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Subgroup separability of generalized free products of free-by-finite groups. (English)

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A group G is subgroup separable if every finitely generated subgroup H is the intersection of the finite-index subgroups of G containing it. (Finitely presented such groups are readily seen to have solvable “inclusion problem”.) Using a criterion, due to Brunner, Solitar and the reviewer, for a free product of two groups with amalgamation to be subgroup separable, the authors show that such a free product is subgroup separable if the two groups are finitely generated free-by-finite, and the amalgamated subgroup is cyclic. This implies that a particular class of finitely presented groups shown earlier to have solvable word problem are in fact subgroup separable.

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