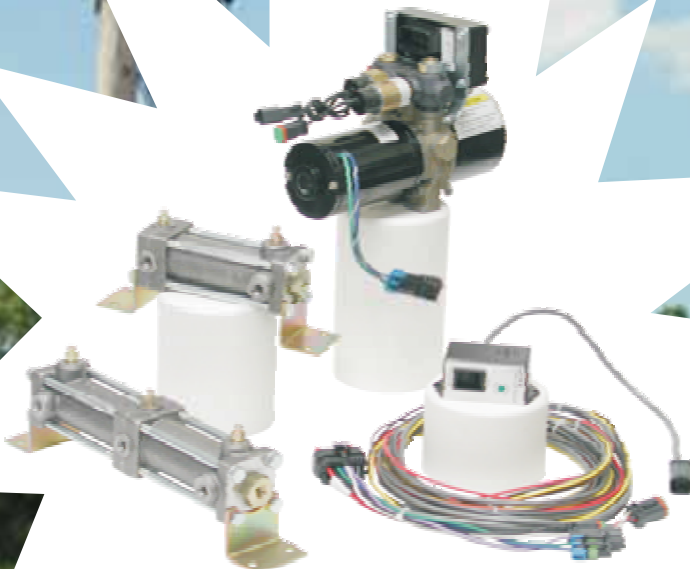




Electrohydraulic 691 Brake Lock System



Patent Number 5,505,528

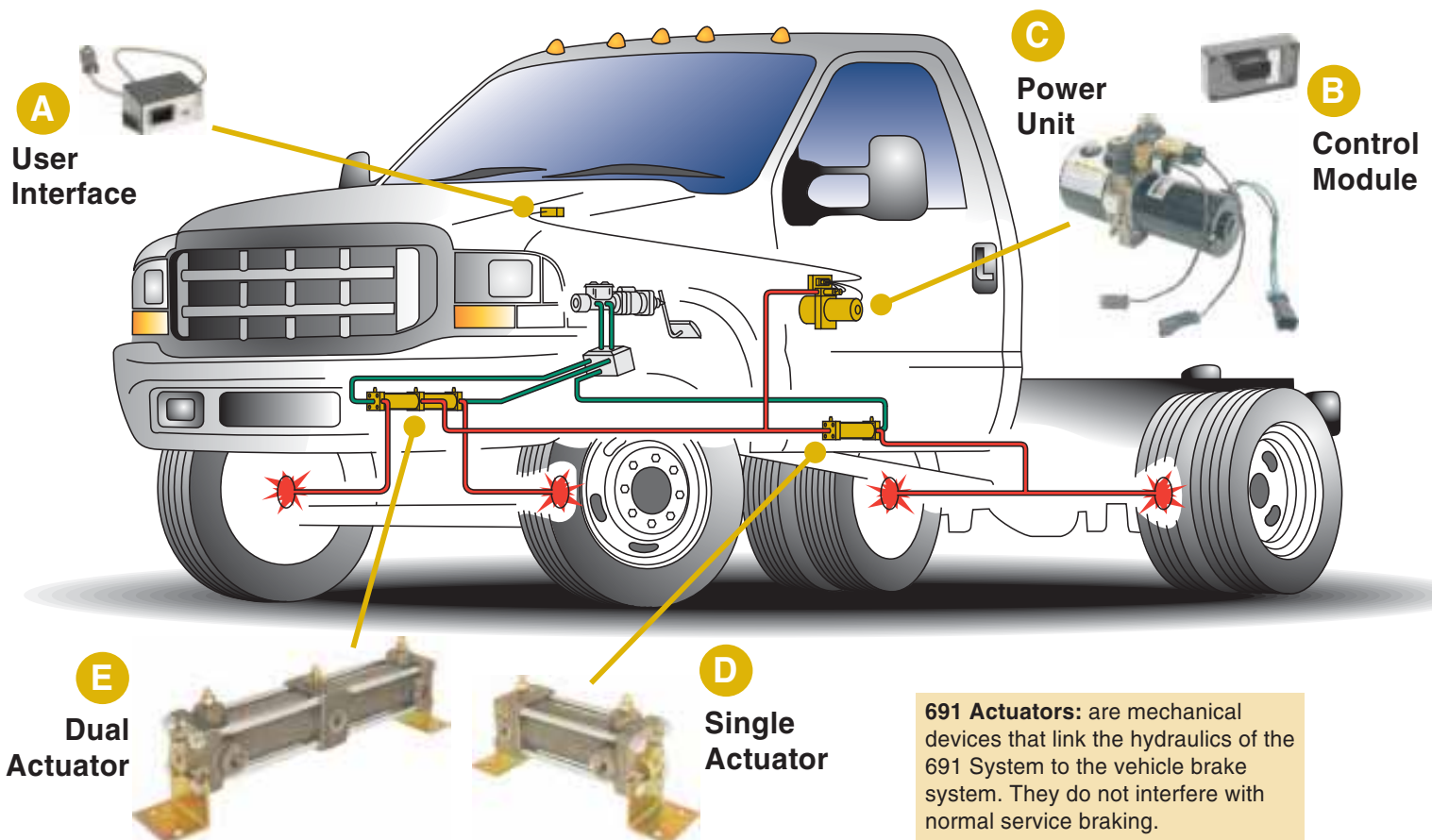
Supplemental Brake Holding Device

MICO 691 Brake Lock System

MICO Brake Lock Systems lock hydraulic pressure in the service brakes to supplement the vehicle's mechanical parking brake and provide extra holding in heavy-duty and high-frequency applications. The 691 consists of a small electrohydraulic pump, remote mounted actuator (single and/or dual), electronic control module and small dash-mounted user interface. The operator simply activates a switch and the 691 system automatically applies, monitors, and maintains brake locking pressure. The 691 Brake Lock significantly enhances vehicle-holding capability while not interfering with normal service brake function.

In addition to operator control via the "Lock/Release" switch on the user interface, 691 systems can be remotely controlled and/or interlocked using leads in the main wiring harness. This allows control of the brake lock system from locations outside the cab. As an interlock, 691 operation is linked to other vehicle systems and components; for example, wheelchair lift, PTO, electrical generator, hydraulic pump, air compressor, to ensure the brakes are locked and the vehicle is immobilized wherever they are being used.

- A User Interface:** provides operator access for controlling and monitoring 691 operation. It contains a recessed rocker switch, an audible alarm, and an indicator lamp. Located in cab. **NOTE: In place of the user interface, controls similar to those already in the cab can be used to achieve a finished OEM appearance. 691 Systems can also be remotely controlled by switches located outside the cab, or interlocked with other 12-volt systems.**
- B Control Module:** the electronic processor that evaluates input signals and manages all 691 system functions. Utilizing the user interface and vehicle horn, the Control Module informs the operator visually and audibly of system conditions. LED's on the module indicate system status and operating modes. Can be mounted directly to the power unit using supplied bracket and fasteners, or remote mounted. An optional wiring harness extension is available to aid remote mounting.
- C Power Unit:** pressurizes and holds system pressure when activated. Two pressure switches send signals to the control module indicating the current pressure conditions. If correction is necessary, the 691 Power Unit will compensate system pressure accordingly. Upon deactivation, the 691 Power Unit reverses flow to release locking pressure. Located under hood, behind seat, or on vehicle frame rail.
- D Single Actuator:** used for connecting to one brake line controlled by a single input from 691 Power Unit. Single Actuators are available in two different bore sizes and are capable of displacing 1.77-2.90 in³ of brake system fluid. Usually mounted on a vehicle frame rail.
- E Dual Actuator:** used for connecting to two brake lines controlled by a single input from 691 Power Unit. Dual Actuators are available in two different bore sizes and are capable of displacing 1.77-2.90 in³ (per side) of brake system fluid. Usually mounted on a vehicle frame rail.



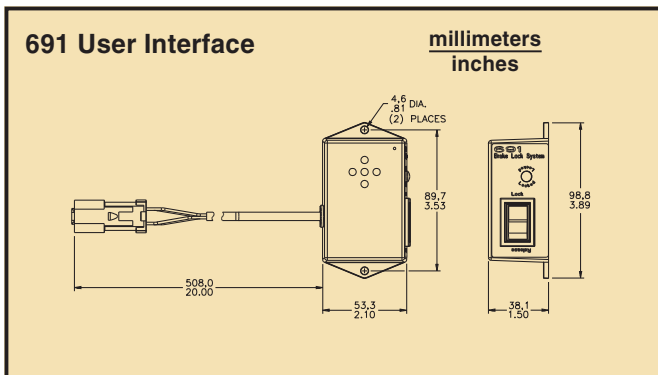
FEATURES

- Supplements existing parking brake for additional holding
- Automatically monitors and maintains optimal brake lock system pressure
- Activates with the flip of a switch
- Can be remotely controlled
- Can be interlocked with other 12-volt systems
- Microprocessor controlled with onboard diagnostic LED's
- Waterproof control module
- Factory provided weatherproof connectors
- Wide selection of models

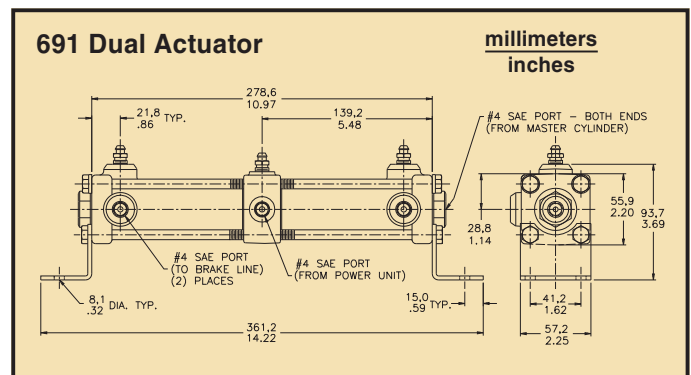
BENEFITS

- Added safety for operator, vehicle, and work area
- Allows workers to focus on work functions
- Simple to operate with a short learning curve
- Eliminates driver intervention and human error
- Adds safety by locking the brakes before other systems can function
- Easy troubleshooting, wiring and component functions are confirmed
- Low maintenance expense when used in adverse environments
- Makes for simple wiring procedures
- Compatible with all hydraulic brake systems

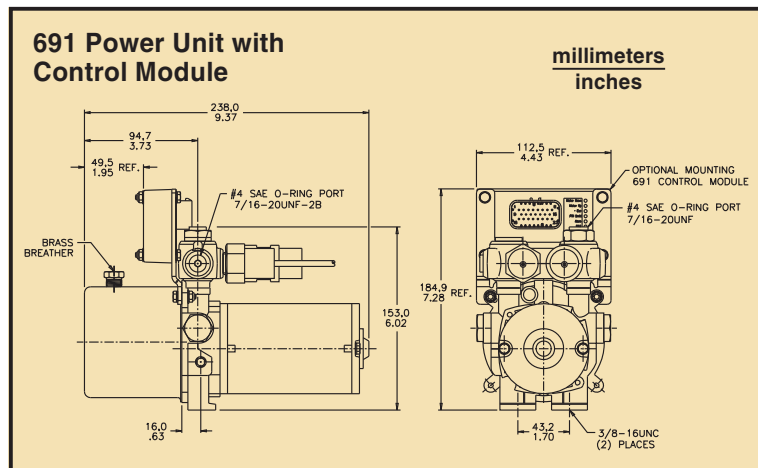
A



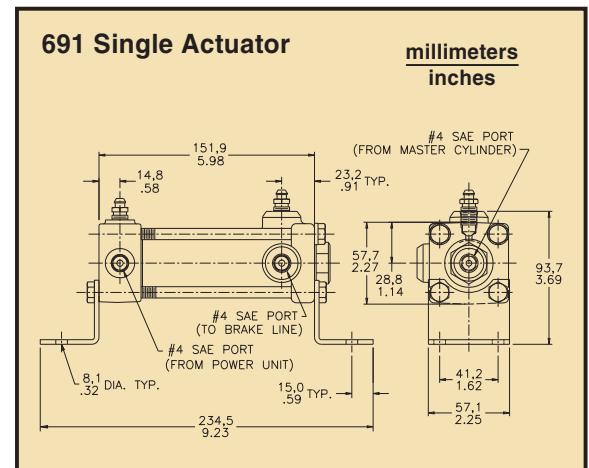
E



B



D



Applications:



Recycling Vehicles



Waste Vehicles



Utility Vehicles



Emergency Vehicles



Towing Vehicles



Delivery Vehicles

Plus many other markets

MICO has made every attempt to present accurate information in catalogs, brochures, and other printed material. MICO can accept no responsibility for errors from unintentional oversights that may exist. Due to a continuous program of product improvement, both materials and specifications are subject to change without notice or obligation. Refer to www.mico.com for the most recent versions of our literature. If you have any further questions, please call MICO.

Distributed by:



Innovative Braking and Controls Worldwide

MICO, Incorporated

1911 Lee Boulevard
North Mankato, MN U.S.A. 56003-2507
Tel: +1 507 625 6426 Fax: +1 507 625 3212

MICO Europe Ltd.

Goodwood Road / Pershore
Worcestershire Wr10 2RY England
Tel: +44(0)1386 555562 Fax: +44(0)1386 553955

Web Site: www.mico.com

MICO is a registered trademark of MICO, Inc. MICO is registered in the U.S. Patent and Trademark Office as well as in Australia, Canada, Indonesia, Japan, Peoples Republic of China, South Korea, and the European Community.

PRODUCT LINE:

Brakes

Caliper Disc Brakes
Multiple Disc Brakes

Brake Locks

Electric
Mechanical

Controls

Electronic Controls
Hydraulic Throttle Controls
Pedal Controls
Switches
Transducers/Sensors

Cylinders

Drive Axle Brake Actuators
Slave Cylinders
Wheel Cylinders

Master Cylinders

Boosted Cylinders
Hydraulically and Air Actuated
Straight Bore Cylinders
Two-Stage Cylinders

Valves

Accumulator Charging
Electrohydraulic Brake
Park Brake
Pressure Modulating

Miscellaneous Components

In-line Residual Check Valves
Pump with Integrated Valves
Reservoirs