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Conditions on the Effective D-term $G(u,v)$

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The relevant terms are

$$-\frac{1}{4}\Big\{ G_{uuv}\,\bar D_R D_L v\cdot \bar D_L u\, D_R u + G_{uvv}\,\bar D_R v\, D_L v\cdot \bar D_L D_R u + G_{uv}\,\bar D_R D_L v\cdot \bar D_L D_R u\Big\}\Big| \supset$$

$$\supset -\frac{1}{4}\Big\{ 2\,G_{uuv}\frac{(-i)}{\cancel{\sqrt{2}b}}\left(-\frac{(iD)^2}{|\sqrt{2}b|^2}\right)\cdot(-2)\frac{\cancel{\sqrt{2}b}(iD)\lambda_R}{|\sqrt{2}b|^4}\cdot 2\frac{\sqrt{2}\bar b\, iD\,\bar\lambda_L}{|\sqrt{2}b|^4} +$$

$$+ \cancel{2}\frac{-i}{\sqrt{2}b}\,G_{vvu}\,(-1)\frac{(iD)^2}{|\sqrt{2}b|^2}(-2)\frac{\cancel{\sqrt{2}b}\, iD\lambda_L}{|\sqrt{2}b|^4}\, 2\frac{\sqrt{2}\bar b\, iD\,\bar\lambda_R}{|\sqrt{2}b|^4} +$$

$$+ \frac{(-1)}{|\sqrt{2}b|^2}\,G_{uv}\cdot 4\cdot(-1)\frac{(iD)^2}{|\sqrt{2}b|^2}\cdot 2\Big[\cancel{2}\, i\sqrt{2}\bar b\,\bar\lambda_L\lambda_R iD + 2i\sqrt{2}\bar b\,\bar\lambda_R\lambda_L iD +$$

$$+ i\sqrt{2}b\,\bar\lambda_R\lambda_L iD + 2i\sqrt{2}\bar b\,\bar\lambda_L\lambda_R\, iD\Big]\frac{1}{|\sqrt{2}b|^4}\Big\} =$$

$$= -2\,G_{\mu\nu}\frac{(iD)^4}{|\sqrt{2}\,b|^{10}}\, i\sqrt{2}\,b\,\bar{\lambda}_L\lambda_R - 2\,G_{\nu\mu}\frac{(iD)^4}{|\sqrt{2}\,b|^{10}}\, i\sqrt{2}\,b\,\bar{\lambda}_R\lambda_L -$$

$$- 6\,G_{\mu\nu}\frac{(iD)^3}{|\sqrt{2}\,b|^6}\left\{ i\sqrt{2}\,b\,\bar{\lambda}_L\lambda_R + i\sqrt{2}\,b\,\bar{\lambda}_R\lambda_L \right\} =$$

$$= -2x^3\left\{ 3\,G_{\mu\nu}\cdot\frac{i\sqrt{2}\,b\,\bar{\lambda}_R\lambda_L + i\sqrt{2}\,b\,\bar{\lambda}_L\lambda_R}{|\sqrt{2}\,b|^2} + \right.$$

$$\left. + x\,G_{\mu\nu}\frac{i\sqrt{2}\,b\,\bar{\lambda}_L\lambda_R}{|\sqrt{2}\,b|^2} + x\,G_{\nu\mu}\frac{i\sqrt{2}\,b\,\bar{\lambda}_R\lambda_L}{|\sqrt{2}\,b|^2} \right\} =$$

$= \Big|_{\text{at } y=0} \qquad G_{uuv} = G_{vvu}$

$$= -2x^3 \cdot \frac{i\sqrt{2}\,b\,\acute{\lambda}_R \lambda_L + i\sqrt{2}\,b\,\acute{\lambda}_L \lambda_R}{\phi} \left\{ 3\,G_{uv} + x\,G_{uuv} \right\} =$$

$$= \frac{i\sqrt{2}\,b\,\acute{\lambda}_R \lambda_L + i\sqrt{2}\,b\,\acute{\lambda}_L \lambda_R}{\phi} (-2) x^3 \cdot$$

$$\cdot \left\{ 3 \cdot \frac{x - (1+x)\ln(1+x)}{x^4} + \frac{1}{2} \frac{4\ln(1+x) + 3x\ln(1+x) - 4x}{x^4} \right\}$$

coeff =

$$- \left\{ 6 \cdot \frac{x - (1+x)\ln(1+x)}{x} + \frac{4\ln(1+x) + 3x\ln(1+x) - 4x}{x} \right\} =$$

$=$

(4)

$$= \frac{2x - 3x\ln(1+x) - 2\ln(1+x)}{x} =$$

$$= 2\,\frac{\ln(1+x) - x}{x} + \frac{2x\ln(1+x)}{x} + \ln(1+x) =$$

$$= 2\,\frac{(1+x)\ln(1+x) - x}{x} + \ln(1+x)$$