

## Oversized Solenoid Modulating Pressure Blow-Off Valve



**Part No.**  
**99740-03**

- Valves (3)

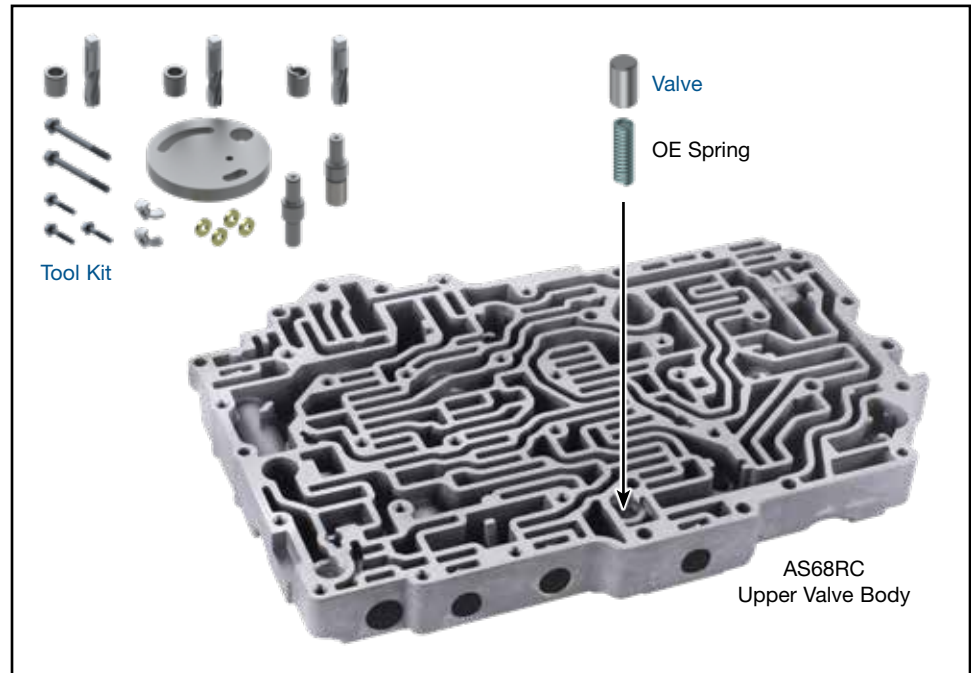
## Tool Kit

**Part No.**  
**99740-TL4**

- Reamers (3)
- Reamer Jigs (3)
- Jig Plate
- Guide Pins (2)
- Bolts, M5 (2)
- Bolt, M6
- Bolts, M5 (2)
- Washers (4)
- Wing Nuts (2)

Short  
Short  
Long

## Aisin Seiki AS68RC



### 1. Disassembly

- Remove and discard OE solenoid modulating pressure blow-off valve.
- Retain OE solenoid modulating pressure blow-off spring for reuse.

### 2. Bore Reaming (Figure 1)

- Place upper valve body casting on bench with OE solenoid modulating pressure blow-off valve bore facing upwards.

**NOTE:** Recommend using two 1" parallel blocks under the two machined flat areas of the valve body for support while reaming.

- Position Sonnax jig plate using one short M5 bolt and one short M6 bolt along with washers to hold it in place where indicated, do not tighten bolts at this time.

- Recommend using an appropriate plate and clamp to secure casting to bench, ensuring not to damage any of the surfaces of the casting. The plate must not contact any of the valve bore protrusion's/boss's.

- Insert Sonnax guide pin **99740-GP3** into the jig plate with small diameter facing up.

- Slide Sonnax guide pin through jig plate and into casting bore.

- Once guide pin and jig plate are aligned with bore to be reamed, securely tighten two bolts. Ensure jig plate is tightly held in place while allowing guide pin to stroke freely in casting bore.

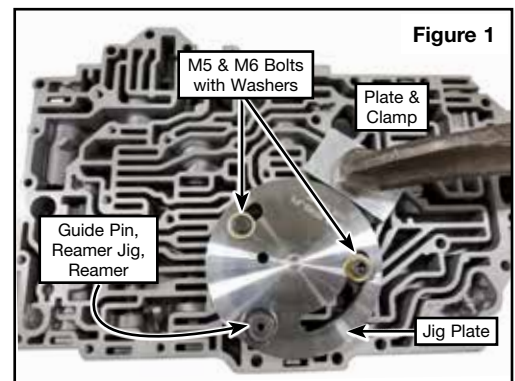


Figure 1

## 2. Bore Reaming (continued)

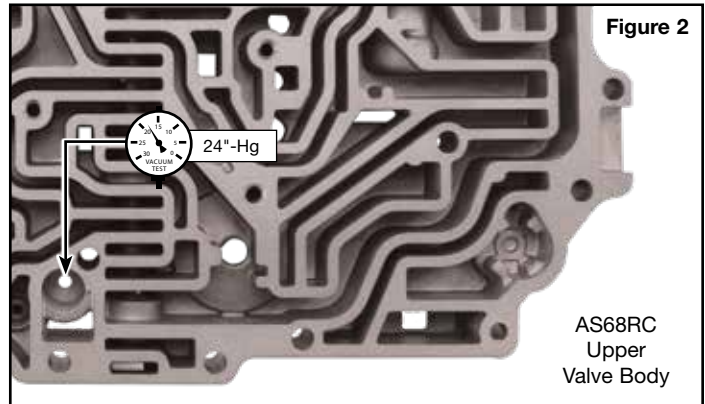
- g. Remove guide pin and insert Sonnax reamer jig **99740-RJ8**, protrusion facing down, rotate jig until protrusion drops into bore pocket. Soak the bore and reamer with cutting fluid (Mobilmet S-122, Lubegard®Bio-Tap, Tap Magic™, etc). For best results, provide a continuous flow of water-soluble cutting fluid (i.e. Mobilmet S-122) during the reaming process.
- h. Insert Sonnax reamer **99740-RM8** and ream bore with steady, clockwise rotation. Once reaming is complete, spin the reamer a few more times to burnish and improve surface finish (for full reaming instructions/reamer care, please visit [www.sonnax.com](http://www.sonnax.com)).
- i. If necessary, deburr bore entrances slightly to facilitate assembly of Sonnax oversized solenoid modulating pressure blow-off valve.
- j. Thoroughly clean the casting after reaming.

## 3. Installation & Assembly

- a. Be certain all debris has been removed from the valve bore and valve body.
- b. Install OE spring into the Sonnax oversized solenoid modulating pressure blow-off valve.
- c. Install spring/valve assembly into bore, spring side downward.

## 4. Final Testing

Vacuum testing at the port(s) indicated holds the recommended minimum 24 in-Hg (**Figure 2**).



## Oversized Linear Solenoid Output Dampener Valve Kit

Part No.  
**99740-04K**



- Valves (2)

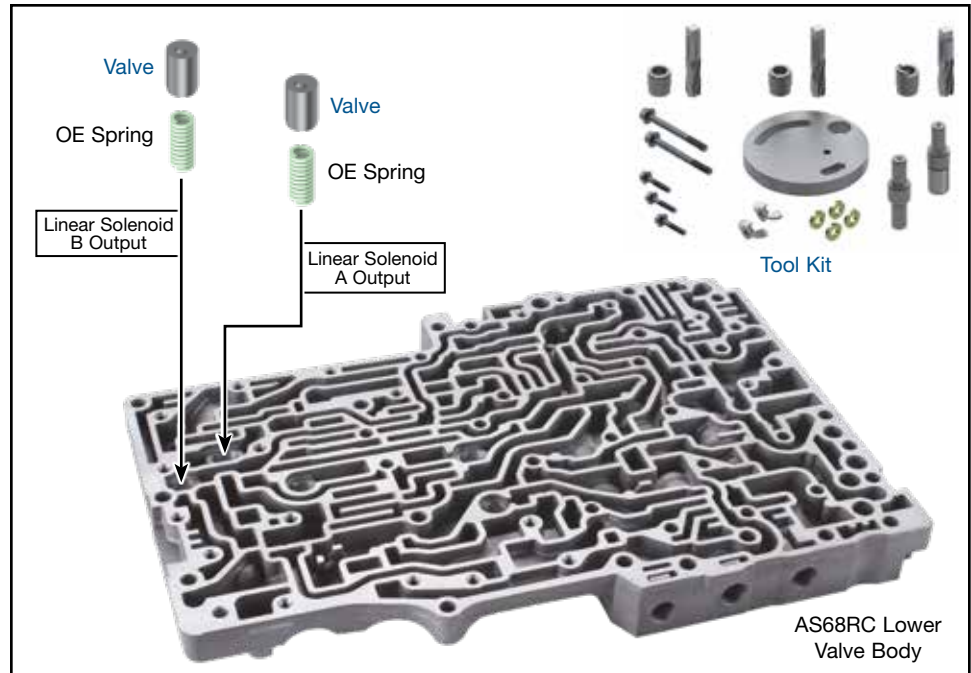
## Tool Kit

Part No.  
**99740-TL4**

- Reamers (3)
- Reamer Jigs (3)
- Jig Plate
- Guide Pins (2)
- Bolts, M5 (2)
- Bolt, M6
- Bolts, M5 (2)
- Washers (4)
- Wing Nuts (2)

Short  
Short  
Long

## Aisin Seiki AS68RC



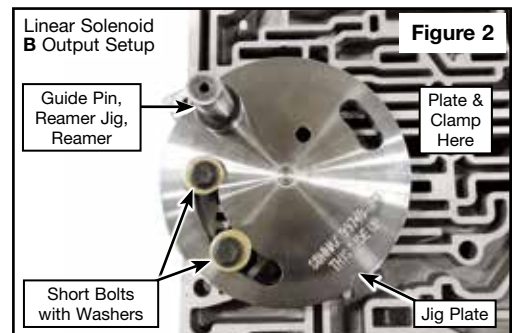
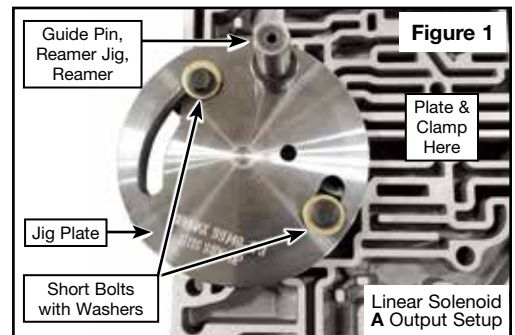
### 1. Disassembly

- Remove and discard OE linear solenoid output dampener valve.
- Retain OE linear solenoid output dampener spring for reuse.

### 2. Bore Reaming

- Place the lower valve body casting on bench with the OE linear solenoid output dampener bores facing upwards.
 

**NOTE:** Recommend using a 1" thick parallel block under the machined flat area of the valve body for support while reaming.
- Position Sonnax jig plate and use the shorter M5 bolts along with washers to hold it in place where indicated, do not tighten bolts at this time (**Figure 1 & 2**).
- Recommend using an appropriate plate and clamp to secure casting to bench, ensuring not to damage any of the surfaces of the casting. The plate must not contact any of the dampener bore protrusion's/boss's.
- Insert Sonnax guide pin **99740-GP3** into the jig plate with the large diameter facing up.



## 2. Bore Reaming (continued)

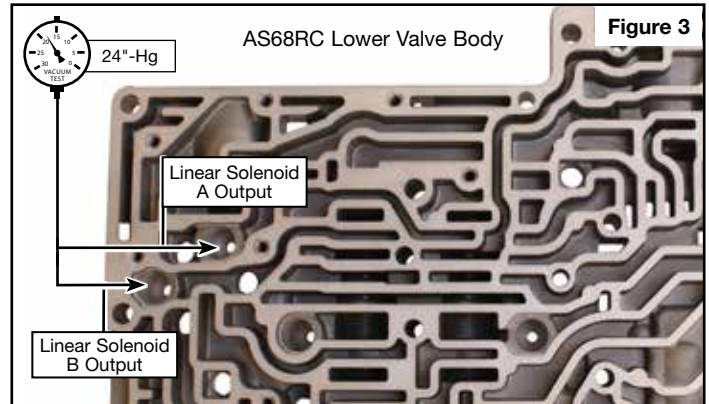
- e. Slide Sonnax guide pin through jig plate and into casting bore.
- f. Once guide pin and jig plate are aligned with bore to be reamed, securely tighten both bolts. Ensure jig plate is tightly held in place while allowing guide pin to stroke freely in casting bore.
- g. Remove guide pin and insert Sonnax reamer jig **99740-RJ6** into the jig plate with the large end down. Soak the bore and reamer with cutting fluid (Mobilmet S-122, Lubegard®Bio-Tap, Tap Magic™, etc). For best results, provide a continuous flow of water-soluble cutting fluid (i.e. Mobilmet S-122) during the reaming process.
- h. Insert Sonnax reamer **99740-RM6** and ream bore with steady, clockwise rotation. Once reaming is complete, spin the reamer a few more times to burnish and improve surface finish (for full reaming instructions/reamer care, please visit [www.sonnax.com](http://www.sonnax.com)).
- i. If necessary, deburr bore entrances slightly to facilitate assembly of the oversized linear solenoid output dampener.
- j. Thoroughly clean the casting after reaming

## 3. Installation & Assembly

- a. Be certain all debris has been removed from the dampener bore and valve body.
- b. Install OE spring into the Sonnax linear solenoid output dampener valve.
- c. Install spring/valve assembly into bore, spring side downward.

## 4. Final Testing

Vacuum testing at the port(s) indicated holds the recommended minimum 24 in-Hg (**Figure 3**).



## Oversized Linear Solenoid Feed Dampener Valve Kit

Part No.  
**99740-05K**



- Valves (3)

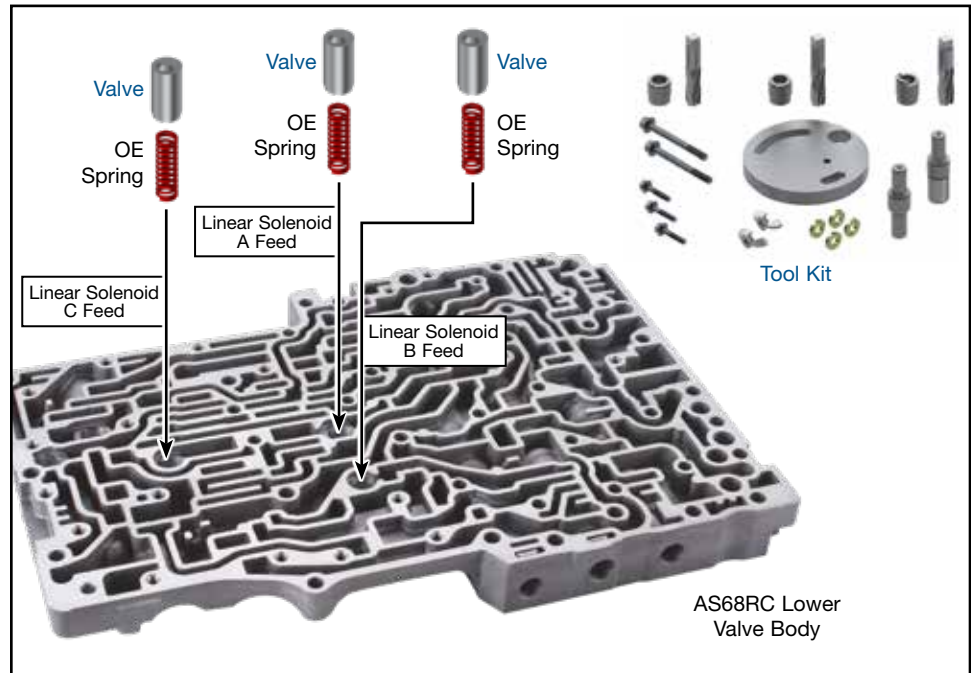
## Tool Kit

Part No.  
**99740-TL4**

- Reamers (3)
- Reamer Jigs (3)
- Jig Plate
- Guide Pins (2)
- Bolts, M5 (2)
- Bolt, M6
- Bolts, M5 (2)
- Washers (4)
- Wing Nuts (2)

Short  
Short  
Long

## Aisin Seiki AS68RC



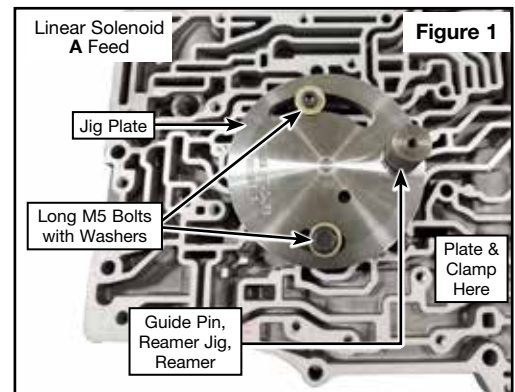
### 1. Disassembly

- Remove and discard OE linear solenoid feed dampener valves in lower valve body.
- Retain OE linear solenoid feed dampener piston springs for reuse.

### 2. Bore Reaming

- Place the lower valve body casting on bench with the OE linear solenoid feed dampener bores facing upwards.
 

**NOTE:** Recommend using a 1" parallel block under the machined flat areas of the valve body for support while reaming.



- Position Sonnax jig plate and use Sonnax long M5 bolts, along with washers and wing nuts to hold it in place where indicated, do not tighten bolts at this time (**Figure 1**).
- Recommend using an appropriate plate and clamp to secure casting to bench, ensuring not to damage any of the surfaces of the casting. The plate must not contact any of the dampener bore protrusion's/boss's.
- Insert Sonnax guide pin **99740-GP5** into the jig plate with the large end down.
- Slide Sonnax guide pin through jig plate and into casting bore.
- Once guide pin and jig plate are aligned with bore to be reamed, securely tighten bolts. Ensure jig plate is tightly held in place while allowing guide pin to stroke freely in casting bore.



### Bore Reaming (continued)

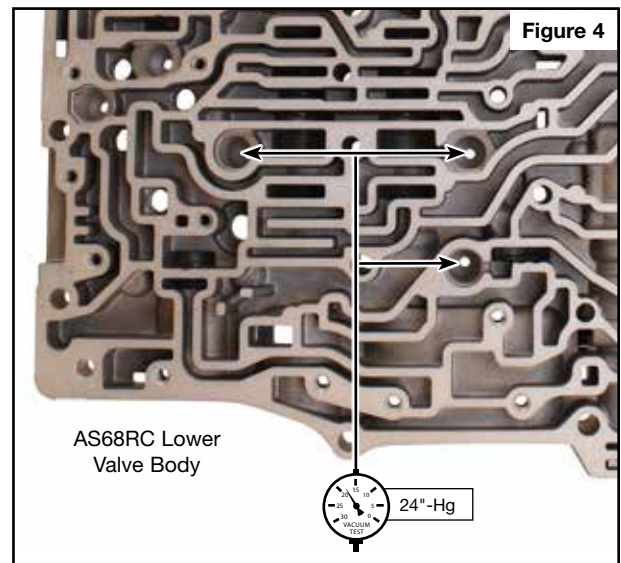
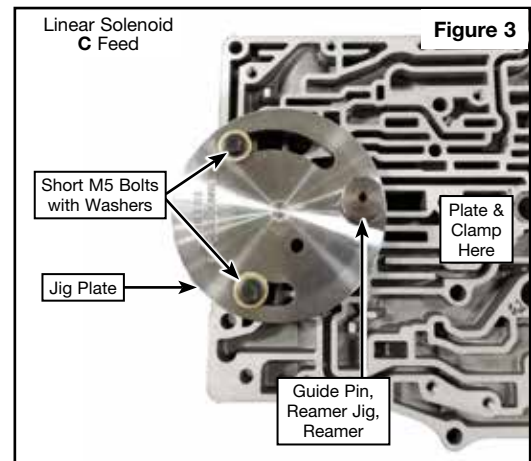
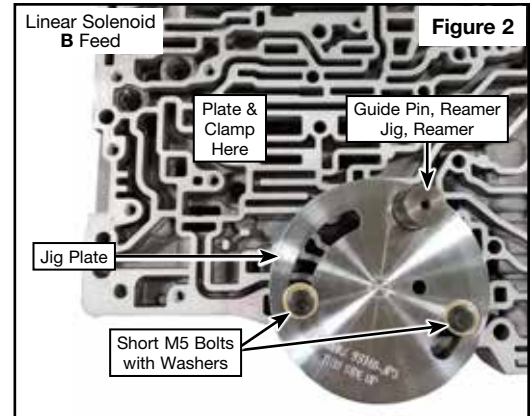
- g. Remove guide pin and insert Sonnax reamer jig 99740-RJ7 into the jig plate with the large end down.
- h. Insert Sonnax reamer 99740-RM7 and ream bore with steady, clockwise rotation. Once reaming is complete, spin the reamer a few more times to burnish and improve surface finish (for full reaming instructions/reamer care, please visit [www.sonnax.com](http://www.sonnax.com)).
- i. Repeat steps 2-8 for remaining solenoid B & C feed dampeners, using Sonnax short M5 bolts with washers (Figures 2 & 3).
- j. If necessary, deburr bore entrances slightly to facilitate assembly of the oversized linear solenoid feed dampener.
- k. Thoroughly clean the casting after reaming.

### 3. Installation & Assembly

- a. Be certain all debris has been removed from the dampener bore and valve body.
- b. Install OE spring into Sonnax oversized solenoid feed dampener valve.
- c. Install the spring/valve assembly into bore, spring side upward.

### 4. Final Testing

Vacuum testing at the port(s) indicated holds the recommended minimum 24 in-Hg (Figure 4).



## Oversized Cooler Blow-Off Valve



Part No.

**99740-06**

- Valves (3)

## Tool Kit

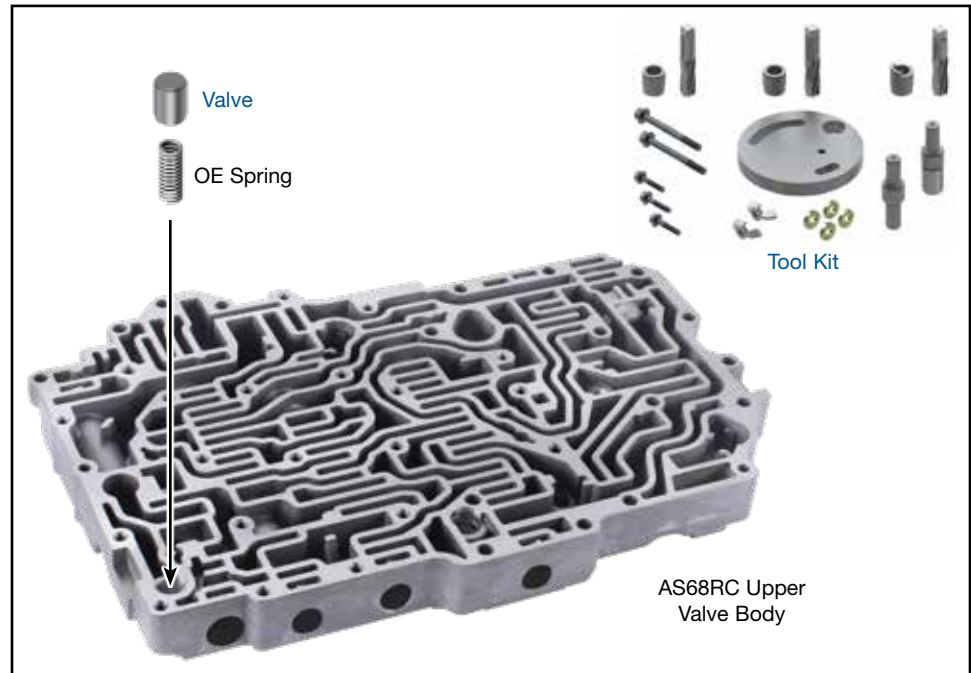
Part No.

**99740-TL4**

- Reamers (3)
- Reamer Jigs (3)
- Jig Plate
- Guide Pins (2)
- Bolts, M5 (2)
- Bolt, M6
- Bolt, M5 (2)
- Washers (4)
- Wing Nuts (2)

Short  
Short  
Long

## Aisin Seiki AS68RC



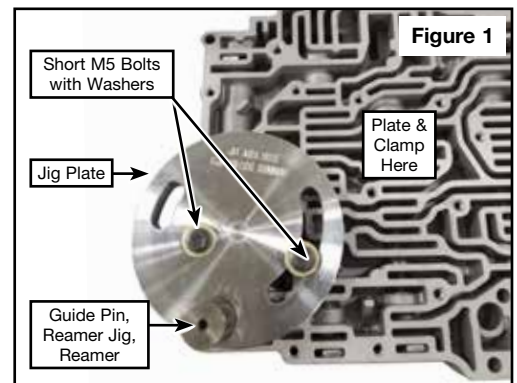
### 1. Disassembly

- Remove and discard OE cooler blow-off valve.
- Retain OE cooler blow-off spring for reuse.

### 2. Bore Reaming (Figure 1)

- Place the upper valve body casting on bench with the OE cooler blow-off valve bore facing upwards.
 

**NOTE:** Recommend using two 1" parallel blocks under the two machined flat areas of the valve body for support while reaming.
- Position Sonnax jig plate using the short bolts along with washers to hold it in place where indicated, do not tighten bolts at this time.



- Recommend using an appropriate plate and clamp to secure casting to bench, ensuring not to damage any of the surfaces of the casting. The plate must not contact any of the valve bore protrusion's/boss's.
- Insert Sonnax guide pin **99740-GP5** into the jig plate (Figure 1).
- Slide Sonnax guide pin through jig plate and into casting bore.
- Once guide pin and jig plate are aligned with bore to be reamed, securely tighten the two bolts. Ensure jig plate is tightly held in place while allowing guide pin to stroke freely in casting bore.

### 2. Bore Reaming (continued)

- g. Remove guide pin and insert Sonnax reamer jig **99740-RJ7**, into the jig plate. Soak the bore and reamer with cutting fluid (Mobilmet S-122, Lubegard® Bio-Tap, Tap Magic™, etc). For best results, provide a continuous flow of water-soluble cutting fluid (i.e. Mobilmet S-122) during the reaming process.
- h. Insert Sonnax reamer **99740-RM7** and ream bore with steady, clockwise rotation. Once reaming is complete, spin the reamer a few more times to burnish and improve surface finish (for full reaming instructions/reamer care, please visit [www.sonnax.com](http://www.sonnax.com)).
- i. If necessary, deburr bore entrances slightly to facilitate assembly of Sonnax oversized cooler blow-off valve.
- j. Thoroughly clean the casting after reaming.

### 3. Installation & Assembly

- a. Be certain all debris has been removed from the valve bore and valve body.
- b. Install OE spring into the Sonnax cooler blow-off valve.
- c. Install spring/valve assembly into bore, spring side downward.

### 4. Final Testing

Vacuum testing at the port(s) indicated holds the recommended minimum 24 in-Hg (**Figure 2**).

