

GM Press Release: November 7, 1996: Chevrolet LT5 Impala SS: Tim Allen's Way of Saying 'Get Me To The Show On Time'

General Motors Media Press Release

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CONTACT(S): Chevrolet/Geo Communications

Phone: (800) CHEVY-MI or: (810) 492-8841

Fax: (810) 492-8853

Chevrolet LT5 Impala SS: Tim Allen's Way of Saying 'Get Me To The Show On Time'

LAS VEGAS -- Chevrolet isn't normally in the "made-to-order" custom automobile business. But for the right opportunity, exceptions can be made. Several months ago television star Tim Allen approached Chevy with a fervent desire to create the Impala SS of his dreams. Chevrolet Specialty Vehicles Manager Jon Moss acknowledged that Allen's vision had promise. And, it might serve as the perfect send-off for Chevy's renowned SS in its final months of production. After due consideration, Moss agreed to help Allen build this interesting variation on the SS theme.

That transplant sounds simple, but it turned out to be a sizable undertaking.

The LT5 is a rather bulky powerhouse that didn't exactly drop into the space left by the original engine. Adapting it to an automatic transmission was another challenge because this engine was engineered solely for use with a manual transmission in the Corvette ZR1. The number of systems to be created rapidly grew to arm's length: engine mounts, wiring, cooling, air induction, exhaust, power steering and driveline. The frame's front crossmember had to be radically modified to provide the necessary clearance for the LT5's nine-quart oil pan. The windshield wiper motor, ABS hardware, heater core and AC evaporator all required some fiddling.

Soon this project grew beyond the scope of an engine swap into a full-blown engineering program. Instead of using a salvage-yard engine, a new LT5 was acquired from GM's Service Parts Operation and extensively modified for better-than-stock performance. An aftermarket crankshaft raised the stroke to 3.82 inches, while the cylinders were bored to 4.00 inches and new pistons boosted the compression ratio to 12.2:1. Those changes resulted in a new piston displacement of 385 cubic inches or 6.3 liters versus the standard LT5's 350 cubic inches or 5.7 liters. Ported intake and exhaust passages in the otherwise stock 32-valve cylinder heads improved flow characteristics. Custom-made stainless-steel tubular headers routed exhaust to a pair of LT1 Camaro catalytic converters. The use of a specially calibrated PROM module in a Corvette engine

control computer helped manage all of the LT5's original functions including emissions controls. During dynamometer tests, Tim Allen's highly tuned prime ride delivered a peak 446 net horsepower at 5500 rpm and well over 400 lb-ft of torque from 3250 to 5750 rpm.

To transport Allen to "openings" and the like without fail, various driveline upgrades were deemed necessary. The Impala's 4L60-E automatic transmission was modified by Hydra-matic for high-rpm longevity and fitted with a 2000 rpm stall speed torque converter. A custom four-inch aluminum driveshaft was fortified with heavy-duty universal joints. A new 4.10:1 ratio limited-slip differential was specified to help provide the desired 'off the line' acceleration. A quicker steering-gear ratio should aid maneuverability through crowds of paparazzi.

Once the powertrain engineering was in hand, Allen focused on aesthetic details to achieve just the right look for his dream ride: Lower-profile BF Goodrich radials ride on wider Enkei alloy wheels; vent holes drilled through the disc brake rotors and aftermarket brake pads improve this hot Impala's stopping performance; and a tasteful crossed-flag LT5 SS emblem on each front fender affirms the source of the commotion under the hood. To acknowledge credit where it's due, Chevy's bowtie badge floats on a blacked-out grille, while a new "Binford 6100" logo has been attached to the decklid. (Binford is the hypothetical tool manufacturer that sponsors Allen's Tool Time TV show on Home Improvement. Every hand tool, drill press and band saw featured on the show is supposedly from that firm's 6100 product line.)

Inside, seating accommodations were altered to maximize comfort for four passengers. Front-bucket side bolsters were enlarged for additional lateral support, and fold-down trays have been added to each front-seat backrest.

The center console is configured for auxiliary power jacks and the requisite cellular telephone. Seats and door panels are upholstered with supple leather trim and finished with wood- and carbon-fiber-motif accents. Bose Corporation created a one-of-a-kind entertainment system for Tim Allen's enjoyment by using the same amplifier and speaker technology fitted to \$30-million Gulfstream V business jets. Engineers first mapped the car's passenger-cell acoustics and then established speaker locations, equalization curves and the sound system's frequency response. In total, 10 speakers are placed in the doors, the A-pillars, the center console and on the rear package shelf. The 10 distinct channels of amplification and equalization provide 117 decibel listening levels with no audible distortion. Source material is provided by a Rockford Fosgate head unit working in conjunction with a trunk-mounted six-disc CD changer.

Opening night may never be the same after this black sheep rolls forth with dual pipes and 10 speakers serenading the crowd.

Specifications for Tim Allen's Impala LT5 SS

Engine

Type.....DOHC 32-valve LT5 V8

Bore x stroke.....4.00 in. x 3.82 in.
Displacement.....385 cu. in. (6.3 liters)
Compression ratio.....12.2:1
Horsepower (SAE net).....446 @ 5500 rpm
Torque, lb-ft (SAE net).....448 @ 4250 rpm
Pistons.....J-E
Piston rings....Speed Pro
Connecting rods....Oliver Crankshaft....Doug Rippie Motorsports
Air Cleaner and induction tube....Wheel to Wheel

Exhaust system

Stainless-steel headers and pipes.....Wheel to Wheel
Mufflers.....Exhaust Tech
Resonators.....Walker

Driveline

Transmission.....modified Hydra-matic 4L60-E
Driveshaft.....Dyno-Tech 4.0-inch aluminum with Dana-Spicer universal joints
Limited-slip differential.....Auburn Gear Company
Final drive ratio.....4.10:1

Chassis

Power steering ratio.....12:1
Wheels.....Enkei 17 x 9.0-inch aluminum
Tires.....B F Goodrich 275/40ZR-17
Front springs....stock trimmed by 3/4 coil
Rear springs.....Eibach variable rate
Brake rotors.....cross-drilled
Brake pads.....Raybestos Super Stop

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