WELLER



OWNER'S MANUAL:
DIFFERENTIAL

Tag #

Mileage In:

Date Installed: _____

WELLER REMAN

Quality Remanufactured



Quality Remanufactured Products by WELLER for the Following Applications Light to Heavy Duty

Eaton/Fuller • Borg Warner • New Process • Clark • IHC • TTC Spicer • Isuzu • GMC • Mack • Noster • ZF • Meritor A complete line of Auxilaries and Transfer Cases



Automated Manual Transmissions

Quality Remanufactured Products by WELLER for the Following Applications

ZF AS-Tronic® • Meritor Freedomline® • Volvo I-Shift® • Mack M Drive® • Eaton/Fuller • Detroit DT 12



Automatic Transmissions

Quality Remanufactured Products by WELLER for the Following Applications

Allison Transmissions® • Clark • Funk • CAT • ZF



Differentials

Quality Remanufactured Products by WELLER for the Following Applications
Complete Stock for quick exchange.

Spicer • Clark • FWD • GMC • IHC • Industrial/Off Road • Mack/PAI • Dana/Eaton

• Terex • Freightliner/Alliance • Meritor /Rockwell • Volvo



Steering Gear Boxes and Pumps

Quality Remanufactured Products by WELLER for the Following Applications

All units are tested on our state-of-the-art XLT3 Road Simulator.

TRW-Ross • Saginaw • Sheppard • Vickers Pumps • ZF • Eaton • Luk



Electronics

Quality Remanufactured Products by WELLER for the Following Applications All units are tested for performance and quality.

Cummins • Eaton/Fuller • ZF • Allison® • Volvo



- Over 17,000 Units in Stock
- Nationwide Coverage
- Same Day Shipping
- One Year Warranty
- · Specialists at Obsolete and Discontinued
- First Quality Units
- All Makes Coverage One Call
- Technical Assistance



PROGRAM DESCRIPTION



Weller's Unit Exchange program eliminates down time by getting you the parts you need when you need them. With over 17,000 remanufactured transmissions and differentials ready to ship, we can help you eliminate your or your customer's downtime. Consider becoming a key partner in the industry's leading drivetrain program today. With no commitments and no minimums, we are the industry partner for you!

Our aggressive reman program includes:

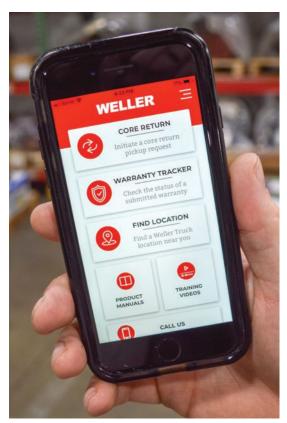
- All Makes Coverage One Call
- Same Day Service
- Obsolete and Discontinued Specialists
- One-year Warranty
- 17,000 Unit Stock It's Available Today!
- Excellent Core Policy (call for details)
- Technical Support on Questions

WELLER REMAN HAS THE ADVANTAGE!

WELLER APP



Check Out Our New App!



We are excited to announce our new app! Designed with our customers in mind, we wanted to bring a user-friendly way for you to access the information you need when you need it most.

Features

Schedule a Core Return: Easily schedule core returns from your phone!

View Warranty Status: Have a warranty you want to know the status of? View all of your warranties with the Warranty Tracker.

Quickly Locate a Store: We are always adding new locations to better serve you.

Weller Literature: Find our Owner's Manuals and other sales literature like our Core Return Program and sales catalogs

Training Videos: Visit our growing collection of videos designed to educate and prevent common issues across a wide range of our products.

How to Download

The new Weller Truck Parts app can be downloaded for free from the Apple App Store and Google Play.

Supported devices include iPhone (iOS 11.0 or later) and Android smartphones (5.0 Lollipop and up).







Eaton NoSPIN® Differential



- Maintenance free
- 100% automatic locking
- Uses original differential case, with easy installation

NoSPIN is a proven performer for light, medium and heavy duty trucks, off-highway, agricultural, forestry, military and specialty equipment vehicles. NoSPIN maximizes traction by delivering 100% of the torque and power to both drive wheels. It is engineered to keep both wheels in a constant drive mode, yet has the ability to automatically "unlock" to permit necessary wheel speed differentiation. The NoSPIN is trouble free and doesn't require special lubricants or service adjustments.



INSTALLATION GUIDE



	ANIC'S NAME VEHICLE ID NO
	ortant installation information eller's history shows a majority of premature component failures are caused by not inspecting the vehicle for these common items!
5	STEPS MUST BE FOLLOWED OR WARRANTY WILL BE VOIDED
I.	Warning: Differential carrier is shipped with NO Lubricants. After installation fill with the correct OEM approved lubricants!
II.	Yokes Thoroughly clean & inspect all surfaces for wear. It is common to find wear at the u-joint, end seat, seal surface, yoke flange and splines
III.	Axle Housing Clean & ensure housing is free of debris and contamination from previous failure. Install NEW breather. Inspect for bends in axle tubes. Inspect axle housing for cracks. Tandem drive axles: R&R output shaft assembly; clean, inspect and replace components as necessary. Tandem drive axles: Measure, adjust, and record the output shaft bearing endplay confirming it meets OEM specification.
IV.	Axle Shafts
	 Inspect splines for excessive wear, and replace as necessary Measure axle shafts for excessive runout, and replace as necessary Measure, adjust and record wheel bearing endplay confirming it meets OEM specification
V.	Measure for play, replace and grease u-joints as necessary
VI.	Tires Inspect tires for wear & confirm all tires are the same size
	This is a generic differential carrier installation guide outlining commonly worn driveline components ed procedures can be found in the specific OFM service manual for the applicable vehicle &

components.



INSTALLATION GUIDE

CAUTION!

Weller's history shows a majority of customer caused failures are from improper tightening of the yoke or flange and not checking these commonly worn items.

MODEL	INPUT YOKE NUT TORQUE SPECIFICATIONS
RD20145	750-850 LBS-FT
DS404	840-1020 LBS-FT
RS404	575-703 LBS-FT
DSP40	840-1020 LBS-FT
RR20145	920-1130 LBS-FT
DS402	840-1020 LBS-FT
RSP40	575-703 LBS-FT
RRL20145	920-1130 LBS-FT
RS402	560-700 LBS-FT
RA472R	900-1100 LBS-FT
RA472F	900-1200 LBS-FT
RDL20145	750-850 LBS-FT
RSH40	575-703 LBS-FT
RR23160	920-1130 LBS-FT

Any references to trademarks are for cross-reference purposes only. The majority of our gearing inventory is original equipment, however many numbers are not. Please call for clarification on an individual basis. The rebuilt units are primarily – and proudly – Weller rebuilt! The mailing of this sheet does not constitute an offer to sell. PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

SPICER°



FE-75W90 isn't approved for all differentials. See OEM bulletins for specific approved lubricants.









Fuel-Efficient Synthetic Gear Lubricant

Protect your bottom line—and the environment—and still get unparalleled performance.

Spicer® fuel-efficient synthetic gear lubricant delivers excellent lubrication, ensuring longer gear life and better operating performance, even in extreme heat and cold. In addition, you'll get improved fuel economy and lower CO₂ emissions for a greener and more profitable fleet. Trust Spicer to help you keep your fleet on the road with top quality parts—as well as the lubricant that provides the ultimate in gear and bearing protection. Talk to your Spicer parts representative about the benefits of genuine Spicer® fuel-efficient synthetic gear lubricant today.



©Dana Limited 2014.

www.SpicerParts.com

Spicer FE 75W-90 Fuel-Efficient

Synthetic Gear Lubricant

Trust Spicer to Protect the Parts That Keep Your Fleet on the Road.

For better operating performance over time and a longer gear life, Spicer remains the name people trust. Not only does Spicer® fuel-efficient synthetic gear lubricant provide ultimate protection for gears and bearings, but it's also proven to deliver improved fuel economy and reduce CO_a. In addition, with Spicer fuel-efficient synthetic gear lubricant you can count on:

- Quantifiable 1% fuel savings improvement
- Reduced gear wear
- Reduced maintenance
- Less oil disposal
- Decreased vehicle downtime

- · Maximum extreme hot and cold temperature performance
- Extended drain interval up to 500,000 miles
- Extended carrier warranty protection option
- Available in 1-gallon (FE75W90-G) or 5-gallon (FE75W90-P) containers or 55-gallon drum (FE75W90-D)

Engineered to meet the specifications of line haul, vocational heavy duty, and light duty drive axles, Spicer® FE 75W-90 fuel-efficient synthetic gear lubricant is also recommended for applications where heat and wear present operational issues for your fleet. Applications include manual transmissions where EP type lubricants are recommended, transfer cases for heavy equipment trucks, tractors, and industrial gear drives. In addition, Spicer fuel-efficient synthetic gear lubricant is recommended for use on automobiles, light duty trucks and farm machinery. Warranty on qualifying carriers can be extended by 12 months when a new genuine Spicer service carrier is purchased and installed, and Spicer® FE 75W-90 fuel-efficient synthetic gear lubricant is used to fill the drive axle.

Specifications/OEM Approvals

Spicer FE 75W-90 fuel-efficient synthetic gear lubricant is approved to meet the most stringent industry specifications, as established by Dana:

- Dana SHAES-256 Rev C & 429
- GI -5 MT-1
- SAE J 2360
- MII -PRF-2105F
- Meritor O76-N
- Navistar TMS 6816 Mack GO-J Plus
- NOTE: Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally.

Characteristics:

Ondi dotto i otioo.		
Appearance	Amber	
SAE Grade	75W-90	SAF -J306
Viscosity, CSt		ASTM D-2161
100° C	15.0	
40° C	103	
Brookfield Viscosity, cP		ASTM D-2983
-40° C	90,000 Typical	
Viscosity Index	152	ASTM D-2270
Pour Point, °C (°F)	<-45 (<-48)	ASTM D-97
Flash Point, °C (°F)	215 (420)	ASTM D-92
Density, g/l, 15.6° C	891	
(lbs./gal., 60° F)	7.42	

To learn more about Spicer® FE 75W-90 fuel-efficient synthetic gear lubricant and other genuine Spicer products, visit www.SpicerParts.com/lubricants/oil.



Dana Aftermarket Group www.SpicerParts.com

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Please refer to material safety data sheet for handling details. Subject to appropriate storage in closed original containers under the usual storage and temperature conditions. Spicer® FE 75W-90 fuel-efficient synthetic gear lubricant is stable for at least 3 years.









U-JOINT ANGLES



Out of spec u-joint operating angles reduces component life and is a leading cause of premature failure to transmissions, differentials, transfer cases, and PTO'S!

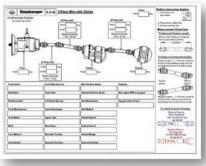
Note: Many resources are available regarding u-joint operating angles, yoke phasing, vehicle ride height, and driveline inspection; this bulletin will not cover them all.

You will need:

- Inclinometer for measuring angles and phasing
- Tape measure to measure length of tube and ride height
- Flat surface to park the vehicle and wheel chocks for stabilization
- Driveline worksheet for recordings



Recommend using the Roadranger DAA software and inclinometer.



Example Roadranger DAA Worksheet

Safety FIRST! Review owners manuals, service manuals, and other OE provided instructions. Confirm driveline series and length is correct for torque, RPM, and vehicle specifications. Wear appropriate PPE.



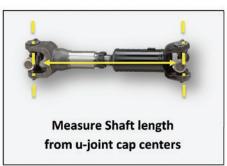
U-JOINT ANGLES

General U-Joint Angle Rules:

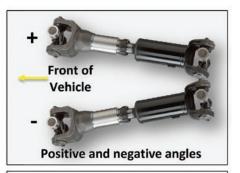
- i. Should have a minimum angle of 1°
- ii. Angles on each end of a shaft should ALWAYS be within 1° of each other
- iii. U-Joint angles should NOT be larger than 3°
- iv. Yoke phasing is vehicle specific & set by operating angles

Inspection:

- Print corresponding worksheet.
- 3. Park the vehicle on a flat surface, chock the wheels, and release the parking brake.
- Inspect driveline for u-joint endplay and worn components.
 Note: Spicer recommends U-Joint endplay should not exceed .006
- Measure and record angles, shaft length, and u-joint phase.
 Make Corrections as needed









DRIVE AXLETIRES



Improperly matched tandem drive axle tires will reduce tire, oil and component life and is a leading cause of premature wear and failure to driveline components!

Note: Many resources are available regarding tire wear, size, and measurements; this bulletin will not cover them all.

The best method is to match drive axle tires is by circumference and not diameter or tread depth.





Example: Diameter

Example: Tread Depth

You will need:

- Flat or endless tape measure to measure circumference
- Flat surface to park the vehicle
- Wheel chocks, jack and jack stands to support the axle
- Tire pressure gauge to confirm PSI is correct per specification
- Tire worksheet for recordings



DRIVE AXLE TIRES

Safety FIRST! Review owners manuals, service manuals, and other OE provided instructions.

Confirm tires are correct for vehicle specifications and use appropriate PPE.

Inspection:

- 1. Park the vehicle on a flat surface, and chock the wheels.
- 2. Confirm air PSI is correct per tire specifications.
- 3. Lift the tires off the ground.
- 4. Measure and record the circumference of all drive tires.

Note: General rule is that tire mismatch shouldn't exceed 3/4 of an inch.









CORE RETURNINSTRUCTIONS



The Weller Truck Parts core return program is designed to facilitate an efficient and cost effective way of returning your cores. Following the instructions listed below will ensure your core is processed quickly and correctly.

- 1. Attach the Core Return Tag provided with the remanufactured unit to core
 - For warranty units, obtain a Warranty Repair Authorization (RA#) from your Weller Truck Representative. If you are not sure who your representative is call the Reman Center at 1-800-872-6697 or email warranty@wellertruck.com.
- 2. Prepare the unit for shipping.
 - 1. Drain oil from unit.
 - 2. Band, wrap, or strap unit(s) to a pallet.
 - Attach a copy of the warranty invoice, core tag or RA# to the unit for identification.
- 3. Notify Weller Shipping Department when unit is ready for pick up.
 - Download the Weller App!
 - Scan the QR code or go to wellertruck.com/app



- Email corereturn@wellertruck.com or call 1-800-872-6697 Ext. 3794 or 3759
 - Provide the following:
 - Core return tag, Weller Truck Parts invoice, or the RA if the unit is a possible warranty
 - ✓ Your contact information
 - ✓ Hours of operation

Weller will prepare the bill of lading and schedule your unit to be picked up by a Weller approved carrier.

Thank you for choosing Weller Truck Parts!

Failure to follow these procedures could result in core credit delays and freight charge backs.

*Core eligibility is one year from invoice date



- Metal tag must not be removed or warranty will be void
- Nationwide
- One Year Coverage
- Unlimited Mileage

Call Us! 800-872-6697 -for-

- Technical Assistance
- Return Authorization

WARRANTY STATEMENT

Warranty Coverage

Standard Warranty Coverage

Weller Reman Manual Transmissions and Differentials - One year, unlimited mileage - parts and labor.

Industrial Transmissions and Differentials – Six months, unlimited hours – parts and labor.

Authorized Repair Points – Our Nationwide Warranty may be administered only by an authorized warranty repair facility. Call 1-800-872-6697 for authorization.

Exclusions – Subject to the conditions stated herein, Weller warrants to the original retail purchaser thereof that its Reman products will, when used in a motor truck for on-highway or on/off-highway applications in the United States and properly installed and assembled on vehicles approved by the O.E.M. for such purpose, be and remain under normal conditions of use and operation free from failure due to defects in materials and workmanship from the date of sale.

This warranty covers parts and labor to repair or replace, at Weller's option, the failed Weller component. Units installed as replacements under this warranty are warranted only for the remainder of the original warranty period.

This warranty shall not extend to failures or damage due to improper lubrication or operation in excess of original design limitations, failure to follow normal published preventive maintenance guidelines of the O.E.M., abuse or damage by improper installation, casualty or shipment.

This warranty shall not extend to repairs for noise (including idle rattle), excessive operating temperature, transmission rear seal leakage, nor does it cover failures caused by engine, clutch, driveline; including transmission synchronizer pin breakage, or other truck components or system.

This warranty does not cover failures caused by a worn, damaged or defective part or component mounted to the unit by the dealer or retail purchaser, including without limitation, the differential yoke.

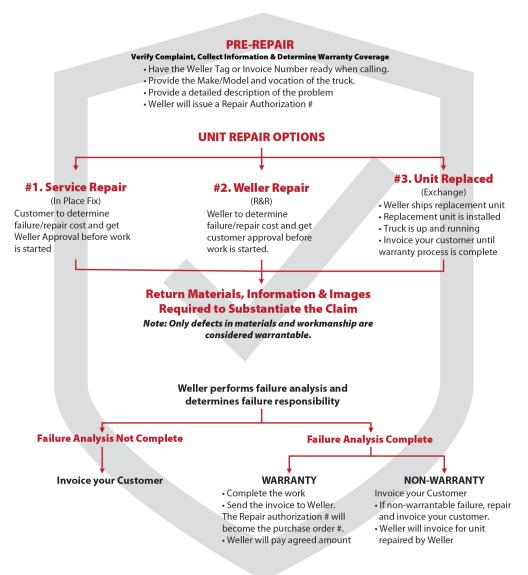
All warranty claims shall be made to Weller and shall be supported by satisfactory evidence in respect of the conditions stated herein. As a condition precedent to the allowance of such claims, the component or assembly involved shall, if requested by Weller, be returned prepaid to Weller for examination.

EXCEPT FOR THE EXPRESS WARRANTY STATED HEREIN, WELLER DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE FOREGOING IS THE LIMIT OF THE LIABILITY OF WELLER, AND IS THE EXCLUSIVE AND SOLE REMEDY OF THE PARTY TO WHOM THIS WARRANTY IS MADE. LIABILITY ON THE PART OF WELLER FOR DAMAGES, EXPRESSLY INCLUDING CONSEQUENTIAL DAMAGES IS DISCLAIMED.

This warranty may not be changed or modified in any way except in writing by Weller.

Weller Warranty Procedure

Don't Buy the Paper. Buy the Performance. Weller Reman.



CALL WELLER FIRST 800-872-6697





Date:

WARRANTY CLAIM FORM

TAG #:___

1500 Gezon Parkway SW Grand Rapids, MI 49509 616-724-2000 800-872-6697 Fax 616-365-5679

Claim Contact Information:	Vehicle Owner Information:	Truck Information:
Name, Company, and Address:	Name, Company, and Address:	Make:
	_	Model:
	_	Mileage:
	_	Vocation:
Phone:		Engine:
Fax:	_ Fax:	- VIN:
E-Mail:	E-Mail:	_
COMPLAINT		

| Description of the Problem: | Problem: | Description of the Prob

ADDITIONAL INFO			
Change with Speed?	□ Yes □ No		s
Change with RPM?	□ Yes □ No		D
During Acceleration?	□ Yes □ No		Е
During Deceleration?	□ Yes □ No		K
When Stationary?	□ Yes □ No		Н
Fluid at Proper Level?	□ Yes □ No		S
Fluid Clean?	□ Yes □ No		
Is the Unit Getting Hot?	□ Yes □ No		
Vehicle Towed?	□ Yes □ No		
Running PTO?	□ Yes □ No		
	Change with Speed? Change with RPM? During Acceleration? During Deceleration? When Stationary? Fluid at Proper Level? Fluid Clean? Is the Unit Getting Hot? Vehicle Towed?	Change with Speed?	Change with Speed?

Suspension Modified Recently?	□ Yes	□ No
Driveline in Phase?	☐ Yes	□ No
Engine Mounts Checked?	☐ Yes	□ No
King Pin Checked?	☐ Yes	□ No
Hydraulic Brakes?	☐ Yes	□ No
System Flushed & Filter Replaced?	☐ Yes	□ No

EMAIL TO: WARRANTY@WELLERTRUCK.COM FAX TO: 616-365-5679, WELLER TRUCK PARTS WARRANTY

WELLER WARRANTY

determined.

It is essential to contact Weller and start the claim prior to removing the differential from the vehicle for warranty consideration. Weller's technicians can assist with diagnosing the complaint to reduce downtime.

Call Weller First! 1-800-872-6697

If the differential failed, the unit will be filmed, documented, and warranty

	Mist	natche	dratio libe let	let uixe	Je June	air such	oper st	Hirid Hatche	d tire e	TES SITE ST	gles of the local control of t	in sell	Bading Sel	a sufficient sufficien	de la	A Deal's	,no		
Excessive heat	X	\mathbb{X}	\mathbb{X}	\mathbb{X}			X		\mathbb{X}	\mathbb{X}									
Seal leak								X	X	X	X	X	X						
Power divider lock won't engage	X				X	X	X												П
Differential wheel lock won't engage					X	X	X											Г	
Noise in differential	X	X	X	X				X	X	X			X						
Vibration with differential		X						X	X	X			X						

The following are the maximum flat rates for failures due to defective products or workmanship:

Differentials	Flat Rate Credit
Front Rear	\$600
Rear Rear	\$500

Authorized Weller Dealers call for warranty labor hours guidelines.



NOTES

THE WELLER REMAN NETWORK



- Reman Center 1500 Gezon Pkwy S.W. Grand Rapids, MI 49509 616-724-2000 800-872-6697
- 2 Atlanta, GA 5007 Clark Howell Hwy., Suite A Atlanta, GA 30349 404-768-9577 877-768-9577
- 3 Baltimore, MD 899 Airport Park Rd., Ste. N Glen Burnie, MD 21061 410-553-0443 877-550-0443
- 4 Birmingham, AL 116 Total Solutions Way Alabaster, AL 35007 205-685-0777 866-535-0777
- 5 Boise, ID 8484 W. Victory Road Boise, ID 83709 208-331-1061 888-331-1061
- 6 Chicago, IL 14407 S Gougar Rd Ste 500 Lockport, IL 60491 708-974-9919 888-974-9319
- 7 Columbus, OH 2885 International St. Columbus, 0H 43228 614-771-9500 866-771-9501
- 8 Dallas, TX 3113 Skyway Circle N Irving, TX 75038 972-258-0460 855-258-0460

- 9 Denver, CO 11333 East 55th Ave Unit A Denver, C0 80239 303-375-6633 833-375-6633
- Detroit, MI 29826 W. Eight Mile Road Farmington Hills, MI 48336 248-473-1900 800-473-1905
- Gaylord, MI 353 Expressway Court Gaylord, MI 49735 989-731-6700 888-731-6700
- Houston, TX 4549 Aldine Bender Houston, TX 77032 281-442-8855 877-677-8855
- Indianapolis, IN 6903 E. 32nd St. Indianapolis, IN 46226 317-547-3190 888-547-3190
- Jacksonville, FL 10330 Chedoak Court Suite 205 Jacksonville, FL 32218 904-757-0777 888-474-0777
- Kansas City, MO 3824 N. Skiles Ave. Kansas City, MO 64161 816-454-2237 844-341-4578
- 16 Las Vegas, NV 2985 Coleman St., Suite 14 North Las Vegas, NV 89032 702-638-8222 866-764-8222

- Los Angeles, CA 9355 Cherry Ave. Fontana, CA 92335 909-356-8322 877-356-8322
- 18 Lubbock, TX 603 CR 7150 Lubbock, TX 79423 806-516-8112 844-389-1766
- 19 Memphis 7520 Appling Center Dr. Ste 102 Memphis, TN 38133 901-386-8604 833-270-3220
- Milwaukee, WI 8625 North 107th Milwaukee, WI 53224 414-354-6400 877-354-6400
- Minneapolis, MN 3201 85th Avenue North Brooklyn Park, MN 55443 763-424-3800 877-424-3802
- Nashville, TN
 230 Molly Walton Drive
 Hendersonville, TN 37075
 615-264-2750
 866-426-2750
- Omaha, NE 8623 S. 117th St. LaVista, NE 68128 402-597-9000 855-597-9001
- Phoenix, AZ 702-638-8222 866-764-8222

- Portland, OR
 13150-2 NE Airport Way
 Portland, OR 97230
 503-255-1924
 888-839-9758
- 26 Sacramento
 1424 N Market Blvd. Unit 80
 Sacramento, CA 95834
 279-972-4170
 888-553-9753
- Salt Lake City, UT 3450 W. California Ave. Suite 400
 Salt Lake City, UT 84104
 801-886-0100
 855-847-0100
- 28 Seattle, WA 6408 South 196th Street Kent, WA 98032 253-872-0321 877-572-0321
- 29 South Bend, IN 3303 William Richardson Ct. Suite 200 South Bend, IN 46628 574-237-1000 800-968-8860
- 30 St. Louis, MO 2388 Chaffee Drive Maryland Heights, MO 63146 314-692-2227 877-992-2227
- 31 Syracuse, NY 4530 Morgan Place Liverpool, NY 13090 315-457-7098 844-320-4288
- Tampa, FL 217 Hobbs Street Suite 103 Tampa, FL 33619 813-685-6100 866-685-6109

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