

# PORSCHE 928

## PKBumpStick Use



**Tighten 32V'r clamp ring bolts.**

Remove cam bolt and hex washer.

Install 32V'r spacer.

Screw in cam bolt, but do not tighten, yet.



Slide on socket, aligning hex washer to fit.

Socket will fit only one way.

*(Small holes align with cam pulley notch/clamp ring key.)*

**Torque cam bolt to 47 ft. lbs. (65 Nm) with torque wrench.**  
*(Use wrench to counter hold hex washer.)*

Install 32V'r needle holder.

Set needle to desired setting. *(See tips on next page.)*

Loosen upper clamp ring bolt.

**Hold wrench firmly.** *(1-4 will try to move CCW, 5-8 CW)*

Loosen lower two clamp ring bolts.

Adjust to center needle in **Λ**. *(See tips on next page.)*

**Tighten 32V'r clamp ring bolts.**

Remove cam bolt, hex washer, socket, and 32V'r spacer.

Reinstall cam bolt and hex washer.

**Torque cam bolt to 47 ft. lbs. (65 Nm) with torque wrench.**  
*(Use wrench to counter hold hex washer.)*



## Tips

### Checking timing with 32V'r

#### 1-4

Retard  $-2^\circ$  for a cold engine

EG: target  $0^\circ$   
 $0 - 2 = -2^\circ$

#### 5-8

No change, cold or hot

EG: target  $0^\circ$   
 $0 = 0^\circ$

### Adjusting timing with 32V'r and BumpStick tools

#### 1-4

Set to desired setting cold, advance  $+2^\circ$  if hot

*Retard  $-2^\circ$  for a cold engine*

*Advance  $+2^\circ$  to compensate for belt reaction when moving the cam*

EG: target  $+2^\circ$   
 $2 - 2 + 2 = +2^\circ$

EG: target  $0^\circ$   
 $0 - 2 + 2 = 0^\circ$

#### 5-8

Set to desired setting, cold or hot

EG: target  $0^\circ$   
 $0 = 0^\circ$

### After any adjustment

- Tighten the 32V'r clamp ring bolts
- **Remove the 32V'r spacer**
- Torque the cam bolt to spec (47ftlb/65nm)
- **Make sure the belt is clear**
- **Remove the wrench used to turn the engine**
- Unplug the EZF/K
- Spin the engine with the starter for a second or two
- Rotate the engine CW by hand, smoothly, to #1 0|T
- Remember to use checking specs when verifying, not adjustment specs

Spinning the engine settles the belt and gives a true reading. *Turning engine by hand does not work as well.*

Try and adjust in one movement. Advancing and retarding, back and forth, will load and unload the belt, changing the reading. If you've messed with it too much, lock it down, spin the engine with the starter to resettle, retry.



Check position of hub bolt holes.

Holes should be roughly centered at  $0^\circ$  on 2 of the holes (1 is offset). *Range is ca.  $\pm 7^\circ$  from center.*

If max'ed out in slot, belt may not have been strung properly.