SERVICE PARTS LIST

BULLETIN NO. 54-37-0225

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS	REVISED BULLETIN	DATE
2.25 MAX. H.P. BODY GRIP ROUTER w/ ELECTRONICS		June 2020
CATALOG NO. 5616-20/5616-29 SERIAL NUMBER **A19A**	WIRING INSTRUCTION	**58-01-0717**

EXAMPLE:
00 — 0
Component Parts (Small #) Are Included When Ordering The Assembly (Large #).

Router Motor Assembly

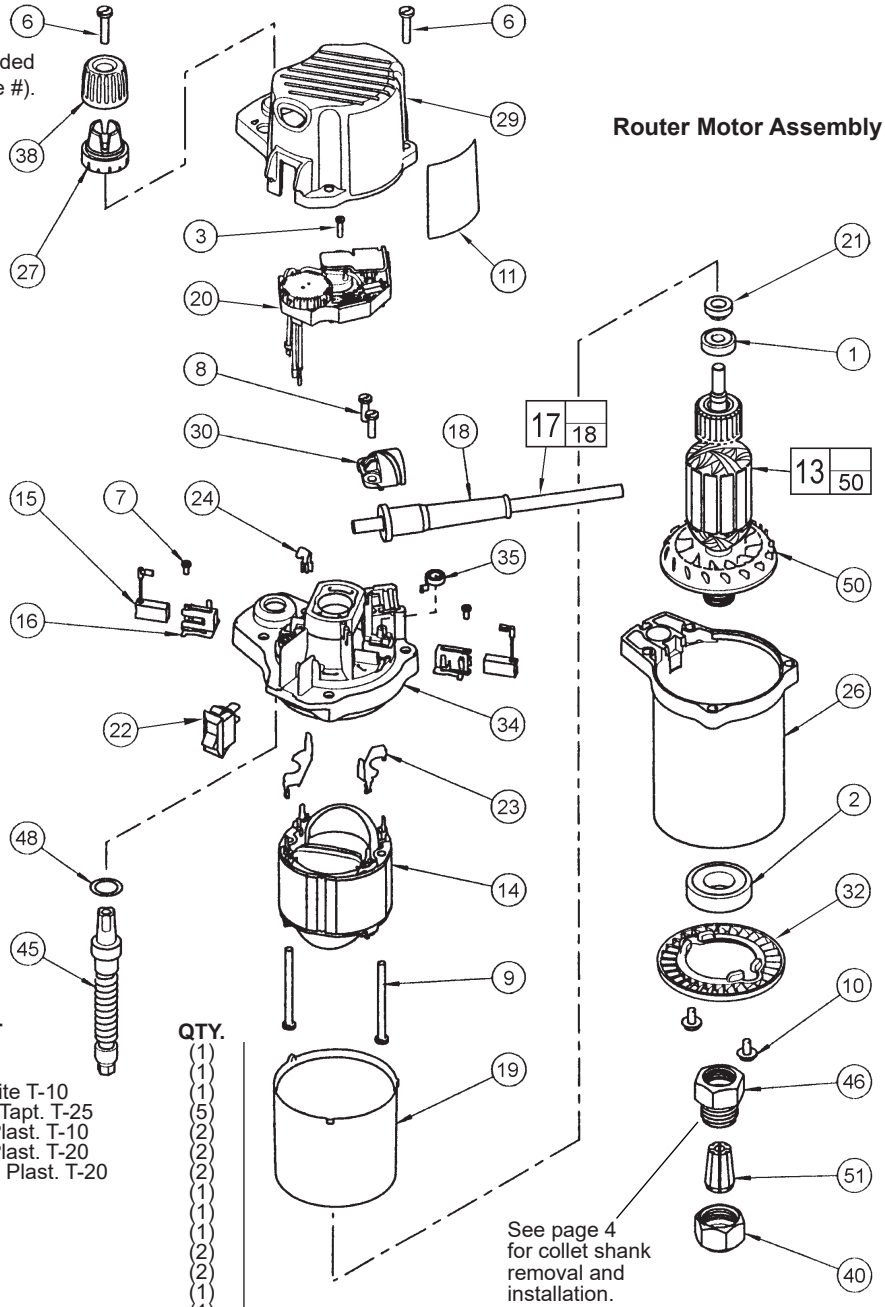

FIG.	PART NO.	DESCRIPTION OF PART	QTY.
1	02-04-0852	Ball Bearing	(1)
2	02-04-2006	Ball Bearing	(1)
3	06-82-7225	4-20 x 1/2" Pan Hd. Plastite T-10	(1)
6	06-82-5574	10-24 x 7/8" Pan Hd. Slt. Tapt. T-25	(5)
7	06-82-7212	4-20 x 1/4" Pan Hd. Slt. Plast. T-10	(2)
8	06-82-7270	8-16 x 5/8" Pan Hd. Slt. Plast. T-20	(2)
9	06-82-7455	8-16 x 2-3/8" Pan Hd. Slt. Plast. T-20	(2)
11	12-20-0255	Service Nameplate Kit	(1)
13	16-30-0015	Armature	(1)
14	18-30-1015	Field	(1)
15	22-16-0410	Carbon Brush	(2)
16	22-22-0165	Brush Tube	(2)
17	22-64-0320	Cord Set Assembly	(1)
18	44-76-0210	Cord Protector	(1)
19	23-16-0405	Field Insulator	(1)
20	14-20-0055	Electronic Feedback Module	(1)
21	23-38-0200	Tachometer	(1)
22	23-66-2280	Rocker Switch	(1)
23	23-74-0025	Field Terminal	(2)
24	23-74-0055	Connector Terminal	(1)
26	28-50-0105	Motor Housing	(1)
27	31-01-0025	Depth Scale	(1)
29	31-15-0095	Motor Cover	(1)
30	31-17-0070	Cord Clamp	(1)
32	31-55-0025	Contamination Shield	(1)
34	31-50-0106	Motor Frame	(1)
35	40-50-0190	Brush Spring	(2)
38	43-98-0531	Depth Knob	(1)
40	44-40-0095	Collet Nut (2 supplied with tool)	(1)
45	45-08-0030	Depth Shaft Assembly	(1)
46	45-10-0081	Collet Shank (See reverse)	(1)
48	45-88-0045	Washer	(1)
50	22-84-0380	Fan Assembly	(1)
51	48-66-0985	1/4" Collet	(1)
51	48-66-1010	1/2" Collet	(1)
	49-96-0365	1-1/8" Open End Wrench (Not Shown)	(2)
	49-96-0370	T-Handle Depth Adjustment Wrench (Not Shown)	(1)

FIG.	NOTES:
16,34,35	When servicing the motor frame (34) and the brush tube (16) has to be removed, replace with a new brush tube. Note: Make sure that the brush spring (35) is positioned properly onto the new motor frame to insure proper brush tension to the commutator.
21	Press tachometer (21) flush ±.020 to the end of the armature shaft (13). Conical side to the bearing (1).
40,51	Collet must be snapped into the collet nut prior to assembly onto the collet shank.

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48-10-5615
Router BodyGrip Assembly

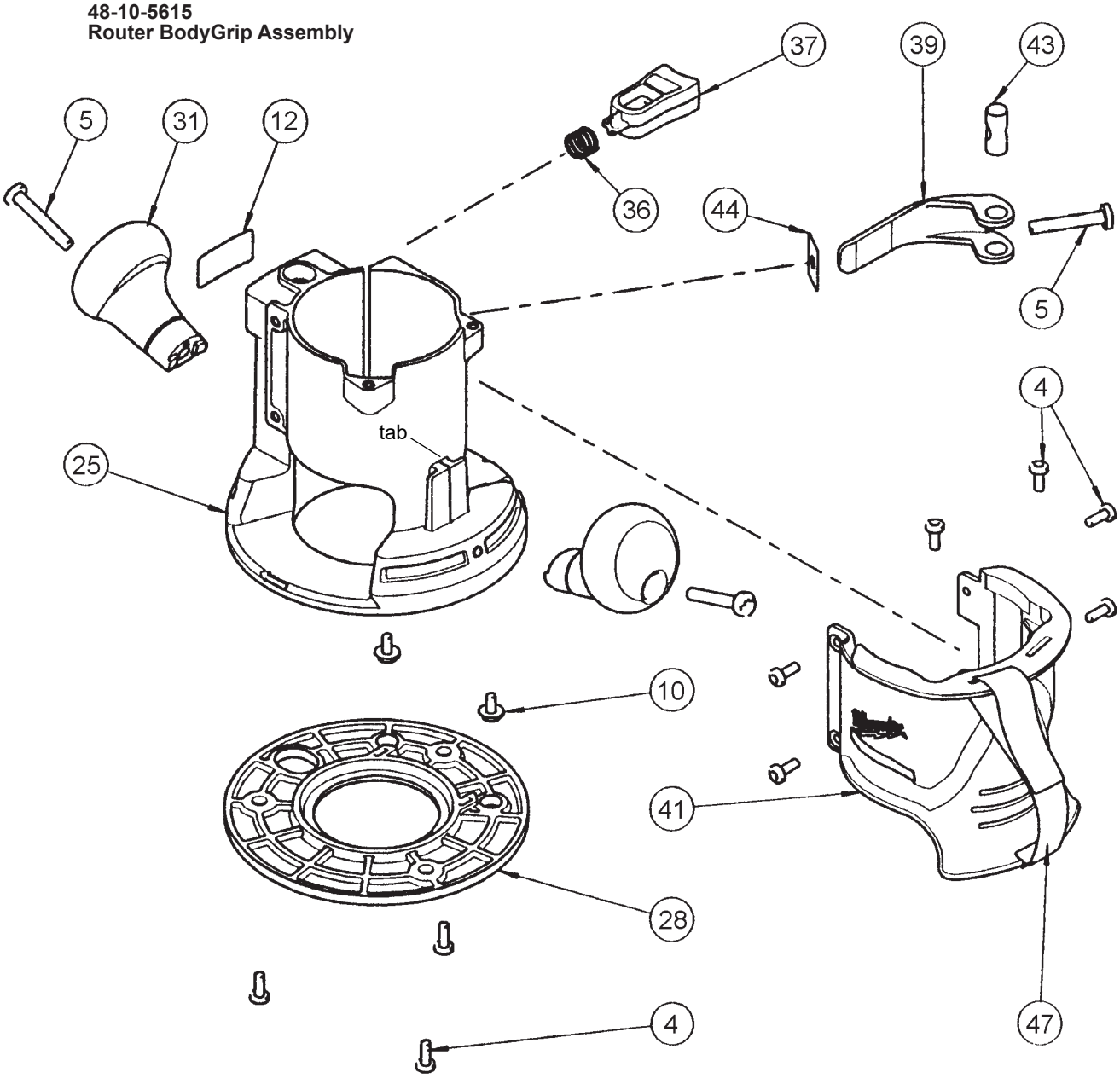


FIG.	PART NO.	DESCRIPTION OF PART	QTY.
4	06-82-5314	10-24 x 1/2" Slt. Pan Hd. Tapt. T-25	(9)
5	06-82-5514	1/4-20 x 1-1/2" Slt. Pan Hd. Tapt. T-30	(3)
10	06-82-8865	10-32 x 7/16" Pan Hd. Tapt. Sems T-25	(4)
12	12-25-0235	Nameplate	(1)
25	26-06-0100	Base	(1)
28	49-54-1045	Sub Base	(1)
31	31-44-0130	Knob Handle	(2)
36	40-50-4005	Compression Spring	(1)
37	42-42-0126	Release Button	(1)
39	44-10-0435	Base Clamp Lever	(1)
41	44-52-0020	Body Grip	(1)
43	44-60-0095	Thru Pin	(1)
44	44-66-0035	Wear Plate	(1)
47	45-56-0225	Handle Strap Assembly	(1)

FIG.	NOTES:
5,39	Clamping force for the base clamp lever (39) is adjusted with base clamp screw (5). Tighten the screw using 10-20 lbs. force to close the lever to the locked position. Motor unit must be in base when checking force.
25,36,37	To service the release button (37) and the compression spring (36) a long, thin tool like a flat blade screwdriver must be used. From the bottom of the base (25), insert the screwdriver into the cavity located under the release button. Press on the button detent to release.
25,41,47	The metal clip from the handle strap (47) is to be placed around the tab on the base (25). The body grip (41) is to be placed onto the base from the top so that the cavity on the inside of the body grip slips over the tab on the base, securing the handle strap.
39,43	Apply a thin coat of "L" grease, No. 49-08-4170, to the pivot surface areas of the base clamp lever (39). Apply a thin coat of grease to the surface of the thru pin (43).

48-10-5600
Router Plunge
Base Assembly

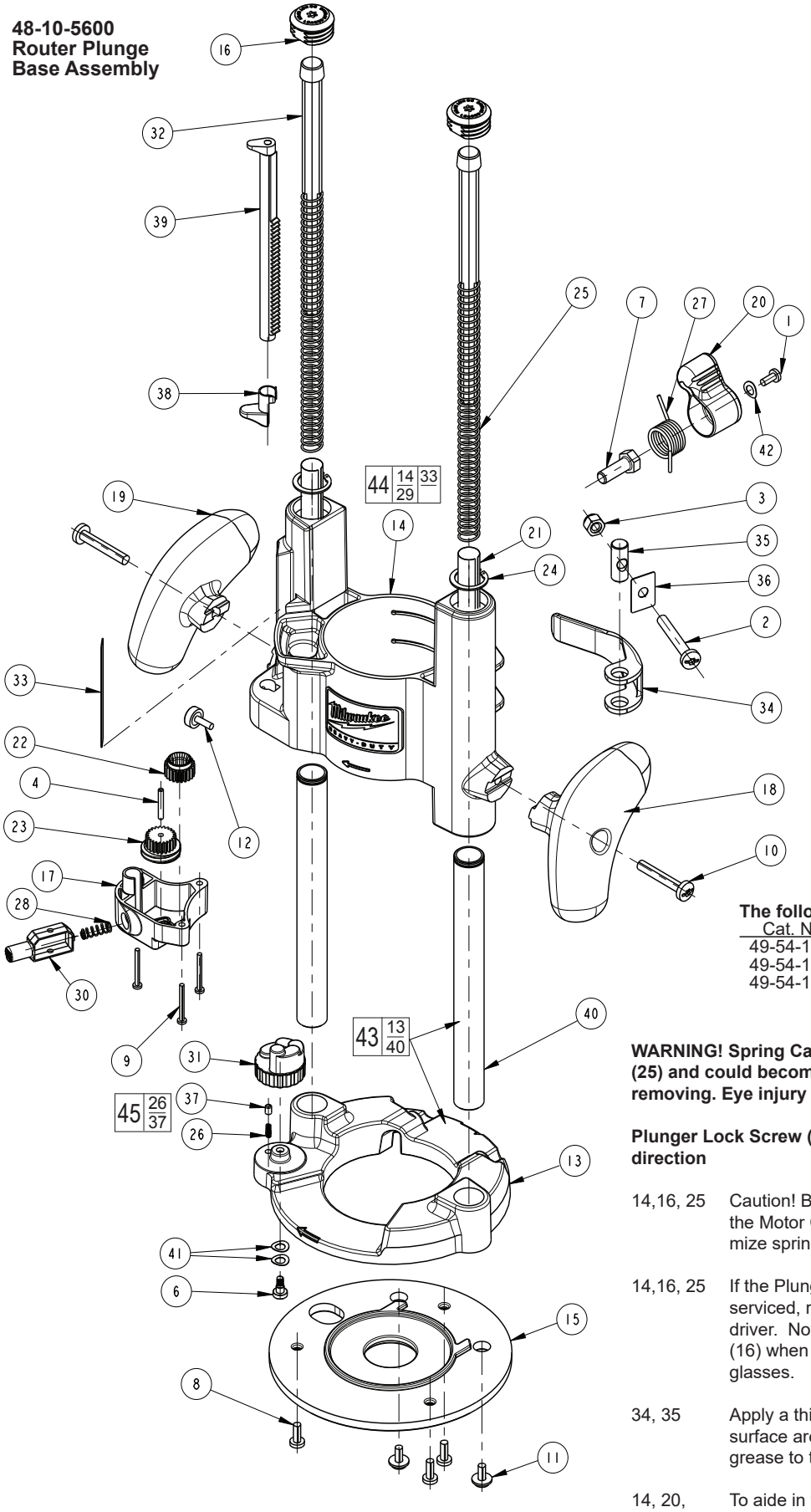


FIG.	PART NO.	DESCRIPTION OF PART	QTY.
1	05-81-1005	Screw 8-32 x .394 T20	(1)
2	06-14-0080	Bolt 1/4-20 x 1.75 T30	(1)
3	06-57-6075	Lock Nut	(1)
4	06-65-0700	Gear Pin	(1)
6	06-75-0410	Shoulder Bolt M4 T25	(1)
7	06-81-1980	Plunge Lock Screw	(1)
8	06-82-5314	10-24 x .5 Pan Tap Torx	(3)
9	06-82-5315	Screw ST M3 x 26.5 mm T10	(3)
10	06-82-5514	T30, 1/4 - 20 x 1.50 Taptite	(2)
11	06-82-8865	Slotted Torx Taptite Screw	(2)
12	06-87-0100	Depth Rod Locking Screw	(1)
13	----------	Base	(1)
14	----------	Motor Carriage	(1)
15	----------	Subbase (See Chart)	(1)
16	31-12-0380	Spring Cap	(2)
17	31-40-0190	Gear Housing	(1)
18	31-44-2530	Right Handle	(1)
19	31-44-2535	Left Handle	(1)
20	31-52-0120	Plunge Lock Lever	(1)
21	31-55-0500	Spring Shield Tube	(2)
22	32-40-2380	Gear with Hex	(1)
23	32-40-2385	Gear with Screw	(1)
24	34-60-3705	Retaining Ring	(2)
25	40-50-1395	Plunge Spring	(2)
26	----------	Spring	(1)
27	40-50-1410	Torsion Spring	(1)
28	40-50-1415	Spring	(1)
29	----------	Bushing (not shown)	(4)
30	42-42-1050	Gear Release Button	(1)
31	42-46-0250	Turret	(1)
32	43-56-0915	Spring Guide	(2)
33	43-82-0175	Scale	(1)
34	44-10-0435	Base Clamp Lever	(1)
35	44-60-0095	Pin, Thru	(1)
36	44-66-0035	Wear Plate	(1)
37	----------	Detent Pin	(1)
38	44-72-0100	Depth Rod Pointer	(1)
39	44-94-0460	Depth Stop Rod	(1)
40	----------	Plunge Rod	(2)
41	45-88-0995	Spring Washer	(2)
42	05-90-0225	M4 Spring Washer	(1)
43	14-46-5600	Base and Plunge Rod Kit	(1)
44	14-46-5605	Motor Carriage Kit	(1)
45	14-46-5610	Spring Assembly	(1)

The following sub-bases (15) are compatible with this base:

Cat. No.	Outside dia.	Center hole dia.	Color
49-54-1027	6"	1-3/16"	Clear
49-54-1028	6"	2-1/2"	Clear
49-54-1045	6"	2-1/2"	Black

WARNING! Spring Caps (16) are under pressure from Plunge Springs (25) and could become projectiles when loosened. Use caution when removing. Eye injury could occur. Always wear safety glasses.

Plunger Lock Screw (7) is LH Thread – tightens in counter-clockwise direction

14,16, 25 Caution! Before removing Spring Caps (16) always release/bring the Motor Carriage (14) to the upward most height setting to minimize spring (25) tension.

14,16, 25 If the Plunge Springs (25) or Motor Carriage (14) need to be serviced, remove Spring Caps (16) with a T-40 Tamper Proof style driver. Note: Always cover / hold your hand over the spring caps (16) when removing or installing springs (25). Always wear safety glasses.

34, 35 Apply a thin coat of “L” grease, No. 49-08-4170, to the pivot surface areas of the base clamp lever (34). Apply a thin coat of grease to the surface of the thru pin (35).

14, 20, 24, 40 To aide in the removal of Retaining Rings (24) from the Plunger Rods (40). (springs (25) and plunger caps (16) removed previously) Push Plunge Lock Lever (20) down and Lower Motor Carriage (14) down until Retaining Rings (24) are just below the internal Spring Cap threads inside the Motor Carriage.

Repair Instructions for the 5616-20,-29 2-1/4 H.P. Body Grip Router

45-10-0081 Collet Shank – removal / installation

Removal of the Collet Shank from the Armature shaft…

Note: The Armature shaft has a 3/8" internal hex; The Collet Shank threads onto the Armature shaft.

Step 1 applied at the time of assembly, mild heat to the Collet Shank will soften Loctite® Threadlocker and will aide in the disassembly. Care should be taken with a heat gun, not to damage the seal of the Ball Bearing or Contamination Shield.

Step 2 to hold the Armature **securely from turning,** pass a 3/8" t-handle Hex Key through the Collet Shank and into the Armature's 3/8" internal hex.

3/8" t-handle Hex Key

Step 3 using the Router's standard equipment Forged 1-1/8" Open End Wrench on the external hex of the Collet Shank, turn the Collet Shank counter-clockwise ↺ to remove.

Installation of the Collet Shank to the Armature shaft…

torque specification of the Collet shank to the Armature shaft is **16.5 ft-lbs** [*vigorously hand-tight*]...

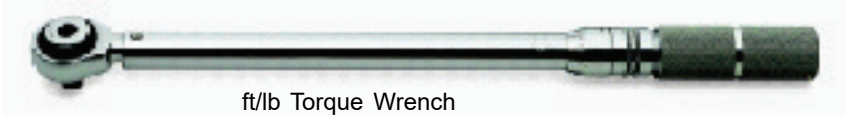
Installation of the Collet Shank [45-10-0081] for a 5616-20,-29 Body Grip Router can best be accomplished by using a 3/8" t-handle Hex Key, a 1-1/8" Crowfoot Wrench and a Torque Wrench.

Step 1 apply two drops of Loctite® 'Blue' 242® or 243 Oil Tolerant, Threadlocker or equivalent, 180° apart, to threads of the Armature shaft before threading the Collect Shank onto the Armature... care should be taken not to get thread locking sealant on the ball bearing journal of the Armature shaft.

Step 2 pass a 3/8" t-handle Hex Key through the Collect Shank and into the Armature's 3/8" internal hex to hold the Armature securely from turning.

Step 3 using a 1-1/8" Crowfoot Wrench and a Torque Wrench combination turn the 1-1/8" hex of the Collet Shank in a clockwise ↻ direction until tight and the specified minimum of **16.5 ft-lbs** of torque is reached.

1-1/8" Crowfoot Wrench

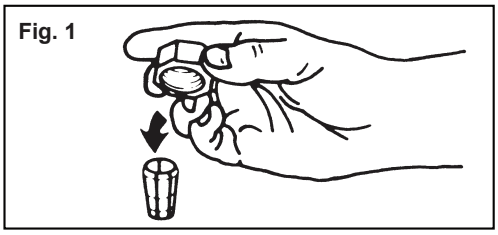


ft/lb Torque Wrench

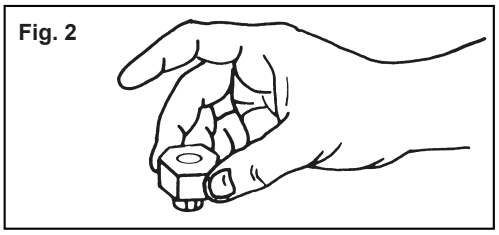
Collets

The collet must be attached to the collet nut before it is put into the collet shaft. Be sure that the size of the collet matches the size of the bit shank being used. If the wrong size bit shank is used, the collet may break. For attaching or detaching the collet nut to the collet, follow the illustrated instructions.

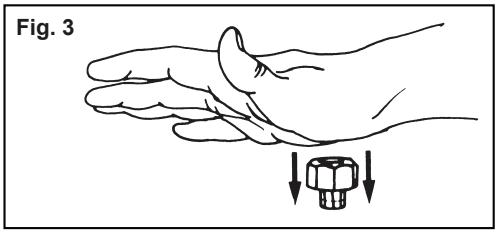
Attaching Collet to Collet Nut



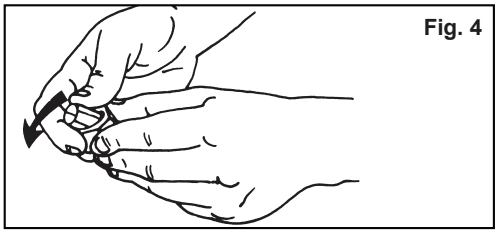
To assemble, place the narrow end of the collet on an even surface. Take the nut and place it over the collet (Fig. 1).



Position nut squarely over collet with the smaller opening of the nut facing up (Fig. 2).



Snap nut and collet together by firmly applying downward pressure into assembly with palm of hand (Fig. 3).



To remove collet from nut, hold nut firmly with one hand and press the collet to one side with the other hand (Fig. 4).