

Approved 2-5-91
Date

MINUTES OF THE House COMMITTEE ON Transportation

The meeting was called to order by Representative Herman Dillon at
Chairperson

1:35 aXX/p.m. on January 29, 1991 in room 519-S of the Capitol.

All members were present except:

Representative Darrel Webb - Excused

Committee staff present:

Tom Severn - Legislative Research
Hank Avila - Legislative Research
Bruce Kinzie - Revisor of Statutes
Jo Copeland - Committee Secretary

Conferees appearing before the committee:

Glen Wiglesworth, Spokesman for Pearson-Deitchman Research and
Development Company

Barbara Pringle, President, Kansas State Pupil Transportation
Association

Chuck Stuart, United School Administration

Jacque Oakes, Schools for Quality Education

Mark Tallman, Kansas Association of School Boards

The meeting was called to order by Chairman Dillon, the first order
of business was a hearing on HB 2030 concerning brake safety system
equipment on school buses.

Chairman Dillon introduced Glen Wiglesworth, who testified in support
of HB 2030 and briefed the committee. (Attachment 1)

Chairman Dillon introduced Barbara Pringle, who testified as a opponent
to HB 2030. (Attachment 2)

Chairman Dillon introduced Chuck Stuart, who testified as an opponent
to HB 2030. (Attachment 3)

Chairman Dillon introduced Jacque Oakes, who testified as an opponent
to HB 2030. (Attachment 4)

Chairman Dillon introduced Mark Tallman, who testified as an opponent
to HB 2030. (Attachment 5)

Committee discussion and questions followed Glen Wiglesworth and
Jacque Oakes testimony.

The hearing on HB 2030 ended.

Chairman Dillon introduced his intern, Kate Lynch, to the Committee.

Chairman Dillon introduced Wayne Templeton from Wichita, Ks in regard
to a plan to provide a regular route bus service for the State of
Kansas. (BUSINESS PLAN FOR KANSA STAGE LINES, INC.) This plan will
provide for the transportation of passengers and freight on a daily
service. It is designed to provide an additional cash flow to
subsidize the regular route service with a charter/tour operation.
(Attachment 6)

Questions and discussion followed.

CONTINUATION SHEET

MINUTES OF THE House COMMITTEE ON Transportation,
room 519-S, Statehouse, at 1:35 ~~XXn.~~/p.m. on January 29, 1991.

Representative Delbert Gross moved introduction for two Committee Bills: (1) That KDOT look at alternatives in the use of amber lights on KDOT vehicles. Representative Shallenburger seconded the motion. Motion carried. (2) Allowing special permits for Oil Field Pulling Units. Representative Freeman seconded the motion. Motion carried.

Chairman Dillon said the next committee meeting will be February 5, 1991.

Meeting adjourned at 2:33 p.m.

GUEST LIST

COMMITTEE: HOUSE TRANSPORTATION COMMITTEE

DATE: 1-29-91

NAME (PLEASE PRINT)	ADDRESS	COMPANY/ORGANIZATION
Wayne Templeton	357 ^{Wichita, KS} Country Acres	Kansas Stage Lines
Dorothy Templeton	6712 ^{Wichita} 357 Country Acres	Kansas Stage Lines
CHUCK STUART	TO PEKA	UNITED School ADMN
Noble Morrell	Topoka	KDOT
Scott Rask	Topoka	KDOT
GLEN WIGLES WORTH	3005 W. 83 RD LEAWOOD, KS.	P.D. RESEARCH + DEVELOPMENT.
Robert Hales	Topoka	KDOT
MOKHTAR AHMAD	"	"
Ken Stodgell	Topoka	KDOT
Leroy Jones	Lenexa	BLE
Matthew Elliott	Overland	Pape
Dawn Pickard	Lawrence	Intern
Jacqueline Dakes	Topoka	SQE
Mike Kroger	Topoka	KADLC
AO Maxwell	Topoka	KCC
Karen Lelberlin	Overland	NONE
Ruth A. Sedelmaier	Overland	NONE
JACK TIERCE	Topoka	KCC
Lt. BILL JACOBS	TOPEKA	KS HIGHWAY PATROL
micah Pugh	Holton	None
Kadoma Komonady	Soldier	None
Reigh Kuttner	Circleville	None
Chester OSZMAN	K.C.K	None
Barbara Pringle	Emporia	Kans. St. Pupil Trans.
Yee Gehring	Buhler	Kans. St. Pupil Trans.
Mary C. Zwick	Topoka	Hain. Hols. Comm. Ass.
Warren Hoemann	Overland Park	Yellow Freight System

Mark Tallman	Topka	K-7-E
Bob Toller	Topka	K-C-11

- [54] METHOD AND APPARATUS FOR BRAKE APPLICATION
- [75] Inventors: Walter H. Deitchman, Shawnee Mission; Gaylord R. Pearson, Kansas City, both of Kans.
- [73] Assignee: **Pearson and Deitchman Research and Dev. Co., Inc., Shawnee Mission, Kans.**

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4,699,435	10/1987	Wupper	303/6.1 X

- [21] Appl. No.: 161,253
- [22] Filed: Feb. 22, 1988

Primary Examiner—Andres Kashnikov
 Assistant Examiner—Timothy Newholm
 Attorney, Agent, or Firm—Kokjer, Kircher, Bradley, Wharton, Bowman & Johnson

Related U.S. Application Data

- [63] Continuation-in-part of Ser. No. 11,116, Feb. 5, 1987, abandoned.
- [51] Int. Cl.⁴ B60T 13/00; B60K 28/16; G05G 1/14
- [52] U.S. Cl. 303/6.1; 303/9.61; 180/271; 180/286; 74/512
- [58] Field of Search 303/1, 6.1, 9.61, 20, 303/93, 100; 180/271, 281, 286; 188/2 R; 192/129 A, 129 B; 105/341; 74/512

[57] ABSTRACT

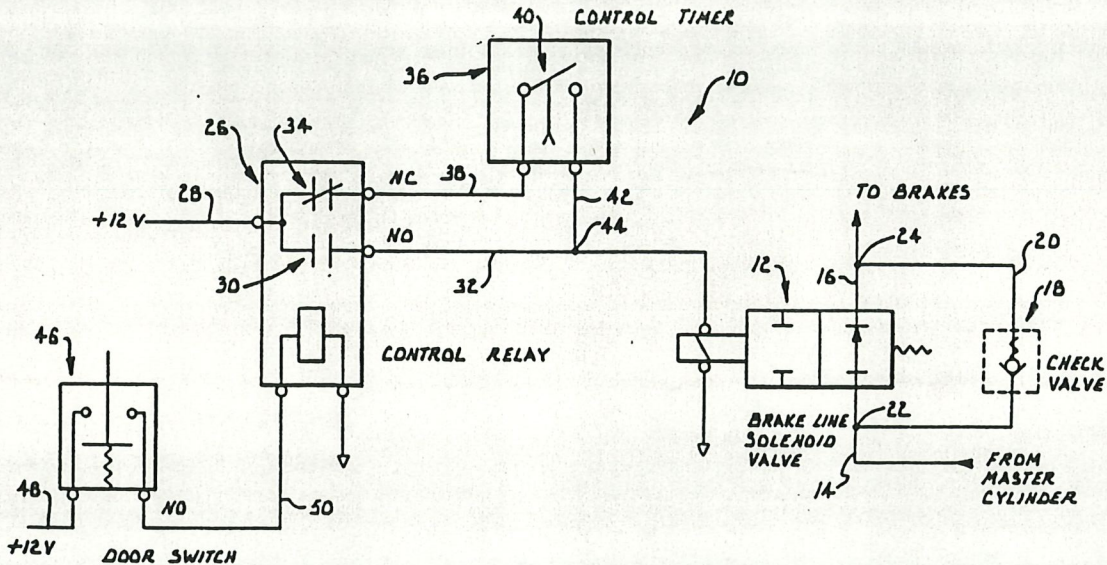
A valve is coupled with a brake line of a vehicle for causing or maintaining vehicle brake application. A switch coupled with a vehicle door regulates operation of the valve. When the vehicle door is open, the switch signals the valve to cause or maintain brake application. A timer coupled with the valve maintains the valve in an applied condition for a predetermined period of time after the door has been closed to allow disembarking passengers adequate time to move away from the vehicle. A sensor may be coupled with the vehicle for determining vehicle speed and preventing operation of the valve when the vehicle is traveling above a predetermined speed.

[56] References Cited

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15 Claims, 3 Drawing Sheets



House Transp
 1-29-91
 Attachment 1

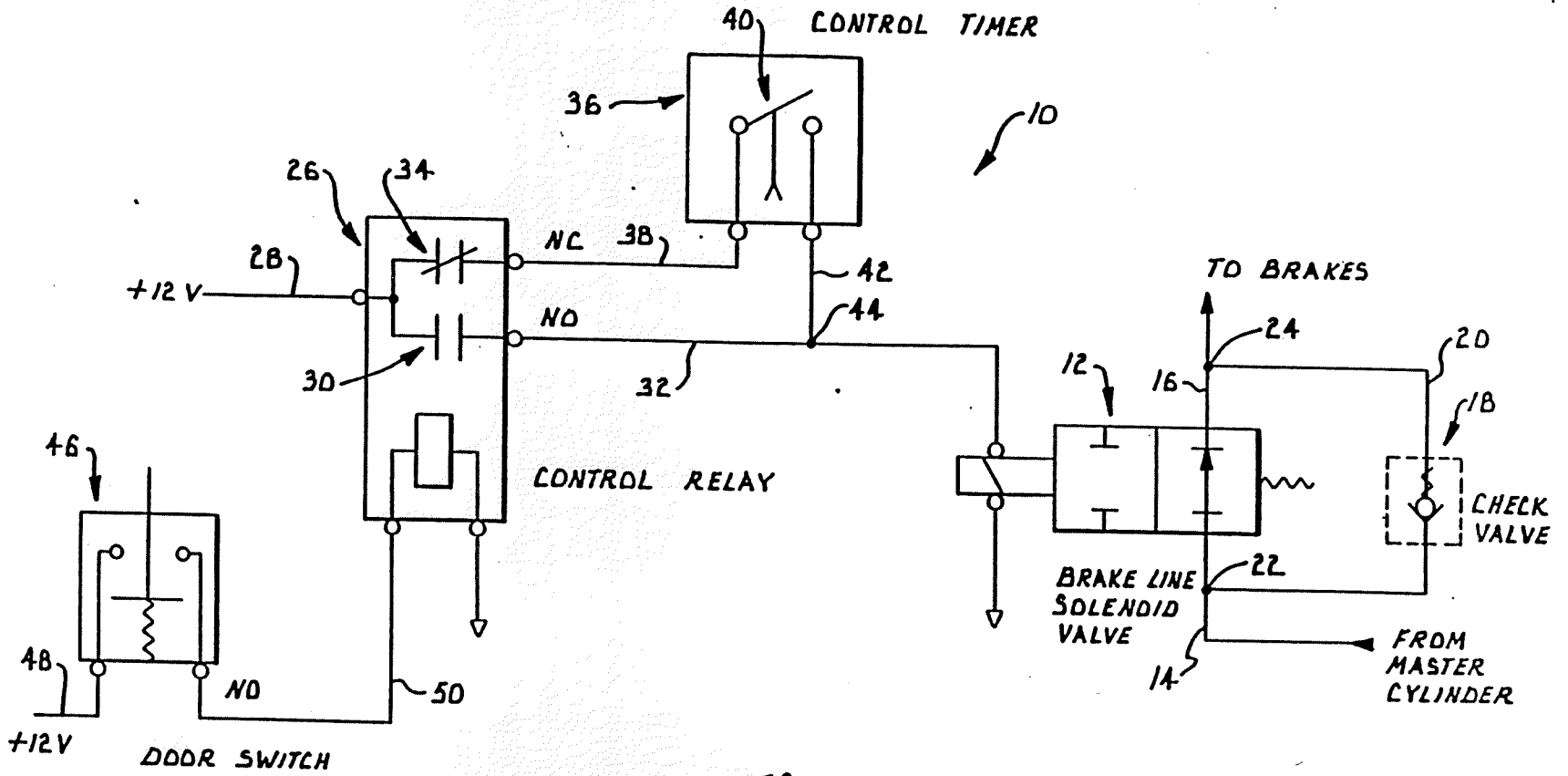


Fig. 1.

Attach. 1-2

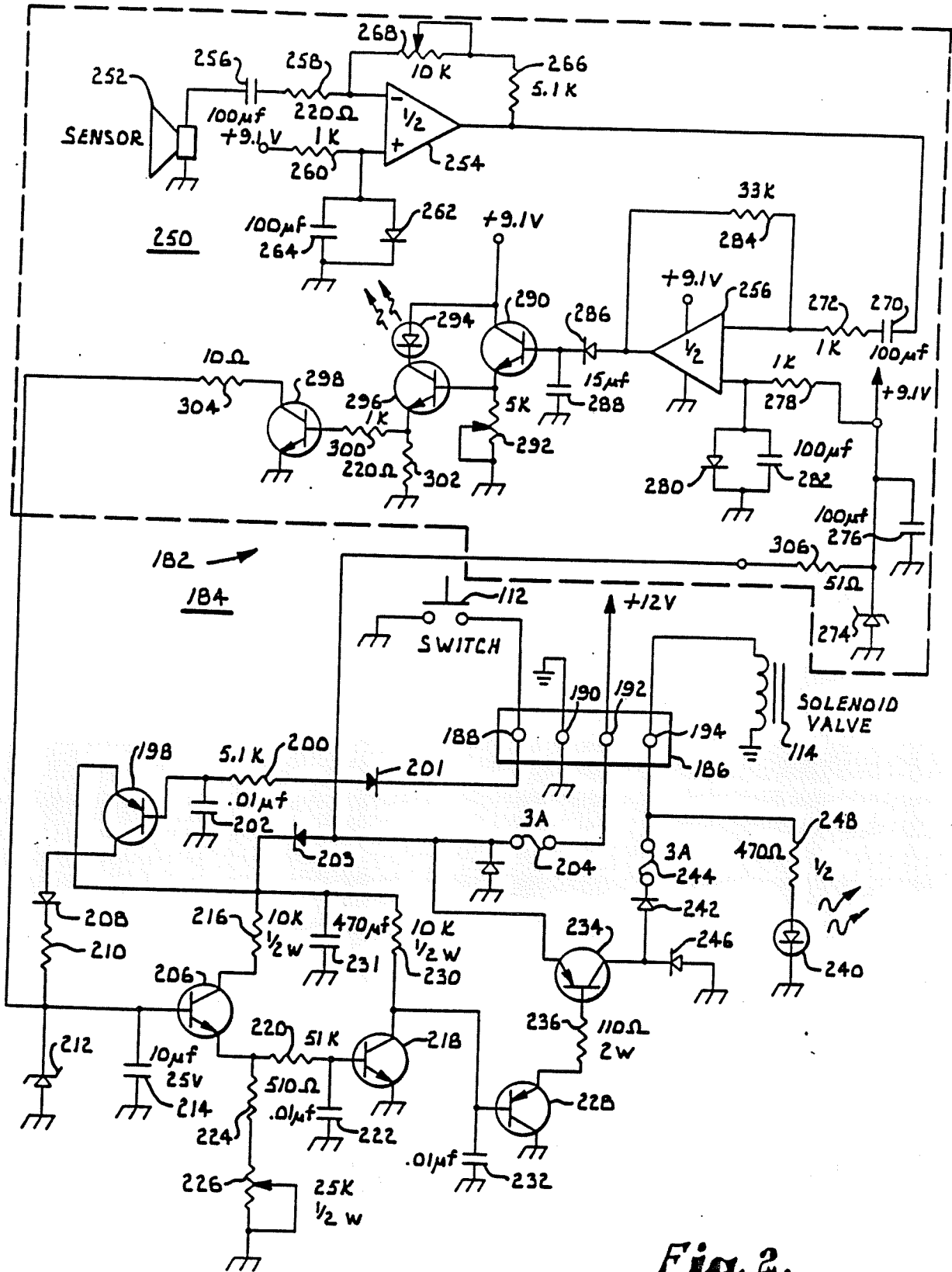
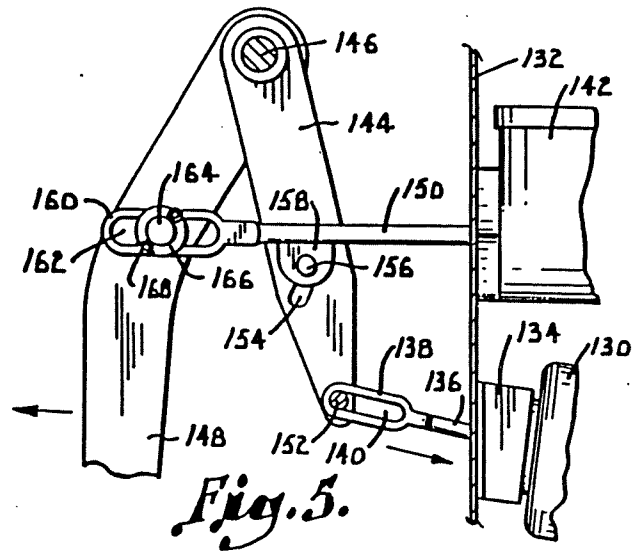
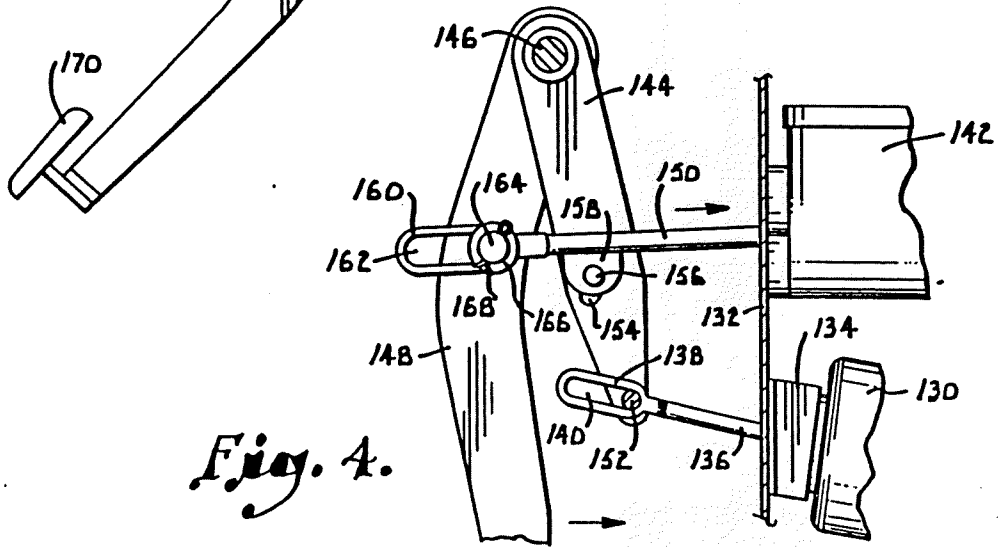
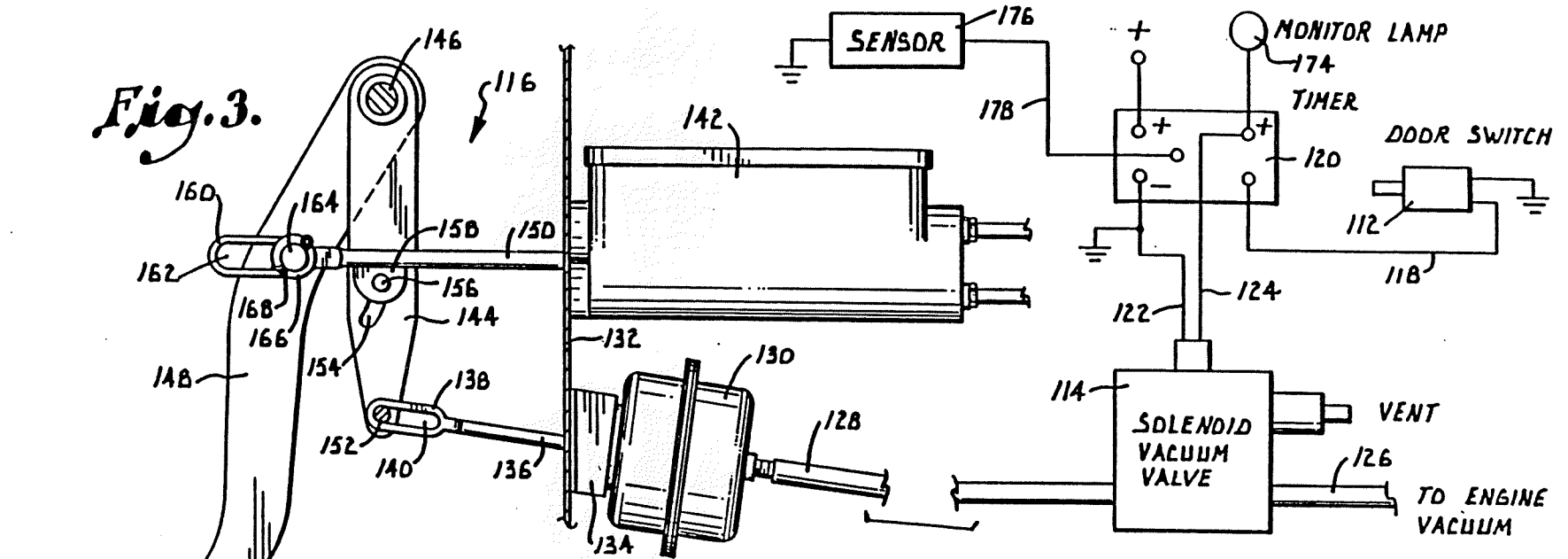


Fig. 2.

Attach. 1-3



Attach. 1-4

METHOD AND APPARATUS FOR BRAKE APPLICATION

This is a continuation-in-part of co-pending application Ser. No. 011,116, filed on Feb. 5, 1987.

BACKGROUND OF THE INVENTION

This invention relates in general to braking systems and, more particularly, to a system operable to apply or maintain the application of a vehicle's brakes while a vehicle door is open and to continue to maintain the brakes in an applied condition for a predetermined period of time after the door has been closed.

Numerous injuries and deaths are caused each year by vehicles striking individuals who are waiting to board or who have disembarked from the vehicle. This problem is particularly acute with school buses transporting school children. While the children are often instructed on the proper procedures for getting on and off the school bus, they frequently disobey such instructions and move into the path of the bus. At other times, the children stumble as they disembark and are struck by the rear wheels of the bus if the driver pulls away from the stop without checking to make sure the child has moved a safe distance from the bus. Injuries have also been known to occur when the child's clothing or book bag becomes caught in the vehicle door and the bus pulls away before the driver notices the entangled child. In addition, when a bus is stopped on an incline, a driver preoccupied with opening and closing the door may fail to maintain firm pressure on the brake pedal and the resulting movement of the bus may also result in injury to those in the vicinity of the bus.

A prior attempt to limit such injuries has focused on a system which automatically applies the vehicle brakes when the vehicle has slowed to a predetermined speed. This system has an obvious disadvantage in that the vehicle is forced to stop regardless of whether the vehicle has slowed because of the flow of traffic or is stopping to let off passengers. Other systems have interlocked the brakes and the vehicle doors so that the brakes are applied and cannot be released when the doors are open. While these systems may prevent inadvertent movement of the vehicle when the doors are open, they do not prevent injuries which result after the door has closed and the driver pulls away before a disembarking passenger has moved a safe distance from the vehicle.

SUMMARY OF THE INVENTION

It is an object of this invention to provide a system which will automatically maintain application of the brakes of a vehicle when a vehicle door is opened and for a predetermined period of time after the door is closed to prevent movement of the vehicle and injury which might result to individuals who are waiting to board the vehicle or who have disembarked from the vehicle.

As a corollary to the previous objective, it is another object of the invention to provide a system as described which, while the door remains open, will maintain the brakes in an applied condition to prevent vehicle movement should the brake pedal be released.

A further object of this invention is to provide a system which will prevent release of a vehicle's brakes when a vehicle door is opened, but which will allow

additional braking pressure to be applied if needed to prevent vehicle movement.

It is a still further object of this invention to provide a system which will automatically cause application of the vehicle brakes when the vehicle door is open so that the vehicle will stop even if the driver should fail to depress the brake pedal.

It is also an object of this invention to provide a brake safety system as described which prevents the driver from releasing the brakes while the door is open and for a predetermined period after it is closed so that the driver may not circumvent the safety features of the invention.

To accomplish these and other related objects of the invention, a valve coupled with the brake line of the vehicle is provided and is moveable between a first position preventing release of the vehicle brakes and a second position allowing release of the brakes. The valve is moved to the first position when the vehicle door is opened and is moved to the second position after the door is closed. A timer coupled with the valve delays movement of the valve to the second position for a predetermined period of time after the door has closed.

In another embodiment of the invention, a vacuum valve or other means is coupled with the vehicle brake system through a linkage which causes engagement of the brakes when the valve is activated upon opening of the vehicle door. The linkage allows movement of the brake pedal independently of the vacuum valve to prevent release of the brakes when the valve is activated. A sensor coupled with the vehicle prevents activation of the valve while the vehicle is traveling above a predetermined speed.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a diagram of the apparatus of one embodiment of the present invention utilizing graphic symbols to illustrate the various components.

FIG. 2 is a diagram of a control circuit of a second embodiment of the present invention.

FIG. 3 is an elevational view of the second embodiment of the invention with portions shown schematically for purposes of illustration.

FIG. 4 is a fragmentary elevational view of a portion of the apparatus shown in FIG. 3 with arrows indicating the direction of movement of various components.

FIG. 5 is a fragmentary elevational view similar to that shown in FIG. 4 with arrows indicating the direction of movement of various components.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, one embodiment of the apparatus of the present invention is represented generally by the numeral 10. The apparatus 10 includes a normally open, two-way brake line solenoid valve 12 which is of the type known to those of skill in the art and comprises an electrically energized coil of insulated wire, a plunger, and a pair of ports. A brake line 14 emanating from a master cylinder (not shown) is coupled with one of the ports and another brake line 16 leading to the vehicle brakes (not shown) is coupled with the other port. The apparatus 10 has utility with braking systems employing various types of fluid including air brakes. A one-way check valve 18 is positioned in a bypass brake line 20 which is coupled with brake line 14 at junction 22 and brake line 16 at junction 24. The check valve 18 may be of any of the various

types of fluid control devices which allow only a one directional flow of the fluid, such as swing, ball or vertical check valves.

An electrical relay 26 for controlling the brake line solenoid valve 12 is in electrical communication with the coil of the solenoid valve 12. A 12-volt power source such as the vehicle battery is coupled with the control relay 26 by conductor 28. A pair of normally open contacts 30 in the control relay 26 are coupled with conductor 28 and a conductor 32 which connects the relay with the coil of the solenoid valve 12. A pair of normally closed contacts 34 in the control relay 26 are coupled with a control timer 36 by conductor 38. A switch 40 in the control timer 36 connects conductor 38 with a conductor 42 which joins with conductor 32 at junction 44.

A normally open door switch 46 is mounted for contact with a vehicle door (not shown) and is maintained in an open position when the vehicle door is closed and then moves to a closed position when the vehicle door is open. The switch 46 is connected by conductor 48 to a 12-volt power source and is connected with control relay 26 by conductor 50.

In operation, when the driver of a vehicle applies the brakes by depressing the brake pedal in preparation for stopping to pick up or unload passengers, the pressure of the brake fluid in brake lines 14 and 16 increases through conventional operation of the master cylinder. The solenoid valve 12 is in a normally open position and the brake fluid is allowed to flow through the valve to cause application of the brakes to bring the vehicle to a complete stop. When the vehicle door is then opened, the door switch 46, which is in a normally open position, is closed and current flows from the 12-volt power source through conductor 48, switch 46, and conductor 50 to the control relay 26, thus closing the normally open contacts 30 and opening the normally closed contacts 34. Current then flows from the 12-volt power source through conductors 28 and 32 to the coil of the solenoid valve 12. The energized coil creates a magnetic field and shifts the plunger to a first position to block the flow of brake fluid through the valve 12. The valve contains the pressure in brake line 24 and prevents the release of the brakes even if pressure on the brake pedal is released.

When the door of the vehicle is then closed, the door switch 46 is opened, breaking the circuit leading to the control relay through conductor 50. The normally open contacts 30 are then opened and the normally closed contacts 34 are closed. Current then flows from the 12-volt power source through conductors 28 and 38 to the control timer 36 and closes the switch 40 for a predetermined period of time. Current flows across the switch 40 and through conductor 42 to maintain current flow through a portion of conductor 32 to the coil of the solenoid valve 12. The plunger is thus maintained in the first position blocking the flow of fluid through the solenoid valve 12. After the predetermined period of time has expired, the timer 36 opens the switch 40 and blocks the flow of current through conductors 42 and 32 to the solenoid valve 12. The coil is then deenergized and the plunger moves to a second or original position which allows the flow of fluid through the solenoid valve 12 and the release of the brakes.

The check valve 18 and bypass brake line 20 permits the driver of the vehicle to supply additional braking pressure when the plunger of the solenoid valve 12 blocks the flow of brake fluid through the valve 12.

Depression of the brake pedal while the plunger is in the first position forces brake fluid through bypass line 20 and check valve 18 to increase the braking pressure. When the brake pedal is released, reverse flow of the brake fluid through line 20 is blocked by the check valve 18.

Thus, the apparatus 10 of the present invention maintains the applied braking pressure while a vehicle floor is open. When the vehicle door is closed, the braking pressure is maintained for a predetermined period of time to prevent movement of the vehicle until a sufficient time has elapsed to permit disembarking passengers to move a safe distance from the vehicle. This period of time may be adjusted but is preferably approximately five seconds. The apparatus 10 also prevents injury to passengers by preventing movement of the vehicle should the driver release pressure on the brake pedal while parked on an incline. The bypass check valve 18 allows additional braking pressure to be applied should additional braking pressure be needed.

Turning now to FIGS. 2-4, an alternate embodiment of the invention will be described. Apparatus 110 may be operated to cause and maintain vehicle brake application under preselected conditions. The apparatus generally comprises a door switch 112 which is mounted on the vehicle for determining when a vehicle door is moved between open and closed positions, a solenoid vacuum valve 114 which is coupled with the door switch, and a mechanical linkage 116 which operably couples the vacuum valve with the vehicle braking system.

Door switch 112 may comprise various types of sensing elements for determining the position of the vehicle door. Depending upon the type of sensing element utilized, switch 112 may be variously positioned in relation to the door. Preferably, a mechanical switch is coupled with the door frame for indicating whether the door is in an open or closed position. Other types of switches may also be used for this purpose.

Switch 112 is coupled with solenoid valve 114 by a suitable conductor 118 which leads to a control box 120 and conductors 122 and 124 which lead from the control box to the solenoid valve. Valve 114 may comprise various types of known solenoid vacuum valves and is coupled by a vacuum line 126 to a vacuum source such as provided by the vehicle engine. The valve is coupled by another vacuum line 128 to a vacuum pod 130 which is mounted on firewall 132 in the engine compartment by bracket 134. Pod 130 comprises an external housing enclosing internal components which are coupled with an extendable elongated member or plunger rod 136. The internal components of vacuum pod 130 may comprise various types of vacuum operable arrangements suitable for causing axial extension and retraction of member 136.

Member 136 comprises a generally Y-shaped rod which extends through the firewall 132 and forms a part of mechanical linkage 116. The outer end portion of the rod comprises a retainer element 138 having a closed-ended slot 140. Another retainer element (not shown) extends from the rod end portion is spaced apart and side-by-side relationship to element 138 to form the Y-shape of the rod.

Linkage 116 provides a mechanical coupling of vacuum pod 130 with a vehicle master brake cylinder 142. The linkage comprises the elongated member 136, a linkage arm 144 which is coupled at one end with member 136 and at the other end with a pivot rod 146, a

brake pedal linkage arm 148, and a plunger rod 150 which couples the linkage arms 144 and 148 with master cylinder 142. Linkage arm 144 includes a retaining pin 152 which extends through the lower end of the arm and is received within the closed slots 140 of the re- 5 tainer elements 138. A washer placed over the pin and a cotter pin (not shown) extending through the end portion of the pin may be used to maintain the pin within each slot.

Linkage arm 144 is coupled with plunger rod 150 by 10 an arcuate, generally longitudinally extending slot 154 positioned in the linkage arm to receive a guide pin 156 which is connected to an ear portion 158 of plunger rod 150. The slot provides a camming surface for pin 156 to guide relative movement of the linkage arm and plunger 15 rod. Pin 156 extends through the slot and may be maintained therein by a washer and cotter pin.

Brake pedal linkage arm 148 is mounted at one end on pivot rod 146 but may pivot independently of linkage 20 arm 144. A brake pedal 170 is coupled with the other end of linkage arm 148. A spring or other means is coupled with the linkage arm for biasing it toward the normal operating position shown in FIG. 3. The outer end portion of plunger rod 150 includes a retainer element 160 having a closed-ended slot 162 formed therein. 25 A retaining pin 164 mounted on the brake pedal linkage arm 148 extends through slot 162 to couple the linkage arm with brake master cylinder 142. A washer 166 and cotter pin 168 are used to prevent disengagement of the pin 164 from slot 162.

Brake master cylinder 142 is mounted to firewall 132 and includes brake hydraulic lines 172 which lead to the individual wheel brake cylinders. It is to be understood, of course, that other types of braking systems such as air 30 brakes may also be utilized with this invention.

The control box 120 contains the principal circuitry for controlling operation of the apparatus 110. One or more monitor lamps 174 may be coupled with the control box and positioned in the vehicle at a location visible 35 to the driver. A sensor 176 which will be subsequently described in greater detail is connected to the control box by a suitable conductor 178. Another conductor 180 connects the control box with a 12 volt power supply such as a primary or auxiliary vehicle battery.

Turning to FIG. 2, the apparatus control circuitry 182 which is coupled with control box 120 will now be described. Circuitry broadly designated as 184 regulates 40 operation of solenoid vacuum valve 114 and includes a wiring unit 186 having a series of terminals 188, 190, 192 and 194. Terminal 188 is coupled with door switch 112. Terminal 190 is wired with the common chassis line and is also grounded. Terminal 192 is connected to a 12 volt power supply and terminal 194 is coupled with solenoid vacuum valve 114.

An emitter npn-type transistor 198 is wired to terminal 188 through a series resistor 200 and diode 201. A high frequency gain regulating capacitor 202 is also connected to the transistor base connection. The transistor emitter connection is coupled with terminal 192 45 and the power supply through diode 203 and fuse 204. The collector connection is wired to the base connection of npn-type transistor 206 through diode 208 and resistor 210. A Zener diode 212 and a timing capacitor 214 are also connected with the base connection of transistor 206. The collector connection of transistor 206 is connected through biasing resistor 216 with the emitter of transistor 198 and the power supply. 50

The emitter of transistor 206 is coupled with the base of npn-type transistor 218 through biasing resistor 220. A variable RC timing circuit is coupled with transistor 218 base and includes capacitor 222 which reduces the high frequency gain of transistor 218, fixed resistor 224, capacitor 214, and variable resistor 226. The emitter connection of transistor 218 is coupled with the common chassis ground and the collector connection is coupled with the base of npn-type transistor 228. A biasing resistor 230 and capacitor 231 are also provided in the connection between transistor 218 and terminal 192.

A capacitor 232 is connected to the base of transistor 228 for reducing the high frequency gain. Transistor 228 collector is coupled to the chassis ground and the emitter is coupled to the base connection of power transistor 234 through resistor 236. The emitter connection of transistor 234 is linked to the power supply and the collector connection is coupled with terminal 194 and solenoid vacuum valve 114. The emitter connection is also coupled with an LED indicator 240 which corresponds to monitor lamp 174. Diode 242 and fuse 244 are placed in series between the terminal 194 and transistor 234 collector connection. A diode 246 is positioned in wiring which leads from the chassis ground and is connected to the wiring leading from the collector. A resistor 248 is placed in series with LED indicator 240.

The transistors 198, 206, 218, 228 and 234 comprise npn and npn type transistors with transverse biased bases. Transistors 206 and 218 may be obtained under Motorola part number 2N3904. Transistor 228 may be obtained under Motorola part number 2N2907A and transistor 234 is available under Motorola part number MJ2955A or ECG281. 30

That portion of the circuitry designated by the numeral 250 comprises a sealed dynamic sensor 252 which is coupled with a pair of two input operational amplifiers 254 and 256. Sensor 252 comprises a low impedance air sealed dynamic microphone and corresponds to sensor 176 previously identified. 35

Sensor 252 is coupled with amplifier 254 through a series capacitor 256 and resistor 258. Amplifier 254 is biased with a 9.1 volt power supply through resistor 260. A biasing circuit, comprising a diode 262 and capacitor 264 connected in parallel, is connected to an input of the amplifier. A feedback loop comprising a fixed resistor 266 and a variable resistor 268 allow variable sensor gain adjustment settings for particular vehicle applications. 40

Amplifier 254 is coupled with amplifier 256 through a series capacitor 270 and resistor 272. A Zener diode 274 and capacitor 276 are connected to amplifier 256 through resistor 278. A biasing circuit comprising a diode 280 and capacitor 282 are also linked to the same input of amplifier 256. A feedback loop comprising resistor 284 is wired with the amplifier. 45

A diode 286 and timing capacitor 288 are coupled with the lead from the amplifier to npn-type transistor 290 base. A variable resistor 292 is coupled with transistor 290 emitter connection and the base of npn-type transistor 296. Transistor 296 collector connection is powered through LED indicator 294 and transistor 290 collector connection. The emitter of transistor 296 is coupled with a base of npn-type transistor 298 through a series resistor 300. Another resistor 302 connects the emitter with the chassis ground. The collector connection of transistor 298 is coupled with circuit 184 through a series resistor 304. Transistors 290, 296 and 298 are 50

available under Motorola part number 2N3904. Circuits 250 and 184 are coupled with the 9.1 volt power supply and 12 volt circuit power supply through resistor 306. The Zener capacitor 274 provides on-board regulation to hold constant voltage.

In operation, circuit 184 controls application and release of the vehicle brakes through regulation of solenoid vacuum valve 114. When the door switch 112 closes upon opening of the vehicle door, transistor 198 turns on from the collector to emitter and charges timing capacitor 214 to 9.1 volts which is maintained by Zener diode 212. The charged capacitor 214 turns on transistor 206 emitter to 8.5 volts which turns on transistor 218. The collector of transistor 218 goes low causing transistor 228 to turn on. The emitter of transistor 228 in turn goes low and causes transistor 234 to turn on and pass high current from its emitter to the collector. This current flow then causes activation of brake solenoid vacuum valve 114 and the resulting application of the vehicle brakes. Illumination of LED indicator 240 alerts the driver to the application of the vehicle brakes.

After the vehicle door is closed, switch 112 opens but brake application is maintained for a predetermined period of time as transistor 206 is held on by timing capacitor 214. The RC timing circuit allows adjustment of the delay in switching off transistor 206 and hence release of the vehicle brakes. This feature is particularly desirable as it allows the delay in release of the brakes to be adjusted for particular applications. Vehicle passengers are thus provided with an adequate period of time to move away from the vehicle after disembarking.

As shown in FIG. 2, the sensor 252 and circuitry 250 operate to prevent activation of the solenoid vacuum valve 238 while the vehicle is traveling in excess of a predetermined speed. This prevents injuries which might result if the door were opened and the brakes were suddenly applied while the vehicle is traveling at a high rate of speed. The sensor operates by picking up vibrations from the drive shaft of the vehicle rather than sound waves. The signal is amplified to detector capacitors 262 and 286 by amplifiers 254 and 256. Capacitor 288 performs a sample and hold function similar to transistor 206. The emitter of transistor 290 turns on transistor 296 which turns on transistor 298. The transistor 298 then operates to pull timing capacitor 214 low which prevents application of the solenoid vacuum valve 238. LED indicator 294 also alerts the driver that the vehicle is traveling at a speed in excess of that which permits activation of solenoid valve 238.

By preventing automatic application of the brakes while the vehicle is traveling above a predetermined speed, the potentially undesirable consequences of a sudden stop are avoided. The predetermined speed at which the circuitry 250 overrides application of the solenoid valve 114 may be adjusted by varying circuit resistor 268. This adjustment allows the apparatus to be adapted for various applications. While sensor 252 is desirable because of its reliable operation, other vehicle speed monitoring mechanisms may also be utilized for this purpose. For instance, a mechanical governor device coupled with the speedometer cable has been found to provide reliable operation.

Turning now to FIGS. 3-5, the system components which regulate operation of the brake system will be described. Mechanical linkage 116 is normally in the position shown in FIG. 3 when the brakes are in an unapplied condition. When the brake pedal 170 is depressed as shown in FIG. 4, the linkage arm 148 causes

axial movement of master cylinder plunger arm 150 which results in application of the vehicle brakes. Linkage arm 144 also pivots in the direction of movement of the plunger rod 150 due to the movement of guide pin 156 along the camming surface of arcuate slot 154. The position and configuration of slot 154 allows pivoting movement of linkage arm 144 while maintaining axial alignment of vacuum pod plunger arm 136.

When the vehicle door is opened, the door switch 112 closes and causes activation of the solenoid vacuum valve 114. This creates a vacuum in line 128 leading to pot 130 and causes axial retraction of plunger rod 136 to the position shown in FIG. 5. The retainer element 138 at the end of the rod engages retaining pin 152 and causes movement of linkage arm 144 in the general direction of retraction of the rod. Due to the coupling of linkage arm 144 and plunger rod 150 through the slot 154 and guide pin 156 arrangement, the plunger rod 150 is also moved in the same direction. This movement of the plunger rod then results in application of the vehicle brakes. Application of the vehicle brakes may thus be accomplished independently of brake pedal application. Even if the driver should fail to apply the brakes while traveling at a slow speed, the apparatus 110 will automatically cause application of the brakes when the door is opened and will significantly reduce the likelihood of injury to vehicle passengers as they board or disembark.

Upon release of the vehicle brake pedal 170 the biasing force acting on linkage arm 148 causes retaining pin 164 to travel along the slot 162 in the retainer element 160 and allows the linkage arm to return to its normal operating position as show in FIG. 5. The vehicle brakes, however, remain in an applied condition while the pod plunger rod 136 is in the retracted position. Without this important feature, the driver of the vehicle might attempt to circumvent the safety system of the invention and prematurely release the brakes by placing a foot behind the brake pedal linkage arm and urging it to its released position. With the linkage of the present invention, the brake pedal is ineffective to cause release of the brakes and the vehicle remains immobilized while the vehicle door is open and for a predetermined period of time after the door is closed.

The present invention thus provides an advantageous method for preventing vehicle movement under predetermined and adjustable conditions. This results in a significant reduced likelihood of injury to vehicle passengers while boarding or disembarking from the vehicle.

From the foregoing, it will be seen that this invention is one well adapted to attain all the ends and objects hereinabove set forth together with other advantages which are obvious and which are inherent to the structure.

It will be understood that certain features and sub-combinations are of utility and may be employed without reference to other features and sub-combinations. This is contemplated by and is within the scope of the claims.

Since many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described the invention, I claim:

1. Apparatus for preventing the release of a vehicle's brakes while a vehicle door is open and for preventing

release of the brakes for a predetermined period of time after the door is closed, said apparatus comprising;

valve means coupled with the brakes and moveable between a first position preventing release of the brakes and a second position allowing release of the brakes;

positioning means coupled with the valve means for moving the valve means between the first position when the door is open and the second position when the door is closed; and

a timer coupled with the positioning means for delaying movement of the valve means to the second position until the predetermined period of time has elapsed after the door is closed, wherein the vehicle brakes are maintained in an applied condition for the predetermined period of time after the door is closed.

2. The apparatus of claim 1, wherein the positioning means includes a switch coupled with the door for detecting the opening and closing of the door.

3. The apparatus of claim 1, wherein the positioning means and valve means comprise a solenoid valve coupled with a vehicle brake line containing a fluid, wherein the solenoid valve includes a plunger moveable between a first position for blocking fluid flow in the brake line and a second allowing fluid flow in the brake line.

4. The apparatus of claim 3, including bypass means to allow application of the vehicle brakes while the plunger is in the first position blocking fluid flow in the brake line.

5. The apparatus of claim 4, wherein the bypass means comprises a valve for allowing the one-way flow of fluid in the brake line while the plunger is in the first position, whereby the vehicle brakes may be applied but are prevented from releasing while the plunger is in the first position.

6. Apparatus coupled with a brake line of a vehicle for preventing release of the vehicle brakes after application while a vehicle door is open and for a predetermined period of time after the door is closed, said apparatus comprising:

a valve coupled with the brake line and moveable between a first position preventing fluid flow through the brake line and a second position allowing fluid flow through the brake line;

a switch coupled with the door for detecting when the door is in an open and a closed position;

valve positioning means coupled with the valve and switch for moving the valve between the first position when the door is open and the second position when the door is closed; and

a timer coupled with the valve positioning means for delaying movement of the valve to the second position until the predetermined period of time has elapsed after the door is closed, wherein release of

the vehicle brakes is delayed for the predetermined period of time after the door is closed.

7. The apparatus of claim 6, wherein the valve positioning means and valve comprising a solenoid valve coupled with the brake line and having a moveable plunger for blocking fluid flow through the brake line.

8. The apparatus of claim 6, including a bypass valve coupled with the brake line for allowing one-way fluid flow through the brake line, whereby the vehicle brakes may be applied while the valve is in the first position.

9. Apparatus for causing application of a vehicle's brakes while a vehicle door is open and for preventing release of the brakes for a predetermined period of time after the door is closed, said apparatus comprising:

valve means coupled with the brakes and moveable between a first position causing application of the brakes and a second position allowing release of the brakes;

means coupled with the vehicle for detecting opening and closing of the door, said detecting means operable coupled with the valve means for movement thereof between said first and second positions; and

timing means coupled with the valve means for delaying movement of the valve means to the second position until the predetermined period of time has elapsed after the door is closed, wherein the vehicle brakes are maintained in an applied condition for the predetermined period of time after the door is closed.

10. The apparatus of claim 9, wherein the detecting means comprises a switch coupled with the door.

11. The invention of claim 9, including a mechanical linkage coupling said valve means with said vehicle brakes for controlling application thereof when said valve means is moved between said first and second positions.

12. The apparatus of claim 11, wherein the valve means comprises a solenoid vacuum valve operably coupled with said mechanical linkage.

13. The apparatus of claim 12 wherein said mechanical linkage includes a vacuum pod coupled with said solenoid vacuum valve, said vacuum pod including an extendable member moveable in response to positioning of said solenoid vacuum valve.

14. The apparatus of claim 12, wherein said mechanical linkage includes a vehicle brake pedal linkage arm moveable between applied and released positions and wherein said mechanical linkage includes means for allowing positioning of said linkage arm in said released position when said solenoid vacuum valve causes application of said vehicle brakes.

15. The apparatus of claim 9, including a sensor operable for determining when said vehicle is traveling above a predetermined speed, said sensor coupled with said valve means for preventing movement of the valve means to said first position when said vehicle is traveling above said predetermined speed.

* * * * *

PEARSON-DEITCHMAN
SCHOOL BUS SAFETY SYSTEM

Existing School Bus Safety

During each school day in the United States, approximately 22 million students are bused to and from school in approximately 600,000 school buses.

Although numerous safety articles and pamphlets are distributed and bus safety talks are given each year, statistics show that approximately 55 children are run over and ^{SOME} killed each year with their own school bus. Statistics also show that over 10,000 non-fatal accidents occur yearly resulting in critical and seriously damaging injuries.

Existing Safety Apparatus

Existing safety equipment on school buses today is comprised mainly of mirrors which help the driver see children close to the bus. There are a total of 5 mirrors on a school bus. The 2 large vertical mirrors on the right side, as well as the left side of the bus are the traffic or vehicle mirrors. These mirrors are to help the driver see vehicles directly behind as well as to each side of the bus.

The school bus also has 3 large round mirrors for monitoring the children. One of the round mirrors is on the right side of the bus directly forward of the doorway. There is also one round mirror on each front corner of the school bus. The right-hand side mirror gives the driver the view of the right-hand side of the bus as well as the view directly in front of the bus.

These wide angle mirrors or diminishing glass mirrors have a fatal flaw. To the driver, it makes objects such as children look much smaller and much further in distance from the bus. A small child, 36" tall and 6' forward of the bus's rear wheels appears to the driver in the right side mirror as being the size of a doll and also appears to the bus driver to be safely clear of the bus. This same round, wide angle-diminishing glass mirror that is used on the front of the bus also has the same fatal flaw.

Virtually all tragic school bus accidents have been due to driver error where either the driver did not see the child or the driver mistakenly thought the child was clear of the bus. Naturally eliminating this driver error would eliminate the accidents and fatalities.

Proposed School Bus Safety System

The Pearson-Deitchman Research and Development Company has developed and tested a school bus safety system that will virtually eliminate the driver error due to the reliance on the mirrors currently installed on the buses, thus considerably reducing the fatality rate as well as the serious injury rate.

The moment the school bus doors open the brakes are activated and locked. A large red warning lamp is simultaneously lit, alerting the driver. This safety system holds the brakes on the bus as long as the door remains open and continues to hold the brakes after the door is closed for a predetermined time until the preset timing delay has elapsed. The large red warning lamp indicator goes out when the brakes are released through this time delay. Tests have indicated an ideal time delay of 20 seconds with an additional 10 seconds as added safety; however, the Department of Transportation can preset this timing delay for any period of time it deems appropriate.

The Pearson-Deitchman Research and Development Company School Bus Safety System is now completed and tested and patents are issued. This life and accident saving system for children has been developed to accomplish the following goals:

1. A safety system that would remain safe and positive under all conditions.
2. A safety system that cannot be deactivated or disconnected by any bus driver during the critical loading and unloading stages.
3. A safety system that would not be prohibitive in time to install on all present buses and that could easily be installed on all new buses when built.
4. A safety system that would not be prohibitive in cost per bus.
5. A safety system that would work on all buses, including gasoline, diesel, electric, automatic or standard transmissions, and hydraulic as well as air brake systems.

The Pearson-Deitchman School Bus Safety System which is activated when the door is opened to load or unload students will eliminate the driver error which has resulted in the serious injuries and deaths during this critical loading and unloading stage.

PEARSON-DEITCHMAN RESEARCH
AND DEVELOPMENT COMPANY
524 South 11th Street
Kansas City, Kansas 66103

Gaylord Pearson
Office: 913/321-1216
Home: 913/621-0165

A BOBIT PUBLICATION

AUGUST / SEPTEMBER 1994

SCHOOL BUS

P-35

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Mirror Standards Updated

NSTA Convention Highlights

Navistar's New Forward-Control Chassis

P-35
J

attach 1-14

Drivers Test Bus Mirrors

New mirror standards change safety approach. Deaths haven't changed.

By Jody L. Bush

Several agencies are re-examining school bus mirrors and a new approach to safety has emerged. Mirror manufacturers have improved mirrors for the school bus — now, it's up to the school bus industry to learn how to use them.

From 1970 to 1989, 322 children were killed in front of the school bus, according to *School Bus Loading & Unloading Surveys* published by the Kansas Department of Transportation (K-DOT).

Since K-DOT began publishing the reports in 1970, the nature of the fatalities hasn't changed. Most occur on the triphome in broad daylight. Young children rushing off the school bus drop an object in front of the bus and bend down to pick it up.

Completely hidden from the drivers view, the child is run over by the bus. For the past 10 years, improved crossview mirrors have helped to reduce children being killed in front of the bus, but more work needs to be done.

The National Highway Traffic Safety Administration (NHTSA), Congress and the school bus industry are developing new mirror standards. The various agencies are developing performance rather than design based standards. They are talking about "mirror systems" not individual crossview mirrors.

Performance based standards

At the federal level, NHTSA is preparing to publish an amended version of the federal mirror safety standard, FMVSS 111. "The goal is to develop a performance-based standard," said Riley Garrott, mechanical engineer at

NHTSA's Vehicle Research and Test Center in Liberty, Ohio.

"Our objective is not to say company 'X' has the best mirror," Garrott said, but to define the area in front of the bus the driver should see. The new ruling will include test procedures that define that area.

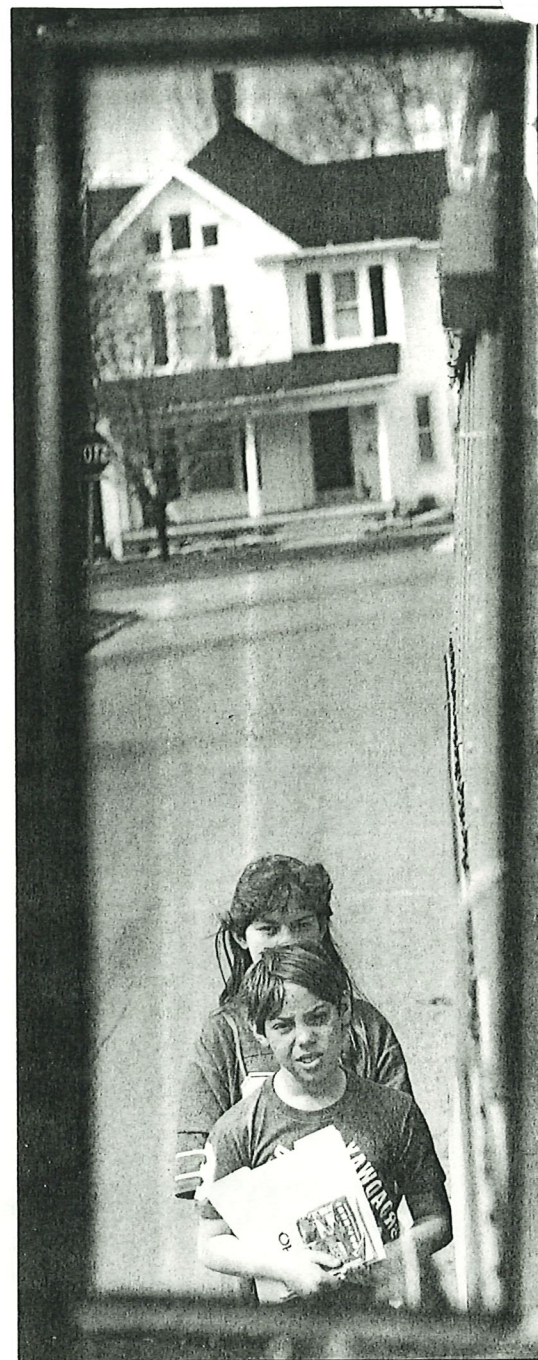
NHTSA examined six mirror systems during its research at the test center in Ohio. "We tried to pick a variety in mirrors," that were available on the market, he said.

Eight drivers from Columbus, Ohio, public schools completed 7 1/2 hours of testing. They were asked to identify strategically-placed targets in front of the bus by looking into the mirrors.

"The characteristics of the mirrors that worked best will go into the new rule," Garrott said. The revised standard will not "issue new specifications or guidelines about the design of mirrors," as does the existing rule he said, "but will encourage manufacturers to be innovative."

NHTSA has received comments from mirror manufacturers, school transportation officials and others concerned with safety in school transportation, but "most of them didn't say a great deal," Garrott said.

At press time, a NHTSA spokesperson in Washington, D.C., said the agency expects to publish the final rule by the end of the year. But Gar-



The West Coast mirror gives the driver a view of the side to the back of the school bus.

rott, at the vehicle test center, said, the rulemaking is "getting somewhat sidetracked" because the agency is in a hurry to study the roll-over of light trucks. NHTSA issued a report in July on proposed upgrades in the federal standards for light trucks and vans.

Last November, at a congressional subcommittee hearing, legislation was introduced to require better mirror systems on school buses.

At that time, NHTSA was preparing to issue its Advanced Notice of Proposed Rulemaking for the mirror

Drivers talk about mirrors

"Drivers we have talked to say there's a problem when you get all those mirrors on the bus. It becomes confusing," said Dr. Charles Wooten, director of the Texas Transportation Institute at Texas A&M University, in College Station, Texas.

Wooten testified at the congressional hearing in November and was chairman of the subcommittee to identify measures to improve the safety of school buses. He also partic-

ipated in the Transportation Research Board's study, *Improving School Bus Safety*, published last year.

"The assumption is you only need to use the (crossview) mirrors when you're stopped. The problem is that they are there and they cause a main distraction to the driver," Wooten said.

Because crossview mirrors have a convex-type lens, the mirrors are not only a physical obstruction but a visual impairment. If you have looked into a convex-type lens, you know that the

eye has a difficult time focusing the lens.

It is almost impossible for the eye to accurately perceive an area when looking into multiple convex-type mirrors.

Manufacturers said they have seen up to eight mirrors on the front of a bus. Some buses have crossview mirrors mounted on the front fenders and crossview mirrors mounted below the side mirrors.

Bluthardt of K-DOT said there is also a problem with crossview mirrors being out of adjustment. K-DOT recently completed a school bus mirror training program for drivers in all school districts in the state.

"Each class we go to, the mirrors are way out of adjustment and the drivers don't know it," Bluthardt said.

"Each class we go to, the mirrors are way out of adjustment and the driver's don't know it."

Larry Bluthardt

He said the drivers don't realize they are out of adjustment because most school bus mirrors are adjusted by mechanics in the garage. If two drivers of different size drive the same bus, the mirrors are not adjusted properly for one of the drivers.

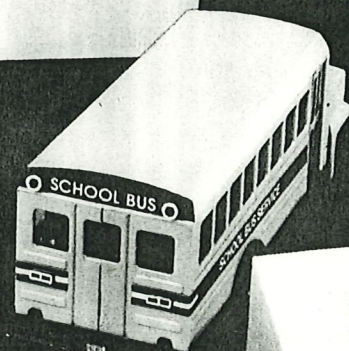
Bluthardt said it is important for drivers to adjust their mirrors before the bus leaves the garage.

Because crossview mirrors are mounted on the front fenders of a conventional school bus, engine vibration can put them out of adjustment also. Mirror manufacturers have developed tripod mounting systems that spread the vibration evenly across the mounting arm to improve mirror stability.

For a mirror system to be an effective safety tool, drivers should learn about the mirrors on their bus. The current activity in developing improved safety standards focusing on performance standards is a result of that awareness.

"School districts need to make the time for training drivers how to use

Get out of that costly maze.



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mirrors, or at least, the drivers need to request the instruction," said Lorraine Kolenda, vice president of K-10 Inc. of Mission, Texas, a mirror manufacturer for school buses.

Although all the research concerning mirror systems on school buses involved driver participation and feedback, none of the standards mention driver training programs for mirrors.

Drivers of school buses will be using the mirrors "when an accident occurs, you have to ask yourself what mirror you were looking into," said Frank Reynolds, president of F.E. Reynolds & Associates of Marysville, Ohio. The company designs heated versions of school bus mirrors.

Mirror manufacturers have done their part. The driver's viewing range has increased with improved crossview mirrors and better mounting systems provide mirrors with greater stability.

Manufacturers said that if a school district requests driver training, they will send someone out to demonstrate how to use the mirrors on the bus.

NHTSA and mirror manufacturers said that school districts are hesitant

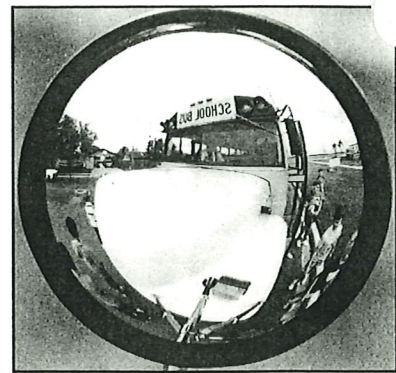
to buy the new mirrors because "a school transportation director is used to paying \$5 for an eight-inch round convex mirror," Stout of Safety Cross said.

The spokesman at NHTSA in Washington, D.C., said, the agency received several comments from state transportation officials concerned about the cost of equipping school buses with new mirror systems. "But there is always concern with rules about the cost," he said.

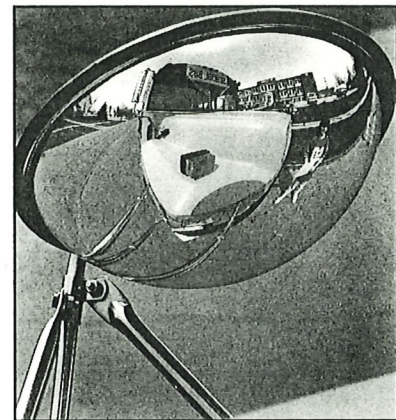
NHTSA is examining other safety measures to help prevent children being killed by their own bus. Mirrors are not the only answer. As Bob Grams, vice president of sales for Velvac, a mirror manufacturer, said, "The crossview mirror has been pretty well beaten to death."

There has been a lot of talk about requiring bus drivers to use a counting system. "As kids get off the bus, you should count each kid and watch them leave for their dwelling," Bluthardt of K-DOT said.

He said children should get off at the same stop every day, and if there is a change in their bus stop, to tell the bus driver. Also five-to-seven-year-olds



A driver's view of the area in front of the bus. The 10-inch crossview mirror (below) exposes a larger area than the 8-inch crossview mirror (above). The driver can see a child and the surrounding area with the 10-inch crossview mirror.



National Standards Propose New Mirror Rule For School Buses

At the 11th National Standards Conference in Warrensburg, Mo., the mirror standard was changed.

The objective was "To improve the safety of students loading and unloading by eliminating blind spots," the proposal stated.

The new mirror standard reflects continuing concern about eliminating student fatalities outside the bus, primarily in front of the bus.

Delegates at the conference changed the focus of the mirror standard from a design-based standard to a performance-based standard—identical to the performance-based approach the National Highway Traffic Safety Administration (NHTSA) is taking in revising Federal Motor Vehicle Safety Standard (FMVSS) 111.

Currently, the editing committees are working on the final drafts of the

proposals issued at the conference in May.

The following is the final mirror standard, not yet edited, including the changes made at the conference. The content will remain the same in the edited draft, but the language of the proposal might be changed so it reads better.

Delegates sent the mirror standard to NHTSA for review. At press time, the agency had received the standard but would not comment on the standard. Here's what it says:

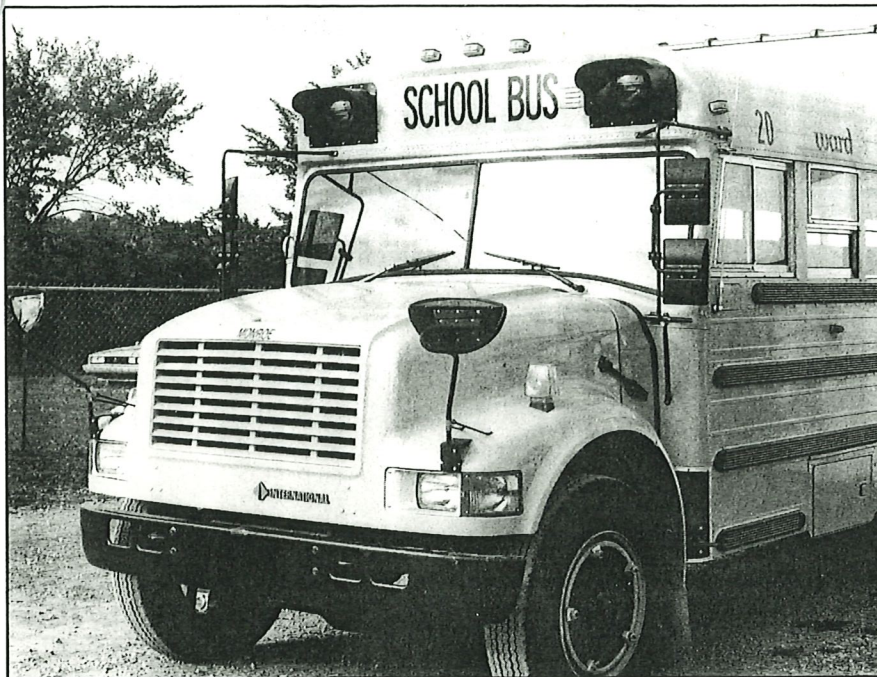
Exterior mirrors: Each school bus shall be equipped with a system of exterior mirrors as defined in Federal Motor Vehicle Safety Standard 111.

A. The mirror system shall be capable of providing a view along the left and right sides of the vehicle which will provide the driver with a view of the rear tires at ground level,

a minimum distance of 200 feet to the rear of the bus and at least 12 feet perpendicular to the side of the bus at the rear axle line.

Crossview Mirrors: The crossview mirror system shall provide the driver with indirect vision of an area at ground level from the front bumper forward and the entire width of the bus to a point where the driver can see by direct vision. The crossview system shall also provide the driver with indirect vision of the area at ground level around the left and right front corners of the bus to include the tires and service entrance on all types of buses to a point where it overlaps with the rear vision mirror system.

Finally, the standard states: "This system of mirrors shall be easily adjustable but be rigidly braced so as to reduce vibration."



The No Blind Spot Mirror System by Mirror Lite is a complete mirror system for the school bus. Two Double Nickel mirrors are mounted on the side of the bus and two Bus Boy mirrors are mounted on the front fenders.

should be required to carry backpacks to prevent them from dropping objects in front of the bus.

NHTSA studied electronic sensing devices to identify children in front

of the bus, but they are very expensive. Bus drivers don't need or want more equipment to keep track of on the school bus. Along with the distractions of motorists and active and

sometimes misbehaving child, school bus drivers have enough to contend with.

Also, educating the public and children about school bus safety are critical factors for happy trips home from school that don't end in another tragic fatality statistic in an annual report. Waterman, consultant for the NPTA said, the association is preparing to release a public service announcement in the fall about school bus safety. It will air on Saturday morning when young children are typically watching cartoons on television.

NHTSA is also preparing a rule-making concerning stop arms on the school bus.

They would help prevent children being hit by cars if the motorist obeys the safety signal.

In 1988 and 1989, eight children were killed in the front of the bus. That is a significant improvement over the previous years, in which the average was 15 to 20. But eight children are still too many. The school bus industry wants to reduce that to zero.

Keep school bus safety under foot.

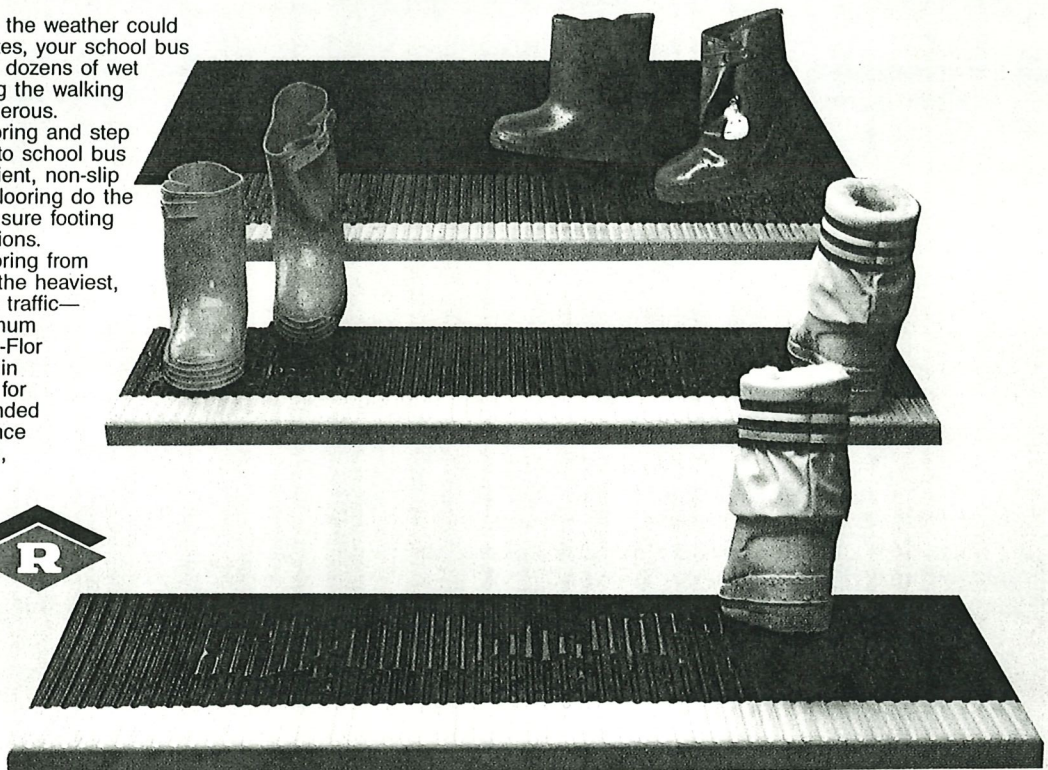
It's early morning and the weather could be better. In a few minutes, your school bus floor will be trampled by dozens of wet shoes and boots, making the walking surface extremely treacherous.

That's why rubber flooring and step treads are so important to school bus safety today. R.C.A. resilient, non-slip rubber stair treads and flooring do the job best, providing safe, sure footing under all weather conditions.

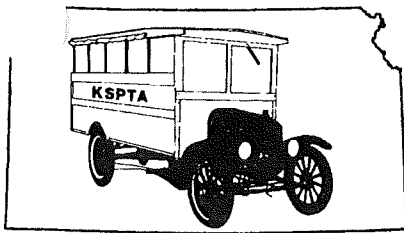
Transit-Flor rubber flooring from R.C.A. stands up under the heaviest, most active kinds of foot traffic—day after day—for maximum child safety. Plus, Transit-Flor and treads are included in the Minimum Standards for School Buses recommended by the National Conference on School Transportation, NEA, 1970, meeting Motor Vehicle Safety Standard #302.

THE R.C.A. RUBBER COMPANY

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Akron, Ohio 44305
(216) 784-1291



Attach. 1-18



KANSAS STATE PUPIL TRANSPORTATION ASSOCIATION

January 29, 1991

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The brake safety system, referred to in House Bill 2030 for all schoolbuses, needs further testing and research before I can support its installation.

It is my understanding this system has been installed on only one bus to date. This is a demonstration vehicle, owned by the product manufacturer, not actually used in the transportation of passengers.

There are several unanswered questions concerning the use of this braking system.

- 1) How was the safety of the system researched?
- 2) Has there been any type of actual field testing?
- 3) Has this system been evaluated by an outside lab and are their reports available?
- 4) What will happen if you lose current to the battery?
Will it automatically lock up or have no function?
- 5) What will happen if the door vibrates and the connection is broken?
- 6) Are the exterior brake lights lit during the delay period?
- 7) Who will assume product liability?
- 8) Has it been approved in writing by chasis manufactures for instalation on their chasis? The warranty may be void if the manufacturer has not approved modification of the original braking system.
- 9) Who will install the device?
- 10) Will the state provide funding for reimbursement for this system?
- 11) Is this type of braking system available from more than one manufacturer? Will they be able to supply enough units to meet the date set for compliance?
- 12) When would the requirement for installation become effective for existing and new buses?

This device is not fool proof. The delay period could be by-passed by simply shutting the door earlier than the present regulations permit. This would turn off the traffic control system of red flashing lights and the stop sign would also retract. The children would then be more vulnerable to other traffic in the area.

This braking devise would not eliminate the driver error that may result in a loading or unloading injury or death.

The present mirror system required on the schoolbus can be improved. There are mirror systems available for the schoolbus that virtually eliminate the blind spots around the bus.

Ultimately the driver is responsible for following all regulations and safety practices such as checking the mirrors prior to moving the bus.

I feel this is another device that will give the driver a false sense of security. A well-trained, conscientious schoolbus driver is the most effective safety device on the bus.

Barbara Pringle

*House Transp.
1-29-91
Attachment 2-1*

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HB 2030

Testimony presented before the House Committee on Transportation
by Charles L. "Chuck" Stuart, Legislative Liaison
United School Administrators of Kansas

January 29, 1991

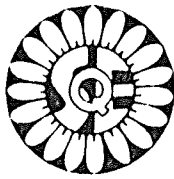
Mr. Chairman and members of the committee, I am Chuck Stuart representing members of the nine statewide school administrator organizations covered by the umbrella organization known as United School Administrators of Kansas.

As a former school superintendent who suffered through a tragic student transportation fatality, I am acutely aware of the desire of school administrators for added transportation safety measures.

HB 2030 requires the installation of a coordinating device which would automatically set bus brakes when the entry door is opened. Most school administrators and transportation supervisors are not familiar with this device.

Until further study demonstrates the degree of safety provided and the cost effectiveness of this device, United School Administrators of Kansas is not supportive of HB 2030.

House Transportation
1-29-91
ATTACHMENT 3



Schools for Quality Education

Bluemont Hall Manhattan, KS 66506 (913) 532-5886

January 29, 1991

TO: House Committee on Transportation

SUBJECT: House Bill 2030

Mr. Chairman and Members of the Committee:

I am Jacque Oakes representing Schools For Quality Education. It is an organization of 91 rural schools.

We are always concerned with school bus safety, but we would like to see further study on this brake safety system.

We would like to see it tested more thoroughly before we put school money into extra possibly not needed equipment.

Thank you for your consideration.

"Rural is Quality"

House Transp
1-29-91
Attachment 4 4-1



**Testimony on H.B. 2030
before the
House Committee on Transportation**

by

**Mark Tallman,
Coordinator of Governmental Relations
Kansas Association of School Boards**

January 29, 1990

Mr. Chairman and members of the Committee, we appreciated the opportunity to testify today on H.B. 2030 on behalf of the Kansas Association of School Boards. H.B. 2030 would require that every school bus be equipped with a safety brake locking system.

There is insufficient information available at this time to determine the merits of requiring major additions to bus equipment. Whether the devices referred to in H.B. 2030 would cause danger in some circumstances appears to be unknown.

At a time when schools are asked to hold the line on spending it does not seem reasonable to mandate spending on as yet unproven equipment.

We ask that H.B. 2030 not be passed and that if the question of automatic locking breaks needs more study, that sufficient time be devoted to that activity.

*House Transp.
1-29-91
Attachment 5
5-1*

BUSINESS PLAN FOR KANSA STAGE LINES, INC.

This is a plan to provide a regular route bus service for the State of Kansas. This plan will provide for the transportation of passengers and freight on a daily service. This plan is designed to provide an additional cash flow to subsidize the regular route service with a charter/tour operation.

We in Kansas have seen the destruction of the public transportation in our state in the last several years.

We will show how the public can be better served with direct connections with the Metropolitan Transit Authority in Wichita, Topeka, and Kansas City, Kansas. Kansa Stage Lines will provide connections with out of state carriers for public transportation.

Wayne Templeton
359 Country Acres
Wichita, Kansas 67212
(316) 722-7664

*House Transp.
1-29-91
Attachment 6
6-1*

Regular Route Service

1. Houghton, Kansas to Wichita, Kansas.

This route will leave Houghton in the a.m. via 160 highway to include Liberal and all cities on 160 highway to Wellington, Kansas, and 81 highway to Belle Plain, Kansas, ending at Wichita, Kansas. Connections for Salina, Kansas; Oklahoma City, Oklahoma; Kansas City and all points between.

3. St. Francis, Kansas, to Wichita, Kansas.

This route will provide service to Wichita via Hays, Russell, Great Bend, Hutchinson to Wichita and points east for freight and passenger service. There will also be connections in Hays, Kansas, with Greyhound Lines for east and west transportation.

4. Wichita to Kansas City, Kansas.

This route will provide service for Salina, Manhattan, Topeka, Kansas City, Kansas, and all cities between. This will also provide for all connecting routes. Two schedules per day, one schedule will leave Wichita in the a.m. and one schedule will leave Kansas City, Kansas, in the a.m., both returning in the p.m.

Type of Service.

The type of service provided will be a commuter service in all major cities in the state of Kansas only. Inbound and outbound traffic will be in a time frame that the public can use to commute to work in the a.m. and return in the p.m. All services will be able to utilize the city bus transportation provided in each city with only a transfer, the cost of which may be included in the price of the ticket.

FREIGHT

The freight service should pay all expenses of the operation and the passenger revenue is the profit, however, it does take the combination of the two. Freight will be solicited by a full time sales person. Delivery will be on the same day or next day service depending on when it is shipped. The U.P.S. Freight Tariff will be used for Kansa's regular freight service and not the Expedited Freight Tariff. This will undercut all existing freight rates and will help assure that Kansa will make a profit. However, when freight is shipped off of Kansa to a connecting carrier the National Bus Tariff or the Freight Tariff for that carrier will be used for the full length of the shipment.

Example: An item shipped from St. Louis, Missouri, shipped to Hutchinson, Kansas, will come under the National Bus Tariff. But an item shipped from Kansas City, Kansas, on a Kansa Freight Bill to Hutchinson, Kansas, will come under Kansa Freight Tariff.

Charter Service

A charter service can be provided with additional equipment to provide in excess of \$32,000 per unit to subsidize the regular route service. A charter is when a person or group wants the exclusive use of a bus for a trip they have planned.

Tour Service

This is a service to provide planned tours throughout the United States and Canada. This service is marketed through travel agents or agents of Kansa Stage Lines. All tours will be planned by Kansa Stage Lines. Commissions will be paid to the agents by Kansa Stage Lines. Commissions are computed above the cost of the trip on a per person figure.

This service will provide the highest quality of motor coach. This coach will have an on board VCR, lounge (7 seats), medically trained and fully certified escorts, refrigeration for perishable items and medications, radios and telephone. This is a service of the highest quality in the United States. Some of the items above are not provided by any other company in the United States. This service will make in profits \$70,000 to \$120,000 per year depending on the length and time on the tour. These profits can be used to subsidize the schedules.

Motor Coaches

I have researched all motor coaches in the market in the world and have found the Van Hool Coach to be one of the best on the market today. This is a 10 year coach, but should be replaced every seven years with a new coach. The replacement will keep the company within two years of warranty and will keep the maintenance cost down to the lowest cost possible. The Van Hool Coach has 320 cubic feet of freight space.

The next coach to be considered is the Prevost. This coach is built in Canada. It is also a long life coach. This coach has 420 cubic feet of freight area and is built with stainless steel. This coach has a two year unlimited mileage new-coach warranty and a five year unlimited mileage anticorrosion warranty. No other coach has this warranty. I believe this coach could be a 10 to 15 year coach.

The coaches used for the regular routes will have 40 to 47 passenger seating with freight space and restroom. All coaches will have an American built drive train. The line coaches can also be used as charter coaches.

The Charter/Tour Coaches will have a 47 seat capacities. Tour Coaches will have a 7 seat lounge in the rear, mini kitchen, VCR's, escort's seat, radio, telephone and refrigeration for medication, emergency medical locker fully equipped with oxygen, heart monitors and supplies similar to a EMS unit. Seniors have a variety of medical problems and have fears of leaving home. It is not the intention of Kansa Stage Lines to be a hospital but to give the senior the knowledge that we do care and will help them

if the need arises. However, there will have to be a medical waiver signed with a doctor's information attached.

Leasing

This will reduce start up cost, reduce taxes, and will permit the company to replace equipment every seven years. Replacing equipment every seven years serves many purposes:

1. Reduces maintenance costs.
2. The majority of travel agents will not use equipment over 8 years of age.
3. Allows the company to receive a premium rate for charters/tours.
4. Will keep the new look for the company.

However, this may not be possible at the start up of the company without the financial backing.

Financial Backing

This operation will require investors to fund the start up of the company.

The regular route service and the trust and confidence of the public in this state has been completely destroyed by other companies. The trust and confidence of the public will have to be restored and this is going to take not less than three years to a maximum of seven years.

The charter/tour operation will support itself and will subsidize the regular route service.

This plan was presented in Topeka, Kansas, September 11, 1990, to seek advice on financing this operation. In attendance were members of the Governor's Office, Department of Commerce, Department of Transportation, Office of Securities Commissioner, and the Mayor of Haysville, Kansas, where the company will be located.

It was learned at this time that there is some money to be extended out on grants for seed money to be able to increase by loans and other forms of financing to make this plan operational.

We will need the cooperation of each and every Representative, Senator, Mayor, and person on the routes to make this plan operational and successful.

We will need information on the business that will use the freight service and their commitment for a marketing survey.

1. Full time marketing agent working in the areas of:
 - A. Media advertising.
 - a. Radio.
 - b. Newspaper.
 - c. Television.
 - d. News stories.
2. Personal contact with freight shippers.
3. Community contact:
 - A. Senior centers.
 - B. Church groups and publications.
 - C. Senior's publications.
 - D. College and University student publications and officials.
 - E. Employers.

Tourism

1. Travel agents.
Travel agents are used to market all tours. This allows for an overall market.
2. Departments of Tourism.
These agencies provide information to locate the best activities for the groups.
3. International Tourism.
There is a market in Europe, Japan, Canada and many other nations who want to see the History of the American West. We have a market here that has not been advertised to the world.

Charters

1. Assist groups in planning their charter.
 - A. Locate the lodging, admissions, meals, etc. needed at group rate. The majority of these groups do not know how to get the reduced rates and by getting these rates you will gain a regular customer. There is no other company doing this in this area. This is one of the ways I built Sunflower Tours.

Baggage

3. Personal baggage will not be checked. Personal baggage, musical instruments, athletic equipment and other paraphernalia necessary for the purpose of the charter trip and limited to the capacity of the coach will be transported at owner's risk and in the custody of the chartering party at no additional charge.

Deposits and cancellations

- 1 A \$200.00 deposit is required to confirm any coach movement.
- 2 The deposit is due within 14 days after booking.
- 3 A full refund of the deposit will be made if cancellation of the charter/tour movement is made 30 days or more in advance of such movement.
- 4 A cancellation of a charter/tour movement within 30 days of such movement will result in forfeiture of the deposit.
- 5 Full payment of any charter/tour movement is due 30 days in advance.

Deposits and cancellations

- 6 When a "Charter Trip" is cancelled, by the "Charter Party" the Carrier will assess charges depending upon notification prior to or after the "Dispatch Departure Time" as provided below:
 - (A) "Dispatch Departure Time" is defined as the time a "Charter Coach" would be required to leave the "Equipment Point" in order to arrive at the "Place of Origin" at the time stipulated on the "Charter Coach" order. Such "Dispatch Departure Time" shall be computed by allowing one hour for each forty-five miles, or fraction thereof, of the one-way distance from the "Equipment Point" to the Place of Origin".
 - (B) If a "Charter Trip" is cancelled after the "Dispatch Departure Time" a cancellation charge per "Charter Coach" will be assessed, which shall be 50% of the total charge of the charter plus the applicable charge for any "Dead-head Mileage" operated, and all other expenses such as tolls charges incurred by the carrier but not greater than \$400.00 but not less than \$200.00.

Collection of Charges

5. All charges are payable in advance, unless credit is established with the carrier.
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- Damage to Vehicles
6. 1 Any damage to the vehicle caused by the chartering party will be charged to the chartering party.
 - 2 When at any time the Chartering Party willfully violates local, state or federal laws as to cause fines imposed or the confiscation of Kansa Stage Lines equipment. The Chartering Party will be responsible for all fines and costs incurred.
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Deadhead Mileage and Live Mileage

- "Deadhead" mileage means the mileage traversed in moving from equipment point to the starting point of the trip and from final destination of the trip to the equipment point and such other movement of equipment unoccupied by passengers as may be necessary to provide the kind of trip the party desires.
- 7.

"Live" mileage means mileage traversed while coach is occupied by passengers.

Distances:

8. All mileages will be computed according to the latest Household Goods Carrier's Bureau Mileage Guide.
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Fees, Tolls, and Parking Charges:

9. The charges named herein do not include entrance fees, toll roads, bridges, tunnel, ferry fees or parking charges; such fees, tolls and charges will be in addition to all other applicable charges.
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Hour

10. As used herein, an "hour" is each sixty minute period beginning at the time the vehicle is ordered to be at the point of origin and ending at the time the vehicle is finally released by the chartering party.
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Liability

11. (A) The carrier will not be liable for delays caused by the Act of God, public enemies, authority of law, quarantine, perils of navigation, riots, strikes, accidents, breakdowns, bad conditions of the road, snow storms, and other conditions beyond its control and does not guarantee to arrive at or depart from any point at a specified time. The carrier will endeavor to maintain the schedule submitted by its agent or employee but same is not guaranteed.

(B) If any Act of God, public enemies, authority of law, quarantine, perils of navigation, riots, strikes, and other conditions beyond its control, make it, in the opinion of the carrier, inadvisable to operate KANSA STAGE LINE's equipment either from the place of origin or any point enroute, the carrier shall not be liable therefore, or be caused to be held for damages for any reason whatsoever.

Special Equipment, Services and Supplies:

Tour Coaches:

12. Tour coaches are equipped with kitchens, refrigerator, coffee machine, hostess, medical locker, V.C.R's.

Sleeper Coaches:

Coaches that are equipped with seats that are converted into beds for the purpose of passengers sleeping in a reclining position will require an additional \$0.25 per mile charge will be made.

Special Equipment, Services and Supplies

13. If at the request of the chartering party the carrier arranges special equipment and supplies in the vehicles for the convenience and comfort of the chartering party or arranges for hotel accommodations, meals, sight-seeing, entertainment or other services, all charges which are incurred in the performance of these special services will be in addition to all other applicable charges. The carrier assumes no liability for accidents, damage, loss or non-performance of these services on the part of any establishment and the carrier's responsibility is limited to the actual transportation contracted for the chartering party. No special equipment is provided for handicap, all loading, unloading or other special care is the responsibility of the charting party.

Charges:

Subject to rules and regulations contained herein, charges will be assessed for each chartered vehicle as follows:

- 14.
- 1 Live mileage charge will be assessed except time charges will apply if they are greater than the charges computed under the live mile charge. (See Item 7)
 - 2 Time charges will be computed from the time the charter coach is ordered to be at the point of origin and continue until the charter coach returns to point of origin

and is released. (See exception under Paragraph 3)

- 3 If the charter coach is released at point of destination of the charter party and charges would be less based upon the deadhead mileage charge for the mileage involved in returning equipment to original equipment point, such lower charge will apply.
- 4 The deadhead mileage charge as provided in Item 7 is in addition to the live mileage charge and/or the time charges set forth in Paragraphs 1 and 2 of this Item.
- 5 On any charter which requires that a driver "over-night" at a location other than driver's home terminal, an additional charge of \$50.00 per night will be made.
- 6 Where due to scheduling extra drivers are required, an additional charge of \$50.00 per night, per extra driver will be made.

Hostess:

15. A hostess on a tour coach will be an additional charge of \$65.00 per day will be made.

16. MILEAGE CHARGE
(Rates are in cents per mile)

1. Deadhead Miles

No charge of "Deadhead Mileage" will be charged in a 50 air miles radius of equipment points. However, if a charter is terminated at point of destination a "Deadhead" charge will be assessed on returning to the originating terminal.

2.	No. of drivers per coach	Per Live Mile	Per Deadhead Mile
	Charter Coach		
3.	Single driver	1.85	1.00
	Two drivers	2.08	1.00
4.	Tour Coaches		
	Single driver	1.65	1.00

Kansas City ICC Commercial Zone

Charter Coach		

5.	Single driver	1.95
	Two drivers	2.18
		1.00

6.	Tour Coaches	
	Single driver	1.65
		1.00

Time Charge		
(Rates in dollars and cents)		

	Each	Maximum
First four (4) hours	Additional hour	8 - hour period
minimum		
\$240.00	\$60.00	\$400.00

SECTION B

 RULES AND REGULATIONS EXPRESS SHIPMENTS

1. APPLICATION OF TARIFF:

1. The provisions of this Tariff apply to the INTRASTATE transportation of package express shipments of standard bus package express service between all points within the State of Kansas on and via the lines of Kansa Stage Lines Inc.
2. All express originating on or transferred to another line the express charges will be charged by the tariff of that line.

 2. SIZE, WEIGHT AND VALUE LIMITATIONS:

Size: Packages will be accepted for transportation, provided the dimensions of the package are within either of the following maximum size limitations:

Length: 33 inches		Length: 24 inches
Width : 33 inches	or	Width : 53 inches
Height: 48 inches		Height: 74 inches

The Carriers party to this Tariff reserve the right to refuse to accept a package if its dimensions, even though within the limits specified herein, exceed the size or capacity of the Baggage and Express Compartments of the available vehicles.

2. WEIGHT : No single package will be accepted for transportation which exceeds one hundred (100) pounds in actual weight.
3. Value : No single shipment will be accepted for transportation which exceeds one thousand dollars (\$1000.00) in value.

3. COLLECT SHIPMENT CHARGE:

1. In lieu of the "Collect Shipment Charge" shown in Item No. 3 of National Express Tariff, K.C.C. No. 148, amendments thereto or reissues thereof, issued by National Bus Traffic Association, Inc., Agent, a "Collection Fee" in the amount of ninety-five cents (\$.95) per shipment will be assessed on all Express Shipments forwarded with Express Charges "Collect".
2. Preparation and Listing of C.O.D. Packages: The Shipper will prepare and attach to each C.O.D. package and C.O.D. tag showing the amount to be collected and will enter such amount on the delivery sheet of the carrier in the space provided for the purpose.
3. Responsibility for C.O.D.s: The carrier will collect for the C.O.D. merchandise the sum of the money shown on the C.O.D tag attached to the package and be responsible for and promptly transmit to the shipper the money so collected or, if collection cannot be made, will return the merchandise to the shipper. The shipper should notify the carrier within 45 days from the date of shipment of C.O.D. shipment if the shipper has not received the C.O.D. collections therefor.
4. Consignee's Checks in Payment of C.O.D.s: Unless instructions to collect cash only are written on the C.O.D. tag, the carrier will accept a check issued by or on behalf of the consignee. When instructions to collect cash are written on the C.O.D tag, the carrier reserves the right to accept cash, cashier's check, certified check, money order or other similar instrument issued by or on behalf of the consignee. All checks (including cashier's check and certified checks) and money orders tendered in payment of C.O.D.s will be accepted by the carrier at the shipper's risk including, but not limited to, risk of nonpayment and forgery, and the carrier shall not be liable upon any such instrument. All checks and money orders will be transmitted to the shipper together with the carrier's own check for the amounts collected in cash.
5. Remittance of C.O.D.s: Carrier shall remit C.O.D. collections to the shipper promptly within 30 days from date of collection.

4. EXCESS VALUE CHARGES:

1. Rates named in this Tariff are dependent upon and vary with the Declared or Released Value of the property and are based upon property declared to be of, or released to, a value of not more than fifty dollars (\$50.00) for any shipment of one one hundred (100) pounds or less, or of not more than fifty cents (\$.50) per pound Actual Weight for any Shipment in excess of one hundred (100) pounds.
 2. In Lieu of the "Excess Value Charges" shown in Item No. 2 of National Express Tariff, K.C.C. No. 148, amendments thereto or reissues thereof, issued by National Bus Traffic Association, Inc., Agent, a charge of forty cents (\$.40) for each one hundred dollars (\$100.00) or fraction thereof in excess of the value stated above will apply.
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5. FILING OF CLAIMS:

1. All claims for loss or damage to property transported or accepted for transportation in interstate or intrastate commerce must be in writing and must include reference to the shipment record number and date or copies of other documents sufficient to identify the shipment involved; must assert liability of the carrier for alleged loss or damage; must make claim for payment of a specified or determinable amount of money; and must be accompanied with a copy of the original invoice or, if no invoice was issued, other proff, certified to in writing, as to the value of the property or extent of the damage.

No claims for loss or damage to property will be voluntarily paid by the carrier unless filed in writing in accordance with the provisions of this tariff.

2. Acknowledgement of Claims: Carrier upon receipt in writing of proper claim in the manner and form described in these rules accompanied by the documents described, will acknowledge the receipt of such claim in writing to the claimant within 30 days after the date of receipt by the carrier unless the carrier will have paid or declined such claim in writing within 30 days of the receipt thereof.

The carrier will at the time each claim is received create a separate file and assign thereto a successive claim file number and note that number on all documents filed in support of the claim and all records and correspondence with respect to the claim including the written acknowledgement of receipt and, if in its possession, the shipping order and delivery receipts, if any, covering the shipment involved. At the time such claim is received the carrier will cause the date of receipt to be recorded on the face of the claim document and the date of receipt will also appear on the carrier's written acknowledgment of receipt to the claimant.

3. Time Limit for Filing Claims: As a condition precedent to recovery, claims must be filed in writing with the carrier within 90 days after delivery of the property or, in case of failure to make delivery, then 90 days after a reasonable time for delivery has elapsed; and suits shall be instituted against the carrier only within one year and one day from the day when notice in writing is given by the carrier to the claimant that the carrier has disallowed the claim or any part or parts thereof specified in the notice. Where claims are not filed or suits are not instituted thereon in accordance with the foregoing provisions, the carrier hereunder shall not be liable, and such claims will not be paid.
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4. Investigation of Claims:

- (A) Each claim filed against a carrier in the manner prescribed herein will be promptly and thoroughly investigated if investigation has not already been made prior to receipt of the claim.

- (B) Supporting documents. When a necessary part of an investigation, each claim must be supported by the original bill of lading or receipt, evidence of the freight charges, if any, and either the original invoice, a photographic copy of the original invoice or an exact copy thereof, or an extract made therefrom, certified by the claimant to be true and correct with respect to the property and value involved in the claim; or certification of prices or values, with trade or other discounts, allowance, or deductions of any nature whatsoever and the terms thereof, or depreciation reflected thereon; provided, however, that where the property involved in a claim has not been invoiced to the consignee shown on the bill of lading or receipt or where an invoice does not show price or value, or where the property involved has not been sold, or where the property has been transferred at bookkeeping values only, the carrier will, before voluntarily paying a claim thereon, require the claimant to establish the destination value in the quantity shipped, transported, or involved and to certify the correctness thereof in writing.

(C) Verification of loss. When a asserted claim for loss of an entire package or an entire shipment cannot be otherwise authenticated upon investigation, the carrier will obtain from the consignee of the shipment involved a certified statement in writing that the property for which the claim if filed has not been received from any other source.

(D) Perishable Commodities. The carrier does not provide a protective service for the transportation of perishable commodities, or of commodities requiring protection from heat or cold. Such commodities will be accepted for transportation solely at the shipper's risk for damage occasioned by exposure to heat or cold.

5. Disposition of Claims:

1. Carrier after receiving a written claim for loss or damage to property transported will pay, decline, or make a firm compromise settlement offer in writing to the claimant within 120 days after receipt of the claim by the carrier; provided, however, that if the claim cannot be processed and disposed of within 120 days after the receipt thereof, the carrier will at that time and at the expiration of each succeeding 60 - day period while the claim remains pending, advise the claimant in writing of the status of the claim and the reason for the delay in making final disposition thereof and shall retain in a copy of such advice to the claimant in its claim file thereon.

6. Damaged and Lost Property:

1. Whenever property is damaged or lost by the carrier in the course of transportation, the carrier will pay, at its option, either for the damaged or lost goods, not to exceed the actual or declared value of the property, whichever is lower, or for the cost of repair of damaged property, provided such cost of repair does not exceed the actual or declared value of the property. When the carrier pays the actual value of the property, title to the property shall thereupon pass to the carrier, otherwise the damaged property shall be returned to the shipper. The carrier shall not be liable for any special, incidental or consequential damages. The carrier will not be responsible for property that is in a bus depot for shipment or to be picked up by the consignee or being delivered by another carrier.

6. EXPRESS RATES:

1. General Commodities, except those of unusual value, Classes A and B explosives, household goods as defined by the Commission, commodities in bulk, commodities requiring special equipment, and those injurious or contaminating to other lading.

The rate for delivery of packages, released to value not exceeding \$100 per package, shall be the following: (fractions of a pound shall be raised to the next full pound).

These rates apply only on lines operated by KANSA STAGE LINES INC..

Express shipped off KANSA STAGE LINES INC. or interlined with will be at the tariff of that carrier or at the highest tariff.

POUNDS	ZONES						
	2	3	4	5	6	7	8
1	1.60	1.72	1.90	1.98	2.07	2.17	2.26
2	1.61	1.75	2.12	2.25	2.43	2.63	2.81
3	1.72	1.93	2.34	2.54	2.80	3.07	3.35
4	1.82	2.10	2.57	2.81	3.16	3.51	3.89
5	1.94	2.29	2.77	3.08	3.51	3.97	4.49
6	2.04	2.46	2.77	3.37	3.87	4.41	4.97
7	2.15	2.63	3.21	3.64	4.24	4.86	5.51
8	2.30	2.79	3.43	3.93	4.60	5.30	6.05
9	2.37	2.96	3.65	4.20	4.97	5.76	6.55
10	2.47	3.11	3.78	4.47	5.32	6.20	7.12
11	2.57	3.28	4.08	4.76	5.68	6.57	7.67
12	2.68	3.45	4.30	4.99	6.05	7.10	8.22
13	2.80	3.61	4.52	5.20	6.41	7.55	8.75
14	2.90	3.77	4.75	5.59	6.77	8.00	9.30
15	3.00	3.93	4.95	5.86	7.12	8.45	9.83
16	3.11	4.10	5.17	6.15	7.49	8.89	10.37
17	3.23	4.27	5.40	6.42	7.85	9.35	10.65
18	3.33	4.42	5.62	6.71	8.22	9.80	10.90
19	3.44	4.67	5.84	6.94	8.58	10.24	11.15
20	3.54	4.75	6.05	7.25	8.93	10.78	11.40
21	3.66	4.92	6.27	7.54	9.30	11.14	11.60
22	3.76	5.09	6.49	7.81	9.66	11.58	11.85
23	3.87	5.24	6.71	8.10	10.02	12.04	12.10
24	3.97	5.41	6.93	8.37	10.39	12.35	12.48
25	4.09	5.57	7.14	8.65	10.74	12.60	12.94

POUNDS	ZONES						
	2	3	4	5	6	7	8
26	4.19	5.74	7.36	8.93	11.10	12.80	13.38
27	4.29	5.91	7.58	9.20	11.47	13.10	13.82
28	4.40	6.06	7.80	9.49	11.83	13.35	14.27
29	4.52	6.23	8.02	9.76	12.19	13.60	14.45
30	4.62	6.38	8.23	10.04	12.55	13.80	14.70
31	4.72	6.55	8.45	10.32	12.91	14.05	14.95
32	4.82	6.72	8.67	10.60	13.27	14.30	15.20
33	4.92	6.88	8.89	10.88	13.64	14.55	15.45
34	5.04	7.05	9.11	11.15	14.00	14.80	15.70
35	5.15	7.20	9.32	11.43	14.35	15.00	15.95
36	5.25	7.37	9.54	11.71	14.72	15.25	16.20
37	5.37	7.54	9.76	11.99	15.08	15.50	16.45
38	5.47	7.70	9.98	12.27	15.44	15.75	16.75
39	5.58	7.87	10.21	12.55	15.81	16.00	17.00
40	5.68	8.02	10.41	12.82	16.16	16.20	17.20
41	5.80	8.19	10.63	13.10	16.40	16.52	17.45
42	5.90	8.36	10.86	13.38	16.65	16.89	17.70
43	6.01	8.52	11.08	13.66	16.90	17.25	17.95
44	6.11	8.68	11.30	13.94	17.15	17.62	18.20
45	6.23	8.84	11.51	14.21	17.35	17.97	18.45
46	6.33	9.01	11.73	14.50	17.60	18.33	18.70
47	6.44	9.18	11.95	14.79	17.85	18.70	19.00
48	6.54	9.33	12.17	15.05	18.10	19.05	19.25
49	6.66	9.50	12.40	15.33	18.40	19.42	19.55
50	6.76	9.66	12.60	15.60	18.60	19.77	19.80
51	6.79	9.71	12.66	15.69	18.85	19.86	20.05
52	6.81	9.75	12.71	15.74	19.15	19.96	20.35
53	6.84	9.79	12.78	15.82	19.40	20.05	20.60
54	6.86	9.83	12.83	15.89	19.60	20.14	20.85
55	6.89	9.87	12.88	15.96	19.90	20.23	21.15
56	6.92	9.91	12.95	16.03	20.15	20.32	21.40
57	6.94	9.96	13.00	16.09	20.40	20.41	21.65
58	6.97	10.00	13.05	16.17	20.50	20.65	21.95
59	7.01	10.04	13.12	16.24	20.59	20.90	22.20
60	7.03	10.08	13.17	16.32	20.67	21.15	22.45
61	7.06	10.11	13.22	16.38	20.76	21.30	22.65
62	7.08	10.15	13.29	16.46	20.85	21.45	22.80
63	7.11	10.19	13.34	16.52	20.94	21.60	22.95
64	7.13	10.24	13.39	16.59	21.03	21.80	23.15
65	7.16	10.28	13.46	16.67	21.13	21.90	23.25

POUNDS	ZONES						
	2	3	4	5	6	7	8
66	7.19	10.32	13.51	16.73	21.22	22.05	23.45
67	7.22	10.36	13.56	16.81	21.31	22.20	23.60
68	7.24	10.40	13.62	16.87	21.40	22.40	23.80
69	7.27	10.44	13.68	16.95	21.49	22.55	23.95
70	7.29	10.48	13.73	17.02	21.57	22.65	24.10
71	7.31	10.90	13.90	17.15	21.65	22.80	24.25
72	7.43	11.10	14.20	17.45	21.95	23.00	24.40
73	7.47	11.30	14.50	17.70	22.20	23.15	24.60
74	7.53	11.55	14.80	18.00	22.45	23.30	24.75
75	7.59	11.75	15.10	18.20	22.60	23.40	24.90
76	7.62	11.95	15.40	18.45	22.95	23.60	25.05
77	7.72	12.20	15.70	18.75	23.25	23.75	25.25
78	7.78	12.40	16.00	19.00	23.45	23.90	25.40
79	7.84	12.60	16.35	19.30	23.60	24.05	25.55
80	7.91	12.80	16.65	19.50	23.80	24.20	25.70
81	8.00	13.00	16.95	19.80	23.95	24.35	25.85
82	8.06	13.15	17.25	20.10	24.05	24.50	26.05
83	8.18	13.35	17.55	20.35	24.25	24.65	26.20
84	8.35	13.50	17.85	20.70	24.40	24.80	26.35
85	8.52	13.70	18.15	20.95	24.65	24.95	26.50
86	8.69	13.85	18.45	21.20	24.80	25.00	26.60
87	8.85	14.05	18.75	21.55	24.95	25.10	26.65
88	9.02	14.20	19.05	21.80	25.05	25.40	26.95
89	9.19	14.40	19.35	22.05	25.20	25.65	27.25
90	9.36	14.55	19.65	22.40	25.35	25.95	27.55
91	9.50	14.80	19.95	22.65	25.50	26.25	27.90
92	9.69	15.05	20.20	22.95	25.65	26.55	28.20
93	9.74	15.30	20.50	23.25	25.90	26.80	28.50
94	9.83	15.50	20.80	23.50	26.05	27.10	28.80
95	9.96	15.75	21.10	23.80	26.25	27.40	29.10
96	10.04	16.00	21.40	23.95	26.40	27.70	29.45
97	10.13	16.20	21.65	24.15	26.55	28.00	29.75
98	10.22	16.45	22.00	24.30	26.70	28.25	30.05
99	10.35	16.70	22.30	24.50	26.95	28.55	30.35
100	10.43	16.90	22.60	24.65	27.05	28.80	30.60

SECTION C

KANSAS INTRASTATE LOCAL PASSENGER TARIFF

TABLE OF CONTENTS

RULES AND REGULATIONS

1. APPLICATION OF TARIFF:

(a) Fares computed under Authority of this Tariff will apply for Local and Joint Kansas Intrastate Application via Kansa Stage Lines Inc.

(b) Fares computed under Authority of this Tariff are shown in dollars and cents and are payable in Lawful United States money.

(c) Luggage will only be checked on Kansa Stage Lines.

2. ROUND TRIP FARES:

(a) Adult fare will be computed at 0.14 cents per mile.

(b) Youth fare (who have reached their 6th birthday but have not reached their 18th birthday) will be at 0.125 cents per mile.

(c) Seniors who have reached their 65th birthday will beat 0.125 cents per mile.

(d) All round trip fares will be at 190% of one way fares.

3. COMPUTATION OF FARES:

(a) Where no through miles are published, mileage will be computed via the route of travel.

NOTE: Where dashes (---) are shown, there are no through miles published. Computation of miles obtained herein via the route of travel will apply.

(b) Apply the total miles determined in Sections thru hereof to the Table of Fares in Section hereof to obtain the applicable one way fare.

KANSA STAGE LINES, INC.

PLAN 2 BEGINNING COSTS

PURCHASE OF 11 BUSES	\$ 2,600,518.00
ADMINISTRATIVE BUDGET	469,453.00
OPERATION BUDGET	518,456.00
MAINTENANCE BUDGET	130,034.00
OFFICE & SHOP EQUIPMENT BUDGET	550,682.00
TOTAL BEGINNING COSTS	<u>\$ 4,269,143.00</u>

KANSA STAGE LINES BUSINESS PLAN 2

YEAR 1

ADMINISTRATIVE DIVISION

ADMINISTRATIVE SALARIES	\$ 105,000.00
ADMINISTRATIVE FRINGE BENEFITS*	28,350.00
* FICA, U/E, W/C & INSURANCE	<hr/>

SUB TOTAL	\$ 133,350.00
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STATION & OFFICE SUPPLIES	3,200.00
TICKETS, FREIGHT BILLS & BAGGAGE CLAIM TICKETS	14,815.00
ELECTRICITY	25,000.00
GAS	10,000.00
WATER	1,700.00
LANDFILL	400.00
TRASH	600.00
HAZARDOUS WASTE	300.00
TELEPHONES (equipment & usage)	20,000.00
POSTAGE - REGULAR	1,500.00
POSTAGE - CERTIFIED	200.00
EXPRESS MAIL	100.00
TRAVEL EXPENSE	
For President of Company & Advertising	29,070.00
PL/PD, VEHICLE CARGO LIABILITY	
Buses, Service Vehicles & Buildings	160,174.00
MEDICAL/LABORATORY	1,430.00
LEGAL SERVICES	
Auditing/Accounting & Attorney Services	5,000.00
TEMPORARY OFFICE HELP	.00
OTHER PROFESSIONAL HELP	1,000.00
MAINTENANCE - GROUNDS	1,500.00
PEST CONTROL SERVICES	200.00
JANITORIAL SERVICES	.00
ADVERTISING	
Newspaper, Radios, T.V., Yellow Pages & Billboards	48,669.00
PERIODICALS (For the employees)	200.00
MEMBERSHIPS - NBA, NBTA, ABA & KMCA	3,500.00
OTHER CONTRACTUALS	1,250.00

SUB TOTAL	<hr/> \$ 329,808.00
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PRINTING - INTERNAL	1,500.00
PRINTING - EXTERNAL	3,500.00
OTHER OFFICE SUPPLIES	1,260.00

SUB TOTAL	<hr/> \$ 6,260.00
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DIVISION TOTAL	<hr/> \$ 469,453.00 =====
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OPERATION DIVISION

DRIVERS SALARIES AT \$.23 PER MILE	\$ 164,762.00
SUPERVISOR SALARIES	30,000.00
DRIVERS FRINGE BENEFITS*	44,486.00
SUPERVISOR FRINGE BENEFITS*	8,100.00
* FICA, U/E, W/C & INSURANCE	
<hr/>	
SUB TOTAL	\$ 247,348.00
NON - AUTO BATTERIES	.00
SERVICE VEHICLE BATTERIES	.00
BUS TIRES	11,000.00
SERVICE VEHICLE TIRES	200.00
LUBRICANTS	3,430.00
DIESEL FUEL @ \$.95 PER GAL	187,809.00
DIESEL FUEL TAX @ \$.33 PER GAL	65,239.00
ANTIFREEZE	704.00
OTHER EQUIPMENT SUPPLIES (FILTERS)	392.00
DRIVERS UNIFORMS	2,334.00
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SUB TOTAL	\$ 271,108.00
DIVISION TOTAL	\$ 518,456.00 =====

MAINTENANCE DIVISION

MECHANIC SALARIES	\$ 39,520.00
MECHANIC SUPERVISOR	30,000.00
MECHANICS FRINGE BENEFITS*	10,671.00
SUPERVISORS FRINGE BENEFITS*	8,100.00
* FICA, W/C, U/E & INSURANCE	
	<hr/>
SUB TOTAL	\$ 88,291.00
TOWEL SERVICE	600.00
PROTECTIVE CLOTHING	980.00
UNIFORMS	1,900.00
CHEMICALS	793.00
TRUCK/HEAVY EQUIPMENT	
Misc. Bus Repair Parts	19,600.00
OTHER EQUIPMENT REPAIRS	
Contract bus repair service	12,250.00
UNLEADED FUEL	2,860.00
HANDTOOLS	800.00
CUSTODIAL SUPPLIES	1,960.00
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SUB TOTAL	\$ 41,743.00
DIVISION TOTAL	\$ 130,034.00
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CAPITAL NEEDS

BUS COSTS FOR 11 BUSES	
Including relief equipment & charter buses	\$ 360,682.00
LICENSES & PERMITS FOR BUSES	13,200.00
SERVICE VEHICLES	36,000.00
SERVICE VEHICLE LICENSES	1,500.00
OFFICE EQUIPMENT/FURNITURE	
Copier/pc/desks & etc.	71,300.00
STATION EQUIPMENT	3,000.00
SHOP EQUIPMENT	40,000.00
BUILDING & RENTAL BUILDINGS	25,000.00
BUILDING IMPROVEMENTS	.00
 SUB TOTAL	 \$ 550,682.00

KANSA BUDGET NEEDS \$ 1,668,643.00
=====

OPERATING COST PER MILE \$ 1.69

OPERATING MILES 988,466

SECOND OPTION FOR CAPITAL NEEDS

BUS LEASE PAYM'T @ 18% PER YEAR FOR 7 YEARS	
Includes relief equipment & charter buses	\$ 454,465.00
SECURITY DEPOSITS ON BUSES	252,478.00
LICENSE & PERMITS ON BUSES	13,200.00
SERVICE VEHICLES	36,000.00
SERVICE VEHICLE LICENSES	1,500.00
OFFICE EQUIPMENT	
Copier/pc/desks & etc.	71,300.00
STATION EQUIPMENT	3,000.00
SHOP EQUIPMENT	40,000.00
BUILDING & RENTAL BUILDINGS	25,000.00
BUILDING IMPROVEMENTS	
Internal improvements	.00
 SUB TOTAL	 \$ 893,943.00

KANSA BUDGET NEEDS \$ 2,011,886.00
=====

OPERATING COST PER MILE \$ 2.04

KANSA STAGE LINES, INC. PROFIT PROJECTION

PLAN 2 YEAR 1

OPERATING MILES		988,466
AT	X	1.85
TOTAL REVENUE	\$	<u>1,828,662.10</u>
TOTAL OPERATING COSTS		1,668,643.00
PROFIT MARGIN	\$	<u>160,019.10</u>

KANSA STAGE LINES BUSINESS PLAN 2

YEAR 2

ADMINISTRATIVE DIVISION

ADMINISTRATIVE SALARIES	\$ 110,250.00
ADMMINISTRATIVE FRINGE BENEFITS*	29,786.00
* FICA, W/C, U/E & INSURANCE	<hr/>

SUB TOTAL	\$ 140,018.00
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STATION & OFFICE SUPPLIES	3,600.00
TICKETS, FREIGHT BILLS & BAGGAGE CLAIM TICKETS	16,667.00
ELECTRICITY	25,500.00
GAS	10,200.00
WATER	1,734.00
LANDFILL	408.00
TRASH	612.00
HAZARDOUS WASTE	306.00
TELEPHONES (equipment usage)	6,000.00
POSTAGE - REGULAR	1,530.00
POSTAGE - CERTIFIED	204.00
EXPRESS MAIL	102.00
TRAVEL EXPENSE	
For the President of the Company & Advertising	20,000.00
PL/PD, VEHICLE & CARGO LIABILITY	
Buses, Service Vehicles & Buildings	180,548.00
MEDICAL/LABORARTORY	1,540.00
LEGAL SERVICES	
Auditing/Accounting & Attorney services	5,000.00
TEMPORARY HELP	.00
OTHER PROFESSIONAL HELP	1,000.00
MAINTENANCE - GROUNDS	1,500.00
PEST CONTROL SERVICES	204.00
JANITORIAL SERVICES	.00
ADVERTISING	
Newspaper, Radios, T.V., Yellow Pages & Billboards	49,643.00
PERIODICALS (Insentives for the employees)	204.00
MEMBERSHIPS - NBA, NBTA, ABA & KMCA	3,500.00
OTHER CONTRACTUALS	1,500.00

SUB TOTAL	\$ <hr/> 331,502.00
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PRINTING - INTERNAL	2,250.00
PRINTING - EXTERNAL	5,250.00
OTHER OFFICE SUPPLIES	1,285.00

SUB TOTAL	<hr/> \$ 8,785.00
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DIVISION TOTAL	\$ 480,305.00 =====
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OPERATION DIVISION

DRIVERS SALARIES @ \$.25 PER MILE	\$ 191,589.00
SUPERVISOR SALARY	31,500.00
DRIVERS FRINGE BENEFITS*	51,729.00
SUPERVISOR FRINGE BENEFITS*	8,505.00
* FICA, W/C, U/E & INSURANCE	
	<hr/>
SUB TOTAL	\$ 283,323.00
NON-AUTO BATTERIES	1,620.00
SERVICE VEHICLE BATTERIES	100.00
BUS TIRE	12,000.00
SERVICE VEHICLE TIRES	250.00
LUBRICANTS	3,500.00
DIESEL FUEL @ \$.97 PER GAL.	199,522.00
DIESE FUEL TAX @ \$.35 PER GAL.	71,993.00
ANTIFREEZE	797.00
OTHER EQUIPMENT SUPPLIES (FILTERS)	400.00
DRIVERS UNIFORMS	2,550.00
	<hr/>
SUB TOTAL	\$ 292,732.00
DIVISION TOTAL	\$ 576,055.00
	=====

MAINTENANCE DIVISION

MECHANICS SALARIES	\$ 40,311.00
MECHANICS SUPERVISOR	31,500.00
MECHANICS FRINGE BENEFITS*	10,884.00
SUPERVISOR FRINGE BENEFITS*	8,505.00
* FICA, W/C, U/E & INSURANCE	

SUB TOTAL \$ 91,200.00

TOWEL SERVICE	612.00
PROTECTIVE CLOTHING	1,000.00
UNIFORMS	1,938.00
CHEMICALS	800.00
TRUCK/HEAVY EQUIPMENT	
Misc. Bus Repair Parts	20,000.00
OTHER EQUIPMENT REPAIR	
Contract Bus Repair Service	12,500.00
UNLEADED FUEL	2,917.00
HANDTOOLS	816.00
CUSTODIAL SUPPLIES	2,000.00

SUB TOTAL \$ 42,583.00

DIVISION TOTAL \$ 133,783.00
=====

CAPITAL NEEDS

BUS PAYM'TS FOR 12 BUSES Including Schedule/Charter buses	\$ 394,127.00
LICENSES & PERMITS FOR 12 BUSES	14,688.00
SERVICE VEHICLE	.00
SERVICE VEHICLE LICENSES	1,470.00
OFFICE EQUIPMENT/FURNITUR Copier/PC/Desks & Etc.	.00
STATION EQUIPMENT (Freight Scales)	250.00
SHOP EQUIPMENT	.00
BUILDING & RENTAL BUILDINGS	25,000.00
BUILDING IMPROVEMENTS	
INTERNAL IMPROVEMENTS	.00

SUB TOTAL \$ 432,310.00

BEFORE BUS DEPRECIATION OF 1/7 THE TOTAL COST

KANSA BUDGET NEEDS BEFORE BUS DEPRECIATION \$ 1,622,453.00

BUS DEPRECIATION OF 1/7TH THE TOTAL COST = - 394,525.00

TOTAL BUDGET NEEDS \$ 1,227,928.00

TOTAL OPERATING COST PER MILE \$

OPERATING MILES 1,028,466

KANSA STAGE LINES, INC. PROFIT PROJECTION

PLAN 2 YEAR 2

OPERATING MILES		1,028,466
AT	X	1.85
TOTAL REVENUE	\$	<u>1,902,662.10</u>
TOTAL OPERATING COST		<u>1,622,453.00</u>
PROFIT MARGIN		280,209.10

KANSA STAGE LINES BUSINESS PLAN 2

YEAR 3

ADMINISTRATIVE DIVISON

ADMINISTRATIVE SALARIES	\$ 150,763.00
ADMINISTRATIVE FRINGE BENEFITS*	40,706.00
 SUB TOTAL	 \$ 191,469.00
 STATION & OFFICE SUPPLIES	 4,896.00
TICKETS, FREIGHT BILLS &	
BAGGAGE CLAIM TICKETS	20,401.00
ELECTRICITY	26,010.00
GAS	10,404.00
WATER	1,769.00
LANDFILL	416.00
TRASH	625.00
HAZARDOUS WASTE	312.00
TELEPHONES (equipment usgae)	6,120.00
POSTAGE - REGULAR	1,875.00
POSTAGE - CERTIFIED	250.00
EXPRESS MAIL	125.00
TRAVEL EXPENSE	
For President & Advertising	29,652.00
PL/PD, VEHICLE & CARGO LIABILITY	
Buses, Service Vehicle & Buildings	230,120.00
MEDICAL/LABORARTORY	2,132.00
LEGAL SERVICES	
Auditing/Accounting & Attorney	
TEMPORARY HELP (Sec. Vacation)	5,100.00
OTHER PROFESSIONAL HELP	600.00
MAINTENANCE - GROUNDS	1,000.00
PEST CONTROL SERVICES	208.00
JANITORIAL SERVICES	3,000.00
ADVDERTISING - Newspaper, Radios,	
T.V., Yellow Pages & Billboards	54,608.00
PERIODICALS For the Employees	208.00
MEMBERSHIPS - NBA, NBTA, ABA & KMCA	3,570.00
OTHER CONTRACTUALS	1,530.00
 SUB TOTAL	 \$ 404,931.00
 PRINTING - INTERNAL	 2,295.00
PRINTING - EXTERNAL	5,355.00
OTHER OFFICE SUPPLIES	
 SUB TOTAL	 \$ 7,650.00
 DIVISION TOTAL	 \$ 604,050.00 =====

OPERATORS DIVISION

DRIVERS SALARIES AT \$.27 PER MILE FOR SCHEDULE/CHARTER DRIVERS	\$ 266,886.00
TOUR BUS DRIVERS AT \$.31 PER MILE	31,000.00
SUPERVISOR SALARY	33,075.00
DRIVERS FRINGE BENEFITS*	80,429.00
SUPERVISOR FRINGE BENEFITS*	8,930.00
* FICA, W/C, U/E & INSURANCE	
	<hr/>
SUB TOTAL	\$ 420,320.00
NON - AUTO BATTERIES	2,066.00
SERVICE VEHICLE BATTERIES	100.00
BUS TIRES	15,300.00
SERVICE VEHICLE TIRES	250.00
LUBRICANTS	4,463.00
DIESEL FUEL AT \$.99 PER GAL.	227,396.00
DIESEL FUEL TAX AT \$.37 PER GAL.	84,987.00
ANTIFREEZE	1,016.00
OTHER EQUIPMENT SUPPLIES (FILTERS)	510.00
DRIVERS UNIFORMS	3,060.00
	<hr/>
SUB TOTAL	\$ 339,148.00
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DIVISION TOTAL	\$ 759,468.00 =====

MAINTENANCE DIVISION

MECHANIC SALARIES	\$	62,087.00
MECHANIC SUPERVISOR SALARY		33,075.00
MECHANICS FRINGE BENEFITS*		16,764.00
SUPERVISOR FRINGE BENEFITS*		8,930.00
* FICA, W/C, U/E & INSURANCE		
		<hr/>
SUB TOTAL	\$	120,856.00
TOWEL SERVICE		624.00
PROTECTIVE CLOTHING		1,020.00
UNIFORMS		2,584.00
CHEMCIALS		1,020.00
TRUCK/HEAVY EQUIPMENT		
Misc. Bus Repair Parts		25,500.00
OTHER EQUIPMENT REPAIRS		
Contract Bus Repair Service		15,938.00
UNLEADED FUEL		2,976.00
HANDTOOLS		833.00
CUSTODIAL SUPPLIES		2,040.00
		<hr/>
SUB TOTAL	\$	52,535.00
DIVISION TOTAL	\$	173,391.00
		=====

CAPITAL NEEDS

BUS PAYM'TS FOR 13 SCHEDULE/CHARTER BUSES INCLUDING RELIEF EQUIPMENT	\$ 428,241.00
BUS PAYM'TS FOR 2 TOURS BUSES	80,478.00
LICENSES & PERMITS FOR 15 BUSES	18,727.00
SERVICE VEHICLES	.00
SERVICE VEHICLE LICENSES	1,441.00
OFFICE EQUIPMENT/FURNITURE	
Copier/PC/Desks & Etc.	.00
STATION EQUIPMENT (Freight Scales)	255.00
SHOP EQUIPMENT	.00
BUILDING & RENTAL BUILDINGS	25,000.00
BUILDING IMPROVEMENTS	
Internal Improvements	3,000.00
 SUB TOTAL	 \$ 557,142.00

BEFORE DEPRECIATION OF BUSES	
KANSA BUGET NEEDS	\$ 2,094,051.00
	=====

DEPRECIATION OF 1/7 OF TOTAL COSTS	\$ 430,391.00
	=====

TOTAL BUDGET NEEDS	\$ 1,663,660.00
	=====

TOTAL OPERATING COST PER MILE \$
OPERATING MILES 1,148,466

KANSA STAGE LINES, INC. PROFIT PROJECTION

PLAN 2 YEAR 3

OPERATING MILES		1,148,466
AT	X	1.85
MILEAGE REVENUE	\$	<u>2,124,662.10</u>
TOUR REVENUE		335,491.31
TOTAL REVENUE	\$	<u>2,460,153.41</u>
TOTAL OPERATING COSTS		2,094,051.00
PROFIT MARGIN		<u>366,102.41</u>

ADMINISTRATIVE DIVISON

ADMINISTRATIVE SALARIES	\$ 158,301.00
ADMINISTRATIVE FRINGE BENEFITS*	42,741.00
* FICA, W/C, U/E & INSURANCE	<hr/>

SUB TOTAL	\$ 201,042.00
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STATION & OFFICE SUPPLIES	4,994.00
TICKETS, FREIGHT BILLS & BAGGAGE CLAIM TICKETS	20,809.00
ELECTRICITY	26,530.00
GAS	10,612.00
WATER	1,805.00
LANDFILL	425.00
TRASH	638.00
HAZARDOUS WASTE	318.00
TELEPHONES (equipment usgae)	6,243.00
POSTAGE - REGULAR	1,913.00
POSTAGE - CERTIFIED	255.00
EXPRESS MAIL	128.00
TRAVEL EXPENSE	
For President & Advertising	30,000.00
PL/PD, VEHICLE & CARGO LIABILITY	
Buses, Service Vehicle & Buildings	265,871.00
MEDICAL/LABORATORY	2,340.00
LEGAL SERVICES	
Auditing/Accounting & Attorney	5,202.00
TEMPORARY HELP (Sec. Vacation)	612.00
OTHER PROFESSIONAL HELP	1,020.00
MAINTENANCE - GROUNDS	1,530.00
PEST CONTROL SERVICES	212.00
JANITORIAL SERVICES	3,121.00
ADVDERTISING - Newspaper, Radios, T.V., Yellow Pages & Billboards	60,069.00
PERIODICALS For the Employees	212.00
MEMBERSHIPS - NBA, NBTA, ABA & KMCA	3,642.00
OTHER CONTRACTUALS	1,561.00

SUB TOTAL	\$ 450,062.00
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PRINTING - INTERNAL	2,341.00
PRINTING - EXTERNAL	5,462.00
OTHER OFFICE SUPPLIES	1,337.00

SUB TOTAL	<hr/> 9,140.00
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DIVISION TOTAL	\$ 660,244.00 =====
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OPERATION DIVISION

DRIVER SALARIES AT \$.29 PER MILE FOR SCHEDULE/CHARTER DRIVERS	\$ 321,455.00
TOUR BUS DRIVERS AT \$.33 PER MILE	39,600.00
SUPERVISOR SALARY	34,729.00
DRIVERS FRINGE BENEFITS*	97,485.00
SUPERVISOR FRINGE BENEFITS*	9,377.00
* FICA, W/C, U/E & INSURANCE	
	<hr/>
SUB TOTAL	\$ 502,646.00
NON - AUTO BATTERIES	2,389.00
SERVICE VEHICLE BATTERIES	110.00
BUS TIRES	17,687.00
SERVICE VEHICLE TIRES	255.00
LUBRICANTS	4,553.00
DIESEL FUEL AT \$1.01 PER GAL.	248,150.00
DIESEL FUEL TAX AT \$.39 PER GAL.	95,820.00
ANTIFREEZE	1,175.00
OTHER EQUIPMENT SUPPLIES (FILTERS)	1,020.00
DRIVERS UNIFORMS	3,400.00
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SUB TOTAL	\$ 374,559.00
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DIVISION TOTAL	\$ 877,205.00 =====

MAINTENANCE DIVISION

MECHANIC SALARIES	\$	65,192.00
MECHANIC SUPERVISOR SALARY		34,729.00
MECHANICS FRINGE BENEFITS*		17,602.00
SUPERVISOR FRINGE BENEFITS*		9,377.00
* FICA, W/C, U/E & INSURANCE		
		<hr/>
SUB TOTAL	\$	126,900.00
TOWEL SERVICE		637.00
PROTECTIVE CLOTHING		1,041.00
UNIFORMS		2,636.00
CHEMICALS		1,190.00
TRUCK/HEAVY EQUIPMENT		
Misc. Bus Repair Parts		26,010.00
OTHER EQUIPMENT REPAIRS		
Contract Bus Repair Service		16,257.00
UNLEADED FUEL		3,036.00
HANDTOOLS		850.00
CUSTODIAL SUPPLIES		2,081.00
		<hr/>
SUB TOTAL	\$	53,738.00
DIVISION TOTAL	\$	180,638.00
		=====

CAPITAL NEEDS

BUS PAYM'TS FOR 14 SCHEDULE/CHARTER BUSES INCLUDING RELIEF EQUIPMENT	\$ 443,434.00
BUS PAYM'TS FOR 3 TOUR BUSES	96,432.00
LICENSES & PERMITS FOR 17 BUSES	21,658.00
SERVICE VEHICLES	.00
SERVICE VEHICLE LICENSES	1,412.00
OFFICE EQUIPMENT/FURNITURE Copier/PC/Desks & Etc.	.00
STATION EQUIPMENT (Freight Scales)	260.00
SHOP EQUIPMENT	.00
BUILDING & RENTAL BUILDINGS	25,000.00
BUILDING IMPROVEMENTS Internal Improvements	3,060.00
 SUB TOTAL	 \$ 591,256.00

BEFORE DEPRECIATION OF BUSES KANSA BUGET NEEDS	\$ 2,309,343.00 =====
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DEPRECIATION OF 1/7 OF TOTAL COSTS	\$ 582,176.00 =====
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TOTAL BUDGET NEEDS	\$ 1,727,167.00 =====
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TOTAL OPERATING COST \$1

OPERATING MILES 1,228,466

KANSA STAGE LINES, INC. PROFIT PROJECTION

PLAN 2 YEAR 4

OPERATING MILES		1,228,466
AT	X	1.85
MILEAGE REVENUE	\$	<u>2,272,662.10</u>
TOUR REVENUE		530,584.78
TOTAL REVENUE	\$	<u>2,803,246.88</u>
TOTAL OPERATING COSTS		2,309,343.00
PROFIT MARGIN	\$	<u>493,903.88</u>

KANSA STAGE LINES BUSINESS PLAN 2

YEAR 5

ADMINISTRATIVE DIVISON

ADMINISTRATIVE SALARIES	\$ 166,216.00
ADMINISTRATIVE FRINGE BENEFITS*	44,879.00
* FICA, W/C, U/E & INSURANCE	
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SUB TOTAL	\$ 211,095.00
STATION & OFFICE SUPPLIES	5,094.00
TICKETS, FREIGHT BILLS &	
BAGGAGE CLAIM TICKETS	21,225.00
ELECTRICITY	27,061.00
GAS	10,824.00
WATER	1,841.00
LANDFILL	434.00
TRASH	651.00
HAZARDOUS WASTE	325.00
TELEPHONES (equipment usgae)	6,368.00
POSTAGE - REGULAR	1,951.00
POSTAGE - CERTIFIED	260.00
EXPRESS MAIL	131.00
TRAVEL EXPENSE	
For President & Advertising	30,000.00
PL/PD, VEHICLE & CARGO LIABILITY	
Buses, Service Vehicle & Buildings	302,961.00
MEDICAL/LABORARTORY	2,640.00
LEGAL SERVICES	
Auditing/Accounting & Attorney	5,306.00
TEMPORARY HELP (Sec. Vacation)	624.00
OTHER PROFESSIONAL HELP	1,041.00
MAINTENANCE - GROUNDS	1,561.00
PEST CONTROL SERVICES	216.00
JANITORIAL SERVICES	3,184.00
ADVDERTISING - Newspaper, Radios,	
T.V., Yellow Pages & Billboards	66,076.00
PERIODICALS For the Employees	216.00
MEMBERSHIPS - NBA, NBTA, ABA & KMCA	3,715.00
OTHER CONTRACTUALS	1,592.00
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SUB TOTAL	\$ 495,297.00
PRINTING - INTERNAL	2,388.00
PRINTING - EXTERNAL	5,571.00
OTHER OFFICE SUPPLIES	1,364.00
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SUB TOTAL	\$ 9,323.00
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DIVISION TOTAL	\$ 715,715.00
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OPERATION DIVISION

DRIVERS SALARIES FOR SCHEDULE/ CHARTER DRIVERS AT \$.31 PER MILE	\$ 356,025.00
TOUR DRIVERS AT \$.35 PER MILE	56,000.00
SUPERVISOR SALARY	36,466.00
DRIVERS FRINGE BENEFITS*	113,677.00
SUPERVISOR FRINGE BENEFITS*	9,846.00
* FICA, W/C, U/E & INSURANCE	
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SUB TOTAL	\$ 572,014.00
NON - AUTO BATTERIES	2,724.00
SERVICE VEHICLE BATTERIES	112.00
BUS TIRES	20,163.00
SERVICE VEHICLE TIRES	260.00
LUBRICANTS	5,191.00
DIESEL FUEL AT \$1.03 PER GAL.	269,544.00
DIESEL FUEL TAX \$.41 PER GAL.	107,294.00
ANTIFREEZE	1,340.00
OTHER EQUIPMENT SUPPLIES (FILTERS)	1,254.00
DRIVERS UNIFORMS	3,828.00
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SUB TOTAL	\$ 411,710.00
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DIVISION TOTAL	\$ 983,724.00 =====

MAINTENANCE DIVISION

MECHANIC SALARIES	\$ 88,212.00
MECHANIC SUPERVISOR SALARY	36,466.00
MECHANICS FRINGE BENEFITS*	23,817.00
SUPERVISOR FRINGE BENEFITS*	9,846.00
* FICA, W/C, U/E & INSURANCE	
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SUB TOTAL	\$ 158,341.00
TOWEL SERVICE	650.00
PROTECTIVE CLOTHING	1,041.00
UNIFORMS	2,689.00
CHEMICALS	1,216.00
TRUCK/HEAVY EQUIPMENT	
Misc. Bus Repair Parts	29,659.00
OTHER EQUIPMENT REPAIRS	
Contract Bus Repair Service	18,525.00
UNLEADED FUEL	4,000.00
HANDTOOLS	900.00
CUSTODIAL SUPPLIES	2,123.00
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SUB TOTAL	\$ 60,803.00
DIVISION TOTAL	\$ 219,144.00
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CAPITAL NEEDS

BUS PAYM'TS FOR 15 SCHEDULE/CHARTER BUSES INCLUDING RELIEF EQUIPMENT	\$ 478,927.00
BUS PAYM'TS FOR 4 TOUR BUSES	138,297.00
LICENSES & PERMITS FOR 19 BUSES	24,700.00
SERVICE VEHICLES	.00
SERVICE VEHICLE LICENSES	1,384.00
OFFICE EQUIPMENT/FURNITURE	
Copier/PC/Desks & Etc.	.00
STATION EQUIPMENT (Freight Scales)	265.00
SHOP EQUIPMENT	.00
BUILDING & RENTAL BUILDINGS	25,000.00
BUILDING IMPROVEMENTS	
Internal Improvements	3,121.00
SUB TOTAL	\$ <u>671,694.00</u>

BEFORE DEPRECIATION OF BUSES	
KANSA BUGET NEEDS	\$ 2,590,277.00
	=====

DEPRECIATION OF 1/7 OF TOTAL COSTS	\$ 659,534.00
	=====

TOTAL BUDGET NEEDS	\$ 1,930,743.00
	=====

TOTAL OPERATING COST \$1

OPERATING MILES 1,308,466

KANSA STAGE LINES, INC. PROFIT PROJECTION

PLAN 2 YEAR 5

OPERATING MILES		1,308,466
AT	X	1.85
MILEAGE REVENUE	\$	<u>2,420,662.10</u>
TOUR REVENUE		712,004.35
TOTAL REVENUE	\$	<u>3,132,666.45</u>
TOTAL OPERATING COSTS		2,590,277.00
PROFIT MARGIN	\$	<u>542,389.45</u>

WAYNE LAWARENCE TEMPLETON
359 COUNTRY ACRES
WICHITA, KANSAS 67212
(316) 722 - 7664

PERSONAL

Date of Birth - April 14, 1939
Place of Birth - Helena, Missouri
S.S # - 486 - 40 - 5125
Married with one child in the home.

EDUCATION

1970-1973 University Of Missouri.
Maryville, Missouri.
Law Enforcement Training.
196 Hours.

1970 Missouri Highway Patrol Academy
Jefferson City, Missouri
Law Enforcement Training
Grade Avg. 89.6

1965 St. Joseph Junior College
St. Joseph, Missouri
One Semester, Rates and Tariffs.

1964 National Safety Council
Chicago, Illinois
Transportation Safety Supervision

1958 U.S. Army Mechanics Training
Ft. Leonard Wood, Missouri
Graduated third from top of class.

EXPERIENCE

4/1990
Metropolitian Transit Authority
Wichita, Kansas.

Duties:

City Bus Driver; Drive regular routes to provide transportation for the public on time, safely.

9/1983 to 4/1990
Sunflower Tours Inc.
Cheney, Kansas.
Business Manager.

Duties:

Tour Coordinator; routing, lodging, meals, activities, costs of all of the above, and agents commissions.
Sales and promotions, contacting and working with travel agents, coordinate all promotion material for travel agents.
Custom design tours for clients and travel agents.
Booking of charters.
Maintain compliance with State and Federal Safety Regulations and permitting.
Employment and screening of drivers.

1/83 - 4/83
Safelite Industries
Wichita, Kansas.
Driver Supervisor

Duties:

Interviewing and screening over the road drivers, institute a routing program for nation wide travel. Maintain compliance of Transportation Safety Regulations.

1981 - 1982
Exhibitors Film Delivery
Wichita, Kansas.
Dock Supervisor

Duties:

Supervision of 15 employees for the transfer of inbound and out bound freight to its proper destination.

1976 - 1981
Truck and Bus Driver
Village Charters
Wichita, Kansas.
Bus Driver

Duties:

Drove Charter and Tour Bus.

Trenton St. Joseph Coaches
St. Joseph, Missouri.
Bus Driver / Driver Trainer

Duties:

Drove regular route and charter bus, driver trainer, assisted in dispatch and auditing of depots, worked in the maintenance of motor coaches. I had worked for this company on different occasions from 1960 until this move.

Pasco Steel Corporation
Wathena, Kansas.
Truck Driver

Duties:

Drove Tractor Trailer and delivered pre-fab steel buildings in the United States and Canada.

1974 - 1976
St. Francis Hospital
Memphis, Tennessee.
Assistant Safety and Security Director

Duties:

To start an inhouse safety and security program prior to and after the hospital was constructed. Control inhouse narcotics theft.

9 / 1974 - 10 / 1974
Container Transit
Milwaukee, Wisconsin
Safety Consultant

Duties:

To bring Safety Department in compliance with the State and Federal Safety Regulations.

6 / 1974 - 9 / 1974
Gordon's Transports
Memphis, Tennessee.
Regional Safety Supervisor

Duties:

Employment and road patrol supervision of road drivers, accident investigation, inspection of company terminals. Indirect supervision of over 800 drivers.

6 / 1973 - 6 / 1974
Southern Trucking Corp.
Memphis, Tennessee.
Safety Director

Duties:

Maintain compliance with State and Federal Safety Regulations, employment and screening company drivers, owner - operators, city drivers and mechanics. Safety inspections of all equipment. Accident investigation. Safety program for accident prevention. Supervision of 120 drivers and mechanics.

10 / 1969 - 6 / 1973
Atchinson County Sheriff's Department
Rockport, Missouri.
Deputy Sheriff

Duties:

Criminal investigation, accident investigation.
Manage jail, incarceration of prisoners, records keeping, fingerprinting, and providing for security in the jail, feeding of prisoners.
Public relations to the news media.
My family and I lived in the living quarters attached to the jail.

CULBS AND ORGANIZATIONS

Past member of:

Odd Fellows Lodge,
Tennessee Council of Safety Supervisors,
International Association of Auto Theft Investigators,
Missouri Sheriff's Association.

Present member of:

Wichita Air Capitol L.I.O.N.s Club - President, Second Term.
Wichita Pachyderm Club.

REFERENCES

Furnished upon request.