



rain-x®

HEAVY DUTY APPLICATION GUIDE

PROFESSIONAL WIPER BLADES



O U T S M A R T T H E E L E M E N T S ®



SERVICE TIPS:

✓ KEEP WINDSHIELD CLEAN

Your Windshield should be frequently cleaned using a non-abrasive cleanser and warm water. Hardened particles and bug residue can generally be removed using a nylon mesh sponge.

TIP: New wiper blades and refills work best when installed on a clean Windshield. Clean Windshield thoroughly before changing wipers and wipe off squeegee (rubber part of blade).

✓ ROUTINELY CHECK BLADE CONNECTION

Improper installation can be a common cause of streaking or chattering.

TIP: Remember to remove the clear plastic cover from Rain-X Latitude® prior to use.

✓ CHANGE YOUR BLADES ON GROUNDHOG DAY

Exposure to the elements can wear down and/or harden rubber on your wiper blades.

TIP: For maximum safety and clear vision when driving, blades should be changed once a year on Groundhog Day.



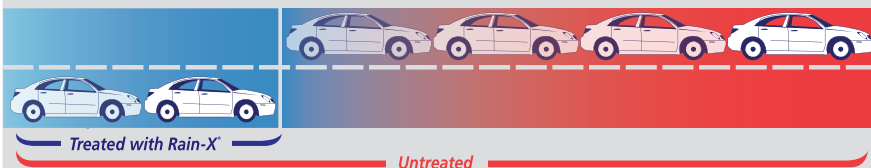
GLASS TREATMENT

Rain-X® Original Glass Treatment seals the microscopic pores of the glass with a super slick, non-stick invisible barrier that repels rain, sleet and snow on contact. Raindrops bead up and are blown away by the aerodynamic wind flow from driving, improving visibility and driving comfort. The Rain-X® treatment also makes for easy removal of frost, ice, salt, mud, and bugs.

Regular Maintenance and Increased Driving Visibility

BETTER VISIBILITY MEANS BETTER RESPONSE TIME.

In tests conducted by a major university, response time improved up to a full second or more. At highway speeds, that's almost four car lengths of extra stopping distance.*



*Source: University of Michigan

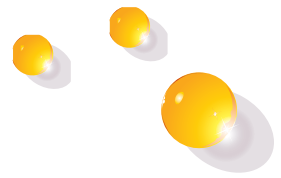




	J-Hook - Small (9X3)	J-Hook - Large (9X4)	Pin - Small (3/16 Side Pin)	Pin - Large (1/4 Side Pin)	I&L (Pinch Tab)	PTB (Push Tab)
	✓	✓*	✓*	✓*	✗	✗
	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓**	✓**
	✓	✓	✓	✓	✓	✓

* EXCLUDES SIZES 15" AND BELOW

** EXCLUDES SIZES 16" & 18"



90%

of ALL driving decisions are based on vision. Make sure Rain -X® Wiper Blades are a part of your routine maintenance program.

Source: American Optometric Association

MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
ABC COMPANIES	M1235	2014-2007	9x4 Hook	28	24
AMERICAN TRANSPORT	AmTran RE	2001-1998	1/4" Side Pin	24	24
	Conventional Chassis	2001-1998	9x4 Hook	22	22
	Conventional Chassis	1997-1992	9x4 Hook	16	16
AUTOCAR	AC Series	1995-1988	9x4 Hook	20	20
BERING TRUCK CORPORATION	HD Series	2001-1999	9x4 Hook	22	22
	LD Series	2001-1999	9x4 Hook	20	20
	MD Series	2001-1999	9x4 Hook	22	22
BLUE BIRD	Vision	2017-2008	9x4 Hook	18	18
CARPENTER	Crown Conventional Chassis	2003-1996	9x4 Hook	18	18
CHEVROLET	C4500	2009-2003	9x4 Hook	22	22
	C5500	2009-2003	9x4 Hook	22	22
	C5500	2002-1997	9x4 Hook	18	18
	C6500	2009-2003	9x4 Hook	22	22
	C6500	2002-1997	9x4 Hook	18	18
	C7500	2009-2003	9x4 Hook	22	22
	C7500	2002-1997	9x4 Hook	18	18
	C8500	2009-2003	9x4 Hook	22	22
	C8500	2002-1997	9x4 Hook	18	18
	Kodiak	1996-1995	9x4 Hook	18	18
	Grumman	1999-1993	9x4 Hook	20	20
	P Series	2002-1991	9x4 Hook	18	18
	Tiltmaster W3	2004-1995	9x4 Hook	20	20
	Tiltmaster W4	2004-1995	9x4 Hook	20	20
	Tiltmaster W5	2004-1995	9x4 Hook	20	20
	Tiltmaster W6	2004-1995	9x4 Hook	20	20
	Tiltmaster W7	2004-1995	9x4 Hook	20	20
	Tiltmaster W3500	2010-2005	9x4 Hook	20	20
	Tiltmaster W4500	2010-2005	9x4 Hook	20	20
	Tiltmaster W5500	2010-2005	9x4 Hook	20	20
	T5500	2009-1997	9x4 Hook	22	22
	T6500	2009-1997	9x4 Hook	22	22
	T7500	2009-1997	9x4 Hook	22	22



MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
CHEVROLET	T8500	2009-1997	9x4 Hook	22	22
	WT5500	2004-2000	9x4 Hook	22	22
DAF	LF Series	2002	9x4 Hook	24	24
	65 Series	2001-1992	9x4 Hook	24	24
	75 Series	2001-1992	9x4 Hook	24	24
	85 Series	2001-1992	9x4 Hook	24	24
	95 Series	2001-1997	9x4 Hook	22	22
DINA	HTQ	2001-1998	9x4 Hook	22	22
DODGE	Sprinter	2014-2008	Pinch tab	26	26
FORD	Aeromax	1998-1996	9x4 Hook	20	20
	Aeroview	1998-1996	9x4 Hook	20	20
	F Series Super Duty	2018-2009	9x3 Hook	22	22
	F Series Super Duty	2008-2000	9x4 Hook	20	20
	F Series Super Duty	1999-1998	9x4 Hook	22	22
	F Series Super Duty	1997-1994(L)	9x4 Hook	18	18
	L Series (Louisville)	1998-1996	9x4 Hook	20	20
	Transit Connect	2018-2014	Push Button	28	21
	LCF	2009-2006	9x4 Hook	21	20
FREIGHTLINER	108 SD	2016-2011	9x4 Hook	22	22
	114 SD	2020-2017	9x3 Hook	22	22
	114 SD	2016-2013	9x4 Hook	22	22
	122 SD	2016-2014	9x4 Hook	22	22
	M2 106	2020	9x3 Hook	22	22
	Business Class M2	2016-2002	9x4 Hook	22	22
	Cascadia	2020-2017	9x3 Hook	24	24
	Cascadia	2016-2008	9x4 Hook	24	24
	Cascadia Evolution	2016-2013	9x4 Hook	24	24
	Century Class C112	2010-2001	9x4 Hook	22	22
	Century Class C112	2000-1996	1/4" Side pin	22	22
	Century Class C120	2010-2001	9x4 Hook	22	22
	Century Class C120	2000-1996	1/4" Side pin	22	22
	CL 120 (one piece)	1997	1/4" Side pin	24	22
	Columbia	2011-2000	9x4 Hook	22	22
	Coronado	2016-2001	9x4 Hook	22	22
	FL Series	2003-1991	1/4" Side pin	24	24

MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
FREIGHTLINER	MB Sries	1995-1991	1/4" Side pin	24	24
	Sport Chassis	2001-1999	1/4" Side pin	24	24
	MT Series	2007-1997	9x4 Hook	24	24
	Sprinter	2016-2008	Pinch tab	26	24
	Sprinter	2016-2001	9x4 Hook	24	22
	Argosy	2006-1999	9x4 Hook	21	21
	FLH Series	1998	9x4 Hook	21	21
GMC	C4500	2009-2003	9x4 Hook	22	22
	C5500	2009-2003	9x4 Hook	22	22
	C5500	2002-1997	9x4 Hook	18	18
	C6500	2009-2003	9x4 Hook	22	22
	C6500	2002-1997	9x4 Hook	18	18
	C7500	2009-2003	9x4 Hook	22	22
	C7500	2002-1997	9x4 Hook	18	18
	C8500	2009-2003	9x4 Hook	22	22
	Topkick	1996-1995	9x4 Hook	18	18
	Grumman	1999-1993	9x4 Hook	20	20
	P Series	2002-1991	9x4 Hook	18	18
	W3500	2010-2005	9x4 Hook	20	20
	W4500	2010-2005	9x4 Hook	20	20
	W5500	2010-2005	9x4 Hook	20	20
	W3	2004-1995	9x4 Hook	20	20
	W4	2004-1995	9x4 Hook	20	20
	W5	2004-1995	9x4 Hook	20	20
	W6	2004-1995	9x4 Hook	20	20
	W7	2004-1995	9x4 Hook	20	20
	T5500	2009-1997	9x4 Hook	22	22
	T6500	2009-1997	9x4 Hook	22	22
	T7500	2009-1997	9x4 Hook	22	22
	T8500	2009-1997	9x4 Hook	22	22
	WT5500	2004-2000	9x4 Hook	22	22
HINO	145	2010-2005	9x4 Hook	26	22
	155	2013-2011	9x4 Hook	26	22
	165	2010-2005	9x4 Hook	26	22
	185	2010-2005	9x4 Hook	26	22

MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
HINO	195h	2017	9x3 Hook	20	20
	195	2014-2012	9x4 Hook	26	22
	198	2013-2011	9x4 Hook	26	22
	238	2016-2005	9x4 Hook	26	22
	258	2016-2006	9x4 Hook	26	22
	268	2016-2005	9x4 Hook	26	22
	308	2010-2005	9x4 Hook	26	22
	338	2017-2005	9x4 Hook	26	22
	358	2016-2008	9x4 Hook	26	22
	FA Series	1997-1989	9x4 Hook	19	19
	FB Series	1997-1987	9x4 Hook	19	19
	FD Series	1997-1986	9x4 Hook	19	19
	L6	2020	9x3 Hook	26	22
	L7	2020	9x3 Hook	26	22
	L8	2020	9x3 Hook	26	22
	M5	2020	9x3 Hook	20	20
	XL8	2020	9x3 Hook	26	22
IC BUS	AC	2014-2012	9x4 Hook	22	22
	AE	2016-2012	9x4 Hook	22	22
	BE200	2016-2006	9x4 Hook	24	24
	CE200	2006-2002	9x4 Hook	22	22
	CE300	2017-2005	9x4 Hook	24	24
	CE300	2004-2002	9x4 Hook	22	22
	FE	2007-2002	1/4" Side pin	24	24
	RE300	2008-2007	1/4" Side pin	24	24
	RE	2006-2002	1/4" Side pin	24	24
IC CORPORATION	AC	2016-2012	9x4 Hook	22	22
	BE	2016-2005	9x4 Hook	24	24
	CE	2016-2005	9x4 Hook	24	24
	HC	2016-2007	9x4 Hook	22	22
	LC	2008-2007	9x4 Hook	22	22
	RE	2008-2002	9x4 Hook	24	24
INTERNATIONAL/ NAVISTAR	CV	2020	9x3 Hook	22	22
	CXT	2007-2005	9x4 Hook	22	22

MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
INTERNATIONAL/ NAVISTAR	DuraStar	2017-2008	9x4 Hook	22	22
	HV Series	2021-2017	9x3 Hook	22	22
	HX Series	2021-2017	9x3 Hook	22	22
	HX 620 Split Window	2017	9x3/9x4 Hook	18	18
	LoneStar	2016-2009	9x4 Hook	22	22
	LoneStar	2017	9x3/9x4 Hook	20	20
	LT Series	2020	9x3 Hook	22	22
	MV	2020	9x3 Hook	22	22
	MXT	2007-2005	9x4 Hook	22	22
	ProStar	2016-2008	9x4 Hook	22	22
	RH Series	2020-2017	9x3 Hook	22	22
	RXT	2007-2005	9x4 Hook	22	22
	TerraStar	2016-2010	9x4 Hook	22	22
	TranStar	2016-2008	9x4 Hook	22	22
	WorkStar	2016-2008	9x4 Hook	22	22
	4100 Series	2007-2006	9x4 Hook	22	22
	4200 Series	2007-2002	9x4 Hook	22	22
	4300 Series	2007-2002	9x4 Hook	22	22
	4400 Series	2007-2002	9x4 Hook	22	22
	4700 Series	2007-2002	9x4 Hook	22	22
	4800 Series	2007-2002	9x4 Hook	22	22
	4900 Series	2007-2002	9x4 Hook	22	22
	5500i (one piece windshield)	2007-1999	9x4 Hook	22	22
	5600i (one piece windshield)	2007-1999	9x4 Hook	22	22
	5900i (one piece windshield)	2007-1999	9x4 Hook	22	22
	5500i (two piece windshield)	2007-1999	9x4 Hook	18	18
	5600i (two piece windshield)	2007-1999	9x4 Hook	18	18



MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
INTERNATIONAL/ NAVISTAR	5900i (two piece windshield)	2007-1999	9x4 Hook	18	18
	7300 Series	2007-2002	9x4 Hook	22	22
	7400 Series	2007-2002	9x4 Hook	22	22
	7500 Series	2007-2002	9x4 Hook	22	22
	7600 Series	2007-2002	9x4 Hook	22	22
	7700 Series	2007-2005	9x4 Hook	22	22
	8500 Series	2007-2002	9x4 Hook	22	22
	8600 Series	2007-2002	9x4 Hook	22	22
	9100i (one piece)	2003-1999	9x4 Hook	22	22
	9200i (one piece)	2009-1999	9x4 Hook	22	22
	9400i (one piece)	2007-1999	9x4 Hook	22	22
	9900i (one piece)	2016-1999	9x4 Hook	22	22
	9900ix (one piece)	2016-1999	9x4 Hook	22	22
	CE Series	2017	9x3 Hook	24	24
	CityStar	2009-2008	9x4 Hook	21	20
	CF500 D.S.	2007-2005	9x4 Hook	21	20
	CF600 D.S.	2007-2005	9x4 Hook	21	20
ISUZU	FTR	2020-2017	9x3 Hook	20	20
	FTR	2009-1997	9x4 Hook	22	22
	FVR	2009-1997	9x4 Hook	22	22
	FXR	2009-2005	9x4 Hook	22	22
	FRR	2004-1997	9x4 Hook	22	22
	FSR	2004-1997	9x4 Hook	22	22
	HTR	2007-2006	9x4 Hook	22	22
	HVR	2007-2006	9x4 Hook	22	22
	HXR	2007-2006	9x4 Hook	22	22
	NPR	2020	9x3 Hook	20	20
	NPR	2016-1995	9x4 Hook	20	20
	NRP	2016-1995	9x4 Hook	20	20
	NQR	2017	9x3 Hook	20	20
	NQR	2016-1999	9x4 Hook	20	20

MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
KENWORTH	T170	2009-2008	9x4 Hook	18	18
	T270	2020	9x3 Hook	20	20
	T270	2013	9x4 Hook	24	24
	T270	2009-2007	9x4 Hook	18	18
	T300	2016-2007	9x4 Hook	18	18
	T370	2016-2007	9x4 Hook	18	18
	T440 (one piece)	2012-2010	9x4 Hook	18	18
	T470	2012-2010	9x4 Hook	18	18
	T600 (one piece)	2008-2007	9x4 Hook	18	18
	T660 (one piece)	2017	9x3 Hook	22	22
	T660 (one piece)	2016-2007	9x4 Hook	18	18
	T680	2022-2017	9x3 Hook	22	22
	T680	2016-2012	9x4 Hook	22	22
	T700	2012-2010	9x4 Hook	20	20
	T800 (one piece windshield)	2016-2007	9x4 Hook	18	18
	T880	2022-2017	9x3 Hook	22	22
	T2000	2008-2006	9x4 Hook	20	20
	T2000	2005-1997	9x4 Hook	19	19
	W900	2016-2011	9x4 Hook	18	18
	W900 (one piece windshield)	2008-2007	9x4 Hook	18	18
	W990	2020	9x3 Hook	22	22
	K260	2008-2007	9x4 Hook	24	24
KENWORTH	K270	2013-2012	9x4 Hook	24	24
	K300	2000	9x4 Hook	21	21
	K360	2008-2007	9x4 Hook	24	24
	K370	2013-2021	9x4 Hook	24	24
LION BUS	eLion	2016-2015	9x4 Hook	24	24
MACK	Anthem 64T Day Cab, Sleeper	2019	1/4" Side pin	18	18
	Anthem Day Cab, Split Window	2017	1/4" Side pin	20	20



MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
MACK	Anthem Flatbed & Bulk Haul 70" Split Window	2017	1/4" Side pin	20	20
	Anthem Sleeper 70" 40"	2017	1/4" Side pin	20	20
	Anthem Sleeper 70" 40"	2017	1/4" Side pin	20	18
	Anthem Sleeper MP8 - Turbo 70"	2017	1/4" Side pin	18	18
	Anthem Sleeper MP8 - Turbo 70"	2017	1/4" Side pin	18	20
	Pinnacle 64T , Day Cab, Sleeper 70"	2019	1/4" Side pin	18	18
	Pinnacle Sleeper 70" 48"	2017	1/4" Side pin	20	17
	Pinnacle Sleeper 70" 48"	2017	1/4" Side pin	20	17
	CH Series	2005-1997	1/4" Side pin	20	20
	CH Series	1996-1989	9x4 Hook	20	20
	CHN Series	2011-2006	1/4" Side pin	20	20
	CHU Series	2016-2007	1/4" Side pin	20	20
	CL Series	2007-1997	1/4" Side pin	20	20
	CL Series	1996-1993	9x4 Hook	20	20
	CS Series	2001-1993	9x4 Hook	24	24
	DM Series	2004-1993	9x4 Hook	18	18
	DMM Series	2004-1993	9x4 Hook	18	18
	Granite	2017-2002	1/4" Side pin	20	20
	GU Series	2012-2007	1/4" Side pin	20	20
	Pinnacle	2016-2008	1/4" Side pin	20	20
	R Series	2004-1993	9x4 Hook	18	18
	Titan	2016-2008	1/4" Side pin	20	20
	Vision	2011-1999	1/4" Side pin	20	20
	Freedom	2004-2002	9x4 Hook	24	24
	LE	2005-1995	9x4 Hook	24	24
	MS Series	2001-1993	9x4 Hook	24	24
	Premium	1998	9x4 Hook	28	28
MARMON	All Conventional	1997-1989	9x4 Hook	16	16
MERCEDES-BENZ	Sprinter	2016-2008	Pinch tab	26	24

MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
MITSUBISHI FUSO	Fe160	2017	9x3 Hook	20	20
	FE	2014-2009	9x4 Hook	20	20
	FE	2008-1996	9x4 Hook	21	21
	FE	1995-1987	9x4 Hook	19	19
	FG	2008-1997	9x4 Hook	21	21
	FH	2004-1996	9x4 Hook	21	21
	FH	1995-1988	9x4 Hook	19	19
	FK	2010-2008	9x4 Hook	26	26
	FM	2008	9x4 Hook	26	26
MORGAN OLSON	Router Star Step Van	2009-2008	9x4 Hook	20	20
PETERBILT	All Convent'I (ex. 587) (one piece windshield)	2016-2012	9x4 Hook	16	16
	All Convent'I (ex. 387/587) (one piece windshield)	2011	9x4 Hook	16	16
	All Convent'I (ex. 387)	2010-2000	9x4 Hook	18	18
	All Convent'I (ex. 377/385)	1999-1997	9x4 Hook	18	18
	All Convent'I (ex. 377)	1996	9x4 Hook	18	18
	220	2019	9x3 Hook	24	24
	337	2019	9x3 Hook	16	16
	377	1999-1996	9x4 Hook	15	15
	385 (one piece)	1999-1997	9x4 Hook	15	15
	387	2011-2006	9x4 Hook	20	20
PETERBILT	567	2022-2017	9x3 Hook	22	22
	567	2016-13	9x4 Hook	22	22
	579	2022-2017	9x3 Hook	22	22
	579	2016-13	9x4 Hook	22	22
	587	2016-2011	9x4 Hook	20	20
	All Conventional	1995-1987	9x4 Hook	18	18
	210	2016-2008	9x4 Hook	24	24
	220	2016-2008	9x4 Hook	24	24
	270	2001-2000	9x4 Hook	20	20



MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
STERLING	Acterra	2009-2000	9x4 Hook	20	20
	A/AT Series	2009-1998	9x4 Hook	20	20
	Bullet	2009-2008	9x4 Hook	24	24
	L/LT Series	2009-1998	9x4 Hook	20	20
	SilverStar	2003-1999	9x4 Hook	20	20
	360	2009-2007	9x4 Hook	21	20
THOMAS BUILT BUSES	Bus Public/ School Bus	2017	9x4 Hook	28	24
THOMAS BUILT BUSES	Saf-T-Liner C2	2016-2005	9x4 Hook	28	24
UD TRUCKS (NISSAN)	1200	2004-1999	9x4 Hook	20	20
	1300	2007-2005	9x4 Hook	20	20
	1400	2009-1993	9x4 Hook	20	20
	1800	2009-2001	9x4 Hook	26	26
	2000	2012	9x4 Hook	22	22
	2000	2009-2007	9x4 Hook	26	26
	2300	2012	9x4 Hook	22	22
	2300	2009-2007	9x4 Hook	26	26
	2600	2012	9x4 Hook	22	22
	2600	2009-2001	9x4 Hook	26	26
	3300	2009-2001	9x4 Hook	26	26
UNION CITY BODY COMPANY	Step Van	2003	9x4 Hook	18	18
UTILIMASTER	Step Van	1999	9x4 Hook	24	24
VOLVO TRUCKS NORTH AMERICA	All White Convent'l (Electric)	1996-1984	9x4 Hook	20	20
	Autocar ACL Series	2001-1995	9x4 Hook	20	20
	VHD Series	2020-2017	9x3 Hook	24	24
	VHD Series	2020-2017	9x3 Hook	24	24
	VHD	2016-2001	9x4 Hook	22	22
	VN	2016-1997	9x4 Hook	22	22
	VNL Series	2021-2017	9x3 Hook	24	24
	VNR Series	2020-2017	9x3 Hook	24	24
	VNX	2020	9x3 Hook	24	24
	VT	2010-2006	9x4 Hook	22	22
	WA	2001-1984	9x4 Hook	20	20
	WC	2001-1984	9x4 Hook	20	20

MAKE	MODEL	YEAR	ARM TYPES	DRIVER	PASSENGER
VOLVO TRUCKS NORTH AMERICA	WI	2001-1984	9x4 Hook	20	20
WESTERN STAR	4700 Split Window	2020-2017	9x3 Hook	20	20
	4900 Split Window	2020	9x3 Hook	20	20
	5900 Split Window	2017	9x3 Hook	20	20
	5700 Split Window	2020-2017	9x3 Hook	20	20
	All Conventional	2017-2001	9x4 Hook	20	20
	3700 Series	2000	9x4 Hook	22	22
	All Conventional	1999-1996	9x4 Hook	20	20
	All Conventional	1995-1990	9x4 Hook	18	18
WORKHORSE	P Series	2007	9x4 Hook	24	24
	P Series	2002-2000	9x4 Hook	18	18



Rain-X® Longitude™ Professional Series

EXTENDED DURABILITY FOR LONG-LASTING PERFORMANCE!

- Engineered with UV & Ozone Damage-Resistant T24.7™ Rubber Squeegee for All-Weather Performance
- Interchangeable Adapter System Accommodates Growing Trends in OEM Designs

Rain-X® Latitude®

ULTIMATE VISIBILITY IN RAIN, SLEET AND SNOW!

- Contours to Curvature of Windshield to Provide Even Wiping Pressure
- Synthetic Rubber Squeegee Withstands Extreme Weather Conditions

Rain-X® Latitude® Water Repellency

MORE THAN JUST A WIPER BLADE™!

- Now Applies Rain-X® Water Repelling Technology to Your Windshield
- Pre-Installed Universal Adapter
- Synthetic Blend Rubber Squeegee Delivers Ultimate All-Weather Performance

Rain-X® Weatherbeater® Professional

CONSUMER RATED BEST IN WET WEATHER DRIVING VISIBILITY!

- High Quality Traditional Blade
- All-Steel Frame For Sturdiness & Durability
- Smooth, Clean, Streak-Free Wipe that's Quick & Easy to Install





For more information about Rain-X® and Rain-X® wiper blades, visit us at rainx.com

O U T S M A R T T H E E L E M E N T S ®

©2022 ITW Professional Automotive Products. All rights reserved Rev.02