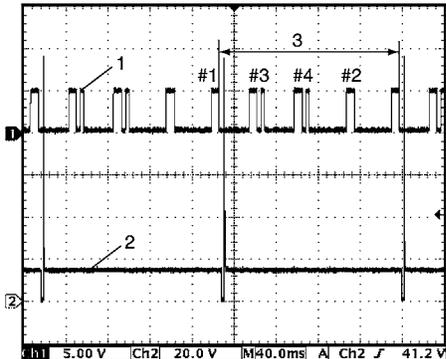


1A-172 Engine General Information and Diagnosis:

Reference waveform No.14

No.4 fuel injector signal (2) with engine idling

Measurement terminal	CH1: "C37-20" to "C37-58" CH2: "C37-17" to "C37-58"
Oscilloscope setting	CH1: 5 V/DIV, CH2: 20 V/DIV TIME: 40 ms/DIV
Measurement condition	<ul style="list-style-type: none"> After warmed up to normal operating temperature Engine at specified idle speed



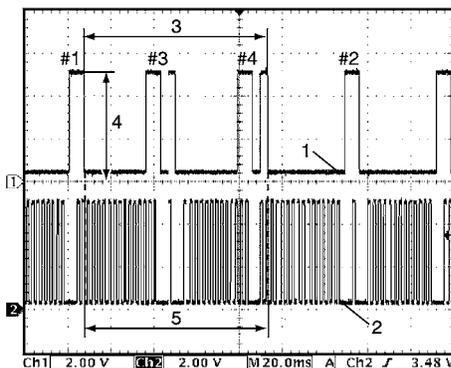
I4RS0A110093-

- | |
|---|
| 1. Cylinder reference signal (CMP reference signal) |
| 3. 720° crank angle |

Reference waveform No.15

CMP sensor signal with engine idling

Measurement terminal	CH1: "C37-20" to "C37-58" CH2: "C37-21" to "C37-58"
Oscilloscope setting	CH1: 2 V/DIV, CH2: 2 V/DIV TIME: 20 ms/DIV
Measurement condition	<ul style="list-style-type: none"> After warmed up to normal operating temperature Engine at specified idle speed



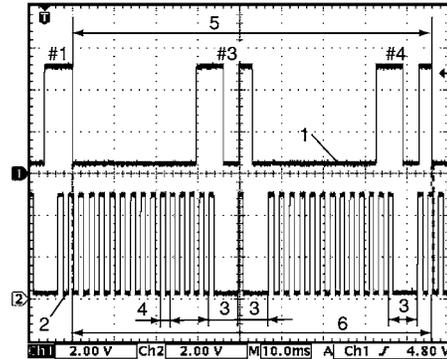
I4RS0A110094-

- | |
|---|
| 1. Cylinder reference signal (CMP reference signal) |
| 2. CKP signal |
| 3. 360° crank angle |
| 4. 4 – 5 V |
| 5. 36 – 6 = 30 CKP pulse |

Reference waveform No.16

CMP sensor signal with engine idling

Measurement terminal	CH1: "C37-20" to "C37-58" CH2: "C37-21" to "C37-58"
Oscilloscope setting	CH1: 2 V/DIV, CH2: 2 V/DIV TIME: 10 ms/DIV
Measurement condition	<ul style="list-style-type: none"> After warmed up to normal operating temperature Engine at specified idle speed



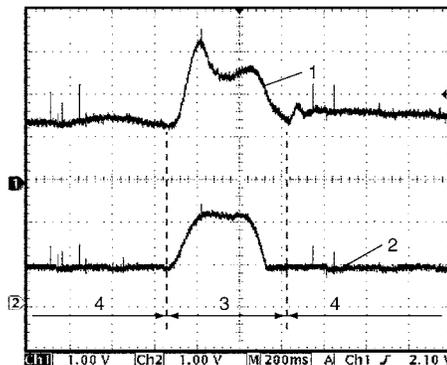
I4RS0A110095-

- | |
|---|
| 1. Cylinder reference signal (CMP reference signal) |
| 2. CKP signal |
| 3. 30° crank angle |
| 4. 10° crank angle |
| 5. 360° crank angle |
| 6. 36 – 6 = 30 CKP pulse |

Reference waveform No.17

Mass air flow sensor signal (1) with engine racing

Measurement terminal	CH1: "C37-26" to "C37-27" CH2: "C37-54" to "C37-55"
Oscilloscope setting	CH1: 1 V/DIV, CH2: 1 V/DIV TIME: 200 ms/DIV
Measurement condition	<ul style="list-style-type: none"> After warmed up to normal operating temperature Engine racing



I4RS0B110066-

- | |
|------------------------------------|
| 2. Throttle position sensor signal |
| 3. Racing |
| 4. Idle |