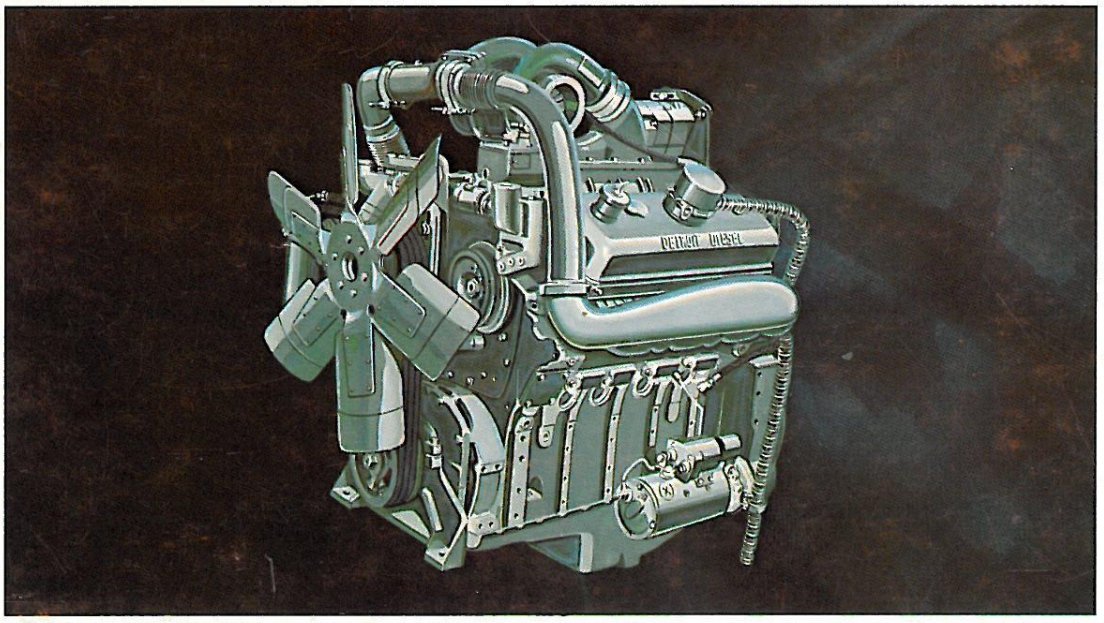
Detroit Diesel Engines

for
trucking
applications



Detroit Diesel
Allison

Successful trucking today demands top productivity from your vehicles and equipment. As a fleet owner or as an owner-operator, you know the keen eye which must be given to the increasing need for efficient performance and durable strength. With loads getting bigger and time schedules getting tighter, your trucks make a profit only if operating costs are trimmed to the minimum.

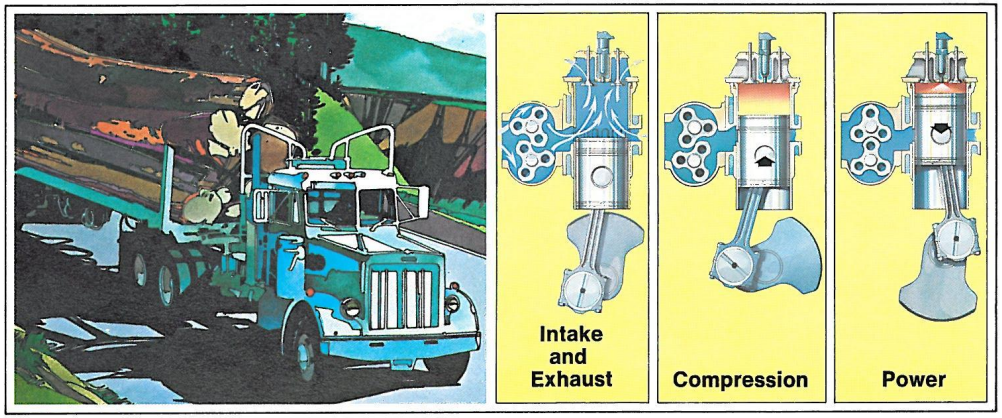
Every trucking job is a specialty. A big line-hauler travels the interstates grossing 70 thousand pounds. A refrigerated unit leaves Idaho for a New York produce terminal. One dump truck hauls 3 cubic yards of gravel. Another hauls 30. A tanker pulls through the coastal mountains. A haulaway unit leaves Detroit carrying nine new cars bound for Pittsburgh, Pennsylvania. A city pick-up and delivery van runs in New Orleans. For just about any road condition or any imaginable load, diesel power has gone to work.

There is a Detroit Diesel Engine for virtually every kind of trucking application. From the small Series 53 to the higher-power Series 71 and Series 92 models, Detroit Diesels fit your power requirements.

Detroit Diesel Allison has roots in the trucking industry which go back to 1938, when the first production engine came off the assembly line. Over the years, the basic Detroit Diesel Engines have been improved and up-dated. Today, these engines answer every trucking need. After over 35 years and many millions of miles, they roll with a reputation for performance, economy and durability.

Detroit Diesel Engine Availability

TRUCK MANUFACTURERS	DETROIT DIESEL TRUCK ENGINE														
	4-53	6V-53	6-71	6-71T	6V-71	8V-71	8V-71T	8V-71TT	12V-71	6V-92	6V-92T	6V-92TT	8V-92	8V-92T	8V-92TT
ADVANCE MIXER		•			•										
AUTOCAR		•	•	•	•	•	•		•				•	•	•
BROCKWAY		•	•	•		•	•	•	•	•	•	•	•	•	•
CHEVROLET	•	•	•		•	•	•	•	•	•	•	•	•	•	•
CRANE CARRIER		•	•	•	•	•	•	•		•	•	•	•	•	•
FORD	•	•	•			•	•	•				•			
FREIGHTLINER		•	•	•	•	•	•	•	•	•	•	•	•	•	•
FWD	•	•	•		•	•	•		•	•			•		
GMC	•	•	•		•	•	•	•	•	•	•	•	•	•	•
HENDRICKSON		•	•	•		•	•	•		•	•	•	•		•
IHC	•	•	•	•	•	•	•	•	•		•	•	•	•	•
KENWORTH		•	•	•	•	•	•	•	•	•	•	•	•	•	•
MACK						•	•		•						
MACK WESTERN			•	•	•	•	•		•				•	•	•
MARMON			•			•	•	•	•		•	•	•	•	•
OSHKOSH						•	•			•				•	
PETERBILT		•	•	•	•	•	•	•	•	•	•	•	•	•	•
WHITE		•	•	•		•	•	•		•	•	•	•	•	
WESTERN STAR		•	•	•		•	•	•	•	•	•	•	•	•	•



Detroit Diesel Engines provide top productivity in any trucking application. For your operation, you may pick from a wide variety of engine sizes and power ratings! From 130 to 475 horsepower (97 to 354 kW)*—there are 12 basic Detroit Diesel models producing 32 power ratings.* You can zero in on just the power you need—so that your truck hauls its cargo with top efficiency. In most Power Rating Classes, you also have a choice of naturally-aspirated or turbocharged engines. To fit your trucking needs, Detroit Diesel engines are available in "53", "71" and "92" Series. The Series "92s" are available in V type blocks. The Series "53" and "71s" offer models in both the inline and "V" block configuration.

Quick response is a feature of all Detroit Diesels. And it results from two-cycle design. Power on every downstroke gives smoother response to throttle action. For faster acceleration and deceleration, the engine responds almost immediately. Whether you're shifting gears on a steep grade or shifting up and down while traveling through a series of traffic lights, quick engine response comes through as a real benefit.

Two-Cycle Power

Every downstroke is a power stroke. The two-cycle design principle has allowed Detroit Diesel Allison to pioneer an engine which gives maximum, efficient power. Compared to a four-cycle engine, a Detroit Diesel can produce the same horsepower with a smaller cubic-inch displacement. As a result, Detroit Diesel Engines are known for packing a lot of power into a lightweight, compact package.

All internal combustion engines must perform the operations of intake, compression, power and exhaust. The four-cycle uses four piston strokes to accomplish these functions. The two-cycle performs all these operations and produces power with just two strokes. By eliminating strokes where the piston is merely pumping air, Detroit Diesels make maximum use of every cubic inch of displacement.

Although turbocharging has allowed four-cycle engines to gain additional power from their displacement, Detroit Diesels are turbocharged so that they provide a power to weight edge in most horsepower ranges. Even turbocharged, Detroit Diesels maintain relatively conservative cylinder pressures.

Positive Displacement Blower

To supply an abundance of air for combustion and to sweep the exhaust from the cylinder, Detroit Diesel Engines utilize a positive displacement blower. It is the primary component of the air system, and it is the most noteworthy mechanical difference to four-cycle diesels. Four-cycle engines, having no blower, use the entire engine to pump air. In Detroit Diesel two-cycle engines, an efficient blower provides air to perform the scavenging and charging of the cylinder.

Complete removal of the burned gases is assured because the blower pumps more air through each cylinder than is needed. At the start of each power stroke, there is a full charge of fresh air. The flow of air helps to cool the valves for longer valve life and to keep cylinder temperatures lower than four-cycle diesels.

Transmission Flexibility

All Detroit Diesel Engines are adaptable to numerous truck transmissions. A selection of flywheels and flywheel housings assures perfect match-up with commercially available transmissions from many manufacturers. Detroit Diesels are also perfect mates for the family of Allison Automatic transmissions.

Direct-Drive Accessories

Flange-mounted alternators, air compressors and hydraulic pumps can be supplied on Series 71 and 92 models. They eliminate drive belt and pulley installations, inspections and adjustments. Installation is clean and neat, and the resulting engine profile eases installation in COE and special chassis designs.

*Naturally Aspirated Engines, 60°F (15.6°C) Air Inlet Temperature and 29.92 in Hg. (101.31 kPa) Barometer (Dry) and "T" Engines, 85°F (29.4°C) Air Inlet Temperature and 29.00 in Hg. (98.19 kPa) Barometer (Dry).

Detroit Diesel Engine Economy On The Shortest Road To Profit

The Unit Injector Fuel System

This fuel system contributes to economy by operating efficiently and reliably. It is low in cost, the components are virtually tamperproof, and the system is simple to service.

Detroit Diesel's patented Unit Injector Fuel System utilizes a simple gear-type transfer pump which moves the fuel through low pressure lines to each injector. There are no high pressure lines to rupture or to leak at the joints. All high pressure functions take place in the injector.

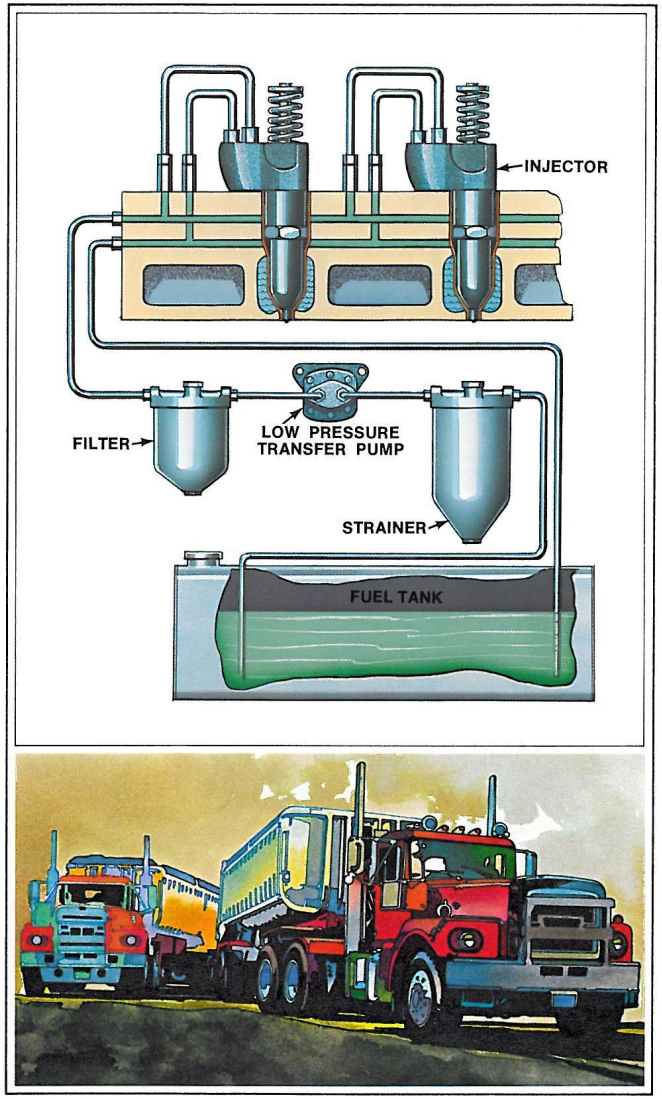
The injector itself performs all critical functions, such as metering, timing, pressurizing and atomizing the fuel. The Clean Tip design provides high opening and closing pressures for precise, crisp and highly-atomized fuel injection. The design also practically eliminates fuel after-dribble for low exhaust emissions and good fuel economy.

Excess fuel not utilized by the injector is passed back to the fuel tank. On it's return trip, it acts as a coolant. It also bleeds any unwanted air or vapor from the system.

The advantages spell economy. When fuel is burned to such exacting specifications, fuel savings are accrued.

Fuel Flexibility

Detroit Diesel Engines can burn a wide range of fuels, including all readily available diesel fuels. For most normal trucking applications, good, clean #2 Diesel Fuel works best in Detroit Diesels for the same reasons most manufacturers recommend it — higher BTU content and lower cost. In fact, published power curves for Detroit Diesel Engines are based on the use of #2 fuel.



Standardization of Designed Components

Detroit Diesel Engines offer up to 70% moving parts interchangeability within each series. In addition, much of the external, optional equipment such as starting systems, air compressors and charging generators are also interchangeable throughout each line. As an owner, you benefit five ways.

Reduced Parts Inventory

Your inventories can be minimized to reduce expense. This allows distributor and dealer parts stocks to be more complete.

Low Parts Cost

Having interchangeable parts allows for volume production. This keeps the cost of replacement parts low, reducing your overall maintenance cost.

Good Parts Availability

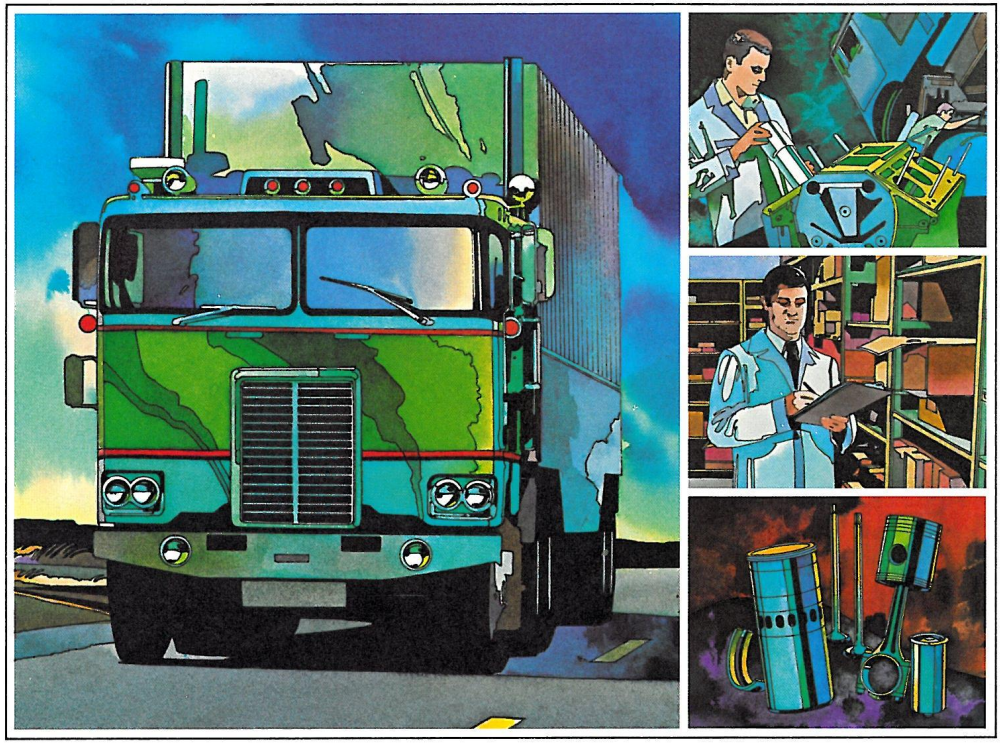
When there are fewer parts involved, it is easier to manufacture and ship them. When parts are readily available, the result is reduced downtime.

Maintenance Ease Simplicity in Service

Detroit Diesel Engines are simple and uncluttered. Virtually every service operation requires less labor time because most parts that require service are more accessible and easy to handle.

Reduced Service Training Requirement

Once a service technician becomes familiar with one engine in any series, he can easily be trained to repair and overhaul engines in another Series. Minimum additional training is required, and few additional new tools are needed.



The Series 53 Tough Lightweight Competitors

Since they were introduced in 1958, Detroit Diesel Series 53 engines have created a place for themselves by meeting the demands for fast acceleration response and optimum weight and size configurations.

From pick-up and delivery operations to the rigorous work of transit mix trucks, the performance, economy and durability advantages of diesel power have gone to work. Fast acceleration and response to loads has made the Series 53 ideal for medium-duty trucking operations.

The Diesel to Gas Comparison

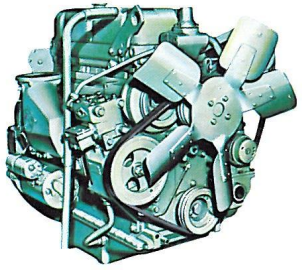
Because of their low first cost, gasoline engines are often thought of as the most practical power plant. However, when the total cost is considered, they are often not the best solution.

With a Diesel engine, you get economy through the efficient use of a fuel which usually costs less and has a higher energy content per gallon than gasoline. You get more miles per fuel dollar. You also get added performance from the higher torque, or turning power, which the diesel has to offer at any rpm.

The finest advantage comes with durability. Compared to the gasoline engine, diesel durability is incredible. There are no electrical ignition problems because the troublesome spark ignition system does not exist in Diesels. Because of simple design and rugged construction, maintenance is reduced. Diesel engines are designed to run for hundreds of thousands of miles before an overhaul is needed. This is obviously not true for most gasoline engines used in trucks.

The 4-53, 140 HP (104 kW)*

Your city pick-up and delivery straight truck operation is ideally suited to this engine. With no electrical ignition system, or complicated emissions control systems, the 4-53 will show consistency and reliability in keeping your truck on the road.



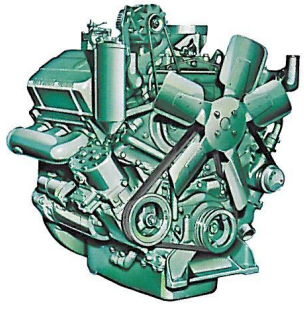
4-53 SPECIFICATIONS	C45 Injectors	C50 Injectors
Rated Power:		
60°F (15.6°C) and 29.92 in. Hg (101.31 kPa) Barometer (Dry)	130 BHP (97 kW) @ 2800 RPM	140 BHP (104 kW) @ 2800 RPM
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	127 BHP (95 kW) @ 2800 RPM	136 BHP (101 kW) @ 2800 RPM
Torque:		
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	270 lb. ft. (366 N•m) @ 1800 RPM	282 lb. ft. (382 N•m) @ 1800 RPM
Approximate Dimensions:		
Length	40 in. (1016 mm)	40 in. (1016 mm)
Width	29 in. (737 mm)	29 in. (737 mm)
Height	34 in. (864 mm)	34 in. (864 mm)
Net Weight (Mass) (dry)	1190 lbs. (540 kg)	1190 lbs. (540 kg)

The 6V-53, 216 HP (161 kW)*

The heavy-duty construction, reliability and low maintenance requirements of this engine make it an excellent performer in heavy-duty pick-up and delivery city tractor operations. This engine also works well with transit mixers and refuse haulers.

The fuel economy characteristics have been shown to be good especially in applications where large amounts of idling or light load operations are involved.

*Naturally Aspirated Engines, 60°F (15.6°C) Air Inlet Temperature and 29.92 in Hg. (101.31 kPa) Barometer (Dry) and T" Engines, 85°F (29.4°C) Air Inlet Temperature and 29.00 in Hg. (98.19 kPa) Barometer (Dry).



6V-53 SPECIFICATIONS	C45 Injectors	C50 Injectors
Rated Power:		
60°F (15.6°C) and 29.92 in. Hg (101.31 kPa) Barometer (Dry)	202 BHP (151 kW) @ 2800 RPM	216 BHP (161 kW) @ 2800 RPM
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	197 BHP (147 kW) @ 2800 RPM	210 BHP (157 kW) @ 2800 RPM
Torque:		
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	421 lb. ft. (571 N•m) @ 1800 RPM	440 lb. ft. (597 N•m) @ 1800 RPM
Approximate Dimensions:		
Length	36 in. (914 mm)	36 in. (914 mm)
Width	35 in. (889 mm)	35 in. (889 mm)
Height	38 in. (965 mm)	38 in. (965 mm)
Net Weight (Mass) (dry)	1540 lbs. (699 kg)	1540 lbs. (699 kg)

Rugged Internal Benefits For Miles And Miles Of Stop And Go

Inside the Series 53 engines is a rugged construction that adds life to your engine. This longer life will benefit your trucking operation by adding many extra miles of maintenance ease.

Advanced Piston Construction

The piston for the Series 53 is cast as a one-piece unit. It meets exacting engineering specifications. Premature side wear of the fire ring life is prevented by chroming the bottom face. Operating temperature is lowered and fire ring life is extended through the design of the rim core heat dam in the piston. For greater strength and durability, the piston strut has a large cross section.

Centrifugally Cast Liners

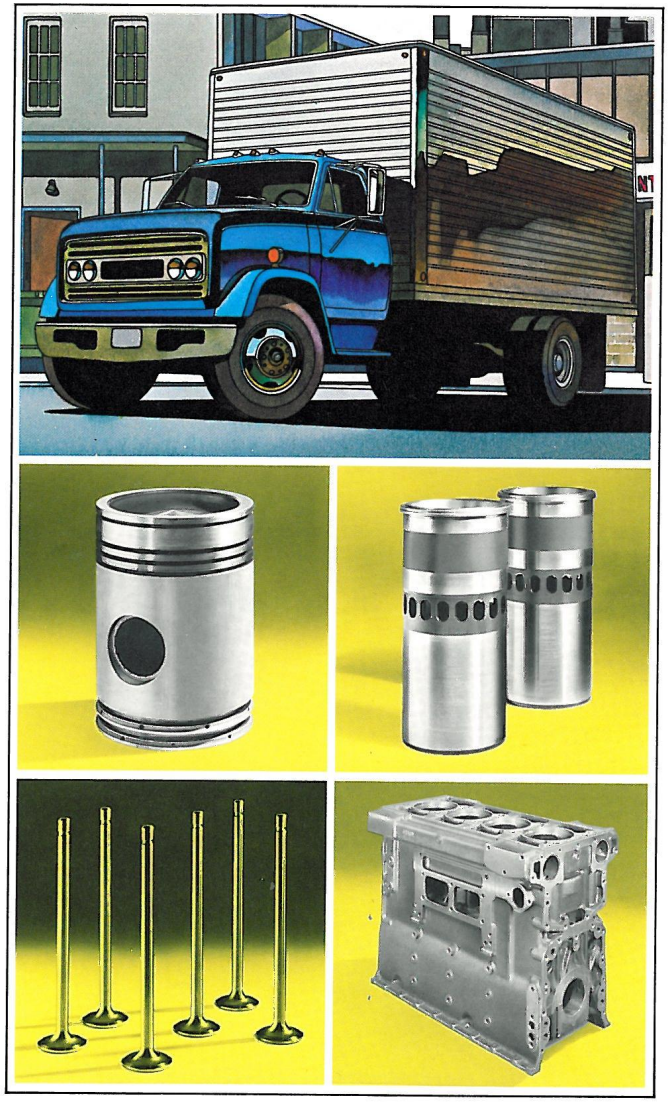
Heat treating these liners at 700°F(371° C) allows for more precise machining achievements. Liners working surfaces are machined to insure proper lubrication. The heat treating process assures that the liner has proper strength and extra resistance to distortion that promotes long piston and liner life.

Durable Valve Assembly

Friction welding of the Series 53 valves gives greater strength than butt welded valves. Chrome Vanadium steel valve springs provide long life, and a low lift camshaft adds to this life by applying less spring stress than a high lift camshaft.

Optimum Cooling

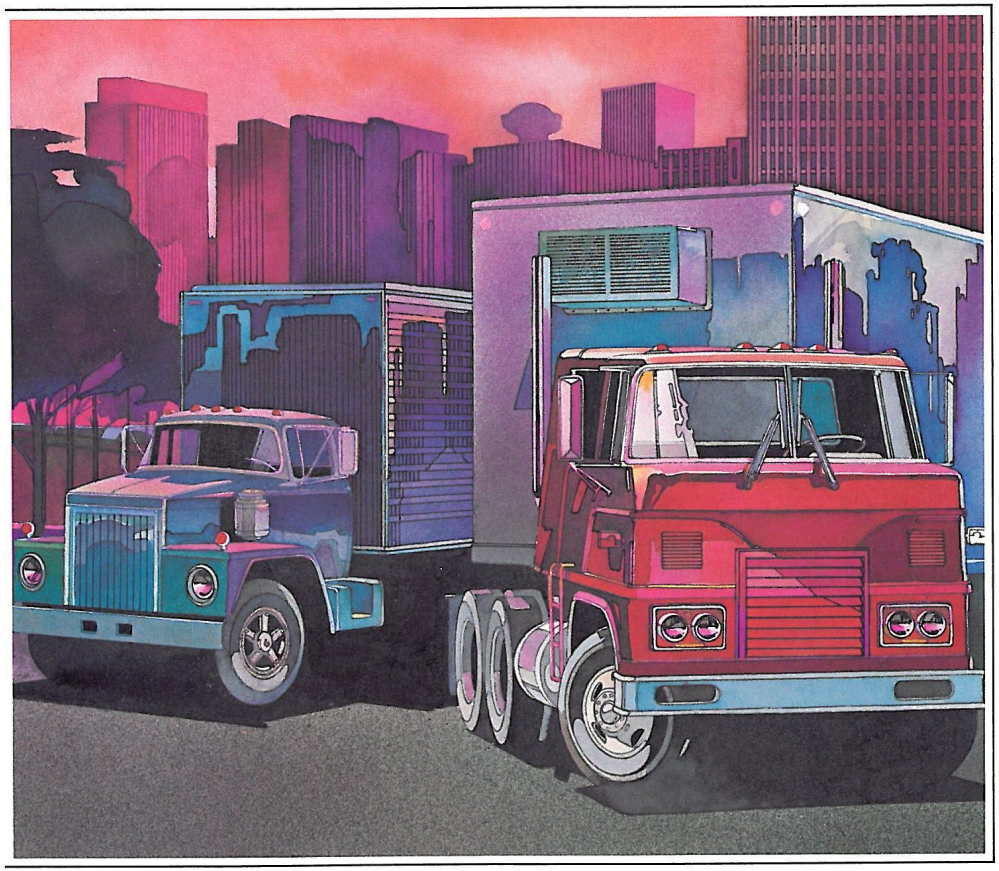
Engine operating temperature is controlled for efficient performance. Series 53 engines are cooled by air, oil and coolant solution. The coolant is circulated through the block by an efficient centrifugal pump. The positive displacement blower helps cool the cylinders and exhaust components while it supplies intake air. In addition, circulating lube oil helps to cool the piston.



Series 71 engines are available for a wide range of trucking applications. With power ratings from 210 to 475 horsepower (157 to 354 kW)*, these engines are suitable for anything from the toughest doubles line-haul operation to demanding intra-city shuttle runs. In this range, 6 basic models offer 15 horsepower (kW) ratings.

In addition, a choice of optional equipment is available to further customize the power capabilities of any engine. You may choose from turbocharged or naturally-aspirated models. A choice of fuel injectors and governed speed zeros in on your power choices. There is also a variety of air compressors, and alternators too.

The wide power spread available from the 71 cubic inch (1.1644 litre) cylinder size permits good interchangeability of moving parts. These engines require low parts inventory investment, and offer easy maintenance from the clean simple design.



The 6-71, 238 HP (178 kW)*

The 6-71 has long been popular in the trucking industry for excellent performance in line haul applications up to 60,000 lbs. (27216 kg) GCW. It adapts easily to intra-city and city peddle runs pulling line haul trailers. The 6-71 is also highly reliable for dump truck and heavy-duty transit mix operations.

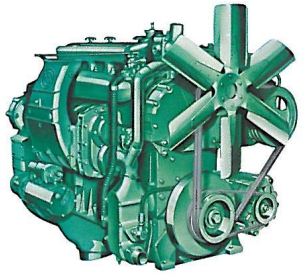
The 6-71T, 272 HP (203 kW)*

This engine is a turbocharged version of the 6-71. It is an excellent choice of power when up to 272 hp (203 kW)* is required, or for high altitude operations. Over hilly terrain, this engine provides good fuel economy while giving the vehicle "staying" power.

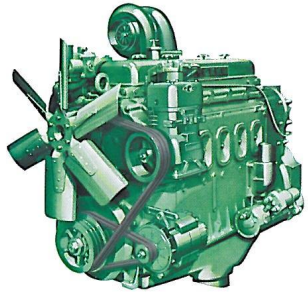
The 6V-71, 238 HP (178 kW)*

The 6V-71 uses the same basic components as the 6-71 and features identical performance characteristics. However, this engine, with a V configuration, is shorter and lighter. This makes it ideally suited for trucks requiring a shorter wheelbase. This short V configuration practically eliminates the doghouse in many conventional models.

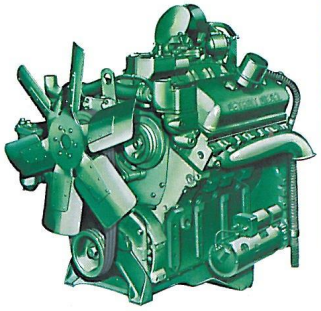
*Naturally Aspirated Engines, 60°F (15.6°C) Air Inlet Temperature and 29.92 in Hg. (101.31 kPa) Barometer (Dry) and "T" Engines, 85°F (29.4°C) Air Inlet Temperature and 29.00 in Hg. (98.19 kPa) Barometer (Dry).



6-71 SPECIFICATIONS	C60 Injectors	C65 Injectors
Rated Power:		
60°F (15.6°C) and 29.92 in. Hg (101.31 kPa) Barometer (Dry)	218 BHP (163 kW) @ 2100 RPM	238 BHP (178 kW) @ 2100 RPM
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	210 BHP (157 kW) @ 2100 RPM	228 BHP (170 kW) @ 2100 RPM
Torque:		
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	577 lb. ft. (782 N•m) @ 1200 RPM	600 lb. ft. (813 N•m) @ 1600 RPM
Approximate Dimensions:		
Length	56 in. (1422 mm)	56 in. (1422 mm)
Width	33 in. (838 mm)	33 in. (838 mm)
Height	44 in. (1118 mm)	44 in. (1118 mm)
Net Weight (Mass) (dry)	2150 lbs. (975 kg)	2150 lbs. (975 kg)



6-71T SPECIFICATIONS	N70 Injectors	N75 Injectors
Rated Power:		
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	256 BHP (191 kW) @ 2100 RPM	272 BHP (203 kW) @ 2100 RPM
Torque:		
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	734 lb. ft. (995 N•m) @ 1200 RPM	772 lb. ft. (1047 N•m) @ 1400 RPM
Approximate Dimensions:		
Length	56 in. (1422 mm)	56 in. (1422 mm)
Width	35 in. (889 mm)	35 in. (889 mm)
Height	52 in. (1321 mm)	52 in. (1321 mm)
Net Weight (Mass) (dry)	2195 lbs. (996 kg)	2195 lbs. (996 kg)



6V-71 SPECIFICATIONS	C60 Injectors	C65 Injectors
Rated Power:		
60°F (15.6°C) and 29.92 in. Hg (101.31 kPa) Barometer (Dry)	218 BHP (163 kW) @ 2100 RPM	238 BHP (178 kW) @ 2100 RPM
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	210 BHP (157 kW) @ 2100 RPM	228 BHP (170 kW) @ 2100 RPM
Torque:		
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	577 lb. ft. (782 N•m) @ 1200 RPM	600 lb. ft. (813 N•m) @ 1600 RPM
Approximate Dimensions:		
Length	42 in. (1067 mm)	42 in. (1067 mm)
Width	43 in. (1092 mm)	43 in. (1092 mm)
Height	47 in. (1194 mm)	47 in. (1194 mm)
Net Weight (Mass) (dry)	1960 lbs. (889 kg)	1960 lbs. (889 kg)

The 8V-71
318 HP (237 kW)*

n both large and small
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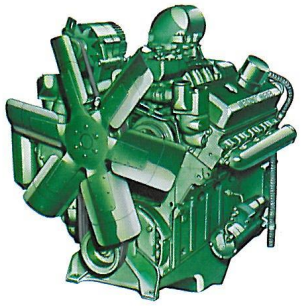

8V-71 SPECIFICATIONS	C55 Injectors	C60 Injectors	C65 Injectors
Rated Power: 60°F (15.6°C) and 29.92 in. Hg (101.31 kPa) Barometer (Dry)	270 BHP (201 kW) @ 2100 RPM	290 BHP (216 kW) @ 2100 RPM	318 BHP (237 kW) @ 2100 RPM
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	263 BHP (196 kW) @ 2100 RPM	280 BHP (209 kW) @ 2100 RPM	304 BHP (227 kW) @ 2100 RPM
Torque: 85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	734 lb. ft. (995 N•m) @ 1200 RPM	770 lb. ft. (1044 N•m) @ 1200 RPM	800 lb. ft. (1085 N•m) @ 1600 RPM
Approximate Dimensions: Length	47 in. (1194 mm)	47 in. (1194 mm)	47 in. (1194 mm)
Width	38 in. (965 mm)	38 in. (965 mm)	38 in. (965 mm)
Height	48 in. (1219 mm)	48 in. (1219 mm)	48 in. (1219 mm)
Net Wt. (Mass) (dry)	2345 lbs. (1064 kg)	2345 lbs. (1064 kg)	2345 lbs. (1064 kg)

The 8V-71T
450 HP (261 kW)*

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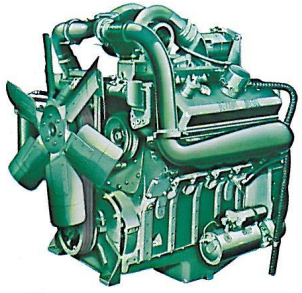

8V-71T SPECIFICATIONS	C65 Injectors	N70 Injectors	N75 Injectors
Rated Power: 85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	308 BHP (230 kW) @ 2100 RPM	335 BHP (250 kW) @ 2100 RPM	350 BHP (261 kW) @ 2100 RPM
Torque: 85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	910 lb. ft. (1234 N•m) @ 1200 RPM	958 lb. ft. (1299 N•m) @ 1200 RPM	990 lb. ft. (1342 N•m) @ 1400 RPM
Approximate Dimensions: Length	47 in. (1194 mm)	47 in. (1194 mm)	47 in. (1194 mm)
Width	39 in. (991 mm)	39 in. (991 mm)	39 in. (991 mm)
Height	52 in. (1321 mm)	52 in. (1321 mm)	52 in. (1321 mm)
Net Weight (Mass) (dry)	2395 lbs. (1086 kg)	2395 lbs. (1086 kg)	2395 lbs. (1086 kg)

The 12V-71
475 HP (354 kW)*

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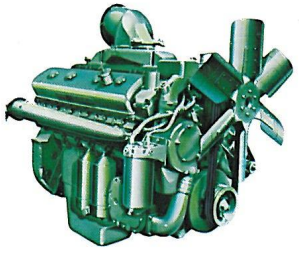
F (15.6°C) Air Inlet Tem-
ature and 29.92 in Hg.
1.31 kPa) Barometer (Dry)
"T" Engines, 85°F (29.4°C)
Inlet Temperature and
0 in Hg. (98.19 kPa)
ometer (Dry).



12V-71 SPECIFICATIONS	C55 Injectors	C60 Injectors	C65 Injectors
Rated Power: 60°F (15.6°C) and 29.92 in. Hg (101.31 kPa) Barometer (Dry)	404 BHP (301 kW) @ 2100 RPM	434 BHP (324 kW) @ 2100 RPM	475 BHP (354 kW) @ 2100 RPM
85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	394 BHP (294 kW) @ 2100 RPM	420 BHP (313 kW) @ 2100 RPM	456 BHP (340 kW) @ 2100 RPM
Torque: 85°F (29.4°C) and 29.00 in. Hg (98.19 kPa) Barometer (Dry)	1100 lb. ft. (1491 N•m) @ 1200 RPM	1154 lb. ft. (1565 N•m) @ 1200 RPM	1200 lb. ft. (1627 N•m) @ 1600 RPM
Approximate Dimensions: Length	59 in. (1499 mm)	59 in. (1499 mm)	59 in. (1499 mm)
Width	42 in. (1067 mm)	42 in. (1067 mm)	42 in. (1067 mm)
Height	56 in. (1422 mm)	56 in. (1422 mm)	56 in. (1422 mm)
Net Weight (Mass) (dry)	3300 lbs. (1497 kg)	3300 lbs. (1497 kg)	3300 lbs. (1497 kg)

Cross-Head Pistons

The crown and skirt are completely separate units, free to react independently to the forces within the cylinder. The crown carries the combustion forces and directs them downward directly to the rod while the skirt absorbs the lateral forces caused by the sideward thrust of the con rod. This independent action improves pin and ring wear and results in long component life.

Water-Below-Port-Blocks

This design feature provides cooling for the full length of the cylinder liner. Uniform cooling of the liner also reduces distortion and gives long component life.

Pre-Stressed Piston Rings

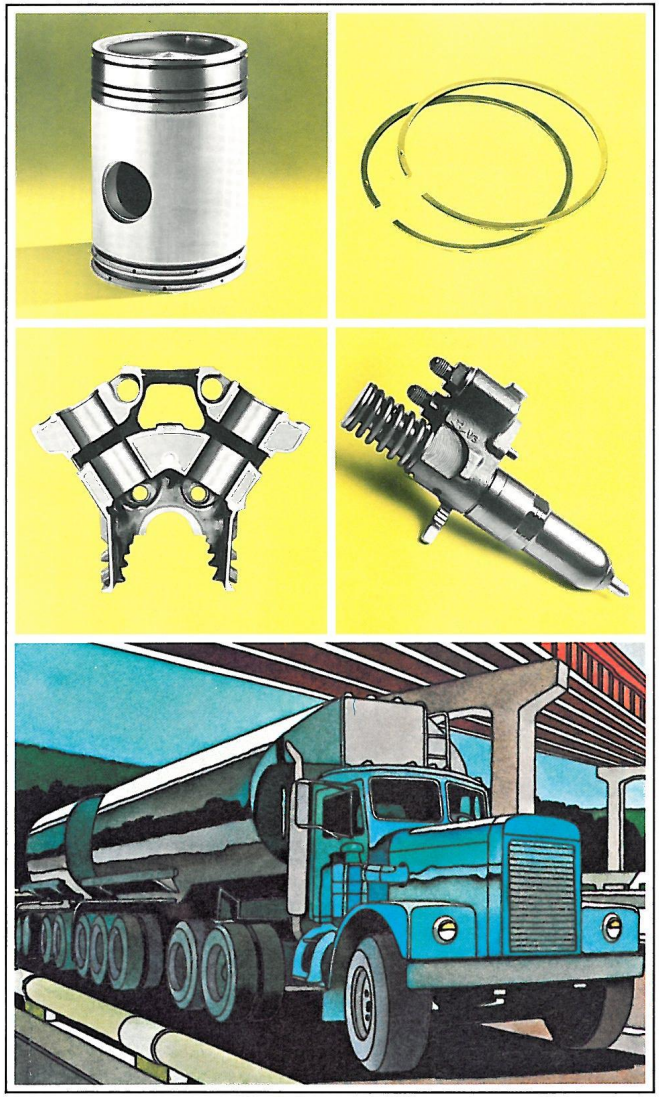
Pre-Stressed rings are stress-relieved in such a way that when they are in the closed position inside the cylinder the outer surface approaches zero stress instead of the appreciable surface tension that occurs in conventional rings. This results in improved ring life and reduced maintenance.

Clean Tip Needle Valve Injectors

The opening and closing fuel injection pressures of the needle valve controls the fuel atomization and combustion efficiency. The Clean Tip Design results in improved engine exhaust emission characteristics.

Rugged Drop-Forged Crankshaft

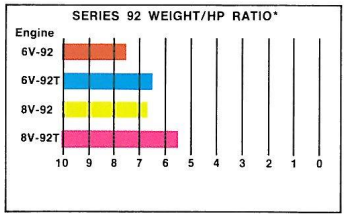
These rugged crankshafts are built to keep working for a long time. The journals are induction hardened to give maximum strength and long life. They are statically and dynamically balanced for smooth, vibration-free operations.



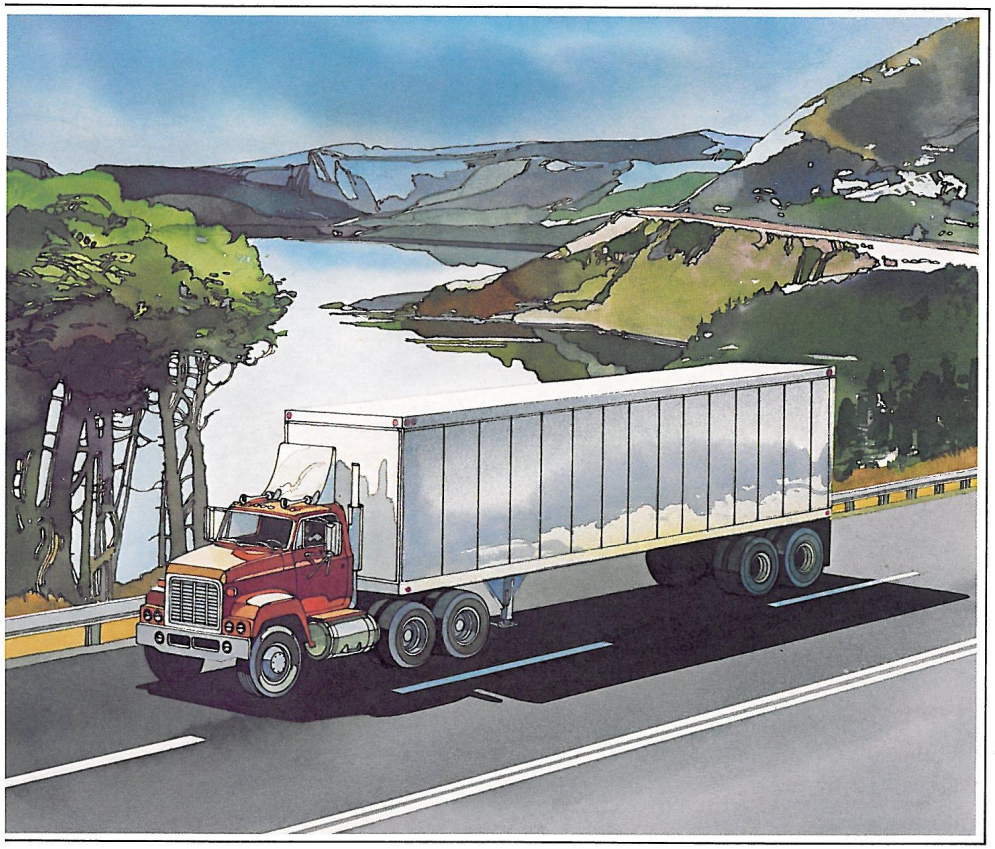
The Series 92 engine family is built to answer today's trucking needs to haul larger loads at higher average speeds. For your truck operations, they are available in a power range from 240 to 430 hp (183 to 321 kW).*

These new engines include the same performance, economy and durability benefits offered in the Series 53 and 71. In size and weight, they are essentially the same as the V-71's, but they produce about 25% more power. The weight-to-horsepower ratios of the Series 92's are the best in their class. More horsepower per pound allows increased payloads by reducing vehicle weight.

The 92's are a flexible addition to any power team. They are compatible with most of today's manual transmissions and with the Allison Automatic HT 700 Series.

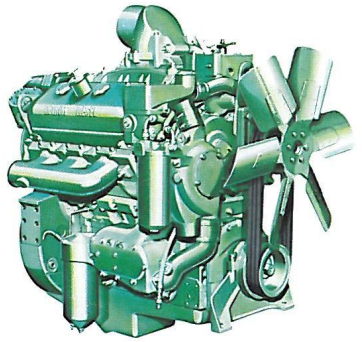


* Naturally Aspirated Engines, 60°F (15.6°C) Air Inlet Temperature and 29.92 in Hg. (101.31 kPa) Barometer (Dry) and "T" Engines, 85° F (29.4°C) Air Inlet Temperature and 29.00 in Hg. (98.19 kPa) Barometer (Dry).



The 6V-92 276 HP (206 kW)*

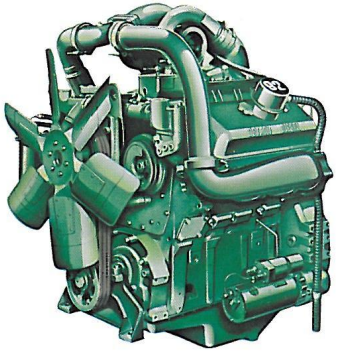
In one of the smallest, lightest packages available to the trucking industry today, the 6V-92 is rated to 276 hp (206 kW)*. This engine practically eliminates the doghouse in most conventional models. It is completely covered by the cab in COE models.



6V-92 SPECIFICATIONS	9270 Injectors	9275 Injectors	9280 Injectors
Rated Power: 60°F (15.6°C) & 29.92 in. Hg (101.31 kPa) Barometer (Dry)	245 BHP (183 kW) @ 2100 RPM	260 BHP (194 kW) @ 2100 RPM	276 BHP (206 kW) @ 2100 RPM
85°F (29.4°C) & 29.00 in. Hg (98.19 kPa) Barometer (Dry)	240 BHP (179 kW) @ 2100 RPM	255 BHP (190 kW) @ 2100 RPM	270 BHP (201 kW) @ 2100 RPM
Torque: 85°F (29.4°C) & 29.00 in. Hg (98.19 kPa) Barometer (Dry)	676 lb. ft. (917 N•m) @ 1200 RPM	709 lb. ft. (961 N•m) @ 1400 RPM	737 lb. ft. (999 N•m) @ 1400 RPM
Approximate Dimensions: Length	41 in. (1041 mm)	41 in. (1041 mm)	41 in. (1041 mm)
Width	38 in. (965 mm)	38 in. (965 mm)	38 in. (965 mm)
Height	46 in. (1168 mm)	46 in. (1168 mm)	46 in. (1168 mm)
Net Weight (Mass) (dry)	1960 lbs. (889 kg)	1960 lbs. (889 kg)	1960 lbs. (889 kg)

The 6V-92T 335 HP (250 kW)*

This engine is a turbocharged version of the 6V-92. It provides muscle from 292 to 335 horsepower (218 to 250 kW)*. Being lightweight for its power, it helps cut pounds for extra load carrying capabilities. This engine provides high power to a compact lightweight package.

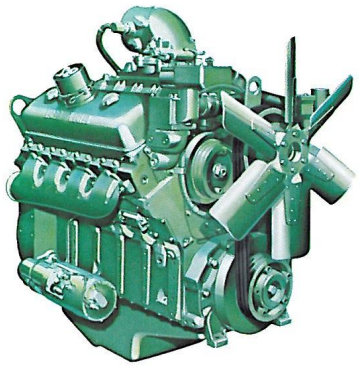


6V-92T SPECIFICATIONS	9280 Injectors	9285 Injectors	9290 Injectors
Rated Power: 85°F (29.4°C) & 29.00 in. Hg (98.19 kPa) Barometer (Dry)	292 BHP (218 kW) @ 2100 RPM	312 BHP (233 kW) @ 2100 RPM	335 BHP (250 kW) @ 2100 RPM
Torque: 85°F (29.4°C) & 29.00 in. Hg (98.19 kPa) Barometer (Dry)	867 lb.ft. 1175 N•m) @ 1200 RPM	915 lb.ft. (1241 N•m) @ 1200 RPM	958 lb.ft. (1299 N•m) @ 1200 RPM
Approximate Dimensions: Length	41 in. (1041 mm)	41 in. (1041 mm)	41 in. (1041 mm)
Width	37 in. (940 mm)	37 in. (940 mm)	37 in. (940 mm)
Height	52 in. (1321 mm)	52 in. (1321 mm)	52 in. (1321 mm)
Net Weight (Mass) (dry)	2005 lbs. (909 kg)	2005 lbs. (909 kg)	2005 lbs. (909 kg)

* Naturally Aspirated Engines, 60°F (15.6°C) Air Inlet Temperature and 29.92 in Hg. (101.31 kPa) Barometer (Dry) and "T" Engines, 85°F (29.4°C) Air Inlet Temperature and 29.00 in Hg. (98.19 kPa) Barometer (Dry).

The 8V-92 368 HP (275kW)*

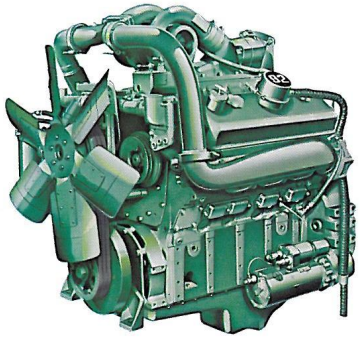
The naturally aspirated model of this engine provides up to 368 horsepower (275 kW)*. This power plant is ideal for big load haulers who do not operate at high altitudes.



8V-92 SPECIFICATIONS	9270 Injectors	9275 Injectors	9280 Injectors
Rated Power:			
60°F (15.6°C) & 29.92 in. Hg (101.31 kPa) Barometer (Dry)	326 BHP (243 kW) @ 2100 RPM	347 BHP (259 kW) @ 2100 RPM	368 BHP (275 kW) @ 2100 RPM
85°F (29.4°C) & 29.00 in. Hg (98.19 kPa) Barometer (Dry)	320 BHP (239 kW) @ 2100 RPM	340 BHP (254 kW) @ 2100 RPM	360 BHP (269 kW) @ 2100 RPM
Torque:			
85°F (29.4°C) & 29.00 in. Hg (98.19 kPa) Barometer (Dry)	902 lb. ft. (1223 N•m) @ 1200 RPM	945 lb. ft. (1281 N•m) @ 1400 RPM	983 lb. ft. (1333 N•m) @ 1400 RPM
Approximate Dimensions:			
Length	47 in. (1194 mm)	47 in. (1194 mm)	47 in. (1194 mm)
Width	38 in. (965 mm)	38 in. (965 mm)	38 in. (965 mm)
Height	47 in. (1194 mm)	47 in. (1194 mm)	47 in. (1194 mm)
Net Weight (Mass) (dry)	2345 lbs. (1064 kg)	2345 lbs. (1064 kg)	2345 lbs. (1064 kg)

The 8V-92T 430 HP (321 kW)*

This is the newest big Detroit Diesel workhorse. It develops up to 430 brute horsepower (321 kW)* yet has a weight advantage of over 1000 lbs. (453.6 kg) over some competitors. This is an engine for high-load bulk commodities operations where a 1000 lb. (453.6 kg) saving in engine weight can be converted to additional payload on each trip.



8V-92T SPECIFICATIONS	9280 Injectors	9285 Injectors	9290 Injectors
Rated Power:			
85°F (29.4°C) & 29.00 in. Hg (98.19 kPa) Barometer (Dry)	375 BHP (280 kW) @ 2100 RPM	400 BHP (298 kW) @ 2100 RPM	430 BHP (321 kW) @ 2100 RPM
Torque:			
85°F (29.4°C) & 29.00 in. Hg (98.19 kPa) Barometer (Dry)	1112 lb. ft. (1508 N•m) @ 1200 RPM	1169 lb. ft. (1585 N•m) @ 1200 RPM	1223 lb. ft. (1658 N•m) @ 1400 RPM
Approximate Dimensions:			
Length	47 in. (1194 mm)	47 in. (1194 mm)	47 in. (1194 mm)
Width	39 in. (991 mm)	39 in. (991 mm)	39 in. (991 mm)
Height	52 in. (1321 mm)	52 in. (1321 mm)	52 in. (1321 mm)
Net Weight (Mass) (dry)	2395 lbs. (1086 kg)	2395 lbs. (1086 kg)	2395 lbs. (1086 kg)

laturally Aspirated Engines, 0°F (15.6°C) Air Inlet Temerature and 29.92 in Hg. 101.31 kPa) Barometer (Dry) nd "T" Engines, 85°F (29.4°C) ir Inlet Temperature and 9.00 in Hg. (98.19 kPa) larometer (Dry).

Trapezoidal Cylinder Head

For good breathing efficiency, the valves have been arranged in a trapezoidal configuration. In this arrangement, two valves are set farther apart from the others, giving more room for the valves and the injector than the Series 71 engines.

When compared to the Series 71, greater strength is created by adding more metal area in the fire deck. An increased volume of coolant is able to flow through the head, providing for even cooling of the fire deck.

The space provided by the trapezoidal design has allowed the valves to be enlarged, giving greater exhaust breathing efficiency. These design features greatly increase durability.

cool stroke

Another important design feature is the cool stroke cooling system. The cylinder liner is in direct contact with the coolant above the air inlet ports, and is cooled through contact with the water jacket of the block below the inlet ports.

This unique cool stroke cooling system maintains a uniform cylinder wall temperature, minimizing distortion and piston and liner wear. The design also results in excellent block rigidity with less size and weight.

New Crankshaft

The Series 92 crankshafts are made of drop-forged steel with induction hardened journals and fillets and a large flywheel mounting hub. The result is long crankshaft life.

Cross-Head Pistons

The Series 92 engines utilize the cross-head piston in which the piston crown is entirely separate from the piston skirt. The crown and the skirt can react independently to the operational loads in the cylinder resulting in reduced ring and groove wear when compared to trunk type pistons. The cross-head design also provides pressure lubrication for improved cooling.

"Y" Drilled Oil Passages in Rod

The "Y" drilled oil passages provide sufficient flow of oil to the rod. Critical bearing and high heat areas receive proper lubrication. The result is long pin and bearing life and good cooling capabilities.

High Strength Compact Block

A compact light-weight cylinder block design provides for optimum cooling, increased strength and rigidity in the crankshaft area.

The Series 92's gain strong advancements in power output while the engine size remains compact.

The "Squeezer" Squeezes

magine owning a diesel engine that's designed to squeeze extra miles out of fuel and squeeze more profit out of your trucking operation. We have a whole line of them called the "Fuel Squeezers." They range in horsepower rom 230 to 365 (179 to 272 kW). The 'Fuel Squeezer" economy engines are just what you need to combat high operating costs—because they not only give high performance but also produce top fuel economy.

How does a "Squeezer" Squeeze?

Constant horsepower does it. From its governed RPM of 1950 down to approximately 1500 RPM, the horsepower output remains essentially constant. The engine's high torque rise characteristic permits less downshifting and provides engine operation in a more economical speed range. Its maximum economy with high performance and durability has resulted in a 10 to 20 percent average reduction in fuel consumption when compared to conventional engines.

Up Your Torque

Torque. It is a very important word these days. With our new "Fuel Squeezers," torque rises at a rate of over 6% per 100 RPM in the constant horsepower operating range. This gives you a dramatic boost in tractive effort when you need it most. The feel of power from the high torque rise can help your driver adjust his driving habits to the engines' lower speed (RPM) operating characteristics while reducing the need to shift as often.

6-71TT 230 HP (172 kW)*

The 6-71TT Fuel Squeezer is a highly efficient engine designed for top fuel economy and high performance. At the 230 horsepower rating the torque rise is 29% overall, with a rate of rise of 5.5% per 100 RPM in the constant horsepower segment.

The 6-71TT is governed at 1950 RPM. At a rating of 230 horsepower, this lower governed engine speed lowers brake specific fuel consumption by 1.76% and improves fuel economy by 6.3% over standard engines.

This tends to keep your vehicle operating in the most fuel efficient RPM range for economy.

Kind of Shiftless

Your drivers won't have to shift as much. They get more out of the engine at lower engine speeds. They can lug it down and not wind it up on grades.

In other words, when the RPM begins to drop as the load increases, your driver will feel an increase in power because the torque rises rapidly while the horsepower stays constant; therefore, he doesn't need to downshift. The benefits achieved from the "Fuel Squeezer" vs the conventional engine include fewer shifts, better gradeability, good average road speeds, short trip times and better fuel economy.

And That's Not All

Highway truck and intercity bus operators can now drive **100,000 MILES** before changing their lubricating oil in their Detroit Diesel Engines. The requirements are simple:

- *Use lubricating oil and fuel oil normally recommended for Detroit Diesel Engines.*
- *Change the full-flow filter element every 25,000 miles, maximum.*

This applies to all Detroit Diesel Engines used in on-highway trucks and intercity buses. Detroit Diesel Engines do not require the use of bypass oil filters and the 100,000 mile approval represents the longest oil change interval in the diesel engine industry. Detroit Diesel Engines are built today and made for tomorrow!

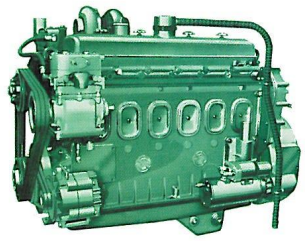
Our Warranty Backs You Up

Detroit Diesel Allison will repair any part of each new Series 71 and Series 92 engine and Optional Equipment which malfunctions due to defects in material or workmanship when used in normal on-highway service and properly maintained. The engine coverage is a full **24 months or 200,000 miles** (321,000 km), whichever comes first. Optional equipment, which includes each new generator, alternator, starting motor, voltage regulator, air compressor, hydraulic pump and vacuum pump installed on each Series 71 and Series 92 engines and manufactured or supplied by Detroit Diesel Allison, is covered up to 24 months or 50,000 miles (80,450 km), whichever comes first.

Any authorized Detroit Diesel Allison service outlet will repair it. No charge for parts. No charge for labor.

Replacement of normal maintenance items, conditions resulting from misuse, negligence, alteration, accident or improper engine repair are not covered.

See your Detroit Diesel Allison Distributor for complete Warranty details.



6-71TT SPECIFICATIONS	
Rated Power:	
SAE: 85°F (29.4°C) and 29.00 in. Hg. (98.19 kPa) Barometer (Dry)	*230 BHP (172 kW) @ 1950 RPM
Torque:	
SAE: 85°F (29.4°C) and 29.00 in. Hg. (98.19 kPa) Barometer (Dry)	772 lb. ft. (1047 N•m) @ 1400 RPM
Approximate Dimensions:	
Length	56 in. (1422 mm)
Width	32 in. (813 mm)
Height	52 in. (1321 mm)
Net Weight (Dry)	2195 lbs. (996 kg)

6V-92TT 240-270 HP (179-201 kW)*

The 6V-92TT at 270 (201 kW)* constant horsepower delivers plenty of wheel horsepower to move a typical 60,000 lb (27216 kg) GCW truck down the road at the speed limit with a very comfortable reserve. And it can handle up to 80,000 lbs (36288 kg) GCW in certain cases.

Horsepower is constant from approximately 1500 RPM to 1950 RPM (full-load governed speed). Torque rise is 32% overall, with a rate of rise of 6.6% per 100 RPM in the constant horsepower segment.

8V-71TT 305 HP (228 kW)*

The 8V-71TT is a new high-torque rise truck engine designed to increase fuel economy, while providing good load-carrying performance and gradeability. The 8V-71TT is rated at 305 BHP (228 kW)* so that it can easily handle loads up to 80,000 lbs (36288 kg) GCW at 60 MPH.

Horsepower is constant from approximately 1600 RPM to 1950 RPM (full-load governed speed). Torque rise is 26.4% overall with a rate of rise of 6.4% per 100 RPM in the constant horsepower segment.

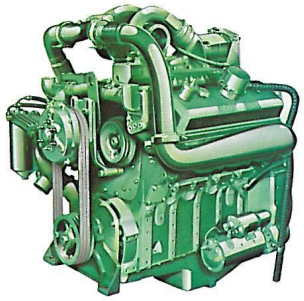
8V-92TT 365 HP (272 kW)*

The compact, lightweight, 8V-92TT's 365 BHP (272 kW)* is adequate and fuel-efficient for many of the heaviest line-haul trucking jobs. Controlling fuel input to produce 365 HP (272 kW)* at 1950 RPM instead of maximum output at 2100 RPM saves approximately 15.5% in fuel.

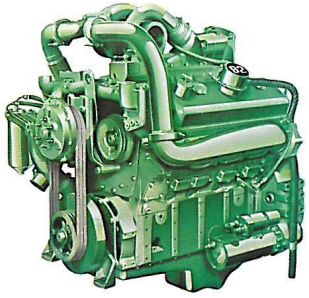
Horsepower is constant from approximately 1600 RPM to 1950 RPM (full-load governed speed). Torque rise is 24% overall, with a rate of rise of 6.25% per 100 RPM in the constant horsepower segment.

*Naturally Aspirated Engines, 60°F (15.6°C) Air Inlet Temperature and 29.92 in Hg. (101.31 kPa) Barometer (Dry) and "T" Engines, 85°F (29.4°C) Air Inlet Temperature and 29.00 in Hg. (98.19 kPa) Barometer (Dry).

6V-92TT SPECIFICATIONS	
Rated Power:	
SAE: 85°F (29.4°C) and 29.00 in. Hg. (98.19 kPa) (Barometer (Dry)	* 240-270 BHP (179-201 kW) @ 1950 RPM
Torque:	
SAE: 85°F (29.4°C) and 29.00 in. Hg. (98.19 kPa) Barometer (Dry)	958 lb. ft. (1299 N•m) @ 1200 RPM
Approximate Dimensions:	
Length	38 in. (965 mm)
Width	38 in. (965 mm)
Height	48 in. (1219 mm)
Net Weight (dry)	2005 lbs. (910 kg)



8V-71 TT SPECIFICATIONS	
Rated Power:	
SAE: 85°F (29.4°C) and 29.00 in. Hg. (98.19 kPa) Barometer (Dry)	*305 BHP (228 kW) @ 1950 RPM
Torque:	
SAE: 85°F (29.4°C) and 29.00 in. Hg. (98.19 kPa) Barometer (Dry)	1038 lb. ft. (1407 N•m) @ 1300 RPM
Approximate Dimensions:	
Length	51 in. (1295 mm)
Width	37 in. (940 mm)
Height	49 in. (1245 mm)
Net Weight (Dry)	2395 lbs. (1086 kg)



8V-92TT SPECIFICATIONS	
Rated Power:	
SAE: 85°F (29.4°C) and 29.00 in. Hg. (98.19 kPa) Barometer (Dry)	* 365 BHP (272 kW) @ 1950 RPM
Torque:	
SAE: 85°F (29.4°C) and 29.00 in. Hg. (98.19 kPa) Barometer (Dry)	1223 lb. ft. (1658 N•m) @ 1400 RPM
Approximate Dimensions:	
Length	51 in. (1295 mm)
Width	37 in. (940 mm)
Height	49 in. (1245 mm)
Net Weight (Dry)	2395 lbs. (1086 kg)

Before And After Purchase
Detroit Diesel Allison Backs You UP

With over 35 years of experience in producing diesel power, Detroit Diesel Allison has one of the most impressive sales and service organizations in the world. An owner of Detroit Diesel power has all the resources of Detroit Diesel Allison to assist him—including its Regional offices, plants and distributors and dealers throughout the world.

PRep Specification Assistance

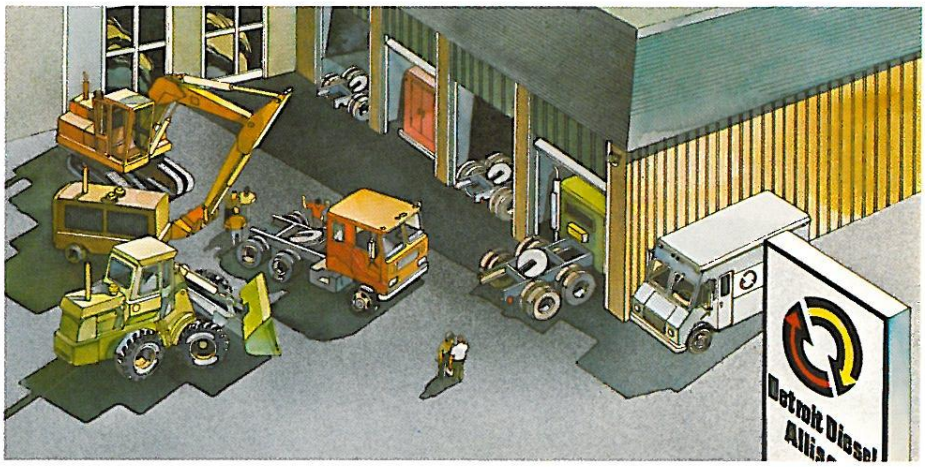
To be sure that you get the most efficient engine/transmission package for your operation, in your territory, with your preferred truck, your local Detroit Diesel Allison Distributor offers PRep.

PRep stands for "PRedicted equipment performance," and it helps to take the guesswork out of truck-buying decisions. What's more, it does it almost instantaneously through the use of a computer connected to all Distributor outlets.

PRep is fast and accurate. It can compute the necessary demand wheel horsepower vs road speed relationships considering grades, vehicle GCW, frontal area and road surface. It can also provide an immediate analysis of available wheel horsepower resulting from a specified engine/transmission/axle combination.

Expert Service

Over 1900 Detroit Diesel Allison Distributors and Dealers offer trained mechanics, parts personnel, 24 hour service and the latest equipment. This distributor and dealer network is always ready to give speedy and economical service wherever and whenever it's needed. A complete listing of service outlets is available through your local Detroit Diesel Allison Distributor.



Parts Availability

Mass production and maximum parts interchangeability work together to give readily available parts at significantly lower cost to you. To speed these parts along, distributors use the most modern of parts ordering and shipping systems.

The order department at the central warehouse facilities in Romulus, Michigan have a direct computer linkup with distributors throughout the United States and Canada. Emergency computer lines are maintained with England, Belgium, Australia and Venezuela.

In the event of a customer emergency order, the parts people are ready 24 hours a day, every day. This computerized ordering system operates with maximum efficiency. It gets parts on their way when they are needed.

Training Service Technicians

The finest training centers in the industry are operated by Detroit Diesel Allison and its distributor organization. Classroom instruction covers complete engine service and repair, including overhauls. To insure that service training is readily available in your area, Detroit Diesel Allison Distributors can arrange for complete training for operators and maintenance personnel.

reliabilt® Parts

The reliabilt name means that these distributor-remanufactured parts are produced under the rigid and continuously updated engineering specifications of Detroit Diesel Allison. A full six-month warranty, including parts and labor, backs up both new and reliabilt parts.

reliabilt products are available from Detroit Diesel Allison distributors and dealers in parts, kits and subassemblies. A subassembly is ready for immediate installation. The kits include all necessary components.

Warranty Coverage

Warranty coverage by Detroit Diesel Allison provides liberal protection for any factory production unit, without exception. Distributors are authorized to make immediate warranty corrections on applicable equipment. In an emergency, they are authorized to make on-site repairs.

Detroit Diesel Allison
Division of General Motors Corporation

13400 West Outer Drive Detroit, Michigan, 48228

6SA 118 6/77 In Canada Diesel Division General Motors of Canada Limited London Ontario

Litho in U.S.A.