

WELLER



OWNER'S MANUAL: I-SHIFT

Tag # _____

Mileage In: _____

Date Installed: _____

WELLER REMAN

Quality Remanufactured



Manual Transmissions and Transfer Cases

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

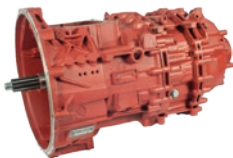
Eaton/Fuller • Borg Warner • New Process • Clark • IHC • TTC Spicer • Isuzu • GMC • Mack • Noster • ZF • Meritor
A complete line of Auxiliaries and Transfer Cases



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



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 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
- Two Year Warranty on Eaton/Fuller Transmissions
- 17,000 Unit Stock – It's Available Today!
- Excellent Core Policy (call for details)
- Technical Assistance

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

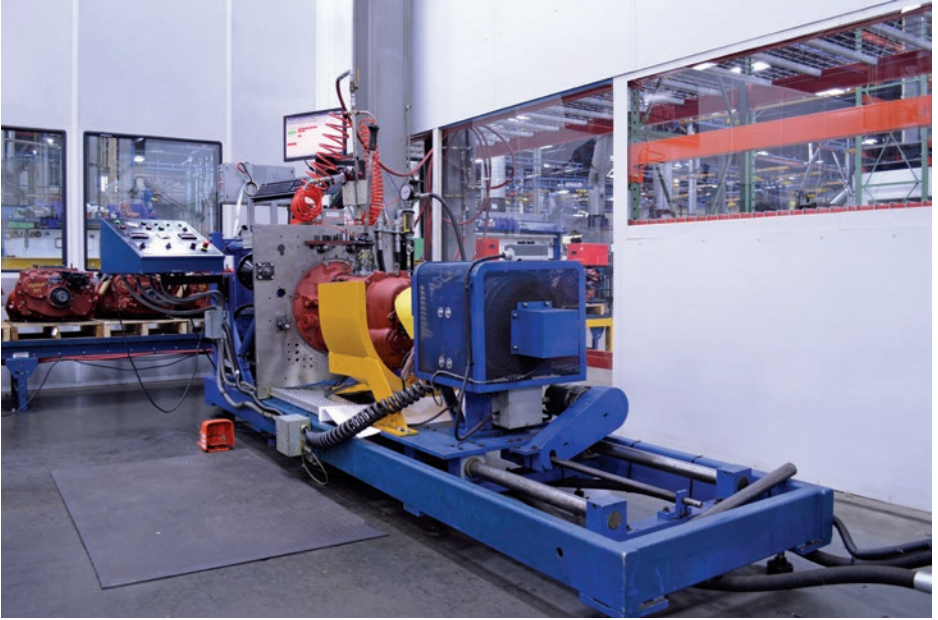
The new Weller Truck Parts app can be downloaded for free from the Apple App Store and Google Play.

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





DYNO TESTING

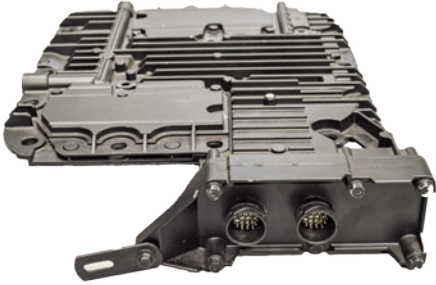


All transmissions are dyno tested with a load to simulate real truck conditions. Every transmission is evaluated to ensure proper torque, no leakage, accurate shifting, oil flow and performance on our state-of-the-art dynamometers.

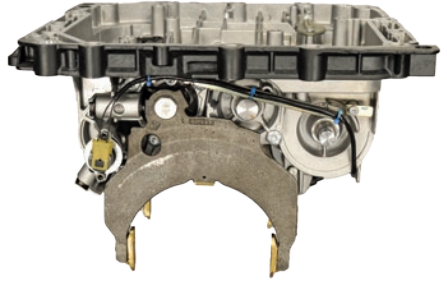
I-SHIFT/mDRIVE ELECTRONICS



Quality Parts Offered Individually by Weller



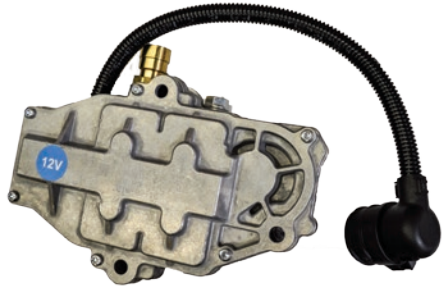
New TECU



Reman Control Housing



New Clutch Actuator



New Clutch Actuator Solenoid



INSTALLATION GUIDE

VEHICLE MAKE AND MODEL _____
MECHANIC'S NAME _____

TRANSMISSION ASSEMBLY NO. _____
VEHICLE ID NO. _____

I. This transmission contains NO LUBRICANTS. Use Volvo approved transmission fluid SAE 75W-80 (See Bulletin SB175-61 for approved lubricants).

II. TECU Top Cover Removal & Installation Job Aid (See pgs. 17-14)

III. Check clutch, and related components

- Inspect all clutch related parts for wear. (Forks, pins hydraulics, etc. . .)
- Did the flywheel get resurfaced?
- Inspect the dowel pins for wear
- Pre lubricate the input shaft with dry graphite or light amount of white lithium grease
- Ensure no grease or oil is on any friction surfaces!

IV. Check driveline for worn or failed components

- U-Joints
- Carrier Bearing
- Yoke seal surface, and splines
- Ride height
- Driveline phasing
- Drive shaft balance
- Drive-line Angles (See job aid on pgs. 15-18)

V. PTO (If equipped)

- See Volvo PTO installation bulletin PV776-89169795

VI. Transmission heat exchanger (If equipped)

- Clean, and flush cooler system
- Weller recommends pressure testing cooler for leaks

VII. Air system

- Check air dryer
- Check truck pressure & inspect for leaks

VIII. After Installation

- Perform clutch calibration and gear re-learn

Check out our install video here!



Scan me

TECU TOP COVER REMOVAL



Please note: Call Weller Reman Center 1-800-872-6697 at any time during installation you have any concerns.

CAUTION! Do not lift the transmission from the control housing (see below for identification). Lifting the transmission from the control housing will cause the rails to slip out of position causing additional down time!

Lift the Transmission using only lift points on Transmission Main Box using the approved Volvo Part# - 9990031 & 9996905 lifting device.

Transmission consists of three (3) main components

TECU Top Cover

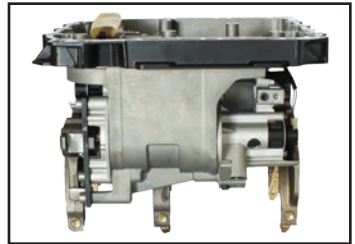
Control Housing

Transmission Main Box

TECU Top Cover



Control Housing

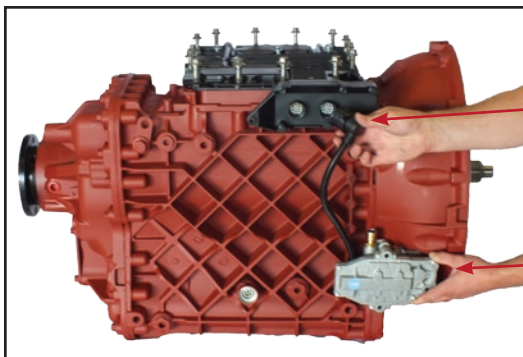


Transmission Main Box



TECU TOP COVER REMOVAL

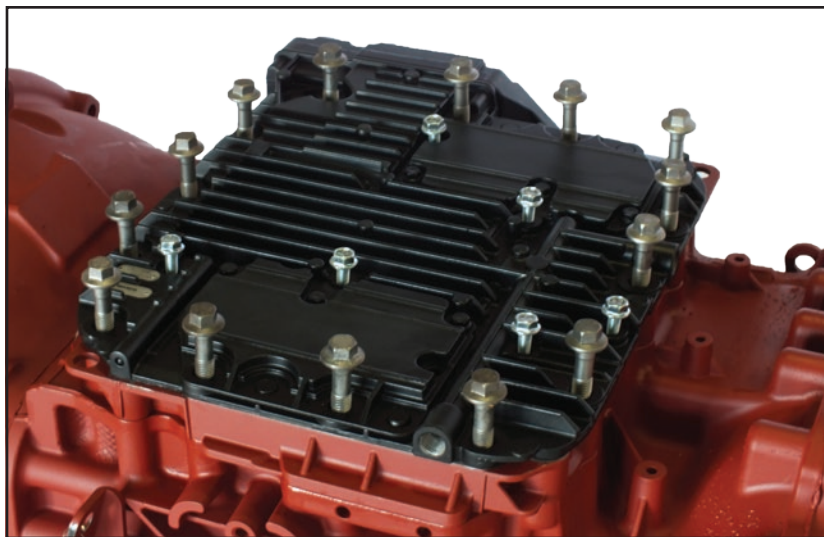
Step #1: Disconnect the harness going to the clutch control valve assembly and remove the Clutch Control Valve.



Harness

Clutch Control Valve

Step #2: Remove 6 bolts with a 13 mm head and Remove 14 bolts with a 15 mm head.



WARNING! Damage to the ribbon cable will occur if the TECU Top Cover slides forward or if the TECU Top Cover is lifted too high while disconnecting the ribbon. Assistance for this step may be required.

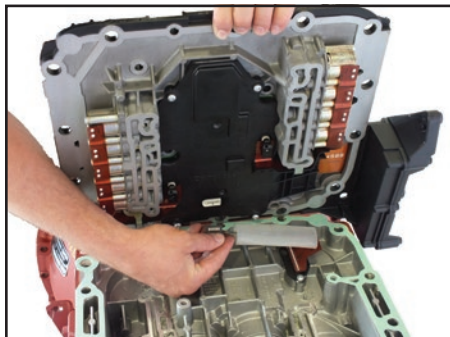
TECU TOP COVER REMOVAL



Step #3: Lift the back of the TECU Top Cover from the Control Housing.



Step #4: Disconnect the ribbon cable from the TECU Top Cover before removing the TECU from the control housing.



TECU TOP COVER REMOVAL

Step #1: Remove protective cover from your Weller Remanufactured replacement transmission



Warning! Ensure no dirt, debris or foreign items enter the control housing!

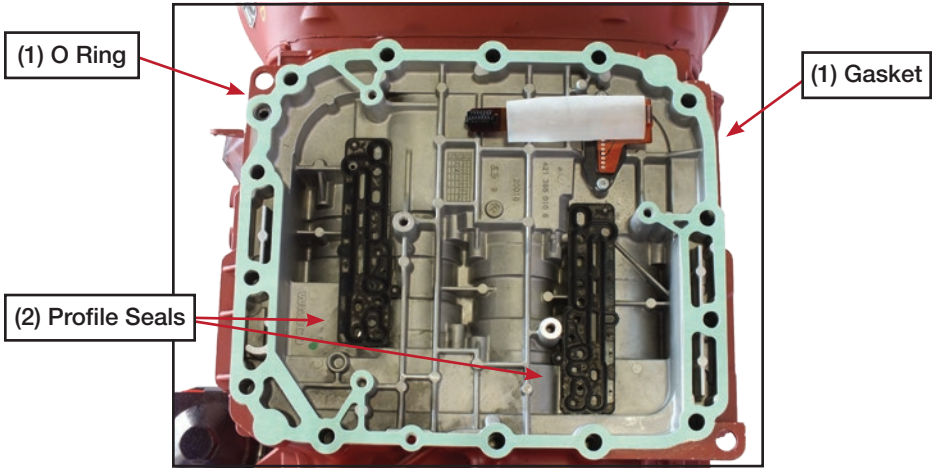


TECU TOP COVER INSTALLATION

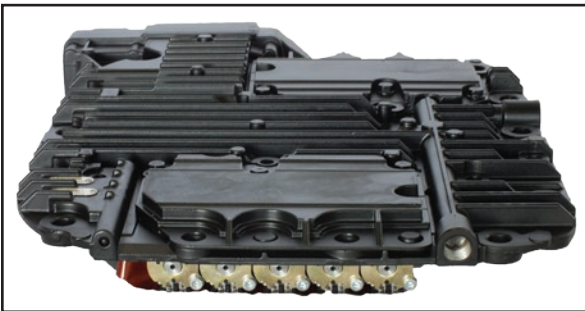


Step #2: Install one (1) O-ring, one (1) gasket and two (2) profile seals on the control housing.

Ensure all old gasket material has been removed from your TECU Top Cover.



Step #3: Visually inspect your TECU Top Cover, for any damage, cracks, dirt or debris before installation!



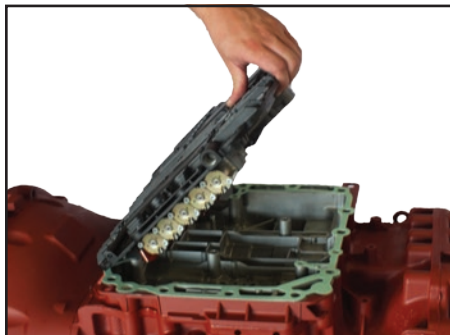
Contact Weller Truck Parts 1-800-872-6697 if your TECU Top Cover is damaged.

TECU TOP COVER INSTALLATION

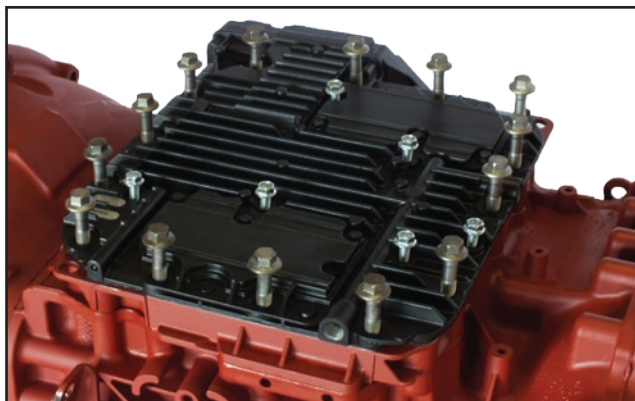
Step #4: Carefully lower your inspected TECU Top Cover on to the control housing while preventing the TECU Top Cover from sliding forward.

WARNING! Damage to ribbon cable will occur if TECU Top Cover slides forward while connecting ribbon, assistance for this step may be required.

Gently reconnect ribbon cable to your TECU Top Cover. Ensure O-ring, gasket and seals remain aligned.



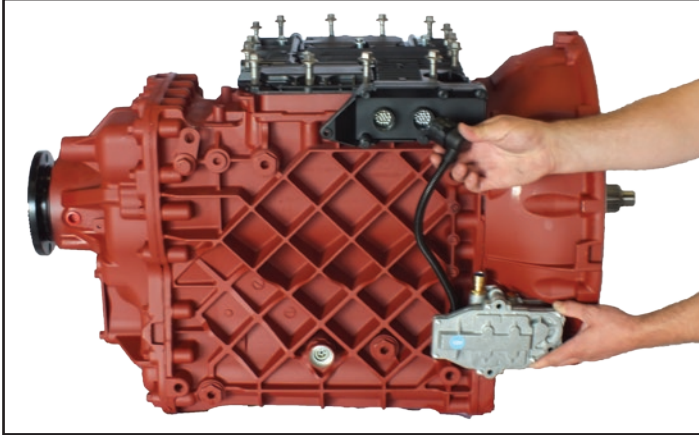
Step #5: Tighten bolts to specs, 6 bolts with 13mm head 18 ± 3 lbs/ft and 14 bolts with a 15mm head 81 ± 7 lbs/ft.



TECU TOP COVER INSTALLATION



Step #6: Connect harness going to clutch control valve assembly and install the Clutch Control Valve.



Step #7: Remove the service plug located on the clutch control valve assembly. Compress the clutch actuator. Immediately reinstall the service plug into the clutch control valve and tighten to specs (5ft/lbs.) while the clutch actuator is compressed. The clutch actuator should remain compressed after the plug is installed. If the clutch actuator extends back out, the actuator or control valve may be faulty and require replacement. *Assistance for this step may be required.*

This step will make it easier to get the bell housing up to the mating surface of the engine flywheel housing during installation.



TECU TOP COVER INSTALLATION

Inspect your clutch for wear. Replacement clutch and actuators are available at all Weller Truck Parts locations.

Weller Truck Parts recommends replacing the pilot bearing on all I-Shift Transmissions

Step #8: After installation, there are two reset functions that need to be performed. Using Volvo Premium Tech Tool or Jaltest software, perform a clutch calibration and gear relearn. This step resets adaptives in your TECU Top Cover. Failure to do these steps will lead to a high probability of poor shift quality and excessive wear to the gear box.



If you have any issues after installation such as shifting, etc. Please call our tech line 1-800-872-6697

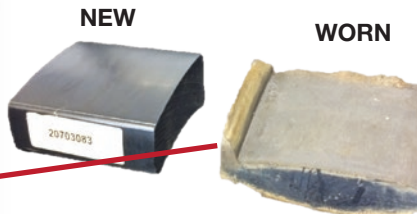
U-JOINT ANGLES



EXAMPLE: 2007 Volvo Model VNL

Volvo Air Suspension Service Manual PC776-TSP27725

Volvo Service Bulletin Ride Height and Pinion Angle Specification PV766-89216187



Excessively worn suspension wear plates are a common cause of poor working angles

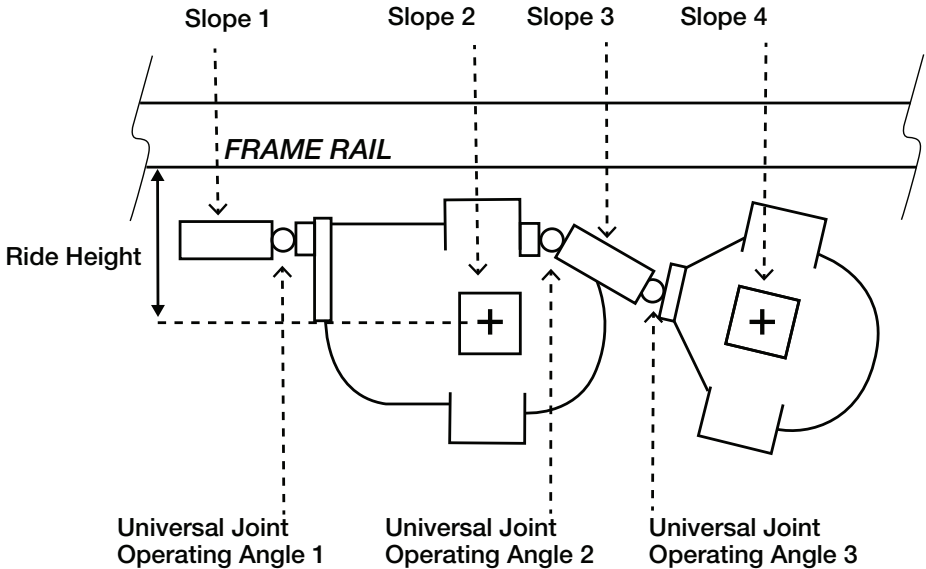
EXAMPLE: 2007 Volvo Model VNL

Description	Angle	Initial	Final
Ride Height Bottom of frame to center of front axle tube	NA	7.75"	7.75"
Driveshaft Angle	1	2.4°	1.5°
Front Axle Angle	2	0.7°	2.6°
Interaxle Driveshaft Angle	3	10.3°	7.8°
Rear Axle Angle	4	8.6°	12°
First Working U Joint Angle Difference between 1 and 2	5	1.7°	1.1°
Second Working U Joint Angle Difference between 2 and 3	6	9.6°	5.2°
Third Working U Joint Angle Difference Between 3 and 4	7	1.7°	4.2°

U-JOINT ANGLES

EXAMPLE: 2007 Volvo Model VNL

Volvo Air Suspension Service Manual PC776-TSP27725
Volvo Service Bulletin Ride Height and Pinion Angle Specification PV766-89216187



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.

U-JOINT ANGLES

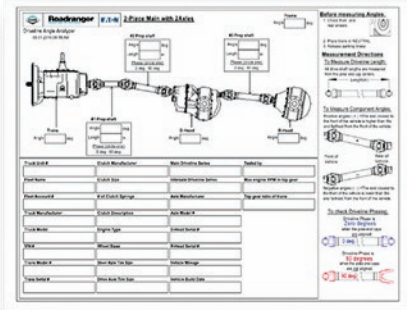


You will need:

- 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

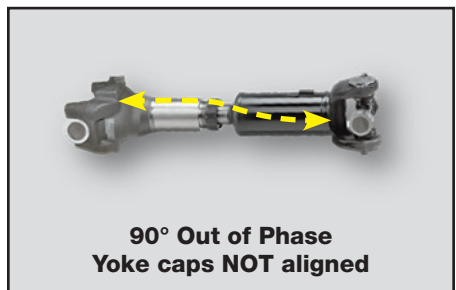
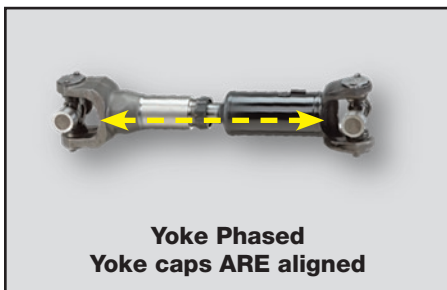
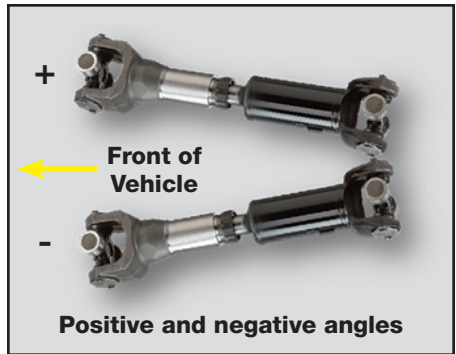
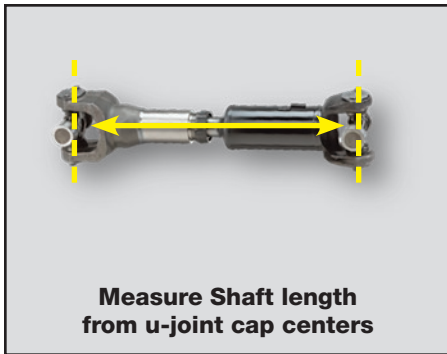


General U-Joint Angle Rules:

- 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 driveline specific

Inspection:

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



CORE RETURN INSTRUCTIONS



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.
3. 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



WELLER WARRANTY

WARRANTY STATEMENT

- **Nationwide**
- **One Year Coverage**
- **Two Year Coverage on Eaton/Fuller Transmissions**
- **Unlimited Mileage**
- **Technical Assistance**
- **Return Authorization**

Call Us!

800-872-6697
-for-

Warranty Coverage

Standard Warranty Coverage

Weller Reman Manual Transmissions – One year, unlimited mileage – 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 transmission end 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.

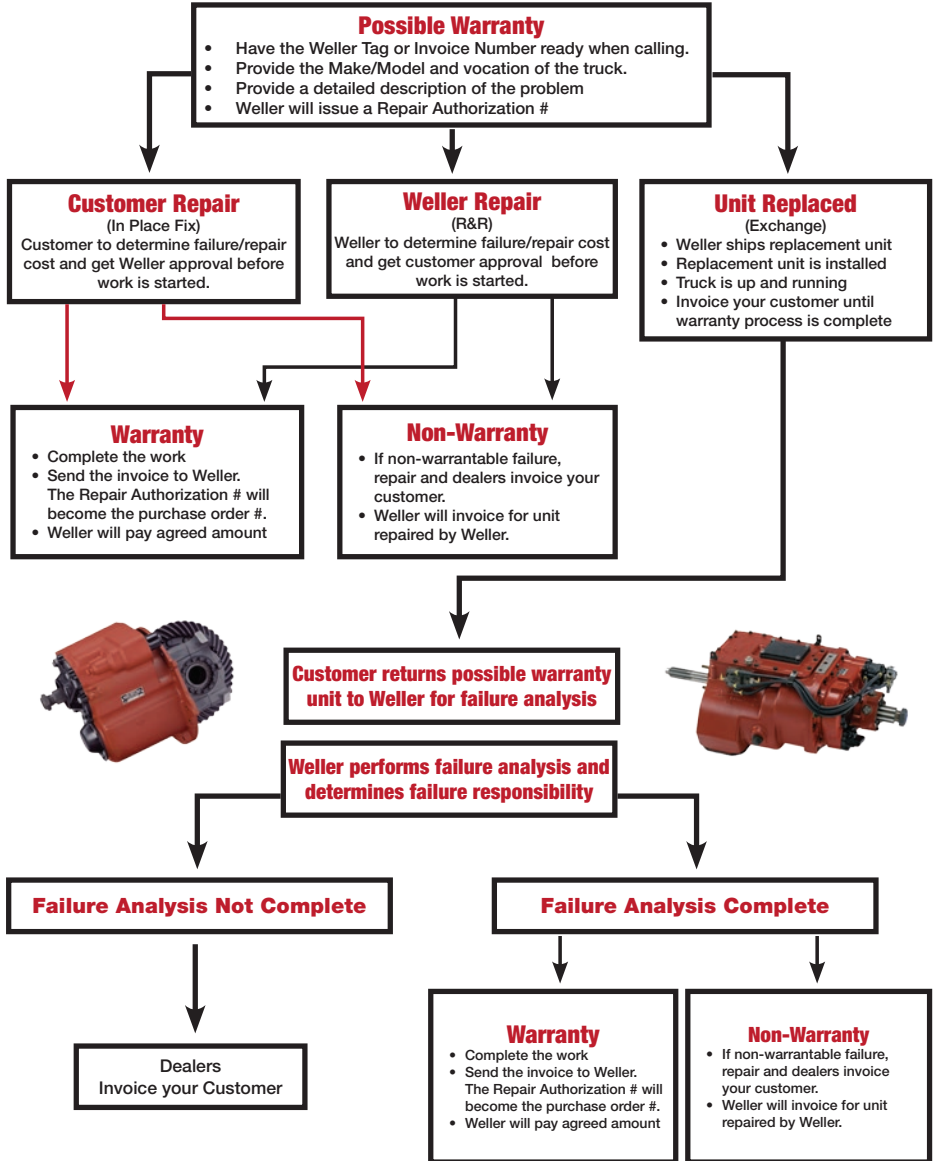
EXCEPT FOR THE EXPRESS WARRANTY STATED HEREIN, WELLER DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE FOREGOING IS THE LIMIT OF THE LIABILITY OF WELLER, AND IS THE EXCLUSIVE AND SOLE REMEDY 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



CALL WELLER FIRST!



WARRANTY CLAIM FORM

Date: _____

TAG #: _____

Claim Contact Information:	Vehicle Owner Information:	Truck Information:												
Name, Company, and Address: _____ _____ _____	Name, Company, and Address: _____ _____ _____	<table border="1"> <tr> <td>Make:</td> <td>_____</td> </tr> <tr> <td>Model:</td> <td>_____</td> </tr> <tr> <td>Mileage:</td> <td>_____</td> </tr> <tr> <td>Vocation:</td> <td>_____</td> </tr> <tr> <td>Engine:</td> <td>_____</td> </tr> <tr> <td>VIN:</td> <td>_____</td> </tr> </table>	Make:	_____	Model:	_____	Mileage:	_____	Vocation:	_____	Engine:	_____	VIN:	_____
Make:	_____													
Model:	_____													
Mileage:	_____													
Vocation:	_____													
Engine:	_____													
VIN:	_____													
Phone: _____	Phone: _____													
Fax: _____	Fax: _____													
E-Mail: _____	E-Mail: _____													

COMPLAINT

Fluid Leak:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Description of the Problem: _____ _____ _____ _____ _____ _____ _____
Shifting:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Noise:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Vibration:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Hard Steering:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Contamination:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No	

ADDITIONAL INFO

Change with Speed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Suspension Modified Recently?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Change with RPM?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Driveline in Phase?	<input type="checkbox"/> Yes <input type="checkbox"/> No
During Acceleration?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Engine Mounts Checked?	<input type="checkbox"/> Yes <input type="checkbox"/> No
During Deceleration?	<input type="checkbox"/> Yes <input type="checkbox"/> No	King Pin Checked?	<input type="checkbox"/> Yes <input type="checkbox"/> No
When Stationary?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Hydraulic Brakes?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Fluid at Proper Level?	<input type="checkbox"/> Yes <input type="checkbox"/> No	System Flushed & Filter Replaced?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Fluid Clean?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Is the Unit Getting Hot?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Vehicle Towed?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Running PTO?	<input type="checkbox"/> Yes <input type="checkbox"/> No		

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

WELLER WARRANTY



Warranty

It is essential that Weller is contacted before the unit is removed from the vehicle for warranty. Weller's technician will assist in troubleshooting the problem. If the unit failed, the unit will be filmed, documented, and warranty determined.

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

Manual Transmissions	Flat Rate Credit
Mid Range	\$500
Heavy Duty	\$700
Auxiliary/Transfer Case	---

Authorized Weller Dealers call for warranty labor hours guidelines.

Call Weller First!
1-800-872-6697



NOTES

NOTES





NOTES

THE WELLER REMAN NETWORK



Scan to
download
our mobile
app!



- | | | | |
|---|--|---|--|
| <p>1 Reman Center
1500 Gezon Pkwy S.W.
Grand Rapids, MI 49509
616-724-2000
800-872-6697</p> | <p>10 Dallas, TX
3113 Skyway Circle N
Irving, TX 75038
972-258-0460
855-258-0460</p> | <p>18 Las Vegas, NV
2985 Coleman St., Suite 14
North Las Vegas, NV 89032
702-638-8222
866-764-8222</p> | <p>27 Portland, OR
13150-2 NE Airport Way
Portland, OR 97230
503-255-1924
888-839-9758</p> |
| <p>2 Atlanta, GA
5007 Clark Howell Hwy.,
Suite A
Atlanta, GA 30349
404-768-9577
877-768-9577</p> | <p>11 Denver, CO
11333 East 55th Ave Unit A
Denver, CO 80239
303-375-6633
833-375-6633</p> | <p>19 Los Angeles, CA
9355 Cherry Ave.
Fontana, CA 92335
909-356-8322
877-356-8322</p> | <p>28 Sacramento
1424 N Market Blvd. Unit 80
Sacramento, CA 95834
279-972-4170
888-553-9753</p> |
| <p>3 Baltimore, MD
899 Airport Park Rd., Ste. N
Glen Burnie, MD 21061
410-553-0443
877-550-0443</p> | <p>12 Detroit, MI
29826 W. Eight Mile Road
Farmington Hills, MI 48336
248-473-1900
800-473-1905</p> | <p>20 Lubbock, TX
603 CR 7150
Lubbock, TX 79423
806-516-8112
844-389-1766</p> | <p>29 Salt Lake City, UT
3450 W. California Ave.
Suite 400
Salt Lake City, UT 84104
801-886-0100
855-847-0100</p> |
| <p>4 Birmingham, AL
116 Total Solutions Way
Alabaster, AL 35007
205-685-0777
866-535-0777</p> | <p>13 Gaylord, MI
353 Expressway Court
Gaylord, MI 49735
989-731-6700
888-731-6700</p> | <p>21 Memphis
7520 Appling Center Dr.
Ste 102
Memphis, TN 38133
901-386-8604
833-270-3220</p> | <p>30 Seattle, WA
6408 South 196th Street
Kent, WA 98032
253-872-0321
877-572-0321</p> |
| <p>5 Boise, ID
8484 W. Victory Road
Boise, ID 83709
208-331-1061
888-331-1061</p> | <p>14 Houston, TX
4549 Aldine Bender
Houston, TX 77032
281-442-8855
877-677-8855</p> | <p>22 Milwaukee, WI
8625 North 107th
Milwaukee, WI 53224
414-354-6400
877-354-6400</p> | <p>31 South Bend, IN
3303 William Richardson Ct.
Suite 200
South Bend, IN 46628
574-237-1000
800-968-8860</p> |
| <p>6 Boston, MA
Auburn Industrial Park
C Street, Building 15B
Auburn, MA 01501
774-374-8015
888-739-7191</p> | <p>15 Indianapolis, IN
6903 E. 32nd St.
Indianapolis, IN 46226
317-547-3190
888-547-3190</p> | <p>23 Minneapolis, MN
3201 85th Avenue North
Brooklyn Park, MN 55443
763-424-3800
877-424-3802</p> | <p>32 St. Louis, MO
2388 Chaffee Drive
Maryland Heights, MO
63146
314-692-2227
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