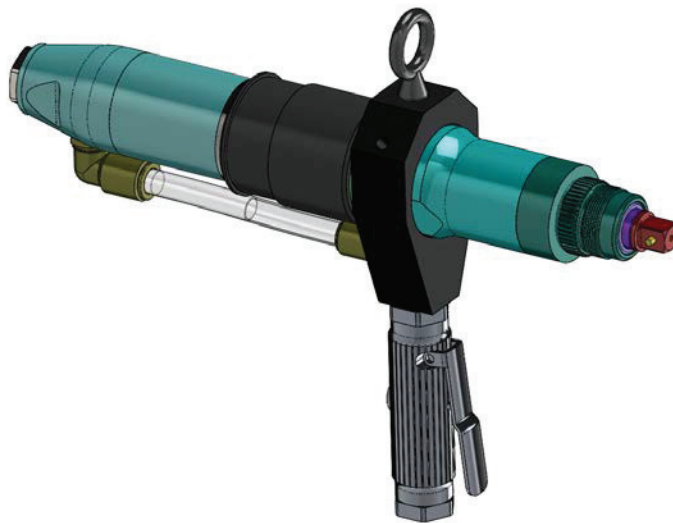




American
★ ASSEMBLY TOOLS ★



ASD3L-M135-P
Pneumatic Nutrunner
Parts List

Jan. 2015

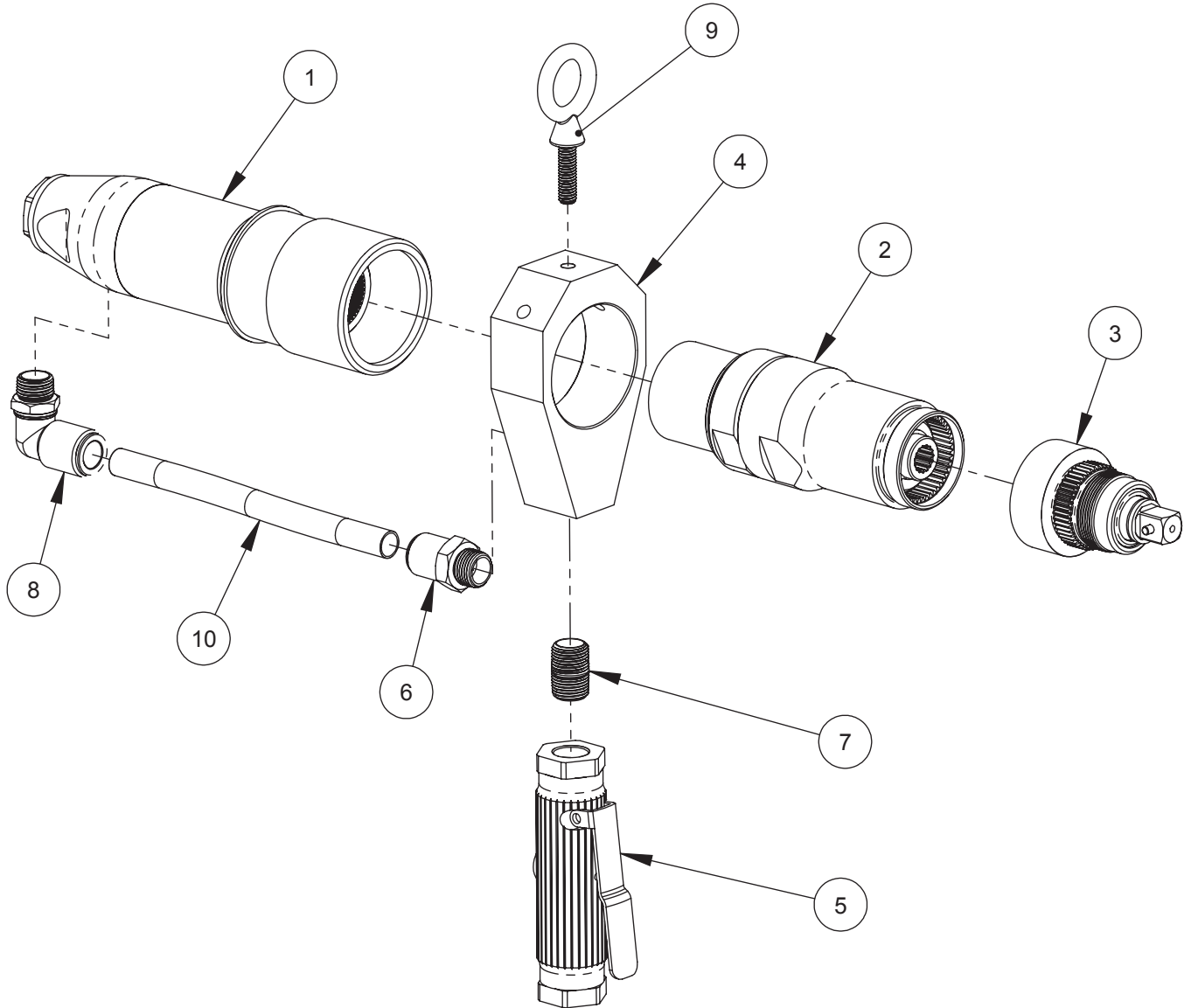


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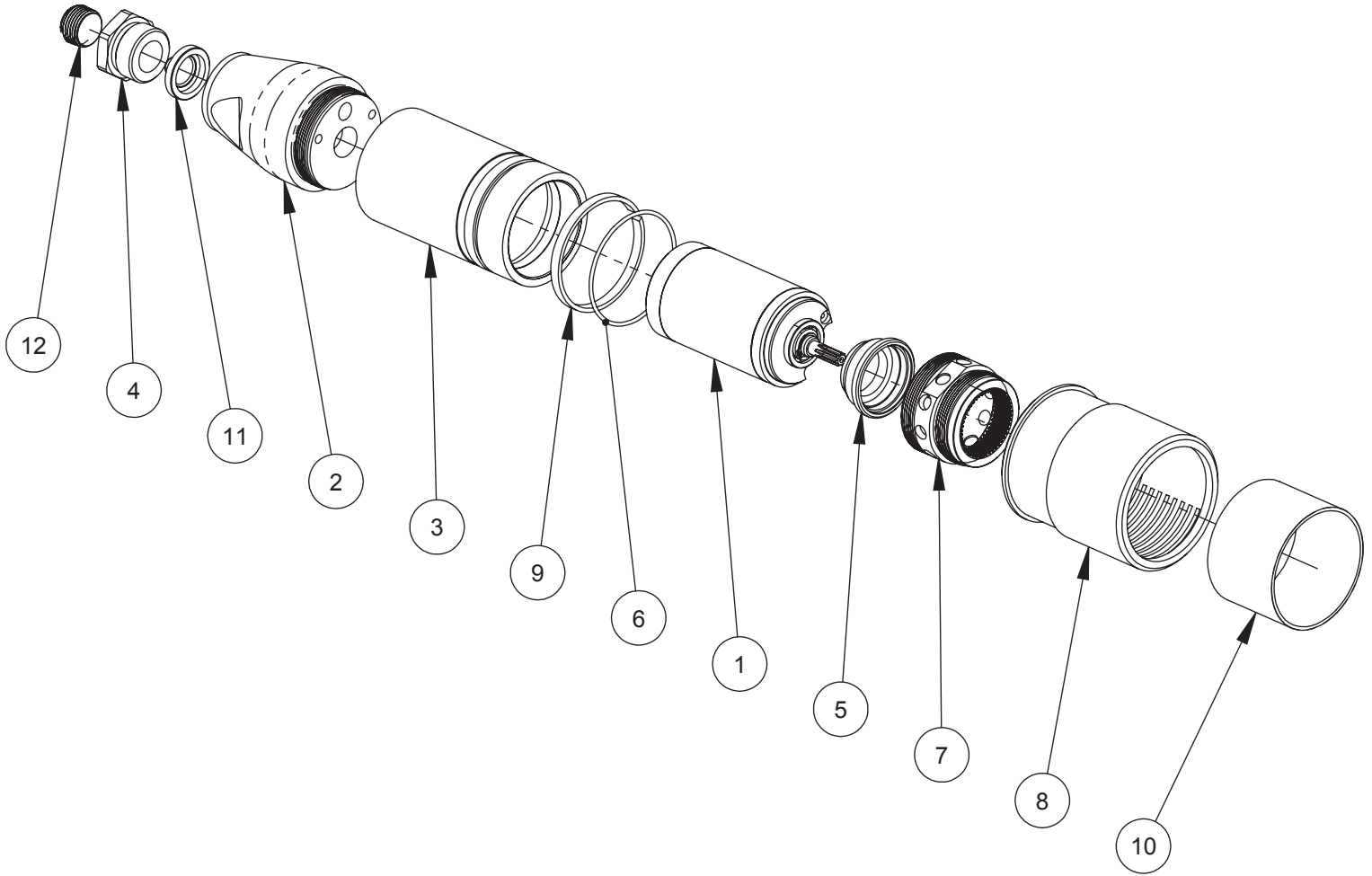
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ASD3L-M135-P Parts List



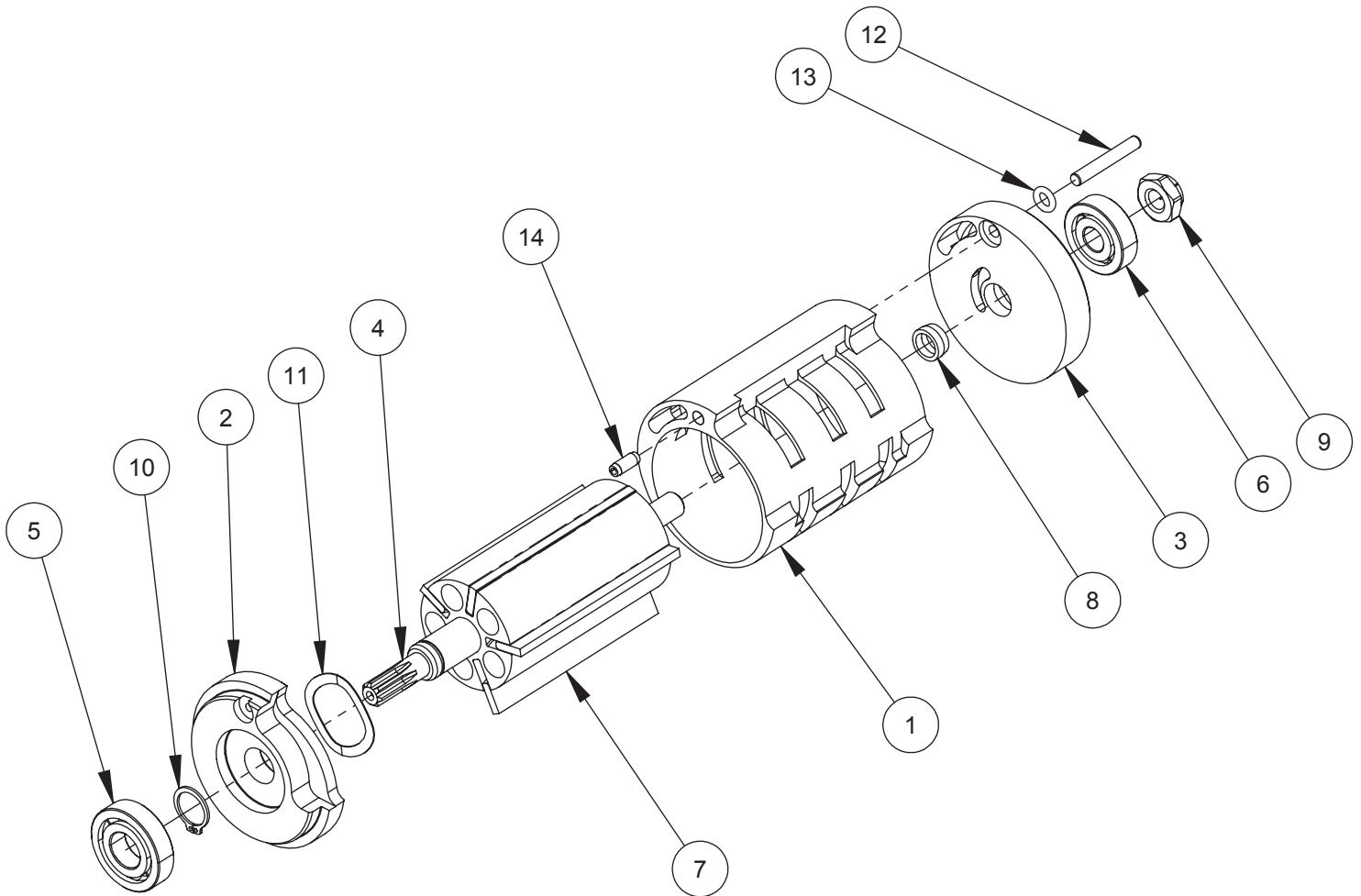
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 1 | 1000-03105 | 3 Size Motor Group, Special | 1 |
| 2 | 3005-30333 | Speed Shift PAC3/Stall3 16/16 | 1 |
| 3 | 5001-03124 | Output Group, Fixed 1/2" Sq. Dr. | 1 |
| 4 | 5213-00080 | Manifold/Support | 1 |
| 5 | 9800-00002 | Air Valve, Side Mount | 1 |
| 6 | 9250-00022 | Fitting, Straight, 3/8NPT to 1/2 Pushlock | 1 |
| 7 | 9522-38060 | 3/8NPT Nipple, Close | 1 |
| 8 | 9250-00023 | Fitting, 3/8NPT to 1/2 Pushlock 90 Deg. Elbow | 1 |
| 9 | 9016-00516 | Eyebolt, 5/16-18 | 1 |
| 10 | 9251-00135 | 1/2" Tubing, Nylon | 1 |

P/N 1000-03105 Motor Group Parts List



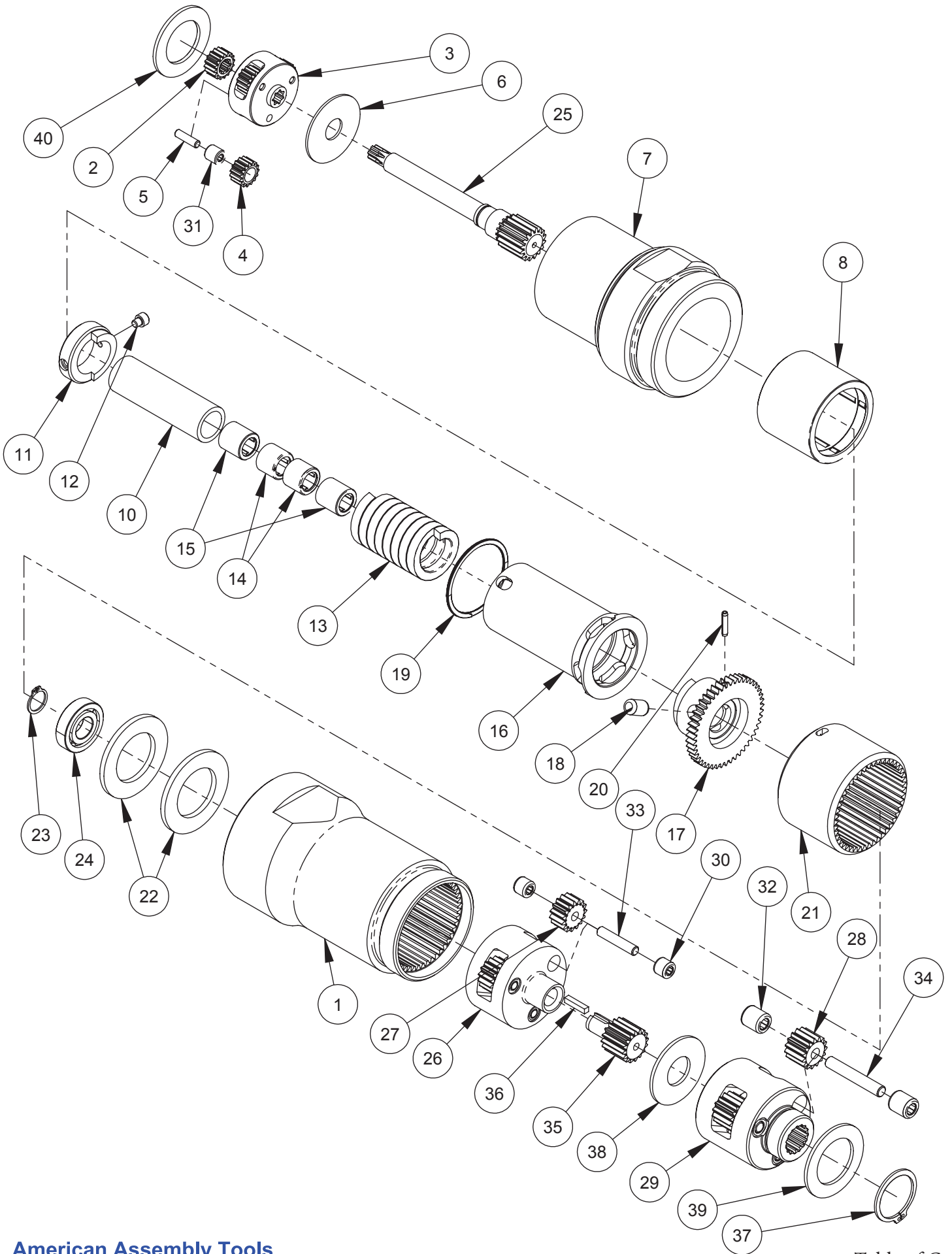
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|------------------------------|------|
| 1 | 1000-90130 | Motor Assembly, 3, PAC/Stall | 1 |
| 2 | 1201-00025 | Valve Body, Pistol Valve | 1 |
| 3 | 1201-00010 | Motor Housing, 3 Series | 1 |
| 4 | 1600-00025 | Inlet Adaptor, 3/8 NPT | 1 |
| 5 | 1250-00122 | Bearing Spacer | 1 |
| 6 | 9200-00032 | O-Ring | 1 |
| 7 | 1220-40011 | Exhaust Housing | 1 |
| 8 | 8600-00005 | Exhaust Cover | 1 |
| 9 | 8310-00144 | Retaining Ring | 1 |
| 10 | 8650-00028 | Muffling Material | 1 |
| 11 | 1610-00003 | Inlet Screen | 1 |
| 12 | 9253-00380 | Pipe Plug, 3/8 NPT | 1 |

P/N 1000-90130 Motor Assembly Parts List



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---------------------------------|------|
| 1 | 1100-99071 | Motor Cylinder, A2 | 1 |
| 2 | 1120-00009 | Drive End Plate A3 | 1 |
| 3 | 1120-00016 | Inlet End Plate A3 Series | 1 |
| 4 | 1110-00028 | Rotor 3 Series | 1 |
| 5 | 9400-00006 | Bearing, Ball | 1 |
| 6 | 9400-00044 | Bearing, Ball | 1 |
| 7 | 1130-00044 | Blade | 5 |
| 8 | 8320-05165 | Bearing Spacer - A3 (Crushable) | 1 |
| 9 | 9033-00025 | Nut | 1 |
| 10 | 9307-00037 | Retaining Ring | 1 |
| 11 | 9102-08610 | Spring Wave Washer | 1 |
| 12 | 8303-00428 | Dowel Pin, 1/8" x 7/8"L | 1 |
| 13 | 9200-00007 | O-Ring | 1 |
| 14 | 9300-00805 | Roll Pin .125" x .312"L | 1 |

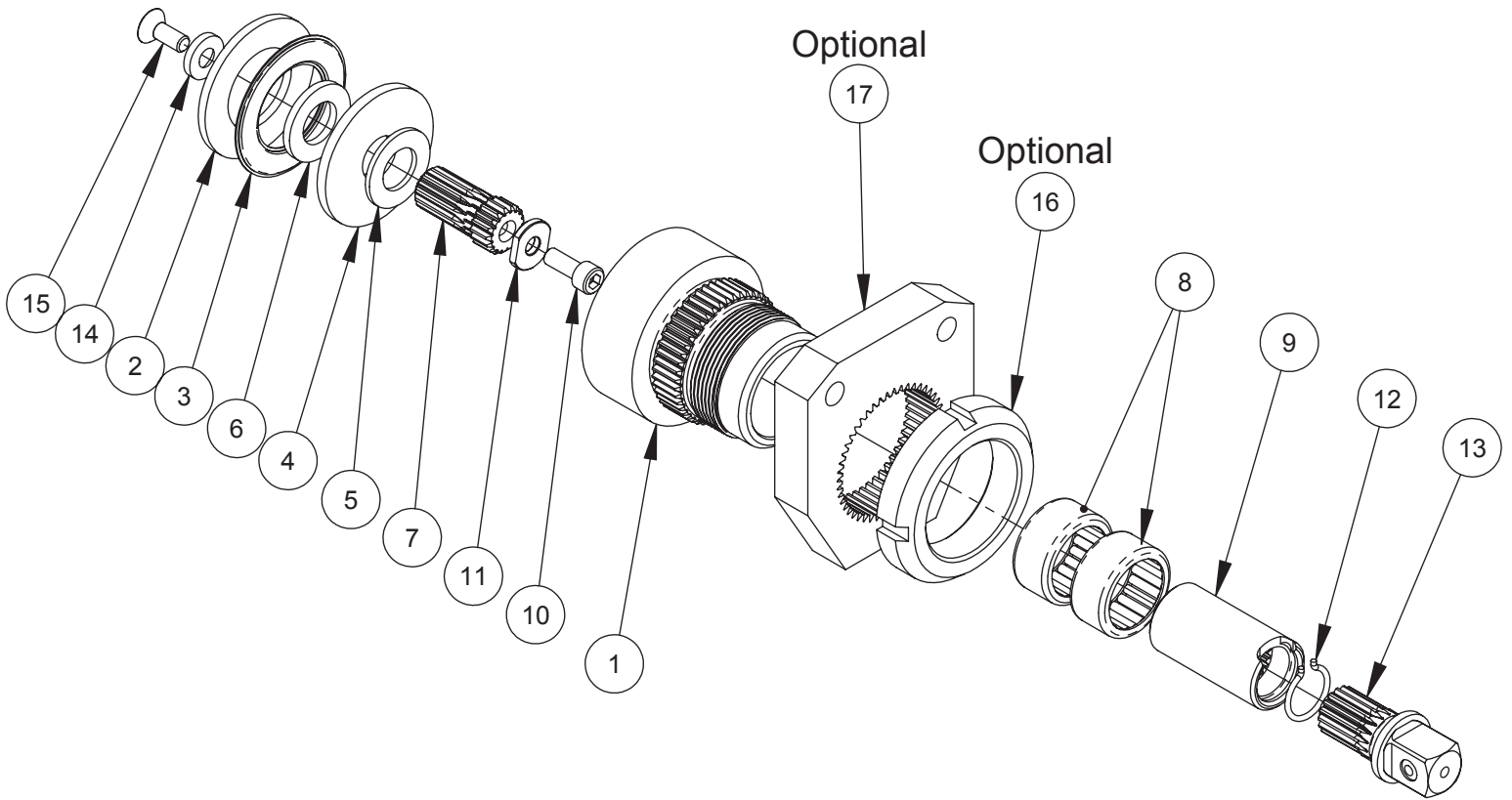
P/N 3005-30333 Speedshift 3 Parts List



P/N 3005-30333 Speedshift 3 Parts List

| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| 1 | 3200-32025 | Gear Housing, Speed Shift, Double Step | 1 |
| 2 | 3100-40160 | Pinion Gear 16T | 1 |
| 3 | 3402-99415 | Planet Carrier, 7T Spline | 1 |
| 4 | 3120-40150 | Planet Gear, 15T-40P | 3 |
| 5 | 8303-00414 | Pin, Planet Gear | 3 |
| 6 | 8320-00049 | Washer, 1.187 OD x .374 ID x .042W (Stock) | 1 |
| 7 | 4200-00034 | Speed Shift Clutch Housing 3 Series | 1 |
| 8 | 9441-00030 | Clutch Bearing | 1 |
| 9 | 4000-93001 | Speed Shift Assembly 3 Size Single Step | 1 |
| 10 | 4320-00100 | Spring Shaft | 1 |
| 11 | 4410-00043 | Spring Lock Ring | 1 |
| 12 | 9000-00502 | SHCS #5-40 x 1/8"L | 1 |
| 13 | 4150-00068 | Wrap Spring, 3 Size Speed Shift | 1 |
| 14 | 9413-00810 | Bearing, Roller | 2 |
| 15 | 9440-00812 | Clutch, Roller | 2 |
| 16 | 4330-00031 | Spring Drum, 3 Size Speed Shift | 1 |
| 17 | 4300-32471 | Hub, Speed Shift 3 Size | 1 |
| 18 | 9303-00812 | Dowel Pin, 1/4 x 3/8"L | 1 |
| 19 | 9326-00125 | Retaining Ring | 1 |
| 20 | 9300-00607 | Roll Pin 0.0938x0.438 | 1 |
| 21 | 3210-32034 | Ring Gear, Single Step 3 Size | 1 |
| 22 | 9432-14233 | Thrust Washer, .875 x 1.437 x .093W | 2 |
| 23 | 9307-00037 | Retaining Ring | 1 |
| 24 | 9400-00006 | Bearing, Ball | 1 |
| 25 | 3300-32161 | Pinion 16T | 1 |
| 26 | 3401-99316 | Planet Carrier | 1 |
| 27 | 3120-32151 | Gear, Planet 15T | 3 |
| 28 | 3120-32152 | Planet Gear (Stock) | 3 |
| 29 | 3410-99316 | Planet Carrier, Output 16T | 1 |
| 30 | 9410-00254 | Bearing, Needle | 6 |
| 31 | 9410-00024 | Bearing, Needle, B36 | 3 |
| 32 | 9410-00036 | Needle Bearing | 6 |
| 33 | 8303-00526 | Pin, Planet Gear | 3 |
| 34 | 8303-00638 | Pin, Planet Gear | 3 |
| 35 | 3401-32016 | Pinion, Planet Carrier 16T | 1 |
| 36 | 8305-00018 | Key, .094" Square x .45" Long | 1 |
| 37 | 9307-00081 | Retaining Ring | 1 |
| 38 | 8320-00054 | Washer, 1.188 OD x .515 ID x .060W | 1 |
| 39 | 8320-00043 | Washer, 1.276 OD x .821 ID x .060W | 1 |
| 40 | 9432-12202 | Thrust Washer, .762 x 1.230x .062W | 1 |

P/N 5001-03124 Output Group, Fixed Parts List



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|------------------------------------|------|
| 1 | 5210-00055 | Mounting Housing | 1 |
| 2 | 8320-00047 | Washer, 1.645 OD x .955 ID x .104W | 1 |
| 3 | 9431-02542 | Thrust Bearing | 1 |
| 4 | 8320-00046 | Washer, 1.626 OD x .509 ID x .125W | 1 |
| 5 | 9432-08152 | Thrust Washer, .506 x .917 x .062W | 1 |
| 6 | 9432-08153 | Thrust Washer, .506 x .917 x .093W | 1 |
| 7 | 3300-00094 | Output Shaft, Fixed (O.D. Spline) | 1 |
| 8 | 9410-00138 | Needle Bearing | 2 |
| 9 | 5310-00081 | Output Shaft, Fixed | 1 |
| 10 | 9001-01008 | SHCS #10-32 x 1/2"L | 1 |
| 11 | 8320-05256 | Spindle Washer | 1 |
| 12 | 8310-00153 | Retaining Ring Clip | 1 |
| 13 | 5300-90004 | Square Drive Assembly 1/2" | 1 |
| 14 | 8320-05286 | Wahser, C'Sink Spindle Retaining | 1 |
| 15 | 9003-01008 | FHCS #10-32 x 1/2"L | 1 |
| 16 | 8027-00144 | Nut, Fixture Plate | 1 |
| 17 | 5213-00062 | Multiple Mounting Plate | 1 |



USING AAT STALL AND PAC PNEUMATIC NUTRUNNERS

MODELS NOS. BEGINNING: AS2; AS3; AP2; AP3; ARS2; ARS3; ARP2; ARP3

GENERAL: The torque developed by Stall type and PAC nutrunners is directly proportional to the regulated pressure setting. AAT tests these nutrunners in a production acceptance test at 80 PSI (5.8 bar) measured and controlled at the inlet to the tool using a pilot type regulator. The tool being tested must be capable of the rated torque (Model number torque) as the MINIMUM average torque delivered to a moderate joint rate. A moderate joint requires 180 degrees of rotation from "just snug" to full stall torque.

There are manufacturing variables that cause small differences in tool performance. In order to set the torque properly in a manufacturing plant, the nutrunner must be run on the actual joint upon which it is to be used with the actual, or duplicate of, the air supply at the job site. The air supply should conform to the specifications in AAT's Air Line Requirements. The torque results from the tool should be evaluated using the torque test methods as defined in the user customer's quality standards. The pressure should be adjusted, up or down, so the torque conforms to the customer's target torque. If a 10% torque reduction is required when the nutrunner is running at a particular regulator setting, the pressure should be reduced 10% - and so on. The tool should be retested at the new setting and the process repeated if required. Good quality practice requires that the torque be checked on a regular basis. With age and other factors, an air supply adjustment may be required from time to time. Note that tool performance may initially improve as the air motor is broken-in.

PREVENTATIVE MAINTENANCE: AAT recommends that a nutrunner be disassembled, all internal components cleaned, degreased and inspected, regreased, reassembled and the nutrunner torque tested every 250,000 cycles or at least once per year. AAT's exploded view drawings include assembly instructions where required. We do not recommend greasing the tool from time to time without internal parts cleaning. Metallic particulate matter that results from wear will mix internally with the lubricant and must be removed to prevent damage. It does no good to add grease to a contaminated environment.

OPERATION: STALL NUTRUNNERS are controlled by the operator directly by hand or remotely for tools equipped with AAT's remote feature. For tools with built-in remote operated valves, a small valve is required to pressure activate the tool's valve. "H" series stall tools require a valve that must be capable of supplying 25-30 CFM directly to the motor to achieve the rated speed. In either case the tool remains pressurized until the operator shuts it off. Torque load will bring it to a stop (stall) when tightening a fastener at which time the operator should shut it off. Stall tools do not shut-off automatically.

PAC NUTRUNNERS are controlled by the operator directly by hand or remotely for tools equipped with AAT's remote feature. The tool runs until the operator shuts it off or until the torque achieves a level very near stall where a pressure sensing system within the tool recognizes the near stall condition and shuts-off the tool. The tool will remain off until the operator or remote device allows the tool's valve to return to the off position. The valve is then reset and a new cycle can begin.



AIR LINE REQUIREMENTS

Optimum performance of AAT 2 and 3 Series nutrunners is achieved when the tools are properly lubricated and supplied with clean air regulated at 85 to 90 PSI (5.8 to 6.1 BAR). Pressure should not exceed 105 PSI (7.1 BAR). Air pressure is adjusted to change torque output on AAT's PAC and stall type nutrunner. Accu-Brake™ and Accu-Trol™ nutrunners can operate at lower pressures as long as the tool can still achieve the target torque.

2 Series nutrunners require a hose diameter of 3/8" for lengths up to 25' and 1/2" for lengths up to 50' and have air consumption of 26 SCFM (Standard Cubic Feet per Minute). 3 Series nutrunners require a hose diameter of 1/2" for lengths up to 25' and 3/4" for lengths up to 50' and have air consumption of 38 SCFM.

The tool should be supplied air through a Filter/Regulator/Lubricator (FRL) that has a flow rating capable of supplying the nutrunner with minimal pressure drop so that the rated torque can be achieved. Generally a 3/4" NPT FRL is adequate for the 3 Series and a 1/2" NPT FRL is adequate for the 2 Series. American Assembly Tools highly recommends single-point, injection type lubricators (as opposed to oil mist or drip types) to insure proper lubrication. An injection type lubricator is adjustable and should be set for one drop of oil every fifth cycle. A good quality oil, specifically for use in pneumatic tools, should be used (such as Peeroyl R-43 air line oil). Lubricating oils that contain cleaning or anti-gumming agents should not be used. These additives may cause swelling of O-rings and other rubber components that can cause malfunction. Inadequate lubrication is considered abnormal operation under atypical conditions. Tool failures caused by inadequate lubrication will not be covered by our warrantee.



AMERICAN ASSEMBLY TOOLS LIFETIME WARRANTY

American Assembly Tools (AAT) warrants AAT Tools and Accessory Equipment against defects in material and workmanship for the life of the Tool or Accessory Equipment. Without charge to the original purchaser, AAT, at its option, will repair or replace any Tool or Accessory or component part if it is found to be defective or not in accordance with AAT Engineering specifications in effect at the time of manufacture and said Tool or Accessory or component part is in active commercial production by AAT. Without charge to the original purchaser, AAT will also, at its option, repair or replace any Assembly Tool or Accessory used for assembly operations or component part (excepting Tools and Accessory Equipment and parts thereof designated for light or limited duty) in the event of a failure due to wear encountered in normal operation under typical specified conditions where typical maintenance procedures have been observed if such failure occurs within one year of the original purchase date of the Tool or Accessory and the failed Tool or Accessory has been subjected to 500,000 operations or less. The Tool or Accessory is to be returned to AAT's factory with shipping charges prepaid.

This warranty will not apply to any Tool or Accessory which has been misused, misapplied, modified or has been subjected to negligence or has been damaged by accidental misuse or other damage by accidental occurrences; or in which parts not manufactured by or specified by AAT have been used for repair; or which shall have been repaired or altered by other than AAT authorized personnel in such a manner, as determined by AAT, that the function of the Tool or Accessory has been affected.

THIS WARRANTY CONSTITUTES THE ENTIRETY OF THE OBLIGATION OF AAT RELATIVE TO THE SALE AND USE OF SAID PRODUCTS AND ITS MAXIMUM LIABILITY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT. IN NO EVENT WILL AAT BE LIABLE FOR CONSEQUENTIAL, INDIRECT, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES ARISING FROM THE USE OR SALE OF SUCH PRODUCT.