

Models
14CFS91-XX
14CFS92-XX
14CFS93-XX
14CFS94-XX



*** Note:** Not included in Gear Assembly

Illustration "D"

Ref	Number	#	X	EN Description
--	Table "D"	1		Complete Gear Assembly
1	1005062	1	2	Ball Bearing
2	Table "D"	1		Bearing Adapter
3	Table "D"	1		Planet Cage
4	Table "D"	2	4	Planet Gear
5	Table "D"	2	4	Planet Pin
6	Table "D"	24	48	Planet Gear Roller
7	Table "D"	1	1	Planet Cage Washer
8	1010099	1	1	Retaining Ring
9	Table "D"	1		Gear Housing
10	1008854	1	2	Ball Bearing
11	1110127	1	1	Wave Washer
12	1008859	1	1	Retaining Ring
13	1110185	1	1	Spindle Nut
14	1110050	1		Thread Cover (not included in Gear Assembly)

(#) Quantity
(X) Recommended Spare Parts

Table "D"

Ref.	Description	#	14CFS91-	#	14CFS92-	#	14CFS93-	#	14CFS94-
--	Complete Gear Assembly	1	1025981	1	1025555	1	1025557	1	1025553
2	Bearing Adapter		------		------	1	1008921	1	1008921
3	Planet Cage	1	1110948	1	1110059	1	1110058	1	1110061
4	Planet Gear	2	1110949 (14T)	2	1008968 (17T)	2	1008919 (19T)	2	1008978 (13/19T)
5	Planet Pin	2	1008920	2	1008920	2	1008920	2	1008977
6	Planet Gear Roller	24	1008924	24	1008924	24	1008924		------
7	Planet Cage Washer	1	1110054	1	1110055	1	1110056	1	1110055
	Washer Inside Diameter		0.488/0.492"		0.518/0.522"		0.532/0.536"		0.518/0.522"
9	Gear Housing	1	1110950	1	1110047	1	1110048	1	1110049

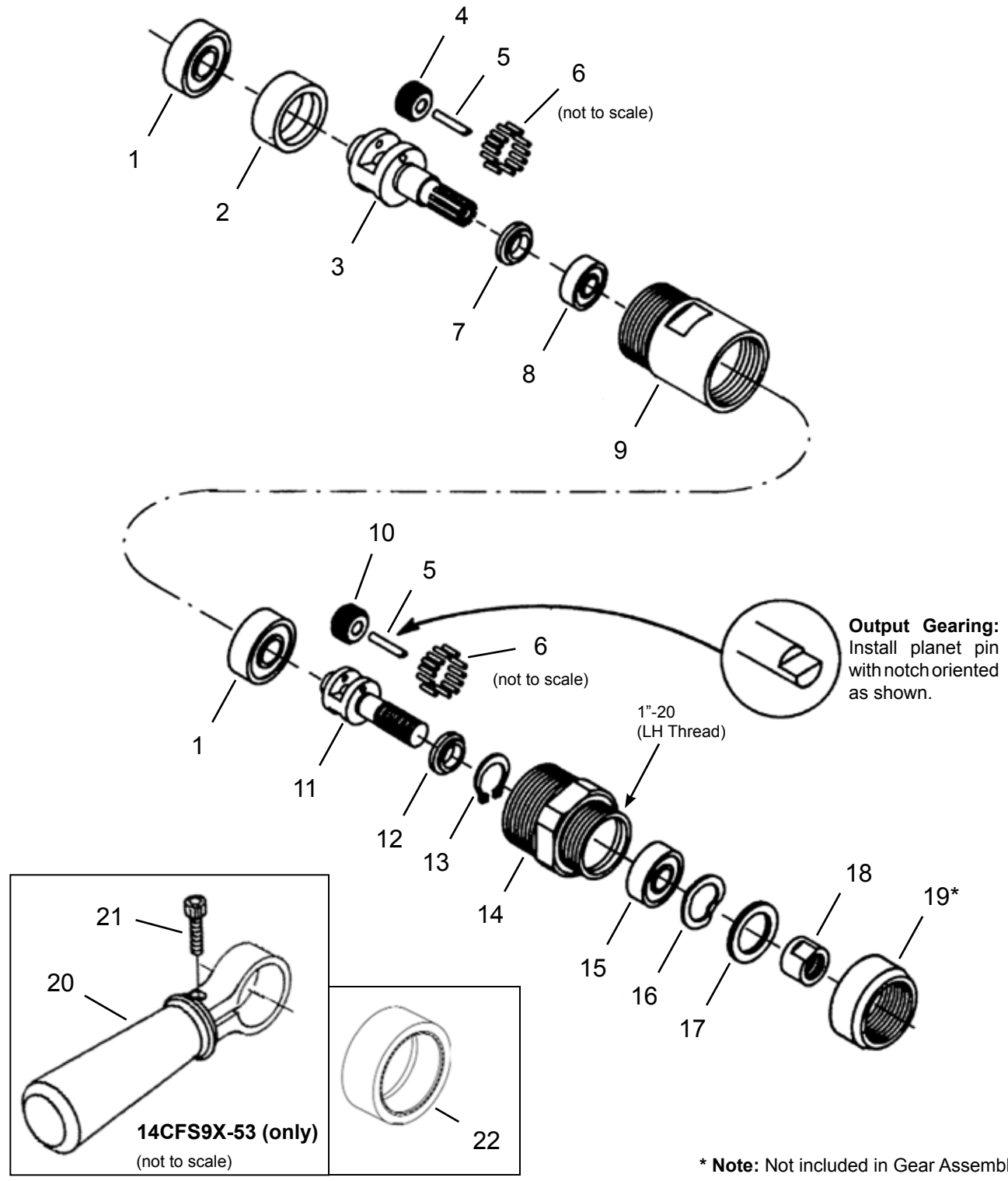
(T) Teeth

Dotco®
Double Stage Gearing

"E"

14CFS95-XX: 1,000 RPM
14CFS96-XX: 700 RPM
14CFS97-XX: 600 RPM

Models
14CFS95-XX
14CFS96-XX
14CFS97-XX



Output Gearing: Install planet pin with notch oriented as shown.

*** Note:** Not included in Gear Assembly

Illustration "E"

Ref	Number	#	X	EN Description
--	Table "E"	1		Primary Gearing Assembly (includes Ref. 1(1), 2, 3, 4, 5(2), 6(48), 7, 8, 9)
1	1005062	2	4	Ball Bearing
2	Table "E"	1		Bearing Adapter
3	Table "E"	1		Planet Cage
4	Table "E"	2	4	Planet Gear
5	1008920	2	4	Planet Pin
6	1008924	48	96	Planet Gear Roller
7	Table "E"	1	1	Planet Cage Washer
8	1007537	1	2	Ball Bearing
9	Table "E"	1		Gear Housing
--	1025551	1		Output Gearing Assembly (includes Ref. 1(1), 5(2), 6(48), 10-18)
10	1008973	2	4	Planet Gear (14T)
11	1110057	1		Planet Cage
12	1110054	1	1	Planet Cage Washer
13	1010099	1	1	Retaining Ring
14	1110046	1		Gear Housing
15	1008854	1	2	Ball Bearing
16	1110127	1	1	Wave Washer
17	1008859	1	1	Retaining Ring
18	1110185	1	1	Spindle Nut
19	1110050	1		Thread Cover (not included in Gear Assembly)
20	1025750	1		Dead Handle (includes Ref. 21) (14CFS9X-53 models)
21	541802	1		Cap Screw (14CFS9X-53 models)
22	01-1204	1		Thread Cover (optional)

(#) Quantity
(X) Recommended Spare Parts
(T) Teeth

Table "E"

Ref.	Description	#	14CFS95-	#	14CFS96-	#	14CFS97-
--	Primary Gearing Assembly	1	1025247	1	1025180	1	1025250
2	Bearing Adapter		------		------	1	1008921
3	Planet Cage	1	1008985	1	1009679	1	1009681
4	Planet Gear	2	1008973 (14T)	2	1008968 (17T)	2	1008919 (19T)
7	Planet Cage Washer	1	1008986	1	1009680	1	1009682
9	Gear Housing	1	1019146	1	1019147	1	1019148

(T) Teeth

Dotco®
1021679 Quick Change Chuck

"F" **-54** Termination

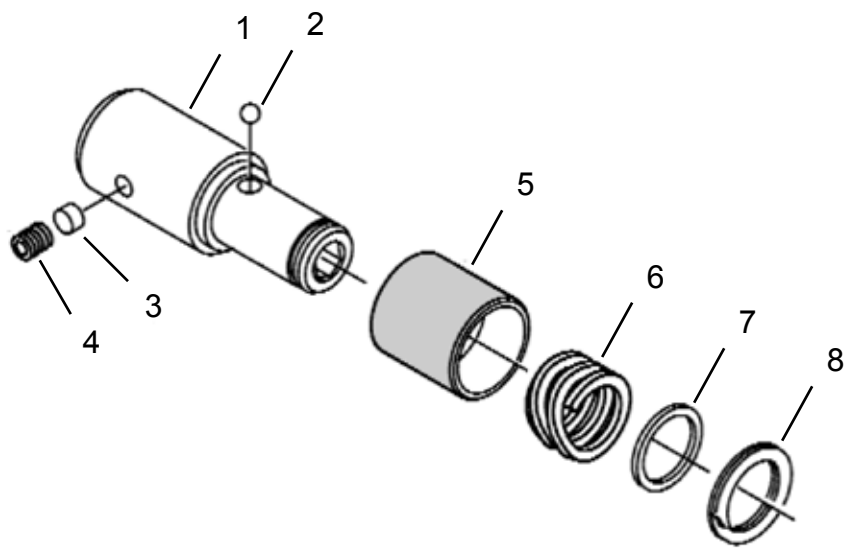
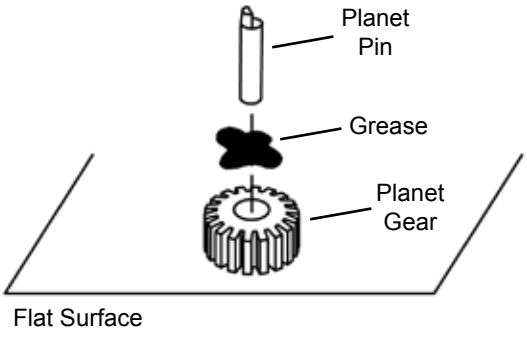


Illustration "F"

Ref	Number	#	X	EN Description
1	1014056	1		Chuck Body
2	1004968	1	3	Steel Ball (5/32")
3	1015203	1	1	Brass Pad
4	1110399	1	1	Set Screw (#10-32 x 1/8")
5	1014057	1		Chuck Sleeve
6	1009823	1	1	Spring
7	1014058	1		Washer
8	1012682	1		Retaining Ring

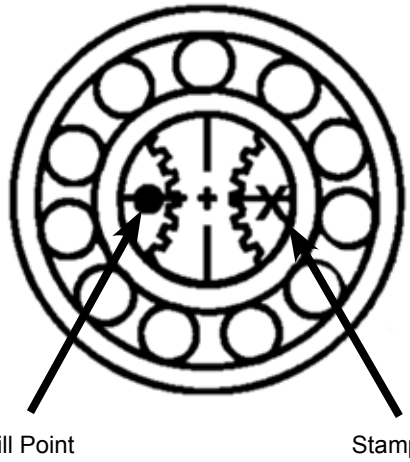
(#) Quantity
(X) Recommended Spare Parts

1 Planetary Gearing



1. Place Planet Gears on a clean flat surface.
2. Place a small amount of grease into each Planet Gear.
3. Insert a Planet Pin into each Planet Gear, as shown.
4. Insert Rollers (12) into each Planet Gear.
5. Grease will hold the rollers in postion.

2 Timing: 14CFS94-XX

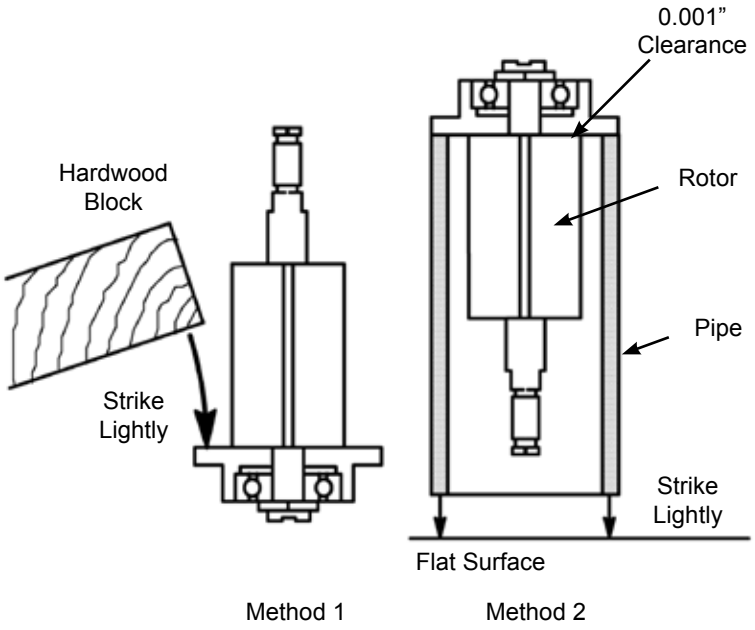


3 Motor Assembly

Tighten the rotor nut. Caution: Overtightening the nut could damage the ball bearing.

Alternately; tighten the nut and spin the rotor until there is a clearance of 0.001” between the rotor and the end plate.

Seat the threaded components by using one of the methods shown.



Sales & Service Centers

Note: All locations may not service all products. Please contact the nearest Sales & Service Center for the appropriate facility to handle your service requirements.

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Fax: 972-641-9674

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