

# Carburetor

## Idle Control System [4WS]

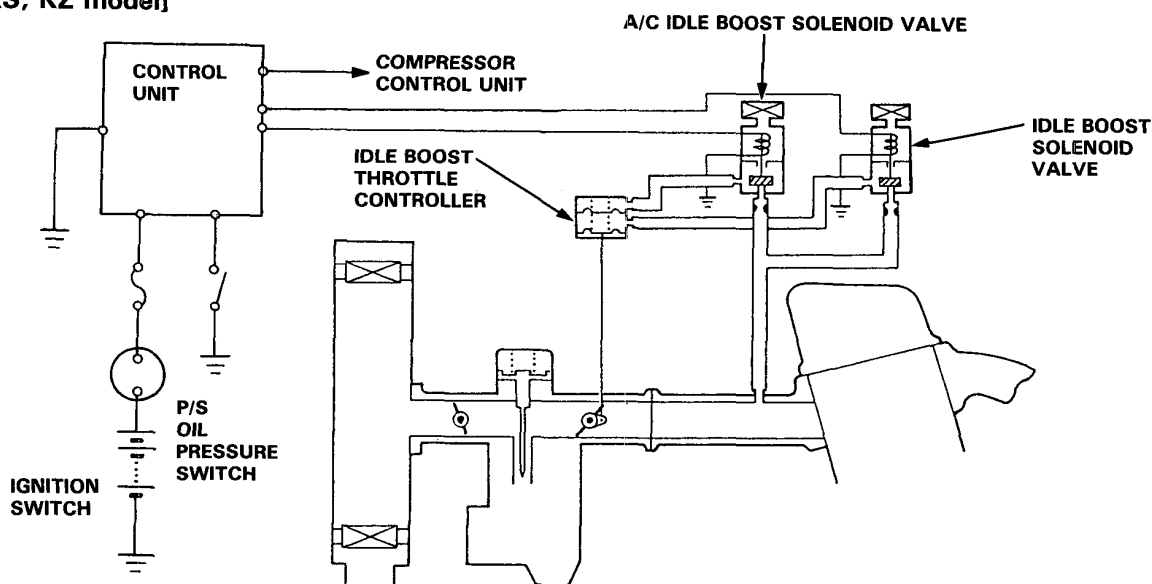
### Description

This system prevents the idle speed from dropping while the steering wheel is turning.

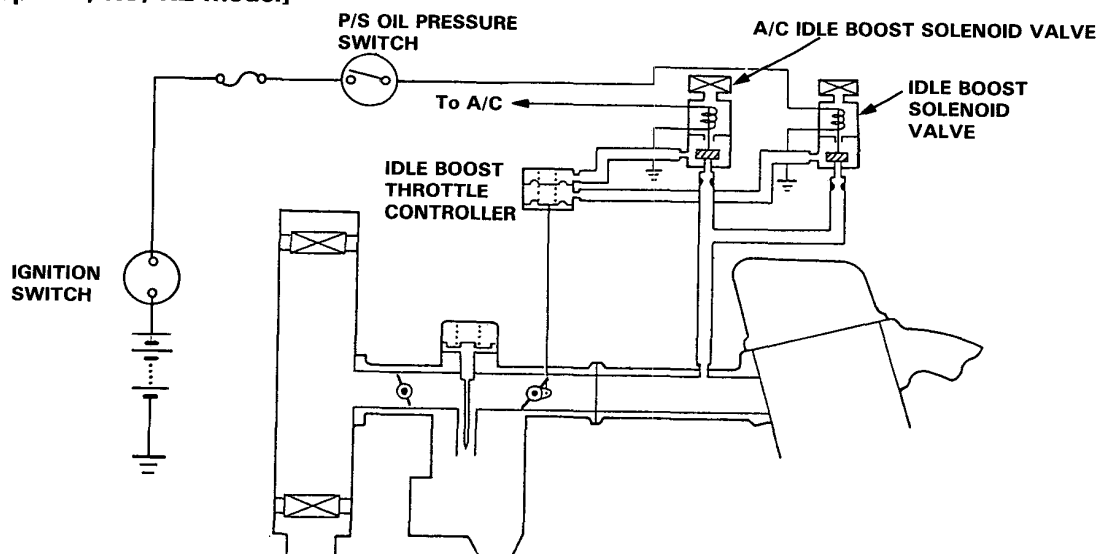
While the steering wheel is turning, manifold vacuum is introduced into the diaphragm chamber of the idle boost controller through the idle boost solenoid valve which is activated by the P/S oil pressure switch. The idle controller's diaphragm rod is retracted to open the throttle valve a certain amount. The amount of this throttle valve opening is adjusted with the idle control screw on the idle controller to maintain the original idle speed.

When the front wheels place in a straight ahead position, the idle boost solenoid valve is deactivated to close the vacuum passage and the vacuum stored in the controller is released through the filter on the solenoid valve.

[KX, KS, KZ model]



[Except KX, KS, KZ model]



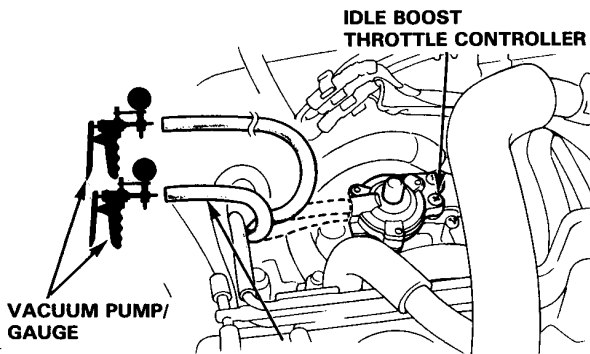


## Testing

### Idle speed too high in no-load conditions

1. Start the engine and warm up to normal operating temperature (the cooling fan comes on).
2. Disconnect the two vacuum hoses from the idle boost throttle controller and check each for vacuum.

There should be no vacuum in both hoses.



- If there is no vacuum, check the throttle valve shaft for binding or sticking, and replace the idle boost throttle controller.
- If there is vacuum at either hose, go to troubleshooting (#21 hose : page 6-15, outside hose: page 6-17).

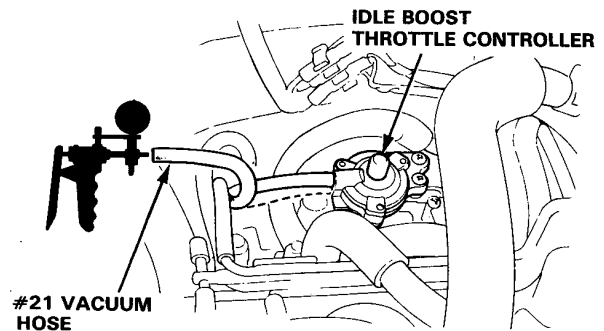
### Idle speed is rough while the steering wheel is turning

1. KX, KS, KZ model: Check the idle speed is above specified in no-load conditions. when the 2P connector on the P/S oil pressure switch is disconnected.

Except KX, KS, KZ model: Disconnect the 2P connector on the P/S oil pressure switch, and connect a jumper wire between the 2 terminals on the wire harness. Then check the idle speed is above specified in no-load conditions.

- If idle speed is as specified in no-load conditions, disconnect the #21 vacuum hose from the idle boost throttle controller and check for vacuum.

There should be vacuum.



- If there is vacuum, check the throttle valve shaft for binding or sticking, and replace the idle boost throttle controller.
- If there is no vacuum, check the vacuum hose for proper connection, cracks, blockage or disconnected hose. If OK, go to troubleshooting (page 6-15).

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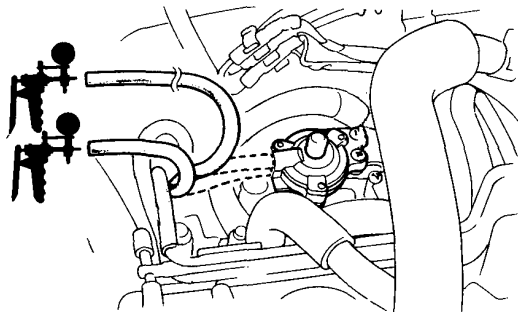
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## Idle Control System [4WS] (cont'd)

Idle speed is low with A/C on

1. Disconnect the two vacuum hoses from the idle boost throttle controller and check each for vacuum with the A/C on.

There should be vacuum in both hoses.



- If there is vacuum, replace the idle boost throttle controller and recheck.
- If there is no vacuum only at the inside hose, go to troubleshooting (page 6-15).
- If there is no vacuum only at the outside hose, go to troubleshooting (page 6-17).



## Idle Control System

### Troubleshooting Flow Chart Idle Boost Solenoid Valve

#### Inspection of Idle Boost Solenoid Valve

Start the engine and warm up to normal operating temperature (the cooling fan comes on).

Disconnect the #21 vacuum hose from the vacuum hose manifold, and connect a vacuum gauge.

Is there vacuum?

YES

Turn the ignition switch OFF.

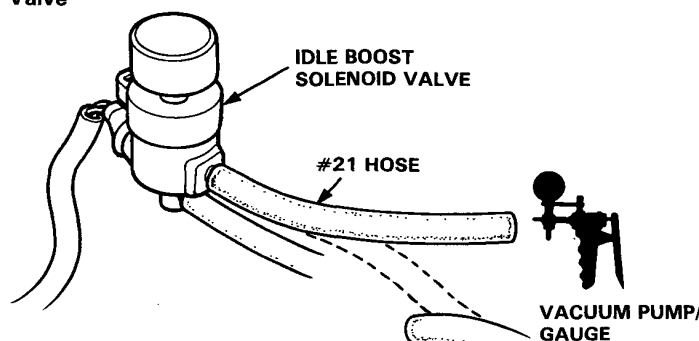
NO

Turn the ignition switch OFF.

KX, KS, KZ model:  
Disconnect the 2P connector on the P/S oil pressure switch.  
Except KX, KS, KZ model:  
Disconnect the 2P connector on the P/S oil pressure switch, and connect a jumper wire between the 2 terminals on the wire harness.

Turn the ignition switch ON.

(To page 6-16)



Except KX, KS, KZ model:

KX, KS, KZ model:  
Disconnect the 2P connector.  
Except KX, KS, KZ model:  
Disconnect the 4P connector.

Start the engine.

Measure voltage between BRN (+) terminal and BLK (-) terminal.

Is there voltage?

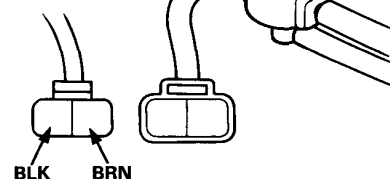
NO

Replace the solenoid valve.

YES

KX, KS, KZ model: Check the self-diagnosis indicator. If OK, check the input troubleshooting (page 6-59).  
Except KX, KS, KZ model:  
Replace the P/S oil pressure switch.

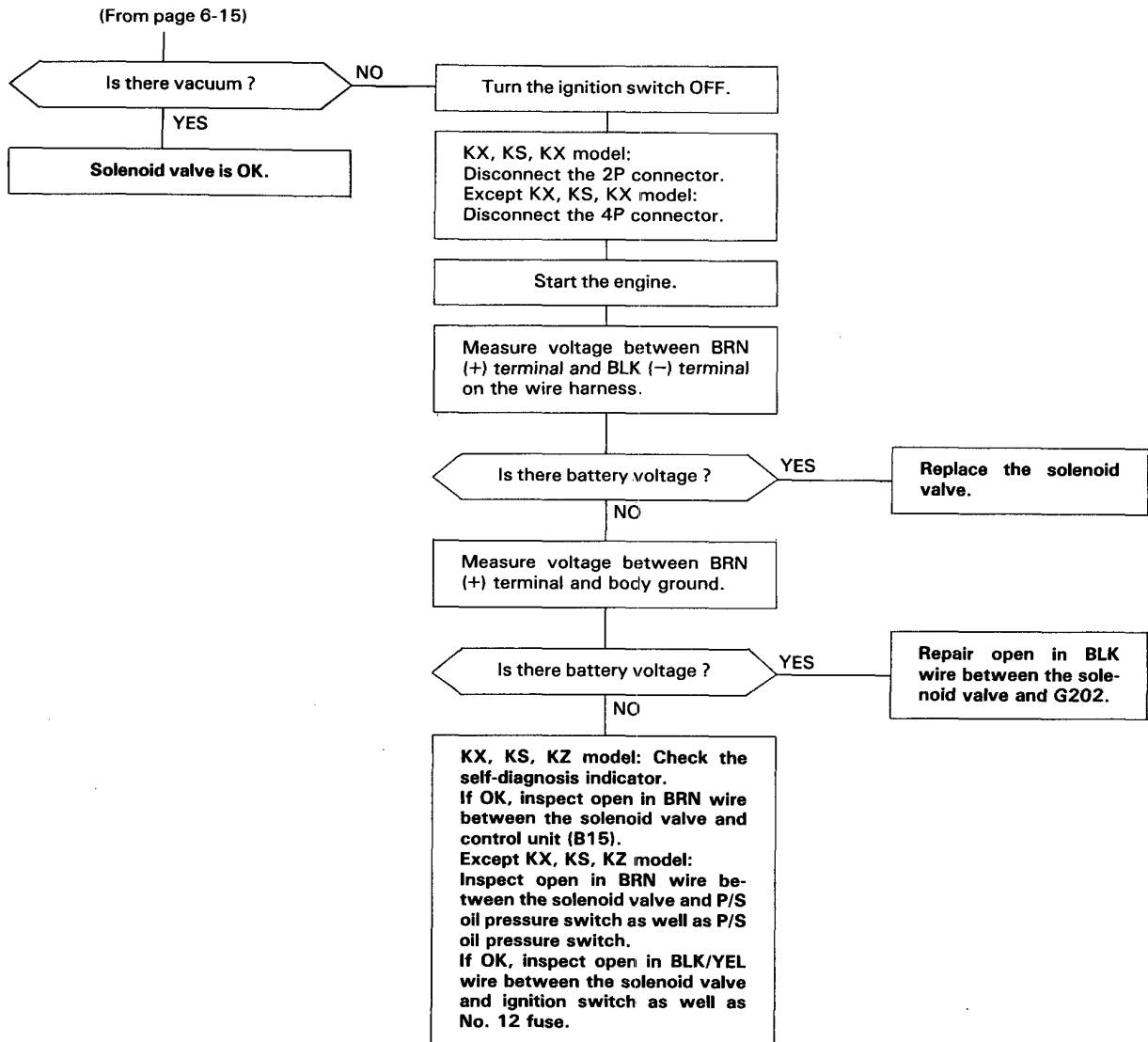
KX, KS, KZ model:



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## Idle Control System [4WS] (cont'd)





## Troubleshooting Flow Chart A/C Idle Boost Solenoid Valve

Inspection of A/C Idle Boost System

Disconnect the upper vacuum hose of the solenoid valve from the idle boost throttle controller and connect a vacuum gauge.

Start the engine and warm up to normal operating temperature (the cooling fan comes on).

Is there vacuum ?

YES

Disconnect the 2P connector near the solenoid valve.

NO

Turn the blower switch ON.

Turn the A/C switch ON.

Is there vacuum ?

NO

Disconnect the 2P connector near the solenoid valve.

YES

A/C Idle Boost solenoid valve and A/C signal are OK.

Measure voltage between RED (+) terminal and body ground.

NO

Is there battery voltage ?

YES

Disconnect the lower vacuum hose from the solenoid valve and connect a vacuum gauge to the disconnected hose.

(To page 6-18)

(To page 6-18)

A/C IDLE BOOST SOLENOID VALVE

VACUUM PUMP/GAUGE

RED BLK

(cont'd)

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## Idle Control System [4WS] (cont'd)

