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Weighted estimates for nonhomogeneous quasilinear equations with discontinuous coefficients

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Abstract. We obtain local and global $W^{1,q}$ estimates on weighted Lebesgue spaces with certain Muckenhoupt weights for solutions to a nonhomogeneous p -Laplace type equation with VMO coefficients in a C^1 domain. These estimates can be viewed as weighted norm inequalities for certain nonlinear singular operators (without any explicit kernel) arising from the p -Laplacian, and are applicable to a quasilinear Riccati type equation.

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