



## THE MICHELIN ADVANTAGE

No matter the season or soil condition, Michelin<sup>®</sup> ag tires are uniquely designed to excel throughout the entire year.

- The expanded footprint gives more contact on the ground and less soil compaction.
- The unique vertical lug design maintains traction with wear.



### LONGER TIRE LIFE

Michelin's exclusive rubber compounds and industry-exclusive deep, vertical lug design not only last longer, but also wear more evenly, resulting in superior traction throughout the life of the tire.

#### RESULTS

- Lower cost per hour than the competition.
- More stubble resistant.
- Michelin R-1W gives you 33 percent more usable tread than competitor R-1 tire.

Deep, sharp, vertical lug profile gives Michelin more-uniform tread wear for superior traction over the tire's life.





## **LESS SOIL COMPACTION**

MICHELIN<sup>®</sup> ag tires are made with more-flexible sidewalls and a flat crown that delivers a longer footprint that more evenly distributes machine weight, putting less pressure on the ground. Less pressure on the ground means less soil compaction, which means increased yield.

#### **RESULTS\***

- Rut depth 55 percent more shallow than a competitor tire.
- Surface area 15 percent larger than a competitor tire\*\* (see illustration at right).
- Soil compaction nearly 20 percent less than a competitor tire.



\*\* Tire imprint comparison of Michelin vs. competitor. 15% larger surface area with Michelin tires.



## THE MICHELIN ADVANTAGE

## FUEL SAVINGS

Michelin's unique tire design (45-degree lug angle, vertical lug and flexible sidewalls) allows for superior traction in almost all weather conditions, which minimizes slippage and can result in greater fuel savings.

#### RESULTS

- Less slippage maximizes equipment productivity.
- More-efficient use of horsepower increases fuel economy.

### **STUBBLE RESISTANT**



Michelin R&D teams invest significant time and resources designing tires for superior stubble resistance. The results are the innovative solutions for stubble resistance found in MICHELIN® Stubble shield<sup>™</sup>, including specialized rubber compounds and the anti-stubble reinforcement in the tread area of the new MICHELIN<sup>®</sup> YieldBib<sup>™</sup> radial. To further guarantee your confidence in the superior stubble resistance of the MICHELIN<sup>®</sup> Stubble shield<sup>™</sup>, we offer a two-year free replacement Stubble Damage Warranty on the MICHELIN<sup>®</sup> YieldBib<sup>™</sup> line.

#### RESULTS

Specially designed rubber compounds and tread design for increased durability in severe stubble conditions.

Side-by-side comparison of Michelin and competitor tire showcasing the stubble resistance of the MICHELIN<sup>®</sup> YieldBib<sup>™</sup> tire.\*



**MICHELIN** 



Competitor

\* MICHELIN<sup>®</sup> YieldBib<sup>™</sup> and Competitor Brand Tire research conducted in North Platte, NE. Each tire had 274.5 hours.

### **INNOVATIVE SOLUTIONS**

Michelin Ultraflex Technologies deliver greater casing flexibility, resulting in increased durability, a longer footprint and reduced soil compaction. Michelin Ultraflex Technology tires can carry the same loads at up to 20 percent less air pressure (IF rated tires) or the same loads at up to 40 percent less air pressure (VF rated tires). Michelin was the pioneer in IF and VF technology in the North American tire market. Our innovations deliver results for your operation, resulting in better care for your soil, less downtime and improved yields.





## WHAT ARE MICHELIN ULTRAFLEX TECHNOLOGIES?

Michelin Ultraflex Technologies refers to the IF (Increased Flexion) and VF (Very High Flexion) designations on select Michelin tread designs. IF and VF tires offer an increase in capacity and decrease in pressure versus the standard radial tire. This increase in capacity is attained by an enhancement in sidewall design that creates a larger area of flexion, or flex. The increase in flexion creates a larger footprint for a dramatic increase in traction and capacity all while decreasing soil compaction.



**Increased Flexion (IF)** tires allow for up to a **+20 percent** increase in load capacity vs. a standard tire or up to **-20 percent** air pressure required to carry the same load as a standard tire.



Very High Flexion (VF) tires allow for up to a +40 percent increase in load capacity vs. a standard tire or up to -40 percent air pressure required to carry the same load as a standard tire.



IF and VF Technology tires are able to reduce compaction and increase traction in the same way snowshoes perform in the snow. They spread your body weight over a larger area, which lowers your pounds per square inch on the ground. Michelin Ultraflex Technologies do the same thing for your tractor.



### MICHELIN<sup>®</sup> CEREXBIB<sup>™</sup> 2

#### **OUTSTANDING PRODUCTIVITY AND SOIL PROTECTION**

#### LOW PRESSURES FOR LESS SOIL **COMPACTION**

- CFO+ designation carry more load at 6 mph cyclic in the field.
- Up to 45% less pressure vs standard radial tires.<sup>1</sup>
- Proven yield increase of 4% using Michelin Ultraflex tires.<sup>2</sup>

#### TRACTION

- Excellent traction and flotation.
- Flexible sidewall delivers larger footprint for larger contact patch with the soil.



**STEEL CROWN BELTS** 

Excellent puncture resistance and

Huge Load Carrying Capacity – up to

40% more load capacity versus standard

optimized load distribution.

High flotation for traction in all

conditions and reduced slip.

Great stability.

PRODUCTIVITY

radial tires.





Size	I.S.O. Index	Product Code	Equivalent Size	Max Inflation Pressure (psi) Harvest Operation	Max Load	Section Width (in)	Overall Dia. (in)	Rolling Circum. (in)	RCI	Tread Depth (32nds)
VF 520/80R26 CFO+	168A8	24394	41	17,800	19.8	58.7	173.2	-	56	56
VF 620/70R26 CFO+	173A8	98039	41	20,990	23.9	59.6	175.6	42	57	57
VF 750/65R26 CFO+	180A8	33777	41	25,860	29.4	63.8	188.4	-	61	61
VF 520/85R30 CFO+	172A8	86907	41	20,425	20.6	63.9	188.9	46	58	54
VF 620/70R30 CFO+	175A8	53106	41	22,485	23.9	63.6	187.6	-	54	58
VF 710/65R30 CFO+	179A8	22560	41	25,110	27.3	66	195	-	58	72
IF 800/65R32 CFO+	181A8	25367	41	30,920	30.4	73	216.6	46	72	74
IF 800/70R32 CFO+	185A8	71535	41	34,670	31.3	76.8	228.3	-	69	69
VF 900/60R32 CFO+	191A8	73624	41	34,670	33.7	75	221.2	-	73	58
VF 500/85R34 CFO+	172A8	29877	41	19,865	19.6	66	195.3	-	58	74
IF 680/80R38 CFO+	182A8	20691	41	31,855	25.4	79.5	237.4	-	74	73
VF 900/60R38 CFO+	193A8	31193	41	37,480	34.6	79.9	235.9	48	73	-
IF 800/70R38 CFO+	187A8	25474	41	36,540	31.1	80.7	239.3	-	72	-
VF 520/85R42 CFO+	177A8	15337	41	20,780	21.3	76.9	228.6	47	69	73
VF 580/80R42 CFO+	183A8	45547	41	28,110	22.8	80.3	237.8	-	73	79
VF 710/70R42 CFO+	188A8	60118	41	31,855	27.8	82.6	244.4	-	81	72
IF 800/70R42 CFO+	1889A8	91180	41	38,605	30.3	83.4	251.5	-	73	71
VF 900/60R42 CFO+	195A8	03717	41	38,605	33.2	83.4	247.3	-	74	81
(1) For 27, 200 lbs, compared to a 000//	OD22 Michalia	Magayala atam	dord rodiol	•						

(1) For 26,200 lbs, compared to a 900/60R32 Michelin Megaxbib standard radial (2) Harper Adams University 2014/2016.



### **SOIL PROTECTION:**

"With regular standard tires, we had grooves, and sometimes erosion down the bean rows. Our MICHELIN<sup>®</sup> tires actually float over the rows – very low compaction that way."

Arlyn Schipper - Conrad, Iowa



## MICHELIN<sup>®</sup> CEREXBIB<sup>™</sup>

#### HIGH LOAD CAPACITY AT LOW PRESSURE FOR LARGE HARVESTING MACHINERY

#### LARGE LOAD CAPACITY

- Up to 40% more load capacity.<sup>2</sup>
- CFO rated for high capacity in cyclic operation.

#### TRACTION

- Excellent traction on slopes and the ability to work on wet ground.
- +25% 3 bigger footprint.

#### LOW PRESSURE, MORE YIELD

Proven Yield Gains of +4% using Ultraflex tires.<sup>1</sup>

- Flexible sidewall for larger footprint and lower soil compaction.
- 20-40% less air pressure versus standard radial.

#### STEEL CROWN BELTS

- Great stability.
- Excellent puncture resistance and optimized load distribution.

Revolutionary strong but flexible casing gives excellent service life.





Size	I.S.O. Index	Product Code	Equivalent Size	Max Inflation Pressure (psi) Harvest Operation	Max Load	Section Width (in)	Overall Dia. (in)	Rolling Circum. (in)	RCI	Tread Depth (32nds)
VF 520/80R26 CFO	168A8	61911	-	41	16,425	19.8	58.7	173.1	-	56
VF 620/70R26 CFO	173A8	64298	-	41	19,070	23.9	59.6	175.5	42	57
VF 750/65R26 CFO	177A8	02320	-	35	21,405	29.3	63.9	188.2	-	61
VF 520/85R30 CFO	172A8	66188	-	41	18,475	20.6	63.9	188.7	46	58
VF 620/70R30 CFO NEW!	172A8	92780	-	35	18,475	23.5	63.6	187.4	-	54
IF 680/85R32 CFO	179A8	18128	-	35	26,490	26.9	76.2	224.8	47	58
IF 800/65R32 CFO	178A8	39571	30.5-32	35	25,630	30.2	73	216.3	46	72
IF 800/70R32 CFO	182A8	18258	-	35	29,045	30.9	77.1	227.9	-	69
IF 900/60R32 CFO	185A8	03456	-	41	31,615	33.7	75	222.2	-	73
IF 1000/55R32 CFO NEW!	188A8	22858	-	41	34,170	40.9	76	226.7	-	74
IF 600/75R38 CFO NEW!	188A8	02720	-	41	27,335	26.1	77.4	229.3	-	74
IF 800/70R38 CFO	187A8	24897	-	41	33,310	31.1	80.7	239.3	48	72
IF 900/60R38 CFO	188A8	03936	-	41	34,170	34.6	79.9	236.9	48	73
VF 520/85R42 CFO	174A8	78620	20.8R42	41	18,950	20.9	76.8	227.8	47	69
IF 710/70R42 CFO	182A8	61530	_	41	29,045	28.1	81.8	243	48	81

Note: All of the above tires are tubeless but can be mounted with a tube. (1) Harper Adams University 2014/2016. (2) Internal test 2013-2015.



#### WEAR/DURABILITY:

"By the end of one season with (other brand) tires, the cords were showing from stubble damage. With the same setup, but using MICHELIN<sup>®</sup> radials, we are experiencing hardly any stubble damage at all."

Chris Bender - Poseyville, Indiana



## MICHELIN<sup>®</sup> MACHXBIB<sup>™</sup> / X28<sup>™</sup> LARGE VOLUME

#### HIGH FLOTATION R1W RADIAL WITH HUGE LOAD CARRYING CAPACITY

## **ROBUST PERFORMANCE**Proven casing design.

 A flat stable tread to spread very heavy loads evenly across the footprint.

#### **FUEL SAVINGS**

4% fuel savings, 0.26 Gallon (US)/ hr compared to the main market competitor (for a consumption on the road of 6.6 Gallon (US)/hr).<sup>1</sup>

#### VERSATILITY

Ideal for road transport: high speed rated with large lugs for long service life and low-rolling resistance rubber mix for fuel efficiency. • Efficient in the field to transfer the torque of highpowered tractors to the ground.

## EXCEPTIONAL COMFORT AND HANDLING

- The swept back 15° lug design delivers an exceptionally smooth ride on the road up to 40mph.<sup>2</sup>
- Ideal for transporting heavy loads.



Combines	1								
Size	I.S.O. Index	Product Code	Max Inflation Pressure (psi)	Max Load	Section Width (in)	Overall Dia. (in)	Rolling Circum. (in)	RCI	Tread Depth (32nds)
MACHXBIB®									
680/75R32 NEW!	164A8/161B	80305	28	16,535	26.6	73.4	217	-	73
650/75R38	169A8/169B	86829	41	19,180	26.2	76.7	226.8	47	77
650/85R38	173A8/173B	89462	41	21,495	27	81.2	239.8	48	81
XM28 <sup>™</sup> LARGE V	OLUME								
680/75R32	164A8/161B	80305	28	16,535	26.6	73.4	217	46	73

((1) When authorized by the laws in force in the country – depending on the size.
(2) Analytic test on MICHELIN tracks Ladoux Centre.



## SOIL COMPACTION DEMONSTRATION

Michelin constructed a compaction ramp at the Farm Progress Show to demonstrate the effect tire choice can have on compaction. The left side of the combine (as pictured) was equipped with Michelin 650/85R38 MachXBibs, while the right side was equipped with Michelin 520/85R42 MegaXBibs. The reason the 650's decreased compaction by over 25% is due to a larger footprint and lower pressure required to carry the load of a loaded combine.



### MICHELIN<sup>®</sup> MEGAXBIB<sup>™</sup> 2

#### EXCELLENT SOLUTION FOR HARVESTERS, FLOATERS AND HEAVY EQUIPMENT, NOW WITH STUBBLE SHIELD TECHNOLOGY

#### ROBUST AND STUBBLE RESISTANT

 Reinforced carcass designed for a long tire life.

#### **MEGAXBIB RANGE BENEFITS**

- Excellent road handling, and high load / speed capacities.
- Great stability, excellent puncture resistance and optimized load distribution.

#### MICHELIN STUBBLE SHIELD

**STEEL CROWN BELTS** 

• Now with Stubble Shield Technology to fight stubble damage.







Size	I.S.O. Index	Product Code	Max Inflation Pressure (psi) 6 mph Cyclic	Max Load	Section Width (in)	Overall Dia. (in)	Rolling Circum. (in)	RCI	Tread Depth (32nds)
1000/50R25	172A8/166D	76362	41	23,610	40.7	65.1	193.2	1	58
750/50R26	160A8/154D	81321	46	16,865	29.2	55.4	164.2	41	58
800/65R32	178A8/178B	87958	56	28,110	31	72	215.4	46	58
900/60R32	181A8/181B	04361	56	30,920	34	74	221.9	46	76
1050/50R32	178A8/172D	12011	41	28,110	40.8	73.5	218	46	71



#### TRACTION/SMOOTH RIDE:

"MICHELIN<sup>®</sup> tires have a really aggressive grip in the field and great tread pattern. The durability is unmatched by other tire brands."

Joseph Zumwalt = Warsaw, Illinois



### **MICHELIN<sup>®</sup> MEGAXBIB<sup>™</sup>**

#### **EXCELLENT SOLUTION FOR HARVESTERS AND HEAVY EQUIPMENT**

#### LOAD CAPACITY

Up to 67,460 lbs per axle.<sup>4</sup>

#### **ENDURANCE**

■ Up to +46% vs main competitor.<sup>5</sup>

#### COMFORT

Flexible sidewalls for a smooth, comfortable ride.

#### **STEEL CROWN BELTS**

- Great stability.
- Excellent puncture resistance and optimized load distribution.





Size	I.S.O. Index	Product Code	Equivalent Size	Max Inflation Pressure (psi) 6 mph Cyclic	Max Load	Section Width (in)	Overall Dia. (in)	Rolling Circum. (in)	RCI	Tread Depth (32nds)
620/75R26	166A8/166B	89936	23.1-26	55	19,865	23.1	63.1	186.9	43	58
750/65R26	171A8/171B	36798	281-26	55	23,050	28.8	63.8	189.7	-	58
620/75R30	168A8/168B	63928	23.1-30	55	20,990	23.8	67.3	200.1	44	58
650/75R32	172A8/172B	46686	24.5R-32	55	23,610	25.9	71.9	213.5	45	74
800/65R32	178A8/178B	49342	30.5LR32	55	28,110	31.2	72.4	214.9	46	71
800/70R32	181A8/181B	68880	-	55	30,920	31.2	76.2	225.4	-	73
900/60R32	181A8/181B	40581	-	55	30,920	34.2	74.6	221.5	46	71
1050/50R32 M28 (1,2)	178A8	94737	73x44.00-32	41 (3)	28,110	40.9	74.9	222.4	46	76
620/75R34	170A8/170B	83734	23.1-34	55	22,485	23.2	71.4	212.5	-	58
710/75R34	178A8/178B	13589	-	55	28,110	27.2	74.8	221.9	47	73
620/70R38	170A8/170B	99512	-	55	22,485	23.9	73.4	218.8	46	69
520/85R42	162A8/162B	15488	20.8R42	39	15,665	21.1	76.3	227.7	47	71
620/70R42	166A8/166B	15145	20.8R42	41	17,485	25.2	77.2	230.6	47	71

Note: All of the above tires are tubeless but can be mounted with a tube.

Note: Tires approved for Floaters must only be roaded with the machine EMPTY and at no more than 65 km/h.
(1) The MegaXbib M28 is designed for use on harvesting machines. Deep Tread.
(2) Not recommended for use on high-speed applicators like Floaters.
(3) 10 mph cyclic
(4) 1050/50 R32 184A8/184B - 6 mph cyc.
(5) Internal test (Ladoux - France) study on 800/65R32 178A8/178B.



#### WEAR/DURABILITY:

"My MICHELIN<sup>®</sup> tires have great wear resistance. I expect my Michelin tires to last at least three times as long as competitor tires that I used to have."

Mike Holman - Union City, Tennessee



Customer:	Phone:	Date:
Combine Make & Model:	Max Road Speed:	Max Field Speed:
Front Tire Size, Brand & Design:		Dual or Single?
Rear Tire Size, Brand & Design:		
PROCEDURE TO OBTAIN	LOADS & PRESSURE	RECOMMENDATIONS

1.	Determine empty front and rear axle weights without the head installed. The recommended methodis to weigh each axle of the machine separately. When actually weighing the machine is not possible,use the shipping weight of the machine from the owner's manual. Without the head attached,approximately 75% of the shipping weight will be on the front axle and 25% will be on the rear axle.Use the attached diagram to record empty axle weights. $W_{FA}$ = Machine shipping weight (without head) $ bs  \propto 0.75 = W_{FA}$ $ bs  \infty \propto 0.75 = W_{FA}$ $W_{FA}$ = Machine shipping weight (without head) $ bs  \propto 0.75 = W_{FA}$ $ bs  \infty \propto 0.75 = W_{FA}$
2.	Using the attached diagram, record the weight of the heaviest head to be used with this machine. Normally this weight can be found in the owner's manual of the head in question.
3.	Determine the max load to be carried in the grain storage on the combine while harvesting.Calculate by multiplying the weight per bushel of the heaviest grain to be harvested by the max grainstorage volume on the combine. Record this value on attached diagram. $W_g =$ Heaviest grain weightIbs/bu $\chi$ $V_g$ bu=Ibs
4.	Using the diagram, record the following dimensions from the combine with the head attached: wb = wheel base = distance from centerline of front axle to centerline of rear axle d1 = distance from head center of gravity to the centerline of the front axle d2 = distance from grain storage center of gravity to the centerline of the front axle
5.	Calculate weight shift from the rear axle to the front axle as a result of installing the head. Weight shift to front axle due to installing head = $W_H$ [Ibs $\chi \frac{d1}{wb}$ in = $WS_{head}$ [Ibs
6.	Calculate weight added to the front axle when the grain storage is filled to max capacity. Grain weight to front axle = $W_G$   bs $\chi \frac{(wb   in - d2   in)}{wb   in} = WG_{front}$   bs
7.	Calculate weight added to the rear axle when the grain storage is filled to max capacity. Grain weight to rear axle = $W_G$ $\square$ $\square$ $\square$ $\square$ $M_G$ $\square$

#### MICHELIN TIRE LOADS WORKSHEET FOR HARVESTERS





#### 8. Calculate max cyclic load per tire & required inflation pressure for each axle under field conditions.

Empty Axle Weight	+	W <sub>FA</sub>	lbs	+	W <sub>RA</sub> Ibs	;
Head Weight	+	W <sub>H</sub>	lbs			
Weight Shift Due to Head	+	WS <sub>head</sub>	lbs	-	WS <sub>head</sub> Ibs	;
Max Grain Weight per Axle	+	WG <sub>front</sub>	lbs	+	WG <sub>rear</sub> Ibs	;
Max Cyclic Load per Axle			lbs		lbs	
Max Cyclic Load per Tire			lbs		lbs	
Equiv. Load per Tire (if dual)			lbs		lbs	į
Inflation Pressure Required @ Ma	ax Field	Speed	psi		psi	

#### 9. Calculate max load per tire & required inflation pressure for each axle under roading conditions.

Empty Axle Weight	+	WFA	lbs	+	WRA	lbs
Head Weight	+	W <sub>H</sub>	lbs			
Weight Shift due to Head	+	WS <sub>head</sub>	lbs			
Max Road Load per Axle			lbs			lbs
Max Road Load per Tire			lbs			lbs
Equiv. Load per Tire (if dual)			lbs			lbs
Inflation Pressure Required @ Max F	ield Sp	peed	psi			psi

## 10. Determine the final pressure recommendation for each axle by selecting the highest pressure per tire calculated in steps 9 or 10 above.

Inflation Pressure Recommended

•
psi



#### **UNITED STATES**

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