The group G is isomorphic to the group labelled by [20, 1] in the Small Groups library.
Ordinary character table of $G \cong$ C5 : C4:

	$1a$	$4a$	$4b$	$2a$	$5a$	$5b$	$10a$	$10b$
χ_1	1	1	1	1	1	1	1	1
χ_2	1	-1	-1	1	1	1	1	1
χ_3	1	$E(4)$	$-E(4)$	-1	1	1	-1	-1
χ_4	1	$-E(4)$	$E(4)$	-1	1	1	-1	-1
χ_5	2	0	0	-2	$E(5)+E(5)^4$	$E(5)^2+E(5)^3$	$-E(5)^2-E(5)^3$	$-E(5)-E(5)^4$
χ_6	2	0	0	2	$E(5)+E(5)^4$	$E(5)^2+E(5)^3$	$E(5)^2+E(5)^3$	$E(5)+E(5)^4$
χ_7	2	0	0	2	$E(5)^2+E(5)^3$	$E(5)+E(5)^4$	$E(5)+E(5)^4$	$E(5)^2+E(5)^3$
χ_8	2	0	0	-2	$E(5)^2+E(5)^3$	$E(5)+E(5)^4$	$-E(5)-E(5)^4$	$-E(5)^2-E(5)^3$

Trivial source character table of $G \cong$ C5 : C4 at $p = 5$:

Normalisers N_i	N_1				N_2			
p-subgroups of G up to conjugacy in G	P_1				P_2			
Representatives $n_j \in N_i$	$1a$	$4a$	$2a$	$4b$	$1a$	$4a$	$2a$	$4b$
$1\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+1\cdot\chi_6+1\cdot\chi_7+0\cdot\chi_8$	5	1	5	1	0	0	0	0
$0\cdot\chi_1+1\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+1\cdot\chi_6+1\cdot\chi_7+0\cdot\chi_8$	5	-1	5	-1	0	0	0	0
$0\cdot\chi_1+0\cdot\chi_2+1\cdot\chi_3+0\cdot\chi_4+1\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+1\cdot\chi_8$	5	$E(4)$	-5	$-E(4)$	0	0	0	0
$0\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+1\cdot\chi_4+1\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+1\cdot\chi_8$	5	$-E(4)$	-5	$E(4)$	0	0	0	0
$1\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	1	1	1	1	1	1	1	1
$0\cdot\chi_1+1\cdot\chi_2+0\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	1	-1	1	-1	1	-1	1	-1
$0\cdot\chi_1+0\cdot\chi_2+1\cdot\chi_3+0\cdot\chi_4+0\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	1	$E(4)$	-1	$-E(4)$	1	$E(4)$	-1	$-E(4)$
$0\cdot\chi_1+0\cdot\chi_2+0\cdot\chi_3+1\cdot\chi_4+0\cdot\chi_5+0\cdot\chi_6+0\cdot\chi_7+0\cdot\chi_8$	1	$-E(4)$	-1	$E(4)$	1	$-E(4)$	-1	$E(4)$

$P_1 = Group([()]) \cong 1$
$P_2 = Group([(1,12,4,16,8)(2,14,6,18,10)(3,15,7,19,11)(5,17,9,20,13)]) \cong$ C5

$N_1 = Group([(1,2,3,5)(4,18,7,20)(6,19,9,16)(8,14,11,17)(10,15,13,12),(1,3)(2,5)(4,7)(6,9)(8,11)(10,13)(12,15)(14,17)(16,19)(18,20),(1,4,8,12,16)(2,6,10,14,18)(3,7,11,15,19)(5,9,13,17,20)]) \cong$ C5 : C4
$N_2 = Group([(1,12,4,16,8)(2,14,6,18,10)(3,15,7,19,11)(5,17,9,20,13),(1,2,3,5)(4,18,7,20)(6,19,9,16)(8,14,11,17)(10,15,13,12)]) \cong$ C5 : C4