



SERVICE BULLETIN

NUMBER: 17-001-14

GROUP: Rear Suspension

DATE: June 24, 2014

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SUBJECT:

Rear Axle Alignment Shims

OVERVIEW:

This bulletin is to inform service personnel of the availability of rear axle alignment shims.

MODELS:

FF 500

DISCUSSION:

Rear axle alignment shims are available in a kit containing two shims and replacement spindle mounting bolts. Front shim (1) is used to correct an out of specification Toe-in condition, and the Rear shim (2) is used to correct an out of specification Toe-out condition. Only one of these shims, front or rear, will be used in the process of an alignment, the unused shim will be discarded (Fig. 1).

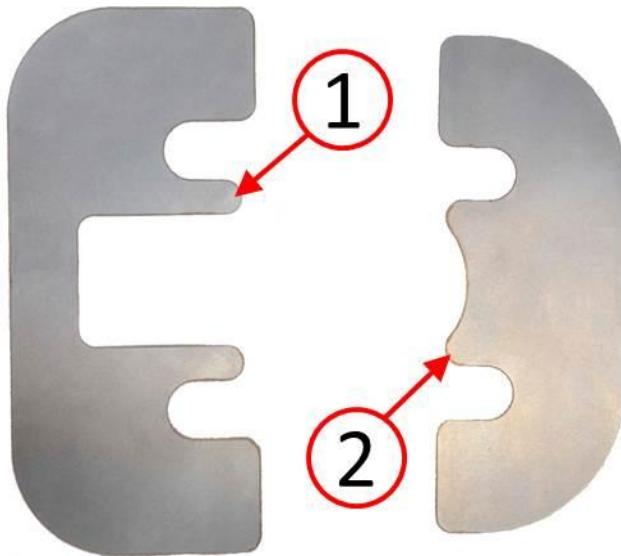


Fig. 1 Front And Rear Shim Identification

1 - Front Shim

2 - Rear Shim

Before ordering the Axle Alignment Shim Kit, first attempt to correct the out of toe condition, by adjusting the alignment thrust angle until a zero thrust angle is achieved. Refer to the detailed service procedures available in DealerCONNECT> TechCONNECT under: Service Info> 02 - Front Suspension> Wheel Alignment> Standard Procedure> WHEEL ALIGNMENT> THRUST ANGLE.

If the toe angle is still out of specification after adjusting the thrust angle, use the Axle Alignment Shim to correct the out of specification toe condition. Shim will provide approximately 1/4 degree of toe correction. Do not use more than one shim kit per axle side and do not stack shims.

CAUTION: Do NOT completely remove more than 1 spindle bolt at a time to prevent the spindle and wheel assembly from rotating or coming off the vehicle because damage to the brake hose may occur.

Loosen but do NOT remove all four spindle bolts on side of rear axle requiring alignment shim ([Fig. 2](#)).

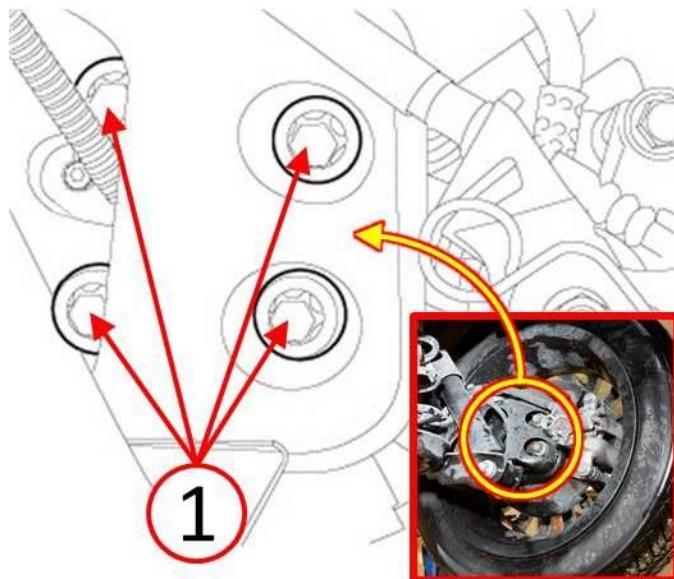


Fig. 2 Loosen Spindle Bolts - Right Side Shown

1 - Spindle Bolts

NOTE: Front shim is larger and has a square cutout area in the center to clear the wheel speed sensor.

To correct an out of specification Toe-in condition, insert the front shim (1) between the rear axle and the spindle as shown in ([Fig. 3](#)) and ([Fig. 4](#)).



Fig. 3 Insert Front Shim - Right Side Shown

1 - Front Shim

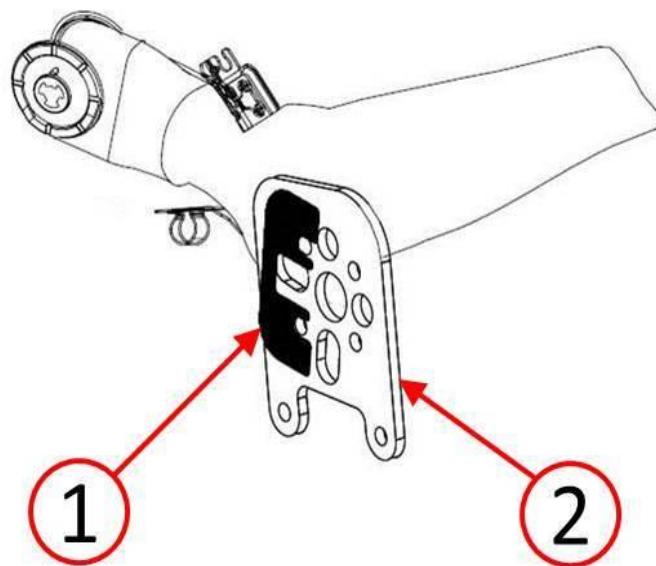


Fig. 4 Front Shim Location - Left Side Shown

1 - Front Shim

2 - Rear Axle

NOTE: Rear shim is smaller and does not have a square cutout area in the center.

To correct an out of specification Toe-out condition, remove only the lower rear spindle bolt for shim clearance, then insert the rear shim (2) between the rear axle and the spindle as shown in (Fig. 5) and (Fig. 6).

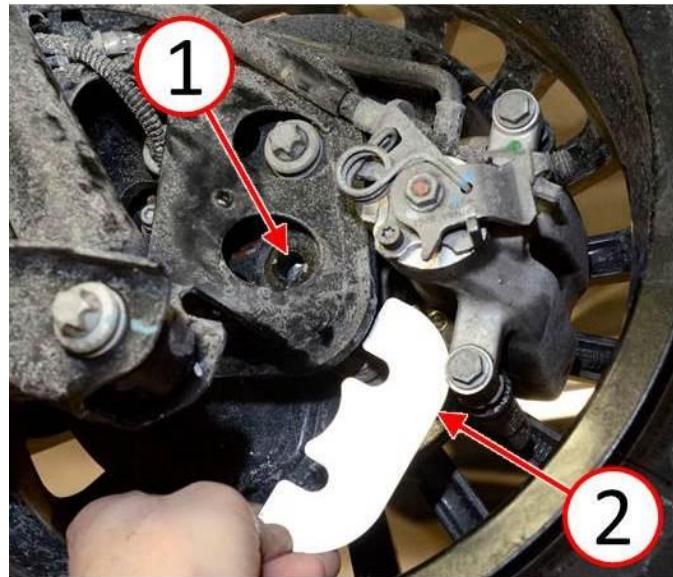


Fig. 5 Insert Rear Shim - Right Side Shown

1 - Lower Rear Spindle Bolt Removed

2 - Rear Shim

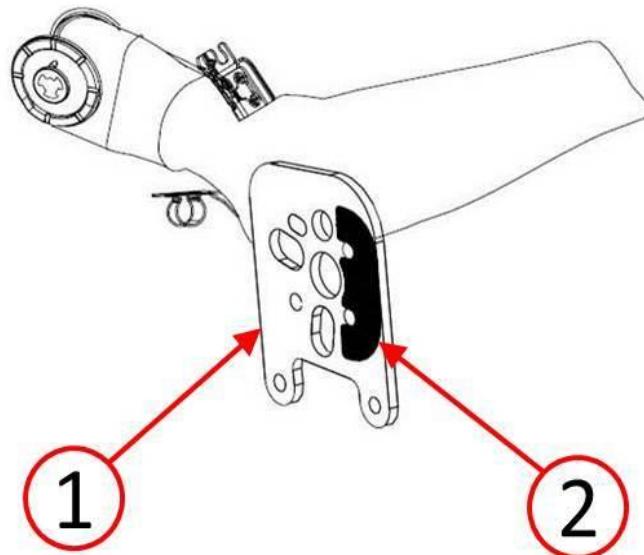


Fig. 6 Rear Shim Location - Left Side Shown

1 - Rear Axle

2 - Rear Shim

CAUTION: Do NOT completely remove more than 1 spindle bolt at a time to prevent the spindle and wheel assembly from rotating or coming off the vehicle because damage to the brake hose may occur.

NOTE: The spindle bolts have adhesive on the threads and are required to be replaced with NEW bolts every time they are removed. The replacement spindle mounting bolts are included in the shim kit.

Replace all four spindle bolts one at a time with the NEW spindle bolts included in the shim kit ([Fig. 7](#)).

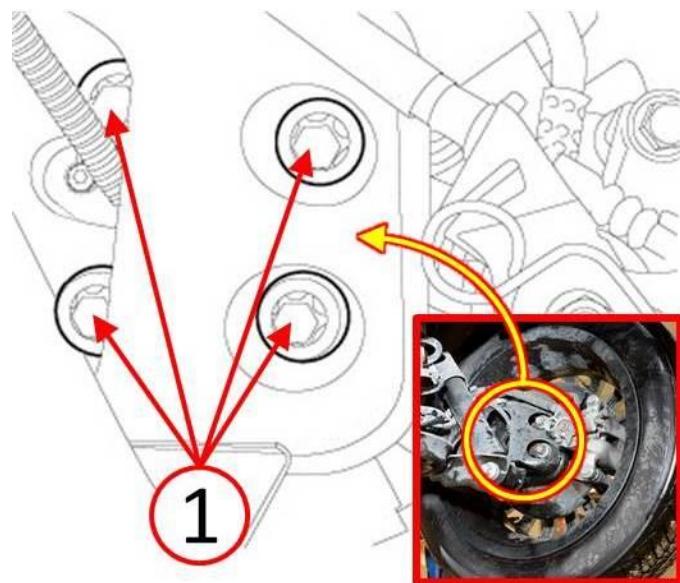


Fig. 7 Replace Spindle Bolts - Right Side Shown

1 - Spindle Bolts

Tighten the NEW spindle bolts to 125 N·m (92 ft. lbs.).

If thrust angle adjustment combined with a maximum of one shim per axle side did not provide the desired amount of toe correction, then a rear axle replacement will be necessary.

PARTS REQUIRED:

Qty.	Part No.	Description
(1) AR	68236620AA	Shim Kit (Kit contains 1 front shim, 1 rear shim, and 4 spindle bolts)

POLICY:

Information Only.