

**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)

# Dynangle® II

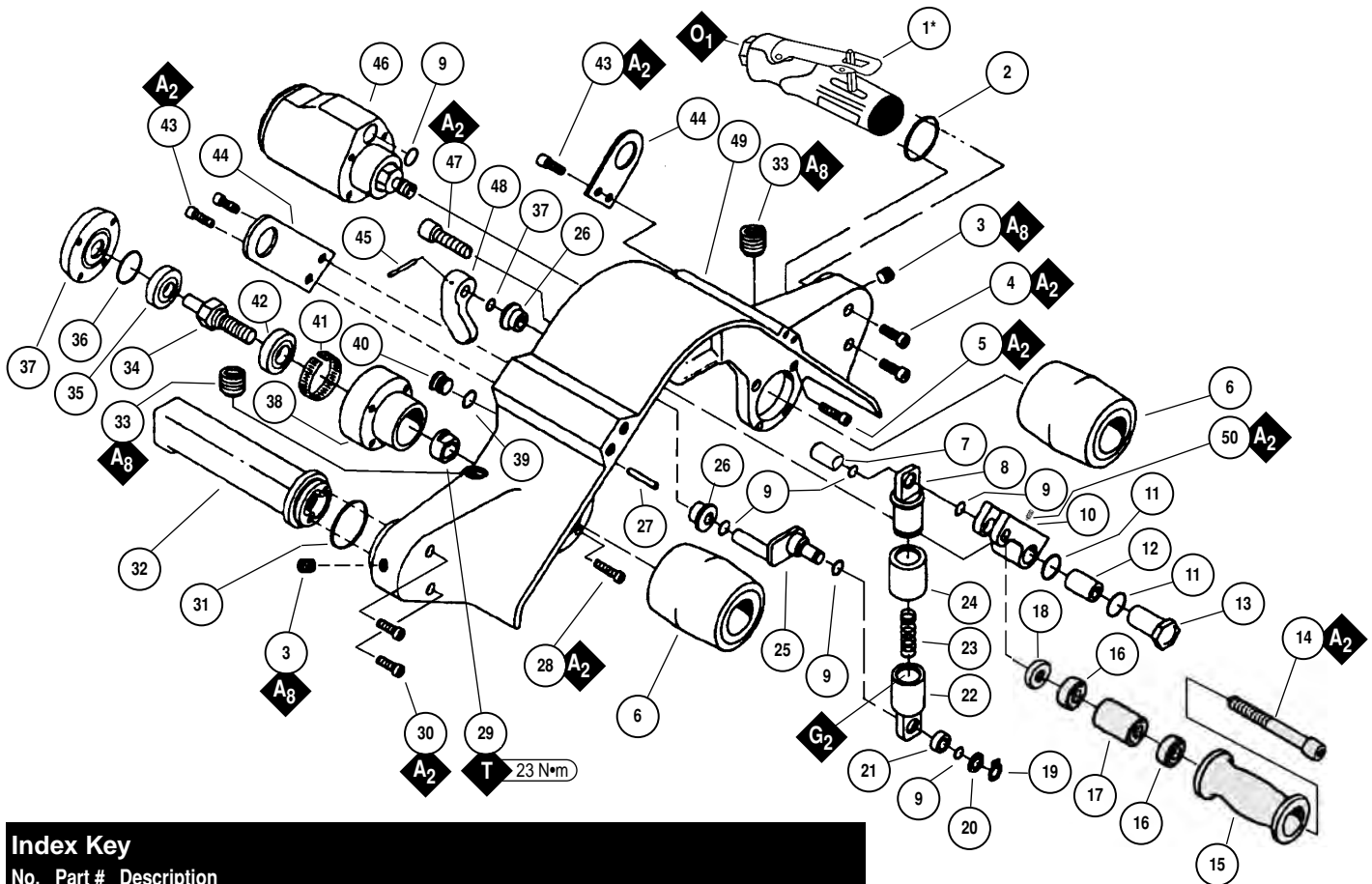
## Machine and Motor Parts



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.*	18	14347	Spacer	35	01266	Bearing
2	14064	O-Ring	19	95558	Retaining Ring	36	95584	O-Ring
3	95562	Plug (2)	20	95557	Washer	37	14328	Cover
4	95720	Screw (2)	21	95572	Bushing	38	14327	Housing
5	95221	Screw (4)	22	14318	Retainer	39	01025	O-Ring (2)
6	01794	Drive Wheel (2)	23	95556	Spring	40	14348	Plug
7	14353	Bushing	24	14319	Cover	41	95583	Ring
8	14317	Retainer	25	14324	Cam Assembly	42	02552	Bearing
9	95288	O-Ring (6)	26	95560	Bearing (2)	43	95536	Screw (4)
10	14316	Idle Arm	27	95333	Pin	44	14333	Bracket (2)
11	95526	O-Ring (2)	28	95564	Screw (4)	45	95164	Pin
12	95555	Bearing	29	14330	Nut	46	07102	Motor
13	14343	Step Nut	30	95720	Screw (2)	47	95559	Screw
14	95565	Screw	31	14064	O-Ring	48	14331	Lever
15	14344	Tension Idler	32	14332	Dead Handle Assy.	49	14320	Housing
16	95398	Bearing (2)	33	95561	Plug (2)	50	95952	Set Screw
17	14346	Spacer	34	14329	Shaft			

KEY	
<b>O</b>	Oil: O <sub>1</sub> = Air Lube
<b>G</b>	Grease: G <sub>2</sub> = Loctite #771
<b>A</b>	Adhesive: A <sub>2</sub> = Loctite #271 A <sub>8</sub> = Loctite #567
<b>T</b>	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.

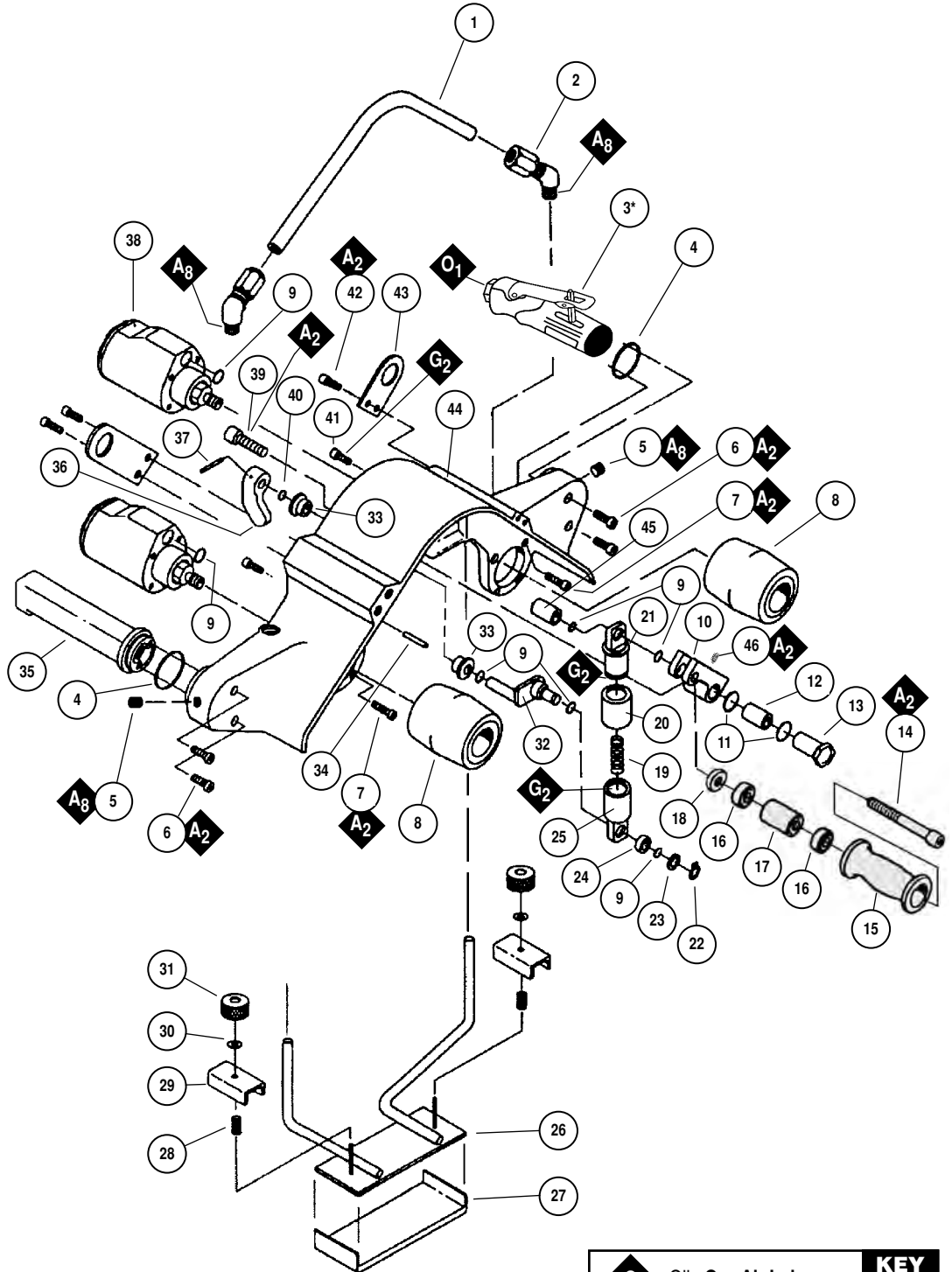
### Machine Assembly

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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<b>T</b>	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. Air supply hose accessories must have a minimum working pressure of 150 PSIG (10 Bars, g) or 150 percent of the maximum pressure produced in the system, whichever is higher. (See Machine Specifications on pg 7.)
3. Connect power source to tool. Be careful **not** to depress throttle lever in the process.
4. Whenever a Dynangle® II is issued for use, check tool RPM (speed) with a tachometer. Run tool with air pressure set at 90PSIG. 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 peak 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, ketones, chlorinated hydrocarbons or nitro carbons.
8. Do not clean or maintain tools with chemicals that have a low flash point (example: WD-40®)
9. Visually inspect air hoses and fittings for frays, visible damage and signs of deterioration. Replace damaged or worn components.

### Handling and Storage

- Visually inspect abrasives/accessories for damage or defects prior to installation on tools.
- Use of tool rests and hangers are recommended.
- Protect tool inlet from debris (see Notice below).
- Do not carry tool by air hose.
- Protect abrasive accessories from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.
- Store accessories in protective racks or compartments to prevent damage.

### Safety Instructions:

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



- Abrasive/accessory RPM (speed) rating **MUST** be approved for AT LEAST the tool RPM rating.
- **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.
- 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

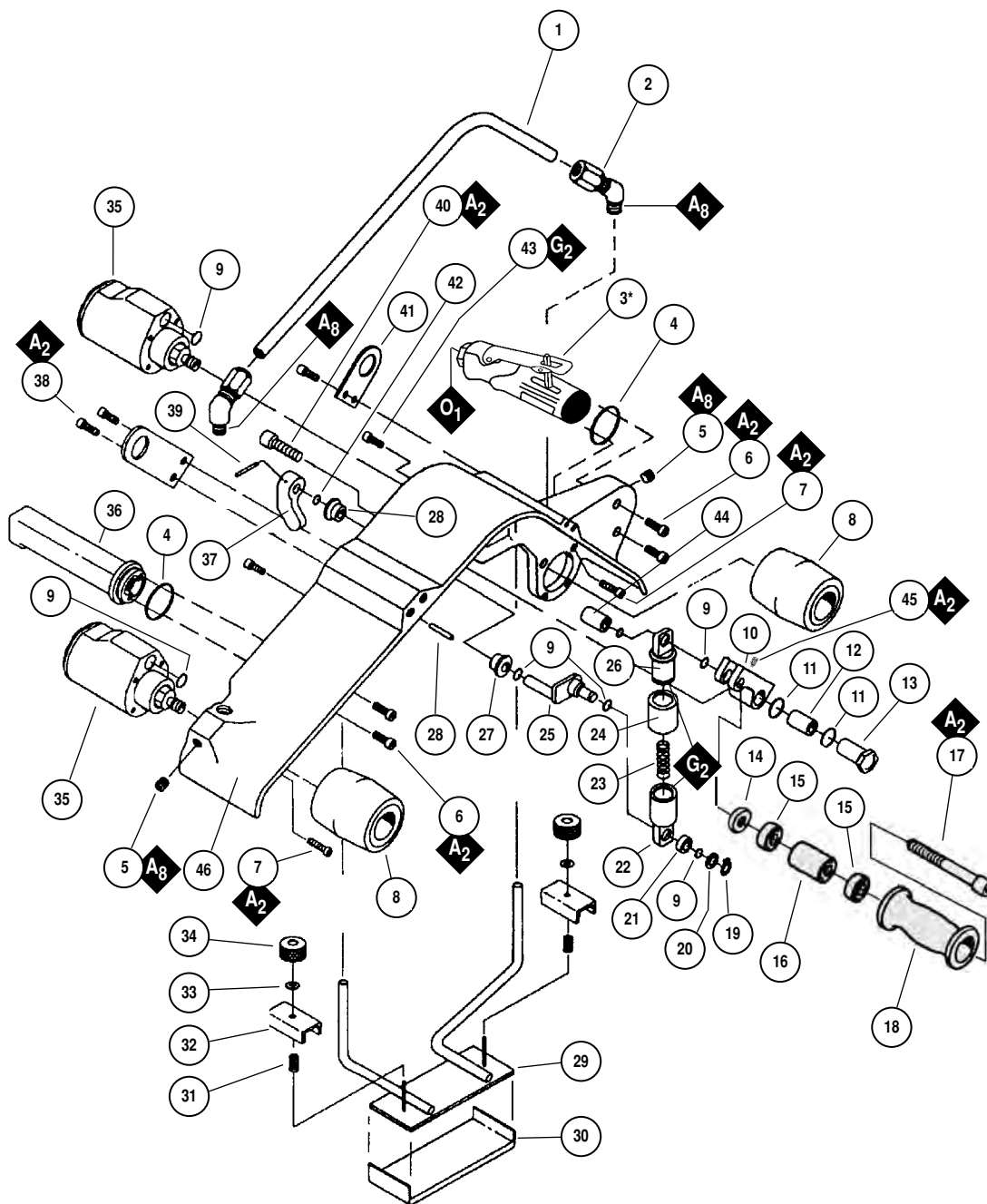
Following the reasonable assumption that any inherent defect which might prevail in a product will become apparent to the user within one year from the date of purchase, all equipment of our manufacture is warranted against defects in workmanship and materials under normal use and service. We shall repair 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.

## 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
46	14450	Housing



KEY	
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<b>G</b>	Grease: G <sub>2</sub> = Loctite #771
<b>A</b>	Adhesive: A <sub>2</sub> = Loctite #271 A <sub>8</sub> = Loctite #567
<b>T</b>	Torque: N•m x 8.85 = In - lbs.

Shaded part numbers represent 14334 Tension Wheel Assembly.

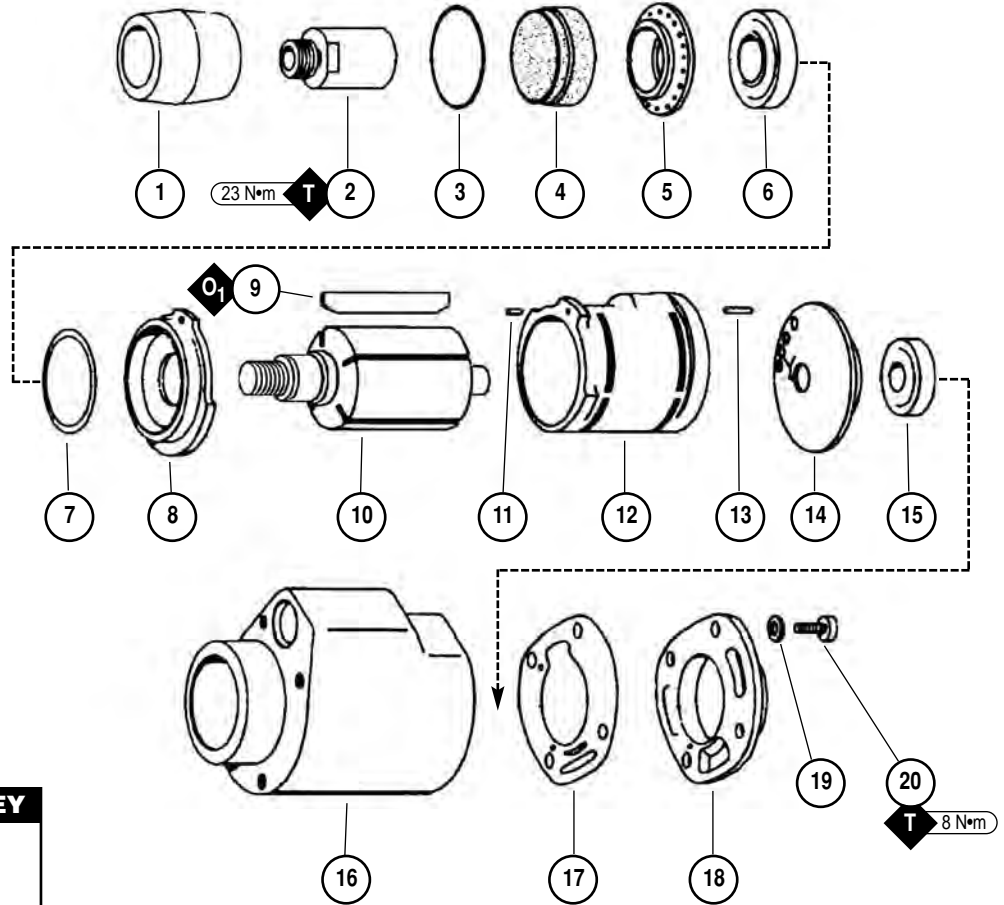
\*See page 5 for 07167 Throttle Valve and 07102 Motor Assemblies.



## 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)

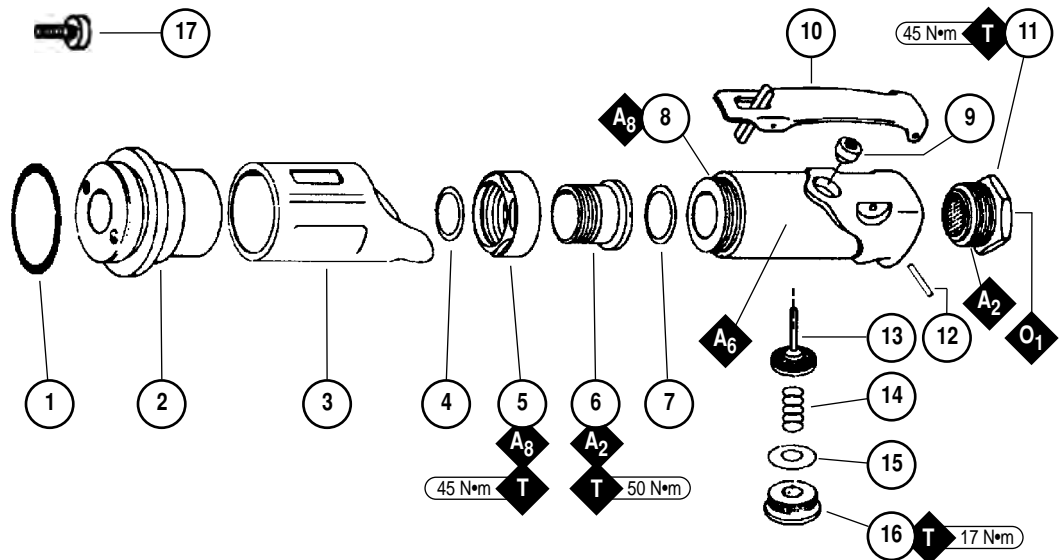


Symbol	Description	KEY
<b>O</b>	Oil: <b>O<sub>1</sub></b> = Air Lube	
<b>G</b>	Grease: <b>G<sub>2</sub></b> = Loctite #771	
<b>A</b>	Adhesive: <b>A<sub>2</sub></b> = Loctite #271 <b>A<sub>6</sub></b> = Loctite #380 <b>A<sub>8</sub></b> = Loctite #567	
<b>T</b>	Torque: <b>N·m</b> x 8.85 = <b>ln</b> - <b>lbs.</b>	

## **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 peak 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.

Loctite® is a registered trademark of Loctite Corp.

## Machine Specifications

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" or 15 mm • Air Pressure 90 PSIG (6.2 Bars)

## 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

#### Open-End

95304 – 24 mm

96079 – 32 mm

#### Hex

95303 – 1/4"

## 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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