



NEW
RELEASE
INFORMATION
Vol.126

08.12

EXHAUST MANIFOLD for VQ35DE ver.2

VQ35 EXHAUST MANIFOLD VERSION 2



**Z-MASTER RACE
FOR THE STRONGEST
ENGINES!!**

The NA Sports Feel Has Evolved To An All New Level.

The 1st Version design had the targets of “Sharp throttle response”, “Sports engine enjoyment” & “True race exhaust sound”. The new version 2 design has all those target aspects met with the additional target of increased power gains. The designs were made and time painstakingly tested both on the engine bench Dyno in a controller environment and on the car in real life uses in the Z Masters race series in Japan. With these tests we found to have excelled in additional performance gains from the previous 1st Version model.

PRODUCT	APPLICATION	ENGINE	PART #	MSRP
EXPREME EXHAUST MANIFOLD	Z33 MT/AT CPV35 MT/AT	VQ35DE	415001	\$1,200.00 (USD)

MATERIAL			PIPE WIDTH		PIPE THICKNESS(mm)	WEIGHT (kg)
PIPE	FLANGE	HEAT SHIELD	MAIN	EXIT		
SUS304	STEEL	SUS304	φ42.7	φ60.5	1.5	6.3 (NORMAL 6.8)

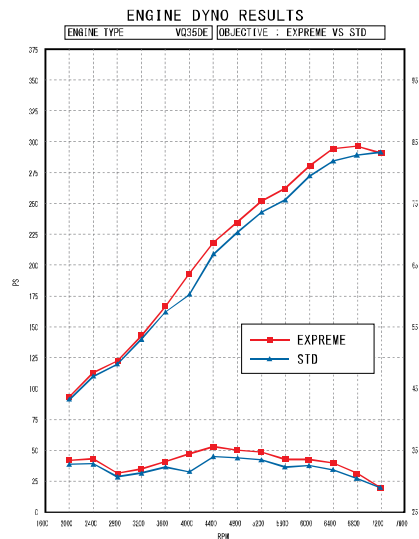
CONTENTS	EXHAUST MANIFOLD/ HEAT SHIELD/ HEAT SHIELD INSULATOR/ HEAT INSULATION TUBE/ CABLE TIES/ ENGINE SIDE GASKET / CATALYTIC CONVERTER SIDE GASKET / HEATER PIPE GASKET/ WATER PIPE O RING / BOLTS / FLANGE NUTS/ BOLT SMOOTH PASTE/ STICKER
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EXHAUST MANIFOLD + STRAIGHT FRONT PIPE
PART #: 415001+193094 **\$1,570.00 (USD)**

EXHAUST MANIFOLD + TOMEI ECU
PART #: 415001+8170155000 (Z33 MT/AT 02.07~04.08)
PART #: 415001+8170255000 (Z33 MT/AT 04.09~05.09)
* Compatible with Roadster Models **\$2,600.00 (USD)**

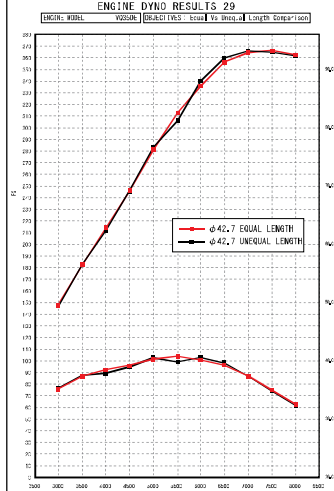
EXHAUST MANIFOLD + STRAIGHT FRONT PIPE + TOMEI ECU
PART #: 415001+193094+8170155000 (Z33 MT/AT 02.07~04.08)
PART #: 415001+193094+8170255000 (Z33 MT/AT 02.07~04.08)
* Compatible with Roadster Models **\$3,110.00 (USD)**



EXTENSIVE REASEARCH & DELVEOPMENT

1. LENGTH COMPARISON TEST

The equal length shows smooth torque results mid rage and the unequal length shows more power up high in the power band. The equal length also delivers a much better race engine sound. The unequal length shows room for power gains up top with more R&D.



EQUAL LENGTH PROTOTYPE



UNEQUAL LENGTH PROTOTYPE

STANDARD LAYOUT EQUAL LENGTH CHOSEN

2. OPTIMUM DISTANCE TO MERGE SECTION

The 3 Test Stages of finding the optimum distance to the merge section.

① Comparison of 370mm and 620mm

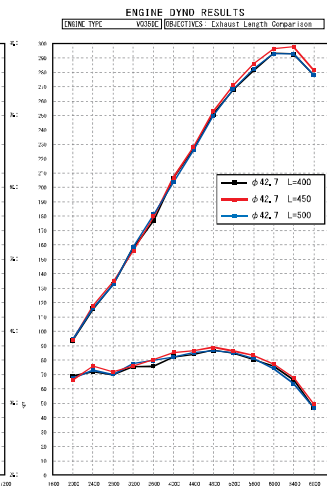
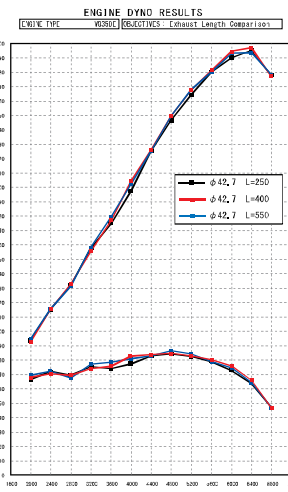
The 620mm length design showed the power band peaked around the 4000 RPM area.

② Comparison of 90mm, 240mm and 370mm

The shorter 90mm and 240mm showed the power decrease before the 6000 RPM range.

* From the various test results obtained we decided with the 450mm length which is in between the 370mm~ 620mm area.

③ Additional tests was done with length ranges between 370mm to 620mm at 400,450. 500 & 550mm sizes to find any extra gains. From the additional extensive testing we found the 450mm delivered the best results.



EQUAL LENGTH PROTOTYPE φ42.7 450mm

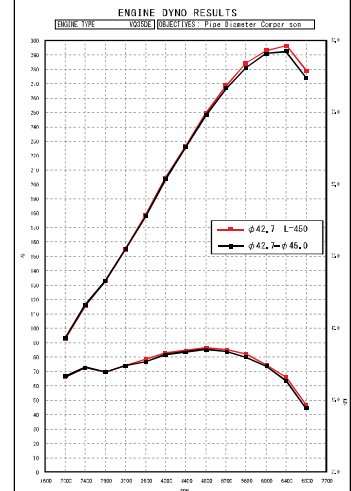


EQUAL LENGTH PROTOTYPE 620mm

THE 450mm LONG TYPE WAS CHOSEN

3. PIPE DIAMETER & MERGE SECTION

Increasing the exhaust pipe diameter is will increase performance gains but too large will cause power loss. We found after numerous tests that the φ42.7mm size made best results.



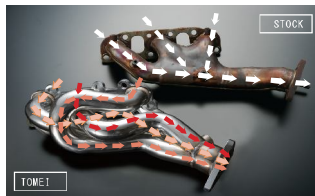
φ42.7mm BENCH DYNO TEST EXHAUST



φ42.7mm→φ45.0mm BENCH DYNO TEST EXHAUST

These test results show how we tested and why we chose the exhaust manifold product designs of equal length φ42.7mm L=450mm.

STOCK COMPARISON



With the best layout design there was an additional 0.5kg weight savings gained from our new design.

SPEC	TOMEI	STD
MACHINING METHOD	PIPE : TIG WELDED PIPES FLANGE : MACHINING	CAST
MATERIAL	PIPE : SUS304 FLANGE : STEEL	STEEL
PIPE DIAMETER	φ42.7	
PIPE WALL THICKNESS	1.5mm	
WEIGHT	6.3kg	6.8kg

THERMAL PROTECTION



With the new performance design layout it is hard to use the thermal bandage to control the heat in the engine bay. So for added performance gains we have also added a heat shield and thermal protector and flexible thermal tube cover. These accessories are all included in the kit and help reduce performance robbing heat.

EXHAUST FLOW OPTIMIZED



For the optimum performance layout the pipe bends are designed to maximize exhaust flow efficiency. The merging section joint angles have all been flow tested and with the smooth pipe layout, performance is maximized with this bolt on kit.



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