

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

**DOTCO<sup>®</sup>**

**14CF Series**  
Pistol Grip Drills



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

**Dotco®**  
Nomenclature

	<b>14</b>	<b>C</b>	<b>F</b>	<b>S</b>	<b>XX</b>	<b>-</b>	<b>XX</b>	<b>NL</b>
<u>Tool Series</u> 14 = Ergo Drill								
<u>Throttle Type</u> C = Throttle Actuated								
<u>Motor Size</u> F = 0.4 HP								
<u>Handle Style</u> S = Small Handle								
<u>Speed Options (RPM)</u> 90 = 29,000 91 = 5,200 92 = 3,800 93 = 3,200 94 = 2,400 95 = 1,000 96 = 700 97 = 600								
<u>Termination Code</u> 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								
<u>Blade Option (Extra Cost)</u> 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

## Description and Instructions

**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.

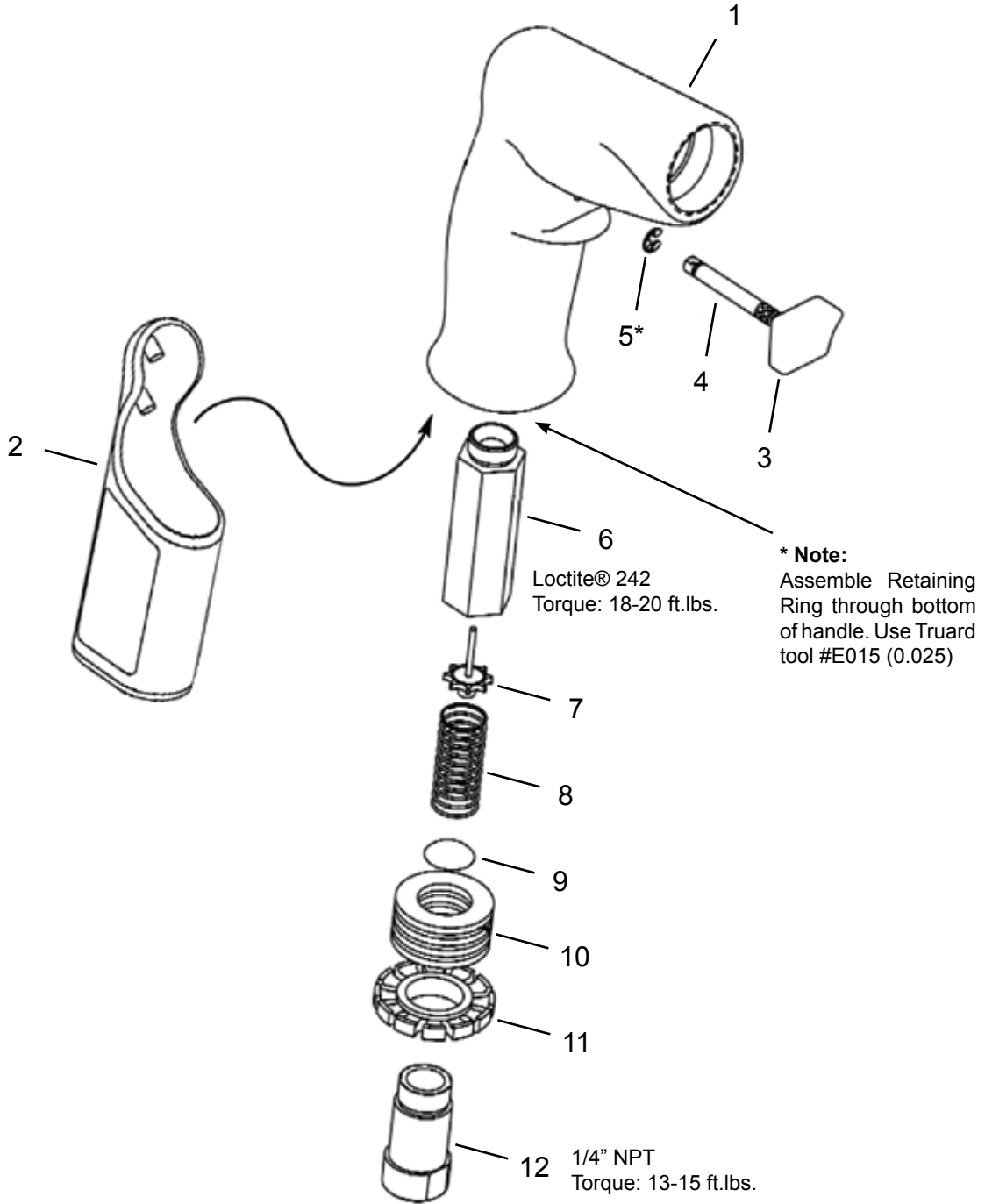
**Gearing:** When the gearing is cleaned or replaced, apply a thin coat of Molykote grade G lubricant. Only a small amount is necessary. An 8 ounce tube (540394) is available from Apex Tool Group.



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

# Dotco® Small Handle Assembly

“A”



**Dotco®**  
Small Handle Assembly

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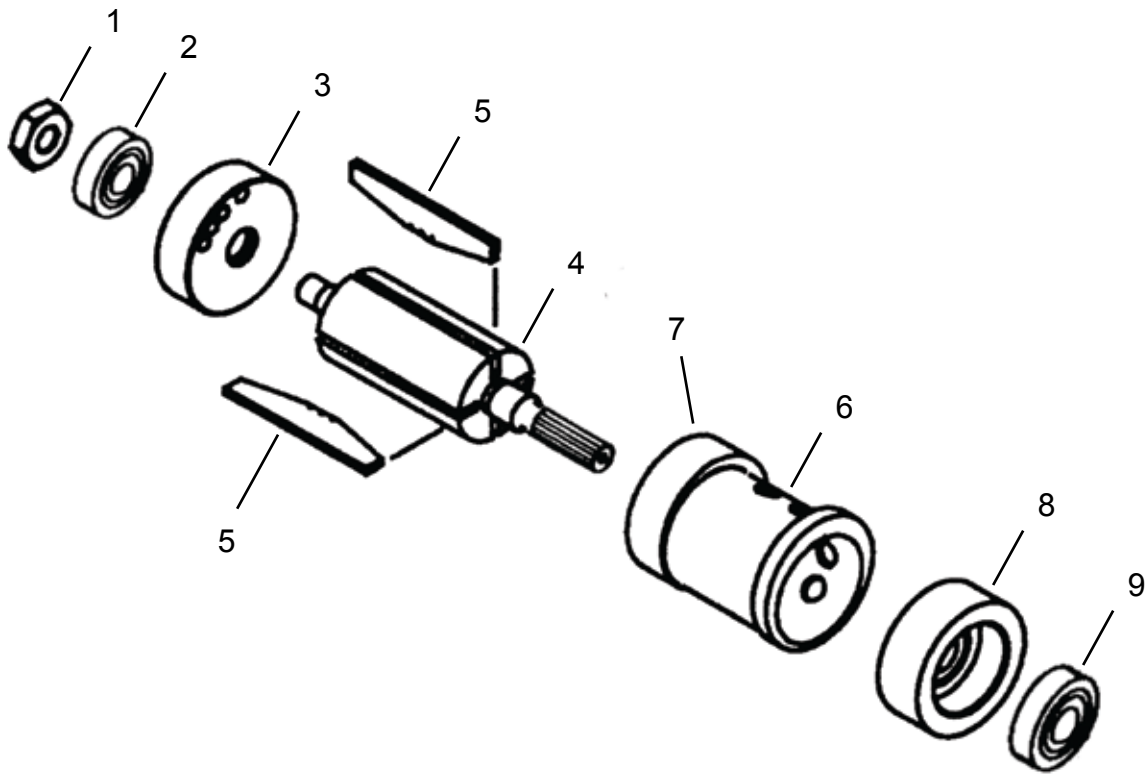
**Illustration "A"**

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

**“B”**



**Dotco®**  
Motor Assembly

**45-8439EN**  
01/31/2012

**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"**

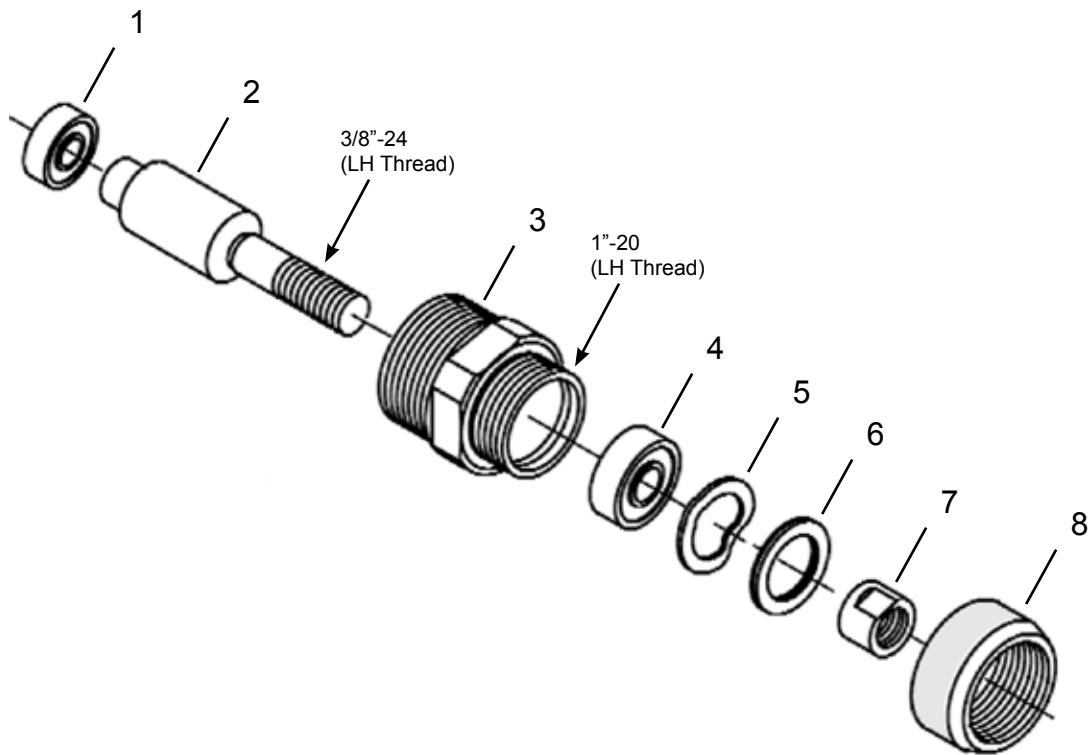
Ref.	Description	Speed Code									
		#	0	#	1 & 5	#	2 & 6	#	3 & 7	#	4
--	Motor Assembly	1	1025618	1	1015872	1	1025554	1	1025552	1	1025556
4	Rotor	1	1110122 (9T)	1	1015872 (9T)	1	1017518 (7T)	1	1017517 (6T)	1	1017516 (5T)

(T) Teeth

**“C”**

**1025595: Nose Assembly**

**Models**  
14CFS90-XX





**Dotco®**  
Nose Assembly

**45-8439EN**  
01/31/2012

**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

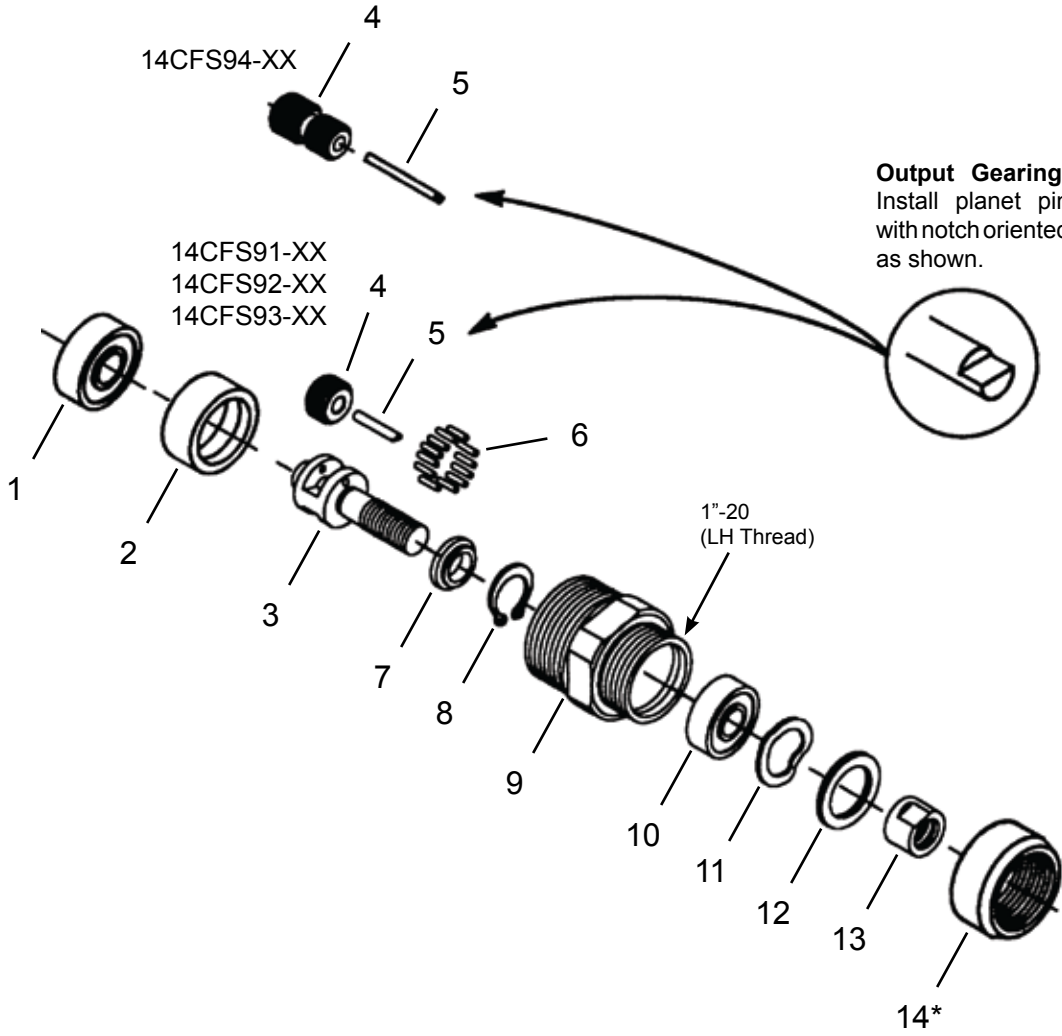
**Dotco®**  
Single Stage Gearing

**“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

**Dotco®**  
Single Stage Gearing

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**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

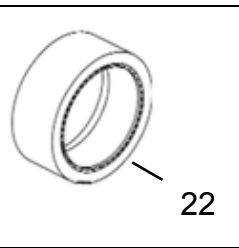
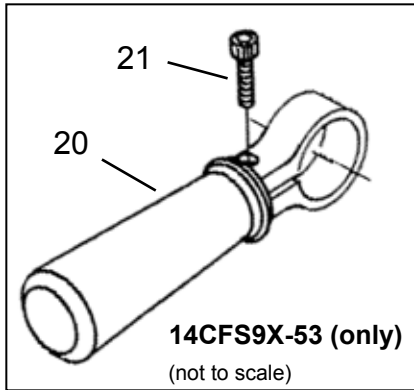
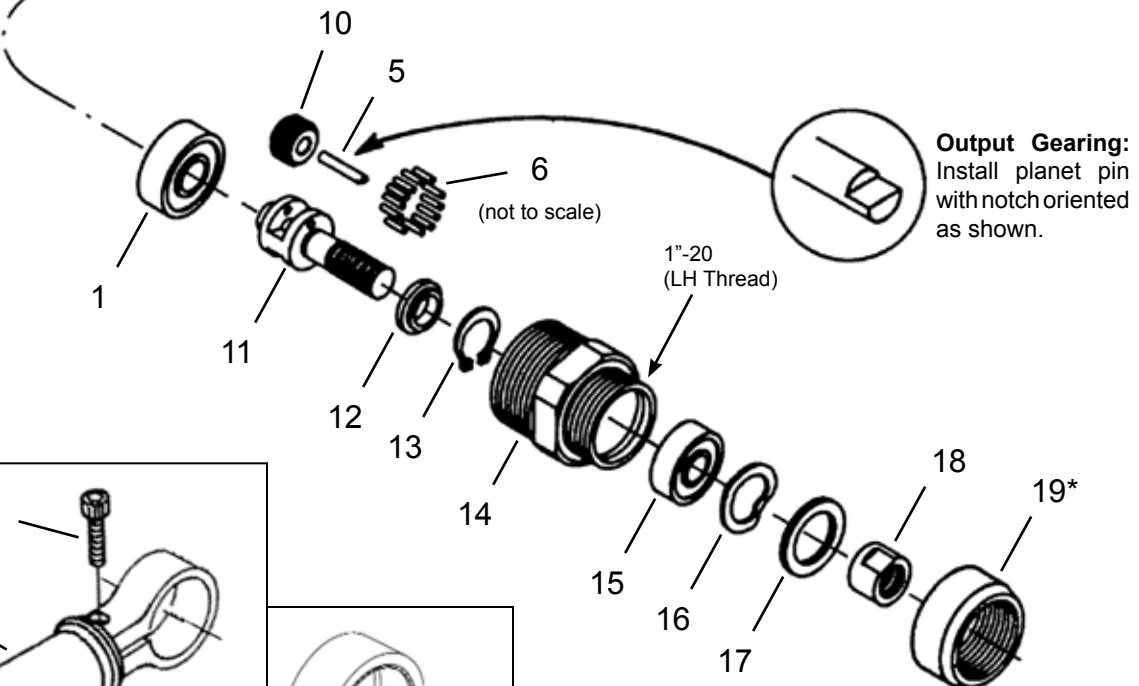
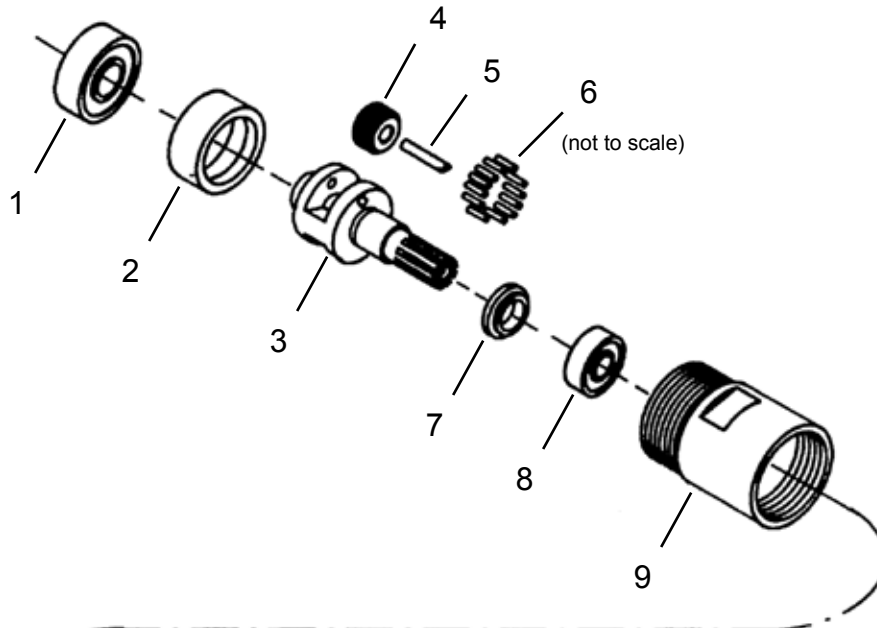
**Dotco®**  
Double Stage Gearing

**"E"**

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

**Models**

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



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

**Dotco®**  
Double Stage Gearing

**45-8439EN**  
01/31/2012

**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

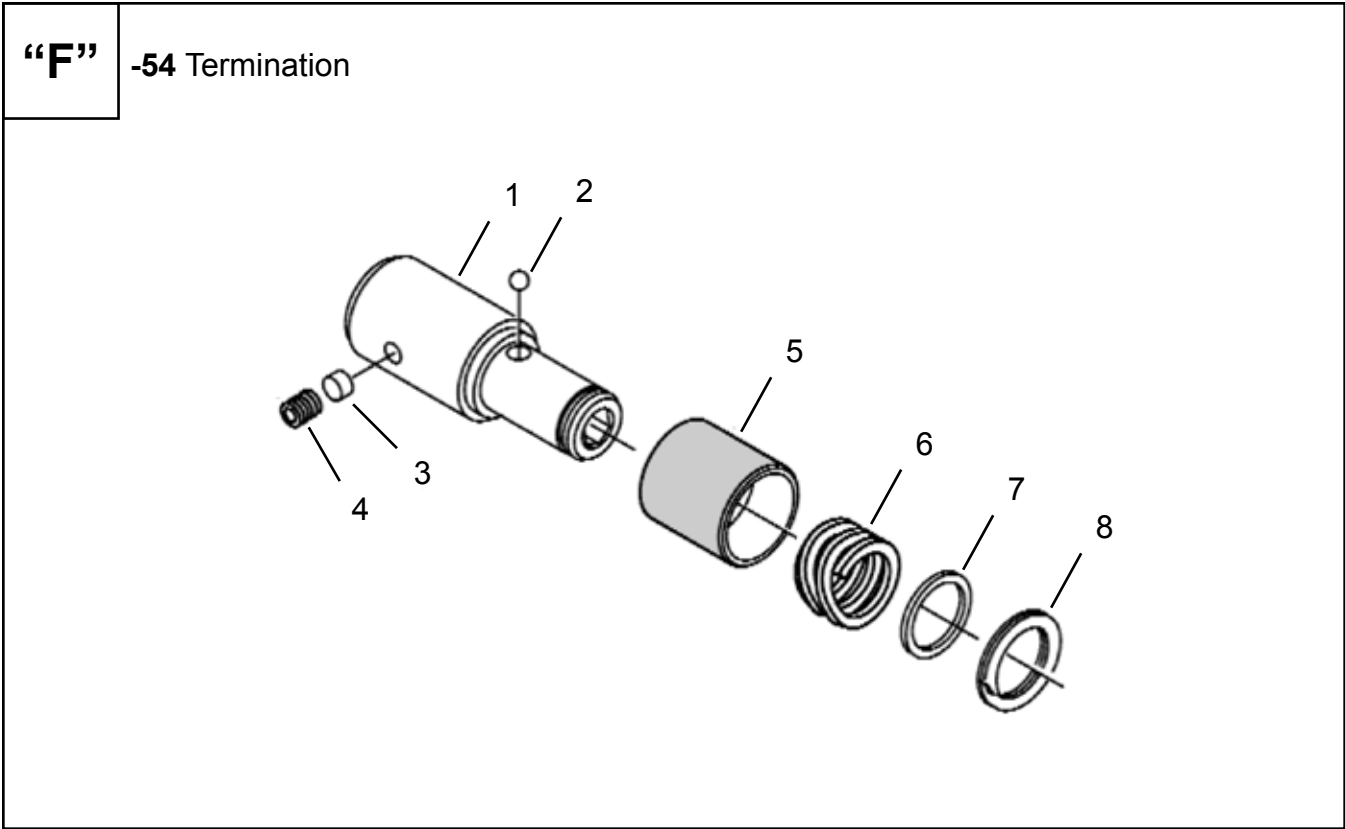
(X) Recommended Spare Parts

(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

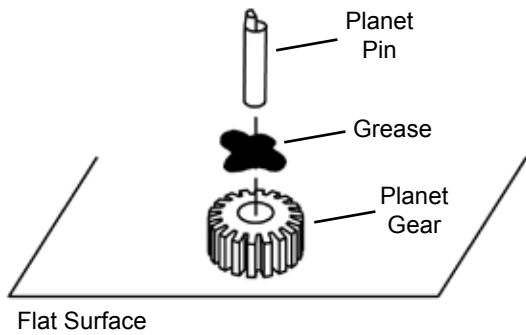


**Illustration "F"**

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

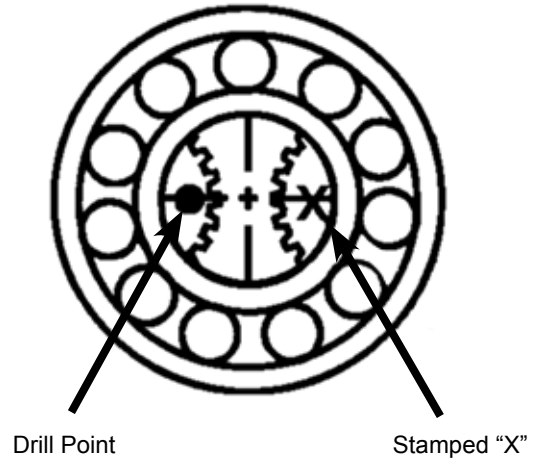
(#) Quantity  
(X) Recommended Spare Parts

**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 position.

**2 Timing: 14CFS94-XX**

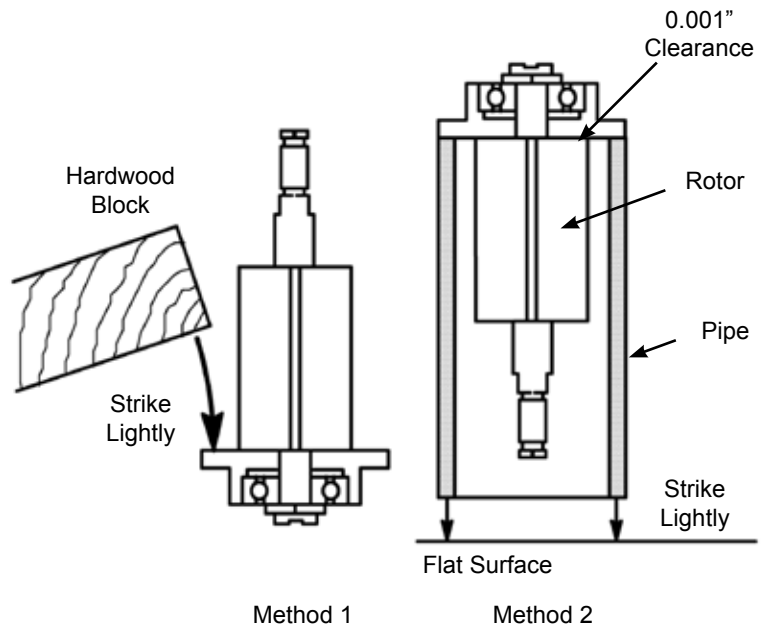


**3 Motor Assembly**

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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**Apex Tool Group  
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Fax: 972-641-9674

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Sales & Service Center**  
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Auburn Hills, MI 48326  
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Fax: 248-391-7824

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Houston, TX 77041  
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Fax: 713-849-2047

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Lexington, SC 29072  
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