```
/* Input Data */
DATA equipment;
INPUT minutes factorA $ factorB $ job $ @@;
DATALINES;
62 1 1 1 48 1 1 2 63 1 1 3 57 1 1 4 69 1 1 5
57 1 2 1 45 1 2 2 39 1 2 3 54 1 2 4 44 1 2 5
59 1 3 1 53 1 3 2 67 1 3 3 66 1 3 4 47 1 3 5
51 2 1 1 57 2 1 2 45 2 1 3 50 2 1 4 39 2 1 5
61 2 2 1 58 2 2 2 70 2 2 3 66 2 2 4 51 2 2 5
55 2 3 1 58 2 3 2 50 2 3 3 69 2 3 4 49 2 3 5
59 3 1 1 65 3 1 2 55 3 1 3 52 3 1 4 70 3 1 5
58 3 2 1 63 3 2 2 70 3 2 3 53 3 2 4 60 3 2 5
47 3 3 1 56 3 3 2 51 3 3 3 44 3 3 4 50 3 3 5
;

/* Print Data */
PROC PRINT DATA = equipment;
RUN;

/* Mixed Model: FULL MODEL ANOVA TABLE TO INVESTIGATE INTERACTIONS */
PROC GLM DATA = equipment;
	CLASS factorA factorB;
	MODEL minutes = factorA|factorB;
	random factorB;
	LSMEANS factorA/ADJUST=TUKEY CL ALPHA=0.05 OUT = lsmeans;
	test h = factorA e = factorA*factorB;
	OUTPUT out = results r = residual p = yhat;
RUN;

/* Print Fitted Values */
PROC PRINT DATA = lsmeans;
RUN;

/* Print Residuals */
PROC PRINT DATA = results;
RUN;

/* Produce Residual vs Yhat */
PROC SGPLOT DATA = results;
	SCATTER X = yhat Y = residual;
RUN;

/* Produce Residual vs Expected Value (Q-Q Plot) */
PROC UNIVARIATE DATA = results NORMAL;
	VAR residual;
	QQPLOT;
RUN;
```