



24. $xy''_{xx} = f(y)y'_x$.

The substitution $w(y) = xy'_x/y$ leads to a first-order linear equation: $yw'_y = -w + 1 + f(y)$.

Reference

Polyanin, A. D. and Zaitsev, V. F., *Handbook of Exact Solutions for Ordinary Differential Equations*, 2nd Edition, Chapman & Hall/CRC, Boca Raton, 2003.