Parts Manual
45-8187EN
PL30-1240
04/12/2012

DOTCO®

12-40 Series
Inline Router

12	L	4	0	18	-	XX

Product Classification
12 = Ergonomic Handle

Throttle Type
L = Locking Lever

Motor Size
4 = 1.7 hp

Handle Style
0 = Straight

Speed Options (RPM)
18 = 18,000

Termination Code
01 = 1/4" Collet (1/4" Router Bits)
03 = 3/8" Collet (3/8" Router Bits)

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

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Description and Repair 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-1013DC and CE-1013TD.

General Description:

Air powered inline router.

Intended Use:

These routers are intended for material removal 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.

Copyright protection:

General Safety:

Refer to General Safety document, CE-2013 for general safety operating instructions for this equipment.

Lubrication:

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

Motor Assembly:

- Replace the rotor blades if they measure less than 0.437" wide (11.1 mm).
- Replace all bearings whenever the motor is repaired.
- To correct for bearing tolerances, it is necessary to use shims to maintain clearances between the ends of the rotor and the front and rear bearing plates.
- Place a 0.002" shim in the front bearing plate then install the ball bearing.
- Place the spacer on the rotor before pressing the front bearing plate assembly onto the rotor shaft. *Note: Press on the inner race of the ball bearing.*
- Secure the rotor in a soft jawed vise and assemble the chuck body securely onto the rotor shaft.
- Hold the rotor in your left hand and the front bearing plate assembly in your right hand.
- Apply outward (pulling) pressure and observe the spacing between the end of the rotor and the front bearing plate.
- This spacing should be from flush (not rubbing) to a maximum of 0.002".
- If the front bearing plate contacts the rotor, reduce the spacing by removing the 0.002" shim completely or replacing it with the 0.001" shim.
- If the spacing is more than 0.002", add the 0.001" shim to reduce the spacing.
- Install the ball bearing into the rear bearing plate.
- Install the spacer on the rear of the rotor before pressing the rear bearing plate assembly onto the rotor shaft. *Note: Press on the inner race of the ball bearing.*
- Check the spacing between the end of the rotor and the rear bearing plate. This spacing should be from 0.001" to 0.002". Shim as necessary to obtain this spacing.
- Remove the rear bearing plate assembly and install three rotor blades into the rotor slots.
- Install the cylinder making certain the air inlet hole in the cylinder match up with the air inlet hole in the rear bearing plate. ***Note: The cylinder can be assembled backwards.***
- Press the rear bearing plate assembly onto the rotor shaft. *Note: Press on the inner race of the ball bearing.*

Governor Module Assembly:

WARNING! ***The Governor Module is factory sealed and IS NOT to be repaired.***

Attempting to repair the governor module can cause a dangerous over-speeding condition that is hazardous to personnel and equipment.

Always replace the governor module with a new module of the same rated speed.

- Using the 15/16" wrench on the governor module flats, assemble the governor module onto the rear rotor shaft *(Left Hand Thread).* The module should be tight against the ball bearing.
- Make certain the nozzle and motor bore of the housing are thoroughly clean.
- Use care not to damage the governor module during assembly.

Final Assembly:

- Install the motor assembly into the motor housing.
- Thread the governor housing into the motor housing until hand tight. Secure the flats of the governor housing in a vise and complete tightening the motor housing with a strap wrench.
- Assemble the throttle components into the throttle housing.
- Tighten the throttle housing assembly onto the governor housing.

Speed Test and Adjustment:

Check tool speed without the router attachment.

Use an accurate tachometer to check the speed, with 90 psig air pressure at the tool while running.

The tool must NOT have a free speed higher than the rpm stamped on the housing. Speeds above the stamped maximum may actuate the speed limiter, which requires disassembly to reset. Speed tolerance is rated speed minus 10%. I tool speed is not within this specified range, proceed as outlined in the following "Speed Adjustment" section.

Speed Adjustment:

- Place the motor housing in a soft jawed vise, throttle end up.
- Grip on the flats of the governor housing with an open end wrench and remove the throttle housing.
- Using a 3/8" hex wrench, loosen the nozzle locknut.
- Using a 5/16" hex wrench rotate the nozzle.

  Clockwise to reduce speed

  Counterclockwise to increase speed.

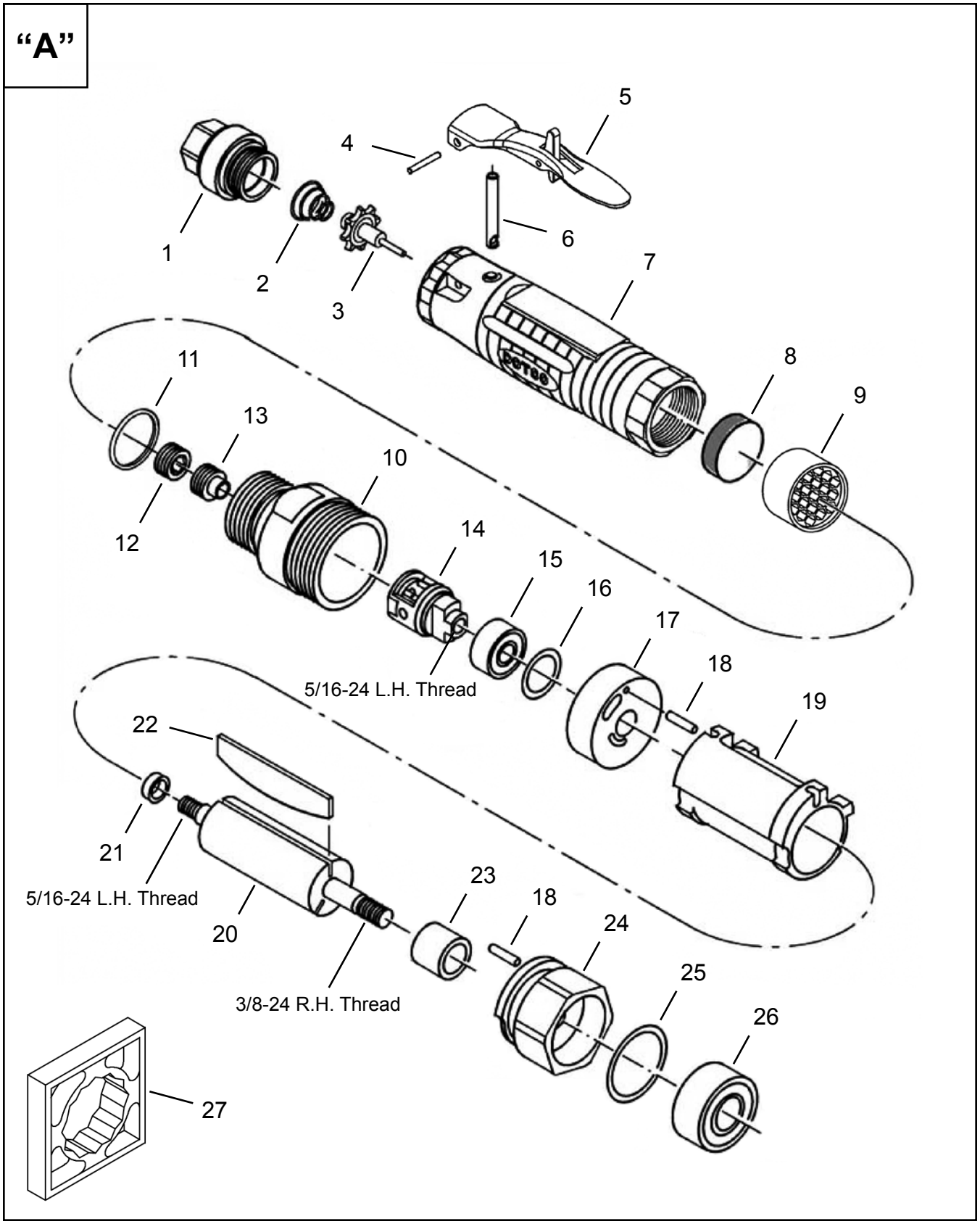
  Note: There is very little clearance between the nozzle and the rotating governor module. If the nozzle is rotated clockwise turn the spindle by hand to make certain the nozzle is not making contact with the governor module. The spindle must turn freely at all times.
- Tighten the nozzle locknut to hold the nozzle position. Use care not to disturb the nozzle while tightening the locknut.
- Reassemble the throttle housing to the governor housing.
- Re-check the speed of the tool as described in "Speed Test and Adjustment".

Router Housing Assembly:

- Assemble the ball bearing, washer, muffler and spacer ring into the router housing.
- Install the adjustment ring onto the front of the motor housing.
- Thread the router housing assembly securely onto the motor housing.
- Install the router bit into the collet.

CAUTION! ***Never tighten the collet into the chuck body without the arbor of a router bit installed through the collet. This may cause the collet to be crushed or permanently deformed.***

Dotco®
Throttle Housing



Dotco®
Throttle Housing

Illustration "A"

Ref	Number	#	X	EN Description
1	01-3031	1		Inlet Adapter (1/2" NPT)
2	01-3029	1	3	Spring
3	01-3033	1	1	Poppet Valve
4	1042	1	1	Lever Pin
5	01-1267	1	1	Lock-Off Lever Assembly
6	01-3036	1		Valve Stem
7	01-3035	1		Throttle Housing
8	4293	1	3	Filter Disc
9	02-5316	1		Filter Retainer
10	4063PT	1		Governor Housing (includes Ref. 11-12-13)
11	3036PT	1	3	O-Ring
12	3263PT	1		Nozzle Locknut
13	3262PT	1		Nozzle
14	3260S	1		Governor Module
15	500PT	1	2	Ball Bearing
16	2488PT	1		Shim Packet
17	4168	1		Rear Bearing Plate (includes 1 Ref. 18)
18	3062	2	4	Pin
19	4189	1		Cylinder
20	4070	1		Rotor (includes Ref. 21)
21	2017PT	1		Spacer
22	4171	3	9	Rotor Blade
23	4253PT	1		Spacer
24	4268PT	1		Front Bearing Plate (includes 1 Ref. 18)
25	2645	1		Shim Packet
26	521	1	2	Ball Bearing
27	14-0851	1		Ergo Handle Wrench

(#) Quantity
(X) Recommended Spare Parts

Dotco®
Motor Housing

"B"

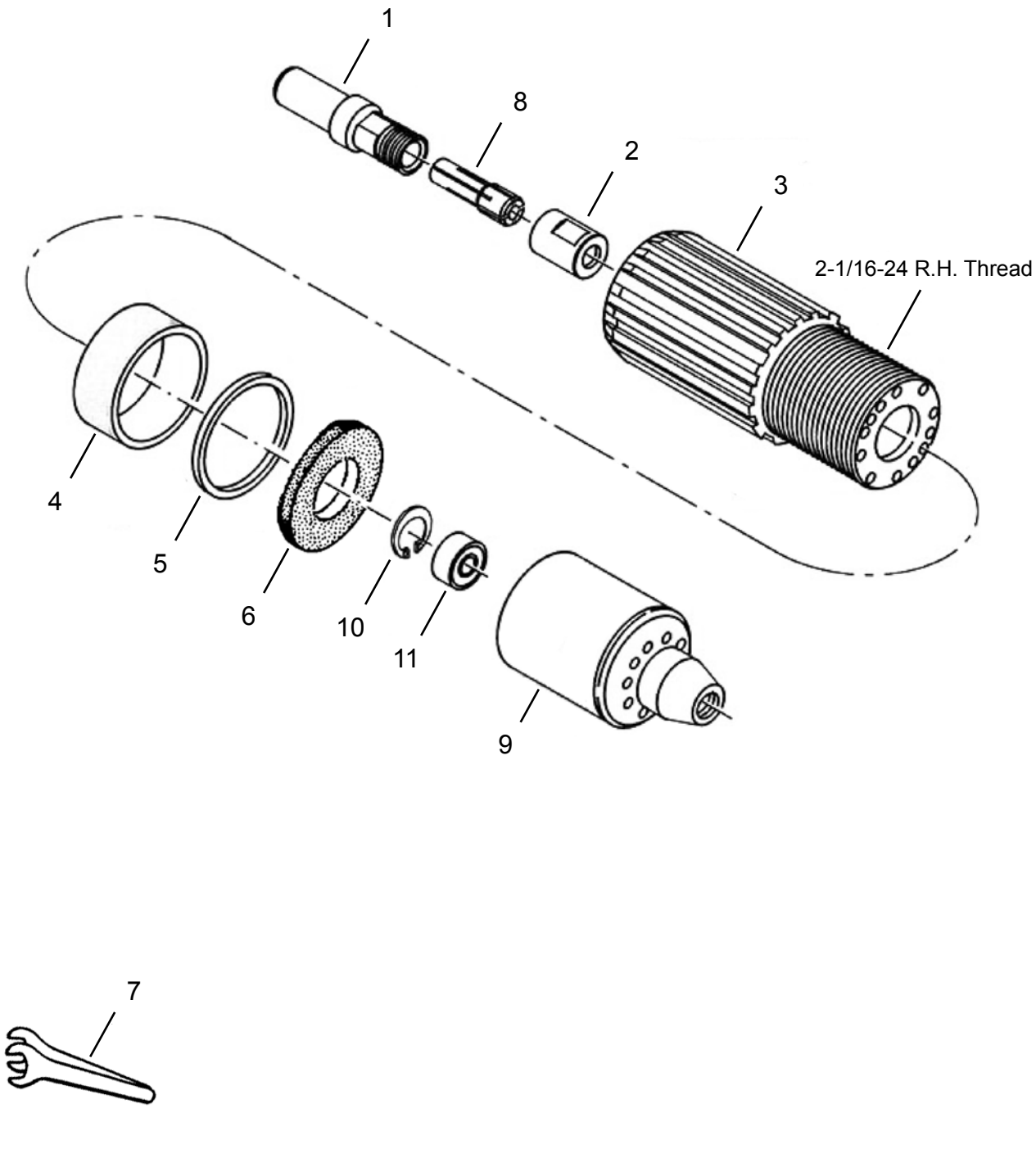


Illustration "B"

Ref	Number	#	X	EN Description
1	4261PT	1		Chuck Body
2	2058PT	1		Collet Cap
3	4267PT	1		Motor Housing
4	4266PT	1		Adjustment Ring
5	4121PT	1		Spacer Ring
6	02-5210	1	3	Muffler
7	14-0809	1		Wrench (9/16")
	14-0812	1		Wrench (3/4")
Termination 01:				
8	208	1	1	Collet (1/4")
9	4271PT	1		Router Housing (includes Ref. 10-11)
10	1098	1	2	Internal Bowed Retaining Ring
11	14-0508	1	2	Ball Bearing
Termination 03:				
8	212	1	1	Collet (3/8")
9	4262PT	1		Router Housing (includes Ref. 10-11)
10	1068PT	1	2	Internal Bowed Retaining Ring
11	14-0533	1	2	Ball Bearing

(#) Quantity
(X) Recommended Spare Parts

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.

Dallas, TX
Apex Tool Group
Sales & Service Center
1470 Post & Paddock
Grand Prairie, TX 75050
Tel: 972-641-9563
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