



**G FORCE
Impact Monitoring Systems**

PRODUCT INFORMATION

BMI TECHNOLOGIES INC.

#405, 1333 – 8th Street SW, Calgary, Alberta T2R 1M6
Toll-free: 1-800-563-8867 Tel: (403) 244-3901 Fax: (403) 229-0135

G FORCE Impact Monitoring Systems are designed to create a safer workplace, and to reduce costs associated with unsafe vehicle operation. There are three **G FORCE Impact Monitoring Systems** to choose from.

G FORCE 1

A vehicle impact alarm system for small, single-shift environments where impacts are easily identified by management...

- ❑ Impact monitors are mounted to vehicles
- ❑ Impact thresholds programmed on a per-vehicle basis
- ❑ 'Alarm' state and optional lift interrupt for threshold-exceeding impacts
- ❑ Supervisor 'disarming' of vehicles in 'alarm' state

Benefits

- Improved driver accountability
- Improved driver performance and workplace safety
- Reduced costs associated with unsafe vehicle operation (i.e. vehicle damage, product damage, racking and facility damage, down time, operator injury)
- Accident report completion at time of impact
- Field-upgradeable to a G FORCE 2 system

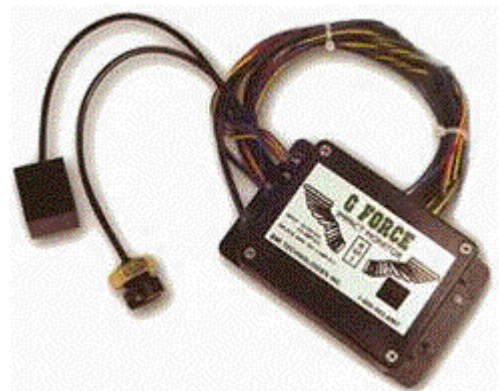
G FORCE 2

A vehicle safety and driver accountability system with G FORCE 1 system features PLUS...

- ❑ Assignment of authorization levels to operators and vehicles
- ❑ Mandatory operator login prior to vehicle use
- ❑ Computer software to maintain vehicle and operator information
- ❑ Impact data collection, storage and searching
- ❑ Vehicle maintenance data collection, storage and searching
- ❑ Excel exportability of impact and maintenance data
- ❑ 7 management reports

Benefits

- G FORCE 1 system benefits PLUS...
- Limited operator access to vehicles
- Greater operator accountability, performance and workplace safety due to login
- Computerized impact and maintenance data storage and retrieval
- Management information tool
- Fleet management tool limiting vehicle use to specific areas or for specific functions



Note: Not field-upgradeable to a G FORCE 3 system



G FORCE 3

A fleet safety and management information monitoring system with G FORCE 2 system features PLUS...

- ❑ Optional double login for performance of vehicle safety inspections by operators
- ❑ Programmable expiry period for supervisor DISARM keys
- ❑ Operator login data collection, storage and searching
- ❑ Operator and vehicle timekeeping
- ❑ Excel exportability of login data
- ❑ 6 additional management reports



Benefits

- G FORCE 2 system benefits PLUS...
- Computerized login and timekeeping data storage and retrieval
- Enhanced management information tool with safety and timekeeping reporting

WORKPLACE HEALTH & SAFETY

G FORCE Impact Monitoring Systems were designed to address OSHA concerns. Here's how:

- ❑ An accident report can be completed at the time of impact because a vehicle in 'alarm' must be 'disarmed' by a supervisor
- ❑ Impact data in the software can serve as a double check to ensure accident reports have been completed for each impact
- ❑ The use of authorization levels limits operators to the vehicles on which they've been trained
- ❑ Operator training or reevaluation dates can be managed from the software
- ❑ Operator login means greater operator accountability and safer vehicle operation
- ❑ Login reports provide an audit trail of vehicle use and safety checks completed

G FORCE Impact Monitoring Systems will assist you in achieving OSHA's ultimate goal: a safer workplace.

SAFETY = SAVINGS

Accountability reduces damage. Safety DOES save you money by reducing your costs on:

- ❑ Vehicle maintenance
- ❑ Vehicle downtime
- ❑ Product damage
- ❑ Racking and facility damage
- ❑ Operator downtime and injury



SYSTEM REQUIREMENTS & ORDER CHECKLIST

Use the following checklist to determine your requirements when ordering your **G FORCE Impact Monitoring System**.

Minimum system requirements

- IBM PC or compatible, Pentium 100, 32 MB RAM
- Windows 95/98/2000/NT/XP Pro
- CD-ROM drive
- Free 9-pin or 25-pin serial port
- 50 MB free space on hard drive
- Printer recommended but optional
- Stand-alone or network installation possible

G FORCE 1

- G FORCE 1 Impact Monitors – one per vehicle
 - Order “G FORCE 1” for electric lift trucks
 - Order “G FORCE 1-LP” for IC lift trucks
- DISARM keys – one per supervisor recommended; your dealer will assist you in determining how many are required for your installation
- PROGRAM keys – one set borrowed from your dealer to program vehicle impact thresholds

G FORCE 2

- G FORCE 2 Impact Monitors – one per vehicle
 - Order “G FORCE 2” for electric lift trucks
 - Order “G FORCE 2-LP” for IC lift trucks
- G FORCE 2 software (G-Link) and instruction manual – one per location
- G FORCE 2 Key Interface Unit – one for each computer
- DISARM keys – one per supervisor plus one for maintenance purposes recommended; your dealer will assist you in determining how many are required for your installation
- PROGRAM keys – your dealer will assist you in determining how many you will require for your installation
- OPERATOR keys – one per operator plus a few extra recommended (note: each Impact Monitor is shipped with one OPERATOR key)

G FORCE 3

- G FORCE 3 Impact Monitors – one per vehicle
 - Order “G FORCE 3” for electric lift trucks
 - Order “G FORCE 3-LP” for IC lift trucks
- G FORCE 3 software (G-Link) and instruction manual – one per location



- ❑ G FORCE 3 Key Interface Unit – one for each computer
- ❑ DISARM keys – one per supervisor plus one for maintenance purposes recommended; your dealer will assist you in determining how many are required for your installation
- ❑ PROGRAM keys – your dealer will assist you in determining how many you will require for your installation
- ❑ OPERATOR keys – one per operator plus a few extra recommended (note: each Impact Monitor is shipped with one OPERATOR key)
- ❑ DATA keys – your dealer will assist you in determining how many you will require for your installation

Recommended G FORCE System Accessories

- ❑ 105dB Auxiliary Horn provides the following benefits:
 - Impact Monitor installation is easier, faster and less expensive than if the vehicle's service horn is used
 - Distinctive sound that clearly identifies a vehicle in alarm
 - Reduced wear and tear on vehicle service horn
 - OEMs prefer the use of an auxiliary horn
 - Avoids disabling of vehicle if service horn fails as part of Impact Monitor installation

MANAGEMENT REPORTS

The G FORCE 2 and 3 systems generate several useful management information reports. G FORCE 3 reports include those listed under G FORCE 2. See sample reports attached.

G FORCE 2

- ❑ Vehicle Authorization Report – list of operators authorized on each vehicle
- ❑ Operator Authorization Report – list of vehicles each operator is authorized to use
- ❑ Impacts by Operator
- ❑ Impacts by Vehicle
- ❑ Impacts by Shift
- ❑ Impacts by Supervisor
- ❑ Maintenance by Technician
- ❑ Maintenance by Vehicle
- ❑ Maintenance Report – list of vehicle maintenance in date order

G FORCE 3

- ❑ All G FORCE 2 management reports PLUS...
 - Logins by Operator
 - Accumulated Hours by Operator
 - Logins by Vehicle
 - Accumulated Hours by Vehicle



Vehicle Authorization Report

Date: 06/26/2002

Time: 12:46 PM

Page: 1

Vehicle Description	Veh Authorization	Oper Operator	Position
Raymond Pallet Jack #12	11	Bill McMahon	Operator
	99	Bob Walsh	Maintenance
	11	Frank Finn	Operator
	11	Henry Smith	Operator
	11	Jack Frost	Operator
	11	Jock McPherson	Operator
	11	John Alexander	Operator
	11	John Jones	Operator
	11	Ron French	Operator
	11	Ron Russel	Sr. Operator
	11	Sam Schwartz	Operator
	11	Todd McDowell	Operator
	11	Vance MacKenzie	Senior Operator
Raymond Reach Truck #25	13	Alec Balfour	Operator
	99	Bob Walsh	Maintenance
	13	Dave Weddel	Operator
	13	Don Wilson	Operator
	13	Henry Smith	Operator
	13	Jack Frost	Operator
	13	Jock McPherson	Operator
	13	John Alexander	Operator
	13	Lorne Scott	Operator

Operator Authorization Report

Date: 04/18/2002

Time: 12:49 PM

Page: 1

Operator	Vehicle	Vehicle Auth
Alec Balfour	Operator	
	CAT Counterbalance #42	12
	Crown Reach Truck #31	13
	Hyster Counterbalance #37	12
	Raymond Reach Truck #25	13
	Reach Truck #12	3
	Toyota Counterbalance #47	12
	Yale Reach Truck #32	13
Bill McMahon	Operator	
	CAT Counterbalance #42	12
	Hyster Counterbalance #37	12
	Raymond Pallet Jack #12	11
	Toyota Counterbalance #47	12
Bob Walsh	Maintenance	
	CAT Counterbalance #42	12
	Crown Reach Truck #31	13
	Crown Stock Picker #36	14
	Hyster Counterbalance #37	12
	Raymond Pallet Jack #12	11

Impacts By Operator

Date: 04/18/2002

Time: 12:53 PM

Page: 1

Operator		Position			
Impact Date	Impact Time	Vehicle	Impact Type	Threshold	Description
<i>Supervisor</i>					
Alec Balfour		Operator			
09/21/2001	4:24:48 PM	Yale Reach Truck #32	Soft	0.3	Driver just back to work after being retrained. Driverran into reach truck #40 and bent the forks on the pallet jack. Driver terminated. Untrainable
<i>Ralph Young</i>					
Bill McMahon		Operator			
09/24/2001	10:21:49 PM	CAT Counterbalance #42	Soft	0.3	Ran off dock, playing chicken with unit #11, Driver sent for drug test, then sent home
<i>Ross McBain</i>					
Bob Wylie		Operator			
09/24/2001	9:26:41 AM	Raymond Reach Truck #25	Hard	0.8	Damaged hydraulics and bent racking in aisle #2. Truck required to go to maintenance for repair.
<i>Don Sabey</i>					
09/24/2001	1:06:00 PM	Raymond Reach Truck #25	Soft	0.3	Bent guard rails at entrance to aisle #12. Rails need to be replaced. Driver warned to be more careful when entering aisles and to slow down in turns.
<i>Don Sabey</i>					
09/25/2001	1:49:02 AM	Toyota Counterbalance #47	Hard	0.8	Don backed into stack of pallets and knocked them over. 12 pallets smashed beyond repair. Driver warned to keep his head up.
<i>Don Sabey</i>					
Craig Morrow		Operator			
09/21/2001	4:36:16 PM	Raymond Reach Truck #25	Soft	0.3	Turned corner too fast and dumped shrink wrapped pallet of product. Product written-off as damage was extensive. Cost of destroyed product \$980.00. Driver warned to slow down.
<i>Ralph Young</i>					
Dave Weddel		Operator			

Impacts by Vehicle

Date: 04/18/2002

Time: 12:54 PM

Page: 1

Vehicle Auth.		Vehicle			
Impact Date	Impact Time	Operator Name	Impact Type	Threshold	Description
<i>Supervisor</i>					
12		CAT Counterbalance #42			
09/21/2001	4:34:23 PM	Will Watson	Soft	0.3	Backed into conveyor system and bent structure. Conveyor shut down for two hours for repair. Approx \$1200.
<i>Ross McBain</i>					
09/24/2001	4:04:14 AM	Vance MacKenzie	Hard	0.8	Ran into post in aisle #12. Post dislodged from floor. Needs to be replaced. forks on truck damaged and need to be replaced. Operator reprimanded and told to slow down.
<i>Don Sabey</i>					
09/24/2001	10:21:49 PM	Bill McMahon	Soft	0.3	Ran off dock, playing chicken with unit #11, Driver sent for drug test, then sent home
<i>Ross McBain</i>					
09/25/2001	11:27:26 PM	Will Watson	Hard	0.8	Bent guard post in aisle #16. Post knocked off moorings and bent. Needs replacing. Forks bent and need to be replaced. Estimated of damage \$850.00
<i>Ralph Young</i>					
13		Crown Reach Truck #31			
09/21/2001	4:35:03 PM	Henry Smith	Hard	0.8	Ran into air conditioning duct with hydraulics up. Duct destroyed and needs to be replaced. No apparent damage to hydraulics on the forklift.
<i>Ross McBain</i>					
09/24/2001	4:04:57 AM	Ron Russel	Hard	0.8	Operator turned too quickly into rack causing product to fall off pallet. Estimate of product damage \$900.00. Driver sent home.
<i>Don Sabey</i>					
09/24/2001	10:21:44 PM	Andy Black	Soft	0.3	Ran into unit #23 Damage to fork lift \$500.00
<i>Ross McBain</i>					
09/25/2001	10:34:34 PM	Ron Russel	Soft	0.3	Backed into Crown stockpicker. Bent side of cab on the Crown. Truck looks like hell. Driver reprimanded for dangerous driving.
<i>Don Sabey</i>					
09/26/2001	4:29:26 PM	Dave Weddel	Hard	0.8	Hit beam over door when going fromwarehouse A to Warehouse B while driving

Impacts By Shift

Date: 04/18/2002

Time: 12:55 PM

Page: 1

Shift Name	Start Time	Stop Time				
Impact Date Impact Time Supervisor	Operator	Vehicle	Impact Type	Threshold	Description	
Day Shift						
09/10/2001 10:16:21 AM <i>Andy McTavish</i>	Don Jackson	Raymond Pallet Jack #12	Soft	0.7	New operator. Ran into unit #12 and bent forks. Driver sent for more training.	
09/11/2001 11:45:53 AM <i>Andy McTavish</i>	Don Jackson	Raymond Pallet Jack #12	Hard	1.1	Exited trailer too fast and alarm set off when going over dock plates. Driver warned to slow down as this is a safety hazard. No apparent damages to jack	
09/20/2001 9:27:36 AM <i>Joe Ferguson</i>	Frank Finn	Toyota Counterbalance #47	Hard	0.8	Backed the reach truck into rack in aisle #8. Guard rail bent ,, rack upright also bent. No apparent damages to reach truck.	
09/21/2001 12:09:51 PM <i>Andy McTavish</i>	Don Wilson	Yale Reach Truck #32	Soft	0.3	Turned corner too fast causing alarm. Driver warned to slow down as excessive speed coming out of aisles is extremely dangerous.	
09/24/2001 9:26:41 AM <i>Don Sabey</i>	Bob Wylie	Raymond Reach Truck #25	Hard	0.8	Damaged hydraulics and bent racking in aisle #2. Truck required to go to maintenance for repair.	
09/24/2001 1:06:00 PM <i>Don Sabey</i>	Bob Wylie	Raymond Reach Truck #25	Soft	0.3	Bent guard rails at entrance to aisle #12. Rails need to be replaced. Driver warned to be more careful when entering aisles and to slow down in turns.	
Afternoon Shift						
09/21/2001 4:24:48 PM <i>Ralph Young</i>	Alec Balfour	Yale Reach Truck #32	Soft	0.3	Driver just back to work after being retrained. Driverran into reach truck #40 and bent the forks on the pallet jack. Driver terminated. Untrainable	
09/21/2001 4:34:23 PM <i>Don Sabey</i>	Will Watson	CAT Counterbalance #42	Soft	0.3	Backed into conveyor system and bent structure.	

Impacts by Supervisor

Date: 04/18/2002

Time: 12:55 PM

Page: 1

Supervisor Name						
Impact Date	Impact Time	Operator Name	Vehicle	Impact Type	Threshold	Description
Andy McTavish						
09/10/2001	10:16:21 AM	Don Jackson	Raymond Pallet Jack #12	Soft	0.7	New operator. Ran into unit #12 and bent forks. Driver sent for more training.
09/11/2001	11:45:53 AM	Don Jackson	Raymond Pallet Jack #12	Hard	1.1	Exited trailer too fast and alarm set off when going over dock plates. Driver warned to slow down as this is a safety hazard. No apparent damages to jack
09/21/2001	12:09:51 PM	Don Wilson	Yale Reach Truck #32	Soft	0.3	Turned corner too fast causing alarm. Driver warned to slow down as excessive speed coming out of aisles is extremely dangerous.
Don Sabey						
09/24/2001	4:03:53 AM	Guy LaFleur	Yale Reach Truck #32	Hard	0.8	Bent racking in aisle #11 on third level. Product removed from damaged rack until repaired. Driver sent for drug test.
09/24/2001	4:04:03 AM	Todd McDowell	Hyster Counterbalance #37	Hard	0.8	Damaged hydraulics and bent racking in aisle #3. Truck required to go to maintenance for repair.
09/24/2001	4:04:14 AM	Vance MacKenzie	CAT Counterbalance #42	Hard	0.8	Ran into post in aisle #12. Post dislodged from floor. Needs to be replaced. forks on truck damaged and need to be replaced. Operator reprimanded and told to slow down.
09/24/2001	4:04:27 AM	John Jones	Raymond Pallet Jack #12	Hard	0.8	Hit the wall at end of warehouse while backing into charging area. No apparent damage.
09/24/2001	4:04:37 AM	Jock McPherson	Raymond Reach Truck #25	Hard	0.8	Backed into conveyor system and bent structure. Conveyor shut down for four hours for repairs.
09/24/2001	4:04:47 AM	Mitchell Brown	Crown Stock Picker #36	Hard	0.8	Ran into rack in aisle #2. Rack bent and delared unsafe until welded. Product removed

GF2/3 Sample Reports

Maintenance by Technician

Date: 04/18/2002

Time: 1:04 PM

Page: 1

Technician	Position	Vehicle	Description
<p>Date Supervisor</p>			
Bill Fitzpatrick	Technician		
09/21/2001 <i>Maintenance</i>	CAT Counterbalance #42		Truck in for service, also battery master and G-Force 2, approx \$1200
09/21/2001 <i>Maintenance</i>	Crown Reach Truck #31		Truck in due to accident, waiting for parts
Sandy Fitch	Sr. Operator		
09/21/2001 <i>Maintenance</i>	Hyster Counterbalance #37		Truck in for new tires.

End Of Report

Maintenance by Vehicle

Date: 04/18/2002

Time: 1:05 PM

Page: 1

Vehicle Auth	Vehicle	Technician	Description
<p>Date Supervisor</p>			
12	CAT Counterbalance #42		
09/21/2001 <i>Maintenance</i>	Bill Fitzpatrick		Truck in for service, also battery master and G-Force 2, approx \$1200
13	Crown Reach Truck #31		
09/21/2001 <i>Maintenance</i>	Bill Fitzpatrick		Truck in due to accident, waiting for parts
12	Hyster Counterbalance #37		
09/21/2001 <i>Maintenance</i>	Sandy Fitch		Truck in for new tires.

End Of Report

Maintenance Report

Date: 04/18/2002

Time: 1:05 PM

Page: 1

Date	Vehicle	Technician	Desc
09/21/2001	CAT Counterbalance #42	Bill Fitzpatrick	Truck in for service, also battery master and G-Force 2, approx \$1200
09/21/2001	Crown Reach Truck #31	Bill Fitzpatrick	Truck in due to accident, waiting for parts
09/21/2001	Hyster Counterbalance #37	Sandy Fitch	Truck in for new tires.

End Of Report

GF2/3 Sample Reports

Logins by Operator

Date: 04/18/2002

Time: 12:56 PM

Page: 1

Operator Name

Login Date	Login Time	Vehicle Description	Safety check performed	Duration (Hrs)
Alec Balfour				
09/21/2001	3:21:02 PM	Yale Reach Truck #32	Yes	1.07
09/21/2001	4:36:10 PM	Yale Reach Truck #32		4.85
Bill Fitzpatrick				
09/21/2001	1:42:17 PM	Crown Reach Truck #31	Yes	0.01
Bob Walsh				
09/19/2001	11:57:43 AM	CAT Counterbalance #42	Yes	0
Bob Wylie				
09/24/2001	7:55:10 AM	Raymond Reach Truck #25	Yes	1.53
09/24/2001	9:26:32 AM	Raymond Reach Truck #25		0.13
09/24/2001	12:32:26 PM	Raymond Reach Truck #25		0.47
Craig Morrow				
09/21/2001	3:32:30 PM	Raymond Reach Truck #25	Yes	1.07
09/21/2001	4:36:25 PM	Raymond Reach Truck #25		4.84
Dave Weddel				
09/21/2001	3:18:23 PM	Toyota Counterbalance #47	Yes	5.92
09/21/2001	9:24:37 PM	Toyota Counterbalance #47		0.01
Don Wilson				
09/21/2001	10:48:05 AM	Yale Reach Truck #32		1.38

Accumulated hours by Operator

Date 04/18/2002

Time 12:56 PM

Page 1

Operator Name

Accumulated Hours

Alec Balfour	5.92
Bill Fitzpatrick	0.01
Bill McMahon	
Bob Walsh	0
Bob White	
Bob Wylie	2.13
Craig Morrow	5.91
Dave Weddel	5.93
Don Wilson	4.44

Logins by Vehicle

Date: 04/18/2002

Time: 12:57 PM

Page: 1

Vehicle Auth	Vehicle Description		Safety check performed	Duration (Hrs)
Login Date	Login Time	Operator Name		
12 CAT Counterbalance #42				
09/19/2001	11:28:17 AM	Lome Scott		0
09/19/2001	11:57:43 AM	Bob Walsh	Yes	0
09/20/2001	2:09:37 PM	Web McDonald	Yes	0.32
09/21/2001	12:17:53 PM	Sandy Fitch	Yes	0
09/21/2001	1:44:34 PM	Jack Frost	Yes	0.01
09/21/2001	1:45:48 PM	Jack Frost		0.1
09/21/2001	1:51:55 PM	Jack Frost		1.49
09/21/2001	3:21:12 PM	Jack Frost		0.13
09/21/2001	3:30:22 PM	Will Watson	Yes	1.06
09/21/2001	4:35:54 PM	Will Watson		5.14
09/24/2001	9:25:58 AM	Todd McDowell	Yes	0.12
09/24/2001	12:32:12 PM	Todd McDowell		0
09/24/2001	12:32:56 PM	Todd McDowell		0.43
13 Crown Reach Truck #31				
09/21/2001	10:51:51 AM	Lome Scott		1.37
09/21/2001	12:13:34 PM	Lome Scott		0.33
09/21/2001	12:34:54 PM	Don Wilson	Yes	0.45
09/21/2001	1:01:37 PM	Don Wilson		0

Accumulated hours by Vehicle

Date 04/18/2002

Time 12:57 PM

Page 1

Vehicle Auth	Vehicle Description	Accumulated Hours
12	CAT Counterbalance #42	8.8
13	Crown Reach Truck #31	12.51
14	Crown Stock Picker #36	12.3
12	Hyster Counterbalance #37	12.38
11	Raymond Pallet Jack #12	6.5
13	Raymond Reach Truck #25	12.39
3	Reach Truck #12	
12	Toyota Counterbalance #47	12.47
13	Yale Reach Truck #32	12.46

End Of Report