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## Incorrect Ignition Timing on 3.0L TKS Engines

### Models Affected

Models Covered	Serial Number Or Year
3.0L TKS Sterndrive Engines	2A013726–2A032399

### Scope

Worldwide

### Situation

Base ignition timing for the 3.0L TKS engines was incorrectly set at Mercury Marine. Incorrect ignition timing may cause loss of power or runability issues during predelivery inspection.

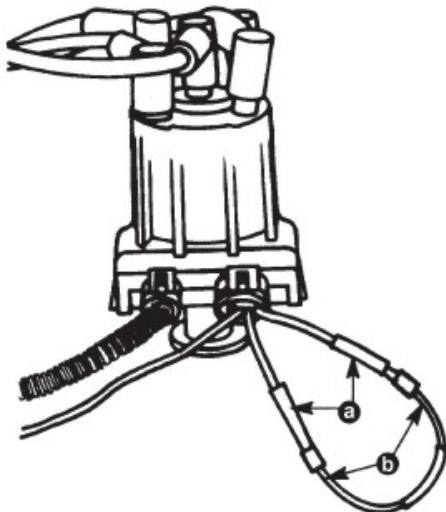
The ignition timing has been set in error to 8–12° after top dead center.

The correct specification for base timing on this engine is 2° after top dead center.

### Inspection/Correction

**NOTE:** The procedures for checking/setting timing and idle speed on this model can also be found in service manual #46.

1. Connect an inductive timing light (Quicksilver part number 91-99379 or similar) to the Number 1 spark plug wire.
2. Start engine and run at idle speed until it reaches normal operating temperature.
3. Install a jumper wire between the two purple/white leads on the distributor. Use Quicksilver part number 91-818812A1 or fabricate a jumper wire using a 6 in. section of 16 gauge wire with two male bullet terminal ends connected.



- a - Purple/white distributor leads
- b - Jumper lead

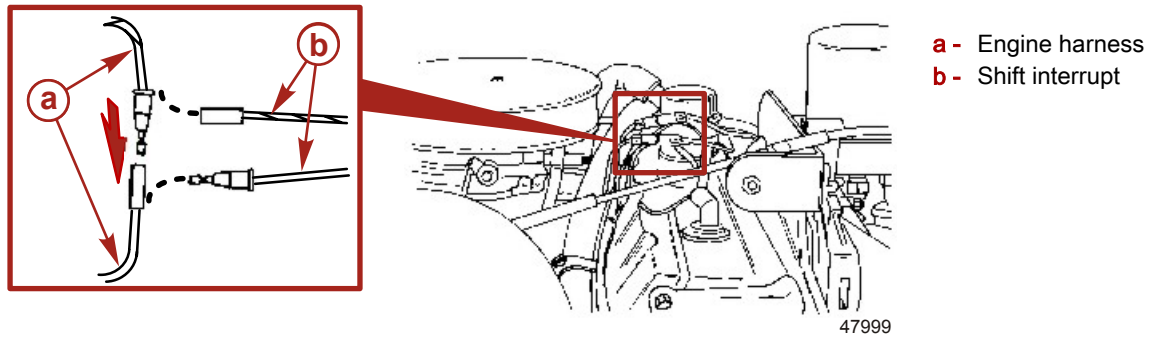
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4. Bypass the shift interrupt switch, as follows:
  - a. Disconnect the bullet connectors from the wires at the shift interrupt switch.

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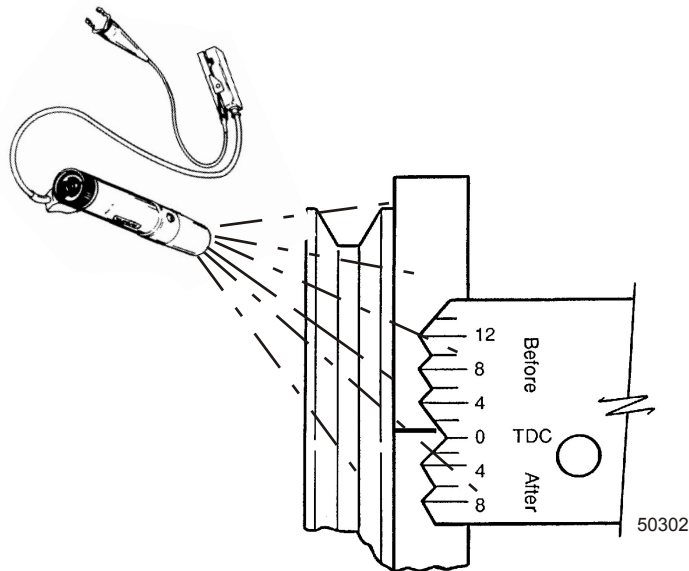
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- b. Temporarily join the two bullet connectors on the engine harness together.



**IMPORTANT:** Do not fail to connect these two wires to the shift interrupt switch when timing procedures are complete.

5. Aim the timing light at the timing tab, located on the timing gear cover and crankshaft torsional damper. Check the timing.



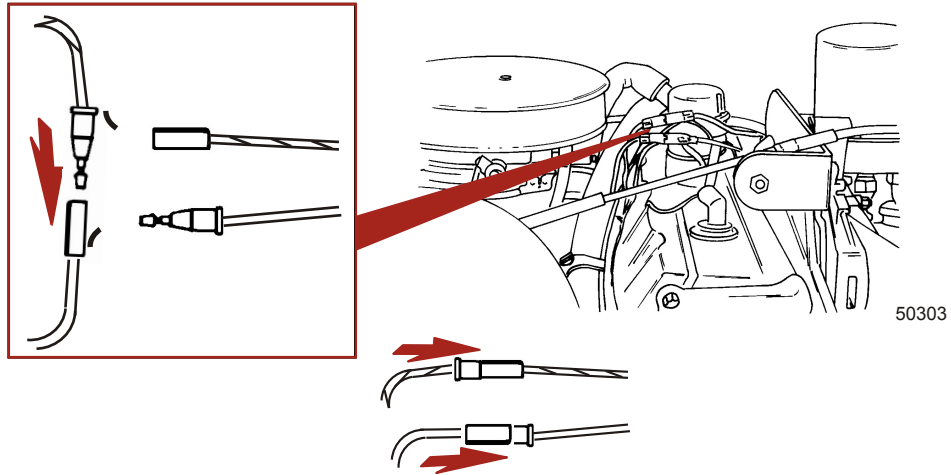
6. **If timing is found to be set at 2° after top dead center** - Shut off the engine and remove the jumper lead from the distributor and connect the shift interrupt switch to the engine harness bullet connectors. Mark with a white paint pen on the top of the coil wire boot at the center post of the distributor cap to indicate that the correct ignition timing has been verified.
7. **If timing is set at 8–12° after top dead center:**
- Loosen the distributor clamp bolt, and rotate the distributor body as required to align the indicator mark on the damper and the 2° after top dead center mark on the timing tab.
  - Tighten distributor clamp bolt.
  - Check location of the timing mark with the timing light.
  - Repeat steps a–c until the timing mark stays at 2° after top dead center.
8. Stop the engine.

Description	Nm	lb-in.	lb-ft
Torque distributor hold down bolt	27	—	20

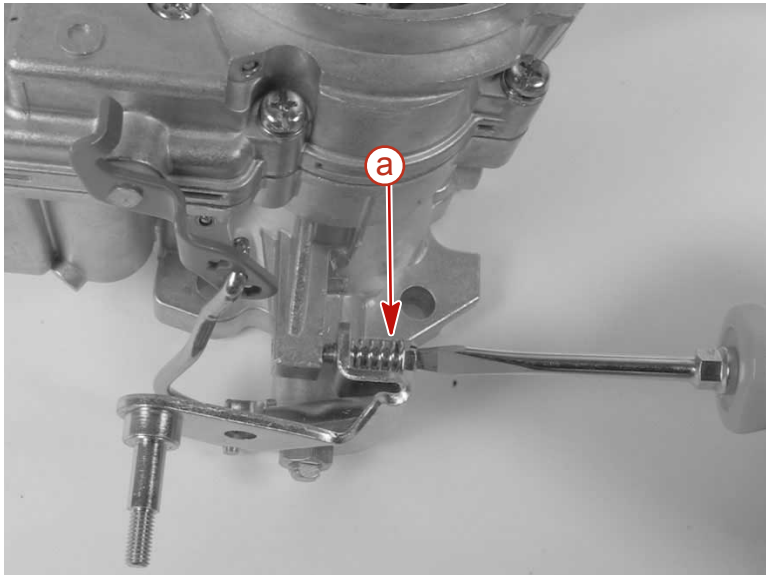
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9. Connect the two wires from the shift interrupt switch to the engine harness bullet connectors.



10. Remove the jumper wire from the two purple/white wires on the distributor.  
**IMPORTANT: Engine must be at operating temperature and boat must be in the water to set the engine idle speed correctly.**
11. Start the engine and adjust the idle speed, using the idle speed set screw, to 650–700 RPM in forward gear.



**a** - Idle speed set screw

12. Make a mark with a white paint pen on the top of the coil wire boot located at the center post of the distributor cap to indicate that the correct ignition timing has been verified.

## Owner Notification

Mercury MerCruiser dealers should contact customers that have purchased product within the affected serial number range of this model to make them aware of this necessary repair and to schedule an appointment to complete this procedure.

## Warranty

**United States and Canada:** Mercury Marine will credit the dealer for the cost of labor and fluids listed. Submit a warranty claim through your normal warranty-processing channel, listing:

- MerCruiser engine serial number
- Labor for resetting engine timing and idle speed use:
  - Labor: 0.5 hour
  - Flat rate code: SB05

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- Part code: 307
- Failure code: 00

**Outside the United States and Canada:** Follow instructions issued by your local office or by your distributor.

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