



EARTHMOVER & INDUSTRIAL TIRE REFERENCE



SAFETY PROCEDURES

SMALL TIRES - LESS THAN 25"

Safety Warning: To avoid serious injury...

- NEVER exceed maximum pressure rating of the wheel.
Specifically for industrial tires: Certain two-piece wheels are only capable of accepting a maximum pressure of 75 psi.— consult wheel manufacturer.
Serious injury or death may result if maximum pressure is exceeded.
- Follow proper tire mounting and dismounting procedures. Only specially trained persons should mount and dismount tires.
- Explosion of tire/rim assembly may result from welding or heating the rim without first removing tire.
- Tire failure may result from overloading or excessive speed.
- Always consult the Michelin® Earthmover Technical Data Book or other documentation if you are unsure of the recommended inflation pressure and proper safety procedures.

LARGE TIRES - 25" AND LARGER

Safety Warning: To avoid serious injury...

- Always properly secure the tire from falling or rolling to prevent personal and property injury.
- Maintain recommended inflation pressure. Under- and over-inflation can be dangerous to people and cause tire damage, improper vehicle handling and rapid, irregular wear.
- Never exceed maximum pressure rating of the wheel. Serious injury or death may result if maximum pressure is exceeded.
- Follow proper tire mounting and dismounting procedures. Only specially trained persons should mount and dismount tires.
- Explosion of tire/rim assembly may result from welding or heating the rim without first removing the tire.
- Improper handling may cause irreparable damage to the tire.
- Always consult the Michelin® Earthmover Technical Data Book or other documentation if you are unsure of the recommended inflation pressure and proper safety procedures.

TIRE CONSTRUCTION

MICHELIN® X®-RADIAL CONSTRUCTION

The crown is **stabilized** by a belt made up of several steel plies.

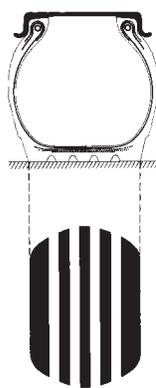
The casing has **one steel radial** casing ply.



The Michelin® X®-radial tire is built to take punishment and deliver more uptime on the job. Unlike its bias-ply counterpart, the sidewalls and tread of a radial tire work independently, absorbing shocks to your equipment, your operator and your payload. Michelin's rugged, sophisticated X-radial design excels in all work environments – from soft sand to tough shot rock.

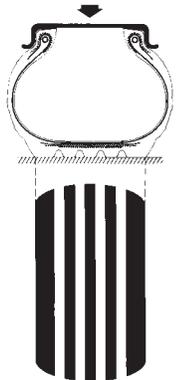
ADVANTAGES:

- LONG TIRE LIFE
- EXCEPTIONAL TRACTION ON ALL TYPES OF SURFACES
- LOW FUEL CONSUMPTION DUE TO LOWER ROLLING RESISTANCE
- IMPROVED COMFORT
- INCREASED RESISTANCE TO PUNCTURES AND FLATS



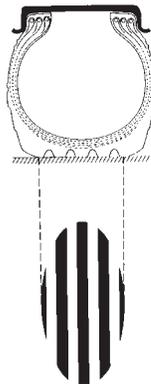
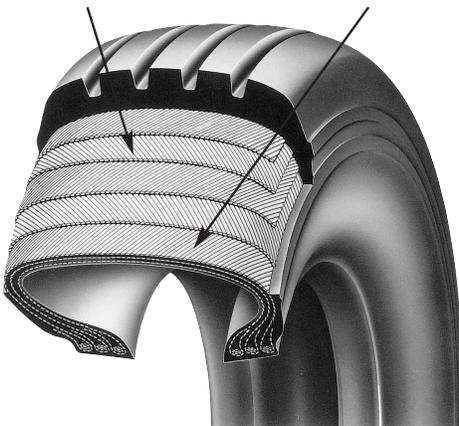
The sidewall and tread function separately. The tread is unaffected by the flexing of the sidewalls, so there is:

- less deformation of the tire contact area on the ground
- less movement in contact patch
- no movement between casing plies



The crown is **not stabilized** with belts.

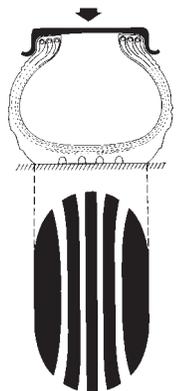
The casing is made of **criss-crossed fabric plies**.



The crown and sidewalls are formed by the same fabric ply structure.

The tread is subjected to flexing which causes:

- deformation of the tire contact area on the ground
 - movement in the contact patch
- The casing plies tend to "scissor" in relation to each other.



DISADVANTAGES:

- ACCELERATED WEAR
- LESS TRACTION
- LESS PUNCTURE RESISTANCE
- INCREASED FUEL CONSUMPTION
- FLAT SPOTTING

TIRES FOR WORK MACHINES

SIZES	XGLA2™	XHA™	XLD™ 70-1 L3	XLD™ 70-1 Super L3	XLD™ D1 / XLD™ D2	X® MINE D2™	XMP5™	XM27™	XR™	XR D™	XSM™ D2+	X® Snoplus M&S™	XTLA™	XZSL™
7.50 R15														
8.25 R15														
10.00 R15														
14.5 R15														
27x8.5 R15														
11 LR16														
10 R16.5														
12 R16.5														
275/80 R18														
335/80 R18														
9.00 R20														
12.00 R20														
275/80 R20														
335/80 R20														
375/75 R20														
405/70 R20														
425/75 R20														
12.00 R24														
13.00 R24														
14.00 R24														
16.00 R24														
16.9 R24														
17.5 LR24														
19.5 LR24														
15.5 R25														
16.00 R25														
17.5 R25														
18.00 R25														
20.5 R25														
555/70 R25														
23.5 R25														
625/70 R25														
26.5 R25														
705/70 R25														
755/70 R25														
29.5 R25														
18.4 R26														
16.9 R28														
19.5 R28														
29.5 R29														
30/65 R29														
16.9 R30														
18.4 R30														
35/65 R33														
45/65 R39														
45/65 R45														
55/80 R57														

Sizes available
 A Type — For the same conditions as A4 but enables higher speeds and is near A4 performance.
 D1 — Deep Rock
 D1A — Deep Rock and A Type
 D2 — Super Deep Rock
 DNA — Rock Tread and A Type



XGLA2™

The L2/G2 Michelin® radial tire designed with aggressive, non-directional tread to give graders maximum traction.



X® MINE D2™

This rugged Michelin® super L5 traction radial is designed to give maximum protection in severe hard rock quarries, underground mines, scrap and solid-waste applications.



XHA™

The versatile Michelin® L3 radial tire designed for loaders, graders and other equipment used in construction stockpile and truck-loading applications.



XLD™ 70-1 L3

The technologically advanced, low-profile Michelin® radial tire for small and medium loaders engineered to substantially increase productivity in moderately abrasive conditions.



XLD™ 70-1 SUPERL3

The technologically advanced, low-profile Michelin® radial tire for small and medium loaders engineered to substantially increase productivity in moderately abrasive conditions.



XLD™ D1 / XLD™ D2

The directional Michelin® L4/L5 radial tire for wheel loaders designed to provide high levels of stability, traction and protection combined with a cushioned ride for operator comfort.

TIRES FOR WORK MACHINES



XMPS™

The Michelin® radial tire designed with an aggressive, non-directional tread to give graders increased productivity year round.



XM27™

This rugged Michelin® R4 radial tire for backhoes and loaders is designed to provide excellent traction and durability both on- and off-road.



XR™

The Michelin® radial tire with a time-proven, versatile tread design that delivers both excellent traction on soft surfaces and long life in long-haul, high-speed applications.



XRD™

The Michelin® radial tire designed to deliver extra protection and a high level of performance on wheel loaders and scrapers.



XSM™ D2+

The super-deep, smooth Michelin® radial tire designed for maximum wear and reliability on wheel loaders and haulers working in severe mining, quarry and waste-handling conditions.



X® SNOPLUS M&S™

The all-season Michelin® radial tire designed for use on graders and loaders where exceptional traction on snow and ice is required.



XTLA™

The Michelin® L2/G2 radial tire designed to provide exceptional traction and long, even treadwear on loaders and graders.



XZSL™

This Michelin® radial tire is designed to provide superior performance in every category while delivering real cost savings for skid-steer operations.

APPLICATIONS		BACKHOE	ROUGH-TERRAIN FORKLIFFTS	GRADERS	LOADERS / DOZERS	TELESCOPIC HANDLERS	SCRAPERS	SKID STEERS
TREAD PATTERN	TRA CODE*							
XGLA2™	G2, L2							
XHA™	L3							
XLD™ 70-1 L3	L3							
XLD™ 70-1 Super L3	L3							
XLD™ D1	L4							
XLD™ D2	L5							
X® MINE D2™	L5							
XMPS™	G2							
XM27™	R4							
XR™	G3, L3							
XRD™	L3, L4							
XSM™ D2+	L5S							
X® SNOPLUS M&S™	G2, L2							
XTLA™	G2, L2, E2							
XZSL™	L3							

TIRES FOR TRANSPORT MACHINES

	Sizes available
A Type	— For the same conditions as A4 but enables higher speeds and is near A4 performance.
A4 Type	— The ideal solution for aggressive surfaces where the risk of cutting and hacking is high.
B Type	— For heat generation resistance in intensive use on long-haul cycles.
B4 Type	— A compromise between resistance to abrasion and heat generation for less aggressive surfaces.
C Type	— Specially designed to cope with the highest-speed hauls.
C4 Type	— Engineered to cope with high-speed travel on long hauls.
D1	— Deep Rock
D1A	— Deep Rock and A Type
D1B	— Deep Rock and B Type
D2	— Super Deep Rock
DNA	— Rock Tread and A Type
DNB	— Rock Tread and B Type

SIZES	XAD™65-1SUPER E3	XADN™	XADT™	XDR™	XDT™	XGC™	XHC™	XHD1™	XK™	XKD1™	X® QUARRY™	XR™	XRD™	XRS™	XVC™
12.00 R24								A							
14.00 R24								A	A						
13.00 R25												B			
14.00 R25								A,A4							
16.00 R25								AB	B						
17.5 R25															
18.00 R25								AB	A	A		B			
20.5 R25															
21.00 R25								A							
23.5 R25								A							
660/65 R25															
25/65 R25												B			
26.5 R25								A							
750/65 R25															
29.5 R25															
810/65 R25															
29.5 R29												B			
33.25 R29												B			
18.00 R33					A,A4,B				A		B				
37.5 R33											B				
21.00 R35					A,A4,B				A		B				
24.00 R35					A,A4,B				AB		B				
29.5 R35											B				
33.25 R35											B				
37.25 R35											B				
37.5 R39											B				
40.5/75 R39													DNB		
24.00 R49					A,A4,B				A		B				
27.00 R49					A,B,B4			B	A,B,B4		B				
30.00 R51					A,B,B4										
33.00 R51					A,B,B4	A,A4,B			AB						
36.00 R51					A,B,B4			B	AB		B				
37.00 R57					A,B,B4,C4				A,B,C4						
40.00 R57					A,B,B4,C4				A,B,B4						



XAD™65-1SUPER E3

The Michelin® Super E3 low-profile, low-pressure radial tire designed to deliver excellent flotation, lateral stability and traction for articulated dump trucks.



XHD1™

The deep-tread Michelin® radial tire designed for haul trucks operating in demanding job conditions where traction and protection are required.



XR™

The Michelin® radial tire with a time-proven, versatile tread design that delivers both excellent traction on soft surfaces and long life in long-haul, high-speed applications.



XADN™

The Michelin® E3 radial tire for articulated trucks designed to deliver exceptional reliability in a variety of applications.

TIRES FOR TRANSPORT MACHINES



XADT™

The extra-deep tread Michelin® E4 radial tire for articulated trucks designed to deliver exceptional performance and durability in solid waste and quarry applications.



XDT™

The Michelin® E4 radial tire for haul trucks designed to provide excellent adhesion and traction in severe conditions.



XGC™

The non-directional Michelin® radial tire designed to deliver exceptional operator comfort and durability in high-speed and demanding on- and off-road crane applications.



XK™

The Michelin® radial tire designed to deliver maximum protection in severe transport and abrasive underground mining conditions.



XKD1™

The Michelin® radial E4 tire for use on haul trucks in the most demanding mine and quarry conditions.



XHC™

The multi-purpose Michelin® radial tire designed for a wide spectrum of applications such as normal highway and off-road crane operations.



X® QUARRY™

The extremely durable Michelin® E4 radial tire designed for use on haul trucks running at low speeds in the most damaging quarry conditions.



XRD™

The Michelin® radial tire designed to deliver extra protection and a high level of performance on wheel loaders and scrapers.



XRS™

The non-directional Michelin® radial tire for large scrapers designed to provide excellent longitudinal/lateral traction and exceptional tread and sidewall cut protection.



XVC™

The Michelin® radial E2 tire designed especially for high-speed applications on well-maintained site roads and highways.



XDR™

The Michelin® radial E4 tire for haul trucks designed to deliver maximum protection and excellent traction in the most severe mine and quarry conditions.

APPLICATIONS		ARTICULATED DUMPERS	CRASH / FIRE / RESCUE	LOADERS	MOBILE CRANES	RIGID DUMPERS	SCRAPERS	BOTTOM DUMP TRUCKS
TREAD PATTERN	TRA CODE*							
XAD™65-1Super E3	E3							
XADN™	E3							
XADT™	E4							
XDR™	E4							
XDT™	E4							
XGC™	E2							
XHC™	E2							
XHD1™	E4							
XK™	E3							
XKD1™	E4							
X® QUARRY™	E4							
XR™	E2, E3							
XRD™	E3							
XRS™	E3							
XVC™	E2							

TIRES FOR INDUSTRIAL MACHINES

SIZES	X [®] RIB™	XZM™	XZR™	XZSC™	XZSL™	XZZ™
5.00 R8						
125/75 R8 (15 x 4 1/2 R8)						
150/75 R8 (16 x 6 R8)						
180/70 R8 (18 x 7 R8)						
6.00 R9						
200/75 R9 (21 x 8 R9)						
6.50 R10						
7.50 R10						
225/75 R10 (23 x 9 R10)						
7.00 R12						
250/75 R12 (27X10 R12)						
7.00 R15						
7.50 R15						
8.25 R15						
27x8.5 R15						
225/75 R15 (28X9 R15)						
250/70 R15 (250-15)						
315/70 R15 (300-15)						
355/65 R15 (350-15)						
10 R16.5						
12 R16.5						
9.00 R20						
10.00 R20						
11.00 R20						
12.00 R20						
12.00 R24						
14.00 R24						
16.00 R25						
18.00 R25						
18.00 R33						

 Sizes available



XZM™

The rugged pneumatic Michelin® radial tire designed for forklift trucks, terminal tractors and other industrial equipment used in heavy-duty applications.



XZR™

The Michelin® radial tire for industrial tractors and trailers designed to deliver excellent traction, long life and fuel efficiency.



XZSC™

The long-lasting Michelin® radial tire for straddle carriers designed to deliver excellent performance and low operating costs in the most demanding conditions.



XZSL™

This Michelin® radial tire is designed to provide superior performance in every category while delivering real cost savings for skid-steer operations.



XZZ™

The Michelin® radial tire for industrial tractors and trailers designed to deliver long life and fuel efficiency.



X[®] RIB™

The Michelin® radial tire for industrial tractors and trailers designed to deliver long life and fuel efficiency.

APPLICATIONS	CONTAINER HANDLERS	DOCK CRANES	FORKLIFTS	AIRPORT GROUND EQUIPMENT	REACH STACKERS	STRADDLE CARRIERS	SWEEPERS	TRANSPORT	SKID STEER
TREAD PATTERN									
X [®] RIB™									
XZM™									
XZR™									
XZSC™									
XZSL™									
XZZ™									

TIRES FOR SPECIAL APPLICATIONS

SIZES	XF™	XHD1™	XL™	X® Lisse Compacteur™	XMP™
7.50 R15					
18 R19.5					
10.00 R20					
11/80 R20					
13/80 R20					
18 R22.5					
12.00 R24					
14.00 R24					
15.00 R24					
395/80 R25					
14.00 R25		A,A4			
16.00 R25		A,B			
17.5 R25					
18.00 R25		A,B			
23.5 R25					

 Sizes available

A Type — For the same conditions as A4 but enables higher speeds and is near A4 performance.

A4 Type — The ideal solution for aggressive surfaces where the risk of cutting and hacking is high.

B Type — For heat generation resistance in intensive use on long-haul cycles.



XF™

The Michelin® radial tire with aggressive directional tread designed to deliver exceptional traction and performance for rough-terrain forklifts and excavators.



XHD1™

The deep-tread Michelin® radial tire designed for haul trucks operating in demanding job conditions where traction and protection are required.



X® LISSE COMPACTEUR™

The smooth Michelin® radial tire featuring a non-stick tread compound designed for compactors used in road construction.



XMP™

The Michelin® radial tire for utility transport and logging operations designed to deliver exceptional durability and cool running in high-speed applications.



XL™

The versatile, all-terrain Michelin® radial tire designed to provide exceptional traction on soft, muddy ground conditions and deliver solid performance in high-speed applications.

APPLICATIONS		COMPACTORS	CRASH/ FIRE RESCUE	ROUGH-TERRAIN FORKLIFTS	LOGGING	MILITARY	MOBILE CRANES	RIGID DUMPERS	TRANSPORT	WHEELED EXCAVATORS
TREAD PATTERN	TRA CODE*									
XF™	L2									
XHD1™	E4									
XL™	E2, E3									
X® LISSE COMPACTEUR™	C1									
XMP™	E2									

STAR RATING / PLY RATING

MAXIMUM PLY RATING (PR) AND CORRESPONDING STAR (*) MARKING ON MICHELIN® RADIAL TIRES

Sizes and Marking	Work Machines	Transport Machines	Sizes and Marking	Work Machines	Transport Machines	Sizes and Marking	Work Machines	Transport Machines
7.50 R 15	12		17.5 R 25 **	20	24	18.00 R 33 **		40
8.25 R 15	12		18.00 R 25 *	24		33.5 R 33 **		44
18 R 19.5 *	16		18.00 R 25 **		36	35/65 R 33 *	36	
10.00 R 20	16		20.5 R 25 *	24		37.5 R 33 **		48
C20 Pil (11/80 R 20)	16		20.5 R 25 **		28	21.00 R 35 **		44
E20 (13./80 R 20) (1)			21.00 R 25 **		40	24.00 R 35 **		48
15 R 22.5 *	16		23.5 R 25 *	28		29.5 R 35 **		40
18 R 22.5 *	16		23.5 R 25 **		32	33.25 R 35 **		44
12.00 R 24 ***	24	24	25/65 R 25 **		32	37.25 R 35 **		48
13.00 R 24 TG *	14		26.5 R 25 *	32		37.5 R 39 **		52
14.00 R 24 TG *	16		26.5 R 25 **		32	40/65 R 39 *	42	
14.00 R 24	24		29.5 R 25 *	34		40.5/75 R 39 **		54
14.00 R 24 ***	28	32	29.5 R 25 **		34	45/65 R 39 * (1)		
15.00 R 24 (17/80 R 24)	28		555/70 R 25 * L2F	16		45/65 R 45 *	50	
16.00 R 24 TG *	16	16	555/70 R 25 * L3T or Super	24		24.00 R 49 **		48
16.00 R 24 **		36	625/70 R 25 * L3T or Super	28		27.00 R 49 **		54
555/70 R 24 TG *	16		705/70 R 25 *	32		30.00 R 51 **		64
20 R 24 TG *	16		750/65 R 25 *	34		33.00 R 51 **		68
13.00 R 25 ***		28	755/70R25* L3T	34		36.00 R 51 **		74
14.00 R 25 ***		32	26.5 R 29 **		34	37.00 R 57 ** (1)		
15.5 R 25 *	16		29.5 R 29 *	34		40.00 R 57 **		78
15.5 R 25 **	20		29.5 R 29 **		40	55/80 R 57 (1)		
16.00 R 25 **		36	30/65 R 29 *	28				
17.5 R 25 *	16		33.25 R 29 **		44			

(1) no corresponding P.R. in these sizes, which are exclusively manufactured in radial construction.

Use code : C : Compactor
G : Grader
E : Earthmoving
L : Loader and Dozer

Index : S : Smooth (mine, hard ground)
1 : Ribbed (smooth surfaces)
2 : Traction regular
3 : Rock regular

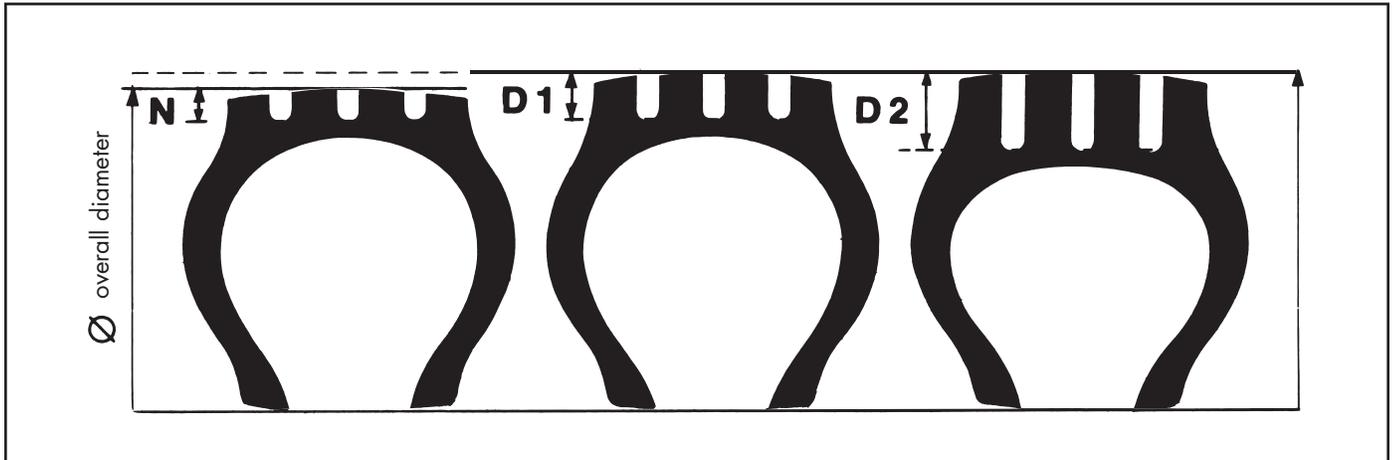
4 : Rock deep tread
5 : Rock extra-deep tread
7 : Flotation (work on soft ground)

Standardized identification code			Michelin® tread patterns to be equated with the codes opposite
Code	Tread pattern	Application	The Michelin tire that ensures equivalent service
C1	SMOOTH	COMPACTOR	X Lisse Compacteur
E 1	RIBBED	TRANSPORT	XRIB
E 2	TRACTION		XGC, XHC, XL, XMP, XR, XTLA, XVC
E 3	ROCK		XAD65-1 SUPER E3, XADN, XHA, XK, XR, XRDN, XRS
E 4	ROCK (deep tread)		XADT, XDR, XDT, XHD1, XKD1, XQUARRY
E 7	FLOTATION		XRIB
G 2	TRACTION	GRADER	XGLA2, XMPS, XSNOPUS, XTLA
G 3	ROCK		XR
L 2	TRACTION	LOADER DOZER	XF, XGLA2, XSNOPUS, XTLA
L 3	ROCK		XHA, XK, XLD70-1 L3, XLD70-1 SUPER L3, XR, XRDN, XZSL
L 4	ROCK (deep tread)		XLDD1, XRD1
L 5	ROCK (extra-deep tread)		XLDD2, XMINED2
L 5 S	SMOOTH (extra-deep tread)		XSMDD2+

MICHELIN® complementary identification: T = Traction, R = Rock, V = Speed, F = Flotation, P = Multi purpose, S/R = Smooth/Rock.
e.g. : **L4T** Rock tire (L4; Standardized identification code) where traction is needed (T; Michelin® code).

TIRE RANGE

1 - DIFFERENT TREAD DEPTHS



N = Normal
(Traction, rock)
(E2 / 3 - L2 / 3 - G2 / 3)

D1 = N x 1.5
(rock, deep tread)
(E4 - L4 - G4)

D2 = N x 2.5
(rock, extra deep tread)
(L5)

2 - SEVERAL TYPES OF RUBBER COMPOUNDS

- type A4** highly resistant to cutting, hacking and abrasion.
- type A** highly resistant to cutting, hacking and abrasion for use at average speeds higher than type A4.
- type B4** a compromise between resistance to abrasion and heat generation for less aggressive surfaces (from 49 inches).
- type B** designed for low heat generation on long runs and in intensive service conditions.
- type C4** engineered to cope with high-speed travel on long hauls.
- type C** specially designed to cope with the highest-speed hauls.



EARTHMOVER

www.michelin.com/earthmover

ONE PARKWAY SOUTH, PO BOX 19001, GREENVILLE, SC, 29602-9001