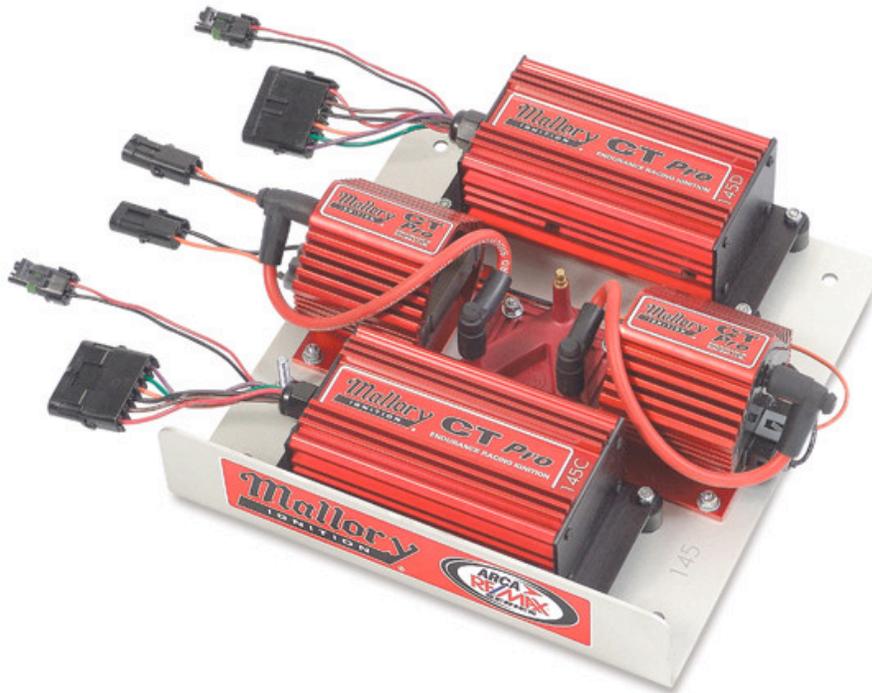


Mallory CT Pro Ignition Products



Part #	Description	Includes
6800M	CT PRO IGNITION SYSTEM	2 CT PRO IGNITION BOXES, 2 CT PRO IGNITION COILS, 1 DUAL COIL SELECTOR AND 2 COIL WIRES PRE-MOUNTED ON AN ALUMINUM PLATE
6864ARCA	CT PRO IGNITION BOX	1 CT PRO IGNITION BOX
30460	CT PRO IGNITION COIL	1 CT PRO IGNITION COIL
29029	DUAL IGNITION PLATE	1 DUAL IGNITION PLATE
29000	DUAL COIL SELECTOR	1 DUAL COIL SELECTOR

Ignition tray

The Ignition tray is made from 1/8" aluminum and has a 12" X 12" footprint. The tray has a 3" tall front lip for product identification. This lip will be facing the rear of the vehicle and is acceptable to hang off the edge of the dash. The bend for the lip has a .50" radius so the overall front to back length of the tray is 12.65"

The coil terminals hang off the right and left side edges of the plate by around 1". Special attention should be paid when positioning your plate so the coil output terminals are at least 1" away from chassis ground to prevent possible arching to ground.

The tray has 4, 11/32" holes that are 1" in from the corners of the 12" x 12" footprint. This makes the hole center spacing 10". We recommend using 5/16" or smaller studs and washers to allow for slight variations. The components are bolted through the plate so there are bolt heads on the bottom of the tray. We recommend using .25" thick spacers or washers under the plate so the bolt heads do not contact the dash.

The overall height from the bottom of the plate bolts to the top of the front ignition box is 3.75" tall. Special attention should be paid so the corner of the front ignition box does not hit the window of the car.

Wiring

Each ignition box has a 2-position male weather pack connector for the power and ground wires as well as a 6-position female weather pack connector for the remainder of the wires. Each coil has a 2-position female weather pack connector. All connectors exit the tray towards the center of the dash. The tray has a .25" grounding stud on the left side when looking at the top of the tray. We recommend running a ground strap from the roll bar to the .25" stud to eliminate the possibility of electrical interference.

The part numbers listed below are for the MATING harnesses (i.e. the vehicle harnesses) that the racecar will need to mate up to the Mallory CT Pro ignition system.

Main 6-Pin Ignition Box Connector (2 sets required):

Components:

Shell - Delphi P/N 12020926

Pins (6 per shell) - Delphi P/N 12124580

Connector position, wire color and function:

A - Red - Ignition power

B - Brown - Tach signal

C - Black - Coil "-"

D - Orange - Coil "+"

E - Green - Mag P/U "-"

F - Purple - Mag P/U "+"

Coil Jumper Connector (2 sets required):

Components:

Shell - Delphi P/N 12015792

Pins (2 per shell) - Delphi P/N 12124580

Connector position, wire color and function:

A - Black - Coil "-"

B - Orange - Coil "+"

Main Battery Power (2 sets required):

Components

Shell - Delphi P/N 12010973

Pins - Delphi P/N 12124582

Connector position, wire color and function:

A - Red - Main battery power

B - Black - Main Ground

NOTE: The pin "gender" is opposite what would normally be used in Weatherpack assemblies to prevent a battery power harness from being plugged into a coil harness.

Distributor Wiring

Mallory CT Pro Ignition Boxes were designed to accept one magnetic pickup per ignition box. We recommend using a dual pickup distributor with each pickup going directly to one ignition box. Paralleling one magnetic pickup per two CT Pro ignition boxes could result in extremely retarding ignition timing.

If you are using a dual pickup distributor and have a switch to select between each distributor pickup, make sure it is not wired to parallel one pickup per two ignition boxes.

Maximizing RPM limit

There are several engine component or assembly related items that can contribute to the CT Pro Ignition's rev limiting circuit activating below the pre-programmed limit of 8,800 RPM. Previously, early rev limiting issues were not necessarily addressed since most people simply set the rev limiter to a higher rpm setting. In order to maximize the rev limit of the CT Pro Ignition system, special attention should be paid to the following engine component or assembly related items.

Distributors-

- Cause Excessive end-play causes cylinder to cylinder timing to vary.
- Cure Reduce endplay to a minimum, but still allowing for housing expansion. This varies depending on the length of the housing and its material.

- Cause Excessive clearance between the camshaft's drive gear and the distributor's driven gear.
- Cure Use an oversize gear to reduce the backlash to a minimum. Also, starting with a gear with an undersize inside diameter and honing it to precisely fit the distributor shaft also will help.

- Cause Cylinder to Cylinder timing variation
- Cure The greater the variation of the timing from cylinder to cylinder is, the earlier the rev limiting will occur. The rev limiting function is based on the shortest time between two cylinder firings.

- Cause Distributor triggering variations
- Cure Different distributors use different internal triggering styles. The more accurate and stable the trigger signal is, the more accurate the rev limiting will occur.

Camshafts-

- Cause Cam Walk
- Cure Roller camshafts especially need to have cam walk kept to a minimum. Depending on the design of the drive being used, this can be controlled by a cam button or thrust plate. Typically, endplay or walk of .003" to .006" is considered acceptable. While the lobes on a flat tappet camshaft are tapered, endplay can still be an issue.

- Cause Uneven Camshaft Rotation
- Cure Minimize the slack or slop in the cam drive whether it is a chain or belt style. The smoother the camshaft rotates, the less variation in the distributor rotation speed.

While there can be other causes, optimizing the above items, in addition to the general condition of engine components, can definitely affect an engine's performance. You may also find some variance based on the type of testing being performed. You can expect some difference between engine dyno, chassis dyno, and on-track test results.