Wiring Diagram 7 Amp 2 Step (7842NR) Ignition Box - No Booster

IGNITION SWITCH

RED

BATTERY

BLACK

ENGINE BLOCK

GREEN

LOWER LIMIT ARMING WIRE

WHITE

7 AMP 2 STEP

7842NR

DISTRIBUTOR LOOM (PRE-MADE)

COIL

BLACK

ENGINE BLOCK

GREEN

TO TACH

WHITE

RED

ORANGE WIRE

DISTRIBUTOR LOOM

GREEN WIRE

BLACK WIRE

WHITE WIRE

RED WIRE

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**Wiring Diagram 7 Amp 2 Step (7842NR) Ignition Box - Inc Booster**

- **IGNITION SWITCH**: Red wire
- **BATTERY**: Black wire
- **BOOSTER**: Orange wire and Green wire
- **ENGINE BLOCK**: Orange wire to Tach
- **TO TACH**: Green wire
- **LOWER LIMIT ARMING WIRE**: White wire
- **7 AMP 2 STEP**: Black wire
- **DISTRIBUTOR LOOM (PRE-MADE)**: Orange wire, Green wire, Black wire, White wire

**WIRE COLOR LEGEND**
- **RED WIRE**
- **BLACK WIRE**
- **GREEN WIRE**
- **WHITE WIRE**
- **ORANGE WIRE**

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Distributor to module loom:

* Supplied finished - simply connect at both ends - no termination necessary.
* Ensure distributor to module loom is routed separately from module to coil loom and high tension wires.

Module to coil loom (supplied semi finished). Please ensure the following:

* Orange wire to coil positive (run direct to ignition coil - do not splice with any other wires).
* Green wire to coil negative (run direct to ignition coil - do not splice with any other wires).
* Black wire to earth / ground (run direct to engine block - do not splice with any other wires).
* Be sure to keep the earth / ground wire from the ICE modules as short as possible. Always run the earth / ground wire from the ignition module (and voltage booster if fitted), to somewhere on the engine block, same as the battery earth / ground cable as per the instructions below. This is the only way to guarantee proper earth / ground.

Optional features:

* White (single) wire : Apply 12 volts to activate low rpm limit ( usually armed by trans-brake switch or similar ).
* Green (single) wire = Tach Output ( 12 volt square wave - normally high, then low for 1.1 m/s per spark ).
* Red wires: If connected = distributor trigger mode; If disconnected = crank trigger mode.
* Orange, White, Yellow, Blue and Brown wires (grouped together) - refer to multiple retards page.

Power supply to coil positive - no booster or inc booster 2316 / 2216 - ideal:

* Supply 12 volts switched (13.8 - 14.8 volts from alternator) to coil positive or booster (if fitted) via ignition switch.
* If vehicle has ballast resistor or resistor wire, by-pass these and feed direct voltage to coil or red wire of booster.
* Never leave original wire from the ignition switch connected to the coil positive if booster fitted (refer diagram).
* Do not try to power anything but a single coil with the booster.
* If wired correctly, two wires go to coil positive and one wire goes to coil negative.

Earth / Ground:

THE IMPORTANCE OF THIS STEP CANNOT BE OVER EMPHASIZED AND WILL VOID THE WARRANTY ON THE IGNITION IF IT IS NOT FOLLOWED.

* Battery negative cable MUST run direct to a bare metal bolt boss on the engine block (should also be attached to body) as a single cable.
* If the battery is mounted in the front of the vehicle the cable must be a minimum of 12mm - 13mm in diameter including the shielding, and must consist of a fine strand copper core.
* If the battery is mounted in the rear of the vehicle the cable must be a minimum of 14mm to 15mm in diameter including the shielding, and must consist of a fine strand copper core.
* For street cars, if you currently have the battery earth / ground cable running from the battery negative to the chassis and chassis to the engine and are relying on the body / roll cage to make the connection for earth / ground, DO NOT assume that because your existing ignition works like this, that the ICE Ignition will also work. You will void your warranty and quite possibly have to buy replacement parts.
* For race cars, if you currently have the battery earth / ground cable running from the battery negative to the roll cage and are relying on the roll cage and aluminum engine plates to make the connection for earth / ground, DO NOT assume that because your existing ignition works like this, that the ICE Ignition will also work. You will void your warranty and quite possibly have to buy replacement parts.

General:

* Keep both looms routed away from the high tension wires.
* These measures are to ensure no noise enters the loom and disrupts the microprocessor inside the unit.
* Mount the unit using the vibration mounts supplied, inside the vehicle cabin, away from heat and moisture.
* Avoid soldering wires, as they become brittle where the solder ends, flex at that point, then break.
* To ensure unit functions correctly, the above steps must be adhered to.
7 Amp 2 Step (7842NR) Curve Select switch

<table>
<thead>
<tr>
<th>Digit</th>
<th>Degrees of automatic advance @ engine rpm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Locked timing</td>
</tr>
<tr>
<td>1</td>
<td>2 Degrees @ 3800 rpm</td>
</tr>
<tr>
<td>2</td>
<td>4 Degrees @ 3800 rpm</td>
</tr>
<tr>
<td>3</td>
<td>6 Degrees @ 3800 rpm</td>
</tr>
<tr>
<td>4</td>
<td>8 Degrees @ 3800 rpm</td>
</tr>
<tr>
<td>5</td>
<td>10 Degrees @ 3800 rpm</td>
</tr>
<tr>
<td>6</td>
<td>12 Degrees @ 3800 rpm</td>
</tr>
<tr>
<td>7</td>
<td>14 Degrees @ 3800 rpm</td>
</tr>
<tr>
<td>8</td>
<td>Locked timing</td>
</tr>
<tr>
<td>9</td>
<td>2 Degrees @ 3800 rpm</td>
</tr>
</tbody>
</table>

Expressed in crankshaft degrees @ engine rpm
7 Amp 2 Step (7842NR) - Multiple retards

Retard wires = White & Yellow & Blue & Brown

<table>
<thead>
<tr>
<th>Wire Colour - Apply</th>
<th>Degrees of automatic retard</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 volts to activate</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>2 Degrees retard when activated</td>
</tr>
<tr>
<td>Yellow</td>
<td>4 Degrees retard when activated</td>
</tr>
<tr>
<td>Blue</td>
<td>6 Degrees retard when activated</td>
</tr>
<tr>
<td>Brown</td>
<td>8 Degrees retard when activated</td>
</tr>
<tr>
<td>White &amp; Yellow</td>
<td>6 Degrees retard when activated</td>
</tr>
<tr>
<td>White &amp; Blue</td>
<td>8 Degrees retard when activated</td>
</tr>
<tr>
<td>White &amp; Brown</td>
<td>10 Degrees retard when activated</td>
</tr>
<tr>
<td>Yellow &amp; Blue</td>
<td>10 Degrees retard when activated</td>
</tr>
<tr>
<td>Yellow &amp; Brown</td>
<td>12 Degrees retard when activated</td>
</tr>
<tr>
<td>Yellow &amp; White &amp; Blue</td>
<td>12 Degrees retard when activated</td>
</tr>
<tr>
<td>Blue &amp; Brown</td>
<td>14 Degrees retard when activated</td>
</tr>
<tr>
<td>Blue &amp; Brown &amp; White</td>
<td>16 Degrees retard when activated</td>
</tr>
<tr>
<td>Blue &amp; Brown &amp; Yellow</td>
<td>18 Degrees retard when activated</td>
</tr>
<tr>
<td>Brown &amp; Yellow &amp; White</td>
<td>14 Degrees retard when activated</td>
</tr>
<tr>
<td>Brown &amp; Blue &amp; Yellow &amp; White</td>
<td>20 Degrees retard when activated</td>
</tr>
</tbody>
</table>

Note: Orange wire - has 12 volts when ignition is switched on

Expressed in crankshaft degrees @ engine rpm