

Part Number: PTR09-53080

NOTE: Part number of this accessory may not be the same as the part number shown.

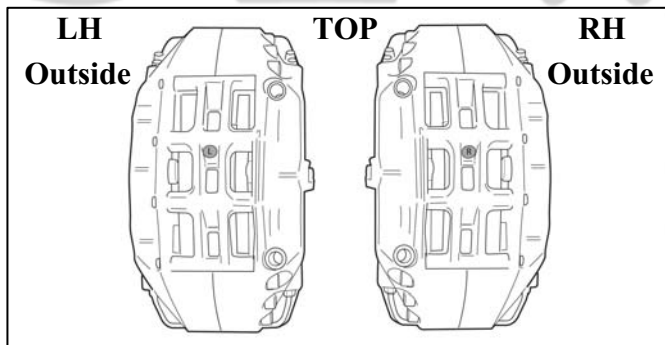
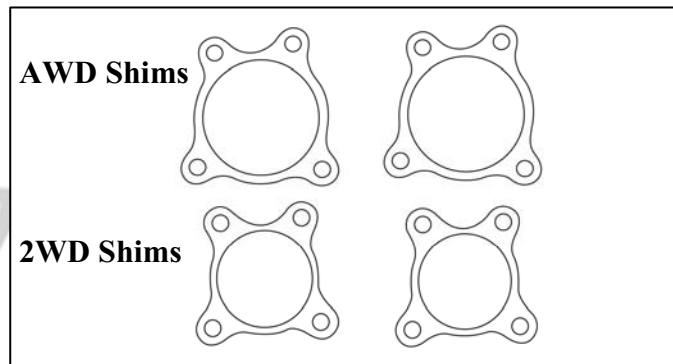
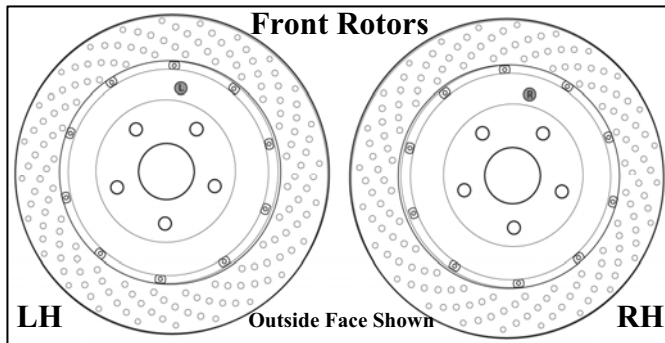
Kit Contents

Item #	Quantity Req'd.	Description
1	1	Brake Rotor, LH Front
2	1	Brake Rotor, RH Front
3	1	Brake Caliper Assembly, LH Front with Brake Pads
4	1	Brake Caliper Assembly, RH Front with Brake Pads
5	1	Brake Caliper Bracket, LH Front with M12 Washers & 7/16-20 Self-Locking Nuts
6	1	Brake Caliper Bracket, RH Front with M12 Washers & 7/16-20 Self-Locking Nuts
7	1	Hardware Bag

Hardware Contents

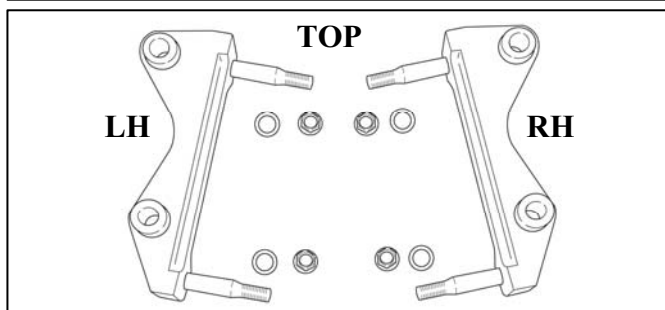
Item #	Quantity Req'd.	Description
1	5*	Copper Crush Washers
2	2	AWD Shims for Front Axle Hubs
3	2	2WD Shims for Front Axle Hubs
4	1	Spare Tire Warning Label
5	1	Installation Instructions
6	1	Mirror Hanging Tag
7	1	Brake Caliper Template
8	1	Owner's Document

*** 4 Required + 1 spare**



Additional Items Required For Installation

Item #	Quantity Req'd.	Description
1		



Conflicts

17 in. OE Wheels will not fit. No conflicts with 18 in. OE, Lexus Genuine Accessory and F-Sport Wheels.
CAUTION: If the OE wheels are not used, then see the brake caliper template shown as the last page of these instructions. The brake caliper template must be used to ensure there is adequate clearance between new brake components and non-OE wheels and balancing weights.
NOTE: The OE 18 in. wheels may need to be rebalanced with the weights placed behind the wheel spokes to provide required clearance.



Recommended Tools

Personal & Vehicle Protection	Notes
Safety Glasses	Safety Glasses /face shield
Vehicle Protection	Seat & Floor Covers
Fender Covers	
Work Gloves	
Special Tools	Notes
SST: 09930-00010	
Chassis Lift or	(Hydraulic Jack & Jack Stands)
Fluid Drip Trays	One per side
Installation Tools	Notes
21mm Deep Socket	1/2" Drive
Air Impact Gun	1/2" Drive
10mm Flare Nut Wrench	
17mm Deep Socket	1/2" Drive
30mm Deep 12 point Socket	1/2" Drive (AWD only)
Torque Wrenches	3/8" & 1/2" Drive
1/2" Socket	3/8" Drive
9/16" Socket	3/8" Drive
Hammer	
Soft Mallet	
11mm Combination Wrench	
5mm Allen Socket	3/8" Drive
Breaker Bar	1/2" Drive
Dial Indicator	
Special Chemicals	Notes
Toyota Brake Fluid	#00475-1BF03 or Fluid: SAE J1703 or FMVSS No. 116 DOT3
Toyota Brake Cleaner	#00289-2BC00-CA

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Req'd.	Description
1	2	Front Axle Hub Nut , P/N 90177-22001 (for AWD only)

Legend

STOP: Damage to the vehicle may occur. Do not proceed until process has been complied with.

OPERATOR SAFETY: Use caution to avoid risk of injury.

CAUTION: A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.

TOOLS & EQUIPMENT: Used in Figures calls out the specific tools and equipment recommended for this process.

E W E L L

General Applicability

Front Brake Upgrade can be installed on all IS 250 models except for vehicles with 17 in. OE Wheels. Some OE 18 in. wheels may require the balance weights to be placed behind the spokes as noted in the instructions.

Recommended Sequence of Application

Item #	Accessory
1	Front Brake Upgrade
2	Rear Brake Upgrade
3	Accessory Wheels/Tires

*Mandatory

Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation.

These guidelines can be found in the "Accessory Installation Practices" document.

This document covers such items as:-

- Vehicle Protection (use of covers and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

Please see your Lexus dealer for a copy of this document.

1. Vehicle Preparation.



(a) Before working on the vehicle, protect the seats and carpets with covers. Use Fender Covers to protect the vehicle paint.



(b) Use a vehicle hoist to lift the vehicle using the vehicle jacking points. If a vehicle hoist is not available, use a hydraulic jack to lift the front of the vehicle and set it on jack stands. Use the owner's manual to locate the proper vehicle jacking points.



Caution: Always use jack stands to support the vehicle, never work on a vehicle using only the jack.

(c) Use a 21mm deep socket and 1/2" air impact gun to remove all front wheel lug nuts.

(d) Remove both front wheel/tire assemblies and save for reuse.

2. Check Kit Contents.

(a) Check the Front Brake Upgrade kit for contents and damage.

3. Disconnect the Front Speed Sensor.

For 2WD go to step 3a, for AWD go to 3b

(a) Disconnect the speed sensor connector from the front speed sensor (Fig 3-1).



CAUTION: Prevent foreign matter from adhering to the speed sensor.

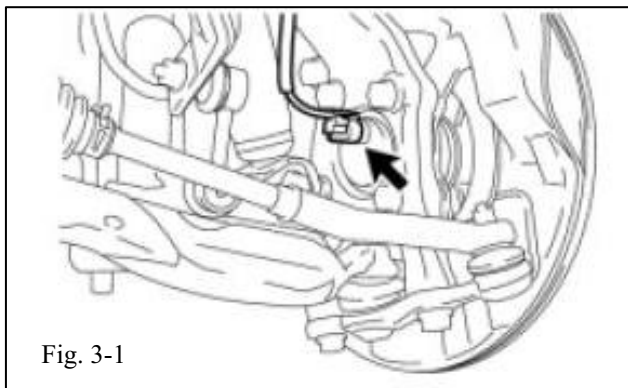
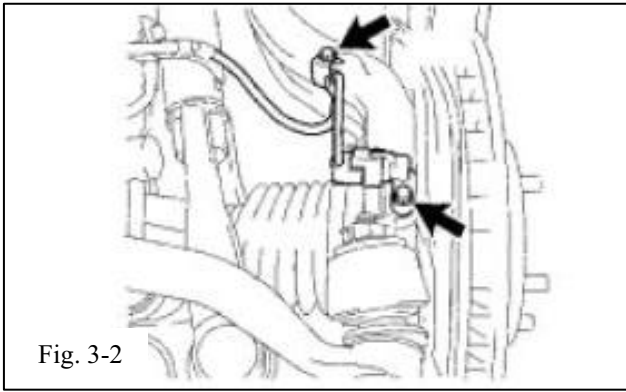


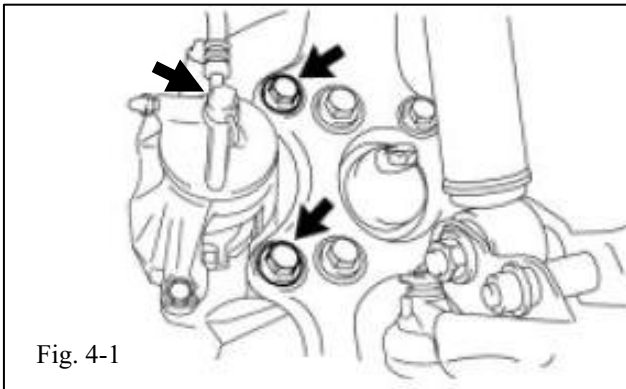
Fig. 3-1



- (b) Remove the 2 bolts and separate the speed sensor from the steering knuckle (Fig. 3-2).

⚠ CAUTION: Be careful not to damage the speed sensor. Prevent foreign matter from adhering to the speed sensor.

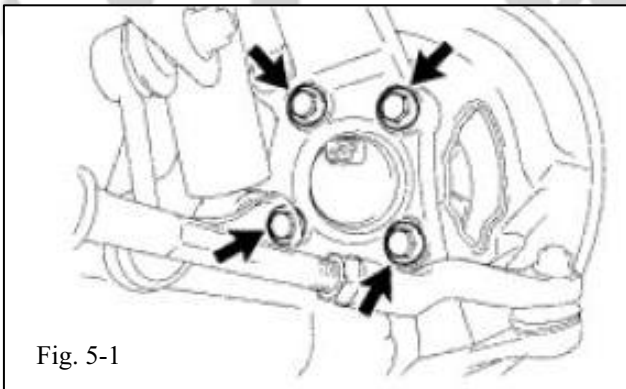
4. Remove Factory Brake Caliper & Rotor.



- (a) Loosen and then re-snug the bolt holding the brake fluid flexible hose to the caliper. Tighten it just enough to prevent fluid from leaking. Remove the 2 bolts and disconnect the brake caliper Assembly (Fig. 4-1). Retain the bolts.

NOTICE: Use wire or equivalent to hang the brake caliper assembly from the upper a-arm or coil spring to prevent the weight of the caliper from placing strain on the flexible hose.

- (b) Remove and discard the brake rotor (also called disk).



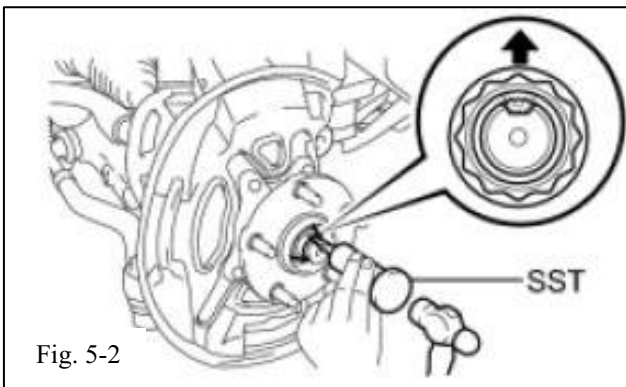
5. Replacing the Dust Cover with Shims.

⚠ CAUTION: This section must NOT be omitted.

For 2WD go to step 5a, for AWD go to 5c

- (a) Remove the 4 bolts, front axle hub sub-assembly (Fig.5-1). Discard the dust cover.
- (b) Reinstall the front axle hub assembly to the steering knuckle using the 2WD shim in place of the dust cover between the steering knuckle and the front axle hub assembly. Tighten the 4 bolts. **Torque: 51 lbf-ft (69 N·m).**

For 2WD go to step 6, for AWD go to 5c



- (c) Using SST and a hammer, release the staked part of the front axle hub nut (Fig. 5-2).

Remove and discard the nut as it is to be replaced with a new nut.

SST: 09930-00010

⚠ Caution: Release the staked portion of the nut completely; otherwise the threads on the drive shaft may be damaged.

(d) Using a plastic hammer, separate the front drive shaft assembly from the front axle hub.

⚠ Caution: Be careful not to damage the front drive shaft boot.

(e) Remove the 4 bolts, front axle hub sub-assembly (Fig 5-3). Retain the bolts and axle sub-assembly. Discard the dust cover.

(f) Reinstall the front axle hub assembly to the front drive shaft assembly and the steering knuckle using the 4WD shims in place of the dust covers between the steering knuckle and the front axle hub assembly. Tighten the 4 bolts. **Torque: 51 lbf·ft (69 N·m)**

⚠ Caution: Be careful not to damage the front drive shaft boot.

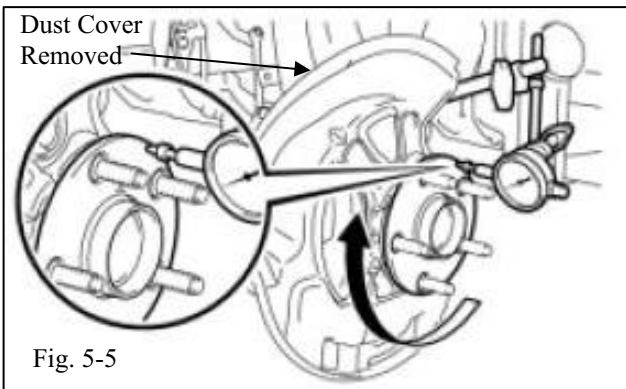
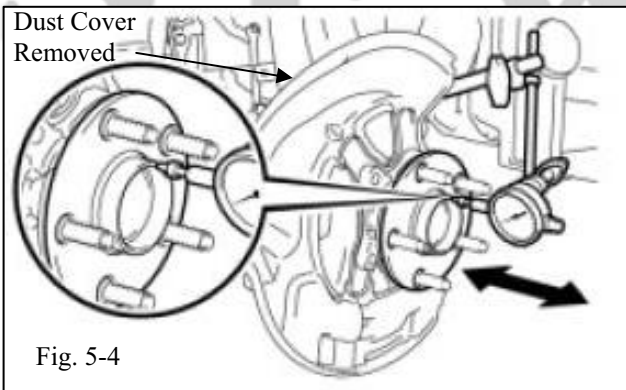
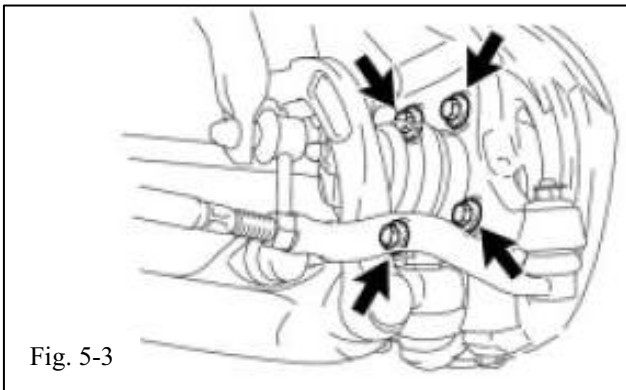
(g) Install a new front axle hub nut using a 30 mm socket. **Torque: 217 lbf·ft (294 N·m)**

(h) Using a dial indicator, check for looseness near the center of the axle hub. Maximum: 0.05 mm (0.0020in.) (Fig 5-4).

NOTICE: Ensure that the dial indicator is perpendicular to the measurement surface.

If looseness exceeds the maximum, replace the front axle hub.

(i) Using a dial indicator, check for runout on the surface of the axle hub outside the hub bolts. Maximum: 0.05 mm (0.0020 in.) (Fig 5-5).



NOTICE: Ensure that the dial indicator is perpendicular to the measurement surface.

If runout exceeds the maximum, replace the front axle hub.

- (j) Once the front axle hub passes the looseness and runout checks, stake the axle hub nut.

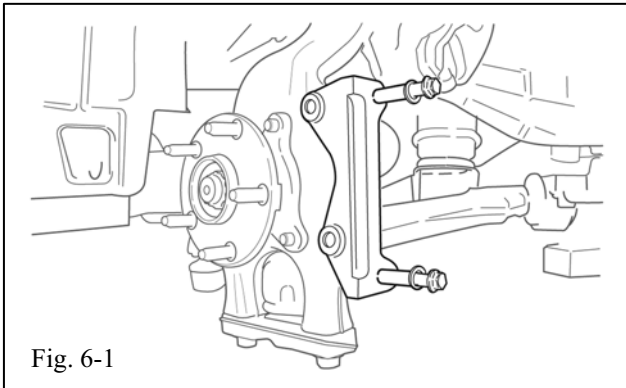


Fig. 6-1

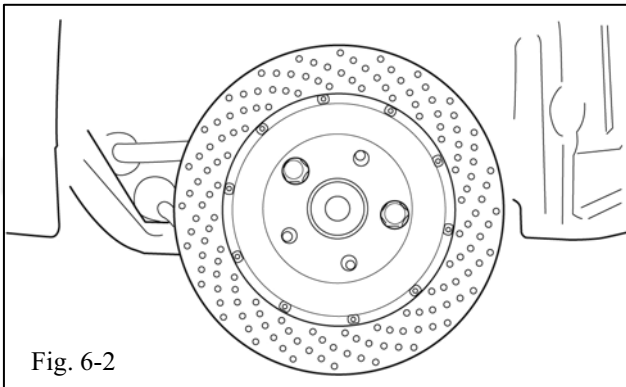


Fig. 6-2

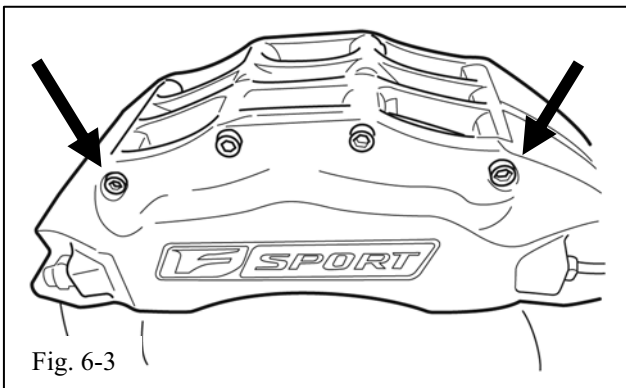


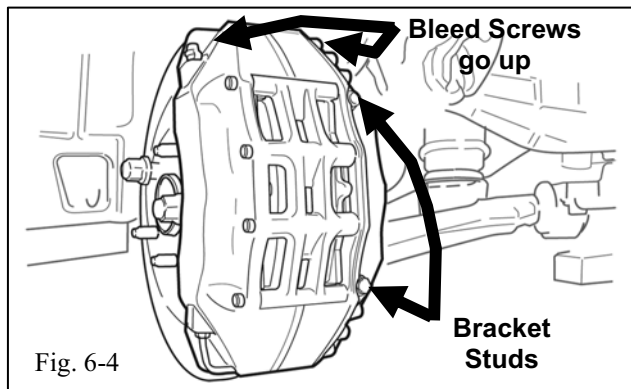
Fig. 6-3

6. Installing the F-Sport Rotor & Caliper.

- (a) Install the caliper bracket to the steering knuckle using the original caliper mounting bolts removed earlier (Fig 6-1). **Torque: 58 lbf-ft (78 N·m)**
- (b) Make certain the hub face and the centering ring on the hub are free of excess rust and or dirt.
- (c) Install the rotor assembly, seating it squarely on the hub face. Place two wheel nuts on opposite studs to prevent the rotor from falling off the hub and to hold it in place (finger tight) (Fig. 6-2).

⚠ Caution: The rotor hats have a small L (left) or R (right) sticker. Install “L” on the left side and “R” on the right side.

- (d) Once the rotor is in place, remove the “L” or “R” sticker and clean any adhesive residue.
- (e) With the caliper on a work bench, using an M5 Allen wrench back the 2 end bridge bolts out 3 turns (Fig 6-3). Then turn the caliper over and remove the foam insert from between the brake pads.

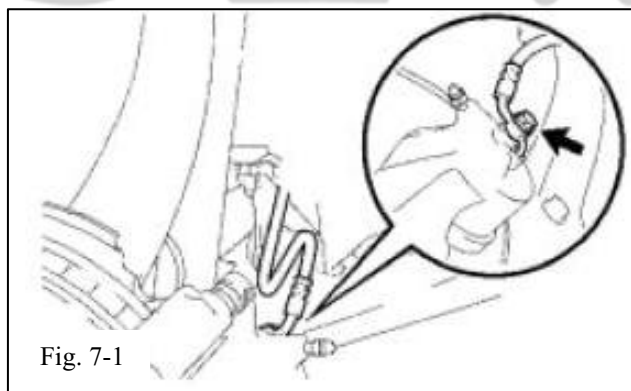


- (f) After removing the nuts and washers from the caliper bracket studs, install the caliper/pad assembly onto the rotor with the bleed screws up while aligning the mounting holes with the studs (Fig. 6-4). Install the washers and then the nuts. Tighten the nuts.
Torque: 40 lbf-ft (54 N·m).

⚠ Caution: The calipers have a small **L (left)** or **R (right)** sticker. Install “L” on the left side and “R” on the right side.

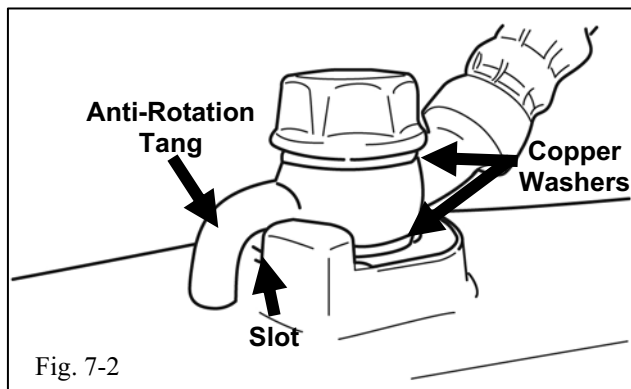
- (g) Once the caliper is in place, remove the “L” or “R” sticker and clean any adhesive residue.

⚠ (h) Re-tighten the 2 end bridge bolts on the caliper to approximately 8-10 lbf-ft, using an M5 Allen wrench. Do not use a torque wrench, the anti-seize compound will cause a false reading. Do not over-torque these bolts, snug is tight enough.



7. Install the Flexible Brake Hose.

- (a) Use fluid drip trays to catch any fluid that leaks.
- (b) Remove the union bolt and gasket from the OE brake caliper assembly and then disconnect the flexible hose (Fig. 7-1). Discard caliper assembly. Remove and discard the aluminum gasket from the brake hose.



⚠ Note: Inspect both sides of the copper washers used in the following step to ensure they are flat & smooth. One spare washer is included in the kit incase of loss or damage.

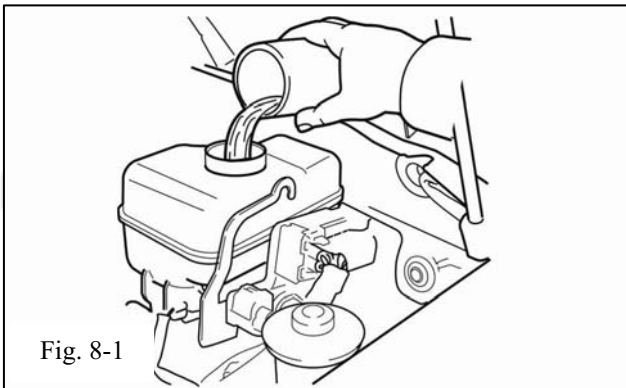
- (c) Using two copper washers, one on each side of the banjo fitting, re-insert the union bolt through the banjo fitting and screw it into the caliper (Fig. 7-2). Note how the anti-rotation

tang on the banjo fitting fits in the slot on the caliper. **Torque: 14 lbf·ft (19 N·m)**

⚠ Caution: Do not over tighten the banjo bolt. Doing so can strip the aluminum threads in the caliper, causing irreparable damage to the caliper. Also, make sure that the flexible hose is not twisted when it is installed on the new caliper. Immediately clean any spilled fluid.


- (d) Have an assistant turn the steering wheel while observing the flexible brake hose for any binding. Also check for clearance to all suspension components.

Repeat steps 3a through 7d for the opposite side of the vehicle.



8. Bleed Brakes, Manual Procedure.

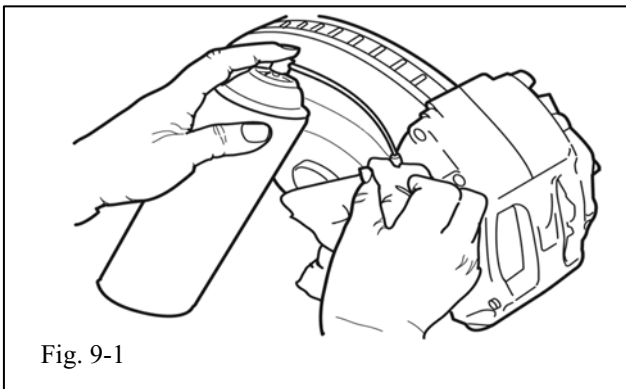
- (a) Fill reservoir with brake fluid. Fluid: SAE J1703 or FMVSS No. 116 **DOT3** (Fig. 8-1). Do not overfill.
- (b) Turn the ignition switch to ON and wait until the pump motor has stopped.
- (c) Remove rubber cap and connect clear vinyl tubing to **right side outboard** bleed screw. Use a small container on the opposite end of the tubing to catch any drained brake fluid.
- (d) Use an assistant to depress the brake pedal several times. With the pedal held down, use an 11mm box wrench to loosen the bleed screw.
- (e) When the fluid stops coming out through the tubing, or the brake pedal is to the vehicle floor, tighten the bleed screw, then release the brake pedal. **Torque: 8 lbf·ft**
- (f) If necessary, repeat steps 8(d) and 8(e) until a solid stream of fluid is coming out of the tubing.

-  (g) Check master cylinder reservoir and add fluid if needed.


Caution: Do NOT allow master cylinder reservoir to run dry and draw in air.

- (h) Connect the clear tubing to the **right side inboard** bleed screw, and repeat Steps 8(d) through 8(g).
- (i) Connect the clear tubing to the **left side outboard** bleed screw, and repeat Steps 8(d) through 8(g).
- (j) Finally, connect the clear tubing to the **left side inboard** bleed screw, and repeat Steps 8(d) through 8(g).
- (k) After bleeding the front brake system, gently tap the caliper body with a plastic mallet to dislodge any small air bubbles, and then perform Steps 8(c) through 8(j) again.

NOTE: Even if a rear brake kit is not being installed, it is suggested that the rear brakes also be bled, so that the entire brake system has fresh fluid.



9. Clean Calipers.

-  (a) Remove excess brake fluid from bleed screw nipples by spraying brake cleaner into each one, wrapping a cloth rag around the spray tube and nipple to catch fluid. Quickly and gently wipe away brake cleaner or brake fluid from the painted caliper finish (Fig. 9-1).

CAUTION: Any fluid left in the nipples can seep out and change the caliper finish.

10. Check for Leaks.

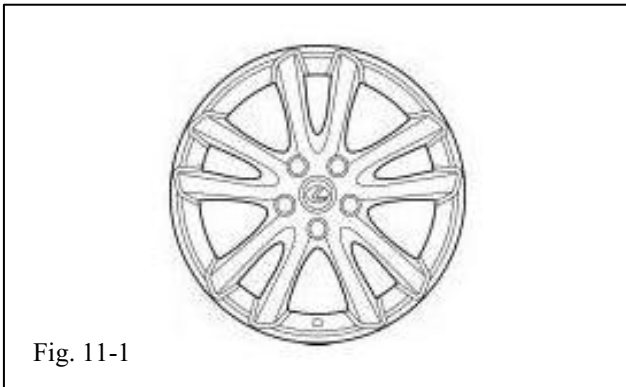
- (a) Use an assistant to depress the brake pedal slowly 3-4 times and hold brake pedal down. Check for fluid leaks while the brake pedal is depressed. Check all connections at both

ends of front brake hoses, and all bleed screws.

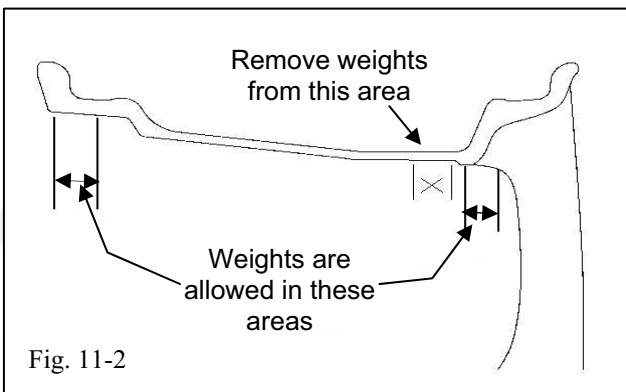
- (b) Cover all 4 bleed screws with the attached rubber caps.

11. Reinstall Wheels and Lower the Vehicle.

- (a) Confirm type of wheel on vehicle. If the OE 18 in. wheel is used (Fig 11-1) follow the next steps to re-balance the front wheels. **All other Lexus Sport, Lexus Genuine Accessory or F-Sport wheels will not require this step. Non-OE wheels will need to be carefully checked.**

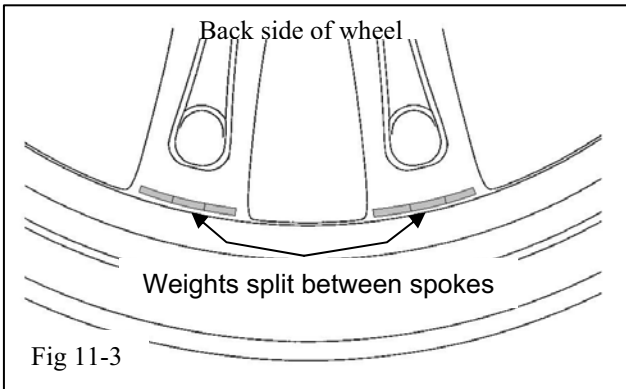


- (b) Inspect wheel for weights located in the concern area shown in (Fig. 11-2).



- (1) If there are no weights found in this location you can now mount the wheel.
- (2) If weight is found here remove and re-balance the wheel assy.

- (c) Rebalance the wheel using the split spoke feature on your tire balancing machine.



- (1) You may have to choose the gap between the double spokes as a spoke selection point for your tire balancing machine. (Fig. 11-3).

- (2) If your tire balancer does not have this feature, you will have to use your best judgment to split the weight added behind the spokes.

⚠ CAUTION: There must be at least a 3.5 mm gap between the wheel weights and brake caliper.

- (3) Apply weights as shown (Figs. 11-2 & 11-3).

- (1) Remove dirt, oil and water from the surface where the balance weight is to be adhered.
- (2) Do not touch the sticking surface of the tape.
- (3) Adhere the sticking type balance weight to the flat position shown in the illustration.
- (4) Push the balance weight securely with a finger to adhere it behind the spokes.
- (5) Do not reuse a balance weight.

- (d) Reinstall the wheels taking care not to scrape the caliper finish with the wheels. Tighten the lug nuts hand tight. Carefully rotate each wheel completely by hand, checking for any excess resistance and or interference.
- (e) Use an assistant to start vehicle engine, depress brake pedal and hold. Tighten the lug nuts. Torque: 76 lbf·ft (103 N·m)

STOP **Note: Both wheels should not rotate when the lug nuts are being torqued. If the wheels rotate, then re-check for fluid leaks. If no leaks are found, remove wheels and repeat brake bleeding procedure.**

- (f) Lower vehicle from lift or jack stands and apply brakes to ensure they are functioning properly before driving vehicle away.

12. Place Documents and Move Vehicle.

- (a) Place break-in procedure tag on inside mirror, and owner's document in glove box.
- (b) Attach the spare tire warning label to the vehicle lug wrench as shown (Fig. 12-1) and replace the lug wrench in its storage bag and replace the storage bag in the vehicle.

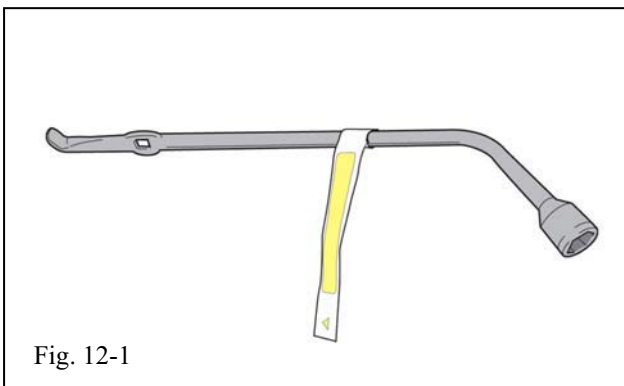



Fig. 12-1

-  (c) Carefully move vehicle at low speed and apply brakes gently several times to ensure that all components are working correctly.

Warning: Do not drive vehicle and apply brakes aggressively until rotors have been properly bedded or broken-in.

Care and Maintenance

- Your brake calipers have a painted finish. Immediately clean off any spilled brake fluid, wiping it off with a soft, clean terry-cloth towel. Rinse the area with clean water.
- Bedding-in rotors and pads is critical to the optimum performance of your new brakes. When bedding-in new parts, you are not only heat-cycling the pads, you are also depositing a layer of pad material onto the rotor face. If not bedded-in properly, an uneven layer of pad material will be deposited onto the rotor, causing vibration.
- Wash F-Sport Performance Brake system and wheels with mild soap and rinse with water. Chemical-based wheel cleaners can permanently discolor the anodized finish on the rotor hats. More frequent wheel cleanings may be required with less aggressive cleaning techniques.

SEWELL

LEXUS IS 250 Front 2006- F-Sport Performance Brake Kit
Checklist - these points **MUST** be checked to ensure a quality installation.

Check:

Accessory Function Checks

- Check for Leaks

- Document Check

Look For:

There should be no brake fluid leaks at the hose ends, bleeder screws and cross tubes.

The F-Sport Performance Brake Kit Mirror Tag should be hanging from the vehicle mirror and the F-Sport Performance Brake Kit Owners Manual should be in the vehicle glove box. The spare tire warning label should be on the vehicle lug wrench.

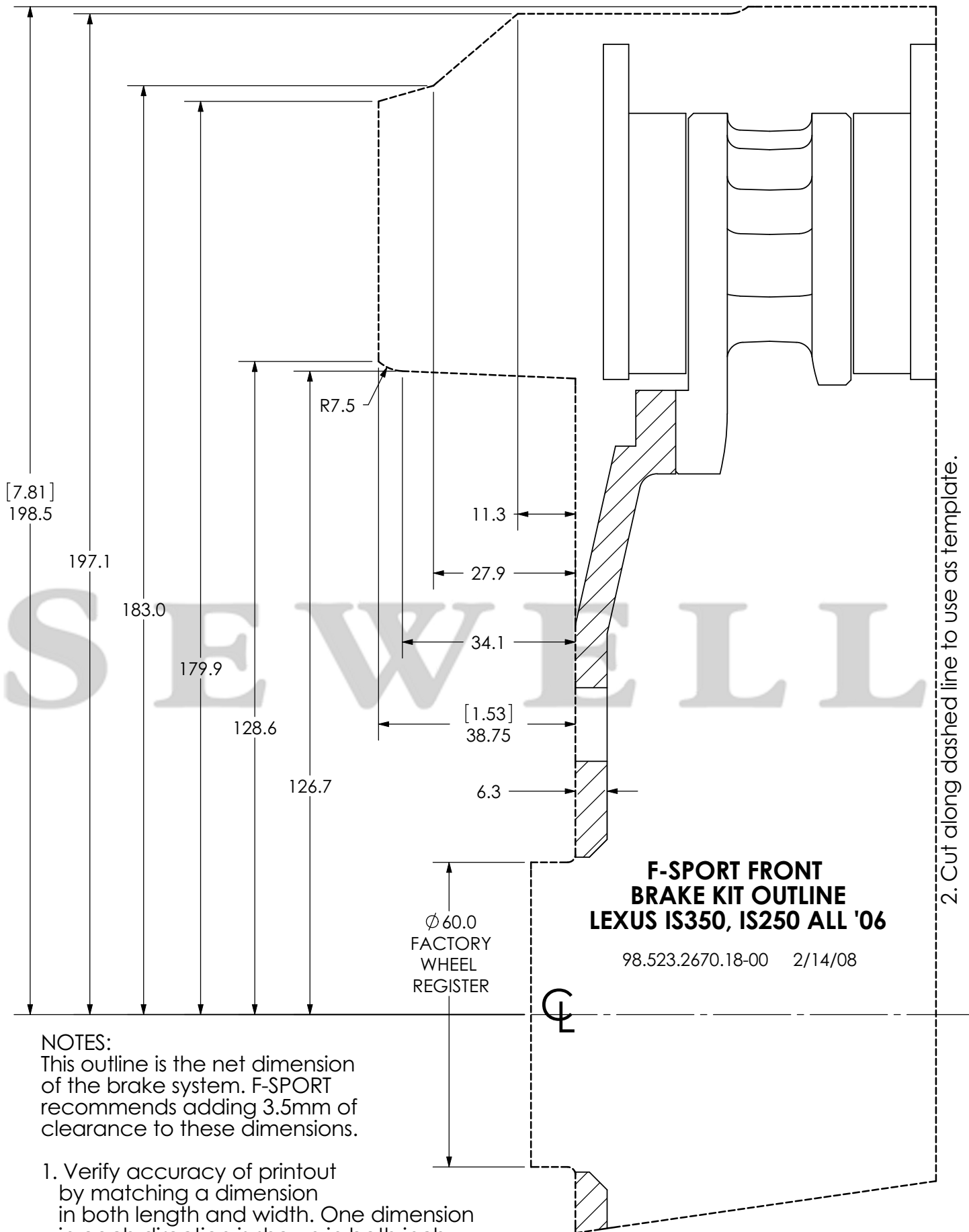
Vehicle Function Checks

- Brake Fluid Level

- Brake Pedal Feel

The vehicle brake fluid level should be full.

The vehicle brake pedal should be firm and solid when depressed and held while the engine is running.



[7.81]
198.5

197.1

183.0

179.9

128.6

126.7

R7.5

11.3

27.9

34.1

[1.53]
38.75

6.3

Ø 60.0
FACTORY
WHEEL
REGISTER

**F-SPORT FRONT
BRAKE KIT OUTLINE
LEXUS IS350, IS250 ALL '06**

98.523.2670.18-00 2/14/08

NOTES:

This outline is the net dimension of the brake system. F-SPORT recommends adding 3.5mm of clearance to these dimensions.

1. Verify accuracy of printout by matching a dimension in both length and width. One dimension in each direction is shown in both inch and mm. All other dimensions are mm.

2. Cut along dashed line to use as template.