

1974-79 EXHAUST EMISSION SYSTEMS

Honda Ignition Timing Control

1975-79 Accord, Civic CVCC, Prelude

DESCRIPTION

The 1975-76 ignition timing control system is controlled by engine coolant temperature and manifold vacuum. Ignition timing is either advanced (retarded on automatic transmission equipped models) to reduce oxides of nitrogen (NOx) and hydrocarbon (HC) emissions. System is made up of ignition solenoid valve, thermo sensor, advance/retard vacuum advance diaphragm, check valve (1976 models only), delay valve, and vacuum hoses.

The 1977-79 ignition timing control system is one of three sub-systems of Honda's CVCC system. Combined with the internal distributor centrifugal advance, the ignition timing control system affects the time at which each spark plug fires the air/fuel mixture.

The ignition spark is controlled according to the engine speed, load and coolant temperature. This system is designed to optimize ignition timing during and after engine warm-up to achieve low emission levels, maximum fuel economy and best engine performance.

Although similar in operation, several versions of the ignition timing control system are used on CVCC engine equipped models. For the purpose of this article, the 1977-79 systems will be divided into a Type 1 system or a Type 2 system. See IGNITION TIMING CONTROL SYSTEM APPLICATION table.

OPERATION

IGNITION TIMING CONTROL SYSTEM

1975-76 Automatic Transmission Equipped Models - At temperatures above 149°F (65°C), thermo sensor is open and solenoid is de-energized. This allows manifold vacuum to enter retard side of distributor vacuum diaphragm. This is not continuous, as vacuum bleeds through delay valve. Eventually, valve is tripped and retard vacuum is dumped. At temperatures below 149°F (65°C), no ignition timing retard takes place. Ignition timing is advanced or retarded depending upon vacuum at carburetor ports and delay valve, regardless of engine temperature.

1975-76 Manual Transmission Equipped Models - At temperatures above 149°F (65°C), thermo sensor is open and solenoid is de-energized. This allows vacuum to enter advance diaphragm through delay valve. The amount of vacuum applied to diaphragm is determined by position of throttle valve and engine load. The delay valve allows vacuum to be applied gradually to diaphragm. At temper-

IGNITION TIMING CONTROL SYSTEM APPLICATION

Application	System
1977	
Civic CVCC	
Man. Trans.	Type 1
Auto. Trans.	Type 1
Federal	Type 1
Calif. & High Altitude	Type 2
Accord	
Man. Trans.	Type 1
Auto. Trans.	Type 1
Federal	Type 1
Calif. & High Altitude	Type 2
1978	
Civic CVCC	
Man. Trans.	Type 1
Auto. Trans.	Type 1
Accord	
Man. Trans.	Type 1
Auto. Trans.	Type 1
Federal	Type 1
Calif. & High Altitude	Type 2
1979	
Civic CVCC	
Man. Trans.	Type 1
Auto. Trans.	Type 1
Accord	
Man. Trans.	Type 1
Auto. Trans.	Type 1
Federal	Type 1
Calif. & High Altitude	Type 2
Prelude	
Man. Trans.	Type 1
Auto. Trans.	Type 1
Federal	Type 1
Calif. & High Altitude	Type 2

¹ - California and High Altitude automatic transmission equipped Station Wagons use Type 2 system.

atures below 149°F (65°C), thermo sensor is closed and ignition solenoid is energized. This allows direct vacuum to enter advance diaphragm through check valve.

1977-79 Type 1 System - When coolant is below a preset temperature, the thermo sensor energizes the ignition solenoid valve(s), allowing manifold vacuum to enter distributor advance diaphragm. Manifold vacuum enters advance diaphragm through a delay valve, which restricts vacuum drop that occurs under heavy load or wide open throttle.

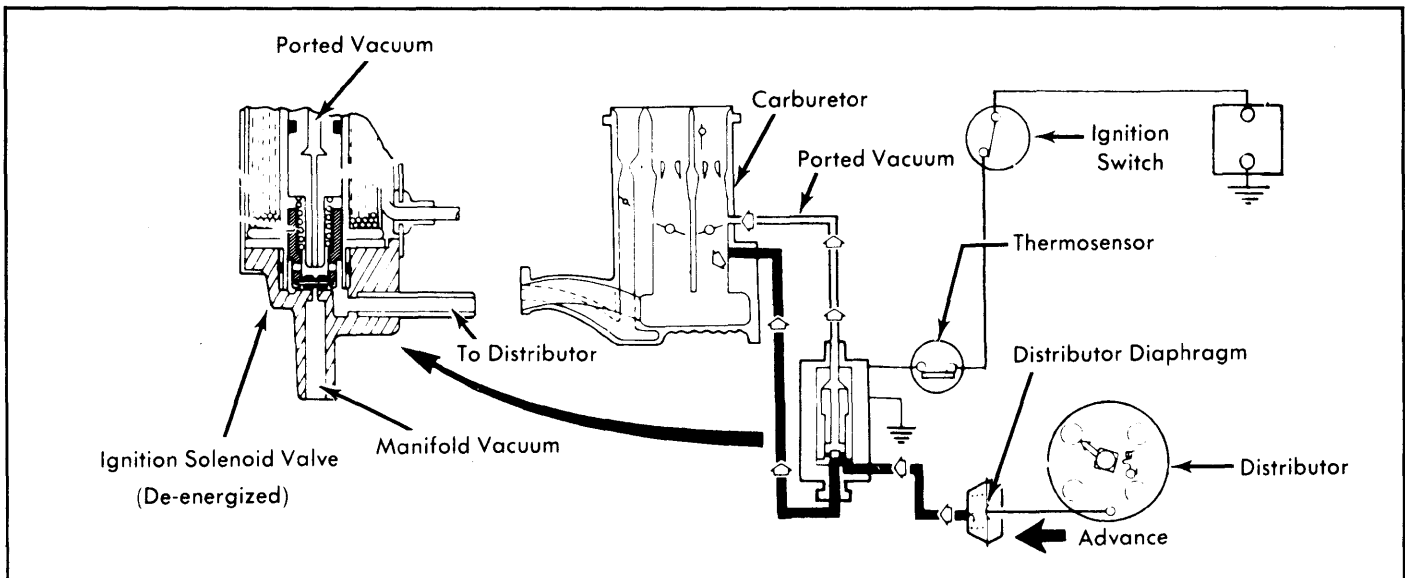


Fig. 1: 1975 Ignition Timing Control System (Man. Trans.)

1974-79 EXHAUST EMISSION SYSTEMS

Honda Ignition Timing Control (Cont.)

When coolant temperature is above the preset value, the thermo sensor de-energizes the ignition solenoid valve(s), allowing carburetor ported vacuum to enter distributor advance diaphragm through a delay valve. The amount of vacuum supplied depends on position of throttle and load of engine. Vacuum is applied very gradually according to characteristics of the delay valve.

1977-79 Type 2 System - When coolant is below a preset temperature, the thermo sensor energizes the ignition solenoid valve(s), allowing manifold vacuum to enter advance side of distributor diaphragm.

When coolant is above the preset temperature, the thermo sensor de-energizes the ignition solenoid valves, causing manifold vacuum to be applied on the retard side of distributor diaphragm. Since manifold vacuum is greatest at small throttle openings, timing retard is greatest at idle.

During cruise, regardless of coolant temperature, carburetor ported vacuum passes through delay valve and vacuum switch to the advance side of distributor diaphragm. When this vacuum reaches the preset level (7.5-8.7 in. Hg), the vacuum switch trips. This dumps the vacuum retard and directs manifold vacuum to the advance side of distributor diaphragm.

TESTING

IGNITION TIMING CONTROL SYSTEM

1975 Models - 1) With engine cold, disconnect vacuum hose from distributor diaphragm. See Figs. 1 and 2. Connect vacuum gauge to vacuum hose and start engine. No vacuum should exist (vacuum should exist on man. trans. equipped models).

2) If correct vacuum reading is not obtained, check voltage at ignition solenoid valve with ignition on. If voltage is present, solenoid valve is defective or vacuum passage is plugged. Repair or replace as necessary.

3) If no voltage is present, check thermo sensor continuity with coolant temperature below 149°F (65°C). If no continuity exists, replace thermo sensor. If continuity exists, check connections, wiring, or fuse. Repair or replace as necessary.

4) Warm engine to normal operating temperature. Connect vacuum gauge to distributor diaphragm vacuum hose. No vacuum should exist (vacuum should exist on auto. trans. equipped models).

5) If correct vacuum reading is not obtained, check thermo sensor continuity. If continuity exists, replace defective thermo sensor. If no continuity exists, replace defective ignition solenoid valve.

6) Increase engine speed to 2000 RPM. Vacuum gauge should indicate vacuum. If not, clean carburetor vacuum port and inspect all vacuum hoses and connections. Repair or replace as necessary.

1976 Manual Transmission Equipped Models - 1) Turn ignition on and disconnect vacuum hose from distributor advance diaphragm (cold engine). Connect hand-held vacuum pump to hose. Apply at least 15 in. Hg of vacuum to diaphragm. Vacuum should not drop more than 0.8 in. Hg in 20 seconds. If it does, go to step 3).

2) If vacuum holds, turn ignition off. Vacuum should drop to zero (0). If vacuum drops as indicated, start engine. Vacuum should appear on vacuum gauge at idle. If not, check vacuum port in carburetor for blockage. See Fig. 3.

3) Disconnect and plug vacuum hose at distributor side of delay valve. Turn ignition on and apply vacuum. If vacuum drops less than 0.8 in. Hg in 20 seconds, replace solenoid valve. If vacuum still drops, replace check valve. Reconnect hose to delay valve and repeat test.

4) Warm engine to normal operating temperature. There should be no vacuum at idle. If no vacuum is present, go to next step. If vacuum is present, check thermo sensor continuity. If continuity exists, replace thermo sensor. If no continuity exists, replace ignition solenoid valve.

5) Connect vacuum gauge to advance diaphragm hose. Raise engine speed to 3000 RPM. Vacuum gauge should indicate more than 2 in. Hg of vacuum after 30 seconds.

6) If vacuum is less than 2 in. Hg, check vacuum at carburetor side of delay valve at 3000 RPM. If vacuum is present, replace delay valve. If no vacuum is present, clean vacuum port at carburetor.

7) Remove delay valve from vehicle. Connect a hand-held vacuum pump to carburetor side of delay valve and apply vacuum to delay valve. On Black/Yellow delay valve, vacuum should decrease from 15 to 5 in. Hg in 3-10 seconds (4-13 seconds on Black/Blue delay valve). If delay time is incorrect, replace valve.

8) Attach hand-held vacuum pump to distributor advance diaphragm and start engine. Apply 15 in. Hg to diaphragm. Ignition should advance. If no advance, replace distributor advance diaphragm.

1976 Automatic Transmission Equipped Models - 1) Connect a vacuum gauge to hose from retard side of distributor diaphragm. Start engine and check for vacuum (engine cold). There should be no vacuum. If vacuum is present, go to step 4).

2) Warm engine to normal operating temperature. With engine at idle, there should be no vacuum. If vacuum is present, disconnect thermo sensor and check sensor continuity. If no continuity exists, reconnect sensor and go to next step.

3) Check voltage at connector Black/Yellow wire. If voltage is present, replace defective vacuum switch. If no voltage is present, check for blocked ignition solenoid valve or blocked vacuum hose. See Fig. 4.

4) Check voltage at ignition solenoid valve (ignition on). If voltage is present, replace ignition solenoid valve. If no voltage is present, check thermo sensor continuity with coolant temperature below 149°F

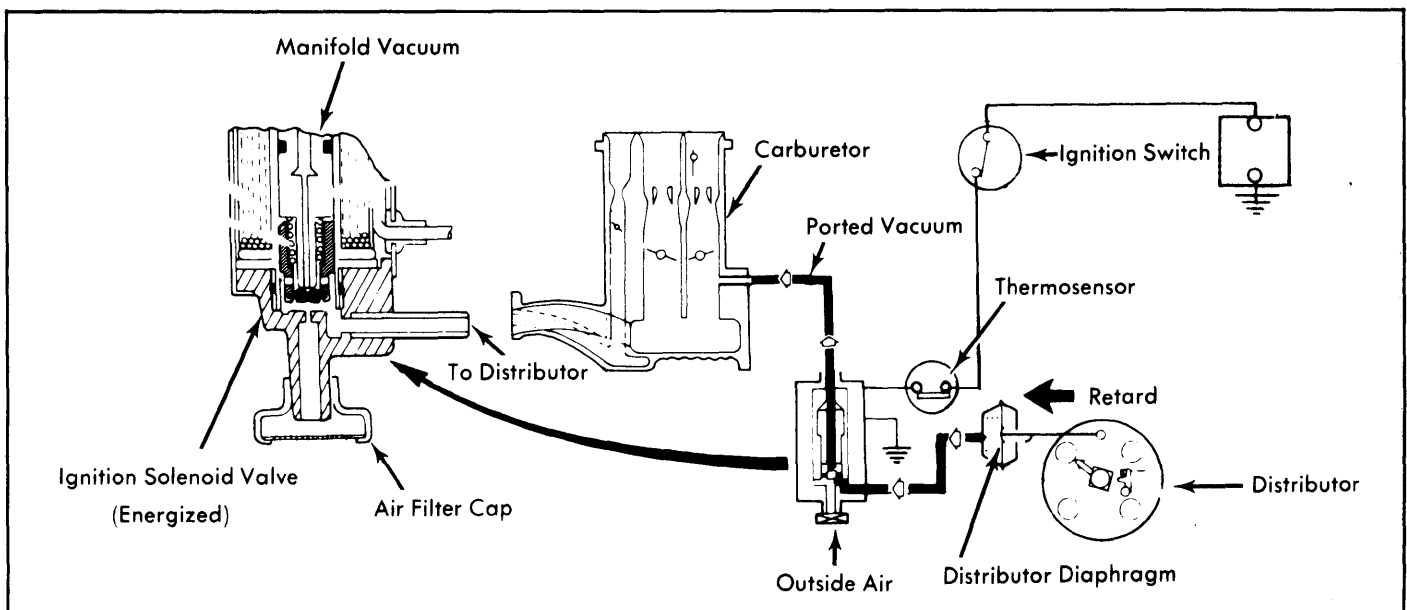


Fig. 2: 1975 Ignition Timing Control System (Auto. Trans.)

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Honda Ignition Timing Control (Cont.)

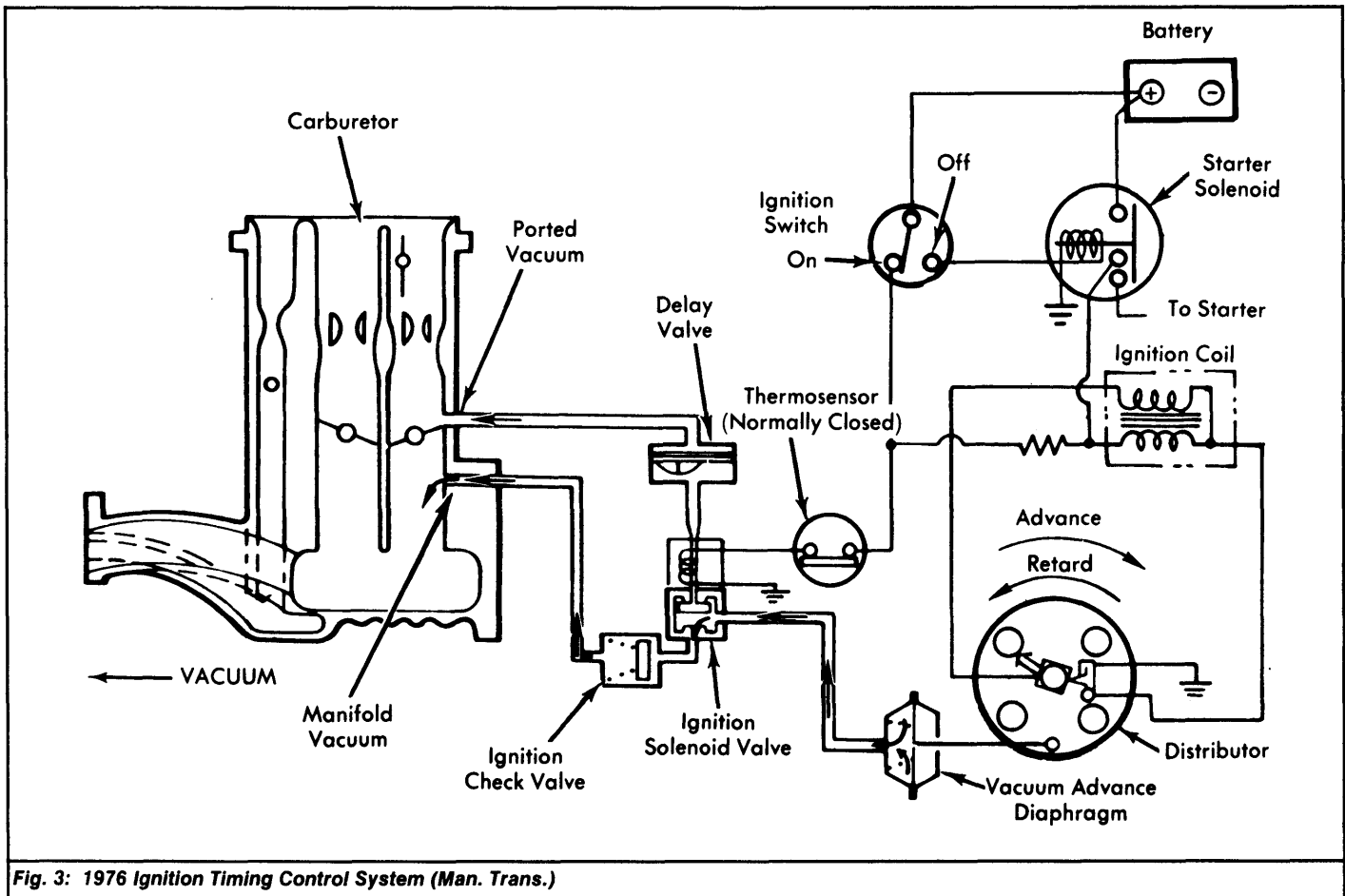


Fig. 3: 1976 Ignition Timing Control System (Man. Trans.)

(65°C). If no continuity exists, replace thermo sensor. If continuity exists, check connections, wiring, or fuse. Repair or replace as necessary.

5) Remove delay valve and replace with a "T" fitting. Connect vacuum gauge to "T" fitting. Start engine and raise RPM until vacuum gauge reads 7.5-8.7 in. Hg. If vacuum reading is low or there is no vacuum, check for plugged vacuum port at carburetor or vacuum leak at advance diaphragm or vacuum switch.

6) With finger placed over retard vacuum hose, vacuum should disappear. If retard vacuum disappears outside specified range, replace vacuum switch. If retard vacuum does not disappear or if vacuum does not reach 7.5-8.7 in. Hg, check for voltage at connector Black/Yellow wire.

7) If no voltage is present, replace vacuum switch. If voltage is present, check voltage at ignition solenoid valve. If voltage is present, replace ignition solenoid valve. If no voltage is present, repair or replace wiring.

8) Remove delay valve from vehicle. Connect a hand-held vacuum pump to carburetor side of delay valve and apply vacuum to delay valve. Vacuum should decrease from 15 to 5 in. Hg in 6-17 seconds. If delay time is incorrect, replace valve.

9) Attach hand-held vacuum pump to distributor advance diaphragm and start engine. Apply 15 in. Hg to diaphragm. Repeat procedure for retard side. Ignition should advance (retard). If no advance (retard), replace distributor advance/retard diaphragm.

1977 Type 1 System - 1) Turn ignition on and disconnect vacuum hose from distributor advance diaphragm (cold engine). Connect hand-held vacuum pump to hose. Apply at least 15 in. Hg of vacuum to diaphragm. Vacuum should not drop for more than 0.8 in. Hg in 20 seconds. If it does, see TROUBLE SHOOTING in this article.

2) If vacuum holds, turn ignition off. Vacuum should drop to zero (0). If vacuum drops as indicated, start engine. Vacuum should appear on

vacuum gauge at idle. If not, check vacuum port in manifold. See Fig. 5.

3) Warm engine to normal operating temperature. Connect "T" fitting and attach vacuum gauge to advance hose. If vacuum is present, go to TROUBLE SHOOTING in this article.

4) If no vacuum is present, raise engine speed to 3000 RPM. Gauge should indicate more than 2 in. Hg within 1 minute. If vacuum is less than 2 in. Hg, check vacuum at carburetor side of delay valve with engine at 3000 RPM.

5) If there is no vacuum at carburetor side of delay valve, clean carburetor vacuum port. If vacuum is present at carburetor side of delay valve, replace delay valve and repeat test.

6) Remove hoses from delay valve and attach a hand-held vacuum pump to valve. Check that there is no restriction when vacuum is applied to distributor side of delay valve.

7) Apply vacuum to carburetor side of delay valve. Vacuum should decrease from 15 to 5 in. Hg in 4-13 seconds. If delay time is incorrect, replace valve and repeat test.

8) Attach hand-held vacuum pump to distributor advance diaphragm and start engine. Apply 15 in. Hg to diaphragm. Ignition should advance. If no advance, replace distributor advance diaphragm.

1977 Type 2 System - 1) Connect a vacuum gauge to hose from retard side of distributor diaphragm. Start engine and check for vacuum (engine cold). There should be no vacuum. If vacuum is present, see TROUBLE SHOOTING in this article.

2) Connect vacuum gauge to hose from advance side of diaphragm. See Fig. 6. Vacuum should be present at idle. If no vacuum is present, see TROUBLE SHOOTING in this article.

3) Warm engine to normal operating temperature. Connect vacuum gauge to hose from retard side of diaphragm. Vacuum should be present at idle. If no vacuum is present, see TROUBLE SHOOTING in this article.

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Honda Ignition Timing Control (Cont.)

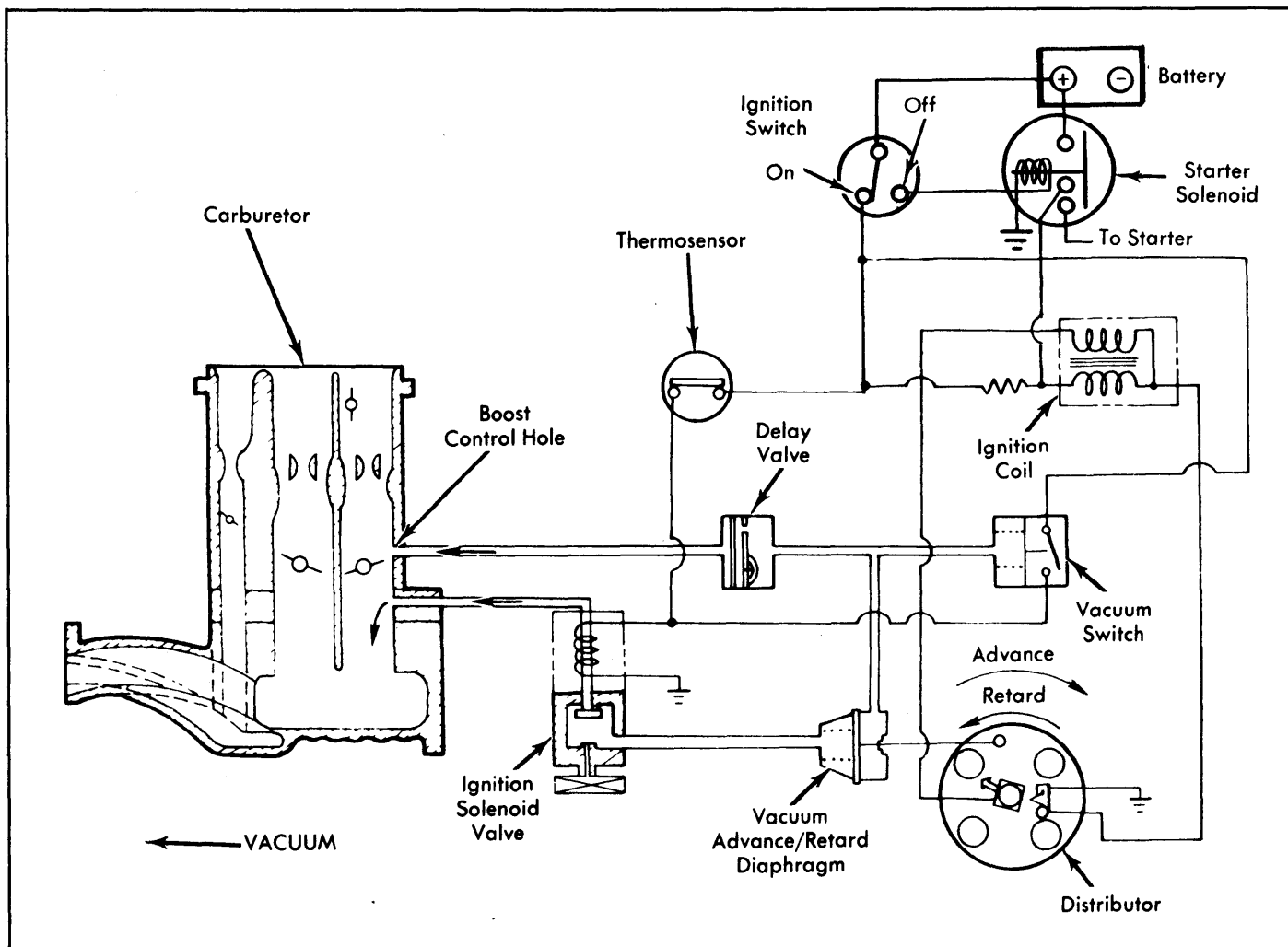


Fig. 4: 1976 Ignition Timing Control System (Auto. Trans.)

- 4) Remove delay valve and, using a "T" fitting, connect vacuum gauge in its place. Start engine and gradually raise engine speed until vacuum level is 7.5-8.7 in. Hg.
- 5) Check that vacuum retard disappears by placing finger over end of retard hose. If retard vacuum disappears outside specified range, replace vacuum switch. If retard vacuum does not disappear or if vacuum does not reach specified level, see TROUBLE SHOOTING in this article.
- 6) Connect a hand-held vacuum pump to distributor side of delay valve. Check that there is no restriction when vacuum is applied to delay valve. If a restriction is found, replace delay valve.
- 7) Apply vacuum to carburetor side of delay valve. Vacuum should decrease from 15 to 5 in. Hg in 6-17 seconds. If time is outside limits, replace delay valve and repeat test.
- 8) Attach hand-held vacuum pump to advance side of distributor diaphragm and start engine. Distributor timing should advance when vacuum is applied. If not, replace diaphragm and repeat test.
- 9) Attach hand-held vacuum pump to retard side of distributor diaphragm and start engine. Timing should retard when vacuum is applied. If not, replace diaphragm and repeat test. Reconnect vacuum hose(s) to original connection(s).

DELAY VALVE LEAK-DOWN SPECIFICATIONS

Color Code	Seconds
Black/Green	5.5-17
Black/Blue	4-13
Black/Yellow	3-8
Black/Gray	3-8

- 1978-79 Type 1 System** - 1) With engine cold, disconnect vacuum hose from advance diaphragm and connect vacuum gauge to hose. See Figs. 7 and 8. Start engine. At idle, at least 12 in. Hg should appear on gauge.
- 2) If not, check hose connections between distributor, emission control box, and carburetor insulator block for blockage. If reading is still incorrect, see TROUBLE SHOOTING in this article.
 - 3) Warm engine to normal operating temperature. There should be no vacuum at idle. If vacuum is present, see TROUBLE SHOOTING in this article.
 - 4) Raise engine speed to 3000 RPM. Gauge should indicate more than 2 in. Hg within 1 minute. If vacuum is less than 2 in. Hg, check vacuum at carburetor side of delay valve with engine at 3000 RPM.
 - 5) If there is no vacuum, clean carburetor vacuum port. If vacuum is present, replace delay valve and repeat test. On 1978 automatic transmission equipped Civics, see TROUBLE SHOOTING in this article. On all other models, reconnect distributor vacuum advance hose.
 - 6) Remove hoses from delay valve and attach a hand-held vacuum pump to valve. Check that there is no restriction when vacuum is applied to the manifold side of Black/Gray delay valve or the distributor side of all other delay valves.
 - 7) Apply vacuum to distributor side of the Black/Gray delay valve or carburetor side of all other delay valves. Vacuum should decrease from 15 to 5 in. Hg in time shown in DELAY VALVE LEAK-DOWN SPECIFICATIONS table. If delay time is incorrect, replace valve and repeat test.
 - 8) Attach hand-held vacuum pump to distributor advance and start engine. Pull 15 in. Hg. Ignition should advance. If no advance, replace distributor advance diaphragm.

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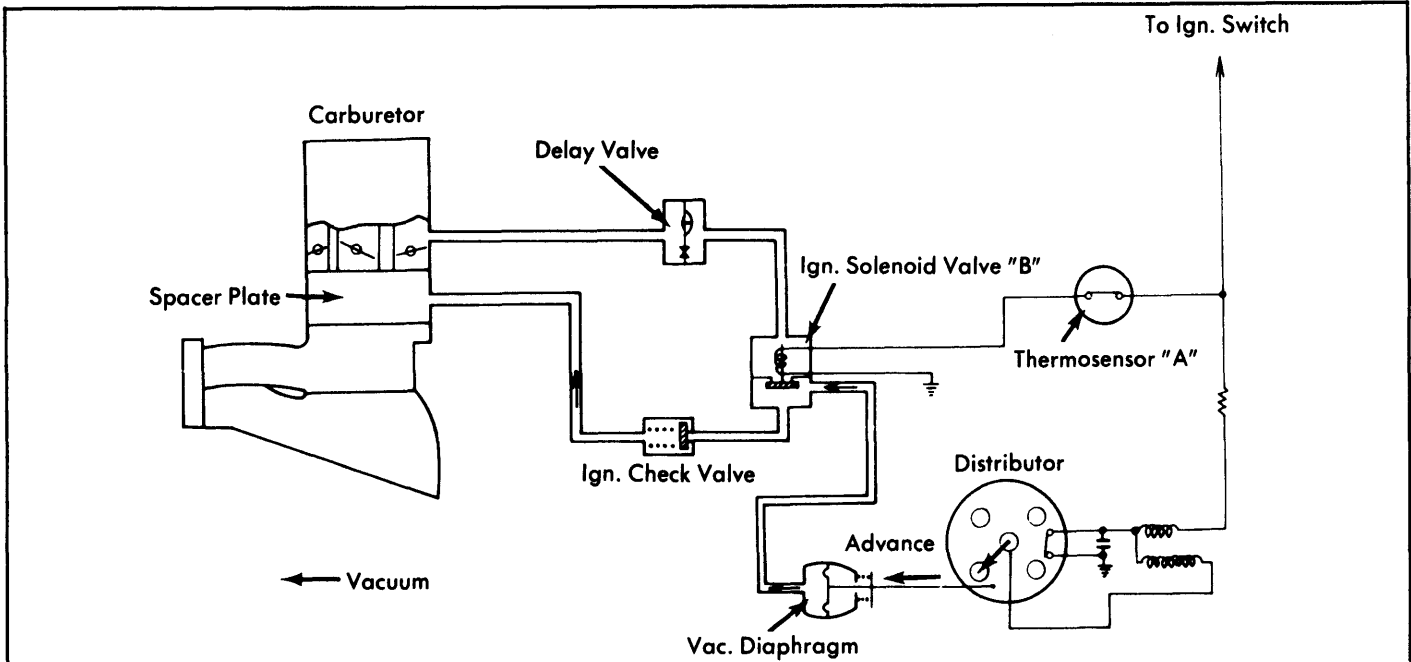


Fig. 5: 1977 Type 1 Ignition Timing Control System (All Man. Trans. & Federal Auto. Trans. Equipped Models)

1978-79 Type 2 System - 1) Connect a vacuum gauge to hose from retard side of distributor diaphragm. See Figs. 9 and 10. Start engine and check for vacuum (engine cold). There should be no vacuum. If vacuum is present, see TROUBLE SHOOTING in this article.
 2) Connect vacuum gauge to hose from advance side of diaphragm. Vacuum should be present at idle. If no vacuum is present, see TROUBLE SHOOTING in this article.
 3) Warm engine to normal operating temperature. Connect vacuum gauge to hose from retard side of diaphragm. Vacuum should be present at idle. If no vacuum is present, see TROUBLE SHOOTING in this article.

4) Connect vacuum gauge to hose from advance side of diaphragm. There should be no vacuum at idle. If vacuum is present, see TROUBLE SHOOTING in this article.
 5) Remove delay valve and, using a "T" fitting, connect vacuum gauge in its place. Start engine and gradually raise engine speed until vacuum level is 7.5-8.7 in. Hg.
 6) Check that vacuum retard disappears by placing finger over end of retard hose. If retard vacuum disappears outside specified range, replace vacuum switch.
 7) If retard vacuum does not disappear or if vacuum does not reach specified level, see TROUBLE SHOOTING in this article.

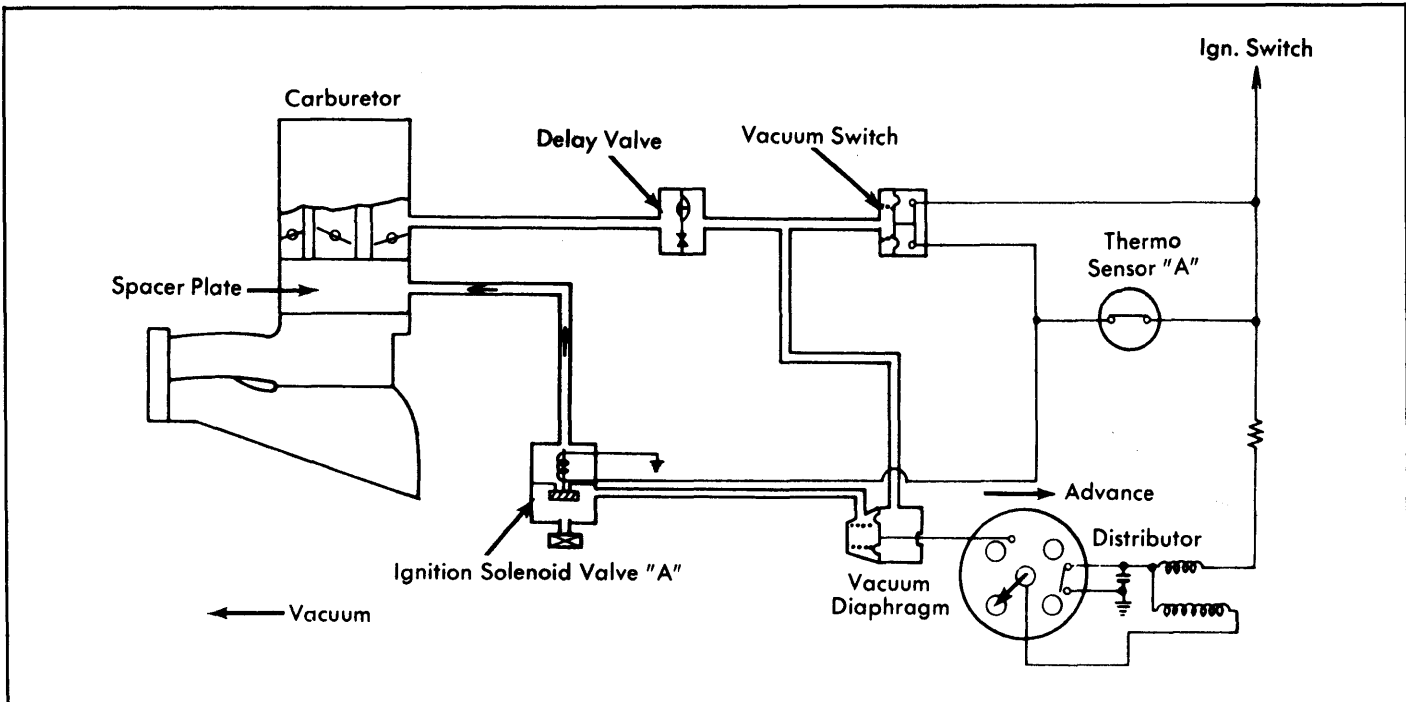


Fig. 6: 1977 Type 2 Ignition Timing Control System (California & High Altitude Auto. Trans. Equipped Models)

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Honda Ignition Timing Control (Cont.)

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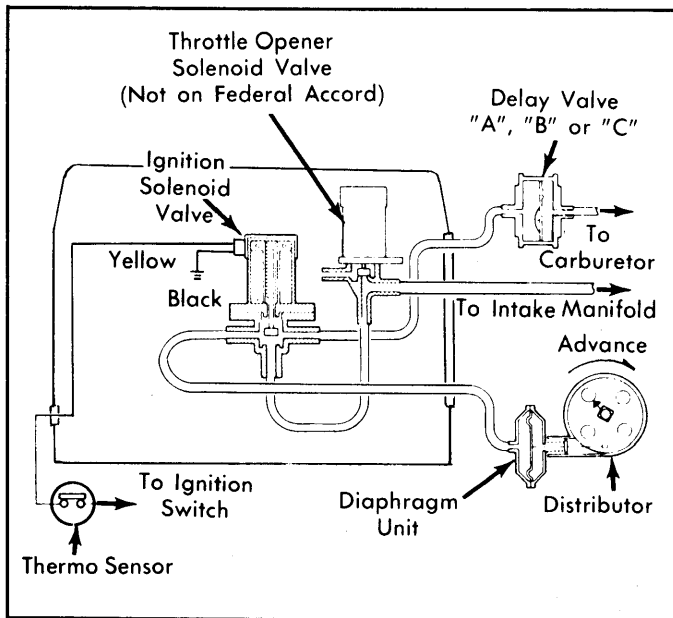


Fig. 7: 1978 Ignition Timing Control System (All Man. Trans. Models & Federal Auto. Trans. Equipped Accord)

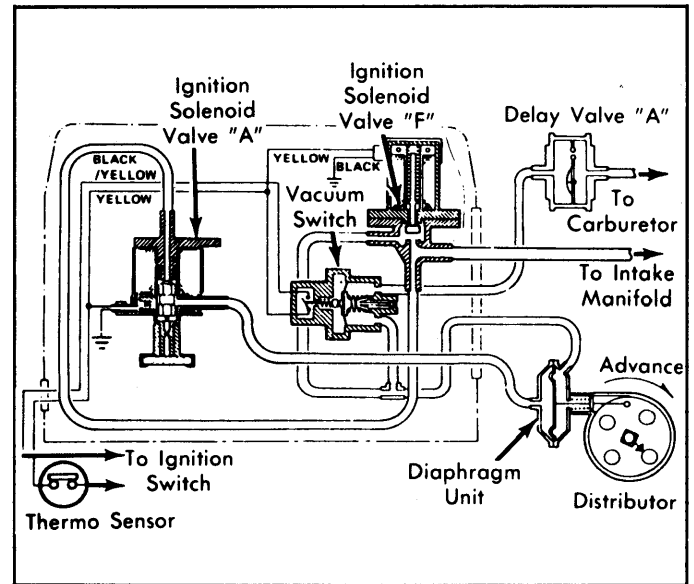


Fig. 9: 1978 Ignition Timing Control System (High Altitude & California Auto. Trans. Equipped Accord)

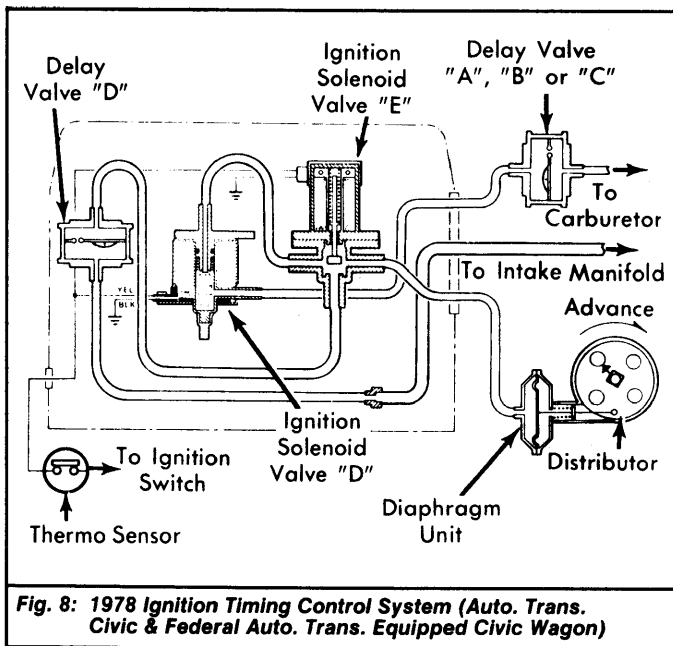


Fig. 8: 1978 Ignition Timing Control System (Auto. Trans. Civic & Federal Auto. Trans. Equipped Civic Wagon)

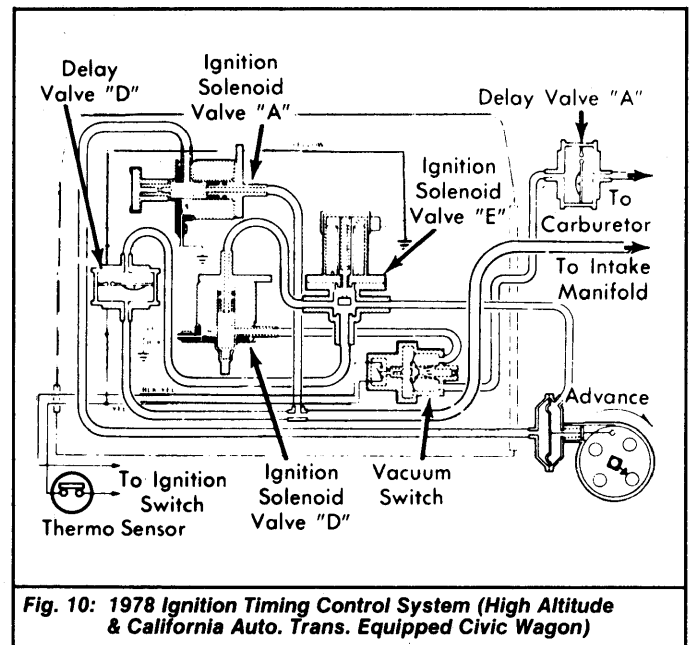


Fig. 10: 1978 Ignition Timing Control System (High Altitude & California Auto. Trans. Equipped Civic Wagon)

8) Connect a hand-held vacuum pump to delay valve. Plug one end of valve, apply vacuum, and check for leaks. If any leaks are found, replace delay valve.

9) Check that there is no restriction when vacuum is applied to distributor side of delay valve. If a restriction is found, replace delay valve.

10) Apply vacuum to carburetor side of delay valve. Vacuum should decrease from 15 to 5 in. Hg in time specified in DELAY VALVE LEAK-DOWN SPECIFICATIONS table. If time is outside limits, replace delay valve and repeat test.

11) Attach hand-held vacuum pump to advance side of distributor diaphragm and start engine. Distributor timing should advance when vacuum is applied. If not, replace diaphragm and repeat test.

12) Attach hand-held vacuum pump to retard side of distributor diaphragm and start engine. Timing should retard when vacuum is applied. If not, replace diaphragm and repeat test. Reconnect vacuum hose(s) to original connection(s).

TROUBLE SHOOTING

VACUUM HOSE AT DISTRIBUTOR DOES NOT HOLD VACUUM

1977 Type 1 System – Turn ignition on. Remove and plug distributor vacuum hose to delay valve. Apply vacuum to distributor vacuum hose. If vacuum drop is now less than 0.8 in. Hg in 20 seconds, replace ignition solenoid valve. If vacuum still drops, replace ignition check valve. Reinstall vacuum hose to delay valve and repeat test.

NO VACUUM AT ADVANCE HOSE AT IDLE

1978-79 Type 1 System (Except Auto. Trans. Civic) – 1) Check for voltage at ignition solenoid valve. If no voltage exists at solenoid valve, check connections and thermo sensor continuity. If there is no continuity, replace thermo sensor and recheck.

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Honda Ignition Timing Control (Cont.)

2) If voltage is present at solenoid valve, remove and plug hose at distributor side of delay valve. With ignition on, apply vacuum to distributor advance hose. Gauge should not hold vacuum.

3) On 1978 models, replace ignition solenoid valve if gauge holds vacuum. Reinstall vacuum hose to delay valve and recheck. On 1979 models, reconnect hose to delay valve and check for vacuum leak between advance diaphragm and intake manifold.

VACUUM APPEARS AT IDLE WHEN ENGINE IS AT NORMAL OPERATING TEMPERATURE

1977 Type 1 System – Check thermo sensor continuity. If continuity exists, replace defective thermo sensor and repeat test. If no continuity exists, replace defective ignition solenoid valve and repeat test.

1978-79 Type 1 System (Except Auto. Trans. Civic) – Check thermo sensor continuity. If continuity exists, replace defective thermo sensor and repeat test. If no continuity exists, replace defective ignition solenoid valve and repeat test.

1978-79 Type 1 System (Auto. Trans. Civic) – Check thermo sensor continuity. If continuity exists, replace defective thermo sensor and repeat test. If no continuity exists, replace defective ignition solenoid valve "E" and repeat test.

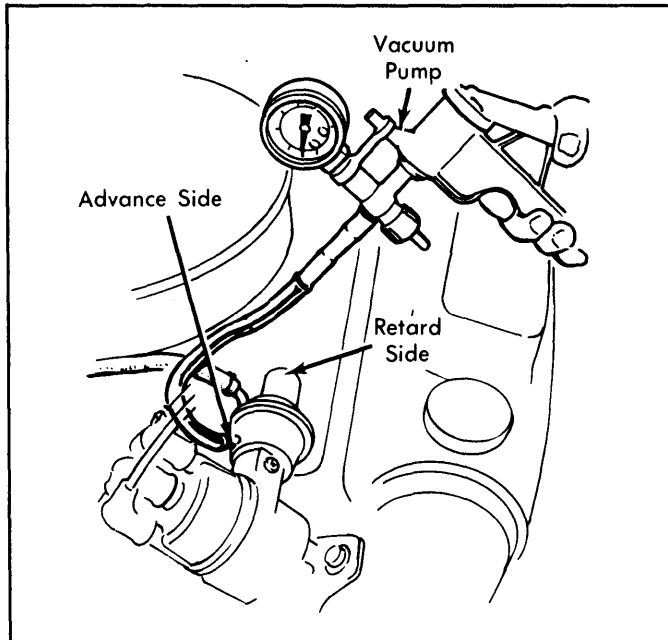


Fig. 11: Testing Distributor Advance/Retard Diaphragm

LESS THAN 12 IN. HG AT ADVANCE HOSE AT IDLE

1978-79 Type 1 System (Auto. Trans. Civic) – 1) Check thermo sensor continuity. If no continuity exists, replace thermo sensor and retest.

2) Pinch vacuum hose between carburetor and delay valve and check for vacuum at distributor advance hose. If more than 12 in. Hg of vacuum, check for voltage at ignition solenoid valve "D".

3) If voltage is present, replace faulty ignition solenoid valve and retest. If no voltage is present, check connections and wiring.

4) If there is still less than 12 in. Hg of vacuum, disconnect vacuum hose between Black/Gray delay valve and ignition solenoid valve "E" and check for vacuum. If less than 12 in. Hg of vacuum, replace Black/Gray delay valve and repeat test.

5) If more than 12 in. Hg of vacuum, check for battery voltage at ignition solenoid valve "E". If no voltage is present, check connections and wiring. If voltage is present, replace solenoid valve "E" and retest.

NO VACUUM AT ADVANCE DIAPHRAGM AT 3000 RPM

1978-79 Type 1 System (Auto. Trans. Civic) – Disconnect hose from Black/Green delay valve to solenoid valve "D" at solenoid valve and check for vacuum. If vacuum is present, replace ignition solenoid valve "D" and retest. If vacuum is less than 2 in. Hg, replace Black/Green delay valve and repeat test.

VACUUM PRESENT AT RETARD SIDE OF DISTRIBUTOR WITH COLD ENGINE AT IDLE

1977-79 Type 2 System (All Models) – 1) With ignition on, check voltage at ignition solenoid valve "A" (valve "D" on 1979 Accord and Prelude). If voltage is present, replace defective ignition solenoid valve and repeat test.

2) If no voltage is present, check thermo sensor continuity with engine cold and electrical leads disconnected. If no continuity exists, replace defective thermo sensor and repeat test. If continuity exists, check connections, wiring, or fuse. Repair or replace as necessary and repeat test.

VACUUM PRESENT AT ADVANCE SIDE OF DISTRIBUTOR WITH COLD ENGINE AT IDLE

1977 Type 2 System (Civic Only) – 1) Check for proper vacuum hose routing. Check voltage at ignition solenoid valve "B". If voltage is present, go to step 3).

2) If no voltage is present, check thermo sensor continuity with engine cold and electrical leads disconnected. If no continuity exists, replace defective thermo sensor and repeat test. If continuity exists, check connections, wiring, or fuse. Repair or replace as necessary and repeat test.

3) Check for vacuum at ignition check valve. If no vacuum is present, check valve or hoses may be blocked or broken. Repair or replace as necessary. If vacuum is present, replace ignition solenoid valve "B" and retest.

NO VACUUM AT ADVANCE SIDE OF DISTRIBUTOR WITH COLD ENGINE AT IDLE

1978-79 Type 2 System (Accord & Prelude) – 1) Check for proper vacuum hose routing. Check voltage at ignition solenoid valve "F" (valve "C" on 1979 Accord and Prelude). If voltage is present, go to step 3).

2) If no voltage is present, check thermo sensor continuity with engine cold and electrical leads disconnected. If no continuity exists, replace defective thermo sensor and repeat test. If continuity exists, check connections, wiring, or fuse. Repair or replace as necessary and repeat test.

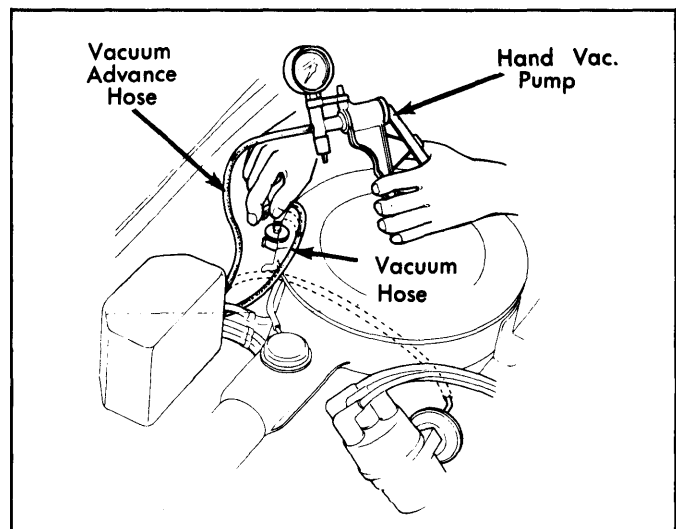


Fig. 12: Applying Vacuum At Distributor Vacuum Line

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3) Check for vacuum at solenoid valve "F" (valve "C" on 1979 Accord and Prelude). If no vacuum is present, hoses may be blocked or broken. Repair or replace as necessary. If vacuum is present, replace ignition solenoid valve and retest.

1978-79 Type 2 System (Civic) - 1) Check for proper vacuum hose routing. Check voltage at solenoid valves "E" and "D". If no voltage is present, check wiring and connections back to thermo sensor. If voltage is present, pinch hose between carburetor and delay valve.

2) Check for vacuum at advance hose. If vacuum is more than 12 in. Hg, replace solenoid valve "D" and retest. If vacuum is still less than 12 in. Hg, replace solenoid valve "E" and repeat test.

NO VACUUM AT RETARD OR ADVANCE SIDE OF DISTRIBUTOR DIAPHRAGM WITH HOT ENGINE AT IDLE

1977 Type 2 System (All Models) - 1) Check thermo sensor continuity. If continuity exists, replace defective thermo sensor and repeat test. If no continuity exists, reconnect thermo sensor.

2) Check voltage at connector Yellow wire. If voltage is present, replace defective vacuum switch and repeat test.

3) If no voltage is present and there is no vacuum retard (Civic only), check for blocked vacuum port or blocked ignition solenoid valve "A". Repair and repeat test.

4) If no voltage is present and there is vacuum advance (Civic only), replace solenoid valve "B" and repeat test.

1978-79 Type 2 System (All Models) - 1) Check thermo sensor continuity. If continuity exists, replace defective thermo sensor and repeat test. If no continuity exists, reconnect thermo sensor.

2) Check voltage at connector Yellow wire. If voltage is present, replace defective vacuum switch and repeat test.

3) If no voltage is present and there is no vacuum retard, check for blocked vacuum port or blocked ignition solenoid valve "A" (valve "D" on 1979 Accord and Prelude). Repair and repeat test.

4) If no voltage is present and there is vacuum advance, replace solenoid valve "E" on Civic or valve "F" on Accord and Prelude (valve "C" on 1979 Accord and Prelude) and repeat test.

RETARD VACUUM DOES NOT SHUT OFF WHEN VACUUM REACHES 7.5-8.7 IN. HG OF VACUUM

1978-79 Type 2 System (All Models) - 1) Check for voltage at emission control box connector Black/Yellow wire while holding advance vacuum at 8.7 in. Hg.

2) If no voltage is present, check wiring and fuses. If voltage is present, check for voltage at Yellow wire of ignition solenoid valve "A" (valve "D" on 1979 Accord and Prelude).

3) If voltage is not present at Yellow wire, replace solenoid valve "A" (valve "D" on 1979 Accord and Prelude). If no voltage is present, check wiring and vacuum switch. Repair or replace as necessary.

4) If no or low vacuum is indicated on gauge, check for plugged carburetor port and leaks in advance diaphragm or vacuum switch.

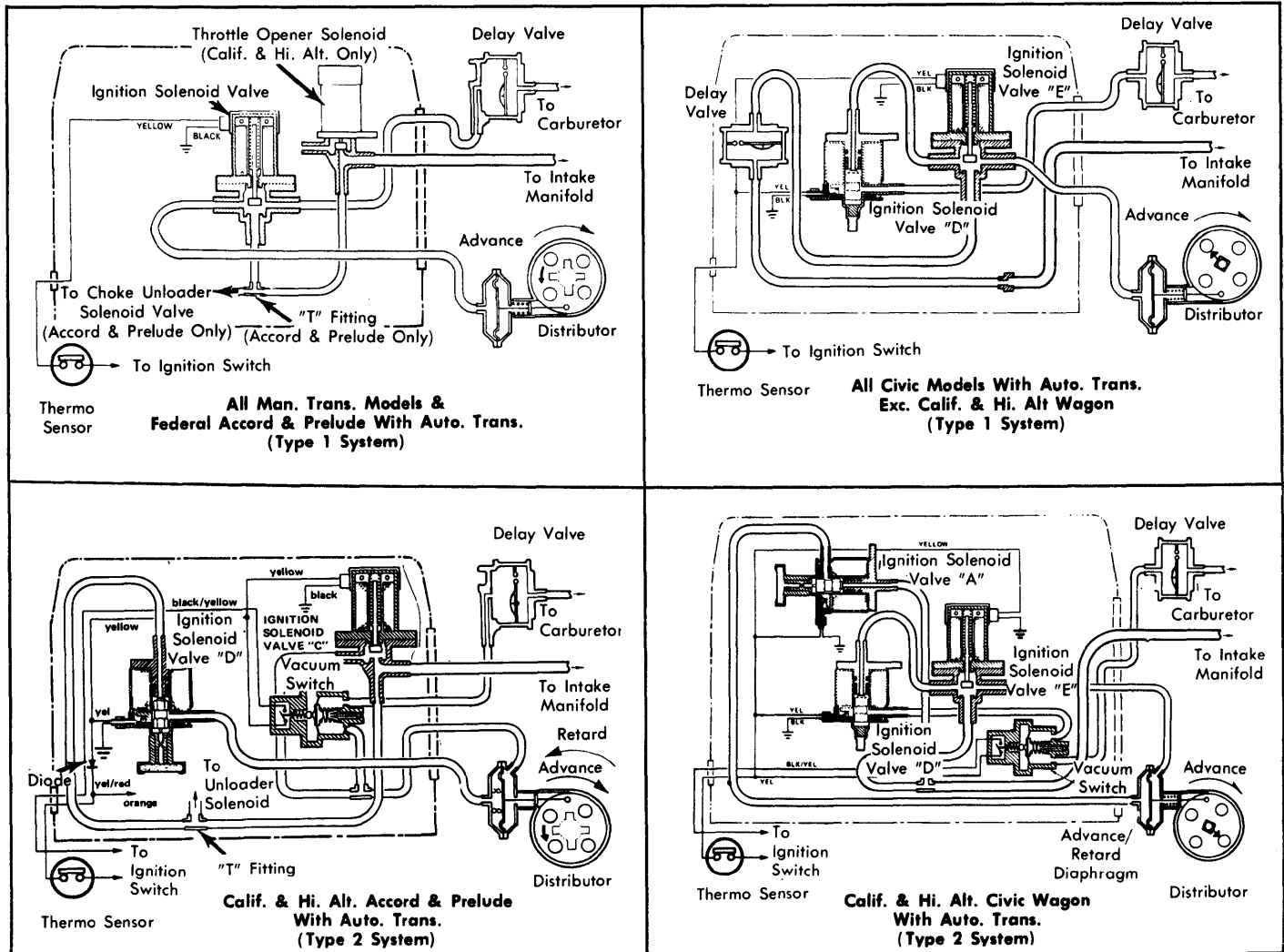


Fig. 13: 1979 Ignition Timing Control System Schematics