

# Technical Bulletin

Model  
6 Cyl.

Group  
1

Subject: **V-Belt Tension Tester  
Special Tool 9574**

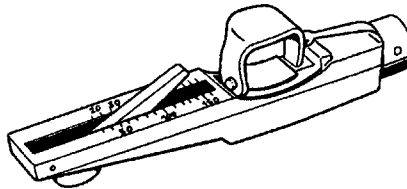
Part Identifier  
1378

Number  
9410

**ATTENTION: Service Manager / Service Technician**

**Models Affected:** *911 Carrera 2/4 from Model Year 1989  
911 Carrera Model Year 1995 on*

**Concern:** Correct procedure for tensioning V-belts.



**Special tool 9574**

**General Information:** Effective immediately, the V-belt tension for the alternator, engine cooling fan and the air conditioning compressor must be checked using the new belt tension tester special tool 9574. The thumb pressure method used up to now is no longer valid.

**Repair Procedure:** For safety reasons, the ignition key should be removed from the ignition switch before adjusting the V-belt tension.

Retensioning of a **used** belt is necessary if:

1. On a **cold engine**, less than 15kg tester scale units are indicated or
2. On a **warm engine**, less than 20kg tester scale units are indicated.

V-belt tension specifications:

**Cold engine:** 15kg to 23kg tester scale units

**Warm engine:** 20kg to 28kg tester scale units

If the belt was retensioned before a measurement was taken, start the engine and allow it to idle for a short period. Afterwards, measure the belt tension.

If a **new** alternator belt or fan is installed, the correct procedure must be used in order to ensure correct belt tension after the belt has "broken in."

- A. For the V-belt tension adjustment, shims in two thickness sizes are available: 0.5mm and 0.7mm. The 0.7mm shim has a 2.0mm diameter hole for identification.



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## Repair Procedure (cont.):

B. Before the tension of a new V-belt is measured, start the engine and allow it to idle for a short period.

Now adjust the tension of the new V-belt to:

23kg to 35kg tester scale units

C. Start the engine again and allow it to idle for approximately 15 minutes or road test the car for approximately 10 miles.

D. Recheck V-belt tension with the engine at operation temperature. The tension should read:

28kg to 40kg tester scale units

## A/C Compressor Belt:

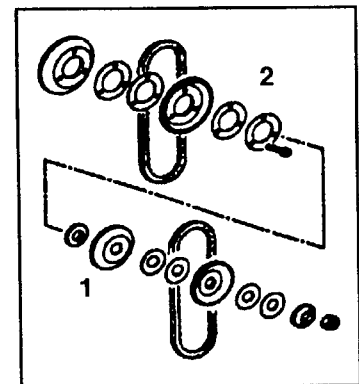
The adjustment value for a **new** air conditioning compressor belt is:

30kg to 35kg tester scale units

## Adjustment Procedure:

The fan and alternator pulleys are separate from each other.

1. Counterhold the alternator shaft with allen wrench Part Number 999 571 052 02 and loosen the hex nut. Remove the shims and pulley halves.
2. If the V-belt tension is below the specified value, remove one(1) shim from between the pulley halves and install it on the outside of the pulley. Torque the hex nut to  $50 \pm 5$  Nm ( $36 \pm 4$  ft.lbs.).
3. For the fan belt, three (3) additional allen bolts must be removed.
4. Use only V-belts that are approved by the manufacturer.



1-Alternator drive  
2-Fan drive

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## Operation of the V-Belt Tension Tester:

### 1. Tester Preparation:

Push indicator arm into tester and hold tester with thumb and index finger.

### 2. Install Tester:

Install tester on the V-belt between pulleys. The guide rail of the tester must be on the side of the V-belt.

### 3. Test Procedure:

Apply even vertical pressure on the pressure button until the snap spring is heard or felt. After the snap spring operates, no additional pressure must be applied to the pressure button since this would result in incorrect readings.

### 4. Value Readings:

Carefully remove the tension tester.

#### **Caution!**

When removing, the tester must not make contact with components in the V-belt area. This would move the indicator arm and render the reading false.

Measured values (tension) should be read out on the ridge between the indicator arm and the top scale.

