



Date \_\_\_\_\_

# Application Data Sheet

(for Full Power Electrohydraulic Brake Systems)

**Confidential**  
You incur no obligation by submitting this data and the non-public information provided will be held in confidence by ZF.

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Fax \_\_\_\_\_ Phone \_\_\_\_\_ Country \_\_\_\_\_

Email \_\_\_\_\_

Are you currently working with a ZF Off-Highway Distributor?  Yes  No If yes, which one and who is the contact?

**Estimated Annual Quantity** \_\_\_\_\_

Project or vehicle name \_\_\_\_\_

Brief description of application \_\_\_\_\_

Expected production start date \_\_\_\_\_

Is this a military application?  Yes  No If yes, what is the destination country? \_\_\_\_\_

Is this an underground coal mine application? (MSHA compliant electronic device 30 CFR)  Yes  No

What, if any, performance standards must this system comply with?

## HYDRAULIC SYSTEM CHARACTERISTICS

**Complete Brake Valve System Data Sheet, Form No. 80-460-042 (locate at [www.mico.com](http://www.mico.com)).**

Full brake pressure setting \_\_\_\_\_

Hydraulic service brakes  Spring apply hydraulic release  Hydraulic apply spring release

Other (describe) \_\_\_\_\_

Number of brakes in system \_\_\_\_\_

Describe the distribution of brakes among axles \_\_\_\_\_

Describe the maximum displacement (fluid consumed) as each brake is filled

\_\_\_\_\_

## BRAKE BY WIRE SYSTEM SPECIFICATIONS

Is true redundancy required? (i.e.: no single non-functioning component can cause complete loss of service braking?)

Yes (recommended)  No

Describe system response requirements \_\_\_\_\_

Describe system environmental resistance requirements \_\_\_\_\_

Electrical system nominal voltage  12 Vdc  24 Vdc  Other (specify) \_\_\_\_\_

Relative to your service braking:

With no electrical power to the brake valves (either intentionally or unintentionally) what brake pressure is desired?

No brake pressure (standard)  Full (maximum) brake pressure setting

Intermediate (between zero and maximum) Specify desired value \_\_\_\_\_

Does the desired service braking pressure vary with:

- A single primary input, such as a brake pedal position
- The higher of two inputs (standard MICO redundant input valve driver)
- Multiple inputs, and/or auxiliary inputs or outputs are required, such as for anti-lock braking systems, or electronic traction control (programmable digital controller required)

Is manual override operation of the service brakes required?

- Push button override on solenoid (standard)
- Common brake pedal overrides electric braking at end of travel, mechanically applying full braking
- Separate hydraulic control, either pedal or lever, provides manual override of electric service braking
- Other options are available. If required, specify the desired performance:

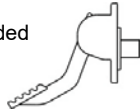
## ELECTRONIC PEDAL SPECIFICATIONS

Pedal sensors provide an analog output proportional to pedal travel. Select a sensor configuration:

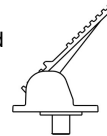
- Three redundant potentiometers traveling 28° from neutral to full, using 5 Vdc, or other, regulated supply.
- A single output hall effect (non-contact) sensor, traveling 20° from neutral to full, using 5 Vdc regulated supply.
- Other configurations are available. If required specify the type of sensor and output(s) desired:

Desired pedal mounting style:

Suspended



Floor Mounted



Desired pedal angle in neutral (suspended):

- 61° with potentiometers or 53° with hall effect standard
- Other angles are available, if required specify angle: \_\_\_\_\_

Desired pedal angle in neutral (floor mounted):

- 44° with potentiometers or 36° with hall effect standard
- Other angles are available, if required specify angle: \_\_\_\_\_

Standard pedal effort is provided by redundant springs with a preload and rate resulting in the following options:

- A throttle (light) spring pack requiring 58 N (13 lb) full travel at 178 mm (7 in) from the pivot point.
- A brake (heavy) spring pack requiring 178 N (40 lb) full travel at 178 mm (7 in) from the pivot point.
- Other configurations are available. If required specify the desired preload and full travel load:

Proposals will be made on the basis of the information provided. Subsequent customer engineering changes affecting the above could make our proposal invalid.

### NOTICE

Component and system recommendations made by ZF Off-Highway Solutions Minnesota Inc. are based on information supplied by you. ZF does not independently confirm or test information supplied, or test the applicability of components or system recommendations. All recommendations are based on theoretical application of ZF Off-Highway Products based on the information you provide. Actual results may vary based on actual use conditions or inaccuracies in provided information. You must finally accept and approve recommended components and systems after you test the performance of the recommended system and components in actual applications for which the system was designed and in which it is operated. ZF Off-Highway reserves the right to reject any orders for components and systems not so accepted and approved. No component or system recommendation is intended to be or shall be construed as an express warranty by ZF Off-Highway Solutions Minnesota Inc. All ZF Off-Highway Products and services are sold and provided subject to the ZF Warranties set forth at [www.mico.com](http://www.mico.com) in effect on the date of sale or supply.



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