VOLVO
Volvo Trucks North America, Inc.
Greensboro, NC USA

Service Bulletin Trucks

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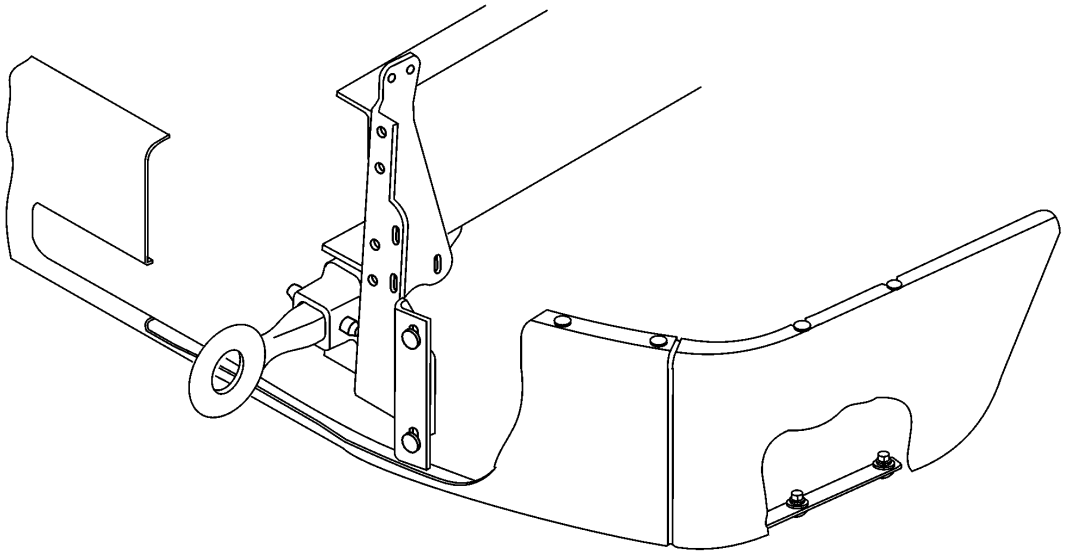
Non-Fifth Wheel
Towing Configurations
VN, VHD

Non-Fifth Wheel Towing Configurations



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The following information includes design and function and specifications for non-fifth wheel towing components (i.e., towing hooks, towing pintles, towing pins, and towing eyes). Use this information in conjunction with any other towing component documentation and any appropriate vendor literature.

Contents:

Front Towing Configurations

Tow Hooks

18 in. Frame Extension

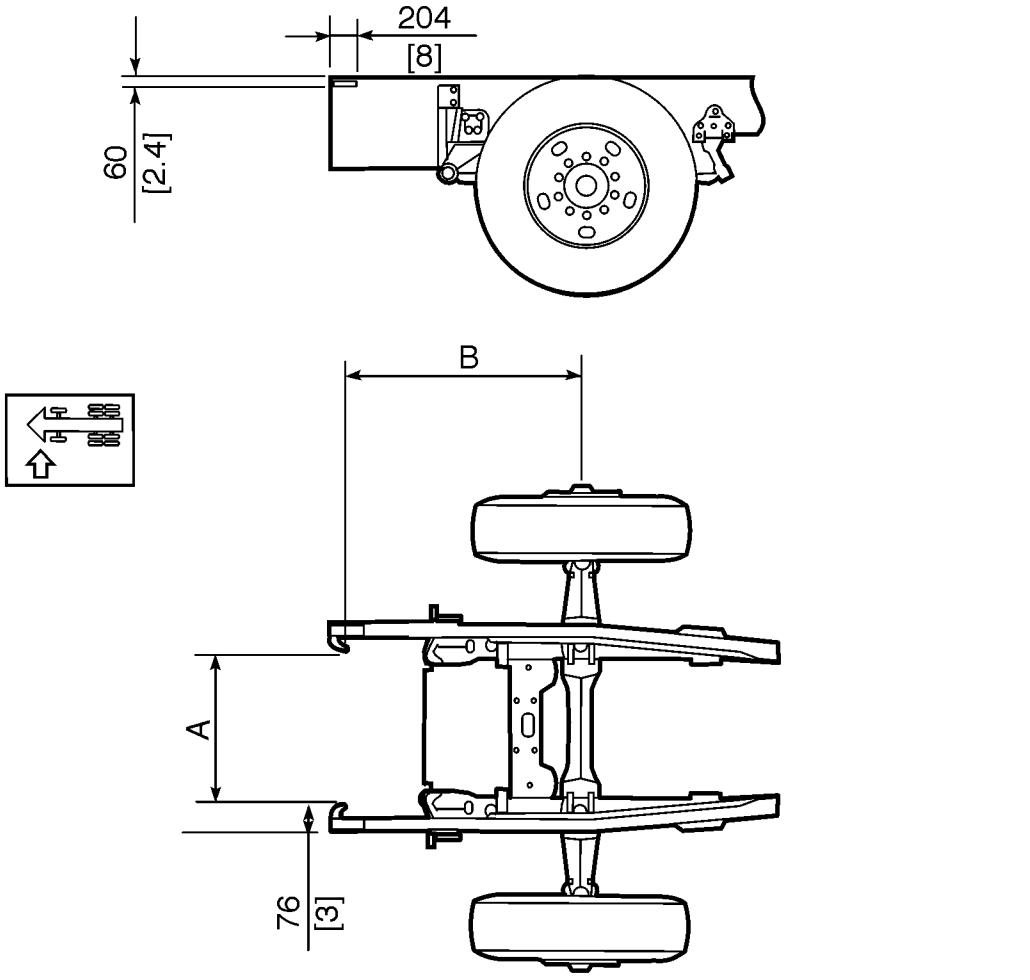

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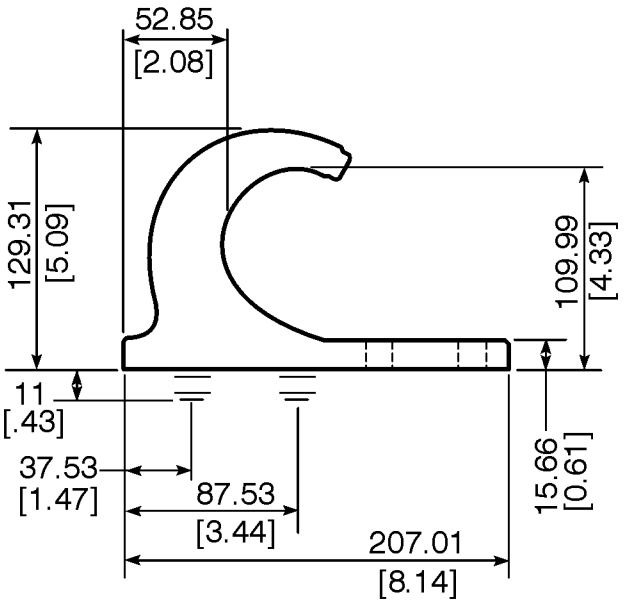
Fig. 1: Tow Hooks, 18 in. Frame Extension (Axle Forward Configuration Shown)

Rail Thickness	A
7 mm (0.28 in.)	807 mm (31.77 in.)
8 mm (0.32 in.)	805 mm (31.69 in.)
11 mm (0.43 in.)	799 mm (31.45 in.)

	Axle Forward	Axle Back
B	942 mm (37.1 in.)	1504 mm (59.2 in.)

LH Tow Hook



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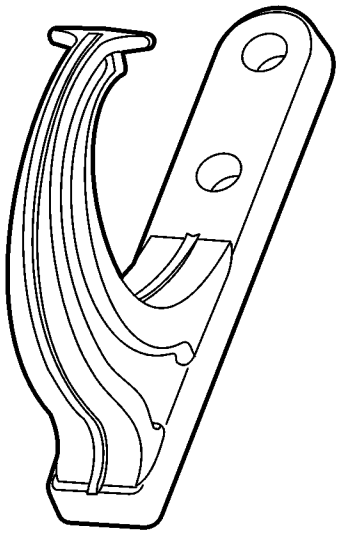

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24 in. Frame Extension

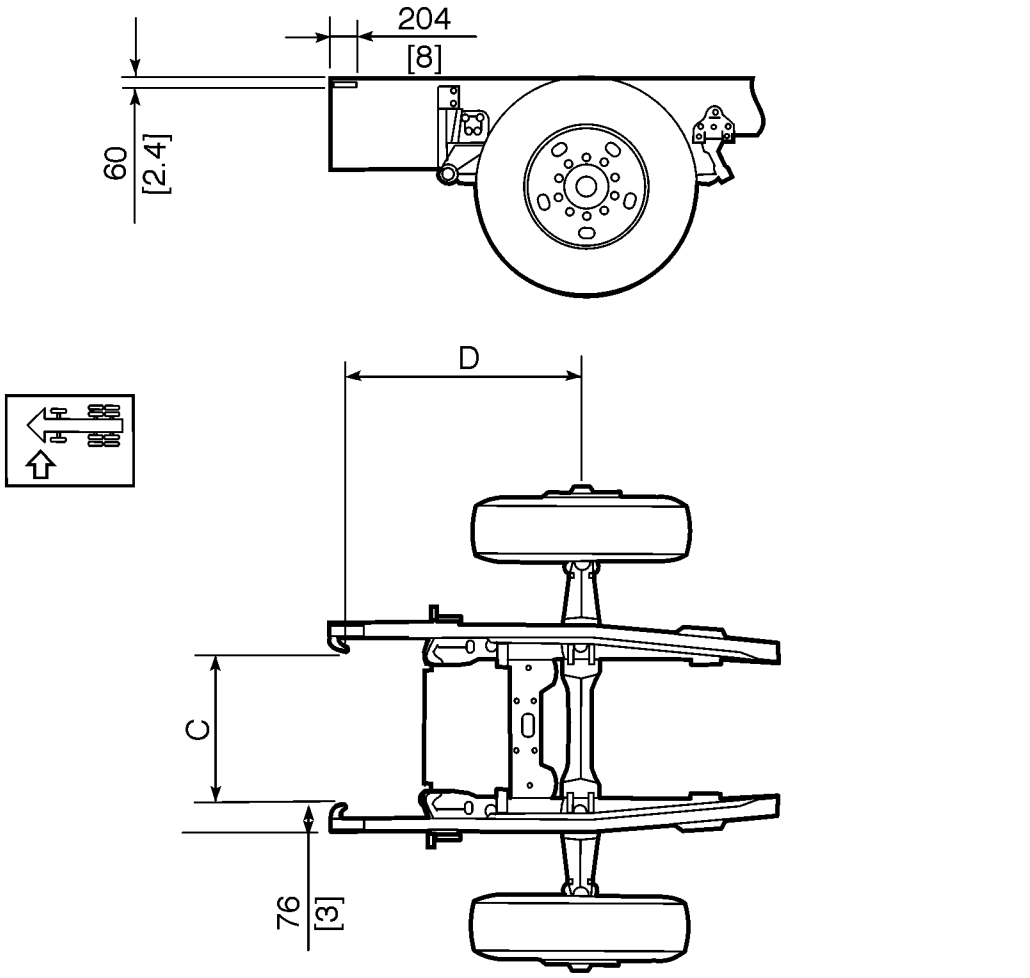

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Fig. 2: Tow Hooks, 24 in. Frame Extension (Axle Forward Configuration Shown)

Rail Thickness	C
7 mm (0.28 in.)	807 mm (31.77 in.)
8 mm (0.32 in.)	805 mm (31.69 in.)
11 mm (0.43 in.)	799 mm (31.45 in.)

	Axle Forward	Axle Back
D	1194 mm (47.0 in.)	1654 mm (65.1 in.)

24 in. Frame Extension with Snow Plow

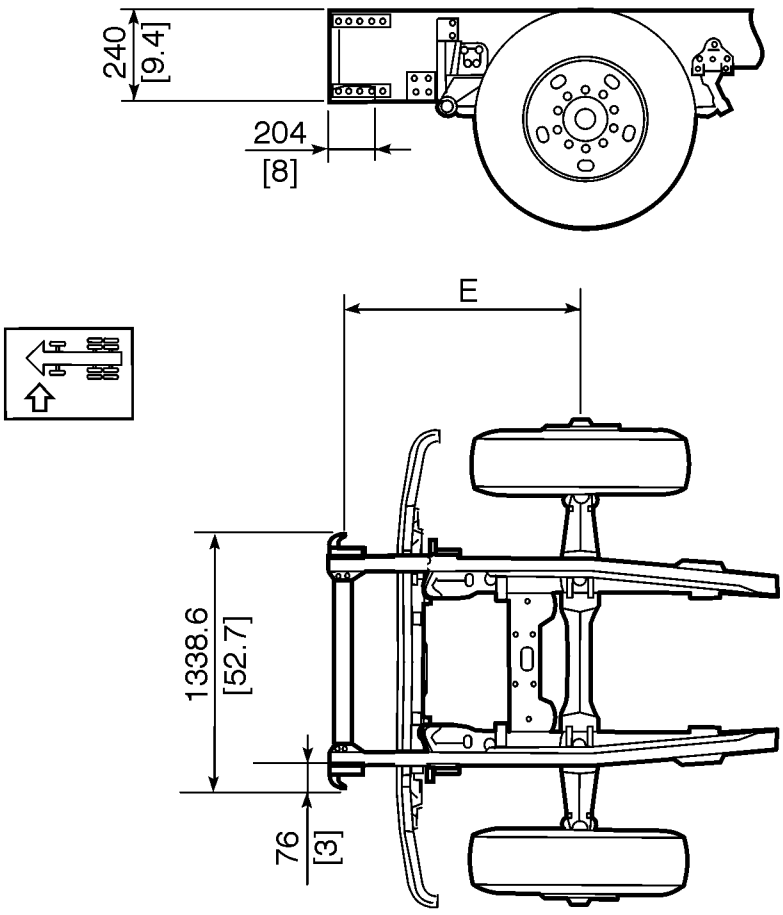

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Fig. 3: Tow Hooks, 24 in. Frame Extension with Snow Plow (Axle Forward Configuration Shown)

	Axle Forward	Axle Back
E	1226 mm (48.3 in.)	1686 mm (66.4 in.)

Standard Front Frame End

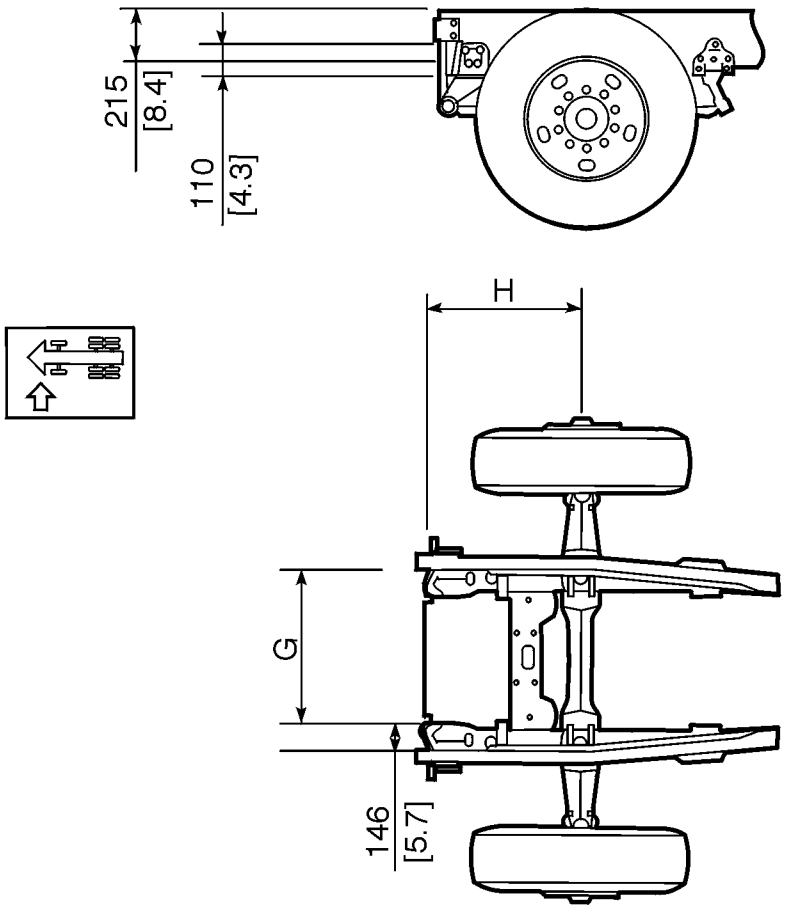

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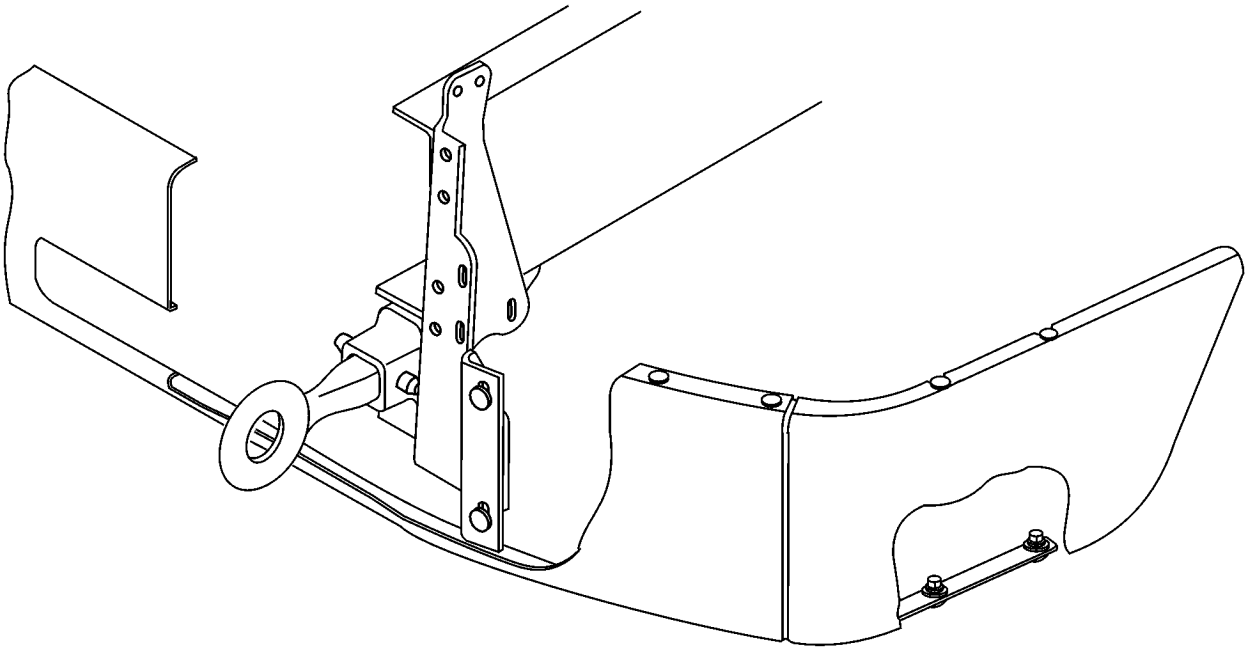
Fig. 4: Tow Hooks, Standard Front Frame End (Axle Forward Configuration Shown)

Rail Thickness	G
7 mm (0.28 in.)	678 mm (26.69 in.)
8 mm (0.32 in.)	676 mm (26.61 in.)
11 mm (0.43 in.)	670 mm (26.37 in.)

	Axle Forward	Axle Back
H	625 mm (24.6 in.)	1085 mm (42.7 in.)

Towing Eye



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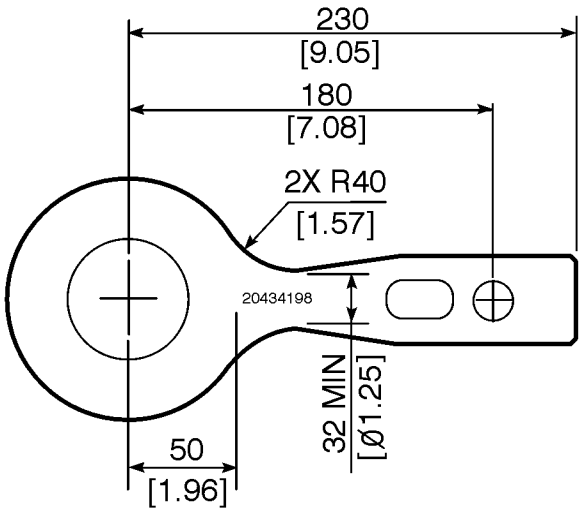
Front Bumper Towing Eye Configuration



Towing Eye

Towing Pintles

Towing Pintle, 8 in. Frame Extension with Heavy-duty Front End

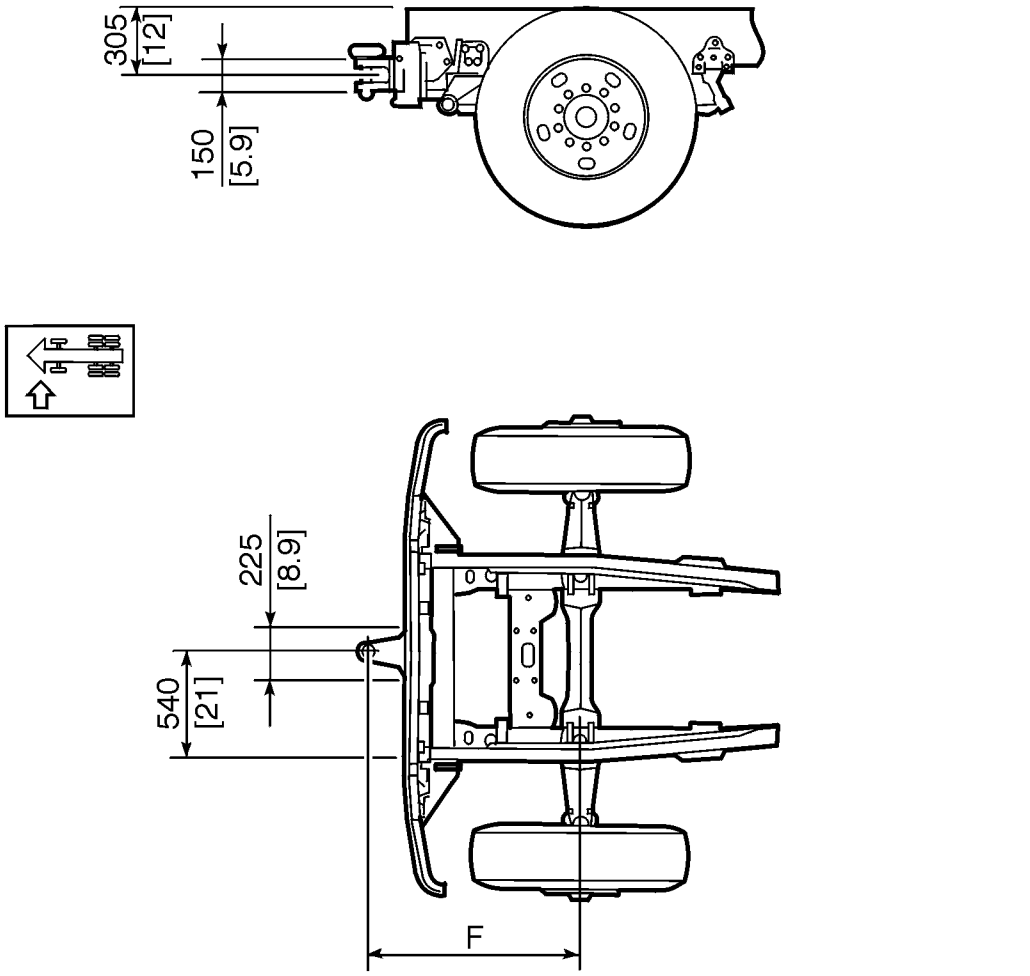


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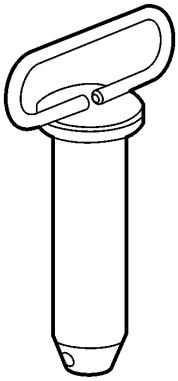
Fig. 5: Towing Pintle, 8 in. Frame Extension with Heavy-duty Front End (Axle Forward Configuration Shown)

	Axle Forward	Axle Back
F	1068 mm (42.0 in.)	1528 mm (60.2 in.)

Towing Pin Assembly



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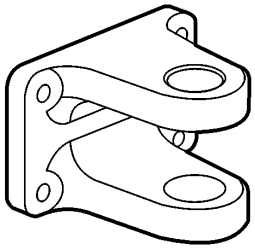
Front Towing Pin



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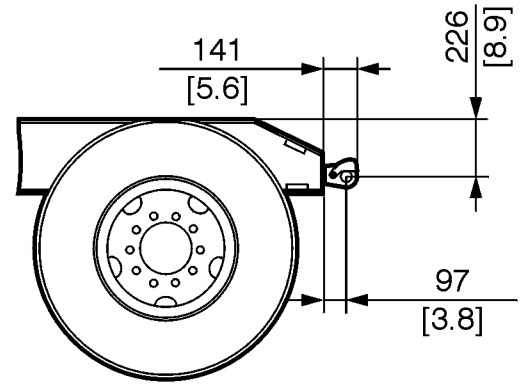
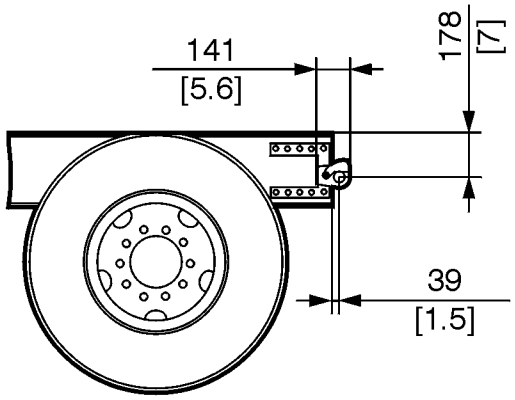
Front Towing Pin Bracket

Rear Towing Configurations

Towing Pintle





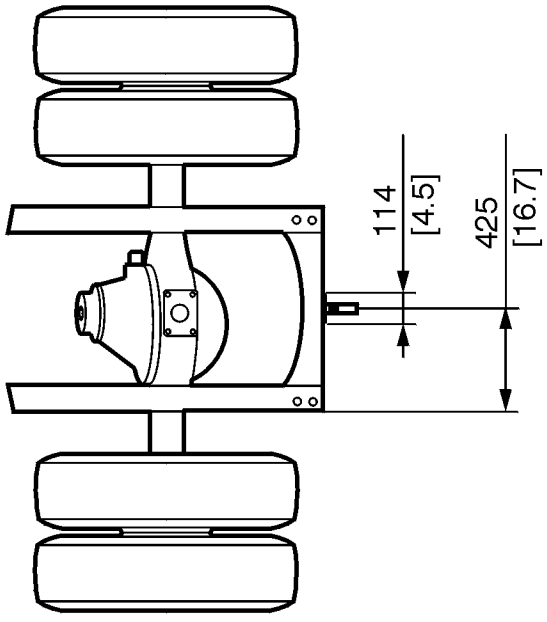


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Fig. 6: Towing Pintle, Tapered Rear Frame End

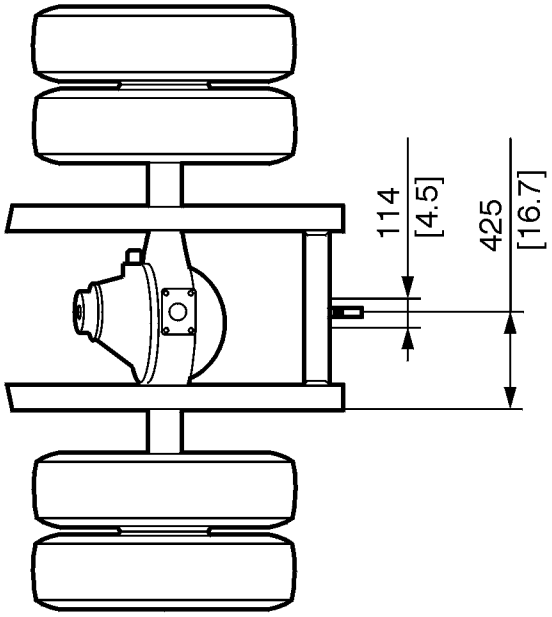

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Fig. 7: Towing Pintle, Standard Rear Frame End

Pintle Hook Dimensions

Rigid

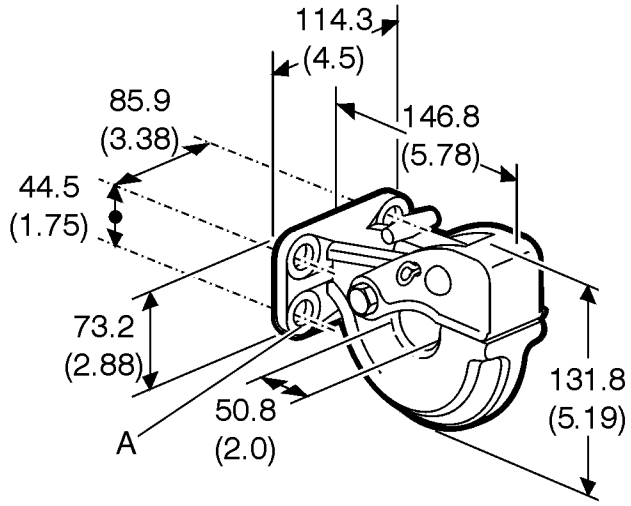


Fig. 8: PH-5 Rigid Pintle Hook

1 **Diameter** 13.2 mm (0.52 in.) through; 4 required.

2 **Capacity:** 907 kg (2000 lb) Maximum Vertical Load, 1814 kg (4000 lb) Maximum Gross Trailer Weight

3 **SAE J847 Information:** Type I - Not applicable. Type II - 3629 kg (8000 lb)

4 **Description:** Rigid pintle hook. Weight 3 kg (7 lb)

5 **Drawbar Eye Dimensions:** 50 mm (2 in.) to 76 mm (3 in.) I.D. with 31.75 mm (1.25 in.) to 41.14 mm (1.62 in.) diameter section.

Tow Hooks

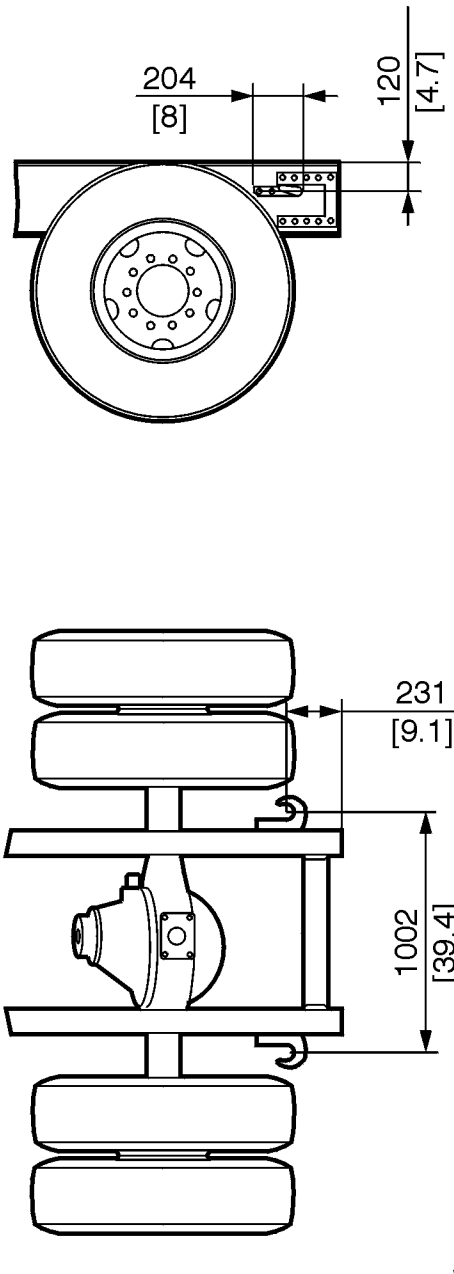


Fig. 9: Tow Hooks, Standard Rear Frame End

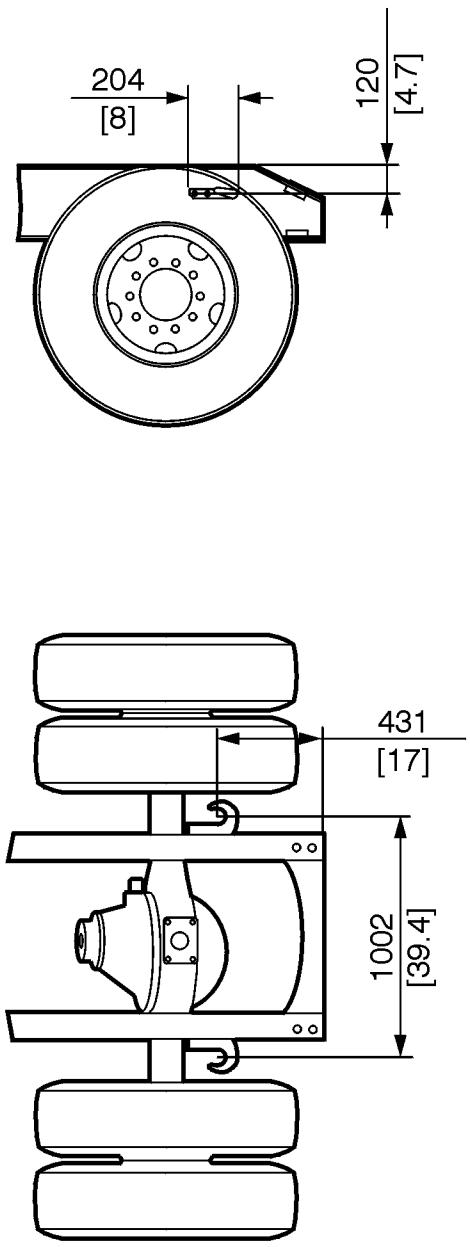


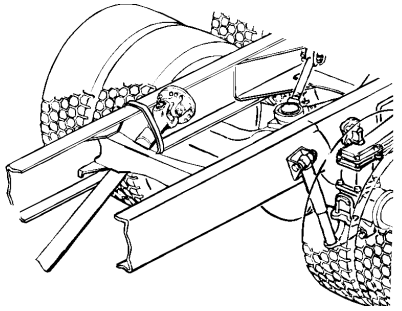
Fig. 10: Tow Hooks, Tapered Rear Frame End

Towing Procedure

General

CAUTION

The driveshaft must be removed before towing the vehicle. Failure to remove the driveshaft may result in damage to the transmission.



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Remove the driveshaft from the rear axle before moving the vehicle, unless it only needs to be moved a small distance for safety reasons. When the transmission is driven from the rear wheels without the engine running, there is no lubrication in the transmission.

Axle shafts must be removed if the vehicle is to be towed at speeds over 40 km/h (25 mph) or for a long distance. Openings should be covered to prevent loss of oil and entry of dirt and grit. Where oil-lubricated bearings are used, openings should be thoroughly sealed with metal discs and new gaskets before towing.

WARNING

If a vehicle with air suspension is lifted by the rear frame member, there is a risk that the air springs will separate from the spring plates. When towing has been completed, never use your hands to reposition the air springs. There is a great risk that your hand will be caught between spring and plate causing personal injury.

WARNING

Do not tow a vehicle backwards when equipped with roof air fairings. The fairings act as an air scoop and may break off. Failure to follow this warning may lead vehicle damage and personal injury.

WARNING

Vehicles with air fairings or large superstructures are tall. Make sure that the total height of the vehicle, when it is raised up behind the wrecker, does not exceed the maximum allowed height for local underpasses. Failure to follow this instruction may lead to vehicle damage and personal injury.

The vehicle may now be towed. It is recommended that a wrecker with a lift bar is used since the service brakes will not function. The system must be filled with air to release the parking brake.

Note: The power steering does not function when towing a vehicle with a disabled engine.

W1000075

Towing Instructions

CAUTION

If the vehicle becomes disabled, it is very important to tow it properly. Failure to do so can cause damage to the frame and body parts. Follow the instructions below to avoid damage.

In the event that the vehicle is not accessible to place the wrecker lift bar under the front axle, use the tow hooks in the front of the vehicle. The front tow hooks are used as a point at the front of the vehicle where the vehicle can be pulled.
When the vehicle is situated properly, lift the front and position the lift bar under the front axle and secure. Using the front axle for towing minimizes the risk of damage to the vehicle body, frame, and suspension.

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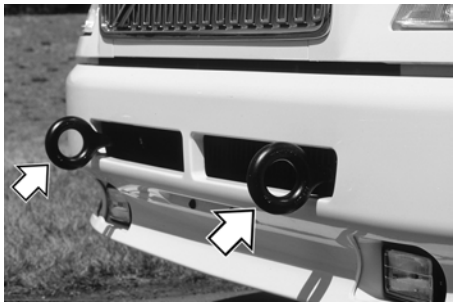
If necessary, the driveshaft and axle shaft can be removed for towing.

Note: When the driveshaft or axle shafts are reinstalled, make sure the nuts are tightened to the correct torques. Also make sure the axle shafts are installed in the proper sides, with the left shaft in the left side and the right shaft in the right side. For further information refer to the “Pre-Delivery Inspection” Service Manual in Group 1.

W1000074

CAUTION

If the vehicle becomes disabled, it is very important to tow it properly. Failure to do so can cause damage to the frame and body parts. Follow the instructions below to avoid damage.



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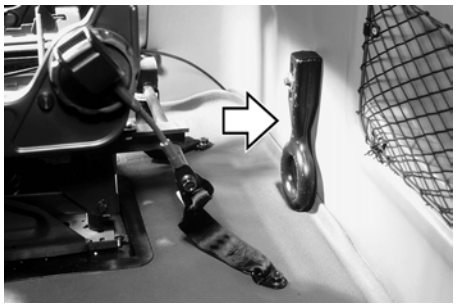
DANGER

Do not use the tow eyes for raising the front of the vehicle; the tow eyes can break. Do not crawl under a vehicle suspended by tow eyes. Failure to follow these instructions can result in serious personal injury or death.

On day cab models, the tow eyes are stored bolted to the back of the cab wall.



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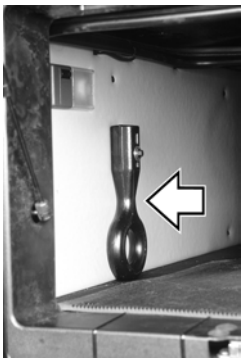
On sleeper cab models, the tow eyes are stored bolted to the back wall of the luggage compartment wall.



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The tow eyes are held in place when mounted on the front of the vehicle by tractor pins. These pins are stored in the tow eye mounting holes when not being used.

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The vehicle may now be towed. It is recommended that a wrecker with a lift bar is used since the service brakes will not function. The system must be filled with air to release the parking brake.

Note: The power steering does not function when towing a vehicle with a disabled engine.

CAUTION

It is recommended that the front bumper be removed when lifting with the front tow eyes/hooks. Failure to remove the front bumper can cause possible component damage.

Acceptable loads per hook:

- Straight pull: Less than or equal to 18,143 kg/hook (40,000 lb).
- Vertical pull: Less than or equal to 5170 kg/hook (11,400 lb).
- 45° cone (combination loads): Less than or equal to 7239 kg (15,960 lb).