

# INDUSTRIAL AIR TOOL MAINTENANCE GUIDE





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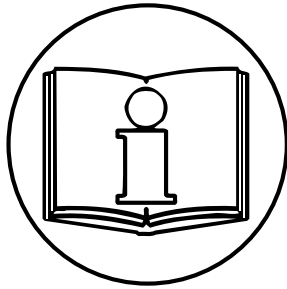
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**Carefully Read all Instructions Before Operating,  
Maintaining or Servicing any Power Tool**

**Contact your Dynabrade representative for pricing of products shown in this guide**

# SAFETY STATEMENT

All Dynabrade® products are built with the highest level of quality and performance in mind. Understanding the proper use and safe procedures involved with using power tools is our primary concern. Accidental injury or death can be prevented and/or reduced by reading and understanding the following:



- **Safety Code for Portable Air Tools – (B186.1)**  
American National Safety Institute (ANSI)
- **Safety Requirements for Use, Care and Protection of Abrasive Wheels – (B7.1)**  
American National Safety Institute (ANSI)
- **Hand Held Non-Electric Power Tools – (EN 792)**  
European Committee for Standards (EN)
- **General Industry Safety & Health Regulations – (CFR 29 Part 1910)**  
Occupational Safety and Health Administration (OSHA)
- **Applicable State and Local Regulations – (Regulations may vary)**

USERS ARE RESPONSIBLE FOR FOLLOWING ALL ESTABLISHED SAFETY CODES AND REGULATIONS.

Carefully read, understand and follow tool manuals before operating or servicing Dynabrade® Power Tools. Always operate, inspect and maintain tools in accordance with all safety codes and regulations for the protection of operating personnel as well as adjacent areas. All products offered by Dynabrade® are not to be modified, converted or otherwise altered from the original design without the expressed written consent from Dynabrade, Inc. Use only genuine Dynabrade® replacement parts and accessories made especially for the tool in use. The use of any other manufacturer's replacement parts and/or accessories could create a hazard.

# SAFETY LEGEND

	<p><b>⚠ WARNING</b></p> <p>Read and understand tool manual before work starts to reduce risk of injury to operator, visitors and tool.</p>	<p><b>⚠ WARNING</b></p> <p>Practice safety requirements. Work alert, have proper attire and do not operate tools under the influence of alcohol or drugs.</p>	
	<p><b>⚠ WARNING</b></p> <p>Eye protection must be worn at all times, eye protection to conform to ANSI Z87.1.</p>	<p><b>⚠ WARNING</b></p> <p>Ear protection to be worn when exposure to sound exceeds the limits of applicable federal, state or local statutes, ordinances and/or regulations.</p>	
	<p><b>⚠ WARNING</b></p> <p>Respiratory protection to be used when exposed to contaminants that exceed the applicable threshold limit values required by law.</p>	<p><b>⚠ WARNING</b></p> <p>Air line hazard, pressurized supply lines and flexible hoses can cause serious injury. Do not use damaged, frayed or deteriorated air hoses and fittings.</p>	

# PREVENTATIVE MAINTENANCE

Carefully read and follow all instructions before operating or servicing any Dynabrade tool.

---

## *PROVIDE A GOOD AIR SUPPLY:*

### **1. REDUCE OR ELIMINATE CONDENSATION (MOISTURE) FROM THE AIR SUPPLY**

- Water traps and drains
- After-coolers
- Refrigerated air dryer

### **2. PREVENT DEBRIS FROM ENTERING THE AIR MOTOR**

- Filter the air.
- Keep the air inlet connections, plugs and couplers clean, free of dust and debris.
- Keep exhaust mufflers and elements in place. Muffler elements provide a barrier that will prevent dust from being pulled into the air motor.
- Do not use compressed air to blow-off the tool, this could force debris into bearings.

### **3. LUBRICATE THE AIR MOTOR**

- Use an automatic lubricator to supply the correct weight and amount of air motor oil.
  - Supply the air motor oil manually, directly into the air inlet. Apply 2-3 drops throughout the day.  
i.e., start-up  
mid-morning  
lunch  
mid-afternoon  
end of the day
- 

## *ELIMINATE ANY BLOCKAGE OF AIRFLOW, IN OR OUT:*

### **1. KEEP THE TOOL'S AIR INLET CLEAR OF ANY DEBRIS**

### **2. CLEAN OR REPLACE EXHAUST MUFFLER ELEMENTS AS NEEDED**

---

## *LUBRICATE GEARS, SLEEVES, BEARINGS AND SLIDERS*

### **1. USE THE MANUFACTURER'S SPECIFIED LUBRICANT**

- Apply the suggested amount at the recommended interval.  
**Note:** This is usually found in technical support literature, i.e., tool manuals, parts pages, etc.
- 

## *USE THE TOOL, ACCESSORY OR RELATED PRODUCT AS SPECIFIED BY DYNABRADE, INC.*

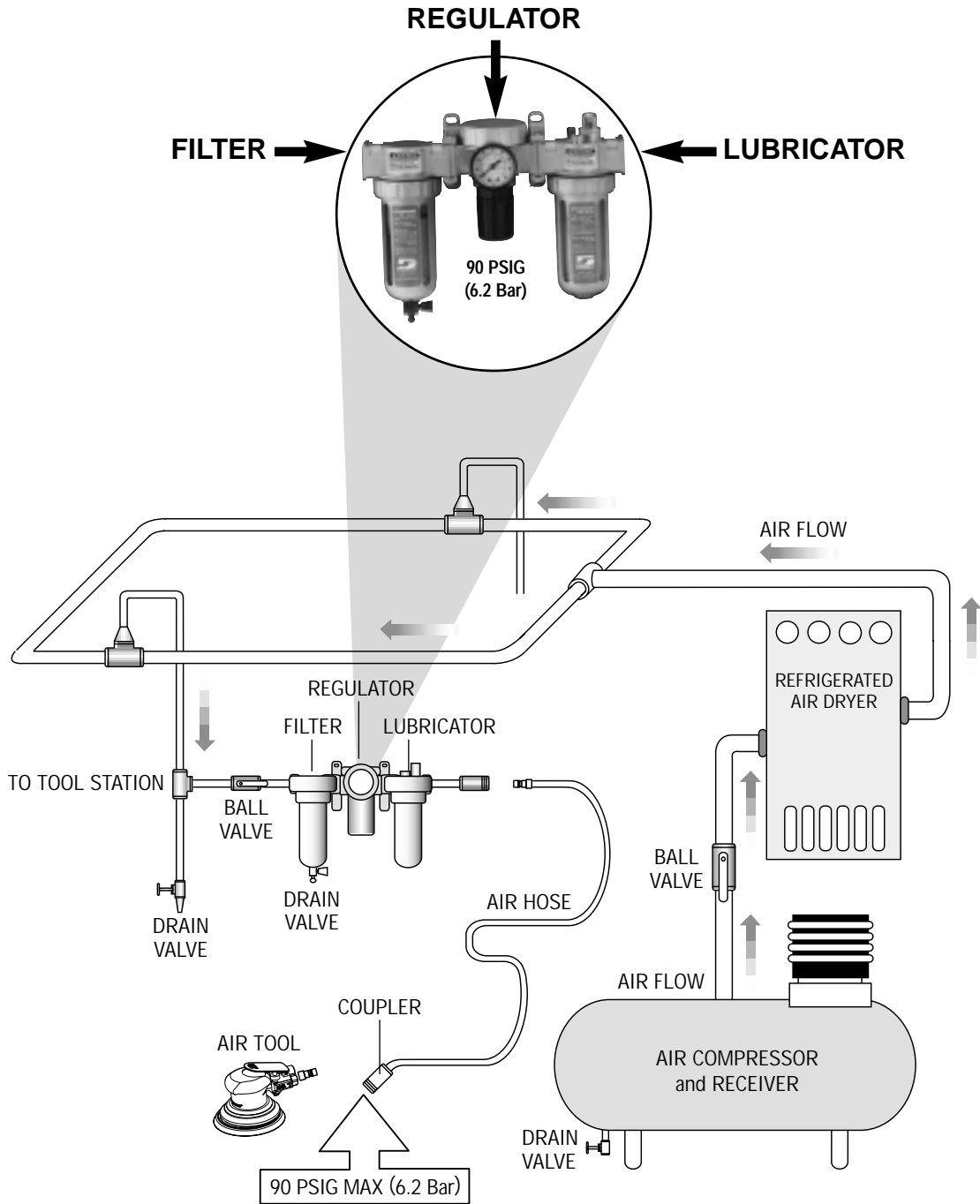
### **1. ADHERE TO THE SPECIFIED MAXIMUM OPERATING AIR PRESSURE**

### **2. ADHERE TO THE SPECIFIED MAXIMUM OPERATING RPM FOR ALL TOOLS AND ACCESSORIES**

- i.e., grinding wheels  
mounted points  
cut-off wheels  
sanding discs  
burrs  
back-up pads, etc.

# COMPRESSED AIR SUPPLY SYSTEM

CLOSED LOOP PIPE SYSTEM  
(SLOPED IN THE DIRECTION OF AIR FLOW)



**LUBRICATOR SETTING**  
**1 DROP/MIN.**  


---

**20 SCFM**  
**(566 LPM)**

Dynabrade recommends one drop of air lube per minute for each 20 SCFM (566 LPM)

**Example:** If the tool specifications state 40 SCFM (1,133 LPM), set the drip rate of your lubricator at 2 drops per min.

# SELECTING A COMPRESSOR

**A) COMPRESSOR TYPE** – Base on your PSIG (Bar) needs

**0 to 80 PSIG** (5.5 Bar)– You may only need a single stage compressor

**80 to 250 PSIG** (17.2 Bar)– You will need a two-stage compressor

**Note:** Dynabrade air tools require air pressure of 90 PSIG (6.2 Bar)

**B) AIR CONSUMPTION** – Determine the total demand SCFM (LPM). List the requirements for all equipment, tools and other air consumption variables (both continuous and intermittent air usage demands).

**C) COMPRESSOR HORSEPOWER (Hp)** – Use the determined total demand SCFM (LPM) and add approximately 20% for system variables. Add \_\_\_\_\_% for (your) future growth.

If the above total equals less than 100 SCFM (2,832 LPM) divide this total by 4 to find the compressor Hp.

If the total is over 100 SCFM (2,832 LPM) divide by 5 to find the compressor Hp.

**Example:** System requirements = 165 SCFM (4,673 LPM) @ 100 PSIG (6.9 Bar)

$$165 \div 5 = 33 \text{ Hp}$$

Resulting in a suggested compressor size:

**30 Hp to 40 Hp** compressor

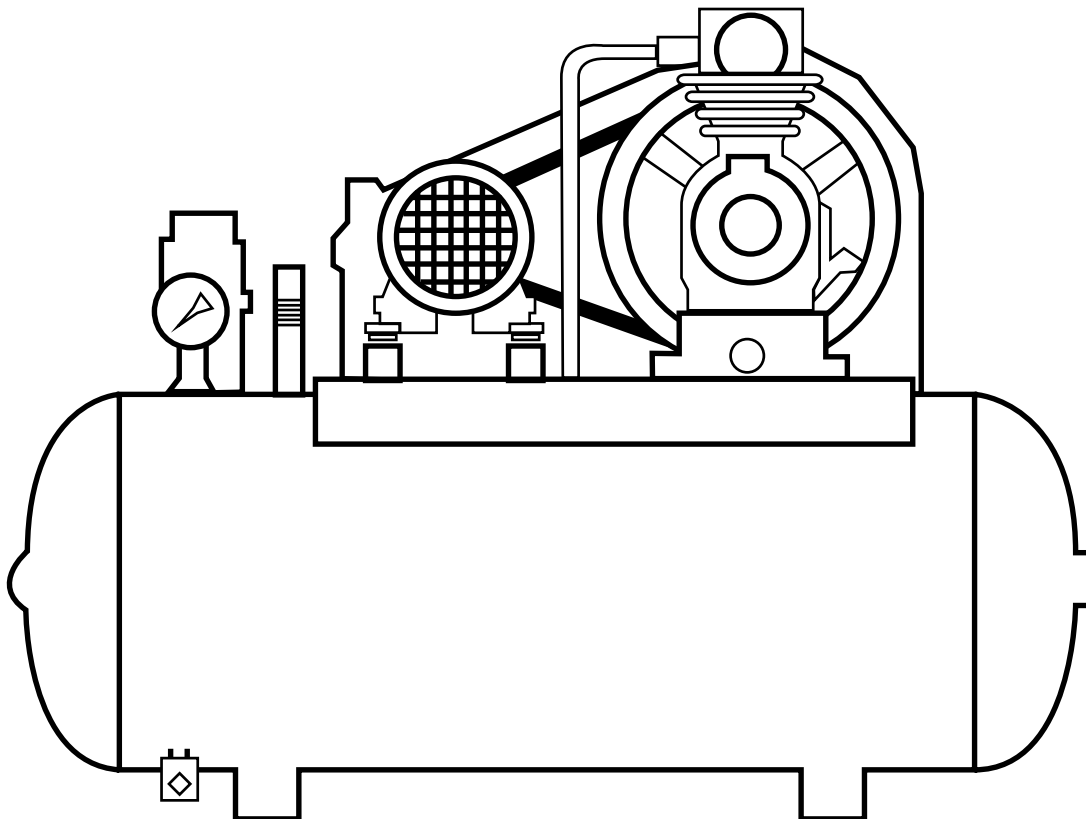
**D) TANK SIZE** – As a general rule, the more receiver the better the system. Use a larger tank for installations where large flows of short duration are needed.

**Example:** For a **5 Hp** compressor use a **60 Gal. (227 L)**, **80 Gal. (303 L)** or **120 Gal. (454 L)** storage tank.

**E) CONTROLS**

*Stop-Start* – The motor stops when the compressor unloads and starts again when the pressure in the receiver drops. Use a stop-start pressure switch control for a small system. (Compressors up to 15 Hp.)

*Continuous Run* – Equipped with constant pressure control, loading and unloading as the supply of compressed air in the receiver drops or reaches a maximum.



# MAINTAINING ADEQUATE AIR FLOW

## PREVENT AND ELIMINATE AIR SUPPLY RESTRICTIONS

Common causes of restriction:

- The air supply hose is too long.
- The inside diameter (i.d.) of the hose is too small.
- The air connections or fittings have an inside diameter that is too small.
- There are too many air connections or fittings being used.
- If an inline filter is being used, the unit may be too small or the filter element may be plugged.
- If an inline regulator is being used, the unit may be too small, not adjusted properly or defective.
- The air supply hose, air fitting, air tool inlet or air tool exhaust may be plugged.
- If the air tool has a speed regulator it may be closed.

## AIR SUPPLY HOSE

- Use the air supply hose with the correct inside diameter as is recommended by the air tool manufacturer.
- Use the shortest air supply hose possible for the task being performed.
- Longer air supply hoses require larger inside diameters.
- Coiled air supply hoses appear much shorter than they actually are. When using a coiled hose, make sure that the inside diameter is large enough to compensate for the length (see chart below).

## AIR SUPPLY HOSE RECOMMENDED CHART

Air Motor SCFM (Standard Cubic Feet per Minute)	Hose & Fitting I.D. Required	Recommended Length Air Supply Hose
22 SCFM (623 LPM)	1/4" (8 mm)	1' - 8' (0.3048 m – 2.44 m)
28 SCFM (793 LPM)	3/8" (10 mm)	1' - 25' (0.3048 m – 8.7 m)
35 SCFM (991 LPM)	3/8" (10 mm)	1' - 20' (0.3048 m – 6.10 m)
45 SCFM (1,274 LPM)	3/8" (10 mm)	1' - 10' (0.3048 m – 3.042 m)
73 SCFM (2,067 LPM)	1/2" (15 mm)	1' - 20' (0.3048 m – 6.10 m)

## CHOOSE THE CORRECT INSIDE DIAMETER (I.D.) AND LENGTH OF AIR SUPPLY HOSE

**NOTE:** To increase the length of air supply hose it will be necessary to increase the inside diameter of the hose.

## FLEXIBLE AIR SUPPLY HOSES (AVAILABLE FROM DYNABRADE)

3/8" I.D. with two male 1/4" NPT fittings. PART NUMBER **11292** - 8 feet (2.44 m) long

1/2" I.D. with one male and one female 1/2" NPT fitting. PART NUMBER **95870** - 5 feet (1.53 m) long

## AIR SUPPLY CONNECTORS/ACCESSORIES

- Compare airflow SCFM(LPM)

COMMON Plug Connector



**25 SCFM (708 LPM)**  
**.2010 in. (5.11 mm) I.D.**

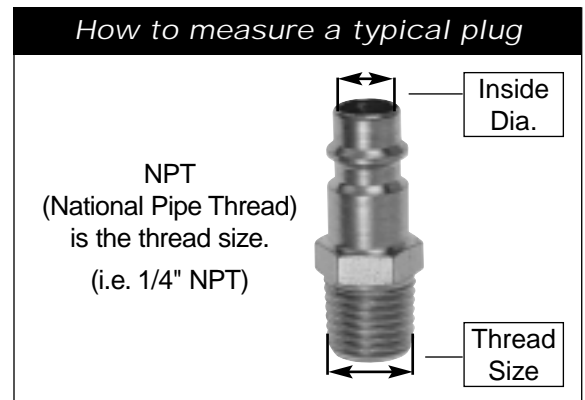
Dynabrade Plug Connector



**76 SCFM (2,152 LPM)**  
**.3070 in. (7.80 mm) I.D.**

**NOTE:** All information is based on the size of the **INSIDE DIAMETER @ 90 PSIG (6.2 Bar) in conjunction with the mating coupler.**

### How to measure a typical plug

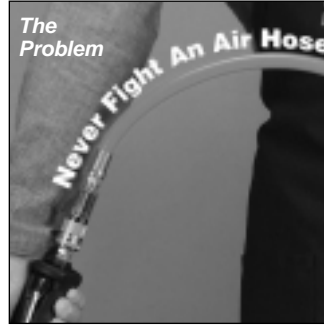


Please reference our catalog or [www.dynabrade.com](http://www.dynabrade.com) for a complete line of air line accessories

# MAINTENANCE ACCESSORIES (CONT.)

## Never Fight an Air Hose Again!

- The Dynaswivel® is a “universal-joint” that connects portable air tools to an air line.
- It improves tool maneuverability, minimizes operator fatigue and extends hose life.
- Patented; works great on air tools.
- SWIVELS 360° AT TWO LOCATIONS which allows air hose to drop straight to the floor, no matter how the tool is held.



### 94300

- Air flow: up to 33 SCFM (935 LPM) MAXIMUM.
- Non-marring, lightweight, composite construction.

**For a complete offering, reference the Dynabrade Industrial Power Tools, Accessories and Abrasives Catalog (D04.01)**

## Flexible Air Line Assemblies

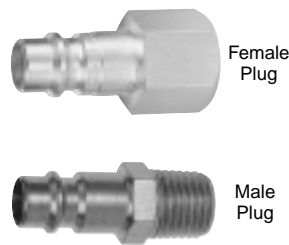


**For a complete offering, reference the Dynabrade Industrial Power Tools, Accessories and Abrasives Catalog (D04.01)**

## Plugs and Couplers

- Provide maximum air flow to tools
- Plugs are available in the following sizes: 1/4", 3/8" and 1/2" NPT.
- Plugs and Couplers are sold separately as well as in matched assemblies.
- Dynabrade couplers come in different styles to satisfy every request.
- For a complete offering, reference Dynabrade Industrial Power Tools, Accessories and Abrasives Catalog (D04.01).

### Plugs



### Steel and Brass Couplers



### Safety Couplers



### Composite-Style Couplers





# MAINTENANCE ACCESSORIES

## AIR TOOL LUBRICANTS AND GREASE



### Dynabrade Air Lube (10W/NR)

- Formulated for pneumatic equipment.
- Absorbs up to 10% of its weight in water.
- Prevents rust and formation of gum/sludge for longer tool operation with greater power and less downtime.

**95821**  
4 oz. (118 ml)

**95843**  
1 gal. (3.8 l)

**95842**  
1 pt. (473 ml)



### 95848 Gear Oil

2.5 oz. (74 ml) tube

- Formulated for geared tools utilizing a wick-type lubrication system.
- Failure to lubricate will cause premature gear failure.
- Easy to apply with Dynabrade P/N **95541** Push-Type Grease Gun (sold separately).



### Grease

- Multi-purpose grease for all types of bearings, cams and gears.
- High film strength; excellent resistance to water, steam, etc.
- Workable range: 0°F (-17°C) to 300°F (148°C).

**95542**  
10 oz. (283.5 g) tube

### 95541 Push-Type Grease Gun

- One-hand operation



### Filter-Regulator-Lubricator

- Provides accurate air pressure regulation, two stage filtration of water/contaminants and lubrication of pneumatic components.



### 11405 – Small FRL

- 40 SCFM @ 100 PSIG, 3/8" NPT female ports.  
(1,133 LPM) (6.9 Bar)

### 11411 – Large FRL

- Up to 55 SCFM @ 100 PSIG, 1/2" NPT female ports.  
(1,558 LPM) (6.9 Bar)

(See below for FRL options)

### Filter Only

#### 11400

- **Small Filter**  
40 SCFM (1,133 LPM) @ 100 PSIG (6.9 Bar)  
3/8" female inlet thread

#### 11406

- **Large Filter**  
55 SCFM (1,558 LPM) @ 100 PSIG (6.9 Bar)  
1/2" female inlet thread

### Filter-Regulator

#### 11402

- **Small Filter-Regulator**  
40 SCFM (1,133 LPM) @ 100 PSIG (6.9 Bar)  
3/8" female inlet thread

#### 11408

- **Large Filter-Regulator**  
55 SCFM (1,558 LPM) @ 100 PSIG (6.9 Bar)  
1/2" female inlet thread

### Regulator Only

#### 11401

- **Small Regulator**  
40 SCFM (1,133 LPM) @ 100 PSIG (6.9 Bar)  
3/8" female inlet thread

#### 11407

- **Large Regulator**  
55 SCFM (1,558 LPM) @ 100 PSIG (6.9 Bar)  
1/2" female inlet thread

### Regulator-Lubricator

#### 11404

- **Small Lubricator-Regulator**  
40 SCFM (1,133 LPM) @ 100 PSIG (6.9 Bar)  
3/8" female inlet thread

#### 11410

- **Large Lubricator-Regulator**  
55 SCFM (1,558 LPM) @ 100 PSIG (6.9 Bar)  
1/2" female inlet thread

### Lubricator Only

#### 11403

- **Small Lubricator**  
40 SCFM (1,133 LPM) @ 100 PSIG (6.9 Bar)  
3/8" female inlet thread

#### 11409

- **Large Lubricator**  
55 SCFM (1,558 LPM) @ 100 PSIG (6.9 Bar)  
1/2" female inlet thread


### SPECIFICATIONS FOR ALL MODELS

Line Size	Max. Air Flow Pressure	Max. Air Temperature
3/8" (10 mm)	140 PSIG / 9.7 Bar	140° F / 60° C
1/2" (15 mm)	140 PSIG / 9.7 Bar	140° F / 60° C


# REPAIR TOOL REFERENCE

## SPECIAL REPAIR TOOLS


**Repair Collars:** Designed to protect the tool during servicing

Item#	Part Number	Description/Where Used
 <input type="checkbox"/> 1.	<b>52296</b>	.4Hp Motor/Valve Housing
<input type="checkbox"/> 2.	<b>57092</b>	Palm & Two-Hand, Dynorbital®/Gear-Driven/Dynalocke™
<input type="checkbox"/> 3.	<b>51989</b>	1Hp Motor/Valve Housing, 1.3Hp Valve Housing

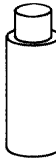
**Lock Ring Tools:** For the removal and installation of air motors

Item#	Part Number	Description/Where Used
 <input type="checkbox"/> 4.	<b>50971</b>	.4Hp, .5Hp, .7Hp & 1Hp Motors as Specified
<input type="checkbox"/> 5.	<b>56058</b>	Palm & Two-Hand, Dynorbital®/Dynalocke™
<input type="checkbox"/> 6.	<b>56599</b>	(Formerly 96337) 5", 6" & 8" Two-Hand Gear-Driven/Use with Composite Housing
<input type="checkbox"/> 7.	<b>97782</b>	1Hp Right Angle, Mini-Angle Head
<input type="checkbox"/> 8.	<b>96165</b>	Mini-Angle Head
<input type="checkbox"/> 9.	<b>96479</b>	Retainer Wrench/Pencil Grinder (Use for all Models)


**Gear/Plate Disassembly & Assembly Wrenches**

Item#	Part Number	Description/Where Used
 <input type="checkbox"/> 10.	<b>96181</b>	Pinion Wrench for 8" (203 mm) Two-Hand Gear-Driven Sander
<input type="checkbox"/> 11.	<b>96182</b>	Front Plate Tool for 8" (203 mm) Two-Hand Gear-Driven Sander
<input type="checkbox"/> 12.	<b>53698</b>	Carrier Tool 1Hp

**Bearing Removal Tools: Use to Remove Bearings**

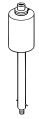
Item#	Part Number	Description/Where Used
 <input type="checkbox"/> 13.	<b>96210</b>	02650, 02696 Bearings
<input type="checkbox"/> 14.	<b>96211</b>	01015, 02648 Bearings
<input type="checkbox"/> 15.	<b>96212</b>	11016 Bearing
<input type="checkbox"/> 16.	<b>96213</b>	02649 Bearing
<input type="checkbox"/> 17.	<b>96214</b>	01007 Bearing

**Bearing Press Tools: Use to Install Bearings**

Item#	Part Number	Description/Where Used
 <input type="checkbox"/> 18.	<b>96216</b>	02650, 02696 Bearings
<input type="checkbox"/> 19.	<b>96239</b>	02651, 56052, 11831, 54520 Bearings
<input type="checkbox"/> 20.	<b>96240</b>	02649, 12153 Bearings
<input type="checkbox"/> 21.	<b>96241</b>	01015, 12152 Bearings
<input type="checkbox"/> 22.	<b>96242</b>	12151, 12058, 12078 Bearings
<input type="checkbox"/> 23.	<b>96243</b>	11016, 02648 Bearings
<input type="checkbox"/> 24.	<b>96244</b>	01007, 01206 Bearings
<input type="checkbox"/> 25.	<b>96418</b>	Use with 96406 Punch. 51651, 51686 Bearings (Pencil Grinder)
<input type="checkbox"/> 26.	<b>96419</b>	Use with 96406 Punch. 51544, 51685 Bearings (Pencil Grinder)
<input type="checkbox"/> 27.	<b>57091</b>	5", 6", 8" All Dynorbital® and Two-Hand Gear-Driven Sanders

# REPAIR TOOL REFERENCE (CONT.)

## Bearing and Gear Pullers: Use to Remove Bearings and Gears



Item#	Part Number	Description/Where Used
<input type="checkbox"/> 28.	<b>56056</b>	Bearing Puller/56052 Bearing
<input type="checkbox"/> 29.	<b>57099</b>	Bearing Puller/56052 Bearing; Use if the Bearing Remains in the Motor Shaft Balancer

## Collars and Fixtures: Use for Holding Motor and Gear Assemblies During Disassembly or Assembly



Item#	Part Number	Description/Where Used
<input type="checkbox"/> 30.	<b>96245</b>	Machined Size .992 I.D./Dynadie III
<input type="checkbox"/> 31.	<b>96246</b>	Machined Size 1.028 I.D./1.4Hp
<input type="checkbox"/> 32.	<b>96247</b>	Mini-Angle Head
<input type="checkbox"/> 33.	<b>96248</b>	Machined Size 1.390 I.D./Ring Gear .7Hp Dynastraight
<input type="checkbox"/> 34.	<b>96249</b>	Machined Size 1.980 I.D./Dynorbital® Supreme Sander
<input type="checkbox"/> 35.	<b>96250</b>	Machined Size 2.290 I.D./2Hp Right-Angle Tools
<input type="checkbox"/> 36.	<b>96209</b>	Motor Clamp; 1Hp
<input type="checkbox"/> 37.	<b>96231</b>	Tool Plate/Use with the 96232 Arbor Press

## Assorted Special Pencil Grinder Repair Tools:



Item#	Part Number	Description/Where Used
<input type="checkbox"/> 38.	<b>51694</b>	Shaft Lock Pin
<input type="checkbox"/> 39.	<b>94999</b>	Air Bushing Removal Tool
<input type="checkbox"/> 40.	<b>96408</b>	Motor Top Plate Wrench
<input type="checkbox"/> 41.	<b>96483</b>	Bullet (Used for Installing the Grip onto a Pencil Grinder)
<input type="checkbox"/> 42.	<b>96486</b>	Collet Insert, Removal Tool

## Arbor Press: Use for Disassembly/Assembly



Item#	Part Number	Description/Where Used
<input type="checkbox"/> 43.	<b>96232</b>	Arbor Press (#2)
<input type="checkbox"/> 44.	<b>96230</b>	Press Ram (General no-mar Ram)

## Special Repair Tool Kits:

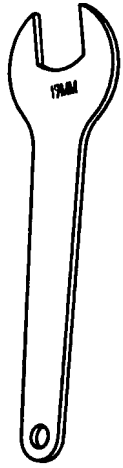
Item#	Part Number	Description/Where Used
<input type="checkbox"/> 45.	<b>11270</b>	Dynafite® with Screw-In Motor/Use to replace Contact and Idler Wheel Components.
<input type="checkbox"/> 46.	<b>11288</b>	Dynafite® with Cam-Lock Motor/Use to replace Contact and Idler Wheel Components.
<input type="checkbox"/> 47.	<b>57098</b>	Dynorbital® Supreme and Dynorbital-Spirit™ Sander Repair Kit Use with Composite Housing Models.
<input type="checkbox"/> 48.	<b>57260</b>	5", 6" Two-Hand Dynorbital® and Dynalocke™/Use with Composite Housing Models.
<input type="checkbox"/> 49.	<b>57325</b>	8" Two-Hand Dynorbital®/Use with Composite and Aluminum Housing Models.
<input type="checkbox"/> 50.	<b>57525</b>	Mini-Dynorbital®/Use with Composite Housing Models: 57500, 57501, 57502 & 57503)
<input type="checkbox"/> 51.	<b>96283</b>	5", 6", 8" Two-Hand Gear-Driven/Use with Composite Hosing Models.
<input type="checkbox"/> 52.	<b>96405</b>	Finesse-It, Two-Step Tools/Models: 57240(45), 57125, 57126, 57500, 57502 & Dynorbital® Supreme/Dynorbital-Spirit™
<input type="checkbox"/> 53.	<b>56077</b>	Lightweight Palm Style Dynorbital®/Use with Aluminum Housing Models.
<input type="checkbox"/> 54.	<b>56577</b>	Mini-Lightweight Palm-Style Dynorbital®/Use with Aluminum Housing Models.



# REPAIR TOOL REFERENCE (CONT.)

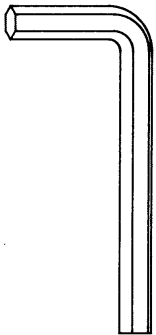
## GENERAL REPAIR TOOLS

### Wrenches: Open-End



Item#	Part Number	Description/Where Used
<input type="checkbox"/> 55.	<b>96314</b>	4 mm/Dynadie III
<input type="checkbox"/> 56.	<b>95731</b>	8 mm/Pencil Grinder
<input type="checkbox"/> 57.	<b>96076</b>	12 mm
<input type="checkbox"/> 58.	<b>95262</b>	14 mm
<input type="checkbox"/> 59.	<b>95263</b>	17 mm
<input type="checkbox"/> 60.	<b>95281</b>	19 mm
<input type="checkbox"/> 61.	<b>95823</b>	23 mm
<input type="checkbox"/> 62.	<b>95304</b>	24 mm
<input type="checkbox"/> 63.	<b>50679</b>	26 mm
<input type="checkbox"/> 64.	<b>96079</b>	32 mm
<input type="checkbox"/> 65.	<b>95987</b>	5/16"
<input type="checkbox"/> 66.	<b>96031</b>	7/16"
<input type="checkbox"/> 67.	<b>96032</b>	11/16"
<input type="checkbox"/> 68.	<b>95176</b>	3/4"
<input type="checkbox"/> 69.	<b>11278</b>	1-1/2"/ Dynafite® with screw-in motor

### Hex Key Wrenches:



Item#	Part Number	Description/Where Used
<input type="checkbox"/> 70.	<b>95251</b>	1.5 mm
<input type="checkbox"/> 71.	<b>96401</b>	2 mm
<input type="checkbox"/> 72.	<b>95252</b>	2.5 mm
<input type="checkbox"/> 73.	<b>95266</b>	3 mm
<input type="checkbox"/> 74.	<b>95331</b>	4 mm
<input type="checkbox"/> 75.	<b>96034</b>	12 mm
<input type="checkbox"/> 76.	<b>96215</b>	15 mm
<input type="checkbox"/> 77.	<b>95050</b>	5/64"
<input type="checkbox"/> 78.	<b>95052</b>	3/32"
<input type="checkbox"/> 79.	<b>95048</b>	1/8"
<input type="checkbox"/> 80.	<b>95135</b>	5/32"
<input type="checkbox"/> 81.	<b>95048</b>	1/8"
<input type="checkbox"/> 82.	<b>95135</b>	5/32"
<input type="checkbox"/> 83.	<b>95049</b>	3/16"
<input type="checkbox"/> 84.	<b>95134</b>	9/64"
<input type="checkbox"/> 85.	<b>95303</b>	1/4"
<input type="checkbox"/> 86.	<b>95521</b>	5/16"
<input type="checkbox"/> 87.	<b>95051</b>	3/8"

# REPAIR TOOL REFERENCE (CONT.)

## Pin Style Spanner Wrenches:



Item#	Part Number	Description/Where Used	Cntr/Cntr	Pin Dia.
<input type="checkbox"/> 88.	<b>96347</b>	Adjustable-Face	10 to 100 mm	2.9 mm
<input type="checkbox"/> 89.	<b>96148</b>	Fixed-Face/Model: 50370	24 mm	3 mm
<input type="checkbox"/> 90.	<b>96348</b>	Adjustable-Face	10 to 100 mm	5.8 mm
<input type="checkbox"/> 91.	<b>96507</b>	Fixed-Face/Model: 52515	1-1/16"	1/8"
<input type="checkbox"/> 92.	<b>95267</b>	Fixed-Face/Model: 50343	5/8"	1/8"
<input type="checkbox"/> 93.	<b>95270</b>	Fixed-Face/Model: 52700	1"	1/8" Sq.
<input type="checkbox"/> 94.	<b>96318</b>	Adjustable-Face/Model: 50273	5/8" to 2"	5/32"
<input type="checkbox"/> 95.	<b>96038</b>	Fixed-Face	1-9/32"	1/4"

## Generic Hand Tools:



Item#	Part Number	Description/Where Used
<input type="checkbox"/> 96.	<b>96341</b>	English Folding Hex Key Set (5/64" to 1/4")
<input type="checkbox"/> 97.	<b>96342</b>	Metric Folding Hex Key Set (1.5mm to 8mm)
<input type="checkbox"/> 98.	<b>96343</b>	Internal/External retaining Ring Pliers
<input type="checkbox"/> 99.	<b>96344</b>	3/32" Dia. Pilot Punch (Use to remove roll pins.)
<input type="checkbox"/> 100.	<b>96345</b>	15/16" Bearing Separator
<input type="checkbox"/> 101.	<b>96346</b>	2" Bearing Separator
<input type="checkbox"/> 102.	<b>96349</b>	Small Torque Wrench (30 - 150 in.-lbs.)
<input type="checkbox"/> 103.	<b>96350</b>	Large Torque Wrench (100 - 1000 in.-lbs.)
<input type="checkbox"/> 104.	<b>96351</b>	Bench Vise (4" Jaw)
<input type="checkbox"/> 105.	<b>96352</b>	4" (102mm) Soft Jaw Caps (Bronze)
<input type="checkbox"/> 106.	<b>96353</b>	(8 piece) Drive Pin Punch Set; 1/16" (1.5mm) to 5/16" (7.9mm)
<input type="checkbox"/> 107.	<b>96354</b>	Feeler Gages (.0015 to .025)
<input type="checkbox"/> 108.	<b>96355</b>	Small Phillips Screwdriver
<input type="checkbox"/> 109.	<b>96356</b>	Large Phillips Screwdriver
<input type="checkbox"/> 110.	<b>96357</b>	Groove Pliers (Channel Lock Style)
<input type="checkbox"/> 111.	<b>96358</b>	Standard Pliers (slip-joint style)
<input type="checkbox"/> 112.	<b>96359</b>	Needle Nose Pliers
<input type="checkbox"/> 113.	<b>96360</b>	10" Adjustable Wrench (Crescent Style)
<input type="checkbox"/> 114.	<b>96361</b>	3/8" (10mm) Drive, Ratchet (includes metric and english socket set)
<input type="checkbox"/> 115.	<b>96362</b>	3/8" (10mm) Drive, Breaker Bar; 10" (254mm) long flex handle
<input type="checkbox"/> 116.	<b>96363</b>	Small Slotted Screwdriver
<input type="checkbox"/> 117.	<b>96364</b>	Large Slotted Screwdriver
<input type="checkbox"/> 118.	<b>96365</b>	3/8" (10mm) to 1/4" (6mm) Drive, Socket Adapter
<input type="checkbox"/> 119.	<b>96366</b>	12 oz. Soft Hammer
<input type="checkbox"/> 120.	<b>96367</b>	8 oz. Ball Peen Hammer
<input type="checkbox"/> 121.	<b>96368</b>	Electronic Tachometer
<input type="checkbox"/> 122.	<b>96373</b>	11/16" Deep Socket

## Parts Pages, Forms, Adhesive:

Item#	Part Number	Description/Where Used
<input type="checkbox"/> 123.	<b>96369</b>	Liquid Thread Locker (50 ml bottle)
<input type="checkbox"/> 124.	<b>96370</b>	Parts Page Manual
<input type="checkbox"/> 125.	<b>96371</b>	Repair estimate Forms (qty. 100)

## FULL SERVICE REPAIR STATION

### Full Service Repair Station:

Part Number 91000 includes most of the Special and General Repair Tools listed on pages 10 - 13.

Contact Dynabrade Customer Service:

**Email:** [customer.service@dynabrade.com](mailto:customer.service@dynabrade.com)

**Email (Europe):** [customer.service@dynabrade.lu](mailto:customer.service@dynabrade.lu)

**Call (US):** 1-888-396-2272

**Fax:** (716) 631-2073



## MAINTENANCE / REPAIR TRAINING PROGRAMS

### SERVICE

Dynabrade Customer Service is committed to giving outstanding service. The customer service staff will assist with answering questions, supplying tool manuals and providing other necessary product support. If it becomes necessary to have your Dynabrade tool or accessory repaired, our fully trained factory experts can meet all your service needs.

### TRAINING

Dynabrade Product Training Programs cover safe operation, maintenance and repair of Dynabrade tools and accessories. To request training, visit our website: [www.dynabrade.com](http://www.dynabrade.com)

### INSTRUCTIONAL VIDEOS AND CDS

Provide an introduction to Dynabrade products, general service and repair instruction. Make requests through **Dynabrade Customer Service**.

**Email:** [customer.service@dynabrade.com](mailto:customer.service@dynabrade.com)

**Email (Europe):** [customer.service@dynabrade.lu](mailto:customer.service@dynabrade.lu)

**Call (US):** 1-888-396-2272

**Fax:** (716) 631-2073



# TUNE-UP KITS

Include assorted parts to help maintain and repair motor.



Model No.	Tune-Up Kit
11000	95600
11001	95600
11003	95600
11450	96259
11462	96045
11475	96045
11476	96011
11477	96259
11480	96045
11481	96011
11486	96011
11489	96011
12200	96261
12201	96261
12202	96261
12203	96261
12204	96261
12205	96261
12206	96261
12207	96261
12250	96533
12252	96533
12254	96533
13100	96173
13101	96173
13102	96173
13120	96173
13121	96173
13200	96260
13201	96260
13202	96260
13203	96260
13204	96260
13205	96260
13206	96260
13207	96260
13220	96260
13300	96174
13301	96174
13310	96174
13400	96234
13401	96234
13410	96234
13411	96234
13450	96532
13460	96532
13500	96532
13501	96532
13502	96532
13503	96532
13504	96532
13505	96532
13506	96532
13507	96532
13508	96532
13509	96532
13511	96532
13512	96532
13515	96532
13516	96532
13517	96532
13518	96532
13519	96532
13520	96532

Model No.	Tune-Up Kit
13521	96532
13531	96532
14000	95600
14010	95600
14200	96045
14201	96045
14300	96011
14302	96011
14303	96011
14306	96011
14308	96260
14309	96260
14310	96260
14311	96260
14312	96260
14313	96260
15002	96074
15003	96074
15006	96074
15300	96233
15301	96233
15302	96233
30200	96260
30303	1048
30304	96260
30336	96260
30337	96260
31600	1049
40320	96044
40321	96044
40324	96044
40326	96044
40330	96044
40335	96044
40338	96044
40381	96174
40500	42735
40501	42735
40587	42735
40588	42735
40597	42735
50000	96179
50001	96179
50002	96179
50003	96179
50004	96179
50005	96179
50302	96532
50303	96011
50304	96011
50306	96532
50307	96011
50308	96532
50320	96047
50321	96047
50324	96047
50325	96047
50340	96047
50343	96049
50345	96042
50346	96042
50347	96043
50348	96043
50349	96042

Model No.	Tune-Up Kit
50350	96042
50360	96042
50370	96184
50371	96184
50372	96184
50374	96184
50375	96184
50727	96179
50728	96179
50729	96179
50730	96011
50760	96011
51130	95600
51134	96007
51200	96173
51201	96173
51202	96173
51203	96173
51204	96173
51205	96173
51210	96174
51211	96174
51212	96174
51213	96174
51214	96174
51215	96174
51240	96049
51241	96049
51242	96049
51243	96049
51244	96044
51245	96044
51246	96044
51247	96044
51248	96049
51249	96049
51250	96049
51251	96049
51300	95600
51301	95600
51302	95600
51303	95600
51304	96530
51305	96530
51306	96530
51307	96530
51310	95600
51311	95600
51312	95600
51313	95600
51314	96530
51315	96530
51316	96530
51317	96530
51330	96529
51331	96529
51350	96531
51351	96531
51370	96504
51371	96504
51390	96532
51391	96532
51392	96532
51393	96532

Model No.	Tune-Up Kit
51394	96532
51395	96532
51396	96532
51397	96532
51400	96174
51401	96174
51405	96174
51410	96174
51411	96174
51412	96174
51415	96174
51420	96174
51425	96174
51430	96174
51450	96234
51451	96234
51454	96234
51455	96234
51460	96174
51461	96174
51470	96178
51472	96178
51474	96178
51476	96178
51479	96178
51482	96178
51600	96178
51601	96178
51602	96178
51603	96178
51604	96178
51605	96178
51735	96522
51800	96179
51801	96179
51802	96179
51803	96179
51804	96179
51805	96179
51820	96179
51821	96179
51822	96179
51823	96179
51824	96179
51825	96179
51827	96179
51828	96179
51829	96179
51830	96179
51831	96179
51832	96179
51833	96179
51834	96179
51835	96179
51846	96179
51847	96179
51848	96179
51930	96532
51931	96532
51932	96532
51933	96532
51934	96532
51935	96532
51936	96532

Model No.	Tune-Up Kit
51937	96532
52050	96173
52051	96173
52052	96173
52053	96173
52060	96173
52061	96173
52062	96173
52100	96260
52101	96260
52102	96260
52103	96260
52104	96260
52105	96260
52196	96505
52200	96048
52201	96049
52202	96048
52203	96049
52204	96048
52205	96049
52206	96048
52207	96049
52210	96044
52211	96044
52212	96044
52213	96044
52216	96044
52217	96044
52218	96044
52219	96044
52220	96044
52221	96044
52222	96044
52223	96044
52224	96045
52225	96045
52226	96045
52227	96045
52230	96048
52231	96049
52232	96048
52233	96049
52240	96045
52241	96045
52242	96045
52243	96045
52244	96045
52245	96045
52246	96045
52247	96045
52248	96045
52249	96045
52250	96048
52251	96049
52252	96048
52253	96049
52254	96045
52256	96529
52257	96529
52258	96529
52260	96044
52261	96044
52262	96044

Model No.	Tune-Up Kit
52263	96044
52264	96529
52265	96529
52266	96529
52267	96044
52268	96044
52269	96044
52270	96044
52272	96044
52273	96044
52274	96044
52275	96044
52276	96529
52277	96529
52278	96529
52279	96045
52280	96522
52281	96529
52282	96529
52283	96529
52284	96045
52285	96045
52286	96045
52287	96045
52288	96045
52289	96045
52290	96045
52291	96045
52292	96045
52293	96045
52294	96045
52295	96045
52297	96045
52298	96045
52299	96045
52315	96179
52316	96179
52317	96179
52318	96179
52319	96179
52320	96179
52325	96049
52326	96049
52327	96049
52328	96049
52331	96049
52333	96049
52335	96049
52337	96049
52345	96049
52373	96532
52374	96532
52375	96532
52376	96532
52377	96532
52378	96532
52379	96532
52380	96532

# TUNE-UP KITS (CONT.)

Model No.	Tune-Up Kit
57125	96437
57126	96537
57127	96522
57130	96024
57131	96024
57132	96024
57133	96024
57134	96024
57135	96024
57136	96024
57137	96024
57138	96024
57139	96024
57140	96024
57141	96024
57142	96024
57143	96024
57144	96024
57145	96024
57146	96024
57147	96024
57148	96024
57149	96024
57150	96024
57151	96024
57152	96024
57153	96024
57154	96024
57155	96024
57156	96024
57157	96024
57200	96122
57201	96122
57202	96122
57203	96122
57204	96122
57210	96122
57211	96122
57212	96122
57213	96122
57214	96122
57220	96122
57221	96122
57222	96122
57223	96122
57224	96122
57225	96122
57226	96122
57227	96122
57228	96122
57229	96122
57240	96122
57245	96122
57300	96195
57301	96195
57302	96195
57303	96195
57304	96195
57306	96195
57310	96195
57314	96195
57315	96195

Model No.	Tune-Up Kit
52381	96532
52390	96044
52391	96044
52392	96044
52400	96044
52401	96044
52402	96044
52403	96044
52404	96044
52405	96044
52410	96045
52411	96045
52412	96045
52413	96045
52414	96045
52415	96045
52420	96044
52421	96044
52424	96045
52425	96045
52426	96045
52430	96045
52431	96045
52432	96045
52433	96045
52434	95600
52435	96530
52436	96045
52450	96259
52451	96259
52452	96259
52453	96259
52454	96259
52455	96259
52500	96049
52502	96049
52503	96049
52510	96049
52512	96049
52515	96522
52516	96522
52518	96522
52520	96179
52521	96179
52522	96179
52523	96179
52524	96179
52525	96179
52530	96179
52531	96179
52532	96179
52533	96179
52534	96179
52535	96179
52540	96179
52541	96179
52542	96179
52543	96179
52544	96179
52545	96179
52550	96179
52551	96179
52552	96179
52553	96179
52554	96179
52555	96179
52557	96522

Model No.	Tune-Up Kit
52558	96522
52560	96532
52561	96532
52562	96532
52563	96532
52564	96532
52565	96532
52566	96532
52570	96519
52571	96519
52573	96532
52574	96532
52575	96532
52576	96532
52577	96532
52578	96532
52579	96532
52580	96532
52581	96532
52590	96505
52600	96044
52601	96044
52602	96044
52603	96044
52604	96044
52605	96044
52610	96045
52611	96045
52612	96045
52613	96045
52614	96045
52615	96045
52620	96504
52625	96504
52660	96532
52661	96532
52663	96532
52664	96532
52665	96532
52666	96532
52667	96532
52668	96532
52669	96532
52672	96532
52673	96532
52674	96532
52675	96532
52676	96532
52677	96532
52678	96532
52679	96532
52680	96532
52681	96532
52682	96532
52683	96532
52684	96532
52685	96532
52686	96532
52687	96532
52688	96532
52689	96532
52692	96532
52693	96532
52694	96532
52695	96532
52696	96532

Model No.	Tune-Up Kit
52697	96532
52698	96532
52699	96532
52700	96045
52710	96179
52711	96179
52712	96179
52715	96532
52716	96532
52717	96532
52718	96532
52719	96532
52720	96532
52721	96532
52722	96532
52725	96532
52730	96532
52731	96532
52732	96532
53001	96260
53004	96260
53037	95600
53043	96179
53044	96179
53045	96179
53046	96179
53047	96179
53048	96179
53060	96047
53070	96174
53071	96174
53072	96174
53073	96174
53074	96174
53075	96173
53076	96173
53077	96173
53078	96173
53079	96173
53080	96234
53081	96234
53090	96047
53091	96047
53095	96047
53096	96047
53120	96532
53121	96532
53122	96532
53123	96532
53124	96532
53125	96532
53126	96532
53127	96532
53128	96532
53129	96532
53130	96532
53200	96174
53210	96174
53400	96333
53401	96333
53402	96333
53403	96333
53410	96333
53415	96179
53417	96179
53420	96333
53425	96179

Model No.	Tune-Up Kit
53430	96333
53435	96179
53440	96333
53460	96179
53465	96179
53501	96007
53502	96007
53506	96007
53507	96007
53510	96007
53511	96007
53512	96007
53513	96007
53514	96007
54481	96531
54482	96531
54484	96531
56800	96024
56801	96024
56802	96024
56803	96024
56804	96024
56815	96024
56816	96024
56817	96024
56818	96024
56819	96024
56821	96024
56822	96024
56823	96024
56824	96024
56826	96024
56827	96024
56828	96024
56829	96024
56830	96024
56832	96024
56833	96024
56834	96024
56835	96024
56840	96024
56841	96024
56842	96024
56843	96024
56844	96024
56850	96024
56851	96024
56852	96024
56853	96024
56854	96024
56855	96024
56856	96024
56857	96024
56858	96024
56859	96024
56860	96024
56861	96024
56862	96024
56863	96024
56864	96024
56865	96024
56866	96024
56867	96024
56900	96024
56901	96024
56902	96024

Model No.	Tune-Up Kit
56903	96024
56904	96024
56915	96024
56916	96024
56917	96024
56918	96024
56919	96024
56921	96024
56922	96024
56923	96024
56924	96024
56926	96024
56927	96024
56928	96024
56929	96024
56930	96024
56932	96024
56933	96024
56934	96024
56935	96024
56950	96024
56951	96024
56952	96024
56953	96024
56954	96024
56955	96024
56956	96024
56957	96024
56958	96024
56959	96024
56960	96024
56961	96024
56962	96024
56963	96024
56964	96024
56965	96024
56966	96024
56967	96024
56968	96024
56969	96024
56970	96024
56971	96024
56972	96024
57000	96024
57001	96024
57002	96024
57003	96024
57004	96024
57010	96122
57015	96024
57016	96024
57017	96024
57018	96024
57019	96024
57021	96024
57022	96024
57023	96024
57024	96024
57026	96024
57027	96024
57028	96024
57029	96024
57030	96024
57032	96024
57033	96024
57034	96024
57035	96024



Model No.	Tune-Up Kit
57400	96107
57401	96107
57402	96107
57403	96107
57404	96107
57405	96107
57407	96107
57500	96109
57501	96109
57502	96109
57503	96109
57530	96024
57550	96107
57551	96107
57552	96107
57553	96107
57555	96107
57570	96018
57571	96018
57572	96018
57573	96018
57574	96018
57575	96018
57582	96018
57583	96018
57584	96018
57585	96018
57600	96122
57601	96122
57602	96122
57603	96122
57604	96122
57610	96122
57611	96122
57620	96108
57621	96024
57622	96024
57623	96024
57624	96024
57625	96024
57626	96024
57627	96024
57628	96024
57629	96024
57630	96024
57631	96024
57632	96024
57633	96024
57634	96024
57635	96024
57636	96024
57637	96024
57638	96024
57639	96024
57640	96024
57641	96024
57642	96024
57643	96024
57655	96024
57656	96024
57657	96024
57658	96024
57659	96024
57660	96024
57661	96024
57662	96024
57663	96024

Model No.	Tune-Up Kit
57664	96024
57665	96024
57666	96024
57667	96024
57668	96024
57669	96024
57670	96024
57671	96024
57672	96024
57673	96024
57674	96024
57675	96024
57676	96024
57677	96024
57700	96195
57704	96195
57810	96024
57811	96024
57812	96024
57813	96024
57814	96024
57860	96024
57900	96236
57902	96236
57908	96169
57909	96169
57910	96236
57920	96169
57922	96169
57923	96169
57924	96169
57925	96169
57926	96169
57927	96169
57928	96169
57929	96169
57930	96236
57935	96236
58000	96236
58010	96236
58050	96173
58100-	
58330	96480
58400	98220
58401	98220
58404	98220
58405	98220
58406	98220
58409	98220
58410	98221
58411	98221
58414	98221
58415	98220
58416	98220
58417	98220
58418	98220
58419	98220
58420	98220
58430	98220
58431	98220
58434	98220
58435	98220
58436	98220
58439	98220
58441	98221
58442	98221
58443	98221

Model No.	Tune-Up Kit
58445	98221
58446	98221
58455	98220
59000-	
59114	96510
59302	42735
59303	42735
59304	42735
59305	42735



The following is a list of tool model numbers with corresponding drop-in motor part numbers. Models not listed do not have an available drop-in motor.

Model No.	Drop-In Motor
11000	01198
11450	CALL
11462	01711
11475	01711
11477	CALL
11480	01711
12200	53406
12201	53406
12202	53406
12203	53406
12204	53406
12205	53406
12206	53406
12207	53406
12250	02501
12252	02501
12254	02051
13100	53407
13101	53406
13102	53407
13120	53406
13121	53407
13200	53170
13201	53169
13202	53169
13203	53169
13204	53169
13205	53169
13206	53170
13207	53170
13220	53169
13300	53408
13301	53409
13310	53408
13400	01136
13401	01136
13410	01136
13411	01136
13450	01904
13460	01904
13500	01904
13501	01888
13502	01888

Model No.	Drop-In Motor
13503	01888
13504	01888
13505	01888
13506	01888
13507	01887
13508	01887
13511	01905
13512	01905
13515	01905
13516	01905
13517	01904
13518	01904
13519	01903
13520	01904
13521	01888
13531	01905
14000	01198
14010	01198
14200	01711
14201	01711
15002	01393
15003	01393
15006	01393
15300	01711
15302	01711
30200	53169
30304	53169
30336	53169
30337	53169
40320	01030
40321	01030
40324	01030
40326	01030
40330	01030
40335	01030
40338	01030
40381	53409
40500	CALL
40501	CALL
40587	CALL
40588	CALL
50000	02030
50001	02050
50002	02051
50003	02030
50004	02050
50005	02051
50302	01902
50306	01902
50308	01902
50320	55055
50321	55055
50324	55056
50325	55056
50340	55055
50343	53411
50370	01144
50371	01144
50372	01144
50374	01144
50375	01144
50727	02030
50728	02050
50729	02051
51130	01198
51134	01127
51200	53407

Model No.	Drop-In Motor
51201	53406
51202	53407
51203	53407
51204	53406
51205	53407
51210	53409
51211	53406
51212	53409
51213	53409
51214	53408
51215	53409
51240	01391
51241	01391
51243	01391
51244	01296
51245	01296
51247	01296
51248	01390
51250	01390
51300	01198
51301	01198
51302	01198
51303	01198
51304	01296
51305	01296
51306	01296
51307	01296
51310	01198
51311	01198
51312	01198
51313	01198
51314	01296
51315	01296
51316	01296
51317	01296
51330	01712
51331	01712
51370	54963
51371	54962
51390	01905
51391	01905
51392	01904
51393	01902
51394	01905
51395	01905
51396	01904
51397	01902
51400	53408
51401	53409
51405	53408
51410	53408
51411	53408
51412	53409
51415	53408
51420	53408
51425	53409
51430	53408
51450	01136
51451	01184
51454	01136
51455	01184
51460	53408
51461	53408
51470	53169
51472	53169
51474	53169
51476	53169

Model No.	Drop-In Motor
51479	53169
51482	53169
51600	53169
51601	53169
51602	53169
51603	53169
51604	53169
51605	53169
51800	02030
51801	02050
51802	02051
51803	02030
51804	02050
51805	02051
51820	02030
51821	02050
51822	02051
51823	02030
51824	02050
51825	02051
51827	02030
51828	02050
51829	02051
51830	02030
51831	02050
51832	02051
51833	02030
51834	02050
51835	02051
51846	02030
51847	02050
51848	02051
52050	53406
52051	53406
52052	53406
52053	53406
52060	53407
52061	53407
52062	53407
52100	53170
52101	53169
52102	53170
52104	53169
52105	53170
52196	54807
52200	01390
52201	01391
52202	01390
52203	01391
52204	01390
52205	01390
52206	01390
52207	01390
52210	01044
52211	01044
52212	01044
52213	01044
52216	01030
52217	01030
52218	01030
52219	01030
52220	01044
52221	01044
52222	01044

# DROP-IN MOTORS

Allows quick and easy replacement. No motor adjustment needed.

Model No.	Drop-In Motor	Model No.	Drop-In Motor	Model No.	Drop-In Motor	Model No.	Drop-In Motor	Model No.	Drop-In Motor
52223	01044	52298	01717	52516	02087	52669	01908	53210	53409
52224	01717	52299	01717	52518	02089	52672	01905	53400	53406
52225	01717	52315	02030	52520	02030	52673	01904	53401	53406
52226	01717	52316	02050	52521	02050	52674	01903	53402	53406
52227	01717	52317	02051	52522	02051	52675	01902	53403	53406
52230	01390	52318	02030	52523	02030	52676	01902	53410	53406
52231	01391	52319	02050	52524	02050	52677	01902	53415	53407
52232	01390	52320	02051	52525	02051	52678	01902	53417	53407
52233	01391	52325	01391	52530	02030	52679	01902	53420	53406
52240	01711	52326	01391	52531	02050	52680	01904	53425	53407
52241	01711	52327	01391	52532	02051	52681	01888	53430	53406
52242	01711	52328	01391	52533	02030	52682	01888	53435	53407
52243	01711	52331	01390	52534	02050	52683	01187	53440	53406
52244	01711	52333	01390	52535	02051	52684	01886	53460	53407
52245	01711	52335	01390	52540	02030	52685	01908	53501	01127
52246	01717	52337	01390	52541	02050	52686	01908	53502	01127
52247	01711	52341	01391	52542	02051	52687	01908	53506	01127
52248	01711	52345	01391	52543	02030	52688	01908	53507	01127
52249	01711	52351	01712	52544	02050	52689	01908	53510	01127
52250	01390	52373	01894	52545	02051	52700	01711	53511	01127
52251	01390	52374	01894	52550	02030	52702	01711	53512	01127
52252	01390	52376	01902	52551	02050	52710	02030	53513	01127
52253	01390	52377	01902	52552	02051	52711	02050	53514	01127
52254	01711	52378	01902	52553	02030	52712	02051	58400	56481
52256	01712	52379	01902	52554	02050	52715	01889	58401	56481
52257	01712	52380	01902	52555	02051	52716	01889	58404	56481
52258	01712	52390	01132	52557	02093	52717	01889	58405	56482
52260	01044	52391	01132	52558	02093	52718	01889	58406	56482
52261	01044	52392	01132	52560	01902	52719	01902	58409	56482
52262	01044	52400	01132	52561	01902	52720	01902	58410	56483
52263	01044	52401	01132	52562	01902	52721	01902	58411	56483
52264	01712	52402	01132	52563	01902	52722	01902	58414	56483
52265	01712	52403	01132	52564	01902	52725	01904	58415	56487
52266	01712	52404	01132	52565	01902	52726	01904	58416	56487
52267	01013	52405	01132	52566	01902	52730	01902	58417	56487
52268	01030	52410	01711	52567	01902	52731	01902	58418	56488
52269	01030	52411	01711	52573	01893	52732	01902	58419	56488
52270	01030	52412	01711	52574	01893	52733	01902	58420	56488
52272	01030	52413	01711	52575	01893	52734	01902	58430	56485
52273	01030	52414	01711	52576	01902	52735	01902	58431	56485
52274	01030	52415	01711	52577	01902	53037	01198	58434	56485
52275	01030	52420	02218	52578	01902	53046	02030	58435	56486
52276	01713	52421	02218	52579	01902	53047	02050	58436	56486
52277	01713	52424	01711	52580	01902	53048	02051	58439	56486
52278	01713	52425	01711	52581	01902	53060	55057	58441	56484
52279	01717	52426	01711	52590	54807	53070	53408	58442	56484
52280	02093	52430	02216	52600	01030	53071	53409	58443	56484
52281	01713	52431	02216	52601	01030	53072	53409	58444	56484
52282	01713	52432	02216	52602	01030	53073	53408	58445	56484
52283	01713	52433	02216	52604	01030	53074	53409	58446	56484
52284	01711	52434	01843	52605	01030	53075	53406	58450	56480
52285	01711	52435	02219	52610	01711	53076	53407	58455	56480
52286	01711	52436	01711	52611	01711	53077	53407	57126	53165
52287	01711	52450	52440	52612	01711	53078	53406	57127	02093
52288	01717	52451	52440	52620	54959	53079	53407	57135	02093
52289	01717	52452	52440	52625	54957	53080	01136	57201	04135
52290	01717	52453	52440	52660	01904	53081	01184	57202	04135
52291	01717	52454	52440	52661	01888	53090	55059	57203	04135
52292	01717	52500	01392	52662	01888	53091	55059	57204	04135
52293	01717	52502	01393	52663	01887	53095	55059	57210	04134
52294	01717	52503	01392	52665	01908	53096	55056	57211	04134
52295	01717	52510	01393	52666	01908	53110	53169	57212	04134
52296	01717	52512	01393	52667	01908	53111	53169	57213	04134
52297	01717	52515	02087	52668	01908	53200	53408	57214	04134
								57306	57747
								57310	57747
								57314	57747
								57315	57747
								57600	04133
								57601	04133
								57602	04133
								57603	04133
								57604	04133
								57700	57747
								57704	57747
								57900	53412
								57902	53412
								57910	53412
								57930	53412
								57935	53412
								58000	53412
								58010	53412
								58050	53408
								59000	59450
								59003	59450
								59004	59450
								59005	59453
								59008	59453
								59009	59453
								59010	59456
								59013	59453
								59014	59456
								59015	59451
								59018	59451
								59019	59451
								59020	59454
								59023	59454
								59024	59454
								59025	59457
								59028	59457
								59029	59457
								59030	59452
								59033	59452
								59034	59452
								59035	59455
								59038	59455
								59039	59455
								59040	59458
								59043	59458
								59044	59458
								59100	59450
								59103	59450
								59104	59450
								59105	59453
								59108	59453
								59109	59453
								59110	59456
								59113	59456
								59114	59456
								66402	66441

# GLOSSARY

## **CUBIC FEET per MINUTE (CFM)**

- CFM is measured in more than one way to apply to specific situations.

### **CFM variations:**

#### **ACTUAL CUBIC FEET per MINUTE (ACFM)**

- ACFM, when applied to compressor capacity, is the amount of air delivered, measured at prevailing ambient inlet conditions.

#### **INLET CUBIC FEET per MINUTE (ICFM)**

- ICFM is the same as ACFM for displacement type compressors but may be higher for multi-stage centrifugal compressors, where clearance type seals may allow leakage between stages, so that the inlet CFM may be greater than the delivered CFM.

#### **STANDARD CUBIC FEET per MINUTE (SCFM)**

- SCFM is measured at "Standard" conditions. Standard conditions refer here to the ISO Standard which generates its measurements at these following conditions: 68° F, 0% relative humidity, and 14.5 psia.
- SCFM is the standard measure used for flow meters.

## **CAPACITY, ACTUAL**

- The quantity of gas actually compressed and delivered to the discharge of a compressor running at full-rated speed and rated pressure conditions. Actual capacity is expressed in cubic feet per minute (CFM) at the conditions prevailing at the inlet to the first stage.

## **FREE AIR**

- Air at atmospheric conditions at any specific location. Because the altitude, barometer, and temperature may vary at different localities and at different times, it follows that this term does not mean air under identical or standard conditions.

## **DISPLACEMENT**

- Displacement of a compressor is the piston volume swept out per unit time; it is usually expressed in cubic feet per minute.

## **PISTON DISPLACEMENT**

- Net volume actually displaced by the compressor piston at rated machine speed is generally expressed in cubic feet per minute (usually CFM). For multi-stage compressors, the piston displacement of the first stage only is commonly stated as that of the entire machine.

## **RECEIVERS**

- Tanks used for storage of air discharged from compressors. They also serve to damp discharge line pulsation.

### **The Rule of "7"**

- Some air tool manufacturers use CFM to rate their tools. This must be converted to SCFM for the purpose of properly choosing the horsepower of a compressor.
- Use **7** as an estimated (not exact) conversion factor when converting SCFM to CFM and vice versa.
- CFM to SCFM: **CFM x 7 = SCFM**
- SCFM to CFM: **SCFM / 7 = CFM**

### **Use These Standards to Determine your Need**

- Determine the total demand SCFM for all tools, equipment and other air consumption variables. Using this information, select a compressor according to its **capacity ACFM or delivered CFM at 125 PSIG (8.6 Bar) rating.**

# MEASUREMENT CONVERSION

U.S. Unit of Measure	Conversion Formula	International Unit of Measure
Inch	x 25.4	Millimeter (mm)
Pound	x .454	Kilogram (kg)
PSIG	÷ 14.5	Bar
SFPM	x .3048	SMPM
SCFM	x 28.32	LPM
Hp	x 745.7	W

# REFERENCE CONTACT INFORMATION

- 1. American National Safety Institute – ANSI**  
25 West 43<sup>rd</sup> Street  
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New York, NY 10036  
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- 2. Government Printing Office – GPO**  
Superintendent of Documents  
Attn. New Orders  
P.O. Box 371954  
Pittsburgh, PA 15250-7954  
Tel: 1 (202) 512-1803
- 3. European Committee for Standardization**  
Rue de Stassart 36  
B - 1050 Brussels, Belgium
- 4. Thomas Associates  
Compressed Air & Gas Institute**  
1300 Sumner Ave.  
Cleveland, Ohio 44115  
Email: [www.cagi.org](http://www.cagi.org)
- 5. Sullair Corporation**  
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