$$\int_{\Omega_0} N_{rr}\frac{\partial \delta u}{\partial r} r dr d\theta = \int_{\Omega_0} \left(rN_{rr}\right)\frac{\partial \delta u}{\partial r} dr d\theta = \left(rN_{rr}\right)\delta u|_{r_1}^{r_2} - \int_{\Omega_0}\left(N_{rr} + r\frac{\partial N_{rr}}{\partial r}\right)\delta u dr d\theta$$

$$\begin{aligned}\int_{\Omega_0} N_{rr}\frac{\partial \delta w}{\partial r}\frac{\partial w}{\partial r} r dr d\theta &= \int_{\Omega_0}\left(rN_{rr}\frac{\partial w}{\partial r}\right)\frac{\partial \delta w}{\partial r} dr d\theta \\ &= \left(rN_{rr}\frac{\partial w}{\partial r}\right)\delta w|_{r_1}^{r_2} - \int_{\Omega_0}\frac{\partial}{\partial r}\left(rN_{rr}\frac{\partial w}{\partial r}\right)\delta w dr d\theta\end{aligned}$$

$$\int_{\Omega_0} N_{\theta\theta}\frac{1}{r}\frac{\partial \delta v}{\partial \theta} r dr d\theta = \int_{\Omega_0} N_{\theta\theta}\frac{\partial \delta v}{\partial \theta} dr d\theta = N_{\theta\theta}\delta v|_{\theta_1}^{\theta_2} - \int_{\Omega_0}\frac{\partial N_{\theta\theta}}{\partial \theta}\delta v dr d\theta$$

$$\begin{aligned}\int_{\Omega_0} \frac{1}{r^2}N_{\theta\theta}\frac{\partial \delta w}{\partial \theta}\frac{\partial w}{\partial \theta} r dr d\theta &= \int_{\Omega_0}\left(\frac{1}{r}N_{\theta\theta}\frac{\partial w}{\partial \theta}\right)\frac{\partial \delta w}{\partial \theta} dr d\theta \\ &= \left(\frac{1}{r}N_{\theta\theta}\frac{\partial w}{\partial \theta}\right)\delta w|_{\theta_1}^{\theta_2} - \int_{\Omega_0}\frac{\partial}{\partial \theta}\left(\frac{1}{r}N_{\theta\theta}\frac{\partial w}{\partial \theta}\right)\delta w dr d\theta\end{aligned}$$