

1965 OLDSMOBILE Cutlass 330-4 bbl MPG= City/ 15.1 Hwy

Written by Double Dragon

Tuesday, 05 November 2019 20:22 - Last Updated Tuesday, 05 November 2019 21:43

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In this article we profile a 1965 F-85 Cutlass owned by Bob. Look for the "20 YEARS PLUS" story on this car in the CAR STORIES section.

GAS MILEAGE TESTS OF 1965 CUTLASSES WHEN THEY WERE NEW. City/ Hwy

The Cutlass model debuted as an option on the Oldsmobile F-85. The Cutlass was originally a sporty 2 door with bucket seats designed to cash in on the popular fascination with compact 'sporty' foreign imports. Over time the popular Cutlass name denoted a higher trim level and was available in all bodystyles and interior configurations.

In 1964 the wheelbase of the F-85 rose from 112 inches to 115 combined with the addition of longer trunks. This bumped the F-85 into a new size class called intermediate.

Because the 1965 F-85 was only in it's second year of the new Intermediate style body it was essentially carried over with minimal changes. The top option on the F-85 platform was still the

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Cutlass which eventually outsold the base model. Cutlass offered more trim and comfort features.

BOB'S 1965 CUTLASS HISTORY

Bob's 1965 Cutlass was built in the Fremont, California final assembly plant. The cowl tag decodes as follows:

5C= May, 3rd week, 1965 build date.

ST 65-33827= 1965 Cutlass Sports Coupe BODY BF 3629= Fremont, CA final assembly plant

TR 302 42= Green cloth bench Split bench

PAINT HH= Laurel Mist

ACC.= Accessories. (None listed).

30840= Manifest sequence number

Note that the top cover of the Owner's Manual and the selling information page in the Owner Protection Plan are both stamped with the Cutlass' VIN, engine and trans number and a synopsis of paint and option codes.

The two tone green interior has cloth inserts in the bench seats. The OCCC Cutlass is equipped with the optional high compression 330- 4 barrel engine, and optional Jetaway with column shifter. The Cutlass has optional power steering and an AM radio. Like many 1960s cars the Cutlass does without power assist for the 4 wheel drums. The Cutlass was also ordered without a defroster. The Cutlass was painted code Green with a code green interior. It had the optional

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330-4 bbl single exhaust 320 HP engine, M33 two speed automatic transmission, open 3.08:1 axle and 7.75x14 tires.

Nine Options:

- 1) N40 Power steering
- 2) P01 Wheel trim cover
- 6) P62 4 Ply Whitewalls
- 7) U63 Pushbutton AM radio
- 8) A02 Tinted windshield
- 9) A39 Deluxe seatbelts

The Cutlass VIN 338275Z124860 decodes:

3= Oldsmobile

38= Cutlass

27= 2 door Sport Coupe (post)

5= 1965 Model year

Z= Fremont, California final assembly plant

124860= Sequential factory number

BOB'S 1965 CUTLASS SPECIFICATIONS, MODIFICATIONS AND CONDITION

Bob's Cutlass has typical options found on the majority of brand new Cutlasses back in 1965.

Bob's 1965 Oldsmobile Cutlass is original except for the modern tires, master cylinder, brake pads, wires, plugs, rotor and condenser and battery. The carburetor was rebuilt. The Cutlass has original exhaust, radiator, and even the shocks! The Cutlass has original interior, glass, drive train, alternator, master water pump, steering box, springs, brake drums and exhaust manifolds. Bob's Cutlass retains the original steel wheels and hubcaps. It has four wheel drum brakes which create less drag than the front disc option.

Incredibly the Cutlass made it through all this time without even a minor insurance claim for glass. There is a slight ripple in the roof just above the passenger door aft of the window pillar and a slight gap in the fit of driver's door which suggests either sloppy factory build or a hit at some point in the car's life. Cars with perfect alignment get better MPG and this one tracks true.

Bobs's 195R70-14 Michelin tires are shorter than the stock 7.75 x 14 bias ply tires which are equivalent in diameter and width to P 215R70-14 tires. Bob's tires were produced in the 2010s. They are only 70% as tall as wide: 'low profile' by 1960s standards. See the article about tires in this GAS LOGS section for more information.

Bob's 320 HP four barrel high compression 330 has the greatest MPG potential. High compression creates greater engine efficiency and the four barrel can squeeze out more MPG than the two barrel when driven on the small primary bores of the carburetor. Total cost of fuel increases somewhat due to the need for premium octane gas.

The four barrel stalls if you give it more than half throttle before it's fully warm. A letter to POPULAR MECHANICS Jan, 1970 complained about this. The rear barrels are kept closed by a thermostat. Flooring it when cold starves the engine for fuel and stalls it. Thus, the four barrel has a built-in 'moderator' subduing drivers from pushing a cold engine as hard as the two barrel carburetor allows. After the car is warm the 'flat spot' in acceleration smooths out. But when cold it hesitates if you give it too much gas.

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The four barrel automatic MPG advantage fades slightly out on the highway. The four barrel is teamed with a 3.08:1 axle causing the engine to turn faster at highway speed than the two barrel engines which run through the 2.78:1 axle. Tire diameter of the radials works out to 24.7" (696 mm). This tire revolves 840 times per mile while the original Cutlass tires only revolve 780 times a mile. The Cutlass has to turn the wheel an extra 60 times per mile when shod with a radial of the same width as the old bias ply. Theoretically this will force the engine to rev about 8 % faster than with the stock tires costing the Cutlass 8% MPG and also some engine longevity.

This is compensated somewhat by the fact that radials improve gas mileage by about 3 to 8 % (depending on what source you consult) over bias ply tires. Whatever the exact amount, those 1965 tires didn't have modern compounds to further lower rolling resistance so the new tires probably equal or improve the situation.

A Mapquest comparison to mileage readings suggest the odometer wasn't grossly out of whack, which was a common problem on 1960s cars.

The Cutlass original 1965 factory issue bias ply tires had a suggested inflation of 24 PSI, while modern radials are safe at 35 PSI, which further reduces rolling resistance and improves MPG a few more points over the original showroom stock cars. In the end, the smaller diameter radial tire MPG loss was probably regained by the radial configuration and high air pressures.

Below are some pages out of the AMA specs provided by Oldsmobile about the 1965 Cutlass.

Olds selected the model numbers below to give an overview of the lineup compared across the four door body style. 33369 is the F85 base six cylinder four door sedan, 33469 is the F85 base V-8 330 two barrel four door sedan and 33869 is the Cutlass Supreme high compression 330 four barrel four door.

According to the AMA sheet above, the basic V8 330 Cutlass weighs 3,200 lbs, fairly light for such a large car. 1960s cars didn't weigh much despite extravagant non functional heavy steel design cues in the all metal bodies. Weight is held down with an absence of airbags, 5 mph bumpers, and safety steel beams in the doors, roll over standard reinforced roofs, catalytic

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converters, GPS, stability control computers, engine management computers, quadraphonic stereos etc.

The automatic transmission adds 11 pounds over the manual transmission, power steering adds 35 pounds, power brakes add 10 pounds, and the radio weighs 8 pounds. Bobs' Cutlass with options weighs 3, pounds with fluids topped up. In metric that is 1, kg.

The modern Delco battery weighs about 35 to 40 pounds, in the same general range as the original 1965 Delco. Technically, Bobs' Cutlass had a few more pounds because radial tires weigh more than Bias Ply. The 195 sized radials on the Cutlass weigh 21 pounds each, while the 225s mounted to the car later are around 25 pounds each. The unsprung weight of tires creates more work than the few extra pounds would as dead weight in the trunk. Unsprung weight gets complex because the larger diameter tire created with the 225s bring rotational inertia into the picture. We'll leave that formula for the diehard experts.

When we add Bob's' driver weight and one passenger we end up with a 3,550 pound car with oil, coolant, and full gas tank.

BOB'S DRIVING CONDITIONS FOR CITY DRIVING

Bob's' city MPG is not affected by the ethanol content in modern gasoline because he used 94 octane Chevron gasoline which contained no ethanol. He also used an octane booster in each tank full of gasoline. The cold weather in Vancouver, British Columbia, Canada decreases efficiency. Magazine tests were made back in the day when these cars were new and gasoline wasn't watered down with efficiency robbing ethanol and usually tests were conducted in warm weather.

Magazines typically tested cars in warm USA locales which boosts MPG. The readers reporting MPG in Popular Mechanics Owners Reports lived in the USA. California has a huge population.

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The sheer volume of warm weather condition drivers reporting might have skewed the figures enough to improve the overall average.

Back in the 1960s a drive across town averaged 35 mph without the perpetual gridlock of modern cities. To this day, Vancouver lacks a highway through town. Every inch of travel is an endless series of ill timed traffic lights and enforced waiting at intersections generally devoid of advance left turn signals.

The CITY MPG figure is averaged from miles of mildly driven short trip summer/ fall stop and go. The carburetor was rebuilt and engine received a complete tune-up at 39,000 original miles.

The trips were usually made carrying just Bob and a passenger plus some small items in trunk like car parts and so on. The Cutlass was always parked in a parkade that was unheated.

Oil changes using Quaker State 10W30 oil were done every year. No oil top ups were required.

During this period of driving, the heater and fan were usually on.

Here is the raw data from Bobs' gas log.

First column lists odometer mileage, second column is the number of gallons. Third column specifies octane. Unleaded gas is the default unless leaded gas is listed. An 'X' in the fourth column indicates that the tank wasn't filled up

Odometer Gallons Octane/ Lead? Full Tank? MPG (uncorrected)

39,000			X	
39,000			X	

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HIGHWAY MILEAGE 1965 CUTLASS = 15.1 MPG (25 miles of logs)

ROAD TRIP NUMBER ONE = 15.1 HWY MPG HIGHWAY (40 miles)

Bob had the advantage over new 1965 Cutlasses back in the day on the highway driving portions. Bob had a well broken in engine. Modern tech gives us superior oils and tires allowing cars to extract more MPG than owners and road testers from back in 1965. Bob logged HWY miles in low temperatures.

The advantage in the early magazine tests is that in the 1960s pure leaded gasoline was available with more energy per gallon. Our modern gasoline is cleaner burning which is better for avoiding engine deposits, but the actual energy available in ethanol diluted gas is lower than the old gas. Bob avoided this issue by using ethanol free 94 octane Chevron plus octane booster.

The HWY MPG figure was achieved over 40 miles of cruising at 55 to 65 mph (90- 100 KPH) on Western highways in fall.

Mileage was recorded from shut off on a 'full tank' to 'full tank' condition using the same gas pump with car parked facing the same position both times to remove doubt from calculations. Gassing up at different places changes the angle of the pad the car is parked on, creating a different 'full shut off point'.

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The Cutlass was parked in an unheated parkade with temperatures ranging from 35 to 40 degrees F (degrees C). Bob was about 135 pounds and his passenger was 165 Lbs (kg). There was also about 50 pounds (22 kg) luggage. The lack of Air Conditioning saves extra work for the engine with absent A/C unit weight and parasitic power drain. This advantage was negated by driving with all windows rolled down. Open windows create a parachute effect as the engine strains to pull against the resistance of the rear window. The vent windows were always fully open, creating an obstruction which lowers the co efficient of drag. The radio was off saving some extra engine energy, and the antenna was fully down which might save a smidgen of drag.

Odometer	Gallons	Octane/	Full Tank?	MPG (uncorrected)
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39,418.0	3.0	Chevron 94	Full tank.	n.a.
39,460.2	2.8	Chevron 94	Full tank	15.1 MPG