# EMCASTRO & AERO ASTRO

1984



TOUGH QUALITY TRUCKS WITH VALUE SINCE 1902



# GMC ASTRO

Since the first GMC Astro made its dramatic entrance into the American trucking scene back in 1969, this COE has built an enviable reputation for quality, value, low scheduled maintenance, fuel-efficient drivelines, and the availability of chassis components to meet most needs.

#### **NEW ASTRO FEATURES FOR '84!**

You'll find these new features in all '84 Astros: • Fresh, new paint colors • Seat belt retractors with all seats • Bostrom air-suspension driver seats and available companion seats • Fluidic windshield washer system • Shockmounted rear lamps • Rear-axle magnetic drain and filler plugs • Transmission magnetic drain plug • Inside/outside 16" dry-type air cleaner • Spicer 14" 2-plate clutch • New standard and available fuel tanks • Rockwell SQ100, 38,000-lb tandem axles • 118" wheelbase now standard for D9K042 model • Sheppard power steering available

#### CP SPECIFICATIONS — A NEW WAY TO ORDER COE'S

The most effectual method of spec'ing trucks is to consult the experts who operate linehaulers day-in, day-out, year after year. For '84 we tabulated, checked, and evaluated engine, transmission, and rear-axle combinations of COE's in actual operation by major fleets, contractors, and owner/operators. Now we offer GMC Astros and Aero Astros in Customer-Proven specifications for vocational applications.

#### WHAT DOES THIS MEAN TO USERS?

It means that a Truck Owner can purchase a truck with proven components. Not just an engine or a transmission but a driveline team that has worked together successfully to the user's satisfaction.

In the case of small fleets or individual owners it provides the benefit of the experience and knowledge of large fleets, component suppliers and GMC Trucks.

#### WANT TO KNOW MORE?

Contact your local GMC Heavy Duty Truck Dealer who will be pleased to tell you more about Customer Proven Specifications.

#### LIGHTWEIGHT COMPONENTS

Helping control operating costs is top priority with us at GMC. To promote fuel economy we have developed an impressive array of standard and available tough but lightweight equipment that adds to the intrinsic strength and value of our Astro models. See page 8 for details.



Astro and Aero Astro aluminum cab



1 Astro pulling a tanker trailer



2 Astro pulling a flat bed trailer



Astro pulling a van trailer

## GAERO ASTRO

#### ADVANCED AERODYNAMIC TECHNOLOGY TO HELP CONTROL OPERATING COSTS

The Aero Astro option embodies the most advanced aerodynamics technology from General Motors research facilities designed to help control operating costs by reducing air drag. At highway speeds of 55 miles per hour approximately 23% of engine horsepower is utilized to overcome air resistance of a trailer with a 100 sq ft frontal area without a dragfoiler. To move the air over and also to the sides of a large-frontal-area trailer requires a wide, long dragfoiler — such a dragfoiler is the foundation of the Aero Astro concept. A unique accordion fold permits the dragfoiler to operate in the raised position, or to be lowered when operating bobtail or when towing lowprofile trailers. For results of a SAE type test see page 7.

Large fiberglass foiler panels attached to the cab back help create a smooth air flow along the sides of the cab, between cab and trailer, and along the trailer sides. To complete the aerodynamic effect, a urethane cab skirt is available.

#### **ELEMENTS OF AERO ASTRO OPTION PACKAGE**

Included components:

- Unique collapsible accordion-fold dragfoiler, 7' wide, 8' long with red GMC AERO graphics
- Urethane grille with grille extensions incorporating rectangular halogen headlamps

Body-trailer gap sealer panels

- Urethane front bumper end caps and air dam (add 2" to BBC dimension)
- 5 Trucklite rectangular, flush-mounted roof marker lamps

- Tread plate 20"×34"

Available equipment:

- Urethane fender skirts with cab-entry steps (require battery box mounted between frame rails and dual 100-gallon, 24" diameter cylindrical steel or aluminum fuel tanks
- Paint schemes: (ZY1) All White (PSZ) White with Black bandit's mask and "Aero Astro" logo on door (PSW) White or Silver Metallic with Black bandit's mask, Aero Astro logo on door, and red accent stripe.

Customer Proven trucks shown on these pages can be identified by these numbers.

- OCP Spec No. 9615A, 9630A, 9625A, 9606A, 9611A, 9823A, 9835A
- OCP Spec No. 9827A, 9820A, 9830A, 9841A, 9805A, 9817A
- **1** CP Spec No. 9616A, 9630A, 9625A, 9606A, 9608A 9610A

- CP Spec No. 9615A, 9616A, 9605A, 9608A
  CP Spec No. 9823A, 9833A, 9805A, 9809A
  CP Spec No. 9608A, 9607A, 9615A, 9617A

#### IMPORTANT! A WORD ABOUT THIS CATALOG

We have tried to make this catalog as comprehensive and factual as possible and we hope you find it helpful. However, since the time of printing, some of the information you'll find here may have been updated. Also, some of the equipment shown or described throughout this catalog is available as factory-installed options, as dealer accessories, and as specialized equipment from various independent suppliers at extra cost. Your dealer has details and, before ordering, you should ask him to bring you up to date.

The right is reserved to make changes at any time, without notice, in prices, colors, materials, equipment, specifications, and models. Check with your GMC dealer for complete information.



4 Aero Astro tandem-axle tractor pulling a van trailer



5 Aero Astro tandem-axle tractor pulling a van trailer



Aero Astro tandem-axle tractor pulling a van trailer



# HUMAN ENGINEERING AND ASTRO CAB DESIGN

Our designers and engineers realize that the ultimate goal of cab design is to provide a good work environment for the driver. To create this ideal environment, we applied the science of human engineering to the design and production of the Astro cab.

- ♠ Before any designs were committed to paper, our engineers talked with operators to determine what gages and controls were most needed and desired, thus arriving at basic instrument component groupings.
- **B**, **C** The human engineering group (Anthropometric Design) developed a cab buck based upon human dimensions. Then designers established lines of sight. The curving instrument panel was adopted as ideal for placing instruments and controls within a driver's sight and reach, rarely more than 18 inches. Design sketches were developed.
- Next engineers and designers worked together. The gage faces, even the position of the gage pointers, were arranged to allow the driver to "sweep the panel" instead of reading each gage face. The instrument panel was contoured so the driver, having learned the position of the controls, could operate them by touch alone.
- Decirio Technicians converted the designs into working bucks, first in clay, and then in fiberglass. Lines of sight were extended from the driver's seated position to the instruments and to the road. This led to the Astro's sloped windshield, made in two sections, and framed with triangular corner posts to help provide impressive visibility. It's one of the largest windshields on an American-made truck, a total of 282l square inches. Visibility is important to drivers. The sharp fallaway of the Astro's front sheet metal permits drivers to see 50"-high objects as close as 40" to the front bumper. A standard low-profile sight window in the right door permits the driver to see objects 40" high as close as 3' to the truck, and an available auxiliary mirror enhances this feature.

Design and engineering provided the shape and arrangement of our human-engineered cab, taking into consideration visibility, heating, cooling, airflow, and access to critical electrical components. Now refer to pages 10-13 to see how our stylists have embellished it. The combined efforts of all of these people have produced a cab that we think is a winner — the GMC Astro!

#### ASTRO DRAGFOILER

Testing of the Dragfoiler design began in the early seventies in the GM Harrison Wind Tunnel at the GM Technical Center in Warren, Michigan.



A Mockup of basic instrument groups



B Lines of sight at driver's right



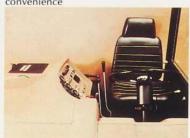
• Lines of sight to front and right of driver



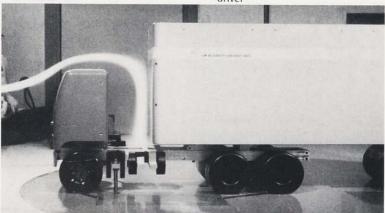
 Instrument panel contoured for convenience



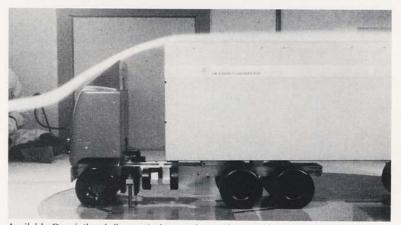
Cockpit-style arrangement of instruments



All controls center around the driver



Astro without Dragfoiler. Wind going over top of tractor creates a "drag" on the trailer making the engine work hard to overcome the resistance.

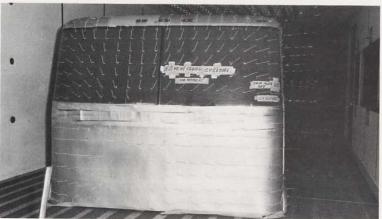


Available Dragfoiler deflects wind up and over the top of a van trailer allowing tractor and trailer to move through the air with less resistance. Dragfoiler is effective only on trailers with large frontal areas.

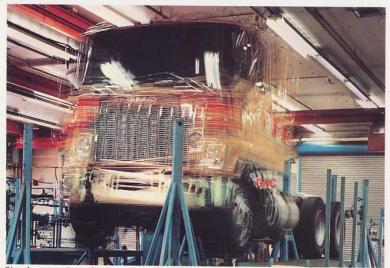
Cab design creates a laminar (streamlined) airflow over cab profile.



Cab corner radius and sloped windshield help reduce side splash.



Head-on test demonstrates that frontal design and contoured roof panels contribute to effective aerodynamics.



Simulator testing of cab and chassis components





Simulator tests duplicates in weeks punishment on springs and seats that will be sustained in years of actual operation.

# RESEARCH, DESIGN, AND TESTING

Long before 1965, when the first Astro prototype was produced, thoughtful men at General Motors Research foresaw a time of diminishing world supply of diesel fuel with resultant rise in the cost of heavyduty truck operation. Their reaction was a resolution to develop a linehaul tractor that would make advantageous use of the scientific principles of aerodynamics to help conserve fuel. At the General Motors Technical Center in Warren, Michigan, an impressive coterie of GM engineers, scientists, designers, and consultants accepted the challenge.

GM engineers consulted professional drivers, owner/operators, and mechanics — they listened and evaluated to learn what would affect the Astro owner down the road. Then they took to the drawing board. From then until now, the application of new engineering techniques has created and refined vehicles and components that would be copied by competitors throughout the decades of the seventies and eighties. The ultimate results are the 1984 aerodynamic GMC Astro and its sophisticated counterpart, the high-technology Aero Astro.

#### **AERODYNAMIC TESTING**

Preliminary testing of scale models of the Astro 95 were conducted in the Harrison wind tunnel at the GM Technical Center in Warren. In 1966 tests (shown in photographs at left) were made of full-size Astro cabs.

Concurrently the conventional Dragfoiler, brought on the market in 1976, and revolutionary Aero Astro dragfoiler, introduced in 1983, were being developed. The photographs on page 5 demonstrate the essential concerns of GM designers in overcoming the tremendous drag effect of a full-size trailer. Without the Dragfoiler, you can imagine the horsepower required to overcome the trailer's wind resistance. The Dragfoiler proved effective in wind tunnel tests and in road tests of pilot vehicles at the GM Proving Ground test track at Milford, Michigan. (See page 8 for Astro fuel-consumption test results.)

#### SIMULATOR TESTING

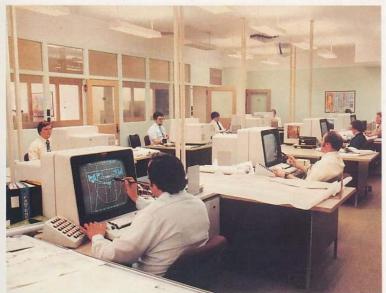
Other aspects of Astro truck design were reworked to take advantage of additional gains in efficiency. Such components as radial tires, declutching fans, high-torque-rise engines, and special driveline combinations were subjected to tough tests at the Proving Grounds at Milford, Michigan, and Mesa, Arizona. Simulators duplicated in hours, days, and weeks the punishment that would be meted out to the cab and chassis in years of actual operation. When the components, individually and collectively, could live up to GM standards, we knew we had a winner, a design that worked, and continues to work, and is even now being further refined to meet the challenges of the future.

#### AERO ASTRO PROVING GROUND TESTING

Advanced Aerodynamic Testing Helps Control Operating Costs! The GMC Aero Astro option was designed to help control operating costs by reducing air drag when pulling high-volume trailers at



Testing the Aero Astro at the GM Proving Ground in Milford, Michigan. Other Proving Grounds are located at Mesa, Arizona; Pike's Peak, Colorado, and Kapuskasing, Canada.



Advanced technology is employed in the Design Section of GM Truck &



Computer mass and area calculations help speed design work.

highway speeds. At 55 MPH approximately 23% of the engine's horsepower (80 hp) is utilized to overcome air resistance (100 sq ft frontal area).

#### GMC SAE TYPE II FUEL ECONOMY TESTS SHOW...

- GMC Aero Astro got 7.14 MPG
  IHC Eagle COE got 7.00 MPG
- Peterbilt COE got 6.74 MPG

These same tests also showed this fuel economy improvement..

- Aero Astro COE 15.3%
- IHC Eagle (with Aero Package) 13.1%
- Peterbilt COE 10.7%

#### CONCLUSION:

GMC Aero Astro under supervised test conditions got higher MPG and showed greater economy improvement than IHC Eagle or Peterbilt. Read on for

#### 1982 SAE TYPE II FUEL ECONOMY **COMPARISON TESTS (7-28/9-16-'82)**

Object of the Test: To compare the fuel efficiency of a GMC Astro D9L064 tractor equipped with a complete Aero Astro package to the fuel efficiency of an International Harvester COF-9670 tractor equipped with IH's roof mounted air deflector and rear cab extensions as well as the fuel efficiency of a Peterbilt 362 tractor equipped with Peterbilt's "Varashield" roof mounted air deflector.

#### TEST PROCEDURE

This evaluation was made using the joint TMC/SAE Fuel Consumption Test Procedure Type II, SAE J1321. The test course consisted of 44.6 miles (10 laps) on the Circular Track at the GM Milford Proving Ground. The three (3) test vehicles, the GMC Astro the IH COF-9670, and Peterbilt 362, were similarly equipped with Cummins Formula 300 Big Cam II engines, 9-speed Fuller transmissions, 3.70 ratio Eaton rear axles, and Goodyear 11R24.5 tires. All tests were conducted at a 68,000# GCW using identical 13'6" H × 45' L Theurer smooth sided trailers with 36" cab to trailer gap settings.

#### TEST RESULTS

As tested, under the same ambient conditions, the fuel efficiencies of the GMC Aero Astro D9L064, the International Harvester COF-9670 and the Peterbilt 362 were as follows:

1. The average percentage fuel economy improvement with the complete Aero Astro package on the GMC Astro D9L064 was + 15.3±1% with a computed fuel savings of 2142 gal/100K miles. That is 7.14 MPG.

The fuel savings in gallons over IHC gal/100K miles was: 273 gals.

The fuel savings in gallons over Peterbilt gal/100K miles was: 570 gals.

The \*dollar savings over IHC, gal/100K miles was: \$273.00

The \*dollar savings over Peterbilt, gal/100K miles was: \$570.00

- 2. The average percentage fuel economy improvement with IH's roof mounted air deflector and rear cab extensions on the International Harvester COF-9670  $\pm$  13.1 $\pm$ 1% with a computed fuel savings of 1869 gal/100K miles. That was 7.0 MPG.
- 3. The average percentage fuel economy improvement with Peterbilt's roof mounted "Varashield" air deflector on the Peterbilt 362 was  $10.6\pm1\%$  with a computed fuel savings of 1572 gal/100K miles. That was 6.74 MPG.
- \*Diesel fuel cost computed at \$1.00 per gallon.

## **SAME ASTRO AND FUEL EFFICIENCY**

Truck drivers, owners, accountants, and government sound the alarm to "control operating costs". One of the largest single operating expenditures is for diesel fuel. An ongoing top priority for GMC engineers and designers is finding ways to make the Astro more fuel efficient. We're constantly working to improve aerodynamics, to introduce weight-saving components, to specify engines and drivetrain components that will squeeze every possible unit of horsepower and torque from each gallon of fuel consumed. GM offers high-torque-rise diesel engines, fan clutches, and drivelines to suit a wide range of applications. See how these can help you in your operation.

## TESTS PROVE GMC DRAGFOILER CAN HELP SAVE FUEL

Wind resistance can cause an engine to consume more fuel to maintain constant horsepower. The available GMC Dragfoiler smooths the flow of air up and over a trailer so your rig moves through the air with reduced resistance. The Dragfoiler is most effective

with large-frontal-area trailers and at highway cruising speeds.

In nine scientifically controlled test runs over a 50-mile course, a GMC Astro tractor/trailer with a Dragfoiler consistently used less fuel than the same rig operated over the same course without a Dragfoiler. The average test results showed:

- 1. 10.05% fuel economy improvement
- 2. 9.13% fuel savings
- 3. 0.63 MPG improvement

Even without the Dragfoiler the Astro averaged an impressive 6.30 miles per gallon. Assuming an average diesel fuel cost of \$1.30 per gallon, the estimated possible dollar saving over 100,000 miles of operation may be computed thus:

Without Dragfoiler

100,000 Miles = 15,900 gallons
6.30 MPG\* (3-significant figure accuracy)

#### With Dragfoiler

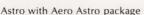
100,000 Miles = 14,400 gallons 1500 gals saved x \$1.30 = \$1950.00 estimated potential savings When you multiply the saving by the number of COEs a business operates, it is readily apparent that the Dragfoiler-equipped GMC Astro can help achieve a dramatic reduction in annual operating costs; a major consideration in these times.

\*MPG figures based on SAE Type II test procedures. You may get different mileage depending on road conditions, tractor and trailer equipment, personal driving habits, speed, and distance. Test applies only to van-type trailers.

#### **UNIQUE AERO ASTRO**

Aero Astro is a recent innovation designed to pare fuel costs. The package consists of a large Dragfoiler with accordion-fold urethane sides that permit raising or lowering. A huge bumper with air dam and foiler panels attached to the rear of the cab help to reduce air drag. Available urethane fender skirts enhance the aerodynamic effect. (See details of Aero Astro package on page 3.)

Astro with available Dragfoiler







#### **FLUID-DRIVE FAN**

Conventional cooling fans work constantly, exerting a costly horsepower drain. The thermostatically-controlled fan installed in the Astro works only when engine temperature climbs above a predetermined level; the rest of the time it's freewheeling, saving horsepower, and helping contribute to reduced fuel consumption.

#### STEEL-BELTED RADIAL TIRES

Steel-belted radial tires help fuel economy, too, because they have less rolling resistance than bias-ply tires. Ask your GMC Dealer for details about the large selection of tube and tubeless radials.

#### **CCOT AIR CONDITIONING**

This system features a cycling clutch that permits the available air conditioning compressor to operate only in proportion to evaporator load. This saves engine horsepower when the compressor is not operating.

#### SAVE WEIGHT, SAVE FUEL

The heavier the truck, the more fuel it consumes — that's obvious. So, to help conserve fuel, we have an impressive array of lightweight components available for Astros. You can specify available front and rear aluminum wheels, aluminum fuel tanks, aluminum differential carrier, and other weight-saving components.

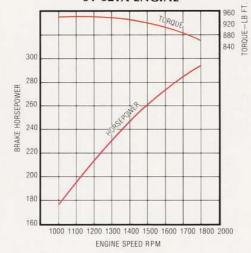
#### NEW CP TRUCK SPECS WITH FUEL-EFFICIENT DRIVETRAINS

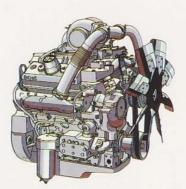
New for '84! Our Customer-Proven (CP) Specifications feature sleeper and nonsleeper GMC Astro 95 models with fuel-efficient drivetrains and components proven to be most desired by professional truckers. We think this new way of spec'ing linehauler tractors will prove to be a shortcut to ordering the right trucks for your vocational application. Your GMC Dealer has all the facts about CP Specs, see him today!

#### **HIGH-TORQUE-RISE DIESELS**

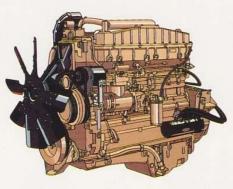
The basic elements of these diesels are high-torque-rise characteristics and a constant horsepower output over a lower engine-speed range. The chart illustrates the horsepower and torque output of the 6V-92TA offered in the GMC Astro. The curve illustrates horsepower in the normal operating range and shows how torque increases when the engine speed drops back from the governed speed of 1800 RPM.

#### **6V-92TA ENGINE**





Available Detroit Diesel 6V-92T engine



Cummins Big Cam III and Formula engines are available

At cruise, the high-torque-rise engine has the reserve power to handle many grades or headwinds without losing the steady speed required for efficiency. These engines help the driver operate in the medium RPM range where torque reserves are high, lessening the need to shift gears. This favorable operating range also is the area where fuel consumption is lowest. Other Detroit Diesel and Cummins high-torque-rise engines with power ratings to meet most needs are available in 1984 Astros.

#### EFFICIENT DRIVELINES

The right driveline components are essential for the successful application of a fuel-efficient, high-torque-rise diesel. Since the engine is running slower and at a higher torque, a high-speed axle is necessary to maintain the same road speed. The right gearing also is necessary to obtain good startability and low-speed gradeability under load. Your GMC Dealer can help you select Astro CP Specs or other compatible engine, transmission, axle, and axleratio combinations to suit your hauling needs.

#### **DETROIT DIESELS**

Detroit Diesel engines feature the 2-cycle design. This means that every piston downstroke is a power stroke. Detroit Diesels with a TA designation feature a turbocharger and aftercooling system that work together. The 6V-92TA Fuel Squeezer engines give you a choice of power ratings. You can select the engine's maximum power or maximum fuel economy - or a compromise between the two. A 290 SAE net at 1800 RPM is a constant horsepower rating that limits power output in the higher speed range. It's ideal when fuel economy is most important. A constant horsepower rating of 256 SAE net and a full-power rating of 309 SAE net, also are available in the 6V-92T series.

If your trucks need more power, you can choose the 8V-92T series Detroit Diesels with full-power ratings as high as 424 SAE net. See your GMC Dealer for details about the availability of Detroit Diesel engines and their broad selection of SAE net horsepower ratings.

#### **CUMMINS DIESELS**

The Cummins Big Cam III series NTC-300, NTC-350, and NTC-400 engines offer an impressive combination of horsepower and torque. The Cummins Formula 300, 350, and 400 engines are high-torque-rise engines developed to meet today's need for fuel economy combined with good performance. All Big Cam engines feature a large 14-liter (844 cu in) displacement, a turbocharger matched to engine performance characteristics, and a large-capacity aftercooler.

### ASTRO WEIGHT-SAVING COMPONENTS

Since 1980 until today, the weight of the tandem-axle Astro 95 has been reduced 698 lbs. Additional weight savings up to 1366 lbs are possible with available equipment — that's a total of 2054 lbs. For fleet operators, an available fleet interior provides an additional weight saving of 53 pounds.

# ASTRO LUXURY INTERIORS

The Astro eye-pleasing tritone Gray interior was created for owner/operators and other professional drivers who appreciate classic appearance, luxury, and comfort in the trucks they drive. When you slide in behind the wheel, you'll notice the contemporary styling and efficient layout of the instrument panel...the huge expanse of windshield that gives an impressive view of the road ahead...standard wet-armtype windshield wipers that release the washer fluid along the wiper blade.

Light Gray is used for the soundabsorbing vinyl-covered fiberglass headliner, dual padded sun visors, and rear wall trim panels. Medium Gray molded vinyl door panels incorporate a closure handle, separate bright dooropening latch large enough for a gloved hand, window regulator or available power window controls.

A warm Medium Gray also is used for the new standard air-suspension Bostrom low-back vinyl driver seat. New air suspension and nonsuspension passenger seats are available to match standard and available driver seats. A belt retractor is standard with all seats. The instrument panel is Black vinyl with 2" instrument faces in highcontrast Black and White. The cab is extensively insulated in the roof, walls, doors, and floor to help block out noise and add to all-weather interior comfort. A two-way screened vent in the left door permits the driver to control the amount and direction of outside air entering the cab. Ventipane windows in each door glass also provide a comfortable flow of air through the cab.

We were thinking about visibility as well as convenience when we made the sight window standard in the right-hand door. The window allows the

driver to see vehicles to his right below the normal line of sight. When the available sight window mirror is added, the driver gets a close-in view along the right side of the vehicle.

On sleeper equipped models the sleeper compartment standard equipment includes a reading lamp, screened vents at either end, and a 32"-or 36"-wide bunk. The compartment is fully insulated. Air conditioning is available for the compartment. Twin inside-lockable compartments in the lower portion of the sleeper provide storage space for gear. Sleeper is keyed to interior decor color.

Available items include Gray carpeting for floor, dash pad mats, and sleeper bulkhead; sport steering wheel; air conditioning; power windows; radios; right-hand door vent; and a 6-inch innerspring bunk mattress; and Astro Dress-up packages. Ask your GMC Dealer for more details.



Interior door panel with available equipment



Foot pedals have ample room for ease of operation



Power windows are available



Standard Astro interior shown with available equipment



Available Bostrom high-back air-suspension seat with Blue cloth insert



Available Bostrom high-back air-suspension seat with Red cloth insert



Available Bostrom high-ba air-suspension seat with Gray cloth insert





We made the Astro cab a comfortable place to put in a day's work. The functional curved console clusters gages where they are easy to see and easy to reach. The console is pleasing to the eye with Black panel face and 2-inch-diameter instruments. Our human-engineering approach to cab design dictated a standard tilt steering column and easy-to-grip 22" Black steering wheel with thumb grooves and finger indents.

Gage faces feature large, easy-to-read graphics. Controls, grouped according

to function and frequency of use, are identified by printed international symbols. Standard instrumentation includes speedometer, odometer, tachometer with hourmeter, fuel level, coolant temperature, air pressure, oil pressure, and voltmeter. Warning buzzer and lights are included for low air, oil and coolant level, and excessive coolant temperature. Standard equipment on the steering column is a Signal-Stat 900 turn signal switch which incorporates a dimmer switch for hand operation. Space is provided for a full complement of available gages.

Heater, available air conditioning controls, and light switches are grouped to the driver's right. Also located here is a 70-amp master circuit breaker with manual reset button housed in a convenient overhead module. Directional outlets for available air conditioning are located on top of the console directly in front of the driver and on the passenger side. Front-removable control panel sections make it easy to service instruments and controls.



# SERVICEABILITY...

Downtime costs money — that's why GMC designers and engineers work hard to make Astro fast to service and easy to maintain. Here are some of the things we have done:

#### **ASTRO TILT CAB**

The cab tilts speedily and easily a full 78° to expose nearly the entire engine area for service. One man easily tilts the cab using a hydraulic pump. There are no systems to disconnect or connect.

#### **DELCO FREEDOM BATTERIES**

High-power Delco 1110 series batteries are maintenance-free, never need refilling with water. Standard battery box is placed under the cab on the left frame rail.

#### **DELCOTRON GENERATOR**

Astro's big Delcotron generator has a built-in solid-state voltage regulator. 75-amp version is standard, 90-amp model is available.

#### **NEW SHOCK-MOUNTED REAR LAMPS**

For '84 rear lamps are shock-mounted to guard against damage and wear.

#### MASTER CIRCUIT BREAKER

A standard 70-ampere master circuit breaker with manual reset button is located on the driver's right-hand control panel next to heater controls and helps protect the Astro's electrical system. Additional individual automatic circuit breakers help protect all cab circuits including headlamps.

#### **CIRCUIT BREAKERS**

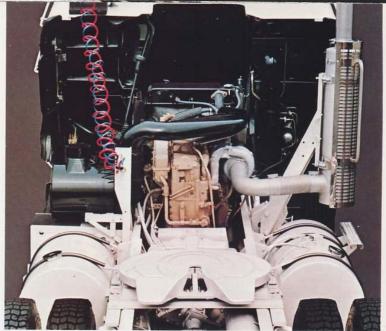
To help improve electrical system reliability, we provided individual breakers in all circuits including headlamps. The circuit breakers work in conjunction with the instrument-panel-mounted master circuit breaker to help protect the system against overloads.

#### **BATTERY BOX**

The standard battery box is fabricated from aluminum with an integral step. Located on the driver's side.

#### CAB LOCKS

A double lock system — mechanical and hydraulic — holds the cab in the down position. Extreme rearward position of the locks helps reduce cab pitch, for a comfortable ride. Mounts are of lightweight design.



Cab tilts 78° for access to engine for service



Delco Freedom batteries are standard.



Delcotron generator



Shock-mounted rear lamps



70-amp master circuit breaker



Circuit breakers



Battery box with handy step

## **CAN SAVE TIME**

#### **CAB TILT CYLINDER**

Raises and lowers the cab hydraulically. A backup locking system is provided.

#### HYDRAULIC PUMP FOR TILTING

One man can easily tilt the cab using the hydraulic pump mounted on the frame. There are no systems to disconnect — simply unlock the cab and tilt. A two-way control valve is used.

#### AIR JUNCTION MANIFOLD

Aluminum-manifold air junction is located under the cab floor for ease of service. It eliminates copper plumbing and utilizes pushin installation of nylon tubing.

#### FRONT SERVICE OF INSTRUMENTS

Instruments have a high-contrast readout with black background and white graphics. Instruments can be serviced from the front by removing the individual panels.

#### S-CAM TYPE REAR BRAKES

Standard on both single and tandem rear axle models. Features  $16\frac{1}{2}$ "  $\times$  7" lining with an area of 400 sq in.

#### **CAB-FRONT ACCESS DOOR**

Front access door allows fast checking and servicing of coolant and oil levels. Radiator sight glass shows coolant level.

#### **BACK-OF-CAB BATTERY BOX (NOT SHOWN)**

The available back-of-cab battery box is highstrength, lightweight, corrosion-resistant polyethylene — securely mounted to the frame on rubber cushions. Frees up space on frame rails for extra fuel tanks.

#### **NEW MAGNETIC PLUGS**

For '84 magnetic transmission drain plug and magnetic rear-axle drain and filler plugs are standard on all Astros.

#### AIR BRAKE SYSTEM

Dual air brake system features large,  $16\frac{1}{2}$ "×7", easy-to-service rear drums. Dust shields available for rear drums help protect brakes in off-road applications.



Cab lock-downs



Cab-tilt cylinder



Hydraulic tilt pump



Air junction block



Servicing instruments is easy



Large rear s-cam drum brakes



Cab-front door for access for oil and coolant service

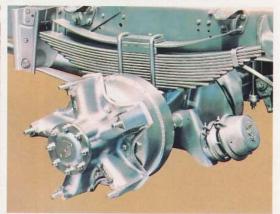
Every cab is immersed in Elpo emulsion



Available interior door trim



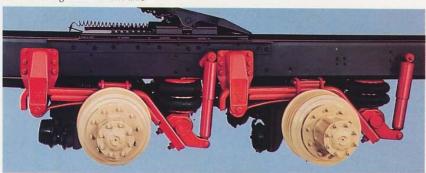
Clip mounted wiring



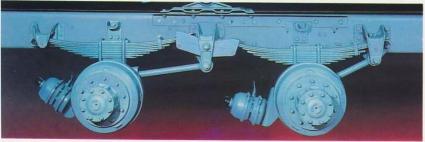
Rear single axle



Wide-tracking I-beam front axle



Rockwell SQ100, 38,000-lb tandem-rear axle with available 38,000-lb air suspension



34,000 lb tandem-axle 4-spring suspension is standard

# STRO VALUE FROM A TO Z

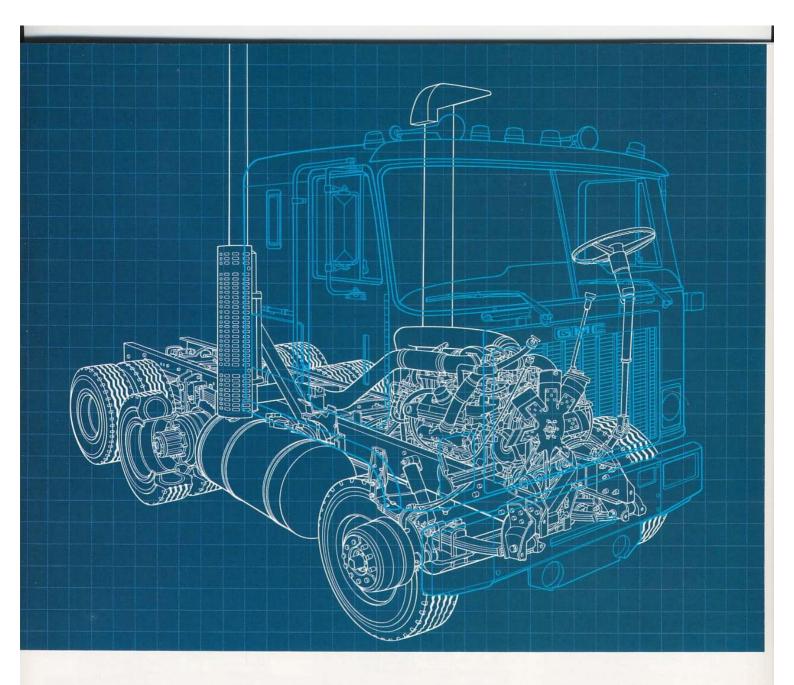
Take a good look at the deep-down craftsmanship built into every GMC Astro — the features that make this COE a leader among linehaulers:

A Lightweight aluminum cab. Outer panels riveted and welded to extruded aluminum headers and rails to form a rigid structure. Drip moldings are included. After assembly, the cab is cleaned, treated, and immersed in an electrically charged prime paint emulsion to thoroughly coat all surfaces. Elpo coating provides a good base for the acrylic finish.

vides a good base for the acrylic finish. BSpecifically designed narrow windshield pillars are triangular with the apex facing the cab interior. Shape contributes to driver visibility. ©Doors are fiberglass-reinforced SMC — lightweight and corrosion-resistant. Doors are hung on rugged, stainless-steel piano hinges. Windows include lockable ventipanes. Sightglass in lower right door. Low-mounted door handles are easy to grasp with a gloved hand. Door-length custom grab handles are standard on 87"-BBC sleeper models. (E) Massive lightweight Astro grille is bright-trimmed. Upper section is hinged to permit quick checks of oil and coolant levels. (F) Washable embossed Gray vinyl forms the attractive surface layer of the multilayered insulation in cab side and back walls. It is part of our extensive effort to block out noise and help provide a comfortable driving environment. GAn aluminum bumper with flexible urethane end caps is standard on the Astro to help save weight. Other bumpers are available. Chrome bumper valance panel with twin fog lamps is part of available Exterior Dress-Up package. 

A thermostatically controlled fan clutch is a standard fuel-saving component. It saves horsepower by engaging only when needed for cooling. New for 84! New battery box with integral step. ( Detroit Diesel Fuel

New for 84! New battery box with integral step. Detroit Diesel Fuel Squeezer Plus and Cummins Big Cam III Series diesel engines are available. New for '84! Spicer 14", 2-plate cerametalix clutch with cable linkage. New for '84! Standard magnetic transmission drain plug. Selection of Spicer and Fuller transmissions is included in available fuel-efficient driveline components. Tough 12,000-lb I-beam front axle features front spring mounting brackets, oil-lubricated wheel seals, and



shock absorbers. An available 18,000-lb front axle includes 161/2" x 6" front brakes. New for '84! Available Sheppard power steering. PNew for '84! Selection of steel and aluminum fuel tanks up to 300-gallon total capacity. O Outboardmounted single vertical exhaust includes a bright heatguard. Frame mounting helps isolate noise and vibration **B** New for '84! Inside/outside 16" dry-type air cleaner. S Bolted frame construction with full-depth, high-performance steel rails. Three high-power Delco 1110 Series Freedom batteries are standard, housed in a weight-saving aluminum battery box. Four-battery systems are available. All batteries are sealed, never require water. Delcotron generator with solid-state voltage regulator is standard. **①** Rockwell SQ100 38,000-lb tandem rear axle and other Eaton and

Rockwell axles up to 46,000-lb capacity are available. On single-rear-axle Astros, choose either the Eaton 23,000-lb or the Rockwell R-170. New for '84! Rear-axle magnetic drain and filler plugs are standard. VA 34,000-lb GM suspension with multi-leaf springs is standard on tandem models. Single-axle models feature a lightweight radius-leaf rear suspension. W Steel-belted radial tires have less rolling resistance than nonradial types, thereby contributing to fuel economy. &A full selection of steel disc, cast spoke, and aluminum disc wheels is available. Y Stainless-steel West Coast mirrors, supports and attaching hardware are standard. 2 Color-coded air lines are easily identified. Also included: deluxe heater/defogger; turn signal incorporating dimmer switch; hydraulic cab-tilt system.



# GMC COLOR CAN HELP YOU SELL

You have a broad choice of color for your new Astro. Choose from 10 solid colors, or select an available solid or two-tone paint treatment with tritone decal striping. Too make your Astro a real standout, select one of the tritone schemes

available. A few of the possibilities are shown here. Your GMC dealer will be glad to show you the complete selection of available exterior color treatments.



























Aero Astro package and other equipment





Radios







Sight mirror



Power steering



Horns







Luberfiner



Power windows

OTHER AVAILABLE EQUIPMENT — • Cab skirt with stainless-steel stirrup steps • Single and dual roof-mounted air horns, snowshields can be added • Full complement of gages • Polished aluminum disc wheels • Selection of single and dual steel and aluminum fuel tanks • Fuel tank dress-up package • Full-width chromeplated steel bumper • Perlux auxiliary road lamps (below front bumper) • Body-color fiberglass windshield exterior sunshade • Much more chassis, drivetrain, and decor equipment is available. Ask your GMC Truck dealer for any items you desire that are not shown here.

# **ASTRO GLIDER**



If you have serviceable powertrain components for a heavy-duty COE, there are many advantages to installing them in a GMC Astro Glider. You'll have an updated, upgraded truck with the advanced design features and shining good looks of a brand new GMC. The cost should be substantially less than a new truck.

Astro Glider Kits are available in 55" BBC nonsleeper or 87" BBC sleeper versions. Each kit includes a completely trimmed cab painted in your choice of standard colors and mounted on a bolted, high-performance steel frame. The cab is wired and plumbed to speed conversion.

This is the same lightweight aluminum cab used in our complete Astro tractors. The interior decor is tritone Gray and the new Bostrom air-suspension driver seat is included. Other cab standard and available features are shown on pages 10-13. Available sleeper compartment provides 85" of length to stretch out and relax after long hours at the wheel. Standard equipment includes a 12,000-lb front axle with oil-lubricated wheel seals, S-cam air brakes, and manual steering gear. See your GMC Dealer.

#### A WORD ABOUT ASSEMBLY, COMPONENTS, AND OPTIONAL EQUIPMENT IN THESE GMC PRODUCTS

The GMC Astro Heavy Duty Trucks Series TD-9500 described in this brochure are assembled at facilities of General Motors Corporation operated by the Truck & Bus Manufacturing Division. These vehicles incorporate thousands of different components produced by various divisions of General Motors and by various suppliers to General Motors. From time to time during the manufacturing process, it may be necessary, in order to meet public demand for particular vehicles or equipment, or to meet federally mandated emissions, safety, and fuel economy requirements, or for other reasons, to produce GMC products with different components or differently sourced components than initially scheduled. All such components have been approved for use in GMC products and will provide the quality performance associated with the GMC name.

With respect to extra-cost optional equipment, make certain you specify the type of equipment you desire on your vehicle when ordering it from your dealer. Some options may be unavailable when your truck is built. Your dealer receives advice regarding the current availability of options. You may ask the dealer for this information. GM also requests the dealer to advise you if an option you ordered is unavailable. We suggest that you verify that your truck includes the optional equipment you ordered, or if there are changes, that they are acceptable to you.

# GMC DEALER SALES, SERVICE AND PARTS



Selling tough, quality trucks is only a part of our business. Just as important to you is our desire to provide service satisfaction. We maintain a service and parts facility to serve your trucking needs. Our mechanics are qualified. They are provided factory service information to help keep up to date on new GMC truck technology. That's why, for routine maintenance, or any required truck service, you should see the folks who know your GMC truck best...the professionals at your GMC Truck dealership.



## GMC TOUGH TRUCKS WITH QUALITY AND VALUE—SINCE 1902

GMC traditions of workmanship and dedication to quality go back over 81 years. Shortly after the turn of the century when motortrucks first began to replace horse-drawn wagons, GMC was building a reputation for motortrucks suited to the needs of the times. Our present-day products bear little resemblance to those early chain-driven, solid-rubber-tired motortrucks, but we like to think that every GMC truck today is a contemporary expression of traditional GMC quality. With today's vital need to hold down truck operating costs, we've engineered our trucks for reliability, ease of maintenance and solid value.

We believe you will find these qualities in the GMC trucks presented in this brochure.

The right is reserved to make changes at any time, without notice, in prices, colors, materials, equipment, specifications, and models. Check with your GMC dealer for complete information.



ERAL MOTORS CORPORATION TRUCK & BUS GROUP Pontiac Michigan 48053 K5

GMC TRUCK GOES FOR THE GOLD

Official Truck of the XXIIIrd Olympiad Los Angeles 1984 TOGETHER.
BUCKLE UP!