Consider a simple complex Lie algebra $g^c$ with real form $g$. Let $\text{Aut}_e g^c$ be the group of all automorphisms of $g^c$ generated by the elements of the form $\exp \text{ad} x$ with nilpotent $\text{ad} x$. Let $\text{Aut}_0 g$ be the inverse image of $\text{Aut}_e g^c$ with respect to the map $\text{Aut} g \to \text{Aut} g^c$, $g \mapsto g \otimes 1$, and $\text{Aut}_0 (g, h)$ be the subgroup of $\text{Aut}_0 g$ preserving the Cartan subalgebra $h \subset g$. The author deduces a necessary and sufficient condition for certain pairs of $\text{Aut}_0 (g, h)$ to be conjugate.

Reviewer: I. Kolář

MSC:

17B40 Automorphisms, derivations, other operators for Lie algebras and super algebras
17B20 Simple, semisimple, reductive (super)algebras

Keywords:

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References:

[1] N. Bourbaki, Lie Groups and Lie Algebras [Russian translation], Mir, Moscow (1972), Chaps. 4-6. · Zbl 0249.22001

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