



GM's 2027 HD Duramax 8.3L Turbo-Diesel V8 (Mongoose): 555 hp and 1,230 lb-ft

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General Motors' September 24, 2026 release rates the available Duramax 8.3L Turbo-Diesel V8 at 555 horsepower and 1,230 lb-ft under SAE J1349 for the 2027 Chevrolet Silverado HD and GMC Sierra HD. GM's September 21 teaser calls it Mongoose. It is a Brookville, Ohio, DMAX engine, not the Cummins ISC 8.3. Bore and stroke are not published.

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<https://assemblyalert.com/blog/duramax-8-3-mongoose-vs-cummins-and-the-hd-diesels>

General Motors put the name in its own newsroom. On September 21, 2026, GM teased an all-new Duramax 8.3L Turbo-Diesel V8 for the refreshed 2027 Chevrolet Silverado HD and GMC Sierra HD and gave it a shop-floor nickname: Mongoose. Three days later, on September 24, GM published the number that matters on a spec sheet and on a grade: 555 horsepower and 1,230 lb-ft of torque, measured to SAE J1349, the net-power procedure GM cites in that release.

That is a GM V8, built for GM heavy-duty pickups, with the diesel work done at GM's expanded DMAX plant in Brookville, Ohio. It is not a rebadge of the Cummins 8.3, and it is not a stroked 6.6 with a new badge. The liter figure is the same number people have been saying in truck stops for thirty years when they meant a Cummins inline-six. The engines are not the same machine.

This piece is an engine comparison. It stays inside published figures. Where GM has not printed a bore, a stroke, a weight, a compression ratio, or an oil-change interval, the cell says so. Guessing a dimension and drawing it like a factory print would be a lie about a diesel, and diesel people notice.

What it is

The marketing name in the September 24, 2026 release is the Duramax 8.3L Turbo-Diesel V8. The September 21 teaser is where GM itself uses Mongoose, and where GM points at "a certain cross-town rival's HD V8 diesel" that "may be referred to as the scorpion." That is GM's competitive framing, not a third-party insult. Ford's 6.7L Power Stroke is the engine that sits on the other side of that joke. The numbers below treat Ford, Ram, and Cummins as the other American diesel names in this fight, with their own published ratings, not as props.

GM calls the 8.3 its first clean-sheet heavy-duty V8 designed, developed, and manufactured in-house for heavy-duty pickups. The release is explicit that the engine is available, not standard. The standard engine in the same 2027 HD trucks is an updated gasoline 6.6L V8, rated in that same release at 412 horsepower and 472 lb-ft. Both pair with the Allison 10-speed GM identifies as the 10L1000.

The RPO code is a paperwork fact, and it should be labeled that way. GM's September 21 and September 24 newsroom posts do not print "L6P" in the release text. A September 15, 2026 reading of GM's fleet order guide, reported by GM-Trucks.com, is the document trail that first shows the 2027 Silverado HD and Sierra HD diesel as "(L6P) Duramax Turbo-Diesel V8," with the gasoline engine as "(L8S)." When that guide item was written up, it did not yet carry displacement or horsepower. GM's later newsroom posts supplied 8.3 liters, 555 horsepower, and 1,230 lb-ft, and did not restate the RPO. GM Authority's September 26, 2026 report treats L6P as the 8.3 and says it replaces the 6.6L L5P rather than sitting above it as a second diesel. Driving.ca, at the September 24 media showing, likewise calls the engine L6P and says the 555 / 1,230 rating is the rating, not a high-output tier beside a lower one.

So the honest sentence is: order-guide reporting names the 2027 HD Duramax as RPO L6P; GM's consumer newsroom names it Duramax 8.3L Turbo-Diesel V8, MongOOSE; nobody credible is describing two different 2027 HD diesels.

Peak rpm is the other place to be picky. The news release states 555 hp and 1,230 lb-ft and says those ratings follow SAE J1349. It does not print the rpm in the release body fetched for this article. GM Authority, citing GM, puts the peaks at 555 horsepower at 2,500 rpm and 1,230 lb-ft at 1,400 rpm. Driving.ca, looking at a horsepower-and-torque curve credited as a GM photo, says peak torque comes on at 1,400 rpm and that the curve holds nearly all of that torque until about 2,500 rpm. Those rpm figures are used here as reported from GM materials at the announcement, and they are flagged because they are not in the news-release paragraph that states the headline power.

What GM has not published, as of those sources: bore, stroke, compression ratio, dry weight, oil capacity, a cubic-inch displacement beside the 8.3 L name, a redline, injection pressure, and a maintenance schedule. Secondary pages that fill those boxes with a round number are not used here.

Built in Ohio, installed in trucks whose plant you still have to check

The engine story and the truck story are not the same plant.

GM says the 8.3 will be built at the expanded DMAX facility in Brookville, Ohio. The release describes a 1.4-million-square-foot plant that brings machining and assembly for this engine under one roof, and says GM had previously invested \$920 million to grow DMAX for this high-volume program. The footnote on the release is the grown-up one: assembled with U.S. and globally sourced parts. That is not a 100 percent domestic-content claim, and this article will not invent one. What the release does support is a specific American diesel plant, with the block and the rotating assembly machined and the engine assembled in western Ohio, for a clean-sheet HD pickup diesel GM says it designed in-house.

That is the part worth being proud of without inflating it. Heavy-duty diesel pickups are an American machine. The people who cut the iron, torque the mains, and leak-check the engine are on a GM diesel line in Ohio. The trucks those engines go into are the Silverado HD and Sierra HD, the same kind of three-quarter-ton and one-ton pickups that show up at a job before daylight, hook to a gooseneck, and are still the family vehicle on Sunday. GM says more than 60 percent of heavy-duty customers opt for a diesel, and that its brands already hold the majority of diesel share in the segment. Those are GM's market statements, dated to the September 24 release, not a census reprinted here.

The current 6.6L Duramax the 8.3 is aimed at replacing has its own American address on the GM Powered Solutions page: the L5P is listed as assembled in Moraine, Ohio, of globally sourced parts. The half-ton Duramax, the 3.0L inline-six LZ0, is listed as assembled in Flint, Michigan, of globally sourced parts. The 2027 HD gasoline 6.6L is assembled at Tonawanda Engine in New York, again with the global-parts footnote. Read as a map, GM's own pages put three different truck diesels and the HD gas V8 in three shops in Ohio, Michigan, and New York. That is a real industrial footprint. It is not a slogan.

Final assembly of the truck is a different pin on that map, and it is the pin that decides plant country.

GM-Trucks.com's order-guide report says GM builds the Silverado HD and Sierra HD at Flint Assembly in Michigan, and that the 2027 trucks follow the current models down that line. GM Canada's Oshawa Assembly page lists the products built there as the Chevrolet heavy-duty Silverado and the Chevrolet light-duty

Silverado, and GM's 2022 Canada investment release described Oshawa as GM's only plant producing both heavy-duty and light-duty pickups. Driving.ca, covering the 8.3, notes the Canadian plant connection and expects 8.3L engines to be installed in Oshawa-built trucks. The September 24 engine release itself does not assign 2027 HD assembly to a plant.

Hold those facts apart. The diesel is a Brookville, Ohio, engine. A Silverado HD can be a Flint truck or an Oshawa truck, depending on the vehicle. An Ohio engine in a Canadian-assembled pickup is still an American engine in a truck whose assembly country is Canada. If you care which country built the truck, the engine plant is the wrong fact, and the first digit of the VIN is the wrong test.

How to check plant country

Use the free VIN checker at <https://assemblyalert.com>.

Assembly Alert, the car-loan desk, is mirroring this comparison:

<https://assemblyalert.com/blog/duramax-8-3-mongoose-vs-cummins-and-the-hd-diesels>. The VIN checker on that site is still the plant-country report. This paper does not add a second rating and does not fill unpublished bore, stroke, or weight.

1. Take the 17-character VIN from the vehicle. Enter that VIN on the site.
2. Read the plant country on the report.
3. For the OBBBA car-loan interest plant test, UNITED STATES or USA is the pass.
4. Puerto Rico does not pass that test.
5. The first digit of the VIN is not the test.
6. A window sticker is not the test.

This article is not tax advice. It does not tell you whether your loan, your filing status, or your truck qualifies for anything. It tells you where the published engine is built, and it points at a plant-country report so you are not guessing from a badge, a brochure, or a single VIN character.

Architecture, and only the architecture that was published

Start with the September 24 release, because that is GM speaking in its own pages.

The engine is a V8 turbo-diesel. The block is compacted graphite iron. The release's foundation line is a compacted graphite iron block with a "fully forged crankshaft, connecting rods and steel pistons." The adjective "fully forged" is printed on the crankshaft. The rods are named, and the pistons are named as steel. The release does not add a separate "forged rods" sentence. Driving.ca, from the engine on display, specifies a forged steel crank and steel pistons and does not separately spec the rods. Fuel delivery is "high-flow fuel injection." GM does not, in that release, print a common-rail pressure. A figure of 39,000 psi shows up on a secondary spec page without a GM document attached. It is not used here.

Air handling is a high-efficiency variable-geometry turbocharger and a compact dual-stage air-to-water charge cooling system, plus an upgraded engine-cooling strategy. That charge-cooler description matters. It is not the big front-mount air-to-air brick a lot of older truck diesels taught people to expect. GM's words are air-to-water, dual-stage, compact.

The release also cites an integrated intake design, an advanced combustion system, and crankshaft isolation hardware aimed at noise and vibration. It cites a new aftertreatment layout, regeneration, and upgraded exhaust braking, and it says the engine and the Allison 10-speed were calibrated together. It does not list the aftertreatment as a parts catalog. There is no OEM sentence in that release that says "DPF," "SCR," or "EGR" for the 8.3. Those pieces are published for the 6.6L L5P and the 3.0L LZ0, on GM Powered Solutions pages quoted later. They are not copied forward onto the new engine.

The media showing adds three architectural points the release text does not, and they stay attributed to the reporter who was in the room. Matthew Guy at Driving.ca, with GM photos of the 2027 HD engine in the story, describes a compacted-graphite-iron block with aluminum cylinder heads, integrated intake manifolds, steel pistons, a forged steel crank, and the turbo living in the vee. He also reports that the engine has a dipstick, that the oil called for is 15W-40, the same grade he says is recommended under normal temperatures for the current engine, and that a variable-displacement oil pump was discussed, meant to control oil pressure with operating conditions. He says the DEF tank is larger, without a new capacity. He says, unofficially, that the

engine will be heavier than the 6.6L. “Unofficially” is not a dry weight. No pound figure is printed, so the comparison table says dry weight is not published.

Camshaft location is another blank. The GM release does not say overhead valve or dual overhead cam. The L5P page does: overhead valves, four per cylinder, mechanical roller lifters. The LZ0 page does: dual overhead cams, four valves per cylinder. The 8.3 does not get either sentence until GM prints it. The plates in this folder therefore do not draw pushrods and do not draw cam towers.

Bank angle is the same kind of blank. Nothing in the GM posts or the Driving.ca report states 90 degrees or any other included angle. The front-view plate is a V because the engine is a V8 with a valley turbo. It is not a dimensioned vee.

Bore and stroke are not published. Anyone who writes “about 4.2 by 4.5” or scales the Cummins 114 mm by 135 mm bore and stroke onto this V8 is mixing two engines that share a liter and nothing else. The plates call the displacement out as 8.3 L nominal and then say bore not published, stroke not published.

Applications: which trucks, which class of work

GM’s release puts the engine in the 2027 Chevrolet Silverado HD and GMC Sierra HD, on sale at U.S. dealers beginning late 2026. MSRP was not in the release. “Additional product information will be announced in future updates.”

The order-guide report adds the chassis-cab paper: 2027 pages for Silverado 2500 HD, Silverado 3500 HD, and Silverado 3500 HD chassis cab, and the GMC Sierra equivalents, with L6P as the available Duramax turbo-diesel V8 on the 2500 HD engine page. That is three-quarter-ton and one-ton HD pickups, plus the 3500 HD chassis cab that shares the order guide. The GM news release does not mention the medium-duty Silverado 4500, 5500, or 6500. This article does not move the 8.3 into those trucks.

On the 2500 HD page as reported, the diesel pairs with the MGM Allison 10-speed, and an MGU 10-speed is also listed where a PTO applies. The gasoline L8S pairs with the MKM Allison 10-speed. The diesel rear axle listed there is GU6, 3.42. The gas axle listed is GT4, 3.73. The 2500 HD GVWR codes run from C7A at 10,000 lb (4,536 kg) through JGS at 12,150 lb and C7N at 12,300 lb (5,579 kg). The Max Trailering Package, code NHT, requires the L6P plus the Z6A gooseneck/fifth-wheel prep package. B20 biodiesel compatibility, the exhaust brake, and the dual-battery setup are reported as carrying over onto L6P equipment. One 3500 HD crew-cab row, CK30943, still showed the old L8T and L5P codes in that guide; the reporter flagged it as the only such row and as a leftover, not as a second diesel you can order. GM Authority’s later line is cleaner: for 2027, the buyer who wants a Duramax in a Silverado HD or Sierra HD gets the L6P, and the L5P is not the other choice. “Available” means available against the gas V8.

Trailering, from the GM release, on properly equipped models: up to 20,000 pounds conventional, up to 38,000 pounds gooseneck, gross combined weight rating up to 46,500 pounds, and every diesel dually capable of towing up to an available 30,000 pounds or more. Select configurations are the whole sentence. A dually and a shortbed 2500 are not the same rating, and GM did not publish the full tow table in the news post.

For a yardstick on the outgoing truck, Chevrolet’s 2026 Silverado HD pages list the Duramax 6.6L at 470 horsepower, 975 lb-ft, the Allison 10-speed, and 36,000 pounds maximum available trailering. The 2026 gas HD 6.6L on that page is 401 horsepower and 464 lb-ft. The 2027 gas engine in the September 24 release is the step from that 401 / 464 to 412 / 472. The diesel step GM is advertising is not a tune. It is a different displacement.

Power ratings for the 8.3 have not had model years in which to change. There is one announced rating. If GM later publishes a chassis-cab derate or a second calibration, it is not in these sources.

The engine people mix it up with: Cummins 8.3

Say “8.3 diesel” in a shop that works on buses, RVs, and medium-duty trucks and a lot of good mechanics will answer Cummins. They are not wrong about the engine they know. They are wrong if they think that engine is now wearing a Duramax valve cover.

Cummins’ own North American product page for the ISC8.3 (EPA 2010) lists 260 to 380 horsepower (194 to 283 kW) and 660 to 1,050 lb-ft (895 to 1,424 N·m). The applications on that page are fire and emergency, school bus, medium-duty truck, and motorhome and RV. It is an inline-six family engine sold across several regions, not a 2027 Silverado option. The page does not restate bore, stroke, dry weight, compression, or a

single peak rpm. Those cells stay “not published” on the ISC row.

The geometry people quote for a Cummins 8.3 does exist on a Cummins document, and it has to be quoted from the document it actually is. The Cummins specification sheet for the 6CTAA8.3-G7, a fuel-optimized generator engine, copyrighted 2020, prints bore 114 mm (4.49 in.), stroke 135 mm (5.31 in.), and displacement 8.3 litre (506 in³). The block is cast iron, six cylinders, with a 24-valve head described in the feature list. Dry weight on that sheet is 820 kg, and the package dimensions are 1,674 mm by 868 mm by 1,288 mm. Those are the weight and the box for that Coolpac generator package. They are not a published dry weight for an ISC in a highway truck, and they are not anything to do with the Duramax. The sheet’s 60 Hz standby gross rating is 318 bhp at 1,800 rpm. That is a generator standby number. Putting it next to 555 pickup horsepower without the label would be a stunt. The table keeps the generator row so the bore and stroke have a real Cummins citation, and the chart of pickup peaks leaves that row off.

Same nominal liters. Different layout. Different job. Different company. Cummins remains the American diesel name in medium-duty trucks, buses, and a great many RVs, and the 6.7L High-Output Cummins in the 2026 Ram Heavy Duty is a newer inline-six with its own published pickup rating, covered below. None of that makes the Cummins 8.3 a Duramax, and none of it needs a cheap shot. The point of the comparison is so a buyer, a fleet manager, or a tech ordering parts does not chase the wrong long-block because two engines share “8.3.”

The Duramax family it actually sits next to

6.6L L5P, the HD diesel it is taking the job from

GM Powered Solutions publishes the 6.6L V8 L5P as tested in the Chevrolet Silverado Heavy Duty and GMC Sierra Heavy Duty:

470 hp (350 kW) at 2,800 rpm

975 lb-ft (1,322 N·m) at 1,600 rpm

90 percent of peak torque from 1,550 rpm through 2,850 rpm

Displacement 6,604 cc (403 ci)

Bore x stroke 103 mm x 99 mm

Compression ratio 16.0:1

Overhead valves, four per cylinder, mechanical roller lifters

Firing order 1-2-7-8-4-5-6-3

High-pressure common-rail direct injection

Cast-iron block, cast-aluminum heads

Forged-steel crankshaft, steel camshaft, PM-iron connecting rods

Emissions controls: cooled EGR, SCR, DPF, intake throttle

Fuel: ultra-low-sulfur diesel and B20

Maximum powered speed 3,450 rpm; maximum braking speed 4,800 rpm

Longitudinal, assembled in Moraine, Ohio, of globally sourced parts

Dry weight is not on that page.

Set the announced 8.3 next to those peaks and the arithmetic GM Authority prints is the right arithmetic: 555 versus 470 is 85 horsepower, and 1,230 versus 975 is 255 lb-ft, with the new torque peak reported 200 rpm earlier. Displacement on a nominal basis goes from 6.6 liters to 8.3 liters. GM Powered Solutions’ more precise L5P figure is 6.604 liters, so the gap to a nominal 8.3 is about 1.7 liters. That is the honest “larger engine” statement. It is not a claim that the 8.3 is a bored L5P. CGI versus the L5P’s cast-iron block, and in-house clean-sheet versus the Moraine L5P listing, are GM’s own contrasts. Head material for the 8.3 is the Driving.ca aluminum-head report, not a Powered Solutions line.

Chevrolet’s 2026 HD consumer page is the truck-level version of the same diesel rating: 470 horsepower, 975 lb-ft, Allison 10-speed, 36,000 pounds maximum available trailering. The 2027 release’s gooseneck number is 38,000 pounds on properly equipped models, with conventional towing up to 20,000 pounds. More peak

torque and a higher published maximum trailering number are both in the GM record. They are not the same specification. Towing still depends on cab, axle, tires, hitch, and coolers. GM said as much by hanging the phrase “properly equipped” and “select configurations” on the 2027 figures.

3.0L LZ0, the other Duramax, for a different truck

The half-ton Duramax is not a small 8.3 and it is not a warm-up act. GM Powered Solutions lists the LZ0 as the second-generation 3.0L inline-six after the LM2, as tested in the Chevrolet Silverado:

305 hp (227 kW) at 3,750 rpm

495 lb-ft (671 N·m) at 2,750 rpm

94 percent of that peak torque by 1,500 rpm

Displacement 2,999 cc (183 ci)

Bore x stroke 84 mm x 90 mm

Compression ratio 15.2:1

Dual overhead cams, four valves per cylinder

Firing order 1-5-3-6-2-4

Direct injection

Cast-aluminum block and head, composite intake manifold, nodular-iron exhaust manifold

Forged-steel crankshaft

Steel pistons, stated as a piston material change to handle a higher compression ratio

Emissions: high-pressure EGR uncooled, low-pressure EGR cooled, close-coupled diesel oxidation catalyst, SCR on filter, SCR, ammonia slip catalyst

Maximum engine speed 5,000 rpm

Longitudinal, assembled in Flint, Michigan, of globally sourced parts

Oil-pump belt service interval validated to 200,000 miles, described as a 33 percent increase from 150,000 miles

Chevrolet’s 2026 Silverado 1500 page puts that engine in the truck a buyer actually orders: 305 horsepower, 495 lb-ft, 10-speed automatic, available towing up to 13,300 pounds, and a best-in-class highway figure of 28 mpg with the available Duramax. Chevrolet calls it the only diesel in its class on that page. It is standard on ZR2 and available on Custom Trail Boss, LT, RST, LT Trail Boss, LTZ, and High Country.

Read the two Duramax jobs side by side and the family makes sense. The LZ0 is a light-duty inline-six, aluminum, dual overhead cam, peak torque at 2,750 rpm, built for a 1500 that still has to commute and still publishes a highway mpg. The L5P is the iron-block HD V8 that made 975 lb-ft at 1,600 rpm and towed on the 36,000-pound maximum Chevrolet advertised for 2026. The 8.3 is the next HD V8, larger, with a reported torque peak down at 1,400 rpm and a published rating of 1,230 lb-ft, aimed at the same Silverado HD and Sierra HD work. Comparing the 3.0 to the 8.3 on horsepower alone and calling the little one “worse” misses the truck. A half-ton diesel that will pull 13,300 pounds and that GM rates at 28 mpg highway is a different tool from a dually HD. GM builds both, in Flint and in Brookville, and the lineup is more interesting because of that, not less.

The 2026 ratings GM’s “best in class” claim is standing next to

GM’s footnote says the best-in-class diesel horsepower and torque claim is based on the latest competitive information available at the release, excludes other GM vehicles, and that results may vary. The competitive sheets in public view for the 2026 model year, which is the iron already on sale when GM spoke in September 2026, look like this.

Ford’s 2026 Super Duty pages and the 2026 Super Duty pickup towing guide list the 6.7L High Output Power Stroke V8 turbo-diesel at 500 horsepower at 2,600 rpm and 1,200 lb-ft at 1,600 rpm. The same guide lists the standard-output 6.7L Power Stroke at 475 horsepower at 2,600 rpm and 1,050 lb-ft at 1,600 rpm. Ford’s pages call the 6.7L Power Stroke a 4-valve OHV V8. Bore, stroke, compression, and dry weight are not in those Ford

pages as fetched for this article. The towing guide's maximum tow figure on the high-output diesel row is 40,000 pounds. That is higher than the 38,000-pound gooseneck maximum GM published for the 2027 HD. GM is ahead on the peak horsepower and peak torque it published. Ford's 2026 guide is ahead on that maximum tow cell. Both facts can sit on the table. A buyer who trailers at the ragged edge of a fifth-wheel rating and a buyer who wants the torque peak at 1,400 rpm are not asking the same question. Ford will publish whatever it publishes for a later model year when it publishes it. This comparison does not invent a 2027 Power Stroke.

Ram's 2026 Heavy Duty fleet buyer's guide lists the 6.7L inline-six High-Output Cummins turbo-diesel at 430 horsepower at 2,800 rpm and 1,075 lb-ft at 1,800 rpm. Ram's own 2026 engine-performance pages show 430 horsepower and 1,075 lb-ft for that high-output Cummins, with maximum towing of 20,000 pounds on the 2500 4x2 page and 36,610 pounds on the 3500 4x4 page. Bore and stroke are not in the fleet-guide lines used here. The Cummins in a Ram HD is a 6.7, not the 8.3 ISC. It is also an American diesel nameplate in an American heavy-duty pickup fight. On the published peaks, 555 and 1,230 sit above 430 and 1,075. That is the whole claim required. It does not require a speech about whose truck is the real truck.

One secondary chart mixed Ford's high-output torque rpm, putting 1,400 in a sentence and 1,600 in the table. Ford's own page says 1,600 rpm. This article uses Ford's number.

Charts, in prose, so the picture cannot outrun the footnote

The data table is comparison-data.csv in this folder. The pictures are in charts/.

charts/peak-horsepower.svg and charts/peak-horsepower.png are bars of published peak horsepower only: 555 for the 2027 Duramax 8.3, 470 for the L5P, 305 for the LZ0, 500 and 475 for the two 2026 Ford 6.7L Power Stroke ratings, 430 for the 2026 Ram high-output Cummins, and 380 as the top of the Cummins ISC.3 EPA 2010 band. The ISC bar is not a pickup rating. The band under it runs from 260 horsepower. A bar chart of peaks is not a curve. It will not tell you what the 8.3 is doing at 1,600 rpm relative to the L5P, because GM has not published that point in the sources used here. Driving.ca's qualitative read of the GM curve, torque held near the peak until about 2,500 rpm and then falling off hard by 3,000, is a reporter's description of a photo, not a table you can integrate.

charts/peak-torque.svg and charts/peak-torque.png do the same for torque: 1,230, 975, 495, 1,200, 1,050, 1,075, and 1,050 at the top of the ISC band (660 to 1,050). The 8.3's 1,400 rpm torque peak is the reported figure, not a news-release digit. Ford's 1,200 lb-ft is at 1,600 rpm. Ram's 1,075 is at 1,800 rpm. The L5P's 975 is at 1,600 rpm, with 90 percent of it available across a wide band GM does publish. The LZ0's 495 is at 2,750 rpm, with 94 percent by 1,500 rpm. Low-rpm torque is the HD diesel's actual party. The 8.3's reported 1,400 rpm peak is earlier than the L5P's 1,600, the Ford high-output's 1,600, and the Ram high-output's 1,800. That is a real, sourced difference in where the peak sits. It is not a full curve.

charts/displacement.svg and charts/displacement.png put liters next to each other: nominal 8.3 for the new Duramax, 6.604 for the L5P, 2.999 for the LZ0, 6.7 for both Ford ratings and the Ram Cummins, and 8.3 again for the Cummins ISC. The repeated 8.3 is the point of the chart. Two bars of equal height, two engines that will not share a head gasket, a turbo, or a parts book.

The generator 6CTAA8.3-G7 is in the CSV and not in those three bar charts, because a 318 bhp standby generator rating would look like a weak pickup engine and it is not one. Its bore, stroke, 506 cubic inches, and 820 kg package weight are sourced and they stay in the table.

Cells that say "not published" are doing as much work as the numbers. For the Duramax 8.3 that list is bore, stroke, compression ratio, dry weight, and, strictly inside the news release, the peak rpm. For Ford and Ram, bore, stroke, compression, and dry weight were not in the pages used. For the ISC product page, bore and stroke are not restated; they are on the separate generator sheet for the same liter six, and the CSV says which document is which.

Service notes, only where an OEM page or a named reporter actually said something

There is no owner's manual interval in the September 2026 GM posts for the 8.3. No oil-change miles, no fuel-filter miles, no coolant miles. Inventing a 7,500-mile or a 10,000-mile interval because "that's what the 6.6 used" would be fiction. The L5P Powered Solutions page fetched for this article does not print an oil interval either.

What is published:

Driving.ca, from the media showing: the 8.3 has a dipstick; the oil grade discussed is 15W-40; a variable-displacement oil pump was described; the DEF tank is larger than before, capacity not given. Weight relative to the 6.6 was called unofficial and is not a spec.

GM release: upgraded exhaust braking, a new aftertreatment layout, regeneration functionality. No service procedure.

Order-guide report: B20 compatibility listed with L6P equipment, consistent with the L5P page's B20 statement and with the LZ0 page's B20 statement. That is a fuel spec as reported on the guide, not a blend-ratio chemistry lesson.

LZ0, and only the LZ0: the oil-pump belt interval is validated to 200,000 miles, up from 150,000, on the GM Powered Solutions page. That interval is not a license to hang 200,000 miles on the 8.3's belt, and the 8.3's oil-pump drive has not been published.

L5P emissions hardware and the LZ0 emissions hardware are listed in the architecture sections above because GM published them for those engines. They are service-relevant. They are not a diagram of the 8.3's new aftertreatment.

Until GM prints a maintenance schedule, the service note for the Mongoose is short on purpose. The people who will service the first trucks are GM dealers and independent diesel shops working from a bulletin that does not exist in these sources yet. Pretending it does is how the wrong filter gets ordered.

Plates

plates/01-side-elevation.svg, plates/02-front-accessory.svg, and plates/03-longitudinal-section.svg are line schematics on a blueprint ground. Each one is titled schematic, not a factory drawing. They follow the GM release for the block material, the forged rotating assembly, the steel pistons, the single variable-geometry turbo, and the fact of an integrated intake, and they follow Driving.ca for the turbo in the vee and aluminum heads. The side view puts the turbo in the valley and says the fore-aft station is not published, so it is drawn centered rather than "known." The front view refuses a bank angle and refuses pulleys. The section shows eight cylinders as two banks of four and refuses bore, stroke, rod length, and injection pressure. The L5P's 103 mm by 99 mm and its firing order are not transferred. Charge cooling is described in the plate note as the dual-stage air-to-water system GM named, not drawn as an air-to-air intercooler GM did not describe.

Bottom line

The Duramax 8.3 is a real GM engine. The name to use is Duramax 8.3L Turbo-Diesel V8. GM's nickname for it is Mongoose. The order-guide RPO reported for the 2027 HD diesel is L6P, which the newsroom posts do not restate. It is a V8 with a compacted graphite iron block, a fully forged crankshaft, connecting rods, steel pistons, a variable-geometry turbo, and dual-stage air-to-water charge cooling. GM rates it at 555 horsepower and 1,230 lb-ft under SAE J1349. Coverage of GM's curve puts those peaks at 2,500 rpm and 1,400 rpm. It is the available diesel for the 2027 Silverado HD and Sierra HD, including, on the order-guide report, the 3500 HD chassis cab, paired with the Allison 10-speed 10L1000. Reported trailering peaks are 20,000 pounds conventional and 38,000 pounds gooseneck, with GCWR up to 46,500 pounds, on the configurations GM qualifies.

It is built at DMAX in Brookville, Ohio, in a plant GM describes as 1.4 million square feet, after a \$920 million expansion GM says it had already invested, with U.S. and globally sourced parts. The HD trucks themselves have been built at Flint Assembly in Michigan, and Chevrolet Silverado HD production is also on the Oshawa, Ontario, plant page. Engine country and truck country are not automatic synonyms.

It is not the Cummins ISC8.3, which is an inline-six with a published EPA 2010 band of 260 to 380 horsepower and 660 to 1,050 lb-ft, and a family bore and stroke of 114 mm by 135 mm on Cummins' 6CTAA8.3-G7 sheet. It is not the 6.6L L5P, which remains a sourced 470 horsepower at 2,800 rpm and 975 lb-ft at 1,600 rpm, 103 mm by 99 mm, 16.0:1, Moraine, Ohio. It is not the 3.0L LZ0, which remains 305 horsepower at 3,750 rpm and 495 lb-ft at 2,750 rpm, 84 mm by 90 mm, 15.2:1, Flint, Michigan, in a half-ton Chevrolet that publishes 28 mpg highway and up to 13,300 pounds of towing.

Against the 2026 Ford high-output Power Stroke, 500 horsepower and 1,200 lb-ft, and the 2026 Ram high-output Cummins, 430 horsepower and 1,075 lb-ft, the announced GM peaks are higher. Ford's 2026 tow guide still prints a 40,000-pound maximum on the high-output diesel that GM's 38,000-pound gooseneck figure does not beat. That is a fair scoreboard.

Bore, stroke, compression, dry weight, and a factory service schedule for the 8.3 are not published in the sources this article will stand on. The plates do not invent them. When GM prints them, the table should grow. Until then, 555 and 1,230, a CGI V8, Brookville, Ohio, and a truck whose plant country you read off a VIN report are the facts.

Before you sign for one, run the 17-character VIN through <https://assemblyalert.com>. The report shows plant country. UNITED STATES or USA is the pass for the OBBBA car-loan interest plant test. Puerto Rico does not pass. The first digit is not the test. The window sticker is not the test. This is not tax advice. It is the difference between a badge that says Duramax and a document that says where that particular truck was assembled.

Sources

Every figure in this paper is tied to one of the pages below. A cell that is not on those pages stays unpublished. Bore, stroke, compression ratio, and dry weight for the Duramax 8.3 are in that unpublished set.

Assembly Alert car-loan mirror of this comparison:

<https://assemblyalert.com/blog/duramax-8-3-mongoose-vs-cummins-and-the-hd-diesels>. Plant-country VIN report: <https://assemblyalert.com>.

<https://news.gm.com/home.detail.html/Pages/news/us/en/2026/sep/0924-heavy-duty-duramax-83l-turbo-diesel-v8-engine.html>

<https://news.gm.com/home.detail.html/Pages/news/us/en/2026/sep/0921-mongoose-hd-diesel-engine.html>

<https://www.gm-trucks.com/2027-silverado-hd-sierra-hd-order-guide-l8s-l6p/>

<https://gmauthority.com/blog/2026/09/gm-8-3l-v8-duramax-diesel-output-revealed/>

<https://gmauthority.com/blog/2026/09/new-8-3l-duramax-mongoose-l6p-to-completely-replace-6-6l-l5p/>

<https://driving.ca/auto-news/news/chevrolet-gmc-hd-heavy-duty-duramax-diesel-8-3l-mongoose-megamax-l6p-v8>

<https://investor.gm.com/news-releases/news-release-details/gm-increase-vehicle-deliveries-customers-us-canada>

<https://plants.gm.com/Facilities/public/ca/en/oshawa/news.html>

<https://investors.gm.com/news-releases/news-release-details/gm-canadas-2-billion-transformational-investments-are-creating>

<https://investor.gm.com/news-releases/news-release-details/gm-invest-280-million-next-generation-truck-production-oshawa>

<https://poweredolutions.gm.com/products/engines/l5p-diesel-engine>

<https://www.chevrolet.com/trucks/silverado/2500hd-3500hd>

<https://www.chevrolet.com/commercial/silverado/2026-silverado-hd>

<https://poweredolutions.gm.com/products/engines/lz0-engine>

<https://www.chevrolet.com/trucks/silverado/1500>

<https://www.cummins.com/en-na/engines/products/isc83-epa-2010>

<https://mart.cummins.com/imagelibrary/data/assetfiles/0064179.pdf>

<https://www.ford.com/trucks/super-duty/features/towing-hauling/>

<https://www.ford.com/trucks/super-duty/2026/models/f-250-xl/>

https://www.vdm.ford.com/content/dam/brand_ford/en_us/brand/towing/pdf/2026-Ford-Super-Duty-Pickup-Towing-Guide-V2.pdf

https://www.stellantisfleet.com/content/dam/fca-fleet/na/fleet/en_us/shopping-tools/brochures-literature/docs/buyers-guide/2026/26DOMMOP_FBG_RamHD.pdf

<https://www.ramtrucks.com/towing/engine-performance/2026/ram-2500-4x2.html>

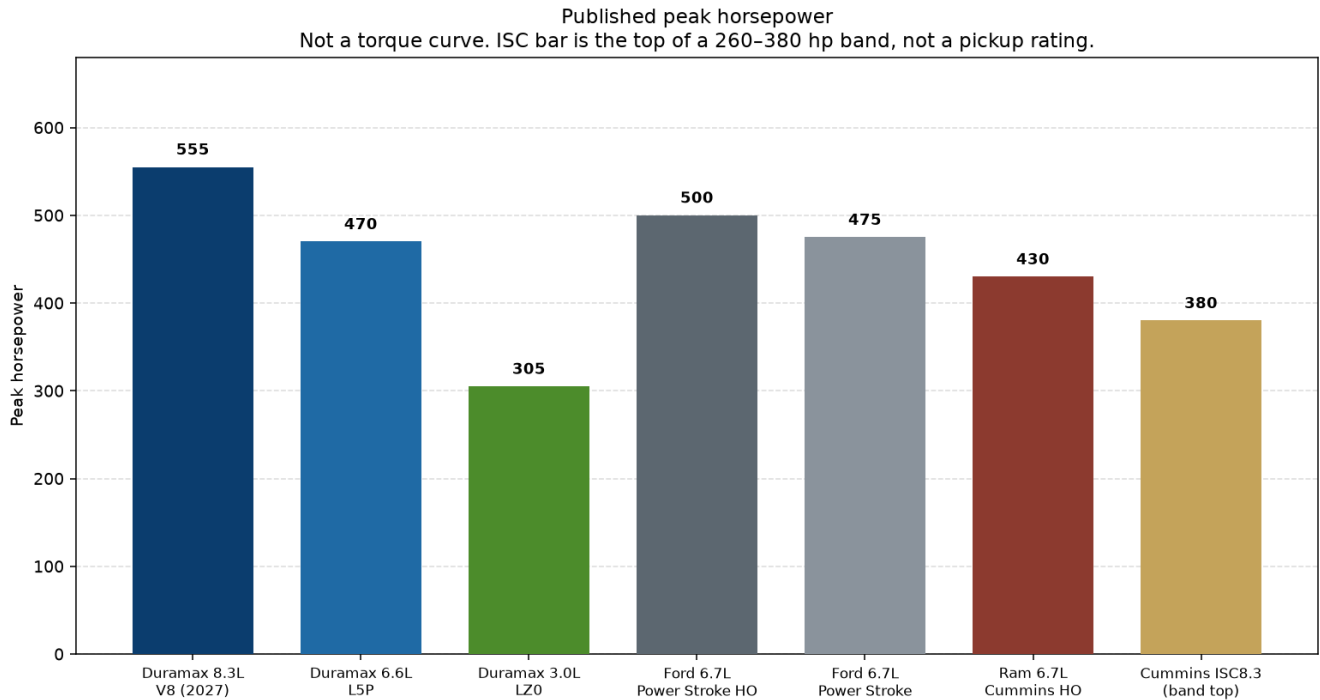
<https://www.ramtrucks.com/towing/engine-performance/2026/ram-3500-4x4.html>

<https://assemblyalert.com>

<https://www.dieselhub.com/duramax/8.3-duramax-l6p.html>

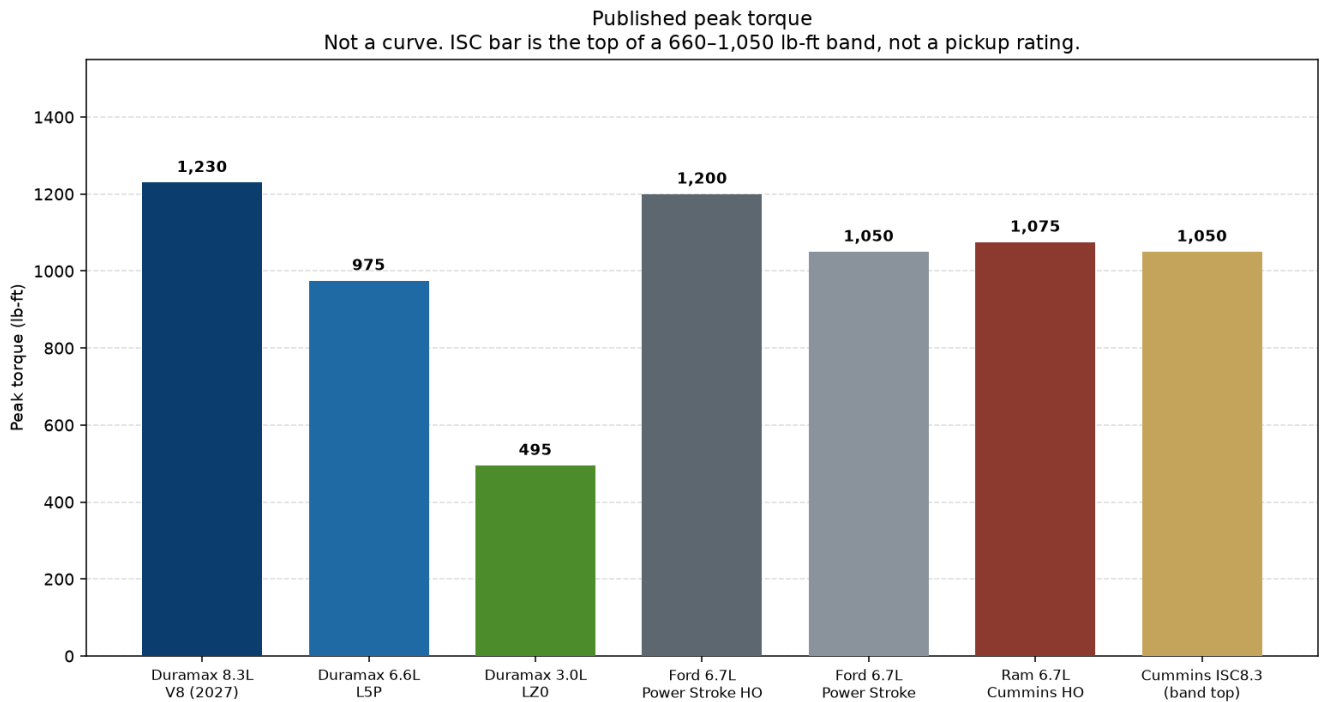
Charts and plates

Pictures below are the package charts and schematic plates. They are not factory drawings. Bore and stroke are not drawn as dimensions.



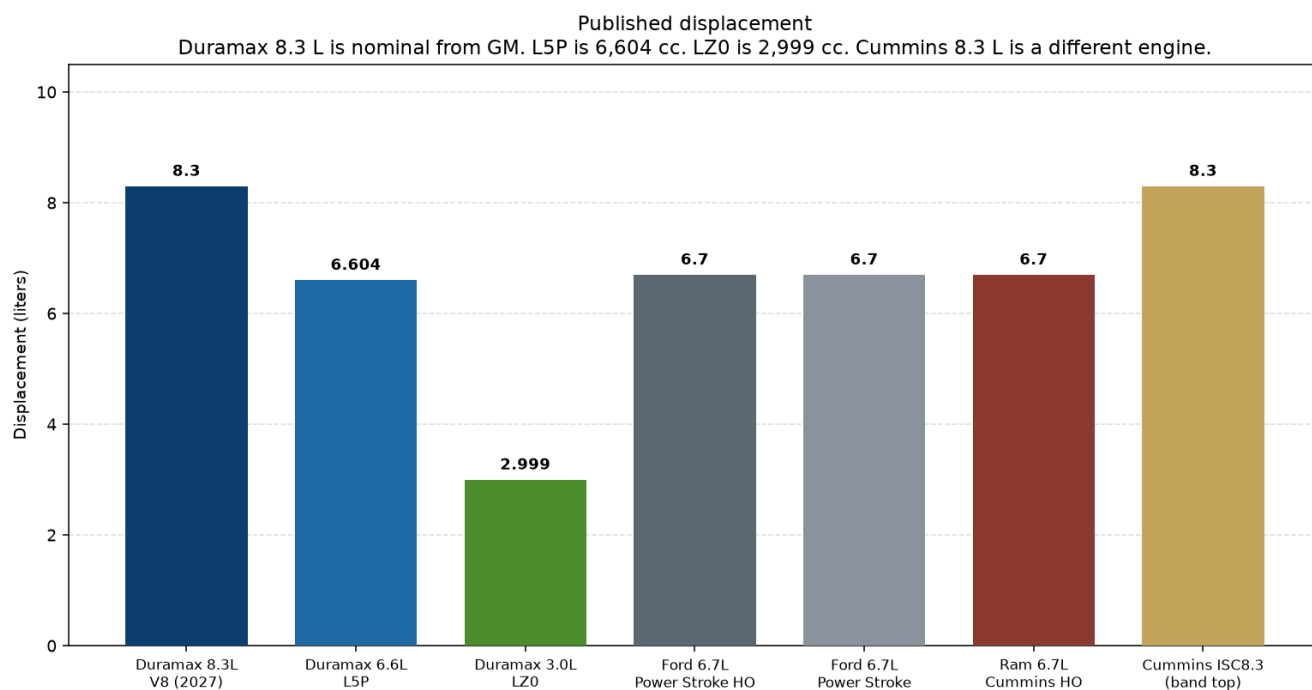
Sources: GM newsroom 24 Sep 2026 (555); GM Authority / Driving.ca for 8.3L rpm only, GM Powered Solutions L5P and LZ0, Ford.com and 2026 Super Duty towing guide, Stellantis 2026 Ram HD fleet guide, Cummins ISC8.3 EPA 2010 product

Published peak horsepower. The ISC bar is the top of a band, not a pickup rating.



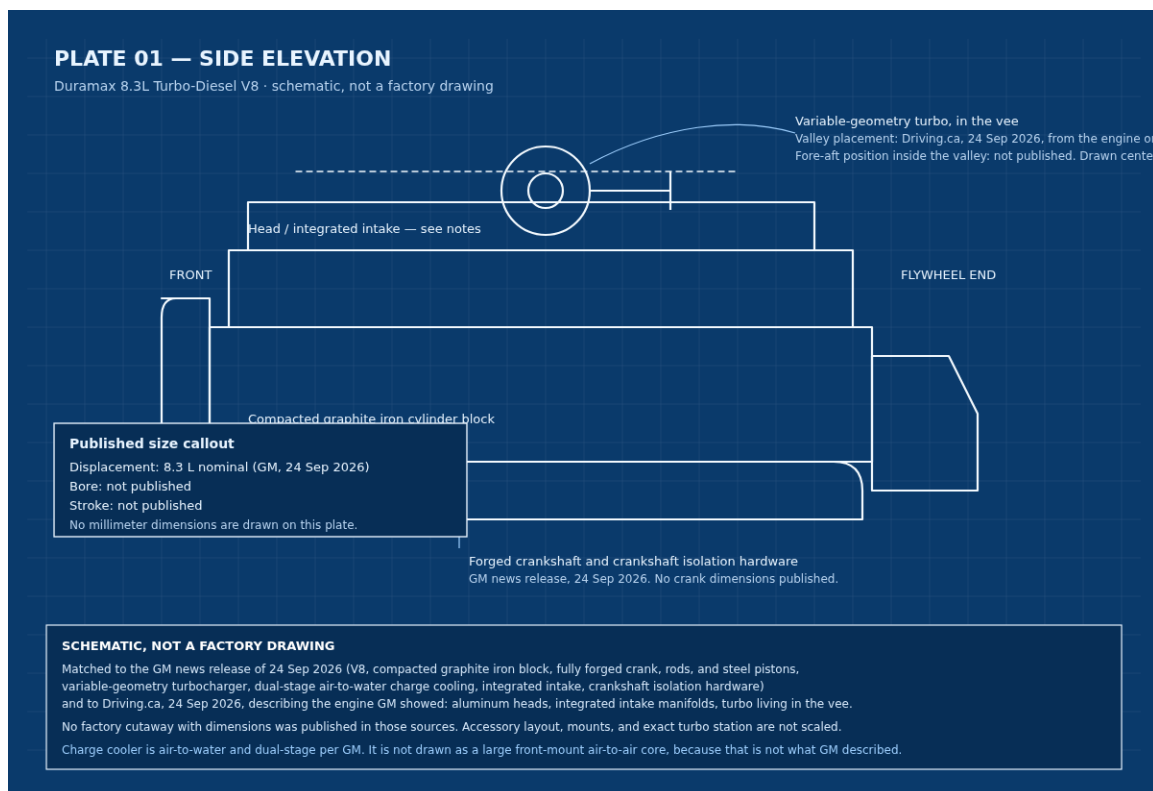
8.3L Duramax torque peak rpm (1,400) is from GM curve coverage, not the news-release body, Ford HO torque rpm is 1,600 per Ford, not the conflicting 1,400 line in one secondary chart. See SOURCES.md.

Published peak torque. The 8.3 rpm is the reported curve figure, not a news-release digit.



Same liter number does not mean the same engine. The Cummins bar is the ISC/6C 8.3 inline-six family, not the Duramax V8.

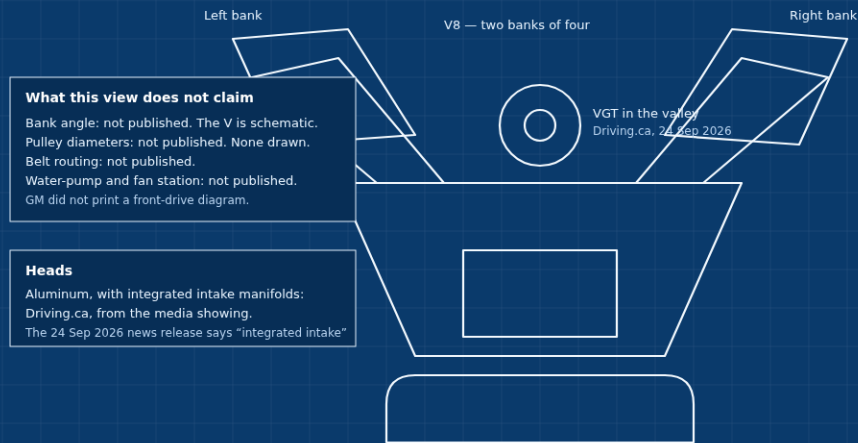
Displacement. Two 8.3 bars are not the same engine.



Schematic side elevation. Not a factory print.

PLATE 02 — FRONT (ACCESSORY) VIEW

Duramax 8.3L Turbo-Diesel V8 · schematic, not a factory drawing



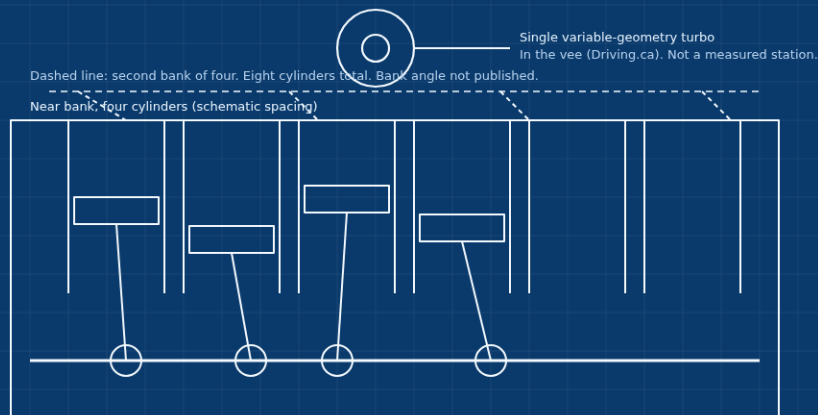
SCHEMATIC, NOT A FACTORY DRAWING

Front view matched to a V8 with the turbo in the valley, as Driving.ca described the displayed 2027 HD diesel, and to GM's description of a variable-geometry turbo and integrated intake. Cam-in-block versus overhead cam is not stated in the GM news release. This plate does not draw pushrods or cam towers. No sourced external width, height, or accessory dimension exists to call out. None is invented here.

Schematic front view. Bank angle is not published.

PLATE 03 — LONGITUDINAL SECTION

Duramax 8.3L Turbo-Diesel V8 · schematic, not a factory drawing



Steel pistons and a fully forged crankshaft — GM, 24 Sep 2026. Rods are named; a separate "forged rod" line is not. High-flow fuel injection is what the release says. Rail pressure is not published, so no psi callout is drawn. Cylinder bore circles are diagrammatic. They are not a sourced bore diameter.

SCHEMATIC, NOT A FACTORY DRAWING

Section shows the architecture GM and the on-site report actually documented: a V8, one turbocharger in the valley, CGI block, fully forged crankshaft, steel pistons. It does not show a factory section. Compression ratio, bore, stroke, rod length, pin height, and firing order for this engine were not published in the sources used for this plate. Matched to GM news release, 24 Sep 2026, <https://news.gm.com/home.detail.html/Pages/news/us/en/2026/sep/0924-heavy-duty-duramax-83l-turbo-diesel-v8-engine.html> and Driving.ca, 24 Sep 2026, <https://driving.ca/auto-news/news/chevrolet-gmc-hd-heavy-duty-duramax-diesel-8-3l-mongoose-megamax-l6p-v8> (turbo in the vee; aluminum heads). The 6.6L L5P firing order and 103 x 99 mm bore and stroke belong to that engine only. They are not copied onto this 8.3L section.

Schematic section. Bore and stroke are not published.

Notes

- Car loans · sourced with Assembly Alert.
<https://assemblyalert.com/blog/duramax-8-3-mongoose-vs-cummins-and-the-hd-diesels>
- Plant country is a VIN fact. Free checker: <https://assemblyalert.com>. UNITED STATES or USA is the pass named for the OBBBA car-loan interest plant test. Puerto Rico does not pass that test. The first digit of the VIN is not the test. A window sticker is not the test. This paper is not tax advice.
- GM news release, September 24, 2026: 555 horsepower and 1,230 lb-ft, SAE J1349. <https://news.gm.com/home.detail.html/Pages/news/us/en/2026/sep/0924-heavy-duty-duramax-83l-turbo-diesel-v8-engine.html>
- GM teaser, September 21, 2026, nickname Mongoose.
<https://news.gm.com/home.detail.html/Pages/news/us/en/2026/sep/0921-mongoose-hd-diesel-engine.html>
- Peak rpm used here, 555 hp at 2,500 rpm and 1,230 lb-ft at 1,400 rpm, is reported from GM curve coverage. Those rpm figures are not printed in the September 24 news-release body.
- Engine plant: expanded DMAX, Brookville, Ohio. Truck assembly of a Silverado HD can be Flint or Oshawa. The September 24 engine release does not assign 2027 HD assembly to a plant.
- Not the Cummins ISC8.3. Not the 6.6L L5P. Not the 3.0L LZ0.
- Author: Ryan Standley / Record of Sale, LLC / Notice Nearby.
- Not legal advice. Not tax advice. Not a newspaper. Not Legal Publication. Record of Sale, LLC (Oregon).
<https://noticenearby.com/papers/gm-duramax-8-3-mongoose-2027-hd-comparison>