

## SECTION 00-02 Lifting, Jacking and Spare Tire Stowage

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### VEHICLE APPLICATION

F-150, F-250, F-350, F-Super Duty and Bronco

### HOISTING AND JACKING

#### Lifting Instructions

Refer to the manufacturer's operating instructions for proper lifting procedures.

**CAUTION:** Damage to suspension or steering linkage components may occur when positioning hoist adapters. Front adapter pads should be positioned carefully to ensure maximum contact under the center of the lower suspension arms or spring supports as near to wheels as practical. Rear suspension hoist adapters (forks) should be placed under spring mounting pads or rear axle housing tubes, but adapters must not interfere with shock absorber mounting brackets or stabilizer bar mounting brackets.

**CAUTION:** When raising a vehicle on a twin-post hoist, care should be taken to position the vehicle so that the hoisting forks do not damage the axle carrier casting or rear cover.

**NOTE:** For proper wrecker towing procedures, refer to Vehicle Owner Guide. Improper towing of a vehicle can result in transmission damage. Always follow the outlined towing procedures.

#### Hoist, Drive-On

To prevent possible damage to the underbody, do not drive the vehicle onto the drive-on hoist without first checking for possible interference between the upright flanges of the hoist rails and the underbody. Should there be interference, modify the hoist flanges as necessary and/or build up the approach ramps to provide the necessary clearance.

**HOISTING AND JACKING (Continued)****Hoist, Frame Contact**

Adapters may be necessary to clear vehicle components (front and rear) to lift the vehicle safely. It may be necessary to place wooden blocks between the frame lift contact point and hoist adapter. This will provide enough clearance to prevent damaging the lower body.

**Hoist, Single-Post**

Adapters may be necessary to clear vehicle components (front and rear) to lift the vehicle safely. It may be necessary to place wooden blocks between the frame lift contact point and hoist adapter. This will provide enough clearance to prevent damaging the lower body.

**Hoist, Twin-Post**

**CAUTION:** Damage to suspension or steering linkage components may occur when positioning hoist adapters. Front adapter pads should be positioned carefully to ensure maximum contact under the center of the lower suspension arms or spring supports as near to wheels as practical. Rear suspension hoist adapters (forks) should be placed under spring mounting pads or rear axle housing, but adapters must not interfere with shock absorber mounting brackets or stabilizer bar mounting brackets.

**CAUTION:** When raising a vehicle on a twin-post hoist, care should be taken to position the vehicle so that the hoisting adapters (forks) do not damage the axle housing cover (4033) or contact the rear stabilizer bar (5A772) or brackets.

Adapters may be necessary to clear vehicle components (front and rear) to lift vehicle safely.

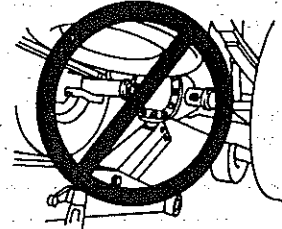
**Jack, Floor**

**WARNING:** TO MINIMIZE THE RISK OF PERSONAL INJURY, DO NOT PUT ANY PORTION OF YOUR BODY UNDER THE VEHICLE WHILE THE VEHICLE IS ON THE JACK. THE JACK IS PROVIDED FOR EMERGENCY WHEEL AND TIRE CHANGING ONLY.

**WARNING:** NEVER RUN THE ENGINE WITH ONE WHEEL OFF THE GROUND, SUCH AS WHEN CHANGING A TIRE. THE WHEELS STILL ON THE GROUND COULD CAUSE THE VEHICLE TO MOVE.

**CAUTION:** On vehicles equipped with an under-chassis mounted spare tire, remove the tire, wheel or tire carrier from the vehicle before it is placed in a high lift position in order to avoid sudden weight release from the chassis.

**CAUTION:** Do not use the differential housing as a lift point. Leaks or damage to the rear axle cover and adjoining differential housing surface may occur if a floor jack or any lifting device is allowed to contact the cover at any point where the cover joins the housing.



**NEVER USE THE DIFFERENTIAL HOUSING AS A LIFT POINT**

Y5773-A

When lifting a vehicle with the vehicle jack or any floor jack, block the diagonally opposite wheel to prevent vehicle from moving.

To raise heavy vehicles with floor jacks, follow the jack manufacturer's recommendations for placement of jack. Do not exceed the rated lift capacity of any jack.

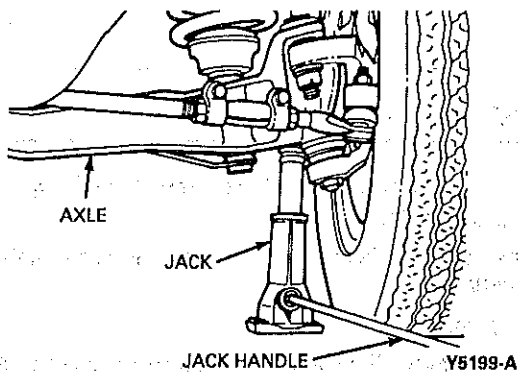
### HOISTING AND JACKING (Continued)

#### Jack, Floor, Front Axle

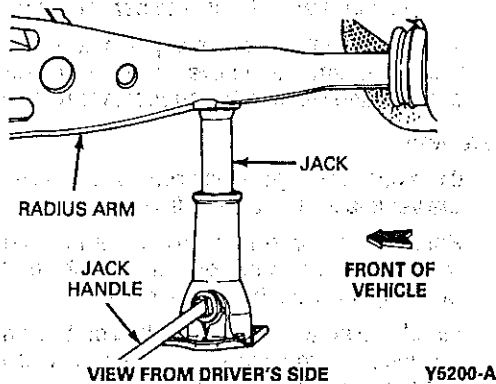
**WARNING: ON F-SUPER DUTY VEHICLES, THE PARKING BRAKE IS ON THE TRANSMISSION. THEREFORE, THE VEHICLE WILL NOT BE PREVENTED FROM MOVING WHEN A REAR WHEEL IS LIFTED, EVEN IF THE VEHICLE IS IN PARK AND THE PARKING BRAKE IS APPLIED. BE SURE TO BLOCK BOTH DIRECTIONS OF THE WHEEL THAT IS DIAGONALLY OPPOSITE TO THE WHEEL THAT IS BEING LIFTED.**

#### Primary Jacking Point, F-150 (4x2)

To raise front wheel, place jack in position from side of vehicle under axle between ball joint and radius arm attaching bolt (just inboard of tire). If vehicle loading will not permit this location, use alternate jacking point.

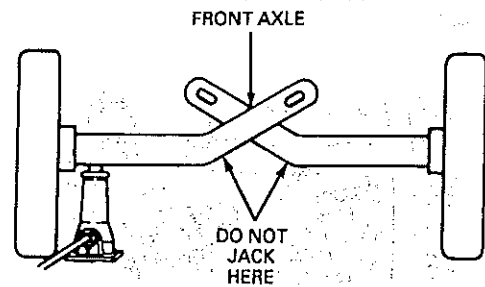


#### Alternate Jacking Point, F-150 (4x2)

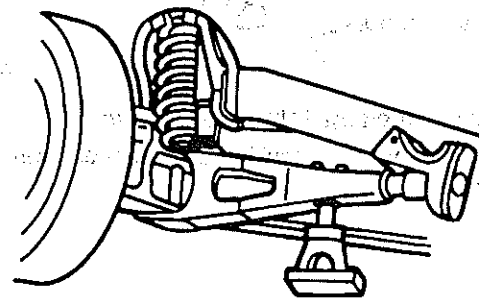


#### Primary Jacking Point, F-250, F-350 (4x2)

To raise front wheels, position jack under front center of axle and slide jack outboard toward wheel to be lifted.

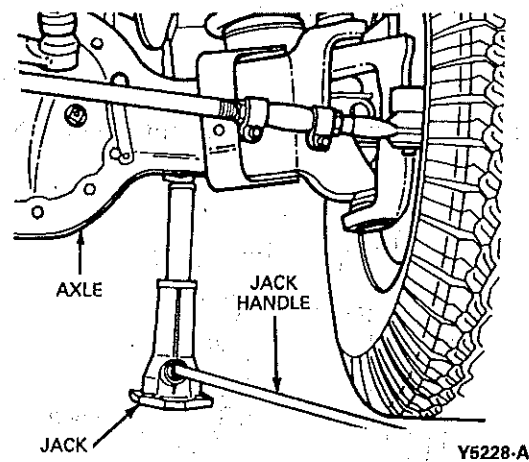


#### Alternate Jacking Point, F-250, F-350 (4x2)



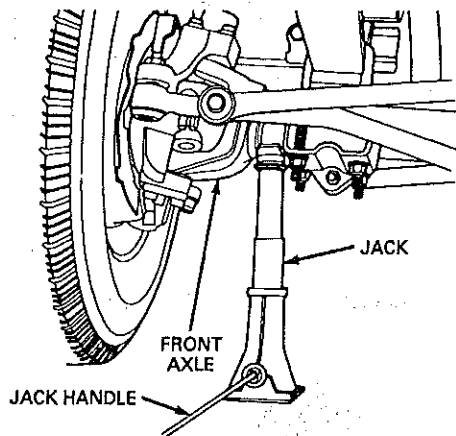
#### Jack, Floor, F-150, F-250 (4x4 Only) and Bronco

To raise front wheel, place jack in position from front of vehicle under axle.



**HOISTING AND JACKING (Continued)****Jack, Floor, F-350 (4x4 Only)**

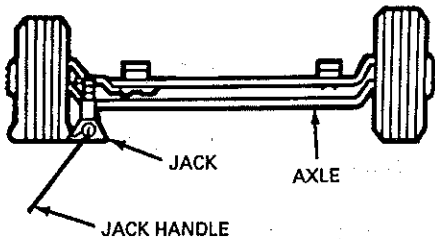
To raise front wheel, place jack in position from front of vehicle under axle.



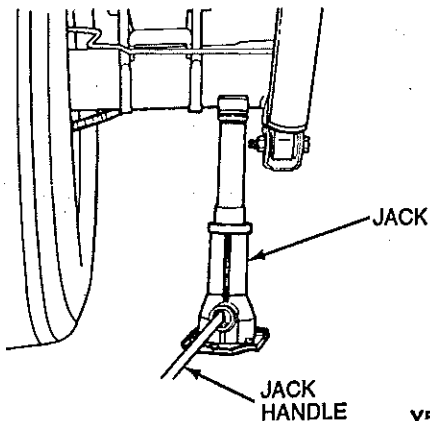
Y5229-A

**Front Axle Jacking Point, F-Super Duty**

To raise front wheels, position jack under bracket, in front of axle.



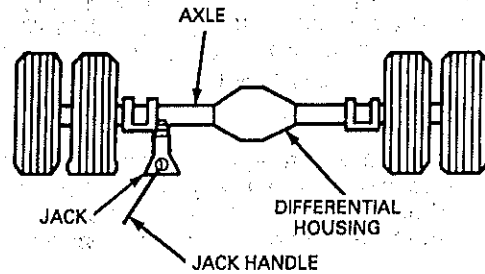
Y5230-A

**Rear Axle Jacking Point, All Except F-Super Duty**

Y5233-B

**Rear Axle Jacking Point, F-Super Duty**

To raise rear wheels, position jack under axle, against inside edge of spring bracket.



Y5231-A

**REMOVAL AND INSTALLATION****Tire, Spare, Carrier, Inside Box, F-150, F-250, F-350**

The spare tire is stowed at the front left side of the pickup box.

**Removal**

1. Remove the wing nut from the carriage bolt and remove the spare wheel mounting plate (1424) from the wheel.
2. Lift the spare wheel from the carrier support.
3. If the spare wheel carrier support needs to be replaced, remove the five screws from the support and remove the support from the vehicle.

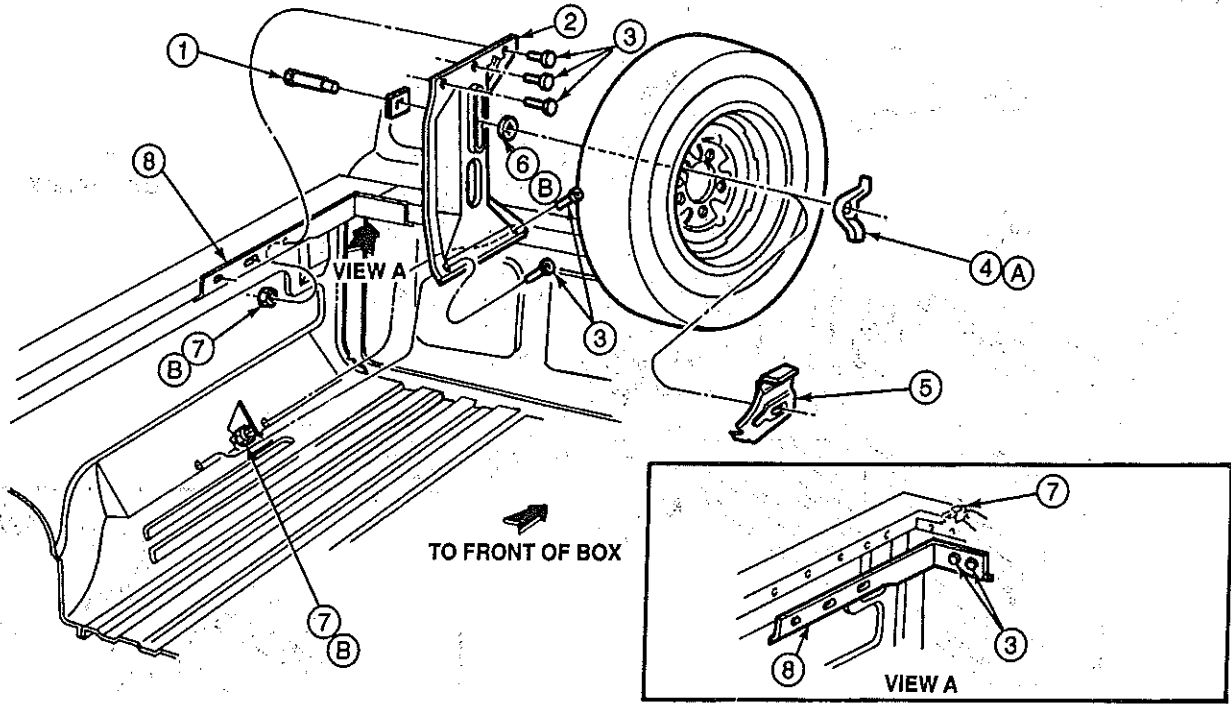
**Installation**

1. If the carrier support was removed, position it to the vehicle and install the five holding screws.
2. Position the spare wheel to the carrier support making sure the carriage bolt is positioned properly through the center of the wheel.
3. Install the spare wheel mounting plate on the carriage bolt making sure the retaining tabs are properly positioned on the spare wheel.
4. NOTE: Make sure the tire is properly secured before operating the vehicle.

Install the wing nut and hand-tighten.

REMOVAL AND INSTALLATION (Continued)

Inside Box Spare Wheel Carrier, F-150, F-250, and F-350, 116.8- and 138.8-Inch Wheelbase with 8-Foot Box (Canada Only)



N9772-B

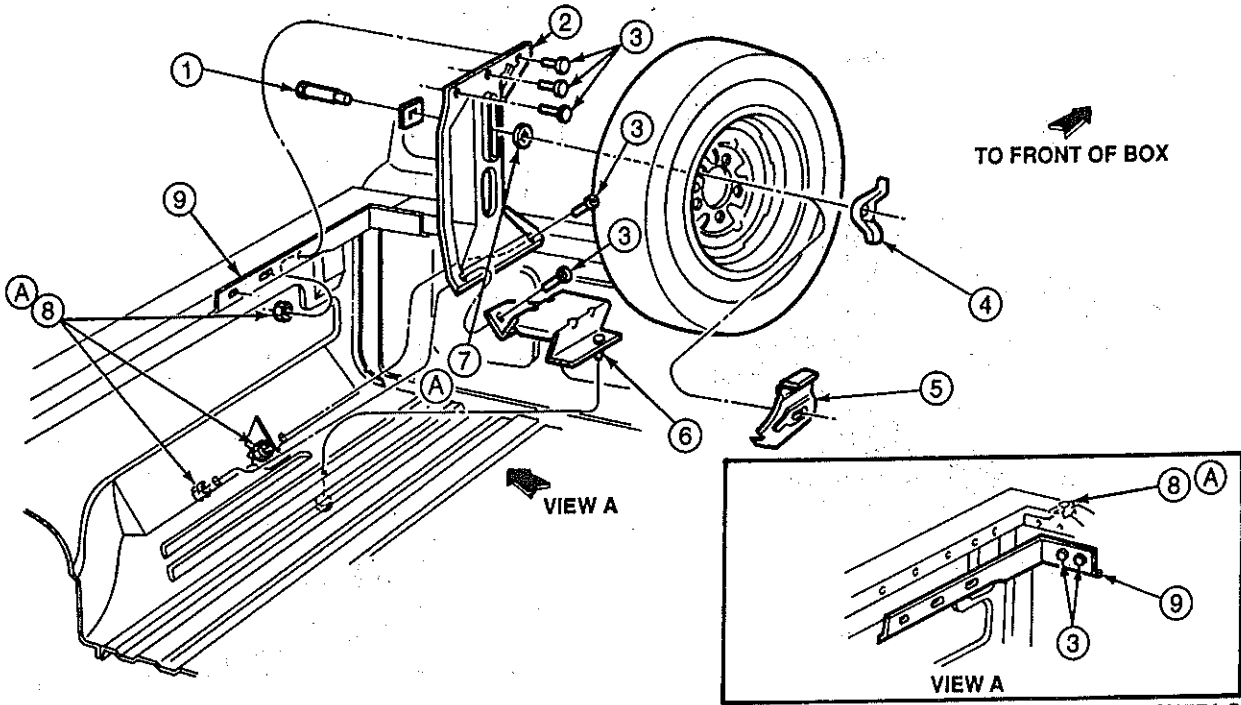
Item	Part Number	Description
1	N802834-S2	Carriage Bolt
2	1405	Spare Wheel Carrier Support
3	N801010-S40	Screw
4	N800344-S2	Wing Nut
5	1424	Spare Wheel Mounting Plate
6	W623485-S2	Nut

(Continued)

Item	Part Number	Description
7	N620481-S2	Nut
8	1407	Spare Wheel Carrier Support Reinforcement
A	—	Tighten to 4.1-4.7 N·m (36-42 Lb·in)
B	—	Tighten to 22-34 N·m (16-25 Lb·Ft)

**REMOVAL AND INSTALLATION (Continued)**

Inside Box Spare Wheel Carrier, F-150, F-250, F-350, 116.8- and 138.8-Inch Wheelbase with 6.0-Foot Box (Canada Only)



N9774-C

Item	Part Number	Description
1	N802834-S2	Carriage Bolt
2	1405	Spare Wheel Carrier Support
3	N801010-S40	Screw
4	N800344-S2	Wing Nut
5	1424	Spare Wheel Mounting Plate
6	1A457	Spare Wheel Carrier Support Extension (F-150, 6-3/4-Foot Box Only)

(Continued)

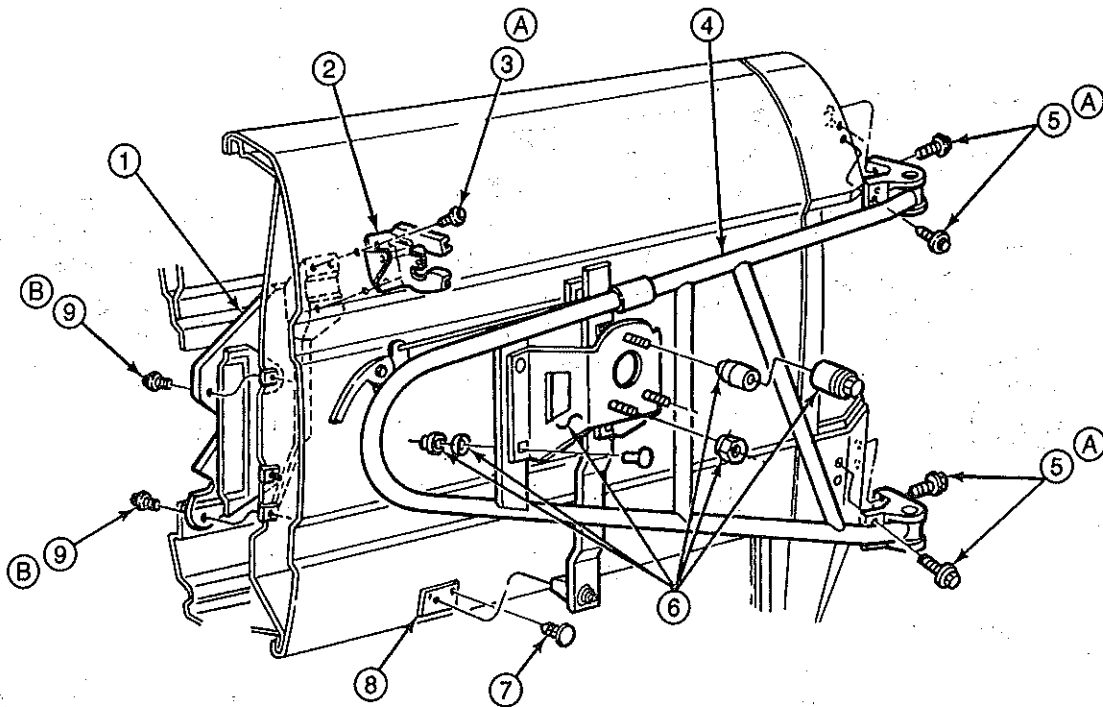
Item	Part Number	Description
7	W623485-S2	Nut
8	N620481-S2	Nut
9	1407	Spare Wheel Carrier Support Reinforcement
A	—	Tighten to 22-34 N·m (16-25 Lb·Ft)

**Tire, Spare, Carrier, Swing-Away, Bronco Removal and Installation**

For swing-away spare wheel carrier removal and installation, refer to the following illustration.

**REMOVAL AND INSTALLATION (Continued)**

**Swing-Away Spare Wheel Carrier, Bronco**



N8403-D

Item	Part Number	Description
1	1A401	Locking Latch Bracket Reinforcement, Spare Wheel Carrier
2	1469	Spare Wheel Carrier Support
3	N606690-S55	Screw and Washer
4	1433	Spare Wheel Carrier
5	N803207-S100	Screw and Washer

(Continued)

Item	Part Number	Description
6	1A429	Spare Wheel Support
7	388577-S150	Pushpin
8	47104	Spare Wheel Scuff Pad
9	57472-S2	Screw and Washer
A	—	Tighten to 16-27 N·m (12-20 Lb·Ft)
B	—	Tighten to 8-15 N·m (6-11 Lb·Ft)

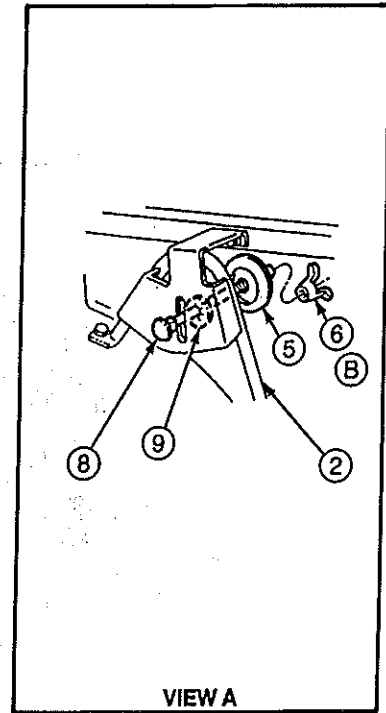
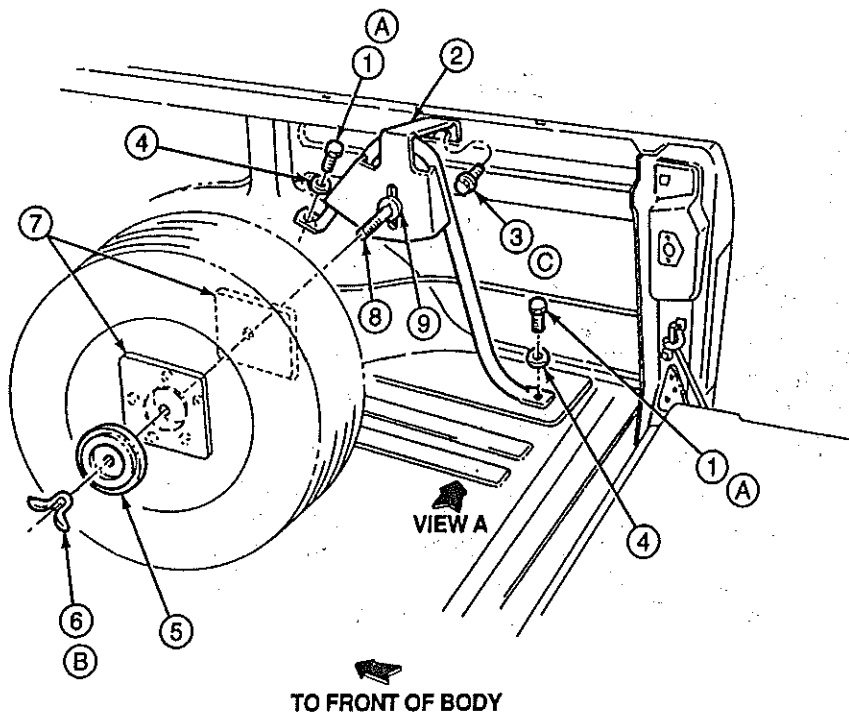
**Tire, Spare, Carrier, Inside, Bronco**

**Removal and Installation**

For inside spare wheel carrier removal and installation, refer to the following illustration.

REMOVAL AND INSTALLATION (Continued)

Inside Spare Wheel Carrier, Bronco



N12528-A

Item	Part Number	Description
1	386273-S101	Bolt
2	1A429	Spare Wheel Support
3	57130-S36	Screw and Washer
4	387455-S2	Flatwasher
5	1424	Spare Wheel Retainer Plate
6	386605-S2	Wing Nut
7	1W356	Spare Wheel Mounting Support Insulator

Item	Part Number	Description
8	382272-S2	Bolt
9	383609-S2	Spring Nut
A	—	Tighten to 30-43 N·m (22-32 Lb·Ft)
B	—	Tighten to 4.1-4.7 N·m (36-42 Lb·In)
C	—	Tighten to 8-15 N·m (6-11 Lb·Ft)

(Continued)

**Tire, Spare, Carrier, Under Frame, F-150, F-250, F-350, F-350 Chassis Cab and F-Super Duty Chassis Cab**

**WARNING: TO AVOID POSSIBLE INJURY DO NOT PLACE ANY PART OF THE BODY UNDER THE SPARE WHEEL CARRIER WITH MOUNTED SPARE TIRE DURING REMOVAL OR INSTALLATION.**

The spare tire is stowed at the rear of the truck under the frame (standard location).

The tire valve stem is on the top side of the tire (except on dual rear wheel) to reduce the possibility of accidental valve stem air leakage through contact with mud, brush, snow, ice, or some other obstruction.

**Removal**

1. Insert the tang of the lug nut wrench through the spare tire retaining eyebolt eye and turn the bolt until the tire is sufficiently loose from the upper retaining support. To avoid a sudden drop of the tire, do not turn the end of the eyebolt out of the retaining nut.
2. Align the eye of the eyebolt with the spare wheel carrier slot.
3. While holding the nut end of the wrench parallel to the ground, insert the tang of the wrench into the spare wheel carrier tube. Lift up on the wrench and at the same time pull the eyebolt toward the tube and push on the wrench to pass the eyebolt shoulder through the spare wheel carrier keyhole.



**REMOVAL AND INSTALLATION (Continued)**

4. Lower the spare tire assembly. Swing the spare wheel carrier to the rear of the vehicle and remove the wrench from the tube.
5. With the spare wheel carrier end on the ground, remove the wheel retainer from the center bolt. If necessary insert the tang of the wrench into retainer to provide additional leverage to loosen the retainer from the center bolt. On dual rear wheel use nut end to loosen retainer.
6. Remove the spare tire from the spare wheel carrier.

**Installation**

**NOTE:** Prior to F-350 and F-Super Duty chassis cab tire installation, make certain the spare tire guards are securely in position. Refer to the illustration in this section.

1. To replace the spare tire under the frame, center the tire on the spare wheel carrier with valve stem up. Face dual rear wheel offset down.
  - Shift the tire as necessary until it is balanced on the channel.
  - Install and tighten the retainer on the center bolt until the wheel is tight to the spare wheel carrier (19-26 N·m [14-19 lb-ft]). For dual rear wheels only, install retainer with offset face down. For F-Super Duty, install spare wheel mounting plate (1424) before installing retainer.
  - Wheel and tire must be centered on spare wheel carrier after tightening retainer.
2. Install the tang of the lug nut wrench into the spare wheel carrier tube and swing the spare wheel carrier under the eyebolt.

3. Lift the spare wheel carrier and insert the shoulder of the eyebolt through the keyhole. Shift the spare wheel carrier and eyebolt until the shoulder of the eyebolt is pushed all the way into the slot. Shoulder of eyebolt must be seated securely in keyhole.

4. **CAUTION: The eyebolt must be in vertical position after tightening to prevent possible channel separation or tire loss when the spare tire is loose in the spare tire carrier. Tire looseness is caused by air leakage or by insufficient tightening of the eyebolt when installing the spare tire (flat or inflated).**

Insert the tang of the wrench into the eyebolt and tighten the eyebolt until the wheel or wheel and tire is snug; then tighten spherical head bolt to 19-26 N·m (14-19 lb-ft).

5. Refer to the views in the following illustrations that show the proper position of the eyebolt after it has been tightened to secure the spare tire in stowage position.

**Spare Wheel, F-250, F-350**

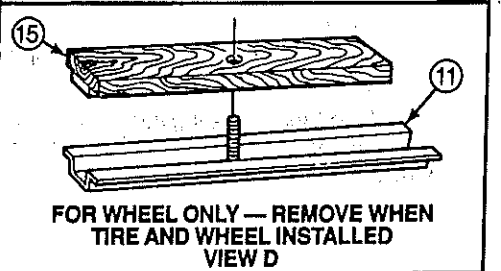
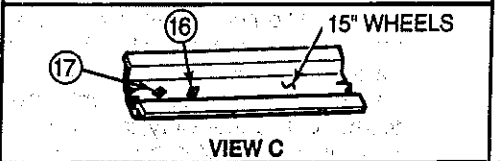
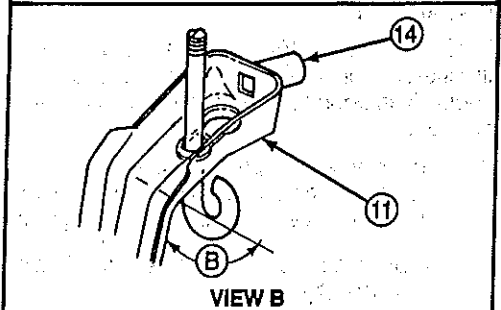
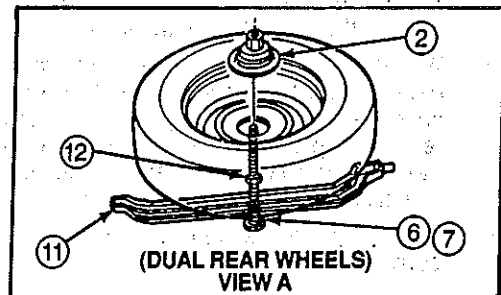
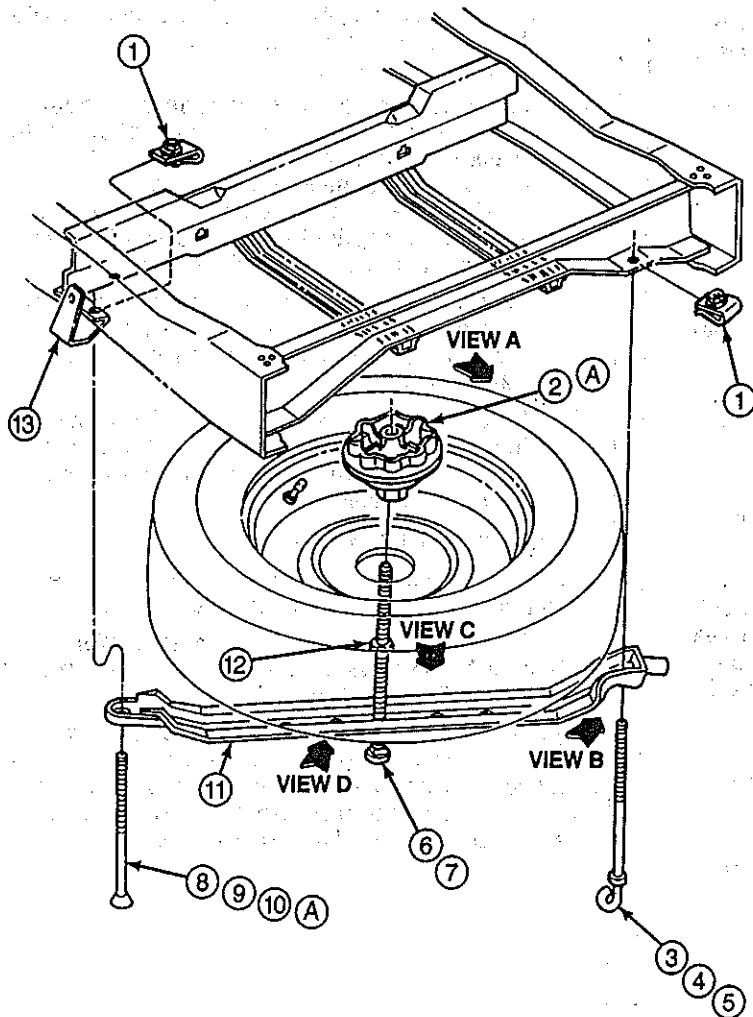
When the wheel only (without tire) is ordered, it is located at the rear of the truck under the frame.

**CAUTION: The wood spacer is installed for shipment of the wheel only and must be removed when installing the tire.**

After installing the wheel and tire in the carrying position, adjust the driver side spare wheel carrier ball and bolt and the eyebolt as necessary until the tire cannot be moved by hand pressure. Then tighten retainer bolt to 19-26 N·m (14-19 lb-ft).

**REMOVAL AND INSTALLATION (Continued)**

Spare Tire Carrier, F-150, F-250, F-350 Regular Cab, SuperCab, and Crew Cab with Aft-of-Axle Tank



N4812-L

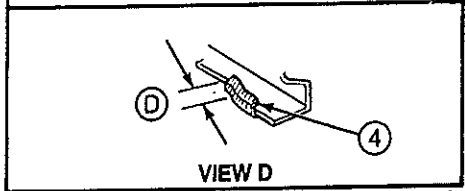
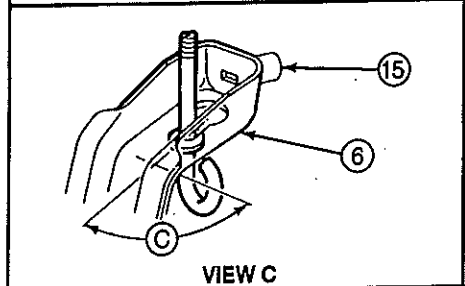
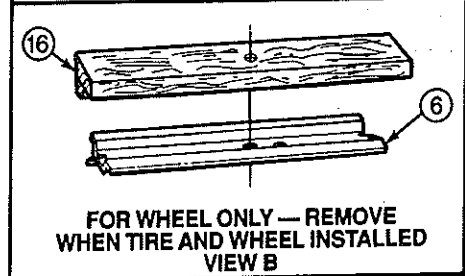
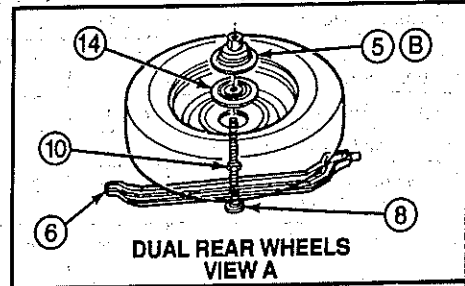
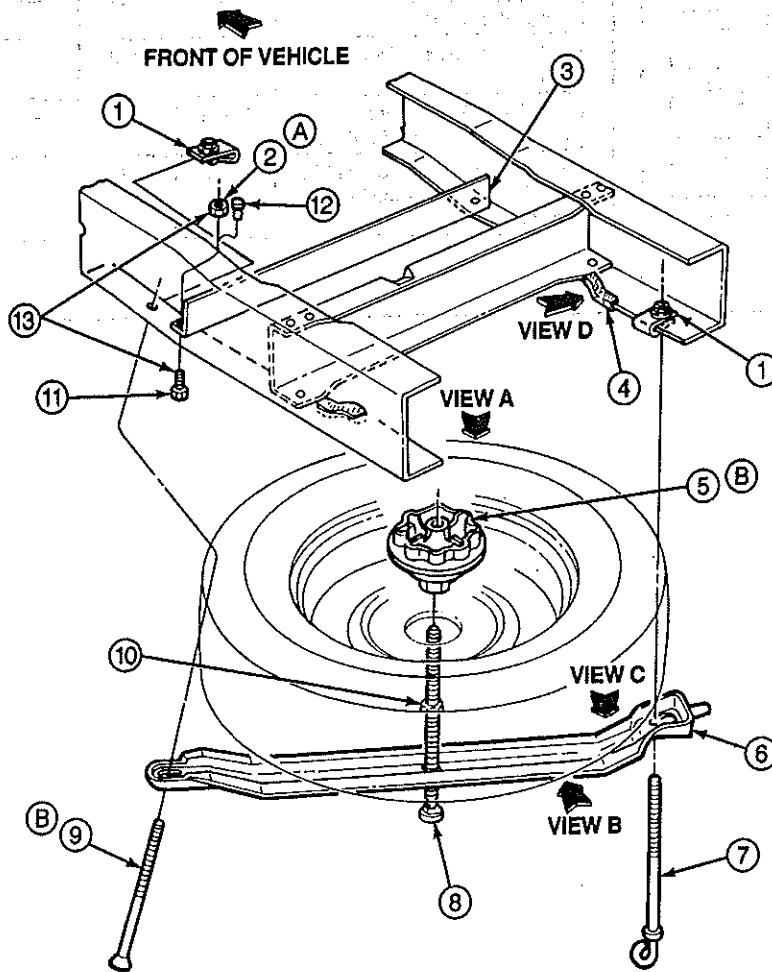
Item	Part Number	Description
1	N805270	Nut
2	1474	Retainer (for Dual Rear Wheels Only, Install with Offset Face Down — See View A)
3	N807335	Eyebolt (230mm)
4	N807456	Eyebolt (267mm)
5	N807334	Eyebolt (245mm)
6	N801463	Bolt (15x6 Wheels and Dual Rear Wheels)
7	N806525	Bolt (Except 15x6 Wheels and Dual Rear Wheels)
8	N803588	Bolt (280mm) (F-150, 15x6 Wheels)
9	N801785	Bolt (315mm) (F-150 Except 15x6 Wheels)

(Continued)

Item	Part Number	Description
10	N807575	Bolt (190mm) (All F-250, F-350)
11	1443	Spare Wheel Carrier Holder
12	N801503-S56	Push-On Nut
13	1434	Bracket (F-250, F-350 Only)
14	—	Spare Wheel Carrier Holder Tube (Part of 1443)
15	1A375	Wood Spacer
16	—	Hole for P215-15 Tire and Wheel Assemblies (Part of 1443)
17	—	Hole for All Except P215-15 Tire and Wheel Assemblies (Part of 1443)
A	—	Tighten to 19-26 N.m (14-19 Lb-Ft)
B	—	90°

REMOVAL AND INSTALLATION (Continued)

Under Frame Spare Tire Carrier, F-350 Chassis Cab, F-Super Duty Chassis Cab



N4810-L

Item	Part Number	Description
1	N805270-S56	Nut
2	620482-S2	Nut
3	1497	Support
4	1353	Spare Wheel Guard
6	1474	Retainer
6	1443	Spare Wheel Carrier Holder
7	N807335-S426	Eyebolt
8	N801463-S426	Bolt
9	N803588-S2	Bolt
10	N801503-S426	Push-On Nut
11	N605801-S2	Bolt
12	N647096-S	Rivet

(Continued)

Item	Part Number	Description
13	—	Alternate of Rivet (620482-S2, N605801-S2)
14	1424	Spring Wheel Mounting Plate (F-Super Duty Only) (Part of 1443)
15	—	Spare Wheel Carrier Holder Tube (Part of 1443)
16	1A375	Wood Spacer
A	—	Tighten to 40-55 N·m (30-41 Lb·Ft)
B	—	Tighten to 19-26 N·m (14-19 Lb·Ft)
C	—	90°
D	—	Approximately 70mm (2.75 Inches)

**SPECIFICATIONS****TORQUE SPECIFICATIONS**

Description	N·m	Lb·Ft	Lb·In
Retainer, Spare Tire	19-26	14-19	—
Nut, Spare Tire Carrier Support, F-350, F-Super Duty	40-55	30-41	—
Wing Nut, Spare Tire Mounting	4.1-4.7	—	36-42
Bolt, Inside Spare Tire Support	30-43	22-32	—
Screw and Washer Assembly, Inside Spare Tire Support	8-15	6-11	—
Nut, Spare Wheel Carrier Holder	19-26	14-19	—

(Continued)

**TORQUE SPECIFICATIONS (Cont'd)**

Description	N·m	Lb·Ft	Lb·In
Nut, Spare Tire Carrier Support, Bronco	16-27	12-20	—
Bolt, Spare Wheel Carrier Holder	19-26	14-19	—
Nut, Spare Tire Carrier Support, F-150, F-250, F-350	22-34	16-25	—
Screw and Washer, Spare Tire Carrier Locking Latch Bracket, Bronco	8-15	6-11	—