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Amalgamation bases for nilpotent groups of class two and odd exponent.

An amalgam of nil-two groups consists of two groups, G and K , and a common subgroup H called the core. We say the amalgam is weakly embeddable if there is a nil-two group M containing G and K , such that $H \subseteq G \cap K$. If we also have $H = G \cap K$, we say the amalgam is strongly embeddable. If there is an isomorphism of G and K over H , then we say the amalgam is special, and in that case it is always weakly embeddable. In the variety of all nil-two groups, not every amalgam is weakly embeddable. We say a group H is a *strong amalgamation base* if every amalgam with core H is strongly embeddable; a *weak amalgamation base* if every amalgam with core H is weakly embeddable; and a *special amalgamation base* if every special amalgam with core H is strongly embeddable. Saracino characterized the weak and strong bases for the variety of all nil-two groups, and the author characterized the special bases. We can also restrict all groups G , K , H , and M to have a given exponent n . In that case, it is possible, in principle, for an amalgam to be embeddable into a nil-two group, but not one of exponent n . In this work we characterize the weak, strong, and special bases for the class of nil-two groups of odd exponent n . (Received July 06, 2000)