The aim was to evaluate the sexual condition effects on non-carcass components, weight and yield at slaughter of lambs. A total of 46 Texel x Corriedale crossbred males, originating of single births, were divided into three groups: uncastrated (n = 15), castrated (n = 17) and induced cryptorchid (n = 14), created in the Pampa Biome region, in the Rio Grande do Sul State, in extensive system of natural pastures, and slaughtered with, in average, eight months of age. The animals were slaughtered when they simultaneously reached a minimum weight of 30 kg and a body condition between 3 and 3.5. The variance analysis was performed to evaluate the sexual condition effects. Castrated lambs reached the slaughter conditions early and, therefore, were slaughtered at lower weight (34.29 ± 0.84 kg; p<0.05). The slaughter weight of cryptorchid (37.33 ± 0.93 kg) and uncastrated lambs (39.17 ± 0.90 kg) did not differ (p>0.05). Castrated lambs had lower values (p<0.05) of 1.40 ± 0.04 and 3.50 ± 0.12 kg, when compared to the cryptorchid of 1.59 ± 0.04 and 4.05 ± 0.13 kg and uncastrated lambs of 1.62 ± 0.04 and 4.25 ± 0.13 kg), respectively for head and skin weights. Castrated lambs presented lighter penis (p<0.05), with 0.10 ± 0.02 kg, in comparison to uncastrated (0.17 ± 0.02 kg) and cryptorchid lambs (0.16 ± 0.03 kg), which did not differ (p>0.05) between them. The castration type had influence on testicles weight (p<0.05), with higher values for uncastrated lambs (0.373 ± 0.03 kg) in relation to cryptorchid lambs (0.257 ± 0.03 kg). Castration affected the lungs witch trachea weight (p<0.05), in which uncastrated lambs (0.79 ± 0.03 kg) were heavier to castrated lambs (0.65 ± 0.03 kg), and for liver with gallbladder weight, uncastrated (0.67 ± 0.04 kg) and cryptorchid lambs (0.68 ± 0.04 kg) were heavier (p<0.05) to castrated lambs (0.54 ± 0.03 kg). When the analysis was performed evaluating the proportionality, in percentage values, no sexual condition influence on any of the response variables was verified (p>0.05). The non-carcass components represented 50.01, 50.76 and 49.40% of live weight at the slaughter of cryptorchid, uncastrated and castrated lambs, respectively (p>0.05). It is concluded that uncastrated lambs and cryptorchidic lambs present higher weights of some non-carcass components when slaughtered according to pre-stipulated criteria. However, proportionally, sexual condition does not influence the yields of the body components of Texel x Corriedale crossbred lambs.

**Keywords:** body composition, castration, cryptorchidism, sheep