

AFTERMARKET TEST FITMENT

INTENT

The intent of this guide is to provide insights, guidelines, and Best Practices to support the processes involved in performing an **Aftermarket Test Fitment** of tires, wheels, and lugs. By following this guide, you will be able to perform a test fitment of aftermarket wheels/assemblies and lugs.

SAFETY & QUALITY FIRST



CRITICAL TO SAFETY

- Never turn or spin a wheel by holding the spokes or inner barrel of the wheel.
- If the assembly is not securely held against the hub, or you find marking at the bottom of the lug or seat during the test fit, stop and contact your supervisor.



CRITICAL TO QUALITY

Not applicable

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OVERVIEW AND APPROACH			
What is an Aftermarket Test Fitment?	Aftermarket Test Fitment is a service process where we carefully install an assembly and/or lugs onto a vehicle while ensuring that they do not interfere with the vehicle's functionality.		
Who is Responsible?	Who performs Aftermarket Test Fitment?	What certification required to perform Aftermarket Test Fitment?	What AOR oversees Aftermarket Test Fitment process?
	Crew Chief	Crew Chief	Workflow Assistant Manager
When to Perform?	Aftermarket Test Fitment is performed any time we install an aftermarket assembly and/or lugs or a tire size that is not listed on the approved fitment sizes on the vehicle.		
Benefits	For Our People: - Ensures we are providing the right products to fit our customers' needs. - Increases overall delivery; we do this together!		For Our Customers: Provides a quality service.
Tools	Throughout the Aftermarket Test Fitment process, you must use the following tools:		
	Personal Protective Equipment (PPE)		PPE is intended to keep you safe. - Safety glasses must be worn at all times when in the Service Area. - Gloves are strongly suggested due to the frequency of dealing with foreign objects, exposed cords, and more.
	Impact Gun		Found and stored at the tool stand, one or both options may be available to use to remove the lug: - Cordless impact gun - Pneumatic impact gun
	Socket		Found and stored at the tool stand, used to remove the lug from the hub.
	Cup Brush		Found and stored at the tool stand, used to remove corrosion.

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	Cordless Screwdriver		Found and stored at the tool stand, used with the cup brush to remove corrosion.
	Tire Chalk		Used to mark the stud when performing a lug test fitment.
	Torque Wrench		Used to tighten lug nuts/bolts to manufacturer's OE torque specifications.

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ADDITIONAL SUPPORT									
Tips from the Trusted Experts	Not applicable								
Additional Resources	Throughout the Aftermarket Test Fitment process, you may use the following resources: <table> <tr> <td>Installing the Assembly Best Practice</td><td>Provides the Best Practices and general information about the process of installing the assembly.</td></tr> <tr> <td>Lowering Vehicles Best Practice</td><td>Provides the Best Practices and general information about the process of lowering vehicles.</td></tr> <tr> <td>Spacers, Adapters, and Wobble Bolts/Nuts Best Practice</td><td>Provides the Best Practices for servicing vehicles with spacers, adapters, and wobble bolts/lugs.</td></tr> <tr> <td>Spacers, Adapters, and Wobble Bolts/Nuts QRG</td><td>Additional information about spacers, adapters, and wobble bolts/nuts.</td></tr> </table>	Installing the Assembly Best Practice	Provides the Best Practices and general information about the process of installing the assembly.	Lowering Vehicles Best Practice	Provides the Best Practices and general information about the process of lowering vehicles.	Spacers, Adapters, and Wobble Bolts/Nuts Best Practice	Provides the Best Practices for servicing vehicles with spacers, adapters, and wobble bolts/lugs.	Spacers, Adapters, and Wobble Bolts/Nuts QRG	Additional information about spacers, adapters, and wobble bolts/nuts.
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AFTERMARKET LUG TEST FITMENT					
	Important Steps (Action/Task)	Key Points (What)	Reasons (Why)	SAFE	AT RISK
AFTERMARKET LUG TEST FITMENT	1. Verifies lug fitment	Verifies the shape and diameter of the replacement lugs match the lug seat of the wheel.	Mismatched lug size and shape of the lug to the lug seat of the wheel may cause damage and may prevent proper installation.		
	2. Places assembly on hub	Places the assembly on the hub and holds in place.	The assembly must be on the hub to test the fitment of the lugs.		
	3. Marks stud	Uses tire chalk to mark the end of one stud.	We mark the end of one stud to ensure that the lug nut does not bottom out on the stud		
	4. Installs the lugs	Installs the lugs while ensuring there are at least seven turns of thread engagement.	Seven or more turns of thread engagement ensures an appropriate distribution of loads.		
	5. Torques the lugs	Torques down the lugs to manufacturer specifications.	To ensure a proper fitment of aftermarket lugs, we must install them per manufacturer specifications.		
	6. Verifies installation	Verifies the assembly is securely held against the hub.	This is the first indication of a proper or improper lug fitment.		
	7. Removes marked lug	Removes the lug from the marked stud on the hub.	This allows you to inspect the lug and seat for damage.		
	8. Inspects lug and seat	- Inspects the removed lug to verify there is no chalk or bulging at the bottom of the lug. - Inspects the lug and seat of the wheel for indications that the lug goes too far into the lug seat of the assembly, such as bulging on the end of the lug.	Damage to the lug and/or lug seat are indications that the replacement lugs are not the proper fitment for the vehicle and another option must be found.		
	 If the assembly is not securely held against the hub, or you find marking at the bottom of the lug or seat, stop and contact your supervisor				
	9. Installs the assemblies	Once the lug fit has been verified, continues with the replacement on the rest of the vehicle.	Once you have verified proper fitment, we must install the new lugs on all the assemblies.		
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AFTERMARKET TIRE SIZE TEST FITMENT					
	Important Steps (Action / Task)	Key Points (What)	Reasons (Why)	SAFE	AT RISK
AFTERMARKET TIRE SIZE TEST FITMENT	1. Mounts tire on wheel, inflate, and balance	Mounts, inflates, and balances the assembly.	This must be done so you can verify there is no interference with the vehicles body, suspension, or frame.		
	2. Installs assembly	Installs the assembly following the existing Best Practices.	The assembly needs to be properly installed to test for clearance.		
	3. Spin check	Spin checks the assembly following the existing Best Practices.	This must be done so you can verify there is no interference with the vehicles body, suspension, or frame.		
	! Never turn or spin a wheel by holding the spokes or inner barrel of the wheel.				
	4. Lowers vehicle	Lowers the vehicle so the tire is touching the ground.	The tire must be touching the ground to torque the lugs and so the suspension is loaded for testing fitment.		
	5. Torques lugs	Torques lugs to manufacturer's OE specifications.	This ensures that the assembly is installed properly so the test fitment can be completed.		
	6. Turns wheel to left lock	Gets in the vehicle and turns the wheel all the way to the left.	This moves the assembly to the furthest point to the left so you can inspect for interference.		
	7. Inspects for interference	Exits the vehicle and inspects for any interference between the assembly and the body, fender well, suspension, or frame.	We must verify that there is no interference at the extreme turn angle of the wheel.		
	8. Turns wheel to right lock	Gets in the vehicle and turns the wheel all the way to the right.	This moves the assembly to the furthest point to the right so interference can be inspected.		
	9. Inspects for interference	Exits the vehicle and inspects for any interference between the assembly and the body, fender well, suspension, or frame.	We must verify that there is no interference at the extreme turn angle of the wheel.		
	10. Installs remaining assemblies	Once the proper assembly fit has been verified; mounts, balances, and installs the remaining assemblies on the vehicle.	It is important to first verify the assembly fits the vehicle before we can proceed with the installation of the remaining assemblies following all existing Best Practices.		
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AFTERMARKET ASSEMBLY TEST FITMENT					
	Important Steps (Action / Task)	Key Points (What)	Reasons (Why)	SAFE	AT RISK
AFTERMARKET ASSEMBLY TEST FITMENT	1. Raises vehicle	Raises the vehicle to remove the front left assembly.	The vehicle must be raised to remove the assembly.		
	2. Removes front left assembly	Removes front left assembly.	The front of the vehicle typically has the least amount of clearance on the vehicle.		
	3. Cleans wheel and hub	Uses the cup brush to clean the wheel and hub.	Cleaning the mounting surface helps to ensure that there is not anything obstructing the wheel from sitting flush.		
	4. Verifies lug fitment	Verifies that the lug seat and the size of the replacement lugs match the lug seat of the new wheel.	Mismatched lug size and shape of the lug to the lug seat of the wheel may cause damage and may prevent proper installation.		
	5. Test fits hub ring on assembly and hub (if necessary)	If a hub ring is necessary, verifies proper fitment on wheel and hub.	The hub ring ensures that the assembly is a hub centric mount. If it is not the correct size, it can cause a gap or vibrations.		
	6. Places wheel on hub	Places the new wheel on the hub and checks for interference with the brake caliper, hub, and other suspension components.	If there is interference with the brake caliper, hub, or other suspension components, another solution should be found for the customer.		
	7. Rotates wheel 360 degrees	Rotates the wheel by hand 360 degrees to ensure no low spots make contact.	Wheels are not perfectly round. When rotating the wheel, if contact is made with any component, another solution should be found for the customer.		
	 Never turn or spin a wheel by holding the spokes or inner barrel of the wheel.				
	8. Marks stud	Uses tire chalk to mark the end of one stud.	We mark the end of one stud to ensure that the lug nut does not bottom out on the stud before providing the proper clamping force on the wheel.		
	9. Installs lug	Installs the lug, ensuring there are at least seven turns of thread engagement.	Seven or more turns of thread engagement ensure an appropriate distribution of loads.		
	10. Removes lug and wheel	Removes the lug and wheel from the hub.	This allows the lug and seat can be inspected for damage.		
	11. Inspects lug and seat	- Inspects the removed lug to verify there is no chalk or bulging at the bottom of the lug. - Inspects the lug and seat of the wheel for indications that the lug goes too far into the lug seat of the assembly, such as bulging on the end of the lug.	Damage to the lug and/or lug seat are indications that the replacement lugs are not the proper fitment for the vehicle and another option must be found.		
	 If the assembly is not securely held against the hub, or you find marking at the bottom of the lug or seat, stop and contact your supervisor				
	12. Mounts tire on wheel, inflate, and balance	Mounts, inflates, and balances the assembly.	This must be done to verify there is no interference with the vehicles body, suspension, or frame.		
	13. Installs assembly	Installs the assembly following the existing Best Practices.	The assembly needs to be installed to test for clearance.		

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AFTERMARKET ASSEMBLY TEST FITMENT	14. Spin check	Spin checks the assembly following the existing Best Practices.	This must be done to verify there is no interference with the vehicles body, suspension, or frame.		
	15. Lowers vehicle	Lowers the vehicle so the tire is touching the ground.	The tire must be touching the ground to torque the lugs and so the suspension is loaded for testing fitment.		
	16. Torques lugs	Torques lugs to manufacturer's OE specifications.	This ensures that the assembly is installed properly so the test fitment can be completed.		
	17. Turns wheel to left lock	Gets in the vehicle and turns the wheel all the way to the left.	This moves the assembly to the furthest point to the left so you can inspect for interference.		
	18. Inspects for interference	Exits the vehicle and inspects for any interference between the assembly and the body, fender well, suspension, or frame.	We must verify that there is no interference at the extreme turn angle of the wheel.		
	19. Turns wheel to right lock	Gets in the vehicle and turns the wheel all the way to the right.	This moves the assembly to the furthest point to the right so you can inspect for interference.		
	20. Inspects for interference	Exits the vehicle and inspects for any interference between the assembly and the body, fender well, suspension, or frame.	We must verify that there is no interference at the extreme turn angle of the wheel.		
COMMENTS	21. Installs remaining assemblies	Once the proper assembly fit has been verified,, mounts, balances, and installs the remaining assemblies on the vehicle.	It is important to verified that the assembly fits the vehicle before proceeding with the installation of the remaining assemblies following all existing Best Practices.		