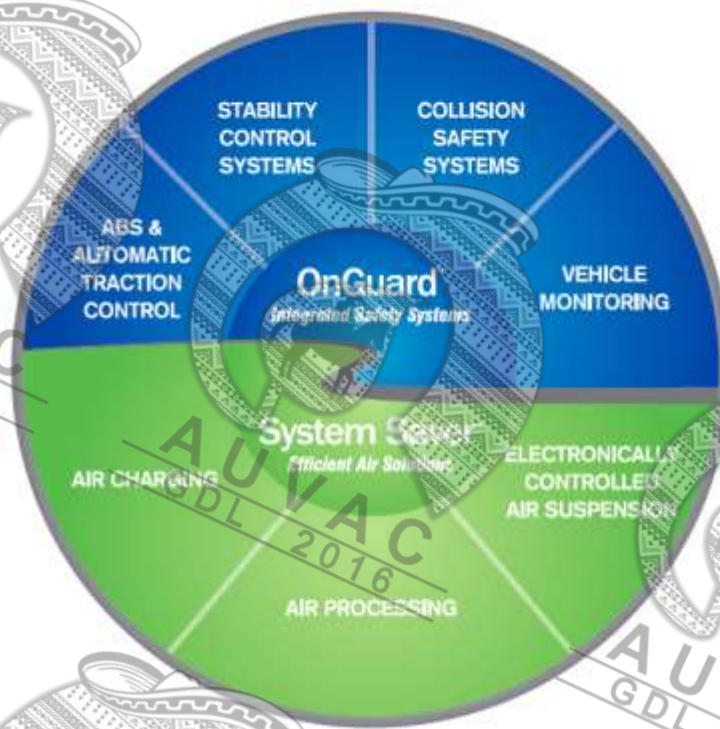




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Safety Strong. Efficiency Smart.

4ª Reunión Nacional AUVAC 2016

NOM-068-SCT-2-2014

ALEJANDRO ROMERO

GERENTE VENTAS TECNICAS & SERVICIO - MÉXICO

28 / Octubre / 2016

Socios de la Alianza Estrategica

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WABCO



- Oficinas Corporativas en US
 - Líder Global en:
 - Ejes, Frenos, Cardanes, Suspensiones
 - +100 Años de Operación
 - 9,000 Empleados, 19 países
- Ventas & Distribución del lado de la JV, Incluyendo Aftermarket

- Oficinas Corporativas en Bélgica
 - Líder Global en:
 - Controles Avanzados de Sistemas de Frenos, Sistema de Carga de Aire, Procesamiento de Aire
 - +140 Años de Operación
 - 10,600 Empleados, 31 países
- Socio Tecnológico / Producto en la JV

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Portafolio de Productos Meritor WABCO

Desempeño

**Secadores
de Aire**



Válvulas de Control



Compresores

Sistemas de Remolque



ABS



**Portal de
Comunicaciones**



SmartTrac™
Stability Control Systems



**Válvulas de
Control**



Seguridad

**Control
Automático de
Tracción (ATC)**



**Manejo de
Protección de
Sistema Motriz**

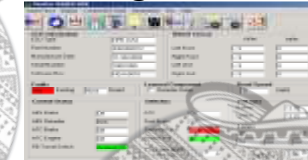


OnGuard™
Collision Safety Systems



**Monitoreo de
Presión de
Llantas (TPM)**

Diagnóstico



**Monitoreo de
Desempeño de
Frenos (BPM)**

La Mas Completa Integración de Sistemas de Frenos

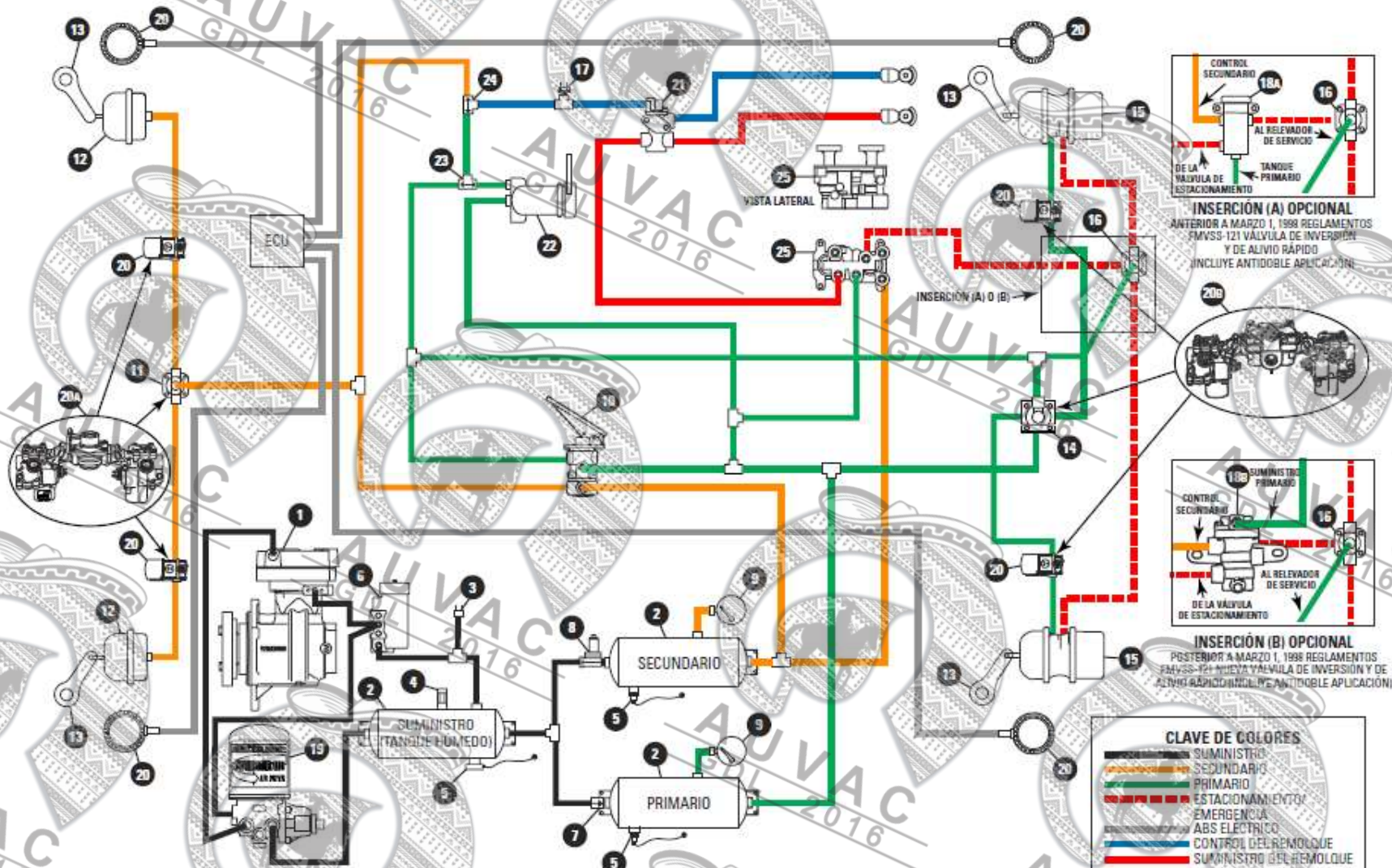


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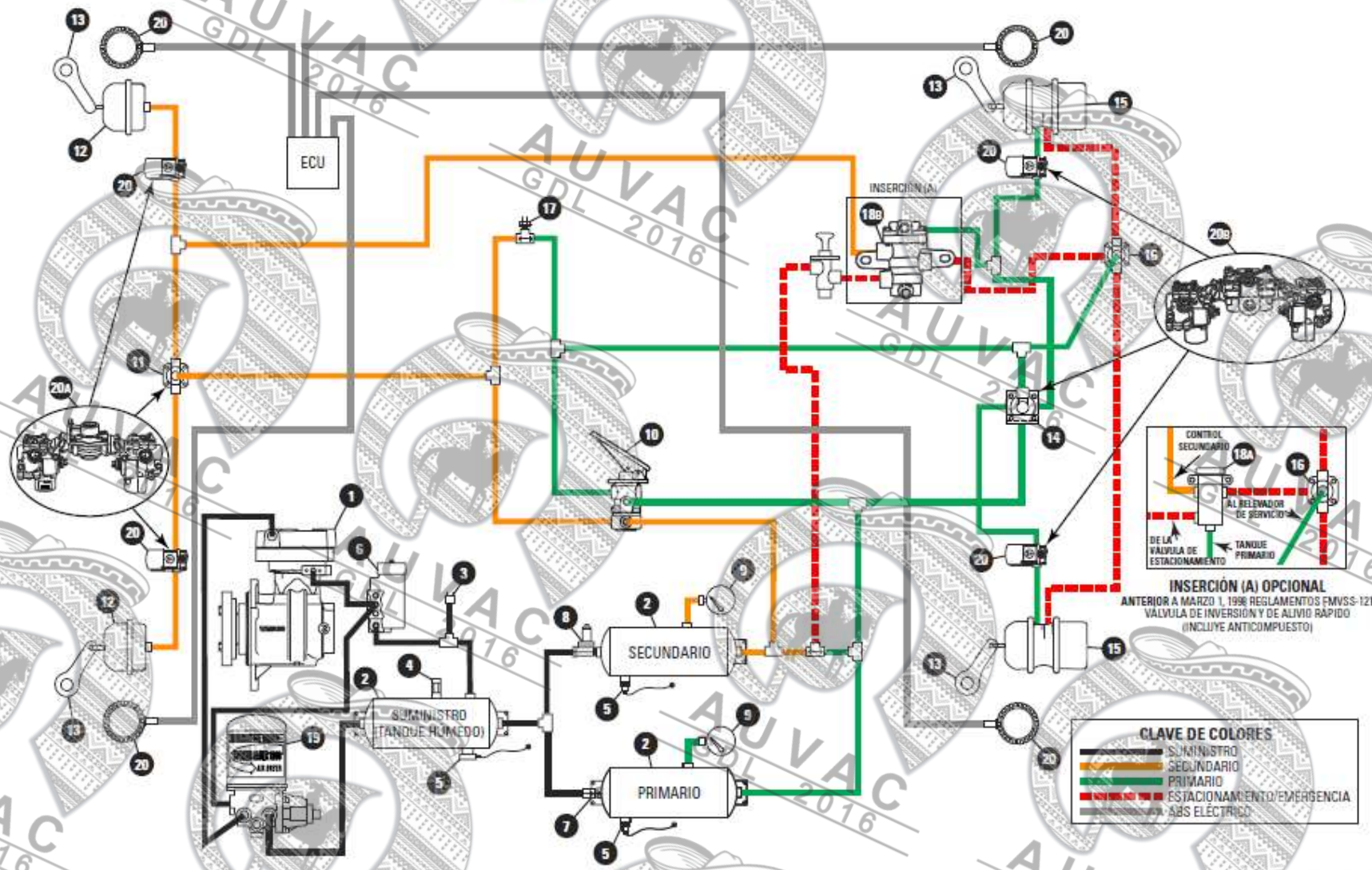
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SISTEMA DE FRENOS NEUMATICO

Guía de Reparación de Tractocamiones



Guía de Reparación de Camiones





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ABS

TRUCK TRACTOR WITH AIR BRAKES☐ **Before March 1, 1997**

- ABS is not required.

☐ **On or After March 1, 1997**

- Begin with the ignition key in the "off" position.
- Turn the ignition key "on".
- Confirm that the ABS malfunction lamp turns on and after a few seconds the lamp goes out.
- Any other response indicates a defective ABS.

☐ **On or After March 1, 2001**

Not connected to any trailer or connected to a trailer manufactured before March 1, 2001.

- Begin with the ignition key in the "off" position.
- Turn the ignition key "on".
- Confirm that the trailer ABS malfunction lamp turns on and after a few seconds the lamp goes out.
- Any other response indicates a defective ABS.

Connected to a trailer manufactured on or after March 1, 2001.

- Begin with the ignition key in the "off" position.
- Turn the ignition key "on".
- Confirm that both the tractor and trailer dash-mounted ABS malfunction lamps turn on and after a few seconds the lamps go out.
- Any other response indicates a defective ABS.

TRAILER WITH AIR BRAKES (INCLUDING A TRAILER CONVERTER DOLLY)☐ **Before March 1, 1998**

- ABS is not required.

☐ **On or After March 1, 1998**

Connected to a truck or truck tractor manufactured before March 1, 1997.

- Apply the brake pedal and confirm that the trailer-mounted ABS malfunction lamp turns on and goes out when brake is released.
- Any other response indicates a defective ABS.

Connected to a motor vehicle manufactured on or after March 1, 1997.

- Begin with the ignition key in the "off" position.
- Turn the ignition key "on".
- Confirm that the trailer-mounted ABS malfunction lamp turns on and after a few seconds the lamp goes out.
- Any other response indicates a defective ABS.

☐ **On or After March 1, 2001**

Connected to a truck or truck tractor manufactured before March 1, 2001.

- Test in the same manner as trailers manufactured on or after March 1, 1998.

Connected to a truck or truck tractor manufactured on or after March 1, 2001.

- Begin with the ignition key in the "off" position.
- Turn the ignition key "on".
- Confirm that both the trailer dash-mounted ABS malfunction lamp and the trailer-mounted ABS malfunction lamp turn on and after a few seconds the lamps go out.
- Any other response indicates a defective ABS.

• Norma Americana FMVSS-121

➤ Tractocamiones a Partir del 1ro de Marzo de 1997

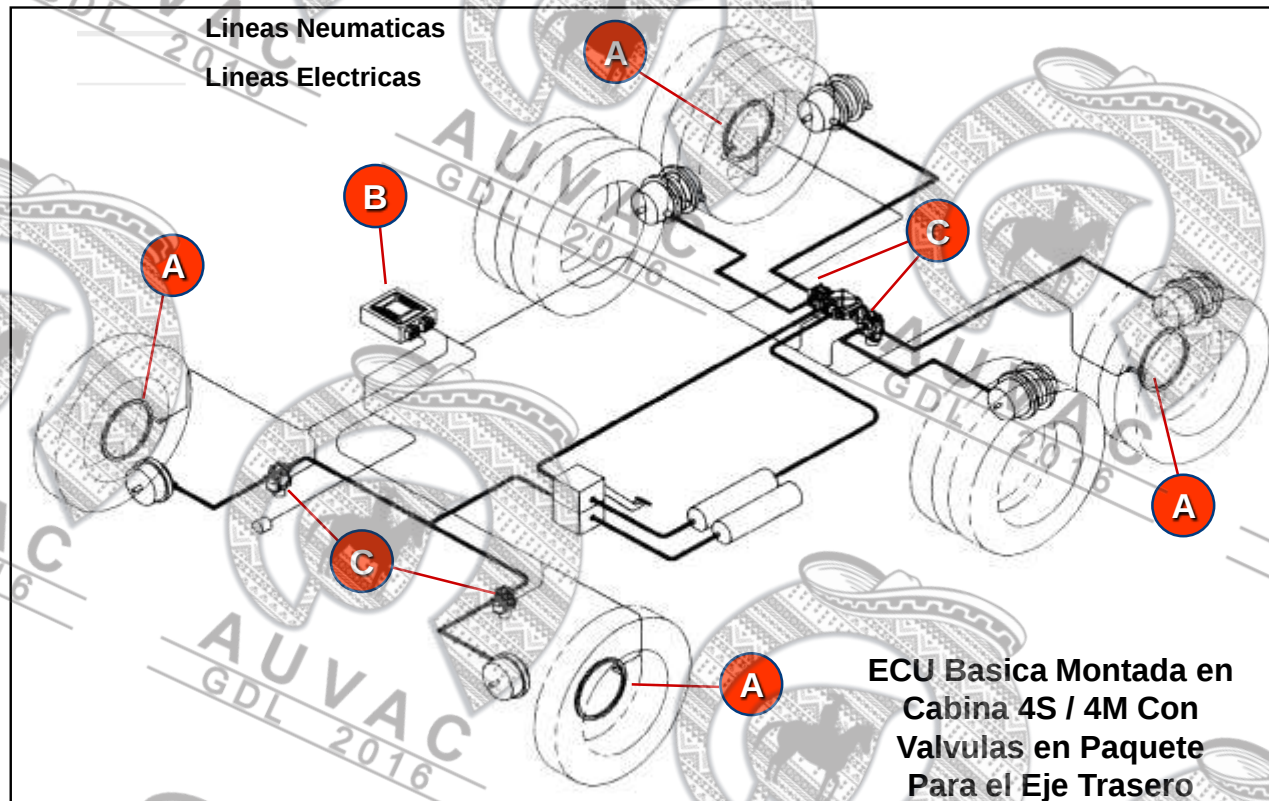
➤ Remolques y Dollies a Partir del 1ro de Marzo de 1998

• Norma Mexicana NOM-035

➤ Remolques y Dollies a partir del 1ro de Diciembre del 2010

• Tractocamiones no existe norma mexicana obligatoria, existe la NMX-D-313-1-IMNC-2014

ABS 4S / 4M



A Los sensores envian informacion de la velocidad de las ruedas a la ECU

B La ECU procesa la informacion, determina cuando la desaceleracion de la rueda puede provocar que se bloquee y envia una senal de control a la valvula moduladora del ABS

C La valvula moduladora del ABS regula la cantidad de aire hacia las camaras de freno para un frenado maximo sin que se presente bloqueo en la ruedas

Componentes del ABS

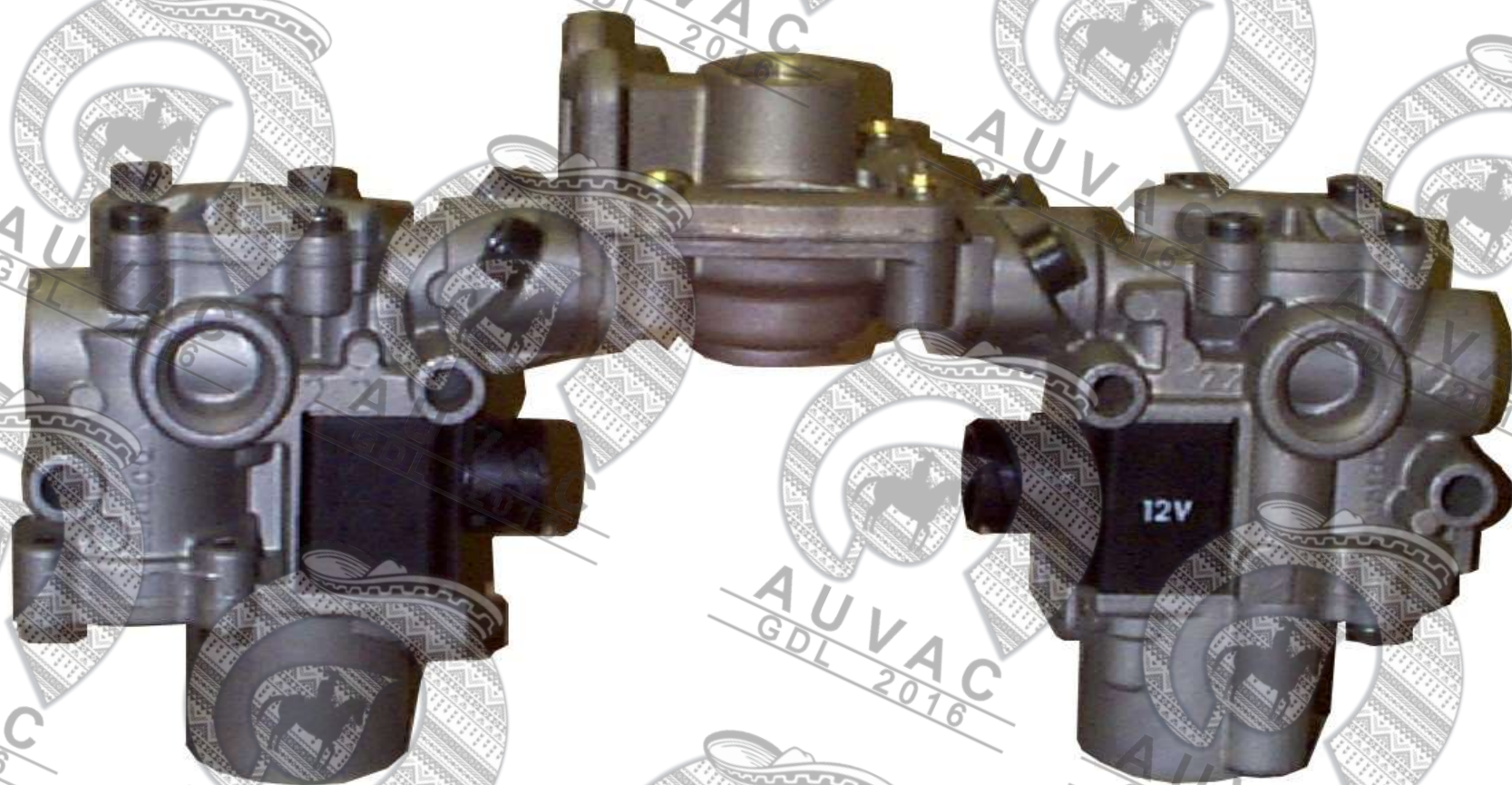
- **Equipo de Monitoreo de velocidad de las ruedas**
- **Unidad de Control Electrónica (ECU)**
- **Válvulas moduladoras de presión de frenos**
- **Arneses eléctricos, interruptores, relevadores y lámparas**



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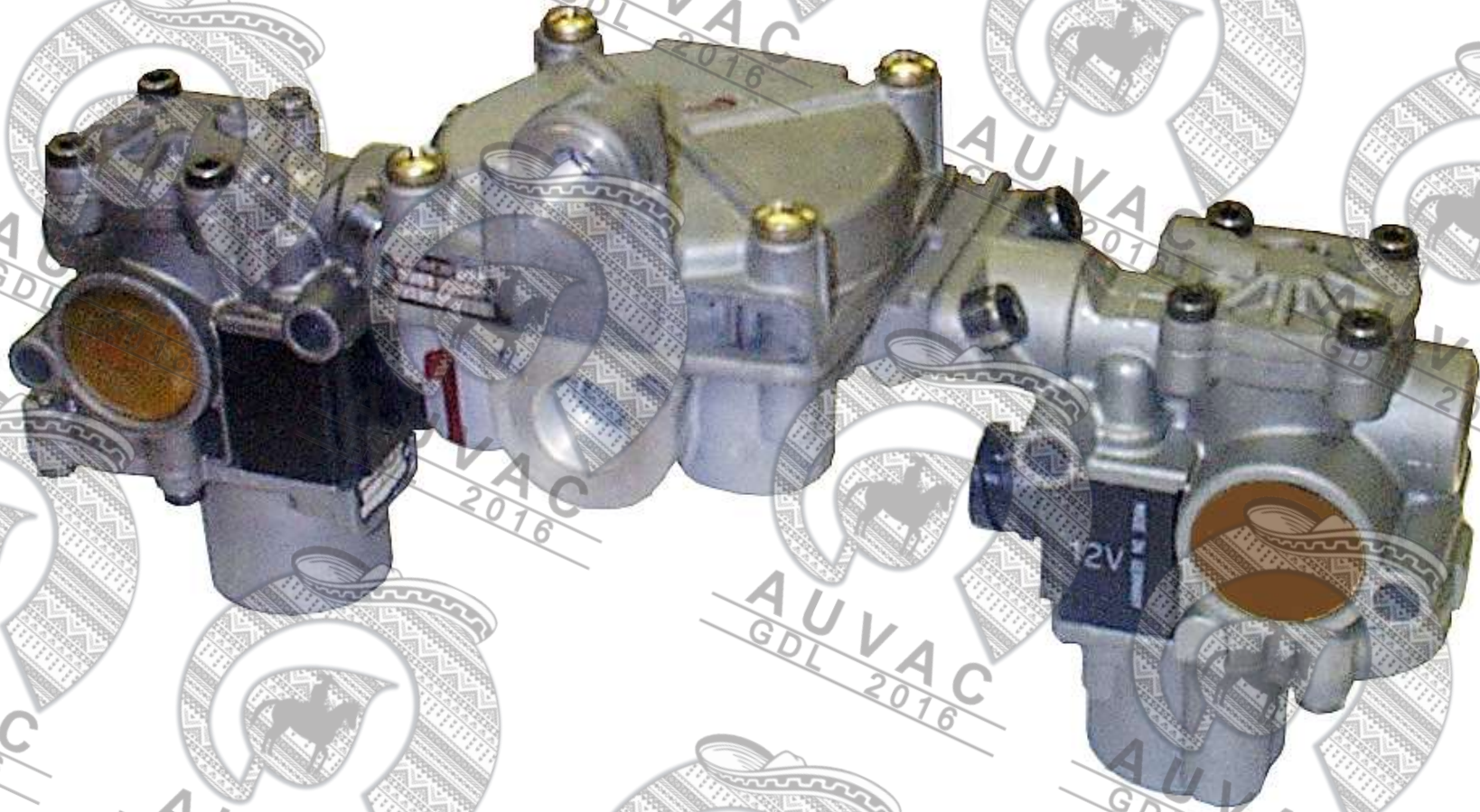
Paquete de Válvulas ABS para Eje Frontal



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Paquete de Válvulas ABS para Eje Trasero



Gracias por su atención

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