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 $\mathcal{C}^1$ 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.