

## Self-Regulating Reverse Boost Valve & Sleeve

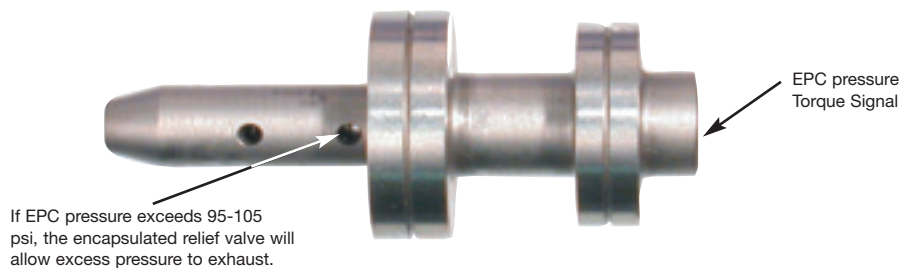
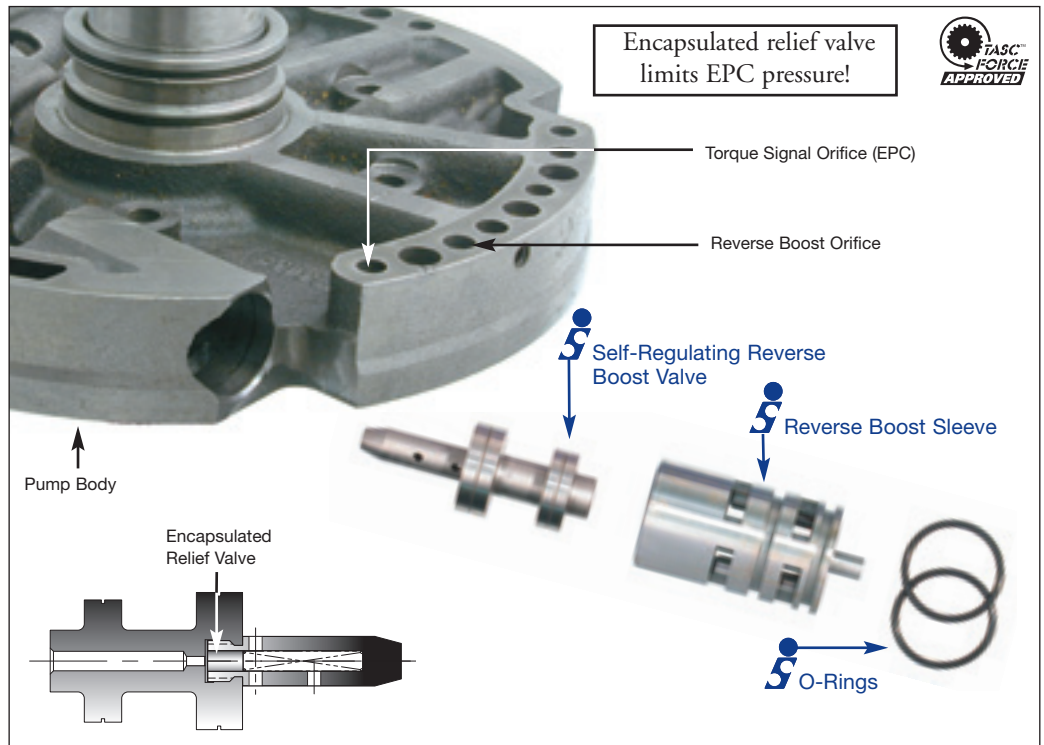
### 34200-10K

- 1 Self-Regulating Boost Valve
- 1 Boost Sleeve
- 2 O-Rings

U.S. Patent No. 6,776,736

#### Notes:

1. Kit includes instructions to retrofit parts dating back to '89.
2. Wet Air Test can be done using either the reverse boost orifice or the torque signal orifice for this particular application.



### Wet Air Test

**Important:** The Wet Air Test procedure will help identify reverse boost/torque signal circuit cross leaks, which will result in uncontrollably high and damaging line pressures.

### Pump Circuit Testing:

1. Securely bolt the two pump halves together. Remove the reverse boost valve and sleeve, then plug both orifices in the pump bore with your finger.
2. Place a small amount of oil into either the reverse boost or torque signal orifice and apply low pressure air to the orifice. Oil coming out of the other orifice indicates a pump circuit cross leak.
3. Resurface the pump halves, as required, to eliminate cross leakage. A thin layer of Loctite® #518 may be applied to the pump mating surfaces to aid in sealing. Caution: Excess sealant may enter the hydraulic system and cause problems with sticking valves.

### Valve & Sleeve Testing:

1. After pump casting cross leakage has been eliminated, install the original boost valve and sleeve and retest as above.
2. Oil coming out of the other orifice indicates cross leakage between the boost valve and sleeve or between the sleeve and pump bore.
3. Replace the leaking valve and sleeve with a Sonnax self-regulating reverse boost valve and sleeve 34200-10K.

### Bore Preparation Instructions (On o-ring designed parts):

Sharp leading edges or casting surfaces must be deburred with a file and/or a new ScotchBrite™ pad or 320-grit emery cloth. The areas that usually create a concern are the balance oil plug roll pin cross holes, the boost sleeve entry near the snap ring groove and the sleeve's entry across the oval opening in the pump casting.

### 1996 & Earlier vs. 1997 & Later OEM boost valve designs:

1997 & later OEM boost valves have a smaller reverse boost spool diameter to reduce maximum reverse pressure by 40-50 psi, compared to earlier versions (later version identified by a groove machined near the end of the sleeve). The Sonnax valve follows the later design, so it is critical that both the valve and sleeve be replaced when servicing earlier models.

### 1989-1991 Retrofit Instructions:

Between 1989 and 1991 the OEM pressure regulator valve and boost valve used a different design. The pressure regulator valve was longer and the boost valve shorter. The Sonnax boost valve can be modified for use with 1989-1991 OEM pressure regulator valves. If you prefer, the early PR valve can be updated using the later style PR valve and bumper spring available from GM. The part numbers are **8680547** (PR valve) and **8680551** (bumper spring).

**Note:** The bumper spring **MUST** be installed when you are updating to the later style PR valve. The retrofit involves shortening both the Sonnax boost valve and the pressure regulator valve (see illustration below).

