

STANDARD PROCEDURE

Always clean the master cylinder reservoir and cap before checking fluid level.

The fluid fill level is indicated on the side of the master cylinder reservoir.

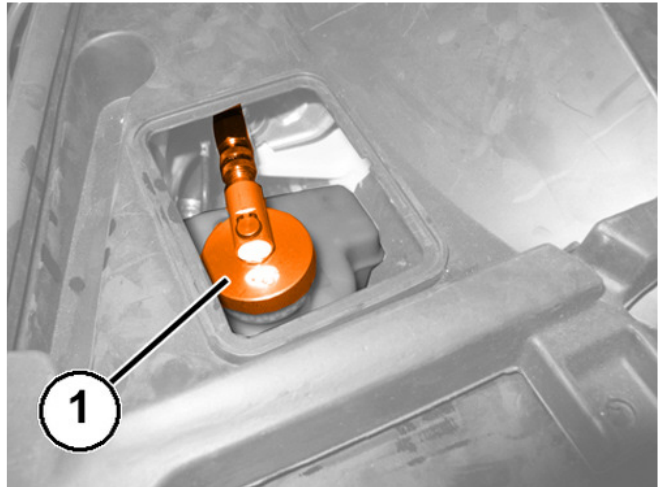
The correct fluid level is to the MAX indicator on the side of the reservoir. If necessary, add fluid to the proper level.

BLEEDING PROCEDURE BASE

1. Raise and support the vehicle (Refer to 04 - Vehicle Quick Reference/Hoisting/Standard Procedure) .
2. With the ignition in the run position place the electric park brake in maintenance mode by selecting: menu, settings, driver assistance, auto park brake, off, brake service, yes. Then place the ignition in the off position.
3. Disconnect and isolate the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), disconnect the IBS connector first before disconnecting the negative battery cable.
4. Disconnecting the Electronic Control Module (ECM) wire harness connector.
5. For vehicles with automatic transmission, to prevent the engine from being accidentally started only reconnect the battery after disconnecting the ECM wire harness connector.
6. Remove all four wheels (Refer to 22 - Tires and Wheels/Removal and Installation) .

7. Replace the fluid in the pressure bleeder with new fluid meeting the specifications in (Refer to 04 - Vehicle Quick Reference/Capacities and Recommended Fluids/Specifications) .

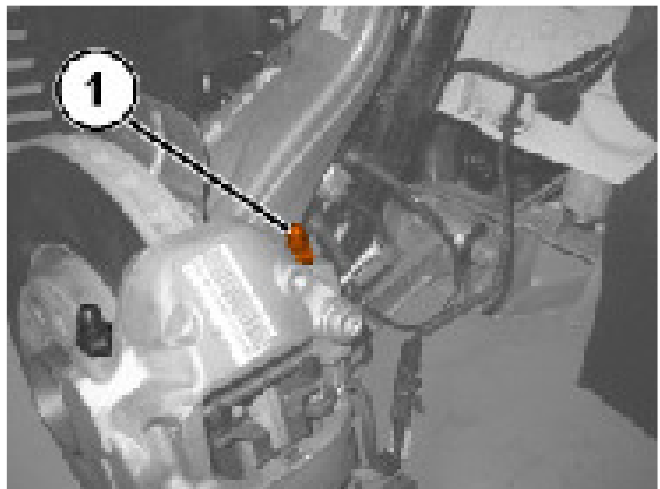
8. Connect the pressure bleeder (1) to the brake fluid reservoir and pressurize the system.



NOTE: The pressure must be 29 - 43 psi during the first stage and second stage described below.

- 9.

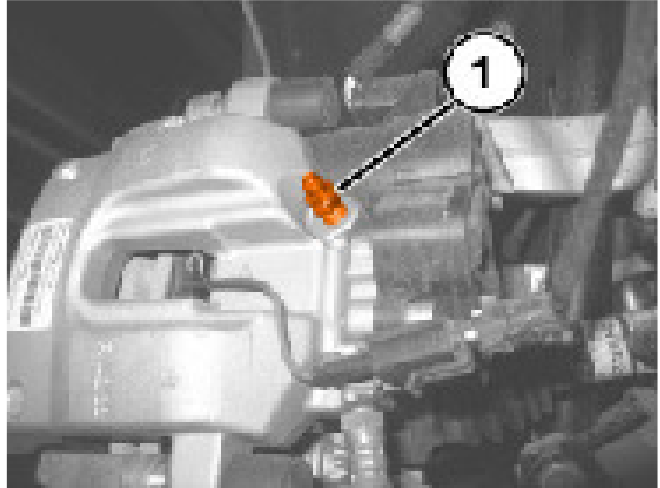
10. Working at the right front caliper, position the brake fluid recovery hose to the INNER bleeder screw (1) and to the recovery container.



11. Open the INNER bleeder screw (1) and without applying any pedal pressure on the system, allow a small amount of brake fluid to drain into the recovery container. Then tighten the bleeder screw and remove the recovery hose.

12. Repeat the procedure on the left front caliper.

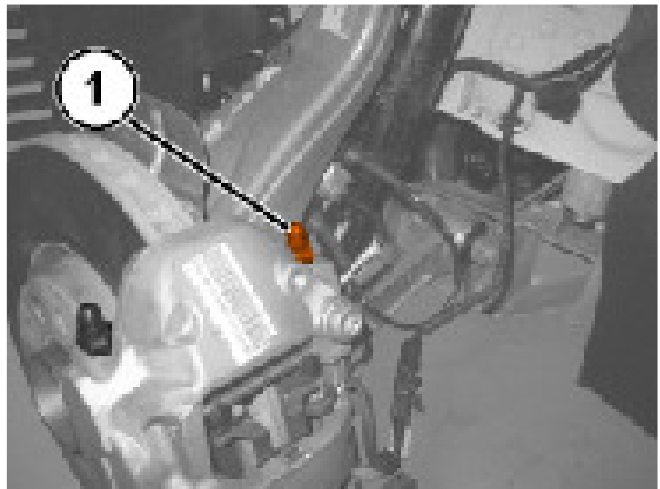
13. Working at the right rear caliper, position the brake fluid recovery hose to the bleeder screw (1) and to the recovery container.



14. Open the bleeder screw (1) and without applying any pedal pressure on the system, allow a small amount of brake fluid to drain into the recovery container. Then tighten the bleeder screw and remove the recovery hose.

15. Repeat the procedure for the left rear caliper.

16. Working at the left front caliper, position the brake fluid recovery hose to the INNER bleeder screw (1) and to the recovery container.



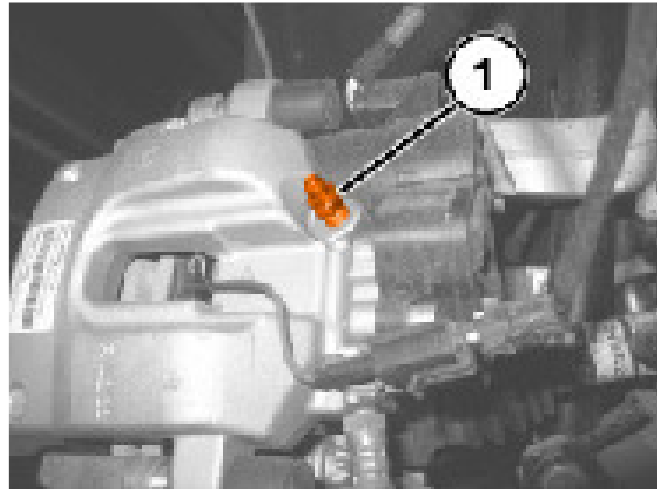
17. Open the bleeder screw and slowly press the brake pedal down fully three or more times, until there are no more air bubbles in the recovery hose.

18. Torque the bleeder screw to the proper (Torque Specifications) .

19. Repeat the bleed procedure on the OUTER bleeder screw of the left front caliper.

20. Repeat the bleed procedure on the right front caliper.

21. Working at the right rear caliper, position the brake fluid recovery hose to the bleeder screw (1) and to the recovery container.



22. Open the bleeder screw allowing a small amount of brake fluid to drain into the recovery container. With the bleeder still open, have the assistant press the brake pedal three times and close the bleeder if the fluid is free from air.

23. Tighten the bleeder screw (1) to the proper ([Torque Specifications](#)) .

24. Repeat the procedure for the left rear caliper.

25. Connect the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), connect the IBS connector after connecting the negative battery cable.

26. Connect a scan tool.

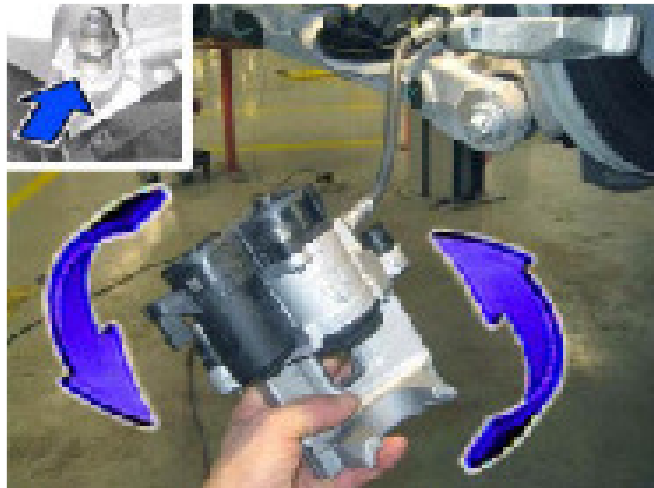
27. Start the Replace Control Unit function, check for air in the hydraulic circuit between the control unit and the brake caliper.

28. Check that the volumes of the Left Front, Right Front, Rear Right, and Left Rear shown on the scan tool are equal to or less than the maximum shown in the table.

Version	200 HP	280 HP
Left front volume (mm3)	1440 – 2550	1495 – 2755
Right front volume (mm3)	1625 – 2735	1790 – 3050
Right rear volume (mm3)	870 – 1990	870 – 1990
Left rear volume (mm3)	855 – 1975	855 – 1975

29. If any of the values shown in the table is higher than the reference threshold, repeat the bleeding procedure.

30. If after repeating the bleeding procedure, the maximum values for the rear calipers are still higher than the limit values, proceed as follows:



31. Identify which calipers are still out of range and remove them without disconnecting the hose.

32. Turn the brake caliper very slowly several times to the various possible positions, stop the motion and keep the bleeder screw pointing upwards for a few minutes.

33. Install the brake caliper (Refer to 05 - Brakes, Base/Hydraulic/Mechanical/CALIPER, Disc Brake, Front/Removal and Installation) .

34. Repeat the bleeding procedure using the scan tool.

35. For vehicles with automatic transmission, disconnect the battery and connect the ECM wire harness connectors.

36. Connect the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), connect the IBS connector after connecting the negative battery cable.

37. Remove the electric park brake from maintenance mode.

38. Install all four wheels (Refer to 22 - Tires and Wheels/Removal and Installation) .

39. Remove the support and lower the vehicle (Refer to 04 - Vehicle Quick Reference/Hoisting/Standard Procedure) .

BLEEDING PROCEDURE QUADRIFOGLIO

1. Raise and support the vehicle (Refer to 04 - Vehicle Quick Reference/Hoisting/Standard Procedure) .

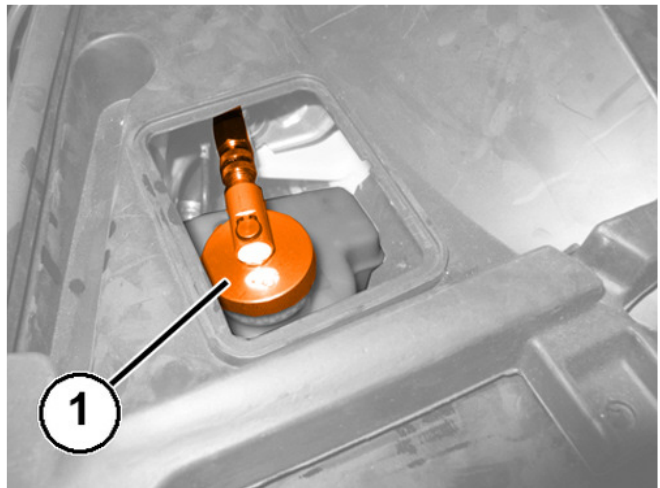
2. With the ignition in the run position place the electric park brake in maintenance mode by selecting: menu, settings, driver assistance, auto park brake, off, brake service, yes. Then place the ignition in the off position.

3. Disconnect and isolate the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), disconnect the IBS connector first before disconnecting the negative battery cable.

4. For vehicles with automatic transmission, disconnect the Electronic Control Module (ECM) wire harness connectors.

5. For vehicles with automatic transmission, to prevent the engine from being accidentally started only reconnect the battery after disconnecting the ECM wire harness connector.
6. Remove all four wheels (Refer to 22 - Tires and Wheels/Removal and Installation) .
7. Replace the fluid in the pressure bleeder with new fluid meeting the specifications in (Refer to 04 - Vehicle Quick Reference/Capacities and Recommended Fluids/Specifications) .

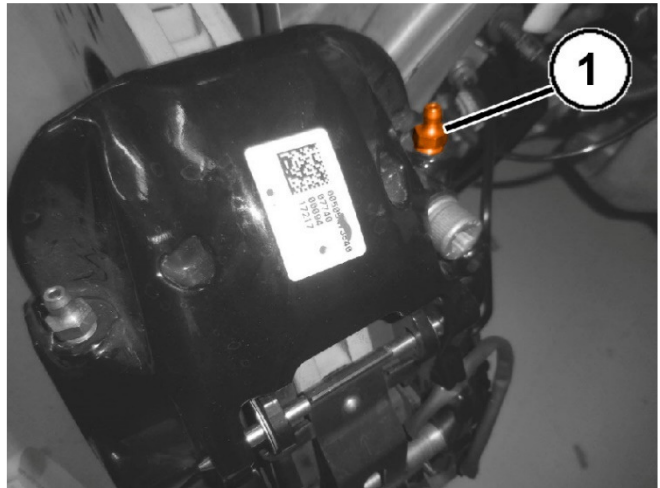
8. Connect the pressure bleeder (1) to the brake fluid reservoir and pressurize the system.



NOTE: The pressure must be 29 - 43 psi during the first stage and second stage described below.

- 9.

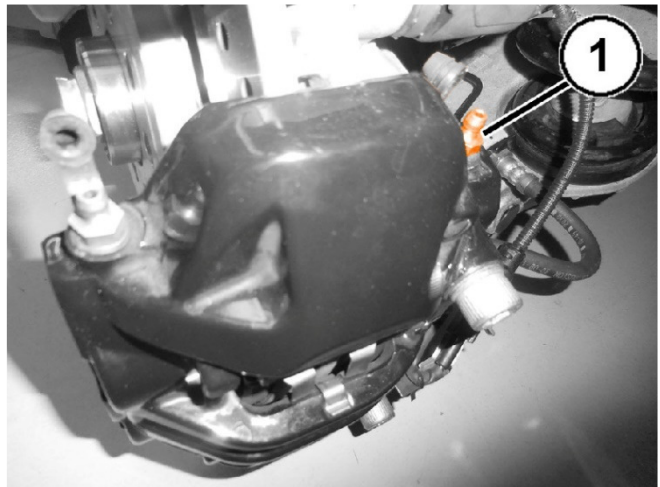
10. Working at the right front caliper, position the brake fluid recovery hose to the INNER bleeder screw (1) and to the recovery container.



11. Open the INNER bleeder screw (1) and without applying any pedal pressure on the system, allow a small amount of brake fluid to drain into the recovery container. Then tighten the bleeder screw and remove the recovery hose.

12. Repeat the procedure on the left front caliper.

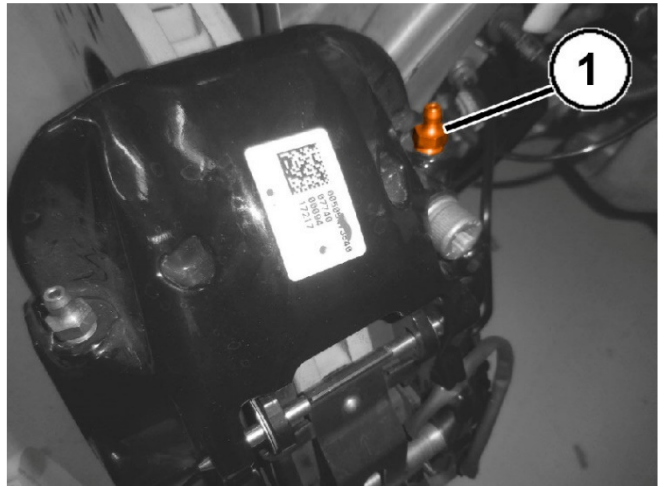
13. Working at the right rear caliper, position the brake fluid recovery hose to the bleeder screw (1) and to the recovery container.



14. Open the bleeder screw (1) and without applying any pedal pressure on the system, allow a small amount of brake fluid to drain into the recovery container. Then tighten the bleeder screw and remove the recovery hose.

15. Repeat the procedure for the left rear caliper.

16. Working at the left front caliper, position the brake fluid recovery hose to the INNER bleeder screw (1) and to the recovery container.



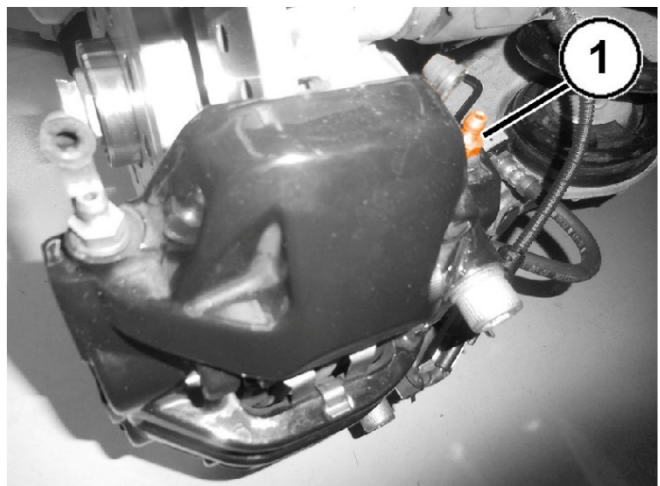
17. Open the bleeder screw and slowly press the brake pedal down fully three or more times, until there are no more air bubbles in the recovery hose.

18. Torque the bleeder screw to the proper (Torque Specifications) .

19. Repeat the bleed procedure on the OUTER bleeder screw of the left front caliper.

20. Repeat the bleed procedure on the right front caliper.

21. Working at the right rear caliper, position the brake fluid recovery hose to the bleeder screw (1) and to the recovery container.



22. Open the bleeder screw allowing a small amount of brake fluid to drain into the recovery container. With the bleeder still open, have the assistant press the brake pedal three times and close the bleeder if the fluid is free from air.

23. Tighten the bleeder screw (1) to the proper (Torque Specifications) .

24. Repeat the procedure for the left rear caliper.

25. Connect the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), connect the IBS connector after connecting the negative battery cable.

26. Connect a scan tool.

27. Start the Replace Control Unit function, check for air in the hydraulic circuit between the control unit and the brake caliper.

28. Check that the volumes of the Left Front, Right Front, Rear Right, and Left Rear shown on the scan tool are equal to or less than the maximum shown in the table.

Version	Steel Discs	Carbon-Ceramic Discs
Left front volume (mm3)	1450 – 2560	1900 – 3110
Right front volume (mm3)	1580 – 2690	2190 – 3400
Right rear volume (mm3)	830 – 1920	750 – 1840
Left rear volume (mm3)	815 – 1905	735 – 1825

29. If any of the values shown in the table is higher than the reference threshold, repeat the bleeding procedure.

30. For vehicle with automatic transmission, disconnect the battery and connect the ECM wire harness connector.

31. Connect the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), connect the IBS connector after connecting the negative battery cable.

32. Remove the electric park brake from maintenance mode.

33. Install all four wheels (Refer to 22 - Tires and Wheels/Removal and Installation) .

34. Remove the support and lower the vehicle (Refer to 04 - Vehicle Quick Reference/Hoisting/Standard Procedure) .

05 - Brakes/05 - Brakes, Base/Special Tools

SPECIAL TOOLS

	<p>2000010500 - Brake Switch Pliers</p>
	<p>2000001400 - Cap, Master Cylinder</p>
	<p>6921 - Cap, Master Cylinder Originally Shipped In Kit Number(s) 6907.</p>

TECHNICAL SPECIFICATIONS

NOTE: Rotor runout specifications are not to be used for diagnosing brake concerns. The values in the table are post turn measurements taken by an on-vehicle brake lathe.

NOTE: When refacing a rotor, the required rotor runout **MUST BE MAINTAINED**. Extreme care in the operation of rotor turning (machining) equipment is required.

BRAKING SYSTEM

	2.9 V6	2.0
Type	Electro-hydraulic of "BRAKE BY WIRE" type with Continental ABS MK C1 module	

FRONT BRAKES

	2.9 V6		2.0
	Steel Disc	Carbon-Ceramic Disc	
Disc type	Self-venting		
Disc diameter (mm)	360 ± 0.4	390 ± 0.2	305 ± 0.2 (Small Version) 330 ± 0.2 (Large Version)
Nominal Thickness (mm)	32 ± 0.2	34.5 ± 0.35	28 ± 0.2
Minimal Thickness after Machining (mm)	30.3	—	26.35
Minimal Thickness allowed (mm)	29.5	33.35	25.5
Caliper piston diameter (mm)	6 Pistons of : 38 - 34 - 30	6 Pistons of : 38 - 32 - 28	4 Pistons of : 40
Rotor Runout (mm)	0.020 mm (0.0008 in.)		

REAR BRAKES

	2.9 V6		2.0
	Steel Disc	Carbon-Ceramic Disc	
Disc type	Self-venting		
Disc diameter (mm)	350.0 ± 0.4	360.0 ± 0.2	292.0 ± 0.2 (Small Version) 320.0 ± 0.2 (Large Version)
Nominal Thickness (mm)	28 ± 0.1	28 ± 0.1	22 ± 0.1
Minimal Thickness after Machining (mm)	26.35	—	20.55
Minimal Thickness allowed (mm)	25.5	27.5	20.0
Caliper piston diameter (mm)	4 Pistons of : 34 – 40	4 Pistons of : 34 – 40	42
Rotor Runout (mm)	0.020 mm (0.0008 in.)		

05 - Brakes/05 - Brakes, Base/Technical Specifications

TORQUE SPECIFICATIONS

DESCRIPTION	N-m	Ft. Lbs.	In. Lbs.	COMMENT
Brake Caliper Adapter to Knuckle Bolts - Front	50 Plus 20°	37 Plus 20°	—	* New Fastener: Do not reuse these fasteners. If removed, a new fastener must be installed and tightened to specifications.
Brake Caliper Adapter to Knuckle Bolts - Rear	105	77	—	
Brake Caliper Bleed Screws	1	—	9	
Brake Caliper Bolts - Front	105	77	—	
Brake Caliper Bolts - Rear	27	20	—	
Brake Caliper Bolts - Rear (Quadrifoglio)	105	77	—	

DESCRIPTION	N-m	Ft. Lbs.	In. Lbs.	COMMENT
Brake Hose to Brake Caliper - Rear	16	12	—	
Brake Hose to Rigid Brake Tube - Rear	16	12	—	
Brake Rotor to Hub Bolt - Front	7	—	62	
Brake Rotor to Hub Bolt - Rear	7	—	62	
Brake Tube to Brake Caliper Nut - Front	16	12	—	
Brake Tube to ICU Nuts	16	12	—	
Brake Pad Tensioner Mounting Screw	33	24	—	
Dust Shield to Knuckle Bolts	9	—	80	
Electric Park Brake (EPB) Actuator to Caliper Bolts	10	—	89	* New Fastener: Do not reuse these fasteners. If removed, a new fastener must be installed and tightened to specifications.
Electric Park Brake (EPB) Caliper to Knuckle Bolts - Rear (Quadrifoglio)	30 Plus 45°	—	—	* New Fastener: Do not reuse these fasteners. If removed, a new fastener must be installed and tightened to specifications.
ICU to Body Bolt			—	
Pedal Assembly to Bulkhead Nuts	22	16	—	* New Fastener: Do not reuse these fasteners. If removed, a new fastener must be installed and tightened to specifications.
Pedal Assembly to ICU Nuts	22	16	—	* New Fastener: Do not reuse these fasteners. If removed, a new fastener must be installed and tightened to specifications.
Wheel Speed Sensor Head to Knuckle Bolt - Front	9	—	80	
Wheel Speed Sensor Head to Knuckle Bolt - Rear	9	—	80	