

Indmar Products

Ignition Timing Procedures & Distributor Adjustments

Carbureted 5.7L w/ EST Distributor

Spec: 10° BTDC @ 750-850 RPM in Base Timing Mode

1993-2005 5.7L & 383 w/ No Connection to the Crank Position Sensor

Spec: 10° BTDC @ Idle in Base Timing Mode

Through 2005 Model Year 5.7L w/ EST Distributor & Connection to Crank Position Sensor (Malibu LCR, Mastercraft RTP-1, Indmar/Skiers Choice Assault 325)

Spec: Cam Retard Angle 50° ±2°

5.7L & 383 w/ HVS Distributor & MEFI 5, 5A, 5B ECM

Spec: Cam Angle 705° ±5° @1200 RPM

5.7L & 383 w/ HVS Distributor & 3 Plug Indmar ECM

Spec: Cam Retard Angle 5° ±1° @1200 RPM

2009 5.7L & 383 w/ HVS Distributor & 1 Plug Indmar ECM

Spec: Cam Retard Angle 12° ±0.5° @1200 RPM

Distributorless Ignition Systems

(Malibu LS1, MasterCraft LQ9, & LY6, Indmar 6.0L, All 8.1L Models)

Spec: Non Adjustable

Electronic Spark Timing (EST) Distributor Systems

1. Setting Ignition Timing on Carbureted Models and 1993-2005 5.7L & 383 w/ No Connection to the Crank Sensor with an EST Distributor

1. Install Timing Shunt (P/N: 801012) into 4 connection connector on the distributor
 - On models w/ an ECM disconnect the 4 wire plug from the distributor
2. Start Engine
3. Supply 12v+ to the black wire
4. Adjust idle to 750-850 RPM (carbureted models)
5. Set timing to 10° BTDC
6. Disconnect timing shunt
7. Reinstall 4 wire plug connector into the distributor (non-carbureted models)
8. Carbureted engines: Reset Idle to 750 RPM for inboard engines, 1000 RPM for Jet engines

2. Distributor Adjustment on 2005 Model Year Engines 5.7L w/ EST Distributor & Connection to Crank Position Sensor

(Malibu LCR, Mastercraft RTP-1, Indmar/Skiers Choice Assault 325)

1. Install Timing Shunt (P/N: 801012) into 4 connection connector on the distributor but unplugging the 4 wire connector on the harness first
2. Start Engine
3. Supply 12v+ to the black wire
4. Connect Diacom and establish communication with the ECM
5. Turn the distributor to adjust the Cam Retard Angle to 50° ±2°
6. Tighten down the distributor hold down clamp
7. Shut down the engine and wait 15 seconds then restart the engine
8. Verify distributor adjustment
9. Disconnect the timing shunt and reinstall the 4 wire connector in the harness

TIPS: If you do not have a timing shunt, you can place the engine into base timing mode by:

Carbureted and EFI Engines

1. Pins in the distributor are lettered A,B,C,D from left to right.
2. Short Pins C & D Together
3. Apply 12v+ to Pin B
4. Follow Adjustment Procedure
5. Disconnect the 12v+ from Pin B
6. Disconnect the short between Pins C & D
7. Engine will no longer be in Base Timing

EFI Engines Only

1. Start Engine
2. On the DLC Jump Pins A & B together
3. The RPM should then raise to 900-1100 RPM automatically
4. Follow Adjustment Procedure
5. Disconnect connection between Pin A & B
6. Engine RPM will return to normal and Engine will no longer be in Base Timing

High Voltage Switch (HVS) Distributor Systems

1. Distributor Adjustment on 5.7L & 383 w/ HVS Distributor & MEFI 5, 5A, 5B ECM

1. Start the Engine
2. Connect Diacom and establish communication with the ECM
3. Raise the Engine speed to 1200 RPM
4. Turn the Distributor to adjust the Cam Angle to $705^{\circ} \pm 5^{\circ}$
5. Tighten down distributor hold down clamp
6. Shut Down then Restart the Engine, then Raise Engine speed to 1200 RPM and Verify distributor adjustment

2. 5.7L & 383 w/ HVS Distributor & 3 Plug Indmar ECM

1. Start the Engine
2. Connect Diacom and establish communication with the ECM
3. Raise the Engine speed to 1200 RPM
4. Turn the Distributor to adjust the Cam Angle to $5^{\circ} \pm 1^{\circ}$
5. Tighten down distributor hold down clamp
6. Shut Down then Restart the Engine, then Raise Engine speed to 1200 RPM and Verify distributor adjustment

3. 2009 5.7L & 383 w/ HVS Distributor & 1 Plug Indmar ECM

1. Start the Engine
2. Connect Diacom and establish communication with the ECM
3. Raise the Engine speed to 1200 RPM
4. Turn the Distributor to adjust the Cam Angle to $12^{\circ} \pm 0.5^{\circ}$
5. Tighten down distributor hold down clamp
6. Shut Down then Restart the Engine, then Raise Engine speed to 1200 RPM and Verify distributor adjustment

TIPS:

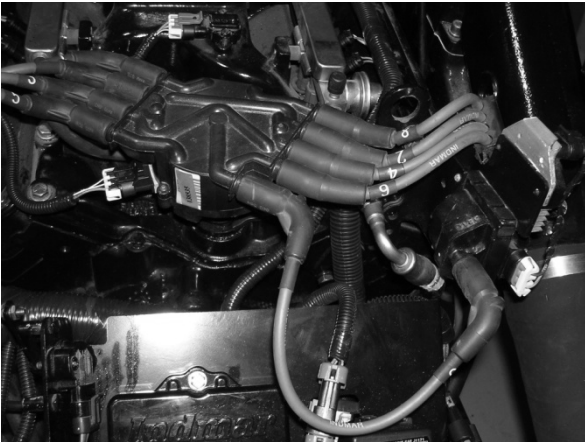
Turning the Distributor Counterclockwise adjusts for readings less than specification

Turing the Distributor Clockwise adjusts for readings greater than specification

If proper adjustment can't be obtained, the distributor should be removed and reinstalled adjusting the distributor gear clockwise or counterclockwise one tooth to the cam gear according to the cam angle reading

Identifying Ignition Systems and Components

HVS Distributor



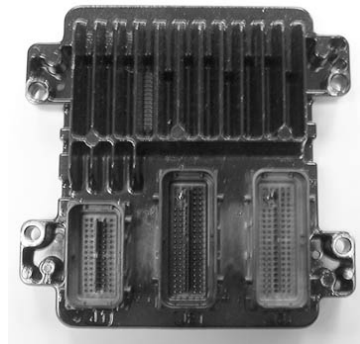
EST Distributor



2009 1 Plug Indmar ECM



MEFI 5, 5A, 5B ECM

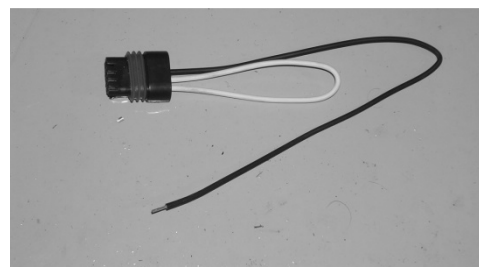


3 Plug Indmar ECM

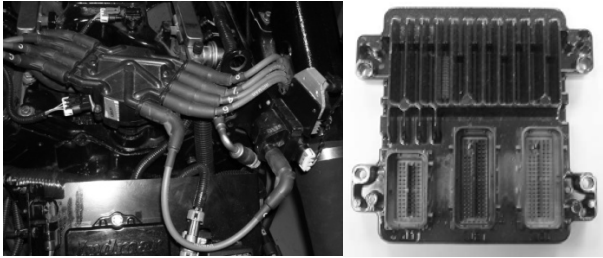


EST Distributor Timing Shunt

(P/N 801012)

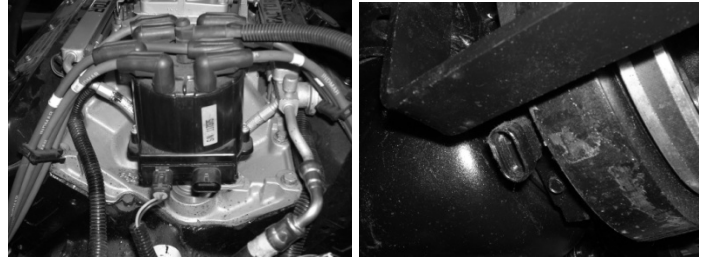


Use HVS Procedure #1 with this setup:



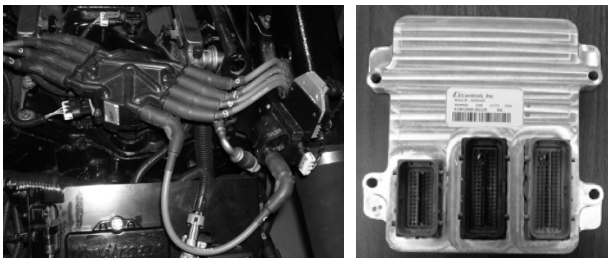
(HVS Distributor with MEFI 5, 5A, 5B)

Use EST Procedure #1 with this setup



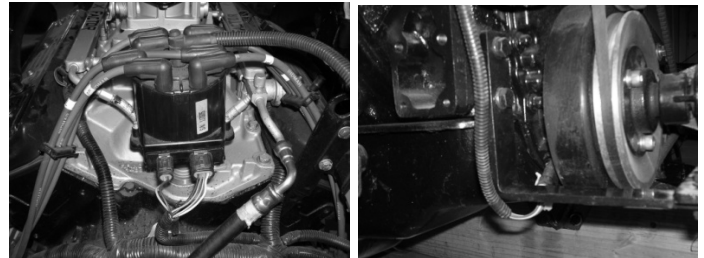
(EST Distributor with no connection to crank sensor)

Use HVS Procedure #2 with this setup:



(HVS Distributor with 3 Plug Indmar ECM)

Use EST Procedure #2 with this setup:



(EST Distributor with connection to crank sensor)

Use HVS Procedure #3 with the setup:



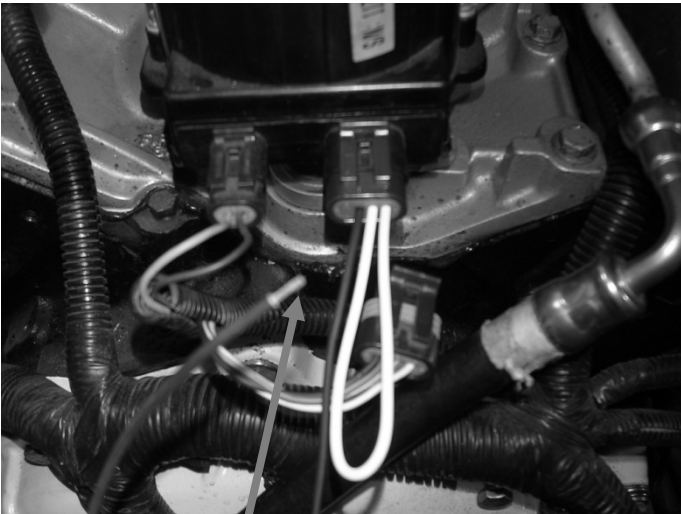
(HVS Distributor with 1 Plug Indmar ECM)

Using the EST Distributor Timing Shunt
(P/N 801012)

1. Disconnect 3 wire connector from distributor Module (if applicable)



2. Plug in Timing Shunt into the Distributor Ignition Module, and connect the black lead to 12Volts Battery Positive



12V +