

Instruction Sheet 484**Transfer Flow, Inc.****READ THIS INFORMATION PRIOR TO BEGINNING INSTALLATION!**

Due to the technical nature of this fuel system, it is necessary to thoroughly read all instructions included in this kit. These instruction sheets are found within this pamphlet. You are installing a fuel system which will contain flammable liquids which can ignite and cause serious or fatal injury if improperly handled. The mechanical components of the system must be handled carefully to avoid possible injury due to weight, size and shape. This system is only to be installed, maintained and/or repaired by qualified adult mechanics with the necessary training and experience to work with gasoline or diesel fuel systems. The instructions for installation must be followed explicitly in order for the system to be installed as intended and in a safe manner. If any installer fails to follow Transfer Flow's instruction sheets, the warranty may be voided. Do not deviate from these instructions without prior written permission from Transfer Flow, Inc. **DO NOT INSTALL THIS FUEL SYSTEM IF YOU ARE UNABLE TO MEET THESE BASIC REQUIREMENTS. CONTACT TRANSFER FLOW AT ONCE.** Please keep this material for future reference.

**If the description on the instruction sheet does not match your vehicle, STOP!!!
Call Transfer Flow IMMEDIATELY at 1-800-442-0056**

Important Safety Information***Filling the Fuel Tank***

- Never fill a fuel tank near a flame or ignition source which might ignite the fuel vapors.
- Avoid breathing fuel vapors or allowing the fuel vapors or liquid to contact the skin. Chemical gloves and a respirator should be used when handling some materials such as adhesives or fuels. Adequate eye protection should be used during the installation of this fuel system to prevent foreign objects from entering the eyes.
- Always fill the fuel tanks while the vehicle is on a flat level surface with the engine OFF.
- Open the fuel cap slowly to allow any pressure to escape.
- Never overfill or "top-off" any fuel tank. Overfilling the fuel tank may cause damage to the emissions system, cause dangerous spills and possibly result in a fire. **The Transfer Flow auxiliary system may also shut down in the event of an over-full condition.**
- Never siphon fuel using the mouth. This practice is dangerous and potentially fatal. Use an appropriate pump.
- Do not allow fuel or other chemicals to contaminate soil or waterways. Properly contain and dispose of used materials in an appropriate and legal manner. Recycle as advisable.
- Do not use a cell phone while filling.
- Do not enter the vehicle during refueling.

Other Important Safety Information

- Use only Transfer Flow Inc. replacement parts. Many parts of our fuel system appear common, but are actually special parts which are critical for safe operation. Contact Transfer Flow for more information.
- Disconnect the battery before working on the TFI fuel system.
- Never place any fluid other than motor fuel in the fuel tanks.
- Never modify or over pressurize a fuel tank.
- Do not grind, torch, weld, cut, or modify a fuel tank.
- Do not sleep in a pickup with a camper shell that contains an in-bed fuel tank system.
- **NEVER connect a Transfer Flow Inc. fuel system to a previously modified fuel system.**
- Do not smoke near a fuel tank.
- Keep small parts, plastic bags, chemicals, etc. away from children as they pose a hazard.
- Installers must follow local, state, and federal OSHA rules and safety regulations.
- Material Safety Data Sheets are available from Transfer Flow for products included in the fuel system.

Door Post Label

Place this label on the vehicle's driver's side door post.



**TFI TRANSFER
FLOW, INC.**

The Leader in Aftermarket Fuel Tank Systems™

The drawings and information contained thereon is submitted confidentially and is the property of Transfer Flow. Use, reproduction, or disclosure of the contents of these instruction sheets or any portion thereof for any purpose must be approved in writing by Transfer Flow. Send inquiries to: Transfer Flow, Inc., 1444 Fprrss St., Chico, CA 95973. Transfer Flow, Inc. reserves the right to change the design and/or application without notification.

TORQUE SPECIFICATIONS

IMPORTANT INFORMATION! IMPORTANT INFORMATION!

TORQUE SPECIFICATIONS ARE CRITICAL. TOO HIGH OR TOO LOW A TORQUE SETTING COULD FATIGUE A FASTENER IN A SHORT PERIOD OF TIME. THE FASTENER COULD PREMATURELY FAIL. UNLESS OTHERWISE NOTED, THE FOLLOWING IS A LIST OF THE SUGGESTED TORQUE SPECIFICATIONS FOR MOST TFI FASTENERS. IF A TFI FASTENER THAT YOU ARE USING IS NOT ON THE LIST, CONTACT TRANSFER FLOW, INC. AT 1-800-442-0056 FOR THE PROPER TORQUE VALUES.

NOTE: A torque wrench is needed for proper installation.

Description	Torque	Socket size: Bolt	Socket size: Nut
SAE			
#6-32 Round head screw – any length	11 in-lb+/- 2 in-lb	N/A	8mm
#8-32 Round head screw – any length	20 in-lb+/- 2 in-lb	N/A	9mm
#10 Hex head sheet metal screw – any length GR 5	35 in-lb+/- 5 in-lb	5/16"	N/A
#10-32 Round head screw/ Set Screw/Weld Stud – any length	35 in-lb+/- 5 in-lb	N/A	3/8"
1/4-20 Flat head screw/Round head bolt – any length GR 5	48 in-lb+/- 5 in-lb	3/8"-7/16"	7/16"
1/4-20 Hex head bolt/Weld stud/Pem stud/Nutsert – any length GR 8	65 in-lb+/- 5 in-lb	3/8"-7/16"	7/16"
5/16-18 Hex head bolt/Weld stud/Pem Stud/Nutsert – any length	12 ft-lb+/- 2 ft-lb	1/2"	1/2"
3/8-16 Hex head bolt/Weld stud/Pem stud – any length GR 8	18 ft-lb+/- 2 ft-lb	9/16"	9/16"
7/16-14 Hex head bolt/Tee-bolt/Special U-bolt – any length GR 8	32 ft-lb+/- 2 ft-lb	5/8"	11/16"
1/2-13 Carriage head bolt /Tee-bolt – any length GR 5	32ft-lb+/- 2 ft-lb	N/A	3/4"
1/2-13 Hex head bolt – any length GR 8	32 ft-lb+/- 2 ft-lb	3/4"	3/4"
1/2-20 Hex head bolt – any length GR 8	32 ft-lb+/- 2 ft-lb	3/4"	3/4"
METRIC			
4mm Hex washer head S.M. screw – any length	20 in-lb+/- 5 in-lb	7/32"	N/A
5mm x 2.0 Weld stud/Hex hed bolt – any length	35 in-lb+/- 5 in-lb	N/A	8mm
6mm x 1.0 Weld stud/Hex head bolt – any length	65 in-lb+/- 5 in-lb	N/A	10mm
8mm x 1.25 Weld stud/Hex head bolt – any length	12 ft-lb+/- 2 ft-lb	N/A	13mm
10mm x 1.5 Hex head bolt – any length	18 ft-lb+/- 2 ft-lb	13mm	15mm
10mm x 1.5 Weld stud - any length	18 ft-lb+/- 2 ft-lb	N/A	15mm
12mm x 1.75 Strap nut	32 ft-lb+/- 2 ft-lb	15mm	18mm
CLAMPS			
#4 Gear Clamp	30 in-lb+/- 8 in-lb	1/4"	N/A
#10 Gear Clamp	30 in-lb+/- 8 in-lb	7mm	N/A
#16 Gear Clamp	30 in-lb+/- 8 in-lb	7mm	N/A
#24 Gear Clamp	30 in-lb+/- 8 in-lb	7mm	N/A
#36 Gear Clamp	30 in-lb+/- 8 in-lb	7mm	N/A
G-12 Hose Clamp	13 in-lb+/- 5 in-lb	7mm	N/A
G-14 Hose Clamp	13 in-lb+/- 5 in-lb	7mm	N/A

IMPORTANT INSTALLATION STEPS

NOTE: Temporarily reconnect the battery cable in Steps A and C below only!

A. Verify OEM or TFI sending unit operation on stock fuel gauge:

1. Attach sender signal and ground wires to sending unit before installing in tank.
2. Turn ignition key to "on" position so fuel gauge is operating.
3. Check to make sure the gauge shows empty when the float wire is in the vertical stop position, and shows full when the flow wire is in the horizontal stop position.
4. If the gauge needle reads empty and then full, the sending unit is functioning properly. If this is not the case, call Transfer Flow at (530) 893-5209 for technical assistance.

B. Pressure test the fuel tank to check the seal around the sending unit and rollover valve:

1. After properly installing the sending unit and the rollover valve, make sure all other openings in the tank are sealed.
2. Apply a maximum pressure of 5 psi to the tank.
3. Use soapy water around the sending unit, rollover valve and other fittings to check for leaks.
4. If any leakage occurs, release pressure, reseal fitting and check for leaks again.

C. Verify sending unit operation on stock fuel gauge while mounted in fuel tank:

1. Place fuel tank close to the ends of the sender signal and ground wires.
2. Run electrical leads from the sender and ground wires to the sending unit in the tank.
3. Once the leads are connected, turn the ignition on and check to see if the fuel gauge shows empty.
4. Rotate the tank upside down in the direction of the float rotation and check to see if the fuel gauge shows full.
5. If the gauge needle is on or past the required mark, the sending unit was installed properly. If this is not the case, the float wire is not being allowed to complete its rotation. The sending unit will have to be repositioned and steps B and C will have to be repeated.
6. On 1999 and later Ford, GM and Dodge pickups and some other vehicles, it will be necessary to turn the ignition switch off and then on to obtain an accurate gauge reading.

D. Calibrate the fuel gauge reading vs. fuel capacity for the new TFI tank:

1. Use the table below to record the amount of fuel pumped into the tank at a specific fuel gauge mark.
2. Keep this table in the vehicle for reference.

Use for a TFI auxiliary tank	
Empty	_____ gallons
1/4	_____ gallons
1/2	_____ gallons
3/4	_____ gallons
Full	_____ gallons

Use for a TFI replacement tank			
1. Amount of fuel added from stock tank = _____ existing gallons			
2. Amount of fuel from stock tank added to the amount pumped in at each gauge mark = _____ gallons			
	Pump gallons	Existing gallons	Total gallons
Empty	_____	+ _____	= _____ gallons
1/4	_____	+ _____	= _____ gallons
1/2	_____	+ _____	= _____ gallons
3/4	_____	+ _____	= _____ gallons
Full	_____	+ _____	= _____ gallons

ONLY USE TRANSFER FLOW REPLACEMENT PARTS

Transfer Flow, Inc. fuel systems are designed to work only with specific components which have been selected for their unique properties. Years of design work have produced the finest auxiliary fuel system available that relies on relatively few but critical parts. The components used in Transfer Flow fuel systems are not generic or "off-the-shelf" parts and cannot be replaced with parts that appear to be similar. For example, the in-line fuel pump used with our Trax-UFS system appears to be a normal fuel pump, but it is actually a high quality solenoid pump with a critical forward and reverse check feature. **Under no condition should any other pump be substituted for this pump.** Contact Transfer Flow immediately if your Transfer Flow auxiliary fuel system fails to operate properly, or if you have questions regarding part replacement.

CERTIFICATE OF LIMITED WARRANTY

1. Three Year/Unlimited Mile Warranty

TRANSFER FLOW, INC. ("TFI") fuel systems and parts are - EXCEPT AS NOTED IN PARAGRAPHS 2, 3, AND 4 BELOW - covered by a three year unlimited mile warranty against defects in material and workmanship. This warranty is in effect in the United States and Canada from the date the unit is purchased by the Original Purchaser ("Original Purchaser" shall mean the person who purchases for his own use).

2. Specific Parts Warranty

Specific parts purchased from TFI are warranted against defects in material and workmanship as follows:

- Sending units are covered by a one year warranty from the date of purchase by the Original Purchaser.
- 12-volt refueling pumps are covered by a two year warranty from the date of purchase by the Original Purchaser (AND ARE NOT TO BE USED FOR AVIATION FUEL).
- Spray-on bedliners are covered by a three year warranty from the date of installation for the Original Purchaser.

3. Exclusions And Limitations

THE TFI WARRANTY, DESCRIBED IN PARAGRAPHS 1 AND 2 ABOVE, IS SUBJECT TO THE FOLLOWING EXCLUSIONS AND LIMITATIONS:

- The rights of the Original Purchaser under the TFI warranty are LIMITED to return of the goods and repair or replacement of nonconforming goods.
- THIS WARRANTY DOES NOT COVER INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO: LOSS OF USE OF THE WARRANTED PRODUCT, LOSS OF TIME, INCONVENIENCE, TRANSPORTATION EXPENSES, TOWING, EXPENSES FOR TRAVEL, LODGING, TELEPHONE AND GASOLINE, LOSS OR DAMAGE TO PERSONAL PROPERTY OR LOSS OF REVENUE. NOTE: SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.
- Warranties will only cover products on which the identification label is affixed; if the label has been removed or defaced, the warranty is no longer valid.
- TFI fuel systems are compatible with a maximum 20% concentration of biodiesel fuel manufactured ASTM D7467 specifications. Concentrations above 20% or failing to comply with ASTM D7467 specifications will void warranty.
- THE WARRANTY PROVIDED IN PARAGRAPHS 1 AND 2 ABOVE IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES (EXPRESS, IMPLIED, OR OTHERWISE) INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN THE EVENT IMPLIED WARRANTIES MAY NOT BE EXCLUDED, THE TERM OF ANY IMPLIED WARRANTY SHALL NOT EXCEED THE TERM OF THE APPLICABLE EXPRESS WARRANTY PROVIDED IN PARAGRAPHS 1 AND 2 ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.
- The warranty will not apply when product failure is caused by conditions beyond the control of TFI, such as:
 - (1) Malfunction due to incorrectly ordered product
 - (2) Damage from misuse, negligence, or failure to provide reasonable and necessary maintenance
 - (3) Damage caused by improper installation
 - (4) Damaged caused in shipment or improper handling
 - (5) Damage caused by contaminated fuels or fuel additives
 - (6) Product modification or alteration
- Products made from pickled and oil material are not covered under warranty for corrosion.
- The in-line fuel filter provided with the TFI fuel system is not covered by warranty as it is a standard maintenance item.
- Any action against TFI for breach of the warranty must be commenced within one (1) year after the cause of action has accrued.
- Any action against TFI for breach of the warranty must be commenced in the Superior Court of Butte County, State of California.

4. Warranty Claim Procedures

- If you have difficulty with your fuel system, consult the dealer where the unit was originally purchased. Your dealer will then contact TFI and request assistance. TFI will require model, part and serial numbers, proof of purchase, and date of installation. TFI reserves the right to examine the claimed defect in the field or upon return of the tank or component to TFI's facility with all shipping charges being prepaid. If a part is defective and must be replaced, TFI will provide a Returned Merchandise Authorization ("RMA") number, authorization, and instructions for replacement or further handling.
- No payment will be made for parts purchased or repaired in the field without prior authorization by TFI.
- TFI will pay its established warranty labor rates to service points or service dealers who have service agreements with TFI.
- If an item is shipped as a replacement for a defective part, a charge will be made for this part. Credit will be considered upon return of the defective item. ALL RETURNED ITEMS MUST BE IDENTIFIED WITH THE RMA NUMBER AND RETURNED WITHIN 30 DAYS OF OPENING THE CLAIM.

5. Federal Regulatory Provisions

This warranty gives you specific legal rights, and you may also have other rights which vary from State to State, and in accordance with specific federal regulations. TFI does not authorize any person to create for TFI any other obligation or liability in connection with TFI fuel systems. If TFI fails to successfully perform its obligation under this warranty, the Original Purchaser has available the remedies provided by the Magnuson-Moss Warranty Act (P.L. 93-637) and any applicable state law.