Catalytic Converters

SUMMARY

The dollar value of catalytic converters on a vehicle is calculated by…

… VIN (not year-make-model)…

… Catalytic component (not part number)…

… Amount of palladium, platinum, and rhodium per component type.

VIN (not year-make-model)

For example, one 2015 Acura TLX (VIN 19UUB1F31FA034813) has 2 catalytic components.

Versus another 2015 Acura TLX (VIN 19UUB2F36FA002445) has 3 catalytic components.

CATALYTIC COMPONENT (not part number)

For example, Ford designates a 2007 F-250 Super Duty 6.7L as having the one part number shown in the image below.

CC3Z5H270A (weight is approximately 100 pounds)

This assembly contains two catalytic components: one that removes carbon monoxide; and one that removes particles.

AMOUNT OF PALLADIUM, PLATINUM, AND RHODIUM PER COMPONENT TYPE

For example, compare a 2007 Jeep Wrangler 3.8L versus a 2007 Jeep Liberty 3.7L

The Wrangler has a catalytic component containing palladium and rhodium (i.e., no platinum).

The Liberty has a catalytic component containing palladium, rhodium, and platinum.

Platinum has high-temperature resilience.

The Wrangler 3.8L engine's exhaust does not demand the catalytic component have as much high-temperature resilience as the Liberty 3.7L engine.

The Wrangler has a Low Stress Load component versus the Liberty has a High Stress Load component.

Types of components are:

High (Primary): manifold-mounted or close-coupled units. Also includes all diesel after-treatment components (diesel oxidation catalyst, diesel particulate filter, selective catalytic reduction) due to high mass / value.

Low (Secondary): underfloor or rear cleanup units on standard gasoline vehicles.

Medium (Hybrid Secondary): the rear / secondary converter on a a hybrid vehicle (higher platinum group metal loading than standard Low).

Single: used only if the vehicle has exactly one catalytic component converter total.

CALCULATING THE TOTAL VALUE OF CATALYTIC COMPONENTS, BY VIN

Using the above example of two 2015 Acura TLX VINs…

…The first has $210.00 of catalytic components [= 1 x $163.65 (High Stress Load) + 1 x $46.35 (Low Stress Load)]…

… Versus the second has $373.65 [= 2 x $163.65 (High Stress Load) + 1 x $46.35 (Low Stress Load)]…

… That's a difference of $163.85. More than enough to win the vehicle from a competitor!

DETERMINING THE VALUE OF EACH CATALYTIC COMPONENT TYPE

Easiest way is to configure the system using the average Price per Converter ($) from selling to a specialist that recycles spent catalytic converters. Also configure the system with Platinum Price per Ounce ($), Palladium Price per Ounce ($), and Rhodium Price per Ounce ($).

The system uses these factors to automatically calculate values for Price per High Stress Load Component ($), Price per Low Stress Load Component ($), Price per Medium Stress Load Component ($), and Price per Single Stress Load Component ($).

The values for Price per High Stress Load Component ($), Price per Low Stress Load Component ($), Price per Medium Stress Load Component ($), and Price per Single Stress Load Component ($) can also be overridden by the user.