



## CHASSIS CONSIDERATIONS FOR RETRIEVER TRUCK BEDS

The Retriever is designed to provide the lowest possible loading angle no matter what truck it is installed on. The low loading angle, if that is an important consideration to you, can be enhanced by selecting the optimum chassis, suspension and rear tires. Air ride suspension with a dump valve aids in reducing the loading angle. Low profile rear tires also help.

### Preferred Rear Tires for Minimum Load Angle & Ride Height

#### Standard Height Chassis

Rear: 255/70R22.5

#### Low Profile Chassis

Rear: 265/70R19.5

#### Required frame measurements for single axle chassis

Bed Length	20 ft.	24 ft.	26 ft.	28 ft.
Back of Cab to Rear Axle (CA)	150 in.	198 in.	218 in.	246 in.
After Frame (AF)	48 in.	48 in.	48 in.	48 in.

**Important Note:** Cab to axle measurements must be increased to allow room for vertical exhaust or any other above frame obstructions to the full width of the Retriever bed and full height of the cab.

#### Required frame measurements for tandem axle chassis

<u>Bed Length</u>	<u>20 ft.</u>	<u>24 ft.</u>	<u>26 ft.</u>	<u>28 ft.</u>
Cab to center of <u>Rearmost Axle</u>	150in.	198in.	218 in.	246 in.
After Frame from Center of <u>Rearmost Axle</u>	48 in.	48 in.	48 in.	48 in.

Truck manufacturers measure **Cab to Axle** on tandem chassis from the back of the cab to the center of the trunnion and **After Frame** from the center of the trunnion to the end of the frame.

**Example:** Based on 52 inch tandem axle spread

<u>Bed Length</u>	<u>20 ft.</u>	<u>24 ft.</u>	<u>26 ft.</u>	<u>28 ft.</u>
Cab to Axle (CA) to center of trunnion	124in.	172in.	192 in.	220 in.
After Frame (AF) from center of trunnion	74 in.	74 in.	74 in.	74 in.

**Important Note:** Cab to axle measurements must be increased to allow room for vertical exhaust or any other above frame obstructions to the full width of the Retriever bed and full height of the cab.

**Suspension:** Air ride with dump valve preferred, pressure gauge optional. Inboard mounted rear shock absorbers required.

**Frame and crossmember requirements:** No crossmember section is to be more than 26 inches behind the center of the rearmost axle. No crossmember mounting holes are to be more than 28 inches behind the center of the rearmost axle. If chassis are not available with crossmembers positioned as required crossmembers can be moved at extra cost.

**Air System:** Air tanks large enough to supply a minimum of 10 gallons (2,300 cubic inches) of Auxiliary Air, (*available air storage separate from air brake tanks*), are required for proper operation. Extra tanks can be added if not available from chassis manufacturer. An Air dryer is required to prevent corrosion and possible freezing of control valves. Minimum 12 cfm compressor is recommended, larger compressors will increase recovery rate between cycles.

**Air Tank Mounting Locations:** Mounting underneath the cab or outside of frame rails immediately behind cab is preferred. Installations between frame rails will typically require that the air tanks be moved for bed installation at extra cost. Installations below frame rails may cause ground clearance problems if the truck is going to be used off road.

**Electrical Considerations:** Body builder wiring should be provided with the brake and turn signals in separate circuits. It is easier and less expensive to order the truck chassis pre-wired for the various electrical equipment you will need. Most truck manufacturers will supply additional accessory switches for options such as work lights and safety beacons.

**Trailer Wiring:** Trailer wiring is an especially important consideration and can be difficult and expensive to correct or add on to trucks equipped with multiplex wiring systems. Truck specifications should take into consideration the type of trailer brakes you will be using, either air or electric.

**Air Brake Trailers:** Chassis can be ordered with Air and Electrical (A&E) connections at the end of the frame. These connections normally come with a round 7-pin semi-trailer style plug and glad hand air connections for trailer brakes.

**Electric Brake Trailers:** If you are going to be towing vehicles with Electric Trailer Brakes the chassis should be ordered with trailer brake wiring and a trailer brake controller if possible. Typically this type of trailer is fitted with single tail lights that combine taillight, stop and turn in a single unit. In this case the truck must be wired with the turn signal circuit combined with the brake light circuit. The typical trailer plug for an electric brake set-up is a 7 blade RV plug.

**Batteries:** Medium and Heavy-Duty diesel trucks are typically equipped with at least 2 batteries. This is adequate for 9,000 lb winches used occasionally. If you anticipate frequent use of the winch or if you order your Retriever with a 12,000 or 15,000 lb. rated winch we recommend going to a 3 or 4 battery system. Extra batteries are also recommended if you are going to use the No Idle System™.

**FACTORY CONSULTATION:** Please give us a call with any chassis questions. We are also happy to review your truck specifications before you place your chassis order to assure optimum performance of your Retriever.