

and the knee pivot shoulder bolt (part 880105–527 in drawing 880105–528R & 528L, sliding knee assembly without potentiometer).

S16.3.1.12 The term “seat cushion reference point” (SCRCP) means a point placed on the outboard side of the seat cushion at a horizontal distance between 150 mm (5.9 in) and 250 mm (9.8 in) from the front edge of the seat used as a guide in positioning the seat.

S16.3.1.13 The term “seat cushion reference line” means a line on the side of the seat cushion, passing through the seat cushion reference point, whose projection in the vehicle vertical longitudinal plane is straight and has a known angle with respect to the horizontal.

S16.3.2 *Driver dummy positioning.*

S16.3.2.1 *Driver torso/head/seat back angle positioning.*

S16.3.2.1.1 With the seat in the position determined in S16.2.10.3.3, use only the control that primarily moves the seat fore and aft to place the seat in the rearmost position. If the seat cushion reference line angle automatically changes as the seat is moved from the full forward position, maintain, as closely as possible, the seat cushion reference line angle determined in S16.2.10.3.1, for the final forward position when measuring the pelvic angle as specified in S16.3.2.1.11. The seat cushion reference angle position may be achieved through the use of any seat or seat cushion adjustments other than that which primarily moves the seat or seat cushion fore-aft.

S16.3.2.1.2 Fully recline the seat back, if adjustable. Install the dummy into the driver's seat, such that when the legs are positioned 120 degrees to the thighs, the calves of the legs are not touching the seat cushion.

S16.3.2.1.3 *Bucket seats.* Place the dummy on the seat cushion so that its midsagittal plane is vertical and coincides with the vertical longitudinal plane through the center of the seat cushion, within  $\pm 10$  mm ( $\pm 0.4$  in).

S16.3.2.1.4 *Bench seats.* Position the midsagittal plane of the dummy vertical and parallel to the vehicle's longitudinal centerline and aligned within  $\pm 10$  mm ( $\pm 0.4$  in) of the center of the steering wheel rim.

S16.3.2.1.5 Hold the dummy's thighs down and push rearward on the upper torso to maximize the dummy's pelvic angle.

S16.3.2.1.6 Place the legs at 120 degrees to the thighs. Set the initial transverse distance between the longitudinal centerlines at the front of the dummy's knees at 160 to 170 mm (6.3 to 6.7 in), with the thighs and legs of the dummy in vertical planes. Push

rearward on the dummy's knees to force the pelvis into the seat so there is no gap between the pelvis and the seat back or until contact occurs between the back of the dummy's calves and the front of the seat cushion.

S16.3.2.1.7 Gently rock the upper torso laterally in a side to side motion three times through a  $\pm 5$  degree arc (approximately 51 mm (2 in) side to side).

S16.3.2.1.8 If needed, extend the legs slightly so that the feet are not in contact with the floor pan. Let the thighs rest on the seat cushion to the extent permitted by the foot movement. Keeping the leg and the thigh in a vertical plane, place the foot in the vertical longitudinal plane that passes through the centerline of the accelerator pedal. Rotate the left thigh outboard about the hip until the center of the knee is the same distance from the midsagittal plane of the dummy as the right knee  $\pm 5$  mm ( $\pm 0.2$  in). Using only the control that primarily moves the seat fore and aft, attempt to return the seat to the full forward position. If either of the dummy's legs first contacts the steering wheel, then adjust the steering wheel, if adjustable, upward until contact with the steering wheel is avoided. If the steering wheel is not adjustable, separate the knees enough to avoid steering wheel contact. Proceed with moving the seat forward until either the leg contacts the vehicle interior or the seat reaches the full forward position. (The right foot may contact and depress the accelerator and/or change the angle of the foot with respect to the leg during seat movement.) If necessary to avoid contact with the vehicle's brake or clutch pedal, rotate the test dummy's left foot about the leg. If there is still interference, rotate the left thigh outboard about the hip the minimum distance necessary to avoid pedal interference. If a dummy leg contacts the vehicle interior before the full forward position is attained, position the seat at the next detent where there is no contact. If the seat is a power seat, move the seat fore and aft to avoid contact while assuring that there is a maximum of 5 mm (0.2 in) distance between the vehicle interior and the point on the dummy that would first contact the vehicle interior. If the steering wheel was moved, return it to the position described in S16.2.9. If the steering wheel contacts the dummy's leg(s) prior to attaining this position, adjust it to the next higher detent, or if infinitely adjustable, until there is 5 mm (0.2 in) clearance between the wheel and the dummy's leg(s).

S16.3.2.1.9 For vehicles without adjustable seat backs, adjust the lower neck bracket to level the head as much as possible. For vehicles with adjustable seat backs, while holding the thighs in place, rotate the seat back forward until the transverse instrumentation platform of the head is level to within  $\pm 0.5$  degree, making sure that the pelvis does not interfere with the seat bight. Inspect the abdomen to ensure that it is properly installed. If the torso contacts the steering wheel, adjust the steering wheel in the following order until there is no contact: telescoping adjustment, lowering adjustment, raising adjustment. If the vehicle has no adjustments, or contact with the steering wheel cannot be eliminated by adjustment, position the seat at the next detent where there is no contact with the steering wheel as adjusted in S16.2.9. If the seat is a power seat, position the seat to avoid contact while assuring that there is a maximum of 5 mm (0.2 in) distance between the steering wheel as adjusted in S16.2.9 and the point of contact on the dummy.

S16.3.2.1.10 If it is not possible to achieve the head level within  $\pm 0.5$  degrees, minimize the angle.

S16.3.2.1.11 Measure and set the dummy's pelvic angle using the pelvic angle gauge (drawing TE–2504, incorporated by reference in 49 CFR Part 572, Subpart O of this chapter). The angle shall be set to 20.0 degrees  $\pm 2.5$  degrees. If this is not possible, adjust the pelvic angle as close to 20.0 degrees as possible while keeping the transverse instrumentation platform of the head as level as possible by adjustments specified in S16.3.2.1.9 and S16.3.2.1.10.

S16.3.2.1.12 If the dummy is contacting the vehicle interior after these adjustments, using only the control that primarily moves the seat fore and aft, move the seat rearward until there is a maximum of 5 mm (0.2 in) between the contact point of the dummy and the interior of the vehicle or if it has a manual seat adjustment, to the next rearward detent position. If after these adjustments, the dummy contact point is more than 5 mm (0.2 in) from the vehicle interior and the seat is still not in its forwardmost position, move the seat forward until the contact point is a maximum of 5 mm (0.2 in) from the vehicle interior, or if it has a manual seat adjustment, move the seat to the closest detent position that causes no contact, or until the seat reaches its forwardmost position, whichever occurs first.

S16.3.2.2 *Driver foot positioning.*

S16.3.2.2.1 If the vehicle has an adjustable accelerator pedal, adjust it to