A trace has been found.

Abbreviations
~X_1 = (Auth2(h(~M_1),a,a_1,spk(a_2)),sign(Auth3(Auth2(h(~M_1),a,a_1,spk(a_2)),hash(Client1(~M_1,~M_2))),a_2),Client1(~M_1,~M_2)) = (Auth2(h(rpid_4),a,a_1,spk(a_2)),sign(Auth3(Auth2(h(rpid_4),a,a_1,spk(a_2)),hash(Client1(rpid_4,challenge_3))),a_2),Client1(rpid_4,challenge_3))