

T/C-88 Billet
Cam Cover

**With Ignition
Conversion Kit**

3757

Parts List

Part No.	Description	Quan.
3757-1	Cam Cover Housing	1
3757-2	Outer Cover	1
3757-3	Ignition Module Adapter	1
3757-4	Auto-Advance / Rotor Adapter	1
3757-5	Rotor Adapter Bolt	1
3757-6	Cam Gear	1
3757-7	8-32x3/8" Lg. Pan Hd Screw	2
3757-8	Oil Seal	1
3757-9	Timing Tool	1
3757-10	Timing Hole Block-Off Plug	1
3757-11	1/4-20x1-1/2 Lg. Stainless Steel Cap Screw	10
3757-12	1/4-20x1" Lg. Stainless Steel Cap Screw	2
3757-13	1/8 Dia. Roll Pin	2
3757-14	8-32x 1/2" Lg Stainless Steel Cap Screws	4
3757-15	10-24x 1-1/4" Lg Cap Screw	2
3802	Electronic Ignition	1
3616	Auto Advance-Reverse Rotation	1

This ignition will eliminate the following;
 The *OEM* ignition module
 The crank position sensor,
 The manifold pressure sensor
 The bank angle sensor.

Will allow you to build
 a clean looking custom motorcycle.



All parts made & chrome plated in the USA

Machining Engine Case For Timing Marks

If for any reason you split your crank cases, drilling & tapping a **EVO** style timing plug hole would make timing a T/C-88 much easier, and would allow the use of a timing light.

Follow the instructions below, and use the 34° mark for full advance timing. The can motor can be timed as you would any **EVO** or **Shovel Head** motor.

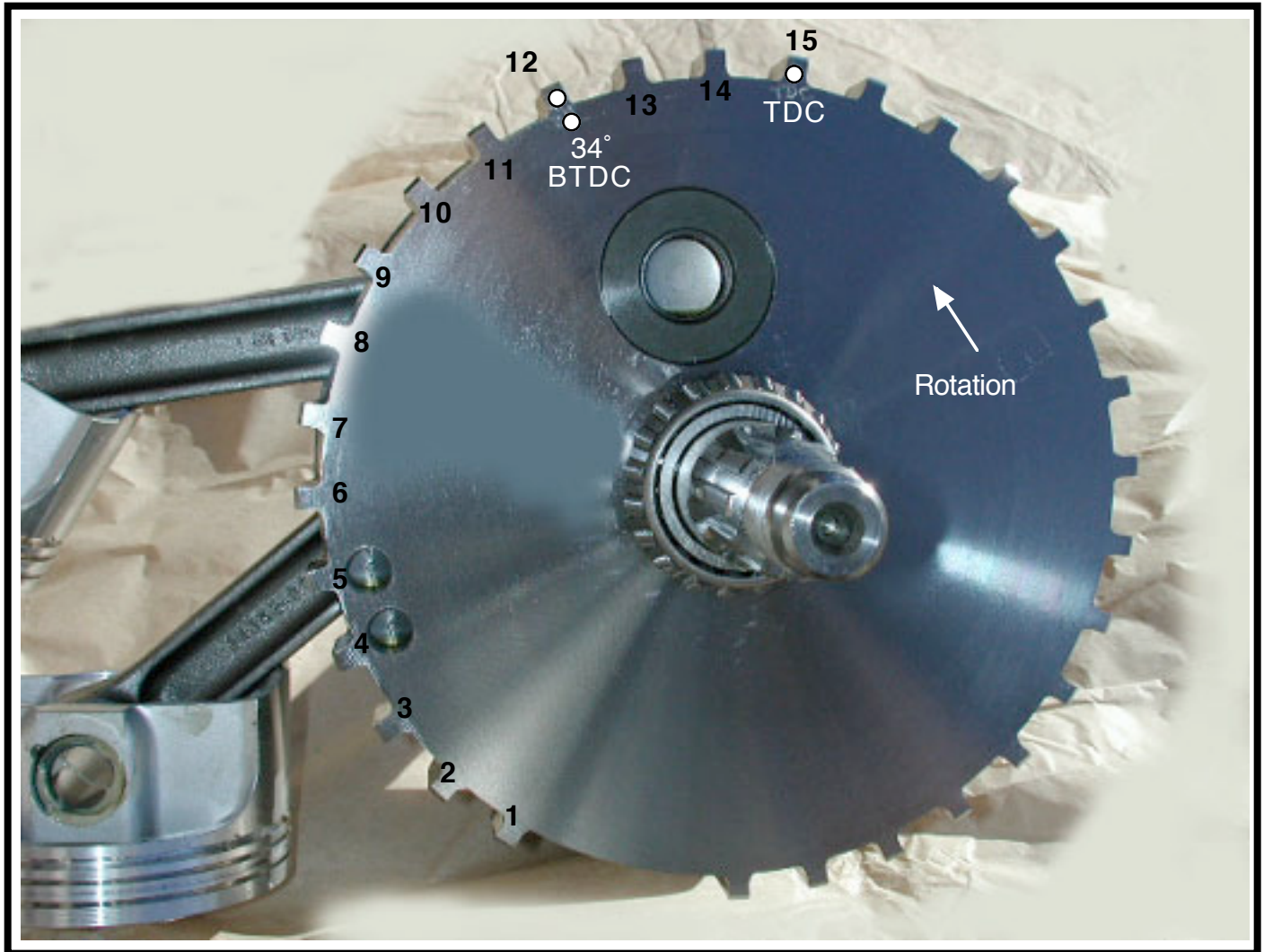


Figure # 1

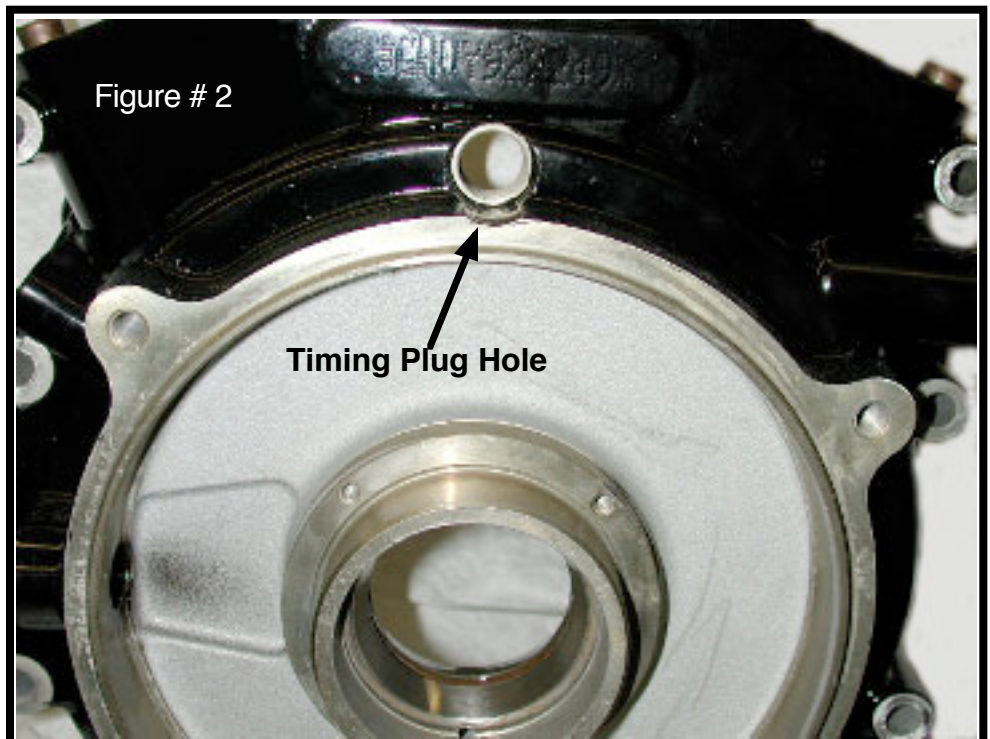
T/C-88 flywheels have 30 raised notches, notch # 12 when centered in timing plug hole is 34° BTDC, notch 15 is TDC, prick punch marks as shown in figure # 1. (Note; do this only when you machine cases for a timing hole, otherwise skip to page # 3)

Figure # 2

Drill & tap left side crank case 5/8-UNF 4.00 up from C/L of sprocket shaft hole. Counter bore hole 5/8"ø, and a EVO timing plug can be used.

Note:

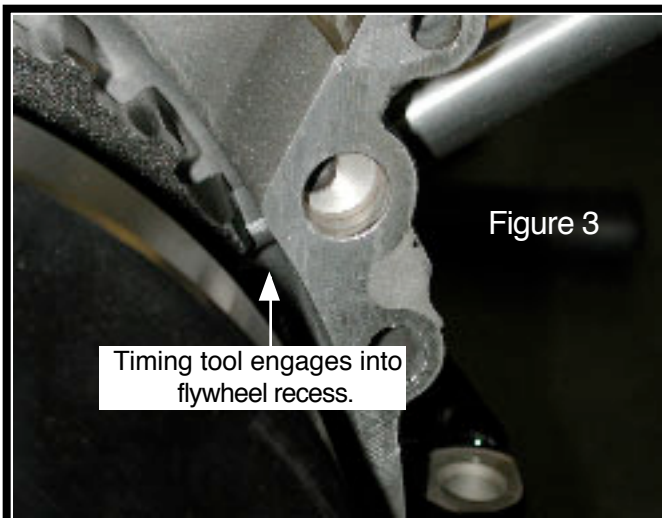
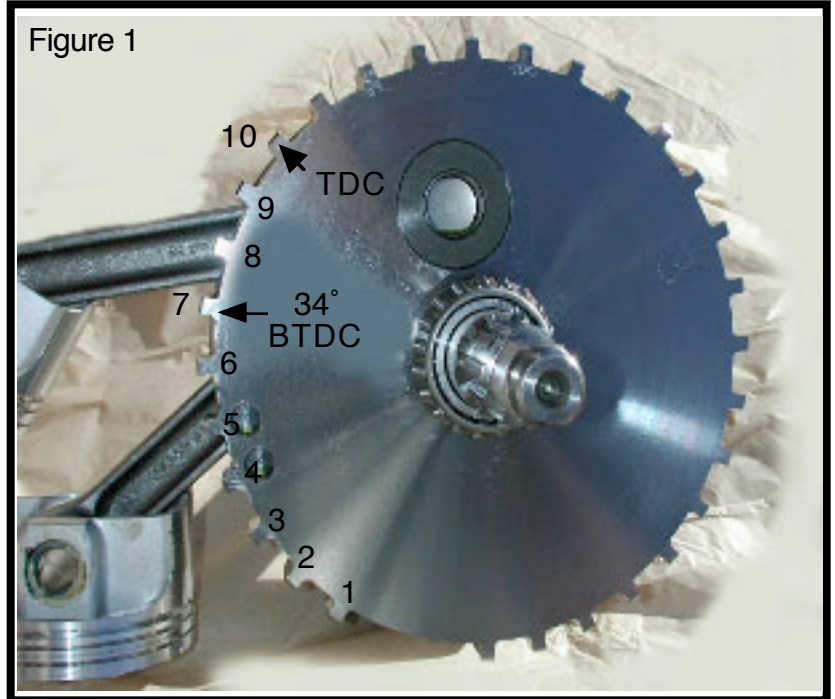
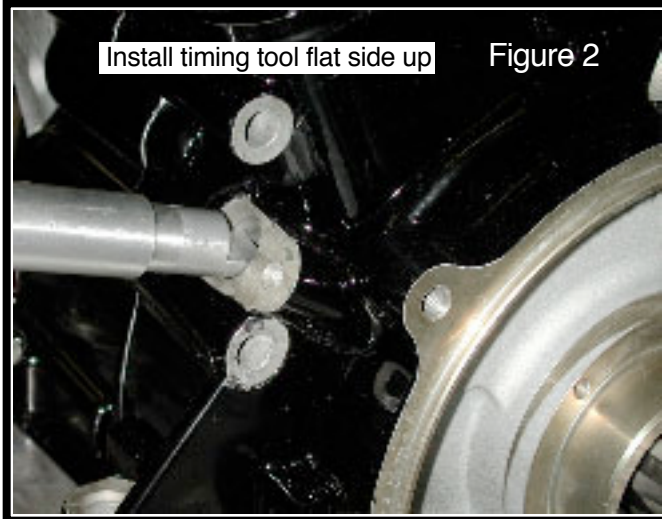
If you don't have access to a milling machine, we have a machining fixture that bolts onto the inner primary flange of the engine case. This will allow you to use a drill press to do this operation. Part # 3804. Call 603-668-6315.



Timing Procedure Using Timing Tool

If you don't want to machine a timing plug hole into your crank case as shown on sheet -2, set timing to 34° BTDC using the procedure shown on this sheet. The aluminum timing tool is provided with this kit.

Figure-1 shows TDC and 34° BTDC flywheel notches.

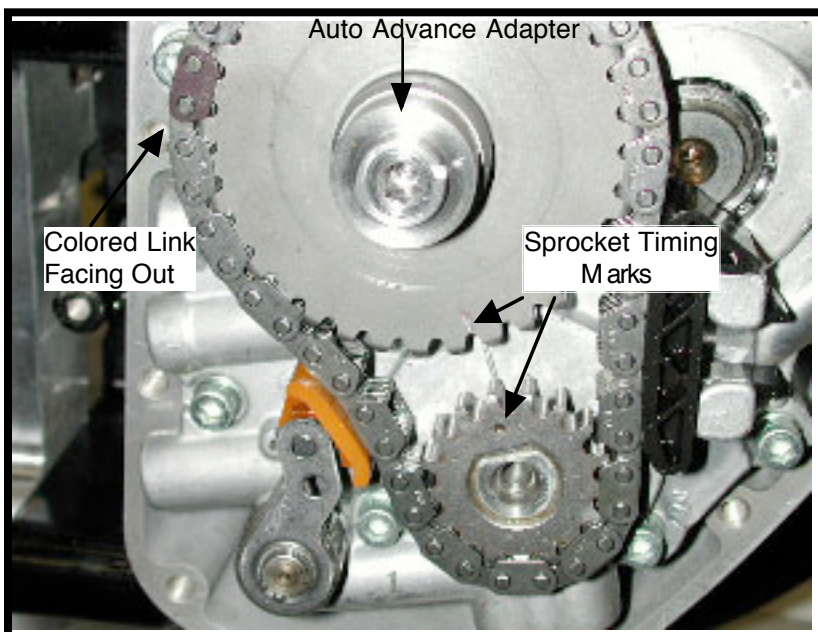


(1) While looking into the crank sensor hole, located in the front left side of the crankcase, rotate the motor in its normal direction. Count the notches starting at the section of the flywheel with two notches missing, stop at the seventh notch.

(2) Install the aluminum timing tool into the crank sensor hole as shown in figure 2 & 3. When the tool is installed correctly, the leading edge of the seventh notch will be centered in the crank sensor hole.

(3) This positions the flywheel so that the front piston is at 34° BTDC. This is when the front cylinder fires at full ignition advance.

Note; After doing the above, make sure your on the compression stroke.



Rear Cam Sprocket Gear Installation

(1) Replace factory cam sprocket with the one provided in this kit. Install sprocket with the boss facing outward.

(2) Line up sprockets as shown in figure 4, that is with the crank sprocket dot facing the cam sprocket line. The camshaft support plate has a cast line between the two sprockets to aid in this alignment.

(3) Refer to factory shop manual for shimming and torque values.

(4) Install auto advance adapter & adapter bolt to rear cam sprocket.

(5) Install cam cover, and install ignition per sheet 4.

Note; Auto advance adapter replicates cam shaft snout as found on Shovel & EVO motors.

Timing

This is a hall effect ignition system that utilizes a heat treated mechanical advance, that can either be wired as a single or dual fire ignition. All components are made in the USA, and are rated for higher amperage than this system will ever see. We recommend using 3 to 5 ohm coils, Dyna single tower coils work well. Avoid using Crane modular coils.

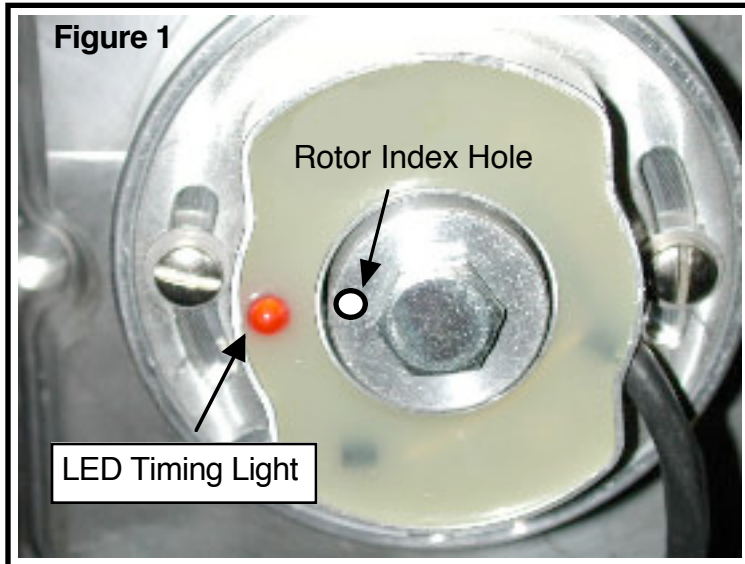


Figure 1 shows how installed ignition will look if flywheels are set to 34°, and front cylinder is on its compression stroke.

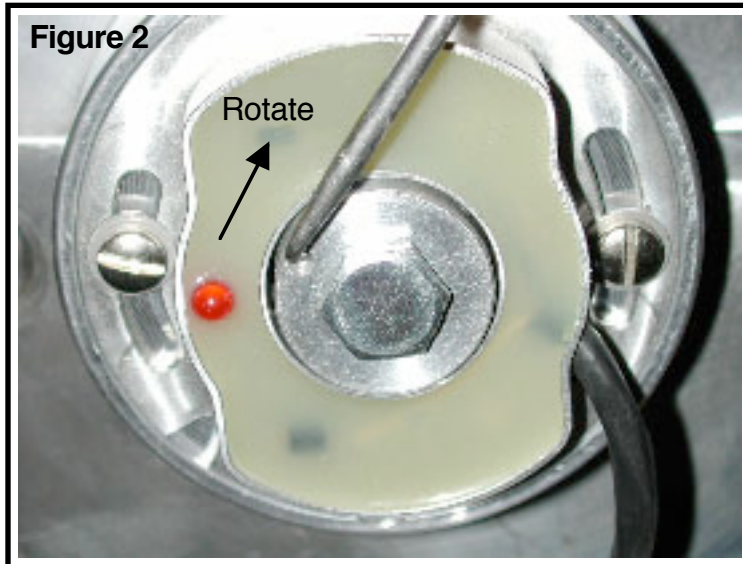


Figure 2 shows how ignition assembly will look when you rotate rotor clock wise to full advance position.

Timing Procedure

(1) Rotate motor until flywheels are at 34° BTDC on the front cylinder compression stroke. *Note; You are on the compression stroke when both valves on that cylinder are closed, and you can rotate both push rods with your fingers.* Set front cylinder timing to 34° BTDC by using a degree wheel, or by following the instructions on sheet 2 & 3.

(2) Install the auto advance assembly onto pc. 3757-4. The auto advance assembly has a pin that engages into a milled slot of pc. 3757-4, so that it can not be installed backwards. Before installing the auto advance assembly, slide the ignition rotor onto the auto advance. Line up the two magnets up with the engraved arrow as shown in figure 3.

(3) If the flywheels are at 34° BTDC and on the compression stroke, the rotor index hole will be in line with the red LED, as shown in figure 1.

Dual Fire Wiring

- (1) Connect white & black module wires together and attach to neg. side of coil
- (2) Red wire from module to coil pos. side.
- (3) Attach 12V power wire from ignition switch to pos side of coil.



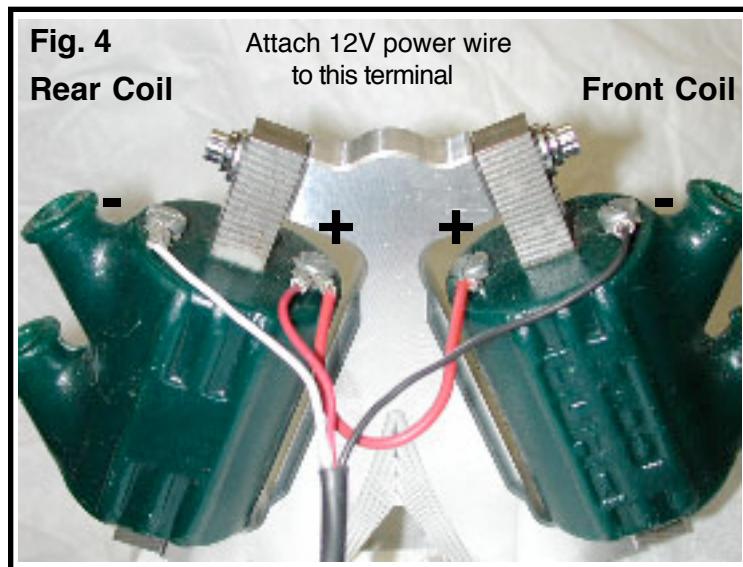
(5) After your coils are wired, turn the ignition on. The red LED light will be on, which means the coil is powered. If the light is not on, rotate the ignition housing slightly until the light flashes on. Using a right angle scribe, rotate the trigger rotor clockwise, to the full advance position. (see fig. 2)

(6) The red LED light should go off at the full advance position. If not, hold the rotor at full advance and rotate the ignition housing until it does. The coil and spark will fire when the LED light shuts off.

(7) The timing procedure is the same for both single and dual fire operation. The front & rear cylinders are internally timed, and accurate 1°.

Single Fire Wiring

- (1) White wire from module to rear coil, neg. side
- (2) Black wire from module to front coil, neg. side.
- (3) Red wire from module to coil pos. side, & run a jumper to other coil
- (4) Attach 12V power wire from ignition switch to pos side of coil.



Single fire wiring