The group G is isomorphic to the group labelled by [24, 13] in the Small Groups library.
Ordinary character table of $G \cong$ C2 x A4:

	$1a$	$2a$	$3a$	$2b$	$6a$	$2c$	$3b$	$6b$
χ_1	1	1	1	1	1	1	1	1
χ_2	1	−1	1	1	−1	−1	1	−1
χ_3	1	−1	$E(3)^2$	1	$-E(3)^2$	−1	$E(3)$	$-E(3)$
χ_4	1	−1	$E(3)$	1	$-E(3)$	−1	$E(3)^2$	$-E(3)^2$
χ_5	1	1	$E(3)^2$	1	$E(3)^2$	1	$E(3)$	$E(3)$
χ_6	1	1	$E(3)$	1	$E(3)$	1	$E(3)^2$	$E(3)^2$
χ_7	3	−3	0	−1	0	1	0	0
χ_8	3	3	0	−1	0	−1	0	0

Trivial source character table of $G \cong$ C2 x A4 at $p = 2$:

Normalisers N_i	N_1			N_2			N_3	N_4	N_5			N_6	N_7	N_8		
p-subgroups of G up to conjugacy in G	P_1			P_2			P_3	P_4	P_5			P_6	P_7	P_8		
Representatives $n_j \in N_i$	$1a$	$3a$	$3b$	$1a$	$3a$	$3b$	$1a$	$1a$	$1a$	$3a$	$3b$	$1a$	$1a$	$1a$	$3a$	$3b$
$1\cdot\chi_1+1\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+0\cdot\chi_6+1\cdot\chi_7+1\cdot\chi_8$	8	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
$0\cdot\chi_1+0\cdot\chi_2+1\cdot\chi_3+0\cdot\chi_4+1\cdot\chi_5+0\cdot\chi_6+1\cdot\chi_7+1\cdot\chi_8$	8	$2*E(3)^2$	$2*E(3)$	0	0	0	0	0	0	0	0	0	0	0	0	0
$0\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+1\cdot\chi_4+0\cdot\chi_5+1\cdot\chi_6+1\cdot\chi_7+1\cdot\chi_8$	8	$2*E(3)$	$2*E(3)^2$	0	0	0	0	0	0	0	0	0	0	0	0	0
$1\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+1\cdot\chi_8$	4	1	1	4	1	1	0	0	0	0	0	0	0	0	0	0
$0\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+1\cdot\chi_6+0\cdot\chi_7+1\cdot\chi_8$	4	$E(3)$	$E(3)^2$	4	$E(3)$	$E(3)^2$	0	0	0	0	0	0	0	0	0	0
$0\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+1\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+1\cdot\chi_8$	4	$E(3)^2$	$E(3)$	4	$E(3)^2$	$E(3)$	0	0	0	0	0	0	0	0	0	0
$1\cdot\chi_1+1\cdot\chi_2+1\cdot\chi_3+1\cdot\chi_4+1\cdot\chi_5+1\cdot\chi_6+1\cdot\chi_7+1\cdot\chi_8$	12	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
$1\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+1\cdot\chi_5+1\cdot\chi_6+2\cdot\chi_7+1\cdot\chi_8$	12	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
$1\cdot\chi_1+1\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	2	2	2	0	0	0	2	0	2	2	2	0	0	0	0	0
$0\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+1\cdot\chi_4+0\cdot\chi_5+1\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	2	$2*E(3)$	$2*E(3)^2$	0	0	0	2	0	2	$2*E(3)$	$2*E(3)^2$	0	0	0	0	0
$0\cdot\chi_1+0\cdot\chi_2+1\cdot\chi_3+0\cdot\chi_4+1\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	2	$2*E(3)^2$	$2*E(3)$	0	0	0	2	0	2	$2*E(3)^2$	$2*E(3)$	0	0	0	0	0
$1\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+1\cdot\chi_5+1\cdot\chi_6+0\cdot\chi_7+1\cdot\chi_8$	6	0	0	6	0	0	2	2	0	0	0	2	0	0	0	0
$1\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+1\cdot\chi_5+1\cdot\chi_6+1\cdot\chi_7+0\cdot\chi_8$	6	0	0	0	0	0	2	4	0	0	0	0	2	0	0	0
$1\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
$0\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+1\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	1	$E(3)$	$E(3)^2$	1	$E(3)$	$E(3)^2$	1	1	1	$E(3)$	$E(3)^2$	1	1	1	$E(3)$	$E(3)^2$
$0\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+1\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	1	$E(3)^2$	$E(3)$	1	$E(3)^2$	$E(3)$	1	1	1	$E(3)^2$	$E(3)$	1	1	1	$E(3)^2$	$E(3)$

$P_1 = Group([()]) \cong 1$
$P_2 = Group([(1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24)]) \cong$ C2
$P_3 = Group([(1,5)(2,8)(3,11)(4,12)(6,15)(7,16)(9,18)(10,19)(13,21)(14,22)(17,23)(20,24)]) \cong$ C2
$P_4 = Group([(1,8)(2,5)(3,15)(4,16)(6,11)(7,12)(9,21)(10,22)(13,18)(14,19)(17,24)(20,23)]) \cong$ C2
$P_5 = Group([(1,5)(2,8)(3,11)(4,12)(6,15)(7,16)(9,18)(10,19)(13,21)(14,22)(17,23)(20,24), (1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21)]) \cong$ C2 x C2
$P_6 = Group([(1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24), (1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21)]) \cong$ C2 x C2
$P_7 = Group([(1,8)(2,5)(3,15)(4,16)(6,11)(7,12)(9,21)(10,22)(13,18)(14,19)(17,24)(20,23), (1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21)]) \cong$ C2 x C2
$P_8 = Group([(1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24), (1,5)(2,8)(3,11)(4,12)(6,15)(7,16)(9,18)(10,19)(13,21)(14,22)(17,23)(20,24), (1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21)]) \cong$ C2 x C2 x C2

$N_1 = Group([(1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24), (1,3,9)(2,6,13)(4,11,23)(5,19,17)(7,15,24)(8,22,20)(10,18,12)(14,21,16), (1,4)(2,7)(3,10)(5,12)(6,14)(8,16)(9,17)(11,19)(13,20)(15,22)(18,23)(21,24), (1,5)(2,8)(3,11)(4,12)(6,15)(7,16)(9,18)(10,19)(13,21)(14,22)(17,23)(20,24)]) \cong$ C2 x A4
$N_2 = Group([(1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24), (1,3,9)(2,6,13)(4,11,23)(5,19,17)(7,15,24)(8,22,20)(10,18,12)(14,21,16), (1,4)(2,7)(3,10)(5,12)(6,14)(8,16)(9,17)(11,19)(13,20)(15,22)(18,23)(21,24), (1,5)(2,8)(3,11)(4,12)(6,15)(7,16)(9,18)(10,19)(13,21)(14,22)(17,23)(20,24)]) \cong$ C2 x A4
$N_3 = Group([(1,5)(2,8)(3,11)(4,12)(6,15)(7,16)(9,18)(10,19)(13,21)(14,22)(17,23)(20,24), (1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24), (1,4)(2,7)(3,10)(5,12)(6,14)(8,16)(9,17)(11,19)(13,20)(15,22)(18,23)(21,24), (1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21)]) \cong$ C2 x C2 x C2
$N_4 = Group([(1,8)(2,5)(3,15)(4,16)(6,11)(7,12)(9,21)(10,22)(13,18)(14,19)(17,24)(20,23), (1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24), (1,4)(2,7)(3,10)(5,12)(6,14)(8,16)(9,17)(11,19)(13,20)(15,22)(18,23)(21,24), (1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21)]) \cong$ C2 x C2 x C2
$N_5 = Group([(1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21), (1,5)(2,8)(3,11)(4,12)(6,15)(7,16)(9,18)(10,19)(13,21)(14,22)(17,23)(20,24), (1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24), (1,3,9)(2,6,13)(4,11,23)(5,19,17)(7,15,24)(8,22,20)(10,18,12)(14,21,16)]) \cong$ C2 x A4
$N_6 = Group([(1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21), (1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24), (1,4)(2,7)(3,10)(5,12)(6,14)(8,16)(9,17)(11,19)(13,20)(15,22)(18,23)(21,24)]) \cong$ C2 x C2 x C2
$N_7 = Group([(1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21), (1,8)(2,5)(3,15)(4,16)(6,11)(7,12)(9,21)(10,22)(13,18)(14,19)(17,24)(20,23), (1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24)]) \cong$ C2 x C2 x C2
$N_8 = Group([(1,12)(2,16)(3,19)(4,5)(6,22)(7,8)(9,23)(10,11)(13,24)(14,15)(17,18)(20,21), (1,5)(2,8)(3,11)(4,12)(6,15)(7,16)(9,18)(10,19)(13,21)(14,22)(17,23)(20,24), (1,2)(3,6)(4,7)(5,8)(9,13)(10,14)(11,15)(12,16)(17,20)(18,21)(19,22)(23,24), (1,3,9)(2,6,13)(4,11,23)(5,19,17)(7,15,24)(8,22,20)(10,18,12)(14,21,16)]) \cong$ C2 x A4