The group G is isomorphic to the group labelled by [168, 42] in the Small Groups library.
Ordinary character table of $G \cong$ PSL(3,2):

	$1a$	$2a$	$4a$	$3a$	$7a$	$7b$
χ_1	1	1	1	1	1	1
χ_2	3	-1	1	0	$E(7)^3 + E(7)^5 + E(7)^6$	$E(7) + E(7)^2 + E(7)^4$
χ_3	3	-1	1	0	$E(7) + E(7)^2 + E(7)^4$	$E(7)^3 + E(7)^5 + E(7)^6$
χ_4	6	2	0	0	-1	-1
χ_5	7	-1	-1	1	0	0
χ_6	8	0	0	-1	1	1

Trivial source character table of $G \cong$ PSL(3,2) at $p = 3$:

Normalisers N_i	N_1					N_2	
p-subgroups of G up to conjugacy in G	P_1					P_2	
Representatives $n_j \in N_i$	$1a$	$2a$	$4a$	$7a$	$7b$	$1a$	$2a$
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 1 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6$	6	2	0	-1	-1	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6$	15	-1	-1	1	1	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 1 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6$	3	-1	1	$E(7) + E(7)^2 + E(7)^4$	$E(7)^3 + E(7)^5 + E(7)^6$	0	0
$0 \cdot \chi_1 + 1 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6$	3	-1	1	$E(7)^3 + E(7)^5 + E(7)^6$	$E(7) + E(7)^2 + E(7)^4$	0	0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 1 \cdot \chi_6$	9	1	1	2	2	0	0
$0 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 1 \cdot \chi_5 + 0 \cdot \chi_6$	7	-1	-1	0	0	1	-1
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6$	1	1	1	1	1	1	1

$P_1 = Group([()]) \cong 1$
$P_2 = Group([(1,6,7)(2,3,5)]) \cong$ C3

$N_1 = Group([(2,4)(3,5),(1,2,3)(5,6,7)]) \cong$ PSL(3,2)
$N_2 = Group([(1,6,7)(2,3,5),(2,3)(6,7)]) \cong$ S3