MOTORVAC

TransTech™ III+

Transmission Service System

Part No. 500-1100B

USER MANUAL

UNIT EQUIPPED WITH V-2 CONTROL BOARD

CE ISO 9001 CERTIFIED

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Introduction

Congratulations on your selection of the The TranTech™ III+ Transmission Service System. By choosing this product, you are acquiring the most technologically advanced method available for automatic transmission service and fluid exchange.

The TransTech™ III+ System is a self-contained system designed to connect to any automatic transmission through cooling system lines or vehicle dipstick tube. Once the unit is connected, it can be used to drain the fluid from the vehicle's transmission for filter replacement and/or to completely exchange the transmission fluid with new fluid, without removing the vehicle's transmission fluid pan.

Please study this Operators Manual to become thoroughly familiar with the TransTech™ III+ Transmission Service System.

Thank you for choosing MotorVac.
Sincerely,
The MotorVac Team.

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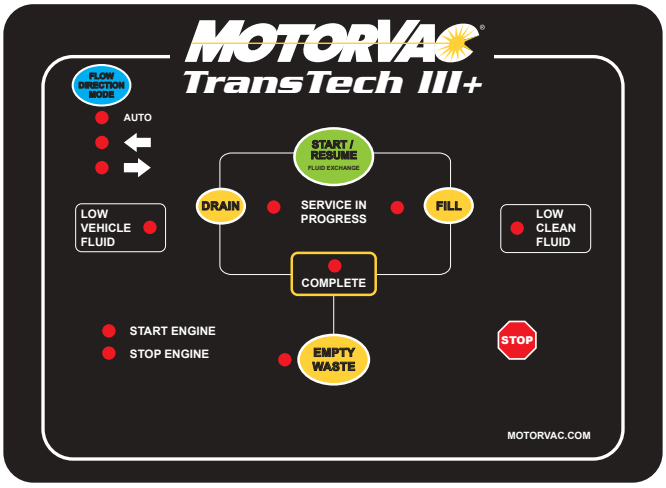
System Features and Functions

The front of the TransTech™ III+ cabinet contains the control panel, the fluid fill neck for adding new transmission fluid, and the fluid level windows.



Automatic Flow Direction Detection

The TransTech™ III+ is capable of automatically sensing the direction of fluid flow in the transmission cooling circuit and aligning the flow internally. A dual one way filtration system ensures that internal filters are never backflushed into a vehicle.

MODE Button – Press and hold MODE button 5 seconds until the alarm sounds. After releasing the button will toggle between manually selecting the inlet hose. This feature can be used for troubleshooting service issues.

MODE LEDS
Fig 1 Indicates flow direction mode is set to automatic but flow direction has not been determined yet. Flow direction is determined when a service is started.
Fig 1 (flashing) Indicates no flow is detected. Ensure hoses are connected properly and vehicle is turned on.
Fig 2,3 Shows the flow direction as manually selected in either direction.
Fig 4,5 Shows that the flow direction mode is automatic and the flow direction has been determined. The arrow indicates the flow direction.

Fig1

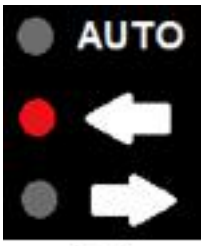


Fig2

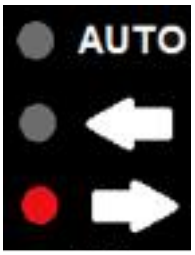


Fig3

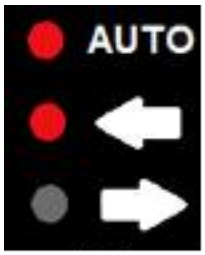


Fig4

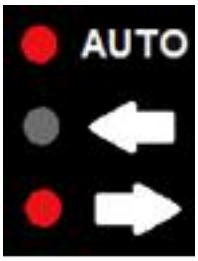


Fig5

Control Panel Features and Functions

	**START/RESUME Button** - Begins & Resumes service
	**DRAIN Button** - Drains fluid from vehicle's transmission. **FILL Button** – Adds fluid to the transmission.
	**LOW VEHICLE FLUID LED** - Illuminates when fluid in the vehicle in service is low or empty.
	**COMPLETE LED** - Illuminates when service is complete.
	**START ENGINE LED** – The LED illuminates when the vehicle's engine is running in inline mode. The Start Engine LED flashes when the vehicle's engine needs to be started.
	**STOP ENGINE LED** – LED illuminates when the vehicle's engine is OFF in inline mode. The Stop Engine LED flashes when the vehicle's engine needs to be stopped.
	**LOW CLEAN FLUID LED** – Illuminates when clean fluid in the unit's clean tank is low or empty.
	**STOP BUTTON** – Pauses service and stops alarms. Hold for 5 seconds to reset unit.
	**EMPTY WASTE BUTTON** - Empties fluid from unit's waste tank.
	**MODE BUTTON** – Toggles between four different modes (Inline/Dipstick etc)

Getting to Know the TransTech™ III+

Front Features

Control Panel – All electronic operational functions are initiated at this location. See Control panel features section.

Filler Port & Cap – New ATF is poured into unit before service.

Right Side Features

Disposal Hose Ball Valve - Open manually before EMPTY WASTE button is pushed.

Waste Disposal Hose - Is inserted into the shop's fluid recycling container or into a suitable container for proper disposal of used transmission fluid.

Left Side Features

Power Cables - Connect power cables to vehicle's battery before use.

Service Hoses – Connect both hoses to the vehicle using the correct adapters. The flow direction does not matter.

Safety Information and Precautions

DANGER:

1. Vehicle exhaust gases contain carbon monoxide, which is a colorless and odorless lethal gas.
2. Only run engines in well-ventilated areas and avoid breathing exhaust gases.
3. Extended breathing of exhaust gases will cause serious injury or death.

WARNING:

1. Exhaust gases, moving parts and hot surfaces are present during and after the engine is running.
2. Read and understand the operator's manual before using the TransTech™ III+ service system.
3. When using petroleum products always refer to the MSDS sheets and manufacturer's instructions for the proper procedure to handle emergency medical treatment, cleanup, handling, and storage requirements.
4. Improper use of the TransTech™ III+ Transmission Service System or exposure to exhaust gases can cause injury.
5. Spilled transmission fluid on an engine can ignite.
6. Avoid exposure to flames, sparks, hot engine parts and other ignition sources.
7. Always keep a fully charged fire extinguisher nearby. The extinguisher should have a class B rating and be suitable for gasoline, chemical, and electrical fires.
8. Cleanup any oil spills immediately.
9. Dispose of contaminated cleanup material according to governing environmental laws.
10. Never look directly into the air induction plenum or carburetor throat when the engine is operating.
11. Always verify hose connections to the transmission's oil cooler lines before starting the vehicle's engine.
12. Explosion or flame or exposure to flammable liquid and vapors can cause injury.
13. Flammable liquid (transmission fluid) can splash out of reservoir when filling or when unit is being moved.
14. Always keep Reservoir Cap secure except when filling reservoir.
15. Explosion or flame can cause injury.
16. Transmission cooling systems may maintain residual pressure in connection lines to and from transmission and cooler radiator even after the engine has been turned off.
17. Wear safety goggles.
18. Wear chemical resistant gloves when connecting or disconnecting fitting and adapters.
19. Chemicals can cause harmful byproducts - do not add any chemicals to TransTech™ III+ reservoir tank.
20. Use only approved automatic transmission fluid.
21. Do not swallow or ingest any chemicals.
22. Use with adequate ventilation. Avoid breathing vapors.
23. Do not store chemicals in or on the machine (other than automatic transmission fluid).
24. Improper use of transmission fluid can cause injury.
25. Over exposure can have harmful effects on eyes, skin, respiratory system and possible unconsciousness and asphyxiation.
26. Improperly blocked vehicles can move.
27. Set the parking brake and chock the wheels.
28. Moving vehicles can cause injury.

Moving engine parts:

1. The engine cooling fan will cycle on and off depending on the coolant temperature and could operate without the engine running.
2. Wear safety goggles.
3. Always keep objects, clothing, and hands away from the cooling fans and engine parts.
4. Moving engine parts can cause injury.
5. Hot surfaces are present during and after running the engine.
6. Do not contact hot surfaces such as, manifolds, pipes, mufflers, catalytic converters, or radiators and hoses.

Hot surfaces can cause injury:

1. Catalytic converters become extremely hot.
2. Do not park a converter-equipped vehicle over dry grass, leaves, paper, or any other flammable material.
3. Do not touch a catalytic converter until the engine has been off for at least 45 minutes.
4. Catalytic converters can cause burns.
5. Cracked fan blade can become airborne.
6. Examine fan blades for cracks. If found, do not service the vehicle.
7. Flying objects can cause injury.
8. Batteries produce explosive gases and can explode, resulting in injury.
9. Wear safety goggles when working on or near batteries.
10. Use in a well-ventilated area.
11. Keep sparks and flames away from the battery and never lay tools, equipment, or other conductive objects on the battery.
12. When is connecting to the battery, make sure the unit's power switch is off. Connect the positive lead of the unit to the positive lead battery first; connect the negative lead of the unit to a solid ground point as far from the battery as possible.
13. Keep battery acid away from skin or eyes. In case of eye contact, flush with clean water for 15 minutes and get medical attention.

IMPORTANT

Do not perform the transmission service if the vehicle's engine oil or coolant level is low. If necessary, add motor oil and/or coolant.

Do not perform service if new transmission fluid is *below 50 degrees* Fahrenheit.

WARNING

Flammable Liquid can squirt out of pressurized lines when connecting or disconnecting.
Verify that engine and machine are both off before connecting or disconnecting cooler lines or adapters.
Wear safety goggles.
Wear chemical resistant gloves when connecting or disconnecting fittings and adapters.
Wrap a shop towel around pressure fittings and adapters when disconnecting.
Avoid exposure to flames, sparks, hot engine parts, and other ignition sources.
Explosion or flame or exposure to flammable liquid and vapors can cause injury.

TransTech™ III+ Initial Setup Procedure

The following procedure is only necessary for first time use or if the waste tank is fully evacuated for shipping purposes.

Set-Up Instructions:

1. Fill the CLEAN FLUID tank with approximately 6 quarts (5.7 liters) of new ATF.

2. Connect two compatible adapters to each other, secure tightly. Attach the 2 red SERVICE HOSES together using connected adapters.

3. Place the waste hose into the clean tank fill neck with the ball valve open.

4. Connect TransTech™ III+ power leads to the vehicle's battery.

5. Press and hold the START button for 5 seconds until the alarm sounds. The FILL and DRAIN LEDs will flash. Press and hold the START button again for 5 seconds until the alarm sounds. The DRAIN, FILL and COMPLETE LEDs will cycle in a clockwise direction while the unit is performing the Initial Setup procedure. When complete, the alarm will sound 4 times.

6. Return the hoses to their original location.

7. The initial setup is complete.

Transmission Service Procedure

Inline Exchange
Warning: It is not necessary to empty the waste tank before beginning an exchange. If beginning an exchange with fluid in the waste tank ensure that there is less fluid in the clean tank than the remaining capacity of the waste tank. Failure to do so will result in waste tank overflowing!
Fill the CLEAN FLUID tank with approximately 6 quarts (5.7 liters) of new ATF.

1. Connect appropriate adapters to vehicle transmission cooler lines. The direction of flow from the vehicle does not matter.

2. Fill the TransTech™ III+ new fluid tank with the correct type and the desired amount of Transmission Fluid for the exchange.

3. Connect TransTech™ III+ power leads to the vehicle's battery.

4. Turn vehicle on and inspect for leaks at the adapters.

5. Press START/RESUME button to begin the exchange. The TransTech™ III+ automatically determines the direction of flow and performs the exchange.

6. When the fluid exchange is finished, the COMPLETE light will come on and the TransTech will beep continuously until the STOP button is pressed.

7. Once transmission service is complete, check ATF level with engine running or as per manufacturer's recommendation. Press and hold DRAIN or FILL to adjust ATF level. Stop the engine, the service is complete.

8. Direct waste hose to a suitable container; open the ball valve on the end of the waste hose and press EMPTY WASTE button to empty waste fluid tank.

Optional Procedure - Drain Pan for Filter Change

Warning: It is not necessary to empty the waste tank before beginning an exchange. If beginning an exchange with fluid in the waste tank ensure that there is less fluid in the clean tank than the remaining capacity of the waste tank. Failure to do so will result in waste tank overflowing!

Drain Pan

1. Follow steps 1-4 from Inline Exchange procedure.

2. Press DRAIN button to begin the pan drain.

3. When the transmission pan is emptied, a buzzer will sound. The LOW VEHICLE FLUID light will illuminate and the STOP ENGINE light will flash.

4. Immediately turn off the vehicle's engine and press STOP to silence the alarm. Do not disconnect the TransTech from the vehicle's battery.

5. Remove transmission pan and change filter as per manufacturer's instructions.

6. When the filter change is complete, press START/RESUME button and the TransTech™ III+ will refill the vehicle with the same amount of fluid removed.

7. Start vehicle. The service will automatically resume and complete. Follow steps 6-8 from Inline Exchange procedure.

Pause Feature

If service needs to be paused at any time press **STOP**. To resume, press **START/RESUME.** The machine will pause indefinitely until the **START/RESUME** button is pressed. While paused, fluid will flow through the machine in a bypass loop.

Adding ATF to Clean Tank

It is recommended that the desired amount of clean ATF to be exchanged is added to the Clean Tank before a service begins. However, additional ATF can be added after a service has started but **ONLY** when the service is paused. Any ATF added while the unit is performing a service will not be properly measured and may result in an **OVER FILL of the vehicle's transmission!**

Changing Fluid Types

Follow these steps if it is necessary to completely empty the clean fluid tank in order to change to another type of fluid.

1. Install an open adapter in either red service hose. (Fluid will exit both hoses if adapters are installed in both hoses). Place hose adapter into a capture container.

2. Connect power cord to a 12 volt DC source. Press and hold the START button for 5 seconds until the alarm sounds. The FILL and DRAIN LEDs will flash.

3. Press & hold the FILL button. The pump will operate until the FILL button is released.

4. Tip the unit slightly backwards to let the fluid flow toward the back of the tank for complete evacuation.

5. Pressing the STOP button for five seconds will reset the unit.

Completely empty waste tank for shipping

1. Connect the power cord to a 12 volt DC source.

2. Direct the waste hose to a suitable disposal container. Open the ball valve on the end of the black waste hose.

3. If the EMPTY WASTE LED is on, press the EMPTY WASTE button. The unit will automatically pump out the waste fluid until the fluid level stops at the switch in the bottom of the tank. The EMPTY WASTE LED will turn off.

   ONLY FOLLOW STEPS 4-7 TO FULLY EMPTY UNIT FOR SHIPPING. INITIAL SETUP PROCEDURE MUST BE PERFORMED IF WASTE TANK IS COMPLETELY EMPTIED.

4. Press and hold the EMPTY WASTE button for 5 seconds to enter MANUAL WASTE mode. Unit will beep. Release the button. The EMPTY WASTE LED will flash.

5. Press and hold the EMPTY WASTE button. The pump will operate while the EMPTY WASTE button is held down.

6. Tip the unit slightly backwards to let the fluid flow toward the back of the tank for complete evacuation.

7. Pressing the STOP button for five seconds will reset the unit.

Maintenance Procedures

The following maintenance procedures should be performed on a routine basis:

1. Carefully clean the exterior with a soft cloth to keep the cabinet looking new. Check the cabinet for dents or impact markings, if found, inspect for damaged components.

2. Check all hoses and wires for cuts or frays.

3. Clean the filter screens after every 100 services or 6 months, which ever comes first. See the next section for procedure.

Replacing Unit's Internal Inline Filters

1. Disconnect power harness from any power source. Remove the Phillips head screws that join the top cabinet housing to the lower housing. Remove the cap from the tank and carefully tip the top cabinet forward.

2. Locate the 2 metal inline filters located near the front of the cabinet. Unscrew worm gear hose clamps, remove and replace both filters. Ensure flow direction is for the filter is correct. Both filters the arrow should be pointing towards the center of the machine.

3. Assemble in reverse order. NOTE: Use caution not to pinch O-ring on reassembly

4. Enter initials, date, and a check mark in the appropriate boxes of the Maintenance Record at the end of the chapter.

Troubleshooting and Additional Help

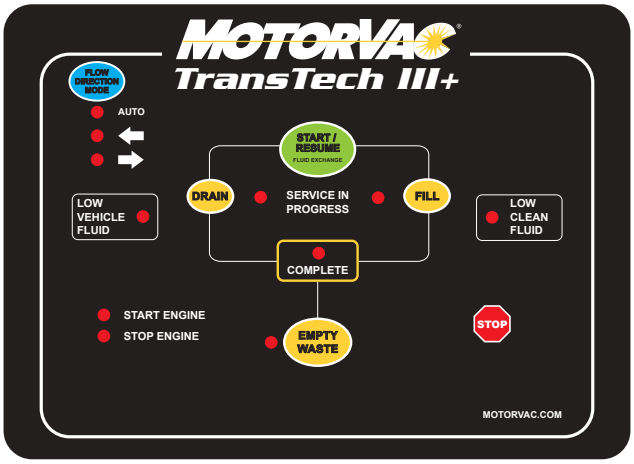
Refer to the list below troubleshooting assistance.

Problem	Possible Cause
1. Unit does not power-up. No LED's are illuminated	Polarity is reversed on vehicle battery connection. Check connection to battery for a loose condition. Circuit breaker may be tripped. (Automatic reset). Faulty battery
2. AUTO led flashes when start button is pressed.	This means no flow is detected from the vehicle. Ensure TransTech is properly connected to vehicle and vehicle is turned on. Vehicle may have a thermostat.
3. Service will not complete FILL LED off DRAIN LED on.	If the DRAIN LED is on (indicating unit should be draining), and FILL LED is off (indicating that the unit is not draining) it means no fluid is going into the waste tank. This can happen during a service if the vehicle has a thermostat which will stop flow from the transmission as it is cooled by new fluid entering the transmission. If you have verified that there is flow the Solenoid may not be shifting properly. It requires a good 12 volts. Low battery voltage, defective power cable or poor wiring connector between the board and solenoid can cause this problem.
4. Services take longer than they used to	Change the internal filters and clean the tank filter screen. (Refer to the maintenance log in to view dates of services performed.
5. When first connected to a battery, all the unit's lights remain on and gives a steady tone.	Verify good battery voltage (12.5 volts) and connection. Unit will not operate off a booster pack. Connect to a new fully charged battery and try again. Check wiring for damage

Error Alerts

The TransTech™ III+ has been designed to stop the service and alert the operator in certain instances if the unit is not functioning properly. See below for details.

Alert	Notification	Cause	Hardware Troubleshooting steps	Recovery
Fill Error **See Figure Below.**	The alarm sounds. The following LEDs flash: FILL.	There is a hardware or software problem that has caused the unit to lose track of how much fluid is in the Clean Tank. This alert prevents the unit from overfilling the transmission if there is a problem with the fluid level sensing system.	Empty the Clean ATF tank on the Trans-Tech™ III+ before attempting another exchange. **Note: Do not leave oil standing above the 0 line of the clean tank for extended periods of time. This may cause the unit to lose track of fluid levels.**	Press STOP button to silence the buzzer. Due to the probability of an overfill condition, the unit cannot recover from this error. Reset the unit to attempt further operation.



TransTech™ In-line System Adapters

The TranTech™ III+ Part# 500-1100B includes two up-graded adapter kits:

1. Part# 200-3100A Adapter Kit TransTech™ (Standard)
2. Part# 200-3101A Adapter Kit TransTech™ (Deluxe)

For more information about additional adapters see our web site www.motorvac.com.

Service Parts for the TranTech™ III+ Transmission System.
Please refer to the part numbers below when ordering parts.

Part #	Description
010-0027	Wheel (8 x 1.75)
010-1052	Bottle for adaptor tray
011-0003	Sorter rack for adapter tray
010-5004	Hose bracket
010-5500	Axle, Rear Wheels (½" x 20.875 lg.)
010-5602	Adapter tray
010-6060	Reservoir cap
010-6101	Swivel caster with brake lock
040-0507	Axle Bushing (Black Nylon)
040-0604	Cap Nut (½" ID – Push 0n)
040-2200	Threaded Standoff (for adapter box)
050-1928	Filter internal inline metal. (2 per machine)
200-8610	Assembly Service Hose (2 per machine)
200-1113	Assembly Disposal Hose
200-1604	Internal Light / LED type
200-8612	Disposal hose assembly
020-8043	Harness, External Power
030-0055	Ball Valve 1/4FNPT Brass Chrome Plated

ORDERING PARTS

Parts for the unit may be ordered by calling MotorVac Customer Service at (800) 841-8810 or (714) 558-4822. Please have your model and serial numbers available.

www.motorvac.com
info@motorvac.com

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