



Date _____

Application Data Sheet

(for Master Cylinders, Remote Actuators, Two Fluid Actuators, Air/Hydraulic Actuators, and Pressure Intensifiers)

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

Choose a component? Master Cylinder Boosted Closed Center Master Cylinder Boosted Dual Master Cylinder
 Remote Actuator Two Fluid Actuator Air/Hydraulic Actuator Pressure Intensifier

VEHICLE SPECIFICATIONS

Type of vehicle or equipment _____ Name and model number _____

Gross vehicle weight _____

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

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

Wheelbase: _____ Center of gravity (vertical): _____ loaded _____ empty

Rolling radius: front _____ Rolling radius: rear _____

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

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

Coefficient of friction between tire and ground (estimated) _____ Type of road surface _____

Is this application required to conform with recommended practices or standards, if so which ones.

HYDRAULIC SYSTEM CHARACTERISTICS

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

Maximum pump flow _____ Minimum pump flow _____

Pump type: Gear Van 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? _____

BRAKE SYSTEM SPECIFICATIONS

Type of brake system: Single Tandem Other _____

Type of brake actuator presently used _____ Bore diameter _____ , and stroke _____
 Pedal ratio _____ Pedal travel _____ Maximum pedal effort _____
 Maximum fluid displacement required _____ Maximum braking pressure _____
 Number of wheels to brake _____ Caliper _____ Drum _____
 Type of Fluid: DOT 3 or 4 brake fluid Mineral base hydraulic oil Water base Synthetic base
 Fluid manufacturer and brand name _____
 Type of coupling to brake lines _____
 Type of Mounting: Side mount Flange mount Other _____

Air system characteristics:

Maximum air pressure available from brake valve _____
 Compressor cut in pressure _____
 Type of Mounting: Side mount Flange mount Other _____

Caliper brake characteristics:

Piston diameter _____ Number of pistons per caliper side _____
 Maximum stroke _____ , or area _____
 Piston pretravel _____ to contact disc
 Volume requirements (per brake):
 New lining _____ maximum Worn lining _____ maximum
 Brake torque capacity (per brake): _____ at _____
 Maximum allowable pressure _____
 Manufacturer _____ Model Number _____

Drum brake characteristics:

Type _____ Brake size (diameter and width) _____ x _____
 Wheel cylinder: diameter _____ Number of wheel cylinders _____ Self adjusting Yes No
 Piston travel _____ to contact drum
 Actuation volume requirements (per brake):
 New lining _____ maximum Worn lining _____ maximum
 Brake torque capacity (per brake): _____ at _____
 Contact deflection _____ Contact area _____ System deflection _____
 Maximum allowable pressure _____
 Manufacturer _____ Model Number _____

Special military specification requirements:

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.

