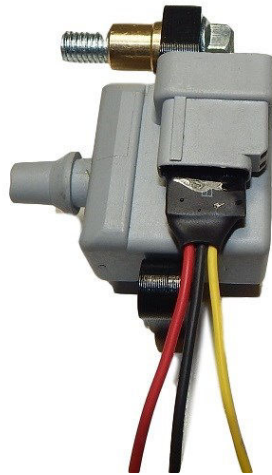




C5 PRO

Ignition Kit

Instruction manual with visual guide for
Magneto style distributor kit



Your kit includes:

- (1) Self contained Ignition module and housing with cover
- (2) Single or Dual tower coils (depending on application)
- (3) Sparkplug leads and boots
- (4) Color Instructions for wire harness

What is the C5 PRO ignition?

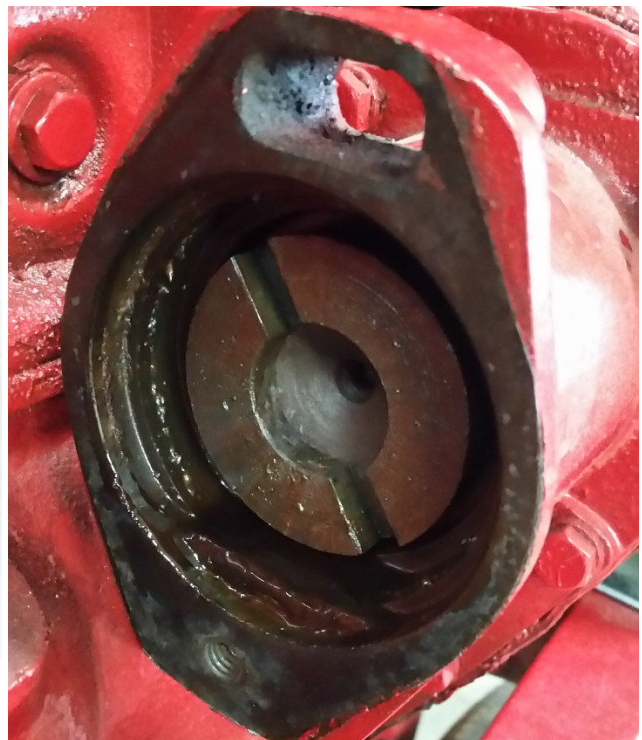
- We designed it to replace the Delco distributor used on most John Deere twin cylinder tractors. It also fits many Farmall, Allis Chalmers, Oliver, and Moline engines that originally used a magneto.
- We provide everything needed except the Drive Lug. A Delco lug from John Deere will fit.
- Final timing is set by rotating the housing, since our encoder disc locks onto the center shaft. This is to provide the most reliable and accurate timing possible.
- We highly recommend resistor style sparkplugs ONE heat range colder than stock. You may have to convert to a smaller diameter sparkplug and we are working on kits to help our customers do this.

Step 1.

Disconnect your battery.

Rotate the engine so #1 cylinder is EXACTLY at Top Dead Center (TDC).

Remove the old distributor. On Farmall and similar you have an intermediate housing that also needs to be removed to access the drive lug.



Step 2.

Install your drive lug using the new shear key and nut provided in the kit.

Verify that your lug will fit into the engine by measuring the height of the lug from the mating surface and compare that to the depth of your drive lug.

We have measured approximate values on several tractors:

John Deere 0.84"

Farmall 0.89"

Allis Chalmers 0.89"

If you have a shim washer under your drive lug you may need to use it.

Trying to force the drive lug into the slot would cause excessive pressure on the bearings and may cause damage to engine parts as well.

We have found that using a thin layer of gasket making compound works fine if you don't have a new base gasket.



Step 3

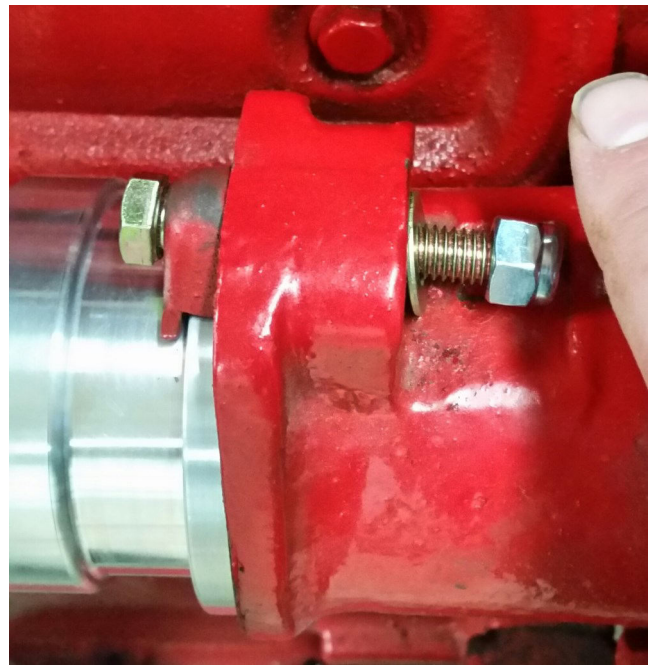
Install the PRO body into your engine.

Carefully align the drive lug so it engages the slot in the engine.

LIGHTLY secure the body using your original hardware (John Deere).

*** (Farmall will need to use John Deere hold down clamps or drill them out slightly and you will need a new upper bolt approximately 1.5-2.0" long with nut/washer).

We have not verified other applications.



Step 4

Install encoder disc and set timing.

Our ignition relies on exact TDC location to function correct.

If you cannot find a reliable timing mark you will need to use a depth gauge or similar tool to verify the #1 piston is at Top Dead Center.

It does not matter if the cylinder is on Compression or Exhaust cycle.

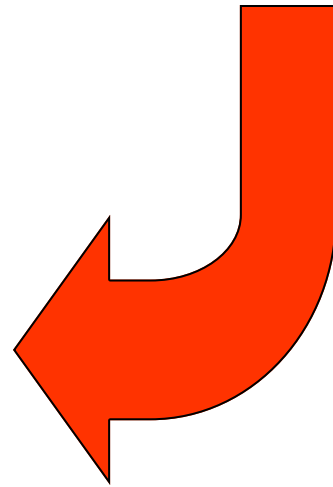
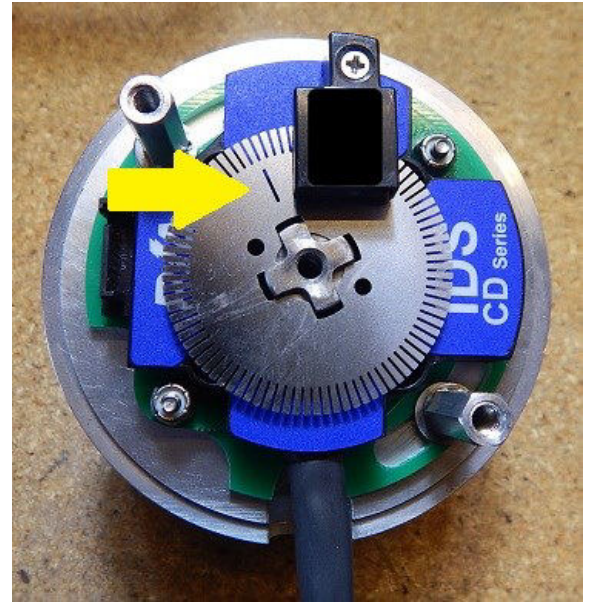
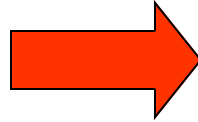
Remove the screw and top cap so the SINGLE TIMING SLOT of the disc can be placed as close to the reader as possible. The reader should always be located at the top to protect it from dirt or moisture.

You have four “fingers” on the shaft that prevent the disc from moving so it is critical that you place the slot in the upper most position now.

Place the cap back on top, making sure the fingers lock together.

If you use a small amount of locking agent we recommend low strength in case you need to remove the screw in the future.

See photos on the next page:



Do not over tighten the top screw!

The encoder disc is very thin and light weight. With locking agent the encoder disc should not come loose.

Step 5

Set the timing light.

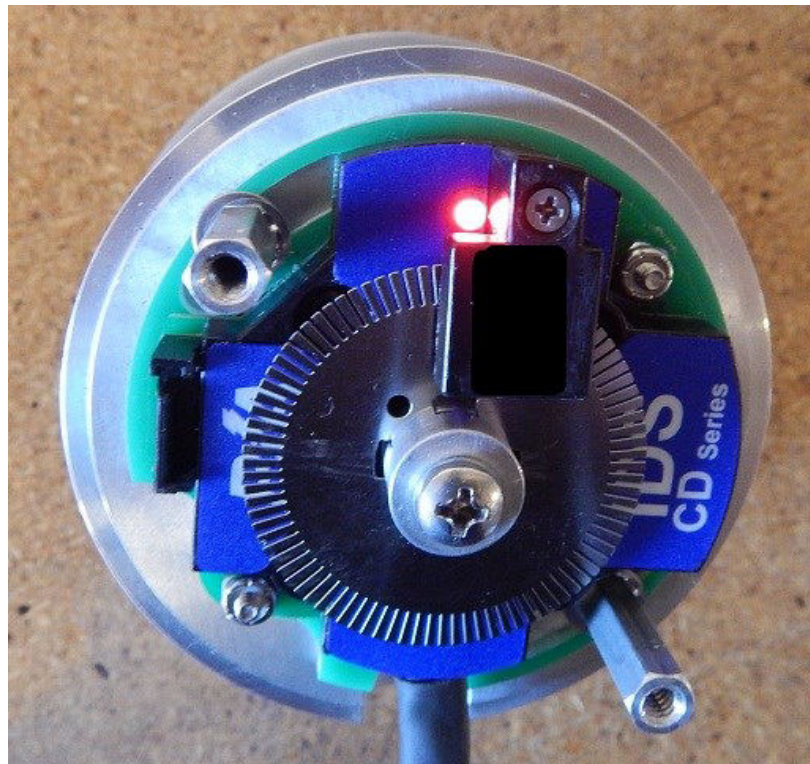
Once again...

Our ignition relies on exact TDC location to function correct.

Be sure the TDC mark has not moved. Install the wiring or temporarily connect the small gauge RED lead from the ignition to 12 volt power and connect the separate black lead from the ignition to ground.

Rotate the C5 PRO body slowly until the single slot of the disc is under the reader. **The LED light will come on once exact TDC is located.** Secure the body using your hold down bolts so the light remains on.

Now you are ready to install your coils and complete the wiring.



Step 5

Install the Coils

*****Proper coil function relies on sufficient voltage and amperage supply. The coils provided in this kit are the newest and most reliable multiple sparking coils available.**

It is your responsibility to connect the power (+) and ground (-) leads of the coils with the correct gauge wire for the distance between coils and battery supply. The use of small gauge wiring can cause coil misfire or failure. Do not use wire less than 14 gauge regardless of distance.

We provide two leads that are 40 inches in length. Before mounting coils be sure the wires are long enough for your mounting location.

On 4 cylinder engines the coils should be mounted in the center of the engine, usually to the valve cover studs or similar.

If you need more wires please contact us.

DO NOT USE WIRES OTHER THAN PROVIDED IN THE KIT

Each coil has a red (power), black (ground), and yellow (trigger) lead.

Because our coils have automatic shutoff when the disc is not spinning, we recommend the coil power and ground leads be connected directly to the battery terminals or the cables coming directly from the battery.

On John Deere twins the BLACK coil trigger from module will operate the #1 cylinder and the WHITE coil trigger from module will operate the #2 cylinder.

On four cylinder engines the BLACK coil trigger from module will operate #1 and #4 (front and rear cylinders) and WHITE coil trigger from module will operate #3 and #4 cylinders (the inside pair).

If you do not have a quality sparkplug terminal crimper then purchase or borrow one!!

Many ignition problems are caused by poorly crimped leads.

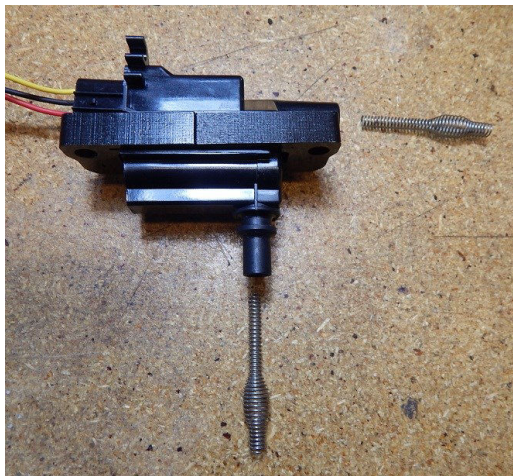
Once the wires have been measured for proper fit, install the terminals and boots provided, or of similar design using quality crimping tool.

Use wire separators. NEVER allow sparkplug wires to contact one another or crossfire can occur.

Our COP (Coil on Plug) design requires springs between the coil and sparkplug lead. Place the larger diameter end into the boot. This will hold the spring in place during servicing.

You may need to trip the spring shorter but be cautious.

Always secure boots firmly to avoid misfires.



Optional Rotary Switch Kit:

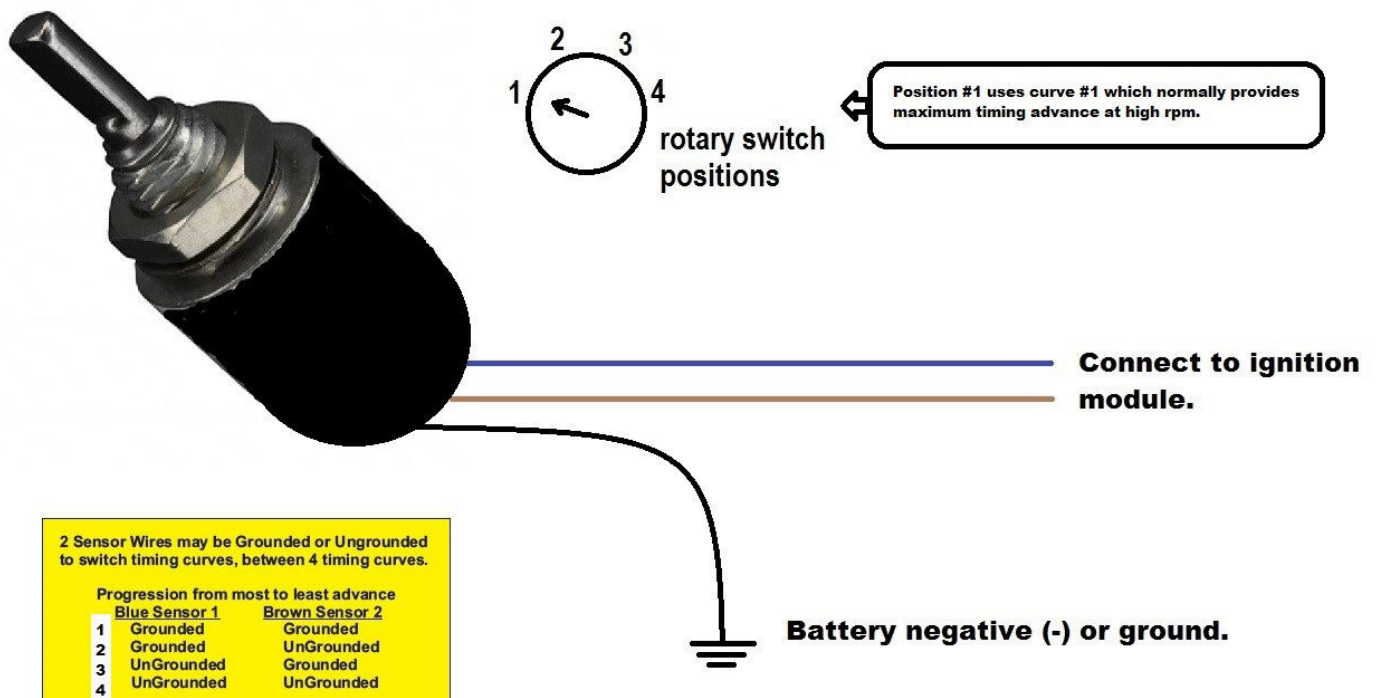
There are two colored leads coming from the ignition module.

Ground both leads (blue and brown) to the battery or engine/frame unless you are installing toggle, rotary, or VOES switches.

The colored leads tell the ignition which timing map it should be following. If you are tractor pulling you can change between maps by selecting a grounding sequence. If you are using for standard farm use you can simply connect both leads to proper ground and forget about this.

Here is the sequence for toggling between the pre-programmed curves from “most timing advance” to “least timing advance”. All timing maps have the same curve during engine start up:

<u>BLUE</u>	<u>BROWN</u>
GROUND	GROUND
GROUND	UNGROUND
UNGROUND	GROUND
UNGROUND	UNGROUND

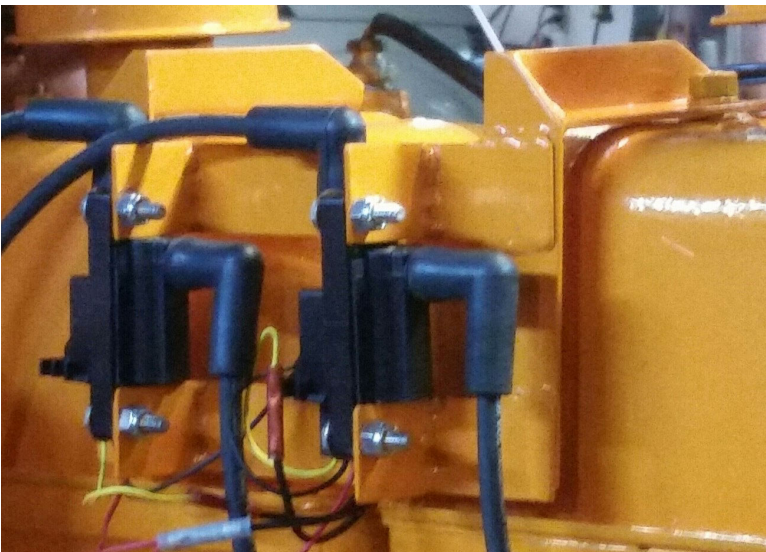
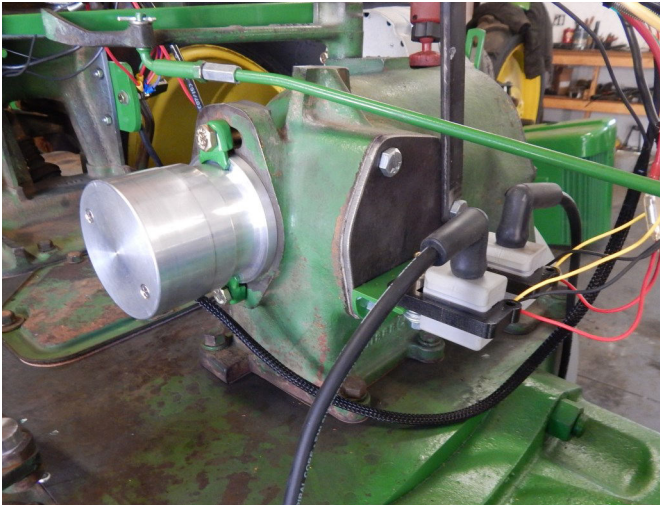


2 Sensor Wires may be Grounded or Ungrounded to switch timing curves, between 4 timing curves.

	Blue Sensor 1	Brown Sensor 2
1	Grounded	Grounded
2	Grounded	UnGrounded
3	UnGrounded	Grounded
4	UnGrounded	UnGrounded

Normal Stock Application
Ground Blue and Brown Wires
Higher Compression or lower octane fuels may require less advance. This can be achieved by ungrounding the appropriate Sensor wires or the addition of a VOES, vacuum switch.

Example of coil mounting



We hope this guide helps you understand the steps needed for a painless install.

Final notes:

NEVER charge your battery with the key ON or attempt to start the engine using a booster device. A 12 volt jumper pack is acceptable.

Using an AC powered booster or charger can destroy electronic devices.

If you experience poor starting, erratic idle, or stuttering...recheck connections, verify carb settings, and be sure the blue and brown leads are grounded to the frame or engine. Often the idle will be slightly higher and will need to be adjusted.

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