

ENGINE EQUIPMENT



1 - PERMA-COIL SPARK PLUG THREAD REPAIR KIT

Perma-Coil kits are designed to repair stripped spark plug port threads to like new or better than original condition. By following the detailed instructions enclosed in every kit, even an inexperienced mechanic can repair stripped threads, permanently. Perma-Coil inserts meet all applicable industrial and military specifications. They may be used on all military and government airplanes and other vehicles covered by MS21208, MS21209, and NAS1222. Kit includes Tap, Installation Tool, and 6 18MMx.5" inserts.

- No. 1218-500 (Complete Kit)
- No. 418-500 (Pack of 6 inserts)



2 - PLUG AND JUMP GROUND POWER PLUG

The Plug & Jump is a very light weight portable unit. It can be used to start your aircraft using standard jumper cables and a car. The Plug and Jump comes in two models; The Universal Model for Cessna, Beechcraft, etc. (3 pin plug) and the single pin model for the Piper. It is not a battery in itself, but a simple conduit of power from any external power source to the aircraft. The Plug & Jump can be used for either 28 or 14 V systems.

- No. 11808 (Piper-single pin unit)
- No. 11807 (Cessna-3 pin unit)



3 - ENGINE MOUNT INSTALLATION ALIGNMENT PINS

Alignment pins for use in installation of engine mounts on aircraft engines. Pins go in the holes ahead of bolts to help align everything without damaging the bolts. Pins are 7/16" diameter steel, and machined with a taper to a bullet nose on the smaller end. Package of 2 pins and instructions.

- No. AE282



4 - HARTZELL PROPELLER WRENCH

Made from heat treated 4130 steel and laser cut to fit 3/4" nuts and 1/2" drive torque wrench. For use on Hartzell props on Lycoming O360 engines.

- No. AE3528



5 - AVIATION LABORATORIES ENGINE OIL ANALYSIS KIT

The most common cause of engine failure is from damage due to excessive wear or metal fatigue. But there is a simple test you can perform on a regular basis to ensure that your engine is functioning correctly. Of course, that is to visually check your oil for metal particles. But the fact is, the most telling sign of impending engine failure comes from microscopic particles that cannot be seen with the naked eye. That's why you should have a lab do an oil check. Aviation Laboratories' test kit determines the condition of oil wetted engine parts even on the first sample. Simply fill the supplied sample bottle with oil and mail it in for analysis (they'll even pay the postage). Aviation Laboratories will analyze 12 wear metal elements for piston and turbine engines, and post the results ONLINE for your private review. The analysis is usually completed within 24 hours, and if they detect an abnormal condition, they will contact you immediately to alert you to potential engine problems. A huge database of wear characteristics for every engine model, and a highly experienced staff allows Aviation Laboratories to give you accurate interpretive guidelines. Recommended or authorized by most engine manufacturers. Complete kit includes sample bottle, siphon hose, prepaid postage to the lab, comprehensive analysis with online results, and full instructions.

- No. AVL-GA001 (Complete Kit)





ENGINE EQUIPMENT

HeliCoil



PART NO.	DESCRIPTION	PRICE
4260-18	18mm Aviation Spark Plug Repair Kit	\$
2-50	individual insert 18mm x 13/16", each	
2-52	individual insert 18mm x 1/2", each	
4260-14	14mm Aviation Spark Plug Repair Kit	\$
137-43	individual insert 14mm x 3/8", each	
137-22	individual insert 14mm x 1/2", each	

2 - HELI-COIL® SPARK PLUG REPAIR KIT (non-serrated)

These repair kits are very popular with experimentalists and kit builders as an economical alternative to serrated inserts. They contain everything you'll need to make on-the-spot engine repairs. Includes piloted tap, and installation tool, and 24 inserts. *Note that the use of non-aviation Heli-coil inserts may not be approved for your engine. Check with the manufacturer before using.*



PART NO.	DESCRIPTION	PRICE
5523-18	18mm Spark Plug Repair Kit	\$
514-6	individual insert 18mm x 1/2", each	\$
5523-14	14mm Spark Plug Repair Kit	
513-13	individual insert 14mm x 1/2", each	

3 - HELI-COIL® MASTER REPAIR KIT

Kit includes taps, inserts, drill specifications and instructions for repairing a wide range of the most commonly experienced coarse thread repair problems. Includes inserts in the following sizes (and quantity): 1/4x20 (12), 5/16x18 (12), 3/8x16 (12), 7/16x14 (6), 1/2x13 (6), 5/8x11 (6). Custom molded case also included

No. 4934



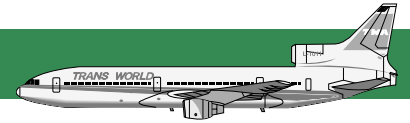
4 - HELI-COIL® INDIVIDUAL REPAIR PACKS

Each pack includes inserts, insertion tool, and tap.

PART NO.	SIZE	PRICE	PART NO.	SIZE	PRICE
5401-04	4-40	\$49.95	5402-06	6-40	
5401-05	5-40	\$75.95	5402-2	8-36	
5401-06	6-32	\$68.95	5402-3	10-32	
5401-1	12-24	\$49.95	5402-4	1/4-28	
5401-2	8-32	\$49.95	5402-5	5/16-24	
5401-3	10-24	\$49.95	5402-6	3/8-24	
5401-4	1/4-20	\$59.95	5402-7	7/16-20	
5401-5	5/16-18	\$65.95	5402-8	1/2-20	
5401-6	3/8-16	\$62.95	5402-9	9/16-18	
5401-7	7/16-14	\$62.95	5402-10	5/8-18	
5401-8	1/2-13	\$83.95	5402-12	3/4-16	



ENGINE EQUIPMENT



1- BENCH TOP GAP SETTING TOOL

A precision gap-setting tool for all massive-electrode spark plugs. Permits simultaneous adjustment of two opposite prongs without removing the spacing gauge. Designed for permanent installation on bench. Includes spacing gauge and spacing gauge handle assembly. Wt: 5-1/2 lbs.



No. CT2500A

5- SPARK PLUG TRAY

A sturdy steel tray that holds up to 12 aviation spark plugs. Speeds handling of used or new plugs. Holes are numbered to correspond with engine cylinders. Protects against shielding barrel contamination. Flat rubber, non-slip pads. Wt. 1 lb.



No. CT446 (12 plug tray).....

No. CT446-18 (18 plug tray).....

2 - OIL FILTER CUTTER

The new improved CT923 Cutter is designed to cut open any spin-on type oil filter quickly and efficiently. This is a complete tool with no parts or adapters to change. It centers around the filter quickly, with no parts to change, and cuts in either direction. The cutter blades are the same blades that are used in the now discontinued CT470 Oil Filter Cutter. Cuts all Champion 3.7 Inch diameter filters. The CT923 also cuts the new Champion RBC308 filter used on the Rotax 912 and 914 engines.



No. CT923

No. CT470-4 (Replacement cutter wheel)

6 - MAGNETIC SPARK PLUG SOCKET

Especially designed for shielded aviation spark plugs. Built-in permanent Alnico magnet holds plugs firmly. 3/8" drive, 7/8" deep 6 point hex. Wt. 8oz.



No. CT907

7 - LEAD-MASTER WRENCH

Lead-Master wrenches reduce time to remove and install spark plug ignition leads, also permits short arc turning due to 12-point grip head. Wt. 9oz.



No. CT913

3 - SPARK PLUG THREAD LUBRICANT

A high-temperature, graphite lubricant that is applied to spark plug threads prior to installation to prevent galling and seizure. The special compound will remain stable at very high temperatures. One bottle provides enough lubricant for up to 200 applications. Comes in a break-proof plastic bottle with brush applicator top.



No. 26124 fl. oz

8 - RETRACTABLE GAP GAUGE

High impact red plastic case contains 4 sets of accurate retractable go and no-go wire gauges for massive electrode aviation spark plugs. Wire sizes .015, .019, .018, and .022. Wt. 1-1/4 oz.



No. CT450

No. CT450-WG.....(Replacement wire pack)

4 - HAND HELD GAP SETTING TOOL

A low-cost efficient gap setting tool for closing gaps on massive electrode-type aviation spark plugs. Can be hand held, bench mounted, or held in a vise. Complete with one adapter for 18mm spark plugs, and one adapter for REM37BY plugs. Also includes a CT450 retractable gap gauge. Wt. 1-1/2 lbs.



No. CT415AV

9 - "T" HANDLE LEAD WRENCH

Special "T" handle designed open box wrench 7/8". Wt. 4oz.



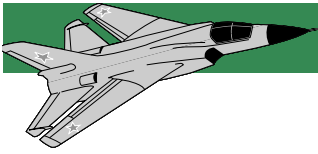
No. CT912

10 - FINE WIRE GAP SETTING TOOL

Designed exclusively for adjusting fine wire electrode spark plug gaps. Two slot sizes fit all platinum or iridium electrodes for quick, safe adjustment. Wt. 1/2 oz.



No. CT457



ENGINE EQUIPMENT

1 - OIL FILTER MEDIA CUTTER

This innovative new Oil Filter Media Cutter allows the filter media to be cut, removed and analyzed in a very neat and orderly fashion. This tool is designed with safety in mind and it greatly reduces the chance of accidentally injuring yourself. A pivoting knife with a retractable safety blade is brought into position to make a clean, consistent cut of the filter media. And once cut, the media can be removed for inspection and evaluation. Other benefits are timesaving and a filter sample with no contamination compared with other cutting methods. It's secured for use by locking it into a machine vise, or can be mounted directly to the workbench with the use of the included base unit. Works with all Champion filters, and can be adapted for use with Kelly Aerospace and Tempest Filters.



- No. FMC-2000.....(Complete unit)
- No. FMC-2000K..... (Kelly Aerospace adapter kit).....
- No. FMC-2000T (Tempest adapter kit).....

2 - OIL FILTER CAN HOLDER

Cutting open an oil filter can be a messy process, but this oil filter can holder makes easy work of it by containing spills that might occur during the cutting process. It's made from solid CNC machined aluminum to hold up to heavy use. And it features three locking pins to puncture and securely hold the can in place prior to cutting. The holder also reduces side loads on the cutter blade (from the FC2000), allowing for a more precise cut with less can deformation. It's simple to use and easily locks into any machine vise. It's a great accessory to the FC2000 Oil Filter Cutter.



- No. FH-2000

3 - HEAVY DUTY OIL FILTER CUTTER

Heavy duty oil filter cutter opens any spin-on type oil filter quickly and efficiently, including the new Champion dash 1 series with the heavier base. This is a complete tool with no parts or adapters to change. It centers around the filter quickly, with no parts to change, and cuts in either direction. Cuts all Champion 3.7 Inch diameter filters. Also cuts the new Champion RBC308 filter used on the Rotax 912 and 914 engines.



- No. FC-2000.....
- No. FC-2000-CW (Replacement cutter wheel).....

4 - OIL FILTER TORQUE WRENCH

A Professional Quality, Heavy Duty wrench with a built in ratcheting mechanism and a pre-set torque arm. The tool fits all standard general aviation aircraft oil filters and has a solid lever-arm with a knurled grip to make oil filter removal a snap! The wrench is compact for areas of limited access and easily fits filters in tightly cowled aircraft. Once the new filter is ready for installation, reverse the wrench and ratchet the filter securely back into place. When the pre-set torque limit of 17 ft/lbs is reached, the user will feel a slight "break" or "click" in the handle. No other torque tools are required



- No. KS5639..... (Kell-Strom)
- No. CT921 (Champion).....

5 - OILEASY OIL FILTER WRENCH

The "Oil Easy Wrench" is specifically designed to remove the oil filter on any aircraft using the Continental IO-520, or IO-550 engine. It's the only wrench that can get between the top of the oil filter and the pressure pump and still provide enough leverage to remove the old (usually stuck) oil filter by hand. And because you are able to remove the old filter without any damage, your inspections of the old filter are more accurate, without any contamination from more extreme filter removal methods..



- No. OILEASY1



UNISON INDUSTRIES



1 - AUTOLITE™ SPARK PLUG TRAY

Holds up to 12 spark plugs and is marked with the cylinder numbers (1-6).

No. T240.....



2 - AUTOLITE™ SPARK PLUG THREAD LUBRICANT

A high temperature graphite lubricant, when applied to spark plugs prior to installation will prevent galling and seizures. Contains no contaminants.

No. T556..... (4 fl oz bottle)



3 - AUTOLITE™ SPARK PLUG SOCKET

A very high quality spark plug socket from Unison Industries. It's manufactured from chrome vanadium steel and chrome plated for extra durability. 6 point 3/8" drive.

No. T557.....(Non-magnetic)

No. T557-1.....(Magnetic)



4 - SLICK® MAGNETO LOCKING PIN

Use this pin to lock the gears of Slick™ magnetos and maintain the correct timing position prior to removal or installation of the magneto.

No. T118.....



5 - SLICK® IGNITION HARNESS ASSEMBLY KIT

The Slick® Assembly Tool Kit is required to install all Slick Ignition Harness Leads on all magneto harness caps and spark plug termination ends. The complete kit includes: Pressing Tool, #72 Drill Bit, Pin Vise, Stripping Tool, Spring Assembly Tool, and Shield Stripper. Complete instructions for the use of this kit can be found in the Unison Industries L-1178 Service Manual.

No. T200..... (Complete kit)



6 - SLICK® MAGNETO OVERHAUL TOOL KIT

Slick magnetos must be overhauled every time you perform an engine overhaul. Additionally, they must be overhauled whenever there is a lightning strike, or sudden engine stoppage. This kit contains all of the tools you will need to perform a complete magneto overhaul in accordance with Unison Industries L-1037 and L-1363B Service manuals. The complete kit contains: Bearing Assembling Plug, Rotor & Frame Assembling Plug, Puller, Base Adapter Plate, Timing Pin, Adapter Plate Bushing, Bearing Puller, Wedge Extractor, Timing Plug, Assembly Fixture, "E" Gap Gauge, Cam and Rotor Set, Spacer, Alternate Cam and Rotor Set, Spacer. *Note: This kit does not include magneto replacement parts.*

No. T100..... (Complete kit)





ENGINE EQUIPMENT

EASTERN TECHNOLOGY



1 - DIFFERENTIAL PRESSURE TESTER

The Model E2A Tester quickly locates worn and cracked rings, defective intake and exhaust valves, scored and cracked cylinders, leaky head gaskets, and worn and stripped spark plug bushings; virtually every potential cause of pressure loss. The E2A Tester also features Eastern's new Slow Fill Valve™ technology. Includes hose and plug adapter.

- No. E2A(For cylinder bores up to & including 5")
- No. E2A-1000(For cylinder bores over 5")



2 - DIFFERENTIAL PRESSURE TESTER WITH MASTER ORIFICE

The Eastern E2M has all of the features of the Model E2A plus the added benefit of a built-in master orifice. The master orifice is used to quickly and effectively calibrate your tester in the field prior to using it; which, in turn, allows you to make accurate and reliable assessments of engine leakage. Includes hose and plug adapter.

- No. E2M..... (For cylinder bores up to & including 5").....



3 - AIRCRAFT TIMING INDICATOR

This all aluminum unit is designed to improve and speed up the process of timing magnetos to the engine. It easily attaches to the propeller spinner, and has an accuracy of 1/2 degree. The easy to read dial can be viewed from any angle. Comes with top dead center locator and mounting bands.

- No. E25



4 - HIGH VOLTAGE CABLE TESTER

Designed to give you a fast accurate test of Hi-Voltage aircraft ignition cables. Simply connect three wires, push the test button and the test is completed. The E5 will instantly indicate in its test window both good and defective cables. There is no waiting for any indication to appear.

- Fail-safe circuitry.
- Compact 3" x 5" x 2-5/8".
- Unbreakable case.
- Heavy-duty lead wires.

- No. E5



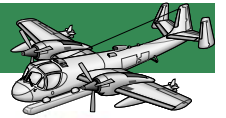
5 - EASTERN MAGNETO SYNCHRONIZER

The Eastern "buzz-box" magneto synchronizer is perhaps the most well known of its type. Its simple design makes it absolutely foolproof. Just attach the leads to the magneto, and adjust until you see the lights and hear the buzz!

- No. E50



ENGINE EQUIPMENT



1 - ENGINE TEST KIT

The new ATS engine test kit has all the test equipment needed to check engine compression, synchronize magnetos, time aircraft engines, and test the aircraft ignition leads in one tool box. The kit contains: 2E pressure tester; LED52 magneto synchronizer; Eastern E25 timing indicator; Eastern E5 cable tester; and a tool box. Wt. 16 lbs.

- No. EK5..... (With 2E)
- No. EK5EM..... (With 2EM & master orifice).....



2 - DIFFERENTIAL PRESSURE TESTER WITH MASTER ORIFICE

The Model 2EM Differential Cylinder Pressure Tester combines the features of our popular 2E tester and a Master Orifice into one tool. Now you can conveniently check the calibration of your pressure tester before each use in accordance with Continental's Service Bulletin SB03-3. Includes hose, plug adapter, and complete instructions.

- No. 2EM..... (For cylinder bores up to & including 5")
- No. 2EM-60 (For cylinder bores over 5"0



3 - DIFFERENTIAL PRESSURE TESTER

Our own make comes with on-off safety valve to eliminate hose pressure when disconnecting from the cylinder. Use it to check valves, cracked or worn rings, defective cylinders, worn bushings, etc. Includes hose, plug adapter, and complete instructions.

PART NO.	DESCRIPTION	PRICE
2E	For cylinder bores up to & incl. 5"	\$
2E-14	Same as above with a 14mm plug adapter	\$
2E-60	For cylinder bores over 5"	\$
18MM	18 millimeter plug adapter	\$
14MM	14 millimeter plug adapter	\$
12MM	12 millimeter plug adapter	\$
10MM	10 millimeter plug adapter	\$



4 - MASTER ORIFICE TOOL

The Master Orifice Tool is required by Continental's SB03-3 Service Bulletin. Use it with Eastern's E2, or our own 2E Differential Pressure tester to determine your calibrated leakage reading prior to engine testing. It is available in either plated steel (SPX), or non-sparking brass (ATS). Note: this tool is not needed by our 2EM or Eastern's E2M, as they already have their own built-in master orifice.

- No. 646953A..... (SPX Model).....
- No. 6469 (ATS Model).....



5 - TOPCAP ENGINE PROTECTOR

Dirt, debris, object and rotational damage can happen to your engine during top overhauls or cylinder removal, which can lead to additional maintenance and expense. The Topcap engine protector is made to fit over the cylinder studs and shield the inside of your engine while maintenance is being performed. Topcap engine protectors are used by leading mechanics everywhere.

- Fits most engines including Lycoming Wide Deck 320, 360, 540, 720, and Continental 470, 520, and 550 series engines.
- Allows for full crankshaft rotation.
- Made of fuel and solvent resistant polymer.

- No. TC320 (1 pair)





ENGINE EQUIPMENT

1 - SPARK PLUG CLEANER

Cleans any size plug without changing grommet. Has 2-way valve (blast or air) and comes complete with abrasive powder. Ready to use.



- No. 12 (Complete Unit)
- No. 78B(Replacement Powder)
- No. C12B.....(Replacement Canvas Bag)
- No. 12GN(Replacement Grommet)

2 - SPARK PLUG VIBRATOR CLEANER

If you clean a lot of spark plugs, then you know that a vibrator cleaner is the only way to remove stubborn lead deposits. This tool will do the same job as the more expensive vibrator cleaners at a fraction of the cost. It removes heavy deposits in and around the electrodes with absolutely no risk of damage to the plug.



- No. PA01
- No. PA01-1(Replacement Blade)

3 - SPARK PLUG THREAD CHASER

Cleans threads in spark plug hole of dirt, carbon build-up, and metal particles. Double ended for both 14mm and 18mm threads. Neoprene band on hex drive holds tool securely in any 13/16" deep-well spark plug socket.



- No. 20200

4 - SPARK PLUG GASKETS

Use these copper gasket rings when replacing spark plugs to ensure a secure seal. Manufactured by Champion.



- No. M674K(Set of 8)
- No. M674HD..... (Pack of 100)

5 - 10X SPARK PLUG INSPECTION MAGNIFIER

A 10X magnifier of the highest optical quality manufactured by Folwer Optical. This is the type of tool recommended by spark plug manufacturers such as Champion for the inspection of spark plug electrodes and insulators. Requires two "C" batteries (not included).



- No. 52-660-050

6 - ELECTRONIC MAGNETO SYNCHRONIZER

Revolutionary new design uses a high frequency electronic signal instead of high voltages to determine when the points of the magneto break. It will reliably indicate breaks so that you can accurately adjust the magneto's internal timing, or synchronize it to the aircraft's engine. Simply attach the leads to the magneto and adjust until the lights go out and the variable pitch tone sounds. Completely safe and foolproof. Dimensions are 3"x5"x2-5/8".



- No. LED52.....(Deluxe Dual Mag, with Tone)
- No. LED52N(Standard Dual Mag, no Tone)
- No. LED51 (Deluxe Single Mag, with Tone)
- No. LED51N(Standard Single Mag, no Tone)

7 - MAGNETO P-LEAD ADAPTER

This unique design of the P-LEAD ADAPTER allows you to connect to the timer leads of Bendix magnetos with an immediate and positive connection. It provides secure and stable alignment, and includes a post that prevents the timer leads from falling off.



Part Number	Works With	Price
8765	Early S-2- mags 3/8"	\$
8766	All other S-series mags 1/4"	\$
8767	D2000 & D3000 series Mags	\$
8768	Set of all 3 adapters	\$

8 - MAGNETO E-GAP TIMING KIT

The Magneto Internal Timing Kit is used to set the "E" Gap on Bendix S-20, S-200, S-400, S-500, and S-1200 series aircraft and industrial magnetos. Instructions included.



- No. 11-8150 (Complete Kit)

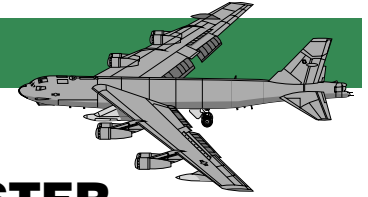
9 - MAGNETO LOCK TOOL

This Bendix Mag-Lock tool is both simple and fast to use.



- No. ML20

ENGINE EQUIPMENT



ATS SPARK PLUG CLEANER & TESTER

STOP! Don't throw away those expensive spark plugs!



Buy spark plugs for \$60 a piece, or...
Clean them for **LESS THAN \$.02 cents a piece..**

SPCT100 CLEANING TEST



1 - ATS SPARK PLUG CLEANER AND TESTER

Our new Spark Plug Cleaner & Tester features the latest developments in spark plug service equipment. It's smart, functional styling combined with rugged construction makes it the perfect choice for anyone who needs to reliably and accurately check the quality of used spark plugs. The cleaner section uses a powerful blast of air and abrasive to thoroughly remove carbon deposits from plugs. The recessed observation mirror is perfectly angled to display the electrodes of the spark plug so that you can clearly judge the quality of the spark as the plug is being tested. It is manufactured to the rigorous ISO 9002 standard. Includes adapters for 12mm, 14mm, and 18mm spark plugs. Works with Aviation and Automotive plugs. Features a motorized turntable for automatic, "hands-off" cleaning of plugs. Test plugs at 24,000 volts and up to 150 psi to simulate engine conditions.

Note: The SPCT100 will not remove lead deposits from spark plugs. The proper way to remove lead deposits is by using either the Champion Vibrator Cleaner (p/n 2600A) or the Aircraft Tool Supply Vibrator Cleaner (p/n PA01).

Specifications:

- Operating voltage: AC115V Single-phase 50/60Hz (The SPCT102 operates at 220V).
- Recommended air pressure: 100 to 140 psi (7 to 10kg/cm²).
- Cleaner section abrasive capacity: 1 lb. (900g).
- High-voltage output when spark testing : 15,000V.
- Dimensions: 19.3" (49cm) x 11" (28cm) x 10.4" (26cm).
- Weight: 20.5 lbs (9.3kg).
- Accessories included: 12mm, 14mm and 18mm spark plug adapters (2pcs each); 12mm, 14mm and 18mm cleaner gaskets (1 each); Adapter case (1pcs); Aviation Massive Electrode adapter plug (1pcs), Abrasive 1 lb. (900g).

No. SPCT100.....	(115 volts)
No. SPCT102.....	(220 volts)



ENGINE EQUIPMENT

ATS DELUXE SPARK PLUG KIT



Our new Deluxe Spark Plug Cleaner Kit is perfect for aviation shops that need to do spark plug maintenance on a regular basis, or for the do-it-yourselfer who wants to do more hands-on maintenance to save some money. It includes our ATS415K Bench Gapping Tool with Gap Gauge; the #12 Spark Plug Cleaner; the PA01 Spark Plug Vibrator Cleaner to remove lead deposits; a Champion Spark Plug Tray; a 10X Inspection Magnifier; a 4oz Bottle of Anti-Seize Lubricant; a box of 100 Copper Gaskets; a Thread Chaser; our new ATS950 Magnetic Spark Plug Socket; plus a durable military-style canvas storage bag. And rounding out this winning kit is our best-selling SPCT100 Spark Plug Cleaner Tester Unit that will check plugs under simulated high voltage/ high pressure conditions for spark quality and leakage.

No. SPK-DX

ATS SPARK PLUG FIELD KIT



Keep your airplane running smoothly and sputter-free with our new Spark Plug Field Kit. It contains our #12 Spark Plug Cleaner to remove carbon buildup, and a set of Dental Picks to handle more stubborn lead deposits. After cleaning your plugs, inspect them for pitting and cracks with the included 10X Inspection Magnifier. Finally, keep them firing at peak efficiency with our #116 Spark Plug Gapper and ATS450 Gap Gauge. You'll also receive a Thread Chaser to remove buildup from port threads, a 4oz bottle of Anti-Seize Lubricant, 8 copper gaskets, a Champion Spark Plug Tray, and our new ATS950 Magnetic Spark Plug Socket. It all comes in a durable military-style canvas bag to keep things well organized.

No. SPK001

ATS SPARK PLUG GAPPER

A low-cost efficient gap setting tool for closing gaps on massive electrode-type aviation spark plugs. Can be hand held, bench mounted, or held in a vise. Complete with one adapter for 18mm spark plugs, and one adapter for REM37BY plugs. Also includes the ATS450 retractable gap gauge.



No. ATS415K

ATS SPARK PLUG GAPPER KIT



Works with all 18mm massive electrode aircraft spark plugs. Wire gauge sizes: .015, .018, .020, .022, .028, .030.

No. 116K

ATS SPARK PLUG GAPPER

Sure-Gap works with all massive electrode aircraft spark plugs and eliminates guessing of plug gap. Works with 18mm plugs.



No. 116

RETRACTABLE SPARK PLUG FEELER GAUGE

New, fully retractable gap gauge keeps your feeler wires out of harms way. Compact design fits conveniently in your shirt pocket for on the go work. Wire gauges are made of stainless steel wire and are accurate to .0005". Gauge sizes are: .015", .018", .019", and .022". Gauges can also be replaced when worn out.



No. ATS450.....(Gap Gauge).....

No. ATS450-WG...(Replacement Gauges)...

ATS MAGNETIC SPARK PLUG SOCKET

Specially designed to accept longer aircraft massive electrode spark plugs. 3-1/2" overall length. 7/8" hex socket.



No. ATS950

ENGINE EQUIPMENT



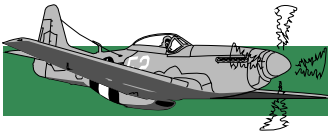
1 - CHAMPION SPIN ON OIL FILTERS

Champion oil filters combine the advantages of both surface and depth-type filtration: high filtering efficiency, controlled porosity for uniform flow, water resistance, and the resistance to impulse and flow fatigue. Champion-brand oil filters keep dirt and harmful particles from damaging your engine. Plus, no other filters on the market have Champion's unique, resin-impregnated, full-pleat design -- 8.2 feet of layered protection for your engine.

- No. CH48103-1 (Type CH48103-1).....
- No. CH48104-1 (Type CH48104-1).....
- No. CH48108-1 (Type CH48108-1).....
- No. CH48109-1 (Type CH48109-1).....
- No. CH48110-1 (Type CH48110-1).....
- No. CH48111-1 (Type CH48111-1).....

Airplane	Filter	Airplane	Filter	Airplane	Filter
AEROSPATIALE (Socata) TB9, TB10, TB20, TB21, TB30	CH48110-1	CESSNA (single engine, continued) 188-S/N 03474 & Up, T188-S/N 03474 & Up	CH48109-1	PIPER	
AMERICAN GENERAL AG5B Tiger	CH48110-1	205A, C-206, 206 A thru H	CH48110-1	Cub	CH48110-1
BEECH		206-S/N 05030 & Up, 206-S/N 05030 & Up	CH48109-1	Tri-Pacer	
Bonanza E33A, F33A, F33B, F33C	CH48109-1	U206, T-206H, TU-206, P206, TP206, 207	CH48110-1	PA-22 "150", PA-22 "160"	CH48110-1
G-33, H-35, J, K, M-35, N, P-35	CH48110-1	207-S/N 05227 & Up, T207-S/N 05227 & Up	CH48109-1	Comanche	
S35 (IO-520B), V35 series, 36, A36 & B36 series	CH48109-1	T207, 210	CH48110-1	PA-24 series	CH48110-1
Debonair/Bonanza C33A, E33A, F33C	CH48109-1	210-S/N 63373-63375 & Up	CH48109-1	Pawnee	
Musketeer Sport III, 23, A23-19, 19A, B19, B23, C23	CH48110-1	T210-S/N 63373-63375 & Up, P210-S/N 278 & Up	CH48108-1	PA-25 "150", PA25 "260"	CH48110-1
A23, A23A	CH48109-1	T210, P210-S/N 1-277	CH48110-1	PA-36 Brave	CH48109-1
B23 (O-360A4JD)	CH48103-1	CESSNA (twin engine) T303	CH48110-1	PA-36-375 Brave	CH48110-1
Sierra 24, A-24, A-24R, B-24R, C-24R	CH48110-1	310 C thru Q	CH48108-1	PA-36-400 Brave	CH48104-1
Skipper 77	CH48110-1	310 R, T310P, Q, R	CH48110-1	Cherokee, Cadet	
Baron C55, D55, E55, 58, 58C, 550	CH48109-1	310 (Riley Conversion)	CH48103-1	PA-28 series	CH48110-1
56TC, A56TC	CH48104-1	320-A	CH48104-1	Arrow	
Baron 58P, 58TC	CH48108-1	320-B, C	CH48111-1	PA-28R "180"	CH48110-1
Duke 60, A60, B60	CH48104-1	320-D, E, F	CH48108-1	PA-28R "180	CH48103-1
Queen Air 65, 70, 80, 88, B80	CH48111-1	335	CH48109-1	PA-28R "200"	CH48110-1
Travel Air 95, B95, B95A, D95A, E95	CH48110-1	336, 337	CH48110-1	PA-284 "200", PA-28-R-201T	CH48108-1
Duchess 76	CH48103-1	P337, P337H, T337H, 340	CH48108-1	Dakota	
BELLANCA 17-31 series, 17-31ATC	CH48110-1	340A	CH48109-1	PA-28-235	CH48103-1
CESSNA (single engine) 150 series, 152	CH48110-1	401/402	CH48108-1	PA-28-201T	CH48108-1
172 A thru M	CH48110-1	402C	CH48109-1	Cherokee Six	
172N	CH48103-1	404	CH48111-1	PA-32 "260", PA-32 "300"	CH48110-1
172P	CH48111-1	411-S/N 000 thru 0126	CH48104-1	PA-32R series	CH48103-1
F172 D thru H, FR172 E thru K	CH48110-1	411-S/N 0127 and up	CH48111-1	Tomahawk	
R172K	CH48108-1	414, 414A	CH48108-1	Trainer PA-38-112	CH48103-1
172R, 172RG, 172S, 177	CH48110-1	421A, B	CH48110-1	Malibu	
177A, B, 177RG	CH48103-1	421C-S/N 1017 thru 1404	CH48110-1	PA-46-301P	CH48109-1
180 A thru J, 180Q	CH48110-1	GULFSTREAM AMERICAN AA-1, 1A, 1B, 1B Trainer, TR, A1C Lynx, T-Cat,	CH48110-1	Malibu Mirage	
180-S/N 53087 and Up	CH48108-1	AA-5 Traveler, AA-5A Cheetah, AA-5B Tiger,		PA-46-350-P	CH48103-1
182 A Thru S , A182 K thru N	CH48110-1	Cougar		Apache	
182-S/N 67042 & Up, F182-S/N 00130 & Up	CH48108-1	COMMANDER 112, 112A	CH48110-1	PA-23 "150", PA-23 "160", PA-23 "235"	CH48110-1
R182, T182, TR182, FTR182	CH48103-1	112TC, 114	CH48103-1	Aztec	
185 A thru D, A185E, F	CH48110-1	500B, 500U	CH48110-1	PA-23 "250", "C" PA-23	CH48110-1
185-S/N 03852 & Up	CH48108-1	700	CH48103-1	PA-23 Turbo "250" C thru F, PA-23 Turbo "250"	CH48110-1
188	CH48110-1	HELIO AIRCRAFT Helio 700	CH48103-1	Twin Comanche	
MAULE M5-180C, MX7-180	CH48110-1	MOONEY AIRCRAFT M20, M20A, B, Mark21, M20D, M20C, M20G,	CH48110-1	PA-30 "160" Turbo, PA-39 "160", PA-39 "160" Turbo	CH48110-1
M5-210C, M5-235C, M6-235, M7-235, MX7-235	CH48108-1	M20E, M20F, M20M-1LS	CH48110-1	Navajo	
M20J-201	CH48108-1	M20Q-201	CH48103-1	PA-31 "300", PA-31 "310" Turbo	CH48110-1
M20K-231, M20R, M20K-252 TSE	CH48108-1	M22 Mustang	CH48110-1	PA-31 "325", PA-31 "350" Chieftain	CH48103-1
	CH48110-1			PA-31P "425", PA-31P "350" Mojave	CH48104-1
				Seneca	
				PA-34 (IO-360)	CH48110-1
				PA-34 (IO-360-CIE6D)	CH48103-1
				Seneca II, Seneca III, PA-34-220T	CH48108-1
				Aerostar	
				PA-60 series	CH48110-1
				Seminole	
				PA-44 series	CH48103-1

Not a complete list. Visit our website at www.aircraft-tool.com for complete listing



ENGINE EQUIPMENT

1 - CHAMPION MASSIVE ELECTRODE SPARK PLUGS

Champion Spark Plugs are used in more airplanes than any other brand. Note: All spark plugs are shipped in a factory sealed case - opened cases are non-refundable.

- No. REB37E
- No. REM37BY
- No. REM38E
- No. REM40E
- No. RHB32E
- No. RHB37E
- No. RHM38E
- No. RHM40E



ENGINE MODEL	5/8"-24 SHIELD	3/4"-20 SHIELD	ENGINE MODEL	5/8"-24 SHIELD	3/4"-20 SHIELD
ALLISON			FRANKLIN ENGINE CO. (continued)		
V-1710	REB37E	RHB37E	6AS-335-A, B; 6AS-350-A, A1; 6V335-A1A, A1B	REB37E	RHB32E RHB37E
TELEDYNE-CONTINENTAL			6VS-335-A, B	REB37E REB32E	RHB37E RHB32E
A-65, A-75, C-75, C-85, C-90, C-115, C-125	REM37BY* REM40E	RHM40E	6A-350-C1, C1A, C2, C2A, D, D1; 6V-350-A, -B		RHB32E
E-165, E-185, E-225	REM40E	RHM40E	GYPSY MAJOR (all types)		
O-200-A, -B, -C	REM37BY* REM40E	RHM40E	JACOBS		
IO-240	REM38E	RHM38E	L-4, L-5, & L-6 series R-755	REM40E	RHM40E
GO-300-A, B, C, D, E, F O-300-A, B, C, D, E, C-145	REM37BY* REM40E REM38E	RHM40R RHM38E	R755S, R-755SM	REM38E	
IO-346-A, -B	REM40E REM38E	RHM40E RHM38E	KENROYCE-REARWIN (all types)		
IO-360-A, AB, C, CB, D, E, G, GB, H, HB, J, JB, K, KB; TSIO-360-A, AB, B, C, CB, D, DB, E, EB, F, FB, G, GB, H, HB, JG, K, KB, LB, MB; LTSIO-360-E, EB, K, KB	REM38E	RHM38E	TEXTRON-LYCOMING		
IO-360-B	REM40E	RHM40E	O-235-C, E, H O-235-K, L, M, N, P O-290 series	REM40E REM38E REM37BY*	RHM40E
O-470-2	REM38E	RHM38E	O-320-A, C, E; O-320-B, D, H AIO-320; LIO-320-B; IO-320-B, C, D AEO-320-A, B, C, D	REM37BY* REM40E REM38E	RHM40E
O-470-4, 11, 13, 13A, 15, O-470-A, E, J, K, L, R, S	REM40E	RHM40E	IO-320-A, D, E	REM37BY* REM40E	RHM38E
O-470-B, G, H, M, N, P	REM40E REM38E	RHM40E RHM38E	AEO-320-E IO-320-C, F; LIO-320-C (Long Reach)	REM37BY* REB37E	RHM40E RHM37E
O-470-T, U		RHB32E	O-340-A	REM40E REM38E	RHM40E RHM38E
IO-470-C, G, P, R, T	REM40E REM38E	RHM40E RHM38E	O-340-B	REM40E	RHM40E
IO-470-J, K	REM40E	RHM40E	O-360-A, C, E, F IO-360-B, E, F, H, L AEO-360-B, C, H; HO-360-A	REM38E REM37BY*	RHM40E RHM38E
IO-470-D, E, F, H, L, M, N, S, U, V, VO, LO; GIO-470-A		RHB32E	O-360-B, D	REM40E REM37BY*	RHM40E
LIO-470-A	REM40E REM38E	RHM40E RHM38E	IO-360-A, C, D, J; LIO-360-E	REM38E REM37BY*	RHM38E
TSIO-470-B, C, D		RHB32E	LO-360-A1G6D; O-360-E1A6D LO-360-E1A6D LO-360-C	REM40E REM38E REM37BY*	RHM40E RHM38E
IO-520-A, B, BA, BB, C, CB, D, E, F, J, K, L, M, MB, N, NB		RHB32E	IO-360-A, IO-360-C1F IO-360-F (Long Reach) IVO-360	REB37E	RHB37E
TSIO-520-A, B, BB, BE, C, CE, D, DB, E, EB, F, G, H, J, JB, K, KB, L, M, N, NB, P, R, T, U, UB, V, VB, WB, AE, AF; LTSIO-520-AE		RHB32E	AIO-360-A LIO-360-C; AEO-360-A	REM38E REM37BY*	RHM38E
GTSIO-520-C, D, E, F, G, H, K, L, M, N		RHB32E	HIO-360-A, D	REM38E	RHM38E
TSIO-550-A, B, C; IO-550-A, B, C, D, E, F, G, L, N, P, R		RHB32E	HO-360-B; HIO-360-A, B	REM40E REM38E	RHM40E RHM38E
W-670	REM40E	RHM40E	TIO-360-A, B; AEO-360-A (Long Reach)	REB37E	RHB37E
R9A	REB37E	RHB37E	HIO-360-E1AD, E1BD, F1AD LHIO-360-F1AD; IVO-360-A	REB32E	RHB32E
FRANKLIN ENGINE CO.			TO-360-A1A6D, C1A6D, E, F1A6D LTO-360-A1A6D, E	REB37E	RHB37E RHB32E
2A4 Series	REJ38		VO-360-A, B	REM40E REM38E	RHM40E RHM38E
2A-120-A, B		RHB32E	O-435-A, C O-435-K, K1	REM40E REM38E	RHM40E
4A4 Series, 4AC Series	REJ38		GO-435-C, D Series VO-435-A; TVO-435-A (Short Reach)	REM38E	RHM38E
4A-235-B, B3, Sport 4, 4A, 4A1, 4B, 4R		RHB32E			
6AC, 6AL, 6AG, 6AA, 6V4 Series	REJ38				
6A4-200, 6V4-200, 6V6-245	REL37B				
6A8-215	REJ38				
6A-335-A, B, 6V335-A, -B	REL37B				

ENGINE MODEL	5/8"-24 SHIELD	3/4"-20 SHIELD
TEXTRON-LYCOMING		
VO-435-A, B (Long Reach) TVO-435-A, B, C, D, E, F, G (Long Reach) O-435-23-25	REB37E REB32E	RHB37E RHB32E
GO-480-B, D, F	REM40E REM38E	RHM40E RHM38E
GO-480-C, G (Short Reach)	REM38E	RHM38E
GO-480-G1, G2 (Long Reach)	REB37E	RHB37E RHB32E
GSO-480-A, B (Short Reach)	REM38E	RHM38E
GSO-480-A, B (Long Reach)	REB37E	RHB37E
IGSO-480-A (Short Reach)	REB38E	RHM38E
IGSO-480-A (Long Reach) IGO-480-A; O-480-1-3	REB37E REB32E	RHB37E RHB32E
O-540-A, D, E, F, G, H, J, J3A5; O-540-B; IO-540-A, B, E, G, K, L, M, P, S, U (Short Reach); IO-540-C, D, J, N, T, V; AEO-540-D, L	REM40E REM38E	RHM40E RHM38E
IO-540-AA, E, G, J, K, M, P, R, S, U; O-540-L3C5D, M1B5D (Long Reach)	REB37E REB32E	RHB37E RHB32E
VO-540-A, B, C (Short Reach)	REM38E	RHM38E
O-540-9, VO-540-Series IVO-540 Series (Long Reach)	REB37E	RHB37E
IGO-540-A, -B (Short Reach)	REM38E	RHM38E
IGO-540-A, -B (Long Reach) TIO-540-A, C, E, F, G, H, J, K, N, R, S, T,	REB37E	RHB37E
TIVO-540-A	REB32E	RHB32E
IGSO-540-B (Short Reach)	REM38E	RHM38E
IGO-540-A, B	REB37E	RHB37E
IGSO-540-A, B (Long Reach)	REB32E	RHB32E
LIO-540-F, J, N, R TIO-541-A, E TIGO-541-A, E	REB37E REB32E	RHB37E RHB32E
IO-580-A		RHB37E
R-680	REM40E	RHM40E
IO-720-A, B, C, D (Short Reach)	REM38E	RHM38E
IO-720-A, B, C, D (Long Reach)	REB37E REB32E	RHB37E RHB32E
PRATT & WHITNEY		
R-985 (Wasp Jr.), R-1340 (Wasp)	REM37BY* REM40E	RHM40E
R-1830 (Twin Wasp C)	REB37E	RHB37E
R-2000 (Twin Wasp D)	REB37E	RHB37E
R-2800 (Double Wasp), R-2800-97, C3, CA5, CA15, CA17, CA18, CA19	REB37E REB32E	RHB37E RHB32E
R-4360 (Wasp Major)	REB37E	RHB37E
RANGER (all 18MM Short Reach)		
	REM40E	RHM40E
WARNER (all types)		
	REM40E	RHM40E
WRIGHT AERONAUTICAL		
R-540 Whitwind R-760, R-975 (1/2" Rch.) Cyclone 9N with 1/2" Insert (R-1820)	REM40E	RHM40E
Whitwind R-760, R-975 (18mm 13/16") Cyclone R-1300 Cyclone R-1820 Series (Except F & HE) Cyclone R-2600 Series	REB37E	RHB37E
Cyclone R-1820-84 (C9HE Series)		RHB32E
Cyclone R-3350, C18BA, C18BD	REB37E	RHB37E
Cyclone R-3350-C18CB1 Cyclone R-3350-DA1, 2, 3, 4, EA1, 2, 3 Cyclone R-3350-EA4, 5, 6		RHB29E

Not a complete list. Visit our website at www.aircraft-tool.com for complete listing

* Use REM37BY when encountering lead fouling.

ENGINE EQUIPMENT



1 - LASER ENGINE TIMER



This brilliant new innovation brings high tech to the task of timing aircraft engines, and the result is an easy to operate tool that delivers laser-precision accuracy. Simply mount it on the ring gear at the timing mark for Lycoming engines and a bright laser beam points to the engine case. Next, adjust your magnetos so that they break just as the laser beam points to the split in the case, and you're done. It's as simple as that. The Laser Timer works equally well with Continental engines by using the included adapter. The Laser Timer is machined from high grade aluminum stock to exacting standards. The laser beam is powered by two 1.5 volt batteries that will last for years of use. *Note: The Laser Timer uses a very low power beam, but remember to always use appropriate safety precautions when using laser equipment.*

No. LASER01

2 - SPARK PLUG TORQUE WRENCH



Flexible handle with micro adjustable torque control. Torque range 5 to 75 ft. lbs. Calibrated in units of 1/2 lb. increments. Reversible ratchet head, 3/8" sq. dr.

No. 2954

3 - STAINLESS STEEL CLEANING PICKS



A set of four picks that are great for removing lead deposits from spark plugs. Contains 1 straight, 1 curved, and 2 hooked tips.

No. E900-205

4 - PISTON RING FILER

Portable rotary filer that sizes any make, type, or size ring with machine shop accuracy.

No. 870K

No. 872K (Replacement cutter)



5 - EXHAUST STUD REPLACER KIT



A precision tool that will allow you to remove broken studs, retap, and replace them accurately to the original dimensions. This can be accomplished in most cases without removing the cylinder; even Number One in a Bonanza, Works on all Continental 470, 540, 550, and 520 series engines. The kit includes the following:

- One steel jig bored, locating plate
- Three knurled retaining nuts to secure the locating plate
- Four hardened and ground drill bushings
- Three drill extensions: 6", 9", and 12"
- One 3/8" drill chuck

No. HE01

6 - EXHAUST STUD DRILL GUIDE

For drilling out broken exhaust studs without damaging the cylinder head. For 470 and 520 series engines. Case hardened steel.



No. 8067

7 - 10X ILLUMINATED SPARK PLUG INSPECTOR



This 10X illuminated magnifier will clearly reveal even the smallest defect in spark plugs. Use it every time you clean your plugs to check for cracked insulation, pitted electrodes, and foreign deposits that can lead to engine failure. Includes optical scales to take measurements of the inspection area. Requires 2 "C" batteries (not included)

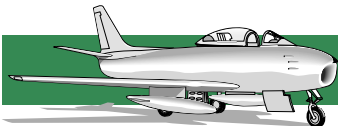
No. DV980-10

8 - PISTON RING GROOVE CLEANER

Cleans carbon from piston ring grooves. Easily adjustable. Blades included for five most popular piston groove sizes: 5/64", 3/32", 1/8", 5/32", 3/16". Adjustable ratchet action holds piston in position during cleaning. Revolve tool around piston to clean. Spring release for quick removal of piston.



No. 2477



ENGINE EQUIPMENT

1 - AVIATION PISTON RING COMPRESSOR

Our new Aviation Piston Ring Compressor features a quick-change design to speed up piston ring installation. It includes the famous Hastings Ring-O-Matic® pliers and bands that operate in all positions: not just vertically or horizontally.

Part Number	Description	Price
1670A	Ring-O-Matic Pliers	\$
1670F	Band 3-7/8" to 4-1/8"	\$
1670G	Band 4-1/8" to 4-3/8"	\$
1670H	Band 4-1/2" to 4-3/4"	\$
1670I	Band 4-3/4" to 5"	\$
1670J	Band 5" to 5-1/4"	\$
1670L	Band 5-1/2" to 5-3/4"	\$
7500	Complete kit with pliers and all 6 bands	



2 - SMALL BORE PISTON RING COMPRESSOR KIT

This kit is designed to accommodate engines with smaller cylinder bores. It features the same Hastings Ring-O-Matic® pliers as the Aviation Kit, so you can easily purchase additional bands as needed. The kit includes the pliers and 6 bands in the following sizes: 2-7/8 to 3-1/8", 3-1/8" to 3-3/8", 3-3/8" to 3-5/8", 3-5/8" to 3-7/8", 3-7/8" to 4-1/8", and 4-1/8" to 4-3/8".

No. 1670 (Complete Kit)



3 - WRINKLE BAND PISTON RING COMPRESSOR

An economical alternative to standard pliers and bands, this tool will do a great job of installing piston rings of any diameter up to and including 5".

- Low Friction! Wrinkle band cuts friction in half. Ring slides in easily.
- Wrinkle Band can't slip down into cylinder!
- Cam Operated! Set adjustment screw just once for the entire set of pistons.
- Faster! Insert a full set of piston rings in half the time with half the work!
- Installs rings from 3" (76.2mm) to 5" (127mm).

No. 21700



4 - PISTON RING INSTALLER

This important tool is inexpensive and easy to use. Just insert the ring ends in wedge jaws and expand the ring gently and slip into groove. Also ideal for removing rings easily without damage. Handles piston rings from 3/64" to 1/4" wide.

No. 1723



5 - PISTON RING EXPANDER

A unique tool that will speed the removal and installation of piston rings with minimum ring distortion. The use of a ring expander will greatly reduce ring point misalignment which can be detrimental to good piston ring sealing and engine performance. Made of steel and requires no adjustments.

No. 1941 (For rings 2-3/4" to 4-1/4" diameter).....

No. 1936 (For rings 4-1/2" to 7" diameter).....



ENGINE EQUIPMENT



1 - AIRWOLF OIL FILTER CUTTER

The Airwolf Oil Filter Cutter has been hailed as the "best filter cutter we've ever used" by AOPA Pilot, and with good reason -- it's unique design makes it a snap to cut through any type of oil filter. It's also currently the only oil filter cutter available that will cut through the new-style Champion filters with the thicker casing. The Airwolf is machined from solid 6061-T6 Aircraft-Grade Aluminum and fitted with stainless steel rollers for smooth cutting. The high carbon steel cutting blade is hardened to 60 Rockwell and honed to razor sharpness to produce clean, consistent cuts. Every mechanic knows that an oil filter cutter is an essential tool; and if you demand the best, then the Airwolf is for you.



- No. AFC470.....
- No. AFC470-RB (Replacement Blade).....

2 - RAPCO VACUUM PUMP WRENCH

The Rapco Vacuum Pump wrench is the tool of choice to remove and replace vacuum pump flange nuts. The shank is bent at the perfect angles to provide easy access to those tight areas between the pump and the accessories nearby. And the open end head is precision laser cut to provide a close tolerance fit on the nut. It's manufactured from hardened steel alloy and nickel plated for corrosion resistance. The ergonomic handle is coated for a comfortable and slip resistant grip.



- No. RA716

3 - MITYVAC SILVERLINE® VACUUM TESTER KIT

Designed for the professional mechanic, the Silverline Test Kit is the premier member of the Mityvac line. The repairable vacuum pump is made of zinc alloy die cast metal with an easily readable vacuum gauge graduated in inches of mercury. The complete kit includes: the Silverline vacuum pump, reservoir jar and transfer lid, storage lid, brake bleeding adapter package, test adapter package, 1-1/4" rubber cup adapter, two 24" lengths of 1/4" tubing, carrying case with removable lid, and a 100 page manual.



- No. 4000

4 - VACUUM & FUEL PUMP TESTER

Easy reading gauge assures accurate vacuum and pressure check. Has both English and Metric scales and measures vacuum from 0 to 30 in.Hg (0-750 mmHg) in increments of 1 in.Hg (25 mmHg). The pressure gauge reads from 0 to 15 psi (0-1100 g/cm2) in increments of 1 psi (70 gm/cm2).



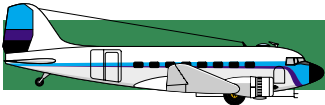
- No. 20300

5 - XTRAKTOR™ STUD REMOVER

Xtraktor is the best tool you can buy to remove rusted, rounded, painted over, or just plain damaged nuts and bolts. The compact pass-through design fits in spaces with as little as 3/4" clearance and will fit over any length bolt or stud. The Xtraktor has 18 to 30 sharp, overlapping teeth to bite into frozen nuts, bolts, or studs and wrench them free. It's made from a case hardened alloy steel with a black oxide finish. This tool will withstand many years of use. Lifetime replacement warranty.



- No. 200E (7/16" - 5/8", 5 pieces).....



ENGINE EQUIPMENT

1 - KLUHSMAN OIL FILTER CUTTER



This economical cutter quickly opens any size oil filter canisters for filter inspection. Simply place the filter in a vise, attach the tool to the top, and rotate about 4 to 6 turns to cleanly cut open the canister. It's made of high quality 6061 aluminum with an attractive purple anodized finish. The cutting wheel stays sharp for up to 45 applications, and is easily replaced when it becomes dull

- No. FC01 (Oil filter cutter)
- No. FCW(Replacement cutting wheel)

2 - OIL FILTER CUTTER

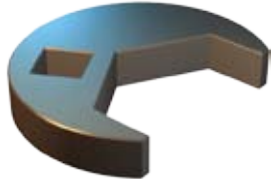
Works on all filters. Cuts open oil filter for inspection without introducing chips.



- No. 1154
- No. 1154-1 (Replacement Cutter)

3 - OIL NUT WRENCH

This wrench is specially designed to comply with CESSNA AD 96-12-22.



The Oil Nut Wrench allows you to reach the adapter nut, which must be torqued to a value of 50 to 60 foot pounds in accordance with the CESSNA AD. Its use is required every time the oil filter is removed to prevent the possible loss of engine oil caused by loose or separated adapters. This tool is absolutely essential for anyone working on any of the following aircraft: All Cessna Models 100, 200, 300, and 400 series; Meyers 200; Twin Commander 500A and 685; Beech 33, 35, 36 and 55 series; Piper PA 46; Navion Rangemaster 17 series; Wren Model 460; Bellanca 200 and 300 series.

- No. TG961222

4 - LOCTITE® AVIATION GASKET SEALANT

A reliable liquid gasket sealant, dressing and coating compound. It brushes on very thinly and forms seals that resist temperatures of -65° to 400°F (-54°C to 204°C). It's resistant to gasoline, oils, and other solvents and is inert so that it will not interact with other chemicals. It dries to full strength in just under 12 hours.



- No. 3051(1 pint container).....

5 - PROPELLER SHAFT OIL SEAL INSTALLER



For all flange shafts per Continental Bulletin M-70-2. Also fits Lycoming. For installing one piece stretch seals easily and efficiently without damaging the seal or crankshaft.

- No. 5209

6 - SEAL DRIVER KIT

Quickly drives seals without damage to the surrounding fixture. Comes complete with 16 adapters for seals up to 3-3/8" diameter. Includes a special adapter for "shielded" seals.



- No. 24800

7 - SEAL PULLER



Removes Oil and Grease Seals. Simply insert the tip of the tool behind the oil or grease seal, press and pull. Leverage works for you. Two size tips reach in and fits nearly all seal applications.

- No. 56750

8 - UNIVERSAL BEARING PACKER

Fast, efficient, thorough. Simply place the bearing between the plastic cones, tighten, and apply grease through the fitting on the end of the threaded shaft. Forces out old grease and evenly injects fresh grease into the bearing. Cone diameter is 5".



- No. 65250

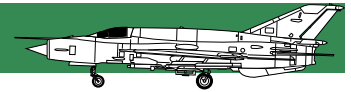
9 - BEARING SEPARATORS

These separators feature knife-like edges which are easily placed behind the part to secure a gripping surface, even in tight spaces. Made in U.S.A.



- No. 1122(2" Max Spread)
- No. 1123(4-5/8" Max Spread)

ENGINE EQUIPMENT



1 - VALVE SPRING COMPRESSOR



For all Continental and Lycoming engines. Adjustable type to work on all series engines. Ring installs on rockers and "C" collar compressor spring to allow keeper removal.

No. 3602

2 - VALVE TAPPET CLEARANCE GAUGE



These tools do the same job as the comparable Lycoming or Continental product which sells for well over \$150. The blades are ground and polished to precisely .080" and .028" respectively for Lycoming, and .060_ and .200" for Continental.

No. T23S (Lycoming).....

No. T35S (Continental)

3 - VALVE GUIDE FLEX-HONES



Flex-Hone allows you to precision fit valve stems to proper guide tolerances. Flex-Hone is self aligning to the guide bore and self compensating for hone wear. Provides a plateau finish, which creates proper lubrication to prevent sticking and permits a closer stem to guide clearance. Hones are 240 S/C grit.

No.	Size	Price	No.	Size	Price
GB9	.354"	\$14.95	GBI2	.472"	
GB95	.375"	\$14.95	GB125	.500"	
GB10	.395"	\$16.95	GB58	.625"	
GB11	.433"	\$16.95	GB34	.750"	

4 - CYLINDER FLEX-HONE

For cylinder bore reconditioning. 120 grit silicon carbide provides proper finish for cylinder wall breaking without expensive fixtures.



PART NUMBER	SIZE	PRICE
102	3-1/2" to 4"	
202	3-3/4" to 4-1/4"	
305	4" to 4-1/2"	
405	4-1/2" to 5"	
505	5" to 5-1/2"	
605	5-1/2" to 6"	

5 - PUSH ROD SPRING COMPRESSOR

For compressing and holding push rod springs on all engines with spring loaded tubes. Compresses the spring, which can then be removed with the clips furnished. Eliminates wiring springs together. To install, simply insert spring, then pull off the clip. Instructions included.



No. 68-3

6 - PUSH ROD FLARING TOOL

Expansion type flaring tool produces a perfect housing flare every time. Balls rotate inside the push rod housing tube, and snugly expands it into the boss.



No. 4915A

7 - VALVE LAPPERS



Excellent tool for restoring a valve's surface finish. Hand operated action allows you to remove metal in precise amounts. Each lapping tool comes with cups for two different valve sizes. Get both tools and you will be able to handle just about any type of engine.

No. 21100 (sizes: 1-1/8" and 1-3/8")

No. 21200 (sizes: 5/8" and 13/16")

8 - VALVE LAPPING COMPOUND

Clover lapping compound is the choice of leading mechanics whenever they need to size valve stems and seats to exact tolerances, while producing an exceptionally smooth finish. Grease type mix retains its texture and lubrication properties during extended lapping or grinding and leaves a rust preventing film. 1lb. can.



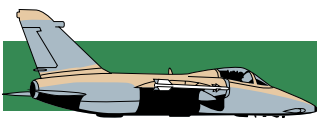
No. A51803(1lb.)

9 - GASKET PUNCH SET

Punches holes in gasket material, leather, vinyl or soft material. Set of ten punches 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 7/8", and 1" with driving mandrel and molded plastic case. Made in U.S.A.



No. S1270.....

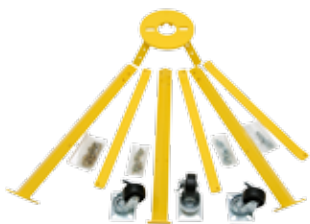


ENGINE EQUIPMENT

1 - ATS AIRCRAFT ENGINE STAND KIT (WITH LOCKING CASTERS)

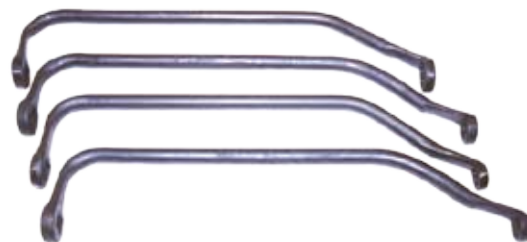
Our new breakdown Engine Stand Kit comes to you unassembled to save you **BIG** on shipping costs, but goes together in just a few minutes with only a couple of wrenches. Other engine stands are pre-welded and shipping via UPS or FEDEX can be very expensive because of their size and shape. In fact, it's not unusual for us to see shipping costs as high as \$375 to places in Alaska! Some of our competitors try to get around this by selling their engine stands in kit form, which solves the shipping problem. But you still have to weld it together yourself! So if you don't have welding equipment, or your welding skills are rusty, then you're out of luck. Our new engine stand requires ABSOLUTELY NO WELDING. We ship it in a compact box to minimize shipping costs, and provide everything you need to get going. All you need to supply are a couple of 1/2" wrenches and a little elbow grease.

- Bolts together in minutes using just a 1/2" wrench.
- No Welding necessary.
- Supports over 1,200 lbs.
- Ships as a regular sized package, not over-sized or dim weight.



No. 65530CX..... (Complete Kit)
 No. W670985-20 (Optional #20 Spline Adapter).....

PART NUMBER	SIZE	PRICE
2882-9/16	9/16"	
2882-1/2	1/2"	
2882-5/8	5/8"	
2882-3/4	3/4"	
2882-5	Set of all 4 sizes	



3 - LYCOMING CYLINDER BASE WRENCHES

Superior quality wrench is specifically used with internal hex nuts on Lycoming engines. Drive end is 1/2".

PART NUMBER	SIZE	PRICE
6494-2	1/2"	
6494-3	3/8"	
6494-SET	Set of all both sizes	



4 - CONTINENTAL 470/520 MOUNT AREA WRENCHES

The special configuration of these wrenches permits access to the 470 and 520 engine mount areas. The 5203A wrench is specially designed for the 520 D&H engine's No. 3 and No. 6 cylinders.

PART NUMBER	DESCRIPTION	SIZE	PRICE
5203	Left mount area wrench	5/8"	
5204	Right mount area wrench	5/8"	
5203A	520D&H #3 & #4 cyl. wrench	9/16"	



5 - CONTINENTAL 550 CYLINDER BASE WRENCH

This 9/16" wrench is designed for easy access to nuts on the 550 series engines. Standard 1/2" square drive. 13" overall length. This wrench is also used on the 7th order stud of the GTSIO520BA.

No. 8158A.....

ENGINE EQUIPMENT



TIME-RITE®

Time-Rite has been the instrument of choice of aviation mechanics for over 40 years. By using specialized arms and calibrated scales, Time-Rite accurately displays piston position and angular displacement to 1 degree accuracy on just about every make of aviation piston engines. No other instrument has come close to matching the versatility, simplicity, and accuracy of Time-Rite.

Aircraft Tool Supply Company is the proud manufacturer of Time-Rite®. It's completely manufactured, assembled and serviced at our plant here in the U.S.A.

The basic Time-Rite unit (I200B18 & I200B14) does not include any arms or scales. You must purchase these separately for the specific type of engine you intend to service. The complete Time-Rite kits (I200B18K & I200B14K) include the basic unit plus the complete set of Arms and Scales.



Part No.	Description	Price
I200B18K	Complete 18mm Time-Rite Kit	\$
I200B14K	Complete 14mm Time-Rite Kit	\$
I200BCK	Combo 14 & 18mm Time-Rite Kit	\$
I200B18	Basic 18mm Time-Rite Unit	\$
I200B14	Basic 14mm Time-Rite Unit	\$
I209-X	Engine Scale: specify the desired scale when ordering e.g. I209-5A	\$
I205-X	Engine Arm: specify the desired arm when ordering e.g. I205-D	\$

ENGINE MAKE	ENGINE MODEL	TIME RITE	SCALE	ARM	U/ D
ALLISON	V-1710-143, -145	B18	12	H	Dn.
CONTINENTAL	A SERIES	B18	5B	D	Up
	C-75, C-85, C-115, C-125	B18	5A	C	Up
	C-90, C-145, O-300-A thru D, O-200 A thru F	B18	10B	C	Up
	E-165, E-185, 1, 3, 8, 9, 11; E-225-4, 8 (with 532452 Cylinders); IO-470-J, 0470-A, E, J, 11 15 (with 532452 Cylinders)	B18	10A	D	Up
	E-165, E-185, 1, 3, 8, 9, 11, E-225-4, 8; O-470-A, E, J, 11, 15 (with 536727, 538348, 528610 Cylinders)	B18	13A	E	Dn.
	FSO-526-A (AIC), GSO-526-A (AIC)	B18	20A	X	
	G10-300, GO-300-A, B, C, E	B18	21A	U	Up
	GSO-526-A (BIC)	B18	20B	A	Dn.
	IO-470-C, G; O-470-B, G, H, M, N, P, 2, 13	B18	13B	E	Dn.
	IO-470-D, E, F, H, K, L, M, N, R	B18	17	S	Up
O-470-G, H	B18	21B	T	Up	
O-470-K, L, R, S	B18	17A	S	Up	
R-9A, R-760, R-975, -C1, C2, C3	B18	4A	C	Dn.	
W670	B18	4B	C	Dn.	
FRANKLIN	4A4; 6A4-150, 165; 64-178; O-335-3, 4	B14	7B	A	Dn.
	6A8-125	B14	7A	E	Dn.
	6A4-200, 6V4-200, O-335-2, 5, 5A, 5B, 6, 6B, VO-335-5	B14	8B	G	Dn.
	6A6-245, 6A8, 6V6-245, O-425-1, 5, 9	B14	8A	R	Dn.
JACOBS	L4, R755A	B18	6B	C	Dn.
LYCOMING	D2, O-145-B, C	B18	9A	C	Up
	O-235, O-290-11, O-320, A, C, E, O435-17, 23, O-480-1, A1, A6, GO-435, VO-435, GO-480-A1, A6, B, B6, D, F, F6, GO-580, GSO-480-A1A6, B1A6, B1B6, GSO-580, IGSO-480-A, A1, A6, B6, IO-320A TVO-435, TVO-435-B1A	B18	9B	E	Dn.
	O-340-A, O-290-D2B, O-290-D2C	B18	18B	V	Dn.
	GO-480C, C1B6, C2D6; G2D6; GO-480-C1D6; GO-480-C2C6	B18	19	E	Dn.
	IMO-360-A, O-360A, A1A, VO-360, MO-360, IGO-540, O540-A, A1A; VO-540, IGSO-540, HIO-360B, O-340-A1A	B18	18A	D	Up
	R-680 (5.5:1)	B18	3A	C	Dn.
	IO540	B18	9A	T	Up

ENGINE MAKE	ENGINE MODEL	TIME RITE	SCALE	ARM	U/ D
LYCOMING	IMO-360-B	B18	19	E	Up
	IO-320-B1A, B, C; O-320-B, D; GO-480-B1B; B1DB, D1A; O-235-C1, GO-435-C2A, C2B, D1; GSO-590C, GSO-580D, O-540-B2B5	B18	9A	E	Dn.
	O-360A1D, O-360C, O-540D, O-540E, IO-540-D4A5, O-540F, IO-360A, IO-360B, IO-360-A1B6	B18	29A	U	Up
	VO-360A, VO-360B, IVO-360A, HO-360A, HO-360B, IO-540C, IO-540D, IO-540J, HO-360, IGSO-540-A1A	B18	18A	D	Up
	IO-720, IO-360-A1A	B18	18A	V	Up
	HIO-360B, O-340-A1A	B18	18A	D	Dn.
	O-360B, O-540B	B18	19	R	Up
	O-290-D2	B18	18A	E	Dn.
	O-290D, O-435A	B18	13A	V	Dn.
	PRATT & WHITNEY	R-985, R-1830	B18	24A	A
R-2000 R-2800		B18	24B	A	Up
R-1340-H1, R-2180		B18	23A	A	Dn.
R-4360		B18	23B	A	Up
RANGER	6-440-C	B18	3B	A	Dn.
ROLLS-ROYCE	V-1650, 23, 25	B14	15	J	Dn.
	GIPSY QUEEN 30MK.2 & 70 MK.2	B14	25A	C	Dn.
	GIPSY MAJOR 140	B14	28A	D	Up
	GIPSY MAJOR 10MK.2	B14	25B	R	Dn.
WARNER	125, 145, 165, 185	B18	6A	C	Dn.
WRIGHT	R-1300-1A, 2A, 3, 4, C7BA (805941)	B18	11A	K	Up
	R-3350-75 (80594) 749C188D1 (805941)	B18	11B	G	Up
	R-1820-54, 72 WA, 60, 62, 62A, 74W, 76, 76A, 76B, 76C, 76D, 80, 80A, 82, 82A, 84, 84A, 84C, 84D, 86, 86A, 97, 101, 103, 103A, C9GC, C9HD, C9HE (805940)	B18	2B	B	Up
	R-2600-8, 13, 20, 29, C148B, R-3350-8, 13, 23A, 24W, 24WA, 35, 35A, 57M, 57AM, 83; 745C18BA-3 (805940)	B18	2A	B	Up
	R-3350-26W, 26WA, 26WB, 30W, 30WA, 30WB, 32W, 34, 77, 85, 89, 91 (805942), 861C18CA-2, 956C18CA, 927TC18DA-1, 2, 3, 4; 975C18CB-1, 988TC18EA-1, 2, 3	B18	14B	M	Up
	R-760, R-975	B18	4A	C	Dn.
	R-3350TC18	B18	14A	MA	Dn.