Parts Page Reorder No. PD01•93
Effective October, 2001
Supercedes PD92•04

Dynangle® II

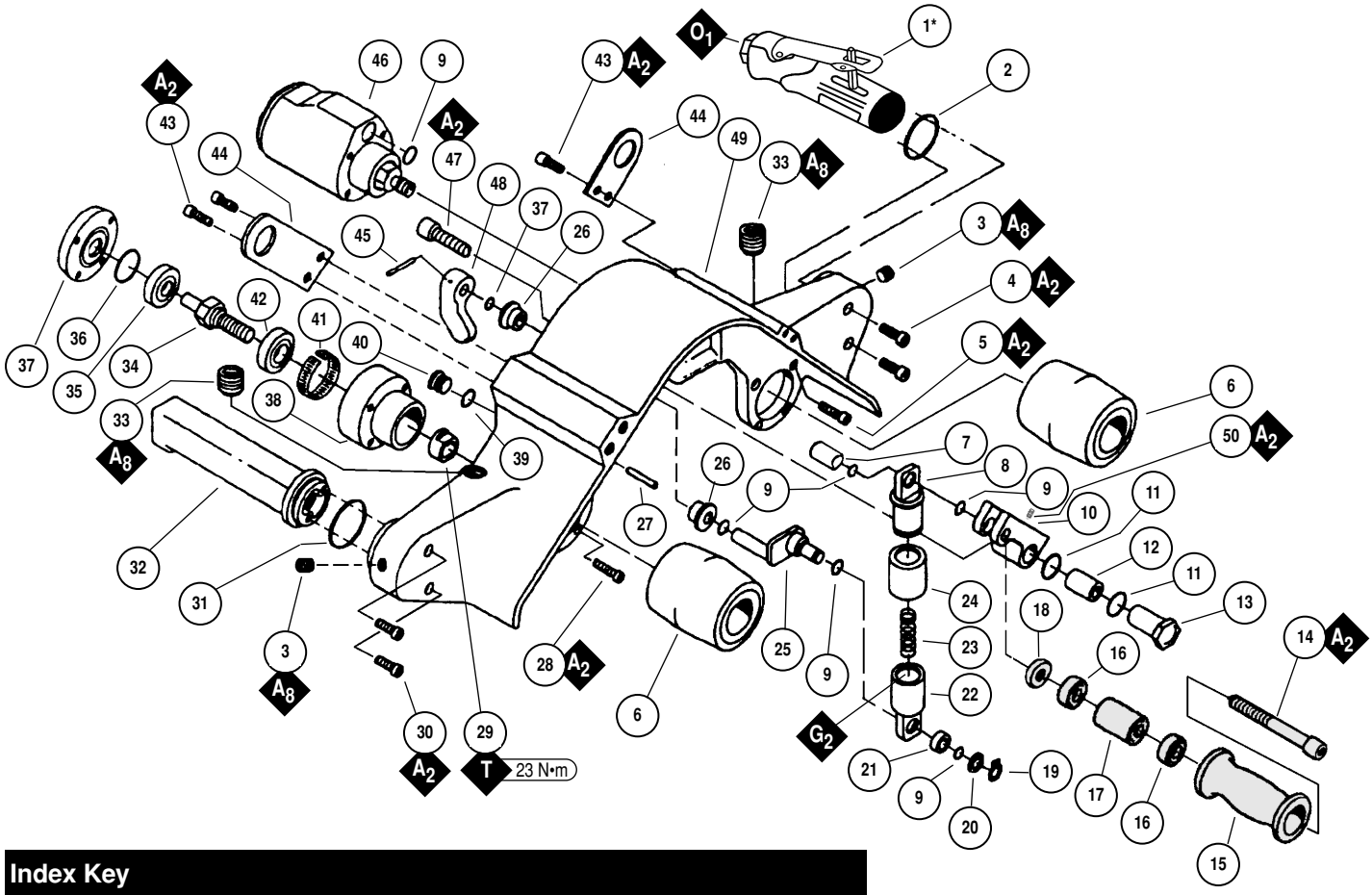
***Models*:**
14300 – Standard Duty
14302 – Heavy-duty "Dual Motor"
14303 – Heavy-duty "Dual Motor" w/ Platen
14306 – Heavy-duty "Dual Motor" w/ Platen (2" x 45" belts)

Machine and Motor Parts

⚠WARNING **Always operate, inspect and maintain this tool in accordance with the Safety Code for portable air tools (ANSI B186.1) and any other applicable safety codes and regulations. Please refer to Dynabrade's Warning/Safety Operating Instructions for more complete safety information.**

Machine Assembly

Model 14300 — for 2" x 34" belts / Standard duty — for strap polishing



Index Key

No.	Part #	Description
1	**07167**	Throttle Valve Assy.*
2	**14064**	O-Ring
3	**95562**	Plug (2)
4	**95720**	Screw (2)
5	**95221**	Screw (4)
6	**01794**	Drive Wheel (2)
7	**14353**	Bushing
8	**14317**	Retainer
9	**95288**	O-Ring (6)
10	**14316**	Idle Arm
11	**95526**	O-Ring (2)
12	**95555**	Bearing
13	**14343**	Step Nut
14	**95565**	Screw
15	**14344**	Tension Idler
16	**95398**	Bearing (2)
17	**14346**	Spacer
18	**14347**	Spacer
19	**95558**	Retaining Ring
20	**95557**	Washer
21	**95572**	Bushing
22	**14318**	Retainer
23	**95556**	Spring
24	**14319**	Cover
25	**14324**	Cam Assembly
26	**95560**	Bearing (2)
27	**95333**	Pin
28	**95564**	Screw (4)
29	**14330**	Nut
30	**95720**	Screw (2)
31	**14064**	O-Ring
32	**14332**	Dead Handle Assy.
33	**95561**	Plug (2)
34	**14329**	Shaft
35	**01266**	Bearing
36	**95584**	O-Ring
37	**14328**	Cover
38	**14327**	Housing
39	**01025**	O-Ring (2)
40	**14348**	Plug
41	**95583**	Ring
42	**02552**	Bearing
43	**95536**	Screw (4)
44	**14333**	Bracket (2)
45	**95164**	Pin
46	**07102**	Motor
47	**95559**	Screw
48	**14331**	Lever
49	**14320**	Housing
50	**95952**	Set Screw

KEY

- **O** Oil: **O_1 = Air Lube**
- **G** Grease: **G_2 = Loctite #771**
- **A** Adhesive: **A_2 = Loctite #271**, **A_8 = Loctite #567**
- **T** Torque: **N•m x 8.85 = In - lbs.**

Shaded area represents 14334 Tension Wheel Assembly.

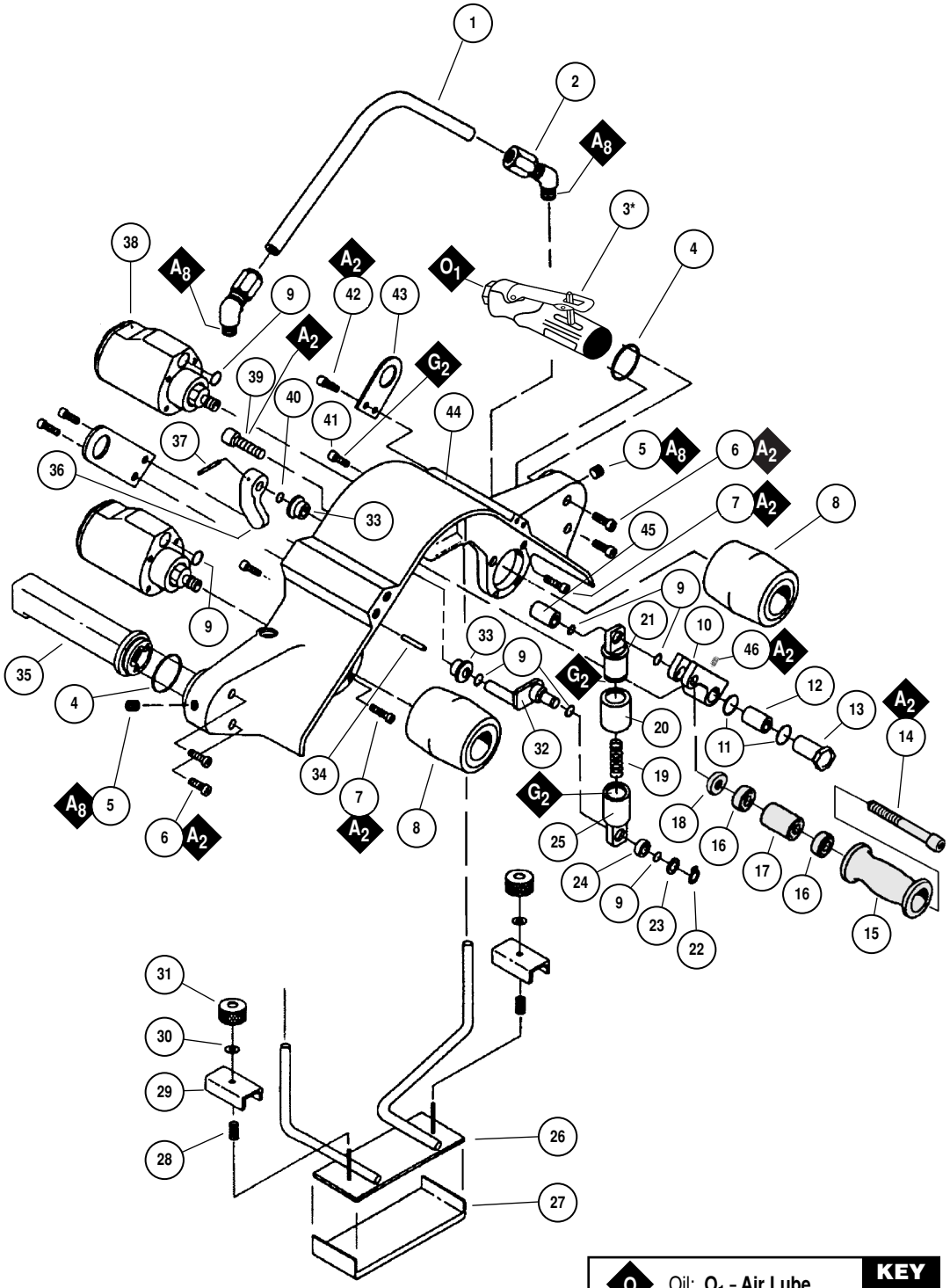
***See page 5 for 07167 Throttle Valve and 07102 Motor Assemblies.**

Machine Assembly

Model 14302 — for 2" x 34" belts / Heavy-duty — for strap polishing
Model 14303 — for 2" x 34" belts / Heavy-duty — with 14336 Platen Assembly

Index Key

No.	Part #	Description
1	**14335**	Air Line
2	**95566**	Fitting (2)
3	**07167**	Throttle Valve Assy.*
4	**14064**	O-Ring (2)
5	**95562**	Plug (2)
6	**95720**	Screw (4)
7	**95221**	Screw (8)
8	**01794**	Drive Wheel (2)
9	**95288**	O-Ring (7)
10	**14316**	Idler Arm
11	**95526**	O-Ring (2)
12	**95555**	Bearing
13	**14343**	Step Nut
14	**95565**	Screw
15	**14344**	Tension Idler
16	**95398**	Bearing (2)
17	**14346**	Spacer
18	**14347**	Spacer
19	**95556**	Spring
20	**14319**	Cover
21	**14317**	Retainer
22	**95558**	Retainer Ring
23	**95557**	Washer
24	**95572**	Bushing
25	**14318**	Retainer
26	**14337**	Mount
27	**14341**	Platen Pad
28	**95570**	Spring (2)
29	**14338**	Clamp (2)
30	**95563**	Washer (2)
31	**14342**	Knob (2)
32	**14324**	Cam Assembly
33	**95560**	Bearing (2)
34	**95333**	Pin
35	**14332**	Dead Handle Assy.
36	**14331**	Lever
37	**95164**	Pin
38	**07102**	Motor (2)
39	**95559**	Screw
40	**01025**	O-Ring
41	**95150**	Screw (2)
42	**95536**	Screw (4)
43	**14333**	Bracket (2)
44	**14320**	Housing
45	**14353**	Bushing
46	**95952**	Set Screw



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- **O** — Oil: **O_1 = Air Lube**
- **G** — Grease: **G_2 = Loctite #771**
- **A** — Adhesive: **A_2 = Loctite #271**, **A_8 = Loctite #567**
- **T** — Torque: **N•m x 8.85 = In - lbs.**

Shaded area represents 14334 Tension Wheel Assembly.

***See page 5 for 07167 Throttle Valve and 07102 Motor Assemblies.**

Important Operating, Maintenance and Safety Instructions

Carefully read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool.
Warning: Hand, wrist and arm injury may result from repetitive work motion and overexposure to vibration.
Important: All Dynabrade Rotary Vane air tools must be used with a Filter-Regulator-Lubricator to maintain all warranties.

Operating Instructions:

Warning: Eye, face, respiratory, sound and body protection must be worn while operating power tools. Failure to do so may result in serious injury or death. Follow safety procedures posted in workplace.

1. With power source disconnected from tool, securely fasten abrasive/accessory on tool.
2. Install air fitting into inlet bushing of tool. **Important:** Secure inlet bushing of tool with a wrench before attempting to install the air fitting to avoid damaging valve body housing.
3. Connect power source to tool. Be careful **not** to depress throttle lever in the process.
4. Check tool speed with tachometer. If tool is operating at a higher speed than the RPM marked on the tool or operating improperly, the tool should be serviced to correct the cause before use.

Maintenance Instructions:

1. Check tool speed regularly with a tachometer. If tool is operating at a higher speed than the RPM marked on the tool, the tool should be serviced to correct the cause before use.
2. Some silencers on air tools may clog with use. Clean and replace as required.
3. All Dynabrade Rotary Vane air motors should be lubricated. Dynabrade recommends one drop of air lube per minute for each 10 SCFM (example: if the tool specification states 40 SCFM, set the drip rate of your filter-lubricator at 4 drops per minute).
   Dynabrade Air Lube (P/N **95842**: 1 pt. 473 ml.) is recommended.
4. An Air Line Filter-Regulator-Lubricator must be used with this air tool to maintain all warranties. Dynabrade recommends the following: **11411** Air Line Filter-Regulator-Lubricator — Provides accurate air pressure regulation, two-stage filtration of water contaminants and micro-mist lubrication of pneumatic components. Operates 55 SCFM @ 100 PSIG has 1/2" NPT female ports.
5. Use only genuine Dynabrade replacement parts. To reorder replacement parts,please specify the **Model #**, **Serial #** and **RPM** of your machine.
6. A Motor Tune-Up Kit (P/N **96011**) is available which includes assorted parts to help maintain motor in peek operating condition.
7. Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool or parts with any solvents or oils containing acids, esters, keytones, chlorinated hydrocarbons or nitro carbons.

Safety Instructions:

Products offered by Dynabrade should not be converted or otherwise altered from original design without expressed written consent from Dynabrade, Inc.

- **Important:** User of tool is responsible for following accepted safety codes such as those published by the American National Standards Institute (ANSI).
- Operate machine for one minute before application to workpiece to determine if machine is working properly and safely before work begins.
- Always disconnect power supply before changing abrasive/accessory or making machine adjustments.
- Inspect abrasives/accessories for damage or defects prior to installation on tools.
- Please refer to Dynabrade's Warning/Safety Operating Instructions Tag (Reorder No. **95903**) for more complete safety information.
- **Warning:** Hand, wrist and arm injury may result from repetitive work, motion and overexposure to vibration.

Notice

All Dynabrade motors use the highest quality parts and metals available and are machined to exacting tolerances. The failure of quality pneumatic motors can most often be traced to an unclean air supply or the lack of lubrication. Air pressure easily forces dirt or water contained in the air supply into motor bearings causing early failure. It often scores the cylinder walls and the rotor blades resulting in limited efficiency and power. Our warranty obligation is contingent upon proper use of our tools and cannot apply to equipment which has been subjected to misuse such as unclean air, wet air or a lack of lubrication during the use of this tool.

One Year Warranty

Following the reasonable assumption that any inherent defect which might prevail in a product will become apparent to the user within one year from the date of purchase, all equipment of our manufacture is warranted against defects in workmanship and materials under normal use and service. We shall repair or replace at our factory, any equipment or part thereof which shall, within one year after delivery to the original purchaser, indicate upon our examination to have been defective. Our obligation is contingent upon proper use of Dynabrade tools in accordance with factory recommendations, instructions and safety practices. It shall not apply to equipment which has been subject to misuse, negligence, accident or tampering in any way so as to affect its normal performance. Normally wearable parts such as bearings, contact wheels, rotor blades, etc., are not covered under this warranty.

Model Number	Motor HP (W)	Motor RPM	Sound Level	Abrasive Belt Size Inch (mm)	Maximum Air Flow CFM/SCFM (LPM)	Max. SFPM (SMPM)	Weight Pound (kg)	Length Inch (mm)	Height Inch (mm)
14300	1.2 (895)	13,000	85 dB(A)	2 (51) W x 34 (864) L	7/53 (1,501)	8,500 (2,582)	15.1 (6.9)	18-7/8 (480)	8-1/2 (216)
14300	2.4 (1,790)	13,000	85 dB(A)	2 (51) W x 34 (864) L	15/106 (3,002)	8,500 (2,582)	17.4 (7.9)	18-7/8 (480)	9-9/16 (243)
14300	2.4 (1,790)	13,000	85 dB(A)	2 (51) W x 34 (864) L	15/106 (3,002)	8,500 (2,582)	18.7 (8.5)	18-7/8 (480)	9-9/16 (243)
14300	2.4 (1,790)	13,000	90 dB(A)	2 (51) W x 45 (1,143) L	15/106 (3,002)	8,500 (2,582)	19.2 (8.7)	22-7/8 (581)	9-1/2 (241)

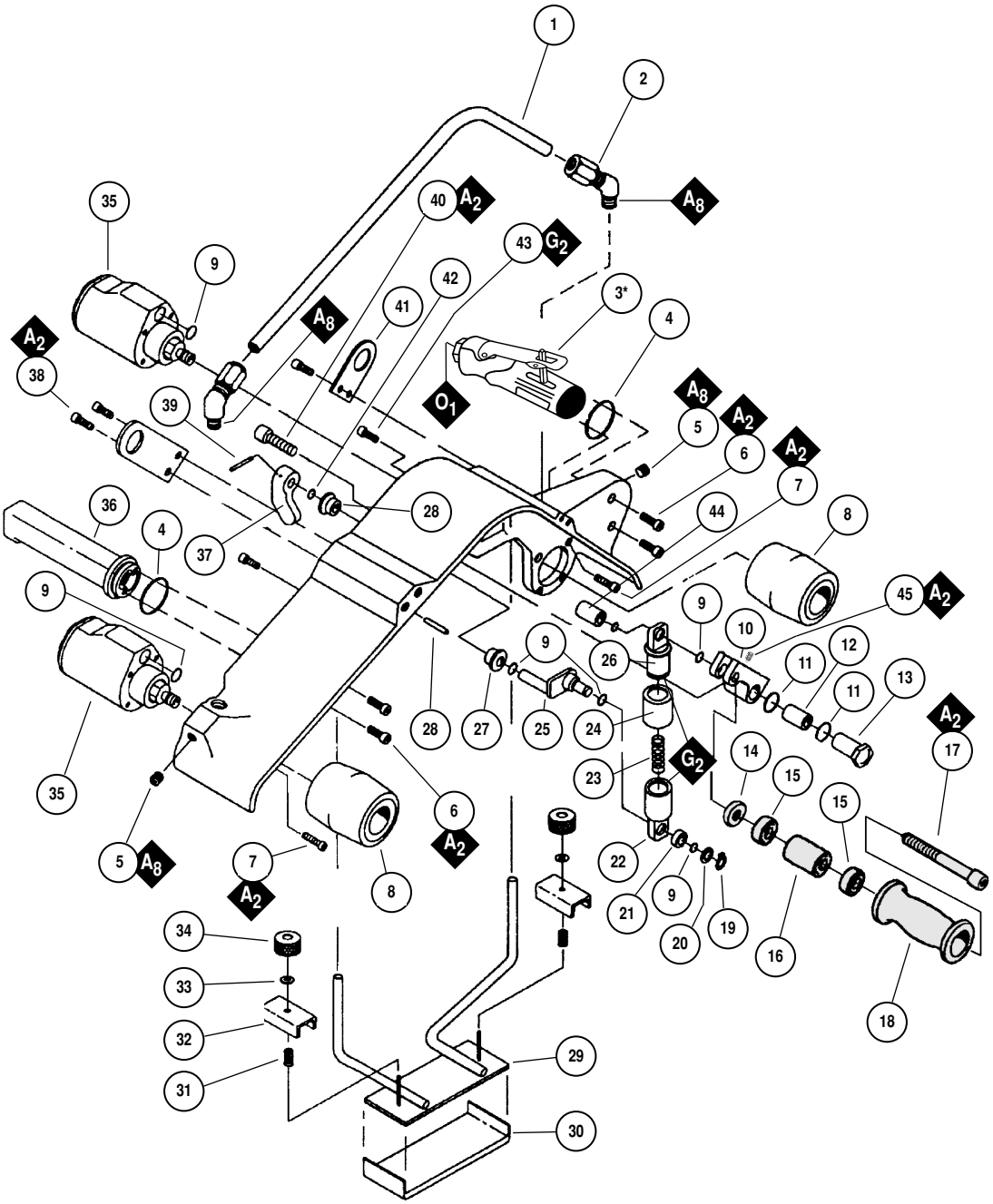
Additional Specifications: Air Inlet Thread 1/2" NPT • Hose Size 1/2" (15 mm) • Air Pressure 90 PSIG (6.2 Bars)

Machine Assembly

Model 14306 — for 2" x 45" belts / Heavy-duty — with 14339 Platen Assembly

Index Key

No.	Part #	Description
1	**14345**	Air Line
2	**95566**	Fitting (2)
3	**07167**	Throttle Valve Assy.*
4	**14064**	O-Ring (2)
5	**95562**	Plug (2)
6	**95720**	Screw (4)
7	**95221**	Screw (8)
8	**01794**	Drive Wheel (2)
9	**95288**	O-Ring (7)
10	**14316**	Idler Arm
11	**95526**	O-Ring (2)
12	**95555**	Bearing
13	**14343**	Step Nut
14	**14347**	Spacer
15	**95398**	Bearing (2)
16	**14346**	Spacer
17	**95565**	Screw
18	**14344**	Tension Idler
19	**95558**	Retaining Ring
20	**95557**	Washer
21	**95572**	Bushing
22	**14318**	Retainer
23	**95581**	Spring
24	**14319**	Cover
25	**14324**	Cam Assembly
26	**14317**	Retainer
27	**95560**	Bearing (2)
28	**95333**	Pin
29	**14351**	Mount
30	**14341**	Platen Pad
31	**95570**	Spring (2)
32	**14338**	Clamp (2)
33	**95563**	Washer (2)
34	**14342**	Knob (2)
35	**07102**	Motor (2)
36	**14332**	Dead Handle Assy.
37	**14331**	Lever
38	**95536**	Screw (4)
39	**95164**	Pin
40	**95559**	Screw
41	**14333**	Bracket (2)
42	**01025**	O-Ring
43	**95150**	Screw (2)
44	**14353**	Bushing
45	**95952**	Set Screw



KEY

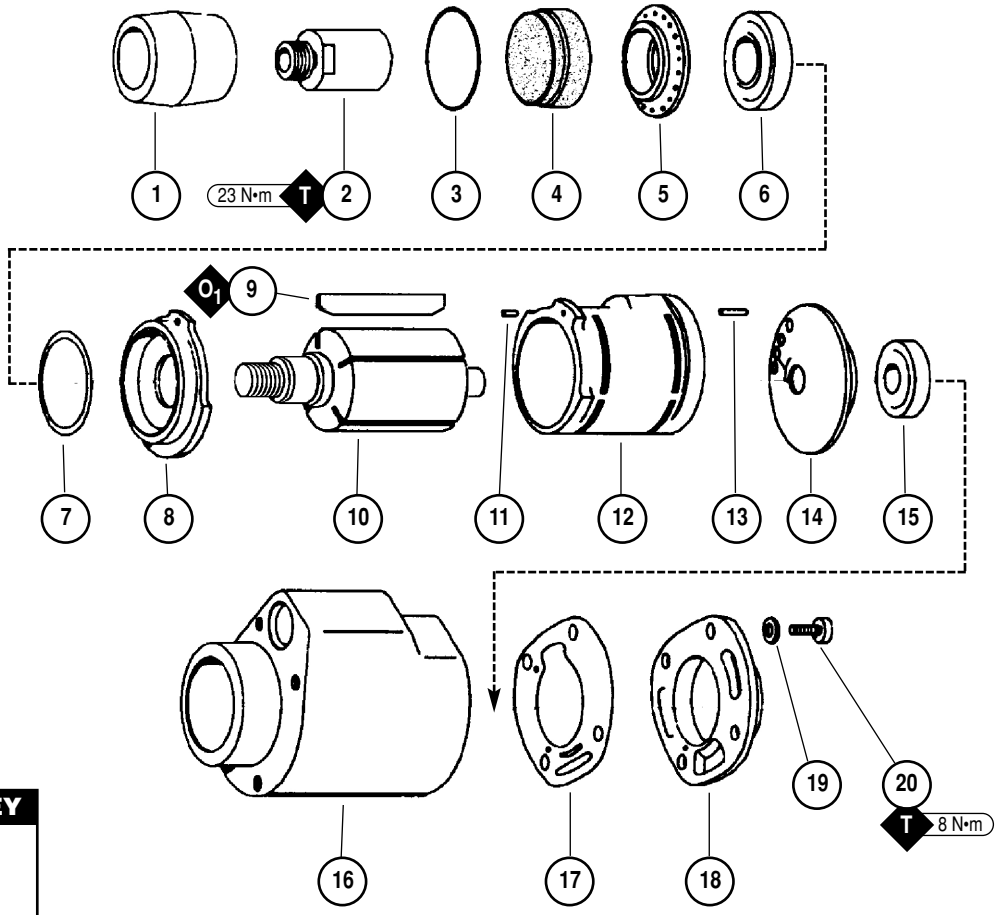
- **O** Oil: **O_1 = Air Lube**
- **G** Grease: **G_2 = Loctite #771**
- **A** Adhesive: **A_2 = Loctite #271**, **A_8 = Loctite #567**
- **T** Torque: **N•m x 8.85 = In - lbs.**

Shaded part numbers represent 14334 Tension Wheel Assembly.

***See page 5 for 07167 Throttle Valve and 07102 Motor Assemblies.**

Heavy-Duty Air Motor 07102 - Dynangle® II

Index Key		
No.	Part #	Description
1	**01794**	Drive Wheel
2	**02553**	Adapter
3	**95584**	O-Ring
4	**01674**	Silencer
5	**07153**	Air Control Ring
6	**01036**	Bearing
7	**01277**	Shim Pack (3/Pkg.)
8	**07119**	Bearing Plate
9	**07107**	Blades (5/Pkg.)
10	**07103**	Rotor
11	**01673**	Guide Pin
12	**07118**	Cylinder
13	**01775**	Guide Pin
14	**07114**	Bearing Plate
15	**01007**	Bearing
16	**07132**	Housing
17	**07129**	Gasket
18	**07122**	Housing Cap
19	**01791**	Washer (4)
20	**01790**	Screw (4)

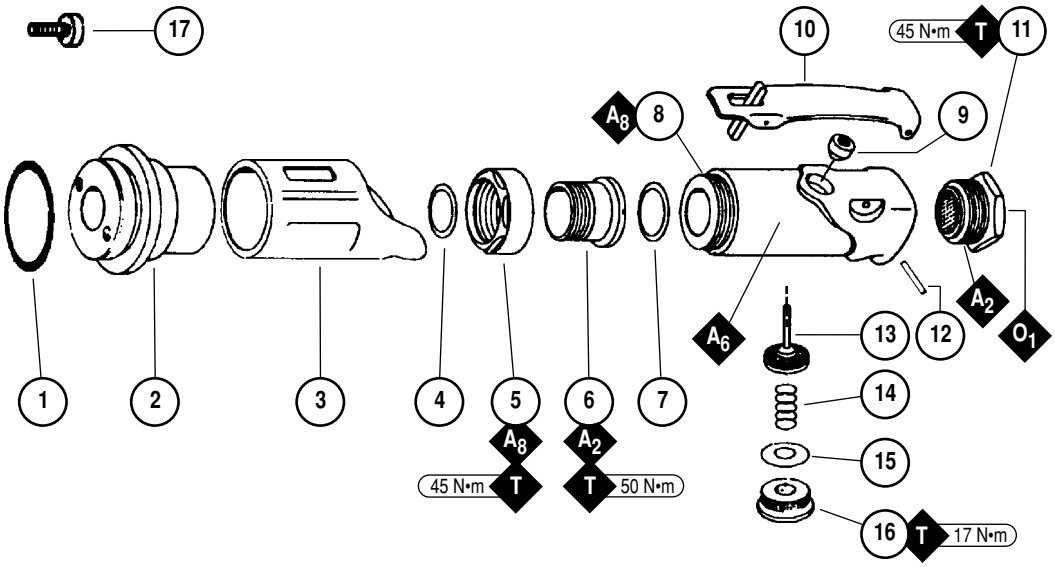


KEY

- O — Oil: **O_1 = Air Lube**
- G — Grease: **G_2 = Loctite #771**
- A — Adhesive: **A_2 = Loctite #271**, **A_6 = Loctite #380**, **A_8 = Loctite #567**
- T — Torque: **N•m x 8.85 = In - lbs.**

07167 Throttle Valve Assembly

Index Key		
No.	Part #	Description
1	**14064**	O-Ring
2	**07086**	Adapter
3	**07136**	Handle Grip
4	**02658**	Packing
5	**02631**	Nut
6	**02626**	Adjustment Bushing
7	**01746**	O-Ring
8	**07141**	Valve Body Assembly (Incl. **07142** Bushing)
9	**07142**	Bushing
10	**01089**	Lever
11	**01697**	Inlet Bushing
12	**01017**	Pin
13	**07168**	Valve Stem Assembly
14	**07145**	Spring
15	**07146**	Packing
16	**07147**	Plug
17	**95720**	Screw (2)



Note: On Models **14302**, **14303**, and **14306** the **07167** Throttle Valve Assembly can be mounted on either side of the tool for right or left hand comfort.

Disassembly/Assembly Instructions

Important: Manufacturer's warranty is void if tool is disassembled before warranty expires.
A Motor Tune-Up Kit is available (P/N 96011) to help maintain motor in peek operating condition.

Tool Disassembly:

1. Disconnect tool from power source.
2. Remove any abrasive belt from machine.
3. Roll **07136** Handle Grip away from **07086** Adapter to expose wrench flats.
4. Remove **07086** Adapter from housing (right hand thread). Separate **07167** Throttle Valve Assembly from machine assembly.
5. Insert **01697** Inlet Bushing securely into vise.
6. Remove **02631** Nut by using a 32 mm wrench.
7. Remove **01794** Drive Wheel with a 19 mm wrench.
8. Remove **95221** Screws (4) and disconnect **07102** Motor Assembly from machine housing.
9. Place **07102** Motor Assembly housing in soft jaw vise. **Important:** Be careful not to over tighten vise to prevent damage.
10. Remove **01790** Screws (4) and **01791** Washers (4) from **07122** Housing Cap. Remove housing cap and **07129** Gasket.

Motor Disassembly:

1. Fasten a 2 in. bearing separator around the rear portion of the **07118** Cylinder and using a #2 arbor press (P/N **96232** available) place the separator on the table of the arbor press so that the motor spindle points toward the floor.
2. Use a 3/16 in. Dia. flat nose drive punch as a press tool and push against the rear shaft of the rotor to remove rear bearing/plate assembly.
3. Hold the body of the **07103** Rotor in a soft (aluminum or bronze) jaw vise and remove **02553** Adapter.
4. Remove **07119** Front Bearing Plate, **01036** Front Bearing from **07103** Rotor.
   Note: Bearing, front bearing plate are a slip fit onto rotor.
5. Push **01036** Bearing Plate and remove shims from front bearing plate.

Motor Disassembly Complete.

Motor Assembly:

Important: Be certain all parts are cleaned and in good repair before assembling.

1. Place **07103** Rotor in soft (aluminum or bronze) jaw vise with threaded spindle pointing upwards.
2. Place .002" shim into front bearing plate as initial spacing and slip **01036** Bearing into plate. **Note: 01277** Shim Pack contains .001" and .003" shims.
3. Install bearing/bearing plate assembly onto rotor.
4. Install **02553** Adapter onto assembly.
5. Tighten **02553** Adapter onto rotor, torque 23 N•m/200 in. - lbs.
6. Check clearance between rotor and bearing plate by using a .001" feeler gauge. Clearance should be at .001" to .0015". Adjust clearance by repeating steps 1-5 with different shims if necessary.
7. Once proper rotor/gap clearance is achieved, install lubricated **07107** Blades (5) into rotor slots. Dynabrade Air Lube P/N **95842** (or equivalent) is recommended for lubrication before installation in rotor slots.
8. Install cylinder over rotor.
9. Press the **01007** Rear Bearing into **07114** Rear Bearing Plate. Press bearing/bearing plate assembly onto rotor. Be sure that pin and air inlet line-up with pin hole and air inlet in cylinder.
10. Place **95584** O-Ring **01674** Silencer and **07153** Exhaust Ring into housing.
11. Slide motor assembly into motor housing.
12. Install **07129** Gasket and **07122** Housing Cap with **01790** Screws (4) and **01791** Washers (4), tighten screws to 9 N•m/80 in. - lbs.
13. Motor adjustment can now be checked. With motor housing still mounted in vise, pull end of rotor and twist (10-15 lbs. force), rotor should turn freely without drag. If drag or rub is felt, then increase preload or remove shim. Also, push end of rotor and twist (10-15 lbs. force), rotor should turn freely without drag. If drag or rub is felt, then deload or add a shim.
14. Install **95221** Screws (4) to connect **07102** Motor Assembly onto machine housing.
15. Apply 2 drops of #271 Loctite® (or equivalent) to threads of **02626** Adjustment Bushing before tightening.
16. Slip **02626** Adjustment Bushing through **02631** Nut and **02658** Packing, and secure into **07886** Adapter.
17. Apply Loctite® #271 (or equivalent) and tighten **02626** Adjustment Bushing into housing torque to 50 N•m/450 in. - lbs.
18. Apply Loctite® #567 (or equivalent) to threads of **07141** Valve Body, and fasten **02631** Nut and **01746** O-Ring onto valve body. Swivel **07141** Valve Body to desired throttle lever position.
19. Tighten **02631** Nut to 45 N•m/400 in. - lbs. Roll **07136** Grip back into place.

Tool Assembly Complete. Please allow 30 minutes for adhesives to cure before operating tool.

Important: Motor should now be tested for proper operation at 90 PSIG. If motor does not operate properly or operates at a higher RPM than marked on the tool, the tool should be serviced to correct the cause before use. Before operating, place 2-3 drops of Dynabrade Air Lube (P/N **95842**) directly into air inlet with throttle lever depressed. Operate tool for thirty seconds to determine if tool is operating properly and to allow lubricating oils to properly penetrate motor.

Optional Accessories

Dynaswivel®
Swivels 360° at two locations which allows an air hose to drop straight to the floor, no matter how the tool is held.

- **95462** 1/2" NPT

96011 Motor Tune-Up Kit:

- Includes assorted parts to help maintain and repair motor.
- Two kits are required.

Dynabrade Air Lube

- Formulated for pneumatic equipment.
- Absorbs up to 10% of its weight in water.
- Prevents rust and formation of sludge.
- Keeps pneumatic tools operating longer with greater power and less down time.

95842: 1 pt. (473 ml)
95843: 1 gal. (3.8 L)

Wrenches

95303 – 1/4" Hex Wrench

95304 – 24 mm Open-End
96079 – 32 mm Open-End

Abrasive Belts

Coated Aluminum Oxide

Belt Width	Abrasive Grit 40	60	80	100	120	180	220	320	500
					18" Long				
1"	90284	90285	90286	90148	90287	90288	90289	90290	90291
					34" Long				
2"	90376	90377	90378	90379	90380	–	–	–	–
					45" Long				
2"	90348	90349	90350	90351	90352	–	–	–	–

1" Belts: Unit = 200 Belts. **2" Belts:** Unit = 50 Belts

Non-Woven Nylon

Belt Width	Grade/Belt Color Super Fine/Grey Grit Range 320-600	Very Fine/Blue Grit Range 220-320	Medium/Maroon Grit Range 150-180	Course/Brown Grit Range 80-150
		18" Long		
1"	90162	90259	90295	90300
		34" Long		
2"	–	90371	90373	90374

1" and 2" Belts: Unit = 10 Belts.

Toll Free (U.S.A.) 1-800-826-7333
Toll Free (Can.) 1-800-344-1488

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