



TRUCK, HIAB CRANE & ACCESSORIES WEIGHT DISTRIBUTION, NO PAYLOAD, LIFT AXLE #2 DOWN.	
TOTAL WEIGHT ON FRONT AXLE	= 13,840 LBS.
TOTAL WEIGHT ON LIFT AXLE #2	= 9,000 LBS.
TOTAL WEIGHT ON TANDEM AXLE	= 27,990 LBS.
FRONT AXLE WT. PERCENTAGE	= 27 %
LIFT AXLE #2 WT. PERCENTAGE	= 18 %
TANDEM AXLE WT. PERCENTAGE	= 55 %
GROSS VEHICLE WEIGHT	= 50,830 LBS.

TRUCK, HIAB CRANE & ACCESSORIES WEIGHT DISTRIBUTION, WITH PAYLOAD, ALL LIFT AXLES DOWN.	
TOTAL WEIGHT ON FRONT AXLE	= 16,760 LBS.
TOTAL WEIGHT ON LIFT AXLE #1	= 5,000 LBS.
TOTAL WEIGHT ON LIFT AXLE #2	= 9,000 LBS.
TOTAL WEIGHT ON TANDEM AXLE	= 32,240 LBS.
TOTAL WEIGHT ON LIFT AXLE #3	= 11,000 LBS.
FRONT AXLE WT. PERCENTAGE	= 23 %
LIFT AXLE #1 WT. PERCENTAGE	= 7 %
LIFT AXLE #2 WT. PERCENTAGE	= 12 %
TANDEM AXLE WT. PERCENTAGE	= 43 %
LIFT AXLE #3 WT. PERCENTAGE	= 15 %
GROSS VEHICLE WEIGHT	= 74,000 LBS.
WATER LEVEL PAYLOAD	= 23,170 LBS.

TRUCK SPECIFICATIONS	
TRUCK MODEL	= FREIGHTLINER 114 SFA
WHEELBASE	= 289"
CAB TO TANDEM AXLE-TO-FRAME	= 205 1/2"
FRONT AXLE CURB WEIGHT	= 10,200 LBS.
REAR AXLE CURB WEIGHT	= 9,600 LBS.
FRONT G.A.W.R.	= 20,000 LBS.
REAR G.A.W.R.	= 46,000 LBS.
YIELD STRENGTH OF EACH CHASSIS FRAME	MINIMUM SECTION MODULUS REQUIRED
120,000 P.S.I. YIELD	= 46.55 in. ³
MINIMUM RBM/RAIL OF 5,585,679 IN-LBS	

NOTES:
 CHASSIS FRAME RAIL MIN. OF 31.0 SECTION MODULUS REQ'D.
 FULL LENGTH SUB-FRAME REQUIRED:
 5"X3"X3/8" RECT. TUBING (ON TOP OF CHASSIS FRAME)
 5"X3"X3/8" RECT. TUBING (CROSS MEMBERS EVERY 3')
 1/2" TOP & 3/8" BOTTOM PLATES REQUIRED - FULL WIDTH.
 FLATBED, LIFT AXLES, AND CURB WEIGHTS WERE ESTIMATED BASED ON COMPLETED TRUCK WEIGHT.

TRUCK RUNS IN US (RULES FOR MOST STATES).
 20,000 LBS. ALLOWED ON FRONT AXLE.
 34,000 LBS. ALLOWED ON TANDEM.
 42,500 LBS. ALLOWED ON TRIDEM (9').
 44,000 LBS. ALLOWED ON TRIDEM (11').
 50,500 LBS. ALLOWED ON QUAD (13').
 52,500 LBS. ALLOWED ON QUAD (16').
 60,500 LBS. ALLOWED ON 5 AXLE GROUP (20').
 74,000 LBS. ALLOWED FOR GROSS WEIGHT (33').
 MAXIMUM LENGTH CANNOT EXCEED 40'.

NOTICE:
 THE DRAWING PURPOSE IS TO INTRODUCE A GENERAL CONCEPT OF A PROPOSED IDEA.

NOTICE:
 THIS WEIGHT DISTRIBUTION IS BASED ON ESTIMATED WEIGHTS AND IS ONLY AS ACCURATE AS THOSE ESTIMATES. ACTUAL WEIGHTS MAY CHANGE THE RESULTS OF THIS WEIGHT DISTRIBUTION.

Cargotec USA
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 Perrysburg, Ohio 43551
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Tolerance - unless otherwise noted.
 Tolerances are in inches
 2-PLACE ±.00..... .03
 3-PLACE ±.000..... .015
 ANGULAR ± 1'
 FRACTIONAL ± 1/16"
 Break all sharp corners unless otherwise specified.

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 Next Assy:
505K / SALES
 Dwg/Cad file no.

Drawing Title:
 HIAB 505K-4 HI-PRO

Project Name:
 SALES LAYOUT

Drawn by/Date:
 SMG 4-1-20

Size: unit wt. **Part No.:** Eng. job no.:

Approval: Date Approved: **Scale:**