Schwarzschild Metric in spherical coordinates with a variable spherically symmetric matter density:

$\boxed{x^\mu}$

$x^0 = t.$
$x^1 = r.$
$x^2 = \theta.$
$x^3 = \phi.$

$\boxed{g_{\mu\nu}}$

$g_{00} = 1 - \frac{8}{3} r^2 \pi \epsilon(r).$
$g_{01} = 0.$
$g_{02} = 0.$
$g_{03} = 0.$
$g_{10} = 0.$
$g_{11} = 3 \frac{1}{-3 + 8\rho(r) r^2 \pi}.$
$g_{12} = 0.$
$g_{13} = 0.$
$g_{20} = 0.$
$g_{21} = 0.$
$g_{22} = -r^2.$
$g_{23} = 0.$
$g_{30} = 0.$
$g_{31} = 0.$
$g_{32} = 0.$
$g_{33} = -r^2 \sin(\theta)^2.$

$\boxed{\sqrt{} = \sqrt{-\det(g_{\mu\nu})}}$

$\sqrt{} = \sqrt{-\frac{3r^4 \sin(\theta)^2 - 8r^6 \sin(\theta)^2 \pi \epsilon(r)}{-3 + 8\rho(r) r^2 \pi}}.$

$\boxed{g^{\mu\nu}}$

$g^{00} = -3 \frac{1}{-3 + 8r^2 \pi \epsilon(r)}.$
$g^{01} = 0.$
$g^{02} = 0.$
$g^{03} = 0.$
$g^{10} = 0.$
$g^{11} = -1 + \frac{8}{3} \rho(r) r^2 \pi.$
$g^{12} = 0.$
$g^{13} = 0.$
$g^{20} = 0.$
$g^{21} = 0.$
$g^{22} = -\frac{1}{r^2}.$
$g^{23} = 0.$
$g^{30} = 0.$
$g^{31} = 0.$
$g^{32} = 0.$
$g^{33} = -\frac{1}{r^2 \sin(\theta)^2}.$

$\boxed{\Gamma^\sigma_{\mu\nu}}$

$\Gamma^0_{00} = 0.$
$\Gamma^0_{01} = 4 \frac{\epsilon'(r) r^2 \pi + 2r\pi\epsilon(r)}{-3 + 8r^2 \pi \epsilon(r)}.$
$\Gamma^0_{02} = 0.$
$\Gamma^0_{03} = 0.$
$\Gamma^0_{10} = 4 \frac{\epsilon'(r) r^2 \pi + 2r\pi\epsilon(r)}{-3 + 8r^2 \pi \epsilon(r)}.$
$\Gamma^0_{11} = 0.$
$\Gamma^0_{12} = 0.$
$\Gamma^0_{13} = 0.$
$\Gamma^0_{20} = 0.$
$\Gamma^0_{21} = 0.$
$\Gamma^0_{22} = 0.$
$\Gamma^0_{23} = 0.$
$\Gamma^0_{30} = 0.$
$\Gamma^0_{31} = 0.$
$\Gamma^0_{32} = 0.$
$\Gamma^0_{33} = 0.$

$\Gamma^1_{00} = \frac{4}{9}(-3 + 8\rho(r) r^2 \pi)(\epsilon'(r) r^2 \pi + 2r\pi\epsilon(r)).$
$\Gamma^1_{01} = 0.$
$\Gamma^1_{02} = 0.$
$\Gamma^1_{03} = 0.$
$\Gamma^1_{10} = 0.$
$\Gamma^1_{11} = -4 \frac{\rho'(r) r^2 \pi + 2\rho(r) r\pi}{-3 + 8\rho(r) r^2 \pi}.$
$\Gamma^1_{12} = 0.$
$\Gamma^1_{13} = 0.$
$\Gamma^1_{20} = 0.$
$\Gamma^1_{21} = 0.$
$\Gamma^1_{22} = \frac{1}{3} r(-3 + 8\rho(r) r^2 \pi).$
$\Gamma^1_{23} = 0.$
$\Gamma^1_{30} = 0.$
$\Gamma^1_{31} = 0.$
$\Gamma^1_{32} = 0.$
$\Gamma^1_{33} = \frac{1}{3} r(-3 + 8\rho(r) r^2 \pi) \sin(\theta)^2.$

$\Gamma^2_{00} = 0.$
$\Gamma^2_{01} = 0.$
$\Gamma^2_{02} = 0.$
$\Gamma^2_{03} = 0.$
$\Gamma^2_{10} = 0.$
$\Gamma^2_{11} = 0.$
$\Gamma^2_{12} = \frac{1}{r}.$
$\Gamma^2_{13} = 0.$
$\Gamma^2_{20} = 0.$
$\Gamma^2_{21} = \frac{1}{r}.$
$\Gamma^2_{22} = 0.$
$\Gamma^2_{23} = 0.$
$\Gamma^2_{30} = 0.$
$\Gamma^2_{31} = 0.$
$\Gamma^2_{32} = 0.$
$\Gamma^2_{33} = -\cos(\theta)\sin(\theta).$

$\Gamma^3_{00} = 0.$
$\Gamma^3_{01} = 0.$
$\Gamma^3_{02} = 0.$
$\Gamma^3_{03} = 0.$
$\Gamma^3_{10} = 0.$
$\Gamma^3_{11} = 0.$
$\Gamma^3_{12} = 0.$
$\Gamma^3_{13} = \frac{1}{r}.$
$\Gamma^3_{20} = 0.$
$\Gamma^3_{21} = 0.$
$\Gamma^3_{22} = 0.$
$\Gamma^3_{23} = \frac{\cos(\theta)}{\sin(\theta)}.$
$\Gamma^3_{30} = 0.$
$\Gamma^3_{31} = \frac{1}{r}.$
$\Gamma^3_{32} = \frac{\cos(\theta)}{\sin(\theta)}.$
$\Gamma^3_{33} = 0.$

$\boxed{\ddot{x}^\mu = \left(\Gamma^0_{\sigma\rho}\dot{x}^\mu - \Gamma^\mu_{\sigma\rho}\right)\dot{x}^\sigma\dot{x}^\rho}$

$\ddot{x}^0 = 0.$

$$\ddot{x}^1 = -\frac{1}{9}\frac{216\epsilon'(r)\dot{x}^2r^2\pi + 576\epsilon'(r)\rho(r)r^4\pi^2 - 288\dot{x}^2\rho'(r)r^4\pi^2\epsilon(r) - 108\epsilon'(r)r^2\pi - 1536\epsilon'(r)\rho(r)r^6\pi^3\epsilon(r) + 1536\rho(r)^2r^7\sin(\theta)^2\pi^3\epsilon(r)\dot{z}^2 + 576r^3\pi^2\epsilon(r)^2 + 2048\epsilon'(r)\rho(r)^2r^8\pi^4\epsilon(r) + 432\rho(r)r^3\sin(\theta)^2\pi\dot{z}^2 + 108\dot{x}^2\rho'(r)r^2\pi - 1152\rho(r)r^5\sin(\theta)^2\pi^2\epsilon(r)\dot{z}^2 - 576\epsilon'(r)\dot{x}^2\rho(r)r^4\pi^2 + 288\epsilon'(r)r^4\pi^2\epsilon(r) - 81r\sin(\theta)^2\dot{z}^2 - 3072\rho(r)r^5\pi^3\epsilon(r)^2 - 1536\rho(r)^2r^5\pi^3\epsilon(r) - 576\rho(r)^2r^5\sin(\theta)^2\pi^2\dot{z}^2 + 216r^3\sin(\theta)^2\pi\epsilon(r)\dot{z}^2 - 768\epsilon'(r)\rho(r)^2r^6\pi^3 + 4096\rho(r)^2r^7\pi^4\epsilon(r)^2 + 216\dot{x}^2\rho(r)r\pi - 216r\pi\epsilon(r) - 1728\dot{x}^2\rho(r)r^3\pi^2\epsilon(r) + 432\dot{x}^2r\pi\epsilon(r) + 1152\rho(r)r^3\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))(-3+8\rho(r)r^2\pi)}.$$

$\ddot{x}^2 = \cos(\theta)\sin(\theta)\dot{z}^2.$

$\ddot{x}^3 = 2\frac{3\dot{x}\dot{z} + 4\epsilon'(r)\dot{x}r^3\pi\dot{z}}{(-3+8r^2\pi\epsilon(r))r}.$

$\boxed{R_{\mu\nu}}$

$$R_{00} = -\frac{4}{9}\frac{12\epsilon'(r)^2r^4\pi^2 + 9\epsilon''(r)r^2\pi - 12\epsilon'(r)\rho'(r)r^4\pi^2 - 24\epsilon''(r)\rho(r)r^4\pi^2 + 384\rho(r)r^4\pi^3\epsilon(r)^2 + 32\epsilon'(r)\rho'(r)r^6\pi^3\epsilon(r) - 192\rho(r)r^2\pi^2\epsilon(r) + 64\rho'(r)r^5\pi^3\epsilon(r)^2 + 64\epsilon''(r)\rho(r)r^6\pi^3\epsilon(r) - 24\epsilon''(r)r^4\pi^2\epsilon(r) - 96r^2\pi^2\epsilon(r)^2 - 96\epsilon'(r)r^3\pi^2\epsilon(r) + 54\pi\epsilon(r) + 320\epsilon'(r)\rho(r)r^5\pi^3\epsilon(r) - 24\rho'(r)r^3\pi^2\epsilon(r) - 168\epsilon'(r)\rho(r)r^3\pi^2 - 32\epsilon'(r)^2\rho(r)r^6\pi^3 + 54\epsilon'(r)r\pi}{-3+8r^2\pi\epsilon(r)}.$$

$R_{01} = 0.$
$R_{02} = 0.$
$R_{03} = 0.$
$R_{10} = 0.$

$$R_{11} = 4\frac{12\epsilon'(r)^2r^4\pi^2 + 9\epsilon''(r)r^2\pi - 12\epsilon'(r)\rho'(r)r^4\pi^2 - 24\epsilon''(r)\rho(r)r^4\pi^2 + 384\rho(r)r^4\pi^3\epsilon(r)^2 + 32\epsilon'(r)\rho'(r)r^6\pi^3\epsilon(r) - 288\rho(r)r^2\pi^2\epsilon(r) + 192\rho'(r)r^5\pi^3\epsilon(r)^2 + 64\epsilon''(r)\rho(r)r^6\pi^3\epsilon(r) + 36\rho(r)\pi - 24\epsilon''(r)r^4\pi^2\epsilon(r) - 48\epsilon'(r)r^3\pi^2\epsilon(r) + 18\pi\epsilon(r) + 18\rho'(r)r\pi + 192\epsilon'(r)\rho(r)r^5\pi^3\epsilon(r) - 120\rho'(r)r^3\pi^2\epsilon(r) - 120\epsilon'(r)\rho(r)r^3\pi^2 - 32\epsilon'(r)^2\rho(r)r^6\pi^3 + 36\epsilon'(r)r\pi}{(-3+8r^2\pi\epsilon(r))^2(-3+8\rho(r)r^2\pi)}.$$

$R_{12} = 0.$
$R_{13} = 0.$
$R_{20} = 0.$
$R_{21} = 0.$

$$R_{22} = \frac{4}{3}\frac{6r^2\pi\epsilon(r) - 48\rho(r)r^4\pi^2\epsilon(r) - 8\epsilon'(r)\rho(r)r^5\pi^2 + 12\rho(r)r^2\pi + 3\epsilon'(r)r^3\pi - 8\rho'(r)r^5\pi^2\epsilon(r) + 3\rho'(r)r^3\pi}{-3+8r^2\pi\epsilon(r)}.$$

$R_{23} = 0.$
$R_{30} = 0.$
$R_{31} = 0.$
$R_{32} = 0.$

$$R_{33} = -\frac{4}{3}\frac{48\rho(r)r^4\sin(\theta)^2\pi^2\epsilon(r) - 6r^2\sin(\theta)^2\pi\epsilon(r) - 12\rho(r)r^2\sin(\theta)^2\pi - 3\epsilon'(r)r^3\sin(\theta)^2\pi + 8\rho'(r)r^5\sin(\theta)^2\pi^2\epsilon(r) + 8\epsilon'(r)\rho(r)r^5\sin(\theta)^2\pi^2 - 3\rho'(r)r^3\sin(\theta)^2\pi}{-3+8r^2\pi\epsilon(r)}.$$

$\boxed{R^\mu_\nu}$

$$R^0_0 = 72\frac{\epsilon'(r)r\pi}{(-3+8r^2\pi\epsilon(r))^2} + \frac{256}{3}\frac{\rho'(r)r^5\pi^3\epsilon(r)^2}{(-3+8r^2\pi\epsilon(r))^2} + 512\frac{\rho(r)r^4\pi^3\epsilon(r)^2}{(-3+8r^2\pi\epsilon(r))^2} + \frac{128}{3}\frac{\epsilon'(r)\rho'(r)r^6\pi^3\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 224\frac{\epsilon'(r)\rho(r)r^3\pi^2}{(-3+8r^2\pi\epsilon(r))^2} - 128\frac{\epsilon'(r)r^3\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 128\frac{r^2\pi^2\epsilon(r)^2}{(-3+8r^2\pi\epsilon(r))^2} + 72\frac{\pi\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 256\frac{\rho(r)r^2\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 16\frac{\epsilon'(r)\rho'(r)r^4\pi^2}{(-3+8r^2\pi\epsilon(r))^2} - 32\frac{\rho'(r)r^3\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} + 16\frac{\epsilon'(r)^2r^4\pi^2}{(-3+8r^2\pi\epsilon(r))^2} + \frac{1280}{3}\frac{\epsilon'(r)\rho(r)r^5\pi^3\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} + 12\frac{\epsilon''(r)r^2\pi}{(-3+8r^2\pi\epsilon(r))^2} - \frac{128}{3}\frac{\epsilon'(r)^2\rho(r)r^6\pi^3}{(-3+8r^2\pi\epsilon(r))^2} + \frac{256}{3}\frac{\epsilon''(r)\rho(r)r^6\pi^3\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 32\frac{\epsilon''(r)\rho(r)r^4\pi^2}{(-3+8r^2\pi\epsilon(r))^2} - 32\frac{\epsilon''(r)r^4\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2}.$$

$R^0_1 = 0.$
$R^0_2 = 0.$
$R^0_3 = 0.$
$R^1_0 = 0.$

$$R^1_1 = 48\frac{\epsilon'(r)r\pi}{(-3+8r^2\pi\epsilon(r))^2} + 256\frac{\rho'(r)r^5\pi^3\epsilon(r)^2}{(-3+8r^2\pi\epsilon(r))^2} + 512\frac{\rho(r)r^4\pi^3\epsilon(r)^2}{(-3+8r^2\pi\epsilon(r))^2} + 48\frac{\rho(r)\pi}{(-3+8r^2\pi\epsilon(r))^2} + \frac{128}{3}\frac{\epsilon'(r)\rho'(r)r^6\pi^3\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 160\frac{\epsilon'(r)\rho(r)r^3\pi^2}{(-3+8r^2\pi\epsilon(r))^2} - 64\frac{\epsilon'(r)r^3\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} + 24\frac{\pi\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} + 24\frac{\rho'(r)r\pi}{(-3+8r^2\pi\epsilon(r))^2} - 384\frac{\rho(r)r^2\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 16\frac{\epsilon'(r)\rho'(r)r^4\pi^2}{(-3+8r^2\pi\epsilon(r))^2} - 160\frac{\rho'(r)r^3\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} + 16\frac{\epsilon'(r)^2r^4\pi^2}{(-3+8r^2\pi\epsilon(r))^2} + 256\frac{\epsilon'(r)\rho(r)r^5\pi^3\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} + 12\frac{\epsilon''(r)r^2\pi}{(-3+8r^2\pi\epsilon(r))^2} - \frac{128}{3}\frac{\epsilon'(r)^2\rho(r)r^6\pi^3}{(-3+8r^2\pi\epsilon(r))^2} + \frac{256}{3}\frac{\epsilon''(r)\rho(r)r^6\pi^3\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 32\frac{\epsilon''(r)\rho(r)r^4\pi^2}{(-3+8r^2\pi\epsilon(r))^2} - 32\frac{\epsilon''(r)r^4\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2}.$$

$R^1_2 = 0.$
$R^1_3 = 0.$
$R^2_0 = 0.$
$R^2_1 = 0.$

$$R^2_2 = \frac{32}{3}\frac{\rho'(r)r^3\pi^2\epsilon(r)}{-3+8r^2\pi\epsilon(r)} + \frac{32}{3}\frac{\epsilon'(r)\rho(r)r^3\pi^2}{-3+8r^2\pi\epsilon(r)} - 8\frac{\pi\epsilon(r)}{-3+8r^2\pi\epsilon(r)} - 4\frac{\rho'(r)r\pi}{-3+8r^2\pi\epsilon(r)} - 4\frac{\epsilon'(r)r\pi}{-3+8r^2\pi\epsilon(r)} + 64\frac{\rho(r)r^2\pi^2\epsilon(r)}{-3+8r^2\pi\epsilon(r)} - 16\frac{\rho(r)\pi}{-3+8r^2\pi\epsilon(r)}.$$

$R^2_3 = 0.$
$R^3_0 = 0.$
$R^3_1 = 0.$
$R^3_2 = 0.$

$$R^3_3 = \frac{32}{3}\frac{\rho'(r)r^3\pi^2\epsilon(r)}{-3+8r^2\pi\epsilon(r)} + \frac{32}{3}\frac{\epsilon'(r)\rho(r)r^3\pi^2}{-3+8r^2\pi\epsilon(r)} - 8\frac{\pi\epsilon(r)}{-3+8r^2\pi\epsilon(r)} - 4\frac{\rho'(r)r\pi}{-3+8r^2\pi\epsilon(r)} - 4\frac{\epsilon'(r)r\pi}{-3+8r^2\pi\epsilon(r)} + 64\frac{\rho(r)r^2\pi^2\epsilon(r)}{-3+8r^2\pi\epsilon(r)} - 16\frac{\rho(r)\pi}{-3+8r^2\pi\epsilon(r)}.$$

$\boxed{R}$

$$R = 144\frac{\epsilon'(r)r\pi}{(-3+8r^2\pi\epsilon(r))^2} + 512\frac{\rho'(r)r^5\pi^3\epsilon(r)^2}{(-3+8r^2\pi\epsilon(r))^2} + 2048\frac{\rho(r)r^4\pi^3\epsilon(r)^2}{(-3+8r^2\pi\epsilon(r))^2} + 144\frac{\rho(r)\pi}{(-3+8r^2\pi\epsilon(r))^2} + \frac{256}{3}\frac{\epsilon'(r)\rho'(r)r^6\pi^3\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 448\frac{\epsilon'(r)\rho(r)r^3\pi^2}{(-3+8r^2\pi\epsilon(r))^2} - 256\frac{\epsilon'(r)r^3\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 256\frac{r^2\pi^2\epsilon(r)^2}{(-3+8r^2\pi\epsilon(r))^2} + 144\frac{\pi\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} + 48\frac{\rho'(r)r\pi}{(-3+8r^2\pi\epsilon(r))^2} - 1280\frac{\rho(r)r^2\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 32\frac{\epsilon'(r)\rho'(r)r^4\pi^2}{(-3+8r^2\pi\epsilon(r))^2} - 320\frac{\rho'(r)r^3\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} + 32\frac{\epsilon'(r)^2r^4\pi^2}{(-3+8r^2\pi\epsilon(r))^2} + \frac{2560}{3}\frac{\epsilon'(r)\rho(r)r^5\pi^3\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} + 24\frac{\epsilon''(r)r^2\pi}{(-3+8r^2\pi\epsilon(r))^2} - \frac{256}{3}\frac{\epsilon'(r)^2\rho(r)r^6\pi^3}{(-3+8r^2\pi\epsilon(r))^2} + \frac{512}{3}\frac{\epsilon''(r)\rho(r)r^6\pi^3\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2} - 64\frac{\epsilon''(r)\rho(r)r^4\pi^2}{(-3+8r^2\pi\epsilon(r))^2} - 64\frac{\epsilon''(r)r^4\pi^2\epsilon(r)}{(-3+8r^2\pi\epsilon(r))^2}.$$

$\boxed{G^{\mu}_{\ \nu}}$

$$G^{0}_{\ 0} = -8\rho(r)\pi - \frac{8}{3}\rho'(r)r\pi.$$
$$G^{0}_{\ 1} = 0.$$
$$G^{0}_{\ 2} = 0.$$
$$G^{0}_{\ 3} = 0.$$
$$G^{1}_{\ 0} = 0.$$
$$G^{1}_{\ 1} = -\frac{8}{3}\frac{24\rho(r)r^2\pi^2\epsilon(r) - 3\rho(r)\pi - 6\pi\epsilon(r) + 8\epsilon'(r)\rho(r)r^3\pi^2 - 3\epsilon'(r)r\pi}{-3 + 8r^2\pi\epsilon(r)}.$$
$$G^{1}_{\ 2} = 0.$$
$$G^{1}_{\ 3} = 0.$$
$$G^{2}_{\ 0} = 0.$$
$$G^{2}_{\ 1} = 0.$$
$$G^{2}_{\ 2} = -\frac{4}{3}\frac{12\epsilon'(r)^2r^4\pi^2 + 9\epsilon''(r)r^2\pi - 12\epsilon'(r)\rho'(r)r^4\pi^2 - 24\epsilon''(r)\rho(r)r^4\pi^2 + 384\rho(r)r^4\pi^3\epsilon(r)^2 + 32\epsilon'(r)\rho'(r)r^6\pi^3\epsilon(r) - 240\rho(r)r^2\pi^2\epsilon(r) + 128\rho'(r)r^5\pi^3\epsilon(r)^2 + 64\epsilon''(r)\rho(r)r^6\pi^3\epsilon(r) + 18\rho(r)\pi - 24\epsilon''(r)r^4\pi^2\epsilon(r) - 48r^2\pi^2\epsilon(r)^2 - 72\epsilon'(r)r^3\pi^2\epsilon(r) + 36\pi\epsilon(r) + 9\rho'(r)r\pi + 256\epsilon'(r)\rho(r)r^5\pi^3\epsilon(r) - 72\rho'(r)r^3\pi^2\epsilon(r) - 144\epsilon'(r)\rho(r)r^3\pi^2 - 32\epsilon'(r)^2\rho(r)r^6\pi^3 + 45\epsilon'(r)r\pi}{\left(-3 + 8r^2\pi\epsilon(r)\right)^2}.$$
$$G^{2}_{\ 3} = 0.$$
$$G^{3}_{\ 0} = 0.$$
$$G^{3}_{\ 1} = 0.$$
$$G^{3}_{\ 2} = 0.$$
$$G^{3}_{\ 3} = -\frac{4}{3}\frac{12\epsilon'(r)^2r^4\pi^2 + 9\epsilon''(r)r^2\pi - 12\epsilon'(r)\rho'(r)r^4\pi^2 - 24\epsilon''(r)\rho(r)r^4\pi^2 + 384\rho(r)r^4\pi^3\epsilon(r)^2 + 32\epsilon'(r)\rho'(r)r^6\pi^3\epsilon(r) - 240\rho(r)r^2\pi^2\epsilon(r) + 128\rho'(r)r^5\pi^3\epsilon(r)^2 + 64\epsilon''(r)\rho(r)r^6\pi^3\epsilon(r) + 18\rho(r)\pi - 24\epsilon''(r)r^4\pi^2\epsilon(r) - 48r^2\pi^2\epsilon(r)^2 - 72\epsilon'(r)r^3\pi^2\epsilon(r) + 36\pi\epsilon(r) + 9\rho'(r)r\pi + 256\epsilon'(r)\rho(r)r^5\pi^3\epsilon(r) - 72\rho'(r)r^3\pi^2\epsilon(r) - 144\epsilon'(r)\rho(r)r^3\pi^2 - 32\epsilon'(r)^2\rho(r)r^6\pi^3 + 45\epsilon'(r)r\pi}{\left(-3 + 8r^2\pi\epsilon(r)\right)^2}.$$

$\boxed{G}$

$$G = -144\frac{\epsilon'(r)r\pi}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - 512\frac{\rho'(r)r^5\pi^3\epsilon(r)^2}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - 2048\frac{\rho(r)r^4\pi^3\epsilon(r)^2}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - 144\frac{\rho(r)\pi}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - \frac{256}{3}\frac{\epsilon'(r)\rho'(r)r^6\pi^3\epsilon(r)}{\left(-3+8r^2\pi\epsilon(r)\right)^2} + 448\frac{\epsilon'(r)\rho(r)r^3\pi^2}{\left(-3+8r^2\pi\epsilon(r)\right)^2} + 256\frac{\epsilon'(r)r^3\pi^2\epsilon(r)}{\left(-3+8r^2\pi\epsilon(r)\right)^2} + 256\frac{r^2\pi^2\epsilon(r)^2}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - 144\frac{\pi\epsilon(r)}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - 48\frac{\rho'(r)r\pi}{\left(-3+8r^2\pi\epsilon(r)\right)^2} + 1280\frac{\rho(r)r^2\pi^2\epsilon(r)}{\left(-3+8r^2\pi\epsilon(r)\right)^2} + 32\frac{\epsilon'(r)\rho'(r)r^4\pi^2}{\left(-3+8r^2\pi\epsilon(r)\right)^2} + 320\frac{\rho'(r)r^3\pi^2\epsilon(r)}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - 32\frac{\epsilon'(r)^2r^4\pi^2}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - \frac{2560}{3}\frac{\epsilon'(r)\rho(r)r^5\pi^3\epsilon(r)}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - 24\frac{\epsilon''(r)r^2\pi}{\left(-3+8r^2\pi\epsilon(r)\right)^2} + \frac{256}{3}\frac{\epsilon'(r)^2\rho(r)r^6\pi^3}{\left(-3+8r^2\pi\epsilon(r)\right)^2} - \frac{512}{3}\frac{\epsilon''(r)\rho(r)r^6\pi^3\epsilon(r)}{\left(-3+8r^2\pi\epsilon(r)\right)^2} + 64\frac{\epsilon''(r)\rho(r)r^4\pi^2}{\left(-3+8r^2\pi\epsilon(r)\right)^2} + 64\frac{\epsilon''(r)r^4\pi^2\epsilon(r)}{\left(-3+8r^2\pi\epsilon(r)\right)^2}.$$

$\boxed{G^{\mu}_{\ \nu:\mu} = 0}$

$$G^{\mu}_{\ 0:\mu} = 0.$$
$$G^{\mu}_{\ 1:\mu} = 0.$$
$$G^{\mu}_{\ 2:\mu} = 0.$$
$$G^{\mu}_{\ 3:\mu} = 0.$$

$\boxed{g^{\mu\nu}\,\Gamma^{\lambda}_{\mu\nu} = 0?}$

$$g^{\mu\nu}\,\Gamma^{0}_{\mu\nu} = 0.$$
$$g^{\mu\nu}\,\Gamma^{1}_{\mu\nu} = \frac{2048}{9}\frac{\epsilon'(r)\rho(r)^3r^8\pi^4}{\left(-3+8\rho(r)r^2\pi\right)^2} - 72\frac{\rho(r)r^5\pi}{\left(-3+8\rho(r)r^2\pi\right)^2} + \frac{2048}{3}\frac{\epsilon'(r)\rho(r)^2r^8\pi^4\epsilon(r)}{\left(-3+8\rho(r)r^2\pi\right)^2} - 24\frac{r\pi\epsilon(r)}{\left(-3+8\rho(r)r^2\pi\right)^2} + \frac{4096}{9}\frac{\rho(r)^3r^7\pi^4\epsilon(r)}{\left(-3+8\rho(r)r^2\pi\right)^2} - 512\frac{\rho(r)r^5\pi^3\epsilon(r)^2}{\left(-3+8\rho(r)r^2\pi\right)^2} - 12\frac{\rho'(r)r^2\pi}{\left(-3+8\rho(r)r^2\pi\right)^2} + 32\frac{\epsilon'(r)r^4\pi^2\epsilon(r)}{\left(-3+8\rho(r)r^2\pi\right)^2} - 12\frac{\epsilon'(r)r^2\pi}{\left(-3+8\rho(r)r^2\pi\right)^2} - \frac{16384}{27}\frac{\epsilon'(r)\rho(r)^3r^{10}\pi^5\epsilon(r)}{\left(-3+8\rho(r)r^2\pi\right)^2} + 192\frac{\rho(r)r^3\pi^2\epsilon(r)}{\left(-3+8\rho(r)r^2\pi\right)^2} + 192\frac{\rho(r)^2r^7\pi^2}{\left(-3+8\rho(r)r^2\pi\right)^2} - 512\frac{\rho(r)^2r^5\pi^3\epsilon(r)}{\left(-3+8\rho(r)r^2\pi\right)^2} - 256\frac{\epsilon'(r)\rho(r)r^6\pi^3\epsilon(r)}{\left(-3+8\rho(r)r^2\pi\right)^2} + 64\frac{r^3\pi^2\epsilon(r)^2}{\left(-3+8\rho(r)r^2\pi\right)^2} + 192\frac{\rho(r)^2r^7\sin(\theta)^4\pi^2}{\left(-3+8\rho(r)r^2\pi\right)^2} - 72\frac{\rho(r)r^5\sin(\theta)^4\pi}{\left(-3+8\rho(r)r^2\pi\right)^2} + \frac{4096}{3}\frac{\rho(r)^2r^7\pi^4\epsilon(r)^2}{\left(-3+8\rho(r)r^2\pi\right)^2} + 9\frac{r^3\sin(\theta)^4}{\left(-3+8\rho(r)r^2\pi\right)^2} - 256\frac{\epsilon'(r)\rho(r)^2r^6\pi^3}{\left(-3+8\rho(r)r^2\pi\right)^2} - \frac{512}{3}\frac{\rho(r)^3r^9\pi^3}{\left(-3+8\rho(r)r^2\pi\right)^2} - 24\frac{\rho(r)r\pi}{(-3+8\rho(r)r}$$
$$g^{\mu\nu}\,\Gamma^{2}_{\mu\nu} = \cos(\theta)r^2\sin(\theta)^3.$$
$$g^{\mu\nu}\,\Gamma^{3}_{\mu\nu} = 0.$$