



ENGINEERING REPORT

2018+ Honda Accord 2.0T Performance Air Intake | SKU: MMAI-ACRD20-18

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REPORT AT A GLANCE

- **Goal:** Create a direct-fit, high-quality intake for the 2018 Accord 2.0T
- **Results:** The Mishimoto performance intake showed consistent power and torque gain over the RPM range of 2500 to 6500, with peak gains of 7.8 hp and 2.5 ft-lb and max gains of 15.6 hp and 12.9 ft-lb. The intake retains the factory fresh air snorkel with an additional inlet for extra supplementary airflow and is tested to be 50% less restrictive on the flow bench compared to the stock intake.
- **Conclusion:** The Mishimoto performance intake is a great upgrade for Accord 2.0T owners looking for performance gains and intake sound improvement and is safe with a stock tune.

CONTENTS

PG 1	— DESIGN OBJECTIVES
	— MATERIAL SELECTION
	— DESIGN AND FITMENT
PG 3	— SOUND TESTING
	— PERFORMANCE TESTING
PG 4	— INSTALLATION NOTES

DESIGN OBJECTIVES

The design requirements assigned to this project are as follows:

- Performance gain over stock intake while maintaining safe air/fuel ratio without custom tuning
- Durable design that will last the lifetime of the vehicle
- Easy bolt-on installation without any permanent modification done to the vehicle
- High-quality intake tone
- Compatible with larger aftermarket intercooler pipe

MATERIAL SELECTION

The Mishimoto performance intake utilizes a rotational-molded, UV-stable polyethylene airbox, which ensures a strong and robust fitment and isolates intake air from engine bay heat. The MAF housing section is CNC-machined from 6061 billet aluminum to ensure precision control on the MAF sensor calibration. The coupler that connects the MAF housing to the turbo pipe is constructed from mesh-reinforced silicone and is much more durable compared to its stock rubber counterpart.

DESIGN AND FITMENT

Our design process started with taking the stock intake apart, thoroughly investigating the system and searching for room for improvement. The stock intake system (Figure 1) consists of a short rubber hose, an enclosed airbox, and a sound resonator that connects to the bottom of the airbox. Fresh outside air is fed into the airbox via a snorkel on top of the radiator cover. With the help of our flow bench, we identified several main restrictions in the stock intake system: the lack of effective filtration surface area,

the corrugated part on the rubber hose, and that the snorkel is the only air supply source in the system.

The Mishimoto intake (Figures 2–3) employs a conical oiled filter with inverted top, which increases filtration area by 53%. The corrugated stock intake hose is replaced by a silicone coupler with a smooth internal surface to reduce air turbulence. We retained the stock air snorkel as the primary air supply source, but we also added an additional ‘window’ on the airbox located just above the snorkel inlet to capture more cold air from above the radiator support for maximum flow gain.



FIGURE 1: Stock intake



FIGURE 2: Mishimoto intake



FIGURE 3: Mishimoto intake installed

SOUND TESTING

The Mishimoto performance intake lends a loud and deep intake tone that is pleasing to the ear, and pronounces the sound of turbo spool. We recorded stock and Mishimoto intake sounds during dyno testing, which can be found on our Engineering Blog.

Click Here: [MISHIMOTO ENGINEERING BLOG](#)

PERFORMANCE TESTING

Performance testing was carried out on our in-house DynaPack™ dynamometer. Testing day temperature was 72°F and humidity was

at 26%. All dyno runs were conducted in 4th gear. The Mishimoto intake created consistent power gains with almost identical air/fuel ratios compared to stock. The dyno results, both performance gains and air/fuel ratios, can be found in Figure 4 below. The results shown are average data curves of multiple dyno runs. We do not take the highest or lowest dyno runs to prove artificial gains. Flow bench testing that the Mishimoto intake is 50% less restrictive than the stock intake. This means that the engine will “breathe” much easier with the Mishimoto intake, and that there is considerable potential for more power gains when the vehicle is custom tuned.

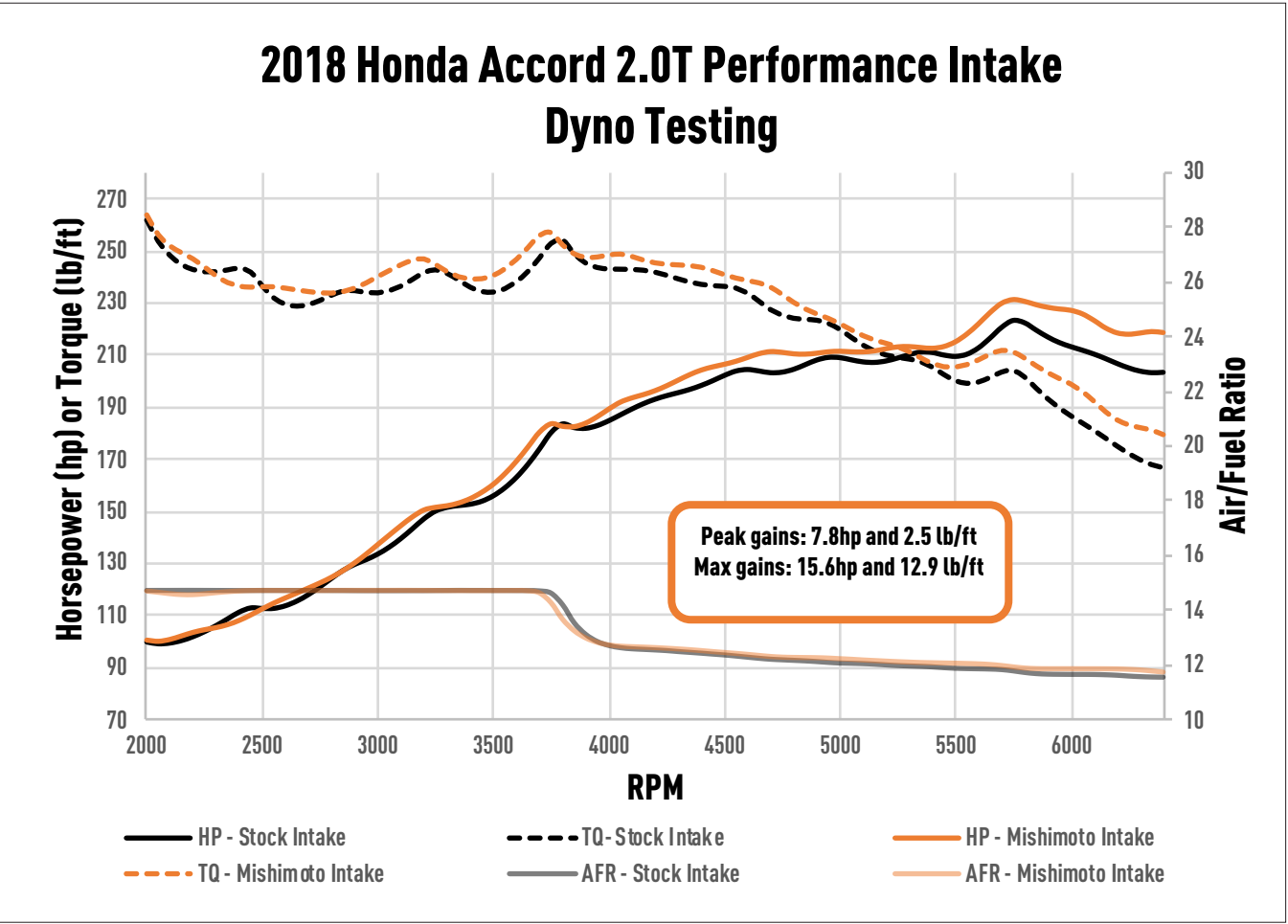


FIGURE 4: Dyno results

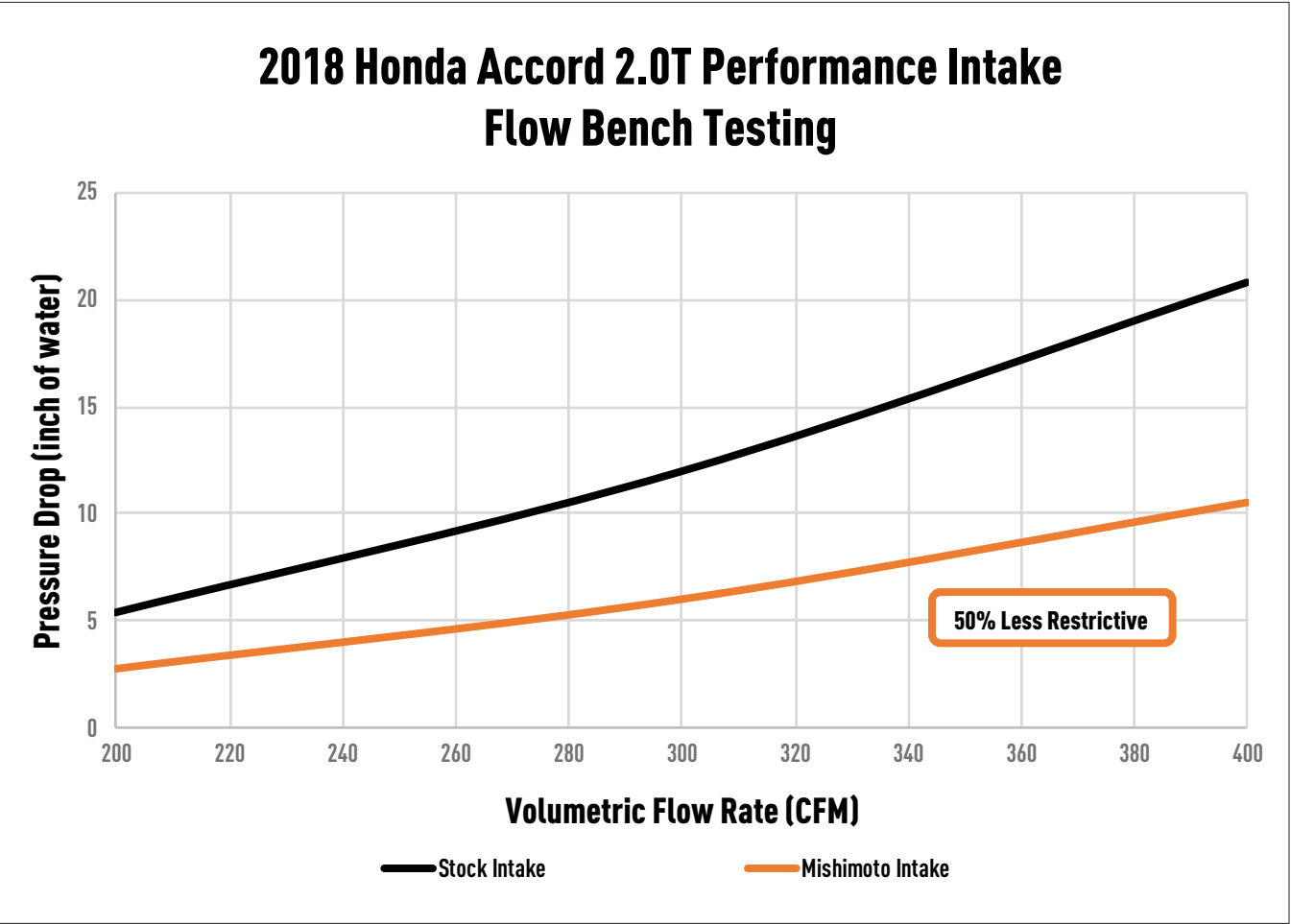


FIGURE 5: Flow bench results

INSTALLATION NOTES

The Mishimoto performance air intake is an excellent bolt-on upgrade for the 2018 Honda Accord 2.0T and can be installed on a stock vehicle without any permanent modification or custom tuning.

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