



## GAC DEUTZ ENGINE SOLUTIONS



GOVERNORS AMERICA CORP.

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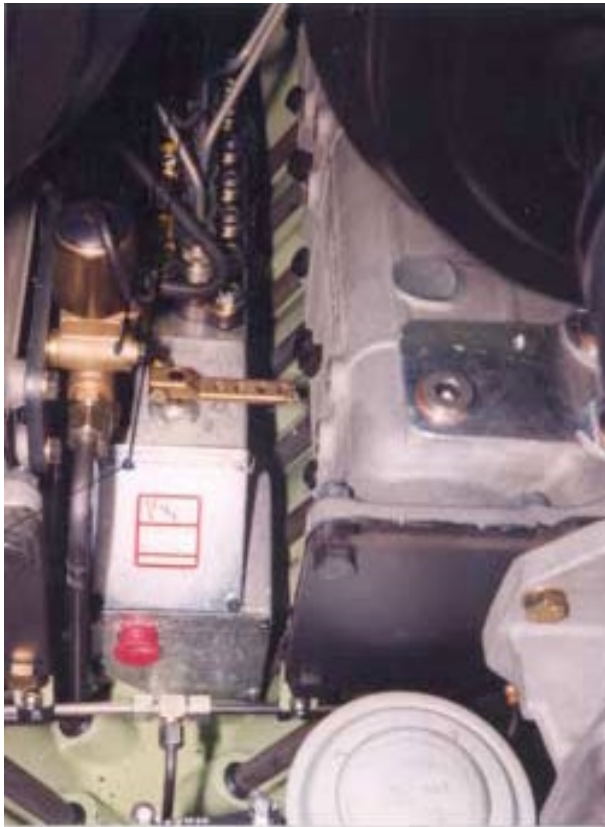
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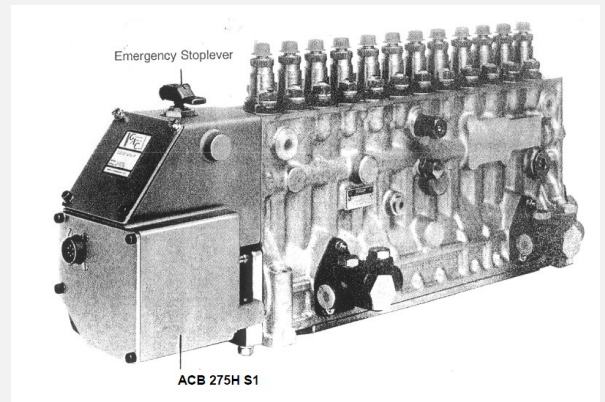
# DEUTZ MWM 616 SERIES

## GEN-SET

This gen-set needed a more robust emergency response mechanism. The GAC 275 series actuator improved response time on this DEUTZ MWM TBD 616 V8/V12 and added a manual stop mechanism.



## ACB275H



NOTE: All components are sold separately.

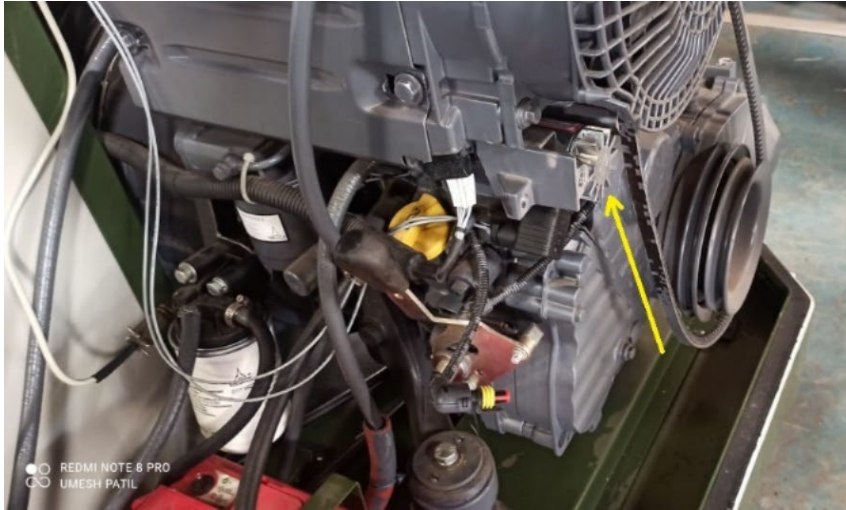
COMPONENT	PART NUMBER	DESCRIPTION
Actuator	<a href="#">ACE275H</a>	Integrated pump mounted electric actuator, 24 V DC, Mounts directly on Bosch P and RP 21 fuel injection pumps in place of mechanical governor, Optimum performance for in-line pumps

# DEUTZ 2011 SERIES

## GENERATOR

GAC builds many OEM parts, including GAC ACD110-12/24 which is Deutz part 0428 1525 KV-12/24. The GAC actuator mounts directly on the engine in place of the electric stop solenoid.

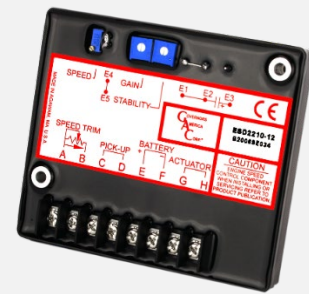
This solution for Deutz improved control on the 1011 and 2011 over the original mechanical governor.



## ACD110-12



## ESD2210



NOTE: All components are sold separately.

COMPONENT	PART NUMBER	DESCRIPTION
Speed Controller	<a href="#">ESD2210</a>	Isochronous controller, 12 or 24 V DC, standard unit, Isochronous operation
Actuator	<a href="#">ACD110</a>	Engine mounted actuator, Designed to replace electric stop solenoid on DEUTZ 1011 and 2011 series 2-, 3- and 4-cylinder engines, high-temperature applications

# DEUTZ MWM 620 with BOSCH P9/ P10 PUMP

## INDUSTRIAL

The strongest replacement for the Bosch P9 and P10 inline pumps on the Deutz MWM 620 is the GAC ACE295-24 actuator. The actuator is designed with two isolated chambers to eliminate the possibility of magnetic particles collecting and jamming the actuator. One chamber contains the oil and actuator linkage, while the second chamber houses the electromagnetic components.



**ACE295-24**



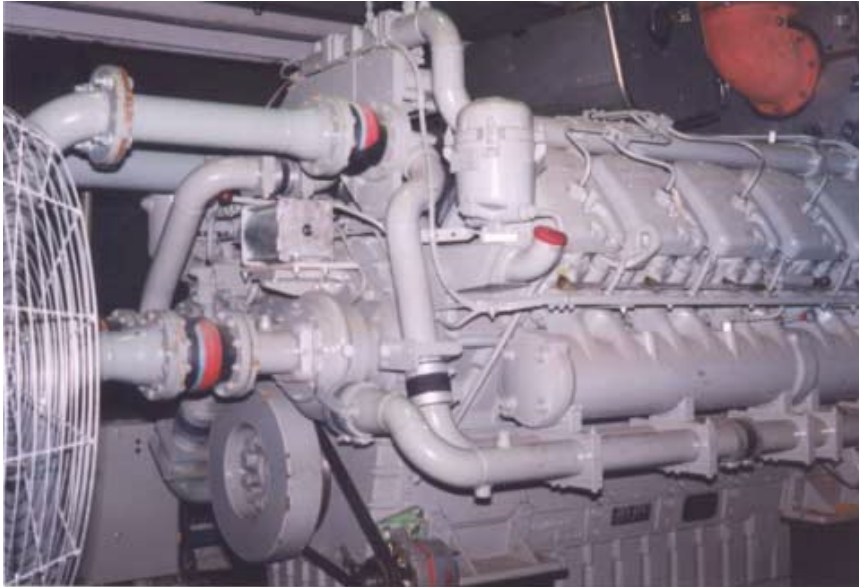
NOTE: All components are sold separately.

COMPONENT	PART NUMBER	DESCRIPTION
Actuator	<a href="#">ACE295</a>	Pump Mounted Actuator, 24 V DC, Mounts directly on Bosch P 9 and 10 injection pumps in place of mechanical governor, Optimum performance for in-line pumps

# DEUTZ MWM 620 V12 with Bosch PE12/10/150/100LS54

## INDUSTRIAL

When it just has to work, GACs powerful ACB2001 provides 16.3 N-m of torque, providing the power you need.



### ESD5330



### ACB2001



NOTE: All components sold separately.

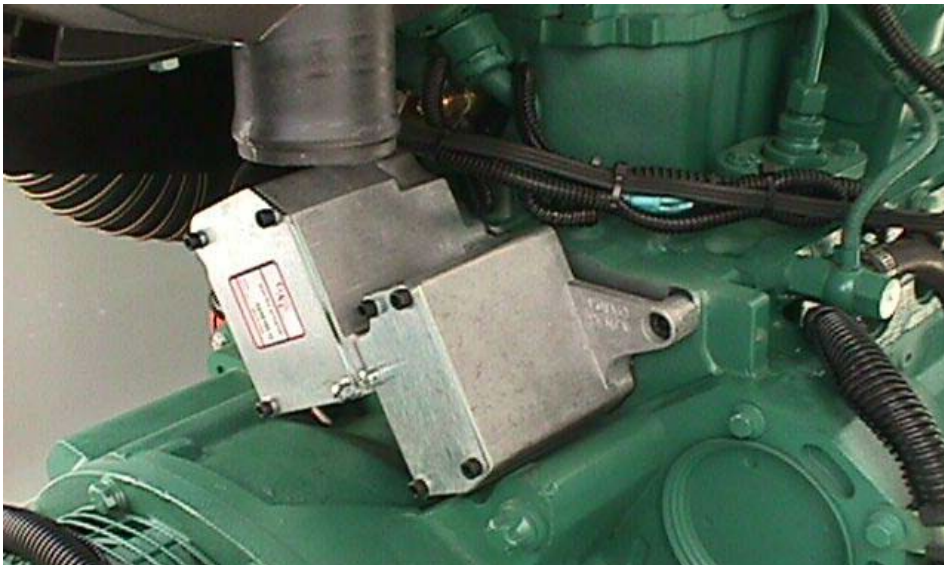
COMPONENT	PART NUMBER	DESCRIPTION
Actuator	<a href="#">ACB2001</a>	24 V DC, Heavy duty capable of 35 degrees rotation with torques as high as 16.3 N-m. Includes lever, terminal strip, rapid response to transient conditions, multiple mounting positions, uni-directional CW/CCW, and internal return spring
Speed Controller	<a href="#">ESD5330</a>	24 V DC, Two-element speed switch designed to support heavy duty actuators.

# DEUTZ 1012 AND 1013 ENGINES

## GEN-SET

This Diesel 1012 needed refined control. The engine mounted pump solution supports Deutz and Volvo engines:

DEUTZ: BF4M1012, Inline 3.19L 4 cylinder, BF6M1012, Inline 4.79L 6 cylinder, BF4M1013, Inline 4.76L 4 cylinder, BF6M1013, Inline 7.12L 6 cylinder, and 2012 . Volvo: 520 Inline 7.76L 4 cylinder, 720 Inline 7.15L 6 cylinder.



## ADD180G



## KT188 Freeze Plug



## EDG5500



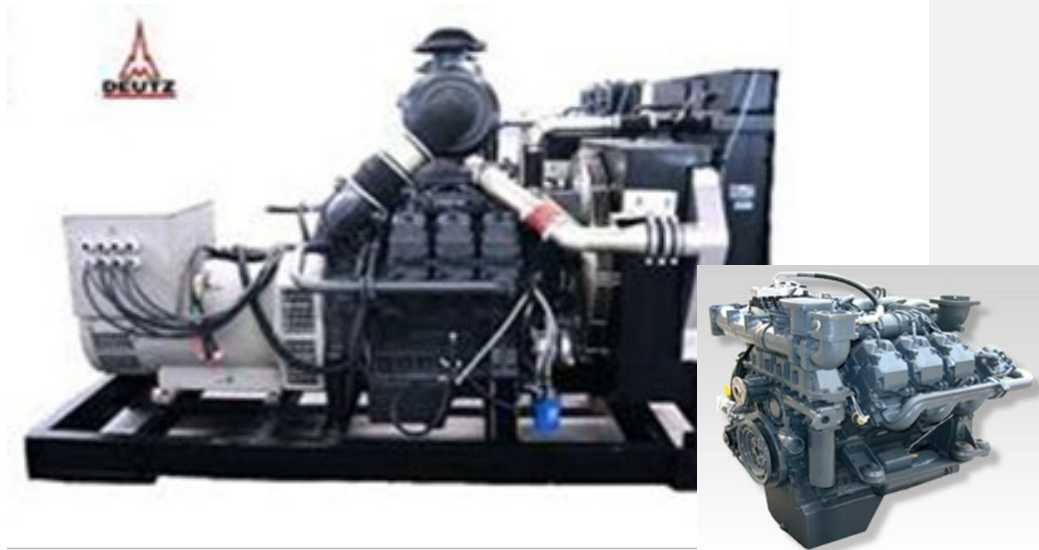
COMPONENT	PART NUMBER	DESCRIPTION
Speed Controller	<a href="#">EDG5500</a>	Electronic speed controller, multi-V DC, Built-In LCD display
Actuator	<a href="#">ADD180G</a>	Engine-mounted actuator for Deutz and Volvo, 12/24 V DC, Spring balance system allows fuel rack to return

# DEUTZ 1015 BF6M1015GCP– FIMS

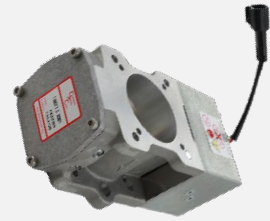
## MARINE PROPULSION / GENERATOR DRIVE

Variations of the Deutz 6 cylinder 1015 LNG / CNG / Biogas fueled engines with GAC Fuel and Ignition Management System components are used in gen-sets, industrial and agricultural applications with wide range of power ratings.

This Deutz 1015 Series uses LNG / CNG / Biogas Fueled to create an industrial Generator Set. Using the Deutz V6, 11.9L, BF6M1015GCP Turbo Charged / Intercooled engine it creates a continuous rating of 300 kW at 1500 RPM (295 kW at 1800 RPM).



### ATB552T2N



### AFR210



### ICM200



COMPONENT	PART NUMBER	DESCRIPTION
Actuator	ATB552T2N-12	55 mm Throttle Body Actuator
Air/Fuel Ratio and Speed Controller	AFR210	Integrated Venturi Mixer Control / Engine Speed Controller
AFR Components	MX60-STM SCI100 RPR104	60 mm Mixer with Stepper Motor Variable Reluctance Speed Sensor Zero Pressure Gas Regulator
Bracket	BK601	Coil Bracket, 6 Cylinder
Control Module	ICM200-6	Ignition Control Module
Control Module Components	CL602 SPG100-002 SPM200-1B STE101 SOX102 SPO100 STC101 GR104 SCI103	Ignition Coil Spark Plugs & Wires 1 Bar MAP Sensor Exhaust Gas Temperature Sensor O2 Sensor Oil Pressure Sensor Coolant Temperature Sensor 24-1, 68mm Trigger Wheel Hall Effect Sensor / 90° Connector



# DEUTZ 1015 ENGINE

## MOBILE EQUIPMENT, CONSTRUCTION, POWER GENERATION

Using the GAC ACE275H-24 (standard unit) or ACE275J-24 (with oil drain fitting and high-torque return fitting and the ESD5500E speed controller you obtain more precise control/. The specialized mounting kit (KT275) provides the required P3000 series camshaft bearing retainer to make installation simple. If the engine uses an EDC pump, use the GAC ACD175A with KT197 to obtain the same results.



**ACE275H-24**



**ESD5500E**



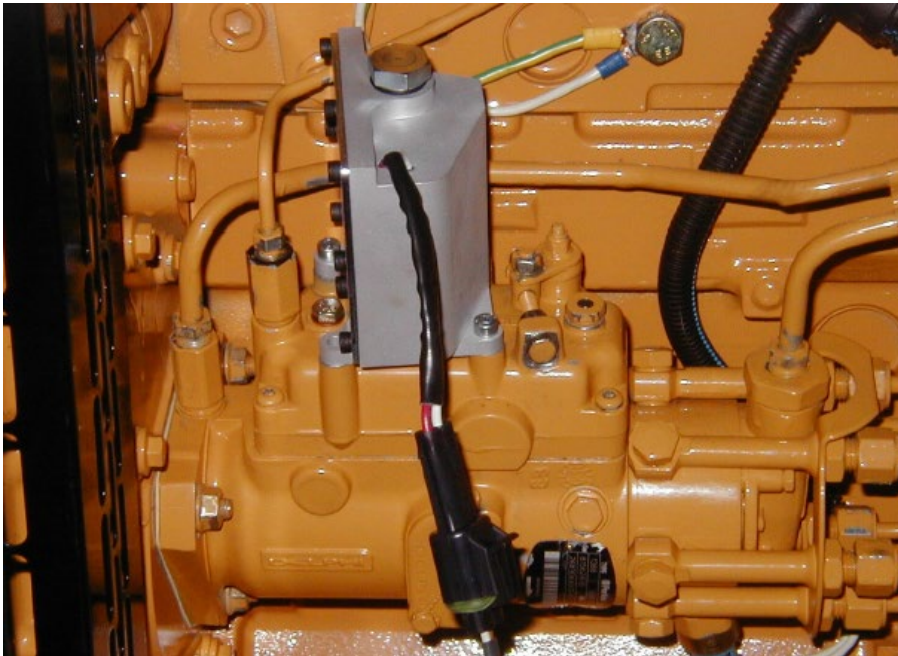
NOTE: All components are sold separately.

COMPONENT	PART NUMBER	DESCRIPTION
Speed Controller	<a href="#">ESD5500E</a>	Multi-V DC, Variable Speed, Droop, Speed Ramp, Aux input
Actuator	<a href="#">ACE275H</a> or <a href="#">ACE275J</a>	Pump mounted electric actuator, Bosch P, RP21 J has oil drain on top cover

# DEUTZ 2008 ENGINE with DELPHI PUMP

## INDUSTRIAL – GEN SET

Adding a fuel shutoff solenoid for a Delphi DPG/DP210 pump on this Deutz 2008 is simple when using the GAC ADD103 pump mounted actuator. Fast response time and no brackets required.



## ADD103B



NOTE: All components are sold separately.

COMPONENT	PART NUMBER	DESCRIPTION
Actuator	<a href="#">ADD103B</a>	Pump mounted actuator, <45ms response, mount directly on Delphi DPG/DP210 pump

# DEUTZ 12L513 ENGINE

## MARINE – GEN SET

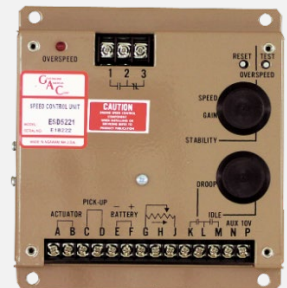
The Alaskan AP188 Hovercraft uses two RCS671 controllers in conjunction with two ESD5221 controllers driving two ACE275 actuators installed on the main propulsion engines, Deutz 12L513's, powering two 9-foot propellers.



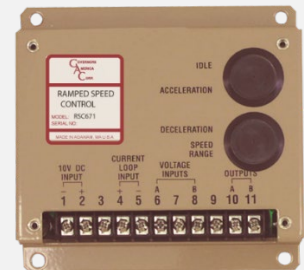
### ACE275



### ESD5221



### Ramp Speed Controller RSC671



NOTE: All components are sold separately.

COMPONENT	PART NUMBER	DESCRIPTION
Speed Controller	<a href="#">ESD5221</a>	Isochronous, droop and variable operation, overspeed switch and LED indicator
Actuator	<a href="#">ACE275C</a>	Pump mounted electric actuator, Bosch P, RP21
Ramp Controller	<a href="#">RSC671</a>	Control module, accelerates / decelerates engine at independently adjustable rates, softening speed changes, preventing current spikes

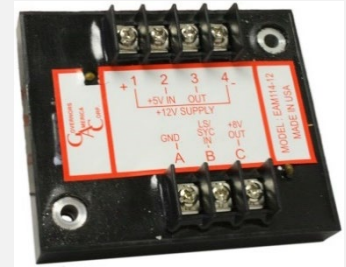
# DEUTZ ENGINES with EMR INTERFACE MODULE

## INDUSTRIAL – GEN SET

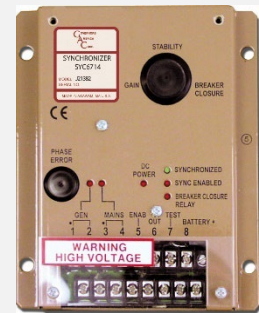
The EAM114 electronic interface module provides signal conditioning when operating a DEUTZ EMR engine control system. It is typically used with a GAC auto-synchronizing / load sharing system such as the [SYC6714](#) and [LSM672](#) when connected to a DEUTZ EMR engine control system.

DC supply for the EAM114 is provided by the common battery source for the speed controller and accessory controls. The input to the module (Terminal B) is typically 5.0 V DC, which represents the auto-sync and load sharing outputs analog signals. The EAM114 output to the EMR engine control is 2.5 V DC with the EMR 5.0 V DC reference connected to Terminal 2.

### EAM114



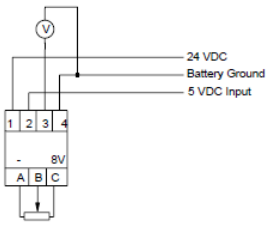
### SYC6714



### LSM672



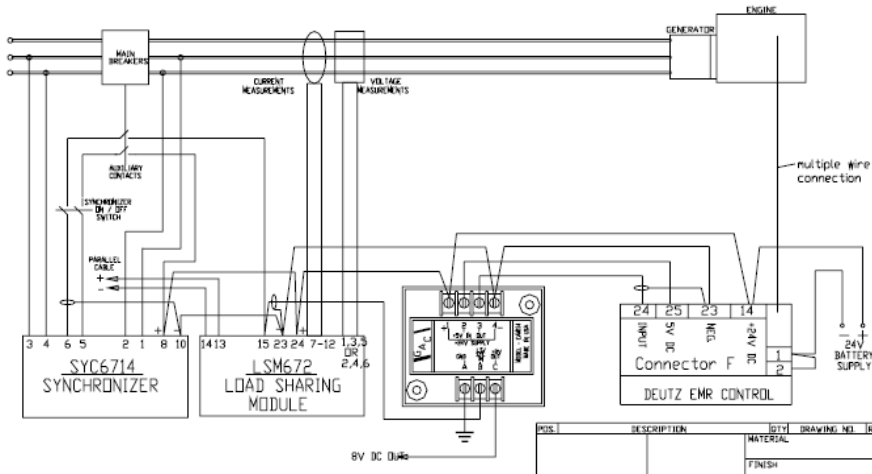
### EAM114



5 kΩ

DC Voltage Input at "B"	DC Voltage Output at "3"
0	5.7
2	5.7
3	5.7
4	4.5
5	2.5
6	0.5
7	0.45

## WIRING Deutz EMR to SYC6714 to LSM672 to EAM114



NOTE: All components are sold separately.

COMPONENT	PART NUMBER	DESCRIPTION
Interface Module	EAM114	2 Multi-V DC, Overspeed Switch, Overspeed LED, Selectable droop

## DEUTZ CROSS REFERENCES & REPLACEMENTS

DEUTZ PART NUMBER	GAC ACTUATOR	GAC CONTROLLER	GAC MSP / ACCESSORIES
02113598	ADD180G-12		
0419 1541			MSP6732
0419 1545		ESD5550	
0421 26060	ADD180G-24		
0422 3457		ESD5221	
0422 3844	ACE275H-24		
0422 3846		ESD5500E	
0422 3959			KT276
0422 4032			CH1220-L6
0422 4035			CH1208-L6
0422 4956			CH1208AM-L6
0422 6301	ACE275J-24		
0423 3161			MSP6728C
0423 3576			CH1220-L03
04233807			CH1225L03
0424 3577			CH1230-L03
0427 1793			CH1240 CE-L02
0427 1795		ESD2210-12	
0427 1801			CH1208AM-L2
0427 1897		ESD2210-24	
0427 1898	AXX110-24		
0428 1524 KV-24	ACD110-24		
0428 1525 KV-12	ACD110-12		
04323142 see 1231 4176			
1203 6768			DC 22321
1215 3968			MTC6C-4320 LC
1215 3968			EC1110
1215 7759			EC1110
1221 3833			GA 270
1221 3883			GA 7000
1221 3885			GA 277

DEUTZ PART NUMBER	GAC ACTUATOR	GAC CONTROLLER	GAC MSP / ACCESSORIES
1230 4578	ACB2000CF		
1230 5436	ACB2001		
1230 7878	ACE295-24		
1231 4175	ACB275H-S1		
1231 4176			G4-24V
1231 4288	ACB275CF		
1231 4423			KT275
1231 6113			KT 1611
1231 6257	ACE275CF-24		
1231 6259			KT278
1232 0620			MSP6714
1232 0621		ESD5550	
1232 0622			CH1204-L6
1232 0623			CH1203A-L6
1232 0914			CH1301-L10
1232 0916		DSC1004	
1232 0983			FN670-10/06
1232 2066			DSC1004B-KPL
1232 3417			CH1220-L10
1232 3419			CH1204-L15
1502 2476		DSC1004B-KPL	
1509 6246		RSC671	
1509 6247		EAM125	
1509 8057		PCI105	
1509 8058			CH1203A-L10
1509 8059			CH1204A-L10
301622	ATB552T2N-12 (Rev H)		
302583			FIMS1500 6 Cyl
302664			CL601
302938			FIMS1500 6 Cyl. Turbo
302969			ECM64A
302970			BK601
302972			MX60-STM
302973			SPG100-001
302974			SPM101
302976			SAI100

DEUTZ PART NUMBER	GAC ACTUATOR	GAC CONTROLLER	GAC MSP / ACCESSORIES
302977			SOX100
302978			SOX102
302979			KT209
302981			KT214
302982			STE100
302983			CH1231
302984			CH1232
302985			CH1234
302987			MX30-STM
302990	ATB552T2F4-12		
302991	ATB401T1F-12		
302994			BK604
302997			FIMS1500 4 Cyl
30301			SPM100
303082			SPG100-002
303089			KT207



# SOLUTIONS THAT OUTLIVE THE LIFE OF THE ENGINE

## GAC OFFERS PROVEN RESULTS

GAC's advanced gaseous-fueled engine management system with exhaust emissions control technologies meet the tough standards sanctioned in the United States and the rest of the world. The total system approach results in a cost-effective solution that offers the greatest potential for improvements in both engine efficiency and exhaust emissions while providing many features.

Governors America Corp. (GAC) is a leading provider of innovative engine control products worldwide. As a veteran-owned and operated family business, our dedication and focus on our customers' needs has shaped GAC into a vertically integrated company with complete design, development and manufacturing capabilities.

Our mission is to provide trusted solutions for the innovative equipment that powers and builds our world. GAC's market-focused efforts provide precise electromechanical and electronic engine devices and speed control systems globally.