



ATD-5598 Self-Powered Inductive Clamp Timing Light



The original battery powered timing light, built with quality to last. There's no need to connect to a 12V battery for power. Unit is powered by (2) D cell flashlight batteries and is a great tool for marine, snowmobile, industrial, racing engines and other small engine timing.

Features:

- Accurate up to 14,000 rpm +
- For 2 or 4 cycle gasoline engines with all ignition systems
- Protective sleeve withstands high temps (1,200° F)
- Standard lead length 4 ft.
- Bright flash at all speeds
- Made in the USA

GENERAL OPERATING PROCEDURES

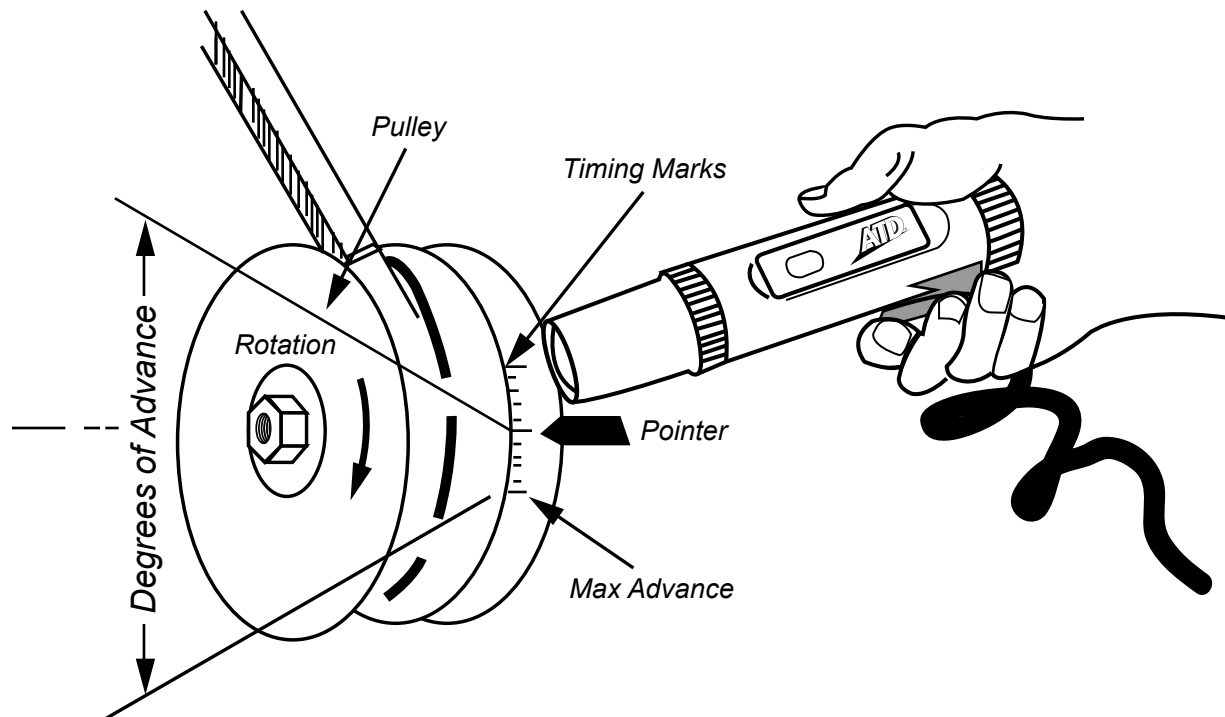
1. Locate engine timing mark (See illustration). It may help to use chalk or white paint on the marks to make them more easily seen.
2. Check manufacturers specifications for correct timing for engine being serviced.
3. Start and run the engine until normal operating temperature is reached. Stop engine.
4. If specifications require, locate the vacuum line going to the ignition distributor vacuum advance and disconnect and plug the line. A golf tee or small pencil may be used to seal the line.
5. Connect the inductive clamp of the timing light to the number 1 spark plug wire.
6. Trigger the timing light and observe the reading from timing mark.

CAUTION: Use care when working around moving engine.
Keep hands, tools and timing light clear of fan, belts or other moving parts.

7. Compare reading obtained in step 6 with manufacturer's specifications. If timing is not as specified, re-adjust as described in the following procedure. Stop engine.

ADJUSTING TIMING TO SPECIFICATIONS

1. Loosen distributor hold down locking bolt located at base of distributor enough so that distributor may be rotated back and forth. Do not over loosen or remove bolt but leave tight enough to prevent distributor from turning by itself.
2. Start and run engine.
3. Direct timing light flash at timing marks and slowly rotate distributor right and left until timing marks are aligned with pointer. Stop engine.
4. Tighten distributor hold down bolts using care not to change position of distributor.
5. Start engine and recheck timing.



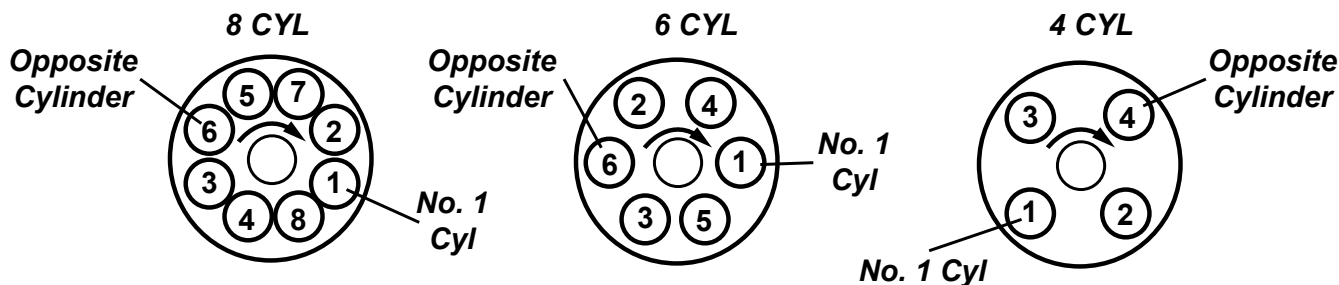
TESTING CENTRIFUGAL ADVANCE

With the timing light still connected and the vacuum line disconnected:

1. Speed the engine up slowly and watch the timing mark.
2. The timing mark should remain stationary until the engine reached the manufacturers specified speed. The timing mark should then move steadily and without jerking.
3. If the mark does not move, or if it moves erratically, the centrifugal (automatic) advance should be serviced as necessary.
4. To check the maximum advance, it is necessary to mark the harmonic balancer with the maximum degree per manufacturer's specification and follow manufacturer's procedures.

TESTING VACUUM ADVANCE

1. The vacuum line to the distributor must be connected to make this test.
2. Set the engine speed to 800 rpm or speed necessary to apply vacuum to distributor.
3. Aim the timing light and note position of the timing mark.
4. Disconnect vacuum line.
5. If the timing mark does not move, the trouble could be a plugged line, a leaky diaphragm or a frozen distributor plate, and the distributor should be serviced as required.



The opposite cylinder is always opposite number 1 cylinder on distributor cap

CHECKING DISTRIBUTOR CAM WEAR

1. This check is done after the timing has been set and the timing mark lines up with the reference pointer for #1 cylinder.
2. Connect the timing light to the wire directly opposite (180 degrees) #1 cylinder on the distributor cap. (See figure 5.)
3. Start engine and aim the timing light towards the timing mark. The reading should be the same as when connected to #1 cylinder.
4. If reading is not the same, probable cause is worn out distributor cam or bent distributor shaft. Repair as required.

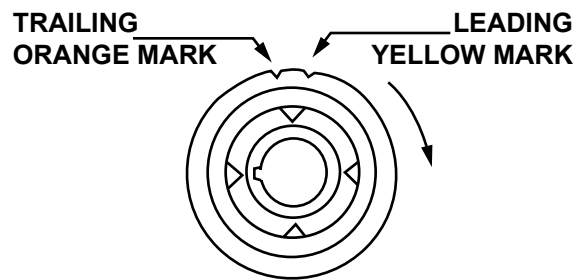
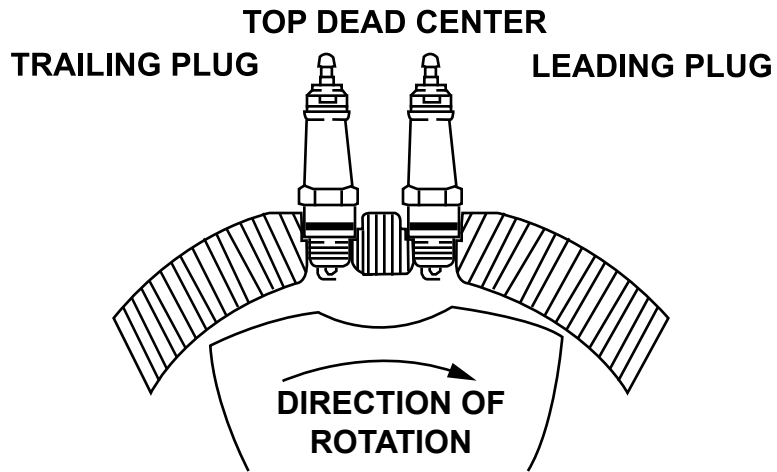
SMALL ENGINES

This self-powered Timing Light can be used on any combustion engine with impulse ignition, magneto ignition, such as motorcycles, lawn mowers, outboard motors, or any time there is a high voltage spark used for ignition. Connect the inductive lead of the timing light to the proper spark plug. Then follow the manufacturer's specifications to adjust timing.

ROTARY ENGINES

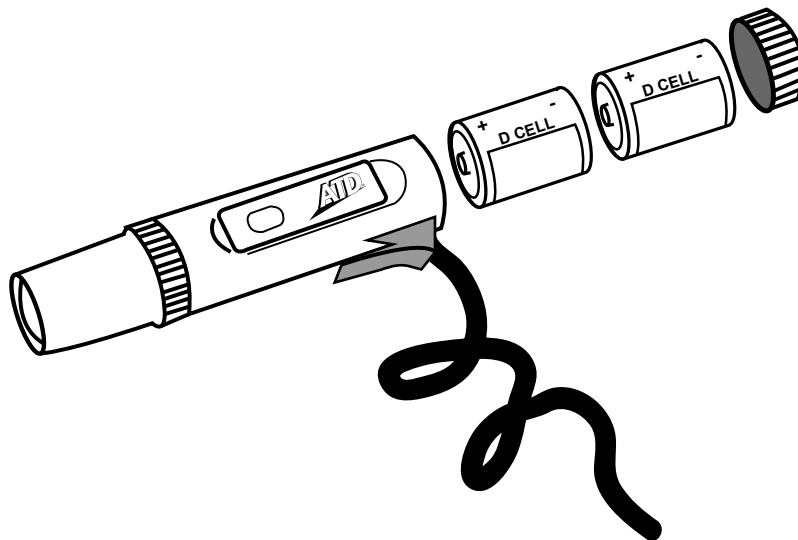
This self-powered Timing Light can be used on rotary engines. Follow the manufacturer's specific instructions and specifications. Following is a typical procedure for the Mazda twin rotor engine.

1. Start the engine and run at idle speed.
2. Aim the timing light at the timing indicator pin on the front cover.
3. Loosen the distributor nuts and rotate the leading side distributor body until the timing marks on the eccentric shaft pulley are in line with the timing indicator pin.
4. Tighten the locking nuts and recheck the timing.
5. Repeat the above step for setting the trailing side distributor timing with the timing light connected to the trailing spark plug.



BATTERY REPLACEMENT

1. Unscrew end of timing light to reveal battery compartment.
2. Insert 2 D cell batteries, positive end first.
3. Screw rear cap back onto timing light.



For service questions, please call 800-227-1603



WARRANTY

1 YEAR LIMITED WARRANTY

THIS WARRANTY AND CONFIRMED RECEIPT(S) SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES

PURCHASED FROM: _____

DATE PURCHASED: _____

INVOICE/RECEIPT NUMBER: _____

Your ATD-5598 is warranted for a period of 12 months from the original purchase date.

For a period of one (1) year from your purchase date, ATD Tools Inc. will repair or replace (at its option) without charge, your ATD product if it was purchased new and the product has failed due to a defect in material or workmanship which you experienced during normal use of the product. This limited warranty is your exclusive remedy.

To access the benefits of this warranty, contact your supplier, or point of sale directly. You may be advised to return the product under warranty, freight prepaid, to your supplier for warranty determination.

If this ATD product is altered, abused, misused, modified, or undergoes service by an unauthorized technician, your warranty will be void. We are not responsible for damage to ornamental designs you place on this ATD product and such ornamentation should not cover any warnings or instructions or they may void the warranty. This warranty does not cover scratches, superficial dents, and other abrasions to the paint finish that occur under normal use. It also does not cover normal wear items such as but not limited to brushes, batteries, drill bits, drill chucks, pads or blades.

Subject to the law in your state:

- (1) Your sole and exclusive remedy is repair or replacement of the defective product as described above.
- (2) ATD is not liable for any incidental damages, including but not limited to, lost profits and unforeseeable consequences.
- (3) The repair and replacement of this product under the express limited warranty described above is your exclusive remedy and is provided in lieu of all other warranties, express or implied. All other warranties, including implied warranties and warranties of merchantability or fitness for a particular purpose are disclaimed and, if disclaimer is prohibited, these warranties are limited to one year from your date of purchase of this product.

Some states' laws do not allow limited durations on certain implied warranties and some states' laws do not allow limitations on incidental or consequential damages. You should consult the law in your state to determine how your rights may vary.

NOTE: This one year warranty does not cover dead batteries and blown fuses.

For warranty and service coverage, please return this product to your dealer for processing and evaluation as described above OR, return it directly to:

Electronic Specialties, Inc.
139 Elizabeth Ln.
Genoa City, WI 53128
262-279-1400
WWW.ESITEST.COM

Defective units being returned to your dealer or to the factory should include proof of purchase date.
Any testers that do not function due to misuse or abuse will be subject to out of warranty service charges.