Dual Fuel / Two-Stage Gas Valve Adjustment

The following highlights from the gas valve adjustment procedure briefly state the required adjustment sequence for obtaining the approximate proper pressure regulation. The installer is required to adjust the low-fire setting and then the high-fire setting in this order. After the gas valve pre-adjustment, the final operational adjustment may be performed during operation for fine tuning the manifold settings.

The instructions note the technique of adjusting the gas valve for LP use that requires pre-adjusting the manifold settings without pressure on the valve (More details on page 2).

1). Manifold pressure tap.
2). Low fire adjustment (under cap).
3). High fire adjustment (under cap).

Note; all Carrier 90% plus, 2 stage LP gas furnace installations require the use of a low gas pressure switch.

The switch, street elbow and nipple are ordered separately and installed into the supply pressure port. Switch part number is **HK021B018**. The pipe nipple part number is **S18112BIN**. The street 90 Part number is **S18SE**.

**It is recommended:** any furnace with a heat-exchanger failure on LP gas have the pressure switch added at the time of the heat-exchangers replacement (in the past it was not required).
HIGHLIGHTS
From The LP Gas Valve Adjustment Procedure
1. Be sure gas and electrical supplies to furnace are off.
2. Remove caps that conceal adjustment screws for high- and low-heat stage gas valve regulations.
3. Turn low-heat stage adjusting screw (5/64-in. hex allen wrench) clockwise (in) 1 full turn. This will increase the manifold pressure closer to the propane low-heat set point.
4. Turn high-heat stage adjusting screw (5/64-in. hex allen wrench) clockwise (in) 2 full turns. This will increase the manifold pressure closer to the propane high-heat set point.
5. Replace caps that conceal gas valve regulator adjustment screws.

For your safety read the entire set of instructions applicable to the furnace model being serviced noting warnings and cautions before performing the LP Conversion.

Caution: The gas valve must be pre-adjusted before operating on propane gas. Failure to follow this caution could result in excess under fire and flashback. If left this way sooting and corrosion will occur leading to early heat exchanger failure.

CONSEQUENCES OF IMPROPER ADJUSTMENT
1. Low-fire cannot be adjusted above the high-fire setting
2. High-fire cannot be adjusted below the low stage setting.
3. Without the correct sequence of adjustment Low-fire will be limited to approximately 3.5 in. W.C.
4. If Low-fire is adjusted prior to High-fire, Low fire will then be set close to High-fire setting causing extreme over fire condition in Low-fire. Stop, use 5 step adjustment procedure noted in this bulletin for correct adjustment procedure.

~~For more information consult LP conversion kit installation instructions.~~

NEW INDUCER WHEELS
On March 26th, 2001 a new inducer wheel with a newly designed stainless steel machined hub, was put into production. This new wheel and hub was designed to minimize TIR (Total Indicated Reading of runout). The lower TIR will ensure fewer balance and vibration issues. It was also designed to eliminate spider-cracking associated with shipping damage. This new improved wheel and hub design has been implemented in ALL condensing furnaces using two distinct inducer wheels, which are model specific.

INDUCER SPACER KITS
When installed in the downflow position, the variable-speed inducer assembly tends to sag even more due to the added weight of the motor. We are now offering Inducer Spacer Kits, P/N KGACC0125SPC. These kits contain spacers for 25 furnaces. The spacers are installed on the grommets to help support the grommets in the downflow configuration. However, on units with the stronger, re-introduced grommets, the addition of the inducer spacers may not be necessary.

GROMMETS
Carrier re-introduced the rubberized grommets that were used prior to January 2000. It was discovered that the grommets used after January 2000 were softer than specified, which was allowing the variable-speed inducer motor to sag. To correct this issue, they have re-introduced the original grommets. The original grommets minimize the sagging of the motor. After much research and testing we believe that the re-introduced grommets will correct most or all vibration issues.

**Important Dates**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date Code</th>
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<tbody>
<tr>
<td>New wheel implemented on both Fixed-Speed and Variable-Speed 90s</td>
<td>1301A</td>
</tr>
<tr>
<td>Re-introduced grommets implemented on Variable-Speed 90s</td>
<td>1701A</td>
</tr>
<tr>
<td>Re-introduced grommets implemented on Fixed- and Two-Stage 90s</td>
<td>1801A</td>
</tr>
<tr>
<td>RCD Assemblies have new wheels and re-introduced grommets</td>
<td>1801A</td>
</tr>
<tr>
<td>Inducer Spacer Kits available for order</td>
<td>NOW</td>
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**Note:** All 58MTAs (two-stage 90s) were built using the new, improved inducer wheel.