

MAHLE EFP-150HD

EN

Operation Manual
Electric Fuel Priming System





**EVERY PERSON WHO OPERATES THIS
EQUIPMENT NEEDS TO KNOW AND
UNDERSTAND ALL OF THE INFORMATION IN
THIS MANUAL – FAILURE TO DO SO COULD
RESULT IN SERIOUS INJURY OR DEATH.**

**READ THIS MANUAL
CAREFULLY AND
RETAIN FOR YOUR
RECORDS**

Contents

1. Warranty	4
2. Safety Precautions	6
2.1 General safety	6
2.2 Warnings.....	6
3. Symbols Use	7
3.1 Signal words	7
4. Specifications	7
4.1 EFP-150HD.....	7
5. Product Description	8
5.1 Component identification	8
5.2 Features.....	8
6. Operation	9
6.1 Fuel transfer	9
6.2 Priming without a fuel module.....	9
6.3 Priming with a fuel module.....	10
6.4 Fuel tank sweep.....	10
7. Troubleshooting	11
8. Replacement Parts	12
9. Notes	13

1. Warranty

MSS One-Year Limited Warranty

(Applies only to equipment owned and operated in North America)

During the One-Year Warranty period, MAHLE Aftermarket Inc., Service Solutions (MSS) is solely responsible for costs associated with parts and labor for repairs needed due to defects in material and/or workmanship. MSS is not responsible for the costs associated with repairs needed due to improper use or a lack of normal maintenance. MSS's goal is to provide a timely turn-around of the covered product requiring warranty repair.

The Customer is responsible to ASSIST AND PARTICIPATE with MSS Technical Support in the over-the-phone diagnosis process of:

- A) Determining that a legitimate failure has occurred and that the complaint is not just the result of inadequate training and/or improper use that could be easily remedied by over-the-phone instructions.**
- B) Determining the nature of the failure and that it is reasonable for MSS Technical Support to judge over the phone that the failure is warrantable.**
- C) Determining the parts necessary to make the repairs so that those parts can be shipped via the appropriate expedited method at the expense of MSS if the failure is warrantable.**

During the One Year Warranty period for failures that are deemed by MSS to be warrantable, MSS is solely responsible for providing Field Repair Service within a reasonable period of time after a warrantable failure is reported. Field Repair Service is generally available in all areas within 150 miles of major metropolitan areas of the US. A reasonable period of time will depend on the location of the customer and the time of the year. MSS maintains a large network of Service Providers in the US. When Field Repair Service is needed, in most locations near a major US metropolitan area, and during most times of the year, a reasonable period of time for Field Service is 24 to 48 hours after parts are received by the Customer.

Since repair parts from MSS will normally arrive 24 to 48 hours after the Customer reports a failure, the Customer may at his sole option and discretion, choose to make the necessary repairs, with over-the-phone support from MSS Technical Support so as to minimize downtime. In such case, MSS will compensate the Customer or the Customer's employee as appropriate for the time necessary to make repairs if the failure is covered by warranty.

It is the Customer's responsibility to maintain the MSS Equipment according to instructions in the MSS Operation Manual for the covered product as well as to operate the equipment in a commercially reasonable manner as generally described in the MSS Operation Manual. MSS provides free Technical Support over toll-free telephone lines in the US to assist the customer in this regard for the life of the covered product.

The Customer should review the legal Warranty Disclaimer for more details of coverage and limitations.

Ancillary accessories such as Refrigerant Identifiers, Leak Detector Lights and Leak Detectors must be returned to MSS for repair or replacement with a new or refurbished unit, at MSS's sole discretion, in case of a warrantable defect.

WARRANTY DISCLAIMER FOR PRODUCTS OF MAHLE AFTERMARKET INC., SERVICE SOLUTIONS (MSS)

1. MSS'S WARRANTY

This is to certify that MAHLE Aftermarket Inc., MSS Division warrants to the first retail purchaser only, the described new product manufactured by it to be free from defects in materials and workmanship, when properly maintained, **under normal use and service for a period of ONE YEAR**. All spare parts supplied by MSS will have a 90 day warranty. This warranty includes the reasonable cost of parts and materials as well as non-overtime labor. MSS shall be the sole judge of whether failure is warrantable.

2. PURCHASER'S REMEDY

Purchaser's sole and exclusive remedy under this warranty shall be limited to the repair or replacement, at MSS's option, of any defective part of the product. Purchaser shall call MSS Technical Support who will assist Purchaser in diagnosing the problem and, if deemed necessary, will immediately ship replacement parts for installation by Purchaser if so requested. If Purchaser requests Factory service, repairs under this warranty shall only be made at a location designated by MSS.

3. DURATION

This warranty will expire one year from date of delivery to the first retail purchaser.

4. PURCHASER'S DUTIES

- (a) Register product with MSS by returning completed Warranty Registration within 90 days of delivery of unit.
- (b) Transportation Expense: Transportation expenses to and from the MSS's facility are to be borne by the Purchaser.
- (c) Notice of breach: Purchaser shall give written notice to MSS of any alleged refusal or failure of MSS to repair or replace as promised by this warranty no later than fifteen days after the Purchaser learns of such alleged failure or refusal.

5. DISCLAIMER

THE EXPRESS WARRANTY HEREIN IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. NO IMPLIED WARRANTY OF MERCHANTABILITY IS MADE AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

6. EXCLUSIONS

The warranty and obligations stated here shall not apply to:

- (a) Any product not registered within 90 days of delivery.
- (b) Any product repaired or altered without prior approval of MSS so as to affect adversely its stability or reliability.
- (c) Any product subjected to misuse, abuse or accident as well as products used in a manner contrary to written instructions or normal operating procedure.
- (d) Any damage to product during original shipment or subsequent shipments to MSS's facility for service.
- (e) Portions of products which are subject to warranties, if any, given by their manufacturers. MSS does not adopt these warranties.

6. EXCLUSIONS (Continued)

- (f) Parts, accessories or other items manufactured by others which are used or installed on the product as a result of Purchaser's specifications.
- (g) Used items furnished by the Purchaser for installation on the product.
- (h) Items which are not defective, but must be replaced during the warranty period as a result of fair wear and tear or scheduled maintenance.
- (i) Hoses, field service couplings, adapters, gaskets and O-rings carry a ninety day warranty.
- (j) Filters, vacuum pump oil and compressor oil are considered consumables and are not covered by any warranty.
- (k) The Warranty may be considered void if evidence of any refrigerant system sealer is found in any of the internal components of an MSS recovery/recycling machine.
- (l) Refrigerant loss is not covered. The Purchaser is responsible for detecting system leaks and advising MSS of same if warrantable repair is required.
- (m) Calibration of equipment, having integrated solid-state controls and load cells for weighing fluids, is not covered beyond the initial setup and commissioning of the equipment. The requirement for calibration of load cell controls is considered normal maintenance and is dependent on many factors, the main one being the care taken when moving the equipment about the shop.

7. EXCLUSION OF LOST PROFITS AND OTHER CONSEQUENTIAL DAMAGES

MSS will have no liability for any lost profit, cargo loss, usage loss or other consequential damages alleged to have been caused by any defect in the product or any failure of MSS to meet any obligation under this agreement including the obligation to repair and replace set forth in Paragraph 2.

8. LIMITATIONS OF ACTIONS

No action for breach of this warranty shall commence more than one year after the accrual of the cause of action.

9. MERGER

This written warranty is the complete, final and exclusive agreement of the parties with respect to the quality or performance of the goods and any and all warranties and representations, except warranty extensions, if any, in writing as applicable.

10. NO ORAL MODIFICATIONS OR WAIVERS

No modification of this warranty or waiver of its terms shall be binding on either party unless approved in writing by an authorized official of the parties.

11. GOVERNING LAW

This warranty and the rights and duties of the parties under this warranty shall be governed by the law of Pennsylvania, the state of the MSS's principle place of business.

MAHLE Aftermarket Inc., Service Solutions

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2. Safety Precautions

2.1 General safety

- ⚠ Before attempting to operate this equipment, thoroughly read and understand this manual to avoid injury.
- ⚠ Completely remove all tape and packaging. Inspect the equipment immediately upon delivery.
- ⚠ Keep this manual. If you need to replace the manual, call customer service at 1-800-468-2321 option 1 or visit www.servicesolutions.mahle.com for a digital copy.
- ⚠ Read all product safety labels.
- ⚠ Refer to appropriate regulations for environmental and workplace safety rules.

2.2 Warnings

- ⚠ **To avoid serious injury or death**, read this manual carefully before operating this unit. Contact the manufacturer using contact information on the back cover of this manual if you have any questions.
- ⚠ **Eye protection**: Proper eye protection must be worn when operating the EFP-150HD.
- ⚠ **Avoid fuel spillage**: When disconnecting the quick disconnect fittings, wrap a shop rag around fitting to catch any residual fuel.
- ⚠ **Do not leave the EFP-150HD running unattended**. Always follow engine manufacturer guidelines for proper priming procedures. Always disconnect the power supply when the unit is not in use.
- ⚠ **Scalding hazard**: When diesel fuel is circulated through an operating engine, it can become very hot. Do not allow fuel to come into contact with eyes or unprotected skin. Allow engine and fuel to cool to ambient temperature before replacing fuel filter or performing service operations which could result in spillage of fuel from the system.

- ⚠ **Fire Prevention**: Heated fuel can form combustible vapor mixtures in the area around the fuel source, To eliminate the potential for fire, keep open flames, sparks or other potential ignition sources away from work area. Do not smoke during filter replacement or other service operations
- ⚠ **Inhalation Precaution**: Always perform engine or vehicle fuel system maintenance in a well ventilated area that is free of bystanders
- ⚠ **The ignition key must be in the off position**, unless otherwise directed. To avoid unintentional engine start up, use a lockout key and/or signage to alert personnel that work is being performed.
- ⚠ **The EFP-150HD is to be used with only diesel fuel**. Do not use the EFP-150HD with gasoline or any other combustible fluid.
- ⚠ **Engine fluids (oil, fuel, and coolant) may be a hazard to human health and the environment**. Handle all fluids and other contaminated materials (such as filters and rags) in accordance with applicable regulations. Recycle or dispose of engine fluids, filters, and other contaminated materials according to applicable regulations.
- ⚠ Failure to understand and obey these warnings may result in personal injury and / or property damage.

3. Symbols Use

3.1 Signal words

Signal words call attention to a safety message or messages, or a property damage message or messages, and designate a degree or level of hazard seriousness. Signal words used in this manual include:

Keyword	Probability of occurrence	Severity of danger if instructions not observed
DANGER	Immediate impending danger	Death or severe injury.
WARNING	Possible impending danger	Death or severe injury
CAUTION	Possible dangerous situation	Minor injury
NOTICE	Possible damage to property	Possible property damage

4. Specifications

4.1 EFP-150HD

Model EFP-150HD	US units	Metric units
Height	33 in	83.8 cm
Width	12 in	30.5 cm
Depth	11 in	27.9 cm
Net weight	37 lb	16.8 kg

5. Product Description

5.1 Component identification

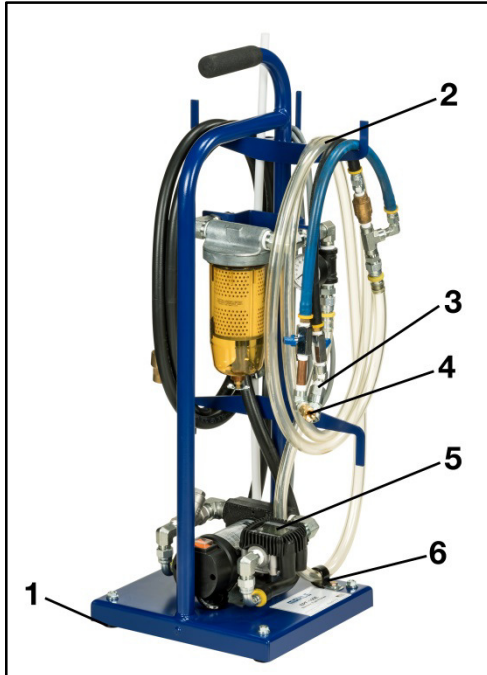


Fig. 1: Component identification – right view

- 1 Leveling feet
- 2 Pressure hose
- 3 Compucheck
- 4 Fuel Fill
- 5 Flow meter
- 6 P-clip

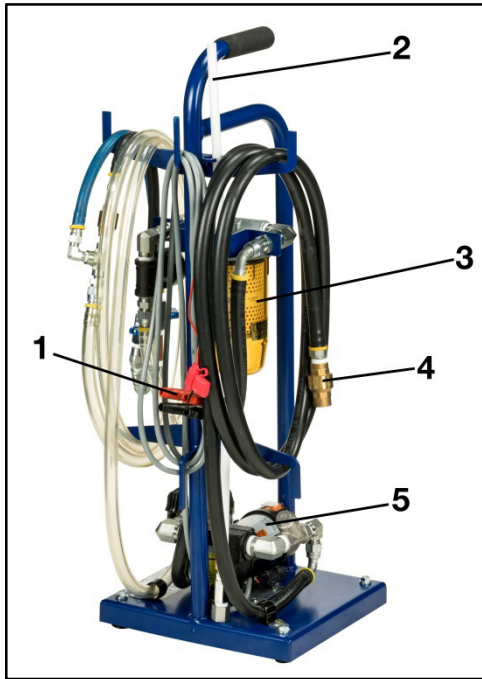


Fig. 2: Component identification –left view

- 1 Clamps w/ cable
- 2 Draw tube
- 3 Fuel filter assembly
- 4 Suction hose
- 5 Electric pump

5.2 Features

⚠ The EFP-150HD is only approved for use with diesel fuel. It is not approved for use with gasoline or any other flammable liquid.

The EFP-150HD is designed to:

- Perform priming after filter service
 - Primes fuel system after filter change
 - Primes after loss of fuel
 - Uses vehicles 12VDC power supply to operate machine
 - Tank sweeps
 - Removes water and sediment from fuel tanks
- ❗ The EFP-150HD will filter fuel to 10 microns to ensure clean fuel delivery.
 - ❗ With the EFP-150HD, fuel system priming can be completed in just seconds.
 - ❗ The EFP-150HD is a clean method of fuel priming and eliminates handling of fluids.
 - ❗ With its compact design, the EFP-150HD is portable for use anywhere.

6. Operation

⚠ WARNING - This section discusses the appropriate and safe methods for using the equipment. Always ensure proper understanding of the equipment function prior to use to avoid injury.

6.1 Fuel transfer

- ❶ Follow these instructions to transfer fuel when the vehicle runs out of fuel.
- 1. If needed connect the pickup tube to the black suction hose, hand tight only.
- 2. Insert the suction hose into your fuel source.
- 3. Open the fuel dispenser and stick it in the fuel tank that needs fuel.
- 4. Connect the 12VDC power cables to a 12VDC power source.
- 5. This machine will pull a maximum of only 20 amps.
- 6. Press and hold the reset button on the flow meter to reset the meter to 0.000
- 7. Start the machine and record the amount of fuel being dispensed if needed.
- 8. Or simply allow to run until vehicle has enough fuel. Note: this pump has a 30-minute duty cycle and transfers at 2 to 3 gallons a minute.

6.2 Priming without a fuel module

- ❶ Follow these instructions to prime engine fuel systems without a fuel module after the loss of prime.
- 1. Add fuel to vehicle using the EFP-150HD if needed. See Fuel transfer section.
- 2. Connect the pickup tube to the black suction hose if needed.
- 3. Insert the pickup tube into the fuel tank or fuel container. The tube is ½" O.D. use with fuel tanks with the anti-siphon in the fill neck small opening.
- 4. Connect the 12VDC clamps to the vehicles 12VDC power supply.
- 5. When ready flip power switch to ON.
- 6. Using the fuel dispenser to fill all spin-on and other filters with fuel.
- 7. If equipped connect the comp check coupler to the engine.
- 8. Flip the power switch to ON.
- 9. Allow to run for 1 minute.
- 10. With primer running start engine.
- 11. Run engine at 1000 rpm for one minute.
- 12. Turn off engine and primer, disconnect the primer and stow.

6.3 Priming with a fuel module

- ❶ Follow these instructions to prime engine fuel systems with fuel modules after the loss of prime.
- 1. Add fuel to the vehicle using the EFP-150HD if needed. See Fuel transfer section.
- 2. Remove the fuel tank cap from the vehicle.
- 3. Connect the pickup tube to the black suction hose if needed.
- 4. Insert the pickup tube into the fuel tank or fuel container. The tube is ½" O.D. use with fuel tanks with the anti-siphon in the fill neck small opening.
- 5. Connect the 12VDC clamps to the vehicles 12VDC power supply.
- 6. When ready flip power switch to ON.
- 7. Using the fuel dispenser to fill all spin-on and other filters with fuel with the exception of the fuel module.
- 8. Turn pump OFF when not in use.
- 9. After the filters are filled connect the comp check coupler at the end of clear pressure hose to the fuel module.
- 10. Turn the pump ON
- 11. You will see fuel pressure on the EFP-150HD gauge.
- 12. You will see the on-board meter counting fuel quickly.
- 13. When the counting slows down to almost a stop this means the air has been pushed out of the fuel circuit and it is safe to start the engine.
- 14. With the primer connected to the engine and primer running, start the engine.
- 15. Allow engine to run for 1 minute at 1500 rpm.
- 16. Turn off engine.
- 17. Disconnect the EFP-150HD from the vehicle and stow.

6.4 Fuel tank sweep

- ❶ Follow these instructions if a tank sweep is needed to remove potentially harmful sediment and water deposits from the fuel tanks.
- 1. Connect the EFP-150HD to the 12VDC power supply.
- 2. Connect the clear suction / pressure hose to the ½" x 30" long pickup tube. Insert tube into the vehicles fuel tank.
- 3. Open the "Flow control" valve on the despensor and stick it into the fuel tank.
- 4. Flip the power switch to "ON".
- 5. Slide the tube along the bottom of the fuel tank from side to side or from front to back (in a sweeping motion).
- 6. When sweeping is complete flip the power switch to "OFF".
- 7. Disconnect "Draw Tube" from hose and store on machine.

7. Troubleshooting

- ❗ This section is a list of potential problems and solutions. If the solution listed fails to correct the problem, call the manufacturer at the number and address printed on the back cover of this manual. Please have the model number and serial number of the unit available.
- When fuel reaches top of the fuel filter, this means the fuel filter is dirty and needs to be changed.
- ⚠ Do not run machine without the fuel filter. This could cause damage to the pump.
- If low or no flow is experienced, check the filter on the end of the pickup tube. Filter may need to be cleaned. Remove the filter and use a blow gun to blow air through the threaded end to dislodge debris.
- If pump will not turn on, check for a blown fuse or loose connections at the 12VDC power clamps.

8. Replacement Parts

 <p><i>Fuel Filter Bowl</i></p> <p>P/N: 310 80064 00</p>	 <p><i>Fuel Filter Replacement Cartridge & Gasket</i></p> <p>P/N: 310 80065 00</p>
 <p><i>Filter Wrench</i></p> <p>P/N: 026 80723 00</p>	 <p><i>Suction Hose</i></p> <p>P/N: 310 80066 00</p>
 <p><i>Handle Grip</i></p> <p>P/N: 028 80543 00</p>	 <p><i>Fuel Fill Assembly</i></p> <p>P/N: 370 80070 00</p>
 <p><i>Check Valve</i></p> <p>P/N: 022 80172 00</p>	 <p><i>Compuchek Assembly</i></p> <p>P/N: 310 80069 00</p>

 <p><i>Flow Meter Assembly</i></p> <p>P/N: 310 80071 00</p>	 <p><i>Electric Pump Assembly</i></p> <p>P/N: 310 80073 00</p>
 <p><i>Pressure Gauge</i></p> <p>P/N: 026 80724 00</p>	 <p><i>Clamps w. Cable Assembly</i></p> <p>P/N: 310 80067 00</p>
 <p><i>Compuchek Coupler</i></p> <p>P/N: 023 80473 00</p>	 <p><i>P-Clip</i></p> <p>P/N: 021 80262 00</p>
 <p><i>Leveling Foot</i></p> <p>P/N: 021 80261 15</p>	 <p><i>Draw Tube Assembly</i></p> <p>P/N: 310 80063 00</p>

9. Notes

MAHLE

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