COOPER Tools

Parts Manual • Ersatzteil–Liste

PL30–1220 March 18, 2003

DOTCO®

45–8164

12L20.. & 12S20.. series
12L21.. & 12S21.. series

0.6 hp ERGO Straight and Extended Grinders

TOOL CLASSIFICATION
12 = ERGO Grinder/Sander

12	L	2	0	00	–	36	08*	OH**

TYPICAL MODEL

THROTTLE TYPE
L = Lever
S = Locking Lever

MOTOR SIZE:
0.6 hp

HANDLE STYLE
0 = Straight
1 = Extended

SPEED OPTIONS (RPM) – *Select one*

STANDARD STRAIGHT		EXTENDED
Front Exhaust	Rear Exhaust	Rear Exhaust
00 = 25,000 **01** = 25,000 **02** = 18,000	**80** = 25,000 **81** = 20,000 **82** = 18,000	**80** = 25,000 **81** = 20,000 **82** = 18,000

(**) OVERHOSE OPTION (extra cost)
OH = Specifies overhose components on ***Rear Exhaust*** models only.

(*) OPTIONAL COLLET
(NO EXTRA COST)

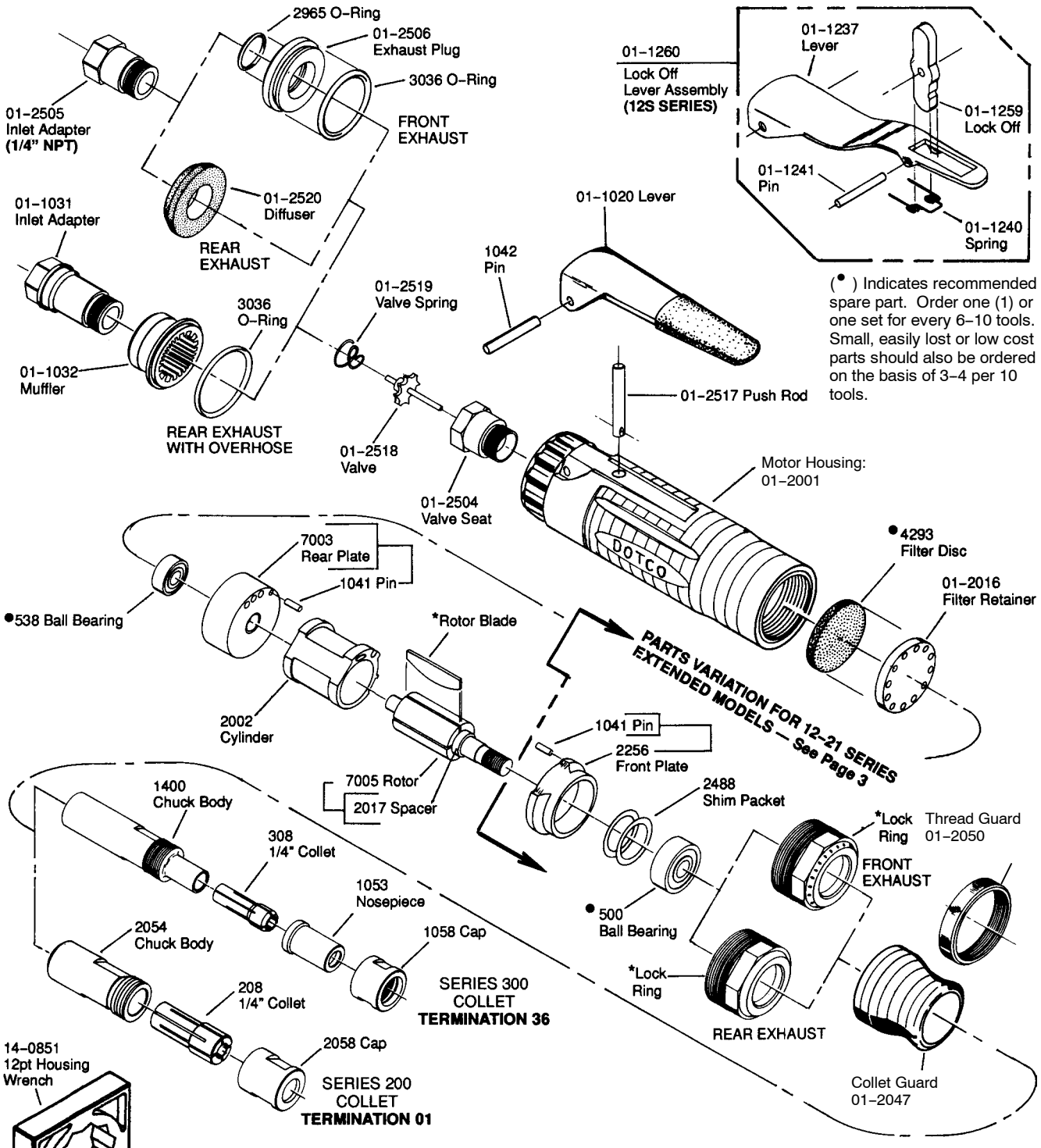
08 = 1/8”
10 = 5/32”
12 = 3/16”
14 = 7/32”
18 = 9/32”
20 = 5/16”
22 = 11/32”
24 = 3/8”
M6 = 6 mm.
M8 = 8 mm.

TERMINATION CODES
01 = 200 series Collet
36 = 300 series, 3 piece collet
77 = Cone & Plug Wheel (2180 series)

CooperTools
P.O. BOX 1410
LEXINGTON, SOUTH CAROLINA 29071–1410

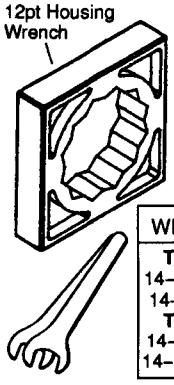
DOTCO
12–20 series Straight Grinders

Front & Rear Exhaust



(●) Indicates recommended spare part. Order one (1) or one set for every 6–10 tools. Small, easily lost or low cost parts should also be ordered on the basis of 3–4 per 10 tools.

14–0851 12pt Housing Wrench



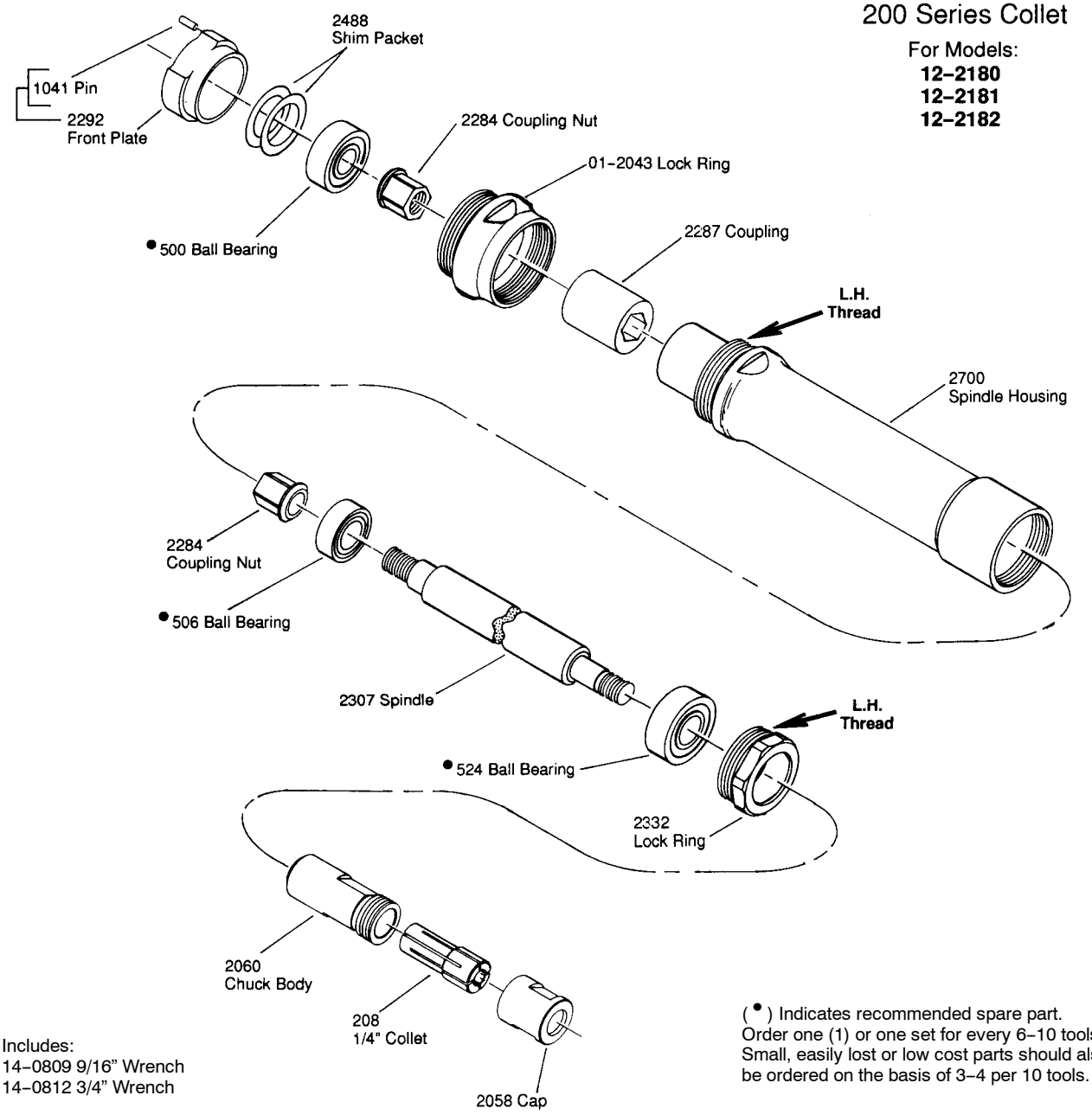
WRENCHES
TERM. –01
14–0809 (9/16")
14–0812 (3/4")
TERM. –36
14–0807 (7/16")
14–0811 (11/16")

Rear Exhaust OVERHOSE models add ***"OH"*** at end of model number.
EXAMPLE: **12L2080–01OH**

(*)	FRONT EXHAUST			REAR EXHAUST		
Description: / MODEL:	12L2000–xx 12S2000–xx	12L2001–xx 12S2001–xx	12L2002–xx 12S2002–xx	12L2080–xx 12S2080–xx	12L2081–xx 12S2081–xx	12L2082–xx 12S2082–xx
RPM:	25,000	20,000	18,000	25,000	20,000	18,000
Rotor Blade (4 req'd)	2006	2406	2406	2006	2406	2406
Lock Ring	2014	2014	2085	2445	2445	2445

TERMINATION 01
200 Series Collet

For Models:
12–2180
12–2181
12–2182

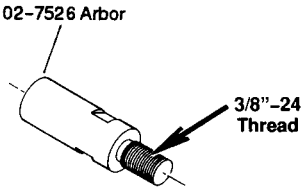


Includes:
14–0809 9/16" Wrench
14–0812 3/4" Wrench

(•) Indicates recommended spare part. Order one (1) or one set for every 6–10 tools. Small, easily lost or low cost parts should also be ordered on the basis of 3–4 per 10 tools.

TERMINATION 77
Cone & Plug Wheel
Types 16–19

For Models:
12–2180
12–2181
12–2182



Includes:
14–0808 1/2" Wrench

WARRANTY

Subject to the terms and conditions hereinafter set forth, CooperTools (the Company) warrants products and parts sold by it, insofar as they are of its own manufacture, against defects of material and workmanship, under use and service in accordance with Company's written instructions, recommendations, and ratings for installation, operation, maintenance, and service of products, for a period of **ONE YEAR FROM THE DATE OF SHIPMENT** by Company, or any of Company's authorized Distributors.

This warranty is limited to the repair or replacement, as Company may elect, of any defective parts, regarding which, upon discovery of the defects, the purchaser has given immediate written notice. Installation and transportation costs are not included. Company shall have the option of requiring the return to it of the defective material, transportation prepaid, for inspection.

Company does not warrant the merchantability of its products and does not make any warranty, express or implied, other than the warranty contained herein, Company has not authorized anybody to make any representation of warranty other than the warranty contained herein.

INSTALLATION

For best tool 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 is in operation. An air line filter and lubricator, such as Cooper Power Tool's #F02–M Filter (1/4" NPT) and #L02–EP Lubricator (1/4" NPT) should be used **(refer to Cooper's "F–R–L" brochure)**. Hose should be blown out before attaching to the tool.

LUBRICATION

The motor must be lubricated and free of moisture. Use a high grade SAE spindle oil, such as Cooper's Lubricating Oil #45–0918 *(one quart)*. Two or three drops per minute should be sufficient.

LOSS OF POWER

A loss of power may not be related to the tool. First, check the air line pressure. It should be ***90 psi at the tool while operating***. Check the size of hose and fittings to be certain they are not causing air restrictions.

SERVICE INSTRUCTIONS

Do not squeeze tool or parts in a vise except as specified in *ASSEMBLY* or *DISASSEMBLY* instructions. Care must be used in the assembly and disassembly of ball bearings. 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.

DISASSEMBLY INSTRUCTIONS

Place the special 12—point socket wrench, *part #14–0851*, horizontally in a vise and insert the tool's housing vertically into the wrench. Loosen and unscrew the Lock Ring (or Extension) from the tool. To remove the motor, grasp the end of the rotor (or chuck body) and pull the motor out. To disassemble the motor, remove the Rear Bearing Plate *(part #7003)* and bearing by pressing on the rear of the rotor with an arbor press. Unthread the Collet Chuck Body or Coupling Nut by holding the rotor in soft vise jaws. The Front Bearing Plate and Bearing can now be pressed off (be careful not to lose the rotor's spacer).

Extension Spindle

To disassemble the Extension Assembly, remove Lock Ring – *NOTE: L.H. Thread* – and pull Spindle Assembly from Spindle Housing *(part #2700)*. To remove Bearing *(part #506)* from Spindle, unscrew Driver *(part #2284)* and press Spindle *(part #2307)* from bearing. Hold spindle in vise and unthread Chuck Body (or threaded adapter). Press Spindle out of Bearing *(part #524)*.

ASSEMBLY INSTRUCTIONS

MOTOR

Make sure all parts are clean. 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 0.001" shim and two 0.002" shims. Insert a 0.002" 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, *#7003*. Slip Spacer, *part #2017*, onto the threaded end of the Rotor. Support the rotor on the *rear end* and assemble the front plate assembly onto the rotor by pressing on the bearing's inner race.

ASSEMBLY INSTRUCTIONS
(continued)

Now, hold the rotor in the left hand and the front end plate by the right hand. Apply an outward *(pulling)* pressure and observe the spacing between the end of the rotor and the bearing plate. This should be from flush, not rubbing, to 0.002" maximum. ***If the rotor rubs the bearing plate, reduce the spacing between the bearing and bearing plate by removing the 0.002" shim entirely, or by substituting the 0.001" shim for the 0.002" shim. however, if there was more than 0.002" spacing between the end of the rotor and the bearing plate, then add 0.001" shim between the bearing and bearing plate.***

Replace Cylinder, *part #2002*. ***NOTE: be sure that the cylinder is not on backwards! The air inlet in the cylinder must line up with the air inlet in the rear plate when the plate's pin is engaged in the mating slot in the cylinder.***

Insert the rotor blades into the rotor. Support this assembly on the face of the Collet Chuck Body or Coupling Nut. If tool has a Chuck Body, place the Nosepiece over the Chuck Body and support this assembly on the face of the Nosepiece. Then, press on the Rear Bearing Plate *(part #7003)* – with bearing assembled – pressing on inner race only. Press just enough to bring the bearing plate against the cylinder. There should be a slight drag between the bearing plate and the cylinder when these are moved with the fingers. Position the cylinder until the motor turns finger–free.

Insert motor into housing and screw in the Lock Ring until tight. *Check the assembly by spinning the Coupling Nut or the chuck body; it must be free. If it is not free, remove motor from housing and recheck snugness and alignment of cylinder between end plates. IMPORTANT: Lock Ring must be tight — do not loosen this lock ring for the purpose of "freeing up" the motor.*

Extension Spindle

Press front bearing *(part #524)* against shoulder of the spindle, pressing only on the bearing's inner race. Thread Chuck (or Adapter) onto spindle until it is snug against bearing. Press Bearing *(part #506)* onto rear of spindle and tighten Driver *(part #2284)* against bearing's inner race by holding Chuck Body (or threaded adapter).

Position Spindle/Bearing Assembly in Spindle Housing *(part #2700)*, making sure that outer race of bearing is up against inside shoulder of the Spindle Housing. Screw Lock Ring *(part #2332)* against outer race of front bearing and tighten.

Spindle must turn freely.

Assembling the Extension Spindle and Motor

To assemble the Extension Spindle and the Motor together, place the special 12—point socket wrench, *(part #14–0851)* horizontally in a vise and insert the tool's housing vertically into the wrench. Place Coupling *(part #2287)* over Driver *(part #2284)*. Mount Spindle Assembly onto motor assembly and thread into Cap *(part #01–2043)* – *NOTE: L.H. THREADS* – making sure that Driver *(part #2284)* on spindle assembly engages Coupling *(part #2287)*. Cap *(part #01–2043)* must be held stationary while spindle assembly is tightened. ***Spindle must rotate freely.***

Pre Operation Inspection

Before tool is connected to the air line, be sure spindle turns freely. Tools should not be operated if there is any rubbing or binding in the assembly. Add a few drops of oil to tool before testing.



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 speed, with 90 PSIG air pressure at the tool while running.