

CENTER OF GRAVITY AND WEIGHT DISTRIBUTION
 WHEELBASE CHANGES OR AUXILIARY AXLE INSTALLATION

2013-11-27
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VEHICLE:	Front GAWR (lbs.)	Rear GAWR (lbs.)	GVWR (lbs.)
Ford F-350 Super Cub 6.7L, 4X4	5940	9750	14000

GVWR should not be increased unless a FMVSS 121 analysis is performed. See instruction manual for additional information.

Chassis Components Before Modification

Original Wheelbase:	161.8	inches
Cab to Axle/Trunion:	60.0	inches
Number of Original Rear Axle(s):	1	

	Front Weight (lbs.)	Rear Weight (lbs.)	Total Weight (lbs.)
Base Chassis Weights	4,591	3,000	7,591

Note: The accuracy of these calculations depends on the accuracy of the input data.

New Wheelbase and/or Additional Axle(s)

	New Wheelbase, or enter original if not altering (inches)	Weight of Original Rear/Additional Axle(s) (lbs.)	Desired Axle Load for weight Proportioning (lbs)	Gross Axle Weight Rating (lbs.)
Data for Original Rear Axle(s):	161.8	3,000	4,000	14,000

Additional Axles

Axle Number 1:				
Axle Number 2:				
Axle Number 3:				
Axle Number 4:				
Axle Number 5:				

Added Components

Component	Horizontal C.G. (inches)	Vertical C.G. (inches)	Weight (lbs.)
CHASSIS	63.9		7,591
Driver/Passenger	40.0		300
Body	105.0		1,100
Interior & machine	209.5		2,800
DESIRED PAYLOAD	98.0		

Total Weight: **11,791**

Horizontal CG: **101.7 inches**
 Vertical CG: **0.0 inches**

Rear Axles Proportioned for Capacity

		% of Total Vehicle Weight
Front Weight (lbs):	4,378	% Weight on Front: 37.1%
Total Rear Weight (lbs):	7,413	% Weight on All Rear: 62.9%

<u>Original Rear Axle(s) Wt. (lbs)</u>	<u>Axle 1 Wt. (lbs)</u>	<u>Axle 2 Wt. (lbs)</u>	<u>Axle 3 Wt. (lbs)</u>	<u>Axle 4 Wt. (lbs)</u>	<u>Axle 5 Wt. (lbs)</u>
7,413	0	0	0	0	0

Note: The accuracy of these calculations depends on the accuracy of the input data.