



Date _____

Application Data Sheet

(for Full Power Hydraulic Brake Systems with ABS and Traction Control)

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 _____

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

Is this an underground coal mine application? Yes No

HYDRAULIC SYSTEM CHARACTERISTICS

Attach any available hydraulic system schematics relevant to full power actuation circuits.

Maximum pump flow _____ Minimum pump flow _____

Pump type: Gear Vane Piston Manufacturer and model number _____

Load Sensing: Yes No Standby _____

Internal bleed down: Yes No Relief valve _____

Oil names and numbers _____ Filtration _____ microns

Operating temperature range: Minimum _____ Normal _____ Maximum _____

Flow required for components other than brake valve _____

What is the function of other components?

VEHICLE SPECIFICATIONS

Type of vehicle or machine _____ Name and model number _____

Gross vehicle weight _____ Empty vehicle weight _____

Weight distribution loaded: front _____ or % rear _____ or %

Rolling radius: front _____ rear _____

Maximum loaded speed (level) _____ Maximum grade in favor of load _____ %

Rate of deceleration desired: Stop in _____ from _____ or _____

Required number of vehicle stops without main hydraulic system pressure _____

Is this application required to conform with recommended practices or standards? If so which ones:

SPECIFICATIONS MOBILE EQUIPMENT

Duty cycle _____

Type of brake actuation: Hydraulic Mechanical Air Spring set hydraulic release

Other _____

Fluid used for brakes DOT 3 or 4 brake fluid Mineral oil base Water base Synthetic base

Fluid manufacturer and brand name _____

BRAKE VALVE REQUIREMENTS

Attach any available brake performance specifications.

Brake type Caliper Drum In axle Number per vehicle _____

Self adjusting: Yes No

Indicate brake relation within axle to gear train (use diagram)

Brake mounted on driveline

Brake mounted between differential and planetary ratio

Brake mounted out board of planetary ratio



Caliper brake characteristics:

Piston diameter _____ Number of pistons per caliper side _____

Maximum stroke _____

Piston pretravel _____ to contact disc

Maximum allowable pressure _____ Rotor diameter _____

Volume requirements (per brake)

New lining _____ maximum Worn lining _____ maximum

Brake torque capacity (per brake) _____ at _____

Manufacturer _____ Model number _____

Drum brake characteristics:

Type _____ Brake size (diameter and width) _____ x _____

Wheel cylinder: diameter _____ Number _____

Piston travel _____ to contact drum

Actuation volume requirements (per brake):

New lining _____ maximum Worn lining _____ maximum

Brake torque capacity (per brake) _____ at _____

Maximum allowable pressure _____

Manufacturer _____ Model Number _____

In Axle brake characteristics:

Maximum allowable pressure _____

Axle manufacturer _____ Axle model number _____

Brake type: Dry Multiple Disc Wet Multiple Disc

Actuation volume requirements (per axle):

New lining _____ maximum Worn lining _____ maximum

Brake torque capacity (per axle) _____ at _____

Type of fluid used with brakes _____

ABS / TRACTION CONTROL REQUIREMENTS

Type of system: ABS Traction Control ABS and Traction Control

Nominal system voltage 12 vdc 24 vdc Other (specify) _____

Number of drive wheels 4 x 4 6 x 6 8 x 8 Other _____

Wheel speed sensor: MICO ABS controllers only support hall effect style sensors.

Number of pulses per one revolution of the wheel _____

Manufacturer of wheel speed sensor _____ Model number _____

Does the engine and transmission require SAE J1939 messages to be sent from the ABS controller? Yes No

If so, what are the messages to be sent? _____

Environmental requirements IP 65 (standard) IP 67 Other _____

Is steering assist desired? Yes No

Comments:

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 in effect on the date of sale or supply.



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