COOPER Tools

Parts Manual • Ersatzteil–Liste

PL30-440 September 4, 2001

DOTCO®

45-8185

12-2065 Series
Inline Oscillating Saw

This manual covers all catalog numbers charted below:

14,000 CYCLES PER MINUTE	THROTTLE TYPE	TOOL TYPE
12L2065–90 12S2065–90	Lever Locking Lever	Threaded Spindle for 3/8" Arbor Hole Saw Blade NOTE: MAX. DIAMETER SAW BLADE = $2^{1}/_{2}$"

OVERHOSE OPTION: *(extra cost)*

Add **"OH"** at end of model designation. "OH" specifies overhose components on ***Rear Exhaust*** models.

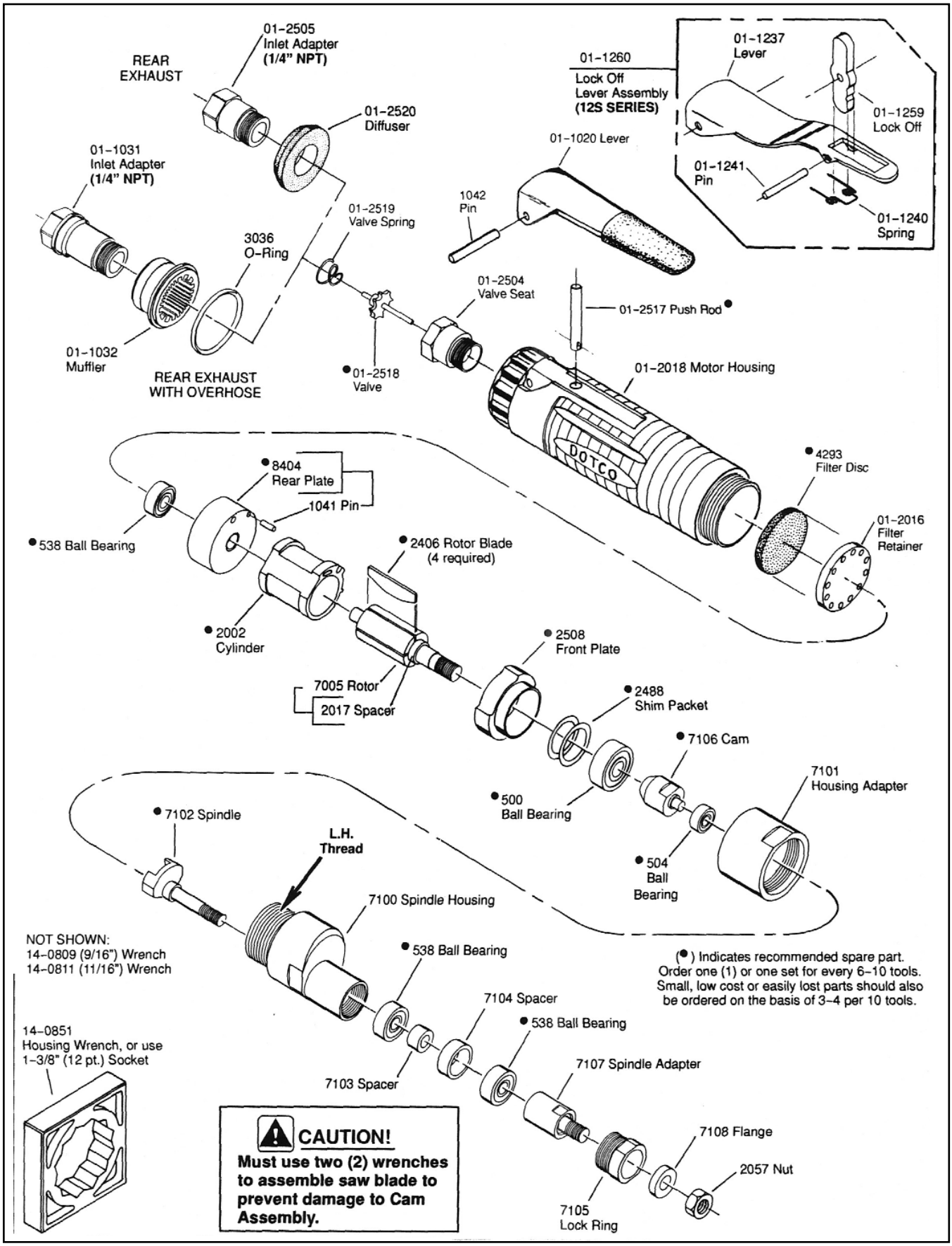
MODEL NUMBER EXAMPLE:
12S2065–90OH
is a *"Locking Lever" style with an overhose option.*

IMPORTANT: Read and comply with safety and operating instructions contained in this manual.

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

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DOTCO
12-2065 Ergo Straight Oscillating Saw



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Saw Blades with 3/8" Arbor Hole:

Blade Part Num.	Diameter	Type	Maximum Depth & Width of Cut	Recommended For
14–1740	2"	Carbide Chip* 36/80 Grit	7/16" x 3/32"	Fiberglass
14–1741	2"	Diamond Chip* 40/60 Grit	7/16" x 5/64"	Fiberglass, Carbon Composites
14–1742	2–1/2"	Stainless Steel, 124 Teeth	9/16" x 3/64"	Wood, Uncured or Cured Composites, Aluminum, Plastic
14–1746	2–1/2"	Flush Stainless, 124 Teeth	9/16" x 3/64"	Wood, Uncured or Cured Composites, Aluminum, Plastic
14–1743	2–1/2"	Carbide** 80 Teeth	9/16" x 1/16"	Cured Graphite Composites
14–1744	2–1/2"	Razor	9/16" x 3/64"	Cardboard, Light Plastic
14–1745	2–1/2"	Autopsy	3/64" width	General
14–1747	3"	Razor	9/16" x 3/64"	Cardboard, Light Plastic

(*) CAUTION: Use only for sawing non–metallic materials.

(**) Specifications subject to change.

RECOMMENDED SPARE PARTS LIST

These parts are suggested as a recommended inventory of spare parts. Where parts are small, low cost, or easily lost, then we recommend stocking 3 to 4 for every 10 tools. Other larger, lower wear or more expensive parts should be maintained as one (or one set) for every six to ten tools.

Part Number	Description	Qty. per Tool	Recommended Spare Parts	
			Per Tool	Per 10 Tools
4293	Filter Disc	1	1	3
500	Ball Bearing	1	1	3
504	Ball Bearing	1	1	3
538	Ball Bearing	3	3	12
2002	Cylinder	1	0	2
2508	Front Plate	1	0	2
2406	Rotor Blade	4	4	20

Part Number	Description	Qty. per Tool	Recommended Spare Parts	
			Per Tool	Per 10 Tools
2488	Shim Packet	1	1	3
01–2517	Push Rod	1	0	2
01–2518	Valve	1	0	2
7102	Spindle	1	0	2
7106	Cam	1	0	2
8404	Rear Plate	1	0	2

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Service Instructions

DISASSEMBLY INSTRUCTIONS

To Disassemble Complete Saw:

1.) Place the special 12-point socket wrench, part # 14-0851, horizontally in a vise and insert the tool's vertically into the wrench. unthread Saw Head Assembly. Unthread Housing Adapter, part #7101, from Spindle Housing, part #7100 **Note:** Left hand threads.

To Disassemble Saw Head Assembly:

2.) Unthread Lock Ring, part #7105, from Spindle Housing, part #7100. Unthread Spindle Adapter, part #7107, from Spindle, part #7102. Remove spindle from Spindle Housing, part #7100. Remove Both Ball Bearings, part #538, and Spacers, part #'s 7103 & 7104, from front of Spindle Housing.

To Remove & Disassemble Motor:

3.) Once the saw head assembly has been removed, pull motor from housing. Hold motor in one hand and tap the rear of Rotor, part #7005, with a brass drive punch until Rear Plate, part #8404 and Ball Bearing, part #538, are free from rotor.
Remove Cylinder, part #2002, and four Rotor Blades, part #2406. Cam, part #7106, may be removed by holding the rotor in soft vise jaws and unthreading the cam. The Front Plate, part #2508, and Ball Bearing, part #500, can now be pressed off. **Note:** Do not lose Spacer, part #2017, from the rotor. Press Ball Bearing, part #504, off cam.

ASSEMBLY INSTRUCTIONS

All parts should be thoroughly cleaned and inspected before assembly. Ball Bearing are normally replaced in most repairs.

To Assemble Motor:

4.) Make sure all parts are cleaned and oiled. Press Pins, part #1041, if necessary, into the motor end plates. To Correct for bearing tolerances, it is necessary to use shims to maintain correct clearances between the ends of the rotor and the bearing plates. Shim Packet, part #2488, contains a .001" shim and two .002" shims. Insert a .002" Shim in the Front Bearing Plate's pocket and install #500 Ball Bearing into the Front Plate.Also Install #538 Ball Bearing into the Rear Bearing Plate, part #2017, onto the threaded end of the Rotor. Support the tool on the rear end and assemble the front plate assembly onto the rotor by pressing on the bearings inner race. Press ball Bearing, part #504, onto the front of cam, part #7106, and then thread Cam, part #7106, onto rotor tightly by holding rotor in soft vise jaws.

5.) Hold rotor in left hand and front bearing plate in the other hand. Apply an outward (pulling) pressure and observe the spacing between the end of the rotor and the bearing plate. This must be from flush, not rubbing, to .002" maximum. If the rotor rubs the bearing plate, reduce the spacing between the bearing and bearing plate by removing the .002" shim entirely, or by substituting the .001" shim for the .002" shim. However, if there was more than .002" between the bearing and bearing plate, add.001" shim between the bearing and bearing plate. Install Cylinder, part #2002. Note: Be sure cylinder is not on backwards, air inlet in cylinder must line up with air inlet in Rear Plate, part #8404, when Pin, part #1041, is engaged in mating slot of cylinder.

6.) Insert all four Rotor Blades, part #2406, in rotor. Support the assembly on the face of the Cam, part #7106. Press on the Rear Plate, part #8404, by pressing on the inner race of Ball Bearing, part #538, just enough to bring the bearing plate up against the cylinder. There should be only a slight drag between the bearing plate and the cylinder when these rae moved in the fingers.
To Assemble Saw Head Assembly:

7.) make certain all parts are properly cleaned. Insert two Ball bearings, part #538, with Spacers, part #'s 7103 & 7104, between bearings, into small end of Spindle Housing, part #7100. Insert Spindle, part #7102, in opposite end of Spindle Housing, part #7100, through both bearings. Thread on Adapter, part #7107, and lock in place. Thread in Lock Ring, part #7105, and Lock in place.

To Assemble Saw Head To Motor Assemble:

8.) Thread Spindle Housing, part #7100, onto Housing Adapter, part #7101. **Note:** Left hand threads. Do not tighten at this time. Now, thread Housing Adapter, part #7101, onto Motor housing, part #01-2018, making sure that Cam, part #7106, and Spindle, part #7102, are properly engaged.

9.) Orient Output Spindle Housing, part #7100, to desired position and tighten Housing Adapter, part #7101.

Safety First!

ALWAYS COMPLY WITH:

1. General industry Safety & Health Regulations, Part 1910, OSHA 2206, available from: Sup't of Documents; Government Printing Office; Washington, DC 20402.
2. Safety Code of Portable Air Tools, ANSI B186.1 available from: American National Standards Institute, Inc.; 1430 Broadway; New York, NY 10018.
3. State and Local regulations.

Portions of the above codes and regulations are listed below for quick reference.

THE FOLLOWING EXCERPTS ARE NOT INTENDED TO BE ALL INCLUSIVE: STUDY AND COMPLY WITH ALL REGULATIONS!

1. TOOL INTENT: Tools shall be used only for purposes intended in their design (refer to product catalog).
2. AIR SUPPLY: Test and operate tools at 90 PSIG maximum unless tool is marked otherwise. Use recommended airline filters-regulators-lubricators.
3. UNUSUAL SOUND or VIBRATION: If tool vibrates or produces an unusual sound, repair immediately for correction.
4. OPERATOR PROTECTIVE EQUIPMENT: Wear goggles or face shield at all times tool is in operation. Other protective clothing shall be worn, if necessary. SEE REGULATIONS.
5. SAFETY MAINTENANCE PROGRAM: Employ a safety program to provide inspection and maintenance of all phases of tool operation and air supply equipment in accordance with *"Safety Code for Portable Air Tools."*

CAUTION: Disconnect the air supply hose before servicing the tool.

INSTALLATION:

For best performance, a working air pressure of ***90 pounds per square inch*** is recommended. Pipings, fittings, and hose should be adequate to maintain ***90 psig*** while the tool in in operation. An air line filter and lubricator, such as CooperTools' #F02-M Filter (1/4" NPT) and #L02-EP Lubricator (1/4" NPT) should be used (refer to product catalog). Hose should be blown out before attaching to tool.

LUBRICATION:

The gears in angle head style tools must be lubricated every 8 hours of operation with high quality gear grease. CooperTools' grease #45-0980 is recommended. A Grease Gun, #45-1982, is furnished with each geared tool. Insert the nozzle into the flush type lube fitting, located on the side or top of the angle head, and pump four or five times. The motor must be lubricated and moisture free. Use a high grade SAE #5 spindle oil, such as CooperTools' Lubricating oil #45-0918 (one quart). Two or three drops per minute should be sufficient lubrication. **NOTE: Turbine motor type tools (10-90 & 10-95) must NOT be oiled.**

LOSS OF POWER:

It is seldom necessary to disassemble this tool for loss of power. A loss of power may not be related to the tool. First, check the air line regulator. Also, check the air line pressure; it should be 90 psig at or near the tool while the tool is running. Check the size of hose and fittings to be certain they are not causing air restrictions. Make certain they are not plugged with dirt, rust, or scale.

SERVICE INSTRUCTIONS:

The parts of this tool are small and require careful handling. We recommend the tool be returned to the factory for repair. However, if the tool is to be repaired in the field, carefully follow instructions. Do not squeeze the tool or parts in a vise except as specified. Care must be used during assembly and disassembly. When pressing bearings onto a shaft, press only on the inner race. When pressing bearings into a bore, press on the outer race only. *NOTE: Ball bearings are the shielded type. They are lubricated for life by the bearing manufacturer and should not be washed out with solvents to clean.*

WARNING!

CHECK SPEED OF TOOL WITHOUT WHEEL BEFORE IT IS RELEASED FOR USE.

The SPEED TOLERANCE is rated speed minus 10%. The tool must ***NOT*** have a free speed higher than the RPM stamped on the housing. Use an accurate tachometer to check the tool speed, with 90 psig air pressure at the tool with the tool running.